

THE
CAPE PHOTOGRAPHIC
DURCHMUSTERUNG

FOR THE EQUINOX

1875,

BY

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AND

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

INTRODUCTION.

Origin and History of the Work.

On the early morning of the 8th September 1882 (civil time), Mr. W. H. Finlay, First Assistant at this Observatory, when on the way to his house after observing an occultation of the star 5 Cancri, saw a bright comet-like object in the constellation Hydra, which proved to be the afterwards celebrated Comet of that year. It appears that the Comet was seen by various less responsible observers several days before its discovery by Mr. Finlay, but the fact remains that the accurate observations of this object which he secured, by returning to the Observatory on the morning in question, are the first of any scientific value that exist.

The remarkable observations subsequently made in full daylight, and the Comet's sudden disappearance at the Sun's limb previous to Transit across the Sun's disc on September 17, increased, in a high degree, the interest with which this remarkable object was followed by the Cape observers.

Personally, I was fully occupied at the time with Heliometer observations for Stellar Parallax, and with a series of extra-meridian observations of the Minor Planet *Sappho* with the 7-inch equatorial, so that it was not until October 11, when the latter series was finished, that I was at liberty to devote much attention to the organisation of other methods of observing the Comet. It now appears certain that satisfactory photographic pictures of the Comet might have been obtained wherever it was visible during the period between September 8 and November 14.

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So early as October 4 several photographers in South Africa had obtained impressions of the Comet with their ordinary apparatus ; amongst these were Mr. Shoyer, of Cape Town, Mr. Simpson, of the U. P. School, Aberdeen (Cape Colony), and Mr. Fernyhough, of Durban, Natal. Their photographs have no scientific value as representations of the Comet, since they were taken without means for following the diurnal motion during exposure. It happened that the axis of the brighter part of the tail was nearly parallel to the direction of the diurnal motion, and the head of the Comet being sufficiently brilliant to produce a nearly instantaneous impression, the effect of diurnal motion was to create a very elongated impression of the nucleus, nearly coincident with the axis of the tail, and sufficient to lengthen the impression of the brighter part of the tail, so that, to the popular eye, a very brilliant picture of the Comet was the result. To Mr. Shoyer and Mr. Simpson I am, however, indebted for certain information that the Comet could be photographed. I had, at that time, no suitable lens and no experience in the development of modern dry plates. I accordingly called upon Mr. Allis, a photographer in the neighbouring village of Mowbray, of whose skill as a photographer I had previous experience. No sooner had I explained to him the object of my visit and the conditions necessary for success, than he at once volunteered all requisite aid, and entered into the work with heart and soul. The most suitable lens in his possession was a doublet by Ross (the work, I believe, of the late Mr. Dallmeyer) of $2\frac{1}{2}$ inches aperture and 11 inches focal length.* This lens was mounted on an ordinary camera, and the latter was attached to a stout board which was then clamped to the counterpoise of the Declination axis of the 6-inch Grubb-Equatorial. This counterpoise could be rotated with respect to the Declination axis and then be clamped ; it was thus easy to adjust the optical axis of the photographic lens in any required position with respect to the axis of the 6-inch telescope, and, so that, whilst the latter axis was directed to the nucleus of the Comet, the general image of the Comet occupied the centre of the field of the photographic lens. This done, and the counterpoise clamped, any motion given to the Declination axis was common both to the telescope and camera. The cross, formed by the intersection of a pair of spider webs in the focus of the telescope, was now placed upon the image of the nucleus of the Comet or upon that of a neighbouring star, and, by means of clock-work aided by the slow motions in Right Ascension and Declination, was kept accurately upon the object during the whole exposure. In three of the photographs thus obtained the nucleus was followed, in three the image of a star was employed.

Paper copies of these photographs were forwarded to various astronomers and scientific societies, and they have since been published in Vol. II., part 1, of the Annals of the Cape Observatory ; these reproductions, however, give a very inadequate idea of

*The lens is now the property of the Observatory.

the details contained in the original negatives. The latter are deposited with the Royal Astronomical Society. Apart from their scientific interest as representations of the Comet itself, these photographs appeared to have a still wider interest from the fact that, notwithstanding the small optical power of the instrument with which they were obtained, they showed so many stars, and these so well defined over so large an area, as to suggest the practicability of employing similar, but more powerful, means for the construction of star-maps, on any required scale and to any required order of magnitude.

A short paper expressing these views, and accompanied by paper copies of the six photographs, was forwarded to Admiral Mouchez, and by him communicated to the Paris Academy of Sciences on the 26th December 1882 (*Comptes Rendus*, Vol. xcv., pp. 1342-43).* In his accompanying remarks, Admiral Mouchez endorses the view that these photographs point to the possibility of producing excellent star-charts by means of photography, and he afterwards told me that these pictures led him to encourage Messrs. Henry to devote their attention to the construction of Astrophotographic lenses, and the application of photography to astronomical work generally. The brilliant results which Messrs. Henry soon attained are still fresh in the minds of astronomers, and mark an epoch in the history of astronomy in the 19th century.

Meanwhile, in November 1882 I wrote to Mr. J. H. Dallmeyer requesting him to send me a lens of moderate dimensions for further experiment, as a preliminary step to ordering one for definitive work.

Mr. Dallmeyer, in reply, kindly forwarded a "Rapid Rectilinear Lens" of 4 inches aperture and 33 inches focal length, which reached the Cape in April 1883, and preliminary experiments were made with it in course of the year. Early in 1884 I went on leave of absence to England, and after some conversation with Mr. Dallmeyer, he undertook to make a special doublet which he hoped would prove to be better adapted for Astrophotographic work than the ordinary "Rapid Rectilinear Lens;" but, as he could not at once obtain the glass which he required for the new lens, he very kindly lent me a "Rapid Rectilinear Lens" of 6 inches aperture and 54 inches focus which he had in stock.

In September 1884 I applied for a grant of £300 from the Government Grant Fund of the Royal Society, partly for the purpose of making attempts to photograph the Solar Corona by the methods proposed by Dr. Huggins, and partly to make star-maps

* Simultaneously a very similar paper was forwarded to Dr. Huggins for communication to the Royal Society; but from some misunderstanding on his part, it was not communicated to the Society.

by direct photography from the sky. The latter object was originally defined as follows :—

“The photographs of the great Comet of 1882, which I obtained here with the assistance of Mr. Allis, show that, with proper appliances, star-maps may be made by direct photography from the sky. I am most anxious to carry out this work for the Southern Heavens, being convinced that an accurate knowledge of star distribution according to magnitude can be more rapidly obtained in this way than in any other.”⁽¹⁾

“From such maps a working catalogue for meridian zone observations could be prepared, and the programme of the Astron. Gesellschaft for accurate meridian observations of all stars to the 9th magnitude be carried out without the repetition of such an arduous undertaking as Argelander's Durchmusterung of the Northern Heavens as a preliminary step. I have in my possession a very powerful and perfect equatorial stand with excellent clock-work, &c. It is capable of carrying simultaneously, and with ease, both the reflector for photographing the Corona and the large photographic lens of 6 inches aperture with its tube, guiding telescope, &c. for star-maps. I have also a suitable observatory of my own at disposal for the work.”

“I can afford sufficient time for the organisation and supervision of the proposed researches, but to carry them out the services of a practical assistant are essential”

In January 1885, the Government Grant Committee placed the sum of £300 at my disposal, and Mr. C. Ray Woods, whose services as my photographic assistant had been provisionally secured beforehand, reached the Cape on the 18th February of the same year.

After a number of preliminary experiments had been made, systematic work was begun on the 10th of April and continued without interruption till its completion.

The vote from the Government Grant Fund of the Royal Society was renewed for the year 1886, but in November of the same year a resolution was passed postponing decision as to continuation of the vote until after the meeting of the Astrophotographic Congress at Paris in May 1887. Meanwhile the following correspondence had taken place between Professor Kapteyn and myself :—

Extracts from Correspondence with Professor J. C. Kapteyn.

J. C. Kapteyn to David Gill.

Leiden, December 16th, 1885.

I must here break off because this letter has to be dispatched an hour earlier than I expected. I will therefore write you another letter that will reach you a week later. In that letter I will make bold to explain to you a proposal that I hope you will not consider indelicate. It is, in the main, what follows : If you will confide to me one or two of the negatives I will try my hand at them, and, if the result proves as I expect, I would gladly devote some years of my life to this work, which would disburden you a little, as I hope, and by which I would gain the honour of associating my name with one of the grandest undertakings of our time.

⁽¹⁾ “Of course, distribution by photographic magnitude might, in special cases, differ from that by eye estimation ; but knowledge of the one is just as valuable as knowledge of the other, and as useful for the purposes of cosmical astronomy.”

J. C. Kapteyn to David Gill.

Leiden, December 23rd, 1885.

I have still to explain to you the proposal in my former letter, which I thought it better not to postpone—my resolution being taken. In doing this, you will excuse me in premising so much about my private circumstances as seems necessary for the purpose.

In the year 1878 I was appointed Professor of Astronomy and Theoretical Mechanics at the University of Groningen, having been before, during a couple of years, Observer at the Leiden Observatory. Directly on my appointment I proposed to the Government to fit out a little Observatory where, besides instruments for teaching purposes, a Heliometer of 6 inches aperture would be mounted.

Perhaps I shall succeed after some years in getting one or two instruments with which truly scientific research may be prosecuted ; but at all events a very long time will have to elapse before any such result may be looked for.

The first years of my Professorship once passed, my lectures left me considerable leisure, which it has been always my desire to devote to astronomical observations.

Now, after your success in Stellar photography, and especially after your letter in which you tell me "I am obliged to crave help where I can get it," it has occurred to me that by measuring and reducing your photographs I could contribute very effectually towards the success of an enormous and eminently useful undertaking. Since then I have revolved the idea in my mind and I have come to the conclusion that if you will let me, and if I can secure the necessary help, there is no one can be in better conditions to undertake this work than myself.

The former point being granted, it is my plan as to the latter—

- 1st. To request the Government to double the yearly subsidy of somewhat more than £40 that is granted for the acquisition of books and small astronomical instruments.
- 2nd. To request another subsidy of £80 for a series of consecutive years from the Society of Teyler, a very rich society, that is always very willing to bestow some money on really scientific pursuits.

With this sum I think I can procure the constant help of three persons to do the most mechanical part of the work, the copying and the simple arithmetical processes, while I myself would execute all the measurements, the computation of the tables of reduction, the comparison of catalogues, &c., for which work perhaps now and then the help of a student could be secured.

Having once got the necessary information and tried the necessary experiments, a rough estimate of the time to be expended on the work may be made, and I will then be able to make you a definite proposal, stating the approximate time in which, and the approximate accuracy with which, I could undertake the whole business. Supposing that you are willing to leave the thing to other hands at all, I do not doubt but that we will soon agree as to these points.

I have kept this letter here some days to talk the matter of the Photographic Durchmusterung over with Professor Bakhuyzen and his brother. I am bound to say that they were not very enthusiastic about the matter; of course they thought the results, once reached, of immense value, but the drudgery to be gone through before these results are once got into the form of a catalogue almost unbearable. However, I think my enthusiasm for the matter will be equal to (say) six or seven years of such work.

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

*David Gill to J. C. Kapteyn.**Cape of Good Hope, January 9th, 1886.*

Such a letter as yours of December 16th requires an immediate answer; I refer, of course, to its concluding portion, in which you offer some years of your life to co-operation with me in cataloguing the Photographic Durchmusterung of the Southern Heavens.

Naturally, before you commit yourself to so serious a work, you desire to see a sample of the photographs on which so much labour is to be expended, accordingly I send you two photographs representing the same area.

[Here follows a long account of instrumental details.]

*David Gill to J. C. Kapteyn.**Cape of Good Hope, January 22nd, 1886.*

. . . . It will, I hope, be as satisfactory to you as it has been to me, that we have mutually, and almost simultaneously, confided to each other the objects of our work, our hopes, and our difficulties. I with too much on hand, you with too little—both interested in precisely the same kind of work, and both intent on having such work done.

I think you will find that my letter of January 9th anticipates most of your questions, and that my new apparatus fulfils all the requirements which you have suggested the desirability of realising.

[Here some technical matters are discussed.]

For my part I will undertake the re-observation or re-photographing of all doubtful points—all necessary re-examination of discordant magnitudes, all re-observation of stars with the Transit-Circle, and so on. All such things are within the limits of my time and that of my staff. I think it would be of very great interest to continue the work to the Equator, for sake of comparison with Schönfeld, but not until the work has first been completed from -90° to -23° . It will be time enough, however, to settle that when we have seen how the work goes on. You probably know that I have obtained the money for this work from the Government Grant Fund of the Royal Society. The President, Professor Stokes, takes great interest in it, and I think he will be greatly pleased when he hears of your offer. Of course I shall not mention the matter till I hear definitely from you on the subject. I do not think it would be right to go on without the full consent of the Royal Society, but I do not think they will object to the plan if I do not ask for a larger grant than I receive at present.

*J. C. Kapteyn to David Gill.**Groningen, April 19th, 1886.*

. . . . I am now able to report almost perfect recovery. [Professor Kapteyn had been ill.] The answer from the Minister has only just now arrived. He writes that he thinks my proposal fit for acceptance, and that for the next seven years he will propose to raise my subsidy to £80. For this year, on the contrary, the extra subsidy of £40 which I requested cannot be conceded. I have waited for this answer before addressing myself to the Teyler Society. So this money question is still in a somewhat unsatisfactory state.

I am very grateful for your offer to endeavour to procure the money from the Government Grant Fund of the Royal Society, or even from your own pocket, still you will understand that for the honour of my University and country, I cannot accept this proposal before having tried to get from Dutch funds the means for executing the Dutch part of the intended work. If I fail in this, however, I certainly will reconsider your proposal.

In the meantime I wish to begin the work, even with the prospect that at first it will not advance at a very rapid rate. So if you will send to me the pictures -77° to -90° I will immediately set to work. With the help of one assistant, I think I can get through that, perhaps, in half a year; this work will enable me to try various methods, and to decide definitively on the method to be adopted for the rest.

By the pressure of other work accumulated during my illness, I have not examined the photographs of the Orion region as thoroughly as I wished. Still I have examined them closely enough (I have measured and discussed some three hundred stars) to have a tolerably clear idea what they will yield. They will certainly give as many stars as the Durchmusterung, up to magnitude 9.4, and by a single examination of one of the plates, I have not found a single star wanting. Star-like specks of the magnitude 9.0 or 9.2 seem to be very rare. On the contrary, the number of specks equal to the fainter stars has somewhat exceeded my expectations. I think, as you seem to do, that it will be absolutely necessary to examine two plates at the same time. [The remainder of this letter discusses purely technical matters.]

David Gill to J. C. Kapteyn.

Cape of Good Hope, May 20th, 1886.

. . . . I am pleased to hear that your Government is prepared, so far, to meet your wishes. The best thing is to proceed with the means available, and prove by "something attempted, something done," that the work is worthy of continued support. . . .

I have sent the duplicate pictures -77° to -90° , of which the necessary particulars are enclosed. I shall send to Professor Stokes (Pres. R.S.) extracts from the correspondence that has passed between us on this subject, and request the approval of the Royal Society for what I have done, and what is proposed to be done.

It is unnecessary to follow this correspondence further. Early in 1887 the circumpolar plates were measured and reduced by Professor Kapteyn; ample proof was given that the apparatus and methods employed were rapid and convenient in use, and afforded results of all desirable accuracy for the purposes of a Durchmusterung. It was also shown that the stellar images were sufficiently sharp to be easily measurable to a second of arc, and a parallactic instrument capable of giving results of this accuracy was devised by Professor Kapteyn and myself, and worked out in detail by Messrs. Repsold. The question remained whether, on the one hand, the Catalogue from the already measured circumpolar plates should be used as a working catalogue for Meridian Observations of the Circumpolar area, and the rest of the work be carried out with a more refined apparatus and an accuracy equivalent to a second of arc; or whether, on the other hand, the circumpolar results should be accepted as part of a general Durchmusterung to be continued with the same instrument, and a corresponding accuracy, to the Northern limit of the proposed work.

In May 1887 the International Astrophotographic Congress decided to undertake the work of forming a Catalogue of stars to the 11th magnitude, and making charts of the heavens approximately to the 14th magnitude.

Apparently the Committee of the Royal Society was of opinion that this resolution rendered the Photographic Durchmusterung unnecessary. I do not think it was then generally realised what a long interval of time must elapse between the adoption

of the resolutions of the Congress and the complete execution of the work. Be that as it may (for the Committee never assigns reasons for its grants or refusals), I was officially informed that the Government Grant Committee was not prepared to recommend that the vote of £300 should be granted for 1887. The sum of £150 for the first half of 1887 was subsequently provided from the donation fund of the Royal Society.

I had no doubt in my own mind as to the desirability of this work, nay, its urgent need in the existing state of Astronomy, and, indeed, that the results of the Paris Congress were to increase rather than diminish the urgency of that need.

I found that my most distinguished colleagues were unanimously of the same opinion, and generous offers of pecuniary and other aid were not wanting. The late Professor J. C. Adams, Professor A. Auwers, and Herr Otto von Struve wrote strongly on the subject in no uncertain terms. My one remaining difficulty was the question whether, having regard to other duties, it would be possible, without the support and sympathy of the Royal Society, to carry the work to completion. The difficulties were at last arranged. The work was carried on without external aid till 1889 September 31, when Mr. C. Ray Woods was employed by the Observatory, and the remaining negatives were taken by him pending the arrival of the new Astrophotographic telescope. But the tax on my private resources, which resulted from the withdrawal of the Government Grant Fund, rendered me unable to procure the Repsold apparatus which we had designed. Consequently the measurement of the plates to the single second of arc, which otherwise would have been carried out, had to be abandoned, and the work was completed with Professor Kapteyn's apparatus on the plan which had been employed for the measurement of the Circumpolar plates; that is to say, with an accuracy of a tenth of a minute of arc. For similar reasons the work was not carried beyond declination -18° .

Instruments.

The original apparatus with which the photographs were taken is shown in Plate I.

The Equatorial stand was made for me by Sir Howard Grubb in 1879, to carry the 4-inch Repsold Heliometer, which I purchased from Lord Crawford before taking up my duties at the Cape, and which I subsequently employed, in conjunction with Dr. Elkin, for researches on the parallax of Southern Stars. This type of stand is well known, and therefore needs little description, beyond the statement that it is of the size and strength usually made by Grubb for his equatorials of 8 to 9 inches aperture.

The clock-work is placed at the head of the pillar, and is provided with Grubb's usual "mouse-wheel" slow motion in Right Ascension, which is actuated by an

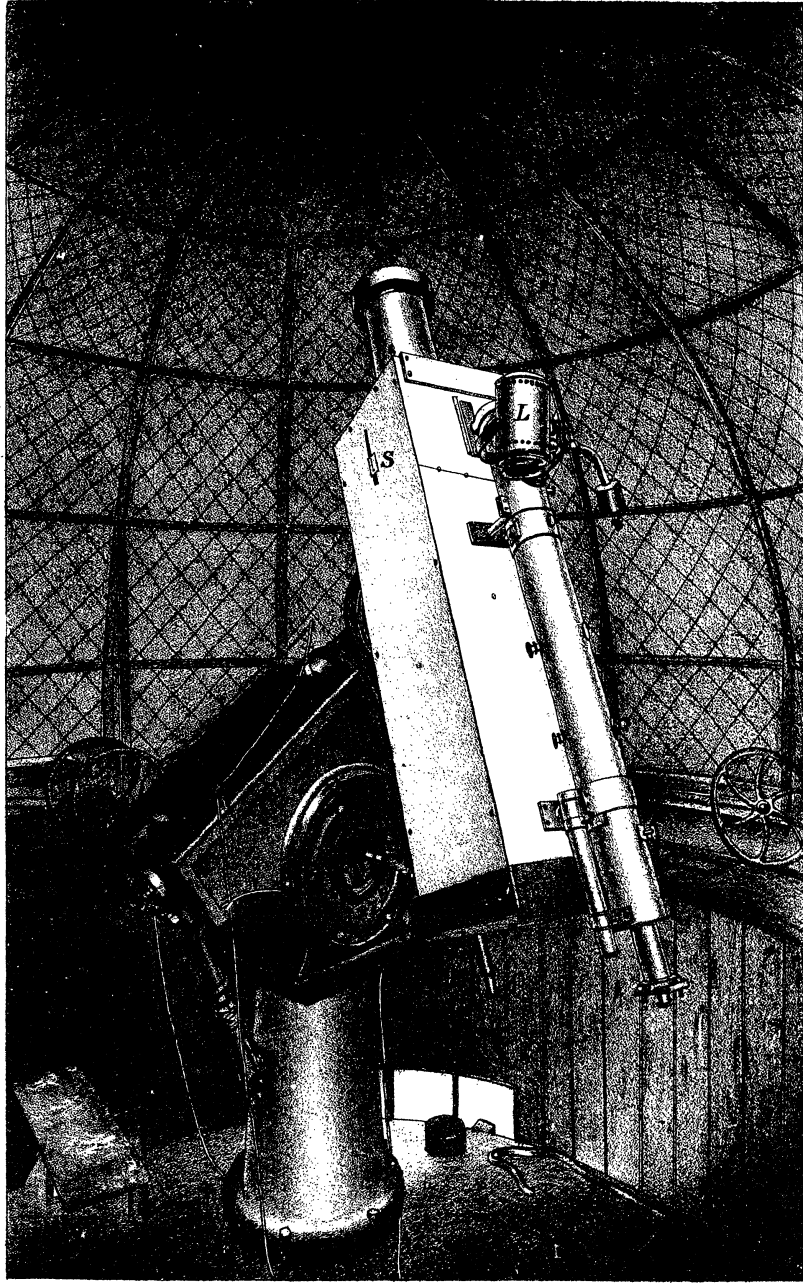
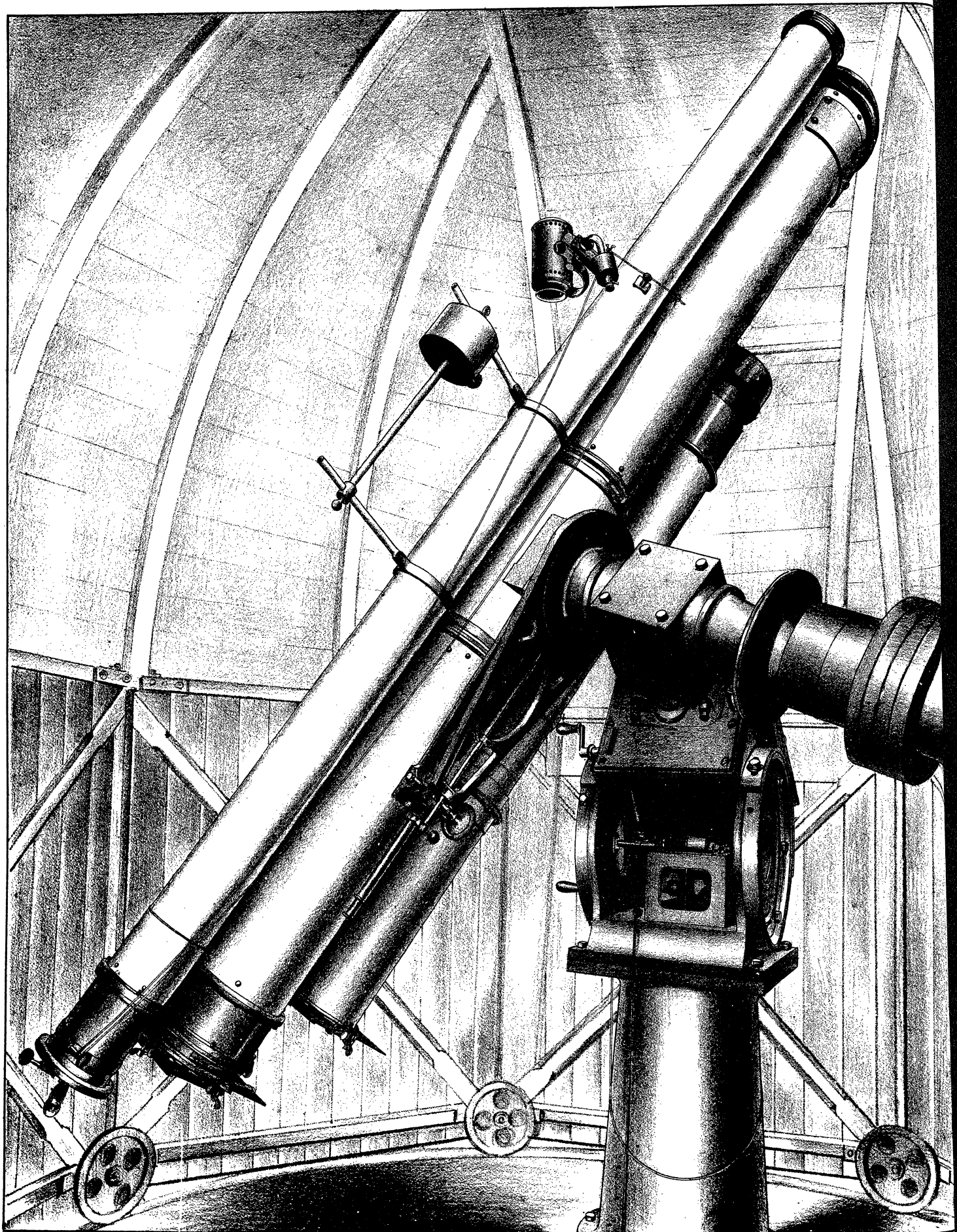


PLATE . I.

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Wyman & Sons. 8/62. 3.96.

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Wyman & Sons. L. Lith. 8/62. U. S. 96.

endless cord passing round the grooved edge of the disc on which the mouse-wheel is mounted. The slow motion and circle-reader in Declination are conveniently accessible from the eye-end.

The Camera has a square wooden tube 12×12 inches, stiffened near its centre by a strong internal diaphragm. A strong iron plate is bolted to the flange of the Declination axis, and the tube of the Camera is screwed to this plate.

The rapid rectilinear Dallmeyer lens, of 6 inches aperture and 54 inches focus, is mounted on the end of a long square tube, of half the length of the outer tube, but fitting accurately only near its two extremities. This gives a very smooth motion for focussing, quite free from perceptible shake. An index is attached to the inner tube, and, for focal reading, is referred to an ivory scale S (Plate I.) attached to the outer tube. Slow motion for focussing is provided by push-and-pull screws acting on the end of the sliding box. The Dollond telescope of $3\frac{1}{2}$ inches aperture, belonging to an old and now disused Equatorial, was utilised as a guiding telescope. The field of this guiding telescope is illuminated by the lamp L (Plate I.), the light of which is reflected to the field of view by a small elliptical reflector in the axis of the telescope. This reflector is mounted on the extremity of a thin rod, which, by means of strings attached to cross arms, can be slightly rotated so as to modify the illumination. This will be more easily understood by reference to Plate II., where the arms and adjusting strings are shown in a similar arrangement. With red glass in front of the lens of the lamp the colour of the field is pleasant to the eye during long exposures, and comparatively faint stars can be observed without fatigue. The eye-piece of the position micrometer has a range of nearly 1° from the axis of rotation of the position circle. The brightest available guiding star within $58'$ of the intended centre of the plate was selected, its position angle and distance from that centre were computed, the micrometer set to that position angle and distance, so that, when the telescope is set by the circles to the Declination and hour angle of the centre of the plate, the star is found in the centre of the field of the eye-piece.

Instead of spider-lines the micrometer is provided with a flat piece of watch-spring perforated near one rounded extremity with a small hole subtending an angle of about $30''$. The image of the guiding star is kept by means of the slow motion handles in the estimated centre of this hole during the exposure of the plate. Special brass adapters were made at the Cape, and by means of these the telescope is attached to the square wooden tube in the manner shown in Plate I.

Plate II. represents the longer-focus Dallmeyer lens and the Nasmyth lens as first mounted in November 1886. The same equatorial stand was employed. The central part of the Nasmyth telescope-tube is a strong iron casting which is bolted to the flange of the Declination axis. Flanged tubes of sheet steel are bolted to the turned

flanges of this central casting. The object-glass, by Grubb, is of 9 inches aperture, and 9 feet 6 inches focal length, and is corrected for photographic work. The dark slide and focussing arrangements are very similar to those subsequently constructed by Grubb for the Cape Astrophotographic telescope.

The second Dallmeyer rapid rectilinear lens, of 6 inches aperture and 5 feet 9 inches focus, was mounted on a brass tube firmly attached to the cast-iron centre-piece of the tube of the Nasmyth telescope. The lenses were mounted in a brass draw tube with a focussing scale. The dark slide thus required no focussing adjustment, and rested simply on three points on the butt end of the telescope, one rounded point entering a hollow cone, another a radial V-shaped groove, the third resting on a plane. The slide was pressed against these points of support by three spring-clips.

For the guiding telescope the object-glass of the now disused Dollond Transit instrument was utilised. Its aperture is 5 inches and focal length 10 feet. The tube is of tinned sheet iron, but the support of the cell of this object-glass is attached to that of the Nasmyth telescope, and the butt ends of both telescopes are firmly attached to each other. The illuminating arrangements were similar to those employed in the first apparatus already described, but intersecting spider-lines were used for guiding instead of a small hole in a piece of watch spring. The Nasmyth lens was generously presented to me by the late Mr. James Nasmyth, of steam-hammer fame, when he learned my desire to couple with the Durchmusterung work the photography of stars fainter than $9\frac{1}{2}$ magnitude. The field of sharp definition does not exceed 2° square, but it was intended, when the instrument in question was designed and erected, to procure a picture of that area central with each of the Durchmusterung plates, and having (since the exposure as well as the atmospheric conditions would be identical), a definitely increased range of magnitude, depending on the increased light-grasp of the 9-inch object-glass over that of the 6-inch Dallmeyer lens. A discussion of the two series of plates thus obtained would certainly have led to increased knowledge of the law of Stellar distribution according to magnitude. But when the International Congress had decided upon the work now in progress, and the Royal Society declined to continue their support of the Photographic Durchmusterung, it was considered no longer necessary to continue the work with the Nasmyth lens. The lens itself was subsequently utilised for rendering the rays from a source of light parallel, in the process of impressing the image of the *réseau* on the sensitive plate previous to exposure of the latter, in accordance with the International programme.

It was hoped that the new Dallmeyer lens of 6 inches aperture and $5\frac{3}{4}$ feet focus would prove better than the original one, but not only was its field of sharp definition more limited, but the Stellar images were less sharp, and longer exposure was required to obtain measurable images of stars of a given magnitude. When Mr. Dallmeyer

learned that the second lens was inferior to the first, he kindly repolished the original lens, and the second lens was returned to him. The definition of the first lens, originally very good, was further improved by repolishing, and finally all the plates taken with the second lens were rejected, and the corresponding areas were re-photographed with the shorter focus lens.

For working with the repolished lens, the sliding box for focussing was removed, the lens was attached to one end of the wooden square tube, and the plate holder and focussing arrangements of the Nasmyth telescope were fixed to the other end of it. This plan worked very satisfactorily, but indeed the original wooden tube never gave any trouble, and preserved its Collimation, relative to the small guiding telescope, with surprising constancy.

The first exposure of the definitive *Durchmusterung* plates was made on the 15th April 1885, with the original Dallmeyer lens. The work was commenced at the South Pole and continued to Declination $-57\frac{1}{2}^{\circ}$.

In November 1886, the Equatorial stand used up till this time (*viz.*, the stand of the 4-inch Heliometer) was dismantled from its previous site, and remounted in the portable observatory which I had used during the observations of Mars at Ascension Island in 1877. The new Dallmeyer-lens, with the other apparatus shown on Plate II., was fitted to the stand in its new site—the dome in which the earlier part of the work had been done being too small for the Nasmyth and 5-inch Dollond telescopes.

With this apparatus the work was completed to Declination $-49\frac{1}{2}^{\circ}$.

Till October 1887, the exposures had been entirely made by Mr. C. Ray Woods, but from this date the services of Mr. Henry Sawyer were engaged, so that the work might be continued throughout the whole, or nearly the whole, night.

Early in April 1888, the original lens (repolished) was received from Mr Dallmeyer, and was re-erected in its original site on a new Equatorial stand very similar to the 4-inch Heliometer stand. This mounting was made by Sir Howard Grubb for the 6-inch telescope, belonging to the Observatory. The photographic work of the *Durchmusterung* was now carried out simultaneously in both observatories, Mr. C. Ray Woods, with the original Dallmeyer lens, taking the zones -34° to -19° , and Mr. Sawyer continuing the zones from -50° to -34° with the new Dallmeyer lens till the end of 1888.

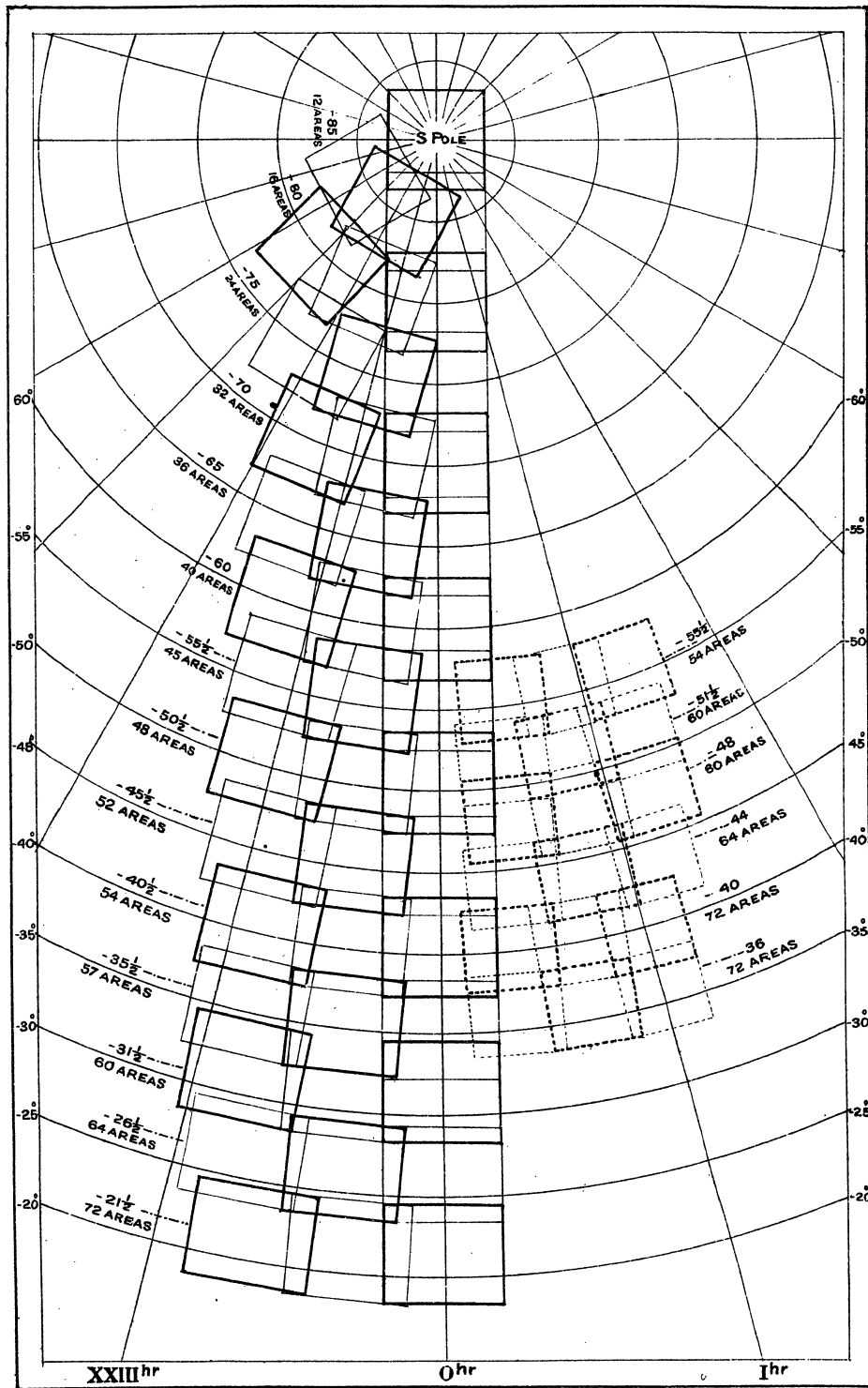
Finally, the whole of the area from -58° to -33° , taken with the new Dallmeyer lens, was re-photographed with the original (repolished) Dallmeyer lens from November 1889; the work was completed in December 1890, with the exception of a few plates which were afterwards re-photographed at the request of Professor Kapteyn.

Thus, the whole of the plates definitively used for the Catalogue were taken with the shorter focus Dallmeyer lens either in its original or repolished condition.

Arrangement of the Plates.

The arrangement of the plates, as definitively used for the *Durchmusterung*, is given in Plate III., the outlines of the plates being shown in black lines. It is, of course, to be understood that the same arrangement is continued for each zone throughout the whole 24^h of Right Ascension. The arrangement of the plates taken with the Dallmeyer lens of longer focus (and which were subsequently rejected) is shown in dotted lines. It will be remembered that, from the South Pole to Declination $-57\frac{1}{2}^{\circ}$, the centres of the plates are arranged at each 5th degree of Declination, that is to say, at Declinations -90° , -85° , -80° , -75° , &c., the area of each plate being $6^{\circ} \times 6^{\circ}$, and the overlap 1° . Thus, for Catalogue purposes, the free area of each plate is about $5^{\circ} \times 5^{\circ}$. This arrangement was found by Professor Kapteyn to present certain practical inconveniences in measurement. It will be seen from a perusal of his account of the measurement of the plates, that the adjustment of the plate and of the parallactic apparatus was so arranged that the direct readings of the eye-piece scale corresponded very nearly with the true minutes of each star's Declination for the Equinox 1875. Having regard to the arrangement of the Catalogue, it is obviously also very convenient that all stars having the same name in the degrees of their Declination for the Equinox 1875.0 should be found on the same plate. This being so, it is clear that, to obtain complete zones of 1° in breadth with the above arrangement of the plates, either the whole of the six zones on a $6^{\circ} \times 6^{\circ}$ must be measured, or one of the zones must be rejected. A much better plan, therefore, is to arrange the plates so that the Declinations of the centres of the zones are situated at $55\frac{1}{2}^{\circ}$, $50\frac{1}{2}^{\circ}$, $45\frac{1}{2}^{\circ}$, &c., and this plan was adopted. In this way five complete zones can be measured on each plate, the Declinations of the stars throughout each photographic zone thus belong also to the same Catalogue-zone; the best part of the plate is also utilized to the greatest advantage, and each zone can be measured with just sufficient overlap to afford a check upon the next.

Every area was photographed on two different nights with a view to eliminate the possibility of mistaking an accidental speck in the film for the true image of a star. This precaution was carried out from the commencement of the work, and its efficacy is well demonstrated in Professor Kapteyn's discussion. Before the photograph of any area was passed as completed, a number of the stars contained in the Cordoba zones, on the same area, were identified, and a judgment was formed, from the intensity of the images of the fainter stars, as to whether the plate probably would give measurable images of all the stars to $9\frac{1}{2}$ magnitude. When, as the result of this examination, it was found that the exposure, on account of mist, dewing of the objective, bad definition or other causes, had not been sufficient, the area was re-photographed. The more thorough examination necessarily made by



AREAS PHOTOGRAPHED WITH SHORTER FOCUS DALLMEYER LENS: — SOLID LINES.
 ,, ,, ,, LONGER FOCUS ,, ,, : - - - - - DOTTED ,,

PLATE . III.

To face page XX.

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Professor Kapteyn in course of measurement, brought to light a good many more plates which it seemed desirable to re-photograph, so that some of the areas have been photographed three, four, and even five times.

A complete list of the Durchmusterung plates, taken with the shorter focus lens, and examined or used in the formation of the catalogue, will be found in Professor Kapteyn's Introduction, pages (99) to (122).

The plates taken with the Dallmeyer lens of longer focus, and with the Nasmyth lens, are given at pages xxxii to lxxviii. It seems desirable to publish this list, as a knowledge of the existence of the plates may be of value to astronomers engaged in researches of variable stars, &c. The plates, for convenience of reference, will be deposited with Professor Kapteyn.

Plates, Exposures and Photographic Methods.

During the preliminary experiments made in the beginning of 1895, three of the best brands of plates then in the market were tried, and preference was finally given to those prepared by the Paget Prize Plate Company.

To determine the exposure necessary for the purpose in hand, which purpose may be briefly defined as a continuance of the Bonn Durchmusterung to the South Pole, an area in Argelander's Durchmusterung was selected and photographed. The negative was then compared, star by star, with Argelander's chart, and the duration of the trial exposures was gradually increased till it was certain that every star in the selected part of Argelander's chart was shown as a measurable disc on the plate photographed from the sky. The simplest method of comparison was found to be to photograph Argelander's chart on the same scale as our negative. The negative, photographed from the sky, is superposed upon that taken from the chart, and so the small black discs, which represent stars, are seen projected on the white discs which represent the black stars of the chart. With the aid of a lens of two or three inches focus, it is then very easy to see whether all the stars on the chart are represented on the negative taken from the sky. The distortion of the chart necessarily requires certain accommodation from point to point in the negative, but the process of comparison in this way is neither long nor troublesome. When the negative from the sky shewed nearly the whole of Argelander's stars, it always shewed a great many more not given by Argelander, as his Durchmusterung only pretends to completeness as far as stars of 9.2 magnitude.

To secure the result that all Argelander's stars should be represented on such a negative, it was found that an exposure of an hour with the Paget plates was necessary, and this exposure was adopted for all pictures taken with them in normal

circumstances. When a new batch of plates of the same make was received, the pictures obtained with them were compared with the duplicates taken with the previous batch, or, when such were not available, with the overlaps of adjacent plates in Right Ascension or Declination.

In testing new makes of plates the method of trails was found to be the most satisfactory, not only for comparative rapidity, but for quality and fineness of grain. Several brands of English, American, and Continental plates were tried, but Paget plates were used up to October, 1887.

The Abney plate, made by the Derby Dry Plate Company, was then introduced, and found to be very rapid, some tests of these plates giving with an exposure of 20 minutes to 30 minutes the same number of stars on the same area as was obtained with the Paget plate after an hour's exposure.

Finally, for the Abney plate, a normal exposure of 30 minutes was adopted for favourable conditions, and increased from 10 per cent. to 50 per cent. according to zenith distance, clearness of atmosphere, &c.

The Abney plate was used till June, 1889, and soon afterwards its manufacture was discontinued. For the repetition plates, Declination -58° to -33° , Wratten's "London Drop Shutter special" plates were used till the completion of the work.

In developing the plates pyrogallol was the reducing agent; other substances, such as hydrokinone and ferrous oxalate, were experimented with, but found to offer no advantage. The accelerator used was ammonium hydrate (liq. ammonia), and potassium bromide as restrainer. Sodium sulphite was used with some batches of plates, but usually "pyro," "bromide," and "ammonia" alone were employed.

In deciding on the developer to be used for any plate, it was assumed that the formula for development given by the maker was that best suited for it, subject to some slight modification for different batches of plates and for the temperature of the water and of the air at the time of development. The maker's formula was, however, taken as the standard only in so far as concerned the proportions of the ingredients; his precise method of preparation was seldom adopted. Each constituent was kept separate in the form of a 10 per cent. solution, the operator being thus able to modify the developer at will. Having ascertained the number of grains of each constituent in the maker's formula, and having prepared the developer accordingly, it was tried on the plate. The object being to develop the faintest effect of light on the plate, it is desirable to push the development to the utmost, that is, to the extent of a slight veiling over the entire plate. The amount of forcing which a plate will stand without much fogging varies greatly, not only with different brands of plates but with

different batches of the same brand. Development and fogging are both accelerated with a warm temperature. The maker's formula, therefore, even if found perfectly suitable with a normal temperature, was never strictly adhered to, but the bromide was increased and the ammonia decreased if veiling was brought about too quickly; if the plate would stand it, bromide was decreased and ammonia increased.

After development and rinsing, the plates were placed in a half-saturated solution of alum for 10 minutes, washed for a few minutes, then fixed and thoroughly washed in the usual way.

General Conclusions.

Notwithstanding the care that was employed throughout the work to obtain uniformity in the results, the actual plates are far from perfect in this respect. The most that can be said is, that probably every catalogued plate shows every star which Argelander would have considered it essential to include in a *Durchmusterung* similar to his own, with the exception, perhaps, of a very few red stars of the fainter class. The majority of the plates show a much greater number of stars than Argelander would have observed, but this is unavoidable in photographic work.

It is, in fact, impossible to solve the practical problem—"to photograph all the stars in the sky to a given order of magnitude, without also photographing stars fainter than those required."

When the present work was begun, its difficulties were much greater than they would be in the present day. We were not then aware of the great difference between the actinic and visual light of stars of different galactic latitude, nor of the variation of the sensibility of plates with time, nor of the effect of moonlight or of previous exposure to faint light in increasing their sensibility. Had the work to be done over again, it could be done in much less time, and I have no doubt a much closer approximation could be made to the solution of the problem in question. But accidental circumstances, over which the observer has no control, such, for example, as the variations of definition, the presence of invisible haze, &c., will always render the problem practically insoluble. All that it is possible to do, is to give an exposure sufficiently long to make sure that stars of the required order of magnitude will be certainly included on the plates. Subsequently, by some independent process, the relations between the diameters and true magnitudes on the plate should be determined; then, and then only, is it possible to assign true values to the magnitudes of the stars impressed on the plate, and, if necessary, to reject those stars which are below the required order of magnitude.

In the present case the basis of the magnitudes of our *Durchmusterung* rests on the magnitudes of the stars in Gould's zones ; and, as many of these stars, of which the magnitudes have been observed by Dr. Gould on a number of different nights, appear on each of our plates, the probability would be that the errors of the magnitude-constants of each plate would be small.

Whence then arise the large variations in the magnitude-constants which Professor Kapteyn has found for different plates ? The variation of these constants expresses not merely a different diameter for a star of the same magnitude on a different plate, but for different plates a totally different *form of curve* is required to represent the relation between stars of different magnitudes and their diameters. The forms of these curves which Professor Kapteyn has derived for different plates, vary so much for plates which include the same range of magnitude that one might be inclined to attribute the variation in question to a combination of the three following causes :—

1. Errors in Gould's magnitudes.
2. Errors produced from the discordance between the visual and photographic magnitudes.
3. Errors in the measures of the diameters of the discs.

It cannot be denied that the discordances in question may, and do, arise to some extent from these causes. Gould's magnitudes may differ systematically on different nights, and they may be systematically affected over longer periods of time ; there are, unquestionably, systematic differences between the visual and photographic magnitudes of individual stars, as well as systematic differences of the same kind depending on galactic latitude. But, apart from the latter consideration, if we have regard to the number of magnitude-standards on each plate, and the number of different nights on which these standards have been observed by Dr. Gould, the discordances in question cannot have their origin in these causes alone.

It has been assumed by some authorities that there exists a definite relation between diameter and magnitude when the same telescope, the same plates, and the same exposure are employed at the same zenith distance in a clear sky, and various formulæ have been given to express this relation. But, in reality, no such fixed relation exists, as the constants of the curve which expresses it are affected to a very large extent by the quality and steadiness of the images. So far as I am aware there is no published discussion of the effect of atmospheric disturbance on the form of the magnitude-curve ; and, as the question is closely connected with the results of the present publication, it may not be out of place to quote some results on the subject.

The following facts have been determined in course of a study of the light curve of the star R Velorum, whose variability (of the Algol type) was discovered by

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Mr. C. Ray Woods by comparing photographs obtained at the Cape on 1894 January 20, with others obtained 1893 January 10, February 16, and March 18.

The comparison stars, whose diameters have been measured along with those of the variable, are the following :—

C. P. D.	Mag.*	G. Z.	Mag.†	1875.		Group.
				α	δ	
				h m s	° ' "	
— 44°3880	7·6	9, 2418	7½	9 29 58	— 44 15·6	I.
— 44°3829	8·7	9, 2126	8·85	26 16	— 44 42·0	II.
— 44°3836	8·9	9, 2153	8·90	26 36	— 44 40·9	
— 44°3865	8·6	9, 2301	8·25	28 31	— 44 57·7	
— 44°3882	8·4	9, 2389		29 29	— 44 12·6	III.
— 44°3896	8·6	9, 2429	8·33	30 11	— 44 40·5	
— 44°3859	9·5		9·40	28 8	— 44 42·4	
— 44°3840	9·7	9, 2174	9·20	26 49	— 44 34·8	
— 44°3852	9·6	9, 2204	9·70	27 17	— 44 53·1	

* The magnitudes in this column are from the Cape Photographic Durchmusterung.
† The magnitudes in this column are from Mr. Roberts' paper, Astron. Journal.
The places are those of Gould's Zones.

For present purposes the measures of diameter are divided into three groups as above—the approximate mean photographic magnitudes being 7·6, 8·6 and 9·6 for Groups I, II, and III, respectively.

The mean diameters derived from measurement are given in the following table :—

Date.	Definition.		Mean Diameters in Seconds of Arc.			Date.	Definition.		Mean Diameters in Seconds of Arc.		
	I.	S.	1 Star 7 ^m ·6.	5 Stars, average 8·6.	3 Stars, average 9·6.		I.	S.	1 Star 7 ^m ·6.	5 Stars, average 8·6.	3 Stars, average 9·6.
1893.											
Jan. 10	1	2-3	16·41	11·13	7·62	Feb. 1	3	3	18·87	11·19	6·63
Feb. 16	2	2	17·16	9·27	6·99	(11 obs.)	2	very bad.	17·85	9·69	5·46
							3	3 2 3	18·69	11·10	6·78
							4	4 4	20·73	11·55	6·63
							5	4 4	19·14	9·87	5·91
1894.						(15 obs.)	7	1-2 2-3	16·26	10·29	6·78
Jan. 20	1-2	1-2	18·24	11·07	6·00		8	very bad.	17·49	7·95	diffused
27	3	2	16·11	10·35	6·78		9	1-2 1-2	13·56	8·46	5·40
28	3	2	18·48	10·74	6·69		10	1-2 1-2	14·67	8·28	5·40
29	2-3	2	15·30	9·87	6·42		11	3 3	19·83	12·30	7·95
30	1	2	14·82	8·91	5·91		12	4 4	22·95	12·30	6·54
31	2-3	2-3	18·00	9·66	6·63						

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d

CAPE PHOTOGRAPHIC DURCHMÜSTERUNG.

Date.	Definition.		Mean Diameters in Seconds of Arc.			Date.	Definition.		Mean Diameters in Seconds of Arc.		
	I.	S.	1 Star 7 ^m .6.	5 Stars, average 8.6.	3 Stars, average 9.6.		I.	S.	1 Star 7 ^m .6.	5 Stars, average 8.6.	3 Stars, average 9.6.
1894—cont.			"	"	"	1894—cont.			"	"	"
Feb. 13 (22 obs.)	1-2	1-2	14.01	8.25	5.52	Apr. 1	1-2	1-2	12.27	6.96	4.20
14	2-3	3	17.53	9.93	5.91	(22 obs.) 13	2	3	15.30	9.30	6.39
15	4	4	18.12	9.54	diffused	25	2	3	15.69	9.39	6.51
16	4	4	10.20	5.64	faint	(12 obs.)					
17	3	2-3	16.50	9.57	5.61	Elliott's plates.					
18	4	2	17.88	10.74	6.48	Dec. 12	2	2	14.97	8.79	5.97
23	2	3	15.54	9.30	6.18	(15 obs.)					
(2 obs.) 25	4	4	20.28	10.14	diffused	18	2-3	2-3	16.17	9.84	6.69
26	3	4	19.29	10.05	5.40	(15 obs.)					
Mar. 3 (2 obs.)	2	2	13.94	8.58	5.54	30	3	2	20.16	12.72	8.52
6	1	2	13.29	8.01	5.40	(21 obs.)					
7	3-4	3-4	20.40	11.10	6.09	1895.					
8	1-2	1-2	14.55	8.73	5.91	Jan. 5	hazy.		15.03	8.37	5.22
9	1-2	1-2	13.92	8.73	5.61	23	2	3	17.43	10.62	7.20
10	2	2	13.47	8.59	5.25	(23 obs.)					
14	1	2-3	13.89	8.23	5.40	29	3	3-4	20.25	12.39	8.07
17	1-2	2-3	14.64	9.45	6.06	(23 obs.)					
21	2	2	15.18	8.97	5.79	Apr. 5	2-3	3	17.79	10.92	8.04
22	2	2	15.12	8.55	4.74	(3 obs.)					
24	1	1	12.48	7.50	5.07	10	2	2	15.45	9.00	8.24
26	1	1	13.38	8.91	5.13	(21 obs.)					
28	2	2	15.75	9.24	5.37						

The variation of the diameters appears at first sight very perplexing in view of the fact that the diameter of each disc has been measured four times with very closely accordant results—none of the single diameters being uncertain to $\pm 0''.5$, and the probable error is much less. Groups II. and III. also depend on 5 and 3 stars respectively, and on some of the plates the number of different exposures rises from 15 upwards to 23, and for these plates the diameters of all the discs of the comparison stars were measured, and the means taken. (The reason why so many exposures were made on the same plate was to obtain, during the period of rapid change, the exact form of the light curve of the variable star.) All the plates were taken with the 13-inch Astrophotographic telescope, exposure 6 minutes throughout. But when the results are grouped according to atmospheric definition, it will be seen how fully the discrepancies are explained by changes in quality and steadiness of the images.

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The quality of the definition is described under two heads ; I. denotes the quality of the images, S. the steadiness of the images, according to the following scale:—

- | | |
|--|-----------------------|
| 1. Images perfect (rings sharp and steady). | 1. Absolutely steady. |
| 2. " good (rings disturbed). | 2. Fairly steady. |
| 3. " poor (rings lost in disc), image rather diffused. | 3. Unsteady. |
| 4. " very bad, disc an agitated nebulous mass. | 4. Wildly unsteady. |

Intermediate qualities are denoted 2-3, 3-4, &c.

The results thus arranged are given in the following table:—

Number of Observations.	Maker of Plate.	Date.	Definition.		Diameter in Seconds of Arc.			Number of Observations.	Maker of Plate.	Date.	Definition.		Diameter in Seconds of Arc.		
			I.	S.	1 Star, 7 ^m .6.	5 Stars, average 8.6.	3 Stars, average 9.6.				I.	S.	1 Star, 7 ^m .6.	5 Stars, average 8.6.	3 Stars, average 9.6.
1	M	1893 Jan. 10	I	2-3	16.41	11.13	7.62	1	M	1894 Jan. 29	2-3	2	15.30	9.87	6.42
1	M	1894 Jan. 30	I	2	14.82	8.91	5.91	1	M	31	2-3	2-3	18.00	9.66	6.63
1	M	Mar. 6	I	2	13.29	8.01	5.40	1	M	Feb. 14	2-3	3	17.53	9.93	5.91
1	M	14	I	2-3	13.89	8.23	5.40	15	E	Dec. 18	2-3	2-3	16.17	9.84	6.69
1	L	24	I	1	12.48	7.50	5.07	3	E	1895 Apr. 5	2-3	3	16.79	10.92	8.04
1	M	26	I	1	13.38	8.91	5.13	1	M	1894 Jan. 27	3	2	16.11	10.35	6.78
1	M	Jan. 20	I-2	I-2	18.24	11.07	6.00	1	M	28	3	2	18.48	10.74	6.69
15	M	Feb. 7	I-2	2-3	16.26	10.29	6.78	11	M	Feb. 1	3	3	18.87	11.19	6.63
1	M	9	I-2	I-2	13.56	8.46	5.40		M	3	3	2-3	18.69	11.10	6.78
1	M	10	I-2	I 2	14.67	8.28	5.40	1	M	11	3	3	19.83	12.30	7.95
22	M	13	I-2	I-2	14.01	8.25	5.52	1	M	17	3	2-3	16.50	9.57	5.61
1	M	Mar. 8	I-2	I-2	14.55	8.73	5.91	1	M	26	3	4	19.29	10.05	5.40
1	M	9	I-2	I-2	13.92	8.73	5.61	21	E	Dec. 30	3	2	20.16	12.72	8.52
1	M	17	I-2	2-3	14.64	9.45	6.06	23	E	1895 Jan. 29	3	3-4	20.25	12.39	8.07
1	M	Apr. 1	I-2	I-2	12.27	6.96	4.20	1	M	1894 Feb. 2	Very bad.		17.85	9.69	5.46
1	M	1893 Feb. 16	2	2	17.16	9.27	6.99	1	M	8	"		17.49	7.95	diffused.
1	M	1894 Feb. 23	2	3	15.54	9.30	6.18	1	E	1895 Jan. 5	Hazy.		15.03	8.37	5.22
2	M	Mar. 3	2	2	13.94	8.58	5.54	1	M	1894 Mar. 7	3-4	3-4	20.40	11.10	6.09
1	M	10	2	2	13.47	8.59	5.25	1	M	Feb. 4	4	4	20.73	11.55	6.63
1	M	21	2	2	15.18	8.97	5.79	1	M	5	4	4	19.14	9.87	5.91
1	L	22	2	2	15.12	8.55	4.74	1	M	12	4	4	22.95	12.30	6.54
1	M	28	2	2	15.75	9.24	5.37	1	M	15	4	4	18.12	9.54	diffused.
22	M	Apr. 13	2	3	15.30	9.30	6.39	1	M	16	4	4	*10.20	5.64	faint.
12	M	25	2	3	15.69	9.39	6.51	1	M	18	4	2	17.88	10.74	6.48
15	E	Dec. 12	2	2	14.97	8.79	5.97	2	M	25	4	4	20.28	10.14	diffused
23	E	1895 Jan. 23	2	3	17.43	10.62	7.20								
21	E	Apr. 10	2	2	15.45	9.00	8.24								

M. = Mawson plate }
L. = Lumière " } E. being the most rapid.
E. = Elliott " }
In three cases where I. and S. has only been recorded as "very bad" or "hazy" the observations are recorded between 3 and 4.
* Probably hazy also.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

Taking, in the first place, the means of the results grouped according to quality of images, and separating also the results obtained with different kinds of plates, we obtain the following results:—

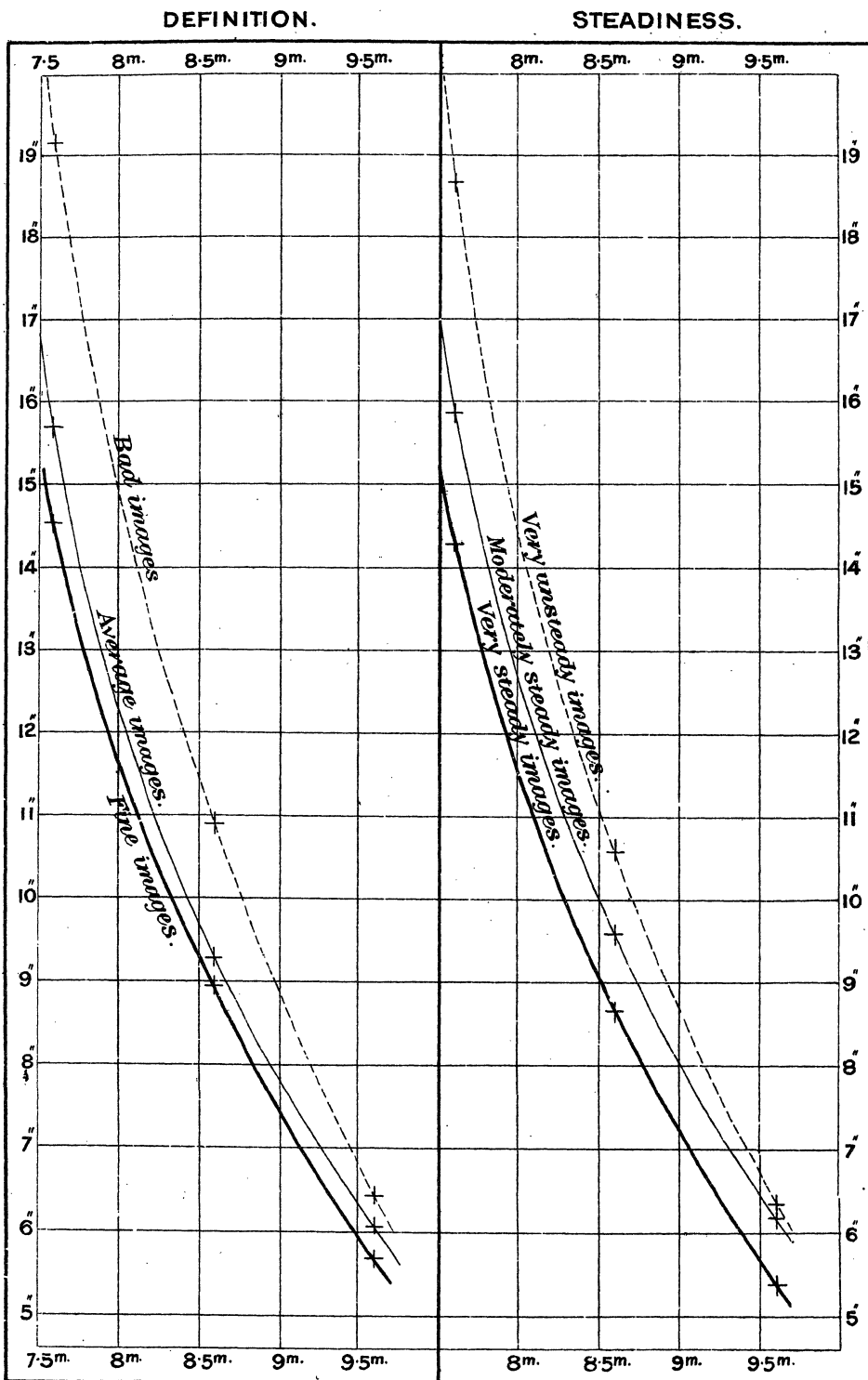
MAWSON PLATES.				
Mean Diameters of Discs.				
Images.	No. of Plates.	Group I. Mag. 7·6.	Group II. Mag. 8·6.	Group III. Mag. 9·6.
		" "	" "	" "
1	5	14·36	9·04	5·89
1-2	9	14·68	8·91	5·65
2	8	15·25	9·08	6·00
2-3	3	16·94	9·82	6·32
3	7	18·25	10·76	6·55
3-4 and 4	5	20·22	11·11	6·33
ELLIOTT AND FRY PLATES.				
		" "	" "	" "
2	3	15·95	9·47	7·14
2-3	2	16·98	10·38	7·37
3	2	20·21	12·56	8·30

Or, if grouped according to steadiness of images:—

MAWSON PLATES.				
Mean Diameters of Discs.				
Steadiness.	No. of Plates.	Group I. Mag. 7·6.	Group II. Mag. 8·6.	Group III. Mag. 9·6.
		" "	" "	" "
1	1	13·38	8·91	5·13
1-2	7	14·46	8·64	5·43
2	11	15·58	9·39	6·06
2-3	7	16·34	9·92	6·41
3	6	17·13	10·25	6·59
3-4	1	20·40	11·10	6·09
4	4	20·53	10·94	6·12
ELLIOTT AND FRY PLATES.				
		" "	" "	" "
2	3	16·86	10·17	7·58
2-3	1	16·17	9·84	6·69
3	2	17·61	10·77	7·62
3-4	1	20·25	12·39	8·07

These results are exhibited graphically in Plate IV.

DIAGRAM SHEWING THE RELATION OF DIAMETER TO MAGNITUDE
 WITH MAWSON PLATES IN A CLEAR SKY : ———
 13 INCH TELESCOPE. EXPOSURE 6^m.



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PLATE IV.

In these figures equal weight has been given to the results of each plate, disregarding the number of images on each, and this chiefly because of possible uncertainty in the observer's estimate of the quality and steadiness of the images.

This latter uncertainty is much diminished if the definition is divided into three classes only, viz., good, indifferent, and bad. The following diagrams exhibit the magnitude curves classed, on this plan, both according to quality of images and steadiness.

Unfortunately the effect of quality of the images cannot be satisfactorily separated from that of steadiness, as when one is good the other is generally good, or at least the observer is apt to estimate it so and *vice versâ*. But the results are perfectly conclusive as to the large effect of atmospheric disturbance and of the sensitiveness of the plates on the magnitude-constants, and they prove also that, for purposes of exact determination of magnitude, it is necessary to determine independent magnitude-constants for each plate.* Thus the values of the magnitudes published in the present work would be entirely satisfactory, provided that the photographic magnitudes in Gould's zones had been accurately known. But there are, necessarily, a comparatively small number of the brighter class of stars on each plate, and these few may chance to be chiefly abnormally red or abnormally blue, so that their mean photographic magnitude may differ very sensibly from their mean visual magnitude. The fainter stars are comparatively numerous, so that, apart from the systematic difference depending on galactic latitude, &c., their mean visual and photographic magnitudes are probably alike. Thus, whilst the curve which expresses the relation of diameter to magnitude for any plate is probably very accurate for the fainter stars, it may be less accurate for some plates in regard to the brighter stars.

As already mentioned, there may be also other errors depending on a change in Gould's estimates of magnitude from time to time, so that successive zones may systematically differ; and, besides the systematic difference between visual and photographic magnitudes depending on galactic latitude, it is not impossible that there are special regions of the sky where similar local differences occur. But if the true values of the constants connecting diameter and photographic magnitude could be determined for each plate, the absolute photographic magnitude for each star in the present catalogue could, for the limits of magnitude 7.0 to 10.0, be relied upon nearly to ± 0.10 magnitude.

In what manner then can these constants be accurately determined ?

* This latter conclusion is more clearly proved by reference to the results of individual plates, because, in the means, the conditions of steadiness and goodness of the images are not sufficiently separated.

There appears to be but one practical plan, it is this :

1. Adopt certain areas not far from the equator, symmetrically distributed in Right Ascension, in which the visual magnitudes of the stars have been determined by accurate photometric processes. (One would naturally adopt the well-known Kapteyn-Pritchard areas.)
2. Selecting a night of clear sky and freedom from moonlight, let the polar area and one of these areas be photographed, immediately after each other, on the same plate ; then, from the diameters of the discs of the stars on the equatorial area and the known magnitudes of the stars on that area, determine the magnitude constants of that plate.
3. With these magnitude constants and the observed diameters of the discs of the polar stars, derive the magnitudes of the stars on the polar area, applying, of course, the necessary corrections for difference of zenith distance.
4. Derive the magnitudes of the stars of the circumpolar area in the same way from comparison with each of the selected equatorial areas, and adopt the mean magnitude so found for each star of the circumpolar area.
5. If necessary, reverse the process and determine from the definitive magnitudes of the circumpolar stars, the definitive magnitudes of the stars of the equatorial areas. (It would, perhaps, be desirable, in this way, to render every standard area equally available as a standard of magnitude.)
6. This done, let a picture be taken with the Astrophotographic telescope of an area in the centre of one of the Durchmusterung plates, and immediately afterwards, on the same plate, a picture of the polar area. From a comparison of the diameters of the star discs on both plates (or of a selected list of these diameters) combined with the known photographic magnitudes of the polar stars, the true photographic magnitudes of a number of stars on the $2^{\circ} \times 2^{\circ}$ area in the centre of the Durchmusterung plate can be determined.
7. A comparison of these magnitudes with the Cape Durchmusterung magnitudes of the same stars, would give the law of difference between the true and previously adopted magnitudes for that plate.
8. By repeating this process for each of the 613 definitive plates of the Durchmusterung, the true photographic magnitudes of all the stars in the catalogue could be very accurately determined.

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The proposed work is, of course, a very considerable one, but its results would well repay the labour, for, if carried out, it would provide the requisite data for obtaining definitive magnitude standard stars for all the International Catalogue plates from Declination -19° to the South Pole.

If we find it possible to complete this additional work, the results will be published in a fourth volume, containing also special observations on new or suspected variable stars, special meridian observations for suspected proper motions, and other researches which have arisen in course of the work.

The present publication will contain the following catalogues, in three volumes, viz. :—

Part 1.	...	Declination	-18° to	-37°
„ 2.	...	„	-38° „	-52°
„ 3.	...	„	-53° „	-90°

DAVID GILL.

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES, ZONES $-57\frac{1}{2}^{\circ}$ TO -30° , TAKEN WITH THE 69-INCH "DALLMEYER" LENS, SOME OF WHICH ARE DUPLICATED WITH THE "NASMYTH" LENS.

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.	
1887 October	6	804	$-55\frac{1}{2}^{\circ}$	h m s 0 0 0	m 60	m + 60	Fleecy cloud passing.
	25	842			60	+ 26	Definition poor.
	13	820		0 26 40	60	+ 42	Definition very bad.
	25	843			30	+ 22	Definition indifferent.
November	5	889		0 53 20	30	+ 30	Definition poor.
	14	911			30	+ 26	Definition fair.
	5	890		1 20 0	30	+ 41	Definition poor.
	12	902			30	+ 13	Definition good.
October	19	827		1 46 40	30	+ 30	Definition poor.
November	3	874			30	+ 14	Definition bad ; hazy.
	25	967		2 13 20	30	+ 8	Definition bad.
	29	977			30	+ 27	" "
	24	965			27	+ 55	27" only (extra).
	2	865		2 40 0	30	+ 46	Definition fair.
	7	897			30	+ 19	Definition good.
	9	828		3 6 40	30	+ 15	Definition indifferent.
	25	969			30	+ 31	Definition fair.
October	21	838			10	+ 15	Clouded up.
	13	821		3 33 20	30	+ 31	Definition very bad.
November	7	898			30	+ 45	Definition good.
October	19	829		4 0 0	30	+ 33	Definition bad.
November	15	925			30	+ 29	Definition poor.
	7	899		4 26 40	30	+ 42	Unsteady.
	19	937			30	+ 54	Definition bad.
	15	926		4 53 20	30	+ 21	Definition poor.
	23	961			30	+ 36	Part hazy.
1888 January	6	1082		5 20 0	30	+ 12	Definition very good.
	31	1138			60	+ 42	
	16	1110			60	+ 30	Definition variable.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 October 19	830	— 55½	h m s 5 20 ⁰ 0	m 60	m + 43	Wrong guiding star.
November 2	868			30	+ 22	Hazy.
23	962		5 46 40	30	+ 18	Definition fair.
December 5	990			30	+ 33	" "
November 25	973			30	+ 37	Hazy.
February 27	580		6 13 20	60	+ 40	Definition fair; also Nasmyth.
March 7	585			60	+ 50	Definition poor; also Nasmyth.
February 20	579			60	+ 35	12 ^m hazy; also Nasmyth.
March 1	583		6 40 0	60	+ 30	Definition fair; also Nasmyth.
9	589			60	+ 40	Definition bad; also Nasmyth.
6	584		7 6 40	60	+ 40	Definition poor; also Nasmyth.
26	612			60	+ 33	Definition fair; also Nasmyth.
21	606			60	+ 32	Definition very bad; only Nasmyth kept.
February 27	581		7 33 20	60	+ 40	Definition fair; also Nasmyth.
March 18	601			60	+ 29	" "
7	586		8 0 0	60	+ 27	" "
9	590			60	+ 40	Definition bad; also Nasmyth.
17	599		8 26 40	60	+ 37	Definition fair; also Nasmyth.
21	607			60	+ 32	Definition poor; also Nasmyth.
February 27	582		8 53 20	60	+ 32	Definition fair; also Nasmyth.
March 10	593			60	+ 46	Definition bad; also Nasmyth.
7	587		9 20 0	60	+ 36	Definition poor; also Nasmyth.
8	588			60	+ 33	Lens wet; also Nasmyth.
17	600		9 46 40	60	+ 30	Definition fair; also Nasmyth.
21	608			60	+ 26	Definition bad; also Nasmyth.
18	603		10 13 20	60	+ 44	Definition fair.
22	610			60	+ 25	" "
April 28	642		10 40 0	60	+ 42	Definition fair; also Nasmyth.
May 23	656			60	+ 55	" "
April 27	639		11 6 40	60	+ 45	" "
May 27	659			60	+ 43	" "
March 22	611			60	+ 52	Hazy; also Nasmyth.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 May 28	662	— 55½°	h m s 11 33 20	m 60	m + 25	Definition fair ; also Nasmyth.
June 6	664			60	+ 55	Badly followed ; also Nasmyth.
May 23	657		12 0 0	60	+ 50	Definition fair ; also Nasmyth.
June 8	666			60	+ 39	" "
April 27	640		12 26 40	60	+ 35	" "
May 10	652			60	+ 32	" "
June 17	680		12 53 20	60	+ 26	Definition bad ; also Nasmyth.
29	689			60	+ 31	Definition good ; also Nasmyth.
16	679			85	+ 47	Lens wet ; also Nasmyth.
8	667		13 20 0	60	+ 29	Definition fair ; also Nasmyth.
9	670			60	+ 26	" "
May 27	661		13 46 40	60	+ 27	" "
June 11	673			60	+ 25	" "
9	671		14 13 20	60	+ 43	" "
July 19	703			60	+ 66	" "
22	685			60	+ 45	? Haze ; also Nasmyth.
June 8	668		14 40 0	60	+ 25	Definition fair ; also Nasmyth.
11	674			60	+ 25	" "
4	692		15 6 40	60	+ 35	Definition good ; also Nasmyth.
July 18	700			60	+ 30	" "
May 12	654		15 33 20	60	+ 30	Definition fair ; also Nasmyth.
July 20	706			60	+ 45	" "
June 22	686			60	+ 45	? Haze ; also Nasmyth.
July 5	696		16 0 0	60	+ 40	Definition good ; also Nasmyth.
18	701			60	+ 45	" "
14	699			60	+ 32	Hazy ; also Nasmyth.
4	693		16 26 40	60	+ 25	Definition good ; also Nasmyth.
25	711			60	+ 33	Lenses moist early ; also Nasmyth.
21	709			55	+ 27	Hazy ; also Nasmyth.
May 12	655		16 53 20	60	+ 25	Definition fair ; also Nasmyth.
July 19	705			60	+ 49	" "
18	702		17 20 0	60	+ 40	Lens wet at end ; also Nasmyth.
August 7	725			60	+ 37	Slight haze ; also Nasmyth.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 August 1	714	— 55 $\frac{1}{2}$ °	h m s 17 20 0	m 60	h m + 0 37	Hazy ; also Nasmyth.
September 3	751		17 46 40	60	+ 0 34	Definition bad.
9	761			60	+ 0 78	Definition fair.
August 22	741			20	+ 0 15	Accident to instrument.
23	742			60	+ 0 26	
September 2	750			55	+ 0 27	Cloud from S.W.
August 10	730		18 13 20	60	+ 0 35	Definition fair.
September 1	747			60	+ 0 37	Hazy.
August 6	722		18 40 0	60	+ 0 31	Definition good ; also Nasmyth.
16	732			60	+ 0 36	Definition fair.
September 13	767		19 6 40	60	+ 0 30	" "
14	770			60	+ 0 60	" "
August 16	733		19 33 20	60	+ 0 55	" "
September 23	790			60	+ 0 49	" "
August 19	736			31	+ 0 30	Hazy at times.
September 1	748			60	+ 0 27	Lens wet ; hazy.
17	776		20 0 0	60	+ 0 30	Hazy.
20	780			60	+ 0 48	Definition fair.
13	768		20 26 40	60	+ 0 37	" "
14	771			60	+ 0 57	" "
19	779		20 53 20	60	+ 0 25	" "
23	791			60	+ 0 36	" "
20	781		21 20 0	60	+ 0 38	" "
21	786			60	+ 0 55	" "
22	789		21 46 40	60	+ 0 26	Faint haze.
October 12	813			60	+ 0 37	Definition fair.
19	823		22 13 20	30	+ 0 9	" "
November 12	900			30	+ 1 52	Definition good.
October 6	803		22 40 0	60	+ 0 35	" "
12	814			60	+ 0 52	Definition fair.
October 28	852		23 6 40	30	+ 0 30	" "
November 4	876			30	+ 0 36	Definition bad.
October 21	834			30	+ 0 11	Haze.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.			Duration of Exposure.	Hour Angle.	Remarks.	
			h	m	s	m	h		m
1887 October	26	849	— 55½°	23	6	0	30	+ 0 33	Haze.
November	5	887		23	33	20	30	+ 0 19	Definition poor.
	7	892					30	+ 0 11	Definition fair.
1888 September	24	1662		17	20	0	40	+ 4 1	? Haze.
October	2	1692					30	+ 4 8	Definition very good.
September	28	1672		17	46	40	35	+ 3 54	Definition variable ; haze.
October	1	1683					35	+ 3 59	Definition wavering.
	2	1693					30	+ 4 17	Definition very good.
September	24	1663		18	13	20	40	+ 3 52	? Haze.
	28	1673					35	+ 4 10	Definition variable ; haze.
October	1	1684					40	+ 4 20	Definition wavering.
1889 January	14	2004		3	33	20	31½	+ 1 21	Definition fair.
	18	2015		6	40	0	31	+ 1 0	" "
	24	2041					32	— 1 34	Definition poor.
	29	2050					32	— 1 22	Definition fair.
	24	2042		7	6	40	30	— 1 12	Definition poor.
	30	2056					33	— 1 45	Definition fair.
	30	2057		7	33	20	30	— 1 17	" "
	31	2065					34	— 2 5	" "
	24	2043		8	0	0	33	— 0 54	Definition poor.
	30	2058					30	— 1 2	Definition fair.
	24	2044		8	26	40	30	— 0 41	Definition poor.
	30	2059					30	— 0 52	Definition fair.
	31	2066		8	53	20	33	— 1 57	" "
February	4	2069					37	— 1 25	Very hazy.
	5	2076					37	— 3 3	Definition fair.
January	31	2067		9	20	0	32	— 1 31	" "
February	4	2070					42	— 0 58	Very hazy.
	5	2077					33	— 2 38	Definition fair.
	5	2078		9	46	40	37	— 2 32	" "
	13	2110					40	— 3 34	" "
	5	2079		10	13	20	37	— 2 13	" "
	13	2111					40	— 3 12	" "

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R. A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1889 April 30	2277	— 55½	h m s 10 40 0	m 45	h m + 0 17	Definition good.
February 13	2112			37	— 2 42	Definition fair.
5	2080			42	— 1 16	Doubled image; definition fair.
5	2081		11 6 40	31	0 0	Definition fair.
13	2113			36	— 2 32	" "
April 30	2278			45	+ 0 41	Definition good.
February 13	2114		11 33 20	35	— 2 17	Definition fair.
April 24	2264			45	+ 0 52	" "
February 13	2115		12 0 0	30	— 2 3	" "
April 25	2270			43	+ 0 29	Followed badly; 8½ mag.
30	2279			50	+ 0 43	Definition good; hazy.
24	2265		12 26 40	40	+ 1 55	Definition fair; hazed up.
25	2271			45	+ 0 47	Definition fair.
May 10	2304		12 53 20	53	+ 0 23	First 20 ^m hazy.
11	2315			45	+ 0 15	Definition fine.
10	2305		13 20 0	45	+ 0 47	Definition fair.
24	2345			45	+ 1 2	Definition good.
23	2332			45	+ 1 12	Wrong star taken.
April 21	2242		13 46 40	45	+ 0 28	Definition bad.
May 11	2316			45	+ 0 16	Definition fine.
April 21	2243		14 13 20	45	+ 0 55	Definition fair.
May 10	2306			45	+ 0 42	" "
April 21	2244		14 40 0	45	+ 0 20	Definition poor.
May 11	2317			45	+ 0 16	Definition fine.
23	2334		15 6 40	45	+ 1 22	Definition fair.
24	2347			45	+ 0 52	Poor; lens wet at end.
June 6	2394			45	+ 1 8	Definition good.
May 24	2348		15 33 20	45	+ 1 14	" "
24	2349			45	+ 2 6	" "
23	2336			45	+ 2 40	Definition fair.
April 21	2245		16 0 0	45	+ 0 52	" "
May 23	2335			45	+ 1 22	" "
23	2337		16 26 40	45	+ 2 42	" "

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.										
1889 May 24	2350	$-55\frac{1}{2}^{\circ}$	<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>16</td><td>26</td><td>40</td></tr></table>	h	m	s	16	26	40	m 45	<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td></tr><tr><td>+ 2</td><td>2</td></tr></table>	h	m	+ 2	2	Definition good.
h	m	s														
16	26	40														
h	m															
+ 2	2															
April 21	2246		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>16</td><td>53</td><td>20</td></tr></table>	h	m	s	16	53	20	45	+ 0 52	Definition fair.				
h	m	s														
16	53	20														
May 10	2308			45	+ 0 16	" "										
	10		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>17</td><td>20</td><td>0</td></tr></table>	h	m	s	17	20	0	44	+ 0 38	" "				
h	m	s														
17	20	0														
	23			45	+ 2 42	" "										
April 21	2247		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>17</td><td>46</td><td>40</td></tr></table>	h	m	s	17	46	40	45	+ 0 45	Definition poor.				
h	m	s														
17	46	40														
May 9	2299			45	+ 0 57	Definition fair.										
	10		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>18</td><td>13</td><td>20</td></tr></table>	h	m	s	18	13	20	45	+ 0 54	Definition fine.				
h	m	s														
18	13	20														
	24			45	+ 1 57	Definition good.										
	9		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>18</td><td>40</td><td>0</td></tr></table>	h	m	s	18	40	0	45	+ 0 57	Definition fair.				
h	m	s														
18	40	0														
	10			45	+ 1 2	Definition fine.										
1887 September 21	786		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>21</td><td>20</td><td>0</td></tr></table>	h	m	s	21	20	0	60	+ 0 55					
h	m	s														
21	20	0														
October 28	853	$-51\frac{1}{2}^{\circ}$	<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>0</td><td>0</td><td>0</td></tr></table>	h	m	s	0	0	0	30	+ 0 15	Definition bad.				
h	m	s														
0	0	0														
November 2	862			30	+ 0 35	Definition good.										
October 28	854		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>0</td><td>24</td><td>0</td></tr></table>	h	m	s	0	24	0	34	+ 0 31	Occasional cloud.				
h	m	s														
0	24	0														
November 5	888			30	+ 0 21	Definition fair.										
	23		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>0</td><td>48</td><td>0</td></tr></table>	h	m	s	0	48	0	30	+ 0 15	" "				
h	m	s														
0	48	0														
	25			30	+ 0 23	Definition bad.										
October 25	844		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>1</td><td>12</td><td>0</td></tr></table>	h	m	s	1	12	0	30	+ 0 16	Definition indifferent.				
h	m	s														
1	12	0														
	28			30	+ 0 20	Definition fair.										
November 14	912		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>1</td><td>36</td><td>0</td></tr></table>	h	m	s	1	36	0	30	+ 0 28	Definition bad.				
h	m	s														
1	36	0														
December 7	997			30	+ 0 15	Definition very good.										
November 23	958			30	+ 0 15	15 ^m streaky sky.										
	24			50	+ 0 35	Three interruptions.										
	2		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>2</td><td>0</td><td>0</td></tr></table>	h	m	s	2	0	0	35	+ 0 20	Patches of cloud passing.				
h	m	s														
2	0	0														
	12			30	+ 0 15	Definition good.										
	5		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>2</td><td>24</td><td>0</td></tr></table>	h	m	s	2	24	0	30	+ 0 18	Definition poor.				
h	m	s														
2	24	0														
	14			30	+ 0 20	Definition very bad.										
	25		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>2</td><td>48</td><td>0</td></tr></table>	h	m	s	2	48	0	30	+ 0 16	Definition fair.				
h	m	s														
2	48	0														
	29			30	+ 0 35	" "										
October 25	845			30	+ 0 38	Definition good; stars faint.										
	28		<table style="display: inline-table; border: none;"><tr><td>h</td><td>m</td><td>s</td></tr><tr><td>3</td><td>12</td><td>0</td></tr></table>	h	m	s	3	12	0	30	+ 0 34	Hazy at times.				
h	m	s														
3	12	0														
November 22	952			30	+ 0 36	Definition fair.										

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 October 23	959	— 51½°	h m s 3 36 0	m 30	n + 31	Haze.
November 25	970			30	+ 35	"
October 28	857		4 0 0	60	+ 34	Definition good.
November 14	915			60	+ 41	Definition poor.
November 2	867		4 24 0	30	+ 33	Hazy.
25	871			30	+ 34	"
October 28	858		4 48 0	30	+ 34	Hazy, fine
1888 January 4	1064			30	+ 34	Hazy, good, interrupted
19	1117			60	+ 30	Bad definition
20	1121			60	+ 30	" "
1887 October 20	831		5 12 0	35	+ 22	Hazy.
November 14	916			30	+ 23	"
1888 January 6	1083		5 36 0	30	+ 32	Definition very good.
19	1118			60	+ 45	Definition bad.
20	1122			60	+ 48	" "
1887 October 25	847		6 0 0	30	+ 22	Definition fine.
28	859			30	+ 30	Definition variable; bad.
March 10	591		6 24 0	60	+ 43	Definition bad; also Nasmyth.
November 15	928			30	+ 14	Definition fair.
March 11	594		6 48 0	60	+ 39	Definition fair; also Nasmyth.
December 5	991			30	+ 31	Definition variable.
1888 March 7	1180			30	+ 19	Definition fair.
1887 March 17	598		7 12 0	60	+ 35	Definition fair; also Nasmyth.
1888 January 21	1067			30	+ 20	Definition good.
1887 March 10	592		7 36 0	60	+ 48	Definition bad; also Nasmyth.
19	604			60	+ 30	Definition fair; also Nasmyth.
11	595		8 0 0	60	+ 40	" "
22	609			60	+ 30	" "
26	613		8 24 0	60	+ 30	" "
30	618			60	+ 38	Lens dewed; also Nasmyth.
19	605		8 48 0	65	+ 34	Cloudy at times; also Nasmyth.
April 6	621			60	+ 39	Bad plate; also Nasmyth.
March 11	596		9 12 0	60	+ 42	Definition fair; also Nasmyth.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES—*continued*.

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.	
1887 March	18	602	— 51½	h m s 9 12 0	m 60	m + 31	Definition fair ; also Nasmyth.
April	14	628		9 36 0	60	+ 34	" "
	29	644			60	+ 29	" "
	6	622		10 0 0	60	+ 37	Definition poor ; also Nasmyth.
1888	7	1253			30	+ 42	Definition good.
January	20	1124			60	+ 38	Hazy.
		1154			50		"
March	29	1244			30	+ 35	"
May	9	1324		10 24 0	34	+ 19	"
	9	1325			40	+ 61	"
1887 April	14	629		10 48 0	60	+ 34	Definition fair ; also Nasmyth.
	29	645			60	+ 31	" "
April	6	623		11 12 0	50	+ 34	Cloud from S.W. ; also Nasmyth.
May	10	651			60	+ 33	Definition fair ; also Nasmyth.
June	9	669		11 36 0	60	+ 60	" "
	11	672			60	+ 70	" "
April	28	643		12 0 0	60	+ 32	" "
	29	646			60	+ 30	" "
May	27	660		12 24 0	60	+ 38	" "
	28	663			60	+ 50	Lens dewed ; also Nasmyth.
June	22	684		12 48 0	60	+ 45	? Hazy ; also Nasmyth.
1888 April	28	1291			40	+ 57	Hazy.
March	8	1194			13	+ 13	Clock stopped.
May	8	1317			30	+ 16	Definition fair.
June	19	1381			30	+ 55	Definition good ; haze.
1887 July	5	694		13 12 0	60	+ 66	Definition good ; also Nasmyth.
1888 May	8	1318			30	+ 35	Definition good.
June	7	1352			30	+ 51	Definition fair.
1887 June	13	676		13 36 0	60	+ 35	Definition fair ; also Nasmyth.
	25	687			60	+ 44	Definition good ; also Nasmyth.
	17	681		14 0 0	60	+ 32	Definition bad ; also Nasmyth.
July	4	691			60	+ 30	Definition good ; also Nasmyth.
May	9	649			20	+ 13	Clouded up ; also Nasmyth.

INTRODUCTION.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 June	29	690	— 51½°	h m s 14 0 0	m 35	+ 26 ^m Lens wet ; also Nasmyth.
1888 March	7	1188		14 24 0	60	+ 55 Hazy.
	13	1216			60	+ 46 Definition fair.
1887 June	13	677		14 48 0	60	+ 35 Definition fair ; also Nasmyth.
July	5	695			60	+ 42 Definition good ; also Nasmyth.
	25	710		15 12 0	60	+ 34 " "
August	2	715			60	+ 55 " "
	6	720		15 36 0	60	+ 53 " "
	10	728			60	+ 48 Definition fair.
	1	713			35	+ 30 Lens wet ; also Nasmyth.
July	19	704		16 0 0	60	+ 33 Definition fair ; also Nasmyth.
August	8	726			60	+ 50 " "
	7	724			60	+ 42 Slight haze ; also Nasmyth.
	19	734		16 24 0	60	+ 71 Interrupted by cloud.
	20	737			60	+ 60 Definition fair.
July	20	707		16 48 0	60	+ 40 Definition fair ; also Nasmyth.
August	2	716			60	+ 34 Definition good ; also Nasmyth.
	6	721		17 12 0	60	+ 34 Large lens wet ; also Nasmyth.
	10	729			60	+ 30 Definition fair.
	16	731		17 36 0	60	+ 30 " "
September	6	757			60	+ 54 Definition poor.
		727			15	+ 10 " "
	12	764		18 0 0	60	+ 55 Definition fair.
	15	773			60	+ 75 " "
1888 August	9	1538			30	+ 68 " "
1887 September	3	752		18 24 0	60	+ 60 Definition bad.
	5	754			60	+ 32 Definition good.
August	20	738			20	+ 42 Clock wrong.
	23	743		18 48 0	60	+ 35 Definition fair.
September	7	760			60	+ 34 " "
August	20	739		19 12 0	60	+ 40 " "
	30	745			60	+ 40 " "
September	5	755		19 36 0	60	+ 33 Definition good.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 September 12	765	— 51½°	h m s 19 36 0	m 60	h m + 0 40	Definiton fair.
6	758		20 0 0	60	+ 0 45	Definition poor.
9	762			60	+ 0 25	Definition fair.
August 23	744		20 24 0	60	+ 0 32	" "
September 15	774			60	+ 0 30	" "
August 30	746		20 48 0	65	+ 0 32	5 ^m hazy.
September 26	795			60	+ 0 34	Hazy.
August 20	740			60	+ 0 33	Definition fair.
September 17	777			60	+ 0 60	Hazy.
October 13	817		21 12 0	60	+ 0 34	Definition very bad.
19	822			60	+ 0 46	Definition fair.
September 15	775		21 36 0	60	+ 0 30	" "
1888 December 31	1945			44	+ 5 52	" "
1887 September 23	792			60	+ 0 37	Definition fair.
October 25	840		22 24 0	30	+ 0 34	Definition good.
November 3	870			30	+ 0 55	Definition poor; haze.
2	860		22 48 0	30	+ 0 23	Definition good.
5	886			30	+ 0 39	Definition poor.
September 23	793		23 12 0	60	+ 0 38	Definition fair.
October 13	819			60	+ 0 46	Definition very bad.
September 21	787			60	+ 0 33	Lens wet.
20	783		23 36 0	60	+ 0 42	Definition fair.
October 21	835			30	+ 0 25	Slight haze.
1888 March 16	1226		8 48 0	15	+ 0 9	Clock stopped.
16	1227		10 0 0	30	+ 0 21	Clock wrong.
1889 January 21	2025		7 36 0	35	— 0 96	Definition very bad.
21	2026		8 48 0	35	— 2 4	" "
April 21	2241		12 24 0	45	+ 0 60	Definition bad.
May 23	2333		14 48 0	45	+ 0 33	Definition poor.
24	2346			45	+ 0 23	Definition good.
24	2351		16 48 0	45	+ 2 32	" "
8	2290		22 0 0	45	— 1 53	Definition fair.
11	2322			45	— 2 10	" "

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.	
1887 March	29	614	$-47\frac{1}{2}^{\circ}$	^h ^m ^s 7 30 0	^m 60	^m + 45	Definition fair ; also Nasmyth.
	30	617		7 52 30	20	+ 8	Clock slowed ; also Nasmyth.
April	4	624			60	+ 40	15 ^m hazy ; also Nasmyth image double.
	12	626		8 15 0	40	+ 40	Clouded up.
	14	627			60	+ 45	Definition fair ; also Nasmyth.
March	29	615		9 0 0	60	+ 30	" "
April	21	635			60	+ 45	Definition good ; also Nasmyth.
	23	637		9 22 30	60	+ 33	" "
	28	641			60	+ 38	Definition fair ; also Nasmyth.
	7	625			60	+ 30	Definition bad.
May	10	650		9 45 0	60	+ 50	Definition fair.
	12	653			60	+ 25	Definition fair ; also Nasmyth.
March	29	616		10 7 30	60	+ 35	" "
April	21	636			60	+ 45	Definition good ; also Nasmyth.
	15	630			60	+ 33	Hazy at end ; also Nasmyth.
June	13	675		12 0 0	60	+ 60	Definition fair ; also Nasmyth.
	14	678		12 22 30	60	+ 39	Hazy ; also Nasmyth.
May	23	658		13 30 0	60	+ 35	Definition fair ; also Nasmyth.
September	19	778		19 30 0	60	+ 29	Definition fair.
	21	784			60	+ 27	" "
	22	788		20 37 30	60	+ 27	Faint haze.
November	7	893	-48	0 0 0	30	+ 21	Definition good.
	12	901			30	+ 54	" "
	3	872		0 24 0	30	+ 19	Definition bad ; haze.
	7	894			30	+ 38	Definition good.
	2	863		0 48 0	30	+ 31	" "
	4	878			30	+ 31	Definition bad.
1889 March	11	2167		1 12 0	30	+ 60	Definition fair.
1887 November	7	895			30	+ 29	Definition good.
October	21	836		1 36 0	30	+ 24	Hazy.
November	4	879			30	+ 22	Definition bad.
	7	896		2 0 0	30	+ 21	Definition fine.
December	7	998			30	+ 37	Definition very good.

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.			Duration of Exposure.	Hour Angle.		Remarks.
			h	m	s		h	m	
1887 November	4	880	—	48	0	30	+ 0	14	Definition bad.
	12	904				30	+ 0	30	Definition good.
December	5	986	2	48	0	30	+ 0	10	" "
	7	999				30	+ 0	20	Definition very good.
November	4	881	3	12	0	33	+ 0	31	Definition bad.
	14	914				30	+ 0	10	Definition fair.
	2	866	3	36	0	27	+ 0	39	" "
	12	905				30	+ 0	35	Definition good.
1889 January	11	1994				34	+ 0	24	" "
1887 November	4	882	4	0	0	30	+ 0	45	Definition bad.
	25	979				30	+ 0	35	Definition poor.
	22	953	4	24	0	30	+ 0	38	Definition fair.
	23	960				30	+ 0	23	Definition fair; slight haze.
	4	883	4	48	0	30	+ 0	40	Definition bad.
	12	907				30	+ 0	48	Definition good.
1889 January	11	1995				32	+ 2	0	" "
1887 November	22	954	5	12	0	30	+ 0	42	Definition fair.
	29	980				30	+ 0	15	Definition very bad.
	14	917	5	36	0	30	+ 0	10	Definition poor.
	15	927				30	+ 0	21	Definition fair; haze.
	4	884	6	0	0	30	+ 0	24	Definition bad.
	12	908				30	+ 0	24	Definition good.
	4	885	6	24	0	30	+ 0	41	Definition bad.
	25	974				30	+ 0	40	Hazy.
	14	918	6	48	0	30	+ 0	24	Definition poor.
December	11	1013				30	+ 0	32	Definition very good.
	11	1014	7	12	0	30	+ 0	57	" "
	13	1030				30	+ 0	47	Definition variable.
1888 March	3	1171				30	+ 0	33	Definition very bad.
1887 December	14	1037	7	36	0	30	+ 0	18	Definition variable.
1888 March	15	1220				30	+ 0	27	Definition good.
January	31	1140				60	+ 0	45	
March	9	1196				60	+ 0	50	Four interruptions by cloud.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 December 14	1038	— 48°	h m s 8 0 0	m 30	h m + 0 43	Definition variable.
1888 March 3	1172			30	+ 0 22	Definition poor.
February 29	1168			30	+ 0 26	Definition fair.
1887 December 12	1023			20	+ 0 46	Definition very bad.
13	1031		8 24 0	30	+ 0 19	Definition good.
21	1056			30	+ 0 38	Definition variable.
14	1106		8 48 0	30	+ 0 20	Definition fair; slight haze.
1888 March 10	1203			30	+ 0 20	Definition very bad.
January 14	1107		9 12 0	30	+ 0 35	Definition fair; slight haze.
21	1129			60	+ 0 37	Poor plate.
March 7	1184			30	+ 0 18	Definition poor.
January 14	1108		9 36 0	30	+ 0 52	Definition good.
March 3	1175			30	+ 0 28	Definition fair.
12	1209		10 0 0	30	+ 0 17	Definition poor.
15	1224			30	+ 0 34	Definition good.
12	1210		10 24 0	30	+ 0 29	Definition variable.
27	1240			30	+ 0 25	Hazy.
1889 April 21	2239			45	+ 0 78	Definition very bad.
1888 March 31	1248			20	+ 0 15	Hazed up.
June 21	1399			30	+ 3 51	Definition fine; hazy.
March 29	1245		10 48 0	30	+ 0 25	Definition good.
April 10	1259			60	+ 0 35	Hazy towards end; definition good.
1889 April 21	2240			45	+ 0 44	Definition very bad.
1888 March 3	1176		11 12 0	38	+ 0 34	Definition good.
January 20	1125			60	+ 0 34	Definition fair.
June 20	1388			30	+ 0 65	Definition fine.
July 19	1474			30	+ 3 40	Definition bad.
April 7	1255		11 36 0	30	+ 0 40	Definition good.
26	1280			30	+ 0 42	" "
July 18	1465			30	+ 3 39	Definition very bad.
June 18	1369			30	+ 0 46	Definition poor.
April 14	1265		12 0 0	30	+ 0 45	Definition good.
July 16	1447			30	+ 3 9	Definition very bad.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.			Duration of Exposure.	Hour Angle.		Remarks.
			h	m	s		h	m	
1888 March	7	1185	—	48	0	30	+	0 28	Hazy.
	9	1197				30	+	0 27	Definition very bad.
	3	1178		12	48 0	30	+	0 35	Definition variable.
April	14	1266				30	+	0 37	Definition good.
March	9	1198				30	+	0 46	Definition very bad.
June	20	1390				30	+	0 31	Definition fine.
March	7	1186		13	12 0	30	+	0 20	Hazy.
June	18	1371				30	+	0 30	Definition fair.
March	3	1179		13	36 0	30	+	0 29	Definition variable.
March	7	1187				30	+	0 37	Hazy.
June	19	1382				30	+	0 45	Definition good.
March	9	1199				30	+	0 40	Definition bad.
March	13	1215		14	0 0	30	+	0 24	Definition variable.
	14	1218				30	+	0 29	Definition fair.
	12	1211				30	+	0 23	Hazy.
	14	1219		14	24 0	15	+	0 38	Definition fair; 15 ^m hazy.
	17	1233				30	+	0 44	Definition good.
June	18	1373				30	+	0 37	Definition fair.
March	12	1212				28	+	0 65	Hazy; clock wrong.
	15	1225				30	+	0 28	Definition good.
June	7	1354		14	48 0	30	+	0 35	Definition fair; hazy at start.
	29	1401				30	+	2 29	Definition good.
July	11	1421				30	+	2 45	Definition fair.
April	28	1299				30	+	0 55	Definition good.
	28	1300		15	12 0	30	+	0 21	" "
May	8	1321				30	+	0 34	Definition variable.
July	11	1422				30	+	2 26	Definition fair.
April	28	1301		15	36 0	30	+	0 47	Definition good.
June	30	1411				30	+	2 57	" "
July	13	1441				30	+	0 25	" "
May	3	1306		16	0 0	30	+	0 25	Definition good; heavy dew.
July	17	1457				30	+	2 44	Definition fair.
	11	1423				30	+	2 21	" "

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1888 May 3	1307	— 48°	^{h m s} 16 24 0	^m 30	^{h m} + 0 34	Definition good ; heavy dew.
June 6	1345			30	+ 0 23	Definition good.
July 17	1458			30	+ 3 0	Definition fair.
June 6	1346		16 48 0	30	+ 0 41	Definition good.
July 17	1459			30	+ 3 31	Definition fair.
	25			30	+ 1 20	" "
September 12	1628			15	+ 3 27	Definition very bad.
May 4	1308		17 12 0	30	+ 0 59	Definition good ; heavy dew.
October 22	1731			39	+ 4 31	Definition fair.
	24			40	+ 3 51	" "
July 28	1511		17 36 0	30	+ 0 61	" "
October 22	1732			40	+ 4 57	" "
July 28	1512		18 0 0	30	+ 3 1	" "
October 22	1733			40	+ 4 27	" "
	25			40	+ 4 53	" "
	24		18 24 0	40	+ 3 51	" "
November 1	1783			39	+ 4 40	" "
	11			43	+ 5 11	" "
October 22	1734		18 48 0	40	+ 4 33	" "
	25			40	+ 4 51	" "
November 1	1784		19 12 0	37	+ 4 34	" "
	11			43	+ 5 15	" "
1887 September 26	794		19 36 0	60	+ 0 37	S.E. haze.
1888 October 22	1735			40	+ 4 31	Definition fair.
1887 October 12	812		20 0 0	60	+ 1 15	" "
1888 October 25	1750			35	+ 4 22	" "
1887 October 6	801		20 24 0	60	+ 0 30	Definition bad.
	11			58	+ 1 6	0 ^h 22 ^m to 52 ^m , and 1 ^h 22 ^m to 50 ^m .
	10		20 48 0	60	+ 0 30	
	10			30	+ 1 22	Lens hazy at end.
	25		21 12 0	30	+ 0 49	Definition good.
1888 October 25	1751			40	+ 3 53	Definition fair.
1887 October 6	802		21 36 0	40	+ 0 27	" "

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 October 21	832	— 48°	h m s 21 36 0	m 60	h m + 0 42	Definition fair.
1888 November 1	1785			32	+ 3 2	" "
1887 September 26	796		22 0 0	60	+ 0 32	S.E. haze.
October 13	818			60	+ 0 51	Definition very bad.
1888 October 25	1752			35	+ 3 48	Definition fair.
1887 October 21	833		22 24 0	30	+ 0 17	" "
26	848			30	+ 0 33	? Haze.
November 4	875		22 48 0	60	+ 0 41	Definition bad ; haze.
14	909			30	+ 1 12	Definition fair.
October 11	811			24	+ 0 17	Clouded up.
September 26	797		23 12 0	60	+ 0 38	S.E. haze.
October 25	841			30	+ 0 18	Definition bad.
November 2	861		23 36 0	30	+ 0 13	Definition good.
3	871			30	+ 0 26	Definition poor.
1887 November 15	920	— 44°	0 0 0	30	+ 0 33	Definition bad.
19	930			30	+ 0 22	Definition fair.
15	921		0 22 30	40	+ 0 57	Definition bad.
22	948			30	+ 0 41	Definition fair.
19	931		0 45 0	30	+ 0 12	" "
21	939			30	+ 0 13	Definition poor.
19	932		1 7 30	30	+ 0 28	Definition fair.
121	940			30	+ 0 30	Definition very bad.
15	922		1 30 0	30	+ 0 24	Definition fair.
22	949			30	+ 0 18	" "
19	933		1 52 30	30	+ 0 21	Definition variable.
21	941			30	+ 0 22	Definition very bad ; hazy.
15	923		2 15 0	30	+ 0 19	Definition poor.
22	950			30	+ 0 13	Definition fair.
15	924		2 37 30	30	+ 0 39	Definition bad.
19	934			30	+ 0 15	Definition variable.
21	942		3 0 0	30	+ 0 10	Definition very bad ; hazy.
22	951			30	+ 0 11	Definition fair.
1889 January 2	1948			32	+ 3 4	" "

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 November 21	943	— 44°	^h ^m ^s 3 22 30	^m 30	^h ^m + 0 22	Definition very bad ; hazy.
December 5	987			30	+ 0 15	Definition good.
5	988		3 45 0	30	+ 0 37	" "
7	1001			30	+ 0 40	Definition very good.
November 19	936		4 7 30	30	+ 0 29	Definition bad.
21	944			30	+ 0 42	Definition very bad.
December 9	1010		4 30 0	30	+ 0 21	Definition fair.
17	1042			30	+ 0 13	Definition good.
November 18	929			30	+ 0 28	Haze and cloud.
21	945		4 52 30	30	+ 0 46	Definition bad.
December 5	989			30	+ 0 40	Definition fair.
6	993		5 15 0	30	+ 0 35	Hazy.
11	1011			30	+ 0 42	Definition variable.
November 29	981		5 37 30	30	+ 0 32	Definition poor.
December 6	994			30	+ 0 10	Hazy.
November 19	938			30	+ 0 28	Very bad definition.
21	946		6 0 0	30	+ 0 21	Definition bad.
22	955			30	+ 0 43	Definition fair.
21	947		6 22 30	30	+ 0 41	? Haze.
29	982			30	+ 0 30	Definition fair.
22	956		6 45 0	30	+ 0 38	" "
December 6	995			30	+ 0 39	Hazy.
November 29	983		7 7 30	30	+ 0 29	Definition bad.
December 6	996			30	+ 0 58	Hazy.
1888 March 8	1189			30	+ 0 31	Cracked ; definition bad.
10	1201		7 30 0	30	+ 0 21	Definition very bad.
1889 January 22	2032			39	— 2 46	Definition fair.
1888 March 8	1190			30	+ 0 29	Definition bad.
January 4	1068		7 52 30	30	+ 0 45	Definition good.
March 10	1202			30	+ 0 37	Definition very bad.
January 6	1086		8 15 0	30	+ 0 37	Definition variable.
16	1112			30	+ 0 20	" "
4	1069		8 37 30	30	+ 0 32	Definition good.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.	
1888 January	13	1098	— 44°	h m s 8 37 30	m 30	h m + 0 20	Definition fair.
	11	1089			30	+ 0 39	Hazy and wrong guiding star.
	13	1099		9 0 0	30	+ 0 40	Definition fair.
1889 February	8	2087			40	— 0 37	Definition variable; hazy.
1888 January	6	1087			30	+ 0 33	Wrong guiding star.
March	8	1192			30	+ 0 12	" "
January	4	1070		9 22 30	30	+ 0 37	Definition good.
	16	1113			30	+ 0 25	Definition variable.
	6	1088		9 45 0	30	+ 0 45	Definition good.
March	24	1236			30	+ 0 40	Definition fair.
June	21	1397			31	+ 0 14	Definition fine; hazy atmosphere.
January	11	1090			30	+ 0 38	Haze, and wrong star.
March	10	1204			30	+ 0 11	Poor.
January	13	1100		10 7 30	30	+ 0 15	Definition fair.
June	21	1398			30	+ 3 34	Definition fair; hazy atmosphere.
1889 February	8	2088			40	— 2 55	Definition variable; hazy.
1888 March	10	1205			30	+ 0 29	Poor.
1889 February	8	2089		10 30 0	40	— 2 28	Definition variable; hazy.
April	23	2255			45	+ 0 18	Definition good.
	24	2262			45	+ 0 21	Definition fair.
February	8	2090		10 52 30	38	— 1 33	Definition variable; hazy.
April	23	2256			45	+ 1 33	Definition fine.
	24	2263			45	+ 0 48	Definition fair. ? Haze.
1888 April	14	1264			30	+ 0 26	Definition good.
	20	1270		11 15 0	30	+ 0 46	Definition good; heavy dew.
June	21	1400			30	+ 3 47	Definition fine; hazy atmosphere.
May	8	1315			30	+ 0 27	Poor. Definition variable.
June	27	1289		11 37 30	30	+ 0 35	Definition good.
July	19	1475			30	+ 3 54	Definition bad. ? Haze.
June	19	1379			30	+ 0 49	Hazy; definition good.
April	20	1271		12 0 0	30	+ 0 35	Definition good; heavy dew.
May	8	1316			30	+ 0 25	Definition good.
June	20	1389			30	+ 0 53	Definition fine.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.			Duration of Exposure.	Hour Angle.		Remarks.			
			h	m	s		h	m				
1888 April	27	1290	—	44	0	12	22	30	30	+ 0	31	Definition good.
June	18	1370							30	+ 0	39	Definition poor ; slight haze.
	19	1380							30	+ 0	41	Definition variable.
April	23	1274							30	+ 0	23	Hazy, and guiding clock wrong.
	26	1281							30	+ 0	36	Definition variable.
July	16	1448				12	45	0	30	+ 3	15	Definition very bad.
	18	1466							30	+ 3	17	" "
April	20	1272							30	+ 0	31	Object glass dewed.
	26	1282				13	7	30	30	+ 0	32	Definition good.
July	19	1476							30	+ 2	56	" "
August	3	1519							30	+ 3	34	Definition fair.
April	26	1267				13	30	0	30	+ 0	35	Definition good.
July	19	1408							30	+ 2	59	" "
August	3	1419							30	+ 2	58	Definition fair.
April	26	1283				13	52	30	30	+ 0	31	Definition good.
May	8	1319							30	+ 0	33	Definition variable.
June	18	1372							30	+ 0	28	Definition fair.
April	27	1292				14	15	0	30	+ 0	50	Definition good ; heavy dew.
	28	1298							30	+ 0	35	Definition good.
June	7	1353							30	+ 0	29	Definition fair.
May	8	1320				14	37	30	30	+ 0	27	Definition variable.
July	11	1420							30	+ 2	18	Definition fair.
June	30	1410				15	0	0	30	+ 2	53	Definition good.
July	7	1456							30	+ 3	4	Definition fair.
June	6	1344				15	22	30	30	+ 0	42	Definition good.
	7	1355							30	+ 0	43	Definition fair.
July	18	1468							30	+ 2	26	Definition very bad.
	23	1493				15	45	0	30	+ 1	48	Definition fair.
September	1	1616							30	+ 3	43	Definition poor.
	28	1671							30	+ 3	45	Definition variable.
July	30	1483							30	+ 2	57	Definition good.
	20	1484				16	7	30	30	+ 3	20	" "
	23	1494							40	+ 2	10	Hazy.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.			Duration of Exposure.	Hour Angle.		Remarks.
			h	m	s		m	h m	
1888 September 15	1644	— 44°	16	7	30	40	+ 4	25	Hazy.
July 23	1495		16	30	0	30	+ 2	31	Bad and hazy.
28	1510					30	+ 0	13	Definition fair.
October 3	1698					60	+ 4	15	Hazy; difficult to follow.
July 20	1485		16	52	30	30	+ 3	19	Definition good.
October 9	1717					50	+ 3	51	Hazy.
12	1719					45	+ 4	5	Cloud.
July 25	1502		17	15	0	30	+ 3	34	Definition good.
August 22	1591					30	+ 3	18	" "
24	1603					30	+ 4	24	Definition fair.
July 20	1486					30	+ 3	38	Definition good.
October 9	1718		17	37	30	50	+ 3	51	Hazy.
23	1738					37	+ 4	12	Definition fair.
25	1747					35	+ 4	31	" "
July 25	1503		18	0	0	30	+ 3	20	Definition good.
October 3	1699					30	+ 3	36	Definition very bad.
29	1756					40	+ 5	1	Definition fair.
23	1739		18	22	30	30	+ 4	9	Hazy.
November 5	1792					44	+ 5	6	Definition fair.
7	1801					40	+ 5	8	" "
November 24	1850		18	45	0	30	+ 5	37	Definition very bad.
25	1855					37	+ 5	51	Definition bad.
7	1802					40	+ 5	31	Wrong star.
October 29	1757		19	7	30	40	+ 4	43	Definition fair.
November 5	1793					42	+ 5	15	" "
October 31	1774		19	30	0	35	+ 4	31	? Haze.
November 7	1803					40	+ 5	36	Definition fair.
September 14	1638		19	52	30	30	+ 2	26	Definition bad.
October 3	1700					30	+ 2	29	Definition very bad.
November 5	1794		20	15	0	52	+ 5	8	Definition fair.
7	1804					40	+ 5	36	" "
October 29	1758		20	37	30	40	+ 4	1	Definition fair; hazy.
31	1775					40	+ 4	12	Hazy.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1888 November 5	1795	— 44°	h m s 21 0 0	m 45	h m + 5 16	Definition fair.
7	1805			40	+ 5 40	" "
October 31	1766		21 22 30	40	+ 4 15	Haze.
November 24	1851			38	+ 4 3	Definition very bad.
25	1856			40	+ 4 5	Definition bad.
7	1806		21 45 0	40	+ 5 41	Definition fair.
25	1857			38	+ 4 30	Definition bad.
1887 October 28	850		22 7 30	30	+ 0 11	Definition good.
1888 October 31	1777			40	+ 4 20	? Haze.
November 1	1786			28	+ 3 17	Hazy.
1887 October 28	851		22 30 0	30	+ 0 28	Definition good.
1888 November 24	1852			40	+ 3 40	Definition very bad.
24	1853		22 52 30	39	+ 4 5	" "
25	1858			40	+ 4 45	Bad plate.
December 31	1946			44	+ 5 32	Definition fair.
1887 November 15	919		23 15 0	30	+ 0 28	Definition bad.
1888 November 24	1854			40	+ 4 28	Definition fair.
December 31	1947			45	+ 6 0	" "
1887 November 14	910		23 37 30	30	+ 1 4	" "
22	1844			35	+ 4 15	Definition poor.
1888 December 29	1937	— 40°	0 0 0	42	+ 5 53	Definition fair.
1889 January 7	1966			35	+ 3 35	Definition very bad.
10	1986			50	+ 4 8	Definition good; hazy.
1888 December 23	1930		0 20 0	40	+ 5 11	Definition fair.
1889 January 7	1967			38	+ 4 2	Definition very bad.
9	1983			40	+ 4 30	Definition good.
1888 December 29	1938		0 40 0	37	+ 4 12	Definition fair.
1889 January 7	1968			35	+ 4 25	Definition very bad; interrupted.
9	1984			42	+ 4 59	Definition good.
1887 November 29	975		1 0 0	30	+ 0 27	Definition fair.
December 5	984			30	+ 0 41	Definition good.
November 29	976		1 20 0	30	+ 0 41	Definition variable.
December 5	985			30	+ 0 58	Definition good.

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Numbers.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1887 December	12 1015	— 40°	h m s 1 40 0	m 30	h m + 0 47	Definition variable.
1889 January	9 1985			42	+ 4 47	Definition good.
1887 December	8 1002		2 0 0	30	+ 0 12	Definition very good.
	9 1006			30	+ 0 13	Definition fair.
	8 1003		2 20 0	30	+ 0 29	Definition very good.
	9 1007			30	+ 0 31	? Haze.
	13 1024		2 40 0	30	+ 0 35	Definition good.
	21 1048			30	+ 0 21	Definition very bad.
	8 1004		3 0 0	33	+ 0 36	Interrupted { $0^h 10^m-23^m$ $0^h 43^m-1^h 3^m$
	9 1008			30	+ 0 29	Definition fair.
	9 1009		3 20 0	30	+ 0 46	Definition fair. ? Haze.
	12 1016			30	+ 0 12	Definition poor.
	7 1000			30	+ 0 14	Definition very good.
	12 1017		3 40 0	30	+ 0 26	Definition bad.
	13 1025			30	+ 0 15	Definition good.
1889 January	8 1978			35	+ 2 6	Definition fair.
1887 December	8 1005		4 0 0	30	+ 0 29	Two interruptions { $0^h 0^m-10^m$ $0^h 15^m-27^m$ $0^h 45^m-53^m$
	14 1032			30	+ 0 20	Definition poor.
1889 January	14 2005			34	+ 1 41	Definition fair.
1887 December	12 1018		4 20 0	30	+ 0 21	Definition very bad.
	13 1026			30	+ 0 12	9 ^m definition good ; poorly followed.
	13 1027		4 40 0	30	+ 0 29	Definition good.
	14 1033			30	+ 0 17	Definition poor.
	12 1019		5 0 0	30	+ 0 17	Definition bad.
	17 1043			30	+ 0 23	Definition good.
	21 1052		5 20 0	30	+ 0 16	Definition bad.
1888 January	12 1093			30	+ 0 34	Definition very good.
	4 1065		5 40 0	30	+ 0 23	Definition good ; interrupted.
	17 1115			60	+ 0 34	Definition fair.
	5 1074			30	+ 0 24	Very hazy.
1887 December	13 1028		6 0 0	30	+ 0 28	Definition fair.
1888 January	12 1094			30	+ 0 24	Definition very good.
1887 December	11 1012		6 20 0	30	+ 0 19	Definition fair.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.			Duration of Exposure.	Hour Angle.		Remarks.
			h	m	s		h	m	
1887 December 12	1020	— 40°	6	20	0	30	+ 0	27	Definition bad.
1889 January 18	2014					30	+ 0	37	Definition fair.
1887 December 13	1029		6	40	0	30	+ 0	31	Poor following.
1888 January 6	1084					30	+ 0	15	Definition good.
1887	1021								Double images ; definition very bad.
	1044								Wrong place.
December 21	1054		7	0	0	30	+ 0	43	Definition bad.
1888 January 9	1119					60	+ 0	29	Definition very bad.
	20					60	+ 0	34	Definition poor to good.
	1137					60	+ 0	60	Followed badly ; lamp blown out.
	1116								Definition fair.
1887 December 12	1022		7	20	0	30	+ 0	51	Definition very bad.
	17					30	+ 0	42	Definition good.
	17		7	40	0	30	+ 1	0	" "
	21					30	+ 0	43	Definition variable.
1888 March 12	1206		8	0	0	30	+ 0	20	Definition fair.
	18					30	+ 0	34	Definition bad.
1889 January 23	2034					39	— 2	51	Definition very bad.
1888 March 3	1173		8	20	0	30	+ 0	35	" "
	12					30	+ 0	38	Definition good.
February 29	1169		8	40	0	30	+ 0	22	Definition fair.
March 15	1222					30	+ 0	33	Definition good.
	12		9	0	0	30	+ 0	34	" "
	17					30	+ 0	19	" "
1889 January 23	2035					38	— 3	4	Definition very bad.
February 12	2099					40	— 2	35	Definition poor.
April 8	2230					28	+ 0	39	Lens wet at end.
1888 March 15	1223		9	20	0	30	+ 0	31	Definition good.
	17					30	+ 0	42	" "
February 29	1170					30	+ 0	22	Definition fair ; interrupted.
March 8	1193					30	+ 0	29	Definition bad ; haze.
	27		9	40	0	30	+ 0	30	Definition fair.
	29					30	+ 0	18	Definition good.

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.			Duration of Exposure.	Hour Angle.	Remarks.	
			h	m	s				
1889 April	20	2236	— 40°	9	40	0	46	+ 1 39	$\left\{ \begin{array}{l} 0^h 53^m-56^m. \\ 1^h 14^m-29^m. \\ 1^h 44^m-47^m. \\ 1^h 50^m-55^m. \\ 2^h 5^m-25^m. \end{array} \right.$
1888	7	1251					30	+ 0 36	Wrong star.
	10	1258		10	0	0	30	+ 0 13	Definition good.
1889 February	12	2100					40	— 2 45	Definition poor.
April	21	2238					47	+ 0 53	Hazy ; mid-exposure.
February	12	2101		10	20	0	40	— 2 18	Definition poor.
April	23	2257					45	+ 2 57	Definition good to poor.
	27	2273		10	40	0	45	+ 0 25	Definition fair.
May	9	2291					45	+ 0 45	" "
February	12	2102					35	+ 1 50	Definition poor.
April	27	2274		11	0	0	30	+ 0 49	Hazy ; clouded up.
May	8	2283					45	+ 1 47	Definition fair.
	9	2293					45	+ 2 2	Definition good to poor.
February	12	2103					32	— 1 28	Definition poor.
	9	2091		11	20	0	45	+ 0 42	Hazy ; definition variable.
May	8	2284					45	+ 2 20	Definition fair.
1888	30	1332		11	40	0	30	+ 0 17	Definition good.
	31	1340					30	+ 0 30	" "
	9	2292					45	+ 0 32	Definition fair.
July	12	1429		12	0	0	30	+ 3 15	Definition variable
August	6	1527					30	+ 3 58	Definition good.
May	30	1333		12	20	0	30	+ 0 41	" "
	31	1341					30	+ 0 42	Definition fair.
July	12	1430		12	40	0	30	+ 3 10	Definition variable.
August	21	1584					30	+ 4 19	
May	30	1334		13	0	0	30	+ 0 38	Definition good.
August	18	1572					30	+ 4 23	Definition fair.
May	31	1342		13	20	0	30	+ 0 45	Definition poor.
July	12	1431					30	+ 2 57	Definition variable.
	23	1492					30	+ 3 34	Definition bad.
	4	1412		13	40	0	30	+ 2 53	Definition very bad.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.	
1888 July	13	1438	— 40°	h m s 13 40 0	m 30	h m + 2 46	Definition good.
	16	1449			30	+ 3 1	Definition very bad.
May	30	1335		14 0 0	30	+ 0 27	Definition good.
June	20	1391			30	+ 0 46	Lens wet after 5 ^m .
July	18	1467			30	+ 2 43	Definition very bad.
June	30	1409		14 20 0	30	+ 2 49	Definition good.
July	12	1432			30	+ 2 53	Definition variable.
	13	1439			30	+ 2 48	Definition good.
	13	1440		14 40 0	30	+ 3 7	" "
	16	1450			30	+ 2 35	Definition very bad.
	6	1343			30	+ 0 37	Double images ; definition fair.
	19	1477		15 0 0	30	+ 1 56	Definition good.
	28	1509			30	+ 4 4	Definition fair.
August	21	1585			30	+ 2 37	Hazy.
	24	1600		15 20 0	30	+ 2 33	Definition poor.
September	15	1642			36	+ 3 39	Hazy.
	15	1643		15 40 0	38	+ 4 5	"
	18	1651			37	+ 3 32	"
October	2	1690			30	+ 4 30	Definition very good ; clear.
September	25	1664			60	+ 4 42	Very hazy.
August	24	1601		16 0 0	30	+ 2 34	Definition variable.
September	14	1635			30	+ 3 50	Definition very bad.
August	22	1592			30	+ 2 25	Definition good.
October	1	1681		16 20 0	40	+ 3 55	Definition variable to bad.
	2	1691			30	+ 4 32	Definition very good.
	4	1706			30	+ 3 50	Definition fair.
	1	1682		16 40 0	37	+ 4 19	Definition unsteady.
	4	1707			30	+ 4 10	Definition fair.
August	22	1593		17 0 0	30	+ 2 37	Definition good.
	28	1609			30	+ 2 13	Definition fair.
	28	1610		17 20 0	30	+ 2 35	" "
September	14	1636			30	+ 3 8	Definition bad.
August	18	1573		17 40 0	30	+ 0 28	Definition fair.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1888 August	22	1594	h m s 17 40 0	m 30	h m + 2 35	Definition good.
	28	1611	18 0 0	30	+ 2 36	Definition fair.
September	14	1637		30	+ 3 8	Definition bad.
August	24	1602	18 20 0	30	+ 2 41	Definition variable.
	28	1612		30	+ 2 53	Definition fair.
November	19	1817	18 40 0	40	+ 5 36	" "
	14	1811		15	+ 5 7	Definition very bad.
	20	1827		40	+ 5 40	Definition fair.
	22	1841	19 0 0	38	+ 5 51	Interrupted.
	28	1874		40	+ 5 58	Definition good.
	19	1818	19 20 0	40	+ 5 42	Definition fair.
	20	1828		40	+ 5 49	" "
	28	1875	19 40 0	45	+ 6 19	Definition good.
1889 May	10	2307		45	- 3 55	Definition fair.
	11	2318	20 0 0	50	- 3 55	Hazy.
	19	2324		45	- 3 57	Definition fine.
	11	2319	20 20 0	45	- 3 25	Definition poor.
	19	2325		45	- 3 22	Definition fine.
	11	2320	20 40 0	45	- 2 50	Definition fair.
	23	2339		40	+ 0 17	" "
	8	2289		33	+ 1 13	Obstructed by dome.
	11	2321	21 0 0	45	+ 2 7	Definition fair.
	19	2328		45	+ 0 27	Definition fine.
1888 November	19	1819	21 20 0	38	+ 4 26	Definition fair.
December	23	1927		42	+ 5 44	" "
	29	1936		42	+ 5 53	Definition variable.
November	19	1820	21 40 0	41	+ 5 0	Definition fair.
December	30	1939		45	+ 5 35	" "
November	28	1876	22 0 0	40	+ 4 53	Definition good.
December	7	1898		37	+ 4 25	Definition fair.
November	11	1809	22 20 0	30	+ 2 44	" "
December	23	1928		40	+ 5 30	" "
	23	1926		10	+ 5 15	Definition fair; hazed up.

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1888 November 19	1821	— 40°	h m s 22 40 0	m 40	h m + 4 53	Definition fair.
22	1842			36½	+ 3 33	
28	1877			40	+ 5 9	Definition good.
20	1829		23 0 0	30	+ 2 55	Definition fair.
December 7	1899			37	+ 4 9	" "
November 20	1830		23 20 0	33	+ 3 13	" "
22	1843			37	+ 3 41	
December 7	1900		23 40 0	37	+ 4 17	Definition fair.
23	1929			40	+ 4 59	" "
13	1915	— 36	0 0 0	38	+ 4 27	" "
1889 January 2	1949			35	+ 3 46	" "
5	1955			35	+ 3 31	Definition good.
5	1956		0 20 0	35	+ 3 51	" "
6	1960			35	+ 3 46	" "
6	1961		0 40 0	37	+ 4 8	" "
8	1974			35	+ 3 9	Definition fair.
5	1957		1 0 0	35	+ 3 52	Definition good.
11	1992			34	+ 2 58	" "
18	2011			41	+ 3 29	Definition fair.
8	1975		1 20 0	35	+ 3 12	" "
11	1993			35	+ 3 19	Definition good.
5	1958		1 40 0	35	+ 3 52	" "
8	1976			37	+ 3 34	Definition fair.
14	2003		2 0 0	33½	+ 2 12	" "
18	2012			37	+ 3 13	" "
19	2017			43	+ 2 47	Hazy.
1887 December 7	1039		2 20 0	30	+ 0 22	Definition fair.
1889 January 5	1959			35	+ 3 52	Definition good.
8	1977			37	+ 3 38	Definition fair.
1887 December 22	1057		2 40 0	30	+ 0 44	" "
1889 January 6	1962			33	+ 3 1	Definition good.
1887 December 17	1040		3 0 0	30	+ 0 19	" "
22	1058			30	+ 1 7	" "

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1888 December	17	1041	h m s 3 20 0	m 30	h m + 0 36	Definition good ; lens hazy.
	21	1049		30	+ 0 21	Definition very bad.
	28	1061		30	+ 0 11	Slight haze.
1888 January	5	1071	3 40 0	30	+ 0 25	Definition poor.
	6	1080		30	+ 0 30	Definition good.
1887 December	21	1050	4 0 0	30	+ 0 20	Definition very bad.
1888 January	17	1114		60	+ 1 9	Definition bad.
1889 January	18	2013		37½	+ 2 1	Definition fair.
1888 January	16	1109		60	+ 0 45	Definition bad ; slight haze.
1889 January	19	2018	4 0 0	36½	+ 1 39	
1887 December	22	1059	4 20 0	30	+ 0 26	Definition good.
1888 January	5	1072	4 20 0	30	+ 0 25	Definition poor.
	12	1091		40	+ 0 14	Definition very good.
1887 December	28	1063		30	+ 0 27	Very hazy.
	21	1051	4 40 0	30	+ 0 19	Definition very bad.
1888 January	6	1081		30	+ 0 11	Definition good to poor.
	21	1126		60	+ 0 40	Definition very fair.
1887 December	22	1060	5 0 0	30	+ 0 26	Definition good ; occasional cloud.
1888 January	12	1092		30	+ 0 11	Definition very good.
	13	1101		30	+ 0 20	Definition poor.
	23	1132	5 20 0	30	+ 0 20	" "
	26	1135		60	+ 0 26	Definition fair.
1889 January	11	1996		34	+ 2 13	Definition good.
1888 January	14	1102	5 40 0	30	+ 0 26	Definition fair.
February	3	1146		60	+ 0 43	
January	31	1139		60	+ 1 33	
February	2	1144		14	+ 0 10	
	3	1146		60	+ 0 43	
1887 December	14	1035	6 0 0	30	+ 0 26	Definition bad ; hazy.
1888 January	23	1133		60	+ 0 45	Definition poor.
	16	1111		60	+ 0 57	Clock stopped during exposure.
	5	1075		30	+ 0 45	Very hazy.

INTRODUCTION.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.	
1888 January	21	1127	— 36°	h m s 6 0 0	m 60	h m + 0 26	Definition very fair.
	26	1136			60	+ 0 55	Definition fair.
February	1	1142			60	+ 0 48	Definition bad.
1887 December	21	1053		6 20 0	30	+ 0 35	" "
1888 January	14	1103			30	+ 0 14	Definition good to bad.
	4	1066			30	+ 0 21	Cloud and wrong place.
	14	1036		6 40 0	30	+ 0 31	Definition bad.
	12	1095			30	+ 0 28	Definition very good.
	14	1104		7 0 0	30	+ 0 22	Definition very bad ; haze
February	3	1147			60	+ 0 26	
	1	1143		7 20 0	60	+ 0 38	
March	7	1181			30	+ 0 25	Definition fair.
January	5	1076			30	+ 0 30	Very hazy.
February	2	1145			60	+ 0 30	
January	6	1085		7 40 0	30	+ 0 32	Definition good.
1889 January	22	2033			33	— 1 50	Definition fair.
	21	2024			44	+ 0 4	Definition very bad.
1888 January	13	1097		8 0 0	30	+ 0 27	Definition fair.
March	7	1182			30	+ 0 20	Definition variable.
	15	1221			30	+ 0 37	Definition good.
January	14	1105			30	+ 0 28	Definition fair ; slight haze.
March	17	1230		8 20 0	30	+ 0 21	Definition fair.
	27	1237			30	+ 0 35	" "
	29	1241		8 40 0	30	+ 0 12	Definition good.
April	7	1249			30	+ 0 14	Star doubtful ; hazed up.
March	27	1238		9 0 0	30	+ 0 32	Definition fair.
	29	1242			30	+ 0 25	Definition good.
April	7	1250		9 20 0	30	+ 0 13	
	10	1257			30	+ 0 13	Definition good.
1889 April	24	2261		9 40 0	45	+ 0 20	Definition fair.
	25	2267			45	+ 0 22	Definition good.
	23	2254		10 0 0	45	+ 0 27	Definition fair.

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
			h m s	m	h m	
1888 April	27	2272	— 36°	45	+ 0 18	
	25	2268	10 20 0	45	+ 0 31	Definition good.
May	7	2280		45	+ 0 28	Definition good ; hazy at end.
April	25	2269	10 40 0	45	+ 1 0	Definition poor.
May	8	2281		45	+ 0 32	
February	18	2124		45	— 1 41	Definition good.
April	23	2258	11 0 0	45	+ 3 0	Definition fair.
May	8	2282		45	+ 1 0	" "
January	18	2125		33	+ 1 34	Definition good.
May	8	2285	11 20 0	45	+ 3 9	Definition fair.
	9	2294		45	+ 2 32	Definition good.
January	18	2126		30	+ 1 12	" "
February	12	2104	11 40 0	42	+ 2 7	Definition poor.
April	23	2259		45	+ 3 20	" "
August	9	1534	12 0 0	30	+ 4 22	Definition fair.
	10	1544		30	+ 4 11	" "
	16	1553	12 20 0	30	+ 4 40	Hazy.
	10	1545		30	+ 4 30	Hazy ; fair.
	18	1571		30	+ 4 19	" "
	3	1518	12 40 0	30	+ 3 9	" "
	9	1535		30	+ 4 20	" "
	20	1579		35	+ 4 22	Hazy.
	17	1564	13 0 0	30	+ 4 23	Definition fair.
	20	1580		30	+ 4 45	Hazy.
	9	1536	13 20 0	30	+ 4 21	Definition fair.
	10	1546		30	+ 4 10	" "
	4	1524	13 40 0	30	+ 3 5	" "
	16	1554		30	+ 3 50	" "
	3	1520	14 0 0	30	+ 3 23	" "
	4	1525		30	+ 3 25	" "
	9	1537	14 20 0	30	+ 4 1	" "
	10	1547		30	+ 3 38	" "

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
			h m s	m	h m	
1888 August 3	1521	— 36°	14 40 0	30	+ 3 25	Definition fair.
16	1555			30	+ 3 31	" "
16	1556		15 0 0	30	+ 3 54	" "
17	1565			30	+ 3 10	" "
20	1581		15 20 0	30	+ 3 6	" "
September 4	1622			30	+ 3 1	Definition very bad.
28	1670			30	+ 3 32	Definition variable.
August 20	1582		16 0 0	30	+ 3 21	Definition fair.
September 18	1652			37	+ 4 8	Hazy.
4	1624		16 20 0	30	+ 3 25	Definition very bad.
29	1674			60	+ 4 7	Hazy; definition variable.
October 5	1713		16 40 0	45	+ 3 50	Hazy.
21	1721			30	+ 3 50	Definition fair.
September 4	1625		17 0 0	30	+ 3 25	Definition very bad.
12	1629			30	+ 3 36	" "
29	1675			35	+ 4 23	Definition variable; haze.
October 5	1714		17 20 0	30	+ 4 2	Definition fine.
21	1722			30	+ 3 50	Definition fair.
4	1708		17 40 0	34	+ 4 8	" "
5	1715			45	+ 4 25	Hazy.
12	1720			40	+ 3 51	
September 18	1653		18 0 0	30	+ 2 53	Hazy.
October 30	1765			40	+ 4 56	Definition bad.
September 18	1654		18 20 0	30	+ 3 13	Hazy.
October 4	1709			34	+ 4 10	Definition fair.
21	1723			30	+ 3 50	" "
November 21	1835		18 40 0	40	+ 5 47	" "
27	1864			42	+ 6 6	Definition very bad.
December 3	1887		19 0 0	40	+ 6 20	Definition poor.
1889 May 8	2286			45	— 3 9	Definition fair.
9	2295			45	— 4 8	" "
1888 November 29	1878			60	+ 6 17	Definition bad; hazy.

REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1888 October	21	— 36°	^h ^m ^s 19 20 0	^m 30	^h ^m + 3 58	Definition fair.
	30			38	+ 5 6	Definition bad ; hazy.
November	27			42	+ 6 10	Definition very bad.
	21			20	+ 5 44	Definition fair.
1889 May	9		19 40 0	50	— 3 50	" "
	19			50	— 5 5	Occasional cirrus cloud.
1888 December	3			40	+ 6 22	Definition poor.
	7		20 0 0	40	+ 5 27	Definition fair.
1889 May	8			45	— 2 7	" "
	9			45	— 3 15	" "
	9		20 20 0	45	— 2 47	" "
	19			45	+ 0 18	Definition fine.
	8			45	— 1 17	" "
	19			45	— 2 29	Mostly cloudy.
1888 November	29		20 40 0	40	+ 5 29	Hazy.
December	10			40	+ 5 20	Definition fair ; haze.
1889 May	23			35	+ 1 1	Definition fair.
1888 December	3		21 0 0	40	+ 5 50	Definition poor.
	13			40	+ 5 3	Definition fair.
	10		21 20 0	40	+ 5 30	" "
	19			40	+ 5 6	" "
October	29		21 40 0	35	+ 3 46	Hazy.
December	21			45	+ 6 10	"
	23			42	+ 5 24	Definition fair ; haze.
	13		22 0 0	40	+ 4 59	Definition fair.
	19			40	+ 5 13	" "
October	30		22 20 0	30	+ 2 49	Definition bad.
November	27			36	+ 4 11	Definition very bad.
	29			40	+ 4 34	Definition bad ; haze.
December	10		22 40 0	35	+ 5 0	Definition fair ; haze.
	21			35	+ 5 32	" " "
	23			42	+ 5 19	" " "

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REJECTED DURCHMUSTERUNG PLATES—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1888 November 27	1867	— 36°	h m s 23 0 0	m 35	h m + 4 13	Definition very bad.
December 13	1914			38	+ 4 43.	Definition fair.
October 13	1769		23 20 0	30	+ 2 32	Definition bad.
November 20	1831			39	+ 4 17	Definition fair.
27	1868		23 40 0	38	+ 4 17	Definition very bad.
29	1881			40	+ 3 59	Definition bad ; haze.
December 3	1891			40	+ 4 57	Definition poor.
February 4	1151	— 32°	6 0 0	60	+ 2 3	
4	1152		6 54 0	60	+ 2 13	
April 16	1268		8 24 0	30	+ 3 36	Definition good.
16	1269		8 48 0	23	+ 3 57	Clock going badly.
26	1279		8 0 0	30	+ 3 55	" "
27	1284		6 0 0	30	+ 3 20	Definition bad to good.

PLATES TAKEN WITH THE 69-INCH "DALLMEYER" AND "NASMYTH" LENSES TO SELECT COMPARISON STARS FOR PARALLAX.

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.	
1886 November	26	515	— 8 46	h m 1 18	m 60	h m + 0 25	θ Ceti; also Nasmyth.
	26	516	— 57 49	1 33½	60	+ 1 19	α Eridani; also Nasmyth.
	26	517	— 74 35	3 49	60	+ 0 29	γ Hydri; also Nasmyth.
	29	518	— 9 27	0 14	60	+ 2 10	ϵ Ceti; also Nasmyth.
	30	520	— 8 20	5 9	60	— 2 34	β Orionis; also Nasmyth.
	30	521	— 1 17	5 23	60	— 1 43	ϵ Orionis; also Nasmyth.
	30	522	— 17 54	5 28	60	— 0 44	α Leporis; also Nasmyth.
December	1	523	— 9 43	5 42	60	— 3 7	α Orionis; also Nasmyth.
	1	524	— 16 34	6 40	60	— 2 58	Sirius; also Nasmyth.
	2	525	— 13 50	3 53	60	— 1 13	γ Eridani; also Nasmyth.
	2	526	— 52 38	6 21½	60	— 2 30	Canopus.
	2	527	+ 7 23	5 49	60	— 2 12	α Orionis; also Nasmyth.
	6	528	— 34 8	5 36	60	+ 0 50	α Columbæ; also Nasmyth.
	8	529	— 47 23	1 0½	60	+ 2 5	β Phœnicia; also Nasmyth.
	8	530			60		δ Canis Majoris; also Nasmyth. Lenses wet.
	8	531	— 59 6	8 20	60	+ 3 20	ϵ Carinæ; also Nasmyth.
	10	532	— 42 59	0 26	60	+ 2 20	α Phœnicis; also Nasmyth.
	10	533	— 40 48	2 54	60	+ 0 50	θ Eridani; also Nasmyth.
	11	534	— 77 57	0 19	60	+ 2 28	β Hydri; also Nasmyth.
	11	535	— 62 11	1 55	60	+ 1 57	α Hydri; also Nasmyth.
	11	536	— 52 14	1 51	60	+ 3 5	χ Eridani; also Nasmyth. Definition poor.
	13	537	— 46 26	0 3	60	+ 2 47	ϵ Phœnicis; also Nasmyth.
	15	538	— 18 40	0 37	20	+ 1 53	β Ceti; also Nasmyth.
	15	539	18 40	0 37	60	+ 2 38	β Ceti; also Nasmyth. Definition poor.
	15	540	0 13	2 33	60	+ 1 52	δ Ceti; also Nasmyth. Definition poor.
	23	547	— 2 0	5 34	60	— 2 8	ζ Orionis; also Nasmyth.
	23	548	— 20 50	5 23	20	— 1 12	β Leporis; also Nasmyth. Clock stopped.
	23	549	+ 16 16½	4 29	40	+ 0 40	α Tauri; also Nasmyth. Clock stopped.
January	10	554	16 16½	4 29	60	+ 0 30	α Tauri; also Nasmyth. Interrupted.
	11	556	— 21 32	5 0	60	+ 0 30	ϵ Leporis; also Nasmyth.
	11	557	— 51 7	5 44	60	+ 1 19	β Pictoris; also Nasmyth.

PLATES TAKEN WITH THE 69-INCH "DALLMEYER" AND "NASMYTH" LENSES TO SELECT
COMPARISON STARS FOR PARALLAX—*continued.*

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1886 January	13	559	3 37	60	+ 0 51	δ Eridani; also Nasmyth.
	13	560	5 18	60	+ 0 17	η Orionis; also Nasmyth.
	13	561	6 17	60	+ 0 29	β Canis Majoris; also Nasmyth.
	14	562	4 13	55	+ 0 23	X Eridani; also Nasmyth.
	14	563	4 31	60	+ 1 9	δ Doradus; also Nasmyth.
	14	564	6 34	60	+ 1 24	ν Puppis; also Nasmyth.
	15	566	5 33	40		β Doradus; also Nasmyth. Lens wet.
	17	567	5 29	60	+ 0 51	ϵ Orionis; also Nasmyth. Interrupted.
February	19	577	12 20	60	- 3 35	α Crucis; also Nasmyth.
1887 March	30	619	9 12	60	+ 0 55	β Carinæ; lens wet at end.
April	4	620				ζ Puppis.
June	17	682	14 31	60	+ 1 12	α Centauri; also Nasmyth.
July	12	697	13 55	60	+ 1 45	β Centauri; also Nasmyth. Lens wet.
	14	698	14 34	60	+ 2 12	α Lupi; also Nasmyth.
	25	712	22 7½	90		10 ^h 15 ^m to 11 ^h 45 ^m C.M.T., search for Eukrate.
August	2	718	21 58	100		10 ^h 20 ^m to 12 ^h 0 ^m C.M.T., search for Eukrate.
	6	723	21 52½	60		10 ^h 50 ^m to 11 ^h 50 ^m C.M.T., search for Eukrate; also Nasmyth.
September	5	756	21 12½	25	+ 0 47	For Eukrate; also Nasmyth.
	5	759	21 11½	120	+ 1 15	For Eukrate; occasional haze.
October	12	815	0 8	20	+ 0 43	Abney plate.
	12	816	0 8	60	+ 1 33	Paget plate.
	12	824	0 8	20	- 0 28	Abney plate.
	12	825	0 8	30	+ 0 1	" "
	12	826	0 8	60	+ 0 56	Paget plate.

MISCELLANEOUS PLATES.

TAKEN WITH THE FIRST "DALLMEYER" LENS IN ITS ORIGINAL STATE.

Date.	Rotation Number.	Dec. of Centre of Plate.	R.A. of Centre of Plate.	Duration of Exposure.	Hour Angle.	Remarks.
1885 April	2	4	— 85	10 15 0	60	Experimental plates.
	2	5	— 85	11 30 0	60	Time of experiment not noted.
May	5	29	— 70	13 30 0	60	+ 26
1886 April	8	390	— 55	11 30 0	60	+ 45
	30	403	— 55	11 0 0	60	+ 35
1885 September	8	146	0	18 20 0	60	+ 32
	8	147		20 0 0	60	+ 17
October	3	178		21 0 0	60	+ 10
	3	179		22 20 0	60	+ 26
	3	180		23 20 0	60	Wrong setting.
	14	188		21 40 0	60	+ 3
	14	189		23 0 0	60	+ 4
	14	190		0 20 0	60	+ 3
December	14	249		2 20 0	60	+ 4
	14	250		3 40 0	60	+ 0
	14	251		5 0 0	60	— 5
	16	255		2 20 0	60	+ 10
	16	256		4 0 0	60	— 10
	28	266		3 20 0	60	+ 7
	28	267		4 40 0	60	+ 5
	28	268		6 0 0	60	— 3
1886 January	4	270		4 20 0	60	— 1
	4	271		5 20 0	60	+ 13
	4	272		6 40 0	60	+ 12
	9	279		4 0 0	45	+ 1
	11	280		4 0 0	60	+ 9
	12	283		4 20 0		
	12	284		5 40 0	30	— 6
	13	285		4 40 0	60	— 9
	13	286		5 40 0	60	+ 7
	13	287		7 0 0	60	+ 6

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CAPE

PHOTOGRAPHIC DURCHMUSTERUNG.

AN ACCOUNT OF THE

MEASUREMENT OF THE PLATES

AND THE

METHODS OF REDUCTION,

TOGETHER WITH

A PRELIMINARY DISCUSSION OF THE RESULTS,

BY

J. C. KAPTEYN.

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1895.

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CAPE

PHOTOGRAPHIC DURCHMUSTERUNG.

1.—Introductory Remarks.

In considering the best methods for measurement and reduction of the plates obtained at the Cape Observatory and placed in my hands by Dr. Gill, so as to derive from them a complete Durchmusterung of the stars South of the parallel of Declination -19° , it was necessary in the first place to fix upon the most essential points requisite in the prosecution of such a work. Of these the following seemed to be the most important :—

- a. Freedom from mistakes either of observation or of reduction.
- b. Precision of the observations as measured by the probable errors of co-ordinates and magnitudes.
- c. Quickness in measurement, reduction and final arrangement of the work.

After a series of preliminary trials the method of parallactic measurement was finally adopted, and it seems to leave hardly anything to be desired.

By the use of this method the total corrections to be applied to the positions have been found generally so small that even if they had been wholly neglected the accuracy of the results would not have been inferior to that of most works of its kind. Moreover, the work can be so planned, and was, of course, so planned, as to reduce the labour to be spent on the final arrangement of the catalogue to a minimum. In fact, there would be little exaggeration in saying that the catalogue *in its final form* was read off from the plates by the observers at the instrument.

In regard to the precision of the positions it was found practicable, without loss of time, to get considerably beyond what was attempted at Bonn. There even seems

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little doubt but that, with the necessary instrumental outfit, a precision corresponding to a probable error of $\pm 1''$, or thereabout, in both co-ordinates, would have been obtainable without too excessive an extension of the time to be spent on the measurements and reductions, and a plan of the instrument required was even worked out by Dr. Gill and myself. The prospect of obtaining a catalogue of precision, which was shortly afterwards rendered possible by the resolutions of the International Astrophotographic Congress, the consideration of cost, and the unavoidable delay which the construction of the instrument would necessarily involve, made us give up this plan, and we resolved to rest content with the results that could be obtained with the instrument which I had been devising and constructing in the meanwhile with the help of a local mechanic.

2.—The Instrument.

The principle of the parallactic apparatus, the idea of which occurred to me very soon after the first plates were placed in my hands by Dr. Gill, has been explained elsewhere. (Vide *Bull. du com. perm. de la carte du ciel I.*, pp. 94, 115, 125, 377, 401.)

It will be sufficient in this place to give a short description of the instrument actually used and with which all the measurements for the catalogue have been made.

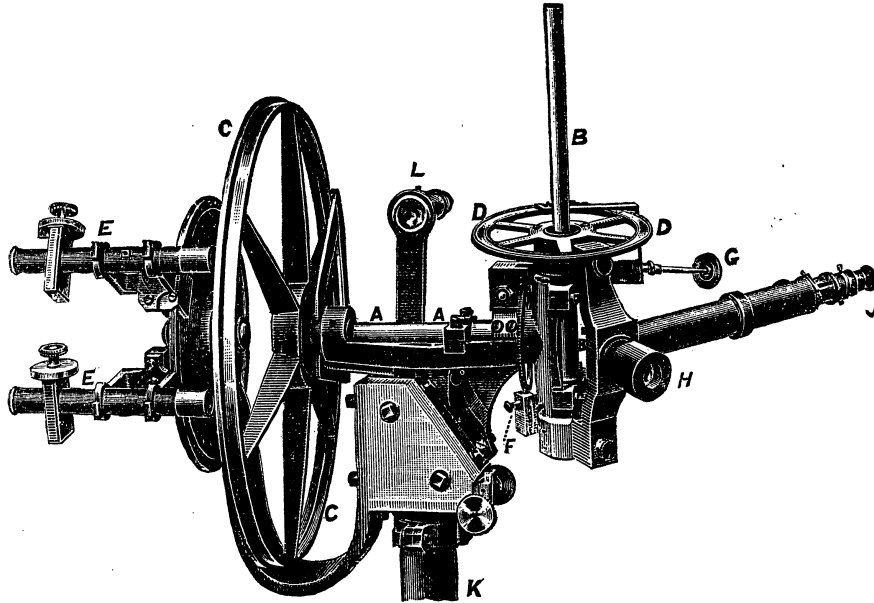
The possibility of measuring spherical co-ordinates directly on plane plates results from an evident property of these plates, viz., that by placing them at the proper distance (the focal distance of the photographic telescope) with the film farthest from the eye, it is always possible to cover the stars in the sky by their corresponding images. Therefore, if for the eye we substitute an instrument by which spherical co-ordinates are measured in the sky, it must be possible to measure these co-ordinates as well on the plates as in the sky itself.

The one fundamental condition, depending on the *finite* distance of the plates, which the instrument will have to fulfil, in addition to those of an ordinary equatorial, is, that the *three* axes: the polar axis, the declination axis, and the optical axis of the telescope, prolonged, must intersect in one and the same point. Moreover, the distance of the objective from this point must be small. For the rest, it will be advantageous to construct the instrument for the latitude *Zero*. Every plate can then be observed in the horizon and may be even mounted in an absolutely fixed frame if we give the whole instrument a vertical axis about which it can rotate.

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The annexed illustration* is a view of the instrument used. A large screen



attached to the solid brass block which carries the upper part of the instrument and protects the observer at the ocular from the illumination lamp of the right-ascension microscopes, as well as another screen attached to the eye end of the telescope have been removed, in order that the several parts of the instrument may be shown. Thus the apparatus may be described as an equatorial for latitude Zero.

The telescope *H J* is a *broken* one, that is to say, a prism is fixed behind the objective by which the rays entering at *H* are reflected at right angles to the axis of the objective.

This constitutes the most essential difference between the instrument in question and an ordinary equatorial, and is clearly necessitated by the above-mentioned condition.

The focal distance, when the telescope is focussed on the plate, is 32^{cm}; the clear aperture of the objective, 27^{mm}, but it was stopped down to 19^{mm} in all the observations. The distance from the centre of the objective to the declination axis is 115^{mm}.

The ocular used throughout the work is a fine achromatic one by Schröder, which, at the actual distance of the plates, gives a magnifying power of 3.3 diameters

* We are indebted to the Editor of *Engineering* for kindly sending an electrotype of this illustration, originally published by that Journal.

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(if we take 20^{cm} as the distance of best vision) equivalent to a power of 23 in ordinary observations in the sky. The diameter of the field is such that $67'$ of the plate can be seen at once and sharply defined to the edge of the field.

In the common focus of the objective and eye-piece is inserted an excellent glass scale for measurement of the declinations. This scale is a photographic one; the surface of the film is protected by another glass plate, and covers the whole field. Scales covering only half of the field, with which a number of trials were made, proved unsatisfactory.

A single line, on which the pointings for right ascension are made, and which may be called the *hour line*, stretches along the diameter of the field at right angles to the declination axis. In this line, the 66 division-lines terminate. These lines correspond in number to the number of minutes embraced by the field of view. The scale proper is divided into 60 parts, easily readable by the prolongation of every fifth line and the number attached to every tenth line. Three division lines below Zero and three beyond 60 are employed for observation of the overlapping parts of two contiguous zones.

BB is the declination axis, DD the declination circle. This circle, simply used as a setting circle, is read by a vernier to single minutes. The arrangement for slow motion, which is concealed by the parts by which the telescope is attached to the axis, allows a movement of seven or eight degrees, so that during the observations of a plate no unclamping is ever needed.

AA is the hour axis, firmly pressed against its cones at either end, not by springs but by the pressure of the two halves of a very steep hollow cone in brass against a third cone of the axis. The block of brass containing the upper half of this cone, visible in the figure near the right-hand end of the axis, can be moved somewhat up or down by means of two screws. If these screws are tightened, the upper half is brought nearer to the lower half, and the cone of the axis is pressed towards the left, till it rests perfectly against its guiding cones.

This device, resorted to because the mounting (the parallactic mounting of an old comet seeker of our astronomical collection) did not offer sufficient facilities for the application of springs or counterpoises, was found to work perfectly well in practice. Any *play* in the axis could be easily abolished without diminishing in the least the smoothness of the motion.

On the hour axis is fixed at one end the hour circle CC , at the other a worm-wheel F , into which gears a worm, movable by the key G , by which, consequently, a slow motion in right ascension may be given.

The circle, which is read off by one of the microscopes EE , is divided from 10 to 10 seconds of time, every whole minute being numbered, so that there are always three numbers at least visible at the same time in the field of the microscope. The reading is made by using the movable web in a fixed position, merely as an index, the position of which relative to the division lines is estimated to tenths of the interval between two consecutive lines. The right ascension is thus read off to single seconds of time. The accuracy of the pointings would have warranted a somewhat more refined method of reading, but I feared that the gain in accuracy would not be in proportion to the loss of time and the greater danger of mere mistakes.

The arms carrying the microscopes can be easily rotated about the centre of the circle without impairing the focussing; by this motion the microscopes can be roughly brought to give any determined reading, which is then accurately obtained by displacing the movable web, which serves as an index.

To the back of the hour circle is clamped a circle sector, shown in the figure, furnished with a rough division and a movable index, by which the hour circle can be roughly read from the ocular of the telescope. This device was found extremely useful in looking up single stars of which, for some reason or other, a revision was needed.

The whole apparatus rests on the iron stand K . This stand is centrally perforated, and is traversed by a vertical axis on which the whole instrument can be rotated. The heads of the screws, by which the slow motion about this axis is brought about, are shown in the figure somewhat above the top of the pillar K . Any particular position of the whole instrument was defined by the reading of a distant scale by means of the small telescope L .

3.—The Plate-holder.

As the focal distance of the photographic telescope is about 137^{cm} , the plates were mounted on the same pier that carried the measuring apparatus, at a distance of 137^{cm} from the point of intersection of the axes, and at $125^{\text{cm}} \cdot 5$ from the objective of the telescope.

The plate-holder consists simply of a frame on which two plates, corresponding to the same portion of the sky, are fixed, one in front of the other, at a distance of a

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single millimetre. Small motions are provided by which the relative position of the two plates may be changed at will ; by means of these the corresponding star images on the two negatives were brought nearly but not quite to superposition so as to appear in the telescope like double stars, and thus true star-images were at once distinguishable from accidental specks on the plates.

The frame rests on three foot-screws and can be rotated about a vertical and a horizontal axis. The amount of rotation about the latter is read off on a distant scale by means of a small telescope attached to the frame.

In the beginning we worked with a single plate-holder. This, however, caused some serious inconvenience, for, as two measures have been always made, and the first and the second measurement were always made by different observers, this involved a change of observer at the very irregular hours at which the first observation of the plate was finished. Likewise, after the end of the second observation, no new plate could be begun before it had been inserted in the frame and had been carefully oriented.

All this interfered very seriously with a strictly regular and economic arrangement of the work.

A second frame-holder was, therefore, mounted by the side of the first, and a corresponding second microscope was introduced for the reading of the hour circle. Two plates could thus be oriented before the beginning of the day's work, and all that had to be done, in order to pass from the one to the other, was to rotate the whole instrument about its vertical axis till a determined scale-reading, carefully noted in orienting the plates, was obtained in the telescope *L*. At the same time the observer at the hour circle had to change his place from one microscope to the other.

4.—Orientation of the Apparatus and the Plates.

We need not here dwell on the manner in which the exact intersection of the axes at one point and their verticality to each other was originally obtained. It will be sufficient to state that the angle between the hour-axis and declination-axis is sufficiently near to 90° , that provision was made for a correction of the collimation, and finally that the connexion of the telescope with the declination-axis was once and for all fixed after the optical axis had been made to meet the intersection of the two other axes.

The sliding focussing tube of the telescope bears a projecting strip of steel, against which butt the ends of two screws in the fixed tube of the telescope. By loosening one of these screws and tightening the other a small rotation can be given to the

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ocular end. The hour line is thus easily set at right angles to the declination axis. In order to avoid the necessity for any correction of the observed right ascensions depending on the reading of the declination scale, this orientation of the hour line was made with the utmost care and was very often verified in the course of the work. As far as I can remember the orientation was but once found sensibly in error (not in the observations for this volume) in consequence of which a small correction depending on the scale reading had to be applied to the work of a certain number of days.

The measuring apparatus being thus once and for all brought into perfect working order, the plate-holder may be now considered.

The first condition to be realised is that the plates shall be perpendicular to the line joining the centre of the plate with the point of intersection of the axes of the apparatus.

Of course, several methods are available to secure this end, but as the true centre of the plate (viz., the point where, in the photographic telescope the perpendicular from the optical centre on the plate meets this plate) was not very accurately known, I found the following very rapid method quite as good as any other more refined one. A couple of plates being inserted in the frame and having been lighted up from behind by means of the illuminating lamp, a copper wire of exactly the length of half the side of the plate was hung over the middle of it, so that its free end indicated the geometrical centre of the plate, which coincides approximately with the nominal centre. The telescope of the measuring apparatus was then directed to this end; after that the light behind the plates was extinguished and the eye put vertically above the centre of the objective. The plate acting as a mirror, an image of the eye was seen, which, by a rotation of the vertical axis of the plate-holder, was brought centrally on the copper wire. Putting now the eye in a horizontal position relatively to the centre of the objective, the image of the eye, the centre of the image of the objective, and the end of the copper wire were brought on one horizontal line by means of the foot-screws of the frame-holder. This done, the verticality of the plate is evidently obtained.

The second condition to be fulfilled is, that the distance of the plates from the intersection of the axes of the measuring apparatus shall be equal to the focal distance of the photographic telescope. The ocular scale has been so made that one part corresponds very nearly with one minute of arc on the plate when at the correct distance. The correspondence, however, is not absolute, and had it been so when the observations were first begun it would still have been in error after the re-polishing of the objective of the photographic telescope in 1887, which slightly changed the focal distance.

At all times, however, the difference has been small enough to make it permissible to reduce it to Zero (which, of course, is most essential for the convenience of the reductions) by slightly altering the distance required by strict theory. In fact, therefore, the distance of the plates was so regulated that the difference in declination of two widely separated stars, as measured in minutes of the ocular scale, coincided perfectly with its known value.

As soon as the distance fulfilling this condition had been once thoroughly ascertained, a rod was made of the required length by the aid of which the plates could at any time afterwards be brought back to the required position with the utmost ease.

It is easily demonstrable* that, with the method of orientation presently to be described, if the error in distance be a p th part of the whole, $\Delta\alpha$ and $\Delta\delta$ the co-ordinates of a star relative to the centre of the plate, expressed in degrees, the error introduced into the results, expressed in degrees, will be of the order of the very small quantities—

$$\frac{1}{\rho p} \Delta\alpha \Delta\delta \text{ for the right ascensions, and}$$

$$\frac{1}{\rho p} \Delta\alpha^2 \text{ for the declinations,}$$

$$\text{where } \rho = 57^{\circ}.296.$$

The error in right ascension is too much mixed up with other small errors to become noticeable; the error in declination proved nearly inappreciable, never exceeding 0'1. Besides this, the error was all but absolutely eliminated in both co-ordinates by the method of reduction, in which the corrections varied from zone to zone of 1° in breadth, and in every zone, where necessary, slightly with the right ascension.

Both the operations—the regulating of the verticality and of the distance—have only to be made once for every belt of plates of constant declination. From time to time, however, it was ascertained that no displacement had taken place.

Even in passing from one belt of plates to another, no change would have been necessary had the vertical axis K (*see* the figure) prolonged, met the intersection of the other axes. In our instrument this condition has not been fulfilled, because it would have necessitated too great changes in the parallactic stand, which was used as a basis for the apparatus.

In a more powerful instrument belonging to the Paris Observatory, lately constructed, this condition has been realized with the utmost care.

* By means of the formulæ given *Bull. du com. perm. de la carte du ciel* I., p. 426.

The operations, which have to be gone through once, or once for a good many plates, having now been considered, it remains to describe the orientation proper that had to be made for every individual plate.

As I wished the observations to give at once mean right ascensions and mean declinations for the Equinox 1875·0, the point to be kept in view in this orientation is at once evident.

If we imagine for a moment the plate under consideration surrounded by all the other plates, forming together a complete set of photographs of the whole sky, and these put together so as to form a regular polyhedric surface, with the intersection of the axes of the measuring apparatus as a centre, and giving, as seen from this point, an accurate representation of the firmament, then it is evident that,* in order to make the instrument give for any couple of stars the actual differences of mean right ascension and declination for 1875, all we have to do is to make the hour axis pass through the mean position for 1875 of the pole on this polyhedric surface.

The reverse, too, holds, *i.e.*, the apparatus is oriented as soon as it gives the correct result for the difference in right ascension and the difference in declination for a couple of stars, chosen arbitrarily.

This being premised, the way in which the orientation is performed will be readily understood. First, the reading of the declination circle is made to correspond to the declination of the centre of the plate; then the instrument is turned about the vertical axis till the telescope points this centre. As for our plates, the accurate place of this centre is not visible; we thus get only a first approximation for the setting of the instrument. Now, taking two stars nearly on the same parallel, but widely apart in right ascension, the mean positions of which for 1875 are accurately known, the instrumental differences of right ascension and declination are determined. If these prove to be in accordance with the known differences, then the plate and the apparatus are perfectly oriented. If not, then, from the outstanding errors, we may compute at once the amount of rotation to be given to the instrument about the vertical axis (which, with the declination axis in a vertical position, can be read off by means of the ocular scale) and to the photograph about its centre, in order to make the adjustment perfect.† A small table in which, for every degree of declination, the corrections to be

* Discarding all considerations of instrumental errors and of differential refraction and aberration.

† The index error of the declination circle being once ascertained, we may as well make : 1st. Difference of *instrumental* declination of two stars equal to *known* difference. 2nd. Circle reading of one of the stars + index error equal to known declination. This method too was often used, especially in low declinations.

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made for errors of 1^{sec} . and $1'$ respectively in the difference of right ascension and declination of two stars 1^{min} . apart in right ascension, reduced the work of orientation to a minimum.

The orientation proper being completed, a known star was pointed, and by displacement of the microscope the reading of the hour circle was made to agree exactly with the mean right ascension for 1875 of the star. This being done, the circle readings will evidently give at once the actual mean right ascensions for 1875 for *all* the stars of the plate.

It was found in practice that the identification of the stars, together with the orientations, could be generally made in about ten minutes.

5.—The Observations.

It has been already stated that two plates were used in the observations, one in front of the other. By a preliminary examination all the plates available for the same region of the sky, after having been thoroughly cleaned on the glass side, and the dust having been removed from the film by means of a soft brush, were compared, and the two best chosen for use. Of these two, in case of the slightest difference, the one on which the images were densest was employed to act as *check* plate, to be mounted in the plate-holder *farthest* from the measuring apparatus, the other, to be mounted in front, was employed as the *measuring* plate. The observations were made in a darkened room, and the plates illuminated from behind by a powerful lamp. Care was taken, of course, to protect the plates as much as possible from the heat of the lamp.

The power used on the telescope being, relatively speaking, a low one, the difference in focus of the images on the two plates and of the images on the same plate at different distances from the centre, was hardly perceptible; those on the check plate being generally the denser ones, but appearing somewhat fainter by being looked at through the measuring plate, the corresponding images of the stars appeared as nearly equal as was possible. This proved to be a great advantage, not only in regard to the number of stars certainly recognisable as such, but especially in regard to the reliability of the estimates of diameter of the fainter stars; for the estimation of the diameter of these stars proves the more certain the more nearly the two images approach equality.

The plates are square, with a side of about six degrees. As, however, the belts of plates lie generally five degrees apart, only five zones,* each somewhat over a degree in breadth, were measured on every plate, beginning with that nearest to the equator.

* On the plates having their centre at $\delta = -35\frac{1}{2}$ only *four* degrees were measured, the distance of this belt of plates to that of $\delta = 31\frac{1}{2}$ being only four degrees.

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Thus, for instance, with the first belt of plates of which the centre lies at $\delta = -21^\circ 30'$. On these plates were measured the five zones, -19° , -20° , -21° , -22° , -23° . For the observation of the first, the zero of the scale was brought to coincide exactly with $-19^\circ. 0'0$ (mean declination for 1875.0) on the plate, by bringing a star of this zone, of which the declination for 1875.0 is known, exactly on that division of the scale that corresponds to the minutes and tenths of minutes of its declination. This done, the slow motion in declination was not further touched, and a sweep was made within such limits of right ascension that an overlapping of the consecutive plates of from a half to a couple of minutes of time was secured, the overlap being taken the larger, the poorer the plate, in order to be sure that a sufficient number of stars would be common to two successive plates.

In making the sweeps, every star, of which both images could be distinctly seen, was observed between $-3'$ and $63'$ of the scale, in the order in which they presented themselves at the hour line. After the completion of the first zone, the telescope was displaced 60 divisions of the ocular scale, the setting was verified by another known star, the second zone observed, and so on.

Two observers have always worked together, one at the ocular, one at the microscope of the hour-circle. A clerk wrote down all the numbers called out by the two observers in ledgers carefully prepared for the purpose, which will be presently described. The observer at the ocular estimated the diameter, read off the declinations on the scale, and made the pointings for right ascension. These were read off by the observer at the microscope.

The diameters were estimated in tenths of a minute of arc. This unit, however, being found too large in practice, was subdivided into three by the signs $-$ and $+$, so that, for instance, the numbers $-2, 2, +2, -3, 3, +3$ - - - - indicate diameters of $0'17, 0'20, 0'23, 0'27, 0'30, 0'33$ - - - - respectively. For diameters below -2 , these estimates cannot be considered as actual measurements, for the reason that the fainter stars on the plates differ generally but relatively little in diameter but considerably in density. For these stars the scale was prolonged downward in such a way that -0 represents the faintest stars on the plates, while $0, +0, -1, 1, +1$ represent intermediate shades of density between these and the stars -2 , which may be generally considered as the first stage really measured.

In some cases, however, where the images are particularly ill-defined, this estimate by density rather than by diameter had to be extended even higher up in the scale. In such cases the estimates are accordingly more uncertain than usual. In some few of these cases the diameters were observed not on the measuring plate but on the check plate.

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All these cases have been carefully noted and will be found referred to in the remarks given in the last column of List IV. at the end of the introduction.

The declinations were estimated to tenths of the minute.

The pointings for right ascension were made by bringing the hour line on the centre of the star's image on the measuring plate. In doing this the images of the faintest stars disappear entirely. Notwithstanding this the pointings of even these stars were still considerably more accurate than the corresponding readings of the hour circle, which, as already stated, were only made to whole seconds of time. In part, this accuracy was due to the fact that the position of the hidden star could be fairly well estimated by the position of the image on the check plate.

Every plate was observed twice. Only in exceptional cases, which will be referred to farther on, three or more observations were made.

The first observation of every plate (at the ocular) was made, in the beginning of the work, by Mr. Speckman, at a later epoch by Mr. de Vries. Both these gentlemen, in the sequel denoted by the letters S and V, were wholly unfamiliar with any work of the kind before they began to take part in the observations, but they acquired considerable skill in it, in a remarkably short time, the former, however, always finding some difficulty in making wholly consistent estimates of diameter (or rather density) of the fainter stars.

In these first observations the whole breadth of the zone of 1° was observed at once, care being taken to observe the stars as nearly as possible in the order of their right ascension. In the second observations, especially towards the end of the work, and in order still farther to diminish the danger of leaving stars out, the zone was mostly observed in two halves, the one below, the other above $30'$.

The second observations were made quite independently from the first. They were written out for every star in a column arranged for the purpose in the ledgers, alongside the first observation of the same object. In order to obviate the danger that the clerk might unwittingly copy numbers of the first observations, as well as to prevent errors by wrong hearing, it has been the invariable custom for him to call out all the numbers which he wrote down. Every number was therefore called out twice, once by the observers and once by the clerk, and it is remarkable how readily any difference between the two is caught by the ear, even at those moments at which the observer is hardly aware of the repetition of his own words. The result has shown that the danger adverted to has been quite overcome by these means, for, in the whole series of observations from -19° to -38° , but two cases have been found where

comparison with other catalogues, and subsequent verification on the plates, has shown the same error to occur in both observations.

Where a star, overlooked in the first observation, was found in the second, it was written down in a third column, the column of "new" stars.

As soon as the second observation of a plate was completed, the two observations were carefully compared; all the differences in diameter, declination or right ascension which seemed to exceed the legitimate limits, and all the stars brighter than -0 occurring in the first observation but not in the second, were noted. All these, together with the *new* ones, were then re-observed and the errors corrected. The second observations, as well as all the revisions, have been invariably made by myself.

At first the stars -0 occurring in the first observation and not in the second were re-observed also. This, however, involved a very considerable labour and nearly always resulted only in their rejection. After some time it has become the rule, therefore, simply to strike out these observations. In any case the catalogue cannot be regarded as complete for such objects. Where such stars appear in any of the catalogues of precision compared, they have been ultimately retained in our *Durchmusterung*.*

It is true that many thousands of objects, by far the greater part of which are certainly true stars, have been thus lost for the catalogue. But this would still have been the case had they been revised. It has been my policy from the beginning, not to introduce any object that is not a true star, and rather to lose ten real stars (of the class -0) than to incur the danger of introducing a single fictitious one. The following precautions were taken for that purpose:—

- (a) In the second observation all objects of the faintest class (-0) looking suspicious were left out or were noted for revision by a third observation
- (b) Between the first and the second observation the position of the check plate relative to the measuring plate was shifted. Experience has taught me to consider this precaution as one of the most efficacious. For two accidental specks in the same relative position as that of the two images of the same star can easily lead to the observation of such an object. If these specks are *on the same plate*, however, the shifting of the check plate must have led to the elimination of such objects in the

* In the case where these stars were afterwards found in Schönfeld's or Thome's *Dm.* they have *not* been inserted, the chief reason being that an error of $1'$ in declination might pass unnoticed.

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second observation. As star-like specks mostly occur in groups, the chance of two such near each other on one and the same plate is far greater than that of two specks in the same position on the two plates. Besides this, the shifting has the advantage of making visible objects on the check plate which may have been hidden by small bubbles or other blemishes on the measuring plate.

- (c) Between the second observation and the revision-measurements this position was again shifted ; the images on the measuring plate, which in the two first observations were always (as seen in the telescope) below the images on the check plate, were now made to be the upper ones. Further changes of position were made in these revisions as often as the case seemed to require. As by these changes the position of the plate-holder might, perhaps, be sometimes slightly altered, the revision-measurements were only used as a check, and never without special precautions for the definitive positions.
- (d) Where a doubtful case could not be decided in this way other expedients were resorted to. The plates were inspected or measured separately, which, for instance, was regularly done in the case of clusters (these have been, therefore, measured generally four times) ; or other plates, where available, were consulted ; or the object, when brighter than -0 , was examined with a magnifying glass or under the microscope, &c.

Doubtful cases not settled in any of these ways, and not in any of the catalogues compared, have been inserted in our Durchmusterung with a ?. It was intended at first to reject these doubtful objects if their diameter was -0 , and only to insert with a ? those stars the diameters of which were larger ; but this rule has not been strictly adhered to, so that many, probably most, of the stars so marked belong in reality to the faintest objects on the plates. Comparisons with the Dm. of Schönfeld and of Thome, as well as with overlapping plates, prove that nearly all, if not all, of these objects will be really found to exist in the sky. For the rest it is perhaps well to state explicitly that the uncertainty is wholly relative to the existence or non-existence of the star, and in no case relative to the correctness of the position.

Finally, the few discordances that were overlooked in the comparison of the two observations, and found when making the reductions, were carefully noted, and have been looked up on the plates before the final catalogue was written out.

Three or four hours in the morning and three hours in the evening were generally devoted to the observations. The number of stars that could be observed without

fatigue varied considerably according to the richness of the plates. For good and rich plates we generally made 300 to 400, occasionally even as many as 450 observations an hour.

6.—The Reductions.

Every page of the ledgers in which the observations were entered is divided into six columns ; the two first for the two regular observations ; the third for the *new* stars found in the second observation and overlooked in the first ; the fourth for the corresponding magnitudes and positions for 1875, accurate to 0^s.1 and 0'.1 according to the following catalogues : Cordoba Zone Catalogue, Cordoba General Catalogue, Argelander-Weiss, and, somewhat less accurately, Lalande.* In the sixth were entered in red ink the differences between the mean of the two observed right ascensions and of the two observed declinations from those of Gould or (for the zones in which few of Gould's stars occur) those of Argelander. From the whole of these were computed the corrections applicable to our positions to convert them into the final values, which were inserted in the fifth column. The number of standard stars being thus very considerable, every zone of one degree in breadth could usually be treated quite independently from the other zones on the same plate. This rule was departed from only in exceptional cases. The reductions applied are either constant for the whole zone or they change slowly with the right ascension. In no case, except in that of the declinations of the repeated plates, Nos. 28, 35-39, 46, 61, which were all measured between 17 Aug. and 21 Aug. 1892, was a change of the reductions depending on the declination applied, and even in this case the change from 0' to 60' did not exceed 0'.3. This mode of reduction must have caused a slight decrease of accuracy towards the extremes of declination of every zone ; but the extreme care taken in placing the plate-holder at the exact distance and in making the hour line at right angles to the declination axis ; the careful orientation of the plate, and finally, the constant practice of taking the mean of the co-ordinates for those stars which occur in the overlapping strips of two consecutive zones of declination (either on the same plate or on two consecutive plates) have resulted in making this decrease in accuracy absolutely insensible in most cases and quite insignificant in all.

For the reductions of magnitude, comparisons were made of the mean of the observed diameters, for the first zone of plates ($\delta = 21\frac{1}{2}$) with the magnitudes of Schönfeld's Dm., for all the rest with the magnitudes of Gould's Zone Catalogue.

For the brighter stars, which were nearly completely compared, the magnitudes of the Uranometria Argentina were used, as given in the Córdoba General Catalogue.

* The positions from these different catalogues were written out in differently colored inks.

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Means were computed separately for the stars of the diameters 0, 1, 2, 3, 4, 5, 6, 7-15, > 15, and these afterwards condensed into from 3 to 5 normals, from which the two constants in the definitive formula of reduction

$$(1) \text{ magnitude} = \frac{B}{\text{diameter} + C}$$

were computed.

It need hardly be said that this formula is a purely empirical one. It was chosen from amongst all those proposed, which have come to my knowledge and a great many others, as the one best representing our observations. It is true that the choice was made before the photographic objective was re-polished, and when less sensitive plates by another maker were used; but experience has shown that it applies equally well to the later measurements which form the basis of the present volume. The constants B and C having been obtained independently for every separate plate, two somewhat different sets of tables were constructed from which the values of the magnitude could be taken, without interpolation, for the two independent computations which were made of these quantities. At the end of the introduction will be found a list of the values of B and C for all the plates, together with the number of stars used for their computation.

7.—Systematic Difference in the Colour of the Stars, depending on the Galactic Latitude.

The method of reduction of the preceding paragraph must of necessity and for all parts of the sky bring the mean photographic magnitudes into close agreement with the visual magnitudes on which they were made to depend. This agreement will be further investigated in the following paragraphs.

The reduced magnitudes cannot, therefore, bring to light any systematic differences between the actinic and visual brightness of the stars in different parts of the sky, even if any such differences really exist.* To discover these it is evidently necessary to compare *inter se*, for a large part of the firmament, either the diameters produced on the plates by stars of equal visual brightness, or the visual brightness of stars having equal diameter on the plates, due allowance having been made, of course, for the influence of difference in zenith distance, time of exposure, transparency of the air, sensitiveness of the plates, &c.

An investigation of this kind, which was made a couple of years ago, has been published in the *Bull. du com. perm. de la carte du ciel*, Vol. II., pp. 131-158.

* Such differences will show themselves in the value of the constants B and C.

As we will probably be able to give a more complete discussion in another volume, it may here suffice to state briefly the results arrived at in this paper.

Three groups of plates, all obtained with the same photographic telescope, containing the belts -75° , -70° , -65° , -60° ; $-50^\circ.5$, $-40^\circ.5$; $-31^\circ.5$, $-26^\circ.5$ and $-21^\circ.5$, have been discussed. In each of the groups the photographs have been taken on plates of the same manufacture; all those obtained beyond certain pretty narrow limits of altitude and time of exposure, have been excluded. By these means the reduction to the ideal case, that of all the plates having been obtained at one and the same altitude and with one and the same time of exposure, become very small, and no serious errors are to be feared on this account, even if it might be found in future that the formulæ which served for this reduction deviate sensibly from the truth.

In all, 370 negatives were found to be available for the investigation.

Their discussion brought out the following facts :—

1. The variation of the star density in different regions of the sky, as found from the counts on the photographic plates, is quite different from this variation as found by the visual observations of Schönfeld and Gould. In some regions our photographic Dm. contains three times as many stars as are contained in Schönfeld's SD. for the same area, whilst in other regions Schönfeld's catalogue is the richer one, and would have contained here almost double the number of stars in our catalogue, had not the poorest of our plates been repeated with a somewhat longer time of exposure. An analogous result is found by a comparison with Gould's Zone Catalogue.

2. Corresponding with this difference in the number of stars, it is found that equal diameters on the plates have been produced by stars of very unequal brightness in different parts of the sky.

If for a moment we assign equal photographic magnitudes to the stars having equal diameter on the several plates (after reduction for altitude and time of exposure) this comes to the same as saying : The difference : "visual magnitude — photographic magnitude" is strongly dependent on the position in the sky.

3. This difference is very probably due in part to meteorological conditions and differences in sensitiveness of the plates, but is certainly chiefly due to the position of the stars relatively to the Milky Way. It is found that "for all stars, at least "for those between the magnitudes 4 and 10, there exists a difference between the "photographic and visual magnitudes according to the estimates of Messrs. Gould "and Schönfeld; this difference varies pretty regularly with the distance from the

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“Milky Way. For every degree of Galactic latitude the variation amounts to $0^{\text{mag}}\cdot 01$ “ or thereabouts.”

4. This variation of the difference “visual magnitude — photographic magnitude” must depend :

- a. On the systematic errors of the visual magnitudes according to the estimates of Gould and Schönfeld ;
- b. On the systematic differences in the colour of the stars.

It is much to be regretted that there is no satisfactory agreement in the determination of the former of these errors ; the only thing which seems to be fairly well established is that these errors, if so be that they have a sensible amount, will in all probability not exceed $0\cdot 2$ or $0\cdot 3$ magnitude. If this be really so, then it seems hardly possible to escape the conclusion that differences of the sort *b* must have a real existence. The phenomenon discovered by Pickering* that the Milky Way is richer than the other regions of the sky in stars whose spectra are of the first type, is shown to explain but a small part of the observed facts. We are thus led to the conclusion that “ even considering only stars of one and the same spectral type *the stars of the Milky Way are in general bluer than the stars in other regions of the sky.*”

About the exact amount of the difference in colour no definitive conclusion could be given for want of a reliable determination of the errors *a*. M. Trepied†, in an interesting paper on the photographic magnitudes, using the photometric determination of the visual magnitudes for seven chosen regions of the sky (rather unfavourably situated for the purpose) made by Pritchard, at Oxford, finds, by a preliminary investigation, that the difference between visual and photographic magnitude varies $0\cdot 004$ magnitudes, or thereabouts, for every degree of Galactic latitude. There is, however, reason to think that M. Pritchard’s method of determining visual magnitudes by extinction makes the results found, approach more or less towards the results found by photography,‡ so that the difference must come out too small.

Better results may probably be expected from the method which I proposed in the paper referred to, which is wholly independent of estimation of magnitude made by the eye, and requires only the photographing of regions of widely different Galactic latitudes both with ordinary and with isochromatic plates. A number of such plates has been recently obtained at the Cape Observatory. To prevent delay in the publication of the present volume, however, their discussion must be deferred for the present ; we hope to be able to give it with another volume.

* Annals of the Obs. of Harv. Coll., Vol. 26., p. 152.

† *Bullet. du com. perm. de la carte du ciel*, Vol. II. p. 383.

‡ This results from considerations like those of Art. 19.

8.—Systematic Errors of the Magnitudes depending on the Position of the Stars on the Plate.

One may reasonably suspect, notwithstanding that the images of the stars were generally perfectly round in all parts of the plates, that the total number of stars at greater distance from the centre may fall short of those nearer the middle of the plate, and that images of equal diameter in different positions on the plate may correspond to stars of different photographic brightness.

I have been led to the conclusion that an error of this kind does not exist to any appreciable amount for the plates discussed in the present volume. The evidence on which this conclusion rests may be summed up as follows :—

1. The marginal zones of the plates, that is, the zones of one degree in breadth farthest from the centre, contain as many stars as the more central ones. This can be at once verified by consulting the catalogue for the total number of stars contained in the several zones. The following numbers will be found :—

TABLE 1.—NUMBER OF STARS.

Declination of Centre.	Central Zones.	Zones 1° from Centre.	Zones 2° from Centre.
21°5	8323	8559	8448
		8432	8376
26°5	7545	7616	7513
		7607	7750
31°5	6897	6857	6927
		6721	6441
35°5	9481	9339	...
		9838	9437 (2)
Mean	8062	8121	8041

2. Even the number of stars in the extreme corners of the plates does not materially differ from the number on an equal area near the centre of the plate.

This conclusion was arrived at by counts made on the 17 plates Nos. 21—26, 91—96, 155—159, all of which were chosen in or near the Milky Way, in order that the number of stars might be sufficient for the purpose. They are arranged so symmetrically

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to the central line of that belt, that the real differences in star density are probably very nearly eliminated in the results.

Nine different areas were compared. If A and D denote the right ascension and declination of the *geometrical** centre of the plate, these areas are limited as follows:—

	Limits in δ	Limits in α
A I.	$D + 2^{\circ} \mp 0^{\circ} 5$	$A - \tau \mp 1^m.$
A II.	"	$A \mp 1^m.$
A III.	"	$A + \tau \mp 1^m.$
B I.	$D \mp 0^{\circ} 5$	$A - \tau \mp 1^m.$
B II.	"	$A \mp 4^m.$
B III.	"	$A + \tau \mp 1^m.$
C I.	$D - 2^{\circ} \mp 0^{\circ} 5$	$A - \tau \mp 1^m.$
C II.	"	$A \mp 1^m.$
C III.	"	$A + \tau \mp 1^m.$

of which the central one is taken four times as large as the others. For the three belts of plates, $-21\frac{1}{2}$, $-26\frac{1}{2}$, $-31\frac{1}{2}$, τ was taken respectively equal to $8^m. 0^s$, $9^m. 15^s$, $10^m. 0^s$.

As the extent of the plates in right ascension is respectively 20^m , $22^m. 30^s$ and 24^m , it will be seen that I stopped 1^{min} short of the limit of the plate; this was necessary in consequence of the somewhat variable limits to which the observations have been extended on the plates.

Table 2 shows the results; the numbers found for the area B II. were of course divided by four to render them comparable with the rest.

TABLE 2.

	6 Plates $\delta = -21\frac{1}{2}$.			6 Plates $\delta = -26\frac{1}{2}$.			5 Plates $\delta = -31\frac{1}{2}$.		
	A	B	C	A	B	C	A	B	C
I.	230	238	255	195	219	147	118	93	83
II.	238	243	290	196	190	205	123	113	93
III.	219	227	229	212	209	190	90	92	87

Expressing these numbers in percentages over or below the average number per area in each group, and combining the three groups with the respective weights 3, 3, 2, we get

* For the plates considered this centre has a right ascension smaller than the *nominal* centre by $1^m. 45^s$ for the zones of plates at $\delta = -21\frac{1}{2}$ and $\delta = -26\frac{1}{2}$; by 2^m for the zone $\delta = -31\frac{1}{2}$.

TABLE 3.

	A	B	C
I.	+ 3	+ 2	-11
II.	+ 6	+ 3	+ 8
III.	- 3	- 2	- 6

and finally, if again we combine the results for those areas for which the effect, if any, may be expected to be nearly equal, and reducing the mean to zero by subtracting 1 per cent.—

A I., C I., A III., C III.	- 5	per cent.
B I., A II., C II., B III.	+ 2.5	"
B II.	+ 2	"

If it is considered that, by including stars fainter by 0.1 magnitude, the number of stars increases by 14 or 15 per cent., it will be granted that these numbers are all but insignificant.

The area C III. is certainly that for which *à priori* the expectation of a lower number of stars seemed greatest, because, owing to an eccentricity in declination and an inclination of the edges of the plates to the parallel circles for 1875, this region is often very near to the edge of the plate*.

3. The magnitude corresponding to a determinate diameter between 0.2 and 0.4 is practically the same in the corners of the plate as near the centre.

In order to prove this, all the plates of the zone $26\frac{1}{2}$ were used for which the total number of stars with diameters between 0.2 and 0.4 exceeds 100. Nineteen plates (Nos. 86-96, 120-124, 126-127, 131) were found to fulfil this condition. For these

* I have thought it advisable, therefore, to measure the narrow zones—

$$\begin{aligned} \delta &= -23^{\circ} 50' \text{ to } \delta = -24^{\circ} 0' \text{ (in some few cases } 23^{\circ} 40' - 24^{\circ} 0') \\ &- 28 50 \text{ ,, } - 29 0 (23^{\text{h}} 45^{\text{m}} - 8^{\text{h}} 34^{\text{m}}) \\ &- 28 40 \text{ ,, } - 29 0 (8^{\text{h}} 34^{\text{m}} - 23^{\text{h}} 45^{\text{m}}) \\ &- 33 50 \text{ ,, } - 34 0 \end{aligned}$$

as well on the plates of the belts $26\frac{1}{2}$, $31\frac{1}{2}$ and $35\frac{1}{2}$ as on the plates these regions properly belong to. The new stars found in these extra zones whenever they did not belong to the very faintest stars on the plates, were inserted in the catalogue, with the sign † attached to the magnitude. A somewhat brighter star has been found in this way only in those few cases where the observations could not be fully extended to the regular limit of the last zone on the plate, because the most southern part of it was actually hidden by the frame of the plate-holder. It may be considered certain that for all but the very faintest stars (-0) the danger of omission has been quite overcome by the precaution.

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plates the diameters (between the limits mentioned) of the stars on the areas* A I., A III., C I., C III. and B II. were compared with their magnitudes in Thome's Dm. The mean results were as follows :—

TABLE 4.

Area.	Number of Stars.	Weight = 1 for every Plate.		Weight = 1 for every Star.		Mean Mag., Thome, corresponding to diam. = 0'.27.
		Diameter.	Mag., Thome.	Diameter.	Mag., Thome.	
A I.	124	0'.271	8 ^m .77	0'.267	8 ^m .85	8 ^m .80
A III.	144	0'.268	8.75	0'.273	8.83	8.79
C I.	137	0'.267	8.73	0'.270	8.78	8.75
C III.	138	0'.277	8.60	0'.276	8.76	8.70
B II.	302	0'.272	8.67	0'.272	8.74	8.72

The differences do not exceed what may be fairly attributed to accidental errors.

4. For brighter stars the same independence of the diameter from the position on the plate still holds, at least, as far as can be judged from the materials available. These being, however, necessarily scanty, I have compared, not areas in the corners of the plates with those near the centre, but only the magnitudes in the central zone with those of stars showing equal diameter in the marginal zones. I have, moreover, increased the number of data by making free use of the measurements made for the belts $\delta = -40\frac{1}{2}$, $\delta = -45\frac{1}{2}$ and $\delta = -50\frac{1}{2}$, the negatives for which were made with the photographic lens in the same state as at the time when the plates discussed in the present volume were taken.

Nineteen plates were thus found on which both the central and the marginal zones contain a tolerable number of bright stars, the diameters of which were compared with their visual magnitudes according to Gould's Z.C.

In the following table are given : in the *first* column the co-ordinates of the centre of the plate ; in the *second* the mean diameter of the stars used for comparison. If the mean diameter of the stars selected in the central zone differed somewhat from this number, I computed the correction (never exceeding some few hundredths of a mag.) necessary to reduce the visual magnitude to what would have been found if the diameter had corresponded *exactly* with the number set down in the second column. The same was done for the marginal zones.—The visual magnitude so found for the stars in the central zone is shown in the *fourth* column ; the third and fifth show the differences, *mag. marginal zone—mag. central zone*. In each of these three columns

* Only the limits in α of the areas being taken wider, in fact, from $A \pm 6^m. 15^s.$ to $A \pm 10^m. 15^s.$ and (for B II.) from $A - 5^m.$ to $A + 5^m.$

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the number of stars used has been added. The *last* column contains the mean of the values of the third and fifth. In the means at the bottom, the first represents the mean obtained by giving equal weight to every separate result, the second by giving weights proportional to the lesser of the two numbers representing the observations in the marginal zone and the central one, or (in the last column) to the number of stars in the central zone.

TABLE 5.

Plate.	Diameter.	D + 2°.		D.		D - 2°.		Mean.
		Magnitude. Central.	Number.	Magnitude.	Number.	Magnitude Central.	Number.	
	h m s	m		m		m		m
25½	6 45 0	0.530	+ 0.42 11	7.99 11		+ 0.01 12		+ 0.21
40½	10 40 0	0.520	+ 0.62 6	8.09 5		+ 0.15 4		+ 0.39
..	8 53 50	0.530	+ 0.15 13	7.94 9		+ 0.22 17		+ 0.18
..	9 46 40	0.530	- 0.57 6	8.57 6		- 0.42 4		- 0.50
..	12 0 0	0.560	- 0.43 3	8.46 4		- 0.37 4		- 0.40
..	8 0 0	0.580	+ 0.33 9	7.87 5		+ 0.16 6		+ 0.25
..	8 26 40	0.595	+ 0.04 8	7.71 11		+ 0.28 12		+ 0.16
..	11 6 40	0.600	- 0.43 4	7.96 5		- 0.18 6		- 0.30
25½	7 7 30	0.650	- 0.01 7	7.93 6		+ 0.03 7		+ 0.01
50½	15 30 0	0.700	+ 0.18 4	7.35 6		- 0.03 8		+ 0.07
..	16 0 0	0.700	- 0.28 6	7.68 7		- 0.15 5		- 0.22
40½	7 33 20	0.710	+ 0.46 5	6.81 6		+ 0.46 6		+ 0.46
25½	7 30 0	0.750	+ 0.37 9	7.57 11		- 0.16 13		+ 0.10
45½	8 46 9	0.800	+ 0.28 4	7.07 4		+ 0.22 4		+ 0.25
..	11 4 36	0.820	- 0.20 4	6.91 3		+ 0.02 3		- 0.09
50½	13 30 0	0.850	+ 0.08 2	6.37 4		+ 0.54 3		+ 0.31
..	13 0 0	0.900	- 1.41 2	7.07 4		+ 0.23 6		- 0.59
45½	8 18 27	0.930	+ 0.12 4	6.82 4		+ 0.05 6		+ 0.08
40½	8 0 0	0.980	+ 0.63 2	6.02 3		+ 0.75 3		+ 0.69
Mean	} < 0.7	+ 0.01		...		- 0.01		0.00
Weighted Mean.....		+ 0.08		...		+ 0.05		+ 0.05
Mean	} ≥ 0.7	+ 0.02		...		+ 0.19		+ 0.11
Weighted Mean.....		+ 0.10		...		+ 0.12		+ 0.11

The values here found are so small that they can be fairly well explained by the accidental errors, which for the visual magnitudes of the brighter stars are far more considerable than those of the fainter stars.

5. Lastly, the Tables 12 and 15, to be given further on, are alone nearly sufficient to demonstrate the independence of the diameters from the position on the plates for stars of every magnitude.

In conclusion, it is, of course, understood, and evidence for this is not wanting, that, although *systematic* error of the kind described does not seem to exist, small *accidental* differences, owing, for instance, to a somewhat unequal sensitiveness of any one plate in some of its parts, are not altogether excluded.

9.—Comparison of the Photographic with the Visual Magnitudes.—

I. Magnitudes of S.D., Z.C., U.A.,* and Thome, corresponding with Determined Magnitudes of C.P.D.

Although the magnitudes of the S.D. and the Z.C. have served as a basis for the computation of the photographic magnitudes, it will not be superfluous to ascertain to what degree the adjustment has been successful. In this way a judgment will become possible as to the value of the formula of reduction as a formula of interpolation and extrapolation.

In what follows, the expressions S.D.-phot.; Z.C.-phot.; U.A.-phot.; Thome-phot. may stand for the difference of the magnitude of the same stars as given in Schönfeld's, Gould's and Thome's catalogues with those of our C.P.D.

Δp may denote the correction to be applied to the magnitudes of our catalogue in order that, *for stars of equal actinic power*, photographic and mean visual magnitude shall be equal.

Δv likewise may denote the correction to be applied to our magnitudes in order that, *for stars of equal visual brightness*, visual and mean photographic magnitude shall be equal.

It might seem at first sight that the two corrections must be the same, but it will be shown in what follows that such is not the case, so that they must be separately considered.

It is with the former that we are now concerned. Comparisons have been instituted, first, for the belt of plates $- 21\frac{1}{2}$ with Schönfeld's S.D., second, for all the belts of plates with the Z.C. and with Thome's Durchmusterung.

* By S.D., Z.C., U.A., and C.P.D. will be denoted further on respectively: Schönfeld's Südliche Durchmusterung, Gould's Zone Catalogue Gould's Uranometria Argentina and the Cape Photographic Durchmusterung.

It should be remarked that for the brighter stars Thome gives the magnitudes of the U.A., and further, that in the reduction based on the magnitudes of the Z.C. we have likewise substituted, for the brighter stars, the magnitudes of the U.A. for those of the Z.C. (*vide* Art. 6). The tables for Z.C.-phot. and Thome-phot. thus rest for the stars brighter than 7.0 for the greater part on U.A.

Table 6 gives for Schönfeld's S.D., for 18 plates, the residuals which the normals, that served for the computation of the constants B and C in the formula (1) of p. (20), left outstanding. The stars from which the tabular results were obtained are very evenly distributed over the whole area of the plates.

In the second column is given the galactic latitude (β) of the centre of the plates. In each of the six last columns is given, next to the value of Schönfeld-phot., the number of stars from which this value was obtained.

TABLE 6. S.D.-phot. Δp .

Plate.	β .	Photographic Magnitude.						
		9.0-9.6	8.5-8.9	8.0-8.4	7.5-7.9	7.0-7.4	6.0-6.9	
-21½	0 0	-79	-0.02 41	+0.05 9		-0.01 11		
	1 20	-79	+0.01 33	-0.04 17		0.00 8		
	2 40	-62	-0.21 42	+0.26 24			+0.03 14	
	4 0	-45	-0.14 43	+0.19 35			-0.06 9	
	5 20	-27	-0.20 41	+0.11 30		-0.12 11		
	6 40	-10	-0.11 48	+0.19 26	-0.09 36		-0.17 11	
	8 0	+6	-0.03 63	+0.15 23				
	9 20	+21	-0.06 55	+0.17 25		-0.05 20		
	11 0*	+35	-0.09 39	+0.12 31	-0.06 16			
	12 0	+40	-0.02 37	+0.02 25		+0.01 18		
	13 20	+40	-0.07 40	+0.06 33		-0.07 6		
	14 40	+33	+0.02 43	-0.04 19		+0.04 8		
	16 0	+22	-0.25 50		+0.34 32		+0.05 10	
	17 20	+7	-0.05 39	+0.07 34	-0.05 14			
	18 40	-10	+0.01 50	+0.07 35			-0.16 14	
	20 0	-27		+0.06 31	-0.07 18	+0.06 10		
	21 20	-44	-0.16 37	+0.21 35		-0.18 14		
	22 40	-62	-0.07 41	+0.22 23			-0.19 11	
Mean	-0.10 668	+0.05 156	+0.10 391	+0.03 98	-0.04 106	-0.08 69

* For plate 10^h 40^m was substituted the plate 11^h 0^m, because the reduction of the former rests on only *two* normals.

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Another comparison, exclusively for the zone $\delta = -21^\circ$, the stars being distributed very evenly over the *whole* zone and arranged in the order of the galactic latitudes (β), has been condensed into the following table. The mean was taken, giving every star the same weight—

TABLE 7. S.D.-phot. Δp .

Limits of β .	Mean β .	Photographic Magnitude.							
		9.5—9.9	9.0—9.4	8.5—8.9	8.0—8.4	7.5—7.9	7.0—7.4	6.0—6.9	
° °	°	m	m	m	m	m	m	m	m
— 60 to — 90	— 73	—0.30 35	—0.13 35	0.00 35	+0.20 30	+0.07 20	—0.05 11	+0.10 3	
— 40 „ — 60	— 49	—0.23 28	—0.04 29	+0.17 29	+0.03 24	—0.03 14	—0.43 6	+0.20 2	
± 20 „ ± 40	± 32	—0.20 83	—0.02 87	+0.16 87	—0.02 80	+0.04 48	+0.02 19	—0.20 5	
± 10 „ ± 20	± 14	—0.09 36	+0.04 36	+0.20 36	+0.09 35	—0.17 16	+0.01 9	—0.40 1	
— 10 „ + 10	± 4	—0.06 24	+0.15 24	+0.08 24	+0.07 24	—0.07 9	0.00 1	+0.07 3	
Mean.....	...	—0.19 206	—0.01 211	+0.13 211	+0.05 193	0.00 107	—0.06 46	—0.04 14	

The two sets of results agree as well as could be expected. Adding the values for the magnitudes 4.0 to 5.9, which were obtained not from zone 21° only, but from *all* the zones 19° — 22° , we may adopt definitively—

TABLE 8. S.D.-phot. Δp .

Phot. Mag.	Δp .	Number of Stars.	Phot. Mag.	Δp .	Number of Stars.
9.5—9.9	m — 0.19	206	7.0—7.4	m — 0.05	152
9.0—9.4	— 0.04	879	6.0—6.9	— 0.07	83
8.5—8.9	+ 0.10	367	5.0—5.9	— 0.18	46
8.0—8.4	+ 0.08	584	4.0—4.9	— 0.14	19
7.5—7.9	+ 0.01	205			

A change of the correction with the galactic latitude, for the stars fainter than $9^m.0$, is apparent in Table 7. This change is caused by the fact discussed before (*vide* Art. 7), that stars of equal visual magnitude in different galactic latitudes have produced widely different diameters. This difference, clearly reflected in the values of the constants B and C (list IV. at the end of the Introduction) is so great

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that the adjustment of the formula (1), p. (20), to stars beyond the limits of the normals which served for its computation, is slightly affected.

The following table, perfectly analogous to Table 6, gives the value of Δp for the magnitudes of the Cordoba Zone Catalogue and the Uranom. Arg., the former for the fainter stars, the latter for the stars brighter than 7.0.

TABLE 9. Z.C.-phot. and U.A.-phot. Δp .

Plate.	β	Photographic Magnitude.										
		9.0-9.4	8.5-8.9	8.0-8.4	7.5-7.9	7.0-7.4	6.0-6.9					
26½	h m	o	m	m	m	m	m	m				
	0 0	- 81	-0.13	35		+0.15	22		-0.10	15		
	1 30	- 79	-0.13	49		+0.18	22		-0.14	11		
	3 0	- 59			-0.05	25	+0.10	38		-0.12	15	
	4 30	- 39	-0.18	25	+0.17	50		-0.15	25			
	6 0	- 20	-0.11	28	+0.10	51		-0.09	30		-0.44 (1)	3
	7 30	- 2	-0.07	31	+0.10	49	+0.05	51		-0.06	22	
	9 0	+ 14	-0.17	57		+0.22	30	-0.14	30			
	10 30	+ 28	-0.14	33		+0.17	51		-0.16	11		
	12 0	+ 35	-0.22	43	+0.24	48		-0.18	18			
	13 30	+ 35	-0.13	42		+0.15	44		-0.10	19		
	15 0	+ 27	-0.14	49		+0.18	37		-0.21	17		
	16 30	+ 13	-0.12	49		+0.13	45		-0.10	20		
	18 0	- 4	-0.38	36	+0.30	51	+0.28	49		-0.05	21	
19 30	- 22	-0.15	58		+0.18	42				-0.13	10	
21 0	- 41	-0.06	19	+0.06	51			-0.05	23			
22 30	- 61	-0.08	33		+0.14	38		-0.08	15			
31½	0 0	- 80		0.00	30	0.00	42					
	1 36	- 77	0.00	31		-0.01	35		+0.01	17		
	3 12	- 57	-0.17	39		+0.14	41		+0.07	12		
	4 48	- 37	-0.19	19	+0.19	68		-0.06	24			
	6 24	- 17	+0.05	66				-0.05	47			
	8 0	+ 1	-0.05	50	+0.08	64		-0.06	33			
	9 36	+ 16	-0.14	68		+0.16	48		-0.16	18		
	11 12	+ 27	-0.08	43	+0.12	49			-0.05	19		
	12 48	+ 31	-0.06	46		+0.09	59		-0.10	16		
	14 24	+ 26	-0.12	61		+0.11	52	-0.15	16			
	16 0	+ 14	-0.18	58		+0.20	50		-0.24	27		
	17 36	- 2	-0.06	68		+0.05	66				-0.12	12
	19 12	- 20	-0.01	64		+0.01	40	-0.02	16			
	20 48	- 40	-0.19	18	+0.16	51			-0.13	29		
22 24	- 60	+0.02	23	+0.05	42		-0.10	19				

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TABLE 9. Z.C.-phot. and U.A.-phot. Δp —continued.

Plate _i	β	Photographic Magnitude.					
		9.0—9.6	8.5—8.9	8.0—8.4	7.5—7.9	7.0—7.4	6.0—6.9
35½	h m s 0 0 0	o — 78	m —0.16 20	m —0.16 20	m +0.16 19	m —0.34 5	
	1 41 3	— 75	—0.03 28	+0.05 25		—0.03 10	
	3 22 6	— 55	—0.05 42		+0.07 18	—0.04 13	
	5 3 10	— 35	—0.05 40		+0.06 14	—0.03 10	
	6 44 13	— 15	—0.11 66		+0.15 30	—0.11 13	
	8 25 16	+ 3	—0.08 52	+0.16 40	—0.04 16	—0.12 8	
	10 6 19	+ 17	—0.04 63		+0.15 18	—0.14 7	
	11 47 22	+ 26	—0.02 33	+0.08 41		—0.08 15	
	13 28 25	+ 26	—0.06 22	+0.08 40	—0.05 21		
	15 9 29	+ 18	—0.21 65		+0.27 23	—0.16 12	
	16 50 32	+ 4	+0.03 71	—0.06 22		+0.02 12	
	18 31 35	— 14	+0.01 44	—0.01 45	+0.01 17		
	20 12 38	— 33	+0.02 28		—0.03 25	+0.02 15	
	21 53 41	— 54	—0.07 48		+0.10 21		—0.06 5
	23 34 44	— 74	—0.01 30		+0.01 13		—0.01 5

No change with the galactic latitude can be traced, so that the means may be adopted for the whole of the observations. Collecting, therefore, the results, and completing them for the brighter stars by the data which were brought together from *all* the plates, I get—

TABLE 10. Z.C.-phot. and U.A.-phot. Δp .

Phot. Mags.	21½	26½	31½	35½	Adopted Mean. 24.0—38.0
9.0—9.4	— 0.03 120	— 0.15 587	— 0.08 654	— 0.03 383	— 0.08
8.5—8.9	+ 0.19 143	+ 0.13 325	+ 0.10 304	— 0.07 309	+ 0.05
8.0—8.4	+ 0.26 154	+ 0.16 469	+ 0.08 433	+ 0.04 173	+ 0.09
7.5—7.9	+ 0.08 98	— 0.14 103	— 0.07 155	+ 0.07 235	— 0.05
7.0—7.4	+ 0.04 62	— 0.10 163	— 0.09 138	— 0.01 42	— 0.07
6.0—6.9	— 0.14 36	— 0.15 39	— 0.12 12	— 0.10 88	— 0.12
5.0—5.9	— 0.30 12	— 0.02 34	— 0.22 28	— 0.20 40	— 0.15
4.0—4.9	...	— 0.47 14	+ 0.32 14	+ 0.19 12	+ 0.01

For the belt of plates 21½ the materials available are very scanty, and, for the greater part, contained in zone -23° , situated at the edge of the plate. As, however, this correction is very important, because, if known, the *whole* of our catalogue can be

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reduced for magnitude to Gould's system, I have compared carefully *all* the stars of the Z.C. north of -23° , over 250 in number, nearly all those north of $-23^\circ 20'$, and the brighter ones between $-23^\circ 20'$ and $23^\circ 40'$. The column for $21\frac{1}{2}$ has been obtained by combining the results, giving the weight 0.6 to the results of the comparisons of the stars south of -23° .

Small as the values for the zones between $-24^\circ 0$ and $-38^\circ 0$ are, they show a decided parallelism with those found for S.D.-phot., referable to an imperfection (smaller indeed than I had anticipated) of our formula of reduction.

For the determination of the differences Thome-phot., which, perhaps, are even more interesting than the preceding ones, because the *Cordoba Durchmusterung* has not been used in the reduction of our plates, stars were compared from the zones 22° , 24° , 25° , 26° , 27° , 28° , 29° , 31° ,* and distributed as evenly as practicable over all the plates. Combining the results of each of the three belts of plates, for which the first volume of Thome's Dm. contains materials for comparison, and arranging them in the order of the galactic latitude, I get the following table in which the means were taken, giving weights to the individual results proportional to the number of stars on which they rest.

TABLE 11. Thome-phot. Δp .
Belt $21\frac{1}{2}$. 72 Plates.

Limits of β .	Mean β .	Photographic Magnitude.							
		9.5-9.9	9.0-9.4	8.5-8.9	8.0-8.4	7.5-7.9	7.0-7.4	6.0-6.9	
-61 to -90	-74	m 39	m 38	m 35	m 34	m 21	m 14	m 11	
-41 ,, -60	-49	m 30	m 30	m 30	m 29	m 14	m 6	m 9	
± 21 ,, ± 40	± 32	m 84	m 87	m 87	m 82	m 58	m 32	m 27	
± 11 ,, ± 20	± 14	m 30	m 33	m 33	m 29	m 23	m 10	m 13	
-10 ,, $+10$	± 4	m 27	m 27	m 27	m 23	m 17	m 12	m 8	
Weighted Mean ...	-0.18	210	215	212	197	133	74	68	
Belt $26\frac{1}{2}$. 64 Plates.									
-61 to -90	-75	m 51	m 52	m 43	m 46	m 19	m 17	m 7	
-41 ,, -60	-50	m 35	m 36	m 36	m 31	m 21	m 11	m 10	
± 21 ,, ± 40	± 31	m 108	m 108	m 108	m 102	m 48	m 42	m 15	
± 11 ,, ± 20	± 15	m 51	m 51	m 51	m 45	m 37	m 14	m 6	
-10 ,, $+10$	± 5	m 39	m 39	m 39	m 37	m 26	m 11	m 2	
Weighted Mean ...	-0.25	284	286	277	261	151	95	40	

* When the comparison with Thome was made, the second part of the *Cordoba Durchmusterung* had not yet appeared. This is the reason why no comparisons were made for stars south of $-32^\circ 0$.

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TABLE 11. Thome-phot. Δp —continued.Belt $31\frac{1}{2}$. 60 Plates.

Limits of β .	Mean β .	Photographic Magnitude.							
		9.5—9.9	9.0—9.4	8.5—8.9	8.0—8.4	7.5—7.9	7.0—7.4	6.0—6.9	
° °	°	m	m	m	m	m	m	m	m
—61 to —90	— 74	—0.76 54	—0.40 51	—0.24 48	—0.26 40	—0.34 28	—0.26 14	—0.20 18	
—41 „ —60	— 50	—0.66 33	—0.42 33	—0.29 30	—0.26 30	—0.24 18	—0.22 6	—0.11 9	
±21 „ ±40	± 29	—0.39 99	—0.26 99	—0.20 95	—0.25 93	—0.24 48	—0.37 27	—0.25 13	
±11 „ ±20	± 14	—0.36 44	—0.14 45	—0.11 44	—0.04 44	—0.31 30	—0.35 8	—0.08 8	
—10 „ +10	± 5	—0.16 39	+0.04 39	+0.07 39	—0.19 38	—0.30 25	—0.28 14	+0.05 8	
Weighted Mean ...		—0.46 269	—0.24 267	—0.16 256	—0.20 245	—0.29 149	—0.32 69	—0.14 56	

The results for the belt $-21\frac{1}{2}$ agree in a very remarkable manner with those for S.D.-phot. (Table 7). Not only are the means nearly the same, which was to be expected since Thome has found his scale of magnitudes nearly identical with that of Schönfeld (Introduction to the *Cordoba Durchmusterung*, p. xxvii.), but the change of the correction with the galactic latitude is insensible for the brighter stars for both observers, and all but identical for those fainter than 9^m ; so that if systematic errors in the estimates of magnitude exist, they must be the same for the S.D. and for Thome's Dm., at least for the zones -21° of Schönfeld and -22° of Thome.

All the belts, most strongly those of the declination $-26\frac{1}{2}$ and $-31\frac{1}{2}$, show, for the stars fainter than 9.0 or even than 8.5, a decided and very large change with the galactic latitude. In this respect these comparisons thus show a totally different behaviour from those with Z.C. If we suppose the magnitudes of Thome correct, then the fainter stars of the Z.C. have been estimated half a magnitude *brighter* in the Milky Way than at the poles of that belt. The difference is in such a direction that the results of our investigation as to the more energetic action on the plates of the stars in the Milky Way as compared with that of *visually* equally bright stars in other parts of the sky (*vide* Art. 7), would have become *exaggerated* if the investigation had been based on comparisons with Thome's Dm. instead of on comparisons with the Z.C.

The mean values too of the corrections for the zones $26\frac{1}{2}$ and $31\frac{1}{2}$ do not agree as well as might have been expected from so large a number of stars compared. For this reason, and for the sake of showing once more the independence of the photographic magnitudes from the position of the stars on the plates, it will be well to give

the separate means for all the declinations for which comparisons were made. The general means were here taken by giving equal weight to the results for 24° , 25° , &c., so that they disagree slightly from those of Table 11.

TABLE 12. Thome-phot. Δp .

Dec.	Photographic Magnitude.							Total Number of Plates.	Total Number of Stars.
	9.5—9.9	9.0—9.4	8.5—8.9	8.0—8.4	7.5—7.9	7.0—7.4	6.0—6.9		
22	^m —0.18 210	^m +0.02 215	^m +0.13 212	^m +0.08 197	^m +0.03 133	^m +0.01 74	^m +0.03 68	72	1109
24	—0.31 48	—0.06 46	+0.02 46	0.00 46	—0.01 28	—0.50 13	—0.20 5	16	236
25	—0.26 48	—0.14 48	—0.03 43	—0.11 43	—0.02 23	—0.25 19	—0.30 6	16	232
26	—0.22 93	—0.06 96	—0.07 96	—0.08 82	—0.22 46	—0.37 44	—0.11 19	32	477
27	—0.17 48	—0.01 48	—0.07 46	—0.14 46	—0.13 29	—0.73($\frac{1}{2}$) 9	+0.13 3	16	231
28	—0.30 47	—0.11 48	0.00 46	—0.08 44	0.00 25	—0.33($\frac{1}{2}$) 10	—0.20 7	16	231
Mean...	—0.25 284	—0.08 286	—0.03 277	—0.08 261	—0.08 151	—0.41 95	—0.15 40	64	1407
29	—0.44 90	—0.17 89	—0.06 86	—0.26 82	—0.33 50	—0.33 17	—0.12 10	30	424
31	—0.47 179	—0.28 178	—0.21 170	—0.18 163	—0.26 99	—0.31 52	—0.15 46	60	887
Mean...	—0.46 269	—0.23 267	—0.14 256	—0.22 245	—0.29 149	—0.32 69	—0.14 56	60	1311

That the values of Δp for the first belt differs somewhat from those for the two others, must be attributed, of course, to the fact that the reduction of the former was based on Schönfeld's magnitudes, that of the others on those of the Z.C. The discrepancies between the results for the belts of plates $26\frac{1}{2}$ and $31\frac{1}{2}$ must be attributed mainly to a slight want of homogeneity either in Thome's Dm. or in Z.C. Where changes in the value of Δp occur, they seem nearly to coincide with the boundary line between the plates, so that the three series of mean results must very nearly represent the corrections for the three belts.

10.—II. Magnitudes of C.P.D. corresponding with Determined Magnitudes of S.D., Z.C., U.A., and Thome.

The value of Δv was obtained in the same way as that of Δp in the preceding article. Only in the case of S.D. and Z.C. *all* the classes of magnitude have not been used as standards of comparison, but only the exact multiples of half a magnitude, 10.0, 9.5, 9.0, &c. In the case only of the brighter stars, where this mode of proceeding

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would have diminished the number of available stars in too high a degree, all degrees of magnitude were made use of, but for the sake of uniformity, the stars 6·8-7·2 were all reduced to the class 7·0, &c.

The results of the comparisons have been embodied in the following tables.

TABLE 13. S.D.-phot. Δv (72 Plates. Zones 19° and 21°).

Limits of β .	Mean β .	Magnitude of Schönfeld.									
		10·0	9·5	9·0	8·5	8·0	7·5	7·0	6·5	6·0	
-61° to -90°	-74°	+0·08 11	-0·15 51	-0·09 75	0·00 43	+0·07 38	-0·20 23	-0·22 17	-0·65 4	+0·20 2	
-41 " -60	-52	-0·02 15	-0·28 59	-0·01 59	+0·12 42	-0·09 22	-0·10 12	-0·54 10	-0·72 5	...	
±21 " ±40	±34	+0·08 137	-0·13 195	+0·06 197	+0·03 165	-0·07 137	-0·22 89	-0·35 40	-0·76 12	-0·82 8	
±11 " ±20	±14	+0·08 36	-0·14 70	+0·07 70	-0·01 67	-0·25 57	-0·34 21	-0·50 15	-0·57 6	-1·57 3	
-10 " +10	± 5	+0·10 54	-0·19 60	+0·07 60	+0·03 59	-0·23 48	-0·53 21	-0·74 14	-0·95 4	-0·80 2	
Mean	...	+0·08 253	-0·16 435	+0·03 461	+0·03 376	-0·11 302	-0·27 166	-0·43 96	-0·73 31	-0·83 15	

from which, in order to make the results comparable with those of Table 8, I get by interpolation* and by addition of the values found for the stars 4·0 to 5·9 from the observation of *all* the zones between 19°·0 and 23°·0—

TABLE 14. S.D.-phot. Δv .

Mag. Schönf.	Δv .
m m	m
9·5-9·9	- 0·05
9·0-9·4	- 0·05
8·5-8·9	+ 0·03
8·0-8·4	- 0·05
7·5-7·9	- 0·21
7·0-7·4	- 0·37
6·0-6·9	- 0·66
5·0-5·9	- 0·62 (68 Stars)
4·0-4·9	- 0·67 (21 ")

* Giving half weight to the results for magnitude 6·0.

For the Z.C. I get—

TABLE 15. Z.C.-phot. Δv .

δ	Magnitude of Z.C.												Number of Plates.				
	9.5	9.0	8.5	8.0	7.5	7.0	6.5	6.0									
$^{\circ}$	m	m	m	m	m	m	m	m	m	m	m	m					
24	+0.34	89	+0.08	120	+0.01	91	-0.15	104	-0.33	37	-0.49	30	-0.35	13	-0.76	11	32
26*	+0.30	170	+0.07	228	-0.09	184	-0.20	196	-0.40	111	-0.50 (2)	88	-0.46 (3)	42	-0.73 (2)	19	64
28	+0.13	96	+0.02	111	-0.14	90	-0.31	92	-0.21	37	-0.29	19	-0.14	7	-0.66	10	32
Mean	+0.26	355	+0.06	459	-0.07	365	-0.22	392	-0.31	185	-0.45	137	-0.37	62	-0.72	40	64
29	+0.21	90	+0.06	105	-0.16	98	-0.30	70	-0.52	32	-0.64	29	-0.95	6	-1.14	7	30
31†	+0.29	211	+0.09	226	-0.02	166	-0.21	184	-0.43	117	-0.54 (2)	86	-0.61 (3)	39	-0.83 (3)	27	60
33	+0.28	100	+0.01	116	-0.10	94	-0.16	65	-0.24	25	-0.58	24	-0.48	5	-0.70	4	30
Mean	+0.26	401	+0.05	447	-0.09	358	-0.22	319	-0.40	174	-0.56	139	-0.65	50	-0.87	38	60
34, 36	+0.31	216	+0.10	236	-0.07	218	-0.12	212	-0.33	144	-0.44	97	-0.48	48	-0.48	25	57

* The brighter stars from declinations 26 and 27.
 † The brighter stars from declinations 30°, 31° and 32°.

from which, in order to get results comparable with those of Table 10, the following table was interpolated, which, as before, was completed for the magnitudes 4.0—5.9.

TABLE 16.* Z.C.-phot. and U.A.-phot. Δv .

Mag. Z.C.	21½		26½		31½		35½		Mean for the Zones —24° to —38°.	
9.0—9.4	m + 0.29 256		m + 0.14		m + 0.13		m + 0.18		m + 0.15	
8.5—8.9	+ 0.16 113		- 0.02		- 0.03		0.00		- 0.02	
8.0—8.4	+ 0.10 99		- 0.16		- 0.17		- 0.10		- 0.14	
7.5—7.9	- 0.17 67		- 0.27		- 0.33		- 0.25		- 0.28	
7.0—7.4	- 0.28 40		- 0.39		- 0.50		- 0.40		- 0.43	
6.0—6.9	- 0.47 39		- 0.50		- 0.70		- 0.47		- 0.56	
5.0—5.9	- 0.93 16		- 0.66		79	- 0.57	69	- 0.36	57	- 0.53
4.0—4.9	...		- 0.77		22	- 0.50	20	- 0.74	18	- 0.67

The numbers of the column for —21½ have been obtained in the way explained in the preceding article.

* This table depends, from mag. 6.0—9.5 exclusively on the mags. of Z.C.
 from mag. 4.0—5.9 exclusively on those of U.A.

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For showing the behaviour in different galactic latitudes the numbers for the belts $26\frac{1}{2}$, $31\frac{1}{2}$, $35\frac{1}{2}$ were differently grouped and gave then—

TABLE 17. Z.C.-phot. Δv .

Limits of β .	β	Magnitude of Z.C.							
		9.5	9.0	8.5	8.0	7.5	7.0	6.5	6.0
$^{\circ}$ $^{\circ}$	$^{\circ}$ m	m	m	m	m	m	m	m	m
-61 to -90	-73	+0.24 123	+0.08 202	-0.05 132	-0.11 154	-0.35 56	-0.40 45	-0.49 41	-0.76 16
-41 " -60	-49	+0.26 92	+0.12 117	-0.04 80	-0.19 82	-0.31 50	-0.44 35	-0.36 18	-0.67 10
± 21 " ± 40	± 30	+0.28 378	+0.07 431	-0.06 352	-0.20 337	-0.37 178	-0.52 133	-0.49 49	-0.68 30
± 11 " ± 20	± 15	+0.27 200	+0.06 212	-0.06 201	-0.22 193	-0.36 98	-0.44 77	-0.54 27	-0.72 24
-10 " +10	± 5	+0.33 179	+0.05 180	-0.15 176	-0.23 157	-0.40 121	-0.60 83	-0.59 25	-0.76 23
Weighted Mean ...		+0.28 972	+0.07 1142	-0.08 941	-0.19 923	-0.37 503	-0.50 373	-0.50 160	-0.72 103

so that no change within the galactic latitude is indicated.

Finally, for Thome-phot. was found from stars in the declinations 22° , 26° , 31° —

TABLE 18. Thome-phot. Δv .Belt $21\frac{1}{2}$. 72 Plates.

Limits of β .	Mean β .	Magnitude of Thome.					
		9.0-9.4	8.5-8.9	8.0-8.4	7.5-7.9	7.0-7.4	6.0-6.9
$^{\circ}$ $^{\circ}$	$^{\circ}$ m	m	m	m	m	m	m
- 61 to - 90	- 75	-0.24 19	-0.01 20	+0.07 20	-0.07 15	-0.17 12	-0.29 7
- 41 " - 60	- 57	-0.09 15	-0.02 15	-0.12 13	-0.15 11	-0.09 7	-0.10 1
± 21 " ± 40	± 32	-0.11 50	-0.08 50	-0.09 49	-0.25 44	-0.38 33	-0.40 14
± 11 " ± 20	± 13	-0.10 20	+0.02 20	-0.24 18	-0.15 17	-0.13 10	-0.55 4
- 10 " + 10	± 2	+0.02 25	+0.03 25	+0.16 18	-0.22 18	-0.05 10	-0.07 7
Weighted Mean ...		-0.10 129	-0.03 130	-0.05 118	-0.20 105	-0.23 72	-0.32 33
Belt $26\frac{1}{2}$. 64 Plates.							
$^{\circ}$ $^{\circ}$	$^{\circ}$ m	m	m	m	m	m	m
- 61 to - 90	- 73	-0.40 25	-0.32 25	-0.34 16	-0.37 19	-0.25 12	-0.54 15
- 41 " - 60	- 50	-0.44 10	+0.01 10	-0.16 10	-0.33 9	-0.56 5	-0.37 6
± 21 " ± 40	± 30	-0.15 50	-0.25 50	-0.21 50	-0.42 46	-0.55 31	-0.41 14
± 11 " ± 20	± 16	+0.01 15	-0.21 15	-0.27 15	-0.41 14	-0.63 13	-0.47 9
- 10 " + 10	± 6	-0.10 30	-0.21 30	-0.44 29	-0.43 18	-0.54 24	-0.42 12
Weighted Mean ...		-0.19 130	-0.23 130	-0.29 129	-0.40 106	-0.52 85	-0.45 56

TABLE 18. Thome-phot. Δv —*continued*.Belt $31\frac{1}{2}$. 60 Plates.

Limits of β .	Mean β .	Magnitude of Thome.											
		9.0—9.4		8.5—8.9		8.0—8.4		7.5—7.9		7.0—7.4		6.0—6.9	
— 61° to — 90°	— 73°	^m —0.94	25	^m —0.80	25	^m —0.55	25	^m —0.64	24	^m —0.44	18	^m —0.63	9
— 41 „ — 60	— 51	—0.64	10	—0.49	10	—0.47	10	—0.66	9	—0.66	7	—0.50	3
± 21 „ ± 40	± 29	—0.38	45	—0.37	45	—0.21	45	—0.45	45	—0.56	34	—0.65	19
± 11 „ ± 20	± 15	—0.19	20	—0.16	20	—0.36	20	—0.39	19	—0.46	9	—0.57	12
— 10 „ + 10	± 3	—0.12	31	—0.11	31	—0.31	30	—0.49	31	—0.67	23	—0.37	3
Weighted Mean ...		—0.41	131	—0.37	131	—0.34	130	—0.50	128	—0.56	91	—0.60	46

11.—The Values of Δp and Δv Compared.

It is easy to show that the mean value of Δp for the faintest stars of Table 8 must be somewhat too small, the corresponding value of Δv in Table 14 somewhat too great.

In the regions near the poles of the Milky Way the S.D. is richer in stars than our Dm. and nearly all our stars in these regions are to be found in that work. The result found for Δp will be therefore unobjectionable. In the regions in or near the Milky Way, on the other hand, the S.D. is far poorer in stars; for these portions of the sky only the brighter ones, visually, of those whose photographic magnitude is $9.5-9.9$ have been observed at Bonn, and the mean visual brightness corresponding to these photographic magnitudes will be, therefore, over-estimated. Δp will be found, in consequence, too small in or near the Milky Way and the mean of this value with the correct one for the poles of that belt will be too small also.

An analogous course of reasoning shows that Δv must be found correct for the regions in or near the Milky Way, too big at the poles, consequently too big in the mean.

The same applies to the value of Δp for the stars between $9^m.0$ and $9^m.5$ of the Z.C. (Table 10), the sign of which would have been doubtlessly found the reverse without this cause. Lastly, the same would have applied even in a higher degree to the value of Δv for the stars $9^m.5-9^m.9$ of Thome's Dm., which we did not compute for that reason.

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There is nothing unexpected, therefore, in the difference shown by the values Δp and Δv for these stars. But on comparing the corresponding Tables 8 and 14, 10 and 16, 11 and 18, it is readily seen that the difference between the two values is not confined to these faint stars, but exists for all classes of magnitude. To show clearly the nature of these differences I have brought them together in the following table—

TABLE 19. $\Delta p - \Delta v$.

Mag.	Z.C. and U.A.				Thome.			Mean.			General mean
	21½	26½	31½	35½	21½	26½	31½	S.D.	Z.C.	Thome.	
^m ^m 9·5-9·9								^m (-0·14)			
^m 9·0-9·4	(-0·32)	(-0·29)	(-0·21)	(-0·21)	+0·12	+0·12	+0·17	+0·01	(-0·26)	+0·14	+0·08
^m 8·5-8·9	+0·03	+0·15	+0·13	-0·07	+0·16	+0·19	+0·21	+0·07	+0·06½	+0·19	+0·12
^m 8·0-8·4	+0·16	+0·32	+0·25	+0·14	+0·13	+0·21	+0·14	+0·13	+0·22	+0·16	+0·17
^m 7·5-7·9	+0·25	+0·13	+0·26	+0·32	+0·23	+0·30	+0·21	+0·22	+0·24	+0·25	+0·24
^m 7·0-7·4	+0·32	+0·29	+0·41	+0·39	+0·24	+0·13	+0·24	+0·32	+0·35	+0·20	+0·29
^m 6·0-6·9	+0·33	+0·35	+0·58	+0·37	+0·35	+0·31	+0·46	+0·59	+0·41	+0·37	+0·46
^m 5·0-5·9	+0·63	+0·64	+0·35	+0·16				+0·44	+0·45		+0·45
^m 4·0-4·9		+0·30	+0·82	+0·93				+0·53	+0·68		+0·60

In taking the general mean I have not considered the values in brackets; the reason of their exclusion has been just now explained. To the value of the Z.C. for the stars 8·5—8·9, which might still to a certain extent be affected by the same cause, half weight was given.

The facts forcibly brought out by this table, viz.—

- (a) that the difference $\Delta p - \Delta v$ is positive for the whole range of magnitude ;
 (b) that it increases with the brightness of the stars,

can be readily explained.*

The first is caused by the real differences of colour between the stars, together with the fact that the number of stars increases with decreasing brightness.

The second goes far to prove that, really or apparently†, the fainter stars are, generally speaking, more uniform in colour than the brighter ones.

* A single example may be given to illustrate the importance of these differences. The Star Phot. Dm. — 19°, 219 is 6·3 according to Schönfeld and 7·2 according to our measurements. Applying the corrections Δv (Table 14) to Schönfeld's magnitude we get - 0^m·2 for the corrected difference of magnitude; applying, on the other hand, the correction Δp (Table 8) to the photographic magnitude, we get - 0^m·85 for the same difference. In the latter system, therefore, the star is far lower down in the scale of blueness than in the former.

† That the difference in range of colour may be only apparent will be explained in Art. 19.

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To show this and to compute the value of $\Delta p - \Delta v$, we may start from any arbitrary system of photographic magnitudes. It is only for the sake of convenience that we choose the system of our catalogue.

Let N_m be the total number of stars of the visual magnitude m . We may adopt for this number the formula

$$(1) \dots \dots \dots N_m = H k^m$$

where, according to Gould's computations (Uran. Arg., p. 354), based on the number of stars in the northern Bonn. Dm.

$$k = 3.87.$$

Let for stars of a *determined visual magnitude* m , $\phi(\omega) \delta\omega$ be the probability that the difference "vis. mag. - phot. mag.", cleared of mere errors of observations, lie between ω and $\omega + \delta\omega$. Let $\psi(\omega) \delta\omega$ represent the same probability for stars of a *determined photographic* magnitude, and let us assume :

1. That the function $\phi(\omega)$ does not vary with the magnitude.

About the form of this function we know little beyond the fact that its value must be small for large positive and negative values of ω *. We will *assume* therefore that, for any determined *visual* magnitude, the deviations $\omega - \Delta v$, of the values of ω from their mean Δv , which we may conveniently call *degrees of blueness*, follow the law governing the distribution of accidental errors ; that is we will assume

$$(2) \dots \dots \dots \phi(\omega) = \frac{h}{\sqrt{\pi}} e^{-h^2 (\omega - \Delta v)^2}$$

in which the multiplier has been determined by the condition $\int_{-\infty}^{\infty} \phi(\omega) \delta\omega = 1$.

This premised we can readily demonstrate the following propositions (l denoting *Nep. log.*)

- I. The corrections Δp will be determined by

$$(3) \dots \dots \dots \Delta p - \Delta v = \frac{l k}{2 h^3} = 2.974 r^2$$

- II. The number P_m of stars of the *photographic* magnitude m will be

$$(4) \dots \dots \dots P_m = N_m e^{\frac{1}{2} l k [\Delta p + \Delta v]}$$

*It is certainly not to be considered hopeless to determine at least approximately the form of this function from observation. It seems, however, that the materials at present available for such a determination are not sufficiently accurate for the purpose.

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III. The quantities $\omega - \Delta p$, the degrees of blueness for any determined *photographic* magnitude, will also follow the law of distribution of accidental errors and the modulus of precision h will be the same as in the case of a determined *visual* magnitude. In fact we will have—

$$(5) \dots \psi(\omega) = \frac{h}{\sqrt{\pi}} e^{-h^2 [\omega - \Delta p]^2}$$

In these formulæ r is the probable degree of blueness, either for stars of constant *visual* or of constant *photographic* magnitude.

We may demonstrate these formulæ as follows :—

Consider the photographic magnitude m . This magnitude belongs to all the stars visually $m + \kappa$ for which the difference “vis. mag.—phot. mag.” is κ magnitudes. The number of these for κ between ω and $\omega + \delta\omega$ is

$$(6) \dots N_{m + \omega} \phi(\omega) \delta\omega$$

We will have therefore

$$\left. \begin{array}{l} \text{mean visual mag. of} \\ \text{the stars photo-} \\ \text{graphically = } m \end{array} \right\} = \frac{\int_{-\infty}^{\infty} (m + \omega) N_{m + \omega} \phi(\omega) \delta\omega}{\int_{-\infty}^{\infty} N_{m + \omega} \phi(\omega) \delta\omega} = m + \frac{\int_{-\infty}^{\infty} \omega N_{m + \omega} \phi(\omega) \delta\omega}{\int_{-\infty}^{\infty} N_{m + \omega} \phi(\omega) \delta\omega}$$

and in consequence of (1) and definition of Δp (Art. 8)

$$(7) \dots \Delta p = \frac{\int_{-\infty}^{\infty} \omega k^\omega \phi(\omega) \delta\omega}{\int_{-\infty}^{\infty} k^\omega \phi(\omega) \delta\omega}$$

from which, substituting (2), without difficulty

$$\Delta p = \Delta v + \frac{l k}{2 h}, \text{ which is equivalent to equation (3).}$$

Further P_m is evidently the integral between $-\infty$ and ∞ of the expression (6), that is

$$(8) \dots P_m = \int_{-\infty}^{\infty} N_{m + \omega} \phi(\omega) \delta\omega$$

or according to (1) and (2)

$$\begin{aligned} P_m &= \frac{h}{\sqrt{\pi}} N_m \int_{-\infty}^{\infty} k^\omega e^{-h^2 \frac{(\omega - \Delta v)^2}{\delta \omega}} \\ &= \frac{h}{\sqrt{\pi}} N_m e^{\Delta v l k + \left(\frac{l k}{2 h}\right)^2} \int_{-\infty}^{\infty} e^{-h^2 \left[\omega - \left(\Delta v + \frac{l k}{2 h^2}\right)\right]^2} \delta \omega \\ &= N_m e^{\Delta v l k + \left(\frac{l k}{2 h}\right)^2} \end{aligned}$$

which again, according to (3), reduces to

$$P_m = N_m e^{\frac{1}{2} l k [\Delta p + \Delta v]} \quad Q.E.D.$$

Finally, as has been said just now, the expression (6) shows the number of stars of the determined *photographic* magnitude m , visually $m + \omega$ to $m + \omega + \delta \omega$. On the other hand, this number is evidently $P_m \psi(\omega) \delta \omega$.

Consequently

$$P_m \psi(\omega) = N_{m + \omega} \phi(\omega)$$

Writing in this formula $N_{m + \omega} = k^\omega N_m = N_m e^{\omega l k}$ (according to (1)) and for P_m and $\phi(\omega)$ their values (4) and (2), we get

$$\psi(\omega) = \frac{h}{\sqrt{\pi}} e^{-\frac{1}{2} l k [\Delta v + \Delta p] - h^2 (\omega - \Delta v)^2 + \omega l k}$$

which by the use of (3) reduces at once to the formula (5).

The tables 6—18 and 19, together with formula (2), prove that the assumption that $\phi(\omega)$ does not vary, cannot be regarded as consistent with the facts, for they show that at least the value of Δv as well as that of $\Delta p - \Delta v$, consequently that of h , vary with the magnitude. It therefore remains to consider :

2. What changes, if any, are introduced in the formulæ by this variation with the magnitude of the quantities Δv , Δp and h .

It appears that all the formulæ still hold good with an approximation sufficient for all purposes, provided that we take Δv , Δp , h to denote the values these quantities have for one and the same magnitude m . Somewhat more approximately still, if we

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denote by h_m $(\Delta v)_m$ $(\Delta p)_m$ the values which h , Δv , Δp take for the magnitude m the formulæ (3) and (4) may be written

$$(3^b) \dots \dots (\Delta p)_{m+\Delta p} - (\Delta v)_m = \frac{l k}{2h_m^2} = 2.974 r_m^2$$

$$(4^b) \dots \dots P_{m+\Delta p} = N_{m+\Delta p} e^{\frac{1}{2} l k [(\Delta v)_m + (\Delta p)_{m+\Delta p}]} *$$

To see this we have only to consider that, on the new assumption, the expression (6) does not rigorously represent the number of stars photographically m , visually $m + \omega$ to $m + \omega + \delta\omega$, because $\phi(\omega)$ will have another value for the magnitude $m + \omega$ than it has for the magnitude m .

The consequence will be that, instead of (7), we get

$$(7^b) \dots \dots \Delta p = \frac{\int_{-\infty}^{\infty} \omega h k^\omega e^{-h^2(\omega - \Delta v)^2} \delta\omega}{\int_{-\infty}^{\infty} h k^\omega e^{-h^2(\omega - \Delta v)^2} \delta\omega}$$

where h and Δv are functions of ω .

Now, experience shows that the differences "vis. mag.—phot. mag." (for a determined photographic magnitude) deviate from their mean Δp hardly ever as much as $\pm 1^m.5$ and even as much as $\pm 1^m.0$ in less than 4 per cent. of all the cases, and this number becomes even still considerably smaller if we exclude the brighter stars and take into account the errors of observation.

The value of the integrals entering into (7^b) and (8) will, therefore, be nearly vanishing, and, consequently, it will be nearly indifferent what are the values adopted for the quantities Δv and h , beyond the limits

$$- 1^m.0 < \omega - \Delta p < + 1^m.0.$$

On the other hand, these limits are narrow enough to make it permissible to take within them *mean* values for these quantities. Therefore we may without serious error adopt these mean values for the whole range of the integrals. We thus fall back

* Had the magnitudes of our catalogue been found extremely different from the visual magnitudes, that is, had Δv and Δp been found very considerable, then these formulæ would have been decidedly preferable to (3) and (4). As it is, it is nearly indifferent which of the two sets are used. We will, however, use the latter as being formally somewhat more accurate.

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on the formulæ (3) and (4), where it will be best to take for Δv and h the values corresponding to

$$\omega - \Delta p = 0$$

that is, corresponding to the visual magnitude $m - \Delta p$.

Thus (3) ought to be read

$$(\Delta p)_m = (\Delta v)_m - \Delta p + \frac{l k}{2 h^2_m - \Delta p}$$

from which follows the formula (3^b).

In the same way we get formula (4^b).

The equation (3) or (3^b) demonstrates the truth of our propositions *a* and *b*, for, first, it appears that the difference $\Delta p - \Delta v$ is necessarily always *positive*, and second, if, as is the case here, the difference $\Delta p - \Delta v$ is found to increase with the brightness of the stars, it proves that the probable amount of a difference between photographic and visual magnitude increases also ; which is equivalent to saying that the range of colour varies in the same sense as the brightness.

The results of Table 19, which we slightly modified so as to give the values $(\Delta p)_{m + \Delta p} - (\Delta v)_m$ instead of $(\Delta p)_m - (\Delta v)_m$, may even be used to determine the value of *r* (that is, the probable degree of blueness either for stars of a determined photographic or for stars of a determined visual magnitude) by the aid of formula (3^b). The following table is the outcome of such a determination.

TABLE 20. Values of *r*.

Vis. Mag.	Schönf.	ZC. and UA.	Thome.	Mean.
9.0—9.4	± 0.08	m ...	± 0.22	± 0.15
8.5—8.9	0.12	$\pm 0.12(\frac{1}{2})$	0.26	0.18
8.0—8.4	0.20	0.25	0.23	0.23
7.5—7.9	0.27	0.28	0.28	0.28
7.0—7.4	0.33	0.34	0.29	0.32
6.0—6.9	0.46	0.37	0.36	0.40
5.0—5.9	0.39	0.40	...	0.40
4.0—4.9	0.42	0.48	...	0.45

The values here found agree fairly well with those which will be found further on by a more direct method (Table 35).

12.—Definition of Photographic Magnitude.

To sum up and render more precise the gist of what has been said in the preceding articles :

Disregarding for a moment the small corrections given in Table 10, or, rather, supposing these corrections applied, our scale of magnitude may be asserted to be that of Gould's Z.C. transformed into a photographic scale by the following definition of photographic magnitude.

DEFINITION I.—*Those stars of equal actinic power shall be defined as photographically of the magnitude m , of which the visual magnitude is m in the mean.*

Stars of a fainter class of magnitude photographically than visually, may be called *red* ; stars photographically of a brighter class *blue*.

If we adopt the hypothesis that the degrees of blueness of the stars of any determined *photographic* magnitude are distributed in accordance with the law of distribution of the accidental errors, then this definition implies that the magnitudes of our catalogue (corrected) are such that the sum of the squares of the differences

$$\text{photographic magnitude} - \text{visual magnitude}$$

is a minimum and the sum of the first powers zero, for the stars of any arbitrary but determined *photographic* magnitude.

On the other hand, the same differences have *not* a minimum sum of squares, and not a sum zero, *i.e.*, show a very decided *systematic* character for the stars of any determined *visual* magnitude.

The cause of this phenomenon has been explained. Divested of mathematical symbols it may be stated as follows :

The relative number of red and blue stars, all of the photographic magnitude m , depends on what will be considered as the photographic magnitude of a star. Suppose we make the numbers equal by choosing a star of a certain mean colour as the standard of photographic magnitude m , from which half of the stars deviate towards the blue, half towards the red (Definition I.).

This premised, consider all the stars *visually* of the magnitude m . It is easy to see that for these the red stars will be considerably in excess of the blue ones. For the red stars, visually of the magnitude m , are photographically of fainter, consequently more numerous classes of which they make up just half the number. In the same way the number of blue stars, visually of the magnitude m , is half that of photographically brighter and, consequently, less numerous classes. Therefore, if we make here the

residuals “*photographic magnitude—visual magnitude*,” or, in other words, if we compute the value of Δv , we must find the *negative* sign strongly preponderating, and as by definition $\Delta p = 0$, we thus find $\Delta p - \Delta v$ necessarily *positive*.*

A definition of the visual magnitudes analogous to Definition I. for the photographic ones, viz. :

DEFINITION II.—*Those stars of equal visual brightness shall be defined as visually of the magnitude m , of which the photographic magnitude is m in the mean,*

leads, of course, to just the reverse conditions, so that now the differences “*vis. mag.—phot. mag.*” (Δp) will show a decidedly systematic character for any determined *photographic* magnitude ; from which it appears that the two definitions are fundamentally different.

The difficulty here encountered is evidently one that cannot be wholly avoided. The blue stars will always preponderate among the stars photographically of a fixed magnitude in a higher degree than among the stars visually of the same class.

Neither of the two Definitions I. and II., however, seems satisfactory, first, because it would seem desirable that the definition of photographic magnitude were *reversible*, that is, taking the photographic magnitude as a basis, the visual magnitudes ought to be definable perfectly in the same way as the photographic ones, taking the visual scale as a basis ; and, second, because it would seem better to divide the unavoidable systematic divergences equally over the stars of a determined photographic and those of a determined visual magnitude, than to make them disappear in the one case but double in amount in the other.

The following most simple definition fulfils both conditions without on that account losing the advantage that the photographic magnitudes may be most easily determined in practice in accordance with it.

DEFINITION III.—*Those stars of equal actinic power shall be defined as photographically of the magnitude m , of which the total number is equal to that of the same class visually.*

It is easily seen from (4^b) that our catalogue shall be made to satisfy this condition if to the photographic magnitude m we apply the correction

$$(9) \dots \dots \dots \mu = \frac{1}{2} [(\Delta v)_m + (\Delta p)_m + \Delta v]$$

or, what is equivalent to this according to (3^b), the correction

$$(10) \dots \dots \dots (\Delta v)_m + \frac{l k}{4 h_m^2}$$

* This demonstration is more general than that of the preceding article in that it does not depend on the form of the function $\phi(\omega)$.

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For

$$(\Delta v)_m = -m + \text{vis. mag. corresponding to phot. mag. } m.$$

Thus, applying the correction (9) to the phot. mag. m , the value of $(\Delta v)_m$ which after this correction we will denote by $(\Delta'v)_m$ changes into

$$(11)\dots\dots\dots (\Delta'v)_m = -\frac{l k}{2 h_m^2}$$

consequently by (3^b)

$$(12)\dots\dots\dots (\Delta'p)_{m + \Delta p} = +\frac{l k}{2 h_m^2}$$

Therefore, according to (4^b)

$$P_{m + \Delta p} = N_{m + \Delta p}$$

which, as it will be fulfilled by all values of m , may be written as well.

$$(13)\dots\dots\dots P_m = N_m \quad Q.E.D.$$

That the unavoidable systematical divergences will now be equally distributed over the stars of determined visual magnitude and those of determined photographic magnitude, appears at once from the equations (11) and (12)

The definition, therefore, seems to leave very little to be desired. By its adoption the additional advantage is secured that the final corrections $\frac{1}{2}(\Delta v + \Delta p)$ will give also the best approximation we can get for the faintest stars. For, as has been pointed out before (beginning of Art. 10), the values of Δp for these stars must be too small, those of Δv too great, so that the mean of the two will be to a great extent free from this source of error. For all these reasons I think Definition III. the best that can be given in the present state of science, at least as long as we base the photographic scale on the visual one.

In conclusion it may be noticed—

That the function expressing the law of the distribution of the differences “photographic mag.—visual mag.” becomes, by the adoption of the final definition—

(a) for stars visually of a fixed magnitude

$$\phi(\omega) = \frac{h}{\sqrt{\pi}} e^{-h^2 \left[\omega + \frac{l k}{2 h^2} \right]^2}$$

(b) for those photographically of a fixed magnitude

$$\psi(\omega) = \frac{h}{\sqrt{\pi}} e^{-h^2 \left[\omega - \frac{l k}{2 h^2} \right]^2}$$

from which it follows at once that for the class of stars (a) the number of differences towards the *red* will be as numerous as the differences towards the *blue* for the class (b), and *vice versa*. Of course, the *red* stars will be somewhat in *excess* for the class (a), consequently as much in *defect* for class (b).

13.—Definitive Corrections to be applied to the Magnitudes of the Catalogue.

Nothing now remains but to collect the results for the value

$$\mu = \frac{1}{2} [(\Delta v)_m + (\Delta p)_m + \Delta p]$$

which will be the corrections to be applied to our magnitudes in order to transform them into the photographic magnitudes truly corresponding with the scales of visual magnitudes of the SD., the ZC. and Thome's Dm., according to Definition III.

From the tables 8 and 14, 10 and 16, 11 and 18, I get

TABLE 21.

Phot. mag.	SD.-phot. μ
9.5—9.9	— 0 ^m .10
9.0—9.4	— 0.04
8.5—8.9	+ 0.05
8.0—8.4	+ 0.01
7.5—7.9	— 0.10
7.0—7.4	— 0.21
6.0—6.9	— 0.38
5.0—5.9	— 0.40
4.0—4.9	— 0.40

TABLE 22.

Phot. mag. ZC.-phot. and US.-phot. μ		
$\delta = 19^{\circ}0' - 24^{\circ}0'.$		
		$24^{\circ}0' - 38^{\circ}0'.$
9.0—9.4	+ 0.14	+ 0.03
8.5—8.9	+ 0.13	0.00
8.0—8.4	+ 0.16	— 0.03
7.5—7.9	— 0.03	— 0.17
7.0—7.4	— 0.12	— 0.25
6.0—6.9	— 0.32	— 0.34
5.0—5.9	— 0.64	— 0.33
4.0—4.9		— 0.33

In the case of the ZC. the change of the correction with the galactic latitude is insensible. In the case of Schönfeld it is so small that for all practical purpose it may be neglected. Besides it is readily determined from the tables 7 and 13.

TABLE 23. Thome-phot.

Mean values of μ .

Phot. mag.	Belt 21½	Belt 26½	Belt 31½
9.0—9.4	— 0 ^m .05	— 0 ^m .13	— 0 ^m .31
8.5—8.9	+ 0.04	— 0.14	— 0.27
8.0—8.4	+ 0.02	— 0.19	— 0.29
7.5—7.9	— 0.08	— 0.28	— 0.40
7.0—7.5	— 0.11	— 0.39	— 0.40
6.0—6.9	— 0.15	— 0.29	— 0.37

In the case of Thome, however, a decided change with the galactic latitude is evident for the fainter stars. For these the corrections may be taken from the following table :—

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TABLE 24. Thome-phot. μ .

Galactic β	Belt 21 $\frac{1}{2}$	Belt 26 $\frac{1}{2}$	Belt 31 $\frac{1}{2}$		
	$\frac{m}{9^{\circ}0}-\frac{m}{9^{\circ}4}$	$\frac{m}{9^{\circ}0}-\frac{m}{9^{\circ}4}$	$\frac{m}{9^{\circ}0}-\frac{m}{9^{\circ}4}$	$\frac{m}{8^{\circ}5}-\frac{m}{8^{\circ}9}$	$\frac{m}{8^{\circ}0}-\frac{m}{8^{\circ}4}$
— 75°	— 0·15	— 0·29	— 0·62	— 0·54	— 0·43
— 51	— 0·05	— 0·27	— 0·47	— 0·38	— 0·36
± 30	— 0·05	— 0·11	— 0·31	— 0·30	— 0·23
± 15	— 0·03	+ 0·01	— 0·16	— 0·13	— 0·22
± 4	+ 0·07	0·00	— 0·05	— 0·02	— 0·27

I am fully aware of the fact that even after the application of the corrections given above, the system of photographic magnitudes of our catalogue cannot be regarded otherwise than as a first approximation to a really irreproachable system. What is really obtained is the photographic scale truly corresponding for all parts of the sky and for all magnitudes, at least from 6^m·0 or 6^m·5 to 9^m·5, with the visual scale of the SD., Thome's Dm. or ZC., and this being the case our photographic magnitudes may claim, as I believe, equal value with those of the other works of its kind.

But it is evident that all the defects of these visual scales will be reproduced in the photographic one.

These defects are probably for all visual estimates in a lesser or higher degree, *first*, want of uniformity for the whole sky; *second*, what I would call *irrationality*, *i.e.*, the light ratio of two consecutive magnitudes is not absolutely the same throughout the scale.

As soon as one wishes to clear the magnitudes of these defects the connexion between the photographic and visual scale must cease. For even if the visual scale were absolutely uniform for all parts of the sky, it would not follow that the photographic scale, which is made to depend upon it, would be uniform also. If the stars in certain regions of Heavens are bluer than elsewhere (and, as has been shown in Art. 7, there is good reason for such an assumption) then it will not be so.

In the same way, even if the visual scale were absolutely rational, it would not follow that the photographic scale would be rational also. If the fainter stars are systematically of a redder or a bluer hue, it will not be so, or at least the light ratio will be different.

Now, first, as to uniformity. There seems little doubt but that photography offers far better conditions here than visual observations. The measures recommended in order to secure such uniformity for the great international undertaking of the chart

of Heavens, will, if duly attended to, doubtlessly result in a system of magnitudes that will leave very little to be desired on this head. They need not here be repeated.

Such measures are, however, beyond the plan of the present work. Still there seems to be reason to think that the derivation of corrections, for every individual plate, which will make the scale of our Dm. uniform throughout, will prove feasible, and a plan tending to that end has been worked out. Its execution, however, is better deferred till the whole catalogue is more nearly complete, and I hope to be able to give the results with the last volume.

Uniformity once obtained will pave the way for obtaining *rationality*, because it will reduce the labour to be expended thereon to the observation of a restricted number of stars. As far as I know, no wholly irreproachable method has as yet been applied to the solution of the problem involved. It seems, however, reasonable to hope that, by the efforts of the astronomers in a position to make experiments in the required direction, photographic photometry will not be long in taking at least equal rank with visual photometry.

14.—Probable Error of the Right Ascensions.

A change of the p.e. of the Right Ascensions with the Declination need not be considered, for a computation of this error for the belts of plates $40\frac{1}{2}$ to $55\frac{1}{2}$ gave practically the same value as that found for the observations of the present volume. The p.e. for the zones near the edges of the plates was also found equal, or rather, even a trifle smaller than that resulting from a discussion of the central zones. These facts show, as indeed was to be expected, that the accuracy of the Right Ascensions depends mainly on that of the readings of the microscope. It is only necessary, therefore, to consider separately the observations of the three observers R., N., K., who made these readings for the present volume.

From the comparison of the mean results of *two* observations, with the corresponding mean Right Ascensions of Gould's and Argelander's zones, the following results were found by the sum of the squares of the errors :—

Obs.	P.E.	Number of Stars.	Number N. of errors \cong 1 sec.	N. in Percentages.	Theoretical Percentage.
R.	$\pm 0\cdot301$	578	20	3·5	3·3
N.	0·335	596	24	4·0	5·6
K.	0·276	281	5	1·8	2·0

These numbers must be slightly diminished for the p.e.'s of the positions compared, which were rounded off at 0^s.1. Schönfeld takes 0^s.12 for this p.e. With us it is

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probably somewhat smaller in the mean, and $0^{\text{s}}.09$ may be adopted instead. Further, every star has been observed in the mean 2.4 times, so the probable errors found are still to be multiplied by 0.913. As the additional observations are relative to the stars near the limits of the zones (the overlapping portions) *i.e.*, relative to the stars of which the reduction is necessarily the least perfect, the gain in accuracy must be even somewhat more considerable than that implied by this factor. Disregarding this consideration and adding the results found at once from the definitive positions for the repeated plates (corresponding to plates 28, 35-39, 46, 61, 97, 100, 175), I get

TABLE 25. P.E. of the Right Ascensions.

Obs.	P.E.	Number of Stars.	Weight.
R.	± 0.262	578	10
N.	0.295	596	4
K.	0.238	281	2
Rep. pl. N.R.	0.302	108	1
Mean ...	± 0.269	1563	

The weights used in taking the mean are approximately proportional to the number of observations contributed by each of the observers. The numbers for all these observers, and especially that for the observer who contributed the greatest part, differ so little from the mean of all, that we may confidently take for the whole of the present volume

$$\text{P.E. of a Right Ascension} = \pm 0^{\text{s}}.269$$

corresponding to $3''.5$ in arc of the great circle.

It should be remarked that after all the observations had been completed, the readings of the hour circle for great part of the repeated plates (plates 28, 35-39, 46, 61) were found to have been very badly made. For this reason a third observation has been made, which was combined with equal weight with the mean of the two first observations. As appears from Table 25, the result has been that the p.e. of the Right Ascensions for these plates is now but slightly greater than that for the other plates.

15.—Probable Error of the Declinations.

This p.e. was deduced by a comparison of our definitive Declinations with those of Gould's General Catalogue. The letters S., V., K. denote the observers at the ocular.

TABLE 26. P.E. of the Declinations.

Obs.	—	P.E.	Number of Stars.	Weight.
S.K.	Central zones	$\pm 0\cdot0456$	150	29
"	Marginal "	$0\cdot0478$	100	29
V.K.	Central "	$0\cdot0445$	225	71
"	Marginal "	$0\cdot0458$	195	71
	Mean	$\pm 0\cdot0455$	670	

This number reduces to $\pm 0\cdot0435$ or $2\cdot6$ if we adopt the value of $0\cdot8$ as the p.e. of the positions compared, which were rounded off at $0\cdot01$. The weights are taken in accordance with the number of observations contributed by the two pairs of observers.

Among the 670 residuals were found

Errors $> 0\cdot20$, number found 0, theoretical number 1·6

$= 0\cdot20$	"	"	1	"	"	0·9
$0\cdot19$	"	"	4	"	"	1·3
$0\cdot18$	"	"	0	"	"	2·5
$0\cdot17$	"	"	5	"	"	3·9
$0\cdot16$	"	"	3	"	"	4·4
$0\cdot15$	"	"	7	"	"	6·1

The fact that the number of relatively large errors is here found, as well as for the Right Ascensions, rather smaller than might have been expected, is to be explained by our habit, referred to in Art. 5, of revising all the stars for which the two observations showed somewhat unusually large differences.

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The p.e.'s here found compare as follows with those found in other works of its kind :—

Authority.	P.E. in α	P.E. in δ
BD. — 2 to + 38	± 0.70	± 25.4
SD. — 2 „ — 23	0.38	9.6
Cord. Dm. — 22 „ — 32	0.42	13.8
CPD. — 19 „ — 38	0.27 (3".5)	2.6
Lalande (1880) + 1 „ + 5	0.224 (3".35)	2.4

Photography has thus permitted a considerable advance in accuracy, especially in the Declinations. In fact, the accuracy of our positions approaches that of the older Zone observations. *At the present moment* the position of a star can be taken as accurately, or nearly so, from our Durchmusterung as from Lalande's Catalogue, even if we exclude all the cases where proper motion seems probable. This appears from the last pair of numbers given, which represent the p.e. of a position of a Lalande star between $\delta = +1^\circ$ and $\delta = +5^\circ$ as reduced to 1880. It was derived from 120 Lalande stars, reduced by von Astens' tables, compared by Boss with his own observations (Cat. der Astr. Gesellsch. 14 Stück, pp. 172–184). From every hour of Right Ascension the five first stars not marked with an asterisk (sensible proper motion) or with any letter, served for the computation. The residuals were first corrected for the systematic differences $+0^s.15$ and $-2^s.5$ of the two catalogues, and the resulting p.e. were diminished by the p.e. of Boss. Uncorrected for systematic error the p.e. of Lalande would even have slightly exceeded those of our Dm.

Wherever observation shows divergences from our catalogue of say 2^s or $0'.3$, there is an overwhelming probability of error or of proper motion.

16.—Probable Error (τ) of the Magnitudes excluding the Systematic Errors of the Individual Plates.

This p.e. was computed in two different ways :

I. By comparing the estimates of the diameters made in the two observations of the same plate. From these resulted the values in the following table, where the letters S.K. and V.K. denote as before the pairs of observers at the ocular :—

TABLE 27. P.E. of Mean of two Observations. τ .

Limits of Diam.	Mean Diam.	Observers, S.K.	Number of Stars.	Observers, V.K.	Number of Stars.
Diam. ≥ 0.2	0.07	± 0.0147	300	± 0.0112	330
0.2 < " ≥ 0.5	0.34	0.0221	220	0.0187	280
0.5 < " ≥ 1.0	0.7	0.0312	120	0.0299	140
1.0 < " ≥ 2.0	1.4	0.0572	45	0.0543	108

These values transformed into magnitudes by means of the tables of reduction* give

TABLE 28. P.E. of Photographic Magnitude. τ .

Diam.	Mag.	S.K.	V.K.	Mean.	Weight.
0.07	m (9.5)	± 0.088	± 0.067	± 0.073	270
0.34	(8.1)	0.095	0.079	0.084	38
0.7	(6.8)	0.093	0.093	0.093	4½
1.4	(5.2)	0.101	0.098	0.099	1
Mean	± 0.089	± 0.069	± 0.075	

In taking the means of the values for S.K. and V.K., weights were given proportional to the number of observations contributed by each pair of observers (29 : 71) ; the weights used in the computation of the general mean are set down in the last column ; they are roughly proportional to the total number of stars of the corresponding diameter.

The difficulty which the observer S. found in making consistent estimates of the fainter magnitudes, alluded to in Art. 5, and repeatedly noticed during the observations, shows itself clearly in these numbers. In some few cases the divergences of S.'s estimates from those of myself were such that the former had to be rejected.

* The magnitudes corresponding with determinate diameters vary considerably, especially with galactic latitude. See Art. 7. The p.e. ought therefore properly not to be taken out with the argument *magnitude*, but with the argument *diameter*. For most purposes however the magnitudes given in brackets in the 2nd column, which in the mean correspond with the diameters given in the first, may be used as such.

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It appears that notwithstanding this, *and as far as can be judged from the agreement inter se*, the magnitudes are highly trustworthy for the whole of the observations and throughout the scale, the p.e. never exceeding $0^m.1$ even for stars as bright as $6^m.0$ or even $5^m.0$.

II. By comparing the diameter of the same star on two contiguous plates. *Fourteen* pairs of plates measured by the observers V.K. and having large overlapping zones in common, were compared for the purpose. Only stars with diameters $\cong 0'.2$ were found in sufficient number to give trustworthy results. Stars on the extreme borders were not used. Before the p.e. were computed the *systematic* differences of the plates under consideration were carefully determined and applied. This having been done, the value

$$\pm 0'.0159$$

was found for the p.e. of the difference of two diameters, each the mean of two estimates.

The p.e. of a diameter depending on two estimates is thus found to be

$$\pm 0'.0113 \text{ (434 stars)}$$

which agrees most remarkably with the value found for the same observers and the same diameter in the case of observations on the same plate. It must be conceded that so close an agreement is to be considered as somewhat accidental; still it proves conclusively that the *accidental* imperfections of the plates, which enter into the last number and not in those of Table 27, must be very small indeed, even at the margin of the plates, which doubtlessly is generally their least perfect part.

17.—Probable Error (τ') of the Magnitudes, including the Systematic Errors of the Individual Plates.

Of 35 pairs of overlapping plates, including a great number belonging to the belts of plates $40\frac{1}{2}$ – $50\frac{1}{2}$ (the reduction of which was performed in exactly the same way as those of the present volume) the definitive magnitudes were compared. The sum of the squares of the differences was then computed separately for the stars 9.5–9.9; 9.0–9.4, &c.; from these the p.e. of the differences, and by division by $\sqrt{2}$, the p.e. of the magnitudes themselves were derived.

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The following are the values found :—

TABLE 29.

Mag.	r'	Number of Stars.
9.5—9.9	± 0.126	167
9.0—9.4	0.114	133
8.5—8.9	0.111	44
8.0—8.4	0.093	17
7.0—7.9	0.124	11
Mean ...	± 0.114	

By comparison of this table with Table 28, the probable amount (ρ) of the systematic errors of the individual plates can be computed ; there results—

TABLE 30.

Mag.	ρ
9.5—9.9	± 0.10
9.0—9.4	0.08 ^s
8.5—8.9	0.08
8.0—8.4	0.04
7.0—7.9	0.09

The smallness of these values is very gratifying. It must be attributed to the reliability of Gould's estimates of magnitude, and the large number of stars on which the formulæ of reduction for the photographic magnitudes were based. Perhaps they are slightly too small owing to the fact that they were mainly derived from very rich plates, for which the data for the determination of the constants of these formulæ are particularly abundant. For stars brighter than 7.0 sufficient data were not available, but, of course, the value of ρ will rapidly increase for these.

18.—Probable Amount of a Difference in Magnitude Schönf.-Phot. (R_s) and Thome-Phot. (R_t).*

The probable amount of the differences here discussed must be so understood that the deviations of the visual magnitudes corresponding to a fixed photographic

* As the aim of the present investigation is merely to obtain a trustworthy determination of the *real* differences of photographic and visual magnitudes, cleared of mere errors of observation, we have not re-considered the differences ZC.-phot. as the accidental error of the magnitudes of ZC. are presumably much greater than those of Schönfeld and Thome.

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magnitude m (m being taken successively between 9.5 and 9.9, 9.0 and 9.4) from their arithmetical mean were first cleared of systematic elements and then treated as accidental errors of which the p.e. was sought in the usual way. I have first only considered systematic differences depending on galactic latitude. A great number of stars were compared, evenly distributed, in the case of Thome over the whole of the Zones -22° and -31° , in the case of Schönfeld over the whole of Zone 21° . The former were corrected by Table 11, the latter by subtracting the two-hourly means from the individual differences. This having been done, the following values were obtained :—

Schönfeld.		Thome.		
Mag.	Zone -21°	Zone -22°	Zone -31°	Mean.
9.5—9.9	$\pm \overset{m}{0.19}$	$\pm \overset{m}{0.15}$	$\pm \overset{m}{0.19}$	$\pm \overset{m}{0.17}$
9.0—9.4	0.175	0.18	0.24	0.21
8.5—8.9	0.19	0.24	0.27	0.26
8.0—8.4	0.26	0.27	0.31	0.29
7.0—7.9	0.32	0.33	0.28	0.30

These must still be cleared of the systematic errors of the individual plates by means of Table 30, which having been applied I get, writing three decimals in order to keep the second more accurate—

TABLE 31.

Mag.	R_s	Number of Stars.	R_t	Number of Stars.
$\overset{m}{9.5}—\overset{m}{9.9}$	$\pm \overset{m}{0.162}$	206	$\pm \overset{m}{0.137}$	389
9.0—9.4	0.153	211	0.192	390
8.5—8.9	0.172	211	0.247	382
8.0—8.4	0.257	193	0.287	359
7.0—7.9	0.307	153	0.286	360

Another determination of the same quantities was obtained by comparing the photographic and visual magnitudes for the whole area of a number of individual plates and eliminating carefully the systematic divergences. For Schönfeld a good determination was thus obtained from 12 plates equally distributed over the 24 hours of Right Ascension. For the stars 6.0—6.9 not 12 but nearly the whole of those plates were used on which at least *five* stars of this magnitude were to be found. For Thome only five plates were used, of which the two richest got only half weight; even so the

richer regions (for which the p.e. of Thome's magnitudes are very sensibly greater) preponderate somewhat too much. This new determination gave—

TABLE 32.

Mag.	R_s .	Number of Stars.	R_t .	Number of Stars.
9.5—9.9	$\pm \overset{m}{0.182}$	158	$\pm \overset{m}{0.142}$	163
9.0—9.4	0.169	225	0.213	180
8.5—8.9	0.175	236	0.260	173
8.0—8.4	0.243	157	0.284	125
7.0—7.9	0.317	170	0.298	90
6.0—6.9	0.395	118	...	...

agreeing particularly well with Table 31.

Adopting the mean of the two determinations, giving half weight to the latter of R_t , we get finally—

Table 33.

Mag.	R_s .	R_t .
9.5—9.9	$\pm \overset{m}{0.172}$	$\pm \overset{m}{0.139}$
9.0—9.4	0.161	0.199
8.5—8.9	0.174	0.251
8.0—8.4	0.250	0.286
7.0—7.9	0.312	0.290
6.0—6.9	0.395	...

The values of R_t proceed very regularly; those of R_s show a singularly abrupt change of character near $8^m \cdot 5$.

19.—Probable Value of the Degree of Blueness of Stars of Different Magnitude.

The values of R_s and R_t , just now determined, are composed of three quantities—

1. The p.e. r_s or r_t of a magnitude of Schönfeld or Thome.
2. The p.e. τ of a magnitude of the Phot. Dm.
3. The probable amount r of the degree of blueness.

The second is known by Table 28. A greater difficulty seems at first sight to be presented by the first.

Schönfeld gives the value of the p.e. of his magnitudes at p. [45] of the introduction to the SD., but he draws attention to the fact that these p.e., which

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have been derived from a comparison of his own estimates *inter se*, are smaller than those found by a comparison with other authorities even after all systematic differences have been carefully taken into account, and he expresses the opinion that probably the difference is to be explained by some or other kind of personality.

As to Thome, no valuation of the p.e. is given in the Introduction of the first part of the Cordoba Dm.

Notwithstanding these circumstances a good estimate of the error r , here sought, can be obtained without serious trouble. For we have evidently—

$$(14) \dots \dots \dots R_s^2 = r_s^2 + \tau^2 + r^2 \quad \text{and} \quad R_t^2 = r_t^2 + \tau^2 + r^2$$

from which

$$(15) \dots \dots \dots 2r^2 = R_s^2 + R_t^2 - 2\tau^2 - (r_s^2 + r_t^2)$$

so that only the determination of the quantity $r_s^2 + r_t^2$ is required; but this being the probable amount of a difference between the magnitudes assigned to the same stars respectively by Schönfeld and by Thome, is readily obtainable by a comparison of the stars in zone -22° observed by both.

I have, therefore, computed this p.e., taking care to use stars equally distributed over the whole zone. This comparison showed in accordance with what was found in Art. 8 that systematic differences depending on the galactic latitude are altogether insensible or so small that they might as well have been neglected. For the magnitudes 7.0—7.9, however, a very small correction of the kind was taken into account. In the following table the p.e. found are given in the second column, the number of stars from which they were computed in the third; the fourth contains the numbers of the second divided by $\sqrt{2}$, so that, if we assume the precision of Thome's observations equal to that of Schönfeld, they represent the p.e. of both observers *inclusive* of personal error. In the last is given the p.e. of Schönfeld *exclusive* of personal error, according to p. [45] of the Introduction to the SD.

TABLE 34.

Mag.	P.E. Schönfeld—Thome.	Number of Stars.	$\frac{1}{\sqrt{2}}$ P.E.	P.E. Schönfeld.	$r_s = r_t$ adopted.
9.5—9.9	± 0.111	120	± 0.078	± 0.06	± 0.08
9.0—9.4	0.126	120	0.089	0.07	0.08
8.5—8.9	0.146	120	0.103	0.10	0.10
8.0—8.4	0.183	115	0.129	0.12	0.12
7.0—7.9	0.172	161	0.122	0.15	0.135
6.0—6.9	0.255	62	0.180	0.21	...

The numbers of the fourth and fifth columns differ so little, the fifth one of the former being even smaller than the corresponding number of Schönfeld, that it becomes

evident that the influence of personal error of the kind alluded to by Schönfeld, must be all but insensible for both observers. It seems, therefore, hardly necessary to confine ourselves to the derivation of a *mean* value of the quantity r , by the use of equation (15). We may expect to obtain fairly good values for both the observers *separately* by taking in the formulæ (14), r_s and r_t both equal to the intermediate values set down in the last column. For the magnitudes 6.0—6.9 of Schönfeld I take the value 0.21 determined by this astronomer by a comparison with the UA. The results so found are as follows, the mean being taken in accordance with formula (15):—

TABLE 35. r .

Mag.	Schönfeld.	Thome.	Mean
	m	m	m
9.5—9.9	± 0.13	± 0.09	± 0.11
9.0—9.4	0.12	0.17	0.15
8.5—8.9	0.12	0.22	0.18
8.0—8.4	0.20	0.25	0.23
7.0—7.9	0.27	0.24	0.255
6.0—6.9	0.32	...	...

These values agree fairly well, not only in the mean, but also for the separate observers, with those formerly found (Table 20), considering the fundamentally different way in which they were obtained.

The more worthy of notice is the difference in the final values for r in the case of the two observers. It seems in conclusion as if the variation of the value of r depended on some personal cause rather than on, or together with, a real variation in the range of colour of the stars, so that we would have to look for some physiological cause of the phenomenon. Such a cause really exists. It is to be found in what to physiologists is known as the phenomenon of Purkinje.*

According to this investigator, if a blue and a red source of light appear to be equally bright, they will appear no longer so if the intensity of both is reduced in the same proportion; the blue one will be the brighter of the two, and the difference will be greater the more the intensity is reduced.

* Conf. *Purkinje*. Zur Physiologie der Sinne, Bd. II., p. 109.

Helmholtz. Physiol. Optik, 2d Aufl., p. 429.

Zöllner. Grundzüge einer allg. Photom. des Himmels, p. 36.

The same phenomenon has been recently discussed by Abney. *Monthly Notices*, vol. 52, p. 426.

It follows from this that for faint sources of light the sensitivity of the eye approaches nearer to that of the plates, which, too, are more sensitive to the more refrangible rays.

This being so, the difference between visual and photographic magnitude must be smaller the fainter the stars considered, which is exactly what we find to be the case.

The varying difference depends evidently not on the absolute brightness of the stars, but on the brightness as it appears to the observer, so that observations at different telescopes and those made with the naked eye, are not to be compared without special precautions. It is for this reason that we did not give in Table 35 the value of r for Thome's stars 6.0—6.9, for which the magnitudes are borrowed from the UA.

According to several investigators it depends too on the illumination of the background. It seems highly probable that the red illumination used by Schönfeld will have contributed to elimination, or a lower estimate of brightness of the fainter red stars, so that for this observer even a closer agreement between the visual and photographic magnitude of these stars might be expected than for Thome. The values in Tables 35 and 20 confirm this expectation for the stars 8.0—9.4, but seem to contradict it for those 9.5—9.9, for which the value derived from Thome's observations is particularly small.

We will not, however, enter into further discussion, which would require a somewhat different arrangement of the data, as for instance, a separate treatment of the values which, in Tables 19 and 20, depend partly or wholly on the UA. It may suffice for the present to have called the attention to a phenomenon which may not be without its importance in several astronomical researches (distribution of stars, photometric investigations, observations of red variable stars, perhaps even achromasy or telescopes to be used for the observations of faint objects, &c.), and which, with due precaution, may be taken advantage of for the determinations of photographic magnitudes.

20.—References to other Catalogues.

The most essential difference between the arrangement of the present catalogue and that of other works of its kind consists in the number of catalogues referred to. It has been my aim to give in these references—

1. The value of the visual magnitude, in order that its relation to the photographic magnitude might be seen at a glance ;
2. A condensed history of the observations made on every individual star of the catalogue.

Practical considerations required the maximum number of references to be fixed at five (*); and even thus, although the several authorities, with the exception of Gould's Zone Catalogue and Schönfeld's Dm. were referred to by a single letter, the number of columns on every page had to be reduced from five (the number of columns in B.D.) to four.

As the execution of such a plan was not originally contemplated, but was arrived at by slow degrees during the time spent on the work of reduction, this part of the work has not only cost an undue amount of labour, but at the same time some imperfections (rarely it is believed of practical importance however) have crept into it, which otherwise might have been avoided. Care was taken, however, to check all the references by a second examination, so that I hope that the number of errors will be insignificant.

For the first part of the programme all the stars contained in Gould's Zone Catalogue were referred to, not by a letter, but by the mean of the magnitudes observed by Gould. For the Declinations $-19^{\circ}0$ to $-23^{\circ}0$, not contained in the Zone Catalogue, the magnitude of Schönfeld's SD. were quoted; these latter have been placed at the right hand side of the column of references, whereas the former are given at the left hand side. No mistake between the two authorities need therefore be feared.

As just these two catalogues have served as standards for the conversion of our diameters into magnitudes, and as the systematic differences for stars of any determined *photographic* magnitude, are therefore small (*vide* Art. 9), the divergencies of our magnitudes from the visual ones give at once a fair idea about the degree of blueness of the stars. The choice of the Zone Catalogue as a standard of comparison was made, of course, on account of its being by far the richest catalogue giving independent estimates of magnitude for nearly the *whole* of the region covered by our *Durchmusterung*, and thus offering the best guarantee for getting at least a respectable degree of homogeneity for our work.

A more difficult problem was to be considered for the second part of the programme, and it seems to me that a solution, which in every individual case may be deemed the best one, is simply impossible, or would at least require the sacrifice of all uniformity.

What I have tried to do, is, to give such authorities as will enable the astronomer to ascertain at a glance whether observations of precision of a star are extant or not, and if so, with what degree of precision, roughly, the position can be brought forward

* In passing the manuscript through the press it appeared possible in many cases to extend this number to six. Advantage has been taken of this circumstance in some cases, especially for the Zones -19° to -22° , where five references to catalogues of *precision* (where available) have been given, in addition to a reference to Schönfeld's Dm. In a few cases, however, this has necessitated the use of a smaller type.

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to a more modern epoch. For this purpose the epochs as well as the reliability of the different catalogues have to be considered, the most modern and the oldest being, *ceteris paribus*, of more importance than those of an intermediate date.

The following catalogues have been definitively extracted, nearly in the order in which they are here given :—

GOULD'S ZONE CATALOGUE (1884) referred to by the mean of the magnitudes at the left hand side of the column of references. *Italics* indicate the fact that the catalogue contains *two* stars, which have produced but a single image on the plates. In these cases the magnitude given corresponds to the *combined* light of the two stars. The computation has been made using 0.4 as the logarithm of the ratio of light between two consecutive magnitudes. *References complete.*

G, *G*, G. GOULD'S ARGENTINE GENERAL CATALOGUE (1886). *G* refers to the cluster catalogues at the end of the work. These cluster catalogues include the observations in the main catalogue. G is used in those cases where in the catalogue a reference is given to Brisbane's Paramatta Catalogue, not given in Stone's Catalogue, so that this letter implies the presence of the star both in Gould's General Catalogue and in the Paramatta Catalogue. *References complete.*

S, S. STONE'S CATALOGUE OF 12441 STARS FOR THE EPOCH 1880 (1881). The letter S is used in those cases where Stone gives references to catalogues of an epoch before 1850, *not* given in our catalogue, viz., to one or more of the five following :—

Brisbane,
Fallows,
Johnson,
Henderson,
Cape 1840.

References complete.

W. WASHINGTON CATALOGUE (Yarnall), 3rd edition (1889). *Referred to in those cases only where the star is either not in G or not in S.*

K. KAM'S CATALOGUE OF STARS FROM THE ASTR. NACHR., VOLS. 67–112. This work has not yet appeared, but was kindly extracted for the present purpose by the Author. *Referred to where none or but one of the preceding authorities occurs.*

M. ZWEITES MÜNCHENER STERNVERZEICHNISS (1891) (Neue Ann. der K. Sternw. in Bogenhausen, Bd. II). *Referred to where less than three of the former authorities occur.*

- C. PORTER'S CINCINNATI ZONE CATALOGUE OF 4050 STARS BETWEEN $-18^{\circ} 50'$ AND $-22^{\circ} 20'$ (1887). This catalogue, which came to hand only at the last moment, was referred to in those cases where, after all other authorities had been quoted, the total number of references did not exceed four.
- β . AUWERS' BRADLEY (1888). *References complete.*
- μ . AUWERS' MAYER (1894). *References complete.*
- π . PIAZZI'S CATALOGUE OF 1814.
- λ . LACAILLE'S CATALOGUE OF 398 PRINCIPAL STARS. The reduction of Baily was used. Vol. V. of the Mem. Roy. Astr. Soc. (1833).
- l. LALANDE'S CATALOGUE by F. Baily (1847).
- t. TAYLOR'S MADRAS GENERAL CATALOGUE (1844).
- r. RÜMKER'S PRELIMINARY CATALOGUE OF SOUTHERN STARS (1832).
- c. CAPE CATALOGUE FOR 1850 (1884).
- g. GILLISS' CATALOGUE OF 1963 STARS (1870).
- b. BONN. MERID. OBSERVATIONS (Bonn. Beob. VI., 1867).
- a. ARGELANDER'S SÜDLICHE ZONEN, von. E. Weiss (1890). *Reference omitted where b occurs.*
- WASHINGTON ZONES (Wash. Observ. for 1869, App. II.; 1870, App. IV.; 1871, App. I.) Referred to by -, =, \equiv , \cong , >, \approx , according to the number of observations. *Reference omitted where the star is in a.*
- m. ERSTES MÜNCHENER STERNVERZEICHNISS (Lamont's Observations. Neue Ann. der K. Sternw. in Bogenhausen, Bd. I., 1890).
- p. BRISBANE'S PARAMATTA CATALOGUE (1835). *Referred to in the very rare occasions in which the stars could be identified without a reference being given either in Stone or in Gould's General Catalogue.*
- k. KAM'S CATALOGUE OF STARS FROM THE ASTR. NACHR., VOLS. 1-66 (1885.) *Where the observation is made after the epoch 1850, the reference was only given in the same cases as those to K.*
- SCHÖNFELD'S BONNER STERNVERZEICHNISS, 4^e SECTION (1886). *Referred to by the magnitudes at the right-hand side of the column of references.*
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All the catalogues from π to k were referred to, giving precedence to the several catalogues in the order here given.

In connexion with this list the following remarks may be made :—

1. Capital letters refer generally to modern observations ; small letters to observations from 1800—1850, including Lalande ; Greek letters to observations before that time, including Piazzini however. Unavoidable exceptions to this rule need not be pointed out.

2. Lacaille's Catalogue of 9766 stars has not been referred to because the positions, at least in the form in which they are available at present, are too rough to be of much importance for the determination of proper motion.

3. Some excellent modern catalogues (later than 1850) have been wholly neglected, as for instance the Melbourne catalogues and the Cape catalogue for 1860. As a choice was clearly unavoidable we have, of course, been obliged to take the richest catalogues. Where a star is to be found in the Melbourne catalogues or in Cape 1860, it is pretty sure to occur too in two or three other excellent catalogues included in our list.

4. For the brighter stars, especially those north of -23° , which have been frequently observed at a great number of northern observatories, another choice of authorities would doubtlessly have been preferable. It did not seem advisable, however, to introduce a new set of references for these stars only. For the faint stars, the zone worst provided with modern observations is that of -22° (or rather the zone between the parallels of $-22^\circ 20'$ and $-23^\circ 0'$) just beyond the northern limit of Gould's Zone catalogue, and just beyond the southern limit of the Cincinnati catalogue.

5. As references to incomplete observations might be misleading to the astronomer consulting the Dm., these have been systematically left out. It is for this reason that, for instance, references to the catalogue of Gilliss from observations between 1838 and 1848, which contains only observed right ascensions, have not been given. The only exceptions to the rule have been made, first, in favour of Auwers' Bradley, because in this case the co-ordinate not observed together with the proper motions have been carefully determined from other sources ; secondly, in favour of ZC. and G., where incomplete observations are extremely rare.

6. For the Washington Zones not only the stars occurring in Argelander's Zones, but also *all manifestly erroneous positions*, which are exceedingly numerous, were

omitted.* Now that we may expect a speedy publication of a catalogue of these zones, it seemed labour thrown away to try to correct all errors. A complete list of the errors found has however been drawn up.

7. The order of precedence of the catalogue is not, even in our opinion and for the purpose in view, the best that could have been determined on, and if our plan had been quite fixed upon from the beginning, we would certainly have followed a somewhat different course; thus for instance, the recent careful revisal of Lamont's Zones seems to demand a reversal of the order of precedence of the Washington and Munich Zone Catalogues. As, however, for the brighter stars both these authorities are mostly of slight importance as compared with the other authorities quoted, and as for the fainter stars both authorities are generally quoted, the advantage to be gained seemed too slight to call for a re-arrangement of the work. To take another instance: according to what precedes *a* has been *always* omitted where the star is in *b*, and Washington Zones have been *always* omitted where the star is in *b*. It would have been better to omit the reference *only* in those cases where the great number of other references required the omission of some of the less important ones.

8. As has been already observed, references to Schönfeld's Dm. have been given, for the zones -18° to -22° , by the magnitude of this work. The small number of Schönfeld's stars, of which the Southern Declination for 1875 exceeds 23° , have not been referred to. Some difficulty was met in those cases where two stars occur on the plates and but a single one in the SD. Where the stars are very near and where it is very probable that the two stars have been seen as a single one by Schönfeld, we have placed his magnitude opposite the two corresponding stars in our catalogue, and connected them by a bracket.† But it is not easy to determine where the limit in such cases is to be drawn. Thus, to take a single example, in our Dm. occur the two stars—

9.0	8 ^h 21 ^m 6.2 ^s	— 22 ^o 40.9 [']
8.8	7.2	40.5

Schönfeld gives only (reduced to 1875)—

9.0	8 21 7.2	— 22 41.1
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The distance is nearly half a minute and the stars must have been easily separable in Schönfeld's telescope; still it seems more probable in our opinion that Schönfeld has estimated the combined light, than that he has left out a star of the magnitude 9.0.

* This plan has been strictly adhered to for errors as large as $3''$ and $1'$. Errors considerably below these limits have not been taken into account. Where more than one position of a remote epoch is extant, the correction may be mostly made easily enough. Where not, it is difficult or impossible to decide whether error or proper motion has been the cause of the discrepancy.

† In the very few cases where other stars of intermediate right ascension prevented this mode of notation, Schönfeld's magnitude, included in brackets, has been placed alongside of each of the two components.

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It should not be forgotten in such cases, that our positions may be in error for $0'.1$ or $0'.2$, and that, consequently, the stars may in reality be much nearer to each other than is implied by the observed right ascensions and declinations. Where the difference in magnitude is considerable we have taken the brighter one to represent Schönfeld's star.

9. The order in which the references have been finally arranged in the catalogue deviates from that given above, and is roughly that of the epochs of the observations. The following list, which may be found convenient for use with our system of references, is arranged in this order and gives the epoch of the catalogue, together with the epoch of the observations on which it rests :—

Cat.	Epoch of Cat.	Epoch of the Observations.
ZC.	1875	1872—1875 (with 5 repeated zones in 1877)
G	1875	1872—1880 (clusters and a small number of observations for catalogue to 1884)
S	1880	1871—1879
M	1880	1884—1889
C	1885	1885—1887
W	1860	1845—1877
K	1875	1866—1885*
k	1855	1821—1866*
b	1850	1850—1867†
a	1850	1849—1852
Wash. Z.	1850	1846—1849
m	1880	1847†
c	1850	1849—1852
g	1850	1850—1852
t	1835	1830—1843
r	1827	1826—1829 (perhaps some 1822—23‡)
p	1825	1822—1826
l	1800	1790—1801
π	1800	1792—1813
μ	1755	1756—1760
β	1755	1750—1762
λ	1750	1751—1752†
SD.	1855	1876—1881 (with 16 repeated zones to 1884)

* At least these are the years of the volumes of the Ast. Nachr., in which the observations have been printed.
† These epochs are relative, not to the catalogue as a whole, but to the positions within the limits of our Dm.
‡ Vide Stone's Catalogue. Introduction, p. 29.

21.—Missing Stars and Errors in the Catalogues Compared.

It has been from the first our intention to draw up lists of errors of the catalogues compared. The comparison of the positions has not been made, however, everywhere with the same degree of precision. ZC., G., S., a, have been accurately

compared, and divergences of 2^s and $0'4$, or more, for stars not in other catalogues, were noted for revisal on the plates. In most of the other catalogues errors of $1'$ in declination and more than 2^s in right ascension can hardly have escaped us. Only in the comparison of the Munich Zones errors up to $2'$ in declination may have passed unnoticed. The revisals on the plates have resulted in the detection of three errors in our catalogue; in the other cases the error found was confirmed and these were all referred to in their proper places and in the lists of errors. The same was done in all other cases where the error was manifest, or could be made out by referring to the original observations (as far as accessible to me), or by the assumption of a single error, which seemed particularly probable (*e.g.*, the assumption of an error in the wire at which the star was observed, or an error of an exact interval of the declination circle, &c.).

These lists of errors have not been definitively finished as yet, and will be given in another volume.

Two other lists were drawn up for the missing stars. In the first list were entered all stars contained in the catalogues of precision compared and not contained in our Durchmusterung. This list will, doubtless, contain many stars of which the position is in some way erroneous, and where, in reality, no star exists in the sky in the assigned position. Besides these, however, it will contain a number of red and very red stars, and very probably some as yet unknown variables. A considerable number of these stars seem, therefore, to deserve particular attention, and it is for that reason that we thought fit to publish it *in extenso*.

In a great many cases the real existence of the star may be proved by its occurring in other catalogues. It is for this purpose that in the sixth column references have been given to other catalogues (which lay no claim to completeness), and in the seventh and eighth columns to the Durchmusterung of Schönfeld and that of Thome (both to Part I. and to Part II.). Where the position of the star falls within the limits of one of the two latter works, but is not contained in them, the fact is noticed by a dash in the corresponding column. In these cases the real existence of the star (if not a variable) seems very doubtful indeed. The other columns do not call for any explanation. In the column of remarks the words "*certainly missing*" imply that the star has been looked for on the plates and its absence established. The revision on the plates has been made for all stars occurring in the Dm. of Schönfeld or Thome, and estimated brighter than $9^m.5$ by any of the other authorities, and for a great number of fainter ones besides.

The second list contains all the stars of the SD. $9^m.0$ or brighter, within the limits of our Dm. and missing on the plates. The total number of these is eight, all

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of which were carefully sought for on the plates. They are all certainly missing, with the exception, perhaps, of No. 3, of which an extremely faint trace was found, which was too uncertain, however, to allow of its admission in our catalogue.

Stars evidently merged on the plates into neighbouring brighter ones have not been admitted in these lists.

I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES.

No.	α			Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
	1875.						Sch.	Th.	
1	h m s 0 3 22	° ' "	25 13·3	ZC. 94	9·5		—	Marked with ? in ZC.	
2	7 6	19 8·1	a 52	9·5	b	9·3		Missing in four sweeps on two pairs of plates. Looked for on plates $21\frac{1}{2}^{\text{h}} 0^{\text{m}}$, where at best extremely faint and uncertain traces of a star can be detected.	
3	11 28	20 50·6	G. 199	$10\frac{1}{2}$		9·5		Looked for on plates. At best extremely faint and uncertain traces of a star can be found.	
4	25 44	29 27·3	ZC. 677	$9\frac{1}{2}$		—		Marked with ? in ZC.	
5	30 17	27 30·5	ZC. 799	10				Thome has a star ($9\cdot5$) $30^{\text{m}} 17^{\text{s}} 0$, $32^{\text{m}} 0$; in the original observations of our Dm. a single observation occurs of a star ($9\cdot9$) $30^{\text{m}} 19^{\text{s}} 2$ $32^{\text{m}} 1$. Does Thome's position refer to the star of ZC. or to that of the plates?	
6	43 51	28 22·7	ZC. 1151	10		9·3		Certainly missing.	
7	1 22 4	33 10·5	ZC. 564	$9\frac{1}{2}$		—		Missing in four sweeps on plates $31\frac{1}{2}^{\text{h}} 1^{\text{m}} 12^{\text{s}}$ and $31\frac{1}{2}^{\text{h}} 1^{\text{m}} 36^{\text{s}}$. Certainly missing on plates $35\frac{1}{2}^{\text{h}} 1^{\text{m}} 15^{\text{s}} 47^{\text{s}}$. 10^{s} in error in R.A.?	
8	36 41	20 20·2	K.	$11\frac{1}{2}$		10			
9	42 26	19 43·2	K.	12		—			
10	43 32	26 38·1	ZC. 1124	10		9·6			
11	43 42	20 16·0	K.	9		9·3		Certainly missing.	
12	44 57	19 14·9	K.	$11\frac{1}{2}$		—			
13	45 17	19 21·2	K.	10		9·7		Certainly missing.	

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued.*

No.	α			Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
	1875.						Sch.	Th.	
14	h m s 1 45 18	$^{\circ}$ ' " 19 20'4	K	10½			9·7		Certainly missing.
15	57 46	28 51'8	ZC. 1544	10			—		Missing in four sweeps. Marked with ? in ZC.
16	2 2 28	31 32'4	ZC. 71	10			—		Marked with ? in ZC.
17	4 6	24 59'9	ZC. 116	9½			—		Certainly missing. Marked with ? in ZC.
18	4 26	32 1'3	G. 2179	10½			9·6		Missing in four sweeps.
19	22 2	32 7'7	G. 2550	10¼	ZC.		9·7		
20	23 51	25 40'1	b 2 ^h 38	7'5			—		Identical with G. 2592?
21	31 53	27 31'3	ZC. 858	9			—		
22	38 23	28 26'4	ZC. 1057	10			9·7		
23	48 24	26 57'7	ZC. 1325	9			—		Certainly missing. Marked with ? in ZC.
24	57 52	27 13'5	G. 3302	9¼			9·3		Certainly missing.
25	3 3 46	32 40'3	ZC. 113	10			—		Marked with ? in ZC.
26	9 44	30 41'9	ZC. 299	10			—		Marked with ? in ZC. It seems not improbable that the declination is 30' in error and that the star is identical with CPD. — 31°, 378.
27	13 5	36 49'5	ZC. 400	10			—		Marked with ? in ZC.
28	24 22	28 50'0	ZC. 721	9			9·2		Certainly missing.
29	31 18	24 15'6	G. 3968	10			9·4		Certainly missing.
30	31 38	24 15'7	G. 3976	9¼			9·9		Certainly missing.
31	34 32	25 47'3	ZC. 1037	9			—		Certainly missing. Marked with ? in ZC.
32	49 35	26 23'1	ZC. 1515	9½			—		Marked with ? in ZC.
33	51 43	27 5'6	ZC. 1582	10			—		Marked with ? in ZC.
34	4 0 52	23 34'7	a 2319	9	{ Wash. Z. O. Stone }		9·3		Certainly missing. In Dm. of O. Stone 94.
35	5 22 27	32 32'0	ZC. 805	9½			—		In the original Zones $\delta = 42^{\circ}$. In both positions the star is certainly missing on two pairs of plates. There is a single observation of a very faint star at $\delta = 52'3$ and a much brighter star at $\delta = 62'3$.

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued.*

No.	α			δ			Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
	1875.			1875.						Sch.	Th.	
36	^{h m s} 5 40 21	^{o ' "} 25 48·1		ZC. 1510	10				—		Marked with ? in Z.C.	
37	41 19	26 43·6		b 5 ^h 89	7½				—			
38	6 3 36	30 51·0		ZC. 155	10				—		Marked with ? in Z.C.	
39	12 12	31 36·0		ZC. 552	9				—		Marked with ? in Z.C.	
40	18 40	27 0·1		G. 7765	8	ZC., a			8·6		Certainly missing. The star is <i>orange yellow</i> according to G. and <i>coloured</i> according to Thome.	
41	31 32	34 52·1		g. 307	7·5				—		Certainly missing on plates 35½ 6 ^h 18 ^m 57 ^s .	
42	37 50	31 28·2		ZC. 1791	9				9·0		Looked for on three plates. At best very uncertain traces on one or two of these.	
43	40 3	36 53·8		ZC. 1923	10				—			
44	41 50	29 7·1		ZC. 2029	9·2				9·3		Certainly missing.	
45	45 53	31 18·9		G. 8534	9½				9·4		Looked for on plates. At best a very faint and uncertain trace on one of them. In Thome's Dm. reference GC. omitted.	
46	47 3	26 17·6		ZC. 2345	9				—			
47	53 36	37 35·1		ZC. 2740	10				9·6			
48	7 1 57	34 49·5		ZC. 136	10				—		Certainly missing. Marked with ? in ZC.	
49	7 22	32 33·2		ZC. 507	10				9·7		On check plate perhaps a faint trace. On measuring plate certainly missing.	
50	20 12	29 15·3		G. 9512	10¼				9·8		Certainly missing.	
51	34 20	26 31·1		t 3166	7				—		Identical with t 3157 ?	
52	36 32	21 31·5		l 15047	7½				—		The star has been several times looked for in vain at Bonn. <i>Vide</i> Bonn Beob. VII., p. 203.	
53	39 1	23 32·8		ZC. 2812	9½						In Messier 93. Certainly missing on plates. The declination is probably 2' in error and the star identical with CPD. — 23°, 2735. Thome has $\delta = 32'5$, which agrees very well with ZC., but our declination 34'6 is certainly correct.	

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING
ON THE PLATES—*continued.*

No.	α			Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
	1875.						Sch.	Th.	
54	h m s 7 40 2	o / 37 25.3	t 3221	8½			—	Certainly missing. It seems not improbable that the α is in error and the star identical with G. 10059.	
55	51 6	22 31.5	G. 10434	9			—	Certainly missing.	
56	52 42	24 55 -	ZC. 3933	10			10	In α Thome's position differs 5.6 from ZC.	
57	56 45	27 23.6	G. 10612	10			10		
58	57 1	30 52.5	G. 10623	9			9.6	Looked for on plates. At best very faint and uncertain traces of a star can be detected.	
59	57 5	34 8.3	ZC. 4342	9			10?	Certainly missing in this position. Identical with the star 2.5 preceding?	
60	8 4 30	35 55.1	ZC. 345	8½			9.3	Certainly missing.	
61	6 11	20 50.4	a 6587	9		9.4		Certainly missing.	
62	13 55	24 16.6	ZC. 1151	10			9.6		
63	23 45	29 54.0	W. 3500	8.9			—	The identification with Mural Zones 103,21 given in W. is erroneous, this star being the same as W. 3510.	
64	23 54	30 22.1	ZC. 2002	9½			9.5	Star is visible on check plate (mag. 10.1), invisible on measuring plate, or at least much fainter than 10.1. Variable?	
65	26 48	28 10.7	ZC. 2246	9¾			9.9	Certainly missing.	
66	30 10	30 28.3	b 8.84	8.0			—		
67	35 7	30 7.5	ZC. 2907	10			9.6		
68	40 14	27 44.8	G. 11860	9¼	a		7.3	Var. = R Pyxidis. Certainly missing.	
69	59 35	24 35.5	ZC. 4821	9			8.5	Certainly missing.	
70	9 4 6	32 47.0	ZC. 349	9½			—	Certainly missing in this position. δ probably 4' in error. Thome, too, seems to assume this error.	

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued*.

No.	α			δ			Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
	1875.			1875.						Sch.	Th.	
71	h	m	s	°	'	"	ZC. 706	10			—	In the original zones $\delta = 0^{\circ}.8$. In both positions, however, there is no star, neither on the plates (two pairs) nor in Thome's Dm. If the catalogue position is correct, the star ought to occur in Orm. Stone's Dm.; if the zone position is so, in Schönfeld's Dm. In neither of these, however, the star is to be found.
	9	9	5	23	20	.8						
72		27	59	31	41	.0	ZC. 2260	10			9.5	
73	10	7	57	28	48	.8	ZC. 588	10			—	Missing in four sweeps. Marked with ? in ZC.
74		11	1	30	44	.0	ZC. 820	9½			9.3	Looked for on plates. At best, most uncertain traces of a star.
75		20	16	30	3	.3	ZC. 1490	9½			—	Certainly missing. Marked with ? in ZC.
76		27	51	26	10	.2	ZC. 2026	9½			—	Certainly missing.
77		45	33	20	35	.2	G. 14842	8	Cal		6.7	= V Hydræ. Certainly missing on two pairs of plates. The star is extremely red.
78		56	6	28	9	.0	ZC. 4059	10			—	Marked with ? in ZC.
79		58	52	24	32	.2	ZC. 4271	10			10	Marked with ? in ZC.
80	11	22	5	30	3	.6	ZC. 1543	9			10	Missing in two sweeps on plates 31½, 11 ^h 12 ^m . Certainly missing on plates 31¼, 11 ^h 36 ^m . Marked with ? in ZC.
81		22	25	23	10	.0	M. 3893	7.0	Not in Orm. Stone		—	Certainly missing.
82		28	1	24	57	.7	ZC. 1961	9½			—	Missing in four sweeps. Marked with ? in ZC.
83		33	19	28	59	.7	ZC. 2342	9½			9.7	Missing in six sweeps on two pairs of plates. The identity with our star (9.0) 33 ^m 18 ^s .7 — 29° 0'.9 might have been thought probable if <i>both</i> stars did not occur in Thome's Dm.
84		33	26	24	35	.6	ZC. 2350	9			—	Marked with ? in ZC.

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued.*

No.	α 1875.	δ 1875.	Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
						Sch.	Th.	
85	^{h m s} 11 37 19	^{o ' "} 33 9.8	ZC. 2602	10			—	Marked with ? in ZC.
86	40 52	24 57.7	ZC. 2835	9½			—	Missing in four sweeps. Marked with ? in ZC.
87	12 0 33	24 11.1	ZC. 38	9			—	Identical with Z.C. 11 ^h 4088 ?
88	2 58	29 8.3	ZC. 190	9.5			9.7	Looked for on plates. On one of them perhaps the uncertain trace of a star.
89	5 5	33 1.3	ZC. 316	10			—	In the original zone $\delta = 2'.3$. Whichever be the correct δ , the star is certainly missing.
90	14 4	32 53.7	ZC. 873	9½			9.4	Certainly missing.
91	21 3	25 5.5	G. 16973	10			9.8	
92	31 8	21 37.2	l 23597	8			—	The star was several times looked for in vain at Bonn. <i>Vide</i> Bonn Beob. VII., p. 201.
93	38 47	31 51.7	ZC. 2313	10			—	Marked with ? in ZC.
94	53 51	21 40.6	G. 17700	10			10	Certainly missing at least on one of the two plates.
95	54 7	19 46.7	a 10288	9½			9.7	Certainly missing.
96	54 18	29 30.2	ZC. 3223	9½			9.6	
97	55 42	19 22.3	a 10302	9½			9.8	Certainly missing.
98	13 8 59	26 10.9	ZC. 553	9½			—	Marked with ? in ZC.
99	22 53	22 38.1	G. 18361	var.	kbetl	var.	8.4	= R Hydræ. Certainly missing.
100	24 49	19 30.6	G. 18402	11			10	
101	36 33	27 4.6	ZC. 2208	9½			—	Marked with ? in ZC.
102	38 46	28 14.5	ZC. 2354	9½			—	Missing in four sweeps on two pairs of plates. Marked with ? in ZC.
103	41 2	36 14.2	ZC. 2483	9	G		9.0	Certainly missing on plates 35½, 13 ^h 53 ^m 41 ^s ; on plates 35½, 13 ^h 28 ^m 25 ^s , at best, very faint traces.
104	14 4 22	28 17.6	G. 19229	8½	a		10	Certainly missing. In Thome's list of suspected variables.

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued.*

No.	α	δ	Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
	1875.	1875.				Sch.	Th.	
105	^{h m s} 14 10 56	^{° ' "} 30 12'9	ZC. 696	10			9'4	Certainly missing on plates 31½, 14 ^h 24 ^m .
106	11 30	20 16'1	K	10½		10		
107	13 26	20 21'3	K	11		10		
108	16 38	30 13'9	ZC. 1067	10			9'5	Certainly missing.
109	18 4	29 1'1	ZC. 1154	9½			9'4	Missing in six sweeps on two pairs of plates. Looked for on plates 31½, 14 ^h 24 ^m , where perhaps an uncertain trace may exist.
110	23 17	31 51'3	ZC. 1476	10			9'8	Certainly missing. Marked with ? in ZC.
111	44 10	36 6'6	ZC. 2808	8½			—	ZC. has two stars differing 2'5 in α . On the plates there is certainly only one star, the diam. of which is 16".
112	50 7	35 19'8	ZC. 3173	9½			—	Marked with ? in ZC. If a correction of + 10' is applied to the declination, the position becomes identical with that of a very faint star observed <i>once</i> on the plates, and therefore rejected.
113	58 23	28 44'5	ZC. 3726	10			9'3	Missing in two sweeps on plates 31½, 15 ^h 12 ^m . Certainly missing on plates 26½, 15 ^h 0 ^m .
114	15 1 21	34 43'8	ZC. 91	9			9'0	Looked for on the plates. At best a very uncertain trace could be suspected.
115	10 47	35 18'5	ZC. 739	9			9'9?	Certainly missing. Marked with ? in ZC. It is uncertain whether Thome's star is identical with that of ZC. or with an object at 15 ^h 10 ^m 49' — 35° 19'8 only once observed on the plates, and therefore rejected.
116	12 56	27 50'8	ZC. 878	9½			9'3	At best faint traces. In ZC. two obs.
117	20 53	29 39'0	a 11907	9			—	"In this position no star in the sky," Weiss, <i>Vide</i> footnote to No. 11907 of his Cat. of Arg. Zones.

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued.*

No.	α 1875.	δ 1875.	Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
						Sch.	Th.	
118	h m s 15 23 27	° ' " 26 25.1	ZC. 1607	9½			—	Certainly missing. Marked with ? in ZC.
119	27 27	36 17.7	ZC. 1880	9½			—	Certainly missing. Marked with ? in ZC.
120	28 47	26 18.9	ZC. 1979	10			—	Certainly missing. Marked with ? in ZC.
121	31 37	26 53.8	ZC. 2173	9½			9.2	Missing in two sweeps on plates 26½, 15 ^h 45 ^m 0 ^s . Looked for on plates 26½, 15 ^h 22 ^m 30 ^s , where, at best, the extremely faint trace of a star could be suspected.
122	34 46	20 46.6	a 12079	9		var.		= U Libræ. Certainly missing.
123	44 42	36 50.3	ZC. 3148	10			—	Certainly missing. Marked with ? in ZC.
124	44 56	37 7.0	ZC. 3164	9½			9.9	Certainly missing. Marked with ? in ZC.
125	44 57	34 10.5	ZC. 3166	9			9.2	Certainly missing.
126	45 22	35 55.3	G. 21504	var.	ZC. (9)		8.9	= R Lupi. Certainly missing on plates 35½, 15 ^h 34 ^m , and on plates 35½, 16 ^h 0 ^m . Marked with ? in ZC.
127	46 27	36 24.5	ZC. 3256	9½			9.4	Certainly missing on plates 35½, 16 ^h 0 ^m 0 ^s ; on plates 35½, 15 ^h 34 ^m 44 ^s at best very uncertain traces.
128	47 14	24 57.1	t 7386	6			—	Identical with t 7376 ?
129	48 43	34 3.5	ZC. 3418	9			—	ZC. has two stars at a distance of about 20". On the plates there is only one star with no trace of duplicity though the diam. is only 14".
130	50 25	36 4.7	ZC. 3539	9½			9.6	Certainly missing.
131	50 31	26 0.2	ZC. 3548	9½			—	Missing in four sweeps. Marked with ? in ZC.
132	52 56	29 33.9	ZC. 3719	9½			9.5	Certainly missing.
133	53 21	34 30.1	ZC. 3740	9½			9.5	Certainly missing.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued.*

No.	α 1875.	δ 1875.	Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
						Sch.	T. h.	
134	^{h m s} 15 53 49	^{° ′} 26 42·9	ZC. 3774	9½			—	Missing in two sweeps on plates 26½, 15 ^h 45 ^m 0 ^s . Certainly missing on plates 26½, 16 ^h 7 ^m 30 ^s . Marked with ? in ZC.
135	55 42	30 23·2	ZC. 3965	9½			10	Certainly missing. Marked with ? in ZC.
136	57 8	23 45·2	ZC. 4006	8½			9·3	Looked for on four different plates. Only on one of these an extremely faint speck was found which might possibly be the first trace of the image of a star.
137	59 46	34 5·9	ZC. 4181	9½			9·7	At best the faintest trace of a star on the plates.
138	16 1 16	20 27·8	K	9			—	Declination 2'·5 in error?
139	10 51	33 3·0	ZC. 778	9½			9·4	Missing in two sweeps on plates 31½, 16 ^h 0 ^m and in two sweeps on plates 31½, 16 ^h 24 ^m ; certainly missing on plates 35½, 16 ^h 0 ^m . In ZC. two observations.
140	10 52	25 45·8	ZC. 782	9½			9·4	Certainly missing.
141	10 53	36 49·5	ZC. 784	10			—	Marked with ? in ZC.
142	12 22	23 47·2	ZC. 875	9½	Orm. Stone		9·5	Certainly missing. Orm. Stone makes the mag. 9·1.
143	13 13	34 41·1	ZC. 940	9½			—	Certainly missing on plates 35½, 16 ^h 0 ^m . Marked with ? in ZC.
144	15 56	26 13·5	G. 22201	7¼	S. Lac.		Cum.	Cum.—Messier, 4—Dreyer GC. No. 6121. On plates 26½, 16 ^h 30 ^m 0 ^s extremely faint traces of nebula may be suspected. On the plates 26½, 16 ^h 7 ^m 30 ^s not even such traces can be found.
145	16 26	26 1·8	ZC. 1149	9½			—	Certainly missing on two pairs of plates. Marked with ? in ZC.
146	17 2	34 33·9	ZC. 1196	9½			9·6	Certainly missing.
147	17 35	34 55·6	ZC. 1236	10			—	Certainly missing. Marked with ? in ZC.

INTRODUCTION.

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued.*

No.	α			Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
	1875.						Sch.	Th.	
148	h m s	° ' "		ZC. 1313	10			10	Certainly missing.
	16 18 39	35 12 0						8.9	Certainly missing.
149	28 39	30 58.5		ZC. 1980	9				
150	32 36	32 7.9		ZC. 2278	8½	g (9)		7.5	Certainly missing on plates 31½, 16 ^h 48 ^m . In G. and ZC. <i>red.</i> Variable?
151	35 12	32 28.0		ZC. 2450	10			9.0	Certainly missing.
152	35 40	34 56.9		ZC. 2492	10			—	Certainly missing. Marked with ? in ZC.
153	43 53	27 24.3		G. 22779	10¼			9.7	
154	44 0	23 15.7		ZC. 3297	10			—	In the original zones $\alpha = 43^m 47^s$. In neither of the two positions a star occurs in CPD., in Thome's Dm. nor in O. Stone's Dm.
155	44 11	34 29.4		ZC. 3114	9½			—	Certainly missing. Marked with ? in ZC.
156	51 47	33 13.7		ZC. 3703	10			—	Certainly missing on plates 35½, 16 ^h 50 ^m 32 ^s .
157	52 45	34 4.9		ZC. 3763	10			—	Certainly missing. Marked with ? in ZC.
158	54 49	34 31.9		ZC. 3912	10			—	Certainly missing. Marked with ? in ZC.
159	56 6	27 1.8		ZC. 4005	10			9.8	Missing in four sweeps.
160	57 13	28 49.4		ZC. 4086	10			9.2	Missing in six sweeps on three pairs of plates. Looked for on plates 31½, 16 ^h 48 ^m where only traces of a star image could be suspected.
161	17 0 0	29 6.3		ZC. 1	10			9.6	
162	0 5	34 59.9		ZC. 7	9½			—	In this position certainly missing on two pairs of plates. There is a star (10.0) $\alpha = 17^h 0^m 9^s.2$, $\delta = -35^{\circ} 0' 0''$, which occurs also in Thome; if there is no error in ZC., however, the two stars cannot be identical.
163	2 29	35 50.6		ZC. 169	9¼			9.2	Missing in a single sweep on plates 35½, 17 ^h 15 ^m 47 ^s . Certainly missing on plates 35½, 16 ^h 50 ^m 32 ^s .
164	15 25	34 50.3		ZC. 1052	9½			—	Marked with ? in ZC.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued.*

No.	α			Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
	1875.						Sch.	Th.	
165	h m s	° ' "							
	17 20 28	25 59' 3	ZC. 1380	10				9.9	Missing in four sweeps.
166	22 21	19 22' 2	G. 23701	7.5	Cwa		7.8		Certainly missing. In G. <i>red.</i> , in SD. <i>roth.</i>
167	23 11	24 8' 4	ZC. 1568	10				—	Marked with ? in ZC. In the original zones $\delta = 23^{\circ} 44' 4$. Near to this position is a star, which however differs still too much in position and mag. to make the identity probable.
168	31 45	32 13' 6	G	9½				—	Certainly missing. In G.'s cluster Cat. of Messier 6 (No. 15). G has but one obs.
169	33 34	34 57' 1	ZC. 2293	9½				—	Certainly missing.
170	35 4	28 10' 0	ZC. 2401	10				9.8	
171	40 41	34 59' 7	G	9½				—	Certainly missing. In Cum. Messier 7 (No. 21). G has but one obs.
172	43 33	26 40' 6	K	10.7				10	
173	44 52	22 50' 9	ZC. 3039	9½			9.4	9.4	Certainly missing.
174	46 50	23 12' 5	ZC. 3170	9	O. Stone (9.0)			9.6	Certainly missing.
175	46 52	34 15' 7	G	7½				—	Certainly missing. In Cum. Mess. 7 (No. 115). G has but one obs.
176	48 4	28 0' 4	ZC. 3255	10				—	Certainly missing.
177	49 36	24 7' 4	G. 24365	9¼	ZC. (9)			9.5	Certainly missing.
178	58 35	28 30' 7	G. 24612	10¼				9.9	Certainly missing.
179	18 2 55	23 14' 5	ZC. 201	9½				—	Not in Orm. Stone's Dm. The star is marked with ? in ZC.
180	14 44	26 56' 7	ZC. 949	9½				10	
181	28 50	24 1' 1	G. 25390	10				9.9	Missing in six sweeps on two pairs of plates.
182	45 22	23 54' 7	b 18 ^h 132	9.0				—	Missing in four sweeps. Not in Orm. Stone's Dm.
183	19 2 12	24 47' 6	ZC. 97	10				—	Thome evidently assumes a correction of 10' in δ . In the CPD, however, the decl. of Thome's star is $24^{\circ} 58' 2$, so that a correction of 10' 6 would be required, which seems improbable.

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*continued.*

No.	α 1875.	δ 1875.	Catalogue No.	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
						Sch.	Th.	
184	^{h m s} 19 6 36	^{° ' "} 19 4 3	a 15155	9		9.7		Looked for on plates. At best, a faint trace on check plate only.
185	9 21	19 31.5	G. 26402	var.	Cab	var.		= B Sagittarii. Certainly missing on plates 21 $\frac{1}{2}$, 19 ^h 20 ^m .
186	25 26	20 46.8	1 36910	8		—		Certainly missing. The star was several times looked for in vain at Bonn, and is also missing in the Markree Cat. <i>Vide</i> Bonn Beob. VII, p. 197.
187	26 51	27 23.5	a 15499	9 $\frac{1}{2}$		—		The star was several times looked for in vain at Vienna, and Prof. Weiss suspects the identity with a 15498. <i>Vide</i> his cat., p. 419, footnote.
188	32 8	31 14.8	G. 26912	neb.	S		neb.	= Messier 55 = Dreyer's GC. 6809. No trace of nebulosity can be detected on the plates.
189	34 43	26 18.7	ZC. 1476	7 $\frac{1}{2}$			9.8	Perhaps a faint speck on one of the two plates. Mag. in error in ZC?
190	36 23	31 7.2	ZC. 1555	10			9.5	At best very faint and uncertain traces of a star.
191	39 22	26 51.1	ZC. 1667	7 $\frac{1}{2}$			—	Missing in two sweeps on plates 26 $\frac{1}{2}$, 19 ^h 52 ^m 30 ^s . Certainly missing on plates 26 $\frac{1}{2}$, 19 ^h 30 ^m 0 ^s . Marked with ? in ZC.
192	51 35	28 5.9	ZC. 2123	9 $\frac{1}{2}$			—	Marked with ? in ZC.
193	56 57	23 31.3	K	11			9.8	
194	20 8 16	32 57.6	G. 27732	10			9.6	Certainly missing.
195	20 20	18 59.5	K	10 $\frac{1}{2}$		10		
196	25 16	22 6.7	M. 10412	9 $\frac{1}{2}$		—	9.7	
197	34 14	29 35.9	ZC. 1134	9 $\frac{1}{2}$			—	Marked with ? in ZC.
198	38 39	35 36.9	W. 9265	10			—	In Wash. Cat. but one observation.
199	58 3	27 51.7	ZC. 1839	10			—	Marked with ? in ZC.
200	21 2 13	19 50.3	G. 29007	10	Cape 1860	9.8		= Cape 1860, No. 1012.

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I.—LIST OF STARS CONTAINED IN THE CATALOGUES OF PRECISION AND MISSING ON THE PLATES—*concluded*.

No.	α	δ	Catalogue	Mag.	Other Catalogues.	Durchmusterung.		REMARKS.
	1875.	1875.	No.			Sch.	Th.	
201	h m s 21 9 50	° ' " 24 33·1	K	...			9·5	Missing in four sweeps on two pairs of plates.
202	10 11	19 25·1	C. 3572	9·2			9·0	Certainly missing.
203	17 16	22 16·9	K	9·6			9·6	
204	19 19	30 23·4	a 16813	9			9·5	Certainly missing on four plates 31 $\frac{1}{2}$, 21 ^h 12 ^m . The star was several times looked for in vain at Vienna (<i>Vide</i> Cat. Arg. Weiss, page 500). Still, however, the star is certainly in Thome's Dm. Variable?
205	29 46	19 26·3	K	...			—	
206	43 6	27 10·5	G. 29862	9 $\frac{3}{4}$			9·5	In Thome's Dm., reference GC. omitted.
207	51 57	32 8·7	ZC. 1630	9			—	Certainly missing.
208	55 4	29 44·9	G. 30132	10 $\frac{1}{4}$			9·7	
209	56 36	28 39·2	a 17177	8 $\frac{1}{2}$			9·1	= S Pisc. Austr. Certainly missing.
210	22 10 53	30 13·6	ZC. 342	9			8·5	= R Pisc. Austr. Certainly missing.
211	12 30	25 25·7	k 4468	...			—	
212	42 37	20 56·0	a 17613	9			—	Prof. Weiss thinks that the star is to be identified with a 17611.
213	49 56	29 7·7	ZC. 1485	9			9·3	On one of the plates an extremely faint speck. On the other certainly missing.
214	50 24	21 0·5	G. 31207	var.	Wbl		var.	= S Aquarii. Certainly missing.
215	50 33	21 5·2	G. 31209	9	b		9·7	On check plate an extremely faint speck. On measuring plate certainly missing.
216	23 10 24	22 13·0	K	9·7			9·7	9·6
217	49 54	32 6·8	ZC. 1351	9 $\frac{1}{2}$			—	Marked with ? in ZC. Possibly the position is in error 1 ^m and 1 ^s , so that the correct position would be 50 ^m 53·6 — 33° 6' 8. In this position a single observation was made on the plates.
218	56 14	20 8·3	a 18231	9	C		9·2	Certainly missing.

II.—LIST OF STARS IN SD., 9^m.0 OR BRIGHTER, MISSING ON THE PLATES.*

No.	No. in SD.	Mag.	α 1875.	δ 1875.	References and Remarks.
	°	m	h m s	° '	
1	— 19 603	9.0	3 0 19	— 19 40.5	
2	— 22 995	8.7	4 59 31	22 4.6	In Thome's Dm. 8.9.
3	— 22 1108	9.0	5 21 16	22 37.5	In Thome's Dm. 9.3.
4	— 20 3283	6.7	10 45 33	20 35.2	GCal = No. 77 of List I. = V Hydræ.
5	— 19 4644	7.8	17 22 21	19 22.2	GCWa = No. 166 of List I. <i>Red.</i>
6	— 20 5153	9.0	18 21 24	20 14.5	
7	— 19 6063	9.0	21 10 11	19 25.1	C = No. 202 of List I.
8	— 22 6041	8.9	22 52 46	22 32.4	In Thome's Dm. 9.2.

In the first list 96 stars† of the whole number of 218, or 44 per cent., are also missing in the Durchmusterung of Schönfeld and Thome, and these are therefore nearly certainly erroneous, unknown variables or (in the case of some stars of K) extremely faint stars. There remain 122 catalogue stars really missing in this volume. Of these there are—

- 9 certainly variable according to Chandler's 2nd Catalogue (Nos. 68, 77, 99, 122, 126, 185, 209, 210, 214),
- 4 suspected variable (Nos. 64, 104, 150, 204),
- 2 more known to be red or coloured (Nos. 40, 166),
- 2 nebulae or clusters (Nos. 144, 188),

so that 105 remain, which are missing, for unknown reasons, on a whole of catalogue stars that probably exceeds 23,000. Not one in 200 of the stars of all degrees of magnitude in the catalogues of precision is therefore missing in this volume of the CPD.

The second list gives 8, or leaving out the well-known red or variable ones, 6 stars 9^m.0 or brighter really missing on the plates on a whole number of 6600‡, or not *one* in a thousand.

* There may be some more missing in the *catalogue* for, by a mistake not at first noticed, the stars 9.0 observed *once* only on the plates, and which therefore are lost for the catalogue, have not been noted down as missing. In the meanwhile it is certain that these belong to the very faintest stars on the plates, which have no pretension at completeness.

† Assuming that No. 5 is missing in Thome, No. 59 occurring in Thome, and that No. 53 is erroneous.

‡ According to the *Neue Ann. der. K. Sternw. in Bogenhausen* Bd. II. the exact number of stars between the declinations $-19^{\circ} 0'$ and $-23^{\circ} 0'$ (for 1855) is 6620.

If it is considered how strongly the least noticeable trace of colour of a star affects the intensity of the image on the plate, it will be granted that this number is unexpectedly small, and so we are led here for the third time to the conclusion that the uniformity of colour for the fainter stars is apparently much greater than that for the brighter stars. To bring this out somewhat more forcibly I have counted, somewhat roughly, for the stars 6.1—7.0 of Gould's Uranometria Argentina, between the parallels of $\delta = -23^\circ 0'$ and $\delta = -38^\circ 0'$, the number of cases in which the degree of redness, *i.e.*, the difference *phot. mag.—vis. mag.* corrected for Δv exceeds $0^m.45$, $0^m.55$, $0^m.65$. The correction Δv could be taken from Table 18 because Thome's magnitudes of stars brighter than 7.0 are borrowed from this source. These numbers were then converted into fractions of the whole number (about 1100) of these stars. The result is as follows :—

STARS IN UA. 6.1—7.0.

Degree of redness.	Fraction of the whole Number.
$0^m.45$ or more	0.17
$0^m.55$ " "	0.12
$0^m.65$ " "	0.085
$0^m.75$ " "	0.051
$0^m.85$ " "	0.037
$0^m.95$ " "	0.021
$1^m.05$ " "	0.011
$1^m.15$ " "	0.0073
$1^m.25$ " "	0.0055
$1^m.35$ " "	0.0045
$1^m.45$ " "	0.0036

Now let us consider the half of our plates which is most deficient in stars, and let us suppose, which certainly is an extreme assumption, that even for this half they stop only at stars of mag. 9.7, being wholly complete up to that limit.

Half the number of the stars of Schönfeld between $-19^\circ 0'$ and $-22^\circ 0'$ may be set down with considerable approximation at—

800 stars of mag.	9.0
260 " " "	8.9
370 " " "	8.8
230 " " "	8.7
140 " " "	8.6

Total 1800 (according to Seeliger 1810).

If now the range of colour were as great for the fainter stars as it is for the stars 6.1—7.0, then according to our assumption all the $9^m.0$ with a degree of redness exceeding $0^m.7$ must be missing on the plates here considered ; in the same way all

the $8^m.9$ with a degree of redness exceeding $0^m.8$, &c. - - - We might thus expect the following numbers of missing stars, opposite which we note the numbers really found :—

—	Number of Missing Stars.	
	Expected.	Found.
$9^m.0$	41	4
$8^m.9$	10	1
$8^m.8$	8	0
$8^m.7$	2	1
$8^m.6$	1	0
Total ...	62	6

I think that in reality the difference must be still more considerable. The conclusion is evident. If, however, it is objected that the data for this reasoning are too untrustworthy, we may give another, to which this objection can hardly reasonably be urged,—

Schönfeld has tried to make his catalogue complete down to stars of the mag. 9.2 or 9.3 (introduction to SD., p. [12]). It contains, however, an enormous number of fainter stars down to mag. 10.0 . For obvious reasons these fainter stars are less completely observed in the Milky Way than elsewhere, and it may at least be considered next to certain that the number of stars for the region between $6^h 47^m$ and $8^h 47^m$ of the Declination -21° does not exceed the total number of stars that would have been found there, if they had been all *completely* observed down to $9^m.8$ (inclusive). The great incompleteness of the stars 9.9 and 10.0 is shown by the mere fact that in the two hours quoted the stars 9.7 and 9.8 are more than three times as numerous in the catalogue than the stars 9.9 and 10 .

Starting from this supposition and admitting that the number of stars of any class of magnitude are 3.87 times as numerous as those of a class brighter by one magnitude, we can compute from the number of stars on our plates, as compared with that of Schönfeld on the same area, the magnitude down to which these plates may be considered complete.

In this way I find, from countings made on the Zone -21° , that the plates of which the centres have the Right Ascensions $7^h 0^m$, $7^h 20^m$, $7^h 40^m$, $8^h 0^m$, $8^h 20^m$, $8^h 40^m$, must show the stars complete down to respectively $10^m.27$, $10^m.40$, $10^m.74$, $10^m.49$, $10^m.47$, $10^m.37$.

With these data, together with the number of stars 10^m , $9^m.9$, - - - which are to be found in the SD. on the area covered by the plates, the number of stars that

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might have been expected to be missing, if the various degrees of redness were as probable as for the stars 6.1—7.0, can be computed, and these may then be compared to the number of really missing stars.

I find in this way

Declination -21°	Number of Missing Stars.	
	Expected.	Found.
Plate $7^{\circ} 0'$	11	0
7 20	9	1
7 40	2	0
8 0	3.5	1
8 20	4	1
8 40	6.5	2
Total - -	36.	5

After all that has been said on the subject, there can be no serious doubt of the fact that the uniformity of colour is, really or apparently, far greater for the fainter stars than for the brighter ones. The subject, however, seems to call for a more exhaustive discussion than could be here entered into.

The comparison of our Durchmusterung with that of Schönfeld has not only led to the detection of some stars $9^m.0$ or brighter missing on the plates, but has inversely brought to light some cases where stars photographically $9^m.0$ or brighter are missing in Schönfeld's work.

The whole list of these stars is as follows :—

III.—LIST OF STARS PHOTOGRAPHICALLY $9^m.0$ OR BRIGHTER MISSING IN SD.

No.	No. in Phot. Dm.	Phot. Mag.	α 1875	δ 1875	Remarks.
1	1613	8.9	$6^{\text{h}} 40^{\text{m}} 49^{\text{s}}.4$	$-20^{\circ} 40'.9$	} SD. has only one star (8.3) here.
	1617	8.2	$40^{\circ} 52'.4$	$40^{\circ} 3'$	
2, 3	1753	8.9	$6^{\text{h}} 49^{\text{m}} 37^{\text{s}}.7$	$20^{\circ} 17'.0$	} SD. has only one star (9.1) here. The three stars are near to the bright one (6.8 in SD.) at $49^{\text{m}} 39^{\text{s}}.2$, $-20^{\circ} 14'.8$.
	1754	8.8	$49^{\circ} 38'.2$	$15^{\circ} 7'$	
	1757	9.0	$49^{\circ} 41'.2$	$15^{\circ} 5'$	
4	1867	9.0	$6^{\text{h}} 56^{\text{m}} 18^{\text{s}}.1$	$20^{\circ} 19'.5$	Not near bright star.
5	2476	8.5	$7^{\text{h}} 33^{\text{m}} 53^{\text{s}}.3$	$22^{\circ} 31'.3$	In Thome's Dm. 9.3. Not near bright star.

LIST OF STARS PHOTOGRAPHICALLY 9^m.0 OR BRIGHTER MISSING IN SD.—*continued.*

No.	No. in Phot. Dm.	Phot. Mag.	α 1875	δ 1875	Remarks.
6	2693 2697	^m 9.2 8.9	^{h m s} 7 41 21.3 41 24.8	— 22° 40.9 41.2	Not near bright star. Both stars are missing in SD. On the other hand SD. has the two stars (1875) 9 ^m .7, 7 ^h 41 ^m 21 ^s .7, —22° 45'.2 and 9 ^m .7, 7 ^h 41 ^m 24 ^s .4, —22° 46'.0, which are the only ones missing in Phot. Dm. in this region. Still there seems to be no error in the SD. (<i>Vide</i> Astr. Nachr. No. 3189). The brightest of our stars has been once observed in Bonn. Thome has both our stars (respectively 9 ^m .5 and 9 ^m .7) and probably the last of those of Schönfeld.
7	3424	9.0	8 13 18.7	21 50.8	Not near bright star.
8	3489	9.0	8 16 39.5	21 41.8	Not near bright star.
9	3768	9.0	8 34 19.5	22 51.4	Not near bright star. Also missing in Thome's Dm. Variable? When the star is compared only to stars in the immediate vicinity its magnitude according to Schönfeld and Thome would be found 9.2.
10	6633 6634	8.8 8.6	17 56 43.8 56 44.3	22 30.6 29.7	} In Messier 21. SD. has but one star here. In Thome's Dm. both are found with the respective mags. 9.8 and 9.2. There is a star 6.8 (U.A.) at 56 ^m 39 ^s .2, —22° 30'.1.
11	6736	8.9	18 9 26.7	19 0.5		In $G$ 8$\frac{1}{2}$ (cluster in Sagittar. No. 189). Not very near to bright star (there is a 8.0 at 10^{sec}. distance).
12	6904	8.8	18 24 27.0	19 12.8	Near the variable star 18 ^h 24 ^m 32 ^s .0, —19° 12'.6 (U Sagittar.)

To these stars might have been added the following ones:—

No.	Phot. Mag.	α 1875	δ 1875
13	9.0	^{h m s} 18 7 22.9	— 19 31.5
14	9.0	7 24.9	19 17.0
15	9.0	7 31.9	19 1.6
16	9.0	7 54.7	19 2.7
17	9.0	8 19.7	18 58.5
18	9.0	8 34.5	18 57.3
19	9.0	28 46.7	20 19.1
20	9.0	59 30.3	22 59.9 Markree I., p. 98 (9). Thome 9.6.

but of these the six first are near together at the edge of plate — 21 $\frac{1}{2}$, 18^h 0^m; Nos. 16, 17, 18 are common to this plate and the following one, on which their magnitudes were found to be respectively 9.2, 9.2, 9.6, so that it seems probable that all six are in reality slightly fainter than 9.0. The same holds for No. 19, which is 9.5 on the preceding plate. Finally No. 20 is properly beyond the limits of the SD., and only within the limits of the list of stars on pp. [53] and [54] of the introduction to that work. For this list, however, no completeness was claimed by Schönfeld. Moreover, this star too is somewhat fainter on the overlapping plate — 26 $\frac{1}{2}$, 19^h.0, and is but 9.6 in Thome.

For the remaining stars it may be remarked that three are close to bright stars (Nos. 2, 3, 12), and two near to others (Nos. 1, 10), differing much less in magnitude; to these cases apply more or less the remarks made by Schönfeld, p. [30]. There thus remain seven cases unexplained, of which especially the numbers 5, 9, 11 seem noteworthy; the first because of its relatively great photographic brightness, the second because it is missing also in Thome's Dm., and the last because it has been observed not less than seven times in Cordoba in the years 1881-84.

It seems probable that all these stars, with the exception perhaps of No. 11, if not variable, emit light somewhat above the average in actinic power. Here, too, the unexpectedly *small* number of missing stars is very striking.

22.—Number of Stars per Square Degree.

I have not made detailed counts of the number of stars contained in the catalogue, because such counts to be really important ought to be combined with a careful study of the corrections to be applied to the magnitudes of the catalogue in order to make them thoroughly homogeneous throughout. As has been stated already, I hope to undertake such a study, but probably not before the catalogue has been quite finished. In the meanwhile, in the face of the fact that our catalogue is richer in the rich regions, but poorer in the poor regions of the sky than the catalogue of Schönfeld, it is important to know if our catalogue contains, even for the poorest parts, stars enough for all those purposes for which the BD. has proved so eminently serviceable. The following table, giving the number of stars per square degree for every hour of Right Ascension of each of the five belts of plates contained in the catalogue, will be quite sufficient for the purpose:—

TABLE 36. NUMBER OF STARS PER SQUARE DEGREE.

α		19°·0 — 24°·0		24°·0 — 29°·0		29°·0 — 34°·0		34°·0 — 38°·0	
		Number	β	Number	β	Number	β	Number	β
h	h		°		°		°		°
0 — 1		8·9	— 84	7·4	— 87	8·8	— 85	8·7	— 81
1 — 2		6·8	— 77	8·4	— 79	9·1	— 79	7·2	— 77
2 — 3		7·3	— 65	9·2	— 66	9·5	— 66	9·9	— 65
3 — 4		10·2	— 51	10·5	— 53	10·3	— 53	11·1	— 53
4 — 5		18·5	— 38	20·6	— 40	19·0	— 41	13·0	— 41
5 — 6		25·3	— 25	29·4	— 27	25·1	— 28	18·8	— 29
6 — 7		50·8	— 12	47·2	— 14	30·2	— 16	23·7	— 18
7 — 8		101·2	0	92·8	— 2	52·8	— 5	63·5	— 7
8 — 9		67·1	+ 12	57·4	+ 9	44·1	+ 6	105·2	+ 3
9 — 10		38·8	+ 23	26·8	+ 19	22·6	+ 16	65·0	+ 12

TABLE 36. NUMBER OF STARS PER SQUARE DEGREE—*continued.*

α	19°·0 — 24°·0.		24°·0 — 29°·0.		29°·0 — 34°·0.		34°·0 — 38°·0.	
	Number.	β	Number.	β	Number.	β	Number.	β
h h		°		°		°		°
10 — 11	18·2	+ 32	21·1	+ 28	18·9	+ 23	54·1	+ 20
11 — 12	23·2	+ 38	13·9	+ 33	11·5	+ 29	42·3	+ 24
12 — 13	23·2	+ 41	16·2	+ 36	12·3	+ 31	40·5	+ 27
13 — 14	10·2	+ 40	18·6	+ 35	15·9	+ 30	39·2	+ 26
14 — 15	15·6	+ 35	16·8	+ 30	15·6	+ 26	33·2	+ 22
15 — 16	16·2	+ 26	15·2	+ 22	22·7	+ 19	15·6	+ 15
16 — 17	12·8	+ 16	15·7	+ 13	19·9	+ 10	21·4	+ 7
17 — 18	24·7	+ 5	38·7	+ 2	56·4	— 1	72·6	— 3
18 — 19	46·4	— 7	31·0	— 10	46·5	— 12	54·7	— 14
19 — 20	22·7	— 20	23·2	— 22	25·6	— 24	23·1	— 25
20 — 21	23·5	— 33	18·2	— 35	18·2	— 36	22·6	— 37
21 — 22	12·5	— 46	12·7	— 48	13·9	— 49	15·8	— 49
22 — 23	12·3	— 60	8·5	— 61	7·7	— 61	13·8	— 61
23 — 0	7·5	— 73	7·1	— 74	12·2	— 74	9·9	— 73
Mean ...	25·2		23·6		22·1		32·7	

The total mean is 25·43* against

Northern BD. 15·19

Schönfeld's SD. 18·21

Thome's Dm. 56·1

The five poorest plates are the following :—

Plate.	Gal. Latitude.	Number of Stars.	Number of Sq. Degrees.	Number per Sq. Degree.
6	— 75	130	23·25	5·59
194	— 65	151	25·57	5·91
1	— 79	147	23·25	6·32
72	— 75	157	23·25	6·75
7	— 71	159	23·25	6·84
Total ...	...	744	118·57	6·28

whereas Argelander finds for the *five* poorest trapezia of the Northern BD. (Bonn Beob. V.)—

Number of Stars.	Number of Sq. Degrees.	Number per Sq. Degree.
779	113·95	6·84

* The whole number of stars between — 19°·0 and — 38°·0 (5981·6 square degrees), is 152,107. The whole number in this volume 152,598.

The difference is to the disadvantage of our Dm., but is still small enough to be without material importance.

23.—False Objects, Stars Accidentally Omitted, and Probability of Error in the Positions.

As has been stated before, I have been anxious to take every possible precaution against the introduction into the catalogue of any objects not existing in the sky. It seems desirable to ascertain *à posteriori* to what extent these precautions have been successful.

For part of the zone of declination -22° this could be done with very little trouble in the following way. For nearly all the plates from $21^h 0^m$ to $5^h 20^m$ and from $13^h 0^m$ — $16^h 40^m$, thirty-eight in all, the SD. is richer in stars than our Dm. The whole number of stars of this zone contained in our catalogue and within the limits of the SD. is about 1980. Of these, all but 208 stars are in Schönfeld's work. These 208 stars were looked for in Thome's catalogue, with the result that 199 were found. Of the remaining nine*, *five* could be with certainty made out to be real stars by their presence on one or two plates, besides those on which the measurements were originally made. For the *four* last, the stellar nature was ascertained without a doubt under the microscope.

There can thus be no doubt about the fact that among the 1980 stars here examined, *there is not a single false object*. This result was to me gratifying in the highest degree. It is true that the number of stars considered is not very great. But on the other hand, it is certain that the danger of introduction of false stars is far smaller for the richer plates than for the poorer ones here examined, first, because in general the limit of faintness of the objects observed has certainly been slightly lower in the latter case, from fear of the necessity of ultimately rejecting the measurements made (because of a too small number of stars); and, second, because the accuracy of the relative position of the two images, where there are numerous stars in the vicinity, can be far better judged of than where no stars or a few distant stars only are in the same field. Moreover, the favourable result found is strongly confirmed by the experience gained by the consideration of the overlapping portions of contiguous

*Of these nine stars, one is so near the lower limit of declination of Thome ($\delta = -22^\circ 0'2$) that its absence is no matter of surprise. *Seven* others are within $75''$ distance from another star. There thus remains but a single star, CPD. — 22° , 6220, of which the absence from Thome's Dm. is unexplained, for the presence of a very faint star at $2'2$ distance seems quite insufficient to account for the fact.

plates, which, as far as I can remember, have not brought to light a single case that seemed to call for the assumption that a false object had been observed.

About the number of stars probably omitted in the catalogue, either through inadvertence of the observers, or through defects of the plates, a fair estimate was obtained in two different ways :—

1. By the number of these objects found in the comparison of other catalogues with our own. As has been said before, all the stars brighter than $9^m.5$, not in our Dm., have been looked up on the plates.

2. By the number of those found by the comparison of the overlapping portions of the different zones of one degree in breadth, both when these different zones are contained on the same plate and when they are contained on different plates.

The comparison of the catalogues has brought to light for the stars $9^m.5$ or brighter, and well within the limits of faintness of the plates,*

- 3 cases of a star omitted through inadvertence.
- 3 " " " " " " " " defects on the plates.
- 2 " " stars very probably variable (stars 1 and 2 of the next article).

Two more stars, one $9^m.5$ and the other 10 (according to ZC.) were found to be missing through inadvertence, the latter, however, showing only a diameter of 0 on the plates.

The total number of stars brighter than $9^m.5$ in the catalogues, may be certainly estimated at not less than 26,000, so that we get, if the star $9^m.5$ is also counted,

omitted through inadvertence, one star in 6,500
omitted through defects of the plate, one in 9,000.

The second plan cannot give a fair estimate of the omissions through defects of the plate, because it is certain that these defects are considerably greater at the edges of the plates than at other parts. Still, however, even here I have only found three stars in 9,000, *two* degrees* (about $0^m.4$) brighter than the faintest on the plates, lost through defects of the film. Further, one star only in 15,000 was found missing through inadvertence of the observer.

* It seems prudent to set the limit of faintness for which completeness, or what may be called so, is maintained, at *two* degrees brighter (about $0^m.4$) than the faintest stars observed on the plates, that is, to take for this limit the diameter $+0$ ($0'.33$) wherever, as is usually the case, the images on the measuring plate are fainter than, or equal to, those on the check plate. As far as the evidence derived from the catalogues compared goes, we might as well have set this limit one degree lower (at diam. 0) ; but the fact that small variations of sensitiveness for the various portions of the same plate seem to occur sometimes, makes this an unsafe limit.

If we estimate the number of existing stars brighter than $9^m.5$ (for the zone 19° — 38°), *double* that of the stars contained in the catalogues of precision, which, according to a rough counting, is a somewhat high estimate, then it would follow from the first and least favourable consideration that probably some four stars brighter than $9^m.5$ will still be found missing, in this volume, through inadvertence and as many through defects of the plates.

In the same way a judgment may be arrived at about the number of errors in the positions of the catalogue. For, as has been stated before, the divergences of our positions from those of the catalogues were looked up on the plates. In the case of Gould's catalogues and that of Argelander—Weiss *all* divergences of 2^{sec} . or more in right ascension and of $0'.4$ or more in declination were examined, besides a certain number of smaller ones. In all cases, except *three*, our positions were found correct. In one of these, the second observation was correct, the first erroneous by 4^{secs} , notwithstanding which the mean had been simply taken without the error having been noticed. In the two other cases both observations are erroneous in declination by the same amount (once by $0'.4$ and once by $1'$).

The errors found by the comparison of the overlapping zones have not been noted. As far as I can remember there was one error found, but it seems better to rely for an estimate on the catalogue comparisons only. These have given *three* errors in about 24,000 positions, or one in 8,000 positions, from which would result a number of about 16 uncorrected errors for the whole of the present volume. I wish to give this estimate only with some reserve. I cannot but think that it must be too low, though I cannot see a definite cause why it should be so. The precautions taken against the introduction of *typographical* errors will be alluded to at the head of the list of corrigenda. I confidently believe that, after the correction of the three or four errors there given *for the magnitudes and positions*, hardly a single typographical error will be found in these in the present volume.

24.—Variable Stars and Proper Motions.

A small list of suspected variables has been given in No. 2987 of the Astr. Nachr. This list might now be considerably extended, but as in most cases the variability is still very doubtful, it seems better to wait till a series of observations of these stars has been made.

An exception may be made for the eight following stars, not confined to the limits of this volume, of which the variability seems either fairly proved (Nos. 1, 2, 4, 7, 8), or at least highly probable. The magnitudes have been obtained by comparison with stars in the immediate vicinity, for which the magnitudes of our catalogue were

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adopted. All the plates in our possession have, of course, been consulted. The numbers given are those scratched on the glass.

α 1875.	δ 1875.	Plate No.	Date.	Magnitude.
1. $\begin{matrix} h & m & s \\ 2 & 56 & 52 \end{matrix} - \begin{matrix} ^\circ & ' \\ 51 & 8 \cdot 2 \end{matrix} = \text{ZC. } \begin{matrix} h \\ 2 & 1547 \end{matrix} (8 \cdot 5)$		845	1887 Oct. 25	< 9.9
		968	" Nov. 25	9.4
		978	" " 29	9.2
		2521	1890 Feb. 14	< 9.9
		2526	" " 15	< 9.9
2. $\begin{matrix} h \\ 5 & 7 & 37 \end{matrix} - \begin{matrix} ^\circ & ' \\ 48 & 39 \cdot 6 \end{matrix} = \text{ZC. } \begin{matrix} h \\ 5 & 283 \end{matrix} (9 \cdot 5)$	954	1887 Nov. 22	9.0	
	980	" " 29	9.0	
	2439	1889 Dec. 24	< 10.6	
	2528a	1890 Feb. 19	9.1	
3. $\begin{matrix} h & m & s \\ 9 & 28 & 41 \end{matrix} - \begin{matrix} ^\circ & ' \\ 36 & 3 \cdot 8 \end{matrix}$	1250	1888 Apr. 7	9.2	
	1257	" " 10	9.0	
	2678	1890 May 14	8.8	
	2681	" " 28	8.9	
	2686	" " 30	9.2	
	2694	" June 4	9.1	
	2698	" " 5	9.2 ^s	
	2735	" " 24	9.3	
4. $\begin{matrix} h & m & s \\ 10 & 10 & 35 \end{matrix} - \begin{matrix} ^\circ & ' \\ 53 & 51 \cdot 5 \end{matrix}$	603	1887 Mar. 18	8.6 ^s	
	610	" " 22	8.6 ^s	
	2079	1889 Feb. 5	< 9.6	
	2111	" " 13	< 9.6	
	2634	1890 Apr. 15	10.5	
	2717	" June 13	8.6 ^s	
5. $\begin{matrix} h \\ 12 & 2 & 55 \end{matrix} - \begin{matrix} ^\circ & ' \\ 44 & 43 \cdot 8 \end{matrix} = \text{ZC. } \begin{matrix} h \\ 12 & 181 \end{matrix} (9 \cdot 0)$	1271	1888 Apr. 20	9.0 ^s	
	1316	" May 8	8.7 ^s	
	1389	" June 20	8.9 ^s	
	2710	1890 " 11	9.6	
	2724	" " 14	8.9	
6. $\begin{matrix} h & m & s \\ 16 & 41 & 43 \end{matrix} - \begin{matrix} ^\circ & ' \\ 19 & 14 \cdot 3 \end{matrix} = \text{C } 2769 (8 \cdot 5)$	1598	1888 Aug. 22	< 9.9	
	1725	" Oct. 22	9.2	
7. $\begin{matrix} h & m & s \\ 16 & 48 & 40 \end{matrix} - \begin{matrix} ^\circ & ' \\ 30 & 22 \cdot 6 \end{matrix} = \text{a No. } 12936 (6)$	1499	1888 July 25	9.2	
	1711	" Oct. 5	< 10.0	
8. $\begin{matrix} h & m & s \\ 19 & 8 & 24 \end{matrix} - \begin{matrix} ^\circ & ' \\ 33 & 44 \cdot 4 \end{matrix}$	1727	1888 Oct. 22	10.2	
	1744	" " 25	10.2	
	2906	1890 " 30	7.2	
	2913	" Nov. 3	7.2	
	2949	" " 14	7.1	
	2953	" " 19	7.1	

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

No. 1. On plates 845, 2521, 2526 there is no trace of a star in this position. In the ZC. this object occurs in the list of zone stars not found on revision (Intro., p. xv.).

No. 2.* On plate 2439 there is no trace of a star in this position. Not the slightest defect of the film can be detected under the microscope. Variability confirmed by Cape "Carte du ciel" plates. 1893 January 12, certainly missing; 1893 December 8, mag. = 9.0.

No. 3. The differences between the magnitudes on plates 2678 and 2735, and between those of 1250 and 1257, though small, are certainly real. The two latter plates have also been examined under the microscope. In Thome 9.2.

No. 4. On the plates 2079, 2111 there is no trace of a star in this position, though other stars of the magnitude $9^m.6$ in the immediate vicinity are plainly visible. No defect in the film of plates 2634 and 2717 could be detected under the microscope.

No. 5. The difference between the diameters on plates 1271 and 1316, though relatively small, is certainly real. The difference between the diameters on plates 2710 and 2724 is of course very conspicuous. All the plates have been examined under the microscope; no defect in the films could be detected.

No. 6. On plate 1598 there is no trace of a star in this position. The film shows no defect as seen under the microscope. Magnitude according to SD. 8.8; according to C. 8.5; according to Wash. Zones 9.

No. 7.* On plate 1711 there is no trace of a star in this position. Both plates were examined under the microscope; no defect in the films could be detected. Star is also in the list of suspected variables of Thome. I find the following estimates of visual magnitude:—

Wash. Z.	1847 May 28	9.
a	1849 June 23	6. (error of 1' in declination)
W	1868.8	7.0
Thome	1887 June 15	7.7
	1888 April 14	7.5
	1892 May 25	9.1

No. 8. The plates 1727 and 1744 were examined under the microscope. No defect in the film could be detected. Visual estimates: Lacaille 7; Stone 7; U.A. 6.9; ZC. 7.

The variability of two more stars: $13^h 9^m 17^s - 44^\circ 2' 6$ and $17^h 49^m 32^s - 49^\circ 24' 9$ is all but proved by the Cape "Carte du ciel" plates.

A certain number of considerable proper motions have been detected but have not as yet been discussed. We hope to give these with another volume.

* While this work has been passed through the press, Nos. 2 and 7 of our list have been also discovered at Harv. Coll. Observatory (*vide* Astr. Journ., No. 347).

25.—List of the Plates; Arrangement of the Catalogue; Summary of Results and Abbreviations.

In order to facilitate the reference to the plate on which the observations of every individual star have been made, the plates of the belt $-21\frac{1}{2}$ have been numbered in the order of their right ascensions from 1 to 72; those of belt $-26\frac{1}{2}$ likewise from 73 to 136, &c., in such a way that the plates corresponding to one and the same portion of the sky have all the same rotation number, which must be distinguished from the number scratched on every individual plate. The list IV. contains in the first column the rotation number of the plates. In the second and third, the declination and right ascension of its centre. The fourth contains the numbers scratched on the plates. The first of these refers always to the measuring plate, the second to the check plate, the remaining ones, generally less perfect than the former, were not used at all except where they could contribute to the solution of some doubtful case. The fifth column contains the date of exposure; the column headed t the hour angle of the centre of the plate at the middle of the exposure, the next one its duration. By Z and β are denoted the zenith distance corresponding to the hour angle t , and the galactic latitude of the centre of the plate. B and C are the constants adopted in the reduction of the diameters to magnitudes by the formula

$$m = \frac{B}{\text{diam.} + C}$$

and n denotes the number of stars used in their computation.

The 13th column shows the relation of the images of the fainter stars on the measuring plate as compared with those on the check plate, as seen in the telescope. The number before the sign $=$ is relative to the measuring plate; the meaning of a notation as $-0 = +0$ thus being, that an image estimated -0 on the measuring plate corresponds with an image $+0$ on the check plate, &c.

In the next column the letters S and V denote the observers at the ocular for the first measurement of each plate (Art. 5).

In the last column finally the remarks of the observers at the ocular of the measuring apparatus and those of the photographer, mostly relative to the state of the sky, have been given, the latter in *italics*. In the remarks of the former the measuring and check plate are often not distinguished, the observers having simply noted down what they could see in the telescope. Thus, for instance, in the case of numerous star-like specks, it was mostly impossible for the observer to decide, without leaving the telescope, on which of the two plates they occur.

About the arrangement of the catalogue itself little need be said.

The first column contains the photographic magnitudes. The end of a plate has been marked by a dash in this column, and the plate to which any particular star belongs can be ascertained at a glance by the plate numbers at the head of the page. For the overlapping portions of consecutive plates the means were taken of the positions but never of the magnitudes; these were always set down as they were found on the plate to which they belong according to the catalogue. In those few cases where stars within the regular limits of a certain plate were, notwithstanding that, taken from another contiguous one (because they are missing on the former), the magnitude is marked with an asterisk (*) when the star belongs to a plate of the same declination, with a dagger (†) if it belongs to a plate of another declination. It can never be doubtful, therefore, from what plate the magnitude was obtained.

The second and third columns give the right ascension and declination for the epoch 1875.0. At the bottom of these columns are given the precessions for 25 years, in order to facilitate a comparison with positions for other epochs. They include no secular variation and are relative to the mean declination of the zone, and to the right ascension of the middle star of each column. As they were taken from tables accurate to 0^s.1 and 0['].1, errors of this amount may occur.

The fourth column finally contains the references, for the explanation of which we may refer to Art. 20. It may be here repeated that the magnitudes given in this column are those of Schönfeld, if at the right-hand side (zones 19°—22°), those of ZC. if at the left-hand side.

By the sign : is meant that the object was *suspected* of being double. Where the components of a double star could be well separated, both have been observed and inserted in the catalogue. Where not, the sign : has been made use of. For the stars so distinguished, the distance of the components will not, therefore, exceed a couple of tenths of a minute in the case of fainter stars, whereas in the case of brighter stars, where, owing to the greater diameter, the images overlap even where the distance is pretty considerable, this distance may occasionally reach 1' or more. There must be numerous cases in which the suspicion of duplicity will not be confirmed, and I do not overestimate the value of the information conveyed by this sign. Still, uncertain as it is, it seemed preferable to no information at all, and so I have retained the sign.

The same must be said of the sign ×, by which the fact is notified that the star seemed somewhat nebulous. All these objects were looked for in Dreyer's Gen. Cat. of Nebulæ, and when contained in this work, were set down as nebulæ in the first column. For those not found the sign was retained; whether in the case of some of these we have to do with stars surrounded by nebula, or only with some accidental defect of the plate, I do not venture to decide.

Lastly, the sign ? implies that the existence of the star seems more or less doubtful. As remarked before (Art. 5) there is little doubt but that nearly all these stars, too, really exist in the sky.

Before the catalogue proper a certain number of stars observed together with those of zone -19° but belonging to zone -18° have been given. For these stars no completeness is claimed north of the parallel of $18^\circ 58'$, or even $18^\circ 58'5$.

For the sake of convenience we repeat here some of the principal results of the preceding pages, together with the abbreviations used either in the introduction or in the body of the catalogue.

A. Formula of reduction for the magnitude—

$$\text{Magn.} = \frac{B}{\text{diam.} + C} \quad \text{from which diam.} = \frac{B}{\text{magn.}} - C$$

for the values of B and C, *vide* list IV., pp. (99)–(122).

B. Corrections μ applicable to the tabular magnitudes to bring them into accord with definition III. (p. (47)), and the scale of Gould's Zone Catalogue.

By a graphical smoothing of the values of Table 22 I get—

ZC.-phot.

$\delta = -19^\circ 0$ to $-24^\circ 0$		$\delta = -24^\circ 0$ to $-38^\circ 0$	
Phot. mag.	μ	Phot. mag.	μ
m	m	m	m
9.55	+ 0.1	9.55	0.0
7.85	0.0	8.15	- 0.1
7.45	- 0.1	7.75	- 0.2
7.05	- 0.2	7.15	- 0.3
6.65	- 0.3	4.45	
6.35	- 0.4		
6.05	- 0.5		
5.75	- 0.6		
5.45			

from which the corrections μ may be taken without interpolation.

C. Probable error of α	$\pm 0^s.27$	<i>vide</i> Art. 14, p. (52).
" " " δ	$\pm 2''.6$	" " 15, p. (53).
" " " mag.	} $\pm 0^m.114$	" " 17, p. (57).
(including system. errors of plates)		

D. Probable value r of degree of blueness (mean of Tables 20 and 35).

Mag.		r
m	m	m
9·5	— 9·9	± 0·11
9·0	— 9·4	0·15
8·5	— 8·9	0·17
8·0	— 8·4	0·23
7·0	— 7·9	0·28
6·0	— 6·9	0·40
5·0	— 5·9	0·40
4·0	— 4·9	0·45

E.—References. (For details, *vide* Art. 20.)

- C. Porter's Cincinnati Zone Catalogue of 4050 Stars (1887).
 G, *G*, **G**. Gould's Argentine General Catalogue (1886).
G refers to the cluster catalogue at the end of the work.
G implies the presence of the star both in *G* and *p*.
 K. Kam's Catalogue of Stars from the Astr. Nachr., Vols. 67—112.
 M. Zweites Münchener Sternverzeichniss (1891).
 S, **S**. Stone's Cape Catalogue for 1880 (1881).
 W. Washington Catalogue (Yarnall), 3rd edition (1889).
 a. Argelander's Südliche Zonen, von E. Weiss (1890).
 b. Bonn. Merid. Observations (Bonn. Beob. VI., 1867).
 c. Cape Catalogue for 1850 (1884).
 g. Gilliss' Catalogue of 1963 Stars (1870).
 k. Kam's Catalogue of Stars from the Astr. Nachr., Vols. 1—66 (1885).
 l. Lalande's Catalogue by F. Baily (1847).
 m. Erstes Münchener Sternverzeichniss (Lamont's Obs., 1890).
 p. Brisbane's Paramatta Catalogue (1835).
 r. Rümker's Preliminary Catalogue of Southern Stars (1832).
 t. Taylor's Madras General Catalogue (1844).
 β. Auwers' Bradley (1888).
 λ. Lacaille's Catalogue of 398 Principal Stars by F. Baily (1833).
 μ. Auwers' Mayer (1894).
 π. Piazzini's Catalogue of 1814.
 -, =, ≡, ≥..... Washington Zones (1870, 71).

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- mag. Reference by magnitude at the *left hand* side of the column of references (some few in zone -22° , the rest all south of $-23^\circ 0'$) to Gould's Cordoba Zone Catalogue (1884). *Italics* indicate the fact that the catalogue contains two stars which have produced but a single image on the plates.
- mag. Reference by magnitude at the *right hand* side of the column of references (exclusively north of $-23^\circ 0'$) to Schönfeld's Bonner Sternverzeichniss, 4^e section (1886).

F.—Other abbreviations.

ZC. Cordoba Zone Catalogue.

SD. Schönfeld's Südliche Durchmusterung (Bonner Sternverzeichniss, 4^e section).

CPD. Cape Photographic Durchmusterung.

* Where in the catalogue the magnitude of a star is marked with an asterisk, the star belongs to the preceding or following plate of the same declination.

†[#] Where in the catalogue the magnitude of a star is marked with a dagger, the star belongs to a contiguous plate, North or South.

: Suspected double.

× Image of the star somewhat nebulous.

? Existence of the star somewhat doubtful.

IV.—LIST OF THE PLATES.

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
	°	h m s													
1	-21°5	0 0 0	1895	1888 Dec. 7	h m	m	°	°							
			2006	1889 Jan. 18	3 23	30	46	-79	127.4	13.4	61	0=0	V.		
2	"	0 20 0	1826	1888 Nov. 20	4 31	40	60		
			1886	" Dec. 3	3 10	30	43	-82	111.7	11.6	61	0=0	V.		
3	"	0 40 0	2060	1889 Jan. 31	3 5	30	42		
			1896	1888 Dec. 7	4 17	35	58	-84	150.6	15.3	77	0=0	V.		
4	"	1 0 0	2071	1889 Feb. 5	3 18	30	45		
			2082	" " 8	4 18	36	58	-83	158.0	16.7	71	0=0	V.		
5	"	1 20 0	2061	" Jan. 31	4 29	38	60		
			2072	" Feb. 5	4 17	35	58	-79	114.3	12.0	59	0=0	V.	Numerous star-like specks.	

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—continued.

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
6	-21°5'	1 40 0	2052	1889 Jan. 30	3 58	33	54	-75	99.7	10.6	54	0=0	V.		
			2083	" Feb. 8	3 32	37	48	...	...	...	...	...	...	...
7	" 2 0 0	" 2 0 0	2046	" Jan. 29	3 31	30	48	-71	101.5	10.4	67	(0=0)	V.		
			2007	" " 18	3 14	35	44	...	...	...	...	...	...	...
8	" 2 20 0	" 2 20 0	2037	" " 24	3 3	30	42	-67	148.4	15.4	81	0=0	V.		
			2029	" " 22	3 25	30	46	...	...	...	...	...	...	...
9	" 2 40 0	" 2 40 0	2021	" " 21	3 11	30	43	-62	138.2	14.2	80	-0=+0	V.		
			2008	" " 18	3 16	35	45	...	...	...	...	...	...	...
			2002	" " 14	—	22	...	...	...	...	...	...	...	...	Exposed from t=3 ^h 0 ^m —3 ^h 3 ^m , and 3:30—3:44.
10	" 3 0 0	" 3 0 0	2030	" " 22	3 21	30	45	-58	153.4	16.0	80	0=0	V.		
			2038	" " 24	2 59	30	41	...	...	...	...	...	...	...
			2047	" " 29	3 7	30	...	...	...	...	...	...	...	...
11	" 3 20 0	" 3 20 0	2048	" " 24	3 20	30	45	-54	106.0	10.8	73	0=0	V.	Numerous star-like specks.	
			2009	" " 18	3 17	35	45	...	...	...	...	...	...	...
			2022	" " 21	3 7	30	...	...	...	...	...	...	...	...
12	" 3 40 0	" 3 40 0	2074	" Feb. 5	3 30	30	47	-49	123.0	12.5	79	0=0	V.		
			2054	" Jan. 30	3 11	30	44	...	...	...	...	...	...	...
			2085	" Feb. 8	3 26	30	47	-45	139.3	14.3	87	-0=+0	V.		
13	" 4 0 0	" 4 0 0	2093	" " 11	2 45	35	38	...	...	...	...	...	...
			2132	" " 21	2 50	40	...	...	...	...	...	...	...	Hazy.	
			2143	" " 28	2 50	50	...	...	...	...	...	...	...	...
14	" 4 20 0	" 4 20 0	2172	" Mar. 12	3 44	37 ^s	50	-40	150.2	15.0	90	In low declin. -0=0 or +0, for the rest 0=0	V.		
			2055	" Jan. 30	3 7	30	43	...	...	...	...	...	...	...
			2150	" Mar. 4	2 58	45	...	...	...	...	...	...	...	...
15	" 4 40 0	" 4 40 0	2173	" Feb. 12	3 5	40	42	-36	130.4	13.0	86	0=0	V.		
			2086	" " 8	3 21	30	46	...	...	...	...	...	...	...
			2137	" " 25	2 59	38	...	...	...	...	...	...	...	...	} Poor plates.
			2144	" " 28	3 5	50		
16	" 5 0 0	" 5 0 0	2195	" Mar. 23	2 49	38	39	-31	184.6	18.7	92	-0=0; For $\delta=23^\circ$ -0=+0	V.		
			2168	" " 11	2 50	40	39	

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IV.—LIST OF THE PLATES—*continued*.

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
17	° —21'5	h m s 5 20 0	2138	1889 Feb. 25	h m m	3 14	45	44	—27	147'8	15'0	85	...	V.	For the greater part m=c. In low R.A. m > c owing to imperfect trans- parency of mea- suring plate.
			2098	" " 12	3 14	35	44	...	...	...	...	...	...	...
			2135	" " 23	3 25	50	...	...	...	...	...	...	...	...
18	"	5 40 0	2196	" Mar. 23	2 49	38	39	—23	184'0	18'0	101	0=0	V.	In zone 23° numer- ous star - like specks. This zone measured a 3rd time with No. 2145 as a check plate.	
			2169	" " 11	2 52	38	40	...	...	...	...	...	...		...
			2145	" Feb. 28	3 2	50	...	...	...	...	...	...	...		...
19	"	6 0 0	2222	" April 2	2 59	38	41	—18	169'1	16'3	98	0=0	V.	<i>P. or plate.</i>	
			2170	" Mar. 11	3 12	38	44	...	...	...	...	...	...		...
			2139	" Feb. 25	3 26	45	...	...	...	...	...	...	...		...
20	"	6 20 0	2223	" April 1	3 21	38	45	—14	207'9	20'6	101	(0=0)	V.		
			2197	" Mar. 23	2 49	38	39	...	...	...	...	...	...		...
21	"	6 40 0	2171	" " 11	3 13	40	44	—10	218'2	21'4	112	—0=0 or +0	V.	<i>Poor plate.</i>	
			2228	" April 3	3 1	38	42	...	...	...	...	...	...		...
			2141	" Feb. 27	3 0	45	...	...	...	...	...	...	...		...
22	"	7 0 0	2229	" April 3	3 29	50	47	—6	206'0	20'0	108	0=0	V.	<i>Last 30^m hazy.</i>	
			2198	" Mar. 23	2 50	40	39	...	...	...	...	...	...		...
23	"	7 20 0	2199	" " 23	2 51	38	39	—2	223'6	21'9	111	0=0	V.		
			2224	" April 2	3 3	38	42	...	...	...	...	...	...		...
24	"	7 40 0	2231	" " 8	2 55	38	40	+2	181'0	17'6	111	(0=0)	V.		
			2275	" " 30	2 49	38	39	...	...	...	...	...	...		...
25	"	8 0 0	2232	" " 8	3 14	38	44	+6	174'5	17'0	97	—0=0	V.		
			2301	" May 10	2 59	38	41	...	...	...	...	...	...		...
			2225*	" April 2	3 5	38	...	...	...	...	...	...	...		...
26	"	8 20 0	2276	" " 30	3 6	40	43	+10	196'6	19'2	100	—0=0	V.		
			2312	" May 11	2 51	38	40	...	...	...	...	...	...		...
27	"	8 40 0	2302	" " 10	3 2	38	41	+14	188'5	18'3	100	(0=0)	V.		
			2313	" " 11	3 14	38	44	...	...	...	...	...	...		...
			2225*	" April 2	3 5	38	...	...	...	...	...	...	...		...

* On Plate 2225 both the regions 25 and 27 have been photographed by mistake.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	a 1875							B	C	n				
28	° —21'5	h m s 9 0 0	3039	1891 June 23	h m	m	°	^c	154.6	16.0	68	0=0	V.	<i>Definition good to poor.</i>	
			3037	" "	22 4 1	42	54	<i>Definition bad.</i>
			2329	1889 May 23	3 29	38	<i>Wrong guiding star.</i>
			2341	" "	24 2 59	38
			2353	" "	29 3 4	38
29	"	9 20 0	3034	1891 June 16	3 18	45	...	...	...	...	...	...	...	<i>Definition very good but hazy.</i>
			2303	1889 May 10	3 5	38	42	+21	144.1	13.7	100	—0=0	V.	...	
30	"	9 40 0	2314	" "	11 3 13	38	44	...	...	...	...	...	...	...
			2354	" "	29 3 5	38	42	+24	167.5	16.6	94	—0=0	V.	...	
31	"	10 0 0	2342	" "	24 3 1	38	42	...	...	...	...	...	...	<i>Wrong guiding star.</i>
			2330	" "	23 3 31	38	...	...	...	...	...	...	...	...
32	"	10 20 0	2359	" "	30 2 49	38	39	+27	142.6	14.0	87	(0=0)	V.	...	
			2355	" "	29 3 25	38	47	...	...	...	...	...	...	...
33	"	10 40 0	2344	" "	24 3 43	38	51	+30	170.1	16.8	91	In low δ —0=0	V.	...	
			2360	" "	30 3 9	38	43	...	...	...	...	...	In high δ 0=0	...
34	"	11 0 0	2361	" "	30 3 29	38	47	+33	137.4	13.6	78	0=0	V.	...	
			2356	" "	29 3 30	38	48	...	...	...	...	...	...	...
35	"	11 20 0	2362	" "	30 3 49	38	52	+35	183.7	19.0	87	0=—0	V.	Numerous star-like specks.	
			2357	" "	29 3 54	38	53	...	...	...	...	...	...	...
36	"	11 40 0	3038	1891 June 22	2 33	29	36	+37	173.3	18.0	75	0=0	V.	<i>Clouded up.</i>	
			3040	" "	23 2 20	40	33	<i>Definition fair.</i>
			2358	1889 May 29	4 13	34	<i>Fog and bad guiding.</i>
			2363	" "	30 4 18	43	<i>Fog.</i>
			2364	" "	30 5 18	35	<i>Wrong side of plate.</i>
36	"	11 40 0	3032	1891 June 15	2 59	40	...	...	...	...	...	...	...	<i>Definition very good. Film partly detached.</i>
			3043	" "	26 1 36	40	25	+39	188.2	19.0	75	0=0	V.	<i>Definition good.</i>	
			3041	" "	23 2 43	40	37	<i>Definition fair.</i>
			1478	1888 July 20	3 30	30
			1487	" "	23 3 28	30
1496	" "	25 3 15	30			

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IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.		
	δ 1875	α 1875							B	C	n					
37	° —21°5	h m s 12 0 0	3042	1891 June 23	h m	m	°	°	168.1	17.0	81	0=0	V.	<i>Definition fair.</i>		
			3033	" "	15	3 6	40	43	...	...	...	...	...	...	<i>Definition very good.</i>
			1497	1888 July 25	3 29	30
			1513	" Aug. 3	3 58	30
38	"	12 20 0	3044	1891 June 26	1 41	40	26	+41	216.4	22.0	85	+0=0 or -0	V.	<i>Definition good.</i>		
			3048	" "	29	1 7	40	19	...	...	...	...	...	...	<i>Definition poor.</i>
			1479	1888 July 20	3 25	30
			1488	" "	23	3 24	30
39	"	12 40 0	3045	1891 June 26	2 6	40	30	+41	245.4	25.0	90	-0=0 or +0	V.	<i>Definition good.</i>		
			3049	" "	29	2 24	37	34	...	...	...	...	...	...	<i>Definition poor.</i>
			1480	1888 July 20	3 41	30
			1489	" "	23	3 38	30
			1539	" Aug. 10	3 36	30
40	"	13 0 0	1504	" July 28	3 35	30	49	+41	138.1	14.0	85	0=0	S.	...		
			1548	" Aug. 16	3 33	30	48	...	...	...	...	...	...	...	...
41	"	13 20 0	1567	" "	18	3 24	30	46	+40	165.5	17.0	79	0=0	S.	...	
			1540	" "	10	3 32	30	48	...	...	...	...	...	...	...
42	"	13 40 0	1568	" "	18	3 40	30	50	+39	165.4	17.0	82	0=0	S.	...	
			1549	" "	16	3 30	30	48	...	...	...	...	...	...	...
			1522	" "	4	3 27	30	<i>Wrong guiding star.</i>
			1505	" "	28	3 10	30	43	+38	169.2	17.3	86	0=0	S.	...	
43	"	14 0 0	1541	" "	10	3 28	30	47	...	...	...	...	...	...	...
			1595	" "	24	3 35	30	49	+36	165.2	16.8	95	0=0	S.	...	
44	"	14 20 0	1586	" "	22	3 0	30	41	...	...	...	...	...	...	...
			1574	" "	20	2 58	30	41	+33	132.3	13.7	70	-0=0 or +0	S.	...	
			1569	" "	18	3 17	30	45	...	...	...	...	...	...	...
45	"	14 40 0	1587	" "	22	3 17	30	...	...	...	...	...	...	...	...
			1574	" "	20	2 58	30	41	+33	132.3	13.7	70	-0=0 or +0	S.	...	
			1569	" "	18	3 17	30	45	...	...	...	...	...	...	...
			1587	" "	22	3 17	30	...	...	...	...	...	...	...	...
46	"	15 0 0	3046	1891 June 26	0 30	35	15	+31	180.3	18.0	77	0=0	V.	<i>The sensitive film has been in contact with broken plate. Definition good.</i>		
			3050	" "	29	0 44	35	16	...	...	...	...	...	...	<i>Definition fair.</i>
			1575	1888 Aug. 20	3 15	30	...	...	...	...	...	...	...	...	...
			1596	" "	24	3 35	30	...	...	...	...	...	...	...	...

The sensitive film has been in contact with broken plate.

Definition good.

Definition fair.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.
	δ 1875	α 1875							B	C	n			
47	$^{\circ}$ —21'5	$^{\circ}$ 15 20 0	1588	1888 Aug. 22	$^{\circ}$ 3 15	$^{\circ}$ 30	$^{\circ}$ 45	$^{\circ}$ +28	149'8	15'0	93	0=0	S.	
			1570	" " 18	3 15	30	45	...	...	...	...	...	...
48	"	15 40 0	1657	" Sept. 22	...	33	51	+25	140'6	14'3	84	0=—0	S.	<i>Exposed from</i> <i>t=3^h 26^m—3^h 46^m</i> <i>and from 4^h 5^m</i> <i>—4^h 18^m.</i>
			1589	" Aug. 22	3 33	30	48	...	...	...	...	...	...
			1646	" Sept. 18	3 38	35	...	...	...	...	...	...	...
49	"	16 0 0	1665	" " 28	3 42	32	50	+22	154'3	15'4	96	0=0	S.	
			1597	" Aug. 24	3 13	30	44	...	...	...	...	...	...
50	"	16 20 0	1685	" Oct. 2	3 35	30	49	+18	167'5	17'0	83	0=—0	S.	In zones 22° and 23° numerous star- like specks.
			1666	" Sept. 28	4 0	30	54	...	...	...	...	...	...
51	"	16 40 0	1725	" Oct. 22	4 49	38	64	+14	156'0	16'0	84	0=0	S.	
			1598	" Aug. 22	3 15	30	45	...	...	...	...	...	...
52	"	17 0 0	1686	" Oct. 2	3 41	30	50	+11	150'1	15'0	87	+0=—0	S.	Near the edge, at $\delta=24^{\circ}$, stars very faint on check plate.
			1647	" Sept. 18	3 0	35	41	...	...	...	...	...	...
53	"	17 20 0	1726	" Oct. 22	4 52	37	64	+7	182'5	19'0	88	—0=+0	S.	
			1599	" Aug. 24	3 11	30	44	...	...	...	...	...	...
			1648	" Sept. 18	3 20	35	...	...	...	...	...	...	...
54	"	17 40 0	1659	" " 24	3 17	30	45	+3	155'6	16'0	90	(0=0)	S.	
			1667	" " 28	3 17	30	45	...	...	...	...	...	...
55	"	18 0 0	1687	" Oct. 2	3 17	30	45	—1	175'1	17'0	102	0=0	S.	
			1649	" Sept. 18	3 24	35	45	...	...	...	...	...	...
56	"	18 20 0	1668	" " 28	3 15	34	44	—5	151'5	15'0	91	0=0	S.	
			1660	" " 24	3 15	30	45	...	...	...	...	...	...
57	"	18 40 0	1669	" " 28	3 30	30	48	—10	152'5	15'0	99	0=0	S.	
			1688	" Oct. 2	3 14	30	44	...	...	...	...	...	...
			1650	" Sept. 18	3 23	32	...	...	...	...	...	...	...
58	"	19 0 0	1661	" " 24	3 15	30	44	—14	138'9	13'6	96	0=0	S.	
			1689	" Oct. 2	3 31	30	48	...	...	...	...	...	...
59	"	19 20 0	1822	" Nov. 20	4 39	37 ^s	62	—18	122'7	12'0	82	0=0	S.	
			1812	" " 9	4 36	37 ^s	61	...	...	...	...	...	...
60	"	19 40 0	1832	" " 21	4 35	40	61	—22	120'4	12'0	78	—0=+0	S.	
			1837	" " 22	4 44	40	63	...	...	...	...	...	...

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.		
	δ 1875	α 1875							B	C	n					
61	° —21'5	h m s 20 0 0	3058	1891 Aug. 1	h m m	—2 16 43	32	—27	165'3	18'0	59	0=0	V.	<i>Hazy.</i>		
			3055	" July 31	—1 40 40	26	<i>Definition fair.</i>	
			1813	1888 Nov. 19	4 36 35	
			1882	" Dec. 3	4 59 38
			1892	" " 7	5 25 40
62	"	20 20 0	1823	" Nov. 20	4 24 35	59	—31	153'6	15'0	96	0=0	S.	South of 23° 40' stars very faint on measuring plate. Diameters here estimated on check plate.			
			1869	" " 28	4 22 35	58	...	...	...	...	...	...	...	...
63	"	20 40 0	1907	" Dec. 13	5 25 40	71	—35	141'3	14'0	87	0=0	S.	Stars on measuring plate ill-defined.			
			1901	" " 10	5 5 40	67	...	...	...	...	...	...	...	...
64	"	21 0 0	1798	" Nov. 7	3 27 30	47	—40	137'7	14'2	85	—0=+0 or —1	S.	South of 23° 35' stars on check plate very faint. The zone south of 23° 30' was, therefore, measured a third time with No. 1833 as a check plate.			
			1814	" " 19	4 16 35	57	...	...	...	...	...	...	...	...
			1833	" " 21	3 55 30	
65	"	21 20 0	1916	" Dec. 18	5 6 45	67	—44	131'6	13'3	86	—0=0	S.	<i>Hazy.</i> Stars on measuring plate not well defined.			
			1838	" Nov. 22	3 48 35	51	...	...	...	...	...	...	...	...
66	"	21 40 0	1893	" Dec. 7	4 28 35	60	—48	180'4	18'5	87	0=0	S.	...			
			1799	" Nov. 7	3 23 30	46	...	...	...	...	...	...	...	...
67	"	22 0 0	1815	" " 19	3 55 30	53	—53	160'0	15'6	95	0=0	S.	...			
			1870	" " 28	3 20 30	46	...	...	...	...	...	...	...	...
68	"	22 20 0	1800	" " 7	3 19 30	45	—57	156'9	15'5	89	—0=0	S.	Poor plate. The sensitive film has been in contact with broken plate.			
			1824	" " 20	3 20 30	46	South of 23° 42' the check plate seems to have been less sensitive. This zone was revised on plate 1839 and on the plates 132 and 133.		
			1834	" " 21	3 5 20	<i>Clouded up.</i>		
			1839	" " 22	3 28 35		

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
69	° —21'5	h m s 22 40 0	1871	1888 Nov. 28	h m m	3 15 30	44	—62	120'4	12'0	75	—0=0	S.		
			1902	" Dec. 10	3 48 35	51	
			1883	" " 3	2 57 30	
70	"	23 0 0	1872	" Nov. 28	3 31 30	48	—66	120'9	12'2	72	0=0	S.			
			1816	" " 19	3 30 30	48	...	...	...	...	...	...	...
71	"	23 20 0	1825	" " 20	3 25 30	46	—70	136'5	13'7	78	0=0	S.			
			1840	" " 22	3 6 30	43	...	...	...	...	...	...	...
72	"	23 40 0	1894	" Dec. 7	3 5 30	42	—75	180'9	19'0	75	0=0	S.			
			1885	" " 3	3 10 30	43	...	...	...	...	...	...	...
73	—26'5	0 0 0	2019	1889 Jan. 21	4 38 35	59	—81	127'6	13'0	72	—0=0	V.			
			2016	" " 19	4 29 48	58	...	...	...	...	...	...	...	<i>Hazy.</i>
74	"	0 22 30	2027	" " 22	4 10 35	54	—86	145'3	15'0	85	0=—0	V.			
			2036	" " 24	4 22 37	56	...	...	...	...	...	...	...
			1641	1888 Sept. 15	—3 35 30	...	...	...	...	...	...	...	...	<i>Wrong setting.</i>
75	"	0 45 0	2051	1889 Jan. 30	4 12 35	54	—87	98'2	10'0	81	—0=0	V.			
			2045	" " 29	4 8 35	53	...	...	...	...	...	...	...
76	"	1 7 30	1988	" " 11	3 31 34	46	—84	117'1	11'5	69	(0=0)	V.			
			1942	1888 Dec. 31	3 40 32	48	...	...	...	...	...	...	...
77	"	1 30 0	2028	1889 Jan. 22	3 41 30	48	—79	119'8	12'0	82	—0=0 or +0	V.			
			2000	" " 14	3 14 33	42	...	...	...	...	...	...	...
78	"	1 52 30	1989	" " 11	3 24 33	44	—74	128'9	13'0	83	0=—0	V.			
			2020	" " 21	3 23 32	44	...	...	...	...	...	...	...
79	"	2 15 0	2001	" " 14	3 6 30	40	—69	128'0	13'0	74	+0=—0	V.			
			1943	1888 Dec. 31	3 7 30	41	...	...	...	...	...	...	...
80	"	2 37 30	1944	" " 31	3 27 30	45	—64	174'8	18'5	94	—0=0	V.			
			1990	1889 Jan. 11	3 15 30	42	...	...	...	...	...	...	...
81	"	3 0 0	2053	" " 30	3 15 30	42	—59	163'0	17'0	80	—0=0 or +0	V.			
			2092	" Feb. 11	3 6 35	41	...	...	...	...	...	...	...
			2062	" Jan. 31	3 15 30	...	...	...	...	...	...	...	...
82	"	3 22 30	2039	" " 24	3 12 30	42	—54	165'0	17'5	93	0=0	V.			
			1991	" " 11	3 5 30	40	...	...	...	...	...	...	...

INTRODUCTION.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.
	δ 1875	α 1875							B	C	n			
83	° —26.5	h m s 3 45 0	2031	1889 Jan. 22	h m	m	°	°	153.2	16.0	86	...	V.	Near edge of greatest R.A., stars on No. 2031 considerably larger than on No. 2040. For the rest m = c.
			2040	" "	24	3 27	30	45	...	...	...	...	...
			2023	" "	21	3 17	30	...	...	...	...	...	...
84	"	4 7 30	2154	" Mar. 5	3 6	45	41	—44	155.5	15.6	96	0=0	V.	
			2010	" Jan. 18	3 7	30	41	...	...	...	...	...	...
			2049	" " 29	3 10	30	...	...	...	...	...	...	...
85	"	4 30 0	2190	" Mar. 22	3 4	38	40	—39	177.3	18.0	100	0=0	V.	
			2176	" " 15	3 20	40	43	...	...	...	...	...	...
			2147	" " 2	3 18	72	...	...	...	...	...	...	...
			2158	" " 6	3 2	45	...	...	...	...	...	...	...
86	"	4 52 30	2191	" " 22	3 23	38	44	—35	169.8	17.0	91	0=0	V.	In zone 23° numerous star-like specks.
			2151	" " 4	3 14	45	42	...	...	...	...	...	...
			2155	" " 5	3 15	50	...	...	...	...	...	...	...
87	"	5 15 0	2174	" " 12	3 12	37.5	42	—30	179.0	18.0	102	0=+0	V.	
			2177	" " 15	3 17	37.5	43	...	...	...	...	...	...
			2159	" " 6	3 7	45	...	...	...	...	...	...	...
88	"	5 37 30	2217	" April 1	3 22	38	44	—25	185.7	19.0	107	...	V.	In the greater R.A. 0=0; in the smaller R.A. —0=0 or +0.
			2192	" Mar. 22	3 20	40	43	...	...	...	...	...	...
			2148	" " 2	3 22	60	...	...	...	...	...	...	...
			2156	" " 5	3 28	55	...	...	...	...	...	...	...
89	"	6 0 0	2178	" " 15	3 12	37.5	42	—20	172.0	17.0	109	0=0	V.	
			2227	" April 3	2 59	38	39	...	...	...	...	...	...
			2152	" Mar. 4	2 59	50	...	...	...	...	...	...	...
			2216	" " 28	3 28	45	...	...	...	...	...	...	...
90	"	6 22 30	2193	" " 22	3 16	38	42	—16	221.5	22.5	120	0=0	V.	
			2218	" April 1	3 20	45	43	...	...	...	...	...	...
			2153	" Mar. 2	3 33	50	...	...	...	...	...	...	...
91	"	6 45 0	2206	" " 26	3 15	38	42	—11	225.4	23.0	143	0=0	V.	
			2157	" " 5	3 18	45	43	
92	"	7 7 30	2219	" April 1	3 20	39	43	—7	259.8	26.7	162	0=—0	V.	
			2194	" Mar. 22	3 11	38	42	

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
93	° —26°5	h m s 7 30 0	2207	1889 Mar. 26	h m m	3 11	38	42	—2	260°7	26°8	156	0=0	V.	On check plate there is but a small number of stars south of 28° 54'. The zone 28° 50' — 29° 0 has been however measured also on plates $\delta = -31\frac{1}{2}$.
			2249	" April 22	3 17	38	43	...	...	...	...	...	...
			2212	" Mar. 27	3 11	38	...	...	...	...	...	...	...	Bad plate.
94	"	7 52 30	2220	" April 1	3 17	38	43	+2	244°5	25°0	136	0=0	V.		
			2250	" " 22	3 35	38	46	...	...	...	...	...	...
			2213	" Mar. 27	3 31	38		Bad plate.
95	"	8 15 0	2251	" April 22	3 52	38	50	+6	220°6	22°0	128	0=0	V.		
			2208	" Mar. 26	3 8	38	41	...	...	...	...	...	...
96	"	8 37 30	2221	" April 1	3 11	38	42	+10	195°9	20°0	115	0=0	V.		
			2233	" " 8	3 18	37	43	...	...	...	...	...	...
97	"	9 0 0	3036	1891 June 19	3 40	45	47	+14	201°6	20°0	117	0=0	V.	Definition good; hazy at times.	
			3030	" " 15	3 46	40	49	...	...	...	...	...	...	Definition very good.
			1374	1888 " 19	3 40	30	...	...	...	...	...	...	...
			1383	" " 20	3 31	30	...	...	...	...	...	...	...
			1375	" " 19	3 57	30	51	+18	117°4	12°0	113	0=—1 or 1	V.		
98	"	9 22 30	2252	1889 April 22	3 25	38	44	...	...	...	...	...	...
			1392	1888 June 21	3 17	30	...	...	...	...	...	...	...
			2253	1889 April 22	3 43	38	48	+22	187°2	19°0	108	0=0	V.		
99	"	9 45 0	2343	" May 24	3 37	38	47	...	...	...	...	...	...
			1384	1888 June 20	3 21	30	...	...	...	...	...	...	...
			1403	" " 30	3 43	30	...	...	...	...	...	...	...
			2331	1889 May 23	4 9	38	...	...	...	...	...	...	...	Wrong guiding star.
			3035	1891 June 16	3 2	50	40	+25	230°1	23°0	118	0=0	V.	Definition very good; hazy.	
100	"	10 7 30	3031	" " 15	3 24	40	44	...	...	...	...	...	...	Definition very good.
			1376	1888 " 19	3 47	30	...	...	...	...	...	...	...
			1385	" " 20	3 33	30	...	...	...	...	...	...	...
			1393	" " 21	3 7	30	...	...	...	...	...	...	...

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
101	° —26.5	h m s 10 30 0	1404	1888 June 30	h m	m	°	°				—0=+0	V.	South of 23° 40' the difference of the diameters still somewhat more considerable.	
			1433	July 13	3 31	30	46
			1394	June 21	3 20	30
102	"	10 52 30	1424	July 12	3 30	30	46	+30	135.3	13.6	100	0=0	V.		
			1414	" "	11 3 6	30	41
			1386	June 20	3 26	30
103	"	11 15 0	1395	" "	21 3 10	30	41	+32	146.0	14.5	106	0=0	V.		
			1425	July 12	3 31	30	46
			1415	" "	11 3 20	30
104	"	11 37 30	1416	" "	11 3 35	30	47	+34	140.9	14.5	100	—0=0 or +0	V.		
			1434	" "	13 3 5	30	40
			1387	June 20	3 18	30
			1396	" "	21 3 24	30
105	"	12 0 0	1443	July 16	3 36	30	47	+35	172.5	17.4	110	—0=0	V.	Images ill-defined.	
			1460	" "	18 3 4	30	40	...	...	...	...	...	...	...
			1469	" "	19 2 58	30	...	...	...	...	...	...	...	...
106	"	12 22 30	1427	" "	12 3 44	30	48	+35	144.5	14.5	101	0=0	V.	Bad ; double.	
			1435	" "	13 3 2	30	40
			1461	" "	18 3 7	30
			1428	" "	12 3 59	30	52	+36	169.9	17.0	100	(0=0)	V.		...
107	"	12 45 0	1444	" "	16 3 27	30	45	...	...	...	...	...	...	...
			1436	" "	13 3 15	30	...	...	...	...	...	...	...	...
			1454	" "	17 3 37	30	47	+36	172.9	17.5	108	0=0	V.	...	
108	"	13 7 30	1558	Aug. 17	3 27	30	45	...	...	...	...	...	...	...
			1490	July 23	3 45	30	...	...	...	...	...	...	...	...
			1445	" "	16 3 17	30	43	+35	145.8	14.6	105	0=0	V.	Numerous star-like specks.	
1359	June 8	3 39	30	47	...	...	...	...	...	...	...
1437	July 13	3 17	30	...	...	...	...	...	...	...	...
110	"	13 52 30	1455	" "	17 3 26	30	45	+34	169.1	17.4	115	0=0	V.		
			1559	Aug. 17	3 20	30	43
			1472	July 19	3 6	30

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—continued.

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.
	δ 1875	a 1875							B	C	n			
111	-26°5	^h 14 ^m 15 ^s 0	1446	1888 July 16	^h 3 ^m 10	^m 30	41	+32	156°0	16°0	113	0=0	V.	
			1464	" " 18	3 26	30	45	...	...	...	...	...	...
112	"	14 37 30	1506	" " 28	3 10	30	41	+29	169°3	17°4	113	0=0	S.	Measurements difficult owing to specks and stains.
			1550	" Aug. 16	3 9	30	41	...	...	...	...	...	...
			1523	" " 4	3 10	37	...	...	...	...	...	...	...
113	"	15 0 0	1560	" " 17	2 53	30	38	+27	130°0	13°0	103	0=0	S.	Last 17 ^m hazy. Wrong guiding star.
			1551	" " 16	3 22	30	44	...	...	...	...	...	...
114	"	15 22 30	1533	" " 9	3 33	30	46	+23	152°3	15°5	108	0=0	S.	
			1543	" " 10	3 20	30	43	...	...	...	...	...	...
115	"	15 45 0	1552	" " 16	3 15	30	42	+20	215°5	23°0	120	0=0	S.	
			1577	" " 20	3 48	30	49	...	...	...	...	...	...
116	"	16 7 30	1676	" Oct. 1	3 21	30	43	+17	189°7	20°0	110	0=0	S.	
			1562	" Aug. 17	3 20	30	43	...	...	...	...	...	...
117	"	16 30 0	1590	" " 22	3 25	30	44	+13	146°6	14°6	117	0=0	S.	
			1701	" Oct. 4	3 39	30	47	...	...	...	...	...	...
118	"	16 52 30	1702	" " 4	3 52	30	50	+9	167°5	17°2	124	0=0	S.	
			1736	" " 23	4 26	40	57	...	...	...	...	...	...	Partly clouded.
119	"	17 15 0	1677	" " 1	3 26	30	45	+5	163°5	16°0	109	0=0	S.	
			1770	" " 31	5 5	40	65	...	...	...	...	...	...
			1760	" " 30	4 50	35	...	...	...	...	...	...	...
120	"	17 37 30	1694	" " 3	3 15	30	42	+1	224°7	22°4	112	0=0	V.	
			1678	" " 1	3 43	30	48	...	...	...	...	...	...
121	"	18 0 0	1695	" " 3	3 27	30	45	-4	183°0	18°0	152	(0=0)	V.	
			1703	" " 4	3 22	30	44	...	...	...	...	...	...
122	"	18 22 30	1679	" " 1	3 36	30	47	-8	170°5	17°0	122	0=0	V.	
			1761	" " 30	4 32	35	58	...	...	...	...	...	...
123	"	18 45 0	1704	" " 4	3 15	30	42	-13	163°8	16°5	108	0=0	V.	
			1696	" " 3	3 18	30	43	...	...	...	...	...	...
124	"	19 7 30	1762	" " 30	4 24	35	57	-17	168°3	16°5	121	0=0	V.	
			1680	" " 1	3 27	30	45	...	...	...	...	...	...
125	"	19 30 0	1771	" " 31	3 31	30	46	-22	121°5	12°0	110	0=+0	V.	
			1705	" " 4	3 5	30	40	...	...	...	...	...	...

INTRODUCTION.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.
	δ 1875	α 1875							B	C	n			
126	-26°5'	19 52 30	1845	1888 Nov. 24	4 35	40	59	-27	160°9'	16°0'	114	0=0	V.	
			1859	" " 27	4 44	40	61	...	...	...	...	...	...
127	" 20 15 0	1763	1763	" Oct. 30	3 53	30	50	-31	164°2'	16°5'	98	0=0	V.	
			1772	" " 31	3 22	30	44	...	...	...	...	...	...
128	" 20 37 30	1789	1789	" Nov. 5	3 35	30	47	-36	122°0'	12°0'	107	0=0	V.	
			1773	" Oct. 31	3 42	40	48	...	...	...	...	...	...
129	" 21 0 0	1764	1764	" " 30	3 44	30	49	-41	144°0'	14°1'	93	0=0	V.	Numerous star-like specks.
			1781	" Nov. 1	3 22	30	44	...	...	...	...	...	...
130	" 21 22 30	1782	1782	" " 1	3 36	30	47	-46	117°6'	10°7'	95	0=0	S.	
			1790	" " 5	3 27	30	45	...	...	...	...	...	...
131	" 21 45 0	1846	1846	" " 24	3 23	30	44	-51	142°0'	13°2'	100	1=-0	S.	
			1940	" Dec. 31	5 37	40	71	...	...	...	...	...	...
			1860	" Nov. 27	3 32	30	...	...	...	...	...	...	...
132	" 22 7 30	1847	1847	" " 24	3 37	30	47	-56	152°7'	15°5'	98	0=-1	S.	
			1791	" " 5	3 17	30	43	...	...	...	...	...	...
133	" 22 30 0	1861	1861	" " 27	3 23	30	44	-61	125°4'	12°5'	87	...	S.	In some places -1=-0, in others, images nearly equal.
			1997	1889 Jan. 12	5 30	40	70	...	...	...	...	...	...
134	" 22 52 30	1848	1848	1888 Nov. 24	3 27	30	45	-66	128°3'	12°5'	74	0=+0	S.	
			1862	" " 27	3 36	31	47	...	...	...	...	...	...
			1639	" Dec. 3	-3 32	30	...	...	...	...	...	...	...	<i>Error in adjustment.</i>
135	" 23 15 0	1999	1999	1889 Jan. 14	4 49	38	62	-71	180°9'	19°1'	72	0=0	S.	Images on measuring plate very ill-defined. Estimates in 2 ^d obs. made on check plate.
			1884	1888 Dec. 3	2 59	30	39	...	...	...	...	...	...
			1941	" " 31	4 54	38	...	...	...	...	...	...	...
136	" 23 37 30	1849	1849	" Nov. 24	3 19	30	43	-76	136°3'	14°0'	60	0=-1	S.	
			1863	" " 27	3 25	30	44	...	...	...	...	...	...
			1640	" Sept. 15	-3 30	40	...	...	...	...	...	...	...	<i>Wrong setting.</i>
137	-31°5'	0 0 0	1919	" Dec. 19	3 25	30	43	-80	101°4'	10°0'	77	0=0	V.	
			1909	" " 14	3 22	30	42	...	...	...	...	...	...
			1615	" Aug. 31	-3 15	30	...	...	...	...	...	...	...
			1620	" Sept. 4	-4 5	30	...	...	...	...	...	...	...	} <i>Wrong setting.</i>
			1632	" " 14	-3 42	30	...	...	...	...	...	...

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.				
	δ 1875	a 1875							B	C	n							
138	° —31'5	h m s 0 24 0	1979	1889 Jan. 9	h m	m	c	°	99.7	10.0	69	0=0	V.					
			1964	" "	7	3 56	33	49						
			1621	1888 Sept. 4	—3 50	30
			1633	" "	14	—3 29	30
			1716	" Oct. 9	—3 45	30
139	" 0 48 0	1933	" Dec. 29	4 7	35	51	—85	112.7	11.0	69	0=0	V.						
		1910	" "	13	3 9	30	39	...	...	...	...	...	
		1634	" Sept. 14	—3 43	30	...	...	...	...	...	...	...	Wrong setting.
140	" 1 12 0	1970	1889 Jan. 8	3 14	32	41	—82	106.7	10.0	80	0=0	V.						
		1911	1888 Dec. 13	3 21	30	42	...	...	...	...	...	...
141	" 1 36 0	1965	1889 Jan. 7	3 24	35	43	—77	142.1	14.3	83	...	V.	Images nearly equal except in corner of greatest a and smallest southern δ , where —0=+0.					
		1952	" "	5	3 14	30	40	...	...	...	...	...	
142	" 2 0 0	1980	" "	9	3 29	32	44	—72	127.0	12.7	98	(0=0)	V.					
		1971	" "	8	3 5	32	39					
		1953	" "	5	3 25	30	...	...	...	...	...	...	Damaged.
143	" 2 24 0	1934	1888 Dec. 29	3 7	30	39	—67	122.1	12.1	101	(0=0)	V.						
		1972	1889 Jan. 8	3 16	32	41	...	...	...	...	...	...
		1981	" "	9	3 42	33	...	...	...	...	...	...
144	" 2 48 0	1954	" "	5	3 13	30	41	—62	141.4	13.5	78	...	V.	In corner of smallest southern δ and greatest a —1=—0; for the rest, images more nearly equal.				
		1935	1888 Dec. 29	3 17	30	41	...	...	...	...	...	...
145	" 3 12 0	1973	1889 Jan. 8	3 3	30	39	—57	120.9	11.8	93	+0=—0	V.						
		2073	" Feb. 5	3 25	30	43	...	...	...	...	...	...
		2084	" "	8	3 39	32	...	...	...	...	...	...
146	" 3 36 0	2063	" Jan. 31	3 15	30	41	—52	116.7	11.5	106	0=0	V.						
		1982	" "	9	3 7	30	39	...	...	...	...	...	
147	" 4 0 0	2075	" Feb. 5	3 45	30	47	—47	176.8	17.7	104	0=0	V.						
		2064	" Jan. 31	3 26	30	43	...	...	...	...	...	...
148	" 4 24 0	2188	" Mar. 21	3 41	40	46	—42	140.3	13.8	113	0=0	V.						
		2182	" "	18	3 31	40	44						
		2186	" "	19	3 6	40						

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IV.—LIST OF THE PLATES—*continued*.

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
149	° —31°5	h m s 4 48 0	2214	1889 Mar. 28	h m 3 16	m 38	° 41	° —37	134°0	12°5	109	0=0	V.		
			2200	" "	25	3 37	38	45	...	...	...	...	...
			2187	" "	19	3 20	35	...	...	...	...	...	...	...	Cloudy.
150	"	5 12 0	2183	" "	18	3 37	62	45	—32	128°1	12°0	110	—0=0	V.	Cloud mid. exp.
			2209	" "	27	3 25	38	43	...	...	...	...	...	...
			2163	" "	7	3 20	45	...	...	...	...	...	...	...	Poor plate.
151	"	5 36 0	2175	" "	12	3 36	45	45	—27	153°8	15°0	117	0=0	V.	Interrupted.
			2215	" "	28	3 8	38	39	...	...	...	...	...	...
			2160	" "	6	3 34	45	...	...	...	...	...	...	...	Poor plate.
			2189	" "	21	3 4	23	...	...	...	...	...	...	...
			2201	" "	25	3 32	40	...	...	...	...	...	...	...	Zones 151 and 152 on one plate.
152	"	6 0 0	2210	" "	27	3 19	38	42	—22	168°1	16°5	121	0=0	V.	
			2205	" "	26	3 19	38	41	...	...	...	...	...	...
			1303	1888 May 3	4 8	30	...	...	...	...	...	...	...	...	Wrong guiding star.
			1310	" "	8	4 20	30	...	...	...	...	...	...	...	Poor plate.
			2164	1889 Mar. 7	3 22	45	...	...	...	...	...	...	...	...	" "
153	"	6 24 0	2201	" "	25	3 51	40	...	...	...	...	...	...	Zones 151 and 152 on one plate.	
			2184	" "	18	3 20	37 ^s	42	—17	164°5	16°4	119	0=0	V.	
			2179	" "	15	3 30	40	44	...	...	...	...	...	...
154	"	6 48 0	2161	" "	6	3 10	35	40	—12	133°7	14°0	128	...	S.	Half plate of greatest R.A.
			2180	" "	15	3 48	40	47	...	...	...	...	...	...	—0=+0; other half 0=0.
			1304	1888 May 3	3 56	30	...	...	...	...	...	...	...	...	Wrong guiding star.
			1326	" "	30	4 1	30	...	...	...	...	...	...	...	" " "
			2165	" Mar. 7	3 24	45	...	...	...	...	...	...	...	...
155	"	7 12 0	1327	" May 30	4 14	30	53	—8	180°2	19°0	143	—0=+0	S.	Images on measuring plate tailed.	
			2185	1889 Mar. 18	3 10	35	40	...	...	...	...	...	...	...
			1311	1888 May 8	3 48	30	...	...	...	...	...	...	...	...
156	"	7 36 0	1322	" "	9	3 25	30	43	—4	187°4	19°0	148	—0=0	S.	
			2203	1889 Mar. 25	3 14	40	40	
			1302	1888 May 3	...	21	Exp. 2 ^h 58 ^m —3 ^h 13 ^m ; 3°50—52; 4°14—18.
1312	" "	8	4 5	30				

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.
	δ 1875	α 1875							B	C	n			
157	-31.5	h m s 8 0 0	1336	1888 May 31	h m m 3 5 30	39	+ 1	203.7	21.0	147	(0=0)	S.	<i>Haze at end.</i>	
			1323	" " 9	3 39 34	46	...	...	...	...	...	...		...
158	"	8 24 0	2204	1889 Mar. 25	2 58 37	38	+ 5	198.6	20.0	157	0=0	S.		
			1337	1888 May 31	3 18 30	41	...	...	...	...	...	...	...
			1328	" " 30	3 41 30	...	...	...	...	...	...	...	...
159	"	8 48 0	1338	" " 31	3 32 30	44	+ 9	196.9	20.0	129	0=0	S.		
			2234	1889 Apr. 8	3 46 38	47	...	...	...	...	...	...	...
			1329	1888 May 30	3 52 30	...	...	...	...	...	...	...	...
160	"	9 12 0	1363	" June 18	3 25 30	43	+13	177.0	18.3	124	0=0	S.		
			1339	" May 31	3 49 30	48	...	...	...	...	...	...	...
			1313	" " 8	3 47 30	...	...	...	...	...	...	...	...
			1347	" June 7	3 39 30	...	...	...	...	...	...	...	...
161	"	9 36 0	1356	" " 8	3 16 30	41	+16	160.1	15.5	134	0=0	S.		
			1330	" May 30	3 51 30	48	...	...	...	...	...	...	...
162	"	10 0 0	1364	" June 18	3 12 30	40	+20	152.2	15.0	123	0=0	S.		
			1357	" " 8	3 27 30	43	...	...	...	...	...	...	...
			1348	" " 7	3 26 30	...	...	...	...	...	...	...	...
163	"	10 24 0	1349	" " 7	3 40 30	46	+23	148.4	15.0	122	0=0	S.		
			1365	" " 18	3 24 30	42	...	...	...	...	...	...	...
			1377	" " 19	4 7 30	...	...	...	...	...	...	...	...
164	"	10 48 0	1366	" " 18	3 45 30	47	+25	168.2	16.4	123	0=0	S.		
			1442	" July 16	3 39 30	46	...	...	...	...	...	...	...
			1405	" June 30	3 54 30	...	...	...	...	...	...	...	...
165	"	11 12 0	1350	" " 7	3 29 30	44	+27	159.9	16.0	111	0=0	S.		
			1367	" " 18	3 46 30	47	...	...	...	...	...	...	...
166	"	11 36 0	1378	" June 19	3 33 30	44	+29	120.9	12.0	114	0=+0 or -1	S.		
			1368	" " 18	3 59 30	50	...	...	...	...	...	...	...
			1351	" " 7	3 45 30	...	...	...	...	...	...	...	...
			1406	" " 30	3 17 30	41	+30	126.5	13.5	102	...	...	S.	
167	"	12 0 0	1451	" July 17	2 58 30	37	On check plate images double. Both images denser than those of measuring plate.	
			1426	" " 12	3 31 30		

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IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.
	δ 1875	α 1875							B	C	n			
168	-31°5'	12 24 0	1417	1888 July 11	3 27	30	43	+31	217.3	23.0	127	...	S.	In the mean —o=1. At edge of greatest R.A. —o=-2.
			1452	" " 17	3 7	30	39	...	...	...	...	...	...
			1407	" June 30	3 31	30	
169	" 12 48 0	" 12 48 0	1453	" July 17	3 20	30	42	+31	174.4	18.0	121	o=o	S.	
			1529	" Aug. 9	3 43	30	46	...	...	...	...	...	...	...
			1470	" July 19	2 59	30	...	...	...	...	...	...	...	...
170	" 13 12 0	" 13 12 0	1418	" " 11	3 17	30	41	+31	181.7	19.0	127	o=o	S.	
			1514	" Aug. 3	3 22	30	42	...	...	...	...	...	...	...
			1358	" June 8	3 28	30	...	...	...	...	...	...	...	...
171	" 13 36 0	" 13 36 0	1463	" July 18	3 37	30	45	+30	121.8	12.0	127	o=+o	S.	
			1483	" " 20	3 57	30	49	...	...	...	...	...	...	...
			1481	" " 20	3 21	30	...	...	...	...	...	...	...	...
172	" 14 0 0	" 14 0 0	1515	" Aug. 3	3 36	30	45	+28	225.4	24.0	137	o=o or +o	S.	
			1530	" " 9	3 7	30	39	...	...	...	...	...	...	...
			1491	" July 23	3 28	30	...	...	...	...	...	...	...	...
173	" 14 24 0	" 14 24 0	1531	" Aug. 9	3 17	30	41	+26	190.8	20.0	129	o=o	S.	Numerous star-like specks.
			1516	" " 3	3 23	30	42	...	...	...	...	...	...	...
			1482	" July 20	3 9	30	...	...	...	...	...	...	...	...
174	" 14 48 0	" 14 48 0	1542	" Aug. 10	3 16	30	41	+24	185.3	19.0	117	o=o	S.	Numerous star-like specks.
			1532	" " 9	3 30	30	44	...	...	...	...	...	...	...
			175	" 15 12 0	3047	1891 June 26	1 2	37	13	+21	273.4	28.0	92	o=o	V.	Definition good. } Definition } fair. } Numerous star-like specks.
3051	" " 29	1 10	35	15	...	...	...	...	...	...	...
1507	1888 July 28	3 9	30	...	...	...	...	...	...	...	...
1517	" Aug. 3	3 10	27	...	...	...	...	...	...	...	...
176	" 15 36 0	" 15 36 0	1576	" " 20	3 21	30	42	+18	157.9	16.5	125	o=+o	S.	
			1561	" " 17	3 8	30	39	...	...	...	...	...	...	...
177	" 16 0 0	" 16 0 0	1498	" July 25	3 40	30	46	+14	156.3	16.0	137	o=-o	S.	
			1508	" " 28	2 58	30	37	...	...	...	...	...	...	...
178	" 16 24 0	" 16 24 0	1578	" Aug. 20	3 43	30	47	+11	155.2	16.0	130	o=o	S.	
			1710	" Oct. 5	3 50	40	48	...	...	...	...	...	...	...
179	" 16 48 0	" 16 48 0	1499	" July 25	3 30	30	44	+7	166.5	17.0	147	(o=o)	S.	
			1711	" Oct. 5	4 12	40	52	...	...	...	...	...	...	...

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.
	δ 1875	α 1875							B	C	n			
180	^o —31°5	^{h m s} 17 12 0	1742	1888 Oct. 22	^{h m} 4 40	^m 35	^o 58	^o + 3	182.2	18.0	154	(0=0)	S.	
			1500	" July 25	3 43	30	46	...	...	...	...	...	...
181	"	17 36 0	1743	" Oct. 25	4 54	35	61	— 2	194.4	19.3	147	0=0	S.	
			1778	" Nov. 1	4 48	37 ^s	59	...	...	...	...	...	...
182	"	18 0 0	1787	" " 5	4 45	40	59	— 6	185.0	18.0	150	0=—0	S.	
			1737	" Oct. 23	4 27	38	55	...	...	...	...	...	...
			1712	" " 5	3 52	50	...	...	...	...	...	...	...	<i>Hazy.</i>
183	"	18 24 0	1810	" Nov. 14	5 8	45	64	—11	192.6	19.0	151	—0=—1	S.	<i>Part hazy. Images ill-defined. Estimates of diameter uncertain.</i>
			1796	" " 7	4 16	40	53	...	...	...	...	...	...
184	"	18 48 0	1788	" " 5	4 42	40	58	—15	173.0	17.0	122	0=0	S.	
			1779	" " 1	4 18	35	53	...	...	...	...	...	...
185	"	19 12 0	1744	" Oct. 25	3 48	30	47	—20	176.6	17.4	120	0=0	S.	
			1727	" " 22	3 38	30	45	...	...	...	...	...	...
186	"	19 36 0	1797	" Nov. 7	4 10	40	52	—25	142.9	14.0	117	0=—0	S.	
			1697	" Oct. 3	4 5	30	51	...	...	...	...	...	...
187	"	20 0 0	1745	" " 25	3 47	30	47	—30	159.0	15.5	96	0=0	S.	
			1728	" " 22	3 27	30	43	...	...	...	...	...	...
188	"	20 24 0	1753	" " 29	3 18	30	41	—35	191.8	19.4	112	—0=0	S.	
			1780	" Nov. 1	3 21	30	42	...	...	...	...	...	...
189	"	20 48 0	1746	" Oct. 25	3 40	40	46	—40	127.0	12.0	98	0=0	S.	
			1729	" " 22	3 15	30	41	...	...	...	...	...	...
190	"	21 12 0	1754	" " 29	3 7	30	39	—45	156.2	15.0	106	—0=0	S.	
			1730	" " 22	3 28	30	43	...	...	...	...	...	...
			1604	" Aug. 28	—3 31	32	...	...	...	...	...	...	...	} <i>Error in adjustment.</i>
			1617	" Sept. 4	—3 13	30	...	...	...	...	...	...	...
191	"	21 36 0	1931	" Dec. 29	5 43	42	70	—50	191.5	19.5	91	In the mean —0=0	S.	<i>On measuring plate images ill-defined. In 2nd observation estimates of diameter made on check plate.</i>
			1755	" Oct. 29	3 19	30	41	...	...	...	...	...	...
			1605	" Aug. 28	—3 16	30	...	...	...	...	...	...	...	<i>Error.</i>

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β_1	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.
	δ 1875	α 1875							B	C	n			
192	—31°5	h m s 22 0 0	1963	1889 Jan. 7	h m m 5 37 42	69	—55	137°0	14°0	97	...	S.	On measuring plate images multiple. In 2nd observation estimates of diameter made on check plate. <i>Error.</i>	
			1950	" " 5	5 30 40	67	...	...	...	...	...	...
			1630	1888 Sept. 14	—3 0 30
193	"	22 24 0	1969	1889 Jan. 8	5 20 40	66	—60	151°9	15°0	85	0=0	S.	Images in the larger R.A. sharper than elsewhere. Plates very dark. <i>Error.</i>	
			1987	" " 11	5 32 42	68	...	...	...	...	...	...
			1606	1888 Aug. 28	—3 26 30	...	...	...	...	...	...	...
			1618	" Sept. 4	—3 49 30	...	...	...	...	...	...	...
			1619	" " 4	—3 15 30	...	...	...	...	...	...	...
194	"	22 48 0	1918	" Dec. 19	4 0 35	50	—65	104°6	10°0	71	—1=0	S.		
			1932	" " 29	5 6 40	63	...	...	...	...	...	...
			1607	" Aug. 28	—3 13 30	...	...	...	...	...	...	...
			1613	" " 31	—3 19 30	...	...	...	...	...	...	...
195	"	23 12 0	1951	1889 Jan. 5	5 1 37 ^s	62	—70	110°5	10°0	68	0=0	S.	Images of the brighter stars denser on measuring plate. <i>Wrong guiding star.</i>	
			1917	1888 Dec. 18	4 5 40	51	...	...	...	...	...	...
			1614	" Aug. 31	—3 0 40	...	...	...	...	...	...	...
			1631	" Sept. 14	—3 33 30	...	...	...	...	...	...	...
			1873	" Nov. 28	3 57 30	...	...	...	...	...	...	...
196	"	23 36 0	1908	" Dec. 13	3 11 30	40	—75	127°2	12°0	73	0=0	S.	<i>Error.</i>	
			1903	" " 10	3 35 30	45	...	...	...	...	...	...
			1608	" Aug. 28	—3 26 30	...	...	...	...	...	...	...
197	—35°5	0 0 0	2489	1890 Jan. 28	4 43 40	57	—78	100°8	10°0	44	0=0	V.	<i>Definition fair.</i> <i>Definition bad.</i> <i>Definition fair.</i>	
			2481	" " 18	4 14 37	51	...	...	...	...	...	...
			2993	" Dec. 19	5 8 45	...	...	...	...	...	...	...
198	"	0 25 16	2496	" Jan. 30	3 18 37	40	—81	173°4	18°0	59	0=—0	V.	<i>Definition good.</i> <i>Definition very bad.</i>	
			2501	" Feb. 6	5 1 42	60	...	...	...	...	...	...
199	"	0 50 32	2505	" " 8	4 46 42	57	—82	157°0	16°0	46	—0=+0	V.	" " <i>Definition fair.</i> <i>Definition bad.</i>	
			2490	" Jan. 28	4 40 40	56	...	...	...	...	...	...
			2482	" " 18	3 53 37	...	...	...	...	...	...	...
200	"	1 15 47	2509	" Feb. 11	4 36 45	55	—79	153°1	16°0	61	0=0	V.	<i>Cloudy.</i> <i>Definition very bad.</i>	
			2502	" " 6	4 51 40	58		

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
201	—35° 5'	$\begin{matrix} h & m & s \\ 1 & 41 & 3 \end{matrix}$	2483	1890. Jan. 18	$\begin{matrix} h & m \\ 3 & 52 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	47	—75	139·6	14·4	63	—0=0	V.	<i>Definition bad.</i>	
			2491	" " 28	$\begin{matrix} h & m \\ 4 & 34 \end{matrix}$	$\begin{matrix} m \\ 38 \end{matrix}$	55	<i>Definition fair.</i>
202	"	2 6 19	2506	" Feb. 8	$\begin{matrix} h & m \\ 4 & 14 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	52	—70	168·0	17·3	62	—0=0	V.	<i>Definition very bad.</i>	
			2503	" " 6	$\begin{matrix} h & m \\ 4 & 42 \end{matrix}$	$\begin{matrix} m \\ 40 \end{matrix}$	57	...	...	...	...	...	...	" "
			2484	" Jan. 18	$\begin{matrix} h & m \\ 4 & 7 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	<i>Definition bad.</i>
203	"	2 31 35	2492	" " 28	$\begin{matrix} h & m \\ 4 & 26 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	54	—65	134·2	13·5	68	0=0	V.	<i>Definition fair.</i>	
			2504	" Feb. 6	$\begin{matrix} h & m \\ 5 & 2 \end{matrix}$	$\begin{matrix} m \\ 40 \end{matrix}$	60	<i>Definition very bad.</i>
204	"	2 56 51	2487	" Jan. 21	$\begin{matrix} h & m \\ 3 & 24 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	42	—60	130·9	13·0	60	0=0	V.	" "	
			2507	" Feb. 8	$\begin{matrix} h & m \\ 4 & 1 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	49	" "
205	"	3 22 6	2488	" Jan. 21	$\begin{matrix} h & m \\ 3 & 36 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	44	—55	153·4	15·7	73	0=0	V.	" "	
			2485	" " 18	$\begin{matrix} h & m \\ 3 & 32 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	43	<i>Definition bad.</i>
206	"	3 47 22	2493	" " 28	$\begin{matrix} h & m \\ 3 & 53 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	47	—50	126·3	12·0	58	0=0	V.	<i>Definition fair.</i>	
			2508	" Feb. 8	$\begin{matrix} h & m \\ 4 & 0 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	48	<i>Definition very bad.</i>
207	"	4 12 38	2580	" Mar. 13	$\begin{matrix} h & m \\ 3 & 38 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	44	—45	120·3	11·5	71	—0=0	V.	<i>Definition poor.</i>	
			2585	" " 14	$\begin{matrix} h & m \\ 3 & 36 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	44	<i>Definition fair.</i>
208	"	4 37 54	2596	" " 17	$\begin{matrix} h & m \\ 4 & 10 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	50	—40	109·8	10·5	74	—0=+0	V.	<i>Definition good.</i>	
			2590	" " 15	$\begin{matrix} h & m \\ 3 & 17 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	40	<i>Definition fair.</i>
209	"	5 3 10	2581	" " 13	$\begin{matrix} h & m \\ 3 & 28 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	43	—35	121·7	11·7	64	0=0	V.	<i>Definition poor.</i>	
			2586	" " 14	$\begin{matrix} h & m \\ 3 & 26 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	42	<i>Definition fair.</i>
210	"	5 28 25	2597	" " 17	$\begin{matrix} h & m \\ 4 & 0 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	49	—30	143·3	14·7	86	—0=+0	V.	<i>Definition good.</i>	
			2591	" " 15	$\begin{matrix} h & m \\ 3 & 8 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	38	<i>Definition fair.</i>
211	"	5 53 41	2587	" " 14	$\begin{matrix} h & m \\ 3 & 18 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	40	—25	136·8	13·0	87	0=0	V.	" "	
			2582	" " 13	$\begin{matrix} h & m \\ 3 & 18 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	40	<i>Definition poor.</i>
212	"	6 18 57	2598	" " 17	$\begin{matrix} h & m \\ 3 & 48 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	46	—20	149·0	15·0	98	0=0	V.	<i>Definition good.</i>	
			2583	" " 13	$\begin{matrix} h & m \\ 3 & 34 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	43	<i>Definition poor.</i>
213	"	6 44 13	2599	" " 17	$\begin{matrix} h & m \\ 4 & 4 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	50	—15	154·6	16·0	109	—0=+0	V.	<i>Definition good.</i>	
			2588	" " 14	$\begin{matrix} h & m \\ 3 & 8 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	38	<i>Definition fair.</i>
214	"	7 9 29	2589	" " 14	$\begin{matrix} h & m \\ 3 & 26 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	42	—10	190·2	19·3	117	0=0	V.	" "	
			2584	" " 13	$\begin{matrix} h & m \\ 3 & 40 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	45	<i>Definition poor.</i>
215	"	7 34 44	2684	" May 30	$\begin{matrix} h & m \\ 4 & 40 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	56	—6	164·5	16·0	133	0=—0	V.	<i>Definition good, hazy.</i>	
			2676	" " 14	$\begin{matrix} h & m \\ 5 & 1 \end{matrix}$	$\begin{matrix} m \\ 40 \end{matrix}$	60	<i>Definition good.</i>
			2679	" " 28	$\begin{matrix} h & m \\ 4 & 34 \end{matrix}$	$\begin{matrix} m \\ 37 \end{matrix}$	<i>Definition fine.</i>

INTRODUCTION.

IV.—LIST OF THE PLATES—*continued.*

Zone	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
216	° —35°5	h m s 8 0 0	2687	1890 June 3	h m m	4 29 38	54	—1	146·9	14·6	131	0=0	V.	Definition fair.	
			2685	" May 30	4 56 40	59	...	...	...	...	...	...	...	...	Definition good, hazy.
217	"	8 25 16	2692	" June 4	4 10 37	50	+3	158·0	15·0	116	(0=0)	V.	Definition fair.		
			2697	" " 5	4 14 37	51	...	...	...	...	...	...	...	" "
			2677	" May 14	4 52 37	...	...	...	...	...	...	...	...	...	Definition good.
218	"	8 50 32	2688	" June 3	4 20 37	52	+7	165·6	16·5	97	0=0	V.	Definition fair.		
			2693	" " 4	4 24 37	53	...	...	...	...	...	...	...	" "
			2680	" May 28	4 28 37	...	...	...	...	...	...	...	...	...	Definition fine.
219	"	9 15 47	2694	" June 4	4 38 37	56	+11	137·7	13·0	106	0=0	V.	Definition fair.		
			2698	" " 5	4 6 45	50	...	...	...	...	...	...	...	Hazy at end.	
220	"	9 41 3	2678	" May 14	3 26 57	42	+14	237·0	24·5	99	—0=0 or +0	V.	Lens moist at end of 37 ^m exp. Re-ex- posed 20 ^m . Definition fair.		
			2735	" June 24	4 10 37	50	...	...	...	...	...	...	...	Definition fair.	
			2681	" May 28	3 49 37	...	...	...	...	...	...	...	...	...	Definition fair.
			2686	" " 30	3 45 14	...	...	...	...	...	...	...	...	...	" "
221	"	10 6 19	2689	" June 3	3 48 37	46	+17	123·3	12·0	88	0=0	V.	" "		
			2699	" " 5	4 4 45	49	...	...	...	...	...	...	...	Hazy.	
222	"	10 31 35	2695	" " 4	4 4 37	49	+20	152·0	15·0	94	0=0	V.	Definition poor.		
			2682	" May 28	3 39 37	44	...	...	...	...	...	...	...	...	Definition fine.
223	"	10 56 51	2690	" June 3	3 38 37	44	+22	144·7	14·5	93	0=0	V.	Definition fair.		
			2700	" " 5	4 2 45	49	...	...	...	...	...	...	...	Hazy.	
224	"	11 22 6	2696	" " 4	3 54 37	47	+24	132·5	13·0	95	0=0	V.	Definition poor.		
			2683	" May 28	3 28 37	42	...	...	...	...	...	...	...	...	Definition good.
225	"	11 47 22	2786	" Aug 2	5 16 47	63	+26	137·9	14·0	89	—0=+0	V.	Definition fair.		
			2781	" July 25	4 10 37	50	...	...	...	...	...	...	...	...	Definition good.
			2691	" June 3	3 18 37	...	...	...	...	...	...	...	...	...	Definition fair.
226	"	12 12 38	2787	" Aug. 2	5 38 40	67	+27	162·0	16·2	75	0=0	V.	" "		
			2777	" July 24	4 22 37	53	...	...	...	...	...	...	...	...	Definition good.
227	"	12 37 54	2788	" Aug. 2	5 58 47	71	+27	159·6	16·2	66	0=0	V.	Hazed up.		
			2782	" July 25	4 4 37	49	Definition variable.

In the lower
3's images
ill-defined.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
															o	h	m	s
228	—35°5'	13 3 10	2816	1890 Aug. 19	4 35	37	55	+27	178.2	18.0	88	—0—1	V.	Definition fair.	
			2778	" July 24	4 12	37	51	...	...	...	...	...	...	...	Definition good.
			2807	" Aug. 15	4 16	37
229	"	13 28 25	2783	" July 25	3 48	37	46	+26	166.6	16.4	83	—0=0	Y.	Definition variable.	
			2779	" " 24	4 27	37	54	...	...	...	...	...	...	...	Definition good.
230	"	13 53 41	2808	" Aug. 14	3 26	37	42	+25	136.6	13.4	95	—0=0	V.	Definition poor.	
			2784	" July 25	3 44	37	45	...	...	...	...	...	...	...	Definition variable.
			2817	" Aug. 19	4 26	37	...	...	...	...	...	...	...	...	Definition fair.
231	"	14 18 57	2809	" " 15	4 20	37	52	+23	206.4	21.0	101	—0=1	V.	Definition very bad. Images ill-defined and somewhat de- formed.	
			2780	" July 24	4 18	37	52	...	...	...	...	...	...	...	Definition good.
			2818	" Aug. 19	4 40	37	...	...	...	...	...	...	...	...	Definition fair.
			2830	" Sept. 6	4 29	37	...	...	...	...	...	...	...	...	Definition very bad.
232	"	14 44 13	2829	" " 6	4 38	37	56	+21	170.4	17.0	89	—0=+0	V.	Definition bad.	
			2785	" July 25	3 36	37	44	...	...	...	...	...	...	...	Definition variable.
			2810	" Aug. 15	4 35	37	...	...	...	...	...	...	...	...	Definition bad.
233	"	15 9 29	2831	" Sept. 6	4 19	37	52	+18	151.7	15.7	101	—0=0	V.	Definition very bad.	
			2835	" " 8	3 58	45	48	...	...	...	...	...	...	...	Definition fair, hazy.
234	"	15 34 44	2839	" " 13	3 38	37	44	+15	187.7	19.7	96	0=0	V.	Definition fair.	
			2819	" Aug. 19	3 54	37	47	...	...	...	...	...	...	...	" "
			2811	" " 15	4 26	37	...	...	...	...	...	...	...	...	Definition very bad.
			2836	" Sept. 8	4 20	45	...	...	...	...	...	...	...	...	Hazy.
235	"	16 0 0	2840	" " 13	3 58	45	48	+12	179.8	18.8	97	0=0	V.	Cloudy at end.	
			2832	" " 6	4 10	37	50	...	...	...	...	...	...	...	Definition poor.
236	"	16 25 16	2837	" " 8	4 20	45	52	+8	147.2	15.0	94	0=0	V.	Definition fair, hazy.	
			2821	" Aug. 19	3 54	37	47	...	...	...	...	...	...	...	Definition fair.
237	"	16 50 32	2905	" Oct. 30	5 38	45	67	+4	153.2	15.5	108	0=—0	V.	Hazy.	
			2833	" Sept. 6	4 0	37	48	...	...	...	...	...	...	...	Definition poor.
238	"	17 15 47	2838	" " 8	4 16	45	52	0	153.6	15.4	119	0=0	V.	Definition fair, hazy.	
			2834	" " 6	4 17	40	52	Definition poor.

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IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.	
	δ 1875	α 1875							B	C	n				
239	° —35°5	h m s 17 41 3	2912	1890 Nov. 3	h m 6 36	m 45	° 77	° —4	238·2	25·0	143	0=0	V.	<i>Definition fair.</i>	
			2942	" "	11	5 41	45	68	...	...	...	...	...	...	<i>Definition very bad.</i>
240	"	18 6 19	2948	" "	14	5 35	45	67	—9	225·3	23·5	127	0=0	V.	<i>Definition fair.</i>
			2952	" "	19	6 4	45	72	...	...	...	...	...	...	<i>Unsteady.</i>
241	"	18 31 35	2911	" "	3	4 40	45	56	—14	182·0	19·0	107	0=0	V.	<i>Definition fair.</i>
			2943	" "	11	5 42	45	68	...	...	...	...	...	...	<i>Definition poor.</i>
			2956	" "	20	5 44	45	...	...	...	...	...	...	...	<i>Definition fair.</i>
242	"	18 56 51	2949	" Nov. 14	5 38	44	67	—18	180·0	18·0	100	0=0	V.	" "	
			2906	" Oct. 30	5 23	45	64	...	...	...	...	...	...	...	<i>Hazy.</i>
243	"	19 22 6	2913	" Nov. 3	5 49	45	69	—23	157·4	16·0	73	0=0	V.	<i>Definition fair.</i>	
			2953	" "	19	5 0	45	60	...	...	...	...	...	...	<i>Unsteady.</i>
			2944	" "	11	5 42	45	...	...	...	...	...	...	...	<i>Wrong guiding star.</i>
244	"	19 47 22	2971	" "	29	5 28	45	65	—28	139·7	14·5	63	0=0	V.	<i>Hazy.</i>
			2973	" Dec. 1	5 22	45	64	...	...	...	...	...	...	...	<i>Definition fair.</i>
245	"	20 12 38	2950	" Nov. 14	5 14	45	63	—33	154·1	15·5	68	—0=0	V.	" "	
			2954	" "	19	5 40	45	67	...	...	...	...	...	...	<i>Unsteady.</i>
246	"	20 37 54	2987	" Dec. 18	5 48	45	69	—38	165·0	18·2	64	—0=0 or +0	V.	<i>Definition very bad.</i> Images bad and deformed, especially in the smaller southern declinations.	
			2908	" Oct. 30	5 24	45	64	...	...	...	...	...	...	...	<i>Definition good.</i>
			2951	" Nov. 14	5 20	45	64	—43	161·1	16·4	58	—0=0	V.	<i>Definition fair.</i>	
247	"	21 3 10	2957	" "	20	4 10	45	50	...	...	...	...	...	...	" "
			2914	" "	3	4 26	45	53	—48	130·0	13·5	70	0=0	V.	<i>Definition fine.</i>
			2972	" "	29	4 52	60	58	...	...	...	...	...	...	<i>Hazy.</i>
			2974	" Dec. 1	4 34	45	...	...	...	...	...	...	...	...	<i>Definition fair.</i>
			2988	" "	18	5 48	45	...	...	...	...	...	...	...	<i>Definition very bad.</i>
248	"	21 28 25	2990	" "	19	4 50	45	...	...	...	...	...	...	...	<i>Definition fair.</i>
			2915	" Nov. 3	4 54	45	59	—54	110·0	11·4	75	—0=+0	V.	<i>Definition fine.</i>	
			2955	" "	19	4 38	45	56	<i>Unsteady.</i>

SO 11705. CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

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CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

IV.—LIST OF THE PLATES—*continued.*

Zone.	Centre of Plate.		No.	Date of Exposure.	t	T	Z	β	Reduct.—Mag.			m & c Comp.	Obs.	REMARKS.		
	δ 1875	α 1875							B	C	n					
250	° —35°5	h m s 22 18 57	2916	1890 Nov. 3	h m m	5 24 45	64	—59	143·3	14·5	61	0=1	V.	<i>Definition fine.</i>		
			2958	" " 20	3 43 40	45	...	...	...	...	...	...	...	...	<i>Definition fair.</i>
			2989	" Dec. 18	<i>Spoilt by a cloud.</i>
			2991	" " 19	4 50 45	<i>Definition fair.</i>
			3005	" " 27	4 36 45	<i>Definition bad.</i>
251	"	22 44 13	3021	1891 Jan. 21	5 56 40	70	—64	92·4	9·0	56	0=0	V.	<i>Definition good. Clouded up.</i>			
			2959	1890 Nov. 20	4 9 40	50	...	...	...	...	...	...	...	...	<i>Definition fair.</i>
			3018	1891 Jan. 16	5 54 45	...	...	...	...	...	...	...	...	...	<i>Definition very bad.</i>
			3019	" " 17	5 42 45	...	...	...	...	...	...	...	...	...	<i>Definition poor.</i>
252	"	23 9 29	3026	" " 28	6 14 45	74	—69	125·5	12·7	55	0=0	V.	<i>Definition fair. Images deformed; in the corner of small right ascensions and small southern declinations images manifestly double. Estimates of diameter perhaps not quite uniform.</i>			
			3025	" " 26	6 2 41	71	...	...	...	...	...	...	...	...	<i>Definition fair.</i>
			2992	1890 Dec. 19	5 30 45	...	...	...	...	...	...	...	...	...	<i>Definition fair; movement.</i>
253	"	23 34 44	3063	1891 Aug. 18	—2 18 36	28	—74	105·6	10·8	48	(0=0)	V.				
			3062	" " 18	—3 6 36	38	...	...	...	...	...	...	...	...
			2999	1890 Dec. 22	5 48 45	<i>Movement.</i>
			3008	" " 30	5 48 45	<i>Definition bad; movement.</i>

Besides these plates, there is a complete collection of plates for the Zone 36° (—34°·0 to —38°·0) taken between 1887 December and 1889 May, which were rejected on account of the low number of stars obtained.

CORRIGENDA.

For the correction of errors of reduction, copying and printing, the proof sheets have been compared once, accurately, with the original *reduced* observations and roughly once with the first, once with the second *unreduced* observation. After the sheets had been definitively printed off it appeared that some new errors, especially in the references, had crept into the work. For this reason the whole work was once more compared to our copy; the following list of corrigenda has been the result. It appears that by far the greater part of the errors has been caused by the dropping out of the somewhat unusual types used for the references to the Washington Zones.

In the column of references *one dash (-) is to be added to the following stars:—*

<p>— 18°, 470. — 19°, 6163, 6544, 7198, 7644. — 20°, 39, 428, 6553, 6565, 6602, 7421, 7715, 7727, 7880. — 21°, 458, 1700, 5955, 8175, 8214. — 22°, 4585, 4968, 5008, 5150, 6055, 7105, 7251, 7489, 7544, 8247, 8275. — 23°, 363, 369, 411, 765, 1399, 2075, 3643, 3667, 3729, 3881, 4641, 4808, 5535, 7615. — 24°, 359, 458, 2484, 2860, 4868, 5407, 5465. — 25°, 121, 925, 1005, 1027, 1037, 2909, 4216, 4807, 5141, 6848, 7458, 7467, 7501. — 26°, 2502, 2593, 3663, 3707, 5306, 7510. — 27°, 14, 560, 1301, 2000, 3226, 3270, 6567, 6773. — 28°, 1660, 2830, 2845, 2866, 4656, 5865, 6502, 6520. — 29°, 1817, 3747, 6524. — 30°, 1624, 1731, 2321, 3435, 3458, 4353, 5972, 6068, 6604.</p>	<p>— 31°, 33, 337, 1246, 1858, 4086, 4301, 4585, 6313, 6482, 6550. — 32°, 361, 429, 435, 1278, 2218, 2248, 2268, 2552, 2601, 2602, 2712, 2805, 2811, 2966, 3005, 3015, 3375, 4309, 4661, 5296, 5304, 5367, 5740. — 33°, 285, 1119, 2011, 2056, 2067, 2325, 2860, 2993, 3150, 3550, 4461, 4577, 4623, 4885, 6247, 6252, 6341, 6350. — 34°, 19, 1380, 1523, 2208, 2272, 2615, 3701, 3743, 4212, 4287, 4376, 5417, 5543, 5560, 5572, 5638, 6651, 8365, 8505. — 35°, 3495, 5037, 5087, 6682, 6683, 6875, 7840, 7995, 8085, 8280, 8749, 8832. — 36°, 1316, 4439, 4448, 5196, 5482, 5960, 5967, 6093, 6266, 6384, 8344, 8615, 9612, 9805, 9832. — 37°, 3530, 3533, 3592, 3777, 3825, 4479, 6471, 7377, 7971, 8739, 9002, 9136.</p>
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Two dashes (=) to be added:—

<p>— 20°, 7840. — 22°, 6430, 8251. — 24°, 5496. — 25°, 4421, 4689. — 27°, 1903. — 28°, 6254.</p>	<p>— 29°, 3402. — 30°, 559, 4322. — 32°, 5282. — 33°, 3324, 4237. — 35°, 5416.</p>
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Reference to five (>) obs. to be added:—

— 31°, 1706.

CAPE PHOTOGRAPHIC DURCHMUSTERUNG.

EQUINOX 1875.0.

ZONE — 18°.

1-50.				51-100.				101-150.										
mag.	0 ^h -5 ^h .			-18°	mag.	5 ^h -6 ^h .			-18°	mag.	6 ^h -7 ^h .			-18°				
	h	m	s			h	m	s			h	m	s					
8.6	0	10	7.9	57.0	a	8.8	9.6	5	32	37.2	57.4	10.4	6	55	53.5	58.5		
9.0		17	31.0	59.1		9.3	10.4	34	4.9	58.1		10.0	56	45.5	58.9			
8.8		37	10.8	56.9		9.1	9.2		32.4	58.9	C	9.0	9.2	57	14.5	58.9	8.8	
8.6		40	37.8	58.9	a	9.0	9.7	35	2.4	56.8		9.4	58	23.5	56.9			
8.2		58	33.1	59.5	b	8.5	9.6		57.9	59.0		8.6	59	16.4	57.8	a	8.6	
9.0	I	1	25.6	57.2		9.1	10.3	38	13.5	57.1		9.8		27.4	59.5		9.5	
9.6		3	5.6	58.4		9.5	10.2	43	21.9	57.2		9.7	10.2	46.9	59.8			
8.8		14	51.7	57.8		9.1	10.4		57.9	59.3		9.7	7	0	2.4	57.6	9.1	
9.8		18	27.4	57.9		9.4	9.2	44	10.9	59.3		9.4	1	50.2	58.0		9.5	
8.6		20	58.8	59.9	a	8.7	10.4	46	33.0	57.9		9.8	2	42.0	57.2			
8.8	2	2	2.4	57.9	a	8.7	10.0		36.5	58.3		9.6		57.5	57.1		10.0	
9.6		15	34.8	58.9		9.1	8.4	50	7.9	59.0	Cl	7.7	10.3	3	3.0	57.7		
8.6		40	45.9	58.4	a	9.0	10.4		58.9	58.3		10.3	4	52.0	59.0			
8.7		44	12.8	59.3	-	9.0	10.6	52	53.1	57.7		9.5	5	35.5	58.5			
9.0		46	58.1	57.7	Ca	8.9	9.2	56	49.5	57.0		9.5	6	41.5	59.5		9.8	
8.6		57	22.1	59.9	Cka	8.0	10.6	6	2	23.1	58.0		9.4	7	3.0	57.8		9.5
9.6	3	14	40.0	56.8		9.5	8.4	4	8.1	58.7	b	8.8	10.3	11.0	57.4			
7.7		30	33.8	57.9	CWkb	8.0	10.6	6	12.8	59.5		10.3	8	57.4	58.8			
8.5		46	30.9	57.3		9.0	8.6		57.8	58.9		10.0	8	3.9	57.9			
9.3	4	0	6.0	58.1		9.3	9.6	8	26.5	56.3		9.5	10.2	57.4	58.1			
10.0		2	45.8	57.6		9.5	10.6		31.5	56.9		10.0	10	6.7	56.9			
9.6		6	0.8	57.4		9.4	9.8	14	2.6	59.9		10.1		11.7	57.3			
8.7		7	12.0	58.2		8.5	9.6	15	52.4	58.7		9.8		49.2	56.5		9.6	
7.5		10	13.1	57.3	Cal	7.0	9.2	16	26.3	58.3		9.1	8.9	58.2	59.8		8.9	
9.5		16	9.4	57.8		10.0	9.2		40.3	58.4		9.2	9.4	11	30.5	58.8		9.8
10.2			23.4	57.1		9.8	8.6	19	0.0	58.3		9.0	10.4	13	0.0	57.4		
9.8		17	34.9	56.3		9.5	8.7	21	55.5	57.2		8.5	10.4	18.5	57.2			
9.8		19	55.6	59.1		9.1	8.9	23	26.9	58.6		9.2	9.4	42.3	57.5		9.7	
10.0		20	13.6	59.0		10.0	9.1	25	1.3	59.6		9.5	10.4	15	7.2	59.9		
9.7		21	16.6	59.1		9.7	9.2		23.8	59.2		9.8	10.2	12.2	59.7			
7.0			20.6	56.4	Cl	7.0	10.3	30	56.4	59.0		8.8		13.2	59.8	Ca	8.2	
10.2		25	46.6	58.4		9.6	9.6		59.9	57.5		9.6	9.8	13.2	57.7			
10.2			48.6	58.4		9.8	9.8	31	8.4	58.7		9.8	9.4	16	3.5	58.5		10.0
10.2		26	54.1	57.1		9.8	9.8		16.4	57.9		9.8	8.6	52.0	58.3		8.6	
8.8		28	22.1	56.2		9.0	8.4	34	47.8	59.1	Ca	8.0	10.2	18	15.9	58.9		
8.6		30	32.6	59.0		8.5	10.4	36	25.8	59.7		9.4	10.0	43.4	56.9			
10.0		35	15.0	58.1		9.6	9.3		32.8	57.0		9.0	10.4	59.8	59.6			
9.2		46	56.9	56.4		9.8	8.7		54.3	58.9	C	8.8	10.0	19	7.8	57.7		
10.0		57	18.4	57.5		9.8	9.2	39	19.4	58.6	a	9.3	10.0	20	49.7	56.9		
10.0	5	0	57.0	58.0		9.1	9.1	41	7.9	58.0	a	9.2	9.6	52.7	58.2		9.9	
9.4		1	22.5	58.6		9.1	9.2	42	41.9	59.8	a	9.1	10.3		57.2	59.0		
9.7			32.7	59.8		9.9	10.3	44	11.9	58.5		9.8	9.8		59.7	57.2		
9.3		8	42.7	59.0		9.3	9.0		27.4	57.3		9.2	9.9	21	48.5	57.9		
9.4		16	26.9	57.8		9.1	10.3	45	40.6	58.4		10.2	10.2	22	31.5	57.9		
9.8		17	52.4	57.2		9.1	10.4	48	4.8	59.9		9.6	9.6	23	52.8	57.6		
9.6		18	56.4	58.0		9.1	10.4	49	21.8	57.3		9.2	9.2	24	5.8	59.1		9.2
9.7		28	25.4	58.2		9.2	9.2	50	22.7	56.5		9.4	10.2	20.3	57.8			
10.4		29	44.5	59.5		9.2	9.2		38.7	56.4		9.0	9.5		58.2	58.1		9.9
10.4			48.5	58.3		10.3	10.3	52	54.6	57.5		9.0	9.0	25	45.2	59.1		9.3
8.7		31	39.5	59.1	C	8.0	9.4	53	4.1	59.4		9.1	9.2	26	8.2	58.7		9.1

151-210.				211-270.				271-330.						
7h-8h.			-18°	8h-9h.			-18°	9h-14h.			-18°			
mag.	h	m	s	mag.	h	m	s	mag.	h	m	s			
8.3	7	26	12.2	9.4	8	19	43.4	9.6	10.2	9	56	13.2	58.8	
8.4			19.0	9.3		20	45.9	9.4	10.2		57	8.9	56.8	
8.9		27	4.5	9.4			52.9		7.8	10	2	11.9	57.3	
10.0			9.5	9.4		21	2.9		7.8		6	19.6	56.4	
10.1			21.0	9.4		23	4.2		10.0			59.1	56.8	
9.8			36.2	9.4		24	11.7		10.1		15	35.2	58.3	
9.0		28	4.5	8.4		25	5.7	Cal	8.7		16	5.2	57.6	
10.3			14.4	9.4		26	17.5				19	9.7	57.3	
10.2		34	3.7	10.4		27	17.5					35.4	58.0	
9.2			23.7	10.2			44.7				22	12.0	59.3	
9.4			48.6	10.0		28	52.1		10.2		23	18.5	57.2	
9.2		35	1.1	9.8		30	15.5		10.3		27	45.4	58.2	
10.0			57.6	10.0			34.0		9.1		29	48.6	57.5	
10.2		37	53.3	9.6		31	8.0		9.4		31	35.8	59.4	
8.6		39	1.3	10.4			9.0		9.4		32	33.3	59.0	
9.4		40	47.1	9.0			30.0		8.4			47.3	57.1	
9.1		41	11.0	10.0			32.0		8.4		34	30.3	56.5	
9.8		42	15.5	10.2		32	17.4		9.2		35	39.3	56.5	
9.0			53.7	10.0			19.9		8.8		39	50.4	59.6	
9.8		44	17.9	9.3		34	0.7		9.0		42	39.1	57.8	
9.4		45	5.4	9.0			20.7		9.3		57	45.5	58.7	
10.2		49	7.5	10.0			21.2		9.0		58	18.0	59.5	
9.8			44.5	9.3			22.7		9.3		7.1	9.6.2	57.5	
10.2		50	43.3	9.0		36	58.4		9.3		11	9.6.2	57.5	
10.2			52.3	10.0		37	30.9		9.7		12	56.5	59.3	
10.2		51	42.8	10.0		38	48.9		9.8		23	38.0	59.0	
10.2		52	3.3	10.5		39	58.2		9.2		24	20.3	58.6	
10.4			6.3	8.8		42	54.1		9.6		29	43.5	57.2	
10.2		53	12.2	9.2		44	11.4		8.9		44	8.1	59.3	
8.8			32.2	9.9			41.9		9.5		46	33.3	59.2	
10.4		54	36.1	10.4		47	6.2		10.0		50	59.5	57.1	
10.2			37.1	10.2			23.7		9.5		51	23.9	58.5	
9.8		55	19.5	9.8		56	19.8		9.0		54	28.9	58.0	
9.6		57	21.8	9.4		59	29.4		9.0		55	0.9	58.6	
10.4		58	39.1	9.6		9	1.48.9		9.6		56	17.3	56.9	
9.0		8	0.15.5	9.6		2	29.2		10.0		57	51.5	57.8	
9.4			56.1	9.6		4	48.9		9.2		58	22.3	58.7	
10.4		3	10.1	9.8		4	55.4		8.9		59	22.5	59.4	
10.4			44.6	9.8		5	10.2		9.7		12	29.54.3	57.1	
10.1			52.1	8.5			16.2		9.5		31	35.1	58.8	
10.4		5	50.5	7.3		10	40.5	Cal	8.5		32	32.9	57.4	
10.4		6	21.0	10.8		11	21.5		7.0		40	39.2	58.6	
9.3			25.0	10.0		12	10.0		10.0		42	0.9	59.6	
9.3			30.8	9.2			32.5		8.4			12.5	58.9	
9.1			51.3	8.6		14	34.2		9.0		49	41.0	57.2	
10.0		8	14.8	10.2		20	11.8		8.9		53	48.1	57.6	
10.4		9	0.4	10.8			36.8		9.8			51.6	57.2	
10.4		10	26.3	10.3		21	45.3		9.3		13	13.11.0	58.1	
9.6			35.8	9.6		23	6.1		8.8		14	23.0	57.1	
10.2		12	14.8	8.2		24	10.6		9.2		30	41.5	59.0	
9.2		14	46.5	8.8		27	46.5		9.3		32	22.0	59.7	
9.0		15	41.5	8.2		33	58.6		9.0		37	37.6	58.4	
10.2			49.5	9.8		34	21.6		8.3		48	4.7	57.5	
10.4		16	20.5	10.3		36	33.7		9.8		10.0		57.7	
10.4			20.5	9.4			57.7		8.8			1	36.3	57.7
9.6			23.0	9.4		37	13.2		8.2		4	55.1	59.5	
10.4		17	41.5	8.2		38	13.7		9.0		11	30.3	59.0	
9.4			54.5	10.1		39	17.2		8.7		18	51.2	57.3	
10.2		18	13.0	10.3		39	2		9.8		21	20.7	59.1	
10.4		19	36.0	9.8		43	40.9		8.5		24	50.7	57.1	
											27	10.0	58.2	
											37	41.8	59.3	

331-384.					385-438.					439-491.									
mag.	14 ^h -18 ^h .			-18°		mag.	18 ^h -19 ^h .			-18°		mag.	19 ^h -23 ^h .			-18°			
	h	m	s				h	m	s				h	m	s				h	m	s
8.7	14	42	33.3	59.3	8.8	7.9	18	1	26.8	59.6	G=I	8.3	7.9	19	10	4.1	59.1	Mm	8.5
8.2		43	52.8	57.8	8.2	9.2			32.3	57.6		9.0	8.2		11	25.5	57.9	GkamI	8.5
9.2		47	21.8	58.3	9.2	9.9			34.5	56.5	G	9.6	9.4		15	17.3	59.9		9.5
9.6		50	36.3	58.1	9.4	9.2			53.8	59.5	G	9.4	10.0		22	16.5	58.6		9.5
9.9		55	40.4	59.9	10.0	9.4		2	50.7	57.3	Gm	9.1	10.0		23	44.0	57.2		
10.2	15	0	40.3	58.7		10.1		4	8.5	58.7			10.3		34	22.3	59.4		
9.2		1	31.0	58.1	9.4	10.1		5	21.4	58.0			8.6		40	50.7	56.9	M-m	8.6
10.0		3	37.8	59.4		10.3			23.2	57.3			9.8		42	57.2	59.0		9.7
9.9		7	36.5	56.4	a	10.4		6	9.9	59.3			8.6		51	0.3	57.3	Wam	8.5
10.2		8	47.7	59.1		9.0		7	3.9	58.0	W	9.5	8.8	20	4	17.3	56.5		9.3
8.8		10	21.0	59.0	9.3	9.7			11.4	59.5			9.5		9	12.5	58.2		9.5
7.9		22	14.9	58.4	8.7	10.5			14.9	58.7			9.6		13	7.0	58.7		9.5
7.7		25	24.1	58.8	8.8	9.7			21.4	57.9	G		8.8		14	6.0	57.0	Mm	9.0
8.8		26	38.8	56.4	9.2	9.2			31.9	57.7			10.0			42.8	58.7		9.8
9.7		33	33.4	59.9	9.4	7.7			38.5	58.7	G Wam	8.7	8.8		19	58.9	58.0		9.2
8.7		38	57.6	58.4	8.9	8.9		8	6.4	57.8	G Wa	8.7	8.7		20	3.4	56.5		8.8
8.4	16	43	51.5	58.3	7.4	8.9			16.7	59.8	G		5.7		22	42.9	59.8	GWπμβ	7.1
9.2		44	53.5	57.0	a	9.0			19.7	58.5			9.8			57.4	58.8		
9.0		46	17.9	58.6		9.2			23.9	59.5	GWam	9.1	9.4		33	25.4	59.4	a	8.9
8.8		52	58.5	59.0	a	8.3		8.2	24.9	57.0	GW	9.2	10.2		46	20.9	59.2		9.8
9.5		3	34.4	57.4	a	9.1		9.6	31.9	59.9			9.0		56	46.8	57.9		9.4
10.0		7	29.8	58.7		9.7		9.0	34.5	57.3			9.0			50.8	57.4		9.4
9.4		10	3.6	58.8	a	9.0		9.6	36.7	58.2			8.5	21	3	19.8	58.0	a	8.7
9.2		12	33.8	57.7	a	9.0		9.8	9	0.7	59.1		9.7		4	44.8	59.7		9.5
8.4		15	9.8	58.8	a	8.8		9.6	7.7	58.4			9.5		7	47.8	58.0		
9.8		18	12.3	56.9		9.5		9.6	12	34.4	59.3		9.4		27	17.8	59.5		9.6
9.8		20	41.6	57.7		9.6		9.8	14	54.3	59.2		10.1			23.9	57.2		9.6
9.4		25	0.1	57.9		9.8		9.6	18	3.2	59.6		7.7		29	23.8	57.2	GWmtπ	7.8
9.4		26	19.2	58.8		9.5		9.5	23	40.0	57.8		7.4		30	23.3	59.9	GWctπ	7.5
9.0		31	6.3	57.0		9.1		8.0	58.5	59.4	GWlπμ	7.5	8.9		32	27.3	59.8	GM-m	9.1
9.7		36	31.3	58.9	8.8	9.0		9.0	24	10.0	56.8		8.9			32.3	59.0	GM-m	9.5
9.0		47	9.7	57.8	9.5	10.0		10.0	28	52.4	57.2	9.5	8.2		33	14.3	59.8	G≡	8.6
9.9		48	19.3	57.6		10.0		10.0	29	47.9	56.7		8.9		39	56.3	58.6	-	9.0
9.2			31.4	59.4	9.0	9.4		9.4	30	6.4	56.7	9.5	9.0		41	21.3	56.9	Wam	9.1
10.4		49	8.2	58.8		9.8		9.8		7.4	58.4	9.5	7.7		42	24.7	58.1	MWamI	7.8
9.0			13.4	59.9	9.2	10.4		10.4	37	30.2	58.4		8.9		45	52.7	57.7	-	9.0
10.3			23.8	57.2		10.4		10.4		44.2	59.0		10.0			53.7	58.2		
8.8			28.4	57.3	9.4	8.7		8.7	38	10.7	58.3	9.2	9.6	22	3	22.2	59.5		9.4
9.6			30.7	58.9	9.5	9.2		9.2	41	38.0	56.7		9.8		15	10.6	58.3		
10.2			32.3	59.5		9.6		9.6	42	0.0	59.6		8.6		19	17.5	59.4	Wam	8.5
9.8			36.3	59.6		9.6		9.6	43	39.0	58.1		10.2		22	16.0	58.1		
10.0			37.3	58.5	9.4	9.4		9.4		55.5	57.8	a	9.1		23	11.5	57.0		9.3
9.6			42.3	58.1	9.3	10.0		10.0	44	10.5	59.3		9.6		24	26.3	59.9		
9.9			43.0	58.7		9.6		9.6		43.0	57.4		10.3		32	33.2	57.7		
10.5			44.0	59.2		7.4		7.4	46	1.8	56.4	aml	7.6		39	47.7	56.7	kaml	8.0
9.2			53.3	58.0		9.2		9.2	49	4.7	56.5		8.2		54	48.4	58.7	a	8.9
9.3			55.5	57.5	9.5	9.3		9.3	51	22.2	59.2		9.4	23	5	2.5	58.7	a	9.2
8.7			57.0	56.6	9.5	10.4		10.4	53	19.2	58.0		5.2		37	42.7	58.3	GSlπβ	5.8
9.0		50	20.0	59.5	9.3	8.7		8.7	56	13.7	59.2	-m	9.2		44	4.7	57.4		9.4
8.4		53	30.6	57.6	9.1	9.5		9.5	57	30.7	56.6		7.8			19.8	59.2	Wal	7.3
9.3		54	12.6	58.6	9.4	9.7		9.7		47.2	57.1		9.0		47	2.3	57.7	a	8.7
8.0		59	21.9	59.7	GCKam	7.3		10.0	19	1	2.7	k	9.8			20.0	59.2		9.3
10.3	18	0	32.4	57.6	10.0	9.3		9.3	2	35.2	59.3		9.5			45.3	58.5		9.6
9.1			59.8	56.9	9.0	9.8		9.8	9	5.1	56.7								

1896Ancap...3

ZONE — 19°.

1-30.				31-60.				61-90.				91-120.								
mag.	o ^h .	m	s	mag.	o ^h .	m	s	mag.	o ^h .	m	s	mag.	o ^h .	m	s					
8.8	0	23.2	29.7	Ca	9.0	9.6	18 30.0	42.0	9.2	10.0	33 9.3	20.4	9.8	8.6	44 27.8	11.1	Ca	8.6		
7.8		38.6	30.9	a	8.3	7.4	31.0	9.7	Cal	7.3	9.2	52.3	14.0	9.1	9.7	32.3	46.3	9.5		
7.8	1	35.6	22.7	Ca	8.0	8.6	37.5	4.3	a	8.8	9.8	34 16.8	52.8	9.5	8.7	45 18.8	11.2	a	8.8	
8.8		56.1	54.5	CWa	9.1	7.8	19 16.2	30.4	Ca	8.7	10.0	31.8	22.5	9.8	10.0	25.8	44.0	9.8		
8.8	2	0.6	55.1	CWa	9.1	7.2	20 2.7	23.1	GCal	7.0	9.4	35 24.3	29.9	9.2	9.4	46 26.1	41.2	9.0		
8.6		57.6	11.5		8.8	9.4	14.7	34.8	a	9.1	8.8	36 26.3	17.9	9.1	8.3	34.1	15.2	Ca	8.5	
9.3	3	48.6	33.7	C	9.4	9.4	18.7	47.4		9.5	10.0	29.3	16.1	9.5	10.0	48 36.1	22.5		9.5	
9.0		53.6	33.5	C	9.5	9.4	56.2	46.1		9.1	8.3	30.3	45.3	8.5	8.2	49 38.0	12.6	Cbl	8.0	
8.4	4	35.6	16.0	Ca	8.0	8.4	23 39.2	44.0	Ca	8.5	9.1	48.8	52.0	9.3	8.4	43.0	26.4	Cal	8.3	
7.8	5	6.2	24.0	C	8.8	9.8	52.0	28.0		9.5	8.8	37 3.8	32.0	9.2	9.6	50 24.0	32.3		9.3	
7.4		12.2	17.6	Gcb-1	7.3	8.0	57.7	52.7	Ca	8.2	10.0	38 2.3	12.5	9.8	9.6	51 13.5	17.8		9.5	
9.0	6	3.2	13.8	a	9.0	7.3	24 20.2	18.6	Cal	7.8	10.0	13.3	14.0	9.5	6.9	27.0	40.5	GCal	7.2	
9.2		16.7	53.5	CWa	8.9	9.4	21.4	20.4		9.5	10.0	13.3	38.9	9.5	9.0	52 39.4	11.4	-	8.9	
8.8	7	50.7	13.6	a	9.0	8.4	59.4	50.6		8.8	9.1	21.3	6.9	9.2	9.2	52.4	28.8		9.2	
9.8	8	1.2	9.3		9.2	9.6	25 30.9	17.3		9.1	8.3	46.0	58.9	Cal	8.3	9.6	53 8.4	7.9		9.5
8.4		4.9	47.6	C	9.0	8.4	26 25.9	22.7	-	9.0	10.0	51.3	23.7	9.8	8.4	54 56.9	30.7	Cal	8.0	
9.4		5.9	7.6	a	9.0	10.0	27 32.2	3.7		9.5	9.2	39 19.3	49.1	9.4	9.6	55 6.4	53.1		9.3	
5.8		16.9	37.5	GSlπβ	5.0	8.0	29 1.7	6.8	Ca	8.2	9.6	40 10.8	19.4	9.5	9.4	39.4	14.1		9.2	
9.8		19.9	9.0		9.6	8.1	3.2	15.0	Ca	7.8	9.6	39.8	12.3	9.6	9.6	52.4	47.0		9.8	
9.0	9	30.9	38.2		9.0	10.0	6.2	39.8		8.8	8.8	44.8	35.5	Ca	8.7	9.6	56 1.4	7.6		9.6
9.8	10	24.4	5.9		9.4	8.1	43.9	27.1	Ca	8.5	9.8	58.8	15.1	9.8	9.6	11.4	43.1		9.6	
9.0	11	5.9	5.8		9.3	9.6	43.9	54.8		9.4	10.0	41 49.8	48.3	9.5	9.6	46.1	7.4		9.6	
6.6		11.5	44.6	Gatlπ	7.0	10.0	49.9	51.7		9.5	9.6	56.3	46.5	9.3	8.2	57 52.1	14.2	a	8.5	
9.0		42.5	26.8		9.1	8.8	30 23.4	32.0	a	9.2	8.8	42 17.3	20.5	8.9	9.4	58.1	23.9	a	9.3	
9.8	14	52.6	59.6		9.5	10.0	33.9	36.4		9.6	10.0	20.8	37.5	10.0	9.6	59 17.6	5.5		9.6	
9.8	15	11.0	34.8		9.6	10.0	31 7.8	34.6		8.1	8.1	28.8	13.3	Cal	8.3	9.0	39.1	16.0		9.3
9.4		28.5	39.9		9.2	10.0	17.8	54.8		10.0	8.8	43 2.8	41.3	9.0	8.2	0 2.1	30.3	Ca	8.7	
9.2		30.0	3.9		9.4	8.3	32 32.9	10.4	-	8.8	9.6	5.3	47.0	9.8	8.4	1 19.6	48.6	Ca	8.9	
7.5	17	5.5	34.9	Cal	7.5	8.2	35.4	33.2	C	8.0	9.0	27.8	21.3	a	9.2	7.9	35.1	58.6	Ca	8.0
9.2		46.5	46.6		9.1	9.5	33 2.3	41.1		9.5	9.8	44 0.8	50.7	9.7	9.0	2 12.6	37.0		9.0	
25Pr.	+1	16.4	+8.4				+1 15.4	+8.3				+1 14.8	+8.2			+1 14.1	+8.1			

121-180.				181-240.				241-300.				301-360.								
mag.	1 ^h	-19°		mag.	1 ^h -2 ^h	-19°		mag.	2 ^h	-19°		mag.	2 ^h -3 ^h	-19°						
	^m	^s		^m	^s			^m	^s			^m	^s							
8.4	2	18.1	50.0	Ca	8.3	9.2		9.1	16	27.2	18.7	9.5	56	11.1	50.6	Ca	8.0			
9.6	4	7.6	17.4		9.5	9.6		9.2	18	11.3	6.2	9.9	9.8	23.1	26.9		9.1			
9.4		25.2	20.7		9.5	8.8		9.0	9.7	32.2	48.7	9.5	9.4	58	55.1	5.0	9.1			
8.1		53.2	28.1	C	7.0	8.0		9.8	19	2.2	15.5	9.4	9.8	59	19.1	13.7	9.3			
9.1	5	28.2	34.2		9.0	8.0		9.2		36.3	9.4	9.1	7.8	30.6	33.9	Kcal	7.3			
9.3		34.7	8.8		9.2	9.2		8.9	20	40.2	39.0	a	8.9	37.1	53.1		9.4			
9.6	6	4.9	27.6		9.4	8.2		8.6	21	18.7	50.9		9.1	0	20.4	46.3	Ca	8.6		
9.6	7	16.7	41.7		9.1	9.4		9.2	22	35.7	28.2		9.1	1	4.4	15.6	Ca	8.5		
8.7		21.2	49.6	a	8.9	9.2		9.0	7.4	23	1.3	10.7	Ca	2	2.9	46.6		8.9		
9.6	8	0.2	14.1		9.6	9.4		8.8	9.0	15.8	5.5	a	8.6	8.3	27.4	47.1	Cal	7.8		
9.6	9	31.7	39.9		9.1	8.0		8.7	7.5	17.3	50.8	Ca	8.2	7.1	3	12.4	26.8	Cbl	7.3	
8.2		35.6	4.6	C	8.2	8.6		8.8	9.5	26	10.8	41.9		9.1	8.4	24.9	21.4	C	8.5	
9.6	10	7.5	19.5		9.3	10.0		9.4	9.2	24.3	1.4		8.8	8.8	52.9	30.4	Ca	8.6		
8.6		11.0	31.1	a	9.0	8.8		8.9	9.8	28	35.9	46.0	a	8.8	8.0	4	7.7	56.1	Cbl	7.5
9.3		12.5	43.9		9.3	8.9		9.0	9.6	30	2.4	41.2		8.9	9.6	47.2	31.4		9.3	
8.6		14.0	41.1	Ca	9.0	7.9		8.3	9.6		28.9	30.1		9.1	9.8	6	8.2	0.9	9.0	
9.3		29.0	31.0		9.3	10.0		9.6	9.4		55.9	50.3		9.2	9.8	8.7	49.4		9.2	
8.8		36.5	24.2	a	9.1	10.0		9.5	9.6	32	25.9	15.4		9.0	8.3	26.7	17.8	a	8.7	
9.8	12	18.0	25.5		9.8	9.6		9.3	8.4	33	52.9	31.5	Ca	8.5	9.8	7	0.0	59.8		9.4
9.4		40.7	45.4	a	9.1	10.0		9.2	10.0	34	36.9	45.7		9.2	8.5	22.7	0.7		8.7	
8.8	14	59.7	22.7		9.1	10.0		9.8	7.9		48.4	17.1	C	8.3	8.4	55.9	10.4	Ca	8.2	
8.6	15	46.2	37.0		8.8	10.0		9.3	10.0	35	10.1	13.2		9.6	9.2	59.4	56.9		9.2	
8.6	16	22.7	27.5	C	8.5	9.3		9.1	8.4		14.6	8.3	C	8.3	10.0	8	58.3	13.6	10.	
6.8		26.7	44.0	GCbl	6.9	9.0		9.0	9.3		40.6	52.8		9.2	9.4	9	57.8	48.5	a	9.1
9.8		41.7	6.4		9.9	9.8		9.1	9.2	36	25.6	31.5		9.0	9.8	59.8	31.1		9.6	
8.6		55.7	34.2		8.9	9.3		9.4	9.0		29.1	45.0		9.0	9.4	10	4.3	15.7		9.4
9.0	17	16.4	2.5	a	9.3	7.9		8.0	9.0		34.6	57.8		8.9	9.6	6.8	48.6	Cb	9.3	
8.6		18.4	5.3	a	8.7	9.8		9.1	8.4	37	20.6	53.1	Ca	8.5	9.6	13.8	18.3		9.0	
8.4		26.4	7.6	b	9.1	9.6		9.0	8.2		21.6	34.6	Ca	8.8	10.0	13.8	24.4		9.5	
8.5		53.4	32.5	a	9.1	7.9		8.3	9.9	38	24.6	12.9		9.2	9.4	20.3	26.0		9.4	
9.4	18	18.4	44.2		9.5	10.0		9.4	4.6	39	15.4	6.2	GSlπβ	4.0	7.8	24.8	49.1	Cbl	8.0	
9.7		35.9	24.7		9.3	8.4		8.9	9.6	40	16.9	24.8		9.4	9.0	11	10.8	13.3		9.3
8.6	19	37.9	12.8	b	8.8	10.0		9.7	8.0		42.4	25.3	Ca	8.7	9.2	17.3	36.0		9.3	
9.8	20	42.3	46.9		9.7	9.8		9.5	9.2		47.4	25.8		9.3	9.4	33.3	40.0	a	9.2	
8.6	21	14.8	1.4	a	9.1	9.2		9.5	9.6		51.2	25.9		9.3	7.8	12	28.3	31.4	Ca	8.5
9.3	22	17.3	25.1		9.5	8.6		8.9	9.0	41	14.4	29.1	a	8.9	10.0	35.3	41.6		9.1	
8.6	24	20.3	24.3		9.2	9.2		9.3	9.9		36.4	10.7		9.0	8.5	39.8	4.4		8.8	
9.7		21.3	18.3		9.3	9.3		9.4	9.6	42	20.3	53.5	C	8.9	6.4	59.3	0.9	GWkbl	5.9	
7.0	25	32.3	40.0	GCbl	7.0	7.2		6.3	8.4		27.3	12.3	C	8.3	7.0	14	5.5	17.8	Ckal	7.3
7.6		36.7	40.5	GCbl	8.0	8.6		9.1	9.3		40.3	30.7		9.0	9.8	17.0	38.4		9.2	
9.4	26	7.7	5.6		9.4	7.9		8.3	9.0	43	7.3	32.8	Ca	8.3	10.0	49.0	52.6		9.6	
7.9		13.2	12.4		8.2	9.0		9.1	9.6		27.8	9.2		9.2	9.6	15	11.0	43.1		9.4
8.0		34.2	37.1	GC	7.7	8.6		9.0	9.8		48.8	51.4		9.3	10.0	27.5	47.9			
9.7		43.2	21.3		9.5	8.7		8.9	9.9	44	44.3	1.3		9.8	8.8	16	14.0	50.8	C	9.0
9.2		49.7	10.0		9.2	7.9		9.5	8.4	45	17.1	44.7	C	8.8	10.0	17.5	15.9		9.4	
7.9	27	2.7	47.8	GCbl	7.5	7.2		7.2	10.0	46	12.6	11.3		9.7	9.8	35.0	16.7		9.5	
8.3		4.7	28.9		8.4	10.0		9.1	9.9		20.1	7.1		9.7	9.8	47.3	0.3		9.8	
9.4	28	10.5	55.8	a	9.1	10.0		9.5	9.4		38.1	15.9		9.0	8.3	17	5.0	32.8	Cal	8.5
8.8	29	6.5	7.9	Ca	8.3	9.0		9.1	9.9	47	47.6	12.1		8.8	9.2	9.5	45.9		9.0	
9.2	31	10.0	6.6	a	9.0	8.0		8.6	9.9		57.1	42.2		9.2	9.8	18	39.0	43.1		9.4
9.6	32	43.7	19.9	a	9.0	9.5		9.2	9.3	48	8.6	48.3		9.3	9.8	56.0	41.3		9.7	
8.8	33	15.4	26.0	Ca	8.8	8.6		9.0	9.6	49	49.9	23.0		8.6	9.8	19	2.5	26.9		
9.6		33.4	2.8		9.0	9.6		9.2	8.3		53.4	38.7	Ca	8.5	9.4	19.5	0.4	a	9.1	
9.6		42.4	52.7		9.4	9.4		9.2	9.0	50	8.9	15.7		8.9	8.0	20	35.5	19.7	Cb-1	8.3
7.4	36	2.9	49.3	Cal	7.5	8.6		8.5	8.5		38.9	12.3	Ca	8.3	9.4	43.5	7.4		9.2	
8.0		31.9	59.0	Cal	8.2	7.8		8.9	9.6	51	4.9	56.6		9.3	10.0	21	2.3	36.3		9.5
9.2	37	1.2	46.7		9.4	8.3		8.9	9.2		34.9	31.9		9.1	9.4	5.5	4.6		9.3	
9.6		13.2	30.4		9.4	9.8		9.3	9.2		53.1	48.7	Cb	9.0	9.8	16.5	59.9		9.6	
9.4		50.7	11.6		9.2	9.8		9.5	9.4	54	14.1	59.2		9.0	9.2	22.5	15.1		9.5	
9.6	38	16.2	38.2	C	9.0	9.6		9.4	9.6		23.1	22.0		8.9	9.6	24.0	4.6	a	9.2	
25pr.	+1	12.9	+7.9							+1	9.2	+6.4				+1	8.1	+5.6		

361-420.				421-480.				481-540.				541-600.				
3 ^h .	-19 ^o			3 ^h -4 ^h .	-19 ^o			4 ^h .	-19 ^o			4 ^h .	-19 ^o			
m.	s		mag.	m	s		mag.	m	s		mag.	m	s		mag.	
21	32.5	8.0	10.0	49	48.2	34.1	9.8	9	46.5	28.0	9.2	21	53.6	23.3	9.4	
8.8				50	1.7	50.8	9.0	10	2.5	37.1	9.2	53.6	11.2	a	9.2	
9.0	54.3	26.4	9.3		12.2	48.0	9.0	4.6	38.5		9.7	58.6	30.4		9.8	
8.5	0.0	5.2	9.7		25.7	26.2	9.8	5.0	58.9		10.2	59.6	47.0		10.0	
10.0	40.7	14.5	10.0		41.9	56.8	8.8	39.1	19.0		10.0	3.1	38.0		9.8	
7.6	48.2	59.3	7.0		50.2	51.0	9.7	24.1	27.2	Ca	8.9	11.6	38.2	Ch	8.0	
9.4	59.2	9.3	9.1		10.7	3.4	9.1	3.6	55.1	Ca	10.0	17.6	3.2			
9.6	9.7	27.9	9.1	51	28.7	37.7	9.4	44.1	46.3	Ca	8.7	7.2	34.7		9.5	
9.0	17.7	58.6	8.9		42.8	46.0	9.1	47.1	52.4		9.6	8.7	43.9	GCbl	6.0	
9.0	57.7	8.3	9.2		52.3	34.8	9.5	50.6	26.1		9.0	17.8	1.3		9.6	
8.8	59.7	30.8	9.0													
7.6	25	3.2	51.9	52	18.3	32.0	9.8	50.6	50.1	Cal	7.8	21.2	45.9		9.1	
8.3	26	11.0	44.5		30.3	47.4	8.9	57.1	48.6	a	9.2	56.2	43.3			
8.3	27	18.5	40.9	53	32.8	17.8	9.0	3.6	12.3		9.5	59.2	0.8		9.5	
10.0	25.0	14.2	9.4		39.3	28.5	9.5	47.3	32.3	Ch	8.3	7.8	37.6		10.0	
9.8	49.0	42.6	9.3		50.8	34.5	9.3	11.3	52.6		10.0	10.2	0.9	b	9.0	
8.6	58.0	29.2	8.5		54.5	57.6	9.3	12.3	45.8		10.0	8.8	14.7	19.5		9.2
10.0	28	0.8	29.2	54	26.1	36.0	6.8	12.3	42.1	a	9.2	20.2	19.4			
9.6	29	24.8	6.5		28.1	32.1	9.1	34.8	5.8		9.0	25.2	31.9		9.3	
7.0	30	48.8	47.5	56	8.6	51.9	9.7	12.3	49.4		9.5	25.2	13.6		9.6	
10.0	31	21.3	26.3		57.6	50.8	7.3	30.8	10.2		9.5	42.2	55.9		9.8	
9.6	32	17.3	31.3	57	7.1	23.6	9.0	33.3	51.0		9.3	6.2	57.1		9.5	
8.6	51.8	9.3	-		12.6	10.2	9.5	2.3	39.6		9.8	12.2	7.1		9.8	
10.0	33	41.8	52.9		15.6	25.2	9.2	6.8	49.0		9.8	16.2	3.8		9.6	
8.0	53.8	24.3	8.0	58	45.0	48.8	7.7	20.3	38.1	Cbl	7.3	34.1	43.7		9.8	
9.8	34	33.8	21.2	59	6.5	2.5	9.5	27.3	56.0	Ca	8.5	42.6	44.8	Ca	8.5	
8.5	56.1	49.6	a		25.0	11.1	9.4	28.8	32.5	Cbl	8.4	10.1	7.3			
7.6	35	3.6	52.7		38.0	50.8	9.2	49.3	50.7	a	8.8	16.1	48.9			
8.6	36.6	47.7	C		45.5	5.2	9.5	53.8	17.7		9.8	26.1	8.3		9.0	
9.6	38.1	51.8	9.1	0	32.0	38.0	9.4	58.8	18.2		9.6	30.1	55.1	a	8.8	
6.6	47.0	59.4	GCbl		44.3	51.1	7.3	3.4	3.0		9.3	46.1	1.5	C	9.0	
10.0	36	5.6	6.2	1	1.3	21.5	9.0	23.4	6.6	C	8.8	27	22.6	52.3	Ca	8.6
8.5	34.6	23.9	Ca		4.8	35.3	10.0	26.4	6.8		10.0	29.7	19.6		9.4	
9.2	37	3.6	12.8		20.8	38.0	8.9	30.4	28.8		10.0	38.1	37.6	Cbl	7.9	
7.2	6.7	6.7	Cbl		49.8	44.7	9.1	35.9	29.2		9.5	59.7	15.2		9.8	
7.7	38	16.2	30.7	2	21.3	27.3	9.8	37.4	55.3	Cal	7.7	7.7	7.0			
10.0	39	5.7	47.4		22.3	58.9	9.1	43.4	42.9	Cbl	8.2	8.4	24.1	26.4	Cbl	8.5
8.1	25.7	31.6	Ca		48.6	44.8	9.0	51.9	25.6		9.4	43.1	44.1		10.0	
9.2	41.2	32.1	a	3	22.1	27.7	8.4	56.9	9.8	C	8.9	54.1	39.0		10.0	
9.2	40	10.2	21.8		23.6	36.9	8.9	57.9	35.3		10.0	16.6	27.8	C	9.0	
10.0	41.7	26.6	9.8	4	20.6	37.0	6.5	59.9	22.2		9.4	18.6	21.2		9.6	
10.0	46.6	57.5	9.9		26.6	19.8	7.0	3.2	44.3		9.5	25.6	45.3		9.5	
9.2	51.2	19.4	a		27.1	9.8	9.5	3.4	33.4		9.2	41.1	52.4		9.7	
8.8	41	31.5	32.4		28.1	2.5	8.0	13.4	14.3		10.3	6.6	49.9			
9.2	34.5	11.7	a		33.8	25.4	8.5	35.9	12.8		9.0	11.1	39.4		9.4	
9.2	52.5	59.7	9.4		41.8	55.5	9.2	0.9	51.6		9.4	12.6	28.9		9.0	
10.0	42	20.5	33.3	5	13.3	25.2	8.4	2.4	40.2		10.0	48.6	32.1		9.4	
10.0	22.5	58.8	9.1		17.8	45.0	9.3	9.4	20.0	a	9.0	51.6	17.4		9.6	
10.0	43	27.5	23.5	6	2.3	1.6	9.3	9.9	45.9	Cal	8.0	10.1	24.5		9.5	
6.8	44	37.5	7.7		35.8	45.5	8.5	43.9	27.6		9.7	14.1	54.3		9.7	
10.0	45	15.5	7.3		39.3	39.4	9.2	47.4	36.2		10.1	14.5	32.5		9.7	
9.7	26.4	29.3	9.4		54.8	55.5	9.5	34.8	8.7		10.0	18.6	34.9		10.0	
8.0	35.9	17.3	8.5		58.8	21.3	9.2	39.1	21.8		9.4	20.6	11.0		9.4	
9.6	38.4	34.2	9.2	7	4.0	33.9	10.0	48.6	24.0		10.1	56.5	20.2		9.3	
8.5	47	41.9	39.7		58.0	39.2	9.0	13.1	26.2		9.0	59.9	59.2		9.0	
10.0	48	0.6	17.2	8	4.0	1.7	9.8	25.6	28.3		10.3	34.1	45.9			
9.3	7.8	10.5	9.1		32.0	58.2	9.1	32.6	47.6	C	9.3	44.6	15.8		9.8	
9.5	18.4	37.5	9.3		48.5	10.7	9.9	43.6	56.5	Ca	9.2	57.1	59.5		9.1	
10.0	37.2	27.2	9.5		52.0	46.2	9.8	50.6	39.5		9.2	57.1	32.6		9.7	
9.0	58.1	45.3	8.5	9	10.5	11.2	8.8	31.6	51.1		9.0	58.1	5.1	C	8.7	
9.6	49	31.7	2.9		14.0	26.2	9.2	38.6	32.3		9.1	0.6	53.5	Cbl	7.2	
25pr.	+1	7.2	+4.9		+1	6.5	+4.1		+1	6.2	+3.7		+1	6.0	+3.3	

18996Ancap...3....1G

601-660.				661-720.				721-780.				781-840.							
mag.	4 ^h .	-19°		mag.	4 ^h .	-19°		mag.	4 ^h -5 ^h .	-19°		mag.	5 ^h .	-19°					
	m	s	'		m	s	'		m	s	'		m	s	'				
8.7	33	22.6	14.0	9.1	9.6	47	34.7	42.6	9.5	10.0	58	56.0	45.8	10.0	9	19.2	4.4		
8.7		23.1	8.1	8.7	9.2		35.8	49.6	9.6	8.7	59	0.5	2.7	9.0	10.0	31.8	32.8		
9.5		26.6	52.6	9.1	10.3		39.6	59.3		8.9		3.0	48.1	8.9	9.6	35.8	17.8		
10.3		28.1	44.7		9.4		46.2	18.3	9.3	10.0		20.5	13.4	9.7	8.0	56.5	12.1		
8.6		34.1	58.7	9.0	10.0	48	9.4	38.4		10.0		42.0	46.0	10.0	11	13.0	59.1		
9.8		34.6	13.4	9.3	9.9		29.6	1.9	10.0	10.0		44.5	22.8	9.8	9.8	41.5	56.5		
9.0		46.1	59.4	9.4	8.8	49	13.9	27.4	9.3	9.9	0	8.0	2.4	9.4	8.7	12	15.5	36.2	
10.3		50.0	48.4		9.8		21.4	45.2	9.5	9.5		26.5	55.5	9.4	9.8	41.5	42.4		
8.7		51.0	23.4	8.5	9.8		49.4	28.4	10.0	9.7		27.5	11.0	9.7	9.0	48.2	13.1		
9.4	34	35.0	42.6	9.5	9.7		55.4	51.7	9.6	9.4		27.7	58.8	9.5	10.0	13	24.7	31.4	
6.1		58.0	54.8	GSπβλ	4.5	9.9	50	4.8	57.0	9.9	9.7		54.0	9.2	10.0	9.6	38.7	59.9	
10.1		59.0	30.1		9.6	9.4		9.0	56.9	9.0	9.4	1	2.5	13.0	9.7	9.0	14	52.7	
9.7		22.0	57.9	a	9.2	9.6		15.9	29.2	9.5	10.0		4.0	23.8	9.8	9.8	15	56.7	
10.3		44.5	17.8		10.0	9.3	51	0.8	49.6	9.5	9.0		22.5	55.8	9.3	8.8	15	3.2	
10.1		44.5	55.9		9.5	9.4		3.3	41.9	9.3	9.4		28.5	39.6	8.2	8.2	15	30.9	
8.4		53.5	41.2	a	8.8	8.8		16.8	24.2	9.0	9.6		28.7	4.4	9.8	9.8	15	31.9	
10.1	36	36.0	0.8		9.5	9.9		33.8	35.2	9.0	9.6		32.2	44.6	9.4	9.4	15	47.4	
10.1	37	3.0	53.7		9.4	9.4		57.8	51.8	9.4	10.0		34.7	26.0	9.4	9.4	17	11.4	
10.3		5.5	4.2		9.5	9.2		57.8	17.6	9.3	9.8		36.2	27.2	8.2	8.2	17	12.4	
9.8	38	33.5	45.3		9.3	10.0	52	2.8	57.6		7.2		43.2	34.0	GCbl	7.0	9.8	21.9	
9.2		48.5	40.4		9.1	9.4		23.8	1.6	9.4	9.6		49.7	19.0		8.8	18	33.9	
8.6		50.0	2.7	b	8.9	10.0		43.8	26.8	9.8	8.8	2	8.7	12.0	C	8.5	9.2	53.4	
9.4		52.5	42.6		9.3	10.0		49.3	38.5	9.8	9.7		20.2	1.3		8.4	19	5.4	
8.0		55.0	3.0	Ca	9.0	10.0		3.3	20.9		10.0		28.2	47.5		7.0	19	33.9	
7.9	39	1.5	7.8	Cal	8.7	10.0	53	16.8	30.9		10.0		33.2	33.3		9.4	19	47.6	
10.1		2.5	40.3			8.9		21.3	2.1	a	9.0	10.0		53.7	33.8		9.8	49.6	
10.1		8.0	35.0		9.3	9.4		34.3	9.6		9.3	9.6		58.7	48.2		9.2	53.1	
9.2		34.0	55.0		9.3	9.0		37.8	44.0		9.3	9.6		6.2	47.2		9.7	56.1	
10.3	40	2.5	3.1		9.8	10.0	54	3.4	28.3		9.4	9.0		8.2	4.0		9.3	57.6	
9.6		3.5	38.8		9.4	9.9		3.9	28.9		8.9						9.3	19.1	
9.7		42.5	22.3		9.5	9.4		7.4	53.4		9.5	9.4		31.2	44.2		9.8	8.0	
10.3		47.0	44.2		8.9			10.9	12.2	C	9.0	9.4		40.2	53.3		9.5	6.8	
10.1	41	18.5	15.9		9.5	9.7		12.9	44.9		10.0			46.2	20.4		10.0	46.1	
9.2	42	10.0	29.6		9.3	9.4		14.9	32.4	Ca	9.6	9.3	4	3.2	34.5		9.1	9.4	
9.7		21.5	3.6		9.5	8.9		26.4	0.8		9.0	9.9		5.7	29.6		9.5	8.4	
8.6		52.5	57.1	C	8.0	9.2		30.9	2.5		9.2	9.5		12.7	16.4		9.6	8.8	
9.6	43	3.0	14.2		9.4	10.0		37.4	22.4		9.5	9.8		15.2	2.8		9.9	9.0	
9.4		13.0	25.0		9.3	10.0		44.9	3.0		9.7	9.6		22.2	39.8		10.0	9.4	
10.3		39.5	30.3		9.8	9.2		45.3	28.5		9.2	9.3		50.7	12.6		9.3	8.0	
9.6		41.5	5.2		9.5	10.0		51.4	2.9		9.8	9.8		0.2	3.0		8.8	22	
9.4		52.0	51.0		9.3	8.5		52.9	49.5	Cbl	8.2	9.7		8.2	58.4		9.8	9.4	
10.1	44	12.4	36.9		9.2			2.9	9.8		9.0	9.6		26.2	57.2		9.4	8.2	
10.1		37.1	54.2		9.7			21.4	15.6		9.7	10.0		33.2	59.9		9.4	9.6	
9.4		45.4	6.8		9.1	10.0		38.4	45.6			8.8		39.7	18.6		10.0	41.4	
10.1		56.4	11.2		9.8	9.5		44.9	15.6		9.0	8.8		40.7	18.8	Ca	8.5	9.0	
8.0	45	1.9	16.3	Cal	8.6	10.0	56	0.9	4.8		8.8	8.8		15.7	9.9	a	9.0	10.0	
8.0		14.4	6.8	bl	7.3	9.4		19.9	49.6		9.3	8.8		23.7	10.8	a	9.0	10.0	
8.8		31.9	56.4		9.3	7.6		27.4	50.6	Cal	7.5	9.9		33.8	33.5		9.0	10.0	
9.2	46	8.9	26.1		9.5	9.6		31.4	54.0		9.8	10.0		36.7	0.1		9.8	9.1	
9.6		20.4	3.7		9.9	9.9		56.3	32.8		10.0	9.4		41.7	43.0		9.6	9.8	
9.4		20.9	33.6		9.3	9.5		59.4	59.8		9.2	9.5		43.7	30.8		8.7	21.9	
9.6		21.4	50.0		9.4	10.0	57	4.4	16.0		9.8	9.6		47.2	41.8		8.6	26	
10.0		26.9	17.5		10.0	9.8		21.3	19.8			8.8		7.2	9.0	a	9.1	10.0	
8.7		41.9	36.4	C	9.0	9.0		38.4	25.0		9.1	8.6		10.7	31.2	C	8.9	9.6	
10.0		41.9	19.0		10.0	9.8		40.9	39.1		9.7	9.5		18.2	39.6		9.5	8.6	
9.2		42.4	39.2	C	9.1	8.9		44.9	17.8	C	9.0	10.0		8	5.8	45.7		9.5	10.0
10.1		45.9	24.3		9.6	8.0		54.9	40.6	Cal	8.4	9.9		7.7	6.0		9.1	9.1	
9.2		55.9	23.8		9.3	8.9	58	1.4	23.0		9.0	9.4		15.7	41.8		9.2	9.8	
10.1	47	24.7	28.3		9.8	9.8		24.0	57.0		9.7	9.3		21.7	46.8		9.4	10.4	
8.6		31.2	2.0	a	9.1	9.4		44.0	25.6		9.5	9.8		9	15.7	43.8		9.2	8.8
25PR.	+1	5.7	+2.8				+1	5.5	+2.4					+1	5.4	+2.0			

841-900.				901-960.				961-1020.				1021-1080.								
5 ^h		-19°		5 ^h		-19°		5 ^h		-19°		5 ^h -6 ^h		-19°						
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s					
27	57.9	22.9	Cbl	8.5	10.4	37	6.5	17.6	9.6	9.8	45	24.4	39.5	9.5	9.2					
28	18.4	12.8		9.2	9.2	38	7.5	13.5	9.2	9.6	46	25.9	35.9	9.5	9.6					
8.3	23.9	31.1	Cal	8.7	7.9	23.5	42.5	Cbl	7.5	10.4	48.0	10.5	10.0	54	8.1	59.0				
9.1	27.4	30.0	a	9.1	9.2	33.5	33.1	Cbl	9.5	9.6	46	1.5	17.2	9.3	10.0	16.1	40.0	9.5		
10.0	58.4	36.8		8.0	8.0	41.5	37.4	Cbl	8.0	9.2	3.0	48.6	9.0	8.6	36.6	51.3	Ca	8.5		
9.4	2.0	59.1		9.7	9.2	39	5.0	33.1	C	9.0	8.9	4.5	7.0	Ca	9.0	10.4	38.6	3.0		
9.2	9.9	40.4	C	9.1	9.2	6.5	31.6		9.2	9.7	16.0	30.0	Ca	9.9	45.1	48.9				
10.0	9.9	11.4		9.8	9.8	12.0	33.5		8.6	8.6	22.5	25.1	Ca	7.7	10.4	51.1	45.9			
10.3	12.9	8.1		9.4	9.4	22.5	52.3		9.5	9.6	43.0	40.8	9.5	9.4	55	1.6	24.6	C	9.1	
9.8	18.4	48.1		9.5	9.7	23.5	10.1		9.5	10.0	44.0	30.4	9.8	9.8	2.1	9.0		9.4		
8.9	38.5	16.4	C	8.8	10.1	26.5	42.6		8.2	8.2	45.5	5.1	Cal	7.2	9.4	26.0	14.5	9.3		
9.7	40.5	26.6		9.5	8.8	27.5	3.6	C	8.9	10.0	53.5	50.6	10.4	10.4	50.0	43.4				
10.4	8.0	25.4		10.0	10.0	32.5	38.6		9.8	10.0	47	18.5	5.6	10.5	53.5	59.9				
9.7	21.5	19.8		9.2	10.4	46.0	45.1		10.2	10.2	21.5	56.9	9.9	9.9	54.5	2.0		9.8		
10.4	27.5	16.8		9.1	9.1	55.0	21.6		9.2	9.8	27.5	27.6	10.0	9.9	56	1.0	15.0	9.6		
9.6	46.7	58.3		9.5	10.4	40	3.2	6.6	9.5	8.9	45.5	54.7	a	9.0	7.5	47.0	41.5	Cbl	7.7	
9.0	54.0	28.2		9.1	9.2	15.7	21.1		9.8	10.4	55.0	37.5		9.2	57	0.5	37.0		9.1	
10.0	2.5	58.0		9.4	9.2	19.7	23.7		9.8	10.3	48	20.5	19.8	9.7	10.5	0.5	12.2			
9.0	14.0	31.5		9.0	8.7	20.2	19.9	C	9.2	10.2	22.2	59.2	10.6	10.6	13.0	11.7				
10.4	15.0	30.0		9.8	9.8	23.2	12.3		9.7	7.5	33.3	39.8	GCa	6.3	9.1	16.0	34.1	Cb	9.2	
9.8	17.5	9.7		10.4	10.4	27.7	37.1		9.8	9.8	45.8	22.0	9.6	10.6	22.0	43.6				
8.8	25.0	43.7	Cal	8.3	10.0	29.2	26.7		9.8	9.8	51.8	24.9	9.5	9.6	24.0	42.8				
10.2	30.5	17.6		8.6	8.6	38.2	27.6	C	9.1	7.9	49	4.8	43.6	Cal	7.5	9.2	25.0	43.1	Ca	8.5
8.4	36.5	56.2	Cal	8.5	10.2	48.2	41.5		9.5	10.5	5.8	55.0	9.6	10.6	42.0	22.1				
10.4	48.2	28.5		10.1	10.1	51.7	36.2		10.0	10.0	8.8	14.1	9.4	9.5	42.5	32.7			9.3	
10.4	48.2	12.8		9.4	9.4	57.7	26.8		9.6	10.6	18.3	13.1	10.2	10.2	52.3	33.5				
10.3	57.2	48.5		10.4	41	3.2	25.9		10.5	10.5	32.4	39.7	10.0	10.0	52.8	54.9			9.5	
10.2	59.8	57.9		10.0	8.8	13.2	0.9		9.0	10.4	50	13.4	29.5	9.2	53.8	0.0			9.5	
10.4	18.2	1.2		10.4	10.4	27.2	16.4		10.0	10.0	14.4	48.2	9.6	9.6	58	1.3	30.5		9.3	
10.1	22.2	40.0		9.9	10.3	28.2	18.3		10.0	9.9	15.9	18.0	9.7	10.2	9.8	27.3				
10.4	34.7	36.0	?	9.6	9.6	33.2	40.1		10.0	10.5	27.4	24.0	9.2	9.2	12.8	2.3			9.5	
10.3	37.7	53.5		9.4	9.4	36.2	43.1		10.0	8.6	27.9	10.8	C	9.0	10.2	18.3	6.3			
10.2	46.2	52.2		9.5	9.5	52.7	54.8		9.3	9.6	28.9	49.0	9.5	10.2	41.3	22.5				
10.3	56.7	15.3		9.1	42	3.2	1.4		8.8	10.5	30.4	43.4	10.5	10.5	42.8	6.1			9.6	
9.8	24.7	52.1		9.8	10.3	6.2	32.9		9.0	9.0	30.4	10.2	9.3	10.0	51.3	25.9			10.0	
10.0	39.2	34.0		9.5	9.8	7.7	35.1		10.0	9.4	33.4	28.8	9.4	8.2	54.8	0.0	Cal		8.2	
10.4	45.2	49.8		9.4	9.4	20.2	17.6		9.2	9.2	43.4	39.3	9.7	10.4	59	0.3	45.9			
10.2	58.2	37.6		9.7	9.7	20.2	25.2		9.8	10.2	46.4	15.1	9.2	9.2	1.8	41.0			9.5	
9.6	59.7	8.7		9.5	10.4	23.2	44.5		10.4	10.4	49.4	23.3	8.6	8.6	4.8	16.3	Ca		8.8	
8.3	0.9	51.6	Ca	8.2	10.0	30.2	3.1		9.2	9.2	50.4	31.4	9.5	9.1	5.6	38.2			9.4	
10.0	13.9	57.9		9.8	9.8	40.2	55.0		9.5	9.4	51.9	41.2	9.5	8.8	7.1	43.3	Ca		8.7	
10.1	23.9	37.1		9.3	10.4	41.4	6.6		9.9	9.9	51	32.9	30.8	9.5	9.4	22.1	15.1	Ga	9.1	
8.9	33.9	10.8		9.1	10.3	42.2	52.6		8.8	8.8	39.4	14.1	Cal	8.8	10.3	22.1	32.4		9.7	
10.4	50.9	37.7		10.0	10.0	43.4	43.2		10.0	10.0	45.1	0.8	9.7	7.7	24.1	28.9	Cal		8.3	
8.2	52.9	17.2	Ca	8.0	8.5	56.9	4.0	C	8.9	9.8	48.6	53.5	9.8	10.2	29.1	6.9			9.5	
8.9	56.4	44.2	Ca	9.0	9.4	57.9	39.3		9.4	10.6	53.6	59.3	10.5	10.5	51.6	26.4				
10.0	3.9	16.7		10.1	43	4.4	58.0		10.5	52	9.6	13.3	10.6	10.6	55.6	1.7			9.5	
10.3	9.4	29.6		10.0	10.4	31.4	47.3		10.0	10.0	10.6	47.1	10.0	10.4	0	11.1	49.9			
10.4	9.9	21.1		9.6	10.1	31.9	40.3		10.0	10.0	17.1	49.8	9.8	10.2	19.6	5.7				
10.4	19.4	39.5		7.8	7.8	46.9	26.4	Cal	7.1	8.2	19.1	24.0	Cal	7.8	9.4	36.1	13.8	b	9.5	
9.6	22.9	49.0		10.2	10.2	49.9	8.9		9.2	9.2	26.6	36.9	9.3	9.0	36.6	55.9			9.3	
8.8	30.9	8.7	a	9.0	10.4	44	9.9	42.1	9.2	9.2	40.1	58.4	9.4	10.6	43.1	15.5				
10.0	47.9	16.2		9.8	9.8	11.9	32.0		9.4	10.4	42.6	9.1	10.4	10.4	9.6	8.6			9.8	
9.8	50.9	41.0		9.5	9.3	35.9	49.1		9.3	9.2	43.1	24.6	9.8	9.8	15.1	31.6			10.0	
10.1	52.9	31.1		10.0	10.0	42.9	15.0		9.6	9.6	51.1	45.0	9.6	9.8	20.6	47.8			9.8	
10.4	13.4	43.1		9.8	9.8	43.4	37.8		10.6	10.6	53	5.1	16.4	9.8	27.6	35.6			9.8	
9.7	26.9	31.1		9.5	9.7	49.4	54.1		9.2	9.2	25.1	37.8	9.1	8.0	29.6	55.7	Cbl		8.2	
9.0	32.9	53.9		9.4	9.8	55.9	7.9		8.8	8.8	25.6	5.0	Ca	8.7	8.7	36.6	4.6	Ca	8.5	
9.1	33.9	2.7	Ca	9.0	10.4	45	2.9	27.9	10.5	10.5	32.0	11.0	10.6	10.6	38.0	57.1				
10.4	57.4	17.3		10.0	9.8	12.9	25.1		10.5	10.5	39.1	52.8	10.0	10.0	42.6	39.3				
25Pr.	+ 1 51	+ 1 10				+ 1 50	+ 0.7				+ 1 50	+ 0.4				+ 1 50	+ 0.1			

1081-1140.				1141-1200.				1201-1260.				1261-1320.			
6 ^h .		-19°		6 ^h .		-19°		6 ^h .		-19°		6 ^h .		-19°	
mag.	m s			mag.	m s			mag.	m s			mag.	m s		
9.2	1 44.6	43.0	9.5	10.4	8 10.0	10.2		8.6	15 27.4	19.8	Ca	8.6	10.0	20 37.8	50.4
10.6	46.6	19.9		10.2	18.5	24.5	9.5	9.4	33.9	18.1		9.5	9.5	43.8	10.3
10.2	49.1	18.5	9.6	8.8	38.4	34.3	Cal	8.7	10.2	43.4	43.9	9.7	9.5	56.3	30.4
10.6	2 5.6	16.4		8.5	54.4	29.3	Cal	8.0	9.2	43.9	11.7	9.3	9.3	59.5	50.9
9.6	10.6	34.1	9.5	10.2	9 10.4	41.6		10.1	46.4	9.3		7.5	21 2.0	15.1	Cal
7.4	15.1	9.2	GSlπβ	9.0	14.4	6.5		9.2	9.0	59.0		9.1	10.2	12.5	8.9
9.4	15.6	25.1		9.5	16.9	11.8		9.4	9.4	12.8	23.0	9.5	9.5	13.5	29.4
10.2	16.1	29.8		10.0	20.9	14.7		8.4	10.2	13.3	47.0	8.2	9.3	15.5	12.4
9.2	18.1	46.6	9.5	8.8	24.9	41.1	Ca	8.7	10.2	23.8	29.3	9.4	9.4	16.5	39.2
10.6	28.1	35.9		9.8	31.9	53.4		9.5	9.8	26.8	55.0	9.5	9.5	21.5	24.5
10.5	30.1	52.6		10.1	42.4	50.0		10.1	31.3	7.7		10.0	10.0	29.0	59.2
10.6	36.1	25.5		8.8	43.9	0.8	9.1	10.2	32.3	22.4		10.1	10.1	31.0	59.2
9.2	37.1	9.3	9.5	9.8	51.9	14.8		10.1	32.3	21.6		10.2	10.2	35.0	18.2
8.2	42.1	45.3	Ca	8.3	9.6			10.2	33.8	38.2		9.2	9.2	39.0	13.2
7.9	44.1	24.8	Cal	8.3	8.0			10.2	36.8	1.9		10.2	10.2	40.6	5.7
8.6	3 4.6	4.6	a	9.1	10.0	7.4	10	10.2	9.3	52.3	46.3	9.8	10.2	41.6	4.4
10.6	5.1	45.6		8.4	13.9	45.8	Ca	8.2	10.0	52.8	29.4		9.8	47.0	33.9
10.2	13.1	38.8		10.2	15.4	21.3		8.4	8.4	53.3	2.4	Ca	8.7	10.0	22 1.5
9.4	13.6	44.7	9.7	10.2	32.9	11.6		9.3	17 0.3	56.7		9.5	10.2	5.0	6.8
10.2	18.6	0.2		9.8	40.9	13.2		10.2	0.8	30.1		8.4	8.4	10.5	22.6
10.0	38.1	56.9	9.5	8.3	56.9	18.4	Cbl	8.3	10.0	16.3	44.5		10.2	14.5	2.6
9.6	43.1	55.6	9.4	9.8	0.9	6.1		9.0	9.0	17.3	26.3	9.3	10.2	16.0	50.7
9.8	50.1	0.2		10.0	6.4	29.1		9.1	9.1	29.8	46.0	C	9.1	9.3	21.5
8.9	4 5.1	34.3	Ca	9.1	9.8	16.4	3.8	9.8	9.8	37.8	51.7		10.2	22.5	29.7
10.2	6.1	10.8		10.2	21.9	54.1		10.2	10.2	38.8	55.9		9.8	26.0	37.2
10.4	18.1	31.9		9.2	29.4	58.2		9.4	9.4	40.3	16.5	9.4	8.6	31.5	1.4
10.2	40.6	52.7		9.8	39.9	52.6		9.5	9.6	42.8	50.4	9.5	10.2	38.5	57.0
9.6	47.6	34.6	9.6	10.2	55.4	39.8		9.8	9.8	44.3	47.9		9.2	49.4	20.9
10.6	50.1	15.4		9.0	12 9.9	28.7	C	8.8	9.5	57.5	23.1	9.5	8.5	51.4	43.1
10.2	58.1	50.9	9.9	7.0	17.9	8.6	GCbl	7.0	9.2	18 12.0	4.9	a	9.4	9.8	23 12.4
10.5	2.8	4.8		10.0	19.9	37.4		10.2	10.2	16.5	24.6		8.7	16.4	36.6
10.5	10.3	51.9		10.1	21.9	39.0		10.1	10.1	18.5	32.2		9.0	27.9	58.0
10.0	10.8	43.6	9.8	10.2	29.6	31.1		6.8	6.8	23.0	43.3	GCbl	7.0	9.8	43.4
10.6	11.8	46.2		10.2	40.6	38.5		9.4	9.4	27.5	4.5	a	9.2	9.6	50.9
9.4	14.8	7.1	9.4	10.2	43.6	18.7		9.8	9.8	30.5	5.8		9.4	52.4	22.4
9.6	19.8	23.1	9.4	9.5	49.6	11.2		10.0	10.0	33.5	39.3		9.4	11.4	20.1
10.2	20.3	55.2	9.5	5.7	50.6	55.3	GCbl	5.5	9.8	44.0	55.9		10.2	15.9	33.2
10.2	40.8	33.9		9.6	0.1	29.7		9.5	9.8	44.5	0.7		10.1	21.4	32.1
9.6	6 3.8	44.9	9.3	10.2	10.1	48.6		8.8	8.8	46.0	56.7	C	8.7	9.2	40.9
9.9	10.8	46.9		9.5	27.6	52.0	9.8	9.2	9.2	50.5	9.5		9.3	41.4	45.8
10.6	15.8	31.2		9.4	36.1	2.0		9.6	19 1.0	41.8			8.2	45.3	7.8
10.0	25.8	19.5	9.5	10.0	44.1	50.4		10.0	10.0	1.5	30.1		9.8	45.4	44.5
10.0	31.8	2.6		9.8	45.1	43.8		10.2	10.2	1.5	36.2		10.1	52.8	40.5
9.2	34.8	6.9	9.4	10.2	47.6	18.0		10.0	10.0	7.0	45.6		8.9	53.8	8.9
10.6	34.8	18.9		9.2	47.6	35.2		8.5	8.5	28.0	39.0	Ca	8.5	9.2	25 11.8
10.0	51.8	9.3		9.8	0.1	33.0	a	9.5	10.1	35.5	25.2		9.2	17.3	50.8
10.2	59.8	46.1	9.4	8.8	2.6	26.1	Ca	9.0	9.6	42.5	34.3		10.2	19.8	52.2
10.5	7 0.0	9.3		10.2	11.6	23.5		10.2	10.2	43.0	12.0		8.8	27.8	56.4
9.6	10.0	13.5	9.7	9.4	15.4	3.3		9.1	9.2	45.8	2.4	9.5	9.4	31.3	22.9
9.6	11.0	8.2	9.7	8.8	20.4	40.7	a	9.2	10.1	53.8	47.2	9.8	9.4	32.8	46.8
9.4	12.0	18.2	9.6	10.2	21.9	13.9		9.8	9.8	55.8	54.2		9.2	35.8	24.9
10.5	12.0	30.7		8.6	21.9	13.6	C	9.0	9.8	57.3	50.5	9.3	8.8	26 9.3	8.6
10.2	14.5	41.9	9.5	9.1	23.4	6.3		9.5	10.2	58.3	22.6		10.0	15.3	23.9
9.1	30.5	33.2	9.2	9.8	39.9	26.3		10.2	10.2	1.3	45.7		10.1	31.1	28.3
10.6	40.5	51.4		10.2	43.4	38.0		10.2	10.2	2.8	46.6		9.2	32.1	36.2
10.6	42.0	45.0		9.3	44.4	26.2	a	9.4	10.2	5.8	45.1		9.2	33.6	22.7
10.4	46.0	57.4		10.2	59.4	53.5		9.8	9.8	8.8	36.0		10.2	35.2	55.5
9.5	47.5	18.2	9.4	9.6	15 12.4	29.9		8.4	8.4	8.8	55.5	Ca	8.3	10.1	43.1
8.8	51.0	14.7	9.2	10.2	12.4	8.8		9.2	9.2	28.8	47.6		9.3	10.0	45.6
10.6	8 6.0	45.7		10.2	24.4	25.2		10.2	10.2	34.3	58.4		9.8	52.1	12.2
25pr.	+ 1 50	-0.2		+ 1 50	-0.4			+ 1 50	-0.7				+ 1 50	-0.8	

1321-1380.				1381-1440.				1441-1500.				1501-1560.							
6h.		-19°		6h.		-19°		6h.		-19°		6h.		-19°					
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s				
26	57.1	42.3		32	40.4	24.1		41	1.4	44.6	C	6.5	10.0	46	4.6	28.4			
27	59.1	57.7	C	33	44.4	47.7		42	1.9	3.8	a	9.2	10.3	47	6.6	31.2			
27	4.6	20.5		33	47.4	20.9	9.5	42	6.9	41.6		9.2	9.3	47	10.6	32.5			
8.8	8.1	40.3		33	1.4	54.6	a	9.1	9.2	11.9	58.7	9.2	10.2	47	11.6	1.2			
9.6	15.1	41.1		34	45.4	1.1		9.7	9.3	22.4	14.2	8.9	9.8	47	20.6	51.1			
10.2	16.1	21.8		34	55.4	42.1			9.8	24.4	34.8		8.9	29.1	6.9	GCa	8.5		
8.6	22.1	55.8	Cb	34	2.4	46.7			10.2	25.4	19.4		10.4	32.1	14.6				
9.2	32.6	36.9		34	3.8	53.0			10.4	32.4	43.8		10.4	36.6	46.2				
9.5	42.6	50.0		34	5.8	58.9			8.9	39.4	30.2	C	8.8	45.6	59.6		9.4		
10.2	56.1	38.1		34	16.3	51.1	a	9.4	9.6	44.4	15.6		10.4	51.6	43.8				
10.2	59.4	59.1		35	25.8	27.9		10.2	52.4	43.4		9.9	9.3	47	26.6	29.4	9.5		
8.6	7.8	20.5		35	30.8	11.3		10.0	53.4	10.2		9.4	10.4	47	29.6	14.9			
9.2	14.3	17.5		35	32.8	3.5	Ca	8.5	9.4	2.4	2.0	a	8.9	9.3	29.6	58.6	C	8.7	
10.1	38.0	31.7		35	55.8	47.8		9.5	10.3	5.4	24.7		10.1	34.6	48.4				
9.6	39.0	50.9		35	5.3	52.5		9.4	10.1	6.9	36.4		8.6	40.6	10.6	Ca	8.3		
9.8	42.5	11.2		35	5.8	57.7	C	8.9	9.0	7.9	22.6		9.3	41.6	36.0				
10.0	50.5	1.5		35	17.8	45.9		9.4	9.4	11.9	24.8	C	9.1	44.6	56.9				
10.0	53.5	27.1		35	39.3	11.0		9.1	9.6	12.9	35.1		8.6	50.6	26.0	Ca	8.3		
10.4	54.5	49.8		35	41.8	47.2		9.2	9.6	30.4	45.5		9.7	54.6	22.0				
10.4	6.0	1.4		35	51.3	35.9		9.2	9.5	30.9	6.3		10.4	55.1	21.8		9.5		
9.4	7.5	51.4		36	4.3	33.9	a	9.3	10.0	31.9	59.6		8.2	56.3	13.9	Ca	8.2		
10.0	12.5	59.5		36	13.3	7.9		9.4	9.1	36.4	46.4		9.2	10.3	2.2	53.9			
8.9	16.5	7.2	C	36	21.8	33.2		9.5	8.8	36.9	0.0	a	8.7	9.6	3.8	11.0			
8.0	22.5	51.2	Cbl	36	34.8	8.1		9.4	8.3	53.9	52.6	C	8.6	9.0	7.8	35.8	9.0		
9.2	25.5	53.4		36	45.8	38.6		9.3	9.8	53.9	49.2		9.3	9.3	18.8	46.2	9.2		
8.6	26.0	32.8	Cbl	36	46.6	57.2		9.5	9.2	53.9	33.9		9.4	10.4	19.9	11.5			
10.4	31.0	55.3		36	8.5	53.8	Ca	9.0	9.2	55.9	47.3		9.5	10.2	28.8	5.3	9.8		
9.8	32.5	0.7		36	8.6	55.8	a	9.0	9.2	58.4	57.8		9.2	10.4	42.0	0.2			
9.3	38.5	48.8		36	1.3	46.1		10.4	43	1.4	59.4		9.3	9.3	47.7	12.2	9.1		
10.0	42.6	36.4		36	1.8	5.4		9.8	9.8	3.9	0.3		9.8	10.3	47.8	11.4			
9.1	46.5	47.0		36	14.8	30.7	a	9.0	9.8	10.4	28.4		10.2	54.8	8.3				
9.4	51.5	44.8		36	21.8	13.9	Ca	8.7	8.7	10.9	25.0	Ca	9.1	9.3	55.8	18.5	a	9.0	
10.2	53.5	53.1		36	25.3	53.2		9.4	10.4	10.9	24.4		10.3	1.3	54.8				
9.0	56.4	16.7		36	40.8	21.0	Ca	8.7	9.3	10.9	57.1		9.1	9.8	6.8	24.2		9.6	
9.8	3.4	16.6		36	43.8	50.9		8.5	9.1	23.4	40.8		9.5	10.4	8.3	53.4			
10.4	8.3	58.0		36	47.8	1.7	Ca	8.5	10.2	31.9	42.8		9.0	9.0	10.8	31.3		9.3	
9.2	9.4	0.7		36	52.3	42.7		9.2	10.0	37.9	32.6		9.8	9.4	11.8	47.7			
9.2	13.4	36.1		36	52.8	0.2		9.2	10.2	44	8.4	40.1		9.2	12.3	39.1		9.2	
9.6	17.4	7.2		36	2.3	5.5		10.0	10.2	11.0	53.4		9.2	14.8	6.6	a		9.0	
9.3	18.4	27.1		36	2.8	54.3		9.8	8.5	16.4	14.6	Ca	7.8	10.4	17.8	39.4			
9.1	30.4	26.5		36	45.8	19.9		9.4	8.8	22.4	7.4	a	9.1	9.5	23.8	45.8			
10.4	36.9	46.6		36	53.3	35.0		9.4	10.3	34.4	7.0		10.2	26.0	58.9				
9.6	40.4	31.0		36	3.8	50.1		9.8	10.0	41.4	56.9		9.5	9.5	27.3	44.8			
10.4	54.4	39.3		36	4.3	7.3		9.8	9.8	44.4	10.9	a	9.5	9.3	27.7	27.5		9.4	
10.4	54.4	34.5		36	7.9	5.4	C	7.7	9.0	46.9	52.8	C	9.1	9.4	32.7	24.0	a	9.2	
7.6	54.9	23.3	Cbl	36	10.9	7.6		9.0	9.0	47.9	26.1		9.0	10.3	42.2	37.3			
9.8	55.4	0.5		36	22.4	44.2		9.3	10.1	49.4	11.6		9.3	10.2	57.7	7.1			
10.4	0.9	49.6		36	25.9	17.6		9.4	10.4	50.4	17.4		9.8	9.8	50	6.2	36.9	9.4	
6.4	13.4	9.0	GSlπβ	36	39.4	38.2		9.4	10.4	53.9	5.8		9.7	9.7	8.2	5.0		10.0	
10.0	22.4	23.6		36	53.9	4.6	a	9.2	10.1	45	5.1	6.2	5.6	12.5	58.8	GSlπβ	5.1		
10.4	27.9	3.9		36	54.4	16.3		9.3	9.3	10.6	28.2		9.5	9.4	13.7	12.8			
10.2	42.4	41.2		36	57.4	55.0		10.3	10.3	11.6	32.0		9.8	9.8	19.2	11.4			
9.4	42.9	3.6		36	23.4	23.4		9.3	10.0	25.1	9.6		9.5	10.4	22.7	19.7			
9.6	54.4	15.9		36	30.9	44.0		9.8	9.8	29.6	38.3		10.4	10.4	23.7	28.8			
7.8	2.4	41.2	Cbl	36	37.4	6.6		?	9.3	33.6	13.4		9.5	8.9	26.7	36.0	Ca	8.0	
10.4	7.9	18.0		36	39.4	58.8		8.6	8.6	35.1	26.4	Ca	8.3	9.4	42.7	12.4		9.4	
9.0	16.4	12.2	C	36	42.4	15.9	C	8.5	10.0	45.1	30.1		10.2	10.2	43.7	55.1			
10.2	28.9	15.3		36	46.4	40.0		9.0	9.3	48.6	40.1		9.3	9.2	46.7	15.7		9.5	
9.8	32.4	37.2		36	0.9	16.0		9.8	9.8	49.6	37.9		9.8	8.9	48.7	53.6	a	9.1	
9.8	32.4	25.9		36	0.9	26.6		10.3	10.3	46	3.1	34.8		9.4	50.7	9.1		9.5	
25pr.	+ 1 51	- 11		+ 1 52	- 13			+ 1 52	- 16					+ 1 53	- 18				

1561-1620.				1621-1680.				1681-1740.				1741-1800.				
mag.	6 ^h	-19°		mag.	6 ^h	-19°		mag.	6 ^h -7 ^h	-19°		mag.	7 ^h	-19°		
	^m	^a	^z		^m	^a	^z		^m	^a	^z		^m	^a	^z	
10.2	50	50.7	56.1	6.6	54	43.5	59.3	GCa	6.7	10.0	58	3.5	2.1	9.4	33.2	32.5
9.4		51.7	26.4	8.3		49.0	37.6	Cal	7.2	9.7		6.5	18.4	10.3	33.2	36.6
9.4		53.2	49.3	9.7		50.5	44.5		9.4	9.4		7.5	28.7	9.3	35.7	49.0
9.4	51	7.8	57.6	8.8		54.5	51.5	Ca	8.8	10.3		11.0	36.0	9.5	36.2	26.8
10.4		16.7	33.6	9.2	55	3.0	3.4		9.4	10.3		21.0	34.9	10.0	36.2	32.9
8.6		20.7	48.4	10.4		4.0	8.5		9.9	9.9		22.5	45.7	10.0	36.2	39.4
10.4		20.7	42.0	10.3		6.0	5.8		9.4	9.4		22.5	9.4	10.4	43.2	9.9
9.8		22.7	35.7	9.5	9.4	8.5	37.1	a	9.0	10.4		32.5	26.9	10.4	43.7	35.0
10.3		23.7	25.8	8.6		11.5	44.5		8.8	8.8		37.0	39.7	10.0	46.2	58.5
10.2		25.2	6.0	10.3		19.0	28.7					44.9	21.6	8.8	10.4	48.2
8.8		28.2	58.3	9.1	7.6	24.5	16.1	GCbl	7.2	10.4		46.9	49.2	9.8	48.2	27.4
8.7		32.7	32.9	8.5	10.2	33.5	38.7		8.9	8.9		48.4	4.2	8.5	49.2	7.1
7.5		33.7	16.3	7.0	10.2	36.0	52.3		9.4	9.4		48.9	32.6	9.1	10.3	52.7
10.2		33.7	36.4	10.4		51.5	20.5		9.4	9.4		52.4	49.0	10.4	52.7	20.4
10.2		38.7	35.6	9.2		51.5	21.2		9.4	10.0		53.9	2.0	9.7	53.7	27.1
9.2		40.7	14.6	9.3	10.4	58.0	58.4		8.6	10.4		59.9	56.4	9.6	54.2	32.7
9.8		53.7	35.0	8.4	56	1.5	1.5		8.6	10.0		59.9	2.8	9.8	56.2	24.8
9.8		56.2	43.0	10.2		9.5	31.7		10.2	10.2		7.4	13.5	9.5	58.7	21.1
9.4	52	6.7	12.4	9.4	10.0	10.0	6.3	C	8.7	10.2		23.4	21.9	9.2	6.2	16.3
9.8		7.7	23.4	8.8		10.5	25.3		9.9	9.9		26.4	2.5	9.8	10.7	49.1
10.0		8.1	38.9	10.0		12.0	10.7		9.5	8.6		31.4	37.4	8.5	10.1	13.0
10.2		8.2	38.7	9.8		15.0	54.4		8.8	8.8		33.4	46.7	9.0	9.8	13.2
9.2		14.6	9.3	8.9	10.3	22.0	23.1		9.8	9.8		40.9	8.0	9.4	9.6	15.0
9.4		16.6	45.7	10.4		25.0	38.7		9.8	9.8		42.4	10.2	10.0	10.4	18.5
10.4		20.1	37.1	9.6		27.0	28.8		9.5	10.3		42.4	59.6	10.0	10.0	28.0
10.4		20.6	47.0	10.2		33.5	6.3		10.0	10.0		42.9	27.7	9.7	10.4	33.0
10.2		23.1	29.3	10.2		42.0	32.9		10.4	10.4		43.9	22.8	10.2	10.2	35.0
9.2		27.6	20.8	9.5	9.5	56.5	16.5		9.5	9.8		44.4	8.1	10.4	10.4	37.5
9.1		39.1	12.4	9.3	10.3	58.5	42.1		10.0	10.0		47.9	15.6	10.4	10.4	39.5
10.3		42.1	38.3	10.0	57	1.0	4.7		8.6	8.6		49.9	40.0	9.0	10.4	40.0
9.0		43.1	56.7	9.6	10.3	1.5	0.8		9.8	9.8		56.4	43.1	9.5	10.0	41.5
9.8		46.6	54.5	10.0		3.0	55.8		9.6	9.6		3.9	53.0	10.0	10.2	42.5
9.3		47.6	17.2	9.5	9.8	8.5	34.9		10.3	10.3		8.9	53.2	10.2	10.2	43.5
9.8		52.6	41.7	9.5	8.2	10.0	35.3	Cal	8.0	8.8		9.4	13.2	9.0	10.0	46.5
9.3		59.6	56.4	9.2	10.2	11.5	13.2		10.4	10.4		10.9	57.6	10.4	10.4	52.0
10.3	53	2.6	29.6	10.2		12.5	5.0		10.2	10.2		11.8	47.2	10.3	10.3	54.0
9.0		3.6	55.7	9.2	9.9	13.5	9.2		8.6	8.6		14.4	28.2	8.6	10.2	56.0
9.9		6.1	48.6	10.4		15.5	51.4		9.9	9.9		20.9	10.6	9.9	9.9	56.0
9.3		8.6	32.7	9.2	8.9	17.5	31.8		9.1	10.4		23.9	14.0	9.9	9.9	57.0
9.7		11.1	33.0	9.3	9.3	20.5	56.0	a	9.1	9.4		27.9	58.1	9.3	9.4	3.0
8.6		17.1	9.6	8.8	9.8	22.5	21.3		9.4	9.2		47.2	19.5	9.5	9.5	0.0
10.3		18.6	57.2	10.3		23.5	44.3		10.3	10.3		49.7	5.5	10.2	10.2	2.0
10.3		20.6	41.0	10.4		27.0	25.5		10.2	10.2		50.2	22.0	9.3	9.3	2.0
9.4		21.6	55.2	9.5	9.8	32.5	39.3		9.3	9.3		52.7	9.1	9.5	9.8	5.5
8.6		23.6	14.4	9.1	9.7	33.5	46.4		9.5	9.9		55.2	34.1	9.0	9.0	9.5
10.2		25.6	38.5	9.9		34.0	36.9		?	10.3		56.2	58.3	9.5	9.5	9.5
9.2		27.6	56.7	9.2	9.4	37.8	57.3		9.6	10.3		59.2	12.8	10.2	10.2	17.5
9.2		30.1	14.3	9.5	9.2	39.0	7.8	a	9.2	10.4		6.2	55.2	9.0	9.0	19.0
9.4		33.6	12.1	10.4		41.0	15.4		9.2	9.2		6.2	27.4	9.3	10.3	20.5
10.4		37.6	37.7	10.3		41.5	3.7		9.5	9.4		6.2	28.4	9.1	10.4	21.5
10.4		39.6	10.3	10.4		44.0	58.2		9.3	9.3		6.2	11.5	9.5	8.9	22.5
10.4		49.1	37.0	10.3		46.5	36.9		9.5	9.5		11.7	55.7	9.5	9.4	30.0
9.7		51.1	32.9	9.5	10.2	52.0	45.9		9.6	9.6		16.2	10.9	9.7	9.0	30.0
9.2		51.6	53.6	9.5	10.4	55.5	23.4		8.9	8.9		17.7	27.8	8.9	9.7	31.5
10.2		59.6	13.6	9.4		58.5	28.8		9.6	10.3		19.2	46.7	10.3	10.3	32.5
10.4	54	6.6	23.0	9.5		58.5	1.9	a	9.0	9.7		20.2	31.1	9.6	10.2	44.5
8.6		7.6	22.1	8.9	9.2	59.0	54.0		9.4	9.8		28.7	10.1	9.4	9.9	48.0
9.7		13.6	52.5	9.4	9.8	58	1.5		9.3	9.7		30.7	44.6	9.4	9.4	51.5
9.8		16.6	0.9	9.8		2.5	14.2		9.7	10.4		31.2	18.1	9.3	9.3	53.0
10.2		29.5	35.7	10.2		2.5	50.5		9.4	9.4		32.2	21.1	9.3	10.2	55.5
25pr.	+ 1	5.3	-19		+ 1	5.4	-21			+ 1	5.4	-22		+ 1	5.4	-23

1801-1860.			1861-1920.			1921-1980.			1981-2040.			
mag.	7 ^h	-19°	mag.	7 ^h	-19°	mag.	7 ^h	-19°	mag.	7 ^h	-19°	
9.8	3	59.0	9.9	6	48.5	10.2	9	32.9	10.3	12	46.5	
9.2	4	6.0	9.8	5	54.0	9.8	8	33.9	9.4	10	52.1	
10.3		14.0	9.8	10.3	57.5	8.8	8	33.9	10.1	10	53.5	
10.2		16.0	9.8	10.4	57.5	9.8	9	47.7	9.8	13	58.5	
9.2		20.5	9.3	10.4	58.5	10.0	10	47.9	9.0	13	2.5	
9.4		24.0	9.3	10.3	7 0.5	8.9	10	55.2	9.3	9.3	3.5	
9.4		25.0	9.7	10.3	2.2	10.2	10	55.7	9.7	10.1	5.5	
10.4		25.5		9.5	2.5	9.9	10	0.7	10.1	10.1	7.1	
10.0		26.0		9.8	3.0	9.9	9.5	3.7	9.5	9.2	7.5	
9.8		32.0		10.3	5.5	9.6	9.6	3.7	10.1	10.1	8.5	
8.2		32.5	Ca	7.7	10.3	9.4	8.2	6.2	9.8	10.3	11.0	
10.2		36.5			9.5	9.4	8.2	8.7	8.0	8.7	11.5	
9.9		37.0			10.3		9.4	11.7	9.6	10.1	12.5	
9.0		43.0	a	9.0	10.4	?	9.8	14.7	10.4	10.4	13.0	
8.5		43.0	a	8.7	10.2		10.0	16.2	9.8	8.4	14.0	
10.4		43.5			10.4		10.0	22.7	?	9.6	15.5	
8.0		43.5	C	7.4	9.4	9.5	10.2	33.7	9.1	8.9	17.5	
10.4		46.5			10.4		9.2	36.7		9.6	22.5	
9.4		46.5			9.8	9.8	10.0	42.1		9.6	22.5	
10.4		48.5			9.8	10.4	9.8	47.7		9.7	22.5	
9.8		50.5			10.4		10.2	49.7		8.9	28.0	
9.6		51.5			10.4		9.4	51.2	9.5	8.6	29.8	
9.4		53.5		9.9	9.8	9.9	9.6	52.7		7.6	32.8	
10.3		53.5			9.6	9.5	8.9	56.7	9.3	9.6	38.3	
10.4		54.0			10.0		9.4	59.2		10.4	38.8	
10.4		57.5			9.4	9.7	10.1	1.7		9.3	39.8	
9.8		58.0		9.9	10.3		9.8	2.7		10.3	46.3	
10.4		2.5		9.5	9.2	9.6	10.2	4.2		10.2	47.3	
9.5		2.5			9.1	9.4	9.6	4.2		9.6	53.3	
10.2		6.0			10.1	10.1	10.0	8.2	9.5	10.4	53.8	
10.2		7.0			9.8	9.7	9.0	9.7	9.0	9.7	6.3	
10.2		8.5			10.2		10.0	14.2		9.7	11.3	
9.0		18.0		9.0	9.8	10.1	10.1	14.2	10.1	10.0	12.3	
9.1		18.0		9.5	10.1		9.7	14.7		10.0	15.8	
9.4		20.0		9.5	10.4		10.2	17.7		9.2	17.8	
10.2		20.0			10.2		9.8	20.7	9.3	8.4	19.8	
9.2		33.0	Ca	8.7	9.2	9.2	9.7	22.7	9.2	10.3	21.3	
10.4		35.0			10.4		10.3	23.7		9.4	23.3	
8.9		35.5	a	8.3	10.0		9.8	25.2		9.6	25.3	
10.4		50.3			10.3		9.8	27.7	10.1	9.8	33.3	
10.2		50.5			9.4	9.3	10.3	31.5		10.0	35.4	
9.7		51.5		10.1	10.2		9.8	32.0	8.8	9.5	35.8	
9.8		53.0		9.7	10.4	9.9	9.0	33.5		9.5	38.3	
10.4		57.5			9.7		9.8	38.5		10.3	38.3	
9.0		58.0	a	9.1	9.6		9.4	40.5	9.8	10.3	38.8	
9.4		1.5	a	9.2	10.2		9.7	43.0		9.6	42.3	
9.6		3.5		10.1	10.0		10.1	45.0	10.1	9.1	42.3	
9.5		5.5			10.0		9.7	46.5	9.5	10.4	43.3	
9.3		9.0		9.5	9.2	9.5	10.2	4.0		9.3	44.8	
9.0		10.5		9.2	10.4		9.5	6.5		10.4	44.8	
9.5		22.0		9.7	9.2	9.4	10.2	12.5		9.4	45.8	
10.4		24.0			7.5	7.0	10.2	14.0	9.8	10.4	49.8	
9.8		25.5			9.8		10.1	20.0		10.2	51.3	
8.3		26.0	Ca	8.2	9.9	9.6	9.7	20.5	9.4	10.4	51.3	
9.8		30.5			9.4		9.5	23.5	9.6	10.1	52.3	
8.7		31.7	Ca	8.7	9.3	9.4	9.6	30.5	9.6	9.6	52.3	
9.4		31.7			9.9		9.8	31.5		10.2	52.3	
8.4		43.0	C	8.0	8.8	9.1	9.8	32.5	10.1	10.3	56.7	
8.6		43.0			10.1		8.7	44.5	9.0	9.6	57.2	
9.4		48.0		9.7	9.4	9.8	10.2	45.0		9.8	58.7	
25Pr.	+ 1 5.4	-2.3			+ 1 5.5	-2.4		+ 1 5.5	-2.5		+ 1 5.6	-2.7

2041-2100.				2101-2160.				2161-2220.				2221-2280.					
mag.	7h.	-19°		mag.	7h.	-19°		mag.	7h.	-19°		mag.	7h.	-19°			
	m s			m s	m s			m s	m s			m s	m s				
10.4	14	59.7	55.7	10.0	17	27.4	2.8	8.9	19	47.8	34.7	9.5	9.6	22	45.5	22.5	
10.4	15	1.2	55.9	9.5	9.5	35.4	34.9	9.5	9.5	50.8	32.8	9.5	9.3	22	51.0	51.2	
10.1		1.2	4.4	10.3		38.0	58.5	10.0		56.8	9.2	10.3		10.3	51.0	52.3	
10.4		2.7	41.7	9.2		38.9	34.6	10.0		57.3	2.2	10.0		10.0	51.5	9.8	
9.4		6.2	53.0	9.7		40.9	44.5	9.8		20	1.3	56.9	9.8	9.4	52.5	19.0	
10.4		7.2	0.3	9.4		41.9	2.0	8.4		3.8	11.5	GCa	7.3	10.3	56.5	43.4	
10.0		7.7	19.0	9.9		45.9	19.4	10.2		10.8	53.1			10.0	2.5	10.6	
10.1		11.7	19.0	9.7		57.9	59.5	10.3		13.8	17.6	9.5		10.4	6.3	20.5	
10.3		15.2	53.0	9.7	18	1.9	46.3	10.2		18.7	33.0			9.5	9.5	6.5	
9.7		20.7	26.9	10.3		2.9	3.6	10.1		21.7	33.0			10.1	8.0	43.5	
9.0		21.2	42.3	9.1	10.1	6.9	38.3	9.4		22.7	48.8	9.5		9.8	9.8	18.6	
9.0		22.2	14.9	9.2	10.3	7.9	28.3	10.2		32.2	32.3	9.5		10.1	11.8	34.9	
9.0		23.7	23.2	9.5	10.3	8.9	54.3	9.5		32.7	26.9	10.0		10.3	12.3	6.7	
10.3		24.2	7.3			9.9	58.6	9.8	10.3	35.7	49.3			9.4	14.8	31.4	
10.3		24.7	26.8			8.5	11.9	9.3		42.7	55.2			10.4	15.3	44.5	
9.8		29.7	11.1			9.2	18.4	8.8		46.8	58.1	9.3		10.0	21.3	51.1	
9.9		32.2	20.9			9.2	19.4	9.8	9.9	48.7	4.5			10.4	21.3	38.7	
9.6		36.2	12.0			10.0	20.9	9.5		52.7	15.0	9.8		10.3	21.8	16.7	
9.9		37.7	47.8			9.6	22.9	9.4	9.6	55.7	35.8			8.4	31.3	54.3	
9.4		38.2	38.9	9.7	10.3	24.9	26.0	10.0		59.7	36.1			9.6	31.3	20.9	
9.6		43.7	59.7			8.5	24.9	8.1	10.4	21	0.7	8.3		9.3	31.3	34.5	
9.6		44.2	25.8			10.4	26.4		10.4	1.7	46.4			10.0	31.3	24.8	
9.0		45.7	59.4	9.0	9.4	27.4	25.3		9.0	2.7	45.0	Ca	8.7	10.1	35.3	47.7	
10.2		48.2	4.0		9.6	42.4	42.8	9.4	9.8	6.2	37.9			10.4	35.3	9.8	
8.9		50.7	5.1	9.1	9.6	43.4	8.5	9.8	10.4	10.2	8.8			9.4	39.8	48.4	
9.0		52.2	2.8	9.4	9.6	43.9	2.5		9.9	13.2	19.0	10.0		9.2	44.3	18.5	
10.1		53.2	34.3		9.6	45.4	58.5		9.6	20.7	43.9			9.6	49.3	50.3	
9.8		53.7	36.7		9.8	50.4	41.5	10.0		23.7	21.9			9.4	51.3	8.4	
9.9		55.7	3.6		9.8	52.4	39.3	10.0		25.2	22.0			10.3	51.8	28.8	
10.0		57.2	34.6		9.9	52.9	56.3	9.3		29.7	33.0			9.4	52.3	52.7	
8.7		57.7	30.2	9.0	9.3	54.9	58.8	10.4		30.0	15.6			9.8	54.3	55.7	
9.4	16	4.0	46.9		9.7	57.4	48.0	10.4		30.2	6.3			10.0	55.3	41.7	
10.4		17.0	47.6		10.1	57.8	6.0	9.6		32.0	43.6			10.1	56.8	20.8	
8.8		20.2	57.7	9.1	9.9	58.3	19.4	9.1		36.5	41.0			9.1	57.8	6.3	
9.8		21.0	43.9		10.2	58.9	47.4	10.0		36.5	5.5	9.2		9.4	24	4.8	
10.3		21.3	34.6		9.6	59.3	17.4	10.4		40.0	32.7			9.3	5.3	41.4	
9.2		22.0	22.1	9.4	9.8	59.3	3.4	9.8		45.5	24.1			10.4	5.8	23.7	
9.5		26.0	41.3		9.3	1.3	13.6	9.2		47.5	44.8	Ca		10.1	7.3	11.8	
9.9		26.0	6.7		9.3	6.8	18.7	9.6	10.0	48.0	50.7			8.6	8.3	16.0	
10.2		27.5	45.5		9.4	7.8	23.0	9.7	10.0	48.5	54.3			10.4	10.8	28.9	
9.4		33.0	2.1	10.0	10.2	7.8	29.0	9.0		49.5	15.3			9.2	18.3	44.1	
9.0		41.0	50.0	8.8	9.6	12.3	43.8	10.1		51.0	52.0			9.6	21.3	54.3	
9.6		43.5	13.6		9.7	12.8	46.3	9.1		59.5	52.9	9.2		10.2	22.8	43.1	
9.7		47.5	49.0		9.8	17.8	9.4	10.2	22	0.0	29.6			10.4	24.3	4.9	
10.2		51.5	6.3		9.3	18.3	52.6	9.3	9.5	2.5	43.5			9.6	25.3	28.3	
9.6		54.0	54.3	9.5	9.6	22.8	50.0	9.5	10.2	5.0	31.7			10.0	26.7	32.3	
9.0		54.5	43.7	9.0	9.6	26.8	8.6			8.5	12.4			10.3	27.3	29.4	
9.9		56.0	54.0		10.2	29.8	57.7			12.5	53.9	a		8.6	31.2	31.7	
9.9		57.0	39.8		9.6	29.8	4.0	10.0	10.4	14.5	30.0			10.2	31.2	17.7	
9.8	17	8.5	10.3		10.1	30.8	18.0	9.4		16.0	55.8			8.5	32.2	16.0	
10.3		11.5	3.0		9.5	30.8	52.3	9.5	8.8	21.5	57.4	a		8.9	34.7	53.5	
10.0		11.5	6.5		9.3	32.8	13.4	9.1	9.0	22.5	55.8	Ca		8.8	40.2	3.2	
10.0		16.0	45.6	10.0	9.4	38.3	20.3		9.0	23.5	25.6			9.3	45.7	4.5	
9.6		16.0	50.1		9.0	38.8	0.6	9.5	10.4	26.0	53.8			10.4	46.7	54.7	
9.1		16.0	33.3	9.4	9.8	39.8	10.0		9.7	28.0	26.0			10.1	55.7	1.7	
10.0		16.5	41.5	9.3	8.6	39.8	40.7	9.0	9.6	28.5	23.7			9.6	1.2	22.9	
10.0		17.5	32.7		10.0	39.8	27.0		9.5	31.5	37.9	9.8		9.8	1.2	28.8	
9.9		21.0	3.0		10.2	45.8	51.7	9.9	9.9	31.5	9.0			9.6	2.2	50.5	
9.8		22.5	14.7		9.5	45.8	33.3	9.5	9.4	32.5	19.0	9.5		10.0	7.7	15.9	
10.1		23.5	21.5		9.5	45.8	32.3	9.5	10.0	45.0	55.9			10.3	11.2	45.2	
25pr.	+	1	5.6	-2.7	+	1	5.7	-2.8	+	1	5.7	-2.9	+	1	5.8	-3.0	

2281—2340.				2341—2400.				2401—2460.				2461—2520.				
7h.		-19°		7h.		-19°		7h.		-19°		7h.		-19°		
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s	
25	20.2	27.3		28	20.9	40.0		31	20.1	32.7		33	29.2	59.3	Cal 7.7	
	25.2	23.9	9.5		26.4	33.0			22.1	15.6			33.7	55.1		
10.4	31.7	13.9		10.1	31.4	29.7	9.7		22.6	32.9	9.5		33.7	14.7		
10.0	32.2	1.6		9.6	32.4	6.9			22.6	30.3			33.7	58.5		
9.3	35.2	52.4	9.1	9.1	34.9	23.9			25.1	24.2			35.7	8.5		
9.5	40.2	56.3	9.8	10.5	35.6	22.9			27.5	37.5	9.8		42.2	0.1		
10.3	40.7	39.6	9.5	10.2	36.9	46.4			28.6	30.5	9.7		43.2	18.1		
10.2	44.2	16.6	9.4	10.4	41.4	34.8			30.1	59.2	9.3		44.2	17.7		
10.2	50.2	22.5		10.5	42.2	34.3			31.5	38.1	9.6		47.7	8.5		
10.1	51.2	47.3		10.3	42.7	55.3			33.0	17.7			47.7	11.1	9.6	
9.6	52.2	25.4	9.8	10.0	43.4	2.4		10.3	35.0	18.2		9.6	53.2	45.3		
9.4	53.7	7.2	9.6	7.2	45.4	52.1	GChl 7.3	10.1	35.5	16.3		8.7	54.2	28.3	C 9.1	
10.4	55.2	31.9		9.8	49.4	59.9		9.2	37.0	42.7	a	8.9	55.7	56.5		
8.8	1.2	14.9	GCal 7.6	10.2	29	7.9	23.5	9.4	9.4	44.5	15.4		9.8	2.7	49.7	10.
9.4	1.2	46.2		10.2	9.9	26.7		?	9.9	47.5	51.1		10.3	8.2	29.7	
10.4	6.2	44.7		10.2	10.4	32.1			9.1	49.5	6.1	9.3	10.1	9.2	39.0	
10.1	6.7	33.7		10.3	19.4	23.4			9.9	54.0	44.3		10.2	12.7	55.1	
9.7	7.7	22.7		10.5	21.3	59.5			9.9	54.0	56.5		10.0	13.7	24.1	
10.1	9.7	59.6	9.8	9.8	21.4	24.3			9.5	55.0	31.6	9.5	8.9	17.2	57.9	a 9.0
10.1	17.7	31.9		9.5	22.9	53.9			10.5	32	3.0	58.2	10.3	21.2	17.1	
10.3	22.5	42.8		9.9	9.8	22.9	22.3	9.8	10.5	14.0	25.2		10.2	22.7	4.3	
9.3	27.9	14.7	a	9.0	9.5	24.4	0.2	9.5	9.8	17.0	46.4		8.7	23.7	22.1	a 9.1
10.4	28.5	32.9		9.8	24.9	10.6			10.2	17.0	24.5		9.9	26.7	9.9	
9.6	32.5	10.2		9.4	27.0	59.7		9.5	9.9	24.5	21.0	9.8	10.1	28.2	18.7	9.7
9.7	43.0	2.2		9.8	8.5	30.4	24.2	Ca	8.7	27.0	4.0	9.8	9.8	29.6	0.7	
10.2	55.0	17.7		9.6	31.9	41.1			10.4	28.0	17.0		10.0	32.1	9.1	
10.1	55.5	37.6		10.0	35.5	56.7		9.8	9.2	30.0	30.2	9.5	10.4	32.1	19.9	
10.2	58.0	43.2		8.7	38.4	27.3	a	9.0	10.2	31.0	3.8		10.2	34.6	7.3	
9.2	12.0	45.7	9.4	10.5	40.4	38.1			8.5	31.0	18.1	9.1	9.2	36.1	24.7	9.2
9.6	17.0	16.9	9.8	10.1	42.9	16.1			9.8	33.5	34.5		10.1	36.6	31.1	9.6
8.8	23.0	17.0	GC	9.0	10.4	44.6	50.1	10.5	10.5	34.0	23.6	9.8	7.7	43.6	22.4	GCal 6.4
10.1	25.0	28.1		10.3	54.6	31.0		10.2	10.2	35.0	45.3		10.1	43.6	30.4	
9.6	25.0	43.2		9.5	8.9	55.1	33.0	a	9.2	37.0	4.3	9.2	9.8	44.6	38.2	9.8
9.3	26.0	49.7		9.5	10.3	57.1	37.4		10.2	40.0	2.4		8.8	54.6	50.4	a 9.2
9.6	26.0	24.2		9.9	30	12.1	33.3		10.4	41.0	10.1	10.3	10.3	58.6	15.1	
10.4	30.0	21.9		8.6	19.1	30.4	Ca	9.0	9.8	42.0	53.7	10.	9.6	0.1	46.1	
10.4	35.0	56.2		8.5	22.1	7.1		9.0	10.5	45.0	56.3		9.9	3.6	25.5	
10.4	35.5	27.9		10.4	23.1	1.5		9.8	9.5	47.5	12.9		10.4	8.6	13.7	
10.3	35.5	38.0		9.5	24.1	38.7			10.4	48.0	50.3		9.9	9.1	1.5	
9.2	38.5	11.7		9.6	32.1	45.0			9.2	49.5	45.2	9.5	10.5	10.6	30.3	
9.2	38.5	12.0	C	9.1	9.5	38.1	14.8	9.5	9.4	50.0	31.3	9.5	9.1	13.1	34.8	9.5
10.3	39.0	42.1		9.8	40.1	22.9		10.2	10.2	50.5	5.9		10.5	13.6	43.5	
10.3	40.0	38.3		9.2	42.1	18.6		9.3	10.2	51.0	3.5		10.5	16.6	9.1	
10.3	40.5	38.1		9.6	43.1	48.7			10.2	52.5	18.0		10.5	17.1	30.3	
9.9	45.0	54.9		10.4	47.6	15.7			9.9	56.5	56.2		10.5	21.2	59.1	
10.3	46.0	51.2	9.8	10.4	48.6	7.6			10.4	33	4.0	54.6	9.8	21.6	31.5	
10.3	46.5	12.1		10.3	51.1	40.8			9.4	6.0	24.8	9.8	10.5	23.5	35.0	
9.5	48.0	13.1		9.3	52.6	48.9			9.6	7.2	21.1	9.7	9.2	29.1	57.1	9.6
7.8	50.0	8.6	GCa	6.2	8.5	56.6	35.2	Ca	8.7	10.3	8.2	46.5	10.5	31.5	28.4	
9.1	52.3	59.6		9.4	10.4	57.6	2.2		10.3	11.2	2.5		10.4	33.6	31.9	
9.7	59.0	12.4		9.2	58.1	56.2		9.3	9.2	13.7	27.7		10.4	35.6	34.3	
9.9	0.0	54.1		9.9	59.6	2.8			8.7	14.7	33.5	Ca	9.1	36.6	10.1	
9.8	1.0	35.8	9.8	9.8	31	1.6	37.7		9.9	15.7	13.3		9.2	36.6	19.7	
9.8	2.8	27.6		9.6	2.1	54.5		9.4	9.2	17.7	34.1		9.3	36.6	16.4	
10.0	5.0	50.7		10.3	3.1	19.1			9.6	21.2	55.7			38.1	19.4	9.5
9.4	7.4	52.4	9.4	5.8	12.1	25.4	GCal 5.8	9.5	9.5	21.3	59.3		8.9	38.6	13.5	9.3
10.0	10.4	6.1		10.4	12.1	20.2			10.3	22.7	10.1		9.9	42.5	18.3	
10.2	14.4	32.3		10.1	13.1	44.2			10.5	23.2	25.0		10.3	43.6	36.1	
9.8	15.9	43.4		10.4	14.1	20.0			9.4	27.7	45.7	a	9.1	43.6	12.3	
10.5	19.8	22.4		9.5	16.6	52.3			10.3	28.7	32.1		10.5	46.5	36.1	
25pr.	+ 1 5.8	- 3.1			+ 1 5.9	- 3.2				+ 1 6.0	- 3.3			+ 1 6.0	- 3.4	

2521-2580.			2581-2640.			2641-2700.			2701-2760.		
mag.	7h	-19°	mag.	7h	-19°	mag.	7h	-19°	mag.	7h	-19°
9.9	35 47.1	14.8	10.4	38 11.3	38.3	9.4	40 35.6	24.8	9.5	43 12.7	34.0
10.2	48.1	53.7	9.2	11.3	37.3	9.1	37.1	54.7	9.4	13.7	51.2
10.4	50.6	46.3	10.4	12.3	9.7	10.3	39.1	42.8	10.0	27.7	49.6
10.4	52.1	14.7	9.6	12.9	15.3	9.5	45.1	40.0	9.2	29.7	47.9
10.2	56.1	33.9	10.2	13.4	12.7	9.8	47.1	9.1	9.5	9.8	35.7
10.3	56.1	8.7	10.4	14.3	28.2	10.4	49.1	6.2	9.6	35.7	33.0
10.4	56.1	23.5	9.9	17.4	0.9	9.6	49.5	56.8	9.2	35.7	35.1
10.4	36 1.4	33.3	10.2	18.4	12.3	10.5	55.5	5.7	10.3	37.2	38.9
10.4	5.4	13.3	9.4	21.3	0.9	9.9	57.5	2.1	10.5	42.7	4.9
10.5	8.4	1.8	10.1	22.8	34.8	10.1	58.1	32.7	10.4	44.2	53.3
10.5	12.6	57.8	10.3	23.3	54.2	9.9	41 0.0	44.9	9.5	9.4	44.7
10.2	15.6	58.2	9.0	24.3	58.9	9.3	9.2	1.0	9.4	10.0	45.2
10.4	15.9	42.7	8.9	27.3	15.7	9.1	9.6	3.0	10.5	45.7	35.9
10.4	17.4	50.9	9.9	32.3	51.8	9.5	10.4	6.7	10.5	46.7	16.4
10.5	25.9	42.0	9.8	33.3	1.0	9.4	8.0	15.0	9.3	10.2	47.7
10.5	25.9	42.3	10.0	37.3	24.6	10.4	11.0	57.6	10.4	51.2	25.3
9.5	27.4	33.1	10.4	39.8	32.1	10.4	11.0	9.4	10.5	58.7	55.3
9.6	33.4	55.6	9.2	9.1	44.3	10.0	11.5	48.6	9.2	44 5.7	37.7
9.8	35.9	54.7	9.8	10.0	46.3	9.9	13.0	55.3	8.0	9.9	11.5
9.6	36.9	50.5	9.5	9.8	49.8	9.2	24.0	42.9	9.1	9.2	10.9
10.1	39.9	43.3	9.8	53.3	9.5	10.1	24.0	23.0	7.4	15.9	53.4
9.8	42.4	54.1	10.0	57.3	37.0	9.6	27.0	23.2	9.5	10.4	17.4
9.0	44.4	22.7	9.2	57.8	46.7	10.5	27.0	3.8	9.8	18.4	33.4
9.0	45.4	24.1	9.4	59.8	41.5	9.4	31.5	52.5	9.3	10.5	18.9
8.9	58.4	7.5	10.2	0.3	23.3	10.5	34.5	12.3	10.5	21.9	16.0
9.8	2.9	10.1	10.3	1.3	3.2	10.4	35.5	14.5	9.6	22.9	13.4
9.4	4.9	22.1	10.3	7.1	28.2	10.3	37.0	50.1	9.6	22.9	48.3
9.8	6.9	22.2	9.7	11.1	23.6	10.4	38.0	10.3	9.9	22.9	36.9
10.5	7.5	57.9	10.0	12.1	42.4	9.8	40.0	10.1	10. 10.3	23.4	43.3
9.6	8.9	19.3	9.5	8.9	13.1	9.4	43.0	9.8	10. 9.2	27.4	21.6
10.5	12.4	53.3	9.2	20.1	0.6	9.6	47.0	5.7	9.2	9.9	30.9
10.5	13.9	4.8	10.3	22.6	57.1	9.8	47.0	33.8	9.5	7.8	33.9
9.8	15.4	56.9	10.4	22.6	18.5	8.2	49.0	37.5	9.5	36.4	7.5
10.3	18.1	57.0	10.5	23.6	29.0	10.3	49.5	24.0	8.8	38.4	26.0
10.2	20.4	38.1	9.8	24.6	10.1	10.0	50.0	8.3	10.3	38.4	17.7
10.2	20.4	10.3	8.9	30.1	1.7	10.3	50.0	34.2	10.4	39.9	27.5
10.5	23.4	10.1	8.9	30.1	22.6	9.8	54.5	4.2	10.5	40.4	3.3
10.5	23.4	58.5	9.8	30.6	27.3	10.5	57.0	20.3	10.5	40.9	27.9
10.4	28.4	20.6	9.4	32.1	42.3	10.2	59.0	30.8	10.0	43.9	34.7
9.8	29.4	11.6	9.9	36.1	35.2	10.3	42 2.7	59.8	8.9	45.4	15.1
10.3	29.4	24.8	10.4	37.6	27.0	9.6	6.0	11.2	10. 10.5	45 5.9	22.9
10.4	30.4	52.1	9.8	38.1	49.0	9.4	7.0	14.2	9.2	9.2	8.9
9.8	32.9	55.3	9.4	43.1	11.8	10. 10.3	14.0	52.5	10.3	11.4	31.8
9.9	33.3	55.1	10.4	48.6	25.6	8.0	16.0	40.6	9.4	11.4	43.4
9.6	33.6	57.3	10. 10.5	52.1	15.0	8.8	18.0	15.2	8.7	9.5	12.4
9.4	33.8	8.3	9.4	53.6	19.0	7.9	27.2	5.7	7.8	10.0	21.9
10.2	36.3	39.4	10.4	54.1	1.8	9.6	29.7	5.3	9.8	9.8	22.4
10.5	38.3	17.8	9.9	56.1	27.6	9.6	31.2	14.2	9.2	8.7	22.4
9.4	38.8	7.1	9.9	56.1	17.1	8.5	35.7	1.4	8.5	10.3	26.4
9.8	44.3	17.3	9.7	56.1	14.7	10.4	45.7	20.5	10.5	26.4	19.5
10.1	44.3	35.7	9.6	59.1	32.9	10.1	46.7	21.7	9.5	8.6	31.4
10.2	44.8	50.9	10.5	40 0.1	25.7	10.3	47.7	22.2	10.4	33.4	18.8
10.3	45.3	33.9	10.2	2.1	1.3	9.9	49.7	36.9	9.3	10.5	39.9
9.8	45.8	39.7	9.1	12.1	2.4	9.3	52.2	3.6	9.6	9.4	40.6
9.8	46.8	9.4	9.6	16.6	42.8	9.8	54.7	30.0	9.4	10.6	40.6
9.8	50.3	14.3	10.5	16.6	58.8	9.0	55.7	56.0	8.7	9.4	46.1
9.6	53.3	29.3	10.4	19.1	10.9	9.0	56.7	1.9	9.3	10.1	50.1
9.8	38 4.3	54.5	10.5	20.1	12.0	9.8	58.7	15.0	9.9	9.9	51.1
9.5	6.5	59.5	10. 9.6	30.1	7.8	9.1	43 1.2	10.1	9.5	10.1	53.1
10.2	9.8	36.3	10.2	34.1	22.0	10.3	2.7	15.5	9.8	9.8	55.1
25pr.	+1 60	-34									
			+1 61	-35		+1 61	-36		+1 62	-37	

2761—2820.				2821—2880.				2881—2940.				2941—3000.				
7 ^h		-19°		7 ^h		-19°		7 ^h		-19°		7 ^h		-19°		
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	
8.9	46 0.1	1.1	a	9.0	10.4	10.9	51.9	9.8	51	4.3	30.8	9.3	53	32.7	24.1	
10.2	1.1	25.2		9.2	10.4	13.8	39.4	10.4	5.8	10.2	10.4	42.1	31.6			
9.9	5.1	48.2		9.5	9.7	13.8	57.4	9.6	6.3	43.1	9.1	43.1	7.5	a	9.1	
9.2	8.6	19.4	a	9.2	10.4	19.3	35.4	9.9	7.3	9.3	9.7	43.1	20.6		9.3	
9.0	9.3	1.1	a	9.0	9.7	22.4	37.4	9.8	8.8	50.6	10.4	45.6	10.0			
9.4	11.1	17.2		9.8	10.0	26.8	43.8	10.2	10.3	38.2	7.8	48.1	7.7	Cal	8.0	
9.4	12.6	47.5		9.5	10.4	27.8	24.0	10.4	12.8	27.5	9.9	52.1	44.6			
9.8	12.6	58.6		10.4	10.4	30.4	52.0	10.2	16.3	47.8	10.4	56.1	11.5			
10.4	13.1	2.4		10.0	10.0	32.8	52.7	9.2	18.3	27.5	9.5	58.1	11.1			
10.1	16.1	6.6		9.3	9.3	33.8	16.2	9.4	24.8	48.7	9.5	54	2.6	36.3		
10.0	19.6	4.4		10.1	10.1	36.8	24.4	10.4	26.3	51.9	10.4	4.1	36.0			
9.2	24.1	25.0		10.4	10.4	40.8	6.9	9.9	28.3	0.6	9.5	9.4	5.6	28.3	9.4	
9.8	31.1	5.8		10.4	10.4	42.8	27.3	10.4	33.3	34.7	10.4	8.8	6.1	25.1	Ca	8.8
10.1	31.1	7.7		8.4	8.4	43.3	21.2	Ca	8.7	10.4	10.4	7.1	9.2			
10.4	35.1	16.7		9.7	9.7	45.3	30.1	10.4	34.3	28.4	9.1	10.4	10.1	59.6		
9.9	35.6	58.2		9.8	9.8	45.7	59.8	10.2	36.3	3.2	9.3	9.3	11.1	35.6	9.1	
9.9	36.1	40.8		10.1	10.1	46.8	46.7	9.8	37.3	47.9	9.3	9.1	11.6	57.4	9.6	
9.8	39.1	32.6		9.2	9.2	53.3	6.1	9.4	38.3	7.6	9.1	9.1	11.6	55.5	9.2	
9.4	42.1	15.7	9.7	8.8	8.8	54.8	48.9	9.2	49.8	29.2	8.8	10.4	13.1	16.0		
9.8	45.6	17.5		9.8	9.8	54.8	56.2	10.4	49.8	8.1	10.2	15.6	10.7	9.8		
10.0	47.3	32.4		10.1	10.1	56.3	43.4	9.8	51.3	10.9	9.2	9.6	21.1	51.2	9.5	
10.4	47.6	8.7		10.2	10.2	57.8	24.2	10.2	51.8	52.8	10.4	22.6	11.3			
9.6	48.6	45.0		9.7	9.7	59.0	41.9	9.8	51.8	56.8	9.9	23.1	30.6			
9.6	50.6	44.3	9.5	9.9	49	0.0	7.6	9.6	59.8	11.1	9.8	24.6	21.4			
9.8	50.6	19.2		10.2	10.2	10.0	20.7	10.2	52	2.1	9.8	29.1	25.4			
9.8	51.1	20.3		9.6	9.6	13.5	17.6	9.8	2.8	10.1	9.8	29.1	35.8			
9.8	52.1	7.6		10.0	10.0	28.5	33.1	9.3	5.3	42.9	9.4	9.9	30.6	22.1	9.3	
10.3	52.6	24.5		10.2	10.2	29.5	13.1	9.4	5.8	22.6	10.4	33.1	11.6			
10.4	55.1	10.1		10.1	10.1	34.0	30.0	9.2	6.3	58.5	9.0	34.6	47.7			
10.2	55.6	47.0		9.7	9.7	37.5	34.9	10.4	7.3	49.5	10.4	36.1	2.3			
9.8	57.1	43.1		9.6	9.6	40.0	26.8	9.5	7.3	39.9	10.2	40.1	43.0	Ca	9.5	
9.6	47	2.1	23.8	10.4	10.4	40.5	18.0	10.0	10.3	32.3	10.0	42.6	23.5	Ca	9.0	
8.2	6.9	27.8	Ca	8.0	10.4	43.0	49.4	9.1	13.7	48.2	9.2	9.6	51.1	43.2		
9.2	7.1	44.0		9.1	10.2	46.0	16.5	10.4	21.2	27.8	10.4	8.2	54.6	44.1	Cbl	8.6
8.5	9.9	20.0	Ca	8.3	10.4	54.0	6.6	9.8	32.7	31.3	9.8	9.8	57.1	52.1		9.8
10.3	10.4	38.2		9.9	9.9	59.5	3.0	9.7	40.2	23.6	9.8	9.8	57.6	0.0		9.6
9.6	16.4	35.6		9.9	50	3.5	10.1	9.7	42.2	33.9	10.4	59.6	21.0			
10.3	24.9	10.8		10.0	10.0	4.0	4.6	9.0	42.2	34.9	8.8	10.2	55.8			
10.0	26.2	59.5	9.8	10.1	10.1	6.5	7.2	9.1	42.2	20.0	8.8	10.4	2.1	8.4		
8.9	31.4	6.2	a	9.3	10.2	7.5	28.9	10.4	42.7	43.4	9.4	9.4	2.6	44.0	9.1	
9.2	31.6	10.1		9.5	9.2	8.0	51.0	9.4	8.8	46.2	Cal	8.5	10.2	3.1	36.4	
9.9	33.3	8.5		9.8	9.0	10.5	36.8	9.2	9.4	49.2	9.4	9.4	6.0	14.7		
8.9	34.1	18.8	a	9.2	9.4	13.0	2.5	9.7	49.7	19.1	10.4	6.0	26.1			
10.5	34.9	55.7		9.3	9.3	13.5	50.4	9.4	51.7	7.5	10.4	9.3	9.0	15.3	9.3	
9.2	36.9	32.8		9.4	9.8	16.5	2.1	9.7	52.2	14.6	10.2	9.6	10.0	14.8		
9.6	37.4	16.0	a	9.4	9.1	18.5	29.6	10.2	59.2	9.8	10.2	13.0	29.5			
9.2	40.4	44.6		9.0	10.2	19.5	27.3	9.0	53	2.2	8.5	10.4	14.0	38.1		
9.6	42.4	14.2		9.4	10.2	19.5	0.0	10.2	6.2	28.8	10.4	9.1	16.0	52.3	C	8.8
10.1	44.9	9.7		10.2	10.2	20.0	50.1	10.4	6.2	27.5	10.2	10.2	20.5	6.0		
9.4	46.9	26.4		9.7	9.7	24.5	41.6	10.4	7.7	49.1	8.4	8.4	22.0	8.2	Cal	8.5
8.6	49.9	3.6	a	9.1	10.2	25.5	20.4	10.2	9.7	21.4	8.8	8.8	23.1	59.9	9.2	
9.6	50.9	16.2		9.5	9.4	27.5	50.4	10.4	13.2	29.5	9.8	9.8	26.0	56.6	10.2	
9.4	51.9	14.6		9.5	9.7	33.5	32.8	9.8	13.7	31.1	9.5	9.3	28.0	40.5	9.4	
9.8	52.3	56.4		10.0	10.0	33.5	52.0	9.8	16.0	57.8	9.8	9.9	34.0	58.4		
10.3	59.9	21.4		9.6	9.6	38.0	28.6	9.8	18.2	28.1	10.4	10.4	36.5	18.8		
9.0	48	0.4	26.2	9.5	9.2	38.8	44.1	9.5	22.2	2.2	10.4	10.4	37.0	28.2		
10.5	2.9	49.0		10.4	10.4	38.9	57.3	x	22.7	4.3	10.4	10.4	37.5	39.0		
10.4	6.8	29.9		9.4	9.4	39.0	12.5	9.9	24.2	37.6	9.2	9.2	43.0	14.0	9.5	
8.4	8.1	12.4	Ca	8.7	9.4	46.8	37.9	9.7	26.2	12.6	9.4	10.4	47.5	44.2	10.2	
10.2	8.8	31.6		9.0	9.0	51.3	57.9	9.1	26.2	33.1	10.2	10.2	52.5	17.2		
25pr.	+ 1 62	- 38				+ 1 63	- 38		+ 1 63	- 39			+ 1 64	- 40		

3001-3060.				3061-3120.				3121-3180.				3181-3240.						
mag.	7 ^h .	-19°		mag.	7 ^h -8 ^h .	-19°		mag.	8 ^h .	-19°		mag.	8 ^h .	-19°				
m	s			m	s			m	s			m	s					
10.1	55	53.0	2.1	10.4	59	2.6	4.0	9.2	2	6.3	52.2	9.1	5	26.0	0.9			
9.4		53.0	49.8	10.	9.6	5.1	13.4	9.4	10.3	9.6	9.8	10.4	26.0	55.8				
10.4	56	7.0	2.2	6.4	9.1	22.4		6.4	11.6	11.6		10.0	30.0	47.7				
10.4		8.0	18.1	10.4	10.6	43.4		10.4	11.8	15.4		10.2	30.0	23.8				
10.2		8.5	41.5	9.8	9.6	15.6	18.1	9.6	15.3	0.9	9.5	10.4	31.0	39.9				
9.7		18.5	52.8	9.9	9.1	16.1	20.4	10.2	15.3	14.1		10.2	36.0	23.5				
10.2		22.0	33.5	10.0	9.1	23.1	43.6	9.0	19.3	10.9	9.3	10.4	37.0	43.6				
10.2		24.0	41.5	10.2	30.5	24.3		10.4	24.3	42.9		10.2	39.0	0.4				
9.6		29.0	49.5	10.2	36.5	15.1		9.7	25.3	42.8		10.2	42.0	46.9				
9.7		30.5	12.8	10.4	37.5	23.8		10.	25.3	20.1		10.4	42.5	49.4				
9.0		30.8	18.2	a	9.1	9.6	37.5	29.0	9.2	37.3	37.1	9.5	10.4	51.0	19.3			
9.3		32.8	3.4	a	9.2	8.3	39.0	2.7	8.7	9.7	39.3	35.9	9.7	56.0	20.1			
9.3		32.8	22.0		9.4	10.2	40.5	51.1	10.4	39.3	8.9	8.6	6	0.0	55.5	Ca	8.5	
9.4		34.3	53.1		9.2	10.2	40.5	5.0	10.0	39.8	49.5	10.4	8.5	6.8				
9.6		35.8	52.7		10.4	1.0	51.7		9.7	54.1	20.4	9.5	10.2	16.0	50.2			
9.4		35.8	7.1	a	9.1	9.3	41.5	22.2	9.5	7.4	56.1	29.7	7.8	10.4	16.5	13.0		
10.4		38.3	6.6		10.4	4.9	54.5	7.6	10.0	57.1	46.7	10.4	19.0	45.6		9.5		
7.9		57.8	58.3	Cal	7.9	9.7	54.5	44.6	10.4	3	1.1	51.9	10.4	22.0	49.7			
9.8	57	1.3	47.0		9.5	9.9	59.5	34.7	9.7	10.4	2.1	52.9	10.4	25.0	24.5			
10.4		1.3	10.7		10.4	0	1.0	6.0	8.4	4.1	28.5	C	8.3	9.7	29.8	8.5	9.5	
9.7		3.8	21.9		9.5	10.2	4.0	12.6	9.7	13.6	16.7	9.4	10.4	34.3	52.6			
10.4		4.3	48.8		9.2	14.5	4.1		9.5	8.3	14.1	20.6	8.8	10.4	39.3	59.9		
9.4		15.8	49.3		9.2	15.5	5.1		9.3	10.2	21.6	21.7	10.2	42.8	47.5			
9.7		28.8	5.4	10.	9.4	18.0	51.3		9.4	10.1	23.1	55.4	9.6	43.8	42.6			
10.4		33.8	31.1		9.9	20.5	33.4		10.4	26.6	39.5		9.8	44.8	47.5		9.5	
10.0		35.8	17.1		10.4	21.5	19.0		10.4	32.1	6.6		9.1	51.8	16.9		9.3	
8.8		36.8	51.7		9.3	10.4	23.5	24.4	10.2	36.8	58.2		9.3	7	5.8	39.9	8.8	
10.4		39.8	40.8		10.0	25.0	52.6		10.2	40.1	58.2		8.8	7.8	2.4		9.4	
10.4		42.3	29.2		9.8	7.4	25.5	32.2	Cbl	7.5	10.4	41.1	13.4	10.4	10.8	36.0	10.	
10.2		43.8	35.4		9.8	9.3	28.0	43.3	9.4	10.2	41.1	36.5	10.1	14.8	59.6			
10.2		53.3	27.7		9.8	10.4	29.5	55.8	10.2	43.1	32.7		10.4	16.3	38.0			
10.4		53.3	27.0		10.4	31.5	53.4		10.4	46.6	54.0		9.0	22.8	1.6		9.5	
9.9		53.8	34.7		9.7	31.5	37.0		9.1	48.1	15.6	9.2	9.2	27.8	42.5		9.2	
10.4		53.8	42.0		10.0	37.5	47.4		9.1	50.6	41.9	9.4	9.1	30.8	5.0	C	8.9	
8.8		58.8	49.5		9.1	9.7	43.5	30.7	10.4	54.1	9.8		10.0	31.3	23.3		9.5	
10.4	58	0.8	51.8		9.2	45.5	14.0		9.3	58.6	20.4		9.8	31.8	39.9		9.8	
10.4		1.8	2.1		10.2	48.5	1.7		10.	9.7	3.1	32.6	10.	10.4	32.6	46.2		9.8
10.1		2.1	41.4		10.4	49.0	49.3		9.2	5.1	7.9		9.3	10.0	33.8	27.6		9.5
9.6		2.1	56.6		10.	10.4	49.0	20.0	8.3	6.6	51.9	Ca	8.7	8.8	37.0	5.0	C	8.8
10.4		3.6	38.3		9.7	52.5	30.0		9.1	7.1	5.9		9.3	10.4	38.9	44.9		
9.6		8.6	24.1		10.	8.2	55.0	28.0	Cbl	8.0	10.0	9.6	39.7	10.4	42.3	17.3		
9.7		12.1	35.3		8.4	59.5	58.7		Ca	8.2	10.1	11.6	57.4	10.4	55.6	17.2		
10.4		14.6	12.8		9.4	59.5	18.9		9.3	8.6	11.6	47.0	a	9.2	10.4	55.8	55.0	
10.2		16.6	20.7		9.1	2.3	44.8		9.0	8.6	13.1	53.5	a	9.2	10.4	0.4	10.1	
9.3		19.6	24.2		9.4	9.7	6.3	25.9	9.5	8.8	19.1	18.1		9.0	9.0	0.4	32.3	9.4
9.6		22.6	33.4		10.	10.4	8.8	10.2	10.4	21.6	5.2		9.0	9.0	1.4	9.4		9.3
10.1		23.0	58.3		9.4	9.7	15.3	39.0	9.2	9.2	26.0	30.9	9.3	10.0	2.2	6.3		
9.8		25.6	19.9		9.8	15.3	58.1		9.2	9.2	35.0	32.2		10.4	2.4	28.7		
9.9		27.6	30.6		9.2	17.3	1.9		9.3	10.2	40.5	49.6		9.5	3.8	22.6		9.4
9.1		30.1	20.7		9.2	17.3	7.7		9.5	9.3	42.0	47.7	9.2	10.4	5.2	52.4		
8.6		30.6	1.1		8.7	10.4	19.3	47.4	10.1	43.0	43.1		10.0	12.8	6.1			
9.6		32.6	4.5		9.8	10.4	20.8	11.3	8.8	52.0	39.0	Ca	8.7	9.6	15.4	43.4		9.8
10.4		38.1	50.1		9.4	25.3	38.0		10.2	52.5	53.8		8.6	16.9	16.8		8.8	
10.4		42.1	46.2		10.4	27.8	37.2		9.4	9.0	26.1		9.1	17.9	51.8			
10.4		46.6	24.7		10.2	35.3	42.4		10.4	3.0	19.8		10.4	18.0	36.1			
9.9		54.6	41.5		10.2	39.8	28.2		9.4	8.0	20.5		9.2	21.3	25.4		9.3	
9.0		55.1	25.4	Gatlr	8.6	9.3	40.3	42.0	9.5	8.6	9.0	16.5	9.0	8.6	26.4	17.2		9.1
10.4		55.6	53.5		9.6	52.3	54.6		10.4	21.0	48.4		9.4	27.3	15.3		9.3	
10.4		59.6	7.2		9.0	52.3	51.5		9.3	9.7	25.0	40.7	9.8	10.4	29.9	0.5		
8.6	59	2.6	25.3	GCbl	8.9	10.2	2	5.3	9.2	26.0	16.2		9.5	10.4	33.4	46.2		
25Pr.	+ 1	6.5	-4.1		+ 1	6.5	-4.2		+ 1	6.6	-4.3		+ 1	6.7	-4.4			

389-ANCAP... 8h

3241—3300.				3301—3360.				3361—3420.				3421—3480.						
mag.	8h	-19°		mag.	8h	-19°		mag.	8h	-19°		mag.	8h	-19°				
8.6	34.9	4.2	9.8	10.2	11 6.8	17.0	9.8	8.8	14 35.6	21.2	8.7	9.9	18 13.5	46.2				
8.8	36.9	16.0	9.1	9.2	10.0	58.0	9.1	10.4	47.5	26.7	9.8	9.8	18.0	53.4	9.4			
9.8	37.9	33.4		8.6	12.8	32.2	C	8.5	8.6	50.0	41.7	Ca	8.7	10.2	30.0	23.0		
9.4	39.4	57.2	9.5	9.9	13.3	35.2		9.8	9.8	52.0	25.2	10.°	9.3	30.0	21.2	9.6		
10.4	41.9	48.7		9.4	13.3	16.4		9.8	9.8	54.5	2.0		9.9	31.5	13.4			
8.2	47.4	14.8	Cbl	8.3	17.0	59.1		10.2	10.2	58.0	42.8		10.4	32.0	28.8			
9.2	50.9	29.0		9.4	18.3	24.6		9.8	15 5.0	29.5		10.1	33.0	53.2				
9.4	55.9	52.6		9.4	19.3	13.0		10.4	10.4	10.5	38.2		9.6	39.0	19.0	9.4		
9.5	58.9	31.0		9.5	24.8	53.0		9.6	12.0	2.4		9.4	9.9	42.0	11.8	9.6		
9.3	9 10.9	7.9		9.5	30.3	14.2	10.°	10.0	20.0	32.5		9.9	9.9	45.0	51.0			
9.3	15.4	58.3	8.9	9.3	36.8	43.0		9.2	22.0	46.6	9.4	10.4	47.0	1.8				
10.4	20.9	48.4		10.4	36.8	37.0		10.2	26.0	0.2		9.3	53.0	36.3	a	9.2		
9.4	24.4	34.0		9.5	10.1	38.3	32.2	9.5	9.2	34.0	0.1	9.1	10.4	19 0.2	57.2			
9.0	28.9	0.6		9.0	8.6	38.8	45.2	9.1	10.1	35.5	44.3	10.4	10.4	6.0	22.6			
9.4	34.9	18.3		9.5	10.4	41.8	27.8		9.4	42.0	57.8	9.5	9.3	6.5	45.0	9.4		
10.4	34.9	46.0			9.2	44.3	5.2	9.7	10.2	42.0	21.1		9.8	18.0	35.7			
9.5	37.4	44.8			10.4	50.8	43.6		10.4	42.0	24.0		9.4	22.0	30.9	9.3		
9.5	50.4	37.0		9.1	9.9	52.8	24.4		8.8	44.0	0.0	9.0	9.3	24.0	32.1	9.3		
9.4	51.4	28.4		9.3	10.4	58.8	56.3		8.2	44.5	9.4	Cbl	8.5	9.8	28.0	33.6		
9.0	53.4	22.8		9.1	9.6	12 0.3	45.2		6.6	46.0	40.9	GCbl	5.8	10.0	35.5	44.6		
9.6	56.4	46.6		9.0	0.8	38.5		9.6	10.4	50.5	52.0		9.6	36.0	34.8	9.4		
9.2	10 3.9	19.0	8.9	9.3	6.8	51.8		9.4	9.2	55.6	59.0	9.4	9.6	43.9	36.6			
10.4	5.9	19.8		10.2	9.1	29.7		9.7	9.0	57.5	29.0	9.3	9.8	47.4	49.8			
10.2	6.4	45.0		10.4	17.8	24.2			8.8	59.0	48.1	a	9.2	10.2	51.9	41.7		
9.8	10.4	58.4		10.2	17.8	59.4			10.4	59.0	30.8		9.5	20 0.4	26.3			
10.1	10.4	54.2		10.4	22.8	24.0			9.2	16 2.0	46.4	9.6	10.2	1.4	48.3			
10.2	10.9	5.9			8.3	32.3	48.3	8.8	10.2	2.0	9.8		9.3	1.9	25.7	9.1		
9.6	12.4	11.1	10.°	9.0	41.3	23.2		9.3	9.8	7.5	28.8		10.4	7.9	31.4			
9.9	12.8	45.9			8.4	47.8	53.2	a	9.0	10.4	10.5	39.2	10.4	11.9	14.1			
9.0	15.3	37.2	9.4	8.6	49.8	53.9	a	9.0	10.1	14.2	57.0		9.4	13.9	6.1			
9.2	16.3	53.0	9.3	8.5	56.8	34.4		8.9	8.6	19.5	41.2	a	8.8	8.8	14.4	34.6	b	8.7
9.4	18.3	39.2	9.7	10.2	13 7.3	36.6		10.4	22.0	54.8			10.4	15.9	24.3			
10.4	20.3	55.6		9.4	17.6	11.7		9.8	10.2	22.0	2.8		10.4	17.7	57.9			
7.8	20.3	40.8	Cbl	8.3	9.6	24.6	1.0	9.5	9.2	30.0	43.8		9.8	9.6	18.4	15.1	9.1	
10.4	23.3	12.5		10.4	24.7	57.7			9.0	35.0	35.8	a	9.2	10.2	24.9	22.1		
8.3	23.3	1.7	Cbl	7.5	9.4	29.1	57.6	9.5	10.2	37.0	19.0		9.0	27.4	12.1	C	8.8	
10.0	26.8	31.4		10.2	35.6	46.9		9.7	10.2	38.0	53.2		9.4	29.4	52.5	9.8		
9.9	29.3	36.4		10.2	36.1	25.4			9.6	41.5	53.8	9.8	9.8	44.4	2.9			
10.0	30.3	35.2		9.0	37.6	56.0	a	9.3	10.2	50.5	48.8		9.4	56.9	23.5	9.3		
9.4	30.3	13.1	9.3	10.2	39.1	48.5			9.6	56.0	47.0		9.8	21 11.9	2.2	9.5		
9.3	33.3	0.6		9.3	41.6	49.8		9.5	10.1	57.5	27.4		10.2	13.4	41.1			
9.0	33.8	25.6	9.3	9.3	47.6	25.0		9.4	9.2	58.0	22.8	9.0	10.2	13.4	56.9			
10.4	34.3	47.2		6.6	48.6	46.4	Cal	7.0	9.8	17 2.0	7.2		9.8	13.9	2.3			
10.1	36.3	31.2	9.5	9.6	53.1	25.7			9.5	7.0	47.0	9.8	10.2	21.3	47.4			
9.0	36.8	38.7	9.4	9.6	56.1	41.6		10.°	9.8	14.0	10.2	9.8	9.8	22.8	42.0	9.5		
9.4	39.8	16.1		8.8	14 0.1	15.4		9.3	10.0	15.5	33.4		9.8	9.8	26.8	17.2		
10.1	42.3	13.5		10.1	0.1	5.5			10.2	21.0	8.8		10.4	30.3	50.2			
9.2	42.3	19.6		10.4	0.6	29.2			9.3	22.5	55.4	9.4	10.2	35.8	44.0			
9.8	47.3	14.6	10.°	9.9	2.1	2.2			9.6	26.5	26.2	9.7	10.4	37.8	52.4			
10.1	49.8	15.8		10.4	2.6	12.8			9.3	27.0	34.4		9.6	39.8	2.0	9.6		
8.4	52.3	38.8	C	8.2	9.6	4.1	11.2		9.6	34.0	39.0	9.3	9.6	44.3	22.7			
10.2	52.3	25.6		9.6	10.1	33.2		9.8	9.8	40.0	54.6		9.6	45.3	34.5	9.5		
10.1	53.8	46.4		9.0	10.6	43.9	Ca	9.0	10.4	40.5	49.8		9.4	45.8	13.0	9.4		
9.2	56.8	10.6	9.3	10.4	18.1	57.4			9.6	53.0	39.0	a	9.4	9.3	47.8	45.3	9.5	
10.1	56.8	19.6		9.2	20.1	24.5		9.8	8.8	56.0	21.1	a	8.9	10.4	47.8	38.8		
8.8	57.0	59.5	C	9.0	9.2	23.1	40.7	9.5	10.4	59.7	57.4		10.1	49.8	51.0			
9.3	57.3	12.3		9.5	9.6	25.1	1.7		9.2	18 7.0	24.2	9.5	10.4	56.8	35.0			
10.2	58.3	10.0		9.8	30.6	0.0			9.3	8.5	19.6	10.°	9.8	57.8	36.4	9.7		
9.4	11 0.3	20.9	9.5	8.6	32.6	52.7	a	9.0	10.2	12.0	17.1		9.5	22 11.3	47.2	9.5		
9.3	4.8	36.4		10.4	35.1	16.4			10.2	13.0	44.1		10.2	16.3	6.0	9.5		
25Pr.	+1 6.8	-4.5																
					+1 6.9	-4.6												
									+1 7.0	-4.7								
														+1 7.1	-4.8			

3481-3540.				3541-3600.				3601-3660.				3661-3720.								
mag.	8h.		-19°	mag.	8h.		-19°	mag.	8h.		-19°	mag.	8h.		-19°					
	m	s			m	s			m	s			m	s						
9.4	22	16.8	16.6	9.3	10.4	26	15.0	44.9	9.0	10.5	29	34.1	15.4	8.6	32	36.4	59.6	a	9.0	
9.0		19.8	47.0	C	8.5	8.8	15.5	48.9	W	9.5	10.4	36.1	16.6	10.2	36.9	4.7				
9.6		20.3	32.0		9.5	9.2	18.0	42.1		9.5	10.4	43.1	57.4	8.5	40.4	15.4			8.9	
9.9		25.8	39.5		10.0	10.0	25.0	19.8		10.5	10.5	50.6	57.6	9.2	41.9	9.7			9.0	
10.2		29.8	3.7		10.1	10.1	32.0	2.7		8.9	8.9	51.6	21.1	8.6	9.4	42.9	39.1		9.5	
10.4		30.3	41.8		8.5	8.5	32.5	15.7	a	8.7	9.3	51.6	53.5	9.4	10.4	45.1	11.7		?	
10.2		30.3	51.0		10.4	10.4	33.0	53.9		10.5	10.5	52.1	54.6	10.4	10.4	52.4	28.7			
9.6		37.8	1.7	9.4	9.6	9.6	36.5	17.1		8.0	8.0	53.6	55.5	8.7	10.4	54.9	27.4			
9.0		48.3	1.9	9.0	8.5	8.5	39.0	32.7	Cbl	8.2	9.8	58.0	59.0	9.9	9.9	56.9	19.9			
10.4		52.3	38.2		9.9	9.9	41.5	2.7		9.8	9.8	30	3.0	9.8	7.7	33	2.9	17.9	G Cbl	6.7
9.0		55.3	21.9	9.1	10.1	10.1	43.0	14.9		10.0	10.0	3.5	17.7	9.8	9.8	5.9	49.2			
9.6		1.4	57.4		10.1	10.1	47.5	11.1		10.5	10.5	8.5	47.1	10.5	10.5	12.9	31.8			
9.3	23	2.3	21.1	9.2	10.2	10.2	51.5	16.1		10.4	10.4	12.8	57.2	9.6	9.6	13.9	40.4		9.0	
10.4		11.7	14.7		10.4	10.4	54.4	59.7		10.4	10.4	13.0	47.3	10.2	10.2	14.9	48.6			
10.4		16.0	59.2		9.9	9.9	55.0	45.4		9.3	9.3	14.0	50.1	10.0	10.0	17.4	6.6			
9.9		17.7	33.1		9.3	9.3	56.5	39.0		9.1	7.9	21.0	39.0	8.8	9.4	30.4	7.1			
9.4		21.7	22.7	9.5	9.6	27	0.0	24.6		10.4	10.4	22.0	48.7	9.3	9.3	31.2	34.0		9.4	
8.8		23.7	50.0	8.8	10.0	10.0	1.5	26.0	10.0	9.2	26.0	53.5	31.7	9.4	10.4	31.7	15.0			
10.2		26.7	9.5	9.8	9.5	9.5	3.0	0.3	9.5	9.6	32.0	15.5	31.9	8.9	8.9	31.9	32.6	a	9.0	
10.2		31.7	2.7	9.8	9.3	9.3	5.0	47.5	9.4	10.0	34.0	50.1	32.2	10.0	10.4	32.2	43.4			
10.2		32.7	8.7	9.4	9.4	9.4	7.0	51.6	W	9.1	10.4	36.0	45.5	10.5	10.5	32.7	49.4			
9.8		35.2	20.3		10.2	10.2	11.5	14.4		10.4	10.4	43.5	16.0	9.6	9.6	36.7	5.7		9.8	
9.2		38.7	12.3	9.3	10.4	10.4	12.5	18.8		10.5	10.5	46.5	34.5	9.7	10.4	39.2	49.6			
10.2		38.7	5.8		9.8	9.8	21.5	30.3		9.5	10.5	47.5	30.7	10.4	10.4	43.7	12.3		9.7	
9.6		46.7	22.0	9.4	10.0	10.0	21.5	38.5		10.0	10.0	48.0	33.3	8.7	8.7	43.7	59.6	a	9.0	
8.8		9.2	41.4	8.5	9.8	9.8	22.5	21.0	9.8	10.4	54.5	17.2	9.3	9.3	44.2	52.1		9.4		
9.8		11.2	36.0		10.4	10.4	22.5	20.3		9.9	56.0	20.9	54.7	9.6	10.0	54.7	46.5			
9.2		15.7	19.2	9.2	10.4	10.4	29.5	49.8		8.8	58.0	35.7	3.7	9.0	10.0	3.7	6.4			
9.6		19.7	14.9	9.4	10.4	10.4	37.5	42.2		9.2	31	1.0	6.1	9.1	10.5	3.7	6.4			
10.0		27.2	8.9	10.2	10.2	10.2	38.9	15.9		10.5	4.0	54.6	3.7	10.4	10.4	3.7	2.0			
10.0		31.7	13.4	10.0	10.0	10.0	40.2	52.3		9.6	5.0	25.6	4.7	9.8	9.2	4.7	30.0		9.6	
10.4		32.7	15.4		9.8	9.8	43.2	49.3		10.5	7.0	41.9	6.7	10.0	10.0	6.7	25.6			
9.4		39.7	38.5	9.1	10.5	10.5	44.2	41.3		9.9	17.0	1.9	7.7	9.9	9.9	7.7	50.2			
8.8		45.2	52.1	8.3	10.2	10.2	46.7	56.5		10.5	18.0	16.8	13.7	10.4	10.4	13.7	30.2			
8.8		45.7	0.9	8.8	8.7	8.7	51.7	20.7	a	9.0	20.0	30.6	16.2	10.2	10.2	16.2	29.0			
10.4		53.2	7.9		8.4	8.4	52.2	18.7	a	8.8	21.0	6.4	18.7	9.8	9.8	18.7	33.9			
10.2	25	0.2	52.0		10.5	10.5	55.2	6.1		9.8	8.8	23.0	23.5	9.1	9.9	24.2	25.6			
9.5		3.2	28.4	9.5	10.5	10.5	57.2	51.9		9.4	24.0	24.6	26.7	9.5	10.2	26.7	51.0			
9.5		25.5	40.5		10.5	10.5	5.1	59.8	28	1.2	4.6	26.0	22.7	10.4	10.4	36.7	6.8			
9.6		26.0	4.0		10.5	10.5	5.1	59.8		9.4	31.5	26.2	37.7	10.2	10.2	37.7	53.3			
7.7		29.0	53.1	Ca	7.8	10.4	5.2	53.1		10.0	40.0	42.2	39.6	10.2	10.2	39.6	28.0			
9.2		31.0	45.0		9.1	10.4	7.0	16.1		9.5	42.0	56.1	44.2	10.4	10.4	44.2	21.2			
10.2		35.0	20.3		10.4	10.4	10.6	57.9		10.2	43.0	46.4	50.7	9.5	8.6	50.7	0.3	Ca	8.5	
10.4		35.5	11.6	10.0	10.2	10.2	20.0	36.7		9.2	47.5	48.2	52.7	9.2	10.4	52.7	19.7			
10.4		39.0	11.2	10.0	8.4	8.4	21.6	38.4	C	8.8	48.4	10.4	53.2	10.5	10.5	53.2	35.5			
9.3		43.7	57.9		9.5	9.6	23.1	25.3		9.3	48.9	45.4	53.7	10.2	10.2	53.7	41.6			
10.4		45.5	32.7		9.4	9.4	25.6	50.1		10.2	53.9	39.7	3.7	10.0	10.0	3.7	38.1			
7.8		46.5	5.1	Gatlr	7.7	8.4	26.1	49.0		9.1	56.4	28.0	12.7	10.2	10.2	12.7	15.1		9.5	
10.2		50.0	27.1		10.0	10.0	36.8	50.3		10.2	59.9	41.5	13.2	9.8	9.8	13.2	14.5			
9.2		52.5	55.7	9.0	8.4	8.4	42.1	8.3	a	9.0	32	1.9	31.7	9.8	9.8	3.7	6.1			
9.0		52.5	44.9	9.1	9.9	9.9	43.1	5.8		9.9	4.4	4.2	15.1	9.5	10.5	15.1	24.4			
10.2		53.0	14.5		9.4	9.4	43.1	22.1		9.7	7.9	34.9	17.1	8.8	8.8	17.1	6.6		9.3	
5.7		54.0	9.3	GStlrr	5.6	9.4	53.1	32.1		9.8	8.6	58.5	30.6	9.4	9.4	30.6	21.2		9.8	
9.8		57.0	3.2		10.4	10.4	29	0.6	25.7		8.9	12.4	5.4	9.3	7.6	30.6	28.3	Ca	7.4	
9.8		58.5	55.6		9.5	9.5	4.1	3.6		10.2	13.9	0.4	33.6	10.5	10.5	33.6	57.4			
10.4	26	3.0	24.7		10.5	10.5	4.2	37.1		9.7	8.6	18.9	52.6	8.0	9.4	36.6	30.5		9.1	
9.2		4.5	37.3	9.3	9.6	9.6	7.1	58.2		9.5	9.8	20.9	49.6	9.4	10.4	36.6	11.6			
10.4		5.5	41.5		10.4	10.4	25.1	56.3		9.4	27.9	49.0	37.6	9.8	9.8	37.6	42.3			
10.4		9.5	57.1		10.4	10.4	27.6	28.5		10.2	29.9	30.8	39.1	9.0	9.0	39.1	36.8		9.2	
10.4		13.0	34.6		10.4	10.4	30.1	34.4		10.5	32.4	38.7	40.6	10.4	10.4	40.6	29.4			
25pr.	+ 1	7.2	-4.9				+ 1	7.3	-5.0			+ 1	7.4	-5.1			+ 1	7.6	-5.2	

1899-1900-1910

3721—3780.				3781—3840.				3841—3900.				3901—3960.			
gh.		-19°		gh.		-19°		gh.		-19°		gh.		-19°	
mag.	m s			mag.	m s			mag.	m s			mag.	m s		
8.0	35 42.6	0.7	Cal	8.0	39 14.2	59.7		10.2	44 18.9	42.3	9.8	9.8	50 19.8	5.2	9.5
10.0	46.6	15.0		10.2	33.7	41.2		10.0	23.9	5.9	9.4	9.4	19.8	19.7	a 9.0
9.5	47.6	10.6		8.7	37.2	12.5	a 9.1	9.6	29.9	42.7	10.0	9.2	47.4	1.5	a 9.1
10.4	54.6	35.0		9.8	41.2	6.0		9.6	35.9	5.3	9.6	9.0	52.6	9.0	a 9.3
8.4	59.6	32.7	Ca	8.3	41.7	44.9		8.9	10.5	45.9	49.4	9.2	2.6	0.0	Cb 8.2
9.2	59.6	26.8		9.4	10.5	4.1		8.6	48.4	19.4	9.0	8.6	7.4	40.9	8.5
9.6	2.6	2.5		9.8	44.2	16.2		9.6	58.4	5.0	9.0	9.0	9.9	55.1	9.1
9.4	7.6	52.0		9.4	56.7	7.5	a 9.2	10.5	2.9	56.6	9.5	9.5	12.5	10.9	9.4
10.5	12.6	18.1		10.4	59.7	32.9		10.0	4.9	46.8	9.8	9.8	28.9	53.3	
10.5	13.6	51.7		10.0	40 3.2	56.7		9.6	7.9	36.3	9.5	9.5	32.4	9.5	9.2
9.5	18.1	23.0	9.3	10.4	15.2	8.6		9.5	8.9	9.5	9.5	9.8	43.7	9.8	9.4
10.0	18.6	8.0		10.5	20.0	59.2		10.4	15.9	53.9	9.0	9.0	49.5	11.1	a 8.8
9.6	20.1	10.0		10.5	22.2	24.0		10.5	17.9	4.8	9.8	9.8	57.2	57.7	9.8
10.2	26.1	21.2		10.4	24.2	10.8		9.0	23.4	24.4	9.5	9.2	52 1.9	9.7	a 9.3
10.2	28.1	33.0		9.6	26.2	36.8		9.6	27.9	20.4	9.5	9.8	13.7	27.7	9.4
10.2	32.1	12.6		10.2	27.2	23.4		10.0	29.9	53.8	9.5	9.5	18.2	21.8	9.7
9.6	41.6	24.7	9.6	10.4	36.2	29.3		9.6	30.4	36.2	9.2	9.2	18.7	39.4	9.5
10.4	43.6	49.5		7.9	41.7	58.5	Cal 7.3	10.4	40.9	7.0	9.2	9.2	35.7	43.1	9.6
9.4	44.6	20.5	9.3	9.3	45.7	23.4	a 9.1	10.5	41.9	53.5	9.3	9.8	53 2.2	36.5	
9.6	49.1	51.8		10.2	48.2	27.9		9.2	43.9	49.6	9.3	9.8	4.3	17.5	
10.0	50.1	9.8		10.0	49.2	23.9		10.2	46 2.2	6.1	9.6	9.6	8.8	53.1	a 9.1
9.8	53.6	9.3		9.3	41 5.2	27.8	a 9.2	10.2	8.2	53.8	9.1	9.1	18.8	59.2	Ca 8.5
10.2	55.1	59.6		10.5	22.2	13.2		9.0	9.7	57.8	9.1	9.8	25.8	54.2	
10.2	57.6	51.6		9.2	25.2	10.1		9.8	10.7	18.0	9.5	9.5	47.8	22.8	9.1
9.3	37 3.4	5.8	9.5	10.4	26.1	11.9		10.5	12.7	19.8	9.8	9.8	54 3.3	29.9	
10.4	7.4	21.3		8.2	31.1	52.1	Cal 8.0	10.2	16.5	57.2	9.8	9.8	20.2	37.4	
10.5	16.4	6.2		10.5	33.1	41.5		9.9	16.7	6.4	9.1	9.8	21.5	29.0	
9.6	27.9	4.8		10.2	33.1	40.8	9.9	9.0	22.2	45.6	9.1	9.6	28.8	50.6	
10.5	31.9	57.6		10.2	33.6	0.0		9.4	27.7	38.2	9.5	9.6	47.5	4.4	C 8.8
10.5	41.4	18.8		10.4	39.6	46.4		9.6	34.7	13.4	9.5	8.7	53.5	43.6	
8.4	43.4	37.9	8.9	10.4	49.1	35.5		9.6	35.2	1.0	9.8	9.8	57.3	57.0	
9.0	45.4	7.7	a 9.1	9.6	42 0.1	27.2		8.8	42.7	3.2	8.7	9.8	55 2.3	37.8	9.8
10.0	46.4	19.3		9.4	5.1	1.5		10.0	43.7	29.0	9.6	9.6	18.1	29.7	9.5
10.4	52.4	11.2	9.5	9.2	6.6	43.1		9.3	10.4	3.8	9.0	9.0	37.1	13.1	9.0
10.5	52.6	58.6		8.5	9.6	19.3	Ca 8.0	10.4	52.2	34.6	9.0	9.0	39.1	5.9	9.1
9.8	52.9	50.4		9.6	17.1	46.7		9.9	9.5	11.0	9.8	9.2	56 14.6	33.0	a 9.0
9.2	56.4	48.2	9.0	9.3	17.6	58.0		9.5	10.2	43.7	9.8	9.8	28.0	38.8	10.0
10.2	59.4	57.2		9.2	19.6	27.8		9.1	9.9	5.4	9.2	9.2	39.0	30.8	a 9.0
10.4	38 2.9	46.7	? 9.4	9.4	23.6	18.2		9.9	9.8	13.7	9.8	9.8	51.3	57.3	
10.5	10.9	27.7		10.5	37.1	12.6		10.4	35.7	17.4	9.6	9.6	52.5	50.7	9.8
10.5	11.9	57.5		10.4	38.6	25.7		10.2	48.2	43.2	9.8	9.8	57 19.6	12.1	
10.0	16.4	23.9		10.4	43.1	26.0		10.5	50.2	11.2	9.8	9.8	20.3	16.9	9.8
10.2	22.4	30.3		10.0	44.1	33.0		10.2	48 2.7	57.0	9.8	9.8	20.8	48.9	9.8
10.4	23.4	22.6		9.6	46.6	59.7	9.8	10.4	10.7	8.2	9.8	9.8	58 0.5	20.8	
10.4	28.9	39.4		9.0	43 23.1	18.0	9.4	9.6	11.7	35.2	9.1	9.8	0.8	8.7	
8.8	31.4	10.9	a 9.1	9.4	28.7	57.6		10.0	13.7	51.8	9.8	9.8	1.8	45.7	9.3
10.2	34.4	4.3		9.9	31.1	10.0		10.5	14.2	55.8	8.5	9.8	5.4	19.7	Ca 8.5
9.2	34.9	3.3		10.0	34.6	11.9		10.5	15.7	19.4	9.8	9.8	33.5	26.1	9.8
10.2	36.4	17.5		10.4	44.4	32.9		8.4	17.2	57.5	7.5	9.8	37.0	19.5	9.6
7.9	41.4	48.9	Cbl 7.3	9.6	44.9	2.9		9.4	24.7	34.2	9.2	9.4	43.0	1.2	9.5
10.5	44.4	5.9		9.3	45.9	16.5	9.6	9.9	25.7	52.0	9.5	8.0	50.8	34.1	Cbl 8.4
10.2	46.9	57.6		10.5	56.9	14.2		9.8	40.1	43.6	9.5	9.8	59.0	39.9	
9.9	47.4	7.2		10.4	58.9	20.1		9.8	47.2	11.3	9.8	9.8	59.3	4.8	
10.0	48.4	40.0		10.5	44 0.9	19.5		9.8	47.7	18.1	9.8	9.8	59 0.8	28.4	
8.6	49.4	15.1	a 9.1	10.5	2.9	34.5		9.8	49 1.5	30.3	9.3	9.8	0.8	31.0	
10.2	56.9	37.6		9.2	5.9	53.5		9.2	11.8	41.0	9.3	9.8	5.9	30.3	
8.8	58.9	8.7	a 9.2	9.9	6.4	6.9	9.3	9.4	17.3	31.9	9.3	9.8	8.4	27.2	
10.2	39 2.4	53.0		10.0	11.9	48.1		9.8	19.6	7.2	9.8	9.8	9.6	8.1	9.1
10.4	4.7	24.0		9.9	13.9	4.6	9.9	9.2	23.8	1.0	9.3	9.2	38.2	53.2	9.0
10.0	7.2	59.6		10.2	15.9	17.5		9.6	50 11.8	47.9	9.3	9.1	43.2	36.1	9.1
25pr.	+ 1 7.7	-5.3			+ 1 7.9	-5.4			+ 1 8.0	-5.6			+ 1 8.3	-5.8	

3961-4020.				4021-4080.				4081-4140.				4141-4200.				
mag.	8h-g ^h	-19°		mag.	9 ^h	-19°		mag.	9 ^h	-19°		mag.	9 ^h	-19°		
	m a			m a				m a				m a				
9.6	59	49.7	58.6	9.3	7.7			10.8	14	6.9	37.6	9.8	18	51.0	41.8	9.8
9.8		58.9	46.2	9.8	8.2			8.2	8.2	9.3	25.7	9.8	8.5	52.5	3.1	9.0
9.8	o	20.9	50.4		10.0			9.8	10.3	9.2	37.3	9.6	10.4	58.5	10.0	
8.4		27.9	36.4	Cal	8.5	10.2		9.5	10.6	9.2	24.5		10.3	19	0.5	51.5
9.4		29.4	27.4		9.2	10.0		9.8	9.0	13.2	30.0		10.8	1.5	17.9	
9.6		32.1	37.9		9.8	9.6		9.8	9.0	16.2	17.3		9.7	9.8	2.6	48.4
9.8	1	36.2	24.1		10.8			8.0	10.7	31.2	2.8		9.9	9.8	3.0	2.4
9.8		37.2	47.2		9.8	8.9	Ca	8.0	10.0	36.7	45.6		9.6	9.6	3.3	21.0
9.8		38.9	10.5		10.6			10.6	10.6	36.7	2.2		10.8	6.8	5.9	9.8
9.8		39.2	8.2		9.8	10.8		10.8	10.8	46.7	6.2		10.8	19.3	55.4	
8.3		39.4	50.7	Ca	8.6	10.8		10.7	10.7	47.2	47.1		10.4	25.3	56.4	
9.8	2	6.9	21.3		7.1			9.8	9.8	49.7	57.2		10.6	32.3	50.5	
9.6		15.5	58.7		9.7	9.4	Cal	7.3	9.5	49.7	45.2	a	9.0	10.3	35.8	42.0
9.0		20.0	15.2	Ca	8.9	7.4		7.2	10.8	51.7	25.2		10.3	36.8	20.7	
9.8		21.2	4.9		9.8	9.2	Cal	9.0	8.9	57.7	3.6		9.1	10.6	38.8	30.3
9.8		27.9	24.0		10.7			9.0	10.0	15	1.2	16.9	9.7	10.7	20	2.3
9.5		33.8	45.9		9.4	9.2		9.6	9.4	6.7	43.7		8.6	9.3	50.4	a
9.6		39.2	48.2		9.8	10.4		10.0	10.0	13.7	23.4		9.3	9.6	12.3	40.9
9.8		58.1	35.3		9.8	9.4		9.4	10.6	16.7	7.5		10.6	14.8	21.3	9.8
9.2	3	9.0	31.4		9.1	10.0		9.0	9.0	17.7	38.7		9.0	8.6	24.3	33.1
9.8		16.8	2.9		8.5			9.0	9.6	20.7	9.1		9.5	10.0	24.8	26.2
9.0		21.3	35.8	a	9.2	10.7		9.4	9.4	32.7	33.5		9.8	9.2	25.8	5.0
9.8		21.8	21.1		9.5	10.8		9.6	9.6	44.7	36.3		9.8	10.2	27.8	17.0
9.2		38.5	20.6		9.3	10.8		10.7	10.7	47.2	17.1		9.5	9.6	29.3	31.1
9.8		41.8	19.0		9.2			10.8	10.8	48.7	42.4		10.8	10.8	29.8	42.6
9.8	4	0.8	45.2		10.6			10.8	10.8	50.7	6.5		10.8	10.8	36.8	57.4
9.2		5.0	2.0		9.2	10.7		10.3	9.3	56.7	52.1		10.7	10.7	41.3	43.9
8.6		8.3	14.1	Cal	8.4	9.3		9.2	9.3	58.2	11.7		9.3	10.7	46.8	1.9
9.0		9.0	6.8		9.1	9.3		9.1	10.8	58.2	50.1		10.6	10.6	52.9	56.6
9.8		18.5	24.6		10.0			10.8	10.8	58.2	8.5		10.8	21	3.3	4.6
9.6		31.8	24.3	a	9.1	10.4		10.8	16	13.5	13.8		9.8	6.3	6.2	
9.8		33.4	35.2	a	9.7	9.4		10.8	14.5	44.1			9.0	8.8	34.2	G
9.8		59.9	20.1		9.0			10.6	15.0	36.9			8.6	12.3	8.3	9.1
9.8	5	8.2	6.2		10.7			9.2	16.5	41.9		9.3	10.0	37.8	7.8	9.0
9.8		8.6	51.4		10.4			9.6	17.5	0.6		9.3	10.3	41.3	48.2	9.8
9.8		25.2	52.8		8.3	52.5	2.0	8.5	26.5	32.5		9.8	10.0	44.3	46.1	9.8
9.8		38.2	16.3		10.7	59.5	43.7		28.6	5.4			9.6	52.3	55.3	
9.8		39.6	47.4		10.4	3.0	32.7	x	29.5	29.5			10.8	55.8	18.1	
9.2		53.5	32.9	a	9.7	10.7	8.5	57.9	34.5	10.4		?	10.6	22	0.8	2.5
9.8		57.7	51.0		8.6	10.0	6.8	C	44.0	17.3			10.8	2.6	52.4	
9.8	6	0.4	25.0		10.6	17.5	7.3		44.0	11.2			10.2	2.8	30.7	9.8
9.2		10.4	26.8	a	9.0	10.0	33.0	31.2	56.5	27.3			9.2	4.6	15.2	9.4
6.9		15.2	14.2	Gatlr	6.3	10.8	34.0	56.2	56.5	40.9		9.6	10.4	22.6	34.8	
9.8		17.9	50.6		8.3	37.0	50.5	a	16.0	21.9		9.4	10.8	32.1	43.0	9.8
9.8		45.6	0.7	a	9.5	7.7		Ca	10.4	10.6			10.8	37.1	54.4	
9.8		57.1	19.8		9.8	10.8	57.5	31.0	24.0	2.7			10.8	43.1	41.0	
9.8		57.4	3.6	a	9.7	10.8	6.5	42.7	37.0	30.1		9.8	10.8	44.1	0.8	
9.8		59.6	33.9		9.8	10.8	8.0	57.7	40.0	0.1		9.5	8.2	46.1	2.0	Cb
10.8		7.4	18.8		10.6		14.5	0.7	44.5	48.5			10.8	46.1	7.4	8.5
10.7	7	15.3	35.3		10.6	19.5	48.8		49.5	1.0			10.8	46.6	56.4	
10.4		41.5	52.6		9.8	8.5	24.0	54.7	54.5	41.7			10.7	49.6	43.6	9.6
10.4		52.5	36.4	Ca	10.7		25.7	57.7	57.0	0.8		?	10.6	50.1	42.4	
8.9		55.4	14.1		8.5	10.7	25.9	49.9	10.7	48.2			10.0	56.1	20.5	10.
10.6		56.8	24.5		9.8	9.5	29.2	44.7	10.4	45.2			10.6	58.1	15.4	
10.4		57.4	30.9		10.7		37.2	0.1	9.8	30.7		9.8	10.4	3.1	42.2	
10.3		57.9	38.7		9.8	9.6	37.7	16.2	10.2	12.4		9.5	10.7	8.6	47.8	
10.8		59.6	18.4		10.8		39.7	16.5	10.6	27.4			10.7	10.1	48.8	
10.6	8	0.9	51.1		10.7		39.9	4.3	9.0	35.0	35.7	C	8.9	7.6	13.1	53.4
9.0		3.4	59.4		9.0	10.4	5.7	29.1	10.0	53.0			10.8	15.1	17.6	Cal
8.9		4.4	47.3	a	8.7	10.7	5.7	11.4	9.5	9.3		9.8	10.0	20.1	54.1	8.0
25pr.	+ 1	8.6	-6.0		+ 1	8.8	-6.2		+ 1	9.0	-6.3		+ 1	9.2	-6.4	

4201—4260.				4261—4320.				4321—4380.				4381—4440.								
mag.	g ^h .	-19°		mag.	g ^h .	-19°		mag.	g ^h .	-19°		mag.	g ^h .	-19°						
10 ²	23	26.6	54.2	9.8	28	55.1	7.7	9.8	7.6	37	41.2	47.6	Gcb	7.0	10.2	43	30.9	22.9	10.	
10 ⁴		51.1	31.8	9.1		59.6	38.9	9.1	9.5		45.2	5.9		9.8	9.6		34.4	8.7	10.	
8.6		52.1	9.1	9.1	10.3	22.1	20.4	10.1	10.1		45.2	4.4		9.9	9.5	9.6	47.4	15.0	9.6	
8.6		54.1	50.2	9.0	9.8	24.6	23.9	9.8	9.5		58.7	37.4		9.5	10.0		55.9	12.0		
10.4		56.6	52.0	10.1	10.1	31.1	4.6	9.8	9.8		58.9	59.9		10.0	10.0		56.9	53.5		
10.4		58.6	23.6	8.6	8.6	32.1	0.2	8.8	10.0	38	4.7	30.7		9.8	9.8	44	1.4	55.4	10.	
10.0		58.6	49.8	6.8		44.1	1.5	GCal	6.7		12.7	44.0		9.2	9.4		10.4	5.9	9.5	
10.2	24	3.6	24.8	10.0	10.0	47.1	11.6	C	9.2		16.1	58.1		8.8	8.8		10.4	41.5	a	9.0
10.8		6.2	35.6	8.9	8.9	48.1	1.6	C	9.2		42.1	13.3		9.5	10.2		30.9	59.0		
9.8		11.7	58.4	9.1	9.1	30	11.6	Ca	8.4		43.2	45.4		9.1	10.2		36.4	55.3		9.9
10.2		14.6	22.0	10.1	10.1	23.7	53.5	9.9	9.0		43.2	22.0		9.0	9.5		46.9	11.5		9.6
7.7		26.1	1.1	8.0	9.0	28.6	50.0	9.0	10.1	39	2.1	30.1		10.	8.6		58.9	31.7	Ca	8.5
9.2		26.1	16.3	9.2	10.3	29.7	15.6	9.0	9.6		4.7	42.2		9.8	9.6	45	1.9	21.0		
10.8		27.2	18.8	9.6	9.6	30.1	32.0	9.8	10.3		10.7	19.7		9.8	8.9		2.9	21.4	a	9.0
8.0		30.2	15.2	8.5	9.6	41.6	45.7	9.4	10.1		17.2	15.7		8.8	8.8		11.9	33.2	a	8.7
8.6		38.2	3.2	9.0	9.6	56.1	47.7	9.4	9.4		20.7	9.5		9.4	9.6		17.9	23.8		9.8
10.8		45.2	57.2	10.3	10.3	31	1.6	9.6	9.0		21.7	5.5		9.3	10.0		25.8	11.3		9.7
9.2		48.2	54.7	9.8	9.8	5.6	14.0	9.5	9.5		22.1	16.1		9.5	9.5		36.4	58.3		9.8
10.7		49.7	11.1	10.3	10.3	11.1	49.7	9.8	9.6		25.2	18.5		8.2	8.2		39.9	4.9	Cal	8.0
9.0		55.2	49.3	a	9.1	11.6	40.7	9.8	9.6		25.7	52.2		9.8	9.0		40.9	6.6		9.2
10.6		56.7	3.2	10.3	10.3	14.1	49.2	9.6	9.6		27.7	37.0		9.8	10.0		54.2	34.3		
10.3	25	17.7	47.3	9.5	32	0.6	42.8	9.3	8.2		31.7	45.8	Cbl	8.2	8.4		58.2	27.3	Cal	8.0
10.7		20.7	37.6	9.2	9.2	9.1	45.9	9.4	8.4		49.2	0.3	Cbl	8.3	8.8		58.2	10.4	Ca	8.6
10.6		24.7	2.0	9.6	9.6	25.1	18.5	9.6	8.6		51.2	7.6	Cbl	8.8	9.0	46	24.7	36.7		9.4
9.3		29.7	14.4	8.4	8.4	27.1	3.9	Gc	8.7		51.7	53.8		9.5	9.4		44.7	42.2		9.8
10.7		32.7	22.7	9.4	9.4	27.6	21.8	9.6	10.0		52.2	43.4		9.6	9.6		53.2	39.7		
9.2		59.7	24.5	9.7	8.6	32.1	58.6	8.6	9.4	40	8.7	51.8	a	9.0	9.5	47	0.2	21.6		10.
8.5	26	11.2	34.6	9.0	9.0	43.6	12.7	10.1	10.1		10.1	28.0		10.1	10.1		3.2	57.4		
9.6		12.7	26.5	9.8	10.3	56.6	57.2	9.8	7.5		16.2	9.2	Cbl	7.0	10.2		10.7	44.6		
9.3		16.7	46.7	9.5	10.3	33	2.1	8.9	8.9		19.2	52.5	a	9.1	9.4		22.7	41.4		9.5
10.7		19.2	53.0	9.6	9.6	2.1	28.7	9.7	9.6		22.2	21.4		9.8	9.6		23.7	2.5		10.
8.8		23.2	34.1	9.2	9.0	2.6	36.3	9.3	9.5		24.2	46.5		9.7	8.6	48	4.7	14.4	Cb	8.8
10.3		26.5	59.0	9.8	9.0	7.6	41.9	9.4	9.4		29.4	32.2		9.5	8.4		28.7	42.2	Ca	8.4
10.3		30.2	47.4	10.3	10.3	20.7	2.9	9.4	10.1		32.9	24.2		9.7	9.6		31.2	51.7		9.3
10.8		35.2	52.2	9.6	9.6	48.6	29.2	9.4	10.0		50.9	47.2		9.9	9.2		31.7	18.1		9.3
10.8		42.7	32.5	9.6	34	13.1	52.0	9.8	8.8	41	9.4	47.9	Ca	8.5	9.6		34.7	18.2		
10.0		43.7	5.1	9.0	9.0	15.6	15.0	C	9.0		11.1	57.9		10.	10.4		49.3	12.9		
9.6		55.2	43.0	9.5	9.5	27.6	59.1	9.7	9.6		11.9	16.6		9.6	9.4		59.3	35.4		9.3
9.8	27	0.7	32.3	9.5	9.5	35.6	39.2	9.1	9.4		13.9	9.9		9.4	9.7		59.3	15.8		9.4
9.6		2.7	35.0	9.9	10.3	46.7	10.4	9.6	9.6		14.9	1.9		9.4	10.4	49	7.8	13.2		9.1
10.8		7.2	42.9	10.3	35	1.6	41.1	10.3	10.3		23.8	33.7		9.7	9.7		23.3	56.9		
10.3		15.7	31.8	9.8	9.4	20.6	44.0	9.8	10.3		26.8	23.1		9.2	9.2		34.3	34.0	a	9.2
10.6		15.7	41.7	9.4	9.4	21.1	26.3	9.4	9.5		30.4	31.3		9.9	7.6		36.8	23.2	Ca	8.0
10.8		19.2	58.2	9.5	9.5	51.6	18.9	9.4	9.8		33.9	37.9		9.4	9.4		43.8	6.0		9.1
9.4		26.5	2.0	9.5	9.0	56.2	46.8	8.6	9.4		36.9	40.7		9.9	9.5		48.0	20.5		9.8
10.7		26.5	50.4	9.6	9.6	57.6	57.8	9.8	9.8		41.4	7.4		10.	6.8		51.3	5.2	Cb	7.5
10.2		28.5	43.9	10.	9.0	36	1.7	C	8.5	42	5.9	41.8		9.8	9.5		57.3	14.2		9.4
10.8		29.0	29.9	9.4	9.4	4.7	32.0	9.6	10.0		6.4	3.7		9.6	10.4	50	7.0	5.4		
10.4		34.5	12.8	10.3	10.3	11.7	1.8	9.0	9.0		12.4	32.1		9.9	8.8		7.3	21.6	Ca	8.7
9.8		37.0	44.0	10.1	10.1	27.7	50.6	10.	10.0		18.4	29.1		8.3	8.3		20.5	7.2	Cbl	8.0
9.8		37.0	51.0	10.1	10.1	30.2	26.0	9.5	9.6		35.9	35.4		9.4	9.4	51	6.0	48.0		9.5
10.0		49.5	57.6	8.8	9.6	34.2	54.5	C	8.5		37.9	7.9		10.0	10.0		25.0	45.7		9.8
10.6		51.5	43.4	9.6	9.6	49.2	13.3	9.5	8.7		38.9	22.7	Ca	8.2	9.7		31.5	40.2		9.7
10.3	28	1.3	28.9	10.0	10.0	51.2	34.2	9.5	9.6		51.9	14.9		9.2	9.6		32.6	58.2		9.7
7.9		4.5	20.4	8.5	10.1	51.2	18.4		9.4		54.4	14.7	a	9.2	9.4	52	22.0	50.3		9.5
10.4		8.5	56.9	10.0	10.0	55.7	51.7	10.	10.1	43	10.8	16.4		8.8	8.8		33.0	41.7		9.0
10.4		9.5	13.8	10.3	37	15.2	0.9		10.3		13.6	58.2		10.	10.0		44.0	29.5		9.8
9.6		13.0	27.3	9.4	9.4	20.0	59.4	9.3	8.0		14.9	4.0	Cal	8.2	10.4		52.0	23.4		
9.0		13.0	15.7	9.1	9.6	21.2	6.2	9.5	10.0		24.4	9.3		9.8	9.8	53	0.0	44.7		9.7
10.2		21.0	16.0	9.5	10.0	27.2	23.9	10.0	10.0		25.9	21.0		10.4	10.4		6.0	52.2		

4681-4740.					4741-4800.					4801-4860.					4861-4920.					
mag.	10 ^h	-19°			mag.	10 ^h -11 ^h	-19°			mag.	11 ^h	-19°			mag.	11 ^h	-19°			
9.0	33 17.8	55.8	a	9.2	8.0	48 22.2	34.1	Gatlr	8.0	9.8	11 10.9	11.7			9.5	20 48.3	29.7		9.8	
9.9	34 20.2	58.7		9.8	10.2	30.1	48.0		9.4	9.8	19.9	25.0		9.7	9.2	59.2	23.5		9.7	
10.4	28.3	33.8			9.1	50 13.8	16.1	a	8.8	9.8	39.2	54.9			9.2	21 10.3	54.2	a	9.1	
9.0	36.3	54.7		9.4	8.9	16.3	36.0	a	9.1	9.2	48.5	58.0	a	9.1	9.8	19.5	47.7			
10.2	44.3	11.3		10.0	9.2	16.8	55.9	C	9.1	9.8	51.9	21.2		9.8	9.2	50.7	21.3	C	8.9	
8.8	56.3	38.7	a	9.1	9.3	53.3	29.9	a	9.3	9.7	12 9.7	47.6			9.8	57.8	55.4			
10.2	56.3	35.4		9.6	9.8	59.3	29.1		9.5	9.8	33.2	50.6		10.0	8.7	22 49.7	6.3	C	8.8	
10.4	56.8	46.0		9.6	5.1	5.3	29.2		9.4	9.8	42.7	33.2		10.0	9.5	23 12.0	30.1	C	9.8	
8.8	35 0.3	39.3	a	9.0	9.8	23.3	20.9		9.7	7.6	57.0	32.5	C	8.0	9.7	22.3	1.6	C	9.8	
10.4	52.9	27.7		8.9	8.9	45.8	4.1		9.0	9.8	13 1.2	59.7			9.4	23.5	16.1		9.8	
7.8	36 19.9	57.0	Cal	7.5	9.0	52 0.6	19.4		9.0	9.2	1.9	8.7		9.0	8.4	52.7	31.6	C	8.8	
9.4	32.4	49.8		9.4	9.2	41.1	52.7		9.1	9.2	9.9	47.9		9.5	9.7	56.5	44.7		9.7	
9.6	32.9	39.5		9.5	8.5	44.6	23.0	C	8.8	9.8	23.8	18.3			9.8	58.7	51.2			
10.2	37 7.4	6.5		9.4	8.4	54 1.1	22.7	Ca	8.3	9.8	25.9	32.9			9.2	24 5.3	31.4		9.3	
10.2	19.9	39.5		9.8	9.1	18.1	19.4		9.4	9.4	33.2	9.1		9.4	9.2	5.3	0.6		9.4	
10.2	31.9	33.5		9.5	9.0	30.6	9.1		9.1	9.8	33.9	52.6			8.9	24.0	14.0		9.2	
9.0	38 9.9	24.8		9.1	8.8	36.1	38.6	Ca	8.5	9.2	37.2	8.8		9.4	9.1	26.2	58.8	a	9.4	
10.4	15.9	34.5		9.8	9.5	55 9.1	28.0	a	9.4	9.8	40.9	40.0			8.6	29.0	12.4	C	8.8	
10.2	39 0.8	52.9		9.4	8.8	17.1	8.4	Ca	8.9	9.7	41.9	22.1		10.0	8.6	36.7	8.6	C	8.8	
10.0	12.9	5.4		9.2	8.8	32.6	15.0	a	9.1	8.4	14 10.9	59.4	Cal	8.7	7.9	41.0	30.5	Ca	8.0	
8.6	14.9	2.3	Ca	8.5	8.3	36.5	23.1	Cbl	8.0	9.6	17.3	5.7			9.6	48.3	46.4		9.6	
9.8	38.0	57.3		9.2	9.0	56 11.5	8.6		9.4	9.4	22.3	19.8		9.2	9.7	25 9.7	34.7			
8.7	46.9	3.1	Ca	8.8	9.3	45.0	2.3	a	9.0	9.7	23.3	36.7		9.8	9.8	36.5	23.8		9.4	
10.0	55.8	30.3		9.1	9.0	57 12.5	58.9		9.0	9.8	29.6	39.2			9.4	50.5	56.7		9.8	
8.6	57.4	12.2	C	8.5	9.0	58 16.0	42.2	a	9.1	9.7	32.1	44.8		10.0	9.2	52.4	48.9			
8.0	40 24.9	6.1	Cbl	7.0	9.4	59 33.5	25.5		9.1	9.4	36.4	32.2			9.8	26 5.8	13.4	Ga	9.1	
9.4	35.9	35.3		9.8	8.2	42.0	43.9	Cal	8.2	9.8	56.1	30.3			9.7	39.5	6.4		10.0	
8.7	36.4	3.8	a	8.8	9.8	0 3.9	56.4		9.5	9.4	58.1	36.3		9.5	8.4	50.0	7.6	Ca	8.7	
8.7	52.6	13.3	Ca	8.9	9.8	7.0	15.3		9.4	9.0	15 12.3	45.9	Cal	8.7	9.8	27 8.0	54.1			
10.4	4.1 34.6	43.2		8.8	8.8	18.4	13.9	a	8.9	9.2	20.9	39.1		9.4	8.9	12.0	48.9	a	9.1	
9.9	43.6	24.8		9.5	9.5	55.9	21.6		9.2	9.2	21.6	27.5		9.4	8.0	21.0	51.3	Cal	8.7	
7.9	49.6	40.8	Cbl	8.0	8.4	2 33.9	22.6	Cbl	8.0	8.4	33.9	49.2	Cal	8.7	9.4	21.5	39.7		9.8	
9.8	42 13.6	59.8		9.6	8.9	40.9	25.3		9.0	9.5	16 0.9	27.3		9.6	9.5	25.5	8.5		9.8	
9.6	22.6	8.5		9.8	7.8	55.9	50.5	Ckbl	7.5	9.4	3.3	30.3		9.4	9.1	28.5	11.7		9.2	
10.4	25.6	32.4		9.0	9.0	3 2.9	29.1		9.0	8.2	30.9	10.8		8.0	9.8	29.0	57.9			
8.8	52.6	45.0	a	9.0	9.3	4 3.9	26.3		8.8	9.8	33.3	35.8			9.7	35.5	55.9		10.0	
10.4	43 11.6	39.4	a	9.5	8.8	10.4	43.5	C	8.8	7.2	43.8	56.5	Gbtlr	7.3	9.4	28 20.2	36.5		9.0	
9.0	21.6	22.1		9.3	8.7	5 23.9	29.5	C	8.8	9.8	50.7	43.8			9.8	41.0	12.5		9.9	
9.0	23.1	15.5		9.4	9.8	26.3	50.3		9.8	9.2	17 2.4	17.9	C	8.7	9.2	50.0	41.8		9.1	
9.9	35.6	38.2		9.8	8.2	43.3	28.1	Cbl	7.5	9.7	9.5	9.8		9.8	8.2	55.2	52.1	Cal	8.0	
9.3	44 20.7	31.7	C	8.8	8.4	6 27.3	1.1	C	8.3	9.8	14.0	23.8			9.2	29 1.7	52.6		9.5	
8.4	39.8	22.1	C	8.3	8.6	58.3	51.9	Ca	8.2	9.2	32.5	25.6		9.2	9.1	11.9	49.2	Ca	9.2	
9.8	52.2	57.3		9.6	9.6	59.3	13.0		9.4	9.0	39.2	13.2	C	8.3	9.2	37.2	15.2		9.3	
9.4	45 2.2	2.1		9.4	8.4	7 26.8	46.2	Ca	8.2	9.4	42.5	56.1		10.0	9.6	59.2	57.9	a	9.4	
10.2	15.1	52.1		9.5	8.8	46.3	14.6	a	8.7	9.2	43.0	28.8	C	9.3	10.0	30 5.8	5.8			
9.3	42.2	29.5		9.1	9.8	53.3	3.9		9.7	9.8	43.0	20.5		10.0	20.0	18.6				
10.2	46 1.1	20.9		9.3	8.4	8 31.8	58.5	C	8.0	9.8	50.5	27.9		9.8	9.5	23.8	50.1	a	9.1	
9.2	11.2	7.8		9.0	9.6	9 0.5	2.0		9.4	9.2	18 20.5	59.2	a	9.4	9.3	31 2.5	37.9		9.1	
10.4	57.1	22.8		9.7	9.2	14.8	10.7	a	9.0	8.7	29.5	9.1	a	9.2	10.0	50.5	15.2			
7.5	47 0.2	57.4	GCal	7.0	9.5	23.2	33.6		9.8	9.4	32.5	38.8		9.5	9.5	51.8	4.0	Ca	9.1	
9.2	5.7	24.3		9.2	9.6	32.8	42.6		9.8	9.8	36.0	3.8			10.0	32 12.2	21.6		10.0	
10.4	5.7	0.0		9.2	9.2	48.4	27.3		9.3	9.2	38.5	8.4		9.3	9.6	14.2	27.2		9.6	
8.7	18.3	29.9	a	9.1	9.1	51.1	28.1	C	8.8	9.5	55.8	39.4		9.8	9.3	23.5	48.3	Ca	9.1	
6.1	23.2	27.9	GSlrβ	5.0	9.8	10 8.6	27.9		10.0	9.8	59.0	46.1			9.6	33 7.4	56.9		9.9	
8.6	28.4	34.3	a	8.7	9.8	19.4	46.6		9.4	9.7	19 2.0	27.8			9.8	8.5	40.3		9.8	
9.3	39.7	34.8		9.2	9.8	32.1	29.0		9.7	9.7	34.0	38.7			9.3	34 1.3	49.4	a	9.5	
10.2	40.2	44.8		9.4	9.4	32.1	12.8		9.8	7.1	49.0	53.7	GCal	7.0	9.9	4.8	55.2		10.0	
10.4	58.1	54.0		9.8	9.8	36.4	9.3		9.7	9.7	50.5	23.0		9.5	10.0	24.2	57.4		9.5	
9.8	48 5.8	28.7		10.0	9.7	59.6	1.1		10.0	8.9	55.0	19.0	a	9.1	10.0	35 11.4	6.8		10.0	
10.4	10.2	9.5		9.8	9.8	11 0.9	13.7		9.8	9.8	20 11.5	56.0			9.0	21.8	20.6		9.1	
25Pr.	+ 1 12.9	-7.9				+ 1 13.8	-8.1				+ 1 14.6	-8.2				+ 1 15.1	-8.3			

4921-4980.				4981-5040.				5041-5100.				5101-5160.						
mag.	11 ^h .	-19°		mag.	11 ^h -12 ^h .	-19°		mag.	12 ^h .	-19°		mag.	12 ^h .	-19°				
m s	m s	m s		m s	m s	m s		m s	m s	m s		m s	m s	m s				
9.5	35 23.6	22.8		9.4	10.0	48 52.4	59.0		10.0	0 38.1	37.0		9.4	9 22.6	24.9	9.1		
9.9	31.8	39.1		9.8	10.0	49 0.3	52.6	9.8	9.6	45.1	52.7	a	9.5	9.5	26.9	10.4	9.8	
7.3	44.6	35.9	GStlπ	6.3	10.0	6.4	2.6		9.8	56.5	1.0		10.0	9.7	47.1	5.0	10.0	
10.0	46.4	0.4		9.7	10.0	22.4	3.5	9.7	10.0	1 11.3	47.9		10.0	10.0	49.4	22.8		
10.0	50.1	28.8		9.0	10.0	29.9	9.7	9.0	9.9	13.5	34.4	a	9.5	9.6	54.2	49.0	10.0	
9.6	36 21.1	41.6		10.0	9.7	37.6	56.5	a	9.4	16.6	51.6		9.5	9.5	10.2	25.0	9.6	
8.0	37 3.8	7.8	Gcbl	7.2	9.4	39.7	16.9		9.0	23.8	32.3	a	9.4	9.5	44.9	16.8	9.9	
9.6	18.8	43.6		9.4	9.0	50 17.7	5.6	C	8.5	43.8	6.3	C	9.0	10.0	54.9	8.7		
9.6	28.1	15.9		9.7	9.9	21.2	54.0		10.0	2 15.1	20.7		10.0	9.9	54.9	8.7		
10.0	40.9	42.9		9.4	9.4	40.7	24.1		9.2	16.3	22.4	a	9.7	9.9	11 13.6	56.1	10.0	
10.0				9.9	51 25.9	35.2		10.0	10.0	24.6	38.9		9.5	9.5	14.1	47.7	9.8	
10.0	38 0.9	28.7		10.0	29.6	37.7		9.4	9.4	33.1	14.1	Ca	9.0	10.0	22.2	36.8		
10.0	2.3	7.9		9.0	57.7	22.7		9.0	10.0	40.5	3.4		9.9	9.9	29.7	55.2		
9.9	7.9	19.8		10.0	52 10.7	20.0		10.0	10.0	45.1	51.9		9.5	9.5	37.9	29.4	9.8	
8.9	18.2	43.0	C	8.8	9.7	18.9	38.2		10.0	56.3	54.8		9.5	9.7	47.7	18.0	9.8	
9.6	43.3	11.7		9.4	7.8	45.9	38.6	C	8.0	59.0	57.9		10.0	10.0	56.9	19.8		
10.0	39 17.8	4.6		9.8	9.8	50.7	17.2		9.9	3 20.5	10.9	Ca	8.8	9.5	12 0.4	27.8	9.7	
9.6	30.3	28.0		10.0	51.9	44.0		9.2	9.2	23.7	21.0		9.2	9.6	44.2	51.8	10.0	
9.8	33.0	31.9		9.5	10.0	53 9.9	27.4		9.2	23.7	7.5	a	9.0	10.0	47.7	42.7		
10.0	40 0.4	22.0		10.0	18.9	36.9		9.5	9.5	30.4	54.2		9.5	8.6	13 15.9	39.6	8.9	
9.4	43.8	23.2		9.6	9.5	20.7	5.1		9.5	45.4	28.8	C	8.5	9.1	18.5	14.4	9.0	
9.8	55.4	18.9		9.5	9.8	24.5	51.9		9.9	49.2	35.3		9.2	9.9	31.9	39.7		
9.9	7.1	56.1		9.8	10.0	57.2	48.4		9.8	52.7	4.6	Ca	7.7	9.4	39.4	32.5	9.5	
9.2	9.6	26.6		9.1	9.4	12.7	34.2		10.0	52.7	4.6	Ca	9.6	9.6	41.9	33.8	9.6	
9.9	19.6	22.7		9.8	9.5	14.7	43.0		10.0	4 24.0	54.7		9.2	9.6	54.9	10.4	9.5	
9.3	40.8	54.0		9.3	9.6	25.9	44.4		9.5	48.0	19.3	a	9.4	9.8	54.9	10.4		
9.6	42 0.8	21.5		9.5	10.0	28.2	23.4		10.0	5 0.3	2.8	a	9.4	9.0	14 4.7	49.3	9.1	
9.3	17.8	29.2		9.0	9.6	29.5	21.0		9.5	1.4	10.9		9.0	9.0	11.9	55.7	Cbl	
9.3	37.1	12.9	a	9.1	7.8	30.9	56.2	C	8.3	20.4	16.8		8.2	8.2	13.3	31.9	8.5	
9.8	48.1	21.7		9.8	9.2	31.9	18.8		9.2	23.2	14.0	Gcbl	7.2	9.4	18.6	8.6	9.1	
10.0				10.0					10.0	37.7	3.1		10.0	9.0	20.9	11.9	Ca	
8.9	50.6	4.4	C	8.6	10.0	40.7	58.1	Cbl	10.0	40.0	48.6		9.6	9.6	30.2	27.4	9.5	
10.0	53.6	38.9		7.8	55 0.2	58.0		7.5	10.0	50.4	50.7		9.7	9.7	42.0	53.4	10.0	
10.0	25.8	16.2		9.7	9.7	0.9	24.2		9.6	51.4	17.8	C	9.1	9.6	52.0	28.2		
9.9	42.3	44.4		10.0	10.0	12.2	57.8		9.6	52.4	10.6	GCal	7.7	9.0	53.6	42.4	9.0	
8.8	57.3	8.3	Ca	9.0	9.9	32.2	49.4		8.6	6 8.6	25.2	C	8.9	9.7	54.6	16.7	9.8	
10.0	5.1	48.5		9.9	9.9	35.9	36.0		10.0	11.4	31.1		9.6	9.6	54.6	23.2	9.8	
9.9	11.8	34.1		9.7	56 0.7	37.3		9.8	8.8	11.7	7.5	a	8.7	9.9	16 1.6	17.0		
9.8	17.6	43.2		10.0	10.0	21.7	44.0		9.6	20.0	37.8		9.8	10.0	20.9	21.1		
9.8	19.1	4.7		9.9	9.5	30.7	30.9		9.4	20.4	21.4		9.1	9.5	21.6	42.1	9.0	
10.0	30.6	45.5		9.6	9.6	38.9	51.0		10.0	27.7	43.4		9.4	9.4	44.6	20.7	9.3	
10.0				9.4		41.7	44.6		9.6	30.4	39.3		9.5	9.5	52.1	10.2	9.4	
10.0	51.3	40.8		10.0	57 20.7	1.5		9.5	9.5	40.4	41.1		9.5	9.3	57.6	33.5		
10.0	54.8	29.2		10.0	28.9	41.5		9.6	9.6	45.0	56.1		9.6	9.7	57.6	33.8		
10.0	8.4	31.3		10.0	9.0	38.1	51.3	a	9.0	7 5.4	35.3		9.8	9.5	17 7.4	12.7	9.0	
9.6	9.6	42.4		9.9	9.4	7.1	6.9		9.4	19.2	37.8	C	7.5	7.7	10.0	23.5	Cbl	
9.8	12.3	26.9		10.0	8.5	8.3	55.6	Ca	9.0	20.4	22.2	a	9.3	9.6	15.5	18.3	9.6	
10.0	42.3	25.2		9.7	9.7	33.8	36.7		9.8	21.0	40.1		9.6	10.0	35.5	59.9		
8.5	59.6	16.6	Ca	8.3	10.0	48.3	47.2		10.0	41.7	11.2		9.7	9.7	43.2	15.1	9.7	
8.4	46 32.8	0.6	Ca	8.5	10.0	51.1	37.5		9.9	47.2	54.4		10.0	10.0	51.0	50.2		
9.8	47 3.8	56.1		9.5	9.9	51.3	48.0	a	9.7	49.4	46.5		9.1	9.1	52.0	14.6	9.4	
8.5	17.1	39.4	Ca	8.6	9.4	59 1.5	18.7		9.4	8 2.3	24.7	Ca	8.7	9.8	59.5	39.9		
10.0	17.3	37.5		10.0	10.0	4.1	30.9		10.0	8.3	25.5		10.0	10.0	18 6.5	19.4		
9.9	27.5	59.2		10.0	9.7	20.1	53.2		10.0	14.6	26.6		10.0	10.0	12.5	21.0		
8.2	29.1	48.5	Ca	8.6	9.4	41.5	35.5		9.0	30.3	43.9	a	9.7	8.2	12.5	22.6	C	
9.9	30.8	46.3		8.2	8.2	49.6	20.6	Cbl	8.3	34.9	44.5		9.6	9.6	18.0	35.2	8.2	
9.8	31.8	4.1		9.5	9.7	54.1	5.8		10.0	37.4	5.1		9.9	8.7	24.2	10.6	C	
10.0	52.3	45.9		10.0	0 0.3	3.6			10.0	53.1	25.3		9.5	9.2	37.8	5.6	9.4	
10.0	57.3	51.4		10.0	8.0	12.1			10.0	9 7.5	2.0		10.0	10.0	37.9	8.2		
10.0	48 7.9	39.9		10.0	23.8	47.2			10.0	9.7	50.1	GCal	7.2	9.6	52.8	45.4	9.9	
9.7	33.0	48.4	a	9.2	9.6	31.5	46.3	a	9.4	13.9	52.3		9.8	9.8	9 5.2	46.6	10.0	
25pr.	+ 1 15.9	-8.3			+ 1 16.5	-8.4				+ 1 17.1	-8.4				+ 1 17.5	-8.3		

5161-5220.				5221-5280.				5281-5340.				5341-5400.							
mag.	12 ^h	-19°		mag.	12 ^h	-19°		mag.	12 ^h	-19°		mag.	12 ^h -13 ^h	-19°					
9.4	19 14.0	40.6	9.4	10.0	31 33.1	44.8		9.8	40 19.3	20.6	10.0	7.8	50 58.0	4.4	Cal	8.2			
9.9	33.5	53.9		10.0	39.1	11.5		8.7	21.3	15.1	C	8.7	10.0	5.2	a	9.4			
10.0	35.0	38.9		8.8	53.6	21.9	Ca	9.0	9.6	50.9	17.3	9.4	9.4	33.0	24.6	a	9.5		
9.9	35.2	39.4		9.9	11.6	45.0	C	9.8	10.0	50.9	39.4	7.9	7.9	37.1	42.4	Cbl	8.0		
9.8	49.3	45.4		8.8	18.9	50.2		9.0	9.7	41 1.5	23.7	8.8	8.8	56.6	51.7		9.2		
9.9	57.3	29.0		9.4	22.2	35.1		9.4	9.6	6.7	53.0	9.8	7.4	53 10.1	36.9	Cal	7.5		
9.8	20 6.3	56.1		9.4	30.2	42.7		9.4	10.0	9.7	18.7	9.0	9.0	28.1	20.3	C	9.0		
10.0	29.1	41.1		8.7	34.2	1.4	Ca	8.2	9.8	25.2	16.3	9.0	9.0	47.1	42.2	a	9.5		
9.6	29.3	22.7	9.7	10.0	50.5	12.5		9.6	9.6	27.5	35.2	8.8	8.8	54 4.6	41.1	a	9.2		
8.6	39.1	17.1	a	9.0	33 10.5	17.6	10.	8.8	30.5	4.3	Ca	8.8	9.6	58.6	1.9		9.8		
8.2	39.8	16.2	Ca	8.6	10.0	13.6	59.8	9.8	47.2	9.4		7.5	55 14.6	6.0	Cbl	7.8			
8.4	46.5	44.5	Cal	8.5	9.7	32.2	56.4	9.8	9.6	49.7	26.8	8.8	8.8	23.8	58.6		9.0		
9.9	21 4.9	31.2		10.0	10.0	39.2	38.4	9.6	9.6	50.9	26.4	9.0	9.0	24.6	25.7	a	9.3		
9.8	26.6	51.4		9.7	9.7	41.9	19.0	9.7	9.2	55.7	45.5	9.4	9.4	56 3.6	13.5	a	9.5		
9.6	45.4	24.5	a	9.3	7.7	34 10.2	2.5	8.2	9.6	57.5	36.4	9.2	8.2	18.1	48.9	C	8.5		
9.9	57.7	15.0		9.9	18.2	42.0		9.9	9.4	42 7.2	34.1	9.0	9.6	21.6	30.3	a	9.3		
9.9	22 15.6	10.3		10.0	20.2	26.7		9.2	9.2	19.0	31.8	9.3	10.0	39.1	48.6		9.8		
9.8	30.9	35.1		10.0	22.5	57.3		8.5	9.6	20.7	17.4	8.8	8.3	49.6	0.3	Ca	8.8		
9.1	23 33.9	16.3	a	9.1	31.0	25.4		9.2	9.6	23.7	47.3	8.8	8.8	57 0.6	45.5	a	9.1		
10.0	37.2	56.6		9.9	10.0	41.7	6.9	9.6	9.6	30.2	32.8	9.5	6.6	4.6	54.7	Gbl	6.1		
9.6	24 1.2	41.4		9.5	9.7	56.0	56.9	8.3	35.2	55.6	Cbl	8.5	10.0	59 16.6	50.6				
8.6	11.2	49.2	Ca	9.0	7.8	57.5	55.9	7.5	8.8	35.2	36.6	9.0	9.2	26.6	33.2	a	9.1		
9.8	28.7	22.4		9.9	9.7	35 1.6	46.1	9.5	10.0	41.2	21.3	8.2	8.2	44.6	23.2	Ca	8.5		
8.0	31.7	37.4	Ca	8.5	9.8	16.1	42.5	9.8	10.0	42.0	13.1	8.2	8.2	0 23.6	28.2	Cal	8.5		
9.6	34.5	19.4		9.7	7.0	17.1	4.5	6.2	9.8	49.0	12.1	10.0	10.0	24.1	38.0		9.7		
9.4	59.2	10.9		9.5	9.2	21.3	16.7	9.2	8.6	54.5	12.9	Ca	8.9	9.2	47.1	35.6	a	9.5	
9.2	25 53.7	47.8	a	9.2	9.7	32.8	19.6	9.8	9.6	43 14.7	32.8	9.6	8.8	1 15.1	10.8	a	9.1		
9.2	55.0	4.7		9.1	9.6	37.1	12.3	9.8	9.4	21.0	21.1	9.7	8.4	2 29.6	4.5	Ca	9.0		
9.2	19.0	11.9		9.4	9.9	59.8	26.4	9.9	9.9	25.7	0.7	10.0	8.3	40.6	55.8	C	8.8		
8.4	20.5	10.1	C	8.5	9.9	36 2.6	50.6	9.8	9.8	29.1	28.3	9.0	9.0	45.1	49.3		9.5		
9.9	30.2	41.4		10.0	7.8	29.3		8.0	34.6	41.1	C	8.3	6.9	49.1	27.3	Cal	7.5		
10.0	46.7	29.7		9.8	13.8	34.3		9.8	34.6	33.4		8.6	8.6	3 12.1	35.3	Ma	9.4		
7.1	50.8	6.1	GCal	6.2	10.0	24.6	48.4	9.8	9.8	35.7	33.1	10.0	8.6	13.1	40.5	a	9.3		
10.0	59.0	31.0		9.8	9.8	25.5	59.4	9.6	9.6	47.1	9.2	10.0	8.4	51.6	4.8	C	9.0		
8.6	27 3.3	49.0	Ca	8.6	9.8	30.6	0.5	10.0	9.8	44 11.4	23.5	9.8	9.4	4 20.1	10.6		10.0		
9.8	8.6	11.2		9.6	9.6	47.8	45.7	9.5	8.8	25.8	23.4	9.1	9.6	49.8	38.9				
9.8	15.0	40.8		9.9	9.9	52.6	9.0	9.6	9.6	29.1	9.7	10.0	9.6	5 11.5	58.0				
10.0	29.6	8.8		9.9	37 16.6	11.2		9.9	9.9	29.7	37.3	9.0	10.0	15.7	54.0		9.5		
9.6	32.3	52.8		9.8	9.4	48.3	59.3	9.6	8.7	37.1	41.2	9.0	10.0	43.2	44.6				
10.0	37.4	20.4		10.0	49.6	58.1		9.9	9.9	42.8	23.8	9.8	9.8	6 34.7	5.4	a	9.3		
9.6	42.7	30.2		9.4	9.7	52.2	39.1	9.1	45 29.1	38.4	a	9.2	8.6	40.7	36.4	a	8.7		
9.8	43.6	6.1		9.8	8.5	57.1	16.5	C	9.0	32.4	19.5	9.6	9.6	7 2.8	33.7	a	9.2		
9.9	46.7	15.5		9.5	9.7	59.8	37.2	10.0	10.0	38.1	26.0	9.6	9.6	3.5	18.0		9.5		
9.4	28 1.6	32.3		9.3	9.6	59.8	24.8	10.0	10.0	40.8	37.6	10.0	10.0	23.3	9.4				
9.5	34.6	10.2		9.3	9.7	38 6.6	52.4	9.9	9.4	58.8	43.7	9.5	6.4	28.5	16.4	Gtlmβ	6.2		
7.8	29 19.0	46.6	Cbl	8.3	9.4	9.4	8.1	9.4	9.6	46 0.8	51.5	10.0	10.0	40.9	53.4				
7.1	26.5	50.2	Gcbl	6.7	9.6	15.4	17.7	9.5	10.0	28.4	16.1	10.0	10.0*	42.5	37.0				
9.4	43.0	19.9		9.5	8.5	19.2	13.8	8.8	8.9	33.1	32.1	Ca	8.9:	8 19.5	24.2				
9.5	44.3	25.1		9.8	8.6	39.7	33.4	8.6	8.8	51.9	11.6	Ca	8.5	9.6	34.8	23.8		9.2	
10.0	55.1	29.8		10.0	51.4	16.5		9.4	47 28.7	32.8	a	9.2	6.7	9 13.5	16.6	GWtlπ	6.1		
9.5	30 0.1	22.0		9.3	7.6	58.9	27.6	Gcbl	7.5	9.9	29.9	11.2	10.0	8.4	25.3	56.2	C	8.8	
9.4	0.6	49.5		9.2	9.8	39 11.9	44.5	9.7	9.7	50.4	21.9	9.4	9.4	10 59.3	8.3		9.4		
9.9	2.6	7.0		9.8	17.4	25.9		7.8	7.8	52.9	25.1	Cb	6.7	9.6	25.2		9.4		
10.0	14.1	27.7		7.9	23.7	23.5		10.0	10.0	48 31.7	6.3	9.3	9.3	43.8	3.6		9.2		
9.4	23.6	14.0		9.2	10.0	41.8	38.5	Gcbl	8.1	9.6	49 25.5	20.3	a	9.4	53.8	51.0	C	9.1	
10.0	33.6	34.4		9.4	9.4	45.0	29.0	9.5	7.9	27.5	32.0	GCal	7.7	9.3	11 24.0	58.1	Cβ	9.2	
8.7	40.6	23.4	C	8.5	9.9	49.1	29.3	9.6	9.6	41.5	6.7	9.4	9.3	45.3	52.5	a	9.4		
10.0	46.9	36.2		9.2	40 9.8	55.8		9.4	9.6	53.5	5.4	9.4	9.1	12 9.8	10.1		9.1		
9.4	31 12.6	26.9	a	9.2	9.6	10.0	50.8	9.8	8.6	58.5	43.8	Ca	9.0	7.5	21.3	20.6	C	8.2	
9.9	32.6	30.0		9.8	17.3	3.6		9.4	9.4	50 48.0	2.8	a	9.2	10.0	35.3	3.5			
25Pr.	+ 1 181	- 8.3			+ 1 186	- 8.3			+ 1 190	- 8.2				+ 1 201	- 8.0				

5401-5460.					5461-5520.					5521-5580.					5581-5640.				
mag.	13 ^h	-19°			mag.	13 ^h -14 ^h	-19°			mag.	14 ^h	-19°			mag.	14 ^h	-19°		
m s	m s	m s			m s	m s	m s			m s	m s	m s			m s	m s	m s		
9.6	13 2.9	57.7	a	9.4	10.0	42 41.0	38.9			10.0	10 22.0	42.8			9.4	9.4	50.6		9.5
10.0	3.5	1.7		9.6	9.6	42.5	36.8		9.7	7.1	31.3	22.7	Cal	7.5	8.4	23.3	5.4	Cb	9.0
8.8	9.0	54.5	a	9.2	8.7	46.5	24.0	C	8.9	10.0	41.8	9.8		10.0	10.0	26.7	31.9		
9.4	43.0	22.1		9.0	10.0	46.8	6.1		9.5	8.4	11 10.3	3.0	Ca	9.0	9.2	34.5	29.6		9.5
8.4	49.0	42.9	Ca	9.0	10.0	43 21.5	11.2		9.5	8.4	11.3	35.4	C	8.8	9.2	49.4	13.4		9.1
9.4	15 24.0	30.9		9.7	7.0	43.3	16.6	GCa	6.8	9.6	27.8	54.3		9.6	9.2	58.2	3.1		9.3
9.6	31.0	38.8		9.2	9.2	50.2	57.0		9.0	9.4	50.3	52.4		9.5	9.9	29 6.9	44.9	a	9.3
8.8	53.0	28.8	a	9.0	10.0	44 40.8	38.8		10.0	9.4	12 5.8	43.7		9.7	9.4	16.1	39.4	Ca	9.3
9.8	16 40.0	22.7		9.8	9.4	45 8.3	17.5	a	9.0	9.6	22.8	56.9		8.6	8.6	47.4	34.1	Ca	8.7
9.2	17 8.5	59.6	a	9.3	9.4	9.3	17.7		9.0	10.0	51.3	48.8		9.8	9.8	58.4	9.6		9.4
									9.2	9.0	13 11.8	52.0		9.3	9.2	30 33.9	27.8		9.4
8.4	18 37.0	45.3	Cbl	8.5	9.8	56.8	16.0		9.7	10.0	36.3	51.1		9.8	9.8	34.9	7.0		9.5
8.3	47.0	31.4	Cbl	8.9	9.8	46 5.8	29.4	K	9.5	10.0	39.8	15.5		9.7	9.6	41.9	32.9		9.5
9.4	53.5	45.8		9.4	9.4	30.3	34.7	a	9.4	9.4	52.3	29.1		8.4	8.4	46.9	52.9	Cal	8.7
8.5	19 11.0	9.9	Ca	8.2	9.4	32.8	23.6	a	9.4	9.4	8.0	6.5	Cbl	8.5	9.8	31 22.4	7.0		9.2
9.1	33.5	55.9		9.5	10.0	47 24.5	12.5		9.6	8.4	14 32.3	12.6	C	9.3	8.0	45.3	23.9	Cal	8.2
8.5	20 15.5	42.4	a	9.1	9.6	34.3	23.0		9.5	9.4	42.8	13.2		9.8	9.0	32 7.8	34.5	a	9.3
8.8	23.5	41.0	Ca	9.0	9.6	35.8	32.6		8.9	10.0	44.3	45.1		8.2	8.2	15.8	48.9	Ca	8.3
9.4	56.5	34.7		9.8	8.8	48 24.3	43.7		9.5	9.7	53.8	10.7		9.2	9.2	24.3	19.4	Ca	8.9
9.8	21 25.5	10.1		9.8	10.0	24.8	27.1		8.5	8.4	15 13.8	55.5	C	9.1	9.0	30.8	38.2	a	9.2
9.6	22 42.0	4.1		9.5	8.8	31.9	30.4	C											
									9.0	8.2	29.3	54.5	Ca	9.2	9.0	56.3	6.1	a	9.0
8.1	23 15.5	39.9	GCtlr	8.0	8.8	59.9	38.1	a	9.1	8.4	16 2.3	37.8	C	8.7	9.2	56.8	27.9		9.4
10.0	25 37.5	31.5		9.5	9.1	49 31.9	14.3		9.1	9.7	26.0	30.7		9.5	9.2	33 0.3	27.1	a	9.4
9.8	26 5.5	9.6		9.4	9.1	50 9.9	29.9	a	9.0	9.2	26.8	5.3	a	9.0	9.2	2.8	38.4		9.5
7.6	25.0	20.7	Ca	7.5	8.6	52 5.9	26.1	Ca	9.2	8.6	59.8	35.4	Ca	8.5	9.8	36.3	11.5	a	9.1
8.6	41.5	58.6	Ca	9.0	9.2	35.4	5.9	a	9.2	8.0	17 2.3	13.8	CWal	7.7	9.4	36.8	43.1		10.0
8.4	27 36.2	48.9	Ca	8.8	9.0	53 15.9	48.6	C	8.8	8.0	7.8	10.8	Wal	9.1	9.9	44.3	55.5		9.5
9.4	28 21.5	47.8	a	9.2	9.2	23.9	24.0		9.0	10.0	13.3	13.9		9.9	9.9	54.8	27.7		10.0
9.8	50.0	11.2		9.6	8.8	54 0.9	5.2	a	9.3	8.3	16.0	38.9		7.6	7.6	34 23.8	23.3	Cal	7.3
9.3	29 5.2	4.7		9.1	9.6	41.3	59.0		9.3	10.0	29.2	6.9	CWal	8.5	8.8	41.3	40.1	Ca	8.9
10.0	6.8	32.1		9.1	7.6	55 39.9	12.3	GCtlr	7.3	8.4									
									8.8	10.0	54.7	22.3		9.9	9.2	35 44.8	41.3		9.4
8.8	31 2.0	31.5	C	8.7	8.4	56 46.4	20.2	C	9.4	9.0	18 0.7	59.5	C	9.0	8.9	57.8	22.0		9.0
8.7	31.0	47.2	a	9.0	9.4	57 23.9	25.2		9.7	9.4	24.7	54.0		9.5	9.8	36 32.8	15.6		9.4
8.6	32 8.5	13.4	C	9.1	9.4	33.3	11.3		9.0	7.5	29.2	23.8	GCa	7.3	9.8	55.8	55.4		9.3
9.4	25.0	4.4	Cb	9.2	8.8	58 15.8	56.1		9.5	7.4	31.7	24.1	GCa	7.0	8.6	37 39.6	57.2	Ca	8.5
10.0	48.5	2.8	C	9.1	9.8	23.8	51.8		9.3	8.9	41.2	39.4		9.1	9.8	38 3.8	4.1		9.6
10.0	33 33.0	32.2		10.0	9.0	50.8	1.4		9.3	10.0	19 2.2	16.1		8.9	2.1	39 3.3	17.6	a	9.2
10.0	53.5	14.8		9.2	9.2	55.3	31.5		9.3	9.6	12.2	14.4		9.5	9.8	31.3	6.2		9.5
10.0	34 26.1	9.4		9.6	9.2	59 16.3	23.0		8.3	8.8	26.2	3.0	a	9.0	9.4	38.8	8.9	a	9.2
10.0	34.9	43.4		9.5	8.4	35.8	28.4	Ca	9.0	10.0	33.2	1.5		10.0	9.0	50.3	17.2	a	9.2
10.0	35 19.1	51.0		9.5	9.2	49.8	54.1	Ca	9.0	9.4	56.2	34.1		9.1	9.0	40 2.3	26.5		9.7
									8.6	9.0	20 13.2	8.9	a	9.1	9.9	25.3	2.0		9.8
9.6	21.6	10.0		9.2	9.4	50.3	34.9	a	9.1	9.4	59.7	36.3		9.5	9.8	35.8	40.4		9.6
10.0	58.6	43.6		9.6	8.7	1 6.3	7.6	GCtlr	9.1	9.4	21 23.2	35.0		9.7	9.8	45.3	32.4		
9.4	36 12.6	16.6	Ca	8.7	9.4	2 4.8	56.5		9.4	9.4	23.7	50.2		10.0	9.9	46.3	41.1		
10.0	33.1	2.2		9.5	8.9	17.8	18.7	a	9.4	9.0	22 15.7	47.6		9.5	9.8	41 14.1	59.4	a	9.4
10.0	37 32.9	28.8		9.5	9.6	23.3	22.9		9.4	9.4	27.7	13.1		9.8	9.6	45.3	49.5		9.4
9.4	45.6	43.6		9.5	9.6	4 34.8	17.7		9.7	8.8	34.2	10.2		9.2	9.0	46.3	30.4		9.4
9.8	12.6	17.1		9.1	10.0	49.5	58.9		9.3	10.0	23 4.2	0.9		9.5	9.9	52.3	11.7		9.2
10.0	13.1	16.9		9.3	9.4	5 22.1	51.4		9.4	9.0	27 48.7	53.4	GWlπμ6.7	9.4	9.4	42 24.3	22.8	Cbl	7.3
8.7	16.1	6.0	a	9.1	10.0	43.1	53.8		9.3	8.8	16.7	47.0	C	8.7	7.6	32.8	21.0		9.3
9.4	33.6	46.2		9.4	9.4	6 51.0	16.6		9.3	9.8	17.2	42.0		9.8	9.8	43 10.3	21.0		9.5
									9.3	9.8	27.7	56.6		9.5	9.2	43 3.3	5.4		9.5
10.0	39 10.1	56.8		9.8	8.0	7 4.4	37.2	Cal	9.1	8.0	41.7	37.2		9.3	9.4	27.3	17.1		9.3
10.0	26.6	7.0		9.6	9.4	39.2	54.1	a	9.1	8.0	24 12.7	25.2	Cal	8.0	9.6	27.3	17.1		9.3
8.6	40 7.6	18.7	Ca	8.5	9.4	8 4.3	22.5		10.0	10.0	20.2	19.6		9.2	9.2	36.3	2.2	Ca	9.1
8.1	26.1	39.6	Cal	8.2	10.0	15.5	31.6		9.5	9.2	25 15.9	28.5		9.9	9.9	54.3	22.2		
8.4	43.0	44.8	Cbl	9.0	9.0	41.1	22.1	Ca	9.1	9.4	26 21.7	1.9		9.4	9.0	44 24.3	35.1		9.1
8.2	50.5	41.9	Cal	8.5	10.0	42.3	43.0		9.4	9.6	23.7	53.7		9.5	9.8	41.3	52.0		9.8
10.0	41 9.1	53.1		9.5	9.6	9 11.9	35.3		9.0	7.0	27 48.7	53.4		9.4	9.4	54.8	54.8		9.7
8.5	26.0	53.7		9.0	10.0	10 15.8	56.6												
9.3	42 38.0	15.0		9.5	9.3	16.3	22.7												
9.2	38.5	52.1		9.1	8.4	21.8	53.4	C											
25pr.	+ 1 21.3	-7.7				+ 1 22.5	-7.3				+ 1 23.5	-6.9							

5641-5700.				5701-5760.				5761-5820.				5821-5880.						
mag.	14 ^h	-19°		mag.	14 ^h -15 ^h	-19°		mag.	15 ^h	-19°		mag.	15 ^h	-19°				
m s	m s	m s		m s	m s	m s		m s	m s	m s		m s	m s	m s				
9.8	45 18.3	52.0		9.5	57 21.9	8.7		9.2	5 26.2	34.2		9.5	20 34.9	11.9	a	9.0		
9.8	46 52.3	32.3		9.8	10.1	34.2	32.9	9.6	9.2	31.7	20.8	9.2	10.1	38.4	44.8	9.5		
7.4	46 35.3	27.4	Cal	7.5	9.8	41.9	49.2	9.6	9.0	48.2	38.9	9.0	9.6	46.4	27.2	Ca	9.2	
10.2	47 45.0	58.1		9.6	9.6	46.4	10.1	9.7	9.8	51.6	58.1	9.5	9.1	21 31.4	26.9	:9.3		
7.4	48 1.6	30.1	Cal	7.3	9.8	49.2	13.1	10.	8.3	6 8.7	46.8	Ca	8.5	10.1	34.4	42.3	9.5	
9.5	48 4.4	5.7		9.7	10.2	5.1	18.6	6.6	6 11.7	10.5	GWπμβ6.5	8.3	8.3	43.4	46.3	Ca	8.6	
10.1	22.8	48.4		8.5	8.5	11.6	6.9	Ca	8.8	10.2	29.4	58.4	10.2	22 0.4	7.0	9.5		
9.5	32.2	37.6	Ca	9.0	9.4	17.7	19.0	9.5	9.5	35.7	9.9	10.	9.0	48.4	30.2	a	9.2	
10.2	54.6	46.0		9.5	9.5	30.4	37.8	a	9.2	8.7	51.7	44.6	a	9.0	49.9	32.2	a	9.2
8.1	49 5.1	52.9	Ca	8.0	7.8	40.2	55.6	Ca	8.2	9.8	7 5.5	54.4	9.8	10.0	23 51.6	50.0	9.5	
9.8	18.3	14.7		9.3	10.0	55.4	51.6	9.5	9.8	13.5	46.3	9.5	24 6.6	47.4	9.5			
9.9	21.6	52.3		9.6	9.6	3.2	43.4	9.8	9.5	21.3	7.1	10.1	19.6	36.9	9.1			
8.9	34.0	24.5	a	9.3	9.6	22.2	50.4	9.8	10.2	29.5	48.2	6.5	32.6	44.1	Gστπμ	6.7		
8.9	39.6	8.5	b	9.1	10.2	29.0	2.0	10.0	10.0	50.7	55.5	9.2	37.1	15.8	a	9.0		
7.9	43.1	58.9	Ca	8.6	9.6	31.6	29.3	b	9.4	9.8	56.0	5.5	10.1	39.1	14.1	9.0		
10.2	50 0.6	53.7		8.5	8.5	38.2	43.1	Ca	8.6	10.0	58.5	16.6	8.8	55.1	28.0	9.0		
10.2	3.0	10.3		10.0	10.0	39.6	46.6	9.8	8 12.5	32.2	10.	10.2	25 5.1	20.1	10.			
8.4	27.8	37.5	Ca	9.0	10.1	48.6	23.2	10.2	10.2	19.2	35.4	Ca	9.4	13.6	45.2	a	9.3	
9.6	41.3	32.3		9.0	8.9	1.5	19.9	9.1	8.7	20.6	45.0	Ca	8.7	23.1	34.8	a	8.7	
9.8	44.8	45.6		9.6	9.6	1.5	49.9	10.	8.1	40.9	4.8	Ca	8.7	26.1	14.6	GW1πμ	5.5	
9.9	46.9	47.7		8.9	9.8	44.3	Ca	8.5	10.0	49.5	52.1	9.8	49.6	32.7	9.8			
10.0	51 4.1	23.8		9.4	10.2	15.5	28.4	9.9	9.9	53.0	9.2	9.4	57.6	28.5	a	9.1		
9.5	25.4	58.8		9.1	10.2	34.4	25.4	9.2	9.2	58.2	57.8	a	9.0	59.6	19.2	9.8		
9.0	30.6	13.3	Cal	8.5	10.0	36.0	39.2	10.2	9 21.0	0.8	Ca	9.4	26 14.6	49.2	9.0			
9.6	55.6	4.8	a	9.3	9.6	36.6	34.3	a	9.4	8.2	36.0	32.1	Ca	8.5	9.0	17.8	37.9	b
8.6	52 3.6	26.0	C	9.0	9.6	36.7	38.3	9.8	9.2	10 6.5	8.6	9.4	10.2	28.3	36.7	10.		
9.6	4.9	24.5		10.	10.1	47.1	9.7	9.5	9.5	43.5	56.0	9.2	9.2	42.3	12.7	9.3		
9.6	12.6	23.3		9.4	9.9	56.3	50.2	8.6	8.6	57.0	2.5	9.1	10.2	47.8	28.7	9.7		
9.6	33.6	8.2		9.4	9.5	1 10.3	22.0	a	9.1	10.0	11 20.5	19.3	9.5	8.4	48.8	9.3	a	
10.2	37.1	15.1		9.6	9.6	12.3	28.1	9.5	9.2	21.5	0.8	9.1	10.2	27 1.8	54.9	9.6		
8.8	38.9	25.0	a	9.1	8.8	18.8	2.0	9.1	9.2	36.3	49.0	9.5	10.2	27.3	13.1	9.6		
9.8	42.6	42.9		10.2	37.3	6.1		9.0	9.0	50.3	12.2	9.2	9.2	52.5	36.6	a	9.3	
10.2	44.8	54.1		9.8	47.6	43.4		9.5	9.2	51.8	40.2	9.1	9.6	59.3	37.5	9.8		
9.4	47.9	53.7		9.2	8.6	52.3	55.4	C	9.0	8.7	53.3	22.2	9.0	9.0	28 5.3	6.9	a	9.2
9.8	51.3	53.4		9.6	9.6	4.6	17.5	a	9.5	9.0	12 16.8	1.8	9.4	9.2	22.0	12.5	a	9.4
8.7	54.9	38.8		8.7	10.2	8.3	47.5	9.0	9.0	17.3	29.8	a	9.0	10.2	43.8	37.5		
10.2	58.3	42.8		10.1	10.1	15.3	2.7	7.1	7.1	42.3	5.6	GCal	7.3	10.0	29 0.3	5.3	10.	
10.0	53 2.2	37.8		10.2	10.2	17.7	28.4	10.2	10.2	43.8	21.2	10.	9.6	1.5	19.7	9.8		
9.6	6.5	0.9		9.5	9.9	25.3	35.5	10.	10.2	13 14.8	22.9	9.8	9.8	1.8	36.9			
10.2	18.0	56.7		10.1	10.1	28.3	57.8	10.	9.0	14 12.8	56.0	G	var.	9.6	4.9	57.9	9.4	
10.1	54 2.3	52.1		10.0	37.3	25.8		9.6	9.6	13.5	26.0	9.8	10.0	12.8	27.4			
9.5	2.3	7.0		9.5	10.1	45.2	57.5	9.9	10.2	45.3	46.6	9.8	9.4	23.5	23.9	a	9.3	
9.8	39.3	53.4		9.6	9.8	51.7	22.4	10.2	10.2	57.8	19.8	9.7	10.0	31.4	56.9			
8.7	54.3	57.7	C	8.7	9.6	58.3	23.9	a	9.4	9.5	15 5.8	36.1	9.2	9.6	38.2	56.0	a	9.4
8.1	55 1.6	46.9	C	8.9	10.2	3 7.6	38.8	9.5	9.2	21.3	3.1	C	9.0	8.5	30 33.7	0.6	a	9.0
10.2	2.8	7.9		10.2	10.2	7.6	36.9	9.2	9.2	33.3	33.8	9.5	8.4	31 5.2	56.1	Ca	8.5	
10.2	8.9	32.6		9.2	9.2	12.4	42.2	9.2	10.2	37.5	1.0	C	6.8	14.7	29.8	GCal	7.0	
9.1	11.1	44.3		9.4	10.2	16.8	1.7	8.6	8.6	16 2.3	20.2	C	8.3	18.2	22.0	a	9.0	
9.4	15.6	3.8		9.1	10.2	26.6	0.2	10.2	10.2	9.3	45.0	9.8	8.5	30.2	44.7	C	8.3	
10.1	16.1	56.4		10.2	10.2	43.4	33.0	10.	8.8	11.3	17.0	9.2	7.3	48.2	19.2	GCal	7.9	
9.6	21.6	52.3		9.5	10.0	44.8	42.0	10.	8.6	32.3	18.2	C	8.9	9.5	53.7	55.2	9.5	
9.6	22.1	19.0		10.1	10.1	50.8	27.3	9.8	9.8	42.8	31.6	10.0	10.0	57.4	18.0	9.4		
9.6	23.1	48.2		9.6	9.6	4 3.6	22.5	9.5	9.5	17 9.3	17.0	a	9.4	9.2	32 18.9	47.4	9.1	
10.2	35.8	38.1		9.6	9.6	8.4	21.9	9.8	10.2	11.5	50.6	9.5	8.4	28.9	43.3	C	8.9	
9.6	36.1	20.1		9.9	9.9	14.1	0.1	8.3	8.3	20.3	31.0	Cal	8.2	7.9	37.4	18.3	Cal	8.6
10.1	45.6	37.3		9.8	9.8	56.6	7.0	10.0	10.0	18 5.8	20.8	9.5	6.9	42.9	21.5	GCal	7.6	
9.6	56 12.1	52.0		9.5	9.6	5 1.0	50.7	9.4	10.2	56.1	27.3	10.	9.0	33 36.9	28.1	a	9.2	
9.9	57 11.1	9.1		10.	4.5	6.8	18.8	Gστπμβ	4.5	9.8	19 3.9	33.1	10.	9.0	34 2.4	18.1	9.3	
10.2	17.4	17.7		9.6	9.6	9.8	19.2	9.0	7.6	39.9	33.9	GCal	6.5	9.6	3.4	48.8		
10.0	21.9	8.4		10.2	10.2	14.8	50.5	10.2	10.2	41.9	20.2	10.	9.2	13.9	50.1	9.3		
25pr.	+1 24.9	-61		9.8	+1 25.2	-5.9			+1 25.6	-5.6			+1 26.1	-5.2				

5881-5940.				5941-6000.				6001-6060.				6061-6120.			
mag.	15 ^h .	-19°		mag.	15 ^h -16 ^h .	-19°		mag.	16 ^h .	-19°		mag.	16 ^h -17 ^h .	-19°	
7.7	34 44.4	3.3	GCal 8.2	7.6	56 45.0	25.1	GCal 8.0	9.9	29 42.0	6.6	9.5	6.8	49 43.7	20.3	GWlπμ 6.9
6.6	44.9	16.3	GSπμβ 5.3	9.0	57 34.0	18.3	a 9.0	9.2	31 10.2	16.1	9.2	9.2	52.7	22.8	9.1
8.4	35 8.9	5.1	al 8.7	8.8	34.8	57.7	- 8.5	9.9	20.7	28.7	9.3	9.6	50 6.4	41.2	a 9.1
8.4	12.4	27.7	a 9.0	10.2	40.5	5.3	9.0	9.4	33 9.7	36.3	b 8.8	8.8	32.9	35.6	Cb 8.3
10.0	15.9	9.1	9.5	3.0	58 10.0	27.5	GSπμβ 2.0	9.9	12.9	12.6	8.9	8.6	53.9	2.0	9.0
10.0	23.4	34.0	10.0	7.9	29.5	20.3	GWlπ 8.0	6.8	34 32.9	40.8	GWπμβ 6.0	9.6	56.9	28.7	9.4
9.2	37.4	50.6	C 9.0	8.6	58.0	2.3	a 8.7	8.1	54.9	49.0	al 8.5	8.6	51 17.9	12.5	C 8.8
9.3	51.4	16.9	9.7	8.4	59 0.5	26.3	a 8.9	8.2	55.9	56.7	Cal 8.5	9.2	23.4	56.3	9.1
9.5	53.9	6.1	a 9.5	9.4	18.0	53.6	a 9.4	8.1	35 2.9	55.1	Cal 8.3	9.4	33.4	24.8	9.3
10.0	55.2	33.4	9.8	4.4	47.5	6.5	9.4	9.2	29.9	40.6	9.3	9.1	56.4	14.0	C- 9.1
9.0	56.7	56.7	9.3	9.0	0 34.0	39.1	Ca 8.6	9.6	36 11.9	59.2	9.0	9.0	56.9	17.7	9.5
10.0	36 36.4	55.5	9.6	9.8	1 12.5	19.7	9.4	9.9	11.9	1.3	9.4	9.2	52 1.4	47.8	a 9.4
10.0	36.4	34.1	10.2	8.0	2 4.1	8.1	9.6	9.6	35.9	44.7	9.5	10.2	2.9	56.0	9.8
9.9	41.9	55.1	9.6	8.0	5.6	7.4	Gatπ 8.2	9.8	59.4	49.9	9.6	10.2	40.4	29.9	9.5
9.0	59.6	23.4	Ca 8.8	9.6	7.6	21.7	9.6	8.9	37 3.9	36.7	Ca 8.3	10.2	55.9	15.1	9.4
8.4	37 8.1	18.8	Ca 8.8	9.4	3 26.1	3.8	a 8.9	9.4	38 39.9	31.5	9.4	10.2	53 7.5	16.8	9.8
9.6	32.6	39.4	a 9.3	8.9	36.6	40.9	Ca 8.7	9.9	55.4	43.3	9.8	9.8	22.8	7.8	9.4
10.0	38 29.6	18.8	9.7	10.2	4 22.5	47.5	K 9.7	9.9	39 19.4	45.1	9.5	9.6	54.5	59.8	9.4
9.7	51.1	9.9	a 9.5	10.2	40.1	51.0	9.8	9.2	27.4	47.0	9.1	9.6	54 8.0	36.3	9.4
9.4	39 22.1	13.6	a 8.9	4.4	44.1	7.9	GSπμβ 4.5	8.1	35.4	52.1	Wal 7.6	9.4	22.5	23.4	9.4
10.0	34.6	46.0	9.4	7.4	5 5.3	15.1	Cal 8.4	9.2	40 18.9	54.9	9.3	9.6	28.0	31.8	9.0
9.4	40 9.1	32.6	9.4	7.4	28.3	10.6	Gatπ 7.5	8.5	25.9	38.9	CWb-1 8.5	8.8	43.5	1.6	b 9.0
9.2	36.6	18.8	CWa 8.8	9.4	6 56.8	20.2	9.1	9.0	46.5	8.8	9.0	9.4	47.0	3.3	9.8
9.2	41.6	28.0	a 9.2	10.2	57.1	1.0	9.2	9.9	55.5	20.9	9.5	10.2	55 32.5	32.1	9.8
9.5	41 6.1	37.8	9.8	9.0	7 22.2	54.9	Ca 8.8	8.3	41 14.0	3.1	Cal 8.0	9.6	52.0	36.0	9.8
10.0	12.6	23.2	a 9.5	9.4	42.2	43.7	9.4	8.8	25.5	50.3	Ca-1 8.5	8.5	56.0	57.6	MCbm 8.2
10.0	13.6	27.8	9.6	9.6	44.2	49.4	9.2	8.4	41.5	22.8	Cb 8.7	8.2	58.5	18.5	CWal 8.0
9.0	25.9	46.3	b 9.2	9.4	8 10.2	55.3	a 9.1	9.2	43.0	14.3	C- 8.8	8.2	56 4.5	54.3	Cb 8.4
9.0	35.4	1.7	CWa 9.2	7.6	33.0	45.5	Cal 7.5	9.0	56.0	2.1	Cbl 8.3	10.2	9.8	15.4	9.7
9.5	47.4	25.8	Wa 8.7	7.4	9 40.8	47.4	Gatπ 6.5	9.2	42 13.0	58.8	9.3	8.2	16.0	16.8	b 8.9
8.0	42 6.4	54.0	Ca 8.0	10.0	11 1.5	8.3	9.5	9.9	24.0	13.4	9.4	10.2	21.8	31.9	9.5
9.5	14.4	13.7	9.8	9.8	1.5	47.0	9.5	9.8	43 19.0	25.4	9.5	9.6	34.0	44.8	9.2
9.0	52.9	32.7	a 9.3	9.0	19.5	28.4	9.0	9.8	26.0	54.0	9.2	9.2	37.0	55.0	9.7
9.6	43 17.4	32.4	9.3	9.3	29.5	40.0	9.5	9.8	29.0	44.6	9.6	9.6	39.5	20.8	9.7
10.0	22.4	40.9	9.4	10.0	32.0	11.0	9.4	9.9	33.5	41.8	9.2	9.2	45.8	3.5	9.3
8.3	50.9	37.5	a 8.9	9.2	32.5	22.2	9.2	8.2	35.0	37.1	CWal 8.3	9.0	57 2.0	33.4	9.3
9.2	44 16.9	17.2	9.4	7.4	49.0	54.7	Gatπ 6.0	9.2	42.5	16.1	9.4	9.4	12.0	29.4	9.4
10.0	41.9	38.3	9.8	7.9	12 45.5	44.3	Gatπ 8.5	9.2	51.5	33.0	9.2	9.2	36.5	17.1	9.4
9.2	45 32.6	55.2	a 9.1	7.8	46.7	45.0	Gatπ 7.7	9.8	44 11.0	23.0	9.8	10.2	40.0	10.8	9.7
5.0	46 4.6	47.3	GWπμβ 5.4	7.1	13 11.7	48.6	Gatπ 7.3	9.8	42.5	12.9	9.4	9.6	40.0	0.8	9.7
8.8	7.1	1.3	8.9	8.4	51.2	38.1	GCal 8.6	9.6	49.5	33.8	10.2	52.5	36.0	9.5	
8.6	36.8	56.5	Ca 8.7	10.0	14 40.7	57.0	9.6	8.0	45 2.0	8.6	CWal 7.8	10.2	53.5	32.9	9.5
10.0	47 7.7	1.1	a 9.5	9.6	43.2	4.2	9.5	9.0	13.5	7.9	9.4	9.0	58 15.0	11.8	9.2
9.7	10.2	6.4	9.7	5.8	16 47.2	44.5	GWπμβ 5.0	8.8	14.0	29.5	9.0	9.2	26.0	15.8	9.5
9.6	46.1	53.0	a 8.9	8.4	18 8.2	32.8	Ca 8.5	9.9	14.5	33.8	10.2	35.5	35.8	-	
6.0	46.9	0.7	GWπμβ 6.3	9.8	21 21.1	1.3	9.3	8.4	33.5	58.3	Ca 8.6	8.7	41.5	36.8	9.0
10.0	48 4.6	48.9	9.7	8.9	25 13.6	48.1	8.8	9.4	35.4	25.9	9.4	9.0	59 11.2	32.9	9.2
10.0	21.7	14.5	a 9.4	9.2	22.1	19.2	CK- 8.8	9.6	55.4	16.6	9.5	9.6	32.7	20.2	9.2
10.0	44.6	7.7	9.7	9.3	36.1	28.6	K 9.2	9.2	58.9	17.9	9.4	8.2	33.7	46.5	Ca 8.5
9.2	51 32.2	10.9	C 8.3	9.2	26 2.9	58.7	9.1	8.4	46 23.4	11.9	9.0	9.6	33.7	49.1	9.7
8.4	52.2	34.3	Wbl 8.7	9.0	27 27.4	40.7	Ca 8.4	7.8	35.4	6.3	CWa 8.3	10.0	34.2	18.3	9.7
8.0	53.2	34.5	CWbl 8.6	9.3	37.4	52.1	b 9.0	8.6	58.9	9.6	a 9.0	8.6	45.7	19.9	C- 8.8
10.2	52 46.2	45.5	9.3	9.2	40.4	24.4	9.1	9.9	47 55.4	2.9	9.2	9.2	50.2	26.4	9.2
10.0	53 17.7	31.6	9.3	9.3	49.5	55.7	9.1	8.3	58.2	14.2	Ca 8.7	8.8	0 3.2	4.4	9.2
9.6	54 50.2	25.5	8.8	10.0	28 14.8	4.1	9.7	9.6	59.2	25.8	8.8	8.8	5.2	5.7	-m 9.2
8.4	55 0.7	6.0	Cal 8.2	9.0	16.0	59.8	Ca 8.7	8.2	48 3.4	19.0	Ca 8.7	8.2	6.2	7.2	Kbl 8.0
9.0	45.5	38.9	a 8.9	9.3	30.8	47.4	9.3	9.2	17.4	54.0	C- 8.7	8.6	24.2	2.4	Cbml 8.3
7.4	52.0	29.4	GWal 7.5	8.9	29 14.2	53.5	8.8	9.6	22.4	9.0	9.5	10.2	32.2	2.3	9.2
8.4	56 29.0	13.7	Cbl 8.0	8.5	14.5	1.1	Ca 8.5	9.6	23.6	31.0	9.5	9.6	33.2	27.4	9.3
10.2	33.0	10.3	9.0	8.9	21.0	20.5	C- 8.7	9.9	33.4	23.2	10.0	10.0	46.1	11.1	9.4
25pr.	+ 1 26.6	-4.7			+ 1 27.3	-3.9			+ 1 27.9	-2.8			+ 1 28.2	-2.3	

6121-6180.				6181-6240.				6241-6300.				6301-6360.			
mag.	17 ^h	-19°		mag.	17 ^h	-19°		mag.	17 ^h	-19°		mag.	17 ^h	-19°	
10.2	0 51.4	49.1	9.5	9.8	10 17.9	58.0	9.2	8.3	28 9.4	48.6	Ca	8.0	10.3	48 9.3	7.2
9.6	51.9	36.5	9.4	9.8	28.6	31.6	9.5	9.2	55.6	27.0		9.2	10.5	12.3	8.3
8.6	54.4	38.0	a	9.0	41.6	49.1	9.2	8.2	29 12.2	59.7	C-	8.1	9.1	16.6	47.7
10.2	54.9	37.3		9.8	58.1	43.0	9.5	9.8	15.6	49.9		9.4	9.6	18.4	4.0
9.6	56.4	49.4		9.8	5.1	39.8	9.4	9.8	19.6	56.2		9.5	10.1	21.2	24.5
10.2	1 2.1	24.0	9.8	8.8	8.1	50.4	9.4	9.5	34.7	44.6		9.4	10.0	33.6	53.4
9.0	3.9	14.4	9.2	8.7	29.1	7.0	-	8.8	38.0	15.5		9.5	10.5	35.8	17.6
10.2	12.9	12.2	9.7	9.7	30.4	57.4	9.3	9.0	30 6.8	58.6	a	9.1	10.5	37.8	6.4
10.2	26.4	43.0		9.7	32.9	46.7	9.5	9.4	37.3	18.6		9.2	10.5	42.3	2.0
8.6	31.4	30.7	a	9.1	56.6	25.4	C	9.0	44.3	54.0	Cal	8.9	9.2	42.6	20.8
8.2	46.4	31.0	Ca	8.7	9.7	20.3		9.1	31 0.3	0.0		9.3	9.1	47.9	48.0
10.2	46.9	4.2		9.7	9.8	15.3	14.6	10. 9.8	17.3	46.2		9.6	9.3	48.6	33.3
10.2	55.4	56.3		9.8	16.8	20.0		9.6	27.8	27.8	Caml	8.3	8.8	50.9	2.1
10.2	2 5.4	52.0	9.8	8.8	29.3	32.7		9.1	33 32.8	54.3	C	8.3	9.7	53.1	0.4
9.5	13.9	24.8	9.4	7.7	33.8	34.3	Cbl	8.0	34.3	59.2		9.5	10.3	56.8	0.3
9.2	14.9	41.8	9.2	9.2	36.8	40.6		9.3	43.8	27.7		9.0	10.1	49 0.8	7.6
10.2	25.9	29.1	9.4	7.8	37.8	50.9	Caml	7.9	54.8	23.2	CWa	8.0	9.9	4.1	1.3
10.0	26.1	51.0		7.2	13 13.8	12.0	Gkaml	6.5	34 19.8	57.7		9.4	10.1	6.3	13.1
9.2	50.9	41.1	Gctlr	9.2	22.8	29.8		9.4	24.8	11.6		8.9	9.7	6.6	7.3
6.8	53.9	16.5		7.0	9.8	47.8		9.9	38.3	14.6		9.2	9.9	8.5	44.3
8.8	3 1.4	53.4	8.9	9.4	14.8	32.9		9.5	35 1.3	20.2	CWa	8.5	9.6	12.4	3.7
8.8	3.4	21.1	a	8.8	17.3	21.0		9.6	17.3	50.6	Mm	9.1	10.5	15.3	44.3
9.0	27.4	25.6		9.4	20.3	21.4		9.6	35.8	30.9		9.6	9.4	15.9	4.2
9.4	28.9	24.6		9.8	43.0	57.0		9.0	46.3	26.6	Wa	8.6	9.9	19.1	7.3
9.4	30.2	59.4		9.2	48.8	23.4		9.2	36 20.3	34.0		9.0	10.5	21.2	13.2
9.5	31.9	48.4		9.5	10.3	56.7		9.5	57.3	49.7		9.4	9.4	22.1	1.4
10.2	46.9	27.1		9.5	11.6	29.2	Ckbn	7.9	37 7.3	46.3		9.5	10.4	22.8	6.6
9.6	48.9	22.2		9.4	54.3	19.6	Gatlr	7.8	42.3	54.3		9.5	9.2	22.9	2.5
10.0	4 13.4	46.1		9.8	17 14.8	50.0		9.8	38 46.3	46.6		9.4	10.4	24.3	2.1
10.2	21.9	29.1	9.8	9.8	33.3	6.7		9.2	39 17.3	56.8		9.0	9.0	29.3	3.4
10.2	39.4	4.8		9.0	37.3	57.3		8.8	40 52.3	6.5		8.8	8.2	32.3	18.7
10.2	50.9	3.4		8.7	46.1	59.4	Ca	8.5	41 0.3	35.2		9.0	9.6	33.5	4.2
10.2	5 1.9	47.3		9.7	18 1.8	52.1		9.4	41 16.8	44.0	MCKam	8.3	9.4	34.8	1.0
9.2	5.4	37.7	a	9.1	5.8	37.4	Ckal	8.0	42 10.3	58.3		10. 9.6	9.6	35.7	1.9
9.4	41.9	1.7		8.9	17.3	44.7		7.2	10.8	57.8	Cbl	7.4	9.9	35.8	8.0
9.4	49.9	5.7		9.6	24.3	44.1		9.6	27.3	51.8	Mam	8.5	10.0	36.5	38.9
9.4	5.4	46.7		8.4	26.6	10.8	Ca	8.6	57.8	0.4		9.5	9.6	39.8	2.3
10.0	17.1	15.1		8.8	26.6	8.2		9.1	43 0.3	17.9		9.4	9.7	40.3	4.3
9.2	18.4	24.0	b	9.3	29.1	51.9		9.4	44 13.3	59.7		9.3	9.0	45.8	1.9
9.6	18.9	39.8		8.8	31.1	52.7		9.2	44 20.3	44.2	Gktlr	8.0	9.2	46.0	4.3
10.2	33.4	55.4		9.5	19 2.1	24.1	Ca	8.7	45 16.3	20.7		8.7	10.3	49.5	8.3
10.0	36.9	33.3		9.8	2.1	24.5		9.0	46 22.2	51.3	Gktlr	7.0	10.0	54.5	29.0
8.8	46.9	7.2		8.8	21.3	7.4		9.5	47 11.2	9.9		8.8	10.1	55.0	58.2
9.4	5.4	11.7		9.4	24.1	52.6	a	9.1	12.0	30.3		9.5	10.1	50 2.0	1.8
9.1	17.5	9.7		9.3	20 21.6	6.8	Ca	8.5	16.0	22.1		9.5	8.4	3.0	55.7
9.5	21.5	0.7		9.7	30.1	10.6		9.3	20.3	44.2		8.0	9.2	46.0	4.3
9.6	22.0	16.1		9.2	43.1	51.9		9.2	25.2	5.2	C	8.8	10.1	55.0	58.2
8.6	30.7	42.9	C	8.5	23 16.1	27.3	Cam	8.0	27 16.1	33.2		9.5	10.1	50 2.0	1.8
8.7	38.5	23.7		9.0	16.1	33.2		9.5	47 11.2	9.9		9.5	8.4	3.0	55.7
9.5	41.0	42.3		9.3	20.1	0.9	a	8.0	47 11.2	9.9		9.5	10.2	4.0	44.1
10.0	55.5	14.9		9.5	9.3	43.6	43.8	9.2	22.7	7.8		9.8	10.2	5.5	3.0
10.2	8 2.0	5.3		9.4	8.6	25 52.6	16.9	8.6	28.8	44.6		9.1	9.1	10.3	52.1
9.6	2.3	4.5		9.2	26 2.1	54.1		10.4	33.1	51.8		9.3	10.4	13.5	0.0
10.2	13.5	54.3		9.8	9.8	15.1	3.0	9.0	36.6	35.9		9.4	8.9	16.0	7.2
10.0	48.5	35.9		9.8	9.7	21.1	49.6	8.9	40.3	8.5		8.6	8.6	22.0	25.8
10.0	51.5	6.7		9.7	30.1	24.5		10.0	52.8	19.1		10.4	10.4	25.0	1.3
10.2	9 1.5	52.5		9.8	45.1	28.2		9.5	54.4	18.2		9.4	9.8	34.0	19.8
8.2	7.0	11.8	Cal	7.9	8.3	47.4	5.2	8.0	57.4	15.9	C-	8.9	9.3	48.5	15.1
9.8	10.0	29.4		9.2	27 6.6	7.9		9.0	48 1.9	17.9		9.2	9.3	55.6	12.8
9.4	10 9.6	1.0		9.5	28 6.6	17.1		9.8	4.8	12.1		10.3	51 3.6	28.5	
25Pr.	+1 28.3	-2.0			+1 28.5	-1.5			+1 28.6	-0.7			+1 28.6	-0.4	

6361-6420.			6421-6480.			6481-6540.			6541-6600.										
	17 ^h .	-19°		17 ^h -18 ^h .	-19°		18 ^h .	-19°		18 ^h .	-19°								
mag.	^m ^s	^m ^s	mag.	^m ^s	^m ^s	mag.	^m ^s	^m ^s	mag.	^m ^s	^m ^s								
10°0	51 3.6	37.3	9.9	9.8	56 52.1	41.9	9.5	9.6	1 9.8	3.6	9.5	9.7	3 45.0	23.3					
10°2	12.6	28.1		10.5	57 4.6	48.7		9.0	16.8	24.0	G	9.7	10.3	46.0	9.6				
9.8	18.4	58.9	9.3	9.4	15.6	36.4	:9.1	10.3	19.3	36.9			9.2	49.0	56.4				
10°0	22.6	1.4		9.5	10.3	58.3		10.1	21.3	5.2			6.5	51.0	51.9	Gb=cl	9.5		
9.3	36.1	33.8		9.2	10.5	21.1	3.3	9.5	10.5	25.3	5.7		9.2	52.0	42.4		9.5		
10.5	37.8	27.0		9.7	9.7	25.1	34.5	9.7	10.5	26.3	10.4		10.1	52.4	58.2				
9.0	52.6	31.4	C	8.5	8.4	25.6	2.7	a	8.5	10.1	27.3	8.7	10.1	56.0	21.4				
10°0	52 3.1	41.3		9.5	9.8	28.1	46.9		10.0	32.8	26.2		9.0	56.0	27.6	C	8.7		
10.1	6.6	18.0			10.5	31.1	55.9		10.4	35.3	39.1		10.4	56.0	23.0				
10.4	22.6	49.6		9.4	10.3	41.1	57.0		9.7	36.3	37.3		9.5	9.9	22.5				
					10.5	41.6	25.3		9.8	38.3	13.4		9.5	9.7	2.0	13.9	G	9.4	
10.3	36.6	7.3		9.2	9.2	46.6	22.3		9.0	40.8	53.5	Cb=1	8.2	9.9	2.0	56.1			
10.2	39.6	54.6		9.3	8.8	48.4	35.3	Ca	8.8	10.4	41.3	56.2		10.1	6.0	21.0		9.4	
9.6	52.6	44.0		7.8	10.5	56.4	33.1		8.4	43.3	52.9		8.6	9.8	8.5	20.0			
8.8	2.6	13.2	Cbl	9.1	9.8	59.7	59.6		9.5	8.7	44.3	54.4		9.0	10.0	32.0		9.8	
10.5	3.6	22.3		9.1	7.2	58 9.4	45.5	Cal	6.9	10.4	45.3	14.4		10.5	13.5	31.0			
10.5	8.1	19.0		9.1	10.0	13.7	58.4		9.1	8.7	52.8	44.4		9.0	15.0	22.3			
10.4	9.6	43.7		10.0	18.9	33.4			9.8	9.8	53.3	28.2		10.1	19.0	46.4			
10.5	13.1	50.2		8.5	8.4	32.4	42.9	Cal	8.3	8.8	58.3	12.2	G	9.1	10.0	21.0	14.0		
9.4	17.1	42.0		8.5	8.5	32.4	28.0	Ca	8.0	10.1	2 2.3	47.6		8.6	24.5	4.2	G	9.0	
9.8	18.1	41.3			10.4	33.2	51.6	a	9.6	4.3	13.6		9.5	9.2	25.5	45.0		9.4	
10.5	23.1	2.3		9.3	8.4	33.7	57.6		9.0	9.2	8.1		9.3	10.5	28.0	52.4			
9.3	23.8	56.5		9.4	9.4	43.9	57.3		9.0	9.3	11.2	4.4	9.6	8.7	32.0	5.1	G	9.0	
10.1	25.1	15.7		9.0	10.5	48.9	50.5		8.2	13.2	22.4	GCWa	8.4	10.3	49.5	37.0			
8.8	25.6	53.9	a	10.0	10.0	52.4	40.9		9.7	14.7	13.0		9.8	10.1	51.0	10.7			
10.4	25.8	36.9		8.3	8.4	54.4	33.9	a	9.0	9.8	20.7	9.8	9.2	10.3	52.0	9.4			
8.8	39.6	51.9	Ca	7.8	10.5	56.2	58.7		9.2	21.2	19.8	G	9.5	7.6	52.0	27.4	GWal	7.3	
8.5	42.1	57.4		9.0	9.8	59.9	19.9		10.4	23.2	0.6		9.6	9.6	53.5	28.6			
8.9	46.6	41.1		8.8	8.8	59 9.4	4.6	a	8.8	9.0	24.7	38.8	9.4	10.3	54.5	33.2			
10.1	48.1	24.3		9.1	9.2	9.9	14.0		9.2	10.4	30.2	59.2		9.8	55.0	10.4			
9.0	49.1	50.9		9.3	9.8	12.4	57.5		9.9	31.2	5.2		9.4	9.9	55.5	43.5			
9.6	16.1	21.9		10.1	10.1	26.4	49.6		9.7	31.2	5.6		9.4	9.9	56.0	18.3			
9.9	29.6	37.0		8.9	8.9	33.4	23.3	Ga	9.0	9.4	32.2	18.8	G	9.7	59.0	30.2			
7.5	31.1	6.0	Gktlr	9.5	9.6	43.4	40.3		9.5	10.2	32.2	28.6		10.1	5 1.4	30.1			
10.0	32.6	35.8		9.0	9.4	48.4	51.3		9.4	9.9	36.2	0.8	9.8	9.6	1.4	18.1		9.5	
9.6	32.6	40.6		9.0	9.0	51.4	18.0	G	9.1	10.5	36.2	3.6		10.2	3.4	18.4			
10.3	33.6	31.2		10.5	10.5	52.4	49.8		9.8	10.5	41.7	30.2		10.5	6.4	12.0			
9.6	45.6	47.7		9.1	9.7	5 2.4	15.3		9.8	10.5	43.2	42.4		10.5	6.9	10.2			
9.0	55.6	36.1		10.5	10.4	18.3		G	9.3	9.3	44.7	12.0	9.6	10.2	9.2	3.1			
10.2	55.6	2.4		10.3	14.5	56.6			9.9	9.9	45.2	7.7		9.9	10.4	20.1			
9.9	55.6	2.4		10.1	16.9	13.6			10.5	47.2	24.4		9.6	10.5	11.4	9.4			
9.9	22.6	43.5		10.0	17.4	13.9			10.4	53.7	5.4		9.6	9.6	14.4	18.6		9.3	
10.4	39.5	45.2		9.9	10.5	17.9	49.0		10.4	55.2	15.2		9.8	9.8	14.4	5.8			
10.0	53.6	4.9		10.3	23.4	5.0			10.5	59.2	12.8		9.6	9.8	15.9	1.7			
10.5	54.6	47.0		10.0	23.9	9.7			10.4	3 1.5	58.1			9.7	17.4	26.4	a	9.3	
10.4	58.6	19.1		10.0	28.4	49.7			10.2	2.7	21.5			10.2	22.9	28.0			
10.3	56 1.1	15.5		10.0	31.4	22.1		G	9.7	10.2	5.2	23.3		10.4	24.4	2.3			
10.2	3.1	13.5		10.0	32.3	20.1		G	9.5	9.6	5.2	50.4	9.5	10.3	24.9	21.7			
10.0	5.6	51.0		10.0	33.3	24.6		G	9.6	9.3	12.2	16.0		10.0	25.9	41.3			
10.2	11.1	56.2		9.5	10.0	40.3	32.8		9.6	9.6	13.2	4.9		9.6	25.9	28.4		9.5	
10.2	17.1	32.8		10.0	42.3	9.0			9.5	8.8	15.7	19.2	Ga	9.1	10.5	28.9	40.2		
10.5	25.6	8.9		10.3	51.8	6.8			8.5	15.7	11.3		GC	8.8	8.3	31.9	46.4	Ca	8.7
10.5	28.6	25.9		9.0	54.8	23.6			10.3	22.2	45.6			10.4	32.4	34.2			
9.4	29.6	13.1		10.5	1 0.8	37.1			10.5	32.2	19.2			9.9	32.9	32.6			
10.4	33.1	34.8		9.1	1.3	42.0			9.5	9.8	36.2	35.3		10.1	36.9	4.0			
9.4	35.6	43.3		9.0	1.7	57.6			9.0	10.5	36.7	26.2		9.3	39.4	15.8	Ga	9.5	
8.0	37.6	27.4	Gatlr	8.0	2.3	12.4			10.4	10.4	37.7	32.6		10.4	41.4	18.4			
9.6	38.6	37.2		10.3	2.3	12.4			9.0	9.0	38.7	35.2	9.2	9.9	45.9	42.0		9.8	
8.2	41.1	48.5	Cb=1	8.0	2.3	53.0		C=	8.4	9.0	41.7	26.7		10.1	47.4	1.1			
9.8	43.6	26.1		9.3	10.2	2.3	9.4		10.5	10.5	43.0	56.2		9.7	51.4	14.6			
10.1	45.6	24.3		10.0	6.3	11.6			10.5	10.5									
25pr.	+1 28.6	-0.2			+1 28.6	0.0				+1 28.6	+0.1				+1 28.6	+0.2			

6601-6660.				6661-6720.				6721-6780.				6781-6840.			
mag.	18 ^h .	-19°		mag.	18 ^h .	-19°		mag.	18 ^h .	-19°		mag.	18 ^h .	-19°	
9.6	5	52.4	4.1 G	10.5	7	16.9	25.0	10.4	8	32.1	10.8	10.0	13	23.4	36.7
9.6		55.4	14.2	10.0		17.4	44.9	10.4		32.1	5.3	10.3		25.9	4.0
9.6		56.9	50.0	10.2		17.9	16.3	8.6		32.6	56.9	9.2	8.6	26.9	59.0 a
9.7		59.4	30.4	9.7		19.4	23.9 G	10.3		35.1	48.9	9.8		31.9	20.1
9.2	6	0.4	24.4 G	9.6	9.4	19.9	15.5	10.3		46.2	40.7	10.3		33.4	25.7
9.2		2.9	47.2	9.4	10.3	20.1	11.0	9.2		46.7	23.2	9.5	8.0	37.4	42.6 Cal
10.5		8.9	55.2	9.7	10.3	20.9	20.9	10.0		49.2	23.8	9.2		43.4	1.6
9.8		9.9	16.9	9.4	9.4	21.9	21.5	9.3		54.7	15.4 G	9.7	10.3	43.4	58.2
8.8		11.9	19.3 Ga	9.2	9.8	21.9	3.1	8.4		9.3	0.8	9.1	10.3	43.4	40.3
10.1		12.4	7.1	9.1	9.1	22.1	41.0	10.2		6.7	13.2	8.1	14	0.9	40.3
														3.4	19.3
9.3		20.4	51.1	9.4	9.0	22.9	31.5	10.0		13.2	52.7	9.8		10.3	4.8
9.9		21.4	16.3 G	9.5	9.0	24.9	17.0	9.6		14.2	8.0	9.6		13.8	12.8
10.4		21.4	51.3		9.8	25.4	45.1	9.5		14.7	23.3	10.0		18.3	35.8
9.4		21.9	4.6	10.5		25.9	10.1	10.2		23.7	51.3	9.6		19.8	44.1
10.0		22.9	12.6	10.5		25.9	39.7	9.8		26.7	4.3	10.3		22.2	1.2
9.4		22.9	13.3 G	10.5		26.9	5.5	8.9		26.7	0.5 G	10.0		23.3	25.9
9.6		23.9	10.0	10.5		30.9	0.2	9.2		27.7	49.1	9.4	10.0	32.3	42.2
10.5		23.9	6.5	8.7		31.9	15.8 G	9.0		28.7	22.7 G	9.3	10.0	33.3	32.9
10.4		24.4	11.2	9.0		31.9	1.6	8.9		34.7	20.7 GC	9.4	10.0	49.3	24.0
10.2		24.4	39.7	10.4		33.9	17.1	8.5		36.7	36.0	9.3	10.0	57.8	33.5
9.9		24.9	8.7	10.5		33.9	55.6	7.6		36.7	0.6 G	8.0	9.5	15	26.3
10.3		26.3	57.5	10.1		34.4	46.5	8.5		37.7	7.0 Ga	8.9	8.9	30.3	13.4
10.0		27.4	19.3	10.4		35.9	17.9	10.3		40.7	54.5	9.4	9.5	40.3	49.4 Ca
8.4		30.4	1.4 GM-mg	9.3		36.3	57.5	10.3		41.7	54.3	9.4	9.4	50.3	2.6
10.3		30.9	7.9	9.2		37.2	57.8	9.5		48.7	3.0	9.8	9.5	50.3	45.7 a
9.6		31.9	5.4	8.6		38.5	14.4 GC	9.0		52.7	47.0	9.3	10.3	50.3	6.6
9.6		32.9	23.8	10.5		41.4	57.0	8.6		54.7	18.4 G	9.3	10.2	54.3	8.2
8.8		33.9	8.9 G	10.5		42.9	33.6	9.4		54.7	0.2 G	9.0	16	6.3	46.7
10.5		34.9	44.5	9.9		47.4	10.7	9.6		9.6	0.7	10.0	9.0	16.3	21.1
9.8		35.9	6.3	10.1		49.9	7.8	10.2		9.6	14.1	10.0	10.0	26.2	18.7
												9.5	10.0	27.3	33.9
10.3		39.4	33.1	9.0		51.7	9.2 G	9.6		3.7	13.4	10.2		33.3	1.0
10.5		40.4	2.5	10.5		52.1	43.4	9.3		3.7	7.7 G	9.5	10.0	33.3	58.9
9.1		40.4	3.2	9.9	9.3	53.2	53.2	8.0		3.7	31.7 GC-	7.8	9.6	37.3	55.9
9.0		41.9	12.1	9.5	9.4	54.4	50.3	10.0		5.7	2.7	8.9	8.9	41.3	27.3 C=
10.4		42.4	44.1	9.0		54.7	2.7	7.9		16.7	42.8 Gk≡tr	7.6	8.0	45.8	38.4 MCam
10.4		42.4	57.4	9.4		54.9	3.0	10.2		27.7	44.2	9.6	10.0	51.8	15.4
10.4		42.4	6.5	7.2		55.1	1.8 G	9.2		39.4	9.8 G	8.9	9.5	53.3	52.2 Ca
10.5		43.1	28.0	10.0		55.4	14.8	10.2		42.4	1.4 G	10.2	17	6.2	48.1 ?
10.0		44.9	40.6	8.3		56.9	58.4 C-	8.5		50.9	52.2	9.0	9.0	14.3	47.8 Cbm
8.8		44.9	13.8 Ga	9.8		57.7	54.4	9.5		9.6	9.6	9.1	9.0	16.3	47.1
9.4		44.9	1.1	10.3		8	1.9	10.3		5.4	15.1 G	9.0	9.0	17.3	44.2
9.8		47.4	20.1	9.6		3.2	20.0	9.4		16.4	9.0	9.5	9.0	18.8	46.1
10.5		50.9	1.2	9.9		4.9	39.3	10.3		28.4	26.7	10.3	10.3	26.3	46.6
9.3		51.9	18.3	9.8		5.2	1.8	9.5		35.9	37.9	9.4	9.4	30.8	19.7
9.6		51.9	0.0	8.8		8.5	20.1 G	9.3		37.4	30.1 GCa	9.0	9.4	54.3	7.3
9.6		53.9	24.9	10.5		11.1	9.7	9.2		46.4	41.8	9.3	10.0	56.9	59.3
8.7		54.9	6.2	9.8		11.4	28.2	9.8		48.4	0.9	9.5	18	36.7	5.5
10.5	7	0.4	32.3	10.0		12.9	59.7	9.1		52.4	10.9	10.0	10.0	39.7	2.6
10.3		0.4	35.7	10.1		12.9	4.8	10.2		56.9	12.9	9.8	10.0	53.2	4.2
10.1		0.9	49.5	9.1		14.9	14.2 G	9.6		58.9	0.4	10.0	19	0.2	4.8
10.3		3.4	21.5	8.7		14.9	30.9 C	9.0		12	3.9	9.5	10.0	2.7	16.6
10.1		5.9	41.1	10.5		15.4	5.0	10.0		9.9	46.8 Cal	8.5	9.6	10.2	8.6
10.2		6.1	25.6	10.1		17.4	4.9	10.2		27.9	8.5 G	9.6	9.6	24.7	7.3
9.9		7.4	31.5	8.6		19.7	52.5	9.2		41.4	33.2 Ga	9.0	9.8	32.2	36.1
8.8		8.9	21.5 G	10.5		21.1	23.2	10.2		59.9	46.1	8.3	8.3	51.2	1.6 Ca
8.1		12.4	5.4 GCka	10.5		21.9	52.0	8.4		13	4.4	8.4	10.3	55.2	27.1
10.1		12.4	6.9	10.3		21.9	2.3	10.0		9.9	38.2	10.0	20	3.2	4.7
9.3		13.4	26.4	10.2		25.4	0.7	9.6		10.4	35.1	9.7	10.2	13.2	13.6
10.5		15.9	2.8	10.2		25.4	43.5	9.8		12.9	29.9	10.3	10.3	23.7	13.5
10.0		15.9	5.4	10.1		31.4	15.9	9.8		16.4	16.2	9.5	9.0	36.2	8.5
25pr.		+ 1 28.6	+ 0.2			+ 1 28.6	+ 0.3			+ 1 28.6	+ 0.4			+ 1 28.6	+ 0.6

6841-6900.					6901-6960.					6961-7020.					7021-7080.						
mag.	18 ^h		-19°		mag.	18 ^h		-19°		mag.	18 ^h		-19°		mag.	18 ^h		-19°			
	m	s	m	s		m	s	m	s		m	s	m	s		m	s	m	s	m	s
9 ^h 8	20	38.2	40.4		9 ^h 6	24	24.0	10.5		9 ^h 2	29	7.4	43.8	-	9 ^h 0	34	19.7	2.2	a	9 ^h 1	
9 ^h 5		47.7	31.8	Ca	8 ^h 8		25.0	11.6		9 ^h 2		13.4	16.2		9 ^h 5		23.7	16.1		9 ^h 6	
9 ^h 5		53.2	34.8	a	8 ^h 8		27.0	12.0		9 ^h 6		16.4	58.9		9 ^h 5		24.2	46.1		9 ^h 5	
9 ^h 3	21	9.7	39.8		8 ^h 3		27.0	12.8		9 ^h 2		20.9	3.5		9 ^h 5		26.2	31.4		9 ^h 4	
9 ^h 6		10.2	51.0	Ca	8 ^h 8	8.8	28.0	15.2	9.3	10.4		22.2	43.3		10.0		27.7	23.2		9 ^h 4	
9 ^h 4		16.7	14.0		9 ^h 5	9.5	30.5	23.0		10.4		22.4	56.1		9.6	10.0	30.7	23.9		9 ^h 4	
9 ^h 2		26.2	52.9			7.8	32.0	0.2	Gktlπ var.	9.2		28.4	24.0		9.4	9.8	30.7	27.3	Mm	9 ^h 4	
9 ^h 5		26.2	15.0		9.3	8.6	37.0	0.2	a	9.2	9.1	34.4	1.3		9.5	8.4	36.2	13.3	Cam	8 ^h 7	
8 ^h 8		31.7	19.2		9.0	9.6	41.5	10.7		9.5	8.4	36.4	21.9	b	9.2	9.2	59.2	47.3	m	9 ^h 1	
9 ^h 6		35.7	14.3			9.8	44.0	15.2		7.7		36.4	14.5	Cbm	8.2	10.0	35	4.2	50.6		
8 ^h 6		38.2	2.3	am	9.0	9.6	48.5	25.5		9.8	9.2	38.4	22.2		10.0		23.2	36.1		9 ^h 5	
8 ^h 6		43.7	8.2	Ca	9.0	9.6	48.8	16.2		9.5	8.0	42.9	52.9	C≡	8.6	10.0	27.2	16.4		9 ^h 5	
10 ^h 0	22	4.2	49.3		9.4	9.8	49.5	29.3		10.0		43.2	14.2		9.4	7.8	33.7	24.1	GCWam	6.5	
9 ^h 5		6.7	24.5			8.8	50.5	21.7		9.0	7.5	45.4	18.6	Gktπμ	7.6	9.4	34.7	44.2		9 ^h 5	
10 ^h 3		6.7	25.5		8.5	8.5	52.5	12.6	kbcl	8.5	9.1	48.4	23.3		10.0	9.2	41.2	52.4		9 ^h 4	
9 ^h 8		10.7	20.0		9.5	9.7	53.5	32.6		9.5	7.8	51.9	30.4	al	8.3	8.2	55.7	20.8	Wam	8.8	
10 ^h 2		14.0	49.5		9.9	8.6	54.0	18.1		8.8	9.4	55.9	38.2		9.8	10.0	36	25.7	45.1	9 ^h 4	
8 ^h 9		19.0	41.0	Ca	8.8	9.2	25	3.5	3.8	m	9.6	56.4	29.0		9.8	9.8	41.7	45.1		9 ^h 0	
9 ^h 5		21.0	14.0		9.3	9.0	5.5	11.1		9.3	7.8	30	5.4	31.5	8.1	8.7	42.2	21.2		9 ^h 0	
10 ^h 2		22.0	25.2		9.0	9.0	6.0	32.2	Cbl	8.7	8.9		7.4	42.3	9.8	9.8	42.2	48.9			
9 ^h 6		30.5	38.5		8.0	7.5	7.5	3.6	GWtπμ	8.0	9.6		7.9	27.5	9.8	10.4	44.2	54.5		10 ^h	
9 ^h 8		31.5	55.6		9.5	9.8	7.5	7.5		9.6	9.6		16.2	58.7	9.5	7.4	46.7	26.4	GCWam	7.0	
9 ^h 4		31.5	35.2	Ca	8.8	10.2	8.5	22.7		9.1	10.0		17.4	54.6		9.8	51.2	55.2			
10 ^h 0		32.0	33.0		9.6		15.5	7.9		10.2	10.2		17.4	15.3		9.8	55.2	1.2		9 ^h 4	
10 ^h 0		52.0	17.6		10.2		16.0	11.2		8.4	8.4		28.9	42.4	Cal	8.3	9.6	56.7	15.6		9 ^h 5
10 ^h 3		57.9	49.6		9.5		33.0	25.1		9.5	10.4		41.9	24.1		9.2	37	0.7	0.7	9 ^h 5	
8 ^h 6	23	0.0	26.7	Ca	8.8	10.2	42.0	22.8		10.4	10.4		43.4	35.2		10.4		2.7	46.0		9 ^h 2
10 ^h 3		3.0	21.1		10.3		46.8	47.1		10.0	10.0		52.4	11.1		8.8		2.7	14.6		9 ^h 2
10 ^h 3		6.0	31.0		9.8		52.5	3.2		9.5	9.4		53.4	48.3	9.5	9.2	3.7	35.3		9 ^h 5	
9 ^h 6		13.5	10.2		9.4	10.0	59.5	18.9		10.4	10.4	31	13.2	11.0	9.8	9.8	5.7	46.3			
9 ^h 4		19.0	7.2		9.4	9.0	26	2.0	35.7	9.3	9.8		13.4	2.8	9.5	8.8	13.7	30.8		9 ^h 4	
9 ^h 8		23.0	28.0		9.5	8.6	13.0	56.1	C=m	8.5	9.2		16.4	15.0	9.4	8.4	20.2	27.0	am	8.9	
9 ^h 6		31.0	26.1		9.5	9.5	36.0	34.1		9.0	9.6		17.4	38.3	am	9.1	9.1	40.2	59.5		9 ^h 1
9 ^h 6		36.0	19.7		9.2	9.2	37.0	44.5		9.4	9.8		23.9	33.8		9.8	38	0.2	0.6		9 ^h 5
10 ^h 3		40.9	13.4		10.3		54.0	6.5		9.4	8.6		33.4	12.7	MCm	8.4	9.8	14.2	7.0		
9 ^h 6		45.5	11.1		10.0	8.3	27	2.0	52.7	7.5	9.8		33.4	43.4		10.0	21.7	9.8		9 ^h 5	
10 ^h 0		47.5	12.5		9.6		7.5	45.3		9.3	10.4		58.9	22.0		9.2	31.2	55.5		9 ^h 4	
9 ^h 6		48.0	39.0		9.4	10.0	10.9	14.5		10.4	10.4	32	1.2	43.7		8.7	35.7	12.6	am	8.7	
10 ^h 0		57.0	8.2			8.6	25.2	22.3		9.1	9.2		13.9	53.7	9.2	9.6	36.7	54.1			
9 ^h 6	24	2.5	9.4		10.4		31.9	31.2		9.5	10.4		19.9	12.9		7.8	38.7	44.1	GWlπμ	6.8	
7 ^h 8		3.0	14.5	Ca	8.4	8.7	35.7	37.5	Ca	8.8	10.4		23.9	49.8		9.8	54.7	42.2		9 ^h 5	
9 ^h 0		6.0	14.0	a	9.1	10.0	56.4	26.5		9.8	9.8		36.2	10.5	9.7	9.2	57.7	7.8		9 ^h 5	
10 ^h 3		6.0	19.1		9.4	7.6	1.9	21.8	Gktπμ	7.0	9.1		36.2	32.6	9.2	9.1	39	2.7	59.5		9 ^h 5
9 ^h 5		6.5	23.7		9.5	7.8	6.9	29.1	a	9.0	9.6		52.2	45.3	9.5	9.1	9.7	47.2		9 ^h 5	
9 ^h 3		7.0	2.8		9.5	10.2	11.6	59.8		10.4	10.4	33	5.2	15.2		10.4	11.2	50.0			
10 ^h 0		8.5	20.8			10.4	14.2	50.3		10.4	9.8		8.4	57.6		9.6	11.5	2.4		9 ^h 5	
10 ^h 2		10.0	8.8		9.8		14.4	50.5	} 10.0	10.4	9.8		12.7	52.1	9.3	10.0	11.7	22.6			
8 ^h 9		12.0	4.8		9.2	10.0	15.9	4.7		10.0	10.0		13.7	30.6		10.0	20.0	4.9			
9 ^h 6		12.0	21.0			10.4	17.9	47.4		10.0	10.0		13.7	18.7	9.5	9.4	21.5	45.1			
10 ^h 0		15.5	15.2			10.4	23.9	21.3		10.4	10.4		13.7	23.8		8.6	23.5	7.6	Mm	9 ^h 1	
10 ^h 3		15.9	17.2			9.1	26.2	40.8		10.4	10.4		34.4	59.2		10.0	36.5	7.4		9 ^h 9	
8 ^h 1		16.0	10.4	Ga	8.3	7.8	27.0	39.0	Cal	8.5	10.4		36.2	52.9	9.5	9.6	43.5	38.1		9 ^h 3	
9 ^h 4		18.5	20.3		9.4	9.0	34.0	32.4		9.3	8.8		40.7	52.9	9.3	9.2	52.0	49.5		9 ^h 2	
10 ^h 2		21.0	25.0			10.2	34.4	7.0		9.2	9.2		42.7	39.7	C-	9.0	52.5	5.2			
9 ^h 4		21.0	12.0			10.4	36.9	20.5		8.4	8.4		50.2	44.5	M	8.9	58.0	7.1			
8 ^h 9		22.0	12.0		9.1	9.4	46.6	0.1	C=	9.5	8.4		51.7	34.5	C=m	8.6	9.8	3.5	6.3		9 ^h 6
9 ^h 5		23.0	12.4			7.9	50.4	56.4		8.8	10.0	34	2.2	17.2	9.4	9.6	8.0	35.1		9 ^h 5	
9 ^h 3		23.0	11.7			9.0	50.9	7.5		9.5	9.6		4.2	30.7		9.6	8.0	1.8			
8 ^h 5		23.5	15.3		9.3	9.1	53.4	40.3		10.0	10.0		6.2	47.4		9.6	12.0	21.1		9 ^h 5	
10 ^h 2		23.6	14.7			8.9	53.4	23.1	b	9.4	10.0		17.2	55.8		8.2	15.3	59.9	Cam	8.7	
25pr.	+1	28.6	+0.8				+1														

7081-7140.				7141-7200.				7201-7260.				7261-7320.					
mag.	18 ^h .	-19 ^o		mag.	18 ^h .	-19 ^o		mag.	18 ^h .	-19 ^o		mag.	18 ^h -19 ^h .	-19 ^o			
9.8	40	15.5	50.5	10.4	44	59.3	2.5	8.6	48	2.8	40.8 a	9.2	10.4	55	32.7	57.3	
9.8		19.5	13.3	10.4	45	2.4	35.2	9.1		7.4	7.1	9.5	9.6		33.2	58.9	
9.8		20.5	43.4	10.4		6.4	32.2	9.4		8.1	46.7	9.3	10.4		35.7	5.1	
10.4		31.0	54.0	10.4		15.3	42.0	10.0		9.0	9.9	9.9	8.4		43.7	38.7	
8.2		52.5	19.9	10.4		26.3	4.6	10.0		16.5	2.5	7.3	7.3		43.7	25.4	
8.7		53.5	43.7	10.0		31.8	56.9	10.0		18.0	6.2	9.5	9.5		45.7	5.7	
10.0	41	2.0	44.3	10.2		32.3	37.6	9.5	9.6	20.6	21.7	9.4	7.0		45.7	16.8	
8.2		8.5	49.2	8.8	8.2	35.3	49.0	8.7	9.8	24.5	8.3	8.6	8.6		53.7	35.5	
9.0		15.5	4.1	9.5	8.0	35.3	16.1	10.0		32.0	10.7	8.9	56	4.2	41.7	-	
8.6		20.5	10.7	9.3	9.8	39.4	57.5	9.5	8.9	33.1	10.4	9.7	9.7	6.7	49.1	9.5	
9.4		25.0	3.5	10.0	9.8	45.3	59.1	10.4		42.7	33.4	9.7	8.5	12.7	36.9	9.1	
9.8		25.0	0.9	10.4		45.8	19.7	8.9	49	13.2	52.3 a	9.3	9.8	12.7	35.8		
9.6		31.0	36.9	9.5	8.6	55.3	56.1 a	8.8	8.3	16.2	58.1	8.0	9.4	16.7	52.7	9.4	
9.6		32.5	54.8	9.6	46	1.3	41.6	9.5	9.2	16.7	47.4	8.6	10.4	17.7	20.8	9.5	
10.4		32.5	22.4	10.0		2.3	12.3	10.0		26.7	27.3	9.8	10.4	29.7	1.1	9.5	
8.9		44.0	12.3	9.4	9.4	3.8	40.4	10.4		33.2	46.8	9.4	10.0	32.7	59.5	9.5	
10.4		46.5	0.3	9.4	9.4	4.3	54.1	9.2		43.7	33.9	9.3	10.4	55.7	15.6		
9.2		52.0	1.5	9.5	10.4	5.4	22.8	9.3	50	0.2	36.8	9.5	10.4	57	1.2	34.5	
9.4		55.0	8.1	9.5	8.6	6.3	53.4 a	9.2	10.4	9.7	47.1	9.4	9.4	2.7	14.5	9.6	
10.4		57.5	20.7	9.8		12.3	44.2	10.4		10.7	46.6	9.5	10.4	21.2	21.7		
9.8	42	7.5	20.1	10.0	9.4	13.8	49.7	9.2	7.1	15.2	18.8	10.4	10.4	45.7	16.1		
8.4		9.0	8.8	9.0	9.6	15.3	16.3	9.8	10.4	21.7	4.6	9.5	8.8	49.7	52.3	M=m 8.6	
7.0		15.5	16.8	8.4	8.4	15.8	36.1 a	8.8	8.8	25.7	52.2	8.4	10.0	56.2	27.0	9.8	
8.0		15.5	2.9	10.0	10.0	21.8	50.0	8.5	8.5	31.7	59.3	9.2	10.4	56.7	7.0		
10.0		16.5	7.0	10.2		23.3	16.3	9.2	9.2	43.7	34.7	9.6	10.4	58	2.7	13.1	
9.8		22.5	3.8	9.5	9.8	24.4	40.8	9.5	9.7	44.7	35.8	10.4	10.4	21.7	3.5	9.5	
9.8		25.5	15.2	8.0	8.0	25.3	57.0	7.8	10.4	47.7	20.4	10.0	10.0	26.7	2.7	9.6	
10.0		26.5	4.1	10.2		26.3	23.6	9.8	9.8	53.7	34.8	9.8	9.8	31.7	56.6	9.6	
10.4		33.0	42.4	9.1	9.1	27.8	52.9	9.3	8.8	54.7	2.2	9.4	8.0	35.7	40.1	Cal 8.0	
8.7		33.0	52.6 a	9.2	9.6	27.8	54.5	9.8	51	7.2	49.9	9.5	8.7	58.2	15.1	9.1	
10.4		33.5	43.2	9.8		30.3	49.4	9.2		8.2	20.4	8.8	10.4	59	5.7	2.9	
9.8		37.5	38.9	8.4		36.3	13.3	9.1	9.2	8.2	45.3 a	9.4	8.6	12.7	50.9	am 8.7	
9.6		40.0	34.7 a	9.4	8.7	42.3	41.4	9.4	9.8	48.2	19.1	10.0	10.4	16.2	18.5		
9.6		42.5	10.8	10.4		42.8	52.9	9.7		52.7	11.8	9.4	10.4	28.2	15.9	9.8	
9.6		42.5	24.7	10.0		43.4	25.0	9.5	9.7	53.7	23.3	10.4	10.4	33.2	38.4	9.8	
10.0		48.5	28.9	10.0		45.3	10.3	9.8	9.8	57.2	46.7	9.8	9.8	42.7	55.0	9.8	
8.4		55.5	6.7 am	8.8	9.4	49.5	28.0	9.4	7.7	52	2.5	7.0	9.5	44.2	6.5	9.4	
10.0	43	2.5	34.6	9.5	9.8	57.5	4.8	9.7		3.2	31.7	10.4	10.4	52.7	55.1		
9.8		3.0	1.8	9.5	9.2	58.0	34.0	9.5	10.4	4.2	21.2	9.5	9.5	53.7	51.9 a	9.2	
9.2		5.3	59.7	9.5	8.9	47	2.3	9.4	9.3	13.7	49.9 b	9.2	10.2	55.7	3.5	10.0	
8.6		6.5	26.3 a	8.7	10.4	6.0	41.0	10.0		15.2	19.7	10.0	0	1.2	47.3	9.8	
9.6		16.0	30.1	9.5	9.6	14.0	52.8	10.4		18.7	52.1	9.4	8.6	16.2	34.1 =	8.8	
9.8		17.5	42.4	9.5	9.8	14.3	57.8	10.4		36.7	28.9	9.8	9.8	21.7	44.1	9.4	
9.1		18.5	48.0 a	9.5	9.1	21.8	54.5	9.2	8.5	39.7	28.3	8.8	10.4	41.7	43.2	9.8	
10.4		21.0	12.1	8.6		22.0	48.2	9.1	9.7	42.7	25.4	9.3	10.4	43.2	22.5	9.9	
9.6		22.5	21.4 b	9.1	10.4	26.5	56.6	9.7		45.7	4.1	9.8	8.3	51.7	48.3	Ca 9.0	
9.6		35.0	2.1	9.5	10.4	32.5	1.1	10.0	10.0	53	13.7	7.3	9.5	52.2	41.0	9.5	
10.4		35.5	15.2	10.2		36.5	56.6	7.9		43.2	31.2	7.8	9.0	55.7	6.5	9.4	
10.4		44.0	3.3	8.4		38.8	47.6	8.2	9.5	59.7	50.9	9.4	5.1	55.7	29.0	GWkl 86.0	
8.4		45.5	45.4 Ca	8.4	9.6	41.5	49.0	10.4		54	2.7	12.9	9.5	57	5.7	53.1	
10.4		51.0	6.1	10.4		46.0	52.0	8.4		13.7	59.8	am	8.9	10.4	11.2	7.0	
10.0		59.5	48.4	9.8	10.0	50.5	32.1	9.7		18.2	51.1	9.8	9.8	12.2	55.5	9.5	
9.2	44	4.5	7.9	9.8	10.4	51.6	59.7	10.4		22.2	13.9	9.6	9.5	14.7	44.1	9.5	
8.4		7.0	47.0 Ca	8.4	10.0	53.8	22.1	8.6		23.2	29.1	9.3	7.9	24.7	8.9	GCacl 7.4	
9.8		33.0	11.4	8.7		55.0	36.0	9.5	10.4	44.7	12.1	9.6	9.6	25.2	42.9	9.5	
10.4		45.3	13.3	8.7		55.0	27.1	9.3	9.8	54.7	9.8	9.1	9.6	28.2	0.1	9.3	
10.4		46.3	9.2	8.6		55.3	56.3	9.4	9.0	55	12.7	22.1	9.1	9.5	36.2	26.7	9.3
9.8		51.8	39.1	8.0		58.8	8.1	9.0	9.0	15.7	40.1	9.5	9.7	55.7	24.6		
10.2		52.8	56.9	9.6		59.6	53.1	10.4		28.2	12.0	9.4	9.6	2	6.7	15.9	
10.2		53.3	0.9	9.6		48	2.1	9.7		28.2	35.1	9.4	7.6	9.7	36.5	Ca 8.5	
25 pr.		+ 1 28.5	+ 1.5			+ 1 28.4	+ 1.7			+ 1 28.4	+ 1.8			+ 1 28.2	+ 2.1		

7321-7380.				7381-7440.				7441-7500.				7501-7560.							
mag.	19 ^h	-19°		mag.	19 ^h	-19°		mag.	19 ^h	-19°		mag.	19 ^h	-19°					
9.4	2 9.7	35.9	a	9.5	9 57.6	20.4		9.4	10.4	16 44.3	53.3	9.8	9.2	23 32.5	10.8	9.4			
10.4	10.7	12.0		10.4	10 3.1	15.8		9.4	9.7	17 2.3	40.2	10.	10.0	44.0	24.3	9.6			
8.4	15.7	10.2		9.0	9.2	4.1	25.3	9.1	8.3	4.0	57.3	MCbm	8.4	9.7	7.0	20.8	9.5		
9.7	20.7	29.7		9.0	8.6	57.7		9.2	10.4	7.3	41.6		10.	9.7	36.3	26.3	9.5		
10.4	21.7	17.0		8.5	12.6	16.8	CW	9.0	10.2	7.8	43.0		10.	10.4	13.0	36.3			
9.4	46.7	54.1		6.4	19.1	10.4	GSπμβ	8.3	8.3	11.8	10.1	Gatlr	8.2	10.0	13.5	23.9	9.6		
10.4	59.2	8.7		9.0	25.6	50.8	≡	8.8	9.4	22.8	50.7		9.6	10.4	14.5	28.9	9.8		
8.8	3 2.7	51.7		10.4	32.6	12.9		9.8	9.4	31.3	8.1		9.1	9.0	24.0	59.7	9.1		
9.8	10.7	11.3		9.9	10.0	32.6		9.7	9.7	33.3	33.8		9.5	8.0	24.0	38.8	CWal	7.0	
9.7	21.2	36.7	M-m	9.4	8.6	36.6		9.0	9.2	36.3	52.7		9.4	9.6	33.5	17.9			
9.6	24.2	32.2		9.8	8.5	44.6	21.6	C-	8.5	10.4	37.3	41.7		10.0	34.0	51.0			
10.4	34.7	13.9		7.2	53.6	5.1		Gklπμ	8.0	8.2	46.3	17.8	W-	8.9	9.4	2.0	24.0	9.3	
9.8	43.2	7.7		8.6	11 0.6	34.9		Ca	8.5	10.4	46.3	9.2		9.5	9.8	2.0	0.0	9.2	
9.9	44.2	22.2		9.5	10.0	17.1		9.6	10.4	52.1	59.7			8.5	6.0	57.8	Ca	9.0	
9.0	51.7	53.2	a	9.2	9.8	12.5	17.7	W	9.2	10.2	18 2.3	40.0		9.6	10.0	12.0	48.5		
10.4	53.1	59.4		9.6	14.2	56.7		9.5	9.8	13.3	37.2	-	9.5	9.7	45.0	6.1		9.4	
9.8	59.7	23.5		10.	27.0	57.0		MC=m	8.8	10.4	15.8	10.7		9.7	8.5	54.0	32.1	CWal	9.0
8.6	4 4.7	14.1		9.2	10.4	42.0	59.7	9.5	8.2	23.3	24.9		9.5	8.7	57.5	52.3		9.8	
10.4	5.7	38.9		9.2	12 2.5	41.1		9.3	9.7	25.3	16.2		9.5	10.0	26 13.0	31.6			
9.0	24.9	12.2		9.1	9.0	11.5	42.0	9.1	10.4	34.2	51.1			10.4	13.0	32.1			
8.2	25.9	23.4	MC=m	8.8	9.6	27.5	29.9	9.4	10.4	54.3	51.0			10.4	24.0	28.6			
10.0	34.4	53.7	a	9.3	10.4	36.0	16.2	9.8	9.6	54.3	38.7		9.7	8.2	27.5	7.7	al	8.5	
9.6	47.9	25.5		9.9	7.8	38.5	35.6	Cb≡ml	8.0	9.2	19 4.3	30.1		9.6	9.4	30.5	51.0		9.7
10.4	52.4	58.1		9.5	8.8	56.5	43.7	9.3	10.0	6.5	50.3			8.4	31.8	59.8	a	9.2	
10.4	55.4	56.8		9.4	9.4	57.5	0.8	9.5	10.4	10.5	30.9			8.5	50.0	50.2	CWam	8.5	
10.4	5 1.4	3.9		10.4	10.4	58.5	30.6	9.5	10.0	29.5	39.6		9.3	10.4	56.0	36.8		10.	
10.4	4.0	59.3		9.0	13 7.0	5.6		Ca	8.8	10.4	32.0	31.5		10.	10.0	27 11.0	56.5		9.5
10.4	12.9	41.3		9.5	9.2	10.5	13.5	MW-mg	1.1	9.8	32.5	22.4		10.	10.4	11.0	29.3		
9.5	16.4	53.0	a	9.3	9.2	14.0	46.3	9.5	9.8	32.8	58.5		9.4	10.4	24.4	19.5		9.7	
9.6	22.9	30.0		9.4	8.8	16.5	23.4	9.5	9.7	46.0	30.7		9.8	9.4	25.8	56.7		9.5	
8.0	24.9	26.1	Cb=ml	8.3	10.4	17.5	7.1		10.4	56.0	14.0			10.0	37.9	37.7		9.8	
8.0	43.9	41.6	Cal	8.6	9.2	31.0	17.5	W	9.2	10.4	56.5	5.6		8.3	39.5	2.3	Ckal	8.3	
8.2	5.9	3.8	aml	9.0	9.4	46.0	56.2	9.3	9.2	20 12.5	27.1	-	9.0	8.6	58.7	50.9	CWa	8.9	
10.4	29.8	17.9		10.4	14 2.5	59.9		9.5	8.5	30.0	1.1	≡	8.6	10.2	28 1.9	9.9			
10.4	32.9	58.8		9.5	10.4	3.5	23.0	10.4	10.4	41.0	43.6		9.8	9.0	16.2	44.7		9.3	
8.9	35.9	38.0		9.2	9.4	7.0	20.8	9.1	10.4	44.0	51.8			10.4	27.9	2.9			
9.0	38.4	8.6		9.5	9.8	13.0	27.0	9.1	8.3	44.0	35.6	C≡	7.8	9.4	33.9	40.0	C	9.0	
9.0	45.9	50.6		9.2	9.0	16.5	55.5	C	9.1	10.4	52.0	57.0		9.0	9.0	46.2	52.0	CWa	8.8
10.4	48.4	13.2		9.7	9.7	16.5	49.9	9.5	9.8	57.0	48.9		9.5	8.6	55.2	10.7	Wam	8.7	
10.0	59.9	51.0		6.8	17.5	27.9		9.2	6.5	21 12.5	38.5		9.4	9.4	56.4	21.1		9.4	
9.0	7 5.9	37.8		9.3	9.4	32.5	35.0	9.4	10.0	18.5	31.9		9.6	10.0	29 1.9	11.9		9.9	
10.4	14.0	59.7	G	9.5	8.6	35.5	3.2	9.3	9.8	25.5	58.7	Ca	9.0	10.4	4.2	37.4			
10.4	25.3	12.7		8.4	8.4	44.5	21.3	Cb-l	8.3	10.4	32.0	45.1		9.7	9.6	5.5	2.9		9.3
8.4	25.5	11.2	GCa	8.7	9.8	15 13.5	52.0	9.2	10.4	44.5	43.3		9.8	6.5	9.0	7.6	GWlπμ	5.8	
10.4	56.4	34.1		9.5	7.8	16.8	15.5	9.2	8.5	22 8.5	6.6	-	8.5	10.0	11.0	16.1		9.3	
10.0	5.3	24.5		9.5	10.0	38.3	24.4	9.7	9.0	13.0	3.9		9.5	9.6	23.0	48.5		9.5	
9.2	10.8	39.0		9.3	10.4	39.3	12.9	9.7	9.0	18.0	30.8	-	9.1	9.0	23.5	31.6	Ca	8.8	
9.5	11.3	34.9	Mm	9.3	8.4	45.8	13.1	8.3	9.4	22.0	44.7	CWa	9.0	10.3	28.5	34.9		9.5	
10.4	19.4	37.5		9.5	10.0	47.3	2.5	9.4	9.8	39.0	27.7		9.5	8.0	32.5	3.6	Wkam	17.8	
10.4	42.9	9.7		10.4	10.4	57.8	19.7	8.2	8.2	43.0	48.5	CWaml	8.0	9.6	56.3	0.9		8.8	
10.4	45.7	34.1		9.6	8.6	16 3.3	53.7	9.2	9.7	46.5	19.1		9.6	8.4	30 16.8	17.6	a	8.7	
10.4	46.9	16.8		9.4	9.4	16.3	52.9	9.5	10.0	49.0	43.4		9.8	8.0	44.3	29.3	Cam	8.5	
10.0	48.1	52.7		9.7	10.2	17.3	50.6	9.7	9.7	50.5	27.7		9.5	9.2	53.3	10.9		9.2	
10.4	5.1	45.1		9.6	10.4	17.3	57.0	8.6	8.6	51.0	38.4		8.2	10.3	56.3	25.4		9.5	
10.4	13.6	45.7		9.6	10.0	22.3	43.6	9.8	9.8	52.3	58.7		9.1	9.4	31 27.3	37.5		9.3	
9.2	33.1	26.1		9.3	8.6	26.3	54.7	C-	8.8	10.0	53.5	34.6		9.4	9.4	35.3	31.5		9.4
9.2	37.1	16.7		9.3	10.0	35.8	21.0	9.5	10.4	23 3.8	59.1			10.3	36.3	43.8		9.5	
10.4	44.3	31.5		9.4	9.4	36.3	33.0	9.4	10.4	-13.5	30.0		9.5	9.8	40.3	48.1		9.3	
8.3	51.1	12.2	-	8.8	9.2	36.3	38.6	9.5	10.4	15.5	1.2		8.4	8.4	43.8	29.5	Cam	9.0	
10.0	56.6	50.2		10.0	10.0	44.3	9.6	9.7	10.0	27.0	52.0		9.8	9.2	32 9.8	53.3	C-m	8.8	
25pr.	+1 28.2	+2.3				+1 28.0	+2.6			+1 27.9	+2.9				+1 27.7	+3.1			

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7561-7620.				7621-7680.				7681-7740.				7741-7800.					
mag.	19 ^h .	-19°		mag.	19 ^h -20 ^h .	-19°		mag.	20 ^h .	-19°		mag.	20 ^h .	-19°			
8.8	32 26.3	19.2		9.2	9.4	47 25.7	20.6	9.5	9.4	8 48.8	55.2 a	9.1	10.4	15 23.0	12.8		
7.8	27.8	30.9	Cam	7.8	8.6	46.2	5.6	8.5	10.4	53.5	37.6	10.4	10.4	36.0	18.8		
10.3	30.3	27.2	a	9.4	6.9	48 7.0	37.1	M-m	7.0	55.0	20.6	8.9	9.0	52.5	24.4		
9.8	37.3	54.7		9.4	7.9	42.0	12.1	Cam	8.0	55.2	33.6	9.0	10.2	56.0	55.7		
9.6	53.3	12.3		9.1	9.1	49 45.7	53.4	C	9.0	55.2	41.8	10.2	16	16.4	11.4		
9.0	33 32.3	49.6	Cam	8.6	8.8	50 6.7	10.4	a	9.0	9 4.5	14.0	9.5	9.5	25.4	33.6		
9.6	34 10.6	59.2	Ca	9.0	9.2	8.9	26.9	9.6	10.2	6.5	39.5	9.5	9.4	31.4	49.6		
10.2	16.3	17.2		10.	8.8	9.9	51.5	C-m	8.6	14.5	49.1	10.4	10.4	32.3	43.1		
10.3	21.3	53.9		9.4	9.2	40.7	42.3		9.3	26.0	38.1	9.3	9.8	32.4	29.2		
10.3	23.8	57.2		9.8	9.4	57.2	3.1		9.5	26.5	6.4	9.4	9.4	43.4	55.5		
9.4	35 27.3	4.8		9.3	9.3	51 56.8	38.6		9.5	43.0	47.4	9.3	9.4	43.9	7.7		
8.5	54.3	24.2	Ca	8.0	8.6	52 0.2	56.3	≡	8.5	44.0	46.2	9.5	10.2	51.3	50.4		
10.3	58.8	7.7		9.0	9.0	53 16.4	23.6		9.3	52.5	42.0	9.5	9.2	17 12.4	50.2		
9.6	36 16.3	19.2	M-m	9.0	9.0	54 1.1	49.5		9.8	53.5	42.7	8.6	8.6	15.9	16.2		
10.3	17.8	6.1		9.6	7.2	45.4	26.5	CWal	7.3	10.0	1.1	8.5	8.7	21.4	10.3		
9.0	37 5.3	57.0		9.3	8.7	55 26.4	28.0	C-	8.6	10.0	1.1	9.4	10.2	23.4	16.6		
10.0	11.8	59.8		9.2	9.2	56 22.7	18.1		9.0	17.5	14.8	7.9	7.9	51.4	50.2		
9.0	53.3	50.8		9.7	9.4	38.7	8.1	a	8.8	22.5	16.3	9.8	8.6	52.9	6.2		
8.8	38 3.8	9.1	a	8.6	9.3	57 33.1	52.1		9.3	56.5	25.0	9.5	9.0	18 6.4	32.0		
9.8	39 12.3	41.7		9.4	7.6	48.4	7.4	CWaml	7.8	11 13.0	53.4	10.4	10.9	10.9	30.6		
9.8	12.3	25.1	Mm	9.2	8.6	59.4	3.7	Cam	9.0	15.5	40.5	C-	8.2	9.6	14.9	33.0	
10.3	50.3	34.4		9.8	9.4	58 11.1	46.5		10.	19.5	45.6	9.1	7.6	19 10.9	33.4		
9.0	54.3	22.0		9.2	9.1	41.7	42.9		9.2	33.5	58.0	10.4	10.4	15.9	32.4		
7.7	40 3.2	2.9	MC≡m	7.5	8.4	49.4	3.6	Wb≡ml	8.3	10.4	35.0	11.3	9.4	10.2	21.9	55.8	
10.3	16.7	55.2		9.6	9.0	49.7	4.9		9.2	41.5	51.1	9.5	10.4	25.4	33.3		
10.3	22.7	12.1		9.5	7.0	58.4	50.7	GCbtr	7.0	9.5	52.0	35.3	9.5	8.2	38.4	15.2	
8.4	28.7	30.9	MC-m	8.5	9.2	59 23.2	32.8	K	9.3	8.8	4.0	57.8	Cam	8.9	43.9	54.1	
10.2	50.2	30.5		10.	9.4	41.8	8.8		9.2	11.5	31.3	GW=	9.0	50.1	57.2		
9.8	41 0.7	56.8		9.5	9.0	45.8	48.1		9.4	11.5	30.4	GWπμβ	5.7	9.2	20 5.4	34.6	
9.0	6.7	6.7	a	8.8	9.2	50.1	25.9		9.3	22.0	10.8	9.5	10.0	6.3	19.5		
8.4	13.2	39.3		9.6	8.4	0 4.7	55.9	Cal	7.8	9.8	34.5	29.3	9.0	9.0	6.9	1.1	
10.3	14.2	12.8		9.1	9.1	18.7	41.5	a	9.0	9.8	36.5	54.0	9.5	9.2	13.4	25.0	
9.8	46.7	39.6		9.5	8.8	34.4	33.2	a	8.7	10.4	37.0	59.4	9.7	9.8	23.9	24.8	
9.2	47.7	0.0		9.5	9.2	47.9	41.1		9.3	9.8	59.0	33.0	9.5	10.4	30.4	52.5	
9.4	53.7	25.6		9.5	6.9	59.7	9.8	GWlπμ	7.0	9.6	13 10.0	42.4	9.8	9.4	56.9	44.4	
8.6	54.7	20.5	Ca	8.8	9.0	1 30.5	53.0	MCm	9.0	9.5	14.0	56.2	a	9.1	9.6	21 12.6	56.7
10.3	42 20.7	43.1		9.4	8.0	2 2.5	46.6	CW-m	8.5	10.4	24.5	18.6		9.4	16.4	27.2	
9.6	32.2	40.1	MC=m	9.0	9.1	6.5	13.4		9.5	9.5	27.0	1.3	9.2	9.8	25.9	17.8	
9.4	36.7	26.7		9.5	8.4	19.1	15.8	a	9.0	9.2	36.5	29.6	C-	9.1	9.4	35.4	52.3
9.8	42.7	21.1	a	9.0	9.2	26.5	37.4	C	9.1	10.0	38.5	5.7	10.2	10.2	22 5.4	19.7	
8.4	52.7	11.9	a	8.6	9.2	42.3	10.9		9.6	9.2	39.0	38.1	9.5	10.4	7.3	55.0	
8.4	43 11.7	26.8		8.8	9.3	54.8	37.2		9.0	8.8	44.0	17.3	9.8	10.4	13.4	2.2	
9.0	15.7	35.9	C-	9.0	7.2	3 10.1	44.8	GWlπμ	7.0	9.8	49.0	13.3	9.8	9.8	14.4	14.7	
9.0	49.7	56.3	C	9.2	9.4	56.1	19.9		9.3	9.8	50.0	33.1	10.0	10.0	14.9	23.0	
8.2	44 19.2	31.5	Gbmtπ	7.8	8.8	4 25.3	33.8		9.6	8.4	53.5	7.8	C-	8.9	10.0	18.4	32.1
9.0	42.7	6.0	a	8.5	8.8	45.3	17.9		9.3	9.8	54.0	43.7	9.8	9.5	21.9	47.3	
10.3	53.2	27.0		9.6	9.3	5 33.8	39.0		9.2	9.6	56.0	48.9	9.5	9.6	24.9	17.9	
6.4	55.7	21.6	GWtπβ	6.5	8.2	33.8	5.4	≡	8.5	9.6	56.5	19.2	9.9	9.8	28.4	51.0	
8.6	45 5.7	5.7	a	8.8	8.8	37.2	27.7	C=	8.7	9.8	57.5	32.5	8.2	8.2	32.4	30.1	
10.3	13.7	34.6	C	9.4	9.3	59.6	42.0		9.8	9.0	14 20.5	28.1	CWK-	9.0	9.4	37.4	58.0
8.8	21.7	41.4	MC-m	8.3	9.4	7 24.2	10.2		9.5	9.8	24.0	10.8	9.8	9.8	53.9	4.9	
10.3	23.2	30.2		9.5	9.2	26.3	42.7		9.8	10.4	34.0	27.0	10.4	10.4	56.7	36.7	
8.8	55.2	35.0	MCm	8.9	8.0	29.0	34.9	Gbtlr	8.0	10.2	42.5	43.9	10.4	10.4	23 7.9	16.9	
9.2	46 56.7	38.3	-	9.0	9.4	52.8	55.1		9.5	9.4	44.0	17.9	9.9	9.4	10.9	17.6	
9.4	57.2	49.1		9.2	10.0*	54.5	4.0		10.0	10.0	58.0	29.4	8.6	8.6	34.9	51.9	
10.3	47 0.7	10.1		9.4	10.0*	8 4.0	23.1		10.4	10.4	15 6.0	26.3	10.0	10.0	34.9	31.7	
10.3	5.7	56.0		9.4	9.0	5.2	7.0		9.2	10.0	7.5	21.1	10.4	10.4	40.4	35.9	
8.2	15.7	15.5	MC≡m	7.8	9.4	13.0	57.0		9.4	10.4	10.0	56.7	10.0	10.0	45.4	29.6	
8.8	17.2	47.0	Mm	8.8	8.7	29.0	17.2	C=m	8.5	8.1	11.5	5.2	Cam	8.4	8.8	49.9	32.5
10.2	22.0	17.7		9.4	10.4	30.5	11.8		9.8	9.8	19.5	47.7	9.8	9.6	55.4	18.2	
25pr.	+ 1 27.5	+ 3 6				+ 1 27.1	+ 4.2				+ 1 26.7	+ 4.6			+ 1 26.5	+ 4.8	

7801-7860.				7861-7920.				7921-7980.				7981-8040.			
mag.	20 ^h .	-19°		mag.	20 ^h .	-19°		mag.	20 ^h .	-19°		mag.	20 ^h -21 ^h .	-19°	
10.2	24 1.9	49.6		8.0	31 19.9	4.6	bml 8.7	9.0	45 19.4	59.9	MCal 8.6	9.7	56 25.8	15.0	9.8
10.2	25.9	56.7	10.	10.3	23.4	22.5	9.6	10.0	36.4	25.7	9.5	9.9	34.8	16.2	
10.2	38.4	22.8		9.0	42.9	36.9	9.3	8.8	39.9	5.7	9.2	9.9	43.8	14.1	9.8
10.4	40.4	43.5		9.8	45.4	38.2	9.3	10.0	41.4	10.9	9.8	9.7	50.8	16.8	9.4
10.2	44.9	33.7	9.8	9.0	32. 3.4	46.5	9.3	9.2	51.4	4.9	9.4	9.9	53.8	52.0	10.
10.0	47.4	44.7		8.2	5.4	42.8	Cbml 7.8	7.6	46 24.4	35.0	GCaml 6.5	9.9	57.8	49.4	9.5
10.4	47.9	53.0		9.8	16.9	12.9	9.5	10.0	28.4	14.9	9.7	9.7	57 5.3	9.1	9.5
9.4	49.4	3.1	9.7	10.3	18.4	8.7	9.6	10.3	40.4	17.0	9.8	9.9	5.8	10.3	
10.4	59.9	59.8		9.2	21.4	26.8	9.1	9.2	42.4	15.4	9.4	7.8	8.8	1.1	Ca 8.4
9.6	25 0.9	45.2	9.6	10.2	21.9	51.7	9.4	7.6	58.4	28.0	GCaml 7.3	9.9	14.8	4.7	
9.8	9.9	45.7	9.6	9.8	34.4	46.5	10.	10.2	47 6.3	54.4	9.4	9.7	16.8	48.8	9.2
9.0	11.4	41.9	C	9.3	35.4	55.6	9.7	10.3	22.0	37.1	9.8	9.9	17.3	48.0	
9.4	11.4	6.0		9.3	37.4	11.7	9.5	7.8	25.2	19.3	Ca 8.6	8.9	23.8	12.1	9.1
10.0	13.4	58.3	9.5	8.0	33 41.4	13.2	CWaml 8.2	9.5	33.2	49.6	9.3	8.9	58 3.3	12.5	9.2
10.2	21.9	48.7		10.3	50.9	41.7	6.9	6.9	39.9	16.0	GWael 7.0	9.0	16.8	15.8	9.5
10.4	29.9	43.2		9.6	34 25.9	54.0	9.5	9.7	48 0.4	55.6	9.5	9.5	25.8	34.6	9.3
10.2	32.7	0.0		9.0	35.4	29.9	Cb-1 8.5	9.9	9.7	1.0	9.8	9.5	42.3	58.7	G 9.2
9.2	35.4	42.7	9.5	10.0	48.4	30.9	9.5	9.2	12.2	7.9	9.7	9.9	56.8	11.0	9.5
10.4	41.9	6.9		9.1	35 1.4	44.7	MCm 9.0	8.5	20.9	25.0	a 9.0	9.5	59 4.3	48.9	9.5
10.0	42.9	28.3		8.4	7.9	2.3	al 9.0	9.5	35.5	29.9	Wa 9.1	9.5	31.8	39.8	9.7
10.4	50.4	33.3		9.8	22.4	18.2	9.5	7.3	38.2	3.4	Cb≡ml 8.2	9.9	55.8	40.8	9.8
9.2	51.9	43.6	C=m 8.5	10.3	35.9	41.8	9.5	9.0	57.7	30.5	CWam 8.9	8.2	0 2.8	12.0	C= 8.2
10.4	59.9	12.8		9.8	38.9	34.9	9.5	9.9	49 8.4	4.8	9.0	9.0	9.3	59.0	C 9.1
10.4	3.9	48.0	26	8.6	46.9	56.0	CWbm 8.7	9.9	50.4	49.4	9.5	9.5	19.8	51.5	9.5
9.8	5.8	23.7	9.5	8.7	36 5.9	56.3	9.2	8.0	50 6.4	15.6	Ca 8.8	7.2	24.8	35.2	G-ctr 7.0
10.4	8.3	51.1		8.6	15.9	55.7	Ca 9.1	8.9	23.4	23.8	a 9.1	8.5	55.8	29.1	Ca 9.1
9.8	34.8	44.6	9.5	9.1	22.4	33.6	9.0	8.5	33.4	10.8	Ca 9.0	8.5	56.8	25.6	Ca 9.0
9.2	36.8	33.1	9.4	9.6	26.9	4.6	= 9.1	9.7	51 1.1	59.0	9.7	9.0	1 2.8	55.6	9.3
8.4	59.1	42.7	Caml 8.2	9.4	32.4	40.9	9.5	9.9	5.9	17.8	9.8	9.2	5.8	37.9	9.4
10.4	27 1.8	20.2	10.	7.8	45.4	47.3	MCaml 7.3	9.5	6.9	9.2	9.7	8.5	45.8	13.8	am 8.3
9.8	15.0	57.5	Caml 9.6	10.2	37 12.4	19.8	9.8	9.7	7.4	40.4	9.8	8.9	53.3	7.6	Mm 9.2
7.7	15.6	49.3	7.8	10.0	20.9	32.9	9.5	9.9	26.9	46.8	9.8	9.7	2 1.8	43.1	9.5
9.4	25.3	21.2	9.3	9.3	25.9	29.6	Cam 9.0	9.0	34.9	36.7	W 9.4	9.9	3.3	14.8	
10.4	30.8	50.7		10.3	26.9	35.6	8.9	8.9	52.9	38.0	W 9.1	9.5	19.3	57.9	9.7
10.4	31.8	54.0		9.1	39.9	16.2	9.2	8.2	56.4	23.6	Caml 8.2	9.9	21.8	53.9	
10.4	36.8	54.4		10.0	59.4	32.6	10.	9.2	52 6.9	38.8	9.3	9.7	23.3	0.0	
9.6	49.8	13.1	9.5	9.6	38 1.4	28.7	9.6	9.0	12.9	39.4	W 9.2	9.7	45.8	3.7	9.5
10.4	28 5.8	50.9	9.2	9.2	21.9	30.2	Cam 9.0	9.7	23.4	54.8	9.6	8.9	47.3	3.9	9.1
9.8	8.3	52.5	Ca 9.6	8.8	38.4	37.2	Cal 9.0	6.2	29.3	31.1	GWπμβ 6.2	9.5	51.8	21.6	9.5
9.2	12.6	31.3	9.1	9.0	57.4	35.3	Caml 8.8	9.9	29.4	45.7	9.0	9.0	3 33.3	45.8	C 9.1
10.0	13.8	29.1	9.5	9.2	58.9	31.9	9.3	9.9	46.8	53.1	9.7	8.5	55.8	30.4	K= 8.8
9.8	15.3	13.6	9.4	9.1	39 20.4	15.6	Cam 8.8	9.0	53 1.3	30.5	C- 9.0	9.9	4 33.8	13.3	9.5
9.8	18.3	4.2		7.4	28.4	53.5	CWaml 7.0	9.0	9.8	31.2	C 9.2	9.2	43.8	1.4	9.8
10.4	21.6	44.4		9.6	35.4	33.0	9.5	9.9	11.8	2.8	9.7	9.7	5 7.8	16.8	9.6
10.4	21.6	11.5	10.	9.2	44.4	5.4	9.1	9.7	14.8	43.2	9.8	9.7	39.8	42.0	9.5
10.0	30.8	15.2	9.6	8.0	40 15.4	4.6	Cam 8.0	9.9	33.8	16.8	9.9	9.9	53.8	42.6	9.8
8.6	32.8	30.9	Caml 8.5	9.4	23.4	56.4	C 9.1	9.2	41.8	11.9	9.2	9.7	6 4.3	57.8	9.5
9.6	38.3	37.8	9.4	10.0	35.4	25.5	9.5	9.9	54.8	0.9	9.8	9.9	10.8	40.0	9.5
10.2	49.8	3.8		10.0	54.9	16.7	9.5	9.9	54 6.3	52.0	9.4	9.0	42.8	29.9	9.0
10.4	55.8	22.9		7.0	41 3.9	43.0	Gcb≡l 6.5	8.6	20.3	24.2	Ca 8.3	9.5	46.3	17.0	9.3
9.4	29 2.8	42.1	9.7	9.1	33.9	56.4	Cam 8.8	9.7	23.8	6.3	9.5	8.9	7 3.1	22.1	Ca 9.0
9.4	12.0	22.3	9.3	9.1	43 24.9	26.3	C 9.2	9.5	25.3	41.8	9.5	9.7	12.8	9.9	10.
10.0	12.6	10.3		9.2	31.9	26.0	9.3	9.9	33.3	55.9	10.	9.9	43.8	28.8	10.
10.4	12.6	4.7		10.0	54.4	3.4	9.4	9.9	43.3	18.9	9.6	9.9	8 43.8	20.2	9.5
9.8	47.9	34.5	9.4	10.0	44 12.4	53.5	9.7	8.5	52.3	44.0	CWa 8.9	9.9	52.8	46.4	10.
9.2	55.4	52.7	9.4	10.0	46.4	55.1	9.5	9.7	52.8	44.4	10.1	9.7	9 15.2	51.7	C 9.0
8.6	16.9	41.0	9.0	9.8	51.4	1.2	9.5	9.5	55 3.8	49.5	9.4	9.7	55.2	59.0	9.0
8.6	39.9	12.5	CWb≡ 8.9	8.4	45 2.4	32.3	C- 8.8	9.7	24.8	16.5	9.4	8.4	11 8.9	12.5	C≡ 8.3
8.2	31 3.4	13.6	CWb≡l 8.7	10.2	2.9	50.9	9.5	7.8	38.3	44.2	CWal 7.0	9.4	31.9	45.3	9.3
9.4	5.4	59.7	Cam 9.0	8.1	13.4	12.6	C≡ 8.3	8.4	56 0.8	48.4	Cal 8.5	9.8	43.9	19.2	9.5
25pr.	+ 1 26.3	+ 5.0			+ 1 26.0	+ 5.3			+ 1 25.5	+ 5.7			+ 1 25.1	+ 6.0	

8041-8100.										8101-8160.										8161-8220.										8221-8280.									
21 ^h					-19°					21 ^h					-19°					21 ^h -22 ^h					-19°					22 ^h					-19°				
mag.	m	s	'	''	mag.	m	s	'	''	mag.	m	s	'	''	mag.	m	s	'	''	mag.	m	s	'	''	mag.	m	s	'	''	mag.	m	s	'	''					
8.6	13	15.4	27.5	C≡m	9.0	10.0	40	28.0	15.5	9.5	9.1	59	2.0	32.1	CWa	9.0	10.3	17	21.7	54.2				9.5															
8.9	14	13.9	41.7	C	9.0	8.9	41	16.8	13.8	9.1	9.6			44.0	30.5	9.3	10.3			23.6	22.3			10.															
8.5		15.4	21.1	MC-m	8.8	9.9				9.6	9.8			46.0	31.4		10.3			46.7	43.4			9.9															
8.4		27.9	42.7	C	9.0	8.9				8.9	10.0			56.5	43.8	9.5	10.3	18	5.6	52.2				9.9															
7.8		42.9	15.8	GCB=l	8.0	10.0				9.3	9.4	0	2.5	59.7		9.4	10.3			12.6	49.6			9.7															
9.9	15	0.4	45.2	Ca	9.0	9.4	42	4.2	10.5	9.2	10.0			20.5	16.4	9.5	9.5			24.6	33.2			C	9.0														
9.4		16.4	50.9	Ca	9.2	8.8				9.1	9.4	1	12.5	50.4		9.4	9.4			42.0	18.4			9.5															
10.1	17	11.1	10.4	C≡m	8.5	8.5				9.3	9.8			21.5	1.4	9.6	9.8			56.0	19.4			9.5															
8.4		55.4	29.2	C≡m	8.5	8.5	43	3.7	16.7	MC-	8.6	8.7			28.0	41.6	C	8.8		9.2			9.1	9.1	9.1														
8.4	18	42.4	7.4	Cb=ml	8.0	9.4	44	27.7	25.9	9.0	10.0			35.0	47.4		9.4			24.5	54.4			9.1															
10.1	19	34.4	20.9		9.4	9.4			41.7	14.1	9.4	5.6	2	7.2	7.6	GWlπβ	6.0	8.0	30.0	11.8	C	8.0		8.0															
8.4	20	2.4	35.7	C≡	7.5	7.0			45.2	12.3	Gtlπμ	6.6	8.2			14.2	5.6	CWal	8.5	10.3			10.3		9.2														
8.4		11.4	51.0	CW-	8.0	9.2			52.7	25.5	C	9.0	8.4			27.7	35.7	C	8.7	9.4			9.4		9.2														
9.0		44.4	43.3	Ca	9.0	8.6	45	12.2	43.1	MCWm	9.0	10.2			33.0	36.0			9.1	51.4	39.1		9.1		9.4														
10.1	21	10.9	38.4		9.5	9.4			31.0	58.7		8.8			36.2	3.2	a	9.0	8.8	56.4	17.0		8.8		9.0														
9.4		32.4	12.6	a	9.2	9.8			57.7	35.0		9.5	8.7		36.7	3.6	al	8.8	9.6	20	2.9	38.4		9.6															
9.2	22	8.6	57.3		9.1	9.9	46	3.7	36.9		9.5	10.4			50.2	37.7			10.0	5.4	56.4		10.0																
6.8		58.9	41.5	GWlπμ	6.5	8.7			4.7	44.2	CWam	8.8	9.2	3	16.2	31.9		9.4	10.0	9.4	54.4		10.0		9.7														
10.1	23	7.4	33.9		9.8	9.6	47	17.4	23.8		9.5	9.2			27.2	49.8	C	9.1	10.2	10.4	46.0		10.2		9.1														
10.1		13.9	9.6		9.3	10.4			50.1	7.9		9.6	9.8	4	15.7	0.2		9.6	8.5	13.6	58.5	Cal	8.5		8.5														
8.4	24	19.9	52.3	CWam	8.8	10.4	48	10.6	36.8		9.1	9.1			26.2	32.0	C	9.0	8.8	21.4	53.8	C	8.8		9.0														
7.0		23.9	47.2	GWlπμ	7.3	8.5			39.0	59.7	Ca	8.8	9.6			35.7	16.7	b	9.4	9.0	32.4	34.6		9.4		9.0													
8.9	25	21.4	34.7	C-	9.0	10.4			56.1	21.8		9.7	9.2		48.7	8.7	a	9.4	10.3	36.4	47.3		9.4		9.4														
9.6		48.9	44.3		10.4	10.4	49	1.6	49.6		9.6	9.6			5	30.2	42.7		9.4	10.0	41.8	55.9		9.4		9.4													
7.9		50.9	7.9	C=	8.7	9.8			48.1	40.6		9.3	10.2		36.0	34.0			10.3	21	42.2	44.9		10.3		10.3													
8.9	26	14.9	7.3	C≡	8.7	7.8	50	8.6	46.9		8.0	8.8			36.7	52.4	C	9.1	10.3	2.1	21.2	MCm	9.1		9.8														
10.1		15.4	54.0	K	9.8	9.2			13.6	18.3	Gatlπ	=	8.9	10.4	6	0.7	7.9		9.8	9.0	6.6	32.3		9.8		9.8													
8.9		23.9	35.6	a	9.1	8.4			23.1	29.3	MC=	8.8	9.8		27.2	11.4		9.7	10.0	13.0	13.6		10.0		9.7														
8.8		35.4	13.4		9.2	10.4			59.9	12.5		9.8	9.8		35.9	59.5		9.8	10.3	51.0	39.4		9.8		9.8														
10.0		47.9	27.5		10.	9.8	51	2.1	45.4		9.8	9.8			44.0	43.2		9.8	9.4	5.1	39.4		9.4		9.4														
10.0		49.9	26.0		9.6	9.6			4.1	34.3		9.5	9.6		50.8	43.3		9.7	9.5	55.0	0.4		9.5		9.5														
8.2	27	29.9	45.0	Cam	8.5	9.8			12.0	44.1		9.2	9.2		52.9	4.3	Mam	9.2	9.5	55.0	39.8		9.2		9.5														
7.8	28	19.1	48.0	Gamtlπ	8.5	8.7			30.6	58.7	Ca	9.1	9.6		7	12.9	13.2		9.8	9.1	3.5	31.4	CK	9.1		9.8													
7.6		33.1	19.5	Cal	8.2	8.6			32.5	9.2	a	8.8	9.8		27.8	50.9			10.2	11.0	19.2		9.1		9.8														
9.4	29	12.8	31.8		9.4	8.4	52	12.5	55.1	Cal	8.8	9.5			28.4	30.8			10.2	11.0	32.1		10.2		9.4														
9.4		43.8	13.1	a	9.2	10.4			15.5	1.7		7.6			28.9	51.9	Caml	6.5	9.5	18.0	39.1		6.5		9.5														
7.8		59.8	18.0	Ca	7.7	9.8	53	9.0	20.6		9.8	8.5			54.2	18.6	C	8.6	9.4	18.0	2.8	am	9.3		8.6														
10.0	30	32.3	17.0		9.6	10.0			13.0	21.1		9.8		8	1.1	24.8	b	9.4	10.2	18.0	2.8		9.4		9.4														
7.4		37.3	47.5	Gbtlπ	7.8	10.2			37.0	2.1		9.8			18.7	10.2			8.5	4.3	49.4		10.2		9.8														
9.2		54.8	7.9		9.5	10.0			49.0	13.8		10.2			54.2	6.8		9.8	9.0	20.8	42.6		9.0		9.8														
8.2	31	43.3	14.7	Cam	8.5	10.2	54	3.0	7.8		9.5	8.6			9	3.5	40.7	C	9.1	9.5	21.8	9.0	Mm	9.5		9.1													
10.0		54.8	33.2		9.8	9.8			17.5	52.2		10.4			7.2	18.1			10.3	40.2	32.9		9.5		9.5														
8.2	32	32.3	46.8	Cam	8.5	9.8			18.0	11.8		9.5	9.8		19.7	44.3		9.7	9.5	43.2	11.8		9.5		9.7														
9.4		33.3	47.2		9.3	8.6			19.0	54.7	Ca	8.7	10.3																										

8281-8322.				8323-8364.				8365-8406.				8407-8448.												
mag.	22 ^h .	-19°		mag.	22 ^h -23 ^h .	-19°		mag.	23 ^h .	-19°		mag.	23 ^h .	-19°										
10.3	30	23.2	48.9	9.6	9.4	49	26.9	2.1	a	9.1	7.5	6	39.9	3.1	Cal	7.3	9.6	30	32.1	45.3	9.5			
9.8		53.2	18.6		10.1	50	14.6	14.1		9.7	9.6	7	29.3	55.9	C	9.4	9.6	31	55.8	59.8	9.6			
10.3	31	36.7	29.6	9.6	9.8		56.0	36.7		9.6	8.1		55.2	33.3	CWal	8.5	9.0	32	59.1	46.0	Ca	9.0		
9.6		59.2	30.6		9.3	51	17.5	2.0	-	8.8	7.6	10	23.2	33.2	CWal	7.0	9.0	33	26.6	31.5	C-	9.1		
9.4	32	0.7	32.0	Cam	9.2	8.5	22.5	38.3	Ca	8.7	9.5		37.2	27.1	Ca	9.1	8.8		45.1	52.8	C	9.2		
9.4		10.7	37.9	a	9.4	7.7	24.5	22.3	Ca	8.7	8.6	11	6.2	25.9	Ca	9.1	7.7	34	5.1	40.7	Gatlr	7.8		
8.4		54.7	46.4	Cal	8.7	7.6	32.0	3.5	Ca	8.6	7.4		54.7	31.3	GCWal	7.0	9.4		42.2	48.1		9.6		
9.8	33	7.2	5.7		9.7	8.7	52	7.5	16.4		9.3	8.4		57.2	4.5	a	8.5	9.2		54.2	14.0	-	9.3	
7.3		17.2	50.8	Ckal	6.7	9.2	53	5.0	34.9	C	9.1	8.8	12	34.6	22.7	a	9.1	9.2	35	4.7	38.1	C	9.5	
9.6	34	1.2	32.5		9.3	9.2		16.5	46.2	C	9.1	7.8		52.6	14.3	CWal	8.6	9.0	38	4.7	28.6	Ca	9.1	
8.3	35	7.2	12.8	am	8.5	8.8		28.5	9.0		9.1	8.9		53.1	8.2		9.1	9.6		11.7	0.1		9.5	
8.7		17.2	5.3	Cam	8.6	9.6	54	32.9	51.6	C	9.1	9.6	13	13.6	2.2		9.8	5.7	39	31.7	22.4	GWlπβ5.0		
9.4	36	46.7	41.0		9.4	8.2	55	27.9	8.2	Ca	8.7	10.2		22.1	54.9		9.8	9.6	40	5.0	38.5		10.0	
6.5		51.7	28.8	Gklπβ	5.1	7.7		38.4	36.9	C-	8.5	9.3	14	13.1	55.2	C-	9.0	8.8		8.7	1.7		9.1	
9.4	37	3.2	22.3		9.2	7.0		58.4	12.7	GCbl	7.0	9.5		18.1	4.9		9.3	8.5		11.7	26.9	Ca	9.1	
8.8		46.7	44.6	MCm	9.2	8.4	56	17.4	18.6		9.1	7.8		21.1	40.3	Ca	7.5	8.3		38.7	51.9	Ca	8.3	
8.8		52.0	57.0	Ca	8.8	8.7		28.4	6.0	a	9.1	7.5		21.1	13.6	CWal	7.3	9.2	41	44.7	46.1	a	9.3	
8.2	38	9.2	28.4	C	8.4	7.8		45.2	59.1	Ca	8.5	9.8	16	4.1	36.4		10.0	8.0	42	2.7	34.7	Gbtlr	8.0	
9.8		43.2	25.5		9.5	9.9		55.2	35.5		9.2	8.3	17	10.1	47.7	Cal	8.2	8.0	44	41.3	44.6	Cb-1	8.5	
10.3	39	12.7	2.1		9.8	8.2	58	15.7	45.9	Ca	8.9	7.1		32.6	22.5	Ga	6.7	5.0		53.8	36.2	GWlπβ5.0		
9.0	40	19.5	58.5	C	9.2	10.1		27.2	25.3		9.8	9.5	18	28.6	29.3		9.4	8.3	45	27.8	21.3	Cal	8.7	
8.0		49.2	49.2	Ca	8.5	9.2		33.7	2.1		9.2	10.2	20	13.6	55.5		9.8	9.0		58.3	15.3		9.4	
10.2	41	6.2	8.4		9.7	8.2	59	2.7	2.2	-	8.7	9.6		23.1	35.6		10.0	7.0	46	12.3	15.4	GWb-17.5		
9.6		10.2	18.2		9.7	9.7		21.2	19.5	a	9.4	9.0		35.9	31.3	-	9.2	8.4	47	8.3	3.9		9.1	
8.8		28.2	41.1	Ca	9.0	9.4	0	17.2	14.7	a	9.2	9.0	21	17.4	44.7	C	9.2	7.7		19.5	3.6	GCal	7.8	
9.2	42	6.2	45.0	Ca	9.2	9.6		31.2	51.1		9.5	9.6		59.9	4.5		9.6	9.6	48	3.5	57.3	-	9.5	
8.2		10.7	16.2	C	8.8	8.5	1	24.7	52.9	Ca	8.7	9.6	22	4.4	35.9		9.6	9.5		23.7	16.9		9.4	
9.6		40.2	3.7		9.0	9.7	2	2.7	47.9		9.3	9.7		31.4	28.0	-	9.4	8.6		27.7	49.5	C-	8.5	
9.4		46.7	28.0	C	9.2	7.4		5.4	25.6	Cbl	8.0	8.8	23	12.9	12.3	C-	8.8	9.0		28.8	26.1	a	9.0	
9.4	43	45.2	42.0		9.8	8.2		9.4	43.1	Ca	8.8	9.6		22.9	17.1		9.4	9.2		31.4	59.0	C	9.4	
8.2	44	13.7	24.0	C	8.5	8.2		47.4	18.1		8.6	8.8		27.4	22.9		9.3	9.2	50	51.3	5.3	a	9.0	
8.5		29.2	26.9	Cl	8.7	10.0	3	2.9	49.9	C	9.0	8.4	24	4.4	23.1	C-	8.6	9.5		51	37.8	39.9		9.4
9.4		30.9	36.6	a	9.2	9.0		27.4	22.9	Ca	8.7	9.3		51.1	39.3		9.5	9.5	52	7.8	39.0		9.4	
7.3		53.9	41.9	GCaml	7.5	9.0	4	14.9	36.1	C-	9.0	9.8	25	45.6	15.8		9.5	8.2		45.3	14.1	C-	8.0	
9.4	46	35.4	15.2		10.0	9.4		23.4	24.5	a	9.4	8.7		50.6	44.3	Ca	8.6	9.2	53	16.3	8.0		9.3	
10.3		43.9	14.3		9.5	8.6		25.9	19.6	Ca	8.7	9.4	26	33.1	41.5	C	9.3	8.2		23.8	12.1	C-	8.5	
7.7	47	22.8	50.4	GCal	6.4	10.0	5	12.5	38.1		9.8	8.9		58.5	50.0	Ca	8.4	8.6		23.8	26.9		9.1	
9.0		43.9	42.4	Ca	9.2	9.2		22.5	10.9	a	9.4	9.2	27	2.3	4.3		9.2	9.8	54	28.7	33.0		9.3	
8.4	48	14.7	58.6	Ca	8.6	9.4	6	2.0	26.7	C	9.3	9.4		42.9	4.8	a	9.2	9.5		49.2	42.1	Ca	9.0	
10.3		21.0	19.0		9.8	9.7		17.0	8.8		9.5	10.2	28	37.1	27.1		9.5	9.8	55	9.7	50.1	C	9.2	
9.6		56.9	25.7		9.5	9.2		21.0	56.6		9.2	8.0		40.8	15.7	Cal	8.5	9.4	59	3.2	17.1	-	9.1	
10.3	49	8.7	25.1		9.4	10.1		33.8	11.8		9.7	8.6	29	22.1	38.2	Ca	9.0	9.4		47.2	59.9	C	9.1	
25Pr.	+1	20.8	+7.9				+1	20.0	+8.1				+1	18.9	+8.2				+1	17.5	+8.3			

ZONE—20°.

1—30.				31—60.				61—90.				91—120.										
mag.	oh.	—20°		mag.	oh.	—20°		mag.	oh.	—20°		mag.	oh.	—20°								
	m s	'			m s	'			m s	'			m s	'								
9.3	0	1.9	45.1	9.5	9.8	21	27.6	21.2	9.8	10.0	32	27.0	50.2	9.6	10.0	41	26.1	48.3				
9.4		28.4	36.5	C-	9.1	9.8	29.6	39.4	9.5	10.0	49.5	41.9	9.8	10.0	49.1	6.1	9.5					
8.6	3	48.4	40.7	Ca	9.0	9.6	30.6	10.2	9.6	8.7	56.5	46.4	Cal	8.5	10.0	42	31.6	44.9	9.8			
9.0	5	28.9	23.9	Ca	9.0	9.6	22	16.6	33.1	9.3	8.7	33	2.0	32.8	Ca	9.0	10.0	32.4	5.1	10.		
9.8	9	11.9	8.1		9.5	9.4	57.6	13.3	9.0	9.4	28.0	29.8		9.3	9.0	45.4	23.2	C	8.8			
8.1	10	1.4	5.4	C≡	8.0	9.6	23	21.9	3.4	9.2	9.8	30.0	31.5	9.4	10.0	43	4.9	35.0	9.8			
6.0		21.9	54.4	Gcb-1	6.0	8.8	24	3.6	32.4	C=	8.6	10.0	34	6.5	21.6	10.	9.2	14.9	50.8	9.4		
9.6		57.9	2.1		9.2	9.8	37.1	44.9	9.6	10.0	56.0	32.7		9.7	9.2	32.4	36.9		9.3			
9.2	11	29.4	12.0		9.1	8.6	26	27.1	29.8	C-	8.8	8.4	35	3.0	32.9	Ca	8.9	9.6	33.9	27.9	C	9.4
9.6	12	18.9	30.0		9.1	8.4	27	2.3	11.2	C=	8.0	9.6		12.0	6.8		9.5	9.7	41.9	5.1	9.8	
8.4		24.4	3.2	C	8.9	10.0	29.1	16.1	9.8	8.4	15.8	59.2	Gatlπ	7.5	9.8	42.4	16.6		9.7			
9.0	13	2.4	49.2	Ca	9.0	8.6	28	10.3	1.4	Ca	8.6	9.8	36	2.0	50.1		9.5	9.0	44	25.4	35.0	9.2
8.8		25.9	19.6	a	8.8	10.0	19.3	41.1	9.6	9.1	10.0	24.1		9.1	9.1	45	19.1	47.0	9.3			
9.4		32.4	52.7		9.1	10.0	29	59.8	21.2	9.2	8.8	25.5	18.9	C-	9.0	10.0	47.6	56.5	9.4			
9.8		55.4	53.7		9.5	10.0	30	14.8	53.0	9.8	7.8	27.5	52.8	GStlπ	7.0	8.4	51.1	6.1	Ca	8.3		
9.6		56.9	42.6		9.3	10.0	52.8	8.9	9.4	9.8	34.0	48.1		9.1	8.2	46	20.6	34.3	Ca	7.8		
7.8	14	32.9	37.4	al	7.8	9.6	53.9	56.9	9.3	8.4	37	42.6	55.9	Cb	8.8	10.0	21.1	8.6		9.5		
7.5	15	26.1	45.1	GWbl	5.5	9.0	58.3	24.1	C-	9.0	9.6	43.0	51.0		9.9	9.2	35.1	35.9	9.2			
9.8		47.6	53.0	a	9.1	8.2	31	7.8	15.1	GCal	7.8	10.0	38	1.6	5.1	9.9	10.0	41.6	1.0	10.		
9.6	17	40.6	36.0		9.3	10.0	11.8	41.2	9.8	10.0	20.6	26.6		9.6*		9.6	56.1	39.0	9.5			
8.5	18	28.1	32.6	C-	8.8	10.0	17.3	21.4	10.0		35.1	24.2	9.8	10.0	47	5.6	58.1	9.6				
8.0		37.1	38.1	Ca	8.3	9.8	23.3	1.4	10.	10.0	39	32.6	12.7	10.0		14.1	46.0	9.8				
7.4	19	19.1	37.5	Cal	7.7	9.8	27.3	36.1	9.5	9.1	40	8.1	46.7	C-	8.7	10.0	21.1	0.2	10.			
9.2	20	13.1	30.3		9.0	9.2	56.3	36.5	9.4	8.8	28.6	6.7	Ca	8.7	10.0	25.1	46.0	9.5				
9.2		15.6	40.8		9.2	9.4	58.8	15.4	9.5	8.6	29.1	38.3	C	8.7	9.4	39.1	0.4	9.3				
9.8		45.1	11.2		9.5	9.4	32	0.3	2.1	9.5	10.0	43.6	59.9	9.8	10.0	46.1	6.0					
9.6		51.6	11.0		9.6	10.0	3.3	43.6	9.8	10.0	49.1	27.2		9.3	9.6	59.6	48.2	9.3				
9.8		58.1	11.2		9.6	9.2	13.8	44.7	9.3	10.0	41	2.6	22.5	10.0		48	2.1	20.8	9.8			
6.5	21	19.1	49.5	GCWbl	6.5	6.4	17.2	59.1	GCal	6.2	8.6	6.6	38.7	C-	8.3	10.0	38.1	8.5	9.5			
9.4		26.6	0.6	Ca	9.0	8.6	22.3	25.7	Ca	8.7	9.8	17.1	22.2		9.4	9.8	49	8.3	48.8	9.1		
25Pr.	+ 1	16.0	+ 8.3				+ 1	15.1	+ 8.3			+ 1	14.8	+ 8.2			+ 1	14.3	+ 8.2			

121-180.				181-240.				241-300.				301-360.			
mag.	oh-1h.	-20°		mag.	1h-2h.	-20°		mag.	2h.	-20°		mag.	2h-3h.	-20°	
m	s	'		m	s	'	a	m	s	'		m	s	'	
9.4	49	25.8	31.3	9.1	8.4	17	23.4	14.6	a	8.8	8.4	4	43.4	47.1	Ca
9.6		32.9	28.8	9.6	9.4	18	14.4	29.8		9.8	8.4	5	45.0	9.2	C
9.6	50	4.6	57.3	9.4	8.2	15.9	11.2	Ca		8.2	9.0	6	59.0	1.3	
9.6		8.9	28.1	9.5	9.2	19	34.9	42.2		9.1	9.3	6	12.3	58.8	
9.2		19.4	32.5	9.0	9.8	20	42.8	40.4		9.3	10.0	7	1.5	4.8	
7.4		19.4	7.2	C=	7.8	8.0	20	47.9	17.5	C	8.3	8.7	19.2	40.2	Ca
9.6		58.4	0.2	a	9.0	8.2	22	1.9	27.2	Ca	8.5	10.0	53.0	53.9	
9.4	51	0.4	30.5	9.2	9.8	22	3.8	27.4		9.6	8.4	54.2	7.8	Ca	
8.8		26.9	38.3	C	8.8	8.3	23	19.4	21.4	Ca	8.9	10.0	8	41.0	46.0
9.1	52	9.6	59.8	Cb	8.8	8.3	33.4	27.8	a	9.0	9.0	9	45.9	34.7	
7.9		33.4	18.3	Wal	7.0	8.0	59.2	14.7	Cal	8.5	9.1	10	11.4	41.3	
7.9		52.4	0.1	Cal	7.8	8.3	25	22.7	26.9	Ca	8.8	9.4	36.9	38.6	
9.4	53	58.5	41.2		9.2	9.7	54.7	7.9		9.3	9.4	56.9	25.0		
8.4	54	9.5	57.0	C	8.5	8.3	26	20.7	15.0	Ca	8.7	9.8	56.9	49.4	
8.1		17.5	3.7	Cbl	8.0	9.8	55.7	13.2		9.8	9.8	11	13.4	28.6	
7.8		31.0	45.8	Cal	7.2	9.2	27	10.2	24.4		9.1	7.5	20.9	34.5	Cbl
8.0	55	36.5	5.2	Ca	8.0	8.2	23.7	44.9	Ca	8.8	8.2	44.9	9.9	Ca	
7.9		57.5	20.3	Ca	8.2	9.0	28	49.6	59.5		9.0	9.4	12	25.1	33.0
9.0	56	1.8	57.2		9.2	9.4	29	12.0	54.1	C	9.0	9.4	49.6	18.9	
9.6	57	3.5	55.2		9.8	8.0	31	12.9	0.6	Cb	7.8	7.6	13	3.1	6.6
9.3	58	11.5	27.4		9.3	9.6	34	29.9	45.9		9.2	8.2	14	9.6	36.5
9.4		54.0	36.4		9.3	9.6	31.9	15.9	a	9.0	9.8	41.6	56.9		
7.8	59	5.2	31.4	C-	8.2	8.4	40.4	43.7	C	8.7	9.2	15	15.6	33.9	
9.2		30.2	14.3	C	9.0	8.4	52.1	59.9	Ca	8.7	7.0	23.6	29.3	GCa	
9.4		43.7	27.5		9.5	8.4	35	1.9	9.2	Ca	9.0	9.1	39.6	53.6	C
8.4		54.2	15.3	C	8.5	8.6	18.4	34.3	Ca	8.7	9.0	16	3.6	55.5	
8.2	0	8.2	43.7	C-	8.5	9.6	49.9	28.3		9.4	8.0	18	53.6	36.3	Ca
8.4		21.7	43.5	C	9.0	7.6	36	37.4	48.2	Cbl	7.0	9.2	19	7.3	51.0
9.6	1	5.4	58.7		10.0	9.6	37	11.4	37.3		9.2	9.5	18.3	52.2	
9.2		57.7	44.4		9.1	7.8	32.4	2.1	Ca	8.3	9.0	20.3	23.7	C	
9.2	2	2.5	41.8		9.4	9.6	38	32.9	2.1		9.3	8.4	53.3	52.1	C
8.6		52.0	2.4	a	9.0	8.0	49.4	46.7	Ca	8.5	8.6	20	3.3	48.0	C
8.8		53.5	53.5	a	9.0	9.0	39	10.4	40.7	C	9.0	9.4	16.3	35.3	
8.4	3	25.0	3.4	Ca	8.4	9.6	11.4	40.7		9.0	6.7	46.8	36.6	GCbl	
8.5		39.5	53.0	Cb	9.0	9.0	44	21.9	30.1	C	8.7	9.4	21	24.3	34.8
9.6	4	14.0	42.5	a	9.3	9.0	24.9	48.8	C	8.9	7.4	22	54.3	21.5	Cbl
9.4		56.0	26.1		9.5	8.6	36.4	39.7	C	8.7	8.6	23	10.3	32.8	C
8.6	5	19.5	14.8	a	8.8	9.6	46	25.9	28.7		9.3	9.8	25	59.0	26.7
9.0		19.7	57.9		9.1	7.8	53.9	7.2	Cal	7.5	9.2	26	49.0	43.4	C
9.0		36.5	19.3	Ca	9.1	9.6	47	16.4	23.8		9.4	8.6	27	8.6	53.4
9.3		45.2	12.9		9.7	9.4	39.9	11.8		9.1	9.8	11.7	22.0		
9.6	6	35.7	3.9		9.7	10.0	48.5	20.8		9.5	8.7	25.7	12.5		
8.8	7	33.7	40.5	Ca	8.5	10.0	49	47.0	47.0		9.3	9.8	39.7	55.0	
9.4	8	44.9	53.9		9.4	9.8	50	22.5	2.9		9.3	7.3	53.7	33.1	GCbl
8.7		58.2	20.7	Ca	8.6	9.4	24.0	19.4		9.3	8.1	28	0.5	9.9	C
8.4	9	59.7	27.9	Ca	8.3	10.0	42.5	28.3		9.5	8.0	18.0	33.2	C	
8.0	10	39.5	46.0	Cbl	8.3	9.0	52	46.5	22.0		9.1	9.4	29	24.2	17.0
9.0	11	58.5	18.0		9.0	8.8	53	50.5	48.8	C	8.7	9.1	31.5	34.0	
8.0	12	24.5	51.0	Ca	7.5	10.0	54	42.5	51.0		9.4	9.9	52.5	19.1	
7.7		29.5	1.4	C	7.8	9.3	56	2.4	19.7		9.1	9.9	59.0	5.8	
9.2		34.0	23.0		9.0	10.0	33.9	6.7		9.5	9.0	30	2.5	26.0	a
9.0	13	3.2	11.8		9.1	9.0	40.9	55.1	C	8.8	9.2	37.5	21.0	Ca	
9.6		6.2	34.7		9.2	9.3	58.9	13.9		9.0	9.0	46.5	21.7	Ca	
9.3		13.2	46.1		9.2	8.8	57	51.9	29.2		8.9	7.3	31	4.6	39.9
9.6	14	3.7	31.3		9.2	10.0	1	31.4	21.0		9.8	9.6	5.0	30.8	
9.7		23.7	11.8		9.1	7.6	3	24.4	9.7	al	7.3	10.0	21.8	59.9	
7.6		24.2	35.8	Cal	7.3	10.0	45.4	49.0		9.5	9.0	32	22.1	43.7	C
9.7	15	43.2	20.9		9.3	8.7	49.4	12.0	Ca	8.7	7.6	49.3	59.8	GCa	
8.6	16	15.7	13.9	Ca	8.5	9.0	57.4	5.2		8.8	9.6	33	19.6	47.8	
8.6	17	21.9	58.5	a	8.9	9.4	4	30.4	59.2		9.3	8.0	32.1	42.6	Cal
25pr.	+1	13.5	+8.1				+1	11.6	+7.6			+1	9.7	+6.8	
													+1	8.2	+6.1

361-420.				421-480.				481-540.				541-600.			
3h.		-20°		3h.		-20°		3h-4h.		-20°		4h.		-20°	
m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.
9	59.9	25.9	8.1	33	15.4	37.4	8.1	58	18.4	33.9	8.3	14	26.0	10.3	9.5
10	37.4	15.9	8.0	35	50.9	59.9	8.0	29.9	27.4		9.0	10.2	47.8	20.3	10.2
10.0	54.4	37.9	8.6	34	54.9	31.1	8.5	41.4	46.9		9.7	15	2.3	50.8	10.2
8.3	58.4	41.8	8.9	36	36.9	0.0	8.5	49.4	57.4	a	8.7	12.3	56.5	Gbl	8.7
9.6	11.4	24.1	9.3	35	53.3	40.8	9.4	59	11.4	43.5	6.0	19.8	52.3	Gbl	9.0
10.0	5.4	39.1	10.0	36	1.3	33.7	9.5	21.4	6.5	GCal	9.7	25.8	41.7	Ca	9.7
9.6	25.4	11.7	9.3	37	7.0	56.8	8.5	54.6	21.9		9.3	29.8	7.2	Ca	8.8
9.4	6.5	57.6	9.2	38	10.5	31.3	8.3	59.1	4.3		9.1	48.3	28.8	C	8.5
10.0	7.4	24.4	9.6	38	10.5	31.3	9.2	0	17.1	51.1	7.0	16	2.3	41.6	10.2
10.0	51.4	9.5	9.5	52.8	40.7		9.2	35.1	50.4	GCWal	9.7	3.3	2.7		10.0
9.2	14	24.0	56.1	57.8	52.2		9.2	1	1.1	34.8	9.1	9.8	23.2		8.8
10.0	45.0	44.3	9.7	39	48.8	55.0	7.3	5.1	44.0		9.7	17.3	44.3		10.2
9.2	48.5	10.2	9.0	40	57.3	38.5	8.7	18.1	48.9	a	9.0	21.3	27.9		9.5
10.0	56.5	16.7	9.6	41	34.3	5.9	9.5	25.1	11.5		9.8	17	18.3	C	7.6
10.0	58.5	46.1	9.6	41	31.6	36.0	9.2	2	7.8	52.3	9.2	38.8	35.9		9.7
9.8	15	3.7	57.9	42	41.8	20.1	9.8	43.3	31.0		9.0	18	8.8	CWbl	8.0
10.0	16	4.5	10.7	42	11.3	14.4	9.7	44.8	13.7		9.5	18.3	19.9		9.1
6.4	5.0	46.4	6.6	25.1	28.5		9.3	55.3	49.6	Cbl	8.4	33.3	52.9	C	9.1
8.8	23.0	29.7	8.5	29.1	3.0	C	9.0	3	11.8	23.7	8.2	39.3	24.2	Cbl	8.0
9.8	17	34.5	30.4	36.1	12.1		9.3	28.8	57.1		9.1	57.8	44.3		10.2
10.0	18	6.5	16.1	51.1	47.9	Ca	8.4	35.8	36.5	Cbl	8.4	19	7.3	2.5	10.2
9.2	19	4.5	44.9	56.1	56.1	Ca	9.0	49.6	44.8	C	8.8	12.8	24.5		8.8
9.6	17.5	46.1	9.3	43	51.6	19.0	9.0	4	1.6	39.8	9.1	14.8	55.1		9.1
9.2	43.0	11.6	9.5	44	3.6	4.8	9.0	14.6	48.0		9.5	22.8	38.0		9.4
8.8	20	0.5	46.5	13.1	48.5	Ca	8.5	5	34.6	22.6	8.7	33.3	19.5		9.2
9.2	7.5	19.8	9.4	17.9	47.9		9.4	51.1	7.5		9.1	42.3	56.9		9.1
9.6	45.0	28.1	9.2	19.4	26.1	a	9.0	6	4.6	40.0	8.6	20	26.8	18.3	9.8
9.6	28.0	27.6	9.6	40.9	10.4	C	8.5	7.1	41.0	GCal	6.1	32.5	15.3		9.4
10.0	46.5	46.6	9.8	54.4	29.9	a	9.2	35.6	48.5	a	9.1	42.5	9.2		10.2
8.5	22	12.0	15.0	17.4	30.8		9.1	7	1.7	39.3	9.1	53.0	53.9		9.0
9.2	22.5	39.6	9.0	46	24.4	8.5	9.5	16.8	14.4	Ca	9.0	53.5	36.9		9.5
8.4	30.0	11.2	8.5	47	1.0	30.0	8.5	22.8	41.7		9.4	21	39.5	41.9	10.2
8.8	23	18.0	9.0	22.4	26.0	a	9.2	26.3	32.2		8.0	56.5	39.2	Ca	8.0
9.8	28.6	53.3	9.5	37.0	16.7	a	9.0	29.8	10.5	Ca	8.7	22	33.3	6.5	10.0
9.0	24	19.6	8.9	49.0	35.0	a	8.8	33.3	24.9		9.6	35.5	30.5		9.6
9.6	34.1	30.3	9.5	16.4	14.6		9.5	8	30.3	6.2	9.4	55.5	42.2		9.6
10.0	25	1.6	9.4	49	4.5	49.9	8.0	9	6.8	41.5	9.7	23	9.0	16.1	10.2
10.0	3.1	43.4	9.4	12.7	10.8	Cal	8.5	41.8	18.2	C	8.6	18.5	14.6		10.2
9.6	11.6	15.9	9.2	16.7	51.4	Ca	8.5	56.3	41.7		10.0	30.5	34.5		10.0
9.2	19.3	25.6	9.2	20.9	19.8	Cal	8.7	10	51.8	43.2	9.5	33.0	54.6		10.0
9.8	38.8	36.9	9.3	51	1.4	41.6	9.0	11	10.8	15.8	10.2	55.9	15.7		10.2
8.5	26	20.3	8.0	33.4	36.4		9.5	24.3	1.7		9.5	56.0	44.6	C	8.8
9.0	20.3	10.1	9.2	47.9	45.5		9.7	40.7	58.5		10.2	24	16.0	0.9	10.2
8.8	28	6.0	8.6	52.10.9	15.9		9.2	47.3	14.8		9.3	26.0	7.2		9.1
9.6	21.8	34.7	9.1	12.0	37.9	Ca	8.6	51.3	38.4		9.5	36.5	56.4		8.8
7.8	23.3	47.5	8.3	16.0	44.2		9.5	12	9.3	31.5	10.2	38.4	48.3		10.2
10.0	26.9	48.1	9.8	53	29.5	29.5	9.0	10.8	24.5		9.5	25	17.6	1.1	10.2
10.0	28.3	2.3	9.4	42.0	37.7		9.7	18.3	42.1		10.2	21.8	23.7		10.2
10.0	36.9	5.1	9.5	52.5	16.3		9.3	18.8	11.4	C	8.8	41.3	30.1		9.7
10.0	55.9	31.4	9.8	54.5	41.2	Cal	7.2	35.3	0.9		9.4	44.8	51.0		9.4
10.0	29	0.1	10.0	59.0	5.2		9.8	36.3	54.0		9.1	49.8	57.4		8.8
9.8	21.6	15.4	8.9	55	22.5	41.2	8.3	54.3	19.7		9.5	26	2.3	26.9	9.8
9.7	3.1	0.6	9.2	33.0	0.0		9.3	13	8.3	6.8	9.8	13.3	16.3		9.5
10.0	6.1	7.2	9.4	56	21.6	49.6	7.8	11.3	37.8	C	8.9	31.3	9.7		10.2
8.6	11.9	26.2	8.7	31.6	47.6		9.5	27.8	20.5		8.0	33.8	58.1	Cal	8.0
8.0	20.4	34.1	8.2	57	13.6	14.0	9.0	49.5	46.3		9.5	40.8	44.5		10.2
8.6	32	11.4	8.5	23.6	51.2	Cal	7.7	54.5	7.0		8.8	53.3	7.5	a	8.8
9.8	13.4	42.1	9.2	39.1	51.2	Ca	8.0	14	7.5	35.2	9.2	56.8	10.3		10.2
9.4	20.9	10.0	9.3	53.9	29.4	GCbl	6.0	13.5	7.5		10.2	59.8	20.8		10.2
10.0	22.4	42.0	9.8	58	5.9	30.2	7.0	22.5	10.8		9.4	27	41.8	29.7	9.2
25Pr.	+ 1	7.1	+ 5.3	+ 1	6.4	+ 4.6		+ 1	5.8	+ 4.0		+ 1	5.5	+ 3.5	

601-660.				661-720.				721-780.				781-840.							
mag.	4 ^{h.}	-20°		mag.	4 ^{h.}	-20°		mag.	4 ^{h.} -5 ^{h.}	-20°		mag.	5 ^{h.}	-20°					
	m s			m s	m s			m s	m s			m s	m s						
9.9	27	52.8	28.9	9.8	8.7	39	29.9	30.2	Cal	8.0	10.0	55	13.7	0.7	9.5	8.5			
8.6		53.3	1.6	Ca	8.8	9.4	40	8.7	56.4	9.1	9.5		22.7	37.7	9.5	8.7			
9.5	28	2.2	0.3		9.1	10.3		11.4	54.6		9.7		30.7	43.7	9.7	8.9			
9.0		2.7	0.0	C		10.2		40.4	25.0		8.6		34.2	56.1	C	9.0			
9.1		22.4	45.0		9.1	10.1		48.4	52.6	9.4	9.8		39.2	47.9	9.8	10.0			
9.9		22.7	14.5		9.6			59.9	15.5	9.1	9.8		44.7	57.1	9.0	10.0			
10.2		25.2	27.8		9.4	41	35.9	51.2	9.5	9.5	9.8		48.7	15.9	9.0	10.0			
10.2		28.7	22.2		9.7			55.1	17.2	9.5	9.4		56.7	53.9	9.0	8.4			
9.0		34.9	5.3	a	9.3	8.7	42	16.6	37.0	C	8.4	10.0		57.7	7.7	9.6	9.6		
9.6	29	4.1	34.6		9.4	8.6		20.6	10.2	C	8.8	4.7	56	0.2	14.0	GStlπ	5.3		
8.4		5.1	31.9		9.1	9.8		45.6	17.2	9.5	9.6		31.7	31.7	9.5	9.6			
9.8		6.7	0.9		9.5	10.0		50.1	11.4	9.6	10.0		57	52.7	36.9	10.0	9.7		
10.2		18.7	15.2		8.2			56.6	4.5	Ca	7.7	9.4		58.2	52.1	9.5	9.3		
7.2		32.7	11.0	GCal	5.5	7.9	43	11.1	38.9	Ca	8.3	9.4		58	0.7	9.7	9.5	9.1	
8.2		55.2	19.2	Cbl	8.6	8.7		57.1	6.6	Ca	8.9	8.7		11.2	39.1	C	8.9	9.4	
10.0		58.4	56.7		9.6	9.4	44	41.1	44.9	9.5	10.0		22.2	42.9	9.6	8.4			
10.3	30	13.7	36.4		9.8			44.6	13.4	9.6	9.4		57.0	54.4	9.4	8.4			
7.9		22.7	16.3	Cbl	8.0	10.2		52.6	32.8		8.9		59	2.5	37.7	9.1	9.6		
8.2		26.2	25.9	Cal	8.4	9.7	45	48.1	28.8	9.4	8.8		9.0	29.8	Cal	8.2	10.0		
9.0		39.7	33.2		9.3	9.7		57.1	42.3	9.4	9.2		10.0	14.7	9.1	10.0			
10.3		53.7	3.8		10.2	46	10.6	3.3			10.0		20.5	29.9	9.4	16	19.2		
8.6	31	30.7	21.4	Cb	8.6	8.6		26.1	37.2	9.0	9.9		22.0	26.7	9.1	9.1	25.7		
10.2		42.7	7.9		9.4	9.6	47	17.6	9.6	9.4	7.8		24.5	25.3	GCal	7.2	10.0		
9.8		1.7	24.0		9.8	9.7		20.1	38.6	9.2	9.4		30.0	45.7	9.3	9.8	32.2		
8.6		6.7	26.9	Ca	8.8	10.1		21.9	50.2	10.0	10.0		34.5	23.5	9.8	9.8	40.0		
6.1		33.5	56.5	Cal	6.8	9.2		22.1	5.4	9.8	9.6		56.5	29.1	9.4	7.5	54.5		
10.2		42.7	58.4		9.5	9.2		22.6	7.5	9.4	8.8		53.2	17.9	a	9.0	2.0		
10.2		43.7	10.8		9.7	9.2		34.9	38.7	9.5	10.0		53.2	15.6	10.0	9.8	13.0		
10.2	33	46.8	22.6		9.7	8.4		43.1	28.8	8.8	8.2		1	10.7	46.0	Ca	8.3	28.5	
9.0		48.3	21.2	a	9.1	6.4		48.8	58.8	GCal	7.0	9.7		11.7	36.3	9.5	10.0	37.0	
9.6	34	12.2	5.1		9.7	9.8		49.9	47.8	9.5	9.5		31.2	4.8	9.7	9.1	40.0		
9.4		13.3	31.2		9.6	8.9	48	17.5	29.5	Ca	9.0	8.1		34.7	16.8	Cal	8.5	28.0	
9.0		16.3	25.0		9.6	9.5		24.0	30.6	9.5	10.0		2	24.9	59.4	9.8	8.2	30.5	
8.6		20.3	8.4	a	9.0	9.6		25.0	11.4		8.1		36.2	17.0	GStlπ	7.3	9.0	50.7	
9.1		22.3	18.7	a	9.3	9.8		27.0	0.4	9.5	10.0		48.2	40.8	9.2	9.2	58.8		
10.1		36.3	28.0		10.0			29.5	37.8	9.9	9.9		3	1.7	33.1	9.2	9.2	42.5	
9.8		43.3	42.3		9.6	9.9		32.0	45.0	9.8	10.0		6.7	48.9	9.2	9.2	22.8	26.0	
10.1		43.3	56.1		9.4	49	10.5	16.8		9.4	9.9		32.7	28.9	9.2	9.2	32.8	45.3	
10.3		45.8	45.0		8.2			24.0	35.5	Cal	8.4	10.0		33.2	0.2	7.6	7.6	37.3	
8.9		54.8	44.4	Ca	8.8	10.0	50	12.3	31.6		8.9		41.7	19.8	a	9.0	9.4	8.8	
10.2	35	1.3	0.8		9.4			51.3	12.8	9.6	10.0		43.2	12.6	10.0	10.0	49.5	51.6	
10.2		6.3	39.2		9.8	8.9		53.8	15.0	C	9.0	8.2		46.2	23.2	Ca	8.5	52.7	
9.7		16.8	40.6		9.8	9.4	51	3.8	4.0	C	9.5	9.4		59.3	37.2	9.8	9.8	54.7	
9.4		46.3	6.0		9.4	9.4		3.8	30.4		10.0		4	28.3	37.6	9.7	8.8	1.9	
9.2	36	16.3	20.9		8.8	8.9		17.0	40.1	Ca	8.8	10.0		5	2.3	48.1	9.8	9.4	58.4
9.8		1.3	16.4		9.7	9.3		17.3	19.8	9.4	9.0		2.8	15.1	Ca	8.5	4.1	30.0	
10.2		3.8	8.0		9.8	10.0		22.2	12.6	9.3	9.3		4.3	28.1	9.3	9.0	53.6	51.6	
8.9		12.3	40.4		9.3	10.0		49.5	16.1	8.8	8.8		13.3	28.7	9.3	9.6	56.1	0.1	
9.8		20.3	1.2		9.4	8.9		56.8	58.7	9.3	6.9		21.8	54.4	C	7.3	9.8	0.1	
9.6		23.3	22.6	a	9.0	9.7		57.0	42.0	9.5	10.0		48.8	21.9	10.0	10.0	23	16.4	
9.8		25.9	42.6		9.4	9.4	52	4.0	28.7	9.5	10.0		6	7.3	26.8	10.0	5.8	46.8	
8.6		26.4	1.6	a	9.0	9.8		8.5	0.5	10.0	8.9		12.8	19.0	9.0	9.4	25	46.4	
9.2	38	2.9	55.8		9.3	8.8		39.5	22.7	Ca	8.8	9.0		29.3	17.1	9.5	9.1	26	5.9
8.9		12.4	16.0		9.0	10.0		4.0	14.2		9.5	9.0		45.8	47.6	9.2	9.4	35.9	17.7
9.7		14.9	6.1		9.5			18.0	43.9	9.3	10.0		59.3	5.9	9.8	9.8	27	0.9	
8.2		15.4	58.0	Ca	8.8	8.7		21.0	44.3	C	8.6	9.8		7	0.3	9.5	9.3	9.8	1.3
10.0		16.4	54.2		9.6	9.8		38.5	31.0		9.6	9.4		11.5	27.3	9.6	9.0	5.6	11.9
7.6		21.9	35.2	Cal	7.5	8.6		46.5	50.5	C	8.8	9.4		21.0	53.9	9.4	9.6	16.9	57.8
10.3		41.9	41.6		9.4			55	6.5	9.3	10.0		24.5	23.1	9.2	9.2	17.3	26.7	
8.2	39	19.9	14.8	Ca	8.3	10.0		13.5	3.9	9.3	8.5		30.5	43.8	C	8.5	9.4	25.9	25.1
25pr.	+1	5.1	+3.1		+1	4.9	+2.6				+1	4.7	+2.1				+1	4.5	+1.5

841-900.				901-960.				961-1020.				1021-1080.				
mag.	5h.	-20°		mag.	5h.	-20°		mag.	5h.	-20°		mag.	5h.	-20°		
m s	m s			m s	m s			m s	m s			m s	m s			
27	38.4	27.9	Ca	9.5	9.0	35 57.3	29.6	9.3	9.4	42 36.6	51.0	9.1	9.4	47 35.8	10.9	9.5
	43.9	30.6		8.8	10.0	36 8.3	6.7	9.8	10.4	45.6	14.2		10.3	57.0	16.5	
28	33.6	43.8	C	8.5	9.2	11.3	13.8	9.3	8.4	46.6	4.1	Cal	8.2	10.4	57.0	21.4
	52.5	7.4		9.2	9.3	51.8	34.2	9.4	9.6	57.1	47.9		9.8	10.4	58.0	19.9
9.4	57.5	49.4		9.5	9.8	52.3	21.5	10.	9.7	59.6	30.0		9.4	8.8	48 5.8	10.4
9.4	29.4	12.8			10.0	54.3	27.6		10.0	43 1.6	45.9			9.7	18.3	43.4
10.2	33.4	12.1		9.5	10.0	59.3	6.6		8.6	14.9	40.5	Ca	8.3	10.4	19.6	51.5
10.3	33.9	42.6		9.5	9.2	37 2.8	11.1	9.4	9.1	15.9	45.4		9.4	9.7	39.2	26.1
9.6	15.4	47.0		9.3	10.4	8.3	3.0		10.0	29.9	51.9		9.2	9.2	41.0	54.8
9.2	17.5	34.3		9.8	8.4	12.3	12.9	Cal	8.5	8.6	8.4	Ca	8.5	9.8	41.4	2.8
10.3																
8.8	24.0	1.8	Cal	8.2	9.2	20.3	35.4	9.3	9.3	46.4	3.0		9.6	9.8	43.0	24.3
10.2	37.5	48.8			9.6	32.8	40.4	9.5	10.0	50.4	37.7		9.7	9.7	43.3	56.2
9.8	41.5	10.1		9.5	8.3	58.0	43.4	8.3	10.4	51.9	41.1		10.5	49 11.9	53.7	9.8
9.4	47.5	6.2		9.5	8.5	58.0	14.8	Cal	8.3	10.0	7.3		9.6	10.0	41.6	31.6
9.6	54.0	43.7			9.0	38 0.0	46.6	Ca	9.1	10.4	43.7		9.9	9.9	43.1	58.8
10.2	54.5	21.3			8.5	13.0	26.4	Ca	9.2	9.7	17.8		9.4	9.2	50.1	16.7
9.3	58.5	18.1		9.9	8.6	15.5	24.8	Ca	8.8	9.7	2.9	21.8	9.4	9.4	59.1	5.1
10.3	31 13.0	0.4		9.9	10.3	16.1	58.9		9.4	7.4	20.1		9.8	10.6	50 7.9	37.3
10.1	21.0	13.8			10.0	16.5	18.0		9.8	9.6	6.5	a	9.1	10.4	14.1	50.0
9.8	34.5	21.3		9.8	9.4	36.5	41.8		9.3	9.2	12.9	46.0	9.2	10.6	19.9	38.8
8.2	35.5	0.3	Cal	8.7	10.3	36.5	17.9		10.4	14.9	0.1			10.6	25.6	12.1
9.7	38.5	32.7			9.7	45.5	50.1		9.3	23.4	53.6		9.2	9.2	27.6	38.9
9.6	50.0	35.0		9.2	9.2	46.0	12.2	9.1	10.2	31.4	32.7		9.8	10.2	38.1	12.5
9.6	55.5	16.5		10.	9.8	58.0	33.7	10.	8.7	33.4	22.8	Cal	8.0	10.5	50.1	0.9
9.6	59.0	18.0		10.	10.3	39 2.0	28.7		9.4	36.4	16.8		9.1	8.4	51 1.6	3.2
10.0	32 2.0	41.0		9.6	7.4	5.5	10.9	GCal	6.5	44.4	8.0	a	9.1	8.8	2.6	21.1
10.4	30.5	24.6			10.2	16.5	23.1		9.4	56.9	51.4		9.5	10.6	4.1	24.5
10.3	39.5	42.6			8.9	19.0	45.1	Wa	9.0	56.9	11.4			9.4	12.6	7.5
10.4	47.5	40.1		10.	9.2	25.0	46.7		9.4	59.4	11.0		10.4	10.4	17.1	14.7
8.4	54.1	41.9	Cal	8.2	9.2	33.5	11.9		9.5	59.9	45.1		9.2	10.4	23.1	38.5
8.4	54.5	14.8	Cal	8.5	9.2	36.0	32.4	Ca	8.7	10.2	45 10.4	26.6		8.6	32.6	41.3
10.2	55.6	3.6			9.7	42.5	30.9		9.5	9.8	15.4	48.5		9.8	32.6	2.2
9.8	33 1.6	5.4		9.8	10.1	49.0	23.1			49.0	22.1		9.8	10.0	37.1	25.5
8.1	20.6	11.2	Cal	8.3	10.2	58.5	48.0		9.8	49.0	42.8		9.5	10.6	55.1	55.1
9.8	24.6	17.6			8.7	58.8	8.5	Ca	8.5	10.2	51.0	25.0		9.2	55.6	27.6
9.8	28.6	46.0		9.5	9.1	40 1.8	15.9	a	9.4	9.0	55.0	19.8	Ca	8.5	10.4	52 13.1
10.2	29.6	7.8			10.3	1.8	56.9			10.3	55.0	15.6		8.9	13.1	48.3
10.1	30.6	13.7			10.1	10.8	25.8			5.6	57.5	53.7	GS π β λ	4.3	8.7	20.6
10.1	34.6	23.9			9.6	22.3	43.0		9.8	10.3	46 10.5	58.9		10.5	21.8	59.6
10.3	38.6	20.4			9.0	32.8	32.3		9.4	10.2	12.0	53.1		9.9	26.1	15.1
9.4	44.1	11.7		9.5	10.0	34.8	46.6		9.7	9.7	15.0	37.3		9.2	40.6	46.0
9.8	44.6	40.5			10.0	42.3	46.4		9.7	8.8	16.0	52.2	Gat π	8.6	42.1	10.8
9.4	54.6	28.8		9.5	9.8	43.8	44.5			10.4	22.5	21.1		9.0	53 2.4	39.5
10.4	54.7	0.0			9.2	47.3	16.6	a	9.5	10.3	24.5	13.1		10.4	4.8	42.3
9.7	3.1	12.1			10.4	52.3	25.3			10.1	35.5	47.2		8.0	5.4	10.6
10.3	6.1	10.0			9.4	53.3	35.1		10.	10.4	36.0	24.3		9.8	6.4	42.1
9.1	7.1	37.7		9.1	10.1	55.0	59.1			10.4	38.5	11.1		8.4	45.9	20.5
10.4	17.1	44.2			10.0	41 11.3	35.5	Ca	8.5	9.6	43.0	12.5	9.1	10.2	55.4	36.2
6.8	23.1	30.2	Cbl	7.0	9.2	12.3	30.8			10.2	47.0	26.2		9.1	55.4	13.9
9.2	59.6	23.9		9.3	10.4	19.3	16.0			10.4	49.5	40.7		8.6	56.9	35.1
10.3	35 1.6	42.9			10.0	22.6	21.7			10.4	50.0	3.0		10.4	54 6.2	0.1
8.2	17.1	21.8	G Cbl	7.7	10.2	26.1	28.8			10.3	54.8	22.5		9.6	14.9	48.4
9.0	20.6	8.5			10.1	27.1	3.9			10.3	55.3	8.4		9.2	16.9	56.3
10.0	28.6	43.1			10.4	51.6	17.8			9.7	58.8	36.2		9.5	10.0	27.4
9.8	29.6	18.7			9.8	42 2.6	59.7			10.2	47 1.3	37.9		9.4	9.8	28.4
9.8	34.3	54.5			10.4	7.6	51.4			8.9	15.5	49.4	a	8.8	10.4	29.9
9.8	37.3	31.1			9.0	9.6	17.0		9.4	10.4	20.3	51.1		9.4	32.4	27.8
9.2	39.8	37.6		9.5	10.4	15.9	0.0			9.6	23.0	12.4		9.2	8.7	40.9
10.1	49.8	53.4		9.7	10.4	21.6	21.5			9.1	32.3	44.0		9.2	9.9	45.7
9.8	55.3	27.2			9.8	32.1	2.7		9.5	10.3	34.0	41.1		10.0	55 15.9	28.9
25pr.	+ 1 4.4	+ 1 0				+ 1 4.4	+ 0.7				+ 1 4.3	+ 0.5				

1896AnCap...3...1G

1081—1140.				1141—1200.				1201—1260.				1261—1320.										
mag.	5 ^h -6 ^h .		-20°	mag.	6 ^h .		-20°	mag.	6 ^h .		-20°	mag.	6 ^h .		-20°							
	m	s		m	s			m	s			m	s									
9.6	55	23.9	34.9	9.4	9.2	3	5.7	20.0	9.4	9.2	7	44.0	20.4	9.1	10.2							
9.6		25.9	31.5	a	9.2	9.2	6.1	7.3	9.5	10.5	47.0	9.5	9.2	14	29.6							
10.5		28.9	25.0		9.6	9.6	8.6	29.1	10.2	10.2	50.0	48.8	9.9	8.2	32.1							
10.6		49.9	30.7		9.8	9.8	8.6	18.4	9.4	10.4	50.7	10.2	9.8	36.6	28.7							
9.6		58.4	25.5	9.4	10.2	10.2	20.1	24.1	9.4	9.4	55.0	37.2	9.4	40.1	58.5							
10.2	56	4.9	33.1		10.2	10.2	21.6	47.6	10.0	9.2	8	0.6	36.9	10.1	42.1							
8.6		8.9	38.8	Cal	8.0	9.2	25.6	51.1	C	9.1	9.4	12.3	55.8	a	9.1	10.2						
9.2		51.9	1.4	Ca	8.4	10.4	33.6	36.9		10.4	13.4	58.8		9.6	44.1	4.4						
10.4		53.9	55.1		9.4	9.4	34.1	12.1	9.3	9.5	26.0	43.8	a	9.4	52.1	38.8						
10.4	57	11.8	39.6		10.6	10.6	39.3	53.4		9.8	29.6	19.2		10.2	15	7.6						
															12.1	17.6						
9.6		12.4	12.7	9.8	10.4	10.4	40.3	6.3	9.4	9.4	34.2	10.7	9.5	8.8	14.1	37.4	Ca	8.8				
10.2		41.4	54.7	10.0	9.5	10.2	40.3	39.8	9.4	10.2	38.7	20.1	9.8	9.8	26.1	3.7						
10.6		41.6	58.6		9.8	9.8	40.8	40.5		9.0	42.4	57.8	a	9.3	9.2	27.1	9.0	9.4				
9.2		43.9	19.1	9.5	10.5	10.5	45.3	16.9	9.4	9.4	43.7	27.1	9.8	9.2	30.6	15.9	9.4					
9.2		51.9	5.4	9.5	9.1	9.1	51.8	39.7	Ca	8.8	9.0	52.6	41.2	9.3	10.1	42.6	35.5					
10.6		56.8	1.1		9.2	9.2	55.3	27.9	9.0	9.4	55.1	55.8	9.8	9.8	45.1	37.4						
10.4	58	0.4	28.9		8.0	8.0	59.3	54.1	C	8.8	10.2	58.1	6.0	9.8	9.8	56.1	38.5					
9.4		0.9	51.3	9.0	10.4	10.4	4	0.3	46.6		10.2	9	3.6	5.4	8.4	57.1	23.5	Ca	8.9			
9.9		0.9	32.4	9.8	9.0	9.0	2.3	38.5	a	9.1	9.2	8.6	17.4	C	9.1	10.2	16	5.6	24.9			
10.6		7.9	36.7	9.6	9.6	9.6	5.8	3.8		9.5	9.4	10.6	9.5	9.4	9.4	11.1	3.0					
9.1		19.5	59.9	9.5	8.8	8.8	8.3	46.5	9.0	10.0	22.6	21.5		8.7	13.1	46.2	Ca	9.1				
9.9		21.9	3.7	9.5	10.6	10.6	14.3	8.8		10.0	31.6	52.7		9.8	26.1	24.2						
10.6		30.9	45.9		8.7	8.7	24.8	28.9	Cal	8.0	7.9	45.6	14.1	G Cbl	6.3	9.6	33.1	52.0	10.0			
10.0		36.9	49.7	9.7	9.9	9.9	32.3	18.7		9.8	10.2	48.6	3.8		9.0	43.1	47.2	Ca	9.1			
8.8		36.9	51.9	9.3	10.0	10.0	33.3	41.4		9.8	52.6	49.4		9.5	9.8	46.1	1.1		9.5			
8.7		45.9	36.9	C	9.0	10.5	33.3	44.5		10.2	10	3.1	22.2		10.0	48.1	2.4					
9.6		46.6	11.7		9.4	9.8	36.3	16.8		9.0	17.1	50.7		9.5	9.8	52.1	34.0					
9.9		11.6	41.3		9.8	9.9	36.8	55.8	9.8	8.4	18.6	9.7	Ca	8.2	10.2	56.1	17.8					
10.2		14.1	48.9		10.6	10.6	40.8	23.1		10.2	22.6	10.9		10.2	10.2	17	6.1	40.6				
9.6		16.1	43.7	9.2	9.8	9.8	50.8	49.5	9.8	9.4	23.1	55.0		9.8	10.0	15.6	11.0					
10.6		19.6	8.1		10.4	10.4	5	4.8	46.6		9.1	27.6	42.0	9.2	10.2	29.3	18.5					
9.1		19.6	53.7	C	9.0	8.7	13.3	21.9	Ca	9.1	10.2	33.6	2.0		10.2	29.6	19.6					
9.9		25.1	6.4		9.2	10.5	13.3	42.8		9.1	34.6	32.1		9.5	10.2	33.1	21.5					
10.2		32.1	27.2		8.2	8.2	19.3	19.7	Cal	8.5	9.5	56.6	32.7		9.5	9.2	45.1	44.7		9.5		
9.2		38.1	57.7		9.0	9.2	20.8	53.1		9.4	9.8	11	10.1	12.9	9.4	9.6	49.1	41.2		9.6		
10.0		1.1	59.7		9.5	8.8	20.8	21.8	Ca		8.8	12.6	9.9	Ca	8.0	10.0	52.1	15.8				
9.2		2.6	16.3	Ca	8.8	9.8	21.6	21.9		9.1	9.5	16.6	47.9		9.5	10.2	55.2	57.5				
10.0		9.1	10.3		9.8	9.4	25.1	39.3		9.1	8.2	16.6	35.9	Ca	8.3	10.0	55.7	29.3				
10.6		12.6	39.8		10.2	10.2	25.6	58.8		10.2	18.1	3.4		9.2	9.2	58.3	1.3			9.2		
9.2		20.6	4.7	9.1	9.6	9.6	28.1	50.9	Ca	9.1	10.3	31.1	53.1		8.5	18	10.7	52.8	Ca	8.3		
10.4		30.1	39.9		8.6	8.6	30.1	46.8		9.0	9.8	33.6	0.7		8.0	12.2	6.9	Cbl	8.1			
8.4		32.1	39.3	C	8.6	9.1	36.1	11.2		9.4	10.1	41.6	52.8	9.8	10.0	15.2	45.0					
10.6		51.6	20.3		10.0	10.0	44.1	16.0		10.0	43.6	17.3			10.0	25.2	15.9					
9.9		55.6	53.4		9.5	9.2	47.1	31.0	Ca	9.0	10.2	44.1	45.8		10.1	26.7	47.6					
10.6	1	18.7	14.3		8.2	8.2	57.1	49.9	Ca	8.7	8.8	56.6	49.5	9.1	8.7	31.7	24.5	Ca	9.1			
10.2		30.1	21.4		10.2	10.2	58.7	59.6		10.2	12	24.1	8.9		10.1	37.2	26.8					
9.4		32.6	39.3	9.3	10.5	10.5	6	2.1	14.7		9.4	32.6	23.6	9.5	10.1	39.2	9.8					
10.2		52.6	21.5		9.4	9.4	9.6	18.7		10.2	36.6	43.4			10.2	42.7	22.4					
10.0		59.6	19.1		9.9	9.9	15.6	6.8	9.7	10.2	42.6	8.6			10.0	51.7	34.9					
10.5	2	4.6	56.5		9.1	9.1	16.1	21.6	9.2	10.2	13	2.6	50.0		10.2	55.7	29.7					
10.0		7.6	26.4		10.5	10.5	24.6	10.3		9.1	9.6	33.1		9.4	9.6	19	4.7	41.0		9.8		
10.5		11.1	53.3		8.6	8.6	27.6	28.3	Ca	9.0	10.0	9.6	10.4		10.0	13.7	50.5		9.6			
9.4		21.1	51.5	C	9.0	10.2	39.5	59.9		9.2	18.6	11.9		9.5	10.2	14.2	19.9					
10.5		28.1	5.9		9.9	9.9	41.1	3.7	9.7	9.2	22.1	30.1		9.3	10.2	15.7	14.5					
9.2		31.1	33.1		9.1	9.0	43.6	52.9		9.5	10.2	33.6	7.5		9.0	25.7	20.1			9.2		
10.6		34.6	31.3		10.6	10.6	47.6	48.8		6.2	38.1	52.6	G Cbl	6.3	8.4	26.2	34.8	Cbl	8.7			
10.2		45.6	7.3		9.5	10.4	7	17.1	58.8		10.0	41.6	35.8		10.0	30.2	50.1					
10.2		51.1	6.5		9.9	9.9	25.7	7.0	9.5	10.0	53.1	49.4		9.5	10.2	34.2	20.2					
9.4		51.6	34.9	9.5	10.6	10.6	28.4	58.3		9.2	14	0.1	13.6	9.5	9.3	39.2	15.1			9.5		
10.6	3	5.0	1.1		9.8	9.8	29.5	8.4		10.2	12.1	37.3		9.2	9.2	49.2	24.9			9.8		
25pr.	+ 1	4.3	0.0		+ 1	4.3	-0.2			+ 1	4.3	-0.4		+ 1	4.4	-0.6						

1321-1380.				1381-1440.				1441-1500.				1501-1560.							
mag.	6h.	-20°		mag.	6h.	-20°		mag.	6h.	-20°		mag.	6h.	-20°					
m s	m s	m s		m s	m s	m s		m s	m s	m s		m s	m s	m s					
9.4	19 52.7	59.9	9.8	8.3	24 30.5	8.9	Cal	8.3	10.4	28 50.3	56.7	10.4	35 11.5	55.1					
10.4	53.7	32.3		9.8	33.5	35.3		8.6	53.3	2.8	a	8.8	10.3	15.0	52.3	10°			
8.2	20 24.7	54.2	Cbl	7.3	10.2	34.4	41.9		10.2	55.8	19.8	9.6	9.5	17.0	43.1	9.2			
10.2	24.7	11.5		9.2	9.2	40.4	58.9	a	9.5	10.4	56.3	33.4	10.4	24.5	12.2				
10.2	27.7	31.9		9.6	9.6	42.9	45.5		9.8	10.2	4.3	53.9	10.1	37.0	43.7	9.7			
10.1	45.7	19.8		9.3	9.3	51.4	25.9	a	9.4	9.6	4.3	31.2	9.5	8.6	43.8	C			
10.2	46.7	43.5		9.2	9.2	52.4	34.6		9.7	9.4	16.8	20.2	9.5	8.2	7.5	12.0	GCal		
8.8	50.2	31.1		9.1	9.1	52.9	1.4		9.7	9.6	17.8	6.2	9.4	8.4	17.8	27.4	9.0		
10.2	50.2	2.4		9.6	9.6	2.4	33.3		9.5	10.4	23.2	56.4	9.8	9.8	20.8	7.5	9.5		
8.7	21 0.2	6.1	Cal	7.8	8.8	2.4	43.7		9.0	7.7	23.3	27.6	G Cbl	7.0	8.2	32.8	7.7	GCal	
10.1	1.7	3.5		10.0	11.4	34.2			8.9	26.3	41.0		9.0	9.2	37.3	26.8	9.0		
9.4	3.2	18.8		10.0	20.4	22.8			10.4	30.8	45.0		9.2	9.2	41.8	8.4	9.4		
9.2	11.2	18.7		9.5	9.8	30.4	37.0		9.5	40.3	29.9		9.6	9.6	43.3	32.2	9.5		
9.5	11.7	14.6		9.6	10.2	42.4	34.7		9.4	41.8	4.5	a	9.2	9.8	49.8	32.8			
9.8	12.7	35.3		10.2	45.4	32.3			8.0	52.8	17.5	Ca	8.0	8.6	51.8	59.7	Ga		
10.0	15.7	21.5		10.2	51.9	3.4			10.2	55.8	0.9		9.5	8.6	59.8	44.3	9.1		
10.1	18.7	17.1		8.0	59.9	32.4	GCal	8.2	9.0	58.3	41.9		9.1	9.6	37	4.8	41.4	9.8	
9.2	31.5	0.3		9.5	10.0	59.9	54.9		9.4	30	28.3	39.9	9.2	9.0	6.8	38.2	9.2		
9.6	34.0	6.3		9.5	2.4	24.2		9.4	9.4	33.8	9.1		9.5	8.8	9.8	27.3	9.0		
9.0	37.5	8.7	Ca	9.0	9.8	2.4	34.2		9.4	9.2	33.8	23.3	9.5	10.1	10.3	35.7	9.5		
9.6	38.5	9.7		10.0	5.4	56.7			8.7	31	3.3	21.0	a	9.2	9.0	38.8	2.0	Cal	
9.4	40.0	50.2		9.2	9.8	7.4	34.5		9.2	10.3	12.8		9.8	8.6	46.3	19.3	Ca		
9.8	41.5	21.6		8.6	9.4	38.7	Ca	8.7	9.0	11.8	7.6		9.0	9.1	51.8	21.0	a		
10.0	45.0	8.7		9.8	11.4	7.2			10.2	12.3	1.8		9.5	10.3	54.8	46.4	10°		
8.2	50.0	20.7	Cbl	7.7	9.0	11.4	19.3		9.6	10.4	12.3	56.7		9.2	55.8	54.6	9.4		
9.2	51.5	37.5		9.5	8.7	14.4	31.5	a	9.1	10.2	19.2	32.0		9.8	10.4	38	1.3	2.9	
9.2	1.5	7.2		9.5	8.6	17.4	58.7	Ca	8.0	9.0	22.3	45.3		9.2	9.5	3.8	23.5	9.5	
8.9	6.0	51.5	C	8.9	9.8	19.4	13.0		9.7	8.8	24.3	16.9	a	9.2	10.2	15.8	24.8		
8.4	13.5	22.1	Ca	8.9	10.0	21.4	2.7		9.4	9.4	30.3	15.7		9.5	8.8	24.8	36.2	9.3	
8.9	18.0	17.7	Ca	8.7	10.2	22.4	37.3		10.4	30.8	48.1		9.1	9.1	32.8	15.5	9.1		
9.3	21.5	48.6		10°	10.2	24.4	14.3		10.3	35.3	38.9		10.4	46.8	0.6				
9.2	21.5	21.7		9.6	9.6	32.4	2.5		9.1	40.3	23.8		9.2	10.0	50.3	11.6			
9.2	23.0	35.4		9.6	10.2	34.9	19.8		8.8	48.3	27.5	a	9.1	9.6	55.8	53.6	9.4		
10.1	28.5	56.5		9.8	9.8	35.9	19.0		9.0	53.6	57.1		9.2	10.3	55.8	1.9			
9.6	28.5	58.7		8.8	8.8	37.4	11.8	a	9.0	9.5	56.3	54.2		9.5	10.0	56.3	8.8		
9.8	31.0	47.7		9.8	10.0	37.4	36.8		9.2	9.2	58.0	20.4	a	9.0	8.8	57.3	38.4	9.3	
10.2	32.0	58.4		9.2	9.2	37.6	58.6	a	9.0	8.9	32	2.0	28.8	a	9.2	9.4	39	1.8	26.4
9.8	32.5	46.6		9.4	9.4	38.9	21.5		9.5	10.4	13.2	57.7		9.8	9.8	5.3	29.1		
9.8	34.0	48.7		9.2	9.2	44.9	31.8	a	9.4	10.2	26.0	7.4		9.8	9.4	15.1	59.0	9.4	
10.0	41.0	15.1		9.8	9.3	45.9	27.3		9.5	9.4	27.5	10.1		9.6	8.6	16.3	17.1	a	
10.0	43.0	25.9		10.2	10.2	46.4	44.3		9.8	10.0	32.0	59.1		9.5	9.4	19.8	2.3		
10.2	55.5	36.1		10.2	52.9	46.3			10.4	37.0	24.5		9.8	8.8	20.3	19.4	Ca		
9.4	56.5	49.1	a	9.9	9.2	27	2.9	42.0	9.5	9.2	56.0	21.0		9.4	10.4	22.8	26.6	9.9	
9.8	0.0	58.1		7.5	11.8	55.9	Cbl	7.2	10.4	33	17.7	59.2		9.9	10.4	24.3	25.2		
9.0	0.5	1.7		9.3	10.0	14.3	15.7		10.3	33.5	12.3		9.8	10.1	25.1	45.8			
10.1	15.5	13.3		9.6	9.6	27.3	58.3		9.7	9.2	42.0	24.6		9.2	10.3	26.6	21.5		
8.6	16.0	7.1	Ca	8.3	10.2	35.3	13.5		9.8	9.8	42.5	40.3		9.8	10.1	27.6	40.0		
10.2	19.0	24.3		9.2	9.2	36.8	15.6		9.6	10.2	49.0	42.5		10.0	10.0	31.6	38.3		
9.2	21.0	4.9		9.3	10.2	45.3	53.7		9.6	9.6	53.0	30.3		9.5	9.6	33.6	18.1		
9.6	22.0	8.0		10.2	10.2	57.3	57.5		8.7	8.7	53.2	59.9		9.2	9.8	43.1	32.9	9.7	
10.2	23.5	8.2		10.2	59.1	5.9		9.7	10.4	55.5	17.5		10.0	43.1	42.4				
9.8	33.5	32.5		9.1	28	0.6	3.4		9.6	9.1	34	0.0	10.2	9.3	9.4	43.1	39.8	9.8	
10.2	45.5	4.8		9.8	8.0	2.0	22.7		10.4	8.5	7.0		10.4	44.6	10.0				
10.2	46.5	32.1		8.0	8.0	5.8	49.7	GCal	6.6	10.4	10.0	12.9		9.6	9.6	45.6	45.8		
9.3	52.5	58.7		9.5	8.0	10.6	2.7	Cal	8.1	9.0	11.5	31.9		9.0	9.6	45.6	46.0	9.7	
10.2	57.5	32.2		8.6	8.6	14.8	54.0	Ca	8.7	9.4	18.0	38.6		8.6	8.6	46.1	20.8	a	
9.8	59.0	12.9		9.4	10.2	30.8	54.4		9.4	9.4	26.0	34.4	a	9.1	10.2	50.1	35.6		
9.6	19.0	16.9		9.5	9.3	32.4	15.1		9.5	10.0	29.0	9.2		9.5	9.3	53.1	49.9	9.7	
9.8	20.0	43.7		10.2	10.2	38.3	55.2		9.6	9.6	38.5	44.3		9.4	9.3	55.1	39.9	9.8	
10.1	27.5	50.7		9.4	9.4	38.3	51.8		9.0	35	4.5	56.7	Ca	8.5	10.4	55.1	59.2		
25pr.	+1 4.4	-0.8			+1 4.4	-0.9				+1 4.4	-1.2			+1 4.5	-1.4				

1561-1620.			1621-1680.			1681-1740.			1741-1800.		
mag.	6h.	-20°	mag.	6h.	-20°	mag.	6h.	-20°	mag.	6h.	-20°
10.0	39 55.6	32.0	10.3	40 59.4	47.6	10.3	43 50.7	31.6	10.4	48 43.2	3.9
9.3	55.6	25.9	10.0	59.9	33.9	10.1	44 1.7	47.2	10.4	50.2	19.8
8.9	57.1	23.2	9.5	10.2	33.0	9.2	3.2	11.2	9.5	58.2	18.2
8.6	40 1.6	17.9	9.1	8.6	1.4	10.4	12.2	1.0	10.4	58.2	54.3
9.6	2.6	32.7	10.1	2.4	28.9	9.8	12.2	1.3	9.5	49 1.2	32.1
8.0	2.6	50.4	8.9	8.6	2.4	9.3	25.2	1.1	8.8	9.9	1.2
9.8	3.1	23.9	10.1	2.4	47.9	9.5	30.7	19.2	9.0	9.6	2.2
9.6	4.1	24.5	9.6	4.4	49.0	10.1	31.2	26.2	10.2	8.2	12.5
10.4	5.6	47.8	10.3	4.9	42.1	10.2	31.2	26.0	9.9	9.2	17.7
8.1	6.1	42.7	8.6	9.4	4.9	8.8	31.7	57.1	8.8	9.7	17.2
10.3	6.6	47.1	8.6	11.3	40.7	8.2	10.4	32.2	9.5	9.5	19.2
9.8	9.1	38.6	9.2	11.8	26.8	9.0	9.8	33.2	9.5	10.3	30.7
10.3	9.6	46.6	9.2	12.3	26.7	10.3	36.2	24.1	8.9	8.8	37.7
9.2	10.1	28.0	8.8	12.3	34.7	9.3	9.8	42.2	9.0	9.0	38.2
8.4	12.1	5.2	8.8	17.8	33.8	10.4	49.2	57.6	9.0	9.0	39.2
8.4	12.6	35.5	9.3	18.3	31.8	10.4	7.2	54.7	6.2	9.0	39.2
8.4	12.6	29.5	9.2	19.8	30.2	8.9	8.2	13.0	9.0	9.0	41.2
8.4	12.6	33.1	8.8	19.8	22.6	10.2	9.2	51.3	9.3	9.3	49.2
9.6	12.6	51.6	9.9	21.3	2.6	10.4	12.7	50.5	9.8	10.0	53.4
9.4	13.1	16.8	9.8	21.3	46.8	10.4	14.2	51.2	9.6	9.6	57.2
9.6	15.6	33.5	9.6	24.3	4.9	8.6	20.9	47.6	9.0	10.4	50 2.2
8.6	15.6	41.2	9.0	25.3	31.5	9.8	7.6	41.5	GCbl	7.6	10.2
8.6	15.6	23.0	9.2	28.3	39.8	9.8	7.2	30.9	GCbl	7.5	10.4
10.0	17.6	39.8	9.6	28.3	36.3	10.4	40.4	2.2	10.3	10.3	12.2
8.6	18.1	33.0	8.3	31.3	48.5	9.3	54.9	49.0	9.7	9.5	13.2
9.4	20.1	10.5	9.4	31.6	0.7	9.4	10.1	55.1	10.2	10.2	13.2
8.1	20.1	33.8	9.0	33.8	31.0	9.8	10.1	55.4	9.6	10.2	19.2
8.5	21.4	43.3	7.8	36.3	35.1	9.0	9.0	56.4	9.5	10.2	26.2
9.0	21.4	30.0	9.4	40.3	44.8	10.0	59.4	17.2	9.5	10.2	31.2
9.8	21.4	23.0	8.5	40.3	32.5	8.4	46 8.0	7.5	9.4	10.3	33.7
8.8	22.4	56.0	8.4	40.8	52.8	9.8	14.9	59.6	9.5	10.0	41.7
9.8	25.4	39.1	9.8	41.8	11.8	9.5	18.9	59.1	9.4	10.3	46.7
10.0	27.4	42.5	8.7	44.5	58.1	10.4	24.9	34.4	9.4	9.4	47.2
8.2	27.4	43.0	8.9	47.3	51.9	10.3	26.0	38.1	9.6	9.6	53.2
10.0	28.9	14.7	9.2	50.8	21.1	9.6	29.9	53.6	9.8	10.0	53.2
9.2	30.4	33.7	9.3	52.3	11.4	9.1	10.1	48.9	10.0	8.9	53.7
9.1	31.4	33.5	9.3	54.8	51.9	10.2	49.4	19.3	9.1	9.1	55.7
8.7	32.4	35.3	8.8	58.3	10.0	8.8	10.3	56.9	9.4	9.4	56.7
8.3	35.4	38.7	9.6	42 2.3	32.7	10.1	57.4	36.4	9.5	10.3	51 3.7
10.0	37.4	31.0	9.8	42 2.3	42.8	9.8	47 1.4	10.8	9.5	9.6	5.7
9.3	40.4	36.6	9.8	8.8	43.1	9.3	10.9	41.0	8.8	10.0	16.7
8.3	41.4	35.4	9.5	8.6	11.3	10.1	14.0	14.3	9.5	9.5	20.2
9.8	42.4	37.2	9.8	11.3	27.4	9.8	20.9	17.7	10.0	10.0	28.2
8.6	42.4	39.2	9.7	17.3	45.6	10.1	27.0	40.2	9.1	9.1	29.2
8.6	42.4	28.6	8.3	23.8	12.6	9.1	37.5	23.3	9.8	7.8	33.0
8.8	43.4	34.5	9.8	44.8	27.7	9.4	40.7	8.2	9.5	9.5	33.2
9.5	43.4	32.1	9.4	54.3	6.0	10.2	42.5	25.3	9.5	9.5	39.2
10.3	45.4	30.7	10.1	55.3	42.8	10.4	43.2	44.7	9.3	9.3	42.2
7.9	45.4	37.4	9.4	56.0	58.8	9.4	10.4	55.9	9.4	9.4	51.7
9.2	46.4	35.5	10.0	43 5.2	45.0	5.0	48 8.8	4.4	10.2	10.2	54.2
10.0	47.4	27.5	10.1	10.2	45.0	10.4	10.2	51.9	10.4	10.4	55.7
10.2	47.4	38.0	10.2	12.7	27.6	10.2	11.2	51.0	10.4	10.4	56.2
8.9	49.4	40.9	8.8	15.2	54.7	9.3	11.8	40.9	9.2	52 1.2	17.2
10.3	50.4	23.8	9.4	16.2	36.2	9.8	12.2	20.4	9.2	9.4	2.2
9.1	50.9	46.3	9.4	20.7	58.9	9.1	32.2	17.1	9.5	10.0	3.2
10.1	51.9	20.5	9.0	25.2	15.9	9.3	33.5	17.4	9.2	9.2	9.2
8.2	52.4	40.3	8.8	26.7	17.2	9.0	34.2	41.7	8.5	9.4	12.2
8.3	53.4	37.6	9.0	29.7	43.0	10.0	36.0	44.4	9.4	9.4	16.2
9.3	55.4	34.5	10.0	41.2	31.4	9.1	36.2	40.0	9.7	10.4	27.7
9.6	59.4	43.4	10.0	48.2	1.5	9.8	43.2	1.8	9.4	9.4	30.2
25pr.	+1 4.5	-1.5									
				+1 4.5	-1.5						
							+1 4.6	-1.7			
										+1 4.6	-1.8

1801-1860.				1861-1920.				1921-1980.				1981-2040.						
mag.	6h.	-20°		mag.	6h.	-20°		mag.	6h.-7h.	-20°		mag.	7h.	-20°				
	m	s	'		m	s	'		m	s	'		m	s	'			
10.3	52	30.2	35.5	9.6	56	8.1	19.3	10.2	59	42.1	26.5	8.6	2	58.1	39.7			
10.0		31.2	20.5	10.4		8.1	43.7	8.7		43.1	32.0	Ca	8.5	9.8	3	6.1	30.5	
8.8		39.2	48.1	9.2	9.8		59.9	9.6		44.6	55.5		10.2		6.9	57.5		
10.0		39.7	59.4		10.3	12.1	7.0	9.2		53.1	28.1		9.4		12.1	5.9	9.6	
9.6		49.7	25.0	9.5	10.3	13.1	10.0	9.9		54.1	3.5		9.7		12.2	12.7		
9.6		50.2	36.7	9.5	10.4	13.2	20.0	10.4		56.6	27.7				13.7	54.5	9.5	
9.6		53.2	52.0		9.0	18.1	19.5	10.2		59.6	47.9		10.2		17.7	52.5		
9.9		53.7	4.5	9.4	9.4	18.1	12.1	10.4		0	1.1	45.5	9.2		19.2	46.1	9.0	
9.7		57.2	1.3	9.7	9.7	19.1	54.1	9.8	8.8	1.6	13.2		10.4		25.2	28.6		
10.2		57.2	24.4	9.9	9.9	20.1	6.0	9.8	10.0	6.1	46.5		10.0		27.7	57.9		
9.7		57.7	4.2	10.2		22.1	9.4	9.8		7.1	44.1		9.8	10.3	29.1	50.3		
9.6		59.2	56.5	9.6	9.2	22.1	27.3	9.8	10.2	12.1	35.9			9.4	30.2	17.9	9.1	
8.4		59.2	21.7	Ca	8.8	9.2	46.6	9.0	8.2	18.1	36.2	Ca	8.7	9.4	30.2	10.5	9.7	
9.6	53	2.5	58.5	9.9	10.4	27.1	23.6	10.0	9.5	22.1	45.0		9.5	10.0	31.2	11.5		
10.0		3.2	46.7		9.6	33.6	40.3	9.5	10.3	22.6	49.0			9.4	32.7	0.0	C	
10.2		6.2	9.0		10.4	36.1	26.3		10.3	23.6	24.5			9.8	36.2	44.1		
9.2		9.2	52.4	9.7	10.2	42.1	21.5		9.9	25.6	50.0		10.0	10.4	44.6	3.5		
10.2		11.1	44.7	9.7	9.4	51.1	9.0	9.5	9.3	30.1	14.1		10.4		51.7	22.9		
8.8		21.1	26.8	Cal	8.3	9.0	29.4	9.2	9.8	31.6	25.5		9.8		52.2	27.5	9.8	
10.4		22.1	44.8		8.6	15.1	55.4	9.0	9.8	37.6	56.7		9.8	8.6	56.2	38.8	a	
10.4		26.1	16.4		9.0	15.1	48.3	9.2	10.4	39.6	23.1			9.4	57.2	49.9	9.7	
9.4		26.1	19.1		8.7	25.1	8.7	a	9.2	40.6	30.9			10.4	59.2	51.3		
10.4		41.1	9.9		10.4	32.1	21.3		9.9	43.1	32.2			10.4	4	5.7	44.3	
9.3		42.1	30.1	9.4	9.4	36.1	50.4	9.5	10.4	44.6	58.5			10.3	17.7	20.3		
9.9		42.1	48.7	10.0	8.5	41.6	34.3	Cbl	8.7	46.1	29.9			9.5	18.2	18.8	9.8	
10.0		42.6	25.7		10.2	44.1	8.7		10.3	53.1	52.5			9.2	22.2	27.1	Ca	
8.0		44.1	37.4	Cal	8.5	49.1	2.8		9.1	55.6	49.4	a	8.9	10.2	27.2	7.6		
9.4		45.6	28.6		9.5	50.1	39.9		9.6	56.1	5.7			10.3	27.2	13.1		
9.5		46.6	25.3		9.6	54.1	45.7	10.0	10.3	56.6	7.7			9.9	28.2	12.5	9.6	
9.2		57.9	58.8	9.3	9.8	57.1	29.0	Ca	9.1	9.9	47.3			8.8	31.2	29.1	Ca	
10.2	54	11.1	44.9		10.2	58	0.1	12.0	9.6	17.6	30.9		9.8	10.4	36.2	54.5		
9.8		13.1	39.1		10.0		3.1	42.8	9.7	31.1	14.1		9.5	10.2	36.2	58.9	10.0	
9.4		16.1	8.3	9.5	9.4	12.1	54.1		9.1	33.6	4.8			9.4	40.2	21.2	9.5	
9.2		16.1	37.3	a	9.1	8.8	12.1	56.8	9.1	40.6	48.7		9.8	9.9	42.2	35.5		
9.9		20.1	42.2		9.5	9.4	14.1	34.5	9.4	42.1	6.6		9.5	9.6	49.2	56.8	9.4	
9.7		23.1	23.4		9.8	10.3	14.6	4.9		42.1	27.7			10.0	5	3.7	37.7	
10.3		24.8	1.5		10.0		17.5	1.0		43.1	12.1	C	9.2	10.4	3.7	26.0		
9.0		42.1	26.4		9.0	9.4	18.1	29.4	9.5	48.6	40.3		10.0	8.1	4.2	4.3	Cbl	
9.4		55.9	57.7		9.4	10.2	18.6	43.7	10.4	49.9	56.9			9.0	28.2	8.0	9.3	
9.6		59.1	16.5	9.5	8.8	20.1	14.2	Ca	9.0	52.1	21.2			10.4	30.7	39.0		
10.2	55	3.1	46.9		10.2	26.1	54.3		8.9	52.6	5.7	C	8.4	10.2	32.2	54.9	9.7	
9.3		3.1	49.0		10.4	28.6	57.4		10.0	52.6	36.2		10.0	10.0	37.2	28.5		
10.3		3.6	23.9		9.5	31.1	1.8		9.7	57.1	37.2		10.0	8.8	39.2	5.0	Ca	
7.2		12.1	27.9	GCal	7.5	31.6	30.9	a	9.1	58.6	42.9		9.5	10.2	41.7	3.9	9.6	
10.0		12.1	36.3		10.4	34.0	59.2		9.4	2	0.6	23.3	9.8	10.4	46.2	41.2		
8.5		18.1	30.1	Cal	8.2	36.1	48.1		9.6	1.6	35.1			9.7	53.2	4.3	9.9	
10.2		20.6	9.1		9.9	41.1	21.0		9.4	3.1	41.7		9.4	10.2	53.7	3.7		
10.4		22.1	41.2		10.0	41.1	2.5		9.9	6.1	34.3		9.4	9.7	55.7	47.8	10.0	
10.3		23.1	19.0		10.4	58.4	59.8		10.2	7.1	33.9			10.4	59.2	3.6		
9.2		25.1	35.9	9.1	10.2	59	2.9	1.3	9.8	8.1	46.6			9.6	59.2	28.3	9.9	
9.8		27.9	58.3	9.1	10.2	5.1	57.2		9.8	10.1	41.9		9.8	9.5	6	2.2	34.9	
9.2		38.1	14.2	9.4	10.4	11.1	43.1		9.4	11.1	47.7		9.4	10.3	2.2	39.4		
10.0		44.1	0.0		9.8	12.1	27.0		10.0	19.6	12.3			9.8	2.7	29.4		
10.3		46.1	37.9		9.8	16.1	20.0		9.7	26.1	16.2			9.3	8.4	0.6	a	
10.0		51.1	41.1	Ca	9.0	29.6	20.3		9.5	30.1	33.7		10.0	10.3	17.2	51.3		
8.5		51.6	23.7		8.6	31.1	38.7	Cbl	7.3	38.6	9.9		9.5	6.4	17.7	40.6	Gcbl	
9.6		55.1	18.0		10.2	33.1	27.8		9.2	42.6	20.9		9.3	10.4	27.2	58.5	9.8	
10.2		59.6	0.8		8.6	33.1	52.3		8.8	47.1	33.0		9.1	9.2	30.0	0.4	9.3	
10.3	56	4.1	40.7		9.0	37.1	37.8		9.5	52.6	7.9			10.3	31.2	26.8		
9.2		6.1	23.2	9.5	8.4	40.6	1.1	C	7.5	53.6	56.3			9.9	33.2	11.0	9.7	
25Pr.	+ 1	4.6	-2.0		+ 1	4.7	-2.1		+ 1	4.7	-2.2		+ 1	4.8	-2.3			

1896ArcCap...3....1G

2041-2100.			2101-2160.			2161-2220.			2221-2280.			
mag.	7h.	-20°	mag.	7h.	-20°	mag.	7h.	-20°	mag.	7h.	-20°	
m s	m s	m s	m s	m s	m s	m s	m s	m s	m s	m s	m s	
10.0	6 37.7	36.3	10.3	9 2.7	52.5	10.2	11 38.8	33.6	10.2	14 27.7	39.8	
10.4	37.7	14.1	8.8	3.2	53.6 a	10.1	40.6	57.0	9.8	29.0	53.1	
10.4	38.7	26.6	9.5	6.2	55.0	8.9	8.6	41.8	58.0 Cbl	9.7	29.5	8.5
8.9	40.2	11.8	9.0	8.7	56.0	9.3	9.6	41.8	9.8	9.4	31.0	29.3
9.8	40.2	45.7	8.9	9.2	47.8	9.4	10.0	43.3	25.5	10.4	31.0	52.9
10.3	40.2	26.0	9.1	17.2	51.7 a	8.9	9.8	45.8	19.1	9.8	32.5	21.4
10.4	41.2	56.4	10.0	22.5	57.8	9.4	9.4	51.3	20.3	9.5	40.0	28.4 Cal
9.4	42.2	26.5	8.9	23.7	13.8	9.1	8.6	1.3	14.3 C	8.7	41.5	15.1
10.2	46.2	15.9	10.0	24.7	26.1	8.7	8.7	1.8	58.5 Cal	8.3	41.5	30.7 a
10.3	47.7	46.8	9.8	25.0	48.6 Ca	8.2	9.2	5.3	50.6	9.4	42.0	22.5
10.4	49.7	10.2	9.9	26.0	37.8	9.5	10.2	5.3	8.5	10.4	42.3	1.6
9.8	53.2	10.1	10.2	26.5	23.8	9.5	9.5	6.8	0.9	9.8	42.5	31.6
10.3	55.2	15.7	9.7	29.5	59.8	9.8	9.8	9.2	4.6	9.8	42.5	0.4
9.1	57.2	24.0 a	9.0	31.5	14.1	9.2	9.2	12.7	13.4	9.4	42.5	54.9
9.2	59.2	11.8	9.5	33.0	24.2	9.5	10.3	14.2	34.4	10.4	43.5	31.2
9.4	7 3.2	7.1	9.4	38.0	38.5	10.4	10.4	16.5	0.2	9.5	47.5	54.6
9.6	3.2	8.0	9.9	39.5	48.0	9.1	9.1	16.7	39.8 Ca	8.7	50.0	28.9
10.3	3.2	32.8	8.9	47.0	8.1	9.1	10.4	20.2	42.0	10.3	52.0	24.2
8.8	4.2	26.2 a	9.0	9.3	55.0	9.8	9.7	21.7	31.5	10.0	55.5	31.8
8.8	7.2	51.4	9.0	9.2	56.5	8.9	10.3	23.2	56.6	9.8	58.9	8.8
10.0	14.0	6.3	9.6	56.5	33.8	10.0	10.3	25.2	26.1	9.4	59.9	48.6
9.0	14.0	38.6 C	8.8	9.6	59.0	9.8	9.6	31.2	10.9	10.0	9.4	2.9
10.4	22.2	1.4	9.4	10.0	15.5	10.0	9.9	31.7	46.6	9.2	6.4	33.4
10.0	26.2	11.4	9.8	17.5	17.6	10.1	10.1	33.7	39.0	8.9	9.9	15.7
10.2	27.0	31.5	9.8	19.5	0.8	9.6	9.6	34.7	15.5	9.4	8.9	11.9
9.1	30.0	48.2	9.2	20.5	33.6	9.8	9.8	35.2	18.7	10.0	15.4	34.9
9.9	37.0	7.2	9.7	22.0	51.8	9.8	10.3	36.2	57.3	9.6	20.4	32.3
8.2	45.0	22.2 Ca	8.2	10.4	22.0	10.0	10.0	36.2	44.7	9.6	21.9	52.8
9.4	47.0	39.7	9.3	10.2	23.5	9.3	9.3	38.2	42.2	9.7	23.9	58.1
9.8	49.0	6.9	9.5	26.0	7.9	9.2	9.2	45.7	40.5	9.5	25.9	45.0
9.0	52.0	1.4 a	9.3	9.2	26.5	9.8	9.9	47.7	23.5	9.4	27.4	33.0
9.5	55.0	7.2	10.3	31.5	9.8	10.2	10.2	48.2	21.7	7.8	29.4	25.0 Cal
9.5	59.4	46.9	9.7	10.3	32.5	10.1	10.1	52.2	56.0	10.4	32.4	54.8
10.4	0.7	57.4	9.2	32.5	21.1 Ca	9.1	9.3	52.7	52.4 a	9.2	36.9	43.8
10.2	3.2	41.9	9.2	35.0	8.3	9.2	9.8	53.2	27.2	9.7	38.9	33.7
9.4	3.5	31.3 Ca	9.0	35.0	30.1	9.9	9.9	54.2	8.8	10.2	40.4	12.0
9.8	4.0	7.6	9.2	35.2	59.4	9.5	9.4	55.7	57.1 a	9.1	42.9	26.0
8.8	5.0	23.2 Ca	10.2	37.5	39.4	8.9	8.9	55.7	39.4 Ca	8.9	42.9	25.8
8.6	6.0	55.0 Ca	8.4	44.0	29.8	9.0	9.0	57.7	22.5 Ca	8.7	43.3	1.1
9.1	6.0	47.6	9.5	10.3	48.5	10.2	10.2	13 2.7	30.5	8.7	45.4	29.7
10.1	9.4	8.0	8.9	50.0	11.1 Ca	9.2	9.8	6.2	59.0	10.2	48.4	30.3
10.4	9.7	20.3	9.6	50.9	57.8 a	9.2	9.7	6.2	21.9	9.1	48.9	4.7
9.2	13.9	23.1	9.7	51.0	0.0	9.4	10.4	9.2	55.2	9.3	48.9	54.7
10.4	14.0	44.8	10.1	51.8	45.4	9.2	9.2	9.7	14.2	8.8	50.4	32.2 a
9.8	16.4	14.3	10.1	52.8	12.1	10.3	10.3	12.2	46.4	10.1	52.9	44.7
9.0	21.5	14.0	9.3	53.3	23.9	10.0	10.0	12.2	5.2	10.0	56.9	51.1
10.4	21.7	31.8	10.0	54.8	55.8	9.8	9.8	15.2	8.9	9.7	5.9	51.6
9.1	23.2	13.2	9.3	9.5	57.6 a	9.2	9.9	16.1	1.2	9.8	5.9	8.3
10.4	27.7	32.3	9.5	9.2	0.9	9.7	10.4	21.0	6.9	10.3	5.9	12.0
10.0	30.0	7.1	9.6	10.3	38.6	9.6	9.6	27.5	41.5	10.0	12.4	12.0
8.8	30.5	56.0 a	9.1	10.0	10.3	9.8	9.8	32.0	48.1	10.3	15.3	24.6
9.7	30.7	9.7	9.4	9.8	11.3	9.8	8.8	41.5	24.4	9.0	16.3	17.7 a
9.0	31.7	19.1	9.0	9.9	16.3	9.7	8.7	44.5	26.1 a	8.9	16.8	32.1
9.5	43.7	21.4	10.0	10.2	17.8	9.4	9.4	50.5	4.0	9.5	18.3	17.6
9.6	49.2	6.2	9.5	18.8	44.0 a	9.3	10.2	51.5	8.4	8.6	19.8	10.7 Cal
9.1	49.7	53.6 a	8.9	10.2	20.8	9.8	10.0	57.5	48.9	10.3	20.8	46.5
10.1	56.2	52.4	9.9	22.8	54.9	9.6	10.3	6.0	24.8	10.3	20.8	39.2
10.4	59.2	20.6	9.8	32.8	59.1	9.6	9.9	8.0	35.7	9.7	21.3	31.0
8.5	59.7	42.2 Ca	8.5	9.7	33.8	9.7	10.1	14.0	42.9	9.3	22.8	2.0
9.8	9 0.3	2.1	9.7	10.0	36.4	10.4	10.4	25.5	59.8	10.3	23.8	11.5
25pr.	+ 1 4.9	-2.4										
			+ 1 4.9	-2.5		+ 1 4.9	-2.6			+ 1 4.9	-2.7	

2281-2340.				2341-2400.				2401-2460.				2461-2520.				
7h.		-20°		7h.		-20°		7h.		-20°		7h.		-20°		
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s	
16	25.3	46.5		18	53.4	37.8		20	29.4	26.7		22	36.0	31.3		
	25.8	15.9			57.4	19.7			30.6	0.7			42.0	57.0	a	
	28.8	23.5		19	1.4	52.1	9.1		31.4	18.4	9.6		49.0	49.1		
	30.8	37.6	9.8		1.4	30.3			37.4	53.6			51.0	30.7		
10.3	32.8	3.7			3.4	24.0			38.9	10.0		10.0	52.0	54.2	9.5	
9.4	34.8	50.8	9.8		4.4	9.2	9.8		41.4	44.1		10.3	55.0	24.3		
10.3	35.3	26.5			5.9	21.3	9.4		43.9	48.3		10.4	59.0	12.4		
9.5	39.3	50.2	9.8	10.2	5.9	5.1		10.1	43.9	45.6		10.4	0.0	4.2		
10.3	40.3	5.8			7.4	42.6	9.5	8.3	45.4	9.2	C	8.2	1.5	8.3		
9.4	41.1	2.9	9.5	9.6	9.4	7.3		10.4	47.4	32.4		10.4	3.0	21.0		
10.1	41.3	17.3		9.5	11.4	17.4		7.5	48.4	39.4	GCal	7.3	6.5	54.5	a	
9.8	41.3	35.6		9.5	12.4	4.7	10.	10.4	52.4	28.5		10.2	8.3	59.3	9.8	
9.2	44.8	2.9	9.5	10.4	12.4	29.3		9.2	52.4	38.8		9.4	8.5	38.3	10.	
10.3	44.8	10.8		10.1	14.4	29.4		10.0	54.9	31.1		10.2	12.5	26.7		
10.1	52.8	44.1		10.2	14.9	8.4		10.4	56.9	54.7		8.6	16.0	23.5	C	
9.5	55.3	33.2	10.	9.4	15.4	32.8	a	9.3	57.4	20.6		9.8	16.5	35.6		
9.3	55.3	18.9	9.1	8.9	17.4	28.0	a	9.3	58.4	28.5		10.3	19.5	30.7		
9.7	55.3	19.6		9.0	19.4	41.6		9.4	59.4	50.1		9.5	20.0	33.2	9.4	
9.7	56.3	58.2		9.0	24.9	41.6		9.4	1.4	38.3	2.1	10.1	22.5	4.5		
8.7	57.3	16.2	Cal	7.8	10.1	26.4	10.1	9.0	2.4	16.8		9.2	23.0	30.2		
10.3	1.3	8.5		9.8	31.9	19.3		9.2	3.9	44.8		9.3	10.1	26.0	40.4	
9.9	2.3	23.9		10.4	32.9	5.5		9.4	6.4	2.9		9.1	10.0	32.0	56.4	
9.0	2.8	36.8		9.2	33.9	21.3		10.3	8.4	16.5		9.9	9.9	32.0	46.1	
10.2	5.8	22.1		10.0	36.4	32.8		10.3	8.9	35.3		9.7	9.7	33.5	3.0	
9.0	11.8	40.4		9.2	36.4	46.5	C	8.7	11.4	14.4		9.5	9.5	34.5	22.5	
9.0	13.3	57.4	C	8.8	37.9	55.0	al	8.5	13.2	48.1		9.0	9.0	37.0	37.0	
9.8	15.4	9.8		9.4	39.4	7.2		9.1	13.7	27.1		9.8	9.8	41.0	26.0	
10.4	15.9	20.0		10.4	39.4	13.0		9.4	16.2	28.2		9.9	9.9	42.0	9.1	
9.7	17.4	55.5		9.4	41.4	46.1		9.4	17.7	14.7		10.0	10.0	48.5	39.1	
9.8	22.4	9.9		7.1	43.9	55.8	GCal	7.3	20.7	21.4		9.4	9.9	51.0	23.2	
9.0	24.4	31.1	a	9.2	45.4	42.0		9.6	21.7	40.1		9.5	9.6	57.0	10.6	
10.3	25.9	10.0		10.2	45.4	24.1		9.5	23.2	27.1		9.4	24	0.5	45.1	
9.8	26.4	2.8		9.4	46.9	34.2		10.1	28.2	45.7		8.9	8.9	2.0	3.2	
8.9	27.4	39.0		9.4	47.9	35.2		10.0	28.7	12.2		10.4	10.4	2.5	22.3	
10.2	30.7	57.5		8.7	47.9	46.8	Ca	10.1	28.7	51.6		9.4	9.4	8.5	34.5	
9.6	31.4	55.6		9.8	49.4	47.3		9.8	30.7	28.7		10.3	10.3	12.5	23.2	
10.0	44.4	37.8		?	50.4	34.6		9.1	34.7	39.1	a	9.4	10.2	19.5	1.7	
9.2	45.4	33.4	a	8.9	50.4	46.2		9.6	39.2	3.3		10.0	10.0	25.0	17.5	
9.4	45.4	37.1		10.	51.4	46.0		9.3	41.2	8.9		10.	10.2	27.8	59.5	
10.4	50.4	7.5		9.5	53.4	25.0	9.8	10.0	44.7	3.3		10.4	10.4	28.8	58.7	
9.8	55.4	14.3		10.2	54.4	45.8		9.1	49.7	22.1		9.5	9.1	30.8	32.3	
9.6	56.4	38.1		9.5	59.4	6.6		9.8	55.2	1.8		9.7	9.8	30.8	17.9	
10.0	58.9	35.7		9.8	20	1.4	20	9.8	55.2	22.7		10.4	10.4	31.8	19.1	
8.9	1.4	26.8	a	8.7	1.4	10.2		9.3	58.7	45.2		9.8	9.8	36.8	23.1	
10.0	10.4	16.0		9.8	2.4	21.4		9.7	59.2	12.2		9.4	9.4	40.3	13.7	
9.4	19.4	33.5		9.2	5.4	5.4		9.5	1.2	10.5		9.8	9.8	40.8	22.7	
9.9	21.4	46.8		9.6	5.4	56.6		9.8	1.2	32.1		9.5	10.4	40.8	32.1	
10.2	21.4	15.2		9.4	10.4	30.4		10.	2.2	31.8	a	9.1	9.7	41.8	12.7	
10.1	21.4	12.8		9.4	10.9	9.8		9.7	5.2	36.9		9.4	9.4	45.8	15.1	
9.8	21.9	4.9		9.8	12.4	47.9		9.8	5.3	25.2		9.6	9.6	50.8	49.4	
10.2	24.4	17.9		10.0	14.4	56.9		10.0	10.2	30.6		9.6	9.6	50.8	40.5	
9.7	26.4	7.9		9.4	16.4	15.9		8.7	10.2	53.7	Cal	7.8	10.3	51.8	11.4	
8.6	28.4	28.0	Ca	8.5	9.5	20.9		10.0	15.2	26.5		9.4	9.4	51.8	28.4	
10.4	34.8	55.1		9.6	21.4	6.0		10.3	17.7	16.6		9.8	9.8	59.3	52.1	
10.2	35.4	6.8		8.6	22.4	42.6	GCal	8.0	19.7	47.8		9.8	25	0.8	30.9	
10.2	41.4	35.0		9.0	22.4	39.1		9.3	20.7	39.2		9.5	8.0	0.8	32.9	
9.5	41.9	18.4		9.8	23.4	25.9		10.4	22.2	37.7		10.1	10.1	1.3	59.8	
9.9	44.9	32.8		10.1	26.2	59.4		8.9	28.2	14.7		9.0	9.8	2.8	17.1	
10.0	49.4	24.0		9.8	10.0	26.4		10.4	30.7	4.3		10.0	10.0	5.8	48.1	
9.6	49.4	35.2		9.0	28.4	38.7		9.3	34.0	17.3		9.8	9.4	13.8	12.8	
25Pr.	+1	5.0	-2.8		+1	5.0	-2.9		+1	5.0	-2.9		+1	5.1	-3.0	

1896AnCap...3....1G

2521-2580.				2581-2640.				2641-2700.				2701-2760.							
mag.	7 ^h	-20°		mag.	7 ^h	-20°		mag.	7 ^h	-20°		mag.	7 ^h	-20°					
	m	s	/	m	s	/		m	s	/		m	s	/					
9.8	25	14.8	3.5	9.2	9.7	27	31.9	39.2	9.4	10.5	29	12.1	49.1	10.3	31	26.1	58.6	9.3	
9.3		20.8	40.9	9.5	10.4		35.0	38.4		9.2		12.6	47.1	9.1	10.2	27.8	59.7		
8.6		22.3	45.0	9.1	10.1		37.5	45.6		10.2		16.2	38.0		9.8	28.1	2.8		
9.6		25.8	14.0		9.3		38.0	27.1	9.3	9.2		18.6	42.8	a	8.7	8.4	28.1	38.6	C
9.4		27.8	41.9	10.	10.4		39.5	56.1		9.2		19.6	32.9		9.3	10.4	28.1	47.9	
10.4		30.8	26.8		9.4		43.5	22.1	9.4	9.6		24.1	15.9		9.4	28.8	58.6		
10.3		31.8	25.7		8.5		43.5	26.1	Cbl	8.7		28.6	35.2		9.9	31.0	54.6		
9.6		40.8	15.3		9.6		45.5	43.2		10.4		31.6	42.7		8.1	31.1	46.5	Ca	
10.2		41.1	15.3	9.4	10.1		46.0	30.4		10.2		33.1	33.4		9.2	31.1	37.5		
10.1		48.3	43.8		9.6		47.5	31.0		9.4		35.1	22.8	9.2	9.8	38.1	15.6		
10.4		49.3	9.3		9.1		50.5	4.5	9.1	9.6		37.1	5.3	9.4	9.1	38.6	18.1		
10.1		51.3	53.9		10.3		51.0	42.3		10.5		39.6	28.0	9.4	9.4	39.1	12.8		
9.2		51.8	28.8	9.4	10.4		53.0	39.1		9.9		43.1	54.7	9.8	9.8	41.6	35.0		
9.4		54.8	55.5	9.8	9.6		54.0	13.2		10.5		46.6	20.4		8.5	44.0	1.1	Ca	
8.8		54.8	58.4	9.0	9.4		55.3	59.9	9.8	10.0		46.6	42.3	9.7	9.8	44.6	56.0		
9.3		56.8	29.1	9.4	10.0		59.1	20.7		8.8		47.1	35.3	9.3	10.5	45.1	28.1		
10.4		59.3	39.2		10.4	28	1.0	20.5		10.5		52.0	1.9		9.9	45.1	10.1	10.	
10.0	26	0.8	43.1	9.6	10.0		1.3	51.6		9.2		52.6	35.9	9.5	10.4	49.6	6.3	10.	
10.0		1.8	3.9		10.2		3.0	38.9		10.1		57.1	15.2		9.5	52.6	19.5	C	
9.4		3.3	2.5	9.8	9.6		4.1	52.2	9.7	10.2		58.0	56.9		10.2	58.6	31.0		
9.7		4.8	37.5	10.	9.1		7.5	28.2	9.4	9.8		58.6	27.6	10.	9.6	59.6	42.0		
9.3		5.8	42.9	9.5	10.4		8.9	56.9		8.5		0.6	13.3	Ca	8.5	9.8	8.1	30.2	
10.3		6.6	53.8		10.1		9.5	45.5		10.4		0.6	50.6		9.8	11.1	29.5		
9.5		8.6	54.3	9.3	10.2		10.5	42.5		9.5		5.6	59.9	9.5	9.9	11.1	16.5	9.8	
9.4		11.6	12.9	9.8	10.0		12.0	11.8	9.7	9.8		5.6	5.6	9.5	9.8	12.1	23.9		
9.6		12.6	22.5		9.4		12.4	45.2	9.8	8.5		8.6	15.3	Ca	8.9	9.8	13.6	3.6	
9.4		14.6	16.1		9.9		13.5	56.8		9.6		9.6	16.5		10.3	13.6	57.0	9.5	
10.4		15.9	50.9		9.9		18.7	14.7		9.2		15.1	8.2	9.3	9.6	16.6	10.6		
9.6		16.6	34.7		10.3		19.6	39.9		10.0		27.6	13.7		9.9	20.6	24.4	9.8	
9.6		16.6	55.3	9.6	9.9		20.7	20.3	9.6	10.0		28.6	30.3		10.4	22.6	32.4		
9.6		20.1	52.9		10.4		21.2	34.5		10.1		31.1	48.3	9.5	10.4	26.1	45.1		
8.0		25.6	40.1	Cbl	8.0	10.0	22.4	27.1		9.4		33.1	24.6	9.8	10.2	28.1	17.6		
9.9		27.6	2.8		10.2		23.7	54.0		9.9		33.6	40.0		10.4	28.6	6.2		
10.3		34.6	17.8		10.5		26.0	45.2		10.4		34.6	33.7		10.4	29.6	31.3		
9.7		35.1	4.9		8.9		27.7	32.6	C	9.2	9.4	36.6	0.1	C	8.9	10.2	30.1	20.7	
9.4		36.9	28.1	9.8	10.5		27.7	18.6		10.4		37.6	24.0	10.	9.6	31.1	34.9		
10.0		37.1	51.9	9.6	9.2		30.7	42.4		9.2		37.6	32.8		9.4	40.1	38.5	9.8	
9.8		38.6	7.3		10.5		34.2	42.5		9.8		39.6	37.7	9.8	10.3	42.6	39.6		
10.1		38.6	51.5		9.8		40.2	26.3	C	9.1	10.3	40.6	21.3		9.4	44.6	27.5	9.4	
8.6		40.6	17.1	Cbl	8.3	9.4	41.5	2.3		9.5	9.1	43.8	57.6	8.8	10.0	45.1	19.3		
10.4		40.6	34.7		10.4		41.6	13.6		9.4		44.1	18.9	9.8	10.2	45.6	43.0		
9.7		48.1	19.1		10.3		41.6	10.4		10.5		44.1	17.0		9.9	50.4	56.4		
10.4		48.6	5.7		9.6		42.6	7.7	9.5	10.5		45.1	21.0		9.8	50.9	35.1		
9.8		1.6	36.5		9.2		43.6	37.0	9.3	10.0		50.1	5.7		9.4	53.4	54.9	9.7	
9.4	27	5.6	45.3	10.	10.4		45.1	32.1		10.1		50.6	19.6		9.9	54.9	41.0	9.8	
9.4		8.6	44.4		10.5		47.1	31.5		9.8		50.6	19.9	10.	9.8	55.2	34.3		
9.4		11.6	29.1	9.9	10.5		47.6	11.0		10.0		52.6	18.1	10.	10.3	56.9	55.7		
10.4		12.6	14.9		10.4		49.1	10.7		10.4		53.1	31.1		9.2	59.4	29.5	9.3	
9.9		12.6	23.3	l	10.5		49.1	16.2		10.5		58.1	24.7		10.5	3.4	34.5		
10.0		12.6	30.9		9.6		50.6	46.2		9.2	10.4	58.6	11.1		10.1	6.9	34.0	9.9	
9.5		16.6	10.2	9.4	10.1		53.1	57.3	10.	9.4	31	0.6	23.6	9.8	10.5	9.2	56.8		
9.8		18.6	24.5		10.4		59.1	13.6	9.8	10.4		2.1	32.8		10.2	9.9	29.2		
10.3		18.6	27.2		10.2		59.1	54.2		10.2		3.6	8.7		9.4	10.9	49.8	9.6	
8.6		20.6	31.6	Cbl	8.6	10.5	29	0.2		10.3		3.6	50.2		9.6	12.9	35.9	9.8	
10.2		20.6	22.3		10.3		0.6	16.5		9.8		4.1	35.3		9.8	13.4	4.3		
9.0		21.1	13.4		8.8		2.1	44.1	a	8.8	10.4	12.6	0.9		8.7	29.4	25.2	8.9	
9.4		21.1	38.7	a	8.6	10.1	3.6	54.7		9.8		13.1	11.2		10.4	29.4	14.0	9.8	
9.1		29.1	14.0		9.3	10.4	4.1	19.3		9.8	10.5	16.6	18.4		10.4	29.9	47.3		
10.4		31.5	17.0		9.9		4.1	8.7		9.5	10.5	25.1	22.2		10.1	31.9	56.2		
10.4		31.6	14.4		9.2		4.6	10.1	C	8.8	10.3	26.1	45.2		10.0	32.4	50.7		
25pr.	+ 1	5.1	- 3.1		+ 1	5.2	- 3.1			+ 1	5.2	- 3.2			+ 1	5.3	- 3.3		

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
7h.		-20°		7h.		-20°		7h.		-20°		7h.		-20°	
m	s	i	mag.	m	s	i	mag.	m	s	i	mag.	m	s	i	mag.
33	36.9	56.1	10.5	36	3.6	0.6	10.5	38	1.7	32.2	10.4	40	26.7	57.7	10.4
	39.4	21.3	10.5		4.2	0.2	9.5		2.2	52.8			28.5	54.8	9.4
	40.4	4.8	8.4		6.4	57.6	bl	8.7	3.2	12.2			28.5	39.0	9.8
	45.4	40.3	10.4		10.2	3.2			3.4	21.4	9.5		28.5	5.1	
	45.9	4.0	10.2		12.0	26.3			3.7	10.5			29.5	13.4	
	46.4	18.4	10.5		13.2	49.1			3.7	11.9	9.7		33.0	7.4	
	46.4	0.2	10.2		13.2	7.6			6.7	36.1			35.5	27.7	
	49.4	21.8	10.1		18.2	21.0			6.7	1.6			39.0	27.3	Cal
	50.4	39.6	10.1		19.2	43.2			7.2	33.2			39.5	30.9	
	53.2	34.5	10.1		19.7	10.4			8.1	59.2	Cbl	8.0	40.5	16.8	
	56.4	55.4	9.8		20.7	55.4	10.		11.2	25.2			42.5	55.2	a
	56.4	21.0	9.4		22.0	21.3			13.2	50.4			42.5	20.7	10.
	58.9	23.1	9.1		23.7	49.6			15.7	32.4	a	9.3	43.5	33.8	9.6
	0.9	15.1	9.5		26.7	38.7			18.2	26.5			44.0	0.3	
	1.4	36.5	10.5		29.7	50.5			19.7	9.9			46.0	30.3	
	6.4	55.3	10.5		32.2	32.7			20.0	6.9			49.5	31.4	
	10.9	55.1	10.		32.7	11.0			20.5	56.1			49.5	48.9	
	11.9	9.0	10.5		35.7	14.5			33.0	47.7			53.5	13.9	9.7
	13.4	55.5	9.9		43.7	47.1			34.5	44.2	Ca	8.6	53.5	21.1	
	22.8	8.0	9.4		47.7	16.4			38.0	33.9			56.5	28.9	9.5
	24.3	7.3	9.6		50.2	35.1			38.5	20.3			58.0	33.7	
	25.0	59.0	9.7		50.7	15.7			41.5	27.1			58.5	44.4	
	26.8	26.9	9.2		53.2	26.6			43.5	38.0	10.		10.2	41	1.5
	26.8	2.4	10.5		53.2	3.5			46.4	0.2	9.4		10.0	6.5	4.2
	32.3	20.9	9.5		57.7	56.2			52.5	18.1			10.1	10.3	9.1
	36.8	31.4	8.8		57.7	1.6			53.0	30.0			10.5	10.5	16.6
	40.8	56.6	9.6		59.2	15.5			54.5	10.3			10.4	12.8	33.1
	42.3	45.7	10.2		0.7	26.4			56.0	25.1			9.4	13.3	5.4
	43.3	28.6	10.1		1.2	40.2			58.5	35.2			10.5	16.8	48.9
	43.8	36.2	10.4		3.8	0.3			59.0	34.4			7.3	18.3	31.5
	45.8	9.7	9.4		5.8	3.8			0.5	30.8			10.3	18.8	45.6
	48.8	34.0	9.9		6.7	56.3			6.0	42.1	a	9.1	9.8	22.3	3.1
	50.3	14.6	10.2		8.2	18.5			6.5	1.5			10.2	23.3	53.8
	52.3	40.0	8.8		10.2	23.9	C		11.0	19.4			10.5	24.8	6.3
	52.8	16.3	9.3		10.7	25.0			13.0	10.0			10.5	26.1	40.1
	52.8	55.3	9.8		11.7	8.6			15.0	52.8			9.9	30.8	23.1
	1.8	44.2	8.8		16.2	36.9			20.5	24.2			9.2	32.8	51.4
	4.8	43.6	9.8		16.7	0.6			23.0	3.9			9.4	37.3	32.0
	5.8	27.5	9.1		19.7	32.8			26.5	45.2	Ca		8.7	37.8	6.6
	6.8	28.2	8.8		20.2	10.3	Ca	8.5	31.0	24.5			10.5	43.3	14.1
	10.8	37.5	9.2		20.7	19.5	a	8.9	32.5	4.9			9.8	49.8	34.9
	11.3	56.4	8.8		22.7	46.6			39.0	52.1			8.8	50.3	25.7
	12.3	53.0	9.8		25.7	17.1			45.5	30.5	C		8.5	51.3	13.4
	13.8	20.8	9.4		28.2	39.2			55.5	52.7			10.5	53.3	47.7
	20.3	40.0	8.2		28.2	47.2			3.0	28.1			9.8	57.8	36.0
	23.8	46.4	10.3		30.4	24.5			4.0	47.2			9.9	59.8	28.9
	28.0	59.7	9.4		30.4	36.0			7.0	25.8			9.1	59.8	28.9
	31.8	14.7	9.2		30.7	52.5			8.0	6.5			9.8	1.3	25.3
	32.0	47.5	9.8		32.9	59.1			12.0	17.1			10.5	2.8	4.4
	32.3	4.4	8.7		33.2	50.6			12.0	24.7			10.3	9.5	0.4
	32.6	58.5	9.5		33.7	38.4			12.0	50.4			9.2	16.3	53.0
	40.2	59.2	10.5		35.7	53.7			12.8	0.9			9.0	21.8	33.7
	40.3	43.1	10.5		37.2	42.8			13.5	5.2			10.5	22.1	16.0
	44.6	57.5	10.4		40.2	24.0			16.5	11.6			10.2	22.5	2.2
	45.7	13.2	9.8		45.7	32.2			16.5	52.7			10.0	33.3	0.0
	47.7	2.6	8.6		46.2	24.2			18.0	44.4			10.3	36.4	58.0
	47.7	4.8	9.0		47.7	32.2			22.0	41.5			10.2	39.1	49.9
	47.7	48.7	10.		49.7	46.8			25.0	3.1			9.9	42.3	20.2
	2.7	25.6	8.7		51.2	55.8			26.0	20.0	Cal	8.5	10.5	43.8	58.8
	3.2	12.4	9.3		38	1.2	33.1	a	26.0	23.3	a	8.5	10.2	46.8	42.1
													9.2	48.3	19.0
25pr.	+ 1 5.4	- 3.4		+ 1 5.4	- 3.4			+ 1 5.5	- 3.5			+ 1 5.5	- 3.6		

1896AnCap...3...1G

3001-3060.				3061-3120.				3121-3180.				3181-3240.								
mag.	7 ^h	-20°		mag.	7 ^h	-20°		mag.	7 ^h	-20°		mag.	7 ^h	-20°						
	m	s			m	s			m	s			m	s						
10.5	42	50.3	33.8	10.2	45	42.1	32.0	9.8	48	5.2	38.0	9.4	74	50	51.9	7.9	7.9	Cal	7.1	
9.8		52.3	47.6	9.5	9.4	45.1	54.1	10.5	9.4	7.0	54.3	9.7	9.7	53.9	44.8					
10.3		53.3	39.8	9.8	10.4	45.1	38.3	9.4	9.4	8.2	36.0	9.2	9.4	59.4	38.9				9.3	
10.0		55.8	40.2	10.4	10.4	47.1	4.0	10.0	10.0	8.5	4.2	9.7	51	0.4	27.0				9.7	
10.4		57.1	23.6	9.4	9.4	52.1	36.9	9.1	10.0	9.8	4.0	9.2	9.2	1.9	31.5				9.2	
9.5	43	1.3	37.5	9.9	10.4	53.1	39.6	9.6	10.3	14.0	6.3	10.0	10.0	7.9	38.9					
9.0		2.8	41.4	9.2	10.2	53.1	12.0	10.3	10.3	14.2	26.7	8.8	8.8	7.9	44.2			Cal	8.3	
9.6		11.8	39.6	10.5	10.5	57.1	23.6	9.4	9.4	15.2	14.6	9.9	9.9	13.4	8.6				9.8	
10.5		13.3	41.2	9.5	9.5	58.1	48.1	10.5	10.5	22.0	8.0	10.4	10.4	13.9	59.5					
9.5		15.3	47.2	9.5	10.5	46	1.1	9.8	10.4	24.5	2.1	10.1	10.1	15.9	6.1				9.7	
10.4		21.3	1.1	9.8	9.8	5.1	59.3	9.5	10.5	27.0	26.4	10.2	10.2	16.4	1.4				9.7	
10.3		22.3	13.7	9.9	10.4	11.1	48.3	8.9	10.4	29.7	42.4	Ca	8.2	10.4	21.9				9.7	
10.4		24.8	14.2	9.6	9.6	12.1	54.1	9.4	9.4	31.0	33.3	a	9.3	10.2	25.9				10.	
9.9		25.8	21.8	10.2	10.2	14.1	11.2	9.3	9.3	37.0	16.3	9.4	9.4	28.9	49.7				9.8	
10.5		27.3	32.0	9.9	9.9	14.6	49.4	10.0	10.0	40.0	28.3	9.9	9.9	33.3	7.0					
10.5		28.3	42.3	9.5	9.5	15.6	54.1	9.1	9.1	42.5	30.3	10.2	10.2	35.4	11.6					
10.5		42.3	50.8	7.1	7.1	15.6	51.3	GCal	5.6	48.4	0.9	9.7	10.4	36.9	55.1					
9.6		45.8	16.2	9.6	9.2	16.1	10.7	9.2	10.4	49.5	43.7	9.2	9.2	40.9	34.1				9.5	
9.4		48.3	15.3	9.6	7.5	21.0	24.0	Cbl	7.4	53.0	16.0	9.8	9.8	41.9	23.2				9.4	
10.5		49.3	40.6	10.4	10.4	24.0	3.2	10.4	10.4	58.5	21.9	10.4	10.4	44.4	48.3					
9.4		52.8	34.7	9.5	10.1	25.5	40.6	9.5	10.2	49	0.0	12.7	9.3	52.9	52.8				9.4	
10.2		52.8	20.8	10.	9.0	27.5	58.2	a	8.8	10.4	3.0	0.0	10.4	57.4	33.0					
10.4		55.3	49.9	10.2	10.2	28.5	23.7	10.4	10.4	3.4	2.3	10.2	10.2	59.4	33.6					
9.8		59.8	25.2	10.5	10.5	31.0	1.4	10.2	10.2	4.5	59.0	9.6	52	7.4	3.3				9.4	
10.5	44	0.3	48.8	10.5	10.5	31.9	48.9	10.4	10.4	5.0	34.0	9.7	9.7	12.9	3.2				9.4	
7.6		5.8	58.4	9.4	9.4	35.0	56.2	9.8	10.4	6.0	34.3	9.2	10.4	15.4	50.8					
9.5		6.3	4.4	9.2	9.5	37.5	57.2	9.0	9.0	6.0	10.5	9.2	10.0	18.9	48.8				9.7	
10.0		11.3	8.4	10.3	10.3	42.0	33.8	9.0	9.0	11.0	25.5	a	9.2	9.1	20.9	10.9	a		9.0	
10.4		12.3	49.6	9.4	9.4	44.0	21.2	10.4	10.4	11.5	35.7	10.4	10.4	22.7	39.1					
10.1		17.3	15.0	9.1	9.1	48.0	13.9	9.3	10.2	12.0	4.2	9.1	9.1	22.7	25.1				9.2	
9.6		19.8	13.9	9.5	10.3	49.5	9.2	9.2	10.0	18.5	32.9	9.8	8.8	23.2	5.6	Cbl			7.7	
9.4		20.3	59.4	10.	9.5	50.5	9.0	9.6	9.6	25.3	57.9	9.8	9.4	30.7	40.6				9.7	
9.8		20.3	11.0	9.5	10.0	52.0	26.2	9.2	9.2	25.5	8.1	9.4	10.4	35.9	41.4				9.6	
9.2		23.3	10.2	9.4	10.2	53.0	54.5	9.2	9.2	27.5	10.7	9.4	8.6	45.2	15.8	Cal			8.5	
9.8		28.3	15.4	9.8	9.8	56.0	17.5	9.4	9.6	33.0	4.9	9.5	10.4	50.9	8.6					
9.8		37.3	44.7	9.3	9.4	57.0	31.7	9.8	9.2	39.0	35.1	9.8	9.3	51.9	0.8				9.1	
10.4		38.8	1.5	9.5	9.5	57.5	16.0	9.3	10.1	40.5	22.9	9.3	9.3	55.7	3.6				9.3	
9.8		39.8	3.2	9.2	9.2	58.5	28.2	9.2	10.4	42.0	3.7	9.5	9.1	59.2	27.9	a			9.4	
9.2		40.8	31.8	8.9	10.1	59.5	30.7	a	9.0	44.0	37.3	9.8	53	11.2	4.0				9.5	
10.1		47.1	16.1	8.9	47	0.0	55.6	9.0	9.0	54.5	53.3	9.1	10.4	12.2	29.5					
10.3		49.1	17.0	9.2	9.2	8.0	7.6	9.4	10.1	57.3	58.9	9.2	9.2	12.7	52.2				9.5	
9.2		55.1	26.1	9.2	10.5	8.0	17.9	9.9	9.9	59.5	13.7	10.1	10.1	15.7	27.5				9.8	
10.3		55.6	38.0	9.8	9.8	9.0	26.3	9.1	50	12.9	2.1	9.1	9.4	17.7	16.2				10.	
10.5		57.6	56.1	10.5	10.0	10.0	0.0	10.4	10.4	14.0	14.4	10.4	10.4	22.7	29.9				9.8	
9.9	45	9.6	31.1	10.5	13.0	53.7		9.2	9.2	15.5	18.7	a	9.2	9.6	26.7	42.7				9.8
10.4		12.1	15.3	9.6	9.6	15.5	28.3	9.1	9.1	20.0	26.3	a	9.3	9.4	32.7	54.5				8.9
10.4		12.6	7.3	9.4	9.4	21.0	16.5	9.2	9.2	22.0	52.6	9.2	9.0	33.7	45.2	a			9.0	
10.1		21.1	7.9	8.6	8.6	26.3	40.8	C	8.7	10.2	23.0	45.1	9.4	9.4	35.2	7.1				9.8
10.5		21.4	56.8	10.0	10.0	26.5	7.4	9.8	10.2	27.4	26.2	9.3	10.4	35.2	32.4					
9.4		21.6	21.9	9.7	9.4	29.8	42.6	9.9	9.9	35.9	41.3	9.3	8.8	38.2	0.9	Cbl			8.4	
9.9		21.6	21.3	9.8	9.8	32.3	10.9	10.0	10.0	36.9	21.0	9.8	9.8	41.7	51.0					
10.4		21.6	13.1	8.9	8.9	32.7	44.1	9.2	9.9	37.4	9.7	9.5	10.4	52.7	21.7					
10.2		25.6	54.8	10.	9.2	33.2	13.1	9.1	10.4	40.4	45.9	10.4	10.4	53.2	6.2					
10.4		27.6	33.2	10.4	10.4	39.5	41.0	10.4	10.4	41.9	35.4	9.2	9.2	54.7	44.2	a			9.2	
10.4		28.1	30.2	10.5	10.5	46.0	19.9	10.4	10.4	42.4	34.6	10.4	10.4	55.7	40.7					
10.2		34.1	20.1	10.4	10.4	47.0	15.4	9.3	9.3	42.9	40.2	9.5	9.6	56.7	19.9				9.5	
10.4		34.1	6.0	10.2	10.2	50.5	53.1	9.8	10.4	43.9	31.1	9.8	9.9	59.2	32.8				9.7	
9.6		34.6	46.2	9.6	9.6	55.5	15.2	9.4	10.1	44.9	44.0	9.2	9.2	54.0	13.7				9.6	
9.4		36.6	20.7	9.5	10.5	56.0	51.9	9.7	9.7	45.9	3.4	9.3	9.3	17.2	33.8				9.8	
10.5		37.1	5.7	9.4	9.4	58.3	0.6	9.5	10.4	49.9	51.1	9.9	9.9	17.2	47.4					
25pr.	+1	56	-3.7		+1	56	-3.8		+1	57	-3.8		+1	58	-3.9					

3241-3300.				3301-3360.				3361-3420.				3421-3480.			
mag.	7 ^h .	-20°		mag.	7 ^h -8 ^h .	-20°		mag.	8 ^h .	-20°		mag.	8 ^h .	-20°	
9.1	54	18.2	6.6	9.2	57	31.6	11.9	9.4	10.4	4.8.5	58.9	10.2	3	44.8	11.1
10.2		19.2	18.6	9.6		31.6	5.2	9.5	10.4	49.5	30.8	9.2		48.3	55.6
9.9		22.7	39.0	10.2		32.6	28.2	10.2	10.2	55.5	51.1	10.4		57.3	16.5
9.4		24.7	43.0	9.2	10.3	32.6	4.3	9.3	9.3	59.5	39.6	10.2	4	2.3	40.2
10.2		25.7	12.4	8.8		35.6	45.6	10.4	10.4	7.0	17.5	9.9		6.3	46.0
10.4		25.7	34.5	9.4	58	1.6	0.5	9.4	8.0	10.0	10.6	9.2		9.3	51.6
8.8		34.0	59.6	8.2	10.1	9.4	0.8	10.2	10.2	13.5	25.8	9.8	10.2	11.8	33.1
10.1		34.5	56.9	10.0	10.0	10.4	1.0	10.1	10.1	22.0	18.9	10.4		19.3	33.9
9.6		37.7	7.6	8.5		12.1	25.4	8.3	10.0	23.0	27.3	9.2		20.8	26.0
9.2		41.7	31.9	9.1	9.0	25.6	38.3	9.3	10.2	23.0	43.9	9.6		22.3	15.6
10.0		42.7	24.1	8.5		25.6	33.4	9.3	10.4	23.5	51.9	10.4		26.3	25.5
10.1		43.7	8.3	10.3		26.6	30.4	9.5	10.4	28.5	14.9	10.2		26.3	50.6
10.4		44.2	0.6	9.6		29.6	12.5	10.2	10.2	30.8	58.2	10.4		32.8	9.6
10.4		46.7	55.3	10.0		33.3	2.6	10.2	10.2	31.0	44.3	9.7		40.3	27.7
9.9		52.7	0.1	9.3		34.1	28.5	9.4	9.2	35.5	55.9	9.3	10.4	42.3	31.5
10.4		52.7	40.5	10.2		35.6	13.8	9.8	10.2	36.5	0.5	9.6	9.1	42.8	33.6
10.4		54.7	32.6	10.2		36.1	45.2	10.2	10.2	39.5	8.8	8.8		49.3	32.4
10.2		55.7	44.2	9.7	9.2	37.6	22.0	9.4	9.6	41.0	11.3	9.6		49.3	26.9
10.1	55	0.7	40.0	10.1		39.1	14.0	9.3	9.3	41.5	55.1	9.4		56.3	3.5
10.2		1.5	59.3	10.0		40.1	22.2	9.1	10.2	42.5	26.0	9.3	10.2	58.3	41.3
9.6		3.7	16.3	9.7	10.2	44.1	53.8	9.8	5.8	46.5	11.7	5.8	10.4	5	7.6
9.3		5.7	13.4	9.8	9.4	47.9	59.4	9.1	10.0	52.0	29.6	8.3		12.8	17.3
10.0		11.2	38.6	10.0		50.1	24.0	10.2	10.2	55.5	47.0	9.2		24.8	53.2
10.0		11.2	33.8	10.0		56.2	1.5	10.4	10.4	56.5	55.6	9.6		25.3	24.2
9.7		14.2	37.1	9.7	10.0	57.7	16.1	10.4	2	1.0	48.8	9.9		27.0	0.6
10.4		23.2	24.9	9.1		58.7	2.2	8.9	9.2	12.5	19.3	8.9		30.3	23.5
10.2		27.2	37.3	9.7	10.4	59.6	1.1	10.4	9.2	16.5	47.1	10.4		32.3	36.0
9.0		32.7	7.0	9.3	10.4	59.7	13.9	9.6	9.6	20.5	1.5	9.7		35.3	8.5
10.0		39.2	9.6	10.2	59	4.2	6.1	9.8	9.8	22.5	32.0	9.5		37.8	45.0
9.1		45.7	42.1	9.0	10.2	11.4	1.9	10.4	10.4	22.5	34.3	10.4		41.8	43.3
10.0		51.7	32.0	8.8		11.7	55.1	9.1	10.2	25.0	53.6	9.0		45.3	49.8
10.2		57.2	54.5	10.0	10.0	19.2	13.8	8.6	8.6	25.0	47.3	9.0	10.4	45.3	31.6
9.2		57.7	38.3	9.5	9.9	20.4	0.9	9.6	9.6	31.3	24.4	10.5		45.3	37.2
9.9	56	3.7	19.6	9.0		21.7	54.4	9.3	9.7	35.3	33.0	10.1		51.3	24.0
9.3		4.7	10.3	9.5	10.2	22.7	0.4	9.4	10.0	35.8	21.2	10.4		55.6	59.1
9.6		11.7	6.0	9.4	10.4	23.7	13.5	10.2	10.2	38.8	30.9	9.8		55.8	19.6
10.2		12.2	2.2	10.4		25.7	47.8	9.2	9.2	46.3	9.6	9.5	10.1	57.8	8.5
8.8		15.7	48.8	7.8	10.1	29.7	17.9	9.5	9.2	47.3	19.6	9.6	10.1	6	2.8
10.2		15.7	19.1	10.4		29.7	45.3	8.6	8.6	54.8	9.4	9.1	10.2	3.1	58.5
10.4		16.7	33.7	10.2		32.2	42.3	9.4	9.4	55.8	12.5	8.6		31.1	14.1
9.8		17.2	14.2	10.2		35.7	32.7	10.2	10.2	58.3	18.9	9.4		35.1	20.5
8.4		22.7	8.8	8.5	9.3	42.2	10.5	9.5	10.4	3	0.3	9.2		38.1	18.9
10.4		25.7	11.5	10.4		47.2	24.8	9.8	9.7	2.3	37.3	9.8		39.1	22.3
8.5		28.7	30.7	8.4	10.4	49.7	27.9	8.8	8.8	7.3	18.4	9.0		54.1	32.3
10.4		35.7	26.4	9.0		49.7	33.3	8.7	10.4	11.3	6.9	8.8		55.1	7.1
10.4		39.2	19.6	10.4		2.7	22.5	9.8	7.0	11.8	0.0	6.7	10.4	55.6	56.9
9.7		41.2	15.4	10.4		11.7	52.7	10.4	10.4	12.3	34.6	9.7		57.1	10.2
8.8		44.2	17.8	9.1	9.3	14.7	42.1	9.3	9.8	16.3	51.0	10.0		57.7	1.5
8.8		45.7	22.6	9.1	10.4	15.7	27.4	9.8	9.7	21.3	14.3	8.6		7	2.6
10.0		51.2	37.3	10.2		18.7	18.8	10.0	9.0	23.3	22.1	9.1	9.7	4.1	46.2
10.0		53.7	46.3	9.7	10.4	19.7	59.5	10.4	10.4	23.3	56.0	10.2		5.1	42.7
9.6		55.6	29.6	9.3	8.4	25.7	36.2	8.2	10.4	25.3	25.5	9.6		6.6	7.5
9.4	57	6.6	31.6	9.4		31.7	38.1	9.8	10.2	25.6	59.2	9.7	8.4	6.6	39.4
8.5		11.6	28.7	8.8	10.4	35.2	24.5	9.4	9.4	26.3	43.2	9.6		9.6	17.7
8.8		12.6	20.3	8.8	9.2	35.7	10.0	8.2	8.2	31.8	7.9	8.2	10.4	18.7	14.3
10.4		15.6	36.3	10.4		36.7	27.9	10.0	10.0	31.8	26.6	9.4		25.9	55.3
10.1		20.6	14.4	10.1		40.2	16.5	9.7	9.7	40.3	37.6	9.7	10.1	33.7	43.5
8.5		24.6	7.6	8.8	10.1	40.2	59.0	9.8	9.3	41.3	44.7	9.1	10.4	36.4	19.8
9.6		24.6	17.2	9.4	9.4	41.7	29.8	9.3	10.4	41.4	4.2	9.8		38.2	26.3
9.9		25.1	47.2	9.5	9.3	47.5	15.3	9.0	9.1	42.3	47.1	9.1	8.8	41.4	52.1
25pr.	+1	5.9	-4.1		+1	6.0	-4.1		+1	6.1	-4.2		+1	6.2	-4.4

1896Ancap...3....1G

3481-3540.				3541-3600.				3601-3660.				3661-3720.			
mag.	8h.	-20°		mag.	8h.	-20°		mag.	8h.	-20°		mag.	8h.	-20°	
10.2	7 43.3	56.6		9.8	II 5.2	5.6		10.4	14 18.7	31.5		8.8	18 8.7	39.8	a
10.4	45.1	21.5		8.5	5.7	38.0	Cal	9.3	22.2	12.2		9.3	17.2	15.0	
9.9	53.1	48.5		10.4	9.2	51.0		9.9	24.7	51.1	9.4	10.2	17.2	49.3	
10.2	57.7	3.1		10.4	12.7	10.7		9.2	33.7	53.1	9.1	9.4	22.2	47.9	a
9.0	59.0	11.9	Cbl	10.1	13.7	13.5		10.4	35.7	39.1		9.2	22.7	26.5	
10.4	8 2.9	17.7		10.4	14.2	50.6		9.4	55.2	12.5	9.3	10.4	23.2	2.0	
9.6	6.3	51.3		10.4	15.7	51.1		9.8	15 0.2	46.3	:	8.8	33.7	53.5	a
9.0	6.3	51.6	a	10.2	20.2	22.2		10.4	0.2	31.5		10.4	36.7	20.9	
9.2	8.6	52.1		9.7	7.0	24.2	GCal	10.4	4.7	52.0	6.6	10.4	43.2	9.6	
9.8	10.0	34.3		9.5	9.5	25.8	31.3	10.4	22.7	46.1		9.8	47.7	32.6	
10.0	12.4	29.5		9.8	29.7	48.8		10.4	30.7	29.7	9.8	9.2	54.7	20.0	9.1
10.4	16.9	2.4		9.2	31.7	11.0	C	9.0	33.2	55.8	9.0	9.0	56.0	1.1	9.2
9.6	24.2	19.4		10.4	31.7	38.4		10.2	33.2	10.5	9.2	9.9	11.7	35.4	9.5
10.2	25.2	32.7		8.6	32.2	18.5	Ca	9.0	35.7	49.0	9.2	10.4	11.7	13.3	
9.8	32.9	35.6		10.4	35.7	46.0		10.4	39.2	29.0		10.4	36.7	12.5	
9.4	33.9	24.7		9.4	40.7	38.1	a	9.4	39.7	6.7	9.4	10.2	39.7	10.2	
9.8	49.4	41.7	9.4	10.4	43.2	28.0		10.0	41.7	23.2	9.5	9.0	45.2	20.5	Ca
10.2	51.9	19.3		9.7	46.7	53.1		9.9	53.7	16.0	9.5	6.6	46.7	38.6	Gcbl
9.4	52.9	22.1		9.6	52.7	20.6		9.5	54.7	54.7	9.5	10.2	55.7	24.4	
10.1	55.9	37.5		10.1	56.2	55.8		9.4	55.7	41.0	9.5	10.4	20 3.7	53.1	
10.4	56.9	57.9		9.6	58.7	52.8		9.5	7.8	57.7	7.2	10.4	16.7	24.5	
10.2	56.9	25.8		9.3	12 1.2	40.9	a	9.1	10.2	57.7	9.5	9.5	17.2	53.3	
10.4	59.9	14.3		10.4	4.2	36.3		9.8	59.7	37.8	9.6	9.6	18.2	2.3	
8.8	9 2.9	45.3		10.4	5.2	37.0		10.4	59.7	2.7	10.0	10.0	20.2	22.2	
10.2	2.9	11.0	9.1	9.6	6.7	58.4		9.4	16 1.7	44.2	16	10.1	23.7	55.5	
10.4	3.2	17.3		9.6	7.2	37.6		10.4	7.2	8.2	9.9	9.9	29.7	16.0	9.5
10.4	3.4	7.6		10.4	11.7	24.7		8.0	10.2	17.4	C	10.1	31.7	18.7	
10.4	17.4	32.0		10.4	15.7	18.1		9.3	11.2	1.0	9.0	9.2	38.2	50.7	9.2
10.4	17.9	32.5		9.9	18.9	52.3		9.3	10.4	15.7	9.3	9.8	39.2	31.3	9.7
9.5	19.9	11.0		9.0	21.2	2.5	a	9.1	9.4	15.7	9.1	9.3	43.2	42.1	9.4
10.4	22.4	34.7		9.4	22.2	43.1		10.0	18.7	51.0		10.4	43.7	29.6	
9.8	27.2	57.5		9.3	22.7	32.7	a	9.0	19.7	25.6	9.0	9.0	45.7	58.1	9.5
10.2	29.4	7.0		10.4	40.7	29.3		9.8	20.2	39.4		10.4	47.6	56.5	
9.6	30.4	25.8	9.5	10.4	42.7	13.3		10.1	25.7	28.5		10.0	51.7	50.3	
10.1	32.9	59.6		9.7	3.7	13.6		9.6	25.7	59.2		10.4	52.7	10.6	
8.8	35.2	57.8	al	10.4	8.7	31.0		9.3	25.7	36.2	9.5	9.3	55.7	46.2	a
9.2	36.4	52.4		10.0	11.2	40.0		10.2	32.7	37.3	9.2	10.2	2.7	14.1	9.5
10.1	36.9	57.0		8.5	11.7	9.4		9.3	33.7	8.7	9.2	9.4	2.7	20.1	a
10.4	36.9	53.2		10.4	13.9	25.5		10.2	35.2	52.6	9.5	10.0	4.2	41.5	9.3
9.6	37.9	10.4		10.4	14.2	0.4		9.8	38.2	31.5	9.5	10.4	9.8	37.0	
9.6	39.9	45.3	9.5	9.2	15.7	24.6	a	9.1	10.4	38.2		9.4	12.7	36.2	9.3
10.2	42.1	55.0		10.4	15.7	53.3		9.4	40.2	41.5		10.4	21.7	46.9	
10.4	47.8	50.7		10.4	23.7	5.4		8.3	41.9	58.5	C	8.5	9.3	21.7	a
9.4	53.4	22.0	9.6	9.0	25.7	7.9		10.4	42.2	44.6		10.2	22.7	15.9	
10.4	56.9	40.7		10.4	26.7	14.1		9.4	43.2	47.4	9.8	9.8	27.1	16.3	
10.4	57.9	13.7		10.4	26.9	58.3		8.8	45.7	26.1	a	9.0	10.4	27.6	24.1
9.5	10 6.9	20.0		10.0	31.2	33.8		9.6	51.3	5.4	Ca	10.0	30.6	52.4	
9.8	12.9	14.3	9.4	10.2	34.4	57.8		8.6	51.3	36.5	8.5	10.4	31.1	51.1	
10.1	20.9	43.7	9.8	10.4	44.2	10.2		9.8	52.3	28.0		10.4	41.1	27.9	
10.4	21.7	17.2		10.4	49.2	48.7		9.8	57.7	9.8		10.0	43.6	1.1	9.2
9.2	21.9	9.0	C	10.4	51.2	6.5		9.9	59.7	44.0		10.4	44.1	52.0	
10.4	28.7	47.1	9.2	9.4	55.2	46.5		9.5	10.0	19.7	9.8	9.9	44.6	35.8	
9.4	35.7	44.2		9.4	55.9	45.1		8.8	23.2	21.7	C	8.6	10.4	45.6	55.6
10.4	45.7	10.8		9.8	57.2	3.3		10.0	26.4	21.5		10.1	46.6	31.4	
9.8	52.7	52.7	10.	8.6	14 0.7	52.0	Cbl	9.9	28.5	2.3	8.0	9.4	49.1	11.9	a
10.4	55.2	15.8		9.8	1.2	28.7		9.5	10.4	45.2	9.5	9.3	50.6	16.1	a
9.8	56.2	52.2	9.7	10.4	2.7	45.3		10.1	50.7	41.3		8.3	51.6	34.3	Cal
10.4	0.7	17.7		9.6	6.2	8.7		10.0	56.2	45.2		9.8	57.6	27.4	
9.8	1.7	4.7		10.4	13.7	25.0		10.0	18 3.2	18.5		7.1	22 0.6	25.9	Gcbl
9.2	3.2	29.5		9.3	17.7	27.3	a	9.2	9.2	6.7	8.9	9.3	5.6	26.5	9.1
25pr.	+1 6.3	-4.5		+1 6.4	-4.6			+1 6.5	-4.7			+1 6.6	-4.8		

3721—3780.				3781—3840.				3841—3900.				3901—3960.					
gh.		—20°		gh.		—20°		gh.		—20°		gh.		—20°			
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s		
22	8.1	6.5		9.0	24	46.9	36.5	9.7	10.5	28	15.6	17.8	10.4	31	20.8	53.7	
14.1	45.1			10.4	47.9	34.5		10.2	18.9	13.5		10.4	30.8	35.8			
15.1	20.2		9.5	9.5	51.9	9.3		9.4	9.8	19.6	3.4	9.5	10.5	32.3	18.5		
20.6	5.5			8.5	54.4	27.3	Ca	8.5	9.5	20.6	30.8		8.9	38.3	49.0	9.1	
21.6	3.2			9.6	25	0.9	30.9		10.2	22.5	0.7		8.7	48.3	47.0	Ca	8.9
22.6	46.4		9.5	10.0	1.4	16.3		10.5	24.0	36.9		9.6	57.7	2.7			
22.6	57.9		9.8	8.8	2.9	46.1	C	8.6	10.2	24.6	20.5		10.2	32	0.3	51.2	
25.6	12.4			9.9	8.9	15.3		10.5	31.6	5.8		9.5	2.8	7.7			9.4
26.6	43.0		9.5	10.2	11.9	19.6		10.4	33.0	14.9		10.4	11.3	29.9			
31.6	21.4			10.4	19.4	1.0		7.7	36.7	20.4	Ca	8.2	10.4	23.1	13.9		
31.6	31.4	a	9.1	10.0	21.9	1.2		9.4	37.0	57.1		9.1	8.5	27.1	10.9	Ca	9.0
36.6	49.4			9.3	25.4	35.5		9.4	40.1	7.4		9.2	44.1	13.2			9.5
41.1	36.9			10.2	25.9	39.4		8.8	42.9	43.3		9.3	9.6	45.6	16.9		9.5
41.6	24.2		9.5	9.9	30.9	47.3		9.5	43.9	44.1		9.2	46.6	48.8			9.1
47.1	36.9		9.3	9.3	34.9	46.6		9.2	46.4	25.0		9.9	52.6	29.0			
57.6	0.8			10.4	37.2	0.5		9.5	46.9	39.6		9.9	9.0	55.1	56.3	a	9.1
23	2.1	29.6		10.4	53.9	6.0		8.9	50.9	27.3	Ca	7.9	10.4	33	0.9	18.9	
7.6	16.7			9.9	54.9	48.0		8.0	52.4	46.5		10.4	10.5	2.1	45.7		
10.6	44.3			9.2	55.4	50.8		9.8	59.9	12.8		10.5	2.1	45.7			
11.6	45.4			10.4	58.9	37.6		10.4	59.9	47.6		8.9	2.6	19.2			9.3
13.5	5.2			8.2	59.4	39.5	Cal	7.0	8.8	29	1.4	14.4	a	9.0	10.4	4.1	28.5
16.1	15.1			10.4	26	0.9	50.5		9.6	2.9	50.8		9.8	9.3	6.6	49.0	9.7
16.5	31.8		9.3	9.8	5.9	17.5		8.9	3.6	58.2		9.0	9.0	13.6	11.8	Ca	9.0
17.5	38.3			9.9	9.6	59.4		9.4	4.9	11.8		10.0	10.0	20.1	7.2		
19.5	3.0			9.9	11.4	18.8		9.4	6.4	21.8		10.4	22.9	28.9			
20.0	32.1	GCal	6.7	9.4	17.9	10.5		9.5	10.9	13.4		10.2	28.6	3.2			
20.5	28.6		9.3	9.8	22.4	37.8		9.5	11.4	8.0	Ca	8.9	10.4	37.1	32.7		
21.5	13.0		9.0	10.2	23.9	47.2		9.8	17.4	52.7		9.0	10.5	38.6	18.8		
23.3	56.7			8.8	25.4	22.9	Cal	9.0	17.4	12.2	a	9.5	10.5	39.1	54.1		
29.5	54.0			9.8	31.3	27.0		10.0	17.4	13.6		9.5	44.1	31.2			
31.5	31.6			9.8	32.9	53.8		9.2	17.9	30.1		9.9	46.9	53.8			
32.5	29.9		9.8	9.2	33.8	37.4	a	9.0	18.4	21.8		9.5	10.2	47.1	3.7		
33.0	6.9			10.4	36.3	59.6		8.7	23.4	25.3		9.1	10.4	49.1	51.4		
36.5	44.1			9.5	38.8	40.6		9.5	26.2	1.8		10.5	52.6	57.7			
40.0	42.1			9.3	39.8	19.1	a	9.3	26.9	12.1	a	9.5	8.8	53.6	28.6		9.0
41.5	32.5			9.8	42.3	32.0		10.4	33.4	21.8		9.4	54.6	33.9			
42.0	56.7			9.5	45.3	0.5		9.5	37.9	16.6		10.5	56.6	28.6			
43.0	37.5	Ca	9.0	9.4	54.3	9.4	C	9.0	42.4	36.3		10.5	56.6	27.9			
43.5	10.9		9.4	9.2	57.8	53.9		9.0	42.9	31.3		8.9	59.6	4.3	a	9.2	
51.0	6.1		9.5	9.6	27	0.3	40.7		48.4	6.5		10.2	34	0.6	27.0		
52.0	10.4			10.4	2.3	5.1		10.5	59.4	35.2		9.5	1.1	55.7			9.5
57.0	42.8	a	9.0	10.4	12.3	39.5		10.5	59.4	35.0		10.0	4.6	18.5			
1.0	52.0	Cal	8.0	10.4	16.8	12.2		9.6	59.4	29.1		10.2	4.6	47.5			
9.0	29.4			10.4	18.3	58.3		10.4	30	0.9	20.5		10.4	6.6	54.8		9.5
9.5	20.5			10.4	19.5	59.9		9.8	6.8	22.9		9.4	9.9	11.1	17.0		9.5
9.5	4.6			10.4	20.0	58.9		10.4	8.3	43.0		10.4	13.1	10.4			
21.5	9.8		9.5	10.2	22.2	52.7		8.5	11.3	46.9		10.2	16.1	52.5			
25.0	47.2			10.2	27.8	35.0		9.4	17.3	27.3		10.2	20.1	34.2			
30.5	44.1		9.5	10.4	32.3	29.4		10.2	22.8	13.6		8.4	22.4	57.3	Ca	8.3	
30.5	22.6		9.2	9.8	32.7	52.3		10.2	36.8	25.4		9.6	23.6	21.8			
35.5	15.5			9.2	35.3	22.0	a	9.3	42.3	37.7	Ca	8.2	10.4	24.4	47.1		
38.0	28.9	Cal	8.2	10.0	40.8	46.4		9.5	44.3	55.2		10.4	24.4	38.8			
39.5	59.0			10.4	44.3	8.9		10.2	54.0	58.2		9.3	28.6	48.2			9.4
39.5	0.0		9.8	9.8	53.3	27.8		9.2	54.8	13.6		10.2	31.6	21.0			
41.0	30.7			10.4	58.0	0.9		9.4	56.3	0.6		10.4	36.6	8.1			
41.5	56.7		10.0	10.4	28	4.3	16.9		9.6	31	1.3	54.2	8.6	38.6	20.3		9.0
42.5	19.0			9.8	7.2	40.6		10.5	3.3	52.0		9.6	8.4	41.6	11.1	Ca	8.2
43.5	55.2			10.4	9.3	15.9		9.0	8.3	11.9	Ca	9.0	9.4	43.1	49.5		
44.4	19.0			10.0	11.6	39.6		9.6	16.3	30.2		9.8	43.6	23.9			9.6
46.4	20.3		9.3	10.5	14.6	1.7		9.9	16.8	41.8		10.4	47.1	54.0			9.5
25pt. + 1	6.7	-4.9		+ 1	6.8	-5.0		+ 1	6.9	-5.1		+ 1	7.0	-5.2			

3961-4020.				4021-4080.				4081-4140.				4141-4200.			
mag.	8h.	-20°		mag.	8h.	-20°		mag.	8h.	-20°		mag.	8h.	-20°	
	m	s	'		m	s	'		m	s	'		m	s	'
10.2	34	48.6	4.9	10.4	37	46.2	49.9	10.4	41	46.3	22.9	9.2	45	23.2	20.3
10.5		53.6	35.5	8.8		56.2	39.5	8.7	8.9	51.7	12.5	9.3	10.2	31.2	5.4
8.4		53.6	34.1	9.3	38	1.7	27.7	9.5	9.0	52.8	38.1	9.2	9.8	35.2	10.5
10.4		55.1	23.0	9.5		6.2	18.3	9.9	10.5	56.3	9.7	10.5	10.5	39.2	13.7
10.2		57.1	0.7	9.2		10.2	32.8	9.4	10.2	57.3	35.5	8.0	8.0	40.7	3.2
10.2		57.6	11.6	10.4		24.7	48.2	9.8	4.2	1.8	34.6	10.5	10.5	48.7	32.9
8.4		59.6	51.6	9.4		33.2	16.5	9.1	8.8	3.8	19.8	8.3	10.5	51.2	15.2
10.4	35	7.6	26.6	10.5		42.7	46.1	10.5	10.5	13.3	3.9	10.5	10.5	57.2	35.2
8.4		10.1	23.3	9.0		45.7	22.9	8.9	9.5	15.3	36.7	8.2	46	7.5	7.9
9.8		14.1	22.1	9.2		45.7	28.9	10.5	10.5	15.3	39.5	9.2		17.5	3.2
10.4		16.6	15.5	10.4		46.2	29.1	9.3		19.8	5.3	9.6	10.2	38.5	18.1
10.0		16.6	6.1	10.4		53.2	30.9	10.0		22.3	56.0	10.5	10.5	43.5	54.7
9.2		26.4	32.0	10.5		54.2	3.2	10.4		25.3	27.2	10.5	8.4	46.0	10.7
9.6		26.6	53.3	10.0		58.2	47.1	10.4	9.8	32.7	10.1	10.4	47.5	37.5	3.9
10.2		37.4	6.5	10.2		59.2	30.1	9.6		33.8	31.3	9.3	10.4	48.5	46.2
10.2		40.4	22.9	9.4	39	1.2	38.6	10.2		34.3	19.2	10.0	9.4	58.0	58.1
9.9		43.4	44.1	9.5		6.2	58.8	9.3	10.0	38.3	10.8	10.5	47	5.5	55.6
10.5		46.4	0.2	10.5		11.7	56.0	8.6	10.5	42.8	53.2	9.6	10.5	5.5	28.7
10.0		47.9	10.1	10.4		19.0	2.1	10.5	10.5	42.8	38.5	10.5	10.5	8.5	33.7
9.8		48.4	16.3	9.5		20.0	42.9	10.5	10.5	45.3	17.2	10.5	10.5	19.5	40.7
10.4		53.4	41.8	10.4		22.0	50.7	10.2		49.8	47.4	10.5	10.5	21.5	37.3
10.5		53.9	33.6	8.6		23.5	12.8	8.5	9.4	51.8	4.0	9.8	10.0	21.5	41.2
10.5		56.4	52.5	10.4		24.5	5.5	9.7	9.9	55.3	37.2	10.4	10.4	25.5	18.9
10.5		58.4	3.1	10.0		35.5	6.3	9.8	9.8	43	1.8	9.4	10.5	37.5	45.1
10.2		58.9	10.6	10.4		42.0	33.6	10.4	43	3.3	29.6	?	9.8	45.5	27.2
9.4	36	2.4	7.8	10.4		42.0	6.2	9.9		12.8	14.7	9.7	8.2	51.5	58.4
9.5		2.9	41.0	8.8		44.0	17.3	8.7	10.2	14.3	29.3	10.2	48	2.0	34.8
10.5		6.4	54.6	10.5		44.3	57.5	10.4	10.4	21.8	48.2	8.2	10.5	11.5	31.1
10.5		8.9	52.4	10.5		48.0	15.7	8.8	10.4	24.7	46.2	9.1	9.6	18.0	39.1
10.0		10.4	16.3	10.4		50.5	15.5	10.4	10.4	28.3	50.2	10.0	10.0	20.0	37.3
10.2		13.4	29.7	10.0		51.5	27.3	10.2		29.7	43.7	10.0	10.0	29.5	43.9
10.5		16.9	12.2	10.2		51.5	0.2	9.4	9.4	35.2	25.5	9.5	10.2	35.0	46.9
10.5		19.4	24.3	10.2		59.5	23.9	9.2	9.2	36.7	0.8	8.9	10.4	35.5	56.1
9.3		23.4	37.9	8.7	40	4.0	56.2	9.0	9.4	40.7	26.1	9.6	10.4	37.8	2.0
10.2		26.4	51.3	10.0		8.0	46.3	10.5		49.7	36.4	10.2	10.2	41.5	35.7
10.4		32.9	8.9	9.8		10.0	2.9	10.2		56.2	27.9	10.4	10.4	43.5	1.5
10.4		35.9	50.7	8.8		11.0	12.2	9.1	8.8	59.2	6.0	9.1	9.2	57.6	45.7
10.2		37.4	24.7	10.5		14.0	9.2	10.4		59.7	21.2	9.9	49	17.6	14.9
9.4		41.4	25.8	9.4		16.0	49.0	9.6	7.1	44	8.2	6.5	9.9	20.5	14.7
9.3		41.9	53.8	9.5		18.0	36.4	9.4	10.4	15.7	38.8	?	9.9	22.2	32.1
10.5		45.4	31.0	10.4		20.0	41.1	10.5		16.2	30.1	8.8	8.8	51.5	0.0
10.5		53.4	30.7	10.2		23.0	28.0	10.4		19.2	49.5	9.9	50	10.5	35.5
10.4		56.9	16.5	10.2		26.5	24.9	10.2		24.7	55.5	9.8	9.8	17.6	25.2
10.5	37	3.4	8.7	10.5		41.0	25.0	10.2		28.2	28.5	8.4	8.4	20.1	23.7
9.8		4.2	58.4	10.0		54.0	20.5	9.6		30.7	41.9	9.6	9.6	22.8	4.2
10.4		5.4	9.9	8.9		54.0	5.5	9.3	10.5	32.2	1.5	8.8	8.8	27.3	23.4
10.4		6.4	38.1	10.4		56.0	4.8	10.5		32.4	20.0	9.9	9.9	32.8	48.5
9.2		6.4	56.5	9.0		58.0	39.4	9.5	10.2	39.2	0.8	9.4	9.4	38.6	40.1
10.0		13.1	58.3	9.4	41	0.0	12.5	9.5	10.5	45.7	52.8	9.2	9.2	54.1	5.9
10.4		13.4	33.0	9.8		2.5	42.0	7.8		48.7	40.8	8.0	51	2.5	4.6
10.4		16.2	16.4	10.2		6.0	0.8	9.6		48.7	40.0	9.2	9.2	6.8	5.5
10.5		16.2	18.6	9.4		6.0	20.2	8.8		52.7	23.0	9.1	9.9	36.6	48.2
10.4		19.7	55.3	10.4		6.8	58.2	10.2		54.2	14.3	9.8	9.8	41.1	24.3
8.4		21.2	13.7	10.4		11.3	56.6	10.0		54.7	11.1	9.4	9.8	46.6	52.8
10.4		23.7	45.3	10.4		11.8	48.8	10.4		55.2	59.6	9.8	9.8	50.1	35.1
10.2		24.7	31.1	10.2		16.3	6.5	8.0	45	5.4	37.3	8.3	9.6	52	0.4
10.0		36.2	7.5	10.4		21.3	26.4	10.5		9.7	21.3	9.8	9.8	29.7	16.6
10.2		38.0	57.4	10.4		24.8	34.8	10.4		11.2	17.9	9.6	9.6	31.5	23.7
10.4		40.7	16.4	10.0		29.8	23.3	9.0		11.7	17.4	9.4	9.8	42.2	20.2
10.5		42.7	13.7	10.4		42.8	19.7	10.0		21.7	14.9	9.5	9.8	50.5	14.8
25pr.	+1	71	-5.3	+1	72	-5.4		+1	73	-5.5		+1	75	-5.6	

4201-4260.				4261-4320.				4321-4380.				4381-4440.			
8h.	-20°			8h.-9h.	-20°			9h.	-20°			9h.	-20°		
m	s		mag.	m	s		mag.	m	s		mag.	m	s		mag.
52	52.1	2.3	9.77	59	29.8	16.0	9.8	7	26.4	57.1	10.4	12	7.9	27.6	9.8
53	58.3	8.4	9.3	30.6	51.9		9.8	10.8	27.4	12.3	10.7	10.7	12.9	7.8	
	0.2	10.1	9.8	41.3	55.0	a	9.8	10.2	41.0	44.8	10.8	10.8	15.4	29.2	
	0.5	34.3	9.8	50.6	45.1	a	8.5	10.3	45.8	24.9	10.8	10.8	19.4	45.0	
	0.8	32.2	9.8	57.6	6.7			9.2	54.8	0.9	10.3	10.3	19.4	20.5	
	16.3	3.9	a	0	1.6	18.0		10.8	55.9	29.7	9.8	10.2	20.4	24.8	
	29.3	29.1	9.5	8.4	13.6		9.8	10.0	57.8	5.8	10.7	10.7	28.9	3.2	
	31.0	25.1	9.3	42.8	20.9		9.8	9.0	8	3.9	9.0	10.3	46.4	10.4	
	31.7	24.1	9.7	46.0	59.5	a	8.7	10.4	13.4	20.4	9.8	10.7	50.9	21.0	
	34.3	50.9	10.	48.3	32.5		9.4	10.2	16.9	42.3	9.5	10.6	52.4	49.4	
	39.1	35.7	9.7	59.8	34.0			9.0	25.9	5.1	9.2	9.0	57.4	45.7	9.2
	1.8	25.2	9.6	7.4	44.9			10.8	28.9	10.9	10.7	13	1.4	58.4	
	8.3	19.4	Cal	20.8	7.5			10.8	32.2	43.1	8.6	8.9	18.4		9.3
	12.3	57.2		22.1	42.4	a	9.3	10.4	41.7	5.3	8.6	12.4	15.7	Ca	8.5
	15.3	18.1		28.8	29.1			9.6	48.0	33.9	9.5	9.4	13.7		9.7
	20.4	59.0		29.6	20.0			10.0	50.7	47.6	10.0	14.9	51.1		
	23.5	18.4		49.6	1.8		9.4	10.7	55.2	54.2	10.2	26.4	38.8		
	34.4	15.1	Ca	50.6	46.2			10.8	9	1.2	9.3	35.9	28.0		9.8
	39.6	41.6		59.8	49.1	a	8.8	9.8	3.7	41.7	9.6	10.4	36.9	46.3	
	49.6	10.4	10.	2	27.6	11.0		10.6	7.7	25.0	9.5	50.8	3.6		9.7
	52.4	21.0	9.8	29.8	23.3	a	9.2	10.7	10.7	54.5	9.0	52.8	12.3		9.3
	0.1	43.8	GCal	37.3	57.4			10.6	16.7	19.8	9.5	10.8	54.8	10.3	
	2.4	8.9		37.3	9.2			10.0	23.2	30.1	9.4	8.9	3.3	4.0	9.2
	9.9	59.5		40.6	31.3		9.6	10.7	33.7	55.8	10.8	3.8	53.4		
	26.1	55.8	9.6	48.4	44.8	a	9.2	10.8	38.7	17.2	8.8	4.3	32.5		9.5
	28.6	8.3		51.6	50.5			9.3	43.7	38.4	9.2	10.4	5.8	51.6	
	38.6	2.1		56.6	24.8		9.7	10.4	49.7	21.9	10.8	8.3	37.8		
	41.6	28.9	9.8	3	3.1	1.3	9.8	10.8	50.8	8.8	10.0	20.3	2.2		
	52.1	10.9	9.5	12.7	2.3			10.4	54.2	16.1	10.0	21.8	19.3		
	18.9	17.7	9.4	13.6	33.7			10.4	10	11.7	9.8	8.5	34.8	49.9	MC
	27.6	12.8	9.8	16.6	54.1		9.6	8.2	13.0	59.9	MCal	7.5	10.7	35.3	23.5
	38.9	57.7		29.6	25.2	Cal	7.2	10.7	27.2	24.5		10.0	35.3	10.1	9.8
	41.1	49.4	Ca	39.3	24.3			7.8	29.2	40.6	Cbl	7.7	10.7	36.3	14.7
	48.9	52.9		50.8	9.7			8.9	32.2	44.8	9.0	10.6	38.3	25.5	
	49.6	37.1		58.0	35.4		9.7	9.3	34.7	18.7	9.5	10.4	47.3	42.1	
	50.3	28.7	9.8	4	1.2	11.3	9.7	10.7	38.2	44.8	10.2	49.3	32.0		
	0.1	52.8	9.8	6.0	15.9		9.8	10.6	47.7	33.5	9.4	49.3	53.7		9.8
	26.9	3.3	Cbl	16.5	2.6		9.7	9.5	49.7	17.2	9.6	10.6	52.3	25.9	10.
	36.4	30.4	9.4	16.8	13.0	C	9.0	9.3	55.2	49.1	9.6	9.8	53.3	44.8	9.9
	41.8	6.3	9.7	22.5	54.8	Cbl	8.2	10.7	58.2	5.8	9.6	9.6	57.3	23.9	9.9
	50.1	16.0	9.8	37.0	34.0		9.3	10.6	11	12.7	9.3	9.8	15	4.8	58.0
	52.1	32.9	Ca	40.2	49.2			9.6	24.6	58.6	9.8	9.8	5.3	31.0	9.9
	53.3	6.4	a	5	0.0	9.8	C	9.0	26.2	6.1	9.5	9.8	9.8	1.2	9.8
	59.5	59.7		9.3	42.5			10.2	26.7	50.9	7.8	12.3	27.0	Cbl	8.3
	59.6	25.7		12.5	41.1		9.6	10.0	27.2	41.8	10.8	12.8	42.3		
	22.1	4.0	9.8	15.8	40.2		10.	8.2	36.9	42.5	C	9.3	14.3	30.8	9.7
	36.2	57.2	9.3	17.5	53.1		9.8	10.8	38.9	3.6	10.2	16.3	3.5		
	39.1	8.1	a	20.2	10.8		9.5	8.0	41.4	48.8	Cbl	7.7	10.0	25.3	50.6
	49.9	0.4	9.8	34.0	26.1			9.5	42.4	40.5	9.3	10.8	29.8	11.3	
	59.6	38.9	9.8	44.3	29.8			9.5	42.4	7.3	9.5	9.5	32.3	55.6	10.
	0.0	44.2	9.5	59.2	49.0		9.5	9.6	44.9	39.6	9.7	9.5	35.3	55.1	
	2.1	59.4		6	6.5	59.1		10.8	48.1	1.8	9.8	9.8	42.3	20.8	
	4.4	34.4		9.1	22.4		9.9	10.3	50.7	58.3	10.8	43.3	52.3		
	8.6	53.8	Ca	10.6	27.8		9.8	10.8	51.4	33.4	10.8	50.3	17.0		
	10.6	31.6	Cal	26.9	34.5			10.0	54.4	11.1	9.4	52.8	13.1		9.5
	18.4	40.4		39.1	16.2		9.8	9.5	58.4	53.5	10.8	55.2	46.9		
	18.6	39.7	9.8	7	8.6	14.8	10.	10.0	59.9	10.6	9.8	9.3	55.7	54.3	a
	21.6	37.7	Ca	12.2	36.0			9.6	12	3.9	9.8	10.2	56.3	32.8	
	23.1	2.9		15.6	21.9		9.3	9.0	4	4	9.5	10.6	58.7	36.4	
	29.3	28.4	10.0	16.8	28.9		9.7	8.9	6.4	30.0	9.4	10.7	16	6.2	17.9
25Pr.	+1	7.8	-5.8	+1	8.1	-6.0		+1	8.3	-6.2		+1	8.5	-6.3	

1896AnCap...3...1G

4441-4500.				4501-4560.				4561-4620.				4621-4680.					
mag.		gh.		mag.		gh.		mag.		gh.		mag.		gh.			
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s		
9.0	16	12.2	10.9	7.4	20	11.4	13.2	9.0	24	49.7	3.2	10.8	28	48.1	9.9		
9.5		13.2	12.4	9.5	10.7	30.6	1.4	10.8		52.7	12.7	9.6		48.7	29.5		
10.6		20.7	49.9	10.3	10.3	39.1	34.3	10.0		57.7	12.5	8.0		54.6	32.4		
10.7		26.0	2.0	10.0	10.0	42.4	48.1	10.3		58.7	58.8	9.5		55.4	46.1		
10.3		26.2	14.1	9.5	10.8	45.4	4.9	9.6	25	5.7	41.7	10.3		56.8	59.5		
10.0		26.2	30.5	9.8	10.6	49.4	35.8	10.3		8.7	24.8	10.0	29	7.3	31.2		
10.2		29.2	8.9	8.4	8.4	51.4	10.9	8.4		9.7	27.8	9.4		41.8	23.4		
10.4		32.2	12.2	8.6	21	0.9	6.5	9.8		11.7	43.2	10.2		46.8	48.0		
9.3		37.2	15.0	9.2	10.6	1.9	20.9	9.3		14.7	18.8	10.3		52.3	26.7		
10.8		42.2	21.6	10.4	10.4	14.8	18.8	10.8		15.2	22.4	10.3		56.4	40.4		
9.0		46.2	4.2	9.5	8.9	14.9	55.0	10.2		24.2	52.2	10.1	30	20.4	10.2		
8.4		50.2	38.5	9.0	10.3	15.8	11.6	8.2		35.7	10.3	10.0		21.3	25.8		
9.6		58.7	45.4	9.4	10.3	19.8	42.5	9.6		41.2	38.8	10.3		28.3	8.4		
10.3	17	1.2	1.4	9.4	10.8	21.3	4.4	10.8		48.7	32.4	10.3		31.3	8.9		
9.6		13.7	27.3	9.4	10.8	26.8	2.6	8.0		56.7	47.7	8.4		32.3	19.6		
8.4		16.2	28.0	8.7	10.6	30.3	18.4	10.7		59.7	57.7	9.5		33.8	28.3		
10.7		18.7	21.5	10.7	10.7	31.8	56.8	9.6	26	0.2	4.8	9.4		37.3	54.3		
9.8		22.3	57.4	9.8	10.4	34.8	26.6	10.3		2.2	12.0	10.3		37.4	45.0		
10.0		23.2	6.9	9.9	8.8	42.3	14.0	10.8		11.7	11.2	9.4		39.7	33.9		
10.0		28.2	18.0	10.2	10.2	50.3	38.2	10.8		20.2	36.6	10.0		48.3	53.9		
10.0		29.7	13.0	9.8	10.7	51.8	16.3	10.8		23.2	47.8	9.6		52.8	5.1		
8.0		31.2	30.2	6.8	10.8	55.8	35.4	8.2		26.2	9.2	9.8		58.3	38.3		
10.4		36.7	47.7	9.2	9.2	59.3	34.8	9.4		28.1	38.5	10.1	31	5.8	48.2		
10.7		47.2	2.6	10.6	22	1.8	51.2	10.6		28.9	38.3	10.0		12.3	19.6		
9.6		55.7	8.8	9.5	9.2	12.8	39.3	10.7		32.1	34.7	9.0		18.3	1.8		
10.8		58.7	27.2	10.6	10.6	22.8	17.4	10.0		41.1	26.1	8.0		21.3	50.5		
8.8	18	2.7	13.9	9.2	9.8	28.8	11.8	10.6		41.1	13.9	9.8		36.3	42.7		
9.6		2.7	46.2	9.8	10.6	32.8	5.2	10.8		41.6	44.6	9.4		38.8	3.3		
10.0		3.7	38.8	10.3	10.8	39.3	23.0	9.8		44.6	39.7	10.0		48.8	13.7		
9.6		14.2	31.0	10.4	10.4	45.8	49.8	8.9		51.6	49.1	9.1	10.1	51.3	3.9		
10.0		22.2	12.8	10.8	10.8	51.8	29.6	10.8		53.6	17.5	9.4	32	18.3	49.4		
10.8		25.2	41.8	9.3	9.3	56.8	20.7	10.7		54.6	42.4	10.3		19.4	28.9		
9.6		30.4	50.5	9.9	7.4	56.8	15.2	9.6		10.1	19.7	9.5		21.4	41.9		
10.8		30.9	54.6	10.8	23	1.8	35.8	10.8		12.1	39.8	10.1		30.8	35.6		
10.6		42.1	19.3	10.8	10.8	10.9	12.6	10.7		16.1	32.6	9.0		39.3	48.1		
9.5		45.9	33.9	9.8	10.0	11.8	56.4	9.6		24.6	9.3	8.4		43.8	21.8		
10.0		45.9	11.5	9.8	10.6	13.8	2.3	6.1		26.9	33.7	9.2		4.3	6.8		
9.8		47.9	54.1	9.5	10.6	18.3	4.6	8.2		27.1	9.8	9.2		12.3	43.9		
10.4	19	2.9	33.3	10.6	10.6	22.3	12.4	10.7		31.1	56.9	9.6		14.3	29.5		
9.3		2.9	11.0	9.2	9.3	23.8	15.0	9.5		32.5	50.3	10.1		14.8	8.2		
10.6		10.1	17.9	7.3	7.3	26.8	12.2	10.8		33.6	3.0	10.0		24.8	9.3		
10.0		11.9	9.8	9.8	9.5	35.8	33.0	10.8		37.1	14.7	9.1		35.3	39.2		
10.6		12.9	24.5	9.6	9.6	40.8	49.2	10.8		37.9	17.9	10.2		35.3	43.7		
10.3		18.4	29.2	10.2	10.2	43.3	50.0	10.7		38.1	47.1	9.5		37.3	41.2		
9.4		19.9	50.6	9.5	9.5	49.3	6.0	10.8		42.1	13.8	10.0		43.0	1.2		
9.2		24.9	46.9	9.7	9.0	51.3	2.3	10.2		57.1	7.0	8.8		43.3	25.0		
10.4		25.9	29.2	10.4	10.4	53.3	24.5	10.7		59.1	30.7	10.3		51.4	57.3		
10.3		27.1	59.5	10.8	24	5.2	37.8	9.3		6.3	58.6	9.0		52.8	3.3		
10.6		27.4	34.6	10.8	10.8	12.7	36.8	8.8		6.6	55.9	9.2		52.8	2.7		
10.7		29.4	26.6	10.8	10.8	14.7	3.3	9.2		8.5	55.3	9.8		20.3	45.5		
8.2		32.9	14.0	8.3	9.3	18.7	45.9	9.6		21.5	30.7	9.4		22.3	28.4		
10.2		39.9	27.0	9.8	10.8	20.0	31.9	9.8		21.5	30.5	9.6		22.3	15.6		
8.8		39.9	33.9	8.5	10.8	26.7	39.0	8.8		21.5	43.0	10.0		33.8	6.7		
10.2		39.9	13.3	10.8	10.8	27.0	22.8	9.0		22.5	42.5	9.8		37.8	5.5		
10.4		48.4	3.6	8.6	8.6	28.2	27.3	9.0		23.1	44.3	9.6		41.3	48.4		
10.7		51.9	13.8	10.4	10.4	30.7	39.9	10.6		24.0	48.1	10.2		51.8	1.4		
9.6		52.9	41.3	9.5	9.6	34.2	31.2	8.9		29.2	56.3	9.3		56.3	41.4		
10.2		55.4	47.6	10.2	10.2	42.2	45.8	10.0		39.4	48.5	10.3		9.8	43.0		
10.0	20	0.4	44.4	7.6	7.6	45.7	25.8	10.0		43.2	38.3	10.2		9.8	40.6		
9.6		2.9	41.2	9.8	10.7	46.7	16.6	9.2		43.2	3.7	9.6		14.8	45.1		
25pr.	+1	8.7	-6.4														
				+1	8.9	-6.5				+1	9.1	-6.6			+1	9.3	-6.7

4681-4740.				4741-4800.				4801-4860.				4861-4920.				
9h.		-20°		9h.		-20°		9h.-10h.		-20°		10h.		-20°		
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	
0.1	35 25.2	30.0		9.1	44 20.9	39.4		9.1	53 56.3	52.3		9.8	2 54.9	43.4		
0.0	41.2	24.3		9.5	30.9	52.0		9.7	10.0	54 12.8	37.5		3 5.9	13.3		
0.6	42.2	16.3		9.6	9.5	35.9	53.2	9.8	10.4	27.2	8.9	9.9	10.4	15.4	18.9	
10.2	48.7	7.5		?	9.8	39.9	28.1	10.0	10.0	29.3	31.9	9.9	10.0	25.7	59.3	
9.1	51.2	55.8	a	9.3	9.5	40.9	37.4	8.5	9.0	37.3	45.3	9.3	10.2	47.9	2.6	
9.5	52.7	32.8		9.8	8.2	51.9	29.6	Cbl	9.2	47.3	44.5	9.7	10.4	4 12.6	58.9	
9.1	56.2	47.3	a	9.5	7.9	54.9	11.1	Cbl	8.0	9.5	47.3	3.1	9.5	8.8	20.6	
10.1	36 6.2	27.5		9.8	8.2	5.0	52.8	MC	8.1	9.0	55 3.3	47.7	Ma	9.1	9.8	
8.8	12.2	21.1	MCa	9.0	9.6	2.4	50.2		9.3	10.0	11.3	53.9		9.5	38.1	
9.2	12.7	28.5		9.7	9.6	4.9	17.1		9.4	9.1	16.3	33.0	9.4	9.2	54.6	
9.5	28.7	11.8		10.1	7.9	8.5		10.0	10.0	26.8	28.2		9.5	59.6	3.6	
9.6	39.7	33.8	Cal	7.7	7.9	12.4	28.9	Cbl	7.8	8.6	50.3	21.9	a	8.7	8.4	
8.4	40.7	33.8		10.3	14.9	51.3		9.4	56	2.3	27.6		9.5	8.3	13.1	
9.0	58.7	24.8	a	8.7	10.1	20.9	25.0	10.2	10.2	9.2	13.4		10.4	24.1	59.4	
9.0	14.2	21.2	a	9.0	9.5	24.9	12.4	9.9	9.0	13.3	7.5		9.2	9.1	35.1	
9.2	18.2	45.3		9.5	9.8	26.9	11.7	9.5	9.5	14.8	24.5		9.8	8.8	52.3	
9.5	35.2	55.4		9.5	9.8	34.7	14.4	8.6	8.6	16.3	57.5		9.0	10.0	56.3	
9.8	35.7	7.0		10.1	46 1.7	12.2		8.6	8.6	19.3	14.3	a	8.8	8.5	6 2.3	
10.0	37.2	1.7		10.3	45.5	12.0		10.4	10.4	20.2	14.2		10.4	16.3	41.5	
9.5	50.2	45.3		9.5	10.0	50.5	56.4	10.0	10.0	21.8	56.9		9.0	39.8	28.9	
9.4	55.2	35.6		9.1	55.7	27.2		9.4	8.6	21.8	36.9		9.0	8.8	51.5	
7.9	57.2	35.0	Cal	8.2	10.0	56.2	42.3	9.4	9.6	36.8	15.3		9.9	9.1	7 2.0	
10.3	9.2	22.6		10.2	59.7	43.1		9.4	8.6	50.7	26.3		9.1	10.4	9.3	
9.2	16.2	10.6		9.5	8.6	47 24.2	12.7	8.8	8.0	57 0.2	13.7	Cal	8.6	9.8	11.7	
9.6	35.2	55.3		10.1	9.1	30.7	51.2	9.4	9.7	5.7	7.4		9.7	9.2	8 2.3	
9.5	42.2	10.5		9.8	10.3	33.2	47.6	9.0	9.0	6.2	6.2		9.4	10.2	18.3	
10.3	51.7	21.9		8.6	36.2	26.5	C	8.8	9.4	8.2	27.6		9.7	10.2	37.3	
9.5	39 2.2	12.4		9.5	10.0	39.7	55.4	10.4	10.4	14.7	51.6		9.5	9.5	51.8	
9.8	3.2	46.2		9.0	48 4.3	27.9		9.1	10.2	16.7	0.9		9.6	9.6	9 32.8	
9.6	5.2	19.8		9.8	9.8	8.0	32.1	9.4	9.7	20.2	35.2		10.2	38.4	52.9	
9.0	12.2	44.3	a	9.3	10.3	16.2	34.2		7.7	20.2	19.5	GCal	7.7	9.2	44.4	
10.1	17.2	14.8		9.8	9.1	23.6	13.5	9.3	8.8	26.2	33.8		9.0	10.2	54.4	
10.2	17.2	23.4		9.8	10.0	28.0	10.2	10.0	9.5	32.2	23.7		10.3	10.3	10 6.4	
10.0	21.7	56.2		10.0	58.5	27.4		9.5	10.4	58 42.0	58.1		10.1	16.4	22.9	
8.4	27.2	6.0	Cbl	8.2	10.4	49 12.8	16.0	9.5	9.5	59 14.7	7.5		9.3	10.0	18.4	
9.6	35.9	55.5		9.8	10.2	36.8	3.9	9.6	8.8	27.2	45.0	C	8.4	7.1	50.7	
10.3	37.9	43.1		10.0	10.0	53.3	37.0	10.2	10.2	31.9	59.5		10.2	10.2	31.4	
10.0	49.9	33.1		7.4	54.8	9.1	Cbl	7.7	8.8	32.2	51.9		9.0	9.7	31.4	
10.0	56.8	2.1		10.0	50 1.8	10.0		8.6	8.6	32.2	28.4	a	8.9	9.6	31.4	
9.0	58.9	26.6		9.1	9.0	3.8	54.1	C	9.8	44.7	2.2		9.8	7.5	45.9	
10.1	40 13.9	10.0		9.7	4.3	54.5		8.5	8.5	50.9	59.6	M	9.0	9.8	47.9	
9.0	15.4	47.5	a	9.2	9.6	5.8	16.0	9.8	9.1	52.4	42.1		9.7	8.2	56.4	
9.2	46.7	59.4		9.4	8.5	43.8	39.6	Cbl	8.2	10.0	53.9	53.3		9.2	12 35.9	53.7
9.8	50.9	52.4		9.8	8.8	51.3	15.0	9.0	9.0	0 12.9	44.9		9.3	10.3	13 13.4	
10.3	41 37.5	59.4		9.4	9.6	52.8	49.9	9.5	9.2	13.9	39.7		9.3	8.8	14 0.4	
9.4	47.9	13.5		9.4	9.6	53.8	7.5	9.7	8.2	15.4	20.4	Cal	7.2	9.7	3.9	
9.2	50.9	26.2		9.8	10.4	51 4.8	35.2		7.7	38.9	40.7	GCal	8.4	8.8	6.4	
10.0	42 6.4	38.7		9.7	9.7	21.3	51.2	10.0	9.0	41.9	24.5		9.3	10.0	29.1	
10.3	10.9	51.1		10.4	44.8	4.7		9.7	9.7	1 6.4	9.7		9.0	9.0	40.1	
9.8	26.7	57.4		9.8	9.4	49.8	49.1	9.4	6.8	13.9	38.8	Gal	7.0	9.2	42.1	
10.0	43.9	0.9		7.9	55.8	35.1	Cal	7.7	9.8	15.9	31.6		9.8	10.2	15 4.1	
8.8	5.4	46.9	MC	8.7	9.8	57.8	38.1		9.4	38.9	41.6		9.7	8.8	17.1	
8.4	12.9	51.4	MCa	8.5	9.0	52 4.8	53.1	a	9.6	9.7	41.4	13.2		9.8	8.4	18.1
9.1	21.4	53.3		9.8	10.0	28.3	35.1		9.0	9.0	42.9	8.1	a	9.3	10.0	24.6
10.2	25.6	57.4		8.6	31.7	58.1	a	9.0	9.4	54.2	0.2		9.7	9.3	45.9	
10.1	34.4	3.7		8.8	38.8	23.6	K	9.1	8.8	2 3.9	10.4	a	9.2	9.6	47.1	
9.2	35.9	54.1	MCa	9.0	9.0	41.3	37.7	Ca	9.0	9.7	22.9	27.5		9.8	9.2	16 1.6
9.4	42.9	42.3		9.1	9.1	57.3	37.4	Ca	9.8	8.8	36.9	46.1	C	9.0	8.0	13.1
9.4	44 6.9	35.6		10.0	53 18.8	43.5		9.2	9.2	39.9	48.2		9.4	8.7	15.1	
8.4	11.4	32.8	C	8.5	8.5	52.3	57.9	Ca	9.0	9.0	48.9	34.0		9.6	9.2	17 2.6
25pr.	+1 9.6	-6.8			+1 10.0	-7.0				+1 10.4	-7.2			+1 11.0	-7.4	

4921-4980.				4981-5040.				5041-5100.				5101-5160.							
mag.	10 ^h	-20°		mag.	10 ^h	-20°		mag.	10 ^h -11 ^h	-20°		mag.	11 ^h	-20°					
m	s			m	s			m	s			m	s						
9.6	18 1.1	56.6	9.8	10.4	29 48.1	52.4	10.0	9.9	48 53.5	42.4	9.9	9.2	8 4.9	49.3	9.1				
10.3	3.1	52.5	10.0	8.8	49.3	59.2	Ca	9.0	7.5	49 5.0	0.1	Gcbl	6.5	9.7	9.8				
9.8	6.0	5.5	9.5	8.6	56.1	48.1	Ca	8.5	9.8	24.0	44.1	C	9.3	9.7	9.2				
8.4	46.1	53.7	Cbl	8.4	10.4	3.0	3.1	6.4	9.5	8.7	36.0	51.0	C	8.6	9.2	9.2			
10.2	19 11.1	24.5		9.4	31 10.6	17.6		9.0	9.0	58.5	27.6	C	8.7	9.2	9.3				
9.0	25.1	28.1		9.2	10.0	24.1	20.3	8.5	5.0	2.5	26.6	C	8.7	9.5	9.5				
10.2	57.1	51.5		8.0	56.6	9.9	Ca	8.5	7.9	32.0	36.5	C	7.8	9.6	9.6				
9.7	20 6.1	21.4		9.4	32 8.6	39.4		9.6	8.6	37.5	0.0		9.0	9.8					
8.6	20.6	21.5	Cbl	8.7	10.0	11.6	29.9	9.6	8.9	53.0	54.3	C	8.8	8.0	10 3.7	Cbl			
9.6	23.6	48.1		9.7	10.2	22.6	7.0	10.0	9.7	58.5	43.7		9.7	9.6	10 4.3	55.6	9.7		
10.0	21 13.1	40.7		10.0	29.1	56.7		9.6	8.6	5.1	5.6	59.4	9.0	9.6	10.3	14.7	9.5		
10.0	21.0	34.5		10.4	43.6	51.9		9.6	9.2	52 28.5	53.1		9.4	9.0	21.0	3.2	8.9		
10.1	26.1	34.1		10.4	57.6	11.7		9.4	9.1	43.5	15.4	a	9.2	9.4	28.3	34.1	9.7		
8.4	29.1	48.2	C	8.4	10.2	33 19.6	43.3	9.5	8.6	55.0	30.1	Ca	8.8	9.2	31.1	1.4	9.7		
9.2	31.6	15.6		9.1	8.4	27.6	12.1	Cbl	8.0	9.0	53 3.8	57.5		9.3	9.8	41.4	23.7		
8.8	39.6	47.6	C	8.6	10.0	34 25.6	26.9	9.5	9.2	17.5	24.1		9.3	9.1	56.4	12.6	9.0		
9.8	22 4.1	45.5		9.3	8.6	30.7	55.2	Ca	8.8	8.5	19.0	22.5	Cal	8.0	9.8	59.3	22.6		
8.8	29.4	2.6	a	9.0	10.4	48.3	39.8	10.0	9.6	8.9	40.5	40.1	C	8.5	9.8	11 0.4	13.5		
9.6	40.1	27.9		9.6	9.6	35 34.2	24.3	9.6	9.8	48.0	36.7		9.9	9.8	8.4	14.8			
8.6	41.6	53.8	Ca	9.1	10.2	47.2	58.9	9.5	9.8	54 22.5	52.9		9.4	8.2	17.6	5.0	Cal	8.2	
9.3	52.6	26.0		9.6	48.7	52.5		9.5	8.8	57.9	49.1	C	9.0	9.8	28.9	47.2	9.6		
10.0	59.6	5.4		8.8	36 7.7	45.0	C	9.3	9.1	55 5.9	30.1	C	9.1	9.8	30.9	11.1			
9.8	23 13.1	36.9	9.8	9.6	40.2	13.3		9.2	9.8	9.4	55.8		9.9	9.8	31.2	15.1			
9.4	36.6	48.6		9.7	9.0	37 7.2	22.1	a	9.1	9.8	43.4	6.1		9.1	9.5	33.6	13.5	9.6	
8.8	46.3	9.0	Ca	8.7	9.6	11.9	18.4		9.5	8.8	53.4	49.4	C	8.8	9.4	46.1	4.1	9.5	
8.7	52.8	7.0	a	9.0	9.3	15.9	20.5	a	9.3	9.2	58.9	38.3		9.2	9.7	50.9	23.3	9.5	
8.8	24 6.3	48.9		9.2	10.2	37.9	30.1		8.0	56 19.9	44.2	C	7.5	9.0	12 1.1	0.6	a	9.1	
10.3	22.3	34.5		10.2	39.9	41.8		9.8	9.2	57 20.0	58.0		9.2	9.7	4.1	31.3			
9.3	26.8	35.5		9.3	10.4	51.9	25.2		9.2	29.4	53.9	C	8.9	9.8	10.4	23.7			
9.6	40.3	43.2		9.1	38 22.9	46.7	a	9.0	8.8	46.9	4.9	C	8.8	9.6	54.2	20.2			
9.3	47.3	7.0		9.3	9.3	32.4	32.0		9.3	58 17.9	16.2	C	9.0	8.8	54.6	1.2	a	8.8	
8.4	53.3	34.2	Ca	8.8	9.8	52.9	2.8		9.3	18.4	12.5		9.6	9.7	0.1	26.3		9.1	
10.2	56.3	5.0		10.4	39 10.9	54.5		9.8	8.2	23.9	27.0	Cbl	8.0	9.8	3.8	58.1		9.8	
9.4	57.3	23.8		9.5	9.0	23.4	41.4		9.1	9.3	59 12.4	55.1		9.5	8.7	14.4	45.0	Cbl	8.0
10.0	3.1	59.6		9.4	10.2	45.6	26.6		9.6	9.3	39.9	58.6		9.3	8.2	33.7	17.8	Cbl	8.3
9.2	3.3	35.1	Ca	9.2	8.2	49.6	18.9	Cbl	8.0	8.7	0 23.5	58.0	a	8.9	9.7	36.0	46.3	9.5	
10.3	35.8	40.5		9.6	40 9.6	15.5		9.4	7.1	24.9	29.4	Cal	7.0	9.8	38.0	44.4			
8.8	38.8	0.1		9.1	8.6	41 6.6	51.9	C	8.5	8.5	27.6	1.4	Ca	8.2	9.8	38.0	53.9		
10.1	39.8	6.6		10.4	17.6	20.2		9.4	9.8	32.4	49.2		9.8	9.6	41.6	13.7			
9.0	51.3	51.4	a	9.3	9.6	38.6	56.2		9.7	1 39.4	8.3		8.7	8.8	14 2.7	5.4	a	9.1	
9.0	53.3	31.7		9.2	8.0	42 15.2	31.0	Cbl	7.8	8.1	2 2.4	50.5	Cal	7.7	9.8	42.7	26.6		
9.4	20.3	3.2		9.4	9.8	15.4	0.4		9.6	8.8	19.4	6.6	bl	8.5	9.8	53.7	1.0		
9.4	27.3	9.5		9.4	10.4	25.2	24.5		9.8	9.8	28.4	27.1		9.6	9.7	15 10.9	9.6	9.7	
9.4	44.8	8.5		9.5	9.6	43.2	52.3		9.6	9.3	40.9	57.0		9.4	9.8	16.4	52.8	10.0	
10.2	46.3	24.9		9.8	9.4	43 3.2	44.7		9.6	9.0	46.4	13.8		9.3	9.8	26.9	3.9		
8.8	55.3	58.2	a	9.1	9.0	15.2	45.8		9.1	8.7	3 13.4	15.4		9.1	9.8	39.6	31.3		
8.8	27 20.0	26.5		9.1	10.2	46.2	55.8		9.8	9.8	4 1.2	2.1		9.8	9.8	40.6	9.5		
9.3	21.3	37.4		9.4	8.8	44 14.9	43.5	Ca	8.9	9.8	7.2	1.9		9.8	9.8	47.2	48.5	10.0	
10.2	32.3	20.9		8.4	45 10.9	51.9	GCal	8.2	9.3	20.9	35.8		9.3	9.4	49.1	56.5		9.1	
8.9	37.1	59.2		9.2	10.4	11.4	20.8		9.9	9.8	30.9	41.1		9.6	9.7	57.4	14.0		
8.8	43.1	53.6	a	9.2	10.4	16.9	35.2		9.6	9.0	5 5.9	28.4		9.5	9.6	16 7.9	3.1	9.6	
8.8	4.4	43.9		9.3	10.2	51.7	22.3		9.9	9.3	44.9	23.5		9.4	9.6	49.2	24.1	9.8	
8.8	9.6	58.2	a	9.1	10.4	46 51.9	5.5		9.7	8.2	53.4	39.2	Ca	8.0	9.8	52.4	22.2		
9.3	12.9	2.3		9.2	9.2	58.5	40.2		9.1	8.4	6 2.4	32.3	Ca	8.5	9.8	52.6	41.8	9.7	
10.2	19.6	26.9		9.2	8.4	47 43.5	25.9	C	8.6	8.4	4.4	36.4	Ca	9.0	9.8	55.9	31.0		
8.7	31.1	20.5		9.3	9.8	48 11.0	57.4		9.9	8.4	5.4	37.2	Ca	9.0	9.7	17 7.4	40.4		
9.3	45.1	7.1		9.5	10.2	15.5	35.2		9.8	9.1	7.4	44.0		9.1	9.8	31.1	23.5		
8.8	48.1	11.9	C	8.8	9.0	26.3	44.9	C	8.8	9.3	8.9	41.7		9.5	8.0	38.7	34.5	Cal	8.0
10.2	49.5	32.1		9.3	9.3	34.2	54.3		9.4	9.8	9.4	36.7		9.8	9.8	41.1	21.5		
9.9	29 20.1	26.3		9.9	10.4	44.5	17.2		9.8	9.8	56.4	5.7		9.7	9.1	52.5	6.5	a	9.2
25pr.	+ 1 11.7	-7.6			+ 1 12.4	-7.8				+ 1 13.5	-8.1				+ 1 14.2	-8.2			

5161-5220.				5221-5280.				5281-5340.				5341-5400.								
mag.	II ^h .	m s	-20°	mag.	II ^h .	m s	-20°	mag.	II ^h .	m s	-20°	mag.	II ^h .	m s	-20°					
9.8	18	10.9	32.2	9.8	10.0	12.7	48.9	9.5	38	33.3	52.9	9.2	10.0	4.8	58.8	40.2				
9.8		37.0	24.0	9.0	10.0	23.8	51.3	9.6		37.8	55.7	9.8	9.2	49	15.9	54.8	9.0			
9.7		52.5	43.5	9.9	10.0	25.7	26.3	9.8	9.5	55.8	15.1	9.5	9.5		21.8	59.3	9.7			
9.4		57.2	3.4	9.7	10.0	52.8	49.7	10.0	9.3	39	4.4	55.0	9.0	9.9	24.1	10.4	9.5			
8.7	19	3.8	34.2	C	8.5	9.4	8.7	9.3	7.9	9.8	46.7	Cbl	7.6	7.6	30.2	57.7	7.7			
9.8		13.9	18.1		10.0	59.8	36.2	10.0	10.0	10.8	52.7		9.8	9.8	42.6	49.3	9.4			
9.5		16.8	4.4		9.3	9.8		9.8	9.8	19.1	9.0	9.9	9.6	9.6	49.2	17.5	a	9.0		
8.6		17.3	32.4	Cbl	8.4	10.0	1.5	44.8	9.6	19.6	38.4	9.8	9.4	9.4	51.4	49.2	a	9.0		
9.8		28.4	17.7		9.3	13.8	58.3	8.8	10.0	35.4	21.9	10.0	2.4	10.0	19.7					
9.8		32.5	55.2		9.8	18.2	4.5	9.8	10.0	58.8	2.0	9.8	9.6	9.8	6.6	57.7		9.8		
9.8		56.5	25.6		9.6	25.7	10.9	9.4	9.6	40	1.3	47.5	9.4	9.4	16.1	43.3	a	9.2		
8.2	20	1.5	42.8	Cbl	8.2	9.5	49.8	48.2	9.5	10.0	18.2	36.9	9.8	9.8	28.2	28.2		9.5		
7.4		20.5	40.1	GCbl	7.0	9.4	52.3	54.7	9.4	10.0	30.2	47.2	10.0	10.0	37.7	22.1				
9.8		30.4	12.6		10.0	30	16.3	49.7	9.7	8.2	30.7	46.8	Ca	7.7	9.5	51	7.3	36.3	9.6	
9.8		49.6	19.8		9.5	29.8	5.4	9.1	10.0	33.1	8.4	9.7	9.8	9.7	8.8	26.1		9.6		
9.8		49.9	4.8		7.7	39.4	16.3	Cbl	7.7	9.6	42.7	44.6	9.6	9.9	20.3	1.9		9.6		
8.9	21	2.1	6.1	Ca	8.7	9.6	43.8	53.3	9.4	9.8	41	41.7	21.7	9.8	8.8	33.3	37.7	Ca	8.4	
9.4		8.4	22.5	a	9.0	10.0	43.8	12.5		9.3	43.1	39.9	a	9.5	10.0	43.5	25.3			
9.6		22.1	32.3		9.8	9.6	50.4	52.3	9.5	10.0	42	8.2	37.5	10.0	10.0	51.3	0.5		9.7	
9.2		29.4	28.4	b	9.0	8.9	31	4.3	46.2	C	8.8	9.9	9.8	10.0	52	1.7	10.9			
9.8		29.6	48.4		9.5	9.4	17.8	30.1	C	9.1	10.0	12.6	4.4	10.0	39.5	23.7				
9.4		33.9	35.8		9.4	9.5	41.1	30.1	Ca	10.0	9.4	21.3	52.5	a	9.2	43.0	10.7	10.0		
9.6		38.6	27.2		9.8	8.8	51.8	1.2	Ca	8.8	9.6	21.3	36.8	9.4	10.0	52.7	27.7			
9.4	22	0.9	36.5		9.5	10.0	32	9.3	25.2	9.5	10.0	47.9	9.3	9.5	53	10.3	9.4		9.5	
9.5		4.4	32.0		9.3	9.4	31.8	21.6		9.5	9.6	43	18.1	15.3	9.5	10.0	14.4	59.6		
9.8		4.8	54.3		10.0	7.5	37.8	28.8	Cbl	7.5	10.0	27.4	24.7	10.0	17.0	53.0		9.9		
9.8		24.6	49.3		9.8	9.3	42.2	17.8		9.3	9.9	28.6	41.8	10.0	20.7	0.0				
9.8		34.4	36.4		10.0	9.5	55.7	47.5		9.3	10.0	36.6	40.0	9.8	21.7	46.7		9.3		
9.7		41.4	45.2		9.8	10.0	33	0.6	58.9	10.0	8.6	50.1	29.3	Ca	8.5	10.0	25.0	51.2		
9.7	23	4.1	16.9		9.8	9.5	17.4	25.7		9.5	9.1	44	4.8	8.1	9.2	10.0	29.2	21.2		
9.8		22.1	40.7		10.0	24.0	7.0		9.6	9.6	35.6	9.8	9.9	30.2	28.7		9.8			
9.8		22.2	6.9		9.3	24.7	25.0		9.2	9.8	13.9	6.0	9.4	49.9	2.3		9.3			
9.7		24.9	4.9		9.3	35.0	3.2	a	9.3	10.0	20.1	10.2	10.0	54	14.9	54.5		9.8		
8.2		29.4	39.1	MCal	8.2	9.6	41.7	33.4		9.8	7.8	30.1	18.4	Ca	7.7	10.0	27.2	50.6		
9.7		41.7	7.4		9.5	9.1	46.9	2.2	a	9.4	10.0	51.6	27.2		8.4	33.4	33.0	C	8.0	
9.5		43.9	54.0		9.7	9.6	25.3	23.5		9.5	10.0	59.1	12.8		10.0	34.2	38.4		9.8	
9.8		54.7	57.5		9.5	10.0	37.2	34.8		9.4	9.4	45	1.6	32.9	9.3	9.4	56.4	26.4	9.5	
9.8		5.1	50.2		9.7	9.3	38.7	30.9	Ca	9.2	9.8	10.3	16.8	10.0	9.0	57.2	13.1		9.0	
9.2	24	2.9	44.8	C	9.0	9.8	39.0	14.4		9.8	7.4	11.5	56.5	Cal	7.2	9.0	58.2	9.0	9.4	
9.2		30.2	45.2		9.0	9.5	46.6	41.1		9.2	9.8	14.1	30.5		9.8	8.0	50.0	Ca	8.2	
8.6		30.2	52.0	C	8.3	9.4	49.5	28.4		9.2	9.4	26.4	12.0	a	9.4	9.8	8.1	50.2		
9.2		46.2	51.7		9.4	10.0	35	1.6	32.6	10.0	34.8	43.3	10.0	10.0	15.8	27.2				
9.4		52.2	45.6		9.5	10.0	8.3	41.4		10.0	49.1	7.2	10.0	10.0	33.5	23.0				
8.6	25	0.2	26.4	C	8.5	8.9	13.0	9.7	a	9.0	9.1	58.1	8.4	a	9.2	7.5	39.3	6.7	Cbl	7.6
8.4		12.9	17.2	Cbl	8.2	9.5	15.1	25.6		9.6	10.0	46	1.4	35.0	10.0	50.8	1.2			
9.5		29.2	3.2		9.4	10.0	36	35.6	1.2	9.9	1.8	40.1	10.0	9.5	56	0.1	19.6		9.5	
7.2		32.2	5.4	GCbl	6.3	8.2	37	1.4	6.2	C	8.3	8.9	8.1	32.3	9.3	9.9	1.8	13.2	Ca	9.8
9.5		45.9	9.9		9.6		3.1	38.5	a	9.1	9.1	18.1	8.3	9.5	9.2	20.5	42.0		9.0	
9.6	26	2.2	31.4		9.7	9.4	7.7	50.7		9.6	9.8	51.8	33.1		9.5	27.1	29.7		9.8	
9.2		16.4	4.8		9.5	9.6	11.2	51.5		10.0	47	10.7	29.7		9.6	37.1	13.8			
9.8		20.1	55.9		9.5	11.9	8.7		9.6	10.0	13.7	57.6	9.4	9.4	38.6	34.5				
9.8		22.2	9.2		9.5	15.9	19.0		9.4	10.0	21.7	28.0	10.0	57	0.1	46.3				
9.8		48.1	42.9		7.5	30.4	20.7	C	7.3	9.8	29.2	30.8	10.0	10.0	20.5	30.8				
9.8		55.8	42.4		10.0	42.2	19.9		9.8	9.8	38.9	8.1	9.8	9.8	21.1	57.2		10.0		
9.6	27	0.1	4.5		10.0	43.9	42.2		10.0	9.8	39.7	30.4	9.6	9.5	22.3	5.2		9.9		
9.8		9.3	24.2		10.0	47.7	20.9		9.5	9.8	58.4	18.8	9.5	10.0	24.8	14.5				
9.8		19.0	42.5		9.8	53.2	1.8		10.0	9.5	48	2.7	4.0	9.4	10.0	32.6	39.0			
9.8		47.8	8.9		9.6	38	1.2	7.1		9.9	10.0	2.8	4.5		9.2	51.1	20.8	G	10.0	
10.0	28	4.4	27.7		7.2	5.0	0.1	GCbl	7.2	10.0	16.4	42.0	9.1	9.1	51.3	39.1		Gatlr	9.1	
10.0		5.1	29.1		10.0	5.7	50.6		9.4		54.5	5.5	9.6	7.8	52.6	20.5			7.5	
25 ^{pr}	+ 1	14.8	-8.2																	
	+ 1	15.3	-8.3																	
	+ 1	15.9	-8.3																	
	+ 1	16.4	-8.4																	

1896AnCap...3....1G

5401-5460.				5461-5520.				5521-5580.				5581-5640.							
mag.	11 ^h -12 ^h .		-20°	mag.	12 ^h .		-20°	mag.	12 ^h .		-20°	mag.	12 ^h .		-20°				
	m	s			m	s			m	s			m	s					
10°0	57	55.3	38.1	9.8	10°0	8	0.9	1.5	9.7	17	13.2	47.3	9.9	10°0	29	36.4	14.0	10°	
10°0	58	8.6	41.3		9.4	2.5	41.3	9.5	9.4	34.7	12.6	9.8	9.4	49.9	30.2		9.2		
8°0	15.9	39.1	Cbl	8.5	9.9	9.4	18.6	10°	9.0	38.5	37.8	C	9.0	10°0	30	1.4	8.3		
9.7	30.6	44.7			10°0	9.9	35.0		9.4	49.8	34.9		9.5	9.8	2.4	33.3			
9.2	44.6	22.0		9.3	9.7	11.2	55.9		10°0	51.5	9.1		8.2	7.3	37.0	Ca	7.8		
10°0	57.2	1.2		8.8	28.6	49.7	MCa	8.9	9.2	18	7.2	7.4	9.2	8.8	20.3	14.8	C	9.1	
9.4	59	3.6	16.1	9.2	10°0	31.5	23.9		8.6	16.0	6.3	Ca	8.6	9.2	23.0	54.0	a	9.2	
10°0	15.1	2.9			7.2	32.2	8.9	Gblπ	6.1	30.2	58.3	Ca	8.8	9.8	25.8	44.3			
9.4	38.9	4.8	a	9.1	10°0	41.7	10.0		9.2	31.5	16.3	a	9.1	9.4	27.6	39.1		9.6	
8.8	40.6	58.7	Ca	9.0	9.7	54.6	56.5		9.5	9.0	45.0	20.5	Ca	9.0	9.4	56.0	23.0	9.3	
10°0	45.3	59.7		9.7	59.4	6.1		10°	8.7	48.0	32.1		9.1	9.6	31	21.1	46.0	9.7	
9.9	47.9	21.2		10°0	9	5.7	46.0		9.8	19	41.5	4.9	9.7	10°0	32.6	48.6			
9.7	59.1	50.1		9.0	12.9	42.2		9.1	9.7	46.2	30.9		10°	9.6	40.4	48.0		9.5	
9.8	0	1.6	15.0	9.8	9.9	40.1	28.6		9.7	20	48.5	23.1	9.5	9.2	40.4	42.4	b	9.1	
9.6	5.9	25.0			9.4	47.9	23.9		9.5	9.9	49.9	1.5		9.4	58.4	49.9	a	9.1	
9.4	7.1	30.4			9.9	48.6	35.9		8.0	21	0.7	31.9	C	7.8	9.4	59.4	56.1	9.4	
9.4	10.5	1.9		9.6	48.6	12.2	a	9.2	9.6	10.8	22.6		9.8	9.5	32	7.1	37.6	a	9.6
8.8	10.8	2.5	Ca	8.6	10°0	51.6	26.8		9.4	12.0	41.8		9.8	9.9	13.4	4.5			
9.4	13.1	24.9		9.8	10°0	57.6	43.8		9.4	21.8	9.8		9.5	10°0	27.6	1.0			
10°0	22.8	10.7		9.5	10	18.1	53.6		9.4	47.8	19.2		9.5	10°0	33.1	19.8			
10°0	23.5	13.7		9.0	22.8	18.5	Ma	9.3	9.5	52.3	33.6		9.5	10°0	56.6	6.6			
9.6	32.2	44.7		9.6	9.9	26.3	26.0		9.5	55.3	0.9		9.3	10°0	33	0.0	19.4		
10°0	36.5	7.2		9.5	38.3	9.1	a	9.4	9.7	22	4.6	36.4		10°0	11.7	8.0		10°	
10°0	39.8	13.3		9.0	56.6	21.5	a	9.0	10°0	50.6	11.9		8.7	19.3	16.9	Cb	8.5		
10°0	49.8	0.9		9.8	11	3.3	26.1		9.0	56.6	42.6	C	8.3	9.2	24.1	32.7	a	9.4	
10°0	57.5	31.8		10°0	8.8	25.7			9.7	58.6	34.7		9.8	10°0	26.0	12.5			
9.2	1	0.2	54.3	a	9.2	21.6	48.5	9.8	10°0	23	0.6	37.1		9.9	47.3	36.0			
9.9	1.5	10.5		8.1	23.0	10.1	Cal	8.6	10°0	16.8	9.6		9.2	49.3	35.7	a	9.3		
10°0	12.2	52.5		10°0	23.2	21.7			9.7	31.1	5.7		9.8	10°0	50.0	34.9			
9.8	19.8	39.5		9.7	38.8	20.4			9.8	37.6	7.8		9.4	34	19.0	48.2	a	9.3	
10°0	30.0	10.9		7.5	46.5	8.8	Cbl	7.5	9.4	38.6	56.9		9.4	10°0	28.0	22.5			
9.4	55.0	21.7		9.1	10°0	57.0	40.3		9.0	24	16.0	57.1	Ca	8.4	9.9	46.6	58.0		
10°0	2	22.5	15.0	8.1	59.0	6.9	Cbl	8.0	10°0	18.0	44.7		9.0	9.0	50.1	18.9		9.2	
7.6	3	6.8	21.3	7.8	12	2.2	11.5		9.3	21.8	2.7		9.1	9.2	35	4.1	59.9	a	8.8
10°0	25.4	28.8		9.5	9.2	57.9		9.5	9.6	25	4.0	40.5		9.9	8.8	9.9	14.1	C	8.8
10°0	4	1.6	42.9	8.6	26.2	49.7	Ca	8.2	9.6	6.3	56.1		9.4	9.8	21.3	41.8			
10°0	15.5	58.0		10°0	51.8	3.3			7.9	21.7	17.5	GCal	7.3	9.6	37.1	25.9			
9.4	24.0	19.7		9.4	54.8	29.1		9.6	9.9	26.1	58.3		9.9	9.7	40.6	4.6		9.7	
8.6	33.7	12.6	C	8.9	9.7	2.9	57.3		9.4	33.0	39.3		9.5	10°0	45.3	30.3			
10°0	36.1	24.0		8.6	13	27.8	47.9	Ca	8.8	41.9	44.1		9.4	9.4	47.9	4.7		9.6	
9.4	40.1	7.0		9.3	10°0	29.3	0.4		9.4	51.5	37.7		9.2	9.4	56.1	23.8		9.5	
10°0	42.1	25.7		9.6	30.3	57.3	a	9.3	9.4	55.0	37.9		9.4	9.8	59.1	18.3			
9.9	49.2	39.7		9.8	59.0	38.0		9.9	7.4	26	1.5	31.2	Gbl	6.5	10°0	36	0.2	48.2	
9.4	52.2	56.7		9.3	14	4.0	8.3		9.2	9.3	20.9	29.2		9.3	10°0	11.2	22.4		
9.2	5	5.7	28.3	9.2	10°0	29.3	24.3		8.6	43.1	23.7		8.5	9.6	24.9	30.2	a	9.7	
9.6	10.1	11.8		9.6	9.6	41.8	22.7		9.5	9.8	58.9	56.0		9.5	9.8	38.4	52.2		
10°0	22.1	10.9		8.8	45.8	0.9		9.1	9.8	27	21.5	42.2		9.9	46.6	59.8			
9.5	6	1.4	5.9	9.6	9.7	50.6	40.4		9.6	35.0	36.6		9.1	9.1	54.4	41.0	a	9.1	
10°0	7.7	31.3		9.4	15	0.1	55.1	a	9.4	50.2	50.7		9.3	9.4	37	2.3	44.2		9.6
9.1	14.0	38.1		9.4	9.4	22.8	58.3	a	9.6	10°0	50.7	24.5		9.7	14.3	4.8		9.8	
9.2	41.9	2.5	C	8.7	9.6	51.1	7.6		9.6	10°0	54.7	15.5		10°0	26.0	24.8			
9.2	47.0	43.5	C	9.1	10°0	16	1.6	20.4		9.6	55.0	41.2		9.6	9.8	29.6	19.9		9.8
9.5	53.3	49.9		9.1	9.6	9.6	14.7		9.7	10°0	28	22.5	2.3		9.5	47.0	51.6	b	9.3
9.5	57.0	31.8		9.8	9.4	10.6	34.3	a	9.5	9.2	23.7	8.8	b	8.8	9.6	49.6	42.8		9.7
8.3	7	4.0	13.4	8.0	8.4	29.3	20.0	Ca	8.9	7.9	24.8	31.6	C	8.4	9.0	52.7	59.0	a	9.0
8.4	8.5	22.7	C	8.0	9.6	39.0	37.1		10°	9.4	47.0	59.3	a	9.4	10°0	58.6	35.8		
8.4	9.7	56.3	Gatlr	8.5	9.6	41.7	44.8		9.8	9.8	58.0	3.0		9.7	10°0	38	16.8	26.3	
9.5	20.5	12.6		9.7	9.6	54.2	48.1		9.8	9.4	29	3.7	4.6	9.6	10°0	30.0	28.5		
9.0	28.3	52.3	a	9.1	9.8	57.0	31.8		10°0	11.4	4.3			9.9	30.3	31.6			
10°0	40.5	10.4		9.4	17	1.5	1.5	a	9.2	9.9	12.0	53.2		9.5	31.0	23.9		9.5	
25pr.	+ 1	16.9	-8.4		+ 1	17.4	-8.3			+ 1	18.1	-8.3			+ 1	18.6	-8.3		

5641-5700.				5701-5780.				5761-5820.				5821-5880.									
12 ^h .		-20°		12 ^h -13 ^h .		-20°		13 ^h .		-20°		13 ^h -14 ^h .		-20°							
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s						
38	45.0	0.6		9.4	48	36.7	41.1	9.5	9.6	13	6.6	1.8	9.4	7.6	42	5.4	7.5	CWal	7.0		
8.8	52.0	52.7	a	9.1	9.9	40.9	0.9	9.8	9.3	13.8	1.2	9.4	8.6	12.4	14.5	u			9.0		
10.0	39	8.3	11.1		10.0	42.2	41.0	9.6	10.0	26.1	9.2	9.5	8.6	18.4	12.3	a			9.1		
9.9	25.0	10.3		9.4	9.6	50.1	59.7	9.7	7.8	45.1	13.2	7.8	10.0	35.4	31.6				9.7		
9.2	27.6	25.5		8.8	10.0	49	25.7	27.2	9.8	10.0	14	49.8	35.0	52.0	11.0				9.8		
8.7	51.6	9.9	C		10.0	50	43.5	38.0	9.8	9.4	15	9.1	29.1	43	19.9	38.7	C		8.8		
10.0	58.3	22.2			9.0	51	51.5	10.7	9.1	9.4	10.8	0.6	9.5	9.0	22.4	14.8	GWtlπ		7.2		
9.7	40	6.6	20.6		10.0	51	7.5	41.7	9.5	8.8	15.0	59.7	9.0	9.4	29.4	29.3			9.0		
9.7	19.0	49.2			8.0	7.5	11.6	C	8.5	8.4	33.6	12.3	8.5	8.3	44	2.4	47.0	Ca	8.5		
10.0	21.6	34.8			10.0	48.6	0.0		10.0	9.6	40.6	3.1	9.7	8.0	5.4	21.7	Gatlπ		7.7		
9.6	23.6	36.3		10.0	9.6	52	7.5	25.0	9.1	8.4	16	4.1	45.5	8.0	10.0	32.2	37.2				
10.0	29.2	33.5			10.0	15.5	41.0		9.8	9.8	30.6	53.5	9.3	10.0	32.2	36.1			10.0		
9.5	32.2	28.3		9.5	7.6	17.0	52.2	Gbtlπ	6.8	7.5	17	11.7	16.2	7.0	10.0	51.8	57.8		9.8		
9.4	35.6	7.4		9.4	10.0	26.5	50.4		9.4	9.4	13.2	5.3	9.4	9.0	59.4	20.2			9.3		
9.8	40.6	27.2			8.5	37.0	47.6		9.0	9.2	42.7	37.4	9.3	9.0	45	49.9	20.2		9.3		
9.7	41.9	17.8			9.0	53	8.5	42.6	9.0	8.8	19	10.2	25.7	9.2	10.0	46	36.9	55.4		9.6	
8.4	50.6	46.9	Cal	8.2	9.4	15.0	37.8		9.4	9.2	20	15.2	3.6	9.4	9.4	41.9	52.2		9.4		
9.8	53.2	16.2			9.0	22.0	38.7		9.2	9.0	21	41.9	57.6	9.3	8.1	55.8	36.1	Cbl	8.3		
9.6	59.7	1.1			7.7	54	17.5	45.0	Cbl	7.8	9.3	34.3	42.3	9.3	9.4	59.3	2.9		9.4		
9.9	41	14.8	58.0		7.6	34.5	6.2		GCbl	7.2	8.8	22	48.7	11.2	9.0	8.1	47	56.8	53.6	Cal	8.0
9.6	34.4	16.5		9.6	10.0	55	6.7	58.0	9.6	9.6	23	25.7	34.8	9.5	10.0	48	4.7	57.5			
9.0	34.7	14.2		9.5	8.4	56	32.5	32.1	C	8.5	9.0	24	25.7	46.2	8.8	9.4	10.3	36.7		9.0	
10.0	42	9.5	31.4		9.4	57	22.5	50.0		9.4	9.4	33.2	10.0	9.6	9.6	20.8	44.3			9.5	
9.8	38.9	59.0			9.6	47.5	56.3		9.2	9.8	39.7	11.5	9.0	9.0	30.7	57.0	a		9.0		
9.6	38.9	30.1		9.7	7.3	58	12.0	50.8	Cbl	7.5	8.8	25	15.7	18.3	8.8	9.6	36.4	23.5		9.5	
9.8	50.4	46.4		9.5	10.0	44.2	22.1		9.8	9.1	35.7	48.1	9.2	9.0	49	53.2	9.6	C	8.8		
8.7	43	11.9	34.3	Cb	8.7	50.2	49.3		?	9.4	9.4	55.7	6.3	9.3	8.8	55.9	14.3		9.0		
10.0	26.2	12.1			10.0	53.5	20.3		9.6	9.6	26	6.7	21.2	9.7	9.6	50	10.4	1.5		9.4	
9.8	39.9	44.8		10.0	9.6	59	39.5	46.0	9.4	10.0	23.2	45.6	9.2	9.2	22.9	7.1			9.6		
9.7	41.7	43.2		10.0	10.0	57.2	39.7		9.6	9.6	27	2.3	10.7	8.4	58.9	59.1	Ca		8.5		
9.6	48.9	34.0		8.3	0	0.5	30.7	C	9.0	9.8	23.7	29.4	9.0	8.0	51	4.4	2.1	Ca	8.5		
9.2	56.7	35.6		: 9.4	8.6	4.5	30.6	C	9.1	10.0	34.0	14.6	9.7	9.5	32.4	5.9			9.7		
9.7	58.9	27.7			7.4	12.0	48.4		9.8	9.8	28	30.7	51.9	9.4	9.5	52	5.4	54.5		9.1	
9.9	44	4.4	6.4		7.2	25.0	7.9		9.5	9.2	29	59.7	8.9	9.1	10.0	41.9	12.9		9.5		
9.8	4.9	15.1			9.0	27.5	40.6		9.5	9.6	30	27.3	57.8	9.2	9.4	54	20.9	21.8		9.1	
9.8	11.7	31.8			8.6	46.5	12.6	a	9.1	9.4	47.7	56.1	9.3	10.0	35.9	59.2			9.5		
9.9	19.9	20.9			8.4	1	4.0	20.1	Ca	9.2	8.5	31	22.7	7.5	8.8	8.9	44.4	23.5		9.1	
9.7	21.7	32.6			9.8	2	3.0	2.3		8.7	58.7	57.0	Ca	8.5	9.2	55	5.9	31.3		9.0	
9.0	23.2	33.5	Ca	8.7	9.4	3	4.2	23.6		9.5	9.1	33	46.2	17.5	9.1	9.9	29.4	8.3		9.6	
10.0	36.2	29.0			8.6	4	22.7	42.3	Ca	8.6	10.0	34	3.7	10.5	9.5	8.8	36.1	17.1	a	9.1	
9.7	55.7	32.3		10.0	8.5	5	2.1	0.8	Ca	8.7	9.1	10.2	6.9	Ca	9.1	9.4	45.4	16.8	a	9.3	
9.9	45	39.5	31.2		9.1	5.2	29.0		9.1	9.3	36	36.2	55.9	9.5	9.1	56	16.9	24.7		9.1	
9.0	59.5	14.7	a		7.9	26.2	13.1	Ca	7.5	8.5	54.2	34.8	Ca	8.5	9.4	29.4	35.8			9.2	
9.6	46	5.9	23.1		10.0	33.2	38.6		9.5	9.4	37	3.2	53.1	9.3	9.1	39.9	11.1	Ca		8.7	
9.9	37.6	17.5		10.0	10.0	6	1.7	4.8		9.0	13.7	12.9	C	8.9	9.4	52.4	6.5			9.5	
9.9	41.4	48.5			9.6	43.7	36.3		9.7	8.6	36.2	35.5	Ca	8.7	8.0	57	10.4	42.6	Ca	8.1	
9.8	44.6	3.7			10.0	53.1	8.0		9.1	9.4	38	32.3	52.4	9.2	9.4	32.4	3.8			9.6	
9.9	46.1	45.8			9.4	53.2	40.4		9.1	9.6	56.3	11.5	9.4	8.7	58	8.4	58.9	Ca		8.7	
9.7	46.3	30.1		9.6	9.0	7	39.8	50.3		9.2	9.6	56.8	42.3	C	9.2	9.9	55.9	36.0		9.5	
9.0	53.3	37.1	C	8.7	9.1	8	8.3	42.2	C	9.0	9.8	59.3	48.7		9.8	9.9	59	36.9	38.3		
10.0	57.4	12.3			9.2	14.0	13.1	a	9.1	9.4	39	19.3	52.6	9.3	8.9	45.4	4.4			9.3	
9.8	47	4.1	43.2		8.8	30.9	54.2	b	8.8	9.6	35.8	53.9	9.5	9.6	51.9	9.1				9.8	
9.8	6.6	20.6			10.0	9	6.9	51.0		10.0	42.8	2.4	9.3	9.2	0	36.4	28.7			9.2	
9.6	8.3	6.6			8.8	11.9	16.0	Ca	8.7	7.8	55.3	13.7	C	7.8	9.6	45.9	53.4			9.2	
9.7	29.3	50.8		10.0	9.3	36.4	5.5		9.5	8.7	40	7.3	2.4	9.0	8.0	55.9	35.7	Ca		8.0	
10.0	41.3	4.6			8.6	10	36.1	21.8	Ca	9.0	10.0	15.8	11.8	9.8	10.0	57.9	43.8			9.8	
9.2	47.3	32.6		8.8	7.8	38.6	52.7	Ca	7.8	8.4	17.3	50.4	C	8.8	9.6	1	22.9	0.8		9.3	
9.0	48	6.7	37.9		9.1	11	0.6	47.9	a	9.1	8.7	24.8	13.8	C	8.9	8.8	42.2	56.9	a		9.0
9.8	7.6	30.5		9.5	9.2	12	50.1	34.2	C	9.0	9.4	43.8	53.2		9.6	9.6	2	23.9	32.3		9.5
10.0	14.3	45.0			9.4	13	4.6	22.4		9.9	9.4	41	17.9	8.3	9.4	9.4	37.4	40.1		9.1	
25pr.	+1	19.2	-8.2			+1	20.0	-8.1			+1	21.5	-7.8			+1	22.6	-7.4			

1896AnCap...3...1G

5881-5940.				5941-6000.				6001-6060.				6061-6120.				
mag.	14 ^h .	-20°		mag.	14 ^h .	-20°		mag.	14 ^h .	-20°		mag.	14 ^h -15 ^h .	-20°		
	m s			m s				m s				m s				
8.4	2 40.4	36.1	Cbl	8.3	9.6	22 36.9	16.9	8.0	44 39.8	6.0	Cb	7.9	10.0	57 23.5	58.9	
8.2	3 5.9	38.5	Cal	8.2	10.0	36.9	59.5	8.6	45 4.3	17.9	Ca	8.5	10.2	58 0.3	44.8	
9.2	32.4	45.4		9.2	8.8	46.9	24.2	a	9.2	9.8		9.5	9.6	11.1	27.2	
9.6	39.6	58.3		9.4	9.6	23 13.4	55.8	Ca	9.7	9.6		9.4	10.2	30.4	30.8	
9.6	45.9	14.5		9.7	8.9	21.4	56.5	Ca	8.6	9.9		9.4	9.8	41.8	56.6	
9.6	50.4	54.1		9.7	9.4	25.4	23.3		9.6	9.8		9.3	10.0	49.4	6.5	
9.6	4 6.9	6.2		10.0	9.6	36.4	47.7		9.8	9.9		9.3	9.6	53.6	49.9	
9.2	6 3.9	34.8		9.3	9.0	48.4	41.7	a	9.4	9.2		8.9	9.8	59 5.1	29.2	
10.0	7 15.2	56.4		9.5	7.8	50.4	9.7	GCbl	7.3	10.2		10.2	10.2	49.8	47.9	
8.0	53.9	28.9	Cal	7.2	9.3	57.4	48.0	a	9.2	10.2		9.5	10.1	57.1	26.3	
10.0	8 46.8	7.2		9.8	9.0	24 2.4	9.1	C	9.0	10.0		9.4	10.0	0 4.4	11.6	
9.4	9 54.4	17.4		9.3	10.0	3.4	42.6		10.2	10.2		9.9	9.9	15.6	19.5	
9.2	10 5.9	44.9	C	8.8	8.2	59.4	23.5	Cbl	7.9	9.8		9.2	8.4	15.7	13.0	
9.2	28.9	44.8		8.9	8.8	25 12.4	1.1		9.4	9.9		9.6	10.2	17.1	34.3	
9.0	40.4	10.7	C	8.3	10.0	17.4	15.1	Cal	8.7	9.6		9.4	9.6	20.1	14.4	
9.2	40.9	10.4		9.8	10.0	32.4	39.1		8.3	10.2		8.7	9.4	29.0	53.7	
10.0	53.9	3.9		9.8	10.0	42.4	38.5		10.2	10.2		9.8	9.8	29.9	6.0	
10.0	53.9	10.8		9.7	9.7	43.4	41.1		9.8	10.1		9.3	10.2	32.9	9.8	
9.3	11 20.4	5.6		9.4	9.4	57.4	44.1		9.5	9.8		9.5	9.5	51.0	22.1	
9.3	27.1	2.4		9.5	9.6	26 5.9	51.7		10.2	10.7		8.2	1 37.8	12.7	Ck	
10.0	48.7	2.3		9.3	9.3	40.4	17.1	Cal	9.3	7.0		6.0	10.1	46.1	30.3	
9.8	12 35.4	45.6		9.4	8.0	43.6	28.9	Cal	8.3	10.2		9.7	10.2	46.9	11.2	
8.0	49.9	17.8	Cal	8.0	10.0	27 8.9	54.8		9.6	9.9		9.7	10.2	2 37.6	19.4	
9.3	13 16.4	24.7		9.0	9.4	9.4	18.8		9.9	9.9		9.7	10.2	39.1	48.0	
9.6	35.4	55.8		9.5	9.3	42.6	34.7		9.2	10.1		9.7	10.2	40.1	2.5	
9.0	53.9	45.0		9.5	10.0	28 13.4	20.4		10.0	10.0		9.5	10.2	44.2	46.9	
10.0	57.4	25.1		9.7	10.0	28.1	1.3		9.5	5.1		9.5	9.6	49.6	44.9	
8.9	14 50.9	7.1		8.8	8.8	31.4	4.4		9.3	10.0		9.5	10.2	51.1	5.1	
9.7	15 12.9	58.9		9.8	9.8	53.4	55.0		9.7	10.2		9.1	9.1	3 4.9	5.2	
7.7	35.4	11.1	Ca	7.1	8.8	58.1	22.4		9.1	9.9		9.5	9.6	5.2	43.4	
10.0	16 2.9	4.3		9.8	9.9	30 21.8	33.3		9.8	9.6		9.5	9.8	14.9	41.8	
10.0	20.4	52.3		10.0	9.4	26.3	15.1		9.5	9.2	C	9.0	10.1	4 0.1	30.9	
9.4	31.9	39.6		9.2	9.0	31 3.3	46.3		8.8	9.9		10.2	10.2	11.6	4.6	
10.0	47.4	25.8		9.0	9.6	46.5	57.6		9.5	10.2		9.2	9.2	20.5	12.7	
10.0	51.9	42.9		9.0	9.0	53.3	23.8	a	9.1	10.0		9.8	9.8	21.4	50.1	
10.0	17 23.4	2.9		9.5	9.2	33 20.3	18.5		9.2	10.0		9.8	10.0	39.6	39.0	
8.6	58.4	18.3	C	8.0	9.8	25.3	8.9		9.4	10.2		9.8	10.2	45.1	17.0	
10.0	18 26.4	31.3		9.4	9.4	49.8	1.4		9.5	9.6		9.8	9.6	45.6	11.0	
9.2	35.9	49.9		9.3	9.9	34 5.3	37.6		9.9	9.8		9.9	9.9	50.9	37.5	
10.0	39.4	25.7		9.2	9.2	5.3	8.5		9.5	9.4		9.2	9.0	50.9	39.1	
8.4	44.4	51.9	C	7.7	9.4	16.3	20.6		9.8	8.0	Cbl	8.5	9.6	51.4	45.7	
9.6	53.9	33.8		8.2	8.2	35 29.3	39.5	Cbl	8.3	9.6		9.5	9.6	55.6	16.5	
10.0	19 18.4	31.5		9.2	9.2	48.3	14.6	a	9.1	9.9		9.4	9.4	5 11.4	4.3	
9.6	24.4	22.2		9.5	9.0	36 29.3	23.5	a	9.2	10.1		9.2	10.2	24.4	19.2	
8.2	31.4	27.1	C	8.5	9.8	37 10.8	6.4		9.4	10.1		9.2	8.9	25.1	28.2	
9.4	37.4	29.2		9.4	9.4	30.3	56.7	Gtlπμ	9.3	10.2		9.2	10.2	50.1	16.0	
10.0	50.9	37.9		7.1	39 5.8	38.7	6.4		9.4	9.5		9.3	9.9	6 0.9	4.9	
9.4	4.9	33.6		9.5	9.2	16.3	37.0	C	9.0	8.6		8.5	9.9	8.2	25.9	
9.6	18.4	8.8		9.5	9.9	17.3	38.6		9.5	8.7	Ca	8.6	10.0	21.2	28.0	
10.0	23.4	54.6		9.5	7.6	40 7.3	48.0	Gtlπμ	6.3	9.6	Ca	9.7	9.8	21.2	34.3	
8.4	36.4	14.9	Cb	8.9	9.9	41.3	46.4		9.8	9.8		10.2	10.2	21.6	19.2	
8.8	38.4	20.2	Ca	9.1	9.8	53.8	20.2	a	9.2	10.1		10.2	10.2	32.0	30.2	
10.0	39.4	42.7		9.9	9.9	41 44.3	47.1		9.8	10.2		10.2	10.2	57.2	0.8	
9.0	42.4	21.1	Ca	9.2	9.0	42 47.8	1.4	Ca	9.0	10.1		9.6	9.6	7 4.7	48.2	
9.3	50.9	8.3		9.5	9.0	43 11.8	9.0	a	8.9	8.9		9.2	10.1	11.0	39.3	
9.4	15.4	41.9		9.4	9.0	25.8	15.0	Ca	8.8	9.2		8.9	9.0	16.1	14.2	
7.6	17.4	0.2	Cbl	8.0	9.4	48.8	9.0	a	9.4	9.4		9.7	10.2	26.8	4.5	
9.7	38.7	11.4		9.8	9.8	44 1.3	38.3		9.6	10.0		9.7	10.2	30.2	12.8	
9.3	42.4	44.4		9.6	9.9	4.8	13.1		9.7	10.2		9.7	10.2	34.2	11.8	
10.0	22 21.9	57.4		9.9	9.9	11.8	6.0		9.4	10.1		9.8	9.8	52.9	22.4	
25pr.	+1 23.8	-6.9				+1 24.4	-6.6				+1 25.3	-6.1			+1 25.7	-5.8

6121-6180.				6181-6240.				6241-6300.				6301-6360.								
15 ^h .		-20°		15 ^h .		-20°		15 ^h -16 ^h .		-20°		16 ^h .		-20°						
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s					
8	24.2	17.1	9.5	23	23.1	17.6	Gal	6.7	7.5	42	23.5	23.4	Cb	7.5	9.8					
8	26.9	35.9	9.4	9.0	35.1	36.4		9.1	7.6	43	13.5	27.8	Cal	8.1	9.4					
9	32.6	7.4	9.2	10.2	24	35.1	14.1	9.7	9.4	9.5	10.0	16.5	20.0	9.1	9.4					
8	35.4	28.4	CWal	8.5	8.2	43.1	12.0	Cal	8.5	10.0	41.0	25.4	9.5	9.4	4	31.1				
10	3.9	15.7		9.7	9.6	44.6	4.8	9.4	8.7	9.4	51.0	35.8	a	9.0	8.7	35.1				
9	51.9	8.7	a	9.1	9.6	46.6	5.8	9.5	7.5	44	13.6	12.4	Cbl	7.3	10.2	5	21.6			
10	59.9	55.0		9.4	10.1	25	16.2	59.3	9.3	9.0	17.1	32.2	a	8.8	9.2	23.6	52.3			
9	14.4	22.3	a	9.0	10.2	23.1	45.9	9.7	10.0	45	9.1	30.3		9.6	6.6	6	5.6			
9	33.9	17.9		9.2	9.1	26.1	26.1	C	9.0	10.0	43.6	4.2	2	9.6	6.6	7	7.9			
8	39.9	15.4	CWal	8.0	9.8	26.1	49.9	9.7	9.4	9.7	55.6	34.5		9.7	10.0	25.3	55.2			
9	2.9	22.5		9.5	9.8	39.6	12.3	a	9.3	10.0	46	7.1	3.3	9.6	10.2	9	3.5			
8	9.1	24.0	CWal	8.2	9.4	51.6	13.5	a	9.4	10.0	49.6	9.0		9.7	10.0	18.4	41.7			
8	12.1	36.0		9.1	9.4	26	1.1	14.1	9.8	10.2	47	18.7	24.3	9.4	9.0	33.2	28.1			
10	26.6	29.8	a	9.2	9.4	17.6	28.1		9.4	8.9	31.9	26.9	Ca	8.3	6.4	37.0	59.5			
8	32.1	38.7	CWkal	8.2	10.1	21.7	38.2		8.4	8.4	46.2	25.3	Ca	8.9	10.0	10	27.0			
9	34.1	4.5	a	9.2	8.2	29.1	7.5	Cal	8.5	10.2	55.9	18.9		9.4	9.4	11	13.9			
10	2.1	33.0		9.5	10.1	41.1	21.0		9.8	9.4	48	28.9	34.5	C	8.8	7.8	12	35.4		
10	6.6	34.4		7.5	54.1	53.4	C-	7.9	9.8	9.0	37.3	15.7		9.2	9.3	13	21.9			
7	37.6	24.6	CWal	8.1	9.6	27	43.6	38.1	9.0	10.2	53.1	8.1		9.4	10.0	37.7	38.8			
9	17.1	3.7		9.7	8.0	56.6	35.2	Cb-1	8.4	8.5	49	4.7	24.3	Cal	8.2	9.2	52.9	23.2		
9	51.1	18.6		9.4	10.1	28	20.7	50.1	9.6	8.6	21.4	3.9	Ca	8.3	9.3	55.9	57.9			
10	54.6	54.5		9.5	10.0	22.6	55.3		9.9	6.1	50	23.2	37.1	GWacl	6.5	10.0	14	32.9		
9	54.6	0.0	G	9.3	9.8	33.8	51.1		9.9	7.2	51	12.7	31.9	CWal	7.5	9.6	15	5.4		
9	1.6	2.9		9.5	10.2	41.6	55.2		9.9	8.1	42.2	39.3	Cal	8.5	9.6	12.9	44.0			
9	26.1	10.9	a	9.3	9.8	51.6	17.4		9.0	9.4	52	26.7	36.6	a	9.1	9.3	22.4	13.4		
9	28.6	12.8		9.5	8.7	55.1	1.3		9.0	9.4	42.2	26.3	a	9.5	9.6	22.9	18.4			
9	42.6	31.3		9.6	10.0	29	21.6	10.0	9.2	9.2	42.7	3.4		9.0	9.2	48.5	59.3			
10	3.3	59.8		9.2	55.0	51.1			8.8	9.4	43.6	20.7		9.3	9.4	16	13.9			
8	11.6	43.8	a	8.7	10.0	30	26.2	58.7	9.4	10.2	53	12.6	14.9		9.5	9.6	22.9	9.8		
9	17.1	16.5	a	9.1	9.3	56.0	57.2	C	8.8	8.7	17.6	5.7		8.9	9.4	56.9	59.4			
10	21.1	37.4	a	9.4	6.9	31	1.0	36.1	G	5.8	7.8	46.6	48.0	Cal	7.5	9.4	18	3.6		
9	22.1	15.7	a	9.1	10.0	13.0	5.5		9.5	10.2	54	23.1	34.5		9.6	9.8	12.4	11.2		
9	32.0	1.0		9.5	9.7	25.0	22.6		9.3	8.8	46.6	24.2	Ca	9.0	10.0	46.7	9.8			
9	22.1	6.2		9.4	8.5	44.5	51.9		8.9	10.2	55	12.6	9.0	a	9.2	9.3	20	29.4		
9	58.1	23.7	Ca	8.6	8.2	46.0	10.3	a	8.7	9.6	42.6	37.4		9.4	9.4	21	31.4			
9	2.6	17.1		9.0	8.6	57.5	49.0		9.2	10.0	45.6	7.3	a	9.4	10.0	53.4	29.2			
9	26.1	35.2		9.5	8.2	32	25.0	36.4	Cal	8.2	9.6	57	35.4	33.2		9.0	9.8	55.9	52.5	
10	32.6	34.2		9.9	9.5	33	8.0	33.5	Ca	9.1	8.0	36.6	33.2	Gb-π	8.2	10.0	23	4.9		
10	52.1	17.8		9.5	10.0	19.0	4.3		9.5	9.0	58	8.1	9.0		9.1	10.0	9.7	31.4		
10	32.6	9.6		9.5	8.6	28.0	46.9	a	9.1	8.9	9.1	13.6		9.0	9.3	30.4	32.9	Ca	8.9	
7	51.6	56.3	GWtlπ	7.0	9.2	46.7	0.4		9.3	10.2	16.6	38.7		9.5	9.8	24	21.9	17.5	9.5	
10	54.4	27.9		9.3	9.3	34	45.5	6.7	9.3	9.6	20.6	12.2		9.1	10.0	24.9	45.5		9.7	
10	55.4	3.5		9.3	10.0	53.0	10.9		9.3	7.9	20.6	5.8	Cb-	7.7	10.0	56.4	35.6			
9	1.1	26.5		9.7	8.8	56.5	54.3	a	9.1	8.5	34.6	8.4		8.9	9.0	59.4	30.8	Wa	9.0	
9	1.6	46.3		9.5	9.5	36	2.0	19.5		9.1	35.1	48.6	Ca	8.5	8.6	25	3.9	29.0	CWal	8.5
8	22.6	3.4	Ca	8.7	8.2	3	5	42.9	Ca	8.4	9.0	59	9.1	54.2		9.1	9.4	20.3	43.1	9.3
9	32.1	46.1		9.3	10.0	27.5	34.5		9.5	3.7	29.1	19.6	Gλπμβ	4.7	8.8	34.8	3.6		9.0	
8	53.1	17.9	Cal	8.3	10.0	37	38.0	47.2		9.6	30.6	48.7		9.5	10.0	55.0	24.9			
9	54.1	32.4		9.6	9.2	38	53.5	6.9	9.1	9.6	38.7	57.4		9.1	9.2	26	22.8	16.3	9.3	
7	4.1	46.2	Gatlπ	7.7	10.0	53.6	0.6		9.3	5.4	0	5.1	31.7	GSpμβ	5.0	9.4	24.8	14.2		9.6
9	4.2	56.5	a	9.2	10.0	39	37.0	56.7		9.1	6.6	36.2	CWbl	8.5	9.4	33.8	41.6		9.5	
10	30.6	52.8		7.6	7.6	40	6.0	4.5	CKb-1	7.6	10.2	23.6	38.2		9.5	10.0	51.3	30.6		9.6
9	51.6	5.2		9.4	8.2	14.0	50.5	CWb-1	7.8	10.2	47.6	25.8	a	9.2	10.0	27	34.8	46.2	9.5	
9	7.9	58.4	a	9.2	9.2	35.0	11.0		9.0	9.0	53.1	28.9	a	9.0	10.0	36.3	37.7		9.4	
10	26.1	48.8		9.3	9.3	55.5	32.7		9.6	8.0	1	16.6	25.2	Cal	8.5	9.0	51.1	3.4	K	9.1
10	33.6	32.8		8.6	8.6	41	7.5	0.4	Cb-	8.5	10.2	18.5	1.8		9.5	10.0	28	24.9	12.2	9.4
10	38.6	12.6		10	8.7	28.5	49.8	Ca	8.4	10.2	50.4	18.6		9.6	9.6	38.6	32.5		9.4	
9	8.6	10.8	a	9.0	8.4	40.0	3.7	Cb	7.7	9.6	2	3.6	35.5		9.5	9.2	46.3	27.2		9.1
10	9.6	51.1		10.0	10.0	42	20.0	2.1	9.3	8.9	16.6	16.9	Cal	8.3	9.6	52.7	0.2		9.6	
9	13.1	49.1		9.3	8.2	20.0	4.8		8.5	9.6	17.1	30.0		9.4	8.7	53.1	50.5	a	9.1	
25pr.	+1 26.2	-5.5				+1 26.7	-5.1				+1 27.5	-4.4					+1 28.0	-3.6		

6361-6420.				6421-6480.				6481-6540.				6541-6600.				
16h.		-20°		16h.-17h.		-20°		17h.		-20°		17h.		-20°		
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s		
9.9	29	12.9	10.3	9.5	9.4	53	47.8	45.4	9.5	7.4	3	39.1	29.4	9.6	9.5	
9.4		18.8	2.1	9.2	7.3		51.3	14.9	7.0	8.2		40.1	39.8	9.0	9.5	
8.5		21.9	17.3	9.0	10.0		59.0	35.0		7.4		57.6	16.0	8.7	9.2	
9.8		55.9	7.1	9.2	9.5		59.7	50.5	9.0	10.2	4	26.1	15.3	8.0	8.5	
9.4	30	2.1	15.8	9.0	9.0	54	5.7	45.2	a	9.1	9.8	46.6	28.0	9.5	7.3	
9.9		29.9	38.9	9.3	9.8		6.2	19.2		9.4	9.6	53.1	37.1	9.0	9.4	
9.9	31	12.9	29.0	9.3	9.1		22.7	41.0		9.0	8.8	53.6	50.2	9.1	9.1	
9.8	33	8.4	9.2	8.8	8.7		36.2	15.8	a	9.1	9.6	5	0.6	32.1	9.5	8.4
7.5		12.4	9.8	10.2	8.7		37.2	19.6		9.5	9.0		2.1	59.3	9.2	9.7
9.8	34	11.7	29.5	9.3	8.0		37.7	24.6	CWal	7.8	10.2		15.6	30.0	9.5	8.7
9.6		22.9	58.0	9.1	9.0	55	25.7	15.4	a	8.9	10.2		33.1	14.0	8.2	17.4
9.8		54.7	14.0	9.2	9.0		26.2	58.4		9.5	9.4		40.1	7.3	9.2	9.4
9.0	36	12.2	24.3	9.2	10.2		39.7	6.6			10.2		46.6	48.5	9.7	8.2
7.9		14.7	27.4	7.5	10.2	56	14.7	16.2			10.0		51.6	49.4	9.7	9.2
9.4		31.2	35.8	9.3	10.2		16.2	41.0	10.	8.4			54.6	26.1	a	8.5
9.8		42.7	31.3	9.6	8.2		23.2	12.6	al	8.5	10.2	6	8.6	1.1	9.5	9.8
9.9	37	21.7	13.7	9.5	10.0		25.2	7.6		9.5	10.2		16.1	48.1	10.	9.4
9.9		50.7	26.2	10.	9.2		31.7	42.4		9.3	10.0		34.4	18.4	10.	8.9
9.8	38	21.7	15.2	9.8	7.7		33.7	17.6	al	8.2	10.2	7	7.4	47.9	9.7	9.8
8.8	40	38.7	22.5	9.2	8.0		50.2	51.9	Ca	8.5	10.2		10.4	2.9	9.2	9.2
9.4		42.7	23.4	9.4	9.4		51.2	38.6		9.7	9.2		13.4	11.9	9.4	9.5
8.1		47.7	43.1	8.4	9.6	57	10.2	46.8		9.7	8.2		26.9	49.2	GWtlπ	7.8
9.2		54.9	56.5	9.2	6.0		21.7	18.8	GWlπμ6.5	8.6	8.6		27.9	57.2	9.2	8.6
9.9	41	21.2	12.2	10.2	10.2		30.2	52.8			10.0		32.6	59.8	9.5	8.6
8.8		38.7	14.0	8.7	8.8		36.7	38.9	a	9.0	8.5		53.4	7.7	b	9.0
9.8		41.2	32.1	9.5	10.2		42.0	59.3			8.5		54.6	9.0	b	8.9
9.6	42	28.7	25.2	9.8	9.8		45.1	59.0		9.5	10.2	8	5.0	32.6	9.8	8.3
9.8		50.2	25.7	9.4	10.2		52.7	4.2			9.8		7.4	34.9	9.6	9.2
9.9	43	3.7	56.4	8.4	8.4		52.7	1.1	Cb	8.5	9.6		8.4	3.7	8.4	8.4
9.9		5.0	0.4	9.4	10.2	58	5.7	45.2		9.6	9.6		25.9	37.9	9.3	7.8
9.6		34.2	9.2	9.5	9.2		6.2	34.0		9.4	9.8		37.1	22.7	9.6	8.7
8.3		43.7	24.6	8.0	9.5		10.7	50.0		9.3	9.5		40.1	53.3	9.4	9.6
8.6	44	32.2	40.8	8.5	10.2		22.7	48.7		9.6	9.6	9	2.6	3.4	9.5	8.8
9.9		36.4	34.8	9.4	9.4		44.7	25.6		9.5	10.2		12.9	9.6	9.0	9.0
6.9	46	2.7	12.3	9.8	9.8		46.0	5.3		9.5	10.2		17.4	39.9	10.	8.6
9.2		23.7	55.0	9.4	9.0	59	9.7	32.3		9.3	9.4		26.4	27.7	9.1	8.3
9.9		39.7	23.4	9.5	10.2		14.2	34.7			10.2		35.4	52.1	9.8	9.8
9.9		50.3	12.8	9.4	9.2		36.7	15.4		9.1	10.2		46.9	28.9	9.8	9.8
9.9		57.7	50.6	10.	10.2		42.7	4.7		9.8	8.8		59.2	47.3	9.0	9.3
9.4	47	9.7	47.0	9.4	9.4		47.2	46.6		9.4	8.4	10	28.6	19.5	a	9.0
9.0		23.5	25.4	9.4	9.6		49.7	52.8		9.5	9.3		32.1	2.3	9.6	9.0
8.3		27.0	35.3	8.6	9.4	0	5.7	4.0		9.5	9.7		35.1	47.5	9.5	9.4
9.0		33.7	52.6	8.8	9.4		11.7	30.2		9.5	9.7		46.1	52.3	9.2	9.7
9.0		36.2	41.8	9.2	9.6		38.7	15.1		9.5	8.6	11	5.6	40.1	K	8.7
9.9		38.6	43.9	10.2	9.6		41.6	13.0		9.5	9.7		18.1	30.7	9.3	8.8
9.9		55.6	29.8	9.5	9.6	1	7.1	44.3		9.8	9.8		19.6	39.7	9.2	9.2
9.8	48	19.6	52.8	9.8	7.7		9.1	3.2	al	7.8	9.5		21.1	22.5	9.2	9.3
9.9		22.6	19.9	9.4	9.4		18.6	27.6		9.5	8.8		22.6	13.7	a	9.0
9.2		23.1	38.4	9.4	10.2		41.6	21.0		8.4	8.4		23.1	30.3	Cal	8.7
9.0	50	20.4	25.8	9.1	10.2		43.6	50.0		8.1	8.1		27.1	21.8	Cal	8.5
9.6		32.3	36.0	9.5	9.4		43.6	18.2		9.3	8.1		37.1	26.0	Ca	9.0
9.6		35.8	52.7	9.5	9.1		45.6	35.7		9.3	9.8		46.1	9.5	9.3	9.3
8.2	51	3.3	35.4	8.5	9.2		59.6	17.6		9.4	9.8		50.6	27.9	9.3	8.1
9.6	52	33.3	54.7	9.0	8.2	2	3.1	36.6	Cb-1	8.5	9.0		52.4	6.1	8.9	9.9
10.2		37.3	44.3	9.0	9.0		20.6	13.0		9.0	9.0		53.6	56.5	9.1	9.2
10.2		38.8	56.7	10.2	10.2		32.1	5.3		9.7	9.7	12	32.9	26.1	9.8	9.9
8.0	53	10.8	23.6	8.5	8.2		32.6	31.0	CWbl	7.3	4.9	13	31.1	58.7	GWπμβ5.0	9.9
9.6		23.3	24.0	9.5	8.7		41.6	37.4		8.5	8.8		31.4	13.8	9.0	8.9
10.2		33.3	15.0	9.5	10.2	3	4.1	8.4		9.5	8.8		39.4	20.3	Ca	9.0
9.2		39.8	8.7	9.1	10.2		32.9	0.7		8.1	8.1		41.9	21.3	a	9.0
251.7	+128.6	-2.8				+128.9	-2.2					+129.0	-1.8			
														+129.1	-1.4	

6601—6660.				6661—6720.				6721—6780.				6781—6840.					
17 ^h .		—20°		17 ^h .		—20°		17 ^h —18 ^h .		—20°		18 ^h .		—20°			
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'		
9.9	29	9.5	48.5	9.3	9.4	4.5	59.3	27.9	9.4	9.6	5.5	43.6	25.9	10.5	13.0	10.4	
7.9		18.8	52.5	9.9	9.9	4.6	11.8	25.0	8.1	10.4	4.3	43.6	56.1	9.6	13.5	28.2	
9.4		36.8	37.8	9.2	8.8	4.7	12.6	59.7	CWa	10.5	4.4	41.1	48.2	10.5	13.5	18.5	
9.8		37.0	35.5	9.3	10.5		17.4	7.3		9.3	4.6	41.1	56.3	10.4	18.9	22.1	
9.7		58.3	1.1	9.4	10.0		25.4	58.0		10.5	4.7	47.6	50.0	10.5	25.9	28.6	
9.9	30	0.0	3.6	9.7	9.9		26.6	57.9		10.5	5.6	2.1	36.7	9.8	31.9	43.6	
9.9		1.5	10.0	9.0	9.0		35.6	22.6	Ca	8.7	10.2	3.1	54.9	9.5	31.9	30.9	
8.4		3.5	36.5	CWb=	10.0		41.6	33.4		9.9	9.6	4.1	28.0	9.4	35.9	21.5	
9.9		8.0	10.1	9.3	10.5		44.1	7.0		9.4	10.6	10.6	49.9	9.0	38.4	42.1	
9.0		11.6	57.7	9.0	10.4		52.9	15.6		9.5	9.9	18.6	48.8	10.1	48.9	9.0	
8.4		24.0	35.2	W	8.8	9.8	4.8	12.6	42.4	9.5	10.1	2.1	25.5	9.5	9.7	50.4	
9.9		31.0	47.1	9.8	10.3		17.3	19.8		10.5	3.0	1.1	59.1	9.8	53.9	35.6	
9.4		43.0	28.8	9.0	10.1	4.9	2.9	47.8		9.3	9.4	3.8	1.1	9.1	15.9	6.1	
9.4	31	7.0	12.9		10.0		3.8	11.1		9.3	9.0	3.9	6.1	9.3	16.9	37.9	
8.6		18.0	53.1	9.0	10.0		5.2	22.9		9.4	10.4	4.3	9.1	9.7	17.9	46.2	
8.8		22.0	39.8	a	9.0	9.9	1.3	24.8		9.5	9.7	4.7	1.1	9.0	22.9	37.9	
9.2		50.5	47.3	9.5	10.4		22.4	50.3		9.0	9.1	4.9	1.1	9.1	23.9	56.1	
8.4		51.0	38.1	a	8.8	10.1	3.3	10.8		10.2	5.2	1.1	8.4	9.1	26.9	44.7	
9.9	32	0.5	32.3		9.7		47.8	10.6	C	8.8	10.0	5.6	6.1	10.5	27.4	50.3	
9.8		12.5	35.0	9.2	10.0		57.1	50.4		10.1	5.7	5.1	17.6	9.6	31.4	38.6	
9.4		55.5	42.2	9.4	10.2	5.0	8.4	21.7		9.5	10.3	7.1	3.1	9.6	33.6	2.1	
9.4		59.0	41.0	9.2	8.5		10.9	36.4	C=	8.5	9.1	7.6	3.1	9.0	38.9	57.3	
9.8	33	0.5	41.5		10.1		24.7	26.7		9.4	8.9	8.1	5.1	9.1	38.9	23.8	
9.8		8.5	5.8	9.2	9.9		27.7	4.1		9.4	10.4	10.6	4.1	9.5	45.9	16.0	
9.9		10.0	35.6		9.0		37.2	34.3		8.9	10.5	12.6	1.1	9.9	45.9	28.9	
8.2		23.0	47.7	Ca	8.2	10.5	5.1	5.9		9.6	9.6	13.1	9.4	9.4	51.9	12.4	
9.9		35.5	44.9		9.4	5.1	1.7	15.4		9.0	9.1	14.8	5.1	9.0	51.9	14.1	
9.9		56.5	24.1		10.1		16.2	29.8		9.3	8.4	22.6	4.1	8.3	52.7	1.8	
9.4	34	4.0	8.1		10.5		28.2	51.6		10.4	2.6	1.1	18.0	8.6	59.5	3.1	
7.9	35	7.0	2.4	Cb=	7.9	10.2	28.2	51.8		9.3	10.4	2.7	1.1	10.0	59.5	36.8	
9.6		27.5	58.2	9.8	10.2		30.2	50.7		9.3	10.0	3.5	3.1	9.5	10.3	2.4	
9.2		34.5	41.7	9.1	8.2		37.7	2.9	Cal	8.0	10.2	5.2	2.1	10.5	2.4	54.8	
9.9		51.0	53.3		9.8		47.2	41.4		9.5	9.6	5.3	3.1	9.3	5.9	50.0	
9.7	36	2.0	31.2	9.2	9.9		55.2	23.2		10.1	5.8	6.0	12.4	9.9	9.9	55.9	
9.2		32.0	19.7	9.4	10.3	5.2	13.7	3.9		9.6	10.3	8.8	5.1	9.6	12.9	50.8	
9.9	37	25.5	27.5	9.3	10.2		28.7	21.9		9.9	9.9	13.0	4.1	9.7	19.9	7.6	
9.6		33.0	43.1	9.4	9.4		31.2	26.4		9.4	10.5	17.0	2.1	9.8	22.4	4.1	
8.9	38	15.5	8.8	Ca	8.2	7.6	3.3	19.5	GWlπμ6.5	9.3	9.3	3.3	3.1	9.1	33.8	14.7	
9.6		18.5	1.8		9.5	10.5	3.5	41.6		9.6	9.4	3.7	7.1	8.9	35.8	34.8	
9.4	39	32.8	13.0		9.1	10.1	3.7	11.6		9.8	9.8	3.7	5.1	10.0	45.8	28.9	
9.2		32.8	39.0	b	9.0	10.2	4.6	3.6		10.0	4.7	7.0	3.4	9.3	51.8	51.9	
9.9		51.3	27.5		9.5	10.0	4.7	0.1		9.9	5.0	12.1	1.1	9.8	55.8	10.3	
9.8	40	1.8	27.2		9.3	9.9	4.7	44.1		9.5	9.0	3.0	2.1	9.0	58.8	55.2	
7.3		3.8	47.1	Wal	7.0	9.9	5.3	43.6		9.7	8.7	6.0	2.1	8.9	3.0	37.0	
9.0		31.8	14.6		9.1	10.3	5.6	3.6		10.5	10.5	6.5	1.1	10.1	8.3	22.5	
8.8	41	59.8	47.1	Cb	8.1	8.4	5.3	29.7	C=	8.0	10.1	12.5	8.0	9.3	9.8	3.9	
9.9		42.5	18.4		8.8		37.2	47.6	C	8.2	10.0	24.5	2.1	10.1	12.8	24.6	
9.0		43.3	13.5		9.0	9.6	4.1	30.6	=	8.8	9.6	26.5	2.1	9.4	14.3	58.9	
9.0		44.3	55.5	=	8.8	9.6	5.4	7.2		9.0	9.4	28.5	5.1	9.3	15.3	22.1	
9.9		46.3	36.3		9.1	10.0	3.4	33.1		9.8	9.8	36.0	2.1	10.1	15.8	21.1	
9.8	44	25.8	43.1	C-	9.5	10.1	5.7	28.7		9.5	10.1	5.0	2.1	9.5	29.8	14.1	
8.5		29.3	23.9		8.5	10.1	5.5	3.2		9.7	9.6	5.4	4.1	9.6	34.8	52.9	
9.0		33.8	9.3		8.8	10.3	7.2	39.6		9.5	9.6	5.6	3.1	9.5	38.3	54.4	
9.9		35.3	34.2		9.0	6.5	10.2	4.9	GWlπ 6.5	9.7	9.7	5.7	3.1	9.3	41.8	42.1	
7.5		44.3	2.6	Cb=	7.5	10.5	1.7	27.6		9.1	0.0	0.0	2.1	9.1	52.8	11.9	
9.2		51.3	34.3		9.2	10.3	2.9	1.1		9.2	10.2	7.0	2.1	9.1	54.3	44.4	
9.9	45	3.8	31.2		9.5	10.1	3.0	42.0		9.5	9.2	9.5	6.1	10.1	55.3	33.1	
9.9		17.3	13.7		10.0		36.1	42.5		9.5	10.1	9.5	4.1	9.8	56.8	44.0	
8.6		35.8	49.0	Ca	8.5	9.7	3.8	22.0		9.4	10.5	10.5	4.1	9.5	4.8	54.8	
9.9		46.8	13.1		9.4		4.2	25.9		10.0	12.0	2.1	1.1	9.7	4.8	53.7	
25 ^{Dr.}	+1	29.3	-0.9							9.0					+1	29.3	+0.1

6841—6900.				6901—6960.				6961—7020.				7021—7080.				
mag.	18 ^h .	—20°		mag.	18 ^h .	—20°		mag.	18 ^h .	—20°		mag.	18 ^h .	—20°		
	m	s			m	s			m	s			m	s		
10.3	4	9.8	33.4	8.8	7	4.6	55.1 a	9.4	9.6	9	47.6	25.8	10.0	17	33.4	12.9
10.1		10.8	6.0	8.8		4.6	30.3	9.4	9.6	10	2.6	28.2	10.0	18	54.4	36.4
10.5		13.3	7.5	10.5		5.6	40.9	9.4	9.0		6.6	41.2 a	10.0	18	6.4	57.2
10.5		15.0	45.4	9.2		5.6	19.9	9.5	8.6		8.6	38.1 Cam	9.0	9.6	28.4	38.3
9.8		15.8	43.1	10.0		10.1	18.7	?	10.0		9.1	33.0	9.7	9.4	47.4	42.0
9.6		15.8	29.4	10.2		10.6	25.9		8.9		26.6	42.8 a	9.1	9.2	6.4	20.9
9.9		16.8	38.4	9.1		11.6	18.1	9.3	9.2		33.6	17.1	9.4	9.6	6.9	55.4 a
10.5		22.8	7.8	10.0		12.1	4.1	9.5	10.3		47.1	24.4	10.3	10.3	6.9	57.0
9.4		22.8	23.7	9.8		12.6	30.1		9.6		47.1	34.1	9.3	10.0	10.4	26.5
8.8		23.3	35.9	9.9		17.6	45.8	9.4	9.8		48.5	16.8	9.5	9.6	20	28.4
9.2		27.3	21.4	10.5		23.6	3.1		10.4		57.0	44.7	9.0	9.0	39.4	53.2 a
7.0		31.8	26.8	7.5		25.1	24.7	9.4	9.2	11	14.5	5.5	9.1	9.3	40.4	46.7
9.6		32.7	11.7	9.3		34.0	54.4	Caml	8.7	9.0	18.5	47.9 a	9.1	8.5	41.9	52.5
9.3		45.7	43.0	10.3		38.6	27.7		9.6		24.5	8.4	9.1	10.0	44.4	57.0
10.5		50.7	2.7	9.4		40.4	31.9	9.5	10.0		55.3	57.3	9.8	9.6	48.4	17.6
10.4		50.7	32.5	9.0		40.6	48.4	9.6	10.0		56.5	3.2	9.5	9.8	49.9	25.7
10.3		53.7	33.3	10.5		42.6	11.1		10.0	12	12.5	13.9	9.6	9.8	21	3.9
10.5		53.7	46.8	5.2		45.4	45.9	GWπμβ5.8	10.3		14.4	5.9	9.6	9.5	6.9	52.9
9.6		56.7	50.6	5.8		46.6	25.4	Glπμβ 6.5	10.3		33.5	42.7	9.6	9.6	22	4.4
10.5		57.7	47.7	10.4		48.2	58.1		10.3		47.0	59.1	10.0	9.8	5.4	17.4
9.4		59.7	28.4	10.4		55.6	1.1		10.0		48.5	14.7	10.0	10.0	44.2	1.0
10.0	5	3.7	40.7	10.5		56.1	59.6		9.5		49.0	24.7	9.2	9.8	54.4	54.0
10.5		3.7	47.7	10.4		57.8	2.4		9.0		53.5	33.3	9.1	10.0	23	0.9
10.5		4.3	59.9	10.5		58.6	41.3	9.8	10.2		54.4	26.1	9.4	8.9	7.4	22.0
10.5		5.5	12.0	10.5		59.6	39.8		8.3	13	7.0	16.0	Caml	8.0	13.4	56.2
10.5		11.7	23.7	10.0	8	3.8	59.4		10.2		19.0	30.1	9.5	10.2	20.4	50.1
8.9		13.7	28.8	8.8		3.8	23.7	9.1	10.2		23.5	7.0	10.3	10.3	23.4	52.1
9.8		15.7	44.5	10.3		4.5	56.6 a	9.4	10.2		33.5	7.0	9.6	9.6	37.0	1.9
9.4		16.7	55.0	8.6		6.1	29.7	9.0	10.0		39.5	15.0	9.5	9.4	24	2.4
9.3		21.2	25.5	8.4		10.9	24.2	9.0	8.6		43.0	20.3	Ca	8.7	20.4	8.6
10.5		21.5	2.9	9.6		12.1	7.7		9.6		47.7	58.6	9.5	9.8	36.2	2.3
9.7		22.2	10.1	9.0		12.6	44.5	9.5	9.2	14	10.5	6.4 a	9.1	9.4	36.4	45.3 a
8.7		25.2	34.4	9.3		13.1	31.7	9.0	9.8		36.5	15.8	9.3	10.2	50.9	8.2
10.2		30.7	22.6	8.8		14.1	38.7 a	9.0	9.6		37.5	43.4	9.2	9.2	53.4	49.2 a
9.7		34.7	42.8	8.4		15.8	13.1	C-	8.5	9.2	50.5	45.4 a	9.1	10.3	56.4	24.9
9.8		39.2	26.1	10.1		16.6	23.6		9.8		51.5	18.1	9.5	25	30.9	44.3 a
8.8		44.2	26.2	10.2		16.6	42.9		9.0		56.0	7.4	Cam	8.7	32.4	28.1
9.1		44.7	27.6	10.3		17.1	46.8		9.2		57.5	21.9	9.3	10.3	54.9	57.3
9.6		50.7	33.0	10.3		18.6	30.1		9.3	15	2.5	27.9	9.6	10.3	54.9	57.3
9.9		55.7	48.2	10.2		21.1	3.8		10.2		6.5	32.6	9.4	8.2	26	0.4
10.5		56.7	54.8	10.4		21.6	23.4		9.6		14.0	39.2	9.6	10.2	3.4	27.4
10.4	6	14.7	21.1	9.6		21.6	3.5		10.3		19.0	29.8	9.7	10.2	5.9	42.9 a
10.1		15.2	30.8	9.5		21.6	43.6		9.0		40.5	12.1	9.1	9.4	10.4	34.9
9.9		16.7	7.3	9.5		25.6	28.6		9.0		47.4	38.0 a	9.0	10.0	20.4	22.2 a
9.4		22.7	31.3	10.0		27.4	45.4		10.3		52.2	34.3	9.0	10.0	20.4	33.8
10.4		31.8	1.7	10.5		29.6	51.8	9.8	10.0		53.4	52.0	10.0	9.0	38.9	22.2
10.0		32.2	54.2	10.2		30.1	29.3		9.0		53.4	42.8	Caml	8.0	41.9	2.0
10.5		35.4	14.7	10.0		32.6	36.7		9.8		54.4	32.4	Mm	9.4	49.9	20.0
9.1		37.1	20.0	9.0		33.4	3.3	9.2	9.6	16	17.4	41.2	9.6	10.3	54.9	57.3
8.8		37.6	41.0	9.6		43.6	59.9	9.7	9.6		30.4	47.3	9.4	9.6	54.7	17.7 a
10.1		37.6	53.0	10.0		43.6	4.8		10.0		30.9	38.7	9.5	9.8	28	3.4
10.5		45.6	27.6	10.0	9	2.6	48.8		9.8		33.4	10.2	10.0	10.0	7.4	23.0
9.3		49.1	19.0	7.8		8.1	35.0	GWlπβ7.3	9.8		43.4	24.1	9.2	10.4	37.4	16.0
10.5		51.1	38.4	10.0		14.6	11.8		8.7		46.4	23.2	am	8.9	45.7	24.6
10.0		52.6	19.0	10.0		16.1	24.8		9.8		57.9	56.1	9.3	9.0	46.7	19.1
10.1		56.6	18.3	9.6		17.6	32.0		10.0	17	4.9	11.1	9.5	10.4	46.9	22.5
10.5		57.1	21.4	9.5		24.6	35.2	9.2	9.5		15.9	15.9	9.2	10.2	56.4	45.4
10.1	7	0.5	3.0	9.5		33.6	17.7	9.5	10.3		20.4	56.8	10.0	9.6	58.4	22.2
9.9		2.6	22.7	10.0		34.6	57.9	9.5	9.4		31.4	50.8	C-	8.5	29	13.9
10.0		4.1	51.8	9.8		44.6	20.0	9.5	10.0		32.4	7.1	9.5	9.6	14.4	24.7
25 pr.	+1	29.3	+0.2		+1	29.3	+0.3		+1	29.3	+0.5		+1	29.3	+0.9	

7321-7380.				7381-7440.				7441-7500.				7501-7560.			
18 ^h .		-20°		18 ^h -19 ^h .		-20°		19 ^h .		-20°		19 ^h .		-20°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.4	47	10.6	2.6	8.4	53	42.6	3.5	8.0	2	16.0	14.3	7.8	8	4.2	0.1
9.6		11.1	4.2	9.8		50.6	28.9	8.7		19.0	35.9	8.8	10.4	14.7	12.6
9.6		15.0	0.9	10.0	54	15.6	18.8	9.5	9.5	26.0	0.1	9.7	9.7	22.4	30.0
10.4		15.6	8.1	9.8		35.1	53.6	9.5	9.2	26.5	38.8	8.4	8.4	44.9	40.2
10.4		15.6	18.5	9.7		39.6	32.0	9.0	10.4	28.0	35.1	10.4	10.4	53.5	23.6
10.4		18.8	0.8	10.4		48.1	48.1	9.6		35.0	32.8	9.8	10.2	9	0.1
10.4		23.1	32.4	9.6		53.6	28.2	10.4	9.4	56.0	48.6	10.4	10.4	7.6	48.5
9.0		23.9	2.6	9.7		54.1	8.3	8.3		3	6.0	8.2	8.4	22.6	59.7
8.4		24.0	1.1	9.0	10.4	57.3	0.5	9.0		13.5	18.3	9.1	8.6	23.6	43.0
9.6		24.3	3.1	10.4		58.6	39.8	10.4		15.5	13.7	9.5	10.4	44.6	47.5
10.2		26.6	11.5	10.4	55	0.8	41.5	9.7	9.8	22.0	15.5	9.5	8.0	48.1	45.9
8.7		32.9	27.0	10.4		8.3	9.7	9.8		33.0	9.1	9.4	8.6	52.1	55.3
10.0		42.6	15.9	10.4		10.4	46.2	9.6		34.0	10.8	9.7		56.1	56.5
8.0		46.6	24.6	8.8		16.3	36.4	8.3		35.0	10.4	10.4	8.5	58.9	21.4
8.2		51.6	59.9	8.8		16.8	35.2	8.5	8.5	43.5	13.8	9.8		10	6.4
9.2		55.4	11.2	9.3		41.8	54.2	8.3	8.3	44.0	45.0	9.4	9.4	13.4	10.8
10.4		59.6	51.8	10.4		49.6	43.7	9.7	9.2	47.0	22.4	9.4	9.4	13.9	11.6
10.0		4.1	50.6	9.8		55.8	28.5	9.2		52.0	53.8	9.3	10.4	33.4	42.8
10.4	48	6.6	16.2	10.0		5.8	30.1	7.7		55.5	32.9	7.8	9.0	34.9	5.7
10.0		6.9	48.7	10.0		7.7	18.4	10.4	7.8	4	4.0	16.8	10.0	43.9	30.3
7.8		19.1	10.4	8.5		15.8	45.3	8.9	10.4	10.0	28.7	9.8		44.4	17.5
9.7		37.3	44.2	9.7		22.8	54.8	8.7		15.2	7.4	8.9	8.5	57.4	39.7
9.8		45.6	5.7	9.0		26.8	51.9	8.6	8.6	17.2	11.4	9.4	10.4	11	2.4
9.6		50.4	33.2	10.0		32.8	29.1	9.8		26.2	29.8	9.4	10.0	4.9	24.3
10.4		53.6	14.9	9.0		33.8	37.3	9.0	8.6	28.2	35.0	8.3	9.2	17.4	30.6
10.2		57.6	19.9	9.0		44.5	58.9	8.7	8.7	35.2	26.9	9.0	9.8	32.2	53.1
9.7	49	6.6	6.9	9.6		53.3	44.6	8.0		36.2	10.1	8.9	9.2	42.2	55.5
10.2		23.6	7.0	10.4		53.3	40.9	9.6	9.2	43.2	36.9	9.2	9.0	43.7	31.2
10.0		45.1	26.7	9.3		54.8	19.4	8.3	10.4	55.7	37.3	10.0	9.2	12	1.2
9.6		50.6	25.6	9.5		57	17.8	9.2	9.4	58.2	8.3	9.0	9.2	5.2	38.9
4.9		54.1	49.0	10.4		19.8	32.3	9.4	9.6	5	7.2	56.9	9.5	9.8	7.2
10.4	50	12.6	14.3	9.6		26.0	58.9	9.4	9.8	12.2	32.3	9.0	9.0	25.7	51.1
10.4		17.6	13.8	9.8		38.3	0.5	9.4	9.0	16.2	14.5	9.5	9.0	40.7	27.6
9.6		23.6	6.8	10.0		58	36.8	9.4	9.8	16.2	39.8	9.6	9.2	44.2	8.1
9.2		33.1	25.3	9.8		56.8	47.4	9.3	9.4	16.2	25.9	8.5	9.2	51.7	4.3
9.8		42.6	46.2	10.0		28.3	15.2	10.4		16.2	42.2	9.6	9.4	13	1.7
7.1		45.6	35.2	8.6		36.8	10.4	8.3	8.3	20.2	15.8	10.0	10.0	28.7	19.7
10.0		46.6	17.9	10.4		37.8	28.5	9.0		25.7	44.1	9.2	9.4	36.2	55.5
10.4	51	5.6	2.5	10.4		37.8	37.4	9.9	10.0	31.2	41.8	9.4	9.0	54.2	41.7
10.4		11.4	2.0	9.7		39.8	49.9	10.0	9.0	40.2	23.7	8.3	10.4	14	2.5
9.7		19.6	49.1	9.0		52.8	42.2	9.0	7.5	45.7	37.7	7.9	9.7	3.0	6.9
10.4		19.6	1.6	9.5		0	1.8	10.4		48.2	26.2	10.4	10.4	18.0	42.3
10.4		22.6	37.0	10.0		30.0	44.8	9.5	10.0	54.7	52.3	10.4	10.4	18.0	41.5
8.3		45.6	40.7	9.0		36.0	14.7	9.5	9.6	6	8.7	24.1	9.3	10.0	36.0
9.7		46.1	15.6	9.4		56.5	28.0	9.0	10.4	12.2	50.3	9.7	9.2	40.0	45.9
10.4		46.6	59.7	9.8		59.0	5.9	9.7	9.7	22.7	23.9	9.1	10.4	43.0	58.1
10.4		52.6	53.1	9.3		1	0.2	9.1	10.0	23.2	39.8	9.6	9.4	43.0	34.3
9.8		53.6	14.8	9.4		2.0	54.9	10.4		33.2	5.1	10.0	10.0	55.0	47.3
10.0		20.1	53.0	9.5		3.0	28.2	9.4	10.0	35.2	32.7	8.6	9.0	15	9.0
9.3		20.6	24.7	9.4		11.0	7.2	9.8	9.7	39.2	8.1	7.7	7.7	16.0	52.5
10.0		39.6	58.4	10.4		23.0	23.9	9.8		41.2	19.9	9.5	10.4	16.0	41.7
9.7	53	0.1	1.6	8.9		26.0	23.7	8.8	9.2	43.4	55.8	9.4	9.2	22.0	33.3
8.4		2.6	3.2	8.9		31.0	0.7	8.2	10.0	46.1	35.5	10.4	10.4	37.0	54.6
9.5		5.6	37.9	9.5		33.0	59.2	10.4		54.2	39.9	8.6	8.6	37.5	4.8
8.4		13.6	47.5	9.0		39.5	11.8	8.0	10.4	56.2	29.7	8.5	8.5	49.5	11.4
10.0		15.6	3.1	9.5		43.0	22.6	9.0	8.9	7	19.2	7.5	9.1	9.8	3.0
9.0		21.6	1.6	9.2		58.8	59.6	10.4		22.7	32.0	10.0	10.0	6.3	9.6
9.6		23.4	0.2	9.5		2	3.6	8.7		28.4	14.7	9.0	9.8	13.3	57.4
10.0		42.6	2.1	9.4		6.5	10.1	9.6	9.7	38.7	40.0	9.5	9.8	21.8	6.0
10.0		42.6	51.7	9.6		16.0	54.2	9.3	10.4	48.2	46.8	9.5	9.6	31.8	26.4
25pr.		+ 1 29.0	+ 18			+ 1 28.9	+ 2.1			+ 1 28.8	+ 2.3			+ 1 28.7	+ 2.6

8281-8340.				8341-8400.				8401-8460.				8461-8520.									
mag.	21h.-22h.		-20°	mag.	22h.		-20°	mag.	22h.-23h.		-20°	mag.	23h.		-20°						
	m	s		m	s			m	s			m	s								
10.2	59	59.1	44.1	8.6	16	39.8	56.7	8.5	9.4	37	42.4	59.0	9.6	8.4	9	21.7	58.4	C-	8.8		
9.8	0	9.3	27.9	10.3	42.8	46.6		9.5	10.3	38	7.4	45.7	9.5	8.9	8.9	23.7	24.8	C-	9.1		
9.2		26.8	44.6	9.3	42.8	19.6	Ca	8.9	10.3	39	9.4	9.3	9.8	8.0	10	2.2	38.5	C	8.6		
8.1		32.3	10.6	CWbl	7.3	10.3			10.2	43.4	25.0		9.6	9.6		4.8.9	4.6		9.4		
10.0		37.3	9.2		9.6	9.6		9.6	8.8	40	6.9	33.6	Ca	8.5	9.1	11	8.1	59.3	-	9.4	
10.4		43.6	13.8		8.8	8.8		9.1	8.8	40	6.9	33.6	C-	8.8	9.6		21.9	51.1		9.4	
8.8		51.8	17.7	Ca	9.0	8.8		9.1	9.8	11.4	27.5		9.8	9.5			4.8.9	30.3		9.3	
10.4	1	11.8	5.2		10.0	9.8		9.8	6.4	49.9	15.8	GWlπ	β5.4	9.8		12	22.9	10.2			
10.4		32.8	29.2		10.3	57.3	44.9		8.4	4.1	35.9	21.2	Gbltπ	8.5	9.5	13	40.9	14.9	C	9.2	
9.0	2	47.3	29.9	C	8.9	7.6	57.3	52.2	10.3	52.9	9.2		9.7	10.2		13	40.9	14.9	C	9.2	
																	46.4	36.5		9.8	
10.4		50.3	44.1		8.6				8.8	42	29.9	55.2	Wb	9.1	8.4		50.4	42.5	CWa	8.4	
10.0	3	3.3	36.2		9.7	9.8			7.1	43	11.9	56.8	CWbl	7.3	10.2	14	47.6	28.8		9.5	
8.5		3.8	30.8	C	8.8	8.6			10.3	44	5.9	45.6		8.3	8.3		57.8	58.9	C≡	8.5	
8.7		22.8	37.9	C	8.8	10.3			10.0	44	5.9	45.6		9.5	9.5	15	45.6	36.0	Ca	9.2	
8.7		53.8	46.4	C	9.0	8.2			10.3	45	4.9	7.9	Ca	8.3	8.4	16	10.1	22.1	C=	8.3	
9.6		59.8	8.8		9.3	9.6			8.7	45	4.9	7.9	C=	8.7	10.2		15.6	2.9		9.5	
9.6	4	11.8	37.8		9.4	9.4			10.3	46	2.9	55.2		9.3	5.7		24.1	46.9	GS1πβ	4.5	
10.0		39.8	8.8		10.0	9.8			10.3	46	2.9	55.2		9.6	9.8	17	9.1	58.8			
9.6	5	15.8	28.7		9.8	10.0			9.8	41	35.9	21.2	Ca	9.5	9.4	18	1.0	0.7	C	9.0	
10.0		15.8	45.6		9.8	9.5			9.0	40.5	44.0		9.0	9.8	9.8		2.6	34.6		9.7	
9.5		40.8	43.9	C	9.1	9.0			10.2	47.4	44.9		9.8	10.2			15.2	11.8		9.8	
8.8		51.3	43.4	C	9.0	10.0			10.2	53.9	12.4		9.1	8.8			16.2	58.0	C-	9.0	
9.2		55.8	18.1		9.4	10.3			10.1	48	0.6	37.2		8.3	8.3	19	34.7	3.6	Ca	8.3	
9.8	6	6.3	55.1		9.8	9.0			10.1	33.2	10.0		10.0	9.3	9.3	20	2.2	28.6		9.2	
9.6		10.3	25.0		9.5	9.0			7.2	47.2	48.3	GWb≧16.3		9.0	9.0	21	10.2	34.4	C-	9.3	
9.2		12.5	14.1		9.4	10.3			9.2	49	20.1	20.0		9.2	9.0		20.2	4.4	C	9.3	
10.4		15.5	30.9		9.1	9.1			8.0	50	28.6	13.2	Cb	8.0	8.9		21.2	23.9	C=	8.7	
9.6		26.0	27.1		10.3	9.4			7.8	55.0	56.6	CWb≧17.5		9.5	9.5		41.2	51.0		9.6	
9.1		28.5	46.1	C	9.3	9.4			8.1	51	14.9	29.8	C	8.5	9.0		53.2	50.4	Ca	9.0	
9.0		35.5	11.5	C	9.3	9.0			8.7	53	49.9	17.4	Ca	9.0	9.6	22	1.4	11.4		9.5	
10.2		59.5	24.8		9.9	9.5			9.2	54.9	34.4	C	9.1	9.0			14.9	4.2	C	9.0	
10.0	7	15.0	48.7		9.6	9.6			9.4	54	12.4	40.9	C	9.3	9.1		16.0	51.1		9.3	
10.3		32.1	41.6		8.5	26	20.5	2.1	8.3	14.9	1.1	Cal	7.7	9.4			40.4	14.0		9.3	
10.3		49.3	9.4		9.0	9.0			9.1	55	12.2	53.0	CW-	9.1	9.8		59.9	55.5		9.8	
10.3*	8	3.7	8.0		9.6	9.6			9.8	27.1	6.3	a	8.6	9.1	23	12.9	59.4	Ca	8.9		
10.4		12.5	35.0		9.5	8.6			9.2	52.6	23.0		9.2	8.8			32.4	51.5	Ca	8.7	
8.8		12.6	30.8	Cb-ml	8.7	8.6			9.2	56	2.6	38.8		9.6	10.2	24	21.0	54.4			
8.6		18.8	17.8	a	9.0	9.4			9.4	8.6	3.3	Ca	8.8	8.4			28.4	10.7	Ca	8.6	
10.2		26.3	46.4		10.0	9.4			10.0	42.5	46.8	C	8.9	9.8			24.5	10.6		9.9	
10.0		27.3	12.7		8.0	8.0			8.5	46.0	8.9	a	9.1	10.2			40.5	36.5		9.5	
8.5		42.3	15.6	Ca	8.9	10.3			9.8	46.4	27.7		9.2	10.2			53.5	34.0			
10.2		55.7	24.6		9.8	9.6			10.1	57	58.3	17.9	9.8	9.3	26	10.5	30.9			9.7	
8.6	9	18.3	35.6	Ca	9.0	9.6			9.7	58	9.8	17.9	9.5	8.6			25.5	23.8	C	8.8	
8.6		25.3	38.4	Ca	9.1	10.3			9.8	59	22.0	33.6		9.3	7.8		32.7	46.5	CWa	8.0	
9.6		29.3	9.1		9.5	8.4			8.0	0	15.8	32.5	C=	8.8	8.8		27	5.0	48.5	Ca	8.8
8.4		30.6	16.8	Caml	8.2	9.4			9.5	1	43.0	45.1	C-	8.3	8.8	28	4.8	51.6	Ca	8.8	
9.6		43.8	43.4		9.8	9.6			9.8	1	43.0	45.1		9.4	9.6		29	15.3	7.6		9.5
7.3	10	2.8	38.6	Cal	7.7	9.2			10.1	3	2.2	44.7		9.4	9.3			21.8	44.3	C-	9.2
9.0		32.2	1.4		9.3	9.0			10.1	3	2.2	44.7		9.5	9.6			30	38.6	0.5	9.8
9.6		47.8	47.9		9.5	9.2			9.4	41.5	8.4	W	9.2	9.3	31	18.0	18.5	C-		9.0	
9.0	11	37.3	14.0		8.8	8.8			9.8	4	58.3	43.7		9.3	9.4			39.5	14.7		9.4
8.5		41.8	53.3	Cbl	8.6	9.6			10.2	7	13.7	56.8		9.3	9.3	33	31.9	8.5		9.4	
9.0		55.8	51.2	Cb-l	8.4	9.4			9.2	7	0	30.5	CWK	7.0	9.6			41.0	24.7	-	9.2
9.6	12	53.8	6.6		9.2	9.8			9.5	10.2	48.4	49.8		9.8	9.6	34	14.9	14.7		10.0	
8.8		59.8	33.6	Ca	8.7	9.4			9.1	8.0	57.0	41.9	C-	8.2	9.0			52.9	46.3	Cb	9.0
10.0		48.8	41.0		9.8	10.0			9.4	8	7.7	42.6		9.4	8.6	35	14.9	27.0	CWa	7.8	
8.0	15	10.8	3.8	Caml	7.3	8.2			8.5	9.4	23.4	1.3		9.5	8.6			14.9	51.8	Cb	8.0
8.5		31.8	48.0	Clk-	8.3	10.2			9.5	8.4	33.7	50.2	C=	8.8	8.5			25.4	5.4	C	8.5
10.3		41.3	11.4		7.8	10.2			10.0	9	1.2	50.1		9.5	9.6			36	15.9	34.0	9.2
10.3		51.3	35.0		10.2	10.2			10.2	4.7	59.0		9.8	8.3	37	15.7	58.2	C=		8.5	
25pr.	+ 1 22.7 + 7.4				+ 1 21.9 + 7.6				+ 1 20.4 + 8.0				+ 1 18.8 + 8.2								

8521-8530.				8531-8540.				8541-8550.				8551-8559.					
23 ^h		-20°		23 ^h		-20°		23 ^h		-20°		23 ^h		-20°			
mag.	m s	m s	mag.	m s	m s	mag.	m s	m s	mag.	m s	m s	mag.	m s	m s			
9.6	37	26.4	30.3	9.6	41	4.9	48.1	9.1	50	7.4	52.5	8.7	53	44.4	6.7	Ca 8.5	
8.8	38	14.9	36.6	9.2		29.9	11.9	9.3	9.2		7.9	9.0	55	6.9	40.1	- 9.2	
9.6	39	19.9	34.3	9.5	42	32.9	26.0	8.9	9.5		16.9	9.0	56	17.4	5.8	C 9.3	
9.6	40	10.9	5.8	9.7	43	21.8	13.1	9.8	9.6	52	2.9	59.7		32.4	44.6	GWtlπ 5.8	
9.6		12.9	4.4	9.7	9.2	24.3	23.4	9.7	8.8		17.4	43.2	9.0	57	9.9	15.9	9.4
9.4		17.4	30.7	9.8	7.2	44	5.8	55.7	8.0		25.9	20.8	8.0	57	56.4	20.5	9.2
9.3		23.4	13.5	9.4	9.6	44.6	55.8		7.4		59.9	43.2	7.3	58	12.4	8.0	Ca 8.8
9.6		26.4	41.3	9.5	9.2	47	8.3	55.1	9.0	8.6	53	8.9	13.4		29.4	6.5	Ca 8.8
8.6		26.9	27.2	8.8	8.2	48	31.8	44.4	8.0	9.0		31.9	43.8	59	22.4	21.5	C- 9.0
8.2		39.1	3.0	8.7	9.5	49	6.1	59.3	9.4	9.0		33.9	11.6				
25pr.	+ 1 17.9		+ 8.3		+ 1 17.7		+ 8.3		+ 1 17.2		+ 8.4		+ 1 17.0		+ 8.4		

ZONE — 21°.

1-30.				31-60.				61-90.				91-120.							
oh.		-21°		oh.		-21°		oh.		-21°		oh.-1h.		-21°					
mag.	m s	m s	mag.	m s	m s	mag.	m s	m s	mag.	m s	m s	mag.	m s	m s					
9.0	0	23.3	46.4	9.0	9.6	23	12.6	45.2	9.3	10.0	38	1.0	13.6	9.5	8.0	49	54.3	22.8	Cal 7.8
9.8	2	0.3	43.6	9.0	9.4	25	0.6	38.2	9.1	9.4		3.0	13.6	9.4	9.6		54.7	2.9	9.6
7.4		36.3	54.0	7.1	9.4		1.6	3.4	9.2	8.1		39.0	1.2	8.5	9.6	50	54.6	59.0	C 9.1
9.6	4	2.8	4.8	10.0	9.4	26	39.5	13.2	9.7	10.0	39	0.5	25.9	9.8	9.6	51	23.2	22.2	9.3
7.8		56.3	56.7	7.8	9.4	27	6.5	33.0	9.1	8.2		25.0	35.5	8.7	7.6		49.2	21.0	Cal 7.2
9.8	5	18.8	16.0	9.5	9.4	28	52.2	1.1	9.0	8.8		32.0	54.1	9.0	8.1	52	1.2	51.3	Ca 8.2
7.2	6	56.0	18.8	6.8	7.8	29	51.8	26.8	7.5	8.5		59.5	20.6	8.5	8.6	53	45.2	7.9	9.0
6.8	8	0.8	53.1	7.0	9.4	30	55.5	33.8	9.2	10.0	40	5.0	1.2	8.7	8.7		56.7	44.1	Ca 9.0
9.4	9	28.5	46.8	9.5	9.6	30	15.0	47.1	9.3	10.0		6.5	40.1	9.5	9.4	55	52.7	47.9	9.2
9.4		35.8	6.7	8.8	9.1		41.5	13.0	9.1	10.0		36.5	52.2	9.8	9.4	56	11.2	5.1	C 9.1
9.2	10	10.5	17.9	8.8	9.8	31	13.0	9.1	10.	8.8		58.5	33.0	8.9	9.0		33.2	12.5	Ca 9.0
8.8		53.5	10.4	9.1	9.4		13.5	48.1	9.1	10.0	41	12.5	17.2	9.4	9.3	58	22.2	33.7	9.0
9.6	11	37.7	0.2	9.2	10.0		39.0	26.2	9.8	10.0		47.5	45.1	9.4	8.6		35.7	39.4	Ca 9.0
6.4		57.5	49.9	6.7	8.8	32	0.5	52.9	8.6	9.2	42	36.0	13.9	9.3	7.5		42.7	24.1	Cal 7.6
8.6	12	4.0	54.4	9.2	8.6		1.5	13.5	8.7	10.0		48.0	22.6	9.8	9.4	0	25.2	41.9	9.5
9.6		42.0	9.3	9.7	10.0		3.0	12.1	9.7	7.4		55.5	49.9	7.0	9.6		33.5	21.9	9.8
9.8		53.0	14.3	9.4	10.0		8.5	22.4	9.7	9.2		58.5	35.0	9.0	9.6		48.5	38.5	9.9
9.4	13	4.0	41.0	9.1	8.8		16.5	58.2	9.1	10.0	43	2.5	50.6	9.3	9.3	1	11.0	11.6	9.5
9.8		11.5	38.1	9.1	9.8		17.1	0.1	8.6	8.6		31.5	48.6	8.5	9.4		22.0	8.3	9.4
9.0	16	38.5	20.8	9.1	8.2		30.5	43.6	8.6	10.0		32.5	30.2	9.5	9.0		33.0	3.7	C 9.0
9.6	17	4.8	0.1	9.8	10.0		38.0	2.9	9.5	10.0		52.5	16.7	10.	9.6		51.5	44.1	9.5
9.0		8.6	23.3	9.1	8.6		48.0	58.0	8.7	9.4	44	15.0	31.4	9.3	9.4		53.0	19.1	C 9.2
9.4		38.1	25.6	9.4	8.8	34	11.5	40.6	9.0	9.4		20.0	50.9	9.5	9.6	2	20.0	57.9	9.5
9.8	20	7.1	35.3	9.1	9.6	36	12.5	5.6	9.8	8.6		44.0	33.4	8.6	9.2	4	24.8	12.1	9.2
7.8		35.1	21.3	8.2	8.4		25.4	2.2	9.0	7.6	46	2.5	47.2	7.3	9.4	5	1.8	46.6	9.1
8.4		47.1	12.2	8.6	8.7		32.5	2.7	8.8	7.7		20.9	40.4	8.0	9.4		25.8	5.9	a 9.1
9.8	21	47.1	59.1	9.0	8.8		41.0	18.6	8.7	10.0	47	9.5	17.4	9.6	9.6	6	23.7	9.6	9.8
9.8		47.1	35.2	9.3	8.4	37	33.0	45.2	8.7	8.4		45.4	58.2	8.5	7.4		29.7	7.2	Cal 7.3
9.8	22	2.5	19.9	9.6	8.3		41.0	5.0	9.0	9.6	49	39.2	12.2	9.5	8.2	7	46.7	10.6	Ca 8.1
6.5		4.0	1.4	6.3	9.2		43.5	45.8	9.2	9.0		43.6	32.0	9.1	9.6	8	33.0	2.2	a 9.2
25pr.	+ 1 16.1		+ 8.3		+ 1 15.0		+ 8.3		+ 1 14.3		+ 8.2		+ 1 13.4		+ 8.1				

121-180.				181-240.				241-300.				301-360.					
1h		-21°		1h-2h		-21°		2h		-21°		2h-3h		-21°			
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s			
9.6	8	43.8	44.9	9.4	9.4	50	56.5	9.2	9.6	24	30.2	9.3	7.5	58	8.5	Ckbl	7.5
9.8	9	33.6	1.6	9.2	10.0	51	6.5	9.2	9.4	24	57.2	9.3	9.8	58	20.5	a	9.1
8.6		35.9	33.3	8.8	9.3		13.0	9.2	9.4	25	36.2	9.5	8.4		24.5	Ca	8.5
9.7	10	35.9	44.2	9.1	9.2	52	49.0	8.5	9.5		39.7	9.4	9.0		45.0	a	9.1
9.0	11	49.4	53.1	9.0	7.2	53	2.0	7.4	9.8		46.2	9.6	9.0		46.5	Ca	9.0
9.2	12	36.4	14.6	9.0	9.8		22.0	9.1	9.8	26	41.2	9.6	8.0		58.5	Cbl	8.2
9.7		44.4	10.0	9.5	7.0		53.0	6.0	10.0	27	11.9	9.4	8.2	59	5.0	Ca	8.5
8.8	13	54.4	34.4	8.9	10.0	54	4.5	9.3	9.9	28	48.5	9.4	9.8	0	17.0		9.5
8.0	14	1.9	7.7	7.3	5.4		7.0	4.1	7.2	30	16.8	GCal	7.0		38.5		9.2
9.3	16	33.4	30.2	9.0	10.0		37.5	9.2	8.0		34.0	Cal	8.2		51.5		9.5
9.7		44.9	49.9	9.3	9.6	55	8.0	9.0	8.8		54.0	9.2	8.2	1	38.0	Cal	8.0
7.8		50.4	23.4	7.8	8.2		25.5	8.4	7.7	31	3.0	Cbl	8.2	2	41.5	Ca	8.7
8.0	17	2.9	46.8	8.0	10.0	57	10.0	9.3	9.0		6.0	a	9.0		48.5		9.2
9.4	18	7.9	21.1	9.1	8.2		56.0	8.4	9.8		30.0		9.3	3	5.0	Ca	9.6
8.2		38.4	44.9	8.8	10.0	58	54.0	9.3	9.0		35.5	C	8.9	4	38.3	Ca	8.8
9.6	21	0.9	21.8	9.1	10.0	59	2.5	9.1	9.9		49.5		9.5	5	29.5	C	8.9
7.8		1.9	8.4	6.8	9.0		9.7	9.0	8.6	32	53.0	Ca	8.0	6	23.5	Cal	7.8
7.0		23.4	0.2	7.0	9.3		11.7	9.1	7.9	33	19.0	GCal	8.3		37.0		9.3
7.6	22	1.9	4.9	7.5	9.8		28.2	9.5	9.4		54.5	Ca	9.3		38.5	GCal	7.0
8.2	25	9.4	45.8	8.7	9.6	1	46.4	9.4	8.0	36	1.0	C	8.2		48.4		9.5
9.8		13.9	56.1	9.4	8.6		48.7	8.7	8.6		46.8	Cal	8.3	7	6.4		9.5
8.6	26	16.0	20.8	8.9	7.6	2	9.7	7.9	8.6		54.0	Ca	8.5		22.9		
8.8		52.1	43.8	8.2	8.6		52.7	8.8	9.6	38	1.5		9.4		29.8		
9.8	27	33.0	10.4	9.2	9.8	3	32.7	9.0	9.8		10.5		9.2	8	24.7		9.4
7.4		52.5	40.3	7.8	8.8	4	16.2	8.8	9.2		14.5	Ca	9.1		27.9		9.2
9.2	29	18.3	41.8	9.2	8.0	6	12.7	8.2	9.3		23.7	C	9.0		33.8		9.8
9.6		21.0	8.6	9.1	8.4		22.5	8.2	10.0		48.7	Cbl	9.0		44.0		9.5
8.1		21.6	50.3	8.5	10.0		43.7	9.4	9.6	39	59.7	Ca	9.4	9	36.8		9.4
9.2		56.1	47.6	9.1	10.0		53.7	9.4	9.0	40	4.7	Ca	8.9	10	8.8		
8.0	30	8.6	9.4	7.8	8.7		55.1	8.7	9.2	41	3.7	C	9.0		18.8	a	8.9
8.8		48.8	18.8	8.9	8.4		59.6	8.7	9.9	42	0.7		9.4		23.8		9.2
5.5	32	53.3	54.8	6.0	6.3	7	11.6	6.2	7.4		56.2	Cal	7.7	11	4.3		9.9
8.8	33	51.8	9.1	8.5	10.0		20.7	9.1	9.6	43	5.2		9.4		32.3		9.3
9.6	34	27.3	38.7	8.9	9.8		21.4	9.4	9.8		5.7		9.4		36.8	C	8.9
9.2		43.3	6.7	9.0	8.6	8	15.3	8.5	9.6		21.7	a	9.3		46.8		9.1
9.2	35	18.3	58.4	8.7	9.5		56.5	9.3	9.0	44	52.7	Ca	9.1		48.8		9.1
9.6	36	58.8	58.1	9.3	7.8	9	56.8	7.9	10.0		53.2		9.5	12	20.3		9.4
9.2	37	4.8	57.8	9.2	8.0	10	20.4	8.4	9.9	45	15.2		9.4		22.8		9.4
7.8	38	25.6	12.8	7.6	9.2		28.4	9.2	5.8		21.7	GSlπβ	5.0		32.8		9.8
9.6	40	26.1	34.4	9.1	8.0		45.9	8.0	8.6		30.7		8.5		52.8		9.2
9.6	41	24.6	38.4	9.1	9.8	11	14.9	9.3	7.8	46	5.7	Ca	8.3	13	22.3		9.6
9.6		38.6	5.9	9.5	9.8	13	42.3	9.1	8.0	47	5.2	Ca	8.1		34.3		9.5
7.5		43.1	27.9	6.4	8.6		49.3	8.5	10.0		35.7		9.0	14	24.3		9.1
9.6	42	11.3	1.4	9.2	8.2	14	19.3	8.0	9.8	48	6.0	C	9.1		27.8		9.4
7.9		29.1	15.8	8.5	9.2	16	42.8	9.0	7.5		47.0	C	7.8		28.3		9.5
8.6		52.6	37.5	8.9	9.8		43.3	9.4	7.5	49	4.2	Cal	8.1	15	6.3		9.4
9.6		58.6	30.8	9.4	9.0	17	6.3	9.2	8.6		9.5	a	9.1		22.3		9.1
9.6	43	4.1	15.9	9.3	8.3	19	25.8	8.6	8.2		12.0	Cb	8.8		28.3	C	9.0
9.4		8.6	16.1	9.2	8.3		58.9	8.4	8.4	50	0.5	C	9.0		38.3	a	9.4
8.8		51.6	1.5	8.7	8.6		58.9	8.5	8.4	51	23.0		9.1		55.3	a	9.0
8.8	44	13.6	22.8	9.0	9.2	20	40.4	8.9	7.7		30.5	Ca	7.6		56.1		9.5
9.4	45	43.1	48.7	9.0	9.2	22	28.9	9.2	9.4	53	45.5	Ca	9.0	16	20.6		9.4
9.6	46	24.3	57.6	9.0	9.0		31.4	9.1	8.0		46.5	Cal	8.0		42.1	Gcbl	7.0
8.0		30.1	13.6	8.3	9.0	23	10.4	8.8	9.6	54	7.0		9.3	17	11.1	Ca	8.8
8.4	47	9.4	35.1	8.6	6.8		31.9	7.0	7.8		31.5	Cal	7.3		55.1		9.0
9.0		37.6	51.7	8.8	9.2		46.6	9.0	7.8	55	8.5	Ckal	7.3	18	5.6		
10.0	48	16.1	52.7	9.3	9.4		47.9	9.1	9.2		13.5	Ca	8.9		33.1	CWal	7.2
9.6		44.4	52.8	9.2	8.2	24	12.9	8.5	9.4		16.0	a	9.0		49.1		9.8
8.7	49	34.6	25.0	8.3	8.6		17.2	8.9	9.6		23.0		9.3	19	39.1	Cal	7.8
7.4		54.0	10.3	7.3	9.2		18.2	9.3	9.8	57	36.4		9.3		41.6		
	+1	11.8	+7.7			+1	9.8			+1	8.3			+1	7.1		+5.6

361-420.				421-480.				481-540.				541-600.										
3 ^h .		-21°		3 ^h -4 ^h .		-21°		4 ^h .		-21°		4 ^h .		-21°								
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s							
20	9.6	8.9		43	30.7	12.0		3	31.4	15.5		17	14.3	34.4	9.8							
			C	8.9	8.4		Ca	9.7	9.1			9.9	8.8									
9.2	41.6	12.9		9.4	9.8	44	13.2	7.8	8.8	8.2		8.5	8.8		8.5							
9.2	46.1	18.7		9.4	9.8	44	13.2	7.8	10.0	4	3.9	23.0	9.8	9.1	29.3	53.6	a	8.9				
9.6	51.6	11.6		9.5	10.0	45	5.2	2.0	9.5	9.9		9.3	8.8		45.3	54.5	a	8.9				
9.6	21	13.6	3.9	9.1	8.6	45	5.2	2.0	a	9.0	9.6	35.0	49.7	a	9.1	10.2	52.8	55.5				
9.6	13.8	58.8		9.4	10.0	46	34.9	50.9	GC	6.6	9.3	50.5	3.7		9.5	9.1	18	6.3	39.2	9.1		
8.4	22	13.1	50.0	8.9	7.2	46	1.9	39.2		9.0	9.1	5	20.5	18.4	9.4	10.2	15.3	44.0				
9.4	30.6	22.9	a	9.0	8.6		22.4	36.2		9.0	9.1	6	0.0	29.9	9.1	10.2	42.8	50.9		9.8		
9.6	44.8	0.0		9.4	9.7		31.9	35.9		9.3	9.3		9.5	3.3	9.4	9.6	19	12.8	46.6	9.3		
10.0	23	2.6	16.3	a	9.5	9.7	51.4	26.9		9.3	7.8		17.5	44.4	8.2	10.0	17.8	25.8				
8.3	44.1	48.2	Cbl	7.8	8.4		58.4	32.6	C=	9.0	9.6		19.0	25.9	9.5	8.2	36.3	29.9	C	7.7		
7.8	24	6.6	51.2	Cal	8.3	10.0	47	2.4	36.3	9.5	9.6		21.0	4.4	9.1	9.2	46.3	42.8		9.2		
9.6	25	22.6	19.4		9.5	8.4		6.8	11.9	8.8	10.0		26.0	34.3	9.4	9.7	55.8	31.2		9.5		
10.0	26	4.6	29.5		9.4	10.0		44.6	42.6	9.8	10.2		51.5	35.8	10.2	20	4.3	12.9		9.5		
9.2	13.3	45.0		9.1	8.3	48	0.7	23.1	C-	8.3	10.2	7	3.5	58.4	8.0	8.0	5.8	15.2		8.5		
7.8	32.3	40.4	Ca	8.5	9.9		48.2	33.9		9.4	8.4		26.5	41.4	Ca	8.5	9.1	20.8	36.0	b	9.0	
9.8	51.3	2.0		9.0	10.0		51.6	27.2		9.2	9.9		56.0	27.4		9.3	9.0	31.8	24.2		9.0	
10.0	53.3	43.9		9.3	8.4	49	8.5	3.2	CWa	8.5	9.5	8	4.0	36.9	9.6	9.5	34.3	46.2		9.5		
10.0	59.3	57.8		9.7	10.0		12.5	23.4		9.7	10.2		31.5	9.7		8.8	59.3	47.6	a	8.8		
9.6	27	4.3	3.4		9.3	8.8	40.2	39.4		9.0	8.7		40.7	23.9		9.0	8.4	21	0.3	14.7	C	8.3
8.6	25.1	12.3	Ca	8.8	10.0		47.7	36.4		9.5	8.8		57.4	8.4	C	9.0	8.8	13.0	57.0		9.2	
10.0	25.3	22.3		9.5	8.4		54.2	56.4	Cb-1	8.3	8.5		58.7	2.6	C	8.5	9.5	23.8	42.1	a	9.1	
10.0	28	12.4	24.1		9.3	10.0	50	0.2	4.8	9.7	9.6	9	9.0	46.0	9.5	9.4	51.8	52.0		9.3		
10.0	29	0.4	43.5		9.6	8.2		11.7	57.8	Cal	8.3	10.2	22.5	10.7		9.5	57.3	55.1		9.4		
9.8	30	2.4	28.4		9.5	8.7		44.2	10.1	a	9.1	9.0	40.0	16.3		9.1	10.2	22	5.8	30.7		
9.5	25.4	51.6		9.2	8.4		44.7	2.8	a	9.0	9.2		42.5	6.1		9.5	9.8	15.8	55.0		9.8	
9.7	57.4	3.3		9.0	9.4	51	6.7	17.8		9.3	9.2		42.5	23.0		9.3	6.8	31.8	47.0	GCa	6.7	
8.6	31	53.4	18.6	Ca	8.8	9.9		36.7	31.2	a	9.2	9.9		49.0	26.9		9.4	10.2	32.7	59.7		
9.7	32	53.4	9.6	Ca	8.8	9.8		52	22.7	53.2		9.4	10.2	50.5	26.3		9.7	45.3	27.3		9.5	
9.4	33	12.4	43.5		8.9	9.2		34.7	52.1	a	8.9	10.0	10	2.7	45.0		9.8	10.2	23	1.3	32.2	
9.4	34	6.4	15.2	Ca	8.8	10.0	53	16.1	23.2		9.4	10.2		13.7	21.9		9.2	21.8	7.1		9.2	
9.7	26.4	15.4		9.3	9.8		26.1	20.4		9.5	8.8		38.0	58.5		9.0	9.7	48.3	6.3		9.5	
10.0	36.7	2.2		9.1	9.3		56.1	58.1	a	9.1	9.0		41.2	31.0		9.0	8.2	57.3	42.3	Cal	8.4	
8.8	57.4	47.0	Ca	8.6	9.9	54	33.6	19.1		9.5	8.6	11	3.0	1.4	Cbl	8.5	9.5	24	6.8	48.7	9.3	
8.0	36	31.9	38.2	Cal	8.0	9.6		42.1	18.8	a	9.0	9.6		44.2	9.7		9.5	9.0	10.8	15.8	9.0	
9.0	52.9	4.9		8.8	9.1		46.1	40.7		9.1	8.7		51.2	19.3		9.0	10.2	17.3	47.0		9.5	
8.6	55.4	31.1		9.0	8.0	55	25.2	4.0	Cal	7.5	10.2		52.2	2.0		9.5	9.5	18.3	53.0		9.6	
8.6	37	17.0	58.0	a	9.0	8.6		30.7	50.8	C	8.3	8.3	12	12.7	33.4	C	8.1	10.2	18.8	5.0		
10.0	24.5	49.2		9.5	8.7		41.7	29.7	CW	8.7	10.0		45.2	45.6		9.5	10.2	27.8	41.2			
9.7	38	5.0	2.0		9.1	8.6		47.2	40.9		8.8	10.0		46.7	11.2		9.2	30.8	1.1	C	9.0	
9.7	28.0	23.4		9.2	9.3		49.2	41.2		9.5	7.4		48.7	1.3	Gcbl	6.2	8.6	43.8	7.3		8.8	
9.4	37.0	57.4		9.0	7.7	56	27.2	22.2	CWal	7.0	8.3	13	1.2	3.2		8.8	10.2	25	3.8	56.8	9.9	
8.6	51.5	30.0	C-	7.8	7.5	57	16.7	4.3	Cal	7.8	9.4		9.2	25.8	a	9.1	8.4	8.3	10.0	Ca	8.4	
9.2	39	9.5	18.2		9.4	7.7		49.2	45.9	Cb-1	7.6	10.2		22.2	41.7		9.4	7.2	23.8	38.7	Cbl	7.6
8.6	9.5	53.8		9.1	8.6	58	49.2	41.4		8.6	9.6		41.2	29.5		9.3	7.6	25.8	6.2	Ca	7.8	
8.6	17.5	41.4		8.8	9.8		50.7	37.8		9.6	9.4	14	21.8	59.2		9.2	10.2	37.6	44.6			
9.4	24.2	58.1		9.3	9.2		59.7	25.8		9.0	9.0		27.0	0.3		9.0	9.9	50.6	27.0		10.0	
8.0	27.7	58.8	C-	8.3	8.4	59	5.5	48.4	b	8.8	10.2		42.2	53.0		9.8	10.2	26	2.1	0.6		
8.6	40.7	41.8		9.0	9.2		31.0	10.3	Ca	8.5	9.1		42.7	39.6		9.2	10.2	6.6	39.7		9.6	
9.0	58.2	37.2		8.8	8.2		43.5	47.7	Cb-1	7.5	9.0		56.7	42.6		9.2	10.2	13.1	9.9		9.4	
9.8	40	21.2	27.2		9.5	9.4	1	5.5	56.2		9.1	9.7		58.2	49.7		9.5	8.5	17.6	16.5	a	8.5
8.4	25.2	22.4	Ca	8.7	9.3		6.0	10.0	a	9.1	7.8	15	0.3	38.0		9.1	7.3	30.6	29.8	Ca	8.2	
9.8	32.2	49.9		9.4	9.3		12.5	31.9		9.2	8.8		2.3	31.0	al	8.7	9.0	31.6	40.7	a	8.9	
8.6	35.2	28.6	a	9.1	10.0		19.5	41.2		9.6	9.6		4.8	37.4		9.1	9.0	27	5.6	35.1	a	9.0
8.7	49.7	13.0	Ca	8.7	10.0		25.5	19.9		7.8	7.8		40.3	32.7	Cal	7.2	10.2	6.1	52.0			
9.4	42	18.7	42.3		9.3	10.0		27.5	14.6		9.5	9.4		52.8	22.4		9.4	9.5	27.1	15.8		9.8
10.0	21.7	54.0		9.4	9.9		28.0	5.2		9.4	9.0		54.3	55.2		9.1	10.2	36.1	16.0			
7.7	39.7	57.8	C-	7.8	10.0		47.0	27.6		8.6	8.6	16	1.3	13.0	Ca	8.3	8.8	41.2	24.7	a	8.8	
7.2	43	5.2	17.2	CWal	5.7	8.0	2	54.0	27.7	Cb-1	8.2	9.2	17	4.3	28.6		9.4	8.8	51.6	9.6		8.8
9.0	19.2	41.0	C	9.0	8.6	3	20.9	51.6	Ca	8.7	10.2		5.8	13.0		9.9	9.9	51.6	43.1		9.1	
25pr.	+1	6.2	+5.0				+1	5.6	+4.4				+1	5.1	+3.9			+1	4.8	+3.4		

1896AnCap...3...1G

601-660.				661-720.				721-780.				781-840.										
mag.	4 ^h .	-21°		mag.	4 ^h .	-21°		mag.	4 ^h -5 ^h .	-21°		mag.	5 ^h .	-21°								
m	s	'	a	m	s	'	a	m	s	'	a	m	s	'	a							
8.8	27	51.9	23.5	a	9.0	9.2	43	7.5	54.8	9.3	10.0	56	12.7	17.4	9.4	10.0	7	21.6	32.1			
10.1		52.6	43.8		10.0		16.0	20.9		9.5	10.0		31.7	5.4		9.8	9.4	31.1	50.6	9.2		
8.8		56.1	38.3	a	8.6	9.4	18.0	43.3		9.3	10.0		51.2	9.5		10.0	10.0	36.6	7.6	9.8		
9.9		56.1	50.4	a	9.4	9.4	27.0	35.9		9.5	9.9		51.7	35.3		10.0	10.0	37.6	23.9	9.4		
10.2	28	46.1	5.4		9.5	9.4	41.0	6.7		9.4	9.6	57	0.7	46.5		10.0	10.0	38.1	54.3			
9.4		52.2	54.9	a	8.8	10.1	57.0	11.9		9.5	9.4		2.2	42.3		10.0	10.0	58.1	31.2			
7.4	29	39.2	0.2	Cbl	7.5	8.7	44	32.0	10.5	9.0	8.8		8.2	25.7	C	9.4	10.0	8	29.1	27.2	9.7	
8.6		56.4	1.4	Cbl	8.5	9.2	45	2.0	20.6	9.3	9.8		9.2	44.7		9.5	7.5	45.4	47.8	Gcbl	7.5	
7.7	30	22.2	35.8	Cbl	7.5	8.9	35.5	28.5	a	9.1	8.8		22.7	35.9		9.0	8.9	49.4	47.6	G	9.0	
7.6		53.7	34.4	Cbl	8.0	8.9	46	0.5	20.9	Ca	9.0	8.0		22.7	16.5	Cb	8.0	9.4	9	2.9	48.4	9.5
8.8	31	4.4	1.8		9.1	9.8	55.5	55.3		9.6	9.4		29.7	16.7		9.4	9.5	6.6	0.6		9.6	
10.0		17.2	32.2		10.0		57.3	2.1		9.2	9.2	58	9.7	31.1		9.3	9.2	8.1	57.5		9.1	
9.8		18.2	12.8		9.8	10.2	59.0	13.9		9.4	9.4		10.7	37.7		9.1	9.0	25.6	44.8		9.3	
9.6		20.2	19.9		9.2	10.0	47	3.5	50.9		9.7	9.3	11.7	43.6		9.2	10.0	30.6	3.0		9.8	
9.7		51.8	59.1		9.4	9.2	5.5	56.1		9.1	10.0		40.2	6.3		10.0	10.0	48.1	23.3		9.8	
8.6	32	3.2	53.9		9.0	8.6	6.0	7.5	a	8.8	9.3		52.4	57.9	b	9.1	8.9	53.9	46.7		9.2	
9.7		13.2	34.8		9.5	8.4	14.0	46.9	a	8.8	10.0		56.7	48.1		9.5	8.0	10	16.9	20.3	C	8.3
8.6		46.3	5.6	Ca	8.8	9.7	16.5	3.5		8.2	8.2	59	1.7	18.7	Cbl	8.5	9.5	21.6	39.4		9.7	
8.6		55.3	38.2		9.0	9.9	30.8	42.4		9.5	10.0		10.7	42.5		9.9	10.0	28.1	2.2			
9.7	33	6.4	15.9		9.8	9.0	42.8	35.3		9.0	9.6		12.2	25.4		9.5	10.0	30.9	23.6			
9.4		7.3	6.1		8.9	9.3	52.9	23.8		9.4	9.7		20.7	50.5		9.5	7.7	11	10.2	14.4	Cbl	7.8
8.7		22.8	39.9	a	8.8	10.0	58.7	3.6		8.0	8.0		21.2	23.5	Cal	7.5	8.7	36.7	24.0	G	8.8	
9.4		48.8	32.8		9.2	8.9	48	2.8	52.2	a	8.5	10.0	44.2	53.7		9.5	9.4	51.2	14.9		9.5	
9.4	34	2.3	52.1		9.3	8.9	13.8	44.6	Cb	8.5	7.6		56.7	25.7	Cal	7.7	9.2	59.9	11.1		9.3	
8.2		11.8	29.2	a	8.9	9.8	20.5	34.9		9.5	8.6	0	13.7	35.5	Ca	8.6	9.6	12	13.9	52.9	9.7	
7.6		13.8	29.7	Cal	7.3	10.0	20.5	14.5		9.8	8.3		36.2	19.3	C	8.5	7.7	13	0.5	57.6	Cbl	7.7
10.2		27.8	3.0		9.5	9.5	49	7.3	35.9	a	9.1	8.6	46.7	3.4	C	8.5	9.0	4.9	0.8	Cal	8.3	
10.0		27.8	2.0		9.6	10.0	27.6	39.0		9.7	9.9	1	25.7	5.9		10.0	8.4	43.4	15.6		9.0	
9.4		46.3	21.2	a	9.1	8.7	32.1	22.3	C	9.7	9.6		28.2	26.5		9.5	4.6	15	6.4	21.9	Gcbl	5.0
8.7	36	20.8	36.1	a	8.7	8.8	33.6	23.4		9.1	9.8		30.2	45.1		9.3	7.5	33.9	10.0	Cbl	8.0	
10.1		35.8	4.1		9.5	9.5	53.6	42.7		9.6	10.0		38.2	43.6			8.4	44.4	48.6	C	8.6	
9.4		43.8	5.9		9.1	9.8	50	9.1	34.1		9.4	8.9	2	22.7	38.3		9.2	10.0	54.9	23.6	9.6	
9.0		49.8	50.0	a	9.1	9.4	13.6	32.6	a	9.2	8.2		46.7	38.0	Cbl	8.4	9.6	16	10.4	29.4	9.6	
7.6	37	7.8	12.7	Cbl	7.3	10.0	56.1	24.9		9.7	9.4		49.2	47.7		9.1	9.6	12.4	20.9		9.3	
10.3		19.3	28.1		9.4	10.0	51	8.1	53.8		9.3	9.7	51.2	5.4		9.2	9.8	37.9	57.3		9.5	
9.4		55.3	28.8		9.5	10.0	13.1	19.3		9.6	9.6	3	7.7	56.3		9.5	10.0	17	2.4	58.7	9.4	
10.3	38	0.3	26.9		9.7	9.4	23.6	16.9		9.4	9.5		11.2	13.9	a	9.2	8.7	23.9	55.1	a	9.0	
10.1		5.8	30.0		9.7	9.0	28.1	32.2	a	9.2	8.6		41.1	55.6	a	9.0	9.4	45.7	2.8		9.4	
8.2		12.8	1.9	C	8.9	9.0	32.1	31.9	a	9.1	9.5		41.7	22.9		9.5	9.8	50.9	2.4		9.5	
10.3		20.3	15.0		9.9	9.9	43.1	36.7		9.7	10.0		50.6	34.2		8.8	8.8	18	1.3	19.8	Ca	8.9
8.6		21.8	40.7	C	8.6	9.9	52.1	25.3		10.0	9.4		52.1	11.6		9.5	9.2	14.8	12.2	a	9.2	
8.0		40.0	20.4	Cbl	7.6	9.3	54.1	29.5	a	9.2	8.9		4	7.6	58.0		9.3	9.8	15.8	24.5		9.3
8.4		41.5	55.6		8.7	9.3	59.6	18.0		9.4	10.0		35.6	13.3		9.8	9.8	22.3	44.0		9.4	
9.4		45.5	46.6		9.1	10.0	52	15.1	18.1		10.0		43.6	58.3		10.0	9.1	55.3	14.2	Ca	9.0	
10.2		54.5	15.8		9.8	9.6	35.6	53.2		9.5	9.6		56.1	15.6		9.8	9.4	59.3	55.7		9.3	
9.4	39	27.0	39.0		9.4	10.0	53	24.1	29.9		9.6	8.9	59.6	55.8	Ca	8.7	9.6	20	20.3	22.7	a	9.1
7.2		41.5	30.8	GStlτ	5.5	10.0	38.6	29.6		9.5	9.5		5	7.1	42.3		9.6	9.6	27.8	22.8	a	9.2
10.2		57.5	27.8		9.8	10.0	40.6	9.3		9.5	9.6		7.6	46.6		9.6	9.2	21	29.3	46.5	a	8.8
7.8	40	51.0	41.4	Cbl	8.5	9.3	46.6	11.3		9.6	9.2		11.1	15.0		9.3	9.8	40.8	25.2		9.4	
10.3		51.4	30.6		9.5	9.3	56.6	16.9	C	9.1	10.0		20.1	34.8		7.8	7.8	22	15.8	1.3	Cal	8.3
9.2		58.5	38.1		9.4	9.7	54	2.1	53.7		9.5	9.9	43.1	49.2		10.0	7.3	16.8	29.0	GCal	6.1	
9.8	41	5.5	23.4		9.4	9.6	24.6	34.9		9.0	8.8		45.6	39.0		9.0	8.2	23	1.3	14.5	C	8.8
9.4		22.5	26.5		9.2	9.5	28.1	40.5		9.5	8.9		49.9	2.8		9.0	9.2	11.8	47.8	a	9.0	
9.2		28.0	19.9		8.8	10.0	32.6	55.8		9.2	9.2	6	9.6	27.1		9.4	7.5	24	11.3	8.5	Cbl	7.7
8.2		30.5	54.9		8.8	10.0	33.6	41.5		9.6	9.6		12.1	33.1		9.5	9.0	25	29.1	30.1	C	8.0
7.6		35.0	26.2		7.0	8.8	53.7	4.1	C	8.8	9.9		12.1	43.4		9.7	9.0	36.6	40.4	C	8.5	
7.7	42	22.8	2.1	Cal	7.8	9.8	55	20.2	35.5		9.6	9.4	19.1	18.8		9.4	8.7	39.1	13.3		8.9	
10.2		32.0	40.9		9.7	10.0	36.7	48.6		9.9	10.0		27.1	48.8		9.4	8.7	48.6	26.7	C	8.8	
10.2		40.0	19.2		9.8	9.0	49.2	10.3		8.9	9.4		7	6.6	31.8		9.1	9.8	26	24.1	51.1	9.1
8.2		52.5	8.1	Cal	8.5	8.0	56	10.2	51.0	Cbl	8.2	10.0		12.1	9.6		9.2	27.6	2.9		9.0	
25pr.	+ 1	45	+ 3.0				+ 1	42	+ 2.5				+ 1	41	+ 2.1			+ 1	3.9	+ 1.6		

841-900.				901-960.				961-1020.				1021-1080.			
mag.	5h.	-21°		mag.	5h.	-21°		mag.	5h.	-21°		mag.	5h.	-21°	
9.0	26	32.6	53.5	9.2	9.8	36	3.5	14.2	9.5	8.8	42	27.1	9.5	Ca	8.7
9.0	27	5.6	23.5	C	8.8	9.4	5.5	35.6	a	9.2	9.3	35.6	42.8	Ca	9.0
9.8		35.1	6.1		9.8	9.8	12.5	40.1		9.4	10.2	47.1	57.6		10.4
10.3		36.4	2.0		9.5	9.4	9.4	55.3		9.5	10.0	49.1	20.4		7.6
9.0		36.4	17.4		9.0	9.8	35.5	20.2		9.4	9.6	51.6	0.0		9.8
8.6		36.4	6.6	Cal	8.5	9.8	47.5	27.0		9.8	10.1	54.6	45.0		10.1
9.0		36.5	50.6	C	8.9	10.4	56.0	43.9			8.9	43	1.1	a	9.1
10.2		54.1	59.4		9.2	10.3	37	0.5	29.1		10.1	2.6	31.6		10.4
9.0		56.1	59.1		9.2	10.3	2.2	55.1			9.4	47.1	53.0		9.5
10.2	28	3.9	49.5		9.8	9.6	11.2	36.2	a	9.2	9.1	51.1	26.4		9.4
9.9		18.4	6.2		10.1	9.4	11.2	26.2	b	9.1	10.1	51.1	50.2		9.2
10.2		25.4	33.0		10.2	10.2	17.2	37.8		10.4	10.4	51.6	56.2		9.9
9.8		28.1	47.2		8.8	8.8	32.2	5.8	C	9.0	8.8	44	16.1	a	9.1
8.7		33.4	15.6	Cbl	8.4	10.1	45.7	18.2		9.1	9.1	17.1	16.7		9.4
9.3		48.4	37.1		9.0	9.2	47.2	31.0		9.3	9.8	21.1	31.4		10.3
9.0	29	2.9	3.3		9.2	9.8	38	0.6	1.0	9.5	9.3	31.9	46.9		8.6
10.4		3.5	31.6		10.3	10.3	1.4	38.2			8.9	34.1	40.2	a	9.0
9.2		8.9	29.2		9.1	10.2	6.7	47.1		9.7	9.0	41.9	26.6		10.5
9.7		20.4	46.4		9.7	8.0	27.2	29.1	GCal	6.7	10.3	45	1.1		9.0
9.6		26.4	55.1		9.8	7.8	31.2	20.2	Cal	7.2	9.7	45	1.4	55.6	9.7
9.7		27.4	19.8		9.1	9.1	36.1	1.5		9.0	10.1	2.9	50.7		8.0
8.4		36.9	9.1	Cbl	7.5	10.0	37.2	51.4		9.7	9.7	4.9	48.4		10.2
8.9		57.4	53.9		9.1	10.3	43.2	31.1		10.1	10.4	10.4	52.1		9.9
10.3	30	18.5	33.3		9.3	9.3	44.7	58.5		9.5	9.7	16.4	18.0		9.7
9.8		43.4	25.8		9.5	10.2	50.1	1.8		10.4	10.4	17.4	19.6		9.9
10.2		47.9	1.0		9.6	9.7	55.7	52.2		9.5	8.6	20.4	53.6		9.0
9.2	31	6.4	26.9	a	9.4	10.4	57.7	14.2		10.4	10.4	37.9	3.7		10.4
9.8		10.4	16.7		9.8	9.6	39	11.2	50.2	9.5	9.6	41.4	43.3		9.7
9.1		17.4	40.2	a	9.2	10.0	17.2	52.9		10.3	10.3	49.4	48.6		9.7
10.1		22.9	31.9		9.8	9.8	18.2	5.0		9.5	10.4	52.2	42.4		9.7
9.2		23.4	42.1		9.5	10.1	19.2	43.4	Ga	9.1	9.8	59.9	47.1		10.4
10.2		47.1	59.6		9.8	8.8	30.2	33.8	GCal	9.2	9.2	46	1.7	37.5	9.4
10.3	32	26.0	22.2		9.0	6.5	32.2	42.8		7.2	10.2	4.2	32.7		10.2
9.0		30.0	41.9	a	9.0	9.2	36.2	45.0		9.0	9.8	11.2	6.7		8.7
10.4		42.0	49.1		9.8	9.8	40	0.0	56.8	9.8	9.0	18.7	39.4	C	8.4
9.4		53.0	22.7	a	9.2	10.0	16.2	30.4		9.8	9.8	22.7	13.5		9.5
9.3		55.0	8.2		9.4	9.8	36.2	31.7		9.8	10.0	24.7	42.1		10.0
10.4	33	2.0	1.7		9.7	9.7	48.2	5.4		10.3	10.3	31.7	15.2		9.2
9.3		3.0	19.2	Ca	9.0	9.8	58.2	54.8		10.3	10.3	39.2	38.6		10.0
9.6		4.0	45.7		9.6	10.3	41	0.2	21.6	9.8	9.8	50.7	2.9		9.5
10.0		4.0	6.0		8.8	8.8	1.2	52.9	a	9.0	8.4	58.2	53.6	C	8.3
10.4		6.0	44.3		8.9	8.9	2.2	48.0	a	9.0	10.0	47	4.7	6.7	9.5
9.3		19.0	19.2		9.4	9.4	13.0	0.0		9.9	9.2	5.2	33.0		9.0
10.4		20.0	26.9		9.2	9.3	14.2	20.2		9.1	9.0	15.7	41.6	Ca	9.0
9.2		41.0	14.9		9.2	10.1	15.7	30.4		9.8	9.8	19.6	42.0		9.7
9.8	34	20.0	13.5		9.5	8.3	18.7	4.2	Cal	8.0	10.0	22.7	46.1		9.2
9.2		21.0	41.1		9.0	10.4	21.7	26.2		10.3	10.3	24.7	38.4		9.6
9.2		32.0	21.5	a	9.5	8.3	25.2	52.5	Ca	8.7	9.6	31.7	59.8		9.5
9.0		32.5	6.3	C	9.0	10.0	32.1	23.8		10.4	10.4	32.7	24.5		9.6
10.0		36.0	17.9		9.8	9.8	48.6	59.0		10.4	10.4	36.7	25.9		9.5
9.7		42.0	55.9		9.4	10.4	52.1	57.0		9.8	9.8	43.6	18.9		9.5
9.8		54.5	50.1		9.5	9.6	52.6	36.0		9.6	9.6	46.7	32.0		9.3
9.3	35	5.0	2.9	a	9.1	8.8	53.1	35.3	Cbl	7.9	9.0	58.2	50.5	a	8.9
9.8		14.0	9.4		10.1	10.1	56.6	46.1		10.3	10.3	6.7	17.4		7.8
10.0		18.0	19.0		10.2	10.2	42	2.1	50.8		10.3	21.2	14.9		8.7
9.7		20.0	18.6		9.3	10.1	2.6	40.2		9.6	10.4	44.2	10.8		10.6
9.0		20.5	17.7	Ca	8.5	9.8	15.1	24.4		10.1	10.0	54.3	46.9		9.7
10.4		23.1	57.5		9.3	9.6	19.6	13.0		10.1	10.6	49	6.0	36.7	9.7
10.3		27.5	29.7		9.8	9.8	21.1	23.1		9.8	9.8	22.5	46.6		9.6
8.1		41.5	36.5	C	7.8	9.4	22.1	55.0		10.1	8.6	25.0	18.2	Ca	8.5
25pr.	+1	3.8	+11				+1	3.7	+0.8			+1	3.7	+0.5	
															+1
															3.6
															+0.2

1081-1140.				1141-1200.				1201-1260.				1261-1320.			
5 ^h -6 ^h .		-21°		6 ^h .		-21°		6 ^h .		-21°		6 ^h .		-21°	
mag.	m s			mag.	m s			mag.	m s			mag.	m s		
10.2	58	50.6	27.6	10.6	5	25.3	16.1	10.0	12	36.2	15.3	10.1	19	19.2	51.7
9.4	59	6.4	42.7	10.0		39.3	0.6	10.1		56.2	21.9	10.2		20.2	20.9
10.4		8.9	37.4	10.5		47.8	54.9	9.8	13	2.2	38.9	9.0		25.7	5.2
10.6		16.4	24.8	9.1		50.8	34.9	9.4		2.3	17.4	10.2		37.2	57.4
9.6		19.4	27.2	10.5		59.3	24.4	10.2		4.2	11.7	8.0		45.7	53.5
9.9		20.9	54.3	10.2	6	1.8	28.1	10.2		11.7	56.9	9.3		57.2	15.9
10.6		26.4	31.8	10.5		4.8	1.5	9.6		22.2	49.8	9.8		57.2	42.7
10.5		34.4	35.9	9.1		11.3	47.9	10.0		23.4	0.4	9.5		9.3	20
9.0		36.4	40.9	10.2		17.8	26.6	8.8		28.2	55.3	8.8		9.0	16.7
9.9		43.9	53.9	9.2		20.3	12.7	9.1		28.7	3.9	9.1		9.6	25.3
9.6		50.4	42.9	10.4		30.8	23.0	10.2		36.2	41.9	10.2		27.3	32.9
10.5		54.9	56.2	9.2		47.8	59.8	7.6		41.7	59.2	8.1		8.7	29.3
10.5	0	2.4	31.2	10.2		53.8	35.8	10.2		45.2	44.9	10.0		10.0	40.3
10.6		3.5	1.8	10.5		59.3	5.3	9.0		52.2	41.5	9.2		8.3	41.7
10.6		10.4	2.6	8.8	7	13.8	28.0	9.8		58.2	10.0	9.5		10.1	42.2
10.2		24.4	49.3	9.9	9.4	24.0	43.1	9.4		11.7	28.8	9.7		9.3	43.7
9.9		33.4	24.4	9.4	9.5	32.0	6.6	9.5		12.2	47.5	9.5		9.0	47.7
10.5		34.4	48.4	9.2		32.2	59.9	9.5		33.2	35.9	9.1		10.2	55.2
9.5		44.4	11.6	10.2		40.0	13.8	9.2		49.2	16.2	9.4		10.2	55.7
10.5		57.2	2.0	10.6		40.3	48.1	9.8		51.2	24.5	9.8		9.8	56.7
10.0		58.4	29.3	10.6		44.3	13.1	10.2		55.2	32.1	9.5	21	2.7	49.9
9.9	1	1.4	29.5	10.2	8	2.0	44.2	9.8		55.9	23.1	9.2		9.2	10.7
9.2		11.4	35.1	10.1		4.7	59.9	10.0		57.9	27.9	9.2		9.2	14.5
10.0		16.4	12.6	8.0		9.0	14.0	10.0	15	5.9	20.3	10.1		10.1	23.2
10.5		38.9	47.0	9.2		10.2	9.5	9.5		37.9	27.9	9.5		9.5	25.7
7.8		40.4	47.9	6.1	9.2	11.7	7.9	9.5		39.9	52.1	9.3		10.0	28.2
9.2		40.9	13.1	9.1	10.1	13.9	55.8	10.2		43.9	25.1	9.0		9.0	31.7
10.0		53.9	21.4	9.5	10.0	15.9	55.9	9.8		46.9	27.1	9.4		8.0	49.7
8.6		56.4	30.9	8.5	10.2	22.4	21.9	8.9		50.9	15.3	9.0		9.6	51.7
8.4	2	3.9	11.0	8.3	9.6	30.7	45.9	10.2	16	7.9	42.1	9.5		9.5	52.2
9.8		16.9	10.0	9.5	10.2	38.9	58.7	8.8		9.9	27.2	8.9		9.3	59.2
9.6		18.4	37.1	9.4	10.0	41.7	13.2	10.0		9.9	3.6	9.5	22	5.2	24.0
10.6		32.2	24.8	9.6		56.2	15.9	9.4		38.9	53.4	9.9		9.6	11.7
10.6		39.9	30.1	9.8	9.6	10.7	26.9	9.5		46.9	32.9	9.6		9.6	11.7
9.2	3	0.4	18.5	9.4	10.0	20.2	45.8	10.1		47.8	43.1	10.0		10.0	15.7
10.6		6.9	17.6	10.2		30.7	30.2	9.8		52.9	33.9	10.0		10.0	16.7
8.9		6.9	56.1	9.2	10.0	33.7	25.2	9.5	17	11.4	3.7	9.4		10.2	25.7
10.6		11.2	37.4	9.8		35.2	18.5	9.0		16.9	22.3	9.5		10.0	33.2
9.4		27.4	43.3	9.5	9.8	42.2	4.4	9.4		19.9	19.8	9.2		9.2	36.2
9.6		54.9	22.4	9.2	8.9	53.2	6.0	8.6		19.9	37.7	9.4		10.1	38.2
9.2		59.4	42.9	9.1	8.9			9.0	9.4	25.9	35.6	9.8		9.3	40.5
9.2	4	13.4	12.2	9.2	8.8	9.7	35.5	9.3	9.2	26.9	1.9	9.3		10.2	42.5
9.5		20.3	43.7	9.6	9.8	16.7	24.9	10.2	10.2	42.9	39.5	9.8		8.7	44.5
9.5		21.3	53.6	9.8	9.8	18.7	24.9	9.8	10.1	56.9	34.1	9.2		9.2	48.0
9.2		24.3	59.7	8.9	10.2	27.1	1.3	10.2		57.9	21.8	9.0		9.0	50.5
10.2		27.8	25.3	10.0		27.7	22.9	9.6	18	0.4	2.2	8.6		8.6	55.5
10.5		31.8	8.4	9.2		40.2	7.1	8.6		7.9	10.1	8.5		10.2	59.5
10.2		34.8	10.3	8.8		42.7	49.4	9.1	10.2	9.9	30.4	10.1		10.1	5.5
9.4		34.8	11.2	9.1	9.8	47.2	14.1	9.9	10.1	15.9	33.7	10.2		10.2	14.5
10.0		38.3	13.0	9.6	10.2	55.2	57.7	10.1		15.9	20.0	10.2		10.2	19.6
10.6		40.1	8.9	10.1	11	23.2	55.1	9.2		29.9	50.6	9.6		9.0	35.5
9.8		50.8	30.4	9.4		42.2	7.7	9.0	9.5	31.9	35.0	10.2		10.2	38.0
9.8		53.3	9.0	9.5	9.2	46.2	37.2	9.5	9.2	31.9	32.3	9.1		9.4	43.0
10.2		59.8	26.0	10.2	10.0	57.7	40.1	9.6	9.6	41.9	33.4	9.8		9.8	48.0
9.1	5	9.8	24.4	12	1.2	41.9	a	8.5	9.4	49.1	57.2	9.5		10.2	13.5
10.6		9.8	1.1	9.8		9.7	52.7	9.1		56.9	10.7	9.1		10.2	15.0
10.5		11.3	23.7	8.8		22.2	42.7	10.0	19	2.4	26.9	8.6		8.6	20.5
8.9		18.3	49.1	9.6	9.6	22.2	5.7	8.6		8.4	54.5	9.2		9.0	25.5
9.5		19.3	44.4	9.7	9.8	27.2	5.0	10.2	9.0	13.4	24.6	9.5		10.2	25.5
9.6		21.3	1.1	9.7	10.0	36.2	10.7	9.6		14.4	14.8	9.5		9.5	29.0
25Fr.	+1	3.6	-0.1	+1	3.7	-0.3		+1	3.7	-0.6		+1	3.7	-0.8	

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1321-1380.				1381-1440.				1441-1500.				1501-1560.			
6 ^h		-21°		6 ^h		-21°		6 ^h		-21°		6 ^h		-21°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9 ^o 2	24	31 ^o	9 ^o 5	9 ^o 4	31	26 ^o 9	7 ^o 4	9 ^o 3	38	24 ^o 8	29 ^o 6	9 ^o 5	43	9 ^o 8	40 ^o 4
9 ^o 2		35 ^o 5	41 ^o 9	8 ^o 8		33 ^o 9	17 ^o 6	9 ^o 0	10 ^o 2	25 ^o 8	28 ^o 8	9 ^o 2		30 ^o 4	47 ^o 9
10 ^o 2		35 ^o 5	58 ^o 3	10 ^o 1		35 ^o 9	23 ^o 2	9 ^o 8	9 ^o 6	30 ^o 3	43 ^o 3	10 ^o 1		32 ^o 9	45 ^o 8
8 ^o 9		38 ^o 5	25 ^o 9	Ca	10 ^o 3	37 ^o 9	9 ^o 4	9 ^o 8	10 ^o 1	32 ^o 8	27 ^o 7	9 ^o 5		36 ^o 4	42 ^o 4
10 ^o 2		39 ^o 5	34 ^o 2		10 ^o 2	38 ^o 4	33 ^o 8		10 ^o 1	44 ^o 6	2 ^o 5	9 ^o 5		47 ^o 4	33 ^o 1
9 ^o 8		42 ^o 0	4 ^o 0		9 ^o 4	48 ^o 4	31 ^o 8		9 ^o 6	55 ^o 8	0 ^o 4	10 ^o 2		56 ^o 4	35 ^o 0
9 ^o 6		42 ^o 5	56 ^o 8		10 ^o 0	48 ^o 4	9 ^o 7	9 ^o 5	9 ^o 8	39	2 ^o 8	9 ^o 0		9 ^o 0	53 ^o 2
9 ^o 3		42 ^o 5	1 ^o 9	a	10 ^o 2	32	2 ^o 9	10 ^o 4	9 ^o 0	8 ^o 8	9 ^o 8	9 ^o 0		12 ^o 4	2 ^o 4
10 ^o 2	25	8 ^o 2	59 ^o 9		9 ^o 0	11 ^o 9	51 ^o 0	Ca	9 ^o 0	13 ^o 8	6 ^o 2	9 ^o 1		13 ^o 9	52 ^o 8
10 ^o 1		15 ^o 5	39 ^o 5		9 ^o 0	31 ^o 9	40 ^o 1	Ca	8 ^o 9	14 ^o 8	9 ^o 0	9 ^o 0		14 ^o 4	2 ^o 6
9 ^o 4		21 ^o 5	25 ^o 9		9 ^o 0	37 ^o 9	16 ^o 0	a	9 ^o 2	25 ^o 3	59 ^o 8	9 ^o 7		17 ^o 4	14 ^o 0
10 ^o 2		32 ^o 6	43 ^o 7		9 ^o 0	48 ^o 9	19 ^o 3		9 ^o 3	27 ^o 8	13 ^o 8	9 ^o 4		18 ^o 4	33 ^o 8
9 ^o 2		33 ^o 0	20 ^o 4		9 ^o 5	48 ^o 9	7 ^o 1		9 ^o 8	28 ^o 8	38 ^o 2	10 ^o 1		18 ^o 8	57 ^o 1
10 ^o 0		35 ^o 5	43 ^o 7		9 ^o 2	51 ^o 9	59 ^o 8		9 ^o 8	35 ^o 6	57 ^o 5	10 ^o 1		19 ^o 6	5 ^o 1
9 ^o 8		38 ^o 0	21 ^o 2		9 ^o 6	58 ^o 4	49 ^o 5		9 ^o 8	37 ^o 3	17 ^o 1	10 ^o 4		29 ^o 9	37 ^o 8
10 ^o 1		39 ^o 7	1 ^o 8		9 ^o 5	33	3 ^o 7	0 ^o 7	9 ^o 5	37 ^o 8	24 ^o 8	10 ^o 4		35 ^o 4	30 ^o 4
9 ^o 8		41 ^o 6	42 ^o 1		9 ^o 0	6 ^o 9	35 ^o 5	Ca	9 ^o 2	37 ^o 8	34 ^o 6	9 ^o 4		39 ^o 4	59 ^o 5
9 ^o 4		43 ^o 5	28 ^o 7		9 ^o 1	14 ^o 4	43 ^o 7	a	9 ^o 0	55 ^o 3	5 ^o 1	9 ^o 8		45 ^o 4	6 ^o 7
10 ^o 2		45 ^o 4	32 ^o 8		8 ^o 9	30 ^o 9	11 ^o 1		9 ^o 0	40	2 ^o 8	9 ^o 3		50 ^o 4	44 ^o 4
9 ^o 5		46 ^o 4	47 ^o 9		9 ^o 7	33 ^o 4	59 ^o 4		9 ^o 5	23 ^o 3	7 ^o 1	9 ^o 4		50 ^o 4	46 ^o 6
10 ^o 2		47 ^o 9	15 ^o 6		9 ^o 8	38 ^o 9	13 ^o 7		10 ^o 1	26 ^o 3	21 ^o 6	10 ^o 3		52 ^o 4	24 ^o 6
10 ^o 0		51 ^o 9	41 ^o 8		8 ^o 2	34	10 ^o 4	Ca	8 ^o 4	32 ^o 8	18 ^o 2	9 ^o 6		52 ^o 4	45 ^o 1
10 ^o 2		52 ^o 4	13 ^o 3		10 ^o 3	11 ^o 9	10 ^o 3		8 ^o 6	33 ^o 3	35 ^o 1	9 ^o 3		52 ^o 4	45 ^o 1
7 ^o 4	26	10 ^o 4	19 ^o 1	GCal	10 ^o 2	18 ^o 4	24 ^o 9		9 ^o 6	35 ^o 8	44 ^o 5	9 ^o 4		19 ^o 4	51 ^o 2
8 ^o 4		11 ^o 4	57 ^o 1	Ca	8 ^o 6	20 ^o 4	12 ^o 8	a	9 ^o 0	41 ^o 8	20 ^o 7	9 ^o 5		20 ^o 4	32 ^o 3
10 ^o 0		55 ^o 4	41 ^o 9		9 ^o 3	25 ^o 9	26 ^o 9		9 ^o 4	43 ^o 3	53 ^o 1	9 ^o 3		24 ^o 9	56 ^o 4
10 ^o 0	27	1 ^o 4	45 ^o 9		10 ^o 4	34 ^o 4	43 ^o 1		10 ^o 1	44 ^o 3	49 ^o 0	10 ^o 2		29 ^o 4	23 ^o 4
9 ^o 1		4 ^o 9	9 ^o 6		9 ^o 0	36 ^o 9	29 ^o 0	a	8 ^o 8	46 ^o 3	45 ^o 5	9 ^o 1		35 ^o 4	19 ^o 4
9 ^o 0		5 ^o 4	14 ^o 4	Ca	9 ^o 1	39 ^o 4	42 ^o 2		10 ^o 1	53 ^o 8	18 ^o 9	10 ^o 4		39 ^o 4	45 ^o 8
10 ^o 2		16 ^o 4	51 ^o 9		9 ^o 3	43 ^o 9	9 ^o 8		9 ^o 5	54 ^o 8	36 ^o 0	10 ^o 4		45 ^o 9	25 ^o 1
10 ^o 2		18 ^o 7	54 ^o 0		10 ^o 2	55 ^o 4	53 ^o 5	Cal	9 ^o 5	55 ^o 8	19 ^o 1	9 ^o 0		49 ^o 4	36 ^o 6
9 ^o 5		30 ^o 0	1 ^o 8		7 ^o 8	5 ^o 9	16 ^o 6		7 ^o 5	41	1 ^o 8	10 ^o 1		52 ^o 4	45 ^o 1
10 ^o 4		33 ^o 2	23 ^o 8		10 ^o 1	12 ^o 9	18 ^o 5		10 ^o 1	16 ^o 8	7 ^o 0	10 ^o 2		52 ^o 4	45 ^o 1
9 ^o 8		34 ^o 7	7 ^o 4	10 ^o	10 ^o 4	19 ^o 9	53 ^o 3		10 ^o	25 ^o 8	36 ^o 5	9 ^o 3		52 ^o 4	45 ^o 1
10 ^o 4		57 ^o 0	24 ^o 2		10 ^o 3	23 ^o 9	47 ^o 4		10 ^o 0	27 ^o 8	2 ^o 8	9 ^o 4		19 ^o 4	51 ^o 2
10 ^o 4		57 ^o 2	17 ^o 8		10 ^o 3	35 ^o 9	48 ^o 6		9 ^o 6	29 ^o 3	6 ^o 9	9 ^o 5		20 ^o 4	32 ^o 3
8 ^o 9	28	17 ^o 9	44 ^o 4		9 ^o 3	36 ^o 2	2 ^o 9		9 ^o 8	32 ^o 8	13 ^o 3	10 ^o 2		24 ^o 9	56 ^o 4
9 ^o 4		36 ^o 6	31 ^o 7		9 ^o 8	8 ^o 9	42 ^o 2	1 ^o 5	9 ^o 3	32 ^o 8	14 ^o 1	10 ^o 4		29 ^o 4	23 ^o 4
9 ^o 1		42 ^o 1	53 ^o 1		9 ^o 2	9 ^o 6	43 ^o 9	13 ^o 1	9 ^o 4	39 ^o 8	38 ^o 8	9 ^o 4		35 ^o 4	19 ^o 4
7 ^o 9		47 ^o 6	26 ^o 4	Ca	7 ^o 9	10 ^o 3	51 ^o 9	32 ^o 9	9 ^o 6	47 ^o 3	54 ^o 0	9 ^o 8		37 ^o 2	18 ^o 0
10 ^o 4		53 ^o 9	39 ^o 0		9 ^o 0	36	1 ^o 4	5 ^o 0	9 ^o 0	47 ^o 8	35 ^o 3	10 ^o 1		40 ^o 7	43 ^o 7
9 ^o 8	29	2 ^o 9	11 ^o 9		9 ^o 2	8 ^o 4	37 ^o 6	C	8 ^o 8	48 ^o 8	32 ^o 5	9 ^o 3		45 ^o 2	48 ^o 3
8 ^o 8		26 ^o 9	15 ^o 1		9 ^o 3	10 ^o 9	41 ^o 7		9 ^o 2	48 ^o 8	15 ^o 3	9 ^o 3		54 ^o 2	35 ^o 0
9 ^o 2		28 ^o 4	2 ^o 1	a	9 ^o 1	8 ^o 1	10 ^o 9	59 ^o 3	7 ^o 8	51 ^o 8	31 ^o 9	9 ^o 1		58 ^o 2	8 ^o 9
9 ^o 8		41 ^o 4	50 ^o 5		9 ^o 5	9 ^o 5	45 ^o 8	51 ^o 0	9 ^o 5	55 ^o 8	24 ^o 7	10 ^o 4		58 ^o 2	8 ^o 9
8 ^o 1		41 ^o 9	53 ^o 9	C-	8 ^o 7	9 ^o 0	49 ^o 8	10 ^o 1	9 ^o 4	42	12 ^o 3	9 ^o 3		0 ^o 2	9 ^o 5
9 ^o 0		47 ^o 8	18 ^o 6	Ca	8 ^o 7	9 ^o 6	5 ^o 8	7 ^o 7	9 ^o 8	17 ^o 3	44 ^o 9	10 ^o 2		2 ^o 2	14 ^o 9
9 ^o 4		53 ^o 5	27 ^o 4		9 ^o 5	9 ^o 5	10 ^o 3	4 ^o 7	9 ^o 1	21 ^o 3	44 ^o 8	10 ^o 1		3 ^o 7	54 ^o 7
9 ^o 3		55 ^o 9	15 ^o 8		9 ^o 7	10 ^o 4	13 ^o 3	32 ^o 1	9 ^o 6	31 ^o 6	56 ^o 8	9 ^o 2		11 ^o 2	36 ^o 7
9 ^o 2		59 ^o 9	11 ^o 6		9 ^o 4	9 ^o 6	15 ^o 3	38 ^o 8	9 ^o 8	32 ^o 6	57 ^o 4	9 ^o 2		11 ^o 7	47 ^o 2
9 ^o 2	30	8 ^o 6	1 ^o 6		9 ^o 4	9 ^o 6	27 ^o 8	48 ^o 1		8 ^o 9	35 ^o 8	9 ^o 3		19 ^o 7	2 ^o 1
10 ^o 4		32 ^o 4	43 ^o 8		9 ^o 8	27 ^o 8	47 ^o 5		9 ^o 4	36 ^o 8	20 ^o 2	9 ^o 3		21 ^o 4	45 ^o 8
10 ^o 1		35 ^o 4	40 ^o 8		9 ^o 9	28 ^o 8	37 ^o 7		9 ^o 7	38 ^o 6	12 ^o 0	9 ^o 4		27 ^o 7	24 ^o 0
10 ^o 1		41 ^o 6	57 ^o 3		10 ^o 4	32 ^o 8	32 ^o 8		8 ^o 6	42 ^o 3	24 ^o 9	9 ^o 1		33 ^o 6	2 ^o 5
9 ^o 6		52 ^o 4	25 ^o 9		10 ^o										

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1561-1620.				1621-1680.				1681-1740.				1741-1800.										
mag.		6h.		-21°		mag.		6h.		-21°		mag.		6h.-7h.		-21°						
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s					
8.5	48	10.7	54.3	Ca	8.6	10.4	52	27.2	25.9	10.4	56	8.1	30.8	10.2	59	30.1	45.0					
9.2		21.8	58.4		9.2	8.6		32.2	46.2	a	9.1	10.2	8.1	33.9	9.6	10.2	32.1	32.2	9.5			
9.8		21.9	28.6		9.6	9.4		34.7	10.5		9.7	9.9	12.1	33.9	10.4	10.4	33.1	19.5				
10.4		23.2	19.5		9.8	10.2		35.2	4.6		10.4	10.4	16.2	23.7	10.4	10.4	33.2	7.6				
8.4		31.2	43.6	Ca	8.0	10.3		36.7	48.3		9.5	10.4	18.6	48.3	9.8	9.8	38.1	46.6	9.5			
10.4		40.9	18.1		10.4	10.4		38.1	21.5		10.4	10.4	29.1	16.2	9.4	9.4	42.1	53.8	9.5			
9.0		48.2	20.3		9.0	9.0		40.2	13.2		9.3	9.6	37.1	44.5	9.8	9.3	43.1	25.4	9.0			
9.4		51.7	25.8		9.4	9.1		42.7	21.9		9.0	8.7	38.1	11.0	Ca	8.4	8.4	44.1	15.9	Ca	7.3	
9.8	49	3.7	46.1		9.6	9.6		47.0	59.4		9.4	9.4	38.6	39.3	9.8	10.0	48.6	22.8	9.8			
9.5		7.2	4.9		9.8	8.6		49.2	42.1	Ca	8.7	10.4	39.1	48.2	10.	10.4	56.6	53.8	9.9			
10.2		12.2	16.1		10.4	10.4		52.2	53.1		10.2	10.2	40.6	10.4	9.8	9.8	10.6	20.1				
9.5		18.7	51.5		9.8	9.1		52.2	33.8		9.7	9.8	42.1	47.8	9.1	9.1	16.6	6.1	9.5			
8.8		25.7	42.8	Ca	8.7	9.5		55.2	33.7		9.7	9.7	48.1	32.9	10.4	10.4	19.1	16.2				
9.4		29.2	28.9		9.5	9.9		59.7	32.0		9.4	9.4	54.1	58.1	9.7	9.9	23.1	33.7				
9.7		33.2	22.3		9.5	10.2	53	5.2	20.7	a	9.2	10.0	55.6	18.1	10.	9.8	25.1	3.5	9.8			
9.4		36.7	16.3		9.8	9.0		7.7	52.3	a	9.2	8.6	57.6	38.8	9.1	9.8	25.3	0.1	10.			
8.6		52.2	42.8	Ca	8.7	9.8		16.2	20.1		8.4	8.4	4.6	33.3	C	8.6	9.9	27.1	45.6	a	9.5	
10.3		55.2	12.7		9.8	10.0		18.2	54.7		10.2	10.2	5.1	43.3		9.4	9.4	31.1	16.6	9.8		
9.8		57.7	6.0		9.5	10.4		44.7	48.0		9.4	9.4	6.1	48.3		9.4	9.4	32.1	24.8			
9.3		58.7	41.2		9.8	9.6		49.7	30.7	10.	8.8	8.8	21.6	50.8	C	8.2	10.0	32.1	52.9			
10.4	50	2.2	20.4		9.8	9.0		53.2	0.0	Cbl	8.5	8.7	22.1	18.3	a	9.1	9.6	38.6	58.1	9.5		
7.2		14.7	52.7	Ca	7.2	8.5		53.2	12.5		9.0	9.9	25.1	2.5		9.8	9.6	45.6	21.3	a	9.3	
10.2		20.2	57.6		9.2	9.2		53.7	24.5		9.0	8.9	28.1	4.2	9.2	10.0	50.6	35.5				
9.2		31.7	33.5		9.4	9.3		59.2	13.4		9.5	10.3	43.6	56.4	9.8	9.9	50.6	15.2				
10.0		32.7	20.6		9.8	9.8		59.7	8.0		10.3	10.3	44.6	34.9		9.4	55.1	58.5	9.8			
9.5		36.7	6.3		9.8	10.4	54	3.2	44.9		9.8	9.2	49.6	15.5	a	8.7	10.2	56.1	15.1			
10.4		41.7	9.3		10.4	10.4		7.1	57.5		10.4	10.4	52.6	1.9		9.5	9.8	59.1	46.8	9.7		
8.6		43.2	20.6		9.0	9.8		9.7	8.3		10.4	10.4	6.1	9.5		10.4	10.4	0.1	22.5			
9.7		47.9	0.5		9.3	9.3		15.2	44.6		9.8	10.0	7.1	3.7		10.0	10.0	4.1	15.9			
10.4		55.2	37.1		9.9	9.9		15.7	42.3		9.9	9.9	12.6	22.0		10.2	10.2	5.6	42.2			
10.2		56.7	43.2		6.4	19.2		25.8	Gcbl	6.7	10.3	10.3	14.6	49.5		10.2	10.2	6.1	56.1			
9.0	51	0.2	32.1		9.3	10.4		22.1	29.0		9.9	9.9	16.1	1.7		8.5	8.5	15.1	49.4	Ca	8.2	
9.8		9.7	11.4		9.8	9.8		34.2	10.2		9.5	8.6	18.1	44.1	C-	8.2	9.1	17.6	14.1	a	9.3	
10.4		15.7	19.7		9.4	9.4		34.2	5.8		9.5	9.5	22.1	32.8		9.5	9.0	17.6	56.3	a	9.1	
10.3		18.7	52.2		9.8	9.8		35.2	6.9		9.5	9.5	25.6	30.7		9.5	8.8	19.6	46.1	a	9.0	
9.4		19.7	9.5		9.5	9.8		37.2	48.6		9.8	9.6	26.6	27.4	a	9.3	9.0	23.6	16.3	b	9.0	
9.3		21.7	13.5		8.8	43.7		37.9			9.2	9.4	27.1	0.7		8.6	8.6	26.1	21.9	Ca	8.7	
10.4		23.2	51.2		8.9	48.7		5.8			9.3	10.2	29.6	19.1		10.0	10.0	26.6	39.5			
9.5		23.7	6.0		9.5	9.7		48.7	40.1		10.0	10.0	38.1	38.8		9.3	10.0	31.6	59.2		10.	
9.4		36.7	23.4		9.7	9.6		51.7	58.2		10.2	10.2	40.1	12.3		9.8	9.8	34.6	34.3	a	9.5	
9.2		37.2	33.2		9.7	9.7	55	0.7	54.7		9.7	10.2	40.6	49.9		9.8	9.8	39.1	17.3			
9.9		40.7	23.7		6.9	0.9		56.8	GCal	6.7	10.3	10.3	41.1	9.9		10.3	10.3	43.6	59.0		9.5	
8.7		42.7	3.3		9.2	10.4		1.7	38.1	x	8.5	8.5	41.6	35.3	Ca	8.8	10.3	44.6	22.9			
9.0		47.7	0.6		9.6	10.4		5.7	5.3		10.4	10.4	43.1	44.9		9.4	9.4	47.1	30.6	a	9.2	
10.2		48.7	43.5		9.7	9.7		13.7	32.6		9.8	10.3	45.6	17.0		9.3	9.3	53.1	57.4		9.3	
9.4		50.2	48.4	a	9.5	10.4		15.7	6.6		8.0	8.0	52.1	5.0	Cal	7.5	10.0	55.6	53.9			
10.4		52.7	28.8		9.4	9.4		20.2	30.2		9.4	8.2	52.1	15.2	Cal	8.2	10.3	0.6	47.4			
9.4		55.9	2.3		9.6	9.7		22.7	9.8		9.8	10.4	57.4	1.3		9.8	9.4	2.1	3.6		9.3	
9.4		58.2	1.8		9.7	9.3		27.2	24.3		10.0	10.0	57.6	9.0		9.3	9.3	2.1	34.0	a	9.4	
9.0	52	0.7	35.1		9.3	10.0		32.1	3.0	10.	9.4	9.4	58.1	51.7		9.5	10.3	3.6	34.3			
9.4		1.7	47.0		9.5	10.4		32.1	55.3		9.4	59	0.6	16.7		9.1	9.5	3.6	35.1		9.8	
10.3		3.2	35.4		9.4	10.4		42.1	57.7		10.3	10.3	2.1	49.2		9.5	9.5	8.1	46.9			
10.2		3.2	35.7		9.8	9.8		44.1	24.4		10.2	10.2	4.6	48.6		9.9	9.9	12.1	19.6			
10.4		6.2	5.9		8.3	45.1		47.4	Ca	8.1	10.4	10.4	6.6	36.4		10.2	10.2	15.6	23.0			
9.6		8.2	51.5		9.8	9.8		52.6	28.2		9.1	9.1	8.1	34.2		9.7	10.2	20.6	3.5			
10.2		12.2	30.9		9.2	9.2		53.1	7.6	a	9.0	10.4	9.6	17.3		9.8	9.8	21.6	35.0			
10.2		20.7	11.7		10.2	10.2		56.6	53.4		10.4	10.4	11.2	3.4	GCal	6.3	9.4	23.6	52.7		9.4	
10.4		21.2	8.7		10.4	10.4		57.6	2.8		8.0	8.0	27.6	50.8		10.0	10.0	24.6	6.3			
9.4		22.7	10.3		9.5	9.5	56	5.6	48.2		9.2	9.2	29.1	1.4		9.3	9.8	29.6	16.9			
9.9		26.2	51.3		10.2	10.2		6.1	6.2		9.7	9.7	29.1	56.2		9.4	9.8	42.6	16.2		9.8	
25pr.		+ 1 4.0	-1.8					+ 1 4.0	-2.0				+ 1 4.1	-2.1				+ 1 4.1	-2.2			

1801-1860.				1861-1920.				1921-1980.				1981-2040.					
mag.	7 ^h	-21°		mag.	7 ^h	-21°		mag.	7 ^h	-21°		mag.	7 ^h	-21°			
9 ^o	2 46.1	8.9	Ca	8.7	6 39.1	49.6		10.3	9 35.8	49.9		9.8	12 9.0	31.7			
9.8	49.6	53.1		10.3	46.1	6.0		10.2	35.8	43.5	9.8	9.0	10.0	12.8	Cal		
9.0	50.1	3.9	a	8.8	8.9	50.1	4.2	8.7	9.7	38.2	42.9	10.3	16.0	35.7			
10.4	53.1	53.0		10.0	51.6	6.0		10.0	38.3	36.7		8.8	19.0	27.9	C		
10.4	53.6	25.6		10.4	56.1	2.3		9.4	39.3	40.5		10.1	29.0	26.5			
9.3	2.1	18.0		8.6	56.8	57.6	Cb-1	8.6	8.7	40.3	40.3	C- }	9.8	33.0	36.4		
8.8	3.6	48.1	C-	8.5	59.6	46.0		9.2	43.3	43.3	9.5	10.4	34.0	58.9			
10.3	18.6	49.0		9.4	9.4	3.1	8.1	10.3	43.3	14.4		10.3	34.8	59.1			
9.7	23.1	52.8		9.4	9.4	9.8	59.4	9.4	10.3	46.3	57.1	8.7	36.0	8.1	GCal		
9.8	26.1	47.9		9.0	12.1	51.4		9.2	10.3	47.3	30.1	10.3	37.5	21.6			
10.4	33.2	25.7		8.6	13.6	32.4	Ca	8.6	10.0	48.3	1.9	10.2	44.0	55.3			
9.4	40.1	4.4		9.5	16.9	52.8		10.4	10.4	52.2	42.4	9.7	47.0	4.3			
10.4	42.1	51.3		9.5	10.4	22.1	6.2	9.4	9.4	53.3	36.1	9.1	9.6	48.5	55.0	10.	
10.4	45.6	44.0		10.0	10.0	29.8	57.9	8.8	8.8	58.8	45.3	8.7	9.5	51.5	50.6	9.4	
10.4	47.1	54.6		10.0	9.4	31.6	9.0	9.5	10.4	10.4	6.8	10	9.2	55.5	52.6	9.5	
9.4	48.1	44.7		9.7	9.1	32.0	36.4	9.1	10.2	10.3	16.2	10.3	57.0	33.9			
10.4	48.1	42.2		10.4	10.4	35.5	1.9	10.4	10.4	11.8	17.3	10.3	13	5.0	16.7		
9.8	53.6	29.8	a	9.5	10.2	36.1	9.0	10.4	10.4	13.2	42.5	9.9	9.9	5.0	52.0		
9.7	57.6	34.5		10.4	10.4	38.6	54.0	10.2	10.2	16.1	1.3	10.2	9.6	13.0	20.6	9.8	
9.8	58.1	10.1		10.4	10.4	40.1	39.0	9.3	9.3	16.3	10.8	9.8	10.3	14.5	10.9	9.8	
10.2	59.6	42.5		9.5	9.5	46.4	50.0	9.5	10.3	17.8	42.9	9.5	9.5	33.0	42.0	9.5	
10.0	2.6	15.3		9.8	9.2	46.9	57.6	9.2	10.2	22.8	39.9	10.3	10.3	34.8	35.4		
9.9	8.6	51.6		9.2	9.2	47.1	32.1	9.5	9.8	25.3	55.6	10.	9.2	37.3	6.4	9.8	
9.7	9.1	11.6		9.7	9.4	52.6	52.0	9.5	9.6	25.8	34.1	9.6	9.6	38.8	20.3	9.6	
10.0	13.1	35.4		9.1	9.1	56.7	56.7	9.1	8.4	30.3	24.6	8.7	8.9	45.3	20.9	Ca	
8.7	13.1	16.3	C	8.8	9.4	57.1	45.0	9.4	8.9	31.3	43.5	9.4	9.6	45.3	2.7	9.4	
9.4	27.6	55.9	a	9.3	9.4	57.4	43.2	9.1	8.6	34.8	4.1	8.2	8.8	46.8	13.7	a	
10.4	33.1	31.6		9.8	9.8	57.9	28.4	9.8	8.9	35.8	42.2	9.3	9.0	52.3	43.4	9.8	
9.4	41.1	59.8		9.3	9.9	59.1	14.2	9.6	9.6	44.3	12.8	10.	10.4	59.3	21.1		
10.4	43.1	25.3		9.0	8 2.0	30.0	C	8.5	9.2	44.3	24.5	9.8	7.6	49.2	Cal	7.3	
10.2	50.6	39.6		9.6	9.6	4.1	25.4	9.5	9.2	44.8	40.3	10.4	0.8	20.1			
10.0	52.6	11.1		10.4	10.4	4.1	24.6	9.6	9.6	45.8	11.9	9.4	9.4	2.3	14.8	9.8	
9.8	3.1	52.3	a	9.3	10.4	9.9	34.7	9.1	9.1	54.3	12.1	9.0	10.4	5.3	19.3		
9.9	4.1	15.7		8.9	8.9	11.5	8.6	9.0	10.2	55.3	55.5	10.2	10.2	6.3	1.8		
10.0	11.1	54.3		8.6	8.6	20.8	14.7	8.7	9.0	55.8	54.8	9.1	9.6	6.8	15.6		
9.7	13.6	17.8		10.4	10.4	21.3	14.3	10.2	10.2	56.3	8.9	10.3	10.3	7.9	26.3	9.5	
10.4	21.6	6.0		10.0	10.0	21.3	49.6	10.3	10.3	56.8	59.7	9.9	9.9	8.6	1.5	10.	
9.8	26.1	21.1		9.8	10.3	23.3	12.7	10.2	11	1.3	9.4	10.4	10.4	8.8	17.9		
10.4	30.6	28.4		9.8	9.8	34.0	0.9	9.3	9.3	1.8	50.3	8.6	8.6	9.8	46.6	a	8.7
10.2	36.1	27.3		10.0	10.0	34.3	27.9	10.2	10.2	1.8	16.5	9.6	9.6	12.3	44.2		
10.2	36.1	0.8		9.5	9.5	39.0	55.9	9.5	10.2	2.3	7.0	9.8	9.8	12.3	7.5		
10.4	36.2	16.5		10.3	10.3	42.3	15.1	10.1	10.1	2.8	23.2	9.6	9.6	12.8	37.7	9.7	
9.4	42.6	12.1		8.7	9.4	42.3	49.3	9.8	9.4	4.3	48.0	9.8	9.6	14.3	31.8	9.5	
9.8	49.6	16.2		9.4	9.4	43.8	26.4	9.7	10.4	7.3	2.9	9.8	9.6	15.3	39.8		
9.3	50.6	55.1		9.2	9.6	44.3	57.9	9.5	9.0	13.3	37.2	9.2	10.0	15.3	37.4		
10.2	51.9	1.8		9.4	9.4	44.3	45.9	9.2	9.2	18.8	42.1	9.4	9.2	17.3	36.1	9.4	
10.4	53.6	1.5		10.4	10.4	46.3	41.9	10.1	10.1	24.8	13.6	9.8	9.8	20.8	27.8		
7.5	0.6	35.9	Cbl	7.1	10.4	49.5	2.9	9.4	9.4	28.3	16.8	9.5	9.5	23.8	11.6	a	9.3
9.2	2.6	18.6		9.1	9.7	56.3	16.9	9.2	9.2	32.0	0.8	9.4	9.8	34.8	18.3		
9.6	7.1	22.1		9.8	8.9	9 4.3	45.4	9.1	10.4	32.8	34.9	9.6	9.6	36.3	40.1		
8.9	12.1	29.4	a	9.2	9.9	6.8	35.9	9.5	9.1	35.5	58.9	9.7	9.6	38.8	13.9		
10.0	17.1	56.3		9.8	9.4	12.3	51.5	9.0	10.1	36.0	24.3	9.5	9.5	39.3	11.0	9.8	
10.4	17.6	21.2		9.1	9.1	17.8	6.4	9.3	9.8	41.0	0.7	9.5	9.6	40.8	23.2		
10.4	18.6	27.1		10.2	10.2	18.3	13.4	10.4	10.4	55.0	34.9	8.4	8.4	45.3	39.1	9.0	
9.8	25.6	10.1		9.5	9.8	20.3	54.5	9.8	10.0	55.5	55.1	9.4	9.4	45.8	39.9		
9.4	28.1	39.0		10.0	10.0	20.8	33.9	9.6	9.6	59.0	41.3	9.6	9.6	46.3	53.4		
9.8	32.6	10.3		9.7	9.8	24.8	39.2	9.3	9.3	1.5	56.2	9.8	9.0	46.8	40.7	9.5	
10.3	32.6	52.4		9.8	9.8	25.3	25.9	9.6	9.6	3.0	50.6	9.2	9.2	49.8	39.6	9.8	
9.3	33.1	40.7		9.5	10.2	30.8	24.1	10.4	10.4	6.5	8.9	9.6	9.6	52.8	37.8		
9.0	36.1	33.5		9.5	10.4	31.8	25.9	9.6	9.6	8.0	8.0	9.5	9.6	55.3	31.7	9.4	
25pr.	+ 1 4.1	-2.3			+ 1 4.2	-2.4			+ 1 4.2	-2.5			+ 1 4.3	-2.7			

2041-2100.					2101-2160.					2161-2220.					2221-2280.					
mag.	7h.	-21°			mag.	7h.	-21°			mag.	7h.	-21°			mag.	7h.	-21°			
	m	s			m	s				m	s				m	s				
9.8	14	56.8	31.5		9.4	17	32.1	42.8		9.6	20	25.0	45.1		10.0	23	17.7	58.4		
10.3		58.8	13.5		9.1		32.1	17.9 a	9.8	9.6	30.9	1.9	9.5	8.7	19.2	32.9	Cal	7.8		
8.3	15	2.2	51.2	Cal	7.4	9.5	43.1	32.8	9.1	10.4	32.0	6.8	9.8	9.8	19.7	11.5				
9.4		4.2	45.1		9.7	9.6	44.6	27.5	9.8	9.8	37.5	55.8	10.4	10.4	20.7	54.6				
10.3		7.2	49.5		10.4	9.7	46.6	33.2	9.8	9.8	38.5	16.8	10.5	10.5	21.2	1.8				
9.6		8.7	13.0		9.7	10.2	48.6	13.2	9.8	9.2	41.0	30.6	9.7	10.5	23.2	1.9				
10.3		11.7	54.6		10.2	9.8	49.1	28.0	9.2	9.0	41.5	35.1	9.7	9.8	24.7	9.9				
9.8		11.7	42.1		9.8	10.4	50.6	10.6	9.0	9.7	42.5	48.1	9.7	9.4	31.7	0.9	9.7			
10.3		20.7	38.3		10.4	9.2	52.3	35.3	9.7	8.4	44.5	51.7	9.6	8.6	40.7	8.0	9.0			
9.4		21.2	19.8	9.5	9.2	53.1	25.7	9.4	8.4	48.5	58.2	Ca	9.0	9.5	41.2	13.6				
10.3		22.2	8.7		9.6	56.1	36.9		9.5	50.0	4.3		9.9	44.7	43.6					
9.6		28.2	53.3	9.4	8.8	57.1	9.1 a	9.2	9.8	53.0	40.7		8.4	48.7	34.6	bl	8.8			
10.0		29.2	6.8		10.1	59.1	39.5		9.8	53.3	35.1		9.8	52.2	49.0					
9.7		30.2	55.2		9.8	18	0.1	29.6	9.8	10.2	55.3	55.7	10.4	53.7	49.3					
8.4		30.7	20.5	Ca	8.4	10.4	0.9	59.5	9.2	9.2	57.3	43.3 a	9.2	8.3	0.7	36.7	Cb-1	8.2		
9.5		31.9	2.3		9.7	10.1	1.1	39.1	10.0	10.4	58.3	59.4	9.4	9.4	3.2	27.8			9.4	
10.0		32.7	54.6		9.7	8.6	3.6	16.1	Ca	8.2	10.0	21	0.0	58.9	4.7	56.7			9.8	
10.4		32.7	4.0		9.8	9.8	6.6	17.0		9.4	9.4	0.3	19.9	8.2	5.2	36.0	Cal	8.4		
9.9		33.7	8.4		9.4	9.4	9.6	22.0		10.2	1.3	15.4	9.5	8.2	28.3				9.4	
9.4		35.2	16.9	10.	9.9	10.6	48.6		9.6	9.6	1.3	56.0	9.4	8.2	46.1					
10.0		35.5	33.0		9.0	15.6	9.6 a	9.3	9.4	1.3	18.4		9.5	10.2	9.2	38.3				
10.3		37.7	43.3		10.1	16.6	36.3		9.8	3.3	21.0			8.6	9.2	56.6			8.9	
10.4		47.3	39.2		10.1	18.6	35.3		9.7	4.8	24.5			9.3	10.2	4.8			10.	
9.6		49.3	26.0		9.6	21.1	10.8	9.5	9.4	12.3	44.9 a		9.0	10.2	10.7	4.5				
10.0		49.3	46.5	9.5	9.5	32.1	13.4	9.8	10.1	16.8	18.2			9.8	12.0	11.9			9.7	
10.2		49.7	30.5		10.4	35.1	25.7		9.7	20.8	53.9		9.5	9.8	25.0	17.9			9.5	
9.8		52.2	27.7	9.6	9.2	36.1	54.6	9.3	9.5	22.3	58.2 a		8.9	9.2	25.7	56.9			9.5	
9.2		57.7	44.5	9.8	9.6	41.6	26.0	9.5	10.0	24.3	58.4			10.3	33.0	35.0				
9.4	16	1.2	20.5	9.8	8.4	46.6	21.6	Ca	8.7	10.4	28.5	1.9		9.9	35.0	7.1	10.			
10.3		2.2	1.0		9.4	47.6	36.2	9.2	10.0	36.3	15.1			9.6	42.0	10.9			9.8	
10.4		7.7	12.3		9.6	55.6	15.0 a	9.3	9.8	37.3	28.8			9.6	46.5	24.2			9.5	
10.1		11.2	36.0		10.4	56.6	48.9		9.0	39.3	21.7		9.3	10.2	50.0	39.5				
9.6		12.2	18.3		9.7	57.6	14.0		8.6	39.8	34.2 a			9.1	10.3	51.0	6.1			
10.0		12.7	42.2		10.2	19	1.6	34.2	9.5	40.8	4.2		9.7	10.3	56.0	1.9				
9.2		13.2	29.7	9.7	10.0	12.1	48.7		10.0	41.3	51.8			10.2	58.5	19.5				
9.6		14.7	7.1	9.8	9.8	19.1	5.3		10.4	43.0	2.3			10.4	58.5	49.6				
9.8		17.7	1.1		9.5	26.1	54.3	9.7	9.6	56.8	18.2			10.0	25	2.0	42.3			
9.8		19.2	9.9		9.5	29.1	4.5	9.7	9.6	22	2.3	30.5		9.2	3.0	16.5			9.3	
9.6		35.1	1.9		9.6	31.6	43.1		9.4	4.3	23.2			9.2	6.5	18.1			8.7	
10.0		40.6	48.7		8.8	36.5	13.7	9.2	9.8	7.8	31.7		10.	10.1	7.0	47.0				
9.8		40.8	46.0	?	9.8	45.5	1.6		10.0	9.3	3.4		9.8	9.5	9.5	14.4				
9.7		41.6	38.0		10.0	46.5	35.6		9.3	12.8	55.9		9.5	10.0	12.0	9.8			9.8	
9.2		52.6	25.2		10.4	47.5	10.2		10.4	16.3	48.1			8.8	14.5	20.3 a			8.9	
9.5	17	2.1	53.3	9.3	9.8	48.0	17.5		8.6	30.8	37.5	Ca	9.0	10.4	15.0	48.9				
10.2		3.6	49.3		10.2	49.5	27.5		9.7	38.8	46.7		9.8	9.4	17.0	33.1			9.5	
8.8		6.6	29.7	9.4	9.8	56.5	12.1	9.6	10.0	38.8	43.8			9.9	21.5	45.3				
9.7		9.1	52.6		10.4	58.5	37.3		10.0	40.3	43.6		9.8	8.3	22.0	32.9	Ca		8.2	
9.6		10.1	31.6		6.9	58.5	44.2	GCbl	7.0	10.5	56.9			9.9	26.5	0.2				
10.3		11.6	59.0		9.6	59.0	35.0		10.	10.5	46.3			10.2	27.0	4.3				
9.3		12.6	2.9	9.2	9.8	20	0.5	30.3	9.6	10.1	42.7	31.9		9.5	31.5	30.8				
9.3		15.1	3.3	9.4	9.8	5.0	59.6		9.6	47.7	6.7		10.	10.0	34.5	23.3				
10.3		16.6	33.0		9.9	8.5	16.8		9.6	50.7	9.9		9.5	9.7	36.0	49.9				
9.4		17.1	37.7	9.2	8.7	9.0	39.4 a	9.0	10.0	52.2	41.0			9.4	36.5	15.0			9.5	
9.2		21.6	7.2	9.5	10.1	11.5	6.8		10.3	57.7	11.1			9.0	40.0	21.7 a			9.1	
9.8		21.6	48.4		10.4	11.5	33.9		10.4	58.7	50.5			10.1	41.0	25.9				
9.8		21.6	13.0		9.7	12.0	4.4	9.7	10.3	59.7	59.0			9.7	42.0	23.9			9.5	
9.9		24.1	59.3		9.8	14.0	27.2		10.0	23	7.2	43.5		10.4	44.0	38.3				
8.8		26.1	14.9	Cal	8.0	16.0	18.4		9.8	9.6	9.2	0.1		10.2	44.5	25.9				
9.5		27.6	45.2	9.8	10.4	16.5	59.1		9.8	9.8	10.2	23.7		8.6	49.0	37.5 a			9.0	
9.6		28.1	50.1		9.6	23.0	35.7		8.2	15.2	42.5	Ca	8.7	10.0	50.0	55.1				
25pr.	+1	4.3	-2.7		+1	4.4	-2.8		+1	4.4	-2.9			+1	4.5	-3.0				

7h
1899Acap...3...1G

2281-2340.				2341-2400.				2401-2460.				2461-2520.			
7h.		-21°		7h.		-21°		7h.		-21°		7h.		-21°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.0	25	54.5	9.9	10.4	28	33.8	39.6	9.2	30	29.9	26.3	9.5	32	24.9	53.9
9.0		58.5	22.9 a	10.4		38.0	3.5	10.5		30.3	58.1	10.2		30.4	50.2
9.8		59.5	46.5	10.1		41.3	34.6	10.5		31.6	10.4	9.9		30.4	49.8
10.1	26	1.0	54.9	9.9		48.4	30.7	10.5		37.4	30.2	10.3		30.5	31.9
10.4		5.0	39.9	9.6		51.9	6.6	10.5		39.4	7.6	10.1		32.9	41.8
8.7		6.0	28.8 Ca	10.1		52.9	42.3	7.8		45.4	53.1 Ca	6.7		32.9	41.0
9.9		7.0	33.9	10.5	29	3.1	58.1	10.5		45.4	7.5	10.5		37.9	53.9
9.6		11.8	1.7	10.3		3.9	39.8	9.2		46.4	25.7	9.8		38.9	23.7
10.4		15.0	46.5	9.6		3.9	25.5	8.6		49.4	38.3 C	8.0		41.9	51.2
10.4		17.5	44.4	9.8		5.6	6.1	10.4		56.9	47.7	9.8		43.4	9.5
10.3		19.0	13.1	10.0		5.6	8.8	10.0	31	2.4	12.1	9.9		43.4	44.9
10.2		20.0	13.5	10.1		7.4	24.8	9.8		3.4	55.4	8.9		45.9	37.1
8.2		22.0	43.6 Ca	10.4		7.4	20.6	10.2		5.4	31.3	9.8		45.9	19.3
9.2		23.5	52.5	9.1		8.6	35.1	9.5		5.9	41.9	10.5		45.9	4.3
9.8		29.0	13.8	9.2		7.7	10.2	7.7		10.3	6.5	10.5		46.4	36.3
8.8		31.7	57.1	9.2		9.4	17.4	9.5		9.8	6.9	9.2		51.9	46.7
9.4		33.5	30.0	9.8		9.4	20.4	9.8		10.0	9.9	10.5		52.9	47.9
9.4		35.8	2.1	9.4		9.4	20.9	9.3		9.4	9.9	10.5		52.9	47.9
9.9		36.0	39.3	10.3		25.9	47.5	10.1		10.9	28.4	9.2		54.4	42.9 a
10.3		38.0	5.7	9.5		28.9	39.0	10.0		11.4	11.9	8.4		59.6	57.5 a
10.3		40.0	36.9	9.8		31.9	19.9	10.4		12.9	12.9	10.3		59.9	10.4
9.4		40.5	10.3	9.2		32.9	23.9	10.5		13.4	14.9	10.4		59.9	40.1
10.1		41.0	24.4	10.5		36.1	1.5	10.0		15.9	8.7	10.5	33	2.4	32.5 Ca
10.0		43.0	33.9	9.2		36.6	49.1	10.4		21.9	3.3	9.4		5.9	51.9
9.6		43.5	19.9	9.8		37.4	56.8 a	9.4		21.9	21.9	9.4		6.9	52.9
9.4		51.0	45.8	10.4		37.6	29.8	10.2		27.4	10.9	9.4		6.9	34.3
10.3		54.0	31.2	9.2		37.9	9.2	9.8		31.9	52.1	10.5		12.4	43.4
10.1		54.0	37.1	9.4		38.4	38.9	9.8		32.5	13.3	8.7		16.4	35.5 a
10.4		56.9	1.3	9.4		38.4	4.8	10.4		33.5	20.1	10.3		16.4	27.2
9.7		57.0	14.1	10.4		41.4	50.4	9.8		33.9	27.4	10.2		18.4	10.1
10.2		59.5	28.3	9.8		41.9	23.2	9.4		33.9	54.1	9.6		18.9	39.8
10.2		59.5	4.7	10.4		41.9	25.2	10.2		34.9	42.0	10.5		20.5	40.2
9.7	27	1.0	8.6	9.9		45.9	37.8	10.5		35.3	58.2	10.2		21.4	55.3
10.4		7.0	48.1	10.2		46.4	32.5	8.1		35.4	6.9	10.4		22.1	58.6
10.4		11.5	37.0	10.3		46.4	35.3	10.2		41.5	14.1	8.9		22.4	23.3
8.6		14.0	39.9	9.4		47.4	9.3	10.1		43.9	4.7	8.9		25.4	36.7
10.4		15.5	37.9	10.4		47.6	40.0	10.2		44.5	20.2	10.1		25.4	45.5
10.0		16.0	33.2	10.0		51.4	20.7	9.5		46.4	31.6	9.3		26.9	33.7
9.4		18.5	30.1	9.6		51.6	56.4	9.4		51.4	6.2	10.3		26.9	50.7
10.3		22.0	27.2	9.8		52.9	30.9	9.8		51.4	21.1	9.2		26.9	13.1
9.5		28.5	36.1	10.5		54.9	0.1	9.2		51.9	21.4	9.0		27.4	44.9
10.4		40.0	2.9	9.9	30	2.4	44.8	9.8		52.9	18.9	10.5		29.5	37.1
9.7		47.4	30.7	9.2		2.9	18.7	10.3		52.9	21.8	9.8		31.9	39.6
10.0		48.2	12.5	10.0		6.4	27.7	9.5		53.4	15.0	9.8		32.4	49.1
8.7		50.6	40.1 Ca	9.0		8.6	25.3	10.3		59.9	12.1	9.2		32.9	3.7
9.4		55.1	13.1	9.3		9.4	24.1	10.4	32	1.4	40.1	9.8		33.1	57.7
10.4		58.4	54.8	9.1		9.4	30.0	9.7		3.2	1.3	9.6		33.4	51.5
9.6		58.6	0.9	10.0		10.4	46.3	9.8		5.4	4.5	10.5		34.6	58.7
9.8	28	2.3	55.4	9.8		12.4	39.6	9.8		6.9	29.9	10.4		37.4	36.5
9.6		3.4	39.9	10.5		14.4	5.3	10.2		9.4	8.6	9.9		39.4	33.7
10.4		4.3	28.3	9.8		15.9	40.5	10.3		11.5	34.3	10.1		43.6	2.8
8.7		7.6	22.1	9.2		15.9	17.5	9.2		12.4	27.6	10.4		44.1	30.8
10.1		8.6	33.7	10.3		16.6	33.3	9.8		12.5	38.7	10.4		47.1	22.5
10.1		13.3	11.9	8.3		17.4	12.4	10.1	8.7	13.9	53.1	10.5		52.6	49.9
10.0		17.1	9.2	9.6		19.4	29.0	10.4		15.4	14.9	10.2		58.6	34.8
9.8		17.1	22.4	10.4		23.4	9.9	10.4		15.4	26.6	10.4		59.6	37.0
10.2		19.1	17.5	10.3		24.9	1.6	10.4		21.4	55.9	9.6	34	3.1	36.1
9.4		20.6	12.9	10.4		26.9	14.3	9.8		21.9	43.2	10.4		4.6	46.5
9.8		20.6	17.1	8.8		26.9	43.3	9.3		22.4	9.2	10.4		8.1	32.7
9.9		24.6	47.5	10.3		26.9	36.9	10.5		22.5	38.8	10.5		10.1	4.5
25Pr.		+ 1 4.5	- 3.1			+ 1 4.6	- 3.2			+ 1 4.7	- 3.3			+ 1 4.7	- 3.3

2521-2580.				2581-2640.				2641-2700.				2701-2760.											
		7h.		-21°				7h.		-21°				7h.		-21°							
mag.		^m	^s	^m	^s	mag.		^m	^s	^m	^s	mag.		^m	^s	^m	^s						
10.0		34	15.6	50.9		9.8	10.3	36	1.3	29.5		9.8	37	48.6	25.5	9.6	39	37.6	17.1	9.8			
9.8			15.6	54.1		10.0	10.3		2.3	8.6		9.8		50.1	20.9	10.4	39.6	33.6					
10.1			16.1	55.7			10.4		2.6	43.0		10.4		54.1	22.5		9.5	41.6	9.3	a	9.2		
9.4			20.6	15.6		9.5	10.4		5.1	43.1		10.5		57.1	22.1		10.5	48.6	6.1				
9.5			20.6	29.6			10.3		5.3	17.9		10.4	38	0.6	39.7		8.4	50.1	55.3	Ca	8.2		
10.2			26.1	7.3			9.8		9.1	23.0		10.5		1.6	39.7		10.5	57.1	12.3				
7.8			26.6	54.6	C-	8.2	9.9		14.1	24.2		9.8	8.1	2.6	49.4	Ca	8.5	10.5	57.3	45.8			
9.8			27.1	4.5			9.8		15.1	30.7		10.5		2.6	48.3		10.4	40	0.1	49.9			
9.6			28.6	48.1			10.3		15.3	40.7		10.4		3.6	4.9		9.9		5.6	25.8			
9.8			34.6	55.3			9.8		17.1	37.2		10.1		7.1	49.8		10.5		9.6	14.9			
9.6			35.6	12.3			10.2		18.3	6.7		10.3		7.6	18.3		10.4	10.6	53.7				
9.8			36.6	45.2			8.9		20.1	4.7	Cbl	8.6	10.2		10.1	19.7		9.2	11.1	15.5		9.4	
9.8			36.6	55.1			10.1		21.1	41.0		10.1		12.6	16.8		10.4		12.8	2.3			
10.2			38.6	27.3			10.2		21.6	32.9		9.8		17.1	39.7		10.4		22.1	11.0			
10.5			39.1	25.5			10.1		21.6	35.0		9.9		17.6	33.0		9.9		25.1	56.8			
10.4			39.6	46.1			9.8		22.9	1.1		10.0		20.1	52.3	Gal	8.2	10.5	25.3	36.4			
9.6			40.6	41.2			9.4		27.6	33.5		10.4		22.6	42.7		10.5		26.6	8.0			
9.0			42.1	0.1		9.1	10.3		29.6	53.9		9.8		23.1	59.1		10.3		26.6	48.7			
10.5			46.1	9.8			9.4		29.6	13.3		10.0		23.6	13.1		9.0		27.1	47.5	a	9.1	
9.4			50.4	0.5		9.2	9.8		30.1	34.9		10.4		24.1	9.7		10.5		27.1	3.5			
9.4			50.6	30.1		9.5	10.3		32.3	26.5		10.3		29.1	23.5		10.4		29.3	38.5			
9.2			51.6	32.0		9.5	9.5		33.1	33.5		9.5	9.6	29.6	44.7		10.1		29.6	41.3			
10.5			52.6	4.4			9.8		37.1	19.9		9.8		32.6	6.8		10.1		32.6	48.3			
9.8			56.1	40.3		9.8	9.2		38.6	7.7		9.1	10.4	34.1	23.1		10.0		35.3	33.4			
10.4			56.1	35.9			9.8		40.1	21.3		9.9		35.3	52.1		8.6		37.1	27.0		9.1	
9.9			57.1	12.4			9.2		40.1	43.7		9.9		36.1	4.0		9.8		41.6	11.3			
9.4			59.6	41.5		9.7	9.4		41.6	35.2		9.6	9.2	38.1	37.7		10.4		42.3	25.0			
8.2		35	2.1	45.6	Cal	7.3	9.6		42.6	56.5	a	9.5	9.8	40.1	3.7		9.4	10.3	44.1	7.9			
9.2			6.1	59.0		9.3	9.2		43.6	39.0		10.4		40.8	1.5		10.4		45.6	43.5			
9.2			6.1	11.3			9.8		44.1	25.3		10.0		41.3	57.3		10.0	10.4	46.1	39.3			
10.4			6.1	9.6			10.3		47.6	36.2		9.8		41.6	29.4		10.1		47.6	7.9			
10.0			6.1	24.7			9.4		50.6	55.5	a	9.4	10.2	43.3	17.2		10.4		47.6	36.7			
9.8			7.6	56.9			10.5		52.6	56.5		9.2		44.6	4.1		9.2	9.8	52.6	53.7		10.0	
8.1			18.1	39.2	Ca	8.7	10.3		54.1	38.1		10.5		46.8	54.9		10.0		53.3	6.3		9.8	
10.5			21.6	31.9			10.0		57.1	30.3		10.3		47.8	41.5		9.9		54.1	55.9			
9.4			29.1	37.6		9.4	8.1	37	2.6	38.5	Ca	8.5	9.8	51.6	43.9		8.5		55.1	17.7	C	9.0	
9.9			29.6	35.5			10.3		2.6	37.1		9.6		53.1	16.6		8.7	41	1.6	14.3	Ca	8.0	
9.4			30.1	44.4			10.5		2.8	14.5		10.0		55.6	10.1		10.4		1.6	40.9			
9.8			30.1	36.8			10.0		7.6	50.1		9.0		56.1	27.0		8.5		4.1	42.6	a	9.1	
10.3			30.1	47.7			10.1		9.8	41.2		10.5		57.3	39.1		10.5		4.1	43.5			
9.8			32.1	34.6			10.3		11.6	3.3		10.4		58.6	53.1	Ca	9.0	10.1	9.6	8.1			
10.4			36.1	43.0			9.6		12.1	28.3		9.8	8.5	59.1	31.1		8.5		12.6	9.4	a	9.0	
10.1			40.1	34.3			9.9		15.1	43.9		10.5		59.3	19.9		8.9		19.1	15.3		9.4	
9.8			41.1	26.4			10.4		15.6	31.5		10.1		1.1	34.3		10.3		23.1	55.0			
9.4			44.1	21.4		9.5	9.1		17.1	40.4		10.1		1.1	19.5		10.2		31.1	19.6			
9.4			44.1	15.6			10.3		17.1	9.9		10.5		1.1	49.7		10.1		37.1	13.7			
10.0			45.6	34.4			10.4		18.1	30.9		10.5		1.6	33.9		9.2		38.8	1.0	a	9.2	
9.9			47.6	33.8			8.9		21.1	52.8	a	9.3	9.8	2.6	18.6		10.3		41.6	31.3			
9.0			49.1	12.7		9.3	10.4		21.6	4.9		10.0	9.2	3.6	12.5		10.4		43.1	50.2			
10.2			49.1	33.4			10.5		22.6	52.6		10.4		3.6	34.1		10.0		47.6	19.9			
10.2			51.1	1.0		8.3	31.1		27.7		C	9.0	9.8	5.1	45.9		9.8		49.1	18.1			
10.4			51.1	56.9			10.3		31.1	9.9		10.3		7.3	38.1		10.5		52.6	38.9			
9.8			52.3	30.2			7.9		32.1	41.7	Ca	7.3	9.4	9.1	41.7		10.3		56.5	14.0			
9.1			52.6	34.3	a	9.5	9.6		32.1	57.0		9.5		9.1	8.7		9.8		59.1	3.9			
10.4			55.6	13.0			9.8		35.6	54.9		9.3	10.4	14.6	20.1		10.4		59.1	54.2			
10.3			56.3	6.9			10.2		35.6	10.5		9.5		15.1	44.5		10.0		59.6	6.5			
10.2			57.1	41.3			10.5		37.1	59.3		10.4		16.1	50.1		9.6		42	2.1	20.5	9.9	
9.6			57.1	14.3			10.5		37.6	15.1		10.2		26.1	16.7		9.6		4.1	4.1			
10.3			57.3	11.3			10.1		39.6	16.9		10.4		30.6	39.6		10.4		4.5	20.9			
10.4			59.6	35.4			9.9		40.1	12.5		9.8		36.6	36.1		9.8		9.6	17.3			
25pr.		+1	4.8	-3.4				+1	4.8	-3.4			+1	4.9	-3.5			+1	4.9	-3.6			

2761—2820.				2821—2880.				2881—2940.				2941—3000.				
7h.		-21°		7h.		-21°		7h.		-21°		7h.		-21°		
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	
42	13.6	58.6		44	35.6	6.1		47	19.1	52.9		50	33.4	26.5		
10.0	14.1	15.3		10.0	36.3	35.6	9.5	10.3	19.6	51.7		10.0	36.4	49.9	9.5	
10.2	16.6	37.3		10.2	40.9	1.0	9.2	8.6	21.0	54.1	Ca	7.7	38.9	37.6	9.3	
10.4	21.6	23.3		9.9	41.4	1.4		10.4	22.4	0.0		9.8	40.4	10.0	9.5	
10.1	26.1	41.5	9.8	10.3	42.6	5.5	9.7	10.1	27.0	3.3		10.2	42.9	17.0		
10.4	26.9	57.1		10.5	43.1	22.5		10.0	28.0	37.0		10.4	45.9	13.0		
9.6	28.1	23.5	9.8	10.1	49.1	41.3		9.2	28.0	6.0	9.4	9.4	46.4	16.2		
9.2	29.6	10.2	a	9.5	10.1	52.1	10.4	9.5	10.3	30.5	52.0	9.2	51.4	25.3	9.3	
9.8	32.5	3.2	a	9.0	10.4	52.6	59.6	10.3	31.5	16.6		10.4	52.4	57.3		
9.8	32.6	55.6		9.7	9.6	52.7	58.1	10.0	8.7	37.3	2.2	a	9.1	10.4	52.4	49.6
10.4	32.6	5.9		9.4	54.1	20.7		9.5	10.5	42.0	55.7	9.7	53.4	53.7	9.8	
10.1	33.1	2.1	a	9.3	10.5	56.6	52.1	9.5	9.5	46.3	43.2	10.4	55.4	1.3		
10.3	41.5	19.4		10.3	45	1.6	40.9	9.8	9.8	46.3	29.3	9.9	51	0.4	25.2	9.5
10.5	42.6	21.3		9.8	2.6	7.1	a	9.8	9.2	52.0	54.8	a	9.0	9.3	3.6	9.5
10.4	42.6	21.0		9.8	12.6	37.1		9.4	10.5	53.5	17.7	9.4	9.4	5.4	14.0	
9.6	44.1	9.1	9.5	10.4	14.6	8.8		48	3.3	45.9		10.0	5.9	18.7		
10.5	44.6	2.9		8.6	20.6	44.3	Cal	7.7	9.8	5.6	16.7	10.0	11.4	34.2		
10.5	46.1	57.5	9.9	9.5	23.6	25.0		9.8	9.8	6.0	58.9	9.7	10.1	20.4	35.9	
10.4	46.6	18.6		10.0	30.1	35.2		10.1	10.1	7.0	33.4	9.8	9.8	22.9	32.1	9.8
10.5	47.1	59.5		10.4	35.1	9.2		10.4	10.4	7.2	48.3	9.7	9.7	24.5	13.7	
9.2	48.1	27.6	9.1	9.2	35.6	43.8		10.1	10.1	10.8	14.0	10.0	24.9	21.6		
10.5	48.6	20.0		10.2	36.1	20.0	10.0	10.0	10.0	11.5	35.3	9.9	27.9	24.8		
9.9	48.6	9.1		10.4	40.1	1.2		9.8	9.8	15.3	58.3	9.7	10.4	30.4	21.6	
9.9	49.1	6.3		10.1	41.1	53.8		10.5	10.5	18.0	24.4	10.4	10.4	32.9	4.4	
10.5	52.1	32.5		9.6	45.9	1.4	9.6	8.2	20.1	35.8	Ca	8.4	9.4	32.9	3.4	9.6
10.4	43	2.5	14.6	9.4	47.6	34.6		9.7	9.7	27.3	36.1	9.5	10.4	34.4	13.7	
10.5	2.6	24.3		10.4	51.6	18.1		10.4	29.2	14.2		10.0	41.9	40.4		
9.9	2.6	32.9		10.4	53.6	23.6		10.2	32.6	32.9		10.4	42.9	43.8		
10.2	6.5	41.1		9.2	54.6	12.0	a	9.2	10.2	35.0	1.6	9.7	9.9	42.9	53.9	
9.2	9.1	5.5	9.4	10.4	57.6	33.6		9.0	9.0	36.6	42.2	Ca	8.9	10.4	47.9	28.9
8.3	11.6	41.9	Cal	7.5	46	5.8	1.7	9.6	9.8	38.1	27.6	9.5	10.1	55.9	7.9	
10.0	23.6	47.5		10.5	7.6	39.7		9.6	9.6	47.1	26.1	10.4	56.4	34.5		
10.1	27.6	59.0		10.3	11.4	1.5		10.2	10.2	55.6	23.5	9.8	10.4	0.9	46.0	
9.4	32.6	53.5		10.5	17.6	56.6		9.7	9.2	59.1	40.8	a	9.0	7.4	39.7	
9.9	32.6	18.5	9.5	10.1	22.6	16.6		10.0	49	0.1	36.4		9.5	10.4	9.9	4.7
10.5	32.9	0.6		9.5	23.1	18.3		9.4	9.4	7.1	34.6	9.3	10.1	14.4	53.8	
10.1	37.9	1.5		9.8	27.6	24.0		10.2	10.2	17.2	0.4	9.5	10.2	16.4	54.5	9.8
10.5	39.5	24.7		10.1	28.6	17.7		10.4	10.4	38.6	3.3	9.8	10.2	18.9	59.1	
10.5	41.5	32.0		8.7	30.1	23.6		9.1	10.4	44.9	31.7	10.2	10.2	19.9	50.1	
9.5	42.6	32.3		9.5	9.9	31.6	34.5	9.7	9.7	48.1	50.4	10.4	10.4	21.4	40.5	
10.4	47.6	14.2		9.6	35.3	0.9		10.2	10.2	50.1	17.9	9.1	9.1	24.9	24.0	9.1
10.2	51.6	49.4		9.0	36.1	23.3		9.4	9.7	52.1	34.5	9.4	9.4	36.4	4.6	9.3
10.0	52.6	39.2		10.4	37.1	29.4		10.0	10.0	52.1	35.9	9.3	9.3	39.9	44.0	9.2
9.2	55.1	55.3		9.1	39.1	25.5		10.1	10.1	53.1	0.8	9.5	9.9	40.4	44.9	9.2
10.4	55.6	1.1		10.1	40.1	49.2		9.4	9.2	53.1	44.3	9.3	9.2	56.9	3.9	9.2
9.4	58.6	18.8		9.5	41.6	27.8		9.6	9.6	54.6	28.9	9.5	10.4	53	1.4	23.4
9.9	59.9	59.0		10.5	42.1	37.8		9.1	9.1	58.1	41.6	Ca	8.5	10.1	1.9	57.8
10.3	44	0.6	31.6	10.4	45.1	6.7		10.4	10.4	50	0.4	13.5	9.6	9.6	2.9	18.8
9.9	1.1	13.5		8.7	48.1	29.7		9.1	10.4	3.4	25.2	9.7	9.7	6.9	8.8	
10.4	2.6	10.6		10.1	52.6	15.4		10.4	10.4	3.6	19.4	9.0	9.0	6.9	9.0	C } 8.5
10.3	7.1	5.0		10.4	53.4	58.6		10.4	10.4	10.9	8.9	9.2	9.2	11.9	44.4	9.6
10.4	12.1	1.8		10.5	53.6	12.2		9.1	9.1	12.4	23.5	9.1	9.1	12.4	45.6	
9.9	17.6	47.3		9.5	56.1	33.5		9.4	9.4	12.9	36.9	a	9.1	10.0	12.9	53.4
10.1	22.6	6.8		9.8	57.1	52.6		9.6	9.6	16.4	48.0		9.3	9.3	13.4	6.8
9.8	24.6	37.9		9.8	47	1.6	29.2	10.0	10.2	18.7	57.6		10.4	10.4	14.4	13.0
10.4	24.6	12.0		10.5	3.1	33.6		10.2	10.2	20.9	29.4		10.4	10.4	16.9	54.2
8.8	25.6	29.2	C	10.4	4.1	9.3		9.1	9.1	23.4	24.4	9.4	9.4	22.1	0.5	9.3
10.5	26.1	25.6		8.5	5.6	40.7	C	8.7	10.2	27.9	8.0		9.1	9.1	27.8	45.9
9.8	29.6	37.3	C	9.7	6.1	56.4		9.3	9.3	28.9	4.5	9.4	9.9	28.3	38.9	9.8
9.5	35.6	26.1		8.8	12.6	5.0	Ca	8.7	10.4	32.9	6.7		10.2	29.1	59.8	
25pr.	+ 1 5.0	-3.6			+ 1 5.0	-3.7			+ 1 5.1	-3.8				+ 1 5.2	-3.9	

3001-3060.				3061-3120.				3121-3180.				3181-3240.				
mag.	7h.	-21°		mag.	7h.	-21°		mag.	7h.-8h.	-21°		mag.	8h.	-21°		
	m s	'	''		m s	'	''		m s	'	''		m s	'	''	
9.6	53	32.3	55.9	10.4	56	46.7	46.3	9.5	10.4	59	27.6	6.1	10.4	2	15.3	15.8
9.9		35.3	17.0	10.4		50.7	47.1	10.2		36.6	16.1	10.2		15.8	43.8	
10.2		37.3	19.1	10.2		51.2	1.6	10.4		42.6	1.9	9.8	10.4	17.3	35.5	
9.8		38.8	41.5	9.7	10.4	52.7	35.8	10.2		51.1	37.2	10.4	10.4	18.3	16.0	
9.4		39.8	37.4	9.8	9.1	53.7	48.2	9.1	10.4	51.6	34.1	9.0	20.3	7.2	a 9.3	
9.0		39.8	3.3	9.3	9.6	53.7	20.7	9.2	10.4	57.6	56.5	9.4	22.3	42.0	9.4	
10.1		42.8	43.0	10.2	10.2	55.5	58.9	8.8	8.8	58.4	17.1	9.0	9.9	32.3	38.1	
8.8		44.8	45.2	8.0	9.9	56.7	39.9	10.2	10.2	58.6	32.5	9.8	9.9	33.8	55.1	
9.9		45.8	22.2	10.1	57	1.2	6.0	10.2	0	1.9	42.4	9.6	9.6	34.3	23.1	
9.7		45.8	12.0	9.6	9.6	1.2	35.7	9.3	10.2	8.4	44.4	9.8	9.8	34.7	58.4	
9.1	54	3.3	44.4	9.3	8.5	2.2	51.7	8.9	10.2	12.4	5.5	10.4	10.4	38.8	42.7	
9.9		4.8	30.6	9.0	9.0	3.7	28.5	9.4	9.0	17.9	31.2	8.5	10.0	43.3	8.2	
8.6		6.3	36.8	8.8	9.4	9.7	35.5	9.8	9.8	20.9	53.2	8.0	8.0	43.4	46.3	
9.2		6.8	34.8	9.1	8.0	10.7	54.9	8.1	9.6	23.4	57.4	10.1	10.1	46.4	34.3	
10.1		8.3	31.6	10.3	13.7	22.8		9.3	9.3	29.9	3.4	9.8	9.2	50.4	26.9	
10.4		10.8	55.6	9.2	15.2	3.1	a	9.3	8.6	33.9	32.5	9.0	9.9	57.4	9.5	
9.6		10.8	55.8	9.8	21.2	4.4		9.5	9.8	35.4	19.5	9.5	9.3	59.4	6.3	
8.8		11.3	32.9	9.0	9.6	22.2	40.0	9.5	10.2	35.4	23.0	9.8	10.2	3	0.4	
10.1		13.8	47.1	10.4	10.4	23.7	36.9	10.4	10.4	35.9	58.0	10.1	10.1	0.9	15.0	
9.7		23.1	57.9	9.2	9.2	34.2	55.1	9.6	9.6	43.4	56.7	10.4	10.4	4.4	9.8	
9.9		25.8	47.2	9.0	9.0	40.7	33.0	9.5	9.8	44.4	50.6	10.2	10.2	5.9	49.4	
9.4		28.8	19.5	9.5	10.4	44.7	21.1	10.4	10.4	46.9	22.9	10.2	10.2	11.9	10.0	
10.0		28.8	33.5	9.0	9.0	45.2	39.5	8.8	9.3	48.4	39.0	10.1	10.1	12.9	18.1	
8.0		31.3	56.7	8.1	10.4	46.7	4.3	8.8	8.8	58.4	52.2	8.2	10.4	13.4	25.2	
9.7		36.7	52.2	10.4	10.4	49.9	1.4	9.4	9.4	58.9	57.9	9.3	10.2	13.9	36.6	
9.3		40.2	42.2	10. 9.4	52.2	31.3		8.4	1	0.4	40.8	8.7	10.2	15.4	11.7	
9.4		40.2	16.4	9.3	10.1	52.7	23.1	10.1	10.1	2.4	52.2	10.2	10.2	16.9	4.4	
8.8		41.7	32.7	9.3	9.7	53.2	35.3	8.8	8.8	2.4	39.6	9.1	10.2	21.9	35.0	
9.1		43.7	51.3	9.8	10.4	55.2	46.9	9.6	9.6	4.4	57.5	9.8	8.0	23.4	20.2	
10.2		45.2	52.7	10.4	10.4	57.1	59.0	9.1	9.1	5.7	1.3	9.0	10.4	24.9	50.2	
9.8		52.7	21.1	9.8	9.8	58.7	21.9	9.8	10.4	7.0	1.7	10.4	10.4	30.9	49.0	
9.0		54.2	33.6	9.4	9.0	58	1.6	9.5	10.4	7.4	17.6	10.4	10.4	31.4	42.7	
9.3		57.2	48.2	9.8	9.8	3.1	53.9	10.4	10.4	11.4	4.2	10.0	10.0	43.3	58.9	
10.1		57.7	41.1	9.7	9.7	4.1	47.1	10.2	10.2	14.4	7.3	10.4	10.4	43.4	44.1	
9.6	55	3.2	26.2	10.4	10.4	4.6	34.0	8.8	8.8	17.4	19.1	9.1	9.1	44.4	22.3	
10.2		3.7	49.1	10.4	10.4	5.6	54.6	9.9	9.9	18.9	43.6	10.0	10.0	44.4	34.3	
9.0		8.9	2.5	9.2	10.4	6.6	6.7	8.3	8.3	20.9	16.7	8.2	10.2	46.4	49.5	
9.6		12.7	11.0	9.0	9.0	8.6	51.7	9.3	9.7	24.3	22.1	8.3	8.3	47.4	12.6	
9.7		15.7	10.4	9.5	9.4	9.1	20.8	9.4	9.4	25.3	13.6	9.8	9.8	49.4	46.2	
9.9		18.7	26.7	9.3	9.3	12.6	23.2	9.4	9.7	27.3	53.8	10.2	10.2	52.9	37.0	
9.8		26.2	5.6	9.9	9.9	14.1	45.6	9.6	9.6	32.3	31.4	10.0	10.0	54.9	13.1	
10.2		34.7	18.3	10. 9.8	20.6	31.5		9.8	9.8	32.8	24.8	8.8	8.8	1.9	19.3	
9.4		36.2	22.5	9.8	9.8	24.1	6.7	9.6	9.6	36.3	16.4	9.9	9.9	2.9	24.2	
10.2		51.2	45.1	8.0	8.0	36.6	1.5	8.8	8.8	40.8	19.2	9.0	9.0	2.9	35.8	
10.2		51.7	56.2	10.2	10.2	37.0	49.0	9.3	9.3	43.3	52.6	10. 10.4	10.4	3.9	8.1	
7.6		53.5	59.7	8.3	8.3	38.6	27.7	10.4	10.4	44.8	5.4	9.2	9.2	4.4	13.6	
8.5		56.2	59.4	10.0	10.0	45.6	8.0	9.8	9.8	49.3	16.7	9.5	10.4	5.9	32.5	
10.0		56.2	48.0	9.0	9.0	48.6	42.7	9.2	9.6	49.3	3.4	10.2	10.2	6.1	1.7	
8.6	56	3.7	1.3	8.7	10.1	49.6	40.2	9.4	9.9	49.8	29.2	9.4	9.4	8.9	56.1	
10.4		3.7	6.0	10.0	10.0	50.6	47.6	9.2	9.2	50.3	24.9	9.5	10.4	10.4	38.9	
9.0		16.2	17.4	9.0	10.2	51.1	7.5	9.8	9.8	50.3	4.0	9.3	9.6	12.4	18.6	
10.2		18.2	7.4	10.1	10.1	52.6	52.5	8.6	8.6	50.3	41.3	8.7	10.2	13.9	24.0	
9.0		22.2	4.4	9.2	8.8	52.6	3.6	9.1	9.1	53.3	40.2	9.2	9.4	16.6	57.2	
10.4		23.2	20.7	9.9	9.9	53.1	56.1	9.2	9.2	55.3	4.2	9.1	9.3	17.9	58.6	
10.2		30.7	20.5	9.9	59	2.6	52.1	9.5	9.4	5.8	27.9	9.5	9.0	18.9	24.5	
9.2		31.2	24.9	10.0	10.0	2.6	16.3	10.4	10.4	8.8	17.7	9.4	9.4	21.9	44.6	
9.7		31.2	9.0	10. 9.6	2.6	3.2		10.1	10.1	10.3	43.6	10.0	10.0	24.9	27.6	
10.1		35.7	4.8	9.8	10.2	13.6	16.7	10.4	10.4	10.8	37.7	9.8	9.8	26.4	24.9	
10.0		37.2	35.7	10.4	10.4	23.6	46.0	8.8	8.8	12.3	25.5	9.3	9.4	26.9	5.1	
10.4		46.7	26.6	10.1	10.1	26.6	22.8	10.2	10.2	14.8	24.3	10.2	10.2	28.3	57.4	
25pr.	+ 1	5.3	-4.0	+ 1	5.3	-4.1		+ 1	5.4	-4.2		+ 1	5.5	-4.3		

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3241-3300.				3301-3360.				3361-3420.				3421-3480.						
mag.		8h. -21°		mag.		8h. -21°		mag.		8h. -21°		mag.		8h. -21°				
m	s	i		m	s	i		m	s	i		m	s	i				
10.2	4	32.4	56.2	9.6	7	28.2	6.4	9.4	9	51.2	2.2	8.2	13	15.7	11.2	Cbl	8.5	
10.4		37.4	9.4	9.4		29.7	40.7	9.8	10.2	7.0	27.0	9.5		18.2	32.7		9.5	
9.4		46.4	37.2	9.5	10.0	34.9	36.9	10.2		15.8	59.7	8.3		18.7	44.8	Ca	8.5	
9.8		50.9	2.9	9.6		36.2	11.3	10.2		20.5	32.3	9.0		18.7	50.8			
10.2		55.9	20.3	9.8		37.2	15.5	9.5		26.0	37.4	10.4		20.2	41.2			
10.4		56.4	34.2	10.4		47.4	30.0	10.0		26.5	35.4	9.9		22.2	40.0			
10.2		58.4	7.5	9.7		47.5	2.9	9.7		27.0	59.1	9.2		23.2	48.0		9.1	
10.4	5	1.9	14.1	9.6		49.4	37.1	9.4		27.5	45.6	8.8		32.7	51.0	a	9.1	
9.4		3.4	5.5	9.5	10.4	50.5	29.8	10.4		28.5	48.0	10.4		44.2	9.0			
10.0		6.4	12.6	9.2		52.2	13.0	9.5		36.0	4.3	8.8		45.7	37.9	a	8.8	
9.0		7.4	35.5	9.1	9.3	52.2	0.5	9.7	10.2	38.0	6.9	10.0		47.2	11.4			
8.8		9.4	29.5	9.1	10.1	52.5	59.9	8.6		39.0	7.1	9.8	8.7	50.7	56.2		9.4	
9.0		12.6	2.1	9.2	9.4	54.2	59.4	9.7	10.4	50.5	22.1	10.2	10.2	51.2	9.8			
10.1		15.9	19.2	10.4		54.2	3.7	9.8		51.0	37.1	10.4		58.2	12.1			
10.0		16.4	22.4	8.4		55.5	11.3	8.8	9.8	53.0	40.6	10.2	14	0.2	55.6			
9.8		26.9	35.4	9.0	8	5.2	34.3	9.4	10.2	54.0	41.7	9.6	9.0	1.7	7.7		9.6	
10.0		30.4	27.8	9.5	9.5	10.2	12.5	10.0		58.1	46.7	9.8	9.2	3.7	9.7		9.5	
10.4		31.4	32.7	9.9		11.2	19.6	9.2	II	2.0	50.3	9.5	10.2	5.7	45.3			
9.8		31.4	16.8	9.9		11.7	46.9	9.5	10.4	4.0	31.7	9.3	9.3	5.7	57.5		9.0	
10.2		32.4	41.9	10.4		14.0	3.1	9.3		6.0	6.6	9.4	9.2	7.7	51.9	a	9.1	
10.4		34.9	16.7	8.8		16.0	57.9	8.4	9.8	9.5	28.6	10.4		10.2	22.2			
9.9		40.4	39.1	10.4		22.0	8.8	10.0		10.0	6.7	9.8	9.4	19.7	57.9		9.7	
9.8		50.9	23.5	10.4		25.2	43.2	9.9		12.0	33.1	9.2	9.4	22.7	22.6		9.8	
9.4		55.4	6.9	9.5	10.4	25.5	38.6	10.4		12.5	40.1	9.8	9.8	32.7	41.7			
10.4	6	2.4	56.3	10.4		26.0	33.2	9.3		12.8	58.0	9.8	10.4	38.7	39.6			
10.1		7.4	30.0	8.6		29.4	0.1	8.7	10.4	14.5	6.0	10.4	10.4	40.7	34.6			
10.4		10.4	38.4	10.4		30.7	47.4	7.1		16.0	29.8	Cal	6.8	42.2	53.4			
10.0		17.9	27.8	10.4		31.2	46.0	10.1		17.4	44.8	9.8	9.8	42.7	12.2			
10.2		19.9	59.0	10.0		32.2	23.4	9.8		20.7	57.2	10.4	10.4	48.0	28.1		9.7	
8.8		21.4	22.6	Ca	8.7	9.0	35.9	0.6	Ca	9.0	10.2	25.1	9.6	49.0	35.1		9.4	
10.4		23.9	45.2	9.3		37.5	45.0	9.8	9.0	31.9	52.3	8.7	10.2	51.5	3.3			
9.6		24.9	0.2	9.5	10.0	47.0	47.8	10.4		33.4	8.2	10.1	10.1	52.5	50.3			
9.8		24.9	1.7	9.4	10.4	50.0	25.5	8.8		33.9	13.9	9.1	9.9	53.5	4.2		9.8	
9.7		26.4	56.0	9.4	9.3	51.8	59.9	9.5	9.6	34.9	35.8	9.8	9.8	55.5	6.1		9.8	
10.0		30.4	6.4	10.2		55.0	41.4	10.4		38.9	3.6	9.4	9.4	59.5	51.2	a	9.3	
10.4		30.4	51.0	9.5		55.5	27.0	10.2		44.4	24.2	10.0	10.0	59.5	24.6		10.2	
10.2		30.4	46.1	10.4		55.9	17.0	10.4		45.4	35.2	8.3	15	2.0	20.7	Ca	8.3	
10.4		30.4	39.3	10.4		56.0	1.4	9.8		48.4	1.0	?	9.4	10.0	0.7		9.8	
8.8		34.9	37.2	Cal	8.7	10.4	9	3.0	3.0	51.9	23.9	9.8	9.8	11.5	21.9			
9.3		37.4	12.5	9.1	9.8	3.0	11.8	8.6		53.9	26.6	Cal	8.7	10.0	39.1			
10.4		38.4	51.7	9.5		9.0	56.7	9.0	9.6	12	4.4	26.4	9.0	17.0	30.2	a	9.5	
9.2		41.4	51.4	9.5	10.4	10.5	36.6	9.6		4.9	47.2	9.8	9.8	20.5	12.3		9.8	
9.4		43.4	24.1	9.2	10.0	11.0	21.0	9.6		10.9	27.3	10.4	10.4	25.5	33.5			
10.1		45.9	5.4	9.6		12.0	56.1	10.1		11.9	27.6	9.9	9.9	30.5	11.9			
9.8		46.4	58.9	10.2	10.4	12.0	4.6	9.6		13.4	52.2	10.2	10.1	31.5	30.4		9.6	
10.2		57.9	51.0	9.8		13.5	41.4	9.2		17.9	36.1	9.6	9.6	31.5	46.2			
9.7	7	1.9	10.3	9.3	10.1	14.5	41.9	8.0		21.4	24.7	Cal	8.7	32.5	38.5			
10.1		2.5	1.4	10.2		16.0	1.3	10.2		21.9	18.4	10.4	10.4	37.0	13.9			
10.4		3.4	49.5	10.4		20.5	18.6	10.4		22.4	52.2	9.2	9.2	45.0	33.1		9.8	
10.0		5.9	15.3	10.4		22.0	35.0	10.4		23.9	4.7	10.4	10.4	53.0	7.7			
10.1		6.4	24.2	10.4		23.0	30.4	9.4		25.9	34.2	10.4	10.4	53.5	51.6			
9.1		9.9	28.9	9.0	9.0	30.0	6.1	9.3		36.4	55.0	9.3	9.3	55.5	3.4		9.5	
10.4		10.9	53.5	8.2		32.0	17.6	Cal	8.2	10.0	38.9	11.0	10.4	56.0	19.1			
9.9		11.9	39.4	9.3		35.5	21.4	a	9.1	10.4	45.9	52.4	10.4	16	2.0	36.7		
9.6		12.9	28.9	9.4	10.0	42.0	13.7	a	9.4	10.4	46.9	54.0	10.4	6.5	10.1			
9.9		14.9	11.7	9.4	9.9	43.0	48.9	9.8		47.6	1.2	9.8	10.4	7.8	30.9			
9.3		16.4	21.1	9.4	10.4	44.1	26.8	8.8		50.9	1.7	9.3	9.6	8.0	52.6		9.5	
8.6		19.4	15.2	9.1	10.0	46.5	22.4	9.0		9.0	3.7	32.9	9.1	11.5	43.4		9.1	
10.4		21.4	48.2	10.2		48.5	32.2	8.8	9.7	8.8	5.7	40.9	8.7	12.5	11.3	a	9.5	
10.0		23.4	27.5	9.6		49.0	44.9	9.4	9.8	11.7	9.5	9.8	9.8	24.5	4.2			
25pr.	+ 1	5.6	-4.4															
						+ 1	5.7	-4.5										
										+ 1	5.7	-4.5						
														+ 1	5.9	-4.6		

3481-3540.				3541-3600.				3601-3660.				3661-3720.					
mag.	8h.	-21°		mag.	8h.	-21°		mag.	8h.	-21°		mag.	8h.	-21°			
	m	s		m	s			m	s			m	s				
10.4	16	25.5	12.7	9.2	19	13.5	37.1	9.4	10.4	21	59.7	59.5	10.2	26	3.7	32.7	
9.9		29.5	51.5	9.6		21.0	30.5	9.7	10.4	22	3.7	11.5	10.4		5.8	36.5	
9.2		30.0	23.4	9.5		22.5	56.9	9.7	9.9		11.7	28.9	10.4		10.8	8.9	
10.2		32.5	55.0			31.5	4.0	Ca	8.5	10.1	12.7	13.0	10.4		13.3	36.6	
9.2		34.5	38.5	9.4		32.5	13.4	Ca	8.5	10.4	18.7	45.3	10.0		13.8	35.5	
10.2		35.5	52.5	10.4		41.5	50.6		10.2	10.2	19.7	46.6	10.4		14.8	50.5	
10.4		37.5	23.6	9.5		42.0	41.9	9.1	10.1	10.1	20.2	3.8	10.2		18.3	31.2	
9.8		38.5	10.1	10.4		45.5	28.4	9.0	9.4	9.4	23.7	58.4	10.4	10.0	18.8	28.4	
9.0		39.5	41.8	9.2		47.5	51.1	9.0	9.3	9.3	33.2	30.9	10.4		27.8	11.3	
9.3		40.5	15.9	9.5		49.0	44.1	7.0	10.2	10.2	41.7	58.5	9.0		32.3	42.5	
10.4		42.5	26.7	9.8		52.5	0.2	9.4	8.5	43.7	54.7	Ca	8.7	9.0	32.8	9.8	
9.8		45.5	53.9	9.4		53.5	10.2	Ca	8.5	8.6	43.7	30.4	a	9.0	9.3	43.8	53.4
9.4		48.0	51.6	10.4		54.0	27.6		9.8	9.8	43.7	12.0	9.5	10.1	43.8	3.5	
9.3		51.0	55.0	9.2		54.5	31.4		10.4	10.4	50.7	3.8	10.2	10.2	44.8	25.9	
9.9		55.5	34.5	10.4		55.5	5.1		10.4	10.4	52.2	40.4	10.2	10.2	45.8	28.3	
9.0	17	3.5	12.2	9.4		59.5	28.6		9.2	9.2	55.7	21.7	9.5	9.8	50.8	37.4	
10.0		6.5	12.0	10.4	20	1.0	49.4		9.8	9.8	59.7	22.9	9.8	10.1	54.8	52.2	
8.2		7.5	44.0	Cal	8.2	10.4	12.5	22.3	10.0	23	8.7	31.5	10.2	27	2.3	6.6	
9.3		8.0	23.3			10.4	13.5	4.8	9.5	10.4	9.7	41.3	10.4		15.8	4.0	
8.8		9.0	8.8	a	9.2	9.6	15.5	42.8	10.0	10.4	12.2	53.9	9.0		24.6	55.8	
8.6		10.5	43.9	Ca	8.8	8.8	21.4	58.7	9.0	9.9	15.7	0.0	9.0		28.1	19.3	
9.8		15.0	29.7		9.5	10.4	22.6	14.5	10.4	10.4	18.2	50.2	10.4		32.8	38.5	
10.4		16.0	19.0			9.4	24.1	8.7	9.8	10.4	21.7	31.6	9.6		36.3	54.4	
10.4		16.0	6.4			8.8	27.4	57.8	9.2	9.0	21.7	40.0	a	9.4	8.8	39.8	
9.6		22.5	2.7	9.4		10.4	28.6	11.9	9.6	9.6	24.8	45.2	9.9		41.8	50.4	
9.5		26.5	52.3			9.3	31.6	53.3	9.4	9.8	27.3	53.8	10.2		42.6	6.0	
8.8		27.5	11.2	a	9.0	10.2	35.1	41.5	10.4	10.4	28.3	33.6	10.4		44.1	9.5	
10.0		32.0	46.4			9.4	40.6	6.8	a	9.5	28.8	39.4	9.4	9.5	45.8	28.5	
10.0		32.5	59.2			10.4	40.6	9.2	10.4	10.4	33.3	13.6	9.4	9.4	56.3	29.1	
10.4		43.5	14.1			10.4	42.1	58.6	9.3	9.3	33.3	55.1	a	9.0	9.8	30.1	
9.5		44.5	4.0		9.8	9.8	43.6	57.8	9.8	9.8	42.8	3.2	10.4		2.8	37.4	
8.8		44.5	10.6	Ca	8.7	10.1	49.6	29.0	9.7	9.4	46.3	16.7	9.4	10.4	2.9	59.7	
9.9		46.5	41.5			10.4	52.1	48.7		9.5	48.3	42.4	9.5	9.3	3.6	36.9	
10.2		50.0	5.8			10.1	54.6	8.3		9.6	49.8	0.5	9.5	10.2	6.7	18.7	
10.0		51.0	43.2			10.0	56.6	30.4		10.4	50.0	0.1	10.0	10.0	11.1	34.5	
9.8		59.5	38.1			9.3	57.1	6.1	9.8	9.0	51.8	22.3	8.9	10.4	11.5	26.0	
10.4	18	0.5	22.8			8.8	1.6	9.2	Cal	8.5	59.3	49.2	10.0	10.0	12.5	34.4	
9.8		1.5	3.7			9.4	11.6	2.7		10.4	3.3	3.3	10.4	10.4	13.6	27.0	
9.3		3.5	22.0		9.7	9.4	11.6	8.4		10.1	5.3	20.0	10.4	10.4	15.3	54.2	
9.0		12.0	13.0	a	9.1	10.4	11.6	48.7		10.4	6.8	55.5	9.5	9.5	21.0	33.7	
9.4		13.5	7.3		9.3	9.4	13.1	20.6		10.4	11.8	32.1	10.5	10.5	21.1	21.9	
9.8		14.0	7.6			10.4	13.6	37.0		10.4	18.8	39.6	7.8	10.4	24.5	36.4	
9.8		25.5	12.5	a	9.4	10.4	14.1	5.5		10.0	22.8	57.6	9.0	9.0	32.3	5.3	
10.4		26.0	51.7			9.8	14.6	47.6		10.1	22.8	53.2	10.2	10.2	35.3	36.0	
9.8		27.0	16.2			10.4	16.6	5.7		10.1	29.8	27.5	9.7	9.6	36.8	12.6	
9.8		31.5	35.9			9.5	21.6	1.9		9.8	35.8	1.8	9.6	9.6	40.8	28.9	
10.0		32.5	37.3		9.8	9.2	21.6	13.0	a	10.2	37.3	21.5	10.5	10.5	44.3	20.1	
10.0		33.5	16.3			9.0	22.6	13.1	a	10.2	44.8	46.9	9.4	9.4	44.8	18.8	
10.0		34.5	21.0			9.3	23.1	26.1		9.3	51.8	5.6	9.6	9.6	48.8	46.5	
10.4		39.3	2.4			10.0	23.6	58.3		9.5	53.8	7.7	9.2	9.2	53.3	0.0	
10.4		42.0	58.0			9.6	24.1	33.8		8.8	2.2	59.1	a	8.8	10.5	29	
9.8		44.5	1.1			9.4	29.6	19.4	9.4	10.2	6.3	45.5		10.0	4.3	55.9	
8.4		49.8	58.6	C	8.2	10.0	30.7	32.6		10.4	8.8	28.1	9.7	10.5	5.8	9.2	
10.4		52.5	37.3			10.4	40.7	12.7		10.4	15.8	55.9	9.7	9.5	6.3	58.2	
10.4		54.0	55.1			10.0	41.7	59.2		10.4	27.8	21.9	10.0	10.0	7.8	55.9	
9.8		56.0	17.2			10.4	50.2	2.2		10.4	30.8	59.2	9.5	9.5	10.3	23.9	
9.2		57.5	22.2		9.8	8.8	53.7	45.4	9.0	9.8	42.8	27.2	9.6	9.6	15.3	25.8	
10.4		59.5	19.1			9.8	53.7	25.9		10.4	50.8	30.2	7.9	7.9	20.1	1.9	
9.8		6.5	50.9			10.4	57.2	23.7		9.9	57.3	45.6	8.8	8.8	24.6	2.0	
9.6	19	9.8	58.6		9.4	9.8	57.7	26.8	9.5	10.0	59.8	13.8	9.5	8.6	26.3	8.2	
25pr.	+ 1	5.9	-4.7			+ 1	6.0	-4.8		+ 1	6.1	-4.9		+ 1	6.2	-5.0	

1026AnCap...3.1G

3721-3780.				3781-3840.				3841-3900.				3901-3960.							
mag.	8h.	-21°		mag.	8h.	-21°		mag.	8h.	-21°		mag.	8h.	-21°					
9.7	26.3	50.7	9.7	9.8	36.2	53.8		10.5	36	13.1	27.3	10.4	39	33.1	39.9				
10.0	26.3	14.5		9.3	42.7	30.9	a	9.0	9.2	13.1	0.4	10.0		41.6	5.0				
9.3	29.8	47.8	a	9.0	8.4	43.2	44.5	8.7	10.0	19.7	56.0	10.0		50.6	19.7				
10.0	32.3	2.9		9.4	45.7	55.0		9.8	8.4	22.2	34.8	Cal	7.7	9.2	40	3.1	48.2	C	8.6
10.4	32.7	12.6		10.0	45.7	27.6		9.3	9.3	24.7	6.8	10.5		10.1	14.2				
9.6	32.8	23.2		9.5	9.8	48.2	54.0	10.0	10.2	33.2	38.2	9.3	9.6	16.6	40.0				
10.5	33.2	11.9	Cal	6.8	9.8	56.2	5.0	10.0	10.2	43.2	22.2	10.2		27.1	8.2				
8.0	33.5	49.5		9.5	33	2.2	18.3	9.2	10.5	44.2	21.1	9.8	10.4	27.6	43.3				
10.5	36.2	35.7	Ca	9.9	9.9	4.2	55.6	9.8	9.8	45.2	48.7	10.5		30.1	48.0				
8.9	36.7	56.9	Ca	9.1	9.5	4.2	44.0	9.8	10.5	51.2	46.7	10.5		33.1	43.2				
10.5	39.2	35.9		9.5	9.8	9.2	52.6	9.3		53.2	14.3	10.2		37.1	27.0				
10.2	43.7	55.9		10.5	12.2	15.2		9.4	37	1.7	23.9	9.7	9.5	40.1	47.5				
9.0	44.2	26.4		9.4	9.4	13.2	18.8	9.2	7.4	2.2	56.3	Cal	7.7	10.5	42.1	21.6			
8.9	45.2	45.3		9.8	10.2	13.7	32.4		8.2	2.2	7.5	C	8.3	10.5	44.1	25.9			
10.2	57.5	2.0		10.5	10.5	13.7	20.5	10.5	10.5	4.4	0.3	9.6		53.6	53.5				
9.3	59.7	21.7		9.7	10.5	14.7	16.6	9.6	9.6	8.7	5.8	8.9		56.1	25.5				
9.2	2.2	32.5		9.6	10.5	16.2	20.7	9.9	9.9	10.7	39.4	9.4		58.1	42.8				
10.2	2.7	34.9		9.8	9.8	16.7	17.8	10.0	10.0	13.7	44.0	10.4	4.1	0.6	32.1				
9.9	6.2	33.3		9.6	10.4	24.7	13.3	9.6	9.6	16.7	38.7	9.7	9.9	4.1	21.1				
10.4	11.2	6.2		10.4	10.4	25.2	54.5	10.4	10.4	16.7	15.6	8.8	8.8	6.6	36.3				
9.3	18.7	29.6		9.6	10.5	26.7	43.4	10.4	20.2	7.7		10.5		16.6	31.0				
8.4	19.2	33.6	Ca	9.0	7.8	28.7	38.7	Ca	8.1	9.0	29.2	47.1	8.8	10.0	19.6	20.8			
10.4	22.2	27.8		10.4	10.4	33.7	12.4		9.0	36.2	22.2		9.1	8.4	22.1	12.6			
9.2	24.7	29.3		9.6	10.2	38.7	15.2		9.6	38.2	45.8		8.3	9.0	26.1	54.7			
10.4	27.2	16.8		10.2	10.2	42.2	4.3		8.4	42.7	32.9	C	8.3	10.2	34.1	33.5			
10.4	28.2	29.6		9.8	9.8	46.2	21.8	9.4	10.5	44.2	10.1		10.4	10.4	36.6	47.0			
9.6	28.2	23.2		9.3	8.8	48.4	1.2	9.0	10.0	47.2	42.6		10.0	10.0	38.1	51.0			
9.6	28.7	45.2		8.6	8.6	56.2	29.1	Ca	8.1	51.7	8.1		9.2	9.2	41.1	13.1			
9.4	32.2	48.2		9.7	9.6	59.7	16.2	9.3	9.8	56.2	50.2	10.0	10.5	53.6	42.3				
9.5	40.2	52.9		10.5	34	5.9	1.6	9.8	9.8	57.2	42.7	9.9	10.0	56.1	10.9				
9.6	41.7	9.8		9.4	6.2	35.6		9.8	38	8.7	43.1	9.6	9.4	42	1.6	40.3			
8.4	43.7	44.4	Ca	9.1	10.0	7.7	2.9	10.5	10.5	11.7	44.3	9.3	9.3	5.1	6.9				
8.8	44.2	32.7		8.9	9.3	10.0	59.5	9.5	10.5	13.2	57.7	9.0	9.0	11.1	26.4				
9.4	47.2	34.4		10.0	10.4	11.2	40.9		10.2	14.2	52.2	10.2	10.2	12.6	39.0				
8.6	52.7	32.9	a	9.1	9.9	12.7	45.1	9.5	10.0	17.7	39.9		10.0	16.0	57.0				
9.6	53.2	31.0		9.3	9.3	14.2	38.3	9.5	9.3	22.2	7.2	9.5	10.4	22.1	32.0				
10.4	53.7	56.7		10.2	10.2	17.2	36.9	9.3	9.3	27.2	12.1	a	9.0	9.6	24.0	59.4			
10.4	59.2	2.9		10.4	10.4	18.7	49.5	10.5	10.5	28.2	25.0		10.0	10.0	26.1	40.8			
10.0	5.7	26.6		10.2	10.2	29.2	29.9	9.4	9.4	29.7	3.6	9.5	8.8	29.6	48.2				
9.5	8.2	21.0		10.5	10.5	30.2	54.9	9.3	9.3	39.2	9.6	9.0	8.8	31.6	56.7				
10.4	10.2	48.7		9.9	9.9	38.2	5.1	9.8	10.0	40.7	22.7		8.2	49.1	25.7				
10.4	14.7	26.1		10.4	10.4	39.2	47.1		8.4	44.2	11.5	Ca	8.0	10.2	56.1	28.2			
10.0	16.0	1.1		9.5	9.5	40.2	29.7	9.7	9.9	47.2	29.6		10.4	43	6.1	26.7			
10.4	22.2	28.5		10.0	10.0	40.2	3.1		9.5	47.7	38.0		10.0	10.1	12.9				
10.4	23.2	8.0		9.6	10.5	45.7	27.9		9.4	48.7	20.0		9.6	25.6	18.9				
9.9	38.2	6.0		9.9	9.9	48.4	58.8		8.2	54.2	14.8	a	8.7	10.0	28.6	41.9			
9.3	43.2	42.8		9.6	10.4	52.2	55.3		10.5	54.5	0.1		10.5	35.6	50.9				
9.9	43.7	56.1		9.5	9.8	58.7	4.7		9.4	56.9	1.9		9.7	9.8	42.0	24.7			
10.4	43.7	44.5		10.5	35	14.7	59.8		9.3	39	6.2	46.1	9.7	10.0	45.0	45.0			
10.2	50.7	27.9		10.5	10.5	31.7	50.9		10.4	12.1	49.4		9.9	51.5	21.7				
9.6	51.7	52.7		9.8	9.4	35.7	10.5	9.7	8.4	13.6	50.7	C	7.8	10.4	44	11.0	31.3		
8.6	57.7	5.2	a	9.0	10.2	36.2	13.5		10.2	15.1	37.9		9.5	9.5	13.5	27.4			
10.4	6.2	38.5		10.0	10.0	39.7	49.3		9.6	15.1	30.7		9.4	9.6	18.5	34.1			
10.2	8.2	41.0		9.5	10.4	42.2	53.5		10.5	18.6	5.0		9.2	9.2	32.5	28.9			
9.9	14.7	25.1		9.8	9.6	52.2	27.0	9.8	8.7	20.3	1.7		9.1	10.2	36.5	14.0			
10.4	17.2	44.3		10.5	10.5	54.7	8.3		10.5	23.1	29.3		10.4	10.4	45.0	51.8			
10.5	18.7	8.3		10.2	36	0.2	41.3		9.2	23.1	32.0		9.4	9.8	45.0	20.7			
10.2	20.2	3.9		7.6	3.2	44.9		Cal	7.2	10.5	25.1	47.5		9.2	46.0	26.3			
10.5	21.7	29.7		10.0	8.2	46.0			9.5	10.0	27.1	30.2		9.5	49.5	34.9			
8.9	35.7	51.6		9.4	9.4	12.2	24.3	9.3	10.4	32.1	18.8		10.0	51.5	34.8				
25pr.	+1	6.3	-5.1		+1	6.5	-5.2		+1	6.6	-5.3		+1	6.8	-5.4				

3961-4020.				4021-4080.				4081-4140.				4141-4200.							
mag.	8h.	-21°		mag.	8h.	-21°		mag.	8h-9h.	-21°		mag.	8h.	-21°					
10.5	44	56.2	1.3	9.0	49	33.7	41.9	9.5	58	54.5	36.4	9.5	10.2	7	45.1	36.6	9.7		
10.5	45	5.0	47.4	9.6		46.7	3.1	9.0	9.8	59	3.5	9.0	9.8	8	45.6	27.4	9.7		
10.5		6.0	51.3	8.8		48.0	16.1	8.3	9.8		4.5	6.9	10.0	8	2.4	12.2	9.4		
9.8		6.2	59.5	9.4	50	0.0	48.3	9.8	9.1		9.5	27.6	8.8		16.2	33.4	8.7		
9.0		7.0	47.9	8.7		12.7	6.8	8.5	9.4		17.0	53.3	9.5	9.4	29.4	28.0	9.8		
9.0		15.5	43.2	8.7		12.7	21.0	8.5	8.8		20.0	32.6	8.9	9.0	29.4	15.8	8.9		
9.8		19.5	11.9	9.2		15.7	38.2	9.5	9.8		0	12.0	53.9	10.2		42.0	2.4		
10.2		25.0	31.9	9.8		20.0	30.3	9.3	9.8		18.8	8.6	10.7		42.7	13.0			
8.4		31.0	53.5	9.8		29.7	10.8	8.5			19.0	2.1	8.0	10.8	46.2	57.6			
10.2		31.0	7.2	9.4		41.4	20.5	9.5	9.8		25.4	11.2	9.8	10.4	50.9	4.2			
10.4		33.0	41.0	9.8		59.0	12.0	9.4	9.8		32.7	39.2	9.8	10.8	51.2	7.0			
10.0		36.5	54.8	9.8		51	0.4	41.1	9.5	9.8		40.5	54.2	9.5	9.3	54.0	59.1	9.4	
9.8		37.5	7.4	9.4		17.5	55.3	9.3	8.4		50.5	52.7	8.1	10.8	58.4	7.2			
9.4		44.0	50.6	9.8		38.0	40.7	9.7	9.8		53.2	29.1	10.6		59.8	28.3			
9.3		54.0	7.8	9.5		53.0	24.5	9.4	9.1		58.5	24.6	9.0	10.8	9	11.2	46.4		
9.6		54.5	36.9	9.8		52	1.2	6.0	9.1	9.1	1	1.2	52.1	9.1	7.8	11.7	45.8	Cbl	8.2
10.0	46	17.5	36.9	9.8		6.0	13.5	9.8	9.6		2.2	50.0	9.4	9.3	14.7	18.4		9.8	
9.4		21.0	31.0	9.2		26.8	16.0	9.2	9.8		5.5	27.6	9.3	10.8	16.7	47.0			
9.0		22.5	47.2	8.7		31.2	25.1	9.8	9.8		8.3	45.2	9.5	10.0	18.7	38.2		9.6	
9.9		30.0	8.5	9.7		41.7	1.8	9.6	9.6		10.9	58.8	9.4	10.4	18.7	36.6			
9.2		32.0	26.9	9.0	9.8	49.5	44.3	9.8			13.4	19.7	10.3		22.7	39.0		9.7	
10.0		42.5	35.3	9.5	9.2	57.5	4.9	9.0	9.5		13.6	1.2	9.3	10.4	22.7	53.2			
8.7		43.0	48.9	9.0	9.2	58.8	0.5	9.4	9.8		20.7	30.6	9.2	9.2	33.7	16.0		9.5	
9.6		49.0	54.9	9.8	53	0.5	28.8	9.8	9.8	2	11.5	27.5	9.9	10.7	36.7	49.2			
8.4		49.0	1.5	8.2	9.8	20.0	22.3	9.8	8.6		28.5	33.7	8.7	10.3	46.7	40.6			
10.5		52.0	12.4	9.6		29.0	3.9	9.5	9.8		38.0	30.0	10.6	8.8	48.7	36.0		9.2	
10.2		56.0	14.9	9.8		31.0	55.7	9.8	9.8		50.4	27.0	10.6	10.6	48.7	29.4		9.7	
10.4	47	2.5	30.9	9.6		32.1	27.1	9.1	9.6		53.5	12.7	9.4	10.6	56.7	45.2			
10.0		5.5	45.9	9.5		33.1	33.4	9.0	9.8		57.7	44.3	10.0	10.0	57.7	21.4			
9.3		6.0	15.5	8.8	9.8	36.3	30.5	10.	9.8	3	1.0	38.4	10.8	10	3.2	4.4			
10.0		16.0	48.4	9.8		47.6	28.7	9.2	9.2		1.7	35.5	9.4	10.7	4.2	32.0		9.4	
10.4		20.0	27.1	9.8	9.6	51.6	22.0	9.8	9.8		5.0	56.1	10.8	10.8	5.7	12.4			
9.2		20.5	49.1	8.7	8.2	54	8.1	39.0	8.4	8.8		5.5	28.7	8.6	10.6	12.7	47.3		
10.5		24.5	17.9	9.6	9.6	22.1	8.5	9.3	9.1		19.0	53.2	9.0	10.7	18.2	3.6			
7.8		31.7	38.7	7.7	9.6	29.8	35.2	9.5	9.5		27.5	16.8	9.3	10.8	26.7	47.2			
9.8		31.8	1.1	8.3		49.6	59.7	8.2	9.2		36.1	0.7	8.9	10.4	43.0	3.8		9.5	
9.8		34.5	38.1	9.8	55	9.3	1.9	9.7	9.8		52.2	20.8	10.2	10.2	46.5	33.5			
10.0		37.5	33.2	8.5		26.6	31.0	8.3	9.4	4	1.1	47.8	9.1	9.8	50.0	15.6		9.8	
10.5		38.8	57.7	9.8		34.3	11.3	9.0	9.0		9.3	11.7	8.9	7.8	11.0	26.0	Ca	7.3	
10.2		51.0	35.5	8.6		44.3	54.4	8.3	9.8		40.3	28.2	9.8	8.9	12.0	4.1	M	9.0	
9.4		54.5	19.1	9.1		47.6	35.1	8.7	9.2		55.6	56.0	9.3	10.7	16.5	47.4			
10.0	48	0.5	7.9	9.6	56	21.9	28.0	8.8	8.8	5	13.8	13.6	9.0	10.4	17.5	32.2		9.8	
10.4		1.0	20.2	9.8		31.8	18.9	9.8	9.2		15.8	38.9	9.2	9.8	19.0	53.8		9.8	
9.0		1.2	27.5	9.2	9.4	38.6	22.1	9.5	9.2		17.4	33.0	9.2	8.8	27.9	57.9		9.0	
9.4		2.7	5.7	9.4	9.4	46.3	28.3	9.1	9.8		29.3	34.8	10.3		32.0	45.4			
10.2		9.5	39.5	9.0		48.7	1.8	9.0	9.8		30.2	0.8	10.4		37.0	22.9		?	
10.4		16.0	47.8	9.6		54.0	0.3	9.8	9.8		39.3	0.9	10.8		52.0	3.1			
10.4		17.5	38.3	9.5	57	10.8	56.1	9.3	9.8		56.0	57.8	9.5	9.5	12	2.0	49.7	9.3	
9.9		17.5	2.1	9.8		26.3	2.9	9.8	9.2		58.8	54.9	9.4	8.5	4.5	14.3	Cb	8.5	
9.4		20.0	1.8	9.0		29.3	4.8	9.0	9.2	6	11.1	43.2	9.0	10.6	10.5	55.4			
10.2		20.0	6.1	9.8		46.9	24.5	9.4	9.2		15.8	39.4	9.4	10.7	13.0	58.2			
9.8		21.7	45.7	8.8		51.1	41.1	8.5	9.8		26.1	0.3	10.8		17.0	22.5			
10.2		22.0	26.0	9.2		51.8	3.3	9.4	9.6		55.8	56.7	10.7		20.0	58.9			
9.6		26.0	24.9	9.5	9.8	58	19.8	42.2	9.5	9.2		58.8	14.3	9.5	8.8	25.5	51.9		9.1
8.8		40.4	20.2	8.8	9.8	22.8	35.1	9.8	9.8	7	8.4	15.5	9.8	9.2	27.5	27.3	C	8.8	
9.8		58.7	5.1	10.	9.8	36.1	16.6	8.8	8.8		9.3	18.7	9.0	10.4	33.5	53.8			
9.8	49	9.0	36.8	9.8		36.4	53.6	9.5	9.8		18.4	52.8	9.2	9.2	41.5	27.2		9.7	
9.2		13.0	52.9	9.4	9.0	37.1	29.5	8.5	10.4		27.0	21.8	9.8	9.6	43.5	25.6			
9.2		19.7	56.7	9.1	9.1	38.1	4.9	9.1	10.8		27.7	26.1	10.6		44.5	53.2			
9.6		25.4	42.5	9.4	9.5	39.6	13.9	9.5	10.3		43.7	37.2	10.0		47.5	8.8			
25pr.	+ 1	7.0	-5.6		+ 1	7.3	-5.8		+ 1	7.6	-6.0		+ 1	7.9	-6.2				

4201-4260.				4261-4320.				4321-4380.				4381-4440.			
9h.		-21°		9h.		-21°		9h.		-21°		9h.		-21°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
8.3	12	49.5	5.0	10.2	17	25.0	56.2	9.2	22	9.8	28.4	8.8	26	33.7	49.0
10.2		53.2	1.2	9.5		29.0	12.2	7.5		11.8	59.2	9.5		41.7	47.1
10.8		55.0	25.6	10.7		30.5	41.3	10.8		18.3	8.5	10.0		49.7	14.2
10.3	13	14.7	1.1	10.6		32.0	26.6	10.0		18.3	8.1	8.8		50.7	40.1
9.2		27.0	28.9	10.8		33.0	49.2	9.8		29.8	39.1	9.8	27	4.2	12.1
10.8		27.5	39.4	10.7		39.5	52.9	10.8		33.8	23.8	10.0		6.1	2.4
10.7		30.3	9.8	8.4		41.0	41.7	8.5	8.5	40.8	34.3	9.3	10.7	7.7	20.7
10.2		30.5	6.3	7.3		51.5	17.2	8.0	8.0	42.8	17.4	9.6	9.6	7.9	21.9
10.2		31.8	46.6	10.8		55.5	17.7	9.6		44.3	44.2	9.5	10.4	8.7	27.3
9.0		32.3	6.7	8.8	18	3.0	7.6	8.8		56.3	55.4	9.3	10.0	9.2	4.9
10.7		43.3	9.7	10.2		7.0	9.7	10.3		59.3	16.8	10.0		7.6	12.7
10.6		43.3	7.4	10.4		11.5	39.4	10.8	23	13.3	45.1	10.6		28.7	27.3
9.3		57.8	3.1	10.8		17.0	5.4	10.7		16.3	58.7	10.4		42.7	0.5
10.3	14	0.8	42.3	10.4		26.0	44.9	10.7		21.8	16.4	9.6		57.7	35.7
10.7		3.3	51.0	10.7		33.0	20.0	10.7		22.8	50.8	10.3		59.2	44.5
10.4		10.0	0.1	10.8		40.0	42.8	10.8		25.8	42.3	10.8	28	2.9	1.3
9.2		14.8	10.6	10.7		40.0	27.2	10.8		29.8	40.2	9.5		17.7	18.5
10.7		24.3	35.0	9.0		40.8	35.3	9.2	9.2	35.3	17.3	10.8		21.2	59.3
10.8		25.8	35.4	10.0		44.8	9.5	10.6		40.8	52.6	8.6		24.7	17.9
9.6		30.8	49.0	10.2	19	9.8	16.4	8.8		42.3	8.8	9.1	10.3	40.2	10.2
9.8		33.3	41.8	10.2		11.1	0.8	8.4		42.8	31.8	8.5	8.6	45.3	58.1
10.7		33.3	25.8	9.8		18.8	19.4	10.3		53.3	32.5	9.7	10.0	46.7	48.7
10.3		36.3	18.3	9.2		19.1	57.8	10.8		53.8	7.4	9.0	9.0	50.2	6.1
9.4		37.3	46.0	10.8		26.3	0.2	9.2	24	2.8	25.6	9.1	9.4	54.7	39.4
10.3		37.8	54.4	10.6		34.8	6.6	10.8		2.8	30.0	9.4	29	1.7	50.8
10.2		40.3	31.1	10.8		38.3	42.0	9.0		8.8	45.2	9.0	10.0	8.7	57.3
10.0		40.3	16.3	10.2		41.3	43.6	10.0		18.2	2.5	9.1	9.1	8.9	58.8
10.8		42.3	25.3	10.6		51.8	4.9	7.8		19.8	35.6	7.9	9.5	11.7	28.5
10.0		44.3	30.1	10.2		57.8	17.0	10.8		32.3	2.6	9.2	9.2	56.7	57.0
10.4		50.8	19.8	10.4		59.3	34.5	8.8		35.8	37.4	9.0	8.2	30.2	23.3
10.6		52.8	44.3	10.6	20	1.3	41.9	10.0		36.3	30.4	9.7	9.2	12.2	20.1
10.7	15	11.3	20.9	8.8		4.3	24.4	9.0	9.0	36.8	40.0	9.1	9.6	17.7	44.8
10.6		14.3	24.2	10.6		8.3	17.2	10.2		38.3	25.4	9.1	9.1	24.7	8.8
10.8		14.3	18.2	10.7		8.3	3.8	10.4		42.8	12.3	10.2		28.2	55.3
10.7		15.8	41.3	9.8		11.8	55.6	10.8		42.8	15.2	7.5		31.7	26.2
9.3		17.8	25.0	9.2		11.8	35.6	10.8		51.3	14.4	9.4		46.7	30.3
8.8		28.8	45.1	9.1		14.8	39.0	9.4	10.4	54.8	2.9	8.6		48.7	52.3
10.8		40.8	12.3	10.4		19.8	29.9	9.8	9.0	55.8	8.9	9.5	9.2	31.0	43.7
9.0		54.3	31.7	10.3		23.3	30.6	10.7	25	0.8	28.4	10.0	9.0	13.0	0.9
8.8		56.6	59.3	9.3		23.8	34.7	8.2	8.2	8.3	10.1	8.3	9.4	21.2	53.3
9.0	16	13.1	57.9	10.8		36.3	22.3	10.0		21.8	21.5	9.0		23.7	7.3
10.2		17.8	31.2	9.6		36.8	21.4	8.6		26.3	44.7	8.8	10.1	26.0	0.4
10.7		23.0	52.5	10.0		41.8	16.9	10.2		32.3	21.6	9.1	9.6	26.7	58.3
8.8		28.5	0.4	8.8		42.3	20.9	9.2	8.9	32.3	2.2	9.1	9.2	35.7	59.0
8.6		33.0	5.5	8.2		50.8	22.4	8.6	10.3	35.3	49.8	9.6	9.6	40.7	41.4
9.3		34.0	39.1	10.6		59.8	33.5	10.3		36.3	17.2	10.0	8.8	32.0	4.2
9.2		40.0	42.2	10.4	21	5.8	47.4	9.9	9.4	37.8	14.0	9.5	9.4	20.7	5.6
10.8		43.5	7.1	10.0		8.8	7.8	9.5	9.2	39.8	32.1	9.3	10.1	33.7	17.4
8.2		51.0	59.3	8.4		13.8	25.8	8.5	10.8	40.8	52.6	9.4	9.4	45.7	0.1
9.2		52.0	14.4	10.0		15.8	46.9	9.5	9.0	46.8	41.6	9.3	9.8	51.2	51.4
10.8		56.5	38.0	10.8		31.8	8.6	8.6		53.8	8.9	9.3	10.0	54.2	45.4
10.8		4.0	38.2	10.8		33.8	7.6	10.3		59.3	39.6	9.6	9.6	4.7	12.7
10.8		6.5	21.6	6.3		34.8	47.8	10.7	26	1.8	10.0	10.0		12.7	22.8
10.8		9.5	21.6	10.4		42.8	40.2	10.8		2.8	2.5	10.1		15.5	10.5
9.5		11.0	10.5	10.8		50.8	18.0	8.3		8.3	12.6	9.0	9.6	22.5	36.3
10.3		13.0	42.1	10.0		53.8	21.8	9.0		13.5	0.5	9.1	9.2	27.7	27.4
10.0		18.0	11.0	10.0		53.8	27.4	10.8		14.3	20.2	9.1	9.1	30.7	31.2
9.3		18.0	30.0	9.3		58.0	0.8	10.7		18.8	44.2	10.1		52.7	58.6
8.8		22.0	24.2	10.8	22	1.3	6.2	10.0		21.0	1.1	9.5		54.7	20.1
9.6		22.5	47.4	10.0		7.8	52.0	10.8		32.2	4.5	10.3		55.2	54.0
25pr.		+ 1 81	-6.8			+ 1 84	-6.4			+ 1 86	-6.5			+ 1 88	-6.6

4441-4500.				4501-4560.				4561-4620.				4621-4680.									
mag.	9 ^h		-21°	mag.	9 ^h		-21°	mag.	9 ^h -10 ^h		-21°	mag.	10 ^h		-21°						
	m	s		m	s			m	s			m	s								
9.4	34	4.7	21.2	9.5	9.8	4.2	29.5	4.9	8.8	5.0	44.4	50.3	C	9.1	9.5	2	8.5	6.4	9.7		
9.4		5.0	0.5	9.5	10.0		39.2	58.5	9.5		44.9	44.5		9.4	9.6		9.0	40.8	9.7		
10.0		12.7	20.6		9.2		48.5	11.6	9.2	5.1	4.4	28.1		9.5	10.4		10.5	8.6	10.0		
10.2		14.7	3.8		7.3	4.3	1.5	26.3	CKbl	7.2	10.4	18.2	45.2		9.0		15.5	44.7	9.2		
10.0		16.2	46.2		10.0		5.8	43.5			9.0	24.9	35.4	M	9.2	7.8		22.0	42.6	Ca	
9.4		48.7	2.3	9.3	9.6		10.8	58.9		9.5	10.2	26.4	3.5		10.4		24.0	2.4			
8.4		52.5	1.0	Cbl	7.7	9.5	12.3	30.6		9.3	9.1	33.4	47.6		9.7	10.0		36.4	2.3	9.4	
9.0		8.7	29.0		9.2	8.9	16.8	37.8	C	8.8	8.8	34.9	58.3		9.5	8.3		39.0	51.7	a	
9.6	3.5	10.5	55.5	9.8	10.2		31.3	35.8		10.2		34.9	10.5		9.8	9.0		43.0	41.6	C	
9.6		10.7	30.9		10.0		31.3	21.2		10.0		41.1	23.1		8.6			54.5	8.6	8.3	
9.6		12.2	36.9	9.8	10.3		31.5	58.6		9.4		50.1	19.5	9.5	10.4	3	14.5	29.2			
9.6		21.4	56.5		10.3		36.8	51.7		10.2		56.1	26.3		9.2			29.5	3.0	8.8	
8.4		41.7	13.3	C	8.2	8.6	37.8	20.4	a	8.9	9.6	5.2	3.1	55.0	9.8	8.4		46.0	38.4	C	
10.1	3.6	1.9	58.0		9.6		45.8	14.5		9.3	9.6	2.3	1.1		8.2			52.0	3.8	Cbl	
9.4		20.7	37.2		9.7	9.5	48.3	44.8		8.2		5.1	6.3	MCa	7.8	9.7	4	2.0	45.6		
10.0		26.2	50.5		8.7	4.8	3.3	44.8	a	8.8	8.6	5.3	13.6	4.5	Ca	9.0	9.7	2.1	5.0	9.5	
9.2		42.7	44.4	9.3	10.1		50.3	29.7		8.2		14.6	35.4	Ca	9.0	9.7		23.5	26.8	9.5	
10.3		58.7	55.4		10.3	4.4	7.8	21.2		9.2		16.1	32.5		8.2	9.6		39.3	2.6	9.9	
9.4		7.2	47.2	9.3	10.1		9.8	22.4		9.4		17.6	15.6		9.1	9.7		46.0	57.8	9.3	
9.6		20.2	32.1	9.1	10.1		16.8	1.6		9.6	9.6	3.3	1.1	46.7	9.0	9.0		54.0	47.4	9.3	
8.0		28.2	45.0	C	7.8	10.3	34.3	37.9		9.8	10.0	3.7	1.1	13.4		9.6	5	20.5	45.0		
10.0		35.7	49.2		10.2		36.3	39.8		9.5	9.5	5.0	6.6	46.8	9.5	8.8		36.5	23.8	9.2	
8.8		37.2	32.6	C	8.8	9.6	5.7	50.4		9.5	10.4	5.4	16.1	31.5		9.5		38.4	31.9	9.5	
10.1		42.5	38.3		10.0	4.5	1.1	5.2		10.2		2.5	1.0	40.8		9.0		44.5	24.8	9.2	
10.0		45.6	1.9		9.4		36.8	17.9		9.4	10.2	4.7	1.0	52.0		10.4	6	7.5	8.4		
8.7		46.4	0.9	a	9.0	10.0	4.8	12.6		9.5		5.1	1.0	26.6	9.5	8.5		14.5	40.1	a	
8.8		56.7	10.8		9.3	10.0	4.9	15.2		9.1	5.5	8.6	3.1	7.7	9.5	10.4		15.5	6.0	10.0	
9.8		58.7	8.2	10.0	9.0		5.5	10.3		9.5	10.4	1.2	5.1	51.2		10.4		29.0	27.2		
9.6	3.8	16.5	29.8	9.6	10.0	4.6	1.3	4.8		9.3	10.4	2.8	1.0	40.9	9.5	9.3	7	59.4	11.1	9.4	
9.0		31.5	49.8	9.1	9.2		30.3	3.8		9.3	9.1	4.3	6.6	37.6	9.5	8.6	8	8.7	32.1	MC	
9.8		31.8	1.5		10.1		4.5	5.2		10.4		5.7	1.0	48.5		10.0		12.4	55.6	9.6	
9.4		41.5	9.7	9.5	9.6		46.8	4.2		10.4		5.9	1.8	1.8		9.0		13.2	25.3	C	
9.5		47.5	40.5		9.2		5.2	3.2		9.1	10.0	5.6	3.1	8.5		10.2		26.2	18.1	8.6	
8.8		52.5	22.9	C	8.8	9.2	4.7	0.1	16.1		9.5	10.4	9.6	34.6		9.5		4.3	6.5	Ca	
10.2		54.5	41.3		9.4		5.3	3.8		9.5		1.3	1.0	52.8	9.5	9.0	9	3.2	36.2	8.8	
8.8		56.5	28.9		9.0	8.8	9.1	2.1	a	9.3	9.5	20.6	13.3		9.8	10.2		6.2	32.0	9.7	
9.6	3.9	3.5	50.8		9.2		3.6	1.9		9.5	10.4	3.3	1.0	34.1		9.4		2.3	29.7	9.1	
8.8		7.5	52.6	C	9.0	10.2	5.0	12.4		9.5	10.4	5.2	1.0	0.4		9.4		26.2	3.5	9.3	
9.1		44.0	45.8		9.5	9.2	5.0	8.3		9.5	8.5	5.7	1.0	29.8	MCa	7.3	9.6	5.1	5.8	9.8	
9.0	4.0	1.5	5.4	M	9.2	9.4	5.4	1.5		9.4	10.0	5.7	4.3	51.5		9.5	10.1	14.2	45.9	9.5	
10.2		7.0	32.6		9.6		5.6	2.5		9.5	5.8	1.6	1.0	10.3	MCa	9.8	10.1	3.1	4.4		
8.8		7.5	10.8	MC	8.7	10.1	5.7	5.8		9.5	8.3	2.8	6.7	57.3	MCa	7.8	8.8	3.1	27.9	9.0	
8.9		30.0	50.8		8.8	8.8	4.8	1.9	56.5	Ca	8.8	10.4	3.1	17.0		9.6	8.8	4.2	57.0	a	
10.2		31.0	30.0		9.8		10.3	1.3		9.5		3.6	1.0	3.7		9.8	8.3	4.7	5.6	Ca	
8.6		40.5	45.0	C	8.5	10.0	1.9	6.1		9.8	8.2	5.9	5.9	1.9	C	8.3	10.0	11	44.7	7.8	
10.1		41.0	22.6		10.3		2.7	4.9		9.5		2.3	1.0	15.5		9.5	9.4	12	16.2	45.6	
9.6	4.1	1.0	52.4		9.4	6.2	4.3	5.3	Gal	6.0	9.4	4.5	6.6	56.5		9.5	9.6	3.8	12.8	9.8	
10.0		4.5	3.6		9.6	10.4	4.5	2.7		9.5	10.4	4.6	1.0	45.7		9.3		44.1	7.3	9.8	
10.2		10.5	6.4		9.0		4.8	4.9		9.1	10.2	5.1	5.2	24.1		8.4		10.6	20.4	Cbl	
9.4		17.0	10.9		8.6		5.0	3.5	C	8.8	9.8	0	12.5	42.6		10.3		3.3	5.5	8.2	
10.0		17.5	43.4		10.0		5.7	1.6		9.8	9.0	4.0	5.5	47.0		9.0	10.1	3.7	6.4	9.5	
8.0		20.5	7.4	MCa	7.7	10.4	8.4	1.4		9.8	9.6	0.0	4.0	40.4		9.4	10.3	4.0	7.2	9.8	
10.0		32.8	58.9		8.2		1.7	4.7	MCa	8.3	9.7	1.5	1.8	18.4		9.8	8.2	5.4	5.8	GMC	
9.4		41.5	20.4		9.0		3.2	2.3		9.4	10.4	5.4	3.4	34.0		9.0	9.2	5.1	3.5	9.4	
9.5		44.5	11.6		10.4		3.6	4.2		9.8	8.8	8.0	5.4	54.4		9.0	10.2	6.1	4.2		
9.5		50.5	40.0		9.7		3.6	9.7			9.6	2.1	5.5	43.5		7.8		2.1	5.9	8.5	
10.0		57.0	2.5		9.8		5.6	2.5		9.4	9.6	3.2	2.8	28.0		9.4	9.7	2.2	5.1	9.4	
9.4		58.0	32.5	9.6	9.0	5.0	2.4	1.4		9.0	7.8	4.1	5.2	8.6	Ca	7.0	9.4	2.3	1.8	9.8	
10.0	4.2	14.5	3.5		9.0		3.3	4.7		9.2	9.2	5.2	4.1	41.0		9.5	9.7	3.5	1.3	9.7	
9.6		23.0	54.8	9.8	10.0		4.0	4.2		9.5	9.4	5.7	5.1	51.0		9.3	9.7	4.9	3.8	9.7	
25pr.	+ 1	9.2	-6.8				+ 1	9.6	-7.0			+ 1	10.0	-7.2				+ 1	10.6	-7.4	

4681-4740.				4741-4800.				4801-4860.				4861-4920.							
10 ^h .		-21 ^o		10 ^h .		-21 ^o		10 ^h -11 ^h .		-21 ^o		11 ^h .		-21 ^o					
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s				
9.8	14 52.6	43.1	9.5	9.2	26 48.4	7.6	9.1	9.0	42 38.9	45.4	Ma	8.7	9.6	1 8.1	59.7	9.3			
8.4	15 17.6	19.3	8.9	7.0	56.4	53.2	7.0	10.4	43 3.2	28.4		9.6	9.6	20.1	24.6	9.6			
6.7	41.6	54.0	6.7	10.3	27 15.4	19.7	GC	10.2	5.2	25.1		8.8	8.8	23.1	16.9	9.2			
10.3	52.5	23.9		8.6	15.5	9.0	MCa	9.8	24.9	32.3		9.3	8.6	2 1.3	52.5	a	8.8		
10.1	16 2.6	35.0	10.0	9.0	17.0	19.5		9.0	26.9	30.2	MCa	8.6	8.7	28.1	28.9	Ca	8.3		
9.2	35.6	38.0	9.4	9.6	23.7	26.1		9.5	32.4	11.2		9.8	8.8	37.6	22.7	a	9.0		
10.3	54.6	43.9		8.7	27.0	56.5	GMC	8.5	51.4	31.6		9.8	8.6	43.6	24.0	a	8.9		
10.2	17 16.5	33.8	9.8	9.2	44.7	10.0		10.2	44 25.9	16.7		9.9	8.7	48.1	12.9	a	9.1		
8.9	24.1	38.9	9.1	9.7	56.7	26.4		9.8	31.9	28.7		9.6	9.6	48.6	9.1	a	9.1		
9.0	50.6	0.3	9.2	9.6	28 40.4	21.7		9.0	45 15.4	37.4		9.3	9.3	3 22.6	9.7	a	9.3		
8.8	51.6	33.3	9.0	7.9	43.4	33.4	GCbl	7.3	37.4	24.5	Cb	7.8	8.9	44.7	57.8		9.0		
10.2	18 11.6	54.7	9.6	9.6	55.5	28.0		9.5	42.4	49.2		9.5	9.3	51.6	58.8		9.1		
9.0	24.6	49.7	9.6	10.2	29 2.0	6.4		9.5	54.9	31.1		9.2	8.8	56.1	21.7	a	9.2		
10.1	30.1	14.2	9.8	8.8	29.5	32.5		9.4	55.4	43.2		9.3	8.9	4 8.6	56.6		9.1		
8.8	33.1	50.6	MCa	9.0	36.5	4.4		9.8	46 49.7	57.1		9.3	9.8	22.1	4.3		9.7		
9.0	19 3.6	39.8		9.2	50.5	39.5		9.2	47 2.2	21.6	MC	8.9	9.6	24.6	10.9	a	9.3		
9.6	6.6	52.0		9.4	50.5	40.1		10.4	26.4	20.9		9.5	9.5	29.6	10.9		9.5		
9.0	12.6	47.2		9.5	59.0	18.5		9.7	40.9	33.9		9.4	9.2	5 24.1	23.4	a	9.0		
10.2	30.6	7.5		9.8	0.5	0.8		9.8	46.4	43.2		7.7	7.7	6 24.6	4.3	GCal	6.5		
8.3	38.6	19.1	Cal	7.8	1.5	11.2	Ca	9.0	59.0	55.1		9.3	8.6	7 11.1	21.4	Ca	7.7		
10.3	45.6	55.0		9.0	37.5	28.9	a	9.0	48 0.3	11.0		9.3	9.6	8 52.7	17.5		9.5		
10.1	20 19.1	21.0	9.8	8.7	31 13.8	1.9	Ca	8.7	10.4	30.8	26.8	10.0	9.8	8 14.2	9.1		9.5		
10.0	21.6	42.0	9.5	10.2	23.5	6.3		9.8	9.4	36.9	17.2	M	9.4	9.4	30.7	28.8		9.3	
9.0	38.6	7.0	Ca	8.9	35.5	38.9		9.8	9.9	38.4	42.5		9.4	9.7	37.3	2.7	10.0		
9.2	53.1	23.3		9.3	52.5	14.2		9.3	9.8	49 7.6	5.6		9.4	9.4	53.5	24.2		9.4	
9.4	55.6	15.6		9.4	58.5	50.0		9.9	8.9	48.1	38.1		9.1	8.6	55.6	38.0	Ca	8.8	
10.3	21 14.4	39.9		9.8	59.5	20.1		9.6	9.6	50.1	9.4		9.2	9.4	58.8	47.8			
10.3	31.5	20.9		9.1	32 19.5	9.6		8.9	50 27.6	43.4		9.1	9.1	9 12.6	43.3	a	9.2		
10.1	43.4	7.1		9.1	26.5	13.9	C	9.0	8.4	46.1	22.0	MCbl	7.7	9.0	40.0	36.7	a	8.9	
8.8	56.9	5.8	Cal	8.5	33 6.5	52.1		9.2	7.8	51 50.1	21.2	Cal	7.2	9.2	54.1	30.9	a	9.5	
8.4	59.4	3.9	Cal	8.8	20.5	18.7		9.2	9.8	51.1	47.6		9.1	8.8	10 2.3	19.2	Ca	8.3	
10.0	1.4	49.2		9.8	26.2	27.5		9.4	9.2	52 54.6	17.0	Ca	9.0	9.0	12.8	19.2	Ca	8.3	
10.3	15.4	23.5		9.5	43.2	52.8	Cal	7.5	9.0	53 1.8	2.3		9.1	9.7	29.3	46.3			
10.2	26.4	18.3		10.2	44.2	23.9		9.7	9.3	26.1	6.0		9.4	8.6	36.3	11.9	Ca	8.3	
10.1	41.4	35.0		9.8	34 12.2	3.9		9.1	9.6	29.6	16.6		9.8	9.8	47.8	52.0			
9.0	42.9	45.6	M	8.9	34.2	13.1		9.5	8.8	29.6	17.5	a	9.0	9.8	59.1	58.2			
9.7	0.4	54.0		9.4	42.2	27.9		9.8	9.8	54 4.6	8.9		9.2	9.6	11 22.8	29.8		9.6	
8.7	5.4	36.9	GMCa	8.6	46.2	9.5		9.8	8.6	17.1	32.4	a	9.1	8.2	37.3	27.7	MCa	7.2	
10.0	5.5	47.6		9.8	58.2	45.2		9.6	9.6	22.6	31.3		9.6	9.5	38.6	2.3		9.4	
8.3	11.4	57.3	C	8.8	35 22.2	41.4		9.4	9.8	33.6	39.8		9.2	9.7	41.0	23.6		9.6	
9.6	12.9	5.1		9.5	36.2	57.9		9.4	8.2	55 41.6	10.3	Cbl	8.0	7.8	45.3	44.9	Ca	8.0	
9.2	16.4	39.3		9.3	47.7	17.2		9.4	8.2	56.1	28.8	Cbl	8.2	9.7	50.5	1.3		9.9	
9.6	18.2	2.7		9.7	10.2	50.9		9.5	8.3	56 2.1	12.6	Cbl	8.5	9.5	54.5	1.4		9.8	
9.7	33.4	13.2		9.8	36.2	33.8	MC	9.0	9.8	37.5	1.3		9.5	9.8	12 17.8	43.5			
7.3	41.4	36.4	GCal	7.5	53.2	51.1	C	8.0	9.6	58.1	23.5		9.9	9.8	20.5	36.4			
9.4	42.9	24.8		9.2	37 58.4	58.1		9.5	9.1	57 16.6	46.8		9.8	9.8	24.7	56.1			
7.6	44.9	24.3	GCbl	7.2	38 44.8	58.8		9.1	9.1	22.6	25.1		9.1	9.5	29.6	27.6	a	9.2	
8.8	9.4	37.5	a	9.6	47.7	53.1	Ca	9.0	9.4	23.6	33.6		9.5	9.8	34.5	22.6			
8.4	37.4	52.9	a	9.1	50.2	36.3		9.5	9.8	32.1	3.7		9.8	9.7	47.2	0.6			
9.0	38.9	57.3		9.4	39 36.3	58.2		9.2	9.8	34.1	7.5		9.5	9.8	13 26.3	43.9			
10.0	58.4	32.7		9.4	44.9	0.8		9.1	8.7	58 3.1	37.5		8.7	8.6	29.9	32.4	C	8.3	
8.8	5.9	55.8	a	8.8	40 4.3	56.6		9.0	9.8	33.4	42.0		9.5	8.8	33.6	13.1	C	8.8	
10.3	22.9	50.1		10.2	57.7	40.2		9.2	9.2	39.6	53.6		9.8	9.7	38.8	59.6			
8.5	48.4	11.3	C	9.0	41 21.4	11.1	C	8.0	8.6	52.6	42.8	C	8.8	9.1	50.6	26.5	Mb	9.0	
9.8	51.4	26.7		9.8	23.4	37.5		9.1	8.6	59 33.1	25.4	Ca	8.7	9.6	14 2.6	38.5			
9.0	52.9	11.4		9.1	28.2	10.0		8.3	9.0	56.6	24.9	Ca	8.7	9.4	16.9	38.6		9.5	
8.5	54.4	33.2	MC	8.3	29.4	41.2	Ca	8.2	9.0	0 2.6	47.5	a	8.6	9.8	20.6	33.3			
10.2	26 9.9	49.1		10.4	58.4	58.9		9.6	9.6	17.6	43.7		9.7	9.7	30.1	5.5		9.5	
10.2	41.4	5.1		8.8	42 20.4	48.8	a	9.0	9.8	34.1	27.7		9.5	9.8	53.1	4.2			
9.0	45.4	41.7		9.6	32.4	43.2		8.5	8.5	40.6	41.1	a	8.8	9.6	15 9.0	2.4		9.8	
25Pr.	+ 1 11.4	-7.6			+ 1 11.9	-7.8				+ 1 13.0	-8.0				+ 1 13.9	-8.2			

4921-4980.				4981-5040.				5041-5100.				5101-5160.										
mag.	11 ^h .	-21°		mag.	11 ^h .	-21°		mag.	11 ^h .	-21°		mag.	11 ^h .	-21°								
m s	m s	m s		m s	m s	m s		m s	m s	m s		m s	m s	m s								
9.5	15	13.9	49.5	9.3	9.4	25	17.6	6.4	9.5	9.6	36	7.1	11.9	9.3	9.6	47	29.7	20.6	9.6			
9.8		30.5	48.8	9.8	9.8		28.3	53.5	9.9	9.9		8.8	49.4	9.6	9.8	48	1.7	9.7	9.9			
7.4		33.6	25.2	MCa	7.0	9.8	26	9.0	58.6	8.8	11.3	50.4	a	8.8	8.8		4.3	10.5	Ca	8.9		
9.5		40.6	42.0		9.5	9.8		23.3	55.8	9.6	24.5	25.6		9.6	8.0		10.5	12.1	Ca	8.2		
9.7		43.3	49.1		9.2	9.2		30.1	18.3	9.1	9.3	42.7	5.8	a	9.0	9.3		20.8	54.9		9.2	
9.5	16	3.6	27.9	Ca	9.6	9.8		35.4	9.0	10.0	56.0	2.9		10.0	10.0		24.7	2.8				
8.8		31.5	24.2		9.0	9.8		51.7	13.5	9.5	9.8	58.7	16.5		9.6	9.6		32.0	20.2		9.9	
9.8		42.8	32.8		9.2	9.2		56.2	33.2	9.5	9.9	37	6.9	39.1	10.0	10.0		32.2	25.6			
9.4		49.3	10.2		9.3	9.8		56.9	38.8	9.9	9.9	16.8	57.3		8.5	8.5		46.0	35.4	a	8.8	
9.8	17	9.0	13.3		9.7	9.7	27	20.0	3.4	9.5	9.6	18.9	8.9		9.5	10.0		46.8	53.5			
9.2		10.5	10.5		9.3	8.4		29.2	45.7	Cb	8.3	8.6	45.2	50.9	Ca	8.5	9.7	56.7	44.8		9.5	
9.7		11.8	8.2		9.8	8.9		29.7	7.6	Cb	8.7	8.7	10.0	38	32.1	0.3	9.9	59.2	11.6			
9.7		44.5	19.0		9.8	9.8		31.2	16.5		10.0	10.0	36.4	0.5		9.2	49	8.4	41.1	a	9.1	
8.2	18	11.5	24.1	MCbl	7.5	9.8		32.4	58.7		10.0	10.0	57.4	19.2		9.0	9.0	18.5	43.9	a	9.0	
9.8		13.7	10.7		10.0	10.0		44.8	49.3		9.3	39	5.7	28.9		10.0	10.0	20.2	6.9			
9.8		13.7	13.9		9.8	9.8		50.3	35.9		9.4	8.7	7.7	32.4	C	9.0	7.8	33.2	29.2	MCa	7.7	
9.8		20.5	18.9		9.8	9.8	28	0.4	46.1	10.0	9.5	10.4	33.0		9.2	10.0	36.7	11.5		9.4		
9.7		28.0	2.1	10.0	9.3	9.3		18.3	5.5	9.1	9.5	18.7	29.8		9.8	10.0	46.0	35.8				
9.4		35.7	19.8		9.5	10.0		27.8	45.0	10.0	9.8	52.3	10.1		9.6	9.7	56.8	21.5		9.8		
9.5		48.5	11.6		9.5	10.0		34.5	19.3	10.0	9.6	56.8	42.4		9.8	8.4	50	7.1	21.9	Cal	8.7	
9.8	19	0.5	24.6		10.0	10.0		37.3	50.0		9.6	40	12.3	55.5		9.5	10.0	7.6	9.0			
9.7		13.5	27.6	10.0	9.9	9.9		45.1	22.7		9.3	30.7	50.5		9.1	9.7	8.1	14.6		9.4		
9.7		16.5	25.5	10.0	9.3	9.3		55.9	12.7	9.1	9.0	51.0	45.0	C	8.5	10.0	24.0	53.1				
9.7		25.8	0.2	9.8	9.6	9.6	29	10.6	16.9		9.6	41	0.3	37.8		9.7	9.6	38.8	18.1		9.5	
9.6		33.2	51.5	9.8	8.6	8.6		39.6	37.6	C	9.1	10.0	10.4	58.5		9.6	9.6	40.8	17.7		9.9	
9.4		37.8	26.9	9.4	10.0	10.0		43.1	53.4		10.0	10.0	30.7	12.9		9.9	9.8	42.3	24.9		9.8	
9.7		40.4	48.4		8.2	8.2		51.3	47.2	C	8.5	9.8	37.8	35.1		9.7	10.0	49.5	20.5		10.0	
9.8		47.1	51.6		9.6	9.6	30	3.2	51.2	9.8	9.3	45.3	24.4		9.3	10.0	54.1	15.9		10.0		
9.6		48.1	47.8		10.0	10.0		28.9	37.5	10.0	9.3	57.8	26.0		10.0	7.3	56.3	50.4	MCbl	7.2		
8.6		50.4	18.7	Ca	8.5	9.6		30.1	14.9	9.8	9.3	42	34.0	8.8		9.2	10.0	51	0.0	15.4		
9.7		59.4	25.9		10.0	10.0		30.4	10.9		9.3	50.0	47.4	a	9.3	9.4	1.0	45.0		9.2		
8.2	20	0.5	59.8	Cal	7.7	9.6		31.1	19.1	9.1	9.6	50.0	32.6		9.5	9.9	10.3	4.9				
9.2		17.8	17.3		9.5	9.3		38.8	57.6	9.1	9.6	55.0	38.1		9.7	10.0	45.1	44.8		9.6		
9.7		21.3	58.6		9.8	9.8		50.9	5.7		8.2	43	0.5	24.1	Ca	8.5	10.0	48.1	45.8		10.0	
9.8		22.8	1.1		9.8	9.8	31	7.4	50.1	10.0	10.0	3.8	45.6		10.0	10.0	53.9	3.6				
8.7		51.6	31.8	Ca	8.2	10.0		19.7	5.3		9.5	36.8	56.2		9.5	8.8	59.9	54.5	a	9.2		
9.6		54.4	18.3		9.4	10.0		33.2	38.6		10.0	50.6	44.7		9.8	9.8	52	3.0	0.8	a	9.4	
9.2		57.7	2.6		9.3	9.3		47.4	18.0	a	9.2	10.0	57.1	35.5		10.0	9.5	13.5				
9.8		21	23.9		9.8	9.8	32	1.0	40.6		9.3	59.6	48.9	a	9.0	10.0	19.9	3.9		10.0		
8.4	22	34.9	42.4	MCa	7.5	10.0		5.0	1.1	9.9	9.3	44	22.3	18.8		9.2	9.4	28.7	4.9	a	9.4	
9.8		37.2	57.1		9.3	9.3		13.0	5.1	a	9.4	9.8	22.6	9.9		9.8	10.0	44.9	25.7			
9.5		20.9	27.3		9.7	9.5		20.5	10.8	a	9.4	9.6	27.6	44.9		9.1	9.8	53	0.9	32.0	9.8	
9.8		23.2	22.5		9.8	9.8		21.0	33.9		9.7	8.3	29.1	26.9	Ca	8.2	10.0	13.4	9.7		9.9	
9.4		25.2	52.9		9.4	10.0		23.7	47.5		9.6	31.1	19.3		9.5	10.0	20.6	19.3				
9.6		31.2	45.4		10.0	9.8		29.0	35.0		9.4	8.7	39.4	42.1	Ca	8.6	9.9	39.9	47.0		9.5	
9.7		52.2	51.0		9.9	9.3		33.7	46.4		9.3	9.6	52.3	29.3		10.0	10.0	53.9	46.9			
9.8		52.2	28.9		10.0	10.0		35.5	45.3		9.8	45	51.4	27.4		10.0	9.7	54	4.1	29.7	9.1	
9.8	24	5.3	48.2		10.0	10.0	33	2.7	7.9		9.5	52.4	14.1		9.5	7.9	6.4	10.9		CWal	8.5	
9.8		8.5	42.1		9.3	9.3		12.0	54.2	8.8	9.9	55.7	21.7		10.0	10.0	12.6	39.1				
9.8		30.9	58.6		10.0	10.0		37.5	27.2		9.6	46	9.4	56.9		9.8	7.0	19.4	8.5	GMWb16.2		
9.8		31.5	4.0		9.3	9.3		44.4	0.5	a	9.2	9.2	16.2	28.9	b	9.0	10.0	26.1	6.3			
9.1		39.8	51.8		9.1	9.3		59.7	24.5	Ca	8.9	8.8	17.7	19.6	MCa	8.8	10.0	30.9	15.1			
9.8		42.5	26.8		8.6	8.6	34	13.3	38.3	MCa	8.7	9.6	19.7	35.4		9.7	9.6	41.4	24.7		9.7	
9.7		52.1	34.9		9.4	9.9		19.9	42.0		8.8	9.3	29.7	29.9		9.6	9.0	55	10.9	45.2	8.8	
9.8		53.0	41.2		10.0	9.3	35	1.3	8.8		9.6	9.6	36.9	39.1		9.7	9.6	11.9	7.9		9.5	
9.6		59.4	1.1		9.3	9.3		10.8	33.5	a	9.3	9.6	49.9	20.9		9.4	9.2	16.6	53.2		8.8	
9.8	25	0.1	24.3		8.5	8.5		31.3	57.6	GMbtπ	8.5	9.8	47	2.1	30.0		9.4	10.0	27.8	57.1		9.8
9.8		1.1	41.2		9.8	9.9		43.5	58.7		10.0	10.0	22.7	33.6		9.8	9.8	40.6	36.0		9.5	
9.8		1.5	53.2		8.8	8.8		59.9	56.8	a	9.1	9.8	24.4	26.1		9.5	9.5	48.3	43.3		9.5	
9.6		2.8	48.5		8.9	8.9	36	0.8	9.6	a	8.9	9.6	25.1	18.2		9.5	9.8	51.1	24.8		9.8	
25pr.	+1	14.5	-8.2				+1	15.1	-8.3			+1	15.8	-8.3				+1	16.3	-8.3		

5161-5220.				5221-5280.				5281-5340.				5341-5400.						
mag.	11 ^h -12 ^h		-21°	mag.	12 ^h		-21°	mag.	12 ^h		-21°	mag.	12 ^h		-21°			
	m	s		m	s			m	s			m	s					
9.6	55	54.3	31.1	9.8	9.7	3	23.7	55.3	9.4	14	26.9	10.8	9.4	10.0	25	39.7	31.5	
9.5		55.6	45.9	a	8.9	9.6	35.4	50.5	9.8		29.5	40.6	9.6	10.0		46.7	37.6	
10.0		58.7	16.0		9.2	9.6	39.2	45.4	a	9.1	10.0	30.3	58.4		10.0	52.0	28.8	
9.7	56	2.6	22.3		9.8	9.6	39.7	6.2		9.5	9.8	30.3	58.4		26	1.7	44.1	
10.0		3.3	15.6		10.0	5.1	41.7	55.5	GSπβλ	2½	9.8	58.9	45.6	10.0	9.3	7.2	36.3	
9.8		4.8	46.4			8.5	44.7	0.5	Ca	9.0	8.9	59.9	44.5	a	8.7	9.9	36.6	
10.0		8.3	28.3		10.0	10.0	4	12.4	44.8		9.4	15	8.9	53.9	9.3	9.8	37.4	
9.6		9.8	6.9		9.3	9.9	18.2	22.2		9.9	9.4	9.4	38.1		9.4	9.4	37.9	
9.5		20.8	40.4	a	9.5	10.0	26.2	10.1		9.6	9.6	10.9	41.7		9.6	9.6	48.2	
9.8		24.3	41.2		9.9	10.0	45.7	26.3		9.0	9.0	17.2	22.1	a	9.2	10.0	49.4	
10.0		31.6	18.9		9.7	9.7	45.9	41.2		9.5	9.4	19.9	29.0		9.5	9.6	55.0	
9.6		34.3	31.9		9.3	10.0	5	0.2	49.6		10.0	34.3	13.3		10.0	27	1.2	
8.4		36.6	27.3	Gbt1π	7.5	10.0	9.2	51.8		9.8	9.8	49.2	33.6		10.0	9.9	4.4	
10.0		38.8	42.1		8.8	10.0	9.7	26.0	Ca	8.3	9.2	59.9	45.5	a	9.3	9.0	16.5	
10.0		44.3	12.8		10.0	10.0	18.9	7.7		9.3	9.3	16	20.2	26.4	9.3	9.5	21.0	
9.4		45.8	13.2		9.0	10.0	27.2	4.1		10.0	17	27.2	52.1	C	8.5	7.8	28.3	
10.0		49.7	11.1		10.0	10.0	29.2	11.1		7.9	9.6	40.7	22.6		9.5	10.0	40.5	
9.7	57	21.3	21.5		10.0	10.0	29.7	0.2		9.6	9.4	45.8	21.5		9.5	9.2	28	
10.0		41.8	58.4		10.0	10.0	36.9	39.0		9.4	9.4	46.5	21.0		9.2	9.2	6.6	
9.5		42.3	3.8		9.2	9.1	49.2	49.5	Ca	8.8	9.4	18	8.4	8.2	9.2	9.8	7.5	
8.2		48.3	40.5	Cal	7.7	9.5	6	19.7	3.5	9.5	9.6	29.1	51.2		10.0	19.3	36.3	
9.6	58	22.0	24.9		9.8	9.7	25.2	34.0		9.7	9.8	38.7	23.3		10.0	30.0	29.0	
10.0		30.0	4.1		9.2	10.0	32.0	3.1		9.4	9.8	53.8	33.1		9.8	9.6	29	
9.1		32.3	8.9	Ca	9.1	10.0	49.2	16.1		9.5	9.4	19	0.6	14.7	10.0	10.0	17.3	
9.2		41.0	53.9		9.4	9.9	7	49.2	17.3		9.8	18.6	35.4		10.0	50.0	12.8	
9.4		43.3	18.3		9.5	10.0	8	17.3	36.8		9.9	31.1	40.9		9.7	30	2.3	
10.0		59.3	28.0		9.2	10.0	19.8	41.9	a	9.1	9.8	36.4	35.0		9.7	8.8	11.0	
9.0	59	4.0	44.3		9.0	10.0	9	9.8	12.9		10.0	20	2.8	27.2	9.6	9.6	19.3	
10.0		9.3	15.0		9.8	9.8	20.4	15.1		9.7	10.0	9.4	57.7		10.0	9.7	23.0	
10.0		21.0	10.4		9.8	7.7	20.8	21.7	Ca	8.0	9.8	15.4	21.9		9.8	9.0	23.5	
9.9		22.0	5.5		10.0	9.2	22.1	15.7	a	9.1	8.1	31.8	41.9	Cal	7.7	10.0	42.3	
9.6		22.8	16.3		9.6	9.4	28.7	7.0	a	9.1	9.1	39.4	1.6		9.0	9.9	56.5	
9.9		42.0	22.3		8.8	8.8	29.7	48.3	Ca	8.5	10.0	40.1	7.3		10.0	31	2.0	
9.6		45.5	11.0		9.8	9.8	35.8	4.7		9.5	9.8	40.6	0.9		9.9	9.9	10.3	
10.0		49.7	16.4		10.0	10.0	43.4	6.0		10.0	10.0	41.2	2.0		9.5	9.5	19.5	
9.6		51.9	35.7		9.5	10.0	48.6	36.3		9.2	9.2	44.4	21.8		9.4	9.4	23.5	
10.0		59.7	36.0		10.0	10.0	50.4	14.2		10.0	10.0	44.6	39.4		9.8	9.8	46.3	
9.6	0	12.9	37.3		9.8	9.8	59.9	22.7		10.0	9.1	47.4	19.0	C	9.1	9.9	32	
9.7		30.7	29.1		10.0	10.0	10	29.7	28.3		8.7	21	15.0	42.4	Cal	8.6	8.4	
9.8		36.7	8.4		9.8	9.8	31.7	1.0		10.0	10.0	21.4	45.6		9.4	9.4	33.7	
8.6		47.5	40.5	Ca	8.0	9.8	11	1.1	40.4		9.8	22	10.7	48.7		9.4	41.8	
10.0		48.7	46.0		8.6	8.6	11.4	15.6	Ca	8.3	9.2	11.7	11.7	C	9.0	10.0	33	
10.0		49.7	43.3		9.3	9.3	12	0.4	39.6	Ca	8.8	10.0	26.2	53.5		9.4	5.1	
10.0	1	1.2	24.7		9.9	9.9	19.4	31.1		10.0	10.0	44.1	35.7		9.8	9.8	9.9	
10.0		4.5	52.8		9.6	9.6	13	18.9	47.7		9.7	9.8	51.9	57.8		9.8	9.7	
10.0		11.9	10.5		10.0	10.0	21.1	45.8		9.8	9.8	59.4	3.9		9.7	9.6	18.4	
8.2		38.4	33.8	Ca	8.2	9.7	23.1	18.9		9.5	9.6	23	1.0	26.0	9.6	10.0	34.7	
10.0		43.9	55.1		8.5	8.5	26.7	29.5	Ca	8.7	9.0	8.0	21.4		9.0	9.8	36.8	
9.4		46.5	23.2	a	9.4	10.0	38.0	44.6		9.4	9.4	9.0	53.7		9.4	9.4	40.8	
9.0		46.7	52.9		9.0	9.6	38.7	33.0		9.5	9.3	11.0	47.3		9.0	10.0	41.1	
10.0		49.7	40.3		9.6	9.6	40.7	45.1		10.0	9.9	22.2	48.3		10.0	10.0	46.6	
9.0		53.5	36.4	a	9.1	7.0	42.1	28.8	GS1π3	6.5	10.0	27.2	29.3		9.2	9.2	50.1	
10.0	2	0.2	5.7		10.0	10.0	52.4	59.0		9.3	10.0	29.2	33.1		9.3	9.3	52.3	
9.0		1.0	57.6	C	8.6	9.6	53.9	58.7		9.3	8.8	31.0	11.3	Ca,	8.5	9.8	56.6	
9.4		8.2	0.1		9.4	9.4	14	3.4	44.5		9.4	24	28.5	10.1	9.5	9.2	58.7	
9.6		14.7	25.4		10.0	10.0	4.3	5.9		9.7	9.7	39.7	20.5		10.0	10.0	34	
8.4		19.7	49.5	Ca	8.5	5.5	6.5	31.2	GS1π	5.0	10.0	49.6	18.1		9.6	9.6	39.8	
10.0		56.2	31.5	a	9.5	9.9	6.9	46.5		9.8	9.8	25	17.1	1.7	9.1	9.1	49.8	
10.0		3	12.4	57.5		9.7	11.9	8.8		10.0	9.6	21.5	32.1		9.7	9.9	51.1	
10.0		19.7	16.2		8.8	8.8	19.9	37.9	Ca	8.6	9.1	35.6	22.2		9.4	9.2	35	
25PR.	+ 1	16.7	-8.4				+ 1	17.3	-8.3			+ 1	18.0	-8.3			+ 1	

5401-5460.				5461-5520.				5521-5580.				5581-5640.								
mag.	12 ^h .	-21°		mag.	12 ^h .	-21°		mag.	12 ^h -13 ^h .	-21°		mag.	13 ^h .	-21°						
	m	s		m	s			m	s			m	s							
10.0	35	0.6	30.9	9.2	42	19.0	21.5 a	9.4	9.2	58	12.8	54.2 C	9.0	28	42.9	22.9	GCal	6.5		
9.5		1.8	31.5	9.6		19.4	1.5	9.7	9.1		25.3	38.9	9.5		57.5	44.6	Ca	8.5		
9.9		9.1	43.2	10.0		22.8	17.6		7.1		53.3	23.9	7.7	9.2	30	2.4	3.9	Cal	8.3	
8.3		20.6	6.4 Ca	8.5	10.0	25.5	4.2		9.2	59	34.3	3.4 a	9.1	9.0		13.4	12.9	Cal	7.8	
9.6		21.8	20.3		10.0	37.0	47.9		9.0	0	27.3	19.7	9.3	8.6		31.4	17.0	a	9.0	
9.8		23.3	18.9		8.7	39.0	6.7 Ca	8.9	9.6		36.3	6.0	9.4	9.2		46.4	35.0		8.9	
10.0		26.8	26.4		8.5	46.7	42.5 C	8.3	10.0	1	0.3	30.8		9.6	31	29.9	32.5		9.2	
10.0		36.4	44.8		10.0	53.7	19.9		10.0		17.8	35.3	9.5	10.0	33	1.9	34.1		9.5	
8.9		36.8	16.7 a	9.0	9.6	56.0	33.1		10.0		18.3	50.9	9.5	10.0		13.4	45.4		9.6	
9.8		39.6	26.7		9.5	43	1.9	59.7	9.5	2	2.8	58.4	9.4	9.0		33.9	5.4 a		9.0	
9.4		53.1	53.1	9.5	9.0	11.5	15.8 a	9.1	10.0		37.8	40.5	9.5	9.0	34	3.9	8.7		9.1	
9.8	36	0.9	21.4		9.1	16.0	42.4 C	8.6	10.0		41.8	10.9	9.4	9.3		11.9	4.3		9.4	
9.9		3.1	47.9		9.8	18.3	26.3		7.7		57.3	30.8	7.4	9.8	35	25.9	8.8		9.5	
9.1		6.8	6.7	9.3	10.0	19.0	22.7		10.0	3	39.8	59.2	9.5	8.4		28.4	24.7	Cal	8.0	
9.8		9.6	19.1		10.0	31.0	21.6		8.2		42.0	42.2	8.0	8.8		58.1	59.7	a	9.0	
10.0		10.8	52.3		10.0	43.8	58.3		10.0	4	4.0	52.1	8.8	10.0	36	2.6	49.5		9.4	
9.9		35.3	33.9		9.8	44.0	47.7		8.6		5.0	32.2	8.8	10.0		18.1	57.1	Ca	9.1	
10.0		39.5	2.5		10.0	46.0	28.8		9.4		15.0	13.6	9.5	8.5		27.6	44.2	Ca	8.2	
9.8		42.8	19.9	10.	9.8	53.7	19.3		10.0	5	26.0	18.4	9.5	7.8		37	12.1	Cbl	9.7	
9.7		45.2	44.3		10.0	44	1.7	9.1	8.3	6	36.2	59.6 a	9.0	10.0		35.6	17.9		9.2	
9.7		46.0	48.8		9.4	39.5	32.1	9.2	10.0		37.0	36.8	9.8	9.8		51.1	35.1		9.2	
9.8		50.9	2.9		9.6	45	9.4	8.5	9.3	9.4	56.4	48.5	9.7	9.0	38	15.6	13.6		9.2	
9.8	37	34.2	4.8		9.4	10.9	41.0	9.3	9.1	7	6.3	53.5	9.2	9.3	39	19.6	20.7			
10.0	38	10.2	4.9		9.4	11.7	27.7	9.4	7.7		15.8	41.9	7.7	10.0		19.6	20.7			
9.8		12.9	29.9		10.0	14.7	44.4		10.0	9	1.4	18.1	9.8	8.8	40	1.1	18.4	Ca	8.9	
10.0		19.9	39.9		9.9	36.9	52.2		7.8		22.3	15.2	8.0	9.4		34.6	3.3		9.4	
10.0		29.4	2.2		10.0	46	7.7	32.7	9.5	8.5	10	2.5	8.0	10.0		44.4	24.1	a	9.7	
10.0		38.9	40.6		9.9	23.7	59.7		8.8		15.6	22.0	8.9	9.0		45.6	13.7	a	9.2	
10.0		39.5	6.6		9.6	36.7	36.7	9.5	9.2	11	15.6	43.8	9.2	9.6		55.4	30.8	a	8.9	
10.0		41.2	21.4		10.0	53.4	53.3	9.1	9.1	12	9.4	24.4	9.2	8.3	41	37.6	31.9	Ca	7.7	
9.8		50.9	16.3		10.0	47	4.7	16.8	9.4	13	12.4	46.4	9.5	9.4		45.6	12.1		9.4	
9.5		56.9	16.1	9.5	10.0	8.4	19.7		8.4		44.4	28.7	8.3	9.0	42	39.6	9.1		9.1	
9.6	39	11.5	43.1	9.5	10.0	9.7	1.2	9.5	9.3	14	4.4	36.4	9.4	8.5	43	5.6	28.3	C	7.8	
8.0		16.9	5.0	GCal	7.5	9.7	12.1	9.9	9.9	7.9	15.4	43.5	8.1	10.0		26.3	42.3		9.2	
9.6		21.9	24.8	C	7.5	9.6	24.2	7.3	9.3	8.3	19.9	9.0	8.1	10.0		43.3	19.7		9.9	
9.7		29.2	55.6		9.9	24.3	49.9		9.6	9.6	35.9	3.1	9.7	10.0	44	5.3	59.8		9.8	
9.8		33.9	48.4		9.6	27.3	10.0		9.1	15	2.9	5.9	9.1	9.0		25.3	27.6	Ca	9.0	
10.0		43.2	34.1		9.6	48	5.5	34.7	9.3	9.4	48.9	36.0	9.4	10.0	45	0.8	17.0		9.8	
8.7		44.5	21.5	Ca	8.9	9.8	8.3	37.8	9.4	8.8	17	25.4	8.8	9.0		27.8	9.4 a		9.0	
					9.4	14.3	52.4		9.4	9.3	18	9.4	9.3	9.1		32.4	18.4			
10.0		51.5	45.3		9.8	26.5	20.7		8.5	19	17.9	30.6	9.4	10.0		56.8	25.2		9.9	
9.5	40	2.7	25.8		10.0	30.0	47.3		8.5		55.4	38.7	8.2	10.0	46	33.4	11.8			
10.0		4.2	15.2		9.2	37.7	29.4	9.1	9.4	20	18.4	51.4	9.4	10.0		45.3	13.2		9.8	
9.5		4.2	15.5		7.9	45.2	4.5	C	8.1		20.4	42.8	8.2	10.0		51.8	27.8			
7.7		27.2	26.7	Ca	7.7	50	30.1	29.6	8.3	9.4	38.9	0.4	9.3	10.0		54.8	52.2			
9.4		32.2	40.0		9.1	51	23.8	1.2	9.1	10.0	21	13.1	9.8	9.4	47	5.7	49.7		9.5	
10.0		35.9	19.6		10.0	47.7	2.4		9.7	8.2	25.1	45.0	7.7	8.5		11.3	36.9		8.7	
10.0		38.8	2.2		10.0	52	16.6	14.5	9.8	9.1	27.6	45.0	9.2	9.2		14.1	18.1	C	9.0	
9.7		39.2	17.3		9.1	16.6	45.9		9.3	9.1	29.1	5.1	8.5	10.0		15.3	35.4		9.7	
9.8		47.7	12.2		9.4	18.6	53.5		9.4	9.4	41.6	56.8	9.8	9.6		15.7	16.1		9.4	
9.7	41	6.5	56.1		8.0	46.1	27.1	CWal	7.9	8.6	44.6	46.7	8.7	9.8		21.8	50.4		9.3	
9.8		14.2	29.1		8.4	53	8.1	23.4	Ca	9.1	22	11.9	9.2	9.1		32.0	22.3	C	8.6	
9.8		14.6	15.1		9.0	14.1	6.4		9.1	8.5	52.6	43.2	8.5	7.1		35.7	37.5	GC	6.7	
9.8		20.8	0.0		9.6	39.1	27.4		9.4	9.4	23	3.6	9.5	8.8	48	33.5	40.0		9.0	
9.2		26.3	58.8	Ca	8.8	8.4	50.1	6.7	8.2	10.0	24	10.9	9.5	9.4		52.0	51.1		9.5	
10.0		53.2	5.7		8.8	54	49.8	45.8	8.5	9.4	31.4	1.9	9.6	8.9		59.0	45.7	a	9.0	
9.4		54.4	18.5	a	8.8	55	26.3	44.0	8.5	9.4	25	58.1	8.9	10.0	49	25.8	2.1		9.5	
9.8		59.6	57.5		9.6	47.8	58.4	C	8.9	8.6	28	1.5	9.0	9.4		33.7	41.4		9.5	
9.4	42	1.7	48.2	9.0	10.0	52.1	12.9		9.3	8.0	34.3	58.9	7.5	9.2		36.0	17.2		9.5	
10.0		6.0	58.8		10.0	56	45.3	36.3	9.5	9.0	36.5	51.1	9.1	9.0		40.0	54.3	Ca	9.0	
25pr.	+ 1	19.0	-8.2		+ 1	19.5	-8.2		+ 1	21.0	-7.9		+ 1	22.5	-7.5					

5641-5700.				5701-5760.				5761-5820.				5821-5880.				
13 ^h -14 ^h	-21°			14 ^h	-21°			14 ^h	-21°			14 ^h -15 ^h	-21°			
m s	'		mag.	m s	'		mag.	m s	'		mag.	m s	'		mag.	
50 00	33.5		9.4	10.0	17 15.4	2.1	9.2	33 26.5	51.7	a	9.1	10.0	51 42.9	14.5	10.	
8.8	24.0	2.3	8.9	9.3	22.7	9.4	9.3	34 17.5	25.7		9.4	9.8	43.9	53.4		
8.8	30.0	42.1	a	9.1	9.4	49.9	57.0	a	9.2	9.9	9.2	10.1	44.9	43.0		
9.2	51 27.0	11.4	a	9.3	9.2	18 4.2	0.3		9.3	9.2	9.3	9.9	50.0	2.3	9.5	
9.4	38.0	53.1		9.5	9.6	16.2	56.4		9.5	9.9	9.2	10.2	55.3	40.0		
9.8	52 23.0	21.1		9.6	9.4	42.0	3.0		9.8	9.8	9.5	9.9	52 3.9	55.9	9.4	
8.8	56.0	44.1	Ca	8.5	9.3	52.3	33.4		9.0	9.0	9.1	10.2	18.6	50.0		
8.8	54 58.0	16.3	C	8.9	8.0	53.2	33.6	Cbl	7.7	9.0	8.5	10.2	31.1	33.4		
8.6	55 44.0	3.5	Ca	8.2	10.0	19 8.2	31.4		9.2	9.2	9.2	10.0	32.6	21.4	9.7	
8.8	54.0	6.3	a	9.0	8.4	16.9	59.7	a	8.5	9.9	9.7	8.3	43.9	29.7	al	
9.4	56 17.0	47.0		9.1	9.2	50.2	32.4		9.1	8.9	8.8	9.5	49.1	14.0	9.5	
9.6	33.0	43.7		9.4	8.4	50.7	18.2	Cbl	8.0	9.2	9.5	10.2	53 7.9	15.8		
7.1	55.0	49.1	GCbl	6.5	8.6	53.2	6.1		9.1	9.8	9.5	10.1	18.4	2.9		
9.6	57 7.0	38.3		9.7	8.8	56.2	40.6	a	8.9	7.5	7.8	10.2	30.6	36.9		
9.5	13.0	56.3		9.8	9.6	20 13.7	55.4		9.3	9.9	9.4	9.8	54.2	57.9		
8.4	16.0	9.5	Ca	8.4	9.2	23.9	59.7		9.2	7.7	7.8	10.0	56.6	52.8		
8.4	31.0	9.8	Ca	8.7	8.0	30.2	25.6	Cal	7.2	9.2	8.9	9.6	54 16.3	44.1	Ca	
9.2	58 26.5	18.1	a	9.3	9.6	39.2	12.4		9.0	9.0	8.8	9.6	42.6	27.3	9.1	
10.0	39.0	39.3		9.9	9.6	53.2	7.5		9.8	9.9	9.8	9.5	55 3.0	0.5	9.8	
9.4	59 18.0	56.5		9.3	10.0	58.2	10.2		9.2	9.2	9.4	9.2	7.6	24.5	C-	
9.9	38.5	46.2		9.4	10.0	21 3.7	14.0		9.0	8.9	9.0	9.6	9.1	28.4	9.6	
8.6	42.5	45.4		9.1	10.0	5.3	41.0		9.9	9.2	9.0	8.5	19.6	31.0	Cal	
9.2	0 41.0	3.6		9.0	9.6	27.7	16.6		10.	9.2	9.0	8.7	35.6	20.1	Cb-1	
8.7	1 3.0	35.6	Cbl	8.6	8.4	30.2	25.8	Cb	8.3	8.6	8.8	10.2	56 22.3	21.3		
9.5	58.0	22.0		9.8	8.0	31.7	42.3	Ca	7.9	9.4	9.2	9.9	35.8	16.4	9.5	
7.6	2 14.1	56.8	CKbl	8.0	8.7	40.7	32.6		9.1	8.8	9.0	10.0	57 1.3	46.0		
9.2	31.9	29.2		9.5	9.6	22 7.2	11.0		9.5	9.4	9.5	8.9	2.3	35.3	9.3	
9.6	37.4	11.0		9.4	9.6	23 5.7	42.0		8.4	8.4	8.6	9.6	3.6	44.8	9.8	
10.0	45.7	44.8		9.9	9.6	15.3	14.8		8.9	8.9	8.9	9.8	14.9	26.5	9.8	
9.2	4 16.9	30.4		9.2	7.2	35.7	54.2	Cal	7.0	9.8	10.1	9.2	15.9	30.6	9.8	
9.4	25.4	29.4	Ca	9.3	9.6	24 27.2	3.7		9.4	9.6	9.5	10.0	20.3	31.9		
9.4	40.9	51.0	a	9.1	8.8	36.2	20.8	C	9.0	9.2	9.0	10.2	36.7	11.0		
10.0	5 6.9	45.4		9.9	9.4	49.7	46.9		9.5	8.0	8.3	9.5	42.4	1.7	9.5	
9.1	55.9	7.0		9.1	9.6	51.2	52.8		9.6	8.6	8.5	9.0	43.7	43.9	C-	
8.8	6 42.4	53.1	Cal	8.0	9.3	55.9	34.9		9.8	9.4	9.8	9.1	58 0.3	58.5	9.3	
9.2	57.4	32.2		9.1	10.0	25 56.4	35.3		9.8	9.8	9.7	10.2	18.2	4.8		
10.0	7 2.7	53.5		9.8	9.3	26 16.4	46.6		9.3	10.0	9.8	9.0	20.0	44.4	9.1	
8.0	8 7.4	58.9	Cbl	7.9	9.3	31.4	33.8		9.5	9.6	9.5	9.0	32.6	41.6	9.1	
9.6	39.3	59.7		9.8	9.0	47.7	32.8		9.4	10.0	9.8	9.8	34.3	4.2	9.3	
10.0	47.4	54.7		9.0	9.0	50.7	45.2	a	9.1	9.6	9.5	9.9	48.3	47.0		
9.6	9 9.7	40.5		9.4	10.0	27 8.4	20.3		10.2	9.6	8.0	9.0	50.8	55.0	CWK-7.6	
9.8	43.4	18.9		9.4	9.0	8.9	19.6		9.3	9.6	9.4	10.1	59 9.0	14.4		
10.0	52.4	28.5		9.6	10.0	18.9	45.7		10.2	10.2	8.5	9.5	14.3	21.9	C-	
9.2	59.9	30.1	a	9.2	10.0	19.9	13.6		9.5	10.2	7.4	9.6	14.3	32.5	GCWal6.5	
8.2	10 11.4	12.3	Ca	7.5	7.6	20.9	50.4	Cal	7.5	10.2	9.6	9.2	14.6	1.0	9.6	
7.7	42.4	14.9	Ca	7.0	9.6	28 13.9	31.6		9.5	8.0	8.0	9.2	25.3	35.9	8.9	
10.0	12 32.4	10.9		10.0	10.0	24.4	28.0		9.8	9.8	10.0	10.0	43.3	20.6		
9.7	42.4	17.1		9.3	10.0	43.4	15.3		9.8	9.8	10.	10.2	46.6	22.9		
9.7	44.4	26.4		9.6	7.1	29 2.2	37.8	GCal	7.5	10.1	9.8	9.8	51.3	12.7		
9.4	14 1.4	19.9	a	9.0	9.9	22.3	10.8		9.8	9.8	9.8	10.1	54.2	33.6		
10.0	17.9	6.9		9.8	7.8	30 56.5	35.6	Cal	7.9	10.2	10.	9.8	0 28.3	5.9		
8.6	43.1	1.5	Ca	8.5	9.8	14.5	47.7		9.3	9.2	9.2	9.8	36.0	18.0		
9.6	15 1.9	4.4		9.5	8.4	40.0	29.8	a	9.0	9.6	9.3	10.1	40.3	22.3		
9.6	30.7	24.2		9.1	9.4	31 9.0	5.2		9.4	9.6	9.4	10.2	43.3	47.6		
10.0	16 5.2	4.0		9.8	9.8	13.5	12.6		9.8	7.8	7.7	9.5	50.0	16.0	9.5	
9.2	38.7	7.3		9.0	9.8	15.0	4.3		9.8	10.2	9.5	10.2	53.2	0.3		
10.0	46.2	31.2		8.9	8.9	43.7	59.8	C	9.0	9.5	9.5	8.5	1 9.6	36.8	CWal	
8.4	55.2	8.3	C	8.0	7.3	48.0	47.2	Cal	8.0	9.5	9.8	9.6	28.3	18.7	9.3	
9.6	17 3.7	54.4		9.8	9.9	59.8	52.7		8.0	9.0	7.5	9.5	29.2	1.1	9.4	
9.2	13.7	25.3		9.5	7.9	32 46.5	7.9	Cal	8.3	9.2	9.3	9.8	29.6	42.1		
25pr.	+ 1 23.6	- 7.2				+ 1 24.5	- 6.8						+ 1 26.0	- 6.0		

5881-5940.				5941-6000.				6001-6060.				6061-6120.								
mag.	15 ^h	-21°		mag.	15 ^h	-21°		mag.	15 ^h	-21°		mag.	15 ^h -16 ^h	-21°						
m	s			m	s			m	s			m	s							
9.6	1 32.0	23.9	9.6	10.2	10 48.5	12.0	9.6	10.0	24 44.7	48.8	9.8	8.2	48 45.2	9.4	Cb-1	8.4				
9.0	40.3	2.3	9.2	10.1	11 17.0	21.3	9.8	10.2	52.7	19.0	9.8	9.0	49 16.6	26.1	K	9.0				
8.9	43.8	54.6	a	9.0	9.4	33.0	41.2	9.4	7.5	53.2	32.3	GCWal	8.4	18.9	C-	8.6				
8.6	50.6	14.7	-	8.8	9.4	47.5	21.8	9.4	8.8	25 24.2	22.4	9.2	8.3	29.4	CW-	8.5				
10.1	51.3	14.9		10.1	10.1	53.0	24.2	9.8	9.1	50.7	34.8	9.3	10.2	42.4	17.0	9.5				
8.7	52.0	45.6	CWa	9.1	9.5	12 22.5	53.1	9.8	10.2	58.7	30.4	9.8	8.4	48.4	12.9	C	8.8			
8.7	54.8	44.2	CWb	9.1	9.6	36.5	29.3	9.3	10.1	26 20.2	32.8		7.1	53.4	7.2	GWtlπ	7.0			
9.2	58.0	3.3		9.4	9.6	53.5	8.6	9.3	10.1	26.2	28.1		9.6	50 20.4	41.1	9.0	9.0			
8.8	2 20.6	5.1	Ca	8.8	9.6	13 2.5	59.2	-	9.1	51.2	24.5		10.0	25.4	20.8	9.5	9.5			
9.6	21.8	35.0		9.5	10.2	5.5	20.7	9.5	9.6	27 7.2	18.9	9.4	8.4	51 9.9	2.4	C=	8.9			
8.7	34.3	15.7	C-	8.8	8.4	9.5	48.2	CWb=19.0	10.1	10.6	17.7	9.8	10.0	19.9	3.1	9.5	9.5			
9.8	34.8	18.9		9.6	9.6	40.5	25.5	9.8	8.2	12.4	29.8	Ca	8.3	23.9	45.7	9.4	9.4			
10.2	36.9	2.6		9.5	9.5	43.5	54.2	9.3	10.2	42.1	39.1		9.6	52 7.1	59.8	9.1	9.1			
9.8	3 33.3	13.9	9.8	8.4	8.4	51.5	45.8	Ckb=1	9.0	10.1	44.1	40.0	9.8	10.2	41.9	5.1	9.4	9.4		
9.0	41.6	34.2	a	9.1	9.2	14 3.0	36.8	C	9.0	8.6	53.2	43.3	-	9.2	53 1.4	8.3	=	9.1		
9.9	51.0	59.1		8.4	8.4	18.0	53.4	al	9.0	8.3	28 51.4	19.6	GCa	7.5	20.9	53.8	a	9.1		
8.3	52.1	35.9	Gatlπ	8.5	9.6	44.0	8.7	9.8	9.8	8.8	29 25.6	37.3	9.3	8.6	45.9	48.9	Ca	8.5		
9.6	4 14.1	22.1		9.4	9.8	44.5	0.8	9.8	9.5	8.9	45.2	47.4	9.3	10.2	59.9	28.3	9.5	9.5		
10.2	33.3	11.8		9.6	10.0	46.0	59.2		8.9	0.2	30 2.1	0.2	C=	8.8	54 13.4	22.0	K	9.2		
10.1	45.5	54.3		10.0	10.0	53.0	35.1	9.5	6.9	12.7	42.1	GCW-	7.0	7.0	33.4	37.6	Cb=	7.3		
9.4	51.5	53.4	Ca	9.1	10.2	56.0	50.5		8.9	33.7	11.5	-	9.0	9.8	45.4	20.9	9.5	9.5		
9.9	56.8	45.8		10.1	10.2	15 20.0	10.1	9.4	10.0	40.7	49.3		9.5	9.8	55 15.4	43.9	9.5	9.5		
10.2	5 13.3	43.6		9.0	16	2.5	56.6		9.4	46.2	39.7		9.3	9.4	56 5.4	51.9	9.0	9.0		
9.8	16.4	0.0		9.2	9.2	3.5	13.4	a	8.8	7.7	31 16.7	11.2	GCbl	8.2	10.2	36.9	36.5	9.3		
10.1	17.6	9.2		9.8	9.8	24.5	23.9	9.3	10.0	30.2	18.7		9.8	8.4	43.4	34.6	Cal	8.7		
10.0	25.8	6.0		10.0	10.0	28.2	42.0	9.6	9.5	32 45.7	55.0	-	9.4	9.4	57 15.2	0.5	Wb	8.8		
9.9	27.8	50.5		8.8	8.8	37.0	54.2	Cb-1	8.8	10.0	46.3	24.4	9.8	9.6	49.4	41.1	9.3	9.3		
10.1	31.3	26.4		8.3	17	42.5	35.9	CWkal	7.5	7.9	33 26.5	11.9	Cbl	8.1	10.2	58 17.4	56.8	9.5	9.5	
10.2	36.0	10.4		7.9	18	7.0	29.1	Ckal	7.7	8.9	42.0	40.9	9.1	7.4	21.9	29.7	CWa	7.5	7.5	
10.2	38.0	23.2		10.2	10.2	20.5	7.9	9.6	10.0	59.5	56.0		9.5	9.2	47.9	14.0	9.0	9.0	9.0	
9.4	41.5	47.0		9.5	9.0	39.5	49.4	9.0	9.7	59.5	59.1		9.5	9.2	59 13.4	48.8	-	9.3	9.3	
10.0	59.0	30.1		10.2	10.2	50.5	3.4	9.5	8.8	34 0.5	19.1	C-	9.2	10.2	13.4	26.2	9.5	9.5	9.5	
10.2	6 12.8	55.6		10.2	19	2.8	18.3	9.5	8.2	52.0	29.7		8.1	8.9	27.4	34.9	Wa	9.1	9.1	
10.2	17.0	52.5		10.2	10.2	12.0	47.1		10.0	35 12.0	32.5	9.1	7.8	28.9	31.4	CWal	8.0	8.0	8.0	
10.0	28.0	53.8		9.5	9.5	23.0	18.5	9.4	8.8	37.0	30.7	-	9.0	8.4	55.4	43.2	CWal	8.8	8.8	
10.2	36.3	30.4		10.2	10.2	51.5	11.9	9.6	8.9	37 0.7	58.7	a	9.1	8.2	0 24.4	4.5	Cb	8.2	8.2	
10.2	37.5	3.9		9.1	9.1	52.0	26.0	C-	8.9	7.9	38.0	25.0	Ca	8.3	9.4	57.4	52.0	9.4	9.4	
9.0	44.2	45.1	a	9.1	9.5	20 4.5	50.7	9.8	8.8	39 51.5	8.4	a	8.8	10.2	59.9	17.8	9.5	9.5	9.5	
9.6	44.5	41.3		9.3	9.6	12.7	13.6	9.3	10.0	52.0	15.3		9.4	9.0	1 52.4	36.3	a	8.8	8.8	
10.2	49.0	4.3		9.8	9.8	35.7	48.0		9.5	40 25.0	7.1		9.3	7.0	2 56.4	49.5	Cal	7.3	7.3	
9.6	50.4	49.7		9.4	9.6	35.7	51.2	10.1	9.4	36.5	14.7	a	9.1	9.6	3 5.4	54.0	9.2	9.2	9.2	
10.2	58.2	7.8		10.2	10.2	43.7	6.5	9.2	9.2	41 2.0	46.6	-	9.2	9.4	17.4	19.1	W-	9.2	9.2	
9.8	7 8.7	31.8		10.1	10.1	2.7	40.5	9.5	8.9	47.4	55.0	C-	8.8	8.5	26.4	52.1	Cal	8.8	8.8	
10.0	10.5	2.1		9.8	9.3	11.7	45.3	ka	9.4	8.0	42 37.9	6.3	Cal	7.0	9.6	52.4	6.5	9.5	9.5	
9.8	14.2	18.0		9.8	9.3	12.2	14.3		9.0	9.6	38.9	11.6		9.2	9.6	4 7.4	15.6	WK	9.5	9.5
10.2	15.2	1.5		9.8	10.2	15.7	43.7		9.5	8.9	57.4	52.8		9.3	10.2	42.9	57.6	9.6	9.6	
9.8	15.6	35.4		10.1	8.4	16.2	22.5	C	8.9	9.4	43 37.4	59.5	9.1	9.2	46.4	3.6	=	9.0	9.0	
9.6	17.4	52.5		10.1	10.1	23.7	20.6		9.5	9.3	44 41.9	40.6	9.3	10.2	53.4	57.4				
9.8	23.7	35.5		10.1	9.0	29.2	23.3		9.3	10.0	41.9	15.7	9.6	9.6	5 25.3	31.1		9.5	9.5	
9.2	32.9	7.0		9.1	10.2	22 30.2	15.3		7.9	49.9	18.2	Ca	7.3	10.2	37.8	59.3		9.4	9.4	
10.2	33.0	15.4		10.0	10.0	32.7	40.2	9.7	10.0	45 11.9	39.1		9.5	10.2	54.3	53.3	a	9.5	9.5	
10.2	4 4.4	29.9		9.6	9.6	23 0.2	8.5	9.8	10.0	42.9	17.8		9.4	9.4	59.8	38.4	-	9.1	9.1	
9.6	13.6	8.3		9.2	9.2	12.2	53.0	-	9.3	50.9	27.7		9.3	9.6	6 12.3	35.8	GWtlπ	9.3	9.3	
10.0	24.1	23.5		9.5	10.0	18.2	41.7		9.8	8.0	46 1.9	35.7	CW=	8.2	7.1	19.8	4.8	9.0	9.0	
7.4	9 7.8	56.1	GS1πμ	6.0	7.7	26.7	26.8	CWal	7.8	9.3	13.4	22.6	a	9.0	10.2	21.3	42.1	9.5	9.5	
10.1	23.1	58.9		9.6	8.2	27.7	45.5	Ca	8.6	10.0	23.4	13.0		9.3	9.0	38.3	46.1	9.3	9.3	
9.1	54.6	20.4		9.0	9.2	29.2	30.9		9.6	8.9	25.9	21.8	a	9.1	9.3	45.8	50.4	a	9.2	9.2
10.1	10 13.6	52.9		10.1	9.5	48.2	27.8		9.3	8.6	47 6.7	11.6		9.0	7.7	56.3	48.9	Ca	7.5	7.5
10.1	27.6	51.1		10.1	9.6	24 31.7	23.9		9.8	9.3	47.1	20.2		9.5	10.2	7 0.3	2.1	9.5	9.5	
8.7	32.1	6.7		8.8	10.2	34.2	47.0		9.8	8.6	53.1	54.3		9.0	10.2	8.8	31.8	9.4	9.4	9.4
25pr.	+1 26.3	-5.8				+1 26.8	-5.4			+1 27.4	-5.0				+1 28.2	-4.2				

6121-6180.				6181-6240.				6241-6300.				6301-6360.						
mag.	16 ^h .	-21 ^o		mag.	16 ^h .	-21 ^o		mag.	16 ^h .	-21 ^o		mag.	16 ^h -17 ^h .	-21 ^o				
10 ^o 2	7 12.3	29.5	9.7	9.2	23 16.3	40.6	9.2	9.2	47 38.5	45.9	b	8.5	10.2	58 7.6	15.5			
9.2	14.8	34.4	9.4	9.0	24 26.3	15.5	9.0	9.0	55.7	28.4	a	9.0	9.0	12.1	7.5	9.5		
10 ^o 0	26.3	40.6		4.5	43.8	11.8	9.8	9.8	59.0	20.4		9.5	9.5	16.1	6.3	Cal 7.2		
10 ^o 0	27.5	23.7	9.4	9.3	25 3.3	29.1	9.2	8.9	48 3.0	30.2		9.4	9.4	32.1	44.3	10.0		
9.3	43.5	16.8	9.2	8.5	26 9.8	5.3	9.0	6.9	5.8	21.9	GCal	6.5	9.1	43.6	8.5	9.0		
9.2	46.2	4.8	9.3	10.0	27 28.4	0.4	9.4	9.4	6.8	30.2		9.4	6.0	44.1	23.2	GSπμβ 6.0		
9.2	8 0.0	27.3	9.4	8.4	28 3.9	36.8	Ca	8.2	9.0	28.0		9.5	8.5	47.6	5.6	Ca 8.5		
8.4	6.2	16.3	Ca	8.7	8.2	48.0	Ca	8.0	9.4	39.8		9.5	9.8	59 9.6	35.9	9.6		
10 ^o 0	20.0	28.8	10.0	9.8	34.6	24.9	9.8	9.8	43.8	41.8		10.2	10.2	12.6	21.6			
9.3	23.2	37.6	9.7	9.9	31 22.1	12.0	9.5	8.8	46.0	21.0		9.2	10.0	16.6	11.9	9.5		
9.6	24.5	23.2	9.5	8.3	33.6	47.5	a	8.5	8.8	50.3	50.7	9.3	10.2	22.6	45.2			
9.4	33.7	38.1	9.5	9.8	32 25.6	44.5	8.8	8.9	49 3.0	21.2		9.4	10.2	27.6	40.9	9.2		
9.4	56.5	52.9	9.9	9.4	56.1	40.0	9.0	9.8	6.3	56.1		10.0	10.2	32.6	55.5			
9.3	9 32.2	18.4	9.5	9.2	33 0.1	54.8	9.2	8.6	17.3	35.8	Ca	8.5	10.2	34.1	29.9			
10 ^o 0	53.2	15.4	9.8	9.2	33.1	25.2	-	8.8	9.0	24.0	34.5	9.2	9.6	0 1.6	32.7	10.0		
9.4	10 6.0	51.3	Ca	9.3	35 29.9	59.1	G	9.2	9.2	50 0.5	59.6	9.5	9.5	40.6	9.1	9.5		
8.4	23.2	35.3	Ca	8.4	33.1	31.7	G	9.2	9.8	1.3	48.0	9.8	9.2	1 1.6	10.2	9.5		
9.6	36.2	50.9		8.2	36.1	6.1	CWa	8.0	7.8	14.3	34.6	CWal	8.2	10.2	5.1	58.6		
9.4	45.8	1.0	9.5	9.9	41.9	26.7	a	9.0	9.0	28.5	0.9	9.0	10.2	32.1	20.3	9.8		
9.4	11 13.2	29.5	9.5	9.9	51.1	12.2	9.5	9.2	30.1	1.1		9.3	9.0	2 21.6	37.9	a 9.0		
8.4	16.2	17.1	CWa	8.3	9.9	36 23.1	57.9	9.7	9.2	31.6	11.4	8.1	10.2	26.6	19.1	10.0		
9.6	16.7	26.7		9.4	9.9	38 35.6	50.2	9.5	9.6	33.4	57.0	9.3	9.6	36.1	55.7			
8.4	12 7.2	5.9	a	8.6	8.9	39 56.1	32.8	9.0	8.7	34.1	25.2	a	8.8	10.2	38.1	2.0		
10 ^o 0	13.2	58.1	9.6	9.8	59.2	55.0	a	9.6	9.5	31.1	55.4	9.5	10.2	46.6	14.7	9.7		
9.8	26.0	30.4	9.5	8.2	40 1.9	56.8	a	8.8	10.2	16.9	34.4	a	9.2	8.8	51.1	25.2	a 9.0	
9.8	49.2	42.3		9.7	7.2	59.4		10.2	46.1	58.6		9.5	10.2	55.6	48.6	9.5		
8.2	13 5.7	12.3	Ca	8.5	9.4	31.2	56.1	a	9.2	9.5	50.1	18.3	a	9.0	8.2	3 14.6	Ck- 8.5	
8.9	6.2	8.7	a	9.1	9.6	33.7	50.9	9.3	10.0	53.1	1.1	9.5	9.5	37.6	46.9	9.5		
8.1	20.2	32.2	CWa	6.8	9.9	37.2	58.8	9.4	9.4	52 4.6	37.8	9.5	10.2	41.1	35.1	9.6		
9.3	39.3	1.2	9.1	8.9	44.2	17.7	9.3	9.4	12.1	15.7	a	9.2	10.2	43.6	34.6	9.5		
8.3	56.2	48.4	Ca	8.3	9.2	48.2	11.4	Ca	9.0	9.0	22.6	22.1	a	9.1	9.5	48.1	3.6	a 9.2
9.2	32.7	10.7	9.2	9.8	50.2	53.8		9.3	9.0	31.6	57.5	-	9.0	8.8	52.1	12.9	Ca 8.7	
10 ^o 0	43.7	54.3		8.2	41 9.2	42.9	GCa	8.0	10.2	51.7	56.6	-	9.3	8.2	56.1	44.2	a 8.5	
10 ^o 0	44.2	52.3		9.5	9.0	34.2	9.4	Ca	8.5	10.2	58.6	31.1		10.2	4 19.6	29.3		
8.0	46.7	21.3	Ca	8.3	8.2	42 7.2	37.8	GCal	7.0	7.8	53 2.6	16.1	Cal	7.0	9.5	26.1	43.3	9.5
9.8	53.2	21.3		9.5	9.0	35.2	44.6	a	9.0	9.5	16.6	20.3	9.4	8.2	35.6	37.9	Ca 8.5	
9.8	15 3.7	27.3		9.5	9.8	43 0.2	30.4		9.8	9.2	19.6	25.3	9.5	10.2	56.1	14.3		
10 ^o 0	53.0	20.6		9.9	9.8	17	12.8		9.8	9.6	42.1	0.3	9.3	7.4	5 11.2	27.1	Cal 6.8	
10 ^o 0	2.7	35.7		8.6	24.4	59.3	a	8.8	10.2	54 7.1	2.9	9.5	9.5	31.2	22.2	a 9.2		
9.6	36.2	33.2	9.6	9.2	41.2	55.6	a	9.2	10.2	9.6	44.2	9.4	10.0	52.2	8.9			
8.3	27.7	56.6	Ca	8.0	8.5	44 3.2	26.3	CWbl	8.0	9.6	11.6	42.9	9.7	9.2	57.4	1.1	- 9.0	
10 ^o 0	53.2	38.2		9.4	9.8	16.2	35.7		9.5	9.6	20.6	51.0	9.5	10.2	6 8.7	27.9	9.8	
8.4	18 0.2	23.9	Ca	8.5	9.8	24.2	14.9		9.2	9.2	24.6	11.9	9.2	9.4	35.7	16.3	9.2	
9.2	19 5.7	30.4	a	8.8	9.8	25.7	8.6		9.0	9.0	33.1	6.6	9.3	9.8	42.7	11.9	9.8	
9.4	30.7	24.3		9.4	8.6	30.7	7.0	Wa	9.0	10.2	36.1	28.9	9.5	9.0	52.2	12.7	Ca 8.2	
9.0	43.2	53.5		9.3	9.8	30.7	42.9		9.8	9.8	58.1	49.0	9.5	9.5	7 27.9	55.4	9.3	
7.9	49.7	50.0	Ckb	7.5	9.2	31.2	19.8		9.5	8.8	55 3.4	1.7	9.0	9.1	30.6	53.9	Ca 8.9	
9.6	20 55.2	29.7		9.4	9.8	54.2	19.7		10.2	9.8	47.6	25.8	9.8	9.0	36.2	46.8	a 8.7	
9.6	21 15.7	29.2		9.6	9.8	54.2	56.2		9.5	10.2	56 6.6	44.9	8.1	9.5	38.9	13.4	Ca 8.2	
9.0	18.7	56.5	a	9.2	9.9	45 15.2	31.0		9.5	8.4	9.6	12.4	-	9.0	10.2	51.5	14.6	9.5
9.6	23.7	32.2		9.5	9.9	26.2	5.1		9.4	8.7	15.1	14.0	C≡	8.9	9.1	8 26.2	48.0	a 8.9
8.3	56.3	17.3	Ca	7.8	9.6	35.2	52.5		9.3	9.6	16.1	47.9	9.3	10.2	34.2	44.7		
10 ^o 0	2.2	41.1		9.8	9.8	47.7	27.8	a	8.8	9.0	20.6	20.6	-	9.0	10.2	40.2	47.2	
9.4	6.3	42.4		9.5	9.0	46 4.2	39.5		9.1	9.8	43.6	42.5		7.8	54.9	42.5	Cbl 7.0	
8.8	22.3	10.1	Ca	8.8	9.4	9.2	16.8		10.2	9.8	56.6	41.5	9.8	9.2	55.7	36.2	9.4	
10 ^o 0	27.8	33.0		9.6	9.9	33.2	49.0		9.1	9.1	57 13.1	35.8	8.8	10.2	9 8.2	41.0		
10 ^o 0	28.8	24.3		9.8	9.6	45.4	4.9	a	9.1	9.2	39.6	49.9	a	9.1	9.2	17.9	54.6	9.5
10 ^o 0	30.8	16.3		9.4	7.6	47 10.2	40.3	Ca	7.3	9.6	43.6	22.7	9.5	9.6	22.7	51.8		
9.3	44.3	47.3		9.4	8.1	12.2	50.1	a	8.0	7.0	58 1.6	53.8	GCa	6.9	9.4	35.7	0.8	9.4
9.4	23 6.3	28.0	9.5	9.6	33.2	25.1	9.4	9.2	9.4	3.6	31.5		9.3	10.2	54.7	32.3		
25Pr.	+1 28.6	-3.7			+1 29.2	-2.8				+1 29.4	-2.4				+1 29.5	-2.0		

6361-6420.				6421-6480.				6481-6540.				6541-6600.					
mag.	17 ^h .	-21°		mag.	17 ^h .	-21°		mag.	17 ^h .	-21°		mag.	17 ^h .	-21°			
9 ⁵	58.2	24.9	9.5	6.6	27	47.4	57.5	9.2	40	41.0	40.9	9.1	10.5	52	47.0	10.1	
9 ⁵	58.7	13.0	9.2	9.8	49.7	50.8	9.8	9.6	41	10.5	17.3	9.6	8.8	53	53.5	27.2	
9 ⁸	7.4	54.6	8.8	9.8	52.0	50.9	9.8	9.9	9.9	14.0	16.7	9.8	9.7	53	6.0	24.9	
8.7	10.4	27.1	8.8	9.8	2.5	54.9	9.8	9.9	22.5	3.0	3.0	9.8	9.8	10.5	39.5	10.0	
9.4	15.9	45.0	9.5	9.6	12.5	0.5	9.2	9.4	41.0	55.2	55.2	9.5	10.5	33.0	16.4	9.5	
9.8	21.9	16.8	9.7	8.7	20.3	6.9	Cb	9.0	42	13.0	23.7	9.1	10.5	54	3.0	20.8	
9.8	30.4	5.0	9.5	9.8	25.4	7.4	1.0	9.8	54.0	11.9	11.9	9.4	10.1	14.0	7.3		
9.8	20.4	49.0	9.5	9.7	30.5	37.2		8.6	43	7.5	53.5	8.7	9.6	14.5	8.2	9.4	
9.8	28.4	11.0	9.2	9.7	47.5	23.0		9.9	16.5	45.1	45.1	8.9	9.6	19.0	32.3	9.5	
9.0	29.9	23.9	8.7	9.4	52.2	52.8	a	9.3	49.5	20.5	20.5	9.7	8.8	41.5	45.4	9.1	
9.8	52.9	27.6	9.3	9.8	1.0	12.9		9.4	44	8.0	7.5	9.5	9.6	43.5	32.8	9.5	
9.4	14.9	11.1	9.5	9.8	15.5	27.6		8.4	21.5	1.3	1.3	8.3	10.0	48.0	27.1		
8.9	33.4	15.7	9.0	9.8	32.5	43.1	a	9.6	56.0	41.2	41.2	9.4	9.6	49.2	56.7		
9.2	45.4	39.4	9.4	9.4	45.8	2.8		9.2	45	8.5	22.7	9.5	9.0	51.0	57.5	Ca	
9.2	53.9	25.6	8.6	9.2	47.5	37.9		9.5	12.0	49.7	49.7	9.5	9.6	58.5	46.6	10.0	
9.8	4.9	48.5	9.0	8.6	50.5	27.4	a	9.0	20.7	30.6	30.6	9.5	10.2	55	5.7	44.4	
9.4	34.9	10.1	9.1	9.2	55.3	59.9		9.4	38.0	22.7	22.7	9.0	9.4	7.2	58.8	9.7	
9.2	57.9	1.1	9.3	9.8	5.0	5.7		9.5	59.2	44.1	44.1	9.1	10.4	7.7	44.6		
9.6	2.9	49.4	9.4	7.8	12.8	10.6	Ca	8.1	8.3	7.4	7.4	8.5	8.4	9.2	30.2	CW≅	
8.2	7.9	35.5	8.2	9.0	32.0	25.7		9.2	47	7.2	25.1	8.7	9.6	14.2	59.8	9.7	
9.2	19.4	31.1	8.8	8.6	39.0	29.9	a	8.9	13.4	45.5	45.5	10.5	18.2	18.2	25.0		
7.1	13.4	19.2	6.5	9.9	51.5	36.6		9.5	30.2	41.8	41.8	9.5	10.1	18.2	51.8		
8.4	41.9	46.6	8.3	9.2	53.0	18.9		9.1	44.7	47.7	47.7	9.4	10.0	21.1	59.2	9.5	
9.8	48.7	58.9	9.6	9.9	54.0	26.5		9.3	57.5	2.1	2.1	10.0	10.1	23.7	10.4		
9.2	5.5	3.8	9.0	6.9	13.7	50.2	Gtlπβ	6.3	10.5	41.0	41.0	9.7	9.7	30.2	29.8	9.5	
8.3	6.5	30.9	8.5	9.6	16.2	20.8		9.1	18.8	23.6	23.6	9.3	9.4	47.2	56.1	9.8	
9.3	13.0	30.7	9.5	9.6	20.2	34.8	a	9.0	50.5	47.4	47.4	9.0	9.3	56	18.2	50.4	
8.7	29.0	18.0	8.9	9.7	27.7	3.9		9.5	50.5	55.9	55.9	7.2	9.2	23.2	51.5	9.3	
9.8	54.5	15.9	9.0	9.7	31.2	10.6		9.5	54.8	25.1	25.1	9.2	9.6	31.2	50.4	9.8	
8.1	13.5	21.3	7.5	9.8	38.2	19.0		9.8	56.3	11.9	11.9	9.7	9.7	33.7	9.2	9.5	
8.8	15.5	18.0	8.5	9.8	0.7	24.8	a	9.0	49	8.6	36.0	9.5	9.9	53.8	59.0		
9.5	24.0	4.7	9.2	9.9	4.2	58.1		9.5	10.0	8.8	44.7	9.5	9.2	54.2	16.8	9.3	
9.8	25.5	30.7	9.5	9.9	45.5	17.0		9.7	10.5	18.0	36.7	10.3	57	3.2	35.8		
9.0	5.5	19.7	9.0	9.8	39.2	31.5		10.5	31.5	40.0	40.0	10.5	10.5	5.7	3.6		
8.8	48.0	8.5	9.0	9.2	45.7	12.4	a	9.0	33.5	8.2	8.2	9.5	10.5	14.7	7.8		
9.8	6.5	51.1	9.3	9.7	55.5	28.8		9.4	34.6	0.9	0.9	10.4	10.4	15.2	19.0		
8.3	35.0	23.1	8.3	8.5	59.7	52.6	b	8.8	50	10.5	41.8	9.3	9.6	23.2	54.9	9.5	
8.8	57.5	27.9	8.8	9.4	36.7	52.0		9.4	42.5	59.0	59.0	9.1	10.3	26.7	45.8		
9.4	2.5	25.5	9.2	9.0	45.7	39.6	b	9.1	56.5	14.6	14.6	9.4	9.9	43.2	47.6		
9.2	3.7	57.1	9.3	9.6	48.2	14.0		9.3	58.0	49.8	49.8	9.5	10.4	44.2	28.8	9.8	
9.3	6.2	6.9	9.3	5.6	35	55.7	37.2	10.1	51	2.0	3.2	9.1	8.4	53.2	40.4	Cb≡l	
8.9	39.2	7.2	8.8	9.4	57.2	22.2		9.3	14.5	45.8	45.8	9.1	9.6	55.2	47.7		
9.8	53.7	19.8	9.8	9.9	46.2	57.3		9.7	10.5	24.5	43.9	10.2	10.2	56.2	56.3	9.5	
9.2	0.1	56.9	9.1	8.8	50.7	40.2	CWa	8.7	26.5	7.7	7.7	9.7	8.3	58	0.2	8.8	
8.4	9.2	46.8	8.1	8.6	51.7	24.0		8.9	30.0	7.2	7.2	9.5	8.9	2.0	57.0	9.4	
9.2	21.2	28.6	9.3	9.6	37	6.7	31.6	9.7	31.5	12.4	12.4	9.4	9.2	2.2	33.6	9.3	
8.4	30.7	43.9	8.9	8.5	10.5	58.0	Gatlπ	8.7	34.0	42.1	42.1	9.5	9.3	2.2	29.8	9.2	
8.8	39.7	40.0	9.0	8.6	42.2	39.0	CWa	8.9	36.5	22.3	22.3	9.7	9.7	3.2	46.9		
9.8	45.1	58.3	9.9	9.9	38	16.7	7.6	9.7	38.0	48.4	48.4	9.3	9.8	7.2	55.9		
8.8	52.2	12.6	8.5	9.0	25.1	2.3		8.9	41.5	34.0	34.0	10.5	10.5	13.2	21.4		
9.8	2.2	12.3	9.5	8.4	42.0	32.5	Cal	8.5	41.5	47.4	47.4	9.3	9.4	16.7	32.1	9.5	
9.2	31.2	6.0	9.1	9.6	44.0	26.2		9.4	52	0.5	15.7	9.4	9.7	34.2	59.0	9.4	
9.0	49.7	44.9	9.1	8.3	56.0	13.1	a	8.5	3.5	1.9	1.9	8.0	10.5	36.2	20.0	9.5	
9.7	50.7	19.1	8.8	9.0	39	11.0	27.4	8.7	10.2	11.5	54.7	9.8	9.4	37.2	35.4		
9.5	53.3	1.8	9.5	9.9	11.5	27.1		9.9	11.5	31.5	31.5	9.6	8.7	41.2	28.1	GCW	
9.4	30.7	7.6	8.8	9.0	14.0	5.5	Ca	8.5	25.0	10.6	10.6	9.8	10.5	43.2	43.1	8.8	
8.9	32.2	23.9	9.1	9.8	41.0	32.4		9.8	37.5	43.2	43.2	9.0	10.5	43.7	18.1		
9.7	36.2	46.9	9.5	9.2	56.0	9.0		9.2	41.0	25.4	25.4	10.5	10.5	43.7	19.5		
9.4	44.2	48.0	9.4	9.2	40	0.0	2.5	9.2	42.5	10.3	10.3	10.0	9.0	49.7	40.6	10.0	
9.3	45.2	48.9	9.3	9.6	32.0	23.8		9.5	43.0	8.3	8.3	9.1	9.7	57.2	40.1	10.0	
25pr.	+1	298	-15		+1	298	-10		+1	300	-0.4			+1	300	-0.1	

6601-6660.				6661-6720.				6721-6780.				6781-6840.				
17h-18h.		-21°		18h.		-21°		18h.		-21°		18h.		-21°		
m	s		mag.	m	s		mag.	m	s		mag.	m	s		mag.	
59	1'2"	50.8	8.8	1	53.7	31.5	K	4	45.5	31.8	9.4	6	43.0	40.0	9.7	
9.7	3.2	53.0	10.4	57.7	34.6			9.9	46.0	32.3	9.7	45.5	20.7		9.8	
9.4	7.2	7.2	9.4	9.1	57.7	18.6		9.7	10.5	50.5	30.3	7.6	45.5	44.7	GWπμβ6.3	
10.5	13.0	58.1		9.7	2	1.7	45.9	9.7	9.7	52.0	42.8	10.4	49.0	19.7		
10.0	19.2	27.3		8.2	2.2	35.4	C-	9.0	9.4	52.0	9.6	9.5	10.5	50.0	0.7	
8.9	20.2	4.1	8.8	9.2	4.0	34.5		9.5	9.6	52.0	27.7	9.6	9.9	52.0	35.8	
8.4	22.2	30.8	GWb=18.2	10.2	5.2	24.8		9.9	9.9	52.0	0.2	10.4	54.0	26.8		
10.3	27.2	54.4	:	9.7	5.5	36.4		10.5	9.7	53.0	8.1	9.8	7	2.0	15.8	
10.5	34.7	16.5		9.7	9.5	20.8		9.7	9.7	53.0	8.5	9.2	9.0	49.6	9.3	
6.2	42.2	27.2	GWlπμ6.4	10.5	17.0	17.8		10.5	10.5	57.0	40.2	8.9	9.5	45.8	a	
10.5	43.2	49.0		10.3	18.5	18.0		9.3	9.3	57.5	29.8	9.6	10.3	10.8	58.5	
9.4	44.2	15.8	9.2	9.7	24.0	55.0		10.0	10.0	58.0	39.5	9.9	9.9	11.0	42.4	
10.0	44.2	31.6		9.2	26.4	58.4	9.3	9.8	5	2.0	20.3	9.8	8.4	11.0	52.9	
9.7	47.7	47.7		10.5	34.0	6.1		10.5	10.5	3.5	2.1		8.9	13.5	39.9	
8.6	52.2	12.8	CWkal 8.2	10.5	34.5	42.8		10.1	10.1	4.0	47.5	10.2	14.5	14.5	42.4	
10.2	52.7	26.7		9.9	40.0	3.6		10.2	10.2	4.5	22.7	10.0	25.0	7.3		
9.7	56.2	32.1		8.5	44.5	20.8	Ca	9.0	10.5	5.0	37.1	10.1	26.0	30.5		
10.1	57.7	25.6		10.5	46.0	6.4		10.5	10.5	6.0	35.4	10.5	26.8	46.1		
9.1	0	3.2	9.3	9.7	47.0	18.7		10.5	10.5	7.0	36.7	10.0	32.0	53.3		
10.4	6.2	39.9		9.2	52.0	40.4	9.8	10.5	10.5	7.5	41.7	10.0	32.5	22.6	9.5	
9.6	12.2	52.4	GC≡ε 8.7	10.4	53.0	39.1		10.5	10.5	9.5	42.2	10.5	34.0	18.9		
10.5	15.2	56.3		9.0	53.0	17.8		10.3	10.0	10.0	42.7	9.4	36.8	38.7	9.8	
9.8	17.2	24.6		9.4	53.0	16.3	9.8	10.5	10.5	11.5	28.1	10.5	44.0	25.9		
10.1	23.2	42.6		9.9	56.0	51.5		8.4	12.1	0.9	Wa	8.7	10.4	45.8	32.9	
9.7	26.2	20.0	9.5	9.8	58.5	3.4		10.0	14.0	36.7	:	9.8	51.5	30.7		
10.5	30.2	40.6		10.2	3	6.5	51.6	9.7	15.0	45.7	10.0	56.5	32.7	9.8		
10.3	31.3	57.4		10.0	12.0	38.8		10.4	16.5	43.6	10.4	8	1.5	4.7		
10.4	43.2	20.1		10.4	17.0	22.0		9.6	17.0	26.3	9.8	2.0	25.9			
9.8	53.2	23.8	9.8	8.0	17.5	19.9	Ca	8.5	19.0	37.7	9.4	3.2	56.3	9.5		
10.5	54.7	45.3		9.9	19.5	56.6		9.5	10.1	22.0	31.7	10.5	9.5	33.5		
10.5	56.2	34.6		8.4	25.0	13.6	Ca	8.7	10.1	23.0	40.7	9.4	14.4	1.8		
10.0	57.7	7.3		9.7	29.0	49.9		9.9	9.9	23.5	37.2	10.5	15.8	49.4		
10.5	59.2	43.9		9.4	30.0	2.1		9.8	10.1	24.0	48.7	10.4	25.0	21.3		
7.9	59.7	16.0	CWal 7.8	9.1	33.0	27.6		9.5	10.4	26.0	41.3	10.2	26.5	24.6		
9.2	3.7	39.0	K	9.1	38.0	2.3		9.8	27.0	35.0		9.6	27.0	33.9	9.5	
10.5	3.7	25.8		9.7	41.5	14.6	a	9.3	9.9	29.0	35.7	9.8	41.0	52.9	9.8	
10.0	8.7	33.8		9.7	48.5	3.8		10.4	30.0	38.8		9.6	43.5	46.8	9.8	
10.0	8.7	8.2		10.5	51.5	52.1		9.3	40.0	21.9	9.8	9.5	44.0	57.3	9.7	
7.6	8.7	27.8	GWlπ 6.8	10.5	53.0	4.5		8.7	43.0	45.3	C-	8.8	9	2.0	48.0	
9.9	11.2	34.7		9.7	55.0	5.3		7.9	44.5	17.4	Ca	8.5	9.6	3.0	25.5	
9.9	12.7	25.8		10.3	58.0	10.0		10.5	45.0	35.1		9.5	14.0	59.5	9.8	
10.5	13.2	39.6		9.2	4	0.5	22.6	9.7	9.7	53.0	14.7	9.2	26.5	56.2	9.3	
9.8	14.2	26.2		10.3	3.0	54.3		10.5	53.0	33.6		10.3	33.0	23.6		
9.1	16.2	15.8	9.5	9.4	6.0	18.5		10.5	56.5	21.9		9.3	37.2	58.2	9.3	
10.5	16.2	38.5		9.6	7.0	11.2		9.6	10.5	6	1.1	6.6	9.6	10	6.5	7.0
10.2	16.7	40.3		10.5	14.5	27.7		10.5	6.0	3.7		10.2	12.4	22.0	9.8	
10.5	18.7	37.9		9.6	17.0	27.4		9.3	9.6	7.0	3.7	9.8	24.5	19.9		
10.4	22.0	59.8		9.8	19.0	11.9		9.6	9.7	9.5	17.8	9.4	31.5	52.5	9.5	
9.2	22.2	16.6		10.5	23.0	16.9		9.4	9.4	16.0	4.8	9.5	10.0	53.5	48.3	
9.7	23.7	17.1	9.4	9.7	30.0	20.8		9.6	9.6	16.0	8.1	10.3	11	3.5	29.0	
8.9	26.2	25.0	W	8.7	9.8	33.0	42.7	4.2	17.0	5.3	GSπμβ 4.0	9.0	18.5	17.1	9.2	
9.6	33.2	45.3		9.6	10.5	33.0	13.5	10.0	17.0	20.4		8.4	24.0	30.3	MCm	
9.8	33.2	29.2		10.5	34.0	40.9		8.5	23.0	50.9	a	9.0	30.0	20.8	M	
10.0	33.2	1.8		10.5	34.0	45.9		10.1	24.0	52.3		9.6	31.0	36.0	9.2	
10.5	33.2	24.1		10.1	35.5	50.5		10.2	27.0	10.4	9.8	9.6	38.5	21.8	9.4	
8.6	35.2	25.4	9.0	9.8	39.0	44.1		10.5	27.0	25.2	9.8	10.3	54.5	20.4	9.8	
10.5	35.2	50.0		10.4	39.0	38.6		10.1	31.8	2.6		9.4	12	13.5	54.5	
9.8	37.2	53.8	9.5	10.0	39.5	6.8		10.2	35.3	2.6		8.8	21.0	46.9	M-m	
9.6	38.2	29.4		10.5	39.5	31.1		10.0	36.0	30.7		10.0	23.0	39.0	9.2	
10.5	44.2	30.2		9.3	44.0	15.3	a	9.2	43.0	29.6	9.8	8.9	40.5	33.2	9.2	
25Pr.	+ 1 30.0	0.0			+ 1 30.0	+ 0.1			+ 1 30.0	+ 0.2			+ 1 30.0	+ 0.3		

6841-6900.				6901-6960.				6961-7020.				7021-7080.						
18 ^h .		-21 ^o		18 ^h .		-21 ^o		18 ^h .		-21 ^o		18 ^h .		-21 ^o				
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'			
8.6	12	43.5	20.1	10.0	19	19.3	59.5	10.0	29	5.1	40.6	10.3	36	0.6	15.9			
8.9		46.5	32.5	8.9		20.9	35.4	9.2	9.6	19.1	6.1	9.2	10.4	3.4	1.5			
9.5	13	16.5	0.7	9.1	10.3	29.4	2.6	10.4	10.4	22.6	17.1	8.2	8.2	5.6	2.4			
10.2		21.5	28.1	9.0	9.0	49.4	43.8	9.0	9.6	32.1	8.8	9.2	10.4	5.6	13.3			
9.6		23.5	1.7	9.6	9.8	20	10.9	47.9	9.5	8.6	32.1	45.1	9.0	9.0	26.6	12.3		
9.2		38.0	59.0	9.7	9.6	12.4	44.4	9.5	8.0	57.6	35.8	8.5	9.8	39.1	14.1			
9.2		39.5	51.8	9.5	10.0	16.4	23.8	9.5	8.2	30	2.1	48.1	8.3	10.2	46.6	5.3		
9.5		44.9	42.0	9.2	8.4	30.4	39.6	8.5	10.0	11.6	31.1	9.5	10.2	46.6	54.9			
10.0		47.2	25.4	9.1	8.9	37.9	25.2	9.0	8.8	22.6	51.8	8.8	9.8	47.1	32.3			
10.3		58.0	6.3	10.0	10.0	37.9	33.9	9.7	8.9	22.6	51.8	8.8	10.2	50.6	23.0			
9.4	14	27.5	46.0	9.3	9.6	41.9	18.6	Ca	8.7	10.0	25.1	39.6	10.4	51.9	57.4	9.7		
8.9		31.0	8.4	9.1	9.6	52.9	4.9			6.0	25.1	29.9	9.1	52.6	4.4	9.5		
9.5		33.5	26.1	9.4	9.6	53.4	49.8			9.8	43.6	45.6	9.5	52.6	45.1	10'		
8.9	15	1.0	25.7	9.0	9.5	57.9	24.7	am	8.8	8.9	55.1	32.7	9.1	6.1	23.7			
9.6		3.0	3.1	9.5	9.8	58.9	6.4		9.5	9.0	58.6	16.5	8.9	8.4	11.6	5.7		
9.8		3.5	43.4	10.3	21	1.9	16.2		9.6	9.6	5.6	55.5	8.6	8.6	26.6	29.1		
9.8		10.0	8.4	9.3	9.6	2.9	9.2		9.3	9.8	6.6	56.1	9.4	8.9	33.1	39.1		
9.5		10.5	15.8	9.0	9.0	16.4	42.7	a	9.2	6.8	25.6	9.2	8.6	8.6	34.1	52.9		
10.2		14.2	15.9	9.6	9.6	19.9	4.4		9.3	10.4	29.6	53.7	10'	10.4	42.6	37.0		
8.6		14.5	38.4	8.5	8.3	22.4	26.5	Caml	8.5	9.6	32.6	8.7	9.4	9.8	43.6	13.4		
10.3		28.0	10.9	9.6	9.6	24.4	31.9		9.4	9.4	41.8	57.6	a	9.0	7.1	51.6		
10.0		42.5	42.6	10.0	10.0	31.9	35.9		9.2	9.6	42.6	23.2	9.5	9.8	51.6	13.1		
10.0		45.5	48.7	8.3	8.3	57.4	42.8	Cbm	8.5	9.8	46.6	52.7	9.4	9.6	38	3.6		
9.5		53.5	15.2	10.2	22	17.4	48.4		9.6	9.4	59.6	7.4	8.8	10.4	20.1	8.1		
10.2		56.0	46.2	7.8	23.4	1.9		Cal	7.5	8.7	32	1.6	7.7	8.9	10.4	20.6	8.1	
10.0	16	2.0	50.1	9.6	8.3	23	4.4	Caml	8.0	8.6	11.8	0.9	C≡	8.9	9.6	21.1	22.5	
9.0		4.5	43.4	Ca	8.3	9.5	31.4	CWaml	8.7	10.4	16.6	35.4		8.7	35.6	19.1		
9.4		7.5	36.5	9.4	10.0	43.4	42.1		9.3	9.8	10.4	23.1	4.1.4	9.8	39.5	50.9		
8.3		16.5	58.8	Mm	9.0	10.2	46.4		9.3	9.8	31.6	5.3		9.8	54.0	38.3		
9.6		23.5	32.6	10.2	10.2	53.9	33.8		9.5	7.8	35.6	4.5	Cam	8.2	39	7.0		
9.6		36.5	52.8	m	9.5	9.5	24	0.4	MC-m	8.5	9.8	37.1	20.0	10'	10.4	13.5	52.2	
9.5		46.5	11.8		9.4	10.0	14.9	34.5	9.5	9.4	40.6	19.5	9.2	9.4	30.5	39.1		
9.0	17	2.5	58.3	9.2	10.0	22.9	50.5	a	9.2	10.4	33	4.6	34.2	9.5	9.0	53.5	16.1	
8.6		4.0	54.5	a	9.2	9.6	46.4	48.1	a	9.3	8.0	10.1	36.3	8.5	8.7	40	30.0	
10.3		4.0	2.4	9.6	9.6	25	6.4	48.0	9.5	8.4	13.1	46.1	Cbm	8.5	9.6	35.5	24.9	
9.5		9.0	51.6	9.6	9.8	8.4	19.7	C=	9.0	9.4	13.3	59.2	9.5	10.4	56.5	50.1		
10.0		11.6	57.7	10.2	10.2	13.4	7.4		10.4	9.6	13.6	4.9	9.8	9.8	41	0.5		
10.0		27.0	10.8	9.5	10.3	33.4	3.1		9.6	9.6	15.6	14.4	9.2	9.6	6.5	17.1		
9.5		34.0	33.1	10'	10.0	40.4	57.4		9.8	9.6	18.6	16.2	9.4	10.4	9.0	0.1		
10.3		36.0	4.9	10.3	10.3	46.4	55.8	10'	9.6	9.6	22.6	10.3	9.5	10.4	12.0	53.7		
10.3		42.0	9.7	9.8	9.8	26	54.4	7.8	9.5	10.4	45.8	16.6	9.4	9.4	13.5	43.1		
9.6		43.5	27.6	9.4	10.0	0.9	34.6		9.6	9.6	56.6	26.4	9.6	9.8	15.5	21.1		
9.6		44.5	37.5	10'	9.0	6.9	19.3	=	8.8	10.0	58.1	10.0	9.6	9.6	15.5	20.1		
8.6		50.5	48.1	Ca	9.1	10.0	15.9	20.2	9.0	9.6	34	21.1	2.3	9.5	9.8	24.7	35.3	
9.6		59.0	59.9	9.5	8.9	50.9	38.7	-	9.0	8.7	30.6	26.1	Cam	8.3	9.6	25.9	57.1	
10.3	18	6.0	42.5	9.5	9.2	27	39.4	46.0	9.1	9.6	38.6	32.3	10'	10.0	43.5	50.8		
9.8		10.5	34.0	10.4	10.4	42.6	27.0		9.1	10.4	43.1	6.5	10.0	10.0	45.5	58.0		
8.3		11.5	6.2	CWal	8.5	10.4	42.6	47.1	9.5	9.6	35	2.6	11.9	9.5	10.4	52.7		
10.0		14.5	49.9	10.0	10.0	42.6	52.5		9.5	9.6	4.6	16.9	8.8	9.6	42	9.8		
9.8		14.8	56.9	a	9.4	10.0	45.9	37.3	9.6	9.6	17.1	11.1	9.1	10.4	12.7	24.4		
9.4		28.0	35.8	9.1	10.4	55.6	33.1		10.0	10.0	27.1	25.1	9.6	10.0	13.5	58.1		
9.8		42.5	8.0	9.5	10.0	28	1.9	19.2	9.0	9.4	33.6	25.1	9.6	10.0	23.0	57.8		
9.6		47.0	32.2	9.4	9.8	15.5	7.9		9.4	9.8	34.1	7.7	9.4	9.1	36.0	59.5		
10.0		52.5	45.0	10.0	10.0	22.9	55.5		10.0	10.0	36.1	14.7	10.0	10.0	36.5	9.1		
10.2		52.6	15.5	9.5	9.1	36.0	32.6		9.4	10.4	41.6	19.2	10.4	10.4	50.5	8.3		
10.0		54.5	22.5	9.5	9.6	36.0	42.2		9.8	9.8	43.6	11.1	9.3	9.8	52.5	18.4		
10.2	19	2.5	53.9	9.6	9.6	51.1	28.1		10.4	10.4	43.6	12.1	9.6	43	5.5	11.1		
9.6		2.5	26.5	9.5	10.4	52.1	28.3		9.4	9.8	49.1	20.5	9.9	9.8	21.0	20.1		
9.8		6.5	51.5	a	9.2	8.6	57.1	47.4	9.3	9.0	53.6	26.3	8.8	9.6	26.5	58.7		
9.5		8.0	19.4	9.5	9.0	29	3.1	47.9	9.5	10.2	53.6	37.3	10.2	10.2	36.5	34.3		
25pr.	+ 1	29.9	+ 0.6			+ 1	29.9	+ 0.9			+ 1	29.8	+ 1.2			+ 1	29.8	

7081-7140.				7141-7200.				7201-7260.				7261-7320.			
18h.		-21°		18h.		-21°		18h-19h.		-21°		19h.		-21°	
mag.	m	mag.	m	mag.	m	mag.	m	mag.	m	mag.	m	mag.	m	mag.	m
9.8	43	55.0	16.2	9.4	10.4	49	52.8	9.6	9.5	9.5	59	20.0	27.7	9.3	9.2
9.0		57.5	51.8	9.3	10.0	50	5.8	55.8	9.5	9.7			31.0	41.6	10.4
9.4	44	2.5	36.1	9.2	8.4		9.3	18.7	CWa	8.5	10.4		33.5	8.5	9.5
9.1		3.7	59.0	9.3	5.1		16.3	16.0	GSπμβ	4.0	8.2		34.0	36.9	CWam
8.6		11.0	3.0	=	9.0	9.0	17.8	54.2	C=	8.5	9.0		47.0	30.5	9.1
9.1		13.0	49.7	9.1	9.5		30.3	54.6	Ca	9.4	9.8		53.0	50.7	10.2
10.4		15.0	16.1		8.8		45.3	44.7	Ca	9.1	8.4		56.5	48.3	CWam
9.8		15.5	49.3		9.8	51	32.8	14.0	Cam	9.5	9.5		0.4	38.7	9.3
9.4		22.5	40.2		9.0		45.8	23.7	Cam	8.3	10.4		12.0	14.9	8.6
8.4		22.8	0.4	C=	8.8	10.4	54.3	30.6		9.3	9.7		13.5	16.7	9.5
9.0		28.5	51.1	9.4	9.0		55.8	32.5		9.2	8.7		19.0	26.2	Cam
10.0		32.0	35.1		8.6	52	6.3	59.8	CWam	18.3	8.8		33.3	0.5	9.0
10.2		35.7	23.8		9.8		21.8	56.0		8.0			33.5	53.3	MCWam
10.0		39.5	19.1		9.0		22.8	55.4	a	9.3	9.5		41.5	25.8	9.5
9.6		46.5	5.1		10.4		22.8	2.2		9.4	9.4		43.5	59.0	GCWa
9.4		52.8	2.6	9.0	10.4		35.8	3.5	10.	10.4			46.5	17.8	9.0
9.1		54.5	5.5	9.4	10.0		40.9	0.4	9.5	10.0			57.0	29.7	9.7
10.2		56.0	17.1		9.2		52.2	55.1	a	9.4	8.6		1.7	11.1	GCacl
9.6	45	3.0	34.4	9.3	10.0	53	6.2	18.9		8.5		1	13.0	26.2	am
9.2		20.0	33.8	9.4	10.0		13.7	34.0		9.8	10.4		25.8	57.3	8.5
10.4		20.7	45.7		8.7		19.7	43.8	9.1	9.5			26.5	5.7	9.0
10.4		46.7	8.0	Cam	8.5		26.2	36.7	9.8	10.4			35.0	40.3	9.5
8.4		49.5	52.4		10.0		37.7	7.8	9.5	10.0			47.0	5.7	9.5
10.0		52.5	33.9		9.7	54	9.1	2.2		10.0			51.0	41.3	9.6
9.0		54.0	27.9	-	9.1		16.0	58.6	9.5	9.5			53.5	20.7	9.1
8.2	46	11.5	12.1	C-	8.3		22.2	57.7	9.4	9.6			56.5	12.1	9.5
9.6		29.5	37.3		9.4		22.2	6.6	=	8.8	10.4		57.0	6.9	10.2
8.4		32.5	59.2	am	9.3		42.7	49.0	9.3	10.0			2.9	29.9	9.0
7.0		32.5	30.6	GWπμβ	36.2	9.4	50.7	26.9	9.5	8.4			14.0	39.2	GCWam
8.4		43.2	5.1	C=	8.5	10.4	57.3	1.8	9.3	9.3			16.0	37.1	GWbm
9.0		56.0	27.4	C	9.1	10.0	55	6.2	20.3	9.5	10.4		16.0	16.3	9.7
9.8		57.0	38.7		9.5	9.7	47.2	43.1	9.5	3.5			19.0	13.1	GSπμβ
9.4	47	1.2	30.8		9.5	10.4	50.2	32.9		10.5			24.4	11.8	9.8
9.4		1.4	42.5		9.6	56	3.7	11.1	=	9.0	10.4		27.9	41.1	8.5
9.8		6.5	55.9		9.6		37.7	45.3	9.5	10.4			42.1	20.4	10.0
9.8		8.0	14.5		9.7		47.0	0.4		8.6			56.9	30.7	b
10.4		8.7	45.5		10.4		47.2	46.0		10.4			2.9	18.4	3
10.4		12.7	25.6		9.8		51.2	0.8	9.5	10.0			3.9	14.5	9.5
10.4		16.5	56.6		7.4		52.2	42.7	GWbel	7.0	8.7		5.9	52.3	CWam
9.6		16.9	12.8	9.5	10.4	57	3.7	21.3	9.5	9.3			9.9	34.3	a
9.6		19.0	35.0		9.5		5.2	39.1	9.0	10.4			19.9	25.7	9.5
10.4		23.0	32.1	9.5	9.7		7.2	52.2	9.7	9.0			25.9	24.7	am
10.4		33.5	13.7		5.2		12.2	55.3	GSπμβ	4.2	10.4		40.9	4.0	9.5
9.6		53.5	5.6		8.5		13.2	11.6	a	8.8	8.9		51.2	0.6	9.4
9.8		54.5	26.5		9.4		23.7	11.1	9.1	9.4			51.4	53.3	9.4
10.4		55.7	28.5		10.4		26.2	20.8	9.4	9.8			53.9	11.3	9.5
8.6		56.6	4.0	8.8	8.4		37.2	7.7	Cam	7.8	8.5		54.4	19.3	8.9
9.8	48	12.6	38.6	a	9.4	8.4	44.7	15.9	a	8.7	10.0		59.4	28.1	9.5
9.2		13.0	2.6		9.4	9.5	7.7	12.9	9.5	10.0			4.8	45.9	10.
9.4		13.5	37.0		9.6	9.0	20.5	6.3	Cam	8.5	10.0		16.4	55.5	10.
10.4		16.0	38.1		10.0		31.5	8.9		8.4			33.9	17.4	Cam
9.6		29.5	11.0	9.5	9.3		37.0	22.4	9.4	10.0			40.9	49.7	8.5
9.8		42.5	55.7		9.5	10.4	40.4	13.6		7.5			59.4	51.9	GWtπμ
10.2		47.6	38.0		9.2	10.4	41.5	24.1	9.8	9.6			5.10.9	56.2	9.5
9.7		51.2	9.6		10.0		43.5	7.4	10.	9.6			11.9	32.2	9.9
9.8		57.0	58.6		9.7	10.0	54.0	28.3	9.5	9.5			23.4	3.7	9.5
10.4		59.3	7.8		9.3	9.3	59	1.0	53.1	9.1	9.7		36.9	26.1	9.3
10.4	49	14.3	18.0		9.4	10.4	5.0	21.9		9.3			37.9	16.0	9.4
9.4		37.8	28.7		9.4	10.4	13.0	19.1		8.9			46.9	20.1	9.3
9.7		37.8	25.7		9.4	9.0	14.0	21.5	9.5	9.8			58.4	35.1	9.4
25pr.		+1 29.7	+1.7				+1 29.6	+2.0					+1 29.6	+2.2	
													+1 29.4	+2.5	

7321-7380.				7381-7440.				7441-7500.				7501-7560.								
mag.	19 ^h	-21°		mag.	19 ^h	-21°		mag.	19 ^h	-21°		mag.	19 ^h	-21°						
m	s			m	s			m	s			m	s							
10.4	12	37.8	42.9	9.5	7.4	41.6	47.3	Cb=1	8.2	9.7	6.4	58.8	9.8	9.8	40	20.4	47.1	9.8		
10.4		46.8	21.6		10.4	56.6	32.2			7.4	12.8	3.0	Gactπ	6.8	9.8	35.4	39.1	9.4		
10.2		48.8	52.6	9.4	8.2	19	2.6	29.4	Gct1π	7.5	19.8	23.0	9.1	7.1	7.1	37.4	15.8	Gtlπμ	6.8	
9.0	13	2.8	29.3	am	8.8	9.4	15.6	56.2		9.1	23.6	39.4	9.1	9.0	10.0	42.4	26.1	8.8		
9.8		12.8	11.4		9.4	10.0	18.1	27.7			8.5	11.7	Cam	8.8	10.3	47.4	46.1	9.5		
9.2		15.8	0.3		9.5	10.4	24.6	32.8			9.2	30.6		9.2	9.4	51.9	54.8	9.4		
10.2		22.8	54.0		9.4	8.0	40.6	52.4	Ca	8.3	55.1	43.1		9.4	9.4	41	13.9	28.1	9.4	
7.6		25.8	45.9	Cam	8.3	9.4	43.1	8.6		9.5	10.3	56.0		10.0	10.0	17.1	33.9	9.6		
9.7		29.8	34.2		10.0	9.4	5.6	24.2		9.4	9.0	46.0		9.0	9.8	22.6	47.0	9.6		
9.2		47.8	28.8		9.6	9.4	12.1	29.2		9.5	8.5	54.2	C=	8.3	9.6	44.1	53.6	9.4		
10.4		47.8	24.9		9.8	9.7	29.1	50.8		9.3	9.6	34.8		9.3	8.5	54.1	2.1	C	9.1	
10.4		50.8	47.6		8.8	8.8	35.1	24.0	a	9.2	9.0	11.1		9.5	9.0	42	13.1	18.1	9.1	
10.4		51.2	58.9		10.0	52.6	23.3			9.5	9.8	7.1		9.5	8.4	18.1	40.4	9.1		
9.0		52.3	47.9		10.0	21	3.1	22.9			10.0	11.1		9.4	9.8	22.1	37.1			
9.2		57.3	33.1		10.0	3.6	31.4			9.4	9.4	5.6	Cam	9.0	8.4	23.6	3.4	MC-m	8.6	
9.7		58.8	24.0		9.9	10.6	14.6	-		9.2	10.0	17.1		9.7	9.2	43.6	50.1	Mm	9.0	
9.2	14	3.8	40.6		9.8	10.0	12.1	32.2			10.3	36.3		9.3	9.4	47.3	2.3		9.6	
8.3		25.8	52.6	Cam	8.5	10.4	12.6	15.3			10.2	20.0		9.8	7.7	56.1	57.3	Cam	8.5	
9.2		26.0	2.2		9.2	9.2	19.1	16.6		9.8	9.8	30.4		9.5	10.3	43	23.6	44.1	9.5	
10.4		36.8	3.0		9.8	10.4	25.1	9.6		9.5	10.3	49.2		10.3	10.3	34.6	58.2		9.6	
10.0		45.8	25.2		9.5	9.0	59.1	44.7		9.1	10.2	0.1		9.7	9.4	46.1	31.5		9.3	
10.4		47.3	47.8		8.4	8.4	17.1	35.6	Gam1π	8.2	9.8	50.6		9.4	8.4	58.6	27.7	MCbm	8.5	
9.8		47.8	44.1		9.5	10.4	28.6	56.0		9.5	9.6	26.0		9.1	10.3	44	33.1	34.1	9.7	
9.4		52.8	50.9		9.6	9.2	51.6	54.7		9.4	9.2	53.3	=	8.7	10.3	49.6	13.0		9.8	
9.8		53.8	51.9		8.2	8.2	55.6	5.6	Cam	8.0	8.4	37.3		8.8	10.0	52.2	4.1		9.8	
10.0		56.3	31.1		9.7	9.7	2.6	9.8		8.0	8.4	17.3	Ca	8.3	8.4	45	15.1	39.6	Ca	8.8
9.2	15	2.8	49.5		9.6	6.7	28.6	34.2	Gtlπμ	6.5	10.2	54.2		9.3	9.8	18.6	21.8		9.2	
9.4		12.8	15.5		9.5	10.0	32.6	17.0		9.5	7.6	35.2	Cb-1	8.0	7.9	31.6	23.1	Cal	8.2	
9.2		16.8	39.6		8.0	8.0	35.1	41.4	Cb	8.0	8.0	32.2	C	8.3	9.0	32.1	1.5		9.2	
9.7		21.8	0.2		9.5	8.2	36.6	33.6	a	8.8	8.2	7.5	MCb	8.0	9.8	40.1	26.0		9.8	
8.6		34.9	1.4	a	9.1	10.4	39.6	27.0		9.8	9.0	53.6		9.5	9.4	44.1	45.0		9.0	
10.0		41.8	44.4		9.7	9.7	46.1	13.8		9.5	8.4	50.6	Cam	8.5	9.4	45.6	44.7			
10.4		45.3	47.4		9.5	10.0	52.6	27.8		9.4	8.4	7.6	Cbml	8.7	10.3	46	16.1	17.0	M-m	9.2
9.6		45.8	28.9	a	9.2	9.0	53.0	58.3		9.3	8.8	8.1		9.5	9.8	16.1	35.7		9.5	
10.0		50.3	9.5		8.3	8.3	53.6	53.8	Ca	8.3	8.4	9.1		9.1	9.0	45.6	40.5	a	9.1	
9.6		52.8	33.1		9.5	8.0	1.1	18.0	Mb=ml	7.8	9.4	55.6		9.3	9.6	47	6.6	46.1	9.8	
9.6	16	13.1	31.4		9.8	7.8	2.6	54.0	Cal	8.3	9.0	27.0	m	9.0	9.0	27.6	30.7		9.4	
10.2		13.5	59.2		9.6	8.5	7.6	8.5		8.8	9.4	1.7		9.5	10.3	58.8	48.7		9.3	
10.0		17.6	12.9		9.4	9.4	15.6	20.3		9.3	8.4	46.4	Cbl	8.3	8.4	48	8.6	49.9	Cam	8.2
9.4		19.6	27.9		9.5	10.4	23.0	59.3		9.6	9.4	39.5		9.3	10.3	22.5	17.6		9.8	
8.2		32.6	59.6	Cam	8.8	9.8	26.6	29.9		9.8	8.4	27.2	C-	9.0	9.8	57.6	16.3			
10.4		41.6	17.3		9.5	10.4	29.1	0.6		9.9	9.8	15.5		9.4	9.2	49	3.6	13.9	9.3	
9.0		43.1	21.1		9.5	7.8	49.6	46.7	Gat1π	7.3	10.2	3.3		9.2	9.2	24.5	35.9		9.4	
10.0		48.6	31.9		9.4	9.7	12.2	57.3		9.4	9.8	59.5		9.5	9.4	50	59.5	4.2	9.1	
10.0		55.6	3.0		9.8	9.8	25.6	6.3		9.5	8.4	5.1	MCam	8.3	9.4	51	6.2	19.1	9.4	
9.2	17	2.6	28.4		9.5	10.0	28.1	51.9			10.3	23.5		9.4	9.0	23.9	35.3		9.2	
9.4		3.6	38.1		9.5	10.4	34.6	49.3		9.5	9.6	7.2		9.0	9.4	52	6.2	5.5		
9.2		16.1	6.2		9.5	10.0	43.6	49.4			10.2	42.6		9.8	8.4	53	2.0	11.7	Gbt1π	8.0
10.4		20.6	29.6		9.5	10.4	12.1	19.5		9.8	9.8	27.0		9.7	9.4	5.1	6.5		9.3	
9.7		25.6	22.7		9.5	9.2	29.1	15.2		9.4	9.0	14.6	MC-m	9.0	9.4	31.1	38.3		9.8	
10.4		25.6	20.8		9.6	9.6	35.6	36.4		9.5	10.3	2.2		9.5	9.1	40.8	3.2		9.4	
10.4		31.1	54.7		9.4	9.4	35.6	11.9	M-m	9.0	9.8	46.4		9.5	9.4	47.4	30.4		9.7	
10.4		33.6	44.5		8.8	8.8	37.1	48.1	-	9.0	7.2	49.4		7.3	7.8	47.8	48.3	Cam1	8.2	
9.7		45.6	33.2		9.4	9.0	54.0	13.7		9.3	9.6	52.6		9.3	8.7	50.4	53.9	Cam	9.0	
10.4		59.6	9.2		9.8	9.8	26.1	3.1		9.5	8.2	12.4	C≡m	8.5	9.2	54	11.5	57.5	9.5	
9.7	18	2.6	30.7		10.0	9.4	27.5	37.6		9.5	9.8	13.6		9.3	9.4	49.1	38.6		9.5	
9.8		15.6	43.8		9.8	9.8	28.1	31.9		9.4	8.5	29.1		9.3	8.2	52.6	25.9	Cam	8.2	
9.7		25.6	10.7		9.5	10.2	32.6	13.9		10.0	10.3	43.1		9.3	9.3	55	28.6	10.2	9.8	
10.0		32.1	5.7		9.3	9.8	55.5	59.6		9.0	9.0	56.5	Mm	9.1	8.4	37.4	5.5	Cam	7.8	
9.8		35.6	51.2		9.6	10.4	58.1	33.9		9.0	9.0	41.9		9.3	9.4	56	5.5	28.8		
25Pr.	+1	29.3	+2.7				+1	29.1	+3.0							+1	28.6	+3.7		

7561-7620.				7621-7680.				7681-7740.				7741-7800.			
19 ^h -20 ^h		-21°		20 ^h		-21°		20 ^h		-21°		20 ^h		-21°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.0	57	15.9	57.2	9.1	10.0	11	13.4	9.3	9.8	20	27.6	9.5	7.8	29	12.3
9.2		16.6	56.1	9.0	9.0		13.9	9.1	9.8		36.1	9.6	9.6		15.7
9.4		30.1	53.4	9.3	9.5		43.1	9.4	9.8		42.1	9.6	9.6		36.2
8.7		36.3	26.0	8.9	9.6		49.6	10.	10.0		43.1	10.0	10.0		43.9
9.4		36.4	59.1	10.2	10.2	12	0.4	10.0	10.0	21	11.6	9.6	9.8		54.7
9.4		36.5	43.3	9.5	8.6		2.9	8.5	8.7		16.1	8.9	9.8		55.0
7.7		37.0	39.8	7.0	10.2		3.9	9.4	9.8		17.6	10.	8.0		32.2
9.3	58	18.5	9.0	9.5	9.8		5.4	9.8	9.4		26.1	9.3	10.0		20.7
8.2		48.5	21.2	8.0	7.3		7.9	9.6	9.6		37.1	9.4	10.4		37.7
9.0	59	16.0	15.4	8.9	8.8		21.6	9.0	9.4		39.1	9.4	10.0		47.7
9.3		30.2	1.6	9.4	9.2		34.1	9.4	7.1		44.1	7.4	31	4.7	51.5
8.7		0.5	47.7	9.0	9.4		36.6	10.4	10.4		51.6	10.	7.2	10.7	25.8
9.0		18.5	36.4	9.5	9.6		37.6	9.1	9.8		53.1	9.5	10.0	14.7	48.9
8.0		19.5	11.4	8.0	9.8		47.6	9.5	9.8		56.1	9.5	10.4	33.2	41.2
9.2		58.0	38.0	9.4	9.4	13	13.6	9.3	9.8	22	5.6	10.	9.2	42.7	31.8
9.3	1	15.0	11.5	9.5	8.6		28.6	8.7	8.9		13.1	9.4	10.4	57.7	46.8
8.7		19.8	20.8	8.9	10.4		46.6	8.8	8.8		20.6	8.7	9.2	32	15.2
9.3		49.8	47.3	9.1	10.0		56.6	9.4	10.4		32.6	8.6	8.6	22.2	22.4
8.8	2	16.0	49.4	9.4	10.2	14	6.6	9.2	9.2		33.6	9.1	10.4	27.7	44.9
8.4		33.0	53.2	8.5	9.6		9.1	10.	9.2		45.6	9.0	9.1	55.7	24.0
9.0		51.0	38.0	9.5	9.0		15.1	9.5	8.0	23	25.6	7.0	10.4	57.7	30.0
9.0	3	14.8	40.9	8.8	7.6		15.1	7.6	9.8		32.6	9.5	8.6	33	11.2
8.7		19.5	16.6	9.1	10.0		17.6	10.	9.4		38.1	9.4	8.7	12.2	14.4
8.7		31.0	40.2	8.5	10.0		23.1	9.8	9.8		50.6	10.4	10.4	34.2	14.6
9.3		31.8	12.9	9.2	8.8		27.6	9.0	9.5		56.6	9.5	10.4	42.7	57.6
8.6		32.3	23.3	8.8	10.2	15	5.6	9.8	9.8	24	23.6	8.6	8.6	34	2.7
9.0		48.0	19.8	9.4	9.6		10.1	9.3	9.2		45.6	9.2	10.4	4.2	51.1
9.3	4	7.8	4.8	9.3	10.4		12.1	9.6	9.6		45.6	9.4	9.0	17.2	15.2
9.2		39.8	44.2	9.4	9.8		43.6	9.6	10.0	25	16.1	9.8	9.8	23.2	30.2
8.7		42.2	40.2	9.0	8.6		46.6	9.0	10.4		20.1	9.8	9.8	28.2	20.0
8.8		58.9	6.0	9.4	8.9		48.6	9.1	10.0		33.6	9.8	9.8	31.7	28.0
9.0	5	15.7	37.1	9.3	10.0		50.4	9.5	10.0		35.6	9.3	9.3	48.2	29.2
9.4		49.3	58.8	9.1	9.3	16	2.6	9.4	9.8		36.6	9.9	9.0	51.2	43.0
8.0		53.9	48.8	8.0	10.4		6.1	10.	9.5		37.6	9.8	9.6	58.7	40.2
9.2	6	10.2	42.3	9.0	8.4		13.6	8.2	9.6		42.6	10.	10.2	35	12.2
9.0		42.2	40.7	9.1	9.8		18.6	9.7	10.4		51.7	8.2	8.2	57.7	15.3
9.3		45.2	55.4	10.	10.0		26.6	9.4	9.4	26	4.6	10.	10.	8.7	8.7
8.2	7	10.9	56.3	8.7	9.8		41.7	10.	9.0		9.6	8.8	8.8	31.2	56.3
8.6		23.9	34.0	8.6	8.4		47.6	8.6	8.6		11.6	8.3	8.0	33.2	40.8
8.8		34.0	11.0	9.0	8.6	17	4.1	8.2	9.2		18.1	9.0	8.6	33.2	43.6
9.4		35.9	28.3	9.5	9.0		16.1	9.1	9.8		44.1	9.8	10.2	37.2	8.7
9.4		56.5	18.4	9.3	10.2		23.1	9.8	9.8	27	3.6	9.7	9.6	45.2	47.7
10.0		59.9	43.5	9.5	10.4		26.6	10.	10.4		7.7	8.0	8.0	56.0	38.3
8.4	8	11.4	50.6	8.4	9.6		34.1	9.6	10.4		9.5	9.6	9.6	29.8	2.2
10.0		17.4	44.4	9.5	9.8		38.1	9.8	9.8		14.1	8.0	8.0	35.5	20.4
10.4		33.5	2.5	9.8	9.8		38.6	9.4	9.4		17.7	9.5	8.6	38	1.5
9.8		38.4	37.7	9.3	9.8		43.9	9.2	9.2		25.5	9.1	10.3	13.0	37.5
9.6		39.7	47.0	9.7	9.0		44.1	10.4	10.4		29.3	9.4	9.4	29.0	48.6
10.4		44.4	56.6	9.8	10.0		45.6	9.7	9.6		40.8	9.6	9.0	30.5	18.2
10.4		44.9	45.0	10.	9.8		53.1	10.	10.0		53.3	9.0	9.0	33.5	25.5
9.4	9	3.4	42.4	9.1	10.4		59.1	9.4	9.4		10.4	9.2	6.4	39	54.9
8.4		29.5	18.9	8.3	9.2	18	8.1	9.4	9.6		22.7	9.5	10.2	26.0	42.1
9.4		41.9	16.1	9.6	8.8		10.6	8.5	9.8		25.0	10.	10.2	27.0	47.8
10.4		47.0	42.1	7.7	8.6		12.1	8.7	10.4		39.3	9.6	9.6	32.5	12.1
9.4		53.4	40.9	9.2	9.4		22.6	9.7	10.4		55.8	10.3	10.3	56.0	5.1
9.5		53.9	35.4	9.0	10.2	19	16.6	10.0	10.0	29	0.8	10.	10.3	16.0	13.2
10.2	10	3.9	13.1	9.4	9.4		32.6	9.1	9.4		2.0	9.6	9.8	27.0	19.8
10.2		24.9	29.6	9.6	8.6		35.6	8.5	10.2		2.3	10.3	10.3	31.0	23.9
10.2		31.4	55.4	9.7	9.8		56.1	9.4	8.3		5.3	8.8	9.1	49.5	44.1
10.4		33.9	22.8	10.4	10.4	20	19.6	10.4	10.4		11.8	10.3	10.3	52.0	29.1
25Pr.	+1	28.0	+4.3			+1	27.7			+1	27.4			+1	27.1
							+4.7				+4.9				+5.2

7801-7860.				7861-7920.				7921-7980.				7981-8040.					
mag.	20 ^h	-21°		mag.	20 ^h -21 ^h	-21°		mag.	21 ^h	-21°		mag.	21 ^h	-21°			
	m s	m s		m s	m s	m s		m s	m s	m s		m s	m s	m s			
9.2	40 52.0	18.6		9.5	54 8.3	44.3	K	9.5	8.2	8.7	b=1	8.2	10.0	37 26.3	3.4		
9.0	41 5.5	48.4	CK	9.9	52.3	48.7		6.8	31.6	10.2	GWπμβ	5.5	9.1	27.8	27.8		
10.3	7.5	9.0		9.0	53.8	36.6	C	9.0	7.5	43.6	al	8.0	8.9	42.8	50.6		
10.2	12.0	20.8		8.6	55.3	49.3	Cam	8.8	10.1	9 25.9	34.0	9.5	8.9	38 10.3	47.9		
8.3	22.0	14.4	MC≡m	8.7	55 0.8	54.3	Ca	9.2	9.6	10 23.7	54.8	9.4	9.2	54.4	29.6		
9.8	24.5	20.2		9.5	22.3	15.2		9.3	9.2	32.7	46.7	Cam	8.5	10.0	39 18.4	18.4	
8.6	43.0	4.7	Cam	9.8	56 25.3	8.7		9.8	8.2	50.2	46.4	Ca	8.6	10.0	41.9	16.6	
8.0	42 2.0	5.1	Cam	9.7	26.3	45.8		9.6	9.2	11 12.7	43.5	9.0	10.0	55.9	45.1		
9.0	2.0	21.6		9.2	34.8	20.5		9.3	8.4	56.7	48.1	Cam	8.7	8.6	40 8.9	5.9	
10.3	27.5	39.2		8.0	43.3	14.3	C≡	8.3	7.8	59.2	48.9	Cam	8.7	8.7	32.9	20.3	
9.6	35.0	3.9	am	9.7	57 6.8	47.9		9.9	10.1	12 14.7	9.9	9.4	9.6	48.4	55.7		
10.2	53.4	59.4		9.2	41.8	44.1		9.4	8.7	54.2	57.0	9.3	10.0	41 57.9	39.7		
7.4	43 40.5	46.3	Caml	9.7	51.3	22.1		9.6	9.4	13 53.7	58.9	Ca	9.0	9.6	42 38.4	4.0	
9.0	44 15.0	29.3	CWK-	8.5	58 2.3	41.1	Caml	8.5	7.5	55.2	20.8	GWlπμ	7.2	8.9	41.4	5.4	
9.6	20.0	36.0		9.5	15.3	1.0		9.2	8.9	14 11.7	7.6	C	8.5	8.7	53.9	3.7	
9.8	24.0	49.8		9.6	28.3	43.7		9.4	10.1	46.2	11.7	a	9.0	9.4	56.4	21.1	
9.0	30.5	19.0		9.3	33.8	27.1	Caml	8.5	9.4	15 9.2	30.7		9.2	8.9	43 18.4	51.6	
10.3	34.0	37.2		9.0	52.3	31.1	a	9.2	9.2	17 4.2	13.6	a	9.0	9.2	38.4	3.6	
9.0	42.8	0.8		9.5	59 50.8	26.1		9.9	6.8	17 4.2	22.8	GSπμβ	5.3	7.5	51.9	7.5	
9.8	51.1	2.3		8.9	52.3	15.2	Ca	9.0	8.7	55.7	28.9	a	9.0	9.9	54.4	3.1	
7.6	45 8.0	41.9	aml	7.3	8.5	56.9	MCam	8.7	9.4	19 4.2	10.2	K	8.8	9.9	44 20.9	45.1	
10.3	19.5	46.9		9.5	9.9	15.2		9.7	7.8	16.2	32.1	Gatlπ	7.5	9.9	24.9	26.3	
10.3	25.5	20.6		8.6	12.0	0.2	Cal	8.4	10.1	20 1.7	15.8		9.2	10.0	28.4	56.0	
9.8	51.5	44.6	C	9.3	45.4	37.2		9.0	7.3	9.2	44.1	Gtlπβ	6.4	9.0	48.9	49.7	
9.1	56.0	9.6	K-	9.3	51.4	42.4		9.0	10.1	27.2	27.1		9.4	9.6	54.3	51.6	
9.6	46 15.0	20.7		9.5	1 2.9	29.8	Mm	9.2	10.0	22 11.7	24.6		9.5	9.0	47 3.7	45.3	
10.0	27.0	38.5		9.5	17.9	27.8		9.5	9.4	23 24.2	13.1		9.1	9.0	4.0	18.6	
9.8	47 0.0	21.4		9.5	23.4	41.6	Glπμβ	5.3	9.2	24 13.7	36.4		9.1	10.4	41.6	16.2	
10.3	2.4	43.2		10.0	25.4	18.5		9.5	9.0	31.7	7.1	-	9.0	8.0	48 37.9	0.7	
10.3	9.4	47.4		9.5	33.2	2.1		9.4	10.1	43.5	58.0		9.4	8.0	39.2	43.7	
9.1	11.2	56.1	Cam	9.0	36.4	7.5		9.3	9.9	25 17.7	9.4		9.2	9.2	41.6	8.7	
9.9	12.0	38.9		9.7	6.5	3.5	Glπμβ	6.5	8.2	22.2	30.2	MCal	8.4	10.4	49 9.9	5.9	
9.0	17.7	57.2		8.5	25.4	33.1	MC-m	8.3	8.2	26 8.7	13.8	Gbtlπ	8.5	9.5	36.1	18.6	
9.7	26.0	44.5		10.0	47.9	37.1		10.0	7.7	20.7	49.7	MCaml	8.4	9.0	36.1	21.4	
7.4	32.0	25.3	K≧ml	7.5	49.9	9.3		9.6	8.9	53.9	50.7	Cam	9.0	8.5	37.1	7.6	
9.0	48 11.5	35.4		9.0	56.4	22.3		9.3	10.1	27 16.6	21.8		9.5	10.0	41.6	37.3	
9.9	42.5	51.1		9.7	3 6.9	21.1		9.8	8.6	38.1	10.9		9.2	9.6	50 32.6	42.8	
9.0	49 16.5	3.8		9.0	16.2	33.4		10.0	9.4	42.4	54.7	Mm	9.3	8.5	33.1	44.3	
9.9	48.0	43.3		10.0	37.4	3.9		9.3	8.6	49.8	0.1	Gbtlπ	8.2	9.8	37.1	32.2	
9.7	50 33.0	5.7	?	9.9	41.4	8.8		9.5	8.6	28 46.4	37.9	C	9.0	10.4	51 3.6	56.6	
9.7	39.5	31.6		9.9	53.9	2.2		9.8	9.1	29 40.3	16.7		9.1	10.4	18.9	59.6	
8.9	40.5	41.9	Ca	9.1	4 4.9	13.8		9.5	8.9	47.3	59.9		9.3	8.8	20.6	19.9	
8.5	51 2.0	48.9	Cal	8.5	41.4	40.2		9.5	9.2	30 5.8	35.9	CK	8.8	7.6	45.1	46.7	
9.9	6.3	13.9		9.8	51.9	39.2		9.3	10.0	32 13.3	40.0		9.5	9.4	52 28.6	45.1	
9.5	6.3	42.9		9.3	52.9	53.6		9.5	10.0	28.3	36.2		9.5	10.4	28.6	42.7	
9.0	32.3	31.5		9.1	5 21.4	22.4		9.5	9.2	39.8	14.1		9.1	9.2	33.1	48.7	
9.9	35.3	34.0		10.0	22.4	21.3		10.0	10.0	46.0	46.9		9.3	10.0	33.1	16.9	
9.2	48.8	44.9		9.5	28.4	31.3	Caml	7.7	9.8	33 3.8	20.2		9.8	10.4	42.6	49.3	
9.5	49.8	34.1		9.7	39.9	20.6		9.4	9.2	10.3	29.2		9.4	9.0	46.1	18.1	
9.9	52 11.8	52.5		9.9	40.4	4.0		9.4	8.9	30.8	49.9		9.2	10.4	47.1	1.0	
9.9	55.3	20.5		10.0	9.9	53.4	25.1	Ca	9.5	9.0	49.3	37.5		9.3	10.0	47.1	0.6
9.5	53 1.3	41.9		9.8	54.9	47.9		9.1	9.6	34 22.8	30.9		9.6	9.2	51.6	26.1	
8.6	3.3	38.3		9.2	56.9	41.1		9.3	9.0	30.3	52.0	C	9.1	10.0	52.6	5.6	
9.0	18.8	4.9		9.2	6 6.4	12.9		9.4	8.9	34.8	7.4	am	9.0	9.2	52.6	13.8	
9.7	22.8	32.5		9.7	33.4	52.0		9.7	9.6	35 36.8	58.7		9.6	10.4	53 10.6	40.8	
9.7	38.3	52.0		9.6	7 5.9	56.8	C	9.3	9.0	50.3	27.7	a	9.3	9.2	22.1	48.1	
9.9	44.3	55.9		9.8	12.4	35.7		9.3	9.2	52.8	52.8		9.3	9.4	22.6	21.1	
9.7	52.3	7.3		9.8	21.9	29.7		9.6	9.4	36 13.8	29.2		9.3	8.8	33.1	25.0	
9.7	55.3	11.2		9.9	36.9	56.0		9.5	8.9	53.3	20.0	MCa	9.0	9.5	56.6	25.7	
8.5	54 3.3	56.1	Cam	9.0	51.0	18.1	GC-π	7.5	9.8	37 23.8	28.1		9.2	9.2	54 7.6	32.6	
25pr.	+ 1 26.6	+ 5.6			+ 1 26.0	+ 6.0				+ 1 25.1	+ 6.5			+ 1 23.9	+ 7.0		

8041-8100.				8101-8160.				8161-8220.				8221-8280.									
21 ^h -22 ^h .	-21 ^o			22 ^h .	-21 ^o			22 ^h .	-21 ^o			22 ^h -23 ^h .	-21 ^o								
10 ⁴ 54	38.1	26.2	9.8	mag. 12	56.3	28.7	9.8	mag. 31	44.7	28.8	C	8.7	9.7	57	58.8	54.3	9.2				
9.2	42.6	19.7	9.5	10.3	57.3	43.3	10.3	9.2	54.7	16.0	C	9.0	8.7	58	42.8	18.7	8.5				
10.4	47.1	40.5	10.3	9.1	13	3.3	56.7	Ca	8.9	9.2	32	41.7	19.6	9.3	59.3	50.6	9.2				
10.0	54.1	40.8	10.3	10.3	25.4	8.0	9.8	8.4	46.7	42.2	C-	8.9	10.0	0	24.3	8.8	8.9				
9.6	56.1	42.2	9.7	9.4	14	11.9	44.7	9.3	9.4	8.4	9.3	9.4	10.0	1	11.3	22.7	9.7				
10.2	55	26.1	54.1	9.7	9.1	28.4	57.5	9.2	10.3	6.4	33	19.2	6.4	10.3	23.7	16.0	9.0				
9.8	56	12.1	39.0	9.6	9.0	49.9	24.7	Ca	8.9	9.0	9.0	22.2	21.5	C	9.0	10.0	55.7	9.1			
10.4	45.6	2.7	8.5	8.5	15	5.9	27.3	Ca	8.5	9.8	8.5	26.9	59.0	9.5	9.2	2	8.2	59.4	9.1		
8.0	57	30.1	1.0	9.4	9.4	27.9	43.7	9.4	10.3	11.7	9.4	31.2	11.7	9.8	9.2	15.7	32.1	9.0			
9.6	38.1	6.8	9.5	10.3	31.4	51.2	9.8	9.8	9.8	35.7	44.1	9.6	5.0	46.2	51.0	GS1πβ	4.4				
9.8	43.1	34.3	9.6	9.2	43.9	41.9	9.2	9.6	34	13.9	19.2	9.4	9.7	3	1.7	38.8	9.1				
9.2	48.1	41.0	9.5	10.2	16	48.9	56.4	9.8	10.3	22.9	37.1	9.7	8.2	4	12.2	41.7	Ca	8.3			
8.8	52.6	17.7	9.1	8.6	53.9	14.8	8.6	9.8	33.9	16.5	9.5	9.7	19.2	5	30.2	30.2	9.1				
9.8	52.6	22.0	9.6	9.6	17	48.6	0.9	9.8	10.2	35	11.9	40.1	9.4	9.2	56.2	40.9	Ca	9.0			
9.0	57.6	40.1	9.3	10.3	18	8.4	21.2	9.8	9.2	12.9	26.1	C	9.0	8.1	5	51.7	47.4	C	9.0		
9.6	59	20.1	9.0	9.8	9.5	29.4	5.7	9.5	9.8	13.4	42.7	9.6	8.6	6	2.2	14.5	≡	9.0			
9.6	26.1	39.0	9.6	9.5	48.9	14.3	9.5	9.2	35.9	16.7	9.5	10.2	7	32.0	46.6	46.6	9.8				
10.2	36.6	35.0	9.0	9.0	59.3	53.7	9.4	8.8	51.9	35.9	CW≡	8.6	10.2	8	54.5	7.0	-	9.2			
10.2	40.1	39.0	10.0	10.0	19	48.3	42.9	9.6	10.3	52.8	58.7	9.7	9.4	8	41.6	11.4	-	9.2			
9.8	0	6.1	23.5	9.4	10.3	54.8	1.2	10.3	36	2.9	49.8	C-	9.0	9.4	42.4	17.1	-	9.4			
9.8	8.1	2.0	9.3	10.2	55.3	29.5	10.3	10.2	59.4	45.1	9.8	9.4	9	10.8	58.6	58.6	9.4				
9.8	35.1	41.1	9.5	9.8	20	0.3	49.7	8.5	37	15.9	23.9	C=	9.0	9.6	21.8	3.4	-	9.5			
8.0	43.1	21.9	7.3	10.0	21	10.8	21.3	9.7	9.2	48.9	36.1	CWa	9.3	10.2	46.3	13.2	10.3				
9.8	44.1	37.9	9.4	9.0	21	1.1	0.9	Ca	9.0	0.0	0.8	C	9.1	8.4	57.8	51.8	CWa	8.3			
8.8	47.1	41.8	9.1	9.5	39.8	49.9	9.3	8.8	32.9	31.7	CWa	9.0	7.8	10	12.3	52.9	Wal	7.8			
10.4	3	19.6	41.4	9.8	46.8	59.0	9.0	9.0	57.4	19.1	a	9.0	7.5	12	32.3	21.8	Cb=1	7.8			
9.8	23.1	36.7	10.3	10.3	46.8	10.4	10.3	9.1	39	15.9	30.1	W	9.4	8.8	12	56.3	23.0	Ca	8.5		
8.6	23.1	36.2	Cal	8.3	10.0	58.3	6.4	9.8	9.1	22.9	43.3	9.4	9.6	13	32.8	44.7	44.7	9.3			
9.2	48.6	17.1	a	9.2	10.0	2.3	2.9	10.3	10.3	28.1	43.5	9.6	8.7	13	40.5	37.5	C-	9.0			
10.4	52.1	7.7	9.8	9.8	8.3	18.1	10.3	7.7	40	4.4	26.9	Ca	7.9	9.6	50.5	32.6	-	9.4			
6.4	4	6.1	50.7	GWtlπ	6.0	7.8	16.3	2.9	Cam1	8.3	9.6	9.7	8.9	14	43.0	31.9	Ca	8.5			
9.2	50.6	59.4	Wa	9.0	9.4	19.3	24.3	C	9.3	8.6	41.4	42.6	Ca	8.5	9.6	15	3.0	28.9	9.3		
7.6	5	53.1	30.2	Cb=ml	7.3	9.6	20.3	52.1	9.8	9.0	42	30.9	38.3	9.1	9.4	16	26.0	53.8	9.3		
10.0	53.3	59.3	9.5	9.4	22.8	35.9	9.4	10.3	44	32.9	40.8	9.5	9.3	17	47.5	13.2	9.3				
9.6	6	56.3	56.1	9.3	10.3	35.3	35.0	9.8	8.4	53.9	36.0	C=	8.5	8.4	17	53.0	4.2	C=	8.5		
9.2	44.6	16.2	9.2	9.8	23	19.3	54.1	9.5	8.2	45	43.4	50.8	Ca	8.3	8.7	18	3.0	4.5	8.5		
9.8	7	7.9	31.4	9.4	9.6	26.3	11.4	9.5	9.2	47	18.9	2.6	Cb	8.9	9.4	23.7	32.9	C	9.3		
6.6	23.6	41.7	Gklπβ	5.5	10.3	31.8	15.4	10.3	20.2	59.8	-	8.8	8.1	19	18.2	17.7	GC=τπ	8.2			
9.1	33.4	49.2	9.0	9.6	32.8	28.4	9.6	9.2	45.2	30.8	Cb	9.1	6.4	28.2	19.4	GSτπβ	5.5				
8.4	33.8	39.0	Cal	9.0	10.2	24	56.0	22.8	9.5	10.3	46.9	25.5	9.3	8.6	55.7	52.7	Gb=τπ	8.7			
8.3	35.0	33.7	Ckal	8.8	9.0	25	21.3	24.7	9.4	10.1	48	5.7	18.2	9.5	9.0	20	27.2	54.4	a	8.9	
8.8	53.8	48.6	9.3	8.8	34.7	20.9	9.2	10.1	35.7	51.2	C-	9.1	8.4	21	36.2	26.2	26.2	8.9			
10.2	8	2.6	56.4	9.6	9.6	39.6	58.9	9.6	9.4	45.7	26.2	9.3	8.7	21	55.7	9.3	Ca	8.9			
9.1	18.4	3.6	9.2	9.6	26	16.7	50.9	9.2	10.0	49	9.2	25.1	9.6	9.3	22	47.2	1.8	9.4			
8.6	46.2	53.8	CWaml	8.6	9.1	44.7	43.4	9.5	8.2	11.7	11.8	Cbl	8.5	9.5	23	14.9	0.3	9.5			
10.2	53.4	48.4	9.4	10.3	27	21.7	21.3	9.8	10.1	16.2	1.1	9.4	8.0	21	21.4	15.8	Ca	8.4			
9.4	9	6.9	54.9	Wa	9.1	9.6	39.6	59.3	9.2	9.8	21.5	45.5	9.3	10.2	35.9	45.9	9.7				
9.6	14.9	44.5	Ca	9.2	9.6	51.2	34.6	9.5	10.1	50	11.1	46.8	9.4	9.5	38.9	50.8	C	9.5			
9.4	10	43.3	5.7	Wa	9.1	5.4	51.7	20.8	GS1πβ	5.7	9.4	26.6	50.5	C-	9.0	7.4	25	14.9	56.4	GW1πβ	7.8
10.2	57.3	12.8	10.3	10.3	53.7	31.5	9.8	8.6	47.6	20.1	Ca	8.3	9.8	26	3.4	23.0	23.0	9.6			
8.5	11	6.3	7.1	CWam	8.8	10.3	28	7.7	18.4	9.8	51	20.1	15.3	9.6	9.0	21.4	52.1	9.1			
9.5	22.3	13.4	9.3	9.4	29	1.9	35.0	9.2	10.1	52	11.6	18.8	9.3	4.8	43.9	36.3	GW1πβ	5.8			
8.3	25.8	32.0	8.0	8.0	5.2	34.8	Gatlπ	7.3	8.2	12.1	33.4	Ca	8.9	10.2	27	4.2	28.3	9.8			
9.0	33.3	37.5	Cal	8.6	10.0	7.2	12.2	9.5	9.2	41.1	17.0	9.3	9.4	28	2.2	47.6	47.6	9.2			
9.0	39.3	11.6	9.3	9.5	22.5	42.8	9.4	9.0	53	52.1	29.0	C≡	8.8	9.6	14.3	16.8	9.4				
9.0	40.3	7.1	CWam	9.0	7.2	57.7	44.2	Gatlπ	7.8	9.7	55	16.3	32.5	9.1	10.2	20.8	44.8	9.4			
8.3	42.3	21.7	Cb-1	7.7	9.4	59.7	3.4	9.4	9.4	32.8	10.4	-	9.2	10.0	29	0.1	22.9	10.3			
8.5	45.8	10.6	Ma	9.0	9.8	30	13.2	27.4	9.6	9.4	45.8	12.2	9.0	10.2	25.3	58.4	58.4	9.7			
9.5	12	32.8	25.3	9.5	7.1	42.3	1.5	Gbt1π	7.0	6.8	56	3.3	32.2	GCWal	6.4	33.7	56.4	9.6			
10.0	35.3	44.5	9.5	9.2	31	8.7	6.0	9.4	8.5	44.8	16.6	Ca	8.5	9.6	51.0	21.4	21.4	9.7			
25pr.	+1	23.2	+7.3		+1	22.3	+7.6		+1	21.3	+7.9		+1	19.4	+8.2						

8281-8291.				8292-8302.				8303-8313.				8314-8323.											
mag.	23 ^h .		-21°	mag.	23 ^h .		-21°	mag.	23 ^h .		-21°	mag.	23 ^h .		-21°								
	m	s	'		m	s	'		m	s	'		m	s	'								
9.6	30	44.2	10.9	9.6	41	12.4	31.9	9.8	49	8.2	39.0	Cb-1	7.8	8.6	55	44.2	34.0	Ca	8.8				
9.3		45.0	37.3	9.7	42	11.4	49.5	9.5		31.7	9.8	C-	8.6	9.4	56	22.2	56.2		9.2				
8.8	31	7.0	11.9	9.0		38.9	43.0	Cb	8.5	7.2	50	44.2	31.7	Gcb=	6.5		31.2	55.3		9.5			
7.7	32	10.5	33.5	Gcatr	7.8	9.3	50.4	35.1		9.1	9.8		9.3	9.5	57	38.2	34.7		9.1				
9.2		56.0	42.4	9.1	8.8		58.3	8.2	C=	8.5	8.0		0.9	Ca	8.6	8.8	54.3	15.6	C	8.8			
9.0		57.0	15.1	C-	9.3	9.2	43	21.8	11.8		8.9	8.4	52	41.2	19.2	C=	8.4	9.4	58	12.8	36.0	9.0	
8.6	34	48.4	9.4	Ca	8.7	7.8	46.8	34.6	Cal	8.3	9.0		58.7	38.5	C-	9.0	9.2	42.8	18.3	C	8.8		
8.0	36	48.4	47.0	Ca	8.0	8.8	45	4.8	28.6	Ca	8.6	8.8	53	30.7	42.1	C	9.2	9.2		48.3	24.5	9.2	
9.0	38	54.1	57.9	-	9.0	9.4	24.1	55.6		9.4	9.0		38.2	36.5	C-	9.0	9.0		52.8	24.3	9.3		
9.2	39	24.1	58.6		9.1	9.3	57.8	56.0		9.1	8.6		54	31.2	7.1	a	8.8	9.8	59	33.8	20.3	9.2	
9.6	40	57.4	30.2		9.5	7.8	47	11.5	12.8	Cal	7.2	8.2		44.2	24.0	Ca	8.3						
25Pr.	+ 1 18.4		+ 8.3		+ 1 17.8		+ 8.3		+ 1 17.2		+ 8.4		+ 1 16.9		+ 8.4								

ZONE — 22°.

1-30.				31-60.				61-90.				91-120.													
mag.	oh.		-22°	mag.	oh.		-22°	mag.	oh.		-22°	mag.	oh.		-22°										
	m	s	'		m	s	'		m	s	'		m	s	'										
8.4	0	7.8	11.8	Ca	8.5	9.8	16	48.0	13.9	9.5	10.0	32	21.8	2.2	9.5	9.8	44	17.0	59.8						
8.1		37.8	31.4	a	8.4	9.8	18	52.0	57.9	9.4	9.6	33	15.8	1.3	9.7	10.0		42.0	11.0						
9.4		49.8	43.2	9.4	9.4	9.4	19	19.5	43.7	9.1	8.6		25.8	15.9	C=	8.5	9.2	45	9.5	8.2	-		9.1		
8.2	1	56.1	32.0	a	8.2	7.0		25.0	19.4	GSbl	7.0	10.0		26.3	46.0		9.8	9.8		41.1	57.8				
7.9	2	2.1	6.3	C-	8.2	9.6		33.0	43.9		9.4	9.6	35	48.3	35.9		9.5	8.8		45.6	5.1		9.1		
7.6		31.6	52.5	7.5	GSal	7.2	8.8		54.0	14.5	C	9.0	9.8		52.8	43.5		10.0	46	18.1	49.2		9.3		
9.0		51.6	45.2	9.5	9.1	7.8		59.0	21.9	GSbl	7.5	9.2		56.5	59.7	a		8.0		30.4	6.9	Cal	7.8		
8.0	3	12.6	4.7	Ca	8.3	9.8	21	43.9	40.7	9.5	9.8	36	25.8	19.5		9.4	9.1	9.1	30.4	12.7			9.2		
9.2		20.1	35.7		9.0	9.4	22	27.4	34.2	9.2	9.4		37.8	20.5	Ca	8.0	9.1	9.1	58.1	17.1			9.3		
8.6		24.1	46.9	9.0	9.0	8.4	23	53.4	9.2	Ca	8.5	9.6		46.8	38.0		9.0	8.6	47	23.9	52.8	9.0	a	8.5	
8.4	4	13.1	50.0	8.5	GWa	8.5	8.0	24	55.5	2.5	Ca	8.0	10.0		54.3	34.9		9.8	9.2	48	11.0	36.6		9.0	
7.8		24.1	37.7	7.5	Gbl	7.5	8.6	26	32.9	47.0	a	8.6	8.2		54.3	23.4	Ca	8.3	9.3		21.7	59.9			
9.5	6	1.7	15.9		9.3	8.1	27	1.8	32.5	-		8.3	9.8		37	35.8	13.2	9.4	8.6		30.2	9.1	Ca	8.5	
8.0		7.2	45.5	9.0	a	8.5	9.8		14.0	27.2		9.5	8.3		38	4.8	45.5	9.0	Gal	8.0	9.4		37.4	54.8	9.1
8.6		32.2	57.7	8.5	Ga	8.5	9.0		16.3	48.9	9.5	G	9.1	10.0		21.8	41.4		9.3	9.3		42.2	24.0	9.3	
9.4		42.2	20.5		9.6	9.8		21.0	27.1		9.3	8.8		29.3	17.0	C	9.0	9.4	49	1.1	20.0			9.2	
9.5	7	43.9	23.4		9.4	10.0		21.6	2.6		9.3	5.8		32.8	41.5	5.0	GSal	5.5	9.6		3.2	5.5		9.4	
8.2		59.2	16.1	Ca	9.0	8.7	28	35.6	34.2	a	8.8	8.2		42.5	5.4	C	8.7	9.6		7.9	42.8			9.3	
9.4	9	3.2	53.1		9.5	9.2		44.5	8.4		9.1	10.0		39	32.0	10.7		9.7	8.2		10.4	36.5	a	8.0	
8.6	10	16.5	17.7	Cb	9.0	8.6	29	9.8	25.9	C=	8.3	9.8		49.7	58.2		9.4		9.4		38.2	26.9		9.4	
8.6		16.5	14.7	Ca	8.9	9.4		38.2	18.4		9.4	8.0	40	0.0	55.6	9.0	al	8.6	9.2	51	49.2	5.7		9.2	
9.8		37.5	55.9		9.2	9.4		44.1	53.7		9.0	9.2		3.5	3.2		9.0	9.6	53	41.7	25.9			9.5	
9.8	11	2.0	37.6		10.0	8.6		57.9	5.3	Ca	8.8	9.2		57.0	20.8		9.1	9.0		48.7	53.2	a		9.0	
8.1		42.0	31.6	a	8.2	9.8		59.6	48.4		9.5	10.0		41	35.5	56.2		10.0	9.6		58.7	33.5		9.5	
8.8	12	20.5	44.3	9.5	9.1	9.6	30	0.1	25.8		9.4	5.0		50.5	24.2	GSal	6.2	9.6	54	2.7	52.3	9.5	G	9.0	
8.1	13	15.0	30.1	al	7.5	10.0		19.1	57.2		9.6	9.6		42	41.0	25.3		9.3	9.6		5.2	5.3		9.5	
9.6		35.5	26.9		9.5	10.0		31	44.6	16.9		9.7	8.1	43	7.5	4.8	Cb=1	8.2	9.6		12.2	10.1		9.5	
9.6		43.0	18.7		9.3	9.4		51.1	5.9	Ca	9.0	10.0		24.2	58.6			9.4	9.4		51.2	40.4		9.5	
9.2	14	14.0	55.7		9.0	8.7		57.9	57.1	9.0	8.6	8.0		45.5	47.0	Ga	7.8	9.0		55	23.2	7.4	C	9.1	
9.4	16	23.0	37.2		9.0	10.0		32	2.1	51.2		9.5	10.0	44	15.5	29.9		9.5	8.1		56	3.5	16.9	Cal	8.0
25Pr.	+ 1 16.4		+ 8.4		+ 1 15.2		+ 8.3		+ 1 14.5		+ 8.2		+ 1 13.9		+ 8.2										

1896AnCap...3...1G

121-180.				181-240.				241-300.				301-360.				
mag.	oh.-1h.	-22°		mag.	1h.-2h.	-22°		mag.	2h.	-22°		mag.	2h.-3h.	-22°		
7.8	56	19.0	16.9	Cal	8.0	9.2	37	32.5	54.8	9.1	9.4	19	31.4	33.2	9.1	9.4
9.3	57	19.0	58.0		9.1	9.6	38	19.5	30.2		9.4	7.2	39.9	22.4	GSal	7.8
9.6		38.5	6.7		9.5	8.0	39	30.5	36.8	al	8.0	9.4	43.4	23.4		9.5
9.2		58.5	54.4		9.5	9.4		47.0	47.9	9.5 a	8.8	9.8	20	35.9	12.5	9.5
9.4	58	2.5	46.9		9.1	8.2	42	10.5	50.9	8.5 Gb	8.6	9.0		39.4	35.1	9.1
9.6	59	34.5	25.4		9.6	7.8		32.5	50.6	8.0 Gbl	8.0	9.8	21	6.4	46.4	9.3
7.9		45.0	14.2	Ca	8.2	8.4	43	17.0	57.7	9.0 b	8.5	9.4	22	28.9	48.2	9.4
8.6	o	14.5	20.5	Ca	9.0	9.6	44	29.5	47.9		9.5	9.2		42.4	19.6	9.2
8.8		24.5	44.1		9.1	9.6	45	13.0	47.4		9.5	8.4	23	16.9	8.0	8.4
9.0		40.0	41.3		9.2	7.8		46.0	47.2	8.2 a	8.1	8.6		43.4	51.9	9.0
7.6		49.0	57.3	Gal	8.0	9.6	46	6.0	38.6		9.3	9.8	24	53.4	39.0	9.5
9.6	1	36.8	29.2		9.5	8.9	48	12.8	8.6	C	9.1	9.4		56.4	26.3	9.4
8.8		57.5	50.6		9.3	8.4	49	35.0	39.6		8.6	9.4		58.9	34.5	9.4
8.6		59.5	17.0	Ca	8.7	7.7	50	4.0	26.2	Ca	8.3	8.6	25	53.9	37.7	a
9.0	2	19.0	11.4	a	9.1	9.8	51	49.5	15.5		9.0	9.0	26	20.9	48.9	9.1
9.3		26.0	48.1		9.5	7.6		56.0	30.6	a	8.0	9.0		30.4	19.9	9.1
9.4		53.0	12.3		9.3	8.4	52	58.5	48.2	9.2 Ga	9.0	9.6		31.9	29.3	9.4
9.0	3	3.0	40.7	a	9.0	8.7	53	1.5	47.5	9.2	9.1	9.3		33.5	3.2	C
9.4	4	42.0	5.0		9.3	9.2		12.0	51.2	9.5	9.2	9.6	27	50.2	13.8	9.2
8.8		57.5	39.6		9.0	8.6		12.0	52.7	8.0 Ga	8.5	10.0	28	6.8	20.0	9.5
9.1	5	46.5	33.9		8.8	7.6	54	39.0	40.8	8.5 a	8.2	10.0		15.1	32.7	9.8
9.3	7	43.7	36.3		8.8	8.9	56	0.0	53.4		9.0	10.0		31.7	55.6	9.7
9.6	8	11.5	36.3		9.5	8.0		11.0	20.0	C	8.4	7.5		53.6	28.6	GSbl
8.1	9	12.0	57.6	8.0 Gal	7.3	6.0		45.5	34.1	GSal	7.0	9.1	31	33.6	38.4	9.1
8.2		19.2	23.3	C=	7.8	9.2	57	2.6	41.6		9.0	9.9		48.6	59.2	9.0
9.0	10	7.7	8.7	Ca	8.7	7.7		12.1	30.8	Wal	7.8	8.4	32	21.1	40.4	8.5
8.0		44.5	28.2	a	8.0	8.9	58	2.1	35.9	9.5 G	9.1	9.4	33	28.6	12.6	9.2
9.8	12	1.5	6.9		9.4	8.4		3.1	29.0	a	8.4	9.6		57.1	33.7	9.3
9.6		40.5	55.9		8.9	8.4		22.1	37.7	8.5 Ga	8.5	9.9	34	20.6	26.2	9.7
9.4	13	44.5	53.6		9.0	10.0	59	10.1	13.1		9.5	7.9		55.6	6.6	Ca
8.2		45.5	6.6	C=	8.6	8.2	o	9.6	21.2	Ca	8.2	8.6	35	15.1	27.4	a
9.2	15	4.0	47.3		9.0	7.9		10.6	45.0	8.0 Ga	8.0	9.9		55.6	32.1	9.5
9.3		44.0	4.0	Ca	8.8	9.8		17.6	5.2		9.2	9.6	36	35.6	5.3	9.2
9.4		58.0	35.6		9.0	10.0		20.1	54.8		9.2	9.2		50.1	20.9	9.0
8.3	16	3.5	11.3	Ca	8.0	10.0	1	43.6	17.1		9.5	9.6	38	35.6	33.8	9.5
9.8		31.9	26.5		9.4	9.2		44.6	38.9	9.0 Ga	8.8	10.0		45.6	37.3	9.4
7.7		43.0	4.8	Cal	7.9	9.6		46.1	52.6		9.1	6.8	39	22.1	41.4	7.0 GSal
8.2	18	11.0	35.7		8.6	9.0	3	22.1	35.7		9.3	6.9	40	45.1	11.3	GCal
8.3		13.5	24.2	C=	8.5	9.2		41.1	51.7		9.2	10.0	41	49.1	46.2	9.5
9.8		21.0	48.6		9.4	9.4	5	48.7	0.5	C	8.7	6.5	41	4.1	9.9	GCal
9.3		53.0	40.1		9.0	8.8	6	16.4	8.8	C-	8.5	9.8		26.6	13.4	a
7.0	21	23.5	59.1	6.5 GSal	6.3	9.8	7	47.8	35.7	a	9.0	9.9	42	32.6	11.0	9.7
9.8		52.7	47.0		9.3	9.8		53.4	56.8		9.4	9.9	43	41.6	10.6	9.1
7.0		59.7	41.2	GSbl	7.0	9.8	10	55.9	48.9		9.3	8.4	44	3.1	14.3	C
8.6	22	3.7	59.1	8.5 a	8.5	8.2	11	16.4	25.6		8.3	9.2		31.1	41.1	9.5 G
8.6		6.7	12.4	Ca	8.5	8.6		51.9	44.0	9.0 a	8.5	9.0	45	1.1	4.1	9.0
5.0	23	36.2	16.6	GS1πβ	5.0	9.8	12	56.4	25.2		9.3	9.3		11.1	41.2	9.1
9.0		24.54.2	57.0		9.0	9.6	13	2.1	29.2		9.0	8.2		41.6	9.7	8.6
9.4		25.11.2	9.1	a	9.2	9.4		41.4	12.8		9.2	8.8	46	1.6	42.0	9.1
9.0		27.9.7	21.8		9.2	9.2	14	37.9	16.2		9.1	9.3		2.9	1.2	9.1
8.8		9.2	28.1	a	9.0	8.0		39.9	41.6	8.0 GSb	8.1	9.0		11.6	19.8	9.2
9.4		22.2	58.0		9.3	9.8	16	12.4	5.0		9.4	8.8		12.6	43.9	9.0
9.2	30	17.0	16.1	-	9.1	9.0		26.4	16.9		9.2	9.4		58.0	54.3	9.4
9.2		47.0	5.4		8.9	8.3		30.9	26.5	a	8.0	9.6	47	21.2	13.2	9.3
9.6	31	12.5	4.8		9.5	8.6	17	53.9	22.5	a	8.9	7.1		40.8	36.1	6.5 GSal
9.6	34	3.5	6.3		9.5	9.4		55.9	17.1		9.3	6.8		57.7	53.2	6.0 GSal
7.4	35	13.0	21.1	GCTπ	7.8	9.2	18	6.4	10.5		9.1	10.0	48	6.6	52.6	9.4
8.2		29.0	46.1	a	8.5	9.0		21.4	1.5		8.9	9.4		10.6	11.0	9.3
8.4		36.48.5	16.6	-	8.8	9.6		56.4	18.1		9.1	8.8	49	29.9	43.2	9.4
7.6		37.18.0	14.9	Cal	8.0	9.2	19	22.4	6.0		9.0	9.8		31.4	24.2	9.7
25Pr.	+1	12.4	+7.9				+1	9.9	+7.2				+1	8.1	+6.5	
																+1
																6.8
																+5.8

361-420.				421-480.				481-540.				541-600.									
mag.	3h.	-22°		mag.	3h.-4h.	-22°		mag.	4h.	-22°		mag.	4h.	-22°							
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''						
9.6	17	10.1	14.5	9.3	8.5	47	16.5	15.7	8.7	9.4	9	10.8	16.1	a	9.3						
9.4		54.3	10.2	9.2	7.0		23.2	39.1	GSal	7.0	8.7	43.8	18.0	a	8.8						
10.0	18	13.6	42.0	9.5	9.7		45.5	46.9	9.4	9.4	10	12.8	26.6		9.3						
8.4		50.8	6.5	8.4	9.4		56.2	18.7	9.4	9.0	10	12.8	26.6		9.1						
10.0		55.6	58.4	9.5	10.0	48	36.0	29.6	9.5	8.4		15.8	48.9	a	8.8						
10.0	19	30.8	26.6	9.5	8.0		42.5	45.0	8.5	10.0		18.3	14.7		9.7						
9.2		55.3	25.2	9.0	9.0		45.0	43.9	a	9.2	6.7	28.3	27.7	GWal	6.8						
8.2	20	24.8	30.3	8.5	8.3	49	0.5	12.4	a	8.8	9.4	35.8	26.3		9.5						
9.0		36.8	36.1	8.9	9.1		6.5	6.0		9.3	9.6	41.8	37.4		10.0						
8.5	21	13.8	6.4	8.7	9.3		9.5	6.4		9.4	8.8	41.8	46.5		9.2						
9.6		26.0	31.0	9.4	10.0		39.0	45.9	9.5	8.6	4.7	52.5	8.5	Ga	8.8						
9.8		33.5	46.8	9.3	9.0		39.5	10.2	a	9.0	10.2	52.8	8.0		9.5						
10.0		33.5	21.1	9.6	8.6	50	10.0	12.1	a	9.1	9.9	55.8	29.4		10.0						
10.0	24	10.5	19.6	9.5	9.0		17.5	14.4	a	9.1	8.4	44.8	37.7	a	8.5						
7.2		19.5	56.2	7.0	8.4		18.0	58.5	9.0	8.6	10.2	0.7	1.9		10.0						
9.6	25	12.3	45.0	a	9.0	9.6	44.0	46.0		9.4	9.2	1.8	29.8		9.4						
9.2		22.3	53.5	a	9.2	9.6	51	44.1	8.0	9.6	10.2	12.8	3.3		9.7						
10.0	27	1.3	18.1	9.5	9.1	52	24.6	50.2	9.0	a	8.8	18.8	18.9		10.0						
9.6		6.3	19.8	9.4	9.6	53	29.6	25.0		9.3	8.4	26.3	50.9	9.0	a						
9.2	28	14.9	20.9	8.8	6.7	55	47.1	37.7	Wkb-17.0	8.6		32.8	40.3	a	8.9						
3.6		16.2	3.2	GS1πβ	3.8	9.4	56	16.2	26.8		9.0	9.7	36.8	16.6		9.9					
9.6		45.8	27.3	8.8	8.7		42.7	0.0		8.8	10.2	50.8	52.4		10.0						
9.2	29	8.1	33.8	a	8.5	9.3	57.2	22.9		9.3	9.7	6.3	18.7		10.2						
9.2	30	0.1	16.7		8.9	9.1	19.7	19.4	-	8.8	9.5	39.8	21.9		9.4						
9.7		45.1	43.1	9.2	10.0	57	19.7	14.9		9.2	9.2	2.8	49.0	a	9.3						
8.1	31	21.6	53.9	8.5	8.0	7.2	23.2	56.3	7.0	9.5	10.2	0.7	1.9		9.3						
8.4		38.1	12.2	Ca	8.7	9.8	0.7	31.3		9.3	8.8	34.3	11.7		9.3						
8.6	32	25.6	30.4	W-	8.5	9.9	14.9	2.8		9.3	8.8	34.6	59.2	7.5	Ga						
8.6		48.1	40.5	al	8.3	10.0	20.2	6.8		9.3	8.8	38.8	10.1		9.2						
9.7	33	35.1	8.5	9.4	8.6	20.7	0.8	0.8	Cb-1	8.3	10.0	22.8	4.0	Ca	7.2						
8.1		47.1	43.7	al	8.0	8.4	49.7	27.1	-	8.3	10.2	29.8	45.2		7.4						
9.6		56.1	22.4	9.5	9.8	0	11.7	53.4		9.4	10.2	32.3	52.8		8.0						
10.0	34	1.4	33.2	9.4	9.1	38.2	28.1		8.8	10.2	37.8	52.8		10.3							
7.6		32.4	34.5	al	8.3	9.0	53.7	52.5		9.0	8.8	39.8	45.0		9.1						
8.6		53.9	55.5	8.5	8.6	8.6	55.7	11.3	a	9.0	9.9	42.8	58.9		9.3						
8.6	35	7.9	21.2	9.0	9.6	1	4.7	45.8		9.1	10.2	43.8	23.4		9.4						
9.2		48.9	32.2	a	8.8	8.0	17.2	0.4	Ca	8.5	10.2	21.8	38.9		10.2						
8.6	36	43.4	50.7	a	9.0	6.8	32.7	19.7	Ca	6.3	10.2	33.8	34.0		9.6						
8.0		9.4	22.7	Cb-1	8.3	8.6	39.2	43.6		9.0	8.6	43.8	24.7	bl	8.0						
8.5		49.9	40.7	a	8.5	10.0	41.2	27.7		9.6	9.6	5.8	58.2		9.8						
10.0		56.4	34.4	9.5	8.4	3	0.7	13.7	a	9.0	9.5	19.8	21.1		9.4						
8.1	38	26.4	19.9	8.6	9.3		13.7	15.9		9.4	9.0	23.2	31.2		9.2						
8.4		37.9	25.6	al	8.7	9.8	25.7	28.6		9.5	8.8	28.7	41.5		9.0						
9.0		51.1	57.7	Ga	9.0	8.3	29.2	10.1	a	8.7	10.2	53.7	26.3		9.5						
8.4	39	44.4	22.1	a	9.2	10.0	55.7	31.5		9.5	10.2	0.2	3.5		7.7						
8.8		59.9	44.1	a	9.0	10.0	6.4	21.6		9.5	9.0	2.0	1.7	a	8.9						
8.4	40	0.9	30.3	al	8.2	9.0	31.2	37.0		9.0	7.6	18.2	9.6	Cal	8.2						
9.2		30.5	30.6	9.4	9.8	5	44.7	26.3		9.5	10.2	38.7	12.9		10.2						
8.5		55.0	21.6	a	9.0	9.6	6	29.8	26.0		9.0	10.2	57.7	49.3		10.3					
8.6	41	47.5	23.9	9.0	9.4	7	20.1	8.0		9.3	10.2	13.2	38.2		9.8						
8.6		53.5	34.7	-	8.7	9.0	27.6	0.4		9.2	10.0	32.7	13.9		9.8						
9.4		53.5	47.5	9.4	10.2		52.0	55.8		9.5	8.5	36.0	57.2	9.0	Ga						
8.6		54.0	38.2	-	9.1	9.0	55.0	26.8		9.2	9.0	54.2	22.5		9.3						
9.7	43	2.0	43.2	9.5	9.4	8	8.0	18.5		9.4	8.7	54.2	6.7		9.0						
9.8		16.0	44.3	9.4	8.8		11.2	2.3	a	9.0	9.0	15.2	55.8	a	9.1						
8.4	44	32.0	20.0	a	8.7	8.2	27.7	49.1	9.0	G	8.8	16.7	53.2		9.7						
9.2		45	9.5	58.9	a	9.4	31.0	46.6		9.5	9.0	32.7	35.9		9.4						
8.1	46	21.0	49.7	a	8.8	9.7	33.0	21.0		9.4	10.2	32.7	59.2		9.4						
9.7		32.5	18.2	9.5	10.2		35.5	53.8		9.0	9.0	47.5	59.6	9.0	a						
8.6		33.5	35.3	a	9.0	9.1	9	1.0	16.6	a	9.0	9.9	52.7	26.9		9.5					
25pr.	+ 1	5.7	+ 5.0				+ 1	4.8	+ 4.2				+ 1	4.4	+ 3.7				+ 1	4.0	+ 3.2

601-660.				661-720.				721-780.				781-840.				
mag.	4 ^h	-22°		mag.	4 ^h -5 ^h	-22°		mag.	5 ^h	-22°		mag.	5 ^h	-22°		
10.1	37 38.1	58.4		8.8	52 44.4	59.9	9.0 Ga 8.2	8.8	3 55.7	59.5	9.5	9.1	9.8	15 43.3	49.6	a 9.1
7.8	44.6	33.5	a 8.2	7.5	44.6	12.8	Cal 7.1	9.6	55.7	6.9		9.6	9.6	16 36.3	29.4	9.4
10.3	38 7.1	6.3		9.5	53 11.1	37.1	9.5	9.4	57.7	25.2		9.4	8.3	17 49.3	33.2	8.5
9.7	7.6	5.6		9.3	39.6	21.5	a 9.2	9.6	4 1.7	20.3		10.0	10.0	17 26.4	1.2	9.4
9.4	11.1	39.2		9.2	41.6	50.2	a 9.0	9.7	9.7	18.1		9.4	9.2	37.3	54.9	9.0
10.2	15.6	36.9		9.8	54 0.6	21.0		9.5	23.2	17.7		9.3	10.0	55.9	28.9	9.3
9.7	46.1	29.9	a	9.1	16.1	3.2		7.4	26.2	39.2	bl	7.6	9.4	57.8	22.9	9.3
9.7	57.1	46.4		9.5	19.6	35.1	al 7.8	8.4	33.2	27.9		8.8	8.6	18 3.8	22.9	9.0
10.3	39 0.1	18.1		9.7	33.1	37.1	al 9.4	8.3	39.9	58.7		8.8	9.0	7.8	8.7	9.2
9.2	21.6	38.8	a 9.3	9.2	55 9.1	26.7	a 9.0	9.9	41.7	3.3	a	9.1	7.2	21.6	25.4	Gbl 7.3
9.4	32.1	54.6		9.2	38.6	47.1		10.0	5 0.2	41.7		9.8	9.8	49.1	32.6	9.1
8.8	42.6	20.2		8.9	10.0	50.6		9.7	17.2	48.1		9.2	9.4	19 21.6	32.8	9.1
9.4	55.1	43.6	a	9.2	8.6	51.1	Ga 9.0	10.0	22.0	28.6		8.6	8.6	28.6	29.4	8.8
9.7	40 11.8	41.0		9.5	56 8.1	34.0	a 9.0	8.3	39.7	11.4	a	8.8	8.6	20 5.6	37.4	9.0
10.1	13.1	16.3		9.5	14.1	57.7		9.9	42.2	39.5		9.3	8.6	42.6	51.0	al 8.3
9.4	24.3	40.1		9.3	26.1	12.5		9.0	45.2	26.3		9.3	8.4	21 20.6	35.9	8.7
10.2	41 20.3	31.4		9.0	28.1	29.8		9.8	49.7	27.2		9.1	9.1	26.1	41.8	a 8.8
10.2	20.8	31.0		10.0	32.1	45.0		9.5	6 5.7	19.5	Ca	8.5	10.0	28.6	24.7	9.2
9.2	44.3	50.5	a	9.1	48.6	15.8		8.8	13.7	18.0		9.6	9.6	51.6	23.9	9.3
9.4	52.8	25.6		9.2	51.6	53.7		9.8	43.7	34.8		9.5	8.8	22 26.1	30.4	9.0
8.7	42 4.8	46.9	a 8.3	9.5	57 10.1	8.2		9.1	55.7	1.1		9.6	10.0	42.6	25.9	9.4
10.1	43 42.6	37.4		9.4	16.1	57.3	9.5 9.3	9.3	7 11.7	22.7	a	9.3	7.4	23 6.1	32.5	6.6
8.0	50.3	6.6	Ca 7.9	6.8	27.6	58.6	6.0GSπβ6.0	10.0	21.7	1.0		8.8	8.8	15.1	58.6	9.1
10.1	51.8	11.0		9.8	45.1	7.1		9.5	31.6	39.5	a	8.0	9.4	44.6	43.2	9.4
8.0	58.6	56.9	9.0 Ga } 8.4	9.0	48.6	15.3	b 9.2	9.5	43.7	7.8		9.7	9.6	24 1.6	4.9	a 8.9
10.0	59.3	56.6	G 9.0	9.9	58.1	18.1		9.4	45.7	50.1		8.2	8.2	24.1	49.0	Gal 8.0
10.2	44 10.3	40.4		9.6	58 3.1	30.9	a 9.1	8.4	8 10.3	10.5		8.6	9.4	39.6	17.6	a 8.9
10.3	19.8	28.1		9.0	6.1	42.1		9.3	11.8	35.6		9.8	9.4	25 12.1	45.2	9.3
9.2	22.0	28.5		9.2	16.6	16.8		9.5	22.7	28.2		9.3	9.1	17.6	54.7	a 8.8
10.0	35.0	27.5		9.8	43.1	7.1		9.7	28.7	45.5	a	9.2	10.0	56.1	19.2	9.4
8.9	39.0	27.7	a 8.9	9.0	47.1	23.5	b 9.3	9.4	28.8	49.3		9.5	9.6	26 17.1	22.9	9.5
9.8	39.0	48.2		9.5	5.1	3.2		10.0	35.3	1.1		10.0	10.0	25.5	58.4	9.4
10.3	45 41.5	47.5		9.5	30.6	1.8		9.5	37.8	34.3		8.6	8.6	48.1	19.0	Cal 8.6
10.0	46 14.3	22.7		9.3	43.1	25.6		9.0	40.5	53.4		9.5	10.0	55.6	38.8	9.5
8.4	14.5	31.9		8.3	51.1	51.2		9.5	40.8	7.3		9.5	10.0	27 21.7	41.7	
9.2	47 6.0	20.1		9.0	3.1	46.0		9.7	46.8	34.0		9.3	9.3	22.4	19.7	9.5
9.8	20.7	29.9		9.4	6.1	42.1		9.6	9 2.5	41.7	a	9.0	9.6	45.7	4.7	10.0
9.2	24.2	40.1		9.3	10.6	32.5	GS1πβ 3.7	9.7	13.0	19.0		9.1	9.1	57.6	1.3	9.4
8.6	43.5	6.1		8.8	14.5	48.3		9.6	15.3	39.9	a	9.3	10.2	28 18.2	15.5	9.8
9.0	56.2	54.1		9.1	17.6	5.3		10.0	18.8	22.2		9.9	9.6	20.2	55.3	9.8
10.3	58.0	4.0		9.8	19.6	41.1	bl 8.7	9.4	24.4	33.9		8.9	8.9	28.9	53.7	a 9.1
9.6	48 2.7	22.7		9.5	25.1	50.2		9.1	39.8	1.5		9.5	10.1	31.2	34.3	
9.2	15.0	23.5		9.4	38.1	16.5		9.4	51.8	19.1		9.8	10.1	32.7	44.5	9.8
9.9	35.6	58.0		9.5	38.6	19.3		9.3	10 3.5	20.0		9.5	8.6	38.9	49.3	a 8.7
9.4	36.7	23.0		9.2	48.3	20.9		9.2	26.5	10.8		9.0	9.7	52.2	41.1	9.8
9.8	39.9	44.6		9.3	52.3	53.1		8.8	37.7	3.5		10.0	9.2	53.2	13.4	9.3
10.0	56.0	4.5		9.4	1 7.3	10.1		9.9	11 33.6	24.5	Cbl	8.0	9.8	57.7	40.5	9.5
8.9	49 23.9	18.4		8.8	9.8	8.3		10.0	54.1	13.4		9.4	9.8	29 26.2	29.6	9.8
9.7	53.4	31.5		9.3	29.2	55.2		8.6	12 39.1	55.2	a	9.0	10.3	28.2	0.9	
9.2	53.4	1.2		9.0	2 1.7	48.7	a 8.5	9.6	41.6	27.0		9.4	9.3	30.2	42.2	a 9.3
9.0	50 32.4	18.1		9.0	6.2	5.0		10.0	13 29.1	20.7	a	8.7	10.3	37.2	12.9	9.7
10.0	34.4	6.9		9.5	13.2	45.6		9.4	34.6	33.5	a	8.4	9.1	38.2	46.5	a 9.5
8.9	46.4	5.7		9.2	22.2	37.9		9.7	42.6	6.9	Cbl	8.2	9.7	45.8	2.5	9.6
10.0	47.9	11.3		9.7	23.7	47.4	a 9.0	9.1	14 15.3	49.3		9.0	9.8	30 11.2	11.8	9.7
9.9	51 32.4	5.6		9.7	27.2	55.1		9.9	19.8	22.7		8.8	9.8	39.2	35.5	9.8
8.7	38.6	14.1	Ca 8.2	8.6	51.7	30.5		8.4	31.8	40.3	a	8.0	10.0	41.7	20.5	9.8
10.0	44.1	6.6		9.4	58.7	48.5		9.3	46.8	41.5	a	9.2	10.3	31 3.2	39.7	10.0
8.2	52 2.1	40.4		8.5	3 26.7	38.8		9.4	15 7.8	24.0		9.1	9.2	6.2	29.7	9.5
9.4	12.1	35.2		9.2	32.2	3.5		9.7	13.3	24.9	a	8.6	9.0	49.9	57.3	9.0
9.8	30.1	20.7		9.6	35.2	47.8	al 8.0	8.8	18.3	32.7	a	8.6	8.8	55.2	54.7	8.5
25pr.	+ 1 3.7	+ 2.7			+ 1 3.4	+ 2.2			+ 1 3.3	+ 1.9				+ 1 3.1	+ 1.2	

1896Ancap...3...1G

841-900.				901-960.				961-1020.				1021-1080.						
mag.	5 ^h	-22°		mag.	5 ^h	-22°		mag.	5 ^h	-22°		mag.	5 ^h -6 ^h	-22°				
	m s	'	''		m s	'	''		m s	'	''		m s	'	''			
9.0	32	17.2	49.7	8.5	9.6	40	23.0	56.6	10.4	47	24.1	37.5	9.4	56	4.0	23.9		
9.6		23.7	25.1	9.3	10.0		33.2	34.5	9.8		34.4	50.6	9.0		12.5	30.8		
10.0		30.7	4.9	9.4	9.8		35.7	40.5	9.0		55.6	29.9	10.6		15.7	1.5		
10.0		45.2	7.3	9.5	10.2		38.9	58.7	9.1	48	3.1	23.4	9.4	8.8	22.9	8.8		
9.4	33	1.2	47.9	9.5	10.4		52.7	43.7	9.8	8.3	5.4	24.0	8.2	10.2	24.4	54.0		
9.6		21.2	23.1	9.5	9.3	41	17.7	9.7	9.5	9.8	7.4	49.3	9.1	9.1	31.9	45.8		
9.2		21.4	59.2	9.3	9.4		24.2	53.9	9.1	10.0	21.6	21.0	10.4	10.4	36.4	16.5		
10.4		27.2	3.9	9.5	8.9		25.2	40.0	9.1	10.2	36.1	19.7	10.2	10.2	46.9	54.6		
9.4		35.2	47.9	9.8	9.0		26.2	46.8	9.0	9.7	51.6	10.1	9.5	9.5	54.4	8.8		
9.2		35.2	22.7	9.3	10.0		26.2	11.3	10.0	10.0	55.6	25.6	8.7	57	1.9	18.4		
10.4		51.2	43.1	9.5	10.0		27.4	1.8	9.6	49	21.1	24.2	9.3	9.2	8.9	43.1		
9.7	34	11.7	54.1	9.4	8.9		31.7	52.7	9.0	10.6	28.4	43.3	9.2	9.2	11.9	25.3		
9.7		27.2	5.9	9.7	10.4		32.2	41.9	8.7	8.7	29.6	51.7	9.0	9.4	19.9	42.8		
9.2		31.2	53.9	9.0	10.3		32.2	17.9	9.6	9.6	53.1	26.0	9.1	9.9	33.4	17.0		
9.1		55.2	46.2	9.2	10.3		32.2	39.8	10.0	50	2.6	33.8	10.2	10.2	35.4	26.4		
7.8	35	10.7	42.9	8.0	10.3		35.2	12.7	9.0	9.0	15.1	40.2	9.2	9.9	49.4	28.1		
8.0		14.7	13.4	8.2	9.8		43.2	5.0	9.8	9.2	21.1	47.1	9.5	10.2	49.4	54.1		
10.3		23.2	45.3	10.4	10.4		45.2	48.5	9.5	9.5	23.5	18.7	9.8	10.2	54.4	4.9		
10.3		24.7	43.0	10.4	10.4		47.7	53.9	10.2	10.2	31.0	34.9	9.8	9.8	58.4	44.3		
10.3		30.2	13.9	9.8	9.7	42	3.7	55.5	9.5	9.4	35.5	8.8	9.1	9.1	58.4	48.8		
8.8		42.7	40.2	9.1	9.1		41.3	44.8	8.8	9.4	41.0	46.6	9.3	10.2	30.4	55.9		
10.2		54.2	52.5	9.8	9.8		46.8	13.1	9.8	10.6	43.3	15.7	9.2	9.2	41.4	18.5		
10.0	36	24.2	51.2	9.5	8.5	43	4.8	5.8	8.0	8.2	55.5	17.2	9.6	9.6	50.9	7.9		
9.6		49.2	50.7	9.2	8.5		10.8	32.2	8.8	8.8	59.5	51.6	6.5	9.2	55.4	30.1		
6.1		58.7	26.1	6.5	10.1		24.3	27.0	9.5	10.6	51.3	59.4	9.5	10.0	56.4	5.1		
9.1	37	5.2	33.0	9.0	10.4		24.8	43.3	9.8	8.4	8.5	40.1	9.0	9.8	58.4	18.6		
10.0		13.2	25.8	8.6	8.6		44.8	5.8	8.2	9.8	14.5	28.3	10.5	10.5	5.9	18.9		
9.7		13.7	24.7	9.7	9.7		50.8	19.0	9.0	10.5	16.5	6.1	10.0	10.0	14.4	52.6		
10.1		15.4	57.1	9.8	10.3		59.8	19.5	10.4	10.4	31.3	41.8	10.5	10.5	16.4	47.8		
9.6		21.2	42.5	9.5	10.4	44	1.3	50.7	8.8	8.8	31.5	18.9	9.2	10.6	19.4	31.6		
8.5		37.2	27.5	9.0	9.8		8.8	13.1	9.2	9.2	36.0	55.6	9.5	9.9	20.4	35.2		
10.1		50.0	18.6	10.4	10.4		11.3	38.2	10.2	52	0.0	9.3	9.2	9.2	21.4	34.7		
10.0	38	15.7	50.3	10.1	10.1		14.8	29.3	10.6	10.6	3.0	59.5	9.8	10.6	40.4	35.1		
9.8		18.2	22.3	9.5	9.0		20.8	15.9	9.1	9.4	12.0	12.8	9.4	10.4	50.9	34.3		
8.7		27.2	50.2	8.0	9.0		21.8	12.3	9.1	9.2	12.0	11.2	9.3	10.2	59.4	44.7		
9.4		34.2	44.3	9.4	10.3		27.8	29.8	9.0	9.0	25.0	26.3	9.3	10.2	0	9.9		
10.1		43.2	52.9	9.8	9.8		42.3	40.5	9.4	9.4	30.5	42.7	9.5	10.2	30.4	23.9		
8.9		48.7	51.8	8.7	10.0		57.8	4.8	9.5	9.5	51.2	0.8	9.5	10.4	36.9	40.8		
8.9		52.2	34.5	9.0	10.4		58.8	54.0	10.4	10.4	51.3	26.1	9.2	9.2	40.4	6.0		
10.3		58.2	0.4	9.5	9.0		59.3	45.5	9.4	9.9	53	0.5	8.8	8.8	46.4	38.4		
9.0	39	1.7	0.7	9.3	8.5	45	14.8	36.3	8.7	9.5	16.5	53.7	9.4	10.0	1	16.4		
10.2		8.2	43.3	9.8	10.4		42.8	32.3	10.0	10.0	17.0	33.4	7.8	7.8	18.4	8.0		
10.1		12.2	26.7	9.0	9.0		44.8	14.8	9.1	9.9	37.5	32.6	9.8	8.2	27.4	23.4		
10.3		12.7	8.5	10.3	10.3		48.3	9.8	10.5	10.5	43.5	59.6	9.2	9.2	40.9	4.9		
7.8		13.7	27.8	6.9	10.4		57.8	57.6	8.8	8.8	44.5	35.1	8.9	9.4	51.4	42.7		
4.4		15.2	29.6	4.0	8.7		58.3	48.5	9.3	9.4	55.0	28.7	9.3	9.4	53.2	57.8		
9.6		26.7	52.5	9.4	10.0	46	4.8	39.9	9.2	9.2	57.0	10.0	9.0	9.2	56.4	15.1		
9.6		28.7	18.5	9.5	7.7		14.8	57.6	9.0	9.0	2.0	38.6	9.5	9.8	56.9	15.3		
10.3		31.2	15.1	9.7	10.0		18.6	58.9	10.5	10.5	4.0	32.2	7.6	7.6	1.9	33.3		
8.9		33.2	54.0	9.0	9.7		18.8	12.9	9.4	9.6	11.0	17.8	9.5	10.0	17.4	42.7		
10.2		33.2	21.4	10.1	10.1		21.3	54.5	9.8	9.2	41.5	46.8	9.5	9.2	25.9	6.0		
7.9		35.2	33.5	8.0	8.4		22.3	3.7	9.0	9.2	46.0	5.8	8.9	8.6	41.9	27.5		
9.4		36.7	52.8	9.3	9.2		27.1	59.1	9.6	10.2	47.0	48.5	9.4	9.4	43.4	27.2		
10.0		37.2	28.7	10.0	10.0		31.3	11.0	10.2	10.2	55	20.5	10.5	9.6	50.9	34.1		
9.0		52.7	18.9	9.0	10.0		42.1	47.9	9.6	9.6	25.5	33.4	9.6	9.6	55.4	46.4		
9.7	40	1.2	30.5	9.5	10.0		44.6	28.3	10.6	10.6	42.3	56.0	10.6	10.6	56.9	4.0		
10.2		5.2	23.6	10.0	10.0		53.6	4.4	10.6	10.6	42.3	49.0	9.8	9.8	3	28.9		
9.1		11.2	14.9	9.3	9.6	47	8.4	26.9	9.5	10.6	45.3	41.8	9.4	9.4	41.4	25.5		
9.1		12.2	55.7	9.2	10.0		15.6	49.1	9.7	10.5	0.5	24.5	5.7	5.7	42.9	24.4		
9.8		17.2	12.9	9.4	9.8		18.6	56.2	9.8	9.8	2.0	52.6	9.7	8.6	4	21.4		
25pr.	+1	3'0	+0.8			+1	3'0	+0.6			+1	3'0	+0.3			+1	3'0	0.0

1081-1140.				1141-1200.				1201-1260.				1261-1320.					
6h.		-22°		6h.		-22°		6h.		-22°		6h.		-22°			
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s			
8.4	4	25.4	6.0	Cal	8.1	9.6		10.2	17	27.5	50.5	9.2	23	41.6	38.0	9.4	
10.2		29.4	11.5			7.7		10.2		28.3	27.1	10.2		44.6	14.0		
6.3		32.9	45.3	Gbl	6.5	10.1	1.3	9.5	10.2	33.3	14.0	9.2		44.6	14.4	a	
9.9		35.9	30.5		9.3	10.0		9.5	10.2	49.3	23.2	9.4		57.1	25.5	9.8	
8.6	5	17.4	20.2	a	9.0	10.2		9.0	9.0	59.8	11.1	8.9	9.8	24	2.1	34.2	
10.0		20.9	31.8		9.0	10.0		9.5	10.1	18	8.8	31.5	9.2		6.6	25.4	
10.2		26.4	48.5		9.1	10.2		9.5	10.2	11.8	43.8	10.2		6.6	46.4		
8.8		31.9	3.8	a	9.1	10.1		9.6	9.0	35.3	6.0	9.1	7.2	10.6	30.6	Gal	
10.6		46.4	20.6		9.3	9.3		9.4	9.3	40.8	1.0	9.3	10.1	17.1	9.1		
10.2		49.4	20.9		9.2	9.2		9.3	9.8	19	2.8	54.9	9.6	23.6	6.0	9.7	
8.9		51.9	23.3	a	9.4	10.0		10.2		7.5	59.0	9.6		24.1	25.3	9.5	
7.8		59.4	48.2	bl	8.7	9.3		9.5	10.0	8.8	8.1	9.8	10.2	32.1	39.5		
10.5	6	10.4	8.0			10.2		9.4	9.4	8.8	15.1	9.6		36.6	37.0	9.8	
10.5		12.4	29.0		9.0	9.0		9.0	10.2	9.8	21.5	8.9		42.6	37.7	9.5	
8.7		25.4	52.3	8.5 bl	9.1	9.2		9.4	10.2	27.8	14.5	9.6		52.6	47.9		
9.9		30.9	4.5		10.0	9.8		10.0	9.4	32.5	59.5	9.5	9.6	58.1	23.4		
8.8		32.4	46.6	al	9.2	8.8		9.1	10.0	41.8	22.8	9.4	25	7.6	21.1		
9.2		32.9	42.9		9.7	10.1		10.0	10.0	46.8	13.9	9.8	10.2	8.6	12.9		
10.0		45.9	12.1		9.2	10.2		9.2	9.2	49.8	19.0	9.0	10.2	9.6	39.7		
9.9		50.9	36.0		9.2	9.2		9.5	9.0	55.8	30.1	9.0	10.2	11.4	11.9		
9.6		51.9	7.8	a	9.7	8.2		8.7	10.2	58.3	26.4	10.2		15.5	7.8		
10.2		54.1	59.8		10.0	10.0		9.8	9.8	58.8	55.8	10.2		17.9	48.9		
10.6		56.5	23.3		8.2	22.0	3.2	Gcbl	7.2	59.8	0.5	9.8		7.7	22.4	Cal	
9.9		6.4	37.3		9.0	29.5	14.8		9.4	10.0	21.4	10.2		26.5	1.3	9.6	
8.2	7	17.4	21.0	bl	8.5	8.8		a	8.9	8.6	51.6	8.9	9.5	27.4	35.8		
8.2		17.4	31.8	al	8.5	10.0			9.4	38.3	55.4	9.5	10.0	32.9	21.3	9.8	
10.6		25.4	36.0		10.2	39.5	4.2		9.6	40.8	49.7	9.6	10.2	37.9	36.7		
10.5		43.3	1.3		10.0	42.5	32.0		9.6	44.8	52.8	9.2		39.4	7.5	9.5	
10.0		49.0	6.3		10.0	51.5	7.4		9.7	51.8	43.2	9.5	9.5	44.7	2.1		
9.9		50.3	35.0		9.0	59.0	2.3	a	9.5	57.8	37.5	10.2	10.2	49.4	20.9		
10.4		50.3	37.9		10.0	15	0.0	52.4	10.0	21	9.8	16.4	9.6	52.4	0.3	9.7	
9.6	8	0.3	23.0		8.9	6.0	46.5		9.5	8.6	49.9	9.0	9.8	26	12.9	14.9	
9.9		5.7	6.4		9.8	10.1	9.5	14.4		9.3	18.8	7.0	9.5	9.8	17.4	22.4	
10.2		8.3	17.5		9.6	10.0	12.0	9.6	10.2	20.8	55.3	10.2		9.5	26.4	43.3	
8.8		10.0	30.9		9.2	10.2	22.0	58.0		9.3	22.3	35.2	9.1	9.6	26.4	7.7	
10.6		12.8	5.0		10.0	23.0	39.5		9.0	26.3	31.8	9.5	10.1	27.9	17.9	9.7	
9.4		16.8	14.6		9.8	9.6	31.0	10.3	a	10.1	33.3	49.0	9.5	9.6	35.4	5.1	
9.2		17.0	45.0		9.2	9.8	39.0	35.9		9.3	35.8	2.2	9.7	9.2	37.4	3.7	
10.0		26.8	12.3		9.4	9.4	52.0	37.3		9.5	52.8	35.1	9.5	10.2	49.4	8.5	
10.0		29.4	51.1		8.5	52.5	17.1	Cb-1	8.4	10.2	58.8	14.9	9.8	27	5.4	19.0	
10.5		36.7	4.8		10.1	56.0	2.0		9.5	9.0	59.6	32.3	9.2	10.0	7.4	39.3	
9.5		52.0	17.9		9.7	10.0	0.0	51.4		8.7	59.6	47.7	8.9	10.0	34.1	14.3	
10.1	9	3.1	40.3		9.8	10.0	1.5	22.5		8.1	11.6	3.0	9.5	10.2	35.6	57.3	
9.0		5.1	51.2		9.3	9.8	3.5	45.0		9.4	11.6	26.4	9.0	9.0	35.9	48.6	
8.6		18.6	11.0	GCal	8.4	10.1	4.8	59.3		9.3	15.6	23.8	9.5	9.4	36.4	3.5	
10.0	10	1.6	11.9		10.0	15.5	44.4		10.1	16.6	50.9	10.2		42.4	30.3	9.8	
10.1		24.1	9.5		8.8	17.0	9.0		Cal	8.8	17.6	46.4	10.2	8.5	54.9	30.9	
8.5		25.6	9.2	Gal	8.7	9.2	26.5	7.5		9.5	32.1	41.9	10.1	8.5	57.1	50.3	
10.1		33.1	42.7		9.2	9.2	28.0	40.9		9.4	35.6	33.0	9.8	8.6	57.1	50.3	
10.0		39.1	9.5		9.8	10.2	41.5	14.8		9.0	38.6	1.6	9.1	10.4	19.9	53.7	
9.0		43.1	42.4		9.0	8.9	51.0	53.2		9.4	41.6	59.9	9.6	9.0	24.6	46.9	
10.1		44.1	44.5		9.4	10.2	17	0.5	58.6		41.6	3.0	8.8	8.8	26.1	36.1	
10.1		50.1	21.1		9.8	9.8	2.0	28.4		9.8	58.4	57.1	8.7	8.7	37.6	10.3	
10.0	11	7.6	41.0		9.5	8.4	2.0	11.3	Cal	8.6	9.8	15.5	9.4	9.4	43.8	47.9	
9.8		16.1	28.0		9.5	10.2	3.0	10.7		10.1	10.1	51.1	10.1	10.1	56.3	16.4	
10.2		16.6	34.1		9.4	9.4	6.0	50.0		9.2	10.6	20.3	9.3	10.0	29	17.8	
9.6		20.1	25.1		9.4	8.8	12.0	32.2	al	8.6	12.1	36.3	9.5	9.8	26.3	36.7	
8.9		46.1	23.6		9.0	9.4	12.5	35.8		10.1	12.1	50.8	9.4	9.4	39.3	52.1	
10.0		47.1	46.6		9.0	8.9	21.0	12.9	a	9.2	18.1	50.0	9.4	9.4	42.3	13.5	
7.9		48.1	39.8	GStlπ	7.0	10.2	23.0	26.0		9.4	22.6	39.1	9.5	10.0	48.8	38.7	
25pr.	+1	3.0	-0.3														
	+1	3.0	-0.5														
	+1	3.0	-0.8														
	+1	3.1	-0.9														

1896AnCap...3.....1G

1321-1380.					1381-1440.					1441-1500.					1501-1560.					
mag.	6h.	-22°			mag.	6h.	-22°			mag.	6h.	-22°			mag.	6h.	-22°			
5.3	29	49.8	51.9	5.0	9.8	34	15.9	56.4	9.7	4.0	36.3	59.5	9.5	45	37.3	35.2				
9.0		52.3	42.5	a	9.2		15.9	35.2		10.2	43.8	17.7	10.4		38.8	14.2				
9.0		52.3	34.1	a	9.1		31.7	8.3		9.0	45.8	55.4	9.1		9.4	39.3	49.8			
10.3	30	8.3	9.7	GC-	6.9		8.6	47.5	a	8.3	4.1	1.3	4.5	10.1	10.4	40.5	33.0			
7.9		13.3	0.7			35	2.4	7.7		9.3	9.3	3.8	19.9	9.0	10.4	41.3	33.0			
10.4		17.5	22.3				9.4	2.4	39.4		10.3	8.3	31.7		10.3	42.8	18.3			
10.2		23.3	16.9				9.4	6.9	32.0		9.3	24.8	3.5	9.3	9.4	45.8	20.8		9.8	
9.5		26.3	26.5	a	9.1		10.4	26.4	13.8		10.2	26.3	18.7		9.4	48.8	49.7	a	9.5	
9.8		44.3	8.1		9.5		10.4	31.9	53.5		10.2	30.3	9.9		10.1	49.3	55.5			
10.3		45.3	30.4				10.4	48.2	16.2		9.5	31.3	4.9		9.3	51.3	5.0		9.6	
10.4		46.3	12.5				9.4	49.9	48.9		9.2	41.8	37.8		9.3	10.4	46	3.8	53.6	
9.8		53.3	52.7		10.1		10.0	58.4	17.0		10.2	44.3	43.3		10.4	6.3	1.4			
10.3		54.8	47.9		10.1	10.2	36	3.4	23.3	Cal	8.2	47.3	32.7	b-1	8.7	9.8	10.8	3.3	9.5	
9.4		58.8	48.1		9.7	8.8		3.4	5.8		10.3	52.3	9.9	8.0	Gal	9.1	14.1	56.6	9.2 a	
10.3		3.5	16.8		10.4	10.4	33.4	56.1		8.7	42	1.3	55.2	8.0	Gal	8.5	16.0	2.6	9.4	
9.0	31	4.8	26.1	a	9.2	10.3	37.4	32.7		8.6	8.6	2.3	20.1	-	9.1	10.4	31.8	54.8		
9.0		8.8	50.0		9.4	8.5	42.9	21.9	b	9.0	10.3	9.8	12.5		10.0	10.0	34.3	19.4	9.7	
10.4		8.8	42.3		10.0	9.0	49.9	54.1		9.5	9.8	21.3	11.9		10.3	10.3	35.8	17.7		
9.5		13.3	13.0		9.8	9.0	50.9	17.9		9.4	9.6	21.3	47.8	:	9.4	8.3	37.8	9.2	Cal	
9.0		14.3	14.9		9.4	7.8	52.9	19.4	al	8.5	9.8	21.8	31.1		9.5	10.4	43.8	16.5		
10.2		17.3	5.9		9.5	59.9	22.9			9.2	9.8	26.3	51.9	9.5 b	9.2	10.2	43.8	36.7		
10.0		21.8	26.8		10.4	37	2.9	47.0		10.1	8.2	30.0	2.1	C-	8.7	8.9	44.3	3.9	a	
9.2		26.3	42.0		9.2	10.0	2.9	57.7		9.5	10.4	43.3	15.1		10.3	10.3	46.0	25.7		
10.3		26.4	36.6		10.4	10.4	4.4	6.6		10.1	10.4	52.8	53.8		9.0	9.0	51.3	32.9	-	
7.0		26.4	30.6	Gal	7.0	8.5	6.4	14.4		8.7	10.4	43	5.8	14.1	9.8	47	1.8	57.1		
8.8		38.4	9.7	Gal	8.3	10.4	18.4	20.1		9.4	9.4	11.8	27.6		9.4	9.2	5.3	3.0	a	
9.0		39.9	54.5		9.0	9.0	22.9	39.9	Gbl	9.3	9.3	15.8	46.9	a	9.3	10.4	8.8	8.9		
9.0		40.4	54.3		7.0	7.0	30.4	19.8		6.8	9.5	15.8	23.4		9.6	10.1	15.3	39.3	9.4	
10.2		41.4	21.8		10.2	31.4	49.5			9.5	9.6	16.8	38.7		10.0	10.0	23.8	12.7	9.4	
10.4		46.4	44.9		9.8	56.9	38.5			9.5	8.6	21.3	45.1	a	8.8	7.6	32.3	53.7	8.5 Gal	
10.2		59.6	0.7		10.4	38	2.2	18.6		10.4	31.8	8.6			10.3	10.3	36.0	15.7		
10.1		59.9	40.1		10.4	8.8	1.5			9.8	9.6	32.3	30.6		10.1	9.3	41.3	14.6	9.4	
9.4	32	1.9	32.0		9.8	9.3	18.4	41.3		9.4	9.6	33.3	3.5		9.8	9.2	42.7	57.6	9.0 a	
10.0		4.4	33.5		10.1	10.1	20.2	34.2		9.3	9.3	33.8	28.6		9.6	9.6	53.3	32.0	9.5	
10.2		4.9	50.9		10.4	10.4	35.9	5.2		9.2	9.2	42.8	14.6		9.6	10.4	55.0	0.1		
9.6		27.9	22.3		9.5	10.3	36.9	38.5		9.6	9.6	47.3	15.6		9.8	10.4	56.4	46.4		
9.6		29.9	29.1		9.8	10.4	45.4	56.5		9.8	9.0	47.8	34.0	a	9.0	8.8	48.9	48.9	a	
10.3		32.4	50.9		10.1	10.1	47.4	30.6		9.6	9.6	53.8	48.9		10.4	10.4	11.1	49.9		
9.4		40.9	59.3		9.5	10.2	48.4	3.7		9.5	44	0.3	33.5		10.2	10.2	11.1	26.8		
10.3		48.4	21.9		9.0	53.9	24.4			9.5	9.6	6.8	32.7		9.5	9.5	17.1	37.3	9.5	
10.2		51.4	40.5		8.6	57.4	26.9	a		8.5	10.2	10.8	22.2		9.8	9.0	25.0	16.8	9.3	
10.0		53.9	39.1		9.4	57.4	34.9			9.4	10.2	14.3	4.1		9.6	9.6	37.1	21.8	9.5	
8.6	33	1.9	39.5	al	8.7	8.8	58.9	20.3	a	8.4	9.0	20.3	42.5		9.3	8.5	38.6	10.4	C	
10.4		12.1	24.0		10.1	9.4	0.4	48.8		9.5	10.3	25.3	56.9		10.4	10.4	39.6	3.1		
8.8		13.9	55.7	G	9.0	8.6	4.9	18.2	a	8.5	9.4	27.8	17.6		10.3	10.3	42.1	12.5		
8.8		13.9	55.9	8.5 G	9.0	10.1	11.9	6.1		9.7	8.5	37.3	19.8	a	8.7	8.8	44.1	26.4	9.0	
10.4		16.1	23.3		8.8	12.4	39.1			9.1	10.3	41.8	46.2		10.3	10.3	56.1	19.9		
9.4		16.4	30.4		10.2	15.9	52.7			9.8	9.8	43.3	16.1		9.3	8.8	58.0	57.1	a	
9.6		16.4	53.3		9.8	25.9	26.3			9.8	45	2.3	46.6	a	9.2	8.7	49	2.1	C	
10.4		25.4	46.5		10.3	26.9	48.4			9.8	9.8	5.8	51.3		9.0	9.0	2.1	38.0	9.5	
10.4		32.4	31.1		10.2	32.8	44.9			10.3	11.8	14.8			9.6	9.6	5.1	52.7		
9.2		33.9	16.2		9.4	40.3	26.9			9.1	12.8	55.9			8.6	8.6	7.1	53.5	Ga	
10.2		41.9	47.3		10.3	45.8	9.9			9.5	10.3	15.3	42.0		9.4	9.3	10.1	53.9	9.3	
9.3		41.9	52.1		9.8	10.3	45.8	35.3		10.3	9.3	20.3	3.2		9.4	10.4	15.4	57.1		
10.4		42.4	4.7		10.2	49.8	56.9			10.3	10.3	20.3	52.1		10.4	10.4	15.6	36.1		
10.3		51.9	46.4		10.4	40	14.8	23.9		8.6	8.6	26.8	51.0	9.5 a	9.2	10.0	18.6	35.1		
9.8		56.4	19.3		9.5	10.4	15.8	31.9		9.0	9.0	31.8	32.3		9.1	9.2	25.1	15.0	9.7	
10.2		57.4	7.3		10.3	25.8	37.2			10.0	10.0	32.3	11.2		9.3	10.4	25.1	39.8		
10.1	34	9.1	8.8		10.2	27.3	47.1			10.1	10.4	35.8	24.6		9.4	9.4	27.1	38.8	9.5	
10.4		12.9	8.3		9.4	31.8	34.2			9.3	9.4	36.8	47.9		9.5	8.9	30.1	36.7	9.0	
25pr.		+ 1 31	-1.2			+ 1 32	-1.4				+ 1 32	-1.6				+ 1 33	-1.7			

1561-1620.				1621-1680.				1681-1740.				1741-1800.			
6h.		-22°		6h.		-22°		6h.		-22°		6h.-7h.		-22°	
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s
10.2	49 34.6	7.9	9.8	8.9	53 21.3	22.0 a	9.1	10.3	56 5.6	19.8	10.0	10.3	59 57.4	16.6	9.5
9.0	35.4	1.1	9.2	10.2	22.3	22.0	9.5	9.8	5.6	3.6	10.0	10.3	0 1.4	13.0	9.8
10.2	36.6	39.5	9.2	9.2	25.3	56.9	9.1	9.8	9.6	11.2	10.0	10.0	2.4	42.8	9.5
8.5	43.1	46.9 a	8.4	10.4	26.8	45.4	9.1	10.4	12.6	19.6	10.0	10.2	2.9	31.0	9.5
10.2	44.6	44.4	9.8	9.2	26.8	22.0 a	9.1	8.9	12.6	23.1	9.3	9.6	5.9	1.9	9.5
9.7	51.1	41.5	9.5	9.9	38.3	34.6	10.0	9.1	15.1	29.0 a	9.0	10.4	5.9	31.4	9.8
9.6	50 6.1	27.9	9.8	10.2	45.3	54.0	10.0	10.4	15.6	35.2	9.5	10.3	8.4	42.4	9.5
9.8	11.1	57.1	9.5	9.2	48.3	15.5	9.5	9.2	16.6	28.9	9.5	9.7	13.9	50.7	9.5
10.2	12.1	25.0	10.2	10.2	50.3	20.6	10.2	10.2	17.1	37.3	10.3	10.3	15.9	55.7	9.5
9.8	12.1	2.6	9.5	10.4	54 2.3	23.4	9.2	9.2	20.1	59.3	10.3	10.3	16.0	46.1	10.0
9.7	17.1	13.5	9.2	9.2	3.9	5.9	9.7	9.4	21.6	43.4	9.4	9.6	18.4	36.2	9.8
8.9	21.4	2.1 C	8.7	8.5	4.3	38.7	8.8	9.4	22.6	43.6	9.5	9.6	18.9	16.0	9.5
9.1	29.6	13.9	9.1	9.8	5.4	49.7	8.5	9.1	26.1	31.3	8.7	9.4	22.9	39.5	9.8
5.6	31.6	46.9 Gblβ	6.0	10.3	5.4	45.5	8.5	8.5	31.6	55.7 a	9.5	9.8	32.9	1.9	9.0
8.8	42.1	51.1 9.0 a	8.9	9.8	5.4	20.7	9.5	10.3	39.6	21.3	9.5	8.8	39.3	53.0	9.5
10.4	52.6	22.1	9.6	9.6	9.4	13.5	9.2	9.2	43.1	49.3	10.4	10.4	40.9	5.7	9.5
9.0	56.1	19.6	9.4	9.7	12.4	32.8	9.5	10.4	45.6	50.2	9.3	9.3	42.4	5.0	10.0
10.3	51 5.6	52.7	10.3	10.3	12.9	53.3	10.0	10.0	55.6	47.8	10.2	10.2	43.9	30.3	9.6
9.7	7.6	8.4	9.7	9.7	14.9	24.7	9.8	9.9	57.6	28.8	9.6	9.6	47.9	14.4	9.6
10.0	7.6	13.3	9.7	9.8	15.1	1.6	9.7	9.4	57.6	17.5	9.0	9.0	48.4	16.2	9.4
9.3	12.1	48.7	9.5	9.2	15.9	28.9	9.4	9.2	57 5.6	19.0	9.5	9.6	50.9	41.5	9.4
8.8	16.1	21.4	9.0	8.8	19.4	56.0 Ga	8.3	9.4	9.6	35.1	9.5	10.0	52.4	25.2	9.5
8.6	17.6	28.9 b	8.0	10.0	25.4	12.6	10.4	10.4	12.7	59.1	10.2	10.2	55.9	44.5	9.8
8.9	19.1	28.6 a	9.0	9.1	28.4	31.0	9.5	10.2	12.8	12.0	10.4	10.4	58.9	24.2	9.0
9.2	22.1	48.2	9.5	10.4	29.7	2.4	10.2	10.2	19.8	35.2	10.4	10.4	3.4	38.0	9.5
9.9	22.1	43.2	8.9	8.9	32.4	4.4 a	9.1	9.4	28.8	55.7	10.3	10.3	7.4	0.1	9.8
9.6	25.1	30.1	9.7	10.3	32.4	18.1	10.2	9.4	33.3	28.0	9.2	9.2	7.6	57.8	9.8
10.3	31.1	43.0	10.3	10.3	32.9	43.3	10.2	10.2	42.8	56.0	9.8	9.8	8.9	14.2	9.0
10.4	39.1	51.6	10.4	10.4	35.4	19.6	10.4	10.4	48.9	46.9	8.8	8.8	9.9	54.0 9.0-	8.5
10.4	40.6	19.6	8.4	8.4	45.9	32.8 a	8.7	10.3	49.3	51.1	9.8	9.8	12.9	2.2	9.3
9.7	42.6	44.3	9.4	9.3	46.4	3.9 a	9.2	8.6	51.3	38.1 a	8.4	8.9	15.9	48.2	9.3
9.6	46.1	4.4	9.9	8.6	46.9	50.2 al	8.5	9.3	55.8	23.0 a	9.2	10.2	17.9	38.1	9.7
10.3	49.1	7.9	8.9	8.9	52.4	32.8 a	9.0	9.2	55.8	27.2 a	9.1	9.4	21.4	1.9	9.8
6.9	56.1	2.4 GCb-1	7.1	9.3	54.4	27.9	10.2	10.2	56.8	47.3	9.4	9.4	32.9	23.2	9.8
10.3	59.6	29.9	9.8	9.8	56.9	0.7	10.0	10.0	57.2	56.6	10.4	10.4	51.9	5.7	9.8
10.0	52 5.3	28.7	9.1	9.1	55 0.9	53.5	9.5	9.0	59.8	52.3 9.0	9.0	10.3	52.2	18.1	9.1
10.4	12.8	47.3	10.3	10.3	2.4	50.7	8.7	8.7	58 6.3	23.2 a	8.5	9.0	53.7	0.9 a	9.4
10.2	16.3	3.5	9.7	9.7	5.4	4.3	9.8	9.8	11.8	30.7	9.8	9.0	2 9.2	46.9	9.3
8.2	20.5	59.6 8.0 Gbl 8.0	8.6	8.6	11.4	28.2 al	8.0	9.7	13.3	59.0	9.8	9.4	10.7	41.2	9.3
10.0	23.8	21.5	10.0	10.0	14.9	59.0	9.0	9.0	23.3	46.3	9.1	9.4	12.2	38.1	9.3
9.2	26.8	25.5	9.5	8.8	19.9	56.4 a	9.2	10.4	36.9	51.1	9.9	9.9	12.2	23.0	9.0
10.2	32.3	23.6	9.2	9.2	21.4	14.8 a	9.3	10.4	37.3	45.1	10.2	10.2	22.2	43.0	9.7
9.6	32.8	10.3	9.7	10.0	21.4	27.6	10.4	10.4	37.3	33.4	8.8	9.4	23.7	13.2 a	9.0
10.0	36.3	9.6	9.9	9.9	25.4	28.5	8.9	8.9	41.8	7.8	10.4	10.4	28.7	18.7	9.5
9.1	38.8	8.6	9.7	9.0	26.6	22.0	9.5	10.0	42.8	8.0	9.8	9.8	31.2	9.1	9.5
10.4	39.3	36.2	9.4	10.2	27.6	29.2	9.5	10.0	46.3	58.2	9.8	9.8	32.7	33.3	9.7
9.2	40.3	51.1	9.8	8.6	32.1	12.5 Ca	8.4	9.8	55.8	11.2	10.4	10.4	36.2	37.2	9.0
10.3	45.3	23.9	9.6	9.6	35.1	26.5	9.3	9.0	59 0.8	34.0 a	9.0	10.4	38.2	41.1	9.0
8.4	45.8	42.5 a	9.1	10.4	37.2	58.6	10.0	10.0	1.8	15.5	9.6	9.1	39.4	2.2 a	9.0
10.3	53.3	37.6	10.4	10.4	37.6	44.2	9.8	9.8	2.8	34.5	9.4	10.0	41.2	42.7	9.0
10.3	56.8	53.1	10.2	10.2	43.6	41.3	10.3	10.3	10.8	36.1	8.8	8.8	56.7	14.7 a	9.0
9.9	57.8	4.9	8.7	8.7	45.6	20.9 a	9.0	9.6	12.8	17.2	9.5	9.0	3 3.2	36.8	8.9
10.0	53 0.3	46.7	8.6	8.6	47.6	50.5 a	8.7	10.3	20.8	20.8	9.5	8.7	3.2	12.7 a	9.0
10.4	3.3	59.6	9.6	9.6	49.6	58.5	9.5	9.3	21.8	41.0	9.5	8.6	16.2	57.7	9.0
9.3	7.3	18.3	9.4	10.0	51.6	3.6	10.3	10.3	34.3	28.5	9.8	9.8	18.2	25.3	9.5
9.4	8.3	47.3 a	9.4	9.6	51.6	54.2	9.5	10.3	38.3	41.0	10.0	10.0	21.0	57.1	9.1
9.8	8.8	40.1	9.7	9.7	57.6	34.6	10.3	10.3	40.3	10.0	8.8	8.8	26.2	52.3	9.4
10.4	13.3	39.0	8.8	8.8	56 1.6	24.0 a	9.3	10.2	52.1	58.8	10.0	10.0	28.2	20.5	9.4
9.8	16.3	51.6	9.6	10.4	2.6	48.1	10.0	10.0	54.9	19.3	8.7	8.7	33.7	30.1	9.0
10.3	16.8	32.6	9.6	9.6	4.6	9.4	9.3	9.3	55.4	52.4	9.5	10.4	36.2	30.8	9.0
2.5pr.	+1 3.3	-1.9			+1 3.3	-2.0			+1 3.4	-2.1			+1 3.4	-2.2	

1801-1860.			1861-1920.			1921-1980.			1981-2040.						
mag.	7 ^h	-22°	mag.	7 ^h	-22°	mag.	7 ^h	-22°	mag.	7 ^h	-22°				
10.4	3	36.2	35.5	10.4	6	47.6	20.5	9	53.3	46.2	a				
9.8		36.2	0.2	9.5	10.4	47.6	24.6	10.1	56.3	54.8					
10.4		49.2	6.4	9.4	9.8	50.4	3.1	10.3	56.3	41.5					
9.8		50.2	34.9	10.2	10.2	52.1	19.5	10.3	57.3	37.8					
10.4		52.2	25.9	10.0	10.0	52.1	29.3	9.4	10	2.3	20.0				
10.4		57.2	52.1	8.6	8.6	54.1	46.5	8.5	9.0	9.3	37.5	b			
10.4		1.2	44.5	9.7	9.7	54.6	26.2	10.4	9.8	24.9					
8.9	4	2.2	34.2	9.0	9.7	7	3.6	9.3	15.3	26.3					
9.9		2.2	27.0	9.8	9.0		7.6	9.6	15.3	7.2					
8.8		3.2	17.6	8.9	10.4		13.6	9.5	17.8	3.3					
10.4		3.7	42.5	10.4	10.4	20.6	18.1	10.3	20.0	1.1					
10.2		10.2	28.9	8.5	8.5	22.8	42.1	8.8	10.3	21.3	29.6				
10.2		11.2	44.3	9.9	9.9	25.1	49.5	9.4	9.4	22.3	12.4				
9.8		12.2	40.8	9.8	9.8	27.3	17.1	10.4	10.4	26.8	18.0				
9.8		13.0	58.1	8.8	8.8	33.3	38.9	9.0	9.6	29.3	7.1				
10.2		13.5	14.9	9.8	10.4	37.6	10.9	10.8	9.8	29.8	58.9				
10.0		15.5	45.0	8.5	8.5	48.0	40.1	9.1	10.3	31.3	49.9				
9.3		18.5	49.3	9.6	10.4	48.1	23.3	10.0	10.0	32.3	44.2				
10.2		19.5	33.5	10.2	10.2	50.6	46.3	9.4	9.4	33.8	24.7				
10.3		20.5	11.0	10.4	10.4	52.6	24.2	10.3	10.3	38.3	27.2				
9.2		22.5	27.9	9.3	9.6	53.0	32.7	9.4	9.4	50.3	5.6				
9.4		23.5	19.3	9.5	9.3	56.6	10.1	10.0	10.0	52.3	5.4				
9.0		24.0	4.3	9.0	10.4	59.0	21.1	9.3	9.3	52.3	24.2				
8.8		27.5	48.5	8.7	10.4	8	3.6	10.2	10.2	55.3	42.1				
9.8		31.0	36.5	9.5	8.1	6.1	27.7	6.0	9.5	58.2	57.0				
10.4		33.5	11.1	10.4	10.4	8.6	43.7	9.1	9.1	59.0	2.9				
9.4		38.0	23.1	9.8	9.8	12.6	47.7	9.4	9.4	11	0.7	a			
10.3		38.5	11.9	10.4	10.4	13.1	46.5	10.0	10.0	2.2	31.4				
9.4		56.5	11.9	9.4	9.4	16.5	50.4	9.4	9.7	4.2	8.2				
10.4		56.5	8.5	9.9	9.9	19.3	24.9	9.5	9.7	5.2	56.5				
9.9		57.5	36.6	9.6	9.4	21.3	13.3	9.5	9.0	6.7	3.0				
9.8		58.0	41.6	9.4	10.1	22.3	45.5	9.8	9.8	7.2	55.1				
10.2	5	3.5	19.1	10.4	10.4	28.5	28.4	9.4	9.4	8.5	59.5				
10.2		3.8	59.1	9.8	10.0	31.5	41.6	9.9	9.9	10.2	7.4				
9.7		7.0	46.1	9.4	10.4	32.5	56.6	9.0	9.0	11.5	2.8				
9.2		13.5	56.1	9.4	10.4	35.5	55.3	10.0	10.0	12.2	52.6				
10.2		18.5	17.9	9.8	9.6	41.0	42.5	9.4	9.4	14.2	32.9				
10.4		19.5	40.9	10.1	10.1	45.5	33.8	9.2	9.2	21.2	30.4				
9.4		22.5	5.1	9.6	10.3	46.5	29.8	9.1	9.1	22.2	35.5	a			
10.2		26.5	19.9	10.4	10.4	46.5	51.5	9.9	9.9	25.2	30.2				
9.4		26.8	2.1	9.6	10.1	46.5	36.0	10.4	10.4	26.2	18.0				
9.1		33.5	19.7	8.7	9.2	48.0	28.9	9.1	10.4	31.2	8.5				
10.4		36.3	1.7	10.3	10.3	54.0	46.9	10.0	10.0	32.7	25.8				
9.3		53.5	19.7	9.0	8.8	54.5	27.8	9.0	9.8	36.2	32.0				
9.0		55.5	46.9	9.0	10.1	57.5	32.2	10.0	10.0	37.2	33.4				
10.4		59.5	22.2	10.4	10.4	9	7.1	8.9	8.9	37.7	51.3				
9.4	6	2.5	39.5	8.6	8.6	13.5	43.7	8.5	10.3	38.2	27.3				
10.4		3.5	26.7	8.9	8.9	18.5	20.2	9.0	9.4	38.7	9.8				
10.2		8.5	11.9	9.7	10.0	23.0	1.5	9.4	9.4	45.7	21.3				
9.1		12.5	23.9	9.0	10.1	25.3	20.5	9.5	9.5	46.2	28.0				
9.9		13.5	9.7	9.5	10.1	26.3	8.5	10.4	10.4	46.7	47.2				
10.3		13.5	25.1	10.2	10.2	26.5	24.3	10.0	10.0	51.2	41.2				
10.0		22.5	33.8	9.6	9.6	28.8	37.6	9.9	9.9	51.2	29.3				
9.9		23.0	4.8	9.5	10.2	39.8	8.9	9.0	9.0	57.2	25.9				
10.4		24.6	1.3	9.8	10.4	40.8	17.9	9.6	9.6	12	0.5				
10.4		26.1	0.9	10.0	10.0	43.3	3.1	9.0	9.0	1.7	51.1				
9.9		27.1	14.1	8.7	8.7	46.8	33.7	8.0	8.0	2.2	14.2				
10.4		39.8	57.1	10.0	10.0	48.8	32.8	10.3	10.3	2.2	4.0				
10.4		45.1	45.9	10.0	10.0	50.3	35.9	8.3	8.3	12.7	29.0	a			
10.3		46.6	12.1	9.7	9.7	52.3	42.6	8.7	8.7	13.7	36.4	a			
25pr.	+1	3.5	-2.3			+1	3.6	-2.4			+1	3.6	-2.5		
													+1	3.7	-2.7

2041-2100.			2101-2160.			2161-2220.			2221-2280.								
mag.	7h.	-22°	mag.	7h.	-22°	mag.	7h.	-22°	mag.	7h.	-22°						
10.1	15 16.1	57.5	8.6	18 17.7	39.6 a	9.0	9.8	21 0.2	47.4	9.3	23 50.4	38.3 a	9.4				
9.2	18.0	23.6	9.3	9.9	18.8	17.7	9.4	0.7	57.2	9.7	10.0	56.4	38.4				
9.1	21.0	30.9 a	9.3	10.0	20.2	2.6	9.6	2.1	32.5	9.9	9.9	57.9	28.7				
10.0	25.0	33.7	9.6	9.6	20.3	43.7	9.1	10.1	2.2	7.8	9.4	24 4.4	9.6	9.7			
9.8	27.0	29.9	9.7	8.9	20.8	46.7 a	9.1	10.3	4.0	1.0	9.7	7.4	50.6				
10.3	32.0	23.1	10.0	10.0	23.8	7.2	9.5	8.7	46.9	9.7	9.7	9.4	10.1	9.7			
10.0	32.0	58.5	9.6	9.6	24.8	15.0	10.0	9.7	21.5	9.8	9.8	14.4	51.2				
7.0	35.0	37.0 Gal	6.8	8.4	24.8	37.4 a	8.8	10.4	14.7	31.2	10.3	17.4	32.8				
9.8	37.5	15.3	10.0	9.8	28.5	59.0	9.6	18.2	10.1	9.3	10.0	28.6	57.0	9.4			
9.1	38.5	56.1	9.3	10.4	33.8	7.9	10.3	18.2	13.7	9.5	9.5	32.4	30.8	9.1			
9.1	41.5	38.7	9.4	10.4	34.3	51.1	10.4	18.7	52.8	5.6	32.9	45.9	Ga	6.0			
9.9	56.0	43.8	9.3	10.3	49.8	19.0	7.7	20.7	50.0	b-1	8.0	9.0	36.4	18.4	9.0		
9.4	56.5	43.2	10.1	10.1	50.3	27.3	9.9	21.2	9.1	9.6	9.6	40.4	31.1				
10.0	57.0	12.8	10.3	10.3	50.8	30.6	10.0	29.2	52.8	9.4	9.4	40.9	13.8	9.7			
9.4	16 0.0	20.6	8.8	51.8	7.2	C-	7.6	9.2	31.1	39.3	9.8	9.4	46.4	14.7	9.2		
10.3	3.0	20.4	10.3	52.8	36.4	9.4	9.4	31.2	44.2	9.3	10.2	46.4	26.1				
9.8	6.0	32.0	9.8	53.8	58.9	9.5	10.4	32.6	43.0	10.4	10.4	46.9	40.4				
9.8	6.0	14.3	9.8	58.8	23.3	9.4	5.7	41.6	50.1	Gbl	6.0	10.4	48.4	52.8			
8.9	7.9	7.5	9.3	6.6	59.3	40.1	Gal	6.7	9.4	41.6	47.0	-	9.3	9.2	58.4	4.0	9.8
10.0	15.4	48.9	9.8	19 0.8	37.4	9.4	10.4	45.6	39.1	9.4	9.4	59.9	12.7	9.8			
9.3	17.4	16.2	10.0	10.0	0.8	23.2	9.4	46.6	29.0	9.3	10.3	25 4.9	35.2				
9.6	22.9	46.5	10.0	10.0	4.8	2.2	9.6	52.6	42.3	9.7	9.7	6.4	46.0	9.5			
9.8	24.4	47.0	10.0	10.0	5.8	16.4	9.8	22 0.1	3.8	10.4	10.4	8.4	34.8				
9.8	24.9	59.2	9.3	8.8	47.8	10.0	4.6	41.3	9.8	9.1	9.1	8.4	41.8	9.4			
9.4	25.9	15.5	9.7	10.2	12.3	17.3	9.4	12.6	29.3	9.8	9.6	9.4	1.0	9.8			
9.7	26.9	26.0	9.5	9.1	14.8	44.8	9.4	10.4	15.1	12.0	9.6	10.4	10.7				
9.5	27.9	56.4	10.0	10.3	15.8	24.8	10.4	23.1	20.9	10.3	10.3	10.9	56.0				
10.2	33.9	13.8	10.3	15.8	20.1	9.6	6.4	23.6	36.4	Gbl	7.0	10.3	17.8	57.4			
10.0	41.9	34.7	9.6	18.8	2.8	10.0	10.1	27.6	48.0	10.3	10.3	17.9	58.7				
10.3	44.9	30.4	9.6	24.8	40.6	9.8	10.3	31.1	21.6	8.8	8.8	18.4	37.7	a	9.2		
10.3	52.9	43.6	10.2	26.8	32.2	10.2	32.1	2.2	9.8	9.8	9.8	18.9	45.7				
9.2	54.9	29.3	9.6	10.4	27.8	9.5	10.3	34.1	52.8	9.8	9.8	27.4	46.7				
10.3	56.9	10.3	8.8	35.8	38.2	a	8.9	10.3	35.6	18.8	9.6	31.4	7.9	9.4			
10.4	17 1.9	11.3	10.3	36.8	46.6	9.0	36.1	47.8	9.4	10.0	9.4	10.0	35.4	21.6			
10.1	8.0	57.4	9.8	44.3	14.6	9.4	37.6	8.0	a	9.2	10.0	35.4	10.7				
10.4	10.9	28.8	9.7	46.8	55.6	10.0	40.6	58.7	9.2	9.2	9.2	37.9	0.2	9.1			
8.8	10.9	47.2 a	9.1	10.4	46.8	34.0	9.1	53.6	30.2 a	9.2	10.3	50.9	44.2				
9.4	11.9	46.5	10.1	52.8	26.7	9.7	56.6	20.0	9.6	9.6	10.2	52.4	50.7				
10.3	12.4	5.8	9.6	53.3	40.9	9.8	10.0	59.1	15.9	10.3	10.3	52.4	39.5				
8.9	15.9	54.3 a	9.0	10.4	56.8	31.3	9.4	23 0.6	16.7	9.7	10.3	59.4	35.3				
9.2	17.4	10.9	9.3	9.3	57.7	17.2	9.8	10.4	2.6	46.6	10.1	26 3.9	19.0				
9.2	17.9	27.5	9.4	9.6	58.7	25.4	9.8	12.1	8.0	9.5	9.5	3.9	34.8	9.5			
9.4	20.9	30.6	9.8	10.4	18.7	26.4	10.4	15.6	3.6	9.8	9.8	4.4	43.7				
9.2	21.9	24.9	9.4	10.2	21.7	6.5	10.3	16.1	52.0	8.1	8.1	10.4	50.5	9.0 a	8.5		
10.4	22.4	47.9	8.6	27.7	36.8	a	9.0	9.6	17.1	48.2	10.0	10.4	14.4	54.0			
10.4	28.9	28.0	10.0	28.2	0.8	9.7	9.4	20.1	29.1	9.9	9.9	10.4	17.9	54.2			
10.3	35.9	22.9	10.4	30.7	52.8	9.6	9.6	20.6	25.2	9.9	9.6	19.4	37.2				
9.9	36.9	37.4	9.4	30.7	13.2	9.6	9.6	27.6	52.9	9.9	9.9	22.4	20.0				
9.4	41.9	5.6	9.6	9.0	30.7	5.8	9.4	10.3	27.6	36.9	9.9	29.4	35.9				
9.3	42.9	22.9	9.7	10.4	32.7	4.4	10.0	28.1	11.0	10.4	10.4	30.4	2.0				
9.5	46.9	56.3	9.4	10.0	35.2	33.8	10.4	28.4	21.2	9.0	9.0	31.9	17.2	9.2			
8.6	51.9	4.5	8.8	9.4	36.7	40.3	9.8	10.0	31.4	17.5	9.0	39.4	39.2	a	8.3		
10.4	53.4	12.7	9.9	37.2	54.2	9.9	9.8	31.9	51.9	9.9	10.3	40.4	59.5				
10.1	54.9	39.6	9.9	39.7	55.2	10.2	8.2	35.9	53.8	9.0 G.	8.7	10.4	44.4	35.0			
10.3	18 2.4	44.7	10.4	40.7	52.4	10.2	35.9	26.2	9.4	44.9	9.4	44.9	30.9	9.8			
8.8	2.9	25.8	9.1	10.4	41.7	16.0	9.9	36.4	36.8	10.3	10.3	46.4	9.7				
9.5	5.8	22.2	9.9	45.2	51.4	9.8	9.8	38.4	2.3	9.8	10.3	46.9	45.5				
9.5	7.3	28.6	9.4	47.7	31.4	10.0	10.0	43.4	48.7	9.1	9.1	49.4	12.8	9.4			
10.0	7.8	46.3	10.0	52.7	30.9	10.4	10.4	43.9	8.0	9.6	9.6	49.4	7.2	10.0			
8.9	14.8	16.5	9.0	9.4	56.7	57.6	9.8	9.9	46.4	34.3	10.0	9.6	51.4	0.0	10.0		
25PR.	+ 1 37	-2.8	+ 1 38	-2.8	+ 1 39	-3.0	+ 1 39	-3.0	+ 1 39	-3.0							

2521-2580.				2581-2640.				2641-2700.				2701-2760.			
7h.		-22°		7h.		-22°		7h.		-22°		7h.		-22°	
m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.
35	22.3	34.2		37	35.8	20.8		39	31.3	18.7		41	28.3	53.6	8.5 Gal 8.5
	22.3	41.3		9.8	36.8	23.1	9.5	10.0	32.3	13.9		9.2	30.3	16.4	9.3
10.2	27.8	43.9		10.4	36.8	43.4		10.4	36.3	15.3		9.6	32.3	23.4	
10.5	29.8	34.8		9.9	38.8	35.5		10.3	39.3	18.7		10.5	35.8	41.9	
10.5	30.8	46.8		10.3	39.3	37.7		10.5	39.8	8.7		9.2	39.3	45.2	9.5
10.5	31.8	58.9		10.3	40.0	40.0		9.4	40.3	3.1		10.4	41.8	58.6	
8.7	32.3	7.8	a	9.4	42.3	33.6		9.2	40.8	32.4	9.5	9.2	43.8	7.8	9.4
9.8	35.3	4.0		9.8	44.8	16.9		10.5	41.3	9.1		10.2	44.3	9.6	9.4
9.5	36.3	36.6		9.9	48.3	15.1		8.5	46.3	20.2	9.0	10.0	50.3	46.0	
10.5	37.0	29.5		9.2	53.8	5.2	9.5	9.2	47.3	53.4	9.2	5.8	50.3	12.8	GSk- 6.3
9.6	37.8	20.2		9.0°	54.0	54.8	9.0 b	9.0	47.3	6.2		9.8	57.3	58.6	
9.2	39.3	40.9	10.	8.8	54.8	49.9	9.5 b	9.0	51.3	25.7		10.3	58.6	58.7	9.8
9.8	42.3	44.5		10.5	55.8	35.3		9.0	54.3	16.9	8.7	10.0	58.8	47.6	
9.2	44.8	24.7	9.5	8.0	56.8	0.2	Cal	7.8	54.8	6.5	10.	10.1	58.8	12.3	
9.4	48.3	21.2	9.6	9.2	57.3	14.6		9.4	56.2	16.7		10.2	42	2.3	14.1
9.8	51.3	25.1		9.8	58.8	11.9		10.5	59.2	26.0	9.8	9.6	6.3	15.4	9.8
9.9	54.8	23.7		9.6	59.3	54.2		9.2	59.3	50.0		10.5	8.2	15.7	
10.5	54.8	48.9		9.2	38	3.8	54.8	10.0	9.4	59.3	15.0	9.8	9.6	15.3	18.1
10.5	56.3	50.2		9.9	4.3	30.9		8.7	2.3	1.2	a	8.9	9.8	18.3	33.5
9.2	57.3	42.0	10.	10.5	6.8	23.0		10.3	6.8	8.3		10.1	26.3	31.2	
8.2	1.3	2.8	GCal 6.8	9.0	7.3	9.3		9.3	9.8	9.8	52.6	9.8	31.3	44.5	
9.6	2.3	11.9		9.8	11.3	13.2		10.1	12.3	28.5		9.6	31.3	48.0	9.5
9.8	2.3	5.2	9.9	9.8	16.3	15.7		9.9	13.3	27.4		9.8	38.8	14.8	
9.9	5.5	1.8		10.3	17.3	45.4		10.3	18.3	8.2		9.4	39.3	16.9	
9.8	10.3	35.3		9.8	17.3	36.2		9.8	20.3	46.1		10.4	40.8	32.7	
10.2	12.3	0.7		10.2	19.8	51.8		10.4	21.3	9.5		8.3	41.8	2.4	C-
9.6	15.3	55.8	10.	9.1	20.3	14.0		9.0	26.3	47.9	9.6	10.4	44.1	58.3	8.5
9.8	15.8	32.8		9.6	21.8	28.6		9.2	31.8	43.2	9.0	10.4	44.3	41.2	
9.8	19.1	58.7		10.2	24.8	3.3		10.5	37.3	55.1		10.4	46.8	47.5	
10.3	21.8	56.4		9.9	26.3	12.3		10.4	39.8	2.2		9.8	50.3	40.6	
9.9	22.3	24.1		10.4	30.3	49.4		9.2	40.3	19.0	8.9	9.8	54.8	11.5	9.7
10.3	22.3	52.0		8.9	32.3	36.8		7.4	41.1	57.4	8.0 Gbl 8.2	10.5	59.3	2.1	
7.8	23.8	6.8	GChl 7.7	10.5	32.3	39.8		9.4	43.8	56.0		9.8	59.8	29.9	
10.5	24.1	59.0		9.9	36.1	59.6		7.7	44.3	50.2	7.5 Gbl 7.7	9.6	43	1.3	15.3
9.8	26.3	3.9		10.4	39.3	46.9		9.9	44.8	12.0		10.5	2.3	3.1	
9.8	27.3	11.5		10.5	39.8	47.4		9.8	50.3	7.3		9.9	2.8	43.5	
9.2	27.3	33.0		8.8	42.8	29.7		9.2	50.3	58.0		9.8	5.3	3.4	
10.3	30.3	13.1		10.2	46.3	38.6		10.4	51.3	54.3		9.8	8.2	13.3	
9.2	34.8	33.2	9.8	9.2	47.3	1.0		9.8	54.8	20.0		10.3	9.2	42.2	
10.0	36.3	0.5		9.8	47.3	8.2		10.5	55.3	31.0		9.6	9.8	21.5	9.3
10.1	38.8	20.7		10.2	49.3	39.8		10.3	56.3	30.4		10.5	11.3	29.0	
9.2	40.8	4.1	9.5	10.5	51.8	13.5		10.5	0.3	18.2		9.6	11.8	36.0	9.6
9.8	43.3	35.8		10.5	54.3	12.3		9.2	9.3	44.7	9.7	10.2	13.8	58.0	
9.8	43.3	28.0		10.0	54.8	8.7		10.4	13.8	15.8		9.8	14.8	33.2	
9.8	47.3	23.8		10.5	56.3	54.3		9.9	14.6	56.5		10.1	16.3	15.5	
10.5	49.3	24.6		10.3	39	1.3	53.5	9.8	14.8	1.2		9.2	21.3	47.0	
10.5	51.8	22.7		9.4	7.3	52.0		9.8	16.3	13.0		10.3	24.3	53.0	
10.5	57.3	50.1		9.6	7.8	2.9		9.2	17.3	24.5		9.2	26.3	26.4	9.5
9.6	37	2.3	37.6	10.5	8.3	56.1		10.4	17.8	32.0		9.2	28.8	49.2	9.7
10.4	4.3	38.2		9.8	11.8	39.9		9.8	20.3	33.4		10.2	31.3	36.7	
10.4	9.8	49.7		10.4	13.3	12.8		8.9	21.3	38.5	9.4	9.8	32.8	33.2	
8.9	11.3	6.7	a	9.2	17.8	33.0	9.4	9.6	21.3	54.6	9.8	9.2	32.8	55.1	
9.2	15.3	25.4		9.8	19.3	44.1		9.2	21.3	40.9		10.2	34.3	36.1	
10.5	15.8	10.7		9.2	20.3	29.4		9.9	21.3	55.5		10.3	36.3	57.7	
9.1	19.3	39.2	9.8	10.5	20.3	45.1		10.4	22.3	29.0		9.8	37.3	34.9	
9.4	20.3	26.8		9.5	22.3	54.9		9.9	22.3	55.0		10.5	39.3	9.5	
10.4	21.3	15.7		9.8	22.3	18.6		8.9	24.8	41.2		10.2	45.3	4.3	
9.2	24.8	32.8		9.6	28.8	33.6		10.4	25.8	9.9		9.9	46.8	52.8	
10.5	29.3	33.9		9.6	29.8	7.9		10.5	26.8	22.0		10.2	47.3	16.5	
9.0	31.3	26.6	9.1	10.2	31.3	13.2		9.8	26.8	40.0		10.0	48.9	32.6	9.8
25pr. + 1 4.2 - 3.4				+ 1 4.2 - 3.5				+ 1 4.3 - 3.6				+ 1 4.4 - 3.6			

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
mag.	7h.	-22°		mag.	7h.	-22°		mag.	7h.	-22°		mag.	7h.	-22°	
10.5	43	49.9	32.6	10.2	46	35.3	15.6	10.4	49	19.9	8.6	9.8	51	52.9	1.0
9.2		50.8	6.9	10.3		38.3	24.6	10.4		23.4	24.0	10.4		52.9	56.9
10.4		57.3	46.0	10.0		45.6	57.5	10.2		32.9	39.8	9.2		52.9	53.6
9.8		58.8	43.4	10.2		45.8	55.0	9.6		32.9	12.1	10.2		56.4	45.2
8.9		59.8	15.0	10.3		47.9	56.9	9.0		37.4	32.7	9.2	9.7	52	0.9
10.5	44	6.3	6.0	10.1		51.3	13.2	10.0		41.9	42.4	9.1		1.9	44.9
10.4		7.6	0.1	10.0		52.3	11.2	9.6		42.9	20.1	9.2		3.4	27.6
9.0		7.8	34.6	9.4	9.8	53.8	52.3	9.3		43.9	43.9	10.1		7.4	46.5
10.5		8.3	5.5	9.2	9.2	53.8	14.0	10.0	9.8	45.9	21.3	10.2		7.9	22.3
9.8		13.3	21.5	9.8	47	1.3	37.4	10.4		45.9	14.2	10.4		8.4	32.5
8.9		21.3	3.3	9.2		5.0	58.6	9.6	9.8	52.4	38.9	9.3		12.4	25.9
10.2		22.3	51.1	10.4		6.3	53.2	9.2		53.9	39.8	10.0		13.9	16.5
10.3		29.3	39.5	10.4		9.3	52.1	8.2		56.4	46.9	9.0	10.4	17.4	39.8
9.4		35.3	56.4	9.0		13.3	22.0	10.1	8.7	57.4	42.1	10.4		18.4	45.1
10.4		37.3	39.5	10.0		19.1	43.6	9.3		57.6	0.3	10.2		20.4	48.4
9.0		37.8	31.8	9.1	10.1	19.1	45.2	10.4		58.4	49.7	10.1		21.9	23.2
9.2		39.8	50.8	9.5	10.4	20.3	54.0	10.4		59.9	10.0	10.4		27.9	34.8
9.8		41.3	31.3	10.3		21.5	38.0	9.6	50	2.9	8.5	9.3		29.9	49.9
9.8		42.8	5.6	10.2		24.1	19.2	9.2		2.9	55.3	9.5	10.0	33.4	19.8
10.1		44.8	33.3	9.6		28.4	5.4	10.2		5.4	42.3	10.2		38.9	44.1
9.2		49.3	51.0	9.1	9.8	28.4	4.8	9.7	9.4	8.9	8.5	9.4	9.0	40.9	24.5
10.4		49.3	51.4	10.1		30.1	7.4	9.8		11.9	13.3	10.0		42.4	7.6
10.2		50.3	39.0	10.5		33.3	55.0	9.9		12.4	18.7	9.8		42.4	13.1
9.6		52.3	10.4	10.0		37.1	37.5	9.8		13.4	39.3	8.6		46.9	38.2
9.4		55.3	19.6	8.9		39.8	2.7	10.0	9.3	16.4	28.3	10.4		52.4	28.1
9.6		56.3	26.0	9.8		43.1	25.6	10.2	9.8	20.9	10.4	9.6		52.9	53.0
10.5		57.3	48.6	10.5		45.3	17.8	10.1		27.4	45.4	8.4		53.4	40.3
10.2	45	0.9	28.4	10.4		47.1	31.0	9.3		27.6	1.7	10.2	9.3	53.4	25.7
9.5		1.3	19.1	9.2		47.1	49.0	9.6	9.1	31.4	34.2	10.4		55.9	7.4
9.6		1.3	13.4	9.8		50.1	58.1	10.4		33.9	40.1	10.0	53	2.9	41.5
9.2		10.3	35.1	9.3	9.2	52.6	46.1	9.5	10.0	36.9	12.3	9.8	9.8	3.4	19.9
9.5		11.8	46.6	10.5		57.3	26.6	9.3		38.4	53.5	10.1		4.9	21.3
10.2		11.8	42.2	10.5	48	1.3	7.4	8.8		40.9	40.6	9.0	8.8	12.4	51.8
8.9		12.3	12.2	10.4		2.1	59.7	9.9		44.6	57.2	9.8		19.4	37.4
9.8		22.3	23.3	9.6		2.8	59.9	9.0	9.5	47.9	13.4	8.8	10.4	24.4	24.7
9.2		22.3	51.4	10.4		7.8	16.2	10.2		48.9	0.1	10.2		25.9	43.5
9.8		27.8	24.8	10.5		10.1	55.0	10.4		49.4	18.3	9.9		27.9	40.5
10.5		39.8	51.3	10.1		13.1	30.6	9.8		51.9	10.2	9.4	10.2	31.6	1.9
10.3		41.8	10.5	10.0		14.6	35.0	10.1		56.4	32.6	8.8		31.9	37.2
10.1		48.8	50.8	7.1		17.8	59.4	9.8		58.6	58.9	9.7		40.4	54.4
9.2		49.3	51.5	10. 7.5		19.3	51.8	10.2	51	0.4	58.3	9.3		41.9	49.5
9.9		50.3	53.2	9.5	10.0	20.3	35.8	10.4		3.9	12.6	7.2		44.1	58.4
10.3		50.8	0.1	10. 10.4		28.1	34.6	9.9		5.4	5.0	10.4		47.9	53.3
8.5		52.3	42.9	8.5	10.4	30.3	29.0	9.6		6.4	34.9	10.5		48.4	44.9
10.0		54.3	37.5	9.4		32.9	44.0	7.8	9.8	8.4	40.3	9.4		50.4	35.8
9.2		56.3	12.4	9.0	9.6	36.4	32.7	10.4		8.9	47.4	10.2		50.4	56.3
10.3		58.3	24.9	10.0		37.3	11.2	9.5	8.8	15.9	25.3	9.3	9.6	53.9	32.0
8.5		58.8	54.5	10.2		37.4	8.0	9.7	9.9	19.9	15.2	9.4	54	0.9	31.9
10.3		59.3	42.2	10.4		38.4	5.8	10.2		20.9	10.6	9.7	10.4	1.9	13.8
9.6	46	2.3	35.3	9.2		43.9	11.8	9.4	10.4	26.9	50.0	10.4		6.4	32.7
10.5		4.3	38.0	9.8		44.2	0.8	5.8		29.9	32.9	9.8		12.9	6.5
10.4		15.3	22.8	9.8		45.9	41.3	9.7		33.4	28.9	10.4		16.4	48.9
9.2		16.3	44.2	9.0	9.8	50.4	16.2	8.8		33.9	29.5	10.4		20.4	33.9
10.2		16.8	46.7	9.8		52.4	28.7	9.8		35.9	53.4	10.2		22.4	57.8
10.4		17.3	4.8	10.1		52.4	43.6	10.4		36.3	59.8	9.4		26.4	32.2
9.2		21.3	13.8	10.1		57.6	57.2	10.4	9.4	36.4	31.2	9.2		31.9	41.3
10.1		26.3	51.5	9.3		57.9	0.2	9.5	10.4	40.4	50.7	9.8		36.9	50.7
9.2		26.8	39.3	9.5	9.7	49	0.9	9.0		43.9	33.1	9.7		48.9	49.4
10.2		28.8	44.1	10.0		3.4	15.4	9.3		48.9	7.9	8.8	10.1	51.4	33.4
10.1		30.3	0.0	9.8		4.9	12.7	10.4		52.4	12.6	9.4		56.4	41.1
25pr.	+ 1	4.4	-3.7												
				+ 1	4.5	-3.8		+ 1	4.5	-3.9		+ 1	4.6	-4.0	

7h-8h

3001-3060.			3061-3120.			3121-3180.			3181-3240.		
mag.	7h.	-22°	mag.	7h.-8h.	-22°	mag.	8h.	-22°	mag.	8h.	-22°
55	3'4	43'6	9'8	57 56'1	54'6	10'4	0 57'6	9'9	10'2	4 46'2	54'7
10'4	4'9	39'8	10'4	59'1	43'4	10'4	57'6	27'5	7'8	50'7	9'9
9'8	6'4	29'1	10'4	59'1	57'4	10'2	3'1	44'7	10'0	52'7	51'0
9'6	12'7	59'7	9'8	10'2	4'1	9'6	5'1	39'0	10'0	9'4	55'7
8'5	13'4	31'0	9'1	10'1	58 6'1	10'4	6'7	46'6	9'7	9'7	57'2
9'0	14'4	47'1	9'5	10'4	8'1	8'6	11'2	39'3	8'9	8'8	57'7
9'8	16'9	25'2	9'9	9'2	23'0	8'6	12'2	0'8	9'0	8'8	57'7
9'6	22'4	4'9	10'	10'2	21'4	8'8	12'7	25'4	8'7	9'8	5' 3'7
10'4	23'9	22'6		9'8	13'6	9'5	9'8	47'6		9'9	13'7
10'4	27'9	12'8		10'2	20'1	9'4	9'4	13'1	10'	9'4	19'2
10'0	29'9	22'0		8'2	25'6	8'6	9'4	6'3	9'3	10'4	22'2
9'9	32'4	54'2		10'0	26'3	9'6	9'6	51'6	10'1	10'1	23'2
9'7	33'9	1'8	9'3	10'2	29'1	10'2	28'2	13'5	9'6	9'6	29'3
10'2	33'9	6'2		9'6	32'1	9'8	9'6	29'7	8'6	8'6	30'6
9'1	36'9	5'2	9'3	10'2	32'1	9'2	9'2	32'2	9'7	10'2	42'6
9'8	36'9	9'7	9'5	10'4	34'1	9'6	9'6	36'7	10'0	10'0	44'1
10'4	38'9	37'4		10'4	50'1	9'7	9'7	43'2	10'2	10'2	45'1
8'8	42'7	8'1	9'2	9'0	50'6	9'3	9'0	45'5	9'5	10'2	46'1
10'4	49'7	6'6		10'4	54'1	9'6	9'6	50'7	9'8	9'8	46'6
9'7	50'7	52'1		10'4	58'6	9'7	9'7	52'2	9'7	10'4	53'6
10'1	51'2	33'8		9'4	59 0'1	9'4	9'4	52'2	9'5	10'4	57'1
10'1	53'7	57'2		10'4	0'6	9'8	9'8	59'7	10'4	10'4	57'6
10'0	58'7	56'6		10'1	2'6	9'7	9'7	5'7	8'6	9'0	6 3'6
9'8	2'2	54'9	56	10'4	7'6	10'4	10'4	13'2		9'4	4'1
9'0	2'7	40'7		8'8	11'1	9'1	10'1	13'7		10'2	9'1
10'4	7'2	8'1		10'2	13'6	10'3	10'3	16'2		9'6	10'6
10'4	7'7	15'1		9'6	16'1	9'5	10'4	23'7		9'8	17'6
10'2	9'7	37'6		9'1	18'6	9'8	10'2	24'2		9'9	20'3
9'6	12'7	6'9		10'4	23'3	10'2	8'8	32'7	9'1	9'2	22'6
8'8	16'2	52'9	8'8	9'0	23'6	10'2	10'2	37'2		10'4	26'1
10'4	23'6	38'1		9'6	30'1	10'0	10'4	45'7		9'3	31'6
8'8	25'2	33'7		9'6	32'1	10'4	9'8	48'7		9'7	37'6
10'4	26'7	34'5		8'3	36'1	7'8	10'4	53'7		10'4	50'1
9'6	28'7	34'9		9'3	36'3	9'3	10'0	56'2		10'4	52'1
10'1	32'7	41'1		10'2	42'1	9'4	9'4	5'7	3	10'4	2'6
9'4	38'7	2'6		9'5	43'6	9'0	10'2	11'7		10'1	4'6
10'4	39'7	43'4		10'2	44'6	9'2	10'2	16'2		9'4	6'6
10'4	43'2	27'9		9'6	48'6	9'2	10'1	22'2		9'8	17'6
9'2	50'2	52'6		9'5	49'1	9'3	9'3	27'7	9'5	9'2	20'6
10'1	50'2	47'3		10'4	52'1	9'8	9'8	30'2		10'1	21'1
10'2	52'2	48'7		9'1	53'6	9'5	9'7	37'7		8'8	22'8
10'4	52'7	35'6		9'2	56'1	9'5	9'6	38'2	9'3	10'4	23'7
9'9	2'7	10'8		9'6	58'6	9'0	9'0	40'2	9'5	10'4	24'3
10'1	3'6	42'4		10'4	0'6	10'4	10'4	41'7		10'4	25'5
9'7	6'2	27'1		9'6	3'6	10'	9'4	42'2		9'1	10'4
9'7	7'9	57'4		10'4	9'6	10'4	10'4	43'2		10'0	31'5
10'4	14'2	23'6		10'0	15'6	9'3	9'3	45'7	9'4	9'6	39'0
10'4	16'2	28'1		10'2	22'1	10'1	10'1	54'2	9'5	10'2	39'8
10'4	16'2	15'1		10'2	22'6	10'4	10'4	59'2		9'9	39'8
10'2	17'7	46'4		10'0	30'1	10'	10'4	1'7		9'2	40'3
9'1	22'7	12'5		9'5	35'1	9'4	9'4	3'7	10'	9'2	40'8
10'0	23'7	31'7		9'0	42'1	9'0	10'1	6'7		9'4	41'5
10'0	27'2	33'9		9'7	43'1	9'4	10'1	16'2		10'4	42'5
9'0	27'7	20'5		9'1	43'6	8'8	8'8	18'7	9'1	10'0	43'5
9'2	32'2	34'3		9'8	47'1	9'0	9'0	19'7	8'5	9'3	44'3
10'2	35'7	4'1		10'4	47'6	10'2	10'2	27'7		9'4	45'3
9'6	38'6	7'4		9'6	48'1	10'1	9'6	34'7		10'4	45'5
9'6	40'6	25'9		10'	50'1	9'6	9'6	42'7	9'4	9'3	46'0
9'4	44'1	29'1		9'8	51'6	9'3	10'4	42'7		8'1	46'5
8'8	54'4	58'2		9'1	56'1	9'6	9'6	46'2		9'2	48'8
25pr.	+ 1 4'7	- 4'1		+ 1 4'8	- 4'1		+ 1 4'9	- 4'3		+ 1 5'0	- 4'4

1896AnCap...3...16

3241-3300.			3301-3360.			3361-3420.			3421-3480.				
mag.	8h	-22°	mag.	8h	-22°	mag.	8h	-22°	mag.	8h	-22°		
10.0	7 50.5	59.9	8.8	10 28.0	45.2	9.2	12 53.8	3.1	9.5	16 2.5	9.5		
10.1	50.8	44.1	10.4	30.0	35.4	10.4	55.5	36.5	10.1	6.7	18.9		
10.4	8 6.3	53.0	9.6	30.0	54.1	9.3	13 2.5	1.9	9.3	7.7	55.9		
10.4	13.5	23.3	9.8	31.5	40.7	10.2	2.5	0.6	10.4	12.7	39.6		
10.4	16.3	47.6	9.3	32.5	49.5	9.2	6.5	26.0 a	9.2	14.2	20.5		
9.2	17.3	21.1	9.9	9.6	33.5	3.4	9.3	9.0	23.2	9.5	19.2	32.1	
10.4	21.3	34.3	10.4	35.5	34.9	9.6	9.0	42.7	9.0	23.7	35.8		
10.1	21.5	58.2	9.6	39.5	14.0	9.4	10.0	44.1	10.0	35.2	34.5		
9.6	21.7	57.2	10.1	41.3	5.0	10.2	11.3	10.9	9.0	37.7	4.7		
9.6	21.8	53.0	8.8	41.5	4.8	9.5	11.5	56.5	9.4	45.7	52.9		
8.4	24.0	1.6 a	9.1	9.9	42.0	26.3	10.4	15.3	32.5	9.3	51.7	18.0	
9.8	26.3	24.3	10.4	43.5	55.4	9.4	18.5	9.9	9.5	10.4	52.7	39.3	
9.8	27.5	41.1	9.3	46.0	35.0	8.8	29.0	47.2	9.5	9.3	52.7	5.6	
9.0	32.5	28.0	9.3	9.8	46.5	23.7	9.8	30.0	3.9	9.4	55.7	3.3	
10.4	33.3	48.9	10.1	58.5	39.5	9.8	31.0	42.9	10.4	57.7	36.6		
10.4	36.3	36.6	10.4	11 1.5	39.3	9.9	35.0	31.4	9.5	17 1.7	29.8		
9.3	37.5	18.1	9.4	10.4	6.0	35.8	9.2	40.0	15.4	9.3	1.7	41.5	
9.6	39.0	36.6	9.3	9.3	24.0	21.1	10.4	44.5	8.5	9.3	2.2	3.2	
9.8	41.0	49.1	9.6	25.5	23.6	10.2	45.3	33.4	10.1	9.7	3.7		
10.2	43.0	7.2	9.3	31.0	22.2	9.3	45.5	38.0	9.4	10.4	17.7	45.1	
10.4	43.5	30.7	9.0	31.5	49.3	9.7	47.0	36.8	10.4	25.2	40.0		
10.0	43.5	26.3	9.4	32.2	1.4	9.5	55.0	29.2 a	9.1	9.6	25.3	59.4	
10.4	46.1	59.0	10.4	32.5	42.6	10.2	14 6.3	41.7	9.5	9.5	29.7	45.4	
10.4	48.5	31.6	9.0	33.5	53.7	9.4	7.0	59.0	9.0	10.2	29.7	33.2	
9.8	49.5	45.0	10.4	35.0	42.2	10.4	9.0	17.0	9.6	9.6	30.2	8.4	
10.4	51.5	28.7	9.5	35.4	4.2	10.2	9.5	56.0	9.6	31.7	30.1		
10.4	53.5	51.1	9.3	35.5	25.9	9.8	11.5	29.3	10.2	32.7	19.3		
8.6	54.0	45.9	9.1	9.4	36.0	41.1	9.5	14.0	31.8	10.4	34.7	44.6	
10.1	55.3	34.2	10.0	37.0	4.8	9.6	20.0	26.9	10.4	38.2	21.0		
9.3	56.5	18.2	10.2	39.5	29.7	10.2	22.0	6.6	9.6	39.8	20.5		
9.3	9 2.5	7.3	9.4	9.3	41.5	18.1	10.4	23.3	19.5	9.8	40.2	45.7	
9.5	12.0	50.5	9.0	42.5	15.9	9.7	27.5	20.7	10.0	42.2	22.7		
9.2	15.0	29.8	10.4	53.0	32.9	10.4	30.5	45.6	10.4	45.2	35.0		
9.8	19.5	30.5	9.2	57.0	30.1	9.3	32.0	48.4	8.8	46.7	4.3		
10.4	19.5	22.5	9.8	9.3	12 0.5	17.6	9.6	38.5	47.1	9.5	49.7	29.4	
10.4	21.5	22.9	9.4	1.7	1.0	10.0	41.0	45.5	9.4	54.7	43.2		
10.4	23.5	43.2	9.6	3.5	37.3	10.4	42.5	21.3	9.3	55.7	26.0		
9.6	26.5	52.4	9.4	4.0	0.6	9.6	45.2	58.0 Gbl	8.0	10.4	18 11.7	5.4	
9.9	32.0	45.5	10.4	4.5	34.3	10.4	48.0	14.9	9.3	12.0	56.7		
10.2	33.5	11.7	10.0	5.5	38.8	9.9	52.0	43.7	9.4	13.7	34.5		
10.1	34.0	2.4	9.7	9.6	8.0	42.8	10.4	56.5	23.7	9.8	43.7	1.1	
9.0	37.0	20.4	9.6	10.4	11.5	56.4	10.2	59.0	4.7	10.1	44.7	56.0	
10.4	37.0	13.5	10.4	12.0	10.5	10.4	8.6	0.0	30.6	9.0	49.7	20.2	
10.4	39.3	42.8	10.0	13.0	35.0	9.1	7.8	1.5	31.8 G	6.3	8.6	58.7	28.3
10.4	40.0	58.6	8.6	15.5	17.4	9.6	9.6	1.5	57.4	9.8	59.7	48.2	
9.3	45.5	10.2	9.2	10.4	15.5	27.1	9.6	21.0	43.4	10.4	19 1.2	12.6	
10.1	52.0	46.1	10.4	19.0	55.5	10.0	23.5	29.6	9.3	2.7	20.3		
9.9	52.3	13.6	10.0	21.0	51.7	9.3	24.5	50.3	10.1	5.7	22.2		
10.4	10 0.0	18.3	9.6	22.0	17.9	9.2	27.5	3.3	8.2	9.6	7.7	18.1	
10.4	5.0	46.6	10.4	23.5	13.3	9.9	31.5	10.6	10.4	10.2	26.7		
10.1	5.5	14.4	10.2	26.5	52.3	10.4	33.5	20.2	9.4	12.2	35.6		
10.2	5.5	15.7	9.9	27.7	59.6	9.8	34.8	56.5	10.0	23.7	46.9		
10.1	7.5	45.8	9.3	28.0	29.1	9.5	35.5	32.3	9.8	9.6	25.2	31.2	
9.4	7.5	46.5	10.4	31.0	12.9	9.2	38.0	17.9	9.8	10.4	26.7	30.5	
10.4	13.3	53.9	10.4	32.0	13.1	9.5	38.0	34.2	9.8	10.4	27.7	5.7	
9.2	13.5	47.2	10.4	32.0	43.5	9.4	41.7	59.4	9.5	5.5	29.2	44.9 G	
9.4	17.0	43.5	9.8	10.4	35.5	58.0 a	10.4	43.0	30.0	9.4	30.2	28.6	
10.4	20.5	48.0	8.6	45.0	50.6	8.2	10.4	44.0	43.8	10.2	32.2	36.3	
10.1	24.0	48.8	9.6	47.0	43.6	10.0	51.5	42.8	10.4	32.7	49.6		
9.6	27.5	27.4	10.4	47.3	22.9	10.4	56.5	0.9	10.2	35.7	16.0		
25pr.	+1 51	-4.5	+1 52	-4.6	+1 53	-4.6	+1 54	-4.7					

16

3481-3540.			3541-3600.			3601-3660.			3661-3720.				
mag.	8h.	-22°	mag.	8h.	-22°	mag.	8h.	-22°	mag.	8h.	-22°		
10.4	19 40.7	23.5	10.0	22 29.7	17.5	9.8	10.4	25 55.7	44.4	10.4	28 52.7	15.6	
10.4	46.7	23.5	10.4	29.7	33.8	9.6	9.6	59.7	41.0	9.6	57.2	18.8	
9.8	46.7	39.7	8.8	36.7	21.1	9.3	9.6	1.7	13.6	9.6	57.7	21.7	
9.8	48.7	40.8	9.6	40.2	22.8	9.5	10.1	2.2	8.4	10.4	57.7	23.7	
10.4	48.7	52.6	10.4	41.2	58.9	10.4	10.4	2.7	29.0	10.2	1.9	59.9	
10.2	51.2	21.8	10.4	41.5	52.5	9.8	9.8	3.2	25.4	9.8	6.2	49.8	
9.8	52.7	22.3	10.4	42.2	6.4	10.4	10.4	5.7	51.3	10.0	6.7	38.1	
10.0	53.7	29.6	9.2	45.7	48.0	9.5	9.5	9.2	42.7 a	9.7	9.3	8.2	53.9
10.4	54.7	19.3	9.4	46.2	34.5	9.4	9.4	9.7	37.2	9.7	9.9	9.2	18.1
10.2	20 5.7	9.5	9.3	48.7	34.1	9.0	10.4	12.7	17.8	10.2	13.2	30.2	
10.4	6.7	20.6	9.6	48.7	50.8	10. 8.8	15.7	44.3 a	9.4	8.7	17.7	58.3	Gal 9.1
10.4	12.2	44.1	9.6	49.7	56.2	9.4	9.6	16.2	23.6	10.4	19.7	53.7	
10.4	12.2	14.0	10.4	58.7	22.8	10.4	10.4	23.7	43.1	10.4	24.7	31.9	
8.4	25.7	18.3	9.0	10.4	0.2	23 0.2	9.4	24.2	27.4	10.0	30.0	58.4	
9.2	30.9	2.2	9.5	6.5	8.7	Gal 8.7	10.4	26.2	56.1	9.9	33.2	15.2	
9.2	33.7	11.0	9.3	8.4	11.7	15.3	8.5	10.2	32.7	10.4	33.7	5.5	
9.3	34.2	22.4	9.5	9.0	14.2	25.1	9.4	37.2	15.8	9.8	35.7	53.0	
9.4	38.7	24.8	9.2	14.7	6.9	9.6	9.6	40.2	56.2	8.9	36.2	52.1	9.0 a 9.1
8.6	45.7	39.5	8.8	10.4	17.2	52.8	10.4	43.7	49.6	10.4	38.2	29.4	
10.0	50.2	46.0	9.6	17.7	57.4	9.8	10.2	45.7	19.4	10.2	47.7	43.6	
10.4	51.7	44.0	9.2	27.7	7.6	9.4	9.8	45.7	51.2	10.4	50.7	6.7	
10.0	53.2	30.2	10. 10.4	32.2	21.5	9.2	9.2	54.7	14.0	9.6	10.5	51.2	37.7
9.5	54.2	16.8	9.5	10.4	37.2	11.7	10.4	59.0	1.2	10.4	56.2	42.2	
10.4	57.7	37.2	10.4	38.7	29.0	9.4	9.4	0.7	11.8	9.7	10.4	59.2	35.3
10.2	21 4.7	34.6	10.2	41.7	24.2	10.4	10.4	0.7	50.1	10.0	59.7	50.8	
10.4	5.7	36.0	10.4	42.2	50.0	9.6	9.6	6.9	58.1	9.8	9.5	6.2	23.0
9.9	5.7	50.7	10.4	42.7	27.0	10.1	10.1	10.2	18.5	30 6.2	6.2	11.7	
9.6	5.7	39.2	9.2	50.7	38.1	9.5	8.6	14.7	23.8	8.4	10.4	11.2	38.1
9.0	6.2	40.9	9.4	50.7	56.0	9.9	9.9	15.9	31.0	9.7	10.4	13.2	25.1
8.8	7.2	40.5	9.6	51.2	53.5	9.8	10.4	17.2	51.2	10.5	14.7	7.3	
10.0	9.2	24.6	9.3	52.7	3.5	9.8	9.8	18.7	18.4	10.5	16.2	53.0	
10.4	9.7	48.5	9.3	24 0.2	56.1	9.5	10.4	24.2	5.8	9.4	34.2	3.1	9.6
10.2	9.7	38.9	8.8	0.7	35.6	9.4	10.4	25.0	32.4	10.4	34.7	38.1	
10.1	9.7	16.4	10.2	3.2	46.1	8.8	8.8	25.4	47.3 a	9.0	9.8	16.2	
10.2	11.7	55.3	9.0	7.2	47.7	9.5	8.4	25.9	27.9	9.0	9.6	41.7	27.4
9.2	14.7	45.4	9.1	8.5	13.7	38.7 a	9.1	10.4	33.9	10.0	44.2	49.6	10. 10.0
10.4	15.7	32.6	9.6	13.7	17.8	9.6	10.4	39.6	6.7	9.4	44.7	26.4	
9.0	16.2	27.3	9.5	9.8	14.7	7.9	9.6	40.7	3.3	9.6	48.2	12.7	9.7
9.4	19.2	36.2	9.8	10.2	15.7	40.7	9.8	42.2	32.1	9.9	50.2	50.4	
10.2	20.2	10.9	9.5	22.7	9.7	10.0	10.0	43.9	26.6	9.4	56.2	2.9	9.6
9.3	25.2	28.3	9.6	9.4	25.7	12.6	9.5	10.0	45.0	10.5	57.7	31.0	
7.5	32.7	50.6	Gal 7.7	9.8	28.7	40.4	9.6	45.7	51.7	8.6	59.7	36.8	9.0
10.4	32.7	7.9	9.3	29.7	31.2	10.1	8.1	45.9	2.3	8.4	10.0	8.2	4.1
9.2	35.7	37.1	9.5	10.0	35.2	59.0	10.1	54.5	31.6	10.4	8.2	52.1	
10.1	37.7	12.1	10.4	42.2	14.7	10.1	10.1	55.0	8.1	10.2	15.2	3.4	
8.8	37.9	2.4	9.0	47.7	39.5	10.4	10.4	58.9	26.9	10.2	16.2	58.0	
9.5	39.7	10.2	9.3	53.7	21.9 a	9.2	8.6	59.9	46.6	9.2	8.8	19.3	59.9
9.9	41.7	18.8	9.4	53.7	1.9	9.2	10.4	5.7	9.7	9.5	20.2	56.0	9.8
9.9	44.2	0.7	9.3	25 9.2	41.5	10.4	10.4	12.2	32.0	10.4	20.7	25.0	
10.4	56.2	56.1	10.0	12.5	0.0	10.4	10.4	12.5	39.9	9.4	24.2	45.6	
10.4	58.7	9.5	10.2	13.2	32.8	9.7	7.8	21.0	56.1	7.7	10.5	39.7	26.9
9.2	59.7	0.3	9.1	13.7	3.4	10.5	10.5	22.0	58.7	9.2	43.2	43.4	9.3
10.2	59.7	15.3	9.4	17.2	26.6	8.4	8.4	23.0	27.5	9.1	9.8	45.2	0.1
10.2	22 0.2	51.7	9.4	19.7	44.3	8.9	8.9	24.0	42.1	9.5	8.0	48.7	17.8
10.2	10.7	59.8	9.8	25.7	5.5	9.6	10.2	27.2	10.1	9.4	49.2	45.1	8.2
10.4	10.7	3.3	9.5	31.2	31.1	9.4	9.4	32.2	54.9	10.2	52.2	4.7	
10.4	21.7	53.8	10.4	33.2	19.1	9.4	9.4	36.7	14.8	9.8	9.5	52.7	42.9
9.6	21.7	5.7	9.4	37.2	29.9	9.5	10.4	37.2	6.6	9.8	10.4	53.2	19.6
9.6	23.7	53.1	10.1	40.7	16.2	9.9	9.9	37.5	1.5	10. 10.5	53.2	58.2	
10.4	28.7	45.6	10.2	43.2	7.4	10.4	10.4	45.7	45.4	9.3	56.2	35.5	
25pr.	+ 1 5.5	-4.8	+ 1 5.6	-4.9				+ 1 5.7	-5.0			+ 1 5.8	-5.1

1896AnCap...3.....1G

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
mag.		8h.	-22°	mag.		8h.	-22°	mag.		8h.	-22°	mag.		8h.	-22°
9.6	31	56.2	13.7	9.9	35	17.0	35.2	10.2	38	22.7	21.7	9.5	41	56.3	23.0
10.4	32	8.2	30.0	10.4		18.5	2.0	10.0		24.7	49.4	10.0	42	7.3	17.5
10.2		8.7	23.0	10.2		20.0	23.1	9.4		25.2	34.0	9.3		21.3	14.0
10.4		9.2	11.9	10.4		23.0	52.2	9.3		26.2	10.1	10.4		22.8	26.9
9.6		10.2	15.4	9.5	10.0	23.0	47.4	9.0		37.2	13.7	9.2	9.2	25.3	56.9
9.8		12.2	26.7	9.2	9.2	30.0	27.8	9.8	10.5	40.7	3.1	9.6	9.6	36.3	53.6
10.2		12.7	24.9	10.5	10.5	30.0	38.5	9.9	9.9	41.2	55.9	10.0	10.0	36.3	32.7
10.4		20.2	48.9	9.0	9.0	31.8	59.2	9.4	9.4	49.7	30.3	9.4	10.2	39.8	33.5
10.4		26.2	32.8	9.2	9.2	32.0	18.0	9.8	9.8	50.7	58.5	9.4	9.6	48.8	35.6
9.4		26.2	57.9	9.8	9.3	33.5	30.7	10.4	10.4	52.2	32.4	8.9	8.9	49.8	40.7
8.4		27.7	38.1	8.7	10.4	36.0	39.0	9.3		59.2	3.6	9.6	9.6	55.8	6.9
8.6		42.2	4.7	8.7	9.6	37.3	58.4	9.6	39	1.2	4.9	9.4	9.9	6.2	0.3
9.6		43.2	7.4	10.5	10.5	44.3	20.4	9.8		2.2	34.0	10.5	10.5	7.9	40.9
9.6		44.2	54.7	9.3	9.3	48.8	10.4	9.5	10.0	2.2	4.4	10.4	10.4	12.8	42.0
9.2		44.2	5.2	9.4	10.5	50.8	20.8	8.6	8.6	3.2	37.3	9.2	8.7	15.8	43.0
10.5		46.2	7.9	9.4	9.4	52.3	33.6	9.5	9.9	4.2	16.8	9.6	8.5	22.3	24.7
10.5		54.4	58.8	10.5	10.5	54.0	20.4	10.0	10.0	5.2	54.5	9.3	9.3	32.8	2.0
10.4		56.2	42.9	10.5	10.5	54.3	9.0	10.4	10.4	7.2	44.3	9.4	9.4	39.8	18.1
9.4		56.2	50.5	9.2	9.2	54.8	23.1	10.2	10.2	14.7	6.3	10.5	10.5	52.3	26.0
10.4	33	8.2	22.4	9.6	9.6	55.6	43.9	9.3	9.3	15.7	15.3	9.4	9.0	54.3	8.7
10.0		12.2	13.2	9.7	10.2	59.3	50.4	10.2	10.2	20.7	10.7	10.5	44	0.8	44.6
10.5		12.7	58.6	9.0	9.0	59.3	24.1	8.4	9.4	32.2	54.0	9.9	8.6	5.8	56.3
9.0		18.7	56.2	9.3	10.4	59.8	12.0	10.0	10.0	32.7	19.9	8.8	8.8	5.8	17.6
9.3		19.7	43.2	9.6	9.6	1.8	45.0	10.0	10.0	34.2	22.0	10.2	10.2	9.3	24.3
9.6		20.7	8.2	9.7	10.5	3.3	33.7	9.0	9.0	50.7	32.3	9.4	10.5	9.8	36.4
9.3		32.2	35.8	9.5	10.0	7.8	3.5	10.5	10.5	56.7	38.9	9.4	9.4	15.9	16.2
10.4		33.2	5.0	9.6	9.6	11.3	0.6	9.8	9.4	1.7	25.3	9.5	10.2	21.4	30.3
8.6		33.2	57.2	8.5	8.5	21.8	46.5	9.1	9.1	10.2	16.9	9.1	10.4	21.9	13.4
9.6		36.2	46.1	10.0	10.0	25.8	25.2	10.5	10.5	11.7	9.6	9.6	9.6	30.4	4.9
10.4		36.2	15.1	10.0	10.0	30.3	23.2	9.5	10.2	15.7	50.1	10.5	10.5	51.0	1.3
9.6		36.2	40.1	9.8	10.5	31.3	37.4	9.5	9.5	16.7	8.0	9.6	10.2	58.9	49.6
6.2		39.7	14.1	5.3	10.4	32.3	55.5	8.6	8.6	18.2	17.4	9.0	9.4	5.4	18.6
10.2		41.7	6.9	9.2	9.2	37.8	12.1	9.2	9.3	19.2	19.1	9.8	10.5	5.4	53.3
10.4		41.7	7.9	9.4	9.4	39.8	20.2	9.5	9.9	20.2	29.5	10.2	10.2	12.4	32.9
9.4		42.2	27.8	8.6	8.6	43.3	25.0	9.2	8.8	20.2	15.9	8.8	8.4	13.9	45.2
9.4		44.2	4.0	9.5	10.5	45.8	12.0	9.5	9.5	21.7	12.9	9.5	9.8	17.9	26.9
9.0		50.2	0.8	9.0	9.6	49.3	20.3	9.3	9.3	24.2	0.2	9.4	10.4	22.4	47.6
10.2		52.7	11.8	8.8	8.8	49.8	23.8	9.4	9.2	31.2	16.1	9.0	10.5	30.1	32.0
9.9		55.2	44.0	8.5	8.5	49.8	3.2	8.9	10.5	42.1	5.9	9.8	9.8	35.4	24.3
10.5		57.2	1.0	10.2	10.2	53.8	51.3	10.5	10.5	43.2	14.0	10.4	10.4	35.9	33.1
10.5		58.2	56.2	10.4	10.4	54.3	20.8	9.4	9.4	55.7	19.0	9.1	8.8	37.4	25.2
10.5	34	5.7	26.4	10.2	37	5.7	1.5	9.0	9.0	56.2	31.9	9.2	8.7	37.4	34.2
9.0		6.2	46.9	9.5	9.2	9.7	57.9	9.5	10.5	56.7	25.9	10.4	10.4	37.9	50.3
9.6		8.7	56.2	10.4	10.4	15.2	56.3	8.8	8.8	59.7	31.3	9.0	9.3	45.9	50.7
10.4		11.0	36.0	9.2	9.2	21.2	20.0	9.3	10.4	0.7	28.2	9.9	9.6	51.9	22.0
9.5		14.0	11.8	9.5	9.5	27.7	6.4	9.5	10.2	4.2	27.5	10.5	46	2.4	55.7
10.4		15.0	47.4	10.0	10.0	29.2	4.7	8.0	8.0	7.2	14.3	8.2	10.0	2.9	36.3
9.0		19.5	51.4	10.5	10.5	31.2	45.6	9.3	9.3	7.7	19.7	9.5	9.3	6.4	53.6
9.0		23.0	14.0	9.3	10.5	32.2	46.2	10.4	10.4	9.2	56.3	10.4	10.4	32.1	31.8
10.5		24.5	45.8	10.0	10.0	32.4	1.3	10.4	10.4	9.7	36.9	9.3	9.3	32.9	35.6
8.4		34.0	46.0	8.2	10.5	39.7	45.7	10.5	10.5	13.7	41.7	9.8	9.8	38.4	32.7
9.9		34.5	44.8	10.5	10.5	43.2	27.7	10.4	10.4	14.3	54.9	10.5	10.5	43.4	0.0
8.8		35.0	31.2	9.1	10.5	45.7	25.3	9.6	9.6	15.7	35.9	10.2	10.2	44.4	7.8
9.6		39.5	35.9	10.5	10.5	48.2	49.9	9.8	9.8	25.8	38.0	9.6	10.2	45.9	29.8
9.9		43.0	56.0	9.4	9.4	49.2	20.7	10.5	10.5	36.3	31.9	9.5	9.5	50.9	24.1
10.2		44.0	17.0	9.4	38	7.2	34.7	9.8	9.8	40.8	14.9	9.8	10.0	51.9	17.6
9.0		52.2	58.8	9.5	9.8	10.2	13.3	9.9	9.9	40.8	2.3	10.2	9.9	57.6	40.1
9.4		59.0	28.8	10.5	10.5	12.2	48.7	10.5	10.5	41.8	19.9	10.5	10.5	58.3	33.5
9.0	35	6.0	9.6	9.2	10.5	16.2	22.2	9.6	9.6	53.8	33.6	9.4	10.0	47	1.1
9.4		12.5	38.0	9.9	10.2	21.7	22.2	10.0	10.0	55.3	55.3	10.5	10.5	4.6	13.5
25pr.	+ 1	60	-5.2	+ 1	61	-5.3		+ 1	62	-5.4		+ 1	64	-5.5	

3961-4020.				4021-4080.				4081-4140.				4141-4200.								
8h.		-22°		8h.-9h.		-22°		9h.		-22°		9h.		-22°						
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s					
47	10.1	45.0		53	55.3	13.5		4	30.6	42.3		10.8	51.3	21.9						
10.1	12.1	45.9		8.2	58.6	41.0	al	7.5	9.8	33.1	42.6	10.7	57.8	44.4						
9.3	22.6	50.5		9.2	54	13.2	59.8	10.0	9.8	35.9	32.7	9.4	10.7	59.8	44.1					
10.4	27.6	44.1		6.9	19.8	12.3	GCal	6.8	7.0	47.6	40.1	al	6.3	10.8	11	14.8	17.1			
9.2	49.1	12.7		9.5	9.8	44.3	52.7	8.5		51.8	46.9	a	8.7	10.0	16.3	3.1	9.8			
7.8	50.6	31.3	al	8.0	9.6	53.5	3.1	9.6	9.1	58.5	2.4		9.3	10.7	23.3	43.5				
10.4	54.9	40.6		9.2	9.2	56.6	5.5	9.5	9.6	59.1	50.2		9.9	8.8	26.3	24.4	a	9.0		
9.2	57.0	20.2	a	9.1	9.8	59.3	37.7	8.5		5	5.8	35.8	al	8.0	10.7	26.8	42.4	9.5		
9.4	57.2	0.0		9.5	9.2	55	11.8	51.0	9.5	9.4	11.1	49.8		9.5	10.7	33.3	18.0			
9.2	57.7	28.0		9.1	9.8	12.5	11.0		9.2	14.8	57.8		9.2	10.8	33.3	45.7				
7.9	48	5.6	33.6	al	8.2	9.4	18.1	25.1	9.2	9.6	51.8	42.8	9.4	10.7	44.3	13.5				
9.6	6.4	29.1		9.8	56	4.1	41.2		9.1	9.8	6	0.5	19.2	9.8	9.2	0.8	27.5	a	9.1	
10.5	12.4	28.0		9.0	18.6	3.1	a	9.0	9.1	5.3	21.0		9.6	10.4	2.3	50.3		9.5		
9.9	18.4	27.7		9.5	9.8	28.6	16.9	9.5	9.6	26.0	1.9		9.8	10.8	2.3	30.9				
10.4	24.9	16.4		9.5	9.5	40.8	56.9	9.6	9.2	29.5	53.2		9.0	7.8	7.3	24.7	al	8.5		
9.0	28.8	1.3		9.5	9.8	52.0	5.0	9.5	9.6	32.5	40.2		9.5	10.0	13.3	28.7				
9.8	33.5	42.3		9.6	59.1	25.7		9.5	9.8	38.8	17.5		9.5	8.2	27.3	27.4	al	8.3		
9.8	41.0	1.0		9.5	57	12.3	41.8	8.6	9.2	39.0	15.2		9.4	10.7	29.3	8.7				
9.2	49.0	9.2		9.5	54.1	30.2		7.5	9.2	41.8	5.2	a	9.1	7.8	31.3	9.1	Cbl	8.0		
9.0	52.5	28.6	a	9.1	55.8	56.6		9.0	9.8	48.5	58.0		10.7	10.7	36.8	21.1				
9.8	49	7.8	31.8		9.8	2.0	53.8	9.7	9.8	57.6	44.3		10.0	53.9	17.4			9.4		
9.8	50	0.5	55.4		9.8	13.3	56.0	8.9		7	10.1	1.1	a	8.8	10.7	55.9	45.4			
8.4	10.8	54.7	Ga	8.5	9.8	18.9	57.0	9.6	10.4	12.1	56.1		9.5	9.6	58.9	36.1	a	9.0		
9.1	14.8	22.2	a	9.2	9.8	20.0	15.9	9.7	10.7	12.1	51.1		9.4	10.7	13	3.4	31.3			
9.8	15.0	40.5		8.8	22.0	52.2	a	9.0	10.8	18.4	40.4		10.7	11.9	17.7			9.8		
9.8	16.7	0.3		9.8	9.8	27.0	29.3	9.7	10.8	48.4	33.3		9.5	10.2	13.9	39.5				
9.8	20.7	21.1		9.8	9.8	40.3	59.4	10.4	10.4	49.8	55.4		9.8	10.4	18.9	55.9				
9.8	24.8	14.0		9.6	9.6	45.3	17.3	9.6	10.7	50.5	2.4		10.7	21.4	3.4					
9.5	28.2	55.5		9.6	9.6	46.5	40.9	7.7		8	10.2	21.2	bl	7.0	10.8	22.9	49.4			
9.8	34.3	6.8		9.5	9.5	48.8	14.3	9.5	10.3	11.9	47.5		9.9	10.0	22.9	31.4		9.7		
9.8	42.8	32.6		9.8	50.5	13.8		9.8	10.4	20.2	58.7		9.0	9.6	23.9	26.1		9.2		
9.5	44.3	52.3		9.4	51.5	2.5		9.0	9.0	23.8	10.7		9.0	10.0	24.9	30.2				
9.8	49.5	18.9		9.7	59	1.8	11.3	9.6	10.3	31.2	34.1		9.8	10.2	7.2	28.9	1.8	Cbl	7.5	
9.2	58.5	59.3	a	9.2	10.0	44.6		10.4	10.4	34.5	26.0		9.8	10.2	28.9	28.6		9.8		
9.1	3.0	40.5		9.2	30.0	14.0		10.0	9.5	35.2	0.5		10.0	10.0	28.9	32.3		9.8		
9.8	12.7	43.0		9.5	33.3	50.0		10.8	10.8	35.3	52.8		9.6	9.6	29.4	50.2		9.3		
8.5	15.7	2.8	Cal	8.1	48.6	28.3	a	8.0	9.3	40.5	24.4		9.2	10.2	31.4	37.8		9.4		
9.8	17.2	0.1		9.4	0	11.5	31.0	9.4	9.4	41.8	39.2		9.2	10.7	33.4	29.6				
9.8	35.5	34.6		9.6	9.8	17.8	5.5	10.3	10.3	42.3	26.0		8.2	8.2	42.9	52.6		7.9		
9.8	37.5	30.2		9.8	27.1	57.8		9.6	10.0	47.8	11.1		9.6	10.8	46.9	12.6				
9.4	50.5	54.7		9.5	40.0	13.1		10.8	10.8	48.8	34.9		10.7	10.7	58.4	11.2		10.0		
9.8	52.0	54.8		9.8	44.8	9.5		10.8	10.8	9	5.3	22.1		10.8	14	3.1	40.0			
9.8	0.3	17.6		8.6	50.3	25.5		8.5	10.3	10.3	22.2		9.8	9.2	8.9	34.7		9.5		
9.8	0.7	53.8		8.3	1	18.3	49.6	8.5	8.3	11.8	25.5		9.6	10.2	9.4	48.0				
9.8	44.5	43.2		9.6	28.7	1.0		9.1	10.6	13.3	27.1		9.8	10.6	12.9	56.1				
9.1	53.5	7.1		9.3	9.8	45.0	0.0	10.6	10.6	16.3	7.1		10.8	10.8	19.4	3.0				
9.5	55.8	14.8		9.3	9.8	46.1	16.0	8.6	8.6	20.8	16.9	a	7.7	8.3	20.4	25.8		8.5		
8.8	53	1.0	Ma	8.6	9.8	48.8	52.8	9.2	9.2	41.3	29.9		9.3	9.2	22.9	1.8	a	9.2		
8.4	1.5	27.9		8.5	9.8	52.8	55.0	10.8	10.8	46.3	45.9		10.3	10.3	35.9	53.9		9.4		
9.8	6.3	34.2		9.0	2	11.8	53.8	a	8.8	7.2	58.6	7.2	Gal	7.0	7.8	38.9	57.1	8.0	bl	7.5
9.8	8.3	45.7		9.8	17.8	25.8		10.4	10.4	5.8	57.0		9.4	8.2	45.4	53.4	8.5	bl	8.3	
9.6	8.8	13.7		9.7	30.0	51.7		10.0	10.0	6.3	13.5		9.5	9.6	46.9	19.9		9.8		
9.8	13.1	43.4		8.6	46.6	49.2	9.0	a	8.3	10.0	16.3	25.9		9.1	10.8	48.9	43.8			
9.8	17.1	50.4		9.0	49.8	33.5	Ma	8.0	9.8	21.1	57.6		9.4	10.2	49.9	46.2		9.8		
9.4	22.5	30.0		9.8	55.3	12.5		9.7	10.6	23.8	25.9		9.4	10.8	52.0	58.3				
9.8	27.6	47.4		9.8	3	23.0	45.0		10.3	30.0	0.1		9.4	10.8	52.4	3.9				
9.8	29.8	47.4		8.3	4	1.3	5.8	MCal	7.2	10.8	33.3	12.2		10.0	55.4	42.1		9.8		
9.8	30.8	53.5		9.8	10.3	11.7		10.4	10.4	33.3	31.2		9.5	10.0	59.4	8.3		9.9		
9.2	32.8	32.5		9.1	9.8	11.1	51.3	9.8	10.8	35.3	45.5		10.0	10.0	59.9	10.2		9.9		
9.8	43.1	48.4		9.8	11.5	28.1		9.8	7.9	41.3	36.6	al	7.7	10.8	15	2.9	48.1			
25pr.	+ 1	6.6	-5.7		+ 1	7.0	-5.9		+ 1	7.4	-6.1			+ 1	7.6	-6.2				

4441-4500.					4501-4560.					4561-4620.					4621-4680.					
9h.		-22°			9h.		-22°			9h.-10h.		-22°			10h.		-22°			
m	s	m	s	'	m	s	m	s	'	m	s	'	m	s	'	m	s	'		
37	16.6	14.7			44	5.0	2.3			53	20.8	3.8			3	12.6	13.4			
	22.2	42.3	a	9.1		10.5	9.0		9.7		27.8	11.1	M	9.2		17.6	57.2	8.5	GMal	
	33.2	21.9		9.8		10.5	14.7		9.8		10.0	43.3	31.5	9.1		18.6	52.8	9.0		
	44.9	0.5		9.5		40.5	34.4				10.0	46.8	25.5	9.0		58.6	46.6			
	58.7	25.5		10.0		9.8	43.0	57.2			9.8	53.3	11.1	10.0	4	10.1	30.1		10.0	
8.4	38	5.7	12.2	MC	8.4		43.5	19.6			8.8	59.8	44.2	9.7		13.6	38.1		9.3	
	10.7	1.6					45.0	52.9			9.8	54	2.3	52.8	8.5		33.1	9.8		9.4
	11.7	15.1		9.8		55.0	47.4		9.4		9.6	3.3	9.5	9.7		37.6	28.2		9.3	
	26.2	26.9		9.5		12.5	5.9		9.7		9.8	4.8	43.0	9.5		41.1	30.5		9.4	
	27.7	53.1		9.5		18.0	26.0	GMal	6.6		9.7	15.3	29.5	9.8		43.6	59.6		9.3	
	27.7	38.7		9.6		26.5	44.4		9.2		8.5	21.3	29.0	8.9		48.1	47.8			
	32.8	59.3		9.4		28.5	22.6	Ma	8.8		9.5	21.3	50.5	9.1		51.6	26.6		9.0	
	34.7	38.5		9.0		38.4	29.9		10.4		10.4	22.8	7.5	9.0		59.3	2.4		9.2	
	51.7	10.7	Gatlr	6.8		41.5	49.3		9.0		10.4	29.1	56.3	10.2	5	2.6	21.1		9.8	
	53.2	47.2	Mal	7.7		45.5	33.9		9.4		10.4	32.3	5.4	9.7		22.6	27.2		10.0	
	12.7	54.7	7.5	Gbl	8.0		53.2	1.4		9.8		10.0	44.3	39.9	9.6		22.6	48.6		9.6
	14.7	13.0					56.4	38.2		9.0		9.0	50.3	15.6	9.3		29.6	31.2		9.0
	22.7	47.4		9.4		58.8	57.5		9.8		10.4	55	10.1	35.1	10.2		41.6	39.2		9.8
	34.2	35.1		9.2		46	2.0	37.6		9.5		10.4	13.1	59.3	8.6		59.6	1.0	MCa	8.0
	36.7	18.1		10.3		7.0	55.6		9.8		9.8	17.1	48.2	9.5	6	5.1	38.4		9.4	
	38.5	59.7		9.4		12.5	5.6		9.1		7.6	23.3	32.8	al	7.8		11.6	36.2	-	9.0
	39.2	12.7		10.2		51.5	53.5		7.5		7.5	26.8	9.9	Ca	7.4		15.1	48.7		
	1.2	5.2		9.6		59.5	41.5		9.2		9.7	52.3	4.3	10.0		16.1	14.1		9.6	
	3.2	25.0		10.0		47	15.0	56.1		9.1		54.3	21.6	9.4		27.6	40.6		9.8	
	20.7	25.8		9.8		20.6	14.1		9.7		8.0	56.5	59.5	8.8-		35.1	36.6		9.8	
	32.2	4.7	Cal	7.8		36.7	11.1	MC	8.8		10.2	56	1.4	3.2	8.5		53.1	40.3		8.7
	38.2	40.7		9.5		40.4	45.3		9.1		9.6	23.9	28.0	9.3		7	4.9	34.3	al	9.2
	42.6	9.5		10.3		44.5	25.1		10.2		29.3	29.3	57.0	7.6		8	0.4	27.6	al	7.5
	42.7	7.3	a	9.2		47.5	21.2	M	8.5		10.0	43.9	0.7	9.4		10.3	27.0		9.3	
	48.7	18.1		9.0		51.9	14.9		9.1		10.0	58.9	53.0	10.4		31.6	33.6			
	50.7	30.3		10.3		48	7.5	22.1		10.4		57	2.4	42.1	9.8		41.1	37.9		9.3
	0.7	0.3		10.2		14.5	56.7		10.4		10.4	24.5	12.6	9.0		45.6	30.3		9.0	
	2.2	42.6		9.6		20.1	43.1		9.5		10.2	48.5	48.5	8.4		49.6	12.7	Ma	8.8	
	7.7	27.4		10.4		24.7	7.4		8.8		8.8	58	2.4	35.0	9.0		53.1	7.5		9.7
	16.2	48.5		10.4		27.7	50.6		9.0		9.0	25.4	40.4	9.0		28.1	17.6		9.1	
	21.7	57.9		7.8		40.1	43.4	a	8.5		10.0	26.4	8.6	9.7		50.1	33.9			
	54.7	12.0		10.2		49	4.2	52.5		9.8		10.4	42.4	8.7	9.8		10	6.1	5.5	9.8
	55.2	32.0		9.4		6.3	44.6		9.4		8.8	47.9	17.4	9.0		9.6	2.1		8.9	
	56.0	45.6		8.4		17.8	54.4	8.0	GMa	7.8		9.0	58.9	19.8	9.0		12.7	59.4		
	57.8	1.8		9.0		31.8	35.8		9.1		9.0	59	12.9	22.8	8.9		37.6	43.2		9.0
	0.5	35.4		9.5		48.8	6.7		9.7		10.0	13.9	29.7	9.4		44.1	52.3			
	18.5	1.5		9.5		50	7.3	16.7	a	8.9		10.2	23.4	36.6	9.5		56.1	18.6		9.5
	19.5	56.3		8.8		35.3	20.2		9.0		9.0	32.9	6.3	8.5		9.3	40.1		9.5	
	21.5	40.0		10.0		48.8	9.2		9.7		10.0	35.4	19.0	10.0		10.0	4.4			
	29.0	1.4		9.0		54.3	49.5		9.1		9.7	57.4	23.9	9.3		12.9	23.6			
	33.4	28.8		9.4		51	13.3	16.1		9.7		9.5	0	8.4	9.4		18.9	18.8		9.6
	35.5	9.5		9.2		22.3	59.7		9.4		9.5	10.4	25.0	9.7		22.8	58.6			
	37.5	14.1		9.1		29.8	21.6		9.6		7.4	51.4	31.8	9.7		25.4	35.6		9.4	
	37.5	14.9	M	9.0		47.3	44.0		10.0		9.4	53.9	20.5	7.3		27.9	42.9			
	49.0	6.1	MCbl	8.1		49.3	19.0	a	9.2		8.2	1	7.4	8.5		48.4	2.1	Ma	9.2	
	50.5	30.5		10.4		53.3	6.3		9.7		9.7	23.4	47.3	9.8		52.9	44.6		9.4	
	53.0	27.8		9.5		55.3	47.5		9.8		9.8	23.7	1.2	9.0		5.9	55.6		9.4	
	56.5	31.0		10.2		52	15.1	27.7		9.8		9.8	29.4	41.6	9.7		29.9	8.0	Ca	8.3
	8.5	26.4		9.1		29.3	52.7		9.3		9.8	39.9	54.8	9.7		38.9	2.0		9.4	
	22.0	48.1		8.6		39.3	32.6		9.1		9.8	57.4	33.6	9.5		46.9	34.2		9.4	
	28.4	25.1		9.6		40.3	21.7		9.6		10.0	2	4.9	8.1		56.9	33.4	al	7.5	
	28.4	17.6		10.4		52.0	0.9		10.0		10.0	34.4	37.6	9.8		11.9	32.2	al	8.5	
	35.0	48.1		9.0		57.3	48.9		9.5		10.4	35.9	39.2	9.8		37.4	26.3			
	40.5	4.7		9.8		53	3.8	15.2		9.8		9.2	36.9	42.8	9.7		52.4	18.9		9.5
	59.0	29.6		9.0		7.3	20.7		9.4		9.7	52.9	17.7	9.9		55.9	31.2			
25Pr.	+ 1	8.9	-6.9		+ 1	9.3	-7.0			+ 1	9.7	-7.2			+ 1	10.3	-7.4			

4681-4740.				4741-4800.				4801-4860.				4861-4920.						
mag.	10 ^h .	-22°		mag.	10 ^h .	-22°		mag.	10 ^h .	-22°		mag.	10 ^h .	-11 ^h .	-22°			
8.2	13	55.9	20.6 Gal	7.4	10.2	24	34.9 18.8	10.	9.6	37	10.0 37.3	9.5	7.9	54	22.4 44.9	M-	8.2	
9.0		56.4	6.2	9.1	9.6	25	25.4 32.1	9.5	8.8	20.0	10.3	9.2	9.8		24.9 9.4		9.6	
9.8	14	5.9	33.8	9.8	9.8		35.9 35.3	9.9	9.9	20.8	59.3	9.6	9.6		25.9 7.9		9.3	
7.9		19.9	28.4 Gal	7.5	10.1		47.9 33.2	9.5	10.2	25.8	8.1	9.7	9.6		41.9 4.6	10.		
8.4		22.9	31.4 a	9.0	8.8		51.9 9.3	9.1	10.4	26.2	0.1	9.5	8.4	55	21.9 44.6	Ma	8.4	
9.6		36.9	38.6	9.5	8.8		52.0 40.3	9.0	8.4	31.8	28.4 a	8.5	8.6	56	8.4 44.1	a	9.0	
9.8		50.9	56.2	10.3	26	27.8	38.7	9.4	8.4	38.8	41.5 a	9.1	9.1		18.4 21.1		9.7	
10.2	15	5.9	17.7	9.8	7.6		28.7 57.6	8.0 Gtl	8.0	38	4.3 18.6	8.5	8.6		25.3 25.0	M	8.8	
8.6		59.4	12.2 a	9.1	9.0		29.0 43.3	9.4	9.8	17.8	30.5	9.8	9.8		34.3 35.0		9.8	
8.8		15.9	34.6	9.4	9.8		31.8 38.4	9.3	9.3	30.8	15.1	9.4	8.1		35.8 56.5	Ma	8.7	
10.0		20.9	22.1	9.7	10.0		33.4 21.1	9.8	8.6	41.8	17.0 b	9.0	9.8		39.8 34.5		9.5	
10.1		30.2	42.1		9.0		36.2 58.4	9.0 }	10.2	56.8	55.6	9.8	9.8		45.0 5.4		9.8	
10.1		37.4	19.5		9.3		38.7 58.0	9.1	10.2	39	17.7 2.9	10.	9.8	57	5.8 59.7			
8.8		39.4	15.5 a	9.2	10.0		50.9 30.8		8.8	25.8	9.1	9.2	9.8		22.0 29.6		9.5	
9.2		50.9	5.0	9.5	9.4		7.7 41.3	9.8	10.4	32.8	44.6		8.7		32.3 8.6		9.0	
10.0		59.4	56.1	9.7	10.0	27	7.7 19.5		7.2	40	7.8 46.5	Mal	7.3		51.8 14.2	a	9.0	
9.4	16	4.9	14.9		10.2		57.4 16.4		8.6	20.8	13.7		9.1	58	1.8 14.5			
9.2		9.4	42.5	9.2	10.2	28	0.9 1.3		9.9	28.8	11.7		9.9		21.3 49.0		9.4	
9.6		18.4	5.3	10.	9.2		10.4 7.7	9.5	10.0	34.8	21.3		9.6		25.3 27.6		9.4	
10.2		30.4	45.7	9.4	9.4		12.1 27.1	10.	9.8	45.3	18.4		9.4		31.8 6.5	Ca	8.0	
8.8	17	18.4	12.2	Ma	9.2	9.8	22.1 5.9		9.1	41	15.8 17.7	9.2	9.8	59	14.3 6.1			
8.1		43.4	50.2	Mbl	7.8	9.0	32.2 57.0 a	9.0	10.0	35.8	50.5	9.8	9.6		33.0 27.2		9.1	
9.2		49.9	58.1		9.5	9.9	38.9 34.6	9.3	9.2	42	0.9 48.1	9.1	9.5		57.3 26.4		9.4	
9.3		51.9	30.3		9.5	9.6	29 0.1 50.1	9.5	10.4	9.4	6.7	9.6	8.6	0	0.3 32.6		9.1	
8.8	18	32.4	0.4		9.5	7.0	0.8 31.9	GSal	6.7	10.4	12.3 24.0		7.8		44.8 52.8	8.0 Gb	7.8	
9.3		33.9	11.9		9.3	9.4	4.9 50.4 a	9.0	9.0	43	4.4 17.7	8.8	8.3	1	29.3 44.0		8.7	
10.1		52.4	29.3		8.4		13.4 37.4 a	9.0	9.0	15.4	14.4	9.2	9.0		53.3 45.1	MC	9.4	
10.2	19	10.9	33.6		10.2	15.9	18.4	9.8	8.6	18.4	26.2	8.5	8.6		55.8 9.8		8.8	
8.9		22.4	54.3	8.5 -	8.8	9.2	47.4 59.7	9.4	10.4	45	5.4 8.4	9.5	9.8	2	10.8 33.0			
9.3		31.4	32.3		9.5	9.9	30 2.4 31.1	10.	10.4	12.9	48.1		8.7		21.8 12.2		9.3	
9.3		37.4	51.4		9.6	23.4	3.0	9.7	9.6	39.4	57.6	9.5	9.3		49.8 24.9		9.5	
9.7		45.2	42.1		9.2	42.4	7.3	9.2	8.6	46	2.2 1.9 a	9.1	9.8		53.0 57.0			
10.3		49.7	45.0		8.0	52.4	1.0	Cbl	7.2	9.1	2.4 36.6	9.3	9.8		56.3 33.6		9.6	
9.3		56.2	48.0		9.6	31	26.4 54.8	9.5	10.2	8.0	8.1	9.8	8.7	3	29.8 52.3	8.5 a	8.8	
10.3		56.2	35.9		10.0	33.4	37.5	9.5	8.4	19.0	32.4 -	9.0	8.4		55.8 9.9	MCa	8.6	
9.3		57.7	30.5	9.8	7.8	37.9	43.9	bl	7.8	9.6	21.4 11.7	9.5	9.3		56.8 40.1		9.1	
10.1	20	13.2	25.0	9.8	10.4	32	2.3 59.4		9.6	30.4	31.1	9.0	9.8	4	13.7 58.8			
9.0		19.2	19.0	9.6	8.8	3.9	37.5	9.2	9.6	47	3.2 30.8	9.4	9.0		21.8 6.8		9.2	
8.8		25.2	46.1	9.0	9.0	6.0	48.5	9.7	8.6	11.2	55.5	9.2	9.8	5	5.0 43.6	GS1πβ	4.8	
9.4		59.2	42.7	9.5	10.2	9.5	53.9	9.9	9.9	22.4	50.0	9.8	5.0		30.8 8.7			
10.3	21	0.0	25.8		9.8	32.0	28.5	9.8	10.4	35.4	59.3	9.8	9.8		36.0 45.5		9.3	
10.3		14.2	25.8		10.0	58.0	45.9	9.5	8.6	40.3	41.0 a	8.9	9.8	7	30.3 50.7		9.5	
8.8		17.7	13.2	9.5	10.4	33	3.0 6.3		10.3	48	1.2 52.9	9.5	7.2		32.3 19.1	Gmb-17.3		
9.6		31.2	44.7		10.2	20.0	26.3	9.7	8.0	2.2	30.9	Mal	7.8	8	36.1 35.7		9.5	
9.3		33.2	24.3	9.5	8.4	29.0	7.4	Ma	8.9	9.1	26.6 37.7	9.5	9.0		20.5 20.5		9.4	
8.5		34.7	33.8	-	8.6	9.4	46.0 46.8	-	9.2	10.4	46.7 41.5	9.2	9.2		15.5 4.0		9.2	
9.3		39.7	25.0	9.5	8.6	55.5	48.0	-	9.1	10.4	49.2 13.4	9.8	9.8		20.1 35.9			
9.7		29.7	28.1		9.2	59.0	3.5	9.8	9.6	53.8	9.0	9.3	9.7		22.0 39.3			
9.3		39.2	10.8		7.7	34	1.5 58.4	8.0 b=l	8.0	49	2.4 15.6	Cal	8.3	8.4	38.7 58.1	9.0 M-	8.5	
8.4		39.2	10.2		10.2	37.0	17.0	10.	8.0	19.9	22.4	Ma	8.3	8.9	40.7 24.8		8.9	
8.6		48.7	1.3	8.8	9.6	45.0	24.0	9.4	8.6	23.9	31.5 b	9.1	9.4	9	16.3 15.9		9.4	
10.1	23	1.2	30.9		8.6	50.0	9.1	Ma	8.7	48.0	18.5	9.8	9.6		28.2 45.1			
10.2		6.0	24.6		9.4	35	1.0 22.4		9.5	50	2.9 13.1	Cbl	8.5	7.1	33.2 14.0	GCbl	7.1	
8.9		6.7	41.0	-	9.0	2.0	36.7		9.5	9.1	21.4 55.3	9.7	9.7		46.2 58.0			
9.4		18.2	0.7	9.3	10.2	6.0	29.5		9.8	28.9	52.6	9.8	9.4		48.2 25.6		10.	
10.0		19.2	1.4		9.6	21.8	57.4	9.5	8.6	50.9	44.1 a	8.9	9.4	10	12.0 17.3		9.5	
10.0		22.2	40.8		9.8	28.0	15.4		9.4	52	42.9 13.0	9.2	9.1		53.5 53.3		9.2	
10.3	24	20.8	38.2		8.7	36.0	45.0	M-	9.0	53	1.4 35.0	MW-	7.8	9.7	11	5.5 55.2		9.8
9.4		20.9	35.5		8.6	36	45.0 15.9	a	8.6	9.0	53.3	9.0	9.7		8.7 58.5			
10.0		30.4	26.5	9.8	7.5	53.0	53.8	7.0 GS1β	7.0	9.5	39.4 30.6	9.5	9.6		59.5 20.2		9.6	
25pr.	+1	11.0	-7.6		+1	11.5	-7.7		+1	12.3	-7.9			+1	13.4	-8.1		

4921-4980.				4981-5040.				5041-5100.				5101-5160.												
mag.	11 ^h	-22°		mag.	11 ^h	-22°		mag.	11 ^h	-22°		mag.	11 ^h	-22°										
	m	s		m	s			m	s			m	s	a										
9.4	12	0.5	6.4	9.5	9.4	31.0	10.5	10.0	30	51.7	19.0	9.6	9.3	40	59.9	36.4	a	9.3						
8.8		44.8	25.9	a	8.9	8.2	31.5	49.9	Mb-	8.6	8.3	31	10.5	31.9	b-1	8.2	8.7	41	2.6	20.8	a	8.6		
9.5	13	3.2	24.0		9.8	9.6	41.0	48.3		9.6	9.4	23.7	58.8		Ma	9.0	9.8		9.6	33.2		9.7		
9.6		17.5	34.5		9.8	9.5	42.2	34.2		9.6	9.9	41.0	28.9				9.8		9.8	20.3	33.6		9.8	
9.4		29.7	2.8		9.3	8.4	47.8	34.9		8.8	9.6	32	1.8	40.6			9.8	10.0		59.0	59.6			
9.4		58.2	16.3		9.7	8.9	49.5	3.8	a	8.8	9.4		4.3	34.9			9.5	8.0	42	9.6	23.8	Mal	7.1	
9.4	14	12.2	18.0		9.8	9.4	52.2	48.3			9.4		9.4	59.2	a		9.2	10.0		52.2	59.9			
9.8		14.5	26.2		9.6	9.6	58.5	9.9			9.5		17.8	11.7			9.8	10.0		55.2	13.4			
9.2		19.2	14.9	10.	9.8	22	10.5	35.2			10.0		18.3	13.7			10.0		43	1.2	39.5		9.9	
8.9		25.0	40.2	a	9.2	9.7	42.2	32.8			9.4		18.6	30.1			9.6	10.0		13.0	25.9			
9.2		33.5	20.5		9.4	9.1	23	7.5	20.2	a	9.2	10.0	29.5	36.5			10.	9.8		26.4	29.2			
9.5		41.0	28.4		9.8	9.8	17.8	41.4			9.8		57.3	52.1			10.	10.0		31.2	13.7		9.6	
7.8		42.0	31.5	al	8.0	8.7	24	1.7	47.5	a	9.0	10.0	33	1.1	25.7			10.0		32.0	27.1			
9.8	15	8.2	36.3		9.4	9.4	12.0	5.3			9.4	9.8		4.1	20.4			8.6		37.5	20.8	M=	8.3	
9.5		31.2	53.6		9.7	9.7	26.0	43.8			9.3	9.3	17.3	18.0			9.3	9.3		41.7	52.3		9.5	
9.8		35.5	36.2		9.8	9.8	27.5	13.4			9.4	9.4	21.2	2.2			9.4	9.8		47.7	5.6			
9.2		39.0	44.8	-	9.2	9.8	32.7	20.1			9.8	9.8	21.3	4.1			9.5	9.3	44	11.2	27.6		9.1	
9.4		39.5	18.8		9.8	8.9	40.0	5.7		9.0	9.9	30.8	24.2				8.0			17.5	47.2	a	8.2	
9.2		42.6	3.1		9.5	9.4	46.8	25.2			9.9	9.9	47.3	47.9			9.8	9.6		18.7	38.9			
9.6		47.8	7.3		9.1	9.1	57.8	54.5	a	9.5	9.9	56.6	17.7				9.8	9.6		22.7	10.1		9.3	
9.7		48.5	12.4		9.2	25	20.5	6.7		9.3	10.0	58.7	1.9			10.	9.6		30.2	40.0		9.5		
9.8		48.7	21.7		9.2	22.0	18.5			9.6	9.9	34	10.1	49.3			9.5	9.1		30.2	32.5		9.0	
9.4		50.0	7.3	a	9.0	9.5	38.0	54.2			9.0	9.0	30.8	21.5	-		9.1	9.0		30.2	49.1	a	9.1	
9.4		52.0	12.8		9.7	9.6	40.0	30.2		9.8	10.0	31.3	17.1				9.6			38.7	49.1			
9.8	16	0.9	14.3		9.2	41.0	4.5			9.6	8.6	32.3	23.3	b=		9.0	9.6		45	0.2	53.8		9.7	
8.9		7.5	12.5	a	8.9	9.4	41.9	57.0		10.	9.8	40.7	59.2				9.6			11.7	56.1			
9.4		42.0	9.0	a	9.2	9.5	3.8	4.7			10.0	57.6	14.8				10.0			14.2	18.6			
9.6		44.0	51.4		8.8	15.2	41.7			8.8	8.3	35	9.3	43.7	b		8.5	10.0		14.4	42.3			
8.9	17	19.5	52.8	9.0	9.0	9.6	23.2	50.0			9.6	19.6	54.4				9.6	9.3		16.7	41.9		9.0	
9.6		23.5	9.8		10.	9.4	23.2	10.1			9.3	22.2	4.0				9.4	9.5		29.4	1.0		9.4	
9.2		41.7	37.9		9.8	29.5	12.3		10.	9.9	23.1	30.2					9.6			39.2	55.0			
9.1		52.0	31.9		9.6	40.8	11.5		9.9	9.3	26.7	1.0	a			9.1	10.0		46	5.1	9.4		10.	
9.7		55.2	57.9		7.5	43.2	45.2	Mal	7.5	9.3	30.8	24.6				9.5	10.0			39.0	43.2			
9.0		59.0	25.0		9.5	9.4	55.2	7.7		9.7	9.2	32.3	33.2			9.2	10.0			56.8	32.0		9.8	
9.8		59.5	52.8		8.8	27	6.2	26.8		8.3	10.0	38.7	1.9				9.6			58.8	37.0			
9.4	18	0.2	21.9		10.	9.1	10.7	47.2	a	9.5	9.0	36	2.0	41.8			9.4	10.0		59.8	1.0		9.8	
8.8		9.5	8.3	a	9.1	9.0	17.5	29.8		9.1	9.6	3.8	53.5			9.8	9.6			59.8	1.0			
9.8		18.2	33.3		9.4	21.2	8.7			9.4	9.6	18.3	43.6				9.9		47	10.5	7.5			
9.6		33.5	40.3		9.5	9.2	23.5	31.7		9.8	9.5	22.6	54.4			9.8	9.8			25.0	54.3			
7.6		34.5	8.7	Cal	7.7	8.2	32.2	45.7	Mal	8.2	9.6	25.6	5.9			9.5	10.0			29.0	50.1			
9.8		45.8	29.4		9.8	33.0	36.9			9.6	31.6	33.9					9.3			39.2	48.6		9.1	
9.8		46.5	59.4		9.7	59.7	14.4			10.0	38.1	54.6				9.1	10.0			48.2	24.2		9.0	
9.8		47.2	7.9		9.2	28	4.5	12.9		9.7	9.5	53.3	40.8			9.8	10.0			57.0	0.0			
9.7		51.0	38.4		9.4	31.2	6.5			10.0	37	11.2	52.3				9.8		48	21.0	59.4		9.8	
9.5		57.9	57.1		9.0	32.0	54.6	Ga	9.0	9.6	17.7	13.2				9.5	7.6			27.6	51.4	8.0	7.8	
9.1	19	3.1	57.6		9.8	37.0	47.2			10.0	21.0	36.2					10.0			32.8	11.9		10.	
9.4		13.5	7.1	a	9.7	37.7	52.7	9.0 Ga	8.7	10.0	27.1	9.6				9.9	9.9			50.1	43.2		9.9	
9.0		23.2	53.7	9.0 M	8.9	39.9	26.3		9.8	8.6	52.3	19.5	Ma			8.9	9.8			51.6	45.0		9.7	
9.5		23.5	29.2		9.5	9.8	44.2	59.4			9.0	38	2.8	26.9	a		9.2	10.0		55.0	29.0			
9.8		40.0	55.2		10.0	59.4	28.8			9.9	12.0	40.4				9.8	7.9		49	10.4	45.4	b	8.0	
9.2	20	5.5	52.0		9.8	8.6	29	11.2	49.9	a	8.8	10.0	42.1	30.2			9.4			54.0	54.7		9.4	
9.6		9.5	5.1		10.0	19.2	8.0			10.0	43.8	3.7					10.0			56.9	21.3		9.6	
9.7		10.0	11.6		9.8	19.2	23.7			9.6	50.6	33.1				9.9	10.0		50	22.4	2.8			
9.2		30.7	34.5		10.0	48.0	31.3			10.0	55.8	5.4					10.0			41.7	21.8		10.	
9.4		56.7	1.0		10.	50.2	8.8			9.0	39	6.6	19.1	a		8.9	10.0			52.4	41.1			
9.8	21	4.0	8.3		9.1	30	0.5	9.5	a	9.2	8.7	17.6	17.6	Ma		8.6	9.7			56.4	26.6		9.4	
9.2		6.5	5.0		9.6	9.0	9.7	56.9	9.0 a	9.0	10.0	58.1	55.9				8.8			57.9	48.3	-	8.5	
9.8		22.8	3.0		10.0	12.9	48.2			8.6	40	10.8	22.7	Ma		7.8	9.8			59.7	0.2		9.8	
9.6		28.2	18.0		10.	9.8	18.5	22.4		9.4	9.9	24.8	11.3				9.2		51	9.4	30.4	-	8.5	
9.7		29.5	5.7		9.8	7.3	43.7	15.3	GSat π	6.7	9.9	51.6	10.0			9.6	10.0			18.2	44.6			
25pr.	+ 1	14.3	-8.2																	+ 1	16.0	-8.3		

5161-5220.				5221-5280.				5281-5340.				5341-5400.						
11 ^h -12 ^h .		-22°		12 ^h .		-22°		12 ^h .		-22°		12 ^h .		-22°				
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'			
10:0	51	27.7	26.6	9:2	0	26.3	47.3	9:1	9:5	11	26.2	36.6	9:5	10:0	20	16.4	17.0	
10:0		31.4	33.4	9:7		29.3	58.4	9:8	9:2		52.4	15.1 a	9:1	10:0		18.7	15.6	
10:0		39.9	33.9	9:6		29.8	46.1	9:9	9:9		57.1	2.8		9:9		21.9	47.6	
9:5		41.1	25.4	9:7		8.8	30.3	24.5	8:8	10:0	12	5.2	51.1	9:6		28.9	42.8	
9:4		50.4	24.4	9:4	10:0		53.1	43.7	9:5		6.7	31.6	9:8	9:8		39.1	17.5	
9:9		52.9	43.0		9:2	1	29.5	5.9	9:0	9:0	9.7	19.0 a	9:3	10:0	21	20.1	54.4	
9:7		57.2	53.8	9:8	10:0		32.6	59.6	9:3		32.2	11.7 a	9:0	9:8		21.9	29.9	
9:0	52	8.2	56.8	9:1	10:0		49.8	32.5	9:7		39.7	12.4 a	9:3	9:2		29.1	43.1	
10:0		22.1	20.4	9:8	9:9		50.8	3.8	9:9		41.7	41.5	9:8	8:5		32.1	32.1 a	
10:0		26.3	0.2	9:9	2	7.0	58.7		9:8	9:9	43.9	29.5		9:3		36.4	30.0 a	
9:4		38.2	8.1	9:4	10:0		13.2	44.7	9:4		49.0	38.8	9:4	8.6	22	9.4	13.8 Ca	
7:7		39.4	43.0	Mal	7:3	9:1	22.5	57.4	9:5 a	9:0	9:1	59.7	25.8 a	9:1	9:9	32.1	36.3	
10:0	53	13.4	54.9		9:2		36.9	10.8	9:1	10:0	13	1.7	38.0	9:0		34.8	2.3 a	
9:2		15.9	50.0 a		9:2	8:5	54.2	41.0	8:5	10:0	6.9	57.8	9:6	9:6	23	1.4	21.4	
9:7		18.7	3.6		10:0	3	1.4	42.4	9:5	9:6	8.5	14.0	9:8	9:4		2.0	30.0	
9:4		49.4	20.6	9:5	9:8	2.6	58.7		9:8	8:1	11.7	44.3	8:8	9:8		16.2	15.9	
10:0	54	23.9	30.8		9:0		15.6	14.7	9:0	10:0	36.2	10.5		9:7		41.0	21.1	
10:0		27.4	19.3		9:6		29.4	18.0	9:8	9:5	36.7	29.0 a	9:2	9:8		51.0	10.3	
10:0		38.9	52.0	10.	9:0		35.4	47.2	9:2	9:8	39.7	7.2		10:0		52.0	32.3	
9:5		40.4	56.3 a	9:4	9:9		48.2	30.8	9:6	9:6	54.1	2.9	9:7	8:9		55.0	51.4	
10:0		42.3	0.1		9:7	4	4.6	26.6	9:6	9:6	58.9	58.3	9:6	10:0	24	0.7	49.9	
9:0		43.9	38.8	9:0	9:9		18.6	22.7	9:5	9:5	6.7	5.3	10.	9:8		12.0	54.7	
9:7		48.0	1.1	9:6	9:9		20.6	13.7	9:5	9:8	7.0	46.6		9:4		13.7	39.0	
9:7		49.4	48.8	9:8	5.7	38.2	54.5	GSlπβ	6.0	9:5	19.4	5.3	9:8	8:6		33.4	36.3	
8:6		57.2	25.4	=	8:9	9:9	38.9	52.0	9:6	9:6	19.4	57.3	10.	9:6		39.2	21.4	
9:5	55	18.7	45.4		9:8	9:5	49.0	19.7	9:4	10:0	27.1	58.9		9:4		46.2	18.5	
9:7		22.5	58.5		9:8	9:8	56.2	20.8	9:8	9:9	30.9	6.9		9:8	25	19.2	32.5	
9:6		27.9	44.0	9:8	9:1		58.2	9.9 a	9:0	9:8	37.2	44.2		10:0		24.2	54.0	
10:0		35.9	14.9		10:0	6	10.1	42.6	8:3	8:3	41.1	58.6	8.5 G=	8:6	9:6	34.2	23.5	
10:0	56	5.9	13.3		8:8		11.4	7.5 a	8:8	9:4	50.9	24.0 a	9:3	9:5		36.0	1.2	
10:0		21.4	49.5		9:8		19.4	28.9	9:8	8:1	15	11.4	11.7 a	7:7	9:8	45.7	14.3	
9:8		48.7	20.8	10.	9:6		21.1	38.7	9:8	9:9	17.4	2.4		10:0		51.7	34.5	
9:8		48.9	17.7	9:8	9:4	7	13.9	43.0	9:3	9:5	20.0	38.0	9:8	9:7		59.7	11.4	
9:9	57	10.9	27.4	9:5	9:9		20.9	19.7	9:8	9:6	20.0	53.0	9:9	10:0	26	15.7	56.6	
10:0		30.7	53.3		10:0		22.6	51.2	9:8	9:4	47.3	26.3	9:5	9:4		29.7	52.2	
9:7		37.8	58.2	9:8	10:0		29.3	57.9	10:0	9:8	48.5	18.1	10.	8:8		34.6	0.5	
9:8		38.7	36.1		9:7		29.4	15.7	9:8	9:8	57.3	16.5	10.	9:6		50.6	9.2	
9:7		38.9	47.0	9:6	10:0		58.9	50.1	9:8	9:8	0.0	16.9		9:4		54.1	53.7	
9:0		52.7	12.0	9:2	10:0	8	15.0	45.0	9:6	9:6	10.0	24.1	9:7	9:0		55.6	18.7 a	
9:4	58	0.4	15.4	9:5	10:0		21.4	5.8	9:9	9:9	11.0	22.0		9:8	27	1.6	49.6	
9:5		4.4	4.7	9:8	9:7		38.0	10.3	9:5	8:3	12.5	33.7	8:5	7:9		14.9	49.3	
9:2		9.9	24.1	9:3	10:0		49.0	49.8	9:0	9:0	21.3	33.5	9:4	9:0		19.6	24.2	
10:0		15.9	17.2		10:0		49.9	2.4	9:7	9:7	56.5	8.5	10:0	10:0		21.8	39.7	
9:4		28.7	28.3	9:7	9:4		51.2	25.9	9:3	10:0	59.3	28.0	9:8	9:4		28.7	30.7	
9:5		38.2	38.7	9:8	10:0		58.5	17.9	8:6	8:6	5.5	4.6	Ca	8:8	9:4	29.3	30.6	
9:4		40.1	53.2	9:6	9:7		59.9	2.1	9:7	9:8	30.3	13.9	9:9	7:6		30.9	51.3	
9:9		41.4	24.9		9:4	9	8.6	22.0	9:6	9:8	37.0	53.1		9:0		44.6	16.8	
9:2		42.7	55.9	9:6	9:5		9.9	12.5	9:3	9:2	44.8	8.9	Ca	8:8	4:8	49.9	42.3	
9:9		51.7	47.0		9:9		18.4	6.7	9:4	9:4	52.0	6.6	a	9:2	10:0	4.0	8.8	
9:7		52.7	18.7	7:0	19.2		39.4	Gb=1	6:8	9:6	18	6.1	47.8	9:8	10:0	6.6	21.2	
10:0		1.1	1.4	9:8	22.9		6.7		9:4	9:1	9.4	59.3	8:5	9:0	10:0	7.3	29.9	
9:0	59	3.1	48.6	9:1	9:6		41.4	21.3	9:8	9:9	19.5	41.0		8:5		15.0	47.1	
10:0		21.8	3.7		9:0		43.1	8.2	9:3	9:7	41.8	49.0		10:0		20.1	20.0	
9:4		39.5	9.4	9:4	9:4		50.2	7.3	9:6	9:6	47.0	32.7	9:4	10:0		28.6	59.5	
8:5		43.3	54.2	8:5 Ga	8:3	10	10.7	55.1	10:0	10:0	50.0	21.0		8:8		29.7	27.9	
9:6		50.1	25.5	9:8	9:4		34.4	47.0	9:4	9:8	50.0	11.8	9:9	9:4		38.2	17.2	
7:6		51.1	6.0	GStlπ	7:2	9:8	56.7	12.7	9:8	9:5	56.5	48.4	9:8	10:0		41.1	20.4	
9:6		52.3	49.1		9:6		58.4	32.0	9:8	8:4	19	7.8	Ca	8:3	10:0	42.4	16.5	
9:8		58.8	56.1		9:0	11	1.4	48.3	9:3	10:0	19.3	32.1		9:6		49.2	37.3	
9:2	0	20.5	20.6	9:1	9:5		24.2	33.2	9:7	9:8	20	10.1	1.3	10.	10:0	29	22.3	
25pr.	+ 1	16.6	-8.4		+ 1	17.2	-8.4		+ 1	17.7	-8.3		+ 1	18.4	-8.3			

5641-5700.				5701-5760.				5761-5820.				5821-5880.					
mag.	13 ^h .	-22°		mag.	13 ^h -14 ^h .	-22°		mag.	14 ^h .	-22°		mag.	14 ^h .	-22°			
6.9	34 36.6	48.9	6.5 Gtlπ6.7	9.9	56 50.0	7.6		9.3	16 48.6	53.6		9.5	35 35.7	27.6		9.4	
8.8	41.9	58.7	9.5 a	9.3	59.9	0.9	Cbl	9.1	9.3	50.1	46.4 a	9.2	39.2	44.4		9.5	
8.6	35 7.6	28.9	a	8.7	7.3	1.3		7.5	9.4	17 13.1	50.8	9.5	36 14.7	28.8 a		8.9	
10.0	8.6	49.5		8.8	24.8	33.8 a		8.7	9.2	53.6	54.1	9.3	53.7	19.4		9.9	
10.0	29.1	38.9		8.4	37.3	32.2 a		8.6	8.9	57.1	0.9 a	9.0	37 8.7	26.2 a		9.0	
9.2	51.1	41.1	9.4	8.8	59 2.3	0.0 a		9.0	10.0	19 3.1	15.2	9.8	11.7	27.8 a		9.0	
8.5	36 2.6	32.5 a	9.2	8.4	4.3	7.6 a		8.8	9.3	12.1	50.0	9.4	22.2	13.2		9.5	
9.8	4.6	31.1	9.4	8.8	0 5.3	31.0		9.2	9.3	20 13.1	32.6	9.5	22.2	47.3		9.1	
9.3	5.1	32.2		10.0	11.0	32.1		9.8	9.4	41.6	46.5	9.8	26.7	4.2			
9.0	11.6	10.3	9.3	9.6	16.8	29.3		10.0		43.6	1.7	9.8	27.2	56.6			
9.0	37 16.1	6.7	9.5	8.4	23.3	52.6 Gb		9.0	9.2	21 0.4	2.1	9.2	30.7	20.6 a		9.0	
10.0	19.6	5.9	9.8	8.2	47.3	42.0 a		8.2	8.0	18.6	26.8 =	7.8	38 29.2	55.8		9.5	
9.2	29.6	15.9	9.3	9.0	1 45.8	10.2 b		9.0	7.8	24.6	24.7 -	8.1	42.2	23.2		10.0	
8.7	47.6	12.5	9.2	8.6	2 8.3	10.2 b		9.0	9.6	41.6	27.0	9.8	42.2	5.4		9.5	
10.0	38 5.6	55.5		9.2	9.4	2.5		9.2	8.4	58.6	3.8 a	8.8	56.2	37.3 Gal		6.3	
10.0	39.6	17.9	9.8	9.8	28.0	4.7		8.6	22 22.6	51.8	9.0	8.8	39 3.2	8.0		9.5	
9.8	39 6.1	23.3	9.4	9.4	3 16.3	45.7		9.3	9.6	57.9	59.5	9.3	43.7	28.0		9.5	
9.0	26.6	4.5 a	9.2	9.9	35.8	16.8		9.7	8.8	23 27.1	23.5 a	9.1	47.2	40.6 a		9.5	
8.8	40 16.6	50.9	8.5	8.5	37.3	21.0 a		8.5	10.0	32.7	11.7	9.9	40 23.2	21.9		9.2	
7.9	48.4	47.5 -	8.3	9.2	41.0	54.2		9.3	8.8	48.7	0.2 Cal	8.6	39.2	38.1			
9.3	41 21.4	44.0	9.5	9.6	58.8	57.3		9.8	9.6	24 3.9	57.9	9.1	45.9	52.3		9.7	
9.6	46.4	3.7	9.4	9.4	4 13.3	47.3		9.5	8.4	16.1	31.5 a	8.8	41 53.9	7.9			
8.0	42 6.4	5.9	8.2	8.0	15.3	14.1 a		8.6	7.3	25 0.1	53.4	7.5 Gbl 7.0	42 48.6	2.8			
8.5	31.4	50.6	9.5	9.0	22.3	31.0		9.5	9.8	3.6	38.9	9.8	43 2.6	32.7		9.4	
10.0	47.9	41.9	9.7	9.4	53.3	19.5		9.5	8.6	16.1	6.2	9.3	5.1	3.1 Ca		8.8	
9.6	48.3	55.3	9.8	9.2	6 46.9	39.6 a		9.0	9.6	22.6	43.6	9.5	15.8	34.1		9.1	
9.4	43 11.9	26.5	9.3	8.2	7 17.1	32.7 a		8.2	8.6	51.6	27.0 a	9.1	21.1	43.7 a		9.5	
9.8	22.4	25.5	9.4	9.6	39.5	6.6		9.7	9.0	26 27.6	21.8	9.2	38.1	53.6 Ga		9.5	
9.3	24.9	45.6	9.6	8.8	49.9	48.7 a		9.0	10.0	39.6	12.3	9.8	44 29.6	9.9		9.3	
9.4	46.4	13.6	9.7	8.8	52.1	21.8		9.1	9.4	43.2	7.9	9.6	58.1	29.7 a		9.1	
9.2	51.9	49.1 a	9.5	8.9	8 25.9	29.4 a		9.1	10.0	27 26.6	37.1	9.0	45 9.6	39.7		9.5	
8.8	45 45.9	25.0 a	8.8	9.5	28.6	19.4		9.4	9.2	40.4	23.0	9.0	46 6.0	57.3		8.3	
8.4	46 9.4	53.7 a	7.8	9.6	59.6	18.1		9.6	9.6	54.1	46.4	9.0	10.1	34.5 a		9.2	
7.8	47 5.4	55.6	8.0 al	7.7	10.0	14.9		9.7	9.4	28 4.1	59.2	10.0	26.1	38.0 a		9.3	
9.3	15.4	1.6	9.2	9.6	10 11.8	16.9		9.2	9.4	19.9	6.4	10.0	47 6.8	12.5 a		9.2	
8.6	48 35.4	8.7 a	8.8	10.0	40.2	10.1		9.6	10.0	33.0	50.2	9.6	32.9	11.1		9.8	
8.7	47.0	26.1	9.1	8.7	47.7	17.8		9.1	9.4	33.9	32.0	9.2	38.6	5.6			
8.4	47.4	43.4 a	9.0	9.6	59.9	59.2		9.8	8.8	43.9	39.1	9.3	50.8	10.4		9.3	
10.0	49 9.4	22.9	9.8	9.7	11 6.2	19.5		9.5	10.0	52.9	55.1	9.8	59.4	57.1			
10.0	13.4	23.4	9.8	9.7	10.2	52.1		8.6	29 18.6	11.2		9.2	48 11.9	37.4		9.5	
7.1	50 2.8	29.4	b-1	7.7	9.4	44.2	54.2	9.4	8.9	32.3	49.0	9.5	35.9	12.0		9.6	
9.9	26.8	44.2	9.3	7.5	12 2.7	22.5 a		7.3	9.9	36.8	38.4	9.0	43.4	37.9		9.5	
7.4	31.3	24.7	GWb=16.6	8.6	16.7	47.5 a		8.5	9.2	39.3	37.1 a	9.2	49 17.1	26.6		9.8	
9.1	51 9.8	46.6	9.3	9.7	13 35.2	48.9		9.5	9.9	47.8	37.7	9.6	50.6	12.6		9.4	
9.4	26.8	55.8	9.5	10.0	14 22.4	45.5		9.7	9.4	30 24.3	26.0	9.0	56.4	23.7		9.9	
9.9	33.8	37.4	9.4	9.4	24.7	10.9		9.5	8.4	51.8	37.2	Gbtlπ	57.3	58.3		9.5	
9.2	35.8	38.7	9.4	8.6	28.2	15.5 -		8.6	9.9	31 10.0	59.9	7.5	58.6	29.0		9.6	
8.9	39.8	15.3	8.9	9.6	33.2	9.0 -		9.7	9.4	15.8	19.6	9.3	50 22.6	4.2		10.0	
8.0	45.3	38.1	8.9	8.8	36.7	26.5 -		9.0	9.9	26.8	49.5	10.2	23.7	7.0		9.6	
9.4	52 18.8	34.3	9.7	9.6	39.2	19.9		9.5	7.9	47.3	46.1 bl	8.0	39.9	27.9		9.5	
9.4	25.8	16.0	9.0	10.0	15 25.7	46.1		9.8	8.6	32 3.3	29.1	9.1	51 29.7	5.4			
9.9	32.8	54.8	9.6	9.2	26.7	21.4 a		9.0	9.9	46.7	59.3	9.8	39.2	16.3			
9.5	34.8	54.7	9.5	9.4	27.2	47.9		9.9	9.9	52.3	52.2	10.0	52 6.7	22.1		9.7	
8.6	53 4.3	49.1 a	8.2	9.2	35.7	29.9		9.0	9.4	33 53.3	46.4	9.3	13.9	46.9 a		9.0	
9.4	54 10.8	17.8	9.4	10.0	53.1	37.7		9.6	7.4	58.8	4.8	Gatlπ	24.3	40.3			
8.6	16.8	44.7 a	8.8	9.3	16 0.6	20.9		9.8	9.8	34 30.8	42.7 a	9.5	27.2	43.0			
8.6	55.8	46.2 a	8.3	9.4	16.6	46.1		9.8	9.8	41.8	5.7	9.4	46.2	14.2			
9.9	56 16.8	25.9	9.6	10.0	22.1	4.3		9.8	9.9	35 2.3	4.3	9.8	46.7	2.0			
9.1	17.3	4.0 C	9.1	10.0	37.1	7.4		7.4	7.4	13.8	53.3	7.0 Gal	51.9	10.7			
9.8	39.0	40.4	9.4	9.0	48.6	8.9		8.8	9.2	18.7	14.3	9.2	53 1.9	16.8			
25pr.	+1 22.8	-7.5			+1 24.1	-7.1				+1 25.0	-6.7		+1 26.0	-6.3			

5881-5940.				5941-6000.				6001-6060.				6061-6120.							
mag.	14 ^h -15 ^h	-22°		mag.	15 ^h	-22°		mag.	15 ^h	-22°		mag.	15 ^h	-22°					
8.4	53 17.7	21.0	a	8.0	10.2			8.7	17 37.3	27.3		9.0	10.0	35 2.7	47.1				
8.1	29.9	11.0		9.5	9.5			9.6	45.3	15.1	9.4	10.0	49.2	11.7		9.8			
9.6	31.7	15.0		9.8	9.8			9.8	10.0	18.2	9.8	8.3	36 42.7	18.2	Ca	8.6			
9.6	33.4	30.1		9.5	10.1			9.2	18 47.8	52.6	9.0	8.8	37 0.9	56.4	a	8.9			
8.3	46.9	40.9	a	8.5	9.9			9.4	16.3	19.5	9.4	10.0	5.5	2.1		10.0			
9.8	54 1.7	30.5		10.2	22.4	27.8		9.4	19 1.8	57.0	9.5	8.7	32.4	41.3		9.0			
9.6	30.4	43.3		9.8	28.8	50.5		10.1	5.8	30.3	9.5	8.0	49.9	29.7	bl	8.6			
10.0	46.1	16.5		10.1	48.1	56.3		8.4	27.3	3.9	CWa	8.5	10.0	52.4	15.7				
9.6	55 2.7	22.4		10.0	49.6	33.1		9.5	27.3	48.2	9.8	10.0	54.7	15.8		9.4			
10.2	9.4	54.1		9.0	5 4.3	52.2	9.1	9.4	47.3	26.2	9.8	10.0	38 17.4	23.5		9.6			
9.8	19.4	17.0		9.8	10.0	29.6	6.9	9.7	9.2	52.8	27.0	a	9.2	7.6	21.9	21.4	Wal	6.7	
8.8	36.4	37.2	a	8.5	9.1	34.6	45.8	9.2	9.6	20 49.3	49.1	9.5	9.0	35.9	11.8		9.0		
9.6	42.4	12.1		9.2	10.0	36.4	7.0	9.4	21 11.3	59.2	9.5	9.0	39 36.9	43.4		9.1			
9.5	51.4	44.8	a	9.0	9.6	41.6	15.3	9.6	10.0	13.3	38.6	9.8	40 22.9	25.7		9.8			
10.2	56 8.4	18.2		9.8	10.0	6 24.1	13.7	9.6	9.6	18.3	40.7	9.2	36.9	17.4		9.4			
10.2	13.9	21.1		10.2	25.4	18.3		9.5	9.8	34.8	32.0	9.5	8.4	45.9	58.3	9.0	9.0		
9.8	14.2	19.5		9.8	25.6	50.0		10.0	10.0	44.3	29.7	9.6	8.8	45.9	59.1	9.0	9.2		
9.6	19.5	58.3		9.8	40.1	53.2		9.2	8.4	57.8	15.9	Ck	9.0	9.3	41 12.9	27.5	9.4		
9.5	31.9	59.2	9.0	9.1	49.1	10.9		9.3	9.4	22 7.8	59.9	9.5	9.5	40.4	39.2		9.5		
9.4	38.7	1.7	-	9.2	9.5	7 2.7	7.7	9.8	10.1	11.3	23.7	9.7	9.7	52.4	32.5		9.5		
10.2	41.1	27.8		9.1	6.7	0.1		9.0	10.2	17.8	49.2		10.0	54.9	32.9				
9.4	57 8.7	4.7		9.4	9.4	32.2	2.1	-	9.4	10.0	20.2		9.7	8.9	4.4	29.2		8.8	
9.5	37.9	3.5		9.6	9.5	38.7	41.1		10.0	10.2	26.8	33.4	9.8	7.4	16.2	52.4	7.0	GL1	7.3
9.1	42.5	40.7	b	9.4	9.5	48.4	53.3		9.5	9.4	23.2	25.2	9.1	7.6	44.2	14.5	Cal	7.4	
9.8	47.7	41.4		9.3	10.2	50.8	54.0		10.0	10.0	55.7	41.1	9.8	8.9	44 3.7	12.7	Cal	8.6	
9.8	48.5	41.8		8.9	52.5	27.0	al	8.8	10.2	2.5	26.2		10.0	23.7	5.9			9.7	
10.1	50.5	27.8		9.8	8 33.4	6.0		9.8	9.0	11.2	36.8		9.3	9.2	24.2	6.7		9.4	
10.1	55.5	7.0		9.5	10.1	45.8	47.6		9.4	32.7	35.5	a	9.5	8.7	4.5	1.2	38.7		9.1
10.1	57.9	12.9		10.2	52.8	23.0		10.1	9.4	38.7	4.9		9.2	46 51.2	47.8			9.5	
7.6	58 2.5	31.3	bl	7.5	10.1	9 14.8	14.1	9.3	8.4	27 2.4	34.8		9.0	6.7	18.9	23.5	Gal	6.8	
10.1	3.2	7.9		10.1	26.0	58.0		10.2	13.2	57.7		9.5	9.6	27.5	32.5			9.5	
9.2	7.2	30.0		9.1	10.1	59.3	45.1	9.0	9.4	22.4	21.1		9.1	10.0	43.5	23.7		9.5	
9.6	27.6	8.8		10.2	10 12.8	2.2		9.0	10.2	31.5	17.7		9.8	9.8	47.0	7.8		9.4	
8.5	33.5	28.9	bl	8.5	9.2	23.5	50.2	9.5	9.1	28 21.9	57.0	a	8.9	9.8	50.0	31.4		9.2	
10.0	33.7	18.2		10.2	46.0	36.2		9.8	9.4	24.6	34.9		9.2	7.8	53.2	59.9	8.5	Ga	8.4
10.2	41.5	53.1		9.6	11 32.8	17.2		9.7	10.1	35.7	8.1		9.7	10.2	48 56.3	37.0	al	8.0	
10.2	49.9	26.7		8.6	43.8	52.0	a	8.9	9.6	51.2	13.4		9.6	7.4	49 23.5	49.0	a	8.5	
9.9	55.5	49.5		10.2	43.8	37.7		9.2	9.2	29 23.5	31.4		9.3	8.2	50 37.3	11.0	a	8.5	
9.1	56.2	44.1		9.2	58.3	14.7		10.0	10.0	32.5	11.2	W	9.4	9.6	51 13.3	35.5		9.4	
7.8	57.0	50.1	7.5Gtlπ	8.0	10.1	12 16.8	47.3		10.0	52.0	29.6	W	9.2	10.2	58.8	25.7		9.5	
10.0	59 12.0	12.8		10.2	23.3	11.4		6.6	30 27.0	43.5		GWkbl	6.0	10.2	52 0.3	41.4		9.4	
9.8	15.5	29.6		9.1	47.8	26.2		9.1	10.0	34.0	13.1		9.5	8.8	19.3	19.3	a	9.0	
9.9	38.3	21.0		10.2	13 12.3	38.0		9.8	8.0	31 23.5	38.2	GWal	7.7	8.4	29.8	12.6	-	9.0	
9.9	48.5	46.7		9.2	35.8	13.9		9.5	9.5	32.0	11.0		9.4	8.4	36.3	50.5	8.5-	8.5	
9.6	54.0	0.5		9.7	10.2	36.0	32.5		9.5	42.0	3.8	C-	8.2	10.0	41.7	59.2		9.5	
9.8	56.0	24.0		10.2	14 19.8	2.1		9.6	9.1	43.5	47.4		9.4	2.9	55.8	15.7	GSπμβ	2.0	
9.1	0 33.5	12.9	-	9.2	8.4	31.5		8.5	6.4	32 0.5	44.4	GWal	7.0	10.0	53 18.3	14.0			
9.6	57.7	50.7		9.5	8.8	7.1	C-	9.1	10.0	9.2	46.8		8.6	54 26.3	27.1	K	al	9.0	
10.2	58.0	9.3		9.8	15.7	57.6		9.3	9.7	9.7	49.3		9.4	7.3	50.3	20.0	al	7.7	
8.8	1 38.5	35.0	b-1	7.7	10.1	21.3	28.9	9.5	9.7	17.2	43.3		7.3	55 20.3	49.7	8.5	al	7.8	
9.4	41.3	43.1		9.0	8.1	26.3	26.9	al	8.5	9.6	19.7	44.3	9.5	10.2	30.3	25.2		9.7	
9.6	2 10.3	9.4		9.6	9.8	26.3	39.2		9.3	9.4	23.7	28.9	W	9.3	9.4	33.8	49.0		9.5
10.2	13.5	42.3		9.6	31.8	22.2		9.8	10.0	24.2	55.9		9.7	10.2	48.8	38.6			
9.8	23.5	56.1		9.8	42.3	58.9		9.2	10.0	25.7	11.1		9.7	9.8	56 37.8	5.3		9.5	
7.9	46.0	14.4	-	8.3	9.2	16 0.8	59.2	9.5	10.0	46.7	0.1		9.2	10.2	42.3	6.7			
9.8	3 14.0	7.9		10.2	41.3	36.7		10.0	33 9.7	11.1		9.7	10.0	46.3	42.2			9.4	
10.1	27.5	25.2		9.0	53.8	16.6	Wal	8.8	10.0	52.2	26.1		10.2	57 50.3	52.7			10.0	
10.2	37.5	7.9		10.2	17 5.3	9.3		9.4	9.4	59.2	16.5		9.6	9.8	58 3.5	59.4		10.0	
9.9	46.0	37.4		10.2	30.5	0.2		8.0	34 31.2	52.1	Gkbl	8.0	10.2	16.8	36.4			9.8	
9.9	52.5	50.5		7.8	35.3	55.0	8.0 G-	8.5	7.8	42.7	37.9	al	8.3	9.6	33.8	15.3	=	9.1	
25Pr.	+ 1 26.5	- 6.0			+ 1 27.0	- 5.7			+ 1 27.7	- 5.2				+ 1 28.4	- 4.6				

1896AnCap...3...1G

6121-6180.				6181-6240.				6241-6300.				6301-6360.							
mag.	15 ^h -16 ^h .	-22°		mag.	16 ^h .	-22°		mag.	16 ^h .	-22°		mag.	16 ^h -17 ^h .	-22°					
	^m ^s	'			^m ^s	'			^m ^s	'			^m ^s	'					
10.2	58 48.8	26.8		9.7	10.0	12 38.0	29.8	9.8	9.9	40 39.5	1.0		9.6	58 20.3	49.3				
8.6	59 14.8	33.3	K	9.0	9.2	42.0	12.9	9.5	9.0	40.2	17.5	b	8.9	10.2	26.3	55.2	9.3		
9.8	24.8	46.2		9.8	8.4	13 24.0	17.5	8.5	9.6	46.2	31.0		9.5	9.4	26.8	40.3	9.3		
9.0	33.8	37.9		9.0	8.8	14 52.5	20.4	9.0	9.8	52.2	6.9		10.2	59 13.7	54.0				
10.2	45.8	18.3		9.9	7.7	15 23.0	49.3	8.0 Wbl	7.3	41 7.2	11.9		9.8	9.4	0 15.7	19.5	a	8.8	
9.4	0 34.8	39.4		9.5	9.4	16 26.0	4.6	C=	9.0	11.7	21.5		9.1	9.2	30.2	51.2		9.6	
10.2	56.8	17.1		9.7	8.2	17 57.5	21.7	Wal	7.7	42.7	29.1	a	8.3	9.6	52.2	13.5			
9.4	1 4.8	4.2	a	9.2	9.2	17 24.5	22.1	a	9.3	53.2	31.4		9.4	9.8	57.2	6.3		9.4	
10.2	7.8	31.3		9.5	9.4	19 59.0	20.7		10.1	42 10.2	52.8		9.8	9.4	1 41.2	51.6		9.4	
9.4	14.8	59.8	9.0	9.4	8.8	20 23.0	18.7		9.1	33.1	58.6		9.8	9.4	50.5	59.4		9.5	
9.8	16.8	12.9		9.5	9.2	22 14.5	34.4		9.3	42.7	41.6		10.2	54.2	10.5				
9.8	16.8	22.6		9.5	10.0	36.5	14.8		9.2	53.2	50.5		9.3	9.5	2 13.2	14.2		9.8	
9.0	16.8	30.7		8.9	8.8	39.0	9.8		9.0	53.7	24.9		9.3	9.2	14.7	44.5		9.8	
7.9	57.3	50.7	8.5 Gal	8.5	8.5	24 9.0	31.6	Wa	7.8	43 16.7	44.8		9.5	10.2	19.2	46.1			
8.6	58.8	37.0	al	8.5	8.4	26 21.0	33.6	Wa	8.5	23.7	23.6		9.8	9.8	28.4	58.3		9.5	
9.8	2 2.3	16.4		9.4	9.3	27 13.8	21.2	a	8.9	44 23.2	6.0		9.2	9.2	33.5	58.0	a	9.4	
7.8	34.3	4.7	Ca	7.8	10.0	28 23.5	27.8		9.6	23.7	11.0		9.6	8.8	59.2	31.5		9.3	
9.4	45.3	7.4		9.3	10.0	29 32.6	44.7	G	9.4	26.7	33.4		9.4	9.2	4 2.2	0.6	-	8.9	
7.4	58.8	46.4	al	8.0	9.8	30 22.7	55.4		9.8	31.7	41.5	Kbl	8.0	8.8	5.2	9.9		8.8	
10.2	3 11.8	18.0		8.6	8.6	38.0	11.2	a	8.9	33.2	6.2	a	9.1	9.6	22.2	41.2			
10.2	29.3	14.9		9.4	7.5	50.5	38.1	GWbl	6.8	45 7.2	30.0		8.9	10.0	31.7	9.2		9.7	
10.2	36.3	44.4		9.5	9.4	31 19.0	54.1		9.2	56.7	57.3		9.3	7.5	50.2	46.2	8.5 al	7.7	
8.4	48.8	52.5	9.0 Ga	9.1	9.2	32 16.0	3.0		9.2	46 24.7	32.5		9.7	10.2	5 0.2	56.2			
10.2	52.8	21.0		9.9	9.9	34 10.0	34.9		9.9	25.4	6.2	W	9.4	10.2	0.4	42.1			
10.2	58.8	56.7		9.9	9.9	14.5	55.6		9.5	39.2	48.9		10.2	10.2	9.2	6.1			
10.2	4 22.8	48.0		10.1	9.9	23.0	55.6		9.8	47 14.4	38.3		9.1	10.2	20.7	28.0			
8.1	27.3	13.0	Cal	8.2	9.4	25.0	48.8		9.5	43.7	26.9		9.8	9.5	44.7	52.1		9.8	
8.7	38.8	55.1	9.0 al	9.1	9.9	41.2	27.6		9.5	47.5	29.1		9.8	9.4	50.7	26.4		9.6	
10.2	57.3	18.6		9.7	9.0	45.2	27.4	a	9.1	55.5	50.0		9.8	9.4	6 2.7	49.3			
10.2	5 41.8	50.6	9.5	9.5	9.4	52.2	18.3		9.4	56.4	40.5		9.6	9.6	5.7	43.4			
8.4	46.8	9.7	a	8.8	9.2	35 4.7	52.1		9.4	48 46.7	53.4		9.0	9.0	21.7	21.2	K	9.2	
8.6	6 32.3	7.1	a	8.8	9.9	7.3	18.2		9.9	46.7	18.1		9.8	8.2	33.0	25.8	-	8.8	
9.6	34.3	36.3		9.3	9.0	25.9	59.1		9.6	48.2	15.9		9.3	10.0	7 41.2	32.8			
10.2	42.3	24.0		9.8	9.0	42.2	6.3		9.2	50.7	29.3		9.5	10.2	44.2	4.0			
9.4	55.3	21.7		9.0	9.8	49.7	44.3		9.9	57.7	56.0		9.9	10.2	51.2	42.0			
9.6	7 8.9	53.8		9.5	9.8	55.2	48.4		9.9	49 0.7	53.6		9.8	9.8	8 4.7	48.9		9.4	
9.8	10.5	19.9		9.9	9.9	0.2	47.4		9.2	10.5	28.3		9.3	10.2	22.7	44.3			
9.6	22.3	20.7		9.5	7.4	10.7	29.8	al	6.8	15.7	57.1	6.0 GSμ35.5	8.8	8.8	49.0	1.8		8.9	
7.3	28.9	3.8	Gatlr	7.3	7.6	19.2	53.5	8.5 GWtπ	7.5	29.7	22.6		9.0	10.2	59.4	35.6			
8.4	8 15.9	29.4	b	8.7	9.9	20.7	41.0		9.9	31.7	26.4		10.2	9 16.2	42.5				
9.8	32.3	50.6	a	9.1	9.9	27.2	42.6		9.4	41.7	15.2		8.8	8.8	28.2	19.6	a	8.8	
8.4	51.3	50.8	a	8.6	9.9	39.2	3.4		9.5	59.7	26.7		9.1	9.2	32.7	28.9		9.4	
9.0	51.5	48.8	a	9.1	7.6	49.2	17.1	Cal	7.0	50 17.0	4.9		9.8	8.8	10 15.8	27.7		9.3	
8.0	9 26.0	47.9	Gka	8.5	8.6	37 6.2	45.5	a	9.0	26.7	4.7		9.3	9.8	50.8	7.2			
10.0	32.2	31.0		9.8	9.4	13.2	50.9	9.5 a	9.1	34.5	49.9	9.5	9.0	9.4	53.8	49.5		9.5	
neb.	36.0	39.8	kb	neb.	9.9	18.2	18.0		9.5	51 1.8	42.6		9.8	8.3	11 22.8	34.2	Wa	8.8	
8.2	47.4	36.5	Gkb	8.0	9.9	27.7	57.7	G	9.0	46.3	28.6		9.5	9.8	45.3	6.8		9.2	
9.3	10 0.0	53.9		9.3	9.4	32.2	11.3		9.4	53.3	12.4		9.7	9.6	45.6	1.3		9.0	
9.3	3.4	44.9		9.2	7.4	37.6	57.0	7.5 GSπβ	6.5	52 12.6	14.3		8.6	8.6	57.3	51.5	9.5 Wa	8.9	
9.0	15.1	11.0		9.0	9.9	40.2	17.5		9.6	53 6.9	57.1		9.2	9.8	12 15.8	49.4		10.1	
9.4	15.6	16.4		9.8	8.9	38 58.7	5.2	b	9.0	50.8	10.0		9.3	9.8	24.3	34.1	a	9.4	
8.9	22.1	35.2	Gb	9.2	7.6	59.7	23.8	a	7.8	52.8	38.2	a	8.5	9.8	27.3	23.2			
9.0	42.1	23.6		9.2	9.8	39 14.2	52.3		9.5	54 14.8	46.8		9.9	9.8	31.3	26.3		9.6	
9.2	49.1	50.0	9.5 Ga	9.2	9.9	38.7	16.5			10.2	32.4		8.9	8.9	13 12.8	6.3	a	9.1	
9.0	52.2	58.5	9.5 a	9.2	9.8	40 0.2	54.0		9.4	55 10.8	27.2		9.4	9.8	31.8	47.9	9.0 b=	8.3	
7.3	11 0.5	57.9	8.0 Gbl	7.3	9.2	0.2	27.0		9.5	49.1	58.3	Gal	7.5	8.2	57.8	47.7			
10.0	12.0	4.5		9.4	9.4	0.9	57.9		8.6	56 9.8	29.6	b	8.9	8.9	14 3.8	44.7		9.3	
8.8	25.0	27.2	a	8.9	9.8	3.2	29.0		9.5	23.8	42.1	a	8.7	7.9	15.7	37.3	GWal	8.0	
9.4	27.0	33.6		9.7	9.6	7.7	12.1		9.5	57 37.3	42.6		9.2	8.2	15 5.2	34.6	Wa	9.0	
9.0	12 12.0	7.8	-	9.2	9.6	33.2	13.9		9.6	58 0.3	42.8		9.4	9.4	9.7	31.2		9.4	
25pr.	+ 1 29.0	- 4.0				+ 1 29.7	- 3.0			+ 1 30.0	- 2.6			+ 1 30.3	- 2.0				

6361-6420.				6421-6480.				6481-6540.				6541-6600.				
17 ^h .		-22°		17 ^h .		-22°		17 ^h .		-22°		17 ^h .		-22°		
m	s		mag.	m	s		mag.	m	s		mag.	m	s		mag.	
15	21.7	27.4	8.7	36	23.5	2.1	9.2	48	16.0	36.9	9.4	54	1.6	59.4		
16	22.7	13.7	9.5	37	25.3	59.3	9.5	49	16.2	26.0	al	55	6.6	11.0		
17	32.7	21.3	9.0	38	33.3	52.1	9.5	50	39.7	35.7	7.8	56	7.1	7.5	GCatπ 8.0	
18	39.7	53.2	7.5	39	33.8	13.3	a	51	50.9	46.7	a	57	12.1	35.1		
19	43.5	21.8	9.6	40	49.8	52.3	9.4	52	49	16.2	2.8	58	14.1	48.2		
20	44.7	39.2	9.4	41	52.8	8.1	GWtlπ	53	46.2	21.2	9.6	59	17.1	8.1		
21	10.7	58.9	8.3	42	30.8	49.9	8.5	54	53.2	38.9	10.5	60	20.6	46.4	Gtlπμ 6.0	
22	51.0	40.9	a	43	48.8	3.9	a	55	3.7	53.4	-	61	21.1	26.9		
23	0.3	9.9	9.4	44	15.8	26.0	9.5	56	12.2	12.8	9.0	62	27.0	22.0		
24	21.5	40.9	9.5	45	27.3	34.1	8.7	57	12.9	41.6	9.5	63	27.5	48.4		
25	42.5	45.2	8.9	46	40.3	38.3	9.1	58	16.7	3.7	9.5	64	27.5	38.0		
26	43.3	30.5	9.0	47	45.3	46.1	9.5	59	21.4	57.5	a	65	29.5	36.3		
27	9.0	28.4	a	48	14.3	9.9	a	60	21.4	33.0	a	66	30.0	46.4		
28	30.5	14.4	9.5	49	42.3	41.9	9.5	61	28.7	9.3	9.4	67	31.0	35.0		
29	8.0	18.6	9.1	50	44.8	7.7	9.8	62	40.7	34.0	10.4	68	31.5	13.5	10.0	
30	11.5	51.6	9.0	51	45.8	2.0	a	63	40.7	34.0	9.3	69	37.7	42.4		
31	32.0	51.0	9.0	52	45.8	10.0	9.4	64	56.7	46.4	10.3	70	41.5	58.1		
32	47.5	7.0	9.5	53	46.5	22.5	9.5	65	57.7	18.7	10.2	71	44.0	27.9		
33	56.5	19.0	9.5	54	46.8	43.5	10.0	66	51	13.2	31.0	72	46.0	19.3	9.5	
34	0.0	56.2	10.0	55	49.3	33.7	9.0	67	13.7	48.0	9.5	73	47.0	40.6	9.2	
35	31.0	18.2	a	56	8.1	29.7	9.9	68	23.7	30.0	Gal	74	56.5	57.7		
36	51.5	10.7	a	57	13.1	25.7	Gal	69	25.2	21.8	al	75	56.5	54.1	7.2	
37	12.3	59.6	9.5	58	16.1	55.3	9.2 =	70	35.7	16.8	10.5	76	57.5	33.9		
38	22.5	54.2	9.5	59	16.6	8.7	9.9	71	39.7	4.9	9.7	77	1.5	46.0	9.1	
39	16.0	24.9	9.5	60	18.1	8.3	a	72	44.2	8.3	10.0	78	1.5	59.8		
40	18.0	23.0	9.5	61	27.1	37.6	a	73	49.7	7.0	9.8	79	6.0	21.1		
41	42.6	0.3	9.2	62	42.6	5.7	9.8	74	53.2	27.1	Gal	80	6.5	12.0	9.8	
42	0.0	33.4	9.0	63	50.1	3.8	9.4	75	52	3.2	59.2	81	6.5	34.6		
43	3.0	5.0	Gbtlπ	64	53.1	19.9	9.8	76	6.2	56.1	9.0	82	11.5	5.1	a	9.6
44	5.5	54.7	9.2	65	57.6	34.6	9.5	77	13.7	37.1	9.3	83	12.5	44.7		
45	11.5	53.2	9.0	66	59.1	30.1	9.5	78	15.2	22.3	10.0	84	19.5	39.0		
46	22.0	59.0	9.0	67	42	23.6	39.7	79	16.2	38.6	8.9	85	22.8	59.1		
47	27.5	56.3	8.0	68	44.6	55.3	W	80	22.2	29.4	10.0	86	23.0	16.5		
48	41.5	8.0	a	69	53.3	39.8	9.2	81	26.7	17.1	9.4	87	23.5	34.3		
49	41.0	13.8	9.5	70	43	16.6	37.6	82	27.1	32.1	al	88	24.0	52.1	9.8	
50	45.5	4.8	9.6	71	33.1	52.7	7.5	83	41.6	24.7	9.7	89	27.0	28.1	9.5	
51	0.4	28.8	9.9	72	43.1	30.2	9.3	84	43.6	24.2	10.2	90	27.5	42.8	Gtlπμ 7.3	
52	7.0	51.0	10.0	73	58.6	26.1	9.3	85	44.1	23.4	9.3	91	27.5	47.0		
53	29.6	27.4	=	74	44	45.6	38.0	al	46.6	28.8	9.6	92	28.5	33.0		
54	51.5	41.2	9.8	75	59.6	37.7	9.0	86	47.6	33.5	10.4	93	30.8	44.8		
55	56.6	21.4	b	76	45	22.6	16.7	9.4	10.1	48.1	23.0	94	32.8	55.6		
56	30.5	34.4	9.2	77	25.6	13.3	9.7	87	49.6	57.3	9.3	95	38.8	49.7	9.0	
57	31.1	43.6	9.5	78	29.6	17.9	9.9	88	53.6	34.7	9.5	96	39.3	36.5		
58	41.0	6.8	9.8	79	31.6	36.3	9.8	89	10.5	14.1	34.0	97	39.8	40.3	9.5	
59	31.3	30.1	b=1	80	40.6	30.1	a	90	16.1	48.1	10.5	98	40.8	40.6		
60	36.8	0.3	9.5	81	43.1	18.7	9.1	91	19.6	48.8	8.8	99	41.5	2.2	a	
61	43.3	40.9	9.3	82	55.1	14.4	9.5	92	10.1	19.6	4.8	100	43.8	53.0	8.8	
62	15.3	27.7	9.4	83	58.1	55.9	9.7	93	8.6	21.6	14.7	a	44.8	41.6	8.3	
63	36.8	29.3	9.5	84	46	10.6	49.7	al	28.6	24.0	10.0	9.9	51.8	36.9	al	
64	21.6	59.4	9.0	85	12.6	0.9	9.9	86	30.6	7.1	8.5	10.4	52.3	18.4	9.1	
65	32.8	26.9	9.6	86	35.1	44.7	9.2	87	33.1	35.3	a	10.2	52.3	29.7		
66	18.3	13.9	9.2	87	39.6	40.7	9.7	88	34.6	14.5	9.4	9.8	53.8	36.9		
67	55.8	33.3	9.5	88	45.6	31.5	9.9	89	40.6	34.0	10.2	9.7	54.3	49.4		
68	1.8	39.9	9.5	89	53.3	33.3	9.6	90	41.6	10.8	9.8	9.7	56.8	4.4	9.5	
69	12.8	54.7	9.0	90	47	24.9	57.3	8.5	44.1	18.0	10.0	10.2	56.8	20.4		
70	25.8	14.7	-	91	37.2	3.7	9.1	91	52.6	3.9	9.9	9.9	56.8	53.7		
71	41.8	4.7	a	92	48	1.4	8.7	9.4	10.5	11.5	10.0	10.0	59.3	19.0		
72	8.8	18.1	a	93	2.4	1.9	9.5	9.5	10.1	59.1	13.2	10.0	56	1.3	12.0	9.4
73	52.8	27.0	a	94	6.4	24.0	a	9.2	59.1	20.7	9.8	10.0	2.8	10.0	9.9	
74	22.8	42.0	a	95	7.2	52.6	9.7	9.7	59.6	18.7	9.6	9.0	2.8	24.8	9.8	
25Pr.	+1 30.5	-1.2			+1 30.6	-0.7			+1 30.7	-0.3			+1 30.7	-0.2		

6601-6660.				6661-6720.				6721-6780.				6781-6840.			
		17 ^h .	-22°			17 ^h -18 ^h .	-22°			18 ^h .	-22°			18 ^h .	-22°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.3	56	5.8	14.6	10.1	57	53.3	55.2	10.0	0	48.8	47.3	mag.	m	s	'
9.2		9.8	30.8	10.4		55.8	30.6	9.6		49.8	9.5	9.7	3	45.6	5.8
9.1		10.3	28.2	9.3	10.5	56.3	44.2	10.0		50.3	15.5	9.4	9.7	47.8	43.5
9.7		10.8	34.4	9.4	10.1	58	6.8	9.2		56.8	55.6	9.5	10.1	52.8	8.9
10.3		12.8	28.9	9.7	9.7	10.3	18.7	8.8	1	0.3	43.1	9.2	10.5	54.3	6.4
9.9		15.3	46.8	9.4	9.4	11.3	51.2	9.5	9.4	1.3	14.9	9.2	10.5	4	9.3
10.0		15.8	23.2	8.6	8.6	18.3	12.7 =	9.0	9.9	2.8	19.6		10.5	11.6	59.6
10.5		16.3	13.7	9.8	9.8	19.3	41.3	9.5	10.4	4.8	22.0		8.8	12.3	7.8
8.5		16.3	14.2	9.0	9.4	22.8	37.9	9.5	10.3	5.5	0.3		10.1	12.8	4.9
9.1		16.8	49.1	9.6	10.4	25.3	3.8	9.0	10.3	8.8	17.1		9.4	13.8	25.5
									9.0				9.5	10.5	20.3
									9.8					10.3	21.3
10.1		19.3	29.0	10.	10.3	29.6	58.8	9.8	12.6	59.2			10.3	21.3	29.0
10.5		20.6	52.5		10.3	30.3	7.1	9.7	12.8	10.5	MCam	8.5	10.4	25.8	36.7
7.4		21.8	50.2	8.0	9.8	31.8	27.2	8.4	23.8	11.4	a	9.0	10.2	29.8	18.0
10.5		23.3	23.8		8.2	33.3	7.4	8.7	10.2	24.0	58.3		9.6	43.2	25.9
8.8		23.8	31.3	9.4	10.2	36.3	19.9	10.5	10.5	39.6	32.1		9.9	45.2	9.5
8.2		29.8	33.9	a	8.6	37.8	28.0	9.2	8.9	40.3	11.8	b	9.1	9.6	48.7
8.8		32.8	27.2	9.3	8.8	48.3	43.8	9.1	8.2	40.3	47.5		9.0	10.5	50.5
8.8		33.3	26.3	9.4	9.4	48.3	44.2	8.4	8.4	42.8	54.6	8.2	8.6	10.2	52.7
10.5		34.3	29.4		10.4	59	2.8	10.0	10.0	42.8	37.1		10.0	53.2	28.5
10.5		35.8	25.9		9.7		2.8	10.5	10.5	50.3	29.3		10.4	56.7	16.7
9.4		35.8	35.9		9.8	11.8	23.5	9.8	10.1	54.3	33.2		9.7	10.5	58.2
9.3		36.3	54.4		10.5	11.8	4.2	9.7	9.7	56.8	30.8		9.9	9.9	58.2
10.0		36.8	28.4		8.4	12.8	28.4	8.5	9.9	2	2.8	35.3	9.7	10.5	59.7
9.9		37.3	28.7		8.8	17.3	3.5	8.4	9.4	5.8	20.9		9.6	10.4	5
8.6		37.8	29.7	b	9.2	18.3	36.5	8.4	9.4	5.8	52.5		10.2	0.7	46.0
8.4		38.8	41.3		9.0	22.3	5.6	9.8	9.8	5.8	56.1		10.3	3.2	53.9
8.6		39.3	27.4		10.3	23.8	15.8	9.7	9.7	8.3	32.4		10.0	5.2	54.4
7.9		39.8	30.1	Gbl	9.4	32.3	24.3	10.2	10.2	10.3	52.1		9.7	5.7	21.1
9.8		40.8	29.5		9.4	32.8	24.3	10.2	10.2	16.3	51.4		10.4	15.7	18.8
10.3		41.8	16.5		10.0	32.8	15.2	9.7	8.8	16.3	8.5	a	9.2	10.4	15.7
10.4		42.8	32.0		9.6	32.8	35.2	8.6	8.6	16.8	4.5	bm	9.2	9.9	16.2
8.8		43.3	3.6	9.2	9.6	35.3	35.6	9.7	9.7	17.3	44.0		9.6	10.4	20.6
8.8		43.8	30.6		9.3	35.3	41.6	9.5	10.0	19.0	56.5			8.6	22.2
8.6		44.3	29.7	a	10.0	35.8	11.4	10.4	10.4	22.8	20.3		10.2	25.2	26.7
10.5		44.8	39.0		9.7	42.3	56.1	10.5	10.5	27.8	37.2		9.9	28.2	27.5
10.5		44.8	38.6		8.9	50.0	0.3	9.3	9.6	30.3	36.1		9.9	31.7	42.9
9.1		46.8	29.4	9.6	10.1	51.3	23.1	9.6	9.6	32.8	54.1		10.5	33.7	34.4
10.5		47.8	34.6		10.5	52.8	6.5	10.5	10.5	41.8	54.1		10.3	34.2	16.9
9.9		47.8	25.6		9.9	57.3	28.9	9.8	9.8	42.8	55.5		9.9	34.7	25.9
10.2		49.3	29.3		8.8	58.3	6.5	10.4	10.4	43.3	33.9		10.5	36.2	34.5
8.9		51.8	26.3	9.4	9.6	58.8	6.2	8.8	8.8	45.8	24.3	9.6	9.6	36.2	14.8
10.1		55.3	13.2	9.7	9.6	0	0.3	9.8	9.4	53.8	25.9		10.3	36.7	36.1
9.9		55.8	51.3		10.3	3.8	40.4	9.4	9.4	53.8	6.7	9.5	10.3	39.7	4.8
9.6	57	1.8	30.4		8.1	5.8	7.6	9.0	9.8	3	0.8	19.5	10.5	41.5	23.9
8.8		2.3	22.7	9.4	9.0	6.8	54.5	9.3	10.5	7.3	42.0		10.5	45.2	51.8
10.5		3.8	50.8		8.6	7.8	5.3	8.9	9.2	7.3	13.6		9.4	9.4	45.7
9.0		12.8	27.1	9.5	10.5	12.0	2.7	8.6	8.6	12.3	15.6	Cam	8.0	10.4	47.2
9.6		17.3	42.8		10.5	12.8	56.7	9.7	9.7	12.8	33.0		9.8	50.2	25.6
9.6		20.3	32.1	9.8	9.6	12.8	56.9	10.4	10.4	13.8	43.0		8.8	51.2	4.3
9.7		20.5	56.5		7.6	15.8	53.5	8.5	8.5	17.3	55.5	9.2	8.6	51.7	44.8
9.9		31.3	14.0		10.0	16.3	52.5	9.5	10.0	20.8	29.3		9.9	53.7	18.4
10.4		33.3	41.1		10.5	19.8	17.1	9.7	9.6	22.3	8.9	9.5	10.2	55.2	34.3
10.5		34.3	55.5		9.3	31.5	59.6	10.4	10.4	23.3	50.8		9.0	55.7	15.9
9.8		36.8	29.3		10.3	33.3	7.6	9.9	9.9	24.8	31.8		9.5	10.1	6
9.6		41.3	24.8	b	10.5	35.3	18.1	9.6	9.6	29.8	20.0		9.4	9.4	2.2
9.6		42.3	29.0		10.0	35.8	15.5	10.3	10.3	33.3	29.8		10.4	2.7	23.5
10.0		42.3	19.7		8.2	36.3	17.1	8.4	9.8	36.8	14.2		9.7	5.7	2.0
9.2		43.3	50.9	9.8	9.2	38.8	16.7	10.4	10.4	37.3	29.7		9.6	21.7	31.1
9.4		45.8	7.0	9.4	10.4	41.8	5.4	9.4	9.4	37.8	25.2	9.7	9.7	24.2	28.1
10.5		47.3	21.4		10.1	43.8	23.3	10.3	10.3	42.8	36.6		10.3	28.5	11.4
25pr.	+ 1	30.7	- 0.1		+ 1	30.7	0.0		+ 1	30.7	+ 0.1		+ 1	30.7	+ 0.2

6841-6900.				6901-6960.				6961-7020.				7021-7080.								
18h.		-22°		18h.		-22°		-18h.		-22°		18h.		-22°						
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s					
6	29.7	52.1		9	37.5	12.6	Cal	8.5	7.6	14	33.0	21.1	aml	7.8	10.0	20	57.3	7.4	9.5	
	32.2	42.6	9.4		42.5	1.7		10.5	8.2		37.5	17.6	Cal	7.8	10.3	21	12.3	23.7		
10.1	32.2	13.3		10.2	46.7	17.4			9.6		54.5	4.9		9.2	10.3		14.8	22.3		
10.5	32.5	48.1			5.5	27.1		9.5	10.0		56.5	4.8		9.5	9.4		18.3	21.6	9.5	
9.6	32.7	43.1		10.3	6.5	17.4		9.7	10.2		59.9	57.3		9.5	9.4		23.8	22.1	9.6	
10.0	36.7	13.4	9.6	10.3	6.5	26.4			10.0	15	3.0	16.9		10.0	10.0		45.6	57.2		
9.2	46.7	28.0	9.5	8.9	22.5	20.0	al	8.3	9.8		4.0	13.4		9.7	10.0		53.8	6.3	9.7	
10.5	49.2	26.2		10.0	23.5	0.4		9.5	10.2		4.5	3.4		10.0	10.0		56.8	33.5	9.6	
10.1	52.7	24.7		8.2	24.5	23.1	al	8.2	10.0		22.0	10.3		9.5	9.5	22	3.3	15.2	9.1	
9.6	54.2	6.5	10.5	10.2	36.0	54.8			10.3		28.5	0.7		9.5	9.6		3.8	32.9	9.5	
9.8	55.7	55.6			44.0	3.0	a	9.1	8.6		29.5	20.6		9.0	8.6		8.3	45.6	GW-m8.7	
9.9	58.7	27.2		10.2	53.1	58.9		9.8	10.3		29.5	16.0		10.3	10.3		48.8	40.9	9.5	
9.6	59.7	46.0	9.5	9.3	56.5	0.9		9.4	8.6		31.5	40.0	Mm	9.1	10.2		52.8	40.7		
9.6	7	1.0	57.6	9.2	59.5	4.0	a	9.2	10.2		43.0	23.9		9.7	9.6	23	3.8	3.0	9.5	
9.6	2.2	27.2	9.5	8.5	4.0	35.6	a	9.0	9.6		43.5	40.3		9.5	10.3		9.3	40.1		
10.0	4.2	24.9		8.9	26.6	59.8	9.5	Mm9.4	9.8		53.5	56.5		9.8	10.3		13.8	47.2		
9.6	5.7	31.5		10.0	30.5	43.5			10.3		54.5	42.0		9.8	10.3		18.0	54.7	9.8	
10.4	6.2	8.0		10.2	34.0	36.4			9.6	16	0.5	48.6			10.2		24.8	19.8	10.5	
10.0	7.2	33.9		10.2	37.5	55.9			9.8		7.0	27.1			10.0		38.3	35.0	9.5	
10.0	10.2	44.2		8.9	46.0	47.0	bl	8.5	10.3		8.0	11.3		9.5	9.5		46.1	57.9	9.5	
8.8	13.2	3.7	9.1	10.2	53.5	28.7			9.8		11.5	26.0			9.2		57.6	58.6	9.3	
10.1	14.2	47.9		9.2	55.5	24.7		9.2	9.4		13.5	13.0		9.4	8.6	24	5.8	47.6	9.0	
10.4	15.7	14.7		9.5	57.5	29.3		9.1	9.4		15.5	45.9		10.5	9.2		6.8	13.1	9.2	
10.5	16.5	23.0		10.0	3.3	0.0		9.4	8.6		24.5	20.4		9.2	9.6		7.8	54.0	9.3	
8.8	17.0	2.4	Cbl	8.6	4.5	8.6	a	9.0	9.0		25.1	6.2	C-	8.6	9.8		9.3	9.6	9.5	
9.6	19.4	55.6		9.6	5.0	3.6		9.6	10.3		42.6	22.4			9.8		13.8	25.2		
9.0	21.5	37.3		9.7	8.8	34.6	a	9.0	9.2		50.6	22.0		9.6	10.3		22.8	38.1		
10.4	25.2	31.0		9.4	16.5	25.2	b	9.4	10.0		17	3.1	30.4		9.0		30.3	42.7	9.0	
9.7	26.7	23.3		8.9	23.5	24.9		9.4	10.2		5.6	22.7			9.2		34.8	48.0	9.5	
9.6	29.0	38.2	9.3	9.8	24.0	16.6		9.5	9.6		14.0	1.0		9.7	10.3		41.0	32.3		
8.8	32.8	38.0	9.1	10.2	27.1	56.4			10.0		21.6	49.3			8.6		42.8	8.5	8.7	
8.6	32.8	28.7	9.0	10.2	33.1	58.0		9.8	9.4		22.6	4.2		9.7	9.0		54.8	28.4	9.0	
9.9	35.3	24.6	9.6	9.4	37.5	13.8	am	9.3	10.3		31.6	3.4			8.3		58.8	22.7	Waml	
10.5	39.9	46.8		10.2	39.5	34.8		9.9	9.2		42.6	34.4		9.5	10.0	25	0.1	0.6	9.0	
10.2	42.9	8.6		10.2	45.5	28.5			10.3		44.1	53.2			8.4		13.8	13.3	CWal	
9.9	45.1	2.6		10.3	47.5	17.3			9.3		57.6	45.2		9.6	9.6		24.8	10.9	9.5	
10.5	45.6	18.7		9.6	48.5	52.6			9.0	18	8.1	4.6		9.3	9.6		33.8	5.2	9.5	
9.2	46.0	8.7	9.4	8.8	53.5	12.4	am	9.2	10.2		14.1	9.4			9.6		33.8	18.7	a	
9.6	47.0	58.1		9.2	58.5	32.3		9.5	9.8		14.6	45.3			8.9		37.8	53.9	8.5 am	
8.6	49.3	46.5	9.1	10.3	7.0	36.1		9.5	10.3		18.1	23.3		8.2	8.2		47.8	42.6	am	
10.4	51.4	19.2		9.4	14.5	5.0		9.6	9.2		23.6	16.3			9.6		50.8	29.7		
10.3	57.7	10.9		10.3	24.5	6.6			8.8		41.1	43.3		9.4	9.0		55.6	26.7	9.2	
9.9	5.4	24.0		10.2	24.5	29.2			9.2		44.6	43.1		9.8	9.0	26	11.1	43.7	9.2	
10.1	13.4	49.2		9.5	29.0	23.6		9.8	9.8		45.1	17.4		9.5	10.0		12.6	56.0	9.5	
10.0	21.9	14.1		9.5	30.0	46.0			10.0		46.1	47.2			8.8		15.1	21.4	a	
10.4	22.6	57.3	10.5	8.8	31.0	58.6		9.7	10.0	19	2.1	15.5	-	9.2	10.2		15.1	9.6	9.6	
9.7	23.0	17.0		9.4	32.0	19.7		9.5	9.6		11.1	58.7		9.3	9.0		17.1	31.3	=	
9.2	32.1	34.4		10.0	32.5	7.9			9.4		26.6	11.0		9.7	10.2		30.6	32.2	9.5	
10.2	32.9	37.6	9.6	10.0	33.5	17.9			9.5		29.1	56.3		9.7	9.2		31.6	54.0	9.5	
10.4	32.9	18.0		9.2	53.5	51.1		9.5	10.3		54.9	2.0		9.5	8.6		51.6	18.1	a	
10.5	33.9	17.9		9.2	14	0.5	22.3	9.8	9.0	20	1.6	41.9		9.4	8.4	27	8.1	38.3	b-ml	
10.0	49.0	4.3	Ca	9.0	10.2	2.5	14.8		10.0		3.6	15.1		9.8	10.4		10.4	18.3	9.4	
10.3	54.6	58.9		10.2	6.0	28.7			10.2		3.6	27.1		9.4	10.0		13.8	43.9		
10.0	55.0	16.9		9.4	9.8	13.5	6.0		9.7	10.0	3.6	49.3			10.4		22.4	24.9	9.8	
10.2	9	11.0	49.7	10.3	23.5	34.4			9.5	10.3	33.6	55.9			10.4		25.2	30.0		
10.3	15.0	33.9		8.8	24.5	8.2			9.0	10.2	38.1	43.7			9.8		27.2	27.3		
10.3	20.5	29.9		8.0	26.0	4.7	Cb=ml	8.4	8.9		38.6	29.1	W	9.0	10.0		29.7	2.2		
10.2	27.0	52.5		7.2	28.2	58.7	8.0GSac	7.2	10.2		47.1	40.9		9.8	10.2		30.4	17.8		
10.3	34.2	53.8	9.5	9.5	29.0	36.3			10.3		53.1	25.6			9.8		36.2	56.0	9.5	
10.3	36.0	56.6	9.0	9.4	31.5	51.1			8.6		53.8	53.7	9.0	GW	9.0	9.0	36.4	4.6	Ca	
25pr.	+1 30.7	+0.3			+1 30.7	+0.4					+1 30.6	+0.6						+1 30.6	+0.9	

7081-7140.			7141-7200.			7201-7260.			7261-7320.		
mag.	18 ^h .	-22°	mag.	18 ^h .	-22°	mag.	18 ^h .	-22°	mag.	18 ^h .	-22°
9.8	27 36.9	12.7	10.4	34 50.0	47.4	8.2	42 38.3	59.3	10.2	47 4.6	46.1
10.4	44.2	20.7	8.7	53.5	6.9	9.8	38.8	20.7	10.4	9.1	25.3
10.4	47.7	36.0	10.0	56.5	59.8	9.8	38.8	20.1	10.4	19.8	40.9
7.4	49.2	11.2	8.0	57.0	27.5	9.1	9.4	49.8	13.3	10.4	21.6
8.4	54.2	29.7	9.0	1.0	41.9	9.6	50.4	2.1	9.5	8.8	22.4
8.7	56.4	41.8	9.3	3.0	21.4	10.2	50.8	7.7	9.5	6.6	33.8
9.8	7.2	57.0	9.8	4.0	21.4	8.2	43 2.6	57.9	9.0 b	8.9	39.1
9.8	7.4	47.4	9.8	7.0	17.2	9.8	5.8	24.4	8.5	9.7	52.1
10.2	13.6	5.0	9.8	10.4	59.1	8.6	8.8	24.4	8.5	10.4	55.6
8.6	15.4	49.6	9.1	9.2	47.0	9.3	11.8	1.6	10.4	10.4	59.6
10.4	17.1	17.0	7.6	48.0	31.7	7.3	6.6	20.3	18.1	9.0	48 1.1
10.4	26.1	3.4	9.6	36 7.0	40.6	9.6	9.0	23.8	43.4	9.2	1.8
10.4	28.6	1.0	9.5	7.8	10.5	7.8	10.4	25.8	49.1	10.4	3.8
8.2	43.4	58.0	8.9	9.0	27.0	9.0	9.2	26.3	46.5	9.5	10.4
9.6	43.8	13.3	9.4	9.8	34.5	10.0	9.6	29.3	31.5	9.6	11.4
9.4	53.1	43.6	10.0	9.6	48.0	9.8	9.6	37.3	5.4	9.5	23.4
10.0	29 1.1	55.6	9.8	9.6	49.0	9.8	10.4	43.8	54.1	9.6	26.9
10.4	17.1	16.8	9.6	9.6	54.0	8.6	8.6	48.3	9.7	9.6	40.1
10.4	33.1	33.4	9.6	37 6.0	56.1	9.5	10.0	49.3	16.7	9.5	42.6
9.8	54.1	8.2	9.4	9.8	43.0	9.2	10.4	49.8	32.4	10.0	55.1
8.8	3.6	13.2	9.3	10.0	53.2	8.4	52.8	28.2	8.5	10.4	55.8
9.8	14.1	59.9	9.5	10.4	59.5	9.4	2.8	25.3	10.0	10.4	49 0.2
10.4	15.1	46.6	9.6	9.2	1.0	10.0	11.4	0.6	9.5	9.5	6.6
10.4	16.6	47.4	9.6	38 1.0	53.7	9.5	10.0	12.8	0.2	9.0	52.7
8.2	20.6	32.4	8.5	10.4	5.2	9.8	9.6	35.8	34.1	9.6	57.7
10.4	40.6	55.3	9.6	9.6	12.0	9.5	6.5	37.3	3.9	10.4	50 9.7
9.1	43.1	39.0	9.4	9.6	30.5	9.3	10.4	37.3	23.8	10.4	31.2
8.8	44.1	10.6	9.1	9.8	31.5	9.5	9.0	40.3	20.9	9.4	35.5
10.4	50.1	42.5	10.4	10.4	37.0	9.5	9.8	45.8	58.3	9.8	40.2
10.4	31 6.1	49.0	9.5	10.0	42.0	9.4	51.8	33.1	9.8	6.3	53.2
10.4	24.4	41.3	10.4	46.5	2.1	10.4	55.8	9.1	9.6	9.6	56.2
10.4	25.4	30.3	7.5	48.5	31.2	9.8	1.8	19.4	9.7	8.5	58.7
8.9	36.6	25.1	9.0	39 2.0	4.0	9.6	1.8	42.1	9.6	51 11.7	8.2
10.4	42.6	45.2	10.4	5.0	6.4	10.0	2.8	43.5	9.5	9.5	12.4
9.0	44.1	44.6	9.3	12.5	25.2	9.5	8.0	6.3	26.9	8.0	17.7
9.4	46.6	28.0	9.5	21.5	50.7	10.0	9.0	13.8	32.3	8.7	25.2
7.8	0.1	4.4	8.0	10.4	22.2	9.8	9.8	22.8	44.2	9.3	27.2
9.6	3.1	38.8	8.0	8.0	23.3	8.5	9.8	22.8	31.9	9.7	30.7
9.4	5.1	47.2	8.0	8.0	26.3	8.5	8.4	25.8	33.3	9.1	31.7
10.4	13.1	43.0	10.4	33.3	23.3	9.6	9.6	27.8	22.3	9.4	37.2
10.0	17.1	1.9	9.8	10.0	37.3	9.6	27.8	21.6	8.6	8.6	43.7
7.9	38.1	46.4	8.7	8.7	39.8	9.0	32.8	6.5	9.8	9.8	51.7
10.4	42.8	59.4	10.4	46.8	2.1	9.7	35.8	5.3	10.4	52 9.0	36.6
10.0	46.1	30.0	9.0	40 21.8	18.1	8.8	55.8	47.5	9.2	9.2	22.7
9.8	6.6	23.9	9.4	10.2	23.3	9.6	3.8	28.4	9.5	9.0	25.7
10.0	7.1	3.4	9.5	10.4	28.8	9.8	8.8	34.2	9.5	9.5	29.0
9.8	10.1	15.1	9.5	9.1	42.8	10.4	3.8	43.7	10.0	10.0	44.7
9.8	10.8	59.9	9.1	9.1	56.3	9.0	8.8	43.7	9.2	9.2	46.2
9.0	26.0	25.2	9.0	10.4	12.8	9.4	29.8	52.0	9.5	10.2	59.7
10.2	26.8	59.1	10.0	9.8	25.8	9.5	31.8	32.6	9.5	8.0	54 5.2
10.4	32.5	32.6	10.2	46.3	29.9	9.8	7.6	35.8	43.3	8.5	6.7
10.4	46.0	26.4	10.4	47.3	3.3	9.6	10.4	36.8	42.6	9.3	9.7
10.0	52.0	51.2	10.0	50.3	4.1	6.9	6.9	36.8	53.8	10.4	16.2
10.2	59.2	24.6	9.6	57.3	22.3	9.5	8.0	42.8	50.3	8.3	29.2
9.8	2.5	25.3	10.4	42 10.3	22.3	10.4	42.8	39.4	8.5	9.4	44.7
9.4	8.5	18.4	9.8	9.8	10.3	8.6	43.8	49.6	10.0	10.0	3.7
10.4	10.2	19.7	9.8	9.8	15.3	9.6	57.8	8.1	9.5	10.4	11.2
9.6	21.7	59.2	9.8	9.8	21.8	9.6	58.8	43.5	10.4	10.4	14.7
10.0	36.5	23.7	10.2	10.2	25.8	8.7	1.6	25.4	9.3	10.4	25.7
9.1	43.0	23.9	9.3	9.6	35.3	10.0	2.4	52.9	9.5	10.4	49.2
25pr.	+ 1 30.5	+ 11		+ 1 30.5	+ 14		+ 1 30.4	+ 16		+ 1 30.3	+ 18

7321—7380.				7381—7440.				7441—7500.				7501—7560.					
18 ^h —19 ^h	—22°			19 ^h	—22°			19 ^h	—22°			19 ^h	—22°				
mag.	mag.	mag.	mag.	mag.	mag.	mag.	mag.	mag.	mag.	mag.	mag.	mag.	mag.	mag.	mag.		
56 ^m 1.2	43.9		9.4	6 ^m 23.0	33.9		8.8	15 ^m 12.7	6.9		9.4	23 ^m 58.4	3.4		9.4		
8.0	12.8	53.5	Gam 8.5	8.0	23.5	9.1	Caml 8.8	10.2	16.7	35.0	9.5	9.4	9.6	12.3	0.7	9.8	
9.0	25.8	3.0	9.4	10.4	27.0	44.1		8.5	19.7	37.6	9.1	9.4	25	11.9	28.0	9.5	
9.5	39.3	35.9	9.5	9.7	34.0	17.1		9.8	22.7	11.9	9.8	9.4	15.4	26.8		9.5	
8.2	41.3	44.4	am 8.7	7.3	39.5	16.2	Okaml 7.3	9.8	23.7	18.2	10.2	10.2	16.4	21.8		10.0	
9.6	43.3	58.5	9.5	9.7	45.0	9.5		9.3	9.4	23.1	9.4	8.4	28.9	15.9	Wa	8.7	
9.7	5.8	34.5	9.5	10.0	49.0	55.1		9.3	9.2	31.5	9.6	10.4	42.4	21.5		9.8	
10.4	21.8	31.3	9.5	9.8	7	3.7	10.5	10.4	10.4	2.4	9.5	9.6	44.9	27.5		9.5	
10.2	27.5	25.0	9.5	8.2	5.2	17.3	al	9.7	9.7	6.9	9.6	9.2	56.4	42.2		9.5	
9.6	44.3	29.4	9.5	9.6	7.7	42.8		9.4	10.4	27.5	9.2	26	1.4	37.5	m	9.1	
8.9	47.0	2.0	9.2	10.4	13.8	59.4		8.6	46.7	48.4	al	8.8	10.4	3.9	49.5		
10.4	6.3	32.3	9.5	8.9	23.0	15.1		8.4	54.2	51.5	aml	8.7	10.4	15.9	35.7		
10.4	22.8	58.6	9.5	9.6	27.0	38.3		10.4	17	3.7	52.0	10.4	10.4	18.9	36.2		
10.4	23.3	28.3	9.5	10.0	32.8	21.8		8.8	5.2	56.2	a	8.8	10.0	20.4	8.3	9.8	
8.6	50.3	47.3	Gam 8.5	10.4	38.3	35.2		9.6	5.7	50.1	b	9.0	9.8	22.4	1.6	9.4	
9.8	54.8	21.8	9.5	10.4	8	9.8	29.3	7.6	8.2	48.8	Gbl	8.2	10.0	30.4	16.6	9.8	
9.8	57.0	58.3	9.8	8.9	16.9	34.8		8.8	10.2	33.9		9.0	9.2	33.4	33.9	Mm	
10.2	4.5	29.9		9.2	18.1	38.8		9.3	10.0	13.7	57.7	9.0	9.0	40.4	22.3	a	
9.7	5.8	16.4	9.1	9.2	27.1	15.0	W	9.1	10.4	21.7	57.2	10.0	10.0	46.4	11.9		
10.0	17.9	0.6		8.4	28.3	3.3	CWaml	8.8	9.6	32.7	7.0	9.5	8.6	27	17.9	16.3	a
10.0	19.8	44.3	9.4	10.4	9	1.0	26.6	10.4		39.7	52.8	9.8	9.8	30.0	37.7		
7.6	26.8	41.1	GSlπμ 7.2	8.6	7.4	0.9		9.8	40.9	56.8		10.4	10.4	36.4	27.0		
9.0	30.3	59.9		10.4	23.4	15.4		9.4	42.4	59.1		8.3	8.3	28	13.9	26.3	M=m
10.4	33.5	32.5	9.5	10.4	25.4	56.6		9.2	18	0.2	43.0	9.3	9.6	21.9	48.5		
9.0	43.3	55.4	a	9.0	28.4	26.9	Mm	8.8	8.4	5.7	45.1	a	8.9	34.3	46.7		
9.6	46.8	36.9	9.4	8.2	33.4	10.0	Cal	8.5	9.0	7.2	34.1		9.0	50.9	55.3		
9.5	54.8	41.1	9.3	10.4	48.9	43.5		10.4	11.2	44.2		8.8	8.8	29	22.7	32.7	M
9.6	3.3	26.2	9.5	10.0	10	10.2	48.4	7.8	13.7	41.6	Gal	7.7	7.9	27.7	10.8	Cal	
9.8	24.3	43.1	9.8	9.7	11.4	49.7		9.5	30.2	32.4		9.0	8.4	52.7	32.0	am	
9.2	28.3	33.7	Mm 9.1	10.4	43.6	0.8		9.5	32.2	16.3		9.4	8.4	30	0.2	13.9	Cal
10.0	41.8	13.8	10.0	9.2	46.9	45.6		9.5	50.2	45.1		9.8	9.8	3.2	0.6		
9.6	52.3	52.2	9.8	10.4	11	4.4	44.8	8.0	51.7	11.1	G=	8.7	10.3	48.2	32.7		
9.5	36.8	15.9	9.3	7.8	25.4	19.6	Wb=l	9.4	52.4	1.3	GSpμβ	6.0	10.2	31	0.7	33.8	Mm
9.5	56.8	47.2	9.4	9.0	32.4	22.7		9.2	52.7	42.9	10.0	8.8	10.0	46.2	51.5		
8.6	0.3	34.4	am 8.6	10.4	41.4	8.3		9.6	19	2.7	32.1		9.3	53.7	44.7		
9.7	51.8	23.3	9.5	9.2	51.9	10.0	m	9.0	15.2	18.8		9.3	7.0	32	28.7	20.7	Wb=ml
10.0	54.3	0.7	9.6	9.2	12	2.9	10.3	9.1	16.7	33.9		9.7	9.4	33.7	51.7		
9.8	54.5	41.1		9.7	14.4	52.0		9.2	26.7	37.8		9.7	9.8	38.7	53.7		
9.8	57.8	26.0		7.9	15.4	24.5	Gapl	8.3	40.2	25.9		9.8	9.8	33	26.7	53.2	
9.4	28.3	45.6	8.8	10.4	15.4	8.8		9.7	50.2	14.9		8.4	8.4	34.7	42.5		
10.4	36.8	40.9	9.6	9.8	20.4	7.7		10.0	52.7	51.9	9.0 a	8.5	9.8	34	14.7	16.5	
8.6	39.8	6.5	9.2	9.7	36.4	16.9		9.6	54.2	13.9		9.5	10.3	15.7	25.9		
10.0	46.8	18.7		9.6	42.4	21.5		9.7	13.7	48.9		9.4	9.4	30.2	45.8		
8.6	53.8	48.7	K 9.1	8.6	58.7	5.7	M=m	8.7	20	13.7	23.6		9.5	33.7	40.2		
10.4	54.5	11.9		9.4	58.7	42.6		9.5	26.7	7.6		9.4	10.3	35	23.7	36.2	
10.4	59.5	15.7		9.5	13	8.7	37.9	6.4	39.2	24.0		9.0	10.2	36.7	16.7		
9.6	4	2.5	12.1	9.5	22.2	53.6		9.5	48.7	48.3		9.6	9.6	54.7	30.1		
9.6	23.5	17.9	9.8	8.0	26.7	2.1	Cam	3.4	50.7	30.4		8.8	8.4	36	11.7	13.5	am
10.4	24.0	8.1	9.5	10.4	31.7	49.9		10.0	21	14.2	54.9		9.1	20.2	44.7	Mm	
8.4	37.0	7.9	Cam 8.0	9.2	33.2	18.3		9.2	22	11.1	59.6		9.8	37.7	1.3	Mm	
10.4	37.5	0.4	9.5	10.0	35.7	21.0		9.7	10.0	22.2	6.3		9.3	8.8	45.7	32.3	
9.2	39.0	30.6	9.5	10.0	45.2	28.6		10.4	10.4	32.7	8.6		8.4	37	14.2	50.5	b=ml
10.0	49.0	47.5		10.0	46.0	1.6		9.5	10.4	37.7	7.6		9.8	20.7	6.9		
10.4	5	7.0	4.5	10.0	55.7	50.7		9.4	8.5	42.7	13.9	=	8.9	10.3	30.7	37.8	
8.0	7.5	23.5	am 8.6	9.7	14	42.2	19.0	9.4	10.4	43.2	54.8		9.8	37.2	52.5		
9.6	27.0	11.9	9.6	8.4	46.7	18.4	a	8.7	10.4	43.5	29.6		9.5	42.7	40.4	m	
8.9	6	7.5	35.1	9.0	47.2	9.4		9.8	10.0	48.2	4.4		9.8	38	0.2	17.9	
7.3	7.5	46.4	GWtlr 8.2	9.0	49.7	39.6		9.4	9.0	51.7	45.0		8.8	0.7	50.7		
9.2	16.0	8.2	Mm 9.1	9.0	55.7	48.8		9.2	9.6	53.7	15.3		9.3	10.3	11.7	20.3	
9.5	21.5	42.5	9.1	10.4	15	0.2	14.8	9.6	9.6	23	56.0	1.7	9.5	8.5	14.7	47.5	Mm
25pr.	+1 30.2	+2.2			+1 30.0	+2.5			+1 29.8	+2.8				+1 29.6	+3.2		

7561—7620.				7621—7680.				7681—7740.				7741—7800.												
mag.	19 ^h .	—22°		mag.	19 ^h .	—22°		mag.	20 ^h .	—22°		mag.	20 ^h .	—22°										
9.2	38	29.7	22.3	M-m	8.9	9.4	9.4	54	52.0	29.5	9.3	10.0	11	33.2	56.7	8.6	18	15.7	11.2	MW=m	8.8			
10.3		57.7	4.3		9.6	9.2	9.2	55	33.7	10.1	9.6	8.7		46.6	2.3	9.2	9.2	16.2	58.7	9.0	G	9.0		
10.3	39	12.7	13.7		9.6	9.2	9.2		44.0	27.5	9.5	9.8		46.7	35.6	9.8	10.2	31.7	28.6					
10.3		37.7	3.5		9.5	9.0	9.0		55.4	36.3	9.5	8.7		51.2	30.9	am	8.5	9.2	31.7	59.9	9.5	G-	9.4	
8.0	40	5.2	8.0	Wam	8.0	6.6	6.6	56	19.3	56.8	7.5	GSπμ	6.8	10.2	12	13.7	24.1	9.4	45.2	3.6	9.8	9.8	9.8	
9.6		32.7	3.6		9.4	8.8	8.8		28.0	47.9	9.0	10.2		15.7	24.5		10.2	8.8	51.0	9.0	m	8.5	8.5	
9.0		35.2	28.7		9.3	8.2	8.2		42.0	19.2	9.0	10.0		16.7	1.7		10.2	8.2	57.1					
9.4		36.7	53.6		9.4	8.8	8.8		50.9	9.1	9.3	8.4		19.7	16.6	8.8	9.6	13.2	19.1				9.3	
9.8		43.2	18.5		9.3	9.2	9.2		51.9	42.1	10.2	10.2		23.2	17.6		9.8	16.2	31.3				9.8	
9.0	41	3.7	19.8		9.0	7.3	7.3	57	2.2	32.2	Wam1	8.0	9.8	34.7	39.0	10.	9.4	26.2	37.4				9.5	
10.3		24.2	17.0		9.8	9.3	9.3		3.6	59.7		9.3	9.2	40.2	30.9	9.2	8.7	40.2	57.9	9.0	GWam	8.7	8.7	
10.3	42	50.2	32.0	W	9.1	9.3	9.3		6.9	16.6		9.4	9.6	43.2	19.2	9.8	8.6	56.2	23.1	-m			8.3	
9.6	43	11.2	12.6		9.7	9.0	9.0		9.2	29.7	a	9.1	10.4	13	16.2	34.5	9.4	20	23.7	25.9			9.1	
9.8		13.7	46.6		9.5	8.6	8.6		29.6	15.8	kb	8.8	9.8	19.2	7.8	9.6	10.4	42.2	6.5					
9.0		23.7	58.2		9.4	8.2	8.2		57.5	59.1	9.0	Gam	8.5	9.0	20.2	13.2	9.1	7.8	46.2	25.8	b=ml		8.0	
10.0		45.7	12.9		9.5	8.7	8.7	58	13.3	56.8	10.0	Ga	9.5	10.4	24.2	3.5	10.	10.0	59.7	53.8				
8.8	44	5.2	41.8	Mm	9.0	8.7	8.7		13.6	48.0		9.4	9.5	34.2	26.0	9.5	10.4	21	3.7	18.5				
10.0		5.7	31.0		9.4	9.1	9.1		18.2	26.1		9.5	9.6	36.2	33.9	9.4	10.2	14.2	27.7					
9.8		15.7	27.6	W	9.4	neb.	neb.		41.7	16.4	neb.	10.0	10.0	42.7	17.2		9.2	29.7	42.5				9.3	
10.2		26.4	2.6		9.6	9.4	9.4		49.3	37.3		9.4	10.4	48.2	3.8		9.5	30.2	25.6				9.5	
9.4		55.2	38.9		9.5	9.4	9.4	59	9.2	56.7		9.6		54.7	12.5	9.5	10.4	33.0	33.6					
10.2	45	10.7	38.4		9.4	7.8	7.8		12.1	1.9	Gat1π	7.6	9.8	56.7	21.0		8.6	34.2	44.6				9.1	
9.0		14.7	31.8	Wm	8.9	9.4	9.4		30.9	22.8		9.3	9.8	6.7	55.8	9.9	9.8	42.7	23.5					
10.0		26.7	38.5		9.3	9.4	9.4		58.6	23.8		9.3	8.7	23.2	23.9	9.3	9.4	53.7	19.1				9.7	
10.2	46	17.2	5.2		9.6	9.1	9.1	0	8.9	19.3		9.4	9.4	24.4	0.6	9.5	10.0	56.2	19.5				9.9	
8.4		36.2	47.8	bm	8.9	9.4	9.4	1	27.9	43.4		9.2		32.7	0.0	9.4	7.6	22	11.7	48.1	GS1π		6.2	
9.6	47	11.7	57.9		9.3	9.1	9.1		55.4	29.2		9.3	10.0	36.2	44.3		9.0	13.7	51.8	9.5			9.1	
8.8		11.7	4.0	Mm	9.1	9.4	9.4	2	3.9	2.0		10.4		40.7	56.9	Gat	7.3	9.6	22.2	44.5			9.5	
9.0		17.7	56.6		9.0	8.7	8.7		21.9	30.5	Mm	8.9	7.7	46.2	21.1		9.6	25.2	17.8				9.5	
9.8		50.2	27.2		9.2	9.0	9.0		49.7	35.2		9.0	10.0	53.7	44.9		9.6	27.0	59.9				9.6	
9.4		53.2	4.5		9.4	9.4	9.4	3	36.8	13.0	K	9.4	9.8	54.2	28.0	9.4	9.2	46.2	14.5				9.3	
10.2	48	2.1	27.7		9.3	9.2	9.2		51.4	31.0		9.4	10.2	5.2	38.5	10.	8.7	46.7	55.4	8.5	am		8.8	
9.8		29.7	17.7	W	9.1	7.8	7.8	4	2.1	19.0	aml	8.0	10.2	6.2	14.9		10.0	46.7	47.8					
8.8	49	16.1	42.0	Wm	9.0	9.4	9.4		14.4	53.7		9.3	10.0	6.2	55.8	10.	10.0	54.2	24.1					
9.0		18.4	20.1		9.1	9.3	9.3		43.8	59.0		9.3	10.0	7.7	36.8		9.5	57.7	5.8				9.7	
9.4	50	40.9	27.4		9.4	8.8	8.8		51.2	36.4		9.3	8.3	16.2	44.4	Wam	8.2	8.8	23	8.7	4.3		9.4	
8.8		50.1	40.2		9.1	9.3	9.3	5	0.3	59.1		9.8	9.5	36.2	12.9	9.5	10.0	13.2	6.6					
9.0	51	0.1	55.6	Mm	9.2	8.8	8.8		14.8	49.3		9.0	9.5	46.2	32.9		9.2	27.7	53.8	9.5			9.4	
8.2		9.1	35.1	GWa	8.0	8.2	8.2		55.0	26.0	Mm	8.5	9.0	52.2	31.6		9.3	34.7	47.1	m			9.0	
8.7		15.0	57.2	-m	9.0	8.7	8.7	6	4.5	30.5		9.2	10.0	57.7	39.1		9.8	35.7	31.9	-			9.3	
8.8		38.7	36.0	Wa	8.8	9.4	9.4		42.0	46.3		9.4	10.4	9.7	6.8		9.2	41.2	28.1	-			9.3	
9.2		42.9	33.5		9.3	9.4	9.4		49.0	45.2		9.5	10.0	14.7	51.7		9.6	49.7	50.8				9.5	
9.4		46.9	14.9		9.4	9.4	9.4		52.0	36.1		9.4	10.4	21.2	26.7		10.4	54.2	42.8					
9.3		48.1	5.8		9.5	7.9	7.9		56.5	25.0	M=	7.5	9.2	26.2	45.7	9.4	10.4	6.2	20.3					
7.8		48.7	15.5	=	8.0	9.4	9.4	7	2.1	48.2		10.2		34.2	41.2		10.4	12.2	31.0					
7.0	52	9.4	32.8	GWet1	6.5	9.5	9.5		12.9	34.7		10.0		47.2	14.9		10.0	17.2	52.8					
9.4		16.7	23.4		9.5	9.6	9.6		13.2	24.9		9.4	8.0	2.2	26.9	b=ml	8.1	8.6	18.7	55.4	8.0	GWam	8.7	
9.2		25.9	34.4		9.7	10.0	10.0		45.8	58.4		9.3	9.6	3.2	42.6		9.5	9.6	26.2	23.8				
9.1		36.1	24.7		9.2	10.2	10.2		45.8	12.9		9.4	9.4	5.2	13.7		9.6	8.9	28.7	27.1			9.2	
8.6		40.1	6.5	Cka	8.7	10.4	10.4		47.2	12.8		9.2	9.2	26.2	11.8		9.3	9.2	35.7	58.1	Wa		9.2	
9.0		20.0	50.1		9.1	9.8	9.8	8	6.4	35.0		9.2		35.7	53.2		9.6	40.2	24.8					
8.0		22.2	58.7	GWt1π	8.2	9.5	9.5		13.2	29.6		9.5	9.8	44.7	30.6		7.8	54.2	34.5	GS1π			8.5	
9.3		37.1	31.5		10.0	10.0	10.0		24.7	19.4		9.2		51.2	50.8	9.3	8.0	56.2	34.9	GS1π			8.8	
9.2		57.6	2.7		9.5	10.2	10.2		54.7	48.4		10.	10.4	55.7	7.2		9.8	4.2	42.4					
7.9	54	14.4	27.1	W=m	8.0	9.2	9.2		57.3	11.4		9.1	10.4	56.3	59.9		9.4	6.2	11.8				9.7	
9.2		23.2	36.6		9.5	9.2	9.2	9	14.2	51.4	-	8.8	10.2	18	0.1	1.1		9.8	16.2	1.8				
9.0		27.7	17.8		9.3	9.6	9.6	10	33.2	59.2		9.7	9.2	2.2	18.4		9.5	9.8	23.2	38.4			10.	
9.3		34.8	33.8		10.	7.3	7.3		41.2	11.7	Getπβ	6.0	9.8	6.7	8.7		10.0	26.2	9.1					
9.3		44.7	57.4		9.7	7.7	7.7		44.2	22.9	M=	7.8	10.0	13.2	6.6		10.4	35.7	5.6					
9.1		47.3	28.0		9.5	10.4	10.4	11	4.8	57.8		9.7	8.4	14.2	3.9	Cal	8.6	39.7	34.8				9.6	
25pr.		+1 29.2	+3.8						+1 28.7	+4.3				+1 28.3	+4.6			+1 28.1	+4.9					

7801-7860.				7861-7920.				7921-7980.				7981-8040.							
20 ^h .		-22°		20 ^h .		-22°		20 ^h -21 ^h .		-22°		21 ^h .		-22°					
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s				
25	41.5	58.9		34	43.9	22.3		47	52.0	12.9		4	56.8	24.2	=	9.0			
	43.2	37.1	9.5		44.9	54.9	9.3	48	4.0	35.8	am	8.3	59.8	35.1		9.4			
10.4	44.0	15.6			44.9	44.5	9.1		4.7	30.2		9.5	5	22.3	3.2	9.4			
9.8	58.7	46.8		35	25.4	9.6	9.5	9.9	13.5	55.3		9.2	25.3	17.3		9.3			
10.4	26	1.2	21.6		25.9	44.1		9.0	51.5	22.9		9.2	48.8	8.3		9.7			
10.2	2.7	44.9			25.9	42.4		9.2	54.7	34.1	Mm	9.0	6	34.8	36.3	9.0			
10.4	13.0	55.6			52.4	24.3	=	8.8	49	11.5	55.7		8.5	42.8	34.6	8.8			
7.6	13.2	39.2	GS π 7.7		55.4	5.3		9.9	27.0	20.6		9.1	50.8	43.5	GS π μ	7.0			
10.0	23.2	6.5		36	4.4	44.9	Mam	8.9	8.0	39.0	28.9	am	7.5	7	14.8	43.1	10.0		
10.4	23.2	24.2			5.9	45.4		8.5	50	4.5	6.5	Ca	9.0	41.8	20.2	G	9.0		
9.7	27.7	34.3			8.9	54.0	GSame	7.5	19.0	24.5		9.5	53.0	19.9	GS π	7.7			
9.8	52.6	0.2	10.0		35.9	7.3		8.0	33.5	2.0	Caml	8.3	54.0	22.7		10.0			
10.2	53.2	36.4			38.9	42.0	a	9.1	53.5	35.9		9.3	8	22.8	21.3		9.9		
10.0	56.2	50.9	9.7		45.9	59.9		9.5	59.5	58.5		9.3	9	2.3	42.0	am	8.9		
9.4	56.2	28.4	9.5	37	3.9	24.5		9.9	51	3.0	4.7	9.9	10.1	15.9	6.2		9.9		
9.4	59.7	13.1	9.7		13.9	40.3		9.8	52	2.0	4.8	9.9	8.0	17.4	25.8	=	8.9		
8.8	27	5.0	36.9	am	17.0	3.2	am	8.9	7.8	33.0		9.6	10.1	25.3	49.2		10.0		
9.8	12.2	44.8			38.4	37.3		8.5	45.3	5.5	Cam	8.7	10.1	53.4	18.4		9.2		
9.5	26.0	25.0	9.8		38	3.4	12.1	9.5	58.8	48.9	a	8.8	9.4	55.4	6.0		9.2		
9.6	31.6	58.9			4.4	42.4	=	9.2	54	31.3	43.3	9.5	8.4	10	5.4	35.8	-m	8.8	
10.0	38.2	15.0	9.6	10.2	19.4	17.1		9.8	49.5	10.5		9.7	7.5	6.4	15.5	C=	8.1		
9.8	44.2	29.8	9.8		22.4	47.6		9.2	54.8	39.7		9.8	7.6	25.9	7.4	CW=m	8.3		
10.0	56.7	44.8			32.9	5.8		9.0	55	22.3	48.2	a	9.0	31.4	22.1		9.7		
9.2	58.5	15.0	MKm	9.3	53.9	11.4	-	8.0	49.3	27.4	aml	8.2	8.4	51.9	34.0	Mm	9.0		
9.6	58.5	5.1		9.5	39	6.4	54.3		53.3	40.5		8.0	8.0	11	43.4	33.6	Wam	8.3	
10.4	28	6.7	53.3		8.4	12.7		9.1	56	5.3	7.6	Cam	10.0	12	21.4	47.5	-	9.4	
10.0	7.7	32.0		9.7	9.4	11.4		8.5	12.3	1.8		8.4	8.7	35.9	27.4	am	8.7		
10.4	16.2	57.2			13.9	36.9	GSame	8.0	29.3	39.5		9.4	10.1	41.6	41.2				
10.0	16.7	29.8			15.4	8.7		9.2	39.3	47.7		9.4	9.7	43.4	53.2		9.4		
9.6	23.7	12.6	9.6	9.6	21.9	53.4		9.4	41.3	12.6		9.7	9.8	13	29.9	6.4		9.3	
10.4	32.7	26.2	9.8	9.6	32.4	40.5		9.3	57	1.8	57.1		9.9	32.4	54.9	8.0 Gal	8.2		
10.0	43.4	0.0	9.4	9.0	32.9	41.8	-	9.1	9.5	4.3	39.8		9.7	14	42.6	18.8			
9.2	43.5	31.0		9.4	38.9	21.5		9.2	9.9	9.5	12.3		9.4	48.4	3.8	C		9.1	
9.2	47.2	29.2		9.3	57.9	24.0	am	9.0	8.9	11.3	40.2		9.3	51.9	55.5	-		9.1	
9.5	47.5	4.6	Mm	9.2	40	12.4	12.2		9.0	39.3	59.9	9.5 GMam	9.0	15	21.4	27.4		9.4	
10.4	53.2	33.4			12.9	8.2		9.6	9.2	50.3	14.9	C-m	9.1	16	42.3	59.0	=	9.1	
10.4	58.2	10.4			13.0	0.5		9.7	58	3.3	4.6		9.5	52.9	38.8	a		9.2	
7.4	25.3	52.7	GSame	7.8	10.0	43.9	37.5	9.3	13.3	43.8		9.4	9.4	17	3.9	35.4		9.2	
9.8	39.3	10.9		9.4	10.3	56.9	5.7	10.0	26.3	10.9		8.7	8.7	12.9	23.2	=		9.0	
10.2	46.3	9.0			41	12.9	32.0	Wam	8.9	9.7	45.3	47.2	9.7	50.0	11.2			9.2	
10.3	47.3	31.1	9.5	9.4	37.9	52.1		9.5	59	2.3	41.0		9.7	18	14.5	34.1		9.0	
9.8	51.3	0.0	9.3	9.6	39.4	18.4		9.5	12.3	47.0		9.5	7.7	34.5	12.0	MCam		8.3	
10.2	8.8	33.7	9.5	9.1	52.4	5.5	Cam	8.8	9.0	26.3	30.3	Mm	9.1	36.0	3.3	Ca		8.8	
10.2	15.3	11.1		9.6	53.4	16.7		9.6	9.5	56.3	17.0		9.6	19	7.0	22.1	CW=m	8.3	
10.0	27.8	11.6		10.3	55.4	53.8		9.9	0	10.8	32.5		9.8	8.0	25.7			9.1	
9.1	29.3	45.2	am	9.1	42	35.4	21.2	Wam	8.5	9.0	15.8	28.5	9.1	32.5	57.1	3.5 GS μ β		4.7	
10.3	41.3	20.9		9.8	43	29.7	2.0		9.4	9.2	19.3	23.4	9.4	52.5	40.8			9.4	
10.0	55.4	32.6		9.5	49.9	5.4		9.0	9.7	27.1	1.0		9.3	21	5.0	15.6	Gbt π	8.2	
10.0	33.4	30.4		9.8	56.9	27.3		9.3	7.6	43.2	50.1	8.0 GWam	7.8	35.0	20.9	GW π μ β	5.7		
9.2	35.9	18.7	9.5	9.6	56.9	9.0		9.3	9.0	43.8	10.2		9.1	37.0	28.1			9.0	
9.8	59.3	2.6	9.6	9.4	44	13.9	23.1	am	9.0	7.7		1	25.3	46.0	11.8			9.3	
9.6	1.6	0.8	9.2	10.0	45	48.4	30.6		9.8	9.0	27.2		9.2	0.5	30.1			8.5	
9.2	9.9	9.4		8.6	46	7.4	25.7	am	8.9	9.5		2	12.3	37.5	33.6	a		8.9	
8.2	15.4	3.9	am	9.0	8.0	22.4	53.8	8.0 am	8.5	9.7			19.3	23	36.5	50.9		9.4	
10.3	22.9	18.1	10.0	9.8	22.9	45.2		9.1	9.5	9.5	5.4		9.4	49.1	6.6			9.4	
10.3	45.9	22.0		10.0	47	4.4	51.4	Mm	9.3	9.9		3	4.8	24	10.6	54.0		9.3	
10.3	34	4.9	33.0	9.8	8.7	34.1		9.5	7.8	17.8	59.2	7.5 GS α	7.7	24.6	29.3			9.3	
9.0	7.9	17.1		9.2	24.5	18.5	Cam	9.0	9.0	46.8	11.1		9.5	26.1	33.4	Wbml		7.8	
9.3	18.4	44.9	Mm	9.2	35.7	34.5	a	8.5	9.9	4	30.8	53.3	9.9	34.1	19.5	b=ml		8.3	
10.0	39.4	56.7		8.6	43.2	47.1	Mm	9.1	9.9	43.3	56.6		9.5	37.8	59.2				
25pr.	+ 1 27.9	+ 5.0			+ 1 27.4	+ 5.3			+ 1 26.7	+ 5.8				+ 1 26.0	+ 6.3				

8041-8100.				8101-8160.				8161-8220.				8221-8280.				
mag.	21 ^h .	-22°		mag.	21 ^h -22 ^h .	-22°		mag.	22 ^h .	-22°		mag.	22 ^h .	-22°		
9.6	25 4.8	26.0	9.3	8.8	49 34.6	21.0	9.0	9.8	4 27.1	50.1	G	9.2	9.8	21 35.3	36.2	10.0
9.4	26 20.6	24.6	9.4	9.0	50 3.1	36.4	9.1	9.1	5 52.6	7.1	Wam	9.0	9.6	37.8	15.9	9.5
9.2	27.1	48.9	a	9.2	10.0	15.1	9.5	10.4	52.6	17.9		9.5	7.2	55.8	42.4	GSal
8.5	32.6	12.9	-m	9.0	10.0	15.6	9.4	10.2	54.1	15.9		9.5	9.6	22 4.8	14.5	9.3
8.2	34.1	31.1	≡	8.5	8.8	28.1	9.0	8.6	58.6	6.0	MCWam	8.9	10.0	45.8	3.4	9.5
9.2	27 4.8	49.0		9.4	9.4	34.4	9.6	7.6	6 14.1	1.5	CWam	8.2	10.0	49.8	17.9	9.5
10.1	18.4	52.7		9.9	8.8	35.8	9.2	9.8	20.1	19.5		9.5	9.0	54.3	47.8	a
9.7	22.6	55.0		9.5	10.4	51.4	9.5	8.4	56.1	52.9	8.0 a	8.3	10.3	23 20.1	0.3	9.5
10.1	37.1	21.1		9.5	9.8	55.1	9.5	7.5	7 12.1	1.9	CWam	18.0	10.3	52.3	42.4	9.8
10.1	44.6	46.3		9.8	9.8	51 23.6	9.4	10.2	17.1	26.9			9.4	24 4.8	32.2	9.3
9.6	28 0.4	4.0	9.7	10.2	32.6	23.3	9.6	10.2	18.6	25.3			10.3	29.3	58.9	
9.2	7.4	37.0	am	9.0	10.4	42.6	10.2	10.2	22.7	59.4			9.0	53.3	31.6	=
9.4	44.4	19.0		9.5	10.4	45.6	10.0	10.0	42.1	19.3		9.4	8.6	25 0.8	36.9	-
8.8	29 30.9	51.4	am	9.2	9.1	55.6	9.1	10.0	8 22.6	47.1		9.4	9.4	6.8	41.9	9.4
9.2	37.4	23.1	am	9.0	9.2	52 24.6	9.2	10.0	56.8	42.9		9.5	9.1	13.3	14.4	-
8.2	38.9	3.7	Ch=ml	7.8	8.8	45.6	9.1	9.6	9 22.0	46.8		9.4	9.4	13.8	55.3	9.5 a
9.2	30 20.9	43.0	a	9.0	10.0	53 6.6	10.2	10.2	33.0	32.0		9.3	9.8	56.8	23.5	9.5
9.9	31 21.3	28.0		9.6	10.2	8.6	9.8	10.2	56.0	55.3		9.6	10.0	26 15.8	18.0	9.6
9.4	47.4	4.4		9.3	10.0	12.6	9.8	10.2	10 16.0	12.2		9.8	9.4	35.8	33.6	9.1
10.0	58.3	52.5		10.0	10.0	19.6	9.6	10.3	25.3	1.2		9.8	9.6	55.8	58.6	9.2
8.1	32 4.4	16.6	Cam	7.5	10.0	54 22.6	9.8	9.5	11 3.0	6.7		9.5	8.5	27 3.4	44.9	Wa
9.4	11.4	6.9		9.7	9.2	43.8	9.5	7.3	16.0	55.2	8.0	GSal	7.2	7.9	26.3	9.3
8.6	50.9	43.2	a	8.7	9.2	50.1	9.2	10.2	17.0	14.6		10.3	10.3	12.6	56.7	
10.0	33 13.3	11.1		9.7	9.8	55 12.6	8.7	10.0	21.0	3.2	Ca	8.8	10.2	21.3	47.3	9.6
9.6	17.9	8.2		9.6	8.8	13.6	10.0	10.0	28.0	12.0		9.7	10.0	26.8	31.4	9.8
9.4	46.4	44.1	a	9.0	9.8	32.6	9.6	8.8	30.5	46.0		9.5	10.3	42.8	30.8	9.9
10.0	34 0.9	53.6		9.5	9.6	34.3	9.5	10.3	12 2.5	52.2		9.1	8.6	28 16.5	43.5	8.8
8.0	25.9	29.6	GWatπ	7.8	10.0	36.6	9.5	10.3	3.0	14.2		9.5	9.5	40.2	5.7	9.3
8.4	29.9	13.7	GC=τ	8.0	10.4	42.8	10.0	10.0	20.0	55.6		10.2	10.2	29 3.8	59.2	
9.5	45.9	44.0		9.5	10.4	43.6	10.2	10.2	23.5	6.0		10.0	9.6	23.9	19.9	9.3
9.5	35 15.4	49.4		9.4	9.8	55.6	9.7	9.2	47.5	44.2		9.4	8.8	25.6	19.4	9.0
8.9	20.4	19.8		9.0	9.8	59.6	9.9	9.1	52.0	43.4		9.4	9.8	34.6	39.5	9.5
9.5	43.9	40.1		9.5	8.6	56 29.6	8.5	9.0	13 1.0	20.4		9.5	8.4	42.1	13.8	a
10.0	36 2.4	15.0		9.8	9.8	57 7.6	9.3	8.0	6.0	38.6	Maml	8.0	8.6	30 1.1	10.7	a
9.5	52.9	32.0		9.5	7.7	12.1	9.0	9.6	25.0	35.0		9.8	9.4	5.1	19.1	9.1
10.0	58.9	13.6		9.7	9.6	29.1	9.5	10.3	26.5	7.8		9.4	7.4	45.6	26.7	Wal
8.9	38 16.9	26.8	a	8.8	9.2	53.1	9.0	9.8	36.0	26.1		9.4	10.3	31 39.1	57.8	9.5
9.0	39 26.9	41.6		9.3	8.7	56.1	8.0	9.4	43.0	25.0		9.4	9.6	42.6	51.8	9.5
8.6	40 4.4	14.1	≡	8.7	9.5	58 33.1	9.3	10.0	51.5	16.8		9.8	8.8	53.6	18.2	a
9.1	41 24.9	14.9	=	9.1	10.4	59 2.1	9.4	9.1	14 7.5	16.4	W	9.0	9.6	32 15.6	11.8	9.2
9.2	39.6	42.2	-m	8.7	10.0	8.6	9.4	10.2	7.5	48.0		9.4	9.4	51.6	50.4	9.0 a
9.5	42 4.6	23.9		9.6	9.8	50.1	9.3	8.8	16.0	15.7	CWbl	8.8	9.4	33 32.6	42.8	9.3
9.4	19.1	34.2	am	8.4	7.6	0 16.6	6.5	6.8	43.0	13.3	GSlπβ	5.7	10.3	35.6	26.8	9.5
9.2	37.1	23.0		9.1	8.8	20.6	9.0	9.0	15 50.0	48.0	a	9.0	10.2	58.6	39.8	9.5
9.5	47.6	46.6		9.4	10.0	49.6	9.5	9.6	16 57.0	56.3		9.8	9.8	34 7.6	52.4	9.8
8.9	43 23.6	47.7		8.8	7.6	54.1	8.0	9.0	17 2.0	32.3		9.0	9.8	30.6	31.8	9.4
9.6	44 9.6	15.6		9.3	10.2	1 6.1	10.0	8.2	24.0	13.8	Waml	7.5	10.3	35 6.6	16.0	9.4
8.8	21.6	20.0	M≡m	8.3	9.2	44.6	9.0	8.2	28.0	53.5	8.5 Ga	8.5	9.0	19.6	25.2	-
9.0	45 19.1	58.7		9.1	9.8	53.1	9.5	10.3	48.0	16.9		9.0	9.0	53.1	56.6	a
9.9	35.5	18.2		9.5	9.2	58.6	9.4	9.6	59.0	49.6		9.7	9.4	57.1	24.4	9.5
9.4	55.6	27.7		9.0	10.4	2 3.1	9.1	8.6	18 33.5	39.6		9.2	9.6	36 9.0	48.7	GSal
9.9	46 34.5	31.1	Mm	9.1	10.0	12.1	9.5	10.0	46.0	14.0	Wam	8.5	7.2	14.5	18.6	7.0
8.5	35.1	18.4	=	8.6	10.4	32.6	10.0	9.0	46.0	29.0		9.8	9.6	16.5	7.5	9.5
10.0	59.6	16.4		9.5	10.4	47.1	10.0	9.0	56.8	25.7		9.3	9.4	37 55.0	39.4	9.1
10.4	47 35.4	24.9		9.5	9.6	3 7.1	9.5	9.6	19 2.8	8.0		9.3	9.4	38 13.0	28.3	9.0
9.8	38.0	42.0		9.5	9.8	10.8	9.5	9.4	59.8	13.5		9.3	9.8	21.0	49.9	9.3
9.8	56.8	10.7		9.5	9.2	18.1	9.0	10.3	20 27.6	34.8		9.8	9.8	41.0	13.3	9.5
9.4	48 21.9	53.9	b	9.1	9.6	18.6	9.5	10.3	59.6	41.4		9.8	9.8	42.3	2.9	9.5
10.0	49 5.4	45.3		9.8	9.2	27.6	9.2	8.5	59.8	30.2	=	8.0	10.0	39 8.0	40.9	9.6
8.7	29.1	41.7	am	8.5	8.0	4 25.6	8.0	9.6	21 27.8	53.0		9.2	9.0	9.5	51.9	9.0
25pr.	+1 25.0	+6.7							+1 23.0	+7.5				+1 22.2	+7.7	

8281-8318.				8319-8356.				8357-8394.				8395-8432.				
22h.		-22°		22h.-23h.		-22°		23h.		-22°		23h.		-22°		
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	
9.0	40 17.0	45.5	9.4	9.0	59 33.6	36.6 a	8.7	8.0	18 11.8	7.7	Cal	8.2	9.6	37 23.6	45.9	9.0
9.0	37.0	30.5	9.1	9.2	47.4	57.4	9.1	9.8	27.8	43.8	9.5	9.5	55.5	52.8	9.1	
10.3	44.0	59.8	8.8	8.5	0 14.5	7.7 Ca	8.5	9.1	36.3	43.8	9.2	9.6	38 15.6	46.9 a	8.9	
8.8	56.0	52.1	8.8	8.1	21.5	53.6	8.2	9.8	40.8	2.1	8.5	8.6	57.9	32.2 a	9.0	
8.6	59.0	48.1	8.8	10.1	1 4.8	5.9	9.4	8.4	56.8	20.6 a	8.5	9.2	39 1.9	18.8	9.1	
8.6	41 20.0	17.2 Ca	8.3	9.9	7.3	43.2	9.5	9.8	19 21.8	24.5	10.8	9.6	5.9	30.5	9.4	
10.3	42 25.0	14.5	9.5	8.5	36.8	16.8 C-	8.7	8.4	39.8	7.1	8.8	9.6	32.1	35.0	9.0	
9.8	33.1	16.3	9.4	9.8	2 29.2	41.1	9.1	7.2	59.8	25.6 GStlπ	6.5	9.6	51.4	31.8	9.1	
9.8	53.1	15.9	9.4	9.8	3 0.1	2.1	9.5	8.6	20 27.8	45.5 a	8.8	8.6	40 41.9	12.2 Ca	8.5	
9.8	43 36.1	14.6	9.3	10.1	4 16.4	10.1	9.5	9.4	38.8	47.2	9.4	8.6	44.9	28.0	8.3	
10.3	44 47.1	42.3	9.5	9.4	17.9	16.8	9.0	10.2	21 42.8	38.8	9.6	7.7	56.4	58.1 8.0 G=τπ	7.5	
10.3	47.1	58.3	9.4	9.2	5 3.2	24.7	8.5	8.8	22 5.8	9.5 C≡	8.7	9.0	41 30.6	36.3	9.1	
7.7	45 38.1	22.2 a	8.0	9.7	8.7	53.7	10.0 Ga	9.1	7.8	50.2 b=1	8.0	7.4	42 57.6	18.4 GStlπ	6.8	
10.2	46 36.1	43.9	9.5	8.2	6 7.1	37.0	=	8.0	8.7	57.3	5.1 9	8.9	9.0	58.1	53.5	9.0
10.2	54.1	58.2	9.3	9.2	37.5	4.4	9.1	7.4	23 41.8	34.3	GSal	7.3	9.2	43 6.1	53.3	9.1
9.2	47 13.7	36.3	9.1	10.1	56.0	38.5	9.5	8.4	56.3	41.7 a-1	8.3	9.4	18.1	42.1	9.5	
10.3	22.1	14.9	9.6	10.2	7 0.2	10.5	9.6	9.4	24 5.3	57.9	GWlπβ	3.0	8.4	28.1	35.9	9.1
9.2	26.1	49.9 9.0	9.0	9.2	8 0.4	16.5	-	8.8	25 8.8	3.5	9.7	8.8	44 17.0	1.9	8.8	
9.6	46.2	2.9	9.2	9.6	10.9	49.3 9.0	9.2	9.6	10.3	30.3	W-	8.2	9.2	45 18.7	20.1	9.4
9.4	51.7	0.9	9.4	9.3	17.1	48.3 8.5	9.1	8.3	35.3	29.5	9.0	8.4	46 28.7	10.5 Ca	7.8	
10.2	48 39.1	42.1	9.5	9.8	23.6	36.1	9.3	26 1.8	50.0 a	9.0	8.0	47 16.2	18.9 b	8.5		
10.3	49 25.6	40.9	9.8	10.2	57.1	35.5	8.2	16.8	22.5 C-	8.0	9.5	22.2	59.9			
8.8	51 16.8	42.2 a	8.5	8.7	9 1.1	31.7	-	9.0	34.8	8.5	9.6	4.8	42.7	5.2		
10.0	26.8	37.4	9.4	7.8	1.6	0.5 CWa	8.8	10.2	36.9	51.9	9.8	9.5	43.2	4.5 Cb=1	6.8	
10.1	52 3.6	10.6	9.2	8.1	3.1	56.6 8.5 Wa	8.8	9.2	28 27.3	27.9 =	9.0	7.2	43.2	19.4 a	9.1	
8.8	45.6	49.2 a	8.9	10.2	27.6	16.1	9.2	10.2	30.2	32.9 a	9.0	9.6	46.3	19.4 a	9.1	
9.7	56.0	45.5	9.4	9.8	11 5.9	52.2	9.3	10.2	45.8	25.6	9.6	7.8	49 41.0	41.2 GSal	7.0	
9.4	53 39.5	17.5	9.0	10.2	17.9	48.0	9.8	8.9	29 12.8	25.3 a	8.6	9.3	50 9.8	18.9 a	9.0	
10.1	58.7	31.3	9.4	8.4	12 11.9	48.9 8.8 Ga	8.3	8.7	24.3	20.0 Ca	8.5	8.2	51 2.8	20.4 Ca	8.5	
8.5	54 11.4	55.9 9.0 Gb:	8.3	10.2	13 33.9	10.0	9.5	9.4	51.1	0.1	9.5	7.8	41.8	35.8 Wa	8.5	
8.7	55 19.8	30.7	8.9	9.2	14 6.9	59.4 8.5 a	8.9	9.2	30 23.6	43.9 9.0 a	8.5	9.8	52.3	51.4 a	9.4	
10.1	56 38.8	58.4 9.5	9.1	9.6	16 13.9	56.7	9.2	8.6	30.6	21.9 Ca	8.1	8.8	58.8	35.7 a	9.0	
10.0	47.0	17.1	9.1	8.7	21.9	13.0 C-	8.7	9.2	31 52.6	51.1 Ca	9.1	9.6	54 34.8	20.7	9.2	
9.4	53.0	21.3	9.1	8.7	31.2	0.0 Ca	8.8	8.6	55.6	21.8 Ca	8.3	8.4	48.3	6.0 C=	8.6	
7.7	57 29.4	54.3 8.0 GWbl	7.1	9.8	45.9	10.0	9.4	9.2	32 21.3	0.7	9.0	9.5	55 7.8	50.2	9.1	
9.4	53.8	11.1	9.2	9.4	17 1.8	25.6	9.3	7.6	44.6	37.0 al	7.2	8.4	56 19.8	35.1 =	8.3	
9.7	58 16.3	43.5	9.3	7.1	28.3	27.3 GStlπ	6.8	9.3	33 8.1	26.7	9.2	7.4	58 56.1	0.7 Ca	7.4	
8.8	42.7	24.7	9.1	8.4	18 2.8	40.0 8.5 G-	8.0	8.7	36 53.6	24.0 Ca	7.8	9.5	59 32.3	21.3	9.3	
25pr.	+ 1 21.1	+ 7.9			+ 1 19.9	+ 8.1			+ 1 18.9	+ 8.3			+ 1 17.7	+ 8.3		

ZONE — 23°.

1-30.				31-60.				61-90.				91-120.			
mag.	oh.	-23°		mag.	oh.	-23°		mag.	oh.	-23°		mag.	oh.	-23°	
6.0	0	26.4	48.2	6.0	9.6	20	31.3	38.5	9.0	9.0	31	31.6	39.7	9.5	-
9.8		30.4	31.6	8.4	8.4		41.5	59.2	9.0 a	8.4		44.3	1.7	9.0	G
8.6		48.9	48.6	8.4			59.3	25.5	a	9.8		48.6	13.5		
5.7	1	22.9	12.2	9.8	21	35.3	52.0	-		9.4		49.6	52.1	-	
8.8	3	58.9	27.9	9.4			52.3	18.7		8.8	32	0.1	54.5	-	
9.6	5	21.9	10.0	8.2	22	6.3	32.7	8.0	Gal	9.2		43.1	15.3		
7.4		32.9	30.7	9.4	23	19.8	52.7	-		10.0		52.1	20.0		
7.0	6	42.1	10.0	9.0			52.8	11.8		9.6	33	52.7	31.3		
9.0		48.0	37.8	9.8	24	34.3	23.5	-		9.6	34	11.2	8.0		
9.6	7	19.0	10.7	9.2	25	6.3	53.3	-		9.4		23.2	13.2		
7.0		23.2	54.5	9.4			23.8	38.4		9.4		39.7	41.4		
9.8		44.8	54.2	9.2			29.8	21.8		8.1		51.2	50.1	9.0 a	
9.7		54.3	36.8	9.6	26	29.3	8.0			8.8		56.2	8.6		
8.0	8	54.5	35.1	9.8			32.3	12.2		9.6	35	52.2	29.7		
9.8*	9	30.6	13.8	9.6			38.5	23.0		9.6		54.2	5.8		
8.8		38.2	6.9	10.0			43.1	35.3		8.6		59.7	40.8	a	
8.6		56.4	16.2	9.6			52.6	35.5		8.8	36	10.5	58.2	9.0	Ga
7.5	10	2.9	16.8	9.6	27	3.4	54.5			9.1		43.2	18.4	9.5	
9.8	12	33.3	59.1	10.0			28.6	26.2		8.6	37	17.2	19.2	8.5 a	
9.8		35.8	51.7	10.0	28	22.1	33.5			9.8		31.1	33.1		
9.2		47.3	36.4	10.0			41.6	56.7		9.2	38	4.7	45.0	-	
8.8	13	31.3	5.1	10.0			58.1	17.6		8.8		46.2	32.8	-	
7.8	15	32.8	20.0	10.0	29	35.1	9.9			9.8	39	7.2	59.8		
7.2		32.8	41.8	10.0			52.4	36.6		9.8		26.3	44.1		
9.2		48.3	37.4	6.8			53.5	31.7	6.0	10.0		49.3	30.6		
9.0	16	47.8	45.5	9.4	30	5.1	32.9	-		6.6		59.3	12.4	5.8	GSbl
9.8		49.3	33.6	9.4			24.1	11.3		9.8	40	2.3	16.0		
9.8	17	12.3	42.9	9.1			27.1	41.2		10.0		12.3	13.0		
8.8	20	13.3	8.5	9.2			47.6	51.1		8.8		49.3	26.2	a	
9.8		19.3	58.4	9.2	31	0.1	57.7	-		9.2	41	16.3	47.8	-	
25pr.		+ 1 16.2	+ 8.3				+ 1 15.1	+ 8.3				+ 1 14.5	+ 8.3		
															+ 1 13.7 + 8.2

121-180.				181-240.				241-300.				301-360.				
ob.-rh.	-23°			rh.-2h.	-23°			2h.	-23°			2h.-3h.	-23°			
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s		
9 ^h 55	22.2	28.7	b	8.8	25	2.8	10.1	9.0	9.6	1	17.0	42.1	10.0	46	41.6	32.0
9 ^h 56	32.7	44.0		9.3	43.8	52.7	a	8.0	3	18.0	34.9	9.6	47	1.1	58.5	a
9 ^h 57	7.2	51.2	9.0 GWa	9.8	47.6	51.5	-	10.0	4	56.0	39.7	9.9	48	50.6	52.3	
9 ^h 58	12.2	10.2		8.8	53.2	5.6		7.7	7	28.3	27.5	9.8	48	2.3	58.3	
8.6	20.2	9.2	9.5	7.8	26	45.6	3.5	8.5	8	25.8	8.5	9.3	8.8	17.8		
8.4	32.7	10.5	8.5 a	9.3	59.3	12.8		7.6	9	31.8	52.0	8.6	9.6	39.3	8.5 W≡	
9.6	34.7	14.2		9.2	28	9.8	25.1	8.5	8.2	51.4	57.2	9.2	33.8	55.3	Ga	
9.4	54.7	7.1		9.2	29	0.8	31.6	a	7.7	53.0	10.9	8.6	39.1	27.6	8.0 Wa	
9.2	36.7	18.2		9.2	7.8	4.5	a	8.4	10	11.5	30.9	9.9	40.6	40.7		
7.8	44.2	31.2	8.0 G-	10.0†	56.9	54.8		7.6	28.0	37.3	8.0	9.4	43.1	8.6		
9.3	55.2	55.0	a	9.6	30	19.8	7.3	8.6	46.0	12.7	a	9.6	46.6	47.3	-	
9.6	41.2	5.8		8.0	21.3	4.5	8.5 Ga	9.8	11	36.8	11.5	9.8	49	26.0	50.9	-
9.6	56.7	15.1		8.0	49.3	4.9	8.0 Gal	9.2	54.0	30.9	-	9.5	55.5	53.9		
9.2	7.2	5.9		9.4	32	6.8	3.8	7.7	12	27.5	9.9	8.5	50	20.5	43.5	9.0 GWa
8.8	39.2	1.0		9.6	41.6	5.1		8.4	14	59.0	10.6	9.4	42.0	59.5		
10.4†	6.6	59.0		8.2	33	14.4	45.6	8.0	18	27.0	8.1	8.2	51	16.5	29.3	9.0 G≡
9.6	9.7	10.0		7.6	59.9	32.8	7.5 GWal	9.0	45.5	4.4		9.2	26.5	12.4		
9.0	20.2	26.4	a	8.6	34	1.7	1.2	9.2	49.0	19.3		9.4	29.3	52.9	-	
9.4	11.7	23.2		8.6	47.4	25.1	Ga	9.8	19	25.8	26.1	9.8	42.8	53.2		
8.6	25.7	23.7	8.5 Ga	8.8	35	2.4	24.9	9.0	20	32.5	28.9	8.4	55.8	2.6		
10.4†	39.3	57.9		8.4	36	32.4	34.1	9.8†	41.4	58.4		9.5	53	2.8	32.3	
9.4	56.2	7.2		8.4	37	31.9	48.0	8.0	21	3.0	32.0	8.1	54	9.8	52.9	8.5 Ga
8.8	10.2	19.8	9.0 Gb	8.6	37.9	21.8	8.5 G	8.3	23	22.0	46.0	9.7†	14.9	55.7		
9.0	25.5	12.2	a	9.6	40	36.9	17.0	9.8	24	6.0	53.8	9.6†	58.9	50.7		
9.6	47.7	58.4		9.4	41	2.4	47.3	6.2	12.5	14.4	6.5 GS1π	9.4	55	12.3	52.4	
9.1	7.9	21.0	-	8.6	41.4	26.8	a	9.9	31.4	30.5		9.0	24.8	26.2	9.0 a	
9.6	11.2	51.9		8.8	45.7	1.2	9.0 a	7.3	50.9	6.1	6.0 GS1π	9.2	56	32.3	24.8	
9.0	20.2	40.7	9.5 -	9.4	42	5.9	14.5	9.8	25	0.0	59.6	8.2	49.8	18.0	a	
8.6	27.2	6.6	8.5 Gal	9.4	43	29.5	7.0	9.0	11.9	43.7	a	9.2	57	11.8	1.8	
10.2†	29.1	50.5		8.4	44	2.0	10.0	9.8	26	4.9	59.8	8.9	58	40.7	37.9	9.0 GWa
8.4	40.7	11.3	8.0 Gbl	8.6	29.0	23.2	GWb	9.2	12.9	43.4		9.8	49.2	29.0		
7.9	5.5	33.7	a	9.6	46.0	52.9		7.1	19.4	38.2	7.5 GSa	9.8	0	3.8	57.4	
8.5	19.2	34.9	a	9.4	45	0.0	15.1	8.7	37.9	24.9		9.8	46.2	21.9		
8.2	54.0	58.6	8.5 Ga	7.6	46	3.0	46.1	8.3	45.9	53.0	8.5 Ga	9.8	55.4	0.5		
9.0	53.7	7.3		9.0	50.6	3.3	8.5 Ga	8.6	28	59.4	41.5	9.4	1	32.2	3.9	
9.2	54.2	6.3		8.8	47	53.6	44.8	9.9	30	6.8	58.9	9.2	2	6.4	57.8	9.0 a
8.2	4.2	54.0	9.0 Ga	9.0	49	6.7	24.0	9.9	51.4	9.5		9.8	22.7	34.9		
9.7	21.7	48.9	-	10.0	58.8	15.8	b	9.3	31	10.4	15.6	9.4†	29.9	52.3		
6.8	24.2	40.1	7.5 Gal	9.3	50	1.8	11.4	8.6	41.4	16.1		9.6	53.6	46.5		
7.9	39.2	28.7	8.5 al	9.3	18.8	44.7		9.1	50.4	28.1	=	9.6	3	30.1	34.8	
8.2	22.2	45.9	8.5 Ga	9.3	31.8	19.5		7.3	32	5.4	32.1	9.2	4	43.1	12.6	
9.8	40.2	7.5		6.2	49.3	8.3	5.0 GSπβ	9.8	18.9	25.7		9.2	6	12.1	34.4	
9.6	51.3	35.8		9.6	54.3	29.0		9.6	35	3.4	21.6	9.0	58.2	28.5	9.0 a	
9.7	7.7	42.6	-	10.0†	51	38.4	58.4	9.0	9.9	29.5	=	8.5	7	46.5	48.6	a
9.8	33.2	33.7		10.0	52	23.8	49.9	8.6	36	17.4	8.4	9.2	58.8	29.7	8.5 a	
9.4	52.2	9.4	a	10.0	43.8	17.0		10.0	37	51.6	14.3	10.0	8	15.4	11.2	
10.4†	15.6	51.8		6.2	53	10.8	31.7	8.6	38	2.6	12.0	9.2	9	26.0	34.8	
9.2	9.7	8.7	a	9.8	11.3	21.2		10.0	39	33.6	20.8	9.8	10	6.4	44.8	
9.8	13.7	58.4	-	10.0	11.8	54.2		9.3	40	22.1	16.0	10.0	53.8	13.8		
9.0	7.2	25.3	a	8.8	12.8	35.9		9.6	46.6	21.1		8.2	11	39.9	29.0	8.5 =
7.5	5.7	26.9	8.0 Gal	8.9	13.2	59.7	9.5 Ga	9.6	49.1	21.1		7.3	48.9	58.9	7.0 GSbl	
9.8	33.3	22.1		9.8	54	0.3	56.9	9.0	41	4.6	11.1	10.0	50.6	0.1		
9.4	45.2	45.7		9.8	5.8	8.1		9.9	5.6	45.7	-	9.4	57.6	21.0		
8.8	4.1	57.5	9.5 a	8.2	50.3	50.2	9.0 a	6.4	32.8	0.6	6.5 GSa	9.2	12	5.6	25.1	
9.8	9.2	9.7		10.0	57	1.8	51.2	9.4	42	32.6	3.8	9.6	21.6	14.5		
9.8	57.3	40.5		10.0	58	39.8	50.8	8.7	52.6	36.9	a	10.0	13	14.1	9.9	
8.3	31.3	24.7	-	9.6	59	32.8	52.0	10.0	44	1.1	53.1	9.6	42.6	7.3		
9.0	48.8	7.2		10.0	55.3	46.1		7.0	45	13.6	32.6	8.4	56.9	26.7	=	
7.6	1.3	10.0	8.0 Gal	9.3	57.0	11.7		9.2	38.6	10.9		10.0	14	27.4	15.4	
8.2	33.8	53.3	8.5 Ga	8.7	0	15.0	59.9	8.7	46	13.6	41.4	8.2	15	1.9	9.8	9.0 a
25pr.	+ 1 12.5	+ 8.0			+ 1 10.5	+ 7.5			+ 1 8.2	+ 6.7			+ 1 6.5	+ 5.9		

361-420.				421-480.				481-540.				541-600.			
mag.	3 ^h .	-23°		mag.	3 ^h -4 ^h .	-23°		mag.	4 ^h .	-23°		mag.	4 ^h .	-23°	
	m	s			m	s		m	s			m	s		
9.8	15	2.9	9.0	9.8	44	36.8	31.0 a	9.7	9	17.3	47.8	9.9	24	12.1	22.5
8.3		13.4	45.7 a	8.8		47.8	11.3 8.0 Ga	9.9		41.8	28.6	10.2		15.1	12.0
9.6		34.4	31.8 -	8.6	45	31.8	17.2 a	9.7		45.8	28.0	10.2		16.1	19.8
10.0	16	29.2	2.3	9.6		36.8	52.8 -	9.9		45.8	21.5	7.9		18.1	19.6 8.5 Ga
8.8	17	13.2	24.3 a	10.0		59.3	31.0	9.4	10	4.3	40.9 a	9.5		20.1	3.4
9.6		40.4	54.2 -	9.0	46	5.1	19.9 a	9.7		5.8	36.1	9.8		23.6	46.8 -
9.8		58.9	55.1 -	7.7		18.1	18.4 8.0 Gbl	9.7		22.3	4.2	10.2		33.1	48.2
9.6	18	7.2	19.6	8.6		33.6	4.1 a	9.2		23.3	43.9 a	9.5		42.1	51.0
9.0		9.4	52.4	8.6	47	24.6	18.9 8.5 Ga	6.2		26.3	33.1 7.0 GSal	8.2		49.6	48.0 8.5 G-
9.8	19	48.5	55.0	8.6		31.6	16.2 8.5 Ga	9.1	11	0.3	34.8	7.7	25	6.1	46.0 8.5 G=
10.0	20	0.0	32.4	10.0		46.6	19.1	8.7		9.8	15.6	9.2		10.1	53.8 -
9.4		42.0	20.3 9.0	6.8	48	33.0	29.9 GSal	8.0		10.8	50.7 8.0 Ga	8.8		11.1	23.8 9.0 a
9.8		58.0	13.8	9.8		36.2	48.7 -	10.2		15.8	33.2	9.2		12.6	18.3
6.8	24	8.0	54.6 7.0 GSal	10.0		47.6	36.1	9.0		36.3	11.9 a	6.7		15.6	17.8 7.0 GSal
9.2	25	43.0	36.6 =	9.9	49	6.4	27.8	9.2	12	23.8	6.0	8.2		31.1	40.8 8.5 GWbl
9.8		53.5	24.9 -	9.8		37.4	17.7	10.2		51.9	43.2	10.0		32.1	24.9
9.8	26	10.5	43.7	8.6	50	33.4	54.9 8.5 Ga	9.4		55.8	36.2	8.8		41.1	45.8 a
10.0	27	1.0	3.6	9.0		33.4	24.5 a	8.3		56.8	3.9 8.5 Ga	10.2		50.1	26.2
8.0	28	10.7	22.2 8.5 Ga	7.8		49.4	47.3 8.0 Gal	9.2	13	2.8	42.0	10.2		55.1	10.7
8.4		47.5	16.7 9.0 a	8.4	51	28.9	32.8 Ga	6.0		17.3	16.6 6.5 GScl	9.0		57.1	39.0 -
9.7	29	24.0	36.9 =	9.6		48.9	21.4	9.6		23.8	22.2	9.6		57.7	1.9
8.4		36.5	34.1 b=	9.9		54.9	53.0 -	9.9		30.8	50.3	8.6	26	11.6	19.2 a
8.4	30	35.0	56.0 8.5 GWa	10.0	52	1.9	0.1 a	8.2		55.8	43.1 GW-	10.2		27	26.1 28.3
9.6	31	2.5	51.7 9.5 G-	9.1	53	1.9	9.9 a	10.2	14	8.3	15.6	10.2		42.6	38.2
8.4		7.0	47.0 9.0 a	9.9		18.7	53.5	8.8		29.3	6.8 8.5 Ga	8.8		44.5	36.6
10.0		36.0	21.0	9.9		28.2	24.7 -	9.0	15	56.8	2.2	10.0†		45.4	58.5
10.0	32	7.3	6.0	8.3		33.7	30.1 8.5 Ga	10.2	16	10.8	22.5	8.4	28	2.2	50.7 =
9.2	33	2.3	29.8 9.0 =	8.4	54	33.2	32.0 8.0 a	9.5		18.8	52.2	8.8		6.1	15.7
10.0		30.3	58.0 -	9.8		33.2	34.6	8.3	17	2.8	9.0 8.5 G	10.2		8.6	6.2
9.2		46.3	22.6	10.0		37.2	41.9	10.0†		10.3	57.8	10.2		9.1	11.6
9.4	34	7.3	55.3 -	9.8		51.2	14.1	9.6		35.8	14.5	10.0		20.1	7.7
10.0		25.3	21.5	8.2		55.7	31.5 8.0 Ga	10.2		39.9	52.9	9.7		26.1	44.9
9.2		55.8	22.4	9.6	55	1.7	31.1 9.0 G-	8.6		46.8	27.8 -	10.2		49.1	6.2
8.5	35	1.8	19.2 b	10.0		30.5	49.5 a	9.8	18	9.5	2.0	9.5	29	5.6	41.3 -
9.2		21.3	32.7	9.2		41.7	38.2 8.5 a	10.0		21.9	3.4	9.6		32.9	4.7
9.6		34.3	9.0	9.8		45.7	4.4	8.4		22.8	16.0 9.0 Ga	10.3		43.4	50.9
9.2		34.8	11.1	9.8	56	19.2	27.1	9.5		39.8	16.3	8.9	30	0.9	32.9 9.0 =
8.8		52.3	18.8 a	9.9	57	6.2	14.3	8.5	19	11.8	23.4 a	10.1		31.9	50.3 -
9.7	36	30.6	30.2 a	10.0		49.2	36.6	9.8		17.8	22.8	10.1		47.4	15.7
7.6		41.3	38.8 GWa	10.0		55.7	9.6	8.5	20	47.8	24.0 9.5 a	10.2		31	20.9 6.3
9.8		45.8	37.4	10.0	58	11.3	57.5	9.6		48.8	58.4	10.0†		55.0	57.4
9.2		59.3	23.8 -	9.8		53.7	34.8 -	8.8	21	0.8	18.7 9.5	10.0		58.9	33.9 -
8.4	37	22.8	18.5 8.0 Ga	8.4	59	26.2	4.4	9.7		11.7	58.7	9.2		59.9	57.7 a
10.0	38	22.8	41.7	10.0	0	35.7	47.4 a	7.4		13.6	25.0 8.0 GWal	6.8		59.9	18.1 8.0 Gbl
7.6	39	28.3	46.4 8.0 GWal	9.4		37.7	54.8	8.3		33.1	14.4 8.5 Gal	9.8	32	27.9	26.9
9.0		46.8	20.1 -	8.2		50.7	37.2 8.0 GWa	9.2		44.1	4.9	10.3		35.8	57.1
10.0		57.8	23.8	8.2		51.7	49.2 8.2 Ga	9.6		49.1	7.2	8.7		42.9	10.3 9.5 a
9.7	40	19.8	23.8	9.6	2	0.1	50.4 9.5	9.5		53.1	9.1	10.2		57.4	0.3
9.7		20.8	4.0	10.1†		11.4	58.6	9.0		59.1	49.9 9.5 G=	9.6	33	29.7	59.9 -
9.7		22.3	41.2	8.2		25.6	26.2 8.5 Ga	10.2	22	13.2	46.3	10.2		47.9	34.5
8.5		45.8	28.4 8.5	9.6		45.6	52.8	8.8		14.6	29.3 -	10.3	34	12.6	57.6
10.0	41	26.3	7.4	9.6	3	50.7	56.6 a	9.4		15.1	3.7	10.1		26.4	8.9
10.0		26.8	35.2	9.8	4	58.4	2.4	7.6		55.1	2.8 7.5 Gal	10.0		56.4	23.1
4.5		28.3	37.4 4.0 GSπB	8.4	5	38.1	42.8 8.5 =	8.2		56.1	22.8 8.5 GWa	8.4	35	27.5	17.7 8.0
9.8	42	18.8	41.8 a	9.3	7	24.0	39.6 -	9.4		57.6	28.4	10.0		39.1	59.5
9.7		21.3	59.8	7.2		42.6	26.8 6.5 GSbl	10.2	23	2.6	19.0	9.8		55.0	17.9
7.7		38.3	35.0 Ga	9.6		53.6	22.6 -	8.2		4.1	43.2 =	8.6		57.5	49.7 9.5 -
10.0	43	6.8	27.5	10.2	8	25.3	1.6	9.4		6.1	59.7	10.3	36	12.0	51.7
9.0		50.8	28.4 9.0 Ga	9.8		58.8	36.1	10.2		32.6	9.3	7.6	37	5.5	24.9 7.2 GW1π
9.7	44	35.8	1.1	10.2	9	15.9	25.0	10.2	24	11.1	12.0	10.3		11.2	54.3
25pr.	+ 1	5.1	+ 5.0		+ 1	4.4	+ 4.3		+ 1	3.7	+ 3.6		+ 1	3.4	+ 8.3

601-660.				661-720.				721-780.				781-840.				
4 ^h .		-23°		4 ^h -5 ^h .		-23°		5 ^h .		-23°		5 ^h .		-23°		
mag.	m s	m s		mag.	m s	m s		mag.	m s	m s		mag.	m s	m s		
6 ^{mag}	38	2'0	51'9	10 ^{mag}	53	41'7	3'9	9 ^{mag}	3	45'7	58'7	9 ^{mag}	16	12'1	54'2	9'5
9		25'0	14'1	10		51'7	14'4	9		46'2	11'6	9		20'6	16'0	
9		25'5	23'7	10		55'2	54'1	8	4	10'7	16'8	9		26'1	57'0	9'5 G
9	39	22'5	11'8	10	54	13'9	5'0	9	5	32'7	2'8	8	8	33'6	59'4	9'0 G
8		25'5	55'5	10	55	1'5	57'1	10		42'2	15'0	8	4	45'6	33'7	a
8		26'0	26'7	10		12'9	39'2	10	9	59'5	30'1	10	17	8'1	15'7	
9		29'5	55'2	10		20'4	27'4	10	5	6'2	40'5	8		27'6	22'7	Gal
8		42'5	4'8	10		26'9	46'2	10		7'2	57'0	10		32'5	51'5	
10		51'0	1'7	9		29'9	55'1	8		7'2	22'4	8	8	49'6	11'1	9'0 al
9	40	7'0	18'2	10		52'9	21'0	8		39'2	43'8	9	2	51'6	44'3	9'5
10		18'5	36'0	10		57'9	25'6	9		40'2	16'1	10	18	22'1	35'2	
8		44'5	30'9	7	56	4'9	53'6	9		43'7	22'6	9	4	44'1	13'8	
9	41	2'0	22'7	10		10'9	50'0	9		44'7	32'0	10	10	45'4	59'8	
8		6'5	44'9	10		26'9	6'0	9		45'2	8'4	9	4	19'2	56'0	
7		17'0	0'4	9		32'9	44'3	8		54'2	33'8	9	1	22'1	10'7	9'0 a
10		36'5	2'1	9	57	2'9	54'8	9		59'7	10'8	8	2	20'4	17'0	8'5 Ga
9		42'0	27'7	9		5'9	45'6	10	6	3'7	48'0	9		42'1	5'0	
9		53'5	54'1	10		9'9	38'8	9		16'7	10'4	8		45'4	1'2	9'0
10		59'5	41'1	9		12'9	56'8	9		18'7	59'4	9	21	17'6	36'3	
10	42	7'5	11'9	8		14'0	57'9	10		49'5	15'8	9		21'6	34'5	
8		13'0	10'2	9		14'9	23'0	9		58'7	42'8	8		47'6	26'3	a
8		22'0	44'7	10		37'4	36'1	9		7'2	29'6	9	22	12'6	0'7	
7	43	30'5	55'1	8	58	4'4	26'0	10		24'0	59'9	9		36'1	36'4	
7		34'0	29'6	10		26'9	12'7	9		25'7	6'4	9		37'1	12'0	9'5
9		34'5	56'3	8		45'9	28'5	9		27'2	3'2	9		37'1	6'0	
8		55'0	16'7	8		51'4	52'7	9		45'7	23'3	9	24	10'5	43'0	
10	44	10'0	42'6	9	59	2'9	6'0	9	8	39'2	36'0	8	25	6'5	37'3	9'5 -
9		45'13	40'5	9		5'9	46'6	9		39'7	56'0	8		27'5	9'5	a
8		20'0	30'2	10		17'9	26'5	7		41'6	8'2	8		37'0	47'4	9'0
9	46	2'0	37'2	10		21'9	23'0	9		56'7	12'6	8		41'0	36'9	9'5
10		28'5	49'9	10		27'9	2'0	8	9	3'6	21'4	9	26	20'0	31'1	9'0 a
8		37'5	52'9	9		37'9	10'2	9		12'5	9'8	8		39'3	2'1	9'0 a
10		38'0	5'5	9		42'9	9'8	9		14'2	3'6	7		52'8	31'2	8'0 Ga
9		41'0	28'0	9		42'9	38'8	9		23'7	27'8	9		56'8	16'6	
8		45'0	3'9	8		50'9	37'1	9		28'7	49'4	9		59'6	55'9	
8		58'3	49'3	9	0	6'9	25'6	9		48'5	27'3	10	27	10'1	39'0	
9	47	58'7	51'0	8		15'4	49'1	10		55'7	9'4	10		17'1	59'0	
8	48	8'3	6'9	8		19'9	28'0	9	10	12'2	12'3	10		29'6	37'9	
10		22'2	18'9	9		32'9	3'9	9		16'2	36'2	10		30'1	37'5	
9		23'0	40'9	9		41'9	40'7	6		29'0	2'3	8		41'1	30'1	9'0
9		43'0	10'9	10		58'9	52'0	9		31'7	57'4	10		55'1	47'7	
8		50'0	42'3	10	1	9'9	9'1	8		44'0	12'8	10	28	4'6	12'1	
8	49	15'3	42'5	9		17'9	7'6	10		45'1	35'3	10		25'7	17'1	
8		16'2	11'1	9		26'9	31'1	9		45'2	53'3	10		33'6	19'9	
8		34'2	43'8	9		31'9	18'1	8		55'5	32'8	9		45'3	0'9	9'0 a
8		57'2	36'1	8		50'4	32'1	9		55'7	19'7	10		55'1	3'7	
10	50	1'7	18'9	10		57'0	52'2	9	11	0'2	46'8	8	29	19'1	36'7	8'5 a
10		12'1	24'1	9		59'2	11'0	9		7'9	12'0	10		22'1	58'1	
9		17'2	25'9	8	2	1'7	21'2	10		51'0	50'9	8		33'6	32'3	8'5 Ga
7		23'2	26'8	9		23'2	39'4	8		12'18	58'5	10		36'6	16'1	
8		53'7	15'3	8		25'2	26'2	9	9	28'9	18'8	10		41'9	41'9	
10	51	6'2	47'8	10		31'7	51'5	8		45'9	33'8	10	30	40'6	10'9	
8		8'2	50'1	9		46'7	4'0	8	13	12'9	21'2	9	31	10'6	40'9	
8		12'2	29'2	10	3	0'7	31'8	10		17'4	32'9	9		13'7	59'7	
9		27'2	50'6	10		10'7	4'0	9		18'9	48'8	10		21'1	39'8	
8		56'2	14'2	10		24'6	3'0	9		10'4	57'2	10		27'1	58'6	
9	52	3'2	17'7	9		25'2	8'0	10		42'6	50'6	9		31'1	21'2	
10		29'7	42'8	9		29'7	16'9	9		15'32	16'1	8		48'1	55'0	9'0 G-
10		40'2	52'1	9		32'7	31'9	9		46'4	18'5	10	32	10'6	35'3	
10		53'4	57'8	9		36'2	1'4	9		16'06	51'3	10		24'6	22'5	
25Pr.	+1	31	+27		+1	28	+22		+1	26	+18		+1	24	+12	

1896AnCap...3....1G

841-900.				901-960.				961-1020.				1021-1080.				
mag.	5h.	-23°		mag.	5h.	-23°		mag.	5h.	-23°		mag.	5h.-6h.	-23°		
	m	s			m	s			m	s			m	s		
9.2	32	40.6	22.0	9.1	41	34.1	33.5	10.2	48	20.9	22.1	9.9	56	1.5	44.3	
10.2		51.1	16.9	9.7		43.1	28.5	9.4		24.6	14.8	10.1†		9.5	57.3	
10.4	33	9.6	36.2	10.0		47.1	27.7	9.0		42.9	11.6	10.2		10.4	11.9	
9.3		28.6	52.8	8.7		49.1	3.1	10.4	49	5.9	14.3	10.6		36.5	12.8	
9.8		50.6	34.1	10.2		51.1	9.8	10.2		10.1	59.2	9.5		52.0	56.2	
9.2		53.6	29.6	10.0	42	7.1	18.1	9.5		11.9	45.8	9.5		58.5	35.9	
10.0		58.8	5.7	9.4		12.6	21.1	9.6		17.4	52.3	9.2	57	3.5	43.0	
9.6	34	3.6	3.8	9.2		22.6	56.4	10.4		21.9	34.4	10.0		11.5	22.9	
9.8		11.9	0.2	10.4		35.1	8.2	10.5		31.9	15.7	10.5		17.0	26.4	
10.3		19.1	27.9	9.0		45.1	51.4	8.8		44.9	58.6	9.8		22.5	20.4	
10.2		20.6	35.0	10.3		51.0	43.4	10.5		46.4	3.9	8.8		27.0	50.4	
9.7		25.6	39.8	9.7		56.1	21.1	10.6	50	2.7	39.7	9.4		28.5	47.2	
9.1		26.1	44.9	9.8		59.6	52.1	10.6		7.8	1.0	9.6		31.5	44.2	
9.0		31.8	56.9	10.1	43	2.1	42.1	10.1		30.9	36.5	10.5		35.0	25.7	
9.6		33.1	50.5	8.7		25.6	2.7	8.4		32.4	45.2	10.2		41.4	38.2	
9.8		43.6	30.0	10.0		39.1	2.9	10.2		32.4	16.0	8.2		48.5	13.1	
10.2		49.1	0.2	8.0		50.6	51.1	10.0		42.9	39.3	9.2	58	2.5	7.5	
8.0		55.1	47.4	9.6		55.1	3.9	8.8		46.2	27.8	10.6		15.7	54.8	
9.2	35	6.6	32.4	9.6		55.1	37.5	9.2	51	10.2	23.6	8.7		41.0	8.1	
8.6		15.6	6.3	9.2		56.1	32.1	10.4		12.7	10.8	9.2		54.0	50.5	
9.8		24.1	35.6	9.2	44	0.1	9.1	9.2		16.7	25.4	10.4		54.5	49.2	
9.6		39.1	39.1	9.2		1.9	36.2	7.9		21.7	14.1	10.5		57.5	32.3	
10.3	36	19.1	8.6	9.3		5.4	40.7	10.0		25.2	50.6	9.2	59	25.0	48.6	
10.2		38.9	1.2	9.6		7.4	24.3	10.4		28.7	55.1	10.6		55.0	10.8	
9.1		50.6	24.6	10.0		32.9	56.1	10.5		33.2	7.6	9.2		56.0	46.4	
10.0		50.8	15.4	6.1		40.6	0.7	10.0	52	3.2	26.2	9.9	0	9.5	29.9	
8.8		58.1	11.2	9.9		51.4	23.7	9.2		5.7	47.2	9.8		14.5	22.6	
10.0	37	3.1	21.0	10.2		59.9	18.6	9.6		26.2	29.4	10.5		19.0	57.6	
10.4		5.1	24.2	10.1	45	0.4	21.2	9.6		55.7	1.6	10.0		19.5	23.3	
8.8		31.6	53.3	10.1		9.4	53.9	9.9		59.2	55.6	9.9		21.0	23.4	
8.6		36.1	35.5	8.5		12.9	16.3	9.4		59.2	48.4	10.0		56.0	18.5	
10.3		41.1	27.7	10.2		23.9	40.7	9.2	53	7.7	13.6	10.6		56.0	1.9	
9.8	38	7.8	34.7	8.7		30.4	16.2	8.4		10.2	15.2	9.2	I	6.5	26.4	
9.8		11.1	53.8	8.9		34.9	25.1	9.4		10.2	11.1	9.4		7.5	55.9	
8.5		28.6	35.8	10.0		41.9	32.9	10.2		14.7	33.4	10.0		10.7	2.8	
8.9		41.6	35.1	9.8		47.4	21.7	10.5		21.2	3.8	10.0		12.0	20.0	
9.4		44.1	55.1	7.8		59.4	27.3	10.4		21.6	20.5	5.3		19.0	5.9	
8.9		45.6	25.2	9.2	46	4.9	12.6	10.5		27.7	45.3	10.1†		19.4	55.8	
10.2		48.1	31.4	10.3		8.9	10.3	9.8		36.2	37.8	8.4		27.5	31.6	
9.1		59.6	27.9	9.6		8.9	29.1	9.2		37.2	1.1	9.0		31.5	16.8	
9.8		59.6	12.3	9.6		9.4	38.6	10.0		53.2	55.0	8.0		39.0	4.9	
9.7	39	6.1	51.0	10.1		14.9	9.7	9.2	54	6.8	0.7	10.0		40.0	25.3	
8.9		6.1	50.0	10.0		25.4	18.3	9.6		8.8	44.5	10.0		41.5	4.8	
9.1		10.6	32.1	9.3		28.6	2.0	10.0		9.2	47.4	8.8		57.5	29.9	
8.8		15.1	40.1	8.9		47.4	54.8	9.6		13.2	29.4	9.9	2	4.5	47.4	
9.6		16.1	17.5	10.2		59.9	8.6	10.6		15.2	51.3	9.9		10.5	39.8	
9.2		35.6	49.7	9.7	47	18.6	34.0	10.6		16.2	52.0	10.5		22.0	41.2	
9.7		42.6	40.9	9.0		18.9	18.2	10.6		19.2	0.7	9.4		29.5	3.2	
9.2		45.1	22.7	9.6		20.9	21.2	10.4		20.7	51.8	9.1		45.5	36.2	
10.1		51.1	56.3	9.8		25.4	57.2	8.4		23.2	42.6	10.6	3	5.5	57.6	
8.7	40	5.6	40.9	9.0		28.4	26.6	10.0		27.3	59.8	10.2		10.5	9.8	
8.2		10.6	53.3	8.8		35.1	38.6	10.0		41.4	56.9	10.2		15.5	39.9	
9.8		15.1	49.1	10.1		38.2	12.2	10.3†		45.5	58.2	8.7		17.0	59.7	
10.1		26.6	48.7	10.0		54.9	14.7	10.2		50.2	19.2	10.6		25.0	9.1	
8.2		41.6	11.3	10.0	48	0.9	14.3	10.4		51.6	28.6	9.5		27.5	55.4	
9.4		42.1	31.3	10.0		6.2	55.0	9.2	55	12.2	21.7	9.8		27.5	5.9	
9.4		48.6	46.7	10.0		7.6	26.3	10.2		33.7	55.7	8.4		37.0	45.5	
8.0	41	2.6	41.6	9.4		10.2	30.7	10.2		49.7	20.3	9.9		38.5	29.0	
8.9		22.1	56.0	9.7		13.2	33.1	9.0		50.7	10.3	8.2		41.0	23.4	
8.7		29.6	30.5	9.7		14.2	9.3	9.1		57.7	54.0	9.8		50.0	20.9	
25pr.	+1	2.3	+0.8													
					+1	2.3	+0.5									
										+1	2.3	+0.3				
														+1	2.3	0.0

189625222

1081—1140.				1141—1200.				1201—1260.				1261—1320.			
		6h.	-23°			6h.	-23°			6h.	-23°			6h.	-23°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.6	4	5.5	7.2	8.9	10	48.5	17.5	9.8	16	40.0	6.6	9.8	21	47.3	15.5
8.6		15.0	32.7	8.4		48.5	7.0	9.0		47.0	20.9	10.0		50.3	52.7
9.5		15.0	50.2	10.2		50.0	7.6	9.0		47.0	52.4	9.5		55.3	18.1
9.6		28.5	17.3	10.2		53.0	51.3	9.8		50.5	10.7	9.8		57.8	49.3
10.6		32.0	42.4	9.0	11	18.0	43.9	10.2		55.0	23.9	9.8	22	8.3	9.5
10.5		32.5	36.1	10.2		33.0	23.9	8.8		56.5	14.1	9.5		8.8	19.3
9.8		46.0	39.9	9.1		41.0	3.6	10.2	17	1.0	51.7	8.8		11.8	25.4
10.6		48.9	58.7	9.2		43.0	51.7	9.4		10.0	36.6	9.8		23.3	18.8
10.6		50.8	52.8	9.8		46.0	6.9	10.2		10.0	48.9	9.1		31.8	43.3
8.9	5	1.5	43.3	9.6		48.0	24.9	8.2		13.0	31.8	8.4		32.8	42.9
9.2		3.5	45.9	9.8		57.0	51.4	10.2		16.0	32.6	9.8	23	5.8	32.2
10.2		5.5	22.8	9.3		58.5	20.8	10.2		16.0	47.8	9.6		16.8	27.5
8.7		19.0	10.8	8.7	12	3.0	54.5	8.8		33.2	39.3	9.4		23.8	31.1
10.0		19.5	16.3	10.0		12.0	49.2	8.8		41.8	58.7	10.0		23.8	18.9
9.2		21.0	43.0	9.2		20.0	54.2	10.1		42.3	25.9	10.2		46.3	40.0
8.6		21.0	10.3	8.3		22.0	28.9	9.8		42.3	24.2	9.3		49.8	9.4
10.3†		29.1	58.9	9.6		36.5	30.0	9.8		46.9	33.5	9.8		49.8	29.1
10.5		29.1	11.7	9.0		37.0	10.8	10.1	18	2.8	50.1	10.2		50.3	35.9
9.5		35.5	21.6	10.1		45.5	4.1	10.2		2.8	13.9	10.1		52.8	51.6
9.4		38.5	38.8	9.0		51.5	7.4	9.6		16.8	40.9	9.5		57.3	54.6
10.6		40.0	1.7	9.8		52.0	19.0	10.2		17.9	28.6	9.5	24	8.3	44.5
10.2		45.0	54.2	9.8	13	20.0	8.0	9.2		21.8	41.2	8.5		14.8	54.1
10.0		51.5	50.0	9.8		23.0	22.4	8.4		29.8	8.5	10.1		25.8	12.5
7.6	6	20.5	45.4	10.2		33.0	15.2	9.2		29.8	10.1	10.2		31.8	51.1
10.6		45.5	52.9	9.2		50.0	19.3	9.8		32.8	29.3	10.2		32.8	52.2
10.0		46.5	34.6	8.4		52.0	28.9	10.2		42.9	9.3	10.2		34.8	37.9
10.5		47.5	30.2	10.0		54.0	29.9	10.2		49.3	29.3	10.0		42.3	3.5
10.5		49.7	35.4	9.8		54.0	40.0	10.0†	19	10.0	58.8	10.0		50.3	17.1
10.6		52.7	44.7	9.6		56.0	49.5	8.9		11.8	19.2	9.8	25	1.8	5.7
10.0	7	4.3	59.6	10.2	14	9.0	7.0	9.6		15.8	48.6	10.2		5.3	14.5
8.9		19.2	26.4	9.6		19.0	28.9	10.2		23.8	50.4	10.0		5.8	14.7
9.2		22.6	6.1	9.2		24.0	46.2	10.1		27.6	58.6	10.2		22.7	42.8
10.6		29.2	13.5	10.2		37.5	5.0	9.2		27.8	42.4	10.0		26.8	24.9
9.4		29.9	33.3	10.2		40.0	22.9	9.8		38.8	9.1	10.1		31.8	48.1
8.8		32.2	33.0	9.2		40.5	42.4	10.0		43.8	13.3	10.1		39.8	31.9
8.8		37.2	19.5	10.1		42.0	23.1	10.2		45.8	21.5	9.2		51.8	17.0
9.4		42.2	13.7	8.6		52.0	43.4	9.3		46.8	23.6	10.2	26	0.6	59.3
8.8		56.9	57.7	8.0		52.5	3.2	9.2		56.3	12.0	9.2		1.1	47.3
10.5		57.2	31.7	9.2		54.5	2.5	10.1		57.8	44.6	10.1		2.1	0.9
9.6	8	3.0	2.2	10.2		58.5	42.9	9.6	20	14.8	29.2	9.4		5.6	11.7
9.4		21.0	0.2	9.6	15	0.0	29.7	9.5		16.9	16.5	10.2		11.0	0.7
9.6		25.0	28.9	9.2		6.0	39.6	10.0		17.8	9.9	9.8		13.1	17.3
10.1		25.6	45.6	10.1		8.0	40.0	9.0		25.8	22.0	9.2		14.6	31.5
8.4		30.0	18.9	9.8		22.0	32.2	9.2		27.8	17.2	9.8		21.6	22.9
7.5		35.6	49.8	8.1		23.5	34.8	9.8		27.8	41.0	9.8		24.1	22.9
9.4		38.0	36.7	9.5		25.0	50.7	9.1		33.3	50.5	9.0		27.6	36.7
10.2	9	6.5	38.1	10.0		34.0	59.9	9.3		43.8	3.1	10.1		34.6	25.3
8.2		24.0	41.7	10.2		37.5	47.1	9.8		56.3	9.2	9.5		35.1	54.3
9.5		34.0	11.6	9.2		42.0	31.4	8.8		59.8	48.1	10.2		38.6	3.3
10.2		38.0	39.6	10.2		43.0	9.2	10.0	21	25.3	12.4	9.2		39.6	8.5
9.8		42.0	45.1	9.8	16	1.0	31.3	9.2		28.3	49.8	9.3		39.6	15.3
9.2	10	0.0	4.3	10.1		6.0	48.8	10.1		28.3	14.5	4.9		40.1	19.7
8.9		14.5	23.9	10.1		14.0	13.6	10.2		29.7	57.9	10.1		57.6	22.7
9.8		17.0	42.4	10.2		16.0	42.4	9.5		36.8	16.4	9.0	27	2.6	19.5
9.8		19.0	12.7	9.8		23.5	38.6	10.2		36.8	22.0	9.6		4.6	31.7
10.2		40.6	59.1	10.2		24.0	39.9	9.8		37.8	25.6	9.6		5.1	14.1
9.8		42.0	46.8	9.1		28.0	37.9	9.3		37.8	10.7	9.6		12.6	34.1
8.8		46.0	18.8	10.0		33.0	30.1	9.8		40.5	56.4	9.3		13.6	28.1
9.6		48.0	27.2	8.9		37.0	5.6	9.8		40.8	4.7	9.8		15.6	20.3
9.2		48.0	40.9	9.2		39.0	30.2	10.2		44.7	11.9	9.2		21.6	5.7
25Pr.	+ 1	2.3	-0.3	+ 1	2.3	-0.5		+ 1	2.3	-0.7		+ 1	2.3	-0.9	

1321-1380.				1381-1440.				1441-1500.				1501-1560.			
mag.	6 ^{h.}	-23°		mag.	6 ^{h.}	-23°		mag.	6 ^{h.}	-23°		mag.	6 ^{h.}	-23°	
	m	s			m	s			m	s		m	s		
8.5	27	24.4	32.4 a	10.2	33	48.5	18.2	9.8	38	46.1	41.8	10.4	43	15.1	20.2
10.2		31.6	42.9	10.1		53.6	26.1	9.0		54.1	17.6	9.5		22.1	41.2
9.4		33.1	21.3	9.0	34	0.6	4.3 9.0 a	10.3		55.1	40.5	9.8		29.6	16.1
9.3		38.4	26.9	9.4		7.1	32.5	10.4		56.6	18.5	9.4		30.1	9.9
10.2		42.6	36.0	8.7		8.6	42.1 8.5 -	10.0		59.1	37.6	8.3		33.6	3.7 7.8 G
9.4		46.6	28.3	10.4		10.1	56.2	10.3	39	0.1	43.2	10.2		36.1	10.9
8.2	28	5.4	39.5 Ga	9.8		12.1	48.7	8.9		0.6	14.7 9.2 a	9.8		44.6	51.7
10.2		11.6	20.5	9.2		13.1	0.1	10.2		2.1	47.7	9.6		59.6	47.3
9.4		11.8	23.7	9.4		16.6	50.1	10.3		4.6	56.8	9.8	44	12.1	27.0
10.4		11.9	3.0	6.5		24.6	35.0 6.5 GSa	9.6		5.6	41.6	9.3		14.1	23.7
9.4		21.9	1.0 a	10.0		26.1	41.4	10.2		6.1	16.5	9.8		14.1	18.9
10.4		24.7	10.9	10.0		29.6	51.0	9.8		7.1	30.5	10.4		21.6	11.4
10.4		47.6	46.2	10.3		43.1	55.1	9.0		9.1	4.9 8.8 Ga	9.2		24.1	46.5
10.0		49.1	38.2	7.8		43.6	35.4 8.0 GWa	9.6		15.6	38.4	9.4		26.1	5.1
10.4		49.1	47.2	9.0		49.1	31.9 8.5 a	10.0		16.1	5.1	8.3		27.1	59.7 8.5 GWa
10.4	29	2.6	11.6	10.4		50.1	4.0	9.0		26.1	57.6 9.0	10.4		27.6	17.9
8.7		11.6	46.7 9.0 ≡	9.4		52.6	46.7	9.8		29.6	44.9	9.2		30.6	2.8
10.2		12.1	41.6	9.5		55.6	25.9	10.0		37.1	57.5 9.5	8.5		31.1	55.9 8.7 a
10.4		17.1	12.0	8.3		56.1	43.2 8.5	10.0		39.6	59.3	7.0		33.1	56.1 6.8 GSa
8.6		39.6	23.2 9.0 -	9.0		58.6	48.9	8.6		41.6	43.9 Ga	10.3		38.6	26.7
9.8	30	2.1	41.9	9.5	35	1.6	33.2	10.4		48.6	51.1	10.1		39.1	26.5
10.1		6.6	50.8	9.0		6.1	11.2 Ga	10.4		56.6	48.3	10.4		40.7	47.1
9.2		37.6	16.2	9.5		10.6	44.6 9.0	10.4		58.5	40.1	10.1		41.2	18.1
9.5		47.9	0.6	10.4		12.3	25.5	7.6	40	11.1	19.9 6.5 GSa	10.0	45	3.7	26.8
10.2		48.4	59.0	9.8		13.6	33.6	9.3		12.6	13.4	9.8		6.2	48.5
10.0		51.6	51.2	8.7		17.1	3.4	8.8		17.6	27.0 8.2 G	9.6		12.2	41.7
10.4	31	1.1	16.9	10.3		18.1	22.4	10.3		33.1	26.3	9.4		14.7	32.7
9.5		4.1	13.4	10.4		22.6	19.2	9.0		38.6	19.9 9.2 Ga	9.0		20.7	30.9 8.5 a
10.0		9.1	17.6	10.4		28.7	8.9 a	8.5		46.1	8.2	10.0		30.7	8.4
10.1		12.1	50.4	10.4		38.1	22.0	10.2		54.1	23.1	10.4		33.7	43.6
9.5		28.1	12.4	9.4		43.6	55.4	8.0	41	12.1	1.2 8.2 Gal	9.4		43.7	26.4
9.6		34.1	13.5	10.3		47.6	22.4	10.4		20.6	12.0	10.2		58.8	0.0
9.8		45.1	19.5	10.2		49.1	44.8	10.2		22.0	25.0	9.0	46	3.7	43.3
10.2		49.1	6.9	9.8	36	15.6	38.8	10.4		46.6	42.0	8.9		12.7	29.9 8.5 Ga
9.2	32	1.1	43.3	10.1		22.1	55.7	10.4		48.1	22.3	9.5		16.2	33.7
9.4		1.6	12.5 a	10.2		38.6	42.8	9.8	42	1.6	44.5	8.9		19.2	25.0
9.2		7.6	15.3 a	10.1		48.1	27.1	10.0		2.6	13.3	10.2		22.2	41.1
9.8		8.1	34.0	9.4		54.6	6.4	10.4		5.6	14.7	7.5		28.7	39.3 8.0 Ga
10.4		8.5	42.7	8.8	37	13.1	51.2 =	10.4		7.6	52.3	9.8		31.2	17.5
10.1		20.1	46.6	7.6		13.6	6.8 GSa	10.2		10.1	52.6	9.8		31.7	28.1
9.8		24.5	57.6	8.9		18.1	13.8 GWa	9.6		10.6	2.1	9.5		37.7	50.3 9.0
9.2		27.1	2.0	9.8		24.1	40.6	10.2		11.6	53.2	9.4		41.2	41.5
10.4		30.6	28.6	10.3		25.1	33.0	8.6		23.1	43.3 9.5 =	10.3		47.2	12.0
10.4		33.6	50.9	10.4		37.6	56.2	9.2		24.4	56.2 8.7 G-	9.6		48.7	49.1
10.4		35.5	26.1	9.6		39.6	15.3	9.8		26.1	21.9	10.3		48.7	29.9
10.0		54.6	2.3	10.2		41.6	3.1	10.4		30.6	35.3	10.1		52.2	20.7
9.0		56.6	32.7 9.0 a	9.3		43.1	43.4 =	9.0		42.1	5.8	10.3		54.7	38.9
10.4	33	0.5	25.6	10.1		46.1	36.4	10.4		44.6	0.9	9.8	47	6.0	2.0
10.4		2.1	45.2	10.2		46.1	14.0	9.3		49.1	20.7 9.0	9.4		7.7	19.3
10.3		2.6	32.1	10.2		46.3	7.7	9.4		49.6	54.9	10.0		8.7	47.6
9.3		6.6	13.3 a	8.8		47.6	16.7 a	10.4		51.6	3.5	10.2		10.6	29.9
10.4		7.6	15.8	9.8		50.1	36.6	10.1		53.1	22.5	10.4		13.6	41.5
7.7		10.6	28.3 7.0 GSa	10.0		55.6	36.6	10.1		57.1	4.7	8.9		19.1	58.7
10.4		11.1	43.6	10.4		55.6	17.4	9.4		59.1	8.3	8.8		21.7	27.8 9.0 a
9.5		12.1	25.7 9.5	10.2	38	6.1	2.7	10.4		59.1	31.3	10.4		22.2	39.7
9.6		12.1	8.0	10.4		23.3	43.0	10.4	43	0.1	31.7	9.8		26.7	13.3
10.2		19.1	58.8	10.3		29.6	47.1	10.0		7.1	36.9	9.8		28.7	48.7
10.0		23.1	28.2	10.0		32.1	7.2	10.4		9.1	41.0	9.3		33.5	5.9
10.3		42.5	57.0	8.8		32.6	39.2 a	9.8		12.1	22.9	10.4		41.1	25.9
10.4		44.5	26.3	10.2		36.3	58.3	9.3		13.1	39.7	9.8		42.0	36.6
25pr.	+ 1	2.4	- 1.1	+ 1	2.5	- 1.3		+ 1	2.5	- 1.5		+ 1	2.6	- 1.7	

1561-1620.				1621-1680.				1681-1740.				1741-1800.				
mag.		6h. -23°		mag.		6h. -23°		mag.		6h. -23°		mag.		6h. -23°		
m	s	'	°	m	s	'	°	m	s	'	°	m	s	'	°	
9.0	47	43.7	43.9	9.0 a	10.0	51	0.2	57.9	10.0	54	13.2	47.2	9.8	57	34.7	16.5
9.0		46.4	51.7	9.3	9.3	8.9	48.2	9.4	9.4	16.2	14.9	9.8	9.8	35.3	56.4	
9.0		51.0	48.6	9.0	9.4	18.4	22.4	10.4	10.4	16.2	19.3	9.3	9.3	37.2	29.0	G
10.2		51.3	8.3	10.2	10.2	18.9	20.8	9.2	9.2	18.2	24.0	9.8	9.8	37.2	14.3	
10.0		52.0	24.9	9.4	9.4	19.4	7.5	10.4	10.4	22.7	10.7	9.9	9.9	45.7	33.3	
9.2		52.7	33.6	10.4	10.4	23.4	11.5	9.8	9.8	26.2	47.8	9.8	9.8	48.2	54.0	
9.4		53.0	9.2	10.2	10.2	30.9	48.7	10.2	10.2	33.7	24.7	4.0	4.0	48.2	39.2	3.0 GSπβ
10.4		55.2	56.9	9.6	9.6	33.4	48.1	9.4	9.4	33.7	16.0	9.3	9.3	49.7	0.2	
10.2	48	1.2	18.8	9.5	9.5	35.9	7.9	9.3	9.3	37.2	11.8	9.5	9.5	50.2	42.1	
10.4		3.2	12.8	10.3	10.3	36.9	34.1	9.0	9.0	44.2	47.3	10.4	10.4	55.7	33.3	
7.8		3.7	57.9	a	9.3	50.9	36.4	10.3	10.3	46.7	10.8	10.4	58	1.9	48.0	
8.8		4.7	37.4		8.4	51.4	35.2	8.5	8.5	51.7	42.8	9.9	9.9	2.7	34.8	
9.5		5.2	17.6		9.3	51.4	31.5	9.8	9.8	55.2	31.9	10.4	10.4	7.4	54.3	
9.4		7.0	33.9		9.4	51.9	15.9	10.2	10.2	56.2	19.0	8.9	8.9	9.7	28.3	8.5 Ga
9.4		7.4	27.5		9.2	52.9	24.3	10.4	10.4	59.7	17.8	9.4	9.4	14.3	23.2	a
8.5		16.2	57.5	b	8.9	52	6.7	20.1	9.0	55	6.7	8.5	9.2	14.8	15.7	
10.4		22.4	29.4		9.6	13.7	50.7	9.3	9.3	12.7	7.0	9.4	9.4	14.8	24.3	
10.0		26.9	50.8		9.2	16.2	50.1	10.4	10.4	12.9	11.5	10.4	10.4	17.3	59.7	
10.4		27.1	27.6		9.3	17.0	2.6	10.4	10.4	15.2	35.0	8.9	8.9	28.8	39.2	
9.0		31.7	44.4		9.4	25.2	48.7	10.2	10.2	18.2	10.1	10.0	10.0	29.0	59.2	
9.4		31.8	21.9		8.3	28.7	17.5	8.6	8.6	22.7	40.9	9.2	9.2	31.8	59.4	
9.9		31.9	26.6		9.2	30.2	28.8	9.3	9.3	26.2	13.3	10.2	10.2	33.8	55.5	
9.4		35.2	40.3		10.4	31.7	9.2	10.4	10.4	30.9	53.3	10.0	10.0	34.8	54.6	
9.4		36.2	21.0		10.4	32.2	34.3	9.7	9.7	32.2	57.5	10.4	10.4	36.3	21.9	
9.8		40.2	56.4		10.4	33.2	7.7	9.9	9.9	33.2	12.1	10.4	10.4	37.3	38.4	
10.4		41.2	57.5		9.4	33.2	19.0	9.2	9.2	33.7	46.0	10.4	10.4	39.3	39.6	
9.4		46.2	33.1		10.2	37.2	53.3	8.5	8.5	37.2	25.2	10.4	10.4	41.9	56.1	
7.4	49	1.2	46.2	GSb=1	9.9	38.2	56.4	8.8	8.8	39.7	32.3	10.3	10.3	43.8	14.0	
10.4		3.4	0.9		9.4	40.7	28.3	10.3	10.3	41.7	4.6	9.5	9.5	51.8	48.0	
9.4		10.2	27.8		10.4	43.2	49.0	10.4	10.4	42.2	59.1	9.4	9.4	57.1	2.3	9.5 a
9.7		12.2	38.8		9.1	45.2	43.1	10.4	10.4	50.2	44.3	9.0	9.0	58.8	3.1	8.5 a
10.3		16.2	10.9		9.4	52.7	50.0	9.1	9.1	51.7	19.0	10.4	10.4	59	1.8	46.1
9.8		18.2	22.0		9.4	54.5	57.8	10.4	10.4	56	4.7	9.4	9.4	8.8	23.2	
9.8		20.2	32.0		9.8	55.7	24.6	9.5	9.5	5.7	3.0	10.4	10.4	19.8	8.7	
9.8		21.2	54.8		9.5	53	1.7	53.9	10.2	5.9	30.0	9.6	9.6	22.8	21.5	
9.4		29.7	47.4		9.8	7.7	14.3	9.0	9.0	7.4	1.0	10.4	10.4	23.8	59.2	
9.7		30.4	2.7	a	9.4	10.7	36.6	10.4	10.4	13.2	16.2	10.3	10.3	23.8	31.2	
9.4		33.2	25.7		10.4	12.7	29.8	10.0	10.0	15.7	2.2	9.4	9.4	25.3	32.9	
10.3		34.7	21.6		10.3	19.2	55.7	8.5	8.5	25.7	19.3	9.4	9.4	25.8	31.9	
10.4		41.9	14.1		9.4	20.2	56.0	10.4	10.4	25.9	42.1	10.2	10.2	29.8	43.7	
9.0		42.9	27.5		9.0	21.7	8.2	8.6	8.6	28.7	21.3	10.4	10.4	31.3	34.9	
10.4		43.4	32.9		9.8	21.7	10.7	10.3	10.3	28.7	21.9	9.7	9.7	32.3	35.9	
10.4		46.9	23.0		7.9	22.7	42.8	10.3	10.3	28.9	8.8	10.4	10.4	35.8	30.0	
10.0		52.5	56.7		9.2	27.2	6.8	9.1	9.1	32.7	14.7	9.6	9.6	43.3	15.0	
9.5		59.9	55.0		10.2	27.7	13.7	8.1	8.1	33.2	16.9	9.8	9.8	43.3	18.0	
8.8	50	4.9	22.7		10.4	35.2	24.8	8.6	8.6	38.7	7.9	10.4	10.4	47.3	57.7	
10.4		10.9	30.5		9.7	37.7	35.1	8.9	8.9	45.7	24.1	9.8	9.8	49.3	21.3	
10.4		15.4	7.7		9.2	43.2	50.1	10.4	10.4	46.2	44.2	9.5	9.5	50.3	16.1	
10.4		20.4	20.1		9.8	47.2	21.0	10.4	10.4	50.7	5.5	9.8	9.8	50.8	22.2	
10.4		23.9	1.5		9.7	48.0	57.0	10.4	10.4	51.2	31.6	9.7	9.7	51.3	45.0	
9.8		28.9	34.8		10.4	49.2	0.1	8.5	8.5	54.7	19.2	9.9	9.9	57.3	39.9	
9.3		36.4	48.4		9.2	52.2	38.9	9.4	9.4	10.7	54.7	10.0	10.0	3.8	26.2	
10.3		40.9	4.1		9.0	1.2	18.5	10.3	10.3	11.7	23.9	10.2	10.2	12.6	36.2	
10.2		42.4	7.3		10.3	2.7	41.9	10.4	10.4	14.7	13.3	10.0	10.0	12.8	50.3	
9.3		45.9	52.0		9.4	4.7	28.2	8.9	8.9	17.7	7.5	9.0	9.0	16.6	1.6	9.0 a
10.0		46.4	27.1		9.1	6.2	49.7	10.4	10.4	23.2	28.3	9.7	9.7	17.8	40.2	
9.4		54.9	45.3	10.0	9.2	6.2	46.6	10.4	10.4	25.7	47.5	10.4	10.4	19.8	28.8	
9.9		55.4	36.9		10.4	8.2	50.5	10.0	10.0	27.2	33.0	9.8	9.8	23.8	26.7	
9.4		58.9	50.7		9.8	11.7	33.3	10.4	10.4	28.2	15.9	10.2	10.2	26.8	11.0	
10.4		59.8	32.7		9.4	12.7	0.4	10.2	10.2	33.2	43.4	10.4	10.4	42.8	56.0	
25pr.	+ 1	2.6	- 1.8		+ 1	2.7	- 1.9		+ 1	2.7	- 2.0		+ 1	2.8	- 2.1	

1896AnCap...3....1G

1801-1860.			1861-1920.			1921-1980.			1981-2040.		
mag.	7h.	-23°	mag.	7h.	-23°	mag.	7h.	-23°	mag.	7h.	-23°
m s	m s		m s	m s		m s	m s		m s	m s	
10.4	46.8	48.7	10.3	3 43.8	47.0	9.8	6 40.0	30.3	10.3	9 37.7	41.6
10.2	48.8	33.3	9.4	46.3	9.4	10.3	41.0	40.6	10.2	42.5	32.2
10.4	51.8	49.5	10.4	46.3	14.5	9.8	41.0	16.2	10.4	42.5	5.2
8.5	53.3	10.2	9.4	47.8	42.9	10.0	41.5	32.5	9.3	50.7	59.3
9.4	56.8	9.5	9.4	56.3	14.0	10.4	43.9	40.6	10.4	51.7	58.6
10.4	I 2.3	52.9	9.9	4 1.8	35.5	9.4	44.9	23.6	9.4	54.7	18.7
8.4	8.3	14.1	10.2	3.3	12.6	9.5	46.4	7.0	9.0	5.2	36.9
10.0	10.3	6.8	10.0	5.8	3.6	10.0	49.4	13.5	10.3	17.7	12.4
9.4	16.3	33.8	9.4	9.8	6.7	9.5	49.4	9.2	8.6	18.7	29.3
10.4	16.5	20.0	9.4	9.8	40.0	9.7	50.4	4.6	9.4	20.2	16.3
10.3	17.5	52.5	10.0	11.3	28.4	9.0	56.9	9.8	10.3	20.7	49.3
10.2	17.8	40.3	9.8	11.3	54.1	8.8	59.9	36.6	10.3	21.7	37.4
10.2	21.8	12.3	10.0	12.3	10.0	9.8	7 1.4	7.8	10.3	22.7	21.3
10.2	24.3	41.3	9.8	15.8	55.2	10.4	9.9	18.1	10.0	23.7	21.2
10.3	25.5	5.1	9.0	18.8	59.8	9.2	10.9	30.2	10.4	25.2	32.8
10.4	28.8	15.6	10.4	18.8	41.0	10.4	13.4	41.6	9.4	30.7	50.3
9.2	33.1	1.7	9.5	22.3	32.9	9.1	16.9	39.1	10.4	30.7	54.2
9.1	36.3	27.3	10.4	22.8	48.2	10.4	17.9	5.9	10.4	32.7	24.6
9.9	39.8	51.6	10.4	23.8	0.1	9.8	17.9	5.2	7.0	32.7	31.3
10.4	52.1	2.5	10.0	28.3	55.2	10.2	22.4	30.5	10.0	32.9	42.2
10.0	55.3	35.3	8.2	30.8	44.4	10.4	26.0	36.9	10.4	36.7	52.2
10.2	56.3	14.2	9.2	33.3	31.2	10.3	27.4	7.7	9.8	38.9	22.8
10.4	56.8	3.7	10.4	35.5	48.2	9.6	30.6	48.0	10.2	43.2	12.6
9.9	59.8	15.5	9.0	36.3	0.7	10.4	37.4	29.2	10.2	46.7	43.1
9.5	59.8	19.5	10.3	38.5	39.2	10.4	45.8	43.1	9.2	50.7	55.4
10.3	2 5.8	39.0	9.6	42.5	49.3	9.9	46.9	38.6	9.8	52.2	13.9
6.4	8.8	38.7	10.0	56.5	25.8	10.2	8 1.5	57.9	9.6	11 2.3	58.4
10.3	10.3	58.4	10.2	5 1.0	18.2	10.0	4.4	38.2	9.3	3.2	50.9
10.4	11.8	41.1	9.8	2.5	20.4	10.0	4.4	3.2	10.3	7.7	7.4
9.1	15.8	46.4	10.2	12.0	16.2	9.0	4.9	58.9	9.0	16.7	48.4
9.7	18.8	13.0	9.7	19.0	46.4	9.4	5.9	48.8	10.3	20.7	7.6
9.9	22.8	40.4	10.2	27.5	51.9	10.2	6.9	1.0	7.6	20.7	5.7
10.0	23.3	14.0	9.0	27.7	2.9	10.4	10.0	0.8	7.8	21.2	36.4
9.6	24.8	38.9	10.2	31.2	2.4	10.4	12.6	20.2	9.4	21.7	47.9
9.8	40.8	20.1	10.2	31.5	37.2	9.7	20.9	43.7	7.5	21.7	5.5
10.4	43.3	12.6	10.4	33.5	50.5	10.4	22.4	24.9	9.2	25.7	45.9
10.4	44.5	37.5	8.9	43.0	53.5	10.0	24.0	12.4	9.9	29.7	11.2
10.4	45.8	31.4	9.4	45.5	11.2	10.4	29.7	47.7	9.4	30.7	20.1
10.0	46.3	29.5	9.4	46.5	47.6	10.4	34.2	17.2	9.3	35.7	52.4
10.2	47.8	11.7	9.6	52.5	51.1	9.5	40.0	12.2	9.4	41.7	5.8
10.4	49.0	56.8	10.4	54.0	15.1	10.3	41.0	13.4	9.7	54.2	44.3
9.7	51.3	8.3	9.4	56.5	16.7	9.5	42.5	21.5	9.3	54.7	7.6
9.7	55.8	41.7	9.8	57.0	26.6	10.2	43.0	32.5	9.1	55.2	37.8
9.5	58.3	23.2	10.0	58.5	22.9	10.3	44.7	53.6	10.0	56.2	56.1
8.6	0.8	14.1	8.7	58.5	20.4	10.0	47.7	13.5	10.1	57.2	14.8
10.2	9.3	57.0	9.4	58.5	29.5	8.3	47.7	28.2	10.0	58.7	44.9
9.9	9.8	53.2	10.3	6 1.5	27.5	10.4	49.2	31.0	10.4	12 1.1	52.6
9.4	10.3	38.6	9.8	3.0	40.9	10.1	49.7	26.5	9.4	1.7	39.5
8.4	13.8	52.8	10.2	8.5	11.6	10.3	50.7	37.2	10.1	10.2	8.2
9.4	16.3	42.0	10.0	8.5	5.4	10.4	54.7	46.3	10.4	11.7	31.7
10.4	17.8	54.2	9.8	9.5	0.8	10.2	9 6.7	43.6	9.7	13.4	0.6
9.4	20.8	12.8	9.3	16.5	27.5	9.6	8.2	42.9	9.6	21.7	36.1
10.4	23.5	57.4	8.6	20.0	45.8	10.2	8.2	25.7	9.4	21.7	9.6
9.8	29.3	17.6	9.3	20.5	55.8	9.4	10.7	14.7	10.0	22.1	5.1
9.3	29.3	31.9	9.8	23.5	19.2	10.1	12.7	44.6	10.4	24.7	39.7
8.2	30.8	34.6	9.7	25.0	11.5	10.3	20.7	3.0	9.9	27.2	13.2
9.2	32.3	37.9	9.2	30.8	0.4	8.7	26.7	43.9	9.8	41.9	59.1
7.4	36.3	50.6	10.2	34.5	25.4	7.6	26.7	16.4	10.3	48.7	50.5
9.4	38.8	44.1	9.4	37.0	15.1	9.6	31.0	2.2	9.7	51.7	12.2
9.3	40.8	9.8	9.4	38.0	37.3	10.1	37.2	9.4	10.3	57.7	56.0
25pr.	+1 2.8	-2.2	+1 2.9	-2.3		+1 3.0	-2.4		+1 3.0	-2.5	

2041—2100.			2101—2160.			2161—2220.			2221—2280.		
mag.	7h.	-23°	mag.	7h.	-23°	mag.	7h.	-23°	mag.	7h.	-23°
13	07	40.3	8.7	15	56.6 22.8 8.5	8.6	18	40.1 41.5 9.0 a	10.2	21	15.3 14.3
9.7	2.2	24.0	9.4	56.6	32.3	10.3	40.6	2.8	10.0	19.8	28.8
9.9	4.7	53.7	10.2	16	0.6 9.8	10.4	40.6	53.4	10.0	21.8	18.0
10.1	8.7	49.2	9.4	1.1	13.2	10.2	41.6	18.0	8.9	22.8	16.9
10.1	9.2	41.0	10.3	2.6	16.3	10.2	54.6	9.7	9.4	23.8	28.4
9.4	10.2	55.7	10.3	5.6	29.6	9.8	56.6	32.3	7.4	24.8	27.7 7.0 G8a
10.0	10.4	0.6	9.5	20.6	12.2	8.6	57.1	6.9 9.5 a	9.2	25.3	27.1
8.6	11.2	19.8 8.5	9.4	20.6	34.1	9.6	57.6	10.3	10.3	28.3	13.1
9.4	12.7	32.3	9.5	26.1	33.9	9.6	58.1	37.3	9.4	30.8	37.2
9.6	27.7	33.0	8.6	27.5	59.9 8.0 G=	9.4	19	0.6 40.0	10.1	31.8	58.5
10.0	30.7	50.9	9.6	31.6	58.8	9.4	6.1	29.8	9.9	32.3	25.1
10.2	30.7	55.5	9.7	35.6	19.2	10.2	7.6	33.5	10.3	33.7	58.1
10.4	32.7	15.5	8.2	37.6	33.4 9.5 -	10.3	9.6	26.1	10.1	33.8	22.1
8.8	37.4	59.0 a	8.8	38.6	6.3	9.9	10.9	58.2	10.3	40.8	22.0
10.3	38.7	58.7	8.6	42.6	18.0 9.0 a	9.2	34.1	30.7 9.5 Ga	10.3	42.3	36.5
10.2	41.2	44.2	8.8	44.6	32.2	10.0	36.1	30.5	10.4	46.3	25.1
10.4	41.7	42.8	10.4	45.6	7.0	10.0	38.6	36.9	10.4	50.8	28.1
10.4	42.2	57.6	10.4	48.6	53.6	9.9	39.6	38.3	9.6	54.3	37.3
8.1	42.7	32.8 8.5 ≡	10.2	49.6	6.3	10.2	41.6	55.2	9.8	54.8	39.3
10.4	48.7	19.9	10.0	50.6	50.5	8.7	44.6	35.4 9.5 a	9.3	55.8	55.9
10.3	51.7	36.2	10.3	54.1	31.6	9.5	44.6	50.9	9.9	59.8	44.3
10.0	0.7	55.6	8.6	55.6	48.2 9.5 -	9.2	46.6	37.1 a	9.0	22	1.8 40.7 9.5
9.9	2.2	11.8	8.6	56.6	57.8 9.2 a	9.2	48.6	47.8	9.4	2.8	13.8 G
9.2	8.2	31.1	10.4	58.6	25.4	9.4	50.6	36.5	9.4	4.8	40.3
10.0	9.2	43.4	10.4	17	1.6 55.9	10.4	57.1	34.3	10.0	6.7	40.9
10.2	10.4	56.7	10.3	5.1	31.4	10.4	57.1	34.0	8.6	8.8	41.3 9.0 -
9.9	12.2	24.7	9.4	5.6	30.3	9.4	0.6	37.2	10.0	9.3	31.8
10.2	15.7	49.4	9.8	8.6	21.0	9.9	0.6	18.1	10.3	9.7	43.1
9.8	18.7	33.2	10.3	12.8	58.8	10.2	1.6	45.0	9.7	9.8	21.5
8.2	23.7	47.7 9.5	9.8	14.1	27.9	10.0	4.1	5.5	10.1	10.3	45.3
9.6	24.7	39.1	10.2	15.6	36.9	9.9	10.6	46.3	9.6	10.3	44.4
10.4	30.7	14.7	10.0	16.6	28.4	10.3	11.6	17.9	10.0	10.3	42.0
9.6	31.2	55.0	10.1	16.6	29.3	10.3	15.1	29.1	10.1	10.8	41.8
10.4	31.2	48.8	10.3	18.1	4.7	10.3	15.6	14.8	10.4	11.3	26.4
8.4	37.7	50.3 9.0	10.4	23.6	33.0	10.0	16.1	30.0	9.0	13.3	32.0 9.5 a
9.8	39.2	31.4	9.6	24.6	14.8	10.1	20.1	3.6	9.7	14.8	17.1
8.9	39.2	12.1	10.3	26.1	30.3	10.4	20.6	21.4	9.4	16.3	9.1
10.0	39.7	52.9	10.0	26.6	14.0	10.3	24.6	14.1	9.2	17.3	53.7
10.0	40.2	37.3	9.0	28.1	37.5	10.2	24.6	24.0	9.9	19.8	41.1
10.4	44.2	37.0	8.8	29.6	17.6	9.9	29.6	36.0	10.1	20.3	47.1
9.2	46.7	17.8	8.8	35.6	21.4	9.2	35.8	26.1 9.5 a	10.4	21.8	40.1
10.4	47.7	35.9	10.4	39.1	21.4	9.2	40.8	21.7 10.0	9.4	31.3	32.8
10.3	50.7	36.0	9.4	40.6	23.5	10.0	41.3	8.2	8.7	31.8	45.2
8.6	51.7	51.3 9.2 -	9.3	44.6	17.3	10.2	42.8	6.0	10.4	36.8	25.8
10.0	55.1	55.8	10.0	47.6	9.3	10.4	48.8	23.9	8.6	38.8	14.1 8.0 Ga
9.7	55.7	33.7	10.0	50.1	40.4	9.1	49.8	54.1	10.0	44.7	40.5
9.4	15	1.2 5.2	9.5	54.6	26.8	9.6	50.8	29.8	10.3	44.8	14.1
9.3	1.2	32.2	9.3	54.6	46.5 9.5	10.4	50.8	56.1	10.0	45.8	21.4
10.4	4.7	14.0	10.4	55.3	57.6	9.4	54.8	6.8	10.4	48.8	42.2
10.0	5.5	37.9	8.8	18	0.6 55.4 9.0 a	10.4	54.8	42.1	9.2	49.3	15.9 9.0 Ga
9.8	8.7	52.4	10.1	4.1	22.2	9.8	59.8	19.3	9.2	52.2	2.0
10.2	10.7	43.4	10.3	5.6	1.3	10.2	21	1.8 29.9	9.4	54.8	53.0 9.5
9.8	20.6	31.3	8.6	11.6	41.3 9.0 a	10.0	4.8	38.4	10.2	58.8	55.5
10.1	21.6	6.4	9.8	17.6	15.4	9.4	4.8	44.7	9.0	59.3	20.2 9.5
10.3	31.6	52.9	9.8	21.6	25.5	10.4	5.8	8.0	9.4	23	1.8 8.8
10.4	33.6	42.5	9.6	30.6	8.7	10.3	5.8	57.7	9.8	1.8	44.1
10.0	34.6	6.3	9.0	31.6	6.4	9.4	8.3	32.8 9.5	9.8	2.3	42.7
9.7	47.1	21.0	9.8	31.6	24.0	9.4	10.8	29.6 9.0 Ga	8.3	4.8	55.0 9.0 -
9.5	51.3	1.6	10.3	32.6	32.5	10.0	11.8	45.5	9.0	4.8	52.1 9.0
9.2	51.6	32.2	9.8	37.1	46.4	10.3	13.8	17.7	9.6	11.8	10.0
25pr.	+ 1	3.1 -2.7									
			+ 1	3.1	-2.8						
						+ 1	3.2	-2.9			
									+ 1	3.2	-2.9

1896AnCap...3...1G

2281-2340.				2341-2400.				2401-2460.				2461-2520.			
mag.		7h. -23°		mag.		7h. -23°		mag.		7h. -23°		mag.		7h. -23°	
m	s	'	8°0 Ga	m	s	'	9°0 a	m	s	'	9°0 -	m	s	'	9°0
8.9	23	11.8	5.2	10.0	25	44.7	34.2	10.4	28	22.2	55.5	8.7	30	41.3	31.3
10.4		13.3	36.5	10.4		45.2	20.6	8.3		32.1	37.5	10.2		41.3	26.1
10.4		14.3	30.6	9.5		45.2	56.5	10.5		35.4	4.3	10.1		41.8	14.4
10.3		14.8	43.8	9.5		45.7	26.6	10.0		37.4	51.0	10.1		42.3	22.9
10.3		16.8	3.9	10.3		46.7	32.0	10.5		41.4	18.7	8.9		45.5	0.2
10.0		21.8	52.6	10.0		48.7	15.3	7.6		43.9	25.9	10.0		46.3	38.9
10.1		22.3	55.3	10.3		53.2	11.5	8.4		44.4	16.1	9.5		51.3	7.4
9.2		24.3	28.7	10.4		58.6	9.2	10.4		50.4	52.4	9.4		53.8	12.2
9.2		25.8	27.5	9.0		58.7	34.3	10.0		50.9	5.1	8.5		54.8	37.1
10.0		27.8	41.9	9.9		58.7	18.8	9.4		50.9	31.3	9.9		56.8	33.0
9.8		31.3	45.0	10.1		59.7	41.9	9.4		51.9	29.8	8.6		58.3	33.7
10.4		35.8	4.3	10.4	26	0.7	57.3	10.3		56.9	50.9	9.2		58.8	34.0
9.8		36.8	53.3	10.4		1.7	2.3	9.6	29	0.4	21.7	10.5		59.3	57.4
9.8		40.8	53.2	9.8		4.2	19.9	6.3		1.9	12.3	10.1	31	0.8	30.5
9.3		42.3	12.4	9.2		4.7	9.9	10.0		5.3	20.5	10.1		1.8	17.2
9.6		44.8	22.4	9.7		10.7	52.0	9.2		6.3	40.4	9.2		4.8	50.1
9.4		44.8	34.9	10.3		11.7	26.0	10.4		7.3	26.2	10.1		12.8	25.1
10.4		51.8	29.2	9.2		12.7	6.1	9.8		11.3	11.2	9.8		14.3	16.2
10.1		53.8	12.0	10.3		14.7	55.0	10.4		14.3	28.6	8.9		17.6	1.8
9.8	24	4.8	44.6	10.4		16.7	32.3	9.9		15.8	24.3	7.9		28.8	49.8
10.1		4.8	43.0	10.4		18.2	4.0	10.2		17.3	47.3	10.0		42.3	59.2
8.6		5.8	16.0	9.8		25.7	41.2	8.9		19.3	15.6	8.7		42.8	44.0
10.4		7.3	12.9	10.0		26.7	55.6	9.4		20.8	37.4	8.8		47.3	24.0
8.6		7.8	40.0	10.4		30.7	26.0	9.4		23.8	39.0	10.2		49.3	9.3
9.8		9.8	18.7	10.1		30.7	21.4	9.5		25.8	51.2	9.4		58.3	7.7
8.6		10.8	40.4	9.4		34.7	1.4	9.8		32.8	23.3	10.3		58.5	2.4
9.4		13.8	54.0	10.4		39.7	30.9	9.2		42.3	56.9	7.4	32	0.3	29.7
9.8		15.8	33.0	10.1		40.7	12.8	9.6		43.3	2.4	8.8		3.3	7.4
9.8		17.3	51.0	9.9		44.6	43.2	9.6		43.8	47.9	9.6		5.3	29.4
9.4		20.8	26.4	8.9		46.7	52.6	9.4		46.3	30.7	9.2		8.3	44.9
10.1		21.8	40.0	10.0		48.2	12.2	9.9		48.3	6.7	10.4		9.3	9.1
8.9		30.8	26.0	10.2		50.7	33.5	10.1		50.8	8.3	9.4		14.3	19.4
8.9		31.8	44.7	10.3		51.7	27.1	9.6		52.3	24.9	10.5		20.8	14.3
9.7		36.3	26.1	9.1		54.2	58.0	9.6		58.3	6.5	9.4		22.3	26.2
10.0		40.8	31.4	10.2	27	7.7	11.2	9.4		58.3	4.2	10.5		23.3	6.0
9.5		40.8	39.8	10.3		8.7	10.3	8.7	30	0.8	20.6	10.0		23.3	38.4
8.6		41.3	32.6	8.5		9.2	46.6	10.1		1.8	34.0	10.5		23.8	22.0
10.4		41.9	2.0	8.8		10.7	46.2	8.7		10.3	18.8	9.5		24.8	37.6
10.0		46.8	16.6	10.0		11.7	30.1	10.4		13.8	35.1	10.0		25.1	58.4
8.6		55.3	14.2	9.1		20.3	42.5	10.3		18.3	13.5	9.5		25.3	11.8
9.4		58.8	14.5	10.2		20.7	43.8	9.6		18.8	28.1	9.6		25.8	32.2
10.2		58.8	58.8	9.6		24.7	5.0	10.1		20.8	54.8	9.9		27.8	31.8
9.8		58.8	40.5	10.4		25.2	38.6	9.9		21.8	20.4	9.4		30.8	58.2
8.3		59.1	1.8	9.6		35.2	17.7	9.2		23.3	17.3	9.6		33.3	0.6
8.9		59.3	32.0	9.4		37.0	46.1	8.5		24.8	17.6	10.5		35.3	6.2
9.4	25	5.8	33.3	9.4		38.2	37.6	8.9		25.3	40.2	9.4		38.3	50.5
10.4		7.9	54.5	10.4		44.7	41.8	9.6		27.8	13.6	9.2		38.8	45.5
10.2		10.8	25.3	8.0		46.7	40.0	9.8		27.8	37.9	9.8		41.8	4.2
10.3		11.7	18.5	10.0		52.2	46.8	9.5		28.8	38.1	9.4		45.3	44.6
10.3		13.7	27.7	9.6		53.7	46.5	8.7		32.3	14.7	10.2		45.8	57.5
9.6		20.7	42.0	9.8		59.3	13.1	9.6		32.3	10.9	9.2		46.3	25.4
9.1		20.7	59.2	10.3	28	0.7	53.4	9.6		32.3	7.6	9.2		48.8	48.0
10.3		23.7	58.5	9.3		2.2	44.2	9.2		36.3	25.5	9.2		50.3	38.1
10.3		26.2	43.2	10.1		3.2	39.3	8.1		36.8	16.3	10.4		52.3	45.1
10.3		29.2	46.4	9.8		7.2	42.6	10.5		36.8	4.9	9.5		52.6	59.4
8.1		30.7	15.8	10.2		8.2	29.0	9.9		38.3	12.4	10.0		54.3	3.3
8.7		34.7	56.3	9.9		9.7	8.4	10.2		38.8	19.7	10.3		56.8	37.4
10.4		38.2	22.2	8.7		11.7	12.0	9.1		39.3	40.5	9.4		59.3	17.7
9.1		40.7	18.1	10.1		14.7	24.1	10.3		39.3	46.1	9.4	33	1.3	33.4
10.0		40.7	32.7	10.0		18.7	54.7	9.2		39.8	42.7	9.6		1.3	53.6
25pr.	+1	3.3	-3.0	+1	3.3	-3.1		+1	3.4	-3.2		+1	3.4	-3.3	

2521-2580.				2581-2640.				2641-2700.				2701-2760.			
mag.	7h.	-23°		mag.	7h.	-23°		mag.	7h.	-23°		mag.	7h.	-23°	
m	s	'	"/	m	s	'	"/	m	s	'	"/	m	s	'	"/
10.1	33	8.3	43.0	8.9	35	2.3	12.2	8.7	36	50.8	49.8	10.0	38	26.8	41.4
9.1		8.3	50.2	9.6		4.8	56.1	8.9		50.8	37.7	9.5		27.3	22.3
8.9		9.3	27.4	10.2		5.1	18.5	10.3		51.8	55.2	9.6		28.3	54.9
10.4		14.3	28.2	10.4		6.5	1.4	10.4		52.3	43.0	9.5		31.8	45.9
9.6		15.3	33.5	10.4		8.8	13.5	10.3		52.3	54.0	9.2		31.8	23.8
10.2		15.8	25.2	10.4		10.8	16.6	9.4		55.3	12.9	8.9		31.8	19.2
10.3		18.3	4.6	9.8		10.8	20.8	8.6		56.8	23.0	10.5		32.1	35.5
10.2		19.3	43.6	10.5		11.0	56.3	9.5		59.3	35.3	9.8		33.3	5.2
8.9		20.3	33.0	9.2		14.3	9.1	10.0		59.8	49.0	9.6		35.3	44.5
10.2		20.3	28.8	9.1		16.8	9.4	10.5	37	0.3	2.1	10.0		35.3	37.7
9.5		20.8	57.1	9.5		21.8	8.2	10.1		0.8	54.1	10.4		35.3	28.3
9.2		21.8	21.6	9.4		22.3	11.4	10.3		1.3	28.8	9.8		36.8	2.1
10.5		22.9	52.9	9.9		23.3	16.0	10.5		4.3	29.5	10.4		37.1	53.6
9.2		24.3	20.6	9.2		24.8	32.9	9.4		4.3	58.2	9.6		39.3	1.5
10.1		24.3	58.9	10.4		25.3	41.9	10.3		6.3	24.1	10.5		39.3	34.3
9.8		28.3	13.9	9.4		25.8	39.2	8.7		7.3	33.9	9.2		39.8	22.9
9.4		28.3	9.4	10.4		26.1	36.4	10.3		8.8	24.7	9.8		39.8	10.6
9.2		29.3	10.6	10.5		26.3	28.6	10.5		9.8	6.0	10.5		40.8	21.1
9.6		31.8	35.2	9.4		26.4	56.9	10.3		10.8	52.2	8.5		42.3	51.7
10.4		34.3	5.5	9.6		26.8	52.2	10.5		12.3	3.5	8.9		43.3	55.7
8.9		34.8	54.3	9.4		28.3	53.2	10.5		12.4	56.8	10.3		45.3	57.8
10.5		35.3	59.0	8.0		31.8	47.9	9.0		13.3	14.9	10.1		47.3	29.7
9.8		37.8	26.5	9.4		31.8	41.4	9.2		15.5	2.8	10.5		49.3	20.6
10.3		38.3	43.0	8.3		34.5	59.2	9.8		17.3	35.3	9.4		51.8	32.0
10.4		42.8	57.6	9.4		34.8	48.4	9.2		18.8	26.8	9.2		55.3	45.6
9.8		50.8	4.4	10.1		35.4	32.1	8.9		19.3	8.6	10.5		55.8	48.9
9.1		52.8	48.6	9.4		36.3	40.4	9.2		20.8	45.2	9.8		56.0	1.9
9.8		55.8	46.2	9.4		37.3	39.8	9.9		26.8	5.5	9.8		56.3	30.7
8.9	34	0.8	43.5	10.2		37.3	15.6	10.5		29.3	53.8	9.2		58.8	41.4
10.1		0.8	50.2	9.4		44.3	25.0	9.2		35.2	40.2	9.4		59.3	27.3
10.4		2.0	15.6	10.0		46.3	51.8	9.4		35.8	23.9	9.2	39	0.3	36.6
9.9		2.3	12.3	10.4		46.5	0.2	9.8		36.8	41.1	8.7		0.8	35.4
10.5		4.8	19.0	9.8		50.8	35.9	9.5		41.8	19.3	10.4		1.8	11.1
9.4		5.3	4.3	10.2		51.8	8.1	10.5		44.8	46.2	9.4		1.8	41.5
9.6		6.3	14.6	10.4		53.4	57.0	9.0		52.8	16.8	9.5		2.0	34.6
10.3		8.8	28.5	9.8		54.3	36.9	9.5		54.8	53.1	9.4		2.8	15.9
10.3		10.8	30.1	8.3		58.3	52.6	9.6		56.3	5.5	9.8		3.1	35.2
8.6		13.6	56.8	9.8		59.3	16.2	9.8		58.8	20.6	10.1		4.7	32.7
8.9		20.8	25.1	9.8		59.8	17.9	9.1	38	1.3	49.2	9.2		4.8	8.3
9.4		21.8	31.9	9.8	36	3.3	31.7	9.9		1.8	5.3	10.3		5.1	36.1
10.3		22.8	58.6	9.2		3.3	27.1	10.2		2.3	35.7	9.8		5.3	38.7
10.4		24.8	15.7	9.2		7.3	35.3	10.5		4.3	49.3	10.1		5.3	17.0
9.6		26.3	17.1	10.1		7.8	56.0	10.5		5.3	30.1	8.8		6.7	32.8
8.6		31.8	34.7	10.4		8.3	16.8	9.1		5.3	28.8	9.8		7.1	28.6
8.9		33.3	43.2	10.1		11.8	48.1	9.4		6.3	31.3	9.5		7.8	32.0
9.4		34.8	47.6	9.9		18.3	6.0	10.2		6.3	56.1	8.9		8.0	35.0
9.4		35.8	42.3	10.2		20.8	20.8	9.9		7.3	52.7	8.9		10.2	32.7
8.4		37.3	4.7	8.9		21.8	6.3	9.8		8.3	43.5	9.2		10.3	24.8
10.2		37.3	52.6	9.2		26.3	38.2	9.2		8.3	13.3	9.2		10.5	34.4
9.5		42.8	42.3	8.9		26.3	17.6	10.3		8.8	32.3	9.4		11.0	31.3
9.4		43.3	3.3	10.1		29.8	52.8	9.8		10.8	5.9	9.4		11.3	35.4
9.6		43.3	7.6	10.4		32.8	48.6	10.4		10.8	38.3	10.4		11.7	32.3
9.8		47.3	27.9	10.0		35.8	16.2	9.8		11.8	13.0	10.4		12.1	35.5
9.8		50.3	15.4	7.7		36.3	19.6	9.2		15.8	36.2	9.5		12.2	32.2
9.9		53.8	17.7	10.5		38.3	10.3	10.2		19.8	29.0	9.2		12.3	31.4
10.5		57.3	24.1	9.2		39.8	18.3	10.5		20.8	50.6	8.7		12.8	9.6
10.2		57.3	39.8	9.0		39.8	23.0	9.8		21.8	13.4	9.8		13.7	31.9
9.9		58.3	53.1	10.3		41.3	49.6	10.4		22.8	26.7	10.0		14.3	29.6
9.2		58.3	41.2	10.4		43.8	51.4	9.4		25.3	58.8	8.7		14.7	33.3
9.1	35	2.3	3.0	8.0		50.8	49.3	10.3		25.3	52.4	9.5		14.8	39.9
25pr.	+ 1	3.5	-3.3		+ 1	3.5	-3.4		+ 1	3.6	-3.5		+ 1	3.6	-3.5

2761—2820.				2821—2880.				2881—2940.				2941—3000.			
mag.	7 ^h .		-23°	mag.	7 ^h .		-23°	mag.	7 ^h .		-23°	mag.	7 ^h .		-23°
	m	s			m	s			m	s			m	s	
9.8	39	15.2	32.4	10.5	39	53.8	37.5	9.6	41	17.4	50.1	9.9	43	10.4	28.9
9.4		15.6	30.8	10.5		53.8	37.2	9.5		19.4	59.0	8.7		14.7	57.1
8.8		15.7	33.3	10.3		56.3	39.7	8.8		20.9	11.9	10.5		15.9	55.6
9.5		15.7	33.7	10.2		57.3	40.3	9.0		21.9	20.9	9.2		19.4	8.3
10.0		16.1	40.5	10.5		57.8	35.1	10.1		23.9	49.0	9.6		20.9	13.9
10.5		16.2	31.4	9.6		59.3	30.6	10.5		26.7	30.1	9.2		21.9	35.0
10.4		16.7	34.8	10.5		59.8	35.3	10.1		26.9	4.3	10.3		24.9	42.1
9.2		17.7	33.8	10.3	40	0.8	21.8	10.4		30.7	20.5	10.4		24.9	8.2
9.2		17.8	54.9	9.0		2.8	34.4	9.2		31.4	54.5	10.5		28.7	57.6
9.8		18.3	35.7	9.9		4.3	17.1	10.1		31.9	52.0	9.1		29.4	31.9
9.2		19.7	34.1	9.4		4.3	41.3	9.2		31.9	42.6	10.5		30.4	41.3
10.3		19.7	33.1	10.5		5.3	42.2	10.5		38.4	59.0	10.3		31.4	41.7
10.5		21.2	34.8	9.4		9.3	30.4	10.2		38.9	23.8	9.6		35.4	11.8
9.2		21.8	43.7	9.0		9.8	38.5	9.0		44.9	10.7	9.8		36.4	32.2
9.2		23.8	33.1	9.2		9.8	37.9	10.5		45.4	13.0	10.3		40.4	35.1
9.2		23.8	32.3	9.5		10.8	34.1	9.8		45.9	4.6	9.6		42.4	26.0
9.2		24.3	40.1	10.3		10.8	18.7	10.3		46.4	29.3	9.8		44.9	31.8
9.6		24.8	32.9	9.2		11.8	30.6	9.8		46.7	59.3	10.5		44.9	44.6
10.1		25.3	15.1	10.4		11.8	51.5	9.1		46.9	48.0	10.3		45.9	8.2
8.0		25.8	56.3	10.4		12.9	25.9	9.8		50.4	0.2	9.8		51.9	27.5
9.8		25.8	29.3	9.8		13.3	18.5	9.5		50.4	19.2	8.9		51.9	33.4
9.2		27.3	43.6	9.6		14.8	23.6	10.4		50.5	35.9	10.3		51.9	12.0
9.4		27.8	35.6	9.4		17.8	18.8	9.2		52.4	42.3	10.3		54.4	50.6
10.2		28.3	56.6	9.8		20.3	7.9	10.3		55.9	29.9	10.4		55.4	57.5
9.6		28.8	26.5	10.5		20.8	59.6	10.3		56.4	26.7	10.1		57.9	31.5
9.8		29.3	37.7	10.4		20.8	25.4	9.2		56.9	5.0	8.9		59.9	29.1
8.9		29.3	32.2	9.0		20.8	12.3	9.8	42	1.9	55.2	9.6	44	5.9	29.7
8.9		30.8	38.8	10.3		21.8	17.2	10.5		4.4	19.6	9.2		7.4	54.7
10.2		30.8	33.2	9.4		24.3	31.3	10.1		7.9	24.3	10.3		9.4	10.5
9.8		31.3	26.9	10.4		24.8	30.4	10.3		9.9	33.8	9.2		9.4	53.1
10.0		31.3	34.6	8.8		25.3	17.4	8.9		10.4	54.0	10.1		13.4	37.1
9.2		31.8	34.4	9.5		25.9	10.0	10.2		10.9	36.6	10.4		14.4	26.3
9.6		32.8	31.6	10.4		26.8	14.5	9.9		11.9	8.9	9.0		15.4	13.7
10.3		34.3	18.1	10.0		28.6	2.2	10.5		20.9	51.1	10.5		15.9	32.9
9.4		35.3	29.3	10.3		30.6	2.8	10.4		20.9	30.3	9.8		17.9	57.1
9.8		35.3	50.6	10.5		32.9	7.3	10.0		21.9	22.9	8.5		18.4	33.8
9.0		36.3	35.3	6.5		35.4	57.2	10.4		24.1	2.0	9.5		19.4	34.6
10.5		36.3	32.2	8.9		37.4	19.1	9.6		25.4	36.0	9.0		20.4	31.3
10.0		36.8	6.8	9.8		42.9	24.7	9.2		31.4	48.0	10.5		20.9	58.4
8.7		37.3	45.9	10.5		42.9	27.5	9.6		33.4	39.3	9.8		21.9	4.9
10.3		37.3	21.0	10.4		45.9	12.6	10.4		34.4	3.3	9.8		24.9	44.6
8.9		37.8	21.5	10.1		46.9	11.5	10.4		34.4	49.3	10.5		26.9	9.6
10.3		39.3	33.7	9.8		47.6	59.3	8.7		36.4	52.8	9.8		27.9	53.3
9.2		39.3	36.0	10.2		48.4	9.8	10.2		40.9	21.7	10.5		31.9	37.6
10.5		39.8	34.5	10.3		51.9	29.9	8.3		41.9	57.1	9.8		36.4	46.2
9.4		40.8	7.8	10.4		54.4	27.7	10.4		42.9	27.4	10.0		36.4	34.5
9.8		41.8	51.8	9.4		58.4	28.9	10.4		46.4	35.9	10.5		36.9	54.6
9.2		44.3	12.4	9.2	41	1.9	45.8	8.9		47.4	27.5	7.5		40.9	28.9
9.4		44.3	33.1	10.5		2.4	47.0	9.8		50.4	43.2	9.8		41.4	44.8
9.2		51.0	2.3	9.6		5.4	59.3	10.4		50.4	54.3	9.8		41.4	8.2
9.8		51.3	23.6	8.5		5.7	17.6	10.0		51.9	46.0	10.3		48.7	59.1
9.2		51.3	49.8	10.2		8.4	53.7	9.1		53.9	25.3	10.4		52.4	6.7
9.4		51.3	31.4	9.2		9.9	40.4	9.6		54.9	3.3	9.6		53.9	2.6
9.2		51.3	23.1	9.8		10.9	37.8	10.2		57.4	19.7	9.4	45	4.4	34.7
9.2		51.8	29.7	10.4		10.9	29.1	9.5		57.4	19.2	10.5		6.4	56.1
10.0		51.8	22.8	10.1		11.4	7.5	8.9		58.9	29.1	9.2		7.4	32.0
10.4		51.8	25.4	9.6		11.4	52.4	10.5	43	0.9	5.5	9.9		11.4	42.0
10.1		51.9	20.9	10.5		16.4	23.3	10.5		3.4	21.4	9.8		12.4	11.4
9.0		53.3	9.4	8.7		16.4	50.8	10.5		7.4	1.3	8.9		14.4	45.1
9.2		53.8	36.9	10.4		17.4	55.2	9.9		9.9	37.6	10.3		14.9	54.9
25pr.	+1	3.6	-3.5		+1	3.6	-3.5		+1	3.7	-3.6		+1	3.7	-3.7

3241-3300.				3301-3360.				3361-3420.				3421-3480.				
mag.	7 ^h .		-23°	mag.	7 ^h -8 ^h .		-23°	mag.	8 ^h .		-23°	mag.	8 ^h .		-23°	
	m	s			m	s			m	s			m	s		
9.9	54	53.9	40.3	9.5	10.4	57	59.1	25.1	10.4	1	54.0	53.0	9.6	4	57.9	2.0
9.6	55	2.4	21.7	10.0		59.6	7.4	10.0		55.5	17.9	10.4	5	1.4	56.5	
9.7		3.9	45.0	10.4	58	0.1	27.4	10.2	2	7.5	38.9	9.9		3.9	51.6	
9.8		3.9	39.1	9.2		1.6	21.7	10.4		8.5	32.0	10.4		8.9	56.8	
10.2		9.4	24.7	10.0		11.1	33.2	9.6†		9.1	57.7	9.4		18.9	1.3	
10.1		16.9	22.6	10.4		17.6	39.0	10.0		9.5	59.3	9.2		20.4	50.2	
10.4		17.9	50.3	9.8		18.6	55.7	9.7		12.0	24.9	9.7		20.4	12.8	
9.7		24.9	15.9	10.4		23.6	22.4	4.7		13.4	56.7	10.2		22.4	12.8	
9.3		26.4	45.4	8.4		28.6	32.1	10.4		19.4	59.0	9.7		25.3	0.2	
10.4		30.9	33.1	10.0		31.1	35.1	10.4		22.0	32.7	10.0		27.9	23.8	
10.1		31.4	59.0	9.6		32.1	36.6	10.5		25.9	47.9	10.4		28.4	37.2	
10.4		31.9	27.3	9.8		42.6	42.5	9.7		30.5	46.1	9.7		42.9	12.7	
10.4		32.4	38.9	10.2		45.1	17.0	8.6		31.0	48.6	10.1		47.4	40.4	
10.2		33.9	50.6	10.4		48.1	30.4	10.4		32.5	35.1	9.8		50.9	26.9	
10.4		35.9	17.7	10.4		49.4	0.5	9.6		33.0	27.9	9.6		55.9	2.5	
8.8		37.9	23.5	9.4	59	2.6	45.1	8.8		34.0	1.3	10.4		56.4	46.9	
10.4		40.9	20.8	9.3		3.1	13.9	9.3		34.5	2.6	9.8	6	12.4	37.9	
10.0		43.4	38.4	9.0		24.1	29.1	10.0		36.8	13.3	10.4		16.9	30.8	
10.2		56.4	14.6	10.4		29.6	39.1	9.3		36.9	29.1	10.4		18.4	14.1	
8.4		57.4	29.2	10.1		32.6	10.9	10.4		37.9	29.5	9.8		18.4	56.0	
10.2	56	0.9	44.8	9.7		33.1	0.8	10.2		39.4	17.6	10.4		20.9	21.5	
9.9		12.4	7.0	10.2		39.4	2.6	9.9		42.8	2.2	9.7		34.9	13.2	
10.2		12.4	13.2	10.2		49.1	9.8	9.4		44.9	41.0	10.2		41.4	45.2	
9.7		12.9	30.0	10.0		53.1	38.0	10.0		51.4	42.7	9.3		42.9	19.2	
9.8		16.9	54.1	9.9		53.1	32.5	7.0		57.4	15.2	9.6		52.4	37.9	
9.0		18.9	38.9	10.2		58.1	5.5	10.2	3	0.4	14.5	9.2		53.9	5.2	
10.5		26.9	44.8	10.4	0	2.1	5.3	9.7		2.9	36.2	8.6		55.9	48.1	
10.2		28.4	54.4	10.4		3.6	58.0	8.8		7.4	12.5	9.9		57.4	36.7	
9.7		29.9	31.5	10.2		17.1	46.0	10.2		9.3	57.6	9.4	7	1.9	0.1	
10.4		31.9	37.6	9.2		17.6	14.4	10.4		11.9	24.4	10.4		3.4	31.7	
10.4		32.4	12.0	10.4		17.6	0.1	9.9		13.4	38.4	10.5		3.4	32.2	
9.7		32.9	36.4	10.4		22.1	17.0	9.9		18.9	49.3	10.5		12.9	34.8	
10.2		43.4	55.8	9.2		23.6	49.8	8.6		21.4	10.7	9.8		14.4	48.1	
10.0		45.9	7.6	10.1		25.1	38.0	9.4		21.9	9.9	10.5		15.9	23.3	
9.8		47.4	3.4	9.8		33.3	57.2	10.0		23.9	43.2	9.2		17.9	56.6	
10.4		48.9	32.3	10.1		36.6	39.8	10.4		25.9	45.3	10.1		23.9	15.6	
10.4		51.1	5.3	9.8		41.6	46.3	9.4		25.9	26.1	10.5		25.0	53.8	
10.4		52.5	50.4	9.0		42.0	48.8	9.6		26.4	18.0	9.8		27.4	27.6	
9.6		57.1	53.7	10.4		44.0	33.6	10.4		35.4	7.8	9.0		32.9	48.8	
10.2	57	2.1	39.6	9.4		44.0	8.5	9.7		43.9	38.9	10.4		33.1	28.8	
10.0		3.6	2.5	10.2		45.0	38.4	9.6		48.9	20.6	9.8		34.9	43.1	
10.4		5.1	9.0	9.3		47.0	13.3	10.4		52.8	9.8	9.6		37.9	33.5	
10.1		6.6	19.8	10.4		51.0	58.7	9.8		52.9	9.5	10.4		38.3	31.8	
10.2		7.1	25.9	9.7		52.0	31.1	10.1		55.9	50.9	10.4		44.6	18.5	
10.4		11.6	55.2	9.6		54.0	55.1	10.1	4	1.4	54.6	9.8		47.3	57.1	
9.8		16.6	36.7	10.4		54.0	41.9	9.2		2.9	3.6	7.6		50.2	8.3	
9.7		17.6	26.1	10.0	1	4.0	11.1	10.2		8.9	52.4	9.2		50.2	35.7	
9.7		17.6	45.9	10.4		5.5	35.2	9.2		11.4	40.6	10.4		51.2	53.8	
10.2		23.1	5.1	10.4		6.5	33.1	9.2		13.4	17.2	10.4		52.2	51.3	
10.0		24.1	58.5	10.1		6.5	50.3	10.1		16.4	6.0	10.0		54.2	57.2	
9.2		26.6	22.2	9.3		7.0	3.4	9.7		33.9	39.2	9.2		54.2	47.1	
10.4		27.1	8.9	10.0		11.0	31.8	10.4		34.9	54.5	7.5		55.3	55.1	
10.1		31.1	32.6	10.4		20.0	55.6	10.1		36.4	4.4	8.8	8	1.7	6.1	
9.9		33.6	55.3	10.4		22.0	55.1	9.3		40.9	45.9	9.9		5.2	56.6	
10.4		39.6	25.4	10.4		22.0	28.4	9.2		46.4	7.8	10.4		8.4	49.0	
10.4		43.3	58.3	9.4		29.5	16.9	10.4		47.9	19.3	7.5		9.3	34.6	
9.4		48.1	21.2	10.2		32.5	31.1	9.9		51.9	43.0	10.4		12.2	0.4	
9.7		52.6	22.9	10.4		34.5	38.7	9.9		52.4	14.0	9.8		12.7	37.9	
9.8		53.6	40.2	9.8		42.5	51.3	10.2		53.4	20.9	10.2		13.7	13.9	
9.7		56.6	31.2	8.6		52.5	38.4	10.4		54.9	24.6	8.8		14.2	32.6	
25pr.	+ 1	4.1	- 4.1													
				+ 1	4.2	- 4.2		+ 1	4.3	- 4.3		+ 1	4.4	- 4.4		

3481-3540.			3541-3600.			3601-3660.			3661-3720.			
mag.	8h.	-23°	mag.	8h.	-23°	mag.	8h.	-23°	mag.	8h.	-23°	
9.6	20.2	52.8	9.6	31.4	35.9	10.2	12 33.8	18.0	8.2	15 9.9	52.4	8.5
9.4	20.2	10.3	10.2	35.4	54.7	10.4	35.8	20.1	8.6	10.4	30.6	9.0
9.6	24.2	8.2	10.4	36.4	19.1	9.6	35.8	22.9	10.4	10.6	13.0	
9.6	24.7	6.5	10.0	36.9	3.9	10.2	38.3	57.0	10.2	11.4	27.3	
9.9	26.0	45.7	10.4	36.9	6.3	8.6	43.3	55.2	8.5	12.9	37.6	
9.9	26.1	26.7	10.4	38.8	28.9	10.4	48.8	29.5	9.2	14.9	25.5	
9.2	28.2	11.4	9.8	40.4	54.9	9.0	49.3	53.2	8.3	18.4	42.1	8.5
10.4	29.9	46.3	8.8	40.9	29.3	9.6	53.8	9.7	8.2	18.4	13.1	G
9.4	30.2	15.1	9.9	41.9	52.3	9.3	54.3	58.6	9.3	20.4	0.8	
9.0	42.2	11.5	10.4	46.4	11.4	9.0	54.3	13.0	10.4	24.4	39.9	
9.9	42.7	5.3	10.4	49.9	22.9	10.1	55.3	46.6	10.0	26.4	11.3	
9.0	43.2	9.1	10.0	51.4	31.2	10.4	13 0.8	37.3	10.4	27.6	46.2	
8.4	51.7	11.7	9.0	54.4	35.4	10.4	1.6	16.1	9.3	29.9	1.8	
9.8	55.2	38.9	9.9	55.9	4.6	9.4	1.8	23.0	10.1	31.4	7.5	
8.8	59.2	5.1	9.6	55.9	22.5	10.0	10.8	9.8	10.0	31.9	49.8	
10.0	9 0.2	50.7	9.4	59.4	42.1	9.0	12.3	50.5	9.0	32.4	5.8	
10.2	1.2	39.7	9.6	59.4	42.8	10.2	24.3	51.7	10.0	32.4	27.5	
9.6	1.2	37.7	9.2	2.4	53.1	9.9	29.3	20.3	9.8	32.4	45.9	
9.3	1.2	11.5	10.1	6.4	30.7	10.4	31.8	33.0	10.4	34.9	45.7	
10.4	1.7	33.7	9.2	11.4	46.2	9.8	37.3	50.7	10.2	42.4	4.4	
9.8	4.7	51.1	9.2	11.4	36.1	10.4	40.8	56.4	10.4	42.4	17.0	
9.0	4.7	8.3	9.9	11.4	59.4	10.1	42.8	1.3	9.8	44.4	20.5	
10.0	7.2	53.7	10.4	18.4	3.3	9.3	44.3	6.9	9.2	45.9	47.8	
10.1	8.2	24.6	10.0	20.9	39.9	10.0	44.6	21.3	10.0	48.9	47.5	
10.2	9.4	33.1	10.4	28.5	37.9	10.4	47.3	46.5	10.2	54.9	57.3	
10.2	12.7	26.3	9.3	30.4	37.9	10.4	48.6	59.8	10.4	57.9	14.5	
10.4	19.9	30.4	9.3	31.4	5.1	9.3	49.3	44.0	10.2	16 1.9	8.2	
10.4	21.9	16.7	10.2	32.9	53.6	9.8	52.3	39.6	10.4	5.2	1.6	
9.6	23.4	31.4	9.9	32.9	13.1	9.8	53.3	20.0	8.2	6.9	31.4	8.0 G
10.4	28.9	14.0	8.8	36.4	40.2	10.1	54.3	54.7	9.4	6.9	1.3	
10.2	29.4	58.8	9.3	37.4	35.4	8.4	54.8	24.3	9.5	8.9	7.0	
10.2	31.0	59.9	9.3	40.9	12.1	8.8	8.3	48.9	9.5	11.9	34.1	
9.0	31.9	11.8	9.6	40.9	15.3	9.2	9.3	34.6	9.8	13.9	28.6	
10.4	31.9	47.9	10.4	43.9	15.3	9.8	10.3	19.4	9.4	21.9	34.1	
9.0	35.4	13.8	9.2	49.9	29.2	10.4	11.3	36.5	9.8	27.9	20.6	
10.4	36.9	53.6	9.3	50.4	43.1	10.4	12.3	11.3	10.4	30.9	54.0	
10.4	37.4	0.9	8.0	51.9	20.9	10.1	12.3	11.7	10.1	32.4	36.2	
9.0	40.4	52.6	10.4	52.9	43.0	10.4	16.3	12.7	10.1	32.4	13.1	
10.4	44.8	16.0	10.4	57.9	29.8	10.4	18.9	31.3	8.8	36.4	35.7	
9.3	44.9	3.4	9.4	58.9	53.6	10.4	21.6	36.1	9.4	41.4	36.7	
10.4	49.9	29.3	9.2	59.4	34.0	8.8	21.9	30.0	8.4	43.4	1.1	9.0
9.2	50.9	22.0	10.4	59.9	55.6	9.3	27.4	59.0	8.8	48.9	15.3	9.0
10.4	55.4	19.9	9.5	12 1.9	37.2	8.6	32.4	54.4	9.2	53.4	22.8	
10.4	56.5	0.4	10.4	1.9	8.4	10.0	35.9	29.6	10.0	17 1.9	7.8	
9.2	59.4	51.9	9.8	3.9	16.5	10.4	39.4	27.6	10.4	12.9	17.6	
9.8	59.9	54.6	10.4	4.4	31.0	10.4	39.9	34.0	9.3	13.4	39.4	
7.8	10 1.4	15.3	9.6	10.4	54.9	8.1	40.4	4.2	9.3	15.4	27.4	
10.2	4.4	11.9	10.4	10.9	46.9	9.3	46.1	57.6	10.4	16.4	41.0	
9.4	4.9	49.0	9.2	12.9	26.0	8.0	49.4	23.4	10.0	17.4	8.5	
10.4	8.9	45.2	10.4	13.5	29.9	9.2	49.4	52.1	10.4	22.4	50.9	
10.2	9.4	13.5	8.2	14.9	22.8	10.4	50.9	54.3	9.4	25.9	25.3	
9.4	11.9	15.3	10.4	17.4	21.3	10.0	54.4	44.5	10.0	27.4	54.0	
10.4	12.3	1.5	9.9	18.9	4.0	10.4	54.9	30.0	9.5	27.9	20.4	
10.2	15.9	3.9	10.2	22.4	39.6	9.9	59.9	48.8	9.2	31.4	20.6	
10.4	17.8	30.0	10.2	22.9	42.4	9.0	15 4.4	24.1	10.2	31.9	21.3	
10.1	20.7	1.9	10.0	25.9	17.5	10.0	4.4	42.9	10.4	35.4	32.7	
10.4	20.9	23.1	10.0	25.9	1.0	10.2	4.9	30.0	10.2	36.4	28.5	
10.2	22.4	52.7	10.4	30.8	36.0	9.9	5.9	5.0	9.9	38.4	7.3	
10.0	22.4	14.1	10.4	32.3	36.5	10.4	7.9	9.3	10.1	38.9	9.1	
10.4	30.9	50.1	9.6	32.8	22.2	9.3	8.9	6.9	9.8	47.4	7.3	
25pr.	+ 1 4.5	-4.5	+ 1 4.6	-4.6		+ 1 4.7	-4.6		+ 1 4.7	-4.7		

3721-3780.			3781-3840.			3841-3900.			3901-3960.		
mag.	8h.	-23°	mag.	8h.	-23°	mag.	8h.	-23°	mag.	8h.	-23°
10.2	17 50.8	43.3	10.4	20 41.8	32.3	9.8	23 56.0	35.1	9.6	27 32.6	22.6
10.4	51.0	26.5	8.6	46.3	12.0	10.4	56.0	42.0	9.3	32.6	38.2
10.0	53.8	5.2	10.4	49.3	35.3	10.4	57.5	41.2	10.1	35.3	54.3
9.8	57.8	29.5	9.6	21 4.8	43.8	9.4	59.0	38.0	10.4	36.1	26.0
9.3	18 1.3	46.4	9.9	11.8	46.0	9.8	24 3.0	55.2	10.1	36.3	55.2
10.4	5.8	12.9	10.1	17.3	8.9	10.2	3.0	16.1	8.8	36.9	15.7
9.0	10.8	43.6	9.3	19.8	4.2	10.4	9.5	19.2	9.0	38.1	12.0
10.4	11.3	55.5	9.3	20.3	25.7	9.6	12.0	47.1	10.4	46.1	58.2
9.0	14.8	52.2	10.4	20.8	8.7	10.1	19.5	20.2	9.9	48.1	36.0
10.2	21.3	25.4	10.1	21.0	2.8	9.6	21.0	32.8	8.3	48.7	38.3
10.4	22.3	32.7	10.4	21.8	9.0	9.9	22.0	55.0	9.8	49.2	27.1
9.6	24.8	16.1	10.0	22.8	53.5	7.8	26.5	7.3	8.2	52.1	36.4
10.4	26.8	48.4	8.6	25.3	23.9	9.0	28.5	54.0	9.2	53.7	22.5
10.0	29.3	19.5	10.2	28.3	34.8	9.9	32.0	12.4	10.4	54.7	5.4
9.9	30.8	12.3	10.2	29.3	46.1	10.0	32.5	39.8	7.8	55.9	45.5
10.4	32.3	35.0	9.9	33.3	1.3	9.0	34.0	55.8	10.4	28 13.4	13.1
9.3	32.5	2.9	10.2	33.8	38.9	9.0	34.0	52.2	10.4	15.4	6.5
9.3	36.8	21.1	8.8	38.8	35.8	9.0	39.0	25.3	10.1	15.7	57.3
9.6	44.3	54.0	10.4	41.8	42.9	9.8	45.5	42.0	10.4	15.9	7.3
9.2	49.8	12.4	8.0	43.4	1.8	9.9	47.5	13.1	10.4	19.9	10.2
10.0	52.3	12.1	9.2	47.9	40.1	9.4	51.0	19.7	10.4	22.2	35.2
10.2	52.8	56.9	10.4	50.4	26.9	9.2	56.0	20.5	10.2	23.4	37.5
9.0	55.2	2.0	10.4	51.4	14.1	10.1	57.0	38.0	9.6	25.2	28.0
10.4	55.3	47.9	10.2	51.6	58.9	10.1	58.0	31.1	10.4	29.0	57.0
9.8	58.8	12.7	10.4	53.9	58.6	10.0	25 2.0	45.3	9.0	32.4	16.2
10.2	59.8	20.3	8.8	22 0.9	46.0	10.2	2.1	1.6	8.8	33.1	59.9
10.4	19 0.8	8.7	10.0	0.9	23.5	10.2	5.5	2.7	10.2	33.4	56.2
10.2	3.3	2.1	10.1	3.9	41.9	9.9	9.5	25.9	9.9	36.6	11.1
9.2	5.3	44.1	10.2	8.9	41.9	9.2	10.5	4.8	10.5	38.1	28.6
10.4	13.3	19.3	9.8	15.9	24.0	8.8	12.0	34.8	10.5	41.6	7.4
9.6	21.3	10.0	10.4	15.9	52.3	10.4	13.0	58.4	9.9	42.1	0.9
10.4	26.0	13.0	9.8	16.9	48.8	10.4	14.0	45.2	10.2	42.6	48.0
9.8	27.3	0.9	10.0	17.9	19.4	9.8	25.0	34.1	10.4	48.1	36.2
7.7	28.8	17.1	10.4	25.9	57.7	10.4	32.1	31.9	9.6	49.6	17.2
9.2	29.3	16.3	9.4	25.9	27.4	10.0	32.6	13.0	8.4	53.6	41.6
9.0	29.8	7.7	10.4	33.9	22.0	9.8	41.6	53.2	7.6	59.6	23.8
9.8	30.8	18.2	10.1	35.9	29.0	8.6	44.6	30.0	10.5	29 1.6	49.6
9.8	31.8	23.4	9.6	39.4	8.0	9.3	45.4	2.8	8.9	1.6	13.7
10.4	32.8	5.2	10.4	41.4	45.2	9.6	45.6	17.4	10.5	1.6	2.5
9.4	32.8	31.3	9.6	41.4	16.3	10.4	46.1	58.2	9.9	2.9	2.8
10.4	35.3	53.8	9.8	41.9	52.2	9.4	47.6	37.5	8.8	5.6	34.6
10.4	37.8	47.8	9.2	42.4	10.6	10.4	54.1	42.7	10.4	8.1	7.8
7.8	40.8	38.5	10.4	43.9	59.8	10.2	26 6.1	28.7	8.7	11.6	31.0
9.5	40.8	51.1	9.9	53.0	32.1	7.9	13.6	7.0	9.4	15.6	5.9
8.8	42.8	38.4	10.4	57.4	51.6	9.3	17.2	7.2	10.5	22.2	20.7
8.8	42.8	24.6	9.5	23 1.9	6.0	8.8	32.1	20.2	9.3	22.7	15.2
9.8	47.3	24.0	9.4	2.4	9.7	10.4	37.1	6.2	9.6	24.2	6.2
10.4	48.8	26.4	9.4	6.9	17.2	10.4	54.1	19.3	10.5	25.7	24.5
9.8	54.8	53.4	7.6	15.9	24.9	10.4	27 2.1	10.4	10.5	27.2	13.9
10.4	58.8	54.5	10.4	16.4	56.9	10.4	2.6	23.4	10.0	31.7	17.4
9.9	20 0.3	33.7	9.3	18.9	34.8	9.4	3.9	0.2	8.9	33.2	48.1
9.4	10.3	27.9	9.4	20.4	21.1	10.4	5.6	22.7	9.8	33.2	40.5
10.4	12.3	20.8	8.8	22.4	52.0	10.4	12.4	24.3	10.5	34.2	35.1
10.4	12.3	17.7	10.4	28.9	51.3	10.0	13.1	39.6	8.8	41.7	50.2
10.4	16.8	5.4	9.2	30.9	25.3	9.8	13.1	38.8	8.9	51.9	1.6
9.4	20.8	21.9	10.4	30.9	11.0	9.6	16.1	55.7	8.7	30 1.7	47.4
10.0	25.3	7.4	10.1	36.9	40.7	10.2	17.1	20.0	9.4	9.2	36.9
10.4	28.8	39.9	10.4	40.0	45.7	8.1	19.1	53.0	9.8	16.2	49.0
9.4	32.8	17.3	9.8	42.0	29.4	10.0	21.6	7.4	10.4	17.2	29.9
10.4	37.8	55.3	10.2	49.5	37.9	8.6	22.6	47.4	8.9	26.7	47.5
25pr.	+ 1 4.9	-4.8									
				+ 1 5.0	-4.9					+ 1 5.3	-5.1
							+ 1 5.1	-4.9			

3961-4020.				4021-4080.				4081-4140.				4141-4200.			
8		-23°		8h.		-23°		8h.		-23°		8h.		-23°	
m	s	'	"/	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
30	34.7	37.1		10.4	34	44.0	4.0	10.2	38	14.5	25.5	10.5	42	52.5	3.8
9.9	35.2	36.2		10.2	47.5	15.1		9.4	15.0	41.9		9.5	59.5	33.2	
10.2	35.7	57.2		9.0	55.5	20.9	9.5 Ga	10.0	16.0	30.8		9.2	43	3.0	5.3
10.4	37.2	38.5		10.4	58.0	58.7		9.3	25.0	31.5		10.5	10.0	35.1	
9.8	41.4	58.7		10.2	59.0	27.7		8.2	33.0	8.7	Ga	10.2	12.0	24.6	
9.8	43.2	39.4		9.8	35	0.0	15.1	9.3	43.0	24.7		10.2	14.0	42.1	
10.0	43.7	4.8		10.1	2.0	37.5		8.6	51.0	47.4	9.0 Ga	10.5	23.5	4.8	
8.9	48.7	35.4	a	8.5	8.0	52.6	9.5	10.0	56.0	59.9		9.8	26.5	33.6	
8.0	50.7	9.2	8.5 Gbl	10.4	12.0	8.6		9.0	57.0	2.9	a	9.9	27.0	29.8	
10.2	52.2	11.0		10.4	13.0	39.3		9.3	39	4.0	1.9	9.3	33.0	20.3	
10.0	54.7	33.3		8.7	17.0	40.4	a	10.4	9.0	27.4		10.5	36.0	27.7	
9.8	55.2	36.9		8.0	28.0	58.5	9.0 Ga	7.9	12.5	20.0	7.5 Gal	9.8	37.0	4.5	
10.2	55.7	32.6		10.5	30.5	44.0		9.8	15.5	12.2		9.0	53.0	21.1	
10.5	31	2.7	3.2	8.8	36.5	56.0	8.8 Ga	9.8	20.0	35.1		9.2	44	0.0	47.1 a
9.4	11.2	32.8		8.8	41.0	26.6		9.9	21.0	14.2		9.6	1.0	29.0	
9.8	11.7	13.1		9.2	50.0	13.8		9.9	39.5	47.5		10.4	2.5	26.9	
9.8	13.9	27.2		10.5	52.0	22.8		10.4	42.5	14.4		10.2	5.0	22.4	
9.4	15.9	42.4		10.4	54.5	45.4		10.2	44.0	40.6		9.3	11.0	27.1	
10.4	21.9	30.2		9.8	56.5	9.7		10.5	45.0	15.4		8.5	30.0	29.2	8.0 Gal
9.2	22.9	19.7		8.4	57.5	49.9	8.5 Ga	10.5	48.5	30.8		10.2	34.2	29.2	
8.7	34.4	19.9		10.2	36	0.5	59.8	10.4	49.0	51.1		9.8	35.4	2.9	
9.3	40.9	9.4		10.5	2.0	53.0		8.8	49.0	41.5	a	10.2	46.0	58.1	
10.2	42.9	27.8		10.4	3.0	52.1		9.9	49.0	33.3		9.3	46.2	2.6	
10.0	45.9	1.0		10.4	6.0	54.0		9.8	52.0	43.6		10.4	52.0	11.7	
9.3	46.4	58.6		9.2	6.0	6.3		9.9	54.0	39.2		9.4	52.0	46.9	
9.3	50.9	29.9		9.6	7.0	6.0		10.5	56.5	2.4		8.8	45	7.5	9.5
8.0	54.4	52.1	8.8 Gwa	10.5	9.0	23.0		10.5	58.0	55.0		9.5	18.0	59.7	
9.4	56.4	34.9		8.8	10.0	51.7	10.0	9.6	40	0.0	6.8	10.0	33.0	11.9	
10.2	32	4.9	12.3	9.4	12.1	58.4		9.6	5.0	11.1		10.4	40.5	34.9	
9.0	5.9	51.7	a	10.4	13.5	39.6		10.5	12.0	29.7		9.3	42.0	29.9	
10.0	11.9	58.5		9.8	22.5	31.5		10.5	22.0	13.3		9.9	46.0	8.3	
8.2	13.9	26.7	8.0 Gal	9.6	28.0	3.8		9.6	27.5	47.8		10.4	47.0	24.1	
9.2	16.4	18.8	9.0	10.0	28.0	4.3		10.2	33.5	55.8		10.5	52.0	23.1	
9.9	19.9	27.2		9.8	29.0	41.5		10.5	41.5	6.0		10.0	56.0	27.7	
10.5	25.9	3.8		9.3	30.0	23.9		10.4	45.0	9.4		9.9	46	4.0	9.9
9.9	34.4	50.8		9.9	34.5	35.7		9.8	56.5	12.3		9.2	11.0	9.4	
8.2	36.4	29.6	9.0 a	10.0	34.5	44.4		9.4	59.0	27.7		10.5	20.0	11.6	
10.4	43.4	34.0		10.5	44.0	10.1		8.8	41	7.0	52.2	9.3	36.5	26.2	
10.0	47.4	44.4		10.4	50.0	21.8		10.2	10.5	28.3	9.5 a	9.6	43.0	53.9	
9.6	49.4	6.8		10.5	51.5	53.0		10.4	19.5	46.4		10.4	52.0	41.7	
10.2	57.9	48.6		10.4	52.0	50.1		9.0	22.0	26.1		9.3	53.0	12.9	
10.5	33	0.5	26.1	10.2	52.0	52.0		10.2	26.5	51.2		9.2	56.0	23.8	
10.2	10.0	46.0		10.4	56.5	40.6		10.4	35.5	52.3		9.2	56.0	27.3	9.5
10.5	10.0	18.6		10.4	37	2.0	47.4	9.4	41.5	22.5		10.4	47	3.5	10.7
9.3	17.5	29.3		8.4	6.0	45.8	8.0 Gwa	10.2	49.5	48.5		10.5	10.0	10.2	
10.5	17.5	20.0		10.0	6.0	42.0		8.4	42	0.0	44.1	9.8	20.0	16.1	
8.9	27.0	10.9		7.6	21.8	59.5	8.0 Ga	10.4	4.0	40.6		9.2	22.0	48.7	
10.5	27.5	56.5		10.4	23.5	28.5		8.0	10.5	56.1	8.2 Gb	9.4	26.8	3.0	
10.4	35.5	24.1		10.0	27.0	19.5		8.7	17.0	53.1	9.0 a	9.9	33.4	0.1	
10.0	44.0	57.0		10.4	34.5	8.8		9.6	18.5	39.0		10.5	36.2	4.8	
8.6	54.5	21.7	9.0 a	9.6	35.5	11.3		10.2	22.0	45.9		10.4	38.2	16.4	
10.2	34	16.5	18.0	10.5	36.0	12.7		10.2	31.0	41.2		9.3	49.2	9.8	
8.8	18.0	8.6		10.5	42.0	48.6		9.2	32.0	55.1	9.5 a	10.5	51.2	29.8	
9.2	20.5	21.8	8.5 a	9.5	46.0	6.6		9.3	36.0	5.9		9.8	58.7	59.4	
9.9	20.5	11.1		9.6	46.0	48.6		10.5	38.5	11.0		10.5	48	6.2	53.0
9.4	20.7	1.8		10.5	56.5	25.9		9.2	39.5	46.1		10.4	7.2	26.2	
9.0	21.0	7.1		10.4	38	0.0	24.9	10.5	44.5	16.4		10.4	7.2	52.7	
9.3	22.0	18.6		8.9	3.0	52.0		9.3	47.0	54.8	9.5 a	10.5	11.7	18.9	
8.5	23.5	22.7	9.0 a	10.5	12.0	7.3		9.6	47.0	48.8		10.0	14.2	47.3	
9.2	44.0	52.7	9.0	10.5	13.0	50.7		9.4	47.0	33.2		8.8	16.9	1.7	9.5
25pr.	+ 1	5.4	- 5.1		+ 1	5.5	- 5.3		+ 1	5.7	- 5.4		+ 1	5.9	- 5.5

4201-4260.				4261-4320.				4321-4380.				4381-4440.			
mag.	8h.		-23°	mag.	8h.-gh.		-23°	mag.	gh.		-23°	mag.	gh.		-23°
	m	s	'		m	s	'		m	s	'		m	s	'
10.4	48	23.2	45.4	7.1	55	21.9	39.8	8.4	3	51.9	0.8	8.8	12	19.4	40.3
9.2		27.6	49.7	9.8		29.2	28.5	9.6	4	31.5	50.7	10.2		25.9	22.0
9.4		33.9	8.0	9.8		37.2	59.0	9.4		37.3	39.6	10.3		26.4	48.5
10.5		37.2	57.7	9.6		39.0	25.0	9.6		43.0	24.1	9.8		28.9	11.5
8.8		37.5	48.7	9.6		57.5	20.6	9.2	5	21.7	40.1	10.3		33.9	18.9
10.4		38.2	59.5	9.8	56	16.8	0.9	9.5		35.8	56.8	9.2		35.1	59.6
9.0		40.8	52.8	8.3		27.1	15.6	9.6		36.3	31.3	8.5		42.9	29.5
9.6		52.3	26.9	9.8		45.8	46.6	9.5		38.3	37.8	9.5		52.9	0.1
9.8		58.1	15.1	9.8		46.2	39.4	9.8		39.3	16.5	10.3		56.7	2.3
7.6		59.0	3.0	9.8		47.8	44.0	9.8		41.3	12.4	10.6	13	3.9	58.4
9.2	49	0.6	22.4	9.4	57	8.8	17.8	9.2		47.3	29.0	9.4		7.4	19.9
9.5		6.1	8.5	9.6		12.5	30.0	9.8	6	3.0	30.0	10.0		7.9	54.5
8.5		30.6	55.3	9.6		16.5	30.0	9.8		3.3	24.4	9.5		7.9	20.4
9.8		31.1	7.7	7.6		20.9	45.4	9.6		4.8	42.3	8.6		10.9	38.0
9.6		32.3	8.8	9.8		37.7	53.3	9.8		9.5	48.6	8.0		13.9	55.9
8.8		39.6	13.8	9.6		44.7	29.3	9.8		22.8	18.4	10.8		16.4	40.1
9.6		45.8	33.1	9.8	58	1.9	52.6	9.2		27.0	35.2	10.8		16.9	30.9
9.1		46.4	21.2	9.1		7.4	15.6	8.8		41.0	22.2	9.2		18.9	30.0
9.8		56.8	44.1	8.8		11.9	1.4	9.6		47.0	8.8	10.7		20.9	31.9
9.8	50	18.1	44.0	9.8		20.1	52.2	9.4		48.5	45.1	8.2		23.9	12.5
9.6		24.1	21.1	8.0		23.4	21.2	9.2	7	0.5	40.3	10.8		44.9	59.0
6.6		26.4	20.5	9.4		28.4	20.2	9.0		12.4	10.2	8.6		49.4	43.8
9.8		36.4	44.2	9.8		38.4	9.6	10.8		24.2	20.8	10.0		57.4	14.7
9.8		36.8	9.0	7.6		42.1	44.8	10.4		35.4	11.3	10.7	14	5.9	17.9
9.0	51	0.6	0.6	9.8		52.1	48.4	9.0		57.3	18.7	10.2		16.9	48.0
9.1		19.1	52.9	9.8	59	5.7	31.0	10.8	8	4.4	59.2	10.2		19.9	44.6
9.5		20.0	57.9	9.8		26.6	46.7	10.4		7.8	44.1	10.7		24.4	38.8
9.8		24.4	36.8	8.3		29.1	16.7	8.8		10.2	2.8	10.2		28.4	9.0
9.8		30.2	40.0	9.6		30.9	19.7	10.8		25.9	27.8	10.8		30.9	46.4
9.6		32.2	36.2	7.8		32.1	41.4	10.2		26.8	30.9	10.3		31.9	5.2
9.8		39.4	6.3	9.8		47.4	13.3	10.8		28.9	36.1	10.2		33.3	21.5
9.6		40.7	6.2	9.4		53.5	1.1	10.8		33.7	26.0	9.6		36.4	28.3
9.8		56.0	52.3	9.2		56.7	10.6	10.8		35.9	23.8	8.9		36.9	10.7
9.8	52	7.0	46.8	9.6	0	0.9	46.1	9.6	9	1.2	12.7	10.3		36.9	41.0
9.8		18.0	18.1	9.8		31.1	2.7	8.8		6.9	25.9	10.2		39.4	31.5
9.8		21.2	29.0	9.8		31.1	14.6	10.4		27.4	39.7	8.4		39.9	25.2
9.2		33.7	12.8	9.8		46.6	17.0	10.6		38.4	6.9	9.2		44.4	0.2
9.8		43.2	3.2	7.6		59.1	39.4	10.0		42.9	12.5	9.6		47.9	18.4
7.8		46.4	56.8	9.8	1	15.4	42.4	10.3		53.4	8.6	10.8	15	1.4	3.6
8.4		56.0	42.6	9.6		26.7	37.0	10.3		57.9	14.3	8.9		2.9	22.8
7.8	53	3.7	18.7	9.8	2	1.6	20.3	10.7	10	16.9	59.1	10.8		6.9	44.2
8.8		4.2	16.7	8.0		2.4	31.4	10.8		16.9	9.5	8.0		13.9	34.0
9.2		5.0	50.2	9.8		18.8	1.5	10.7		17.4	24.3	9.3		14.9	23.6
9.8		7.7	12.4	9.6		21.6	14.8	9.0		23.4	56.2	9.6		45.9	35.5
9.0		13.7	7.7	9.8		30.6	21.1	10.4		27.9	31.4	8.0		49.9	15.3
9.8		22.9	6.9	9.6		32.0	58.2	10.0		52.9	49.9	10.8		58.9	32.8
9.8		35.7	26.4	9.0		45.2	26.9	10.4		58.9	8.3	9.0	16	5.9	25.1
9.6		49.3	0.8	9.8		56.6	56.5	10.4		59.9	45.4	10.3		7.4	23.1
8.3		51.4	43.0	9.6		57.2	42.0	10.8	11	2.9	8.1	9.0		9.9	10.2
9.0		54.2	47.3	9.8	3	6.4	37.6	9.6		6.4	41.1	10.8		11.9	31.3
8.3		56.7	42.3	9.1		7.9	22.9	10.8		11.9	12.9	9.0		13.9	36.4
9.8	54	1.7	2.6	8.5		16.7	13.5	10.6		22.9	31.3	9.0		15.9	25.6
7.8		9.0	45.0	9.8		18.7	56.5	10.7		42.4	13.3	7.5		16.4	36.0
9.8		21.9	8.6	8.5		19.9	38.1	8.8		48.1	59.6	10.6		17.4	50.3
9.8		27.0	25.1	9.8		24.8	24.4	10.4		48.6	1.8	9.3		19.9	11.1
9.6		28.7	7.8	9.2		44.0	2.1	10.6		50.4	20.9	9.5		21.9	27.5
9.8		32.2	15.1	9.2		46.3	16.0	10.8	12	1.9	9.9	10.6		23.9	47.7
9.8		34.7	11.8	9.2		48.2	57.3	10.0		11.4	5.8	10.8		24.9	7.2
9.6		44.7	25.9	9.6		48.5	13.6	10.6		11.9	15.1	9.2		30.9	17.6
9.6		46.4	59.3	9.8		51.0	13.6	10.8		12.9	43.0	9.2		31.9	31.3
25pr.	+ 1	6.2	-5.7	+ 1	6.5	-5.9		+ 1	6.9	-6.1		+ 1	7.2	-6.3	

4441—4500.			4501—4560.			4561—4620.			4621—4680.		
mag.	g ^h .	—23°	mag.	g ^h .	—23°	mag.	g ^h .	—23°	mag.	g ^h .	—23°
9.9	16	32.9 17.8	10.6	21	48.8 59.7	10.6	25	53.3 28.6	8.8	31	39.6 7.4
10.0		33.9 49.3	9.4		50.8 47.1	10.4		54.3 6.1	10.0		51.1 39.1
9.6		35.9 25.4	10.7		50.8 34.3	10.7	26	0.8 7.1	10.2		54.1 15.7
10.3		45.9 12.8	10.0		51.3 22.1	10.8		2.3 10.2	9.4	32	11.1 52.5 a
10.7		50.4 15.5	9.8		52.8 7.4	10.8		3.8 52.7	9.2		23.6 22.4
10.3	17	5.9 44.4	10.3		58.8 31.0	10.3		8.3 10.1	9.4		57.6 15.5
10.7		7.4 49.6	9.8	22	6.3 37.6	10.6		16.3 4.9	9.0	33	2.1 51.3 Wa
10.8		14.4 45.8	10.6		12.3 42.7	10.6		19.3 10.9	9.2		21.1 26.4
9.0		15.9 22.9 a	8.0		19.3 8.0	10.2		19.3 30.7	8.9		49.6 33.6
9.6		19.4 54.9	9.6		19.3 48.3	9.8		24.6 2.2	8.4		59.9 59.2 9.0 Gb
10.8		28.4 57.9	9.2		28.8 9.1	10.2		36.8 49.9	9.5	34	8.1 20.6
10.6		30.9 49.8	9.0		32.3 20.7	10.2		43.3 30.5	9.8		9.1 32.7
8.6		33.4 41.8	10.2		33.3 30.0	9.8		45.8 47.9	9.6		11.1 9.6
9.5		41.9 40.2	10.7		34.8 49.1	10.4	27	3.3 39.3	9.1		11.6 36.3 9.0
10.3		56.9 35.8	9.8		43.3 12.5	10.7		6.3 23.2	9.6	35	4.6 21.4
9.6	18	2.9 5.2	8.6		49.8 32.4 a	10.2		11.3 51.1	9.4		9.1 38.8
10.6		4.9 16.0	7.8		53.3 53.6 8.5 Gb	10.7		14.8 22.1	10.0		10.1 3.5
8.6		7.9 38.6	9.2		58.3 4.5	10.6		18.3 45.8	7.9		15.6 35.0 8.5 Ga
10.6		9.9 8.3	10.7	23	2.3 4.3	7.7		19.3 14.9 8.5 Gal	9.6		21.1 48.0
7.5		10.9 7.4 8.0 Ga	10.6		4.3 31.7	8.8		23.3 34.7 9.0	10.0		27.1 47.0
10.8		17.9 46.2	9.8		8.3 26.0	8.2		33.0 35.2 8.5	8.6		30.6 20.8 9.0
10.3		20.4 28.3	8.6		9.3 30.9 b	10.0		36.3 4.3	9.6		31.1 35.9
9.6		22.4 31.9	10.0		16.3 41.4	10.4		42.3 54.2	4.4		35.4 1.4 5.0 Gbl
10.6		25.9 39.8	9.4		19.8 39.3	10.8		45.3 15.0	9.8		43.1 59.4
9.6		32.8 15.0	9.6		23.8 16.1	8.9		49.3 35.3	10.0		50.1 46.5
8.8		42.3 16.3 a	10.4		25.8 54.8	9.5		50.0 39.9	8.9		55.1 22.8
10.0		42.3 9.2	10.0		36.3 13.9	10.0	28	0.3 10.3	9.2		57.6 38.6
10.3		44.8 9.8	10.6		42.3 47.3	10.3		2.3 43.2	9.6		57.6 9.4
10.7		46.3 26.0	10.4		42.9 2.4	10.8		2.8 56.7	10.0	36	16.6 17.4
10.6		48.3 32.8	8.9		47.3 17.2 a	9.2		5.3 49.5	7.6		20.3 42.3 a
10.0		55.3 54.6	10.8		53.3 32.0	10.8		6.8 44.4	7.7		25.8 8.3 8.0 Gal
10.7	19	0.8 38.4	10.0		56.4 0.8	10.8		7.3 7.5	9.6		30.8 5.6
7.9		11.8 17.2 8.0 Gal	9.6	24	15.3 37.0	9.2		12.2 26.3	8.7		32.8 41.7 W
9.3		30.3 4.8	9.0		19.8 7.7	9.4		12.5 44.0	9.6		33.8 9.3
9.2		32.3 4.9 a	10.8		21.8 10.1	9.2		13.0 27.1	10.3		35.3 20.2
9.8		46.3 6.7	10.7		23.3 12.0	10.0		25.2 31.9	5.7		35.8 21.3 5.5 Gal
10.7		48.8 20.6	8.0		24.5 58.5 a	10.3		28.9 42.6	9.1		38.8 51.5
10.0	20	3.3 46.4	8.3		25.3 53.3 a	10.3		30.2 3.1	9.6	37	3.3 23.3
10.7		3.8 38.8	7.5		36.3 43.6 GSa	9.6		35.6 55.9	8.4		21.3 19.7 a
10.6		8.8 27.0	10.0		40.3 21.7	10.0		41.1 7.2	10.2		23.3 42.8
9.4		15.3 13.4 a	9.4		42.3 10.8	7.3		49.6 58.9 8.5 Ga	8.7		29.3 54.6 9.0
8.6		22.3 14.0	10.8		44.3 29.9	10.1		51.1 14.5	10.2		32.3 49.3
10.8		23.3 21.4	9.0		49.8 28.4	8.4	29	5.6 38.0 9.0 G	10.1		33.8 49.1
10.7		23.8 58.8	9.5		54.3 26.3	9.1		17.6 28.4	9.8		38.3 50.7
8.6		26.3 26.2	10.7	25	1.3 33.5	9.5		23.1 49.2	9.8		45.8 54.5
9.0		28.3 27.3	9.0		6.8 32.1	10.1		29.6 40.9	10.2		52.3 15.5
9.8		52.8 14.4	10.0		10.8 43.9	8.0		32.1 17.2 8.5 a	9.5	38	7.8 55.5
10.0		53.3 52.0	9.8		13.8 8.3	9.6		41.6 29.4	10.0		12.3 20.6
6.5	21	2.8 37.7 7.0 GSa	10.0		18.3 8.0	9.5		45.1 19.6	8.6		14.3 33.2
9.6		7.3 10.8	8.0		19.8 5.9 Ga	9.4		58.1 27.5	8.0		55.8 0.1 8.0 al
10.0		9.8 12.9	10.2		23.8 43.9	10.0		59.1 6.8	10.3		58.8 1.6
10.8		14.8 7.8	9.8		32.1 0.0	10.2	30	6.1 6.2	8.7	39	16.3 26.7
10.8		19.3 35.6	9.6		36.3 6.1	10.2		34.6 39.9	9.4		24.8 41.2
9.3		21.3 25.7	9.8		36.3 55.6 a	10.2		42.6 8.9	8.8		31.8 31.3 9.0
10.8		22.3 36.6	10.6		39.3 26.8	8.4		51.1 40.0 a	9.6		32.3 18.9
10.4		22.3 59.9	8.9		41.3 33.8	9.2		51.6 23.0	10.3		34.3 21.2
10.0		33.3 41.8	7.9		42.3 47.6 7.5 Ga	9.4		52.6 2.4	9.0		41.3 53.3
10.4		36.3 53.4	10.0		43.8 44.0	9.2		55.1 54.3	10.2		45.4 19.4
10.6		40.3 7.0	9.3		45.8 26.5	8.6	31	11.9 56.5 Wa	9.2		52.8 35.1
10.8		45.3 32.3	9.2		48.3 19.9	8.9		14.1 47.2	8.7		56.3 25.1
25pr.	+ 1	7.4 -6.4	+ 1	7.7	-6.5	+ 1	7.9	-6.6	+ 1	8.3	-6.8

4681-4740.				4741-4800.				4801-4860.				4861-4920.				
mag.	9 ^h .	-23°		mag.	9 ^h .	-23°		mag.	9 ^h -10 ^h .	-23°		mag.	10 ^h .	-23°		
	m s	'		m s	'				m s	'		m s	'			
10.0	40	12.3	59.3	9.5	47	20.6	28.5	10.4	58	5.8	51.2	10.4	5	5.7	9.8	
9.6		16.5	50.7	8.9		25.1	49.5	9.7		8.3	4.9	8.8		9.8	14.9	
10.3		28.0	17.0	10.3		25.8	59.4	10.0		16.8	34.4	8.8		37.8	16.1	
9.2		42.0	5.4	8.2		29.2	5.8	8.5		25.8	30.7	9.7		38.8	5.5	
9.2		52.5	8.5	10.2		37.1	55.1	9.2		31.3	52.0	10.0		51.8	50.4	
9.1	4.1	3.0	21.4	9.1		37.6	44.9	6.4		34.3	40.9	9.6	6	3.4	57.1	
9.2		6.0	7.8	8.6		46.2	31.2	9.0		38.3	19.3	10.4		7.3	5.8	
9.2		7.0	19.0	9.6		46.6	12.3	9.0		53.3	24.9	9.2		26.8	29.2	
9.0		8.5	42.2	9.2	4.8	11.8	5.6	9.6		53.3	21.9	9.4		40.8	0.0	
9.4		9.0	10.3	10.4		12.8	33.3	9.5		55.3	55.4	9.0	7	0.3	12.2	
10.3		10.5	54.2	10.0		13.0	24.2	10.4	5.9	14.3	31.3	9.1		6.3	44.3	
9.4		15.0	14.0	9.4		20.3	16.0	9.8		23.8	25.0	8.8	8	0.0	37.5	
9.0		20.0	33.8	10.2		57.1	24.0	10.0		27.3	59.5	9.5		8.0	23.8	
9.8		25.0	19.0	9.4	4.9	19.3	26.3	10.0		28.6	1.2	9.8		16.3	44.1	
10.3		29.0	38.4	10.2		55.3	20.1	10.4		40.8	26.5	10.4		16.8	23.5	
10.0		36.5	4.6	7.6	5.0	45.8	30.3	10.4		42.3	20.3	7.8		18.0	11.7	
9.2		45.5	10.4	10.4		53.8	13.9	10.4		47.8	59.8	10.3		30.5	43.9	
9.6	4.2	0.0	15.8	8.4		55.8	4.9	10.2		48.3	59.0	8.8		55.2	57.7	
9.4		0.5	35.4	10.2		56.8	0.4	8.0		53.8	33.8	10.0	9	10.7	27.0	
10.3		18.7	39.9	9.7	5.1	14.4	59.4	10.0		0	1.3	4.6	10.2		47.2	49.4
9.5		24.0	40.8	10.4		35.8	20.6	9.1		16.8	21.1	9.3		47.2	21.5	
10.0		24.0	49.0	9.5		51.3	17.0	10.0		29.3	19.3	9.7		51.7	20.5	
9.5		25.5	29.1	10.4	5.2	1.3	4.5	9.1		33.3	29.9	9.0		53.2	6.4	
10.3		31.7	33.6	9.0		22.8	15.0	9.7	1	9.8	27.6	10.3	10	11.7	20.9	
10.1		40.5	42.2	9.4		22.8	59.2	9.8		10.8	11.5	9.8		54.7	7.6	
9.6		47.0	12.2	9.6		35.3	17.2	9.5		11.9	59.2	9.0		22.7	34.2	
9.6	4.3	2.0	11.2	9.5		48.3	3.8	10.4		17.3	1.7	7.9		41.7	15.1	
9.6		3.0	48.4	7.6		49.8	44.4	10.4		49.4	57.6	9.0		43.0	5.0	
10.0		3.0	41.2	9.8		55.8	48.5	8.4	2	3.8	46.3	9.6	12	6.5	55.2	
9.6		3.5	19.4	10.0	5.3	2.3	14.3	8.4		5.3	26.7	10.1		22.0	4.8	
8.7		6.0	4.2	10.0		2.8	40.4	10.2		5.3	7.3	8.8		28.0	6.3	
8.4		14.0	43.3	9.1		12.8	8.5	9.6		6.3	27.3	9.6		32.5	20.0	
9.4		31.5	41.2	10.0		18.8	48.3	9.4		11.3	36.4	10.1	13	32.0	55.1	
9.6		31.5	42.1	6.1		20.3	21.2	9.7		30.3	2.0	10.2		45.8	58.2	
9.2		53.5	4.6	9.4		23.3	41.6	10.4		31.8	55.3	9.4	14	18.5	45.5	
10.3		56.7	44.4	8.5		41.3	0.4	9.4		31.8	18.1	8.8		19.0	8.0	
10.1	4.4	5.5	38.4	9.5		45.8	50.4	9.4		37.3	35.9	10.3		20.5	36.0	
9.5		12.5	3.0	10.4	5.4	13.8	54.7	9.8		40.8	13.5	9.0		40.5	1.1	
8.6		14.0	47.0	8.3		18.8	54.3	9.0		42.3	2.5	8.0		41.2	0.8	
9.0		23.8	59.9	10.0		50.3	0.2	9.7		43.8	7.9	10.0		55.5	28.1	
8.0		28.5	54.4	10.0	5.5	9.8	0.2	9.0	3	5.8	51.5	9.2	15	1.5	23.8	
9.6		31.5	3.4	10.2		11.3	35.6	9.6		9.8	26.5	10.1		28.5	35.5	
10.0		53.8	1.3	9.7		30.3	37.0	9.0		21.8	18.3	7.0		36.0	5.0	
10.3	4.5	4.1	52.5	7.7		56.8	12.3	10.4		29.5	0.5	10.3		49.5	16.3	
10.3		7.0	22.6	9.6	5.6	2.8	27.6	9.8		42.3	41.0	9.4		53.0	5.4	
9.4		23.1	41.5	9.5		7.3	3.6	9.0		50.3	36.2	7.7		59.5	48.3	
9.5		32.6	35.8	9.8		13.8	52.5	8.5		52.3	16.3	10.3		59.8	56.2	
9.6		40.6	6.2	9.4		14.8	54.5	10.4		52.8	44.9	9.0	16	10.5	47.2	
10.2		51.1	15.6	9.7		17.3	30.4	9.6	4	2.3	26.2	9.6		17.5	34.7	
10.0		51.1	10.4	9.6		24.3	49.0	8.8		5.3	21.2	10.3		35.5	54.5	
9.4	4.6	14.1	35.6	10.2		36.8	23.4	10.2		7.3	24.0	8.7		48.5	12.1	
8.2		14.6	38.2	9.0		45.8	27.9	10.4		13.8	35.8	8.8		49.0	8.7	
9.6		17.0	57.1	10.0		47.3	32.5	9.0		17.3	2.3	8.8		49.5	29.5	
10.1		17.0	16.7	10.4		47.3	40.6	9.8		23.8	15.1	9.6		52.5	20.2	
8.4		29.6	20.4	9.5		48.8	56.3	8.8		26.8	4.6	10.0	17	2.5	40.2	
10.2		41.0	39.0	9.0		51.8	24.9	10.0		26.8	51.9	6.9		6.5	42.1	
8.4		42.6	10.8	8.8	5.7	14.3	50.2	10.2		36.2	0.2	10.2		31.0	3.2	
10.3		43.6	54.2	10.0		14.8	13.0	9.6		48.3	43.2	10.1		43.5	31.3	
8.2		49.6	8.4	9.5		25.3	39.6	10.2		52.8	56.6	10.1	18	2.5	19.7	
10.3		59.1	32.5	10.4		26.8	24.9	10.4	5	3.7	17.5	8.9		19.0	48.3	
25pr.	+1	8.6	-6.9	+1	9.1	-7.1		+1	9.6	-7.3		+1	10.2	-7.4		

4921-4980.			4981-5040.			5041-5100.			5101-5160.		
mag.	10 ^h .	-23°	mag.	10 ^h .	-23°	mag.	10 ^h -11 ^h .	-23°	mag.	11 ^h .	-23°
7.5	18 24.0	58.6	10.1	30 14.7	2.1	9.3	55 54.1	55.5	9.8	14 9.7	11.3
10.0	25.5	1.9	9.8	21.2	28.9	9.4	56 2.1	21.3	9.4	39.7	27.2
10.2	29.2	13.5	10.0	25.2	40.9	9.3	32.6	36.5	9.8	47.7	31.7
10.3	30.0	43.9	9.2	27.2	55.1 a	9.6	50.1	56.0	9.8	15 3.3	18.3
10.2	36.5	29.5	10.2	57.2	12.8	8.4	50.6	18.9	9.8	11.0	32.9
9.0	37.0	6.0	10.4	31 7.5	54.5	8.6	57 19.1	6.6 a	9.8	14.9	1.7
10.3	45.2	35.8	9.0	10.7	14.5 =	9.3	40.1	56.6	8.0	16.3	18.4
9.6	53.0	28.4	9.0	17.7	34.9	9.0	58 42.1	54.0	9.5	22.0	33.3
10.3	19 20.5	17.5	10.2	46.7	40.6	9.1	59 4.1	54.6	9.8	38.4	1.7
9.4	41.5	4.0	8.8	32 36.2	53.2 8.5 a	9.4	14.1	36.4	8.0	39.4	30.2 8.5 a
10.3	49.5	26.2	9.0	40.2	23.4	9.0	32.6	19.4	9.0	46.9	31.1
9.2	20 38.5	24.7	9.0	33 16.2	47.8 a	9.1	57.6	48.1	9.8	16 9.8	26.6
10.2	41.5	11.3	8.6	43.0	1.9 9.0-	9.8	59.1	12.6	9.8	17.4	47.7
9.4	43.5	14.0	9.4	34 56.0	53.3 =	9.6	0 33.1	48.9	7.6	23.9	2.8 8.5 MWa
9.4	21 7.0	50.0	9.6	35 10.0	58.6	9.5	33.1	52.0	9.8	33.1	10.5
9.6	21.5	32.8	9.2	13.0	36.5	8.2	51.6	28.4	9.5	35.6	6.3
8.4	25.5	8.8 8.5 a	9.8	36 32.0	9.8	9.8	1 32.8	0.0	9.8	39.4	51.9
10.2	37.5	28.2	9.9	44.5	50.6	8.9	44.1	7.4 9.5	9.2	40.6	14.0
8.5	46.5	25.8	10.4	54.0	15.5	8.4	51.6	10.9 8.5 Ga	8.6	57.9	52.1 -
8.8	53.5	48.4	10.4	37 15.0	45.7	9.0	58.6	55.6	7.6	17 7.7	1.4 8.0 GWbl
8.6	56.5	14.1 9.0 a	9.6	43.0	28.0	9.6	2 0.1	5.5	9.5	45.8	4.4
9.6	22 6.3	59.4	10.0	50.5	16.1	8.8	19.6	51.5 9.0 =	9.5	46.6	13.6
9.4	24.0	37.8	9.2	38 2.0	39.5	9.0	3 10.6	1.2	9.8	18 15.6	36.5
8.6	43.5	45.4 9.0-	10.4	27.0	27.9	9.8	24.1	36.5	9.8	26.4	49.2
8.9	48.0	7.5 a	7.9	29.0	19.7 7.0 GWal	9.6	41.1	42.2	8.6	29.8	48.0 8.5 M=
8.2	49.5	47.6 8.5	9.2	39 1.5	55.7 a	9.3	5 12.1	43.7	9.6	36.4	48.2
9.4	23 3.0	57.2	9.8	24.3	17.1	8.7	6 39.1	8.5 -	9.2	41.8	37.5
10.2	8.5	52.1	10.2	40 8.3	2.6	9.3	43.1	10.4 -	9.7	47.4	56.8
9.2	22.0	38.4	10.2	14.8	21.3	9.8	7 13.1	4.2 -	9.8	50.6	0.2
9.0	32.1	3.0 a	10.4	18.3	47.9	9.1	21.6	43.9 -	9.5	51.4	23.4
9.2	45.5	46.9	9.4	38.8	35.3	9.6	27.6	5.8	9.5	59.8	9.1
10.0	46.0	51.0	9.2	38.8	55.5 8.5 =	9.8	8 24.9	14.4	9.5	19 2.1	41.3
10.0	24 6.5	27.8	9.2	41 2.8	38.5	9.4	46.7	49.1 -	9.8	11.6	42.8
10.2	6.5	35.0	7.9	9.8	53.4 8.2 G=	9.8	9 6.5	42.3	9.4	21.5	0.3
10.1	22.5	17.8	9.3	42 12.8	13.5	9.8	6.8	14.1	9.8	36.8	21.5
8.1	30.0	12.7 -	9.9	30.3	47.5	9.1	12.1	52.1 9.0-	8.8	51.8	32.3 a
8.5	51.5	5.3 -	9.6	36.8	10.5	9.6	18.8	50.7	9.7	55.1	29.2
8.5	56.5	17.9	9.2	43 8.3	46.9	9.8	19.7	46.6	9.8	20 3.2	59.8
10.3	25 6.0	10.9	9.9	32.8	12.5	9.1	51.7	37.8	9.0	4.4	3.3 -
7.8	10.0	32.3 8.5 b-1	9.9	44 7.2	15.5	9.4	53.5	23.9	9.2	8.5	6.5
8.8	21.5	19.4	8.6	45 20.0	1.7 ≡	9.1	10 12.6	57.2	9.8	21.0	22.3
8.8	37.1	2.1	9.9	34.5	7.0	8.2	13.0	22.0 8.5 a	9.6	21.7	14.0
9.4	45.5	34.9	8.6	58.7	42.5 8.5 GWa	9.7	21.7	44.5	9.4	43.5	18.5
8.8	46.5	4.5	10.2	46.42.2	38.1	9.7	29.3	48.9	9.8	46.8	4.2
9.7	46.5	16.7	8.2	47 44.4	40.1 8.0 W-	9.1	42.7	51.0	9.8	56.7	0.4
10.0	56.5	50.9	8.8	48.4	26.3 -	9.8	11 3.8	43.2	9.8	58.0	53.4
8.8	26 3.0	54.7 8.8 a	8.7	55.7	3.5	8.6	13.0	41.9 8.5 ≡	9.8	21 3.6	47.3
9.0	7.0	4.2 G	9.3	48 41.7	31.6	9.4	23.5	7.9	8.8	8.6	7.8 Wa
10.1	21.5	23.3	9.6	49 19.7	8.9	9.8	28.3	22.3	8.2	8.8	28.9 8.0 Gal
8.4	26.5	53.7 8.5 Ga	8.9	28.7	21.4 -	9.5	31.7	9.6	9.5	10.2	56.5
10.0	45.5	38.9	8.3	59.2	22.5 Ga	9.4	39.3	10.5	8.0	16.8	23.9 8.0 Gal
8.9	53.5	40.7 a	9.3	50 49.7	20.7	8.0	39.3	17.4 8.5 Ga	9.6	17.3	22.1
10.0*	27 50.2	58.4	9.3	51 26.0	16.2 -	9.2	54.0	32.5	9.0	23.4	1.5
7.6	28 4.5	6.1 GSlπβ	8.6	45.2	22.2 8.5 Ga	9.7	12 21.7	23.7	9.6	49.3	16.5
7.9	17.5	39.3 8.0 =	9.6	52 27.1	59.8	7.1	27.5	39.5 7.0 GSbl	9.7	56.6	53.0
9.4	33.5	22.5	8.4	30.1	52.6 8.2 Ga	9.2	55.0	13.6 a	9.7	22 6.7	1.0
9.4	29 1.5	33.5 8.0 GWa	8.3	31.1	31.9	9.8	13 12.7	50.2	7.9	10.0	8.2 GMWal
9.4	14.8	19.0	9.8	55 3.6	43.0	9.8	51.7	39.3	9.8	18.9	43.6
9.7	27.2	36.1	9.3	31.6	11.3	9.8	14 3.0	33.3	9.8	23.8	12.1
10.3	37.7	11.6 ?	9.6	40.1	42.8	8.4	8.4	2.5 8.5 GMa	9.8	26.8	48.2
25pr.	+ 1 10.9	-7.6		+ 1 11.8	-7.9		+ 1 13.4	-8.1		+ 1 14.2	-8.2

5161-5220.				5221-5280.				5281-5340.				5341-5400.			
mag.	11 ^h .	-23°		mag.	11 ^h .	-23°		mag.	11 ^h .	-23°		mag.	11 ^h -12 ^h .	-23°	
	m	s		m	s			m	s			m	s		
9.7	22	27.3	16.8	9.4	33	26.5	28.0 a	10.0	43	10.5	26.8	7.6	51	34.2	48.5 8.2 GMa
9.4		29.8	7.5 a	10.0		47.1	12.3	9.6		10.5	18.8	8.4		49.9	13.5 8.0 G=
9.0		58.3	53.3 a	10.0	34	3.3	47.3	10.0		13.2	20.6	9.9		56.2	57.9
9.6	23	2.5	9.1	9.9		21.3	52.1	9.8		41.2	27.7	10.0		57.2	38.4
9.8		5.1	12.5	9.9		30.5	28.2	10.0	44	10.5	10.0	9.2		58.9	38.3 a
9.5		14.6	6.9	10.0		50.7	58.0	9.9		27.2	39.0	9.2	52	6.7	8.2 10.0
6.3		25.8	46.6 6.0 GSb-	9.2		56.3	39.6 8.8 a	10.0		29.9	41.3	10.0	53	14.5	47.3
8.4		37.0	47.7 9.0 Ma	9.3	35	2.5	23.1 Ma	10.0		30.3	0.3	9.7		38.9	30.7
9.8	24	10.3	18.9	10.0		31.8	53.3	9.6		43.4	52.6	10.0		48.9	21.5
9.1		49.8	5.4 b	9.2		39.3	10.2	10.0		49.5	22.9	9.9		58.5	17.1
8.4	25	10.8	36.3 =	7.0		40.8	41.5 7.0 GSa1	9.8		53.0	28.3	9.4		58.5	9.3 a
9.4		18.6	46.7	9.8		43.8	3.7	9.4		55.1	36.2 9.5 M-	10.0		59.9	44.4
9.7		18.6	18.2	9.8	36	8.1	18.5	9.6		55.1	45.0	9.9	54	1.8	59.8
9.8		20.5	42.5	9.9		10.8	28.9	9.9	45	0.4	13.1	7.2		5.9	45.8 8.0 a
8.6		34.3	51.0 8.8 Ga	10.0		13.3	15.9	9.9		6.9	9.1 8.0 Gal	10.0		10.8	45.3
9.8		38.0	49.6	9.8	37	3.8	12.2	9.1		10.8	7.0 9.0 a	9.4		53.6	13.6 9.5 Ga
9.8		38.7	11.6	10.0		11.6	2.4	9.5		20.9	9.0	9.8	55	17.6	25.8
9.8		48.7	35.2	8.3		18.8	31.2 8.5 Ma	10.0		27.7	2.9	10.0		29.2	14.5
9.8		49.9	43.2	9.4		38.8	50.3 a	8.7		31.1	11.6 8.8 a	10.0		29.2	5.4
9.7		59.7	9.3	9.6		43.8	30.6	9.6		40.4	28.9	9.9		34.8	10.5
9.2	26	5.2	51.7	9.6		48.1	36.1	9.9		50.4	20.9	10.0		35.5	15.3
9.8		6.9	1.3	9.6		52.5	31.0	10.0		59.4	15.2	10.0		42.2	48.6
8.2		34.5	13.5 8.5 Ga	9.4	38	0.3	3.5	9.3	46	12.0	21.7	9.4		50.2	4.1 8.5 a
9.4		37.4	54.1	9.6		17.8	19.4	9.8		13.7	13.3	9.6	56	0.2	39.2
8.8		47.2	13.0 8.5 Ga	9.6		31.8	4.7	10.0		17.1	41.6	8.3		6.0	21.8 8.5 M=
9.8	27	3.0	45.4	10.0		35.4	4.2	9.8		21.7	27.3	9.6		14.7	54.7
9.8		23.7	28.2	9.0		52.4	46.9 8.5 GMa	10.0		22.0	19.4	9.5		42.0	19.0
9.6		35.1	59.7	9.4	39	1.1	41.3 9.0 a	8.4		28.7	47.0 8.2 Ga	9.4		59.2	24.4
9.8		40.7	40.1	10.0		38.7	47.1	10.0		35.2	20.0	9.8	57	4.2	52.8
9.6		47.6	46.1	10.0		40.8	29.8	9.2		40.7	41.4	9.0		25.7	42.9 9.0 a
9.7		52.8	33.7	10.0		59.4	46.5	8.1	47	0.0	53.6 8.5 GMa	10.0		26.5	58.9
9.4	28	4.7	52.7	10.0	40	1.1	13.1	9.9		0.3	35.5	10.0		26.5	3.9
8.7		13.5	1.3 M-	10.0		7.2	45.2	10.0		6.2	45.8	10.0		29.3	46.1
9.5		13.8	12.3	8.2		10.7	47.4 7.4 Ga	10.0		10.7	3.7	10.0		35.0	14.2
9.8		45.7	46.7	8.9		33.9	14.6 9.0	9.5		13.2	18.6	9.5		41.3	36.3 10.0
9.8		58.7	58.0	9.9		36.7	44.9	9.3		15.7	12.8 a	10.0		52.6	33.9
8.4	29	4.9	8.6 M-	10.0		42.1	18.2	8.8		31.7	45.9 8.5 Ga	9.4	58	4.5	2.3
10.0		9.8	16.6	10.0		43.9	10.5	10.0		31.7	36.9	10.0		6.3	3.9
8.6		10.1	52.8 Ma	10.0		52.1	11.7	9.6		33.2	27.0	9.6		7.8	47.5
10.0		23.3	14.6	9.8	41	3.7	49.0	9.5		40.7	53.3	9.9		22.8	44.5
9.2		38.1	8.9	10.0		13.0	4.6	10.0		50.2	22.9	9.0		40.0	25.2 9.0 a
8.8		50.8	59.2 a	9.8		18.8	8.2	9.6		55.5	39.0	9.4		43.5	43.0
9.3		51.5	47.9	9.6		27.5	39.0	9.4	48	4.5	33.0	9.2	59	23.5	5.2 8.5 Ga
9.6	30	0.1	20.3	10.0		29.3	28.8	10.0		49.7	15.1	10.0		31.5	0.7
10.0		2.8	6.1	10.0		32.5	0.2	9.5		59.4	12.9	9.9		32.8	8.1
9.6		12.3	31.8	10.0		38.5	33.8	9.6	49	0.7	28.2	10.0		46.5	45.3
7.5		30.8	44.8 7.5 GSa1	9.8		52.5	7.3	9.4		9.0	40.0	9.0		51.3	18.2 9.0 -
10.0		32.2	0.9	10.0		58.0	19.2	10.0		12.7	16.4	9.6	0	14.8	0.3
10.0	31	1.8	2.3	10.0		59.7	1.1	10.0		22.5	40.3	10.0		24.8	24.0
9.8		20.8	36.7	9.6	42	6.5	27.9	10.0		27.2	0.1	10.0		32.8	38.6
10.0	32	3.8	47.3	10.0		7.5	26.3	9.4		29.5	3.0	7.4		37.3	4.3 GSt1π
10.0		4.8	48.2	9.9		10.5	18.1	10.0		48.7	14.0	9.0		39.3	20.7 9.0 a
10.0		10.3	34.8	10.0		17.0	23.9	10.0		52.5	57.6	10.0		59.8	31.6
9.6		10.5	55.9	9.8		20.5	47.9	10.0		7.0	6.6	8.6	1	3.1	26.7 8.0 a
9.2		21.5	9.0 Ma	9.5		22.5	38.4	10.0	51	2.0	30.7 8.2 Ga	7.5		12.3	16.3 7.0 GWal
10.0		25.8	53.0	9.6		22.5	10.7	8.0		11.0	58.6	9.9		15.1	52.9
9.8		29.1	45.6	9.6		44.5	29.9	9.9		13.9	53.1	10.0		19.4	0.7
8.6		48.1	36.7 GMa	10.0	43	1.0	40.4	9.4		22.7	0.1	9.5		23.1	27.0 9.0
10.0	33	12.3	53.9	9.6		2.0	49.2	9.7		25.2	41.9	8.0		39.3	48.8 8.0 M=
9.9		23.8	20.2	9.6		4.8	59.5	10.0		30.2	40.3	10.0		41.3	22.3
25pr.	+1	14.8	-8.3	+1	15.5	-8.3		+1	16.0	-8.3		+1	16.6	-8.4	

5401-5460.				5461-5520.				5521-5580.				5581-5640.				
12h.		-23°		12h.		-23°		12h.		-23°		12h.		-23°		
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s	
9.0	44.5	31.7		9.7	52.0	10.3		9.9	25	11.5	40.0		9.8	36	27.8	50.8
9.2	45.3	38.9		10.0	52.8	56.3		9.8		15.4	41.6		8.4		29.3	9.4
9.3	24.3	55.2		8.9	13	1.7	18.7	9.6		33.3	15.0		10.0		32.3	39.8
9.4	36.8	9.4		9.5	12.2	2.1		9.1		39.8	38.9	9.0 a	10.0		42.0	26.0
10.0	51.3	21.1		9.5	50.1	0.6		9.4		59.3	11.9	9.0 a	9.8		50.0	27.3
8.4	55.8	5.5	8.8 Ga	9.6	51.0	29.9		7.4	26	3.3	30.5	7.5 GMal	9.6	37	1.3	13.2
9.5	58.5	5.2	9.5	9.7	59.7	34.1		9.9		23.0	35.1		9.6		2.6	28.4
10.0	14.5	19.4		9.2	14	0.7	56.9	9.6		29.5	41.2		8.8		10.0	10.0
9.9	36.1	19.5		10.0	5.1	14.4	9.5 a	9.8		36.3	19.8		9.0		12.0	36.0
9.5	40.8	41.2		9.6	8.1	42.8		9.5		40.8	28.2		9.4		32.6	26.3
9.2	40.8	43.8	9.0 a	9.0	22.1	3.7		9.9		9.1	53.1		9.4		53.3	0.1
9.9	50.3	57.2		9.7	29.3	16.3		9.8		35.3	52.8		9.2	38	9.0	21.9
10.0	50.5	42.2		9.2	37.3	19.4		8.6		40.8	35.8	8.5 ME	9.7		13.0	44.2
9.9	4	30.3	40.8	8.6	15	1.8	31.6	9.4		44.8	23.9	8.8 G	9.5		15.3	10.2
10.0	37.5	15.1		9.8	19.1	8.6		8.3		59.7	26.9		9.7	39	0.8	17.6
9.5	42.5	33.5		9.8	31.5	46.2		10.0		5.7	22.5		8.8		5.2	51.1
8.8	5	10.3	4.4	9.6	36.8	39.4		9.2		13.7	35.2	8.8	10.0		10.7	29.7
8.8	15.1	16.0	8.5	9.4	37.6	2.8		10.0		29.5	14.5		9.8		17.2	52.2
10.0	40.3	1.2		9.6	41.5	31.9		9.6		7.4	15.0		9.4		17.9	44.0
10.0	46.1	12.3		9.9	51.1	23.8		9.2		20.2	8.8	9.0 a	9.9		20.9	8.6
9.9	49.3	3.2		7.4	58.1	32.4	7.5 GWal	9.4		23.4	59.3		10.0		28.4	57.0
9.5	51.5	22.7		9.2	16	12.8	23.7	9.8		31.9	42.9		10.0		31.9	25.0
9.6	58.8	7.1		10.0	17.8	52.2		10.0		33.9	4.7		10.0		32.8	5.6
9.9	6	6.8	25.7	9.6	21.8	37.8		9.8		41.0	17.5		9.9		47.4	34.6
10.0	9.3	16.1		9.6	27.8	41.7		10.0		59.9	7.8		10.0		50.2	27.0
9.0	28.5	48.3	9.0 =	9.0	32.2	31.8	a	10.0		1.2	49.8		9.8		56.2	11.8
9.7	29.3	57.9		9.6	34.8	31.3		8.0		21.2	27.6	7.8 Ga	10.0	40	5.4	53.6
10.0	44.5	13.9		10.0	39.1	23.5		9.9		22.2	20.4		9.8		18.9	51.9
9.5	51.3	49.3		9.9	52.1	50.2		9.9		47.5	48.1		9.8		38.2	36.2
9.6	7	1.5	45.1	10.0	52.5	28.8		9.4		52.5	17.1		10.0		40.3	0.3
9.2	18.5	33.1		10.0	57.6	2.5		9.1	31	1.9	17.8		9.6		44.4	50.2
9.9	20.8	6.9		9.8	17	3.8	8.1	9.4		8.0	43.0	9.5	9.8		46.2	54.1
10.0	41.3	11.5		10.0	6.3	20.0		9.4		31.7	29.9		9.4		51.6	55.9
10.0	49.3	7.9		8.3	36.6	33.0	8.5 Wa	10.0		37.5	50.4		10.0	41	27.4	21.7
9.5	49.3	20.9	-	9.2	40.8	50.3	a	9.4		43.9	16.3	a	10.0		31.2	11.3
10.0	52.0	24.5		9.1	18	19.1	8.6	9.9		49.5	1.5		10.0		32.2	22.7
9.9	8	0.8	22.4	9.8	23.5	38.5	8.5 a	9.8		58.2	26.7		9.8		32.6	57.9
10.0	13.0	18.9		9.6	28.1	46.0		10.0	32	8.9	22.7		9.9		48.2	59.4
10.0	15.8	35.4		9.9	39.3	18.2		9.6		19.2	38.9		10.0		52.2	44.8
8.7	59.2	5.5	a	8.7	47.1	41.9	8.0 Ga	9.2		42.2	21.2		10.0		53.9	6.6
9.2	9	22.0	8.9	9.5	19	1.8	52.2	9.9		44.7	10.7		10.0		55.6	5.6
9.5	23.7	52.1		10.0	16.8	44.4		10.0		47.2	38.6		10.0	42	7.1	2.8
8.9	38.8	25.0	a	9.5	19.1	4.7		9.0		54.3	20.6	9.5 -	9.6		8.9	33.6
9.8	58.2	35.5		9.4	20.3	40.6		7.8	33	0.0	7.4	8.0 Gal	10.0		17.2	31.0
10.0	10	34.2	37.0	10.0	39.1	12.7		9.5		23.0	36.2		10.0		17.8	2.9
10.0	49.2	18.1		8.1	49.1	34.7	8.0 GM≡	9.9		58.8	28.8		9.4		55.2	37.8
10.0	59.2	35.6		9.5	20	30.5	46.2	9.8		12.3	37.8		8.6	43	0.6	43.8
9.7	11	1.7	3.8	9.8	53.8	11.9		9.6		13.5	38.5		9.6		4.4	29.4
9.6	5.0	50.6		10.0	21	38.8	53.2	9.8		14.0	6.8		10.0		12.7	58.3
9.6	5.8	19.3	9.2	10.0	22	47.1	14.9	10.0		49.0	49.4		9.7		25.7	7.1
9.9	13.5	52.1		9.4	49.8	29.5		10.0		56.3	14.0		9.7		28.4	16.1
9.6	16.2	17.9		9.9	23	4.1	27.7	8.6		6.3	11.0	8.5 Ga	10.0		38.9	42.9
7.4	28.2	19.0	7.0 GWal	9.4	20.3	6.8		9.4		17.0	0.3		8.5		40.9	31.9
10.0	49.5	48.2		10.0	24.8	45.9		10.0		19.1	16.4		9.6		49.2	3.6
9.4	12	2.5	1.1	9.8	27.3	4.1		9.7		42.6	11.6		9.2		49.9	34.0
9.0	9.2	26.1	8.5 Ga	7.3	45.5	0.3	6.0 GWtr	8.2		58.6	55.7	9.0 a	9.6		51.2	38.4
9.8	26.5	41.3		9.8	56.8	51.8		9.4	36	3.3	33.4		9.5		51.9	15.7
9.0	37.8	1.6	-	10.0	24	19.5	55.1	9.8		9.0	14.6		10.0	44	11.2	15.5
10.0	45.5	40.8		9.9	19.8	11.7		9.0		13.6	43.2	a	9.8		18.9	32.9
10.0	50.0	21.9		9.6	25	0.8	9.5	9.5		24.8	49.9		9.6		19.3	2.1
25 pr.	+ 1	17.2	-8.4		+ 1	17.9	-8.3		+ 1	18.8	-8.3			+ 1	19.5	-8.2

5641-5700.				5701-5760.				5761-5820.				5821-5880.			
12 ^h -13 ^h .		-23 ^o		13 ^h .		-23 ^o		13 ^h .		-23 ^o		13 ^h -14 ^h .		-23 ^o	
mag.	m s	'	''	mag.	m s	'	''	mag.	m s	'	''	mag.	m s	'	''
10.0	44	24.9	42.4	9.1	3	50.4	20.7 a	9.0	32	21.7	19.2	9.4	51	15.6	34.3
10.0		30.9	49.9	8.8	4	0.4	41.3 8.0-	10.0		45.7	37.5	9.2	52	16.5	39.1 9.0-
9.9		52.6	4.0	7.8		3.9	30.7 7.5 Ga	9.8	33	9.7	6.6	9.4		46.5	59.7
10.0		55.9	17.9	7.9	5	6.9	54.3 8.0 Gal	10.0		14.5	51.1 a	9.1	53	33.0	23.7
10.0	45	0.9	28.7	9.6		12.9	56.1	8.5		17.2	37.7 8.5 G-	10.0		46.5	21.1
9.8		7.9	25.9	10.0		17.1	53.2	10.0	34	50.7	6.7	8.4	54	23.0	12.7 9.5 a
10.0		18.9	16.8	9.6		40.4	52.6	9.3	35	25.6	29.6	9.9†		46.1	57.5
10.0		29.2	46.0	9.4	6	16.9	50.3	8.4		29.6	44.6 -	9.1		54.0	47. a
9.2		40.6	55.0 9.5	9.4		22.4	54.1	8.7		42.6	54.8 9.2-	9.2	55	16.0	42.3 -
10.0		56.9	1.6	6.9	7	41.9	37.3 7.0 GSbl	9.3		54.6	55.4	8.8		17.0	12.2 9.5 a
9.0	46	3.5	34.0 a	8.2	8	8.4	11.5 7.5 Gb-1	8.8	36	4.6	35.8 a	10.0		56.9	44.2
9.6		10.3	3.0	10.0		20.4	32.1	9.4		11.6	12.0	8.4	56	43.9	32.6 a
9.8		19.7	47.6	7.6		33.4	20.3 8.0 G=	9.3		16.6	8.6	9.4	57	18.5	49.8
10.0		22.4	10.7	8.4		35.9	31.0 M	9.4		31.6	56.6	9.6	58	11.5	41.1
9.6		36.2	12.8	9.4	9	9.7	30.9 -	9.6		37.6	10.8 a	10.0	59	14.0	43.9
10.0		49.3	2.6	10.0	10	26.7	5.8	9.6		45.6	54.6	8.4		29.0	5.7 9.5 Ga
10.0		55.3	45.4	10.0		42.7	13.2 G	9.4		49.6	7.0	9.6	0	12.5	56.9 9.0
9.6		59.2	5.7	9.1	11	5.2	39.6 Ga	10.0		55.6	10.0	8.4		19.0	17.7 a
9.7	47	1.1	2.8	9.4		15.2	13.8	10.0	37	6.6	27.1	9.8		40.5	5.3
9.9		21.4	36.3	9.3		15.2	30.0 a	9.6		25.6	32.6	8.8	1	6.7	58.1
8.7		46.8	54.2 8.7 b	9.0		44.2	28.3 a	10.0		28.1	0.9	8.9		22.5	19.8 a
9.8		58.9	13.2	10.0†	12	18.5	58.2	9.6		39.1	30.7	9.4		47.0	29.7 9.2 Ga
10.0		59.2	59.9	10.0†		25.0	59.0	9.0		40.6	25.9 a	10.0	2	6.8	53.3
10.0	48	3.1	15.9	8.2		34.2	57.7 8.0 Gal	9.4	38	18.4	58.4	8.8	3	0.0	58.6 a
9.6		4.2	10.7	9.0		35.7	0.1 a	9.0		36.6	19.9 a	9.1		14.5	23.2
9.6		16.3	4.7	9.6		44.7	27.8	8.6	39	12.6	34.6 a	10.0		38.6	0.0
9.6		27.4	12.2	10.0	13	5.7	16.0	9.3		22.6	48.7	9.2		50.0	23.0
9.6		29.6	45.4	8.8		31.7	51.0 8.0 SWa	9.4		25.6	42.8	8.4	4	14.0	3.1 8.0
9.8		40.6	38.0	8.3		57.7	6.3 7.5 GWa	9.0		38.6	43.4 a	9.2		33.0	16.7 G
8.6		42.4	1.6 a	8.2	14	15.7	48.9 7.0 GSal	9.6		59.6	2.6	10.0		37.0	43.9
9.8		52.4	50.7	9.0		26.2	44.2 a	9.6	40	11.6	37.8	8.9		46.0	47.7
10.0	49	21.9	27.7	9.2		16	5.7 0.8 =	10.0		51.1	8.8	10.0		48.5	48.2
7.9	50	1.9	46.3 8.8 Gal	10.0		17	5.2 6.8	9.3	41	3.6	9.2	9.8		56.0	48.0
9.6		6.9	52.9	9.4		11.9	59.9 9.0 a	9.4		16.6	37.2	8.4	5	4.5	6.7 8.0 G
8.4		22.9	52.5	9.6		18	33.2 8.1 a	9.4		22.6	32.3	7.4		20.0	46.3 6.8 GSbl
9.6	51	11.9	16.0	8.8		19	52.2 38.3 8.5 a	9.6		23.1	26.8	9.4		37.0	31.9
9.8		16.4	58.3	9.6		20	6.4 49.8	9.4		24.1	1.1	10.0		56.0	31.0
9.8		34.4	22.4	8.8		14.9	38.3 8.5 a	8.5		32.6	13.6 8.5 a	10.0	6	6.0	30.1
9.6		41.4	48.7	9.8		15.7	3.4	10.0	42	9.2	56.6	9.2		14.5	35.0
9.4		53.4	46.3	9.3		34.7	56.5	9.2	43	45.1	43.6	9.2	7	0.3	14.7
7.3	53	31.4	14.3 8.0 GWal	8.8		21	19.4 24.4	9.2	44	4.6	17.8	10.0		18.5	56.0
9.4		32.9	29.7	8.8		23	28.9 47.3 a	6.8		26.6	45.6 7.0 GSbl	9.4		31.0	1.5
8.8		33.4	26.6 a	7.8		39.4	0.2 8.0 GWal	10.0		45.6	16.2	9.1	8	3.5	37.6 8.5 a
10.0		33.4	36.0	9.3		24	33.4 19.8	9.1	45	4.8	0.3	9.6		25.3	54.5
10.0	54	36.4	38.4	9.4		25	22.4 12.1 -	9.2		25.6	18.6	10.0	9	21.5	58.0
6.8		53.1	59.6 7.0 GSal	9.4		26	15.9 32.5	10.0		54.1	52.3	10.0		30.1	26.1
10.0		55	24.4 49.2	9.4		23.2	2.6	9.6	46	9.6	7.3	9.2		57.7	1.6
8.6	56	22.9	28.6 8.5 =	9.2		25.4	39.2 8.5 M=	9.3		30.6	6.1 9.0 a	10.0	10	17.6	8.7
9.4		30.4	22.6	9.8		31.9	59.1	8.8		49.3	12.1	10.0		19.7	52.3
9.0		43.9	44.8	9.2		38.9	46.1 9.0 -	9.0	47	19.8	16.6	9.2		31.6	21.5
10.0		45.6	16.1	9.0		28	2.7 47.9 a	9.6	48	7.0	48.6	10.0		33.0	51.1
9.0	57	7.9	49.7 9.0 -	9.2		29	20.3 0.8	8.1		13.0	3.2 8.0 Gal	8.4		35.5	58.7 8.0 -
7.6		12.4	50.7 7.5 GSbl	10.0		27.7	31.5	9.8		15.0	56.0	9.3	11	11.0	44.6 9.0
10.0		42.9	51.9	10.1†	30	6.2	59.6	9.8		48.5	45.0	8.8		48.5	43.8 9.5
9.6	1	26.4	2.6	9.0		19.7	14.6	9.4		52.5	41.6	10.0	12	2.5	8.1
8.2		47.4	0.7 8.0 Ga	9.1		22.2	16.7	9.4	49	4.0	22.7	9.3		6.5	27.5
7.7		55.9	9.2 7.0 GWal	10.0		48.4	58.3	9.2		55.6	13.5	8.8		23.0	41.1 9.0 -
10.0	3	6.5	53.9	8.8		56.7	29.5 -	7.5	50	6.1	48.1 8.0 Ga	10.0		41.5	57.5
8.2		35.9	11.7 Wa	10.0	31	16.2	12.3	9.4		15.3	33.7	9.4		53.0	34.2
8.8		45.4	15.6 a	7.8		22.7	3.3 8.0 GWal	10.0		55.6	35.7	10.0	13	17.0	40.9
25pr.	+ 1	19.9	- 8.2		+ 1	21.4	- 7.9		+ 1	23.0	- 7.6		+ 1	24.4	- 7.1

5881-5940.				5941-6000.				6001-6060.				6061-6120.			
14 ^h		-23 ^o		14 ^h		-23 ^o		14 ^h		-23 ^o		14 ^h -15 ^h		-23 ^o	
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s
13	30.0	55.9	7.5	26	27.6	29.7		44	53.0	43.3		57	54.9	12.4	
	38.5	30.6		9.2	29.1	20.1		8.2	45	8.0	26.2	10.0	57.3	19.8	
14	11.5	10.0	7.5	9.4	36.1	0.5		6.8		24.0	36.2	8.5	58	3.6	17.2
9.6	21.0	27.2		8.6	37.6	47.7	8.5	9.8		35.0	46.7	10.2	6.0	38.5	
10.0	28.5	41.2		10.0	59.6	5.1		9.0		47.5	57.3	9.4	11.0	11.8	
10.0	50.0	5.0		10.0	27	14.5	34.4	9.2		51.5	13.6	10.2	11.8	14.9	
10.0	57.0	56.2		9.4	17.6	8.7		9.2	46	16.5	58.2	10.2	14.0	2.7	
10.0	41.6	53.1		10.0	22.6	21.3		6.8		40.5	27.7	7.4	53.6	38.5	7.0
9.6	0.1	4.7		9.6	22.6	13.7		9.6	47	5.2	45.8	8.7	59	6.0	29.1
10.0	1.6	32.5		8.7	28	20.6	47.7	9.5	9.9	41.5	16.2	9.0	23.0	17.0	a
9.4	12.1	57.5		10.0	57.8	26.1		9.0		47.7	9.2	9.0	36.0	8.3	a
10.0	17.1	4.9		8.8	29	4.5	50.7	9.9		57.6	16.4	9.5	49.0	51.2	
10.0	21.1	13.1		10.0	11.2	52.7		9.9	48	11.7	1.1	7.8	59.7	42.5	7.0
9.4	42.1	14.7		8.7	15.7	36.1		10.0		24.7	2.6	9.8	0	2.5	42.3
10.0	44.6	36.1		9.2	32.2	55.9	9.5	7.6		33.5	46.2	10.2	15.4	26.8	
9.3	54.6	50.2		8.0	50.7	29.6	9.0	9.4		34.8	0.1	10.0	18.3	41.6	9.5
9.2	59.6	18.8		9.9	54.2	27.2		9.9		49.5	45.6	10.1	20.4	17.1	
8.4	6.1	22.8	9.5	9.9	55.7	42.6		10.0		49.9	58.5	10.2	25.0	1.4	
9.2	8.6	51.2		9.9	30	12.6	45.7	10.2	49	10.9	30.9	9.5	31.8	7.2	
10.0	29.1	12.7		9.4	20.2	16.8		7.8		16.9	45.1	9.2	53.8	29.4	a
10.0	3.6	49.7		9.9	32	25.7	3.1	10.2		27.6	30.0	10.2	1	6.0	45.1
8.4	32.1	24.9	9.0	8.7	52.2	33.7	8.5	9.2		30.9	18.0	10.0	19.0	47.1	
9.4	37.6	10.0		8.4	33	18.7	47.1	9.2		42.1	51.7	9.8	30.3	15.9	
9.0	46.1	18.4		7.4	40.7	31.0	7.5	10.0		44.1	42.4	10.1	44.0	18.7	
8.7	0.1	28.1		9.9	34	8.7	26.9	10.1	50	3.7	50.1	10.2	5.0	3.5	45.0
8.0	11.6	38.8	8.0	9.9	54.7	38.2		9.1		10.4	13.0	9.8	57.0	25.8	
9.6	25.6	3.6		7.4	35	42.5	57.4	10.0		23.4	1.9	10.2	2	11.4	56.5
10.0	32.6	8.1		9.9	36	3.2	44.3	8.9		39.4	0.5	9.9	17.0	29.3	
10.0	34.6	33.2		7.7	18.2	55.6	8.5	9.2	51	30.9	20.9	9.8	23.4	57.3	
9.2	35.1	32.8		9.8	36.2	57.1		9.8		42.1	16.1	7.6	33.3	30.3	7.0
8.8	44.1	29.4	9.0	9.4	42.7	43.5		9.9		44.9	8.0	10.0	33.8	18.9	
9.4	12.2	13.8		7.8	42.7	32.7	b-1	10.1		59.4	3.6	9.4	53.0	13.5	
9.4	21.7	51.7	G	7.3	37	6.0	35.8	10.2	52	1.9	14.1	9.8	3	11.0	30.1
9.8	57.2	37.7		9.8	30.3	6.5		10.2		13.2	50.1	10.2	26.6	35.9	
9.2	3.7	14.1		9.8	32.0	25.0		10.1		33.1	35.0	10.2	29.0	56.6	
9.3	3.7	34.4		8.9	36.5	20.8	8.0	10.2		56.1	57.7	9.5	34.8	5.7	
9.0	5.7	11.8		9.2	57.0	48.1		8.6		58.7	51.1	8.9	36.9	32.6	9.5
8.6	38.2	15.1	9.5	8.6	38	7.5	24.7	8.8		59.4	5.7	10.0	48.5	16.6	
8.4	42.7	29.7	G	9.9	26.3	36.9	9.0	9.8	53	4.6	57.3	10.2	49.9	14.6	
10.0	55.2	25.1		9.9	39	46.0	23.8	10.1		7.4	2.4	9.4	4	20.9	9.5
9.4	57.7	12.2		9.8	54.0	43.8		9.4		7.7	27.9	9.8	58.5	17.0	
9.6	58.3	59.4		8.9	40	13.0	32.1	9.0		21.9	32.0	9.8	5	33.7	14.8
10.0	1.2	24.8		9.4	17.7	3.0		10.1		40.6	53.2	10.2	41.2	47.7	
8.6	50.2	47.2		9.2	19.0	40.5		9.8		40.9	24.6	9.8	50.2	37.8	
9.2	54.2	41.9		9.2	41	33.0	49.6	8.8		41.9	33.1	9.2	52.5	23.3	
8.8	4.7	43.8		8.0	42	3.0	44.5	9.6	54	0.9	54.4	10.2	53.6	1.1	
9.2	28.2	46.9		8.6		3.5	10.1	9.4		5.9	12.1	6.5	59.5	32.2	6.5
10.0	35.7	3.3		6.9		5.0	43.7	9.6		12.0	0.5	9.8	59.7	44.5	
9.4	5.7	33.4		9.4		18.0	27.4	9.5		17.1	32.2	9.8	6	0.2	41.9
8.8	7.2	28.7	9.0	9.9		20.3	11.6	10.2		30.9	17.8	9.6	1.7	51.5	
10.0	8.2	29.1		7.9		43.0	42.0	9.9		33.1	11.8	9.9	10.2	21.3	
9.4	13.7	26.0		7.9	43	4.5	54.6	9.0		35.4	30.4	10.0	15.9	6.2	
8.4	26.2	38.0	8.5	8.8		18.5	4.9	9.8		39.8	1.4	9.0	18.5	26.2	9.0
9.0	37.7	3.3	b-1	9.9		36.0	29.6	10.0		49.9	33.6	9.4	20.7	15.0	
9.4	42.7	21.9		9.9		52.5	47.0	10.2		52.1	34.3	8.0	29.7	4.4	8.0
8.4	43.6	52.3	8.0	9.4		57.5	43.1	10.2	56	30.4	21.2	10.0	31.2	50.0	
9.2	52.6	21.0	Gb	8.0	44	2.5	20.3	10.2		34.8	14.7	7.8	33.5	54.5	7.5
7.6	2.1	27.9	7.5	8.8		24.5	16.1	8.3		57	5.9	9.8	7	10.0	4.1
9.7	25.6	28.2	Gal	8.0		34.0	46.5	10.1		53.1	0.9	9.2	13.7	47.3	
10.0	25.6	32.2		9.8		52.0	44.7	9.2		53.8	19.8	10.2	27.2	54.5	
25Pr.	+1	25.2	-6.8			+1	26.0	-6.5		+1	26.7		+1	27.2	-5.8

6121-6180.			6181-6240.			6241-6300.			6301-6360.		
mag.	15 ^h .	-23°	mag.	15 ^h .	-23°	mag.	15 ^h .	-23°	mag.	15 ^h -16 ^h .	-23°
10.2	7 55.9	42.8	8.4	20 21.6	57.3	6.7	32 53.6	24.4	8.8	54 12.2	58.3
9.9	8 0.2	46.7	10.1	41.1	10.3	9.2	54.6	44.8	10.2	34.2	10.0
9.2	13.4	21.3	10.0	42.5	18.1	9.6	33 12.9	28.4	9.6	42.7	28.8
9.5	15.4	25.8	9.6	53.0	5.2	9.3	15.6	51.0	9.2	55 7.2	19.6
9.8	16.1	52.9	10.0	56.5	55.2	10.0	25.1	40.1	9.2	13.2	54.0
9.8	25.7	51.1	9.5	21 12.7	1.4	8.8	35.6	55.0	10.2	14.7	6.9
9.4	28.7	29.5	9.5	23.2	0.3	7.5	50.7	59.7	8.7	28.7	49.3
10.2	39.2	38.4	9.5	23.5	37.8	10.0	52.6	47.0	9.4	35.2	48.5
9.8	41.4	32.5	10.1	32.5	58.0	7.4	34 33.1	53.8	9.6	59.0	59.3
10.1	50.2	16.1	10.0	33.5	26.0	8.9	35 35.1	51.9	10.2	56 15.2	55.7
10.2	55.7	14.1	8.6	47.0	15.8	10.0	36 2.1	19.4	9.6	46.2	13.3
7.0	9 29.0	32.7	10.0	22 2.0	1.9	7.1	52.6	59.9	8.9	51.7	24.1
10.2	10 5.7	47.8	8.7	23.5	39.5	8.4	37 16.6	48.7	9.4	57 29.2	16.9
10.2	12.0	29.0	9.2	27.0	7.8	8.4	38 5.6	6.8	10.2	35.7	38.8
9.9	12.2	40.2	9.6	29.8	30.9	10.0	16.6	46.2	9.2	41.7	41.8
9.2	24.7	58.1	8.0	31.5	36.5	10.0	28.6	40.0	7.4	52.2	19.3
9.2	44.7	0.8	9.2	54.0	48.3	9.0	57.1	38.9	9.2	58 1.2	45.0
10.2	11 9.7	56.9	10.1	55.8	25.4	9.8	39 5.6	31.0	8.0	6.6	52.8
8.4	16.2	47.3	9.8	58.5	35.2	10.0	17.1	37.2	10.2	10.0	45.4
9.2	25.1	22.0	9.5	23 12.0	52.2	9.2	40 2.1	58.5	9.0	25.1	2.0
9.5	45.1	29.3	9.5	38.0	31.2	9.3	39.5	24.4	6.1	39.6	15.8
7.0	50.1	48.5	8.8	43.5	0.2	10.0	49.0	40.8	9.4	59 24.6	18.3
10.1	59.6	37.9	7.9	46.0	13.4	9.0	49.0	17.6	10.2	25.1	28.3
10.1	12 13.6	1.3	9.5	24 9.0	47.3	9.7	41 2.5	38.6	7.8	26.1	48.8
9.4	16.6	18.1	8.8	22.5	55.1	6.3	3.0	26.8	9.0	31.1	33.0
7.1	20.6	48.9	9.0	37.0	26.9	8.2	26.5	17.9	7.9	0 2.1	36.6
10.2	27.1	51.2	8.8	53.5	46.7	9.4	51.5	27.3	10.2	16.6	40.5
10.2	46.1	6.3	7.9	53.5	27.1	10.0	57.5	43.2	8.4	42.6	30.8
9.6	13 11.6	28.5	9.0	25 3.0	2.9	9.5†	42 0.8	58.3	9.4	44.6	27.3
10.2	23.6	59.0	8.6	12.5	29.7	9.5†	44.2	59.8	10.2	54.6	9.2
9.6	24.6	36.5	9.0	13.5	0.2	9.4	43 6.5	46.4	9.6	1 11.7	1.6
9.5	44.1	5.1	9.4	27.0	56.9	8.2	18.5	37.2	6.2	15.6	21.0
10.2	49.1	56.2	10.0	44.5	21.7	9.5†	44 26.3	59.4	10.2	22.1	31.0
10.2	14 13.1	48.4	8.4	54.9	2.5	9.0	31.0	32.0	9.4	2 10.1	28.0
10.2	16.6	46.9	10.0	26 35.8	44.1	9.3	31.5	33.3	9.4	3 16.1	6.3
10.2	17.1	55.8	10.2	36.0	55.1	9.4	45 22.0	5.4	7.8	4 41.1	35.7
10.1	39.1	14.0	9.6	39.8	46.4	5.7	46 29.9	36.3	9.0	5 27.6	0.4
9.8	52.6	47.3	8.6	53.7	48.7	9.2	47 11.1	34.3	10.2	38.8	0.6
9.6	56.1	10.4	10.2	27 9.5	15.1	8.4	34.1	24.9	10.2	6 12.1	23.6
9.4	15 2.6	20.6	8.3	38.7	44.1	8.2	45.1	58.2	7.8	17.1	56.2
9.2	8.1	51.2	9.4	57.0	25.2	10.0	48 13.7	0.0	10.2	26.0	1.3
8.1	8.6	38.5	9.2	28 18.4	43.1	9.4†	27.6	55.7	8.0	33.0	27.2
10.0	21.6	25.6	8.4	22.2	53.4	7.9	43.3	31.3	8.3	33.6	50.8
10.1	22.6	53.6	9.8	37.5	47.0	7.7	43.8	6.4	9.6	7 5.1	49.8
10.2	26.6	2.0	10.0	29 3.9	1.1	8.7	49 9.9	58.2	9.4	21.6	0.9
9.8	43.6	18.4	7.8	12.5	34.6	9.6	18.4	44.0	8.5	40.6	26.4
9.6	43.6	50.6	8.3	15.5	38.6	6.9	50 22.4	9.7	10.2	47.2	14.2
8.2	17 12.6	55.4	8.7	35.9	53.9	9.6	44.2	58.9	10.2	8 3.2	18.4
9.6	30.6	46.3	8.2	49.9	14.1	9.8	46.9	6.8	10.0	25.9	36.8
8.0	32.1	3.8	9.3	54.3	59.8	10.0	51 4.2	48.9	10.0	48.9	20.8
8.2	47.1	13.4	10.0	30 28.9	24.3	8.4	11.4	32.4	7.0	56.2	58.1
10.2	53.6	1.0	10.0	29.9	20.9	7.6	52 4.9	50.0	9.3	9 3.4	26.4
8.2	18 10.1	14.5	9.4	33.1	16.5	9.4	11.7	36.2	10.0	13.4	53.2
10.0	26.2	59.2	10.0	44.6	53.1	10.2	21.7	32.2	8.3	45.2	54.7
9.2	46.1	38.2	8.8	31 46.1	32.9	9.6	51.2	10.5	8.4	58.6	1.9
9.2	57.6	37.1	7.7	32 13.1	23.4	9.2	54.7	22.3	9.2	10 7.7	33.0
10.1	19 26.6	12.0	9.0	20.1	18.8	8.8	53 31.2	16.3	9.0	9.0	16.9
8.6	27.6	42.2	8.2	28.6	3.7	8.0	40.2	54.7	10.0	11 21.9	31.9
10.1	35.1	48.1	10.0	28.9	8.6	8.5	49.7	40.3	9.6	28.0	0.3
9.5	55.1	9.8	9.2	52.1	11.0	8.8	54 5.7	56.0	10.0	34.6	56.1
25Pr.	+ 1 27.7	- 5.6		+ 1 28.2	- 5.2		+ 1 28.8	- 4.7		+ 1 29.4	- 4.1

6361-6420.				6421-6480.				6481-6540.				6541-6600.					
16 ^h .		-23°		16 ^h .		-23°		16 ^h -17 ^h .		-23°		17 ^h .		-23°			
m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.		
9.9	12	13.4	9.8	48	40.6	38.0	9.8	59	8.5	34.3	10.2	6	7.1	57.0	10.2		
9.9		41.4	9.1	49	3.8	0.8	9.1	9.2	12.2	57.1	8.2		9.4	54.0	9.2		
5.6	13	7.4	9.9*		3.8	32.0	9.9*	9.2	39.0	2.7	9.4		25.4	20.9	9.4		
9.4		27.4	9.9*		11.8	55.1	9.9*	9.2	46.5	10.2	9.5		27.4	20.4	9.5		
6.9	14	16.9	9.8		12.0	37.0	9.8	10.2	48.5	14.1	10.2		30.4	11.0	10.2		
9.6		14.7	9.5		14.3	52.7	9.5	10.2	57.0	10.1	9.6		40.4	5.3	9.6		
8.3	16	43.4	9.8		21.3	9.2	9.8	9.6	0	2.5	36.9		43.4	48.6	10.2		
7.0	17	54.9	9.2		22.6	22.1	9.2	9.4	3.4	2.1	2.1		45.4	32.8	9.6		
4.9	18	5.4	9.1		23.1	22.5	9.1	10.2	22.9	13.7	13.7		56.4	12.4	9.8		
7.4		6.4	9.2		25.8	47.3	9.2	10.2	22.9	44.7	44.7		57.4	16.9	9.6		
9.0	28	44.7	9.8*		49.5	37.4	9.8*	9.1	23.9	17.4	9.5 -	7.5	7	11.1	54.7	8.3	
9.9	30	11.9	9.4	50	2.8	7.2	9.4	8.0	36.4	30.2	9.0 ≡	9.8		12.4	18.6	9.8	
9.9		40.5	8.4		27.3	22.6	8.4	10.2	40.4	14.2	9.0 =	10.2		19.4	7.5	10.2	
8.4		42.0	9.1		39.4	48.8	9.1	8.8	51.9	25.5	9.0 =	9.6		35.2	35.5	9.6	
9.9		53.0	9.1		41.3	24.3	9.1	8.2	1	1.4	3.7	10.0		42.4	8.9	10.0	
8.1	31	0.5	9.2		54.5	29.6	9.2	9.8	6.4	45.0	9.0 Ga	9.5		45.2	44.1	9.5	
8.6		45.0	9.8	51	2.8	40.9	9.8	8.7	10.4	50.1	8.2 Gal	10.2		53.9	36.8	10.2	
9.6		53.0	9.5		11.3	37.9	9.5	7.5	21.9	49.6	9.5	10.2		55.9	32.8	10.2	
9.9		58.0	7.8		12.3	47.4	7.8	9.1	46.9	44.6	9.5	8.6	8	52.4	37.7	8.6	
9.9	32	40.0	8.2		18.3	32.9	8.2	9.2	52.4	23.2	9.5	9.6	9	30.8	0.4	9.6	
8.1		45.0	10.2		22.3	41.0	10.2	8.8	53.9	0.4	a	9.6		38.4	17.2	9.6	
8.8		52.0	9.8		33.3	10.4	9.8	9.5	55.4	33.9	9.0 =	9.8	10	15.4	29.8	9.8	
8.3	33	42.5	10.0		52.5	21.5	10.0	10.2	57.5	52.1	9.0 =	10.2		25.4	1.6	10.2	
9.4	34	43.0	9.6		58.5	16.8	9.6	9.0	59.9	24.2	9.0 =	7.4		29.4	55.9	9.0	
9.2		56.0	9.4	52	5.5	53.2	9.4	9.4	2	17.4	32.5	8.5	11	19.0	51.7	9.4	
8.9	35	23.6	8.7		56.5	24.2	8.7	9.0	26.2	59.3	9.5 G	8.6		22.0	52.8	9.0	
9.6		32.1	10.0		57.0	16.7	10.0	9.2	26.4	45.2	9.0 a	9.8		37.8	27.8	9.8	
9.4	36	1.2	9.1	53	0.0	34.3	9.1	8.4	27.9	51.1	9.0 a	9.8	12	16.0	53.8	9.8	
9.9		21.1	10.2		2.5	36.6	10.2	9.1	32.4	25.1	9.0 =	9.8		41.5	47.4	9.8	
8.6		30.6	7.9		4.0	19.4	7.9	9.5	45.4	32.5	9.0 =	9.2		51.5	29.0	9.2	
9.9		54.1	10.2		33.0	17.7	10.2	10.2	55.4	42.1	9.0 =	8.7	13	31.0	2.1	10.2	
9.9	37	29.1	10.0	54	1.5	43.3	10.0	9.5	56.9	45.0	9.0 =	9.3		34.0	42.1	9.5	
8.6	38	53.6	10.0		16.5	22.4	10.0	8.8	3	7.9	23.0	9.4		44.5	33.0	8.8	
9.4		57.1	9.1		17.0	41.2	9.1	9.6	13.9	19.4	9.0 =	9.8	14	10.0	12.4	9.6	
9.4	39	40.1	10.2		20.8	58.1	10.2	8.8	31.9	22.6	9.0 =	9.2		16.5	41.1	8.8	
7.6	40	12.6	8.5		36.0	6.2	8.5	10.2	33.9	19.1	9.0 =	9.8		28.0	14.5	10.2	
9.4	41	25.6	10.2	55	22.0	10.4	10.2	9.6	40.9	11.3	9.0 =	8.3		31.5	26.7	9.6	
9.8		53.6	9.0		22.5	9.0	9.0	9.5	52.4	23.0	9.0 =	9.8		51.0	41.8	9.5	
8.8	42	18.2	9.1		30.5	7.1	9.1	9.8	55.4	54.2	10.0	9.2	15	13.0	55.4	9.0	
9.4		23.1	10.2	56	6.5	40.1	10.2	9.8	4	22.4	32.3	9.4		31.5	46.1	9.8	
8.6		26.6	9.5		12.0	18.1	9.5	9.5	25.9	32.5	9.0 =	9.8		37.5	32.1	9.5	
8.1		36.6	8.2		14.5	26.2	8.2	9.8	35.4	0.6	9.0 =	9.3	16	8.0	48.9	9.8	
8.6	43	3.6	9.4		22.0	7.9	9.4	9.3	42.1	0.5	-	9.5		14.5	11.8	9.3	
9.6	44	10.6	7.7		42.5	26.7	7.7	9.6	52.4	30.7	K	9.4		16.0	44.7	9.6	
9.2		23.6	10.2		54.5	12.7	10.2	10.2	53.9	8.2	9.0 =	7.6		26.5	43.4	10.2	
9.8		27.6	57		8.0	16.8	57	9.5	5	2.9	31.0	9.0		49.0	35.9	9.5	
9.2		40.6	9.4		32.0	9.5	9.4	9.6	4.4	28.4	9.0 =	8.2	17	14.5	48.5	9.6	
9.2		52.6	9.5		32.0	24.1	9.5	9.6	4.9	2.8	9.0 =	9.0		23.0	43.7	9.6	
9.0	45	18.6	9.6		35.0	42.2	9.6	9.4	9.4	2.0	9.0 =	9.2		26.5	27.4	9.4	
8.6		22.1	9.2		40.5	34.8	9.2	10.2	15.4	19.0	9.0 =	7.8	18	27.5	3.4	10.2	
9.9		26.5	9.6		42.5	19.5	9.6	9.8	15.5	48.3	9.0 =	8.5		31.5	46.6	9.8	
9.6	46	22.1	8.6		47.5	32.3	8.6	10.0	15.9	10.8	9.0 =	9.8	19	50.6	20.1	10.0	
8.9		43.3	9.6		56.5	19.0	9.6	9.5	35.4	20.4	9.0 =	9.8		31.5	10.9	9.5	
7.6	47	17.9	9.1		57.0	10.5	9.1	9.2	38.4	52.0	9.0 =	9.8		32.0	8.0	9.2	
9.2		29.8	9.6	58	20.5	51.1	9.6	9.4	49.4	4.9	a	9.2	21	2.0	8.1	9.6	
9.2		49.7	9.4		34.0	49.3	9.4	8.4	51.9	43.1	9.0 G -	9.2		16.5	20.1	9.2	
9.9		54.8	9.1		49.5	43.2	9.1	10.2	53.4	54.3	9.0 =	9.2		31.5	43.7	10.2	
8.2	48	13.6	8.8		54.0	18.8	8.8	9.2	59.9	7.4	9.0 =	8.9	22	13.0	9.6	9.2	
9.6		17.6	9.0		58.5	44.0	9.0	8.8	6	2.9	20.9	9.3		32.0	56.1	9.0	
9.0		26.6	9.6	59	2.5	45.4	9.6	8.6	5.4	2.2	a	9.8		49.5	0.2	9.8	
25 pr.	+1	30.4	+1	30.7	-2.4	+1	30.9	-2.1	+1	31.0	-1.7	+1	31.0	-1.7			

6601—6660.				6661—6720.				6721—6780.				6781—6840.											
mag.	17 ^h .	—23°		mag.	17 ^h .	—23°		mag.	17 ^h .	—23°		mag.	17 ^h .	—23°									
7.4	23	12.5	44.4	8.0	Gtlπ	7.3	42	39.6	5.3	8.2	Gal	9.3	52	47.8	8.7	8.3	56	2.8	8.2	9.5	G-π		
8.2		28.5	4.7	—		9.2		41.9	57.0			8.8		47.8	29.5	9.6		3.3	48.0				
8.8		36.0	33.5	8.5	Gbl	9.2	43	2.1	5.0			9.4		53.3	20.6	8.5		5.8	20.7	9.0			
5.3		47.5	51.8	5.3	GSμβ	10.2†		31.3	58.6			9.4		53.8	40.7	9.1		6.8	26.2	9.0			
9.4	24	8.1	28.3			9.2		32.6	55.3			9.9	53	1.0	2.2	9.3		10.3	31.6				
9.5		41.6	4.3			9.3		51.6	41.7			10.2		1.3	14.5	8.9		12.8	18.0	9.0			
9.5		50.1	55.3			7.2	44	1.6	38.3	8.0	Gtlπ	10.4		6.3	8.5	10.4		15.8	19.4				
9.3	25	18.1	17.9			9.4		26.1	57.7			9.4		12.3	3.3	10.5		19.3	45.8				
8.0		50.8	58.7	8.6	a	10.0†		33.0	50.8			9.0		16.3	30.0	9.5		21.3	29.1				
9.6		57.1	53.3	9.0	—	9.2	45	17.6	17.6	9.5		10.2		20.8	13.1	9.9		22.8	46.4				
9.0	26	32.1	8.6	9.5		9.4	46	16.6	20.7			9.8		21.8	48.4	9.8		28.3	41.8				
9.4	27	8.1	13.6			9.7		25.6	25.0			10.3		21.8	54.0	10.2		31.8	52.0				
9.7		52.1	42.6			9.9		52.6	5.7			9.6		22.8	35.1	10.0		39.8	16.6				
9.0		55.1	32.1	9.0	G=	9.6		57.7	38.4			10.0		22.8	50.6	9.2		41.3	28.0				
9.8		55.6	27.6	9.5		9.0	47	35.2	57.8	9.5		8.9		23.3	1.5	10.4		45.8	25.4				
9.5	28	49.9	31.9			9.4		48.5	9.9			9.8		26.8	30.7	10.5		48.3	56.0				
9.3		57.7	40.3			9.9		58.0	55.0	9.5		8.2		32.8	32.7	8.5	GW≡	9.8		53.3	14.8		
9.4	29	42.1	37.0			9.0	48	14.5	6.4	9.0	a	9.6		37.3	50.3	10.5	57	3.3	4.6				
9.2		45.6	29.4			9.8		36.0	58.3			10.3		37.3	27.6	8.8		5.8	27.8	9.5			
7.9	30	11.6	18.5	8.5	al	8.0		53.2	22.0	8.0	GWal	9.6		37.8	41.1	9.6		7.3	43.2				
9.8		21.1	18.7			10.5	49	20.8	31.1			9.1		40.3	56.3	8.5		12.3	36.0	9.0	W		
9.2		35.7	13.9			8.4		29.3	55.1	7.5	GWπβ	8.8		47.3	9.4	9.2	G	10.1		16.8	50.6		
9.9		40.8	27.6			8.8		37.7	7.7	a		9.7		55.3	8.5	8.7		18.3	42.0	8.5			
10.0†		43.5	53.6			9.6		44.8	14.8			9.6	54	2.3	44.8	9.7		19.3	26.0				
8.8		45.3	7.9	9.0	—	10.5		53.8	53.6			8.0		9.8	10.3	8.8	G=	10.5		20.3	35.8		
8.9	31	7.6	58.0	8.8	a	9.4		59.0	43.2			10.4		12.3	59.9	9.6		23.3	25.0				
9.4		37.3	24.3			9.7	50	2.8	40.9			10.1		18.8	55.2	9.7		23.3	41.0				
10.0†		39.0	55.2			10.5		5.8	42.3			10.5		20.8	33.0	9.0		32.8	16.8	9.0			
10.2†		46.5	54.8	9.0		10.1		26.3	10.8			10.4		21.8	57.3	10.0		33.3	46.0				
8.8	32	1.3	36.5	a		10.1		33.8	23.3			10.3		22.3	41.1	9.9		34.1	58.6				
7.8	33	12.3	46.0	8.5	Gtlπ	8.4		42.5	41.1	8.8	G—	10.4		22.8	39.2	10.5		44.3	4.0				
9.9		21.3	33.1			10.3		45.3	59.8			9.7		26.6	14.6	9.4		47.6	0.6				
9.2		22.8	56.1	9.5		10.5		50.3	59.5			9.7		32.8	33.2	10.5		49.8	11.5				
9.4		32.3	24.3	9.0		10.4		59.3	49.9			9.0		36.3	18.0	10.5		50.3	9.9				
9.9		33.9	58.9			10.5	51	15.3	55.4			10.2		45.8	16.0	9.4		51.3	0.8				
8.2	34	45.6	17.2	8.0	GWal	10.1		17.3	17.5			10.0		45.8	33.2	8.0		52.3	43.2	8.5	G		
8.8		48.1	40.3	9.5	Ga	10.3		19.8	28.9			9.7		47.3	37.2	10.4		55.8	26.5				
9.8	35	16.1	50.1			9.6		22.8	22.2			7.2		48.3	1.7	8.0	GWal	10.5	58	3.8	6.1		
9.4	36	40.1	41.9			10.4		27.3	12.9			10.1		53.2	2.3	10.1		5.3	31.1				
7.5		41.1	37.2	7.5	GScl	8.3		32.8	18.1	8.8	Gb≡	10.3		55.3	9.0	9.0		9.3	31.0	9.0			
9.2	37	13.1	15.9			9.6		42.8	4.4			9.8		55.8	0.6	10.4		14.3	37.1				
9.4		52.6	40.5	9.0	—	10.4		45.8	31.4			10.4		59.8	56.4	9.8		14.8	42.9				
9.7		55.6	28.6			9.9		45.8	22.6			9.6	55	2.8	15.0	10.5		16.3	7.3				
9.8		55.6	49.7			10.3		53.8	55.8			9.2		6.3	6.2	9.7		16.8	55.0				
9.7	38	2.6	21.1			10.2		57.3	9.1			9.8		10.8	57.9	10.3		19.8	6.1				
7.8	39	5.1	38.0	8.5	GW—	10.5	52	4.8	55.9			9.8		13.3	1.3	9.9		22.8	9.4				
8.6		29.6	31.1	9.5		5.0		10.3	48.2	5.5	GSμβ	10.0		15.6	51.1	10.0		22.8	32.1				
9.8		55.6	8.2			9.9		11.8	8.9			10.0		17.8	1.9	9.9		25.3	19.3				
9.8	40	18.5	51.9			10.3		14.3	47.0			10.5		21.8	59.6	9.3		28.3	29.7	9.5			
9.8		30.1	28.0			10.3		15.8	18.6			9.7		25.8	5.4	10.5		30.3	17.7				
9.8		31.6	17.8			9.4		25.8	33.4			9.6		26.3	11.6	10.5		32.8	58.8				
7.7		46.6	11.2	8.0	Ga	8.8		29.8	7.0	9.5	—	9.9		29.3	11.6	10.4		32.8	19.7				
9.6		59.6	18.6			9.9		32.3	53.1			10.5		29.8	36.0	9.7		43.8	45.6				
9.4	41	12.6	13.0			10.0		33.8	51.5			10.5		30.3	31.0	9.6		53.3	58.1				
8.9		12.6	34.9	9.0	G—	9.0		35.8	16.3			9.0		32.8	5.8	9.1		55.3	57.2	9.0	—		
9.2		30.6	24.2	9.2	a	10.3		39.3	17.6			10.0		35.3	13.1	9.9		56.3	14.7				
7.5		44.1	19.5	7.5	Gal	10.4		42.3	16.3			9.4		35.8	33.4	10.0	59	8.8	32.2				
9.0	42	3.6	24.7	9.0		10.0		43.3	16.9			9.8		42.8	10.6	10.2		25.8	34.6				
9.9		15.5	40.1			9.3		43.3	19.2			10.2		43.8	9.0	10.2		28.3	20.4				
9.2		28.1	9.0			9.4		45.8	33.1			9.6		52.8	25.0	9.0		30.8	35.5				
25pr.	+1	31.2	—1.0			+1	31.3	—0.3				+1	31.3	—0.2				+1	31.4	—0.1			

6841—6900.			6901—6960.			6961—7020.			7021—7080.		
mag.	17 ^h —18 ^h .	—23°	mag.	18 ^h .	—23°	mag.	18 ^h .	—23°	mag.	18 ^h .	—23°
9.3	59 32.8	12.9	10.5	2 21.3	28.0	9.7	6 11.8	10.2	10.3	10 21.1	23.4
9.0	35.8	20.4	9.2	27.3	39.8	10.5	14.3	33.0	8.8	29.1	41.8 9.0
10.3	35.8	37.6	7.4	29.3	47.5 8.5 Gtlπ	10.4	14.8	37.0	8.8	41.6	20.9
10.4	36.8	20.7	9.4	29.3	46.2 9.0	10.4	18.3	6.1	9.0	42.1	31.0 8.5 a
9.6	36.8	2.9 9.5	9.7	36.3	2.7	10.0	20.3	50.4	8.6	51.6	5.4
9.8	37.3	4.7 9.0	10.1	39.8	48.4	10.4	30.3	10.8	10.0	53.6	36.6
10.2	40.8	19.0	8.8	40.8	25.6	10.0	36.8	13.7	10.0	55.6	37.6
10.5	42.3	24.1	9.7	41.3	15.7	8.8	42.8	42.0 9.5 am	9.5	56.1	11.3
10.0	44.3	16.9	9.4	41.3	42.9	10.1	47.3	12.6	9.0	11 9.5	1.7
8.7	52.3	20.4	9.9	44.3	17.0	10.2	50.3	12.9	10.2	10.1	21.7
9.8	57.3	16.9	10.5	46.3	31.9	10.1	52.8	3.8	10.2	15.6	30.4
9.9	2.8 13.3		8.4	53.3	35.1 8.5 Gb-1	8.8	55.3	25.2	8.9	15.6	6.8 9.0 M-m
10.5	2.8 55.3		8.0	54.5	56.4 9.0 b	9.4	57.3	12.8 9.5	9.4	37.6	45.7
9.6	3.3 22.5		10.5	57.3	19.5	8.8	7 3.3	9.0 9.5	10.3	42.1	55.1
10.5	5.8 39.9		9.7	3 7.8	12.7	10.3	3.8	15.8	9.0	53.6	21.4
9.2	7.8 21.1		10.1	12.8	6.4	10.4	4.3	15.8	9.6	55.6	30.7 9.2 a
8.0	10.3 7.1 8.2 G≡		9.6	14.8	27.5	10.4	5.8	1.8	9.6	12 10.1	13.6
9.9	29.8 42.2		9.4	16.3	42.9	9.2	12.6	47.9	9.0	11.6	12.7 am
9.4	31.3 7.5 9.5 G		10.4	26.3	23.0	8.6	12.8	5.1 8.5 M-m	8.8	18.6	21.8 8.0 GWal
9.3	31.8 35.5		10.5	28.8	10.2	10.2	13.5	1.8	9.6	39.6	17.0 M
10.5	35.8 21.2		8.8	32.3	22.3 8.5 W=	10.4	15.8	55.8	9.5	49.4	52.4
10.2	35.8 17.7		10.5	38.3	18.9	9.7	17.1	21.1	8.6	13 0.4	22.8 9.0 a
8.8	43.3 26.7		9.7	39.3	55.7	10.4	19.3	29.7	10.2	3.9	53.3
10.1	52.8 15.1		9.7	43.3	8.1	10.0	24.3	13.1	9.6	7.9	28.4
9.7	1 1.8 38.9		9.6	55.3	16.0	8.8	26.3	56.3 9.2 a	10.3	13.5	59.9 9.2
10.5	3.3 40.7		10.5	56.8	44.5	10.4	31.8	42.8	9.8	25.9	29.8
10.3	5.8 20.1		10.1	59.8	22.7	10.4	37.3	37.8	10.3	37.9	8.0 9.0 Mm
9.9	7.3 11.6		10.0	4 2.8 10.5		9.9	41.3	13.8	9.3	14 8.9	29.8
10.0	8.8 14.1		7.3	5.8 43.5 5.8 GSμβ		10.5	41.8	5.9	9.0	11.4	13.7
10.5	12.8 46.4		10.0	5.8 54.2		8.9	43.3	59.8	9.4	20.4	29.1
9.4	13.3 26.6		9.7	10.3 49.9		10.4	43.8	28.6	9.0	22.9	19.8 8.8 a
9.2	17.3 36.5		8.8	16.8 52.4 9.0		10.5	44.8	36.3	9.3	23.4	17.4 9.5
9.8	21.3 47.1		10.5	16.8 7.1		10.5	45.8	29.0	9.5	35.9	16.6
9.1	23.8 19.9		10.5	22.8 51.8		8.1	54.8	9.2 8.5 am	10.3	36.9	54.2
8.9	32.3 27.0		10.5	22.8 53.9		9.3	55.5	46.3	9.6	42.4	47.2
9.7	35.8 44.8		10.5	23.3 35.9		10.5	8 1.3 19.9		10.3	52.4	17.6 a
10.1	42.8 47.1		10.0	30.3 14.6		10.5	10.3 38.5		9.5	15 6.4 30.0 -	
9.6	43.3 15.6		10.0	35.8 16.4		8.8	11.3 50.8 9.0 a		10.3	9.4	0.3
10.4	43.8 51.9		10.5	44.3 9.5		9.2	13.6 35.9		10.0	10.4	38.5 9.5
9.8	47.8 31.4		9.4	46.8 13.8		10.1	15.8 21.7		10.3	25.7	38.4 9.0
9.4	49.3 5.6		10.0	56.8 18.9		9.6	21.1 16.4		10.3	25.9	6.4
10.4	52.3 20.5		9.0	5 10.8 35.7 9.0 a		9.6	21.8 32.8		10.3	36.4	0.1
9.7	52.8 22.8		10.5	21.8 54.4		9.9	22.8 49.4		10.3	49.4	35.1
10.4	53.3 10.4		10.4	26.3 53.4		9.4	25.8 4.4		8.6	57.4	7.3 9.0
10.5	55.0 59.3		7.8	26.8 8.6 7.5 GWel		10.0	42.1 9.4		9.5	16 1.4 6.4 9.0 =	
10.3	55.3 16.2		10.2	33.8 36.1		9.3	42.6 30.6		9.6	4.9	23.7 9.0 -
10.0	55.8 17.0		9.6	34.8 31.8		7.6	56.1 56.4 8.2 Gaml		10.2	13.9	36.9
8.0	59.3 35.1 8.2 Ga		9.7	35.3 29.7		8.6	9 2.6 15.4 9.0 G=m		10.0	17.9	19.2
10.5	59.3 2.8		9.8	35.8 53.7		8.9	13.5 1.1		9.4	33.9	6.2
10.3	2 0.8 8.4		10.2	45.3 4.2		10.3	15.1 2.9		8.9	17 5.9 10.4 9.5	
9.6	2.0 56.8 9.0		10.1	49.3 9.9		10.0	21.6 5.6		10.3	12.4	20.4
9.7	5.3 56.4 10.0		10.1	50.8 21.0		9.6	22.1 19.8 9.5		10.0	22.9	10.7
9.8	5.3 21.0		8.8	6 0.8 43.6		8.6	29.1 15.2 9.5		9.5	25.9	18.9
8.6	8.3 41.9 9.5		10.1	2.3 25.8		10.3	32.5 1.7		9.3	30.4	1.7 9.5 G
8.3	9.3 39.7 8.5 a		10.0	2.3 35.0		10.2	41.2 52.5		8.9	33.5	2.8 8.5 Gaml
9.0	11.3 40.4 9.5		9.4	4.3 5.9		8.6	47.1 25.7		10.2	52.9	2.1
10.4	12.6 1.8		9.6	6.3 7.9 9.0		9.3	52.1 56.3 a		8.6	18 8.4 8.9 8.5 Gaml	
8.8	12.8 27.4		9.0	7.3 39.1		8.3	59.1 37.8 GWa		8.8	12.4	17.8 9.5 a
9.2	14.3 37.9 9.0		9.8	7.3 21.3		9.6	10 5.6 15.7		10.3	12.9	6.4
9.2	17.3 3.5		10.5	8.3 3.8		7.8	12.1 19.1 8.5 b≡ml		9.5	21.9	24.5
25pr.	+ 1 31.4 0.0			+ 1 31.4 + 0.1			+ 1 31.3 + 0.3			+ 1 31.3 + 0.5	

7081-7140.			7141-7200.			7201-7260.			7261-7320.			
mag.	18 ^h .	-23°	mag.	18 ^h .	-23°	mag.	18 ^h .	-23°	mag.	18 ^h .	-23°	
8.6	18 28.4	33.0	9.2	27 56.1	18.1	9.2	34 57.3	11.5	9.6	42 13.3	30.0	9.5 Mm
9.2	44.9	45.0	10.4	28 5.6	54.2	9.8	35 0.8	11.1	10.4	32.3	33.0	
8.4	55.9	24.8	9.0	17.6	38.2	9.6	0.8	17.9	9.6	35.3	14.6	
10.2	56.3	45.2	10.4	19.1	19.4	9.6	3.3	42.8	9.8	43 20.3	6.0	
7.8	19 5.8	30.3	9.1	23.5	9.9	10.4	10.3	25.0	9.8	21.3	6.8	
10.0	10.6	1.7	9.6	33.5	52.3	10.0	16.8	7.6	8.7	21.3	44.6	9.0 am
9.5	43.3	51.0	9.2	40.6	47.7	9.8	21.3	28.4	9.0	32.3	11.6	
10.0	53.3	47.8	9.0	46.1	27.4	10.4	22.3	38.5	10.4	42.3	41.2	
9.0	20 24.3	32.6	neb.	49.1	59.4	10.0	23.9	2.5	9.4	58.8	16.5	9.5 G
7.6	33.3	4.4	9.2	50.0	8.1	10.0	29.8	10.2	10.4	44 11.3	46.2	
9.2	33.3	24.0	10.4	55.5	28.1	9.8	32.3	57.0	9.4	25.3	31.0	
9.8	40.3	0.9	10.0	59.5	15.4	10.4	36 1.3	19.1	10.2	32.3	9.4	
8.6	40.8	38.4	9.4	29 10.0	51.9	8.5 Gam	2.3	8.1	9.6	50.3	1.4	
10.0	49.3	51.6	10.4	16.0	57.5	10.4	8.4	5.3	10.0	59.8	32.2	
10.0	53.8	15.8	9.8	46.0	25.6	10.4	18.3	10.4	9.8	45 15.8	56.0	
9.8	21 12.3	19.1	10.4	46.5	22.0	10.4	22.3	26.3	9.6	25.8	40.0	
10.0	26.3	45.3	8.4	46.5	42.9	9.5 a	10.0	24.3	9.8	34.3	22.9	
9.8	37.3	56.1	9.8	51.0	15.9	9.0	34.3	31.8	9.0	35.3	30.9	9.0 G ₂
10.2	40.8	25.4	10.4	56.0	32.2	9.2	39.3	7.8	10.4	37.1	1.6	
9.9†	45.5	57.9	9.8	30 12.5	20.3	9.6	40.8	9.2	10.0	46.3	56.2	
10.2	46.5	3.0	10.4	13.0	48.9	9.6	41.3	41.5	9.8	53.8	1.5	
9.4	50.3	44.3	8.0	14.5	29.9	8.5 GWbl	10.4	42.3	9.8	55.8	56.6	
9.2	53.8	54.9	10.4	15.5	17.8	10.4	45.3	8.6	9.2	55.8	3.4	
10.2	55.3	56.1	8.6	22.5	17.7	8.5 G	9.6	49.3	9.8	46 13.8	11.1	9.0
8.9	22 2.8	1.4	10.4	23.5	51.2	10.4	49.3	23.4	9.8	13.8	9.1	
10.0	13.8	16.6	8.6	33.0	49.3	9.0 b	9.2	56.3	9.6	16.8	49.8	
10.3	23.8	24.0	8.2	52.5	12.3	7.5 GWal	10.4	37 3.3	9.8	20.8	4.6	
10.0	27.8	46.8	10.0	53.5	54.7	6.0 GSμβ	9.8	9.3	9.4	32.8	5.2	9.0
10.2	30.5	29.3	5.8	55.5	36.5	10.2	21.8	30.3	9.8	35.8	43.7	
9.8	53.3	50.7	10.4	31 8.0	34.1	10.0	22.3	39.6	9.1	37.8	7.9	
8.1	53.8	19.8	8.6	22.0	2.9	8.5 GMM	9.0	23.8	8.4	41.5	2.9	9.0
10.0	23 0.0	58.1	9.6	22.5	40.6	9.6	23.8	9.5	9.6	52.8	44.2	
9.6	43.3	11.9	9.6	23.5	56.2	10.4	24.3	48.2	8.4	52.8	52.4	am
8.1	44.3	23.8	7.2	26.5	17.2	7.5 GSIβ	10.4	28.8	9.6	53.8	12.7	
9.2	46.8	3.8	10.4	57.5	13.6	10.4	29.3	22.3	9.2	56.3	7.7	
10.2	6.8	44.9	10.4	32 5.3	2.0	9.5 G	9.4	36.3	9.6	56.5	48.9	
10.2†	22.3	58.5	10.4	8.5	59.1	10.0	44.4	44.8	10.4	47 1.5	34.8	
9.0	27.5	1.6	9.6	8.5	7.9	10.0	9.6	52.3	10.4	2.8	21.4	
10.0†	36.9	53.3	9.8	13.8	1.9	9.0 G	9.0	52.4	10.4	3.5	22.5	
9.6	41.8	6.8	10.0	23.5	13.0	10.4	59.4	31.1	9.8	13.0	35.4	
9.2	25 13.3	58.1	9.8	41.5	53.5	9.6	38 12.3	54.4	9.6	16.3	1.3	
10.2	27.8	50.3	9.1	45.5	47.5	9.6	19.3	47.2	10.4	29.5	20.0	
10.0	32.3	46.1	9.4	33 10.5	15.0	9.2	49.8	22.2	9.0	43.8	50.8	
9.8	34.9	9.8	10.4	22.5	25.3	9.8	57.3	7.8	9.8	53.3	39.5	
10.3	37.9	9.2	10.0	26.5	38.0	10.4	39 12.4	34.3	9.6	13.0	32.2	
8.3	43.4	36.6	9.4	39.8	10.8	8.7	13.3	13.8	8.4	22.0	54.5	9.0 Ga
10.3	51.4	0.8	9.8	40.0	51.8	9.5	10.4	13.4	5.8	25.8	19.8	6.3 GSIπ
9.6	26 3.9	9.8	10.4	52.3	57.1	10.0	8.0	14.8	9.6	31.5	5.0	
9.6	33.4	25.9	9.1	55.3	19.5	10.0	22.3	8.2	10.4	43.3	47.1	
10.0	53.9	3.2	9.6	34 12.3	27.9	10.0	26.3	38.0	9.8	44.8	6.9	
10.0	27 16.1	2.0	6.8	14.1	57.0	6.7 GSπβ	9.6	31.8	8.7	45.8	26.3	
9.2	16.9	38.8	10.2	16.3	20.2	10.2	39.3	28.1	10.2	45.8	6.9	
10.0	20.4	31.2	10.2	16.3	36.1	10.4	41.3	58.8	7.5	49 0.8	18.2	8.2 GWLπ
10.4	25.6	18.9	10.0	20.8	33.4	10.0	57.3	14.4	10.4	2.3	22.0	
9.8	34.4	44.1	10.4	22.3	19.2	9.4	40 9.3	14.0	10.2	5.3	28.1	
10.4	41.1	14.5	10.4	32.3	14.3	8.4	20.8	23.4	7.9	11.8	24.9	8.8 Gal
10.4	43.1	42.8	9.6	35.3	11.5	9.8	26.3	36.6	8.6	16.3	27.5	9.2 Ga
9.8	43.8	9.5	8.4	36.8	15.0	9.0 G-	9.8	38.1	9.7	24.8	24.3	
9.8	43.8	39.0	8.4	39.3	24.4	8.2 G=	9.8	21.0	10.0	38.2	57.1	Mm
10.4	44.1	9.0	10.4	56.3	17.4	10.4	29.8	1.1	9.3	41.8	59.3	
25pr.	+ 1 31.3	+ 0.8					+ 1 31.1	+ 1.3		+ 1 31.0	+ 1.7	

1800-1900

7321-7380.				7381-7440.				7441-7500.				7501-7560.			
18 ^h -19 ^h		-23°		19 ^h		-23°		19 ^h		-23°		19 ^h		-23°	
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s
10.4	49 42.3	10.8		9.0	1 47.5	42.5	8.0 Ga	10.4	13 30.4	43.5		10.4	23 36.7	58.8	
9.5	42.7	1.9		9.8	56.5	48.1		8.0	31.4	51.0	8.0 Gam	8.4	44.0	52.4	9.0 -
10.4	51.3	4.2	a	7.6	2 1.5	23.3	8.0 GWal	10.4	43.4	24.1		9.2	24 2.0	12.4	
8.8	50 2.3	22.0		9.6	16.5	14.4		9.7	45.9	51.2		9.0	9.0	50.2	
10.0	4.8	25.0		10.0	28.0	42.1		10.4	55.4	25.2		10.4	9.5	30.7	
9.2	12.8	59.7		8.6	43.5	16.9	9.5 Ga	9.4	14 15.6	15.2	9.0 -	8.0	11.5	21.4	Wb=1
8.5	15.8	13.5	8.5 Gam	9.6	54.5	48.2		9.0	25.6	12.8	8.5 =	9.0	26.0	50.2	8.8 am
9.6	26.3	46.9		9.6	3 19.0	40.6		10.4	34.6	2.1		10.4	47.0	15.5	
9.6	41.3	53.9		10.2	4 23.0	39.0		9.4	50.1	15.1		10.4	49.5	24.1	
9.6	47.8	16.2		7.1	29.0	56.7	8.5 Gam	10.4	55.6	38.3		9.8	52.5	29.3	
9.8	51 2.0	57.7		9.3	38.0	6.5	-	9.0	15 5.6	49.0	9.0 am	7.9	55.5	0.3	8.0 GWam
9.8	17.1	30.7		10.4	38.0	53.8	a	10.4	13.6	6.0		10.4	57.0	1.7	
10.0	21.1	36.0		9.6	38.5	2.0		10.0	15.6	42.6		10.4	25 12.0	4.4	
9.0	23.1	15.0	9.0 Gam	8.8	42.0	49.7		10.4	26.6	8.9		10.4	42.9	42.0	
9.2	36.1	13.1		7.6	56.5	14.5	Gal	9.7	44.1	19.5	-	10.2	26 6.9	15.0	-
8.7	55.6	26.0	8.0 Ga	10.4	5 4.0	20.7		10.4	45.6	25.7		10.4	16.9	39.5	
9.3	52 6.1	52.6	Mm	9.5	14.0	38.7		9.2	16 5.6	49.2		10.4	25.4	46.0	
9.2	12.6	6.8		10.0	19.5	8.1		9.7	10.6	17.5		10.4	32.4	18.8	
8.6	31.1	13.7	8.5 Ga	8.0	23.0	0.5	al	10.0	26.1	22.1		9.0	33.4	33.5	9.5 Ga
8.0	53 3.4	2.5	8.5 Ga	8.3	31.0	55.0	Gam	8.6	32.6	18.0	Ga	9.2	35.7	0.5	
9.4	4.6	26.8	-	9.4	35.5	26.7	-	8.2	32.6	33.1	9.0 G≡	9.8	39.9	17.1	
10.4	6.8	36.8		10.4	43.0	28.1		10.4	36.1	6.0		7.8	46.4	35.6	8.5 Gam
9.3	16.1	27.6	M=m	10.4	54.1	50.3		10.2	36.6	38.8		9.2	54.8	37.5	9.5 a
9.7	39.1	39.7		9.8	56.1	2.3		10.0	38.1	16.8		9.2	27 3.4	27.9	9.0 -
9.5	42.6	4.5		10.4	57.6	24.5		10.4	38.6	50.0		8.5	12.8	16.1	
10.4	42.8	37.3		10.4	6 7.1	27.5		8.6	40.6	40.7	9.0 =	8.6	21.0	38.6	
8.2	50.1	24.0	8.0 G≡π	8.8	26.6	8.5	8.0 Ga	8.5	17 2.6	24.8	8.5 W≡	10.0	37.4	8.0	
10.0	52.6	16.2		9.0	31.1	23.9		10.4	6.7	2.1		10.4	37.4	22.8	
10.4	54 2.1	27.1		9.0	34.6	16.6	9.0 -	10.0	25.1	1.6		9.7	40.4	19.2	
9.6	16.1	54.1		10.0	38.6	33.8		7.6	35.1	16.9	8.0 GW	7.7	28 7.4	34.8	Gactπ
9.0	20.7	2.6	8.5 a	9.7	40.6	8.8		8.5	35.6	35.9	9.0 ≡	10.0	20.9	15.4	
8.2	39.1	52.2	8.5 GM-m	10.4	42.1	26.2		9.2	38.6	4.0		9.4	58.9	5.5	a
9.8	55 2.6	45.3	=	9.6	50.6	31.7		10.4	59.6	4.0		10.4	29 2.3	23.7	
9.8	30.1	8.5		9.6	7 40.2	50.7		9.6	18 3.1	40.0	9.0	9.8†	6.3	58.2	
9.6	47.1	52.0		9.5	40.7	49.9		8.8	8.6	22.7	W	9.4	16.4	27.3	am
9.7	53.6	5.5	a	10.4	51.9	27.3		9.2	26.6	17.7	-	10.3	58.6	59.1	
9.7	55.5	57.9		9.2	59.7	54.9	-	8.3	19 46.0	35.6	8.5 a	9.4	30 3.6	16.3	
9.8	56 7.6	16.0		10.2	8 2.2	41.8	Mm	10.4	54.0	22.0		8.8	26.6	29.7	9.5 a
10.4	35.1	42.5		10.4	8.8	24.6		10.4	20 12.0	37.3		9.8	44.6	14.6	
7.1	41.6	4.7	7.0 GSel	10.0	17.9	15.8		9.7	12.5	43.9		9.8	44.6	31.8	
10.0	57 42.7	54.1	a	10.4	45.9	21.2		10.4	19.5	40.1		10.2	50.6	9.9	
8.9	48.2	45.7	a	10.4	9 5.4	8.7		10.4	21.5	33.1		8.5	32 16.6	0.8	M-m
8.4	58 28.7	2.2	8.5 am	8.5	18.0	26.3	G≡m	10.4	23.5	5.1		6.4	18.1	42.5	GSπμβ
9.5	35.9	0.8		9.8	59.4	20.6		10.4	26.5	32.4		10.3	23.6	33.7	
10.0	56.2	56.0		9.2	10 6.9	8.2	=	8.8	33.0	7.5	9.0 GWa	10.3	36.6	36.9	
7.8	58.2	26.4	7.5 GWa	10.4	14.9	20.9		9.6	53.5	57.1		6.9	36.6	42.7	GSπμβ
10.4	59 6.2	4.8		10.0	26.4	5.4		10.4	55.7	31.2		7.6	52.6	36.9	GWtlπ
9.4	15.8	1.8		9.8	33.4	49.5	-	10.4	56.5	47.0		8.4	55.6	0.6	M-m
10.4	59.7	4.3		10.4	38.9	51.7		10.4	56.7	6.7		9.6	33 21.1	27.1	
9.5	0 7.2	30.9		8.5	48.4	25.2	9.0	9.4	21 8.5	18.1		8.8	33.6	56.2	8.8 GW=m
10.4	8.2	26.1		10.0	50.4	14.2		10.0	49.0	11.8		9.6	35.1	39.3	
9.5	20.2	19.5	a	10.4	53.4	10.2		9.4	22 8.5	13.4		9.8	36.6	34.3	
10.0	26.2	42.9		9.4	11 24.9	4.6		9.0	16.0	13.7		10.3	34 6.6	51.9	
8.7	39.2	21.8	a	8.2	43.4	47.0	8.0 Wam	10.4	26.0	55.2		7.7	10.6	55.4	8.5 Gwbl
10.4	52.7	33.1		9.2	12 5.4	27.1		9.7	54.0	30.9		9.4	24.6	15.9	
7.6	1 12.0	23.0	7.0 GSel	10.4	14.4	7.9		10.2†	23 10.0	50.8		9.4	34.6	52.5	
9.3	21.0	39.4	9.0	8.6	40.4	37.1	9.5 -	10.4	22.5	49.1		9.0	40.6	56.7	9.2 Gw
9.5	23.0	56.1		8.8	13 9.9	17.0	8.5 =	9.4	27.5	22.9	W-	8.8	35 16.6	21.4	-
10.4	25.5	26.1		8.0	12.4	56.7	8.5 =m	9.2	33.0	47.8		10.3	22.6	39.0	
9.6	43.5	40.7		9.4	22.4	40.0		9.6	33.0	9.9		10.2	40.6	50.9	
25Pr.	+ 1 30.9	+ 2.0													
				+ 1 30.7	+ 2.4			+ 1 30.5	+ 2.8			+ 1 30.2	+ 3.1		

7561-7620.				7621-7680.				7681-7740.				7741-7800.							
mag.	19 ^h .	-23 ^o		mag.	19 ^h -20 ^h .	-23 ^o		mag.	20 ^h .	-23 ^o		mag.	20 ^h .	-23 ^o					
8.4	35	52.6	54.5	8.5 am	7.2	50	54.6	39.8	8.2 Gal	9.1*	8	24.8	52.2	9.0	17	46.3	35.1	8.5 W-m	
10.3		59.6	34.6		9.4	51	7.5	26.9		9.1		43.0	51.9	8.4		57.3	53.1	8.7 MWam	
8.4	36	10.1	52.3	9.5 Gam	8.4		32.9	40.4	8.2 Gal	9.1		45.0	46.9	10.0	18	14.3	31.9		
7.8		56.6	26.7	8.5 Ga	8.8		34.6	55.7		7.7		45.8	53.5	10.0		17.3	32.2		
7.1	37	4.6	9.1	7.5 GWbl	9.3		51.3	47.4		9.6		51.8	39.7	10.4		36.3	22.6		
8.2		10.6	33.5	7.8 GWbl	9.4	52	21.5	1.7		10.0		52.3	40.3	10.4		44.3	18.0		
9.2		21.6	34.0		9.2		37.4	1.1		10.4	9	3.8	42.2	9.2	19	6.8	43.6	a	
8.4		47.4	3.0	9.0	8.8		38.5	34.3		10.0		7.8	4.3	9.6		14.8	44.9		
10.3†		51.9	57.6		9.4		39.1	10.2		9.8		28.8	38.2	9.8		16.3	33.6		
9.0		57.6	36.7		8.4	53	10.6	10.6	10.0 GW	10.4		35.8	19.6	9.8		22.8	35.9		
8.5	38	15.6	19.4	b	9.3		49.1	32.3		9.8		41.3	21.6	9.5		24.8	51.6		
9.8		40.6	19.3		6.8		59.1	4.8	6.0 GSIπ	9.8		54.8	9.2	8.6		42.3	52.7		
9.0		41.5	21.8	a	9.0	54	22.6	27.5	a	10.2		56.3	39.9	10.0		47.3	34.2		
9.4		42.5	28.7		8.8		51.1	49.4		10.4		56.3	41.7	10.2		53.3	40.2		
9.0		44.6	52.7	9.0 -	9.0	55	12.1	10.7	8.8 Gam	10.0	10	2.3	36.7	10.4	20	33.3	16.9		
9.4		49.5	24.8		8.8		34.4	35.0	-	9.8		19.8	14.7	9.8		45.3	16.0		
10.4†	39	6.4	56.1		8.8		46.5	59.9	10.0 ≡	9.6		42.3	6.3	8.7		46.3	25.3	8.0 Wal	
10.0		11.5	18.1		8.2	56	2.6	18.0	8.5 Gaml	9.6		43.0	0.8	10.0†	21	0.0	57.6		
9.4		40.0	6.1	a	8.7		17.8	55.1		9.8	11	7.3	16.6	9.2		6.3	5.0		
8.2		41.5	41.0	8.5 a	8.2		36.5	34.3	8.8 =	10.4		13.1	2.3	9.8		6.8	31.7		
9.8	40	1.0	36.2		9.4	57	6.0	41.0		10.2		26.3	26.3	10.4		6.8	6.0		
8.0		1.5	7.0	8.5 Gam	9.4		8.3	14.5		9.0		34.3	27.8	10.4		16.3	29.0		
9.8		34.5	14.8		8.7		11.8	7.5	a	9.6		43.3	47.3	10.0		37.3	25.6		
9.2		55.0	24.8	9.0 a	9.3		19.0	45.2		9.2		44.3	5.0	9.6		43.8	32.5		
9.8	41	13.5	59.9		8.7		39.3	4.1		10.0		53.3	41.6	9.4		47.3	27.4		
10.2		15.0	4.8		9.4		42.5	6.1		10.4		55.3	38.1	9.6		49.3	5.0		
10.3		18.7	40.8		9.4		42.5	12.1		9.5		57.3	30.0	10.4	22	3.8	0.0		
9.8	42	22.5	17.8		9.2		53.3	29.8		10.0†		59.8	56.5	8.1		16.3	15.5	8.0 GWal	
10.3		40.5	51.5		9.4	59	7.0	39.2		9.6	12	6.8	41.7	9.8		24.3	46.3		
7.1		47.5	5.6	8.2 Gaml	9.4		18.5	57.5		8.3		13.3	7.1	8.7		26.8	3.5		
8.8		53.5	55.3	9.0 -	8.6	0	11.3	50.4	9.5 Gb	9.2		32.3	10.0	10.4		30.8	4.8		
9.8	43	13.5	7.8		8.7		12.3	45.7		10.0		32.8	31.5	8.6		34.3	37.0	a	
9.4		26.5	53.0	10.0	8.8		16.5	50.4		9.5		37.3	4.9	9.8†		42.7	50.2		
8.5		36.5	40.6	9.5 am	9.4		17.4	58.0		9.4		44.3	15.6	10.4		47.7	4.9	l	
10.3	44	4.5	33.6		7.2	1	9.3	56.9	7.8 Gaml	9.9		46.3	0.1	9.8		49.3	40.5		
10.3		34.5	43.0		9.4		11.1	46.4		9.6		48.8	32.7	9.2		55.3	50.4		
9.6		54.5	5.0		8.8		23.8	3.1		10.3		58.3	45.8	9.8	23	9.8	25.7		
10.3	45	7.0	3.4		8.4		25.6	3.4	am	9.4	13	10.3	28.7	9.6†		37.2	54.6		
7.1		22.5	28.4	GWam	8.2		55.6	14.1	9.0 am	10.0		36.3	13.6	10.0		47.3	10.0		
9.8		29.7	28.9		9.4	2	30.1	53.2		10.4		37.3	39.0	10.0		53.3	11.9		
10.3		33.0	5.0		9.4		47.6	47.2		8.6	14	1.8	10.3	10.4		56.8	28.7		
10.3		56.5	16.5		8.8	3	14.6	40.0		10.4		4.3	14.9	8.8	24	18.3	8.6	8.0 G	
8.2	46	3.0	42.8	9.5 a	9.0		39.1	29.5		7.7		5.3	52.3	9.6		22.8	38.1		
9.8		13.5	34.0		9.4		53.3	30.0		9.0		16.3	15.8	9.8		35.8	37.5		
10.2		56.7	10.6		9.4	4	30.4	58.7		10.4		52.3	11.0	9.8		40.3	0.2	W	
9.8	47	20.7	52.4		8.7		53.4	44.4	9.5 G=	9.8	15	24.3	36.6	9.8†		40.7	58.2		
9.2		26.0	24.0		7.4	5	14.1	48.7	8.4 Gam	10.4		28.3	39.0	9.4		46.3	34.6	8.5	
9.6		26.9	58.6		8.7		17.3	37.3	G	10.2		43.8	15.8	9.4		58.8	8.5		
9.4	48	10.3	33.3		9.4		21.5	16.6		10.4		46.3	11.1	10.0	25	3.3	6.5		
9.4		14.5	9.2		7.9		29.6	21.5	8.0 GWam	9.8	16	34.3	4.2	9.8		6.3	11.7		
9.4		17.9	15.3		9.1		52.8	4.3		10.4		36.3	31.6	10.2		37.3	6.2		
9.0	49	3.5	33.8		9.2		56.5	32.9	b	8.6		36.3	7.7	10.4		37.3	23.0		
9.2		5.0	28.7		9.1		58.1	29.3	9.5 b	10.4		47.8	27.0	10.0		37.8	21.0		
7.0		12.9	23.7	8.0 GSel	9.2	6	39.1	36.4		10.2		53.3	32.7	9.0		50.3	36.9		
8.7		13.1	2.8	8.5 G	8.4		50.1	15.3	9.0 Gam	7.8		55.3	52.6	10.0	26	26.8	34.9		
9.0		23.5	20.6	9.5	9.4		51.2	27.2		10.4	17	9.8	35.0	8.9		46.3	40.4	8.0 GWam	
9.1		29.3	43.4		10.4		7	23.3	34.0		9.8		12.3	40.0	9.4	27	5.3	31.3	
9.4	50	8.3	48.3		10.0		57.3	20.9		10.2		16.3	23.5	9.8		5.8	11.3		
8.2		14.6	15.9	9.0 am	9.8	8	8.1	44.9		10.0		34.3	23.6	9.5		12.1	4.9		
9.4		42.7	59.3		9.0		14.3	28.3		10.1†		36.0	57.2	10.0		16.3	23.6		
25pr.	+ 1	299	+ 36		+ 1	294	+ 42			+ 1	290	+ 46		+ 1	286	+ 49			

7801-7860.			7861-7920.			7921-7980.			7981-8040.		
20 ^h .		-23°	20 ^h -21 ^h .		-23°	21 ^h .		-23°	21 ^h .		-23°
mag.	m s		mag.	m s		mag.	m s		mag.	m s	
10 ²	27 17.3	9.3	10 ²	41 45.5	29.2	9.5	0 55.1	31.3	9.9	22 19.3	4.6
9.2	32.3	12.7	10 ⁰	45.9	45.4	9.7	1 9.6	42.1	9.0	44.8	47.3 10.0 GWa
9.0	36.8	17.7	10.4	42 13.2	1.2	9.8	17.0	42.0	9.2	55.3	45.3 9.5 GWa
8.8	41.8	11.0	10.4	28.3	20.7	8.9	35.1	25.9	10.0	59.8	18.7 -
8.8	45.8	1.2	10.0	43 14.9	8.4	9.7	2 17.1	33.9	10.1	23 23.3	17.4
10.0	46.3	30.2	9.6	44 9.9	18.1	9.0	27.1	8.1	11.0†	56.4	55.9
9.8	28 0.8	29.2	10.2	33.4	42.1	9.7	42.6	12.1	9.0	24 15.8	7.3
10.4	1.3	32.1	8.7	39.4	10.1	8.0	46.1	2.0	9.6	56.8	24.3 b
10.4	3.3	0.5	9.8	46.4	23.6	9.2	3 9.1	11.9	10.0	58.3	17.7
8.6	6.1	57.9	10.2	45 4.3	11.9	9.9	13.0	23.6	8.0	25 5.8	36.6 MWK≧m
10.4	10.3	31.3	10.2	22.4	51.8	7.6	25.1	48.9	8.2	15.3	10.9 Ga
8.6	27.6	57.8	10.3	22.9	51.1	9.2	32.1	4.5	10.1	37.1	39.5
9.4	31.8	24.3	9.6	46 15.0	18.1	9.7	38.1	6.5	9.7	47.8	28.1
10.2	58.3	2.8	9.8	39.0	58.6	9.2	57.6	21.7	10.1	26 19.3	3.2
10.0	29 3.3	30.3	10.4†	55.7	54.0	7.7	4 21.1	37.1	9.6	37.0	26.5
8.8	4.5	8.4	10.3	47 4.5	52.1	9.2	38.3	50.6	10.1	44.5	24.2
9.8	57.5	23.0	10.3	9.0	8.2	9.9	46.1	23.1	9.7	50.2	0.7
9.4	30 44.0	9.9	9.8	20.0	32.4	9.0	52.6	3.3	9.4	55.6	30.9
9.6	54.0	8.3	9.0	47.8	19.4	9.4	5 15.9	57.3	11.1†	27 42.9	50.0
10.3	55.3	54.7	10.2	48 24.8	18.0	9.9	16.6	11.7	8.7	28 14.5	40.4 8.0 Gam
9.0	31 52.5	10.7	9.6	38.0	45.3	9.2	27.6	27.9	9.5	25.6	2.7 a
10.2	32 28.5	45.5	9.9	51.8	27.5	9.5	6 2.6	34.5	9.6	52.2	4.0
8.6	34.5	23.5	9.7	55.0	29.4	9.2	12.6	2.5	9.6	58.2	15.9
10.2	36.0	44.8	9.0	50 50.5	26.2	7.3	13.1	16.3	8.9	29 5.1	22.7 9.0 a
8.8	36.5	15.9	9.9	55.0	13.9	7.6	15.1	3.5	9.8	30 16.2	56.6
9.6	38.5	15.1	9.7	59.5	2.1	8.9	44.4	9.8	9.4	43.7	30.2
8.1	43.0	28.2	9.0	51 37.0	33.6	8.0	7 20.2	23.5	8.0	51.7	37.6 am
8.7	43.5	50.1	7.8	52 45.0	11.2	9.6†	30.1	52.4	9.9	54.2	4.9
8.6	45.0	26.0	8.6	51.0	14.0	9.7	49.1	24.1	10.0	54.7	8.3 -
10.3	54.5	0.5	8.6	53 4.5	43.7	8.8	8 1.3	2.7	8.8	31 17.2	51.3
9.6	33 18.0	46.6	9.2	33.7	0.5	8.2	49.9	41.5	8.9	26.7	42.5 a
10.2	30.5	41.2	8.6	41.8	56.6	9.0	9 24.9	34.1	9.6	32 3.7	29.0
10.3	51.2	58.4	9.0	47.4	2.0	8.2	30.4	19.8	10.0	7.7	38.2
9.9	54.3	17.7	9.7	54.0	34.5	11.0†	11 48.0	58.4	8.0	50.2	45.7 9.0 bm
10.3	59.9	25.0	7.7	54 1.5	21.7	9.9	14 2.7	56.9	9.5	51.7	55.0
8.0	34 33.4	34.8	8.5	9.5	33.8	9.0	5.9	55.3	neb.	33 15.2	44.8 -
9.8	51.4	17.6	9.9	13.0	44.7	9.2	32.4	52.1	10.0	22.7	0.2
8.6	53.4	26.7	9.7	14.5	13.6	9.4	42.9	54.0	8.9	46.7	20.8 M-
9.1	53.4	4.4	9.0	38.0	4.1	8.5	15 3.4	57.1	10.0	34 3.7	4.6
10.3	35 6.4	38.3	9.0	58.1	15.7	8.4	6.8	13.9	7.2	53.7	49.6 6.0 GSπβ
9.8	50.9	8.4	9.2	55 44.1	25.4	9.2	17.2	3.1	10.0	35 17.7	38.3
7.8	36 18.9	55.1	10.2†	49.5	54.1	7.4	50.8	12.1	9.6	51.2	18.3
8.2	37 19.4	38.1	8.5	56 23.6	8.0	10.0	16 6.8	50.7	8.1	53.2	44.4 8.0 Gaml
10.3	46.9	36.1	9.9	57 15.3	0.3	7.2	58.3	16.8	10.0	36 0.7	37.4 Gka
10.3	50.9	36.9	10.2†	19.7	51.4	7.5	17 12.3	49.5	9.6	41.1	9.0
8.6	38 8.5	3.1	9.5	22.1	33.1	9.9	19.3	2.9	9.2	37 55.1	9.9
10.2†	10.3	58.8	9.0	50.6	11.1	10.1	47.3	8.9	7.6	38 0.6	8.2 7.5 Gaml
9.6	24.9	18.7	9.9	58 23.0	12.0	9.9	49.8	51.0	9.8	19.6	12.7
9.6	31.9	23.1	9.2	24.1	22.1	8.2	18 6.8	48.0	10.0	38.4	39.9
8.4	57.8	58.8	9.7	33.1	27.0	8.4	25.8	31.4	9.2	39 13.1	1.0
10.4†	39 29.3	59.5	10.0†	44.7	55.2	9.6	33.8	43.8	9.2	41.1	3.6 9.0 Gam
9.6	38.9	53.7	9.9	46.6	45.0	8.6	55.3	57.1	9.5	54.6	14.8
10.3	40 13.4	17.9	9.8	55.0	33.2	9.4	19 0.3	0.5	9.0	40 18.6	30.8
8.6	29.4	55.9	7.6	59 36.1	42.9	10.1	20 24.3	36.0	9.9	56.1	20.9
10.3	41.9	20.1	9.2	37.6	5.3	9.0	28.8	39.1	9.4	41 35.6	26.3
8.8	49.9	54.4	7.0	48.1	38.8	10.1	51.3	46.2	8.3	42 3.6	23.9 8.0 Gatπ
7.5	58.9	18.4	9.9	49.6	17.3	9.2	56.8	28.2	9.0	17.1	12.4 a
10.3	41 0.9	55.1	9.7	0 33.1	38.4	8.8	21 30.8	12.9	9.4	34.1	19.6
7.4	4.4	11.6	9.2	35.1	7.1	9.8	39.8	12.0	7.5	44 17.6	51.1 7.0 GSlπ
9.6	29.9	48.1	9.2	51.1	47.5	10.0	22 6.8	53.1	8.8	45 0.1	20.6 8.5 Ga
25Pr.	+ 1 28.2	+ 5.2		+ 1 27.3	+ 5.8		+ 1 26.7	+ 6.1		+ 1 25.5	+ 6.7

1896ArcCap...3....1G

8041-8100.				8101-8160.				8161-8220.				8221-8280.					
mag.	21 ^h .	22 ^h .	-23°	mag.	22 ^h .	-23°		mag.	22 ^h .	-23°		mag.	22 ^h -23 ^h .	-23°			
10.0	45	17.6	43.8	10.0	1	20.0	17.6	10.0	16	1.2	19.8	8.2	34	32.6	12.2	-	
9.2		30.7	16.0	10.4		36.5	56.0	10.3		3.7	13.6	9.8		54.1	34.0		
8.5	47	15.7	33.2	9.6	2	3.0	18.9	9.4		11.2	34.1	9.6	35	12.6	47.9	9.5	
10.4		50.8	39.4	9.1		34.5	29.4	10.2		23.7	41.8	9.4		49.6	50.5		
10.0	48	1.0	40.1	8.7		53.5	38.6	10.3		29.7	39.8	8.2	37	14.1	47.1	a	
9.0		2.8	12.2	10.0		54.0	15.2	9.0		39.2	22.3	8.2	38	13.1	38.4	8.5 Gam	
9.8		9.8	5.4	10.4	3	0.0	20.9	9.5		41.2	10.9	8.2		20.6	45.5	9.0 Gam	
8.8		14.2	12.2	10.4		13.0	41.0	9.6	17	16.7	9.3	9.2		23.1	28.2		
8.5		24.0	52.9	9.8		14.0	5.2	10.0		33.2	42.9	8.4		35.6	16.8	-	
8.4		40.5	38.6	9.8		14.8	57.6	9.6		37.2	0.1	9.8	39	26.1	50.1		
10.2		42.2	7.4	10.4		18.0	42.3	9.6		38.7	8.3	10.3		56.1	17.5		
9.4		43.3	36.2	9.8		12.5	19.0	9.6		38.7	46.7	8.0	40	50.1	49.9	8.5 Gam	
10.4		53.8	13.6	8.8	4	14.0	4.8	9.6		42.7	28.5	9.2		51.1	20.1		
10.0	49	13.3	13.1	10.4		23.0	15.0	9.8	18	6.2	51.2	10.3	42	6.1	50.9		
9.8		22.3	51.7	10.4		26.0	55.2	9.1		12.7	42.1	8.4		10.6	18.9	9.0 a	
10.4		47.6	4.4	10.0		43.0	16.0	9.6		59.2	39.3	7.4		30.1	45.1	7.0 GSa	
10.4	50	23.8	23.9	10.0		52.5	2.8	8.6	19	9.7	33.5	9.6		43.6	3.0	b	
8.2		23.8	16.8	10.4		57.5	8.8	8.8		13.7	15.2	10.3	43	13.8	58.8		
9.6		41.8	17.7	9.8	5	6.0	55.2	9.5		15.2	53.6	8.8		20.1	22.8	9.5 Ga	
10.2	51	9.3	0.9	10.4		58.5	57.1	9.6		20.2	30.4	8.6		54.1	22.3	9.0 a	
8.0		9.8	49.5	9.8	6	17.4	10.6	9.6	20	16.7	51.7	9.8	45	46.1	13.4		
9.8		10.0	1.3	9.6		27.4	21.0	8.2		32.7	10.2	10.3		56.8	12.5		
9.2		37.3	39.1	9.8		36.9	26.8	8.6		55.7	14.3	9.0	46	2.1	35.9	9.5 a	
9.8		51.8	28.2	9.1		46.4	46.9	9.6	21	37.2	23.3	8.4		28.6	18.2	9.0 Ga	
10.0		51.8	25.5	9.1	7	5.4	45.1	10.3		48.2	13.3	9.8		33.1	53.9		
9.6	52	4.8	8.0	9.1		14.4	16.3	8.8	22	25.7	40.2	10.3	47	10.8	20.0		
9.0		15.8	15.6	8.8	8	16.4	27.7	9.6	23	36.2	7.5	10.2		16.1	55.1		
7.4		15.8	28.0	10.4		17.4	33.9	7.8	24	21.7	38.2	9.4		27.6	7.5	8.5 Sa	
9.8		42.3	32.0	8.6		55.7	19.9	9.6		35.7	10.8	9.2	48	3.6	46.5	8.5 GMm	
10.4	53	11.3	41.9	7.2	9	10.2	37.8	9.0		41.2	48.3	7.1		9.1	1.8	6.5 GSa	
10.4		35.3	0.4	10.0		46.2	11.2	8.5		43.7	18.8	10.2		25.8	13.0		
10.2		35.8	0.2	7.0	10	3.2	45.7	10.0	25	11.7	21.1	8.6		55.0	15.9	=	
7.7		41.3	53.6	9.8		24.7	24.2	10.3		15.7	20.8	8.5	51	2.4	16.7	8.5 Ga	
9.6		42.6	57.8	9.8		26.2	50.7	9.8		31.7	33.3	9.8		8.4	30.3	9.0 a	
10.0		43.3	0.6	8.0		34.7	44.2	9.5	26	12.7	10.6	10.1		34.3	4.4	9.0 a	
8.8	54	6.8	15.7	10.3		42.7	12.1	10.3		35.0	7.4	8.2	52	36.9	29.9	8.5 G-	
10.0		17.0	54.0	10.3		52.2	25.3	9.6	27	11.0	25.1	9.4		57.4	3.8		
9.8		17.5	29.6	9.8	11	3.2	27.6	10.2		16.5	37.5	9.6	53	23.4	17.3	9.0 Ga	
10.4		38.5	54.8	10.3		22.6	56.1	8.8		16.8	56.2	8.1		39.9	11.8	7.5 GSbl	
10.2		46.5	10.1	7.5		32.4	57.3	8.0		31.5	14.8	9.0		49.9	33.3	-	
9.8		48.0	27.3	9.4		46.2	41.7	9.0		3.5	54.7	9.2	54	17.4	4.5	a	
8.8		52.5	7.6	9.6	12	3.2	43.2	10.0		32.5	3.2	6.4		39.4	27.5	6.5 GS1π	
9.8	55	12.0	8.6	8.3		3.2	25.2	9.8		49.6	48.5	7.1		50.7	5.4	7.5 GSa	
9.6		22.5	13.0	8.5		6.2	32.3	10.3		51.6	18.2	9.8		57.6	1.7		
9.8		39.5	9.0	10.0		13.2	23.2	9.6	30	13.1	39.2	10.0		57.6	1.7		
10.4		56.5	48.4	9.6		20.2	20.0	8.8		22.6	33.8	9.6		58.4	52.0		
10.2	56	6.5	52.2	9.6		27.2	6.6	9.2		33.6	4.0	8.4	56	13.9	17.2	8.5 GMa	
8.8		14.5	52.0	9.1	13	23.2	35.8	9.6		41.1	43.0	8.0	57	21.9	23.0	7.8 GMal	
9.8		14.5	31.6	9.5		39.7	14.7	9.6		44.1	0.8	8.5	58	11.1	49.8	-	
9.1	57	44.0	48.0	9.6		49.7	2.3	9.2		46.6	54.8	8.2		43.1	9.6	Gal	
10.4		47.5	17.0	10.2		52.2	8.4	8.0	31	6.6	17.4	10.0		43.1	50.4		
10.4	58	19.0	50.9	8.5		56.2	20.4	9.4		6.6	0.3	8.2	0	4.1	27.0	-	
9.2		44.0	58.2	9.8	14	1.2	8.7	9.8		21.6	11.8	10.1		23.5	49.6	-	
9.8		44.0	38.0	9.5		7.2	25.6	8.2		34.6	23.2	9.6	1	15.1	45.1	-	
8.4	59	22.0	42.4	8.8		12.7	6.5	9.2		49.1	40.7	9.6	2	1.6	48.8	9.5	
8.8		28.0	41.6	9.1		42.7	27.0	8.6	32	0.6	48.9	8.4		59.1	46.6	8.5 G=	
9.6		57.0	52.2	9.5		57.7	55.6	8.4		15.6	17.1	10.0	3	7.1	40.0		
9.8	0	10.0	13.5	10.2	15	5.6	45.6	8.4		42.6	25.7	5.3		14.6	8.0	5.2 GSπβ	
9.6		59.8	0.8	10.0		38.2	23.6	9.2	34	5.6	18.5	7.7		16.6	46.9	8.5 G=	
8.8	1	3.0	13.4	9.4		55.7	39.0	8.8		12.6	6.0	8.7	5	55.1	41.2	9.0 a	
25Pr.	+1	24.4	+7.1	+1	23.5	+7.4		+1	22.7	+7.6		+1	21.3	+7.9			

8281—8304.				8305—8328.				8329—8352.				8353—8376.				
23 ^h .		-23°		23 ^h .		-23°		23 ^h .		-23°		23 ^h .		-23°		
mag.	m s	m s	'	mag.	m s	m s	'	mag.	m s	m s	'	mag.	m s	m s	'	
9	5	58.6	18.1	8.4	17	21.8	0.9	9.3	29	13.5	6.2	9.6	42	58.0	24.1	
10.2	6	59.0	8.7	10.2	30.3	14.4		9.4	40.7	35.9		8.6	43	15.0	47.6	
8.4	7	22.7	51.0	10.2	37.3	58.1		9.6	31	35.2	17.0	9.4		56.0	35.6	
8.4	44.1	3.5	9.0 a	9.6	45.8	52.4		9.6	46.7	12.7		9.0	44	10.0	9.7	
9.5	8	41.4	8.7 a	8.3	18	22.8	11.3	7.1	33	10.8	13.4	8.6	23.0	58.5	9.5 =	
9.8		50.2	18.0	9.8	54.3	50.1		9.0	54.3	42.5		10.0†	45	29.9	59.2	
7.0	9	51.2	54.3	9.8	19	11.3	53.6	8.8	34	2.3	26.7	9.0 a	9.4	47	42.0	38.9
9.6	10	12.7	22.2	8.4	23.8	12.3	8.5 Ga	9.4	35.8	55.8		8.4	48	12.0	43.8	
9.4		13.7	20.3	8.4	44.3	45.4	8.0 Gal	9.2	36	12.3	50.3	9.8	49	5.9	42.7	
7.8		50.2	29.7	9.0	45.8	25.6	8.5 Sa	8.8		31.3	47.9	9.8		21.5	40.1	
	11	1.2	17.6	7.8	20	25.8	24.5	9.2		58.3	55.5	9.8		29.9	15.0	
10.2		12.3	4.5	9.3	21	17.3	31.2	8.2	37	2.8	35.6	8.6	52	31.4	42.8	
9.8		54.8	35.7	9.4		45.8	11.6	9.6	38	15.3	54.2	9.0		37.9	4.9	
9.8	12	14.8	24.5	8.8	22	35.8	56.0	8.7		18.6	52.3	7.7	53	27.9	7.6	
9.6		26.8	49.3	8.6		56.3	44.7	9.6		37.4	10.4	9.8		40.9	45.6	
8.6	13	3.3	54.6	7.8	23	29.8	20.8	8.3		37.6	19.2	8.4		43.9	17.3	
7.6		24.8	30.3	8.7		40.3	11.9 a	8.7		56.1	41.8	8.1	54	16.9	21.8	
10.2		47.3	34.2	9.6		58.8	9.0	8.4	39	58.6	43.2	8.2		36.9	28.2	
9.8	15	15.8	27.3	9.2	24	10.8	44.0	9.6	40	31.6	5.2	9.5	55	39.9	22.1	
9.6		30.3	57.0	9.3		38.3	28.9	8.2	41	21.6	43.2	9.0		40.9	1.5	
	16	19.8	42.5	9.4	27	15.8	23.6	8.2		23.6	18.1	9.4	57	5.6	58.0	
10.2		23.1	55.5	8.7		24.8	38.0	9.0	42	2.6	22.0	9.6		37.9	12.0	
10.2	17	5.8	33.4	10.2		59.3	54.2	8.0		40.6	55.1	9.2		54.4	57.1	
8.4		7.3	17.6	10.2	29	2.0	18.2	9.6		44.4	25.2	8.6	59	18.9	12.2	
25pr.		+ 1 19.9	+ 8.2			+ 1 19.3	+ 8.2			+ 1 18.2	+ 8.3			+ 1 17.2	+ 8.4	

ZONE — 24°.

1—30.				31—60.				61—90.				91—120.				
		oh. —24°				oh. —24°				oh. —24°		oh. —1 ^h . —24°				
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	
10°0	0	5.8	52.1	8°0	18	31.0	8.7	9°0	34	54.8	12.7	9°4	47	59.6	16.6	
9°0		13.8	6.1	9°2		36.0	8.8	10°2	36	25.6	28.8	10°2	48	25.5	36.6	
8°4	1	7.0	31.0	9°7	19	29.0	10.2	9°2		34.1	56.4	9°0		36.0	35.9	
7°0	2	4.5	47.3	9°8	20	41.7	14.0	10°2	38	9.0	50.8	10°0	50	3.0	30.9	
10°0		38.5	26.4	9°7	21	37.7	53.9	9°6		37.6	21.6	9°8		30.0	42.7	
10°0	4	0.5	36.8	9°6		44.7	40.2	10°0	39	1.6	46.1	8°4		30.0	20.1	
10°0		27.0	56.0	9°8	22	26.7	46.1	8°4		25.1	8.1	9°8	52	34.0	12.8	
8°5		42.0	17.7	9°0		40.7	35.0	9°2		48.1	50.6	9°2		59.0	21.9	
10°0	5	7.5	14.5	5°8	24	7.2	28.6	10°2		58.1	3.5	10°2	53	36.8	22.3	
7°5		14.5	19.7	9°8		16.7	4.7	10°0†	40	4.8	1.2	8°6	54	39.6	56.8	
		54.5	57.9	9°9		49.7	10.7	10°0		9.6	8.8	10°2		45.6	16.0	
9°6		56.2	0.0	9°9	25	25.2	6.0	9°1		12.1	10.8	10°4		50.6	35.0	
9°8	6	34.5	22.3	9°2		34.2	12.8	7°4		50.1	54.0	8°5	55	43.6	3.7	
9°4		43.5	38.2	9°8		56.7	49.4	9°1	41	25.1	12.6	10°2	56	8.6	35.1	
7°5		56.5	25.8	9°8	26	10.7	33.6	10°0	42	31.6	48.8	10°4		27.6	12.6	
9°7	8	49.7	35.1	9°8		39.7	36.2	8°4		35.6	49.5	9°0		51.6	33.3	
10°0	9	29.5	49.2	9°5		44.7	10.9	10°2		43.1	52.3	9°6		52.1	46.2	
9°8	12	45.0	7.9	9°6	27	2.9	59.0	6°9	43	4.1	49.1	10°4	57	9.1	44.8	
9°0		50.0	57.0	8°6		26.2	5.2	8°4		11.9	0.8	10°4	58	12.6	19.9	
9°9	13	39.0	4.1	9°8		32.2	29.2	6°2		24.1	2.7	8°6		14.6	56.8	
		1.0	22.6	9°9	28	6.7	2.0	8°2		51.1	48.0	9°6		32.6	29.1	
6°6		30.0	19.3	8°2		45.7	10.4	10°0	44	33.8	57.2	8°8		45.6	31.7	
9°0		34.0	15.4	9°6	29	33.7	27.4	8°0		35.6	21.0	10°4	59	5.6	51.7	
9°9		42.5	56.9	9°5		42.7	29.4	10°2		41.1	4.9	8°2		42.6	15.9	
8°4	15	33.0	4.8	9°8	31	20.0	38.6	9°8	45	8.2	1.9	7°4	0	4.1	39.7	
8°0	16	1.5	32.0	7°0	32	24.2	17.2	8°0		22.6	15.6	9°6		5.6	9.2	
9°5		8.1	57.6	10°0		38.8	12.4	10°0†		36.8	1.8	10°4		18.6	7.0	
9°9		31.0	37.6	9°8	33	31.3	52.3	9°6	46	16.1	10.0	10°4		40.1	59.2	
7°8	17	55.5	5.8	9°0	34	11.3	7.0	6°6		31.1	41.2	10°4		45.6	24.0	
8°0	18	29.3	58.8	6°9		15.3	28.8	8°2	47	26.6	42.1	9°6		55.6	8.6	
25pr.	+	1	16.4	+	1	15.1	+	+	1	13.9	+	+	1	13.1	+	8.1

121-180.			181-240.			241-300.			301-360.								
1 ^h .	-24°		mag.	1 ^h .-2 ^h .	-24°		mag.	2 ^h .	-24°		mag.	2 ^h .	-24°				
m	s		m	s		m	s	m	s		m	s		m	s		
0	56.1	7.0	10.2	30	21.3	59.8	9.6	2	23.2	47.9	9.0	9.6	33	46.0	33.7		
	56.6	32.0	10.2	31	5.3	51.8	8.2	3	3.0	37.4	a	8.0	34	16.5	28.1	8.0 Gal	
9.6	57.6	7.1	10.2	31.3	49.9		8.6	13.0	23.9	9.0 Ga	9.6	9.6	52.5	42.9			
7.0	1	8.6	9.4	46.8	27.9	a	8.4	18.5	57.6	8.5 G	7.4	7.4	56.5	40.4	8.2 GWal		
10.4	25.6	45.4	9.2	56.8	40.0	9.0 Ga	8.2	21.0	21.4	9.0 a	9.1	9.1	35	21.5	27.4		
9.4	37.6	38.0	10.2	32	32.7	40.6	9.5 G	7.0	50.6	56.3	6.5 GSbl	9.6	36	40.8	1.0		
8.2	2	24.6	9.0	34	22.2	28.8	9.0 G	9.2	4	31.6	11.7	9.4	9.4	51.3	13.0		
9.6	56.6	42.4	9.8	35.2	50.8		9.8	5	10.6	58.8		9.2	9.2	57.3	28.0		
9.4	3	5.1	10.2	36	8.7	28.3		9.8	15.6	50.9		9.0	38	28.3	39.4		
10.4	19.1	48.3	9.4	25.7	31.0	9.0 G	8.2	6	5.6	56.1	8.8 Ga	9.1	9.1	31.8	18.6		
10.0	29.6	36.6	10.0	52.7	39.8		9.8	50.6	36.7			9.2	9.2	34.3	20.4		
10.4	5	25.6	9.2	37	14.2	32.9	9.0 G	10.0	7	3.1	23.8	9.6	9.6	50.8	25.6		
9.6	55.1	55.2	10.0	20.2	22.7	9.0 a	8.7	15.6	11.3	9.0		8.2	8.2	55.3	56.4		
9.0	4	4.6	9.4	42.0	47.8	8.5 a	9.2	24.1	3.3			9.4	39	1.8	29.7		
10.4	18.1	55.4	10.2	54.5	42.0		10.0	50.6	14.1			8.8	8.8	15.8	21.8	-	
9.2	26.1	40.0	10.2	59.5	13.8		8.6	8	1.6	33.5		8.8	40	25.6	7.2	9.5	
10.2	7	44.1	9.4	38	12.6	13.8	a	7.4	9	18.1	7.3	9.6	9.6	28.6	46.2		
8.8	50.6	55.2	9.0	20.0	55.7	9.2 Ga		9.8	19.6	35.7		9.6	9.6	30.6	55.0		
9.0	8	19.6	10.2	44.0	35.7		9.0	9.0	29.6	59.8		9.6	9.6	35.1	48.5		
9.2	25.5	29.6	10.2	40	31.4	37.4		10.0	47.6	51.6		9.6	41	6.1	38.6		
8.6	9	26.5	8.4	49.3	38.6	8.2 Ga	10.0	10	40.5	24.3		8.6	8.6	47.1	12.2	9.0 G	
7.4	53.5	38.0	9.4	42	50.2	23.1	9.5	8.7	11	23.0	55.8	9.0	9.0	42	20.1	45.8	
9.2	8.0	34.3	7.8	51.2	29.6	8.5 Gb-1		7.9	25.5	38.7	8.5 Gb-	9.4	9.4	43	20.1	33.3	
10.4	40.5	51.3	10.0	43	41.2	43.9		10.0	30.8	58.8		9.0	9.0	49.6	15.9	a	
10.0	52.0	30.2	10.0	44	27.7	52.5		8.8	12	9.0	18.0	8.5 G	9.4	44	5.1	59.1	
10.4	11	27.5	8.4	30.2	23.6	8.5 G-1		7.6	20.5	12.3	7.2 GSbl	9.6	9.6	16.8	31.4		
9.2	37.5	50.4	9.4	50.4	13.7	-		8.6	13	29.5	25.9	G	9.4	45	6.8	6.9	
8.8	4.0	24.0	9.8	46	28.9	55.1	9.5	10.0	58.0	1.2		9.6	9.6	7.6	19.4		
8.0	17.5	9.3	8.8	47	31.9	49.5	8.2 Ga	9.0	14	4.5	26.3	8.5 GSa	9.0	9.0	20.3	52.1	9.0 Ga
9.2	24.5	3.8	10.2	48	0.4	7.0		8.1	7.5	26.5	8.5 GSa	9.2	9.2	46	2.1	42.1	9.0 Ga
10.4	58.5	55.1	9.2	49	11.9	46.2	9.3	8.1	11.0	12.5	8.5 SWb	9.6	9.6	38.8	50.0		
10.2	13	3.5	8.0	22.9	46.1	8.0 Gbl		9.4	15	5.0	17.1	9.6	9.6	48.6	42.7		
9.0	14	6.0	9.4	50	4.9	27.2		9.7	9.7	11.5	7.2	9.2	47	11.7	1.3	-	
9.8	15	10.0	8.4	21.3	2.2	8.5 G-		9.4	9.4	12.5	26.4	9.2	9.2	49	23.0	29.3	
8.4	47.9	47.1	8.4	29.4	44.7	8.2 G-		9.6	16	31.5	45.8	8.3	8.3	50	10.0	35.4	
10.4	26.7	46.6	8.6	29.9	50.8	7.8 Gb		6.1	6.1	50.5	23.0	9.8	9.8	14.4	21.4		
10.4	58.9	26.1	8.8	57.4	12.9	9.0 -		9.2	17	2.5	26.1	9.0 G	9.6	9.6	38.9	29.8	
10.0	17	26.4	9.7	51	9.9	19.8	9.5	9.7	9.7	40.5	15.4	8.4	8.4	50.9	48.6	8.8 Ga	
10.2	33.3	16.0	8.4	30.4	36.3	7.8 Gal		9.6	18	30.0	17.0	8.8	8.8	54.9	6.7	a	
8.6	49.7	42.7	9.4	33.9	50.0	a		9.6	19	40.5	39.3	8.9	8.9	59.9	39.1		
10.2	19	5.0	9.9	52	38.9	59.4		8.6	20	52.5	32.2	7.8 GWa	9.2	51	7.9	8.0	
9.4	20.5	13.3	9.2	53	25.1	21.0		7.6	20	11.5	24.4	7.2 GWal	9.0	9.0	8.9	37.9	
10.2	41.0	56.1	8.6	29.6	35.2	7.5 Gb		8.1	9.4	35.4	26.7	8.0 GWa	9.0	9.0	14.9	7.9	
8.4	21	41.0	8.0	36.6	2.9	8.0 GWal		9.4	9.4	47.9	43.4	9.4	5.1	49.9	21.8	5.5 GSπβ	
10.2	56.0	36.2	10.2	54	9.6	40.7		7.8	23	52.1	39.8	8.0 GS=1	7.3	52	31.9	6.6	6.0 GSπβ
8.4	22	31.5	9.0	55	27.6	33.2	9.5 a	10.0	24	24.7	59.0		9.0	53	5.9	16.8	
9.4	40.3	50.7	9.7	51.1	31.0			9.0	26	20.3	29.0	-	9.7	10.0	41.3		
9.0	50.3	59.3	9.0	59.6	29.0	9.0 a		9.6	9.6	31.3	24.3		8.2	45.9	11.3	8.0 Ga	
8.4	55.8	28.3	10.2	56	22.6	6.3		9.1	9.1	40.7	43.6		9.2	54	4.4	38.2	
8.6	56.7	2.6	7.8	24.6	38.8	7.0 Gal		9.6	9.6	45.7	31.1		9.8	9.8	8.4	27.1	
7.0	26	11.5	9.0	57.6	51.1	9.0		9.4	9.4	59.2	36.4	9.0 Ga	9.8	9.8	0.4	0.1	
10.2	44.5	52.0	7.5	57	4.6	29.3	8.0 GSbl	9.6	27	51.7	47.5		9.8	9.8	22.9	7.7	
7.6	27	19.3	10.2	9.1	54.2	9.5		9.4	29	9.2	52.8		9.8	9.8	26.9	10.3	
10.2	28	44.8	10.0	55.1	4.4			9.6	9.6	36.2	21.9		9.2	9.2	40.4	32.7	
10.2	45.9	4.8	9.8	58	9.0	32.5		8.4	30	21.2	4.2	8.0 Gbl	8.7	8.7	49.9	30.3	a
7.4	55.8	20.4	8.7	59	49.3	58.7	8.8 Ga	9.6	9.6	25.3	16.2		9.4	9.4	56	2.4	41.9
9.4	29	6.8	8.7	53.0	58.4	8.2 Ga		8.0	8.0	51.2	27.8	8.0 GSsal	9.4	9.4	42.0	18.1	
8.2	13.3	5.4	8.5	0	44.0	9.9	8.0 Gbl	8.5	31	17.7	48.5	8.2 Ga	4.4	4.4	53.4	6.9	4.2 GSπβ
9.8	29.8	45.0	10.0	1	3.6	27.3	9.0	8.4	8.4	42.0	16.0	9.0 -	8.7	8.7	57	21.4	2.1
9.8	46.3	45.5	9.4	2	11.0	41.2		8.0	33	31.0	52.7	8.0 Gb-1	9.8	9.8	34.9	46.8	
25Pr.	+ 1	12.0	+ 7.9	+ 1	9.9	+ 7.4		+ 1	8.4	+ 7.0		+ 1	6.7	+ 6.3			

361-420.				421-480.				481-540.				541-600.			
mag	2 ^h -3 ^h	-24°		mag.	3 ^h .	-24°		mag.	3 ^h -4 ^h .	-24°		mag.	4 ^h .	-24°	
	m	s	'		m	s	'		m	s	'		m	s	'
9.2	57	34.9	9.0	9.6	21	36.7	53.4	9.0	48	8.0	6.7	7.8	7	30.3	8.6
9.7		46.4	28.0	9.2	22	27.4	40.3	9.6		8.8	58.9	10.1		38.3	14.8
8.6	58	41.9	40.8	9.2		49.9	39.3	4.3		23.5	59.1	10.2		49.4	1.4
9.4	59	1.9	54.7	9.0	23	55.9	32.1	9.8	49	9.4	57.6	9.8	8	22.3	8.2
9.0		44.4	54.6	8.4	24	28.9	10.6	8.9		53.4	23.9	9.4		27.3	54.6
8.0	0	12.9	41.4	8.4		48.4	10.5	9.2	50	12.4	23.0	9.8		31.3	37.1
9.7		42.9	28.2	8.4	26	4.9	16.6	9.6		49.4	15.6	9.6		35.1	1.2
8.4		42.9	16.2	8.6	27	9.9	3.3	7.2	51	53.9	59.6	9.0		41.3	11.2
9.7	1	7.4	39.0	9.0		20.9	32.2	8.9	52	54.9	17.9	8.0		55.3	31.2
9.8		7.9	8.0	8.2		40.9	11.5	7.4	53	13.9	9.2	8.8		56.5	0.9
9.0		28.9	37.4	9.2		50.9	55.8	10.0		50.7	41.4	9.4	9	30.5	28.3
9.8	2	1.4	22.2	9.4		54.9	16.6	8.8	54	26.5	56.3	9.0		31.5	59.2
9.8		3.4	0.2	9.6	28	6.9	8.8	4.5		35.7	22.2	10.1		35.0	24.0
9.5		57.2	38.5	8.7		55.9	59.4	10.0		42.2	42.2	10.1		59.5	19.6
8.4	3	43.7	36.9	8.4	29	10.9	45.3	10.0	55	6.2	10.6	10.1	10	13.5	7.5
9.6		48.7	5.1	8.0		29.9	16.7	10.2	56	12.7	15.1	8.8		17.0	22.2
8.5		51.2	29.0	7.6		40.4	43.6	10.0		15.7	46.7	9.4		19.0	58.3
9.8		52.2	46.1	9.0		54.9	39.5	9.5		25.7	12.4	8.2		40.0	19.3
9.0	4	10.7	11.2	8.6		58.1	21.8	9.8		35.7	21.1	8.5		41.5	49.2
9.2		37.7	44.1	9.6	30	2.6	34.4	9.4		45.7	3.2	10.1		52.5	0.8
8.6		47.2	39.6	8.8		9.4	58.7	9.6		51.7	28.3	9.4	11	9.5	14.6
8.7		59.2	28.3	8.8		32.1	36.5	9.8		52.2	59.9	9.1		40.0	16.6
7.3	5	4.2	12.8	8.9		35.6	56.0	9.5		57.7	12.6	9.6		51.5	53.2
9.8		14.7	46.4	9.6		49.1	19.1	8.6		59.7	47.6	9.1	12	0.0	44.8
9.8		29.2	53.1	9.6	31	31.2	38.3	10.2	57	21.2	59.1	9.0		23.0	6.4
8.5		40.2	30.2	9.0		39.1	15.1	9.6		21.2	9.3	8.3		50.0	22.2
9.8		57.2	29.4	9.4	32	58.7	45.6	9.0		31.7	19.9	10.1	13	9.0	21.4
9.6	6	32.2	31.9	9.0		58.7	25.0	10.1		34.2	18.2	9.4		9.5	6.0
9.6		32.2	55.2	9.1	33	16.8	27.1	10.2		48.2	38.0	8.8		25.0	46.9
9.5		38.7	36.0	9.8		29.8	3.5	9.5		59.7	40.6	8.5		38.5	27.4
9.0		41.2	51.1	8.8		36.8	29.8	8.0	58	10.7	48.3	9.5		49.5	45.7
9.8	7	9.2	6.0	9.0		39.3	6.1	9.5		18.3	21.9	10.0	14	5.0	8.2
9.2		40.2	3.0	9.6		50.9	20.6	9.8		22.3	9.4	9.0		15.0	34.4
9.2	8	29.2	0.6	8.2	34	56.8	55.6	10.0		46.3	17.2	9.2		51.0	33.5
8.6		29.7	46.0	8.0		57.8	4.1	10.2	59	13.3	21.0	9.0	15	10.0	56.8
9.2		39.6	17.0	8.0	36	36.8	2.8	8.4		36.8	45.6	10.2		12.0	13.0
8.8	9	36.7	24.2	9.2	37	1.8	48.5	10.0		40.5	59.0	9.6		17.5	50.8
9.6	11	3.2	13.6	8.8		22.8	51.1	9.8		45.3	54.4	10.1		29.0	50.0
9.4		4.7	39.0	9.2	39	49.8	18.7	10.1		54.8	16.0	9.5		47.5	2.4
9.6		43.2	10.5	9.8	40	11.3	54.2	10.1	0	19.8	33.0	9.5		50.5	43.4
7.8	12	59.2	33.5	8.4		51.8	46.8	10.1		26.3	4.4	9.0		55.0	50.2
9.6	13	30.7	50.7	8.5	41	8.8	26.2	9.8		27.3	47.2	9.6	16	8.0	43.0
8.4	14	4.2	56.8	9.6		17.8	3.3	9.8		28.3	10.0	8.6		16.8	35.5
7.0		8.2	34.6	9.4	42	16.8	38.7	9.0		29.3	6.2	10.1		28.3	3.3
7.7	15	0.2	33.9	5.6		16.8	15.7	9.1		32.8	20.3	9.6		40.7	59.9
9.6		35.2	34.5	9.2		20.1	58.9	9.2		33.3	32.6	10.2		41.3	9.9
9.6		42.2	51.9	9.8		23.9	6.5	10.2	1	1.3	30.8	10.0	17	3.1	2.9
9.6		43.2	32.7	9.8		30.0	3.6	8.4	2	7.3	5.4	10.0		3.6	45.0
6.8		55.7	5.2	9.0		34.0	24.6	9.6		17.3	11.2	9.4		13.3	43.4
9.6		57.0	57.2	9.2		39.0	42.8	8.2		29.3	8.6	9.4		15.3	3.1
9.0	16	5.2	37.7	8.0	43	4.0	4.9	9.5		36.3	29.0	9.8		25.1	3.4
9.6		25.2	7.8	8.8		5.0	1.2	9.2		42.8	49.9	9.8		36.1	27.7
9.6	18	5.2	37.1	9.6	44	35.5	43.6	9.6	3	0.3	20.2	9.7	18	0.8	54.9
9.6		36.2	19.0	8.6		40.0	14.7	9.4		54.8	19.0	9.4		24.6	25.1
7.6		50.2	44.6	9.4		57.0	12.1	10.1	5	25.3	31.8	9.4		32.6	43.6
9.2	19	2.7	41.2	8.5	45	0.0	25.3	9.0	6	25.3	59.5	9.1		37.6	1.8
8.6		59.2	55.4	7.8		42.5	29.3	9.4	7	0.3	13.9	10.0		39.6	23.1
9.0	20	10.3	42.1	9.6	46	16.7	24.7	9.6		12.3	19.2	10.0		41.6	50.8
9.6		35.2	45.8	9.0		44.5	57.5	8.8		27.3	13.0	9.4	19	10.1	20.4
9.6	21	28.2	9.8	9.1		50.5	47.2	9.4		27.3	41.6	9.4		27.6	28.8
25pr.	+ 1	5.7	+ 5.7	+ 1	4.5	+ 5.0		+ 1	3.7	+ 4.2		+ 1	3.2	+ 3.7	

601-660.				661-720.				721-780.				781-840.			
mag.	m	s	—24°	mag.	m	s	—24°	mag.	m	s	—24°	mag.	m	s	—24°
9.4	19	43.6	1.4	9.6	34	0.0	41.9	9.4	44	45.4	15.1 a	9.5	55	20.0	50.4
10.0		51.6	2.0	9.4		10.5	49.6	10.0		52.4	49.6	8.9		38.5	13.0 9.5 a
9.4		51.6	36.1	9.8		11.5	10.3	10.2		58.7	59.5	10.0		49.5	34.4
10.0		59.6	40.7	9.6		17.5	24.6	8.6		59.9	53.2 9.0 G	9.1	56	1.3	2.2
9.7	20	10.2	18.5	8.8		23.5	35.7 8.8 a	8.4	45	5.4	35.0 8.2 bl	9.9		2.7	27.1
9.4		16.2	7.9	9.4		45.0	23.4 9.0 a	10.2	46	5.9	49.4	9.4		7.7	38.1
9.8		48.2	6.3	6.8		55.0	43.6 6.0 GSlπ	10.2		7.4	26.8	10.2		25.7	25.5
10.0		48.2	31.5	9.4	35	4.5	59.6 9.5 Ga	10.2		8.9	31.9	9.7		26.5	1.3
10.0		48.7	33.6	10.0		10.7	34.7	9.6		10.7	2.1 a	10.2		34.7	3.9
9.4		56.2	29.0	10.0		18.7	42.1	9.2		11.4	41.6	10.2		52.9	57.9
10.0	21	2.2	4.4	9.4		20.7	32.7	9.4		14.2	11.0 9.0 Ga	9.0		59.7	12.9 a
9.1		6.2	42.0	9.2		21.7	38.0 b	10.1		21.7	44.3	9.0	57	0.2	19.8 a
6.6		41.7	21.7 6.5 GSB	9.4		30.7	33.9	8.6		30.2	34.8 8.5 bl	10.0		1.7	50.0
9.5		51.2	56.0	9.4		33.2	39.0	10.1		35.7	34.1	9.6		2.7	26.7
9.4	22	9.2	45.5	9.4		39.7	56.5 9.5	9.6		44.7	7.7	9.8		3.7	9.6
9.4		16.2	18.9	10.0		44.7	26.0	9.9	47	4.2	34.0	9.2		4.2	35.2
8.2		18.2	44.2 8.0 G	9.8		53.7	30.9	9.7		7.2	1.5	10.0		12.5	11.8
8.8		33.7	15.3 9.5	10.0	36	1.7	40.9	9.3		13.4	58.3	9.3		16.2	3.3
9.4		35.2	26.4	10.0		7.2	17.6	8.8		20.2	6.2 8.8 Ga	9.0		34.2	57.7 9.5
10.0		38.7	32.1	10.0		11.7	16.2	10.2		27.7	27.8	9.6		42.7	19.8 a
10.0		42.2	25.0	10.0		14.7	5.9	10.0		33.2	51.0	10.2		59.7	33.7
9.4	23	3.7	43.9	8.4		16.7	13.0 7.5 Gal	9.9		38.2	32.0	9.4	58	1.7	28.0
9.6		5.7	46.3	10.0		28.7	42.0	10.1		44.7	32.1	10.2		4.7	4.0
9.6		12.7	58.7	9.8		29.7	0.9	9.4		44.7	27.1 b	9.6		13.2	50.1
8.6		13.2	9.5 9.5	10.0		32.2	6.8	8.8		50.2	26.9 a	5.5		43.2	33.7 6.0 GSB
9.7		59.7	29.4	9.8		47.2	56.5	9.6		50.2	43.1	9.4		59.7	52.7
9.2	25	0.7	14.8	10.0	37	13.2	48.2	9.3		53.2	58.4 9.5 G	8.9	59	0.6	6.1 9.5 G-
10.0		0.7	56.9	10.0		17.2	13.9	10.0	48	0.7	7.3	9.9		4.6	59.3
8.8		6.7	38.4	7.5		45.2	32.4 7.5 G	9.6		20.2	9.7	10.2		12.1	5.9
9.8		30.2	9.3	8.8		54.7	5.0 8.2 Wa	9.8		40.0	41.8	9.4		27.1	42.7
10.0		37.7	11.4	8.8		58.2	44.3	10.2	49	0.2	49.2	9.1		27.1	17.9
9.5	26	18.7	12.4	10.0	38	9.8	48.2	9.6		16.0	1.8	10.1		46.1	42.9
10.0		21.7	29.6	9.4		46.1	21.6	10.0		48.1	13.3	9.8	0	2.1	55.3
7.8		33.7	22.7 8.0 Gal	9.4		53.1	45.3	10.0		59.6	1.2	9.0		19.1	38.9 a
8.8		38.7	50.1 9.0	8.8	39	2.3	43.0 9.0	9.7	50	45.1	8.2	9.1		49.1	40.1 a
9.5	27	48.4	11.7	8.8		32.1	9.3	10.0		51.6	57.0	10.2	1	4.3	31.9
8.8		50.9	16.6 8.8 a	10.0		36.3	49.3	10.1		55.1	2.2	9.0		31.8	38.5 a
9.0	28	0.4	17.3 8.8 a	9.7		48.1	4.6	8.4	51	0.1	20.6 9.0 G	10.2		43.4	46.5
8.2		10.4	12.1 8.2 Gal	10.1		50.9	15.5	10.2		3.1	6.0	9.6		51.3	32.4
9.8		20.4	48.4	9.6		52.1	7.1	9.6		22.6	59.6	9.4		54.6	28.5
10.0		40.4	26.6	9.6		56.6	37.4	10.0		32.6	35.0	9.4	2	0.8	8.8
10.0	29	10.4	19.6	9.2		59.4	3.9 8.5 -	10.1		34.1	0.2	9.8		4.3	6.3
10.0		12.4	0.2	8.4	40	3.8	21.7 9.0 G	9.0		37.1	18.0 8.5 G	10.2		8.5	24.9
7.8		23.4	18.1 6.8 GSal	9.6		11.4	30.3	9.6		40.1	12.2	9.6		24.3	17.9 a
10.0		46.4	19.9	9.4		15.4	41.3	9.6		44.1	26.0	9.8		42.0	13.9
9.4		59.4	10.1	9.9		24.4	5.2	9.4		50.1	46.0	10.0	3	13.9	24.3
6.8	30	4.4	47.5 7.0 GSal	9.6		27.4	19.2	8.5	52	44.1	26.4 8.8	10.1		14.2	17.0
10.0		27.4	52.8	9.9		55.4	53.7	9.4		55.0	38.5	9.5		40.4	35.2 G
10.0		31.4	30.3	9.7	41	41.9	29.4	8.6	53	36.0	23.8 9.5	9.2		49.4	14.3
9.0		41.4	47.7 8.2 a	10.2	42	10.9	7.6	9.9		43.0	45.6	9.8		49.9	30.3
9.1	31	3.4	39.9 a	9.8		38.9	2.2	9.4		52.0	46.1	10.1		55.4	48.5
10.0		20.5	16.9	9.4		42.4	14.9	10.0		55.0	52.0	8.5	4	14.4	56.4 9.2 G
9.6		33.0	3.5	9.6	43	26.4	51.5	10.1	54	3.0	3.4	9.4		37.4	18.3
9.6		54.5	7.9	9.0		26.9	27.0 8.8	10.2		37.0	43.0	9.4		39.4	12.8
9.2	32	5.0	18.0	9.7		42.9	53.5	10.1		46.0	13.2	10.0		46.9	14.5
9.8		59.5	27.4	9.4		53.4	43.8	9.3		50.0	47.7	9.8		50.4	33.0
8.0	33	4.0	54.5 8.5 Ga	9.9	44	0.4	46.2	9.6	55	1.0	25.5 a	10.0		55.4	17.7
9.4		18.0	23.3	9.4		4.9	11.1	10.1		5.0	33.5	9.0	5	0.9	14.3 9.0 a
10.0		35.0	25.9	9.0		32.4	6.5 9.0 a	10.1		14.0	47.5	9.6		5.4	15.4 10.0
8.8		46.4	0.8 9.0 Gb	9.6		43.4	2.0	10.0		19.5	34.3	10.1		6.9	10.6
25pr.	+1	2.8	+3.3	+1	2.5	+2.9		+1	2.3	+2.5		+1	2.1	+2.2	

1896ArcCap...3....1G

841-900.				901-960.				961-1020.				1021-1080.			
mag.	5 ^h	-24°		mag.	5 ^h	-24°		mag.	5 ^h	-24°		mag.	5 ^h	-24°	
m s		'	''	m s		'	''	m s		'	''	m s		'	''
10.1	5	7.6	59.9	10.1	14	59.9	18.5	9.5	22	55.4	11.8 a	10.0	33	23.2	33.4
9.6		10.4	14.2	10.0	15	0.9	5.9	9.5		59.4	15.3	9.9		24.7	59.5
9.8		13.9	40.3	10.0		20.4	55.0	10.1	23	11.4	47.5	9.5		28.7	3.5
10.1		23.0	57.3	9.4		29.4	16.2	9.8		15.4	2.7	10.0		29.2	35.9
9.6		35.9	8.9	9.3		37.9	33.1	8.0		38.1	21.7 7.2 Ga	9.6		49.2	31.9
9.8		43.0	58.4	10.1		50.9	22.6	9.4		38.4	33.1	8.4	34	4.4	57.1 7.8 Ga
8.3		53.4	36.2 8.8 a	9.0		51.9	49.8 9.2	9.8		40.4	20.5	9.8		6.2	32.6
10.1		55.9	7.3	9.8	16	5.4	54.5	10.1		45.4	0.4	9.4		13.2	16.0
8.4	6	0.4	30.2 8.0 Ga	10.1		8.9	30.8	9.0		55.4	31.7 8.3 G	9.8		22.8	2.5
10.1		3.9	4.9	9.3		15.4	40.0 b	10.0	24	0.9	1.3	8.6		23.9	23.2 8.5
9.6		4.4	29.7	5.7		38.4	53.8 5.8 GStπ	9.4		14.4	52.5 9.5 G	9.0		24.4	22.8 9.5
9.0		16.4	42.3 8.5	9.4		43.4	54.0 8.5 G	9.5		18.4	34.5	10.0		28.9	59.9
9.8		28.4	33.7	10.1		45.9	51.9	10.0		19.9	53.3	9.4		55.9	47.0
10.1		38.9	15.3	10.1		55.9	12.3	9.6		20.9	26.1	10.0	35	2.4	7.1
10.1		48.4	13.8	9.3	17	0.4	34.5	10.1		21.9	22.0	9.2		36.4	6.0 9.5 G
9.8		54.4	18.0	10.1		17.4	44.9	9.5		32.4	10.0	9.2		48.4	29.3
8.8		55.4	40.7 9.0 a	9.8		18.4	30.8	9.8		38.9	20.0	8.8		56.4	24.5
10.1	7	17.4	50.6	10.0		21.4	29.3	10.1	25	9.9	10.2	9.0		57.9	38.0 9.0
10.1		25.4	9.1	10.1		25.9	20.4	9.9		19.3	25.3	9.0		59.9	37.9
9.6		37.9	7.1	10.1		32.3	3.7	10.0		40.8	30.1	10.0	36	29.4	21.7
10.0		51.4	5.5	10.1		41.4	0.3	8.7		46.3	21.7	8.6		34.4	53.8 9.0 Ga
8.8		54.4	6.9 8.5 -	10.1		43.4	1.3	10.0		47.3	59.3	9.4		42.4	39.3
9.0		57.4	42.9 a	10.1	18	2.4	45.2	10.0	26	21.3	20.8	9.0		47.9	28.0 8.2 a
9.6	8	3.4	11.9	10.1		5.9	15.9	8.2		30.8	53.5 8.2 G	9.2		52.9	23.5 8.5 a
10.1		13.4	57.8	9.6		11.4	49.3	9.6		31.3	51.1	9.9		57.4	15.1
9.6		21.4	41.5	9.8		24.9	14.3	9.9		31.3	11.9	9.8	37	40.9	48.6
8.8		27.9	57.8 9.0 a	10.1		27.4	34.3	9.9		31.8	17.7	9.4		58.9	5.1
9.4		37.4	1.9	10.1		29.3	11.5	8.4		40.3	1.7 8.5	9.4	38	3.9	56.6 9.0
9.3		40.4	5.1	10.1		29.9	28.2	10.0		50.3	6.1	10.0		24.4	28.7
10.1	9	4.4	10.0	10.1		44.4	9.4	10.0		53.4	23.0	9.4		24.9	56.1
10.1		11.4	36.1	neb.	19	2.4	38.4 a	9.8	27	13.8	9.7	9.2		25.4	35.2
9.0		12.4	36.5 9.2	8.8		5.4	29.0	9.6		16.3	22.9	9.2		41.4	8.3
10.0		15.4	24.2	8.4		8.4	48.3 8.7 Ga	10.0		20.3	6.6	9.4		44.4	23.5
9.4		39.4	13.7	9.6		10.4	51.9	9.5		23.8	53.5	9.4		49.4	6.1
9.2		39.4	30.4 G	10.1		28.4	36.8	9.9		32.8	17.7	9.5		59.4	6.1
9.8		50.4	42.2	9.6		37.4	44.3	8.6		33.3	51.0 9.2	9.2	39	20.4	27.2 9.5
10.0	10	10.4	55.4	9.6		43.4	14.3	8.8		50.2	20.6 a	10.0		25.2	0.8
10.1		15.4	26.0	10.0		53.9	24.9	9.6	28	7.2	49.0 9.5	9.6		59.4	49.7
10.1		17.9	42.4	9.6	20	2.4	42.1	7.9		21.2	25.2 8.0 Ga	9.2		59.9	13.5
8.4		35.4	25.7 8.5 Ga	10.0		13.9	54.0	10.0		38.2	46.7	9.9	40	1.7	13.7
10.1		45.9	53.0	9.3		20.9	47.0 9.0 a	9.9	29	2.0	52.1	9.0		12.2	4.3
10.0	11	25.9	38.6	9.1		31.4	54.7 9.5 a	8.8		8.0	25.4 9.5	9.8		31.7	18.1
9.0		30.4	18.3 9.5	10.1		48.4	37.9	9.9		13.0	7.4	9.9		42.2	22.5
10.0		40.4	52.9	10.1		57.9	19.7	10.0		28.7	7.7	9.6	41	5.2	47.4
9.4		40.4	43.7 9.0	9.6	21	8.9	0.7	9.4		32.2	50.1	10.0		5.2	8.0
9.5		44.9	16.1	9.8		11.4	9.0	9.9		30	20.7 10.7	10.0		29.7	15.0
10.0		53.9	30.9	10.0		12.9	18.9	9.2		26.2	9.5	9.4	42	1.2	32.0
10.0	12	2.9	15.1	9.0		32.4	28.7 8.5	9.6		27.2	13.7 10.0 G	8.2		4.8	32.5 8.2 Ga
10.1		10.4	29.1	10.1		34.4	5.5	8.8		47.2	4.7 8.2 a	9.8		5.2	7.7
10.0		47.9	16.8	9.4		43.4	3.1	8.8	31	8.2	42.3 8.5 G	8.4		5.2	32.4 8.8 Ga
10.0		6.9	53.1	10.1		50.4	51.9	10.0		23.7	8.2	8.7		26.2	4.8 9.0
9.5		10.4	52.6	9.5		52.9	38.5	8.5		36.2	6.6 8.5 a	9.6		27.7	12.9
9.5		32.4	17.1	10.0		55.4	3.7	8.2		36.2	46.9 8.0 Ga	9.5		34.2	28.9
9.5		50.4	51.0	10.1		55.4	53.2	8.0	32	4.7	28.7 7.8 a	9.5		46.2	50.9
9.0		56.4	17.8 8.8 G	9.3	22	3.4	46.2 a	9.5		7.2	8.2	10.0		54.9	1.6
9.4	14	0.4	53.9 9.5	9.6		32.9	50.3	10.0		9.7	3.9	9.0		59.7	3.1
9.8		4.4	54.2	10.1		34.9	16.5	8.4		34.2	12.6 7.8 Ga	8.2	43	12.2	30.2 8.0 a
9.6		18.4	35.2	9.4		34.9	55.1 a	9.4	33	10.2	47.9	10.0		25.7	51.7
9.1		33.4	50.4	10.1		50.4	24.9	9.6		16.2	4.7	9.0		34.7	11.4 8.8
8.8		41.4	26.4 9.5 a	9.8		53.9	20.3	8.7		21.2	9.6	8.9	44	1.7	5.3
25pr.	+ 1	1.9	+ 1.8		+ 1	1.8	+ 1.5		+ 1	1.7	+ 1.2		+ 1	1.6	+ 0.8

1081-1140.				1141-1200.				1201-1260.				1261-1320.			
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
8.6	44	9.5	57.5	9.7	50	42.9	2.0	9.6	58	11.9	49.6	9.8	4	4.1	14.7
8.6		12.2	18.7	9.3		49.4	52.6	9.8		30.4	5.4	9.6		13.1	36.6
10.0		12.7	24.2	9.6	51	3.4	33.8	10.2		32.9	40.2	8.1		20.6	13.7
8.5		14.7	30.1	9.2		5.4	7.0	10.3		36.9	13.9	9.2		45.1	31.9
9.9		17.7	8.8	9.6		5.6	57.2	10.3		44.4	26.9	10.3		51.4	58.9
9.4		29.7	0.4	8.5		8.5	6.6	9.6		45.9	53.9	10.3		53.1	12.1
8.8		38.2	19.2	9.2		16.0	41.2	10.3		50.4	39.4	10.3		56.4	25.9
10.0		39.7	6.2	9.7		52.0	3.0	9.3		53.4	19.2	10.3	5	1.6	33.6
10.0		41.0	1.7	9.4	52	1.5	23.2	10.2	59	0.6	59.8	9.6		13.6	36.5
9.8		49.2	24.9	9.6		1.5	52.8	10.3		31.9	11.9	9.0		27.1	39.5
9.8		50.7	16.7	8.3		15.5	59.0	9.7		46.9	20.5	10.0		31.6	18.9
8.8	45	4.7	9.0	9.4		17.5	33.4	10.3		49.9	50.8	9.8		36.1	11.9
9.5		9.2	11.9	10.3		27.0	6.6	9.6		50.4	20.6	10.3		46.6	21.0
10.0		11.7	9.9	9.8		27.5	25.1	9.6		54.4	40.4	8.4		47.1	21.9
9.8		15.7	34.1	8.4		37.0	12.5	9.6		59.4	29.9	10.0		47.1	42.5
9.2		17.2	22.7	9.7		48.0	26.8	9.6	0	1.9	4.1	9.6		50.1	8.9
9.4		28.4	56.2	9.6		51.5	20.1	10.3		6.9	5.1	9.6		52.6	27.2
8.6		41.9	22.5	10.3		55.5	39.3	10.3		13.2	23.9	9.6		56.1	35.4
9.8		58.9	31.2	10.3	53	1.5	25.2	9.6		26.7	43.2	9.8	6	8.1	48.3
9.9	46	0.9	7.8	9.3		10.5	46.4	8.0		36.7	11.1	9.3		20.1	9.1
8.5		13.9	3.6	8.9		12.0	38.5	10.2		43.2	2.5	10.3		22.1	47.9
8.8		15.7	19.3	10.3		23.5	33.2	8.1		55.2	54.7	9.6		24.1	51.9
9.6		21.9	24.4	9.6		23.5	39.4	10.0		56.2	2.0	10.1		25.6	11.7
9.6		41.9	3.4	9.4		36.0	45.8	9.6	1	6.7	40.4	10.1		27.6	8.6
9.5		48.0	55.2	9.0		36.0	50.0	9.7		29.2	36.9	9.6		36.4	58.7
10.3		50.1	34.2	9.2		36.0	58.5	9.7		29.2	7.0	10.1		36.6	34.6
10.3		51.9	19.0	9.2		47.5	26.7	9.7		31.2	25.7	10.0		48.1	47.5
10.3		51.9	37.4	10.0		47.5	44.8	9.4		34.2	9.0	8.8		51.1	25.7
9.4		52.1	11.7	9.7		56.5	44.4	10.3		34.7	31.3	9.6		51.6	19.2
9.0		52.4	19.7	9.3	54	3.0	25.2	10.2		38.0	28.2	10.3		51.6	57.8
9.0		53.9	28.3	10.3		7.0	7.0	7.6		38.2	55.0	9.6		57.1	40.6
10.0	47	1.9	31.1	9.6		15.0	5.6	10.1		43.2	24.3	10.0	7	2.9	57.5
9.2		3.7	8.3	8.8		15.0	24.4	9.3		45.7	8.5	9.2		18.9	29.5
9.4		6.7	24.6	10.2		29.0	29.2	9.4		56.2	53.8	9.0		30.9	7.1
9.7		11.1	0.2	8.6		29.0	28.3	10.1	2	6.7	0.7	10.2		38.4	19.4
10.3		29.9	22.4	10.3		40.5	57.8	10.0		6.7	36.3	8.8		51.9	51.9
10.3		43.9	48.9	10.3		53.5	6.4	10.1		10.2	12.1	9.4		53.9	31.1
8.7		47.7	28.0	10.3	55	2.0	57.5	10.2		24.7	47.8	9.2		53.9	17.3
9.2		48.2	54.0	9.4		19.5	56.1	10.3		27.2	2.0	10.3		53.9	11.7
9.6		54.4	50.7	9.4		20.5	13.2	9.7		31.7	29.5	9.2	8	2.9	35.1
9.4		57.9	33.0	10.1		23.0	7.2	10.2		32.2	46.9	10.3		6.4	11.5
9.6	48	15.4	34.4	10.2		37.0	48.7	9.7		33.2	8.9	10.3		11.9	48.7
8.6		20.9	40.7	9.6		44.4	10.8	9.3		38.7	23.1	10.3		16.9	19.7
9.4		25.9	6.2	9.2		46.4	45.3	9.4		40.2	44.2	9.7		22.4	30.4
9.6		32.9	5.5	8.3		54.9	6.0	9.6		44.2	39.7	10.0		25.2	59.4
9.4		52.9	19.9	9.4	56	2.9	44.9	9.7		53.2	21.7	10.0		31.4	40.1
9.2	49	0.4	1.1	10.2		16.4	9.9	10.2		56.7	9.4	9.6		39.4	41.9
10.0		13.9	11.4	10.1		24.4	54.9	10.2	3	4.2	51.5	10.3		42.9	14.1
9.6		14.9	18.6	9.7		29.4	49.9	10.2		8.7	39.2	10.2		54.9	44.7
10.3		20.4	36.9	9.6		31.9	21.1	9.0		21.2	18.3	10.3	9	2.4	38.9
9.6		23.4	28.8	10.3		38.4	2.9	9.6		24.7	47.9	9.3		2.9	49.7
10.0		25.9	52.6	9.4		47.4	48.7	10.0		26.7	37.5	8.6		5.4	41.0
9.6		34.9	6.3	9.4		57.4	11.9	9.6		33.1	11.5	10.3		5.4	9.6
10.0		46.4	57.6	9.7	57	8.4	53.2	10.3		36.6	59.6	9.4		25.9	20.9
10.3		52.9	2.7	9.7		33.9	40.3	9.0		39.1	33.8	10.3		26.9	52.0
9.2	50	7.4	34.2	10.1		34.9	43.5	9.6		45.1	42.5	10.3		32.9	20.6
9.0		10.4	38.9	10.3		38.4	6.1	9.4		48.1	14.0	8.8		33.5	23.1
8.4		18.9	17.1	9.7	58	0.4	40.8	9.0		59.1	20.0	9.0		43.5	3.7
10.1		34.9	31.1	10.3		4.9	3.1	10.0		59.6	57.8	9.7		44.4	59.1
10.1		38.9	29.0	9.8		4.9	34.1	9.6	4	0.1	7.8	9.8		45.1	45.9
25Pr	+ 1	1.6	+ 0.5		+ 1	1.6	+ 0.2		+ 1	1.6	- 0.1		+ 1	1.6	- 0.3

1896AnCap...3...1G

1321-1380.				1381-1440.				1441-1500.				1501-1560.			
mag.	6h.	-24°		mag.	6h.	-24°		mag.	6h.	-24°		mag.	6h.	-24°	
	m	s	'		m	s	'		m	s	'		m	s	'
9.0	9	48.1	41.3	9.9	15	30.2	0.7	9.4	21	3.1	12.0	9.6	25	35.6	58.5
8.4	10	3.5	21.3	9.5		32.0	36.0	9.6		10.6	16.7	10.0		38.1	7.7
8.9		10.1	29.3	7.7		37.5	14.7	9.3		11.6	51.1	9.0		52.6	48.4
9.6		10.3	50.0	9.2		44.0	24.7	10.0		26.6	9.0	9.2		58.6	48.8
9.0		18.1	12.7	9.6		48.0	23.1	9.6		27.1	57.0	9.1	26	1.6	36.2
9.7		36.1	47.7	10.0		56.0	30.6	9.4		31.6	36.7	10.0		8.6	34.9
10.0		53.1	49.9	10.0		56.0	29.8	10.0		40.1	33.4	9.5		17.6	19.2
8.4		54.9	57.9	9.2		59.0	23.3	8.7		40.1	56.6	9.9		22.1	19.7
9.9		59.1	29.3	8.4	16	3.5	27.4	10.0		47.1	4.5	9.0		27.1	4.7
9.8		59.1	42.2	8.4		6.0	11.8	9.6		52.1	23.8	9.0		32.1	57.5
9.0	11	5.1	26.5	9.7		35.8	9.4	10.0		55.6	20.5	9.2		38.1	40.0
10.0		9.6	38.2	10.0		37.6	43.0	9.0		58.5	0.8	10.0		56.1	9.2
10.0		26.4	59.9	9.8		39.3	20.7	8.8	22	0.1	9.9	9.6	27	13.6	25.2
8.9		43.1	54.2	9.1		42.3	41.0	8.9		2.4	0.0	9.2		19.6	42.9
9.5		46.6	5.2	9.0		45.3	13.4	9.8		5.6	46.7	9.2		20.6	2.3
9.8		48.6	50.0	9.2		47.3	10.4	9.8		7.1	10.4	9.0		32.6	3.3
8.8		56.6	32.1	10.0	17	2.3	44.4	9.6		10.1	8.0	9.7		32.6	45.4
7.7	12	3.1	1.8	9.4		2.8	9.8	9.6		11.6	46.6	9.8		32.6	28.3
9.0		8.6	47.5	9.0		6.3	36.0	9.9		12.6	32.7	9.5		39.1	26.0
9.6		12.1	23.7	9.9		26.3	59.4	8.6		15.1	12.2	9.6		39.6	39.9
9.9		16.1	8.7	8.7		40.3	49.0	9.9		23.6	54.8	8.7		41.1	16.5
9.0		19.6	11.2	9.5		41.8	22.7	9.6		30.6	16.4	9.9		42.1	53.9
9.5		24.6	13.9	8.4		47.3	54.7	10.0		36.6	1.2	9.6		47.6	52.1
8.0		28.6	23.6	8.1		49.8	29.6	10.0		38.6	12.1	9.4		51.1	24.1
9.3		32.1	4.5	9.7		59.8	9.8	9.6		41.6	28.1	9.3		54.1	17.6
9.9		36.1	36.7	9.8	18	1.3	17.9	10.0		49.6	14.8	8.8	28	6.6	22.6
9.8		42.0	41.1	9.7		3.0	1.6	9.8		53.8	56.6	10.0		6.6	34.2
9.6		42.1	12.0	9.8		31.3	38.5	9.6		55.6	8.8	9.9		9.1	42.6
8.9		44.0	10.4	9.1		39.3	50.8	9.4	23	0.6	54.5	9.5		12.6	54.6
9.6		48.0	59.1	10.0		42.3	54.0	9.6		12.1	35.0	9.6		16.1	25.9
9.7		56.5	45.2	9.4		55.8	34.2	9.9		17.6	8.8	8.2		18.6	7.7
10.0	13	3.0	22.9	9.4		57.3	53.1	9.1		19.1	29.8	9.6		21.6	38.7
9.6		5.0	59.3	9.4	19	2.8	27.8	9.2		21.6	36.6	9.3		40.6	24.9
9.8		11.5	19.5	9.7		2.8	41.4	9.2		22.6	44.2	9.8		49.1	25.2
8.6		16.0	17.0	9.6		11.3	13.5	9.4		27.1	46.5	9.7		52.1	52.7
9.8		17.0	51.2	8.8		15.8	58.8	10.0		30.6	19.3	9.8	29	7.6	28.6
9.8		20.5	50.6	8.8		17.8	55.9	9.6		37.6	39.6	9.6		14.1	11.1
10.0		21.5	6.0	9.9		17.8	19.2	9.9		40.6	34.6	10.0		15.6	44.2
8.6		22.0	14.3	10.0		20.6	24.9	9.5		49.1	18.2	9.8		15.6	43.3
9.1		36.5	38.4	10.0		20.8	46.0	9.2	24	20.1	15.8	9.5		26.1	26.8
10.0		43.5	52.2	9.2		23.3	36.4	10.0		26.1	50.2	8.6		28.6	6.9
9.8		44.0	9.1	10.0		32.8	48.6	9.8		26.6	49.3	9.1		32.6	4.2
9.6		47.5	49.4	9.7		35.3	8.7	9.6		29.6	37.3	9.8		45.6	30.0
7.5		49.4	57.9	9.6		35.8	10.6	9.9		32.6	22.5	8.6		58.1	19.1
9.6		55.5	49.3	9.6		36.8	8.4	10.0		32.6	2.5	9.7	30	2.1	28.3
9.4	14	1.5	36.1	8.6		37.3	5.7	10.0		40.6	24.2	9.5		6.1	48.2
9.6		2.5	47.9	9.4		37.8	28.4	9.4		46.6	44.7	9.0		11.1	36.4
8.9		8.5	33.2	8.3		41.3	45.4	9.8		47.6	16.7	9.8		18.1	29.0
7.6		9.5	55.5	9.0		43.5	59.5	9.8		53.1	4.9	9.8		30.6	29.2
8.4		9.5	54.4	9.0		47.3	18.2	9.6		55.9	59.0	9.4		35.6	21.6
9.7		10.0	36.7	9.4	20	10.1	15.0	10.0		59.6	29.1	9.9		41.1	49.7
9.9		16.5	14.3	8.7		12.1	2.5	9.7	25	2.6	51.1	9.6		51.6	5.5
9.2		33.0	2.1	10.0		12.6	1.1	9.5		4.6	53.2	9.9		52.6	33.6
10.0		35.9	10.6	9.8		42.6	3.8	9.0		11.6	27.1	8.8		52.8	1.5
9.3		37.5	46.3	9.8		43.1	53.0	8.4		14.1	3.6	7.9		55.4	1.1
8.8		42.0	4.4	9.0		47.1	10.8	9.8		16.6	57.8	8.5		57.6	45.8
9.9		46.0	16.8	9.9		48.1	29.0	9.6		20.1	37.0	9.0	31	1.1	19.6
9.5	15	8.5	6.0	9.8		49.1	3.0	9.3		24.6	1.7	9.6		9.4	11.8
9.6		10.5	51.4	9.7		53.1	25.8	9.7		29.1	25.8	9.9		13.1	10.1
9.2		28.5	14.6	9.1	21	1.6	34.9	9.5		30.1	19.2	9.8		19.6	53.4
25pr.	+ 1	1.6	-0.5	+ 1	1.6	-0.7		+ 1	1.6	-0.8		+ 1	1.7	-1.0	

1561-1620.				1621-1680.				1681-1740.				1741-1800.			
mag	6h	-24°		mag	6h	-24°		mag	6h	-24°		mag	6h	-24°	
9.6	31	28.6	6.0	9.5	38	38.9	53.5 9.5	8.7	43	58.5	28.4 9.5 a	9.8	48	41.7	6.9
9.8		36.1	31.3	9.9		52.9	50.7	9.7	44	2.5	17.7	9.5		44.2	41.8
10.0		44.3	54.8	9.9		53.9	0.7	9.6		7.0	18.4	7.0		46.2	23.0 GSbl
10.0		54.1	38.0	9.4		56.9	14.9	9.9		24.0	55.0	9.5		54.2	36.4
9.8	32	9.3	56.6	9.8	39	2.4	9.9	9.1		25.5	4.4 8.3 a	7.2		56.4	1.8 4.0 GSπ3
10.0		11.6	39.4	9.9		12.9	23.8	7.8		26.8	0.2 7.7 GSa	9.8	49	1.7	38.3
10.0		26.3	42.1	9.6		24.4	4.0	9.9		32.0	22.1	9.7		6.2	21.8
9.9		31.3	58.9	9.8		38.9	8.6	9.9		38.5	10.6	9.9		22.2	13.7
9.3		34.1	39.1 9.0 a	9.3		40.4	9.2	7.9		42.5	51.3 Ga	9.9		23.2	40.5
9.5		35.1	3.7	9.9		40.9	10.0	9.7		42.5	16.9	9.9		24.2	26.9
9.9		37.1	18.3	9.4		44.4	8.0	9.5		43.5	11.3	8.4		31.2	6.0 9.0
9.9		38.7	57.7	9.5		50.9	54.6	9.9		47.0	48.5	9.9		32.5	1.7
9.5		40.1	38.5	9.9		52.9	30.9	9.0		53.5	55.1	8.7		33.2	0.6
9.7	33	11.6	21.3	9.7		53.9	53.4	9.9		57.7	19.0	8.4		33.7	46.0
9.2		24.1	48.5 a	9.6		58.9	30.0	9.6	45	4.0	41.4	8.2		33.7	9.6 9.0 a
8.9		26.1	3.8	9.5	40	0.9	13.1	9.8		6.0	14.8	9.7		36.7	19.1
8.8		28.6	51.5 9.0 a	9.3		1.9	6.1 8.8 a	9.7		6.0	57.8	9.1		37.7	26.3
9.4		53.1	32.1	9.3		2.7	29.3	9.5		12.8	59.7	9.7		38.2	39.6
8.7		57.6	14.3	9.9		2.7	1.8	9.4		16.0	3.2	9.7		42.2	38.0
9.2		58.1	48.7 a	9.9		4.7	3.5 9.5	9.9		16.5	44.1	9.9		42.5	35.1
9.6	34	0.1	32.7	9.9		9.2	9.1	9.9		19.3	59.0	7.9		44.0	33.6 8.5
9.9		22.1	31.9	9.9		11.7	46.1	8.6		24.5	48.8	9.8		44.5	55.9
9.1		31.1	40.9 a	9.9		14.2	12.3	9.7		36.5	4.8	9.2		46.0	31.3 9.0
9.1		37.1	46.0 a	9.9		15.7	11.9	8.3		47.0	35.5 9.0	9.0		48.0	6.1 9.5
9.9		44.1	33.9	8.9		23.7	45.9 a	8.4		47.0	15.1 9.0	9.1		50.0	35.6
9.9		48.6	16.2	8.4		26.7	3.3 8.5 a	9.2		53.5	22.2	9.5		52.0	36.1
9.9		59.1	15.4	9.9		26.7	17.9	9.6		55.7	58.4	9.1		54.0	16.3
9.5		59.1	34.2	9.9		32.7	23.4	9.0		57.0	33.5	9.2		56.4	2.2
9.8	35	5.6	45.1 a	9.7		37.7	37.9	9.7	46	5.0	40.0	9.2		56.5	22.4
8.8		9.1	46.0 a	9.9		46.7	39.9	9.9		23.5	25.9	8.6	50	13.5	12.1 9.5
9.7		13.1	57.6	9.9		53.7	14.9	9.5		28.0	55.0	9.9		22.0	13.1
9.5		23.1	31.4	9.9		58.7	24.1	9.8		35.5	24.4	8.8		23.0	13.5 9.0 Ga
9.1		41.1	45.6 8.5 Ga	9.6	41	14.7	27.2	9.5		41.0	15.2	9.7		28.5	5.8
9.3		47.1	32.6	9.7		22.7	27.8	9.4		44.5	58.2	8.0		33.0	31.1 8.0
8.8		47.9	59.1 9.0 a	9.6		22.7	39.3	9.5		52.0	37.2	9.9		34.0	26.6
8.8		57.1	41.8 9.0 a	8.0		27.1	0.7 8.2 Ga	9.0		58.5	47.1 9.5	9.9		43.0	38.5
9.2		57.1	25.7	9.1		32.7	36.5 9.5	9.7	47	12.5	5.9	9.9		46.5	40.0
9.3	36	0.1	30.7	9.7		44.7	26.1	9.9		13.5	41.2	9.9		50.5	23.9
9.9		14.4	6.3	9.8		47.2	59.3	9.1		18.5	53.4 9.5	9.4		51.5	0.5
8.0		17.6	15.9 8.0 Ga	9.7		53.7	29.3	9.2		23.5	18.6	9.9	51	2.0	34.2
9.2		22.1	16.7	9.7	42	13.2	48.7	9.9		27.2	8.9	8.9		3.0	38.7 8.5 G
9.9		38.4	49.3	9.9		17.2	6.3	9.7		33.7	34.2	9.9		3.0	10.0
8.5		56.9	7.3 8.5 Ga	7.8		31.7	48.4 8.0 Ga	9.4		38.2	10.1	9.9		11.0	39.1
9.0	37	13.4	6.9 8.5 G	9.7		33.7	42.1	9.9		50.2	4.6	9.9		13.0	27.9
8.4		26.9	21.2 8.0 G	9.1		33.7	57.4 8.8 a	9.9		54.2	28.1	9.6		16.0	45.6
9.9		28.9	9.3	9.2		35.7	10.5 9.8	9.9		56.7	32.8	8.6		28.0	42.1 9.0
9.5		40.9	55.8	9.4		38.7	36.1	8.4		59.2	45.2 9.0	9.8		28.5	8.3
9.5		45.9	4.4	9.5		38.7	10.6	7.6	48	2.2	0.9 8.5 Sb	8.4		43.5	21.1 9.5 a
9.9		46.4	54.9	9.9		44.7	36.9	8.9		3.2	6.6	8.6		45.0	48.3 8.5 GSbe
9.9		50.9	30.9	9.9		54.2	39.3	7.4		13.2	31.6 GS	9.9		50.0	44.1
9.9		54.4	56.9	9.8	43	1.4	58.9	9.9		16.7	6.8	9.4		56.0	26.3
9.8		54.9	18.6	9.9		3.7	54.9	9.7		16.7	55.6	8.8	52	1.0	18.5 9.5 a
9.2		58.9	47.7	9.7		4.2	22.7	8.9		22.7	15.7	8.7		2.0	17.3 9.0 a
9.0	38	2.9	18.9 8.5	9.9		6.7	15.3	9.9		26.7	30.3	8.6		2.0	59.4 8.5 Ga
9.5		9.9	34.2	8.6		7.7	25.5 a	9.5		30.2	13.6	9.3		2.0	20.7
9.0		13.9	26.9	9.7		8.7	17.8	8.6		30.2	13.9 GSb	9.9		9.0	46.5
9.5		22.9	39.2	9.9		34.0	5.3	9.9		32.2	7.9	9.7		15.0	13.7
9.8		23.9	31.1	8.5		44.5	51.7 9.2 a	9.6		32.2	11.0	6.6		23.7	28.1 6.0 GStπ
9.5		26.9	20.3	9.9		51.7	8.0	9.9		37.2	53.3	8.9		32.7	30.7
9.7		34.9	19.1	9.9		53.5	58.1	7.9		38.2	4.6 8.5 GStπ	9.6		32.7	7.1
25Pr.	+ 1	1.7	-1.8		+ 1	1.8	-1.5		+ 1	1.9	-1.7		+ 1	1.9	-1.8

1896ArcCap...3....1G

1801-1860.				1861-1920.				1921-1980.				1981-2040.			
mag.	6h.	-24°		mag.	6h.	-24°		mag.	6h.-7h.	-24°		mag.	7h.	-24°	
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''
9.7	52	33.2	1.3	9.3	56	14.7	35.8	9.8	59	52.7	54.3	9.7	2	43.7	46.0
9.3		54.4	2.8	9.8		19.2	33.0	9.4		53.7	58.9	9.7		44.7	1.0
8.7	53	3.7	8.2	9.8		19.2	41.4	9.0		56.7	22.4	9.2		46.7	27.4
9.9		10.7	39.9	9.8		28.7	37.9	8.3		58.2	54.8	9.5		46.7	43.5
9.9		14.7	46.9	9.8		32.2	39.2	9.5		59.2	35.8	9.0		47.2	33.9
9.9		20.2	56.3	9.3		33.2	17.5	9.1	0	2.7	16.0	9.8		52.2	19.4
9.7		20.7	21.3	9.7		37.7	43.7	9.8		3.7	52.5	9.2		52.7	8.1
9.3		28.7	4.4	9.8		44.7	7.0	9.8		7.7	18.2	9.8		54.2	47.1
9.9		30.2	6.1	8.8		50.7	30.8	9.4		13.7	8.9	9.0		55.7	46.1
9.7		30.7	10.9	9.5		50.7	4.3	9.2		18.7	38.7	9.6		56.2	54.1
9.0		35.7	21.1	9.0		57.2	21.3	9.8		21.2	6.3	9.3		56.7	40.4
9.6		41.7	31.0	9.3		58.7	14.8	9.6		25.7	50.5	9.8		56.7	23.9
9.0		43.7	45.6	9.0	57	1.7	5.4	9.6		26.7	55.3	9.5	3	0.7	58.5
9.9		51.7	14.9	9.8		9.2	29.7	9.8		27.8	25.4	9.6		6.2	21.6
9.3		53.2	46.3	9.8		17.7	55.4	9.6		30.7	45.3	8.6		6.5	3.2
9.1		57.2	31.4	8.8		18.7	41.7	8.8		32.2	22.8	9.8		10.2	2.6
9.9		58.2	22.5	9.6		36.7	8.8	9.0		32.7	34.0	9.7		15.7	43.9
8.9	54	1.5	42.3	9.6		38.2	8.1	8.4		36.7	49.1	9.5		16.7	4.0
9.7		2.7	20.6	9.8		38.2	54.8	9.0		39.5	2.7	9.5		22.7	59.8
9.5		3.7	8.9	7.9		43.7	24.1	9.4		45.2	29.5	9.3		23.7	11.7
9.9		11.2	20.9	9.8		48.7	53.4	9.8		53.2	15.6	9.5		28.7	24.4
9.8		16.7	2.4	9.4		48.7	43.4	9.6		53.7	37.9	9.4		29.2	12.7
9.7		20.5	17.6	8.4		49.7	3.1	9.6		59.2	42.9	9.8		31.7	33.4
9.3		32.7	42.8	9.4		51.2	4.9	9.6		59.2	58.9	9.6		35.7	34.1
9.8		33.7	25.3	9.1		52.7	25.9	8.3	I	1.7	29.5	9.2		42.7	54.4
9.8		34.2	26.4	9.0		53.7	19.4	9.4		1.7	24.8	9.8		44.7	51.5
9.8		34.6	15.2	9.7		54.7	49.8	9.6		2.2	35.1	9.4		55.7	46.2
9.6		35.2	53.4	9.5		55.2	59.3	9.3		6.7	25.5	9.8		56.7	55.0
9.4		36.2	31.4	9.3	58	1.2	34.5	9.4		9.2	31.1	8.8		58.7	16.0
9.6		42.2	39.1	9.2		2.7	32.4	9.7		18.0	0.5	8.4		59.7	59.4
9.7		42.4	0.3	8.8		5.2	9.8	9.3		23.7	18.3	9.5		59.7	19.9
9.7		45.7	16.2	9.1		8.7	8.0	9.8		30.2	55.4	9.8	4	0.7	17.0
8.8		47.4	30.6	9.6		8.7	50.1	9.7		32.7	47.7	9.5		3.7	20.5
9.2		47.7	52.2	9.7		10.7	44.1	9.6		33.7	32.0	9.2		3.7	33.4
8.9		54.7	23.8	9.6		16.7	23.7	9.3		33.7	9.9	9.8		3.7	58.2
9.8		57.9	0.7	9.6		18.2	33.1	9.0		38.7	11.2	9.2		4.7	9.3
8.8	55	4.7	7.0	9.8		20.9	39.8	9.6		41.7	27.3	9.1		18.0	59.1
9.4		5.2	53.5	9.6		21.2	4.8	9.8		41.7	26.3	9.1		22.7	6.5
9.8		7.2	6.9	9.5		22.7	4.1	8.1		42.7	46.1	9.6		23.7	26.3
9.4		7.7	8.2	9.5		24.2	36.8	9.6		42.7	20.8	9.6		25.7	58.2
9.2		17.7	22.5	9.2		26.7	5.7	9.7		42.7	43.0	9.6		28.7	21.2
9.8		20.2	3.8	9.0		32.7	19.6	9.6		46.7	43.0	9.3		34.7	12.8
9.0		23.2	6.8	8.3		32.7	7.6	9.3		47.7	39.4	9.4		36.7	13.8
8.4		23.7	27.1	9.6		33.7	8.3	9.6		56.7	18.1	9.8		42.7	35.8
8.1		43.7	18.8	7.3		33.7	54.1	9.8	2	1.2	57.7	9.8		42.7	40.5
9.6		44.2	11.0	9.6		35.7	33.5	9.0		2.7	28.9	9.7		44.7	6.5
9.8		46.7	20.7	9.6		37.2	50.1	9.0		2.7	35.6	8.6		46.7	12.5
9.7		47.7	16.8	9.6		43.7	31.5	9.4		3.7	30.8	9.6		49.2	21.9
9.8		49.2	58.5	9.7		48.7	20.8	9.3		6.7	44.0	9.2		50.7	45.1
9.8		52.7	37.4	9.6		49.7	31.3	9.8		10.2	0.3	9.4		52.7	54.9
9.8		53.2	33.8	9.6		53.7	48.1	9.4		12.7	16.9	9.7		52.7	26.8
9.8		54.4	0.9	9.8		54.7	11.8	9.4		13.2	54.1	9.3		56.7	23.6
9.4		54.7	7.2	9.4	59	4.7	11.4	9.7		14.2	4.6	8.6	5	5.2	4.5
9.5		56.7	26.2	9.4		7.3	1.3	9.8		18.7	8.0	9.6		13.5	59.8
9.4		56.7	28.2	9.4		7.5	1.0	9.4		22.7	20.4	8.4		14.7	8.6
9.6	56	1.2	26.0	9.2		14.2	59.6	9.7		23.7	40.9	9.5		18.7	26.2
9.5		3.7	15.9	9.8		39.2	22.1	9.6		32.7	9.4	9.6		19.2	18.4
9.6		4.7	9.0	9.4		40.7	40.3	9.8		34.7	42.4	9.7		19.7	26.7
9.5		7.7	39.1	9.4		46.7	29.9	9.1		36.7	18.2	9.5		21.7	4.1
9.8		14.4	59.9	9.6		48.2	56.9	9.8		38.7	15.8	9.2		26.7	2.3
25pr.	+ 1	2.0	-2.0	+ 1	2.1	-2.1		+ 1	2.1	-2.2		+ 1	2.2	-2.3	

2041-2100.				2101-2160.				2161-2220.				2221-2280.			
mag.	7h.	-24°		mag.	7h.	-24°		mag.	7h.	-24°		mag.	7h.	-24°	
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''
9.2	5	32.2	53.0	9.5	9	13.2	51.9	9.1	12	10.7	17.6	9.8	13	33.5	35.3
9.8		33.7	56.7	9.3		14.2	7.4	8.3		25.7	35.5	9.8		35.0	45.2
9.3		33.7	8.8	8.8		16.2	39.4	9.3		27.2	46.5	9.2		35.0	46.0
9.8		40.8	46.9	9.3		16.7	38.7	9.8		31.7	24.9	8.4		35.5	25.7
9.5		42.7	9.9	9.5		19.2	51.0	9.5		37.7	38.3	9.4		36.0	44.2
9.7		53.7	0.5	9.8		22.2	18.3	9.4		37.7	16.1	9.4		37.0	39.8
9.5		53.7	30.8	8.5		23.2	43.3	9.4		39.2	15.2	9.3		37.5	15.9
9.6		58.7	39.2	9.6		23.2	27.5	9.2		41.2	55.2	8.4		37.5	43.3
9.8	6	1.2	33.4	9.8		24.2	37.2	9.6		41.9	1.3	9.8		38.5	45.0
9.7		3.7	55.1	9.8		39.2	3.0	9.7		45.7	59.5	9.6		39.5	45.7
9.7		5.2	32.6	9.4		39.7	42.0	9.6		47.2	13.3	8.8		39.5	44.2
9.6		5.2	29.0	9.5		41.9	51.9	9.5		47.2	18.0	9.4		39.5	30.2
9.6		7.7	51.3	9.0		42.4	8.7	9.2		52.2	29.0	9.8		41.5	52.1
9.4		15.7	34.0	9.4		44.9	1.4	9.4		54.2	12.5	9.8		42.5	41.5
9.4		16.7	30.3	9.8		50.4	22.0	9.6		54.2	10.5	9.5		43.0	45.8
9.4		24.2	11.8	9.5		51.8	23.5	9.6		54.2	25.7	9.4		43.0	43.7
9.4		24.7	7.4	9.2		52.9	38.6	9.8		57.2	36.3	9.8		44.0	42.7
9.7		29.7	33.1	9.0		52.9	36.0	9.5		57.5	1.0	9.6		44.5	30.0
9.8		40.8	37.4	9.1		53.9	25.8	9.8		58.2	16.2	9.0		44.8	57.7
9.3		41.8	25.6	9.1		55.9	23.0	9.6		59.4	56.6	9.4		47.5	44.0
9.8		46.7	53.7	9.8	10	5.9	49.0	9.8	13	2.7	17.0	9.3		50.0	51.1
9.8		52.2	30.1	9.4		11.9	31.2	8.8		4.7	42.1	9.0		51.5	25.7
9.8		56.2	40.9	9.2		13.4	7.6	9.1		5.7	7.6	9.5		51.5	34.2
9.3	7	8.7	36.3	9.2		13.9	16.3	9.7		10.5	26.3	9.5		54.0	42.6
9.8		10.7	9.2	9.0		31.9	20.8	8.6		11.2	37.6	9.7		54.5	54.4
9.6		13.7	25.7	9.4		31.9	50.0	9.4		11.5	18.8	9.4		58.9	36.9
9.8		16.7	39.7	9.4		45.9	48.6	9.8		12.5	31.5	9.6	14	1.4	53.0
9.8		18.8	58.9	9.5		49.9	32.6	9.0		15.5	38.5	7.1		2.4	43.6
9.0		19.7	44.6	9.3		54.4	22.2	9.5		17.5	54.0	9.0		3.9	52.2
9.5		26.2	14.6	9.6		55.9	53.6	9.4		18.1	1.7	9.0		5.4	39.8
9.8		33.2	51.5	9.6		56.4	19.6	9.8		20.0	42.7	9.6		6.4	41.6
9.4		36.7	8.6	9.5		57.4	53.2	9.4		20.5	7.2	9.0		8.9	27.5
9.8		37.2	51.2	9.8		57.9	0.0	9.6		21.5	53.8	9.4		11.4	41.0
7.8		37.3	24.2	9.5	11	6.9	26.4	9.6		21.5	1.1	9.3		14.9	42.8
9.7		38.7	36.3	9.5		8.9	29.0	9.6		22.5	47.3	9.6		20.9	3.8
9.2		45.7	34.2	9.8		9.4	5.0	9.3		23.5	41.6	9.7		23.4	34.2
9.8		48.7	12.0	9.0		13.4	54.3	9.5		24.0	43.8	9.5		26.4	51.4
8.3		50.7	1.2	9.8		17.8	58.3	9.5		24.0	43.2	9.8		32.4	37.8
9.7		50.7	14.4	9.8		19.9	17.6	9.6		24.0	45.7	9.8		35.4	24.0
9.5		51.7	10.4	9.8		20.6	1.6	9.8		24.5	41.8	9.6		35.4	19.7
9.8		57.2	51.0	9.3		23.9	17.6	9.4		25.0	48.2	9.0		35.4	17.4
9.5	8	6.2	51.0	9.4		26.4	19.3	9.7		25.5	33.7	9.5		37.4	57.4
9.8		7.2	5.8	9.8		29.8	52.8	9.0		25.5	46.0	9.8		40.4	8.8
9.0		12.2	20.4	9.4		30.3	3.2	9.1		26.5	42.5	8.6		41.4	46.0
9.8		16.2	40.1	9.4		32.9	26.4	9.0		27.0	44.1	9.6		41.4	57.4
9.3		22.2	14.2	9.0		38.9	28.2	9.7		27.5	45.4	9.5		41.9	8.8
9.2		26.2	4.8	9.8		40.4	13.2	9.0		27.5	44.7	9.7		41.9	43.7
9.4		27.2	11.8	7.5		40.9	56.4	9.3		27.5	42.7	9.4		42.7	58.4
9.8		28.2	2.6	9.8		47.2	41.8	9.8		27.5	55.0	9.6		45.4	30.1
9.0		32.2	36.6	9.2		47.8	2.5	5.4		28.0	19.8	9.8		45.4	42.2
9.5		41.7	55.9	9.8		47.9	17.0	9.7		29.5	45.2	9.6		50.4	56.8
9.8		43.2	17.4	9.8		47.9	16.5	9.4		30.0	44.7	8.2		50.4	11.2
9.6		49.2	27.4	9.5		54.2	32.9	8.6		30.5	46.6	9.8		55.4	42.9
9.8		49.2	39.2	8.2		57.2	7.8	9.3		31.0	34.6	9.6		55.4	32.6
9.7		53.2	34.8	9.6		58.2	6.2	9.6		31.5	55.3	9.5	15	0.9	29.4
9.0		56.2	19.6	9.6		59.7	36.9	5.2		32.5	43.7	9.6		1.2	57.3
9.4	9	1.2	6.2	9.5		59.9	1.9	9.4		32.5	42.2	9.6		5.4	32.0
9.4		9.2	26.8	9.4	12	1.2	24.9	9.4		32.5	40.2	9.4		5.4	35.9
9.4		9.2	34.0	9.4		2.7	20.9	8.8		32.5	25.4	9.6		6.9	11.2
9.5		12.4	58.9	9.4		5.9	1.9	9.4		33.0	44.7	9.5		6.9	48.1
25pr.	+ 1	2.2	-2.4	+ 1	2.3	-2.5		+ 1	2.4	-2.6		+ 1	2.4	-2.7	

2281-2340.			2341-2400.			2401-2460.			2461-2520.		
mag.	7h.	-24°	mag.	7h.	-24°	mag.	7h.	-24°	mag.	7h.	-24°
9°0	15 9'3	4'3	9°0	17 24'8	51'7	9°8	20 10'7	2'2	9°6	23 24'2	43'5
9°6	10'8	41'9	9°4	29'3	55'6	9°8	13'2	11'6	8°8	25'2	3'1 9°5
9°7	10'8	48'9	9°4	33'5	1'2	6°3	14'7	58'4	9°6	27'7	55'9
9°5	11'3	38'9	8°5	35'0	56'1	9°8	15'7	27'5	9°4	38'2	39'0
8°9	14'3	16'1	9°5	40'8	31'6	9°6	19'2	27'2	9°5	40'2	13'2
9°6	17'3	51'8	9°8	41'5	54'9	9°8	21'2	16'6	9°0	43'4	57'6
9°8	20'3	25'7	9°8	41'8	48'5	9°8	22'2	19'3	9°2	55'2	30'9
9°8	25'3	28'0	9°3	42'7	21'5	9°8	24'7	12'2	9°8	55'7	40'0
8°6	25'3	56'5	9°8	44'0	29'2	9°6	27'7	43'0	9°4	56'2	14'2
9°1	29'3	36'0	9°8	44'3	42'1	9°6	28'2	52'4	9°8	24 0'7	25'8
9°4	31'0	2'3	9°3	45'0	43'1	9°1	31'2	51'5	9°2	1'2	56'2 9°0
9°4	31'3	6'3	9°8	48'9	22'4	9°3	36'2	48'2	9°3	6'2	56'2 8°5
9°1	32'8	35'1	9°6	50'0	38'4	9°0	36'7	34'7	9°8	12'2	5'2
9°0	33'3	20'3	9°8	52'5	14'2	9°4	39'2	45'1	9°4	14'2	3'7
9°3	33'6	1'8	9°6	53'5	23'8	9°8	41'7	17'4	9°5	17'7	39'7
9°0	35'0	2'2	9°8	54'5	14'4	9°4	41'7	23'6	9°4	24'2	6'4 9°5
9°8	37'3	54'7	9°8	18 2'0	50'3	9°3	43'2	38'9	9°2	24'2	17'2
9°8	38'3	55'7	9°5	11'5	17'2	9°5	49'7	18'6	9°4	27'2	5'4
9°4	45'3	22'0	8°8	17'5	42'8	9°4	50'7	49'8	8°8	30'2	12'4 9°0
9°4	51'3	5'8	9°4	25'0	32'5	9°6	51'2	15'5	9°4	32'2	27'4
8°9	52'6	58'3	9°0	26'5	19'5	9°4	53'2	7'5	9°3	40'2	53'7 G
9°2	57'3	38'0	9°6	27'0	7'0	9°6	57'4	56'8	9°7	43'7	16'4
9°7	58'8	55'0	9°6	32'5	46'6	9°8	1'2	53'8	9°6	45'2	55'8
9°4	16 1'3	59'7	9°6	33'0	52'9	9°6	6'2	22'6	8°0	51'2	53'3 8°0 GW
9°6	2'3	57'7	9°7	40'0	33'9	9°0	6'2	47'1	9°7	55'2	18'6
9°6	2'3	53'3	9°6	41'5	35'9	9°6	11'7	19'2	9°8	55'7	12'0
9°1	3'3	18'3	9°0	44'5	4'6	8°2	26'2	12'7	9°8	25 3'2	35'8
9°6	5'3	30'0	9°8	45'0	41'6	9°6	27'2	37'8	9°0	9'0	1'2 10°0
9°6	6'3	44'1	9°5	46'5	55'2	9°2	27'2	36'2	9°6	9'7	58'6
9°4	11'3	24'8	9°5	46'5	7'0	9°2	40'7	18'6	9°8	10'2	20'0
9°6	12'3	32'9	9°8	47'0	49'8	9°6	43'3	1'8	9°2	18'7	24'3
9°7	13'3	34'8	9°5	48'0	6'8	9°0	44'7	4'0	9°7	21'2	41'2
9°7	14'8	43'9	9°7	50'8	58'9	9°8	46'2	4'1	9°6	23'7	54'4
9°8	15'8	44'8	9°7	51'2	51'0	9°8	53'2	24'6	9°8	26'2	24'5
9°7	16'3	45'0	9°6	51'2	41'4	9°4	54'7	35'0	9°0	27'2	12'7
9°8	22'3	8'2	9°8	53'7	42'5	9°4	55'2	49'7	9°8	29'0	2'1
9°5	26'3	56'0	9°8	54'7	32'7	9°8	56'9	58'4	9°8	31'2	43'0
9°5	27'3	37'2	9°8	19 1'7	32'6	9°3	22 11'2	44'4	9°7	31'2	43'2
9°3	30'8	12'9	9°8	1'7	29'4	9°6	16'2	3'4	9°4	33'7	25'7
9°5	33'3	25'8	9°8	1'7	55'4	9°8	16'5	0'6	9°4	36'2	24'4
9°2	36'3	10'5	9°2	5'2	24'5	8°0	20'2	47'7	9°6	37'2	19'7
9°6	36'3	26'0	9°8	5'2	29'2	9°8	25'7	48'3	9°6	41'0	1'6
9°8	36'8	14'2	9°8	5'7	55'2	9°6	29'2	47'9	9°8	41'2	50'6
9°4	41'6	48'3	9°8	7'2	24'1	8°8	32'2	31'2	8°2	43'2	24'3 9°0
9°4	45'1	45'1	8°7	11'2	35'5	9°8	33'7	50'0	9°2	47'2	52'2
9°4	46'1	58'7	9°3	12'2	47'2	9°4	36'7	16'1	9°8	53'2	21'7
9°6	51'3	28'9	9°2	16'2	40'1	9°7	38'7	39'2	9°2	55'2	36'6
9°6	57'3	23'9	9°6	18'2	28'8	9°5	53'2	11'6	9°8	56'2	29'2
9°8	57'4	28'3	9°8	24'7	47'2	9°6	56'9	57'2	9°8	57'2	22'1
9°7	59'6	20'6	9°6	34'2	26'6	9°8	23 2'2	19'6	9°8	26 3'2	12'2
9°8	17 0'6	26'9	8°7	36'2	48'4	9°8	3'7	53'0	9°8	6'2	13'8
9°8	1'1	31'1	9°1	36'2	49'1	9°6	10'2	40'6	9°6	16'2	4'4
9°3	3'6	58'2	9°2	43'7	34'1	8°8	11'7	52'4	9°6	17'2	21'2
9°7	5'3	53'1	8°1	45'2	10'8	9°8	11'7	7'2	9°5	17'4	59'0
9°6	7'1	57'1	9°8	46'2	21'2	9°4	15'2	10'2	9°6	20'2	26'4
8°8	12'1	40'0	9°6	53'2	41'2	9°6	15'7	12'6	9°3	24'7	15'6
9°5	14'3	29'4	9°8	54'2	28'2	9°4	16'2	38'2	9°4	26'2	40'8
9°8	16'9	31'5	9°6	54'4	57'5	9°6	20'2	42'2	9°4	31'2	15'2
9°8	18'9	26'3	9°5	58'2	49'5	9°5	21'2	21'4	9°6	36'2	12'4
9°8	20'1	33'0	9°8	20 1'7	19'8	9°8	24'2	14'8	9°1	36'4	57'8
25pr.	+ 1 2'4	-2'7	+ 1 2'5	-2'8		+ 1 2'5	-2'9		+ 1 2'6	-3'0	

2521-2580.				2581-2640.				2641-2700.				2701-2760.				
mag.		7h.	-24°	mag.		7h.	-24°	mag.		7h.	-24°	mag.		7h.	-24°	
9.9	26	46.7	52.8	9.5	9.6	30	7.1	42.2	9.4	32	46.9	9.5	9.5	35	50.8	25.1
8.8		51.2	7.4	9.0 a	9.1		7.6	40.6	9.4		47.4	52.2	9.8	36	0.6	59.9
8.8		55.7	53.6	8.8 a	9.6		9.6	35.5	9.8		52.9	30.9	9.6		1.8	3.9
9.6		56.7	44.0	9.3		18.6	26.7	9.8		55.9	16.4	9.5		11.3	6.8	
9.0		58.7	45.2	9.8		21.1	53.6	9.8	33	1.4	20.3	9.8		12.3	4.5	
9.8	27	1.2	6.0	9.8		21.6	30.2	9.6		3.9	5.4	9.4		13.3	54.9	
9.6		4.2	44.0	9.2		23.6	48.3	9.8		19.9	24.8	9.0		14.3	15.3	
9.6		4.2	59.2	9.3		25.5	37.7	9.7		22.9	12.3	9.8		15.8	47.9	
9.4		7.7	19.9	9.6		26.0	46.0	9.8		30.9	36.4	9.8		16.3	15.0	
9.8		8.2	38.8	9.0		33.0	10.9	9.6		44.9	43.7	9.6		17.3	14.4	
8.8		11.2	47.0	9.2		35.0	55.2	9.0		45.9	43.0	9.6		23.8	34.9	
9.8		16.2	2.9	8.7		38.0	37.0	9.7		51.4	33.0	9.8		25.3	22.4	
9.8		16.2	16.5	9.8		38.0	7.3	9.8		51.9	28.0	8.6		25.3	35.4	
9.4		19.7	37.6	9.6		38.0	55.4	9.8		55.9	37.5	9.7		35.8	45.0	
8.8		24.2	18.3	9.8		50.0	50.6	9.6	34	2.2	57.9	9.8		36.3	18.0	
9.4		25.7	46.6	9.4		54.0	3.2	9.8		3.4	13.4	9.8		38.8	49.3	
9.4		30.7	17.5	9.4		56.0	27.4	9.8		5.4	0.7	9.0		38.8	40.4	
9.6		33.2	55.0	9.3	31	0.5	32.9	9.8		5.9	14.5	9.6		40.8	41.6	
9.8		44.7	23.0	8.1		4.5	19.9	9.8		6.9	5.5	9.7		41.8	12.5	
9.8		52.2	37.2	9.3		6.0	34.0	9.8		7.9	44.1	9.6		41.8	1.2	
7.0		56.2	26.5	9.8		11.5	35.1	9.2		17.4	17.6	9.8		48.3	56.2	
9.4	28	3.2	44.7	9.6		14.0	49.7	9.8		18.4	42.0	9.8		54.3	11.7	
9.2		4.7	27.6	9.8		14.0	7.0	9.8		20.8	31.1	9.4		54.4	57.3	
9.8		5.9	59.9	9.5		20.5	24.1	9.6		24.4	41.0	9.4		55.8	55.7	
9.6		6.2	35.4	9.8		22.0	56.1	9.8		25.9	4.8	9.8		56.8	55.4	
9.4		11.7	28.6	9.8		23.5	46.0	9.8		39.4	48.4	9.8		58.0	23.8	
9.4		11.7	47.4	9.2		26.5	3.4	9.0		43.4	48.1	9.8	37	1.5	12.3	
9.6		12.7	18.6	9.6		32.0	53.1	9.1		44.4	6.0	9.6		5.5	47.8	
8.4		19.2	3.0	9.6		33.0	46.2	9.2		45.9	44.9	9.0		13.0	47.9	
9.8		20.8	20.0	9.8		34.0	23.9	9.8		46.4	35.3	9.7		14.0	5.2	
9.3		21.2	29.6	9.6		35.0	58.0	8.9		46.9	26.1	9.7		19.5	21.3	
9.7		24.2	14.7	9.4		37.0	19.9	9.6		48.9	38.3	9.4		20.5	10.2	
9.8		24.7	32.7	8.1		42.0	1.3	8.7		53.4	15.1	9.8		21.0	17.1	
9.8		26.7	52.0	9.6		45.0	19.6	9.2		54.4	9.4	9.6		21.0	34.5	
9.2		28.2	53.7	9.6		46.0	44.9	9.6		56.9	9.2	8.6		23.0	12.4	
8.8		36.1	29.0	9.3		46.5	43.8	9.6		59.6	0.0	9.6		26.0	13.2	
9.5		38.6	5.2	9.8		47.5	18.6	9.0	35	1.9	13.3	9.4		26.5	50.0	
9.8		41.8	58.0	9.8		48.0	16.1	9.8		3.9	21.9	9.2		29.5	14.6	
9.7		42.1	0.4	9.8		50.0	14.5	9.7		4.4	16.0	9.6		30.5	50.5	
9.8		52.1	13.2	9.7		52.9	20.4	9.8		6.9	47.4	9.8		45.0	28.1	
9.6		54.1	47.8	9.2		53.5	7.2	9.6		8.4	4.2	9.7		45.5	30.9	
9.0		56.6	17.8	9.6	32	4.9	34.0	9.8		10.4	17.3	9.8		45.5	31.4	
9.4	29	9.6	38.2	9.8		8.9	43.1	9.8		10.4	4.0	9.7		46.5	4.2	
9.4		12.6	15.0	9.6		11.4	30.7	9.4		11.9	33.8	9.6		51.5	26.1	
9.6		12.6	13.2	9.8		12.4	12.3	9.8		15.9	3.8	9.8		52.0	39.2	
9.8		16.1	12.7	9.6		16.4	24.7	9.8		17.4	25.8	8.9		53.0	18.1	
9.7		16.1	43.5	9.2		16.9	18.6	9.8		18.9	38.7	9.8		53.0	44.2	
9.5		16.1	19.1	9.8		20.9	32.6	9.8		24.9	47.3	9.8		54.3	58.9	
9.8		25.1	5.2	9.6		22.9	27.9	9.3		25.9	10.3	9.2		55.5	19.3	
9.6		26.1	6.9	9.5		23.9	16.9	9.4		26.3	20.3	9.8		56.5	53.3	
9.8		26.6	33.1	9.3		23.9	52.0	9.6		28.8	31.5	9.8		57.5	29.1	
9.8		27.1	19.2	9.6		25.4	31.3	9.8		30.1	1.2	8.8		59.0	18.3	
9.4		36.6	39.4	9.4		27.4	52.4	9.4		30.8	45.9	9.6	38	1.0	13.9	
9.6		43.6	5.8	9.8		31.4	10.5	9.1		36.3	19.4	9.8		3.5	27.8	
9.3		45.1	40.7	9.6		33.9	38.5	9.6		37.8	4.1	9.6		4.5	42.2	
9.6		46.6	46.1	9.8		36.9	22.7	9.4		42.8	15.2	9.8		4.5	46.0	
9.7		51.6	9.8	9.8		36.9	42.2	8.8		45.8	18.4	9.8		5.0	35.5	
9.7		58.1	15.3	9.7		44.4	19.1	9.6		47.8	7.2	9.6		8.0	10.0	
9.4		59.1	30.2	9.1		44.4	13.3	9.8		47.8	23.5	9.7		9.4	17.3	
9.3		59.6	20.0	9.8		46.4	20.6	9.6		49.8	56.4	9.5		10.4	48.2	
25pr.	+ 1	2.7	- 3.1													
	+ 1	2.8	- 3.3													
	+ 1	2.8	- 3.4													
	+ 1	2.9	- 3.4													

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
mag.	7h.		-24°	mag.	7h.		-24°	mag.	7h.		-24°	mag.	7h.		-24°
	m	s			m	s			m	s			m	s	
9.4	38	13.9	20.3	9.7	39	45.2	23.2	9.9	42	5.9	19.8	9.4	44	16.9	18.5
9.8		14.2	45.9	9.9		45.2	21.0	9.9		10.4	19.8	9.8		28.4	5.3
9.2		20.4	35.5	9.8		45.2	11.8	9.9		12.9	19.8	9.4		35.4	50.1
9.8		20.9	8.0	9.6		45.7	30.4	9.4		12.9	39.0	9.8		36.4	42.1
9.8		22.4	7.6	9.8		47.0	10.8	9.6		20.4	29.0	9.1		39.9	43.3
9.7		24.2	58.4	9.8		48.2	46.1	9.8		22.4	58.3	9.6		45.9	54.1
9.8		24.4	41.1	9.9		49.0	2.3	9.9		24.4	15.7	9.8		47.4	45.9
9.7		30.4	55.0	9.9		51.0	2.9	9.5		25.4	25.9	9.2		53.4	30.6
9.8		30.4	7.5	9.6		51.2	59.5	9.8		27.2	50.3	9.2		55.4	37.0
8.8		30.9	22.0	9.8		52.5	48.1	9.6		28.4	41.1	9.6		55.4	15.0
			9.5 a												
9.8		33.1	1.0	8.4		54.8	21.2	9.5		29.4	47.2	9.4		55.4	24.9
9.4		33.9	26.0	9.9		55.3	47.5	9.5		33.6	57.1	9.7		59.4	28.8
9.2		35.4	31.0	9.5	40	8.3	5.0	9.6		35.4	28.0	9.6	45	10.7	59.2
9.2		41.9	31.4	9.9		10.3	48.1	9.9		35.7	0.6	9.5		11.7	58.0
9.8		46.1	13.9	9.7		11.3	5.3	8.7		35.9	6.3	9.9		12.9	45.6
9.3		46.9	40.7	9.8		17.8	23.9	9.5		40.4	36.4	9.5		16.6	0.5
9.3		51.4	55.7	9.9		20.3	6.0	9.8		40.9	32.5	9.7		19.4	17.3
9.1		52.4	38.1	9.9		28.8	1.1	9.8		42.5	50.1	9.9		19.7	33.6
9.6		52.9	34.0	9.8		32.3	39.5	9.2		45.5	46.1	9.5		23.4	13.1
9.6		53.4	38.3	9.6		35.8	56.0	9.5		48.5	20.6	9.9		28.4	48.7
			G												
9.8		53.4	10.8	9.5		38.6	57.4	9.7		51.0	40.2	9.4		28.9	9.0
8.6		54.9	38.9	9.2		42.3	29.8	9.7		52.2	59.7	9.9		31.9	45.9
9.1		55.9	52.5	9.1		42.8	7.9	9.5		54.7	1.4	9.5		35.4	54.6
8.8		55.9	30.7	9.9		45.3	8.3	7.8		57.2	16.1	9.9		35.4	51.6
9.1		55.9	22.8	9.6		46.3	39.4	9.9	43	0.0	34.7	9.9		40.8	57.5
9.8		58.3	35.1	9.5		48.5	58.3	9.6		0.0	19.2	7.5		43.8	12.6
9.4		58.3	48.9	9.7		49.8	57.8	9.4		0.0	27.5	9.4		44.8	55.1
9.8		58.8	5.9	9.5		53.8	40.2	9.0		0.5	15.5	9.9		47.3	4.4
9.3	39	1.7	33.8	9.9		54.8	41.9	9.7		2.0	42.6	10.5†		49.1	1.6
9.8		2.6	16.0	9.8		58.3	31.5	9.9		2.5	47.0	9.9		51.1	2.3
			Ga												
9.1		4.4	37.4	9.7		58.6	1.1	9.9		9.5	24.4	9.7		54.3	55.4
9.0		4.6	24.2	9.8	41	0.3	22.4	9.9		14.0	54.4	9.5		57.3	42.8
9.2		5.4	1.8	9.8		1.3	50.0	9.0		15.5	11.2	9.8	46	1.8	48.0
9.9		10.2	5.9	9.0		3.8	0.9	9.7		15.5	26.4	9.0		5.3	43.4
9.9		10.2	29.9	9.8		5.3	21.5	9.0		18.5	51.8	9.8		5.8	39.5
9.9		12.2	40.3	9.8		9.3	4.1	9.6		18.5	20.1	9.8		8.3	14.8
9.5		14.7	24.9	9.9		10.3	5.6	9.7		20.5	44.8	9.0		10.8	17.6
8.8		17.2	45.1	9.9		14.3	17.9	9.5		21.0	10.2	9.7		14.8	37.9
9.8		19.2	41.0	9.0		18.8	50.5	9.1		32.5	9.0	9.8		19.8	24.6
6.6		19.7	22.5	8.7		22.8	10.9	9.8		35.5	6.8	8.8		20.3	31.2
			7.0 GSel												9.0 Ga
9.9		21.3	59.8	9.5		23.8	50.2	9.5		36.8	57.4	9.4		20.3	45.3
9.7		21.7	51.0	9.9		25.8	52.1	9.5		37.0	13.9	9.9		20.3	50.7
8.8		22.5	15.1	9.8		29.3	2.1	8.7		37.5	43.4	9.8		20.8	40.1
9.3		23.0	6.2	9.6		32.9	23.2	8.4		37.5	39.2	9.9		20.8	51.6
9.9		24.0	4.4	9.0		38.9	22.1	9.6		41.0	36.6	9.9		24.9	30.5
9.9		24.7	41.8	9.8		39.9	57.0	9.6		42.0	36.0	9.6		25.3	29.3
9.6		26.0	50.3	9.7		40.4	14.1	9.8		45.5	45.1	9.9		27.8	27.0
9.9		27.0	52.7	9.0		42.9	14.9	7.4		46.5	36.1	8.4		30.3	53.3
9.6		31.0	49.5	9.1		45.9	39.1	9.9		49.0	29.8	9.9		32.8	13.9
9.5		33.0	22.1	9.8		50.9	22.0	9.2		50.5	12.6	9.9		35.3	15.9
9.3		33.0	27.5	9.6		51.9	15.7	9.5		51.0	50.0	9.0		39.8	48.4
9.5		35.2	24.8	9.9		53.9	54.2	9.0		51.9	28.4	9.9		40.3	29.1
9.9		37.0	49.0	9.8		56.4	52.1	9.4		52.9	34.5	9.4		40.8	11.5
9.9		38.0	22.7	9.5		56.4	58.1	9.8		55.9	41.5	9.5		43.3	27.2
9.9		38.0	58.0	9.4		58.9	28.2	9.7		55.9	28.2	9.4		47.3	11.0
9.8		39.9	16.1	9.0		59.9	47.4	9.6		58.4	15.6	9.5		48.3	10.6
9.5		40.5	47.4	9.8	42	2.4	11.0	9.5		58.4	50.8	9.7		49.8	54.8
8.8		40.7	42.4	9.9		4.4	56.5	9.8	44	0.4	31.1	9.6		53.8	13.9
9.9		41.0	3.8	9.5		4.4	49.0	6.4		1.9	32.8	9.7	47	0.3	26.0
9.8		44.3	10.4	9.9		5.4	47.3	9.2		10.9	25.0	9.8		0.3	42.1
			a												
25pr.	+ 1	3.0	-3.5	+ 1	3.0	-3.6		+ 1	3.1	-3.6		+ 1	3.2	-3.7	

1896a cap. 3.3.1G

3001—3060.				3061—3120.				3121—3180.				3181—3240.			
mag.	7h.	-24°		mag.	7h.	-24°		mag.	7h.	-24°		mag.	7h.	-24°	
m	s			m	s			m	s			m	s		
9.8	47	2.8	16.5	9.5	49	19.3	1.0	9.5	50	55.0	22.7	9.8	54	2.0	34.8
9.8		9.3	28.5	9.0		21.8	11.7	9.9		58.0	36.7	9.7		6.0	8.4
9.8		15.3	36.3	9.0		23.8	43.4	9.8	51	0.0	12.0	9.4		6.5	27.9
9.8		15.3	8.6	9.5		23.8	31.0	9.4		2.5	30.1	9.8		10.8	57.1
9.8		15.8	37.4	9.9		25.3	6.5	9.9		4.0	33.8	9.1		12.5	28.0
9.6		23.8	49.6	9.6		25.8	22.8	9.8		10.5	30.9	9.6		14.0	48.7
9.7		25.8	34.1	9.5		25.8	19.3	9.9		11.5	59.6	9.9		16.5	45.1
9.8		25.8	6.9	9.9		26.3	43.7	9.8		13.5	54.2	9.6		17.5	58.5
9.8		28.0	59.0	9.8		27.8	9.9	9.8		14.5	31.4	9.5		19.5	27.1
9.5		30.3	37.7	9.0		28.2	46.8	9.5		15.0	53.7	9.8		21.0	34.6
9.0		30.8	42.7	9.8		29.1	2.0	9.9		20.0	17.8	8.9		21.5	15.9
8.4		30.8	46.8	8.9		29.8	28.5	9.6		24.5	16.2	9.8		23.0	13.8
9.9		31.8	10.4	9.8		29.8	35.8	9.4		25.0	31.0	9.0		27.5	19.4
9.6		31.8	28.2	9.7		30.8	55.3	9.1		29.5	48.3	9.9		27.5	43.2
9.9		35.8	27.6	9.9		31.8	16.6	9.7		29.5	55.5	9.8		29.2	0.6
9.8		38.3	28.3	9.6		33.8	49.6	9.5		36.0	10.9	9.7		29.5	47.4
9.4		40.8	23.4	9.7		34.3	1.2	9.8		45.5	41.8	9.9		33.3	58.1
9.8		45.3	39.6	9.2		35.3	4.7	9.8		46.5	33.2	9.7		34.5	28.1
9.8		49.8	16.1	9.4		35.4	0.6	9.8		49.0	27.2	9.8		35.5	6.0
9.6		50.3	28.1	9.4		40.1	11.5	9.8		49.5	16.1	9.7		40.0	56.3
9.5		50.8	53.2	9.8		43.1	25.5	9.7		52.3	58.2	9.9		46.5	50.3
9.9		50.9	58.3	9.6		44.6	14.6	9.6		52.5	22.7	9.6		55.0	6.0
9.1		53.8	54.7	9.9		44.6	28.3	9.5		55.0	3.8	9.9		55.0	29.1
8.7		55.3	15.8	9.5		45.1	55.9	9.5		55.5	56.9	9.9		55.5	20.1
9.9		59.3	16.8	9.8		47.2	57.5	9.2	52	0.5	24.4	9.7		59.0	19.1
9.6	48	5.3	47.7	9.9		51.1	3.2	9.4		1.5	8.0	9.5	55	17.5	44.5
9.8		9.8	45.1	9.4		51.1	16.0	9.6		3.5	48.7	9.8		22.0	42.2
9.4		15.3	9.6	9.7		51.6	2.9	8.4		7.5	11.2	9.4		23.5	47.2
9.8		15.8	17.0	9.8		51.6	13.8	9.9		19.5	15.4	9.6		25.5	6.2
9.4		20.3	26.6	9.8		52.6	28.1	9.8		22.0	27.1	9.8		35.3	10.0
9.9		21.8	10.1	9.9		53.5	32.4	9.9		22.5	12.6	9.7		35.5	14.7
9.9		25.3	24.4	9.4		53.6	20.6	9.4		25.0	22.3	9.8		46.3	22.2
9.8		25.3	38.7	9.5		54.6	10.1	9.9		30.0	48.9	9.6		47.3	41.2
9.6		25.3	32.1	9.5		55.6	54.0	9.6		35.0	13.0	9.6		49.3	29.2
9.6		25.8	28.1	9.6		56.1	24.0	9.8		39.5	53.7	9.5		56.3	7.1
9.5		33.8	3.3	9.6		56.1	40.1	9.3		40.0	28.3	9.6		58.3	54.7
9.4		33.8	22.2	9.0		58.1	10.2	9.4		42.0	59.3	9.6	56	4.3	16.0
9.9		35.3	54.2	9.8	50	0.6	43.7	9.8		44.6	59.1	7.8		5.3	36.5
9.0		35.3	28.8	9.4		1.6	24.1	9.5		45.0	35.0	9.9		14.3	6.7
9.9		37.3	53.9	9.9		4.5	51.4	9.4		45.5	49.0	9.3		19.3	22.2
9.6		38.3	18.1	9.8		4.6	48.0	9.0		45.5	25.0	9.4		19.8	50.5
9.6		39.8	23.8	9.5		8.6	5.6	9.6		52.0	36.1	9.6		24.3	45.2
9.6		40.8	46.2	9.5		15.1	51.8	9.9		53.1	43.2	9.6		27.3	56.1
9.7		43.8	49.7	9.9		15.1	17.1	9.2		58.0	43.1	9.4		29.3	16.2
9.8		43.8	49.0	8.8		24.6	39.4	9.0	53	5.5	35.7	9.6		29.3	41.2
9.9		45.3	36.0	8.8		25.9	57.2	9.0		9.5	28.3	9.6		30.3	51.7
9.0		46.8	9.0	9.4		26.6	43.5	9.5		10.5	7.0	9.9		30.3	30.0
9.0		48.3	34.5	9.7		29.7	59.3	9.9		11.5	21.5	9.1		31.3	48.2
9.7		49.8	7.0	9.8		30.1	27.3	9.9		14.5	50.9	9.7		34.3	53.4
9.5		50.8	3.5	9.6		35.1	46.6	9.6		19.0	14.8	9.5		36.3	48.3
9.5		51.8	5.3	9.6		36.6	59.5	9.9		24.5	42.0	9.8		39.3	57.4
9.8		53.6	2.3	9.5		38.6	35.2	8.6		24.5	37.8	9.9		40.2	1.2
9.9		55.3	56.1	9.6		43.1	18.7	9.4		24.5	9.9	9.6		53.8	21.5
9.8		55.3	18.7	9.9		43.6	49.4	9.4		30.0	15.1	9.1		54.3	53.0
9.6		59.5	59.1	9.8		45.6	18.2	8.8		31.0	27.6	9.8		55.8	35.4
9.8	49	0.8	39.0	9.9		48.5	35.9	9.9		37.5	18.6	9.9		57.8	39.1
9.7		6.5	2.6	9.9		50.0	10.1	8.8		49.8	56.4	9.5	57	4.0	0.9
9.7		7.3	37.9	9.8		51.5	1.9	9.6		52.0	21.1	9.8		4.3	11.3
9.9		8.3	18.3	9.9		53.5	10.1	9.9		57.5	58.5	9.9		4.3	10.3
9.4		19.3	20.5	9.6		54.5	22.0	9.8	54	1.0	10.2	9.5		4.8	34.7
25pr.	+ 1	3.2	-3.8	+ 1	3.3	-3.9		+ 1	3.4	-4.0		+ 1	3.5	-4.1	

1896AnCap...3...1G

3241-3300.				3301-3360.				3361-3420.				3421-3480.			
mag.		7h.	-24°	mag.		7h.-8h.	-24°	mag.		8h.	-24°	mag.		8h.	-24°
m	s			m	s			m	s			m	s		
9.9	57	4.8	46.2	9.6	59	47.0	25.5	10.0	3	13.6	55.0	10.2	6	14.6	42.6
9.9		9.3	48.3	9.8		54.5	59.0	9.4		14.9	59.2	10.0	9.2	14.6	20.9
9.9		11.3	6.9	9.3	0	0.0	48.2	9.6		15.3	55.0	10.1	10.1	24.6	4.7
9.5		13.3	53.0	9.5		0.0	28.9	9.9		20.3	43.4	10.0	10.0	25.1	16.7
9.3		14.0	18.0	9.8		4.5	46.2	9.8		20.3	6.2	10.0	10.0	25.1	22.2
9.1		14.5	26.2	9.2		7.0	23.6	8.6		20.8	1.4	8.5	9.2	27.9	57.5
9.7		17.5	1.2	9.8		9.0	56.2	10.0		21.3	43.6	10.1	10.1	30.1	24.1
9.6		17.5	3.4	9.5		11.5	17.1	8.7		26.3	10.2	9.0	10.1	30.6	8.0
8.2		18.0	41.2	9.8		14.0	50.1	9.0		27.8	22.1	10.1	10.1	33.1	26.3
9.6		24.5	36.2	9.0		15.5	52.1	10.1		29.8	36.9	8.9	8.9	36.6	13.7
9.7		29.5	49.2	9.8		18.0	25.0	9.7		32.3	10.9	9.5	10.2	40.6	21.6
9.5		36.0	46.2	9.8		21.0	55.0	9.8		35.8	27.0	9.7	9.7	47.1	34.9
9.4		39.0	24.4	9.9		30.5	23.2	10.1		36.8	27.2	9.7	9.7	49.6	8.1
9.0		39.0	48.9	9.6		33.5	8.1	10.1		40.3	6.8	10.0	10.0	59.6	13.0
9.5		39.5	39.0	9.8		38.5	53.1	9.8		42.3	18.5	10.2	7	0.1	2.6
9.7		45.5	49.0	9.9		39.3	56.9	10.2		51.0	58.6	10.2	10.2	8.1	51.1
9.7		45.5	40.2	9.8		42.5	23.0	9.2		56.3	46.4	9.7	9.7	14.1	49.1
9.9		49.0	10.5	9.8		43.0	51.8	10.2		57.7	50.0	9.3	9.3	20.1	7.0
9.6		49.5	6.0	9.7		47.5	5.7	10.0	4	7.7	23.1	10.2	10.2	20.6	21.1
9.9		50.0	31.9	9.5		49.1	43.1	10.2		12.2	9.5	10.1	10.1	25.1	49.0
9.0		51.0	33.5	9.9		54.5	59.5	10.2		14.7	7.1	10.2	10.2	26.1	42.8
8.6		51.5	15.2	9.9		55.5	50.8	8.2		17.7	14.5	8.2	9.9	31.1	43.5
9.5		52.5	2.4	9.9		59.1	28.0	9.5		19.2	38.1	10.2	10.2	33.6	51.2
9.5		52.5	10.8	9.8	I	1.1	16.3	10.0		24.2	16.8	10.1	10.1	41.6	35.5
9.9		54.5	57.2	9.9		2.0	46.7	9.8		30.2	27.1	9.7	9.7	46.6	1.5
9.8		59.5	11.1	9.0		8.0	9.9	9.3		31.7	27.2	9.3	9.3	50.1	39.9
9.5	58	0.5	29.0	9.9		9.5	8.7	8.5		32.2	9.2	9.8	9.8	50.6	36.9
9.5		2.5	3.2	9.5		11.0	26.1	9.7		39.7	30.5	9.7	9.7	50.6	6.7
9.5		4.5	28.6	8.7		12.0	45.6	9.9		40.2	1.5	10.0	10.0	52.1	1.4
9.9		5.5	46.2	9.5		13.0	21.9	9.8		42.4	58.2	10.0	10.0	52.6	19.6
9.5		6.5	3.8	9.0		13.5	29.1	9.7		45.2	48.9	10.2	10.2	52.6	23.2
9.9		7.0	54.6	9.8		21.5	6.1	10.2		45.7	24.1	10.1	10.1	54.1	45.6
9.5		9.5	20.9	9.8		24.0	1.7	10.1		49.2	34.6	9.2	8	4.1	31.1
9.8		15.0	56.8	9.2		26.9	19.1	10.1		50.2	5.1	10.0	10.0	5.1	25.9
9.0		18.5	4.6	9.6		29.5	23.3	10.0		58.2	9.0	8.8	8.8	11.6	22.9
9.9		20.3	41.1	9.4		44.5	16.9	10.2	5	0.7	11.8	9.6	9.6	14.6	22.7
9.4		24.0	33.4	9.8		56.0	2.1	9.0		1.7	43.0	9.8	9.8	19.5	11.0
9.5		29.5	58.8	9.8		59.5	33.8	10.2		3.2	32.3	10.2	10.2	25.0	42.4
9.9		30.0	1.1	9.0	2	0.5	43.6	10.0		9.7	22.2	10.1	10.1	28.0	48.3
9.8		34.5	22.2	9.8		4.5	42.7	10.0		9.7	32.1	10.0	10.0	29.5	33.7
9.0		35.0	21.5	9.6		8.1	31.1	9.7		15.2	55.8	9.8	9.8	30.0	3.8
9.2		42.0	7.6	9.9		9.3	37.5	9.9		22.7	18.6	9.8	9.8	32.5	28.5
9.6		44.0	37.2	9.4		10.0	45.7	10.2		23.2	3.5	10.2	10.2	51.0	58.0
9.6		49.0	43.2	9.1		10.5	18.1	10.1		24.2	41.6	8.3	8.3	54.5	33.3
9.0		50.0	18.2	9.5		13.0	21.7	10.1		25.2	23.0	9.7	9.7	54.5	37.9
9.5		50.0	17.0	9.2		30.0	9.7	10.1		30.2	1.1	10.2	9	2.0	52.8
9.5	59	4.5	43.2	9.6		30.0	58.9	10.1		30.7	2.2	10.2	10.2	5.0	23.3
9.4		14.0	4.9	8.8		41.3	24.6	9.5		34.7	12.0	10.2	10.2	6.5	52.3
9.7		14.0	12.3	9.7		41.3	17.1	9.7		36.2	46.2	9.7	9.7	14.5	24.4
9.6		14.5	36.6	9.0		41.8	13.4	10.2		42.2	7.0	10.1	10.1	23.0	15.3
9.7		15.5	18.0	10.2		42.6	48.9	9.8		48.7	13.0	10.2	10.2	29.5	7.3
8.4		19.5	0.8	9.9		45.3	39.6	10.2		54.7	13.8	10.2	10.2	32.5	58.5
9.8		23.0	12.3	9.7		46.3	34.2	9.5		59.2	49.6	10.0	9.3	33.0	17.4
8.7		24.5	10.9	10.2		49.3	31.6	10.0	6	0.2	48.0	9.7	9.7	41.5	51.1
9.9		25.0	10.2	10.2		50.3	54.2	10.1		2.2	14.4	10.1	10.1	46.0	21.9
9.8		29.5	44.3	9.5		51.3	38.6	10.0		5.7	5.0	10.2	10.2	50.0	34.8
9.6		32.0	43.9	10.2		53.3	27.2	9.7		9.7	2.7	10.1	10.1	58.0	5.4
9.0		34.5	56.6	10.2		53.3	19.1	9.7		10.2	14.4	9.4	10	0.0	17.7
9.6		35.0	25.8	9.8		53.8	15.2	9.8		11.1	10.1	10.2	10.2	0.0	12.2
9.8		45.0	22.1	10.2		56.9	57.2	9.7		11.1	7.4	8.9	8.9	0.5	35.7
25pr.	+ 1	3.5	-4.1		+ 1	3.6	-4.2		+ 1	3.8	-4.3		+ 1	3.9	-4.4

3481—3540.				3541—3600.				3601—3660.				3661—3720.			
mag.	h.	m	s	mag.	h.	m	s	mag.	h.	m	s	mag.	h.	m	s
10.2	10	1	5	10.1	13	9	7	9.6	17	31	4	9.6	21	32	3
10.0		5	0	9.9		14	7	9.9		39	4	9.7		33	3
9.9		8	0	9.7		14	7	10.2		44	9	9.7		35	3
9.8		11	0	9.7		15	7	9.2		47	4	10.1		42	8
10.2		13	0	10.1		18	2	8.7		47	4	10.1		48	8
9.6		18	0	9.6		19	4	9.5		49	4	9.8		49	1
9.7		25	5	9.3		24	2	9.8		49	4	10.2		49	3
9.6		27	0	10.1		32	2	10.2		52	4	10.0		59	3
10.2		30	0	10.1		39	7	10.2		54	4	10.1	22	5	8
10.1		36	4	9.6		43	2	9.5		55	4	9.0		10	8
8.8		44	4	10.1		50	2	10.1		55	9	9.1		11	6
9.2		44	9	9.9		56	7	10.2	18	0	4	8.4		11	8
10.1		44	9	9.6	14	0	2	9.7		1	4	9.6		23	8
10.1		49	9	9.1		2	2	10.2		5	9	10.1		23	8
9.8		55	4	10.2		4	5	9.0		8	9	8.3		24	3
10.2		59	9	9.0		5	2	10.2		8	9	10.2		24	8
10.2	11	0	4	9.9		10	2	8.8		9	4	10.2		29	8
9.5		0	4	9.1		13	7	10.0		13	4	9.8		32	3
9.7		1	9	10.2		19	2	9.6		16	9	9.3		33	3
10.2		6	4	10.2		20	2	9.8		17	9	9.7		34	8
8.9		7	4	9.5		26	2	9.7		24	4	10.1		35	3
9.1		13	4	10.0		40	8	9.1		24	9	9.7		37	3
9.2		13	4	8.5		47	7	10.2		31	0	10.1		38	7
9.8		17	7	10.1		49	4	10.0		31	4	8.8		39	7
9.8		23	4	8.4		57	4	9.7		32	6	10.0		41	2
9.7		23	9	10.0		58	9	10.2		36	9	9.6		46	2
9.5		29	5	10.2	15	0	9	9.3		41	4	9.7		47	2
10.1		29	9	10.0		4	4	10.0		56	6	9.1		48	7
9.5		30	4	9.9		7	4	10.0		56	9	10.2		48	7
9.1		34	4	9.8		8	9	10.2	19	6	4	9.5		56	7
9.0		36	9	9.5		10	4	9.9		7	9	9.7	23	19	4
10.0		39	4	10.1		13	9	9.7		9	4	10.0		20	2
8.6		40	4	10.2		18	9	9.9		13	9	10.1		29	2
9.3		49	4	9.7		27	4	10.0		19	4	9.8		47	2
9.7		54	4	8.4		28	9	10.0		23	4	9.9		49	0
10.2		56	4	9.8		34	4	7.8		39	4	10.0		52	7
10.2		59	4	10.4†		34	9	10.2		51	0	10.1		53	2
9.5	12	2	9	10.4†		36	9	10.4†		55	3	10.0		57	7
9.7		6	9	10.1		39	4	9.3		59	4	10.0	24	4	2
9.3		6	9	9.7		52	4	10.2	20	2	9	10.2		12	7
10.0		10	4	9.9		53	9	10.2		5	4	10.0		13	2
9.8		11	9	10.0		59	4	10.2		8	9	9.0		22	2
9.8		12	9	9.8		59	9	9.8		18	9	10.1		29	4
8.8		14	4	10.0	16	0	9	9.8		24	4	9.9		29	7
10.2		21	4	9.7		9	9	10.0		26	9	10.1		29	7
9.2		24	4	9.6		9	9	10.2		26	9	9.1		40	7
9.2		25	4	9.1		13	9	9.9		34	3	10.1		44	2
9.2		26	2	10.1		15	9	9.7		36	8	10.2		53	6
9.0		27	4	9.4		16	9	10.2		45	3	8.6		54	2
10.1		30	8	10.2		24	9	9.3		50	6	10.2		59	7
8.6		35	2	9.5		28	9	9.9		54	3	8.8	25	0	2
9.0		37	7	10.2		39	4	10.1		59	8	9.0		3	7
10.2		40	2	10.2		49	4	9.8	21	1	3	9.4		11	7
10.2		41	7	9.7		52	9	9.6		2	5	10.0		14	7
10.1		42	7	8.4	17	5	4	9.9		14	3	9.9		20	6
10.2		49	7	8.6		8	9	10.2		19	3	8.4		22	2
10.2		59	7	10.0		9	9	9.8		19	3	9.3		42	2
8.0	13	1	7	9.3		25	4	9.7		24	3	10.0		42	7
9.7		1	7	9.2		28	2	9.9		26	8	9.4		45	5
10.2		8	2	10.1		29	4	9.6		29	3	9.3		48	0
25pr.	+ 1	4	1	+ 1	4	2	- 4	+ 1	4	3	- 4	+ 1	4	4	- 4

1896AnCap...3....1G

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
mag.	8h.		-24°	mag.	8h.		-24°	mag.	8h.		-24°	mag.	8h.		-24°
	m	s			m	s			m	s			m	s	
9.6	26	9.5	22.0 a	8.4	33	34.9	39.1 9.0 Ga	9.1	43	17.9	59.1 8.2 G	10.2	52	0.6	17.2
9.4		15.5	44.5	9.6		49.9	55.3	9.6†		22.0	0.5	7.4		11.1	21.4 7.5 Ga
9.9		31.5	18.8	8.5	34	14.9	8.0 8.2 G=	10.0		30.9	14.9	9.9		15.6	24.7
10.0		32.0	2.5	9.6		25.4	28.0	9.2		41.9	13.6 9.5	10.2		21.6	45.8
9.3		35.5	25.3	8.0		28.4	17.6 8.5	10.4†		45.0	0.5	10.2		26.1	42.6
8.5		50.5	20.0 Ga	9.6		29.9	54.6	9.4		46.9	5.7	10.2		47.1	50.7
9.4		50.5	16.0	10.0		30.9	19.9	9.4	44	1.4	3.7	9.4		51.1	11.8
9.3		54.0	16.7	9.4		33.9	52.2	9.4		1.9	19.3 9.0	10.0		52.6	12.4
9.2	27	0.5	39.4	9.9		49.9	44.8	8.5		29.9	7.0 8.5 GWa	10.0		56.1	31.2
8.9		1.0	7.9 a	9.9	35	0.9	4.8	9.4	45	13.9	9.7 9.5	9.5		59.8	1.2 9.0
10.0		3.0	36.0	9.4		4.9	22.8 a	10.0		20.9	21.4	9.5	53	3.1	10.8 Ga
10.0		3.0	56.9	9.9		10.9	14.1	10.0		30.4	37.5	10.0		9.6	6.2
9.9		15.2	56.3	9.3		21.6	33.1	10.0		32.7	32.2	10.2		15.1	27.0
10.0†		38.3	0.2	10.2†		22.0	0.2	9.4		38.7	53.4 9.5 Ga	10.2		28.6	14.5
9.6		38.7	10.0	10.0		23.6	3.5	9.4		41.7	54.3 9.5 Ga	9.8		36.6	43.5
7.5		40.2	10.9 6.5 GSa	9.4		24.6	13.1	9.4		45.6	1.2	9.6		39.6	14.0
9.7		45.2	23.8	9.1		24.6	54.6	8.8	46	11.2	16.8 9.0 a	8.0		50.1	14.4 8.5 Ga
9.3	28	5.2	10.7	8.2		28.1	10.4 8.0 Ga	9.9		55.5	46.9	10.2	54	6.1	45.2
9.9		10.2	16.0	9.4		29.1	56.0	10.2	47	3.4	10.0	10.0		25.6	9.0
10.0		13.2	27.2	9.3		34.6	25.6	9.9		4.6	17.0 9.5 a	10.0		43.8	57.4
9.9		20.2	26.4	9.3		44.6	6.8	7.8		8.3	58.4 8.0 Ga	9.9		44.6	4.5
9.7		30.2	33.8	8.8		44.6	32.2	10.2		12.9	45.1	9.8		46.5	36.0
7.4		39.2	40.3 7.0 GSb	9.4	36	3.8	2.9	10.2		16.9	25.9	8.0		48.0	40.8
9.0		43.2	23.8	9.6		4.6	23.0	8.5		52.9	46.5 9.0 Ga	10.2		51.5	55.0
10.0		51.1	1.0	9.9		37.1	33.2	10.2		54.4	51.2	9.2		52.0	10.3 9.5 Ga
9.9		54.7	54.8	9.3		43.8	0.0	9.5	48	5.9	7.9 9.2 a	10.2		53.0	59.5
9.4	29	2.2	52.8	10.0		44.6	56.4	10.2		8.9	37.3	10.2	55	4.5	0.1
9.0		3.7	35.8 10.0	10.2†	37	0.0	0.5	9.8		13.4	55.1 G	10.2		18.0	23.1
9.4		25.7	7.6	9.3		2.6	46.1	10.0		20.9	48.4	10.2		27.0	23.0
9.4		27.2	40.9	10.0		4.0	3.0	10.0		20.9	15.7 9.5 a	7.9		29.5	28.9 7.5 Ga
10.0		43.7	49.6	9.6		14.6	7.5	8.4		22.9	36.7 8.5 Ga	9.8		31.0	40.9 G
10.0		48.4	59.0	9.7		41.1	22.4	10.2		32.4	10.6	9.7		32.0	10.1
10.2†	30	1.7	0.4	9.2	38	8.1	8.1 10.0	9.8		33.4	25.6	10.2		35.5	48.0
10.4†		2.7	2.7	8.5		9.1	4.8 9.0 a	10.2		37.9	39.2	10.0		37.5	7.3
8.2		4.2	40.7 8.0 GW	8.9		12.1	51.2 9.5 a	10.2		42.9	47.1	9.9		50.5	51.1
9.8		10.2	9.0	8.9		14.6	38.4	10.0		42.9	23.1	10.2		53.0	18.4
9.7		12.7	22.1	8.4		16.1	15.5 9.0 a	10.0		47.4	39.8	10.2	56	5.5	22.8
10.0†		19.7	0.4	9.8		16.1	20.0	10.2		56.9	47.0	10.0		9.3	3.1
10.0		34.2	8.2	8.8		47.8	30.8 9.5	10.0	49	11.4	15.5	10.2		12.0	32.7
9.1		40.2	25.8 9.0	9.3		53.1	1.9	9.4		15.9	53.2	9.3		12.0	2.8
10.0		53.1	25.6	9.9		54.8	30.8	9.8		32.4	6.6	8.0		15.5	56.6 7.5 GSa
9.3	31	7.3	58.1	9.2	39	9.3	42.2	10.0		51.0	32.0	10.2		18.0	40.2
9.9		8.1	35.3	9.9		19.3	41.0	9.9	50	1.5	56.4	9.0		44.0	55.1 8.8 Ga
10.0		12.1	26.7	9.3		49.3	40.5	9.8		6.0	8.9	10.2		56.0	42.9
9.9		14.1	54.6	9.2		50.3	5.0	9.9		14.5	4.2	10.0	57	2.5	47.5
10.2†		18.9	0.1	9.9	40	5.8	23.7	9.8		19.5	8.1	10.2		10.0	25.9
10.0		25.1	56.8	9.7		7.8	15.5	8.4		21.0	56.2 9.0 a	10.0		10.5	30.2
9.4		34.6	53.5	10.4†		8.0	0.2	10.2		21.0	14.1	10.2		38.0	52.7
9.9		39.1	45.5	8.6		8.3	26.5 9.0 a	10.2		34.5	6.7	10.0		56.5	19.2
10.0	32	5.1	10.8	6.5		24.8	56.2 6.5 GSb	9.8		35.5	57.8	9.5		58.0	32.0 9.0
10.0		15.1	3.2	10.0		29.3	31.4	9.5		35.5	15.0 9.0 a	10.0	58	1.5	34.1
9.4		25.1	41.8	9.0		42.8	13.3 8.5 a	9.9		44.1	12.0	9.2		3.6	44.4
9.7		41.1	39.8	9.4		54.1	19.5	8.1		57.8	59.4 9.0 a	10.0		21.1	5.4
10.0		41.1	34.2	8.9		55.8	55.7 9.5	10.2	51	0.1	4.5	10.0		28.6	54.8
8.9		46.1	33.7 9.5 a	9.4	41	4.3	11.2	9.4		2.1	23.8 9.5	9.9		34.1	52.0
8.7		50.1	12.2 9.5 Ga	9.8		16.3	56.5	10.2		5.1	12.7	10.2	59	2.4	59.9
10.0		54.9	33.2	9.1		18.9	16.3	10.0		37.6	32.0	10.2		6.1	15.8
9.0	33	0.9	35.1 9.5 a	9.6		21.9	46.1	9.8		40.6	10.6	9.2		31.1	3.6
8.8		9.9	36.1 9.5 a	8.8	42	57.9	7.8	10.2		45.1	18.8	9.9		33.6	42.2
9.2		14.9	38.0	9.3	43	5.4	20.3	9.9		48.1	13.8	10.2		36.1	6.2
25pr.	+ 1	4.7	- 5.1	+ 1	5.0	- 5.3		+ 1	5.5	- 5.6		+ 1	5.8	- 5.8	

3961-4020.				4021-4080.				4081-4140.				4141-4200.			
mag.		mag.		mag.		mag.		mag.		mag.		mag.			
g ^h .	-24°	g ^h .	-24°	g ^h .	-24°	g ^h .	-24°	g ^h .	-24°	g ^h .	-24°	g ^h .	-24°		
10:2	20:1	4:9	10:0	5 11:4	42:1	8:2	14 30:3	43:2	8:5	7:2	30 55:6	8:8	7:0	G Sa	
9:9	22:1	15:8	9:6	11:9	16:6	9:5	10:0	55:3	23:2	10:0	31 18:6	11:8	10:0		
10:2	31:1	24:1	10:2	21:9	4:9	10:0	15 11:8	6:0	10:0	19:8	44:8	10:0			
8:6	31:6	36:5	9:0 b	10:2	27:4	52:0	10:0	41:8	43:2	6:6	23:4	44:3	6:5	G Sa	
9:7	39:6	19:9	10:2	37:4	9:9	7:7	50:3	16:8	8:0	8:4	25:6	39:3	9:0	a	
9:9	45:6	0:6	9:7	39:2	0:9	10:4†	54:4	0:6	9:4	26:6	20:9	9:4	26:6	20:9	
10:2	50:1	33:0	9:8	53:4	12:2	10:2†	58:9	2:0	9:5	48:7	31:1	10:0			
8:0	52:1	53:8	9:0	10:2	6 1:4	18:4	10:0	16 0:3	13:4	10:0	32 5:3	45:2	10:0		
9:4	1 1:1	15:2	10:2	5:9	44:8	9:2	30:3	48:8	a	9:8	37:3	49:8	10:0		
10:2	11:1	56:2	10:2	8:4	28:7	10:0	17 13:3	38:7	9:4	40:3	11:7	10:0			
10:0	11:1	48:6	9:3	14:4	12:9	10:0	20:5	2:6	10:0	47:3	25:1	10:0			
10:2	16:1	37:8	9:7	16:4	27:4	10:0	25:6	27:4	8:9	33 12:3	26:1	a			
9:9	22:1	10:0	10:2	17:4	20:5	10:0	18 10:1	58:9	9:2	15:7	0:0	10:0			
10:2	32:1	44:2	9:7	24:4	46:8	9:2	14:6	17:4	9:8	32:8	33:3	10:0			
10:2	37:6	42:4	10:2	27:9	36:8	9:0	20:1	5:5	8:5	8:6	34 11:3	6:6	a		
10:2	46:1	36:8	10:2	27:9	41:9	8:5	55:1	52:7	8:5	10:0	19:3	30:0			
8:8	47:1	39:0	9:0	9:9	33:6	14:2	9:8	19 7:1	17:9	10:0	22:8	46:1	10:0		
9:7	2 0:1	59:6	9:9	51:6	3:3	10:0	11:1	29:2	10:0	25:3	30:8	10:0			
10:2	0:1	5:0	10:2	56:9	41:8	10:8†	12:3	0:6	9:2	27:3	26:1	9:0			
10:0	0:1	2:2	9:5	7 8:4	53:3	9:2	40:1	6:3	9:5	30:3	27:8	10:0			
9:8	0:6	18:0	10:2	13:4	25:9	9:2	49:1	49:0	10:0	37:3	44:5	10:0			
9:4	2:1	26:7	9:5	9:8	13:4	43:3	10:0	50:1	30:8	10:0	44:3	27:4	10:0		
10:0	5:1	3:6	10:2	14:4	57:8	7:0	20 2:6	47:8	7:0	35 0:3	44:4	10:0			
10:0	8:6	42:4	9:4	15:4	33:1	9:6	20:1	15:4	10:0	9:3	51:4	10:0			
10:2	11:1	45:6	10:2	19:4	31:7	10:4†	28:3	0:8	10:0	15:3	24:0	10:0			
10:2	13:6	27:2	10:2	28:9	22:8	10:0	32:1	44:5	10:0	18:6	58:7	10:0			
9:8	19:1	34:4	9:9	35:4	34:4	8:2	44:7	33:8	8:5	9:8	25:3	11:8			
10:2	21:6	5:8	8:3	48:4	6:8	7:8	21 19:7	56:6	9:6	25:3	38:1	9:6			
10:2	21:6	29:6	8:3	55:9	20:3	Ga	9:4	43:7	42:6	9:4	36 0:0	0:0	10:0		
9:0	26:1	43:0	9:4	59:4	21:8	a	9:2	53:2	52:4	9:0-	10:0	10:4	59:1		
9:2	31:6	27:4	9:5	9:8	8 11:4	6:7	10:0	22 44:7	53:1	9:0	25:3	9:8	10:0		
10:2	39:6	6:0	7:9	14:4	23:3	8:5	9:8	23 2:7	56:4	10:0	55:3	49:6	10:0		
9:6	39:6	5:0	10:2	22:1	57:2	7:2	10:6†	4:2	53:2	7:5	37 15:3	14:1			
10:0	41:9	57:9	10:0	26:9	17:3	10:6†	10:3	0:0	9:0	20:3	5:9	9:5			
10:2	44:6	44:6	10:2	29:6	8:5	10:0†	16:8	2:7	9:7	36:8	11:8	9:7			
9:1	49:1	53:8	a	10:0	38:4	39:4	9:2	23:2	28:9	8:5	10:0	38:3	22:5		
10:2	49:1	6:5	9:2	38:6	25:3	9:5	10:0	32:2	13:4	9:7	38 2:3	19:8	10:0		
9:8	3 3:6	39:0	10:0	49:9	41:0	10:0	48:8	1:3	10:0	30:3	30:1	10:0			
9:0	16:6	51:0	9:5 a	9:5	51:2	8:5	8:0	24 10:2	59:0	7:5	8:4	32:3	24:5	8:5	a
10:0	23:1	6:5	9:7	58:5	43:5	9:8	14:7	7:2	9:8	39 17:8	51:9	9:8			
10:0	26:6	46:2	10:0	9 18:2	39:1	9:8	19:6	11:9	8:6	24:3	28:4	a			
9:0	38:1	20:2	Ga	10:2	20:2	43:3	9:6	23:2	57:6	9:5	41:3	1:3	9:5		
9:7	45:1	44:0	9:8	23:2	37:0	8:5	41:2	28:4	8:5	9:8	59:8	37:9	9:8		
10:2	46:6	10:3	9:8	31:2	29:3	9:6	44:7	57:9	8:9	40 8:8	53:0	9:4			
10:2	47:6	48:0	9:8	44:2	25:5	9:8	48:7	28:4	9:4	16:8	48:2	10:0			
10:2	50:6	13:8	8:9	45:3	0:7	9:5	10:0	25 10:6	7:2	10:0	41 13:0	58:7	10:0		
9:8	50:6	23:0	10:2	59:7	36:0	8:6	28:7	33:9	8:5	9:5	20:0	6:4	9:5		
10:2	54:6	34:0	9:8	10 1:0	53:9	7:8	29:7	17:4	8:2	8:0	26:5	40:2	9:0	W	
9:6	59:1	37:6	9:5 a	10:0	2:7	44:0	10:0	27 27:6	36:3	10:0	45:2	0:8	10:0		
10:2	4 3:1	42:2	9:9	12:1	3:9	9:6	59:1	2:5	8:8	46:0	48:3	9:5	a		
9:8	12:1	21:8	10:0	25:8	45:0	9:6	28 22:6	14:7	9:5	8:6	53:0	43:4	8:5	Ga	
10:2	12:6	20:8	10:0	31:8	34:1	10:0	32:6	42:1	9:0	57:0	46:4	9:5	9:0		
10:2	23:4	30:7	8:8	56:3	46:9	8:5	8:2	29 3:1	35:5	8:5	42 20:0	51:2			
10:2	29:6	19:9	10:4†	56:9	1:7	9:4	9:4	4:6	46:4	b	7:8	36:5	37:7	8:0	G W a
9:9	40:1	33:3	9:8	11 17:3	37:8	10:0	20:1	35:0	9:0	40:0	8:0	9:0			
10:2	43:6	32:7	9:2	12 10:3	50:6	9:0	10:0	27:1	47:1	8:5	52:0	57:7	8:5	Ga	
10:2	49:2	0:7	10:0	12:3	33:7	9:2	30 4:6	47:4	a	8:9	43 29:5	46:5	8:6		
10:0	53:1	40:8	10:0	19:8	54:3	9:5	9:6	9:6	26:6	8:6	30:0	38:7	8:5	-	
9:8	54:6	20:2	10:0	13 29:3	24:4	8:6	8:6	9:6	17:8	a	8:2	31:5	3:9	8:0	G
10:2	59:1	30:4	9:8	14 20:3	13:8	9:6	39:4	1:7	10:0	47:5	31:5	10:0			
25pr.	+ 1 61	-60		+ 1 64	-61		+ 1 71	-64		+ 1 79	-68				

4201-4260.				4261-4320.				4321-4380.				4381-4440.			
mag.	gh.		-24°	mag.	gh.-10 ^h .		-24°	mag.	10 ^h .		-24°	mag.	10 ^h .		-24°
	m	s			m	s			m	s			m	s	
9.0	43	57.5	25.3	9.3	54	53.1	10.3	9.9	0	19.5	43.1	10.2	5	37.0	55.3
9.3		59.5	0.9	10.0	55	6.6	30.0	10.2		23.0	9.7	10.2		39.5	51.9
9.6	44	4.0	1.1	9.7		29.6	27.9	9.8		24.0	41.5	9.3		40.7	56.5
10.0		12.0	30.0	10.2		40.6	31.5	9.9		24.0	33.9	8.8		41.0	45.7 9.0 a
9.2		14.8	0.5	9.5		43.6	37.4	9.0		37.0	9.1 9.0	9.5		43.4	2.2
10.0		19.9	37.6	9.6		44.6	16.6	9.8		43.5	44.1	9.7		44.5	48.9
8.4		37.0	10.2 a	9.7		45.6	39.3	8.9		46.5	42.8 8.5	9.9		49.0	6.8
9.8		38.0	14.0	9.1		46.6	48.6 a	9.6	I	2.0	27.3	10.1		50.0	40.6
8.8		41.5	2.7 9.5	9.7	56	6.1	12.4	7.5		3.0	6.5 7.5 GSb=	10.2	6	3.0	26.2
9.8		53.0	38.1	9.9		8.6	55.0	10.2		5.0	41.1	9.9		9.5	55.0
9.8		56.0	45.6	10.1		18.6	10.9	9.9		14.5	38.5	9.7		19.0	58.5
10.0		58.5	40.3	9.7		31.2	0.3	9.9		19.5	10.4	9.0		27.0	17.8 8.0 =
10.0	45	33.0	36.1	9.5		33.1	17.3	10.2		24.0	37.1	9.7		33.5	50.7
9.4	46	15.0	2.4	10.0		46.1	22.3	10.2		26.0	30.5	9.9		39.0	49.7
9.7		40.0	43.8	8.5		48.1	51.8 8.5 a	10.1		29.0	11.5	9.9		47.0	24.2
10.0		45.0	55.9	9.8	57	1.1	42.7	9.7		30.0	12.7	8.3		50.0	31.3 8.2 Ga
10.0	47	37.5	43.0	9.7		2.1	26.4	10.2		35.0	56.9	9.0		54.0	19.3 9.0
9.8	48	22.0	18.4	10.2		7.6	9.3	8.5		38.0	19.5 8.0 W	10.0	7	2.0	51.9
9.4		24.7	59.0 9.5	9.9		10.1	39.8	10.1		40.5	40.1	9.3		3.5	54.2
8.6		25.0	52.9 8.5 G≡	9.1		18.1	35.3	10.0		50.0	37.9	9.9		6.0	23.1
9.5		40.0	8.6	10.0		23.1	4.9	9.9		51.0	4.9	10.2		23.5	8.4
10.0		41.5	33.4	9.5		29.1	31.7	8.6	2	2.0	31.7 8.8	9.3		34.0	29.3
10.0		55.0	27.8	10.2		33.1	14.0	8.3		15.0	21.1 8.2 W-	9.8		39.5	17.8
9.2	49	0.0	5.1	9.9		35.6	9.6	9.9		17.5	50.3	10.1		39.5	31.9
9.0		7.0	20.5	8.8		36.1	5.7 9.0	10.2		21.0	16.9	9.7		43.5	22.6
9.4		21.5	32.5	9.3		39.1	12.4	10.2		23.0	28.0	10.2		44.0	16.9
9.4		22.0	46.6	9.9		39.6	28.2	9.9		24.0	16.7	10.0	8	0.0	52.3
10.0		25.0	37.2	9.1		52.1	28.8	9.8		26.0	54.0	10.2		32.0	24.9
10.0		28.7	59.6	7.4		57.1	42.7 7.0 GSa	10.2		27.0	25.7	10.1		34.0	8.1
8.6		50.0	56.3 9.5 -	10.2		58.6	57.0	10.2		39.0	25.1	9.7		37.5	36.7
9.4		52.0	7.8	10.2	58	5.1	48.7	10.2		40.5	56.5	9.3		51.0	30.4
10.0	50	3.5	51.1	9.7		8.1	2.8	9.9		41.0	18.4	9.3	9	2.5	46.9 9.0
9.5		22.0	36.9	8.8		9.1	51.8 9.0 Ga.	10.0		49.2	58.5	9.6		3.5	30.7
10.0		22.0	27.4	10.0		10.6	49.7	9.5		53.0	12.1	8.5		6.5	56.0 -
8.9		26.5	1.3	9.9		19.1	15.0	8.0		55.5	22.5 7.7 G-	8.5		11.5	43.8 7.8 G=
9.7		30.0	20.6	10.2		21.6	31.2	9.0		58.0	31.5 9.0	10.2		15.0	25.4
8.2		31.0	29.3 8.0 Ga	9.9		23.1	30.5	9.5	3	1.0	38.5	9.9		17.0	57.6
9.8		37.8	59.3	9.9		28.1	33.9	9.8		9.0	51.1	10.1		17.0	45.9
9.3		38.0	43.1	10.2		38.1	46.9	8.8		9.0	16.3	8.4		18.0	22.0 a
9.6		42.0	55.3	10.0		42.1	36.6	8.6		10.5	26.9 8.2 G-	9.2		18.5	7.4
8.1		58.5	44.5 8.5 Ga	10.2		43.0	26.9	9.3		27.0	34.9	9.7		23.0	12.9
10.0	51	1.0	8.7	10.0		43.3	59.4	9.8		29.0	50.0	9.3		36.0	30.3
9.8		37.0	16.0	10.2		48.5	43.1	9.5		29.0	5.9	9.1		36.0	43.6 8.8 Ga
9.7		41.0	4.5	10.0		53.7	59.6	9.2		43.5	15.7 9.0 a	10.0		46.5	40.6
9.8		41.0	55.1	9.9	59	0.5	29.3	9.8		48.0	12.1	10.0		56.0	6.3
9.2		47.0	20.2	10.2		3.0	57.7	9.6	4	1.0	16.4	10.1	10	0.5	34.9
10.0	52	14.8	58.8	10.2		4.0	5.9	9.6		6.0	46.4	9.4		8.5	6.5
9.5		21.0	3.5	10.1		16.0	39.9	9.3		6.5	46.9	10.1		14.5	24.1
9.7		25.0	34.5	8.8		37.0	43.0	9.9		27.0	31.5	9.1		23.5	9.1
7.5		30.0	32.2 7.0 GSbt	9.9		43.0	28.8	9.8		52.0	53.9 9.5	9.9		24.0	52.0
9.0	53	15.0	31.2	10.1		54.5	43.7	9.7		53.0	28.9	9.8		30.0	24.6
9.0		19.2	2.0	10.2		57.0	30.0	9.6		56.5	47.9	9.8		31.5	23.6
8.9		50.0	15.7	10.0		59.0	13.3	8.2	5	4.0	49.3 8.1 Ga	10.0		40.3	26.3
10.0		55.0	0.3	10.0		59.3	57.0	10.0		9.5	47.6	10.2		40.8	23.2
9.4	54	10.0	31.4	9.7	0	0.5	42.7	9.7		14.5	27.0	8.7		55.8	3.3 9.0 -
9.4		14.4	43.1	9.9		5.0	35.3	9.7		16.0	23.7	9.9	11	7.3	34.1
9.8		15.6	44.0	10.0		6.5	44.3	10.2		26.0	36.0	10.0		20.8	25.1
10.2		19.1	58.1	10.2		8.5	1.3	9.9		28.0	32.9	9.6		28.3	7.5
10.2		22.6	55.0	10.2		9.0	5.6	10.0		30.5	25.9	8.3		28.8	27.3 9.0 a
9.9		48.6	44.0	9.9		19.0	30.4	8.9		33.5	34.0 9.0 a	9.4		52.3	13.2
25pr.	+1	8.6	-7.0	+1	9.1	-7.2		+1	9.4	-7.3		+1	9.7	-7.4	

4441-4500.			4501-4560.			4561-4620.			4621-4680.		
mag.	10 ^h .	-24 ^o	mag.	10 ^h .	-24 ^o	mag.	10 ^h -11 ^h .	-24 ^o	mag.	11 ^h .	-24 ^o
10.2	11 58.8	32.7	9.3	17 33.9	58.9	8.2	40 48.9	52.7 7.5 Ga	9.5	7 33.4	45.2
8.8	12 3.3	48.8	10.1	39.2	7.4	9.2	41 29.9	46.7 9.0 a	10.2	8 11.8	34.7
9.9	3.8	52.2 9.0 =	10.2	45.2	39.0	9.6	48.4	32.1	9.8	12.9	48.0 -
10.2	10.3	33.7	9.7	49.7	53.6	10.2	42 21.9	18.1	10.2	29.3	0.2
9.9	12.3	57.5	7.8	18 35.7	56.0 7.5 G≡	8.8	36.9	30.0 8.8 a	9.6	48.9	53.1 9.5
9.9	14.8	52.6	9.0	55.2	46.9 8.5 a	10.2	53.9	23.4	10.2	9 8.4	54.2
9.9	19.8	49.5	8.6	58.2	20.2 8.0 Ga	9.6	59.4	38.9	10.2	16.4	48.3
9.0	29.8	39.2 9.0	9.0	20 17.2	49.8 9.0 a	9.4	43 52.4	6.2 9.5 -	9.0	50.9	19.4
9.5	32.3	42.4	9.6	29.2	7.9	10.2	44 31.4	19.0	8.8	54.4	38.0 9.0 -
10.1	35.3	30.8	8.8	34.7	42.8 9.0 a	9.1	41.9	51.7 8.5 Ga	9.4	10 21.6	59.1
10.0	39.8	2.0	9.6	21 7.2	24.1	9.8	43.4	41.7	10.0	36.4	58.2
9.6	40.3	24.6	9.6	7.7	23.7	9.4	53.9	41.1 9.5	9.8	39.9	22.2
9.7	42.3	41.5	9.2	54.7	2.6 9.5	9.6	45 37.9	27.0	10.0	11 22.4	52.2
9.8	43.3	30.7	9.6	22 34.7	20.1 -	10.2	42.9	56.1	10.0	53.9	41.9
10.0	44.3	42.3	9.6	44.7	41.4 9.0	10.0	42.9	58.9	9.6	57.4	20.0
9.7	59.3	51.8	9.6	23 3.7	19.2	10.2	46.2	57.4	8.4	12 52.4	32.6 8.5 G=
10.2	13 0.8	19.3	9.4	6.2	13.3	9.8	46 19.3	0.4	10.0	13 23.6	59.0
9.5	10.3	47.6	9.2	9.2	55.7 9.0 =	8.2	47.9	3.4 8.5 a	10.0	27.9	5.4
10.1	12.3	56.2	8.2	46.7	26.1 8.8 =	8.8	54.9	5.3 8.2 Ga	10.2	34.4	33.8
8.8	13.5	58.3 9.0 =	8.6	24 27.8	14.4 8.5 Ga	8.5	47 40.9	9.2 8.0 Ga	10.2	14 8.6	1.1
10.2	18.3	40.2	8.8	31.8	3.3 9.5	10.2	48 3.4	28.8	9.6	20.4	58.3
9.8	21.3	18.6	8.0	54.8	34.9 8.5 GWa	10.2	27.9	42.8	10.0	26.4	28.7
9.7	26.3	29.5	9.6	25 49.8	30.5	8.6	39.9	8.7 8.5 Ga	8.8	36.4	34.4 9.0 =
9.7	28.3	47.6	9.0	26 54.3	34.4 9.0 -	8.6	49.9	34.4 8.5 G	9.3	15 11.4	22.6 9.0 G=
9.1	34.3	39.6 9.0 a	8.8	59.8	30.1 9.0 =	10.2	52.9	12.3	10.0	22.4	17.1
10.2	40.8	20.4	9.6	27 6.3	44.6	9.3	49 16.9	5.5	9.6	22.4	5.7
8.6	52.8	36.2 9.0 a	9.4	10.3	7.4	9.6	50 8.5	1.4	9.6	28.9	54.5 -
9.7	56.3	21.3	8.8	10.8	56.9 9.0 a	8.6	14.4	55.1 8.5 Ga	10.0	30.4	43.0
9.7	14 18.3	26.8	9.2	16.8	51.3 9.0 Ga	9.2	51 20.4	37.5 9.0 =	9.8	40.9	18.5
9.8	28.3	12.5 G	9.6	40.3	30.9	10.2	40.4	28.4 9.5	9.6	46.8	2.4
10.0	32.3	55.5	9.2	42.5	57.2 9.0	10.0	52 56.4	55.4	9.1	54.9	5.5 9.0 =
9.9	42.8	14.4	9.6	59.8	37.0	9.8	53 51.4	51.7 9.0 a	10.0	16 3.4	40.7
9.7	46.7	54.9	8.0	28 54.8	27.0 8.5 =	10.2	54 21.4	22.8	10.0	3.4	54.7
9.9	15 7.2	35.1	8.8	29 17.8	49.2 9.0 a	9.8	27.4	28.0	8.4	5.9	30.6 8.2 Ga
9.9	12.7	36.3	9.6	43.7	2.0	9.3	55 34.9	21.4	9.6	17 0.4	52.6 10.0
10.0	15.7	50.1	9.0	30 59.3	52.5	10.0	52.9	32.0	8.8	8.4	53.2 8.8 G>
9.9	27.2	28.7	9.6	31 12.3	57.7	8.8	56 10.7	3.1 -	9.8	15.0	24.3
10.2	27.7	11.9	9.6	12.3	55.4	10.2	37.9	24.1	9.8	33.0	25.3
10.2	30.2	18.1	9.4	28.3	25.0 9.0 -	9.4	39.9	8.7	9.6	41.0	49.7
7.9	30.7	44.7 7.0 GSat	9.4	39.7	12.6 9.0 -	7.4	57 1.4	54.3 7.0 GSa	10.0	18 13.0	7.3
9.9	42.7	27.1	9.2	50.8	21.7 9.2 =	9.0	4.4	30.1 a	10.2	26.7	2.0
10.2	43.7	55.4	9.6	33 23.3	24.1 -	9.4	10.9	15.3	10.0	19 2.0	19.7
9.7	44.2	55.1	9.2	34 13.8	29.5 a	8.2	37.7	59.3 8.8 Ga	10.2	6.5	2.8
9.3	46.9	51.9 9.0 a	9.6	15.3	3.3 9.5	8.8	59 29.4	20.7 9.0 =	9.6	8.5	22.1
9.1	53.7	24.5	9.2	26.3	1.6 9.0 =	9.6	0 30.4	33.3 9.5	9.3	12.0	7.1 -
9.0	4.7	57.9 9.5	9.6	35 24.6	0.4	10.2	34.4	33.1	9.6	38.8	59.3
10.0	4.7	1.7	9.2	57.3	35.5 9.0	10.2	1 20.1	26.0	9.6	39.3	59.8
10.1	7.7	0.6	8.8	36 19.8	18.0 8.0 Ga	10.2	49.6	19.7	10.2	20 13.0	11.1
9.5	8.0	22.5 9.5	9.6	50.3	21.4	9.8	2 38.1	41.5	9.4	16.0	33.4 M=
10.0	10.2	26.1	9.6	50.3	49.9	10.2	3 3.6	20.2	9.8	16.5	36.2
9.7	14.2	23.1	8.8	37 7.3	50.6 9.0	9.6	39.6	40.1	10.2	35.5	8.6
9.6	20.2	31.3	8.8	28.3	5.0 -	9.8	52.1	30.8	9.8	43.0	45.4
9.9	22.2	26.1	8.6	39.3	25.9 8.0 a	8.0	59.6	55.9 7.7 GSMa	10.0	21 21.5	8.8
10.2	26.2	26.4	8.8	38 8.8	43.5 9.0 a	10.0	4 16.8	0.1	9.6	58.5	36.0
10.0	31.7	43.7	9.2	33.1	13.1	10.2	39.9	42.5	8.8	22 11.5	11.3 =
10.2	32.2	30.8	8.8	59.6	27.1 9.5 =	10.2	5 10.9	24.6	8.0	46.0	4.7 8.5 -
10.2	34.7	54.0	7.7	39 34.9	22.2 8.0 Ga	9.8	46.4	35.7 9.0 -	7.6	23 32.8	18.7 7.5 GSb=
9.6	39.7	50.2	9.2	40 18.4	31.7	10.2	6 20.4	0.3	9.6	50.0	52.0 9.0 a
9.0	41.7	19.3 9.0	10.0	44.9	17.1	9.8	27.4	26.0	10.0	24 9.5	52.7
10.1	52.7	6.6	9.8	46.9	43.2	10.0	7 7.9	6.6	10.2	21.6	24.2
25pr.	+1 10.1	-7.5	+1 10.9	-7.7		+1 12.3	-8.0		+1 13.9	-8.2	

4681-4740.				4741-4800.				4801-4860.				4861-4920.					
11 ^h		-24 ^o		11 ^h -12 ^h		-24 ^o		12 ^h		-24 ^o		12 ^h		-24 ^o			
mag.	m s			mag.	m s			mag.	m s			mag.	m s				
10.2	24	34.0	47.2	10.0	45	52.6	27.0	9.9†	6	39.3	2.3	9.6	23	8.1	36.9	9.0 a	
9.3	25	7.8	4.0	10.0		53.6	48.4	10.0	7	10.1	44.1	8.9		28.1	33.8	9.5 a	
8.6		14.1	31.9	10.0		54.0	51.9	8.8		17.6	15.0	10.0		35.1	8.9		
10.0		28.1	46.0	10.0		54.8	48.8	9.2		18.1	39.3	9.4		35.6	15.3		
9.6		33.1	46.9	10.0	46	43.8	59.6	10.0†		47.3	0.3	9.8	24	2.6	46.6		
9.3	26	51.1	14.0 a	9.6		45.5	47.3	10.0		55.6	31.9	10.2		47.6	55.0		
9.2	27	19.8	2.1 a	10.1	47	37.5	10.1	9.5		57.6	18.3	8.8	25	46.6	56.8	8.7 ≡	
9.8†		20.9	1.7	9.4		45.0	5.3	10.1	8	12.6	9.5	8.6	26	44.6	34.5	8.5 G	
9.8		28.7	53.1	10.1	48	32.0	1.0	7.8		16.8	4.9	10.2	27	12.2	1.1		
9.4	28	13.7	37.3	9.2	49	5.5	49.3	10.0†		23.0	1.6	10.2		13.1	0.8		
9.2		48.2	53.2	7.7		9.5	9.8	10.0		31.6	47.7	9.5		36.6	5.7		
9.2	29	19.7	4.4 a	7.9		25.6	27.1	10.2	9	49.1	52.3	10.2		46.8	58.6		
9.8		45.7	16.0	8.0		34.1	13.8	9.4	10	15.6	34.5	9.6		47.6	22.8		
10.0	30	27.7	16.0	8.2	50	41.1	47.1	10.2		19.7	54.9	9.8		57.1	3.3		
9.8		38.7	15.6	10.0†		51.7	1.3	9.9†	11	0.5	1.1	9.4	28	32.6	46.6		
10.0	31	40.7	43.1	10.0	51	23.2	59.1	9.2		52.1	21.9	9.5	29	41.4	9.8		
9.7		48.2	6.2	8.4		24.1	5.7	9.0	12	34.1	59.2	9.4		51.4	14.0		
8.6	32	2.7	53.9	10.1		34.1	54.1	9.2	13	3.1	39.1 a	8.8	30	2.4	37.6	9.0 M-	
9.1		3.7	55.6	9.6		42.1	5.6	10.2		11.6	6.7	9.0		2.4	3.4	b	
10.0		19.2	43.0	9.0	52	22.1	22.3	8.4		36.1	52.2	8.6	29.4	31.7	9.0 Ga		
10.0		29.7	16.8	10.0		58.1	50.6	9.8	14	44.6	31.1	8.4		36.4	12.2	7.5 Gal	
7.2		44.1	1.3	9.8†	53	1.2	0.9	10.2	15	1.6	15.0	9.0	31	1.2	56.1	9.5 G-	
8.0	33	5.9	12.1	10.1		23.1	41.3	10.2		7.6	16.7	8.9		5.7	50.5	8.5 GMal	
10.0		20.4	52.8	10.0		44.1	9.9	8.5		33.3	0.1	10.2		33.0	56.6		
10.0	35	2.4	30.5	8.9		50.1	34.9	9.8		45.6	23.0	8.8		59.5	47.7	8.3 Gal	
9.4		5.9	30.7	9.8		56.6	47.1	9.4		51.6	30.0	9.7	32	42.0	48.9		
9.3		12.4	4.7	8.8	55	23.1	22.0	9.4	16	5.6	24.0	9.9		42.5	20.9		
10.0		15.9	22.8	10.0		24.1	5.3	9.5		6.6	53.8	9.6	33	6.0	20.0		
9.6		29.9	53.5	10.1	56	9.1	8.5	9.8		25.6	20.9	9.2		18.0	36.2	9.5 a	
10.0	36	5.9	25.3	10.0		29.1	40.1	7.9		30.6	10.7	8.8		35.0	32.8	9.5 a	
10.0		8.9	48.5	10.0		33.1	23.9	8.8		42.6	34.8	9.8		58.0	12.2		
9.1	37	3.4	3.9	10.1		50.6	56.1	10.2		45.6	8.9	9.4	34	13.5	37.0		
9.6		3.4	58.4	10.0		54.1	48.3	7.4		51.6	8.7	8.2		51.0	18.4	8.0 GWal	
9.8		6.4	51.5	10.1		57	43.3	9.5		59.6	7.3	9.0	35	22.0	39.8	b	
10.0		7.7	1.8	10.1		58	6.3	9.4	17	2.6	13.1	10.2		53.0	3.8		
8.6		27.0	58.2	9.0		16.3	12.3	9.6		21.6	21.0	9.2	36	7.0	36.4		
9.3		29.9	7.9	9.2	59	47.8	10.1	8.3		47.6	51.7	9.6		13.5	59.2	9.0 a	
10.0	38	13.1	40.1	10.1		49.8	59.2	8.2		51.6	31.0	9.7		22.0	20.4		
8.8	39	5.1	19.0	9.8		54.3	11.1	9.8		53.6	52.7	10.2		27.0	10.0		
10.0		16.1	39.3	8.7	0	0.8	49.8	10.2	18	11.6	34.7	8.0		36.0	18.2	7.0 GSbl	
9.2		27.1	23.9	10.1		11.3	31.5	9.2		23.6	8.9	10.0		47.5	13.7		
8.4		52.1	10.7	9.6	1	18.3	30.6	10.0		35.6	25.5	9.0		50.0	33.2	a	
9.6	40	3.1	2.3	8.6		21.8	38.6	8.4	19	10.1	14.4	10.2	37	12.0	0.8		
7.8		7.6	16.8	10.1		39.8	28.1	8.8		12.6	52.8	8.8		16.0	21.3	8.5 Gal	
9.8		25.1	18.8	9.6		58.8	51.5	9.0		52.1	27.4	10.0†		27.3	2.2		
10.0		45.9	9.2	5.0		59.0	1.9	9.2	20	20.1	5.0	9.2		29.5	28.8		
9.6	41	8.4	8.2	10.1	2	2.3	45.8	9.8		23.6	59.2	10.1		29.5	55.9		
9.3		21.4	46.8	10.1		27.3	44.0	10.0		29.6	48.5	10.2		50.4	8.8	10.0	
8.8		36.9	35.2	10.1		55.0	22.1	10.2	21	0.6	2.2	9.7	38	40.9	30.1		
10.0		42.9	43.4	10.0	3	22.8	42.1	8.0		8.8	2.1	8.0	39	6.9	17.5	7.9 Gal	
10.0	42	5.9	43.5	7.4	4	2.8	15.8	8.4		19.1	38.1	10.1		13.9	14.7		
7.8		11.9	23.5	10.1		4.0	35.2	9.2		23.1	58.4	10.2		33.9	52.7		
10.0		31.4	33.6	10.0		12.8	24.3	10.2		32.1	11.8	8.8		42.9	36.2	9.2 a	
10.0		51.4	34.0	9.6		14.8	3.9	9.6		58.1	6.9	10.2		49.4	11.4		
9.8	43	10.4	3.9	8.6		46.8	9.0	9.4	22	1.6	21.3	10.0	40	3.1	59.0		
9.6		17.9	13.8	10.1	5	49.3	31.0	9.8		12.6	18.2	10.2		25.9	28.4		
9.8		18.9	32.9	10.1		50.3	4.3	10.2		16.6	31.2	10.1		48.4	37.8		
9.8		39.9	20.2	10.1		54.3	9.4	10.2		22.6	13.9	8.0	41	14.4	19.8	7.0 GSsal	
10.0	44	7.4	54.5	10.1		59.3	11.9	9.8		29.1	20.2	7.0		15.9	10.2	6.5 GSsal	
9.6	45	51.0	27.2	8.4	6	25.6	7.9	10.2		45.1	15.4	8.8		33.9	7.7	7.9 a	
25pr.	+1	15.2	-5.2		+1	16.6	-8.4		+1	17.9	-8.5		+1	19.1	-8.3		

4921-4980.				4981-5040.				5041-5100.				5101-5160.								
12h.		-24°		12h.-13h.		-24°		13h.		-24°		13h.		-24°						
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s						
8.4	41	41.9	6.9	8.0	bl	9.4	54	12.8	33.5	9.7	13	18.0	32.2	9.0	27	23.6	44.2	8.5	a	
9.0	42	7.4	52.8	9.6	13.3	41.0	9.4	29.0	12.2	10.1	41.6	48.3	10.1	41.6	48.3					
9.6	19.4	12.2	9.6	52.3	38.7	9.2	42.0	17.1	9.0	9.6	42.6	49.2	9.6	28	10.7	39.7	8.8	a		
9.6	39.4	46.2	10.0	55.1	12.0	9.7	14	22.1	6.3	8.6	28	10.7	39.7	8.8	a					
9.4	42.3	59.1	9.6	55	2.1	26.1	9.7	34.6	1.9	10.1	25.7	45.9	10.1	25.7	45.9					
8.1	46.9	36.7	8.0	Gal	10.0	4.1	52.9	9.5	34.6	52.6	9.5	GM	9.6	32.2	15.4					
10.1	54.9	15.2	9.0		9.0	12.1	39.5	a	10.0	35.6	2.7	9.5	29	59.7	9.6	9.5				
9.0	43	0.4	33.8	9.0	a	10.0	56	10.1	13.1	7.7	41.6	16.4	8.0	Gal	9.4	30	35.2	32.2		
9.4	21.4	54.8	10.0	46.4	59.3	9.9	50.6	37.4	9.9	50.6	37.4	10.2	31	1.2	10.5					
10.0	41.9	35.6	9.7	58.1	24.5	9.4	54.6	47.0	9.4	54.6	47.0	9.6	32.7	39.4						
10.2	42.8	43.0	9.4	57	35.1	39.5	9.0	a	9.4	15	4.6	28.4	9.6	58.7	47.2	9.5	a			
9.6	48.9	21.9	9.0	10.0	54.1	19.3	9.6	9.1	42.4	9.6	32	6.7	13.5	7.5	GSal					
9.7	50.4	53.6	9.8	59	36.1	9.7	9.8	24.6	11.0	8.9	57.7	47.2	9.0	a						
10.2	44	11.9	19.6	10.0	37.1	31.6	10.0	28.1	10.7	9.4	33	2.2	3.0							
9.2	14.9	3.4	9.6	42.6	6.1	10.0	31.7	24.0	10.1	14.7	45.4	9.8	17.8	34.6						
9.8	15.9	20.2	10.0	55.6	31.0	9.9	36.6	35.8	9.8	34	11.7	42.6	10.0	40.3	25.4					
8.8	25.4	32.3	9.0	a	10.0	59.7	58.8	8.0	16	20.9	5.0	7.8	Gal	9.0	42.3	34.7	9.0	=		
9.2	30.9	8.2	9.0	1	28.6	34.0	9.0	M=	8.5	30.9	0.2	7.8	Gal	10.0	47.8	25.9				
8.8	31.4	7.5	a	9.7	2	10.1	22.8	9.5	17	17.1	30.4	9.5	-	10.2	47.8	25.9				
9.2	46.4	40.8	9.5	a	10.0	26.1	31.3	7.8	24.3	28.6	7.5	GWbl								
10.1	45	8.4	55.6	9.0	31.1	32.7	9.0	a	9.4	28.0	2.8	a	10.2	58.3	6.8					
8.8	18.9	1.7	9.0	Ga	8.8	51.6	4.3	8.5	Ga	9.6	31.8	48.8	10.1	35	8.3	6.8				
9.1	52.9	39.5	M	8.2	3	25.6	52.2	7.8	Ga	10.2	47.8	28.0	10.2	39.3	49.7					
10.2	46	0.4	38.5	8.2	36.1	21.7	8.0	Gbl	10.0	18	20.8	12.5	9.6	53.3	38.5					
9.0	4.5	48.1	9.0	M-	9.4	58.1	28.2	8.6	21.8	24.0	9.0	-	8.5	36	21.3	20.4	8.8	Gb-l		
9.6	49.0	56.0	10.0	4	7.8	54.2	8.9	23.8	43.9	8.2	M-	9.6	22.8	20.2	9.0					
9.2	51.0	35.2	9.0	G	10.0	43.8	22.0	9.6	19	15.3	25.6	10.0	36.4	28.0						
10.2	47	5.5	39.0	10.0	45.3	22.4	9.6	23.3	41.2	10.2	46.3	45.8	10.2	37	48.3	52.3	6.5	GSbl		
10.2	9.3	0.5	10.0	46.8	47.0	8.6	45.8	31.1	8.5	M=	10.1	56.8	24.1							
10.0	24.5	45.8	9.4	5	0.1	2.3	a	10.0	20	20.3	4.9									
9.9	29.0	45.4	10.0	3.3	31.2	10.0	22.3	14.9	10.0	22.3	14.9	9.4	38	42.8	39.9					
9.3	34.5	51.3	10.0	5.3	45.6	10.2	27.3	52.0	10.2	27.3	52.0	9.9	56.5	56.9						
9.7	45.5	5.6	9.7	11.3	2.7	8.6	33.5	50.2	8.2	Ga	8.4	39	3.5	43.4						
9.4	59.5	29.2	9.6	35.3	38.4	10.0	9.6	41.5	4.8	9.6	11.4	8.8								
10.2	48	6.5	3.8	10.0	58.3	39.0	9.2	21	8.0	30.3	9.1	13.5	53.9	9.0						
8.5	11.5	45.0	8.0	Gal	9.5	6	16.3	30.8	7.7	34.5	33.8	7.2	GStn	9.4	21.6	44.7				
8.0	29.5	16.5	7.7	Gal	10.0	16.3	49.0	9.5	52.5	1.9	9.6	48.9	24.7							
9.4	40.5	12.6	9.4	22.8	3.3	a	10.0	59.0	37.2	9.8	40	7.4	42.2							
10.2	46.5	21.1	10.0	35.8	55.7	10.2	22	19.0	14.4	9.4	12.4	16.0								
10.2	47.2	59.1	8.8	7	31.8	33.0	8.5	a	9.5	30.4	58.0	9.4	35.4	25.7						
9.6	49.0	54.6	9.5	8	10.3	57.0	a	9.6	52.1	36.4	9.6	41	2.4	53.8						
10.2	52.5	13.3	9.0	13.5	13.6	=	10.1	23	29.6	38.0	9.6	16.9	26.4							
9.6	49	16.0	48.8	10.0	32.0	48.0	9.0	24	7.1	31.1	9.5	9.9	26.4	19.0						
9.7	19.0	12.9	9.2	41.0	39.6	9.5	10.2	9.6	2.4	9.6	42.4	55.1	8.5							
9.4	26.5	19.4	9.4	9	43.0	30.2	a	10.2	47.1	23.3	9.6	42	5.4	44.4						
9.4	43.5	47.9	9.6	55.0	18.4	9.8	48.1	50.0	9.8	7.4	29.1									
9.6	47.5	14.5	9.7	10	10.0	9.2	10.1	25	7.1	47.2	9.9	21.4	27.8							
9.0	50	5.5	42.6	9.9	12.2	12.9	9.6	15.6	10.8	9.1	49.9	43.9	8.5	=						
9.4	41.5	48.5	8.8	22.5	22.0	8.7	Ga	10.2	26.8	58.8	9.3	50.4	18.2	9.5	a					
9.0	51.5	22.4	9.8	40.0	58.1			10.1	34.1	5.4	9.6	43	12.9	43.2						
9.3	55.5	33.2	9.2	51.0	50.2	9.5	M-	9.4	47.1	9.8	9.0	9.2	13.4	45.3						
10.0	51	6.0	47.1	10.0	11	1.0	32.8	9.2	55.6	35.2	9.6	20.4	45.2							
9.8	12.5	2.5	a	9.2	12.0	28.1			9.8	26	8.6	41.7	9.1	33.4	19.7	9.5				
10.2	12.5	3.1	9.9	21.5	34.2			10.2	9.1	42.0	8.2	48.4	21.4	7.8	Ga					
10.2	18.0	47.7	8.8	29.5	51.8	8.1	Gb=l	9.2	9.1	46.0	9.4	44	11.4	25.5						
8.2	36.5	29.3	7.5	Gal	10.0	59.0	45.0	9.8	11.1	33.2	9.1	25.4	53.4	9.2	a					
10.2	52	4.5	44.7	9.1	12	5.0	41.8	9.2	8.4	13.1	53.6	8.8	a							
10.0	53	29.5	39.9	8.0	9.5	56.2	8.2	Gal	10.2	16.8	57.2	9.0	42.4	42.3						
9.0	41.3	21.6	9.0	=	8.6	10.0	35.6	8.8	M=	9.8	23.1	19.5	9.8	45	3.4	1.1				
9.4	52.0	52.1	9.0	17.0	25.4	8.5	G=	10.0	27.6	51.4	9.6	25.9	8.8							
25Pr.	+ 1199	-8.2																		
			+ 1	21.1	-8.0			+ 1	22.0	-7.9			+ 1	23.2	-7.6					

1896AnCap...3....1G

5161-5220.			5221-5280.			5281-5340.			5341-5400.		
mag.	13 ^h	-24°	mag.	13 ^h -14 ^h	-24°	mag.	14 ^h	-24°	mag.	14 ^h	-24°
9.4	45 45.4	45.6	9.4	58 48.9	6.2	8.6	12 20.3	19.1	9.6	27 3.1	24.1
8.8	57.4	4.8	9.6	52.9	3.2	8.6	20.3	33.8	8.4	14.1	43.6
9.7	46 3.4	40.2	8.2	59 8.9	8.4	10.0	28.8	1.1	9.2	28.1	51.5
9.9	31.4	37.4	8.4	20.4	33.0	9.6	13 2.3	52.0	8.8	28 1.6	22.6
9.3	57.9	9.5	9.9	37.9	40.9	9.0	12.3	35.1	9.1	53.1	41.3
9.9	47 1.4	24.2	9.4	52.9	18.7	8.8	37.3	31.5	8.4	53.6	2.2
9.7	29.9	56.0	9.6	59.9	18.5	9.2	48.3	2.9	9.4	54.1	17.7
9.3	57.9	29.9	9.9	0 19.9	46.7	9.0	14 1.8	16.9	8.8	29 3.6	34.4
8.4	48 15.9	46.6	9.4	19.9	23.0	10.0	58.3	53.3	9.4	30 32.6	21.9
8.4	17.1	35.1	8.8	39.9	44.7	8.9	15 22.3	43.6	9.8	35.1	53.6
9.6	30.1	35.2	9.8	40.4	31.9	8.8	46.3	36.3	9.4	35.1	54.3
9.6	34.1	43.2	9.9	40.6	57.8	9.2	53.3	19.5	9.2	31 29.1	45.6
8.6	39.1	4.0	9.7	46.9	30.2	9.4	16 1.3	38.0	8.6	32 0.6	31.7
9.6	41.6	28.4	8.0	52.9	26.7	9.4	10.3	10.7	8.1	9.3	29.1
9.2	56.1	27.6	9.9	54.1	43.3	8.6	17 28.3	45.0	9.6	27.3	14.1
8.4	57.6	55.1	9.4	56.7	50.8	9.6	32.9	31.6	9.6	33 43.3	42.7
9.0	57.6	55.5	9.9	1 2.3	37.1	6.8	40.9	14.2	9.0	48.8	52.1
9.3	59.1	40.6	9.7	10.9	6.3	8.1	18 19.9	0.9	9.1	50.8	13.6
9.6	49 13.1	20.5	9.1	2 10.4	33.7	10.0	25.9	27.2	9.3	51.8	22.2
9.6	25.1	46.1	8.8	19.9	0.1	9.4	26.4	42.3	9.9	34 14.3	48.9
9.9	36.1	43.1	8.8	22.2	27.2	10.0	32.9	10.0	9.9	16.8	11.5
9.9	46.1	45.9	7.1	3 7.5	48.5	9.6	54.4	35.0	8.4	35 45.0	59.1
9.4	53.1	35.5	9.6	13.5	35.5	9.4	19 2.4	7.5	8.0	56.8	34.5
9.2	50 9.6	33.9	9.2	20.5	43.1	9.8	13.4	1.1	6.2	36 0.8	27.6
9.2	21.6	12.2	8.3	49.5	43.8	9.8	39.9	15.6	9.6	32.3	27.0
9.9	27.1	55.2	8.8	4 17.0	20.3	9.8	50.9	30.9	9.3	32.8	44.3
9.8	44.1	48.3	8.4	31.0	35.4	9.4	20 2.4	48.6	9.0	37 23.3	31.0
5.7	51 31.1	21.5	9.2	5 33.0	51.4	9.4	2.9	6.3	9.9	52.8	6.3
9.4	38.1	58.5	9.8	41.0	32.4	9.4	17.9	43.5	9.8	38 6.3	17.6
9.9	52 1.6	29.6	9.8	41.0	43.6	8.6	31.9	17.5	9.0	12.8	15.9
8.6	5.6	56.2	10.0	42.5	11.5	10.0	39.4	3.9	9.1	27.3	27.0
9.6	42.1	20.7	7.6	50.5	55.1	10.0	21 21.9	5.5	5.6	46.3	54.7
7.1	53 1.1	23.9	8.6	53.6	59.9	9.0	36.4	23.1	9.0	39 22.3	12.7
8.4	1.6	56.3	9.4	6 3.5	42.5	9.6	39.9	24.4	8.5	44.3	56.3
9.6	8.1	40.4	9.6	15.0	57.4	9.8	44.9	51.6	9.9	40 41.6	0.0
8.8	21.6	56.8	9.0	15.5	54.2	9.4	45.9	38.8	9.2	41 0.8	5.3
9.9	26.6	9.0	10.0	28.0	21.6	9.8	48.4	59.9	7.6	14.3	58.2
9.1	42.6	51.4	9.8	33.5	11.8	9.0	48.9	46.9	9.4	36.8	28.0
9.9	54.6	34.9	9.8	7 59.0	28.0	10.0	51.4	33.7	9.3	41.3	51.7
9.9	54 14.1	36.4	10.0	8 3.3	57.5	10.0	22 16.9	26.0	9.6	46.6	2.7
9.6	32.1	19.3	9.4	3.8	51.7	9.8	22.9	7.8	9.6	58.8	28.5
9.8	33.6	11.6	9.0	21.8	17.0	10.0	28.9	44.5	9.8	42 3.3	8.3
9.9	37.6	1.1	10.0	40.8	34.5	9.2	30.4	7.6	9.8	15.3	37.5
9.9	39.1	19.4	9.8	51.3	52.1	9.8	32.4	29.5	9.9	22.3	3.9
9.4	49.1	54.3	9.8	57.3	10.3	8.0	39.2	59.0	9.1	34.3	42.4
9.9	51.0	42.2	9.6	59.0	2.4	9.4	41.9	9.9	9.0	44.3	36.0
9.9	55 12.1	36.1	8.2	9 7.3	47.0	8.4	42.9	17.3	8.8	43 22.8	28.6
9.6	17.6	29.7	9.6	16.8	20.0	8.9	23 4.4	12.2	8.8	59.8	19.9
9.4	21.4	9.2	9.2	47.3	40.8	9.6	9.9	18.4	9.4	44 37.3	24.5
9.6	22.9	50.6	9.0	52.3	39.8	9.8	10.9	26.4	9.0	41.8	3.9
8.1	26.4	3.3	9.2	10 0.3	54.1	9.0	42.9	2.0	9.9	45 17.8	29.9
9.9	36.9	54.0	8.2	3.3	28.4	7.4	50.2	45.4	8.2	21.8	56.2
9.6	48.9	33.6	10.0	16.3	3.4	9.2	24 8.0	45.9	9.3	22.8	25.3
8.5	56 20.4	10.9	8.4	28.8	43.2	9.6	8.8	39.7	9.9	27.0	2.4
8.8	42.4	1.2	9.6	37.3	12.9	10.0	28.9	20.8	9.0	46 48.8	41.9
9.0	57 5.9	54.8	8.8	11 3.3	48.5	8.8	37.3	0.3	9.3	50.4	8.5
9.6	25.4	53.8	9.8	3.3	20.3	8.5	25 0.3	31.4	9.2	56.3	30.9
9.9	37.9	38.6	9.6	12 6.3	20.2	9.4	26 16.6	23.4	6.6	47 4.9	7.8
8.8	58 0.9	13.8	8.6	9.3	13.8	9.4	20.1	26.3	9.0	12.0	19.7
9.4	16.4	57.3	8.6	12.3	16.3	9.4	38.1	9.3	9.8	42.5	5.1
25pr.	+ 1 23.9	- 7.4		+ 1 24.8	- 7.1		+ 1 25.6	- 6.8		+ 1 26.5	- 6.4

5401-5460.				5461-5520.				5521-5580.				5581-5640.						
14 ^h -15 ^h -24 ^o				15 ^h -24 ^o				15 ^h -24 ^o				15 ^h -24 ^o						
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'			
9.3	47	44.0	43.0	9.5 -	10.2	3	1.5	55.2	8.0	21	46.8	1.0	7.5 Gal	9.5	45	55.8	33.8	
9.4	48	13.0	15.3	-	9.8		23.5	13.4	10.2†	22	12.8	1.4	5.2	46	6.3	57.2		
9.5		24.0	45.8		9.6		42.5	47.9	8.6		44.0	5.9	9.2 a	6.2		25.8	9.5	
9.8		43.0	11.2		9.5		57.0	14.8	9.5	8.7	23	2.5	52.1	9.0 =	9.1		30.8	52.1
9.8	49	4.0	33.7		9.0	4	12.5	11.9	9.2	10.1†	24	43.8	1.6	9.2		35.8	52.1	
9.1		5.0	10.0		8.8		30.0	9.8	9.0	6.7	25	46.0	3.9	6.1 GScl	9.5		37.3	49.9
8.4		15.5	10.7	8.8	8.8		34.9	58.8	8.3		54.0	36.1	9.0 -	9.5		54.3	39.8	
10.2		58.0	1.7		9.8	5	8.0	46.6	7.9	26	30.0	41.2	7.5 GSat	9.4		54.8	46.3	
9.4		59.5	37.2		10.2		13.5	48.7	G	9.4		37.2	25.6	9.0 a	9.5	47	3.3	48.3
10.2	50	10.2	8.1		9.6		37.3	1.0	9.2	27	8.2	33.0	9.2 a	6.5		9.4	52.3	
7.2		14.0	56.2	7.0 GSπ	9.6		40.0	33.1	8.0		40.7	41.0	8.0 GSa	9.4		16.9	27.7	
9.4		22.2	32.0		10.2		59.5	56.1	8.4	28	11.7	43.8	8.5 GWa	9.2		37.4	24.7	
10.2		38.2	53.0		9.6	6	3.5	7.2	9.5 G	10.0	29	25.7	10.2	9.5 G	8.5		53.9	17.9 a
10.2	51	17.2	28.9		8.4		9.5	24.1	9.0 -	10.0		43.2	54.8	9.5	48	4.9	19.9	
9.8		22.7	27.3		7.3		10.5	50.2	7.0 GSπ	10.0	30	13.8	16.4	8.8		10.9	14.7	
10.2†		31.1	2.3		10.2		37.0	0.7	9.1		20.7	7.0	8.5 a	8.7		16.9	18.7 a	
10.2		47.7	59.9		10.2		46.0	8.7	7.8		57.0	14.5	8.0 Ga	9.2		18.4	50.2	
10.0		52.7	54.8		10.2		51.0	36.8	9.5	31	50.3	44.1	9.0 -	9.2		44.0	59.8	
9.4	52	59.7	44.0		9.8		54.5	33.4	9.4	32	7.7	57.3	8.8 G	9.2		49.9	29.6	
9.3	53	7.2	43.5		10.2		58.0	9.6	8.7	33	58.7	2.1	9.4	49	6.4	40.0		
8.8		52.2	39.0	9.0 -	9.8	7	0.5	1.4	8.9	34	3.8	56.3	8.7		25.4	45.6		
8.2	54	23.7	34.2	9.0 -	10.2		3.4	58.0	9.4		8.3	5.1	9.5		28.1	37.2		
9.8		25.2	1.0		10.2		6.0	55.3	9.0	35	12.3	49.9	9.0	9.2		33.9	54.0	
9.5	55	4.7	13.4		9.3		24.5	0.1	8.0 -	8.9		34.8	49.3	9.0	9.4		39.1	39.0
9.3		6.2	53.9		9.1		27.0	43.4	8.4		35.8	45.0	8.5	8.4		44.9	53.3	
10.2		11.7	7.4		9.0		54.7	55.4	8.7 a	9.2		39.3	5.9	9.5		48.9	51.8	
8.8		23.7	35.6	8.5 Ga	8.2		57.0	19.5	9.0 a	8.4		51.3	15.1	9.0	9.2		51.4	7.7
9.5		33.7	13.7		9.3	8	20.2	32.4	9.5	9.5	36	27.3	26.9	9.3		54.9	32.4	
10.2		49.7	32.0		9.8		38.0	13.1	9.2		27.8	57.6	9.0		57.9	13.5		
9.5	56	19.7	6.2		9.1		55.5	26.7	9.0	9.4		46.0	29.5	9.5	8.7	50	3.4	32.4
9.6		42.7	58.1		9.2	9	22.7	34.3	9.0	37	3.5	56.2	9.1		6.9	8.4		
6.2		45.7	47.3	3.8 GSμβ	9.2		36.2	13.3	9.5 -	9.5		31.5	16.6	9.0		10.9	2.7	
10.2	57	3.7	28.2		9.6	10	13.9	1.1	9.4		56.5	39.8	5.8	51	5.4	28.0		
10.2		13.2	4.2		8.2		31.9	31.3	8.5 -	9.0	38	12.5	22.2	9.1		11.9	7.7	
9.5	58	13.7	39.0		7.5	11	15.4	32.4	8.0 GSbc	8.0		23.5	19.2	7.5 GScl	9.0		15.4	9.6
9.8		25.7	8.6		8.4		16.9	45.9	8.5	8.9		28.0	9.9	8.8 Ga	9.5		21.9	39.7
9.5		32.7	56.2		9.4		28.9	12.1	9.5	39	13.5	14.6	9.4		23.4	38.1		
9.1		33.7	41.5		9.2		33.9	12.4	8.9		16.8	40.8	9.0		29.9	6.5		
9.3	59	2.7	32.6		9.8	12	18.9	20.1	8.4		20.8	51.1	8.8 -	9.2		37.1	11.6	
9.5		4.5	1.0		9.6		43.9	15.3	a	9.2	40	23.3	48.9	9.2		38.4	28.3	
10.2		6.2	17.2		8.4		51.9	31.3	9.0 W=	7.5		34.3	49.7	7.5 GScl	8.4		59.9	45.4
9.3		11.2	20.4		9.6	13	22.5	2.2	9.3		42.3	36.9	8.9	52	23.4	11.7		
9.3		13.7	33.2		9.0	16	9.0	55.5	9.5	8.9		53.3	20.4	9.2		30.9	48.2	
9.3		17.7	48.5		9.0	17	3.5	25.6	9.2	41	22.3	1.5	8.3	53	24.4	26.1		
10.2	0	9.2	28.2		10.0	18	40.5	52.6	9.4		52.8	55.4	7.9		55.8	50.6		
8.2		31.7	45.2	8.0 G≡	9.4		48.0	41.5	9.5	8.4	42	31.8	46.0	a	9.4	54	20.1	35.3
9.4		56.7	54.8		8.4		54.5	32.8	9.0 -	8.9		37.3	44.0	a	9.4		30.9	22.2
10.2	1	3.2	22.7		10.0		55.5	47.7	9.3	43	3.3	19.2	9.5		44.4	53.8		
10.2		5.7	59.8		9.4		57.5	21.6	9.4		11.8	6.0	9.4		47.1	21.3		
10.2		8.2	41.3		9.8	19	0.5	34.2	9.5		20.8	4.8	9.3		48.2	31.0		
9.1		10.2	56.1	9.0	8.7		40.5	5.2	9.5	8.9		28.8	31.7	8.2		57.6	13.8	
8.6		27.0	50.3	8.8 G	7.9	20	23.5	43.9	8.0 G≡	8.7		31.3	40.7	8.5 a	9.2		58.4	34.7
8.2		40.0	34.3	8.5 -	9.8		27.5	16.1	9.0	44	15.8	19.7	G	9.0	55	8.4	30.5	
9.8		53.4	3.1		8.6		55.5	29.3	9.3		15.8	31.1	9.2		16.4	46.6		
9.8		58.5	34.3		8.8		56.0	54.1	9.1		38.3	35.8	9.0	7.4		22.4	39.7	
9.5		59.5	8.2		10.0	21	8.5	46.2	8.6		49.8	36.4	8.5 a	9.6		27.9	28.3	
9.6	2	9.0	10.8	a	9.0		24.0	9.5	9.5 a	8.7	45	6.3	38.3	8.8 Ga	8.2		44.4	18.7
9.6		21.5	48.7		9.4		27.5	4.7	9.0		36.8	23.3	9.5	9.6		54.9	27.5	
9.5		43.0	56.4		9.4		38.5	10.5	9.2 a	8.9		43.3	5.7	7.8	56	24.4	22.7	
10.2		50.0	11.1		8.4		46.0	20.7	8.8 -	8.9		43.3	31.9	9.5	9.6		31.4	38.0
2.5pr.	+1	27.5	-6.0		+1	28.0	-5.7			+1	29.2	-4.9			+1	29.6	-4.5	

5641-5700.				5701-5760.				5761-5820.				5821-5880.												
mag.	15 ^h -16 ^h	-24°		mag.	16 ^h	-24°		mag.	16 ^h -17 ^h	-24°		mag.	17 ^h	-24°										
	m s	i		m s	i			m s	i			m s	i											
7.9	56	48.4	55.7	8.5 a	7.7	22	19.8	4.2	1	8.0 Ga	9.3	45	56.1	54.7		9.4	1	37.7	11.7	GW				
9.0	57	6.5	35.5	b	7.4	23.8	52.2	8.4	GS π	9.8	56.6	28.3		10.2	52.9	52.8		10.2	2	3.4	49.1			
9.6	9.0	41.1			4.7	36.8	50.3	5.4	GS π β	7.9	46	19.1	51.7	8.5 Ga	10.2	9.6	17.2	19.5						
9.6	15.4	41.7			9.6	24	6.8	8.8	9.5 a	10.0	27.1	44.8		10.4	51.9	4.2		10.4	3	0.1	40.7			
9.6	52.5	24.3			9.1	25	28.8	51.7	9.3 a	10.0	29.6	54.8	9.5 Ga	10.4	53.4	42.2		10.4	3	2.9	29.5			
9.4	57.5	12.8			8.4	26	18.1	1.4	8.8 GWal	8.5	33.6	16.0	9.5	10.4	55.9	4.5		10.4	3	10.4	47.2	7.7 Gal		
9.6	58	29.0	50.8		8.6	36.8	44.0	8.5	Ga	10.0	58.1	7.5		10.4	9.5	30.4	38.8							
8.6	54.5	35.7	8.5 G \equiv	9.1	27	19.6	54.2		8.0	47	21.6	18.0	8.2 Ga	10.4	34.4	0.4		10.4	8.4	41.4	52.3	8.5 Gal		
9.0	4.0	25.4		9.2	28	19.8	57.2	8.8 a	9.2	54.1	14.4		10.2	42.4	38.5		10.2	4	12.9	25.8				
9.6	13.6	14.6		9.8	29	55.5	33.5		9.4	49	42.1	14.9		9.5	47.4	24.2		9.5	5	6.4	46.1			
6.6	22.1	7.4	7.0 GSel	9.0	30	38.5	37.9	9.5 a	9.2	44.1	22.5		10.4	30.4	38.8		10.4	6	2.4	45.4				
8.7	33.1	35.2		9.4	44.6	58.7		7.9	58.1	20.1	8.5 Ga	10.4	34.4	0.4		10.4	9.5	26.4	39.0					
9.2	42.1	16.0		9.4	46.8	58.5		9.1	50	6.1	49.9	8.8	10.4	38.9	13.6		10.4	9.5	38.9	13.6				
9.6	45.6	22.2		10.2	31	13.5	43.5		8.5	14.1	43.0	9.5	10.0	47.4	10.3		10.0	10.0	47.4	10.3				
9.6	48.6	16.6		10.2	32	25.5	55.4		9.8	44.1	9.3		10.2	56.4	0.1		10.2	10.2	56.4	0.1				
8.2	49.1	47.5	8.5 -	8.8	32	4.5	45.5	8.5 a	8.8	44.6	12.0	9.0	10.2	7.1	44.0		10.2	7	1.1	44.0				
8.7	1	22.6	25.5	9.0	10.2	35.0	58.3		10.0	53.1	12.7	9.5	9.8	16.9	42.2		9.8	8.8	21.4	34.8	a			
8.7	2	22.6	23.6	8.3 Ga	10.2	35.0	58.3		8.4	51	25.6	11.4	10.0 -	9.8	21.4	34.8	a	9.8	8.8	21.4	34.8	a		
9.5	32.6	58.5		8.0	33	52.5	9.3	8.3 Wal	10.0	26.6	34.7		10.0	47.4	50.8	9.0	10.0	9.6	17.4	18.3	-			
6.7	39.6	15.0	7.0 GSel	6.5	34	2.5	13.3	6.3 GSel	9.3	41.6	53.9		9.5	22.4	15.3		9.5	9.6	17.4	18.3	-			
9.6	40.9	59.0		10.2	22.0	35.9		9.0	52	13.3	58.9	9.5	10.4	26.4	39.0		10.4	9.5	34.4	10.0	9.5 =			
8.2	3	6.6	38.6	8.5	8.8	33.5	34.5	8.5 Wa	7.8	19.1	54.1	6.0 GS μ β	9.0	38.9	13.6		9.0	8.8	43.4	50.2	9.5 -			
9.6	9.1	22.3		10.2	57.5	23.3		8.5	21.6	0.8	9.5 a	10.0	47.4	10.3		10.0	9.8	56.9	33.1					
9.6	27.6	21.8		9.4	35	22.5	59.1	10.0	6.4	30.1	47.8	6.5 GS μ β	10.2	56.4	0.1		10.2	10.4	56.4	0.1				
8.6	29.1	47.3	8.0	9.8	26.0	51.6	9.5	10.0	32.1	32.9		10.0	7.1	44.0		10.0	10.4	7.1	44.0					
9.0	58.6	25.6	9.0 a	9.1	54.5	48.1	a	9.4	54	1.0	45.1	9.0 b	9.8	16.9	42.2		9.8	10.4	16.9	42.2				
8.9	4	42.1	46.0		10.2	36	8.1	59.7		9.2	1.0	55.9	9.5	8.8	21.4	34.8	a	8.8	10.4	21.4	34.8	a		
9.0	53.1	46.6	9.0 a	9.2	10.1	58.9	b	8.2	23.0	52.4	8.5 al	9.6	47.4	50.8	9.0	9.6	10.4	47.4	50.8	9.0				
9.2	6	2.1	32.0		9.6	17.5	50.3		9.8	23.2	57.3		8.8	3.4	50.5	9.5	8.8	10.4	3.4	50.5	9.5			
9.2	10.6	11.1	9.0	9.6	53.5	14.6		10.0	28.0	50.9		9.8	22.4	15.3		9.8	10.4	22.4	15.3					
7.0	15.1	6.0	6.8 GSac	10.2	37	0.5	40.3		8.5	38.0	19.0	8.0 G=	9.0	34.4	10.0	9.5 =	9.0	10.4	34.4	10.0	9.5 =			
8.2	7	36.1	16.2	8.5 a	8.7	7.1	58.7	9.0 a	9.8	55	27.0	18.3	8.8	43.4	50.2	9.5 -	8.8	10.4	43.4	50.2	9.5 -			
7.8	8	13.6	48.2	8.0 Wa	10.0	38	2.0	49.7		10.0	30.5	26.1		9.8	56.9	33.1		9.8	10.4	56.9	33.1			
9.2	22.1	1.5	9.5		10.2	33.5	47.7		10.0	33.0	8.6		10.4	9.2	31.4	40.3	9.0 a	10.4	10.4	9.2	31.4	40.3	9.0 a	
8.2	49.6	44.9	8.3 a	9.8	49.0	45.5		8.8	39.5	48.8	8.0 Ga	9.2	31.4	40.3	9.0 a	9.2	10.4	31.4	40.3	9.0 a				
7.8	52.6	40.4	8.0 a	10.0	57.0	47.5		8.2	53.5	3.6	7.8 GSel	10.0	41.4	25.4		10.0	8.8	41.4	25.4					
8.5	9	11.1	55.0	9.0 a	10.0	58.0	36.3		9.6	56	3.0	31.1		8.8	53.6	58.0	9.0 a	8.8	10.4	53.6	58.0	9.0 a		
8.4	15.1	36.2	8.7 a	10.0	39	4.5	12.9		10.0	4.5	6.0	9.2 W	10.4	7.7	35.0		10.4	10.4	7.7	35.0				
9.6	16.1	30.2		9.3	9.0	38.3	9.5 a	8.5	5.5	39.2	a	6.3	23.2	8.8	5.5 GS μ β	6.3	10.4	23.2	8.8	5.5 GS μ β				
9.6	20.1	14.6		10.2	33.0	44.6		9.6	15.5	39.8	a	10.1	31.2	17.6		10.1	9.5	31.2	17.6					
9.3	10	0.1	7.6		8.8	45.7	28.6	9.5 a	8.5	21.0	6.8	8.8 Wb-1	9.5	32.2	13.4		9.5	10.4	32.2	13.4				
9.6	9.1	43.9		9.6	40	3.7	47.1	a	9.8	32.0	51.6		9.6	16.2	17.9		9.6	10.4	16.2	17.9				
9.6	10.1	44.8		10.0	4.0	25.1		8.0	52.0	3.7	7.8 GSel	9.0	35.7	21.9	9.0 G=	9.0	10.4	35.7	21.9	9.0 G=				
8.9	21.6	34.3	9.2 a	9.6	26.4	29.5		10.0	57	38.0	5.7	9.5	10.4	35.7	23.5	9.5	10.4	10.4	35.7	23.5	9.5			
9.0	12	2.9	31.9	9.2 a	8.3	37.9	18.0	7.0 GS π	8.6	53.5	23.0	8.5 b=1	10.4	57.7	54.1		10.4	10.4	57.7	54.1				
8.1	33.4	3.6	8.6 a	10.0	42.4	43.5		9.1	56.5	18.2		9.6	16.7	42.4		9.6	10.4	16.7	42.4					
9.0	47.4	48.7	8.8 Ga	10.0	41	12.4	50.8		9.0	58	58.5	32.2	9.0	9.4	59.7	34.4		9.4	10.4	59.7	34.4			
8.6	14	22.9	41.2	9.2 a	9.2	22.4	45.7	8.8	9.4	59	10.5	36.8		8.4	8.4	8.4	9.0 a	8.4	10.4	8.4	8.4	9.0 a		
9.5	24.7	11.6		9.4	31.4	41.0		8.2	15.0	23.2	9.0 al	8.8	15.2	50.5	9.5 -	8.8	10.4	15.2	50.5	9.5 -				
8.8	48.4	3.9	9.2 b	8.1	56.9	51.0	7.7 Gal	9.4	44.0	27.3		9.1	16.2	25.1	b	9.1	10.4	16.2	25.1	b				
8.2	15	4.9	5.1	8.9 b	8.5	58.4	26.1	9.0 Wa	8.6	0	3.0	19.8	8.8	26.7	33.2	a	8.8	10.4	26.7	33.2	a			
9.0	18.9	18.9		7.2	42	7.6	25.1	6.8 GS μ β	8.5	8.0	36.3	9.5 b	8.8	44.7	40.5	b	8.8	10.4	44.7	40.5	b			
8.6	16	46.9	43.9	8.2 \equiv	9.3	13.1	5.6	10.0	7.9	16.5	49.9	7.5 GSel	7.6	14	2.2	46.7	7.0 GS μ β	7.6	10.4	14	2.2	46.7	7.0 GS μ β	
9.8	17	46.8	9.5	9.8	9.6	19.6	13.3	Gk	9.4	23.0	58.6		10.2	12.2	44.4		10.2	10.4	12.2	44.4				
8.0	51.8	10.5	8.2 Wa	8.2	52.6	17.7	8.8 Ga	9.3	33.0	3.0		9.2	12.7	55.9	9.5	9.2	10.4	12.7	55.9	9.5				
9.8	19	38.3	48.7		7.7	43	43.6	37.1	7.8 GSel	9.0	36.0	17.8		3.3	19.2	52.2	4.0 GS μ β	3.3	10.4	19.2	52.2	4.0 GS μ β		
9.1	56.8	52.0	9.5 a	9.2	44	8.6	28.9		10.0	39.0	22.7		10.0	30.2	36.0		10.0	10.4	30.2	36.0				
7.7	20	51.8	27.9	8.0 Ga	9.3	24.1	34.3		8.8	1	3.0	15.4	9.5 Wb	8.4	37.2	49.8	8.5 Wb-1	8.4	10.4	37.2	49.8	8.5 Wb-1		
8.0	21	26.3	15.0	7.6 GWa	10.0	47.6	29.2		10.0	15.6	58.7	10.0	10.4	53.2	46.9		10.4	9.8	53.2	46.9				
10.2	22	0.3	35.6		9.3	45	56.1	12.5	9.5 G	9.2	33.0	40.6		9.8	15	18.2	3.5		9.8	10.4	15	18.2	3.5	
25pr.	+ 1	30.2	- 4.0		+ 1	31.0	- 3.0		+ 1	31.4	- 2.3		+ 1	31.7	- 1.9		+ 1	31.7	- 1.9					

5881-5940.				5941-6000.				6001-6060.				6061-6120.			
17 ^h .		-24°		17 ^h .		-24°		17 ^h .		-24°		17 ^h .		-24°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.4	15	22.2	50.1	10.0	37	23.5	25.3	9.1	46	15.8	33.0	9.2	50	52.5	45.9
10.4		29.2	58.7	10.2		44.5	58.0	9.1		22.5	43.2	10.4		53.5	53.8
10.0		29.5	53.1	9.8		48.5	2.3	9.5		32.9	46.7	10.4		56.5	29.9
8.8		32.2	17.7	9.3	38	24.5	49.1	10.1		35.9	50.0	9.9		58.2	39.9
10.2	16	13.5	44.2	10.0		30.5	3.0	9.8		39.6	22.6	9.9		58.5	39.7
9.2		34.7	50.2	9.1		31.5	41.2	9.6		41.9	48.9	9.2	51	0.0	11.6
9.8		2.5	41.3	9.0		46.5	5.3	9.9		45.6	42.1	10.2		1.0	47.4
7.4		28.5	7.6	10.0		49.0	59.1	9.6		51.9	39.9	10.4		3.2	13.2
10.4		31.5	59.8	10.2	39	8.5	33.6	10.2		54.4	37.3	10.0		14.2	0.4
9.5		32.0	23.1	9.1		18.5	51.7	9.8		56.3	48.1	10.0		15.2	36.5
8.2		32.0	29.1	9.1		21.0	1.9	9.8		56.9	59.7	9.9		22.5	1.9
10.4	18	4.5	38.4	10.1		22.5	47.8	10.2	47	0.7	59.7	9.2		30.2	24.8
10.4		7.0	25.6	10.2		23.0	30.3	10.2		4.4	38.7	9.6		40.7	41.9
10.0		26.5	27.7	9.3		33.5	52.2	9.1		7.4	41.3	10.4		41.7	2.6
4.8		45.0	3.4	9.8		51.5	13.0	9.8		10.4	27.8	9.8		43.2	19.2
10.0		59.0	34.4	9.7		53.5	46.1	10.2		11.9	44.5	9.6		46.7	18.6
9.8	19	1.0	10.8	9.8	40	22.0	9.1	7.0		12.9	51.6	10.4		52.2	28.9
8.8		13.5	16.0	9.8		26.0	25.8	10.2		15.4	44.0	10.2		53.2	59.6
9.8		30.0	21.3	9.8		33.5	16.7	9.7		17.1	33.8	10.4		56.2	42.5
10.4		43.0	52.6	9.8	41	15.5	17.0	10.4		21.7	52.9	10.4	52	3.2	57.6
8.4		57.0	33.4	9.1		29.5	47.3	9.2		22.2	44.7	10.3		12.7	53.0
8.8	20	6.0	36.9	9.3		31.5	11.7	9.5		24.0	10.4	10.2		17.7	49.2
10.0		25.5	39.8	8.8		37.0	17.8	10.4		43.7	53.1	9.8		30.2	15.7
10.4		44.5	37.8	9.1	42	5.8	24.8	10.4		47.7	45.2	7.7		32.2	16.2
10.4	21	16.0	38.5	9.8		13.3	40.2	10.3		53.7	12.5	9.8		32.2	57.1
8.6		22.0	13.8	8.3		18.8	9.8	9.0		56.5	2.0	10.0		37.4	58.9
8.3	25	21.9	13.5	9.7		25.8	50.1	10.4	48	0.5	37.3	9.6		37.7	34.5
9.1		22.9	57.2	10.2		28.3	47.2	9.0		3.5	30.0	10.4		52.2	44.3
9.3		33.9	3.0	10.0		33.3	47.4	9.2		6.5	29.6	9.9		56.2	33.2
10.2		44.4	2.5	9.6		38.8	23.6	9.4		17.0	56.9	8.2	53	2.2	40.1
10.2		48.4	2.9	9.0		48.3	48.7	10.3		18.5	5.1	8.2		10.2	46.7
9.5	26	33.9	47.0	9.5		56.3	31.2	9.6		51.5	11.1	8.0		12.7	12.1
10.0	27	26.9	52.5	10.0		57.3	30.9	9.2		52.0	33.7	8.4		22.2	8.7
8.0		53.9	32.4	10.2	43	1.3	44.8	9.6		52.0	43.6	10.4		25.7	4.5
10.2	28	7.9	13.7	10.0		15.8	50.4	10.3		53.5	23.6	10.4		29.2	59.7
8.6	29	35.9	30.8	9.6		19.3	30.1	9.2	49	13.5	39.9	9.2		39.2	37.4
9.1		40.4	28.9	9.5		21.3	43.4	10.0		14.5	17.0	9.0		43.7	18.8
9.6	30	6.9	43.2	10.2		33.3	57.9	8.2		20.5	24.1	10.0		44.2	44.7
10.0		7.9	38.0	8.8		36.3	28.2	10.3		26.5	29.9	9.6		48.2	45.9
8.5		13.9	53.2	9.5		48.8	50.0	8.4		28.3	58.9	10.2		52.2	48.2
9.3		20.9	52.3	10.2	44	22.3	59.1	10.4		36.5	34.2	9.4		52.7	7.7
9.3		32.9	12.5	9.2		24.3	49.5	10.4		44.0	41.1	10.3	54	6.2	49.9
9.6		43.9	16.7	10.1		36.3	12.4	10.4		49.0	35.4	10.4		7.2	30.8
9.4		44.4	20.6	10.0		36.3	35.4	10.0		55.0	28.6	9.9		8.5	32.8
10.2	31	37.4	16.0	10.1		47.8	31.4	9.5		55.5	37.6	7.8		11.5	9.1
10.2		45.4	4.8	10.1		50.3	34.3	10.4		59.0	39.4	8.8		12.0	21.6
9.0	32	5.9	23.3	9.8	45	3.3	49.9	9.6	50	0.5	50.8	9.3		13.0	18.3
9.4		32.9	13.0	10.2		4.3	18.4	10.2		3.5	49.1	8.8		22.5	39.7
10.2		46.0	16.0	9.8		9.3	53.2	9.0		5.0	45.9	10.0		23.0	25.8
10.1	33	0.0	4.2	9.4		16.3	14.4	10.4		6.2	58.3	9.8		25.0	45.0
9.5		21.0	47.4	9.3		16.3	11.0	9.9		6.5	39.8	10.2		33.5	47.9
10.0		23.0	48.1	9.0		18.8	28.0	9.5		13.5	15.0	8.5		37.5	51.9
10.0		33.5	21.6	8.4		20.3	38.7	9.6		16.0	59.4	10.4		38.4	59.9
9.5	34	48.0	56.0	10.2		32.8	15.0	10.2		18.5	34.5	10.3		45.5	48.9
9.1		51.5	13.5	9.0		46.3	14.0	9.4		27.0	49.1	10.3		48.0	30.7
9.7	35	18.5	29.3	8.8		47.3	44.6	10.3		28.0	35.3	10.2		48.0	39.6
10.2	36	45.0	1.3	10.0		48.3	56.0	9.9		28.5	16.5	9.2		54.0	35.4
10.2	37	3.5	9.2	9.8		52.5	57.3	10.4		36.5	45.3	7.6		59.0	15.1
8.8		13.5	37.5	9.6		53.3	7.0	9.2		49.5	0.1	10.3		59.5	38.0
10.1		18.0	9.0	9.2		56.3	24.2	8.9		52.0	24.0	9.0	55	0.0	2.9
25pr.		+ 1 31.9	-1.2			+ 1 32.0	-0.6			+ 1 32.0	-0.4			+ 1 32.0	-0.3

1896AnCap...3....1G

6121-6180.				6181-6240.				6241-6300.				6301-6360.				
17 ^h .		-24°		17 ^h -18 ^h .		-24°		18 ^h .		-24°		18 ^h .		-24°		
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	
8.4	55	0.5	14.6	9.8	56	56.5	2.3	10.4	1	21.8	41.0	9.9	6	55.6	44.9	G-
8.8		2.0	33.3	8.3		56.7	20.0	9.6		24.3	33.5	10.0	7	16.1	47.4	
9.6		9.0	53.6	10.3		59.2	24.3	9.9		25.3	10.8	10.0		16.6	38.9	
9.6		9.0	38.8	10.2		59.7	19.5	10.2		26.3	43.7	9.2		19.6	32.2	10.0 G
9.2		10.5	32.8	9.8	57	0.2	22.9	9.2		36.8	42.8	9.8		21.8	57.0	
6.6		12.0	16.6	8.6		2.2	21.1	10.3		36.8	5.9	8.1		28.1	2.1	8.2 Gatπ
9.3		13.5	20.0	9.6		2.7	18.7	7.4		39.3	0.3	9.8		44.6	8.2	
9.4		16.0	3.9	10.2		5.2	13.9	9.2		40.3	50.2	10.2		45.6	12.0	9.5
10.4		18.0	18.9	10.3		6.5	28.5	9.2		43.8	32.6	8.9		50.1	10.1	9.5
10.4		22.0	14.3	10.4		13.0	17.9	10.0		47.3	32.5	9.8		50.6	41.4	
9.6		28.0	37.8	10.4		13.0	19.5	10.0		49.8	20.8	10.2		53.8	58.2	
10.3		42.5	21.9	9.5		13.0	49.0	8.6		51.8	40.9	9.8		57.1	10.3	
9.2		43.5	14.3	10.4		16.0	42.8	10.4		53.8	29.0	9.9	8	1.6	7.8	9.0
9.3		47.2	0.2	7.4		17.0	41.1	10.4		55.8	43.8	10.2		16.6	29.1	
9.8		48.0	59.0	9.6		18.5	27.5	9.2		2	0.8	9.9		17.1	38.7	
9.5		52.0	1.1	10.4		19.5	43.8	10.3		8.3	7.5	9.2		17.1	34.0	G
neb.	56	1.5	22.6	10.4		23.5	1.5	9.9		15.5	26.0	10.3		21.1	12.5	
9.9		2.5	57.4	9.4		26.0	49.0	9.0		17.5	7.5	10.3		22.1	24.1	
10.3		3.5	29.5	10.4		26.0	30.1	9.8		19.5	7.9	10.0		27.1	0.7	
9.0		4.5	21.9	9.6		29.0	6.9	10.0		30.0	48.2	9.9		31.1	46.1	
10.0		6.5	21.7	7.3		31.0	24.1	10.3		45.0	56.1	9.8		35.1	0.6	
9.6		7.0	16.7	10.4		31.5	45.9	9.2		45.5	27.2	10.4		38.4	22.6	
9.9		11.5	21.0	8.6		51.0	12.5	9.2		49.5	28.4	10.3		48.4	12.6	
6.6		13.0	21.6	10.2		51.5	43.9	10.3	3	8.0	42.9	9.2		50.1	36.1	
9.0		13.2	0.2	10.4	58	0.0	12.0	9.6		8.5	54.6	9.9		58.5	29.8	
7.5		17.2	18.7	9.6		3.5	49.8	10.0		26.5	10.8	9.8	9	4.8	2.9	9.0 a
10.3		21.7	26.5	10.4		20.5	16.6	9.6		39.0	10.9	10.0		9.2	4.3	
9.3		22.7	53.2	7.7		25.5	12.2	10.4		52.5	23.8	10.3		10.4	26.5	
9.6		22.7	52.0	9.2		25.5	19.4	8.8	4	1.0	5.0	10.2		15.4	40.9	
9.8		27.7	19.5	10.0		27.5	26.4	9.5		1.0	28.5	9.0		15.5	42.9	
10.4		29.7	15.8	10.4		31.5	31.4	10.4		5.0	4.8	8.8		28.5	1.1	9.5 a
9.6		31.7	21.8	10.4		36.5	0.4	8.8		5.4	1.0	8.8		45.3	26.4	
9.6		32.7	21.8	9.3		37.5	46.0	9.9		10.0	42.1	9.9		50.0	15.8	
8.4		35.2	14.7	10.0		43.5	4.7	10.4		21.5	52.2	9.9	10	26.7	37.6	9.0 a
10.2		35.6	5.8	10.4		45.5	14.7	10.3		21.8	58.9	10.2		28.2	4.9	
8.6		35.7	23.5	9.8		46.5	47.1	8.8		25.5	7.6	10.2		34.0	8.0	
8.2		35.7	11.1	8.6		51.0	10.0	10.3		29.5	52.3	8.8		35.7	23.9	9.5 a
10.4		36.2	28.7	10.4		58.0	3.1	10.4		30.5	23.9	10.0		39.2	20.8	9.5
10.3		37.2	17.3	10.4	59	5.0	36.9	8.7	5	5.5	40.2	10.2		39.7	56.6	
9.0		41.7	14.0	10.0		7.0	19.0	9.8		6.0	3.1	10.0		52.7	6.4	
8.5		41.7	21.4	10.0		20.0	27.7	9.0		7.5	30.7	10.2		52.7	44.0	
9.2		42.7	22.2	8.8		22.5	20.0	10.4		39.0	26.9	10.0		56.7	36.0	
8.3		42.7	26.3	10.4		34.3	23.8	10.2		41.8	59.0	8.8	11	0.2	26.0	10.0
9.0		43.7	21.5	9.2		38.3	16.3	10.4		52.5	9.2	9.0		19.5	32.3	
9.3		43.7	21.1	10.4		59.3	12.0	8.3		53.5	37.4	10.2		20.5	17.4	
10.4		44.6	27.8	9.8	0	5.3	50.0	10.2		56.0	11.5	10.2		22.5	11.2	
10.2		45.7	22.8	9.8		8.8	1.0	9.0		56.0	18.6	9.4		39.5	21.0	10.0
9.0		45.7	20.9	9.9		12.3	12.1	10.0		57.5	11.9	9.1		46.0	40.2	a
7.7		45.7	23.3	10.0		16.3	22.4	10.0	6	4.5	7.7	10.2		56.5	40.1	
9.3		47.2	22.9	10.3		18.1	1.8	10.2		7.5	54.2	10.2		58.0	58.6	
9.2		47.7	42.8	10.4		18.3	36.7	10.3		9.0	23.3	10.2	12	4.0	25.2	
8.1		48.2	21.8	10.0		23.1	59.3	10.3		9.5	12.6	8.8		19.5	38.8	9.5 am
9.6		48.7	25.5	10.0		25.8	55.0	8.8		15.0	26.4	9.6		19.5	19.2	
8.7		49.2	19.5	9.2		26.8	54.3	9.3		17.5	20.0	8.6		28.5	59.6	9.5 a
10.4		50.7	43.1	9.4		35.3	25.6	10.3		19.5	50.8	9.0		41.0	9.4	
9.6		52.7	18.9	10.4		38.1	59.0	10.0		27.1	31.2	9.5		48.3	1.5	
8.7		52.7	23.4	9.6		55.3	9.8	10.4		31.1	11.8	9.5		49.5	14.4	
8.2		53.7	9.8	10.4	1	5.8	13.8	9.3		35.6	14.6	9.6		49.5	17.9	
8.9		54.2	22.1	9.3		14.3	22.3	9.2		54.6	35.9	9.1	13	20.6	11.2	
8.5		55.7	26.9	10.4		20.3	37.0	10.3		54.6	47.3	10.2		32.1	14.1	
25pr.	+1	32.0	-0.1	+1	32.0	-0.1		+1	32.0	+0.1		+1	32.0	+0.0		

6361—6420.				6421—6480.				6481—6540.				6541—6600.			
18h.		-24°		18h.		-24°		18h.		-24°		18h.		-24°	
mag.	m	n	'	mag.	m	n	'	mag.	m	n	'	mag.	m	n	'
9.8	13	42.1	36.7	10.0	22	56.3	19.0	9.6	32	43.8	16.4	8.5	45	49.3	8.5
8.8		49.1	58.2	9.6	23	1.3	33.5	10.0		55.8	15.0	10.1		51.3	23.4
		57.5	2.5	10.0		3.8	44.0	8.8	33	0.8	12.7 a	7.4	46	42.8	55.3
10.2	14	5.1	35.0	10.2		11.8	7.2	9.8		27.3	35.3	8.6		52.3	51.8
10.0		5.6	27.5	7.7		20.8	58.5	9.6		30.3	9.9	9.6	47	11.8	32.1
10.2		9.6	19.5	9.8		28.3	52.4	9.0		37.3	43.3	10.0		32.8	10.3
9.8		18.6	23.8	9.8		34.8	45.1	9.1		46.8	2.2	9.6		41.8	26.9
9.5		26.1	29.2	9.6		54.3	14.8	10.0		55.8	29.1	10.1	48	10.3	56.2
9.6		29.1	46.0	9.4		57.3	48.9	7.9	34	11.3	28.1	9.0		21.3	56.2
8.4		32.6	57.7	10.2		59.4	15.6	10.2		32.3	8.6	9.2		46.3	2.6
9.5		36.1	41.2	9.8	24	5.3	5.5	9.8		33.8	31.9	8.3	49	3.8	46.8
9.5		41.1	11.8	9.9		14.8	41.6	8.8		38.8	50.1	9.0		5.3	9.8
10.0		48.6	47.3	10.0		24.8	15.6	10.0		46.3	44.7 a	9.0		15.8	29.9
10.2	15	34.1	30.0	9.0		25.8	59.2	10.0		47.2	23.4	8.8		17.3	31.0
9.6		42.1	4.8	8.5		27.3	48.9	10.0		57.3	15.9	8.8		32.6	1.7
10.0		44.0	16.8	10.2		38.5	10.2	10.1	35	9.3	57.8	10.1		43.6	13.1
10.2		51.6	3.2	10.2		58.5	22.8	7.6		19.8	5.3	9.4	50	27.6	45.8
8.8		53.1	20.8	10.0	25	9.0	27.1	9.5		25.8	26.1	10.1		37.1	55.6
10.0		56.1	19.2	9.9		12.0	53.1	9.4		46.8	34.1 a	9.2		51	26.6
9.0	16	2.1	41.0	7.5		35.5	11.8	8.8	36	0.8	37.5	8.3	52	15.6	34.0
8.8		18.8	49.9	10.2		38.0	4.5	10.1		7.3	53.9	10.1		25.6	52.4
10.2		41.3	36.6	10.2		53.0	1.2	10.1		13.3	12.1	9.8		40.6	33.5
10.0		42.8	28.9	9.9		57.0	8.2	8.8		22.8	49.3	8.3	53	19.1	49.5
8.6		50.8	26.8	9.0		57.0	9.9	9.6		26.8	19.9	9.8		49.1	23.0
neb.		50.8	56.0	10.0	26	4.5	53.0	9.4		36.3	17.0	8.8		56.3	18.7
8.2	17	24.8	28.7	7.8		9.0	12.8	9.4		42.8	27.8	10.0		59.5	19.4
9.4		35.3	37.9	7.6		15.0	7.4	9.5		43.8	27.5	10.1	54	17.8	47.1
9.0		58.8	28.8	7.6		54.0	18.8	10.0		47.3	53.4	9.8		26.6	42.5
9.8	18	12.8	7.2	10.2	27	3.2	35.6	9.6	37	5.8	53.6	10.4		31.5	37.8
9.8		32.3	2.1	9.6		18.5	47.0	9.5		15.8	18.2	9.5		32.8	45.0
9.5		58.3	54.6	10.0		34.5	32.9	8.8		15.8	16.1	8.6	55	5.3	32.5
10.2	19	5.3	49.6	10.2		56.0	31.6	10.4		31.3	0.2	10.4		13.0	23.1
10.2		8.3	44.9	10.2		59.0	8.0	9.5		32.8	24.8 =	10.2		22.5	54.2
10.2		14.3	53.2	9.8	28	7.5	23.7	10.1		41.3	53.6	9.8		26.5	47.9
9.8		17.0	37.2	10.2		13.0	4.4	10.0		42.3	18.7	10.2		37.5	55.9
10.0		19.5	29.3	9.0		16.5	35.0	10.1	38	32.8	32.8	10.4		39.6	24.5
9.5		31.5	5.2	10.2		24.2	59.5	9.0		45.6	2.2	9.4		49.5	42.7
9.0		33.5	53.7	9.0		27.7	31.9	10.0	39	27.3	16.9	9.7		52.0	16.8
9.5		37.5	6.9	10.2		34.2	14.9	9.0		51.8	38.8	9.7		53.0	47.2
10.0		48.5	30.6	8.8		43.7	44.4	8.8		52.8	27.1	9.4		56.0	53.7
10.2		55.5	30.6	neb.		44.7	0.2	10.0	40	21.8	28.1	9.1	56	4.5	44.7
9.6	20	0.5	59.2	8.6		47.7	57.7	9.0		23.3	30.3	10.4		8.0	57.9
9.2		2.5	39.6	10.2	29	0.7	27.4	8.5		30.3	54.4	8.8		12.0	6.8
10.0		5.0	36.4	8.8		3.7	9.7	9.5		35.3	41.6	10.4		18.0	7.6
8.3		24.5	38.1	9.2		7.7	55.0	9.8	41	15.8	11.4	10.4	57	2.0	4.9
10.0		56.0	3.1	10.2		19.2	49.9	9.5		50.8	32.3 a	8.4		22.0	51.1
10.0	21	8.5	29.2	10.2		39.7	32.8	8.5		51.8	40.7	9.5		41.0	25.5
9.5		16.0	26.6	10.2		43.2	34.8	9.5		26.8	22.3	10.4		49.0	21.5
10.2		34.5	41.0	9.2		55.2	41.1	8.6		32.3	46.7	10.4		49.5	20.7
9.0		36.0	41.2	9.6	30	7.7	8.8	9.6		18.3	39.1	8.4		59.0	51.6
9.4		36.0	31.9	9.1		24.7	9.0	8.6		29.8	31.7	9.0		59.0	27.1
10.2		59.0	58.0	10.2		30.7	47.1	10.1		42.8	40.3	9.4	58	8.0	41.3
9.6	22	9.0	36.2	10.0		33.7	17.6	8.6		55.8	30.0	10.4		37.0	57.9
9.9		16.0	47.4	10.2		35.2	23.0	8.6	44	12.3	47.9	8.5	59	16.0	22.9
10.2		32.5	39.0	9.6		36.2	27.9	9.4		13.3	21.9	8.0		36.5	42.7
10.0		34.7	47.1	10.2		42.7	15.7	8.8		41.8	9.1	9.0		39.0	3.5
8.2		45.5	8.6	10.2		54.7	55.8	9.8		50.8	14.4	9.1		40.0	19.2
9.4		48.0	34.0	9.1	31	15.5	48.8	10.4		55.3	1.5	9.0		45.0	22.4
9.9		50.5	53.6	10.1		16.5	19.6	10.1	45	13.3	34.7	9.6		46.0	4.1
9.6		51.5	53.4	9.5	32	36.8	24.5	8.8		42.8	43.9	8.8		55.0	18.7
25pr.	+1	32.0	+0.7		+1	31.9	+1.0		+1	31.8	+1.8		+1	31.6	+2.0

6601-6660.			6661-6720.			6721-6780.			6781-6840.		
mag.	19 ^h	-24 ^o	mag.	19 ^h	-24 ^o	mag.	19 ^h	-24 ^o	mag.	19 ^h	-24 ^o
10.4	0 6.0	13.5	9.7	8 32.4	47.3	6.1	17 40.9	45.1	9.2	31 53.4	50.0
10.4	19.0	13.2	10.4	9 9.4	15.3	7.3	46.6	39.4	10.2	57.9	14.0
6.6	36.0	51.0	10.4	12.4	14.5	7.0	55.9	12.3	9.2	32 1.4	51.8
10.4	46.0	14.3	9.2	15.4	20.1	10.0	18 25.9	33.5	8.6	3.4	25.3
10.4	1 0.0	5.9	9.2	28.4	56.1	10.3	26.4	35.1	8.6	17.9	54.6
9.2	10.0	36.5	9.9	30.4	9.2	10.0	31.9	25.7	9.4	25.9	33.0
10.4	19.5	54.8	9.1	42.4	43.2	8.0	19 22.9	17.6	9.4	30.4	20.0
10.4	36.0	40.5	9.4	45.4	3.7	10.3	30.9	51.1	8.6	33 6.9	46.8
9.2	45.0	37.1	10.4	10 6.9	2.4	9.6	37.9	15.9	8.6	15.9	36.9
9.6	47.0	45.5	9.6	8.4	17.9	9.8	45.9	38.9	8.8	27.4	12.8
9.8	54.0	2.6	10.4	9.9	51.7	10.3	20 2.9	1.2	9.6	34 2.9	26.8
9.5	2 11.0	34.8	9.2	13.9	55.7	9.8	21.9	16.8	9.2	7.4	9.2
9.0	12.0	58.2	9.8	18.9	52.1	9.8	23.4	47.4	9.2	28.9	40.9
9.5	15.0	22.2	10.2	25.4	11.2	10.4	55.2	2.1	10.4	38.9	41.9
9.9	16.3	59.0	9.2	51.4	50.7	9.6	21 5.9	54.6	9.2	2.9	49.6
9.4	18.0	47.4	10.4	59.4	10.9	10.4	12.9	37.2	8.0	3.4	40.2
9.2	37.0	22.8	8.2	11 9.9	6.6	9.2	25.9	28.6	9.8	6.9	43.4
9.8	3 11.5	54.3	10.4	12.4	55.5	10.2	35.9	12.5	10.4	41.9	0.6
8.2	23.0	23.1	10.4	13.9	11.4	8.8	42.9	34.7	9.2	37 2.9	42.2
10.4	52.0	34.7	8.8	41.4	36.5	10.4	46.4	30.9	10.2	6.7	21.2
9.7	52.5	5.9	10.4	45.4	51.5	8.6	56.9	28.0	10.3	10.4	3.9
9.2	56.5	38.8	9.8	12 6.8	56.5	9.8	22 15.9	35.0	9.8	46.4	53.8
9.4	4 3.0	54.8	10.4	21.3	1.5	10.4	18.1	58.0	10.3	38 20.9	39.0
10.4	22.5	21.3	9.9	31.3	36.3	8.6	30.4	57.0	9.8	41.8	54.1
10.2	38.5	5.4	8.8	40.3	51.6	8.8	23 1.8	50.3	10.4	57.2	3.2
9.8	42.0	6.9	10.4	50.8	5.0	8.2	20.8	12.6	10.4	39 1.2	46.8
10.4	44.5	18.0	10.4	13 1.3	56.2	10.4	29.8	29.5	10.2	13.6	24.7
9.9	45.0	15.4	10.4	2.7	58.9	8.2	37.3	21.1	10.2	14.6	1.8
8.8	46.0	11.6	7.6	5.3	26.1	10.2	4.8	49.5	8.2	36.8	2.3
8.6	50.0	31.1	9.5	8.3	14.1	9.2	19.8	36.0	10.2	39.1	56.5
9.6	54.5	4.7	10.4	15.3	1.3	10.0	47.8	6.8	9.6	47.6	42.7
10.4	5 0.0	12.2	9.6	16.3	3.1	9.6	25 32.8	31.7	9.4	40 13.6	38.4
9.2	1.5	37.7	10.4	16.8	3.5	9.8	56.8	57.4	9.6	30.1	44.1
10.4	5.0	10.3	8.5	20.8	4.0	9.4	26 19.3	32.2	9.8	34.6	45.9
7.4	8.0	41.5	10.0	32.8	33.0	8.8	45.8	18.6	10.0	50.1	43.6
9.5	12.5	30.4	10.0	41.8	5.0	8.6	45.8	53.8	9.8	41 0.6	9.2
9.2	37.0	58.3	10.4	14 2.3	42.1	8.0	27 1.3	7.7	9.6	30.6	27.9
9.4	40.0	14.2	9.6	2.8	18.3	8.5	12.3	45.8	9.6	44.6	25.5
9.6	50.5	35.0	9.8	4.3	51.0	10.2	14.3	10.6	8.0	42 25.3	1.9
9.5	53.8	57.3	10.0	15.3	7.7	9.8	23.8	55.2	9.0	43 4.6	45.7
9.7	57.5	43.9	9.0	15.8	39.3	9.2	27.8	38.0	10.0	27.1	8.7
9.2	6 21.5	22.4	9.2	20.3	37.1	9.0	51.8	48.6	10.2	33.6	28.7
10.2	38.0	55.2	9.8	21.8	14.4	8.6	28 21.3	38.8	10.2	37.6	45.3
10.2	42.0	31.3	10.2	52.8	46.5	5.8	26.0	59.5	10.2	38.6	20.5
9.9	59.4	45.8	10.4	53.8	51.8	9.0	47.3	13.8	10.2	44 7.8	56.0
9.4	59.7	1.9	9.6	15 1.7	56.8	9.4	59.8	49.5	10.2	13.2	13.0
10.4	7 15.4	16.4	10.4	4.3	39.6	10.3	29 16.3	29.3	9.8	13.3	2.1
10.0	24.4	7.8	9.4	9.8	26.1	9.4	41.3	56.8	10.0	19.3	22.9
10.4	26.4	4.5	8.8	12.3	22.2	10.3	54.8	54.2	10.2	23.3	10.3
6.8	56.4	23.4	9.9	20.8	34.3	10.4	55.8	56.4	10.2	23.3	19.5
10.4	8 2.9	24.1	10.0	23.3	59.1	10.3	30 9.9	50.2	10.2	28.3	37.0
9.2	15.9	3.8	9.7	42.8	17.0	10.2	11.4	32.9	8.0	32.3	45.3
9.7	15.9	7.9	9.0	49.3	27.2	9.2	19.9	8.3	9.6	37.3	55.0
10.4	17.4	8.2	10.4	54.3	16.8	9.8	22.4	46.0	9.4	58.8	16.0
9.4	17.9	20.4	10.2	16 14.8	52.5	10.3	32.9	15.5	10.2	45 0.8	34.6
9.4	19.4	17.9	9.6	32.1	30.8	9.2	33.4	49.4	9.4	19.3	12.0
7.8	24.9	56.0	10.4	37.3	58.4	10.4	33.4	53.1	9.6	24.3	7.0
10.4	25.4	19.4	10.4	17 1.3	6.8	10.4	49.9	45.5	10.2	35.4	59.5
9.5	26.4	44.6	10.4	1.3	47.2	9.4	58.4	23.3	10.2	43.8	27.4
9.7	32.4	13.7	9.1	28.1	25.1	8.6	31 42.4	27.5	9.6	44.3	1.5
25pr.	+ 1 31.4	+ 2.3		+ 1 31.2	+ 2.6		+ 1 31.0	+ 3.0		+ 1 30.6	+ 3.5

6841-6900.			6901-6960.			6961-7020.			7021-7080.		
mag.	19 ^h	-24°	mag.	19 ^h -20 ^h	-24°	mag.	20 ^h	-24°	mag.	20 ^h	-24°
10.2	45 54.2	23.7	10.2	57 31.3	37.9	9.8	13 3.3	35.3	10.4	27 55.9	44.1
10.2	58.3	7.7	10.0	58 6.8	40.5	9.4	19.3	25.8	8.8	28 11.9	19.4
10.2	46 7.3	10.1	9.6	26.3	37.1	9.4	35.3	47.5	7.8	24.9	48.1
10.2	19.8	29.8	10.0	50.8	6.0	8.8	40.1	59.6	9.8	27.9	38.4
9.3	33.3	49.1	10.2	53.3	37.2	8.8	46.3	43.3	9.6	29.9	9.5
9.0	38.3	49.9	8.4	0 11.6	14.4	9.2	49.3	47.6	10.2	52.9	43.9
10.2	44.8	13.8	9.6	36.1	28.7	9.2	50.3	5.2	10.2	29 6.4	27.1
7.4	48.3	15.1	8.8	51.4	57.0	9.6	57.5	39.0	9.0	9.9	37.4
9.4	47 5.8	34.4	8.7	57.1	24.5	8.6	15 42.5	53.5	9.6	25.9	42.0
10.2	23.3	33.2	10.2	1 9.6	4.8	10.0	47.0	17.4	10.4	45.9	7.0
9.0	26.8	52.0	10.2	14.1	29.8	10.0	58.0	43.6	9.0	52.9	4.8
9.0	27.3	11.1	10.0	30.9	56.0	9.8	16 10.0	17.5	10.4	30 7.9	12.4
10.0	35.3	43.8	10.2	43.9	52.5	9.4	12.5	39.8	7.4	16.9	48.3
8.6	40.8	13.9	10.2	47.6	56.2	8.8	13.0	46.5	10.4	35.9	40.1
8.8	48.3	17.8	8.5	51.4	23.2	9.4	22.0	8.6	9.4	40.4	28.0
9.4	48 4.7	2.2	9.6	2 5.4	14.3	9.8	24.5	32.8	9.4	40.4	6.3
9.8	44.3	30.1	10.1	43.1	18.2	8.6	27.5	33.8	7.1	41.4	39.7
9.6	47.3	38.9	10.0	3 11.6	17.3	10.0	34.0	43.0	9.9	47.9	44.9
10.0	52.3	45.7	9.0	25.1	23.1	9.0	17 10.0	55.9	10.4	31 29.9	17.0
10.2	49 12.3	16.4	9.0	46.1	56.2	9.8	13.0	7.4	9.0	36.9	54.0
10.2	22.3	17.3	10.0	55.6	30.5	8.2	16.5	39.3	9.2	36.9	30.7
8.2	31.3	39.8	7.8	4 0.1	35.7	9.0	19.0	56.8	9.6	36.9	13.5
9.4	40.6	0.5	9.8	2.1	56.6	9.5	45.0	4.2	9.8	49.9	22.8
10.2	53.3	3.8	10.1	17.1	8.4	9.4	18 55.7	57.8	9.4	50.4	46.8
10.2	53.8	45.0	8.8	32.1	38.9	9.5	19 10.5	34.3	9.6	32 1.4	44.5
10.0	50 24.3	41.3	9.6	36.4	42.7	9.0	32.5	48.1	10.4	6.4	18.9
8.8	27.8	45.9	10.1	44.1	25.6	10.0	42.5	50.8	9.2	22.9	52.8
9.0	51 8.8	0.5	9.2	48.3	8.1	8.2	50.0	45.7	9.6	36.9	56.3
9.4	18.3	41.7	9.2	5 9.3	24.2	10.0	20 8.5	27.6	9.4	42.9	36.8
10.2	23.3	26.3	9.6	17.9	58.4	9.2	17.5	19.7	6.9	45.9	13.6
10.2	50.8	30.2	10.1	22.3	32.3	9.5	45.0	12.2	7.6	58.4	32.8
9.8	2.8	46.8	9.6	36.3	40.3	9.6	46.0	37.1	9.6	33 23.6	57.9
9.6	10.8	53.8	9.6	6 16.3	3.2	8.8	51.5	8.4	9.9	38.9	39.1
9.0	15.3	1.0	9.6	17.3	25.0	10.0	21 1.0	13.1	8.6	41.9	56.8
9.8	16.8	55.6	8.8	7 42.3	49.5	9.1	3.0	38.8	9.8	34 5.9	11.1
9.2	27.2	3.4	9.6	43.3	37.7	7.8	3.5	34.2	9.9	18.4	36.7
10.2	40.8	38.1	10.1	59.3	8.7	8.0	19.5	23.6	8.8	35 14.4	44.9
8.0	50.8	17.6	8.6	8 7.8	34.4	8.8	34.0	4.6	10.4	36 11.9	26.9
8.8	53 18.8	31.5	9.6	22.3	31.4	9.5	43.5	11.2	10.4	13.9	39.4
9.3	19.3	56.6	9.4	37.3	51.9	9.8	44.0	47.4	9.0	37 1.9	5.8
10.0	49.3	17.6	9.5	39.8	3.4	10.1	48.5	14.9	9.0	2.9	5.3
10.2	53.3	25.3	8.6	44.8	12.9	9.6	22 23.0	31.6	10.2	11.9	7.5
10.2	54 10.8	44.9	9.6	59.3	32.8	9.2	23 4.5	31.5	10.4	37.9	28.6
9.4	35.8	29.0	10.1	9 3.3	17.4	10.0	7.5	24.1	8.2	41.9	12.4
10.2	46.7	11.1	10.0	17.8	6.5	9.6	44.2	2.9	8.2	57.4	19.4
10.2	50.8	51.9	9.2	10 14.8	26.7	10.0	24 23.7	1.4	9.8	38 1.3	5.6
10.2	55 14.3	54.4	9.0	26.3	19.9	8.8	34.0	29.0	9.0	13.6	2.6
9.0	16.8	23.7	8.0	38.8	45.2	8.1	50.7	29.3	10.2	19.8	6.1
9.4	22.8	45.7	9.0	39.3	39.2	9.4	58.2	37.2	9.6	24.8	13.2
10.2	38.3	6.6	8.8	11 9.8	4.9	8.2	25 3.9	23.2	8.2	25.3	56.2
10.0	43.8	5.2	10.1	11.8	16.5	10.4	42.9	42.5	9.9	47.8	54.6
10.2	56.3	17.6	9.2	11.8	7.0	10.4	53.4	11.4	9.6	49.8	19.6
9.0	4.8	55.5	8.2	28.3	16.9	10.2	53.4	37.7	8.8	51.8	15.0
9.4	18.3	45.6	9.8	41.3	45.3	9.8	57.9	37.0	7.0	56.3	10.6
9.0	24.3	46.6	9.2	52.3	49.7	9.0	26 12.9	4.5	10.4	39 6.8	0.8
9.1	32.3	42.0	9.6	12 11.8	38.8	9.8	13.9	42.1	10.4	24.8	54.0
10.2	32.3	18.9	9.0	17.8	11.1	9.9	21.9	38.7	8.6	52.8	55.8
8.4	58.3	19.8	9.6	35.3	4.7	10.4	45.9	23.4	10.4	40 25.3	1.4
10.2	57 2.3	18.7	9.4	35.8	37.7	10.2	27 2.9	9.5	9.9	35.8	6.1
10.0	15.3	12.8	9.8	43.8	4.9	10.4	24.4	29.3	8.6	59.3	5.2
25pr.	+1 30.2	+3.9		+1 29.8	+4.3		+1 29.3	+4.8		+1 28.8	+5.2

7081—7140.			7141—7200.			7201—7260.			7261—7320.		
mag.	20 ^h .	-24°	mag.	20 ^h -21 ^h .	-24°	mag.	21 ^h .	-24°	mag.	21 ^h -22 ^h .	-24°
10.4	41 21.8	13.8	9.4	53 46.5	9.2	11.0	15 52.9	16.0	10.2	40 41.3	7.1
9.6	29.2	2.9	10.4	46.5	15.3	11.2	16 41.9	5.6	9.2	48.8	21.6 9.0 a
9.6	36.8	21.6	9.6	51.0	47.8 M-	7.0	17 3.4	10.2 7.5 GWa	8.4	41 3.8	38.0 8.5 al
8.8	54.8	31.0 9.5 Mm	10.4	54 5.0	47.3	6.8	6.9	57.4 6.8 GStr	9.4	27.3	54.9
9.6	55.8	17.3	8.3	25.5	17.1 8.5 Gam	9.9	14.9	12.0 8.8 a	10.2	44.3	54.9
9.6	42 9.8	25.0 9.2 a	9.4	34.5	6.0	10.8	57.4	28.0	9.6	49.8	13.1 8.5 Wam
8.8	10.8	24.4	9.8	43.5	43.7	9.8	57.4	32.4	10.2	42 17.7	1.7
9.6	42.6	2.2	9.8	56 5.5	17.4	8.5	18 7.9	35.8 b-1	9.0	58.3	24.3 Gka
9.0	48.8	36.3	7.7	30.5	48.8 7.5 Gaml	10.2	13.4	55.2	9.2	43 12.8	36.9 a
10.0	56.3	46.0	9.6	38.5	7.3	11.0	16.4	38.0	9.6	18.3	14.3
10.4	43 4.8	55.5	10.2	48.5	39.0	8.3	18.4	6.8 Gam	9.5	28.3	46.0
10.4	21.8	42.2	10.0	52.5	10.9	7.3	36.4	21.4 6.5 GSa	10.2	44 2.8	5.2
10.4	56.8	15.0	10.0	57 21.5	18.1	8.8	56.4	55.0 8.8 am	10.2	15.8	51.7
9.9	44 9.8	37.0	8.6	39.0	6.6 8.2 GMam	10.6	19 7.4	15.6	8.9	45 1.8	58.7 9.3 M-m
9.8	30.3	38.6	10.4	58 18.5	24.8	11.2	12.4	14.3	10.2	29.8	21.2
8.8	32.8	11.8	9.2	43.5	41.4 a	11.1	12.4	53.3	10.4	45.3	16.7
10.4	32.8	5.6	9.8	59.5	4.9	11.2	33.4	47.2	8.9	46 15.8	38.7 9.0 Ga
9.6	36.4	1.5	9.6	59 2.5	42.3	11.0	20 14.4	49.4	10.6	47 12.3	0.1
9.0	57.8	37.4 9.0 am	10.0	2.5	3.8	8.4	14.4	9.4 8.0 Gaml	10.0	15.8	4.3
10.0	45 0.6	57.6	9.2	23.5	5.9	11.0	37.4	10.0	10.2	22.3	53.6
10.4	19.8	32.7	9.6	35.5	5.3	10.8	38.4	28.3	10.6	34.3	48.1
8.2	33.8	40.9 8.5 Wam	10.4	0 7.0	48.8	9.0	21 17.7	9.6 9.0 Gam	10.0	48 11.8	43.0
8.8	35.8	7.1 9.5	10.0	41.5	32.3	9.6	39.2	30.9	9.0	19.8	19.5 9.5 GW=
9.8	36.8	55.9	10.4	1 4.5	27.5	10.3	57.7	7.9	9.4	49 5.3	24.3
7.2	41.8	15.0 6.5 GSlr	10.0	15.5	59.0	8.8	22 11.7	20.1 9.0 Ga	9.2	30.8	43.9
9.4	44.3	2.1	8.1	15.5	42.4 8.0 Gal	10.3	59.7	44.3	9.0	31.8	8.0
9.2	59.5	2.1	10.2	55.5	21.9	8.8	23 12.2	58.5 8.5 Gatr	8.8	38.3	35.9 8.5 GMal
9.6	46 25.1	5.6	7.8	57.5	7.9 7.2 GScl	10.2	43.7	49.2	9.5	51 11.3	35.1
7.6	40.6	45.0 7.5 GSac	7.9	2 35.5	54.4 8.2 GM-m	9.6	24 23.5	59.4 9.5 Ga	10.2	20.3	38.9
9.2	47 32.3	19.9	10.2	48.0	31.6	10.6	27.1	33.8	9.8	36.8	30.6
10.4	32.8	10.9	9.0	3 14.0	16.1 =	11.2	53.6	45.8	8.6	52 9.3	29.1 8.0 GWa
9.8	48.4	11.4	9.0	51.5	6.2	8.2	25 26.1	42.0 8.5 GWam	7.0	14.3	25.7 7.0 GSb=
8.5	58.9	42.5 8.0 W=m	9.8	58.5	58.2	9.2	40.6	54.8	10.0	55.8	23.5
9.6	48 45.4	14.7	9.6	4 22.5	34.0 9.0 GM-m	11.1	27 0.6	50.1	9.5	57.3	25.8
10.2	51.4	40.1	7.6	47.0	37.9 8.2 GWal	9.5	52.1	11.0	10.0	53 6.8	40.9
9.1	58.9	25.2 9.0 a	10.2	5 24.5	1.8	7.4	28 6.8	0.6 6.5 GSlr	8.9	17.5	6.0
10.0	49 25.9	54.3	9.0	58.0	36.5 9.5 -	9.8	33.1	38.6	9.2	29.5	50.9
9.1	40.9	18.4	9.6	6 56.8	40.7	11.2	29 13.1	24.9	9.2	54 27.3	33.7
8.4	43.9	40.4 Wam	10.0	7 14.8	52.1	10.3	48.1	35.1	10.2	47.3	5.4
8.6	44.9	8.5 9.0 bl	9.4	30.8	3.7 9.5 -	10.2	30 12.1	13.6	10.2	53.3	18.1
9.6	57.9	45.9	9.8	44.8	44.3	8.8	24.1	8.5 9.5 a	8.0	55 12.0	13.1 8.0 Gal
7.2	58.9	19.3 8.0 Gbl	10.4	8 3.8	7.5	8.5	34.1	15.2 8.5 Wam	10.0	56 29.2	28.0
10.4	50 2.9	15.8	10.2	17.8	37.3	11.1	42.0	51.8	9.6	34.2	57.0
7.8	19.7	58.1 8.0 Ga	9.8	34.8	31.9	10.8	43.6	3.0	9.4	45.7	31.5
10.4	36.5	21.4	10.0	9 1.8	17.0	10.8	47.1	39.0	9.4	57 37.2	34.8
9.6	56.5	3.5 a	9.1	20.1	5.6 9.5 -	10.2	32 58.3	49.9	8.4	48.2	20.1 8.5 b=ml
10.2	51 28.5	17.9	9.4	43.8	25.7 9.5 M=m	10.2	33 19.3	51.1	8.4	58 8.2	48.9 9.5 a
10.0	35.5	29.1	10.2	47.8	34.5	9.0	33.3	28.3 8.2 am	9.8	10.2	23.2
10.2	39.5	28.7	8.6	10 19.0	33.1 9.0 am	8.8	46.3	22.4 9.5 a	8.5	19.2	2.5 9.0 al
10.0	40.5	33.5	11.2	11 9.0	58.6	9.0	34 1.3	59.9 9.2 W	9.8	37.2	22.2
9.8	52 15.5	48.9	8.3	32.5	19.8 8.8 al	9.8	58.3	10.3	8.9	39.2	8.2 9.0 am
9.0	18.5	10.5 9.5 a	10.2	54.0	56.5	7.9	36 13.3	42.7 7.5 GSa	9.4	55.2	7.1 10.0
9.0	23.5	42.5	9.0	12 18.5	17.7 8.5 Maml	10.0	37 3.1	33.3	10.0	59 23.7	10.3
9.6	25.5	21.7	10.5	47.4	28.7	10.0	15.8	5.5 a	9.4	0 4.2	14.6 9.0 a
9.6	50.5	36.0	10.5	13 1.9	35.7	10.6	28.9	41.0	9.2	40.7	33.2 9.0 Gb
10.4	54.5	19.7	11.2	14-44.4	43.0 G	11.0	38 45.8	46.9	9.1	58.7	7.8
9.4	53 5.5	6.2	8.8	53.4	45.4 9.0 G	10.8	40 3.8	15.6	8.0	1 14.7	20.5 8.0 GWal
9.2	14.5	12.0	10.2	15 25.4	31.6	10.2	20.8	10.0	9.6	36.7	3.5
9.6	15.5	54.8	9.8	26.4	21.9	8.8	23.3	14.9 9.0 Wam	9.1	47.2	55.5
9.8	27.0	8.7	9.6	44.1	0.2 9.0 am	10.8	29.8	39.0	9.4	2 17.2	11.2
25p.	+ 1 28.1	+ 5.6									
				+ 1 27.5	+ 6.0						
							+ 1 26.4	+ 6.5			
										+ 1 24.9	+ 7.1

7321-7369.				7370-7417.				7418-7465.				7466-7513.					
22h.		-24°		22h.		-24°		22h-23h.		-24°		23h.		-24°			
m	s			mag.	m	s		mag.	m	s		mag.	m	s			
7 ^h 2	20.2	16.3	6.5 GSal	9.1	30	27.8	50.7	7.8	55	45.1	15.1	8.2 Gb=l	9.6	27	44.6	38.6	
10 ^h 7	33.2	39.3		9.8	31	1.3	41.0	8.4	57	26.1	27.6	Ga	9.8	29	3.6	57.4	
9.4	36.9	56.7		9.1		13.3	18.3	9.6		38.1	42.7		10.0	31	17.6	6.2 9.5 G	
9.4	38.2	51.5		10.2	32	35.8	57.3	7.9		40.1	47.3	9.0 Ga	9.0		32.6	33.1	
9.8	59.7	24.0		8.6		49.8	19.9	8.6		43.1	47.8	Ga	8.2	32	17.8	22.3 8.2 Ga	
9.8	3	23.7	37.1	8.6	33	41.1	21.3	8.1	58	17.6	30.9	8.5 Ga	9.8		33.3	24.0	
9.8	30.4	59.2	K	10.2		45.1	4.0	8.8		46.9	58.9	9.0 a	9.2		37.3	45.9	
8.4	32.7	10.0	8.8 Wam	9.3	34	6.6	13.0	8.6	59	16.9	0.8		9.9	33	36.3	12.7	
8.6	40.7	38.3	Mam	7.4		13.6	10.3	9.5		31.4	31.1	9.0 Ga	7.9	34	35.3	51.3 7.2 GSal	
10.1	4.	4.2	25.7	8.0		15.6	53.5	5.7		57.9	25.0	4.2 GSπβ	8.6		57.8	34.3 9.0 Ga	
9.8	11.7	44.4		9.6		46.6	1.1	9.2	0	16.9	49.2		8.2	35	12.8	18.1 8.2 Gal	
9.4	5	17.2	23.5	9.8		57.8	6.6	10.6		18.4	22.9		10.0		53.3	49.2	
9.8	6	33.7	46.7	9.8	35	1.6	24.3	8.8	2	26.9	37.6	9.2 a	7.6	36	39.8	22.1 8.0 Gal	
8.3	54.7	17.6	8.8 am	10.2	↑	20.5	2.5	10.6		43.8	29.5		10.0	37	13.3	12.5	
9.4	7	4.7	32.4	9.2		38.6	22.2	8.8	3	41.6	55.8	8.6 a	8.3	38	23.3	11.9 8.0 Gb=l	
9.8	13.2	27.0		7.7	37	36.1	25.2	9.4	4	45.1	22.3		10.0	39	6.4	6.1	
10.0	36.2	38.3		8.8		57.6	8.0	7.8	5	48.1	29.9	8.1 Ga	8.4	40	3.3	33.5 9.0 -	
7.3	46.7	37.4	7.0 GSa	9.0	38	52.3	30.7	7.7	6	23.6	47.1	7.5 Gal	7.7		22.3	59.3 8.1 Gal	
10.0	8	41.7	1.5	10.6	39	59.4	15.0	8.3	8	6.6	30.7	9.0 a	10.0		38.8	46.3	
10.0	9	41.2	40.1	9.2	41	1.4	46.9	9.4	9	29.6	8.9		10.0	41	37.4	29.3	
9.2	10	17.2	0.0	10.0		16.9	41.7	9.6		31.6	1.9		9.6		38.3	23.3	
8.4	33.2	20.0	8.5 GM=m	9.0		17.9	45.4	9.1	10	26.6	39.4	8.5 a	9.4	42	27.8	40.9	
9.8	38.7	30.0		10.6		38.4	18.6	9.6	11	45.6	27.3		8.4	43	28.8	51.7 8.8 al	
9.2	11	59.2	50.2	10.4	43	6.0	0.1	9.6	12	16.2	9.7		10.0	44	5.8	42.2	
8.2	12	31.2	25.6	9.5		10.9	55.5	8.7		28.4	58.0	8.8 Ga	10.0		14.3	53.4	
8.9	32.7	29.2	10.0	7.6	44	30.8	25.6	9.6	13	43.2	4.4		9.0		48.3	7.9	
9.0	54.2	43.0	8.5 Ga	9.6		46.8	44.4	9.4	15	6.2	42.9	8.8 G	10.0	45	6.8	26.2	
10.0	13	56.7	10.5	8.8	45	10.8	41.4	8.2		42.2	56.1	8.3 Ga	8.6		22.3	46.7 8.8 Ga	
9.4	14	16.2	20.5	10.6	46	9.7	21.4	7.3	16	13.7	8.2	7.5 GSl	10.0	46	1.4	51.7	
10.0	17	2.5	34.2	7.2		36.8	35.4	9.6		16.2	43.1	a	10.0		3.1	42.0	
7.3	38.5	0.1	7.8 GSal	9.3		48.8	40.9	8.3		26.9	4.6	8.1 GWal	10.0		35.6	15.1 =	
9.6	18	12.3	20.3	8.4	48	23.9	38.1	9.4	17	4.9	19.0		6.2		53.1	55.5 6.5 GSlπ	
6.1	19	15.6	19.0	9.6		54.8	36.0	8.7	18	32.9	6.3	8.8 G -	8.6	49	11.9	55.6 9.2 G =	
9.1	20	10.1	33.3	9.8	49	8.9	47.3	9.2		52.9	42.1		8.8		22.9	18.0 =	
8.5	23.6	30.7	9.0 GM-m	7.8		28.4	49.0	9.6	20	38.4	16.6		7.6	52	4.9	51.9 7.5 Gal	
9.4	21	17.6	25.7	8.1		29.9	30.9	9.2		50.4	24.1	9.0	9.8		31.9	21.6	
8.2	22	3.1	46.2	8.4	50	33.4	30.2	8.9		56.9	55.6		8.8	53	51.9	8.9 9.0 =	
7.8	59.1	29.6	8.0 bl	9.6		58.4	13.3	9.6		56.9	29.2		9.2	54	33.9	8.1 9.2 -	
9.6	23	15.1	20.1	10.4	51	43.9	8.5	9.6	22	5.1	51.9		9.4		38.9	7.8 9.2 =	
9.0	43.1	16.7	=	8.4		52.4	21.8	9.4		22.6	2.2		10.0	55	16.3	29.5	
8.2	54.6	48.6	8.0 Gtlπ	7.9	52	2.9	7.0	7.7		50.1	43.6	8.0 Gal	8.5	56	24.8	34.3 9.5 a	
9.4	26	26.3	39.8	8.1		3.4	6.0	9.2	23	4.6	33.4		10.0		29.8	37.1	
9.5	57.3	35.3		8.6		51.1	46.0	9.4		26.6	42.7		6.7		42.8	50.4 6.6 GSbl	
8.4	27	17.1	58.4	10.4	53	18.1	40.8	7.5	24	4.6	53.1	7.4 GSal	9.6		47.3	34.8	
6.8	28	43.8	38.2	10.0		31.1	42.3	9.9	25	2.3	56.0	9.5	8.5		52.3	18.7 9.0 =	
9.4	29	15.3	37.9	9.8		46.1	52.8	9.4		42.6	20.6		10.0	58	58.8	27.5	
8.4	16.3	38.8	8.0 Gal	10.4	54	24.6	51.0	10.0	27	28.1	26.6		10.0	59	8.3	27.0	
10.2	30	4.8	38.3	9.5	55	41.6	48.5	9.6		34.1	41.0		9.2		48.3	14.1	
9.6	23.8	49.0															
25pr.	+ 1	23.7	+ 7.5		+ 1	21.8	+ 7.9		+ 1	20.0	+ 8.2			+ 1	17.9	+ 8.3	

ZONE — 25°.

1-30.				31-60.				61-90.				91-120.								
mag.	ch.	-25°		mag.	ch.	-25°		mag.	ch.	-25°		mag.	ch.-1 ^h .	-25°						
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''					
9.4	0	0.1	17.8	9.5	8.2	15	56.2	54.6	8.6	9.8	30	23.2	53.6	b	10.2	44	3.5	2.9	9.0 a	
9.8		12.6	59.6	-	9.8	16	6.2	42.2	9.5	7.8		34.0	11.2	8.0	10.2	45	29.0	19.5		
9.8		12.6	5.1		8.6		9.2	40.8	8.9 a	8.1		38.5	10.7	8.0	9.6		42.5	52.4	9.0 a	
8.0		16.6	18.8	8.9	9.5	17	19.7	20.7		6.5		56.8	27.3	6.0	10.0	46	4.5	21.1		
10.0		26.1	39.2		9.4	18	2.2	32.0	9.5 a	9.8		58.5	43.9		9.0		57.7	37.8	9.2	
10.0	1	59.6	39.1		8.8		16.7	25.8	9.0 a	8.0	32	11.5	21.0	8.5	6.4	47	4.2	27.4	6.8	
9.7	2	20.6	48.0	-	9.4		16.7	13.1		7.8		36.5	47.8	6.5	7.8		52.2	43.3	7.7	
10.0		29.6	29.4		8.3	19	15.2	39.8	8.8	9.5		39.5	47.9		9.6		55.2	40.3	9.5	
9.8		31.1	35.8		9.0		50.2	25.8		9.1		51.5	43.8	9.0	9.8		48	2.2	18.3	
10.0		34.6	3.8		8.7	21	35.2	58.6	8.5	9.6		54.1	22.8		7.4	49	15.7	20.3	7.5	
10.0		39.6	20.5		8.1		38.2	32.4	8.2	9.2	33	14.2	12.8	-	9.6	53	3.3	37.7	=	
9.6		40.1	1.9		8.6		48.7	53.1	9.0	8.6		39.2	43.0	9.0	9.1		45.3	13.6	9.0	
10.0		45.6	16.1		7.1	22	34.7	19.6	7.0	10.2	34	27.2	40.9		8.8		48.3	6.7	8.8 a	
9.8	3	16.6	4.7	9.5	8.6		59.7	37.1	9.0 a	10.2	35	3.7	40.7		10.2		50.3	24.3		
9.6		31.6	50.2		9.2	23	54.7	17.6		7.4		23.7	52.9	6.7	9.0	54	19.0	46.6	a	
10.0	4	40.6	50.3		8.6	25	14.2	46.6	8.7	8.4		30.7	26.7	8.2	9.0		47.0	6.0	9.0 a	
9.4	6	41.6	38.8	-	9.9		28.7	53.2		9.6		50.7	38.1		8.5		55	1.6	25.2	
10.0		57.1	30.6		7.6	26	6.2	20.2	7.8	10.0		54.2	31.1		9.8		56	34.0	58.9	
9.0	8	52.9	10.8	8.5	9.2		10.7	34.0		9.8	37	25.7	24.9		9.0		0	35.8	48.3	
10.0		54.6	50.9		9.9		31.4	58.2		8.2		49.0	33.4	8.8	10.5		41.1	20.3	8.8 a	
9.0	9	13.9	2.6	9.0	8.7		31.9	0.0	9.0 a	9.8	38	10.0	26.0	9.0	9.8	1	0.3	18.9		
9.9	12	33.2	31.5		8.7		41.7	17.4	9.5 a	10.0		50.0	14.0		8.2		8.8	31.3	8.2	
8.4		41.7	8.1	9.0	9.7	27	53.7	35.4		9.2		57.5	36.1		10.5		17.8	53.1		
9.9	13	9.7	2.8		8.7	28	43.7	6.6		10.0	40	9.5	16.1		9.2		52.8	16.4	9.0	
9.8		10.7	13.3		8.1	29	11.7	33.2	8.0	10.2		20.5	33.1		9.6	2	21.8	2.2	9.0 Ga	
8.0		39.7	48.7	7.8	9.7		27.7	6.6	8.0 Gb-1	10.2		41.5	32.1		10.0		33.3	16.2		
8.1	14	1.2	23.7	8.7	9.1		30.2	55.6	b	9.8	41	9.5	10.0		10.2		37.3	8.2		
9.9		1.2	36.3		8.7		36.7	34.0	8.3	8.8		53.5	45.6	9.0	10.5		3	25.3	19.5	
9.1	15	15.2	46.1	8.2	8.6		48.7	18.4	8.8 G	9.2		42	50.0	15.1	10.5			26.3	15.1	
9.1		47.2	37.8	9.5	9.9		56.2	47.2		10.2		43	54.0	4.0	10.5		4	5.8	41.8	
25pr.		+ 1	16.5	+ 8.4			+ 1	15.1	+ 8.3			+ 1	14.3	+ 8.3				+ 1	13.1	+ 8.1

121-180.				181-240.				241-300.				301-360.							
1h.		-25°		1h.-2h.		-25°		2h.		-25°		2h.		-25°					
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s				
4	24.3	34.3	9.5	32	9.4	57.4		8.5	2	7.2	8.8	8.8	a	8.2	34	20.7	1.1	8.5	
9.6	35.8	18.0		10.2	39.4	5.0		8.0	2	30.2	17.2	8.3	Gb-1	9.6		36.2	59.3		
10.4	48.8	15.8		9.2	46.0	41.8		9.4		30.5	7.0			9.6	35	14.2	11.3		
10.4	51.8	24.7		6.0	58.5	39.4	6.8 GSlπ	9.4		50.9	0.7	9.5		9.4		23.2	37.9		
10.4	5	2.8	10.4	9.2	33	12.0	46.6	9.0 a	10.0	3	11.2	52.0		9.0		32.2	2.0	8.2 Gbl	
10.5	29.4	41.0		10.2		20.0	11.0		10.0		30.2	8.9		8.6		57.7	21.8	8.8	
10.4	36.9	33.2		10.2	34	9.0	43.8		8.6	4	10.7	36.2	a	9.6	36	2.2	19.9		
9.6	6	45.9	54.0	=	9.4		19.5	55.7	9.7 -	10.0		53.7	3.5		8.8		36.7	50.5	8.7
9.6	7	32.9	9.6	10.0		25.0	43.0		9.2	5	5.5	6.0	Ga	9.4		38.2	11.6		
10.4	8	6.9	7.2	10.2		27.0	41.9		8.6		39.5	9.4	9.0 a	9.0		58.7	13.4		
10.2		7.9	4.0	9.5	9.6	35	27.5	15.5		9.7	7	23.5	23.9	a	8.4	37	11.2	51.2	8.0 G-
10.0	11	8.9	16.2		9.8		38.7	6.0		8.4		51.5	55.2	8.8 G-	9.0	38	5.8	59.0	8.5 Gbl
10.4		46.9	10.4		9.6		39.7	31.8		7.8		54.5	22.5	8.0 Gbl	9.6		39.5	33.8	
10.2		48.2	0.3		10.2		54.2	8.6		9.2	8	0.5	52.9	9.0 G	8.4		47.5	22.8	8.5 -
9.2	12	5.9	11.5		9.8	36	57.2	19.1	9.5	9.4		8.0	36.0		9.4	39	15.0	11.2	
10.5		28.9	50.3		10.2	37	53.2	53.2	10.0	9.8	9	48.5	53.1		9.2		23.0	52.6	a
10.5	13	17.9	9.1		10.2	38	23.7	57.1		8.2	10	5.5	21.3	8.5 -	8.0		49.0	10.9	8.0 G-
8.5		30.9	36.3	8.5 Gbl	10.0	39	9.6	54.8		9.0		56.3	1.0	8.8	9.6	40	4.5	14.2	
10.4		56.4	50.2		10.2		9.8	19.2		8.2	11	10.5	12.7	8.2 Gal	9.2		11.0	33.1	
10.2	14	25.9	57.9		9.9		29.5	55.1		10.0	12	20.5	5.1		8.8		25.5	44.2	8.5 Ga
8.2		47.9	45.5	8.0 Gbl	6.4		48.4	40.7	5.2 GSlπ	9.4		30.5	22.3	a	8.0		35.5	51.6	7.5 GSa
9.2		49.9	12.6		10.2	40	49.9	2.6		10.0	13	0.5	47.9		9.1	41	5.0	44.1	Ga
10.4	16	11.7	1.4		10.0		52.5	59.5		9.2		54.5	52.7	8.8 Ga	9.4		28.0	29.1	
10.5		15.9	24.1		10.0	41	4.4	26.9		8.2	14	20.5	3.3	8.5 -	9.2		30.5	7.1	
10.5		45.9	37.5		8.5	44	22.4	9.7	8.5 -	10.0	15	45.5	24.6		8.8		55.5	52.8	9.2 Ga
10.2	17	10.7	39.0		8.6	45	21.9	3.0	9.0 Ga	9.4		47.5	18.9	a	8.2	42	25.0	19.2	8.0 Ga
9.2		28.1	44.3		9.4		56.4	14.3		8.4	16	32.5	46.1	8.5 Gal	9.6		37.5	43.9	
6.6		37.6	0.5	6.7 GSlπ	8.2	46	32.4	39.7	8.7 Gal	9.8	17	35.0	3.3		8.1	43	23.5	7.9	8.0 GWb
10.2	18	10.9	29.7		9.0	48	36.9	8.7		9.0		40.5	9.1	9.2	9.6		24.9	39.9	
8.2		35.5	58.4	9.0 GΞ	9.4		44.9	23.7		9.4	18	0.5	52.4	a	8.8		40.5	48.7	9.0
9.2		54.4	10.9		10.0		49.9	38.7		9.8		34.0	17.9		9.6		40.9	6.8	
9.8		57.9	18.8		7.8	49	16.9	30.1	6.9 GSbl	9.2		38.0	39.7	8.5 a	7.4	44	18.9	4.6	6.5 GSlπ
9.8	19	1.4	9.5		8.2		29.7	58.9	8.6 Ga	10.0		47.0	24.1		9.4		42.4	14.1	a
9.8		25.4	5.7		10.0		29.9	20.6		9.2		50.5	8.9		9.0		43.4	4.0	9.0 a
8.0		33.5	22.0	8.5 Gal	8.5		30.4	10.3	9.5 -	9.6		55.5	11.4		9.1	45	44.4	56.4	
9.4		41.0	20.5		8.2	50	29.9	53.5	8.4 GWa	9.4	19	50.5	16.0		9.6	46	16.8	34.8	
9.0	20	32.0	10.3	9.0 G	10.0		50.4	6.0		10.0	20	10.5	2.8		9.6		17.5	14.4	
9.2		45.0	48.0	-	8.2		54.9	4.7	8.8 Ga	9.4	21	41.6	4.9	a	9.0		29.9	32.6	9.0 Ga
9.2	21	22.0	29.2	=	10.2	52	20.9	46.2		10.0	22	16.0	54.0		9.2	48	3.2	42.7	
10.2		39.5	35.6		9.4	53	3.9	30.3	a	9.2	23	7.5	50.2		8.9		23.2	59.1	9.0 G
8.2		39.7	58.9	8.8 bΞ	10.0		15.9	7.9		8.4		10.8	32.5	9.0 Ga	9.8	49	9.2	59.9	
9.6	22	10.0	50.0		10.2	54	13.9	4.9		8.2		13.3	22.2	8.8 a	8.4		25.2	22.9	9.0
9.4		19.5	47.2		9.2		53.4	55.3	9.0 Ga	9.4		41.3	34.8		7.4	50	0.2	48.6	7.0 GSb-
7.2		52.0	26.7	7.0 GSa	8.0		55.7	1.6	7.0 GSbl	6.8	24	36.8	44.7	6.8 GSlπ	9.4		38.2	39.0	
9.6		58.5	46.8	G	8.6	55	12.2	7.0	9.5 -	8.8	25	12.9	13.9	8.8 Ga	9.2		50.2	11.3	
9.6	23	31.5	47.9	10.0	9.2		19.7	41.6	9.5 G-	8.4		29.0	48.8	8.8 Gal	8.9	51	30.2	11.7	
10.0		46.5	45.6		9.0		19.7	45.2	9.5 G	9.6		36.0	48.4		8.9		40.2	8.0	-
9.0	24	14.0	41.9		9.4		33.7	43.0	10.0 G	9.6	26	11.0	25.0		8.0		42.7	28.7	GS-
8.8		16.2	58.1	9.3 -	9.4		40.7	34.6		9.6		14.5	5.4	b	7.8		45.2	28.3	GSbt
9.2		40.0	35.9	-	9.2	56	46.7	6.5		9.1	27	42.0	35.2		9.4	52	10.7	56.8	
9.6	25	13.4	15.1		8.4	57	26.2	23.3	8.8 bl	9.4		44.5	13.9		9.8		22.2	44.4	
8.6		17.9	14.8	9.0	9.8		35.2	32.6		8.6	28	13.0	37.7	8.2 G-	9.4		38.2	31.7	
10.2		18.9	48.4		9.2		39.7	43.8	8.0 GWa	8.5	29	3.0	55.8	8.5 Gal	9.8		53.7	37.6	
9.0	26	28.4	56.8	=	10.0	58	19.7	42.2		9.6	30	7.7	54.7		9.8	53	28.2	19.5	
10.0		27	15.4	33.0	9.6		49.7	28.4		9.0		31.7	38.3	9.0 Ga	8.8		40.2	44.0	9.0 Ga
10.2		51.4	52.4		9.9	59	1.2	5.2		7.8	31	12.7	34.0	7.8 Gbl	9.5		48.7	27.1	
9.2	29	40.4	8.7	9.0 a	10.2		45.7	44.0		9.0	33	1.7	47.6	9.0 a	6.0	54	5.7	46.6	6.0 GStπ
9.8	30	20.4	16.4		8.2	0	42.2	16.3	8.5 Gal	9.6		13.7	18.1		9.8		59.7	14.6	
9.8	31	12.9	12.8	G	10.0		49.7	25.8		8.0		15.7	54.4	8.3 Ga	9.8	55	6.1	40.4	
8.0		17.4	39.2	8.2 Gtlπ	10.0	1	49.9	45.2		8.8		31.2	2.9		8.7		7.7	34.2	8.8 Ga
25pr.	+ 1	11.5	+ 7.9		+ 1	9.6	+ 7.4		+ 1	7.8	+ 6.9		+ 1	6.3	+ 6.3				

361-420.				421-480.				481-540.				541-600.			
2 ^h -3 ^h .		-25°		3 ^h .		-25°		3 ^h -4 ^h .		-25°		4 ^h .		-25°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
8.5	55	19.2	8.0 8.5	8.2	18	30.8	40.8 8.5 a	9.1	47	51.3	41.8	8.2	8	24.0	50.8 7.8 Gbl
9.8		29.2	18.2	9.0	19	14.8	3.2	8.0	49	13.8	15.6 8.0	10.1		49.0	55.5
9.8		38.7	4.0	8.4		59.8	1.3 8.5 a	8.0		49.8	15.0 8.0-	10.1		56.5	30.1
9.7	56	3.2	51.0	8.8	21	53.8	48.5 9.0 G	7.6	51	11.3	32.2 7.5 GSbl	9.8	9	8.5	16.4
9.4		8.2	47.8 9.0	8.9	22	14.3	50.1 9.0 G	9.6		31.3	21.9	9.8		31.5	2.9
8.2		10.2	55.3 8.5 a	9.4		28.3	28.2 9.0	8.8		36.3	22.2	8.8		37.0	19.5 9.0 Ga
8.6		22.2	16.6	9.6	23	9.3	19.1	9.0	52	55.7	13.6 a	10.2		51.5	28.8
9.0		23.2	41.0 8.5 Ga	8.2		38.8	19.6 8.5-	9.2	53	40.8	4.8 9.5	9.2		56.0	51.5 9.2 Ga
8.4		39.2	57.1 8.5 Ga	9.0	24	44.8	52.4 9.0 a	10.2	54	1.4	0.1	10.1	10	2.0	15.2
9.8		48.2	36.4	9.6	25	29.8	57.0	10.2		31.4	21.0	10.2		9.0	9.9
9.0		59.2	36.6 9.5 G	9.0	26	38.8	58.1 8.8	8.7	42.1	41.2	9.0 Ga	9.8		30.0	30.7
8.4	57	25.2	27.0 8.5 Ga	6.6	27	3.3	2.5 7.0 GSsal	9.4		49.4	50.6	10.2		32.0	53.0
9.4		32.2	5.9	9.2		59.3	38.2	9.5		56.4	16.0	10.2		50.0	40.5
8.4		37.2	10.2 8.7	8.9	28	24.8	32.1 9.0 G	10.1	55	23.4	15.7	8.7		58.5	46.2 9.0 Ga
9.0		40.2	22.6	9.2		34.8	17.9	8.8		45.1	31.6 9.0 a	8.8	11	0.0	5.9 9.0
9.8	58	9.4	57.7	8.8	29	26.8	56.1 9.0 a	9.2	56	0.4	39.2	9.6		47.0	5.2
8.7	59	7.8	1.2 8.8 Ga	8.6		55.8	18.9 a	9.8		37.2	28.1	8.8		49.5	7.7 8.5 G
8.9		10.2	10.0	9.2	30	10.8	33.7	10.0		38.2	45.9	9.2	12	6.5	26.3
9.8		45.2	5.0	9.2		26.3	36.2	9.4		51.7	13.7	8.8		10.0	37.7 9.0 Ga
8.8	0	20.2	52.7 8.8 G	9.6		36.8	53.2	9.2	57	38.7	42.8	10.1		17.5	4.1
8.8		29.7	38.0 8.5-	9.6	31	6.8	11.2	10.1	58	0.2	41.7	10.2		18.5	4.8
9.2		54.7	20.6	8.4		9.1	22.3 8.5 a	9.5		14.2	12.8 G	9.6		43.0	35.8
9.0		59.2	27.4	8.9		36.3	4.5 9.5 Ga	8.8		23.2	13.2 8.5 G-	9.0	13	3.0	34.6 9.5 a
9.5	1	2.1	10.4	8.5		32	26.1 10.2 9.2 Ga	9.4		40.2	40.5 G	8.8		11.5	48.7 9.0
8.5		7.7	25.8 8.5 a	9.0	34	21.3	45.9 9.0	10.2		45.2	8.7	10.1		18.5	43.1
9.7	2	9.8	15.0	9.6		57.3	32.7	9.0	59	1.2	23.5 Ga	9.6	14	1.5	40.7
9.8		36.3	14.6	8.8	35	42.6	1.7 9.0 Ga	9.5		39.2	17.7 a	10.2		3.5	20.5
8.8		52.3	54.2 Ga	9.8	36	3.8	30.9	8.2		40.2	51.1 8.2 Ga	10.2		24.5	6.3
7.6	3	22.8	22.2 7.5 GSkb	8.6		4.3	44.7 8.8 G	10.2	0	40.2	49.9	8.7		28.0	11.5 9.0 a
9.4		57.8	7.2	9.8		8.8	21.3	9.2	1	7.7	1.5 9.0 a	8.0		29.5	19.6 7.2 GSlt
8.5	4	18.8	33.7	7.3		36.8	3.1 6.8 GSsal	9.0		29.2	53.3	9.8	15	0.0	0.1
9.2		48.3	54.4 G	9.0	37	14.8	6.3 a	10.2		35.2	24.9	10.1		27.0	24.0
7.9		49.8	55.2 8.5 G	9.2	38	6.6	1.7	8.8	2	11.2	4.8 8.5 a	8.8		30.3	1.7 8.4 G
9.8	5	36.8	18.0	9.1		23.6	45.1	10.2		28.2	52.0	9.4		37.0	17.9
8.2		39.8	18.8 8.0 G	9.6	39	7.1	35.7 a	9.5		30.7	32.4	10.2		50.0	47.4
9.4	6	52.8	10.5	8.5		13.6	33.6 8.8 Ga	9.2		58.7	43.4 8.5	9.2	16	7.5	59.4 G
9.8	7	15.8	9.0	9.4		26.6	12.1	10.1	3	20.2	28.6	9.6		46.5	19.4
9.0		18.8	38.8	8.9		42.6	59.0 9.5 Ga	9.5		32.2	7.0	10.0		0.0	28.8
9.4		44.8	48.4	9.4	40	16.6	14.1	9.8		35.2	52.7	10.1		5.0	32.7
9.8		48.8	26.8	9.1		55.6	55.3 8.8 Ga	8.8		45.2	20.8 8.0 GSa	9.6		34.3	32.6
9.4		57.3	56.1	9.0	41	15.1	56.6 9.5 Ga	9.2	4	34.7	43.6	10.0		39.8	27.8
8.0	8	7.3	20.4 8.2 Ga	8.9		23.1	2.1	9.2		35.7	5.2 a	9.8		47.4	54.2
9.5	9	44.0	6.0	8.0		23.6	44.8 7.2 GSsal	8.4		43.7	22.2 7.5 GSsal	7.4		51.8	11.1 6.0 GSbl
8.6	10	22.0	37.5 8.5	8.2		25.6	14.7 7.5 GSbl	9.0		58.2	44.7 9.0 G	9.4		55.8	35.5
9.0	11	0.7	3.8 9.0 G	8.9		46.6	8.3 8.2 G	9.6		58.7	28.7	7.9	18	7.8	40.7 8.0 GW-
8.9		18.2	41.6	9.4	43	24.1	33.2	9.4		59.2	19.0 9.5 a	10.0		8.3	14.2
9.2		20.2	25.6	9.6		26.6	12.8	10.2		5.7	25.3	10.0		8.8	3.9
9.0		30.2	5.4 8.5 G	8.8		35.6	30.5 9.5	10.1		19.2	28.9	9.4		15.8	48.2
8.8		56.3	16.2	8.9		46.1	3.9 a	8.0		28.2	44.8 8.0 Gbl	10.0	19	19.9	57.8
8.8		58.8	18.3	9.6		51.6	18.7 a	7.6		30.2	25.2 7.5 GSsal	10.0		34.5	1.2
9.6	12	22.3	10.0	9.4		56.6	40.4	9.6	6	16.5	27.3 a	9.4	20	22.4	11.1 a
8.8		42.8	24.7	9.0	44	7.1	43.0	9.2		32.5	2.9 a	10.0		23.9	46.7
8.2	13	19.8	53.2 8.5 Ga	8.0		37.6	53.2 Ga	10.2		37.5	40.7	9.8	21	9.4	53.4
9.6		51.8	39.6	9.2		43.1	5.1 8.7 a	10.2		42.0	10.5	10.0		28.4	14.0
8.8		54.8	15.6 8.2 Ga	9.4		51.6	59.1	9.1		47.2	57.2	9.8		40.4	14.8
9.2	14	26.8	4.1	9.4	45	10.8	20.1 9.2	10.1		55.0	57.9	9.0		53.4	17.5 9.0
9.0	15	14.8	1.1	9.2		46	10.8 3.2	10.1	7	30.2	58.2	22	13.9	8.8	
9.6		44.8	24.4	8.3		41.9	57.9 8.8 a	8.8		31.0	7.1 a	9.4		22.4	30.7
9.6	16	0.8	23.6	8.5		43.3	19.9 8.8	9.2		58.5	36.7 9.0	10.0		35.4	23.1
9.2	17	4.8	28.8 9.5 G	8.8		47	44.3 50.2 10.0	10.1	8	0.0	35.8	10.0		38.4	41.6
25pr.	+1	5.3	+5.8	+1	3.9	+4.9		+1	3.0	+4.1		+1	2.6	+3.7	

601-660.				661-720.				721-780.				781-840.			
4 ^h .		-25°		4 ^h .		-25°		4 ^h .		-25°		4 ^h -5 ^h .		-25°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
8.4	22	38.9	17.1	8.4	31	51.3	25.7	10.2	47	20.4	53.1	10.0	59	35.2	52.0
10.0		43.9	12.4	10.0		52.8	42.1	9.8		27.4	12.0	10.2		43.7	36.6
9.8		50.4	43.6	8.5	32	0.3	48.7	8.0		34.9	59.0	9.7		46.5	59.9
9.5		52.4	54.9	10.0		15.3	34.1	10.2		34.9	39.3	9.7		59.7	27.1
10.0	23	0.4	8.9	10.0		41.8	19.5	8.8		40.9	33.6	8.4	0	3.2	21.8
10.0		11.4	6.1	9.4	33	4.4	19.4	9.9		49.8	1.2	8.9		9.2	53.7
9.8		20.4	8.2	9.4		31.4	33.5	10.2	48	5.9	41.0	10.2		9.2	36.8
9.8		21.9	6.3	9.7		40.4	27.1	9.6		21.9	1.9	10.1		9.7	59.6
8.0		42.4	28.2	8.0		47.2	57.3	8.6		23.9	21.4	8.5		9.7	40.8
8.8		59.9	52.8	10.0		56.9	46.8	9.6		29.9	33.4	9.8		17.2	52.1
9.4	24	10.9	40.0	10.0	34	28.4	56.2	9.6		59.9	29.1	9.6		33.2	33.1
10.0		26.4	9.4	10.0		29.9	47.4	10.1	49	0.9	54.7	10.2		34.2	15.7
9.6		41.9	26.0	9.4		44.4	10.2	8.5		41.9	51.3	10.0		35.7	58.3
9.2		53.4	21.9	10.0	35	0.9	37.6	9.7	50	1.4	50.9	9.6		52.7	8.4
10.0	25	6.4	50.8	9.4		4.9	53.6	9.6		7.9	30.2	9.6		54.7	40.3
9.6		13.4	48.1	9.8		5.4	53.8	7.0		23.4	55.7	10.2		56.6	21.1
9.4		22.9	54.5	9.2		23.9	38.6	10.1		23.4	54.7	10.1	1	5.1	40.1
9.4		23.4	20.9	10.0		29.9	9.2	9.6		37.9	51.1	9.1		5.6	28.5
9.4		31.7	59.3	10.0		46.4	50.9	10.2		59.4	56.9	10.2		10.6	30.9
9.4		35.4	55.9	9.2	36	9.4	19.1	9.4	51	8.4	29.6	10.2		11.7	33.7
9.6		36.9	43.1	10.0		42.4	33.0	9.6		14.4	16.2	9.8		15.1	41.2
8.5		47.4	15.0	9.2	37	24.9	5.4	10.2		16.9	23.1	8.6		21.9	20.6
9.8	26	1.4	50.4	10.0		31.4	22.5	9.0		17.9	50.3	10.0		34.6	41.8
9.5		25.9	20.3	10.0		38.9	39.5	9.3		51.4	16.3	9.0		39.6	18.3
9.2		26.4	6.8	9.8		42.9	18.6	8.6	52	17.4	9.7	10.2	2	4.1	49.7
9.2		35.4	0.6	9.8		52.9	20.8	8.6		40.4	15.2	10.2		18.9	10.5
10.0		41.4	15.6	9.5		52.9	0.9	9.4		44.4	10.3	9.0		19.6	49.0
10.0		43.3	7.9	9.6		53.2	5.4	10.1		54.9	1.0	8.3		32.2	12.9
9.1		43.5	2.0	9.7	38	15.4	59.9	8.8	53	19.4	13.8	9.4		47.2	47.0
10.0	27	1.3	45.1	10.0		26.6	57.9	10.1		22.4	5.3	10.1		47.7	18.3
10.0		2.8	24.9	9.4		28.7	8.1	9.4		42.9	53.4	9.8		57.7	48.5
10.0		14.8	7.5	8.0		38.7	1.0	10.0	54	10.9	39.2	9.0	3	1.1	12.6
9.4		20.8	35.7	8.8		56.2	33.7	8.1		28.4	33.4	10.1		1.4	59.4
9.4		24.8	12.4	8.4	39	29.7	55.8	9.6		28.4	40.0	9.8		19.7	49.2
9.0		25.3	45.9	10.0		31.2	54.0	9.4		48.9	42.2	9.0		24.7	23.1
7.8		26.8	28.1	9.6		39.4	43.8	7.6		49.4	14.6	10.0		27.2	3.6
9.4		40.3	45.5	9.2		53.4	33.6	10.2	55	0.2	5.9	10.1		29.7	49.4
9.6		59.3	29.1	9.6	40	15.0	33.3	9.4		39.7	39.0	8.6		31.7	48.8
7.0	28	0.3	49.5	9.9		15.5	24.2	10.2		49.2	15.5	8.8		44.7	39.8
9.4		12.3	12.9	10.2		32.0	50.2	10.2	56	14.2	33.7	9.6		44.7	27.9
9.4		15.3	41.5	9.0		53.7	0.2	10.2		22.7	30.4	10.1		53.7	5.2
10.0		29.8	57.1	7.5		54.5	23.3	10.1		24.7	3.4	8.8		58.7	48.3
10.0		45.3	3.1	9.9	41	17.5	36.2	9.3		29.7	21.4	10.1	4	14.2	8.9
10.0	29	0.3	50.1	10.1		35.0	50.9	10.2		33.7	36.4	8.5		16.7	22.1
9.0		1.3	42.5	9.6	42	5.2	0.6	10.2		37.2	25.9	9.0		20.7	32.6
10.0		5.3	25.3	8.6		10.0	22.3	9.9		46.7	24.6	9.4		29.7	48.6
10.0		6.8	53.9	10.2		14.5	51.0	10.2		50.7	26.1	9.8		36.7	20.6
10.0		11.8	6.5	9.7		16.5	47.5	10.1		56.9	0.0	10.0		37.7	2.0
10.0		20.3	24.3	10.2		49.0	50.0	9.6		57.2	39.2	8.8	5	9.7	38.0
9.5		30.3	29.7	9.4		58.5	26.0	9.6		59.7	6.2	9.1		10.7	26.2
9.6		32.3	3.2	9.6	43	0.5	7.4	8.9	57	34.2	16.8	10.0		14.7	17.8
9.2		43.3	18.2	9.0		27.0	9.8	10.2		37.7	56.7	9.6		19.2	4.8
8.0		43.3	17.8	10.1	45	54.0	32.5	8.6	58	2.2	9.8	9.0		31.2	22.1
9.7	30	0.3	20.9	7.1		59.5	31.3	9.6		7.7	33.4	9.5		38.2	3.5
10.0		7.3	16.0	9.0	46	6.5	28.1	9.3		10.2	38.3	9.6		40.2	33.0
9.5		44.8	4.1	10.0		33.0	11.4	9.1		18.7	11.3	9.6		45.0	1.8
10.0		46.3	13.6	9.6		36.5	16.0	10.2		19.2	50.7	9.6		45.7	53.6
9.2	31	34.3	29.0	10.1		38.0	44.4	9.7		26.7	32.4	9.1	6	3.7	35.0
10.0		38.3	56.5	10.0	47	3.0	24.2	9.6		58.7	9.9	9.8		9.7	19.6
9.5		48.8	34.0	10.1		14.9	35.2	9.6	59	23.2	50.5	10.0		14.7	34.4
25Pr.	+ 1	2.2	+ 3.3		+ 1	1.9	+ 2.9		+ 1	1.5	+ 2.4		+ 1	1.3	+ 2.1

841-900.				901-960.				961-1020.				1021-1080.			
mag.	5h.	-25°		mag.	5h.	-25°		mag.	5h.	-25°		mag.	5h.	-25°	
9.5	6	34.7	25.0	10.0	16	1.7	13.2	10.0	23	26.6	21.2	9.4	34	10.5	47.8
9.3		41.8	1.1 9.0 G	10.1		5.7	23.9	9.3		34.6	38.1	8.5		12.0	34.7
10.1		43.7	51.6	10.1		10.2	57.4	10.0		48.1	58.5	8.4		19.0	36.1
9.8	7	0.2	30.7	9.5		15.2	47.9	10.0		50.6	33.6	8.2		19.0	18.8 8.0 Ga
10.0		3.7	44.1	10.0		28.2	2.9	10.1		58.6	9.7	8.1		28.5	13.1 8.2 Ga
10.0		6.2	45.2	10.1		35.2	2.3	9.6	24	3.2	12.5	10.0		36.0	26.1
8.3		18.2	4.4 8.3 a	9.3		38.7	24.4 a	10.1		6.1	32.3	8.6		40.0	41.3 9.5
9.0		23.2	31.5 9.0 a	9.6		40.2	29.4	10.0		9.1	47.1	9.4	35	12.0	41.1
10.1		50.2	53.2	9.5		42.2	18.0	8.6		11.1	23.4 9.0 Ga	9.4		13.7	2.5
9.4		56.7	59.1	10.1		46.7	42.3	9.5		17.6	11.9	9.3		15.0	33.1
10.0	8	10.2	47.3	9.1		57.2	50.6	9.5		20.6	10.0	9.6		20.0	18.9
10.1		28.7	31.4	10.1	17	1.7	46.8	9.6		28.9	45.5	9.3		22.5	28.7 9.0
8.8		30.2	29.4 9.0	9.3		3.2	5.0	10.0		30.6	47.2	9.5		33.2	2.2 a
10.0		41.7	43.8	9.1		8.0	53.6	10.1		35.6	4.2	8.2		41.0	44.2 8.5 G
9.1		49.2	38.2	9.6		13.5	45.5	10.1		41.6	44.5	10.0		46.0	21.7
9.5		51.2	39.7	9.8		25.5	15.7	9.5		44.9	45.1	8.8		48.0	50.5 9.0
10.1	9	0.2	32.1	8.4		27.5	42.2 8.5 Ga	10.0		45.6	4.1	7.8		58.0	34.2 8.5 W
10.1		5.7	12.1	8.8	18	7.5	30.4 a	9.8		51.6	16.5	9.8	36	13.5	19.7
10.1		6.2	14.7	9.3		10.5	51.9	9.8		57.1	18.5	9.5		15.0	26.7
10.0		11.2	27.6	9.5		13.5	3.6	9.4	25	3.6	12.9	9.4		18.0	31.6
9.6		16.2	42.2	10.0		14.5	26.9	10.1		5.4	10.2	9.4		23.0	13.2 a
9.3		20.2	13.6	9.5		22.0	35.7	10.0		9.1	34.1	10.0		25.5	39.6
9.4		25.2	54.1 9.5	10.0		37.5	49.9	9.4		11.6	16.8	9.3		44.0	21.9
9.2		31.7	16.9	9.6		55.5	18.9 9.5	9.8		13.2	57.8	9.0		55.5	36.4
10.1		41.2	4.7	8.8	19	3.5	54.0 9.0 G	9.4		16.7	9.9	9.4		59.7	2.3 9.5 a
10.1		47.2	29.0	9.6		5.5	59.0	9.3		20.2	13.6 9.5	8.9	37	15.7	0.5 9.2 a
10.0	10	3.2	43.0	10.0		13.5	24.6	8.9		44.7	3.9 9.5	10.0		28.5	22.6
9.6		35.7	7.6 9.0	10.1		36.0	23.1	9.6	26	1.2	52.9	9.6		30.0	7.5
9.8		47.2	38.8	10.1		45.5	11.0	9.9		6.2	7.1	9.6		33.5	1.9
10.1		48.2	3.6	9.6		49.5	44.1	8.8		32.2	48.9 9.0 a	9.8		40.5	24.5
9.6		53.7	15.8	9.5		55.5	24.5	9.6		35.2	46.2	10.0	38	5.5	45.6
9.6	11	0.2	50.3	10.0	20	22.5	58.2	10.0		48.7	3.6	9.2		9.2	2.2 9.5 G
9.6		0.2	33.1	10.1		26.0	12.1	10.0		54.1	11.4	9.9		19.0	5.2
9.0		2.2	7.3 9.0 G	10.0		30.5	13.9	10.0	27	12.2	48.0	8.6		25.0	40.6 9.0 G-
10.1		7.7	2.6	10.1		31.5	23.7	9.3		15.0	23.3 9.0 a	10.0		32.0	25.2
10.1		10.2	45.5	10.0		43.0	51.3	9.6		45.0	31.3	9.3		45.0	47.0
10.1		13.7	7.1	9.8		45.0	22.3	8.4		56.0	27.3 7.8 GWb	9.2		45.0	1.5 9.2 a
10.1		21.2	35.7	9.2	21	10.5	13.7 9.0 G	8.8	28	45.0	23.8 9.0 a	10.0	39	11.0	3.0
8.0		29.2	28.2 8.0 GSb-	9.5		15.5	27.2	9.8	29	7.0	40.3	9.4		13.0	33.8
9.8		45.2	16.0	10.1		28.5	50.1	9.0		26.5	37.9 9.0 Ga	10.0		22.5	19.1
9.8		45.2	44.1	10.1		39.0	57.0	10.0		50.0	9.5	10.0		53.5	32.0
10.1	12	4.7	3.0	9.5		44.0	4.0	9.4	30	17.0	30.5	10.0	40	15.0	37.0
9.2		23.2	32.5	9.6		45.6	11.2	9.9		28.0	5.2	10.0		22.5	27.4
9.6	13	6.2	47.5	8.6		54.3	0.8 8.2 Ga	9.8		38.0	24.4	8.9	41	5.5	55.7 9.0 -
8.3		9.7	23.0 7.8 GW-	9.8		59.6	25.0	8.8		44.0	49.1 8.0 G	9.5		14.5	45.4
8.2		10.2	24.9 8.3 W	9.3	22	21.6	26.9 9.5	9.4	31	30.0	13.4	9.5		19.0	37.3
9.4		12.2	44.6	9.0		22.6	14.2 8.7	8.6		32.0	54.6 8.5 Ga	10.0		20.5	37.5
9.4		14.7	46.1	10.0		25.6	13.1	9.4		44.5	43.7	8.7		55.5	45.2 -
9.4		20.7	19.0	9.1		30.6	24.2 10.0	9.4		48.0	45.3	8.8		55.5	16.5 9.5
10.1	14	15.2	49.3	9.6		30.6	49.6	10.0		55.5	10.3	9.9	42	2.0	13.1
8.4		24.7	15.2 7.8 G	10.1		30.8	58.2	9.3	32	1.0	1.9	9.8		16.5	8.6
9.0		36.2	23.0 9.0 GW-	10.1		35.6	50.7	9.0		18.3	56.8 9.5	10.0	43	1.8	48.1
9.8		45.7	28.3	7.3		40.6	44.5 7.2 GSb-	9.9		30.0	17.9	10.0		11.3	5.1
8.6		49.2	45.1 a	9.6		45.1	13.1	9.5		40.0	19.9	9.6		34.8	18.2
9.6	15	5.2	6.4	9.4		48.6	4.7	9.4		46.5	48.1	8.8		43.8	9.8 8.5
10.1		43.7	28.7	10.1		55.6	23.7	8.8		57.3	0.8 9.2 a	9.9		44.8	22.0
10.1		45.2	27.2	10.0		56.1	8.9	9.8	33	23.5	52.1	10.0	44	4.8	24.9
9.3		45.7	39.9 8.5 a	9.2	23	4.6	52.3	9.6		51.0	13.2	10.0		5.8	23.8
9.6		52.2	2.7	10.0		17.6	42.2	10.0		53.5	7.9	8.8		23.8	35.8
10.1		58.2	2.5	10.0		26.6	15.3	8.6		56.5	8.4 8.7 Ga	9.3		23.8	50.6 -
25pr.	+ 1	12	+ 18	+ 1	11	+ 15		+ 1	10	+ 12		+ 1	09	+ 08	

1081-1140.				1141-1200.				1201-1260.				1261-1320.			
5 ^h .		-25°		5 ^h .		-25°		5 ^h -6 ^h .		-25°		6 ^h .		-25°	
mag.	m s	m s	'	mag.	m s	m s	'	mag.	m s	m s	'	mag.	m s	m s	'
9 ^o 44	50.8	38.4		9 ^o 51	49.7	4.6		8 ^o 57	4.8	37.9	8.5 -	10 ^o 3	3.7	32.9	
8 ^o 51	51.8	2.4	8.5 Ga	9 ^o 54	54.7	3.9		10 ^o 2	10.8	53.7		10 ^o 3	6.7	50.5	
9 ^o 53	53.8	4.8		10 ^o 3	55.7	4.9		8 ^o 23	23.3	14.1	Ga	10 ^o 0	9.2	43.9	
9 ^o 54	54.8	17.0		10 ^o 3	56.7	57.9		9 ^o 4	31.8	2.9	9.2 a	10 ^o 2	10.2	18.9	
10 ^o 45	4.8	58.7		9 ^o 8	52	0.2	31.9	10 ^o 2	46.8	22.7		10 ^o 2	11.2	22.1	
9 ^o 6	6.8	40.0		10 ^o 3	2.2	46.0		10 ^o 2	58.3	39.5		9 ^o 3	15.2	14.1	9.2 a
8 ^o 8	9.8	49.2	8.5 Gb	10 ^o 3	16.2	42.8		9 ^o 6	58	3.8	18.9	10 ^o 3	16.2	42.4	
9 ^o 4	18.3	4.8		10 ^o 3	25.7	55.8		10 ^o 3	25.3	14.9		9 ^o 2	21.7	3.6	
8 ^o 8	43.8	45.8	8.8 b	10 ^o 3	37.2	5.9		10 ^o 1	28.8	14.9		10 ^o 3	21.7	42.1	
10 ^o 0	44.3	1.7		9 ^o 8	41.2	35.5		9 ^o 6	31.3	8.9	10.0 G	10 ^o 3	23.7	58.6	
9 ^o 8	52.3	20.1		10 ^o 3	41.2	7.4		9 ^o 6	33.8	44.2		9 ^o 6	24.2	51.3	
8 ^o 5	56.3	54.6	8.8 Ga	9 ^o 7	44.2	14.2		9 ^o 8	36.8	32.3		10 ^o 1	33.2	3.3	
9 ^o 0	5.3	43.7	9.0 a	10 ^o 0	45.7	17.4		8 ^o 5	39.3	35.3	-	10 ^o 3	40.7	29.9	
10 ^o 0	12.0	7.0		10 ^o 0	49.2	17.4		8 ^o 6	42.8	8.3	8.6 Ga	10 ^o 2	49.2	38.3	
9 ^o 3	23.0	0.7		9 ^o 8	55.2	42.5		8 ^o 6	44.3	14.3	9.2 a	9 ^o 6	4	1.6	29.5
10 ^o 0	28.2	8.6		8 ^o 6	53	11.7	9.0	10 ^o 3	53.3	1.7		9 ^o 7	11.1	53.4	
9 ^o 6	44.8	1.7		10 ^o 0	19.7	45.8		8 ^o 6	59	1.8	5.4	8.6 a	9 ^o 6	17.1	3.1
7 ^o 4	48.8	15.1	7.0 Gsb	9 ^o 0	24.2	48.3		10 ^o 1	5.3	15.7		9 ^o 6	18.1	46.4	
9 ^o 9	3.0	23.3		8 ^o 9	26.3	9.3	8.8 G	9 ^o 4	12.3	50.1		9 ^o 7	23.6	36.1	
8 ^o 0	3.3	58.6	8.0 GSa	10 ^o 1	28.1	58.6		10 ^o 3	21.3	5.4		8 ^o 1	27.6	15.3	8.5 Ga
10 ^o 0	10.3	23.3		9 ^o 6	31.3	28.2		9 ^o 3	21.3	5.7	9.5	10 ^o 0	30.6	3.8	
10 ^o 0	29.2	12.8		9 ^o 7	39.3	39.6		9 ^o 4	32.8	52.4		9 ^o 8	37.6	26.9	
9 ^o 9	30.0	34.4		10 ^o 3	41.3	13.1		10 ^o 0	33.4	57.1		10 ^o 0	46.6	7.3	
9 ^o 4	42.4	3.9		9 ^o 2	46.8	23.2	8.8 G=	9 ^o 6	36.8	12.1		8 ^o 2	52.1	36.2	8.0 Ga
9 ^o 6	53.6	51.8		9 ^o 6	54	2.8	4.1	8 ^o 6	52.3	16.2	8.8 Ga	9 ^o 6	53.1	21.7	
9 ^o 7	54.6	10.9		10 ^o 3	7.3	9.7		9 ^o 4	5.3	5.7		8 ^o 7	59.6	16.2	9.2 a
9 ^o 4	6.6	50.2		10 ^o 3	12.3	53.4		7 ^o 6	9.3	1.2	8.5 Ga	10 ^o 2	5	1.1	32.0
10 ^o 3	12.6	55.8		9 ^o 7	14.8	8.7		10 ^o 1	11.8	9.9		8 ^o 5	16.6	27.6	8.0 Ga
10 ^o 3	13.6	48.6		9 ^o 6	16.8	46.5		9 ^o 7	13.3	48.1		8 ^o 6	18.1	36.5	8.5 Ga
9 ^o 8	22.6	15.2		9 ^o 4	28.3	37.1		10 ^o 0	13.8	5.1		9 ^o 7	19.1	48.8	
9 ^o 7	40.1	29.1		10 ^o 2	29.8	21.9		9 ^o 7	15.3	52.5		10 ^o 0	21.6	53.1	
9 ^o 4	41.1	58.7		9 ^o 7	40.8	22.2		9 ^o 6	24.3	2.7		9 ^o 6	25.1	52.0	
10 ^o 3	4.1	28.9		10 ^o 2	46.8	52.4		9 ^o 7	43.3	43.1		9 ^o 7	30.6	3.5	
8 ^o 6	6.6	4.2	8.5 a	9 ^o 4	50.1	56.5		10 ^o 3	54.7	0.3		9 ^o 6	32.1	3.1	
8 ^o 9	8.6	56.3	9.0 G	9 ^o 3	51.3	9.8		10 ^o 0	57.2	21.4		9 ^o 8	33.6	9.2	
8 ^o 6	14.6	33.0	8.5 G=	10 ^o 0	51.4	58.6		9 ^o 2	1.7	38.3		10 ^o 2	45.1	29.1	
9 ^o 4	17.1	54.7	9.0 G	10 ^o 3	55	4.3	12.6	10 ^o 3	4.2	40.5		10 ^o 0	45.9	2.6	
9 ^o 4	19.1	54.7	9.5 G	9 ^o 7	7.3	8.0		9 ^o 2	7.7	28.3		9 ^o 8	53.6	30.2	
9 ^o 7	28.1	34.1		9 ^o 0	9.3	27.0	9.0 Ga	9 ^o 2	12.2	52.7	9.0	9 ^o 6	58.4	2.4	
9 ^o 3	29.1	16.7	8.8	10 ^o 0	9.4	56.9		9 ^o 6	20.2	37.3		10 ^o 1	6	7.6	2.1
9 ^o 2	39.1	35.9	9.0	8 ^o 8	20.3	20.3	9.2 a	10 ^o 2	20.7	12.7		10 ^o 0	28.1	50.7	
8 ^o 8	45.1	27.9	9.0 =	9 ^o 6	22.8	43.7		8 ^o 5	32.7	53.2	8.5 G-	10 ^o 1	33.6	14.1	
10 ^o 1	46.6	28.2		10 ^o 3	23.3	42.6		9 ^o 2	32.7	47.7	9.0 G-	9 ^o 3	45.6	47.7	
10 ^o 2	52.2	30.5		10 ^o 2	38.8	50.1		9 ^o 6	33.7	55.0		9 ^o 4	47.6	10.4	
10 ^o 0	59.2	44.0		8 ^o 7	43.8	32.6	9.0 a	10 ^o 3	42.2	32.9		9 ^o 6	49.1	46.6	
9 ^o 7	19.2	30.0		10 ^o 0	43.8	28.0		9 ^o 2	43.7	19.9		10 ^o 3	51.1	23.3	
9 ^o 0	-20.2	9.7	9.0 a	9 ^o 6	47.3	44.6		9 ^o 6	44.7	59.5		9 ^o 8	52.6	28.7	
10 ^o 2	27.2	12.8		10 ^o 3	49.3	57.5		10 ^o 1	59.2	56.5		10 ^o 3	56.6	8.0	
10 ^o 3	29.7	8.3		10 ^o 3	49.8	48.2		10 ^o 0	2.7	16.5		9 ^o 0	59.6	41.4	Ga
9 ^o 4	45.5	59.9		9 ^o 8	55.8	14.4		10 ^o 2	3.1	57.0		8 ^o 9	7	2.6	3.9
9 ^o 8	50.6	57.0		6 ^o 3	56	8.8	25.3	6.5 Gsb	19.2	27.9		8 ^o 3	2.6	13.6	8.5 a
10 ^o 2	59.7	7.8		10 ^o 0	14.8	43.4		9 ^o 0	21.2	51.9	9.0 G	10 ^o 1	7.1	26.9	
10 ^o 0	1.7	57.3		9 ^o 0	17.8	18.3	9.2 a	9 ^o 0	22.2	34.6	9.5 a	8 ^o 1	12.6	13.1	8.0 Ga
10 ^o 1	5.2	20.9		9 ^o 6	27.3	24.2		10 ^o 3	30.2	22.0		10 ^o 0	23.1	25.4	
10 ^o 3	13.7	30.5		9 ^o 2	32.1	58.1	9.0 -	10 ^o 3	31.7	26.7		9 ^o 2	30.6	18.3	
10 ^o 3	23.7	44.3		10 ^o 3	32.3	35.2		10 ^o 2	49.2	24.1		8 ^o 5	32.0	14.2	9.0 a
10 ^o 3	30.7	15.7		9 ^o 6	39.3	7.0		9 ^o 6	49.2	24.7		10 ^o 0	36.5	58.6	
10 ^o 3	46.7	57.9		9 ^o 0	43.8	50.4	9.0 G	9 ^o 4	51.7	45.9		10 ^o 3	37.5	20.7	
9 ^o 6	46.7	7.8		10 ^o 1	58.8	31.8		10 ^o 3	54.2	24.7		9 ^o 8	49.0	29.8	
9 ^o 4	48.2	7.2		10 ^o 3	57	4.6	1.4	7.8	3	3.7	24.0	8.0 Ga	10 ^o 1	50.2	59.0
25pr.	+ 1 0.9	+ 0.4			+ 1 0.9	+ 0.2			+ 1 0.9	0.0			+ 1 0.9	- 0.2	

1321—1380.			1381—1440.			1441—1500.			1501—1560.		
mag.	6h.	-25°	mag.	6h.	-25°	mag.	6h.	-25°	mag.	6h.	-25°
9.6	7 50.5	34.5	9.7	14 31.7	7.0	9.2	22 3.8	16.3	10.0	28 0.4	22.3
8.9	57.3	57.7	9.0	36.2	53.4	9.8	5.8	31.4	9.0	3.9	4.6
8.8	8 4.0	46.5	9.8	42.7	7.4	6.9	9.3	46.5	10.0	5.4	24.2
9.0	13.5	53.8	8.7	43.2	21.1	9.2	17.8	53.8	9.5	14.9	36.8
9.8	14.5	43.4	9.8	56.7	27.8	8.6	20.3	39.6	9.4	16.4	2.4
9.7	15.5	21.6	9.3	15 7.7	49.1	9.2	22.8	17.4	9.7	16.9	20.4
9.0	19.0	13.9	9.3	15.7	24.0	9.9	30.8	19.2	9.8	21.4	33.4
10.3	25.0	43.1	9.8	22.2	15.2	9.1	32.8	27.3	9.6	21.4	11.5
10.0	30.0	50.9	8.2	27.2	1.2	9.9	35.3	7.2	9.8	26.4	23.5
10.1	31.0	51.3	9.8	40.7	56.0	8.8	38.8	45.7	9.4	27.9	40.0
9.0	33.2	2.2	8.6	58.2	34.3	9.3	47.3	24.7	9.3	30.4	25.9
9.8	37.5	4.3	9.8	16 7.7	13.6	9.2	49.3	38.6	9.9	34.9	52.9
10.3	39.0	13.9	9.4	25.7	5.0	9.8	58.3	32.7	9.2	51.4	24.1
9.7	41.0	28.6	9.3	27.2	12.9	10.0	23 20.8	3.8	9.6	59.4	27.9
8.6	42.3	48.6	8.3	35.2	17.5	10.0	45.8	21.8	10.0	29 1.9	28.6
9.4	50.3	26.7	9.9	35.2	24.1	9.9	49.3	19.6	8.4	1.9	55.9
10.1	9 13.9	3.6	10.0	43.7	25.0	9.9	58.8	25.7	8.9	17.4	44.4
10.3	18.5	27.4	9.9	17 7.7	19.6	9.6	24 3.3	23.4	9.4	18.4	26.0
10.2	18.5	26.3	9.4	24.8	50.0	8.4	5.3	48.2	9.4	28.9	13.9
8.6	24.0	15.9	9.9	45.8	45.9	9.2	11.3	17.5	9.8	51.9	39.3
9.2	28.0	38.8	9.7	48.8	33.2	9.5	17.8	48.7	9.5	58.9	55.1
10.2	31.5	20.3	10.0	51.3	3.5	9.4	31.8	41.0	9.4	30 2.9	8.9
9.6	36.5	24.2	10.0	18 2.8	52.4	9.2	41.3	31.8	9.9	3.4	32.5
9.0	49.3	50.3	9.4	7.8	39.3	9.4	44.3	55.8	9.6	5.9	48.6
9.6	52.6	38.9	9.0	12.8	46.6	10.0	52.8	43.6	7.6	8.9	44.4
9.8	54.6	23.2	9.0	15.8	29.0	9.4	52.8	9.8	9.7	12.9	36.9
10.0	10 18.5	54.7	9.1	19.3	24.8	9.1	57.8	6.9	9.8	15.4	27.0
9.2	25.6	9.3	9.8	28.3	54.5	8.8	25 2.8	48.0	9.4	15.9	44.9
10.0	30.1	39.4	9.6	29.8	24.4	8.6	3.3	48.3	9.2	16.2	56.9
9.4	37.1	38.9	9.0	30.3	38.1	9.0	7.3	52.5	9.6	21.9	23.9
9.6	40.1	19.8	10.0	33.3	12.1	9.4	13.3	28.5	9.7	21.9	10.5
9.0	54.1	14.9	9.2	39.8	36.2	9.2	26.7	59.6	8.8	24.4	45.6
9.0	0.3	1.8	9.7	41.8	19.3	9.8	26.9	18.3	9.6	29.4	23.7
9.0	6.6	18.5	10.0	47.8	35.6	9.9	32.9	31.3	8.4	34.0	56.5
9.6	25.6	26.1	10.0	48.6	26.1	9.0	33.9	36.0	10.0	42.4	53.8
9.9	27.1	33.8	9.6	50.8	29.5	9.2	36.4	53.7	9.9	31 14.4	52.0
9.9	29.6	33.6	7.8	51.8	30.7	9.1	46.9	39.1	9.9	22.4	43.0
9.4	32.6	48.4	8.1	54.2	5.3	8.8	47.9	36.5	9.9	22.4	57.9
9.8	33.1	41.3	9.4	59.8	33.0	8.6	50.4	20.6	9.8	29.4	36.9
10.0	36.6	33.9	9.4	19 10.8	1.5	9.8	51.9	5.5	9.0	33.4	6.9
9.6	40.1	25.4	9.0	26.3	25.4	9.9	57.9	29.6	8.6	42.9	37.6
8.6	49.6	28.1	9.4	47.3	38.8	9.8	1.9	9.2	10.0	42.9	52.7
9.8	12 15.3	57.2	9.6	50.8	1.9	9.8	12.4	41.1	9.7	48.1	38.9
9.6	23.7	1.7	9.6	50.8	24.8	9.4	12.4	28.6	9.0	0.9	54.9
8.4	26.2	58.8	9.8	57.8	9.4	9.2	17.9	44.9	9.3	9.1	15.1
9.6	31.2	21.1	8.9	20 4.8	37.5	9.9	22.9	21.1	9.5	11.8	53.5
10.0	45.7	44.1	9.0	8.3	34.0	9.6	29.9	57.3	8.6	23.4	3.1
9.9	13 1.7	10.7	9.7	12.8	11.1	10.0	46.4	3.9	9.6	24.9	45.6
9.1	14.2	4.7	8.7	18.3	55.3	10.0	57.9	53.3	9.9	27.4	26.6
8.8	46.2	42.5	9.7	21.8	10.6	9.4	27 7.9	20.1	9.9	36.2	26.5
10.0	56.2	22.1	9.3	36.3	7.3	9.3	14.4	52.6	9.2	49.0	40.9
9.8	0.2	19.4	9.0	39.8	16.8	9.2	16.4	20.3	9.9	53.7	46.1
9.6	1.7	6.6	9.9	40.3	30.7	9.6	17.9	42.1	9.9	2.2	48.2
10.0	8.7	28.9	8.7	21 6.8	36.5	9.8	20.4	50.5	9.9	19.7	51.4
9.6	11.7	56.0	9.4	6.8	12.8	10.0	27.4	7.4	9.4	21.7	30.8
10.0	15.4	22.1	9.2	7.3	13.7	9.8	47.9	41.5	9.9	27.9	58.0
9.2	21.7	46.6	8.7	12.8	3.3	9.8	49.9	22.1	8.8	33.7	47.5
9.2	24.7	9.4	9.7	15.3	2.0	9.3	49.9	9.9	9.7	41.2	44.1
9.9	25.7	8.5	8.8	21.8	3.2	9.4	52.9	24.0	9.9	53.7	56.2
8.7	29.2	16.6	10.0	37.8	29.6	9.3	57.4	34.6	8.8	34 6.7	53.0
25pr.	+1 0.9	-0.4	+1 0.9	-0.7		+1 0.9	-0.9		+1 1.0	-1.1	

1561—1620.			1621—1680.			1681—1740.			1741—1800.		
mag.	6h.	-25°	mag.	6h.	-25°	mag.	6h.	-25°	mag.	6h.	-25°
9.3	34	6.7	9.6	40	14.5	6.4	45	32.5	9.6	49	48.1
9.9		11.2	9.3		27.5	8.8		33.5	9.9		49.1
9.7		13.2	9.5		27.5	9.9		37.0	9.9	50	1.1
9.9		30.2	9.5		28.0	9.9		53.5	9.4		17.6
9.9		42.7	9.5		33.0	9.9	46	4.5	9.3		23.1
9.1	35	3.7	9.5		37.0	8.9		16.5	9.1		27.6
9.4		5.7	9.3		40.0	9.9		19.0	9.9		35.4
9.1		6.7	9.0		40.5	8.4		20.0	9.0		36.1
9.9		9.7	9.9		41.0	9.5		39.5	9.9		38.6
9.9		22.7	9.9		45.5	8.4		44.5	7.7	46.1	21.5
9.4		52.7	9.9		46.5	9.7		44.5	9.4		55.6
9.7		58.2	9.0		50.0	9.5		45.0	9.2	51	6.6
8.3		58.7	9.0		53.0	9.5		46.5	9.5		12.1
9.7	36	2.7	9.5		53.5	9.5		51.9	9.3		23.1
9.9		5.7	9.9		56.0	9.7		52.4	9.8		25.6
9.7		8.6	9.3		59.0	9.9	47	9.4	8.4		27.6
9.4		8.6	9.8	41	2.5	9.7		10.4	9.5		28.3
9.7		16.6	8.4		4.5	9.9		11.9	9.1		28.6
9.9		17.6	9.9		12.5	9.7		20.4	9.9		28.6
9.0		39.6	9.7		22.0	8.9		25.4	9.1		31.3
9.4		41.6	8.7		22.5	9.7		28.4	9.5		43.1
9.6		44.6	9.0		23.5	8.9		32.4	9.9		55.6
9.4		47.6	9.9		23.5	9.4		33.4	9.5	52	8.6
9.4		57.6	9.1		30.0	8.4		36.4	8.4		9.1
8.9	37	14.6	9.8		31.0	9.9		46.4	9.8		9.6
8.3		21.6	9.9		32.3	9.9		57.6	9.5		11.1
9.9		23.6	9.1		36.5	9.9	48	7.4	9.9		13.6
9.0		24.6	8.7		42.4	9.3		7.4	9.5		14.6
8.6		44.6	9.1	42	0.0	9.9		9.6	9.4		15.1
9.0		56.6	9.7		6.8	9.3		10.9	9.9		17.6
9.9	38	0.6	8.7		21.5	9.9		19.9	9.9		34.6
9.7		1.6	9.3		22.5	9.5		24.4	9.7		40.5
8.7		5.1	9.9		24.0	9.1		38.4	9.4		41.1
9.6		9.0	8.1		26.5	9.8		43.4	9.8		43.0
9.5		11.1	8.6		29.5	9.4		45.1	9.5		47.0
9.9		14.6	9.7		35.5	9.0		46.4	9.6		53.5
9.7		16.1	9.9		38.5	9.3		47.9	9.9		54.5
9.7		18.6	9.9		45.5	9.1		49.4	9.9	53	1.0
9.6		23.6	9.9		54.0	9.1		53.4	9.3		4.0
9.9		33.6	9.6		55.5	9.9		54.4	9.4		11.0
9.5		36.6	9.5	43	3.5	9.3		54.9	9.7		11.5
9.9		44.1	9.8		12.5	9.4		55.4	9.5		12.0
8.4		46.1	9.9		22.5	9.9		59.9	9.5		16.0
9.9		46.6	9.3		27.5	9.5	49	3.4	9.9		16.2
7.9		47.6	9.9		33.5	9.7		4.4	9.8		18.0
9.9	39	2.6	9.0		37.5	8.7		6.4	5.8		29.0
9.8		3.6	9.7		47.5	8.7		13.4	9.9		36.0
9.9		14.1	9.9		50.0	9.5		13.9	9.6		36.0
9.9		18.6	9.7		53.8	9.7		14.9	9.0		39.5
9.4		30.1	8.2	44	2.5	9.9		19.9	9.9		39.5
9.6		32.6	9.7		7.0	9.9		23.4	9.0		44.7
9.3		38.6	9.9		8.5	9.2		25.9	9.5		46.5
9.9		43.6	9.9		16.0	9.9		26.4	9.8		51.3
9.6		44.4	9.9		23.0	9.9		26.4	8.7		51.3
9.9		53.1	9.7		33.5	9.8		35.4	9.7		51.8
8.6	40	1.6	9.0		34.0	9.7		36.1	9.9		54.8
9.7		6.6	8.8		46.5	9.5		42.1	9.3	54	13.8
7.9		9.0	9.3	45	7.0	9.4		46.1	9.8		15.6
9.0		12.5	9.5		12.0	9.6		46.1	9.8		22.2
9.9		13.0	9.9		12.5	9.4		47.6	9.8		22.8
25pr.	+ 1	11	+ 1	11	-1.5	+ 1	12	-1.7	+ 1	13	-1.9

1801-1860.			1861-1920.			1921-1980.			1981-2040.		
mag.	6h.	-25°	mag.	6h.-7h.	-25°	mag.	7h.	-25°	mag.	7h.	-25°
9.8	54	25.7	9.8	57	52.6	9.0	0	50.5	9.8	3	20.5
9.8		26.7	9.7		54.0	9.8		56.5	9.4		26.0
9.4		35.7	9.7		56.5	9.4	I	0.5	9.6		29.5
9.5		36.7	8.8		57.5	9.6		1.3	9.8		31.5
9.8		43.0	9.3		58.5	9.8		12.5	9.6		33.5
9.8		43.7	9.6		58.5	9.8		14.5	9.8		36.5
9.6		48.0	9.6	58	13.0	9.0		19.0	9.3		36.5
8.6		50.0	9.5		13.5	9.3		19.5	9.5		37.5
9.8		50.5	8.8		13.5	8.7		19.5	9.6		38.5
9.7		52.5	9.2		14.0	9.6		20.0	8.3		38.5
9.8			8.8		16.5	9.8		21.5	9.8		42.0
9.6	55	3.0	9.8		16.5	9.8		22.0	9.8		43.0
9.8		10.5	9.0		18.0	9.0		25.5	9.6		48.5
9.8		11.0	9.4		19.2	9.6		28.5	9.4		49.5
9.6		16.5	8.8		22.5	8.8		31.5	9.8		49.5
8.5		33.0	9.8		28.5	9.6		38.5	9.8		53.0
9.1		33.5	9.7		36.5	8.8		38.5	9.8		54.2
9.6		33.5	9.6		38.0	9.1		38.5	9.7		56.2
9.8		33.5	8.2		40.5	9.8		46.0	9.6		57.2
9.8		37.5	9.4		43.5	9.8		49.0	9.8	4	3.7
9.6		39.6	9.5		43.5	9.8		50.5	9.7		11.2
8.0		41.1	9.6		43.5	8.7		56.5	9.8		11.7
8.1		42.6	9.8		47.0	9.2		57.5	9.8		12.7
9.6		43.6	9.4		56.5	9.8	2	6.5	9.0		14.2
9.6		54.6	9.5		56.5	8.9		12.5	9.1		15.7
9.6		56.6	8.8		57.0	9.0		12.5	9.4		16.2
6.5		57.4	9.4	59	2.0	9.8		13.0	9.3		16.7
9.4	56	6.6	9.1		4.0	9.2		14.5	9.8		21.2
8.0		6.6	9.6		6.0	9.3		14.5	9.8		31.0
9.7		8.6	9.8		6.5	9.8		15.0	9.6		33.2
8.8		13.1	9.8		11.5	9.2		15.5	9.8		33.4
9.4		14.6	9.6		17.5	9.7		15.5	6.2		33.9
9.8		16.6	9.3		22.5	9.6		16.4	9.1		35.2
9.0		24.1	9.6		29.0	9.5		18.4	8.4		36.2
9.8		27.1	9.6		36.0	9.5		18.4	9.0		37.2
8.6		31.6	9.6		37.5	8.8		18.4	9.6		46.2
9.5		31.6	9.8		43.0	8.4		21.0	9.7		51.7
8.8		39.4	9.4		43.5	9.4		24.5	9.2		52.2
9.1		40.6	9.6		44.0	9.4		25.0	9.8	5	3.2
9.1		40.6	9.6		47.5	9.6		25.6	9.1		3.7
9.5		47.6	9.6		49.5	9.6		27.0	9.8		7.2
9.4		49.6	9.8		52.0	9.7		29.5	9.5		8.2
8.8		53.6	9.8		58.5	9.2		30.5	9.8		15.2
9.8		57.6	9.1		58.5	9.1		32.0	9.8		16.2
9.6		58.1	9.8		3.5	9.8		32.5	9.4		16.2
9.6	57	0.1	9.0		9.0	8.4		37.5	9.8		20.2
9.4		1.1	9.8		9.5	9.8		42.0	9.1		21.2
9.6		6.6	9.6		10.0	8.8		42.5	9.8		22.2
9.3		9.1	9.6		11.5	9.6		48.5	9.0		24.2
9.8		13.6	9.0		13.5	9.4		53.0	9.1		26.7
9.8		13.6	9.8		21.0	9.6		56.5	9.8		31.4
9.4		16.1	9.8		21.5	9.7		56.6	9.6		32.2
9.0		19.4	9.0		21.5	9.6		57.5	9.6		33.2
9.4		21.6	9.3		33.5	9.3		58.5	9.3		34.2
9.4		36.6	9.8		33.5	9.8		58.6	9.8		37.2
9.8		39.6	9.1		34.5	9.6	3	7.1	9.8		41.7
9.8		41.6	9.4		37.5	8.8		9.0	9.8		43.2
9.8		46.6	9.6		38.5	9.6		10.5	8.8		46.0
9.6		46.6	9.7		42.5	9.8		18.0	9.1		46.5
9.8		52.1	9.7		48.5	9.6		20.5	8.4		52.0
25pr.	+ 1	13	+ 1	14	-2.0	+ 1	14	-2.2	+ 1	15	-2.3

7h

2041-2100.			2101-2160.			2161-2220.			2221-2280.		
mag.	7h.	-25°	mag.	7h.	-25°	mag.	7h.	-25°	mag.	7h.	-25°
5.6	53.0	18.9	9.3	8 38.1	57.1	9.8	12 23.5	41.7	9.5	15 28.5	46.6
5.8	53.5	4.6	9.8	39.6	54.0	9.5	27.5	19.9	8.8	30.5	33.0 a
5.9	55.0	34.7	9.6	40.6	30.4	9.3	32.5	12.6	9.6	41.5	32.6
6.0	0.5	22.2	9.6	42.1	42.4	9.8	39.5	43.2	9.8	45.5	6.1
6.2	2.0	41.1	9.6	42.6	28.4	8.4	40.5	45.8	9.6	49.4	53.5
6.8	8.0	42.1	9.6	44.1	32.6	9.8	49.5	36.9	9.5	50.5	58.5
6.8	13.0	55.1	9.4	45.6	28.4	9.8	49.5	52.1	9.0	53.5	56.4 9.2
6.2	18.0	23.1	9.3	52.1	7.1	9.5	51.5	57.2	9.5	54.0	58.8 9.0
6.7	18.5	47.2	9.3	52.1	11.7	9.4	51.5	17.6	8.4	55.5	52.9 8.7 a
6.8	20.3	1.3	9.6	53.1	50.9	9.2	52.5	14.6	8.2	56.5	39.4 6.5 GStπ
6.4	22.0	10.0	9.1	54.6	53.8	9.8	55.5	3.1	9.5	16 0.5	39.1
6.5	22.5	35.7	9.5	57.1	41.1	9.8	58.4	1.7	9.6	1.4	27.6
6.6	24.0	10.8	9.8	9 3.6	33.4	9.6	13 1.5	19.1	9.4	3.5	49.8
6.8	25.5	47.2	9.8	4.6	30.8	9.4	2.0	11.7	9.6	3.5	25.0
6.5	27.0	26.4	9.3	6.1	56.8	9.0	5.5	35.4	9.3	5.5	5.5
6.6	27.0	27.3	9.8	8.2	43.3	9.3	12.3	1.0	9.1	6.5	40.0
6.6	27.0	33.8	9.8	9.1	45.3	9.8	12.7	2.1	9.2	7.5	58.5
6.4	31.5	36.5	9.4	12.1	30.2	9.6	15.5	34.8	9.8	9.5	29.7
6.8	32.5	21.2	9.4	15.1	33.1	9.8	26.0	57.6	9.0	11.5	14.0 9.5 a
6.4	33.5	13.2	9.5	15.9	58.0	9.5	27.0	19.4	9.4	11.5	28.5
6.8	34.5	11.0	9.5	23.1	35.2	9.7	30.5	47.8	9.8	15.0	59.6
6.4	38.0	44.4	7.8	24.8	5.4	9.2	40.5	19.5	9.4	16.0	12.7
6.4	52.0	45.6	9.8	28.8	24.7	9.1	42.3	0.6	9.8	24.0	19.8
6.0	55.5	11.8	9.8	45.5	8.1	9.8	43.5	52.1	9.1	25.5	44.1 a
6.5	56.0	10.9	9.8	46.3	17.9	9.5	46.0	25.0	9.4	25.5	28.3
6.6	7 2.5	46.2	9.4	51.3	57.1	9.8	54.5	10.0	9.8	27.5	54.4
6.2	6.0	44.0	9.6	52.8	27.5	9.8	55.5	53.8	9.4	27.5	20.3
6.4	6.0	18.9	9.6	52.8	3.6	9.4	0.0	6.8	9.6	28.5	5.6
6.8	7.5	3.8	8.8	54.3	30.2	8.8	0.5	17.5	9.6	28.5	9.6
6.5	8.0	13.5	9.8	57.8	56.7	7.9	1.5	20.3	9.0	33.5	39.9 9.0 a
6.4	11.0	53.0	9.4	10 5.8	15.7	9.8	5.5	47.4	9.8	35.5	5.7
6.8	13.5	3.7	9.4	5.8	29.7	9.8	19.0	16.2	9.6	40.0	59.5
6.7	17.0	21.5	9.8	5.8	5.6	9.2	21.0	40.3	9.6	42.1	40.2
6.0	17.0	17.4	9.0	8.8	27.5	9.8	23.0	3.9	9.2	43.5	22.2
6.9	20.0	49.8	9.3	13.3	8.5	9.8	24.2	1.4	9.5	47.2	29.4
6.8	22.5	26.2	9.8	13.7	58.5	9.8	27.5	59.2	9.5	48.7	31.0
6.3	22.5	7.7	9.5	15.3	40.5	9.0	28.5	15.8	9.8	50.1	47.8
6.4	23.1	49.1	8.1	16.3	42.5	9.8	35.0	14.6	9.8	50.6	39.7
6.8	23.1	25.6	9.8	17.8	54.2	9.8	35.5	12.9	9.4	51.9	21.9
6.6	28.1	12.9	9.4	20.3	28.5	9.3	37.0	40.3	9.8	52.1	11.2
6.4	37.6	55.1 9.0	9.4	21.8	43.3	9.8	37.5	58.1	8.8	52.6	38.3
6.6	41.6	26.3	9.3	24.8	53.5	9.7	38.4	14.5	9.0	52.7	10.8
6.8	46.1	6.2	9.0	39.8	32.2 9.0	9.5	41.5	4.1	9.8	55.3	0.5
6.8	47.1	8.1	9.0	48.8	32.4 9.5	9.8	43.0	18.7	9.8	59.6	34.1
6.0	49.1	18.2	9.6	11 0.8	35.0	9.3	45.5	39.3	9.8	17 0.6	19.3
6.3	54.1	9.6	9.2	2.8	0.5	9.2	46.5	21.1	9.1	3.7	44.9
6.8	58.6	51.4	9.4	7.8	3.5	9.8	47.5	48.0	9.8	4.6	55.9
6.8	0.1	6.1	9.3	8.8	27.4	9.8	47.5	9.7	9.8	4.6	42.0
6.6	2.2	34.7	9.8	13.8	27.1	9.3	51.5	10.2	9.6	4.8	43.6
6.8	2.6	14.2	9.3	17.3	17.3	9.6	53.5	45.6	9.0	4.9	39.4
6.8	8.1	12.5	9.1	31.8	2.8	9.6	55.4	29.8	9.8	6.6	44.7
6.2	9.1	32.3	9.6	55.5	19.0	9.1	15 1.5	38.0 9.0	9.4	9.9	2.4
6.8	10.6	48.8	9.5	12 2.5	31.9	9.4	1.5	40.4	9.8	10.6	6.0
6.5	12.1	7.1	9.8	2.5	32.2	9.2	2.5	40.9	9.8	10.6	56.2
6.8	13.1	14.3	9.0	3.5	38.6	9.7	5.0	3.3	9.6	10.9	25.0
6.6	17.2	28.5	9.0	10.5	33.0 8.5 a	9.5	9.5	3.8	9.8	17.1	18.6
6.8	17.6	14.1	9.4	11.5	49.5	9.2	9.5	5.3	9.8	19.1	49.1
6.6	22.2	57.1	9.6	13.0	27.3	9.0	11.5	24.6	9.6	20.9	29.1
6.0	26.1	7.2	9.3	15.5	55.8	9.8	15.0	49.1	9.6	22.9	20.9
6.8	37.6	42.6	9.6	16.0	19.0	9.5	27.0	8.7	9.8	25.4	47.0
25pr.	+ 1 1.5	-2.4	+ 1 1.6	-2.5		+ 1 1.7	-2.7		+ 1 1.7	-2.8	

1896AnCap...3....1G

2281—2340.				2341—2400.				2401—2460.				2461—2520.			
mag.	7 ^h .	-25°		mag.	7 ^h .	-25°		mag.	7 ^h .	-25°		mag.	7 ^h .	-25°	
	m	s	i		m	s	i		m	s	i		m	s	i
9.8	17	30.9	8.0	9.8	19	54.6	53.9	9.8	23	40.6	3.2	9.7	26	23.1	17.2
7.4		35.4	46.4	9.8		55.6	39.6	9.7		40.6	22.6	9.6		30.6	50.9
9.8		41.0	25.7	9.6		57.6	21.8	9.7		48.6	43.9	9.8		31.1	11.2
9.8		45.5	34.1	9.2	20	2.6	54.0	9.1		55.6	4.2	9.8		33.1	1.4
9.8		48.6	56.7	9.8		4.6	16.0	9.8		55.6	24.0	9.8		35.5	11.6
8.8		49.9	31.6	9.2		5.6	31.7	9.8		55.6	54.0	9.8		36.5	34.4
9.4		51.6	33.8	9.4		7.1	39.6	9.5		58.1	39.9	9.8		36.6	2.4
9.8		51.6	19.9	9.6		9.1	22.2	9.5	24	4.1	43.2	9.8		37.1	49.7
9.8		52.6	13.8	8.8		9.1	34.8	9.8		4.1	50.1	9.0		37.6	21.9
8.7		53.1	16.8	9.8		10.6	34.6	9.7		5.1	40.2	9.2		40.6	50.3
8.6		54.6	17.5	9.7		13.6	12.9	9.3		5.6	46.7	9.4		41.6	31.3
9.6		54.6	47.4	9.8		15.1	43.7	9.2		7.1	7.1	9.6		45.1	50.0
9.7		57.6	53.7	9.0		16.6	37.2	9.6		7.1	2.1	8.1		46.6	8.8
9.4	18	1.6	12.0	9.8		19.1	26.2	9.8		10.1	5.3	9.8		48.7	0.8
9.1		4.6	43.0	8.7		30.6	48.9	9.5		14.6	35.0	9.8		49.6	52.4
9.4		5.6	52.8	9.6		39.9	2.5	9.2		19.6	21.5	9.7		49.6	13.4
9.5		11.1	15.6	9.2		40.6	41.7	9.6		19.6	47.9	9.3		53.1	54.7
9.3		11.6	41.0	9.8		41.1	46.0	8.9		25.6	26.6	9.6		54.6	21.1
9.8		18.6	9.2	9.8		45.6	38.4	9.3		25.6	52.3	9.4		54.6	30.9
9.7		19.6	50.6	9.0		55.6	26.1	9.0		32.1	37.3	9.2		56.6	17.3
8.9		22.6	32.8	9.4		56.1	0.7	9.3		37.1	40.2	9.3		57.6	51.7
8.8		23.1	50.4	9.8		57.6	12.5	9.2		42.1	52.9	9.8	27	0.6	32.4
9.8		24.1	9.0	8.4	21	3.4	59.3	8.7		44.1	48.6	9.8		4.9	2.4
8.6		24.6	8.8	9.3		7.4	59.3	9.8		44.2	42.4	9.8		6.1	44.1
9.4		29.1	11.3	9.8		9.6	15.6	9.8		44.6	33.5	9.7		6.1	28.8
9.8		30.6	2.4	9.6		11.6	29.2	9.8		45.1	18.5	9.7		9.6	35.2
9.8		33.4	57.7	9.8		19.1	55.0	9.6		46.1	32.3	9.4		11.6	30.3
9.7		40.6	24.4	9.2		19.6	40.6	9.2		46.6	28.6	9.7		14.1	9.3
8.6		46.6	17.0	9.5		21.6	16.1	9.8		47.1	54.4	9.5		16.6	54.5
9.4		49.6	39.2	9.7		22.6	6.4	9.7		49.6	26.7	9.8		19.6	6.4
9.6		50.6	16.7	9.7		30.1	16.9	9.0		50.6	4.6	8.6		23.6	51.5
9.0		51.6	38.8	9.1		35.1	42.0	9.8		52.6	42.7	9.6		26.6	12.4
8.5		51.6	23.8	9.4		36.6	21.5	9.5		54.6	27.2	9.6		28.6	52.8
9.8		51.6	6.2	9.3		40.1	42.3	9.2		54.6	51.4	9.3		32.6	50.9
9.2		52.1	27.1	9.8		53.6	43.4	9.5		58.1	10.2	9.8		44.6	1.8
9.5	19	0.1	26.5	9.4		55.6	46.3	9.5	25	2.6	24.2	9.6		45.9	1.3
8.8		0.6	7.0	9.2	22	0.6	23.7	9.7		10.6	35.1	9.5		47.6	21.7
8.9		0.6	52.3	9.4		2.6	40.6	9.6		12.6	24.1	9.2		50.6	45.0
9.8		3.6	52.5	9.6		22.6	48.4	9.4		17.6	14.8	9.2		50.6	50.8
9.8		6.1	29.9	9.0		23.1	3.5	9.1		18.1	57.0	9.7		50.6	24.0
8.8		7.6	18.4	9.8		34.1	12.7	9.0		19.6	49.2	9.8		54.1	39.1
9.3		7.6	51.5	8.5		34.2	59.0	9.4		20.6	57.7	9.6		55.6	50.1
9.8		10.1	9.9	9.8		34.6	55.1	9.3		25.6	59.1	9.0	28	4.1	7.9
9.7		10.6	10.4	9.8		35.4	0.1	9.2		31.6	56.5	9.6		8.6	36.9
9.5		11.6	43.6	9.4		42.1	31.1	9.0		32.9	2.8	9.8		9.1	50.7
9.4		11.9	59.0	9.8		44.6	31.5	9.8		33.6	36.5	9.6		11.6	34.0
9.8		13.1	45.2	9.2		44.6	3.6	9.8		34.1	11.2	9.8		15.6	39.2
9.8		14.6	27.0	9.5		54.4	2.4	9.5		35.6	32.7	9.6		18.1	37.7
9.0		15.1	0.3	9.7		59.6	32.7	9.6		35.6	45.1	9.8		23.1	19.0
8.7		15.8	29.8	9.6	23	2.6	48.8	9.5		40.6	27.5	9.8		24.5	36.2
9.4		19.1	51.2	9.1		5.6	55.5	9.4		43.1	8.0	9.4		37.5	47.2
9.1		19.6	5.6	9.7		5.9	1.7	9.3		45.1	36.2	9.4		38.0	37.6
9.6		20.9	0.9	9.3		23.1	59.0	9.5		47.6	59.1	9.8		41.5	17.8
9.4		25.6	16.4	9.8		28.1	49.0	9.5		57.1	56.7	9.8		44.0	57.1
9.0		26.6	48.0	9.4		35.4	59.9	9.3	26	5.1	43.5	9.8		44.5	57.8
9.8		27.6	17.6	9.4		35.6	15.1	9.6		13.6	51.3	9.8		49.0	13.9
9.0		30.6	14.9	9.7		35.6	44.0	9.2		15.6	31.3	9.5		50.5	36.3
9.3		33.6	23.6	9.1		38.6	39.6	9.1		19.6	38.0	9.3		56.5	9.8
9.6		34.6	57.8	9.2		39.6	31.6	9.4		21.1	46.2	9.4	29	0.8	1.1
9.4		48.6	3.9	9.8		39.6	45.1	9.8		23.1	30.4	9.4		5.0	30.3
25pr.	+ 1	1.8	-2.8	+ 1	1.9	-2.9		+ 1.	2.0	-3.0		+ 1	2.0	-3.1	

2521-2580.			2581-2640.			2641-2700.			2701-2760.		
mag.	7h.	-25°	mag.	7h.	-25°	mag.	7h.	-25°	mag.	7h.	-25°
9.4	29 10.5	30.1	9.5	31 27.4	9.9	9.1	34 7.9	52.4	9.8	36 36.9	47.3
9.8	11.5	30.9	9.8	31.4	6.3	9.8	7.9	14.4	9.8	39.4	6.4
9.4	15.5	10.5	9.8	33.4	25.1	9.6	15.4	7.3	9.0	39.9	42.4
9.8	15.5	54.3	9.8	40.4	5.5	9.8	25.4	26.2	9.4	42.4	18.2
7.1	20.0	50.6	9.8	46.4	18.0	9.6	26.6	57.0	9.0	47.9	34.9
9.8	21.2	52.2	9.8	50.4	45.5	9.5	29.4	49.9	9.4	54.5	26.7
9.8	21.8	0.6	9.5	50.9	35.8	9.4	30.4	39.9	9.4	55.5	54.2
9.6	24.0	29.7	8.5	52.4	34.4	9.4	31.9	35.7	8.6	57.5	36.4
9.4	25.0	13.0	8.9	56.4	39.1	9.0	35.4	52.7	9.5	37 0.5	10.3
9.6	25.0	34.2	9.8	56.4	13.6	9.8	36.9	19.0	9.0	1.5	42.7
9.8	33.5	9.7	9.6	56.4	29.7	9.7	41.4	33.2	9.8	1.5	46.6
8.4	35.0	45.7	9.6	32 1.9	23.2	9.6	41.9	21.2	9.8	2.0	49.1
9.8	37.5	30.7	9.6	3.4	31.3	8.8	43.9	33.4	9.3	3.5	46.7
9.8	41.0	35.7	9.8	4.9	53.6	9.5	45.4	17.1	9.7	6.4	27.8
9.6	47.5	34.2	9.8	5.4	37.7	8.8	48.9	15.7	9.6	9.5	24.9
9.4	47.5	33.3	9.8	5.4	14.5	9.8	52.4	49.2	9.7	11.5	24.7
9.4	49.0	31.0	9.8	8.4	15.3	9.6	35 0.4	11.9	9.3	18.0	42.7
9.5	50.5	3.9	9.4	10.4	27.2	9.8	2.9	11.6	9.5	18.5	2.6
9.4	51.5	54.3	9.4	11.9	27.9	9.8	2.9	41.1	9.8	20.0	48.4
9.4	55.5	58.8	9.8	16.4	3.0	9.8	4.4	46.1	9.5	20.5	50.2
9.6	56.0	22.9	9.8	19.4	12.5	9.8	7.9	12.8	9.4	21.0	57.6
9.6	57.5	28.3	9.0	22.9	10.3	9.1	10.9	17.9	9.6	25.5	38.2
8.7	57.5	50.8	9.4	25.9	23.4	9.8	16.4	47.3	9.4	28.5	44.9
8.8	30 1.8	1.9	9.8	28.9	7.3	9.6	16.4	7.6	9.8	29.5	26.8
9.4	4.5	36.5	9.8	34.9	21.1	9.6	18.9	28.1	9.6	30.5	6.2
8.7	5.0	21.3	9.8	40.4	34.9	9.1	20.4	39.7	9.5	30.5	1.9
9.8	5.5	57.5	9.8	42.4	11.5	9.8	21.4	39.0	7.8	46.5	32.6
9.5	5.5	3.9	9.8	43.9	55.1	9.7	21.5	30.2	9.8	49.0	53.2
9.6	10.5	28.7	9.4	45.4	16.7	9.8	22.4	17.4	9.0	49.5	0.0
9.8	12.5	31.5	8.6	45.4	42.7	9.8	23.5	32.4	9.6	51.0	2.2
8.5	17.9	7.3	9.6	45.4	6.1	9.6	23.9	52.3	9.6	57.0	4.5
9.8	20.4	30.5	9.4	48.9	40.9	9.5	24.4	11.7	9.8	58.0	24.8
7.8	23.4	52.7	9.4	48.9	35.1	9.6	25.4	48.7	9.6	38 1.5	10.3
9.8	25.4	28.5	9.0	52.9	43.9	9.0	26.4	10.2	9.2	4.5	5.9
8.6	29.9	3.9	9.6	53.4	14.7	9.4	29.4	9.8	9.8	4.5	3.2
9.8	38.9	17.2	9.4	54.4	5.4	9.6	39.4	10.1	9.8	5.0	33.6
9.8	39.9	27.5	9.6	55.7	58.1	9.4	40.4	37.8	9.8	5.2	59.4
9.8	39.9	14.9	9.4	57.4	19.9	9.0	40.4	12.8	9.2	5.5	4.4
9.8	40.4	43.7	9.8	57.4	36.7	9.8	42.4	49.2	9.2	7.0	29.2
9.2	45.4	13.2	9.7	33 0.4	53.3	9.8	43.4	9.9	9.7	10.5	25.7
8.6	48.4	14.1	9.8	2.4	6.4	9.4	44.4	6.3	9.6	10.5	0.4
9.8	50.4	17.2	9.4	4.4	41.1	9.4	45.4	48.8	9.2	13.0	3.4
9.4	53.4	31.2	9.4	5.4	5.0	9.4	45.4	4.0	9.2	15.0	27.7
9.8	55.9	19.4	9.6	17.9	45.5	8.6	56.4	19.8	9.7	17.5	10.4
8.4	55.9	10.7	9.8	20.4	1.8	9.8	57.4	46.7	9.3	20.5	28.2
9.4	59.9	47.3	9.6	21.4	17.8	9.8	36 4.4	33.1	9.3	21.5	18.3
9.6	31 0.4	17.2	9.8	26.9	28.9	9.8	4.9	12.0	7.4	27.0	12.4
9.3	0.7	3.0	9.8	31.4	21.2	9.5	7.4	20.4	9.8	27.0	46.2
9.8	1.4	55.5	9.8	35.4	41.8	9.8	9.9	59.1	9.7	28.0	21.2
9.6	2.9	37.9	9.8	40.4	11.8	9.4	10.4	58.7	9.6	30.5	37.3
9.1	3.9	38.3	9.8	42.9	33.5	9.4	10.4	36.9	9.8	35.5	24.8
9.3	4.4	12.1	9.6	46.4	32.8	9.8	18.9	38.8	8.9	42.2	0.1
9.8	10.9	21.5	9.6	50.4	37.5	9.8	27.1	0.6	9.1	50.5	20.7
9.6	13.9	45.2	9.8	50.4	10.1	9.6	30.4	8.0	9.7	50.5	3.9
9.6	14.4	39.8	9.6	55.9	51.4	9.8	32.9	49.9	9.8	53.5	29.4
9.8	20.4	21.6	8.1	34 0.4	9.6	9.6	34.9	5.7	9.6	54.5	2.1
7.4	20.4	3.5	9.0	0.4	23.0	9.8	34.9	57.8	9.1	54.5	55.6
9.0	23.4	11.9	9.6	0.4	24.6	9.6	35.4	18.2	9.5	56.5	49.0
9.8	27.4	37.3	9.8	1.4	58.3	9.6	35.4	35.1	9.8	58.0	30.0
9.6	27.4	22.5	9.3	4.9	47.8	9.8	35.4	57.0	9.6	39 4.5	12.0
25pr.	+ 1 2.1	-3.2	+ 1 2.2	-3.3		+ 1 2.3	-3.4		+ 1 2.3	-3.5	

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
mag.	7h.		-25°	mag.	7h.		-25°	mag.	7h.		-25°	mag.	7h.		-25°
	m	s	'		m	s	'		m	s	'		m	s	'
9.8	39	5.2	3.7	8.6	40	55.3	22.2	9.2	42	51.8	6.7	9.6	45	3.9	9.3
8.8		5.2	29.2	9.9		56.3	37.3	5.4		53.3	37.7	9.5		5.9	58.5
9.8		6.0	28.8	9.9		57.3	8.4	9.9		53.4	0.8	9.8		6.9	31.6
9.4		7.4	19.1	9.9	41	1.3	43.5	9.9		54.2	21.0	8.6		14.4	19.5
8.4		8.4	24.8	9.9		1.8	32.3	9.9		57.8	42.3	9.5		19.2	0.3
9.6		9.5	15.6	9.6		2.8	54.1	9.4		58.3	4.6	9.3		20.4	54.8
9.2		11.2	37.5	9.9		4.3	43.5	9.5		59.2	19.0	9.5		22.9	30.5
9.4		13.5	46.2	9.8		4.3	42.7	9.4		59.2	26.8	9.4		24.4	36.0
9.6		13.5	14.3	9.9		4.8	53.7	9.5	43	0.3	10.1	9.8		24.4	4.8
9.7		17.0	57.3	9.9		5.3	20.6	9.4		0.3	15.7	9.2		27.9	17.0
9.8		17.5	16.0	9.8		6.8	16.9	9.8		1.3	48.9	9.5		28.4	20.1
9.8		18.9	9.4	9.6		9.3	27.1	8.8		2.3	7.8	9.9		29.9	42.9
9.8		19.0	13.9	9.6		9.3	19.2	9.6		5.3	21.7	9.9		30.3	13.7
9.4		19.7	19.7	9.8		9.8	52.0	8.7		12.3	26.8	9.5		30.4	44.2
9.8		20.5	7.9	9.7		13.3	30.2	8.5		12.3	27.6	9.8		32.4	2.0
9.6		28.7	4.1	9.7		19.3	43.9	9.7		13.3	47.1	9.6		34.4	48.0
9.3		34.9	55.2	9.8		19.3	4.5	9.7		13.3	41.6	9.1		36.9	46.4
9.8		40.0	30.8	9.6		23.8	18.8	9.4		14.3	19.3	9.5		38.4	58.2
9.3		43.0	52.4	9.9		29.3	37.0	9.8		18.3	44.5	9.7		38.9	9.4
9.4		44.7	35.5	9.5		31.7	57.4	9.4		24.7	18.8	9.0		39.4	10.2
9.6		45.7	53.3	9.6		32.3	38.8	9.9		26.7	24.7	8.6		39.9	49.8
9.8		46.4	35.9	9.5		34.3	53.9	8.9		26.7	49.1	9.0		43.4	49.6
9.8		47.5	8.1	9.9		35.3	5.0	9.7		28.7	15.8	9.5		43.9	13.9
9.8		50.5	19.0	9.4		36.3	6.8	9.9		28.7	43.1	9.2		44.4	49.9
8.9		51.0	18.2	9.7		36.8	39.3	9.4		32.0	4.1	9.6		44.9	27.2
9.8		51.2	56.0	9.5		37.3	7.2	9.9		34.5	24.4	9.5		47.9	7.3
9.2		53.3	3.3	9.8		38.8	38.2	9.5		35.0	15.3	9.8		49.4	51.2
9.9		53.3	50.9	8.8		40.3	46.2	9.7		39.0	22.0	9.1		50.4	3.5
9.0		54.3	15.7	8.5		44.3	3.9	8.9		39.5	41.8	9.8		54.3	23.3
9.9		54.3	14.4	9.7		49.3	4.1	9.9		44.5	5.7	9.5		54.4	38.2
9.9		54.5	0.7	9.0		53.8	11.1	8.9		44.5	18.4	9.7		59.4	18.3
9.4		56.3	27.5	9.4		56.3	37.8	9.5		48.5	16.3	9.1	46	3.9	45.2
9.8		59.3	15.4	9.9		58.3	13.0	9.7		49.7	0.3	9.2		4.9	47.4
9.8	40	0.8	15.2	9.7		58.8	6.3	9.4		58.2	0.1	9.1		6.9	52.3
9.5		3.0	1.1	9.5		59.3	26.6	9.5		58.5	36.8	9.6		7.9	51.4
9.8		3.8	16.7	9.2	42	4.3	46.0	9.0	44	1.5	27.3	9.5		9.4	43.4
9.5		5.3	38.6	9.9		10.8	31.2	9.0		2.0	4.1	9.9		14.4	55.2
9.9		8.1	29.5	9.8		14.3	10.8	9.4		2.0	21.2	9.7		14.4	55.2
9.2		9.3	3.8	9.0		14.8	5.3	9.8		2.5	27.0	9.6		14.9	6.2
9.5		9.3	15.7	9.5		15.8	9.3	9.8		2.5	23.2	9.8		19.4	28.2
9.5		10.3	38.8	9.9		16.5	59.5	9.2		4.5	35.1	9.8		20.3	48.9
9.6		10.3	8.4	9.5		17.3	17.1	9.5		8.6	23.7	9.2		22.3	6.6
9.5		11.3	49.0	9.4		18.3	4.5	9.9		9.0	8.0	9.8		22.3	49.0
9.6		11.8	41.0	9.6		18.8	11.3	9.5		9.5	20.4	9.7		22.9	12.8
9.5		14.3	58.8	9.8		25.3	2.0	9.0		9.5	32.5	9.8		23.8	12.2
9.8		16.3	55.8	9.6		29.3	25.9	9.9		13.0	58.7	9.9		23.8	45.4
9.5		16.3	26.2	9.7		29.3	14.7	9.8		14.5	56.6	9.8		24.1	29.7
8.8		17.8	3.4	9.7		32.8	40.9	9.4		17.0	15.9	9.2		26.3	13.2
9.6		20.3	28.9	9.6		35.3	3.6	9.7		19.5	53.3	9.8		29.3	58.0
9.5		25.3	45.6	9.9		36.8	51.3	9.7		19.5	7.0	9.9		29.5	57.3
9.5		28.8	8.5	9.9		38.8	15.6	9.9		24.5	46.2	9.7		30.8	27.0
9.5		30.8	55.8	9.8		39.3	16.0	9.3		28.5	3.4	8.6		33.8	29.8
9.6		32.3	53.7	9.9		39.8	46.6	9.0		32.5	13.3	9.9		34.3	48.0
9.6		36.3	5.1	9.9		41.3	3.7	9.4		34.5	21.0	9.0		34.8	28.9
9.5		39.3	21.0	9.0		41.6	0.6	9.4		44.5	20.7	9.9		36.3	44.0
8.8		44.3	25.0	9.1		41.8	32.1	9.4		45.5	46.4	9.6		38.3	12.0
9.7		46.8	53.2	9.4		42.3	4.5	9.6		45.9	2.9	9.9		46.3	8.7
9.5		49.3	59.9	9.7		42.3	6.1	9.8		49.0	43.3	9.4		51.8	21.8
9.8		50.8	19.6	9.6		50.3	16.1	9.3		51.0	15.0	9.7		53.8	27.0
9.5		54.3	43.1	9.8		50.3	13.2	9.2		56.0	44.5	9.6		58.3	10.9
25pr.	+1	2.4	-3.5		+1	2.5	-3.6		+1	2.5	-3.7		+1	2.6	-3.7

3001-3060.				3061-3120.				3121-3180.				3181-3240.			
7h.		-25°		7h.		-25°		7h.		-25°		7h.		-25°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.4	47	1.8	10.4	9.9	49	24.8	3.4	9.8	51	30.3	41.6	9.9	54	26.1	45.2
9.6		1.8	55.0	9.9		29.3	14.2	9.9		32.2	38.8	9.6		29.1	34.9
9.6		4.3	33.8	9.3		34.3	42.6	9.2		33.3	41.1	9.9		31.1	35.9
9.4		4.3	11.2	9.9		34.8	23.0	9.6		34.1	1.6	9.6		33.6	25.9
9.6		9.3	33.8	9.1		35.8	50.0	9.2		34.3	37.4	9.4		34.1	43.0
8.9		9.3	36.9	9.7		38.3	46.6	8.9		34.8	15.7	9.7		38.1	4.6
9.5		9.3	50.6	9.6		39.3	18.7	9.4		40.1	42.0	9.4		40.1	47.6
9.7		9.8	49.1	9.5		43.5	0.0	9.0		41.1	47.7	9.9		41.5	2.0
9.9		10.3	29.7	9.4		47.8	43.9	9.3		44.6	20.6	9.0		45.1	43.5
9.8		13.3	48.5	9.5		48.8	9.3	9.4		50.1	15.4	9.2		47.1	48.1
9.9		14.3	57.4	9.9		51.8	5.5	9.7		56.1	33.1	9.7		48.1	22.2
9.9		24.3	17.0	9.9		54.3	19.2	9.8	52	5.1	7.4	9.2		51.1	19.4
9.1		25.8	26.0	9.7		54.8	55.2	9.9		14.1	42.2	9.6		52.6	19.4
9.6		27.8	10.4	9.0		57.8	31.1	9.5		15.1	52.2	9.7		52.6	15.3
9.5		29.3	14.3	9.5		58.3	51.7	9.3		21.1	36.6	9.9		53.1	56.7
9.4		31.3	31.1	8.9	50	1.8	31.2	9.7		24.1	9.6	9.9	55	2.6	12.5
9.5		34.8	57.6	9.0		2.3	33.7	9.5		24.1	58.8	9.5		4.1	36.9
9.5		38.3	24.0	9.7		4.3	51.4	9.9		24.1	59.2	9.9		4.1	42.6
9.5		38.3	13.2	8.8		4.8	36.2	9.9		24.1	17.7	9.8		4.1	38.7
9.7		39.8	7.9	9.1		13.3	15.3	9.5		28.1	33.6	8.8		4.8	2.7
9.5		40.9	57.2	9.7		14.3	8.8	8.8		29.1	51.1	9.0		9.6	45.4
9.7		43.1	51.6	9.9		14.9	10.8	9.7		29.1	45.3	9.4		9.6	56.2
8.6		44.1	23.2	9.7		15.3	40.5	9.4		31.6	25.0	9.6		16.6	4.0
9.7		44.6	41.6	9.6		16.8	40.2	9.6		32.1	54.3	9.6		19.1	22.6
9.9		44.9	2.2	9.5		16.8	31.4	9.5		32.3	1.1	9.4		28.1	37.7
8.9		47.6	10.6	9.7		18.8	16.3	9.9		43.6	42.7	9.4		29.6	7.2
9.4		49.1	19.4	9.8		19.9	40.6	9.7		45.1	42.9	9.4		31.6	18.0
9.9		50.6	3.1	9.5		22.8	32.1	9.0		46.6	16.9	8.9		39.1	21.3
9.0		58.1	22.8	9.9		24.8	32.9	9.6		49.1	45.6	9.9		42.6	28.5
9.7	48	1.1	7.1	9.1		25.8	31.3	9.1	53	3.1	22.8	9.8		43.1	36.7
9.4		12.1	53.9	9.4		28.8	12.8	9.8		4.1	3.4	9.7		44.1	19.9
9.9		13.6	10.1	9.2		29.3	33.2	9.9		6.6	5.6	9.9		44.1	48.5
9.7		13.6	13.2	9.8		29.3	35.2	9.9		14.1	35.7	9.7		45.6	27.2
9.0		17.1	45.1	9.9		29.8	35.2	9.6		17.1	54.1	9.7		49.6	50.5
9.5		18.1	52.0	9.4		32.8	33.7	9.8		21.1	7.0	9.8		50.0	33.5
9.4		23.1	59.5	9.4		34.3	24.6	9.4		21.3	0.1	9.9		55.1	14.4
9.4		24.1	33.1	8.4		35.3	30.5	8.8		28.1	12.7	9.8		55.6	12.5
9.0		24.1	36.6	9.5		38.3	9.2	9.7		31.1	52.4	8.3		59.1	4.2
8.8		26.1	54.7	9.4		39.3	42.2	9.5		32.1	23.2	9.3	56	3.1	51.6
9.9		29.1	34.5	9.6		50.8	11.7	9.9		32.1	45.8	9.8		4.6	4.8
9.3		29.1	53.6	9.8		52.3	52.5	9.4		35.1	56.1	9.9		5.6	27.4
9.8		29.9	24.3	9.1		54.3	52.5	9.5		36.1	7.6	9.9		12.1	28.2
9.9		30.1	39.9	9.0		59.3	48.5	9.4		37.4	3.0	9.9		14.6	37.2
9.5		30.6	15.9	9.0		59.6	1.7	9.2		38.1	8.2	9.9		19.1	38.0
9.0		32.6	4.8	9.4	51	2.8	16.8	9.4		38.1	15.4	9.8		26.1	51.6
9.4		36.1	35.6	9.4		2.8	24.2	9.7		39.1	8.3	9.9		28.1	50.0
8.3		38.1	56.2	9.9		3.8	29.0	9.0		44.1	57.6	9.7		38.6	41.5
9.5		44.1	24.9	9.2		8.3	24.2	9.7		46.6	41.4	9.9		40.6	54.6
9.8		45.1	23.0	9.9		9.3	9.0	9.9		58.6	0.1	9.7		41.1	39.7
8.8		59.1	49.7	9.5		9.8	25.4	9.7		59.1	2.9	9.6		42.9	59.8
9.5	49	4.1	40.2	9.3		14.3	28.2	9.7	54	4.1	35.8	9.4		46.1	0.7
9.9		8.3	35.0	9.4		15.3	39.8	9.7		4.1	53.7	9.0		49.4	59.3
9.0		9.3	15.9	9.5		20.3	18.8	9.5		4.8	0.6	9.8		58.6	59.7
9.7		10.8	50.6	8.8		23.8	4.9	9.8		7.6	22.3	9.6	57	1.6	14.1
9.1		13.3	51.0	9.0		26.3	38.8	9.9		10.1	37.0	8.2		4.6	43.1
8.5		13.8	21.9	9.0		29.3	59.2	9.6		18.1	30.1	9.3		4.6	8.7
9.5		19.3	8.9	9.7		29.3	44.8	9.8		18.1	44.8	9.8		5.1	17.1
9.0		19.3	42.8	8.8		29.3	4.6	9.9		19.1	28.2	9.5		8.1	52.8
9.8		19.8	23.8	9.7		29.3	13.0	9.9		23.6	49.8	8.9		11.6	37.4
9.0		23.3	50.4	9.5		30.3	19.0	9.4		23.6	40.0	9.9		14.6	38.9
25pr.	+1	2.6	-3.8	+1	2.7	-3.9		+1	2.8	-4.0		+1	2.9	-4.1	

3241-3300.				3301-3360.				3361-3420.				3421-3480.			
mag.	7 ^h -8 ^h		-25°	mag.	8 ^h		-25°	mag.	8 ^h		-25°	mag.	8 ^h		-25°
	m	s	'		m	s	'		m	s	'		m	s	'
9.3	57	15.1	15.4	9.8	0	33.1	19.1	10.2	4	23.0	14.5	8.5	8	19.5	47.1 a
9.5		39.6	31.4	9.5		33.4	58.3	10.2		24.5	29.8	10.0		19.5	7.6
9.4		53.6	13.2	9.5		34.1	21.1	10.2		25.0	58.9	10.2		33.0	45.7
9.3		55.6	12.8	9.8		34.7	13.3	9.8		27.5	32.1	9.6		37.7	58.7
9.7		59.6	45.6	9.8		35.2	27.0	10.1		35.0	33.7	10.2		40.0	47.6
9.5	58	1.6	10.1	9.6		49.7	27.4	8.2		35.5	28.8	9.9		42.0	25.3
9.6		2.6	9.0	9.8		56.2	16.5	9.9		37.5	20.7	10.2		45.5	52.1
9.8		3.1	30.8	9.4	I	14.7	50.6	10.1		45.0	20.4	8.6		47.5	19.9 9.0-
9.4		4.1	24.1	9.5		15.2	15.6	9.6		45.6	49.1	10.2		47.5	43.9
9.7		8.1	46.7	9.4		15.7	35.2 10.0	9.7		50.6	24.6	9.2		49.0	18.5
9.7		20.1	14.2	9.4		24.7	53.3	9.6		54.6	2.0	9.9		55.0	33.5
9.6		25.1	18.5	9.3		28.2	37.9	9.7		55.6	19.6	9.2	9	2.0	35.1
9.3		25.1	30.7	9.6		29.7	33.3	10.2	5	0.1	2.3	10.2		6.8	21.6
9.8		26.1	39.0	9.5		32.2	1.3	9.5		2.1	14.0 a	9.5		9.5	10.8
9.5		26.1	12.8	9.9		36.2	3.0	9.5		5.1	42.4	9.5		14.0	47.1
9.1		29.6	40.3 8.2 GW-	9.8		44.7	23.6	10.2		8.1	20.4	9.9		15.0	43.3
9.0		29.6	33.7 9.0	9.5		49.2	59.0	9.4		10.1	10.6	8.4		23.5	37.3 8.0 Ga
9.4		29.6	8.6 9.0 a	9.6		54.7	36.4	9.6		13.6	17.7	10.2		29.8	30.7
9.7		44.6	21.7	9.4		55.5	34.0	10.1		19.6	3.1	10.1		30.5	22.7
9.5		49.1	48.9	9.9		57.1	41.0	10.0		22.1	58.0	10.2		38.0	59.9
9.6		51.1	15.5	9.7		59.5	49.0	9.3		25.1	56.6	9.8		39.0	21.7
9.8		51.6	16.4	9.6	2	0.8	55.8	10.1		25.6	52.3	9.1		40.5	44.0 8.8 a
9.6		52.1	33.0	8.8		10.0	25.0 9.0 a	9.5		30.1	39.4	9.9		57.0	43.0
9.9		55.1	12.5	10.1		13.5	55.7	9.0		32.1	5.5	10.2		58.5	16.1
9.9		56.1	54.7	10.1		15.0	39.0	10.2		35.6	21.5	9.1	10	9.0	46.0 8.5 Ga
9.8		58.6	41.7	10.2		15.3	34.7	10.2		38.6	22.5	9.7		9.5	47.5
9.8	59	1.6	43.1	9.8		15.8	32.2	10.2		39.6	53.3	10.0		9.5	26.4
9.5		2.6	23.5	10.2		23.7	43.1	10.1		42.1	54.7	10.2		9.5	9.1
9.5		4.1	37.9	9.6		26.9	58.6	9.3		43.6	46.3	9.7		10.0	44.0
9.6		5.1	35.2	10.2		28.3	36.0	9.3		48.1	51.5	9.5		10.0	59.0
9.9		7.1	6.8	9.2		30.3	50.8 9.0-	9.6		55.6	16.1	8.8		19.5	35.2 a
9.9		9.6	42.7	9.6		31.3	8.0	10.2		58.6	19.3	9.8		21.0	37.3
9.9		12.1	56.4	10.2		43.3	46.9	10.2	6	0.6	34.0	10.0		29.5	18.4
9.5		14.6	17.9	10.0		45.3	38.4	9.8		1.6	3.4	9.3		30.5	11.8
8.5		18.1	20.8 7.5 GSal	10.2		47.8	54.6	9.8		9.1	47.0	9.7		36.4	1.7
9.9		18.9	56.9	10.2		52.5	33.3	8.8		13.1	40.8 -	10.2		45.7	0.1
9.6		23.6	53.0	8.8		53.0	27.1 8.0 Gb	9.3		17.6	45.6	10.2		52.5	28.7
9.9		24.1	28.0	10.2		53.5	31.6	10.1		18.6	57.8	10.2		59.5	7.6
9.9		24.6	53.2	10.2	3	6.4	0.1	9.6		19.6	48.0	10.0	11	2.5	57.9
9.8		27.1	8.2	8.6		9.0	37.7 9.0 Ga	9.8		25.1	46.1	10.2		11.0	50.7
9.7		29.6	38.0	8.9		9.0	47.2 a	8.8		25.6	19.6 10.0 a	9.8		15.5	20.4
9.7		29.6	45.6	9.5		10.5	11.2	10.2		25.6	35.7	10.1		19.0	45.2
9.9		34.6	14.6	9.8		11.0	41.2	10.2		30.1	37.2	10.1		27.5	47.9
9.9		34.6	8.2	9.6		22.0	24.9	9.3		33.8	2.0	10.2		28.0	50.1
9.9		41.1	26.4	10.1		22.0	26.5	10.2		35.6	25.5	10.0		29.0	22.8
9.5		42.1	51.7	9.3		39.0	31.8	10.0		49.1	6.1	10.0		29.5	5.6
9.2		52.6	48.8	9.5		45.0	52.9	9.1	7	17.8	44.5	9.8		29.5	56.1
9.9	0	2.1	48.9	9.8		45.5	33.0	9.5		20.0	55.3	9.3		30.0	28.9
9.5		5.1	44.1	9.2		49.0	55.5 9.5	8.8		33.5	57.5	10.2		49.5	32.6
9.6		11.1	13.9	10.0		50.0	42.1	10.2		33.5	43.3	10.2		49.5	43.0
9.7		11.3	0.6	10.2		50.0	23.1	10.1		42.5	32.1	9.8	12	0.0	37.7
9.5		13.1	11.9	8.8		52.5	52.0 8.5 Ga	9.9		45.0	10.3	9.8		0.0	43.5
9.8		14.1	40.0	9.8	4	0.0	13.8	8.8		49.0	21.3 9.0	10.1		2.0	54.8
9.9		14.6	7.7	9.5		5.0	18.7	9.9		51.0	41.1	10.2		3.5	27.7
9.9		16.1	48.9	9.6		9.0	6.1	10.2	8	1.0	31.1	9.2		4.0	34.9
9.6		24.1	4.0	10.1		9.5	36.4	9.9		2.0	17.0	10.1		7.5	44.9
9.9		24.6	1.3	9.0		13.5	33.3 9.5	10.2		5.0	39.7	8.0		13.5	54.9 7.5 GSbt
9.8		28.1	24.5 9.0 a	10.1		15.6	2.5	10.2		9.5	11.4	9.3		14.2	1.7
8.8		29.6	24.5	9.1		16.3	58.5	10.1		18.5	12.5	9.2		18.7	2.2
9.7		29.6	39.8	10.0		18.0	14.8	10.1		18.5	41.3	10.0		19.5	13.0
25pr.	+ 1	3.0	- 4.1		+ 1	3.1	- 4.2		+ 1	3.2	- 4.4		+ 1	3.4	- 4.5

3481-3540.			3541-3600.			3601-3660.			3661-3720.			
mag.	8h.	-25°	mag.	8h.	-25°	mag.	8h.	-25°	mag.	8h.	-25°	
10.0	12 20.0	18.1	8.9	16 2.0	2.8	8.5 Ga	9.2	19 8.3	50.4	10.2	22 56.8	11.5
9.9	29.0	6.6	9.2	4.0	25.7	9.3	9.8	1.9	10.2	57.3	15.2	
9.9	30.0	33.5	10.2	6.0	4.7	8.9	13.8	43.1	10.2	23 1.3	31.4	
9.7	31.3	0.0	10.1	11.0	38.6	9.5	14.8	5.1	9.3	3.3	1.9	
10.2	42.0	12.1	10.0	12.5	9.8	9.1	14.8	34.8	9.9	4.3	51.1	
10.2	43.1	1.1	9.0	14.0	20.3	9.5	23.8	53.6	9.5	17.3	24.6	
9.6	44.0	26.1	9.8	14.8	59.3	10.0	28.3	26.4	9.2	18.3	20.1	
9.1	44.5	38.8	9.5	26.5	32.7	9.8	28.3	38.2	9.7	25.3	11.9	
10.2	45.2	57.9	9.9	29.5	47.1	9.8	28.8	50.1	9.3	26.8	3.8	
10.2	45.8	58.8	8.9	30.5	38.7	10.1	38.8	5.0	9.8	28.8	24.8	
9.8	52.5	44.5	9.1	32.5	46.1	10.0	41.6	1.7	9.7	28.8	14.6	
9.8	52.5	57.0	10.1	37.5	5.1	10.0	43.8	4.6	9.7	29.3	27.0	
9.7	58.0	38.5	9.1	43.0	38.1	8.6	54.3	53.7	9.3	32.3	3.4	9.5 a
9.7	59.5	26.3	10.1	44.5	37.2	10.2	20 3.8	50.6	9.3	35.3	53.2	
9.7	59.5	38.8	9.9	51.0	17.2	9.5	5.3	57.8	9.8	35.3	45.6	
8.6	13 4.0	57.3	9.1	51.5	40.9	10.2	9.3	38.9	8.4	38.8	9.1	9.0 Ga
10.2	4.7	0.5	9.0	51.5	13.9	10.2	14.3	57.0	10.1	42.3	51.9	
10.2	7.5	16.0	9.3	58.0	1.2	8.8	18.3	25.9	9.7	48.8	52.6	
8.6	9.0	11.3	10.2	17 0.0	43.1	10.2	21.3	3.3	9.3	50.1	13.0	
9.9	9.5	14.5	9.8	4.5	5.6	10.1	22.8	5.0	9.2	50.9	34.0	
10.2	12.0	7.1	9.1	4.7	58.2	9.6	24.8	44.4	9.3	51.1	34.4	
9.8	19.5	48.1	10.2	5.5	8.0	9.5	32.8	26.1	10.2	52.3	55.5	
10.2	19.5	51.5	10.2	7.5	10.3	9.8	35.3	39.8	9.6	54.8	42.0	
9.6	45.5	39.8	9.9	9.0	59.3	10.1	37.3	22.1	9.5	55.9	0.9	
10.0	45.5	49.4	10.0	16.5	12.5	8.6	42.8	19.7	8.9	58.6	13.7	
9.6	49.0	4.6	10.1	21.0	27.1	10.0	47.8	55.4	10.2	24 4.3	43.4	
10.1	59.0	34.1	9.9	21.5	16.2	10.1	58.8	46.2	10.1	8.8	38.9	
9.6	14 3.5	53.6	10.1	21.5	26.1	9.3	21 1.8	43.7	8.4	12.6	29.8	9.0
10.2	3.5	5.2	10.1	25.5	28.0	9.8	11.3	51.0	10.1	15.3	37.3	
10.2	4.5	16.0	10.1	29.5	10.1	10.2	11.8	6.0	10.2	19.8	32.2	
9.6	6.5	12.2	6.7	33.0	56.9	6.5 GSt*	9.5	12.3	14.1	8.5	22.3	53.6
9.8	11.0	28.5	9.9	39.0	36.6	9.3	14.8	21.7	10.2	23.6	25.8	
9.8	19.5	11.4	10.0	41.7	0.1	9.2	17.3	32.3	9.0	25.3	14.1	
8.8	22.0	1.9	10.0	49.0	35.4	9.8	23.8	37.5	9.7	25.6	55.7	
9.5	29.0	18.8	10.1	49.5	22.2	10.0	29.3	43.4	10.2	27.8	18.1	
10.2	35.5	26.3	9.8	53.0	32.1	9.7	38.8	43.5	10.2	29.3	42.6	
10.0	38.5	30.1	9.8	18 0.0	22.7	9.9	39.3	8.3	9.1	30.1	23.7	
10.2	42.0	24.8	9.7	1.0	22.2	9.7	39.8	49.5	9.9	40.6	34.1	
8.6	42.5	5.5	10.2	9.5	26.3	9.6	49.3	24.1	10.1	42.8	31.1	
8.6	49.5	12.3	9.0	10.5	40.1	10.2	53.8	57.2	10.2	43.8	46.6	
10.2	56.5	45.5	9.3	11.5	46.6	10.2	58.8	35.0	9.2	45.6	16.1	
8.3	15 4.0	25.4	9.9	11.5	17.0	10.2	22 1.3	48.9	9.3	49.8	6.4	
10.0	4.0	49.1	9.1	15.0	9.9	10.1	2.8	0.4	10.1	50.8	57.1	
9.2	4.5	22.7	8.7	16.0	2.0	10.0	11.8	40.5	10.0	55.3	34.5	
8.6	10.5	42.9	9.3	19.5	4.7	9.8	19.8	33.9	10.2	59.3	5.1	
9.5	13.5	38.5	9.8	24.0	27.0	10.1	22.3	47.9	8.8	59.9	36.8	10.0
10.0	19.5	21.8	10.0	26.0	36.4	10.1	22.8	37.6	8.2	25 0.1	37.3	8.0
9.8	23.5	13.9	10.2	26.0	53.4	9.7	24.3	46.9	10.0	5.4	58.2	
9.8	30.5	59.1	10.2	27.0	56.7	10.0	25.8	9.4	10.0	5.9	31.5	
9.7	33.5	21.5	10.2	28.8	49.2	10.0	29.3	11.4	9.7	10.9	32.0	
9.6	36.0	54.4	9.7	29.0	18.4	10.2	29.8	7.0	9.3	11.4	41.0	10.0
10.1	39.5	36.1	9.2	38.0	47.4	7.6	34.8	43.2	8.4	23.0	1.0	9.0 Ga
10.1	40.0	47.4	9.7	39.5	28.3	10.2	35.3	10.7	10.0	32.9	48.9	
9.8	42.5	22.9	9.7	41.3	51.7	10.2	37.8	53.5	9.3	49.4	17.5	
10.2	43.0	7.9	9.8	44.3	43.6	9.8	39.8	47.3	8.8	52.4	31.8	
9.3	44.5	11.9	9.7	48.8	53.8	9.8	44.3	14.0	10.0	59.9	7.4	
10.2	49.5	28.5	10.2	49.3	46.7	9.6	47.8	27.9	7.9	26 7.4	15.7	8.0 GWa
10.2	53.5	34.1	9.7	53.8	57.8	9.5	49.3	13.6	8.8	7.9	40.5	
8.6	57.5	56.3	10.1	59.3	50.2	9.8	51.8	23.4	8.6	13.4	22.5	8.5
10.1	59.5	38.6	9.6	19 5.3	32.3	9.8	55.3	27.2	9.9	15.4	55.8	
25pr.	+ 1 3.5	-4.6	+ 1 3.6	-4.7		+ 1 3.7	-4.8		+ 1 3.9	-4.9		

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
mag.	8h.	-25°		mag.	8h.	-25°		mag.	8h.	-25°		mag.	8h.	-25°	
	m	s	'		m	s	'		m	s	'		m	s	'
9.4	26	15.4	39.0	9.2	31	46.8	33.4	9.4	37	27.6	34.9	8.5	45	23.7	39.1
8.5		18.4	5.0	8.6		48.3	38.2	10.0		28.6	56.7	9.3		29.2	21.3
8.6		19.9	11.2	9.1		50.8	27.3	9.3		39.6	43.6	8.9		30.2	53.2
7.8		20.4	35.7	10.0		55.3	31.6	9.8		57.6	11.0	9.2		34.2	22.7
9.4		20.4	23.0	9.6		59.8	0.6	9.6		59.6	56.5	10.0		43.2	0.9
8.8		21.6	17.0	9.8		59.8	8.3	10.0	38	0.6	46.2	9.6		54.7	30.9
8.6		40.1	16.3	9.0	32	4.3	35.8	9.4		9.6	37.1	10.0	46	9.2	30.0
9.8		44.6	12.7	10.0		5.3	39.6	10.0		9.6	1.0	8.6		14.2	44.3
9.6		51.1	55.8	8.9		9.8	51.7	9.3		26.1	12.9	10.0		19.2	55.4
9.9	27	0.1	31.0	9.3		14.8	15.1	9.4		28.6	23.7	9.6		26.2	30.0
10.0		0.3	59.0	9.9		18.8	53.1	9.3		29.6	17.7	10.0		30.2	28.2
10.0		1.2	0.3	5.4		31.3	49.1	9.8		40.1	50.6	10.0		38.7	39.5
10.0		4.1	34.7	9.6		33.3	12.7	9.6		42.6	52.7	9.9		41.7	24.4
9.2		10.6	12.1	9.2		35.3	3.0	9.7		50.1	30.4	9.0		45.2	4.7
10.0		20.6	57.9	10.0		38.3	31.0	9.6	39	1.6	54.9	9.2		55.4	33.5
9.4		22.1	8.9	8.8		39.8	46.1	9.4		2.6	55.4	9.6		59.0	58.2
10.0		28.6	13.4	10.0		43.8	12.6	9.9		16.6	44.4	10.2	47	3.7	42.2
8.9		30.1	58.9	10.0		44.8	25.0	9.3		24.6	39.9	10.2		6.7	6.3
9.2		30.1	16.7	10.0		44.8	43.0	9.0		27.1	5.5	9.8		9.5	56.1
8.8		50.1	36.8	9.6		56.3	20.6	9.1		32.1	16.8	9.7		11.0	58.0
8.7		57.1	45.6	9.0		59.8	59.9	8.2		34.3	55.6	9.8		21.7	37.1
9.0	28	10.1	0.3	9.4	33	14.3	38.4	9.6		51.3	3.0	10.2		33.7	41.1
8.6		17.1	19.0	9.9		19.8	20.3	8.8		59.3	31.2	10.2		36.2	14.9
9.9		25.0	4.5	9.4		22.8	44.3	9.2		59.3	18.6	9.9		37.5	47.8
9.2		30.1	41.7	9.9		29.3	12.9	9.8	40	9.8	45.8	9.8		40.0	48.8
9.7		46.1	27.0	9.7		49.8	8.7	9.9		14.3	23.3	10.2	48	1.7	5.4
10.0		48.0	28.0	9.7		49.8	39.3	9.2		15.8	44.6	9.8		7.7	11.8
9.4		50.1	28.1	9.4	34	1.8	30.1	9.6		19.8	14.0	9.0		16.7	32.4
9.9		52.6	31.2	9.2		12.3	43.6	9.1		20.3	9.4	9.9		16.7	0.4
9.0		57.6	46.1	10.0		13.8	26.9	9.1		22.8	13.9	9.6		22.2	27.0
9.9	29	3.6	9.0	9.3		29.8	45.6	9.4		24.3	37.1	10.2		32.2	13.9
9.9		11.6	6.4	9.4		32.8	42.8	9.9		52.8	47.8	9.0		41.9	31.1
9.8		23.6	41.0	9.9		50.8	52.5	9.8	41	4.3	43.7	10.2		42.9	32.7
9.8		24.1	17.4	9.4		51.3	38.1	10.0		9.3	26.1	10.2		53.4	37.3
9.6		30.1	39.5	9.6		53.8	18.2	9.6		14.3	19.0	10.2		56.4	14.7
9.1		30.6	41.5	9.9		57.3	7.1	10.0		22.8	57.2	9.3	49	0.4	4.8
9.4		35.1	56.3	9.2		59.8	48.4	10.0		39.3	29.9	10.2		1.4	16.2
9.8		54.6	36.9	9.2		59.8	48.9	9.9		59.8	43.1	9.9		6.4	54.9
10.0	30	13.0	12.8	9.4		59.8	2.6	9.6	42	1.8	17.4	9.7		6.9	59.6
9.4		13.1	29.5	9.9	35	21.8	20.1	9.9		4.3	22.3	9.4		11.4	51.7
10.0		25.1	36.2	8.9		40.6	18.4	10.0		8.1	58.0	9.7		11.9	41.8
9.6		25.6	6.1	9.6		41.6	49.7	9.1		13.8	39.7	10.2		18.9	53.1
9.2		27.2	58.0	9.8		42.1	7.1	9.6		22.3	19.5	8.1		24.9	4.9
10.0		30.1	23.3	10.0		42.6	19.7	9.4		22.8	55.0	10.2		38.9	16.4
9.4		35.1	39.0	9.4		49.1	28.9	9.0		54.3	33.0	10.0		39.4	9.1
10.0		36.1	7.1	9.4		54.9	2.3	8.5	43	8.3	42.0	10.2		56.4	20.5
10.0		39.1	3.5	9.8	36	9.6	45.7	8.4		14.3	11.6	10.2	50	2.4	59.3
9.4		40.6	55.8	8.9		24.6	13.9	9.6		54.3	4.3	9.2		21.4	31.9
9.8		45.1	46.5	9.9		39.6	50.3	9.6		54.3	55.9	10.2		25.4	7.0
9.9		46.6	25.1	9.2		40.6	40.3	8.4		55.3	57.7	8.2		32.4	46.5
9.7		47.6	22.2	9.7		44.6	17.5	9.3		58.3	45.1	9.7		33.2	1.5
10.0		51.0	11.6	10.0		49.6	22.1	9.8	44	7.3	2.5	10.2		36.9	41.4
9.3	31	1.1	31.0	9.8		50.6	21.9	10.0		9.3	16.8	10.2		45.9	1.6
9.6		20.1	13.8	9.7		52.1	22.2	9.6		10.3	30.7	9.8		47.9	23.6
9.3		22.3	19.8	9.9		54.6	7.2	9.0		12.3	3.2	10.2		56.4	2.5
9.9		24.3	4.8	10.0		59.1	30.8	10.0		12.8	38.2	9.8	51	2.4	5.7
9.9		27.8	53.7	9.8	37	8.6	33.9	10.0		29.3	24.5	9.5		12.4	30.3
9.8		28.8	29.1	9.2		10.6	52.0	8.8		39.2	18.4	10.2		12.9	59.5
10.0		37.8	23.8	9.9		21.1	50.9	8.9	45	3.2	17.6	10.0		23.4	54.3
8.0		44.6	58.9	8.2		24.1	25.8	9.4		14.7	34.2	10.2		26.4	25.3
25pr.	+ 1	4.1	-5.1		+ 1	4.4	-5.2		+ 1	4.6	-5.4		+ 1	4.9	-5.6

3961-4020.				4021-4080.				4081-4140.				4141-4200.					
mag.		-25°		mag.		-25°		mag.		-25°		mag.		-25°			
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''		
7.2	51	29.4	55.5	7.8	57	31.2	7.8	7.6	4	16.4	17.8	9.2	13	35.3	45.7	9.5	
7.2		32.4	51.2	10.2		31.7	23.2	9.8		21.4	49.2	8.5		35.3	44.4	8.5	
8.2		33.9	39.5	9.7		35.2	39.7	9.8		26.4	47.7	10.0		50.8	55.8		
8.8		35.0	5.2	7.2		40.7	0.7	10.0		27.9	48.5	10.0	14	20.2	7.6		
10.0		37.0	37.5	10.0		49.7	5.5	9.8		35.9	33.9	9.0		20.3	7.6	9.0	
9.3		40.0	13.5	9.8		50.2	57.4	10.0		41.4	3.5	8.7		31.5	2.7	8.8	
10.2		45.5	10.0	10.0		52.7	20.6	9.8		45.4	50.1	9.4		35.3	18.1	a	
9.7		46.0	24.7	9.7	58	5.7	49.0	10.2		57.9	21.6	8.2		41.3	6.0	8.5	
9.2		52.5	32.5	9.6		8.2	20.9	7.6	5	0.4	46.7	10.0	15	43.3	6.8		
10.2		56.0	50.1	9.2		13.2	39.2	10.2		0.4	50.2	9.8		43.8	5.7		
10.2	52	22.5	6.9	10.2		14.2	49.1	10.2		2.4	53.0	10.0		49.8	59.1		
10.0		26.5	7.7	9.8		21.7	30.1	10.2		17.4	35.7	7.0		58.3	26.0	5.2	
10.0		31.0	31.8	10.2		29.7	12.9	10.2		22.9	32.2	7.7	16	13.3	39.0	8.3	
8.4		50.0	52.0	9.8		32.2	0.3	9.8		42.4	38.7	10.0		50.3	21.7		
9.7	53	0.5	21.6	10.2		34.7	47.7	9.7		46.1	58.4	10.0	17	5.8	36.9		
9.6		6.0	10.1	9.8		36.7	6.2	9.8		53.4	26.0	10.0		10.3	19.4		
9.8		7.0	29.0	9.8		41.9	0.2	10.2		57.4	57.7	8.7		50.3	37.9	8.5	
10.2		14.0	39.0	10.0		47.2	5.9	10.0	6	10.9	44.8	8.9	19	50.3	4.1	9.5	
10.2		34.0	6.9	10.2		58.7	40.2	10.2		34.9	48.5	9.2		51.3	18.3		
9.8		36.3	59.1	10.0		59.7	54.6	8.8		48.4	57.9	9.2		53.3	56.1		
10.0		38.5	37.3	10.2	59	9.7	53.3	9.7		51.9	10.3	10.0	20	14.3	1.2		
10.0		41.5	49.9	10.2		10.4	1.9	7.9		54.9	5.3	10.0		57.3	29.9		
10.2		55.5	41.6	10.2		16.7	43.3	9.6		55.4	50.2	10.0		21	13.8	7.7	
10.2	54	3.0	46.0	8.2		20.2	10.0	10.2	7	3.4	49.1	10.0		50.3	36.1		
10.2		15.0	4.9	9.8		30.7	36.9	9.2		4.4	59.9	9.2		52.3	14.3		
9.2		26.0	21.6	10.2		40.7	40.3	10.2		4.9	39.9	10.0	22	5.3	0.6		
10.2		33.0	30.2	10.2		45.2	5.2	10.0		8.4	12.6	8.2		10.3	49.1	8.5	
10.2		35.5	29.0	10.2	0	21.2	15.5	10.0		14.9	31.6	9.6		30.3	54.0	9.5	
10.2		37.0	24.3	9.2		28.7	9.5	9.2		24.9	6.7	9.2		32.4	16.5		
9.9		43.0	1.1	8.8		33.7	44.3	9.9		35.9	46.3	7.6		51.9	45.2	8.5	
10.2		55.0	49.8	9.2		50.2	5.7	9.8		39.9	42.3	7.4	23	7.9	48.1	8.0	
9.8		59.0	33.3	10.2		57.7	39.5	10.2		44.9	7.0	9.2		14.9	35.7		
9.8	55	6.0	16.4	9.6		59.2	9.5	9.7		45.9	3.4	9.0		24.9	40.9		
10.2		16.0	20.1	10.2	1	0.7	35.0	9.5	8	4.9	47.9	8.2		36.9	6.2	8.5	
9.8		29.2	7.0	10.2		8.2	16.5	9.6		4.9	12.1	9.4	24	14.9	2.7	9.0	
10.2		35.7	40.0	10.2		9.2	44.3	10.2		9.9	12.5	10.0		34.6	57.7		
9.7		39.7	14.7	10.0		10.2	40.1	10.2		20.9	27.1	10.0		36.9	49.9		
8.9		44.7	1.9	10.2		21.7	55.4	10.0		31.9	2.8	9.2		38.4	28.0		
10.2		51.2	46.9	10.2		29.7	33.8	9.0		50.9	41.0	7.6	25	4.9	4.1	7.8	
10.2		56.2	54.8	10.2		38.2	55.1	10.0		55.4	31.0	10.0	26	6.9	14.1		
9.8	56	3.7	53.6	10.2		46.2	21.4	9.6		55.7	41.9	9.4		29.6	24.3		
10.2		3.7	10.4	9.4		52.7	55.1	9.2	9	3.7	27.2	8.9		34.4	2.4	9.0	
10.0		21.7	45.2	10.2	2	0.2	46.0	10.2		10.4	34.0	9.6		37.4	5.9		
10.2		21.7	57.7	9.5		17.7	54.9	9.7		20.7	19.6	8.0		56.9	52.5	8.5	
10.0		24.2	58.3	10.2		18.2	55.5	10.2		24.9	50.4	9.8		59.9	6.6	a	
9.8		32.7	7.0	9.7		26.4	57.1	9.8		28.4	31.0	10.0	27	1.4	18.0		
10.2		32.7	47.7	7.4		33.7	21.3	10.0		41.3	54.7	9.6		1.5	2.0	a	
9.8		39.7	23.7	10.2		45.2	48.7	10.0		44.8	32.9	10.0		24.9	7.3		
9.0		58.2	33.9	10.2		50.7	8.2	9.8		49.3	10.7	10.0		44.4	28.0		
10.2		59.7	27.2	10.2		51.7	46.2	9.8		57.1	42.8	9.6	28	4.4	50.1	9.5	
9.9		59.9	56.6	10.2	3	1.9	12.7	10.0	10	11.3	58.1	9.2		5.9	11.3	8.5	
9.1	57	2.7	45.0	8.0		10.4	20.0	10.0		31.2	40.8	9.2		35.9	51.0		
10.2		5.2	27.0	10.2		14.4	39.5	10.0		45.5	55.5	8.8		49.9	57.9		
10.2		8.2	9.1	10.2		15.4	47.1	10.0		48.0	55.2	9.4		51.9	4.9	b	
10.2		10.7	58.9	9.8		19.4	31.6	10.0	11	14.0	10.9	10.0		58.9	13.8		
9.8		11.7	54.2	9.2		21.4	55.2	9.4		14.5	25.3	8.9	29	4.9	21.2	9.0	
10.0		15.7	24.2	9.4		37.4	7.5	10.0		49.0	0.6	10.0		39.9	19.8		
10.2		16.2	27.9	9.7		51.9	23.1	10.0		50.5	27.4	9.2		56.9	31.0	9.5	
9.4		20.7	23.8	9.3	4	1.4	30.5	9.8	12	5.5	34.0	9.6	30	9.9	19.4	9.0	
9.8		21.7	13.2	10.2		11.4	42.9	9.0		48.8	15.2	10.0		13.0	24.1		
25pr.	+ 1	5.2	-5.8						+ 1	5.9	-6.1			+ 1	6.7	-6.5	

4201-4260.				4261-4320.				4321-4380.				4381-4440.			
mag.	g ^h .	-25°	l	mag.	g ^h .	-25°		mag.	g ^h -10 ^h .	-25°		mag.	10 ^h .	-25°	
	m s			m s				m s				m s			
10.0	30	13.0	41.2	9.8	40	50.0	44.6	10.0	52	45.6	17.7	9.1	0	39.2	15.1
8.9		27.0	21.4	9.4		54.5	3.6	9.8	53	8.1	39.6	8.0		41.2	59.4
8.2		34.0	24.2	9.5		55.0	56.1	9.0		37.6	35.5	9.9		42.7	50.6
9.8		44.0	1.8	9.6	41	25.0	50.7	9.0		59.1	44.4	9.8		49.7	16.6
10.0		52.2	59.1	10.0		41.0	9.2	9.4	54	1.1	41.6	10.2		52.5	59.3
10.0	31	7.7	51.4	9.3		46.5	43.2	9.8		7.6	23.9	9.7		54.9	48.6
9.6		16.1	48.4	10.0	42	0.0	50.6	10.0		8.6	40.8	9.6		58.7	9.8
8.4		29.4	32.0	9.7		4.8	18.6	8.2		9.6	48.0	9.8	I	5.7	17.7
9.5		37.7	4.2	10.0		4.8	14.4	10.0		29.3	24.9	9.6		25.7	27.1
9.7		43.6	20.6	8.9		11.8	19.4	10.0		38.0	16.2	9.9		29.7	6.6
9.3		56.6	16.2	9.8		40.8	4.4	10.2		39.0	12.6	9.5		31.7	3.5
9.4	32	5.6	23.2	8.6		45.3	25.3	10.1		39.0	30.4	10.2		34.2	14.1
9.0		14.7	58.4	9.6		52.8	22.3	9.8		42.3	44.8	10.0		43.2	28.6
8.8		18.7	22.3	7.4	43	4.8	50.2	10.1	55	4.5	1.3	9.6		57.7	2.8
9.5		24.7	39.4	10.0		18.8	14.9	9.5		8.3	25.7	10.2	2	10.7	46.5
8.4		34.7	48.7	9.4		34.3	10.0	9.7		16.3	54.3	10.1		19.2	21.0
9.5		44.4	38.2	9.8		34.6	0.5	10.0		23.5	43.7	8.8		21.7	43.9
9.0		49.2	25.1	9.0		34.8	17.4	9.9		40.0	39.5	9.6		28.2	19.5
9.5		50.7	52.5	8.8	44	5.3	26.1	10.1		40.5	44.3	10.1		29.7	54.3
10.0	33	49.8	15.8	9.0		19.8	17.7	10.2		43.5	42.3	9.7		30.7	25.0
10.0		54.2	36.0	8.9		27.8	34.9	10.0		43.5	46.6	9.3		46.2	49.3
10.0	34	24.2	21.6	8.8		48.3	42.1	7.9	56	2.0	51.8	10.2		47.7	30.9
9.5		27.0	44.5	10.0		58.8	6.4	9.3		20.0	10.5	9.9		49.7	15.8
10.0		46.0	15.9	9.4		59.3	24.9	9.7		24.0	59.5	8.8		55.5	4.1
9.4		55.0	38.0	8.4	45	7.3	45.0	9.9		24.5	41.7	8.9		56.5	1.3
8.2		56.0	45.0	10.0		10.3	3.4	9.6		27.5	14.4	9.7		59.5	18.9
10.0	35	1.0	58.0	10.0		10.7	59.7	9.5		35.0	39.6	10.0	3	14.5	10.1
9.6		27.5	39.1	10.0		24.8	25.7	10.1		49.0	20.9	9.9		19.5	7.0
9.4		31.0	32.6	8.8		36.3	21.0	8.5		50.0	52.7	8.9		20.5	10.9
9.5		42.0	17.8	8.8		49.8	18.1	10.2		51.0	11.6	9.8		20.5	36.2
8.4		55.0	19.7	9.7		57.3	5.5	9.9		54.5	36.4	9.7		21.0	35.6
9.7	36	4.0	3.6	8.9	46	1.3	7.2	10.2		57.8	58.7	9.7		32.7	57.9
8.4		5.0	23.8	10.0		48.3	48.1	8.3		59.5	54.3	10.2		36.5	9.1
9.2		19.5	40.0	10.0	47	3.7	44.3	9.9		59.5	39.3	9.9		39.5	13.7
9.4		23.0	2.5	10.0		22.3	19.0	9.7	57	0.0	18.8	10.2		57.5	42.2
9.8		25.0	41.3	8.7		40.8	34.3	10.2		1.5	15.9	10.1	4	0.0	20.6
9.2		50.0	47.0	9.2		42.8	32.6	9.6		11.0	14.9	10.2		11.5	45.4
8.9		55.0	50.3	9.4		46.8	55.9	9.7		15.5	21.6	10.1		12.0	21.0
9.4	37	19.1	58.8	7.0	48	32.3	20.7	9.7		20.0	37.4	10.2		21.5	57.0
9.4		38.0	8.1	9.0		34.8	33.7	9.9		20.0	16.3	9.9		23.0	33.0
8.7	38	11.0	23.3	9.6		59.8	12.4	9.9		40.5	57.3	8.9		29.5	28.0
9.6		15.0	57.1	10.0	49	26.8	16.0	10.2		57.0	32.1	9.8		30.5	19.7
10.0		16.0	17.3	8.6		27.5	57.0	9.9	58	2.0	5.3	10.2		35.0	21.9
9.5		40.0	43.4	9.2		29.8	34.3	9.9		32.0	31.8	9.8		46.0	53.5
9.5		54.5	9.0	9.8	50	11.1	39.6	10.2		38.0	37.2	10.0		51.5	34.8
10.0		55.0	41.4	9.7		11.1	28.3	9.8		48.0	39.2	8.8		54.0	31.3
9.2	39	0.0	25.5	10.0		14.8	10.3	9.9		51.5	32.9	9.7	5	0.7	57.1
10.0		0.5	55.5	10.0		34.6	53.8	9.9		52.5	11.2	9.7		2.0	42.6
9.4		15.0	57.9	8.9		40.6	30.4	10.1		58.1	21.4	10.0		26.0	27.7
8.9		22.0	59.5	8.8		47.6	12.4	10.1		59.7	39.4	9.8		36.5	33.5
8.9		30.0	42.1	10.0		50.6	48.9	9.9	59	8.2	48.5	9.8		42.0	40.9
8.9		45.0	13.3	9.8		54.6	54.4	9.5		20.2	22.1	9.2		56.5	36.3
8.6		48.0	8.4	9.8	51	0.1	38.2	10.2		21.3	0.2	10.2		57.0	20.5
9.0	40	5.0	13.4	6.6		6.6	57.5	9.9		22.9	22.1	9.9		59.0	17.2
9.6		10.0	18.9	9.5		19.6	22.0	8.7		44.2	4.6	8.6	6	4.5	50.6
8.5		23.0	41.1	10.0		59.6	43.0	9.7		44.7	44.5	9.1		4.8	20.5
8.9		35.5	44.6	9.7	52	7.6	35.0	10.0		53.7	7.8	9.9		8.5	15.4
10.0		38.0	47.1	10.0		9.6	30.9	8.8	0	11.7	13.7	10.1		18.0	17.2
8.5		47.5	23.8	9.8		10.6	28.9	8.7		13.7	37.0	9.7		19.0	33.5
8.4		50.0	5.8	9.3		29.6	6.1	10.0		22.7	24.5	10.2		29.5	10.1
25pr.	+1	7.5	-6.8	+1	8.0	-7.0		+1	8.6	-7.2		+1	9.0	-7.8	

4441-4500.				4501-4560.				4561-4620.				4621-4680.			
mag.	10 ^h .	-25°		mag.	10 ^h .	-25°		mag.	10 ^h .	-25°		mag.	10 ^h .	-25°	
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''
3.3	6	38.0	5.2	9.3	11	37.2	5.5 -	9.4	17	3.6	5.6	9.4	35	9.9	16.4
		39.5	40.7	9.9		39.2	4.5	9.7		5.6	55.0	9.6		18.4	50.3
		46.0	57.6	10.2		43.2	26.4	9.7		8.0	32.2	9.6		44.4	12.5
		54.0	9.1	10.2		48.2	57.6	10.2		8.1	18.9	9.6		47.9	41.4
	7	4.0	15.6	9.7		49.2	10.3	9.5		8.1	51.1	8.4		50.9	12.8
		10.0	14.1	10.2		53.2	46.7	10.2		14.1	42.6	7.3		56.7	23.5
		10.0	1.3	9.9	12	8.7	14.8	9.8		18.6	37.7	9.4	36	35.7	35.5
		17.5	54.0	10.1		10.2	8.6	8.8		21.6	3.4	8.8		40.2	40.8
		18.5	49.9	9.6		29.2	8.9	9.3		34.1	24.2	9.6	37	2.7	3.0
		19.5	33.7	9.6		29.2	17.4	10.0		40.0	43.0	8.4		12.7	12.7
		25.5	55.3	8.1		37.2	52.4	7.2		40.4	25.5	9.6	38	24.7	22.0
		27.0	42.6	10.2		38.7	14.5	9.2	18	7.4	24.3	9.6		32.9	56.7
		50.5	10.3	9.7		41.4	59.3	9.2		16.4	56.2	9.6		40.7	51.5
		51.5	53.5	9.1		41.7	33.0	9.6		27.4	45.9	10.2	39	33.0	15.3
		52.0	57.9	9.5		53.2	7.5	9.6		41.9	20.3	10.2		55.0	7.3
		52.0	44.9	9.9		58.2	14.0	9.6		58.9	9.7	9.4		57.5	8.0
		58.5	30.9	9.5	13	0.2	36.0	9.6	19	4.8	0.9	7.1	40	46.5	23.5
		59.0	21.9	9.7		0.7	53.9	7.8		14.4	43.4	7.9		49.5	44.3
		59.5	24.1	9.9		7.2	5.4	8.8		31.4	57.9	9.8	41	34.5	54.3
		59.5	24.9	9.1		21.2	4.4	9.6		58.9	44.2	9.6		38.5	22.2
		13.5	51.1	9.9		27.6	12.9	9.6	20	0.4	39.9	7.8	42	9.0	44.3
		19.5	1.5	9.7		29.1	18.0	9.4		14.9	30.9	8.8	43	13.0	34.3
		28.0	13.9	9.7		33.6	5.0	8.6		19.4	3.8	10.2	44	34.5	10.7
		29.5	22.7	9.7		45.1	11.7	8.0	22	18.9	10.2	10.2	45	12.5	20.1
		31.0	30.5	9.9		48.7	1.9	9.2		19.4	33.0	9.8		21.5	34.8
		43.5	33.1	10.0		50.1	34.0	9.6		28.4	30.3	10.2	46	24.0	34.8
		50.5	47.9	10.1		55.6	54.8	9.6		45.4	57.7	9.2		39.5	12.9
		52.0	16.9	10.2		57.0	4.2	9.6	23	9.4	1.2	8.8		44.0	54.9
		55.5	35.9	10.2	14	2.1	22.9	8.8		9.4	19.2	9.6	48	31.5	35.5
	9	0.0	11.3	9.7		5.1	11.7	7.2		59.4	50.6	9.4		41.0	1.2
		11.5	21.7	8.8		8.1	45.5	9.6		59.8	59.6	8.4	49	37.5	41.0
		17.5	12.7	10.2		10.6	31.3	9.6	25	0.5	50.2	8.6	50	41.5	40.7
		20.0	30.1	10.0		14.1	24.0	8.0		1.6	27.2	9.4		42.5	35.0
		20.0	38.9	10.0		16.6	44.5	8.2		19.6	21.0	9.4		51	26.0
		29.5	58.3	9.9		30.6	46.0	9.6	26	12.6	25.7	9.6		34.5	24.1
		35.0	7.9	9.9		37.6	2.6	9.6		57.6	52.2	10.2		36.0	25.1
		38.0	30.1	9.7		41.1	53.6	8.2		59.3	58.1	10.2		56.0	39.6
		43.5	18.9	9.6		55.1	3.5	9.2	27	14.6	54.9	10.2	52	9.5	15.6
		54.5	31.1	9.8		55.1	25.0	8.8		37.1	48.5	9.6		16.0	22.9
	10	1.0	24.3	10.2		57.3	56.7	9.6	28	17.6	8.2	8.8		38.5	26.5
		3.5	47.9	9.9		59.1	57.3	8.0		34.1	41.1	8.8	8.8	49.5	25.7
		6.7	51.8	9.7	15	7.1	8.6	8.0	29	9.1	44.1	10.2		50.5	59.0
		9.2	24.0	9.8		16.1	17.5	9.6		9.1	41.6	10.2	53	29.5	2.9
		9.7	44.0	10.2		17.4	0.4	9.6		15.6	20.0	9.4		44.5	34.4
		9.7	53.5	10.2		20.6	6.3	9.6		59.6	25.3	9.5		58.5	4.6
		14.2	58.4	8.2		35.6	38.0	9.2	30	11.6	59.3	8.8	54	3.5	21.6
		16.7	4.6	10.0		43.6	12.3	9.4		27.6	30.6	9.8		41.0	41.0
		17.2	40.5	9.7		49.1	28.1	8.6		33.6	12.2	8.8		31.5	11.0
		20.2	29.3	9.7		53.1	3.4	8.8	31	1.6	1.0	7.7		41.5	2.8
		23.2	17.9	9.9	16	0.6	22.7	9.2		9.6	20.8	8.5	56	39.0	12.9
		24.2	19.4	9.8		10.6	42.3	9.0		16.9	39.2	9.4	57	2.0	44.6
		42.7	54.9	9.9		11.1	38.7	8.8		39.4	56.1	10.2		17.5	15.0
		44.7	47.8	9.5		17.6	22.0	9.0	32	12.9	39.9	10.2		28.0	21.0
		49.2	5.2	10.2		25.1	25.7	8.4		36.9	26.4	9.3		32.5	10.0
		52.2	42.7	9.6		38.1	26.4	7.4	33	13.9	11.9	8.5		36.5	15.6
		54.2	11.0	9.8		49.1	33.7	9.6		19.9	5.5	10.0		39.3	37.3
		55.2	43.1	9.0		52.0	54.8	8.2		27.9	39.0	9.2		52.3	6.9
		0.7	36.1	9.9		56.6	30.2	9.6		56.9	0.9	9.2	58	3.3	17.0
	11	7.2	18.8	10.2		58.1	10.9	9.6	34	54.4	48.0	8.8		32.0	58.9
		23.5	1.5	9.3	17	2.8	27.5	9.6		54.9	48.2	10.0	59	35.8	55.5
25pr.	+ 1	9.4	-7.4	+ 1	9.7	-7.5		+ 1	10.4	-7.6		+ 1	11.9	-8.0	

4681-4740.				4741-4800.				4801-4860.				4861-4920.			
mag.		10 ^h -11 ^h .	-25°	mag.		11 ^h .	-25°	mag.		11 ^h .	-25°	mag.		11 ^h -12 ^h .	-25°
9.5	59	50.3	16.7	10.2	15	51.6	0.0	10.0	33	22.5	43.3	8.6	55	32.6	46.5
9.4	0	0.0	58.0	10.0	16	59.3	35.7	9.8	27.0	8.5		10.0	48.1	37.5	9.0 Ga
9.6		40.8	40.2	10.2	8.2	1.8	34.5	10.0	29.5	23.0		8.4	58.6	44.5	8.5 Wa
9.4		44.8	23.5	8.2	7.0	7.0	58.6	8.3	44.2	56.9	8.2 Ga	8.9	56	13.1	40.1
9.0	1	3.9	24.8	10.2	10.8	10.8	52.9	10.0	34	18.5	44.5	9.4	41.1	30.3	9.0 a
10.2		6.6	56.6	10.2	44.1	29.2		10.0	21.5	24.4		10.0	57	22.6	9.5
9.8		11.6	13.8	9.4	48.1	6.7	9.0	9.1	33.0	22.3	10.0	9.5	58	46.5	7.3
10.0		11.9	34.0	9.0	17	3.6	37.4	8.2	45.0	32.7	8.6 Ga	8.9	59	2.5	59.2
8.8		16.9	14.2	9.6	42.1	31.9		9.8	47.5	16.2		9.6	59	2.5	53.5
10.2		42.3	34.6	10.2	56.1	38.6		7.7	35	7.7	58.7	10.1	4.5	25.3	25.3
10.0	2	18.9	28.5	8.8	18	53.1	31.6	9.0	37	52.0	46.7	9.6	26.5	55.3	9.0 -
10.0		22.4	46.2	9.8	19	8.1	19.9	8.6	39	2.0	32.5	8.4	36.5	5.7	8.8 ≡
10.2		41.4	9.8	10.2	8.4	32.6	32.9	9.2	2.0	19.4	9.2 -	10.0	45.0	41.7	
9.6		47.3	19.1	8.4	37.6	20.4	8.5 GWa	10.0	59.5	48.0		8.4	56.5	42.2	8.8 -
9.6		58.9	54.8	9.9	50.1	48.3		10.0	40	17.5	25.7	9.8	0	2.5	52.1
9.8	3	3.4	59.6	8.8	20	3.6	33.8	9.3	43.0	43.4		10.1	13.0	27.8	
8.7		22.4	18.7	8.6	9.1	4.1	8.5 Ga	9.0	48.0	17.4	8.2 GW≡	9.6	13.5	54.7	
9.6		25.9	22.0	9.0	12.1	15.3	9.0 a	9.8	41	1.5	51.2	9.8	41.0	18.2	
10.2	4	1.9	18.4	10.2	21	6.1	7.3	7.4	2.0	16.0	7.5 GWa	10.1	1	22.5	11.7
9.8		12.4	40.6	7.5	26.1	10.4	7.0 GSat	8.6	23.0	16.8	8.5 Wa	9.6	24.5	35.0	
7.6		25.4	18.9	9.0	54.6	34.4	9.0 a	10.0	36.5	5.4		8.2	34.0	30.4	9.2 >
9.8		39.9	56.8	9.6	22	3.1	3.6	10.0	48.0	34.9		10.0	37.5	32.0	
8.8		49.9	6.3	9.8	22.1	17.0	9.0 =	8.7	57.5	50.3		9.8	40.5	33.6	
8.4	5	11.9	14.7	9.4	22.6	10.7		10.0	42	13.0	50.2	10.0	2	5.0	3.1
10.0		19.4	43.7	8.4	33.1	40.2	8.0 Ga	8.7	17.0	12.6	8.5 Ga	9.8	12.5	46.2	
10.2		33.9	20.7	9.0	34.1	9.9	9.0 -	8.4	34.0	21.2	8.5 a	10.0	12.5	6.3	
7.7		52.9	27.2	8.7	42.1	37.8	8.0 Ga	10.0	56.0	10.0		9.8	23.5	31.4	
9.8	6	18.9	53.2	9.0	49.8	56.7	8.5	9.6	43	18.8	27.3	10.1	59.7	2.8	
8.8		42.3	6.6	10.2	23	8.6	38.0	10.0	22.8	1.5		9.8	3	9.6	2.3
9.8		54.8	17.1	8.4	12.3	40.4	8.5 a	9.8	39.3	6.6		10.1	37.5	15.3	10.0 -
7.4	7	6.3	47.2	9.8	19.8	40.0		10.0	44	2.3	27.7	9.5	40.5	48.0	
9.6		7.3	52.1	10.0	37.6	28.1		10.0	55.3	50.9		7.9	5	32.5	14.7
9.4		12.8	7.4	9.8	44.8	50.5		9.8	45	4.8	8.0	9.3	47.5	53.4	
9.8		53.3	45.5	8.8	51.2	51.7	8.8	9.2	17.3	12.9		8.9	6	0.5	10.1
10.2	8	27.4	59.9	10.0	53.5	22.2		10.0	17.8	32.2		7.9	13.2	7.5	8.6 a
8.4		30.3	23.6	6.8	24	8.0	6.6	9.6	25.3	34.2		10.1	26.2	15.4	
9.8		32.8	21.1	9.2	33.0	1.9	9.2 a	10.0	39.8	53.4		10.0	38.2	17.5	
9.1		58.3	5.5	9.3	43.7	5.1		9.8	46	3.0	52.2	10.0	7	19.7	5.6
9.6	9	12.3	57.2	8.0	48.0	12.6	8.3 GWa	9.2	51.8	2.2		9.8	20.2	52.2	
9.6		18.3	29.8	9.8	25	29.0	55.5	9.1	47	9.5	21.4	10.0	41.2	48.9	
8.8		38.3	7.7	9.8	32.5	17.8		10.0	27.3	37.9		8.4	50.2	25.8	8.0 Ga
10.2		43.8	1.1	10.0	26	26.5	15.3	8.6	30.8	8.5	8.7 Ga	9.6	55.6	1.2	
10.0		48.3	47.6	9.4	27	11.0	23.9	6.8	48	21.1	1.4	9.6	8	7.7	9.9
10.0	10	43.3	24.1	9.8	19.5	28.6	10.0	9.8	30.7	30.3		8.6	12.2	31.8	8.8 a
8.6		54.8	26.9	9.8	20.5	7.4	9.5 ≡	8.8	50	10.7	44.9	9.0	49.2	9.3	9.0 ≡
9.2	11	8.3	37.7	7.9	23.5	50.1	8.0 a	8.4	11.2	50.5	8.7 Ga	9.4	9	18.9	30.8
10.0		28.3	42.7	9.2	28	8.5	23.6	9.0	55.2	53.9	9.2	9.8	26.0	21.3	9.2
8.8		29.8	30.5	9.2	26.5	4.7		8.9	56.7	27.0	9.0 ≡	10.1	30.7	23.5	
9.0		54.3	15.6	9.3	29	12.0	13.0	8.8	51	11.7	50.0	8.0	32.2	52.3	8.5 W=
10.0	12	11.3	24.2	9.2	31.5	17.9	9.0 -	10.1	39.7	7.0		9.0	34.9	54.3	9.5 W
8.5		23.3	54.9	9.8	49.5	8.5		7.0	52	32.1	12.7	9.0	50.2	30.5	9.0
10.2		57.3	55.4	8.6	30	3.0	3.5	8.9	42.6	3.9	9.0 ≡	10.0	56.4	23.0	
10.0	13	6.8	23.1	9.0	43.5	29.1	9.5 =	10.0	53	10.1	56.7	10.2	10	13.2	23.4
9.8		22.3	22.6	9.3	51.0	37.1	9.5	10.0	18.1	0.7		7.8	22.7	54.2	8.0 GW=
9.8		33.3	56.5	8.7	31	10.5	47.0	9.5	39.1	9.6		8.8	32.2	16.8	9.0 b≡
10.0		37.3	19.5	9.8	11.8	27.3		8.2	54	1.6	40.4	9.2	37.1	2.4	9.0
9.8	14	10.8	2.0	10.0	17.0	6.8		10.1	10.1	46.0		10.2	39.7	31.1	
8.2		18.3	28.1	9.0	32	7.5	36.0	10.1	19.1	18.8	=	9.4	11	37.2	19.0
9.6	15	0.8	18.5	9.8	53.5	48.1		8.2	37.1	47.1	8.2 GWa	8.9	12	6.2	52.4
10.0		49.8	23.4	10.0	33	16.0	36.5	10.1	55	7.6	58.0	10.0	9.2	50.5	9.5 W-
25pr.	+ 1	13.1	- 8.1	+ 1	14.2	- 8.2		+ 1	15.7	- 8.3		+ 1	17.1	- 8.4	

4921-4980.				4981-5040.				5041-5100.				5101-5160.			
12 ^h .		-25 ^o		12 ^h .		-25 ^o		12 ^h -13 ^h .		-25 ^o		13 ^h .		-25 ^o	
mag.	m s			mag.	m s			mag.	m s			mag.	m s		
8.3	12 25.7	32.5	9.0 W	9.6	32 59.3	39.8		10.2	46 1.2	39.4		10.0	3 32.2	49.4	
10.0	38.2	29.6		9.0	33 2.3	14.7	a	9.6	2.7	19.3	-	9.2	37.2	12.8	
8.3	57.3	24.5	8.8 GW =	9.9	34 1.5	59.7		8.6	25.7	50.5	9.5 a	9.7	39.7	18.4	
9.8	13 21.3	30.3	9.2 -	9.1	29.8	52.0	9.2	10.2	35.7	1.1		8.3	45.2	13.3	8.2 Ga
9.6	25.3	8.0	9.0	8.6	41.8	10.3	9.5 =	9.6	41.7	12.3		9.6	1.7	30.8	
10.2	14 10.3	43.2		9.0	45.8	34.5		8.1	47 20.2	4.4	8.6 Mb = l	9.5	9.7	52.1	
9.0	22.3	56.7	8.2 GW	9.4	59.8	18.5		9.3	57.7	43.9		9.2	11.7	28.7	
10.2	38.7	36.2		10.2	35 24.8	4.3		8.8	48 7.2	9.3	9.5 -	9.1	32.7	59.2	9.0
10.0	48.0	2.0		9.0	32.8	35.0	10.0	8.8	49 10.3	31.5		7.2	52.2	53.2	6.5 GStl
8.4	15 31.3	13.2	8.2 Gb = l	10.2	36 14.9	36.4		9.2	40.8	44.1		9.8	53.0	40.5	
8.3	16 20.3	0.5	8.8 = l	9.8	32.3	48.4		7.5	47.3	46.9	7.0 GSet	9.7	57.2	14.0	
8.0	51.3	46.7	8.5 GWa	9.0	49.8	47.8	9.0 =	8.4	48.8	54.5	8.2 G	9.6	5 12.2	45.4	
8.8	17 32.3	19.2	8.0 GWbl	8.2	54.3	36.9	7.5 GSa	10.2	55.3	42.2		9.8	22.7	51.0	
9.0	45.3	53.5	9.0 -	9.8	37 6.3	44.2		8.8	50 0.3	17.2	-	10.0	22.7	48.6	
10.2	46.3	31.4		9.2	43.3	23.1		9.1	12.8	52.7	9.0	10.0	34.2	49.8	
9.2	18 16.9	57.9		9.6	38 2.3	17.7		10.2	18.8	55.7		10.0	46.7	59.5	
10.2	18.8	26.0		10.0	21.8	2.5		9.9	32.3	11.4		8.3	49.2	36.7	8.7 a
9.2	29.3	50.8	9.0 -	9.6	32.8	2.5		10.1	32.4	23.6		10.0	51.7	9.2	
9.8	31.8	3.7		9.8	36.6	56.9		10.0	45.9	2.6		10.0	58.2	59.3	
7.2	43.8	17.7	7.0 GSbl	9.6	37.9	26.6		9.4	52 35.3	9.8		8.8	6 5.2	22.7	10.0
10.0	46.8	41.0		10.2	40.3	2.3		8.8	53 1.5	43.1	9.5 a	9.5	14.7	15.0	
8.5	58.8	1.1	8.9 -	9.1	52.8	43.9	-	10.2	52.3	52.0		9.4	21.2	10.2	
9.8	19 11.8	48.2		10.2	39 14.8	28.4		10.0	53.8	13.8		9.5	34.7	16.0	
9.6	12.8	4.6	10.0	10.2	22.8	48.9		9.6	55.5	15.1		9.1	41.2	5.2	9.8 -
10.2	16.8	6.5		10.0	43.3	50.0		9.0	57.0	13.3	-	9.7	47.7	23.0	
10.2	22.8	2.4		9.6	40 2.3	7.7		9.8	54 10.5	3.5		8.4	56.2	51.0	8.6 Ga
9.2	22 15.8	20.1	9.5 a	9.0	32.7	18.5	9.0 a	9.4	23.0	56.8		10.0	59.2	48.6	
9.5	29.8	33.8		9.6	41.7	33.8		9.4	58.8	6.5		10.0	7 5.2	51.8	
8.4	53.8	36.8	9.0 Ga	9.6	41 21.7	32.3		9.6	55 32.7	4.1		10.0	26.7	0.0	
8.3	23 21.8	43.5	9.0 a	10.0	22.7	28.1		9.4	54.2	47.7		9.6	41.2	3.2	
9.2	57.3	21.3		10.1	39.7	53.5		8.6	56 0.7	51.0	-	9.4	45.2	27.2	
10.0	24 27.8	49.8		9.0	41.7	12.8	a	9.9	2.7	58.2		10.0	8 13.2	46.9	
9.8	39.8	49.1		10.2	42 9.7	48.6		10.0	5.2	52.3		9.5	14.7	30.2	
9.5	25 13.8	22.4	9.5	8.8	12.7	19.1	9.2	9.4	12.2	4.4	a	10.0	19.2	3.2	
9.2	30.8	54.4		9.0	25.2	10.9	9.5 Wa	10.0	31.8	11.4		9.4	31.7	56.0	
10.2	51.8	46.8		10.2	27.7	21.3		9.7	34.8	39.9		8.8	41.7	8.6	9.2 a
9.0	26 3.8	46.2	9.0 -	9.0	35.7	50.7	a	8.4	51.7	42.2	9.0 G	9.1	49.7	39.0	
10.2	3.8	56.6		10.2	39.7	51.6		9.6	59.7	9.9		8.8	9 15.7	29.9	9.0 Ga
10.2	27.8	4.4		10.1	45.7	57.5		7.9	57 7.2	7.8	8.0 GWal	9.7	42.2	40.4	
9.2	44.8	39.9		9.1	50.2	24.8		10.0	12.2	19.6		10.0	47.7	48.4	
9.6	57.8	56.5		9.4	43 5.2	51.4		10.0	14.2	29.9		9.0	51.2	58.8	9.2
9.4	32.8	44.4	9.0 -	9.9	28.7	5.5		8.2	40.7	48.6	8.0 Ga	10.0	10 7.7	29.0	
9.8	32.8	31.9		8.1	29.2	9.5	8.0 GWal	10.0	58 2.7	26.8		9.1	12.7	47.0	
9.8	59.5	0.5	9.0 -	9.6	32.7	1.1		10.0	20.2	39.3		9.0	15.2	30.8	a
9.6	28 13.3	51.3		9.4	38.7	6.6		9.8	44.7	14.9		10.0	21.2	30.8	
9.6	56.8	59.2		9.2	46.2	58.1		9.8	47.7	20.9	a	10.0	11 29.2	34.6	
9.8	58.3	2.4		8.2	48.8	58.7	9.0 a	9.8	48.2	30.2		9.6	44.1	58.3	
10.2	29 1.8	31.6		9.8	51.7	38.8		9.8	54.7	17.0		9.1	12 10.9	58.3	
10.2	24.3	24.8		9.6	44 1.7	33.9		10.0	54.7	3.0		9.1	11.2	58.0	
8.6	29.8	18.0	9.0 Wa	9.7	21.7	1.7		9.2	59 2.2	33.8	9.5	10.0	16.7	0.2	
10.2	47.8	48.2		8.8	24.7	46.2	9.0 a	9.2	23.7	20.0	9.0 a	9.0	36.7	33.7	8.0 a
8.9	30 38.3	19.7	Wa	9.0	26.7	33.3		10.0	0 12.7	7.0		8.6	50.7	0.3	8.0 al
9.8	51.8	41.9		10.2	42.7	51.3		9.6	15.7	50.0		8.8	51.2	13.2	
10.2	55.6	31.4		8.8	50.7	14.9	9.0 G =	10.0	26.2	50.3		10.0	13 21.2	58.2	
10.2	57.4	1.9		9.0	57.2	9.1	9.0 W -	9.4	35.7	40.8	9.0 a	10.0	29.7	24.0	
9.9	31 38.6	50.4		9.6	45 4.2	6.9		9.7	55.1	57.2		10.0	35.2	32.2	
10.0	41.3	18.3		9.6	9.2	10.3		10.0	1 15.2	55.0		9.6	14 6.6	4.6	
10.2	54.3	9.8		8.3	26.7	46.5	a	9.8	21.7	49.2		10.0	7.1	47.8	
8.6	32 12.8	49.9	8.8 a	9.1	35.7	34.8		10.0	2 28.7	51.1		10.0	37.6	25.9	
9.6	55.9	2.3		10.2	57.2	24.1		9.8	3 28.2	31.5		10.0	58.6	34.8	
25pr.	+ 1 18.5	- 8.3			+ 1 19.7	- 8.2			+ 1 20.6	- 8.1			+ 1 21.5	- 8.0	

5161-5220.				5221-5280.				5281-5340.				5341-5400.			
mag.	13 ^h .	-25°		mag.	13 ^h .	-25°		mag.	13 ^h -14 ^h .	-25°		mag.	14 ^h .	-25°	
	m	s			m	s			m	s			m	s	
9.7	15	11.1	56.8	10.0	30	8.0	58.8	9.9	45	41.4	2.0	9.9	0	10.3	36.5
9.2		30.6	6.9	9.5	9.4	19.5	45.1	9.0	46	33.0	47.2	9.9	13.3	31.5	
7.6		37.6	11.2	7.0 GSbl	9.2	21.0	7.4 a	9.8		41.0	16.0	9.9	15.8	7.1	
9.1		47.1	28.3		9.6	29.5	40.4	9.8	47	11.5	10.4	9.9	32.8	59.4	
10.0	16	4.6	51.4		10.2	55.0	54.0	8.8		30.0	10.2	9.9	53.8	0.4	
9.2		26.6	6.1	9.5	8.6	31	23.5 12.3	9.0 a	9.9	50.5	57.6	9.9	1	8.8	35.4
10.0		44.0	44.8		10.2	29.5	5.4		9.6	53.5	23.9	9.9	17.8	25.9	
9.4		45.2	27.4		9.2	33.5	40.2		8.4	48	17.5 49.0	8.0 Ga	8.3	18.3	45.2 8.5 a
10.0		59.6	23.8		8.6	32	43.0 21.2	8.5 al	9.9	19.0	24.2	9.8	9.8	19.3	40.0
8.8	17	20.3	43.8 =		9.8	33	1.8 14.1		9.4	23.0	24.2	9.6	9.6	26.5	16.5
9.2		22.3	19.5		9.8	4.0	48.3		9.4	44.0	19.6	9.7	9.7	38.3	47.9
10.2		48.4	6.1		8.2	34	29.5 53.9	7.5 GSstl	9.7	44.0	36.9	8.3	8.3	50.8	47.2 8.2 a
9.5		57.3	9.6		9.2	56.5	36.3		8.6	48.0	0.1	8.4	2	12.0	44.7 9.0 a
9.8	18	27.8	40.6		10.0	35	4.5 7.3		9.3	49	49.0 24.4	9.9	9.9	13.8	32.6
9.8	19	1.3	10.4		8.9	12.5	20.1	9.5 -	9.6	52.0	42.6	9.9	9.9	15.3	28.4
9.6		11.2	53.0		10.0	17.5	2.8		9.4	50	2.0 43.0	9.9	9.9	18.0	25.1
8.0		13.7	57.3	8.2 Ga	10.0	25.7	58.0		9.9	6.5	22.0	8.4	8.4	44.2	39.1 8.5 a
8.4		19.2	32.0	8.5 Ga	10.2	42.0	10.1		7.6	56.0	23.2	9.6	9.6	51.2	8.3
9.4	20	8.2	28.4		10.2	44.5	17.6		9.9	58.0	36.6	9.8	3	6.7	23.8
9.5		44.7	33.6		8.6	36	18.5 14.3	9.0 a	9.9	51	9.5 9.9	9.2	9.2	10.3	57.2 9.5
7.6	21	8.2	45.1	7.0 GSstl	10.2	40.0	41.3		9.8	20.0	8.2	8.9	8.9	39.2	51.9
9.8	22	4.2	44.5		9.8	57.5	10.1		9.6	31.5	33.7	9.2	9.2	59.2	48.3
10.1		5.2	27.9		10.2	37	12.0 13.4		9.8	52	43.5 6.2	9.6	9.6	59.7	1.9
10.0		8.2	45.1		9.6	29.0	41.7	9.0	9.9	53	1.8 10.7	8.3	4	13.2	45.2 8.0 GWb
10.0		13.2	56.4		9.6	38	3.3 57.5	9.5	9.9	2.8	6.9	9.6	9.6	26.2	16.1
9.6		14.2	34.4		6.7	38.8	29.2	6.0 GSltπ	9.3	3.8	33.2	9.2	9.2	36.2	9.3 8.5 a
9.5		18.2	4.8	9.0 a	9.6	43.0	2.8	9.2 -	9.7	25.8	17.7	8.6	8.6	44.7	38.5 =
10.1		22.7	58.6		10.0	53.0	0.6		7.5	32.8	39.3	9.8	9.8	52.0	59.5
10.2		34.7	5.4		9.2	59.3	14.6		9.6	32.8	11.5	9.8	5	3.2	30.1
9.6		52.9	58.5		9.9	39	6.2 5.1		9.9	33.2	0.5	9.4	9.4	6.2	32.7
7.8		55.2	55.3	8.2 G=	9.9	19.2	55.4		9.3	37.3	45.9	9.2	9.2	37.2	7.2
8.6	23	1.7	24.6	8.5 a	9.9	20.7	35.1		9.9	55.3	5.5	9.4	9.4	54.2	23.0
9.8		52.7	41.1		9.9	44.8	21.9		9.7	54	17.8 11.8	10.0	6	1.2	14.3
9.0		1.7	18.6		9.1	53.7	24.3		9.9	25.8	54.7	9.4	9.4	7.2	10.9
7.2		13.9	0.6	7.7 GWbl	9.9	40	2.7 44.7		9.8	53.8	49.1	10.0	10.0	27.2	5.8
10.0		22.2	31.1		9.7	29.7	28.9		9.8	55	8.3 36.5	9.4	9.4	58.2	19.9
9.0		54.2	32.6	9.2 G	9.9	34.2	18.9		9.7	12.3	12.3	8.1	7	31.2	49.1 8.2 Ga
7.6		58.2	28.0	7.5 GSltπ	9.9	43.7	24.6		9.8	25.8	41.3	9.0	9.0	43.2	25.5
9.6	25	8.2	27.7		8.2	41	6.7 40.9	8.0 Ga	9.6	31.8	46.7	9.0	9.0	47.2	20.0
8.4		14.7	21.6	8.8 Gal	9.0	26.7	46.6		8.8	31.8	5.5	9.5	9.2	49.7	42.3
10.2		17.2	22.5		9.9	50.7	29.1	9.5	9.3	56	11.8 43.6	9.8	9.8	53.2	6.3
10.1		58.9	26.0		8.8	51.7	30.9	9.0	9.9	35.8	1.6	9.2	9.2	18.2	38.9
7.1		59.2	56.7	7.0 GSbt	8.0	42	27.2 43.5	8.0 Ga	9.2	57	8.8 37.7	10.0	10.0	47.2	53.5
10.0	26	4.2	2.7		8.8	27.7	35.8	9.2 a	8.8	19.8	48.4	9.8	9.8	57.7	50.7
8.8		12.4	30.8	9.5 Ga	9.9	32.7	54.8		9.9	27.8	53.4	8.6	8.6	9.7	14 9.2
9.8		17.9	19.3		9.4	49.7	23.8		9.3	32.8	24.2	10.0	10.0	13.7	26.3
9.5		23.4	39.9		9.9	53.2	31.9		9.9	58	2.3 7.2	9.4	9.4	22.2	28.2
10.2	27	0.4	49.7		9.2	43	20.7 22.5		9.9	7.3	44.9	9.4	9.4	37.2	25.3
10.0		8.4	26.8		8.8	21.7	31.5	9.5	9.2	16.3	25.4	9.4	9.4	32.2	6.7
8.9		24.4	1.5	9.0	8.6	33.0	26.6	9.0 a	9.9	26.8	47.5	9.8	9.8	46.3	57.2
9.6		25.9	22.1		9.8	33.5	3.2		9.2	51.8	46.6	10.0	10.0	55.7	1.6
10.2	28	33.9	5.1		8.8	39.5	25.8	9.5	7.8	59	12.6 58.9	8.0 Gatπ	8.6	11	13.2 37.8 8.5 -
10.1		59.0	49.2		9.8	45.0	33.0		9.7	28.3	24.7	9.6	9.6	33.2	27.0
9.8	29	8.0	20.9	a	9.7	44	1.5 1.0		7.8	49.8	21.6	9.2	9.2	33.2	17.6
10.0		31.5	7.9		9.4	6.0	8.4		9.6	51.3	12.1	9.8	9.8	33.7	55.9
9.4		52.0	11.3		9.6	13.0	27.4		9.8	51.8	48.1	9.0	9.0	47.7	52.9 =
5.6		53.0	51.5	5.9 GSltπ	9.9	28.0	57.6		9.7	59.3	38.2	7.1	7.1	55.2	14.8 6.2 GSke
9.6		57.0	47.9		8.3	53.5	23.0	8.5 a	9.9	0	2.8 33.9	10.0	10.0	56.3	32.8
10.2	30	4.0	14.5		9.4	45	37.0 27.8		9.9	3.8	27.3	10.0	10.0	12	38.7 15.1
9.8		7.5	20.1		9.4	40.0	51.2		9.8	6.3	12.6	10.0	10.0	13	17.2 55.0
25pr.	+1	22.4	-7.8		+1	23.4	-7.6		+1	24.4	-7.3		+1	25.1	-7.1

5401-5460.				5461-5520.				5521-5580.				5581-5640.			
14 ^h .		-25°		14 ^h .		-25°		14 ^h -15 ^h .		-25°		15 ^h .		-25°	
mag.	m s			mag.	m s			mag.	m s			mag.	m s		
8.6	13	25.2	9.5	9.4	28	22.2	24.7	10.2	51	21.0	1.7	10.2	7	37.8	48.4
10.0		33.2	14.6	9.2		23.2	25.7	10.2		47.3	42.8	10.2		39.8	44.3
9.6		43.2	43.8	9.3	29	46.2	12.1	9.4		53.3	38.0	10.2		54.3	40.6
9.8		43.7	41.1	8.4		51.7	15.1	8.8	52	32.3	16.7	9.8	8	7.8	9.0
9.4	14	21.7	24.7	9.0	30	4.2	21.0	9.8		42.8	6.1	10.2		19.3	14.0
9.2		37.2	4.8	9.6		36.2	15.0	9.2		47.8	11.6	9.4		22.3	54.2
9.2		46.2	47.2	9.3		37.7	12.0	8.5	54	24.8	42.1	9.8		26.8	34.8
9.8		48.2	38.1	9.1		56.2	58.1	9.1		54.8	21.6	10.2		27.7	45.9
9.8		53.2	15.7	9.6	31	24.2	42.1	10.2		55	44.8	10.2		34.3	33.9
9.8	15	17.2	30.7	9.9		54.2	31.1	9.3		56	2.8	9.3		48.5	58.0
9.2		53.2	22.7	9.4	32	32.7	44.0	9.5		42.8	6.5	10.2		52.3	27.1
8.6	16	0.2	13.7	9.3		45.2	10.2	10.2		57	29.8	9.0	9	4.1	29.0
8.0		12.7	15.5	7.2	33	10.2	43.0	10.2		58	0.3	9.6		6.3	22.9
8.5		32.2	47.8	9.0		12.7	13.3	9.6		18.3	53.5	9.8		28.5	10.6
9.2	17	0.7	47.2	8.2		14.2	42.5	9.2		23.8	45.5	10.0		40.5	49.0
8.2		12.7	34.9	9.3		36.2	31.3	7.0		26.8	18.0	9.4	10	9.8	34.1
9.8		13.7	42.1	9.3		40.5	0.6	9.6		36.8	19.9	8.0		16.3	47.2
10.0		20.2	11.0	7.7		40.7	53.6	8.8		47.8	34.1	9.6		52.3	8.4
9.0		26.7	34.3	8.8	34	10.2	18.0	9.6		53.8	7.6	9.4	11	8.8	5.4
9.4		27.2	36.2	9.4		26.7	13.2	8.6		59.3	37.2	9.4		22.8	50.0
10.0		37.2	24.4	9.1		32.7	18.6	8.4	59	6.8	31.9	9.8		57.7	38.8
10.0		43.2	28.2	9.2	35	13.2	12.2	10.2	0	9.3	54.9	10.0	12	1.3	20.1
10.0		46.7	57.2	9.8	36	13.4	25.2	8.8		16.8	32.8	8.8		3.8	22.9
10.0		52.2	12.1	7.7		33.2	28.7	9.2		26.8	17.1	8.3		6.8	41.6
9.8	18	3.2	4.6	9.1		36.7	30.1	10.2		43.3	28.6	9.8	13	5.8	31.6
10.0		31.2	49.5	8.6	37	6.7	21.5	10.2		47.3	52.7	7.4		16.8	31.8
9.8		42.7	49.2	9.9		23.7	7.0	9.4		49.3	46.8	9.4		21.8	30.2
8.6		45.2	48.0	8.4		47.2	17.8	9.6		53.3	39.9	8.8		25.8	8.3
10.0	19	5.2	45.3	9.2	38	3.2	22.1	10.2	1	49.8	17.8	8.3	14	57.8	0.6
9.4		35.7	0.0	9.2		34.2	32.1	8.4		59.8	12.0	8.6	15	15.3	22.9
8.6		40.7	51.2	9.6	39	43.2	24.4	10.0	2	4.8	25.0	9.4		21.3	4.0
9.2		41.2	14.4	9.9		55.7	54.8	10.0		7.3	22.5	8.8		47.3	34.1
9.2		44.2	6.1	5.7	40	6.7	5.9	8.8		21.3	38.1	9.2	16	12.8	21.6
9.6		51.2	27.1	9.2		23.7	32.9	9.3		40.3	56.2	8.7	17	3.3	19.0
10.0		57.7	36.6	7.0		27.2	33.6	10.2		42.8	53.8	8.8		6.3	45.8
9.4	20	30.1	19.4	9.3	41	46.7	6.9	9.2		43.8	21.7	8.0		14.3	13.3
9.8		38.1	57.7	9.4	42	0.2	26.0	7.4		55.3	51.2	8.2	18	40.3	10.4
10.0	21	30.6	57.9	9.1		13.7	25.6	10.2	3	12.8	37.0	10.0		42.3	59.2
9.6		32.1	24.2	9.0		22.2	31.8	8.8		19.8	29.1	8.8	20	35.8	47.9
9.8		32.1	2.8	9.9		22.4	26.0	10.2		29.7	50.4	8.2	25	40.8	22.2
8.4		46.1	8.2	9.3		26.2	0.8	9.8		33.8	14.8	8.7	26	32.8	14.5
9.8	22	0.1	54.0	9.6	43	11.2	13.0	9.6		52.8	13.3	7.2	27	48.3	18.6
7.8		19.6	27.2	9.2		12.7	16.0	10.2		52.8	3.7	8.2	28	11.3	52.9
10.0		35.4	50.2	8.5		55.7	32.4	10.2	4	40.7	43.0	8.8	29	33.8	26.6
8.9		37.6	3.4	9.4	44	44.7	43.1	9.4		56.8	8.9	6.0		58.8	52.0
9.8	23	18.6	50.6	9.3	45	11.2	33.4	10.2	5	14.8	5.2	8.8	30	12.8	14.2
8.6		25.6	55.6	9.1		29.7	31.4	8.2		22.8	12.7	9.1		21.3	57.5
10.0		30.6	1.2	9.2		47.2	17.0	10.0		24.8	46.2	9.5	31	13.5	53.2
8.6		41.1	33.2	8.5	46	21.1	5.2	9.8		26.8	14.2	9.5		23.0	8.8
9.8		52.9	43.2	9.4		23.2	2.0	10.2		36.3	6.8	8.0	33	9.5	11.1
9.4	24	11.4	44.7	9.9		36.4	21.1	9.4		58.3	39.6	9.4		58.0	19.9
9.7		24.4	35.9	8.6		49.3	3.7	8.8	6	28.3	1.1	9.0	34	4.0	39.6
9.9		40.4	58.8	9.3	47	44.5	45.6	7.4		29.3	43.3	8.8		19.0	44.7
9.8		52.2	45.8	10.2	48	4.0	40.6	8.1		32.8	34.9	9.3	35	11.5	35.2
9.4	27	19.7	42.3	8.8		8.5	6.3	10.2		33.8	8.6	8.9		21.5	49.0
9.0		23.2	35.6	10.2	49	9.0	47.0	9.6		36.3	43.3	7.8		43.5	0.9
9.1		24.7	10.9	9.5		9.5	15.7	8.2		50.3	10.9	9.3	36	21.5	55.2
8.8		41.7	30.3	6.6		38.5	46.6	10.0		53.3	53.2	9.2		31.5	48.9
9.3		43.4	59.9	9.8	51	16.5	0.9	9.1		7	10.3	9.3		36.0	36.4
8.8		46.2	13.6	9.3		17.3	12.1	10.2		27.8	9.2	9.5		50.5	53.2
25pr.		+1 260	-6.8			+1 270	-6.4			+1 282	-5.9			+1 288	-5.5

5641-5700.				5701-5760.				5761-5820.				5821-5880.								
mag.	15 ^h .	-25°		mag.	15 ^h -16 ^h .	-25°		mag.	16 ^h .	-25°		mag.	16 ^h .	-25°						
9.4	36	51.0	34.7	-	8.9	50	26.6	28.9	9.6	3	3.7	42.6	10.2	29	3.3	52.4				
9.1	37	17.0	53.5		9.4		45.6	36.7	8.6		5.7	32.9	10.0		50.3	27.3				
9.5		40.0	40.8		9.4		52.1	37.3	8.2		21.7	11.5	10.2	30	9.8	9.0				
9.5		54.0	55.9		8.6	51	4.6	7.3	9.0 a	9.4		31.2	49.6	9.6		47.6	3.8	9.2		
8.4		55.0	54.2	8.9 a	3.7		17.1	45.0	3.2 GSμβ	8.4		35.2	5.2	9.2	9.8		49.6	6.7	9.8	
8.4	38	16.5	6.0	8.1 Ga	9.5		17.6	48.1		8.2	4	16.7	33.2	8.0 Gal	9.6		55.1	45.0	9.5	
9.1		48.5	54.6		9.2		21.4	59.1		8.8		24.2	6.0	9.0	9.6	31	19.6	35.2		
9.5	39	2.7	58.1		9.5		23.6	48.5		9.6		52.2	44.7		10.2		39.1	42.4		
9.1		13.7	59.3		9.2		29.1	20.9		9.6	5	0.7	28.5		10.0	32	20.6	6.4		
8.7		17.7	34.8	8.0 Wa	9.2		55.6	5.1		9.2		27.2	35.4	9.0	10.2		22.1	3.7		
9.5		28.7	9.3		8.8	52	3.1	27.5	9.3		32.2	10.8	7.9		26.1	48.8	GSbel			
8.9		30.7	55.8	8.5 ≡	9.2		37.1	11.7	9.5	6	5.2	58.1	9.2	10.2	26.1	55.2				
8.7		31.7	32.9	9.0 GWb	8.4		37.1	49.2	8.5 Ga	8.4		17.2	58.2	8.8 b-	9.6		42.8	1.4	8.5 a	
8.0		53.2	28.6	7.5 GWb	9.4		41.6	29.4		9.3	7	1.2	51.9		10.2	34	3.1	52.6		
9.5	40	17.0	58.7		9.4	53	3.1	25.0	8.9		6.2	7.1	9.2	10.2		28.1	15.4			
9.5		23.2	20.2		9.3	54	1.1	11.5	9.5	9.6		11.2	33.7		9.6	35	14.6	20.0		
7.8		24.7	35.8	7.0 GSac	9.1		7.6	1.2		6.8		19.2	9.4	6.5 GSπμ	10.2		26.1	5.0		
9.2		25.2	34.0		9.4		19.6	54.8		8.8		21.7	8.9	10.0	10.2		46.1	12.3		
9.5		41.2	19.0		9.5		19.7	15.0		8.0	9	14.7	32.9	8.5 a	9.0	36	12.1	32.3		
9.4		54.7	16.1		9.0		35.4	16.6		8.4	11	47.2	27.2	8.0 Ga	9.6		17.3	2.8	a	
9.2	42	15.2	21.0		8.4		54.1	47.8	7.5 GWa	8.8	12	33.2	33.2	a	10.2		22.6	15.6		
8.3		33.0	1.6	8.2	9.1	55	0.4	4.0		8.4		40.2	20.4	8.5 Ga	10.2		22.9	48.3		
8.4		45.7	8.9	9.2	9.5		7.7	15.5		8.8		43.7	18.3	9.5	10.0		56.1	59.0		
7.8	43	3.2	54.4	7.5 GSac	9.3		7.9	16.8		8.4	13	14.7	5.4	9.0 a	9.4		57.1	20.4		
9.5		8.7	40.7		8.7		9.6	54.3	8.0 Ga	3.9		35.2	17.4	3.2 GSμβ	10.2	37	16.6	1.6		
8.9		25.7	11.3	a	7.2		47.1	30.8	5.5 GSπμ	8.6	14	11.7	38.7	9.0 -	9.4		22.1	36.1		
5.1		27.7	22.2	5.5 GSμβ	9.6		50.5	59.0		8.5	16	8.7	58.7	8.7 a	9.8		32.6	30.8		
9.5		31.2	42.1		9.4	56	21.6	49.5	9.2	8.8		27.0	7.3	-	9.8		43.6	42.4		
8.8		37.2	16.1		9.4		32.1	54.0	9.0 G	8.9		28.0	50.3	9.3 b	9.3		45.6	8.0	9.0 a	
9.2		52.7	47.8		8.8		43.1	52.5	9.2	8.6		48.9	24.7	9.0 -	8.6		59.1	27.8	9.5 -	
9.5		56.2	2.3		8.4	57	29.1	55.1	8.5 b	8.1	17	23.4	3.8	8.7 Ga	10.0		59.1	29.2		
9.4	44	9.2	23.2		9.4		36.6	45.8		10.2	19	7.5	59.9		9.1	38	11.1	27.4	9.5	
8.4		9.7	15.0	9.2 a	9.6		42.1	31.8		9.6		27.7	50.4		9.6		31.1	14.4		
8.8		22.2	59.4	8.8	8.8		58.6	46.1		8.6		28.2	58.3	8.0 Gb-	10.2		45.1	43.4		
9.5		29.7	18.2		9.0	58	5.6	53.6		9.8	20	4.7	17.4		7.8	39	12.6	18.0	7.0 GSπβ	
8.7		30.7	44.6	9.0 =	9.6		9.6	34.0		7.2		38.2	10.2	7.0 Gkal	10.2		21.6	39.6		
9.2		40.2	18.3		9.0		22.1	34.1		10.2		42.7	55.1		9.3		56.2	6.7		
8.7		43.0	56.4	9.0	9.0		29.6	20.9		10.2		53.2	56.7	9.2	9.1	40	34.6	50.8	9.5	
9.0		51.2	28.3		9.5		37.1	31.1		8.6	21	13.3	55.2	9.0 b	9.8		42.8	52.2		
9.4	45	12.2	24.6		9.2	59	2.6	52.8	8.5 a	8.4	22	57.3	11.6	8.5 a	8.3	41	13.8	17.0	8.5 Ga	
9.0		12.7	43.1	9.0	9.0		41.6	10.0	8.8	9.0	23	16.3	23.0	9.0	8.8		39.8	20.0	8.5 a	
8.5		15.7	41.3	8.5 =	8.4		42.1	24.3		8.3	24	16.3	44.4	8.2 Gb	8.6		40.1	1.4	9.0	
9.5	46	5.0	58.7		9.5		42.1	53.0	8.8 -	9.6		50.3	52.2	9.5	9.6	42	5.8	1.2		
9.1		13.6	1.3		9.0	0	2.6	16.6		9.6		52.3	53.1		9.1	43	0.8	0.7	10.0	
9.4		13.6	28.7		9.2		7.6	43.4		10.2	26	6.3	46.9		9.0		1.3	52.2	9.0 a	
9.4		21.6	30.3		9.6		15.7	58.3	9.2	9.3		22.3	32.8		8.8		3.8	12.4	9.0 Ga	
9.2	47	6.6	28.7		9.4		20.1	33.7		10.2		44.8	4.2		9.3		7.8	45.6	b	
8.8		7.6	38.1	-	7.6		31.3	59.4	6.0 GSτπ	9.3		46.3	17.0	9.5	9.2		32.8	23.4		
8.4		40.6	24.5	7.8 Ga	9.4		33.2	30.1		9.6		51.8	52.3		10.0		35.3	3.4		
8.6		50.6	53.9	9.1 G	9.6		42.7	16.9	9.0	9.6	27	12.8	55.8		9.8		52.3	31.7		
6.4		57.1	53.8	6.4 GSπβ	9.0		59.2	19.9	9.0	10.0		16.3	18.3		9.8	44	5.8	45.8		
8.0	48	33.1	34.0	7.8 GWal	9.5	1	7.7	42.1		10.0		16.5	2.4		9.8		7.7	25.3		
8.4		41.6	26.1	8.0 a	8.2		11.2	2.5	8.7 a	9.6	28	13.0	2.1		8.2		11.3	19.1	8.5 Gal	
9.0		43.6	22.5	9.0	9.6		32.7	8.8		9.8		14.8	8.0		9.8		33.3	57.6		
8.4		46.6	4.5	9.0	9.4		36.5	58.9		9.3		15.8	7.2	8.5 Ga	7.4		35.8	23.1	7.5 GScl	
8.9		50.1	34.3		8.4	2	39.7	2.1	8.2 a	10.2		32.3	19.8		9.4		41.8	48.0		
9.0					8.4		40.7	5.5	9.0 a	9.6		34.3	29.6	9.5	9.6		47.3	17.0		
8.9	49	1.1	43.7		8.8		44.7	57.3	8.5 b	10.0		52.3	38.6		9.8	45	4.8	3.0		
9.5		27.6	19.3		9.6		49.2	38.8		9.4		54.8	29.4		9.3		15.3	8.0	9.2 a	
9.1	50	23.1	38.9		9.6	3	0.7	33.2		9.8	29	2.3	4.2	10.0	8.3		29.8	3.5	8.3 Ga	
25pr.	+ 1	30.1	-4.7		+ 1	30.5	-4.3			+ 1	31.1	-3.6			+ 1	31.7	-2.9			

5881-5940.				5941-6000.				6001-6060.				6061-6120.			
mag.	16 ^h -17 ^h	-25°		mag.	17 ^h	-25°		mag.	17 ^h	-25°		mag.	17 ^h	-25°	
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''
9.4	45	56.8	30.5	10.4	2	27.3	25.9	10.4	13	43.1	31.1	9.8	38	15.9	43.8
10.0	46	40.3	37.2	10.0		46.3	24.6	10.4	14	13.7	25.4	10.1		16.9	29.2
9.3		51.3	36.3	10.0		49.6	51.2	10.4		17.2	16.8	9.3		22.9	41.6
10.0	47	0.8	1.4	10.4		55.3	19.2	10.4		19.7	24.8	9.3		25.9	12.0
10.0		4.8	50.1	10.4	3	3.8	48.0	9.8		22.2	3.2	9.7		30.4	19.4
10.0		25.5	35.9	9.8		44.1	2.8	10.4		46.2	24.1	10.0		31.4	59.2
10.0		30.0	44.6	8.8		47.4	9.6	9.8	15	2.2	37.6	10.0		33.9	52.4
10.0		53.6	46.9	9.8		47.9	50.1	8.5		2.7	26.0	10.0		42.9	28.4
7.7	48	4.5	19.7	9.8		53.9	8.6	10.2		6.1	50.7	10.2		46.9	57.0
8.5		27.5	48.1	9.8	4	0.4	34.8	9.8		9.7	37.6	9.9		54.9	49.4
9.4		33.1	56.9	10.4		10.9	31.2	9.8		21.2	37.1	8.6		58.9	42.2
9.8		43.5	42.8	10.4		13.9	48.0	10.4		23.7	37.3	9.1	39	1.4	55.7
9.8		51.0	29.9	7.9		18.9	31.4	10.0		25.7	11.4	9.8		3.9	36.3
9.4	49	26.5	35.5	7.1		32.9	5.8	10.4		29.1	7.6	9.1		6.9	43.6
10.0		34.0	33.1	8.8		37.9	29.8	10.4		31.7	15.2	9.8		17.9	28.0
9.3		42.5	36.0	10.1		44.9	24.8	10.4		48.7	29.0	9.7		18.4	53.4
9.4	50	16.5	29.6	8.5		50.9	4.2	10.4	16	21.2	36.2	9.9		35.4	28.0
9.3		17.0	19.2	8.6		52.4	6.6	10.4		22.7	36.0	9.5		36.9	13.1
10.0		34.0	8.6	9.6	5	3.4	27.0	9.8		32.2	45.4	9.7		42.5	12.0
8.4		34.5	51.8	8.2		19.7	1.2	10.4		52.2	58.2	10.2		53.0	26.0
9.4	51	43.5	23.7	9.0		22.9	23.2	10.4	17	1.2	46.0	10.0		56.0	53.2
9.0		47.5	30.4	10.2		34.3	57.4	10.2		1.7	52.4	8.2	40	1.5	8.4
9.6	52	2.5	28.9	9.2		35.4	58.7	10.4		28.1	20.0	10.2		5.0	25.7
9.8		22.0	55.1	8.5		38.9	52.6	10.0		42.7	38.0	9.8		6.0	19.3
9.6		26.0	39.3	10.0		49.4	53.0	10.4		56.2	13.8	9.5		6.5	41.0
8.8		37.0	8.7	10.4	7	1.4	6.0	10.4	18	2.7	35.0	9.5		7.5	40.8
9.4	53	9.0	35.7	8.8		2.9	46.4	10.4		49.2	53.7	10.2		16.0	26.6
9.8		27.0	20.6	9.8		3.9	9.4	6.3	19	11.2	49.9	9.3		29.0	53.2
10.0		29.0	38.9	10.4		32.9	43.1	10.2		17.2	15.6	9.7		43.5	15.2
9.2		42.5	26.8	9.4		42.4	16.4	9.1		19.2	9.6	10.1		56.5	34.0
9.4		43.0	33.1	9.5		43.6	2.4	9.2	20	12.2	1.9	10.0	41	7.5	0.6
8.3		47.5	6.0	10.4		45.9	9.0	9.4		30.7	39.7	9.3		8.5	8.6
9.8		58.5	30.4	10.4		57.4	24.9	9.2		32.7	7.0	10.0		13.5	28.1
9.4	54	6.5	13.6	10.0	8	2.0	57.2	7.7		56.2	24.2	9.3		14.5	3.2
9.2		7.8	57.8	10.1		6.9	11.8	9.8	23	34.7	57.6	8.4		16.0	42.2
9.4		12.0	42.6	10.4		7.4	24.1	10.0		26	14.0	10.2		17.5	58.0
9.3	55	27.0	28.2	10.4		15.4	48.0	9.5		27	17.5	9.5		17.5	31.8
9.4		38.5	2.1	8.5		15.9	59.6	8.6		32	50.9	10.2		26.5	43.4
9.2		40.5	16.0	9.4		21.4	47.2	9.9		33	1.9	10.0		36.5	16.5
9.8	56	14.0	46.7	7.9		46.4	9.7	9.9		18.9	15.4	9.6		39.5	23.4
7.2		20.0	31.1	10.0		52.4	28.0	9.5		55.4	54.3	9.7		41.5	1.0
9.8		52.3	23.6	9.5	9	12.4	49.8	9.3	34	0.9	12.0	10.2		50.0	59.9
9.4	57	2.8	10.4	10.4		41.4	43.6	10.0		16.9	47.2	8.7		52.5	56.4
7.0		2.8	27.8	10.4		44.9	33.6	10.0		19.4	33.8	9.9	42	2.0	29.6
9.3		5.8	19.7	10.4	10	21.4	26.9	8.9		43.9	42.8	10.1		2.5	46.0
9.0		20.8	8.4	10.4		33.4	9.0	9.8		48.9	51.4	10.2		8.5	29.2
8.3		41.8	18.0	9.8		33.4	47.0	9.8	35	2.4	40.6	9.4		11.0	40.6
8.8		55.8	38.4	10.4		48.4	47.2	10.1		20.9	33.6	10.0		13.0	58.1
9.6	58	20.8	10.0	10.0		56.4	33.4	9.1		48.2	1.0	10.2		15.5	9.0
9.8		43.8	40.8	9.8	11	6.4	41.0	10.0		36	2.4	9.6		22.5	10.4
9.6	59	9.8	7.2	9.0		10.3	2.5	9.5		20.9	10.4	10.1		32.5	17.2
9.8		14.8	3.3	10.1		20.9	13.0	9.8		28.9	54.8	8.8		33.5	23.5
9.8		48.8	27.6	9.4		20.9	35.2	9.8		30.4	54.0	10.2		37.5	13.4
8.1	0	10.3	17.4	9.2	12	6.2	53.8	10.0		46.9	29.8	10.1		48.0	31.8
9.8		32.8	38.5	10.2		28.1	33.6	9.2	37	7.9	40.1	10.2		51.5	14.6
9.5	1	33.1	54.4	10.4		29.2	45.9	10.2		10.9	56.9	9.8	43	6.5	21.8
10.4		52.0	57.2	10.4		31.7	41.0	10.1		14.9	10.8	9.5		17.0	15.8
10.0		55.6	22.7	9.6	13	4.7	43.2	8.7		35.9	18.2	10.0		22.5	10.6
10.2		59.9	52.7	10.0		6.2	50.4	9.7	38	13.9	47.0	10.2		28.0	26.7
10.4	2	12.3	9.7	10.4		10.7	59.7	10.1		14.4	27.0	10.1		32.7	5.8
25pr.	+1	32.1	-2.4		+1	32.4	-1.9		+1	32.5	-1.5		+1	32.7	-0.7

6121-6180.			6181-6240.			6241-6300.			6301-6360.		
mag.	17 ^h .	-25°	mag.	17 ^h .	-25°	mag.	17 ^h .	-25°	mag.	17 ^h -18 ^h .	-25°
9 ³	43 35.7	44.4	9 ⁹	49 0.0	6.8	9 ⁵	53 44.1	1.8	10 ⁰	57 58.1	19.8
9 ¹	36.2	2.1 9 ⁵	9 ³	3.0	12.6	9 ²	48.6	54.2	9 ⁹	58 1.6	46.6
10 ⁰	41.2	32.0	10 ²	6.0	34.0	10 ⁰	52.9	44.8	10 ³	1.6	52.4
9 ⁴	46.2	16.2	9 ⁰	6.5	7.9 9 ⁵	9 ²	56.1	36.4 a	9 ⁰	2.1	14.6
10 ⁰	46.2	56.1	10 ³	12.5	39.2	10 ²	58.1	52.2	9 ⁶	4.1	40.9
9 ²	56.2	46.9	10 ⁴	17.1	57.0	9 ²	54 20.3	0.7 9 ⁰ a	10 ³	5.6	12.6
10 ¹	44 3.2	28.0	10 ⁴	30.0	20.7	10 ⁴	22.8	47.0	9 ⁶	16.1	53.2
8 ⁶	10.2	44.2 8 ⁰ GWbl	10 ³	30.5	29.5	9 ⁹	31.8	54.9	9 ³	18.1	31.7 9 ⁵ -
9 ⁸	12.2	11.9	9 ⁸	37.0	33.2	9 ⁸	37.8	46.7	9 ⁸	28.6	13.4
9 ²	16.2	45.4 9 ⁵ Wb	10 ²	40.5	28.1	9 ⁸	41.8	55.3	9 ⁸	38.8	2.4
10 ⁰	28.2	18.1	8 ⁸	43.5	22.0 -	9 ³	47.3	14.3	9 ⁰	49.6	29.0 8 ⁵ GWa
10 ²	46.2	56.9	8 ³	52.0	3.8 9 ⁰ Wa	9 ⁵	47.8	48.2	9 ⁸	55.1	59.8
9 ⁰	51.7	29.5 9 ⁰ b	10 ⁴	52.5	37.0	9 ⁹	50.8	41.4	10 ²	56.1	56.5
10 ²	45 3.2	24.1	9 ⁸	56.0	21.6 9 ⁵	10 ⁴	53.8	27.5	10 ⁴	59 2.1	36.5
9 ⁸	6.2	51.8	10 ⁴	50 0.5	10.1	9 ⁸	57.3	28.2	8 ⁹	2.1	53.4
9 ⁸	6.7	55.0	8 ⁹	10.0	24.7 9 ⁵	9 ⁴	58.1	59.7	10 ²	2.1	41.6
10 ²	15.2	18.4	10 ⁰	10.0	25.2	10 ⁴	55 2.3	5.0	9 ⁶	17.6	37.5
10 ²	15.7	50.3	10 ⁴	18.1	51.6	8 ⁸	19.8	44.8 10 ⁰	10 ⁰	20.9	13.6
10 ¹	28.0	58.9	10 ⁴	22.0	44.8	9 ²	29.8	56.9 9 ⁵	10 ⁴	25.4	44.8
9 ³	28.2	43.1 W	10 ⁴	26.5	49.0	8 ³	36.8	54.8 8 ⁸ >	10 ³	27.4	8.3
9 ⁹	33.2	46.2	9 ⁵	37.5	7.6 9 ⁰ GWam	10 ⁰	41.8	47.8	9 ⁶	28.9	17.1
8 ⁶	35.2	58.3 9 ⁵ a	10 ²	42.5	9.3	9 ⁰	43.3	15.9 a	9 ⁴	29.9	32.8
10 ¹	41.7	13.1	9 ⁶	44.0	54.1	10 ⁴	51.8	49.8	9 ⁸	31.4	17.4
9 ⁶	43.7	6.9	9 ⁰	50.5	54.8	10 ⁴	53.3	31.5	10 ⁴	31.4	45.0
9 ²	58.2	36.7	9 ⁵	54.5	33.4	10 ⁴	54.3	29.2	10 ⁴	32.4	1.3
10 ²	46 2.1	56.4	10 ⁴	58.6	25.4	10 ⁰	55.8	38.9	10 ⁰	42.4	28.8
10 ²	7.1	7.2	10 ⁴	51 5.6	1.1	9 ⁹	59.3	27.3	10 ²	43.4	27.8
10 ⁰	12.7	56.3	10 ⁴	6.1	40.5	10 ⁴	56 0.8	50.1 a	8 ⁴	45.4	7.0 8 ⁵ =
10 ⁰	22.2	46.3	9 ⁴	6.6	23.6	8 ⁴	1.3	18.7 a	10 ⁴	49.4	43.0
9 ⁰	33.2	56.1 9 ⁵ a	9 ⁸	9.6	43.3	9 ⁴	1.8	44.8	8 ⁴	50.9	34.8 8 ⁵ Ga
10 ²	40.9	53.2	8 ²	10.1	47.5 8 ⁵ Ga	9 ⁸	5.3	20.1	8 ⁰	52.9	36.3 8 ⁵ Ga
10 ⁰	54.2	24.4	9 ⁶	11.1	16.0 9 ⁰ a	9 ⁶	7.3	4.8	10 ⁴	54.4	0.9
10 ²	56.2	2.9	10 ³	17.1	33.6	10 ³	8.3	29.5	9 ⁹	55.9	52.8
9 ⁵	56.2	26.8	8 ⁷	18.6	10.5 9 ⁵ Wa	8 ⁶	9.8	32.9	10 ⁴	0 1.5	2.1
10 ¹	47 7.8	2.9	10 ²	28.1	17.9	8 ⁶	12.8	39.9 W=	10 ²	1.9	13.6
10 ⁰	23.0	22.4	10 ⁴	31.1	21.2	8 ⁶	15.8	28.6	10 ⁴	2.6	23.6
10 ²	27.0	21.3	7 ⁶	31.6	48.3 8 ⁰ Gaml	9 ³	29.3	47.0	10 ⁴	2.6	19.8
10 ⁴	28.1	23.7	8 ⁹	35.6	57.7	10 ⁰	31.3	52.0	9 ⁸	11.9	39.2
9 ⁵	36.3	6.3	9 ⁸	38.6	51.5	10 ⁰	32.1	25.6	10 ²	12.9	57.7
10 ⁴	38.1	3.7	10 ⁴	45.1	16.3	9 ⁰	47.6	4.3	9 ⁶	15.4	43.9
9 ⁹	42.6	47.3	10 ²	51.6	0.3	10 ³	53.6	58.7	10 ²	17.4	27.8 9 ⁵
9 ⁵	43.6	49.9	8 ⁴	52 12.1	9.0 9 ⁰ Wa	10 ⁴	54.1	0.7	10 ³	20.9	12.6
10 ³	52.6	21.0	7 ⁷	17.6	4.5 8 ² GWam	8 ⁷	57.6	12.2 a	9 ²	22.4	43.2
10 ³	59.1	10.6	10 ⁴	20.1	30.3	10 ⁴	57 0.6	53.3	8 ⁰	23.4	21.7 8 ⁰ Gb=
9 ⁵	48 0.6	24.9	10 ⁴	23.1	49.7	10 ⁴	2.1	17.8	9 ⁸	35.4	29.2
9 ⁸	0.6	40.7	9 ⁸	24.1	21.2	10 ⁴	2.1	45.0	8 ⁷	36.9	43.8 Ga
9 ⁵	3.6	49.3	9 ⁹	28.1	8.6	10 ⁰	4.1	34.1	10 ³	41.4	39.0
10 ⁴	14.1	49.1	10 ⁰	28.6	7.5	7 ⁵	4.1	36.5 7 ⁵ GSbc	9 ⁴	44.4	9.6
10 ²	16.5	40.3	9 ⁸	32.9	9.7	10 ²	11.1	37.0	10 ³	49.6	31.1
8 ⁹	25.0	10.5 8 ⁸ =	10 ²	34.6	13.6	10 ⁴	20.6	45.4	10 ⁴	55.5	48.0
7 ⁷	31.5	38.9 M=	9 ⁸	37.6	59.0	10 ²	23.1	52.0	9 ⁸	58.4	21.8
9 ⁰	32.5	27.1	9 ⁴	41.6	47.8	9 ⁹	27.6	55.3	9 ³	1 8.9	40.8
9 ⁸	35.0	54.3	9 ⁸	41.9	57.0	10 ⁰	32.6	35.9	7 ⁰	10.9	29.3 7 ³ GScl
9 ⁶	38.0	16.4	10 ⁴	47.6	2.1	10 ⁴	36.2	28.0	9 ⁸	11.4	40.0
8 ⁴	39.0	14.3 9 ⁰ =	10 ⁴	56.9	15.3	9 ⁸	38.3	59.2	9 ⁸	28.2	4.6
10 ⁴	42.0	29.3	10 ⁴	53 6.1	7.5	10 ²	39.1	40.0	9 ²	28.2	8.2
10 ⁴	43.0	13.8	10 ⁴	12.6	6.0	9 ²	43.6	16.6	9 ⁶	50.7	57.0
10 ³	48.5	7.9	9 ⁰	16.1	15.8	10 ³	52.6	44.2	10 ⁴	55.7	28.2
10 ⁴	52.0	32.0	9 ⁸	17.4	59.9	10 ³	54.6	41.1	9 ⁵	55.7	59.2
10 ³	58.5	18.1	9 ⁵	33.1	6.0 9 ⁵	9 ⁵	55.1	42.8	10 ⁴	2 6.2	35.9
25pr.	+1 32.7	-0.5		+1 32.7	-0.3		+1 32.7	-0.1		+1 32.7	0.0

6361-6420.			6421-6480.			6481-6540.			6541-6600.			
18h.	-25°		18h.	-25°		18h.	-25°		18h.	-25°		
mag. 2	6.7	28.3	mag. 8	15.0	29.7	mag. 8	8.8	13 46.4	9.0 = m	mag. 9	22 48.7	20.1
10.2	13.7	18.2	8.9	21.0	44.6	9.6	48.4	35.9	10.2	23 6.7	54.3	
10.3	20.7	5.2	10.4	24.5	44.6	9.6	56.0	34.2	9.4	7.7	38.1	a
9.9	25.2	50.8	10.3	26.0	36.1	10.2	14 4.0	24.8	9.4	22.7	49.9	Mm
10.4	29.7	30.3	9.6	26.0	17.3	10.2	7.0	40.8	9.0	32.5	57.3	
10.4	31.7	3.4	9.5	27.5	36.3	10.2	11.5	0.1	10.0	43.2	13.4	
9.3	32.7	40.5	10.0	29.0	18.0	9.2	14.0	48.3	8.6	56.2	46.5	9.0 Ga
10.4	39.7	7.9	8.6	31.0	54.1	8.4	23.5	25.3	10.2	57.6	59.9	
9.8	43.7	38.7	9.6	31.7	52.4	8.6	24.0	17.7	10.2	24 8.2	3.7	
9.8	43.7	32.5	9.9	34.7	39.6	9.5	48.5	30.5	9.1	23.7	48.4	a
9.8	52.2	50.4	8.2	35.1	35.1	9.6	54.3	2.0	10.0	24.7	16.8	
8.6	52.7	20.4	9.6	38.3	40.4	10.2	15 4.5	29.1	9.4	30.7	6.9	
9.0	3 1.2	41.7	8.9	40.7	47.9	9.0	10.0	27.7	10.2	33.7	40.8	
10.4	6.2	21.8	9.0	44.7	2.0	10.0	22.0	22.6	9.6	42.7	42.9	
10.2	12.2	12.8	10.3	47.7	12.8	10.2	31.5	29.9	10.2	25 8.2	28.6	
9.9	12.7	39.6	10.3	55.7	43.5	10.2	35.5	56.8	8.3	11.2	10.6	9.0 a
10.3	19.7	47.5	9.8	59.2	30.5	10.2	45.0	4.8	9.0	22.7	16.2	9.0 a
8.1	20.7	47.2	8.8	9 0.0	9.5	9.5	16 13.0	28.5	9.5	38.7	23.8	
9.3	21.2	10.2	10.3	5.7	24.2	9.6	23.5	50.9	9.9	47.2	7.4	
10.3	23.7	5.0	8.9	7.7	48.4	9.6	24.5	1.9	10.2	48.5	4.6	
10.0	25.2	14.0	8.4	8.2	2.7	9.4	35.5	21.0	10.2	50.5	47.1	
9.2	25.4	58.7	9.3	8.7	13.5	9.6	36.5	36.5	9.2	52.5	47.8	-
10.0	39.7	34.6	8.7	10.7	11.7	9.6	43.0	2.0	9.4	59.5	20.9	
9.2	49.2	2.8	8.8	11.2	3.5	10.2	17 43.0	23.8	7.9	26 2.0	32.3	8.0 Gal
9.9	54.2	22.5	9.9	19.2	42.3	10.0	55.0	8.0	10.2	15.5	6.1	
10.0	54.2	43.1	10.0	41.2	28.1	9.6	55.0	44.8	8.5	24.5	28.3	9.5 a
10.3	4 0.7	15.4	9.3	42.7	35.9	9.4	18 12.0	32.9	9.4	31.5	49.2	
9.0	6.7	6.2	9.0	53.1	23.0	9.6	14.0	52.7	8.8	55.5	18.0	9.5 Ga
9.0	9.7	4.9	10.0	54.1	49.1	10.2	21.0	24.5	9.9	27 4.5	30.0	
10.3	25.2	10.1	10.0	10 5.4	28.3	9.8	28.0	56.5	9.5	36.5	14.2	a
9.9	34.5	33.5	9.0	7.3	14.9	10.2	31.0	50.1	9.0	55.5	42.4	a
10.4	50.0	48.9	9.6	17.4	28.0	10.0	35.0	42.5	8.4	28 54.0	24.7	9.0 =
10.4	57.0	40.0	10.0	17.4	32.6	9.6	38.5	12.3	10.2	29 11.5	5.8	
10.4	5 1.0	17.2	8.5	17.9	7.4	9.0	55.0	59.1	9.6	16.5	28.9	
9.9	10.5	48.3	9.4	29.4	36.6	10.0	19 5.5	31.5	8.2	27.5	45.8	8.0 GSel
9.6	22.3	1.1	9.6	31.4	2.8	10.0	17.0	25.2	9.6	45.0	23.9	
7.9	40.5	10.7	9.0	35.9	18.2	9.5	35.0	52.2	9.9	30 2.0	13.8	
10.4	45.0	25.0	9.4	40.4	9.6	9.6	35.5	6.1	8.2	33.0	31.4	8.5 GSel
10.4	47.0	26.5	9.0	56.4	58.8	9.1	40.0	17.4	9.4	31 41.2	20.5	
9.6	6 13.0	6.7	8.0	57.9	38.8	10.2	45.2	6.5	8.5	32 5.2	36.5	8.5 GSa
8.8	21.0	3.9	10.0	11 2.4	25.8	10.2	20 6.2	37.2	8.4	9.4	36.8	8.5 GSac
10.3	25.0	7.7	8.8	19.4	22.2	9.0	14.2	31.1	10.0	21.9	23.8	
7.8	25.0	20.5	9.5	21.9	25.0	4.7	15.2	29.2	9.6	45.4	6.4	9.5 a
9.0	36.5	18.6	9.0	25.4	34.0	9.0	15.2	45.3	8.6	33 5.9	7.5	9.5 Wa
10.0	50.0	13.6	8.8	38.9	22.8	9.1	17.2	23.8	8.8	36.9	32.5	-
10.0	52.5	24.9	8.8	44.4	43.4	9.6	43.7	53.2	10.2	41.4	3.1	
10.3	7 4.5	13.3	10.0	56.9	15.0	9.6	21 1.7	11.1	8.8	55.9	6.1	8.5 GWam
10.3	24.5	55.8	10.2	1.4	38.5	9.5	3.2	21.0	9.4	34 2.9	16.8	9.5 Gam
8.6	24.5	5.3	10.2	1.9	6.9	8.0	14.7	7.1	9.6	12.9	41.3	
9.8	26.0	5.1	9.9	13.4	44.0	10.2	23.7	33.1	10.0	52.0	23.3	
8.8	27.0	49.4	10.2	19.4	29.6	9.8	25.7	37.8	9.8	53.0	15.1	a
10.4	28.5	37.9	9.6	24.4	15.9	6.8	39.2	19.9	9.5	35 9.5	36.9	≡
9.8	32.0	30.1	9.5	25.2	58.8	8.4	59.2	37.4	9.0	12.0	9.1	8.0 GWam
10.3	36.5	40.5	9.1	39.4	5.6	10.0	22 3.7	28.2	10.2	23.0	20.8	
9.5	43.0	29.7	10.2	49.4	14.4	9.4	8.7	22.9	9.1	36 28.0	35.7	-
10.4	43.5	19.1	8.1	59.4	31.3	9.6	12.7	15.5	10.0	36.5	52.9	
10.4	45.5	26.1	9.0	9 4.9	47.7	10.0	18.2	3.2	9.6	56.0	21.0	
10.4	48.5	50.1	10.2	5.4	32.2	9.0	31.2	25.4	8.6	59.0	29.5	8.5 Gam
10.0	55.0	51.7	9.6	14.4	40.9	8.2	36.2	37.8	8.1	37 1.0	55.1	8.0 Gam
9.2	8 13.0	44.8	8.8	28.9	35.6	9.6	37.2	47.2	9.8	3.0	52.8	
25pr.	+1 32.7	+0.2										
			+1 32.7	+0.4		+1 32.7	+0.7		+1 32.6	+1.0		

6601-6660.				6661-6720.				6721-6780.				6781-6840.				
		18 ^h .	-25°			18 ^h -19 ^h .	-25°			19 ^h .	-25°			19 ^h .	-25°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s		
8:8	37	6.0	30.6	10:0	54	3.7	43.3	9:6	4	51.1	7.8	10:4	14	37.1	32.2	
6:7		8.0	8.0	10:4		6.0	7.8	8:5	5	2.1	52.6	9:8		39.6	33.0	
10:2		11.5	36.2	10:4		12.3	40.6	8:8		2.1	1.1	9:8		47.8	57.0	
10:2		51.0	26.1	8:8		42.0	51.9	8:6		7.1	6.8	10:4	15	13.1	49.6	
9:8		46.0	43.7	10:4		45.5	33.2	10:2		31.1	28.8	9:8		26.1	42.8	
9:8	38	47.0	18.9	9:1		46.7	41.7	9:5		32.1	53.4	8:5		31.1	42.4	
9:4		49.5	28.6	7:4		48.7	1.3	8:8		40.1	44.5	10:4		35.1	39.3	
9:6		52.0	9.6	9:8		55.5	26.4	10:4		46.1	46.2	9:9		54.1	42.8	
9:8	39	12.3	2.9	9:6	55	0.0	7.6	10:4		53.5	48.8	10:4	16	0.1	36.6	
9:2		36.0	8.2	9:6		0.0	42.5	9:4	6	50.1	33.1	10:0		12.7	2.2	
								9:5	7	6.3	57.9	9:9		21.6	17.6	
8:8		36.0	20.7	9:1		4.7	16.9	10:4		13.1	52.3	9:7		26.6	14.8	
10:0	40	1.5	31.2	10:4		15.5	4.7	9:9		33.1	25.5	9:4		27.6	35.2	
10:2		28.5	3.1	10:0		20.0	5.1	9:4		34.1	44.5	9:2		32.1	23.0	
9:5	41	57.0	45.0	10:0		41.0	9.3	10:4		37.1	32.5	10:4		52.1	21.2	
9:4		58.5	46.2	10:4		46.0	54.4	10:4		42.1	49.1	9:1		57.1	2.0	
9:1	42	32.0	15.6	9:1	56	3.0	20.7	10:4		52.6	28.1	10:2	17	3.1	6.2	
10:0		33.0	59.4	10:2		12.0	45.9	5:7		20.7	1.7	9:1		12.1	38.6	
10:0		37.5	37.0	8:8		33.0	17.7	10:0	8	20.7	1.7	10:2		26.1	50.4	
9:4		40.0	18.2	9:1		37.0	40.9	8:2		31.1	52.9	10:4		41.0	20.3	
8:8	43	31.5	8.1	7:5	57	5.5	24.8	10:4		41.6	16.7					
								9:0		42.6	33.2	10:4	19	0.8	54.9	
9:6		40.0	20.1	9:2		6.0	42.8	8:4		44.1	33.5	8:5		5.3	49.8	
9:6	44	13.5	31.3	9:0		10.0	0.0	10:4		44.6	24.3	9:8		18.3	34.5	
10:2		25.0	2.1	9:7		22.0	29.0	9:4		59.1	38.5	10:4	20	0.3	24.5	
9:6		31.5	29.7	8:6		26.0	6.1	10:4		9	12.1	16.3	9:8		41.8	29.5
10:0		37.0	32.0	10:0		26.0	40.2	10:0		29.1	14.9	9:6	21	22.8	55.2	
9:5		42.0	8.0	10:4		37.0	7.9	9:2		31.1	10.4	9:6		31.8	25.1	
9:4	45	16.0	2.0	10:4	58	12.0	54.1	10:4		53.3	0.3	8:8		36.8	43.2	
10:2		53.0	44.9	10:4		50.5	14.2	9:2		59.1	47.7	10:4		53.8	22.6	
9:4	46	27.4	18.8	10:4		53.5	11.3	9:1	10	16.1	46.1	10:4		55.8	15.0	
9:4		38.4	51.4	10:4		59	2.0									
								10:4		20.3	59.8	8:8	22	6.3	56.0	
9:0	47	2.9	26.5	8:6		28.0	4.4	8:4		23.1	17.6	9:4		8.3	22.0	
10:0		12.4	11.7	8:6		42.0	26.4	10:4		23.6	11.7	10:4		15.3	23.0	
10:2		37.0	35.6	10:2	0	12.0	49.9	10:4		35.1	32.7	9:0		21.8	13.6	
9:4		54.9	10.9	8:3		12.0	53.7	9:6		38.6	17.5	10:2		28.8	16.0	
8:0	48	19.4	12.2	10:4		24.5	7.0	8:6		46.1	2.5	8:1		32.8	46.2	
8:8		30.9	4.8	8:6		25.0	48.1	8:8	11	17.6	29.5	8:6		34.3	41.6	
8:8	49	27.4	37.3	10:2		25.5	16.1	10:2		20.1	45.4	10:0		55.8	21.9	
9:8	50	7.4	28.3	8:8		44.1	33.3	9:8		21.1	27.9	9:4	23	2.8	50.9	
9:0		12.9	33.7	9:6	1	0.1	27.3	10:4		23.1	28.3	10:4		10.8	40.6	
10:0		21.9	51.8	6:9		7.1	16.4									
								9:6		25.8	59.3	8:0		19.3	47.5	
9:4		31.4	31.7	8:8		26.1	41.2	10:0		33.1	6.5	9:4		20.2	26.1	
7:0		40.9	2.4	9:2		36.6	18.7	10:4		46.1	6.4	10:4		27.2	17.1	
9:5		45.9	51.2	9:2		52.1	41.3	10:2		47.1	24.6	8:1		37.4	59.7	
9:6		49.4	46.9	9:6	2	7.1	22.8	10:4		47.8	39.6	10:4	24	1.7	39.9	
10:2		51.9	44.9	9:6		42.6	24.8	9:4		55.1	38.2	10:4		12.2	51.7	
8:3	51	15.9	17.8	10:0		52.1	31.4	10:4		58.6	24.3	9:2		14.2	11.9	
9:8		16.9	29.8	10:4	3	9.6	10.4	9:1		58.6	24.3	10:4		20.7	30.1	
9:8		31.9	50.3	9:2		12.1	0.0	8:2	13	18.1	45.6	10:3		22.7	35.8	
8:6		55.9	35.7	9:1		17.1	52.5	8:8		24.6	49.1	10:4		31.7	17.4	
10:0		58.9	18.9	9:3		22.1	52.1									
								9:0		48.1	26.0	10:4		33.7	37.6	
9:6	52	5.9	13.0	9:5		38.1	49.3	9:8		49.1	3.4	9:2	25	8.2	11.4	
9:2		30.9	38.1	10:0		43.1	46.9	9:4		53.1	25.8	8:6		10.2	34.0	
7:7		44.4	6.8	9:6		43.1	42.2	10:0		10.1	6.1	10:2		10.7	14.4	
10:0	53	2.4	1.8	10:0		46.6	42.1	9:2	14	10.1	21.4	8:8		12.2	12.3	
9:2		6.9	52.9	10:2		52.1	34.2	9:7		14.1	13.8	10:2		15.7	39.9	
10:0		9.8	58.7	9:1	4	2.1	12.0	9:0		16.1	57.5	9:8		28.7	44.6	
10:2		12.4	32.6	10:4		15.3	0.4	9:4		18.1	34.4	8:8		31.7	43.1	
8:8		16.9	53.7	10:2		26.1	22.7	10:4		24.6	35.6	9:8	26	21.7	58.3	
10:2		55.7	22.8	9:1		30.1	5.5	9:4		29.1	22.6	8:8	27	32.7	23.7	
10:2		56.2	50.1	9:4		36.1	51.5									
25pr.		+1	32.2	+1		32.2	+2.1			+1	32.0	+2.5		+1	31.7	+2.9

6841-6900.				6901-6960.				6961-7020.				7021-7080.			
mag.	19	-25°		mag.	19 ^h .	-25°		mag.	19 ^h -20 ^h .	-25°		mag.	20 ^h .	-25°	
10.4	27	51.7	28.0	10.4	39	15.3	5.6	10.0	50	47.6	44.4	10.0	8	35.0	12.3
9.4		56.7	45.3	10.4		33.7	23.5	8.7	51	12.6	16.4 a	8.8		40.5	34.9 8.5 a
9.6	28	12.2	21.6	10.2		54.9	9.4	9.0		29.6	25.6 9.0 GWa	10.1		51.0	14.4
10.4		18.2	49.1	8.4	40	2.9	56.0 8.0 Gal	10.2	52	27.6	48.2	9.6	9	16.0	3.7
10.4		40.7	47.4	10.0		3.9	27.8	10.2		54.1	27.8	9.8		25.0	52.8
4.8	29	5.7	9.5 5.0 GSμβ	9.4		18.6	5.9	10.2	53	7.6	20.6	9.0		32.0	9.3
9.8		13.7	40.9	9.8		43.4	33.8	9.6		31.6	29.2	10.1		40.8	38.6
8.6		25.7	21.1 8.7 M m	10.2	41	28.4	35.2	9.8		36.6	3.8	10.0	10	18.0	4.6
9.4		34.7	6.9 9.5	10.2		45.5	7.7	10.2		37.6	2.9	10.0		33.5	6.1
9.6		52.2	27.8 9.5	10.0		58.5	42.1	10.2		52.6	25.4	9.8		38.0	27.1
10.0	30	6.9	57.9 9.0 a	10.0	42	4.0	33.3	10.0	54	0.6	11.2	9.0		38.5	23.9 Wa
9.2		13.7	51.5 9.5 a	9.4		54.0	51.2	9.8		32.2	58.8	10.1		44.0	4.3
10.4		17.7	22.0	8.2	43	4.0	37.1 8.5 Ga	10.2		40.1	29.8	9.4	11	21.0	9.9
8.8		20.7	17.6 9.5	9.8		20.0	9.4	9.3	55	36.1	21.0 9.5 a	9.5		22.3	42.7
9.2		51.7	55.1 9.5 a	9.8		31.5	52.8	9.0		45.6	29.5	10.1		24.8	31.0
8.8	31	12.2	51.1 9.5 a	10.2		34.5	18.2	10.2		54.1	21.4	9.4		30.3	27.3
9.8		29.7	54.0 9.5	8.0		40.5	12.8 7.8 G≡	10.0		55.1	29.0	10.0		32.3	16.5
10.0		40.7	55.7 9.0	10.2		47.0	58.9	10.2		58.6	23.6	9.8		45.8	28.6
9.2		55.7	21.3 9.0	8.7		50.5	6.3 9.0	10.2	56	13.6	45.1	10.1		49.0	19.2
10.4	32	19.5	42.0	9.6		55.0	5.7 9.7	9.0		13.9	39.4	9.2		57.3	10.7
8.8		35.2	6.4 9.0 GWa	9.4	44	33.0	13.9	10.2		27.9	51.0	9.0	12	11.3	3.3 9.0 GWa
9.8		45.7	14.0	10.2		37.0	39.0	10.2		31.9	20.9	7.6		16.3	36.7 7.5 GSel
9.4	33	27.7	9.2 9.5 Ga	9.3		43.0	40.0	10.2		43.4	49.9	9.8		18.5	1.9
10.4		29.2	7.0	10.2		50.5	20.9	10.2	57	16.9	58.8	9.8		21.7	7.9
8.4	34	0.7	7.5 9.0 Waml	9.8		53.0	4.9	9.0		41.9	24.5 9.0 Gam	9.8		29.7	44.2
10.2		17.7	54.9	10.0	45	7.5	18.0	10.2		50.9	54.8	9.8		33.8	41.9
9.4		21.7	47.7	9.0		9.0	18.7 8.5 -	9.6		58.4	36.0	9.8		39.8	47.2
9.8		28.2	12.0	8.7		17.0	31.2 9.0	9.0	58	21.9	35.9	9.6		47.3	50.9
9.0		43.2	36.9 -	9.6		31.5	52.0 9.0 Ga	10.2		26.9	30.9	8.3		56.8	36.1 8.0 GWal
7.4		47.2	8.9 7.0 GSel	8.0		33.0	46.7 8.0 Gal	9.8		43.9	15.9	9.0	13	12.3	10.9 9.0 G-m
10.4	35	0.7	45.2	9.4		38.0	18.9	9.1	59	2.9	55.9 9.0 a	8.4		16.8	11.3 8.2 G≡m
9.4		0.9	58.6 9.0 =	10.2	46	4.0	33.3	10.2		6.9	53.4	9.8		35.8	43.1 Ga
10.4		10.7	18.8	9.0		15.0	55.2	9.4		30.9	30.3	10.1	14	47.0	9.8
9.4		21.2	49.5 9.0 ≡	10.2		28.0	18.2	10.2		33.4	53.1	8.8		49.3	22.4
10.4		26.2	18.7	9.4		37.5	36.3	9.0		35.9	7.8 10.0 G-	9.6	15	2.3	7.5
10.4		26.7	33.0	9.4		59.0	51.4 10.0	9.6		44.9	44.9	8.8		27.3	19.4 8.5 ≡m
10.4		45.7	29.3	10.2	47	3.0	23.9	10.2		49.9	43.7	8.2		33.8	23.1 8.5 GW-m
9.8		50.2	27.6 9.0	10.2		17.0	4.8	10.2	0	41.6	48.8	10.0	16	27.8	33.9
9.8	36	1.7	34.3	10.2		18.0	7.1	9.4		52.6	51.6	9.0		36.3	37.9 Mm
8.2		10.2	0.8 8.5 Gbml	10.0		31.5	35.2	9.4	1	0.6	3.5 9.5 Ga	8.8		41.8	22.9
9.8		11.4	59.6	9.6		35.0	15.3	8.8		32.6	52.3	9.4		44.8	32.6
8.5		15.7	12.4 9.0 bl	9.4		37.0	50.6 -	9.6		37.1	28.8	9.8		56.3	44.5
9.2		25.2	29.7	10.0		37.5	48.8	9.4		56.1	47.1	9.4	17	20.3	35.9
10.4		56.3	30.0	10.2		45.5	4.9	9.1	2	5.8	53.7	10.0		50.8	12.9
10.4	37	1.8	6.1	9.6	48	3.0	37.3	10.0		21.0	57.8	10.1		51.3	20.9
10.4		10.8	55.8	9.4		34.5	38.8	9.2		32.0	18.9	9.8	18	25.3	21.3
8.6		14.8	36.3 9.0 Gam	9.0		37.6	33.2 9.5	9.0		34.8	33.4 8.5 Gb-1	9.2		38.3	19.9
10.2		21.3	58.8	9.1	49	6.1	37.8 9.0	7.8		34.8	38.9 7.7 GSel	8.8		38.8	15.1 9.5 M-m
10.4		32.3	2.8	9.4		16.6	34.0	9.6		35.0	6.9	9.4		41.3	25.3 9.5
9.0		35.3	40.4 8.5 Gam	8.4		32.6	25.1 8.5 GWa	8.4		56.5	17.3 8.5 b≡ml	8.8		46.3	36.4 G
10.4		44.8	19.0	10.2		39.6	52.0	9.6	3	43.0	54.9	8.0		47.3	21.1 8.5 b=ml
9.2		48.3	58.9 9.5 -m	10.0		42.6	39.5	9.4	4	21.0	14.9	10.1		55.8	55.7
8.4	38	0.8	28.3 9.0 Gam	8.2		44.1	23.2 8.5 GWa	8.8	5	17.0	10.6 8.0 GWal	9.8	19	12.8	52.2
10.4		3.8	13.2	9.0		47.6	8.2 a	9.5		18.0	38.5	9.8		17.5	48.9
10.2		5.8	56.0	8.2		54.6	30.4 8.2 GWa	8.2		38.5	14.3 8.7 Gaml	9.8		19.0	17.5
8.8		11.3	31.2 9.0 Ga	10.2	50	0.1	9.2	9.6		45.5	20.7	8.8		39.5	2.0 8.8 Wam
8.8		20.8	49.7 9.5 G	10.2		13.6	13.8	9.5	6	38.5	31.3	9.4		43.0	40.2
9.0		29.1	52.0	9.3		16.1	26.4	9.4	7	30.5	32.8	9.4		46.5	28.8
9.6		35.6	57.9 9.5	10.2		41.6	10.0	10.1		35.5	35.6	9.2	20	10.0	59.1 9.0 Ga
8.0		50.6	10.8 8.2 Gb≡l	9.3		46.6	17.6 Gka	10.0	8	22.5	3.8	9.0		39.5	29.8 M-m
25pr.	+ 1	31.3	+ 3.4		+ 1	31.1	+ 3.7		+ 1	30.6	+ 4.1		+ 1	30.2	+ 4.6

7081-7140.				7141-7200.				7201-7260.				7261-7320.				
mag.	20 ^h	-25°		mag.	20 ^h	-25°		mag.	20 ^h -21 ^h	-25°		mag.	21 ^h	-25°		
	m	s			m	s			m	s			m	s	Io°o	
9.4	20	54.0	57.3	10.2	31	41.8	29.1	8.8	43	58.4	29.2	9.4	4	8.0	28.2	Io°o
9.2	21	46.5	34.1	10.0		47.3	41.4	9.6	44	11.9	18.1	9.1		24.5	47.1	
8.8	22	17.5	51.5	10.0		54.8	26.0	9.6	45	12.9	42.3	9.6		39.0	18.3	
10.0		23.0	3.1	9.0	32	22.8	26.3	10.4		51.9	52.3	8.8		45.0	53.4	9.0 Ga
10.1		32.0	42.2	10.4		27.8	13.0	9.0		56.4	30.8	9.8	5	9.0	9.0	
9.2		35.0	11.4	9.6		47.8	37.5	10.2	46	26.9	11.9	9.8		23.5	53.6	
10.0		55.0	27.1	9.4		52.8	45.6	9.6	47	7.9	24.3	10.4		29.0	9.5	
10.0	23	5.0	44.7	9.6	33	5.3	9.9	10.0		9.4	26.7	10.0		39.0	21.3	
9.8		7.5	58.7	8.4		24.3	29.4	10.0		47.9	41.1	8.0	6	2.0	21.4	7.8 GSac
9.2		12.5	55.1	9.2		34.3	39.5	8.8	48	46.4	40.0	8.4		11.5	23.2	9.0 GWa
		20.5	26.0	8.8		36.3	51.7	9.0	50	20.9	21.8	8.6		20.5	41.4	9.5 M-m
9.6		27.0	50.0	10.2		47.3	44.2	9.0		34.2	2.8	9.4		49.0	23.0	
9.6		42.8	17.7	9.8	34	6.8	48.8	9.0		53.9	19.4	9.0	7	1.0	48.5	9.0 Gam
10.1		43.3	23.5	10.0		21.3	26.9	10.4		59.9	6.5	9.1		7.5	14.1	
10.0		47.5	39.0	10.2	35	0.3	46.1	10.4	51	7.9	22.4	10.4		46.0	23.0	
9.6		49.3	26.6	8.8		28.3	22.3	10.2		10.4	18.1	9.6		49.0	54.3	
8.8		59.3	26.7	9.8		51.3	8.6	10.4		14.9	23.9	10.4	8	5.5	45.2	
9.8	24	19.8	27.3	8.8		53.8	37.0	8.3		41.9	51.3	9.1		22.7	57.0	
9.1		23.5	25.1	9.6	36	2.3	40.5	10.0		55.4	12.6	10.0		23.0	4.9	
10.0		36.0	11.4	8.4		10.3	8.3	10.4	53	3.4	9.1	9.4		25.5	23.2	
		44.0	14.7	9.8		35.8	32.2	10.2		34.9	18.4	10.4	9	0.0	26.7	
7.9		52.7	17.5	9.6		47.8	36.6	10.4	54	17.9	9.9	9.6		20.7	4.5	
10.4		57.2	12.8	10.4		48.1	1.0	9.8	55	9.9	6.9	9.9	10	15.3	48.4	
6.5	25	26.2	21.8	9.6		56.3	12.2	8.5		11.4	21.8	9.0	11	17.3	33.0	9.5 M≡m
10.0		41.7	24.8	10.0	37	21.8	7.2	10.4		14.0	38.6	11.2		25.3	49.0	
9.9		42.3	3.2	10.4		29.3	7.9	10.0		23.9	44.0	11.2		31.8	54.6	
10.0		46.2	3.9	9.9		32.3	22.0	10.0		27.4	49.2	11.1	12	15.8	16.2	
9.9		57.4	57.0	10.4		47.8	41.8	7.7		57.9	33.8	11.2		17.8	47.0	
10.4		58.7	4.8	9.6		49.8	44.0	10.0	56	14.4	50.0	10.3		23.3	8.3	
8.6	26	11.7	47.2	10.4		55.8	0.7	10.0		33.9	32.2	11.1		57.3	44.9	
		17.7	32.3	9.5	38	6.8	18.2	10.2		54.9	51.2	11.2	13	16.1	0.2	
8.6		24.2	5.1	9.8		12.8	56.0	9.8	57	37.9	7.2	8.2	14	14.3	14.2	9.0 >-
9.6		45.7	27.8	8.4		35.9	33.4	10.2		38.0	40.1	8.8	15	7.3	41.6	a
10.4	27	1.7	58.3	4.1		41.9	43.1	9.0	58	11.9	14.9	11.1		8.8	54.6	
9.6		4.2	56.1	10.0		52.9	24.6	10.4		51.9	34.0	8.8		36.3	5.6	9.0 -
8.8		21.2	39.3	8.8		55.9	45.6	9.8	59	16.4	46.6	10.0	16	27.3	10.8	
9.8		21.2	25.5	9.6		59.4	10.0	8.3		33.9	9.0	7.4		40.3	44.2	6.5 GS1π
9.6		26.7	56.8	9.9	39	1.9	54.8	9.8		37.9	29.5	9.9		6.8	26.4	
9.4		39.4	57.2	7.8		7.9	22.1	6.8		48.9	30.3	10.5		33.8	50.6	
8.8		42.7	54.6	9.2		8.9	20.5	10.0	0	4.9	35.5	11.2		52.3	34.8	
		51.2	34.6	9.6		12.9	54.4	10.4		14.4	42.3	9.0	18	9.3	26.4	9.0 W
10.4		57.7	36.8	9.9		31.9	3.1	9.1		16.9	20.0	8.4		28.3	17.6	7.8 G-
10.0	28	8.7	30.6	9.6		38.9	12.4	9.6		28.4	36.2	8.0		33.3	46.4	7.5 GS1π
9.6		41.7	11.5	9.6		55.4	2.8	10.4		37.9	40.8	10.8		36.3	47.9	
10.4	29	2.7	27.4	9.6		56.4	55.1	8.8	1	52.0	17.2	7.9		54.6	1.3	7.2 GS1π
9.4		21.4	57.8	10.4	40	7.9	21.1	9.6		57.5	15.1	9.0	19	6.3	1.2	9.0 Wa
10.4		22.7	45.1	10.0		10.9	13.1	9.8		59.0	45.8	11.2		43.3	24.2	
10.4		55.7	8.0	10.4		46.4	5.1	9.8	2	10.0	16.0	9.5		52.3	6.3	
10.4		59.2	47.9	9.6		59.9	43.2	10.0		12.0	49.5	11.2	20	12.3	26.8	
10.4	30	8.2	7.6	10.4	41	2.9	1.5	8.8		35.0	27.2	9.5		24.3	26.6	
		18.3	2.0	9.6		52.9	28.1	9.0		37.0	23.6	11.2		26.3	25.0	
9.9		25.7	12.8	9.6		55.9	25.5	10.2		48.0	51.1	9.2		53.3	49.7	9.0 =
10.0		25.7	16.5	10.4	42	3.4	7.0	8.3		49.0	19.7	9.2	21	8.3	38.3	9.0 ≡
9.9		25.7	24.9	9.6		22.3	2.4	10.4	3	1.5	15.4	10.5		13.3	44.6	
6.8		25.7	32.4	9.2		22.9	49.9	9.6		1.5	32.8	9.0		28.3	54.0	
10.0		35.7	42.8	8.6		26.9	17.0	10.0		11.2	58.0	11.2		39.8	49.6	
9.4		42.7	36.7	7.0	43	7.4	26.5	10.0		26.5	51.3	11.1	22	6.8	13.4	
9.8		48.8	7.2	9.0		29.4	44.0	10.0		34.5	16.3	9.6		18.8	20.7	9.2 =
9.9	31	8.3	16.1	10.2		37.9	52.8	8.4		44.5	20.2	9.9		26.3	28.8	
8.6		22.8	38.0	10.4		52.9	14.9	9.8		49.5	26.3	10.3		27.3	19.1	
25pr.	+ 1	29.7	+ 5.0		+ 1	29.1	+ 5.3		+ 1	28.2	+ 5.8		+ 1	27.4	+ 6.2	

1.896Ancap...3...1G

7321-7380.				7381-7440.				7441-7500.				7501-7560.			
21 ^h .		-25°		21 ^h -22 ^h .		-25°		22 ^h .		-25°		22 ^h -23 ^h .		-25°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
10.0	22	50.3	37.7	9.6	49	37.8	57.3	10.0	9	23.7	1.4	9.5	51	18.3	40.0
11.2		55.3	9.5	10.4		51.1	10.9	10.0		52.6	46.3	9.6		51.8	20.8
8.1	23	12.3	44.2	10.2	50	11.1	7.9	9.2		59.1	8.2	9.6		55.8	49.0
11.2		58.8	0.5	9.6		35.1	28.4	9.4	12	42.6	15.9	6.7	53	19.3	49.8
10.3	24	23.3	23.3	10.2		57.1	24.6	10.0	13	23.7	10.5	8.8		21.3	12.8
8.0		26.3	50.9	10.0	51	50.8	7.3	10.0		24.1	2.0	8.6		23.8	43.6
7.2		37.3	57.7	8.9	52	1.8	57.0	8.6		48.6	44.5	8.0		57.3	39.6
10.5		43.3	49.7	9.0		19.3	4.5	8.8	14	16.1	45.5	8.6	54	8.3	19.9
8.6		53.3	46.6	8.9		26.3	14.1	7.9		56.6	59.7	10.6		15.8	14.0
11.2		58.3	24.4	10.2		30.3	40.9	8.6	15	43.3	19.2	10.6		19.8	59.2
11.2	25	13.2	9.7	10.6		59.3	45.7	10.0		55.6	15.0	9.0		36.3	18.7
6.5		21.3	8.3	9.4	53	11.8	44.3	10.0	16	22.1	13.9	8.4		40.3	44.7
8.8		33.3	57.9	8.8		13.3	24.3	7.0		33.6	23.6	8.2		55.27.3	46.0
10.0	26	3.3	4.3	8.8		13.6	42.2	8.2	18	30.5	59.1	10.4		56.17.3	51.1
9.0		31.8	47.3	8.9		17.1	31.7	9.2		43.3	21.6	9.6		57.0.8	34.7
9.5		43.8	12.7	10.2		32.8	13.9	8.2	19	14.8	4.6	8.6		11.8	42.4
10.0		53.3	3.3	10.2		57.0	4.3	9.8	22	18.8	46.3	9.4		25.3	5.3
8.8	27	17.3	30.1	8.6	54	7.6	36.5	9.2		21.8	12.0	7.6		58.32.8	1.6
7.8		28.4	52.5	9.2		7.6	12.1	9.0	23	2.8	23.4	10.4		53.3	50.0
10.0	29	50.3	13.5	8.0		36.6	27.9	9.0		18.8	20.4	9.8		59.10.8	40.4
10.0	30	6.3	12.3	9.0		57.6	57.2	10.0	24	32.8	3.1	10.6		47.3	27.9
7.9		24.3	0.7	9.6	55	50.3	25.1	9.3		51.3	20.4	10.4		0.8.8	2.8
8.8		27.3	34.5	8.8	56	44.4	17.5	8.2	25	46.8	15.4	10.6		32.3	34.9
9.9		53.3	27.3	8.4		46.9	25.3	9.4	26	14.3	13.5	10.6	1	33.3	24.9
10.2	31	3.8	44.2	8.3		47.9	27.0	9.8	27	53.0	1.0	9.0		2.45.1	43.7
8.4		48.3	0.7	10.0	57	29.3	1.1	10.2	28	26.3	32.3	9.6	3	20.1	24.1
10.2		53.5	40.4	9.6		30.4	21.6	9.5	29	3.3	36.1	9.3		56.1	34.9
10.5	32	11.0	4.1	8.2		40.9	43.3	9.5		13.8	51.1	9.6	4	8.5	58.7
8.4		43.6	47.2	10.0		56.3	31.1	9.0		20.3	45.7	9.2		12.6	24.2
8.4	33	1.9	15.4	10.0	58	34.9	38.6	9.2	30	47.8	48.7	8.7	8	14.1	53.8
10.2		27.9	19.3	9.4		46.9	14.5	9.0	31	6.3	39.0	7.4		39.1	31.9
7.7	34	36.1	40.2	10.0	59	51.9	45.6	9.2		6.3	35.7	9.3	9	54.6	4.5
8.4		50.6	13.2	8.0	0	35.9	0.1	9.4	32	18.8	40.4	8.1		56.6	16.7
9.5	35	36.1	16.3	8.8		42.6	7.4	10.2	33	41.8	17.9	9.6		59.1	36.9
9.6	36	15.6	14.0	9.1		44.6	18.3	9.8	34	13.8	27.0	8.9	11	19.1	18.3
9.5		53.6	5.4	9.2	1	54.8	57.1	9.5	35	57.8	7.2	9.1		22.6	21.0
9.4	37	22.6	36.9	9.6	2	46.6	50.0	8.5	36	37.3	2.1	8.2		44.6	41.0
7.7		23.1	28.8	9.2		51.1	50.1	9.8		55.3	37.6	9.6		55.1	18.7
7.6	39	4.6	23.4	9.8	3	6.6	40.2	9.6	37	16.3	47.2	8.7	12	59.1	51.6
8.2		51.6	38.8	8.2		53.6	19.5	9.3		26.8	7.7	9.2	13	12.2	11.0
8.6	41	40.4	2.6	9.4		59.1	55.1	9.4		29.3	20.0	9.4		43.2	23.8
9.6	42	22.6	25.1	9.6	4	3.1	21.5	10.2	38	9.8	11.2	9.1		51.7	54.4
10.0		39.1	11.2	7.6		8.6	59.1	6.6		41.6	53.6	8.2	14	6.7	50.2
9.4		43.1	26.1	8.8		22.6	32.5	10.6	39	26.7	42.0	7.6		26.2	56.2
8.2		44.6	43.7	9.8		52.6	42.0	10.6		46.3	10.5	8.0		44.7	33.4
9.2		51.6	27.1	10.0		58.6	27.7	10.3	40	40.8	13.0	9.6	16	33.2	25.6
9.6	43	49.6	53.9	9.2	5	12.6	50.2	10.6	41	3.8	34.0	8.0		36.2	17.9
9.0	44	29.1	38.0	9.4		19.6	46.3	9.6		58.3	47.6	9.6	17	0.3	3.7
9.6		46.1	50.6	6.0	6	43.1	47.9	10.6	42	9.9	40.8	9.4		40.3	54.7
9.4	45	16.3	57.3	8.6	7	2.6	14.5	7.8		11.8	34.8	8.5	20	55.7	9.6
9.8	46	7.6	8.3	9.6		11.1	56.2	10.6	45	25.8	45.3	9.6	21	16.7	15.0
9.8		23.6	45.5	9.4		24.6	47.5	9.0		43.3	13.6	9.4		34.2	11.2
9.3		46.1	43.0	9.2	8	8.6	50.7	9.0		49.3	45.5	8.9	22	24.4	2.2
10.2		47.6	5.5	8.3		18.1	36.4	8.1	46	3.3	52.2	9.6	24	3.0	25.6
10.4	47	30.1	44.3	9.4		19.6	50.9	7.6		18.3	48.7	9.2		32.3	4.9
9.4	48	23.6	36.2	8.8		34.1	52.2	7.4	47	31.3	38.7	9.6		48.8	22.0
9.8		52.6	34.8	8.3		40.1	12.1	8.8		41.1	59.3	8.6	25	5.0	14.7
10.2		56.6	36.6	10.0		46.1	44.1	10.4	48	37.3	48.0	9.9		12.7	42.2
10.0	49	25.6	47.8	8.8	9	0.1	42.3	10.6	49	24.3	37.4	10.0		16.8	44.7
10.0		30.6	18.7	9.2		2.1	59.9	10.0		46.3	22.2	9.8		43.3	32.1
25pr.	+1	26.4	+6.7		+1	24.9	+7.2		+1	22.8	+7.7		+1	20.3	+8.1

7561-7574.				7575-7588.				7589-7602.				7603-7616.				
		23 ^{h.}	-25°			23 ^{h.}	-25°			23 ^{h.}	-25°			23 ^{h.}	-25°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	
9.2	25	53.3	37.2	10.0	33	3.3	54.0	9.4	42	27.2	50.4	8.0	53	18.5	20.3	
10.0	26	53.3	19.7	8.2	34	32.7	49.7	9.6	43	42.2	43.6	10.0		39.5	13.3	
9.8		56.3	11.7	9.9		33.2	16.0	10.0	44	35.9	58.4	9.2		49.5	38.9	
7.9	27	25.3	33.0	10.0	35	32.2	11.2	9.9		39.2	32.4	9.2	54	5.6	24.2	
8.6		32.3	47.1	9.6		49.2	10.5	9.8		44.2	51.6	9.8		36.1	24.6	
9.2		47.8	6.7	9.3	36	26.2	59.4	7.6	46	13.0	40.9	10.0	55	58.1	33.7	
9.6	28	20.3	38.8	8.2		49.7	13.9	9.7		26.5	49.9	9.8	56	14.6	48.9	
9.6	30	3.3	44.2	9.1	37	27.2	27.4	8.6	49	28.0	4.7	10.0		23.1	38.4	
7.8		7.3	55.9	9.4	38	20.2	20.8	9.0		40.0	59.7	9.0		41.6	57.4	
7.4	31	18.3	34.0	10.0	39	6.2	10.4	6.9	50	2.5	26.0	7.9		45.6	17.1	
8.4		36.3	54.8	10.0	40	50.7	3.2	9.0		26.5	7.3	9.4	57	8.6	27.9	
9.3		54.3	6.8	8.6		56.2	10.4	10.0	51	15.5	19.1	10.0		35.1	39.6	
9.6	32	37.3	40.1	9.4	41	59.2	38.4	10.0	53	9.0	11.9	9.8	59	3.1	28.3	
9.6		49.3	13.8	10.0	42	19.2	48.5	9.4		15.5	21.5	9.0		51.6	11.9	
25pr.	+1	19.0	+8.3		+1	18.4	+8.3		+1	17.7	+8.3		+1	17.1	+8.4	

ZONE — 26°.

1-30.				31-60.				61-90.				91-120.				
		0 ^{h.}	-26°			0 ^{h.}	-26°			0 ^{h.}	-26°			0 ^{h.} -1 ^{h.}	-26°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	
10.0	0	9.9	11.0	7.0	20	59.0	14.3	8.6	37	15.0	36.4	9.8	58	21.7	15.9	
9.8		39.9	17.8	9.9	24	6.5	46.0	9.2	38	19.0	12.5	10.4	59	0.7	7.9	
7.2		58.9	2.9	9.8		47.0	52.1	10.2	39	45.0	36.1	8.6		46.4	58.6	
10.0	2	6.9	46.8	9.8	25	15.0	56.0	9.0		52.5	3.9	8.8	8.8	50.1	9.2	
9.2		6.9	40.4	9.2		19.5	42.8	8.4	40	6.0	13.2	9.0	9.8	2	30.1	
9.6		29.9	14.7	9.0		39.5	24.0	9.0	41	11.0	3.9	9.0	8.6	44.6	31.8	
9.0		32.9	55.2	7.4	26	25.2	3.0	9.8		26.5	4.7	8.8	10.4	51.1	10.0	
9.0		34.9	29.6	9.4		50.5	28.0	9.8	42	56.0	53.7	8.8	8.8	3	0.6	
7.2	3	36.9	34.2	8.1	27	23.0	46.9	9.6	43	13.5	7.3	9.2	9.2	58.6	6.1	
8.6	5	8.0	56.8	9.8	28	42.0	41.2	10.2	44	29.2	43.0	7.9	4	3.1	51.6	
9.8		31.9	54.0	8.0		49.5	48.9	9.0	49	8.5	17.0	9.2	5	7.5	3.2	
9.7	7	11.4	47.2	7.6	29	19.5	5.3	9.0		37.2	39.4	10.4		25.6	1.1	
9.8		11.9	23.5	9.4	30	15.0	21.8	9.0	50	13.2	13.8	9.0	9.0	42.6	37.6	
7.2		20.9	42.8	9.8		54.2	50.0	7.1		43.2	2.5	8.6	8.6	6	12.1	
7.3		24.6	58.9	8.1	31	18.7	26.2	9.2	51	39.2	54.0	9.8	7	34.1	23.4	
9.8		50.9	47.6	8.2		27.2	14.8	8.2	52	7.7	33.0	10.2	8	55.1	27.1	
8.6	8	19.5	34.8	9.9		33.7	26.5	8.2	52	7.7	33.0	10.4	8	5.6	24.1	
9.9	9	43.5	21.1	9.9		49.7	50.4	8.0	53	46.2	32.2	10.4	10.4	24.6	16.5	
8.2	11	37.5	36.6	9.8		53.2	0.9	9.8		47.5	15.9	10.4	10.4	50.6	29.6	
9.8	12	39.7	59.4	8.4	32	38.9	17.3	10.0	54	10.2	17.3	10.4	9	4.6	33.3	
9.8	13	55.0	37.8	7.6		41.2	16.9	7.4		29.2	25.3	10.2		29.6	28.6	
9.1	14	23.0	59.6	10.2		44.9	7.0	8.4		34.7	57.5	8.8	10	40.6	20.1	
8.6		26.0	9.6	8.4	33	13.5	40.5	10.4		53.2	7.7	8.6	12	39.6	33.6	
8.8		48.5	57.4	10.2		43.7	40.7	9.4	55	6.2	26.1	10.2	9.4	39.6	28.5	
9.9		53.9	30.0	8.8		58.7	44.1	10.0		16.6	17.4	9.4	9.4	46.1	50.0	
9.9	15	3.9	15.8	10.0	34	48.7	45.1	8.8		45.2	33.5	10.4	13	22.6	1.9	
9.8	19	15.0	2.3	10.2	35	13.7	25.7	10.4	56	43.7	35.7	10.4	10.4	30.6	43.3	
9.4	20	0.5	58.5	10.2	36	2.7	6.2	10.4		55.6	24.2	9.6	9.6	30.6	19.2	
9.5		39.5	29.7	9.2		22.2	52.4	8.4	57	12.7	50.9	10.4	10.4	36.6	35.8	
9.2		49.5	23.4	10.2		29.7	35.2	10.4		14.7	39.5	10.4		40.6	3.1	
25pr.	+1	16.2	+8.4		+1	14.5	+8.3		+1	13.1	+8.1		+1	11.9	+8.0	

121-180.				181-240.				241-300.				301-380.						
mag.	1 ^h .	-26°		mag.	1 ^h -2 ^h .	-26°		mag.	2 ^h .	-26°		mag.	2 ^h -3 ^h .	-26°				
	m s	'		m s	'			m s	'			m s	'					
10.4	13	54.6	15.3	9.0	51	47.0	7.1	8.0	33	21.4	17.0	7.2	58	51.7	30.3			
9.8	15	31.1	40.0	10.2	52	51.5	34.1	8.4	36.4	51.1	8.5	8.0	59	17.7	16.0			
10.4	16	46.6	4.8	9.0	53	14.5	28.8	=	8.0	52.4	6.6	7.7	9.8	23.7	12.3			
9.4	17	46.1	50.9	9.4	54	8.0	38.4		9.6	34	17.9	50.4	9.8	0	16.2	14.4		
10.2		56.1	3.7	9.7		24.1	45.2	9.0	9.6		22.4	51.6	9.0	9.6	24.7	6.1		
9.4	18	54.4	54.9	8.6		44.6	49.9	9.0	9.6		29.4	2.4	9.0	9.0	1	23.0		
9.2	20	14.4	56.9	9.2		59.6	47.3	9.2	9.6	36	17.9	44.0	a	8.2	8.2	23.2	26.1	
9.8		17.9	56.8	8.6	55	49.6	14.3	8.5	9.4		43.9	40.5	8.9	8.9	37.7	31.4		
8.8	21	32.9	34.9	9.0	56	18.6	3.0	9.2	9.0		52.4	25.4	8.0	9.0	45.7	53.7		
9.0	22	49.4	24.2	10.2		39.6	2.5		9.4		53.4	16.0	9.0	8.6	49.7	57.8		
				9.4		47.1	8.3		9.4	37	26.9	39.0	8.2	8.9	54.2	55.8		
7.4	23	48.9	15.8	10.2	58	26.6	58.6		8.8	39.9	28.3	8.8	8.2	54.7	2.2			
7.4	24	29.4	51.2	9.4	59	38.9	1.0		9.2	45.9	10.0		9.2	2	9.7	18.9		
8.8		35.9	2.2	9.4	0	0.7	38.7		9.4	38	20.3	0.6	8.8	8.8	10.2	27.2		
9.4		59.4	55.6	9.2	1	21.2	39.7	8.2	9.4	38	20.3	0.6	9.2	9.2	31.7	16.9		
10.0	25	33.4	7.1	9.7	48.0	53.5			7.2	40.9	1.7	7.3	9.2	3	7.2	13.2		
9.0		52.4	10.1	9.2	2	55.7	53.6		9.0	58.9	4.8	a	9.4	8.8	14.7	55.5		
9.6		53.9	38.5	8.5	58.7	20.1	9.0	a	8.5	39	13.0	44.0	9.0	8.8	26.2	50.1		
10.2	26	29.1	36.5	8.2	3	40.3	52.6	8.5	9.0	40	29.5	40.9	9.2	8.8	41.2	40.6		
8.4	27	22.6	18.5	8.1	5	18.3	2.8	8.3	9.6	40	44.0	43.6	8.2	9.4	41.2	40.6		
10.2	28	41.6	50.5	10.0		55.7	58.3	8.5	8.5	41	7.0	36.8	9.0	9.4	12.2	5.4		
				8.6	6	15.3	53.8	8.5	9.6	42	2.0	3.9		9.0	9.0	16.2	43.9	
9.2	29	36.1	4.5	9.8		22.3	16.3		9.4		10.5	52.3		9.8	5	9.7	8.9	
8.8	30	19.1	33.7	8.0		55.3	54.6	8.0	8.0		28.5	36.9	7.5	8.9	10.0	2.7		
10.2		20.1	30.3	8.7	7	13.8	23.4	9.2	8.8	43	6.4	58.1	9.2	8.8	17.2	12.0		
10.0		23.6	44.6	10.0		35.8	54.5		9.6	44	0.5	12.9		9.0	6	0.7	11.2	
10.2		40.1	0.6	9.8		50.5	21.1		9.6		22.5	16.0		8.4	8.4	2.8	0.6	
9.4	31	7.1	49.9	9.2		52.3	21.0	8.5	8.6		42.0	33.5	9.5	9.6	9.6	23.2	14.4	
9.4		8.1	16.4	8.6	9	40.4	29.9	8.5	9.1		47.0	2.4		9.6	9.6	44.2	53.0	
10.2		25.6	32.3	8.6	10	20.4	6.3	8.5	9.6	45	19.0	31.8		9.8	7	8.2	42.3	
10.2		28.6	52.7	9.4		30.4	44.9		9.6		46	11.5	11.9	8.8		8.7	22.0	
8.6		49.1	12.3	10.0	12	0.4	52.3	9.5	8.8		47	5.3	49.1	9.8	9.8	9.7	43.9	
				9.7		20.4	7.9	8.0	8.0		48	13.2	40.1	8.0	8.0	32.5	43.8	
9.8		58.1	3.5	7.2	13	21.9	32.1	6.5	9.8		35.0	23.8		8.8		44.0	30.3	
9.6	32	2.1	0.1	9.2	16	40.4	10.2	a	8.9		49	16.5	5.8	9.8	9.8	51.0	18.7	
9.8		49.1	35.5	8.6		55.4	8.5	8.7	9.0		35.5	38.3		9.8	8	13.5	51.9	
10.2	33	4.1	48.2	7.6	18	43.4	24.9	6.5	9.8		37.5	40.8		9.5		28.5	35.5	
10.2	34	4.6	2.7	10.0	19	39.9	1.3		9.7		44.5	26.9		9.2		29.5	4.9	
9.4	35	29.1	44.4	9.0		45.4	28.3	8.8	8.2		56.5	26.5	7.5	9.2	9.2	44.2	14.7	
10.2	37	34.1	13.8	9.4	20	14.9	52.6	a	8.4		50	0.0	38.6	7.5	9.7	9	15.0	
10.2		49.1	29.5	10.0		40.5	23.8		8.9			16.5	12.9	9.0	9.0	20.5	55.0	
10.2		54.1	22.1	10.0		50.4	31.1		7.0			40.0	42.4	7.2	9.5	28.5	7.7	
9.6	39	18.9	28.7	9.4	22	3.9	12.0		8.4			55.0	35.9	7.8	6.4	38.2	33.9	
				9.2		32.4	14.1		9.8			56.1	16.9		9.0	10	28.8	51.3
9.0		26.8	59.3	8.0		40.9	59.6	8.0	9.4		51	23.2	56.5		9.0		29.1	57.9
8.7		57.2	56.1	10.0		42.4	41.5		9.8		52	5.0	46.2		9.6		29.1	31.1
8.9		59.2	52.9	9.8		52.4	30.4		8.6			15.0	3.9	8.5	8.6	11	8.8	58.2
9.0	41	20.7	19.1	9.8	23	43.4	45.2		9.8			38.0	49.4		9.6		41.8	15.4
9.2	42	28.2	13.5	8.5	24	17.2	39.7	9.0	8.4			39.0	23.6	8.0	7.4	12	28.8	48.6
9.0		30.7	43.5	8.8	27	16.6	18.2	a	9.2			45.5	31.8		9.6	13	34.8	13.3
7.0		49.2	52.6	8.3		43.6	50.5	7.8	9.2			53	5.0	54.0	7.9	14	14.3	2.1
8.2	43	4.2	46.4	9.0		47.6	46.9	9.0	8.5			55.0	39.2	7.8	9.6	9.6	23.8	7.1
8.5		14.2	39.2	9.6		54.6	4.4		9.2			54	30.0	25.2	9.6		40.3	58.1
9.2		56.5	20.0	8.8	28	1.1	7.8	9.0	9.2			50.0	17.4		9.6		51.8	11.8
				9.1		56.9	40.7		9.2			55	44.1	57.4	6.8	15	23.8	44.5
9.3	44	7.5	4.0	9.6	30	15.9	7.2		9.7			56	14.0	8.3	8.6		42.9	37.3
9.3	46	39.0	20.0	9.6	31	3.9	5.1		9.4			57	25.0	17.9	9.6		44.7	59.1
8.7	47	4.5	26.6	9.6		12.4	6.0		9.0			58	11.7	13.1	9.4	16	32.9	43.5
10.2		29.5	15.1	8.8		13.4	14.7	9.5	9.2			29.7	12.1		6.4		54.6	2.4
9.6	48	34.5	14.0	8.8					9.8						9.0	17	25.9	11.9
8.9		41.0	57.7	9.6														
10.0	50	18.5	3.2	8.8														
9.8		31.5	6.0															
8.2	51	14.5	13.9															
8.9		35.0	49.6															
25pr.		+ 1 10.3	+ 7.7			+ 1 7.8	+ 7.0					+ 1 5.7	+ 6.3				+ 1 4.6	+ 5.7

361-420.				421-480.				481-540.				541-600.						
mag.	3 ^h .	-26°		mag.	3 ^h -4 ^h .	-26°		mag.	4 ^h .	-26°		mag.	4 ^h .	-26°				
	m	s			m	s			m	s			m	s				
9.6	17	30.5	6.2	7.4	43	44.5	24.8	7.0	9.4	2	10.1	2.6	7.8	23	5.4	56.7	8.0 Ga	
8.0		49.4	34.0	8.6	44	7.0	39.8	9.0	8.4		12.1	38.1	8.2		29.9	34.2	8.5 GS-	
9.6	18	0.5	8.7	8.6		57.0	9.0	8.5 G	10.2		15.6	37.0	10.0		45.4	56.2		
7.9		37.4	39.6	8.8	45	21.6	58.9	8.6 a	9.2		53.1	54.0	9.5		49.9	26.3		
7.8		39.4	39.6	8.8	46	6.5	18.9	9.0 a	10.2	3	14.1	36.6	10.0		50.4	29.0		
7.6		42.9	28.8	9.6		34.5	11.4		9.4		18.1	38.8	8.0	24	24.4	33.0	7.0 GSa	
9.4		46.9	19.6	8.6	47	11.0	18.3	8.8 Ga	9.8		51.6	8.9	9.4		56.4	47.5		
8.4	19	19.9	35.7	8.5		46.5	19.8	9.0 a	9.5		52.6	30.0	10.0	25	5.9	17.7		
8.2		29.4	11.6	8.5	48	25.9	11.8	9.0 Ga	8.4	4	20.1	21.0	10.0		17.9	17.9		
8.4		58.4	24.2	8.8	49	34.4	57.9	8.8 a	10.0		35.1	7.5	9.4		24.9	46.1		
8.8	20	31.9	45.7	9.8		42.0	13.4		10.1		37.1	20.9	8.6		45.4	1.6	8.5 Ga	
9.0	21	23.4	31.2	9.0	50	0.9	34.5	G	9.0	5	11.1	6.0	8.1		55.4	16.5	8.5 Ga	
9.2		40.9	22.6	8.4		8.9	54.7	8.3 Ga	9.5		15.1	22.1	9.6	26	12.6	0.7		
8.6		58.2	57.9	8.0		20.9	17.7	7.5 GSa	8.6		18.1	22.7	8.0	9.8		22.4	34.6	
8.2		59.4	41.7	7.8		22.9	34.8	7.5 GWb	8.4		24.6	56.1	7.8 GW-	9.2	27	3.6	18.2	
9.0	22	27.7	3.2	8.0		32.9	18.6	8.5 GWa	9.2		32.6	55.3	9.0 G	8.8		32.1	26.4	9.5
9.6		29.7	51.1	9.1		33.9	22.0	9.0	10.2		57.1	4.9	10.0		36.9	1.4		
8.8		42.7	7.5	9.6		59.9	47.2		10.1	6	10.1	55.2	9.8		50.6	3.7		
8.2	23	6.2	46.6	9.8	51	6.2	2.4		8.7		47.4	26.7	10.0		51.1	55.2		
8.2		9.7	7.9	9.1		14.4	16.4	b	10.2	7	39.5	21.5	8.6		55.1	29.8	9.0 Ga	
9.6		30.2	52.0	9.0		43.4	42.8		8.2		52.4	45.4	10.0	28	4.1	12.8		
9.3		33.7	30.5	9.4		47.9	32.5		10.2		57.4	20.2	9.0		39.6	32.4	9.0 a	
8.6	24	49.7	45.2	8.6		51.6	59.3		10.2	9	10.4	35.8	10.0		40.6	53.2		
8.4	25	39.7	3.9	8.8	52	15.9	6.0	9.0 Ga	10.1		14.9	37.7	10.0		43.1	53.7		
8.8	26	9.7	11.1	8.9		17.9	20.9	9.0	9.6		45.4	38.1	9.0		56.7	2.6		
9.6		20.7	6.2	9.4		40.9	18.0		9.6	11	36.4	35.4	10.0	29	4.1	51.2		
6.2		32.7	2.4	9.6		42.0	34.7		9.4	12	42.4	17.3	9.4		4.6	13.3		
8.6	27	6.2	5.0	8.4	53	7.4	28.0	8.5 ≡	9.8		45.9	4.0	10.0		10.1	10.8		
9.4		55.2	17.6	10.2	54	4.8	58.6		9.6	13	11.4	50.2	10.0		24.1	49.0		
9.0		59.7	29.9	10.1		8.8	29.5		9.8		13.9	15.7	8.6		54.1	13.9	8.5 Ga	
9.6	28	21.8	47.6	8.3		15.3	16.0	8.5 -	8.0	14	23.7	15.6	9.6	30	27.1	31.4		
9.6		27.8	22.7	9.6		48.8	12.1		10.2		43.7	48.3	9.2		48.6	19.0		
9.6		30.8	44.3	9.8	56	6.8	7.8		9.6		55.7	14.6	9.4		55.6	51.4		
7.4	29	31.8	0.2	7.3		8.8	52.1	7.5 GSa	9.8	15	11.2	11.0	9.6		55.6	1.0		
8.6	30	7.8	26.9	9.8		9.8	56.0		9.8		27.2	27.9	10.0	31	4.3	58.8		
8.2		14.3	50.8	10.1		26.8	37.5		9.8		42.2	51.7	9.2		15.1	18.4		
9.4		58.8	50.9	10.2		55.3	5.9		8.6		47.7	47.3	8.8	8.8	15.6	49.1	8.8 GW-	
9.6	31	14.8	35.3	8.7	57	20.8	58.8	8.8 Ga	10.2		52.7	23.6	8.3		33.6	41.1	8.5 -	
9.6	33	4.4	46.5	10.2		24.8	24.8		9.1		54.2	47.4	10.0		36.7	49.6		
8.6		29.0	1.0	9.4		32.3	26.3	-	6.6	16	20.7	1.5	9.5		40.6	34.4		
8.9	34	39.5	37.7	9.5		35.1	52.5		8.4		22.3	0.9	10.0		49.1	9.4		
9.2		43.5	47.8	10.1		50.6	23.4		10.1		45.2	32.8	8.8		51.6	32.7	9.0 G	
9.1		44.9	0.1	8.5	58	8.1	21.7	9.0 G-	10.0		45.9	22.1	9.7		51.6	6.0		
9.2		49.0	3.1	8.3		20.1	49.5	8.8 GWa	8.8	17	13.4	12.2	9.4		56.6	30.4	G	
9.8		56.5	7.4	8.0		20.6	11.6	7.2 GSbl	10.0		41.4	54.9	10.0	32	12.6	1.1		
9.6	37	12.5	39.9	9.8		21.1	47.2		10.0		45.4	18.9	8.5	33	16.6	27.4	9.0 =	
8.4		49.0	22.3	10.2		51.1	51.0		9.4	18	12.4	20.0	9.2		32.6	46.4		
9.1		50.5	10.0	9.6	59	18.1	26.4	G	9.8		26.9	52.2	10.0		51.0	20.1		
9.4	38	1.5	25.1	9.8		51.1	27.9		9.2		29.9	14.6	9.9	34	15.0	58.1		
8.9		7.5	45.0	10.2		51.1	18.0		9.7	19	40.4	56.1	10.0		15.4	7.8		
9.1		10.5	59.8	8.6	0	9.1	8.9	9.0	8.6		45.4	45.3	10.0		18.0	6.3		
9.8		46.5	55.9	9.6		29.1	34.2		10.0	20	0.4	4.3	10.0		45.5	20.3		
9.7	39	46.5	7.8	8.8		43.1	59.8	9.0 Ga	8.3	21	13.4	33.9	9.0		50.0	57.1		
9.2		56.5	38.1	8.7		52.1	6.0	9.0	10.0		19.4	49.7	9.4		59.5	21.4		
9.7	40	6.5	0.5	10.0	1	11.6	23.1		10.0		32.4	35.6	8.8	35	27.0	19.3	9.0	
7.0		16.5	18.4	9.5		24.1	25.1		9.7		34.4	44.3	8.1		30.0	1.1	8.5 GW=	
9.8		23.5	45.4	9.6		31.1	14.7		10.0		40.9	25.5	10.0	36	5.0	39.9		
9.2		23.5	0.7	10.2		48.1	30.3		9.2		49.4	46.4	8.8		30.5	49.5	a	
7.3	42	44.5	42.8	10.2		50.1	36.5		9.4	22	40.4	25.3	8.6		45.5	40.4	8.5 a	
8.8	43	39.0	26.6	9.6	2	7.6	47.8		8.8		54.4	16.3	9.4		56.5	10.3		
25pr.	+1	3.7	+5.1	+1	2.6	+4.4			+1	1.9	+3.7		+1	1.4	+3.2			

601-660.			661-720.			721-780.			781-840.					
mag.	4 ^h .	-26°	mag.	4 ^h -5 ^h .	-26°	mag.	5 ^h .	-26°	mag.	5 ^h .	-26°			
37	3 ^m 3 ^s	17.9	9.9	51	14.9	4.9	10.0	6	8.3	21.9	9.5	13	50.2	23.4
38	11.0	2.7	9.6	31.6	2.0	8.4	8.4	8.8	51.3	8.5	9.4	14	2.2	33.8
39	18.5	34.1	9.6	46.4	16.6	9.3	9.3	16.8	31.9	9.8	9.8	2.7	51.8	
40	30.0	52.9 a	9.8	49.9	35.7	10.1	10.1	17.3	23.3	9.8	9.8	16.2	57.1	
41	40.0	49.8	8.8	51.9	52.2 8.8 a	9.4	9.4	47.3	43.9	10.0	10.0	27.2	16.4	
42	50.0	46.9	10.0	52	9.7	1.7	10.1	48.3	57.3	9.8	9.8	34.7	27.1	
43	52.5	29.3 8.8 a	10.2	31.4	24.8	10.0	10.0	54.3	48.8	8.8	8.8	36.7	8.2	9.0 a
44	55.5	42.7	9.6	44.9	32.7	9.5	9.5	56.1	14.8	7.0	7.0	41.7	3.7	7.3 GSa
45	10.0	8.7	9.9	52.9	52.0	8.2	8.2	59.6	48.0 9.0	10.0	10.0	47.7	53.2	
46	15.0	43.8	9.1	53	7.4	34.0 Ga	8.6	7	2.6	44.6 8.5	8.0	15	21.2	41.7 8.8 G-
47	40.0	3.1	9.6	17.4	8.7 9.5 a	9.4	9.4	14.6	53.2	9.8	9.8	31.7	30.5	
48	55.0	9.2 8.3 Gal	9.9	54	2.4	12.6	8.2	19.6	42.0 8.0 -	9.8	9.8	35.2	19.6	
49	5.0	38.9	10.1	32.9	18.4	8.8	8.8	34.1	15.4 9.0 G-	9.6	9.6	41.2	31.1	
50	26.5	45.1	9.4	36.9	3.3 9.0 a	9.8	9.8	46.1	4.2	10.1	10.1	4.2	43.2	
51	30.0	14.9	10.0	54.9	38.3	9.8	9.8	49.6	36.6	9.6	9.6	5.2	35.0	
52	40.0	56.3 8.5 Ga	9.8	55	4.9	24.1	9.0	8	2.6	9.7 8.5 =	10.1	7.2	28.2	
53	45.5	43.1	10.2	14.9	38.4	10.1	10.1	6.6	13.0	9.1	9.1	15.2	14.4	
54	57.2	1.9	9.4	19.9	30.6	9.6	9.6	9.6	13.0	9.6	9.6	20.2	37.2	
55	4.2	49.6 a	9.9	27.3	50.0	10.1	10.1	17.3	59.4	10.0	10.0	43.4	58.2	
56	4.7	37.2	8.8	56	16.3	56.7 9.0 a	8.8	29.6	20.0	9.5	9.5	46.2	15.8	
57	12.2	16.2 8.5 Ga	9.6	18.8	14.7	9.6	9.6	38.6	19.3	9.6	9.6	17	11.2	7.4
58	18.2	52.3	9.0	27.3	8.0 9.0 a	9.4	9.4	52.6	23.0	9.8	9.8	23.2	0.4	
59	4.7	39.9 a	9.6	44.3	27.8	8.8	8.8	57.6	29.4	8.8	8.8	31.2	1.8	
60	12.2	1.3	9.4	57	2.3	8.5	8.6	9	0.6	32.0 9.0	9.6	35.2	52.0	
61	26.7	0.1	6.6	4.8	27.3 5.2 GSλπ	10.0	10.0	3.1	46.0	10.0	10.0	40.2	56.9	
62	35.7	44.7	8.6	39.8	48.8 8.8 Ga	9.3	9.3	7.6	48.2	10.1	10.1	47.9	19.4	
63	36.9	58.9 9.0 a	9.7	45.8	33.6	10.0	10.0	9.6	46.6	10.0	10.0	59.2	2.6	
64	40.7	8.9	10.1	58	0.7	39.2	8.2	19.6	56.4 7.5 Ga	6.6	6.6	18	10.4	49.4 6.6 GSset
65	43.7	31.7 8.2 GWal	9.1	5.3	55.2 9.5 a	8.0	8.0	26.6	21.0 7.0 GSa	9.0	9.0	10.9	39.0	
66	21.4	59.9 8.8 Ga	9.8	19.8	55.0	10.1	10.1	53.1	56.9	10.1	10.1	12.4	42.5	
67	34.7	26.3 a	9.6	35.8	20.6	10.0	10.0	10	25.6	49.2	10.0	38.4	32.0	
68	44.7	48.8	10.0	42.8	2.1	10.1	10.1	29.6	59.6	9.3	9.3	47.4	55.7 9.0 G	
69	48.1	0.8	8.4	49.3	4.1 7.8 Gal	9.6	9.6	30.1	25.1	10.1	10.1	49.9	6.5	
70	57.1	1.1	9.0	59	19.8	12.7 9.0 a	8.5	36.6	34.9 8.5 a	10.0	10.0	53.4	48.9	
71	58.2	50.2 a	10.0	57.8	3.8	9.1	9.1	39.6	37.2	10.0	10.0	54.4	28.0	
72	4.2	5.9 9.0 Ga	9.4	59.8	35.3	8.5	8.5	41.1	25.4	10.1	10.1	19	10.4	45.5
73	6.7	20.8 9.0	7.2	11.8	19.2 6.0 GSλπ	9.0	9.0	41.6	22.2 a	10.1	10.1	16.7	0.1	
74	22.2	14.6 9.0 a	9.7	11.8	10.3	10.1	10.1	47.6	35.0	10.1	10.1	20.4	5.0	
75	37.7	8.0	8.9	23.3	17.6 9.0 a	9.6	9.6	2.6	15.6	10.1	10.1	34.4	11.4	
76	47.9	20.4 8.0 Gal	9.8	29.3	20.4	10.1	10.1	3.6	37.8	9.8	9.8	37.4	8.5	
77	7.4	15.1	9.3	54.3	32.7	9.4	9.4	7.6	3.3 10.0	10.0	10.0	45.9	18.6	
78	11.7	2.8 9.2 Ga	9.7	5.3	16.1	9.4	9.4	26.1	22.3 a	10.1	10.1	55.4	28.2	
79	27.4	33.3	8.3	6.3	39.5 8.2 Wal	9.5	9.5	28.6	29.2	9.8	9.8	57.4	28.5	
80	56.4	18.4	9.4	14.6	22.9 a	9.6	9.6	33.6	8.4	8.6	8.6	20	23.9	52.1 9.1 Ga
81	17.9	5.3	10.0	21.3	13.0	8.6	8.6	39.6	28.4 8.8 a	10.1	10.1	31.9	58.0	
82	24.9	54.7	10.1	26.3	9.2	9.4	9.4	41.6	39.6	10.1	10.1	50.9	38.9	
83	28.9	12.1 8.5	10.0	42.3	44.0	9.8	9.8	51.2	2.8	10.1	10.1	59.4	41.0	
84	36.9	27.9	10.1	2	4.5 25.3	10.0	10.0	54.2	34.2	9.1	9.1	21	0.4	15.1 8.8 G=
85	44.9	59.9 9.5	9.8	9.5	0.5	9.6	9.6	0.2	20.2	10.0	10.0	15.4	30.8	
86	31.9	17.2 8.0 G=	10.1	19.8	21.7	10.1	10.1	3.2	9.4	9.2	9.2	15.4	31.8	
87	44.9	38.0 9.0 G-	9.0	31.5	57.4 9.0 Ga	9.0	9.0	38.2	46.2	9.4	9.4	17.4	26.4	
88	45.9	38.2 G	10.1	57.3	16.1	9.6	9.6	54.2	6.6	9.5	9.5	22	18.9	13.8
89	14.4	18.4	8.1	59.3	57.7 8.0 GSa	10.0	10.0	59.7	22.5	10.1	10.1	20.9	36.6	
90	19.4	9.9	8.4	3	17.8 54.2 8.8 Ga	9.6	9.6	13	0.2 4.2	7.0	7.0	23.4	41.4 7.0 GSset	
91	29.9	56.0 8.2 GWa	9.6	34.3	24.6	10.0	10.0	18.2	16.8	10.0	10.0	24.4	31.5	
92	42.4	25.3	10.0	38.8	8.5	9.2	9.2	18.7	44.8 9.0 a	9.4	9.4	39.9	15.1	
93	0.9	51.2	9.4	4	14.3 12.6	9.6	9.6	20.2	37.6	8.4	8.4	23	0.0	16.6 -
94	12.4	43.7	9.8	5	9.8 14.7	9.1	9.1	22.2	26.9	9.4	9.4	0.5	48.9	
95	17.4	25.1 a	7.8	39.3	4.2 6.5 GSbl	9.0	9.0	47.2	34.4 a	8.6	8.6	12.5	50.5 8.2 Ga	
96	28.4	39.1	10.1	59.3	11.2	9.6	9.6	47.2	28.2	10.0	10.0	18.0	35.3	
25 Pr.	+ 1 11	+ 2.8		+ 1 0.7	+ 2.2		+ 1 0.5	+ 1.8		+ 1 0.4	+ 1.5			

841-900.			901-980.			961-1020.			1021-1080.		
mag.	5 ^h	-26°	mag.	5 ^h	-26°	mag.	5 ^h	-26°	mag.	5 ^h	-26°
9.6	23 23.5	36.9	9.5	33 48.0	45.3	9.3	44 27.0	13.9	10.3	52 21.4	38.4
9.0	31.0	36.6	10.0	34 4.0	27.8	8.0	35.0	23.1	9.7	47.9	37.0
9.4	33.5	46.5	10.0	8.0	38.4	9.8	45 5.5	15.0	10.1	50.9	23.4
10.1	53.0	36.4	9.3	10.5	19.8	9.5	20.5	47.3	9.3	53.4	51.0
9.6	55.3	1.6	9.4	14.0	45.8	9.2	20.5	56.0	10.2	53.4	22.0
9.0	24 3.0	27.5	9.8	36.5	31.5	9.3	25.5	39.1	10.2	58.9	47.5
9.6	10.5	46.8	10.0	35 4.5	21.2	9.9	35.0	52.8	10.2	53.7	33.8
10.1	15.0	2.6	9.6	16.0	41.2	8.9	54.5	46.1	9.0	16.9	13.0
10.1	21.5	48.0	9.2	36 6.0	59.2	8.9	46 1.5	32.7	10.0	23.4	4.0
10.0	38.0	10.1	8.0	16.5	24.5	10.0	5.5	12.7	9.8	24.4	47.8
9.0	44.5	17.4	8.8	17.0	25.0	9.9	12.5	18.5	10.3	24.9	50.0
9.3	48.5	0.5	8.8	38.0	13.7	9.3	23.2	41.8	10.3	29.4	50.2
8.8	54.0	23.4	9.8	44.0	56.8	9.4	29.0	9.7	9.6	31.4	52.4
9.6	54.5	41.0	9.5	59.0	10.6	9.3	30.4	41.5	10.0	42.9	32.6
8.8	55.0	16.6	9.9	37 5.0	50.5	9.6	31.5	46.8	10.1	54 3.4	46.0
9.3	55.3	25.2	10.0	5.0	55.3	10.0	37.7	0.9	10.2	18.9	55.0
9.2	55.7	45.6	9.9	10.5	18.9	10.0	47.5	43.7	10.3	29.4	12.3
9.8	25 1.7	46.6	9.3	12.5	5.9	9.2	47 8.0	32.1	10.1	30.4	17.0
9.6	11.5	13.9	9.2	16.0	32.1	9.5	10.7	14.0	10.2	36.4	42.0
10.1	16.5	41.1	10.0	23.5	22.6	8.1	22.2	19.3	9.7	38.4	12.7
9.5	28.7	6.6	10.0	38 0.0	37.7	10.3	23.6	42.0	10.0	39.9	36.4
10.0	44.0	43.8	9.6	12.0	34.2	10.2	25.7	15.5	10.2	41.9	40.5
9.8	47.0	9.4	10.0	16.0	48.7	9.3	33.9	16.5	10.0	42.4	31.9
9.2	52.0	16.3	8.4	25.0	12.2	9.6	36.9	6.7	9.6	55 1.4	35.1
9.4	26 13.5	37.2	9.8	27.0	30.4	10.2	51.4	13.1	10.2	18.4	45.9
9.8	33.0	8.4	9.6	52.0	58.2	10.3	59.6	20.9	10.3	28.4	23.5
9.5	35.5	39.8	9.4	39 7.0	9.8	10.1	48 17.4	10.3	10.3	36.4	59.8
9.8	56.0	8.0	9.0	7.5	33.4	10.3	36.4	25.9	9.6	46.4	38.0
9.0	27 44.0	23.8	10.0	11.0	9.5	9.2	39.4	16.5	9.6	48.4	42.4
8.8	50.0	21.1	10.0	12.5	37.2	9.6	53.9	18.6	9.7	55.4	43.1
9.6	55.0	3.4	9.8	28.5	46.4	9.6	49 12.4	15.3	10.1	56 2.9	22.5
8.8	28 4.0	49.1	8.8	35.0	51.7	10.0	12.9	43.9	9.6	9.9	31.1
8.4	6.0	38.9	8.7	35.0	19.0	10.0	21.4	13.3	10.3	13.4	13.6
8.9	18.0	50.3	8.8	40.0	12.3	10.2	21.9	6.1	10.1	21.4	23.7
9.4	23.0	12.7	9.9	54.0	13.4	7.6	39.4	41.1	10.3	22.9	51.4
9.3	42.0	12.5	9.5	56.0	48.1	9.4	41.4	50.8	10.1	28.9	28.3
10.0	49.5	0.4	9.3	56.0	54.6	10.0	48.9	38.1	10.2	33.3	23.7
10.0	29 15.0	17.0	8.8	40 5.0	36.4	10.1	52.4	33.0	10.3	33.9	7.2
9.6	50.0	16.8	10.0	6.0	52.9	10.3	58.9	24.1	9.6	40.4	37.2
10.0	53.0	36.4	9.6	36.5	52.2	9.6	50 8.4	50.5	9.6	44.9	13.2
9.9	55.0	52.9	8.6	41 4.0	56.3	10.0	30.9	46.0	10.3	51.4	36.1
9.2	30 17.5	59.0	8.8	5.0	40.4	9.4	33.4	22.7	9.4	54.9	11.1
9.4	29.0	17.3	9.2	15.5	31.1	10.2	49.4	47.0	10.2	57.9	6.0
9.8	31.0	52.7	8.2	27.0	25.4	9.0	51 6.4	50.4	8.3	57 7.9	39.8
9.6	50.5	28.1	8.8	28.0	49.5	10.3	11.4	12.9	10.3	19.4	25.7
8.8	51.0	25.7	9.3	30.0	1.4	10.3	14.4	5.2	9.0	26.4	17.5
10.0	31 15.0	5.9	8.9	35.5	32.5	10.0	16.9	56.8	9.4	27.4	59.9
10.0	32 4.5	41.0	9.6	45.0	34.6	9.8	22.9	23.0	10.0	33.4	18.1
10.0	22.5	54.1	9.9	45.5	27.6	10.3	27.9	24.6	10.2	33.9	36.9
10.0	25.0	48.0	10.0	42 0.0	1.5	9.8	28.4	39.8	9.0	43.4	39.2
9.5	31.0	17.5	8.2	7.0	18.3	8.5	32.4	32.5	9.8	43.9	54.7
7.8	41.5	47.6	8.8	29.8	58.2	8.9	33.9	46.5	9.6	47.9	7.0
10.0	55.0	0.1	10.0	31.5	31.2	10.3	33.9	4.9	9.4	54.9	27.0
9.8	55.5	10.9	10.0	35.0	17.4	10.3	34.6	59.9	9.8	58 2.9	28.7
10.0	33 4.2	57.3	9.4	43 2.0	33.7	10.2	44.3	0.0	10.1	7.9	13.3
9.4	8.0	18.7	9.0	15.0	10.6	10.2	48.9	45.4	10.3	8.4	12.0
9.8	28.0	39.6	9.9	22.5	16.0	10.3	50.9	4.8	6.9	13.4	17.0
9.4	37.0	25.8	9.4	42.0	25.8	10.1	56.9	34.8	9.4	26.4	1.9
9.4	43.5	52.9	9.3	44 15.0	15.9	9.0	59.9	13.5	9.8	29.1	0.2
10.0	44.5	30.2	9.0	20.0	44.8	9.6	52 3.4	37.0	9.6	31.4	28.1
25pr.	+ 1 0.3	+ 1.2		+ 1 0.2	+ 0.8		+ 1 0.2	+ 0.4		+ 1 0.1	+ 0.1

1081-1140.				1141-1200.				1201-1260.				1261-1320.			
5 ^h -6 ^h -26°				6 ^h -26°				6 ^h -26°				6 ^h -26°			
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.3	58	44.9	54.2	10.3	5	24.1	27.4	9.2	11	55.3	22.9	9.1	19	5.8	34.4
10.3		52.9	55.0	9.6		28.6	56.2	9.4	12	7.8	52.9	8.0		11.8	22.7
10.1		55.9	6.2	9.2		39.6	54.3	10.0		11.8	48.9	9.5		20.3	39.3
9.4	59	0.9	11.2	9.6	6	2.6	56.4	7.8		14.8	53.3	9.6		24.3	35.2
9.6		17.9	35.4	9.3		4.1	15.2	9.7		15.3	13.4	9.4		26.3	55.4
10.3		18.4	9.2	6.2		13.1	27.4	10.0		16.8	43.2	9.9		30.3	9.8
8.5		21.7	57.5	9.0		16.6	30.4	9.0		17.8	52.6	9.6		36.8	37.0
9.0		32.4	31.3	10.1		19.6	11.7	9.8		26.8	17.1	9.6		56.3	27.2
10.0		34.9	34.6	10.0		22.1	54.2	8.6		36.8	40.4	9.4	20	6.8	39.6
9.3		41.4	28.7	9.6		37.1	11.0	9.6		46.3	41.8	8.8		17.3	4.6
10.3		48.9	51.7	9.0		42.6	40.2	9.6		54.3	18.8	8.4		20.8	49.6
10.0		50.9	42.8	8.5		46.6	42.2	10.0	13	13.8	30.2	10.0		22.7	44.1
9.7		51.4	44.8	9.8		48.1	45.4	9.0		42.8	56.1	9.6		24.8	42.6
9.4		57.1	1.2	10.3		49.6	47.7	8.8		43.3	16.6	9.4		35.8	41.6
10.2		59.4	31.8	10.0		55.1	26.9	9.6	14	3.8	58.3	9.9	21	0.8	7.4
10.2	0	3.9	44.2	10.2		58.6	32.6	8.4		40.8	55.7	9.0		2.8	6.2
10.3		5.9	42.0	9.0	7	3.6	46.9	9.5		43.8	13.3	9.4		4.8	35.2
9.7		12.4	16.8	8.4		5.1	1.3	10.0		53.2	30.7	9.8		18.8	9.0
10.2		32.4	32.6	10.2		16.6	9.0	8.4		57.2	17.2	9.7		18.8	37.0
8.5		46.4	18.8	9.4		18.1	55.1	9.4	15	2.7	35.6	8.6		22.3	13.6
9.4		57.9	54.8	9.3		18.1	35.8	9.0		2.7	51.1	9.8		22.8	51.2
10.2	I	3.9	23.8	9.8		20.1	9.1	9.0		6.2	6.6	8.8		30.3	44.6
10.0		7.4	22.2	9.3		22.6	34.7	8.8		8.7	43.4	8.9		30.3	2.0
9.3		8.9	18.4	9.6		23.1	5.8	9.0		16.7	31.8	9.0		34.8	31.6
10.1		10.6	56.5	8.7		24.6	36.1	9.9		18.7	53.0	9.9		41.3	15.6
10.0		17.9	39.6	9.7		27.1	20.0	9.9		32.7	35.0	8.4		46.3	41.2
10.3		20.9	55.2	9.7		31.1	36.0	9.2		42.7	34.2	9.0		55.8	38.2
9.2		22.9	25.6	9.6		36.6	8.9	9.3		50.7	53.4	9.1	22	2.8	55.4
10.0		30.4	26.1	10.3		40.6	18.2	9.7		58.2	1.4	9.9		14.8	17.6
10.2		35.4	56.5	9.7		44.1	4.6	10.0	16	1.2	55.4	8.4		28.6	0.2
9.7		43.9	4.0	10.0		54.1	41.6	9.9		12.2	11.5	9.5		33.3	4.8
10.0		52.4	41.0	10.3		54.6	8.3	8.1		13.7	26.0	9.0		40.8	57.8
9.7		53.9	26.2	9.3	8	3.6	30.0	9.6		21.7	50.8	9.3		43.8	45.3
10.2		55.9	0.0	9.6		8.1	25.0	9.8		30.7	22.5	9.4	23	47.3	15.8
9.8	2	2.4	19.1	9.6		11.5	54.9	9.4		33.0	3.0	9.8		55.3	54.2
8.8		27.9	15.0	9.0		40.1	10.6	9.8		46.2	13.2	10.0	24	5.8	45.4
9.4		35.9	22.7	10.3		41.6	44.9	7.9		56.2	18.7	8.9		8.8	2.4
8.6		36.4	36.2	10.3		52.6	54.9	9.2	17	6.2	24.0	9.6		13.8	22.6
9.8		38.4	28.6	9.6	9	0.6	9.0	9.7		6.7	51.4	8.4		16.8	25.2
10.3		38.9	58.0	10.2		4.1	15.1	8.6		13.7	13.0	9.9		41.8	40.2
10.2		53.4	41.8	9.3		11.4	48.3	9.4		21.7	25.4	9.6	25	1.0	25.1
10.2		57.6	20.0	8.4		16.2	7.7	9.6		35.7	58.8	9.6		22.0	10.0
9.7		59.4	9.9	9.3		19.6	16.7	9.9		39.6	30.4	9.0		22.5	18.1
9.6	3	1.6	40.0	9.0		35.1	10.0	9.1		44.7	15.7	9.0		25.5	25.1
10.3		8.6	5.1	10.3		46.6	20.1	9.0		48.7	43.6	8.9		32.0	28.4
10.0		14.1	31.4	10.2		46.6	47.5	9.8		48.7	40.0	9.1		43.5	52.5
9.2		24.1	26.2	10.3		49.3	24.9	8.4		51.2	15.3	9.0		46.5	14.2
9.6		31.1	9.3	9.6		52.8	27.8	9.3		58.2	58.4	9.0	26	6.5	43.6
10.3		37.6	18.6	10.0		53.7	38.0	9.7	18	0.7	21.2	10.0		12.5	53.1
9.7		45.1	54.3	10.0		55.8	53.9	9.8		2.2	20.7	9.2		13.5	25.6
9.8		45.1	19.3	9.9	10	10.3	7.2	9.2		19.7	46.6	8.9		14.5	26.8
10.2	4	13.6	28.0	10.0		22.3	34.2	8.7		23.7	19.0	9.4		38.5	14.4
10.3		27.1	54.6	9.9		26.3	33.7	10.0		34.6	38.1	9.6		42.0	14.6
10.1		33.1	38.2	10.0		36.8	25.9	10.0		38.2	41.1	9.6		43.0	5.4
7.4		46.6	40.7	8.8		51.1	58.1	9.4		39.7	41.1	9.6		46.5	43.0
9.6		51.6	17.8	10.0	II	1.3	35.0	10.0		42.2	17.2	9.3	27	16.5	23.7
10.0	5	1.6	45.7	9.2		4.2	1.2	9.3		46.7	25.2	9.4		19.5	6.6
10.0		14.1	52.9	9.0		6.8	24.6	9.4		50.2	4.8	9.9		21.5	31.9
9.8		16.6	51.8	8.8		15.3	32.4	10.0		54.3	24.7	9.2		23.0	33.2
9.8		22.6	26.4	9.8		26.3	53.4	9.0		56.3	4.1	9.3		26.5	3.1
25pr.	+ 1	01	-01	+ 1	02	-03		+ 1	02	-06		+ 1	02	-08	

1321-1380.				1381-1440.				1441-1500.				1501-1560.			
mag.	6h.		-26°	mag.	6h.		-26°	mag.	6h.		-26°	mag.	6h.		-26°
	m	s			m	s			m	s			m	s	
9.9	27	31.0	23.5	9.4	33	52.6	51.2	9.9	39	29.6	12.0	9.9	46	22.7	22.0
9.2		36.5	42.7	9.9		54.6	39.8	9.9		31.6	43.7	9.5		24.6	57.5
9.0		37.0	27.6 a	9.1	34	1.6	51.8	9.7		33.6	17.2	7.8		34.6	23.2 7.8 GSa
9.3		47.5	51.1	8.8		7.1	27.7 8.0 G	9.5		34.6	9.4	9.7		38.6	39.9
9.0		59.0	6.1 9.5	9.9		8.6	15.2 9.0 Ga	9.8		42.6	53.4	7.8		46.6	25.9 7.8 GSa
8.8		59.0	6.7 8.5 a	9.4		9.3	59.8	9.9		54.6	7.9	8.6		47.1	44.8 a
9.6	28	0.0	42.6	8.6		10.6	27.6 8.2 Ga	9.7	40	8.6	35.6	9.7		48.1	57.9
9.3		0.0	40.6	9.9		13.1	27.1	9.6		14.3	2.3	9.6	47	3.6	31.1
9.5		7.0	25.1	9.9		19.6	28.3	9.8		16.1	19.8	9.6		11.6	30.7
9.2		8.0	20.1 a	8.8		25.1	18.1 8.0 G-	9.0		21.6	1.7 8.8 a	9.3		11.6	47.0
9.8		10.0	21.8	8.2		35.6	33.9 8.2 a	9.3		33.1	3.7 9.0	9.4		16.6	18.6 9.0 G
9.8		11.0	14.8	8.8		37.1	31.6 8.5	9.3		35.6	11.9	9.9		21.1	41.8
9.4		21.0	11.4	9.9		37.1	6.7	9.7		46.6	2.8	8.7		33.6	14.7 9.0
9.8		23.0	56.6	8.8		48.1	4.7 9.0	9.1		59.6	35.3 9.0 -	9.1		39.6	52.4 9.0
9.4		34.0	4.1 8.0 GSa	9.9		51.6	37.5	9.8	41	3.6	15.8	9.3		42.6	15.8
7.7		37.5	14.1	9.9		52.1	23.3	9.9		12.1	42.4	9.7		44.6	56.8
9.9		43.0	24.1	8.0		53.1	40.5 8.2 Ga	9.9		19.6	27.7	9.7		48.6	59.3
9.6		54.0	49.0	9.4		57.6	53.0	9.6		27.6	33.5	9.1		52.6	51.6
9.0	29	7.0	44.6 9.0 a	8.9	35	7.6	38.2 9.0 G	9.7		53.1	45.5	9.1		56.1	8.4
9.1		23.0	16.5	9.1		13.6	1.8	9.4	42	23.6	54.4	8.0		58.6	48.2 7.0 Gb
10.0		26.2	1.9	8.4		25.6	11.7 8.5 Ga	9.9		26.6	7.8	9.7	48	1.1	29.0
10.0		38.5	3.8	9.9		29.6	3.2	9.9		41.1	47.3	9.7		6.6	23.4
9.4		44.0	26.8	9.5		36.1	33.1	9.9		43.6	53.1 G	9.8		8.1	19.7
9.6		52.5	4.5	9.1		41.6	3.1	9.5		43.6	27.2	9.9		12.6	46.4
9.6		57.5	42.2	9.5		52.1	5.2 8.5 GWa	8.3		56.6	23.8	9.1		12.6	31.8 9.0
9.2	30	2.0	20.6	9.5		55.6	30.6	9.9		58.1	18.1	9.9		13.6	28.6
9.4		4.9	0.9	9.4		59.3	56.7	9.9	43	3.6	15.4 G	9.7		26.6	43.4
9.4		7.5	19.3	9.5		59.6	27.2	9.3		6.6	12.4	9.9		29.1	28.5
9.5		7.5	18.3	8.6	36	4.4	2.0 9.0	8.8		14.6	56.0 9.2 G	9.9		31.1	27.0
9.8		20.0	18.6	9.3		13.1	49.8	9.7		19.1	5.1	9.4		42.6	47.9
9.2		29.0	45.7	9.3		22.6	53.2	9.4		27.6	58.0	9.5		46.6	28.6
9.7		31.0	2.4	9.9		35.6	40.8	9.5		56.6	20.0	8.7		55.6	42.4 a
9.4		31.5	13.5	9.4		44.6	49.7	9.6	44	13.6	40.7	8.8		57.6	25.8 9.2 S
9.1	31	3.0	22.5 9.0	9.9		50.6	25.6	9.8		15.6	7.3	9.7	49	6.6	48.6
9.8		6.5	37.9	9.8		53.1	25.0	9.7		23.7	34.0	9.6		10.1	28.0
9.4		8.0	20.3	9.9		56.6	44.4	8.9		24.6	56.8	9.7		11.6	40.0
8.7		13.5	1.4 8.5 Ga	9.5		56.6	39.0	8.9		33.6	24.7	9.9		28.6	22.6
8.6		17.5	25.8 7.5 Ga	9.9	37	1.1	18.3	9.9		33.6	55.8	9.5		36.6	37.4
9.0		32.5	30.0 9.0 a	9.3		18.6	50.4	9.7		33.6	19.2	9.3		42.6	23.0
10.0		53.0	10.9	9.9		20.5	59.4	9.4		48.1	29.5	9.3		45.1	54.4
8.4		53.5	39.1 8.0 -	9.6		27.1	18.2	9.9	45	6.6	50.1	9.6		56.6	26.3
9.0		54.0	56.9 b	9.3		31.6	32.5 G	9.8		9.1	9.2	9.9	50	3.1	0.2
9.6		56.5	41.7	9.9		39.6	16.3	8.8		13.6	37.7 8.5 a	9.9		6.6	48.4
9.7	32	19.5	55.0	9.4		43.1	14.2	9.7		14.6	34.3	9.7		8.1	52.4
9.9		32.8	26.3	9.3		49.4	0.6 8.7 G	9.2		17.6	4.3	9.9		15.1	31.1
9.2		36.6	38.2 a	8.8	38	7.1	0.3 8.1 Ga	9.8		22.6	48.3	9.9		16.3	58.0
9.2		37.8	6.2 9.5 G	9.5		11.1	43.9	9.9		23.6	3.1	9.5		21.5	9.8
9.0		39.3	10.2 9.0	9.3		14.6	6.0 9.5 G	9.7		23.6	44.2	9.9		23.0	29.8
9.9		43.1	9.4	8.3		17.1	20.7 8.2 a	9.7		24.6	24.0	9.9		29.5	51.7
9.5		45.1	10.0	9.9		17.6	17.7	9.4		28.1	42.5	8.0		30.0	58.7 8.3 Ga
9.5		56.1	55.0	9.6		18.1	52.3	8.8		32.6	59.0 8.2 Ga	9.5		37.5	27.3
9.2	33	1.6	55.4 a	9.8		27.6	49.3	9.5		33.1	34.2	9.9		43.6	0.7
9.0		14.1	0.8 8.5 -	8.4		28.6	2.1 8.2 Ga	9.3		39.6	56.2	9.9		44.0	4.4
9.9		20.1	39.4	9.8		34.1	57.6	9.9		41.1	14.8	8.0		48.5	58.3 8.2 a
9.9		24.6	11.8	9.5		36.6	40.3	9.5		43.1	22.6	9.4		52.0	57.1 9.2
9.9		37.6	4.7	9.2		51.6	20.7	8.9		44.6	24.4 8.5	9.9		52.5	2.0
8.9		39.6	14.4 9.5 G	9.6		57.6	26.0	9.8		46.6	42.5	9.4		58.0	28.8
9.9		43.6	32.3	9.8	39	0.6	10.6	9.2	46	3.6	54.3 9.0 a	9.9	51	6.5	1.6
9.9		45.1	12.6	9.5		9.1	32.9	9.5		6.6	2.4	9.9		7.0	19.4
9.9		46.6	19.4	9.8		29.6	43.7	9.5		22.3	2.2	9.2		9.0	41.6 8.5
25pr.	+ 1	0.3	- 1.1	+ 1	0.4	- 1.3		+ 1	0.4	- 1.6		+ 1	0.5	- 1.8	

1801-1860.			1861-1920.			1921-1980.			1981-2040.		
mag.	7 ^h .	-26°	mag.	7 ^h .	-26°	mag.	7 ^h .	-26°	mag.	7 ^h .	-26°
9.8	3 36.2	55.8	9.4	6 45.8	11.8	9.4	10 57	57.0	9.3	14 9.3	37.6 9.0
9.7	37.2	19.7	9.1	49.8	52.0	9.8	7.7	39.4	9.5	11.8	21.1
8.8	38.2	33.1 8.0	9.8	53.7	28.4	9.8	21.7	57.4	9.4	12.3	59.5
9.6	38.7	27.9	9.8	54.8	55.8	9.8	25.7	26.1	9.8	12.3	7.8
9.8	41.2	14.6	9.6	55.3	8.2	8.7	34.2	38.2 8.8 a	9.4	13.3	14.2
9.3	42.2	58.1 a	9.8	56.8	29.1	9.8	39.2	14.9	9.2	17.3	17.5 9.0 a
9.8	43.1	38.4	9.6	58.8	32.1	9.8	41.7	4.9	9.6	21.3	47.8
9.6	50.1	25.9	9.3	7 4.8	16.1	9.6	43.7	52.6	8.4	34.3	20.5 8.5 GWa
9.6	50.2	34.6	9.7	11.8	22.4	9.2	48.2	22.6	9.2	39.3	47.0
9.4	51.2	44.2	9.8	13.3	19.7	9.8	50.2	17.7	9.2	46.3	53.7
8.8	56.5	54.9 a	8.5	13.8	16.8 8.2 a	9.8	51.6	29.5	9.8	49.3	52.5
9.4	58.5	11.8	9.3	14.8	15.5 9.5	9.4	52.2	39.1	9.0	51.3	57.8
9.6	4 2.6	32.1	9.8	17.3	8.7	9.4	53.1	56.6	9.8	52.3	46.8
9.6	3.0	41.0	9.7	22.8	10.6	9.6	11 2.2	36.2 8.2 Gb	9.4	53.3	42.1
9.8	5.5	43.0	9.6	29.3	3.8	9.6	5.7	21.7	9.6	56.3	27.2
9.0	6.5	43.2	9.7	29.8	41.8	9.0	9.7	23.5	9.0	15 3.3	43.9
9.8	8.5	15.5	9.8	32.8	19.2	9.5	9.7	26.0	9.8	9.3	54.8
9.4	9.0	41.1	9.3	37.8	37.9	9.4	13.7	47.5	9.6	11.3	54.1
9.0	12.0	53.0	9.0	41.8	50.6	9.8	19.0	27.0	9.8	11.8	12.2
9.2	13.0	21.8	9.8	46.8	26.0	9.8	19.5	48.0	9.8	14.3	16.0
9.4	13.5	52.0	9.1	50.8	51.9	9.0	21.0	47.5	9.2	21.3	51.3 9.0
9.2	17.0	1.8	9.6	51.8	22.2	9.4	22.5	44.1	7.7	27.3	28.3 7.5 GSa
9.6	19.0	44.9	9.6	59.8	14.3	9.8	23.0	32.2	9.6	32.3	57.2
9.8	22.5	1.7	9.5	8 11.8	11.9	9.4	27.5	49.0	9.3	32.3	0.1 9.5
9.3	28.0	14.5	9.3	15.3	28.7	9.4	33.0	41.4	9.5	35.3	15.0
9.4	36.5	7.1	9.8	16.8	16.9	9.8	39.5	58.2	9.7	40.3	56.5
9.4	46.0	23.1	9.2	20.8	29.0	9.8	41.0	21.2	9.7	41.3	36.4
9.8	46.0	4.6	9.8	25.8	40.8	9.8	41.0	54.1	9.3	42.3	8.0
9.3	47.0	52.4	9.8	28.8	35.5	9.6	42.0	56.2	9.7	46.3	10.7
9.4	53.0	12.8	9.8	32.8	23.4	9.7	47.5	43.0	9.4	47.3	31.6
9.7	56.0	30.6	9.2	33.3	22.9	9.6	50.0	51.1	9.3	48.3	14.2
9.1	57.0	6.1	9.8	37.8	18.2	9.0	51.0	56.1	9.4	49.8	55.6 9.0
9.4	59.0	39.1	9.8	41.3	10.1	9.6	12 0.5	32.1	6.2	51.3	43.8 7.0 GSa
9.2	59.0	55.5	9.4	50.3	18.1	9.5	1.0	34.7	9.6	51.3	4.1
9.4	5 1.5	30.0	9.5	50.3	19.8	9.4	1.5	39.5	9.4	55.3	17.9
9.8	3.0	20.7	9.4	50.8	12.1 9.0	9.6	6.0	53.8	9.8	16 4.4	16.9
9.0	3.0	30.6	9.4	51.8	4.1	9.4	8.0	11.0	9.8	9.3	19.6
9.7	6.0	20.8	8.9	51.8	13.9 8.5 a	9.3	11.5	29.9	9.7	9.3	13.7
9.0	13.0	28.5	9.8	52.7	59.4	9.2	15.5	52.7	9.0	12.3	29.1
9.1	17.0	6.3	9.8	53.2	16.7	9.4	19.5	15.8	9.6	19.3	43.7
9.6	21.5	13.1	9.8	55.2	47.4	9.1	36.0	27.0 8.5 a	9.7	19.3	5.2
9.6	23.0	42.8	9.6	56.2	8.0	6.9	43.5	34.4 7.0 Ga	9.6	20.3	13.3
9.0	23.0	2.6	9.8	56.6	40.9	9.8	55.5	11.3	9.7	24.3	12.2
9.6	23.5	59.9	5.1	9 9.2	8.2 5.5 GSπβ	9.3	13 2.5	40.0 9.0	9.8	31.8	15.2
9.8	34.5	38.3	9.4	9.7	26.5	9.8	9.5	7.6	9.0	34.9	17.7
9.8	39.0	19.8	9.8	17.2	37.0	9.3	11.5	20.1	9.3	35.3	6.2 9.0
9.6	42.5	33.3	9.6	22.2	6.9	9.6	31.5	38.8 9.5	9.8	37.6	11.6
9.2	46.5	25.2	9.8	26.2	2.4	9.8	37.5	19.0	8.8	38.1	43.8 8.5
9.4	48.5	24.4	9.0	26.2	29.1 9.5	9.5	41.0	14.1	9.2	38.3	34.3
9.6	58.0	35.1	9.8	27.7	25.0	9.2	41.5	46.5 9.0	9.6	44.8	10.3
8.9	6 0.0	46.3 8.7	9.8	30.2	22.2	8.5	43.0	43.5 9.0	9.6	47.3	9.4
9.6	2.0	48.9	9.0	31.2	31.7 9.0	9.4	44.5	53.9	9.8	51.8	48.0
9.2	6.0	16.9 9.5	9.6	31.7	42.9	7.2	45.5	21.5 6.2 GSa	9.6	51.8	22.7
9.4	6.0	54.1	4.7	44.7	33.4 4.2 GSπβ	9.0	49.5	23.5	9.8	54.9	30.2
9.8	11.0	18.7	7.7	48.2	49.3 6.8 GSεβ	9.8	50.5	25.9	9.8	54.9	33.8
9.6	12.0	35.2	9.8	52.7	52.3	9.2	51.0	30.5	9.6	57.9	11.9
9.2	20.5	30.7	9.4	54.2	5.2	9.6	51.3	7.0	9.6	58.8	4.2
9.8	21.8	25.7	9.6	55.7	26.0	9.2	51.3	42.8 9.0	8.9	59.0	39.6 9.5
9.1	22.8	35.3	9.6	56.2	25.0	9.7	54.3	4.7	9.5	17 0.9	2.4
9.8	35.8	45.7	9.5	57.7	16.3	9.6	14 2.3	54.1	9.8	2.5	21.0
25pr.	+ 1 0.8	-2.3	+ 1 0.9	-2.5		+ 1 0.9	-2.6		+ 1 1.0	-2.7	

2041-2100.			2101-2160.			2161-2220.			2221-2280.		
7h.	-26°		7h.	-26°		7h.	-26°		7h.	-26°	
m	s	mag.	m	s	mag.	m	s	mag.	m	s	mag.
17	3.5	50.8	20	11.6	15.2	23	30.2	13.8 a	26	46.3	26.6
9.6	5.5	44.8	9.0	18.1	35.6	9.0	30.2	11.4	9.8	46.8	35.2
9.2	19.0	21.2	9.8	21.1	52.9	9.8	30.7	45.8	9.8	57.3	38.1
9.8	19.0	11.1	8.4	27.0	8.0 GSa	9.6	33.2	36.6	9.4	57.3	17.2
9.8	20.3	59.4	9.6	30.1	22.7	9.5	40.3	59.8	9.7	27.0	26.0
9.8	24.9	31.0	8.9	31.1	22.2	9.5	54.8	39.7	9.6	5.3	13.1
9.8	30.5	40.1	9.4	31.6	19.7	9.3	55.8	14.0	9.0	9.3	45.4
8.6	31.9	54.0	8.6	31.6	1.8 8.7 Ga	8.5	57.8	43.8	9.6	10.8	33.4
9.8	37.5	23.0	9.8	35.1	14.3	9.7	9.4	58.2	9.8	14.3	16.4
9.4	39.2	31.0	9.7	35.5	16.5	8.7	10.3	23.4	9.8	15.3	8.5
8.3	42.0	7.6 8.5 G=	9.7	37.6	3.6	9.8	11.3	27.3	9.8	20.3	17.7
9.4	43.0	44.6	9.0	48.6	7.3	9.8	12.8	42.5 10.0	9.4	20.3	50.6 9.5
9.4	50.5	34.5	9.0	51.1	36.3	9.6	21.4	58.0	9.8	20.8	12.8
8.9	51.0	20.9 8.5	9.7	55.6	41.0	9.0	35.3	11.6	9.8	33.3	27.7
9.5	52.0	14.8	8.5	21 0.1	32.5 7.5 GSa	9.8	35.3	30.5	9.8	35.3	26.0
8.8	53.5	22.9 9.0	9.6	0.1	35.8	9.5	36.8	33.2	9.2	39.3	13.0
9.8	53.7	59.6	9.8	1.6	48.6	9.6	42.3	26.8	9.5	41.8	33.8
9.3	59.5	49.9	9.7	6.1	36.0	9.1	43.3	14.6	9.1	43.3	26.8
9.2	18 8.0	7.1	8.8	14.1	25.1 9.0	9.2	48.8	27.1	9.3	44.3	31.6
9.8	8.5	55.4	9.8	15.1	16.3	9.6	59.8	55.1	9.8	45.3	5.5
9.0	10.0	29.8	8.4	16.1	47.1 Ga	9.8	25 3.8	49.6	9.6	45.3	46.4
9.0	10.5	8.5	9.8	25.6	53.5	9.8	5.3	1.7	9.7	49.3	34.8
9.8	15.5	37.2	9.8	28.1	48.2	8.8	7.3	5.5	9.4	55.3	35.6
9.8	18.7	42.2	9.7	32.1	55.7	9.0	9.8	34.8	9.0	56.3	19.2
9.8	20.2	33.7	8.6	34.1	15.7 8.5-	9.8	15.3	2.6	9.0	56.8	27.4
8.2	23.2	19.1 8.5-	9.7	39.6	50.0	9.3	18.9	59.4	9.8	56.8	48.0
9.8	26.2	20.7	9.4	41.1	41.6	9.6	21.8	19.0	9.8	59.3	10.6
9.8	26.7	34.9	9.8	45.6	38.7	9.7	22.8	44.8	9.2	28 0.3	0.8 9.0a
9.7	37.7	18.3	9.8	47.1	36.4	9.4	24.8	49.1 9.5	9.8	8.8	16.0
8.8	40.2	0.4 9.5	9.8	49.7	25.1	9.0	25.3	42.8 9.0	8.9	11.3	48.2 8.2 Ga
9.8	45.2	3.5	9.8	52.7	28.0	9.8	26.3	38.4	9.3	13.3	7.0 9.5a
9.8	46.7	22.6	9.2	55.7	39.5	9.7	35.3	27.0	9.1	17.8	12.4 9.0a
9.8	54.2	23.3	9.3	55.7	26.1	8.4	37.3	43.4 9.2	9.8	23.3	11.8
9.5	57.2	13.9	9.5	22 10.2	47.6	9.2	44.8	7.3	9.8	45.3	59.4
9.3	58.2	11.5	9.8	10.2	22.6	9.3	45.3	42.5	9.8	50.3	29.9
8.7	59.7	8.1 8.5	9.8	11.2	29.2	9.8	45.3	4.8	9.2	51.3	13.8
9.8	19 2.2	14.9	9.4	13.7	30.9	9.5	47.3	13.0	9.5	54.3	12.0
9.5	4.7	39.7	9.8	14.7	1.3	9.2	52.3	9.8	9.8	55.8	34.0
8.8	5.7	59.7 8.5 Ga	9.4	19.2	34.5	9.8	55.4	22.5	9.8	29 1.3	23.4
9.4	7.2	22.3	9.8	20.2	59.0	9.8	58.8	50.8	9.3	4.3	46.7
9.8	10.2	46.4	9.7	22.7	21.3	9.4	58.8	51.2	9.1	5.3	11.2 9.0a
9.8	13.2	29.8	9.6	28.9	0.1	9.8	26 0.3	3.6	9.3	6.8	53.9 9.5
9.0	14.2	15.8	8.2	29.2	46.3 8.8 a	9.8	3.3	10.4	9.8	15.3	16.6
8.6	15.7	21.2 9.5	9.3	31.2	51.7	9.2	4.8	31.4	9.8	17.6	16.3
8.7	28.6	58.6 a	9.8	35.7	53.5	9.3	6.3	25.4	9.6	26.1	50.1
8.2	30.7	26.1 8.5 =	8.7	40.2	49.4 8.2 Ga	9.6	8.3	32.6	9.4	28.6	48.2
9.6	31.7	30.3	8.3	56.2	35.2 7.0 GSa	9.6	10.3	17.2	7.3	30.1	44.5 7.0 GSb=
9.4	33.7	9.1 8.5	9.8	56.2	6.8	9.5	19.3	9.8	9.0	33.1	35.3
9.6	34.7	37.4	9.8	56.5	56.9	9.8	24.6	1.0	9.7	44.1	38.9
9.3	36.2	15.6	9.0	23 0.2	57.8	9.7	25.8	27.8	9.7	44.6	56.8
9.8	38.2	9.9	8.3	5.2	11.1 8.5 Ga	9.0	30.3	15.1 8.5 Ga	8.7	50.1	57.7 9.5 b
9.3	40.2	50.8	9.8	12.7	55.3	8.9	32.8	35.4 8.5	9.6	52.1	51.8
9.3	45.2	24.5	9.8	14.2	12.5	9.8	32.8	55.6	9.4	54.6	2.7
9.8	46.7	10.7	9.8	17.2	49.6	8.4	35.3	38.2 8.5 =	9.0	58.6	13.7
9.5	48.7	26.4	8.6	20.2	59.4 8.9 a	9.6	36.3	7.0	9.7	30 8.4	59.7
8.8	20 1.7	41.1	9.4	22.7	6.5	9.8	37.3	45.0	9.6	12.1	52.3
9.8	4.5	59.4	8.5	23.2	58.5 8.9 a	9.5	40.3	44.2	9.4	19.6	17.4
9.7	7.1	40.4	9.0	27.7	59.7 9.5	9.6	40.3	33.4	9.3	23.6	20.2
9.8	7.6	49.6	9.6	29.2	41.1	9.8	40.3	32.4	7.3	26.1	21.3 7.0 Ga
9.5	10.1	59.9	9.5	29.7	33.1	9.3	40.3	21.2	9.8	27.6	27.4
25 Pr.	+ 1 11	-2.8		+ 1 12	-2.9		+ 1 13	-3.0		+ 1 13	-3.1

2281-2340.			2341-2400.			2401-2460.			2461-2520.		
mag.	7h.	-26°	mag.	7h.	-26°	mag.	7h.	-26°	mag.	7h.	-26°
9.6	30 36.1	16.3	7.8	33 30.4	2.2	7.7	36 33.4	56.6	9.8	38 29.0	1.3
9.4	39.1	29.8	9.0	37.4	15.2	9.8	34.9	44.7	9.8	31.0	8.1
9.5	41.1	13.0	8.8	39.9	4.8	9.4	34.9	47.5	8.5	32.0	56.2
9.3	41.6	30.1	4.6	42.4	31.2	9.7	34.9	26.3	9.8	37.0	30.1
9.8	47.1	2.1	9.5	46.9	21.8	9.4	35.9	14.8	9.6	40.0	44.2
9.6	53.1	35.2	9.6	49.9	25.7	9.8	35.9	39.0	9.6	44.0	36.2
9.5	54.1	30.3	9.8	59.9	27.3	9.7	38.4	6.8	9.5	45.0	18.8
9.2	58.6	2.8	9.8	0.9	59.9	9.0	38.9	57.4	9.8	52.0	28.0
9.4	59.1	31.6	9.6	9.4	38.8	9.8	39.4	52.6	8.8	55.8	57.7
9.8	31 37	1.9	8.7	9.9	8.4	9.8	39.9	24.0	9.0	39 1.3	4.1
9.6	4.6	19.4	9.4	13.4	50.4	9.4	41.4	50.6	9.8	2.8	19.6
9.8	7.1	50.6	8.7	13.9	24.0	9.6	43.4	7.0	9.1	5.0	25.9
9.8	8.6	49.7	9.4	15.4	34.6	9.8	44.9	24.4	8.4	5.0	23.6
9.6	10.1	5.2	9.3	19.9	11.8	9.8	45.9	55.5	9.6	6.1	12.8
9.8	16.0	34.2	7.1	19.9	34.6	9.6	47.9	24.3	9.6	9.3	13.0
9.2	25.5	2.2	7.1	22.9	38.0	9.6	49.9	3.6	9.8	10.8	37.2
9.8	26.0	25.1	9.8	24.9	20.1	8.9	50.9	11.4	9.4	14.3	18.3
9.3	30.0	59.8	8.8	26.9	11.3	9.3	52.4	42.1	9.8	17.3	2.1
9.8	30.0	23.7	9.7	29.9	35.1	9.3	52.9	3.5	9.8	18.3	40.0
9.8	30.5	17.8	9.7	33.9	10.9	9.4	54.9	28.6	9.8	19.0	15.6
9.8	33.0	7.0	9.5	40.1	1.0	9.6	54.9	55.8	9.7	20.0	50.8
9.4	36.0	53.8	9.3	45.4	59.2	9.8	57.4	4.7	9.0	20.0	21.9
9.4	42.5	12.7	9.4	45.9	38.2	9.8	1.2	0.9	9.4	22.8	26.7
9.0	51.5	17.8	9.3	48.9	20.6	9.3	8.9	32.1	9.8	25.5	7.9
9.5	55.0	55.1	9.4	50.9	37.1	9.4	9.9	16.4	9.6	27.8	36.7
8.4	56.0	32.1	9.4	53.4	46.5	7.7	12.9	53.4	8.9	28.0	38.7
9.8	32 5.0	4.5	9.8	54.9	25.2	9.8	17.4	6.9	9.8	28.0	51.7
9.8	7.5	4.5	9.8	57.9	16.9	9.4	19.9	43.1	9.6	28.8	35.7
9.5	12.0	50.9	9.8	0.4	52.4	9.4	24.9	35.3	9.0	29.0	27.8
9.5	12.0	51.7	9.4	0.9	17.9	9.7	24.9	36.0	9.8	29.3	19.1
9.8	17.5	14.6	9.8	4.9	18.6	9.7	25.4	9.9	9.8	31.0	42.8
9.8	20.0	37.2	8.3	9.9	18.1	9.4	25.9	51.6	9.0	33.0	19.5
9.8	22.0	37.2	9.6	20.4	30.8	9.5	29.9	39.0	9.8	33.0	0.2
9.3	24.5	24.5	9.8	21.9	16.9	9.5	31.9	37.9	9.9	33.1	7.1
9.6	25.0	53.2	9.2	29.9	20.1	9.5	32.9	51.1	9.5	34.5	44.0
9.4	25.0	19.2	9.4	34.9	48.4	9.0	34.9	7.7	9.9	39.5	9.1
9.3	28.0	7.1	9.8	34.9	47.1	9.3	34.9	18.9	9.9	41.6	42.4
9.8	33.0	7.8	9.8	38.9	52.1	7.3	38.4	3.4	9.5	42.3	8.9
9.6	34.5	31.7	8.8	42.4	3.9	8.9	38.9	36.9	9.9	43.1	56.3
9.7	42.0	30.7	9.4	44.9	33.1	9.8	49.4	46.1	9.4	43.3	6.9
8.6	47.5	57.4	9.8	45.9	29.9	9.8	49.9	9.3	9.9	49.1	38.6
9.0	53.0	20.7	9.4	45.9	37.9	9.8	51.4	50.6	9.0	49.3	35.6
9.2	55.0	26.6	9.5	49.9	40.3	9.7	54.9	36.6	9.5	54.6	10.6
9.8	2.9	23.0	9.0	54.9	53.7	9.7	55.9	41.0	9.9	57.6	34.5
9.8	3.1	59.1	9.4	59.9	31.4	9.8	57.4	20.6	9.9	58.6	35.8
9.4	3.4	0.0	9.4	1.9	32.9	9.8	57.4	21.2	9.9	59.1	16.7
9.8	3.9	43.5	8.9	4.9	42.1	9.3	57.9	51.3	9.4	40 1.3	15.3
9.4	4.4	53.6	9.7	5.4	5.6	9.7	4.9	36.1	9.4	1.8	40.4
9.8	5.4	30.0	9.4	6.9	33.3	9.2	6.9	14.3	9.6	1.8	51.3
9.8	6.9	28.3	9.8	7.4	21.1	9.4	8.4	41.3	9.9	7.1	21.8
9.7	9.9	50.8	9.6	8.9	0.8	9.6	9.9	13.8	9.9	9.1	31.7
8.1	9.9	36.9	9.4	9.4	27.9	9.8	12.9	55.1	9.9	9.1	24.3
8.8	11.9	52.1	9.7	12.9	41.2	9.4	12.9	6.0	9.5	11.6	13.2
9.8	14.1	0.8	9.7	12.9	16.6	9.4	16.9	0.0	9.6	14.1	13.7
9.6	15.4	22.3	9.8	15.9	20.0	9.7	20.9	11.9	9.6	18.1	27.7
9.3	15.9	54.2	9.8	16.9	45.8	9.6	22.9	10.6	9.5	20.6	3.0
9.3	20.9	2.0	9.8	19.9	47.2	7.8	25.4	53.0	9.9	21.1	40.9
9.5	22.4	27.1	9.6	25.9	36.3	9.6	25.4	44.7	9.9	23.1	21.5
8.4	23.9	18.7	9.8	26.9	16.9	9.8	27.4	9.9	9.9	25.6	4.9
9.5	24.4	23.7	9.8	26.9	48.0	9.0	28.9	35.4	9.9	27.4	58.1
25pr.	+ 1 15	-3.3	+ 1 1.6	-3.4		+ 1 1.6	-3.4		+ 1 1.7	-3.5	

2521-2580.				2581-2640.				2641-2700.				2701-2760.					
mag.		7h	-26°	mag.		7h	-26°	mag.		7h	-26°	mag.		7h	-26°		
40	28.1	54.6	9.0 Ga	9.1	42	40.1	8.4	9.7	44	34.1	13.9	9.6	47	21.7	50.9		
9.5	29.1	30.3	9.0 a	9.9	40.6	0.8	9.3	35.1	49.2	9.4	23.2	47.6	9.5	24.2	2.8		
9.5	29.1	52.5		9.4	45.1	27.0	9.8	35.1	21.8	9.5	24.2	2.8	9.7	25.2	3.4		
8.5	32.6	26.6		9.5	48.1	3.5	9.6	36.2	12.9	9.7	25.2	3.4	9.4	27.7	37.2		
9.9	39.1	11.3	9.0	9.9	52.6	25.9	9.7	42.6	56.6	9.9	28.2	31.7	9.9	38.2	10.2		
9.9	40.1	30.5		9.9	53.6	37.2	9.8	48.1	25.2	9.7	39.2	9.0	9.2	40.9	0.5		
9.4	45.1	22.9		9.7	57.1	24.6	9.4	50.1	17.7	9.7	39.2	9.0	9.7	44.2	1.1		
9.1	48.1	28.3	9.0 a	9.9	57.6	20.0	9.5	54.1	18.5	9.5	44.2	9.3	9.7	46.2	17.5		
9.1	49.1	40.7	8.5 Ga	9.9	58.1	2.6	9.5	59.1	52.1	9.7	50.7	8.0	9.9	51.7	2.3		
9.5	49.1	4.9		9.7	59.1	57.0	9.0	59.6	13.0	9.6	52.2	8.0	9.6	52.7	47.6		
9.5	54.1	6.1		9.8	59.1	10.4	9.8	45	0.6 10.0	9.0	52.7	47.6	8.0	54.2	5.5		
9.5	55.5	57.0	9.0 a	9.2	43	1.6 8.2	9.9	1.0	2.3	9.7	54.2	9.4	9.8	59.0	59.0		
9.7	58.1	32.3		9.0	4.1	52.5 9.0	9.5	3.1	18.3	9.9	59.0	19.5	9.6	6.7	42.7		
9.6	41	0.1 34.4		9.3	7.1	25.5	9.9	6.6	41.4	9.7	6.7	42.7	9.9	9.7	36.9		
8.6	2.1	34.6 9.0 a		9.7	7.1	6.0	8.4	8.1	14.7 8.5 Ga	9.9	10.7	30.9	9.9	10.7	30.9		
9.4	2.6	21.9		9.7	9.1	17.5	9.6	10.2	56.2	9.7	12.2	54.1	9.7	12.2	54.1		
9.9	3.6	3.4		9.9	11.1	17.1	9.4	12.7	56.8	9.8	15.2	53.7	9.8	15.2	53.7		
9.9	6.1	2.9		9.6	11.1	43.9	9.7	13.2	40.5	9.7	18.2	7.1	9.7	23.7	31.7		
9.5	12.1	31.4		9.7	12.1	53.7	9.6	15.2	22.7	9.8	23.7	31.7	9.4	24.2	43.2		
9.6	14.1	58.9		9.2	12.7	0.5	9.4	19.7	16.6	9.6	25.7	38.0	9.6	25.7	38.0		
9.7	14.1	26.3		9.9	16.1	46.0	9.5	20.2	36.5	9.5	25.8	49.7	9.5	25.8	49.7		
9.7	14.6	34.0		8.8	18.1	32.4 9.0 b	9.5	25.2	22.9	9.9	26.6	57.4 8.0 Ga	9.9	26.6	29.8		
8.2	15.1	5.1 8.2 Ga		8.6	25.1	44.1 8.5 Wa	9.2	30.7	49.4	9.9	26.8	29.8	9.9	26.8	29.8		
9.5	19.1	7.8		8.5	27.6	41.0 8.5 GWa	9.5	32.7	27.8	9.9	29.3	7.3	9.9	29.3	7.3		
9.1	19.1	14.0		9.6	29.1	20.2	9.4	34.2	32.9	9.9	29.8	25.1	9.9	29.8	25.1		
9.6	21.6	46.3		9.5	29.1	44.1	9.9	37.2	15.2	9.9	34.3	57.9	9.9	34.3	57.9		
9.4	22.1	52.8		9.5	32.1	14.6	9.5	39.2	12.8	9.9	39.2	20.0	9.9	39.2	20.0		
9.1	24.1	1.6		9.9	33.1	39.1	9.2	39.2	17.3	9.5	41.8	42.2	9.5	41.8	42.2		
9.6	24.6	45.1		9.5	34.1	14.0	9.9	39.2	17.3	9.9	46.2	9.3	9.9	46.2	9.3		
9.9	25.1	47.1		8.6	36.1	18.3 a	9.9	41.2	20.8	8.6	47.7	1.4 7.2 GW-	8.6	47.7	1.4 7.2 GW-		
9.9	27.1	6.0		9.5	39.1	41.1	9.7	41.2	31.6	9.9	49.8	58.0	9.9	49.8	58.0		
9.4	27.6	23.3		9.9	44.6	16.6	9.9	41.2	56.2	9.9	50.2	12.2	9.9	50.2	12.2		
9.9	33.6	45.1		9.9	45.1	3.5	9.9	42.2	16.6	9.5	52.3	3.6	9.5	52.3	3.6		
9.9	33.6	44.2		9.6	48.6	20.0	9.8	44.2	29.0	9.0	52.3	3.6	9.0	52.3	3.6		
9.2	34.1	31.9		9.1	49.1	35.8	9.9	46.2	13.7	9.4	53.3	40.5	9.4	53.3	40.5		
9.5	35.6	29.5		8.7	49.1	14.0 9.0 Ga	9.7	46.2	13.7	9.4	53.3	7.4	9.4	53.3	7.4		
9.1	38.7	57.2		9.5	50.6	13.6	9.7	51.7	53.7	9.9	53.3	7.4	9.9	53.3	7.4		
9.9	39.1	0.9		9.2	58.8	59.1 9.5	9.1	54.7	43.4	9.9	56.2	47.1	9.9	56.2	47.1		
9.9	39.1	19.6		9.6	59.1	29.1	9.9	56.2	47.1	9.3	57.2	42.8	9.3	57.2	42.8		
9.0	41.1	34.0		9.7	59.1	29.1	9.5	57.7	39.7	9.5	57.2	42.8	9.5	57.2	42.8		
9.7	43.1	33.4		44	1.1	28.3	9.6	59.2	50.8	9.6	57.7	39.7	9.6	57.7	39.7		
9.5	47.7	59.3		9.9	4.1	12.8	9.5	46	10.2 36.0	9.6	59.2	50.8	9.6	59.2	50.8		
9.0	49.1	7.5 9.5		9.7	5.1	35.7	9.8	19.2	4.0	9.8	46.2	13.7	9.8	46.2	13.7		
9.2	49.6	15.2 G		8.9	9.1	16.6 9.0 a	9.6	20.2	35.9	9.8	46.2	13.7	9.8	46.2	13.7		
9.9	51.3	59.4		9.8	11.1	21.5	8.8	26.2	54.4 9.2	9.8	46.2	13.7	9.8	46.2	13.7		
9.8	55.6	10.9		9.7	15.1	4.6	8.8	30.7	20.6	9.8	46.2	13.7	9.8	46.2	13.7		
9.5	58.1	37.2		9.0	17.6	1.7	9.6	30.7	56.1	9.8	46.2	13.7	9.8	46.2	13.7		
9.6	42	3.6 25.7 9.0 Ga		9.9	18.9	35.6	9.7	31.7	21.1	9.8	46.2	13.7	9.8	46.2	13.7		
8.6	4.1	16.0		9.6	19.1	10.1	9.4	34.2	22.6	9.8	46.2	13.7	9.8	46.2	13.7		
9.5	8.1	7.4		9.3	21.6	15.9 8.5 a	9.2	39.2	34.6	9.8	46.2	13.7	9.8	46.2	13.7		
9.8	13.1	33.8		9.5	21.6	54.8	9.0	39.2	10.5	9.8	46.2	13.7	9.8	46.2	13.7		
9.9	14.1	2.3		9.4	24.1	40.4	9.9	41.7	57.9	9.8	46.2	13.7	9.8	46.2	13.7		
9.0	22.1	52.0 9.5		9.9	26.1	27.0	9.6	42.2	20.2	9.8	46.2	13.7	9.8	46.2	13.7		
9.3	23.1	21.2		9.9	26.6	20.5	9.2	49.2	58.4 9.0	9.8	46.2	13.7	9.8	46.2	13.7		
8.8	23.1	22.3 9.5 a		9.7	27.6	28.9	9.0	58.2	25.0	9.8	46.2	13.7	9.8	46.2	13.7		
9.9	24.1	27.0		9.0	29.1	41.7	9.8	47	3.2 4.8	9.8	46.2	13.7	9.8	46.2	13.7		
9.1	25.1	56.3		9.9	29.1	22.1	9.9	4.2	39.0	9.8	46.2	13.7	9.8	46.2	13.7		
9.9	29.1	53.8		9.7	30.1	23.2	9.7	6.2	4.3	9.8	46.2	13.7	9.8	46.2	13.7		
9.4	37.6	56.6		9.1	32.1	50.4	8.8	9.2	6.5 9.2 GW	9.8	46.2	13.7	9.8	46.2	13.7		
9.6	39.1	58.5		9.8	33.6	21.0	9.9	15.2	26.6	9.8	46.2	13.7	9.8	46.2	13.7		
25pr.	+1	1.7 -3.6		9.5	34.1	25.0	9.6	15.7	20.0	9.8	46.2	13.7	9.8	46.2	13.7		

2761-2820.			2821-2880.			2881-2940.			2941-3000.		
mag.	7 ^h .	-26°	mag.	7 ^h .	-26°	mag.	7 ^h .	-26°	mag.	7 ^h -8 ^h .	-26°
9.7	49 40.3	24.6	9.7	52 29.4	17.8	8.8	55 6.7	14.8 8.0 Ga	9.4	57 26.7	47.0 9.0
9.9	40.8	27.4	9.1	30.4	45.0	9.0	9.2	9.6 9.5	9.8	27.2	25.8
9.7	44.3	18.8	9.7	36.4	18.8	9.9	13.2	5.0	9.3	34.3	12.3 9.0 G
9.7	46.3	16.1	9.7	39.4	10.0	9.7	18.2	41.1	9.8	34.7	57.4
9.0	49.3	8.4 8.5 GW-	9.9	43.9	50.6	9.5	18.2	16.7	9.6	36.2	48.3
9.5	49.3	40.9	9.6	47.9	15.2	9.6	18.7	17.0	9.5	37.2	21.1
9.5	49.3	18.9	9.9	48.9	53.8	9.9	19.2	24.8	9.5	40.2	9.2 9.0 G
9.0	49.5	57.0	8.8	49.4	3.2 9.0 a	9.5	21.7	20.1	9.8	40.2	12.4
9.5	59.3	45.4	9.9	49.4	10.8	9.4	23.7	23.4	9.7	44.2	51.8
8.2	50 4.4	5.7 8.0 GW-	9.9	51.9	44.4	9.9	25.2	32.4	9.0	45.2	56.6 9.5
9.7	6.1	57.9	9.4	54.2	59.5	8.8	28.2	29.2 8.5 G	9.5	54.2	3.1
9.9	10.4	19.9	9.4	54.4	17.4 9.0 G	9.4	30.7	43.8	9.2	59.7	7.7
9.6	15.9	25.1	9.9	53 0.4	45.0	9.9	42.2	42.6	9.2	58 2.2	24.9
9.7	18.9	10.6	9.8	2.4	21.7	9.6	43.2	3.6	9.5	5.2	2.8
9.8	20.4	37.1	9.4	14.4	49.5	8.8	44.2	53.0 9.0 Ga	8.8	5.2	55.3 8.2 Ga
9.9	22.6	57.6	9.7	18.9	6.1	8.8	48.2	20.9 9.0	9.0	13.7	28.3
9.9	25.4	59.5	9.4	19.4	18.8	9.7	49.2	6.8	9.5	15.1	57.7 9.5
9.8	28.4	37.4	9.4	19.4	13.8	9.9	53.2	10.7	9.1	16.7	18.7
9.9	29.4	34.9	9.0	22.9	33.2	9.8	55.2	17.2	9.9	18.2	21.0
9.8	29.4	29.0	9.5	23.4	12.6	9.7	57.2	33.6	9.4	18.9	58.9 9.0 a
9.9	29.4	18.5	9.6	26.9	8.7	9.7	56 2.2	42.3	9.5	23.2	21.6
9.4	34.4	7.0	9.7	30.4	36.5 9.5	8.5	6.2	43.0 8.8 Ga	9.4	24.7	55.9 9.5
9.9	34.4	57.9	9.9	31.4	38.0	9.8	6.2	20.8	9.5	25.7	7.7 9.0
9.6	37.9	54.3	9.9	31.9	57.1	9.7	8.7	38.8	9.5	26.2	8.0
8.8	39.4	46.9 8.0 G-	9.7	39.4	31.0	9.0	12.2	15.2 9.5	9.4	28.2	13.2
9.9	45.2	0.0	9.0	41.4	12.8	9.6	12.7	55.4	9.0	32.2	41.8 9.0
9.6	46.4	43.6	9.8	41.7	21.4	9.9	15.2	17.0	9.0	36.7	49.7
9.8	49.9	51.0	9.9	46.2	26.4	9.9	18.2	23.8	9.9	37.2	35.1
8.2	54.4	23.5 8.0 G-	9.8	49.2	1.4	9.5	22.7	25.1	9.0	39.2	57.9 a
8.8	51 2.4	44.8 9.0 G	9.5	50.7	34.0	9.0	25.2	34.6 9.0	9.9	44.2	31.8
9.8	4.4	33.6	9.7	50.7	6.6	9.6	25.2	59.6	8.0	49.7	37.4 8.0 Ga
9.2	8.4	44.0 9.0 G	9.8	59.2	34.2	9.9	28.7	20.4	9.4	54.2	12.4
9.7	17.9	32.6	8.5	54 1.2	45.4 8.5 Ga	9.5	39.2	50.2	9.9	54.2	26.1
9.8	20.9	11.9	9.7	1.2	51.0	9.4	39.2	56.1	9.4	56.2	39.5 9.0
9.9	24.4	57.4	9.4	10.2	30.2	9.6	39.7	34.4	9.9	59.2	22.0
9.7	25.6	57.7	9.5	12.1	58.0	9.3	40.7	14.6	9.9	59 1.2	18.0
9.6	26.4	30.0	9.7	13.7	59.9	9.5	42.7	21.0	9.4	5.2	20.2
9.5	29.4	3.8 9.5	9.4	15.2	55.2	9.6	42.7	14.5	9.5	14.2	48.9
9.6	32.4	28.6	9.0	17.2	34.0	9.9	45.2	1.8	9.6	16.2	8.1
9.8	41.6	26.8	9.9	21.7	47.6	7.4	47.7	52.2 7.5 G8a	9.5	20.2	45.8
9.4	49.4	50.4	9.9	22.7	4.8	9.5	48.7	31.6	9.0	24.2	17.0 8.5 a
9.3	50.1	57.8 8.5 -	9.9	22.7	48.3	9.7	50.2	7.0	9.5	36.2	9.2
9.6	53.7	1.8	8.8	24.2	51.8 8.0 Ga	8.2	54.2	54.4 8.2 a	9.2	37.7	9.3
9.4	54.4	48.3	9.7	26.2	16.0	9.3	54.2	12.8	9.9	37.9	58.6
9.9	55.4	52.4	9.9	28.7	30.2	9.5	54.2	55.1	9.0	42.2	18.0 9.5
9.9	57.9	50.9	9.2	34.2	31.2	9.6	54.7	26.2	8.8	43.7	9.7 8.5 a
9.6	59.4	36.3	9.9	34.2	5.6	9.0	57.7	7.1 8.5 a	9.9	48.2	42.1
9.6	59.4	7.0	9.9	36.2	46.0	9.2	58.7	26.0	9.8	52.2	53.0
9.5	52 4.4	20.6	9.9	36.7	49.4	9.8	59.2	12.5	9.7	57.2	53.0
9.9	5.4	9.0	9.0	38.9	56.7 8.2 Ga	9.9	59.2	12.8	9.9	0 1.1	58.9 a
9.5	6.4	44.6	9.9	42.7	22.6	8.8	59.4	2.4 9.0 a	9.5	4.2	50.6
9.7	9.4	34.7	9.8	45.7	21.8	9.9	57 5.3	55.1	9.9	4.7	31.0
9.9	12.4	36.2	9.9	47.2	1.4	9.9	9.2	57.2	9.5	6.7	32.0
9.7	13.4	32.1	9.2	47.7	18.4	9.6	9.2	50.2	9.0	9.2	24.3 8.0 Ga
8.7	13.9	36.2 9.0	9.7	49.2	3.4	9.7	12.7	21.0	9.3	11.7	38.6
9.6	14.4	6.8	9.5	56.4	57.0 9.5	9.5	14.7	34.8	9.0	13.7	26.7
9.4	14.4	46.2 9.5	9.3	57.2	42.8	9.7	15.1	57.8	9.4	14.2	19.8 9.0
9.8	17.9	53.4	9.3	55 1.7	17.2 9.5 a	9.4	16.2	32.5	9.7	15.7	47.6
9.5	23.4	15.6	9.6	3.2	38.1	9.6	18.2	49.8	9.9	17.7	22.5
9.2	23.4	38.2	9.2	5.2	17.6	9.5	25.2	58.8	9.7	20.2	3.3
25pr.	+1 2'0	-3'9		+1 2'2	-4'0		+1 2'2	-4'1		+1 2'4	-4'1

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3001—3060.			3061—3120.			3121—3180.			3181—3240.									
mag.	8h.	-26°	mag.	8h.	-26°	mag.	8h.	-26°	mag.	8h.	-26°							
9.6	0	21.2	49.4	8.7	3	11.6	11.7	9.5	9.6	5	42.6	37.9	9.8	9	20.5	17.9		
9.6		21.2	51.1	9.5		17.1	46.6	8.6		45.1	39.3	9.0 a	9.8		22.5	9.9		
9.9		26.2	47.9	9.7		19.6	21.0	10.2		48.1	49.4	9.5		25.5	33.8			
9.7		27.7	43.4	9.6		25.1	19.2	10.2		49.6	3.1	9.7		25.5	55.8			
9.4		36.2	39.0	10.1		27.6	47.5	9.5		50.1	38.7	9.0	9.1		30.0	20.6		
9.7		38.2	4.1	10.2		30.1	56.6	10.0		50.4	39.8	10.2		30.5	14.4			
9.6		39.2	8.0	9.7		33.1	47.0	10.2		51.6	1.3	9.7		35.5	20.5			
9.9		44.2	11.0	9.1		33.1	53.5	10.0		53.1	3.6	9.5		35.7	2.0			
9.8		44.2	42.4	9.2		47.6	18.2	9.8		54.1	39.3	9.2		37.0	34.6			
9.2		44.2	27.7	9.0	9.6		51.6	49.9	10.1		54.1	45.2	10.1		40.0	0.5		
9.7		49.2	48.9	9.3		52.6	21.8	10.1		54.6	29.1	8.8		40.2	3.0	9.0		
9.2		49.2	20.5	9.5		52.6	51.2	9.2		55.1	37.4	9.0 a	9.8		45.5	14.0		
9.5		51.2	51.6	10.0		54.6	55.8	9.5		58.1	30.9	9.0	10.0		45.5	14.3		
9.9		53.2	20.0	10.2	4	2.6	59.1	9.2		59.6	54.8	9.7		46.0	24.8			
9.0		54.7	21.2	10.2		6.3	57.9	9.7	6	0.3	5.6	9.6		50.5	49.3			
9.7		54.7	28.1	9.7		14.1	51.2	9.8		4.3	0.2	9.8		51.0	12.2			
9.9	I	1.2	40.5	10.2		19.6	44.2	9.7		5.3	44.9	9.2		51.5	45.2	9.0 G		
9.9		5.7	14.0	10.0		22.6	30.8	9.2		9.8	16.3	9.7		55.5	40.2			
9.9		7.2	6.9	10.0		25.1	12.9	9.6		12.3	42.0	10.0		58.0	48.7			
9.2		7.4	57.9	8.9		28.6	42.5	10.1		18.8	2.2	9.6		59.5	16.4			
9.7		12.2	27.3	8.6		28.6	45.9	Ga	9.3		20.3	12.8	10.2		59.5	26.4		
9.6		13.2	52.9	9.7		30.1	46.1	9.8		25.3	29.8	10.1	10	0.5	10.9			
9.5		16.2	47.3	9.0		32.6	31.7	9.0	9.3		35.3	50.1	9.2		5.5	33.9		
9.9		16.2	29.2	9.1		35.1	8.8	9.5 a	9.7		35.3	46.3	9.9		9.0	31.0		
9.9		16.7	14.4	9.7		37.8	0.0	9.6		36.8	42.6	10.2		17.0	2.0			
9.9		18.2	18.9	9.5		39.1	55.2	8.5		38.8	44.1	9.0 a	9.3		25.5	10.3		
9.9		19.2	43.3	9.7		40.6	42.1	10.1		38.8	17.1	10.1		26.5	31.0			
9.5		19.2	4.2	9.3		41.1	45.9	9.5		40.3	32.3	9.4		28.5	17.8	9.0		
9.9		26.2	43.4	10.2		41.1	3.6	9.3	7	0.3	34.9	10.1		37.5	18.7			
9.4		27.5	6.1	9.5		41.1	47.0	9.8		0.3	41.9	10.2		50.5	10.0			
9.0		35.2	46.3	9.5	9.8		45.1	47.6	9.8		1.3	36.2	9.5	11	0.0	48.1		
9.9		35.2	3.3	9.6		52.1	14.3	9.3		3.3	53.5	9.2	10.2		11.0	7.8		
7.5		40.2	45.2	7.5 GSa	9.2		52.1	56.3	9.5	9.8		5.3	18.0	10.2		14.0	5.6	
9.7		41.5	47.9	9.5		53.6	47.1	10.2		18.8	36.2	10.2		14.0	47.7			
9.1		43.3	44.3	9.0 a	9.8		57.6	11.6	10.0		18.8	25.7	9.3		18.5	27.5	9.0	
9.9		44.2	42.5	10.2		0.1	7.9	9.8		18.8	0.1	10.2		19.0	28.0			
9.5		45.2	9.5	9.8	5	0.1	32.4	10.2		21.3	46.8	9.9		21.8	28.2			
9.7		50.2	59.5	10.2		5.1	37.3	9.3		32.3	55.9	10.0		22.5	36.0			
9.0		50.2	32.7	a	8.9		8.1	9.9	8.5 a	10.2		33.8	55.6	9.6		25.5	25.1	9.0
9.7		56.5	15.4	10.1		8.1	46.9	9.8		41.8	40.6	9.5		27.0	35.1			
9.4	2	2.8	28.0	9.0 a	10.0		10.1	41.1	9.6		42.3	47.1	9.3		30.5	34.6		
9.4		6.1	1.7	9.0 a	9.7		14.1	24.6	9.3		44.3	19.6	9.7		31.5	29.9		
9.9		8.7	34.9	10.2		15.1	25.0	10.2		47.8	36.9	10.0		31.5	19.7			
9.6		9.2	54.2	8.8		15.1	31.9	8.5 a	10.0		55.8	55.0	9.9		32.5	42.9		
9.9		9.8	32.1	10.1		15.1	20.6	9.7	8	0.3	30.7	10.2		34.0	33.4			
9.7		11.0	54.3	10.1		18.6	45.7	9.7		0.3	29.3	8.8		38.5	19.8			
9.8		19.2	41.9	10.2		19.1	43.8	9.1		12.3	57.3	9.5	9.6		45.5	54.5		
9.8		19.5	15.8	9.6		19.6	59.0	10.2		13.3	33.7	9.7		50.5	13.8			
9.9		22.2	23.7	10.2		20.1	44.0	9.8		14.3	32.0	9.8		51.5	26.9			
8.8		29.0	1.0	8.5 a	9.1		20.1	47.1	10.0		30.0	7.0	10.0		53.0	42.6		
10.2		30.3	21.1	10.1		20.6	3.4	10.0		42.0	0.7	9.3		53.5	59.9	9.0		
9.7		35.3	54.5	9.5		26.4	42.2	9.6		56.0	16.9	10.2	12	5.5	36.4			
10.1		36.3	23.7	10.1		28.1	37.9	10.1		59.0	40.6	9.7		10.5	9.2			
10.2		37.8	50.7	9.5		28.6	37.0	9.0	10.2	9	2.2	2.2	8.8		14.0	53.2	9.0-	
9.5		43.1	15.7	9.6		29.6	39.5	9.9		6.5	10.4	10.0		20.5	15.8			
9.5		47.6	53.5	10.1		30.6	22.1	10.2		6.8	2.2	10.1		20.5	13.0			
10.2		58.6	50.2	10.2		32.6	35.6	9.3		9.0	19.9	9.3		30.5	35.8			
10.2	3	2.1	24.9	9.8		35.1	35.1	9.3		11.0	28.9	8.8		31.5	45.1	8.5 G-		
9.1		2.1	46.1	9.0	10.2		41.1	31.7	10.1		12.0	29.4	10.0		34.8	6.6		
9.8		4.1	36.2	9.2		41.6	53.8	10.2		14.0	34.0	10.2		35.0	43.1			
25 pr.	+ 1	2.5	-4.2	+ 1	2.6	-4.3			+ 1	2.6	-4.4			+ 1	2.7	-4.5		

3241-3300.				3301-3360.				3361-3420.				3421-3480.			
mag.	8h.	-26°		mag.	8h.	-26°		mag.	8h.	-26°		mag.	8h.	-26°	
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''
9.1	12	35.5	36.3	10.1	15	52.5	17.0	9.7	18	56.0	14.4	9.3	21	56.0	25.4
9.6		40.0	15.2	9.5		59.0	30.1	9.8	19	0.0	45.4	8.9	22	3.5	7.9 9.2 a
10.2		49.0	45.1	9.4	16	3.0	55.9	10.0		18.0	43.1	10.2		10.7	29.2
8.5		54.5	36.7 9.0-	10.0		8.5	31.5	9.8		19.0	33.0	10.2		14.7	35.6
10.1		55.5	21.3	9.2		10.5	50.7	10.2		21.5	48.0	10.2		15.7	3.0
10.2		55.5	50.1	10.2		14.0	58.4	9.8		21.5	14.1 10.0	10.1		15.7	29.0
10.2		57.5	41.3	9.3		20.0	5.3	10.2		21.8	38.2	9.1		19.7	22.3
10.1	13	3.0	19.7	9.4		20.5	26.1	9.9		23.0	48.2	9.7		22.7	53.9
9.8		4.5	31.6	10.2		29.0	35.0	9.5		23.5	51.8	9.7		23.7	19.7
10.2		4.5	34.9	9.8		32.7	0.9	10.0		26.0	5.1	10.0		35.7	49.6
9.3		5.0	36.1	10.2		35.5	41.3	10.2		32.0	41.8	10.0		39.7	7.6
9.5		6.5	34.1	9.8		39.5	49.9	9.2		32.5	12.1	10.2		41.2	14.8
10.2		8.0	55.8	9.3		40.5	6.0 9.0	9.6		34.0	10.6	9.7		45.7	26.1
9.8		9.5	59.4	9.5		40.5	42.2	10.2		41.0	54.8	9.5		49.7	12.3
10.2		10.5	52.1	10.2		45.0	15.1	9.6		43.5	41.2	9.7		50.2	22.6
9.6		14.5	32.1	10.2		50.5	32.2	10.2		45.0	38.6	8.5		50.2	35.3 9.0
9.6		17.5	10.7	9.1		51.5	2.6 9.5	8.8		46.0	35.5 Ga	9.8		55.2	23.0
8.6		26.0	14.5	9.2		56.0	47.8 8.2 G-	9.4		53.5	6.6	10.2		59.2	50.8
9.7		26.0	44.1	9.6		59.0	53.3 9.5	9.5		55.5	53.1	9.8	23	0.2	41.9
10.1		27.0	23.1	10.1	17	1.0	23.9	9.3	20	5.0	51.9	9.7		9.7	24.0
9.6		31.5	1.9	10.0		4.0	40.3	10.2		8.8	54.1	10.0		9.7	20.1
9.8		45.0	11.5	9.8		4.0	30.9	9.6		15.0	37.8	8.8		12.7	27.7 9.0
8.9		50.5	23.1 9.0	9.3		10.5	4.8	9.5		16.0	15.2 9.5	10.2		13.7	5.4
9.0	14	0.5	24.5 9.0	10.1		13.0	56.7	9.6		16.5	5.3 9.0	10.1		16.7	20.0
8.6		0.5	33.3 9.0 G	9.7		25.5	11.6	10.2		21.5	25.0	10.2		16.7	28.9
9.6		10.0	8.1	10.0		25.5	56.2	9.1		25.0	48.6	10.0		20.2	54.9
9.0		10.5	9.0	10.0		26.5	47.1	9.7		25.0	53.7	10.2		24.7	23.3
9.9		20.5	21.5	10.2		27.5	47.5	9.5		25.7	58.0	9.7		47.0	28.4
9.1		21.5	19.1	10.0		30.0	56.4	9.7		30.0	24.3	10.2		50.2	18.1
10.2		26.5	50.7	9.8		34.0	19.8	9.5		30.5	47.0	9.5		50.2	32.5
9.5		27.0	12.9	10.0		36.5	37.3	9.9		30.5	48.7	10.1	24	3.7	13.3
8.6		29.5	41.4 8.0 GW=	9.1		40.5	5.3	9.7		37.5	34.1	8.9		3.7	30.3 9.0 G
9.8		30.5	50.1	10.2		43.5	13.8	9.1		39.0	1.7	10.1		9.7	36.7
10.1		37.0	44.4	9.8		47.5	52.4	9.4		41.0	29.1 9.5 a	7.5		12.2	55.1 7.0 GSb-
10.0		40.0	3.1	8.5		48.5	36.8 8.5 G	8.5		45.5	57.6 8.5 Ga	10.2		14.7	37.1
9.6		40.8	16.6	10.2		55.0	23.2	9.7		50.5	39.1	10.2		20.2	15.3
9.6		42.5	29.6	9.6		56.5	19.1	10.2		56.0	13.4	10.2		24.7	25.9
10.2		45.5	4.5	10.0		57.0	22.1	10.2		58.5	51.1	9.5		25.2	21.7
8.8		49.0	37.8 9.0	9.2	18	7.0	14.6	10.2	21	0.0	8.2	9.6		26.3	27.9
10.1		49.3	58.1	9.6		9.0	55.9	8.2		1.5	44.2 8.0 GW-	9.2		30.2	47.8 9.0
10.2		53.0	49.7	9.5		12.2	0.9	9.2		3.5	25.2	9.3		30.5	54.5
9.8		54.0	24.9	9.6		22.0	6.2	10.0		5.0	28.5	10.0		34.7	52.9
9.6		56.0	22.2	9.8		31.0	47.8	10.2		7.5	0.2	10.2		37.7	49.3
9.1		56.5	36.3 9.5	9.9		31.5	32.0	9.6		12.0	2.8	9.9		41.2	22.4
10.0		57.5	37.5	10.0		33.5	19.5	10.0		16.0	19.5	9.8		41.7	8.3
8.6	15	1.5	48.2 -	8.9		35.3	0.1 a	10.2		18.5	53.2	9.5		43.2	38.1 9.0
8.8		5.0	26.7 9.0	9.1		35.5	55.6 8.8 G-	10.2		23.5	42.9	9.6		49.2	36.9 9.0
10.0		6.8	26.8	9.8		38.0	4.4	9.1		23.5	33.1 9.5	8.6		54.2	39.1 8.5 G
10.0		10.5	45.9	9.0		40.0	15.9	9.2		25.0	17.7	9.9	25	2.2	4.2
10.2		18.0	6.4	10.2		41.0	38.6	9.3		29.0	29.3 G	10.1		2.7	34.6
8.6		20.5	27.4 9.0	9.7		47.0	26.9	9.9		29.5	19.5	10.2		10.7	39.7
9.7		20.5	56.7	10.2		48.5	6.4	9.9		32.0	8.4	9.8		18.7	34.3
10.0		28.5	57.9	9.9		50.5	50.2	10.0		32.5	26.8	9.4		30.1	51.2
9.9		30.0	23.1	9.7		50.5	38.7	9.7		35.7	58.7	10.0		30.3	59.4
10.1		31.5	25.1	9.7		50.5	12.9	8.7		36.0	30.3 9.0	9.9		30.3	1.1
9.5		34.5	50.5	9.9		50.5	36.4	10.1		44.0	4.6	10.0		33.6	26.4
10.2		39.5	42.4	9.3		51.5	22.2	9.2		45.0	21.6	8.4		39.1	15.5 9.0
9.6		40.0	11.0	9.8		51.7	57.9	9.1		50.5	48.9 9.5	9.9		47.1	5.0
9.8		44.5	18.5	9.5		52.5	47.0	9.8		53.5	15.7	9.4		48.6	57.0
9.8		45.5	45.3	10.2		55.0	3.8	9.5		53.5	0.0 9.0 a	10.0		51.1	3.6
25pr.	+ 1	2.9	-4.6	+ 1	3.1	-4.7		+ 1	3.2	-4.8		+ 1	3.4	-4.9	

3481-3540.				3541-3600.				3601-3660.				3661-3720.			
8h.		-26°		8h.		-26°		8h.		-26°		8h.		-26°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
9.0	25	52.6	56.7	8.8	32	56.6	12.2	8.5	40	27.5	26.7	9.8	48	17.5	51.9
9.0		54.6	12.4	9.6	33	5.1	39.0	9.6	8.4	49.5	9.4	10.0	28.0	46.6	
9.0	26	5.1	36.2	9.6		5.6	59.2	9.0	9.9	4.1	4.5	8.2	34.8	2.7	
9.3		11.6	30.9	10.0		23.1	14.9	8.0	9.9	5.0	10.3	9.8	35.8	0.0	
9.7		18.6	45.8	8.7		29.6	47.3	10.0	8.5	23.6	0.0	8.8	39.5	26.6	
8.7		21.6	0.4	9.6		52.1	21.8	9.2	9.2	31.5	13.6	10.2	53.5	52.8	
9.9		28.6	48.6	9.6	34	9.6	12.0	9.4	9.4	49.5	18.9	9.0	53.5	4.3	
10.0		34.6	4.3	9.4		17.1	22.7	9.3	9.3	54.5	53.1	10.2	53.5	22.6	
9.6		38.6	36.4	9.6		17.6	4.0	8.8	8.8	4.2	1.0	9.8	57.5	59.0	
8.2		39.6	16.8	9.4		21.4	2.9	9.3	9.3	2.5	27.7	10.0	49	4.5	
10.0		45.1	50.2	9.7		24.6	6.6	10.0	10.0	4.3	58.3	10.0	20.5	13.8	
9.1		47.6	23.8	9.3		29.6	45.1	9.0	9.0	9.5	1.6	10.0	21.5	11.2	
8.9	27	5.1	26.6	10.0		33.1	5.8	10.0	10.0	22.5	21.2	9.5	23.5	8.4	
9.0		9.1	14.2	9.8		44.1	31.1	9.8	9.8	35.5	38.1	10.2	27.5	34.4	
8.8		12.1	8.4	10.0		44.6	8.0	10.0	10.0	49.5	23.6	10.0	30.5	45.7	
9.9		32.1	54.2	8.8		45.6	20.3	10.0	10.0	43	3.0	10.0	41.5	43.0	
9.8		35.3	0.8	10.0		54.1	20.7	9.8	9.8	4.5	12.5	9.2	52.0	12.0	
9.6	28	3.1	20.4	9.1		59.6	32.6	9.6	9.6	10.0	9.0	10.2	50	2.0	
9.3		26.1	42.0	9.4	35	2.6	25.2	9.6	9.6	29.0	52.0	9.4	12.5	50.9	
9.3		27.1	15.0	9.2		8.6	20.8	9.7	9.7	30.0	14.4	9.8	16.5	11.8	
9.6		40.1	59.3	8.2		9.6	48.9	9.2	9.2	37.5	46.6	9.5	25.0	36.1	
9.7		44.6	3.5	8.8		19.6	56.1	9.2	9.2	49.5	38.1	8.3	33.5	10.2	
8.0	29	12.8	40.2	10.0		24.6	32.2	10.0	10.0	50.6	58.3	10.2	43.5	41.3	
9.6		16.3	56.9	9.3		27.1	38.0	10.0	10.0	52.6	59.8	10.2	44.0	27.8	
9.4		19.8	8.2	10.0		27.1	20.4	9.9	9.9	59.5	49.3	9.3	44.0	33.2	
9.3		21.3	5.5	9.4		29.6	26.4	9.4	9.4	4.0	17.6	9.8	49.5	8.0	
8.5		31.8	4.1	9.4		29.6	51.8	10.0	10.0	9.9	24.7	9.9	52.5	16.8	
9.3		33.3	17.8	9.4		44.6	36.1	8.9	8.9	12.5	38.7	10.2	54.0	9.6	
9.4		34.8	14.8	9.3		49.5	7.0	10.0	10.0	49.5	36.8	10.2	56.5	56.1	
9.6		44.0	1.9	9.4		50.0	31.9	9.3	9.3	59.0	39.6	10.0	51	1.0	
9.9	30	2.2	2.3	10.0		52.0	55.2	8.8	8.8	45	33.5	9.9	1.5	44.2	
9.0		4.3	33.1	9.4		53.0	25.6	9.3	9.3	44.0	31.9	9.9	3.7	2.8	
9.8		4.8	39.8	8.9		55.8	59.9	10.0	10.0	48.0	21.6	9.6	5.0	5.8	
6.9		10.3	24.7	9.1	36	6.0	29.6	9.8	9.8	49.5	24.8	9.9	5.5	40.7	
9.0		19.8	21.7	9.2		16.0	7.6	9.8	9.8	46	14.5	9.9	20.0	32.9	
9.0		22.8	34.0	9.2		19.5	12.1	10.0	10.0	19.5	23.7	8.8	22.0	31.7	
10.0		30.8	14.5	9.3		39.5	30.3	9.2	9.2	23.5	11.3	8.8	30.2	59.1	
9.2		37.8	55.8	9.4		49.0	44.5	9.2	9.2	28.0	33.4	9.8	46.1	53.6	
9.9		49.8	21.1	10.0		53.0	9.2	9.8	9.8	36.5	12.1	10.2	54.1	24.2	
9.9		55.8	40.7	9.3	37	8.8	58.0	10.0	10.0	39.5	37.0	10.0	52	1.1	
10.0		58.8	19.4	10.0		20.0	8.3	9.8	9.8	57.8	9.3	10.2	5.1	39.4	
9.7	31	3.3	32.4	9.2		58.0	17.3	10.0	10.0	57.9	30.5	10.0	15.1	37.8	
8.9		4.8	40.1	9.9	38	21.0	42.5	10.2	10.2	59.4	0.9	10.2	19.1	13.4	
9.4		12.8	55.4	9.3		24.5	51.2	10.2	10.2	47	2.7	10.2	20.1	16.4	
9.4		13.3	17.5	9.3		24.5	44.0	10.0	10.0	12.2	50.2	10.2	21.1	51.4	
9.1		14.8	19.4	9.1		24.5	31.8	10.2	10.2	12.6	59.0	10.2	46.1	23.9	
9.6		19.8	51.0	8.4		25.5	12.0	8.5	8.5	20.4	58.5	9.3	50.1	19.6	
9.7		24.8	35.3	9.3		44.5	32.0	8.7	8.7	24.7	28.6	9.4	53	7.6	
9.0		45.8	27.1	10.0	39	4.5	2.1	10.2	10.2	26.8	6.5	9.1	11.6	20.8	
10.0		54.8	10.2	9.0		9.5	3.8	9.9	9.9	30.8	30.4	9.8	12.1	33.8	
10.0				9.7		24.3	59.5	10.2	10.2	41.7	18.4	9.3	12.1	30.1	
9.9		9.8	7.6	9.4		28.5	7.1	9.7	9.7	49.2	10.5	9.8	22.6	3.2	
9.4		10.8	9.5	9.3		31.5	56.0	9.8	9.8	51.7	8.7	9.2	24.6	55.6	
8.9		24.6	30.3	9.3		39.5	9.3	10.2	10.2	57.2	20.1	9.8	25.1	5.0	
10.0		36.6	10.2	9.9		40.0	52.8	10.2	10.2	57.2	48.1	9.8	29.1	18.2	
10.0		39.6	56.6	9.1		41.5	13.1	10.0	10.0	57.7	14.1	10.2	42.1	32.9	
8.9		43.1	40.9	9.6		42.5	22.8	10.1	10.1	48	2.7	9.8	44.1	24.1	
10.0		43.6	59.9	9.3		59.5	4.7	9.8	9.8	3.1	37.2	10.0	44.1	25.8	
9.2		44.1	46.9	9.8	40	9.5	20.0	10.2	10.2	4.7	26.7	10.2	56.1	0.7	
10.0		49.1	24.6	9.2		14.5	39.7	10.2	10.2	13.2	10.9	10.2	58.1	24.6	
25pr.	+1	3.6	-5.1	+1	3.8	-5.3		+1	4.2	-5.5		+1	4.5	-5.7	

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
mag.		8h. -26°		mag.		8h.-9h. -26°		mag.		9h. -26°		mag.		9h. -26°	
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s
9.3	54	2.1	12.8	9.5	59	0.7	13.5	10.2	4	12.0	46.1	10.2	10	6.6	42.9
10.2		16.6	49.2	9.9		8.7	54.5	9.8		12.5	54.2	10.2		9.6	28.0
10.2		19.6	59.4	7.9		10.2	35.5	9.3		19.5	30.6	9.8		14.1	4.2
10.2		40.6	50.7	9.4		15.7	21.9	10.2		27.5	26.1	9.7		19.6	12.9
10.0		49.1	41.3	10.0		17.7	1.9	10.2		31.7	57.6	10.0		23.1	25.9
9.4		50.1	14.8	10.2		20.2	29.9	10.2		32.5	46.8	8.0		30.8	40.5
10.2		50.1	58.0	9.8		28.2	35.4	9.8		34.5	34.9	10.0		32.3	33.9
9.5		57.6	10.8	10.2		28.7	15.0	9.3		46.5	1.1	9.2		35.3	21.9
10.2		59.7	58.4	9.6		35.2	20.0	9.9		55.0	29.4	10.0		55.3	18.9
9.9	55	0.6	52.7	9.8		37.2	9.0	9.3		58.0	37.0	10.0	11	12.3	12.5
9.8		0.8	1.2	10.0		41.7	7.5	8.6	5	12.5	14.5	9.8		48.3	16.5
10.0		3.1	0.8	10.2		47.7	19.3	10.0		13.5	3.1	9.8		54.3	31.4
10.2		6.6	7.6	9.3		56.7	36.0	9.8		15.0	28.8	9.4		58.3	27.1
10.2		8.6	39.9	10.2	0	0.2	10.9	9.8		18.0	19.7	8.0	12	40.3	45.4
10.2		14.1	20.7	10.0		2.2	5.4	10.0		27.8	5.9	9.6		43.3	16.1
10.2		43.0	12.9	9.7		5.5	59.2	10.2		32.8	25.9	9.2		55.3	26.7
7.6		46.5	10.4	9.8		19.7	7.3	8.8		39.8	55.9	10.0	13	10.8	9.9
10.0		46.5	11.0	9.7		24.9	57.5	10.2		54.8	43.8	10.0		30.3	16.5
9.8	56	0.5	9.6	8.9		26.7	50.0	10.0		57.3	43.8	9.6		35.3	34.9
9.7		3.0	33.8	10.0		39.2	37.0	10.2	6	19.3	18.8	10.0		45.8	39.3
9.7		3.0	49.5	9.2		50.2	13.1	10.0		19.3	53.3	9.4		46.8	55.1
9.9		15.0	7.0	9.2		51.7	13.0	10.0		25.8	4.2	10.0	14	10.1	35.0
9.9		15.1	42.2	9.3	1	4.2	42.9	9.8		31.8	56.1	8.7		11.1	53.0
9.6		19.0	33.6	9.1		14.7	26.1	10.2		33.8	7.7	9.0		35.1	11.6
10.2		20.0	36.1	9.4		23.2	50.5	9.8		34.8	6.6	7.8		37.6	19.4
10.2		21.1	42.2	9.5		36.7	19.6	10.2		35.8	8.1	10.0		44.1	29.6
10.2		23.0	50.7	9.0		36.7	49.1	10.0		42.8	39.4	10.0		47.0	28.6
8.0		26.0	5.0	10.0		40.7	47.0	9.8		43.8	33.9	10.0	15	41.1	13.8
10.0		28.0	18.4	10.0		42.2	36.7	9.8		52.3	21.0	10.0	16	9.0	58.7
9.8		30.0	6.8	10.0		50.2	56.1	9.7		53.8	23.5	9.8		40.1	43.4
8.1		31.0	47.7	9.8		55.2	27.5	10.2	7	6.8	57.9	10.0	17	27.0	38.3
10.0		34.0	41.6	9.8		56.0	39.2	10.2		11.7	17.6	8.0		30.1	38.4
9.7		46.5	3.1	10.2	2	0.0	28.2	10.2		13.8	36.1	9.6		31.1	25.0
9.0		53.5	23.2	10.0		2.0	7.0	10.2		16.3	23.8	9.8		34.1	45.0
9.2		55.0	54.5	10.2		19.0	35.6	10.0		21.8	0.7	8.8		52.6	48.0
9.3	57	8.0	31.7	10.2		25.0	28.1	10.0		34.8	45.0	10.0	18	13.0	48.1
10.2		10.1	8.2	9.1		37.5	48.1	9.3		38.8	29.3	10.0		22.6	34.4
9.2		11.5	42.2	10.0		39.5	28.0	10.2		42.8	0.1	8.8	19	53.6	59.4
10.2		14.0	28.9	10.0		43.5	56.0	10.2		44.8	31.1	9.6	20	9.6	54.8
10.2		20.0	35.7	9.8		45.0	10.6	10.2	8	6.3	9.9	9.8		23.6	25.5
10.2		32.5	34.0	9.7		56.5	49.0	9.7		14.3	47.9	9.8		29.1	21.0
10.0		36.0	56.0	10.2		59.7	41.2	10.0		31.8	56.8	9.0		51.1	41.9
9.8		40.5	15.2	10.2	3	0.0	30.1	10.2		34.3	3.3	8.6	21	7.4	2.2
9.6		43.5	6.4	9.8		4.5	12.3	10.0		35.8	53.1	10.0		7.5	20.9
9.0		46.0	25.5	10.2		11.5	45.3	9.8		41.3	1.9	9.2		12.6	21.0
9.8		50.0	28.5	7.3		17.5	15.8	8.8		47.9	53.0	10.0		15.1	31.2
10.2		50.5	36.6	9.3		22.0	16.9	9.7		54.1	56.3	9.6		36.1	49.2
10.2		50.5	11.6	10.2		26.5	52.8	10.2	9	3.6	39.2	9.4	22	0.1	35.0
9.9		51.0	13.7	10.2		29.5	40.1	10.2		14.6	56.5	8.6		12.1	33.8
10.2	58	9.0	25.0	9.4		30.2	57.4	9.8		17.1	57.1	9.6		15.6	16.0
10.0		17.5	10.0	10.0		30.5	59.3	10.0		17.2	2.8	9.2		22.6	56.0
10.2		18.0	7.0	9.8		35.0	33.9	10.2		19.6	37.6	9.6		33.6	32.2
9.8		24.7	28.7	8.8		36.5	31.4	10.0		20.6	41.5	9.2	23	0.6	27.2
10.2		27.7	30.1	10.0		41.5	26.2	10.0		29.9	25.0	9.0		25.1	44.4
8.4		32.2	13.5	10.2		42.0	56.6	10.2		33.6	30.2	10.0		28.6	51.0
10.1		32.7	18.0	9.9		44.0	49.1	10.2		43.6	50.5	7.4	24	8.6	2.8
10.2		40.2	27.2	10.2		46.8	59.1	9.8		53.1	16.0	9.6		9.8	36.8
10.2		45.7	12.8	10.2		51.5	52.9	10.0		55.1	22.9	7.0		21.6	2.6
10.2		52.2	33.8	10.0	4	8.9	2.1	10.0		57.1	16.3	9.8		24.8	42.0
9.8		59.7	52.3	10.2		12.0	41.4	10.2	10	2.1	6.6	9.6		27.6	0.0
25pr.	+ 1	4.8	-5.8	+ 1	5.1	-6.0		+ 1	5.3	-6.1		+ 1	5.9	-6.3	

3961—4020.			4021—4080.			4081—4140.			4141—4200.					
g ^h .	—26°		g ^h .	—26°		g ^h .	—26°		g ^h —10 ^h .	—26°				
m	s	°	m	s	°	m	s	°	m	s	°			
25	4'3	37.8	9'6	19'7	11.3	8'9	48	10'0	0'6	10'0	58	1'0	51'0	
9'0	9'8	15.8	10'0	40'2	45.5	9'8	41'9	59.5	10'0	4'0	15.6	10'0	4'0	15.6
9'2	9'8	51.2	10'0	51'7	44.2	10'0	44'8	31.7	10'2	9'5	38.0	10'2	9'5	38.0
9'2	10'3	51'1	9'4	52'2	52.3	9'4	49	11'8	33.7	10'1	22'0	10'1	22'0	31'0
9'0	29'8	20.9	9'4	54'7	4.1	9'3	14'8	40.2	10'1	42'0	44.5	10'1	42'0	44.5
9'8	41'8	29.5	9'2	37	9'7	32.8	9'3	55'8	44.8	9'7	48'5	9'7	48'5	40.2
9'6	44'8	14.8	10'0	12'7	0.2	9'2	50	22'3	28.6	9'7	50'0	9'7	50'0	39.4
10'0	26	6'8	10'0	26'2	34.4	8'2	28'3	19.4	8.5	9'8	54'5	9'8	54'5	53.5
9'2	9'8	7.4	9'8	42'2	20.5	8'6	29'8	27.1	9'0	9'6	59	2'0	48'0	
10'0	12'8	31.5	9'4	44'7	30.4	9'6	49'9	56.8	10'0	10'0	2'0	42'1		
9'4	23'8	23.7	9'0	44'7	20.7	10'0	51	7'8	26.1	9'6	4'0	29.5		
8'4	24'8	35.6	8'8	38	6'7	35.2	7'0	14'8	53.1	9'4	6'0	8.8		
10'0	39'8	35.5	10'0	22'2	19.0	8'2	8'2	42'8	42.6	10'2	22'0	7.9		
9'8	39'8	41.3	8'4	37'7	5.2	8'5	44'8	1.1	8.8	9'5	40'0	30.4		
8'5	49'8	21.9	8'6	47'7	52.5	8'2	44'8	36.1	8'0	10'1	50'0	32.0		
9'6	27	3'8	10'0	55'2	47.1	8'9	46'3	15.7	9'0	10'1	0	5'5	48.5	
8'4	9'8	51.9	8'4	39	1'7	18.9	8'9	49'8	3.4	8'3	10'0	40'1	7.7	
10'0	14'3	5'3	10'0	5'2	34.8	8'8	8'8	59'8	45.5	10'0	18'0	48.2		
10'0	24'8	39.7	8'4	18'7	47.4	8'9	53	16'8	28.2	9'2	22'0	25.2		
9'0	29'3	32.0	9'4	20'7	5.1	8'8	8'8	19'8	38.3	10'2	30'0	20.0		
10'0	44'8	19.0	9'4	34'7	59.6	9'7	9'7	28'8	45.4	9'8	33'5	14.9		
9'6	28	24'8	8'6	40	15'7	13.0	10'0	39'8	15.4	9'3	34'5	53.7		
10'0	35'8	11.7	10'0	17'7	4.6	9'7	9'7	44'8	49.8	9'8	34'5	20.1		
10'0	50'8	54.3	10'0	34'7	10.0	10'0	10'0	49'8	56.5	10'1	36'5	55.7		
9'2	58'3	37.2	9'4	40'7	38.5	10'1	54	25'6	12.9	8'8	42'0	48.9		
10'0	29	9'8	9'0	45'2	22.6	10'2	10'2	31'6	17.1	9'9	47'0	37.1		
8'8	9'8	30.9	7'6	45'2	41.8	10'0	10'0	38'1	39.0	10'0	49'0	26.7		
10'0	18'7	27.9	9'0	50'8	30.6	10'1	10'1	46'6	7.2	9'7	56'5	36.1		
10'0	18'7	8.0	9'8	58'3	45.6	9'7	9'7	49'5	5.3	9'7	1	20'0	39.1	
10'0	29'7	15.3	9'4	59'8	31.5	10'2	10'2	52'1	1.0	9'9	20'3	59.2		
8'8	31'7	47.8	9'0	42	1'8	31.2	8'4	54'6	33.3	9'7	24'5	4.8		
10'0	54'7	45.7	10'0	11'8	44.4	10'2	10'2	55	2'1	9'9	34'0	7.2		
9'8	55'7	9.5	8'9	33'3	25.9	10'2	10'2	9'1	45.2	9'9	42'5	48.1		
9'6	57'2	8.9	9'5	43	12'3	39.8	10'0	25'6	19.0	10'2	42'5	9.9		
7'4	30	30'5	9'6	17'3	7.2	9'5	9'5	30'1	47.6	10'2	43'9	12.5		
10'0	54'7	9.4	9'4	42'8	37.1	9'5	9'5	31'1	31.4	8'7	47'4	31.4		
9'2	55'2	24.8	9'7	44	7'3	2.2	9'9	34'6	6.2	9'7	50'9	4.4		
8'2	56'7	45.7	10'0	10'8	35.9	10'1	10'1	35'6	35.0	10'2	2	1'9	57.9	
10'0	31	4'2	10'0	14'8	0.9	9'7	9'7	45'1	45.4	9'9	10'9	39.3		
10'0	16'7	42.7	8'8	39'8	38.2	8'6	8'6	52'6	4.1	9'9	10'9	45.5		
8'4	18'9	17.9	9'4	54'8	4.4	9'9	9'9	56	2'6	9'8	14'9	18.4		
9'8	39'7	31.0	9'7	45	18'8	51.0	10'2	5'3	1.5	9'8	19'9	0.1		
10'0	49'9	1.7	9'4	19'8	9.2	10'2	10'2	10'6	35.5	10'2	29'9	4.1		
10'0	32	14'2	9'5	23'8	31.0	10'2	10'2	13'6	19.4	9'9	33'4	10.6		
10'0	15'4	15.7	8'8	46'3	50.0	9'0	10'2	36'1	51.0	10'2	50'9	26.9		
9'4	19'7	40.0	8'8	52'3	20.4	9'7	9'7	39'6	41.1	10'0	51'9	47.9		
10'0	34'7	52.2	9'4	57'6	58.0	10'1	10'1	49'1	47.5	9'7	57'4	4.9		
9'0	33	1'9	10'0	46	15'3	0.0	8'8	57	9'1	9'9	59'9	35.7		
9'4	4'7	30.0	8'4	28'8	48.3	8'5	9'3	18'1	27.9	10'2	3	4'9	57.0	
9'2	30'2	43.6	9'4	32'8	18.9	10'1	10'1	19'1	20.0	9'9	27'9	38.1		
9'6	34'7	14.2	8'5	34'8	9.3	9'0	9'9	20'1	28.9	10'0	29'4	12.0		
10'0	39'7	50.1	8'6	35'8	8.9	9'0	9'5	24'6	30.0	10'2	37'4	50.5		
9'5	41'2	21.7	9'5	41'8	48.3	9'8	9'8	33'1	19.1	9'9	42'9	6.2		
9'0	28'2	21.8	9'3	49'8	2.0	9'8	9'8	40'1	6.2	9'7	47'4	19.7		
10'0	32'7	16.4	9'0	47	0'8	38.0	8'4	40'6	45.7	9'8	4	15'4	26.1	
8'2	52'7	14.7	9'0	3'8	14.3	8'4	8'4	41'1	7.6	9'7	39'9	17.3		
9'5	35	3'7	9'4	12'8	40.6	9'0	10'2	41'1	53.3	9'7	49'9	7.5		
9'7	16'2	42.9	8'1	16'8	10.2	8'0	10'2	44'1	28.7	9'8	51'9	17.0		
10'0	39'7	38.1	7'2	21'8	44.8	6.5	10'0	54'8	3.1	9'5	53'9	9.7		
9'2	48'2	21.2	9'5	22'8	30.6	7'7	7'7	58'1	18.3	10'0	5	19'9	39.9	
25 Pr.	+ 1	6'6	- 6'6	+ 1	7'4	- 6'9	+ 1	8'1	- 7'1	+ 1	8'6	- 7'3		

4201-4260.				4261-4320.				4321-4380.				4381-4440.			
mag.	10 ^h .	-26°		mag.	10 ^h .	-26°		mag.	10 ^h .	-26°		mag.	10 ^h .	-26°	
9.8	5	31.9	37.7	9.7	11	35.2	8.6	8.5	17	1.5	2.6	8.2	37	23.7	40.2
9.6		33.4	37.8	10.2		42.7	17.7	10.1		4.5	39.5	8.8		25.2	38.6
9.2		37.9	7.5	9.9		51.7	52.2	10.1		27.0	7.1	8.2		30.2	8.8
8.9		54.9	5.9	9.0		54.2	23.3	9.7		31.0	21.5	9.6	38	32.2	11.0
10.0		54.9	45.9	9.8		57.7	3.2	10.2		31.5	42.3	9.6		53.4	45.8
10.2	6	4.4	4.9	8.8	12	7.7	55.9	10.1		58.5	3.4	9.6		57.2	5.4
10.0		9.9	42.2	10.2		17.7	51.1	9.9	18	2.0	26.0	9.4	39	7.4	51.8
8.6		26.8	38.6	8.6		24.7	34.0	9.9		5.5	31.9	8.8		29.2	12.9
9.9		27.8	20.5	9.7		26.2	32.8	9.6		10.6	21.8	8.0		49.7	51.6
10.2		48.8	32.1	9.6		26.7	30.9	8.0		25.1	47.5	9.6		53.4	28.2
10.0				10.1		30.2	19.6	9.2		47.6	59.5	7.5	40	20.5	4.1
10.2	7	14.3	43.1	10.0		30.7	13.0	9.0		51.6	16.8	10.2		22.2	27.1
10.2		25.7	20.1	9.9		35.5	2.5	7.9		56.6	38.5	10.2	42	21.2	41.5
10.2		28.8	7.2	9.7		41.2	37.0	8.4	19	11.1	59.3	7.4	43	17.7	9.1
9.3		33.8	22.9	10.2		44.2	38.6	9.4		42.0	32.9	10.2		40.7	44.0
7.2		34.3	24.7	10.0		57.7	18.7	9.2		53.0	21.2	10.2		42.5	18.9
10.2		35.3	8.5	9.0		58.5	58.6	9.2	20	14.5	21.0	9.2	44	13.7	12.1
9.3		41.8	4.0	9.2	13	1.6	0.3	9.4		25.9	1.5	8.3	45	34.2	14.1
10.2		42.3	40.5	10.2		5.6	51.8	9.4		39.5	27.3	10.2		39.2	51.0
9.8		44.3	30.6	10.0		8.1	33.8	8.8		49.0	30.7	10.2		52.7	9.3
10.2		44.8	32.2	9.9		16.6	15.8	9.0	21	34.5	1.8	8.8	46	3.2	54.7
9.5		51.8	13.9	10.0		29.6	56.1	9.6		36.0	36.0	10.2		31.2	6.9
9.5	8	9.8	11.8	9.1		30.6	25.6	9.2		51.5	50.7	9.8		35.2	3.9
10.2		29.8	54.7	9.7		33.6	58.6	8.6	22	50.0	43.1	8.5		55.7	43.4
9.5		34.3	59.3	9.9		44.6	8.3	8.6	23	21.5	13.7	10.2	47	1.2	18.6
9.5		36.3	5.1	8.8		54.6	33.4	9.0	24	8.0	35.0	9.5		39.2	30.1
9.1		46.8	25.1	9.8	14	15.1	3.5	8.6		23.5	52.9	9.5		49.2	37.6
10.1		59.8	30.0	8.8		19.6	55.3	9.2		39.5	23.8	7.5		59.2	4.9
9.0	9	3.3	32.4	10.1		36.6	3.3	8.8	25	9.0	13.5	8.8	48	2.7	31.8
9.9		8.8	15.9	8.8		41.6	26.1	8.6	26	24.9	22.5	9.6		24.2	52.2
8.8		8.8	41.3	9.3		47.6	59.4	8.4	27	21.4	10.2	8.0		39.2	8.6
10.1		18.8	22.0	9.8		51.1	51.5	9.0		24.9	20.4	8.8	49	15.7	24.7
10.2		21.8	10.4	10.1		53.6	42.6	8.0		30.9	10.0	9.5		20.7	1.9
10.2		23.8	56.1	9.9		55.4	2.0	8.0		59.9	42.3	7.8		28.7	18.7
9.4		25.3	19.6	10.1	15	0.6	26.9	9.0	28	16.4	26.3	10.2	50	2.7	12.8
10.2		25.8	40.8	9.6		4.6	14.5	9.2		39.9	11.4	10.2		11.7	13.4
10.2		29.1	1.9	10.2		12.6	16.0	9.4		41.9	0.3	9.4	51	41.2	23.4
10.1		29.3	7.0	9.8		17.8	0.6	9.6		50.9	21.2	9.8	52	14.2	18.8
9.9		38.9	56.8	9.7		22.6	47.5	9.6		29	23.4	9.6		36.2	54.4
9.9		39.8	30.0	9.7		22.6	12.7	7.0	30	10.4	1.7	9.8		42.2	53.4
10.2		42.2	25.2	9.5		25.6	11.4	9.4		24.9	27.0	7.8	53	22.2	5.9
9.9		44.2	18.0	10.2		27.6	57.7	7.6		31.4	5.2	8.6		30.7	48.8
10.0		50.2	5.7	10.0		29.4	2.2	9.0	31	4.9	1.8	10.2		33.2	9.3
9.0	10	0.7	49.4	9.2		29.6	32.8	7.0		21.7	45.8	9.3		53.0	59.8
9.5		6.7	18.0	9.9		31.1	31.8	9.6		23.2	32.3	8.8	54	2.2	36.6
9.3		14.2	1.5	9.9		34.1	3.3	9.6	33	12.7	3.1	8.8		40.2	49.0
9.9		27.5	1.7	10.0		34.6	48.6	9.2		15.6	1.4	10.0	55	21.2	17.9
9.8		36.2	54.4	9.8		34.6	39.2	9.2		27.2	9.8	10.2	56	3.2	25.7
10.2		36.8	41.6	10.2		34.6	26.9	9.0		39.2	36.1	6.8		21.7	9.4
10.2		38.8	28.7	10.0		38.1	28.6	9.0		52.2	48.8	10.0		37.2	51.2
10.2		55.2	35.2	10.2		48.6	28.6	9.6	34	50.2	41.1	9.5		50.2	23.0
9.7	11	4.7	24.2	9.6	16	6.9	1.0	8.2		51.7	8.0	9.8	57	8.7	23.6
10.2		8.2	12.1	9.5		8.8	50.6	8.6	35	37.7	25.6	7.5		15.2	50.7
10.2		10.2	7.2	9.7		17.6	46.9	9.0		49.7	59.2	8.8	58	13.7	36.8
9.6		10.9	59.3	9.5		25.1	57.9	9.2	36	0.2	50.7	9.2		46.2	9.9
10.1		13.7	25.6	9.8		27.5	42.4	9.2		4.2	15.4	8.8		52.2	49.5
9.7		28.2	29.3	10.2		38.5	18.6	8.8		25.2	48.6	10.2		53.2	50.7
10.1		28.7	45.6	9.4		42.0	12.8	9.0		41.2	51.4	8.2	59	5.2	11.1
9.1		29.2	14.4	9.8		58.5	43.0	9.6		59.7	52.9	5.7		18.7	37.1
10.2		29.7	52.3	9.6	17	0.5	3.4	8.8	37	14.9	57.6	5.7		54.2	36.7
25pr.	+ 1	9.0	-7.4	+ 1	9.4	-7.5		+ 1	10.2	-7.7		+ 1	11.7	-8.0	

1896ARCcap...3.....1G

4441-4500.				4501-4560.				4561-4620.				4621-4680.				
mag.	10 ^h -11 ^h	-26°		mag.	11 ^h	-26°		mag.	11 ^h	-26°		mag.	11 ^h -12 ^h	-26°		
m	s			m	s			m	s			m	s			
9.5	59	57.2	15.4	8.8	14	27.1	45.7 9.5	10.0	34	28.3	45.8	9.0	49	32.3	46.0 9.5 a	
9.2	1	1.2	17.4	10.2	27.2	36.7		8.2	36.3	7.9	8.8 -	10.0	50	30.3	46.6	
9.4		22.2	17.1	10.2	27.6	0.3		9.2	37.3	14.4		10.0	51	0.3	53.9	
10.2		27.7	49.2	8.2	32.1	54.8 a		8.3	41.3	7.1	8.7 ≡	7.2		9.8	21.4 7.0 GSat	
10.0		35.2	18.5	10.2	44.1	6.5		9.3	45.3	5.4		10.1		27.3	41.8	
10.2		40.0	32.9	10.2	15	6.2	18.8	9.8	35	2.8	39.7	7.5		43.3	59.6 7.0 GSa	
9.6		59.5	53.0 9.5	9.4	11.3	59.1		9.2	14.3	13.1		9.8	52	7.3	14.9	
9.0	2	10.6	26.8 9.0 Ga	10.2	43.6	16.8		9.6	22.3	55.2 a		9.0		22.3	44.5 9.0 Ga	
9.4		22.0	50.6 9.5	8.8	16	14.1	33.3 9.0 =	9.2	54.8	41.8		10.1	53	0.9	59.2	
9.4		31.0	31.7	10.2	21.6	25.7		9.6	36	14.8	17.3	10.1		4.8	17.1	
9.4		35.0	44.1	10.2	37.1	49.0		8.2	17.8	49.1	8.7 a	8.9		39.3	49.0 9.5 a	
10.2		49.5	22.4	9.6	40.1	40.7		9.6	23.8	44.6		8.4		46.3	24.2 8.8 ≡	
9.8	3	8.5	30.1	8.2	17	43.1	16.3 8.0 GSat	8.3	33.3	9.8	9.0	8.6	54	22.3	41.3 8.5 Ga	
10.0		20.5	46.4	10.2	53.6	16.0		8.6	42.3	13.4	9.3	8.7		27.3	25.1 9.5	
10.2		25.5	3.0	9.4	18	13.1	20.0 9.0	10.0	59.3	3.3		10.1		32.3	25.7	
10.2		28.5	39.5	9.2	29.1	40.9		9.6	37	12.3	45.9	10.1		47.3	33.0	
9.8		54.0	44.6	10.0	39.1	30.6		9.4	24.4	32.7		10.1	55	18.7	20.6	
8.5	4	3.0	51.3 8.0 Ga	9.8	19	1.1	36.0	8.2	46.9	11.4	8.7 ≡	10.0		30.8	30.7	
10.2		38.0	31.1	8.4	6.1	11.0 8.7 G Wa		10.0	54.4	42.7		8.2		38.3	4.3 8.0 G =	
10.2		52.5	46.1	8.0	32.6	51.8 8.7 G -		10.0	56.4	11.4		10.0		45.3	56.6	
10.2	5	11.0	37.3	10.0	38.5	14.9		9.4	38	0.4	44.1 -	8.6		50.3	57.0 9.0 Ga	
9.6		16.0	31.9	10.2	20	16.0	7.7 8.8 -	10.0	39	1.9	31.2	8.4		53.3	26.7 9.2 -	
9.8		26.0	13.9	8.4	16.0	53.9		10.0	6.9	31.2		9.8	56	38.3	4.1	
9.3		35.5	45.8	10.2	18.5	53.2		10.0	11.4	36.8		9.3	57	1.3	31.8	
7.4		52.0	7.6 7.0 GSct	10.0	25.3	57.7 9.5		10.0	52.0	22.8		9.3		14.3	10.1	
10.2		53.2	1.0	10.2	26.0	13.6		9.0	40	2.9	22.2 9.0 a	9.6	58	23.0	59.0	
9.6	6	32.0	1.8	10.2	33.0	19.0		9.1	18.9	46.0		9.6	59	18.8	51.9	
9.0	7	37.0	10.5 8.2 G -	9.6	49.0	10.5		9.6	35.9	22.2		8.4		30.3	35.4 9.0 a	
8.2		47.5	3.1 8.7 a	9.4	21	42.0	29.6	10.0	43.9	5.2		10.0		51.3	20.2	
10.0		51.1	17.8	9.4	57.0	22.8		9.6	41	1.9	35.7	10.1		58.3	43.1	
8.4	8	12.0	22.7 8.0 a	9.6	22	3.0	11.4	9.8	23.4	22.6		8.8	0	3.8	9.5	
10.0		20.0	15.1	9.4	9.8	58.8 9.0 -		9.8	33.4	24.6		9.6		12.3	43.8	
9.0		23.0	54.1	9.6	23	10.0	8.1	9.2	53.9	7.8		8.8		31.3	21.1	
9.4		31.0	23.5 9.0 a	10.2	22.5	8.8		9.2	55.7	0.9		9.2		36.3	51.1 9.2 -	
8.1		39.0	37.6 8.2 G W =	10.0	50.5	36.9		7.1	42	26.4	3.4 5.8 GSct	10.1		43.3	50.5	
9.1		54.0	53.0	9.8	24	13.0	38.8	10.0	38.4	8.7		8.6		53.8	41.6 9.0 ≡	
8.8		57.0	29.6 a	10.2	56.0	35.9		8.4	38.4	49.0 8.8 G ≡		9.0	1	3.3	51.0 9.2 ≡	
9.4	9	13.0	41.9 9.5	10.0	25	10.5	45.5	10.0	43	14.9	47.1	10.0		2	36.8	51.8
9.8		17.0	16.9	8.7	26	47.9	2.9 9.1 a	9.0	32.4	53.3	8.7 =	10.1	3	24.1	58.3	
10.0		33.0	30.9	10.0	26	3.4	9.8	10.0	32.9	34.8		8.9		55.3	14.2 9.0 a	
9.2		44.0	13.7 9.0 =	7.0	11.9	3.5 6.5 GSat		9.4	35.9	49.2		9.5	4	14.3	25.3	
9.8		53.0	8.8	10.0	24.4	22.9		7.6	44	18.4	34.9 6.8 GSct	10.1		18.4	51.8	
9.0		53.0	16.8 10.0	8.4	44.4	56.0 9.0 -		10.0	25.9	9.5		8.4	5	6.3	22.4 8.0 Ga	
10.2		57.5	7.4	8.2	27	37.4	7.5 8.5 Ga	9.4	33.9	53.0		9.8		23.3	38.7	
10.2	10	2.1	44.9	8.6	29	34.4	27.2 8.5 a	7.8	45.9	23.1 7.5 GSa		10.1		49.4	22.8	
10.0		38.6	51.0	9.8	30	4.4	46.2	9.6	52.9	55.6		8.9	6	32.3	48.8 9.0 -	
7.8		44.6	33.4 7.8 Ga	8.4	8.4	4.0 8.2 a		10.0	55.4	46.3		9.4		37.3	38.2	
9.4		48.6	31.6 10.0	9.3	15.4	22.7 10.0		9.3	45	3.9	14.5	9.6		53.3	16.8	
9.4		49.1	50.2 9.5	9.3	49.9	14.0		9.8	39.9	59.0		10.1		53.3	28.7	
9.6	11	3.6	43.5	9.8	53.9	35.6		9.2	56.8	55.6		9.4	7	3.3	48.1	
10.0		20.1	22.0	9.6	59.9	8.9		9.1	57.7	8.1 9.5		7.7		12.3	37.5 8.2 GSat	
10.0		35.6	24.1	9.8	31	32.8	16.0 9.5 =	9.8	46	21.0	19.3	9.2		33.3	20.2	
9.1		51.1	21.2	8.3	49.8	38.4		9.4	38.5	38.0 10.0		10.1		41.3	10.3	
9.0	12	2.1	2.3 9.0	9.3	32	49.8	32.6	8.4	47.0	36.8 8.8 ≡		9.2		46.3	38.7 9.2 =	
9.7		30.1	9.7	9.8	50.3	59.9		10.1	47	4.1	0.4	10.1	8	1.3	50.2	
9.4		36.1	57.3	10.0	56.8	56.0		10.1	4.2	6.7		9.4		2.3	4.6 -	
9.0		58.1	12.9 9.0 a	8.4	33	2.8	9.1 8.3 W ≡	10.1	10.7	19.9		10.1		10.5	58.9	
9.6		59.1	18.1	10.0	26.3	29.8		8.8	13.6	8.9 8.5 G ≡		10.1		22.6	21.0	
9.8	13	57.1	1.7	9.1	53.3	34.2		8.9	42.3	26.0		10.0		49.3	33.0	
9.6	14	22.1	15.8	9.0	34	5.3	37.5	9.8	48	57.3	14.8	9.0		50.1	21.9 9.5	
25 pr.	+ 1	13.1	- 8.1		+ 1	14.0	- 8.2		+ 1	15.3	- 8.3		+ 1	16.8	- 8.4	

4681-4740.				4741-4800.				4801-4860.				4861-4920.			
mag.	12 ^h .	-26°		mag.	12 ^h .	-26°		mag.	12 ^h .	-26°		mag.	12 ^h -13 ^h .	-26°	
8.4	9	0.5	56.2 9.0 a	10.2	28	55.8	59.2	9.4	42	42.3	5.1	9.7	53	7.2	5.9
9.0		1.1	29.0 9.5	10.2	29	10.3	19.0	10.2	43	1.8	46.1	9.8		29.0	59.1
9.2		12.3	27.0	9.5		23.8	40.5	9.6		15.8	19.8	9.2		32.9	43.7
10.1		26.0	37.0	8.6		40.8	44.3 9.0 a	9.6		17.3	19.5	9.8		35.2	51.7
9.0		27.6	16.9	10.2		48.8	12.6	10.2	44	15.3	52.2	8.6		35.2	27.1 9.5 -
10.1		31.2	5.5	9.4		55.8	4.4 8.5 Ga	9.6		48.3	28.2	9.6		55.2	20.2
8.4		44.8	44.3 8.0 Ga	10.2	30	46.8	7.6	9.6		52.3	3.6	9.6	54	2.5	57.4
7.8		50.3	24.4 ≡	9.6		55.8	50.5 5.5 GSlπ	10.1		58.8	2.9	9.4		25.7	47.1
10.2	10	7.8	55.4	6.3	31	5.2	26.8	10.1	45	2.3	6.0	10.0		29.5	16.0
10.2		33.8	20.8 9.0	10.2		39.8	15.4	9.0		4.8	52.4	9.5		35.5	26.2
8.2		37.0	27.6 8.2 Ga	10.0		40.1	27.0	9.0		14.8	6.6 9.5 -	7.9		44.8	41.7 8.5 Ga
9.8		57.3	49.1	10.1		47.1	43.1	6.4		17.3	3.6 6.5 GSbt	8.6	55	10.8	50.7 a
9.8	11	4.8	29.4	9.8		53.6	34.8	10.2		47.1	41.1	10.0		22.5	34.6
9.4		21.8	19.4	10.0	32	17.1	17.8	8.6		53.3	22.4 9.0 =	8.4		36.5	6.4 8.3 G=
10.2	12	20.4	54.1	10.1		20.6	52.7	9.4		53.8	8.1	9.7		47.0	33.2
9.5		46.9	20.7	9.0		35.6	14.6 9.5 a	10.2	46	34.8	15.8	8.4		58.5	20.2 8.8 -
10.2	13	2.4	14.9	10.2		38.1	41.0	9.0		38.5	1.1 a	9.6	56	11.5	3.3
7.9		25.9	2.6 7.0 GSa	9.3		59.6	33.1 9.0 Ga	9.6		56.3	18.9	8.8		15.5	49.9 8.5 Ga
9.4	14	39.4	38.3	9.0	33	9.6	13.4	7.7	47	0.3	43.4 8.0 G≥	9.6		31.5	6.4
8.3		45.6	2.3 7.8 GWa	9.8		21.1	23.8	8.5		27.2	53.3 9.0 Ga	9.2		46.5	3.0
8.0	15	8.9	34.7 8.8 a	9.0		41.1	17.8 9.5 G	9.6		46.7	33.8	9.9	57	12.5	19.1
9.8		22.4	3.0	9.7	34	3.6	35.3	9.6	48	0.7	18.3	9.6		32.5	28.8
9.0		42.4	49.2	8.6		6.1	8.6 9.2 GWa	9.4		6.2	56.1	8.4		36.5	0.9 9.0 GWa
9.2	16	49.9	9.7 9.0 a	9.7		30.6	2.8	9.0		12.2	47.1 a	8.8		57.5	13.6 9.2 -
10.2	17	41.4	5.0	10.2		35.6	8.2	9.0		49.2	46.8 9.5	9.5	58	8.5	51.3
9.6	18	4.9	35.2	8.4		46.6	49.6 8.8 a	8.2	49	0.2	44.4 9.0 Wa	8.8		12.4	25.6
10.2		4.9	58.3	9.7		46.6	28.0	10.2		4.7	27.8	9.4		51.4	53.1
9.0		15.4	25.2 9.0	9.0	35	1.6	26.6	9.8		5.7	32.4	10.0	59	2.4	31.3
10.2		55.4	6.9	10.1		50.1	44.1	9.7		11.2	46.1	9.5		7.4	5.8 9.5
9.5		55.4	57.4 9.5	10.1		56.6	22.1	9.6		12.2	49.9	9.6		17.4	38.7
9.5		55.6	45.5	9.4	36	5.9	58.6	10.1		25.2	40.6	9.9		25.4	42.9
8.0	19	5.1	7.0 7.5 Ga	9.9		11.6	23.6	9.3		42.2	42.9	9.7		28.4	14.7
8.4	20	5.6	29.4 8.2 GWa	10.1		15.1	42.1	9.1		43.2	48.2	9.2	0	4.4	53.2
9.0		9.6	48.3	10.1		21.1	53.7	8.4		51.2	41.5 8.2 GWa	8.8		7.4	5.9 9.2
10.2		14.6	37.8	9.0		25.1	48.8	8.0	50	1.7	42.3 7.8 GWa	9.9		28.4	45.0
10.2		31.1	5.4	9.4		27.1	17.6	9.0		2.5	1.4	10.0		43.9	55.3
10.0		45.6	39.4	8.6		35.6	41.0 9.0 G=	8.6		15.2	32.2 9.0 a	9.4	1	23.4	55.8 9.2 G
9.8	21	0.6	52.9	8.6	37	18.6	45.2 9.0 -	8.8		23.7	52.5	10.0		42.4	17.4
9.8		25.6	27.4	9.3		20.6	45.8 9.5	10.0		27.8	59.8	10.0	2	5.5	32.6
8.6	22	13.6	24.3 9.0 =	9.0		41.6	40.2	9.3		34.5	2.4	10.0	3	0.4	7.9
9.8	23	2.6	59.9	10.1		44.1	6.0	9.4		40.2	26.9	9.6		20.4	38.0
9.5		2.6	17.2	8.5		56.3	13.0 8.8 Ga	9.6		44.2	49.2	9.5		52.9	41.0
10.2		2.6	5.3	10.2	38	17.8	25.3	10.1		52.7	29.1	10.0	4	5.9	11.5
9.0		21.1	42.4 9.5	10.1		34.8	15.6	10.2		57.2	22.5	9.9		14.9	24.9
8.9		50.1	23.7 8.8 Ga	9.4		43.3	51.7	8.8	51	18.7	25.9 a	9.4		22.4	33.9
9.8		53.0	58.1	9.4		45.8	12.9	9.0		20.7	14.9 9.2 a	10.0		33.4	47.9
9.8	24	13.6	41.6	8.8		52.8	37.6 9.2 a	9.8		20.8	2.9	9.4		58.4	0.0
9.8		27.6	14.0	9.7		56.8	59.6	9.8		23.2	48.0	9.8	5	11.4	41.6
10.0		32.1	15.6	9.6		59.3	14.9	9.7		34.7	11.5	9.5		17.4	34.7
8.2	25	35.3	52.6 7.7 GSat	10.2	39	0.8	9.1	8.8		36.2	40.0	10.0		21.5	32.1
8.8	26	32.8	16.1	9.0		11.8	47.2	10.1		43.5	58.2	9.5		22.4	8.9
10.2	27	13.3	44.7	10.1		12.7	23.1	10.0		51.7	31.7	9.6		35.0	58.4 9.5
9.2		21.8	16.0	9.7		53.8	30.7	10.1	52	5.2	27.4	10.0		39.9	29.3
8.6		38.3	29.5 8.5 ≡	9.3	40	2.8	29.3	9.9		20.2	41.7	10.0		41.4	38.3
9.4		43.8	15.6 9.0	8.8	41	14.3	22.7 a	9.0		36.2	43.1 9.5 a	9.2		45.4	54.2 9.0 a
9.4		48.8	18.7 9.5	8.4		15.3	52.8 8.0 GWa	10.2		38.2	18.9	10.0	6	21.4	31.7
8.2		53.3	20.9 8.8 ≡	10.1		24.3	18.6	9.6		44.2	18.0	10.0		30.9	34.8
9.6		59.3	16.6	9.9		43.8	5.4	9.2		52.8	0.9	9.9		42.4	14.0
7.8	28	25.8	1.4 8.0 GWa	7.0		46.8	54.9 6.0 GSct	10.1		55.0	2.9	8.0		57.9	57.9 8.2 Ga
10.2		31.6	2.1	9.2	42	19.2	1.6	9.0		57.7	7.9	10.0	7	27.4	28.5
25 pr.	+ 1	18.2	-8.3	+ 1	19.4	-8.3		+ 1	20.3	-8.2		+ 1	21.0	-8.1	

4921—4980.			4981—5040.			5041—5100.			5101—5160.		
13 ^h .	—26°		mag.	13 ^h .	—26°		mag.	13 ^h .	—26°		mag.
m	s	'	m	s	'	m	s	'	m	s	'
7	29.4	55.3	10.2	21	2.3	25.0	34	30.5	35.9	7.8	G=
10.0	29.9	48.1	9.6	21.8	54.4	8.2	32.5	38.2	8.8	G	
10.0	36.0	3.6	10.2	24.0	31.1	8.9	34.0	58.8	9.0	a	
9.5	43.0	17.1	7.5	37.3	44.9	9.6	35	31.5	29.4		
10.0	8	17.5	10.1	52.8	41.5	9.8	33.5	13.6			
8.8	40.0	47.1	9.6	22	2.6	59.9	10.1	39.5	4.8		
9.9	41.5	23.2	9.8	12.6	58.6	10.2	36	19.5	15.1		
10.0	9	11.5	7.6	35.5	44.5	10.1	10.1	22.0	33.1		
9.8	27.0	35.7	9.8	38.0	3.1	10.1	10.1	23.5	8.1		
9.7	38.5	29.7	10.2	42.8	11.8	9.4	9.4	29.0	52.0	8.5	
9.9	42.0	7.5	9.4	23	6.5	23.5	9.6	38.0	2.0		
9.8	10	12.5	10.2	14.0	4.5	10.1	10.1	43.5	34.1		
10.0	21.3	58.8	9.6	37.0	50.5	9.8	9.8	48.5	15.0		
9.5	32.5	23.4	9.8	47.5	38.2	9.2	9.2	53.0	9.8	10.0	
10.0	47.0	18.3	8.4	53.7	58.0	9.8	9.8	56.5	4.3		
10.0	11	1.0	9.8	58.0	6.9	10.0	10.0	37	7.5	6.0	
9.6	12.0	54.9	10.2	24	14.0	16.7	10.1	9.0	59.3		
9.4	14.0	32.7	9.4	21.0	25.9	10.2	10.2	22.7	8.9		
8.4	25.0	10.9	8.9	24.5	53.0	9.6	9.6	30.5	24.7		
10.0	28.5	16.7	9.2	52.0	17.7	9.5	9.5	33.5	13.1		
10.0	12	2.0	10.2	25	30.5	12.1	10.1	34.0	12.0		
10.0	5.5	55.6	8.5	37.2	0.9	9.8	9.8	34.5	49.4		
9.7	32.0	49.7	9.0	43.0	17.8	8.6	8.6	38.3	9.0	9.0 G≡	
10.0	13	9.5	10.0	43.5	50.2	10.0	10.0	45.5	6.6		
9.1	36.0	35.2	9.8	57.0	22.0	8.5	8.5	59.5	36.2	9.0 -	
8.4	38.5	45.1	8.6	3.0	42.5	9.4	9.4	12.5	39.4		
9.0	14	2.0	8.6	8.0	21.5	9.0 -	9.8	47.0	12.8		
10.0	6.0	54.3	10.2	49.0	15.7	10.0	10.0	47.0	45.0		
8.8	8.0	47.0	9.6	27	18.0	22.9	9.2	54.5	53.4	9.0	
9.4	8.0	29.8	10.2	19.8	25.7	10.2	9.2	39	2.5	44.8	
10.0	12.0	57.8	10.2	27.5	10.1	9.9	9.9	10.8	19.8		
10.0	41.8	2.4	9.0	33.0	51.7	9.5 a	9.7	30.8	9.8		
9.4	47.0	43.6	9.2	52.0	38.9	Wa	9.4	52.6	19.4		
9.4	15	15.5	9.8	28	0.0	41.8	9.6	40	18.8	20.8	
10.0	45.0	32.6	10.1	14.0	9.9	9.4	9.4	24.3	13.0		
10.0	46.0	19.6	9.8	26.5	17.9	9.4	9.4	38.8	13.0		
8.6	51.8	58.7	9.0	42.0	16.6	9.5	9.6	48.3	17.8		
9.9	9.2	57.7	9.8	52.0	41.1	9.0 a	9.8	59.8	44.0		
9.6	17.1	12.9	8.8	57.5	19.9	9.0 a	9.9	41	32.8	28.4	
8.3	32.5	19.3	9.4	29	19.5	27.1	9.8	42	1.5	2.0	
10.0	38.0	19.8	10.2	53.5	19.6	9.9	9.9	5.6	23.3		
9.9	45.0	40.4	9.6	55.5	17.1	9.9	9.9	5.8	23.7		
9.5	53.0	12.9	9.8	30	0.0	40.0	8.8	7.3	37.8		
10.0	17	30.5	9.6	0.3	56.9	9.4	9.4	43	6.8	53.9	
10.0	42.0	57.6	9.8	6.0	18.4	8.8	8.8	47.3	34.1		
9.9	45.2	18.1	9.5	14.0	3.3	9.9	9.9	50.3	55.2		
9.9	18	2.0	9.6	19.5	32.8	9.4	9.4	55.8	23.9		
9.4	3.8	29.7	8.2	37.5	25.1	8.8 a	9.0	44	2.3	47.2	
9.8	26.8	49.3	8.0	31	33.5	16.0	9.9	5.8	30.4		
10.2	30.8	35.9	9.4	34.2	1.8	8.5 G-	8.8	18.8	46.1		
9.2	30.8	20.0	7.9	46.5	37.3	8.5 W=	9.9	38.3	36.5		
9.0	34.3	0.8	8.4	32	54.5	30.9	9.0	45	17.3	10.0	
9.8	37.8	33.9	8.9	56.5	52.4	8.5 a	9.9	29.8	21.9		
9.8	59.8	41.4	7.8	33	10.0	56.6	8.8	32.8	53.4		
8.0	19	5.8	10.2	37.7	9.0	7.0 GStπ	9.4	46	3.6	58.2	
9.0	12.8	45.6	10.0	54.7	22.4	9.8	9.8	4.3	39.9		
8.8	28.3	11.8	9.4	34	6.5	18.1	9.9	7.8	34.8		
9.8	34.3	23.3	10.2	13.5	8.7	8.8	8.8	12.8	42.2	9.5	
10.1	44.8	29.2	10.2	17.0	31.6	9.9	9.9	13.3	8.4		
8.9	56.8	59.9	10.1	18.0	54.9	9.4	9.4	13.8	52.6		
25pr.	+ 1 22.1	- 7.9	+ 1	23.0	- 7.8	+ 1	23.7	- 7.6	+ 1	24.7	- 7.4

5161-5220.				5221-5280.				5281-5340.				5341-5400.			
mag.	13 ^h -14 ^h	-26°		mag.	14 ^h	-26°		mag.	14 ^h	-26°		mag.	14 ^h	-26°	
m s				m s				m s				m s			
9.0	58	0.9	13.3	7.2	10	23.3	22.6	8.4	21	6.4	17.1	9.7	38	46.1	45.7
9.6		15.4	1.8	9.6		24.8	30.1	8.6		15.4	44.8	9.3	39	32.1	37.9
9.3		22.4	19.6	9.8		24.8	44.0	10.0		24.4	27.2	8.0		33.1	43.1
8.1		32.9	0.8	9.8		45.3	37.9	9.2		28.9	41.1	9.4		36.0	31.8
9.7		35.4	51.0	9.8		59.8	29.2	9.2		36.4	47.6	8.2		43.5	57.2
9.9		38.9	57.8	8.2	11	1.0	56.5	9.0		57.9	33.5	9.3	40	2.0	15.2
8.4		52.7	57.6	8.6		37.3	51.5	9.8	22	12.4	43.8	9.3		13.5	48.4
9.4		57.4	24.9	9.6		44.8	15.4	9.2		32.9	52.3	9.8		36.0	23.8
9.8	59	2.9	59.7	9.2		52.8	41.7	10.0		51.4	48.4	6.1		39.0	7.2
5.3		15.9	4.8	8.2		54.8	15.4	9.8	23	1.9	59.7	9.0	41	30.0	21.1
9.4		21.9	36.1	9.0		54.8	20.0	10.0		1.9	41.7	8.8	43	10.0	0.1
9.9		28.9	15.0	7.8		55.8	33.7	10.0		12.9	33.7	9.9		27.2	1.6
9.8		42.4	2.9	9.6	12	9.8	33.6	9.4		13.9	58.3	9.4		44.0	32.2
7.7		54.4	45.3	10.0		55.3	36.7	9.4		22.5	0.1	9.7		45.0	12.9
9.9	0	2.4	50.9	9.2		55.8	23.4	10.0		24.9	36.0	8.4	44	53.5	6.4
9.8		5.4	16.3	9.4		57.9	22.1	7.5		31.2	16.6	9.9		56.2	20.1
8.8		19.4	23.0	9.8	13	25.9	59.6	8.8		37.4	29.7	8.5		57.5	37.3
9.0		37.6	22.8	9.8		49.9	20.4	9.2		52.9	51.9	9.7	45	2.7	57.9
9.9		39.1	25.5	9.2		54.9	18.6	9.8	24	2.9	53.2	8.3		29.5	44.0
8.0		47.4	44.9	9.4	14	16.9	59.2	8.6		15.5	1.8	9.6		32.5	3.7
9.1		49.2	59.9	7.7		29.9	44.8	7.6		57.6	13.7	9.6		33.0	45.0
9.9	1	16.3	41.4	10.0		39.9	38.2	9.2	25	1.5	26.2	9.9		54.0	45.0
9.0		18.1	52.9	9.8		45.9	28.2	8.8	26	3.1	33.2	9.8	46	1.0	11.1
9.6		19.6	3.8	10.0		49.9	50.1	9.4		27	52.1	8.4		8.5	45.3
7.6		26.1	3.4	9.2		50.9	56.2	9.9	28	3.1	55.4	8.3		37.5	13.2
9.9		28.6	32.9	9.2		54.9	43.2	8.5	29	23.9	2.0	10.2		51.0	0.7
9.6		45.6	8.6	10.0	15	18.9	29.9	8.6		31.1	58.6	10.2	47	3.0	43.6
8.0		55.1	36.0	10.0		27.9	12.4	9.0		37.1	50.7	9.3		46.3	27.8
9.6		57.6	51.6	8.4		29.9	12.9	9.9		53.6	52.6	10.2	48	3.5	25.1
8.6		59.1	35.9	10.0		42.9	32.5	9.2	30	23.1	9.4	10.2		12.5	41.5
9.4	2	32.6	56.6	9.8		55.4	45.3	9.6		39.1	30.4	8.8		33.5	37.0
8.5		40.8	47.2	9.8		57.9	36.3	9.2	31	42.1	11.2	10.2		53.5	9.3
9.2	3	4.8	8.6	9.0		58.9	20.4	9.6		47.6	16.8	9.4	49	0.9	58.5
10.0		8.8	37.6	9.8	16	10.4	27.2	9.9		48.6	48.3	10.2		26.2	15.4
8.0		17.8	17.2	8.2		25.9	46.7	9.3	32	12.1	33.9	8.6		38.2	17.7
10.0		32.8	8.1	9.0		52.9	39.6	9.2		23.6	7.4	10.2		57.2	2.9
9.6		41.8	34.2	7.9	17	10.9	11.4	7.2		24.1	10.8	8.6		59.2	48.9
9.4		43.0	2.0	10.0		18.9	17.9	9.2		31.1	9.3	10.0	50	2.7	27.0
10.0		49.7	41.4	9.6		38.4	47.2	7.7		41.6	35.4	9.5		3.2	51.1
9.8	4	31.5	0.5	9.8		41.9	32.9	9.1	33	5.1	41.9	10.2		12.2	34.4
9.4	5	23.3	5.6	9.4		41.9	26.5	9.0		16.1	6.2	9.1		20.7	31.1
8.8		28.3	50.7	9.2		58.9	47.1	8.4		27.1	11.4	8.8		48.2	45.3
6.8		36.8	40.2	10.0	18	12.4	14.0	9.3		43.6	54.8	8.0		57.2	49.4
7.1	6	5.5	1.6	8.6		26.1	57.4	9.2		58.9	58.0	10.2	51	8.2	53.9
9.8		25.8	15.1	8.3		32.9	10.1	8.8	34	21.6	15.1	8.6		26.2	53.8
9.4		31.8	28.1	7.4		35.4	17.0	8.8	35	8.4	2.8	10.2		40.7	48.2
10.0		57.3	49.0	10.0		42.4	12.0	9.8		27.0	26.4	9.3		42.7	9.0
8.6	7	26.3	31.6	9.4		43.9	33.0	9.6		35.6	25.3	10.2		52.2	15.3
9.4		30.3	6.1	8.3		50.9	39.5	8.8	36	3.1	49.2	9.5	52	6.2	52.5
9.4		48.8	7.8	10.0	19	6.4	58.6	9.0		3.1	9.2	10.0		18.2	54.9
9.0		57.8	38.7	8.6		25.9	17.5	9.1		9.6	18.4	10.2		51.2	24.0
10.0		59.8	41.4	9.8		36.4	21.4	8.8		34.1	8.8	8.8	54	0.7	28.1
8.6	8	40.8	45.9	8.0		37.9	35.5	8.6		40.1	49.5	10.2		9.2	25.2
8.9		59.8	12.5	9.4		58.9	54.6	8.8		46.1	37.8	10.2		13.2	40.1
9.8	9	11.8	4.2	8.5	20	1.4	1.5	8.8	37	2.6	29.1	10.2		26.2	25.7
8.6		29.3	8.2	10.0		11.4	12.3	9.4		34.1	21.8	9.6		45.2	2.1
9.8		32.8	44.8	10.0		12.9	10.4	8.8	38	3.1	40.7	9.6		55.7	1.7
10.0		36.8	29.3	9.0		21.9	51.8	7.6		13.6	24.7	8.6	55	3.2	54.4
9.6	10	7.3	50.7	10.0		32.9	27.3	9.6		14.6	28.8	10.2		46.3	48.1
9.6		10.8	40.0	8.0		46.4	44.8	9.3		28.1	57.4	10.2		52.2	5.7
25pr.	+1	25.3	-7.2	+1	26.1	-6.9		+1	27.0	-6.6		+1	28.0	-6.2	

5641-5700.				5701-5760.				5761-5820.				5821-5880.				
	16 ^h .		-26°		16 ^h .		-26°		16 ^h .		-26°	16 ^h -17 ^h .		-26°		
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	
9.4	19	22.2	27.3	8.4	32	32.6	4.4	8.2	9.0	4.8	4.3	57.5	9.8	59	57.1	9.0
7.8		31.2	54.3	7.8	33	21.1	0.9		9.8		42.6	26.7	9.1	0	3.1	18.8
9.3	20	28.2	10.2	9.5	9.0	53.1	51.7	8.2	9.4	9.4	46.1	27.7	9.6			47.8
9.4		44.2	11.7	9.0	9.4	34	6.1	51.7	8.5	9.4	48.6	32.4	8.1			50.9
9.1		44.7	21.6		8.7	35	3.1	56.8	7.8	10.0	49	7.1	18.6	9.8		53.4
10.2		54.2	24.1		8.3		23.1	13.0	8.5	8.2	13.1	45.1	9.0	9.6		56.4
10.2	21	6.2	19.4		8.7		30.1	28.6		9.4	14.1	37.4	9.3	1	22.9	15.5
4.2		44.7	9.1	1.2	10.2		52.6	59.5		9.8	18.1	12.0	10.4			32.7
10.2	22	5.0	17.5		10.2		56.6	23.2		9.8	38.1	14.8	10.4			48.2
10.2		7.0	29.8		10.2		58.1	11.3	9.5	9.6	43.1	3.2	10.4			56.7
8.1		15.7	18.7	8.0-	9.6	36	4.6	52.5		9.0	43.6	29.0	neb.	2	23.7	25.1
8.3		33.2	16.6	9.0	7.4		8.1	34.0	7.0	9.4	45.1	33.1	10.4			24.7
9.6		41.2	9.9		10.2		16.6	29.3		10.0	54.6	17.6	10.4			39.2
8.4		53.2	54.2	7.5	10.2		18.1	43.6		9.2	50	15.1	12.7	10.0		48.2
10.2		53.3	46.8		9.0		40.1	5.3	9.0	10.0	30.6	26.9	9.6			51.2
10.0	23	15.3	54.6		10.2		48.6	33.7		9.4	37.1	55.1	9.0			51.2
10.0		24.3	53.5		10.2	37	3.1	10.1		8.1	45.1	9.6	9.0	3	0.0	2.5
9.4		39.3	37.8		10.2		10.9	48.1		8.3	45.6	55.1	8.0	8.2	7.2	17.5
7.3		43.3	15.7	6.5	10.0		17.2	58.9		9.1	55.1	49.2	8.5	8.0	51.7	32.6
10.2		54.3	21.9		9.4		38.6	40.6		9.1	51	17.6	3.6	9.5	10.4	52.2
8.7	24	3.8	5.7	9.0	10.2		42.9	8.2		9.0	20.1	53.3	9.4	4	0.7	56.3
9.0		9.3	20.3	9.0	9.4		43.1	44.0		9.1	30.3	57.4	9.6			0.7
10.0		11.2	8.6		10.2		50.1	17.0		8.1	37.6	59.2	8.0	10.4		2.2
9.6		16.3	23.5		9.3		56.1	21.0		7.9	44.1	10.8	8.2	9.8		6.7
10.2		49.3	7.7		9.6	38	3.6	5.6		9.8	52.1	41.4	7.7			24.7
9.3		53.8	18.3		7.3		5.6	24.8	7.0	10.0	59.6	3.4	10.2			48.7
9.8	25	5.8	22.7		9.0		49.1	5.5	9.5	9.3	52	24.6	45.6	9.2		49.7
10.2		17.3	29.1		9.1	39	2.6	2.4	9.0-	8.6	43.6	50.9	b	10.0	5	12.7
9.3		48.3	50.0		9.8		6.1	19.0		9.2	53	23.1	28.5	10.1		13.2
10.2		53.3	47.9		9.8		20.4	28.5	9.5	8.6	29.1	32.6	9.6			33.8
9.8	26	12.3	6.7		9.6		23.1	48.4		10.0	36.1	35.8	10.2	6	10.2	12.6
9.0		22.8	14.3	9.0	9.0		44.1	58.9		9.6	37.1	54.7	10.4			20.7
9.0		24.3	25.1	9.0 a	9.4		49.1	40.0	a	8.3	40.1	27.3	al	10.0		25.7
10.2		36.2	52.5		10.0		53.1	10.8		9.1	42.6	34.3	7.7			26.7
8.1	27	3.3	50.9	8.0	10.0	40	23.1	54.0		8.8	43.1	38.0	b	9.4		37.2
9.0		22.3	10.3	9.0 a	10.0	41	33.1	37.3	9.5-	7.9	58.1	45.9	Gal	9.8		42.7
9.6		24.0	2.4	9.5	8.5	42	3.1	44.8	9.0 a	10.0	54	12.1	53.4	8.4	7	27.7
8.0		34.3	12.9	8.5 a	7.6		27.1	31.3	8.0	9.0	23.1	8.7	9.5	5.5		38.7
9.6		38.0	0.1		9.0		37.1	36.4	8.0	9.0	32.1	44.7	9.6			43.2
9.2		40.3	16.4		8.3		58.1	24.3	8.5 =	9.8	41.3	58.2	10.4			55.7
10.2	28	19.3	27.3		9.2	43	15.1	33.8		8.1	55	18.1	55.0	7.5	8	22.2
9.6		43.8	12.0		9.4		35.6	33.6	9.5	8.4		27.3	46.1	8.0 a	9.6	25.7
10.2	29	3.3	31.5		8.3		45.1	54.1	8.0	9.0		34.6	15.1	8.0		32.7
9.4		10.3	52.9	9.0	9.2		53.6	28.4		8.3	56	30.1	44.8	8.0	9.8	20.2
8.6		13.3	49.0	8.8-	7.6	44	7.1	39.6	9.5	8.8	52.1	5.3	8.5-	9.4		25.7
10.0	30	2.3	49.9		9.0		7.1	28.9		9.3	54.6	54.8		7.2		53.7
9.3		31.8	46.8	9.0	8.1		29.1	42.2	8.0	9.6	57	6.1	27.1	10.4		57.6
10.2		36.8	38.1		8.5		33.1	48.1	7.8	9.8	11.1	37.3	10.4	10	7.7	16.0
10.2		38.3	56.3		8.4	45	12.1	32.3	8.5	9.2	12.1	43.9	9.5	10.0		34.2
8.2		53.3	44.1	8.0 a	9.0		44.1	56.6		8.6	13.1	23.8	9.6			41.7
10.2	31	7.8	59.0		9.4		54.1	2.0		10.0	17.6	52.8	9.8	11	42.7	27.1
9.6		12.3	13.7		9.0	46	29.1	37.0	9.5	9.3	27.6	6.2	8.2	12	15.2	28.5
9.8		17.3	7.1		9.0		30.1	31.9	9.5	9.4	55.1	11.2	10.4			44.6
9.6		32.3	31.4		9.4		36.6	5.4		8.0	58	21.6	24.3	7.5	7.9	45.2
8.6		36.8	12.6	9.0	8.2	47	7.1	12.3	8.5	8.8	23.1	46.2	9.0	10.0		46.7
10.2		59.8	24.9	W	9.8		13.6	43.6		9.8	36.6	47.5	9.8			51.7
10.0	32	3.1	43.3		9.4		26.8	1.7		9.3	43.6	16.7	10.1	13	4.7	29.1
9.8		13.1	43.3		9.6		30.1	26.4		6.4	59	8.1	20.5	7.0	9.8	33.2
9.3		27.1	13.6		9.1		43.1	16.0		8.8	13.1	55.3	9.5	8.1	39.7	18.3
8.2		31.1	12.2	8.8	8.8	48	3.1	33.6		9.3	53.1	34.3	7.6			40.7
25pr.	+1	32.1	-3.3		+1	32.4	-2.9			+1	32.8	-2.4		+1	33.0	-2.0

5881-5940.				5941-6000.				6001-6080.				6081-6120.				
		17 ^h .	-26°			17 ^h .	-26°			17 ^h .	-26°			17 ^h .	-26°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s		
8.7	13	44.7	12.5	8.5 a	10.2	36	44.3	57.6	9.7	42	13.8	46.2	9.9	45	37.2	7.5
9.6	14	33.2	32.6		9.9		47.3	27.2	8.4		16.8	46.1	10.0		53.2	3.9
9.0		37.6	5.4	8.0 Ga	9.2		53.8	17.9	8.8		17.3	35.1	9.5		57.2	57.8
10.2		46.6	13.2		8.8	37	1.8	31.6	10.2		18.8	52.0	10.2	46	13.1	17.8
9.8	15	3.5	1.7		9.5		13.8	9.0	10.2		22.7	59.4	9.7		23.2	47.5
9.4	16	17.7	6.2	8.5 a	10.1		21.8	5.3	10.2		24.6	59.5	10.2		25.2	21.9
10.1		38.6	13.1		10.1		33.8	34.3	8.3		31.8	17.0	10.2		28.1	10.6
9.8		42.7	10.6		10.2		36.8	12.9	9.8		32.3	38.1	9.3		34.8	41.1
9.1		47.2	48.5	9.0 ≡	10.2		38.8	45.7	9.5		38.3	45.0	10.2		36.2	12.8
9.8		52.2	12.9		9.9		45.3	49.4	9.7		48.3	6.2	9.1		37.5	12.3
10.4	17	12.7	16.9		9.9		46.8	49.0	10.1		51.8	48.9	8.8		42.5	35.9
10.4		18.7	19.6		9.2		52.8	35.6	9.4		56.8	39.7	10.1		47.2	35.9
9.1		33.0	1.9	9.1 a	10.2		54.3	19.1	9.5		57.8	54.3	10.2		51.8	14.9
9.6		44.2	29.6		10.1	38	1.8	47.2	10.2		58.3	44.5	9.5		52.8	22.8
10.4		44.6	2.2		10.0		3.8	29.3	10.2	43	2.3	3.8	10.2	47	5.7	47.9
10.4		47.6	44.4		10.0		6.8	41.5	9.8		3.3	58.9	10.2		10.4	43.6
9.2		56.2	52.7	9.2 b	8.3		12.8	55.2	10.2		5.3	18.2	10.2		13.2	47.1
9.6	18	0.2	7.7		9.9		31.3	32.9	9.5		6.3	45.2	10.2		17.1	7.5
9.8		13.4	11.8		9.3		32.8	27.1	10.0		21.8	31.0	9.2		22.0	4.9
10.4	19	0.4	16.1		10.2		37.8	55.0	9.9		27.8	52.3	8.6		23.0	16.6
7.9		5.4	13.2	7.5 GS _{Sal}	10.0		38.8	44.0	9.1		30.3	49.9	8.8		23.2	5.5
10.4		6.4	19.8		9.3		38.8	8.8	9.2		32.3	12.1	10.2		26.2	3.5
9.6		29.9	15.2		10.2		47.3	9.5	10.0		39.3	47.5	10.0		27.5	58.5
8.7	21	2.9	37.3	8.5 a	9.3		57.8	12.7	9.5		39.8	30.0	8.5		48.3	54.3
10.4		16.9	53.8		9.6		57.8	14.0	10.1		43.3	33.3	10.4		51.8	31.5
6.3	23	58.9	10.4	6.2 GS _{πβ}	9.1		58.6	26.5	10.2		43.8	20.4	10.4		52.3	40.5
9.5	25	54.9	39.8		10.2	39	3.6	45.7	10.0		44.3	26.8	10.4	48	6.3	53.7
8.8	26	58.9	39.0	8.5 a	10.2		12.6	26.9	10.0		45.3	47.4	9.2		16.3	49.2
9.8	28	2.4	49.9		10.0		14.1	54.2	9.2		52.3	50.2	9.8		22.3	50.3
9.3		2.7	59.0	-	9.0		21.3	58.1	10.2	44	2.8	51.0	10.0		33.1	8.9
9.8		53.9	53.1		10.2		28.6	2.0	9.3		3.3	56.8	10.4		33.1	42.9
9.5		54.9	45.0		8.8		46.6	17.8	10.0		5.8	54.5	8.0		36.1	44.7
9.9	29	33.9	26.6		10.2		48.1	28.2	10.2		9.8	33.8	10.2		50.1	39.9
9.3		48.9	43.0		9.6		53.1	22.1	9.2		9.8	14.8	9.5		54.1	10.7
9.1		53.9	40.2		10.2		53.1	19.1	9.8		16.3	48.0	9.2	49	8.6	5.9
10.1	30	15.9	11.0		10.2		56.6	34.0	8.5		16.3	51.6	9.8		10.1	15.0
9.8		18.9	17.4		10.1	40	3.6	12.6	9.1		16.3	51.9	10.3		16.1	45.3
10.2		35.9	17.7		9.3		7.6	23.5	9.9		21.3	18.2	10.4		18.1	35.5
9.7		36.6	57.4		9.3		10.6	34.6	9.8		26.2	29.6	10.4		18.1	33.8
10.2		46.4	56.4		10.1		12.6	4.6	9.5		26.2	58.2	9.9		18.5	2.7
10.2		58.4	31.6		9.1		13.6	43.0	9.7		26.3	52.3	10.4		19.1	41.8
7.9	31	17.9	51.6	7.8 G _{Wal}	9.5		16.6	38.4	10.2		32.2	55.5	10.0		22.6	35.2
10.0		32.9	47.0		10.2		29.6	52.2	9.6		33.2	57.8	10.0		23.1	8.9
10.0		40.9	42.6		10.1		30.1	35.0	9.3		33.2	34.3	10.2		28.1	43.6
9.2		40.9	33.8		10.2		32.1	18.0	10.1		36.2	15.0	10.2		45.6	53.1
9.0	32	38.4	25.5		10.2		38.6	43.1	10.2		38.7	7.7	9.8		47.6	40.1
9.5		54.9	50.8		7.0		38.6	55.6	9.0		41.1	59.7	9.9		54.2	57.1
10.2	33	15.9	48.5		9.8		40.6	54.1	10.2		42.2	47.7	10.2		56.6	52.1
10.2		22.3	42.9		9.7		47.1	31.5	10.0		44.2	7.1	9.6	50	1.1	59.7
9.9		32.8	38.2		10.1		50.6	29.7	10.2		58.7	29.9	9.6		1.1	49.1
9.4		34.8	53.7		8.8		56.6	57.7	10.2	45	10.2	39.7	9.8		12.6	34.2
8.4	34	16.8	46.7	8.0 Gal	10.2		59.1	32.3	9.6		12.2	1.1	9.8		18.1	6.1
10.1		22.8	14.1		9.0	41	9.6	50.7	10.0		13.7	41.5	9.6		18.9	58.2
9.3	35	22.8	6.8		10.2		26.6	29.7	9.7		15.2	17.9	10.4		23.1	52.3
10.0		31.8	42.1		10.0		32.6	42.9	9.2		15.2	58.2	10.2		33.1	14.9
10.2		45.3	37.0		10.2		33.6	40.3	10.1		17.2	51.3	8.9		41.1	4.5
10.0	36	5.3	21.4	9.0 Gal	10.1		40.6	27.0	9.5		22.2	59.6	9.3	51	2.1	48.7
8.5		10.8	14.7		9.9		42.6	34.9	10.1		23.7	44.7	10.4		6.1	33.9
10.1		12.8	20.5		10.0		46.1	34.0	9.2		36.2	37.5	9.3		12.1	31.3
9.8		33.8	15.9		9.8		48.6	15.2	9.4		36.2	37.9	10.3		15.1	50.4
25pr.		+ 1 33.3	- 1.2				+ 1 33.4	- 0.8			+ 1 33.4	- 0.6			+ 1 33.5	- 0.4

6121-6180.			6181-6240.			6241-6300.			6301-6360.		
mag.	17 ^h	-26°	mag.	17 ^h	-26°	mag.	17 ^h -18 ^h	-26°	mag.	18 ^h	-26°
9.8	51	17.1	9.2	55	35.9	9.2	58	41.9	9.6	I	37.7
9.6		21.1	7.9		36.9	10.4		49.4	8.6		31.0
8.6		36.1	10.4		38.9	9.5		55.4	9.2		44.2
9.2		36.1	9.5		41.4	10.4		56.4	10.3		21.6
10.3		42.6	10.0		51.9	9.0		57.9	10.0		48.7
10.3		42.6	10.0		51.9	10.3	59	1.9	9.2		20.4
10.2		48.1	8.1		51.9	9.2		8.7	9.8		45.7
9.3		49.6	9.8		58.4	8.6		9.7	10.3	2	5.2
10.2		53.1	9.2		56	9.4		11.7	10.2		41.8
9.2		54.1	9.8		0.4	9.6		12.7	9.8		41.2
					0.4						41.6
9.5	52	3.1	10.3		5.9	10.3		13.7	10.2		33.6
9.8		4.1	10.3		5.9	9.6		17.7	9.8		15.9
10.0		5.1	8.5		21.9	10.4		20.7	10.4		27.8
9.6		9.1	9.8		22.4	9.2		24.7	10.2		24.2
10.2		9.6	10.0		25.9	10.4		25.7	10.4		12.2
10.0		11.6	9.6		29.0	9.9		25.7	9.2		21.4
9.6		12.1	9.9		32.4	9.3		27.7	10.2		47.3
9.8		16.1	9.8		32.5	10.2		31.7	9.2		31.1
10.4		17.1	10.3		36.9	8.8		31.7	10.4		7.6
9.8		18.1	10.3		41.4	10.4		32.7	10.4		32.0
					41.4				8.0		32.8
10.4		21.6	8.2		41.9	10.4		37.2	9.6		3.2
9.5		44.6	10.4		42.9	10.4		37.7	10.0		56.5
8.9	53	0.1	10.0		45.4	10.4		41.7	10.0		47.0
10.4		3.1	10.4		45.9	9.6		43.2	10.4	3	1.7
8.8		10.1	10.3		46.9	9.6		45.2	10.4		57.1
9.9		11.6	10.4		47.9	8.7		47.7	10.4		17.4
10.4		17.1	8.4		53.3	10.4		48.2	10.3		20.9
9.8		23.1	10.3		55.9	10.3		51.7	10.4		30.7
9.6		33.1	9.2		57.9	10.0		58.2	9.6		2.9
10.4		34.1	10.4		58.4	9.2		59.7	10.2		41.9
									10.2		51.0
8.9		34.4	9.9		58.9	9.9	0	5.7	10.4		32.4
9.4		35.6	10.4		1.9	9.2		5.7	10.0		31.0
9.8		36.1	10.4		21.9	10.4		8.7	10.0		50.0
10.4		45.6	10.4		22.9	10.4		11.7	9.0		29.7
9.4		51.1	10.2		29.9	9.6		12.7	10.3		40.0
9.6		58.6	10.3		32.4	10.0		20.2	10.0		52.0
10.4	54	3.1	10.4		32.9	9.6		32.7	10.4		0.9
9.8		3.6	10.4		35.9	10.0		33.7	9.8		32.3
10.4		4.6	9.2		35.9	9.5		35.7	9.8		8.5
8.8		16.9	9.6		36.9	10.3		36.8	9.0	4	1.9
									8.6	2.2	9.5
										2.2	9.5
10.0		19.6	9.6		40.9	10.4		44.2	10.4		9.5
10.3		21.9	10.0		41.9	10.4		44.8	10.4		59.9
10.3		31.4	9.2		43.9	10.4		47.2	9.5		51.9
10.0		31.9	10.0		45.9	10.4		50.2	10.4		41.0
9.0		36.6	10.4		50.9	10.4		52.2	8.2		25.2
10.4		36.9	10.0		1.9	9.8		54.2	10.4		8.5
9.8		38.4	8.8		3.9	10.0		56.7	10.4		34.1
8.6		44.9	10.2		5.9	10.0		57.7	10.4		51.2
10.3		52.9	9.8		5.9	9.9		57.7	9.6		30.7
9.2		56.9	8.0		9.0	10.4		59.7	9.6		19.9
									9.2		45.6
									9.6		50.5
									10.3	5	5.7
8.6		59.9	10.0		19.4	8.8	I	0.7	8.6		5.7
10.4	55	0.3	10.2		21.4	9.2		1.7	8.6		12.5
10.3		3.4	10.2		21.9	9.4		1.7	9.2		55.1
9.9		5.9	9.6		22.9	10.4		1.8	9.2		6.5
10.0		15.9	8.8		23.4	9.6		7.7	10.4		28.0
10.3		22.4	8.6		27.9	9.8		15.2	10.3		42.1
9.9		24.9	8.9		31.9	9.0		15.7	10.2		48.6
10.0		28.9	10.4		32.9	9.5		18.7	10.0		51.0
10.0		29.9	10.2		34.9	10.4		20.7	10.0		58.0
10.2		32.9	8.6		37.9	8.0		29.7	10.4	6	4.0
									9.6		28.8
											46.1
											59.8
											29.6
25Pr.	+1	33.5		+1	33.5		+1	33.5		+1	33.5
		-0.2			-0.1			0.0			+0.1

6361-6420.			6421-6480.			6481-6540.			6541-6600.		
mag.	18 ^h .	-26°	mag.	18 ^h .	-26°	mag.	18 ^h .	-26°	mag.	18 ^h .	-26°
9 ⁸	6 34.5	46.1	10 ²	15 13.0	23.0	8 ⁸	22 6.0	6.1 8.8 am	9 ⁴	36 43.8	21.0
10 ³	37.0	34.4	8 ⁸	26.0	49.9 9.0 -	9 ⁵	36.0	48.7	10 ⁰	37 18.3	44.8
10 ⁴	41.0	57.8	9 ⁶	39.0	2.2 9.0 -	10 ²	23 8.0	17.7	10 ⁰	26.8	8.4
8 ⁶	42.0	13.8	9 ²	41.5	8.7	10 ²	18.9	43.0	10 ¹	27.8	10.6
9 ⁶	48.1	58.0	8 ²	47.5	13.7 8.0 Gal	8 ⁸	45.4	18.9	8 ⁸	45.6	58.2 9.2 a
10 ⁰	56.5	45.6	10 ²	50.5	19.6	9 ²	24 3.4	46.1	10 ¹	38 8.0	44.0
10 ³	7 11.5	19.0	8 ⁶	16 2.5	25.7 9.0 Wm	10 ²	24.0	58.6	9 ⁴	13.5	44.6
10 ⁴	12.3	49.1	9 ⁰	18.5	11.5	9 ⁵	24.4	54.7	9 ⁸	21.0	5.9
9 ⁰	24.0	20.8	8 ⁵	23.0	30.5 7.5 GWbl	10 ²	24.4	31.6	9 ²	22.0	36.0 a
9 ⁶	33.0	40.2	10 ⁰	23.0	55.7	8 ²	26.4	34.6 8.5 b>ml	9 ²	22.5	45.3
9 ³	37.5	48.1	10 ⁰	35.0	22.9	10 ⁰	30.9	4.9	10 ¹	26.0	33.7
9 ⁴	45.0	42.6	9 ⁶	40.0	52.9 9.0 a	9 ⁹	52.9	26.2	10 ⁰	39 21.0	22.8
8 ⁴	52.5	21.8	10 ⁰	44.0	53.8	10 ²	54.5	15.0	8 ⁸	26.0	20.6 ma
8 ⁹	56.5	26.8	9 ⁹	45.8	54.1	10 ⁰	25 7.9	21.6	9 ⁵	28.5	5.2
10 ⁴	57.3	43.8	10 ⁰	51.5	30.3	8 ⁶	18.4	16.5 9.0 ≡	9 ⁶	32.0	33.1 9.5
10 ⁴	8 1.8	58.0	8 ²	52.5	33.2 9.0 Waml	8 ⁸	26.9	30.6	10 ⁰	37.0	47.6
10 ³	16.5	50.1	9 ⁴	58.7	58.6	9 ⁶	38.9	25.0	9 ⁴	40 6.0	6.2 9.5 G-
9 ⁸	20.0	46.6	9 ⁸	17 3.5	50.5	8 ⁸	43.7	57.6 9.0 am	9 ⁵	6.0	22.7
10 ⁰	27.8	38.0	10 ⁰	16.0	0.3 9.5 ≡	10 ²	26 7.4	38.3	9 ⁸	16.0	35.0
10 ⁰	45.5	2.0	9 ⁶	38.0	41.2	8 ⁶	11.4	53.2 8.5 am	10 ¹	36.0	55.0
10 ⁴	51.5	15.9	9 ⁴	46.0	47.7	9 ⁸	11.4	13.0	8 ⁶	56.0	59.2 8.8 ≡
10 ⁴	52.0	15.8	9 ¹	49.0	21.9	9 ⁴	46.4	19.3	8 ⁸	41 9.5	11.0 9.5 -
9 ⁸	57.1	6.6	9 ⁶	2.0	26.9	10 ²	53.4	2.8	10 ⁰	21.5	3.3
10 ⁰	9 9.6	31.6	9 ⁶	24.5	41.7	8 ⁶	27 4.4	34.1 9.5 M-m	9 ⁰	22.0	32.3 8.5 GM≡m
10 ⁴	25.1	14.3	10 ²	27.0	28.3	9 ⁵	40.9	12.9	9 ⁴	42 14.5	14.4
9 ⁰	27.6	36.8	9 ⁸	28.0	28.7 a	9 ⁸	48.4	22.5	9 ¹	15.0	5.3 G-
10 ⁴	35.8	59.6	9 ⁶	30.5	56.1	9 ¹	53.4	36.7	9 ⁵	18.0	32.6
10 ⁴	42.0	53.8	9 ²	34.0	23.7	9 ²	57.4	54.7	9 ²	26.0	56.2 10.0
10 ⁴	48.1	3.2	10 ²	47.0	49.9	10 ²	28 17.9	49.9	10 ¹	28.5	36.0
9 ⁹	48.1	3.4	9 ⁴	59.0	9.1	8 ⁸	19.4	20.0 Mm	9 ⁸	41.5	35.2
9 ⁸	50.8	21.0	10 ²	59.5	56.7	9 ⁰	22.4	40.0 =	9 ⁸	49.0	36.8
8 ⁹	53.4	13.3	10 ²	9.0	38.1	9 ⁶	24.4	36.6	7 ⁶	51.0	54.6 8.0 GSπ
10 ⁴	5.4	5.0	8 ⁶	11.0	36.2 b	9 ⁶	33.4	48.6	9 ⁰	58.0	28.8
9 ⁶	7.1	40.4	10 ²	14.0	36.1	10 ²	43.9	57.1	9 ⁰	43 3.2	59.1 9.5
10 ⁴	12.9	38.5	9 ⁰	14.5	39.5 b	9 ⁶	46.9	48.1	10 ¹	6.2	6.7
9 ⁰	14.5	12.4	9 ⁸	35.5	5.9	9 ⁶	58.4	15.6	10 ⁰	6.5	48.9
9 ²	24.2	25.7	9 ⁶	37.5	3.3	9 ⁶	59.4	14.5	9 ⁰	27.0	9.7 9.3 M=m
8 ⁸	25.7	11.9	10 ⁰	38.5	4.9	8 ¹	29 2.9	23.3 8.5 Gaml	9 ⁴	32.5	52.0
10 ²	5.1	0.5	10 ⁰	47.0	40.1	10 ²	42.9	26.1	9 ⁶	51.0	45.5
9 ⁹	5.2	18.4	10 ²	48.0	43.3	10 ⁰	30 13.4	53.2	10 ⁰	59.5	50.1
8 ⁶	18.2	47.1	9 ¹	49.0	23.0	9 ⁴	31.4	43.1 a	10 ¹	44 2.5	45.7
9 ¹	24.5	26.2	10 ²	51.7	31.8	10 ²	58.4	50.4	9 ¹	8.5	51.2 9.8
8 ⁵	38.5	22.2	8 ⁸	56.5	42.3 7.0 GScl	10 ²	31 25.4	54.2	7 ⁷	42.0	47.7 7.0 GScl
9 ⁵	0.0	44.7	8 ⁸	10.5	54.9 8.8 G	9 ⁶	32 21.8	43.7	9 ⁶	52.5	28.4
9 ¹	18.5	16.1	9 ⁴	13.5	40.1	10 ¹	45.3	35.5	8 ⁶	45 12.0	32.2 8.0 Gb≡l
8 ⁴	19.0	13.3	9 ⁵	18.5	27.9	9 ⁵	33 16.8	18.0	10 ¹	23.5	44.6
10 ²	38.0	31.9	6 ⁶	18.5	49.7 6.8 GScl	8 ³	19.8	51.2 9.0 Gam	10 ¹	46 32.2	43.0
9 ⁰	48.0	28.7	8 ³	20.5	50.5 9.0 Wam	9 ⁸	42.3	39.8	9 ⁶	47 8.7	30.0
10 ²	58.8	4.2	9 ⁸	21.5	9.9	9 ⁸	49.8	4.1	10 ¹	26.2	49.4
7 ⁴	13 26.5	8.3 7.0 GScl	8 ⁴	23.0	15.2 =	8 ⁸	34 2.8	24.6 =	2 ⁹	30.2	27.0 3.0 GSμβ
10 ⁰	45.0	48.5	10 ²	32.5	36.3	9 ⁴	16.3	19.3	9 ¹	48 4.2	5.5 -
9 ⁵	55.5	18.2	10 ⁰	33.0	40.6	9 ⁰	28.3	23.7 -	9 ⁶	19.7	48.1
9 ⁰	33.0	37.9	10 ⁰	2.0	41.3	8 ⁸	47.8	43.2 8.5 ≡	9 ²	31.2	51.7 9.0 -
8 ¹	34.0	28.3	8 ²	9.5	40.1 8.0 GWac	10 ¹	35 33.3	54.6	8 ⁸	36.2	16.8 Mm
8 ⁴	37.7	58.1 8.8 G≡	6 ⁸	10.0	39.4 7.0 GScl	9 ⁸	36.8	17.0	9 ⁶	40.3	49.5
9 ²	41.0	54.1 9.0	9 ¹	24.5	44.7	9 ⁸	43.3	52.3	10 ⁰	49 2.2	53.1
8 ⁵	41.7	58.0 8.8 -	10 ²	45.5	35.9	9 ⁶	49.8	12.3	9 ⁰	3.2	52.1 9.5
9 ⁰	50.5	30.1 W-	8 ⁸	49.0	44.9	9 ⁵	57.3	20.3 9.0 M=m	9 ⁸	50 48.2	54.0
9 ⁶	55.0	30.8 W	9 ⁴	51.0	38.7	9 ⁵	36 13.8	23.9	10 ¹	53.2	7.6
10 ⁰	15 6.0	44.9	10 ²	59.0	47.6	10 ⁰	22.8	45.3	10 ¹	51 2.7	59.7
25pr.	+1 33.5	+0.4	+1 33.4	+0.7		+1 33.3	+1.0		+1 33.2	+1.6	

6601-6660.				6661-6720.				6721-6780.				6781-6840.			
18 ^h -19 ^h .		-26°		19 ^h .		-26°		19 ^h .		-26°		19 ^h .		-26°	
mag.	m	s	b	mag.	m	s		mag.	m	s		mag.	m	s	
8:3	51	19.7	21.4	8:6	0	46.8	39.7	10:3	22	28.0	44.8	10:3	22	28.0	44.8
9:8		19.7	18.9	10:4		50.8	6.7	8:8	9:2	48.5	3.3	10:4		29.5	0.4
8:8		41.7	39.8	10:2	1	3.3	31.8	9:0		52.5	25.0	10:3	23	13.6	33.1
8:6		47.2	6.8	10:0		10.3	10.3	12	12	16.5	7.0	10:4		19.6	26.7
9:0		57.2	10.6	10:2		32.8	5.8	9:0		23.5	40.6	9:6	24	0.6	15.2
10:1	52	7.2	0.7	9:6		39.8	2.5	10:2		48.5	16.8	10:3		16.6	18.5
9:6		7.2	3.0	8:0	2	3.8	44.2	10:4		55.5	34.6	10:4		30.6	19.9
9:8		19.2	51.2	9:5		7.3	23.8	10:0	13	13.5	33.2	10:4		39.6	37.5
10:0		26.7	17.2	8:8		8.3	50.8	10:0		15.0	18.8	10:4		45.6	36.5
8:8		32.2	21.1	9:0		10.3	35.3	10:4		15.0	51.8	8:8	25	4.6	25.6
															a
9:6		50.7	37.5	10:0		22.3	46.2	10:4		21.5	3.5	7:8		12.6	17.5
9:1		56.7	50.4	8:8		33.3	38.6	9:9		31.0	30.0	9:8	26	11.1	26.4
9:4	53	23.7	33.9	10:0		35.8	13.3	9:4		33.5	23.0	9:4	27	49.1	40.1
10:1		37.7	27.0	8:3	3	13.8	6.7	10:2		55.5	23.8	8:6	28	12.6	34.3
9:2		41.2	40.2	9:0		20.3	0.7	8:4	14	2.5	23.8	10:4		22.9	0.5
10:1		45.5	17.3	10:2	4	2.3	16.2	8:4		12.5	24.6	10:4		23.6	11.0
10:0		47.0	36.5	10:4		14.8	28.7	10:4		22.5	9.8	8:2		25.1	10.4
10:4		49.0	14.4	10:4		25.8	31.3	9:6		27.5	33.3	9:4		51.6	35.7
8:2		58.0	10.8	10:2		30.3	6.7	10:0		42.5	59.0	9:6		52.6	0.2
10:2	54	12.8	10.2	10:4		50.3	15.6	10:4		45.5	35.0	9:2		54.1	47.8
10:0		31.5	47.5	9:7		57.3	16.3	9:9		50.0	45.0	10:4	29	5.6	22.5
10:4		36.0	9.3	9:8		5.8	43.8	10:0		53.5	10.1	10:2		6.6	4.7
10:4		56.5	47.0	10:0		13.8	22.9	8:8	15	18.5	57.5	9:4		13.1	45.5
9:6	55	5.3	45.1	8:6		31.3	5.0	10:4		26.5	7.3	10:3		55.1	31.4
9:2		8.0	31.2	7:8		32.3	6.9	9:5		33.5	28.0	10:3	30	22.1	8.6
10:4		16.0	42.5	10:4		56.0	15.8	10:2		37.3	0.3	10:4		26.2	42.5
9:0		18.0	42.4	8:8	6	9.5	0.6	10:4		43.5	21.6	10:2		33.6	46.4
10:4		20.5	37.8	10:4		16.3	1.9	9:7	16	9.8	1.7	10:0		45.6	38.7
10:0		23.5	28.8	9:1		18.5	49.2	10:4		20.5	51.1	10:4	31	2.1	56.2
9:8		26.0	43.0	9:7		33.5	46.9	9:2		31.8	27.0	8:8		11.6	8.8
															=
10:0		42.0	57.4	9:0		36.5	43.4	9:7		35.5	17.6	9:8	33	26.1	24.4
9:2		42.5	8.7	9:4		38.5	55.0	10:4		46.5	10.4	9:2		32.6	3.3
10:2		54.0	16.5	10:4		44.0	3.0	10:0		52.5	35.0	10:4		34.1	7.1
9:4	56	24.0	53.0	10:0		48.0	22.7	10:0	17	12.3	0.4	9:8		35.6	50.9
8:6	57	27.5	19.3	9:5	7	12.5	18.1	10:4		13.5	50.8	9:2	34	2.1	40.3
8:6	58	0.0	49.5	9:0		24.0	5.5	9:5		14.0	48.6	10:3		27.6	51.4
9:6		1.5	43.2	9:4		28.5	8.1	10:0		15.0	16.1	9:2		43.6	44.0
9:4		6.0	31.1	9:7		44.0	6.8	9:1		27.5	5.6	10:3	35	29.6	21.1
9:9		12.0	5.0	10:4		44.5	16.5	9:1		39.2	34.8	10:2		46.1	9.6
8:8		18.0	39.4	10:4		47.5	59.8	9:8		47.5	42.1	10:2		53.6	27.4
9:2		21.0	26.0	9:6		57.5	35.3	9:4	18	8.5	8.8	10:3	36	12.4	0.7
9:8		22.3	59.2	8:8	8	17.0	49.9	10:4		41.5	6.2	9:2		19.6	50.4
9:8		23.0	45.1	9:6		48.5	52.9	10:4		41.5	43.7	8:6		46.1	45.1
10:0		46.5	19.0	10:4		52.0	14.8	7:7	19	1.0	33.7	10:2		52.1	17.8
9:7		48.2	0.5	10:4		52.5	32.0	9:8		4.5	21.8	9:6		53.6	15.8
9:6		48.5	46.1	9:9	9	1.5	8.0	10:3		42.0	56.5	10:3		56.6	11.6
10:4	59	2.3	45.7	10:4		10.5	23.6	8:6		43.0	11.0	10:2	37	2.6	1.1
9:2		10.8	24.9	10:2		22.0	26.7	8:8		43.5	26.6	9:8		21.6	40.0
10:4		24.6	47.6	10:4		27.0	29.8	8:8		48.5	27.1	9:6		26.1	54.5
8:8		26.3	31.1	9:8		31.5	52.1	10:4	20	9.5	23.7	10:2		27.4	24.1
10:2		30.8	37.7	10:4		44.5	12.0	10:4		27.0	52.0	10:2	38	2.6	25.3
10:4		45.3	17.8	9:8		45.0	42.1	10:2		31.5	51.1	9:8		12.6	4.4
9:1		50.8	17.7	10:2		49.0	7.1	8:6		49.5	15.2	10:2		34.6	45.7
10:4		53.3	54.0	9:5	10	4.0	54.1	9:4	21	8.4	0.3	8:4		35.6	13.2
8:8		55.3	11.4	9:0		11.0	8.9	8:5		9.5	9.0	9:4		47.9	4.9
8:6	0	12.3	32.3	9:8		36.5	3.0	9:4		9.5	5.4	10:2		53.5	59.5
10:4		12.8	58.6	8:2	11	0.5	17.8	9:8		13.5	5.2	9:2		56.9	56.7
9:8		28.3	1.6	10:4		13.5	54.0	9:2		31.0	0.8	9:0	39	3.4	23.9
9:6		28.3	16.1	9:7		15.0	5.8	10:3		36.5	49.1	9:6		15.9	5.0
10:4		38.3	48.3	8:5		18.5	15.9	8:6		58.5	3.4	8:2		21.2	47.5
															8.0 GWbl
25pr.	+ 1	33.0	+ 2.0		+ 1	32.8	+ 2.4		+ 1	32.6	+ 2.8		+ 1	32.1	+ 3.3

1896-1900

6841—6900.			6901—6960.			6961—7020.			7021—7080.		
mag.	19 ^h .	—26°	mag.	19 ^h —20 ^h .	—26°	mag.	20 ^h .	—26°	mag.	20 ^h .	—26°
9.4	39 44.2	35.0	10.2	52 49.1	34.6	8.8	9 22.9	29.3	10.0	22 23.2	22.0
8.2	40 30.2	12.2	8.4	53 2.1	2.7	9.8	35.4	43.1	8.8	23.7	11.8
8.0	40.0	58.0	9.3	2.6	16.9	9.4	58.9	55.3	9.0	32.2	46.6
9.4	45.2	25.1	8.0	18.6	33.8	9.2	10 11.9	21.1	10.0	23 10.7	31.4
9.8	41 4.2	48.9	10.2	27.2	23.3	9.8	17.9	8.5	8.8	31.3	30.1
9.3	13.2	56.0	8.8	28.2	24.3	9.6	32.9	37.0	9.4	36.3	7.5
10.2	18.2	29.5	9.8	33.2	56.5	10.0	11 6.4	52.2	9.6	58.1	50.8
10.2	22.2	5.9	10.2	54 19.2	43.9	10.1	20.9	37.9	9.6	59.1	17.1
10.2	49.2	45.8	10.2	55 6.7	34.2	9.2	40.9	33.2	9.8	24 3.9	16.5
9.8	42 4.7	15.9	7.8	25.2	23.2	9.8	54.1	1.5	10.0	34.6	25.8
8.6	17.2	40.2	9.4	34.2	50.5	8.8	59.4	43.8	10.0	47.6	23.8
9.6	46.7	17.4	9.2	38.2	58.9	9.8	12 33.1	1.4	9.6	25 1.9	49.2
9.6	58.7	29.9	9.8	52.2	19.2	10.1	41.9	18.2	9.9	2.5	10.6
8.8	43 3.7	28.9	9.4	56 3.2	15.7	9.6	43.5	57.6	9.6	4.4	16.0
10.2	7.2	39.9	9.4	35.7	17.0	9.8	53.1	17.3	9.2	35.0	23.0
8.4	17.0	57.1	8.0	42.2	40.6	9.8	13 1.9	17.0	9.4	51.0	33.0
9.3	21.2	6.6	9.6	56.2	47.8	10.0	3.4	18.2	9.4	54.0	20.0
9.8	44.2	47.6	10.2	57 22.2	10.4	8.4	7.9	32.3	9.4	26 2.5	15.1
10.2	44 43.2	34.9	10.2	29.7	31.2	10.0	25.9	2.3	9.2	18.5	41.4
9.1	47.0	59.2	10.0	58 0.7	42.1	9.5	31.4	47.9	10.4	29.5	20.6
10.2	47.7	51.6	9.6	12.2	34.0	9.2	35.4	7.8	8.8	42.5	38.8
9.1	55.2	59.3	10.0	17.7	49.0	10.0	38.9	43.9	9.2	45.0	4.2
8.4	45 8.2	29.6	9.3	20.2	49.7	8.8	56.9	16.7	10.4	27 1.5	25.8
10.2	14.2	36.4	9.3	33.7	50.0	10.1	14 2.9	14.7	9.4	28 17.0	51.4
9.8	18.2	33.9	10.0	36.2	39.5	9.5	13.4	41.2	10.0	30.0	26.3
9.1	27.2	16.7	10.2	52.2	18.2	8.8	26.4	35.1	10.4	36.0	36.6
9.4	39.2	16.3	10.2	58.2	59.8	10.0	33.4	23.3	8.4	29 1.3	58.3
10.2	46 5.2	49.2	9.6	59 9.7	41.7	10.0	42.9	3.1	9.6	11.5	28.0
10.2	17.2	11.9	8.7	10.7	47.5	8.8	52.4	2.7	9.6	13.5	10.6
10.2	29.6	59.6	10.0	19.2	34.5	8.8	58.4	33.3	9.6	15.5	8.8
10.0	32.6	14.9	9.6	35.2	36.3	8.8	15 42.9	17.1	8.8	23.0	4.0
8.7	46.6	54.0	10.2	40.2	46.9	10.0	46.4	16.7	9.6	30 11.5	35.2
10.2	47 7.6	11.5	9.0	0 10.7	44.9	9.6	55.9	2.9	9.4	17.5	51.8
10.2	13.6	5.1	9.6	1 7.7	20.5	10.1	16 10.4	15.9	9.6	23.0	24.2
9.0	29.1	19.2	8.8	17.2	17.5	10.0	36.4	46.3	9.9	27.0	44.8
9.0	33.6	8.0	10.0	21.5	35.4	8.2	17 5.9	14.1	10.4	41.0	23.3
10.0	41.6	16.7	7.8	30.2	35.1	9.5	12.4	20.8	10.4	42.5	16.7
9.8	42.6	56.5	10.2	34.0	31.8	9.4	21.9	32.2	9.4	44.0	54.7
10.2	49.4	59.9	10.0	50.2	32.9	9.5	50.4	16.7	9.9	54.5	11.1
6.1	48 11.6	37.7	8.2	2 26.7	14.2	10.0	52.9	36.2	8.8	31 10.5	6.0
7.8	13.6	52.7	10.1	3 9.4	53.8	7.6	18 16.1	57.6	9.6	12.5	14.8
9.0	13.6	25.4	9.2	29.5	47.9	9.0	21.8	9.0	10.2	56.5	4.2
10.0	28.6	11.1	8.4	37.5	2.7	9.6	19 4.3	53.0	9.9	57.5	45.5
10.2	36.1	27.4	10.0	43.0	45.1	9.6	53.8	30.1	9.2	32 24.0	59.9
10.2	49 1.3	59.5	9.5	45.0	47.4	8.4	20 3.3	36.6	9.4	38.5	7.2
10.2	28.6	52.7	8.8	4 27.5	43.8	9.8	6.3	52.2	10.0	57.0	38.4
7.8	37.6	32.9	9.8	30.0	10.3	10.0	9.3	32.7	9.6	33 31.5	30.2
10.0	55.6	34.2	10.1	43.0	4.8	10.1	17.3	50.5	10.2	44.0	0.0
10.2	58.6	39.0	9.4	5 14.0	55.9	7.2	31.8	1.1	7.5	56.5	26.3
10.2	50 10.1	46.9	9.0	22.0	33.7	10.0	44.8	35.5	9.9	34 10.5	6.2
8.2	26.6	39.6	9.0	33.0	25.5	8.8	21 4.8	19.3	9.4	29.0	57.2
10.2	51 3.6	14.0	10.0	6 0.0	25.8	9.0	7.3	40.4	9.4	30.5	5.4
10.2	7.3	56.9	9.3	19.0	7.1	9.8	13.3	42.7	9.6	40.0	55.4
10.2	8.6	59.3	8.8	21.0	53.3	9.6	16.2	14.5	9.9	40.5	11.3
6.3	20.6	31.8	9.8	40.0	23.9	9.8	18.7	58.3	10.2	42.2	58.7
8.4	22.6	37.7	9.0	7 2.5	40.7	9.1	24.2	34.5	10.4	53.5	32.1
9.6	56.6	38.0	10.1	49.0	27.0	10.0	34.7	36.1	10.4	55.0	51.3
9.8	58.1	45.6	10.1	59.5	6.6	9.6	39.7	46.0	10.4	56.5	52.3
8.7	52 19.6	12.0	9.8	8 1.5	51.5	8.2	49.2	59.3	9.2	59.0	39.1
9.0	48.6	14.2	8.8	9 5.9	7.1	9.8	51.7	12.9	9.9	35 43.2	58.1
25pr.	+ 1 31.7	+ 3.8		+ 1 31.2	+ 4.2		+ 1 30.7	+ 4.6		+ 1 30.1	+ 5.1

7081-7140.				7141-7200.				7201-7260.				7261-7320.			
mag.	20 ^h .		-26°	mag.	20 ^h -21 ^h .		-26°	mag.	21 ^h .		-26°	mag.	21 ^h .		-26°
	m	s	'		m	s	'		m	s	'		m	s	'
10 ^o 2	35	54.0	50.2	10 ^o 0	55	23.8	27.6	11 ^o 1	14	37.0	54.9	10 ^o 2	36	12.6	8.0
10 ^o 0	36	12.5	32.0	10 ^o 4	56.8	48.9		10 ^o 5		37.5	57.0	10 ^o 2	37	14.6	48.6
8.8		12.5	41.8	9.8		57.8	24.1	9.9	15	22.5	5.0	9.8		27.4	40.4
9.0		22.5	3.9	10 ^o 0	56	21.8	16.2	10 ^o 6	16	34.0	23.0	8.4		37.9	52.4
8.4		24.0	16.3	10 ^o 4		38.8	6.8	10 ^o 6	16	37.5	25.8	10 ^o 2		46.4	54.7
9.2		32.5	33.8	9.6	57	2.3	8.2	7.5		58.5	5.7	9.8	38	39.9	27.2
10 ^o 2		45.5	18.1	9.6		5.8	4.2	10 ^o 6	17	6.5	56.3	10 ^o 4		49.9	12.0
9.4		57.0	14.9	9.6		13.8	54.5	11 ^o 0		52.5	34.8	10 ^o 2		57.9	27.2
9.8	37	0.5	41.9	10 ^o 0		39.9	39.4	9.6		54.5	38.5	10 ^o 0	39	0.9	0.9
9.4		26.5	2.3	9.6		39.9	8.1	9.9	20	6.5	24.9	10 ^o 2		36.9	24.9
9.4		29.5	41.6	9.6		50.4	42.1	10 ^o 0		9.5	32.7	9.2		48.4	12.5
9.6		52.5	56.3	10 ^o 0	58	32.9	3.9	10 ^o 8		19.0	9.2	8.9	40	25.4	29.1
10 ^o 2		56.0	33.3	10 ^o 4		35.9	38.8	11 ^o 0		28.0	32.0	10 ^o 0		43.4	25.5
9.6		57.5	15.9	7.9	59	33.4	3.7	10 ^o 0	21	16.5	16.3	8.2		59.4	27.3
9.0		1.5	24.2	10 ^o 0	0	19.9	59.8	7.5		26.5	11.2	10 ^o 2	41	12.4	37.1
10 ^o 0		18.5	42.2	9.9		29.9	36.8	10 ^o 3		38.5	5.6	10 ^o 2		15.7	59.4
9.8		33.5	18.7	10 ^o 4		41.9	41.9	11 ^o 1		42.0	44.4	8.4		17.9	48.7
10 ^o 4		37.0	55.1	9.8	1	43.9	34.7	9.8	22	1.5	43.4	8.8		39.9	39.5
10 ^o 0		41.5	7.1	9.6		50.9	6.8	10 ^o 0	23	5.0	20.1	10 ^o 2		51.9	40.1
8.6		52.5	37.8	8.4	2	35.4	39.9	8.2		30.0	15.4	10 ^o 2	42	1.4	32.1
10 ^o 4	39	16.0	50.3	9.0		37.9	4.2	11 ^o 1		35.0	5.4	10 ^o 2		3.9	31.6
10 ^o 4		35.5	22.1	9.0		40.9	33.3	9.5		51.5	2.0	10 ^o 2		19.9	9.5
7.4		52.5	52.3	9.6		48.9	43.2	10 ^o 5	24	18.5	34.7	8.6		35.4	13.3
9.6	40	6.5	59.0	10 ^o 0		48.9	54.3	10 ^o 0		18.5	38.3	9.5		42.9	44.9
9.9		8.5	24.8	9.6	3	29.9	17.1	10 ^o 0		26.0	51.0	9.0		57.4	46.6
9.6		9.0	47.8	9.8		32.4	19.7	10 ^o 5	25	3.5	1.0	9.8	43	31.9	17.3
10 ^o 2		17.5	10.7	10.2		37.4	47.8	10.8		14.5	42.8	10.0		44	22.0
9.9		59.5	13.0	10.4		43.1	57.1	10.0		39.0	7.1	10.2		32.0	15.8
9.6	41	24.1	57.0	10.4		47.9	1.0	11.2	26	22.5	19.0	10.6		47.5	58.0
5.3		52.5	14.5	8.6		48.9	59.4	10.3		23.5	51.6	10.0	45	13.5	48.1
8.4		55.5	48.0	9.4	4	0.9	15.9	10.3		34.5	55.6	10.0		23.0	53.3
10 ^o 4	42	7.5	21.7	10.0		5.4	1.2	10.0		42.5	50.0	8.6		26.5	36.4
9.0		15.5	15.5	10.0		8.9	32.8	11.1	27	6.5	57.4	10.0		29.0	28.6
8.8		16.5	16.1	10.2		38.9	47.9	10.2		33.5	40.4	9.6		44.0	24.5
9.6		49.5	36.5	9.6	5	12.4	5.8	9.4		38.5	17.0	10.4	46	23.0	28.8
9.9		50.0	6.0	10.4	6	10.4	49.4	9.9		39.5	39.8	9.8		24.5	12.0
10 ^o 2	43	13.0	47.8	9.1		29.4	53.9	11.2		54.5	51.0	8.2		47.5	21.9
9.2		35.5	41.3	9.0		44.9	10.9	11.2		56.5	30.8	9.8	48	16.0	10.6
8.2		46.7	2.9	10.0		50.9	45.0	10.2	28	26.5	37.8	9.4		57.0	23.1
10 ^o 4		53.7	2.2	8.8	7	23.9	39.6	9.5		46.5	13.4	10.6	49	7.5	1.7
10 ^o 0	44	15.5	15.0	7.8		26.4	25.6	5.7		56.0	43.5	7.9		23.0	5.5
8.8		35.0	46.2	10.0		42.9	5.2	11.2	29	16.5	35.6	9.8		24.5	51.6
10 ^o 0		35.5	42.9	10.4	8	39.4	52.0	9.2		18.0	23.1	10.0		51.5	43.3
9.6		56.0	34.3	8.8	9	13.4	52.6	9.8		23.5	27.8	9.4		56.5	21.1
9.6	46	9.3	50.1	10.2	10	1.2	0.6	11.2		33.0	42.6	10.0		57.0	15.2
7.8		29.8	47.2	8.8		2.9	32.0	11.2	30	3.4	10.6	9.5	51	15.0	44.5
8.6		57.0	19.5	11.2		57.5	8.2	11.2		22.4	52.5	9.0		37.0	9.9
8.2	47	0.2	2.8	8.6	11	0.5	14.0	9.8		43.0	51.2	9.5		50.0	40.1
8.6		17.0	29.2	10.2		57.5	56.0	7.9		58.6	0.4	9.6	52	8.0	4.5
10 ^o 4		27.8	12.8	9.4	12	9.5	34.7	10.2	31	33.2	46.7	8.5		26.5	19.5
9.0		55.8	35.2	10.6		10.5	24.8	8.4		56.0	17.0	8.5		31.0	18.6
9.1	48	8.3	50.9	10.2		20.5	17.1	8.6	33	49.6	24.6	8.9	53	22.0	52.3
6.5	49	21.8	46.3	7.4		32.5	52.2	9.4	34	2.1	11.8	10.2	54	3.5	18.9
10 ^o 0		55.3	43.6	10.6		46.5	16.2	8.2		52.6	25.6	8.9		43.5	3.7
8.8	50	22.3	43.1	10.5	13	26.5	40.6	10.0	35	12.8	27.5	9.5	55	2.3	54.5
9.0		53.3	49.9	11.1		35.0	54.5	10.2		13.1	15.8	9.8		22.8	47.9
8.8	51	20.8	29.2	8.8		49.5	55.9	8.4		37.1	33.8	9.8		59.4	42.2
9.8		52	30.8	11.2		52.7	55.0	10.2		52.6	39.6	8.5	56	15.0	15.3
9.8	53	31.3	1.3	10.2	14	26.0	20.8	10.0	36	3.1	1.0	10.0	57	22.5	4.4
10 ^o 0		53.3	50.2	10.5		26.5	7.3	8.8		9.6	34.9	7.4		24.0	29.3
25pr.	+ 1 29.5 + 5.4			25pr.	+ 1 28.4 + 6.0			25pr.	+ 1 27.2 + 6.5			25pr.	+ 1 26.1 + 6.9		

7321—7377.				7378—7433.				7434—7489.				7490—7545.			
		21 ^h —22 ^h .	—26°			22 ^h .	—26°			22 ^h —23 ^h .	—26°			23 ^h .	—26°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.0	57	35.5	26.0	9.8	23	34.7	53.3	10.6	52	37.3	35.1	9.6	23	6.3	16.5
10.0		52.0	5.0	7.2		56.2	42.6	9.2		53.3	25.5	9.1		13.5	43.0
10.0	58	15.5	11.1	9.0	24	9.1	59.6	7.4	53	32.3	49.1	9.6	24	36.0	31.1
9.8		35.5	49.1	9.5		52.7	40.0	7.2		37.3	17.6	10.0		57.7	52.4
9.4	59	1.0	46.9	8.4	25	49.7	29.3	8.0	37.8	48.1	58.8	9.0	25	20.5	31.1
9.1		7.0	34.6	8.3	26	2.2	26.7	9.8	40.3	5.8	8.3	7.2		21.3	26.1
9.1		10.0	20.0	9.3		16.7	52.3	10.4	54	23.2	8.3	9.9		23.2	18.1
10.0		10.5	23.9	8.8		49.7	18.5	8.6		25.3	40.0	10.0	27	1.2	34.3
10.0		23.5	54.7	10.2		56.2	36.4	9.5		57.3	31.0	8.4		17.7	27.7
9.8	0	6.5	7.3	9.8	28	11.1	41.4	10.6	55	45.3	38.2	9.6		35.2	55.9
10.0		11.0	43.5	9.6		12.2	18.0	10.4		58.3	9.4	10.0	28	45.3	14.1
9.6		39.0	22.4	8.8	29	13.0	58.8	9.3	56	57.3	6.6	9.2	30	28.2	7.7
7.2	1	42.5	22.7	9.2		33.2	13.6	8.1	57	9.8	25.8	8.1		36.2	33.3
9.2	2	13.5	44.6	9.4		50.7	32.0	10.6		15.3	55.2	9.4		56.2	22.5
9.8	3	16.5	9.0	8.5	30	3.2	42.0	7.6	7.6	47.8	21.5	10.0		58.2	15.6
9.4		34.0	10.0	9.0		41.7	30.2	8.2		52.8	51.5	9.9	31	23.2	21.1
9.2		52.0	54.6	7.7	31	17.7	18.1	10.4	58	43.3	36.2	10.0	32	20.2	28.3
9.4		58.5	27.2	8.1	32	22.7	7.8	8.6	59	47.3	50.8	10.0	33	44.2	1.1
9.8	4	12.5	59.7	8.8	33	12.2	49.2	9.8	0	33.6	2.2	7.7		53.2	53.3
10.0		30.0	23.7	8.8		52.2	36.0	10.4		37.3	33.5	9.0	34	57.7	21.7
10.0	5	16.5	19.9	7.6	34	29.2	0.2	9.3		41.3	16.2	9.4	35	7.2	1.1
9.6		34.0	3.9	10.0	35	17.7	2.4	9.5		43.3	52.8	9.2		17.2	35.1
10.0		50.0	32.5	9.0		43.2	54.4	9.6	1	43.3	2.8	10.0	36	15.3	13.6
9.0		53.5	31.9	9.0	36	0.2	19.9	7.2	2	9.0	30.3	8.2		49.7	3.3
6.4		54.5	56.7	7.8	24.2	19.0	7.7	9.3	3	47.2	24.2	6.8	37	57.7	56.4
9.4	7	56.0	14.0	9.1	37	34.7	36.6	8.9	4	23.7	58.5	9.9	38	17.3	59.3
8.3	8	6.5	16.0	8.8		36.2	56.9	9.1	5	13.7	12.1	8.6		20.2	20.9
7.5		9.0	35.2	9.4	38	54.7	42.7	8.4		27.2	5.1	9.6	39	32.2	51.1
9.2		26.5	48.5	9.3	39	24.2	24.9	9.0	6	5.7	32.1	9.4	41	14.7	52.8
9.1	9	9.0	52.9	8.4		53.2	3.3	9.1		30.2	13.7	8.8	42	38.2	47.1
7.4		36.0	31.1	9.0		55.4	50.4	8.3	8	4.2	14.5	9.4		56.2	20.5
10.0		48.5	46.4	9.6		58.1	46.9	9.1	9	17.2	35.7	6.3	43	21.0	1.6
9.6		50.6	30.0	8.4	40	3.4	57.6	9.2		33.7	2.5	10.0		42.2	19.9
10.0		58.6	20.6	10.4		31.4	34.3	9.4		44.2	9.1	10.0	44	4.2	37.8
9.1	10	22.6	20.9	6.1	41	4.4	33.9	9.4	10	44.2	42.9	8.4		13.2	36.1
8.4		26.6	51.1	10.0		14.9	55.6	8.7	11	5.7	8.3	9.0	46	43.6	45.3
9.4		31.1	30.2	10.4	42	25.4	15.6	9.6		35.2	5.7	9.3		53.7	22.9
9.8	11	21.6	18.8	10.0		28.4	18.2	8.5	12	8.7	54.5	9.6	47	15.9	7.0
9.6	13	7.1	52.2	10.6	43	16.8	31.2	8.3		11.7	37.5	10.0		42.4	19.4
10.0		23.1	42.7	10.4		33.3	40.3	9.6		23.4	1.2	10.0	48	52.9	9.9
9.4		27.8	57.2	9.8	44	5.8	25.0	8.3		24.7	9.7	8.6	49	39.9	36.2
9.2	14	1.1	12.0	10.6		23.3	37.7	9.1	13	57.7	32.1	10.0		44.9	26.6
10.0		42.6	46.0	10.6		42.2	10.1	9.1	14	20.7	29.2	9.4		49.9	8.2
9.2	15	2.6	53.0	10.6	45	33.3	38.9	9.2		25.7	31.8	10.0	51	9.4	26.4
8.6		42.6	20.6	9.5		43.3	14.6	9.2	16	11.7	52.5	9.4		59.9	36.9
8.0	16	13.1	28.2	9.0		46.3	48.6	8.9	17	34.7	33.3	8.5	52	49.9	44.8
9.4		40.9	23.3	7.6		59.3	10.6	9.1	18	12.7	41.8	9.7		59.7	2.0
9.1	17	3.7	49.8	10.0	48	43.8	18.6	9.6		27.2	7.0	8.6	53	40.9	52.6
9.8	18	6.1	2.6	8.6		49	53.3	9.6		57.7	37.3	8.4		44.5	1.2
10.2	19	12.2	26.2	10.6	50	3.3	9.2	9.0	20	17.7	21.9	8.5	54	6.9	19.0
8.4		12.2	12.2	8.2		22.8	52.6	9.6		35.7	3.0	8.4	55	25.4	29.0
9.6	20	30.7	26.1	10.4		39.8	37.0	9.4		57.7	39.1	8.5	56	29.9	5.6
10.3		33.2	46.0	8.1		50.3	6.8	9.6	21	43.8	1.6	8.4	57	42.9	35.2
10.0		58.2	2.0	7.0		58.8	46.0	7.2		48.8	6.6	9.2		53.4	36.4
8.6	21	32.2	7.9	9.0	51	0.8	50.0	9.6	22	3.8	11.7	10.0	58	17.4	23.0
9.2	22	50.7	29.2	9.8		52	11.8	9.1		18.8	10.7	8.5		20.9	8.4
10.3	23	26.6	57.8	9.0											
25Pr.		+ 1 24.6	+ 7.4			+ 1 22.6	+ 7.9			+ 1 20.7	+ 8.1			+ 1 18.1	+ 8.3

ZONE — 27°.

1-30.				31-60.				61-90.				91-120.				
mag.	oh.	-27°		mag.	oh.	-27°		mag.	oh.	-27°		mag.	oh.	-27°		
m s	m s	'	''	m s	m s	'	''	m s	m s	'	''	m s	m s	'	''	
10.0	0	4.8	23.1	9.9	22	53.2	0.8	10.2	42	3.1	35.9	9.4	59	47.6	19.9	9.0 GWa
9.4	3	8.5	39.4	9.9	23	39.7	5.0	9.8		5.1	3.1	8.0		55.6	23.8	8.5 GWal
9.4	4	31.0	8.4	8.7		42.7	56.2	10.0		9.1	35.0	10.2	0	9.6	32.9	
9.0	5	0.5	42.5	9.8	24	52.2	30.0	8.0		24.1	3.2	10.4	1	0.6	17.0	
8.6		40.5	35.0	9.0	25	59.7	29.1	10.2	43	49.1	30.0	10.0		37.2	57.0	
9.2		49.0	34.5	9.2	28	18.7	26.7	10.2	44	32.0	12.1	10.0		41.1	5.8	
10.0	6	14.5	20.4	9.0		49.7	26.1	10.2		50.0	51.1	10.2		43.6	20.0	
7.9		16.3	33.1	8.4	29	26.0	32.6	9.1	45	43.5	11.5	8.8		46.6	39.2	8.8 G≡
7.8		55.3	1.3	9.9		38.0	11.0	8.2	46	11.5	4.7	9.8	2	0.1	29.0	
8.5	8	5.3	51.8	8.2	30	0.0	26.8	9.8	47	13.0	13.4	10.4		14.8	18.1	
				9.0		14.5	15.8	9.4		33.5	7.9	9.0	3	39.6	32.8	9.5 G-
				8.6		30.2	57.9	10.2		55.5	26.3	10.4	4	19.1	28.8	
				9.9	31	37.7	42.7	10.0	49	21.5	16.3	10.4	5	26.1	25.6	
				9.0	32	33.5	51.5	9.1	50	0.5	1.5	9.4		30.1	47.4	9.2 =
				9.8	33	3.2	53.0	10.0		25.8	54.2	10.4		41.1	39.0	
				9.6		3.7	6.6	8.8	52	13.8	46.0	8.8		50.6	1.4	9.5
				10.2		18.9	54.5	9.4		35.8	29.3	9.3	7	12.0	6.3	9.0 a
				8.4		45.4	22.0	9.4		58.3	12.1	10.4	8	21.0	53.4	
				10.2	34	17.4	47.0	10.2	53	18.9	0.2	10.4	10	4.7	57.9	
				8.4		21.0	57.5	10.4		38.9	26.1	8.8	11	40.5	40.2	9.5 ≡
				9.4		59.4	31.4	9.6	54	23.1	34.9	8.8	12	14.0	31.1	9.0 Ga
				9.2	35	29.7	55.8	9.6		34.4	18.4	10.4		30.0	36.2	
				10.0	36	43.7	48.9	9.6		36.9	47.8	8.4		46.0	10.0	8.5 al
				9.0		48.2	18.8	10.0		45.0	53.4	10.4	13	46.0	31.1	
				9.8	38	4.7	16.3	9.4	56	44.4	39.7	10.4	14	4.0	51.9	
				7.8		14.7	12.3	9.6	57	10.4	46.8	10.0		18.7	59.2	
				10.2		29.2	0.1	8.8	58	16.4	49.5	8.8		36.0	24.2	9.5 =
				9.4	39	4.7	49.0	10.4	59	19.4	1.5	9.6		45.8	1.7	
				9.8		59.6	43.0	10.4		25.6	50.0	8.6	15	47.3	19.2	9.0 a
				8.4	41	33.6	39.4	7.8		33.9	37.3	9.4		58.3	21.8	a
25pr.	+ 1	15.9	+ 8.3		+ 1	14.3	+ 8.3		+ 1	12.9	+ 8.2		+ 1	11.9	+ 8.0	

121-180.				181-240.				241-300.				301-360.			
1 ^h .		-27°		1 ^h -2 ^h .		-27°		2 ^h .		-27°		2 ^h -3 ^h .		-27°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
8.6	16	7.8	53.3	8.5	51	22.5	25.2	9.0	24	55.6	18.3	9.2	56	34.1	20.5
				8.7				8.8	26	0.2	56.5	8.5	57	38.1	28.3
10.4	13.0	32.5	9.0	8.2	29.5	15.3	8.7	7.3	58.7	33.3	7.5	9.8	39.6	58.7	8.2 a
	19.0	24.8		9.8	30.5	51.7		9.6	58.7	13.9		9.8	58	23.6	13.2
9.8	17	9.5	29.1	10.0	44.5	12.3		9.0	27	33.7	48.9	9.2	24.6	33.5	8.5 Ga
9.8	18	27.5	52.0	9.0	52	10.5	39.8	9.0	28	7.7	46.1	9.7	25.6	54.1	
				10.2	14.2	5.6	9.0	9.6	29	11.0	53.7	9.8	59	9.6	47.1
10.2	39.5	38.1		8.4	15.0	32.7	9.0	9.4	30	6.5	4.9	9.8	0	35.6	55.1
10.2	39.8	59.8		8.7	53	11.0	7.0	8.6	30	12.0	14.5	9.8	36.6	40.1	
10.2	19	19.0	40.8	9.2	19.5	51.6	-	9.0	8.1			9.8	54.6	15.0	
8.1	36.0	6.6	9.0	6.4	35.3	2.6	6.6	8.1							
9.8	59.0	42.8		9.2	54	1.5	32.9	9.4	22.0	7.6		9.7	1	40.1	3.8
10.2	21	13.0	14.1	9.2	8.0	38.9	9.5	9.0	28.0	14.7	9.2	9.8	2	40.0	14.2
10.2	51.5	17.7		10.0	24.5	27.9		9.1	30.5	43.1	-	9.6	3	49.5	13.7
7.8	22	9.0	45.6	9.0	52.0	9.4	G	9.6	38.8	37.2		7.4	5.0	11.6	7.5 GSal
10.2	54.0	11.8		9.4	56.4	8.1		9.6	39.8	11.2		9.8	4	0.5	47.6
8.6	24	9.0	37.0	8.9	55	14.4	0.3	9.4	47.0	6.6		9.0	5	18.0	34.7
9.8	25	53.0	32.9	9.7	19.4	11.1		9.6	31	1.5	34.2	9.2	35.5	50.2	a
8.8	26	21.0	27.0	9.4	21.4	40.5		9.6	52.5	9.5		9.8	6	0.0	8.8
7.7	28.0	11.6	8.0	9.2	59.4	5.9	9.5	9.6	33	0.0	26.1	9.2	2.0	53.6	
8.6	29.0	11.4	9.0	10.0	56	0.9	38.5	9.6	35.5	53.1		8.8	7	12.5	25.4
9.2	34.2	10.1	9.7	8.4	53.9	20.7	8.3	9.2	34	51.0	39.7	9.5	42.0	0.1	
9.6	27	59.7	33.2	9.0	57	35.9	24.5	9.6	35	0.0	40.4	9.8	8	17.5	9.8
10.2	28	16.7	25.0	9.0	58	53.4	12.1	8.3	36	40.5	53.8	9.2	30.0	31.2	
10.2	56.2	40.1		9.4	59	29.4	0.2	8.1	37	52.6	2.6	9.6	9	1.5	13.2
10.2	29	39.2	27.0	9.9	0	8.9	53.0	9.6	38	5.8	24.0	9.4	3.0	4.0	
9.4	30	3.7	9.4	9.2	59.7	25.4	9.5	9.4	55.8	48.2		8.6	43.5	58.2	9.0 G
10.2	31	55.7	55.7	10.2	1	24.7	38.0	9.6	39	36.3	17.0	8.7	10	34.0	35.4
8.6	32	9.7	51.5	9.4	2	11.7	27.5	9.6	40	25.3	25.0	9.6	39.2	49.7	8.0 Ga
8.8	44.4	59.6	9.5	9.2	33.9	37.2		9.0	45.3	31.1		9.6	11	24.0	0.6
9.0	33	7.7	53.3	9.8	3	8.7	25.1	9.1	41	18.8	26.4	9.6	24.0	15.8	
10.0	29.2	54.0		9.0	4	7.0	41.6	9.1	51.3	51.8	9.2	9.4	13	4.0	49.2
9.8	34.2	45.6		8.7	23.5	17.0	8.8	9.6	53.3	19.2		9.6	14	2.0	19.0
9.4	35	4.2	37.1	8.7	35.0	17.8	9.0	9.1	59.8	49.4	9.2	6.5	15	24.5	3.7
10.2	17.2	39.0		8.2	5	20.5	48.6	9.6	42	30.8	5.7	9.6	36.0	5.2	6.5 GSet
9.0	36	0.5	1.4	9.8	6	8.5	6.0	9.6	43	23.3	41.8	9.6	17	28.0	41.1
10.2	37	15.7	17.5	10.0	23.5	34.0		9.3	45	31.3	21.6	8.2	36.0	44.9	7.8 Ga
10.2	33.2	18.3		9.6	35.0	50.4		9.7	46	20.5	41.4	8.8	18	54.0	34.9
9.6	56.2	37.9	9.5	8.1	40.0	13.6	8.5	8.4	47	8.5	14.1	9.6	19	2.0	25.9
10.2	38	8.7	2.0	10.0	7	36.0	48.6	9.8	48	19.9	46.0	8.9	11.0	35.5	9.0 G
9.4	39	14.2	13.3	9.4	8	10.7	0.2	9.0				8.6	54.0	41.1	8.0 G-
8.8	45.2	1.6	7.8	9.8	51.0	6.8		9.7	25.6	36.3		7.7	20	19.1	42.6
6.7	40	14.3	58.5	7.8	10	0.0	6.3	9.8	29.6	37.1		9.6	47.6	57.6	7.5 GS=
10.2	41	16.0	34.6	9.4	12	0.0	3.4	9.4	31.1	1.4		9.6	52.6	2.2	
10.0	29.5	18.7	10.0	9.7	30.0	34.3		9.7	50	7.6	13.8	6.8	21	5.6	45.4
8.8	52.5	21.9	8.8	8.4	13	10.2	1.1	9.7	23.1	41.5		8.6	13.3	25.3	6.3 GSet
9.4	42	9.5	46.7	9.0	14	30.0	46.7	9.5	52.1	17.1		8.9	21.6	58.8	8.5 Ga
10.0	48.0	40.8		9.4	40.0	32.2		9.7	59.6	17.5		9.0	25.1	27.5	a
9.0	49.5	10.7	9.5	8.4	47.0	50.8	8.2	9.0	51	19.6	32.0	9.0	8.9	37.6	40.7
9.2	43	30.5	41.2	9.4	15	7.0	22.2	9.8	52	37.1	51.4	8.0	56.1	20.6	7.8 Ga
9.2	44	4.5	45.0	9.7	31.5	20.0		9.7	40.6	32.0		8.4	22	26.6	51.0
9.2	7.5	37.7	9.5	7.6	17	49.0	33.7	9.6	49.6	48.1		9.6	38.9	10.8	
10.0	45	9.5	14.0	9.4	18	40.0	14.2	9.7	53	9.6	45.1	8.4	23	7.9	2.8
9.9	14.5	4.0		9.2	54.5	5.7		8.4	17.1	25.7	8.2	9.6	45.9	1.3	8.8 a
8.6	46	15.5	43.8	8.1	20	9.0	42.5	9.0	54	24.1	37.0	9.2	48.4	58.5	a
9.4	40.0	23.0		9.8	29.0	25.5		9.4	55	26.4	56.0	8.8	59.1	5.4	9.0
9.2	49.5	11.1	-	9.7	21	35.0	44.0	8.9	42.6	10.5		8.2	25	44.4	2.9
9.2	50.5	12.8	-	8.6	38.5	22.9	8.8	9.2	43.5	2.7		9.4	26	51.6	31.2
8.5	59.5	51.8	8.7	10.0	22	5.5	14.5	8.7	44.6	22.2	-	9.6	27	9.1	51.3
8.9	49	56.5	6.3	8.2	23	35.2	58.1	8.0	54.7	59.3	8.5	9.0	20.1	10.5	a
9.9	50	52.5	2.9	8.2	41.0	49.0	8.2	9.0	59.1	38.9		9.6	29	5.4	29.1
25pr.	+ 1	10.0	+ 7.7		+ 1	7.9	+ 7.2		+ 1	5.5	+ 6.4		+ 1	3.9	+ 5.6

361-420.				421-480.				481-540.				541-600.					
mag.	3 ^h .	-27°		mag.	3 ^h -4 ^h .	-27°		mag.	4 ^h .	-27°		mag.	4 ^h .	-27°			
	m	s	'		m	s	'		m	s	'		m	s	'		
8.0	30	34.4	12.2	8.0	G=	8.7	55 44.8	42.8	9.0	G=	9.5	9 40.9	39.4	10.0	25 28.3	5.6	
9.4		51.4	46.1			8.5	56 1.8	45.6	9.0	Ga	8.8	52.4	43.0	10.0	37.8	51.9	
9.4	32	47.8	42.9			10.2	7.8	14.5			10.1	10 7.4	4.7	9.0	41.8	43.6 a	
9.6	33	8.3	53.9	9.0		10.2	9.8	37.9			9.6	11.4	12.2	10.0	46.8	19.1	
8.6		46.3	13.3	a		10.2	57 4.3	35.4	8.5	=	9.8	25.4	27.2	9.8	54.8	53.1	
9.0	34	20.8	46.1	9.0	a	8.8	32.8	20.6	7.5	GSal	10.0	28.9	50.0	9.6	55.6	59.5	
9.2	35	1.3	19.0			7.6	34.8	50.0	9.5	-	9.8	41.4	54.8	9.8	59.8	38.5	
9.2		53.8	42.9			9.4	40.3	16.5			9.1	47.4	49.5	9.6	26 4.3	44.3	
9.4	36	17.3	27.6			9.5	58 16.8	29.3			8.8	11 20.4	20.0	9.8	4.8	20.6	
9.8		41.3	3.3			9.6	26.8	47.1			10.1	23.4	45.6	9.4	16.8	26.8	
8.9	37	11.3	13.7	-		9.5	47.8	4.4			9.4	23.9	4.6	9.8	25.3	10.2	
9.2	38	33.3	20.6			9.0	59.3	47.0			9.4	36.4	4.6	9.8	30.3	54.3	
9.2		57.8	50.9			8.5	59 14.8	59.8	8.6	Ga	9.8	45.9	24.8	9.4	34.8	36.0	
9.2	39	18.3	58.2			10.0	18.8	45.1			9.2	50.9	54.5	10.0	54.3	28.1	
9.2		23.3	3.5			10.0	39.8	2.1			10.2	12 0.9	10.4	10.0	27 17.8	50.8	
9.4		29.8	45.9			10.1	59.8	52.2			9.4	21.9	58.9	10.0	41.8	38.7	
9.2		49.8	25.3	9.0		9.5	0 4.8	11.3	a		9.4	44.0	31.1	9.6	28 5.3	47.4	
9.4	40	32.8	32.9			9.4	24.8	56.8	6.0	GSIπ	8.4	13 45.3	2.3	9.5	9.3	56.2	
9.4	41	11.3	47.6			5.5	29.1	59.7			8.8	14 1.0	17.5	10.0	20.4	35.1	
9.0		32.8	0.6	9.0	a	10.0	36.3	33.0			9.4	3.5	6.1	8.8	33.4	47.4 8.5	
9.6		34.2	21.1			10.2	43.8	43.1			8.8	10.5	34.5	9.8	37.4	12.7	
9.6		39.2	41.7			10.2	44.8	6.5			10.0	15.5	22.5	9.8	52.9	20.9	
9.4		43.2	23.2			10.0	46.8	37.6			9.5	21.5	30.5	10.0	29 2.7	1.7	
9.1		47.2	3.4	9.0	a	9.6	1 9.8	22.0			9.1	23.0	38.5	9.6	11.4	0.9	
9.4		56.2	5.5			9.6	17.8	39.3	a		9.0	15 15.5	13.3	9.0	17.9	42.3 9.0-	
8.9	42	26.2	34.2	8.7	-	9.6	34.8	53.6			9.5	16 4.0	37.6	10.0	33.9	48.5	
9.6		40.2	15.0			9.6	44.8	8.3			10.2	37.0	19.1	9.4	34.4	19.1	
9.1		58.2	7.9	8.5	a	10.1	48.8	43.4			10.2	52.9	57.6	9.8	30 8.4	50.1	
9.2	43	28.2	37.7			9.8	51.3	21.9	8.3	Gb-	10.2	17 7.8	38.0	9.6	8.9	34.2	
9.2		57.2	48.6			8.4	52.3	28.1			10.2	22.8	55.3	9.4	26.4	44.4 9.0 a	
9.2	44	3.7	56.2	9.5	G-	8.2	2 12.8	45.1	8.5	GWa	10.0	18 1.2	49.2	10.0	27.4	52.1	
8.4		21.2	29.3	8.0	GWa	10.1	19.8	23.2			8.2	24.9	57.0	10.0	38.4	36.4	
9.8		22.4	52.3			9.6	36.8	47.6			9.2	19 33.7	36.8	9.4	45.4	33.4	
9.6		41.2	19.0			9.6	39.8	23.8			10.0	40.7	51.2	9.4	46.4	10.4	
9.0		46.7	52.5	a		8.8	44.8	53.9	8.5	a	10.0	50.7	31.2	9.0	31 1.9	51.3 8.8 Ga	
9.2	45	27.4	29.3			9.2	54.8	0.8			10.0	55.2	31.2	8.8	5.4	25.2	
8.8	46	14.7	51.4			10.0	59.8	19.5			9.5	59.2	19.4	9.6	20.4	7.7	
9.4		47.2	11.1			9.4	59.8	1.0			10.0	20 3.2	18.6	9.2	27.4	42.4 -	
9.6		40.2	52.2			9.2	3 58.8	52.2			10.0	16.2	53.6	10.0	30.5	27.3	
9.1	49	7.2	49.1	9.0		8.4	4 53.8	58.1	9.2	a	10.0	17.2	14.5	7.6	30.9	18.1 7.3 GSbl	
9.1	50	1.2	59.6			9.8	5 0.0	58.2			10.0	38.2	51.9	9.4	31.9	50.1 9.0	
9.1		10.7	20.5			10.0	10.4	34.1			10.0	21 7.2	23.3	10.0	32.2	0.3	
9.2		39.2	54.7			9.6	12.4	40.1			9.7	11.7	17.0	9.5	41.9	13.6	
8.5	51	46.2	6.7	8.5	G≡	9.1	15.4	11.4			10.0	18.8	57.0	10.0	49.4	43.8	
8.4		47.2	52.7	8.5	=	9.5	40.4	14.9			8.6	33.5	32.8	9.0	49.4	49.6	
9.1	52	51.2	31.5	9.5		9.8	55.4	21.2			9.5	22 23.8	11.6	9.4	32 24.3	1.4	
9.0		56.2	9.1			9.2	58.9	16.0			8.8	55.3	37.9	7.9	38.2	2.0 7.9 Wbl	
9.4	53	10.7	15.7			8.8	6 21.4	5.2	9.0	G	9.4	23 33.8	54.5	10.0	55.4	14.6	
8.8		24.7	23.1	8.8	G≡	8.8	24.9	24.6	9.5		10.0	47.8	6.2	8.6	57.4	30.7 8.0 GW-	
10.1		36.6	10.5			10.0	32.2	59.0			9.5	55.3	27.3	9.5	33 5.4	34.3	
9.0		56.4	47.1	8.8	G	9.6	43.4	51.3			10.0	24 5.3	46.4	10.0	20.4	46.7	
8.8		58.1	21.1			8.8	52.9	52.6	9.0	a	8.2	15.3	16.7	10.0	21.5	33.4	
10.0	54	3.1	29.4			8.8	7 10.4	22.8	9.0	Ga	9.8	18.8	6.8	9.6	25.4	46.6	
10.2		13.1	51.6			8.8	26.4	15.2	9.0	a	10.0	34.8	33.8	8.3	39.4	16.9 8.3 G	
10.0		14.6	23.7			10.1	8 25.9	45.2			9.2	35.3	8.9	9.8	55.4	5.4	
10.2		17.6	4.5			9.6	30.4	59.3	9.0		9.0	39.3	33.8	9.7	34 19.4	38.6	
9.2		20.1	7.9			9.6	9 0.4	11.4			9.8	45.3	46.3	8.8	45.9	36.0 -	
8.5		52.6	37.2	9.0	G=	9.0	5.4	25.3			9.4	50.8	46.2	9.8	45.9	6.9	
8.0	55	15.1	11.4	8.5	GW=	9.6	28.9	37.8			10.0	59.3	53.0	9.4	46.9	51.9	
10.1		32.4	8.2			10.2	34.4	53.9			10.0	25 25.3	2.7	8.6	50.3	54.7 9.0 a	
25Pr.	+ 1	2.4	+ 4.7			+ 1	1.6	+ 4.1			+ 1	1.1	+ 3.6		+ 1	0.7	+ 3.2

601-660.				661-720.				721-780.				781-840.			
mag.	4 ^h .	-27°		mag.	4 ^h .	-27°		mag.	4 ^h -5 ^h .	-27°		mag.	5 ^h .	-27°	
m	s	°	'	m	s	°	'	m	s	°	'	m	s	°	'
10.0	34	50.8	39.2	9.4	44	33.2	16.8	9.6	59	23.9	10.5	9.8	9	31.0	26.2
10.0		51.3	10.0	9.4	45	14.2	35.1	9.7		56.9	0.9	10.1		31.5	45.1
10.0		57.8	39.3	10.2		28.7	17.7	10.2	0	3.9	36.3	8.0		36.5	6.4
9.4	35	12.3	51.9	8.2		29.7	18.9	9.6		4.4	42.2	9.6		40.0	52.1
8.4		13.6	58.8	8.3	46	2.7	43.9	10.2		18.1	0.3	9.2		42.5	41.6
8.8		36.8	42.1	8.6	47	5.7	16.3	10.1		39.9	13.0	10.1		55.0	31.5
10.0		45.3	59.8	9.4		14.7	4.9	8.8		50.4	41.6	10.1	10	11.5	45.6
10.0		56.8	4.5	9.1		33.0	59.6	8.4		59.9	44.8	10.0		17.5	23.4
9.8	36	2.3	2.8	10.1		35.7	28.4	10.1	1	2.4	32.1	10.0		23.0	45.0
9.6		4.8	8.5	10.2		53.2	53.3	10.2		8.0	2.6	4.7		24.0	5.1
10.0		9.3	4.3	9.6	48	18.7	49.1	9.6		31.9	8.1	10.1		24.5	25.3
9.4		17.3	51.3	9.6		27.2	24.0	10.2		45.9	52.0	10.0		28.5	5.6
10.0		21.3	29.3	9.6		34.7	53.1	9.4		57.2	0.9	9.5		31.0	50.5
10.0		24.8	1.1	9.6		37.5	57.7	10.1		57.2	35.3	10.1		36.0	43.8
9.8		45.8	58.4	8.1		44.2	54.4	9.6		59.2	38.2	9.0		45.5	31.7
9.5		52.3	12.3	9.4		54.7	28.1	9.6	2	1.7	54.1	10.1		48.0	57.8
9.5	37	10.3	27.9	8.3		59.2	15.6	9.4		1.9	25.4	10.0		54.5	48.6
9.8		19.3	8.5	8.6	49	0.7	8.6	9.4		6.4	20.9	10.1	11	29.5	55.9
10.0		38.9	1.5	8.9		5.7	44.9	8.9		6.7	15.7	9.0		36.8	1.3
10.0		45.3	5.5	9.4		14.7	45.6	10.0		14.2	29.5	10.1		46.0	44.8
8.6		50.3	15.5	9.0		27.7	28.6	10.1		23.3	12.9	10.0		48.5	34.3
9.4	38	28.5	38.6	9.0		30.2	21.4	9.3		41.7	43.9	9.2		49.0	33.4
10.0		35.9	51.9	10.1		30.7	54.9	10.1	3	26.0	22.4	10.0		57.0	51.9
10.0		37.1	45.6	10.1		40.2	29.9	9.0		26.0	5.8	10.1	12	6.0	18.0
9.6		48.5	0.5	8.9	50	49.7	54.2	9.3		34.0	46.0	9.6		8.0	11.6
9.6		50.6	18.7	10.0		50.2	41.3	9.4		37.0	38.5	8.6		16.0	22.9
9.8		56.0	32.8	10.1		51	38.4	10.0		39.0	18.9	9.6		18.5	41.5
10.0	39	1.0	18.0	9.6		52	14.9	9.8		42.5	46.8	8.6		36.5	16.1
8.0		14.0	48.5	8.9		53	1.4	9.0		44.0	26.4	9.6		38.0	46.5
9.0		26.3	28.6	10.1		4.4	58.7	9.1		47.0	25.4	9.0	13	2.5	37.3
10.0		27.5	25.8	9.1		29.9	7.2	9.5	4	16.0	54.3	9.6		6.5	56.3
8.1		43.0	0.1	9.2		32.9	15.4	9.8		40.9	1.9	9.1		24.3	0.1
8.8		57.2	2.6	10.1		36.4	54.4	10.0		55.5	23.1	9.5		36.0	45.8
9.8	40	7.2	13.3	7.9		40.9	37.8	9.2	5	8.0	44.6	9.6		50.0	55.1
9.6		19.5	2.8	9.6		42.4	11.8	9.2		15.0	12.5	9.8	14	12.5	18.1
9.4		19.7	3.9	9.2		53.9	58.5	10.0		31.0	5.0	8.8		15.5	31.3
9.8		21.2	21.1	10.0	54	9.9	6.6	9.3		39.5	37.2	9.5		18.0	24.1
8.6		54.7	16.6	8.8		36.9	47.9	9.8		48.0	51.2	5.7		25.0	29.9
9.7		59.7	6.7	9.0		42.4	15.4	10.0		51.5	17.0	10.1		59.5	3.2
9.6	41	1.2	49.3	9.9		46.9	24.0	8.8	6	12.0	41.4	10.1	15	13.5	24.4
9.4		1.7	20.8	10.1		51.9	23.6	8.6		13.0	13.5	10.1		17.5	17.8
8.8		5.2	37.4	9.1		58.4	5.7	10.1		23.5	2.0	10.1		42.0	48.3
9.0		15.7	6.4	10.1		58.9	57.4	9.0		25.0	41.0	8.8		43.5	55.9
9.3		20.7	29.6	10.2	55	14.9	9.6	8.6		26.5	6.1	10.0		46.0	33.5
10.0		28.7	36.4	9.6		14.9	57.0	9.0		28.5	50.4	9.6		55.0	6.7
9.6		36.2	49.4	9.1		42.9	7.9	10.0		32.5	11.7	9.0	16	6.5	42.8
9.4		38.5	59.8	9.2		44.9	40.0	9.6		54.0	52.1	9.5		7.0	53.9
8.6		44.7	31.6	10.1	56	4.9	8.0	9.3	7	2.0	32.5	9.3		11.0	13.6
9.6	42	22.7	19.4	8.8		7.4	17.7	9.8		20.0	3.9	10.0		13.0	13.9
10.1	43	7.2	38.5	9.4		24.4	38.0	10.1		41.0	40.1	10.1		17.0	25.8
9.0		14.7	4.6	9.6		31.9	50.0	8.3		48.5	49.6	9.8		17.5	6.5
9.9		22.2	26.1	9.9		49.9	57.5	10.1		52.0	40.2	10.1		23.0	3.3
10.2		29.7	43.4	9.4		50.9	53.0	8.0		52.0	19.6	10.0		37.0	12.1
9.4		39.7	11.0	9.6		53.4	27.8	8.1		56.0	18.5	9.8		46.0	4.9
8.8		46.2	31.2	9.6		57	29.9	9.1	8	2.5	14.3	9.6	17	14.0	7.3
9.9	44	9.7	16.9	9.9		58	1.9	9.8		24.5	55.6	10.1		21.5	51.7
9.2		13.7	23.7	9.6		23.9	11.2	10.0		49.5	52.1	10.1		34.5	14.3
9.3		14.2	31.9	9.6		41.4	30.2	10.1	9	0.0	52.1	9.0	18	1.0	17.5
9.4		21.2	20.9	9.9		45.6	0.4	9.3		14.0	38.3	8.8		2.5	31.3
9.4		31.7	20.7	8.9		56.9	50.1	9.0		14.5	27.4	10.0		19.0	0.4
25pr.	+ 1	0.5	+2.9		+ 1	0.1	+2.4		+ 0	59.9	+2.0		+ 0	59.8	+1.7

841-900.				901-960.				961-1020.				1021-1080.						
mag.	5 ^h		-27°	mag.	5 ^h		-27°	mag.	5 ^h		-27°	mag.	5 ^h		-27°			
	m	s			m	s			m	s			m	s				
8.6	18	33.5	50.7	9.0 a	8.8	30	24.3	15.0	8.8 Wa	9.2	41	30.1	0.1	9.2	9.2	50	55.2	21.3
9.8		43.5	24.6		10.0		35.8	51.0		9.6		40.1	48.8		9.7	51	27.7	8.7
10.0		45.5	47.9		8.2		43.8	41.6	8.3 Ga	9.5		45.6	42.6		10.3		32.2	15.9
9.8		52.5	40.9		9.8		48.8	38.0		10.0		50.6	51.8		8.8		34.7	4.5
10.0	19	13.1	2.9		8.8		57.3	44.0	9.3 a	10.0		57.6	56.8		9.6		35.2	3.4
9.5		19.6	25.3		9.6	31	9.8	53.5	9.5 G	7.8	42	23.1	10.8	7.8 GStr	9.4		42.2	27.4
10.0		22.1	27.3		9.8		40.8	2.7		9.4		55.1	0.7	9.0 a	10.1		53.2	53.2
9.0		35.6	11.8	a	9.0		54.8	30.9	a	8.8	43	35.1	55.8	9.0	9.3	52	7.2	11.3
8.8		40.6	56.9	8.5 Ga	9.5		55.3	31.4		8.9		41.1	23.7	a	8.8		21.2	20.7
10.1	20	0.6	49.0		8.9	32	11.3	24.2		10.0		46.1	50.1		10.3		22.7	34.6
10.0		3.1	30.4		7.0		19.8	56.7	6.5 GStr	9.8		51.6	52.1		10.2		32.2	37.2
10.1		29.6	34.1		8.4		35.3	39.5	8.2 Ga	9.3		53.1	48.2		8.8		32.2	46.8
9.5		44.7	58.4		8.2	33	8.4	17.0	7.5 GSa	9.6	44	0.1	50.1		9.2		43.2	42.6
9.3		45.6	26.9		9.4		29.9	42.9		9.4		9.6	36.4		9.6		46.2	11.8
9.5		59.6	19.5		8.9		57.4	48.0	8.2 Gb	10.0		22.1	36.7		10.3		49.1	40.9
10.0	21	16.6	13.5		10.0	34	9.9	38.3		10.0		50.1	0.5		10.0	53	17.5	58.1
9.6		37.6	52.0		10.0		14.0	44.0		10.0		55.1	4.9		8.5		23.6	59.8
8.8		41.6	35.6	9.0 Ga	8.8		50.9	30.0	9.0 a	8.8	45	0.1	35.7	9.5 a	10.3		26.0	7.1
9.4		48.6	55.0	10.0	9.9		57.9	44.8		9.8		22.1	17.9		10.0		33.5	50.0
9.0	22	30.6	4.8	9.0 Ga	8.4	35	4.4	0.7	9.2	10.0		39.1	40.3		9.0		37.5	32.3
8.3		32.6	22.3	8.5 a	8.8		4.9	8.5		9.8		43.1	11.7		9.0		41.5	4.1
10.0		38.6	3.0	10.0 G	9.2		10.0	48.4	9.5 -	10.0		50.1	5.8		10.3		45.0	26.0
10.1		53.1	12.0		9.6		11.9	29.4		9.6		59.1	49.9		9.0	54	22.5	29.0
9.4		58.1	49.6		9.0		14.9	52.0	9.2 a	9.6	46	15.2	1.4		10.3		23.5	53.3
9.3	23	19.6	20.6		8.4		24.9	49.6	8.5 Ga	9.0		25.2	49.0		10.3		26.0	9.4
10.1		21.6	14.1		10.0		44.9	8.5		10.0		32.7	1.1		10.3		51.0	51.1
9.5		47.6	39.5		9.6		54.9	22.0		10.3		43.1	17.1		10.0		53.0	26.8
9.6		51.9	17.3		9.6		56.9	6.6		10.0	47	0.4	50.7		10.2		59.5	13.0
8.8		51.9	12.9	a	9.0	36	12.9	52.6	9.5 Ga	9.8		0.9	52.9		10.2	55	6.5	34.8
9.0		58.2	53.9	9.5 a	10.0		29.4	54.0		10.0		1.1	22.8		8.7		9.0	3.4
10.0	24	11.6	38.5		8.7		31.9	31.1		9.8		14.6	5.4		8.9		10.5	37.8
10.1		39.1	29.3		9.2		32.4	48.1	10.0 G	9.2		19.9	31.1		9.6		14.5	45.4
8.8		40.6	42.4	a	9.5		39.9	4.9		10.1		26.4	19.7		9.2		22.5	45.6
9.0		47.6	10.1	9.2 a	9.0		58.4	45.2	9.0 -	10.2		37.9	19.3		7.8		33.0	53.7
9.8		50.1	42.4		9.5	37	7.4	4.3		8.9		46.4	20.1		10.1		44.0	27.9
10.0	25	5.6	27.1		8.0		24.4	46.0	8.0 GSa	9.7		46.9	26.3		10.2	56	0.5	54.9
9.9		13.8	26.6		9.6		34.9	19.8		10.3		55.5	55.3		9.6		5.5	21.5
8.9		50.3	13.6	9.8 a	9.9		54.9	27.0		10.3	48	2.5	5.4		9.8		6.5	20.9
9.6		53.8	20.7		9.4	38	51.4	12.2		9.6		10.7	32.6		9.0		7.0	19.3
10.0	26	14.8	34.4		9.9		52.9	16.7		9.2		10.7	29.4		10.1		9.5	16.0
9.6		14.8	14.7		9.9		57.9	44.8		10.1		20.2	50.8		9.7		11.0	26.1
10.0		14.8	52.5		9.4		59.9	39.0		9.4		27.2	56.8		9.2		12.5	33.6
9.9		44.8	49.7		9.9		3.4	45.6		10.1		33.7	43.4		10.1		15.0	25.7
9.2		54.8	17.3	9.0 Ga	8.0		14.9	36.0	8.2 GWa	10.1		52.2	23.3		9.4		19.0	23.2
10.0		59.8	31.9		9.9		18.4	21.9		10.0		52.7	4.0		9.2		29.0	34.5
9.5	27	4.8	4.9	a	9.4		20.1	26.9		9.8	49	18.2	56.5		10.1		35.0	32.8
8.6		16.3	44.9	9.0 G=	10.0		31.1	59.1		10.3		21.2	19.4		10.0		52.0	46.4
9.0		21.3	41.9	9.8	8.8	40	0.1	28.1	9.0	10.1		24.2	55.1		8.2		55.0	21.5
8.7		28.3	22.6	9.2 a	8.6		2.1	45.1	9.2 Ga	9.0		28.2	8.3		10.2	57	6.5	9.1
9.3		33.3	0.5	9.0 a	8.2		11.1	3.3	8.2 Ga	10.0		42.2	49.1		9.6		8.5	25.0
10.0		37.3	32.5		9.8		13.1	15.5		10.2		49.5	1.0		7.6		9.0	25.5
10.0	28	13.3	11.0		8.8		27.3	57.1		10.3	50	0.2	45.9		10.1		10.2	59.8
8.8		39.8	54.3	a	8.8		27.6	40.1	9.5 Ga	8.8		29.2	57.4	9.0	9.6		12.0	46.3
10.0		4.9	43.8		8.8		33.6	32.1	8.0 GWa	10.3		29.5	59.1		9.2		16.5	54.2
8.9		9.8	11.2	9.5 Ga	10.0		39.6	30.5		10.2		31.1	41.8		9.2		22.0	49.5
10.0		34.8	24.7		10.0		53.1	41.1		10.1		33.2	23.7		9.6		26.0	3.5
10.0		35.3	56.0		8.9		54.1	26.8	9.0 Ga	10.1		33.7	58.5		9.4		36.0	23.2
8.8	30	7.3	36.1	9.5 a	9.4		59.6	27.5	10.0 b	10.1		41.2	44.5		10.1		46.5	46.3
10.0		11.8	7.9		10.0	41	16.1	50.6		10.0		50.8	1.0		10.3		47.9	40.9
9.3		16.8	52.8	9.5	9.4		25.1	8.6		10.3		51.7	46.2		10.3		49.4	2.0
25 pr.	+ 0	59.6	+ 1.8		+ 0	59.5	+ 0.8			+ 0	59.4	+ 0.5			+ 0	59.4	+ 0.2	

1081-1140.				1141-1200.				1201-1260.				1261-1320.			
mag.	5 ^h -6 ^h	-27°		mag.	6 ^h	-27°		mag.	6 ^h	-27°		mag.	6 ^h	-27°	
	m s /		a	m s /				m s /				m s /			
9.0	58	4.9	10.7 a	9.6	4	16.8	49.9	10.3	9	27.8	33.4	9.0	18	10.9	30.1
10.2		7.9	5.4	10.3		31.8	0.0	9.2	10	1.3	46.3	9.8		25.9	55.3
9.4		22.4	39.8	9.6		32.8	19.8	9.9		2.6	4.4	9.6		33.9	46.9
9.4		22.4	34.9	9.6		34.8	46.9	9.5		9.1	7.5	9.4		54.9	18.3 a
10.3		33.4	44.4	9.4		35.7	1.3	9.5		13.6	28.8 9.5	9.9	19	0.9	13.7
9.6		33.4	25.8	9.7		49.9	57.9	9.1		44.3	5.2 9.5	9.8		0.9	12.0
9.2		43.4	47.9 9.2 G	10.3		53.3	30.1	9.0		48.3	6.2 9.5	9.4		12.4	41.4
10.1		44.4	49.5	9.6		55.8	15.2	9.9	11	1.0	1.2	9.1		24.9	26.3 a
9.4		54.4	24.0	10.3	5	3.3	29.0	8.8		4.8	28.0 8.0 G=	8.3		24.9	57.5 8.5 G=
9.4		57.9	15.5 a	9.0		5.8	50.2 a	9.2		14.8	53.8	8.4		25.9	15.1 Ga
9.8	59	1.9	26.7	8.8		28.8	29.7 9.5 G	9.3		29.3	38.8	9.6		26.4	35.2
9.2		2.9	28.3	9.8		33.3	24.1	9.4		44.8	9.3	9.5		28.4	51.2
10.3		4.9	18.9	10.2		34.3	11.6	9.8	12	6.2	27.1	9.6		28.4	43.2
10.2		10.9	11.5			7.3	36.3 7.7 6.0 GSt*	9.5		10.3	53.8	10.0		31.9	9.3
10.2		16.4	8.5	8.4		41.3	32.7 9.0 -	9.8		10.8	3.4	9.4		35.9	30.4
10.2		18.5	32.5	10.3		42.8	35.4	9.5		11.8	34.2	9.4		36.9	43.4
10.3		24.4	3.3	10.1		56.3	37.4	8.6		12.8	22.0 8.8 Ga	9.6		41.9	30.1
9.0		27.9	49.8	10.2	6	5.8	23.8	9.6		17.8	54.6	9.6	20	10.6	18.0
10.2		29.9	52.5	9.7		13.8	11.4	9.5		20.3	13.6	9.7		21.9	50.3
10.1		30.9	18.1	9.0		24.0	59.0	9.6		30.8	7.4	9.9		27.4	16.5
9.6		36.9	57.1 9.5 a	10.0		24.8	23.9	9.5		30.8	55.5	9.8		41.9	38.0
9.3		37.9	4.8 10.0	7.8		29.3	1.9 7.5 GSt*	8.6	13	12.8	11.2 9.5 Ga	9.9		43.4	46.5
10.3		44.9	32.9	10.0		30.3	29.2	9.0		22.3	1.0 9.0 a	9.4		45.9	7.0
9.4		50.4	57.9 9.5 a	9.6		35.8	37.7	9.8		25.8	51.7	9.4		51.0	14.0
10.3		57.9	26.3	10.3		38.8	44.8	9.7		49.9	59.4	9.7		56.3	58.2
9.6	0	5.4	35.2	7.8		41.3	54.2 GSb=	9.8		56.2	19.5	9.9	21	3.5	4.4
9.8		13.4	37.4	10.3		43.3	37.8	10.0		56.3	25.2	9.9		17.5	19.8
10.0		15.9	48.1	8.4		43.3	12.2 7.8 G=	8.3	14	12.8	7.8 9.0 Ga.	9.4		21.5	18.2
9.4		20.9	41.4	10.3		47.3	1.2	9.6		18.3	11.3	9.2		23.5	49.7 a
8.8		31.9	11.0 8.2 Ga	10.2		58.3	22.3	9.9		21.8	3.0	9.9		27.0	34.1
10.3		38.4	9.1	10.2		59.5	0.9	9.5		26.2	28.8	9.6		35.0	18.0
10.2	1	7.9	33.3	10.3	7	6.8	48.2	9.8		35.8	37.2	9.4		52.0	28.5
10.0		11.9	22.0	9.4		16.8	33.7	9.0		40.8	34.0	9.6		54.0	22.4
8.9		21.4	53.7 a	9.4		25.8	42.0	9.2		48.8	10.4	10.0		58.5	53.1
10.0		22.9	18.3	10.3		31.3	15.4	9.5		52.3	37.2	9.8	22	7.5	41.6
9.7		27.9	4.5	9.3		33.3	9.4	9.5	15	1.8	56.5	9.4		16.5	43.8
10.3		29.4	47.9	10.3		34.4	26.5	9.8		13.3	59.3	9.4		33.5	0.3
9.2		35.4	3.9	10.0		38.3	54.3	10.0		16.2	40.1	9.5		33.5	55.4
10.3		38.4	55.0	9.4		41.8	45.6	9.6		17.3	56.7	9.0		36.0	51.6
9.8		39.9	5.5	10.2		42.3	48.6	9.5		20.3	21.4	9.1		36.5	38.9
9.6	2	6.8	7.3 a	9.6		44.3	1.9	9.0		41.3	20.8 10.0 -	9.2		41.0	48.2
8.6		9.8	15.1 Ga	8.1		44.3	41.7 7.2 GSb-	9.5	16	1.6	59.4	9.8		42.5	29.0
9.0		19.8	7.2 Gb	8.5		45.8	42.8 7.5 GSb	9.7		8.4	19.7	9.6		42.5	9.5
10.3		30.3	45.9	8.5		48.8	13.4	10.0		10.4	26.1	9.6		48.0	11.7
9.6		39.3	18.8	8.3		58.8	42.2 7.0 Gwb-	9.7		26.4	24.1	9.7	23	2.0	35.2
9.0		46.8	49.8	10.3		58.8	57.7	9.9		42.3	25.9	8.2		6.5	4.0 8.8 GSa
9.2		46.8	20.5	9.6	8	0.8	20.2	9.9		45.4	14.1	9.8		9.9	23.8
10.3	3	6.8	45.8	9.0		3.3	51.0	8.4		45.9	26.9 8.5 Ga	9.0		21.0	30.1
10.3		14.8	40.8	10.2		4.3	7.8	9.8		48.4	34.3	9.8		33.0	1.7
10.2		17.8	51.1	10.0		11.3	27.9	9.8	17	2.9	46.5	9.0		34.5	43.3 9.5 a
9.4		21.8	38.6	10.3		19.8	59.0	9.0		3.4	27.7	9.5		42.0	33.3
9.2		23.3	20.2	8.8		24.8	18.4	9.0		12.9	47.1 a	8.7		47.0	34.8 9.0 a
9.8		32.8	0.9	9.6		25.3	52.0	9.5		14.4	3.7 a	9.5		48.5	23.6
9.6		39.8	0.8	9.6		29.0	4.6	9.0		30.4	38.4 Ga	8.7		50.0	55.2 8.3 Ga
9.6		45.8	4.0	10.3		34.3	21.9	9.0		44.4	47.3 a	9.5		51.5	12.9
9.6		50.8	8.0	9.6		37.3	34.5	9.8		50.4	43.7	9.4	24	12.5	44.7
10.3		59.8	4.8	10.1		42.3	6.6	9.6		52.9	48.5	10.0		23.5	16.5
8.5	4	3.8	40.4 9.5 Ga	9.0	9	3.8	53.9	9.8		54.4	18.1	9.0		26.5	27.8 9.5 Ga
10.2		9.3	57.3	9.4		8.0	30.6	9.7	18	5.9	39.7	9.7		46.5	3.2
10.2		11.8	13.8	9.7		8.3	10.4	10.0		7.4	6.2	8.6		53.0	20.3 8.5 Ga
25pr.	+0	59.4	0.0												
				+0	59.4	-0.3									
								+0	59.4	-0.5					
												+0	59.5	-0.8	

1321-1380.				1381-1440.				1441-1500.				1501-1560.			
mag.	6h.	-27°		mag.	6h.	-27°		mag.	6h.	-27°		mag.	6h.	-27°	
	m	s	'		m	s	'		m	s	'		m	s	'
9.7	25	6.5	55.0	10.0	32	19.9	56.0	7.6	38	54.7	28.1	7.5	46	28.3	58.1
9.4		6.5	22.4	9.0		22.0	22.2	9.4	39	17.7	18.3	9.3		40.3	2.0
9.6		10.0	38.5	9.8		28.2	29.4	9.7		28.2	29.8	9.8		50.3	42.7
9.7		12.0	37.9	9.7		31.9	38.7	9.1		33.7	26.6	9.6		52.3	19.7
9.1		15.0	29.2	9.4		53.9	37.9	9.1		38.2	27.9	9.0		57.3	13.8
9.0		17.0	38.4	9.9		56.8	56.1	9.8		40.7	50.2	9.7		57.3	38.3
9.8		23.6	5.0	8.0	33	2.4	41.5	9.4		51.2	21.0	9.5	47	5.3	23.8
6.2		49.1	41.0	9.3		2.4	29.1	7.3		52.7	13.4	9.6		6.3	31.6
9.7	26	6.6	20.1	9.3		4.9	49.8	9.9		52.7	53.9	8.9		7.3	49.9
9.7		16.6	37.9	9.8		9.4	10.2	9.8		53.2	10.8	9.8		11.8	27.1
8.9		20.8	0.9	9.1		17.9	13.6	9.5		53.7	16.1	9.0		15.3	30.9
9.2		32.1	4.7	8.6		28.9	50.9	9.2		59.7	8.3	9.8		16.3	35.4
9.4		32.1	16.3	9.5		31.9	46.1	9.3	40	30.7	17.1	9.9		128.3	2.9
9.6		33.6	50.1	9.7		48.9	26.4	9.9		31.2	31.9	9.7		33.3	39.8
9.2		46.6	56.7	9.7		48.9	24.1	9.2		32.2	4.3	9.5		33.3	12.8
9.9		52.6	2.7	8.4		51.9	38.0	9.9		44.4	1.8	8.6		34.3	37.2
9.5		58.6	20.8	8.4		57.7	0.6	9.3		48.2	48.8	9.5		39.3	25.7
9.9	27	3.6	17.3	9.7	34	7.2	57.5	9.7	41	4.7	39.4	8.3		40.3	48.2
8.6		4.1	56.5	9.8		23.4	25.9	9.7		7.2	12.4	9.5		44.3	13.1
9.4		6.6	4.3	9.7		31.9	26.5	8.6		7.2	10.8	9.6		45.8	25.5
9.3		20.1	34.4	9.5		33.2	1.3	9.0	42	9.2	58.9	8.8		53.1	57.2
9.4		24.1	55.1	9.5		42.9	4.8	8.8		12.7	12.8	9.9		57.3	22.2
9.0		26.1	41.9	9.2		44.9	8.1	9.6		12.8	9.0	9.4		58.3	21.6
9.7		32.1	22.4	9.4		52.4	45.4	9.5		27.3	29.9	9.5	48	1.8	4.0
9.8		33.1	3.2	9.9		58.4	6.0	9.9		29.3	7.0	9.4		3.3	29.3
9.8		44.1	54.3	9.9	35	0.3	0.1	9.8		31.3	28.8	9.9		4.3	19.5
8.0		46.6	18.9	9.0		4.9	40.5	9.7		33.8	43.6	9.6		4.8	1.1
9.4		53.1	54.1	8.4		5.4	17.0	9.8		34.3	50.0	8.8		6.8	17.4
9.6		53.6	46.3	9.8		8.9	23.0	9.5		44.8	40.6	9.0		18.3	43.0
9.9		58.6	45.5	9.8		14.4	46.0	9.5		47.3	4.5	9.5		19.3	36.6
9.2		58.6	50.9	9.3		16.6	38.5	9.0		53.8	27.4	9.8		20.3	34.6
8.4	28	4.1	30.3	9.3		20.9	10.0	9.9		59.3	3.1	9.8		22.3	23.4
10.0		6.8	44.4	9.9		22.9	38.5	9.5	43	19.8	33.9	9.9		22.8	4.7
9.2		12.1	54.8	9.5		25.9	7.6	7.7		34.3	14.5	8.6		30.3	41.6
9.8		24.6	44.1	9.7		26.4	26.1	9.7		37.3	51.5	9.8		39.8	55.3
9.6		29.6	18.8	9.2		30.9	15.0	9.9		39.8	20.0	9.5		44.3	15.5
9.5		36.6	48.3	9.1		37.4	14.6	8.7		44.3	1.9	9.8		47.8	27.0
9.8		36.6	18.5	9.1		37.9	54.3	8.8		49.3	13.5	9.7		54.3	43.9
9.8		38.3	57.5	9.3		52.2	59.4	8.8		59.0	56.2	9.8	49	2.3	10.1
9.9		47.6	48.5	9.5		55.4	47.5	9.0		59.0	1.1	8.0		3.3	36.3
9.5		50.1	9.7	9.9		59.4	31.0	9.2	44	6.3	12.6	9.0		13.3	12.5
8.8		50.6	51.7	9.9	36	11.4	6.1	9.4		8.3	11.1	9.5		17.8	30.4
9.9		55.1	15.7	7.8		27.4	28.1	8.8		23.3	49.2	9.5		23.4	41.0
9.9	29	12.1	16.7	9.7		30.7	58.0	9.3		26.3	24.4	9.8		27.4	7.8
9.4		13.6	31.5	9.3		32.2	23.8	9.7		53.8	49.9	8.4		33.9	24.0
9.0		16.1	13.8	8.2		40.2	45.7	9.3		58.5	57.7	9.9		45.9	48.6
9.6		19.1	37.2	9.4		40.7	18.2	7.0	45	6.3	11.5	9.0		51.4	4.6
9.8		43.4	16.2	9.7		44.2	11.9	9.4		13.8	27.0	9.8		53.4	6.2
9.8		53.4	30.6	8.7		46.2	37.4	8.8		21.8	48.8	9.9		53.6	26.0
9.1		53.9	3.2	8.4		47.2	30.9	8.6		21.8	9.9	9.1		55.9	18.8
9.7		56.4	59.9	9.1		59.7	6.6	9.9		37.3	39.1	9.3	50	6.1	57.8
8.8	30	2.4	11.2	9.0	37	4.2	51.1	9.7		57.8	59.6	9.9		7.9	30.9
9.2		5.9	12.0	9.9		15.7	9.0	9.0	46	3.3	46.3	9.9		13.4	50.2
9.0		12.9	39.0	9.9		36.2	29.1	9.5		4.3	36.1	9.5		15.9	38.8
9.4		41.9	56.3	9.6		50.2	34.1	9.2		4.3	31.1	9.9		28.6	2.9
10.0	31	2.9	17.9	9.5		57.2	42.9	8.9		10.8	6.9	9.4		34.4	0.8
8.4		10.9	30.7	9.6	38	23.2	25.0	9.7		23.3	19.8	9.9		36.9	49.6
9.5		39.7	24.1	9.7		41.2	49.0	9.5		23.8	20.4	9.9		38.4	12.9
9.8	32	0.9	36.8	9.6		42.2	26.4	8.6		24.8	45.7	9.8		47.4	35.0
9.9		3.9	21.6	9.5		43.2	54.1	9.9		26.3	55.9	9.2		47.9	52.4
25 pr.	+ 0	59.5	-1.0		+ 0	59.6	-1.3		+ 0	59.7	-1.6		+ 0	59.8	-1.7

1801-1860.			1861-1920.			1921-1980.			1981-2040.		
mag.	7h.	-27°	mag.	7h.	-27°	mag.	7h.	-27°	mag.	7h.	-27°
	^m _s			^m _s			^m _s			^m _s	
7.5	7 22.7	15.8	9.8	11 27.5	1.5	9.5	14 47.4	21.4	9.6	17 53.0	7.9
9.6	26.7	10.6	9.0	30.9	6.3	9.6	48.9	41.4	9.0	54.0	33.1
9.2	32.7	7.4	7.3	34.9	39.6	8.2	52.4	43.4	9.4	57.0	59.0
9.4	37.7	23.7	8.9	36.4	59.2	9.0	53.9	29.3	9.0	59.5	9.2
9.2	38.2	35.7	9.5	36.4	17.1	9.7	57.4	16.9	9.8	18 0.0	13.8
8.8	55.2	0.2	9.0	39.4	4.7	9.6	15 2.4	31.4	9.1	9.0	13.7
9.0	55.7	46.4	9.4	40.4	1.1	9.6	5.9	58.5	9.6	9.5	4.1
9.8	8 4.6	36.6	9.6	41.5	19.1	9.8	7.4	31.4	9.3	10.0	56.2
9.6	5.7	20.5	9.7	44.4	34.9	9.4	14.4	34.2	8.5	11.0	24.3
9.4	8.2	33.0	8.4	44.4	35.5	9.1	14.9	29.2	9.6	15.0	39.7
9.8	11.7	1.6	9.6	52.4	11.2	9.2	15.4	21.2	9.4	16.5	25.2
9.8	21.7	56.1	9.6	53.9	18.0	9.1	20.4	7.7	9.6	22.0	33.5
9.6	23.7	50.6	9.6	12 1.4	30.9	9.6	26.4	23.9	7.7	27.0	35.6
9.4	25.7	27.1	9.4	5.9	19.9	9.6	31.4	12.3	9.8	29.0	13.0
9.6	31.2	7.9	9.0	7.4	49.8	9.4	32.4	29.2	9.6	30.0	6.0
6.6	34.1	8.7	9.0	11.4	42.7	9.0	44.4	55.0	9.4	57.0	47.0
8.8	35.6	16.6	9.6	12.4	52.0	9.7	47.4	33.3	9.8	59.7	59.0
9.7	37.6	56.9	9.6	17.9	44.1	9.6	48.4	16.2	9.4	19 10.0	32.2
9.8	42.6	40.0	9.4	21.4	11.3	9.8	55.3	6.1	8.9	24.0	24.7
8.8	45.6	16.4	9.2	31.4	15.5	8.5	56.3	55.1	9.1	24.5	56.2
8.4	51.6	4.9	9.4	42.4	57.2	9.6	16 0.3	58.3	8.2	35.0	52.5
9.5	52.6	7.8	9.6	46.4	28.5	9.6	2.3	57.7	9.2	37.0	3.9
9.4	55.6	40.1	8.7	47.4	22.2	9.6	2.3	51.1	9.8	37.5	19.5
9.3	55.6	32.7	9.7	51.4	12.2	9.8	2.3	36.0	9.8	38.5	20.1
9.4	9 2.6	8.0	9.4	13 0.9	10.0	9.6	3.8	47.1	9.8	39.0	42.2
9.7	10.6	29.4	9.7	1.4	59.0	9.8	4.8	18.5	9.4	51.0	32.3
9.8	12.6	56.5	9.8	5.4	36.8	9.7	10.3	5.1	9.8	52.0	51.7
8.6	14.6	30.5	9.4	5.9	18.7	9.0	11.3	21.8	9.3	20 0.0	26.8
7.8	17.6	57.3	9.1	6.9	27.8	9.4	12.3	38.1	9.8	0.0	42.2
9.8	21.6	22.0	9.0	6.9	27.4	9.4	12.3	43.1	9.0	3.0	8.8
9.8	26.8	1.1	9.8	11.4	2.5	9.4	12.8	55.8	9.3	4.0	17.8
9.4	34.1	19.4	9.2	11.4	28.5	9.7	15.3	40.2	9.3	6.0	43.5
9.3	36.6	23.0	9.5	11.4	16.9	9.8	20.8	20.2	9.8	8.0	46.1
9.8	51.6	0.3	9.8	17.9	16.9	9.2	21.8	13.1	9.8	10.0	6.0
9.8	51.6	49.5	9.4	18.4	30.9	9.7	22.8	38.4	9.6	10.8	1.9
9.4	54.6	35.9	9.5	26.4	13.7	9.2	22.8	14.7	8.8	15.0	23.1
9.7	58.6	41.7	9.8	31.4	41.6	9.6	27.3	47.7	7.6	15.8	56.6
9.7	10 7.6	41.5	9.8	31.4	50.8	8.2	28.6	57.4	9.8	16.0	3.0
9.8	16.6	10.2	9.2	32.4	15.2	9.6	32.3	48.4	9.7	16.5	55.0
9.6	26.6	30.0	9.0	35.4	30.8	9.8	35.2	24.8	9.4	17.0	45.9
9.6	31.6	31.7	9.1	35.4	55.7	9.6	35.3	14.4	9.6	17.0	5.1
9.0	32.6	12.3	9.4	36.4	40.1	9.6	35.3	2.2	8.4	18.0	49.2
9.8	35.6	52.3	9.0	53.4	40.0	9.1	49.6	24.9	9.8	19.5	1.6
8.8	45.1	37.0	9.0	56.4	43.6	9.8	50.9	7.8	9.5	22.5	19.7
9.7	47.6	31.2	9.4	57.4	26.5	9.8	52.3	52.0	9.8	30.0	45.1
9.6	49.6	11.0	9.4	59.9	12.5	9.8	55.1	59.4	9.8	30.0	13.2
8.4	51.6	13.6	9.6	14 1.4	32.7	9.8	17 2.2	6.5	8.8	45.0	53.8
9.7	51.6	36.0	9.6	4.9	22.3	9.4	7.3	49.0	9.8	50.0	29.5
9.8	52.6	57.0	9.6	6.9	19.6	9.8	11.1	24.0	9.8	50.0	23.5
9.8	52.6	55.3	9.0	11.9	14.5	9.8	19.1	4.2	9.8	55.0	51.6
9.7	57.6	9.4	9.6	12.4	46.0	9.6	21.0	51.4	9.7	21 2.0	40.2
9.7	11 0.6	48.4	9.6	13.4	58.2	9.7	22.5	1.0	9.4	7.0	17.5
9.3	2.6	53.0	9.8	28.9	15.0	9.3	23.5	40.6	9.8	10.5	16.4
9.8	6.1	57.4	9.8	31.3	58.5	9.4	29.5	32.8	9.7	11.0	6.4
9.1	6.6	36.9	9.2	32.4	28.6	9.6	30.4	28.3	9.8	13.0	25.1
9.1	9.4	20.2	9.6	33.8	58.3	9.8	33.9	59.9	9.8	15.0	0.9
9.6	10.4	31.9	9.8	35.4	27.2	9.8	34.2	30.8	8.3	15.5	54.8
9.6	11.4	28.1	9.8	41.9	48.0	8.8	35.0	20.5	9.8	16.0	5.5
9.6	15.9	23.9	8.8	42.4	37.8	9.4	41.4	59.0	9.4	19.5	14.9
8.5	22.4	32.4	9.4	42.4	29.7	9.8	43.0	19.0	9.5	19.5	23.9
25pr.	+ 1 0.2	-2.5	+ 1 0.8	-2.6		+ 1 0.4	-2.7		+ 1 0.5	-2.9	

2041-2100.			2101-2160.			2161-2220.			2221-2280.		
7h.	-27°		7h.	-27°		7h.	-27°		7h.	-27°	
m	s	'	mag.	m	s	mag.	m	s	mag.	m	s
21	23.0	43.1	9.0	25	20.0	29.9	8.7	24.0	55.0	9.0	-
9.4	23.0	8.1	9.8	9.8	25.0	56.9	9.8	25.0	14.6	8.5 =	9.0
9.8	25.0	16.7	9.8	9.8	32.0	54.8	8.2	31.0	42.4	9.6	23.1
9.8	26.5	51.7	9.8	9.8	34.0	59.0	9.4	32.5	29.7	9.2	31.1
9.8	31.5	6.0	9.8	9.8	36.0	59.1	9.8	34.0	33.9	9.3	31.1
9.8	35.5	30.2	9.6	9.6	39.5	7.2	9.8	35.0	40.0	9.4	31.1
9.6	35.5	0.2	9.8	9.8	42.0	47.3	9.4	39.9	2.6	9.0	43.5
9.7	56.0	11.8	9.8	9.8	43.5	19.4	9.6	40.5	4.0	9.2	48.1
9.4	56.0	17.0	7.9	7.9	44.5	50.1	9.4	43.6	34.2	9.4	48.6
9.6	59.0	26.7	8.2	8.2	44.5	51.6	9.8	49.1	59.2	9.3	50.1
						7.6 GSA					
						8.1 GSA					
9.4	59.5	24.8	9.1	9.1	45.0	42.4	9.8	50.1	25.0	9.4	51.1
9.8	0.5	4.3	9.2	9.2	51.5	25.7	9.5	50.6	39.3	9.8	55.1
9.8	6.0	56.1	9.7	9.7	54.5	19.1	9.4	59.1	30.0	9.8	58.1
9.6	9.0	3.8	9.8	9.8	54.9	8.6	9.8	29	3.1	7.6	0.1
9.4	14.0	47.9	9.6	9.6	59.0	1.2	9.7	5.1	32.8	9.4	3.1
9.6	18.0	49.0	9.6	26	7.0	11.2	9.8	11.1	53.8	9.8	9.6
9.8	19.0	6.4	9.7	9.7	9.0	20.4	9.6	12.9	2.7	9.8	10.1
9.8	19.5	15.2	9.8	9.8	9.0	50.8	9.7	13.1	9.2	9.4	13.1
8.7	26.5	8.8	9.6	9.6	9.5	5.4	9.8	16.1	12.7	9.3	16.1
9.8	27.0	32.7	9.2	9.2	10.0	5.1	8.7	20.1	58.7	9.0	19.1
										9.5	19.1
9.8	37.0	22.8	9.0	9.0	17.0	8.9	9.0	26.6	13.6	8.9	19.1
8.7	38.5	30.2	9.0	9.0	20.0	41.2	9.3	29.6	57.1	9.6	20.1
9.7	44.0	41.6	9.8	9.8	20.0	29.6	9.4	30.1	11.1	9.4	25.1
9.1	53.0	52.3	9.8	9.8	23.0	0.0	9.6	34.1	25.9	8.4	39.8
9.6	53.0	33.1	9.8	9.8	27.5	48.0	9.8	35.6	0.7	9.8	41.3
8.8	59.0	6.8	9.8	9.8	32.0	44.7	9.3	40.1	46.0	9.8	41.3
9.2	0.0	55.8	9.7	9.7	35.0	45.8	9.8	42.1	3.6	9.3	47.3
9.0	0.0	35.4	9.8	9.8	35.0	2.2	9.4	43.1	22.6	9.4	53.3
8.8	0.5	4.7	9.8	9.8	36.9	28.9	9.7	44.1	56.9	9.4	57.3
8.2	9.0	8.7	9.7	9.7	41.0	30.0	9.8	45.1	6.9	9.7	7.8
										8.0	11.3
9.8	11.0	59.8	9.8	9.8	45.5	4.3	9.3	59.1	43.4	9.0	17.3
9.8	11.0	39.9	8.7	8.7	49.5	30.4	9.7	0.6	29.6	9.8	19.3
9.0	13.5	13.2	9.8	9.8	49.5	55.8	9.4	3.1	6.4	9.0	19.8
9.3	15.5	18.3	9.7	9.7	51.0	18.3	9.8	3.1	43.0	9.3	23.8
9.4	16.5	57.2	9.4	9.4	52.0	23.5	9.4	12.1	11.9	9.5	31.3
9.5	20.5	37.6	9.4	9.4	54.0	51.2	9.5	16.6	16.8	9.8	35.3
9.3	26.5	57.9	9.7	27	0.0	5.5	8.7	17.5	50.3	9.2	35.8
9.6	28.5	53.3	9.6	9.6	9.5	58.8	8.9	20.1	12.2	9.2	35.8
9.6	34.0	16.7	8.5	8.5	10.0	38.7	9.8	24.6	29.6	9.6	39.8
9.8	35.0	33.4	9.4	9.4	11.5	38.4	9.8	25.1	29.4	9.4	44.8
										8.5 a	44.8
9.5	40.0	12.7	8.9	8.9	17.5	38.0	9.4	30.1	16.2	9.6	44.8
8.6	40.0	38.7	9.8	9.8	19.6	54.0	8.0	30.1	2.6	9.6	46.3
9.8	50.0	57.6	8.9	8.9	20.0	52.2	9.7	35.1	45.6	9.8	48.8
9.7	52.0	25.1	9.3	9.3	20.5	38.1	9.8	37.1	23.1	9.2	49.8
9.5	52.5	36.5	9.8	9.8	21.5	22.4	9.2	38.1	58.7	9.6	51.3
9.8	11.0	32.1	9.8	9.8	25.5	48.6	9.4	40.1	8.1	9.5	53.8
9.8	11.0	55.0	9.8	9.8	26.0	6.8	9.8	43.6	19.7	9.6	55.3
9.8	20.5	25.9	9.6	9.6	27.5	3.9	9.8	46.1	25.7	9.6	55.8
9.5	22.0	33.5	9.0	9.0	31.0	9.2	9.0	47.6	36.8	9.4	58.8
9.5	25.5	39.4	8.8	8.8	34.5	41.6	9.2	47.6	22.0	9.5	14.8
										8.5 a	24.8
9.8	26.0	28.1	8.6	8.6	35.0	35.6	8.8	55.6	38.6	9.4	29.8
9.5	33.5	52.2	8.8	8.8	35.0	28.4	9.5	0.6	52.9	9.3	39.8
9.6	35.0	48.3	9.8	9.8	36.0	45.0	9.4	1.6	27.6	9.0	39.8
9.3	39.0	3.4	9.5	9.5	40.0	58.4	8.5	3.6	13.6	9.8	39.8
9.4	45.0	17.4	9.6	28	0.5	22.2	9.8	4.6	44.3	9.4	43.3
9.8	51.5	53.9	9.8	9.8	6.0	22.0	9.8	5.1	22.0	9.8	45.8
9.5	52.0	50.6	9.1	9.1	14.0	48.1	9.8	6.1	29.3	9.4	45.8
9.5	2.0	23.3	9.3	9.3	15.0	32.0	9.4	13.1	10.8	9.6	46.3
9.8	6.5	12.7	9.6	9.6	19.0	35.2	9.6	14.6	51.3	9.5	51.3
9.6	13.0	16.3	9.4	9.4	22.0	23.8	9.7	15.1	23.1	9.6	51.3
25pr.	+ 1	0.6	-3.0	+ 1	0.6	-3.1	+ 1	0.7	-3.2	+ 1	0.8
											-3.3

2281-2340.				2341-2400.				2401-2460.				2461-2520.			
mag.	7h.		-27°	mag.	7h.		-27°	mag.	7h.		-27°	mag.	7h.		-27°
	m	s	'		m	s	'		m	s	'		m	s	'
9.4	34	54.3	25.7	9.6	38	5.8	6.3	9.7	40	51.8	3.9	9.6	44	32.6	7.5
9.7	35	1.3	16.0	9.3		12.8	7.5	8.5		52.3	54.4	9.8		33.6	46.1
9.4		5.3	22.1	9.6		16.8	24.2	8.8		55.8	28.7	9.9		34.1	14.8
9.7		22.3	21.4	9.7		18.8	7.4	9.9		59.3	12.0	9.2		40.6	56.1
9.7		24.8	42.0	9.5		22.3	11.1	9.6	41	5.8	27.9	9.2		41.6	56.1
9.6		24.8	58.7	9.0		23.8	8.9	9.4		6.3	25.2	9.9		42.1	53.4
9.5		25.3	56.5	9.8		24.3	40.7	8.8		7.8	17.0	9.5		42.6	58.3
8.8		27.3	55.9	9.5		25.1	58.2	9.9		21.4	0.3	9.7		45.1	14.6
9.4		32.8	21.9	9.4		31.3	54.7	9.9		24.8	49.1	9.4		45.6	51.0
7.1		39.8	39.4	9.2		31.8	4.3	9.9		30.3	10.2	9.8		46.1	32.0
9.8		43.3	13.4	9.1		34.8	14.1	9.2		30.8	41.6	9.0		50.1	19.8
9.4		54.3	35.6	9.8		40.3	12.8	9.4		32.8	27.8	8.8		54.6	31.9
9.3		59.8	44.1	9.6		40.8	23.0	9.5		32.8	54.3	9.8		54.6	24.3
9.5	36	8.8	33.7	9.8		44.2	47.3	9.5		39.8	12.5	9.9		55.1	12.3
9.4		9.8	17.8	9.5		45.3	39.3	9.9		42.8	3.8	9.7		59.1	44.4
9.8		10.8	0.6	9.7		46.3	49.1	9.9		46.7	13.0	9.6	45	0.1	28.0
9.8		19.3	47.6	9.8		50.8	33.6	9.7		49.8	15.8	9.8		0.1	47.2
9.7		19.8	20.9	9.7		53.3	18.2	9.5		50.3	19.8	9.7		7.6	29.1
9.8		22.3	14.9	9.8		58.8	31.7	9.9		52.8	7.1	9.5		8.1	17.4
9.6		24.8	52.5	9.6	39	4.5	24.3	9.0		59.8	36.2	9.9		13.1	50.3
9.5		25.8	38.1	9.8		5.5	43.0	9.9	42	4.8	54.6	8.8		14.6	39.3
9.7		29.3	55.0	8.7		6.3	25.0	9.9		9.3	54.4	9.2		20.1	12.7
9.4		30.3	10.3	9.8		6.8	51.2	9.8		9.5	25.8	9.8		21.1	6.3
9.8		30.3	13.1	9.8		7.3	30.0	9.5		19.5	11.8	9.9		22.6	38.7
9.8		36.8	17.5	9.8		8.8	10.5	9.8		20.0	7.4	9.9		30.1	6.5
9.3		38.8	51.9	9.5		10.3	13.4	9.8		23.0	29.4	8.8		30.1	58.7
9.8		50.8	8.3	9.8		12.8	4.3	9.6		29.0	39.4	9.2		31.4	2.2
9.6		56.3	31.1	9.8		13.8	59.7	9.8		31.0	3.5	9.4		31.6	54.1
9.8		58.8	4.6	9.8		19.0	19.1	9.1		31.5	33.5	9.2		36.1	24.7
9.8	37	0.8	1.2	8.6		25.5	45.3	9.8		35.0	21.1	9.7		41.6	28.0
9.5		0.8	34.1	9.8		27.5	58.4	8.6		41.5	18.7	9.1		42.1	14.2
9.4		1.8	40.6	9.8		29.8	28.9	8.9	43	0.0	12.6	9.9		47.6	10.3
9.5		1.8	54.5	9.6		33.2	37.1	9.0		4.0	30.9	9.0		48.1	14.8
9.8		4.7	0.1	9.8		37.8	13.1	9.5		5.0	12.1	9.6		48.6	18.9
9.4		4.9	42.7	9.0		39.8	18.3	9.7		6.0	41.6	9.9		50.1	54.2
9.6		5.3	19.1	9.7		42.0	36.1	9.9		10.0	32.2	9.5		54.1	11.4
9.4		6.8	38.1	9.3		42.5	24.6	9.6		13.5	59.6	9.2		55.6	24.7
9.8		7.3	43.3	9.7		42.8	47.3	9.2		20.0	33.4	9.9		57.3	58.9
9.6		14.8	9.5	9.8		43.5	14.4	9.7		23.5	53.7	9.4	46	20.2	55.0
8.2		14.8	38.3	9.4		44.5	3.5	9.3		25.0	46.8	9.4		23.7	41.7
9.8		19.8	10.5	9.3		47.8	31.7	9.9		25.0	48.8	9.5		27.7	0.3
7.8		21.3	26.2	9.8		51.2	5.2	9.2		25.0	11.4	9.5		34.0	58.8
9.5		22.3	29.7	9.3		52.5	28.6	9.4		29.7	59.5	8.8		38.4	2.8
9.8		29.8	9.6	9.7		52.8	20.6	9.4		30.0	20.4	9.9		41.7	57.4
9.6		31.3	31.2	9.3		58.8	53.4	9.5		35.0	18.0	9.5		45.2	31.8
9.8		31.8	17.7	9.6	40	8.7	49.6	8.7		43.0	6.2	9.6		55.2	28.6
8.8		34.3	42.6	9.8		10.2	11.0	9.2		44.0	38.6	9.9		56.2	56.0
9.8		37.8	39.9	8.5		12.3	20.3	9.4		49.5	27.7	9.4		58.2	20.8
9.4		39.8	50.6	9.4		12.3	8.3	9.9		55.0	23.0	9.0		59.0	59.0
9.6		39.8	28.0	9.8		14.3	59.5	9.2		56.0	39.0	9.3		59.2	0.3
9.3		44.8	41.9	9.6		26.7	33.2	9.7	44	5.0	55.6	9.1	47	0.2	20.6
9.3		44.8	8.2	9.0		32.7	43.0	9.8		7.5	42.8	9.7		5.2	36.2
9.8		48.8	48.7	9.5		34.8	36.4	8.8		8.5	32.0	9.6		6.2	26.4
9.4		56.3	32.2	9.5		34.8	11.5	9.9		15.0	4.5	9.5		12.7	42.8
9.6		56.3	44.4	9.2		40.8	49.1	9.8		15.0	58.8	9.4		12.7	35.1
9.8		58.3	42.9	9.5		41.8	35.1	9.2		16.0	41.4	9.5		17.7	13.7
7.5		58.8	22.4	9.7		45.0	44.0	8.6		23.5	31.2	9.6		20.2	18.2
9.8		59.3	54.3	9.8		46.8	37.4	9.8		27.1	56.0	9.7		24.7	26.8
9.5		59.9	9.2	9.2		47.8	38.1	9.5		27.5	11.3	9.9		24.7	42.0
9.5	38	2.8	24.8	9.8		51.3	32.1	9.9		30.5	0.5	9.9		25.5	59.9
2.5 pr.	+ 1	0.9	-3.4	+ 1	1.0	-3.5		+ 1	1.1	-3.6		+ 1	1.2	-3.7	

1886AraCap...1G

7^h

2521-2580.				2581-2640.				2641-2700.				2701-2760.			
7 ^h .		-27°		7 ^h .		-27°		7 ^h .		-27°		7 ^h .		-27°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.4	47	26.2	9.5	9.9	50	13.3	27.9	9.7	52	47.9	12.9	8.8	56	24.5	20.4
9.0		37.7	39.9	9.9		15.3	1.3	9.7		50.4	23.4	9.4		24.5	46.1
9.6		38.2	7.5	7.7		16.3	57.4	8.5		51.4	29.9	9.0		25.0	46.6
9.6		39.2	17.1	9.0		20.3	7.8	9.5		52.9	53.7	9.8		28.5	58.4
9.5		43.7	6.4	9.6		22.3	33.8	9.8		52.9	22.1	9.7		30.5	40.6
9.9		43.7	35.3	9.4		25.3	14.5	9.8	53	0.4	31.7	8.4		31.5	19.8
9.6		44.2	46.0	9.5		25.3	20.4	9.7		0.4	22.4	9.2		34.5	8.1
9.7		46.2	10.0	9.2		26.3	4.5	9.7		0.9	29.8	9.5		39.0	50.0
9.4		50.2	52.4	9.5		27.3	37.1	9.9		5.4	17.2	9.5		40.5	16.6
9.7		54.2	24.1	9.6		28.9	59.2	9.9		6.9	14.8	9.2		44.0	34.4
9.4		59.8	46.7	9.4		29.3	15.5	9.6		7.9	50.1	9.7		44.5	8.9
9.0	48	0.3	51.0	9.5		29.3	35.7	9.8		15.4	17.0	9.5		45.5	28.2
9.1		1.8	40.1	9.6		31.8	31.0	9.6		21.4	50.1	9.8		48.0	13.6
9.6		4.8	57.2	9.7		32.8	34.0	9.0		26.4	32.5	9.9		54.0	0.7
9.5		7.8	24.7	9.8		37.3	3.5	8.6		30.4	14.2	9.9		55.5	1.2
9.0		9.9	19.3	9.6		44.3	49.2	9.2		37.4	6.9	9.6		57.5	13.8
8.9		12.8	37.6	9.9		47.3	38.3	9.6		42.9	2.9	9.7	57	4.0	34.2
9.5		16.8	49.2	8.9		55.8	35.7	8.7		45.9	34.0	9.9		11.5	26.4
9.9		19.9	58.7	9.5		56.8	53.2	9.4		51.9	56.0	9.6		11.7	59.9
9.9		20.3	56.3	9.5	51	0.3	41.2	9.5	54	1.4	20.7	9.8		14.5	46.2
9.0		30.3	8.2	9.2		1.8	33.8	9.6		7.4	33.6	9.9		15.0	57.2
9.9		31.3	31.8	8.0		8.3	51.0	9.6		9.0	58.4	9.1		16.5	19.3
9.9		31.4	7.1	9.8		10.8	29.3	9.0		10.5	15.4	8.8		17.5	56.6
9.9		32.8	32.9	8.8		12.4	57.4	9.9		10.5	14.1	9.4		18.7	57.6
9.5		32.8	9.9	9.5		16.8	51.0	9.7		20.5	30.0	9.9		25.5	28.8
9.0		37.3	41.9	9.9		20.3	40.8	9.2		27.5	56.0	9.4		26.0	28.2
9.0		38.3	39.3	9.6		20.8	48.2	9.2		27.5	24.4	8.0		28.0	11.8
9.1		39.3	0.5	9.9		21.8	40.0	9.9		30.5	39.0	8.8		32.5	11.4
9.9		44.3	38.3	9.5		22.3	17.2	9.9		33.3	58.2	9.5		37.5	29.2
9.6		48.3	43.2	9.5		25.3	44.4	9.8		35.5	21.0	9.2		39.5	20.1
9.9		50.3	40.7	9.4		25.3	16.9	9.0		39.5	45.9	9.4		41.0	13.9
9.9	49	9.3	18.1	9.1		28.8	11.3	9.2		40.0	53.9	9.4		43.5	46.9
9.8		15.3	34.5	8.8		31.3	52.5	9.9		41.0	36.2	9.9		44.2	58.4
7.5		20.3	46.7	9.0		31.3	36.2	9.9		51.0	4.3	9.5		44.5	38.3
9.8		20.3	46.1	9.1		32.3	8.8	9.7		52.3	59.0	9.6		49.0	27.7
9.9		21.3	0.2	9.5		34.8	16.3	9.4		56.6	57.1	9.6		55.5	30.1
9.7		22.3	38.9	9.7		42.8	36.4	9.0		57.5	26.1	9.0		57.5	5.7
9.7		25.8	37.7	9.2		47.3	13.9	9.7	55	2.5	16.5	9.8	58	0.5	22.2
9.9		30.3	49.9	9.2		49.8	13.2	9.7		3.0	46.6	9.4		1.5	22.9
8.8		36.3	28.5	9.9		50.3	36.6	9.9		6.5	48.0	9.5		6.0	25.1
8.4		37.8	25.2	9.4		51.8	55.5	9.7		10.0	28.8	9.2		12.5	37.0
9.5		38.3	4.4	9.9		53.0	6.2	9.5		16.0	5.2	9.9		13.5	17.2
9.5		40.3	4.9	9.7		53.8	49.7	9.7		30.5	13.8	9.2		19.0	12.5
9.9		40.3	32.3	9.8	52	6.6	2.4	9.7		38.5	39.2	9.2		24.0	30.2
9.7		41.3	54.5	9.7		9.8	12.1	9.7		47.5	57.3	9.5		26.5	46.4
9.2		41.3	57.1	9.4		10.8	6.8	9.8		50.5	26.8	9.4		27.0	33.7
9.8		43.3	44.1	9.9		17.3	7.5	9.2		54.1	57.1	9.6		31.0	55.0
9.5		45.3	24.9	9.7		17.3	15.0	9.7		59.0	38.6	9.5		33.5	1.2
9.4		45.8	43.0	9.9		20.3	37.3	9.8	56	0.5	29.0	9.6		36.0	31.1
9.2		46.3	58.0	9.2		20.9	31.9	9.3		0.5	10.0	9.9		40.5	24.8
9.9		49.3	34.3	9.9		21.9	46.2	9.0		5.5	32.3	9.9		46.5	51.8
9.7		49.5	17.0	9.9		24.4	36.2	9.5		6.5	7.2	9.9		47.5	57.8
9.9		51.3	38.5	9.6		25.4	49.0	9.9		7.5	59.5	9.4		50.5	41.0
9.5		53.8	49.1	9.3		26.9	9.7	9.6		9.5	44.4	9.9		54.5	39.1
9.9		54.8	49.0	9.7		29.4	16.0	9.9		15.5	35.4	9.3		55.5	45.7
9.7		56.8	53.9	9.6		33.9	25.5	9.8		19.5	53.7	9.5		57.6	45.4
9.7		58.8	8.3	9.2		34.4	14.0	9.7		20.0	6.0	9.0		59.6	8.0
9.4	50	10.3	24.6	9.9		38.4	53.2	9.0		20.5	22.9	9.5	59	0.6	7.8
9.5		10.3	8.2	9.5		39.9	33.2	9.7		21.0	4.8	9.8		0.6	5.1
9.6		10.8	21.1	9.5		41.4	52.8	9.7		22.5	22.2	9.9		3.6	5.4
25pr.	+ 1	1.4	-3.8	+ 1	1.4	-3.9		+ 1	1.6	-4.0		+ 1	1.6	-4.1	

1896ArcCap...3....1G

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
mag.	7 ^h -8 ^h .	-27°		mag.	8 ^h .	-27°		mag.	8 ^h .	-27°		mag.	8 ^h .	-27°	
m	s			m	s			m	s			m	s		
9.9	59	5.6	49.2	9.7	0	39.1	35.9	10.2	3	9.3	17.9	10.2	6	55.8	23.9
9.2		10.6	30.9	9.4		40.6	44.0	10.2		9.8	49.9	10.2		59.8	38.2
9.5		11.1	48.6	9.5		40.6	35.2	10.0		10.3	41.0	10.2	7	0.8	24.5
9.7		11.1	17.2	9.6		41.6	52.2	10.0		14.8	13.4	10.2		1.3	54.2
9.9		11.6	45.6	9.7		43.6	55.8	9.9		14.8	20.7	9.3		5.8	3.4
9.9		12.6	6.6	9.2		44.6	6.7	9.5		17.3	19.0	8.9		8.3	55.0
9.9		13.6	6.2	9.9		44.6	14.9	9.9		19.8	36.1	10.2		8.3	54.4
9.9		16.1	53.0	9.5		45.6	36.2	9.8		25.3	46.3	9.0		9.1	30.3
9.2		16.1	24.6	9.8		46.6	27.5	10.0		25.8	52.8	10.0		13.6	26.5
9.3		18.1	50.2	9.5		47.1	50.6	10.2		30.8	7.5	10.2		18.1	45.9
9.4		19.1	35.0	9.5		49.6	54.3	10.2		31.3	15.2	9.3		20.1	21.8
9.2		25.1	26.0	9.9		52.1	25.3	10.2		40.8	35.5	10.2		24.6	42.9
9.9		30.6	51.9	9.4		53.1	56.2	9.7		44.8	13.5	9.3		25.1	41.9
9.8		31.1	24.0	9.6		55.6	11.4	9.6		46.3	18.9	9.5		30.1	28.2
9.4		33.1	30.9	8.5	1	0.6	53.0	9.8		49.3	14.2	10.2		33.6	48.8
9.2		40.1	46.6	9.0		9.1	43.3	9.1		49.8	4.4	9.5		43.6	19.7
9.0		40.6	43.6	9.7		9.6	23.5	9.7		50.8	18.7	9.0		48.6	35.0
9.7		42.6	25.8	9.3		9.7	21.5	10.2		51.3	46.0	9.8		50.1	42.3
9.2		44.1	50.4	9.3		11.6	15.7	9.6		54.8	20.6	8.8		56.6	20.6
9.0		44.6	49.7	9.9		11.6	5.5	10.2		59.8	6.5	9.5	8	0.1	32.2
9.4		44.6	48.2	9.8		13.6	5.3	9.0	4	2.8	50.0	9.2		1.1	8.9
9.0		45.1	18.2	9.7		15.6	49.0	10.2		19.3	46.6	10.2		3.6	43.9
9.8		47.1	45.2	9.5		16.1	24.7	8.6		20.8	5.1	8.3		4.1	27.9
9.5		48.6	10.3	9.5		17.4	0.4	9.7		23.3	43.4	9.0		4.1	21.4
9.4		48.6	16.5	9.7		23.1	14.7	9.8		26.8	55.7	10.0		9.6	31.2
9.2		50.6	47.5	9.4		23.6	35.9	10.0		29.2	51.1	10.0		12.6	10.4
9.8		51.9	1.8	9.9		24.6	45.7	8.6		29.8	4.3	10.0		20.1	41.3
9.0		54.6	17.9	9.2		29.1	39.3	9.8		29.9	58.6	10.2		30.1	11.6
9.9		54.6	46.5	9.9		29.6	46.7	9.8		34.3	23.9	9.7		32.1	13.1
9.0		56.1	50.0	9.9		32.2	43.0	9.9		36.3	34.4	9.0		33.6	9.1
9.6		57.1	38.4	9.2		33.2	32.9	9.7		39.3	19.6	9.5		37.6	29.8
8.9		57.1	43.6	8.9		34.2	29.2	9.6		50.8	11.1	9.1		50.1	20.4
9.8		57.1	56.1	9.9		36.0	39.7	9.0		53.2	2.9	8.7		51.1	22.1
9.9	0	0.6	47.9	9.7		38.6	15.9	9.8		54.8	28.4	9.9		54.6	47.1
9.3		1.1	35.5	9.7		40.2	45.7	10.2		55.3	34.5	9.8		55.1	56.8
9.7		2.1	53.6	9.3		42.7	54.1	9.1		59.3	27.0	10.0		58.6	31.1
9.0		2.1	19.6	9.9		49.1	3.5	10.2		59.8	13.9	9.0	9	0.1	40.0
9.7		3.6	51.3	9.5		51.2	35.8	9.8	5	2.8	47.2	9.1		5.1	12.9
9.4		4.1	3.7	9.3		53.9	57.0	9.0		13.8	24.1	10.2		20.1	36.0
9.0		4.6	46.4	9.7		57.4	59.0	10.0		15.3	47.2	8.8		20.3	2.4
9.8		5.6	40.0	9.9	2	3.6	49.3	10.0		20.8	56.2	9.1		21.6	38.8
9.9		10.1	55.7	9.9		6.6	32.6	10.2		22.3	7.3	8.4		22.6	22.9
9.7		13.6	43.9	10.2		9.0	5.7	10.2		29.3	28.5	9.3		25.6	54.4
9.9		15.6	11.7	9.2		16.3	19.2	9.9		33.3	37.1	10.2		28.1	34.6
8.7		19.6	42.0	10.2		16.7	14.7	10.2		35.8	44.2	9.3		31.6	36.2
8.9		20.6	14.6	10.2		16.8	45.0	8.6		36.8	29.5	9.2		32.6	32.9
9.9		20.6	56.3	9.8		23.2	14.4	10.0		59.8	22.4	9.0		34.1	6.2
9.2		21.1	26.4	10.2		25.5	1.6	9.8	6	0.8	14.3	9.4		35.1	31.2
9.9		22.1	55.0	9.0		35.2	57.7	9.5		9.8	15.0	9.8		41.1	54.4
9.7		22.1	47.7	9.8		36.3	42.3	9.5		20.8	6.3	9.6		41.1	39.9
9.9		22.1	37.5	10.2		39.3	6.1	9.3		24.8	58.0	9.9		44.6	58.2
9.2		24.1	18.9	9.5		39.8	27.7	9.5		29.8	7.3	9.8		44.6	13.3
9.9		24.6	57.0	9.8		43.8	4.0	9.6		29.8	52.4	9.5		48.6	50.4
9.2		26.1	47.7	10.2		44.8	52.9	10.0		34.8	41.9	9.4		55.6	38.8
9.0		27.1	31.3	10.0		44.8	40.2	9.6		34.8	20.5	9.6		56.1	32.3
9.8		28.6	42.2	9.0		49.8	44.6	9.5		36.3	25.1	10.2		57.1	14.8
9.5		29.1	55.7	10.2		51.8	31.9	8.4		39.8	9.1	10.2		57.6	13.6
8.8		30.6	5.2	10.2		54.8	43.3	10.2		44.8	4.1	10.2		59.6	6.8
9.9		33.6	52.6	9.3	3	1.8	1.3	10.2		46.8	56.2	10.0		59.6	56.1
9.9		34.6	40.1	10.2		5.3	13.0	9.0		49.8	55.9	10.2		59.6	43.2
25pr.	+ 1	1.7	-4.2												
				+ 1	1.8	-4.2		+ 1	1.9	-4.3		+ 1	2.1	-4.5	

3001-3060.				3061-3120.				3121-3180.				3181-3240.			
mag.		8h.		mag.		8h.		mag.		8h.		mag.		8h.	
m	s	'	°	m	s	'	°	m	s	'	°	m	s	'	°
10	0	1	4.2	9.2	13	10	0	10.2	16	53	3	8.9	20	8	9
10.2	0	4	30.6	10.0	15	0	12.2	9.7	17	12	3	9.8	17	9	36.2
8.8	5	6	50.6	9.8	15	5	57.0	10.2	13	3	42.9	9.3	20	4	48.7
9.3	7	1	50.3	10.2	16	5	47.9	9.8	15	8	16.3	9.7	20	6	59.4
10.2	10	1	6.7	9.7	21	5	0.2	10.2	18	8	48.9	10.0	20	9	18.0
10.2	10	6	26.3	9.7	21	5	47.6	10.2	23	3	20.7	10.2	27	9	53.0
10.2	14	6	55.8	9.8	22	5	47.2	8.9	24	3	36.4	9.2	39	4	38.3
8.6	15	1	15.4	8.5	29	5	7.4	9.9	25	1	57.9	10.0	45	4	38.9
9.8	20	1	13.4	9.8	30	0	13.9	9.8	27	3	11.8	9.7	52	4	10.4
10.2	24	6	43.9	9.8	51	0	31.2	9.0	31	8	34.4	10.0	55	9	37.1
10.0	25	1	28.7	9.3	14	4	27.3	9.6	40	3	34.6	9.6	21	5	5.0
8.8	25	1	19.7	10.2	13	5	33.5	9.7	42	5	19.5	9.9	15	4	16.3
10.0	34	1	9.1	9.0	15	5	9.8	9.9	51	0	45.7	8.9	18	9	25.9
9.6	35	1	38.0	9.6	19	0	24.5	9.8	52	5	20.4	10.2	20	4	44.4
10.0	41	1	14.7	8.5	31	0	58.2	9.3	53	5	12.1	10.2	25	4	46.8
10.2	45	1	45.7	9.6	34	7	2.0	9.4	56	5	49.4	10.2	27	9	44.4
10.0	45	1	59.0	9.1	35	0	9.5	10.2	56	5	34.0	10.2	28	9	54.7
10.2	49	6	14.7	9.1	35	0	47.6	9.8	18	0	33.4	9.6	31	4	25.5
9.3	53	6	36.1	9.8	35	5	5.1	9.2	0	5	53.5	10.2	45	4	49.0
10.2	55	1	52.0	9.7	45	7	56.8	9.7	12	5	13.3	10.0	50	4	9.4
10.2	55	6	8.8	10.2	45	7	0.0	9.2	13	0	1.6	9.0	50	4	16.5
10.0	56	4	22.1	9.8	49	5	44.9	9.5	14	0	42.5	8.8	50	4	53.5
9.3	57	1	3.2	10.2	50	4	4.9	10.0	15	0	39.9	9.8	50	4	47.9
10.2	59	1	9.8	10.2	50	4	7.0	10.2	15	5	35.7	10.0	50	6	9.3
10.0	11	1	23.7	9.4	56	0	4.3	9.7	16	5	34.8	9.2	51	9	47.4
10.2	10	1	4.5	9.7	56	5	16.1	8.2	20	5	25.1	9.8	56	0	59.0
9.3	11	1	16.5	8.6	57	5	45.3	9.6	21	0	8.5	10.2	56	1	28.8
10.2	14	1	20.1	9.7	0	0	38.3	10.2	24	5	7.7	9.9	22	3	34.7
10.0	14	6	15.0	9.0	0	2	1.6	8.8	24	5	15.1	10.2	8	6	18.6
10.0	20	0	7.1	9.5	4	5	41.5	10.2	27	5	0.1	8.8	13	6	15.7
9.3	21	0	42.5	9.4	7	0	32.6	10.2	29	5	3.4	8.6	15	6	52.4
9.2	21	0	27.2	9.9	20	0	13.4	9.3	30	5	7.3	9.8	20	1	27.5
9.8	24	0	19.9	8.8	22	0	59.6	10.2	35	5	8.7	8.7	21	1	2.2
10.2	24	0	5.1	10.2	29	0	18.9	9.4	45	5	51.4	9.2	21	6	42.6
9.3	25	0	4.6	9.0	37	5	14.6	10.2	58	0	13.0	9.4	28	6	8.4
8.7	34	0	28.7	9.0	40	0	28.7	9.8	1	0	39.1	9.3	36	9	0.9
9.8	42	2	1.0	9.6	40	3	21.2	9.8	3	0	4.8	9.6	44	6	16.1
9.6	43	0	14.2	9.3	42	8	17.1	10.0	3	5	39.6	9.8	47	1	49.1
9.2	43	5	27.9	10.0	50	3	42.1	9.7	10	5	52.2	9.9	48	1	9.5
8.4	53	0	9.8	10.2	50	3	10.0	9.6	10	5	54.8	9.4	51	6	20.5
9.8	55	0	7.5	9.2	54	3	37.0	10.2	10	5	16.3	9.7	55	1	45.1
10.2	56	5	5.5	10.2	55	3	5.9	9.5	14	5	51.4	7.8	58	6	9.1
9.3	57	0	4.7	9.8	5	8	1.0	8.8	16	5	13.9	9.6	0	1	6.5
9.9	4	5	39.3	9.5	9	8	8.9	8.9	21	5	25.9	9.5	10	1	30.9
10.0	4	5	12.9	9.5	10	3	2.7	9.7	21	8	1.3	10.0	16	2	29.9
10.2	15	0	18.5	10.0	10	8	47.4	9.9	25	5	42.2	8.7	19	6	56.8
10.0	15	0	14.4	9.1	14	8	16.4	10.2	25	5	4.0	9.8	24	1	25.7
10.0	19	0	25.8	9.0	20	3	5.7	10.2	30	0	27.7	9.8	25	1	9.5
10.0	25	0	39.9	10.2	21	8	29.6	9.1	34	5	39.3	9.8	26	3	10.1
9.6	31	0	18.1	10.2	22	8	3.4	9.8	35	5	10.9	9.2	27	5	30.4
9.2	39	5	47.7	10.2	25	3	52.8	9.6	35	5	23.3	9.9	33	1	13.0
10.2	40	0	7.2	10.2	26	3	29.5	9.4	40	5	5.8	10.2	35	6	28.1
9.7	40	0	30.7	9.7	27	8	4.6	10.2	41	4	8.0	9.4	36	6	4.2
10.0	41	0	51.2	9.1	31	3	0.2	9.8	46	4	57.0	10.2	40	1	15.3
9.4	48	5	11.4	8.9	32	8	26.2	10.2	47	4	39.8	9.7	40	1	49.3
9.3	50	0	12.1	10.2	34	3	30.8	9.7	55	4	24.2	9.5	42	1	33.5
9.5	50	0	19.5	9.3	35	3	4.3	10.2	59	9	38.2	10.0	47	5	56.8
9.5	5	0	12.4	10.2	48	8	35.1	9.8	20	1	4.4	10.2	57	1	30.8
9.6	6	0	3.1	9.9	50	3	49.0	10.2	4	9	34.1	9.5	58	6	4.8
9.9	6	5	16.1	10.2	51	8	19.3	10.0	5	4	42.3	9.9	59	4	5.2
25Pr.	+ 1	2.1	-4.5		+ 1	2.3	-4.6		+ 1	2.5	-4.7		+ 1	2.7	-4.9

3241-3300.					3301-3360.					3361-3420.					3421-3480.				
mag.	8h.		-27°		mag.	8h.		-27°		mag.	8h.		-27°		mag.	8h.		-27°	
	m	s	m	s		m	s	m	s		m	s	m	s		m	s	m	s
8.6	23	59.6	21.4		10.0	29	47.9	26.2		9.2	36	40.5	49.4		8.8	43	24.0	16.7	
8.6		59.9	22.7		9.2		47.9	34.0	8.5 -	9.4		46.5	15.4		9.9		28.0	40.7	
9.8	24	4.9	41.7		9.0		58.9	26.4	9.0	8.7		49.0	41.1		9.4		28.0	21.2	
10.0		11.4	12.6		9.0	30	2.4	23.2	9.0	10.0	37	14.0	55.3		10.0		42.2	28.1	
10.2		15.4	47.2	-	9.4		8.4	7.0		9.3		28.0	38.8		9.8		42.2	16.1	
10.0		18.9	10.1		10.0		14.9	26.3		9.3		34.5	19.9		9.4		43.2	20.9	
10.0		25.4	20.7		9.4		26.4	40.0		9.6		45.5	23.2		9.2		55.7	14.5	a
9.9		35.4	29.0		9.0		30.4	31.8	9.0	9.0		54.0	7.9		9.4		59.2	37.9	
9.6		38.4	39.2		8.6		39.9	29.9	9.0	9.4		59.0	4.6		9.0		59.2	56.2	
9.2		39.6	31.1		10.0		41.9	6.6		9.9	38	4.0	42.9		9.7	44	9.2	13.0	
10.2		40.2	19.8		10.0		49.9	19.7		9.6		5.0	16.2		9.4		19.2	34.7	
9.6		40.9	5.7		9.9		49.9	31.8		8.2		8.5	21.2	G≡	7.4		24.2	47.6	7.5 GW=
9.3		41.1	53.2		9.8	31	1.9	3.1		10.0		14.5	46.3		9.3		34.2	8.1	9.0 a
10.2		44.9	28.9		9.7		3.4	18.9		10.0		14.5	47.9		10.0		36.7	49.3	
10.0		49.9	37.2		9.8		5.4	54.8		9.0		31.5	19.8		8.8		39.2	26.8	
9.2	25	4.4	33.4		8.7		9.9	38.9	8.0 G=	10.0		39.5	52.4		9.6		39.2	23.1	
9.6		4.7	56.5		8.7		11.1	17.4	9.0	9.1		44.0	13.1		10.0		56.2	36.2	
9.2		8.4	23.4		9.6		12.1	10.1		9.3		48.5	16.7		9.0		59.2	10.7	
8.4		22.9	24.8	8.0 Ga	8.9		14.1	41.8	9.0	10.0		49.0	26.1		9.3	45	4.7	0.6	
8.9		32.4	3.2		9.2		22.1	22.2		10.0		49.0	29.1		9.2		10.2	55.5	-
9.2		35.9	33.9		9.3		39.6	40.6		8.9		52.5	52.5	G	9.6		12.7	37.7	
9.4		43.4	41.0		9.4		48.1	32.3		8.8		54.0	44.5	a	6.3		14.2	14.8	5.0 GStπ
9.0		55.4	13.9		8.2	32	16.6	44.4	8.0 Ga	9.8		59.5	54.5		9.1		16.7	38.3	9.0 a
9.4	26	19.9	27.2		8.9		41.6	39.1	9.5	9.7	39	4.0	33.6		9.4		19.7	39.2	9.0 a
10.0		21.4	47.2		9.6		43.6	48.2		9.4		9.0	17.0		9.3		28.7	12.1	
9.4		23.9	20.4		9.2		43.6	13.0	-	9.3		13.3	0.0		10.0		31.7	56.9	
10.0		24.9	0.9		9.2		56.1	4.4		10.0		13.5	2.5		10.0		59.2	14.3	
9.9		29.4	44.9		10.0	33	10.1	19.8		9.6		19.5	45.6		9.4	46	20.7	40.9	
10.0		29.9	55.5		8.9		11.1	55.8	9.2	9.4		23.5	33.2		9.3		29.2	50.6	
8.8		31.4	1.1	9.0	8.9		14.1	46.9	8.9 a	9.3		28.0	8.9		8.0		39.2	10.3	GSb-t
8.4		31.9	30.2		10.0		17.9	58.7		10.0		32.5	54.2		9.4		44.2	32.8	
9.7		45.9	52.9		9.6		46.5	42.4		8.9		41.0	37.2		8.7		44.2	1.0	9.0 G
9.4		49.4	50.8		9.2	34	2.0	9.8		10.0		48.5	3.3		10.0		47.6	11.7	
8.2		49.5	4.2	8.5 -	8.2		9.4	56.3	8.0 Ga	9.9		48.5	7.8		9.8		48.2	43.8	
9.7		51.4	54.3		9.9		14.0	54.2		9.8		49.5	23.1		8.8		52.2	41.1	a
10.0		59.9	43.2		8.4		19.0	6.0	8.8 G-	9.2		52.5	13.8	-	9.1		59.2	17.2	
8.8	27	1.4	4.3	9.5	9.4		19.0	55.2	9.5	9.3		56.0	46.5		9.0	47	6.9	44.1	b
8.6		13.9	0.7	9.0	9.2		20.0	37.0		9.1	40	2.5	7.0	9.0 Wa	10.2		10.0	59.0	
9.3		18.9	15.6		9.2		24.7	58.0	9.0 a	9.8		21.0	51.2		10.0		10.1	10.1	
9.6		39.4	55.8		9.3		26.5	3.0		8.4		31.5	24.1	8.0 Ga	10.2		19.1	11.1	
9.7		39.4	10.1		8.1		57.7	58.4	8.5 Ga	9.6		36.5	27.0		9.4		21.0	47.0	
9.4		49.9	30.5		9.8	35	6.0	2.2		9.9		49.0	55.0		10.0		25.8	44.3	
9.8		51.9	26.2		8.8		8.5	26.7	-	9.9		54.5	15.2		10.2		26.0	13.1	
9.4		52.4	34.0		9.4		29.0	18.2		10.0	41	1.5	31.4		10.2		28.3	58.2	
9.9		58.4	44.1		9.9		34.0	17.6		9.0		2.0	15.0		9.8		34.8	37.1	
10.0	28	3.4	13.3		9.7		34.4	59.2		9.0		10.5	28.9	8.5 a	9.9		35.1	27.9	
9.3		8.4	38.8		10.0		37.0	31.3		9.6		37.5	15.1		10.2		40.9	25.3	
9.4		24.9	23.4	9.0	10.0		38.7	58.0		9.8		59.5	30.4		7.8		49.6	53.3	Ga
8.6		29.9	42.5	9.0 -	8.2		44.0	31.8	-	8.2	42	1.5	18.5	Wa	10.2		50.9	17.7	
9.2		46.4	7.0		9.3		44.0	6.6	9.5	10.0		4.5	25.0		9.3		53.9	27.6	
9.8	29	2.4	31.8		9.2		56.5	7.0	9.0 a	8.8		19.0	54.8		9.6	48	10.9	46.8	
9.3		3.4	38.8	9.0	9.8		58.0	52.9		10.0		19.5	1.8		9.8		12.4	36.6	
9.9		3.9	16.6		9.4	36	8.5	17.1		8.6		20.5	54.9	≡	10.2		18.4	59.1	
8.8		4.9	37.4	8.5 -	8.9		11.0	42.5		9.6		24.0	44.6		9.9		27.4	31.8	
9.2		12.4	3.0		9.9		12.3	33.2		10.0		40.0	3.0		10.2		27.9	24.0	
9.3		20.4	4.4		9.9		18.5	21.4		9.4		49.0	18.1	G	10.2		31.9	43.0	
9.4		21.9	14.0		8.9		24.0	36.8		8.5		58.0	18.4	Ga	9.7		39.9	15.3	
10.0		24.9	40.8		9.0		25.5	18.1	-	9.3	43	2.5	53.1		9.0		41.9	49.1	9.0 a
9.4		26.1	0.2		9.4		29.0	17.5		9.6		15.5	51.0		10.2		43.9	24.9	
9.2		37.4	39.0		8.5		36.5	45.5	-	10.0		20.5	25.1		9.6		43.9	50.5	
25Pr.	+1	2.9	-5.0		+1	3.1	-5.2			+1	3.1	-5.4			+1	3.8	-5.6		

1896-1897

3481-3540.			3541-3600.			3601-3660.			3661-3720.		
mag.	8h.	-27°	mag.	8h.	-27°	mag.	8h.-9h.	-27°	mag.	9h.	-27°
9.8	48 51.9	58.8	9.7	55 5.3	23.9 9.5	10.0	59 20.2	41.0	9.7	4 35.8	11.3
9.8	52.4	48.1	10.2	14.3	40.2	10.2	22.2	8.2	9.9	56.8	10.3
10.2	49 1.4	56.2	9.7	26.8	22.0	10.0	32.0	58.0	9.9	5 8.3	40.0
9.6	4.4	38.3	9.0	31.3	47.0 9.0	10.2	34.0	41.0	10.2	9.3	16.1
9.7	9.9	56.1	10.2	34.8	35.2	9.8	36.2	52.8	9.2	9.8	40.4 9.5 Ga
10.2	21.4	5.5	9.6	36.8	5.4	9.7	53.2	14.3	10.0	10.3	49.1
10.2	21.9	2.8	9.0	40.8	30.8 9.0	9.8	0 2.7	8.0	10.2	14.8	21.6
10.2	34.9	36.0	9.8	42.8	28.1 9.5	10.0	10.2	42.2	10.2	32.8	57.9
10.2	41.2	57.3	8.5	43.8	1.8 W≡	9.7	10.2	56.0	9.4	41.8	20.5
10.0	41.9	37.9	10.2	46.8	44.6	10.2	20.2	19.4	10.2	51.3	40.6
8.1	42.4	36.3	9.2	47.8	52.8 G	9.1	21.7	35.0 ≡	10.0	54.8	39.2
9.4	43.9	39.4	8.2	56 1.3	50.1 8.0 G-	9.2	29.2	17.4	10.0	57.8	5.8
9.7	45.9	1.3	9.8	3.8	25.1	9.8	33.9	2.2	10.2	6 1.8	3.9
9.7	48.9	47.0 9.5	10.2	8.8	12.7	9.8	33.9	8.1	9.1	6.4	37.7 9.0
9.6	53.9	5.6	10.2	9.8	33.6	10.2	34.4	20.0	10.2	6.8	2.3
10.0	50 10.4	25.5	10.2	16.3	55.1	10.0	34.9	59.1	7.9	8.8	55.1 8.2 G≡
5.8	10.4	12.2	10.2	22.3	14.3	10.0	35.0	1.0	10.2	11.3	50.6
10.2	10.9	45.1	10.0	41.8	31.9	9.9	39.9	23.0	9.2	11.3	15.2 a
10.2	25.4	25.8	8.2	42.8	19.2 W≡	10.0	53.9	19.4	10.0	13.8	45.9
10.2	33.7	59.6	8.2	44.8	39.6	9.8	56.4	30.5	10.2	17.8	54.3
9.3	33.9	30.9 8.5 Ga	10.2	46.3	32.5	10.2	59.9	10.4	10.0	22.8	23.7
10.0	35.4	19.1	10.2	51.1	57.9	8.8	49 28.2	≡	7.8	28.3	48.2 7.5 GW=
10.2	40.4	35.4	10.2	56.3	8.0	10.2	7.9	29.1	9.8	38.3	42.9
10.2	59.9	4.7	8.9	57.8	8.8	9.3	10.9	9.3 8.8 a	9.8	39.8	27.1
10.2	51 2.3	14.8	9.9	2.3	46.1	9.3	14.9	2.7 9.0 a	9.8	41.8	7.3
9.7	14.8	42.6	10.2	3.8	26.9	9.4	16.4	33.4	9.0	43.3	43.5 9.0
10.2	16.3	58.0	10.2	15.8	6.9	9.7	17.4	14.1	9.8	54.3	12.0 a
10.0	30.3	51.6	9.5	17.8	47.5	9.6	29.9	49.0 9.5	10.2	7 9.3	37.8
9.8	33.3	1.2	9.4	20.8	7.0	10.2	41.9	28.8	10.0	10.3	54.0
10.2	39.8	8.4	9.6	23.3	52.7	10.2	49.4	27.0	10.2	20.3	1.3
9.9	41.0	35.2	9.7	25.3	48.1 8.8 G	10.2	2 8.4	34.1	10.2	30.3	39.9
9.7	45.8	33.3	8.0	29.8	42.3 7.5 G=	9.9	9.9	1.1	10.2	32.8	20.2
9.6	47.3	11.0	10.0	30.8	0.8	10.2	10.9	40.3	10.2	41.3	7.9
9.4	51.8	32.6 a	9.0	30.8	47.4 8.5 G-	9.4	18.4	30.0	10.2	42.8	43.0
8.0	52 10.8	14.0 GSb≡	9.7	41.3	19.9	10.2	19.9	15.6	10.2	8 6.3	44.8
9.9	13.3	50.9	10.2	47.3	52.7	8.2	25.4	41.7 8.5 W=	10.2	14.3	27.1
10.2	15.3	50.7	9.8	49.8	55.4	10.2	25.9	49.0	9.8	15.8	15.5
10.2	20.3	34.8	10.2	52.3	48.8	10.2	27.9	56.1	7.8	18.3	47.3 8.0 Gwa
10.2	25.8	57.9	10.2	58 0.2	41.5 G	9.7	41.4	0.3	10.2	19.8	22.7
10.2	31.0	58.2	9.7	2.2	58.7	8.7	41.4	14.9 -	7.6	22.3	34.4 8.2 Gwa
10.0	43.3	53.9	10.0	3.7	1.2	10.2	46.9	7.9	9.6	26.3	29.2
10.2	54.8	10.1	9.9	5.2	7.3	10.0	47.9	49.0	9.2	27.3	27.0
10.2	1.8	10.6	8.0	7.2	38.7 8.0 =	9.7	47.9	38.0	9.6	32.3	0.1 G
10.0	5.8	16.4	9.2	9.7	7.7 9.0	8.3	51.4	59.0 8.5 a	10.2	34.3	56.0
10.0	20.3	0.5	10.2	13.2	42.4	10.2	53.4	37.1	9.5	34.3	21.8
9.6	20.3	24.5	9.4	14.2	32.6	9.8	3 9.4	16.3 8.5 W=	8.0	42.9	36.0 8.2 Gwa
10.2	21.4	59.2	10.0	16.7	48.5	10.0	11.4	34.0	9.6	48.9	19.7
10.0	28.3	11.6	10.2	18.7	10.5	10.0	17.4	3.5	9.8	53.5	57.9
8.7	31.8	49.3	9.8	23.7	5.5	8.8	17.9	35.7 9.5 =	9.8	9 0.3	38.4
10.2	42.3	5.0	9.7	24.7	33.0	10.2	18.9	29.0	10.0	4.3	43.7
10.2	42.3	37.6	9.7	26.7	24.2	10.2	29.3	19.4	10.0	11.3	25.0
10.2	49.8	17.6	10.0	29.2	17.6	8.5	44.8	39.5 9.0 =	9.5	16.3	28.9 9.0
9.7	54 10.3	40.8	10.0	30.2	10.7	10.2	58.3	30.7	9.6	18.3	27.7 9.5
10.2	10.8	4.0	10.2	35.2	27.6	10.2	4 2.3	3.1	10.2	41.8	35.9
10.2	11.0	58.2	10.0	43.2	48.0	10.2	5.3	3.0	10.0	50.8	53.0
7.6	21.8	19.7 7.5 GSb≡	9.2	45.2	5.9 9.5 -	9.8	7.8	20.9	10.2	51.8	9.2
9.8	27.8	27.0	9.8	51.7	16.8	9.8	8.3	11.3	8.9	56.8	28.1 8.5 G-
10.0	40.3	50.8	10.0	54.7	26.0	8.6	13.5	58.8 9.0 Ga	9.2	10 9.8	54.7 9.2
10.0	46.8	15.0	9.8	59 2.2	0.0	9.9	19.3	39.9 -	10.2	19.8	1.6
9.5	49.3	0.3	9.8	10.2	34.3	10.2	31.3	42.6	8.4	29.0	41.0 8.0 GS≡
25 PR.	+ 1 4.1	-5.7	+ 1 4.3	-5.8		+ 1 4.6	-6.0		+ 1 4.8	-6.1	

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
mag.		g ^h .	-27°	mag.		g ^h .	-27°	mag.		g ^h .	-27°	mag.		g ^h .	-27°
10.0	11	21.5	22.1	8.9	24	5.0	10.6	10.0	36	58.8	2.2	10.0	46	49.4	36.9
8.0		25.0	55.1	7.0		30.0	41.8	9.5	37	17.5	50.6	10.0		59.9	2.4
9.4		59.0	2.4	8.2		40.0	8.0	9.8		19.0	38.8	9.8	47	4.4	36.1
9.2	12	3.5	31.7	8.2		45.0	38.4	9.2		28.0	49.2	9.5		16.9	20.8
9.0		15.0	49.4	10.0		52.5	41.0	8.9		43.0	54.1	9.4		19.9	39.6
10.0		19.4	0.4	9.2	25	0.0	6.1	10.0		44.2	5.4	9.6		26.4	56.1
8.9		20.0	20.5	9.8		1.5	9.0	9.4		48.2	35.4	10.0		26.9	44.1
9.2		30.0	15.8	10.0		37.0	28.2	9.5		50.2	35.2	9.4		28.4	18.3
10.0	13	15.0	23.3	8.8		50.0	35.6	8.8		53.2	52.9	9.4		30.9	34.1
8.4		45.0	36.9	10.0		26	11.3	9.0		59.5	2.2	10.0		35.9	21.0
10.0				8.1		29.8	40.2	5.8	38	39.2	11.8	9.8		42.4	30.6
9.4	14	3.5	25.6	9.6		48.8	59.0	9.2		44.2	5.2	9.7	48	24.4	30.8
9.8		15.0	42.1	10.0	27	10.3	20.8	10.0	39	4.2	37.4	6.7		28.4	24.5
7.6		30.5	14.9	9.6		12.3	53.2	10.0		10.2	33.2	8.8		30.4	22.6
9.4		33.0	4.0	9.4		13.3	33.0	7.5		12.2	3.3	9.8		38.0	24.9
10.0		12.5	17.7	8.7		14.8	53.0	9.6		24.7	14.0	9.6		44.5	38.1
9.2	15	14.5	12.5	7.6		23.8	7.3	9.8		49.2	3.5	8.6		44.5	54.5
8.8		24.5	23.4	9.6	28	13.8	28.4	10.0		54.2	33.6	8.7	49	19.5	29.1
9.8		43.5	35.0	9.4		46.8	26.1	8.4		54.2	49.8	10.0		24.5	0.2
10.0		44.5	48.2	9.2		51.3	37.3	9.2	40	0.2	22.1	8.5		35.0	56.7
9.6		49.5	37.4	8.2	29	23.3	49.2	9.6		8.2	23.5	9.5	50	3.5	23.1
8.7	16	0.0	19.2	10.0		39.8	21.9	10.0		23.2	59.8	9.6		9.0	11.2
8.5		3.0	16.6	10.0	30	39.8	43.1	8.9		24.2	15.7	9.0		17.5	1.4
10.0		21.0	51.8	9.2		41.3	32.0	9.3		34.2	16.5	10.0		18.5	21.0
9.2		46.5	16.5	10.0		47.3	43.2	8.9		37.2	59.9	8.8		28.5	54.6
10.0		54.5	57.2	7.6		59.7	24.1	10.0		49.2	55.0	10.0	51	7.0	24.7
9.8	17	0.0	21.3	9.2		59.8	31.9	9.4	41	7.5	58.8	8.4		18.5	56.8
8.6		40.0	25.1	10.0	31	7.2	1.0	9.7		50.7	27.9	9.8		22.5	6.4
9.4		45.0	21.2	9.2		19.0	28.9	7.8	42	6.7	48.1	10.0		25.5	34.0
9.8	18	0.0	5.3	10.0		31.2	48.9	9.4		14.2	33.1	9.4		39.0	25.9
8.7		11.5	47.5	8.2		45.0	57.5	7.9		14.5	1.3	10.0		39.5	52.1
9.6		15.0	8.3	9.8		49.7	47.1	8.2		26.7	23.9	9.6		46.0	14.8
10.0		18.5	20.2	9.0		52.9	43.2	9.8		27.2	9.1	10.0		50.0	10.7
10.0		47.5	44.5	10.0	32	8.7	37.9	8.4		29.2	41.3	9.2		54.5	39.9
10.0		53.0	4.2	9.6		27.2	32.9	9.4		34.2	15.4	9.2	52	5.5	25.1
9.6		56.5	8.0	8.9		29.2	23.7	8.6		38.7	18.3	9.4		13.0	58.3
8.0	19	5.0	27.9	10.0		48.7	16.2	9.6		40.2	52.8	9.7		18.0	55.9
10.0		12.0	13.8	8.1		58.4	25.3	9.3		48.7	44.7	10.0		27.0	35.7
9.2		19.5	10.5	10.0	33	15.6	58.6	9.4		51.7	37.4	9.8		39.5	56.9
9.2		31.5	31.8	9.8		22.7	9.4	9.4	43	8.2	21.1	9.5	53	15.0	9.7
9.6		45.0	18.4	10.0		26.7	34.1	9.4		17.2	16.0	9.7		24.5	16.7
8.9	20	9.5	7.4	10.0		28.7	34.3	9.8		24.2	51.0	10.0		29.5	7.9
10.0		55.5	45.4	9.7		29.2	54.9	9.8		36.7	57.4	9.5		44.5	38.7
7.7	21	11.5	50.0	9.4	34	4.0	11.0	8.4		41.5	57.3	8.8	54	8.5	44.2
10.0		37.5	19.6	9.4		6.0	25.1	9.5		43.7	35.5	10.0		17.0	51.2
10.0		40.0	59.3	9.4		8.0	32.0	10.0		46.2	28.0	10.0		30.3	13.5
8.2	*22	0.0	51.2	9.6		29.0	53.1	10.0	44	7.4	51.9	10.0		35.1	53.1
10.0		11.5	17.2	10.0		34.0	45.8	9.5		28.4	11.8	10.0		37.8	1.1
10.0		27.5	17.8	10.0		37.5	20.7	8.8	45	13.4	31.9	10.0		40.6	10.9
9.6		30.0	54.0	9.6		42.0	54.0	9.7		17.4	33.6	9.5		48.8	25.7
8.8		37.0	36.2	9.5		44.0	48.4	8.5		31.9	54.2	9.4		54.8	34.7
10.0		52.5	5.0	10.0	35	12.5	46.6	10.0	46	0.9	3.8	9.9	55	8.7	43.4
8.6		57.5	25.6	9.0		29.0	17.0	9.8		2.4	14.2	9.9		12.2	15.6
10.0	23	3.5	51.9	9.6		49.0	55.1	10.0		6.9	27.8	9.8		40.2	34.8
9.8		39.5	38.8	9.4	36	19.0	55.4	9.3		9.4	32.0	10.1		48.7	48.3
10.0		41.0	9.0	9.4		19.0	19.3	9.3		16.9	29.1	10.2		51.7	29.3
10.0		41.0	27.2	9.8		24.0	31.0	8.9		21.4	44.7	10.2	56	13.2	32.5
10.0		51.5	27.0	9.6		24.0	3.5	9.4		28.9	42.0	10.1		28.7	6.1
9.0	24	0.5	15.2	10.0		42.9	21.2	9.8		29.4	31.4	10.2		32.7	21.7
8.6		4.0	53.6	8.9		46.0	40.0	9.5		44.4	8.8	10.2		36.7	31.0
25pr.	+ 1	5.5	-6.4	+ 1	6.3	-6.7		+ 1	6.9	-6.9		+ 1	7.6	-7.1	

3961-4020.			4021-4080.			4081-4140.			4141-4200.		
mag	9 ^h -10 ^h	-27°	mag	10 ^h	-27°	mag	10 ^h	-27°	mag	10 ^h	-27°
9.3	56 38.7	52.6	9.6	2 25.5	36.6	9.5	8 18.3	6.8	9.3	12 22.9	55.4
9.6	44.7	45.2	9.9	30.5	35.9	9.7	22.3	11.7	10.2	31.9	13.3
10.2	50.7	39.9	9.7	30.5	3.9	9.3	24.3	22.0	9.2	32.4	24.5
10.0	58.2	16.3	10.1	34.5	28.3	10.1	24.8	35.0	10.1	42.9	17.7
9.8	57 0.7	20.6	9.8	35.5	49.0	10.2	29.3	40.8	9.5	48.4	52.9
9.8	2.2	23.0	9.9	36.5	21.9	9.7	30.3	14.0	8.4	13 0.9	38.5 a
9.9	9.0	58.2	10.2	37.0	52.7	10.2	30.8	26.9	8.4	7.9	48.8 8.5 Ga
9.7	40.7	50.0	10.0	3 7.0	49.7	10.2	37.6	1.8	9.7	12.9	36.8
9.7	41.7	27.0	9.8	11.0	51.3	10.2	39.8	54.1	10.2	20.4	13.1
9.9	57.7	20.2	10.2	12.3	57.5	9.7	49.3	39.5	9.3	26.9	22.0
9.8	58 4.7	12.5	10.2	18.0	23.7	10.2	51.3	49.6	10.2	48.4	42.9
10.2	6.7	56.0	8.9	36.5	17.1	9.3	54.8	6.7	10.0	50.4	43.7
9.7	11.2	57.6	10.2	45.5	17.1	9.3	56.3	4.8	9.9	51.4	16.3
7.9	16.7	53.8	9.6	54.0	52.4	9.7	57.6	0.8	9.7	51.9	6.5
9.4	18.7	49.3	10.2	4 0.5	45.0	10.2	59.8	11.5	10.0	52.9	10.0
9.8	20.7	6.2	10.0	7.5	9.7	9.9	9 0.3	24.9	9.9	57.4	16.0
10.2	27.2	47.4	9.8	16.0	23.8	9.9	6.3	29.1	10.2	59.9	9.9
7.7	38.7	46.3	9.8	24.5	25.9	10.2	10.8	25.6	9.6	14 11.9	20.7
10.1	44.1	8.3	10.1	30.5	53.4	9.4	11.1	1.0	9.1	13.9	48.3 a
9.0	45.6	7.4	8.4	32.0	35.2	9.9	24.5	58.6	9.8	23.9	34.1
7.6	59 9.6	34.8	9.8	36.5	34.9	10.2	28.3	17.1	10.1	29.9	59.1
10.0	23.1	29.6	9.7	38.0	37.6	9.1	29.1	17.8	10.2	49.9	23.9
10.2	23.1	41.1	10.1	41.0	29.9	10.1	30.1	16.7	9.9	52.9	10.6
10.2	28.6	40.2	10.0	41.5	46.3	10.1	40.1	54.7	10.2	15 19.9	55.8
7.3	31.6	35.4	10.0	42.5	46.6	10.1	41.1	11.1	10.1	22.9	26.5
10.2	32.6	59.4	10.2	45.6	42.8	10.2	42.4	57.0	9.9	33.9	4.5
10.2	40.6	30.2	10.1	51.0	19.8	9.8	49.1	54.8	9.3	45.9	43.9
10.0	41.1	37.1	10.2	5 0.5	44.1	10.2	51.1	46.8	8.7	49.9	38.9 8.0 =
9.2	45.1	6.0	9.9	7.0	6.3	9.8	10 0.1	52.9	9.8	52.4	21.6
9.9	46.1	49.0	9.6	31.5	38.1	10.2	4.1	9.7	9.7	16 11.9	17.0
10.2	47.1	37.6	9.9	41.7	1.7	9.0	4.1	48.3	10.2	24.9	27.0
10.1	52.9	44.8	9.9	6 9.6	57.8	9.9	8.9	57.9	10.0	31.9	50.7
10.0	0 0.6	40.9	9.7	10.5	10.3	9.6	18.1	26.7	10.2	31.9	47.7
9.1	12.1	8.6	9.7	11.5	6.8	10.2	20.1	11.6	9.7	35.9	56.7
9.7	14.6	4.9	7.1	20.5	59.5	9.9	20.1	13.1	9.3	17 4.8	1.5 9.5 =
10.1	15.6	35.2	10.2	29.5	58.5	9.7	20.1	55.6	8.1	5.2	23.0 8.8 GW =
9.8	20.1	8.3	9.5	37.0	20.3	7.9	21.9	59.7	9.6	19.8	58.7
9.5	23.1	40.6	9.9	37.0	0.7	9.6	22.5	5.3	10.2	47.3	24.6
9.4	29.1	23.0	9.7	42.2	2.7	10.0	22.6	51.9	10.0	18 1.8	9.1
10.2	30.6	1.3	10.0	43.3	35.9	9.7	29.9	57.7	10.1	15.8	34.7
10.2	40.4	1.5	10.0	48.3	53.6	8.2	30.6	5.4	10.0	18.3	41.3
9.3	45.6	6.9	9.9	7 0.3	43.1	9.7	34.1	29.6	10.2	18.8	34.7
9.0	45.6	32.1 a	10.0	0.3	19.3	9.9	41.1	23.3	9.6	34.7	58.2
9.9	50.6	9.9	9.9	3.3	27.7	9.8	54.6	52.3	8.8	19 8.6	24.1 =
9.8	53.1	39.0	9.7	4.3	13.6	10.2	56.6	55.9	9.2	19.6	33.4 9.5
10.0	53.9	54.3	9.1	10.3	53.7	9.6	59.6	14.6	9.0	31.6	28.5 9.0
9.8	58.6	35.8	10.2	21.3	56.4	10.1	11 2.1	30.7	9.6	44.1	18.5
9.7	1 1.1	4.9	9.6	22.3	40.3	10.2	3.6	40.7	9.4	20 29.1	36.0
10.2	22.6	10.9	10.2	25.3	38.1	9.7	10.1	17.3	9.6	21 50.6	46.1
10.2	26.6	12.5	10.0	27.8	43.9	10.2	11.5	20.7	9.6	22 50.6	59.0 9.2 =
9.0	31.1	42.6	10.2	29.3	45.3	10.2	27.1	34.3	9.6	51.1	14.0
10.2	36.6	27.8	9.7	34.3	15.7	9.6	28.6	13.2	9.6	23 9.3	57.7 8.7 =
10.0	41.1	27.3	10.2	38.3	19.3	10.0	31.1	29.8	8.8	18.6	50.5
9.9	42.6	17.7	10.0	41.3	18.4	9.7	39.1	51.7	9.6	24 4.6	30.1
10.1	43.1	56.3	9.7	44.3	17.8	9.6	50.1	22.6	8.8	25 29.6	0.6 9.5 a
9.9	43.6	49.9	10.2	47.3	37.5	9.9	59.1	7.0	6.8	59.6	35.6 6.5 GSa
9.9	2 8.6	27.0	10.2	50.3	13.7	10.0	12 1.6	6.9	9.2	26 14.8	49.3
9.4	10.1	50.6	10.1	58.8	42.4	9.9	8.9	43.6	9.0	27 42.8	11.2 a
9.3	12.0	30.5	9.1	59.3	20.6	9.8	9.1	3.1	8.8	54.8	49.4 9.0 a
9.9	12.1	33.6	9.9	59.3	4.7	10.2	20.9	33.7	9.6	28 42.3	50.6 a
25pr.	+ 1 8.1	-7.2									
				+ 1 8.5	-7.3						
							+ 1 8.8	-7.4			
										+ 1 9.2	-7.5

4201-4260.				4261-4320.				4321-4380.				4381-4440.				
mag.	10 ^h -11 ^h .	-27°		mag.	11 ^h .	-27°		mag.	11 ^h .	-27°		mag.	11 ^h .	-27°		
m	s			m	s			m	s			m	s			
9.6	28	59.8	56.0	9.5	0	16.2	44.7	8.8	15	6.5	15.9	9.0	9.3	32	32.2	41.6
9.6	29	9.8	22.9	10.2		52.3	22.5	8.2		7.5	5.3	8.5	9.6		32.7	25.5
9.6		17.8	43.9	9.2		55.3	17.6	9.6	16	22.0	47.3		9.0		33.2	43.5
9.6		28.3	49.9	9.8	1	14.3	20.6	9.2		27.0	33.7	9.0	8.7		36.7	59.3
9.2		33.8	56.1	8.0		25.3	48.9	9.8	17	8.0	34.7		9.0		58.2	51.5
9.6		50.8	54.7	10.2		31.3	44.1	10.2		10.0	13.9		9.6		58.7	17.2
9.6	30	33.5	57.9	9.8	2	7.3	35.4	9.6		28.0	6.0		9.6	33	7.7	41.1
7.8		50.1	0.7	10.2		39.8	25.6	9.6		29.0	46.0	9.0	9.3		18.7	10.1
7.6	31	45.1	25.2	10.2		41.4	24.1	9.3		36.0	49.3	9.0	9.6		32.2	34.9
9.4	32	3.1	20.3	10.0		49.4	23.4	9.2		38.0	49.5	9.0	9.0		46.3	26.4
8.6		35.7	27.5	10.2		51.4	25.8	10.0	18	5.5	55.8		9.2		59.7	9.1
9.2		37.7	33.3	10.2	3	3.6	42.8	8.5		57.5	58.8	9.0	8.0	34	2.2	48.2
9.6	33	14.2	45.1	10.2		12.9	4.6	10.0	19	1.5	29.1		8.6		23.2	27.1
8.0		30.2	18.0	8.4		23.4	37.0	9.2		17.5	38.0		10.0		47.7	48.2
8.2	35	25.2	28.9	9.6		31.4	10.5	10.2		49.5	12.3		9.1		59.2	8.8
9.6		40.7	39.9	9.0		32.4	6.3	9.8		52.0	37.7		9.0		59.2	21.7
9.6	36	35.1	6.0	9.6		45.4	18.3	9.2	20	14.5	9.5		9.4	36	33.2	10.2
8.4	37	18.1	53.3	9.6		47.7	0.8	9.2		22.6	58.4		10.0		37.5	33.6
8.8	38	30.1	52.5	10.0		54.4	35.5	9.6		26.0	34.3		9.8	37	16.7	40.6
8.8	39	16.1	39.9	7.9	4	14.2	35.6	10.2		28.5	1.0		8.7		19.7	29.1
10.2	40	29.0	29.7	9.3		22.7	13.3	10.2		46.3	0.6		9.6		30.5	18.8
8.6		33.8	30.4	9.8	5	52.7	45.5	9.6		47.0	45.8		9.3	38	3.7	19.9
8.2		34.6	28.9	9.4	6	5.7	1.8	10.2	21	12.5	29.9		9.4		47.7	30.0
10.0		51.0	48.5	10.0		21.7	15.0	10.2		36.9	58.5		8.2	39	8.7	40.7
9.8	41	11.0	52.9	9.6		33.2	15.9	10.2		42.5	20.7		9.8		27.7	47.3
10.2		14.0	5.1	9.8		36.7	14.9	10.0		43.5	25.4		7.8	40	3.7	16.1
8.5		19.0	6.5	10.2		42.7	53.6	10.0		46.5	48.2	9.0 =	9.1		43.5	20.0
10.2	42	3.0	21.0	10.2	7	31.6	20.1	9.3		50.5	40.7		9.8		46.5	30.9
9.4		3.5	31.6	9.1		32.7	45.4	8.4		53.5	41.9	8.5 =	7.4	41	35.0	37.6
10.2	43	0.0	35.0	10.2		42.6	20.9	10.2		57.5	5.9		9.1		39.5	41.6
7.0		1.5	15.4	9.6	8	1.7	8.1	8.6	22	33.5	4.2	8.0	9.3	42	49.0	43.9
8.8		30.0	15.4	9.8		22.6	0.5	7.3	23	26.3	20.4	7.0	9.2	43	6.5	35.0
9.3	45	20.2	13.5	10.2		30.2	15.5	10.2		33.0	1.0		9.8		9.0	25.0
9.4	47	9.7	3.9	8.8		40.7	37.6	10.0		45.5	25.7		9.8		48.5	56.3
9.1		11.7	42.8	8.5		43.7	49.3	9.8	24	3.5	7.9		10.0		50.5	5.2
9.5		42.7	12.9	10.0		52.2	12.6	9.9		18.5	36.9		10.0	44	41.0	30.2
10.2	48	4.2	21.4	10.2	9	1.7	44.7	10.0		57.0	39.3		9.4	45	34.5	24.6
10.2	49	24.2	12.0	9.4		22.2	0.9	10.0		25	23.1	36.0	9.8		38.5	37.8
9.0		35.2	21.8	10.2		39.7	46.7	10.0		34.6	51.7		9.1		54.2	27.2
8.8		52.7	9.2	7.9	10	26.7	26.7	8.0	9.2	46.2	19.4		10.0	46	10.5	47.9
9.8	50	51.7	29.5	10.2		44.2	55.8	9.4		52.5	1.9		8.4		53.2	42.3
8.8	51	5.2	48.5	9.0		45.7	41.5	8.2	26	27.2	55.2	8.5 -	8.2	47	17.0	35.0
9.4		23.2	25.3	9.3		54.2	52.8	9.0		27.2	3.5	=	9.5		17.0	56.7
10.2		51.2	55.5	10.2		54.6	33.2	9.0		29.7	13.8		8.4	48	53.0	2.6
8.8	52	0.2	38.8	9.8		59.2	7.8	10.0		56.2	24.3		8.8	49	11.0	26.8
9.6		50.2	26.3	10.2	11	26.0	20.9	9.8	27	4.2	11.5		7.5		19.0	46.7
10.0	53	7.2	18.8	10.2		54.0	50.3	8.6	28	12.2	29.1	8.5	10.1		21.7	19.8
8.6		9.2	47.2	9.0		56.5	28.8	9.6		12.2	3.2		9.2	50	23.5	55.4
10.2	54	16.7	46.4	8.2	12	7.5	45.1	7.4		19.7	35.8	8.0	9.8		27.0	3.3
9.3		23.4	2.8	10.2		33.0	54.7	8.3		22.2	41.4	8.5	9.0		27.5	26.9
9.8		28.2	33.7	10.0		56.0	7.4	7.8		36.2	43.2	7.5 -	9.8	51	51.5	57.8
9.4	55	27.7	29.3	10.2	13	2.5	50.9	9.2		56.2	37.5	9.0	9.0	52	53.5	56.2
9.8	56	21.7	29.9	8.0		20.0	47.5	10.0	29	19.5	26.2		10.1	53	46.0	52.4
10.0		57	21.2	8.7		38.5	5.5	8.4	30	15.7	10.4	-	10.1	54	0.0	8.5
10.0		25.2	20.7	8.0		41.0	30.2	8.3	31	1.7	18.4	8.8 -	10.1	55	3.5	31.1
9.4		38.7	4.9	8.4		42.0	56.0	10.0		11.5	0.6		9.8		28.5	29.3
10.2	59	1.2	53.4	8.4		42.0	56.0	9.8		13.3	58.6	9.0	10.1		28.5	38.9
10.0		15.7	41.2	7.9	14	13.0	38.8	9.8		36.7	45.5		8.4	56	38.0	33.6
9.3		59.2	18.8	9.4		23.3	1.9	8.6		41.7	33.9	7.5	9.2	57	58.0	53.0
8.5	0	1.2	8.9	9.4		36.0	53.0	7.8		58.2	35.8	7.5	10.1	58	13.2	3.0
25 pr.	+ 1	11.0	- 7.9		+ 1	12.9	- 8.1		+ 1	13.9	- 8.2			+ 1	15.4	- 8.3

4441-4500.				4501-4560.				4561-4620.				4621-4680.					
11 ^h -12 ^h	-27°			12 ^h	-27°			12 ^h	-27°			12 ^h -13 ^h	-27°				
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'		
8:4	58	28.3	57.9	8.8 Ga	9.4	17	41.2	2.4	9.9	39	12.1	39.0	9.0	56	31.8	58.7	
8:5		38.2	4.0		10.2	18	15.7	45.1	9.7		25.1	3.6	9.4		32.1	15.6	
8:8	59	19.2	37.1		7.5		45.7	3.3	9.7		30.6	23.6	10.0		58.1	49.7	
8:8		44.7	16.5	9.0 b	10.2	19	6.1	28.9	9.7		58.1	40.0	10.0	57	5.6	24.9	
8:9		47.2	20.3	9.5 Gb	8.4		7.2	43.4	9.0	4.0	34.6	51.8	9.4		23.6	30.0	
10:1		49.7	12.0		8.9		29.7	48.8	10.0		42.6	42.0	7.4		37.1	44.0	
10:1	1	19.7	0.0		8.4		34.2	0.6	9.8	4.2	6.1	43.0	10.0		45.1	58.9	
9:0		43.0	2.3		10.2		35.2	38.8	10.2		24.6	44.4	10.0	58	12.1	17.8	
9:8		46.0	59.7	9.0	10.2		46.2	21.4	8.6	4.3	13.6	4.5	8.0		23.6	54.9	
10:1	2	0.7	6.3		10.2	21	2.2	38.9	10.2		22.1	41.2	8.0		24.1	50.7	
8:4		3.7	19.5	8.8 GW-	9.2		17.2	28.3	10.0		30.1	33.0	10.0		35.1	16.2	
10:1		7.7	20.1		10.2		47.2	3.7	8.0	44	0.1	10.0	8.0 G=	9.0	59	10.6	19.7
8:2		13.7	22.4	8.8	10.2	22	4.2	59.3	8.1		3.6	38.2	8.5 -	9.7		28.1	12.6
9:6		42.2	17.0		10.0		9.2	18.3	8.8		26.6	10.3	9.6	0	16.1	46.7	
9:6		46.2	33.5	a	9.5	23	17.4	34.8	9.2		42.6	20.7	10.0		21.1	40.0	
8:6		55.2	17.1	8.8 GWa	10.2		17.9	27.1	8.4		49.1	10.3	8.8		26.6	7.7	
10:1	4	18.2	55.7		10.0		22.9	54.3	9.0		59.6	4.2	10.0		42.1	54.2	
9:4		23.2	3.3		9.8		55.9	13.0	10.2	45	46.6	21.7	8.8		44.1	26.8	
8:0		25.7	22.2	7.5 GSat	8.8	24	39.9	9.1	9.4		57.6	59.0	9.6	1	10.1	3.2	
9:5		30.2	39.1	9.5	9.0	25	2.4	49.3	9.6		58.1	43.6	8.3		22.1	32.1	
9:6		30.2	5.0		9.5		17.4	25.5	9.2	46	14.6	53.2	10.0		29.2	57.7	
10:0		39.0	0.9		10.2		21.4	6.0	9.8		35.6	14.4	8.8		31.6	30.5	
9:8	5	7.2	47.0	8.8	8.4		46.9	24.8	10.2	47	12.1	34.0	8.8		45.1	18.1	
8:9		12.2	50.4	8.8	10.2		58.4	25.4	9.6		13.6	59.2	10.0	2	13.2	59.2	
9:0		13.2	49.1	9.0 -	9.2	26	9.9	3.7	7.6		32.8	16.6	10.0		18.1	50.1	
9:2		16.9	58.6		10.2		21.7	17.4	9.6	48	2.3	5.9	8.0 GW=	8.1		32.1	
10:1		33.7	18.6		8.4		49.5	45.4	9.4		2.8	26.3	10.0		50.1	33.4	
10:1	6	13.1	8.0	9.0 a	8.6	27	12.9	55.3	9.4		10.8	41.0	9.7	3	10.7	0.3	
9:5		22.7	51.0	8.7 a	8.6		13.9	18.9	9.7		23.8	31.8	10.0		11.1	46.8	
9:4		43.2	14.3	9.5 a	9.6	28	1.4	39.0	9.1		28.8	13.5	10.0		17.1	53.7	
8:8		55.2	53.8	9.0	9.8		5.4	30.1	8.8		31.3	46.5	9.6		17.1	30.3	
9:6		58.2	10.2		9.8		41.9	7.4	8.4		31.3	21.0	9.0 a	9.2		51.1	
10:1	7	21.2	4.0	9.0 Ga	8.6		59.9	57.1	9.9		58.3	31.9	9.6	4	22.1	10.6	
10:1		33.7	14.0		9.2	29	9.4	17.7	9.0	49	0.8	24.7	9.8		48.4	45.2	
8:4		45.7	33.3	9.0 b	10.2		35.9	0.7	10.2		13.3	3.3	9.1		53.4	58.3	
9:8	8	10.2	6.4		9.4		58.9	5.6	10.2		22.8	46.3	9.7		57.6	15.2	
9:8		20.2	44.6	8.8 GWa	8.2	30	54.3	43.6	9.0		36.8	6.2	9.9	5	3.1	18.1	
10:1		46.4	48.1		10.2	31	9.7	58.0	9.0	51	25.8	36.2	10.0		3.6	55.4	
10:1		47.3	49.9		9.6		25.6	24.2	10.0	52	6.3	19.6	10.0		25.6	17.5	
9:0	9	10.4	36.7		10.2		56.8	55.7	8.5		23.0	1.3	9.4	6	31.1	26.5	
10:2		26.0	52.3		10.2	32	25.8	23.7	9.6		23.3	43.0	9.8		52.1	18.8	
8:4		49.9	15.4	9.0 ≡	10.2	33	22.3	32.2	10.2		42.1	57.1	10.0		52.1	27.1	
9:6	10	50.7	12.8		10.1		32.8	39.1	9.4		42.8	21.8	9.9		56.1	22.9	
9:2		10.7	0.7		9.8		58.6	0.1	10.2		43.3	42.2	10.0	7	2.1	39.9	
9:0		14.7	53.6	9.5	7.6	34	13.2	1.6	9.4	53	11.8	11.7	9.6		2.6	15.0	
7:9		17.7	34.5	8.0 Ga	7.8		35.8	13.2	9.0		21.8	9.9	8.8		15.5	3.0	
9:8	12	29.2	58.3	7.2 GSat	10.2		59.3	17.0	10.2		36.3	29.5	10.0		22.1	5.8	
10:2		35.2	26.2		10.2	35	18.8	3.8	8.5	54	0.8	11.5	8.2		42.6	52.3	
7:8	13	30.2	49.8	7.8 W-	9.4	36	1.3	27.3	10.2		1.8	36.1	9.0		52.1	11.8	
10:0	14	1.7	47.0		10.2		4.1	46.5	9.6		14.8	14.7	9.4		54.6	11.7	
8:4		5.2	7.2	9.0 G-	10.2		20.5	42.0	9.6		17.8	21.8	10.0		55.2	24.7	
10:2		52.7	47.8		9.7		33.1	29.0	10.2		31.6	59.4	9.8	8	10.1	26.7	
9:2	15	15.7	27.0	9.0 Ga	8.2		52.6	30.0	10.0		32.4	54.4	9.7		46.1	6.5	
9:8		29.7	7.7		10.2		37	6.6	10.0		45.1	14.3	10.0	9	33.6	47.5	
9:4		44.2	52.4	9.2	7.4		21.6	38.3	7.6	55	36.1	36.8	8.8		36.1	24.1	
9:2	16	10.7	4.1	9.0 a	10.2		29.6	32.8	10.0		52.1	38.1	10.0	10	7.1	44.8	
10:2		31.7	44.6		10.2		38.6	53.0	10.0		52.6	43.2	10.0		10.2	5.4	
10:2		54.2	28.0		9.7		58.6	32.2	8.6		59.6	46.0	10.0		32.6	40.0	
10:2	17	20.7	30.3		9.0	38	14.1	43.0	9.7	56	13.6	25.2	7.5	11	32.1	40.2	
8:4		38.7	51.8	8.5 a	10.2		22.1	16.3	9.2		14.6	19.8	9.5		33.6	45.3	
25pr.	+1	17.4	-8.4		+1	18.9	-8.3		+1	20.5	-8.2		+1	21.5	-8.0		

4681-4740.				4741-4800.				4801-4860.				4861-4920.			
		13 ^h .	-27°			13 ^h .	-27°			13 ^h .	-27°			13 ^h -14 ^h .	-27°
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
10.0	11	34.1	59.8	9.8	26	12.3	34.2	9.4	42	57.3	49.3	8.8	57	3.0	15.4
9.6		50.1	45.1	8.9		28.9	2.0	9.9	43	1.3	5.2	9.2		5.5	51.7
10.0	12	12.6	21.6	8.8		47.3	38.0	9.7		31.6	57.3	8.1		12.7	59.9
9.6		30.1	14.0	10.2		54.3	57.6	8.2		41.3	41.2	9.9		39.5	4.9
8.8	13	1.1	8.8	9.4	27	32.3	52.5	8.4		51.3	5.1	9.9		40.5	48.8
9.9		12.1	44.1	10.2		33.3	44.5	8.8		55.3	38.3	9.9		42.6	46.1
8.8		24.3	0.3	8.8		47.3	52.3	8.8	44	22.3	0.9	9.8		43.0	10.7
9.7		35.6	23.5	9.0	28	0.8	11.4	8.8		43.3	41.7	9.9		46.4	35.9
8.6	14	4.6	30.9	9.6		5.3	41.4	9.4	45	20.3	26.9	9.8		48.5	8.5
9.6		22.1	36.9	9.4		16.3	53.9	9.2		25.3	13.9	9.9		50.5	11.1
10.0		25.1	44.5	9.8		48.7	54.9	9.6		26.8	14.3	7.8		56.5	55.1
10.0		30.5	26.3	9.8		49.7	26.4	8.8		34.8	13.1	9.6	58	0.5	18.6
10.0		52.0	18.8	9.5		53.7	44.8	9.7		52.3	48.4	9.9		7.5	33.3
9.1	15	6.0	10.8	9.2	29	58.2	32.9	9.1		52.3	26.9	9.8		30.0	2.9
8.5		32.0	43.8	7.9	30	8.7	0.7	9.6	46	12.8	59.9	9.6		32.5	15.9
10.0		35.0	52.3	10.0		16.2	3.4	8.3		38.3	32.0	9.8		59	0.0
9.2		36.0	10.3	9.5		35.2	57.9	9.9		47.8	54.1	9.4		42.0	6.9
9.7		39.0	37.3	10.1		44.2	2.9	7.9		56.3	31.5	9.0		0	12.5
9.2		51.0	46.5	9.8	31	1.2	27.9	9.6	47	11.3	14.5	9.3		15.5	14.5
9.7		51.0	20.0	10.2		40.7	57.5	7.4		12.3	57.1	9.8		16.5	1.4
9.2		54.6	33.4	9.4	32	7.7	18.2	9.9		18.8	12.5	8.8		31.5	6.8
10.0	16	12.0	37.1	10.1		17.2	8.9	9.0		42.3	18.0	9.8		35.5	20.1
9.0		19.5	16.5	9.0		56.7	7.9	9.6	48	19.0	20.4	9.4		43.0	43.9
10.0		42.0	11.5	10.1	33	23.7	22.1	9.1		22.7	1.9	7.7		44.5	32.3
10.0		54.0	42.0	7.8		47.2	36.3	8.6		28.0	22.8	8.8	1	3.8	28.4
8.1	17	2.4	43.0	9.8	34	23.2	28.7	9.0		38.5	26.4	8.8		11.8	6.5
9.5		18.9	3.3	8.8		44.2	32.7	8.8		43.0	44.8	9.6		15.0	58.2
9.0		37.7	5.2	9.8	35	2.7	19.3	9.9		43.0	47.1	9.6		20.3	3.2
10.0		38.5	58.6	10.1		19.7	37.7	8.5	49	1.0	4.0	9.7		40.5	5.4
10.2		51.3	48.6	9.2		48.7	10.7	9.4		15.0	11.1	8.8		52.8	37.1
9.8		54.1	48.4	8.6	36	7.7	32.3	7.6		26.2	1.6	9.0		56.5	18.8
9.2		56.7	36.4	9.5		18.7	20.9	9.8		41.5	55.2	9.8		59.5	37.9
10.1	18	3.6	51.8	8.5		53.7	8.1	8.0		48.7	2.8	8.8	2	6.5	33.0
9.6		10.4	59.6	9.8	37	16.7	48.7	9.9	50	4.5	2.4	9.4		14.8	3.3
8.4		22.3	53.0	10.2		26.7	15.8	9.7		15.0	42.0	9.6		16.0	35.2
8.8		41.3	2.7	10.2		46.7	59.7	9.8		25.0	52.1	9.2	3	1.1	36.1
10.1	19	40.5	24.7	8.5		51.2	1.0	9.2		27.5	48.0	9.0		25.6	24.0
9.2	20	12.3	18.5	9.8		52.7	8.8	9.8		32.5	8.0	7.7		47.6	45.6
10.1		14.6	58.0	10.1	38	32.6	23.0	9.9		45.0	15.7	9.6		52.6	22.5
10.1		53.8	20.0	8.2		33.7	13.5	9.7	51	35.5	17.4	10.0	4	2.6	7.0
10.1	21	3.5	38.1	8.8		38.1	58.8	8.3		52.5	37.2	9.2		4.1	52.0
10.1		3.8	7.6	9.6		52.3	58.6	8.4	52	11.5	16.4	10.0		29.1	49.4
9.0		31.3	45.2	10.2	39	25.3	25.0	9.8		15.5	16.9	9.8		32.9	33.8
9.8		48.8	19.7	9.4	40	2.8	49.4	9.0		15.5	32.4	9.8		42.1	13.4
9.4		49.8	8.2	9.7		21.5	36.7	9.8		22.5	40.2	9.8	5	7.1	15.6
9.4		58.8	39.7	9.4		21.8	51.8	8.3		32.0	13.4	9.4		15.1	0.1
9.5	22	13.3	7.6	9.9		22.9	0.1	9.2		33.5	54.2	8.8		59.6	26.2
9.2		23.3	49.1	9.0		42.5	58.5	8.4		43.0	9.0	9.6	6	29.5	42.8
10.2		23.3	51.1	9.4		48.0	13.2	9.4		49.0	28.7	10.0	7	12.6	55.9
9.5	23	1.8	48.6	9.9		55.9	37.3	9.4	53	2.0	14.5	7.6		31.6	10.5
9.8		36.3	52.1	9.9	41	11.0	52.4	9.2		52.5	27.4	9.4		39.7	9.3
10.0		57.3	49.2	9.4		58.5	44.6	9.4		57.0	35.1	9.8	8	12.7	57.3
9.8	24	23.3	53.1	8.8	42	4.0	44.8	8.8	54	26.0	22.6	9.2		12.7	42.9
6.8		36.3	27.9	9.9		7.1	57.2	9.7		37.5	26.7	9.4		23.7	34.1
9.0		42.8	45.2	9.1		35.4	0.4	9.0		51.0	39.1	9.0		31.5	57.7
10.2		53.3	12.8	9.3		39.5	31.0	9.9	55	11.0	19.2	9.4		43.7	49.5
8.9		57.3	40.5	9.6		45.0	51.8	8.4		15.5	49.0	9.4		50.0	1.9
9.6	25	1.3	38.7	9.7		47.9	44.1	9.1	56	22.0	10.6	9.2		55.2	5.3
9.4		22.3	46.3	7.8		51.0	33.6	9.4		54.5	28.9	8.5	9	9.2	16.1
8.8	26	10.3	35.8	8.6		57.0	33.6	9.9		57	2.0	9.4		11.5	2.1
25pr.	+1	22.6	-7.9		+1	23.9	-7.6		+1	24.7	-7.4		+1	25.6	-7.2

4921-4980.			4981-5040.			5041-5100.			5101-5160.		
mag.	14 ^h	-27°	mag.	14 ^h	-27°	mag.	14 ^h	-27°	mag.	14 ^h -15 ^h	-27°
8.8	9 37.7	58.1	10.0	20 11.3	18.1	8.2	36 46.2	49.2	9.5	52 35.0	59.7
8.2	10 2.7	16.3	8.4	12.8	20.4	9.9	58.7	2.9	9.1	53 7.8	58.3
9.2	16.5	0.3	8.6	16.3	47.8	9.9	37 12.2	56.1	9.8	8.0	52.2
9.2	21.7	14.9	10.0	42.3	6.0	9.7	22.2	41.8	10.2	46.0	55.6
9.2	54.7	23.9	9.4	9.8	24.9	8.2	37.7	31.0	9.5	48.0	47.6
9.0	58.2	6.3	10.0	16.0	40.8	9.0	38 34.2	11.0	10.2	53.0	55.0
9.4	1.7	10.5	8.3	18.8	21.4	9.3	49.7	1.8	10.2	57.5	54.7
9.4	3.2	25.9	9.2	30.3	18.8	9.7	39 8.7	21.3	9.5	54 4.0	40.1
9.6	29.2	47.9	9.2	33.7	32.1	8.6	50.2	47.3	10.0	21.5	57.1
10.0	32.7	21.3	8.6	53.7	58.9	7.6	40 23.2	10.3	8.2	33.0	13.9
10.0	52.8	42.7	9.8	22 15.7	27.0	9.9	27.7	47.5	8.4	37.0	38.6
10.0	28.7	29.8	8.4	16.7	32.4	9.8	36.7	55.9	6.5	40.0	33.8
10.0	31.7	18.3	9.8	17.3	4.2	9.4	43.2	29.9	10.2	57.5	25.0
10.0	35.2	27.3	9.6	31.7	44.3	9.4	41 16.2	51.1	9.4	55 33.0	24.8
10.0	41.5	58.9	9.4	49.7	2.3	8.8	47.7	49.3	9.2	46.0	40.8
7.1	55.7	28.2	9.0	52.7	58.0	9.0	42 0.2	34.3	7.4	56 8.5	20.6
9.2	1.0	0.7	9.8	23 1.3	18.7	9.1	16.2	55.2	7.6	35.0	34.1
10.0	2.7	13.0	8.2	9.7	27.1	7.0	56.7	26.2	10.0	42.0	2.4
9.6	15.2	45.5	9.8	29.7	12.4	9.9	43 13.2	26.9	7.4	57 5.5	48.4
9.8	41.7	26.9	9.4	32.7	28.7	7.4	31.2	48.3	10.2	13.0	53.2
9.0	48.2	25.9	7.7	24 49.8	9.1	7.9	44 3.7	7.1	10.2	39.0	32.3
9.8	13.8	59.9	8.6	50.3	28.9	8.2	32.7	4.8	10.2	41.9	3.0
8.8	18.2	31.5	8.6	1.1	17.7	8.8	33.7	7.1	9.3	58 8.9	32.6
9.6	25.7	28.6	9.4	5.1	14.7	9.8	40.2	18.7	8.6	39.9	47.9
10.0	28.7	59.7	9.3	26 24.6	51.9	9.8	59.2	36.8	9.4	59 21.9	11.4
9.4	30.2	14.9	8.8	57.1	33.6	9.1	45 30.7	23.7	9.3	35.4	38.2
7.7	47.7	44.1	9.4	27 3.1	1.2	8.4	43.7	18.6	10.2	36.9	13.0
9.4	1.8	27.2	9.9	25.1	41.7	9.9	46 17.7	14.8	10.2	57.4	9.5
9.8	16.8	36.4	9.4	44.1	3.1	7.8	22.4	53.6	9.6	12.9	36.3
10.0	30.3	32.8	9.4	46.1	13.8	9.8	27.2	41.9	10.0	20.4	50.1
9.6	35.8	59.7	9.9	28 2.1	21.8	10.2	40.0	29.0	9.4	35.7	57.0
9.8	41.8	58.4	9.3	3.1	22.4	7.0	56.5	50.1	9.5	35.9	14.0
10.0	51.3	50.9	8.8	16.2	28.6	10.2	47 2.9	13.9	10.0	44.4	52.7
7.0	53.8	10.7	9.7	37.2	11.0	8.2	12.5	45.8	9.1	1 21.4	59.9
10.0	7.3	3.8	8.6	29 12.2	42.6	10.2	13.0	28.7	10.2	26.4	12.3
7.8	11.8	14.6	8.6	47.2	41.8	10.2	14.3	0.5	8.0	35.9	52.8
9.4	13.8	22.1	9.3	53.2	44.6	10.2	16.0	39.2	9.5	41.9	25.2
9.4	33.3	45.9	8.8	56.2	45.5	9.6	20.8	43.8	10.2	2 0.4	4.6
8.8	36.8	34.8	9.2	30 43.2	7.4	10.2	36.0	2.4	9.0	52.1	59.1
7.6	44.8	10.6	9.6	31 3.2	56.0	9.4	48 4.0	49.0	10.2	3 5.9	46.7
9.6	57.8	58.5	9.8	33.2	29.7	9.4	41.0	33.0	9.4	12.9	7.3
10.0	17.8	29.3	8.8	32 41.2	22.2	10.2	49 27.0	30.5	9.5	15.9	56.5
10.0	22.3	27.0	8.8	46.2	27.2	9.3	30.0	17.7	9.8	19.9	31.3
9.6	27.3	32.7	8.8	33 4.2	36.0	9.5	46.0	5.2	10.0	52.9	48.5
9.2	44.8	19.9	9.6	6.2	16.5	9.6	49.0	5.6	10.2	4 6.9	56.3
9.6	47.8	14.3	9.7	24.3	11.6	9.8	56.0	7.5	10.2	28.4	31.3
9.8	57.3	11.5	9.4	44.2	27.2	8.5	50 4.0	33.0	9.4	5 20.9	9.5
8.0	57.8	33.7	9.2	52.9	0.1	10.2	23.0	6.3	9.6	24.4	24.5
9.2	59.8	16.6	9.0	53.2	53.0	9.8	26.0	45.8	9.8	6 13.9	46.5
10.0	12.8	55.2	7.9	34 36.7	31.7	9.3	44.0	51.7	10.2	16.4	29.1
10.0	17.8	20.4	8.3	35 6.2	15.0	10.0	53.0	57.3	9.4	22.9	15.8
8.9	18.3	8.7	8.8	18.2	8.7	6.4	51 16.0	9.2	10.2	32.9	56.8
8.6	21.8	12.8	9.9	23.2	48.8	10.2	32.0	22.4	8.6	32.9	4.2
9.6	27.3	25.8	9.2	31.7	43.2	10.0	37.0	21.4	9.5	7 4.9	37.5
9.6	33.3	3.9	8.8	44.7	44.5	10.2	39.5	33.4	10.2	13.1	57.8
9.4	43.8	12.5	9.9	46.9	58.6	8.6	42.0	9.1	9.3	15.9	11.3
9.4	59.8	20.8	9.6	55.7	18.2	10.0	52 3.5	33.8	10.2	25.9	58.6
9.2	7.8	55.3	9.4	36 13.2	9.8	10.2	7.5	2.4	9.3	32.9	19.2
8.5	47.8	13.1	8.2	22.2	14.1	10.2	22.0	31.0	10.2	41.9	11.4
8.3	20 4.8	21.3	8.6	41.4	58.1	8.8	27.0	3.7	7.4	45.9	23.3
25pr.	+ 1 266	-6.9		+ 1 273	-6.7		+ 1 284	-6.2		+ 1 291	-5.9

5161-5220.				5221-5280.				5281-5340.				5341-5400.			
mag.	15 ^h .	-27°		mag.	15 ^h .	-27°		mag.	15 ^h .	-27°		mag.	15 ^h -16 ^h .	-27°	
	m	s			m	s			m	s			m	s	
9.3	7	48.9	32.1	8.5	33	27.8	39.5	8.9	45	40.6	47.0	9.5	54	21.0	59.8
7.2	8	11.7	7.8	8.9	49.3	24.7	9.0	8.5	51.6	18.9	8.0 G=	8.9	26.2	23.0	
9.5	9	38.9	30.1	9.0	55.8	27.6		9.5	56.6	26.9		9.4	33.7	33.6	
10.2	10	5.9	21.0	9.0	34	0.8	42.9	9.2	46	2.6	7.1	9.5	55	3.2	15.2
10.0		56.4	29.0	9.5	9.3	1.6		8.7	15.6	49.1	9.5	8.4	31.5	47.9	9.0
8.7	11	14.4	30.6	9.1	13.3	43.9		9.2	21.6	16.5	10.0	9.6	56	26.0	14.4
9.6	12	53.9	13.4	9.3	32.9	13.8		9.5	23.6	55.7		8.8	42.0	15.8	
7.2	13	0.4	50.0	9.5	52.3	35.1		9.0	32.6	23.3		9.6	46.0	45.9	
9.4		57.9	22.3	9.5	54.4	3.7		9.4	39.6	22.7		9.3	57	7.0	31.6
8.0	14	3.4	28.2	9.0	35	4.9	33.2	8.9	41.1	43.1	a	9.6	47.5	2.9	
10.0		7.4	15.0	8.7	15.4	47.6	8.8 a	8.4	49.1	11.3	8.5 Ga	9.6	56.0	15.2	
8.2		10.9	11.0	9.5	22.4	2.8		9.1	49.6	21.5		8.9	58	19.0	25.6
10.0	15	26.6	39.7	8.2	27.9	34.5	8.5 Ga	9.0	53.6	44.5	a	9.6	26.5	46.9	
9.2	16	2.4	46.7	9.4	31.4	35.3	9.0	9.0	47	19.1	19.7	9.0	28.0	28.9	8.5 -
8.4		12.9	30.2	8.5	35.4	45.0	8.2 a	9.5	22.6	17.1		8.7	49.5	21.9	9.0
9.6		13.4	16.8	8.4	52.9	20.9		9.2	23.6	58.9		8.1	59	17.5	22.6
9.2	17	41.9	44.2	9.5	36	1.4	25.3	8.4	23.6	31.8	8.8 Ga	9.6	0	3.5	27.6
10.0		43.4	47.0	8.7	39.4	41.6	8.0 Ga	9.5	31.8	23.2		9.2	17.0	35.3	
8.8	18	3.4	28.7	8.7	48.4	3.4	8.5	9.4	43.8	43.8		9.6	17.5	31.9	
8.3		8.4	39.1	9.5	37	6.4	21.0	7.9	48	5.0	59.4	9.6	21.5	18.0	
10.0		27.2	1.3	9.0	43.9	30.3	9.0 a	8.4	9.8	34.9	Ga	9.6	24.3	18.1	
9.2		40.4	52.2	9.5	48.9	28.9		9.2	25.3	13.7		8.2	26.8	23.6	7.5 Gctπ
8.0	19	16.9	31.9	9.1	49.4	47.6		8.9	32.3	50.2		8.6	1	20.3	51.1
10.0		18.5	58.6	9.3	52.9	34.6		8.9	35.8	53.5		9.5	28.3	35.4	
8.4	20	39.4	11.3	9.4	55.4	7.6		9.0	40.8	58.1		8.8	51.3	45.5	
9.1		43.4	5.3	8.9	38	2.4	14.0	8.6	45.8	41.1	Ga	8.4	2	0.3	33.6
9.0	21	17.4	11.1	9.4	11.9	44.3	8.5	9.5	49	1.8	41.0	9.4	4.8	47.3	
8.7		48.4	16.0	9.5	31.4	53.7		9.5	2.8	40.8		8.8	13.3	16.8	9.0
9.4		52.4	12.4	8.5	34.4	40.7	9.0	9.3	7.8	42.8		9.5	25.8	17.2	
9.6	22	40.9	29.5	7.6	36.4	40.0	6.5 GSa	8.9	13.3	57.2		9.6	32.3	13.2	
9.8		43.4	13.2	8.9	39.4	32.1		9.3	22.8	50.7		9.6	52.8	4.9	
9.1	23	6.4	20.5	9.1	50.7	2.0		8.6	33.8	25.4	8.5	9.4	55.3	50.7	
9.2		15.9	1.7	9.5	39	2.4	24.1	7.9	35.8	16.4	7.5 GSac	8.0	4	11.3	13.4
9.6		22.4	18.3	9.0	36.9	59.9		9.4	50.3	34.6		9.2	28.3	58.7	
8.3	24	9.4	58.7	8.9	42.4	2.9		8.9	50	25.8	5.0	4.7	36.3	35.9	5.2 GSμβ
9.6		20.4	3.5	9.0	58.9	27.5		9.5	51.3	36.6		8.1	5	0.9	59.9
7.8		33.4	44.3	8.9	58.9	53.0		8.8	52.8	35.6		9.4	2.8	17.7	
9.2	25	5.4	47.3	8.9	40	10.4	26.2	8.3	53.8	56.4	8.5 a	7.9	8.3	48.5	8.0 Gatπ
9.0		14.2	25.3	9.0	22.4	4.8		9.2	51	1.3	14.2	8.2	47.3	4.8	a
10.0		53.2	4.1	8.9	29.4	27.9		9.0	2.8	18.1		8.6	6	6.3	28.1
10.0	26	49.7	2.1	9.4	52.6	2.2		8.7	18.3	40.8	9.5 a	7.9	14.8	56.0	8.0 Ga
9.2		51.2	41.5	9.5	59.3	0.5		9.2	28.8	20.3		9.0	19.3	35.4	
9.0		53.7	16.9	9.0	41	2.6	26.3	9.2	38.8	43.1	9.0 Ga	9.0	32.3	28.8	
6.4	27	3.2	37.5	7.7	7.1	11.7	8.2 Ga	9.4	41.3	41.7		9.4	36.3	34.5	8.8
8.6		13.2	42.4	8.9	21.6	54.8	9.0 G	9.2	42.3	43.3		9.6	7	7.3	20.0
9.4		15.2	13.7	9.5	27.6	21.1		9.3	52	7.3	53.9	9.6	8	32.8	32.4
8.6		15.2	4.1	8.4	32.6	5.5	8.5 Ga	8.9	26.8	10.2	a	8.6	38.8	50.9	9.0 -
9.6		17.2	35.6	9.4	35.6	46.8		9.2	32.8	30.3		9.0	9	27.8	11.8
9.6		51.2	12.7	8.1	42	13.6	8.5 -	9.5	37.8	30.0		7.5	10	32.8	43.8
8.8	28	8.7	47.2	9.0	14.6	55.9		8.8	53	3.8	6.8	7.9	11	23.3	58.8
9.1		33.2	31.7	9.0	23.6	11.2		8.3	22.8	37.4	9.0 a	9.6	13	52.8	37.8
5.7	29	26.2	43.2	9.0	25.6	48.6		8.7	30.4	58.8	8.5 a	8.7	15	21.8	34.9
9.0		46.2	3.4	9.0	25.6	9.3		9.5	30.9	15.0		8.8	16	12.3	3.5
7.1	30	40.2	47.5	9.4	27.1	26.1		9.0	37.1	43.1		9.5	52.8	40.6	
10.0	31	33.5	57.4	9.4	43	5.1	54.5	9.5	42.3	16.9		10.2	17	25.6	10.2
9.4		56.0	16.9	9.3	35.6	9.1		9.5	46.8	48.2		9.0	28.1	22.5	8.5 Ga
7.6	32	2.5	13.9	8.9	44	2.6	32.7	9.4	55.2	10.7		9.1	33.1	25.9	8.8 a
8.7		3.8	6.9	8.9	21.6	49.9		9.4	54	6.7	57.1	8.6	18	5.7	31.7
9.0		16.3	37.9	9.2	44.6	45.8		8.6	13.7	24.8		10.0	39.8	21.7	
8.9		36.3	39.0	9.2	56.6	34.5		9.3	20.2	23.1		8.4	46.6	24.6	8.5 Ga
25pr.	+ 1	30.3	- 5.3	+ 1	31.0	- 4.8		+ 1	31.5	- 4.5		+ 1	32.0	- 4.1	

5401-5460.				5461-5520.				5521-5580.				5581-5640.					
mag.	16 ^h .	-27°		mag.	16 ^h .	-27°		mag.	16 ^h .	-27°		mag.	17 ^h .	-27°			
	m	s	'		m	s	'		m	s	'		m	s	'		
9.3	18	58.1	5.0	10.2	35	36.9	1.0	8.4	48	25.5	34.7	9.3	0	27.9	56.2	8.0 G-	
9.8	19	22.6	1.0	9.6	36	12.4	47.4	9.6	25.5	34.4	9.0	9.3	58.4	28.4	7.5 a		
9.2	20	11.1	0.7	7.4	32.9	13.2	6.5 GScl	8.3	26.0	53.9	8.2 al	9.4	1	13.0	15.1		
10.0	21	17.6	38.3	9.0	34.4	12.0	9.5	10.0	52.0	2.6		8.8	8.8	13.4	43.7	bl=	
9.1	32.6	5.7	9.0 -	10.0	39.4	2.6		9.8	49	3.0	19.7	10.0	9.2	17.4	13.9	Wb	
10.2	46.1	17.0		10.2	43.4	14.4		8.8	5.5	18.9	9.0 -	9.6	9.6	19.6	57.8	9.0	
9.1	53.1	17.4		8.1	37	4.4	7.8 GWal	9.1	12.0	39.1		10.4	10.4	30.1	34.7		
7.0	22	32.1	38.2	10.0	6.4	12.4		9.0	26.0	44.3		8.6	8.6	41.8	55.5	9.5	
10.2	23	37.1	19.8	10.2	17.4	16.5		9.8	32.5	41.0		10.4	10.4	52.6	16.2		
9.6	46.6	40.7		10.2	19.4	5.9	9.0	8.8	41.0	12.3	9.5	9.4	9.4	57.6	29.8		
10.2	50.6	23.0		9.1	21.9	41.2		7.4	50	6.0	24.6	7.8 Gal	9.5	2	17.1	41.6	
10.0	24	17.6	45.6	10.2	22.5	2.5		10.0	33.0	35.4		7.7	7.7	19.6	36.6	7.0 Gal	
10.2	25	20.6	57.8	9.3	25.9	5.4	9.5	9.8	47.5	31.2		10.1	3	10.1	54.2		
8.2	27.1	50.8	8.0 Ga	10.0	53.9	54.9		10.0	55.8	13.7		6.4	4	35.1	36.3	6.5 GScl	
10.0	40.1	15.5		9.0	38	4.4	38.2	9.0	51	4.0	40.1	8.8	5	30.1	50.0	9.5	
9.6	26	31.1	21.0	9.3	13.9	35.3		9.8	11.0	1.8	9.0	10.4	6	6.1	57.7		
10.2	53.1	28.2	a	10.2	17.4	13.0		9.8	16.5	37.0		10.2	11.6	45.8			
10.0	27	6.1	10.4	9.4	33.4	51.4		9.8	18.5	29.2		7.4	7.4	12.1	38.6	7.0 GScl	
9.6	12.6	3.6		9.3	36.4	4.9	9.0 a	9.2	22.0	18.7		10.0	10.0	41.6	41.5		
10.2	17.1	2.0		10.2	50.9	47.3		8.8	33.0	37.8	≡	10.0	7	13.6	40.8		
10.0	18.6	37.0		8.2	51.2	15.0	8.0 Wa	9.8	52.5	16.2		8.8	8.8	32.6	49.4	8.8 Gatπ	
9.4	34.1	10.3		10.2	53.9	40.4		9.6	52	6.5	27.4	8.5	10.2	8	18.6	9.6	
10.2	36.1	48.4		10.2	55.9	5.6		9.8	11.5	26.7	9.0	8.1	8.1	41.6	25.0	8.0 GWa	
9.8	37.1	40.4		9.4	55.9	27.8		9.0	18.5	45.8		10.4	10.4	45.6	34.0		
9.6	41.1	56.6		9.4	39	14.9	5.2	8.2	20.0	46.6		8.0	9	37.6	37.6	7.0 Gal	
10.2	47.4	47.4		10.2	23.9	31.4		9.8	34.5	58.0		10.4	10.4	53.1	6.1		
3.0	28	6.4	57.1	10.2	33.4	33.4		9.4	43.0	21.0		10.1	10.1	56.6	45.3		
9.4	35.9	13.4	9.5 a	9.2	33.5	42.7		8.3	51.5	36.2	8.0 =	8.5	10	3.6	37.8	7.5 a	
9.6	37.4	29.4		9.6	39.9	16.6		8.8	56.0	13.8	9.0	9.6	9.6	20.6	56.9		
9.6	42.9	8.6		9.2	42.7	36.9		10.0	53	7.5	3.0	8.8	8.8	23.6	59.2		
9.3	29	1.4	52.0	9.8	40	42.0	11.3	9.2	19.0	15.6	9.2	10.0	10.0	26.6	59.9		
9.6	6.4	3.7		8.8	41	22.0	20.9	8.8	26.3	57.2	9.0	10.2	10.2	27.6	7.6		
9.8	10.9	45.8		10.0	29.0	5.3	8.0 ≡	7.9	33.0	3.8	7.5 GWal	9.2	9.2	29.9	1.0		
9.8	20.4	35.6		9.1	35.5	21.0		9.3	41.5	5.2	8.5 Wa	10.4	10.4	52.1	55.3		
10.2	31.9	29.6		10.0	49.0	14.9		9.0	48.5	9.1	9.2	10.4	10.4	54.6	19.6		
9.6	54.4	53.0		9.8	51.5	49.0	9.5	7.6	54	6.5	45.2	10.4	10.4	6.6	1.6		
9.2	30	3.9	37.8	10.0	53.5	17.4		9.8	7.0	53.9		10.2	10.2	11.1	51.1		
10.2	6.4	47.2		8.3	42	59.0	41.0	10.0	10.5	58.8		8.3	8.3	16.6	38.4	8.0 G≡	
10.2	13.4	9.5		8.3	43	16.5	45.8	8.8	22.0	20.6	8.5	9.6	9.6	17.6	26.8		
9.8	22.4	57.1	8.0	8.8	31.5	44.6	9.0	9.0	36.0	41.0		8.2	8.2	21.1	57.8	9.0 -	
10.2	31	15.2	58.0	8.1	36.0	48.3	8.0 Ga	9.3	52.5	8.1		9.5	9.5	31.1	31.0		
8.3	17.9	43.8	8.2 a	8.8	47.8	0.3		9.4	55.5	56.6		10.4	10.4	33.1	13.6		
10.2	44.7	50.8	9.5	9.8	44	13.0	48.0	9.0	55	19.5	7.2	10.0	10.0	50.6	25.9		
8.2	47.4	2.2	8.5 a	9.4	30.5	52.1		9.2	22.7	28.2		9.6	9.6	54.6	30.8		
10.0	52.4	24.3		10.0	45.5	11.1	9.5	9.1	46.2	26.0	8.5	8.2	8.2	6.1	12.8	8.0 al	
9.8	53.9	48.3		9.6	45	12.5	44.0	9.4	55.2	56.0		9.6	9.6	14.1	49.7		
10.2	32	21.9	18.6	9.2	41.0	51.7	9.0	10.0	56	14.7	8.2	8.2	8.2	16.6	17.2	7.5 GWal	
8.0	25.9	44.8	7.6 a	9.8	47.0	46.3		8.1	15.7	2.1	7.8 GWa	8.5	8.5	25.6	52.7	8.8 GWb≡	
10.2	30.9	32.8		8.6	46	10.0	23.8	8.6	25.2	49.6	9.5	10.3	10.3	33.6	55.2		
9.3	50.9	51.2		10.0	15.5	56.1		9.4	46.2	49.5		9.2	9.2	36.6	39.9	9.8 Gb	
10.2	33	7.4	7.4	9.0	25.5	45.1		9.4	54.7	20.6		8.8	8.8	55.6	33.1	8.8 Wa	
9.6	21.4	40.2		8.8	25.5	54.4	8.5	8.3	57	0.2	19.0	8.0 a	9.5	9.5	4.8	34.2	
9.8	42.4	50.6		10.0	29.5	56.0	9.0	9.8	0.7	2.6		10.2	10.2	7.3	41.8		
10.2	46.2	31.3		7.9	40.5	21.6	7.5 al	8.8	6.2	12.2	8.5 Ga	9.8	9.8	17.3	33.9		
7.8	51.9	33.8	7.0 GScl	8.3	47	2.5	32.5	9.8	12.8	59.7		10.4	10.4	20.3	56.4		
9.8	34	55.4	16.6	9.2	53.5	25.0	7.5 Gb≡	10.0	39.2	46.6		9.2	9.2	25.8	50.8	9.2 W	
10.0	35	16.9	27.4	9.0	55.5	23.1		10.0	59	32.5	14.6	10.4	10.4	26.8	38.7		
9.6	22.9	43.0		9.1	58.0	26.5		10.0	43.2	57.7	G	10.4	10.4	39.8	27.2		
9.4	25.4	48.6		9.6	48	1.8	2.5	8.5	47.2	33.8	7.5 b	10.4	10.4	45.8	51.4		
9.8	33.9	35.1		9.6	11.5	12.0		8.6	52.4	31.9	8.0 b	10.4	10.4	50.3	56.2		
25pr.	+1	32.9	-3.2		+1	33.2	-2.9		+1	33.5	-2.4			+1	33.8	-1.8	

5641-5700.			5701-5760.			5761-5820.			5821-5880.		
mag.	17 ^h	-27°	mag.	17 ^h	-27°	mag.	17 ^h	-27°	mag.	17 ^h	-27°
9.6	15 52.3	46.2	10.0	33 6.9	45.3	9.5	39 27.4	44.9	9.7	44 21.0	47.2
10.1	16 0.3	18.3	9.2	12.4	15.0	10.2	40.4	56.7	8.8	22.5	42.2
9.4	19.9	57.2	10.2	16.4	40.9	9.8	41.4	33.8	8.5	22.5	18.3
9.1	54.8	39.4	10.0	28.4	14.7	6.7	42.4	46.8	9.7	26.0	21.1
9.1	55.8	54.3	10.0	32.4	39.0	10.2	44.9	54.1	9.6	28.0	12.4
10.2	56.8	32.0	9.9	35.6	1.4	10.0	55.4	26.4	10.1	32.5	11.5
10.4	17 26.8	46.0	9.8	43.9	29.4	10.1	59.4	57.5	9.4	36.5	6.4
9.6	52.3	33.4	9.6	45.9	21.8	10.0	40 6.4	41.8	10.0	37.0	55.8
10.4	18 0.8	33.6	9.7	46.4	52.7	9.5	13.9	11.9	9.4	41.5	3.0
7.7	15.8	29.1	9.7	47.9	50.2	9.1	16.4	23.8	8.4	46.5	3.5
											9.0 Wa
10.4	25.3	43.5	10.2	49.9	32.6	9.6	21.2	58.1	10.1	58.5	20.1
10.4	32.3	9.0	10.2	55.9	33.6	9.5	24.4	58.1	10.2	45 2.5	0.9
10.4	45.8	23.2	9.9	59.4	4.6	9.8	26.4	42.2	10.1	3.5	23.1
9.8	52.8	16.8	9.8	34 6.4	12.8	9.5	31.4	25.5	9.8	5.5	32.7
9.8	53.8	57.1	9.3	22.4	31.9	9.5	40.9	19.5	9.7	6.5	9.7
9.5	54.8	8.1	9.8	24.4	50.2	9.8	42.4	52.7	10.2	7.0	34.0
10.4	19 10.6	1.1	9.6	26.4	32.0	10.2	43.5	19.0	9.1	10.5	42.9
10.1	26.8	56.4	10.0	38.4	31.7	10.2	46.4	23.9	9.4	12.5	50.4
9.8	26.8	45.7	10.1	50.9	50.6	10.1	48.4	53.2	8.0	25.5	35.7
10.4	52.8	28.7	8.6	58.4	46.7	10.1	50.9	51.8	9.4	26.0	33.8
											al
10.0	20 56.8	56.8	9.9	35 6.9	36.3	10.1	52.7	2.7	9.6	28.5	27.7
10.1	21 25.3	8.0	9.5	22.4	43.4	9.3	56.0	58.3	10.0	36.5	24.2
8.6	22 45.3	6.1	7.5	25.9	49.3	10.1	41 5.5	19.1	10.1	37.5	37.5
10.4	55.1	44.7	9.7	27.4	49.0	10.1	8.5	19.3	10.0	42.5	43.1
9.0	23 25.4	57.2	9.3	28.4	17.0	10.1	21.5	31.3	7.5	44.0	15.1
9.8	47.6	59.6	8.9	31.4	10.7	9.3	23.5	38.5	9.0	48.5	7.4
9.6	24 2.6	13.6	9.2	33.4	11.9	9.8	25.0	9.4	9.9	56.5	1.9
10.4	6.6	57.7	9.7	33.4	32.8	8.8	28.5	25.7	10.2	46 3.5	6.3
10.4	15.8	8.5	10.0	37.4	45.4	10.2	36.5	26.2	10.1	5.5	45.0
9.5	33.4	50.6	9.8	46.4	23.2	10.2	39.0	6.9	9.8	6.5	44.5
9.0	25 31.0	22.5	9.8	57.9	28.6	9.9	40.0	28.9	9.9	7.5	13.2
9.3	27 36.4	16.6	9.0	36 8.9	52.2	9.6	46.5	9.1	10.2	8.5	39.2
10.2	46.4	5.0	9.5	13.4	32.0	9.3	47.0	21.2	10.2	16.0	57.8
9.8	55.9	25.5	8.5	22.9	23.8	10.2	58.0	55.3	10.0	16.5	42.0
9.8	28 42.4	47.2	9.1	23.4	42.0	9.0	42 7.5	46.1	10.0	22.5	4.5
10.2	29 12.4	32.9	9.8	29.0	58.0	10.2	10.5	46.4	10.2	33.0	39.9
9.3	14.9	1.1	9.8	43.4	37.3	9.5	17.5	40.4	9.8	33.0	19.5
10.1	52.4	0.8	8.4	55.9	10.2	10.2	24.0	27.4	9.3	37.5	15.9
8.4	30 19.7	58.1	9.8	37 2.4	12.7	9.5	24.5	18.2	9.8	45.4	6.3
9.5	30.4	54.1	10.1	3.9	30.2	9.5	27.0	1.5	10.2	45.5	18.7
9.3	33.4	17.8	10.2	10.9	42.6	10.0	32.5	23.0	8.9	48.5	56.7
9.8	33.4	7.4	8.8	16.4	24.1	7.7	32.5	1.2	10.2	55.5	26.6
9.5	38.9	8.3	10.0	22.4	39.6	10.2	43.5	36.8	10.0	58.2	45.8
9.8	40.4	56.4	10.0	26.4	42.3	10.2	43 14.2	40.5	10.2	47 0.2	41.7
10.2	55.9	44.4	8.4	30.7	59.3	9.6	16.0	24.2	9.4	2.2	34.3
10.2	31 8.9	32.2	9.1	33.4	23.2	9.0	17.0	21.2	10.2	10.0	39.8
10.2	10.4	38.7	10.0	42.4	49.1	8.3	17.5	47.4	9.8	15.5	45.6
8.8	20.4	21.8	10.2	50.4	29.9	10.1	30.0	9.7	9.2	15.5	30.8
9.9	42.7	57.2	10.2	57.7	58.8	9.5	31.5	19.4	10.2	20.3	58.9
9.6	32 2.4	19.2	8.8	38 0.4	9.7	9.5	41.0	10.0	9.8	25.4	42.5
10.0	3.4	28.5	10.2	2.4	5.9	8.9	50.5	55.5	10.2	26.1	57.4
10.2	13.4	52.7	9.5	27.1	0.7	10.2	53.5	15.0	10.0	27.4	54.2
10.2	37.4	9.2	9.5	32.4	1.5	9.8	44 1.5	14.2	10.0	39.0	31.4
8.4	51.4	49.2	9.8	36.4	43.7	9.2	2.5	30.7	9.3	40.3	38.1
9.5	51.4	49.9	9.7	37.4	8.1	9.5	3.5	10.7	10.2	43.1	21.3
10.1	51.4	58.7	10.2	38.9	16.8	9.8	7.5	33.4	8.8	44.8	46.2
10.2	53.4	29.3	9.8	39.9	38.8	10.2	12.5	23.9	10.4	48 0.8	44.9
9.0	53.4	57.7	9.3	40.4	23.0	9.3	14.0	20.9	9.8	2.3	0.6
9.0	33 2.4	19.4	9.3	41.4	32.8	10.2	17.5	49.1	9.8	7.8	21.5
9.3	5.4	32.1	9.8	39 15.4	40.9	9.2	18.5	8.3	10.4	11.8	35.5
25pr.	+1 34.0	-1.8									
			+1 34.1	-0.9		+1 34.2	-0.7		+1 34.2	-0.5	

5881-5940.				5941-6000.				6001-6060.				6061-6120.			
		17 ^h .	-27°			17 ^h .	-27°			17 ^h .	-27°			17 ^h .	-27°
mag.	m	s	o'	mag.	m	s	o'	mag.	m	s	o'	mag.	m	s	o'
9 ^h 8	48	17 ^o	0 ^o	10 ^h 4	52	20 ^o 5	43 ^o 8	10 ^h 4	54	40 ^o 6	52 ^o 4	9 ^h 4	56	35 ^o 1	47 ^o 0
9 ^h 3		20 ^o 8	12 ^o 9	8 ^h 7		21 ^o 2	35 ^o 8	9 ^h 3		41 ^o 6	46 ^o 4	10 ^h 2		40 ^o 6	52 ^o 5
10 ^h 4		30 ^o 8	32 ^o 5	10 ^h 4		22 ^o 2	59 ^o 8	9 ^h 6		45 ^o 6	58 ^o 0	10 ^h 2		41 ^o 6	48 ^o 5
9 ^h 9		37 ^o 8	25 ^o 9	9 ^h 5		25 ^o 7	54 ^o 8	9 ^h 8		46 ^o 1	16 ^o 1	9 ^h 8		41 ^o 6	29 ^o 4
9 ^h 0		41 ^o 3	37 ^o 0	9 ^h 4		26 ^o 7	13 ^o 0	10 ^h 3		53 ^o 6	52 ^o 2	10 ^h 3		45 ^o 1	18 ^o 7
9 ^h 9		42 ^o 3	56 ^o 2	10 ^h 3		31 ^o 2	46 ^o 0	8 ^h 0		55 ^o 6	4 ^o 6	9 ^h 9		46 ^o 6	9 ^o 8
9 ^h 3		45 ^o 6	57 ^o 8	10 ^h 4		31 ^o 5	41 ^o 1	10 ^h 4		55 ^o 6	51 ^o 3	9 ^h 2		49 ^o 1	52 ^o 0
10 ^h 4		45 ^o 8	51 ^o 8	10 ^h 3		31 ^o 7	49 ^o 0	9 ^h 6		56 ^o 6	17 ^o 1	9 ^h 6		50 ^o 1	38 ^o 2
9 ^h 2		46 ^o 3	10 ^o 3	9 ^h 4		32 ^o 2	35 ^o 0	9 ^h 9		59 ^o 1	50 ^o 0	10 ^h 4		51 ^o 2	6 ^o 3
10 ^h 3		48 ^o 0	59 ^o 5	9 ^h 6		35 ^o 6	16 ^o 2	10 ^h 2		55	0 ^o 6	18 ^o 4		52 ^o 1	39 ^o 7
9 ^h 5		55 ^o 8	28 ^o 8	10 ^h 4		37 ^o 6	8 ^o 8	8 ^h 0		2 ^o 6	49 ^o 3	7 ^h 5		53 ^o 6	31 ^o 2
9 ^h 8	49	6 ^o 8	53 ^o 1	8 ^h 4		39 ^o 1	42 ^o 7	9 ^h 8		5 ^o 1	28 ^o 8	9 ^h 6		57	7 ^o 6
8 ^h 2		6 ^o 8	6 ^o 7	9 ^h 3		49 ^o 1	37 ^o 3	10 ^h 3		5 ^o 5	16 ^o 1	9 ^h 3		8 ^o 1	37 ^o 3
10 ^h 4		11 ^o 8	13 ^o 9	10 ^h 2		49 ^o 6	9 ^o 8	10 ^h 2		5 ^o 6	6 ^o 2	10 ^h 4		8 ^o 1	7 ^o 8
10 ^h 3		13 ^o 3	45 ^o 5	10 ^h 3		53 ^o 6	4 ^o 0	10 ^h 2		5 ^o 6	43 ^o 3	10 ^h 4		11 ^o 1	58 ^o 6
9 ^h 3		16 ^o 8	7 ^o 6	10 ^h 4		55 ^o 6	53 ^o 2	10 ^h 3		12 ^o 6	4 ^o 6	8 ^h 4		12 ^o 6	5 ^o 4
10 ^h 4		20 ^o 8	53 ^o 5	10 ^h 4		57 ^o 1	14 ^o 0	8 ^h 7		16 ^o 6	19 ^o 4	9 ^h 4		13 ^o 1	55 ^o 8
9 ^h 0		32 ^o 8	52 ^o 7	10 ^h 0		53	1 ^o 6	10 ^h 0		17 ^o 6	28 ^o 1	9 ^h 0		13 ^o 6	48 ^o 2
9 ^h 0		44 ^o 3	33 ^o 2	10 ^h 4		7 ^o 1	33 ^o 5	10 ^h 2		18 ^o 1	53 ^o 2	8 ^h 6		15 ^o 6	7 ^o 8
10 ^h 0		45 ^o 3	49 ^o 5	9 ^h 2		12 ^o 6	43 ^o 8	8 ^h 2		19 ^o 1	51 ^o 6	9 ^h 8		17 ^o 6	11 ^o 5
10 ^h 4		46 ^o 8	12 ^o 3	10 ^h 2		16 ^o 1	58 ^o 0	9 ^h 2		20 ^o 6	6 ^o 7	9 ^h 6		19 ^o 1	35 ^o 5
10 ^h 3		52 ^o 8	25 ^o 8	9 ^h 5		17 ^o 1	43 ^o 1	10 ^h 4		29 ^o 0	53 ^o 3	8 ^h 7		20 ^o 6	10 ^o 0
9 ^h 8		56 ^o 8	50 ^o 0	9 ^h 9		18 ^o 6	43 ^o 3	9 ^h 6		29 ^o 1	52 ^o 0	8 ^h 6		21 ^o 6	33 ^o 3
10 ^h 0		57 ^o 3	6 ^o 6	10 ^h 2		20 ^o 5	10 ^o 7	8 ^h 7		30 ^o 1	52 ^o 8	9 ^h 4		21 ^o 6	52 ^o 7
9 ^h 5	50	5 ^o 8	23 ^o 8	9 ^h 9		26 ^o 6	13 ^o 7	10 ^h 4		32 ^o 0	54 ^o 1	10 ^h 0		21 ^o 6	53 ^o 9
8 ^h 8		11 ^o 3	27 ^o 4	10 ^h 4		32 ^o 5	28 ^o 3	10 ^h 0		32 ^o 5	52 ^o 8	8 ^h 8		26 ^o 6	32 ^o 8
10 ^h 2		11 ^o 3	47 ^o 4	10 ^h 0		32 ^o 6	40 ^o 6	9 ^h 4		32 ^o 6	53 ^o 4	9 ^h 0		26 ^o 6	50 ^o 7
9 ^h 9		12 ^o 7	47 ^o 4	10 ^h 0		42 ^o 1	40 ^o 4	10 ^h 4		33 ^o 0	56 ^o 0	8 ^h 4		27 ^o 6	42 ^o 0
9 ^h 8		13 ^o 2	59 ^o 4	10 ^h 4		44 ^o 1	31 ^o 8	9 ^h 5		34 ^o 1	53 ^o 7	8 ^h 7		27 ^o 6	50 ^o 3
10 ^h 2		13 ^o 8	51 ^o 9	8 ^h 5		44 ^o 6	39 ^o 6	9 ^h 3		35 ^o 1	51 ^o 2	10 ^h 3		27 ^o 6	9 ^o 1
10 ^h 4		23 ^o 4	0 ^o 4	9 ^h 8		45 ^o 6	49 ^o 0	8 ^h 6		35 ^o 6	32 ^o 9	9 ^h 5		27 ^o 6	8 ^o 3
8 ^h 8		26 ^o 7	25 ^o 2	8 ^h 9		49 ^o 9	57 ^o 0	10 ^h 3		37 ^o 5	46 ^o 1	10 ^h 0		27 ^o 8	57 ^o 9
10 ^h 0		26 ^o 7	8 ^o 8	10 ^h 3		52 ^o 6	47 ^o 0	9 ^h 5		38 ^o 6	54 ^o 7	10 ^h 4		31 ^o 6	30 ^o 0
9 ^h 2		32 ^o 7	19 ^o 4	9 ^h 8		52 ^o 8	0 ^o 6	9 ^h 5		38 ^o 6	53 ^o 3	10 ^h 0		34 ^o 6	14 ^o 4
9 ^h 9		32 ^o 7	40 ^o 0	9 ^h 5		54 ^o 6	37 ^o 2	10 ^h 0		39 ^o 1	38 ^o 0	9 ^h 4		35 ^o 6	18 ^o 1
10 ^h 0		43 ^o 7	25 ^o 8	9 ^h 5		55 ^o 6	32 ^o 8	10 ^h 0		43 ^o 1	1 ^o 1	10 ^h 3		37 ^o 1	55 ^o 8
8 ^h 3		45 ^o 7	30 ^o 2	9 ^h 0		59 ^o 1	52 ^o 2	9 ^h 0		45 ^o 6	10 ^o 2	10 ^h 2		38 ^o 0	58 ^o 1
10 ^h 3		45 ^o 7	53 ^o 6	9 ^h 5		59 ^o 1	59 ^o 5	9 ^h 0		45 ^o 6	13 ^o 2	9 ^h 4		41 ^o 1	55 ^o 6
8 ^h 9		51 ^o 7	28 ^o 8	9 ^h 3		54	1 ^o 6	10 ^h 4		45 ^o 6	52 ^o 0	9 ^h 6		42 ^o 6	25 ^o 1
9 ^h 6		59 ^o 2	16 ^o 1	10 ^h 3		2 ^o 6	31 ^o 8	10 ^h 3		46 ^o 1	27 ^o 6	10 ^h 4		46 ^o 5	21 ^o 9
8 ^h 7	51	6 ^o 7	22 ^o 0	10 ^h 2		2 ^o 6	39 ^o 8	8 ^h 9		50 ^o 6	15 ^o 3	9 ^h 8		46 ^o 6	5 ^o 0
10 ^h 3		7 ^o 2	29 ^o 0	10 ^h 4		6 ^o 2	59 ^o 9	9 ^h 2		51 ^o 6	5 ^o 9	9 ^h 0		47 ^o 1	54 ^o 0
10 ^h 4		8 ^o 7	28 ^o 2	10 ^h 4		9 ^o 1	26 ^o 1	10 ^h 0		53 ^o 1	15 ^o 4	9 ^h 9		49 ^o 3	59 ^o 4
9 ^h 6		10 ^o 7	8 ^o 8	10 ^h 3		11 ^o 6	52 ^o 3	10 ^h 4		57 ^o 1	23 ^o 7	10 ^h 4		55 ^o 6	59 ^o 3
9 ^h 2		13 ^o 2	51 ^o 0	7 ^h 5		11 ^o 6	30 ^o 4	9 ^h 8		57 ^o 8	58 ^o 3	8 ^h 8		57 ^o 6	49 ^o 6
8 ^h 9		20 ^o 7	6 ^o 8	9 ^h 8		11 ^o 6	48 ^o 7	8 ^h 4		56	0 ^o 6	9 ^h 9		57 ^o 6	50 ^o 4
10 ^h 0		24 ^o 7	17 ^o 4	9 ^h 8		12 ^o 6	28 ^o 0	9 ^h 8		1 ^o 6	29 ^o 2	9 ^h 5		58 ^o 1	52 ^o 0
8 ^h 5		25 ^o 7	56 ^o 8	10 ^h 2		15 ^o 6	17 ^o 4	8 ^h 4		1 ^o 6	43 ^o 8	10 ^h 4		58 ^o 6	3 ^o 9
10 ^h 0		27 ^o 7	14 ^o 6	9 ^h 8		18 ^o 6	22 ^o 3	9 ^h 8		2 ^o 1	15 ^o 2	10 ^h 0		58	1 ^o 6
8 ^h 7		27 ^o 9	0 ^o 7	9 ^h 6		21 ^o 6	54 ^o 9	8 ^h 6		3 ^o 1	44 ^o 4	9 ^h 2		2 ^o 6	47 ^o 7
10 ^h 4		40 ^o 7	51 ^o 8	10 ^h 3		22 ^o 1	3 ^o 8	9 ^h 8		6 ^o 6	15 ^o 5	9 ^h 8		3 ^o 3	57 ^o 5
9 ^h 2		46 ^o 7	3 ^o 4	10 ^h 3		24 ^o 5	52 ^o 4	10 ^h 3		10 ^o 1	33 ^o 4	8 ^h 4		4 ^o 6	4 ^o 3
9 ^h 6		55 ^o 7	12 ^o 9	10 ^h 4		25 ^o 5	42 ^o 3	10 ^h 0		14 ^o 2	53 ^o 2	9 ^h 4		10 ^o 6	31 ^o 8
10 ^h 3		57 ^o 7	5 ^o 6	10 ^h 0		26 ^o 1	55 ^o 1	10 ^h 3		20 ^o 6	38 ^o 0	9 ^h 5		11 ^o 1	26 ^o 1
10 ^h 3	52	1 ^o 7	14 ^o 6	10 ^h 0		27 ^o 6	20 ^o 8	9 ^h 4		26 ^o 1	24 ^o 7	9 ^h 0		14 ^o 1	49 ^o 6

6121-6180.				6181-6240.				6241-6300.				6301-6360.			
mag.	17h.	18h.	-27°	mag.	18h.	-27°		mag.	18h.	-27°		mag.	18h.	-27°	
8.0	58	22.1	29.9	8.0 G-	10.4	6.5	5.1	10.4	6.5	16.3		8.9	20.3	27.2	
9.8		22.6	39.1		10.4			10.0	4	23.3	24.8	9.4		27.1	8.4
9.6		25.5	33.0		10.3	12.0	14.1	9.9		24.3	17.1	9.6		29.1	55.8
9.6		27.0	38.1		10.3	15.5	12.0	10.3		25.3	44.8	9.3		32.6	32.8
9.8		27.5	18.0		9.8	17.0	5.0	8.9		25.3	58.9	9.6		35.1	24.6
9.2		35.5	44.4		9.9	22.0	52.5	9.6		25.3	50.6	10.2		35.1	8.8
10.0		42.5	44.4		10.4	24.4	46.6	10.0		26.3	7.1	10.3		38.1	54.9
10.4		45.7	0.0		8.4	24.5	45.1	9.2		32.3	39.2	10.0		45.1	51.0
9.0		47.0	53.6		10.3	29.0	17.3	10.3		32.3	49.5	10.4		45.8	0.5
10.2	59	5.5	56.2		10.3	30.0	18.2	10.3		32.3	7.9	10.0		46.1	22.4
9.6		6.5	43.0		9.6	32.5	58.1	8.6		35.8	56.4	10.3		47.6	35.0
8.8		7.5	31.0	9.5	10.0	34.0	7.9	9.3		38.5	0.3	10.0		51.6	49.1
9.9		9.5	40.7		9.2	41.5	53.2	10.3		45.3	41.0	10.4	8	1.1	18.3
9.3		10.5	0.3		9.0	47.0	6.3	10.4		45.8	16.0	10.4		7.1	55.9
8.6		12.0	6.7	9.5 G-	10.3	48.5	35.3	8.6		49.3	10.1	10.0		8.9	37.0
10.0		18.5	24.4		9.5	51.5	38.1	8.6		50.3	37.9	10.4		12.4	36.0
10.2		21.5	5.1		10.2	53.5	13.3	10.4		51.3	11.0	10.2		12.9	22.6
9.6		25.0	49.9		9.6	57.5	36.7	9.9		53.8	13.8	10.4		14.9	3.0
9.6		28.5	12.6		10.2	58.4	29.7	9.9	5	0.8	8.0	10.4		17.9	22.7
10.4		31.5	42.2		9.3	59.5	12.8	10.4		5.3	5.2	9.9		24.4	37.9
10.4		35.5	28.2		10.4	59.5	36.8	9.6		14.8	26.2	10.4		29.9	22.8
9.4		40.0	6.3		9.9	1.0	3.9	9.4		22.3	38.3	10.4		30.4	22.0
9.8		40.0	2.6	10.0	10.2	3.0	26.3	7.9		29.3	14.7	10.3		31.9	48.6
10.2		42.5	29.0		9.2	8.5	3.0	10.4		29.8	15.4	10.3		32.4	27.0
10.2		46.5	10.7		10.4	11.4	23.2	9.8		30.3	21.3	7.8		34.7	13.9
9.0		52.5	12.7		9.9	17.4	3.1	10.2		30.8	47.3	9.9		34.9	15.5
10.2		55.5	19.1		10.4	22.4	36.2	10.4		31.8	30.7	8.6		34.9	58.0
9.9	0	2.5	5.4		9.0	24.4	21.1	10.0		32.3	15.2	9.3		35.9	50.2
10.4		3.5	9.6		10.4	32.4	9.6	8.7		39.3	55.3	10.0		38.9	28.9
9.5		5.5	52.1		10.4	33.3	25.1	8.9		42.3	0.0	9.6		40.5	28.3
10.0		7.5	6.0		10.3	34.4	8.9	10.4		46.8	59.0	10.2		41.4	31.4
8.8		10.5	8.2	9.5	9.5	37.4	26.0	9.9		50.3	9.0	9.9		43.1	12.6
10.4		13.5	21.7		9.6	41.4	31.3	9.6		52.8	9.3	9.3		52.4	4.3
8.0		15.5	19.4	9.0-	9.2	42.4	45.3	9.2		53.3	43.0	10.4		53.4	22.6
10.4		16.5	2.8		9.2	45.4	58.6	9.6		54.3	55.9	8.0		5.1	45.1
9.0		17.5	44.9		8.4	49.4	26.3	10.2		58.7	56.2	9.8		10.7	14.2
10.4		17.5	55.8		9.2	51.9	34.1	10.3	6	13.1	30.9	10.0		14.8	0.9
10.0		19.5	40.3		9.4	52.4	11.9	10.4		15.1	40.2	9.2		18.9	54.9
10.4		25.5	47.8		9.2	57.4	10.7	10.0		19.6	18.0	10.2		20.9	38.9
9.6		31.5	25.0	9.5	10.2	3	4.4	10.3		19.8	0.2	10.3		20.9	42.8
9.3		32.0	27.1		10.2	6.9	23.4	7.6		20.1	31.9	10.4		21.9	22.3
10.4		33.5	28.9		9.2	8.9	24.8	10.0		21.1	29.4	10.0		23.1	38.7
8.4		34.0	39.4	8.0 GW-	10.4	10.9	47.1	10.3		25.1	33.2	10.0		28.1	5.6
10.4		35.5	46.7		9.8	24.9	13.3	10.3		26.1	36.3	9.3		34.6	32.2
9.0		36.5	31.3		10.4	26.4	45.8	10.4		28.1	25.0	10.4		36.9	43.8
10.4		40.0	12.3		10.4	29.4	2.6	9.6		31.1	16.2	9.5		38.1	49.7
10.2		41.5	17.1		9.3	31.9	15.5	8.9		31.6	43.1	7.2		42.9	54.4
8.1		42.5	52.7	8.0 Gal	9.2	36.4	9.5	9.8		33.1	12.0	9.8		45.9	19.0
10.4		47.0	36.3		10.4	37.3	20.7	10.4		35.3	0.5	10.4		47.4	35.4
9.0		47.5	19.7	9.5 G	10.4	42.4	0.7	10.4		37.1	13.0	8.3		48.5	56.4
10.4		53.5	18.6		9.2	42.4	25.2	9.6		39.1	31.7	9.2		49.9	48.5
10.2		56.5	3.2		10.3	45.4	7.9	10.4		43.1	35.8	9.0		50.7	58.9
9.2		57.0	32.5		9.9	46.4	56.1	10.3		55.1	12.0	9.0		52.2	54.2
10.4	I	0.4	50.3		10.0	48.4	20.0	10.3	7	0.6	38.6	10.0		53.9	58.8
10.4		1.5	21.6		10.3	4	4.4	10.4		2.6	5.3	9.6		54.4	19.2
8.4		2.0	47.9	8.0 GWal	8.9	7.4	50.2	10.3		4.6	29.0	8.5	10	1.4	23.8
10.3		5.5	49.7		9.8	15.4	4.8	9.2		8.1	50.1	10.4		1.9	16.5
10.4		5.5	50.7		9.8	15.4	5.9	9.8		12.6	35.9	9.6		11.9	27.2
10.4		6.4	38.6		9.9	19.4	45.3	10.2		18.1	32.5	7.1		13.7	5.2
9.2		6.5	45.2	9.0 W	9.6	19.4	50.9	9.6		22.1	38.1	8.6		17.4	29.2
25pr.	+1	34.2	0.0		+1	34.2	+0.1		+1	34.2	+0.2		+1	34.2	+0.3

6361-6420.				6421-6480.				6481-6540.				6541-6600.			
mag.	18 ^h .	-27°		mag.	18 ^h .	-27°		mag.	18 ^h .	-27°		mag.	18 ^h .	-27°	
	m s				m s				m s				m s		
9.1	10	20.9	56.9	8.8	20	38.3	42.4	9.9	30	4.5	0.5	9.6	43	13.0	39.5
10.2		26.7	59.6	8.5	21	4.8	20.2 8.8 a	10.2		48.0	12.9	9.0		22.0	51.3
10.2		34.9	56.0	9.6		30.3	37.1	10.0	31	1.5	42.0	8.8		23.0	7.8
9.4		34.9	10.9 -	10.0		31.8	55.8	10.2		34.3	33.7	8.3		38.5	18.3 8.0 GScl
9.4		37.9	14.2	10.2		37.7	56.6	10.0	32	6.0	19.2 9.5	10.0		50.5	49.0
10.0		38.9	17.0	10.2	22	5.3	17.0	10.2		7.5	25.0	9.8	44	3.0	11.9
9.6		39.9	58.2	9.4		14.8	50.0	10.0		10.8	49.0	8.8		8.0	16.9 9.5 G
9.4		51.9	47.1	10.2		18.8	55.1	8.8		44.5	39.1 9.0 M=m	10.1		11.5	35.6
10.0	11	1.9	58.1	9.9		22.3	53.4	9.6		55.0	50.9	9.0		36.0	32.1
9.8		11.9	40.2	8.6		39.3	0.4 8.5 G=	9.6	33	2.5	16.1	7.9	45	17.0	54.3 8.0 GScl
10.2		27.4	42.0	9.5		44.3	34.4	9.6		16.0	35.8	9.6		33.0	15.6 -
10.0		44.9	26.6	8.8		45.8	43.6	9.8		31.6	59.2	9.8		43.5	35.4
9.1		46.4	34.2 10.0	10.2		48.3	6.0	9.8		34.5	44.0	10.0		44.5	45.8
9.5		46.9	41.0	10.2		51.8	4.7	9.6		39.5	21.6	10.1		56.0	4.6
8.0		52.4	33.1 8.5 am	9.4	23	2.8	5.0 9.5	8.5		57.0	7.0 9.0 Gam	9.8	46	33.0	12.8
9.4		53.9	51.5	10.2		8.1	1.6	8.0		57.5	33.5 aml	9.2		33.0	36.3
8.2	12	29.9	27.3 7.5 Gam	9.0		11.8	3.2 7.0 G-	9.2	34	13.5	28.9	8.8		36.0	59.1 - Wam
9.5		51.6	56.8	10.2		13.7	43.1	10.1		41.5	38.4	10.0		46.0	1.6
9.0		52.9	54.3	9.6		20.8	33.7	8.2	35	4.0	45.9 a	8.0		51.5	2.6 GSacl
8.8	13	9.9	51.6 9.5 a	9.8		29.5	58.9	10.1		6.0	35.6	10.0	47	7.5	14.8
9.6		15.4	11.1	9.6		29.8	56.0	10.1		12.0	35.2	10.0		17.0	21.9
10.0		16.9	18.1	10.0		31.3	3.8	9.6		18.5	25.9 9.5	10.1		24.0	48.8
10.2		27.4	50.8	9.9		33.7	17.2	9.1		28.5	30.4 8.5 GMam	10.1		36.0	51.7
9.4		30.9	27.1	10.0		36.8	22.0	10.0		31.0	55.0	9.0		44.0	40.2
9.4	14	18.9	23.3	10.2	24	12.8	5.8	9.5	36	12.0	25.7	9.6	48	8.0	9.6 9.0
10.0		40.2	2.1	7.6		25.5	18.3 8.0 Gaml	10.1		43.0	41.7	9.8		21.8	1.7 9.5 -
9.8	15	23.4	41.5	10.2		28.5	0.7	9.0	37	5.3	12.1	8.6		37.5	39.8 9.0
8.0		35.4	33.6 8.0 M=m	10.0		33.5	32.6	10.1		17.3	5.1	10.1		39.0	40.0
8.6		36.4	0.8 9.0 -	8.8		48.5	16.5 9.0 Ga	8.8		25.3	48.1 9.5	9.1		42.5	27.4 9.5
9.2		43.9	45.8	8.5	25	47.0	34.6 9.5 =	10.0		38.2	40.8	8.4		56.5	23.8 8.5 G-
10.2	16	0.4	49.6	9.5		54.0	30.6	3.6		50.8	7.0 4.0 GSμβ	8.8	49	40.0	36.9 8.0 Gal
9.1		1.4	21.2	10.2	26	4.5	30.0	9.5		59.8	28.9	9.5		41.0	39.9
9.4	17	18.9	33.8 9.0	10.2		9.0	59.6	8.6	38	5.3	54.3	9.5		41.5	12.9 9.0 -
9.4		28.4	53.5	9.8		9.5	11.4	10.0		10.3	46.2	10.1	50	21.5	45.4
9.2		35.9	55.6	9.6		14.5	47.2	7.8		13.3	37.6 7.0 GScl	9.4		24.0	45.0
10.2		37.4	27.7	8.6		18.5	8.7	8.3		27.3	28.3 8.0 Gal	10.0		30.0	35.9
8.6		46.9	28.3 9.0 a	9.9		31.5	24.4	10.1		39.3	24.7 9.0	8.5		31.0	11.2 9.2 -
8.8		54.4	30.3 8.5 am	9.6		35.0	30.2	10.1		58.3	8.5	9.6		33.0	11.7
9.4		55.9	35.3	10.0		44.5	37.9	10.1	39	5.8	20.5	10.0		53.5	2.9
10.2		57.9	12.0	8.4		47.0	39.6 a	9.6		32.8	28.9 9.0	8.6	51	9.5	48.9 9.0 =
10.0		58.9	16.6	10.0		48.5	40.0	8.8		47.8	52.9 8.5	8.5		31.0	20.5 M=m
10.2	18	1.4	53.3	10.2		55.5	45.0	9.6		51.8	40.7	9.6		37.3	54.1 9.0 -
9.2		2.8	55.2	10.2	27	19.5	0.8	10.1	40	0.3	4.0	9.6	52	28.8	6.5
10.2		2.8	17.2	9.6		22.0	27.0	8.0		6.3	13.1 b=l	9.8		36.3	19.2
9.8		5.3	12.2	10.2		25.0	30.8	9.1		9.8	4.5	8.0		43.3	48.8 8.5 am
8.3		8.8	23.8 8.8 am	10.0		32.5	12.7	8.8		17.8	33.7 a	9.8		43.8	33.6
9.1		13.8	51.8 9.0	10.2		43.5	7.0	8.8		30.1	3.1 K	9.6	53	14.3	13.9
9.1		18.3	32.4	8.8		44.0	26.2 8.0 GM=m	9.4		45.8	15.0	10.0		21.8	22.9
10.0		28.8	8.0	9.2	28	18.5	17.1 8.5 ≡	10.1		53.8	32.2	8.8		28.1	43.3 9.0 -
9.0		30.3	53.0 9.5	9.4		40.5	7.6 8.5 -	8.8	41	23.3	14.6 a	9.6		28.3	45.0 10.0
10.2		45.3	33.3	10.2		49.5	27.7	9.2		25.8	51.8 -	9.0	54	7.7	23.3 9.5
9.5	19	1.3	25.2	9.5	29	0.8	59.5 9.0	10.0		36.8	7.7	9.2		8.8	16.0
10.2		37.8	25.6	8.6		7.0	49.7 9.0 a	9.5		47.8	44.4	9.8		17.3	45.9
9.6		39.8	28.9	9.1		15.5	55.0 9.0 a	8.0		48.8	15.8 8.0 GScl	9.4		38.3	0.6
9.4		40.8	2.0	9.5		26.0	23.3	10.0		53.8	7.7	9.2		40.3	14.8
9.5		52.8	17.4	10.2		31.3	27.4	10.1	42	26.8	48.9	8.6	55	12.5	31.8 9.0 a
10.2	20	2.8	49.5	9.8		32.5	18.7	9.6		34.5	26.9	8.8		14.2	18.2 9.5
10.0		11.8	11.5	9.0		39.5	18.7	10.0		36.0	3.9	10.4		28.5	41.1
9.9		12.3	37.4	9.9		54.5	51.3	9.2		36.5	17.6	9.0		57.7	53.8 9.0 G=
10.2		32.8	19.7	10.2		57.0	15.5	10.0		44.0	0.3	10.4	56	26.0	15.9
25pr.		+ 134.2	+ 0.6			+ 134.1	+ 0.9			+ 134.0	+ 1.4			+ 133.8	+ 1.8

6601-6660.				6661-6720.				6721-6780.				6781-6840.				
mag.	18 ^h -19 ^h	-27°		mag.	19 ^h	-27°		mag.	19 ^h	-27°		mag.	19 ^h	-27°		
10.2	56	46.0	56.6	10.0	6	11.1	26.6	9.2	13	10.7	13.8	10.0	24	57.4	55.7	8.5 G
8.8		51.0	18.7	7.6		11.6	5.1	10.4		12.7	3.9	9.4	25	19.4	22.8	9.0 GWam
8.6	57	14.0	42.1	9.9		22.6	19.5	10.2		17.7	12.7	10.0		21.4	28.0	
10.4		17.0	23.3	9.9		30.6	19.8	8.8		24.2	17.9	10.4		55.4	27.2	
10.4		46.0	33.9	10.0		36.6	30.7	10.4		56.7	0.0	9.8	26	5.4	18.7	9.0 GWm
9.2	58	14.5	32.5	9.8		40.1	39.6	9.9		58.7	35.4	9.8		7.4	18.6	9.5 G
10.2		16.0	44.0	7.8		42.6	35.3	10.4	14	6.7	30.1	9.2		12.9	25.7	9.0 GWb
9.8		16.0	31.8	9.0		42.6	24.4	9.6		15.7	19.3	9.4		19.9	6.8	
9.2		17.0	12.3	9.2		44.1	44.4	8.8		18.7	18.8	9.2		22.9	57.6	
9.8		19.0	5.0	9.9		46.6	0.2	10.4		26.7	21.3	9.4		39.9	12.0	
9.7		23.0	29.9	10.4		50.6	53.5	10.0		37.2	1.6	8.6		41.9	25.1	8.5 Waml
7.2		32.0	28.4	8.0		52.6	31.8	10.0		37.7	4.1	8.6		49.9	25.6	9.0 GWa
9.6		35.0	43.1	9.6		56.6	31.2	10.4		49.2	41.7	10.2	27	1.9	53.8	
9.2		45.5	50.0	10.4		56.6	34.1	9.4	15	8.2	22.2	8.8		24.4	43.2	9.2
10.4		48.0	47.1	10.4	7	0.6	48.5	9.5		10.9	59.7	8.8		41.4	43.0	9.5
9.4		58.0	52.7	9.4		3.6	44.3	9.0		11.7	52.1	9.4		45.4	2.3	
5.3	59	8.0	51.1	9.7		8.6	45.4	10.0		15.7	57.4	8.4		47.9	54.1	9.0 am
10.0		10.8	25.7	10.4		8.6	31.2	10.4		26.7	27.5	9.4	29	2.4	22.1	W
9.2		16.3	46.6	10.4		16.1	33.6	10.4		30.7	17.4	8.8		12.9	46.4	9.0 GWam
9.6		16.3	18.0	9.2		30.1	48.1	10.4		33.0	17.2	10.2		17.9	55.1	
10.2		16.3	59.0	9.4		31.1	55.6	9.5		40.2	55.0	10.0		29.2	56.7	9.5 am
9.1		22.8	30.9	10.4		55.6	44.5	9.2		40.7	13.4	10.4	30	2.1	27.0	
10.4		26.3	42.8	10.4	8	2.1	43.9	9.1		42.2	36.1	8.8		15.1	14.4	10.0
10.0		40.8	48.4	9.6		9.6	26.3	10.4		51.7	39.8	8.8		39.1	38.2	9.0 MW-m
10.4		53.3	41.9	9.3		9.6	43.4	10.0		53.4	50.9	9.6		46.3	57.0	9.0 Ga
10.4	0	10.8	28.9	10.2		22.6	6.3	9.6		56.9	44.7	10.2		53.8	1.7	
10.2		12.3	49.5	10.2		23.6	11.7	9.0		58.9	38.2	8.6	31	12.6	39.0	8.5 GWam
8.1		22.5	1.7	10.4		27.7	32.9	9.4	16	4.9	33.5	8.6		16.6	20.7	W
8.5		25.1	2.1	10.0		32.1	57.2	9.9		43.4	28.0	9.4		25.6	46.3	
9.8		51.8	53.9	10.4		53.6	22.4	10.0		46.9	28.5	9.4		32.6	59.9	9.5 a
8.8		53.3	54.2	9.6	9	0.6	6.7	10.2		47.9	51.1	8.4	32	15.6	49.1	8.8 GWam
9.8		55.3	28.9	8.6		2.6	20.6	8.5		48.4	15.1	9.8		45.6	2.3	-
8.8	1	17.3	25.2	10.0		7.9	58.6	9.4	17	16.9	58.0	8.1		48.1	34.8	8.5 Wam
10.4		22.8	55.2	10.4		30.1	59.1	9.2		26.9	10.7	8.6	33	4.6	58.8	7.8 GWal
10.4		32.3	30.1	9.6		31.6	48.5	10.4		40.9	27.4	10.3		5.1	4.3	
9.1		42.3	31.9	9.6		33.1	29.1	9.0		50.4	30.4	10.4		8.6	27.8	
9.4		44.3	23.6	9.5		37.1	58.6	10.4		56.8	1.1	9.4		43.6	33.6	9.5
7.8		57.3	18.6	8.6		54.1	28.3	8.8		59.3	47.6	9.8		55.1	41.7	
10.4	2	29.5	0.0	9.0	10	0.1	46.9	10.3	18	0.1	26.7	9.8		9.6	11.2	9.5
9.4		36.8	54.1	10.0		12.6	53.4	9.2		32.6	56.0	10.3	34	20.8	46.9	
10.4		47.3	47.5	10.4		12.6	56.9	10.3	19	13.6	8.7	10.4		21.8	48.1	
10.4	3	6.8	20.5	10.4		20.1	34.1	9.4		15.6	1.9	9.8	35	2.8	6.7	
10.4		12.3	25.9	9.4		26.6	7.7	10.4		36.1	11.0	9.6		32.8	11.5	
9.6		15.3	21.7	10.4		35.0	58.0	10.4		39.6	39.8	8.2	36	38.3	56.2	7.8 GWal
9.4		22.3	15.0	10.4		36.9	57.9	10.2		45.1	41.6	10.3		39.3	14.3	9.5
10.4		38.5	0.9	10.4		47.2	40.5	10.4		59.7	40.4	9.0		42.3	14.4	9.0 G-
8.2		45.8	16.7	9.6		48.7	48.6	10.3	20	11.0	11.1	10.4		52.1	24.5	
10.2		48.3	24.1	10.4		56.7	23.2	9.4		25.2	47.1	8.2	37	11.8	6.2	8.8 GWa
10.0	4	12.3	0.0	9.7	11	0.7	51.6	10.2		29.2	41.5	8.8		32.8	41.7	8.5 GWal
9.9		19.3	4.4	9.8		14.2	17.5	9.4	21	52.7	7.1	10.4		36.4	26.9	
9.1		21.8	39.0	10.4		43.2	1.0	8.0	22	5.2	41.2	10.0		44.1	8.5	
9.2		28.3	14.0	9.8		58.7	23.6	6.8		8.7	14.3	10.4	38	3.1	30.3	
9.4		43.3	0.0	10.4	12	0.2	19.5	9.2		11.7	6.7	8.8		7.1	0.6	9.5 GWa
10.4		48.8	14.3	10.4		3.7	9.5	8.8		17.2	36.1	9.2		16.8	4.0	10.0 Gb
9.6		49.3	33.0	9.7		20.7	5.1	9.2		19.2	49.5	8.0		37.0	34.0	8.0 GWal
10.4		58.2	58.6	9.1		29.7	0.5	8.6	23	23.7	57.7	9.4		37.8	7.0	
10.2	5	5.8	9.9	9.2		33.7	3.0	10.2		51.2	37.2	10.0		46.0	45.1	
9.2		6.3	54.9	10.2		48.7	36.7	10.4		57.4	58.7	9.0		50.8	18.1	8.5 G-
9.0		12.3	12.4	10.2		53.7	8.8	10.3	24	25.2	48.3	10.2		52.8	47.9	
9.2		52.6	36.1	9.9	13	2.7	8.8	9.4		47.7	45.9	9.8		55.8	58.3	
25pr.	+ 1	33.6	+ 2.2		+ 1	33.4	+ 2.5		+ 1	33.3	+ 2.8		+ 1	32.8	+ 3.3	

6811-6900.				6901-6960.				6961-7020.				7021-7080.				
mag.	19 ^h .	-27°		mag.	19 ^h -20 ^h .	-27°		mag.	20 ^h .	-27°		mag.	20 ^h .	-27°		
	m	s	'		m	s	'		m	s	'		m	s	'	
9.3	39	5.8	45.5	9.6	50	32.5	22.4	10.0	4	49.5	37.0 a	8.6	21	19.1	11.5	
10.2		29.4	56.0	10.2	51	3.5	50.6	8.8	5	3.6	31.0 9.5 a	9.0		28.6	15.1	
8.0		42.3	7.8	8.6		28.5	34.8	9.0		13.6	21.4 9.0 a	10.1		34.6	15.3	
9.0		49.5	8.5	10.0		29.5	16.2	9.2		23.6	13.5	10.0		51.1	30.4	
8.2	40	45.0	23.9	10.2		47.0	40.2	9.6		42.5	22.9	8.6		59.1	11.2	
10.2	41	14.8	39.7	10.2	52	8.0	55.8	10.1		49.6	35.4	8.0	22	4.1	43.6	
8.6		44.1	57.0	10.0		12.0	32.1	8.8	6	0.6	25.6	9.4		15.6	23.3	
8.8	42	23.8	26.1	9.0		12.5	15.7	9.6		3.6	10.3	10.1		48.1	29.6	
9.6		33.8	32.6	8.6		32.5	58.5	8.8		31.6	22.8	9.0		57.1	24.4	
10.2		33.8	18.0	10.0	53	7.0	18.5	9.0		50.1	15.2	10.0	23	13.9	59.2	
9.8		38.8	7.3	10.2		7.5	50.0	9.6		7	2.5	48.6	8.2		25.4	23.6
8.0		43.0	1.7	9.6		9.0	45.2	7.2		31.5	24.2	10.1		30.6	16.5	
8.4		48.3	35.8	8.2		13.5	31.2	10.0		8	39.5	5.9	9.4		47.4	32.2
8.2	43	3.8	39.7	8.7		18.5	3.8	9.0		8	19.5	9.8	10.0		57.6	25.4
7.3		28.2	47.2	10.2		21.0	40.4	9.5		47.5	56.8	9.0	24	19.0	19.8	
10.2		28.2	56.0	9.8		29.0	58.9	9.4		56.0	57.0	9.5		34.3	17.4	
10.2		28.4	41.3	10.2		33.5	33.2	8.5		56.0	59.1	10.4		40.7	55.8	
8.0		36.7	29.3	10.2		36.5	59.6	10.0		9	30.0	40.5	10.4	25	5.6	32.1
9.8		37.7	51.5	10.0		55.4	32.3	9.8	10	26.5	49.8	9.0		7.6	4.1	
10.0		49.7	42.0	10.2	54	7.4	12.1	10.1		41.5	19.2	10.4		31.5	19.3	
7.6		59.7	23.8	10.2		17.4	6.5	9.5		50.0	55.6	9.6		42.0	21.4	
9.0	44	2.7	27.5	9.8		35.9	49.2	8.6	11	11.5	27.6	10.2		50.5	8.0	
10.2		13.7	2.2	10.2	55	1.4	30.1	10.0		46.5	4.5	8.8		55.0	8.8	
9.4		33.7	20.8	10.2		2.9	25.1	9.8	12	2.5	7.6	8.8	26	5.5	29.4	
10.2		42.2	16.9	10.2		12.4	39.4	8.8		11.5	44.0	9.6		13.5	43.4	
9.8		45.7	38.1	10.2		33.9	44.8	9.8		48.9	1.8	10.4		18.7	23.8	
9.8		46.2	1.9	9.8		39.4	23.2	8.8		50.9	34.3	8.8		21.0	35.6	
10.2	45	3.2	32.1	10.2	56	2.4	30.0	9.6		55.9	21.0	9.4		25.0	5.8	
8.6		3.7	9.4	9.3		33.6	59.7	9.2		59.4	8.8	8.8		25.5	31.4	
9.0		7.7	12.5	10.2		48.3	53.0	9.5	13	5.4	58.1	9.6		37.5	47.9	
10.2		22.7	1.9	10.2		52.4	37.9	8.8		7.4	26.1	9.4	27	5.5	52.6	
10.2		31.7	54.3	9.4	57	27.4	38.4	8.4		9.9	43.7	8.0		12.0	39.3	
10.2		33.7	1.1	7.5		33.9	9.9	9.8		32.9	11.0	10.4		12.0	16.5	
9.6		34.2	32.5	10.2		40.9	31.4	9.2		42.4	51.5	9.2		55.0	46.8	
10.2		44.2	46.5	9.6	58	29.4	46.9	9.6		51.9	34.0	10.2	28	20.0	14.8	
8.2		44.7	15.7	9.4		52.4	1.1	9.2	15	2.9	30.8	7.3		22.0	12.2	
10.2	46	14.7	20.5	8.4	59	16.4	34.8	10.0		11.4	54.8	10.2		44.0	19.0	
8.4		18.7	48.7	10.2		19.9	28.2	9.6		12.9	5.4	9.9	29	15.0	8.4	
8.0		30.9	1.1	10.2		34.9	32.0	9.0		15.9	12.5	9.8		24.0	6.0	
8.6		50.2	40.5	10.2	0	2.9	3.2	10.0		20.4	13.8	9.8		29.5	46.1	
10.2		53.7	8.0	9.6		22.4	45.8	9.8		52.9	21.4	8.8		30.0	26.4	
10.2	47	8.7	6.7	9.6		25.9	54.2	8.2		59.9	8.1	9.8		31.0	51.0	
10.2		12.7	5.0	10.2		34.5	2.1	10.0	16	5.9	25.7	9.6		43.5	29.2	
8.8		26.7	25.9	9.0		47.9	22.0	10.0		12.9	3.5	10.2		48.5	43.2	
10.2		39.7	41.8	10.2	1	8.4	35.1	10.1		15.9	0.8	9.4	30	43.0	18.7	
10.2		43.7	10.0	10.2		31.9	58.5	9.1		19.9	54.0	9.0		54.5	45.1	
9.6		47.7	8.7	9.8		35.0	10.5	8.6		29.4	58.5	10.4	31	1.2	58.6	
9.0	48	39.2	2.0	10.2		41.2	25.4	8.4		57.4	18.0	9.2	32	1.5	29.8	
8.2		53.5	57.0	10.2		55.8	30.2	10.0		17	31.4	10.4		5.0	42.6	
10.2		59.0	49.8	10.2	2	2.3	51.1	10.1		18	7.9	7.2	33	6.4	5.2	
9.6	49	15.5	5.6	9.6		12.0	55.4	9.8		30.4	4.2	9.8		6.4	30.3	
6.8		16.5	29.8	9.4		37.8	32.6	8.4		57.4	2.0	10.0		19.4	22.3	
9.8		21.5	39.2	9.4		40.8	17.3	10.1	19	13.9	29.8	9.8		39.2	1.0	
9.4		28.5	56.2	9.8		48.8	36.1	8.8		44.4	51.2	10.4		44.4	23.2	
9.4		37.0	3.9	10.2		54.8	4.2	8.8		50.9	21.9	9.6		49.4	24.6	
10.2		38.5	37.0	9.1	3	51.1	14.8	9.4	20	8.9	6.9	9.6		49.9	49.7	
9.4		45.5	51.0	8.8		55.6	41.8	8.8		49.9	41.3	9.8	34	6.4	26.2	
9.6		53.5	50.9	9.5		57.6	23.6	9.4	21	12.4	30.1	10.4		18.9	36.1	
9.4		57.5	31.8	9.8	4	13.1	49.0	9.4		12.6	2.8	8.4		22.4	39.5	
9.0	50	31.0	34.6	9.4		31.1	20.6	10.1		13.6	15.7	10.4		44.4	28.0	
25pr.	+1	32.4	+3.7		+1	32.0	+4.1		+1	31.4	+4.6		+1	30.7	+5.0	

7081-7140.				7141-7200.				7201-7260.				7261-7320.			
mag.	20 ^h .	-27°		mag.	20 ^h -21 ^h .	-27°		mag.	21 ^h .	-27°		mag.	21 ^h .	-27°	
	m s	'	''		m s	'	''		m s	'	''		m s	'	''
9.4	35	41.4	32.6	9.0	47	33.5	55.1 a	8.6	1	6.8	6.6	9.8	18	30.5	13.6
9.4		45.4	6.1	9.0		57.5	47.6	8.5		37.3	30.6	10.5		33.5	3.6
9.8		57.4	50.7	9.8	48	9.8	57.9	8.2		43.3	36.7	8.6	10.5	57.5	42.3
9.4	36	25.4	36.2 a	9.0		13.0	54.9 9.5 a	9.4	2	11.8	39.8	11.2	19	3.5	6.6
10.0		35.9	19.8	9.6		15.8	23.9	9.1		17.8	42.0	10.0		21.0	34.9
10.4		39.4	48.4	9.1	49	0.8	41.0 8.8 a	10.4		32.3	25.5	10.5		28.0	16.2
7.6		56.4	39.7 7.6 GSA	9.0		24.8	43.8 8.4 am	9.6		58.3	32.8	8.8	20	4.5	22.1 9.5 Ga
10.4		56.9	22.4	9.0		24.8	39.3 9.0	10.4	3	9.8	38.2	9.0		55.0	28.8 9.5
8.2		57.9	30.0 8.5 Ga	9.2		27.3	19.0	9.0		46.3	39.4 9.5	8.6	21	3.0	4.8 8.2 GWal
8.0	37	6.4	53.2 8.1 Gam	9.8		31.8	53.9	8.6		50.8	37.9 9.0	11.1		38.0	23.0
10.4		32.9	48.2	10.4		41.3	39.5	9.6		55.5	2.3	11.2		47.7	2.1
7.2		42.4	41.9 6.6 GSac	9.0		53.8	55.8 9.5 a	9.6		59.1	53.5	8.8		48.0	49.7 9.0 G=
9.6	38	2.4	41.1 9.2 G	9.0	50	5.3	32.2 9.0 a	8.8	4	43.6	35.2 9.5	8.8	22	14.0	41.0 9.0 a
10.4		4.4	20.7	9.2		17.8	56.5 9.0	10.4	5	4.2	19.3	9.2	23	19.5	34.3 9.5 Ga
9.6		5.4	23.6 W	10.4		32.8	51.0	7.6		26.6	12.8 8.1 Gaml	9.0		43.5	41.1 8.8 Gal
7.4		58.4	19.3 7.1 GSac	10.4		40.8	22.0	9.8		28.1	15.5	9.9		24	39.5 23.3
8.6	39	10.4	41.2 7.7 GWa	10.0		42.8	14.2	10.4		44.1	8.5	11.2		41.5	33.2
7.6		15.4	38.3 7.7 GWa	9.1		58.3	49.0	9.4	6	35.1	21.1	10.2		50.0	40.6
9.4		21.4	26.6	10.0	51	0.3	9.9	9.0		46.1	53.0 10.0 Mm	11.0	25	11.5	3.5
10.0		28.4	7.3	10.4		9.8	47.5	9.6	7	28.1	10.1	10.2		44.5	4.0
10.4		45.4	38.1	9.2		14.8	48.9 M-m	10.4		34.1	3.5	8.5		46.5	31.6 8.2 Gal
10.4	40	41.9	5.0	10.0		33.8	47.4	9.8		34.6	11.7	9.4		52.0	53.6
10.2		53.4	2.2	8.8		34.3	43.8 9.0 m	8.4		58.1	27.1 8.4 Gam	10.3	26	13.5	49.1
9.6		58.4	33.4	10.4		58.8	56.9	10.4	8	5.6	14.2	8.8		56.5	53.6 8.5 al
9.6	41	3.2	46.6	8.3	52	5.3	29.9 7.9 GWal	9.0		8.1	35.7	10.3	27	14.0	58.9
9.0		4.2	27.1 8.5 am	10.4		42.0	2.5	9.4		14.1	13.9	9.8		16.5	22.6
9.8		4.7	20.6	10.4		48.3	50.8	10.4		19.1	15.9	9.2		28	17.5 15.1 9.5 Ga
8.4		25.7	28.1 8.2 Gam	8.0		51.8	49.5 7.7 Gtlπ	9.8		41.3	21.5	11.1		23.5	47.1
8.3		56.2	23.6 8.4 Ga	8.3	53	26.8	32.0 8.4 Gaml	9.4		43.3	27.5	10.8	29	2.5	48.4
10.2	42	7.7	56.1	10.4		28.8	31.0	9.8		46.1	20.9	10.3		37.0	53.1
9.6		31.2	0.6	10.4		39.8	5.1	9.6		52.3	21.9	10.0	30	13.5	3.7 9.5 -
9.9		32.7	15.8	10.0		44.8	36.4	9.6		53.3	19.2	10.0		20.0	45.3
7.8		35.5	49.8 7.1 GStπ	10.4		45.3	25.3	9.6	9	37.4	25.1 9.5 Mm	11.0		20.5	30.3
8.2		36.5	49.7 9.0 G	9.2		48.3	54.6	11.0		45.4	42.3	11.2		26.5	49.5
9.2		54.2	57.4 9.0	9.8		52.8	38.6	8.6	10	18.4	0.5 8.2 Ga	11.0		36.5	6.5
9.6	43	15.7	20.7	10.2		52.8	48.3	8.5		24.1	45.0 8.6 Gam	10.3		53.0	49.3
9.8		20.2	41.8	6.4	54	20.8	22.0 6.2 GSlπ	10.6		47.1	7.7	10.5	31	2.5	45.1
9.2		21.7	28.8 9.5	10.0		32.3	34.9	11.2		51.6	34.1	9.5		5.0	45.7 10.0 G
9.0		55.2	14.7 a	9.0		57.8	32.0	7.6	11	27.6	8.3 7.9 Wa	9.4		32.8	48.7
9.0		55.7	37.0 9.0 a	10.4		55	51.8 24.8	9.6	12	2.5	20.0	7.4		51.5	51.9 7.0 GSal
9.6		44	1.7 46.7	9.1		56	27.8 32.0 8.5 Ga	10.6		11.0	38.8	11.2	32	8.0	37.3
7.0		4.7	42.5 6.8 GStπ	8.0		57	3.8 13.8 8.2 Gam	10.0		16.0	34.6	8.8		10.8	53.9 9.5 a
6.7		21.7	23.0 7.0 GSμB	9.8		17.3	35.4	6.8		30.5	44.1 7.0 GSlπ	8.8		12.5	32.6 9.5 a
10.0		24.2	29.7	9.0		32.8	41.5 9.0 a	7.8		41.0	49.8 8.0 Gb≡	10.0	33	2.6	48.4
10.4		52.2	53.2	9.4		54.3	34.5	8.5	13	18.5	11.6 9.0 Ga	10.2		19.1	27.9
9.6		53.7	6.9	9.0	58	9.8	44.8 9.5 Ga	11.2		21.5	40.8	10.0		34	7.6 33.1
10.0		57.2	59.1	9.0		17.8	32.1	8.0		33.5	8.6 8.5 a	8.6		35	26.1 33.1 9.0
8.8	45	10.7	23.3 8.5 a	10.2	59	1.8	46.6	10.2	14	25.0	35.1	10.2		44.6	45.8
9.9		25.2	59.4	10.4		13.8	0.4	8.0		34.5	39.4 9.0 Ga	10.0	36	14.6	44.5
9.8		25.7	6.9	9.0		14.8	24.4 9.0 GMM	9.0	15	13.5	21.6 9.0 Gam	8.6		17.6	17.0 9.0 al
8.2		32.7	38.2 8.2 a	10.0		34.3	40.4	9.4		35.5	36.6	7.9		46.1	5.2 8.5 Gal
9.8		45.7	29.6	10.4		45.3	38.6	10.2		43.0	3.1	8.4	37	47.1	3.8 7.7 Gal
9.6		50.2	37.9	9.0		48.8	53.0 8.9 Gam	11.1		46.0	17.1	9.0		56.1	27.3
10.4	46	7.0	32.0	6.7		57.8	47.4 7.2 GSal	10.2		53.5	48.1 =	8.5	38	2.6	31.0
8.8		40.5	58.2	10.0	0	2.8	1.1	9.4	16	4.5	36.4 10.0	8.8		30.1	3.6 8.3 Gaml
9.4		47.2	38.2	10.2		13.8	38.0	9.9		46.5	37.3	10.2		46.5	17.1
9.2		51.7	6.1	9.4		26.8	18.2 10.0 G	10.2		59.0	44.4	9.5		46.5	16.9
10.4	47	0.6	59.8	9.6		34.8	49.9	9.2	17	27.5	35.5 a	8.5	39	33.0	40.3
9.6		1.5	8.3	10.4		56.3	51.3	10.0		28.0	30.8	8.6		33.0	9.9 9.0 Ga
10.4		12.7	35.7	9.0	1	5.8	0.2 8.5 Ga	9.6	18	23.0	38.1	10.2		41.5	11.4 10.0 G
25pr.	+ 1	30.0	+ 5.4		+ 1	29.4	+ 5.8		+ 1	28.6	+ 6.1		+ 1	27.4	+ 6.6

7321-7380.				7381-7440.				7441-7500.				7501-7560.				
21 ^h -22 ^h .		-27°		22 ^h .		-27°		22 ^h -23 ^h .		-27°		23 ^h .		-27°		
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	
9.8	39	58.0	20.0	9.4	1	52.4	48.3	9.0 am	8.4	33	13.8	56.7	8.8 -	7.7	4	28.4
9.6	40	4.0	41.3	8.8		54.4	17.1	9.0 G-	3.4		44.3	41.6	4.0 GSπβ	8.3		30.4
9.5		16.5	25.8	9.6	2	34.9	12.4	9.5 G	7.2	34	31.8	54.6	8.0 Gtlπ	9.6	5	14.4
8.8		33.0	57.9	9.6		54.9	33.5		8.8	35	7.3	30.0		8.7	6	13.9
8.8		47.0	46.7	9.8		59.4	20.8		9.4		42.3	32.4	8.6		32.9	
9.4	41	7.5	43.2	9.8	3	46.4	30.7		10.0	36	39.8	13.4	8.3		48.4	
10.2	42	15.5	15.1	9.0	4	6.4	3.4		10.0		44.1	42.7	9.1	7	0.9	
9.8		33.5	12.1	7.4		22.4	45.9	7.0 GSStl	10.0		49.1	4.8	8.7		43.9	
6.8		41.7	59.1	10.0		24.6	7.1		8.1		49.8	31.6	8.0 -	8.3	8	30.9
9.8		42.4	10.9	9.8		39.9	7.3		9.3		57.3	36.5	8.5	9.4		52.4
7.9	43	22.9	54.9	9.2		47.2	2.5	9.5 GWa	8.4	37	3.3	51.3	8.2 Gam	8.0	9	0.9
10.8		52.9	51.0	9.4	5	29.0	26.2		9.5		37.3	9.6	9.2		41.9	
9.6		53.9	1.2	7.8		32.5	41.9	7.5 GSStl	9.0	38	11.0	57.0	8.8 Mam	8.3		47.9
10.2	44	9.4	47.5	8.0	6	2.0	6.8	7.8 GWal	10.2		30.9	53.7	9.6	10	28.9	
8.4		18.8	59.0	10.0	8	21.5	35.6		8.4		48.8	38.1	7.8 Ga	8.8		36.4
10.8		21.4	57.2	9.6		26.5	26.2		9.5	40	53.3	55.4		9.6	11	51.4
10.0		37.1	8.5	9.4	9	7.3	3.0		9.8	41	6.3	4.2		9.3	12	23.9
8.0	45	17.4	54.1	9.8		25.0	42.0		8.8	42	2.3	12.0	8.5 =	9.4		24.9
9.2		25.9	41.3	9.6		34.5	11.9		8.8	43	4.3	9.7	8.9 a	8.9		49.9
10.2		29.9	5.2	9.4		44.5	5.3	9.5	9.8		29.3	39.7		9.6	13	27.9
10.2	46	4.9	17.2	9.4	10	29.0	43.1		8.8	44	2.8	56.9	9.0 GM-m	9.6	14	17.4
9.0		10.4	9.3	9.2	11	22.0	55.1	8.5 Gam	8.8		8.3	6.2	8.6 a	7.0		35.4
9.0		46.4	10.9	9.0		56.0	23.2	9.0 G	9.5		33.3	24.8	a	9.6	15	40.2
9.6		55.9	7.3	10.0	12	53.7	30.1		9.8	45	10.8	12.9		9.1		54.5
10.2		56.9	20.7	10.0		56.0	42.6		10.6		51.8	22.6		8.7	16	44.0
9.0	47	17.9	13.3	10.0	13	12.5	8.7		9.2	46	35.3	24.0	9.5	9.4	17	4.0
9.8		46.4	36.2	9.6	14	33.5	11.9		8.4		47.0	38.7	9.0	9.6		8.0
8.6	48	14.3	56.7	9.6		40.5	16.7		8.1	47	50.0	36.3	8.0 Ga	7.5		22.0
9.5		54.8	0.1	10.0	16	16.7	19.7		9.2	48	5.8	6.6		8.9	19	33.5
9.4		59.3	38.9	7.6	17	6.5	0.4	7.7 GSsal	9.8		59.5	38.3		9.6	20	35.0
8.9	49	8.3	52.9	9.4		37.8	29.0	9.2	7.9	49	3.5	19.1	8.0 Ga	9.4		38.5
10.0		33.3	7.8	9.5		45.1	53.9		9.3		52.5	19.2		7.6		54.5
8.4		51.3	36.4	7.6		46.3	29.4	7.2 GS1π	9.0	50	41.5	27.8	9.0	9.1		57.0
7.9		53.8	4.3	8.6	19	6.1	45.5	am	10.4		50.0	9.8		8.1	21	7.5
10.0		54.8	3.1	8.6		9.1	58.6	8.0 Gam	9.0	51	6.5	22.8	9.0	7.8		18.5
9.0	50	29.3	18.8	9.5		9.1	11.5		9.6	52	40.0	46.3		9.4	22	25.0
10.0	51	5.3	55.8	9.8		55.1	21.4		9.5	53	17.5	53.2	9.5 -	8.4		38.0
9.6		33.3	53.7	7.2	20	41.6	3.3	7.0 GSsal	8.2		22.0	20.0	-	9.6	23	33.8
9.0	52	23.8	51.3	8.1	21	12.1	50.7	8.0 GWam	9.6		23.5	48.5		9.4		44.1
10.2		28.5	13.2	8.4	22	24.6	47.7	8.5 GWal	9.0		24.5	28.6	-	8.3	24	12.3
9.2	53	3.5	53.9	6.0		46.1	44.6	6.5 GS1π	8.4		26.5	45.9	8.0 =	9.0	25	24.3
8.6		45.5	7.4	8.8		46.6	11.7	9.0 a	10.6	54	16.3	38.2		9.8		37.6
10.0	54	58.0	40.1	9.5		50.1	23.4		9.2	56	3.8	35.5		9.8	26	54.1
9.4	55	3.2	26.6	8.6	23	12.6	36.8	9.0 G	7.8		52.8	29.1	7.0 GSa	10.0		57.1
10.0		13.0	48.7	10.2		50.6	32.3		9.8	57	7.0	59.1		9.6	27	27.6
10.2		13.8	4.0	10.2	24	16.6	16.0		9.6		13.8	34.9		8.8	28	18.1
8.1		33.2	58.1	9.8	25	40.6	26.5		9.6		28.0	59.9		9.4	29	9.3
9.6		47.9	28.3	9.8		43.1	20.8		9.4		53.8	25.5		10.0		30.6
7.4	56	1.5	39.2	9.2		46.1	6.4	=	9.8		57.8	51.0		9.8		31.3
9.4		14.9	7.6	9.2	27	36.3	49.7		6.4	58	4.3	48.5	7.0 GSsal	6.9		36.1
6.0	57	30.4	25.6	10.0		56.3	13.3		10.0		44.7	58.7		9.3	30	44.1
8.5	58	6.9	27.2	9.8	28	23.8	35.6		8.8	59	22.3	26.3		9.9	31	23.6
9.8	59	23.4	0.4	8.6	29	3.8	34.5	8.0 G-	10.3	0	13.8	10.3		9.9		46.6
9.0		33.4	44.1	8.2		21.3	48.0	8.8 Mm	8.6	2	13.8	49.8	9.0 =m	9.0	32	34.1
9.8		38.0	59.7	9.0	31	10.8	59.0	9.0	9.8		33.6	20.3		8.2		48.6
9.6		44.9	34.4	8.4		26.3	31.0	7.8 GWa	9.0		37.9	46.5	9.0 -	8.2	33	46.1
9.6		52.9	8.8	8.3		42.8	55.3	8.5 a	9.6		54.9	9.8	a	10.0	34	9.6
9.4	0	12.4	22.7	9.6		51.8	56.9	10.0 m	8.4	3	30.7	58.0	8.5 G≥	10.0		19.6
10.0		56.4	58.1	9.8		56.3	22.4		9.2		50.9	2.5		8.8		33.1
9.4	1	51.4	2.7	9.3	32	15.3	50.3	9.2	9.6	4	9.4	22.6		9.6		40.1
25pr.	+1	26.3	+7.0		+1	24.4	+7.5			+1	22.1	+8.0			+1	19.7
																+8.2

7561-7572.				7573-7584.				7585-7596.				7597-7607.				
mag.	23 ^h		-27°	mag.	23 ^h		-27°	mag.	23 ^h		-27°	mag.	23 ^h		-27°	
	m	s	'		m	s	'		m	s	'		m	s	'	
9.6	35	27.6	38.8	8.4	39	32.1	30.7	8.5	9.8	48	57.7	41.8	10.0	53	22.7	1.2
9.1	36	16.1	10.7	8.8		53.6	35.6	9.0	8.6	49	8.2	17.9	8.6	46.7	34.2	9.0
8.2	37	36.1	53.4	9.4	40	15.1	16.8		10.0	24.2	11.5	9.5	10.0	54	0.7	43.9
10.0		43.1	2.4	10.0	41	6.1	5.5		7.1	50	40.2	19.2	6.5	10.7	10.0	9.0 a
10.0		44.6	18.7	9.2		9.6	21.3	a	8.6		43.2	31.9	8.5	9.6	48.7	45.8
10.0		50.3	15.4	8.6		50.6	6.0	a	10.0		43.7	50.6		8.8	49.7	22.4
8.2	38	3.1	10.1	9.2	43	20.6	32.0	9.0	9.8	51	8.2	25.4	9.5	7.8	50.7	49.8
10.0		4.1	56.2	9.4		40.1	49.5	9.0	10.0		33.3	1.6		9.7	56	57.2
9.6		17.1	12.1	9.4		49.6	20.3	9.5	8.6	52	14.7	13.3		8.5	57	0.7
10.0		28.1	24.8	8.8		45	52.6	45.4	6.7	53	4.2	13.3	8.2	8.8	58	20.0
10.0		56.3	59.1	10.0		47.27.0	41.7		10.0		6.2	58.7		8.5	50.4	58.1
9.8	39	4.6	14.0	6.4		53.7	44.3	6.5	10.0		21.2	47.9				
25pr.	+ 1 18.5 + 8.3				+ 1 18.1 + 8.3				+ 1 17.5 + 8.3				+ 1 17.1 + 8.4			

ZONE — 28°.

1-30.				31-60.				61-90.				91-120.			
mag.	oh.		-28°	mag.	oh.		-28°	mag.	oh.-1h.		-28°	mag.	1h.		-28°
	m	s	'		m	s	'		m	s	'		m	s	'
9.6	0	37.3	17.0	9.9	21	4.5	54.2	10.2	39	39.3	56.8	10.0	2	46.3	21.9
8.4		53.3	5.7	7.6		8.7	56.1	9.8		47.3	24.9	10.0	3	15.3	47.0
9.4	1	28.3	9.2	9.2		41.2	39.7	10.2	40	49.8	14.6	10.4		35.2	36.9
6.2	2	59.1	40.8	9.0	22	47.7	5.0	9.6	41	13.6	59.1	8.8	4	25.3	1.0
10.0	4	45.1	35.0	8.8	24	24.7	37.5	9.8	42	9.3	46.2	8.2		34.9	26.6
6.7	5	13.1	29.7	9.2	25	36.7	31.0	10.2	19.0	13.2		10.4	4	29.9	15.2
8.1		51.1	28.8	9.2	26	24.7	40.2	7.8	43	16.8	17.2	10.2	6	58.1	45.0
10.2†		51.8	52.9	9.9	34.7	55.9	9.0	10.2	21.3	14.8		10.4	8	30.4	28.2
10.0	6	21.6	57.0	9.9	27	14.4	29.9	9.2	44	14.3	7.2	10.2		59.4	5.4
8.4		49.6	30.6	9.6		40.4	18.1	8.8		30.3	7.1	10.4	9	1.9	50.0
10.4†	7	17.6	59.9	9.6	28	30.4	44.0	8.8	45	53.3	18.2	9.4		22.9	55.0
7.5	8	0.4	13.5	9.7	29	49.8	57.6	10.2	46	37.8	3.2	9.6	33.9	55.6	9.5
10.0		25.9	33.6	7.8	30	31.9	6.5	9.4		45.8	6.6	9.8	10	25.9	28.4
10.0		35.9	39.8	9.9	31	40.3	21.4	10.0	49	40.8	34.2	9.0	11	48.4	51.4
9.4	9	43.4	11.9	8.3	33	56.4	18.5	7.2		50.8	27.2	10.4	12	12.4	39.2
10.0		47.2	56.0	9.2	33	0.4	48.3	9.6	51	46.8	53.8	10.0		16.4	15.7
9.4	9	52.9	28.2	9.2		6.9	50.2	10.2		49.8	44.3	9.6		41.9	10.6
10.0	10	20.4	29.9	10.2		10.0	13.9	10.2	55	13.3	28.0	9.8	13	32.9	13.5
9.4		40.6	44.9	10.2	34	3.0	11.1	9.6		28.3	7.6	10.4		35.7	44.0
9.7	12	9.8	37.8	7.8		38.0	3.7	9.4	56	54.8	17.2	8.6		51.4	53.4
8.6		13.8	38.7	9.2		40.5	21.9	10.4	57	4.8	24.3	10.4	15	22.3	19.1
9.9		41.3	42.3	10.2	35	47.1	57.8	8.0		16.8	33.0	10.4		46.8	32.9
9.1	13	34.8	20.9	9.8	36	24.0	35.1	10.0		20.3	37.8	10.4	16	7.3	50.8
9.9		55.6	55.5	10.2		36.5	25.5	10.4		36.2	38.2	10.4	17	40.8	13.1
9.0	15	51.3	5.7	9.2		43.0	24.1	10.0	58	0.3	36.8	10.4		48.6	31.9
9.9	16	17.8	2.7	10.2	37	29.5	57.2	10.0	59	17.8	52.4	10.4	18	13.3	39.6
9.9		20.5	21.4	9.6	38	52.8	32.2	8.2		26.5	59.6	10.0		14.2	40.2
8.4	17	43.2	6.4	8.2	39	1.8	27.1	10.4		35.2	13.0	9.0		29.2	42.1
7.8	19	29.7	24.0	10.2		21.3	49.0	9.2		56.8	15.9	10.2		30.2	32.6
8.6		42.2	58.0	8.2		27.3	33.9	8.0	1	38.3	23.4	8.2		54.2	29.0
25pr.	+ 1 16.1 + 8.4				+ 1 14.2 + 8.3				+ 1 12.8 + 8.2				+ 1 11.2 + 7.9		

1866 Cap...

121-180.				181-240.				241-300.				301-360.				
1 ^h .		-28°		1 ^h -2 ^h .		-28°		2 ^h .		-28°		2 ^h -3 ^h .		-28°		
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s		
18	58.5	57.8		10.0	56	9.5	16.8	8.8	33	18.2	3.3	7.0	56	7.0	55.9	7.8 GSb-
7.6	22	14.7	42.0	8.8	43.0	56.5	8.2 Ga	8.6	25.2	42.3	8.5 a	6.6	14.5	34.4	6.2 GSπ	
10.0	19.2	49.8	7.8 G	9.0	57	11.5	39.6	7.8	37.2	21.5	7.5 GSa	9.0	25.0	32.3	9.0 G	
9.8	19.7	54.8		9.4	14.5	1.4		8.2	43.7	50.2	8.0 Ga	9.8	42.5	4.7		
10.2	24	14.2	38.4	9.7	59	13.2	58.9	8.6	34	30.6	36.2	8.8	44.5	29.0	9.0	
9.2	25	5.7	33.2	8.0	17.8	57.6	7.8 G	8.5	36	3.5	3.2	9.0	57	11.5	21.5	
7.9	25.7	44.6	8.5 Gal	7.7	39.0	58.7	7.5 Ga	9.6	29.6	35.2		8.7	24.0	31.1	8.0 G	
10.2	53.7	46.0	10.0	8.8	59.5	42.7	8.0	8.0	30.6	29.0	8.8 Wa	8.7	27.0	48.3	9.5 G	
10.2	26	2.7	39.8	9.0	0	14.8	57.2	7.5	37	25.1	41.0	9.5	29.5	9.7		
7.9	2.7	20.8	7.5 GSb	10.2	26.9	49.9	9.0 G	7.8	38	19.6	25.8	9.4	33.5	12.0		
10.2	24.2	12.2		9.0	29.8	51.6	8.9	9.3	30.6	30.0		9.8	38.0	5.4		
10.2	45.2	11.8		9.2	46.3	43.2	9.0 Ga	8.3	32.4	58.1	8.8 GWb	9.8	49.5	4.1		
9.4	27	8.2	38.0	10.2	1	8.9	42.2	9.3	39	26.0	28.5	9.8	50.3	0.8		
7.4	28	28.7	0.4	8.4	33.6	24.7	8.5 =	9.4	37.6	10.7	9.5 G	9.0	58	36.5	52.2	
7.8	34.2	52.6	7.0 GSa	7.4	2	29.4	10.0	9.3	51.6	47.1		9.2	39.0	21.2		
10.2	30	0.6	13.5	8.7	3	19.4	0.5 a	9.6	41	2.1	22.7	9.2	44.3	58.6		
10.2	31	37.7	6.6	9.2	34.6	9.8	8.5 G	10.4†	23.2	59.8		9.4	54.5	40.2		
10.2	32	38.7	27.1	8.8	52.6	22.7	-	9.2	42	40.1	31.7	9.8	59	13.5	26.3	
9.6	33	42.2	20.2	10.0	4	15.3	1.8	9.2	43	0.6	4.1	9.2	30.5	14.7		
9.4	34	1.2	54.6	8.1	49.6	24.3	a	6.0	44	30.1	27.7	9.0	50.5	29.4	9.0	
10.2	16.2	59.1	9.5 G	9.0	54.6	50.9	9.0 GW	9.0	30.6	37.6	9.2 Ga	8.4	53.5	26.2	8.0 Ga	
10.2	38.2	37.7		7.4	5	4.6	48.5	10.0†	59.2	49.8		8.8	0	10.0	8.8	
9.2	59.2	40.1	9.5	8.1	6	33.6	6.1	9.2	45	0.5	4.9	9.0	25.0	53.3		
10.0	35	1.2	54.8	9.6	57.1	3.1		8.4	35.0	38.9	8.5 Ga	9.6	34.5	45.9		
9.4	10.2	33.8	9.2 G	9.4	7	14.6	30.0	8.2	46	4.0	9.0	8.9	54.5	8.4	8.5 a	
9.2	19.2	38.4	8.8 G	8.8	32.6	28.2		9.0	7.1	57.7	9.5 a	9.2	1	0.5	25.1	
8.6	59.2	35.9	9.0 Ga	7.4	8	43.2	29.3	9.7	13.7	4.8		8.9	5.5	25.7		
10.0	36	18.5	11.3	9.2	9	36.6	1.9	9.2	55.6	0.5		9.8	24.5	31.8		
10.2	27.0	4.0		10.0	49.7	5.5		7.5	47	8.7	28.2	9.0	2	13.5	0.1	
9.6	58.0	6.6		10.0	11	51.2	26.7	8.8	24.8	41.6	9.2 G	6.2	29.9	18.6	6.2 GSπ	
10.2	37	2.0	3.4	7.8	12	25.7	57.1	9.5	38.7	45.6		9.6	37.9	51.0		
10.2	37.5	12.6		9.4	13	48.9	9.7	9.8	50.7	48.2		9.5	39.9	41.9		
10.2	39	29.2	14.0	9.2	14	9.4	20.0	8.0	48	9.6	21.9	9.4	3	17.4	55.5	
9.4	47.7	2.4	8.8 G=	10.0	25.0	26.1		8.8	49	26.7	24.1	9.6	36.9	54.2		
9.7	40	48.8	49.6	9.2	51.9	16.5	9.0 G-	9.2	33.7	27.9		9.7	37.9	46.0		
9.7	51.3	4.8.6		9.4	15	14.9	38.0	9.4	34.3	50.9		8.6	4	1.9	50.5	
8.4	41	9.8	17.7	9.6	38.9	16.9		9.5	39.3	43.7		9.8	59.9	10.3	8.5 GWa	
9.0	36.3	37.9	9.5	10.0	55.9	35.2		9.8	59.8	41.5		8.9	5	40.4	2.7	
10.0	42	36.3	23.3	7.4	16	29.9	26.0	9.0	50	8.8	23.8	9.4	6	14.9	16.6	
9.7	43	34.6	19.0	10.0	40.4	43.4		9.0	51	30.3	16.7	9.7	38.9	52.0		
8.9	39.1	23.9	8.0 b≡l	9.6	18	44.1	31.2	9.0	51.8	29.7	9.0 G	9.0	45.7	3.1	a	
9.4	45	58.6	38.3	9.7	45.6	57.6		9.0	59.8	2.5		9.7	7	21.1	26.9	
9.2	46	17.1	37.8	10.0	20	12.6	53.1	9.2	52	14.3	50.1	9.8	31.9	13.6		
8.0	29.1	22.4	8.8 Gb=l	9.8	12.6	58.6		8.5	17.3	10.2	8.7 Ga	6.8	8	2.4	2.8	
9.0	47	14.1	41.9	10.0	37.6	23.8		8.8	22.3	56.8	9.2 Ga	8.2	9	57.4	48.6	
9.9	22.1	27.5		9.4	41.1	0.3	9.0 G	9.8	23.3	24.4		8.4	10	16.7	28.3	
10.0	40.5	59.1		9.7	42.9	4.7		8.7	29.3	12.4	8.7 Ga	9.2	11	1.0	38.9	
9.2	49	14.1	54.9	8.6	21	57.4	11.4	9.8	43.3	19.6		8.4	19.5	57.1	8.7 GSa	
8.4	50.1	19.5	8.5 Ga	9.7	23	19.9	37.7	9.2	49.3	43.9		9.2	13	7.3	1.9	
10.0	54.1	35.2		9.0	25	30.4	33.1	8.8	52.3	52.2	9.0 Ga	9.2	49.7	2.4		
8.9	50	55.1	10.6	7.4	26	2.2	3.8	9.7	56.8	22.0		9.4	54.0	7.1		
8.8	51	38.6	21.3	8.0	42.7	20.6	7.8 Gal	9.0	53	8.3	23.6	9.0	16	19.0	36.7	
10.2	56.5	6.0	9.0 G-	9.0	54.7	9.3		9.8	29.3	5.1	Ga	9.4	47.0	21.7	9.2	
9.9	52	7.0	44.8	9.4	27	20.7	25.8	9.2	54	7.8	52.5	9.2	17	9.0	52.4	
8.6	53	48.5	32.8	5.3	28	22.2	46.9	9.7	29.3	39.4		9.6	18	8.0	21.8	
9.2	50.5	7.7	9.0 =	8.5	29	52.2	35.1	9.2	32.3	5.5		7.7	24.0	22.4	7.5 GSb-	
9.0	54	5.5	4.8	9.8†	30	14.0	51.5	8.2	48.3	34.5	8.2 GSb	8.9	19	31.5	21.3	
8.8	15.5	45.8	9.0 a	8.4	40.7	45.9	8.0 Ga	7.4	55	20.8	8.1	9.6	34.0	7.6		
9.8	55	14.5	19.8	9.6	31	16.2	33.0	9.8	34.3	30.5	7.5 GSa	8.9	34.0	12.8	8.5 G-	
8.8	24.5	12.9	8.5 Gal	9.6	50.7	35.1		9.0	47.3	27.5		8.8	20	5.0	19.1	
25pr.	+ 1	9.3	+ 7.6		+ 1	6.9	+ 7.0		+ 1	4.6	+ 6.2		+ 1	3.8	+ 5.8	

361-420.				421-480.				481-540.				541-600.							
mag.	3 ^h .	-28°		mag.	3 ^h -4 ^h .	-28°		mag.	4 ^h .	-28°		mag.	4 ^h .	-28°					
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s				
9.4	20	44.0	46.5	10.2†	48	14.9	55.1	9.5	7	29.5	18.2	9.0	W=	8.8	22	21.3	12.9	a	
9.6		59.0	0.5	8.6		31.6	40.6	9.0	9.2	42.5	42.2	9.2		9.2		25.3	20.6		
8.0	21	31.0	59.9	9.8		36.6	38.3		10.2	50.0	54.2	10.0		10.0		30.3	26.4		
9.4		54.2	51.7	7.0	49	7.1	2.4	7.4	10.2	52.0	56.0	10.0		10.0		42.3	56.4		
8.4	22	12.2	10.9	8.9	50	6.6	5.8	9.0	7.3	57.0	51.7	7.9	GSal	10.0	23	17.8	21.5		
9.6		29.2	39.0	10.0†		15.9	53.5		9.5	8	8.8	57.8		10.0		20.3	51.8		
9.2		40.2	15.7	9.6		59.9	39.2	9.0	10.2	10.0	40.8	10.0		10.0		35.8	45.9		
8.9	23	30.2	3.9	9.1	51	12.1	47.2	9.0	10.2	40.1	23.2	10.0		10.0		42.8	24.3		
9.0	24	24.0	59.9	9.0		17.1	21.9	a	10.1	9	13.6	1.1		10.0		55.3	10.4		
8.8		25.7	55.5	8.6	52	44.1	14.0	8.8	10.1	15.0	0.8	9.4	24	15.3	17.6				
9.6		43.7	46.1	9.5	53	39.0	6.0		9.4	15.6	39.0	9.6		9.6		20.3	50.9		
9.6		54.7	49.4	9.8		49.0	24.8		10.1	10	5.6	27.9		8.5		32.8	39.5	8.4-	
7.6	25	26.2	21.2	9.6	54	23.5	54.8	9.5	9.2	33.1	42.5	9.0-		9.4		52.8	54.1		
9.0	26	15.7	5.5	10.2		27.0	14.9		8.6	11	28.6	43.3	9.0	8.5		52.8	42.3	8.8-	
9.2		40.7	33.3	10.0	55	2.5	57.0		10.2	31.6	29.0			10.0	25	12.3	6.9		
9.6	27	9.2	23.6	9.5		15.5	2.7	8.8	10.1	12	30.6	25.1		8.8		14.8	1.7	9.5	
9.2		27.2	32.6	10.2		18.0	45.8		9.4		55.6	45.2	9.0	10.0		21.3	23.2		
9.4	28	18.2	18.4	8.2		59.0	37.2	8.5	10.2	13	15.6	3.0		9.4		30.3	44.5		
9.0		49.2	31.2	8.8	56	30.0	4.0	9.2	8.8	34.6	28.8	9.5	=	9.8	26	10.3	0.0		
9.0	29	3.6	8.5	9.6		55.0	24.2		9.6		36.6	32.9		9.4		10.8	51.1		
8.9		54.1	8.6	10.0	57	4.0	26.8		10.1	41.6	39.4			10.0		11.3	3.2		
8.2	30	12.1	45.0	9.5		14.0	7.5		9.5	46.6	22.8			8.8		12.3	6.9	8.5	
9.6		29.6	30.0	7.6		18.0	52.7	7.5	9.5	55.6	21.9			10.0		20.8	8.4		
9.4		49.6	0.3	10.1		26.0	19.8		9.0	14	10.1	17.4	7.5	10.0		22.8	0.3		
9.0	31	2.6	37.6	10.1		32.0	56.1		10.2	13.1	8.0			9.6		23.8	52.8		
8.8		12.1	18.1	9.6		54.5	4.3		10.2	23.1	54.6			9.7		24.3	55.7		
8.4		47.1	32.1	10.2		58.5	28.3		8.8	30.6	50.0	9.5		9.8		26.8	7.3		
9.6		50.1	3.5	9.4		59.5	18.1		9.4	15	28.3	0.9		10.0		30.1	0.0		
6.4	33	36.4	21.2	9.2	58	39.5	41.8		9.6	33.8	25.0			10.0		32.3	4.7		
10.2†		37.7	52.1	8.8	59	38.5	4.9	9.2	9.2	16	14.5	12.9		9.4	27	10.8	22.0		
8.5		52.4	25.6	7.8		39.5	41.3	8.2	10.2	38.0	44.8			9.8		16.5	0.2		
9.0	34	1.4	5.1	10.0		56.0	50.6		9.8	40.5	20.4			9.5		17.8	52.6		
9.6		7.9	27.4	8.5	0	12.5	41.5	8.0	9.5	41.5	21.4			9.5		31.8	29.4		
9.6		23.9	44.4	10.0		26.0	26.5		8.8	45.5	10.0	G		8.8		50.3	44.2	9.0-	
7.1		44.4	54.8	10.1		28.5	47.5		10.2	51.5	21.0			9.0		50.3	53.5	8.5	
7.5	35	38.4	22.2	10.1		38.5	31.3		10.2	59.0	8.1			9.4		56.3	47.8		
9.8	36	2.3	19.5	10.2		40.5	31.9		10.0	17	17.2	38.6		9.8	28	35.3	55.6		
8.8		8.4	19.3	9.4		49.0	15.8		9.8	20.3	30.9			8.8		36.8	5.2	9.5	
9.4		15.4	22.4	10.1		59.5	15.9		10.0	28.8	29.2			10.0		40.8	56.1		
9.6		24.4	40.5	9.2	1	23.5	7.9		10.0	31.0	8.7			9.2		41.8	39.9		
9.6		26.4	15.8	10.2		25.5	24.7		9.2	49.2	9.6	9.0	Ga	9.7		59.8	44.9		
10.0†	37	4.6	58.8	9.2		29.5	52.7		8.6	18	3.8	31.7	8.5	6.8	29	2.3	42.5	7.0	
9.0		12.4	47.7	9.0		29.5	0.4		8.5	37.3	7.3	8.0	Ga	9.4		5.3	38.7		
9.0	38	1.4	32.2	10.2		38.0	51.9		9.4	19	31.3	18.2		9.5		22.3	31.6		
9.0		17.9	52.0	9.6	2	11.5	20.5		9.7	47.3	43.9			9.0		30.3	25.1	8.5	
9.8	39	46.4	2.8	9.5		25.4	1.8		8.1	50.3	29.7	8.0	GWa	8.2		35.3	28.2	8.5	
9.6		47.4	19.0	8.8	3	1.5	51.5		9.2	20	2.3	0.3		9.8		48.3	43.2		
8.6		51.4	13.0	9.5		17.5	3.8		9.4	20.3	12.6			9.6		50.3	21.4		
8.6		52.6	0.1	8.0	4	17.0	8.4	8.2	9.4	25.3	1.3			10.0		59.3	22.9		
9.0		59.4	9.8	10.1		26.1	3.1		8.8	28.3	6.5	9.5		9.5	30	21.6	1.9		
8.2	40	11.5	15.6	9.6		27.0	8.2		9.4	30.3	10.5	9.0	G	9.6		39.3	6.8		
9.6		20.0	11.0	9.2	5	4.5	18.0		8.3	32.3	46.1	8.3	Ga	9.2		55.3	13.4		
9.8		36.8	20.2	9.4		8.0	47.8		8.8	21	8.3	2.0	9.5	9.0	31	2.3	27.5		
9.0	41	32.5	34.4	10.1		26.5	37.2		10.0	14.2	1.1			10.0		9.3	47.1		
8.6	43	36.0	51.1	10.2	6	8.5	21.4		9.8	23.8	12.2			10.0		40.3	55.5		
9.8	44	22.5	21.0	10.2		26.5	0.6		9.2	35.3	57.3	9.0	Ga	10.0		44.9	50.7		
9.1		59.6	58.2	10.2		27.5	49.4		9.6	50.8	36.0			10.0		45.4	53.8		
9.8	46	16.3	53.8	10.1		40.0	32.3		9.4	51.3	30.0			9.4		50.4	37.9		
9.0		58.5	26.6	9.5		51.0	32.2		8.5	22	1.3	57.2	8.8	10.0	32	22.4	38.0		
9.8	47	35.5	53.7	9.0	7	0.0	45.8		9.4		6.3	52.8		10.0		25.4	41.2		
25pr.	+ 1	2.2	+5.0		+ 1	1.1	+4.2			+ 1	0.5	+3.7			+ 1	0.1	+3.3		

100-Galaxy...

601-660.				661-720.				721-780.				781-840.									
mag.		4h.		-28°				mag.		4h.-5h.		-28°		mag.		5h.		-28°			
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s		
10.0	32	29.4	45.1	8.8	43	28.7	38.5	9.0 =	9.6	53	57.3	44.9	10.1	5	8.7	29.5	10.1	5	8.7	29.5	
8.8		35.4	26.1	a	9.9	33.7	25.1		9.7	54	4.3	25.0	10.1		9.2	34.5	10.1		9.2	34.5	
10.0	33	0.4	4.1		9.8	38.7	32.2		10.0		5.8	1.9	9.8		41.7	0.7	10.0		58.2	56.4	
9.4		22.4	8.0		10.2	48.2	3.9		10.0		6.8	43.1	10.0		58.2	56.4	10.0		58.7	27.6	
7.8		55.4	9.6	7.8 GSa	9.0	48.7	36.0		8.9		7.8	13.1	9.2 a				10.1	6	25.2	54.5	
10.0	34	4.9	43.3		8.6	2.1	56.8	8.9 G-	8.0		11.8	37.9	7.8 GSb=				10.1		33.7	32.8	
9.4		5.4	21.9		9.7	2.7	11.3		10.2		15.6	1.3					10.0		34.0	20.3	
10.0		11.4	32.1		10.2	5.0	51.1		10.2		18.5	0.5					10.1		41.7	7.6	
9.2		14.4	39.3		9.8	14.7	25.5		10.2		43.0	12.7					9.8		43.7	7.3	
9.2		16.4	49.9		10.1	20.2	31.9		9.7		49.5	48.3	W				10.0		49.7	32.9	
9.2		19.9	35.7		9.4	33.7	51.4		8.8	55	4.7	1.3	9.0 Ga				10.1		59.3	52.5	
8.4		38.9	26.7	9.5 -	9.8	45	13.2	23.1	9.2		13.0	26.2					9.4		7.1	3.3	
10.0	35	1.4	25.9		9.7	14.7	22.6		10.2		25.5	9.9					8.5	7	1.3	22.4	
10.0		1.9	19.1		9.6	17.2	21.3		9.6		32.7	58.3					10.1		13.3	7.5	
9.1		2.9	47.8		8.9	23.7	49.0	9.2 Ga	9.6		34.5	59.3					10.1		14.8	15.9	
8.8		11.4	53.6	10.0	10.2	38.7	56.8		9.6		34.5	39.7					9.3		16.3	42.9	
9.8		30.4	56.5		9.0	39.2	37.2		10.1	56	14.5	55.1					9.0		17.3	26.6	
7.9		42.4	26.1	7.8 GSb=	9.4	42.2	12.9		9.7		32.0	13.9					8.8		23.3	2.1	
9.4		43.4	42.1		9.7	52.2	26.9		9.4		33.5	57.7					9.5		35.3	40.1	
10.0	36	39.9	42.9		9.6	56.2	29.0		9.7		57	9.5	53.7					9.6		43.8	30.5
9.4		49.9	57.6		9.0	46	3.7	28.5	8.9		13.5	14.6	8.8 -				8.8		54.3	36.8	
9.5	37	9.4	47.0		9.6	5.7	13.6		8.8		15.5	15.4	9.0 -				9.0	8	2.3	12.8	
9.6		12.4	3.8		10.1	6.7	39.9		9.6		45.9	2.4					9.8		55.3	17.0	
9.5		13.9	12.9		9.7	7.8	57.9		9.4		59.5	13.9					9.3		55.3	5.4	
9.6		26.9	32.9		10.1	16.4	1.0		10.2	58	21.0	42.2					8.8		57.3	15.3	
9.8		50.4	36.9		9.0	47	1.7	16.1	9.9		27.0	21.9					10.0		59.8	54.2	
10.0	38	23.9	22.5		10.1	10.7	41.5		9.9		31.0	45.2					9.5	9	14.3	2.5	
8.8		36.4	54.1	9.2	9.0	32.7	35.4		10.2		37.4	53.1					9.4		19.3	44.0	
10.0		47.4	17.7		9.4	38.3	43.5		10.2		41.5	23.9					10.0		24.3	15.4	
10.0		50.4	47.9		9.9	49.3	26.8		8.9		56.5	40.2	9.0 a				9.5		25.8	54.1	
10.0		59.4	56.7		9.6	59.8	10.9		10.1		59.5	56.5					10.1		26.3	0.7	
9.0	39	6.6	55.0	9.0 Ga	9.2	48	6.3	53.5	10.0 a	9.7	59	22.0	20.2					9.0		28.8	11.7
9.0		10.4	27.9	9.5	10.1	49	22.3	39.2		9.4		26.0	23.3					9.4		29.3	12.6
9.0		15.2	21.1		9.9	27.3	22.1		10.2		44.0	29.5					9.6	10	9.3	17.9	
9.8		15.9	6.0		10.0	42.3	59.6		9.8		49.5	47.5					7.2		14.8	28.0	
9.8		21.9	42.3		9.4	50	0.8	2.9		10.0	0	20.0	14.9					9.1		24.3	2.3
8.0		28.9	11.0	7.3 GStπ	9.6	17.3	5.1		10.2		33.5	40.5					9.0		37.3	53.6	
10.0		31.9	39.1		9.9	17.4	59.9		10.1		54.5	48.5					9.4		51.3	39.4	
9.8		43.4	34.5		9.6	39.5	0.9		10.2		54.5	9.2					9.4	11	5.3	12.8	
10.0		45.2	4.6		9.4	42.0	0.4		9.6	1	18.3	26.4					10.1		9.3	29.1	
9.4		56.9	8.8		8.3	42.8	45.3	8.0 Ga	10.1		18.5	34.3					10.1		10.8	25.3	
10.0	40	1.6	24.9		9.4	49.8	16.0		9.0		36.3	43.7	9.5 Wa				9.4		18.8	46.2	
9.7		3.6	33.9		10.2	51.3	40.1		10.0		54.5	30.9					9.8		19.3	18.6	
10.2		35.8	27.7		9.9	51	8.3	40.4		9.7		55.3	47.6					10.1		26.3	20.2
10.2		38.8	27.2		10.0	11.3	57.5		9.4		56.8	43.9					8.6		31.8	16.5	
9.0		42.9	17.5		9.9	20.8	52.1		8.9	2	3.5	49.3	a				9.5		33.3	1.8	
8.2		43.4	53.2	8.0 GWa	9.6	44.3	19.8		10.0		23.0	12.5					10.0		37.3	52.9	
9.6	41	16.7	22.5		9.8	51.3	22.9		10.1		25.5	50.9					9.1		44.3	42.6	
6.8		26.7	18.9	6.5 GStπ	9.0	59.3	11.7	9.0 Ga	10.0	3	3.7	37.3					10.1		56.3	7.3	
9.8		32.7	10.0		9.6	52	1.3	15.6	9.8		19.7	43.9					9.3		58.5	58.2	
9.6		48.7	34.6		9.9	30.8	12.0		10.1		25.2	27.6					9.3	12	22.7	4.8	
10.1	42	13.7	33.4		9.0	42.8	20.0	9.5 a	9.0		25.7	56.7	9.2 Ga				10.0		33.2	12.0	
9.7		22.7	4.4		9.0	53	13.3	13.7	9.0 a	9.3		37.7	39.7	-				10.0		48.7	27.4
10.2		30.7	0.5		10.1	25.3	56.2		10.0	4	13.7	31.1					8.6		52.7	18.4	
10.2		30.7	27.6		10.1	29.6	0.4		9.0		16.2	12.4	8.5 Ga				9.6		59.7	0.8	
10.0		36.2	26.9		10.2	38.6	0.1		10.0		21.7	2.9					9.0	13	10.7	29.4	
9.4		58.2	22.9		8.8	39.3	11.5	8.8 a	10.0		24.2	9.3					9.5		26.2	22.6	
9.9	43	23.7	52.0		9.3	41.3	15.5	8.8 a	9.8		25.7	0.1					10.0		34.7	14.8	
10.1		24.2	26.4		10.2	44.2	55.8		10.0		35.7	40.9					9.5		57.2	43.9	
9.8		25.7	29.0		10.1	47.8	53.5		9.6		41.7	16.1					9.5	14	25.7	38.8	
25pr.	+ 0	59.7	+ 2.9		+ 0	59.5	+ 2.6		+ 0	59.3	+ 2.2						+ 0	59.1	+ 1.8		

841-900.			901-960.			961-1020.			1021-1080.		
mag.	5 ^{h.}	-28°	mag.	5 ^{h.}	-28°	mag.	5 ^{h.}	-28°	mag.	5 ^{h.}	-28°
10.1	14	34.2	16.6	9.8	27	53.6	36.1	9.2	37	19.4	58.8
9.4	15	5.7	17.0	8.8	28	5.6	15.7	9.5	9.4	26.5	59.5
10.1		8.2	45.3	10.0		20.1	39.2	9.6	9.6	40.5	59.2
8.5		12.7	0.9	9.4		42.1	10.4	9.5	9.5	44.4	30.6
10.1		47.2	35.0	8.8		49.6	48.9	9.0	9.0	44.4	47.4
8.8	16	2.7	30.3	8.8	29	0.1	14.2	8.0	9.4	51.9	3.9
9.8		19.7	45.0	9.4		4.6	7.3	9.2	9.4	52.9	19.2
8.8		25.7	4.5	8.8		6.1	43.2	-	9.6	38	7.4
8.8		59.7	15.8	10.0		6.6	52.1		9.3	19.9	6.2
9.6	17	4.7	39.0	9.3		14.1	34.2		9.9	36.9	16.0
10.1		36.2	52.7	9.3		19.6	35.9	9.8	9.8	44.9	14.5
9.1		54.7	33.7	10.0		23.6	18.7	9.5	9.5	45.4	15.1
10.1	18	19.2	51.2	9.4		29.6	42.4	9.6	9.6	52.9	0.3
10.0		24.7	43.7	9.3		37.1	25.4	8.8	39	12.9	16.9
9.4		46.2	24.5	9.9		39.6	57.7	9.0	9.0	14.9	40.0
10.0	19	2.2	45.0	9.8		39.6	28.6	10.0	10.0	19.9	14.9
10.1		17.5	39.1	9.4		55.6	36.2	9.4	9.4	21.7	3.1
9.0		31.4	52.6	9.8		56.6	31.9	10.0	10.0	54.4	14.2
9.6		47.9	28.5	9.9		58.1	22.5	10.0	10.0	54.9	14.0
9.6		55.9	16.0	9.9	30	5.6	55.8	9.6	40	3.9	17.8
10.1	20	31.9	49.9	10.0		32.6	25.6	10.0	10.0	5.9	44.3
10.1		34.5	37.9	10.0		42.1	18.2	10.0	10.0	15.4	24.1
10.0		52.9	59.0	9.6		47.6	32.3	9.3	9.3	16.9	42.2
9.5	21	3.9	28.0	9.2	31	1.6	6.8	9.6	9.6	22.4	26.2
10.1		3.9	6.0	6.9		17.1	47.3	10.0	10.0	33.5	0.8
10.1		51.4	27.9	9.4		26.6	8.9	9.5	9.5	38.8	25.8
9.8	22	13.9	52.3	10.0		29.8	1.5	9.3	9.3	49.3	48.5
9.4		14.4	54.0	10.0		30.1	51.0	9.2	41	10.3	9.1
9.6		15.0	58.5	9.2		45.8	59.3	7.9	42	1.8	56.0
9.1		27.4	0.9	9.6	32	35.1	46.4	9.0	9.0	10.3	18.9
9.3		36.4	9.0	10.0		39.6	31.1	6.3	6.3	12.3	41.1
9.6		52.9	53.9	7.7		45.6	42.0	10.0	10.0	24.8	53.7
9.4		59.4	53.2	8.6		49.6	5.2	9.6	9.6	33.8	14.5
9.8	23	0.7	56.5	6.3		52.1	45.8	9.8	9.8	36.8	59.7
9.6		4.9	5.0	10.0	33	12.6	37.8	8.9	8.9	45.3	18.4
10.0		5.4	30.0	9.9		25.6	9.8	8.8	8.8	56.8	35.5
10.1		7.4	2.0	10.0		34.4	36.1	9.8	43	27.8	3.8
9.3		16.5	57.8	8.5		37.1	34.0	9.8	9.8	38.3	50.1
10.1		28.4	8.7	7.7		41.1	54.6	9.8	9.8	43.3	8.1
9.6		28.9	37.2	9.2		42.6	10.2	9.4	44	10.3	8.7
9.4	24	7.8	38.8	9.9		45.5	55.8	9.0	9.0	11.3	25.2
10.0		19.9	3.3	9.2		46.6	6.2	9.4	9.4	15.0	1.8
9.4		26.9	54.4	9.9		46.9	43.9	9.4	9.4	17.3	45.8
10.1		35.4	34.8	9.9		50.4	47.0	9.6	9.6	26.3	50.1
9.8		46.2	33.1	10.0	34	11.4	51.6	10.0	10.0	32.7	51.2
10.0		54.4	16.4	9.4		17.4	13.7	9.6	9.6	40.3	29.9
10.0	25	0.2	23.7	8.8		19.9	39.5	9.2	9.2	45.8	36.3
10.0		1.7	31.7	9.5		41.9	45.8	10.0	10.0	49.3	9.1
9.4		11.2	37.1	9.2		50.9	50.0	9.2	9.2	50.3	21.5
10.0		14.2	17.2	9.2	35	14.4	50.4	9.6	45	5.8	58.0
8.8		18.7	32.0	9.8		27.9	47.0	8.9	8.9	25.3	4.7
9.4		20.7	8.8	8.8		52.4	20.3	9.4	46	13.3	13.1
8.8		36.7	49.6	10.0	36	2.9	40.1	9.4	9.4	18.3	27.6
8.6		39.2	52.6	9.2		2.9	1.1	8.2	8.2	35.3	22.4
9.8		51.2	54.8	8.8		18.9	38.0	9.6	9.6	36.3	11.1
8.1	26	7.2	37.7	10.0		31.9	28.9	10.1	47	1.5	7.0
8.6		44.7	11.9	9.2		44.9	15.5	10.2	10.2	12.7	41.7
9.9		45.2	48.0	8.7		48.9	8.0	10.2	10.2	23.0	3.1
10.0	27	6.1	53.6	8.8		54.9	49.9	8.8	8.8	23.7	41.2
10.0		17.6	10.0	9.8		58.1	1.1	10.1	10.1	25.5	21.6
25pr.		+ 0 58.9	+ 1.3			+ 0 58.8	+ 1.0			+ 0 58.7	+ 0.7
											+ 0 58.7
											+ 0.3

1081-1140.			1141-1200.			1201-1260.			1261-1320.		
5 ^h -6 ^h .			6 ^h .			6 ^h .			6 ^h .		
mag.	m	s	mag.	m	s	mag.	m	s	mag.	m	s
9.6	56	52.9	9.6	3	53.7	9.8	9	48.3	9.9	17	2.9
9.7		56.4	9.0		56.2	9.8		49.3	9.7		35.9
8.7	57	0.9	9.2		59.7	10.3		54.8	9.9		53.9
9.6		4.4	9.4	4	1.7	10.3		54.8	9.6		55.9
10.3		8.9	9.6		8.7	10.2	10	1.3	9.0		57.4
9.8		12.9	9.6		10.7	8.1		1.8	9.2	18	23.9
9.6		16.4	9.2		13.6	8.4		5.9	9.5		26.9
10.3		36.9	10.3		23.1	9.4		30.3	9.0		27.4
8.7		44.4	9.2		33.6	9.8		30.8	9.5		31.4
10.0		45.9	10.0		34.6	9.8		43.0	9.8		36.9
9.7		55.9	10.1		43.1	9.3		47.5	9.9		37.9
10.3	58	0.9	9.6		44.1	9.4		50.5	9.4		43.4
8.8		20.4	10.2		48.6	8.7	11	21.0	9.6		43.9
10.3		23.9	10.2		51.1	9.8		33.5	9.6		57.9
8.3		45.9	10.0		56.6	10.0		41.5	9.9	19	9.4
10.2		52.9	10.3		56.6	9.0		55.0	9.4		21.4
10.3	59	6.4	10.2		57.9	9.9	12	34.5	10.0		30.4
10.0		16.4	9.8		8.1	9.9		41.5	9.5		43.9
8.3		43.4	10.0		10.1	9.3		43.0	7.5		52.4
10.3		45.4	9.4		12.6	9.2		43.5	9.8		53.2
8.3		45.9	8.9		18.6	9.8	13	5.5	10.0		56.4
7.4		48.4	10.2	6	0.9	10.0		14.0	9.7		58.4
10.3		48.4	8.6		3.1	9.3		21.0	10.0	20	0.9
10.2		50.9	9.6		5.1	9.6		24.2	8.6		14.2
9.8		55.4	10.0		8.1	9.8		26.2	9.9		17.2
10.3	0	5.7	9.0		12.1	9.4		27.5	9.6		21.0
10.2		14.2	10.3		12.1	9.4		29.5	9.7		30.5
9.2		19.7	8.6		13.1	9.3		31.0	9.6		46.5
10.3		31.2	8.0		15.1	9.2		31.5	9.7	21	12.0
7.8		31.7	10.1		21.6	9.3		33.0	9.1		16.5
9.8		33.2	9.6	7	23.1	10.0		35.5	9.4		20.0
9.6		33.2	9.7		24.1	9.8		40.0	9.6		44.5
9.8	1	4.2	9.6		38.1	9.0		41.0	9.2		46.5
9.8		9.7	10.0		38.1	8.8		41.5	9.6		47.5
10.3		14.2	7.9		40.1	9.9		46.5	9.6		57.5
10.2		16.7	9.2		53.6	9.9		51.0	9.8	22	9.5
9.2		28.7	10.3		55.1	9.8		51.5	9.8		9.5
8.8		30.7	10.0		59.1	9.5		52.5	9.8		12.0
8.6		38.7	9.7		59.6	8.4		57.0	9.5		14.0
10.3		40.2	9.6	8	1.6	9.0	14	9.5	10.0		14.5
9.7		46.7	9.7		1.6	8.8		13.0	10.0		20.5
10.3		53.2	7.6		5.6	9.0		18.0	9.0		21.0
8.6	2	1.2	9.2		9.1	9.5		19.5	9.8		44.0
9.2		4.2	10.1		12.3	9.6		22.4	9.6	23	6.0
10.3		4.2	10.3		14.8	9.9		36.4	9.4		15.0
9.0		8.2	9.4		16.8	9.8		53.4	9.0		18.0
10.1		26.7	9.7		33.8	9.1		58.4	9.5		36.5
10.3		30.7	10.2		37.8	10.0	15	19.4	9.5		38.5
10.1		43.7	10.0		39.3	9.5		26.9	8.9		47.0
9.8		57.2	10.3		40.6	9.5		33.9	9.1		52.0
10.0	3	1.2	8.3		41.3	9.4		41.9	10.0	24	10.0
10.3		9.7	10.3		44.8	9.9		43.4	10.0		14.5
8.1		10.7	9.8		46.8	9.4		55.2	9.6		22.0
10.3		10.7	9.7		54.8	10.0	16	16.9	10.2†		31.0
10.2		16.7	10.1	9	11.3	9.9		18.9	9.4		37.5
9.2		22.2	9.7		24.6	9.8		24.9	10.0		39.5
9.2		23.7	8.5		28.6	9.9		24.9	9.9		52.0
10.3		29.2	10.3		29.8	9.5		40.1	9.9		53.0
10.3		46.2	8.5		34.8	10.0		45.9	9.7		56.5
9.6		53.2	10.0		39.3	9.9		48.4	9.5	25	2.0
25 Dr.	+0	58.7		+0	58.7		+0	58.7		+0	58.7
		0.0			-0.3			-0.5			-0.8

1321—1380.				1381—1440.				1441—1500.				1501—1560.						
mag.	6h.		-28°	mag.	6h.		-28°	mag.	6h.		-28°	mag.	6h.		-28°			
	m	s			m	s			m	s			m	s				
8.4	25	11.5	34.2	8.8 G=	8.4	33	31.5	41.0	-	7.8	41	3.6	40.8	8.0 G W a	8.8	46	6.3	9.0
9.4		24.0	26.8		9.3		47.4	28.4		9.7		6.1	37.9		9.4		7.3	3.9
10.0		30.5	13.6		8.7		53.9	38.8	-	9.9		14.0	11.0		8.0		11.3	35.1
10.0		43.0	38.9		9.9		58.4	58.3		9.4		19.6	8.1		9.9		13.3	8.1
9.0		47.0	59.6	9.0 a	9.9	34	1.9	40.1		8.8		21.6	3.8	8.2 Ga	8.8		16.8	56.1
9.0		59.5	10.2		9.9		3.4	43.2		9.9		23.6	23.5		9.7		19.3	17.3
9.0	26	2.0	8.9		9.7		20.9	12.6		9.5		29.1	7.3		9.2		43.3	29.1
9.0		8.5	22.5	9.5 Ga	8.9		31.9	19.7	8.5 GW-	9.8		31.6	22.5		9.9		54.3	2.9
9.4		19.5	10.9		9.0		36.4	57.0		8.3		52.1	53.7	8.5 G-	9.9		58.3	59.5
9.9		33.5	21.8		8.4		37.4	56.2	Ga	9.4		52.6	0.5	9.0 a	9.7		58.3	24.8
9.5		36.0	35.5		9.0		52.9	33.8		9.9		56.0	56.3		9.8	47	1.8	51.9
10.0		44.0	0.0		9.9		13.4	49.7		9.8		58.6	50.4		9.7		5.8	32.1
10.0		50.0	27.7		9.3	35	15.4	34.6		9.9		59.6	3.3		9.5		8.8	56.7
9.7		53.8	0.6		9.7		28.4	15.2		9.7	42	0.1	45.5		8.6		22.8	29.0
9.6		56.0	41.5		9.0		28.9	6.8	a	9.3		4.6	16.1	9.0	8.5		26.8	29.4
9.5		58.0	36.0		8.0		38.4	9.0	G S a	9.5		6.6	55.8		9.7		27.8	14.7
9.4	27	3.5	26.2		9.3		43.9	32.3		9.9		21.1	23.0		9.0		33.8	56.9
10.2†		15.0	57.0		9.9		47.9	32.6		9.4		22.6	24.1		9.7		40.3	8.9
9.4		16.0	41.1		9.9		51.9	30.1		9.5		23.1	35.0		9.9		40.3	48.3
10.0†		23.0	53.5		7.7		52.9	44.1	a	9.5		25.6	16.5		9.9		53.3	34.3
10.0		46.5	38.2		9.9		57.0	53.9		9.9		30.6	41.5		9.5		54.3	36.5
10.0		57.0	7.4		8.9	36	15.0	56.8	a	7.5		32.6	25.3	7.8 GSbt	9.8	48	3.3	51.1
9.8	28	4.5	6.0		9.9		36.4	38.6		8.8		33.1	26.2	8.0 G W b-	9.9		14.8	42.5
10.0		9.0	14.0		9.4		42.0	56.6	a	8.8		37.1	4.9	8.5 a	9.6		32.3	22.8
9.7		13.0	15.4		8.6		42.9	10.3	G a	9.9		44.1	49.9		7.2		35.3	22.3
9.2		21.0	53.0		9.2		48.4	5.9		9.9		48.1	4.5		9.7		42.8	33.9
9.0		39.0	30.5		9.4		51.4	46.6		9.9		51.0	6.9		9.6		43.3	50.1
9.8		41.2	33.7		9.9	37	13.1	3.1		9.7		59.1	10.1		9.9	49	2.3	22.5
8.9		46.5	47.7		9.7		33.1	8.8		9.0	43	10.6	18.9	8.5 G	9.0		3.0	2.2
9.8		57.0	46.0		9.8		34.6	27.7	a	9.8		26.6	17.7		9.8		7.9	22.8
9.7	29	12.5	18.5		9.5		38.1	55.7		9.5		31.1	53.1		9.5		14.9	12.4
9.9		46.7	1.0		9.9		43.1	10.3		9.4		35.6	7.3		9.6		23.9	32.7
9.8		59.5	44.8		9.9		48.1	46.7		9.8		39.1	37.8		9.8		24.4	1.9
9.5	30	1.5	20.6		8.6		59.1	44.5	a	9.9		40.1	23.5		8.6		26.4	47.5
10.0		8.0	21.4		9.3	38	1.1	23.1		7.7		40.6	4.7	7.5 G S a	9.7		30.4	34.6
9.8		32.0	38.0		9.1		3.1	54.4		8.3		42.6	13.8	8.3 W a	9.9		41.4	7.9
10.0		34.5	13.0		9.0		3.6	4.1	8.5	9.9		43.1	24.3		9.6		44.4	46.8
9.8		35.0	55.1		9.2		5.1	56.0		8.6		49.1	36.5	W-	9.9		47.4	7.1
9.6		42.0	24.1		9.9		11.9	0.9		9.7		50.1	52.6		8.3		52.4	13.1
9.5		49.4	50.2		7.9		13.6	13.7	7.5 G S b-	9.4	44	2.6	47.4		9.5	50	2.9	41.7
10.0		52.5	10.4		9.8		14.6	41.1		9.9		2.6	55.1		9.3		5.9	38.1
9.7	31	0.0	23.6		8.9		17.9	59.9	8.8 Ga	9.1		8.1	46.5	9.5	9.9		5.9	6.9
9.4		15.0	34.0		9.9		27.1	2.6		9.9		13.0	24.4		9.9		12.9	5.9
8.4		15.5	44.0	7.5 G S b=	9.3		31.6	54.8		7.6		23.1	49.9	7.5 G S a	7.9		20.9	52.6
9.2		17.0	15.4		9.9	39	9.6	12.6		9.8		30.1	43.1		8.4		28.4	29.7
9.5		37.0	46.2		9.3		12.1	10.1		8.2		32.1	30.6	7.5 G S a	9.3		33.9	54.2
9.4		56.5	7.0		9.4		26.1	50.1		9.9		52.6	50.8		9.9		43.4	21.2
9.4	32	0.5	14.2	-	9.9		33.6	24.9		9.4		52.6	35.1		9.3		44.1	12.7
8.4		9.7	36.0	7.5 G S b=	9.5		44.6	53.3		9.1	45	1.8	32.4	9.0 G	9.9		46.9	8.9
10.0		19.0	17.4		9.4		53.1	16.0		9.7		3.3	18.1		9.0		48.4	26.8
10.0		30.0	1.7		8.8		53.3	56.8	8.8 a	9.9		9.8	36.1		9.3		49.4	7.0
10.0†		35.8	55.2		8.2		53.6	46.1	8.5 Ga	9.9		10.1	13.4		9.1		55.4	23.4
9.1		39.4	52.3		9.9		57.1	45.2	9.5	9.9		22.3	53.3		9.9		56.4	44.8
9.4		46.5	28.6		9.8		59.6	50.4		9.9		23.8	7.5		9.7		56.9	9.3
10.0		53.5	9.5		9.9	40	6.6	4.2		9.6		26.8	25.9		9.0		59.4	9.6
8.4	33	4.0	23.4	9.0 G S b-	9.3		29.1	18.5	8.8 a	9.9		35.1	0.0		9.8	51	2.9	9.4
10.0		8.0	40.7		9.9		33.1	39.9		9.9		39.3	13.5		9.9		14.4	4.0
9.9		14.7	39.6		9.5		36.1	17.5		9.9		40.8	4.9		9.0		20.4	29.4
8.4		22.2	55.7	G a	9.6		52.1	16.1		8.8	46	0.3	47.1	8.5 a	9.3		36.4	45.1
9.5		22.9	40.0		9.9		58.1	50.9		8.2		3.8	33.7	8.0 W=	9.9		42.4	23.2
25 pr.	+ 0 58.8		- 11			+ 0 58.9		- 14			+ 0 59.0		- 16			+ 0 59.1		- 18

1561-1620.				1621-1680.				1681-1740.				1741-1800.			
mag.	6h.	-28°		mag.	6h.-7h.	-28°		mag.	7h.	-28°		mag.	7h.	-28°	
	m s	'	''		m s	'	''		m s	'	''		m s	'	''
9.9	51	43.4	39.3	9.8	55	57.6	24.7	9.8	0	21.8	34.8	9.4	4	28.8	49.2
9.8		47.4	34.1	9.8	56	6.1	18.7	9.8		22.3	9.6	9.8		32.8	56.6
9.5		55.4	32.2	9.4		11.1	31.7	9.6		25.8	41.0	8.0		35.8	14.6
8.4		59.4	32.1	9.6		18.1	33.3	8.3		33.8	52.9	8.8		36.3	47.3
9.9	52	12.4	5.1	9.6		22.1	37.0	8.9		42.3	22.0	9.3		39.8	31.9
9.9		17.4	14.0	8.5		27.1	52.8	9.0		48.3	5.5	9.0		41.3	4.4
9.6		22.4	58.8	9.4		31.6	16.8	9.2		49.3	19.2	9.6		42.3	10.4
9.2		24.4	10.7	9.4		35.6	48.6	9.0		50.8	18.0	9.7		50.3	46.1
9.7		28.4	17.4	9.7		59.6	10.8	9.8		50.8	1.9	9.4		54.3	51.6
9.4		31.4	0.0	9.8	57	6.1	0.4	9.6		51.3	45.1	9.1		58.3	24.4
9.8		34.2	48.1	9.4		6.6	41.3	9.6		52.3	26.0	9.3		59.8	27.1
9.2		34.7	13.9	9.4		8.1	24.0	9.8		57.3	20.9	7.6	5	3.3	32.7
9.5		41.7	56.1	9.6		9.6	53.3	9.6	I	0.3	41.8	9.5		8.3	24.0
9.4		41.7	27.1	8.7		10.1	44.3	9.0		3.3	7.9	9.4		10.1	34.0
9.6		48.7	23.8	9.6		10.1	50.8	9.6		6.3	0.4	9.8		11.8	38.8
9.3		49.7	51.6	9.0		15.6	27.8	9.8		14.8	47.3	9.7		16.3	31.7
9.1		54.7	53.8	9.4		21.6	34.9	9.8		14.8	17.2	9.8		17.3	45.9
9.7		56.2	39.5	8.3		22.1	6.1	9.0		22.3	10.5	9.1		26.3	43.8
9.6	53	6.7	37.9	9.2		22.6	10.6	9.0		22.3	8.6	9.7		31.3	4.1
9.8		7.7	53.1	9.4		26.1	37.3	9.6		25.3	50.9	9.4		32.3	12.1
9.9		11.7	30.8	9.8		30.1	18.6	9.8		33.9	0.0	9.7		38.8	14.5
9.7		23.7	41.0	9.8		31.1	4.7	9.7		35.3	29.2	9.4		39.3	51.9
9.7		23.7	46.7	9.3		33.1	5.7	9.8		37.1	0.9	9.8		45.3	50.8
8.7		29.7	54.5	9.8		41.1	15.2	9.7		37.8	17.5	9.8	6	2.3	10.5
9.8		30.2	24.9	9.8		41.6	52.4	9.2		39.3	38.4	9.4		11.8	52.7
3.2		43.7	48.2	9.8		52.1	3.0	9.8		41.3	39.1	9.4		12.3	55.0
9.6		43.7	23.1	9.6		55.1	7.5	9.6		43.3	51.3	9.5		13.3	28.1
9.9		43.8	14.3	9.6		57.3	36.5	9.6		46.3	9.3	9.5		24.3	16.8
9.8		46.2	57.6	9.5		57.6	18.8	9.5		47.3	56.0	8.8		26.8	4.7
9.9		47.2	10.3	9.6		59.3	3.9	9.7		57.8	16.8	9.7		28.8	22.3
9.8		54.0	18.8	8.8	58	2.3	26.4	9.8	2	0.3	15.1	9.0		32.8	52.5
9.6		58.4	42.8	9.6		4.8	18.0	9.7		5.8	11.7	9.2		34.8	31.7
9.9	54	2.4	42.5	9.6		7.8	55.2	9.0		11.8	12.7	9.8		36.3	26.1
9.8		4.8	51.0	9.6		17.8	25.6	9.7		12.3	2.0	9.3		37.3	24.8
9.8		9.9	39.6	9.6		18.8	38.8	9.8		24.3	38.8	9.5		38.8	7.1
7.7		10.2	47.5	9.6		28.3	30.0	8.4		31.3	4.7	8.8		38.8	17.3
9.9		17.8	8.8	8.4		37.8	39.3	9.7		31.3	29.9	9.8		39.8	29.9
9.8		19.4	54.5	9.8		38.3	52.1	8.8		32.8	21.3	9.8		41.3	57.1
9.5		19.4	14.7	9.4		38.8	51.0	8.2		35.3	4.1	9.6		42.8	9.7
9.8		20.4	1.6	8.8		43.3	50.0	9.6		39.8	17.3	9.0		45.3	40.1
9.9		30.7	10.0	9.6		47.3	55.4	8.6		46.3	47.7	9.6		50.8	43.5
9.7		34.7	9.1	9.4		53.3	40.5	9.4		51.3	28.3	9.8		51.5	0.7
9.9		42.4	8.7	9.7		55.8	51.9	9.8	3	1.3	13.1	9.0		52.3	56.5
9.9		45.2	32.0	9.8		56.3	43.6	8.3		5.8	22.7	9.0		56.8	47.8
9.0		45.7	45.5	9.2		58.3	18.9	8.4		8.3	0.3	8.8		57.3	11.7
7.6		47.4	13.6	9.8		58.8	35.3	9.8		16.3	9.8	9.5	7	3.8	39.8
9.7		47.9	23.2	9.6	59	1.8	6.4	9.2		22.8	26.8	9.4		20.3	51.3
9.9		55.9	57.9	9.5		11.3	9.4	9.7		30.1	0.2	9.5		27.3	18.9
9.5	55	4.1	59.1	9.0		15.8	55.2	8.2		36.8	25.0	9.3		31.3	36.4
9.8		5.1	3.2	9.6		17.3	53.8	8.8		41.3	9.6	9.6		33.8	13.5
9.2		6.6	14.2	8.8		28.3	42.6	9.3		42.3	13.4	9.6		42.7	2.2
8.7		7.4	0.2	9.4		36.3	41.3	9.6		43.1	25.1	9.4		44.9	59.2
9.8		13.1	27.9	9.6		47.3	32.6	8.8		54.3	49.2	9.8		53.3	42.3
8.5		18.6	26.0	9.8		55.3	6.1	9.0		56.3	6.0	9.1		54.3	18.5
9.8		22.6	15.5	9.4	0	2.8	26.3	9.8		59.3	20.2	8.8		56.5	0.8
9.4		36.1	46.4	9.5		9.3	58.6	9.8	4	1.3	6.3	9.4	8	0.3	15.5
9.0		37.1	49.0	9.4		9.3	51.9	9.0		9.8	45.0	9.7		1.3	45.1
9.7		42.3	1.4	9.8		17.3	4.4	9.8		16.3	22.7	9.4		3.8	38.3
7.8		46.1	18.9	9.4		19.8	56.9	9.4		22.8	48.3	9.6		4.8	37.7
9.6		53.1	24.2	9.7		21.8	51.5	9.8		26.3	23.4	9.8		6.8	54.3
25Pr.	+ 0	59.2	-2.0	+ 0	59.3	-2.1		+ 0	59.3	-2.2		+ 0	59.4	-2.4	

1801-1860.			1861-1920.			1921-1980.			1981-2040.			
mag.	7 ^h .	-28°	mag.	7 ^h .	-28°	mag.	7 ^h .	-28°	mag.	7 ^h .	-28°	
8.9	8 8.3	57.8	10.0	9.6	12 4.1	14.0	9.6	15 57.6	10.5	9.4	18 56.4	57.7
8.5	11.8	18.0	-	9.1	8.1	57.6	9.6	58.1	59.6	9.7	58.4	50.9
9.4	16.8	30.0		7.6	9.1	22.6	7.5	0.1	10.9	9.8	58.9	41.9
9.0	18.3	41.2		9.6	19.1	3.7		5.9	13.9	7.2	19 9.4	35.1
9.6	21.3	15.4		8.4	20.1	49.1	8.0	9.1	23.5	9.5	14.4	52.5
9.6	24.3	37.9		9.6	22.1	29.2		11.6	38.9	9.6	14.4	19.0
9.4	25.3	3.8		9.6	24.6	5.0		18.6	3.0	9.8	19.4	6.3
9.7	31.3	54.6		8.9	25.6	30.8		24.6	34.5	9.8	19.4	50.0
7.9	32.3	58.2	8.0 Ga	7.6	26.1	54.4	7.5	26.1	13.9	9.5	24.4	43.1
9.6	34.8	14.5		9.7	30.1	19.0		28.1	31.5	9.8	27.4	20.0
8.9	44.8	23.7	8.5 a	9.6	32.1	27.3		30.5	23.1	9.6	29.4	19.5
9.6	47.3	46.1		9.4	38.1	34.3		35.6	0.6	9.6	29.4	19.1
9.4	55.8	37.3		9.4	40.1	3.4		37.6	16.1	9.0	32.4	4.7
9.8	9 3.3	0.3		9.7	45.6	15.8		42.3	44.9	9.7	40.4	15.4
9.4	8.8	13.1		8.4	48.6	3.8	8.5	49.1	26.8	9.2	40.6	59.0
8.4	11.3	18.3	8.5 a	9.5	59.6	37.9		50.9	19.0	9.2	44.4	47.1
9.6	12.3	21.3		9.3	13 2.7	29.8	9.0	57.1	49.2	9.8	46.9	54.6
9.7	13.3	58.7		9.8	3.1	22.0		0.9	57.9	9.8	58.5	15.2
9.3	30.3	37.9		9.2	3.6	25.1		1.4	13.7	9.4	7.0	5.1
9.4	30.8	40.6		9.8	6.6	4.9		2.2	49.7	9.5	8.0	34.5
9.0	33.8	47.1		9.2	8.1	16.6		10.1	58.9	8.1	12.7	59.4
9.4	41.8	47.0		8.5	11.1	42.9	8.5	11.1	4.1	9.0	13.5	12.2
9.3	42.2	40.4		9.3	11.1	44.7		11.9	4.5	9.0	16.5	30.6
9.3	44.2	42.5		9.4	40.1	55.4		13.7	3.0	9.3	23.5	50.2
9.6	45.7	41.3		9.6	42.1	37.3		14.4	8.0	9.8	30.7	1.9
9.7	54.7	3.3		8.7	48.1	46.6	9.0	16.9	43.9	9.8	32.5	31.8
7.5	59.2	44.9	Ga	9.4	49.1	22.7		20.9	45.1	9.8	32.7	1.3
9.2	10 0.2	6.9		9.6	50.1	10.2		26.4	36.5	9.0	34.5	16.4
9.4	1.2	51.5		9.3	14 4.1	52.9		26.9	19.6	9.3	34.5	57.3
8.8	1.7	5.1	10.0	9.6	14.1	31.4		28.7	40.4	9.4	36.0	8.6
9.8	5.7	47.7		8.7	14.6	47.0	8.0	29.9	16.9	9.7	39.0	26.0
9.7	8.0	33.0		9.5	17.1	27.9		32.2	39.1	9.8	49.0	33.1
9.0	20.2	28.4		9.5	31.6	54.6		32.9	37.5	9.5	49.5	51.2
8.5	20.2	8.8	8.0	9.4	40.6	14.3		37.7	31.9	9.4	50.0	14.5
9.7	24.7	4.5		9.0	43.1	26.5		39.7	20.7	9.8	54.5	20.8
8.7	26.7	17.1	9.0	9.8	47.1	52.9		39.7	32.9	8.9	57.0	51.2
9.5	27.2	46.1		9.8	51.6	19.2		41.7	10.5	9.8	57.0	4.0
9.5	32.7	59.6		9.0	54.6	46.9	8.5	44.7	0.9	9.8	12.0	57.0
9.4	38.7	30.3		9.4	56.1	14.4		50.7	25.5	9.4	16.5	41.6
9.6	39.2	15.5		9.5	15 0.1	15.7		52.7	27.5	9.4	24.0	22.4
9.7	42.7	48.9		8.7	1.1	16.2	a	53.7	7.9	9.8	25.5	28.5
9.8	43.2	20.8		9.6	2.1	42.9		56.7	20.4	9.5	27.0	21.9
9.7	46.2	26.7		9.8	7.6	9.8		58.4	50.1	9.7	30.0	13.0
9.7	51.2	40.5		9.6	9.1	37.4		58.4	34.5	9.3	31.0	21.9
9.4	53.2	57.5		9.6	9.1	44.4		7.9	20.1	9.4	34.0	50.0
9.8	55.7	58.7		9.8	11.8	58.6		10.4	47.9	9.8	38.5	8.8
9.7	57.2	22.4		9.8	12.1	21.5		12.9	3.7	9.2	39.0	53.1
9.3	11 5.7	40.9		9.7	14.1	24.8		14.4	43.7	8.5	42.5	34.8
9.6	6.7	57.3		9.8	15.6	14.9		14.4	51.9	9.2	44.5	9.9
9.0	18.2	4.0	10.0	9.3	18.6	33.2		19.4	20.3	9.8	44.5	52.2
9.6	21.2	22.9		9.3	25.6	43.0		22.4	36.8	9.8	47.0	32.1
9.6	21.8	9.9		9.4	26.1	45.8		23.4	41.9	9.6	49.2	37.5
9.2	24.2	49.3		9.4	27.1	11.8		23.9	41.5	9.8	51.7	30.8
9.8	35.1	35.8		9.4	36.1	2.5		29.9	20.3	9.4	56.7	14.8
9.2	37.1	30.6		9.7	42.1	31.4		31.4	19.2	9.8	58.2	46.7
9.0	37.6	16.9		9.7	42.1	43.1		34.4	27.4	9.6	9.7	4.6
9.8	41.1	10.4		9.7	44.6	1.9		43.4	10.1	9.6	13.7	55.0
8.7	47.1	27.0	8.5	9.6	46.6	3.9		45.4	47.5	8.8	15.7	11.3
9.7	52.6	14.3		9.7	54.2	43.8		48.4	11.5	9.6	16.2	26.1
9.7	12 2.1	41.3		9.3	57.1	27.2		53.4	20.2	9.8	16.7	41.2
25pr.	+ 0 59.5	- 2.5		+ 0 59.6	- 2.7			+ 0 59.6	- 2.8		+ 0 59.7	- 2.9

2041-2100.				2101-2160.				2161-2220.				2221-2280.			
		7h.	-28°			7h.	-28°			7h.	-28°			7h.	-28°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
8.8	22	18.2	1.7	9.8	24	55.0	59.4	7.8	27	59.8	3.5	9.8	30	46.3	1.2
9.8		19.7	12.8	8.4		58.7	39.4	9.6	28	0.8	37.2	9.0		48.8	38.9
9.8		24.7	39.3	9.4	25	3.7	56.2	9.8		4.8	48.0	9.8		53.3	0.0
9.7		25.2	32.2	9.5		3.7	20.2	9.8		10.8	1.3	9.4		56.3	34.5
8.7		27.2	3.4	9.0		6.7	44.7	9.7		11.8	16.0	9.6		59.8	3.2
9.6		29.2	35.5	9.0		9.7	21.3	9.4		14.8	2.7	8.7	31	11.4	58.3
9.3		29.7	28.3	8.9		10.7	0.3	9.8		14.8	7.3	8.6		12.8	7.7
9.6		30.2	30.1	9.4		10.7	7.6	9.0		20.3	0.6	9.8		15.3	7.9
9.6		34.2	35.1	8.5		15.7	24.0	9.5		21.8	11.1	9.3		16.8	48.3
9.7		35.7	20.0	9.8		19.7	56.2	8.2		24.3	26.4	9.6		27.8	52.3
9.3		39.7	5.8	9.5		21.7	21.0	9.3		24.8	50.2	9.0		28.8	40.5
9.4		46.2	32.0	9.4		21.7	12.7	9.8		29.3	30.4	9.3		32.8	48.4
7.5		49.7	7.2	9.7		22.2	56.6	9.0		34.8	33.2	9.2		36.8	34.0
9.7		51.7	7.7	9.0		23.7	16.1	9.8		38.8	53.1	9.5		49.8	21.4
9.8		57.2	16.8	9.0		23.7	4.4	9.8		49.8	38.3	9.7		52.8	22.9
8.7		59.7	13.5	9.8		25.8	18.4	7.6		51.8	17.8	9.7		55.8	21.4
9.3	23	0.2	9.7	8.5		26.8	35.3	8.6		57.8	23.0	8.7		58.8	52.5
6.4		1.7	54.2	9.8		27.3	14.6	9.0		57.8	24.8	9.7		59.8	47.8
9.2		6.2	13.9	8.8		30.3	34.5	9.8		58.8	28.6	9.5		59.8	48.0
9.8		13.7	55.1	9.8		33.8	23.6	9.8	29	4.8	10.6	9.8		59.8	21.9
8.5		15.2	24.7	9.6		37.3	39.0	9.6		4.8	30.7	9.2	32	5.3	1.3
9.6		21.7	10.7	9.8		37.9	57.2	8.8		6.3	27.7	9.7		8.3	49.4
9.1		24.2	14.6	9.7		43.8	2.9	9.2		8.3	26.0	9.0		8.8	31.6
9.8		24.7	24.0	9.0		46.8	46.6	8.8		10.8	32.9	9.5		8.8	26.4
9.8		24.7	27.4	8.5		49.8	29.1	9.8		18.8	21.9	8.8		11.3	11.0
8.6		26.7	49.8	9.8		53.8	33.3	9.5		18.8	18.1	9.7		13.3	17.4
8.8		31.7	25.3	9.0	26	5.3	22.9	8.7		23.8	10.7	9.6		15.3	0.1
9.5		33.7	29.7	9.4		8.8	8.8	9.8		26.7	58.8	9.0		18.8	11.9
9.5		34.7	12.0	9.5		9.8	18.4	9.3		27.3	34.4	9.2		21.8	27.0
9.8		34.7	53.6	9.4		9.8	6.2	8.5		29.3	26.7	9.3		23.8	37.8
9.3		35.7	29.9	8.8		10.2	50.2	9.4		36.8	6.0	9.4		27.8	17.7
9.5		38.2	0.8	9.4		18.2	35.7	9.6		38.3	22.0	9.4		29.8	51.7
9.6		38.7	13.3	9.4		18.8	50.0	9.6		38.8	53.0	9.0		30.8	41.4
9.4		41.2	12.7	8.5		25.3	55.0	9.8		39.3	18.5	9.4		36.3	56.2
8.2		42.7	51.8	9.8		26.3	34.0	8.8		43.3	31.1	9.6		38.4	49.1
9.8		43.2	24.6	9.1		26.8	35.1	9.5		43.8	33.0	9.0		42.9	55.4
9.4		44.2	48.2	9.0		34.8	17.2	9.7		53.3	58.1	9.8		45.4	40.1
9.8		44.7	18.9	9.7		35.8	25.5	9.6		53.3	26.3	9.8	33	1.4	48.9
9.5		45.7	36.4	9.8		42.8	39.6	9.8		55.3	47.0	9.8		2.4	5.6
8.7		52.2	37.2	9.8		43.3	53.0	9.8		59.8	8.6	9.6		3.4	50.4
9.8		56.2	41.2	9.8		48.3	10.3	8.8	30	0.8	54.5	8.1		7.4	27.2
9.5		59.7	35.6	9.8		49.8	14.9	7.9		2.8	13.3	9.7		8.9	6.0
9.4		59.7	47.8	8.5		51.3	53.3	9.3		3.8	35.8	8.8		10.4	31.8
9.2		59.7	19.0	9.4		54.8	3.0	9.2		5.8	22.8	8.6		14.9	9.2
9.6	24	2.0	57.0	9.6		56.8	53.0	9.6		6.8	57.1	9.7		16.4	30.8
8.8		5.7	47.4	9.4		58.3	39.0	9.6		8.3	18.1	9.4		16.4	57.6
9.6		5.7	22.9	9.6		59.8	2.6	9.4		8.8	24.1	9.6		16.4	13.1
9.8		7.2	52.8	9.3	27	4.8	8.2	9.6		13.3	48.5	9.6		19.9	18.1
9.8		8.7	22.5	9.8		10.3	29.3	9.6		14.7	41.1	9.4		21.9	55.0
9.8		19.7	56.0	8.5		12.3	28.0	5.5		21.3	5.8	9.8		24.9	37.2
9.8		21.2	39.9	9.8		16.3	56.8	9.4		25.3	6.7	9.6		25.9	34.8
9.8		22.7	14.0	9.6		21.3	35.1	9.8		26.3	3.1	9.3		26.4	57.0
9.4		24.7	1.9	9.4		39.8	18.2	9.8		27.3	38.6	9.6		33.9	12.9
9.4		26.7	5.5	9.8		40.3	13.8	9.6		40.8	19.2	9.2		37.9	28.4
9.8		27.2	58.4	9.6		42.3	7.5	8.7		41.8	15.2	9.8		40.9	24.0
9.1		28.2	14.7	9.6		44.3	32.1	9.8		41.8	7.8	9.7		45.4	38.1
9.8		29.7	18.1	8.5		45.8	8.7	9.6		42.7	5.2	9.8		45.4	48.9
8.5		32.2	29.0	9.4		47.6	59.3	9.8		42.8	45.1	9.6		45.9	14.7
9.8		47.7	29.3	9.6		54.8	52.2	8.8		44.3	51.3	9.8		50.9	28.2
9.7		53.7	46.7	9.8		56.3	0.0	9.5		45.8	54.1	9.6		54.9	40.0
25pr.		+ 0 59.8	- 3.0			+ 0 59.9	- 3.1			+ 1 0.0	- 3.2			+ 1 0.1	- 3.3

2281-2340.				2341-2400.				2401-2460.				2461-2520.						
		7h.		-28°				7h.		-28°				7h.		-28°		
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'			
9.6	33	59.4	51.2	9.4	37	24.4	41.7	9.4	40	46.8	6.5	10.0	9.0	45	22.8	56.8	9.2	
9.6	34	3.9	12.8	9.8		25.9	34.1	9.2	41	10.8	8.3	9.5	9.9		24.8	0.6		
9.0		8.4	53.7	9.2		29.9	41.5	8.4		17.8	36.3	8.0 =	9.4		26.3	56.1	9.0	
9.8		12.9	16.0	9.4		30.9	40.8	9.8		19.8	11.1		9.7		32.8	57.4		
8.8		17.4	23.8	9.7		39.4	20.1	9.0		21.3	15.2	9.5 G	9.5		35.8	28.9		
9.6		25.9	34.0	9.8		41.4	15.6	9.9		22.3	15.7		9.5		40.8	28.8		
9.3		25.9	37.0	10.0†		43.6	59.8	9.3		47.8	55.7		9.5		43.8	32.1		
8.3		26.9	57.2	9.3		46.4	52.2	9.9		48.3	50.4		9.6		44.3	50.5		
9.0		29.4	52.8	9.8		49.4	16.5	9.9		55.3	23.9		9.9		47.3	14.2		
9.8		30.9	26.9	9.4		49.9	9.2	9.4		57.8	27.5		9.4		54.3	55.6	9.0	
9.8		34.9	28.0	8.4		52.4	27.9	8.6 G =	9.9	42	1.8	40.0	9.5	46	1.8	0.5		
9.8		35.9	43.8	9.6		52.9	36.2	9.9		4.8	34.6		9.9		3.8	39.0		
9.8		36.4	37.1	9.0	38	2.9	10.7	9.9		15.8	40.3		9.4		19.8	18.8		
9.0		37.9	43.8	9.0		2.9	45.6	9.4		29.3	15.0		9.6		23.3	14.9		
9.8		38.4	50.2	9.5		5.9	52.3	9.7		31.8	7.4		9.5		25.8	9.4		
9.8		39.9	36.0	9.2		8.9	46.2	9.5		36.8	25.1	10.0	9.9		26.8	57.0		
8.2		39.9	54.3	9.4		9.9	39.1	9.9		37.3	44.1		9.8		33.3	37.2		
9.5		40.0	16.4	9.3		18.9	31.3	9.9		49.3	13.0		9.7		36.3	48.8	9.5	
9.6		41.0	55.2	8.8		23.4	7.0	9.9		54.3	36.3		9.6		36.8	36.5		
9.8		41.0	3.0	9.1		28.9	10.6	9.9		55.3	36.2		9.3		42.8	3.4		
9.0†		55.8	58.6	7.9		29.9	6.9	5.0 GSt π	9.7	43	0.3	18.8	9.5	9.4		42.8	53.9	
9.6	35	11.0	15.1	9.5		30.4	37.7	9.5		3.3	43.8		9.9		45.8	46.2		
9.2		19.5	52.9	9.7		35.9	41.5	8.8		15.1	2.9	8.0 Ga	9.6		50.2	58.8		
9.1		20.0	14.7	9.6		36.9	14.1	9.4		16.3	31.4		9.0		55.3	26.5	9.2	
8.8		21.5	38.3	9.5		36.9	40.6	9.5		24.5	56.8		9.6		59.3	53.1		
9.3		30.0	40.2	5.4		47.9	39.5	4.2 GS $\pi\beta$	9.9		32.3	4.0	9.5	47	13.8	8.4		
9.4		32.5	41.2	9.6		47.9	41.3	9.9		35.3	52.2		9.8		19.3	22.3		
9.8		35.0	39.1	9.2		55.1	40.3	9.5		39.3	53.8		9.4		19.8	55.8	9.3	
9.7		36.5	37.8	8.2		55.3	8.1	8.7 a	9.7		42.3	13.8	9.7		21.3	33.5		
9.6		37.5	6.2	9.4		56.6	45.8	9.5		52.3	59.4		9.7		23.3	25.0		
9.8		39.5	41.6	9.8†	39	2.4	59.5	9.7		56.8	42.5		9.8		36.8	37.6		
9.6		44.5	49.4	9.6		4.8	39.8	9.1	44	4.8	24.5	9.0 a	9.0		43.0	24.8	9.5	
9.8		47.0	19.1	9.8		4.9	46.5	9.7		11.3	28.0		9.5		45.0	2.1		
9.8		50.0	36.2	8.4		9.9	33.3	8.5 =	9.9		13.3	59.5	9.8		48.5	31.9		
9.4		51.0	4.4	9.4		17.1	24.0	9.6		13.6	0.3		9.8		50.0	16.0		
9.8		54.0	10.3	9.4		17.3	37.2	9.5		20.3	19.1		9.7		50.0	4.6		
9.6		54.5	44.4	9.5		19.1	13.4	9.9		23.3	59.4		9.0		51.0	27.8	9.5	
9.6		56.0	28.6	9.6		19.9	14.6	9.0		23.8	24.0	9.5	9.1		53.5	55.0	9.5	
9.6	36	0.5	35.4	9.4		23.1	7.4	9.9		25.3	54.1		9.7		53.5	46.0		
8.6		1.0	39.4	9.8		27.9	40.2	9.9		26.8	55.0		9.6	48	2.0	44.5		
9.3		5.0	47.8	9.5		29.4	58.2	9.4		34.3	49.1		9.2		4.5	10.1	9.0	
9.4		6.0	41.0	9.5		29.8	1.2	9.7		37.3	41.4		9.2		7.0	12.0	9.5	
9.3		11.5	33.5	9.9		33.8	59.9	9.7		40.8	25.6		9.9		7.5	31.2		
9.8		27.5	18.9	9.7		43.4	34.1	9.6		44.8	55.4		9.8		10.0	21.3		
9.1		30.0	21.6	9.7		44.8	54.1	9.9		45.3	50.4		9.3		14.5	16.6		
9.8		30.0	43.4	9.6		45.3	13.0	9.9		47.3	5.9		9.3		20.0	59.4	10.0	
9.7		33.0	48.8	9.8		47.6	21.8	9.5		49.3	7.7		9.8		20.0	21.9		
9.5		36.0	34.9	9.9		48.4	20.9	9.9		49.7	59.2		9.5		21.0	12.0		
9.4		50.0	7.1	9.9		49.6	1.8	9.5		54.3	25.6		9.6		23.0	45.9		
9.2†		51.2	57.5	9.4		55.8	26.8	8.8		54.3	42.8	9.0	9.7		30.0	10.0		
9.2		54.0	10.8	9.8		56.1	41.6	9.7		54.3	37.0	-	9.5		30.0	24.5		
9.8		54.5	43.2	9.4		59.8	37.5	9.2		54.8	9.1		8.9		30.5	54.1	8.5 G-	
9.0	37	0.0	3.8	8.9	40	3.1	36.9	9.9		58.0	56.2		9.5		35.0	39.4		
9.5		5.9	26.6	9.9		5.8	12.8	9.7	45	2.8	40.0		9.7		38.5	47.8		
9.1		7.4	36.1	9.9		10.8	20.7	9.9		2.9	56.0		9.6		39.7	2.0		
9.4		8.9	4.0	9.4		12.2	15.1	9.9		7.5	55.9		9.4		40.0	29.0		
9.0		11.9	32.9	9.9		23.3	7.8	9.5		8.7	59.0		9.5		44.0	31.2		
8.7		13.4	8.3	9.7		24.3	6.3	9.0		9.3	10.7	9.0	9.6		49.5	39.1		
9.4		17.9	7.0	9.4		36.3	7.0	9.5		10.3	10.2		9.8	49	1.0	26.2		
9.4		18.4	12.5	9.6		39.8	0.2	8.8		21.8	45.1	8.0 b	9.5		9.0	22.2		
25 pr.	+ 1	0.2	-3.4	+ 1	0.4	-3.5		+ 1	0.5	-3.7		+ 1	0.6	-3.8				

1896JanCap...3...1G

7^h

PLATE 94



2521-2580.				2581-2640.				2641-2700.				2701-2760.			
		7 ^h .	-28°			7 ^h .	-28°			7 ^h .	-28°			7 ^h .	-28°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.7	49	14.0	4.4	9.3	51	39.1	29.4	9.6	53	44.1	58.5	9.9	56	35.2	12.3
9.6		19.0	24.8	9.3		40.1	25.0	9.9		45.1	7.7	9.9		41.7	13.8
9.9		19.5	43.5	9.6		43.1	36.4	9.8		49.6	42.2 9.5	9.9		42.2	34.9
9.9		19.5	38.3	9.9		43.1	39.4	9.5		53.1	3.1	9.7		43.2	47.5
9.8		20.0	0.1	9.5		44.6	37.8	9.9		56.1	10.0	9.0		43.2	3.8 9.0-
8.8		24.0	37.3	9.8		48.1	3.9	9.6	54	1.1	12.8	9.5		49.7	33.0
9.4		31.0	6.4	9.9		49.6	37.0	9.6		1.1	12.3	9.0		52.2	2.1
9.7		31.5	13.1	9.5		50.1	28.6	9.7		4.1	10.7	9.5		54.4	57.7
9.2		32.5	18.1	9.8		53.1	54.2	9.5		4.6	32.3	9.2		55.9	27.1
9.4		35.0	7.8	9.6		54.1	51.6	9.6		7.6	5.1	9.7		57.4	24.7
9.5		39.5	17.1	9.4		57.1	48.8	9.4		9.1	24.5	9.9		58.9	46.9
9.4		43.0	18.5	9.7	52	0.1	47.0	9.7		10.6	58.2	9.9	57	2.4	48.8
9.7		47.0	33.8	9.0		1.6	54.7 a	9.7		11.6	32.0	9.6		5.9	37.0
9.2		47.0	7.8 9.0	9.4		3.3	57.0 -	9.0		17.0	24.0	9.1		8.9	56.1
9.7		50.0	24.6	9.7		5.6	10.9	9.2		18.6	34.0	9.8		8.9	25.9
9.0		53.0	36.6	9.5		7.1	10.8	8.2		25.1	5.5 8.2 GW-	9.0		10.4	14.1
8.9		54.0	28.1	9.4		10.1	31.6	9.5		25.1	30.8	9.2		13.4	26.8
9.2		55.0	25.6	9.9		15.1	58.2	9.5		26.1	2.9	8.8		15.4	49.7 8.5 =
9.6		57.0	15.4	9.8		15.6	17.9	9.9		30.1	15.7	9.0		17.9	31.0
9.5	50	0.0	7.3	9.8		20.1	22.0	9.7		35.1	54.1	9.0		20.4	44.8 10.0
9.2		1.0	32.8	9.0		21.1	0.1 9.5	9.7		35.1	47.0	9.9		20.9	57.3
9.4		3.0	29.7	9.4		22.1	50.0	9.5		38.6	8.1	9.7		24.4	58.6
9.0		8.0	41.2	9.4		23.6	15.1	9.6		41.6	23.6	9.9		24.9	35.3
9.9		9.0	33.2	9.9		25.5	59.9	9.9		44.6	24.1	9.9		27.9	38.1
8.8		19.0	33.6 -	8.6		26.6	0.7 8.5 Ga	9.5		54.6	41.1	9.0		29.4	47.1 10.0
9.4		21.5	21.2	9.5		29.1	7.0 9.5	9.9		59.1	29.9	9.4		30.4	56.2
9.4		25.0	5.4 9.0	9.9		30.1	57.2	9.9		59.6	43.9	9.5		30.4	30.5
9.9		26.5	53.6	9.5		33.1	7.9	9.4	55	0.1	20.0	9.7		31.4	17.0
8.8		34.0	5.4 9.5	9.6		34.2	2.4	9.6		5.1	22.9	9.9		32.4	19.3
9.8		34.0	5.9	9.6		34.6	25.9	9.7		9.2	14.0	8.6		44.4	53.7 8.5 -
9.5		34.0	26.0	9.9		37.1	31.2	9.9		10.2	9.1	9.7		47.4	7.7
9.7		36.0	19.0 9.0	9.7		42.1	26.0	9.5		12.7	35.4	9.7		51.4	28.8
9.7		39.9	26.8	9.7		43.1	7.5	9.0		13.2	39.4 9.5	9.8	58	3.9	29.9
9.8		40.0	33.6	9.9		44.1	7.8	9.5		16.2	12.6	9.9		7.4	35.7
9.4		40.5	51.8	9.2		44.1	29.6	9.8		19.7	30.7	9.8		9.4	29.2
9.6		41.5	30.6	9.9		48.6	4.4	9.9		20.6	18.6	9.1		9.9	43.6
9.9		44.0	22.1	9.9		49.6	51.1	9.9		22.2	4.1	9.7		15.4	20.5
9.7		45.0	20.6	9.6		51.1	18.7	8.9		25.1	23.3	9.7		15.9	35.8
9.9		47.0	46.5	9.6		54.1	15.3	9.5		30.1	58.1	9.0		15.9	5.8 10.0
9.2		49.0	39.2	9.5		54.1	12.1	9.4		30.1	18.0	9.8		17.3	13.0
9.1		49.0	17.8	9.9		57.6	58.0	9.9		34.6	23.7	9.7		21.4	38.9
9.9		50.0	2.0	9.7	53	1.1	14.8	9.4		35.1	38.5	9.8		23.4	10.5
9.0		53.0	12.4 9.5	9.2		2.1	36.3 9.0	9.7		35.5	1.0	9.1		24.5	18.3
9.6		54.0	58.7	9.9		4.6	54.7	9.6		36.7	39.7	9.0		25.0	28.1
9.7		57.5	14.6	9.9		5.1	53.7	9.7		44.2	27.0	8.5		26.7	1.9 8.6 a
9.9		58.9	58.5	9.4		5.6	49.6	9.6		46.7	4.6	9.9		27.0	56.1
9.5	51	0.0	11.2	9.9		7.1	55.2	9.4		52.2	45.0	9.8		30.5	4.5
9.9		0.0	7.1	9.8		13.1	35.6	9.5		53.2	46.3	9.6		33.7	2.0
9.3		5.5	8.4	9.3		19.1	47.5 8.7 a	9.7		55.2	3.0	9.6		40.0	17.0
9.8		10.0	27.0	9.4		19.1	21.6	9.0		56.2	4.9	9.4		55.5	44.1 9.5
9.7		14.0	22.2	9.9		20.1	23.7	9.9		56.2	48.1	9.5		59.8	2.6
9.9		16.0	39.8	9.5		24.1	34.3	9.6	56	1.2	32.3	7.9	59	0.5	49.2 7.8 Ga
9.5		22.5	25.1	9.5		25.1	2.8	9.9		7.2	29.1	9.9		6.0	30.5
9.8		23.6	18.6	9.5		27.1	6.9	8.0		8.2	49.0 8.0 =	9.0		10.5	4.3
9.0		24.6	47.9	9.0		30.1	33.0 9.5	9.9		10.7	17.3	9.8		10.5	45.9
9.4		28.6	31.1	9.5		30.1	10.9	9.5		13.2	42.1	9.4		12.5	22.3
9.5		30.0	24.5	9.7		37.6	6.1	9.9		14.7	0.2	9.7		13.0	31.7
9.7		31.1	58.8	9.3		41.1	9.4	9.9		21.7	24.1	9.4		13.0	9.4 8.8
9.7		32.6	9.6	9.9		42.1	58.0	9.6		23.2	14.1	9.0		15.0	3.7 8.8
9.0		37.1	46.4	9.0		43.1	18.8 9.2	9.1		29.2	23.8	9.9		15.5	6.7
25pr.	+	1 0.7	-3.9	+	1 0.8	-4.0		+	1 0.9	-4.0		+	1 1.0	-4.1	

SO 11705.

2 S 2

323

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
mag.	7 ^h -8 ^h .	-28°		mag.	8 ^h .	-28°		mag.	8 ^h .	-28°		mag.	8 ^h .	-28°	
	m s	'	''		m s	'	''		m s	'	''		m s	'	''
9:2	59	20.0	53.7	9:7	3	25.4	40.0	9:8	6	41.9	31.3	9:6	10	10.4	4.1
9:9		23.5	27.7	9:6		30.9	20.0	9:9		42.4	21.3	10:0		21.4	55.4
9:2		34.5	3.5	9:8		33.4	33.0	10:2		42.6	0.1	10:2		28.9	9.0
9:2		40.5	33.5	9:8		35.4	15.9	10:0		49.9	22.1	9:5		30.9	26.3
8:8		42.0	11.6	10:2		41.9	52.6	10:2		49.9	35.4	9:9		30.9	57.4
9:8		45.5	18.1	9:6		42.4	24.2	9:1		49.9	47.8	9:1		33.4	21.3
9:4		49.0	4.0	10:2		44.9	30.1	10:0		50.9	49.6	9:6		33.9	15.8
9:8		50.5	0.5	10:2		48.3	2.3	10:0		54.9	16.7	8:7		35.4	46.5
9:9		53.5	2.2	9:5		53.9	4.9	10:0		55.4	13.6	9:7		38.4	38.8
9:9	0	7.5	51.7	9:0		54.9	52.5	8:1		55.9	37.7	8:6		45.4	11.5
							9:0				8:2				a
											W				
9:7		10.5	15.0	10:0		59.4	42.7	9:0	7	3.4	12.1	9:1		50.9	28.1
9:3		12.0	20.1	9:8		59.9	5.2	9:0		3.9	51.3	10:2		51.9	27.9
9:0		13.0	18.4	10:0		59.9	33.9	10:0		9.9	55.7	10:2		54.9	58.2
9:5		20.9	58.1	10:1	4	0.4	44.9	9:5		10.9	18.4	9:5		54.9	39.9
9:9		29.5	55.9	9:3		4.9	17.9	9:1		17.4	1.4	8:3		55.4	24.3
9:7		30.0	24.0	9:6		10.4	53.9	10:1		17.4	50.6	10:0		55.9	9.6
9:1		30.5	43.3	9:8		11.9	21.4	9:6		18.9	40.5	9:6		59.6	56.7
9:8		34.5	0.6	10:2		13.9	4.3	8:6		25.4	38.2	9:6		59.9	48.0
9:5		35.0	5.5	9:9		13.9	17.8	9:0		27.4	51.8	9:5	II	4.9	24.2
9:5		40.5	0.2	10:0		14.9	40.1	9:5		31.9	31.5	10:0		8.9	56.8
			10:0												
9:3		41.5	45.8	9:5		18.3	56.9	9:3		34.9	50.8	10:2		10.9	1.1
9:7		45.5	3.7	9:2		23.9	46.9	9:7		38.4	46.6	10:2		10.9	3.1
9:5		50.5	47.1	9:9		34.3	35.3	10:2		39.9	16.2	9:5		14.4	48.3
9:7		58.0	30.9	9:5		35.4	3.7	9:0		50.9	49.2	10:0		19.9	45.6
8:8		59.5	42.6	8:8		35.4	55.8	10:2		56.4	28.1	8:7		21.4	3.3
9:4	I	0.5	5.0	10:1		41.4	7.9	10:0		56.9	39.3	10:2		28.9	36.7
9:9		4.5	27.7	10:2		50.4	47.1	10:1	8	9.4	50.0	10:1		29.9	9.6
9:7		5.5	28.5	10:2		53.4	49.7	9:8		15.4	32.6	10:1		34.9	57.1
9:9		11.5	7.7	10:2		54.9	24.9	10:1		29.9	22.0	9:6		42.9	50.8
9:7		14.5	33.8	9:3	5	2.4	33.3	10:0		31.4	19.6	9:2		44.4	39.1
9:5		14.5	12.9	10:2		2.9	6.9	9:3		47.4	31.2	10:1		49.9	44.1
9:7		20.0	14.9	9:1		5.9	40.9	9:5		59.4	11.4	9:9		50.9	27.4
9:7		21.0	34.9	10:1		12.4	52.5	10:2	9	1.4	56.0	9:5		50.9	16.5
9:2		24.7	54.0	10:2		15.4	20.5	9:0		3.4	39.6	9:5		53.1	59.1
9:9		31.3	0.2	10:2		17.9	7.0	10:2		4.9	27.6	10:0		54.9	9.9
9:6		33.5	29.0	9:2		21.3	59.9	9:5		9.9	47.1	10:1		56.4	6.8
9:7		36.9	1.4	9:6		24.9	10.9	10:2		14.9	43.4	10:1		59.9	7.7
9:4		37.5	17.1	9:5		25.4	13.7	9:5		19.4	19.6	10:2	12	5.9	21.2
9:8		40.5	45.1	9:2		26.4	10.7	10:2		19.9	20.8	9:8		9.4	19.3
9:0		47.9	12.0	9:0		28.9	14.3	10:2		19.9	41.1	9:3		11.9	31.6
9:8		51.5	28.3	9:1		29.9	23.7	9:1		22.4	32.4	9:7		15.4	17.1
9:7		53.8	11.9	9:8		36.4	52.6	10:0		32.9	29.3	8:5		19.9	44.7
10:2		54.0	24.8	10:0		38.4	38.4	9:0		34.9	47.2	9:9		19.9	53.7
9:0		55.4	15.9	9:6		40.4	18.8	10:0		36.9	35.5	9:8		23.4	47.1
10:2		58.7	0.4	10:1		43.9	11.6	8:9		38.4	57.3	9:6		32.9	23.9
9:6		59.2	17.6	9:1		44.9	8.2	9:5		43.0	58.4	9:7		44.9	43.5
10:0	2	0.7	23.1	10:2		46.9	5.2	10:1		43.4	35.7	10:0		44.9	15.4
9:2		5.7	10.6	9:8		49.9	43.8	10:1		49.4	59.6	9:8		48.9	22.5
9:6		12.5	43.0	9:9		58.4	54.9	8:1		53.4	4.2	9:8		54.4	11.8
9:3		15.7	8.0	10:1		59.9	53.7	8:6		54.9	41.2	9:6		54.9	7.1
10:2		19.6	52.2	9:6	6	1.9	48.0	9:9		54.9	40.0	10:2	13	2.4	22.5
9:0		21.2	19.7	10:1		13.4	44.2	10:1		56.4	38.0	10:2		4.9	47.5
9:5		36.0	24.0	10:1		17.9	15.8	9:0		59.4	51.7	9:3		11.9	4.9
10:2		44.4	15.9	10:2		19.9	16.3	10:0		59.9	2.6	9:2		12.4	37.1
10:1		46.4	6.8	9:1		19.9	18.2	9:7	10	4.4	39.0	10:2		14.9	45.5
9:8	3	1.4	8.6	9:0		23.9	37.2	9:0		4.9	19.9	10:1		20.4	47.3
9:8		12.9	41.4	10:1		24.4	33.2	9:0		6.4	18.2	8:9		24.3	57.2
9:6		14.9	48.8	10:0		25.1	12.8	9:7		6.9	39.2	10:1		35.4	51.0
9:5		14.9	23.9	9:9		25.4	30.5	10:0		8.9	41.9	8:6		38.9	33.4
8:7		24.4	8.4	9:1		40.4	6.3	10:1		9.9	40.7	10:0		39.9	15.3
			9:6												9:2 -
25pr.	+ 1	1'0	-4.2	+ 1	1'3	-4.3		+ 1	1'5	-4.5		+ 1	1'6	-4.6	

B6600Cap.....1G

3001—3060.				3061—3120.				3121—3180.				3181—3240.			
8h.		—28°		8h.		—28°		8h.		—28°		8h.		—28°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.4	13	39.9	54.1	9.0	16	54.8	35.6	9.7	19	51.7	15.6	10.2	23	5.8	59.1
9.0		40.4	15.4	8.2		56.3	13.5	9.6		53.7	10.7	9.8		6.4	52.8
9.4		40.4	33.7	9.3	17	3.8	37.1	8.6		55.2	33.0	9.3		6.4	2.2
10.1		44.4	44.5	10.2		3.8	48.1	8.8		55.7	9.9	9.2		11.9	33.0
9.3		46.8	57.9	10.2		5.3	46.6	9.0	20	6.0	57.3	8.8		11.9	55.0
10.2		47.4	19.0	9.0		6.3	2.6	9.3		9.2	23.1	9.9		15.9	24.0
10.0		49.4	38.1	9.7		6.5	1.0	10.0		9.7	52.6	10.0		17.9	48.4
10.0		54.9	34.6	10.0		19.8	52.1	10.2		11.2	5.2	8.6		20.4	17.5
10.2		56.9	8.7	10.0		20.8	34.1	10.2		16.2	21.3	8.9		31.4	49.5
10.2	14	1.9	12.3	9.0		22.3	4.4	9.6		18.6	58.5	10.2		35.4	9.5
9.2		3.4	38.3	9.0		24.8	31.1	10.1		18.9	27.1	9.8		45.4	33.7
10.2		7.9	56.7	7.9		24.8	34.3	10.2		21.9	18.8	9.3		50.4	14.3
9.8		8.9	38.1	10.1		34.3	16.4	9.2		25.9	41.7	7.8		54.0	16.4
9.0		14.9	24.6	9.5		43.8	37.0	10.2		29.4	48.1	8.5		59.7	15.0
9.5		19.8	20.9	10.1		45.3	34.5	10.1		33.9	42.9	9.7	24	1.9	40.6
10.0		24.8	13.2	9.6		47.8	34.1	9.9		35.9	31.0	9.3		17.2	8.3
9.6		25.3	54.0	9.6		50.3	21.4	9.9		37.9	52.0	10.2		20.4	4.0
9.6		33.8	44.8	9.2		53.8	33.8	10.2		39.9	26.0	10.2		25.9	3.1
9.5		36.3	12.7	10.1	18	0.8	42.8	10.2		44.9	7.0	9.7		33.7	19.1
8.3		43.3	0.8	10.0		2.3	38.9	9.8		51.4	48.6	9.3		33.9	39.9
9.6		43.3	53.6	9.4		3.8	17.7	9.5		53.4	7.2	9.2		39.7	18.5
10.2		45.3	48.9	9.1		5.3	41.1	9.4		53.9	18.2	10.2		40.9	38.8
10.1		48.3	49.0	10.1		5.3	33.8	10.1		55.4	29.0	10.2		41.6	0.9
8.7		49.5	57.4	10.1		7.8	57.2	10.1	21	3.9	45.5	9.8		45.2	37.0
9.3		51.8	15.7	9.1		9.8	27.2	9.1		7.6	58.0	10.1		45.4	37.3
9.6		51.8	49.3	9.6		14.8	6.0	9.3		9.9	4.8	10.2		45.6	52.3
10.0		52.8	45.5	9.6		17.3	22.1	9.4		14.4	56.1	10.1		49.1	15.9
9.6	15	2.3	38.0	10.0		25.7	26.0	9.8		14.4	31.7	10.0		49.8	2.3
9.0		4.8	21.2	9.1		36.7	17.3	10.1		18.9	57.3	8.4		50.3	14.5
9.5		5.8	0.2	9.1		36.7	15.3	10.2		19.9	43.9	9.9		52.7	0.9
10.1		15.3	36.6	10.1		37.2	8.0	10.0		25.4	41.0	9.6		54.8	44.5
9.2		15.8	22.7	9.8		38.7	14.9	10.2		25.4	9.6	9.8		54.9	56.2
10.1		16.8	9.0	7.1		40.2	34.1	9.6		29.4	55.2	9.3	25	5.5	37.5
9.8		24.0	56.6	9.7		40.2	11.5	10.0		31.4	33.4	9.9		7.0	47.9
9.7		29.3	29.1	9.8		43.2	10.7	9.5		34.9	47.7	9.2		7.3	17.3
9.3		40.8	34.5	10.1		44.7	12.5	9.6		35.4	20.9	10.0		10.1	17.9
9.1		44.3	36.2	9.6		45.0	58.7	9.7		40.4	54.1	8.5		13.9	14.2
9.4		46.9	18.3	9.3		49.2	20.0	7.4		41.4	48.3	9.0		14.9	34.5
9.0		49.8	13.5	9.5		50.2	18.0	9.7		41.4	4.8	10.0		14.9	21.0
9.6		52.8	58.1	8.6		58.7	15.3	10.1		46.9	52.8	10.0		20.4	24.9
9.6		56.3	36.3	10.0		59.2	35.6	9.1		47.4	49.1	10.0		24.7	1.5
9.5		59.8	44.9	9.8		59.7	38.3	10.0		50.4	39.4	9.0		27.4	8.8
9.7	16	4.8	6.2	10.2	19	0.2	13.2	9.8		51.9	0.7	9.8		28.9	5.6
9.1		5.0	2.4	8.9		0.2	4.8	9.9		59.4	55.0	9.9		30.9	22.0
9.8		7.3	15.0	9.6		0.2	48.6	9.8		59.4	27.7	9.9		32.9	9.5
9.9		9.3	53.3	9.2		1.2	38.9	8.9	22	3.4	20.5	8.9		38.9	9.1
9.8		10.3	50.1	9.8		8.7	30.4	10.1		5.9	14.4	9.4		49.9	42.5
10.2		10.3	51.3	9.8		10.5	42.0	10.0		5.9	44.8	9.3	26	3.9	8.5
9.2		12.8	32.6	9.5		10.7	5.7	9.1		14.4	17.8	9.0		4.4	0.2
8.6		14.8	9.8	9.5		11.2	34.3	10.2		14.9	8.0	8.8		14.9	18.3
10.0		14.8	23.6	9.5		12.2	55.7	9.2		18.9	33.6	8.8		19.9	38.2
8.9		19.8	54.3	10.1		13.2	2.9	9.3		19.4	20.4	10.0		25.9	0.9
9.5		29.3	33.2	9.5		16.7	35.1	10.2		30.4	17.1	8.3		35.9	36.4
10.1		33.8	8.0	9.6		18.7	19.8	9.8		41.4	56.0	10.0		39.9	28.3
9.8		34.8	6.9	10.1		33.7	28.9	9.8		43.4	39.0	9.4		41.9	13.0
9.5		35.8	51.0	9.2		34.7	25.4	10.0		46.9	37.0	10.0		48.3	57.2
10.0		37.3	23.4	9.7		35.7	41.8	9.2		54.9	15.8	9.9		49.9	7.3
9.8		37.8	29.4	10.2		41.2	26.7	10.0		58.9	55.7	8.2		51.9	56.7
10.2		43.8	5.1	9.5		44.7	38.0	9.6	23	0.4	43.6	9.9		58.9	53.6
9.8		49.8	9.2	9.0		47.2	55.4	9.7		2.9	21.5	9.6	27	9.9	21.6
25pr.	+ 1	1.7	-4.6	+ 1	1.9	-4.8		+ 1	2.0	-4.8		+ 1	2.2	-4.9	

3241-3300.				3301-3360.				3361-3420.				3421-3480.			
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.0	27	14.9	44.7	8.8	31	48.9	8.2	9.4	38	10.8	19.6	9.7	45	4.1	28.7
10.0		19.9	21.0	10.0		50.9	6.6	9.3		19.8	43.1	6.6		4.6	9.2
9.4		22.4	33.3	9.6		54.9	36.9	9.3		22.8	12.5	9.2		4.6	16.7
9.3		27.9	26.5	9.9		54.9	49.0	8.6		32.8	31.6	9.7		5.1	47.3
9.9		29.9	4.2	10.0	32	0.9	5.7	8.8		41.3	34.3	9.2		9.6	48.3
8.4		34.9	27.5	9.3		9.9	32.9	10.0		49.8	22.9	10.0		13.6	6.5
8.8		35.4	25.8	9.7		10.9	28.7	9.4		56.3	11.5	8.6		14.6	33.3
10.0		50.9	47.6	9.4		12.4	57.6	10.0		56.3	39.8	9.6		19.6	41.6
9.9		54.9	13.7	9.7		19.9	37.8	9.4		59.8	48.8	9.0		23.1	12.7
8.8		54.9	6.8	9.4		47.4	51.1	10.0		59.8	42.7	9.4		39.6	10.2
9.0		54.9	11.9	8.8		49.9	28.2	9.0		39	7.8	9.4		44.6	56.5
10.0	28	0.9	20.5	9.8		55.4	10.8	10.0		17.3	36.1	10.0		49.6	3.6
9.2		0.9	27.2	9.4	33	5.9	58.6	8.8		21.8	17.4	9.9		56.6	29.8
8.2		1.9	58.2	9.6		16.4	45.8	9.0		26.3	40.1	8.8		59.6	29.1
10.0		9.9	33.6	9.8		22.9	23.6	9.4		32.8	21.8	10.0	46	22.6	21.9
9.3		10.9	13.2	10.0		28.9	18.9	9.4		34.8	50.9	8.9		29.1	35.9
9.0		14.9	11.4	10.0		34.9	22.0	9.4		49.8	12.2	9.6		31.6	10.2
10.0		27.9	56.9	8.8		49.9	54.2	9.7		50.3	32.1	8.7		33.3	59.7
9.8		31.1	2.7	9.6		51.4	41.7	10.0		53.2	49.6	9.8		38.6	23.8
10.0		37.9	30.0	9.6		52.9	3.2	10.0		54.3	40.7	9.3		47.4	57.6
8.9		38.9	16.2	9.2	34	8.4	18.9	9.9		54.3	47.9	8.4		53.8	41.2
9.9		43.9	21.0	8.2		10.4	51.6	8.8	40	1.8	24.8	10.2		59.6	55.4
9.8		44.9	40.2	9.9		17.9	26.0	9.9		4.8	18.9	9.9	47	2.8	8.5
9.3		49.9	25.8	8.0		28.9	38.4	9.4		43.8	41.8	9.0		15.6	31.2
8.6		51.9	23.4	9.3		33.9	37.3	9.4		44.8	18.4	9.8		18.8	2.4
10.0	29	1.3	12.2	9.7		36.9	10.9	9.4		49.8	22.1	10.2		29.7	22.4
9.8		1.4	43.6	9.6		36.9	10.1	9.2	41	14.8	4.2	9.8		31.9	30.2
10.0		4.6	34.0	10.0		47.9	29.1	9.2		21.8	11.0	8.8		32.3	34.4
10.0		6.6	33.5	9.4	35	3.9	40.1	9.6		21.8	24.2	9.4		34.3	8.8
8.4		8.4	11.2	9.8		4.9	10.7	9.6		31.8	21.2	10.0		35.6	30.6
10.0		9.4	10.8	9.4		18.2	59.2	10.0		41.8	33.5	10.2		45.5	2.6
8.6		15.9	39.6	9.6		22.4	13.1	9.4		42.8	12.8	9.2		48.4	24.1
10.0		21.9	34.4	9.9		24.9	52.6	9.4		44.3	51.0	10.0		54.1	1.2
9.7		25.9	33.2	9.2		27.0	2.2	8.9	42	8.4	18.4	9.4	48	1.4	3.8
9.4		28.4	53.4	8.8		28.9	25.9	8.7		9.4	20.8	9.6		5.1	24.3
8.9		32.4	54.0	8.8		31.9	6.1	9.4		13.9	45.3	9.6		12.1	25.1
8.8		35.4	22.4	9.6		34.9	21.9	9.6		21.4	29.1	10.0		15.1	29.9
9.2		39.9	4.8	9.2		39.8	17.3	9.6		29.2	2.0	10.2		25.1	34.4
8.2		53.9	28.2	9.0		39.8	31.0	9.6		35.9	3.2	10.2		25.6	55.3
9.4		59.9	38.2	9.1		39.9	17.8	9.3		44.4	46.5	10.2		26.0	28.3
9.6	30	1.9	37.3	8.6		40.8	57.2	10.0		44.8	58.7	9.8		27.1	49.6
9.9		10.4	34.3	9.2		43.3	8.6	9.4		53.4	16.7	9.5		52.6	34.1
9.8		13.9	28.2	9.0		44.8	36.2	10.0		53.9	45.9	9.6		53.1	43.0
10.0		18.9	45.1	9.7		45.3	39.5	10.0		57.2	33.0	9.7		54.1	25.3
10.0		24.9	0.5	8.4	36	1.3	28.2	8.2		58.4	10.7	10.2		54.1	8.7
8.4		33.1	2.8	9.3		11.8	21.6	9.6	43	14.6	46.5	9.0		58.1	3.9
9.0		42.4	51.2	9.4		19.8	16.1	10.0		31.6	47.0	9.9	49	1.6	31.3
10.0		44.9	4.3	9.4		22.3	9.5	9.0		39.6	20.1	9.8		2.1	38.8
9.1		52.9	10.4	9.4		23.3	49.4	10.0		41.6	15.1	10.2		21.6	35.8
9.2		54.4	8.4	9.4		25.3	35.7	9.9		58.1	9.8	10.2		26.6	10.9
9.7		58.9	11.8	10.0		31.8	37.1	9.9	44	8.6	36.5	10.2		27.6	46.3
9.4	31	0.9	54.4	9.8		36.8	24.3	10.0		12.6	12.5	9.6		39.1	26.7
10.0		6.8	16.3	9.2		54.8	14.1	9.4		17.1	48.8	9.8	50	16.1	49.0
8.2		12.9	21.8	9.7		55.3	47.6	9.9		28.6	41.1	10.2		23.6	33.6
10.0		27.4	15.8	9.4	37	9.8	19.9	9.6		29.6	54.8	10.0		28.1	17.8
9.4		38.4	18.6	8.6		23.8	19.2	10.0		44.5	1.5	9.8		31.1	20.5
9.8		39.9	49.2	10.0		24.8	34.4	8.0		47.9	59.9	9.6		44.1	8.5
10.0		39.9	30.0	9.6		29.8	26.2	9.3		53.1	10.9	8.9		51.1	7.8
9.8		40.4	53.7	8.8		29.8	9.5	9.8	45	1.6	23.5	10.2		56.1	21.5
9.7		46.9	54.5	8.7		59.8	13.9	8.2		3.1	23.7	8.8	51	3.6	58.5
25pr.	+ 1	2.4	-5.1												
				+ 1	2.6	-5.2		+ 1	3.0	-5.4		+ 1	3.3	-5.6	

3481-3540.				3541-3600.				3601-3660.				3661-3720.													
8h.		-28°		8h.-gh.		-28°		gh.		-28°		gh.		-28°											
m	s	'		m	s	'		m	s	'		m	s	'											
9:0	51	12.6	52.0	8.0	GSb-			10:2	56	29.9	38.5			10:2	0	57.3	29.9			10:2	6	59.8	26.1	7.5	GSb=
9:8		14.0	7.7	b				9:8		40.9	34.7			9:3	1	10.8	23.0	-		10:2	7	10.8	8.2		
9:8		16.0	21.0					9:3		43.9	42.0			10:2		15.8	3.9			10:2		13.3	28.8		
10:2		20.0	21.7					9:6		45.9	45.0			10:2		22.8	5.2			10:2		26.8	46.1		
8:5		25.0	43.4	9.0	G			9:8		52.9	7.8			8:2		29.8	47.3	8.5 =		10:0		39.3	55.9		
9:0		30.5	36.0	9.5	-			9:7		54.9	4.8			10:2		34.8	25.6			10:0		42.3	51.9	8.0	G=
10:0		32.0	4.1					8:8		58.3	6.4	Ga		10:2		44.8	31.2			10:2		43.8	6.5		
10:2		40.5	6.1					10:2	57	4.8	21.7			10:2		50.3	55.4			10:2		49.3	41.3		
9:9		42.0	13.6					9:8		8.3	47.2			10:0		53.8	19.6			10:2		51.3	42.1		
10:2		57.5	29.6					10:2		8.3	43.2			9:7		57.8	6.2			10:0	8	6.3	18.8		
10:2	52	4.5	20.9					10:2		8.5	1.0			10:2	2	0.8	4.0			10:2		15.8	6.9		
10:2		4.5	15.1					10:0		8.6	28.9			9:3		9.3	9.2	9.0 a		9:6		18.3	21.9		
10:2		12.0	33.1					9:2		10.3	31.8			9:0		21.3	30.0			10:2		23.3	44.1		
10:0		25.0	33.9					10:2		13.3	22.2			8:5		26.8	5.5	8.0 Ga		9:2		29.0	56.3	-	
10:0		27.0	50.0					10:2		23.3	16.3			9:8		32.3	8.7			10:0		49.8	41.6		
10:2		28.0	26.0					10:2		33.8	53.7			10:0		36.8	47.4			9:2	9	6.0	9.7		
9:9		29.0	35.7					9:6		36.3	6.1			9:8		41.8	15.8			10:2		21.8	20.0		
10:2		31.0	35.8					9:1		38.8	44.7			9:3		44.8	31.6			8:4		21.8	40.5 a		
9:6		33.0	9.9					9:8		39.1	56.7			9:7		51.8	18.3			9:7		21.8	55.0		
9:6		35.0	32.9	9.0				10:2		39.8	42.4			9:6		53.3	24.7			10:2		28.8	5.9		
8:6		37.0	14.1	9.0 a				10:0		43.8	30.5			10:2		54.8	50.4			9:4		39.8	42.1		
10:0		39.0	8.3					10:2		59.3	46.8			10:2	3	19.3	39.5			9:9		42.3	31.2		
7:9		40.0	23.2	8.5 Ga				10:0		59.8	43.9			10:2		19.3	57.6			10:2		44.8	6.3		
10:0		45.5	12.2					10:0	58	8.3	13.5			8:3		41.3	27.1	8.5 GW=		10:0		47.8	52.4		
10:0		52.0	44.8					10:2		9.8	43.1			9:2		41.8	6.0			9:9	10	9.3	7.4		
9:2	53	1.5	55.2	9.0				9:7		12.3	34.1			10:0		44.8	3.2			10:2		13.8	46.2		
10:2		4.5	16.8					10:2		39.8	5.8			10:0		48.8	13.3			10:0		22.3	46.2		
9:4		5.5	11.4	9.5 a				10:2		41.6	31.3			9:0		50.8	18.7	9.0 -		9:8		37.8	46.4	9.5 G	
9:2		8.5	21.2					9:9		47.3	10.6			9:6		53.8	8.1			7:2		44.8	21.9	7.7 GSat	
10:2		11.5	15.8					10:0		47.8	41.5			9:8		57.8	17.9			10:0		51.3	41.0	9.5	
9:7		20.4	2.3					10:2		53.8	50.0			10:2	4	0.3	30.5			8:4		59.8	17.1	8.7 a	
9:2		24.0	20.9					10:2	59	2.3	46.7			9:6		21.8	56.0			11	9.8	28.3			
9:5		26.5	35.6					10:0		5.3	38.0			10:0		23.3	17.0			9:8	12	18.8	53.7	8.5 -	
9:0		48.5	47.4	-				9:8		11.8	11.0			9:8		26.3	0.5			9:6		21.8	36.8	8.5 W-	
7:5		57.4	19.3	7.0 GSat				10:2		14.8	58.1			8:8		35.3	14.7	9.0 -		9:8		33.2	1.9		
9:6		58.4	5.4					10:2		19.6	26.3			9:6		37.3	28.4			10:0		39.3	15.2		
10:0	54	3.9	34.9					10:2		19.8	11.1			10:0		40.3	45.2			8:7	13	7.8	53.2	9.0 -	
9:4		15.8	2.2					9:8		24.8	12.4			10:2		45.2	38.5			9:0		12.3	24.0		
10:0		21.9	56.4					9:8		28.3	25.9			10:2		50.3	44.2			8:4		14.8	49.6	9.0 -	
10:2		26.4	14.6					9:8		29.3	40.4			10:2		56.8	8.3			10:0		19.1	44.0		
9:8		32.4	55.0					10:2		42.3	33.7			10:2		57.8	41.0			8:7		20.8	10.2	9.0 -	
10:2		35.9	8.6					8:0		47.3	31.2	7.0 GSa		9:6	5	4.3	10.6			9:0		29.3	39.7		
10:0		37.9	41.0					8:7		49.8	16.8	9.0 Ga		9:6		13.3	4.0			9:2	14	49.3	43.8	9.0 -	
10:2		40.4	37.0					10:2		56.8	8.5			10:0		13.8	10.9			9:6		49.8	33.9		
10:2		42.9	23.2					10:2		57.5	1.3			10:0		14.8	43.1			7:6	15	1.8	35.8	7.5 GS≡	
10:0		44.9	0.9					9:0	0	0.3	31.8	9.0 Ga		10:2		22.3	50.4			7:4		18.8	41.4	8.0 GSa	
9:1		45.9	28.0	8.5 a				10:0		3.8	50.7			10:2		30.3	18.3			7:8		21.8	16.4	8.0 GSb=	
10:0		46.4	54.6					10:2		7.3	32.9			10:2		44.8	6.8			9:4		29.8	16.2		
10:0		47.4	24.8					9:6		14.2	57.5			9:8		52.8	59.9			9:8	16	19.8	43.7	9.5	
8:4		51.9	36.4	8.5 a				9:4		19.3	9.7	9.5 a		10:2		55.3	55.7			8:2		23.8	11.9	8.0 G-	
10:2	55	0.9	1.0					10:0		22.3	33.2			9:7	6	2.8	27.8			10:0	17	19.4	59.5		
10:2		0.9	6.9					10:0		27.3	24.3			9:8		12.8	49.5			9:6		29.8	12.2		
10:2		1.9	55.4					9:5		32.8	41.4			10:0		21.8	33.6			8:4		33.8	11.2		
10:2		8.4	9.2					9:7		33.8	42.2			9:5		23.1	1.7			9:0		34.8	27.4	8.0 GW	
9:7		30.4	16.2					10:0		39.8	1.9			9:8		25.8	13.9			8:7		39.8	44.8	8.8 -	
8:8		49.9	16.2	8.0 Ga				10:2		40.3	42.8			10:2		29.8	15.9			8:5		44.8	4.9	8.5	
8:5		55.9	20.7	7.5 Ga				10:0		41.8	47.4			10:2		33.8	23.7			6:5		47.9	17.9	5.0 GS _{tr}	
9:8	56	0.9	15.6					9:2		48.8	59.5	9.5		10:2		35.3	33.7			9:0		54.9	34.4	8.0 GW=	
10:0		21.4	19.7					9:8		49.8	26.8			10:2		39.8	11.2			9:0		55.4	5.7	8.5	
10:0		24.9	18.0					10:2		49.8	18.9			9:8		41.8	27.6			9:0	18	4.9	32.6	8.5 W-	
25pr.	+ 1	3.6	-5.7					+ 1	3.9	-5.9			+ 1	4.2	-6.0			+ 1	4.6	-6.2					

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
		9 ^h .	-28°			9 ^h .	-28°			9 ^h .	-28°	9 ^h -10 ^h .		-28°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.0	18	13.2	44.6	9.4	30	0.5	9.4	8.6	42	19.4	22.7	9.7	52	41.4	10.5
10.0		53.4	22.5	9.2		28.0	51.1	9.5		24.7	2.0	8.6		44.4	19.8
8.1		57.9	38.7	9.0		50.0	28.8	9.4		39.4	5.6	7.5	53	7.4	42.5
8.4	19	7.4	31.9	8.9		55.0	25.2	9.7		51.4	7.0	9.0		14.4	21.9
9.6		20.9	35.1	8.6		59.3	44.8	9.7	43	0.9	8.9	9.0		14.4	44.1
10.0		29.9	55.5	10.0	31	43.6	35.4	9.4		11.4	7.2	10.0		26.4	26.9
9.4		46.9	10.2	8.2		47.1	50.7	9.7		12.4	36.7	9.7		27.4	54.5
8.4		52.9	26.4	9.4		49.3	14.9	9.4		26.9	15.9	9.3		29.4	54.1
10.0	20	9.9	6.5	9.3		49.8	11.6	9.8		29.4	30.6	9.3	54	9.4	45.0
10.0		11.9	23.9	8.9		54.8	50.3	9.5		59.4	46.3	10.0		12.9	35.0
9.8		11.9	6.0	8.9		59.3	3.9	9.3		59.4	3.0	9.4		29.6	7.0
8.0		15.4	47.7	10.0	32	17.3	9.7	8.4	44	14.4	27.0	10.2		48.9	46.6
8.2		19.9	47.3	10.0		22.8	30.4	10.0		20.4	49.1	10.2		50.9	53.8
10.0		27.9	46.7	10.0		48.6	11.9	8.2		29.4	18.0	10.2	55	18.9	8.9
10.0		32.9	21.0	9.0		56.1	0.8	10.0	45	5.9	21.5	10.1		23.7	21.6
9.8		32.9	28.2	10.0	33	19.6	59.0	10.0		15.9	4.1	9.7		25.4	11.2
8.0		59.9	54.3	9.2		24.1	15.1	9.6		53.9	34.1	10.2		32.9	53.1
9.0	21	16.4	36.4	9.8		25.1	34.9	9.6		59.4	31.1	10.1		35.4	41.8
6.4		18.9	14.8	9.2		58.1	22.9	9.2	46	9.4	43.6	10.2		43.4	21.5
9.6		24.9	18.6	10.0	34	8.6	27.2	9.0		11.4	43.9	10.1		52.9	13.6
9.2		34.9	54.8	8.7		18.6	20.7	8.7		31.4	29.0	9.5		58.9	39.9
9.8		43.0	31.0	9.4		49.1	14.2	8.2		39.4	4.6	8.0	56	12.9	4.7
9.2		53.4	45.0	9.0		58.6	58.9	9.4		43.9	53.7	8.3		13.9	4.3
9.8		55.4	1.9	9.2	35	22.1	16.7	9.4		54.4	48.1	9.8		40.4	17.3
9.2	22	16.4	21.9	10.0		33.6	48.1	9.6		57.9	35.0	9.5		40.9	59.1
9.6		34.4	3.4	9.6		48.6	36.7	9.0	47	29.4	1.9	10.2		50.4	50.2
10.0		46.4	40.6	10.0		57.6	14.1	9.4		45.4	25.2	10.2		57.4	49.7
10.0		57.9	35.9	8.6	36	3.6	48.3	9.6		55.4	5.8	9.7		59.9	54.0
10.0	23	16.5	24.2	9.5		7.6	48.6	9.3		58.4	10.2	10.2	57	6.4	31.2
10.0		19.4	9.0	9.4		10.6	43.3	10.0	48	18.9	8.3	8.8		14.9	42.3
9.0		37.9	31.1	9.8		15.1	32.5	8.8		49.4	14.1	9.4		19.9	35.1
10.0		56.7	57.4	10.0		25.1	36.1	9.8		54.4	43.0	8.7		27.4	37.0
8.0	24	37.0	2.9	10.0	37	33.6	35.5	9.5	49	5.2	0.0	8.0	58	0.9	26.3
9.0		48.5	44.2	9.4		50.6	23.8	9.6		7.9	55.9	9.8		1.4	30.4
10.0		55.5	32.9	10.0	38	3.6	33.5	9.7		17.9	53.8	9.7		9.9	56.1
8.0	25	11.0	3.4	10.0		4.1	15.9	10.0		39.4	21.4	9.6		18.9	25.5
7.4		11.0	13.0	8.2		8.6	35.5	8.9		41.9	40.9	10.1		20.4	28.2
10.0		15.0	8.3	10.0		20.1	52.7	10.0		44.4	23.1	9.6		20.9	48.3
9.4		45.5	2.6	9.2		31.1	45.6	8.8		54.4	22.4	9.3		54.4	47.4
10.0	26	0.8	57.7	9.8		43.6	46.6	10.0		54.4	24.9	10.2		54.9	27.9
10.0		27.0	51.5	9.7		48.6	46.3	8.8	50	4.4	19.3	9.7		58.9	33.0
7.8		38.5	29.8	8.8	39	4.1	57.7	9.4		14.4	28.2	9.7		59.4	7.4
9.4		46.5	9.1	9.7		41.9	56.0	9.3		29.4	3.6	9.1	59	4.9	54.6
6.8		50.0	4.8	10.0		50.9	43.1	9.8		34.4	10.7	10.2		9.9	44.7
10.0	27	0.0	42.1	10.0		57.9	40.0	9.6		34.4	25.2	9.9		13.4	27.2
10.0		19.8	57.0	8.4		59.1	58.1	10.0		40.4	31.2	9.3		18.9	50.1
9.2		21.5	22.2	9.2	40	15.4	8.7	10.0		52.9	46.0	10.2		20.9	41.0
9.8		22.0	40.1	8.2	41	11.4	54.1	7.8	51	10.9	40.3	9.2		23.4	14.9
8.6		34.5	15.4	9.8		19.3	15.5	9.4		30.4	13.2	9.7		24.8	56.9
10.0		42.8	46.8	8.4		21.4	23.8	8.8		37.9	26.3	9.3		28.4	28.2
9.6	28	9.5	55.4	9.7		29.4	1.5	9.0		41.4	26.7	9.2		30.9	52.3
10.0		18.1	51.1	9.7		30.4	28.1	10.0		57.4	20.8	9.9		32.4	10.8
9.4		21.0	47.1	9.6		39.4	22.1	9.6		57.9	7.3	10.2		38.4	37.9
8.4		26.0	13.3	10.0		44.4	26.8	8.6	52	10.4	27.1	9.8		43.4	26.6
9.0		41.5	39.7	10.0		48.4	32.7	10.0		12.9	34.0	10.2		58.9	46.3
9.0		42.0	0.5	9.4		49.4	11.1	10.0		13.9	17.1	9.6	0	3.9	50.1
10.0		54.5	46.0	9.6		54.9	15.4	8.8		19.4	9.5	9.7		7.9	55.0
10.0	29	9.8	21.5	9.4		55.9	7.0	9.8		23.4	56.7	9.9		16.4	15.5
10.0		11.0	27.2	9.2	42	1.9	7.3	10.0		35.4	17.3	9.9		19.8	25.9
8.2		27.5	19.3	9.8		7.9	44.7	9.3		37.4	33.6	9.4		26.8	33.3
25pr.	+ 1	5.3	-6.5	+ 1	6.2	-6.8		+ 1	6.9	-7.0		+ 1	7.5	-7.2	

3961—4020.				4021—4080.				4081—4140.				4141—4200.					
mag.		Ioh.		mag.		Ioh.		mag.		Ioh.		mag.		Ioh.			
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s		
8.0	26.8	30.6	7.5	10.1	6	48.3	33.5	10.2	12	22.1	12.0	8.6	23	18.0	56.7	9.0 a	
9.5	36.3	15.2		10.2		51.8	23.9	7.0		23.6	22.1	8.8		19.0	16.4	9.0	
8.6	47.5	2.5	8.0	9.7	7	2.8	31.1	9.7		29.1	53.5	9.6		26.0	3.7		
9.9	48.8	19.7		8.0		6.3	53.0	9.7		43.1	55.3	9.0		44.0	54.9	9.0	
8.4	0.3	31.6	8.0	10.2		15.3	16.3	9.7		57.1	22.1	9.6		49.0	27.1	9.5	
10.2	18.3	55.0		10.1		15.8	58.2	9.9	13	1.6	39.6	9.6	24	59.0	7.9		
10.0	22.8	7.0		9.4		39.7	20.1	10.2		5.6	13.7	9.6	26	2.5	38.7	9.5	
8.4	26.8	15.5	7.8	9.7	8	14.7	22.4	9.7		11.1	7.5	8.8		21.0	38.1	9.5 -	
10.0	42.3	51.8		10.2		15.2	35.5	7.9		22.6	20.0	8.2		43.0	24.0	8.8 a	
9.7	44.8	27.1		9.2		16.2	32.6	9.7		31.1	17.3	9.0		44.0	51.4	8.5 a	
9.7	47.3	37.9		9.6		16.2	5.4	10.2		38.6	57.5	9.6	27	8.5	22.8	10.0	
9.5	51.8	25.0	9.0	9.7		21.7	36.0	9.9		39.6	54.3	9.6		52.5	58.0	9.5	
9.9	51.8	43.5		10.2		23.2	34.6	9.9		44.6	25.3	9.6	28	11.5	53.8	9.2 a	
8.6	54.8	39.6		10.0		28.7	55.0	10.0		45.6	55.5	9.6		45.5	58.9	9.2 a	
10.2	2	1.8	44.1	9.5		30.2	35.0	9.6		47.1	10.6	9.6		47.0	27.2	9.5	
10.0	4.3	16.8		10.2		31.2	23.8	9.1		50.1	47.7	9.6	29	9.6	43.5		
10.2	12.3	50.5		9.9		34.7	19.6	10.1		56.1	35.1	9.6		34.9	25.9		
9.5	15.3	27.0		9.9		34.7	39.6	8.0	14	2.1	19.9	9.6		49.6	56.9		
10.0	19.3	1.8		9.5		50.7	7.4	9.5		18.6	1.8	8.2	30	3.9	28.9	8.8 Gb	
10.0	20.3	58.8		9.8		53.7	5.0	9.0		23.5	2.5	8.5	9.4	14.9	54.7	9.0	
9.9	32.3	7.4		10.2	9	0.2	43.1	10.2		28.1	9.7	7.0		44.9	7.5	7.5 GSat	
9.9	37.8	0.9		10.0		7.2	28.5	10.1		30.1	46.9	9.6	31	19.9	31.3	9.0 a	
9.8	42.8	43.2		8.7		8.2	12.0	9.7		32.6	29.8	7.9		54.9	26.9	8.0 GWa	
9.3	43.8	0.5	9.5 a	9.7		23.7	14.6	9.9		31.1	29.7	10.1		58.9	56.0	a	
9.6	54.5	59.3		9.9		29.2	21.4	10.0		11.6	2.8	9.6	32	52.6	22.6		
9.0	3	0.8	9.0	9.7		35.2	26.2	8.8		12.1	7.0	9.0 a	9.6	33	40.7	53.4	
10.0	6.3	5.4		10.2		38.2	18.0	10.1		21.6	5.2	8.8	34	5.1	38.7		
9.5	22.3	6.7		10.1		40.2	12.0	10.2		23.6	50.8	9.6	35	23.6	51.9		
10.2	24.8	13.6		9.6		46.2	40.0	9.1		38.1	31.7	9.5	9.6	36	22.3	14.0	
9.7	59.8	47.3		10.2		47.7	5.8	9.7		38.1	4.0	9.2	9.2	30.3	10.9	Ga	
9.7	4	3.3	45.1	9.9		50.2	50.1	9.9		56.1	41.5	9.6		32.8	39.3		
9.8	5.3	45.2		10.2	10	0.2	55.0	9.1	16	5.8	14.9	9.6		46.8	51.8	-	
10.2	12.3	36.7		9.9		8.2	43.7	9.8		19.1	5.2	9.4	37	21.8	44.4		
8.9	15.3	40.3	9.0 a	10.1		12.9	1.8	8.9		34.4	21.1	9.6		29.8	53.8	8.5 =	
9.9	20.3	27.1		10.2		14.7	23.2	9.7		34.7	1.7	8.2		36.8	24.4	8.0 W-	
9.4	20.8	26.7		9.8		26.7	22.8	7.6		37.9	55.7	9.6	38	12.8	43.6		
10.2	30.6	5.9		10.1		30.2	30.1	9.1		38.6	13.1	9.5 a	9.6	51.1	20.4		
10.0	35.3	6.5		7.8		35.6	21.2	9.8		40.1	43.8	10.2	39	47.1	56.6		
10.2	36.3	46.3		10.2		41.1	32.3	9.9		52.2	44.8	9.3	40	20.5	40.5	9.5	
9.4	36.3	41.1	10.0	10.2		43.6	45.4	10.2		54.6	48.7	9.5		44.5	45.9		
9.9	40.3	6.1		9.7		49.6	54.0	10.1	17	0.1	43.8	9.6	41	20.5	6.4		
9.9	47.8	28.4		9.6		55.1	35.6	9.8		0.6	47.9	10.2		30.5	34.1		
9.9	5	1.3	44.5	9.1		57.6	6.5	10.2		1.6	53.5	8.6		44.5	20.0	9.0 -	
10.2	8.3	37.1		9.1		59.1	35.1	9.7		19.1	54.7	10.2		57.0	53.4		
10.2	26.8	18.5		9.5	11	2.6	4.5	10.1		20.1	9.7	9.2	42	38.7	48.4	9.5'	
9.8	30.3	4.1		9.7		12.6	59.3	9.8		26.1	33.8	8.2	43	3.7	26.5	8.2 -	
10.1	49.3	28.0		10.2		20.1	22.9	10.2		41.2	14.7	9.1		19.7	28.3	9.0 -	
10.2	49.8	30.8		10.2		20.1	18.9	9.6		42.2	27.5	10.2		37.7	40.7		
10.2	54.3	48.1		10.1		26.1	0.1	8.8		46.5	49.3	9.5		37.7	8.7	a	
9.6	6	2.8	14.1	9.9		29.6	7.7	9.0		48.5	56.5	9.3	44	11.2	18.3	b	
10.1	3.3	6.3		9.8		33.9	0.1	8.6		49.0	30.4	10.2	45	0.7	10.3		
10.1	8.8	49.5		10.2		34.1	50.4	10.2	18	9.2	20.1	10.0		26.7	43.2		
9.9	10.8	0.4		9.7		46.1	59.2	9.6		43.3	5.0	9.4		47.7	20.4		
10.2	11.3	51.5		9.3		51.6	49.8	7.8		19	38.7	7.8		51.9	59.3	8.2 Ga	
10.1	11.8	57.0		9.2		59.1	11.9	9.6		20	33.7	10.0	46	3.7	54.3		
9.8	21.8	0.8	W	9.5		59.6	25.3	9.4		21	20.7	10.2		19.7	48.4		
10.2	22.8	9.9		8.9	12	2.6	36.6	9.6		31.2	20.8	10.4		29.0	44.1		
9.7	26.3	7.9		10.1		5.6	50.3	9.6		38.7	13.0	8.8		37.7	51.0	9.0 a	
9.5	31.8	28.1		9.3		9.6	23.4	8.8	22	33.7	52.2	10.2		42.2	56.1		
10.2	41.3	28.6		10.0		12.6	17.1	9.6		53.5	23.7	10.4		55.1	58.8		
25Pr.	+ 1	8.0	- 7.3														
				+ 1	8.4	- 7.4											
								+ 1	8.8	- 7.5							
														+ 1	10.4	- 7.8	

4201-4260.				4261-4320.				4321-4380.				4381-4440.			
10 ^h -11 ^h .			-28°	11 ^h .			-28°	11 ^h .			-28°	11 ^h -12 ^h .			-28°
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
9.5	47	17.2	18.5	9.2	13	36.2	49.8	10.0	31	33.1	21.3	10.1	53	54.9	52.2
9.8		19.7	52.1	9.6	14	7.2	3.9	9.8		59.6	15.2	10.0	54	12.4	3.4
10.2	49	9.7	26.7	9.0		59.7	3.3	9.2	32	45.6	36.1	9.6		52.4	34.8
10.2		21.7	2.0	8.2	15	17.7	54.6	10.0	33	1.1	38.4	9.6	55	27.7	59.0
8.6	50	14.7	35.0	9.6		28.1	3.0	9.2		20.6	28.0	8.4	56	46.4	33.8
9.5		21.2	55.1	10.2		53.7	12.9	9.0		53.6	38.7	10.1		57.9	15.9
9.3		29.9	57.4	10.2	16	25.7	10.5	8.6	34	26.1	11.4	8.7	57	19.4	59.6
10.2	51	2.3	44.2	10.2		28.7	44.9	9.8		44.6	28.7	10.0	58	5.9	8.0
8.6		26.6	36.9	7.4		56.7	12.6	8.4		52.1	10.6	9.6		11.8	21.3
10.2		35.1	58.2	10.2	17	1.7	15.0	6.6		56.1	30.5	9.4		18.8	29.3
8.2	52	12.6	34.2	9.8		36.7	22.2	9.1	35	2.6	35.5	9.2		40.3	38.8
10.2		17.4	46.2	9.4		46.2	1.0	9.8		18.4	30.1	7.8		46.8	0.7
8.6		43.1	28.1	9.6		48.2	37.9	8.2	36	19.4	56.8	10.1		53.8	51.0
10.0		45.1	3.7	8.4	18	30.7	29.6	10.0	37	20.1	39.8	9.8	59	19.8	5.1
9.2	53	10.6	29.4	10.0	19	31.7	48.0	8.0		31.6	59.2	8.9		48.8	19.9
10.0	54	1.1	10.6	9.4		52.2	48.7	9.8		57.6	30.6	9.5	0	20.8	28.3
9.8		20.1	10.5	9.6	20	9.7	1.1	9.4	38	6.6	25.6	8.4		27.8	25.8
10.0	55	11.1	36.8	9.6		39.2	7.8	9.8	39	43.1	54.5	10.1		49.7	14.0
9.6		30.1	55.7	10.0		52.7	24.0	9.3		48.1	18.4	9.8	1	1.8	32.3
10.0		52.1	44.7	9.4		58.7	53.5	9.2	40	9.6	35.0	7.9		11.3	21.9
10.2	56	26.1	59.2	8.4	21	20.7	16.7	8.8		13.6	4.6	9.5		15.3	57.5
8.6		40.1	48.3	10.0	22	0.7	35.1	8.6		32.6	39.6	9.2		15.8	16.3
9.3		50.6	3.2	9.4		17.2	3.4	9.6		37.6	35.0	8.9	2	5.3	40.7
10.2	57	24.3	50.2	10.2		31.2	30.8	10.0		45.4	43.2	9.5		15.0	58.1
10.2	58	9.1	52.7	10.0		31.2	20.4	8.2	41	2.4	47.8	9.6		15.8	28.1
9.4	59	29.6	57.5	9.2		39.7	37.5	9.8		8.9	3.1	10.0		22.8	38.7
9.4	0	15.1	23.8	9.8		40.7	47.1	9.4		13.9	21.1	8.9	3	11.0	21.0
7.2		37.1	3.1	10.2		41.7	8.6	9.5		31.9	8.3	9.3		13.0	53.0
10.2	2	28.6	35.0	9.6	23	6.7	40.5	9.8		48.9	59.0	9.0		40.0	26.9
9.8	3	1.4	29.5	8.8		11.7	27.7	9.5	42	30.9	12.8	9.3		53.0	43.4
9.0		5.1	35.1	8.4		16.5	46.2	9.8	43	11.9	15.5	8.2	4	2.0	55.5
10.2		49.2	10.6	10.2		53.2	9.8	8.6		59.4	26.0	9.0		4.0	19.8
7.8		57.1	55.5	10.0	24	23.7	56.5	9.3	44	3.9	57.1	10.1		4.0	22.6
10.2	4	16.6	16.8	10.2		25.7	41.0	9.4		21.9	19.7	10.1		33.0	52.7
10.0		22.6	44.1	10.0		42.2	2.4	9.3		51.9	47.7	9.4	5	3.0	9.6
8.5		43.1	53.8	10.0		48.0	23.9	9.8	45	23.9	10.7	8.4		20.0	42.1
10.2		59.2	17.7	8.4		52.2	6.4	10.0		38.5	55.6	10.1		35.0	14.2
10.0	6	14.1	44.7	10.0		52.2	28.9	9.3	46	2.9	11.9	10.0		53.3	0.3
9.8	7	9.1	54.7	10.2		56.2	20.1	9.8		15.4	26.7	9.2	6	23.0	55.0
9.6		15.1	33.2	10.0	25	16.0	20.8	10.0	47	16.1	24.2	9.2		42.0	53.1
10.0		29.1	6.3	9.4		23.0	56.7	9.3	48	2.1	40.8	10.0		46.5	6.8
9.2		46.6	17.6	10.2		53.2	16.9	9.4		7.9	20.0	10.1		51.5	9.1
9.6	8	11.1	11.1	6.0	26	4.5	34.5	9.4		26.9	25.5	9.8	7	0.0	21.4
9.4		41.1	35.5	9.2		17.3	50.5	9.0		36.4	12.9	10.1		2.0	36.1
9.6	9	5.1	52.0	8.3		20.3	27.0	8.8		57.9	18.1	10.0	8	2.2	54.0
8.4		16.6	50.0	9.1		37.8	3.0	10.0	49	0.1	7.2	8.9		12.2	15.2
10.2		31.1	28.5	9.8		42.3	4.5	9.5		9.4	4.8	9.8		23.2	41.3
8.4		41.1	52.5	9.6		47.8	21.9	10.1		27.4	29.7	7.2		38.1	32.4
9.6	10	5.7	18.8	9.2	27	35.8	40.1	9.8		48.4	38.8	10.1		58.7	11.0
10.0		10.2	12.8	10.0		53.8	50.3	8.6	50	55.4	24.3	9.2	9	5.6	35.9
9.6		11.7	14.0	10.0	28	6.9	8.9	9.4	51	3.9	7.7	10.0		6.2	32.6
9.6		13.2	33.0	10.0		21.4	36.3	10.1		59.4	6.9	10.0		33.5	53.4
10.2		32.7	58.1	9.6		32.4	31.5	10.0	52	43.4	8.4	7.9		33.9	55.8
9.8		51.7	47.5	10.0	29	38.4	26.0	9.5		49.9	47.3	8.6	10	15.8	16.8
8.8	11	43.2	43.4	10.0		56.4	29.2	10.0		54.4	55.0	10.2		35.3	57.6
9.3		44.7	28.9	9.1	30	45.9	8.0	9.6	53	4.4	25.4	9.8		48.5	10.2
10.2	12	26.7	41.5	9.6		56.4	29.9	9.2		6.4	15.0	8.8	11	25.5	55.6
9.6		41.7	12.7	8.8	31	2.9	21.0	8.6		9.4	30.8	8.8	12	44.0	11.7
10.2	13	2.7	18.6	9.3		5.9	36.2	8.8		22.4	48.3	9.8	13	22.0	38.7
9.6		35.7	15.6	9.0		28.9	9.6	10.0		34.4	33.1	10.0		22.0	9.9
25pr.	+1	12.3	-8.1	+1	13.8	-8.2		+1	15.4	-8.3		+1	17.1	-8.4	

4441-4500.				4501-4560.				4561-4620.				4621-4680.								
mag.	12 ^h .	-28°		mag.	12 ^h .	-28°		mag.	12 ^h .	-28°		mag.	12 ^h -13 ^h .	-28°						
	m	s	'		m	s	'		m	s	'		m	s	'					
8.8	13	30.0	20.3	8.8 =	9.4	26	52.6	52.0	9.0	45	56.5	20.1	9.8	59	29.1	30.4				
10.2		36.5	6.4		8.6	27	10.6	30.6	9.0 -	7.8	57.3	1.6	8.5 a	9.2		48.6	46.7	9.0 Ga		
10.2		48.5	35.9		9.8		18.1	27.8		10.1	46	2.5	11.9	10.0	0	49.6	8.9			
10.2		50.0	27.5		9.5	28	27.6	5.3	9.0 a	10.1		6.5	11.6	10.0		54.1	25.2			
8.6	14	0.5	35.0	Ga	9.4	29	38.6	57.8	9.0	10.2		17.5	23.0	8.4		58.6	48.2	8.5 a		
8.6		6.5	17.3	9.0 a	8.9		38.6	54.0	9.0 =	10.2		20.5	23.9	9.8	1	7.2	21.6			
9.4		8.5	20.8	9.0 a	9.5		50.1	8.6		10.0		27.5	45.6	8.8	2	20.7	22.5	8.5 -		
8.8		23.0	32.8	9.0	9.5	30	10.0	0.9		9.7		30.5	28.7	10.0		31.2	6.5			
9.8		31.0	29.4	9.0	10.2	31	2.6	52.6		10.0		36.0	38.3	10.0	3	8.7	39.7			
10.2		34.5	8.5		10.2		29.7	34.5		9.3		41.5	38.2	10.0	4	14.7	26.1			
9.0		38.5	34.8	9.0	10.2		46.1	46.3		10.2		47.5	7.3	10.0		18.2	27.3			
9.2	15	32.5	58.9		9.4		50.9	36.4		7.9	47	9.5	37.7	8.0 Ga	9.4		21.2	26.3		
9.2		45.5	16.2		9.2	32	5.7	34.2		8.0		28.0	43.4	8.0 a	10.0		24.7	46.7		
10.2	16	3.5	35.8		10.2		12.7	9.3		9.6		34.5	43.1	-	8.5		25.7	10.1	9.0 a	
8.9	17	14.5	8.1		10.1		30.1	32.0		9.0		42.5	34.0		9.7		35.2	41.1		
9.5		42.5	23.8		9.4		34.1	29.0		10.1		50.5	45.6	8.5 Ga	9.4		48.7	7.7	9.5 a	
10.2		44.0	3.0		9.2		41.6	6.4		9.9		54.5	43.7	9.0	9.4	5	30.7	20.3	9.0 -	
8.6	18	7.5	15.0	8.5 G ₂	7.7		45.6	51.0	7.5 GSat	10.0		48	10.5	47.1	10.0		37.9	3.0		
10.2		21.5	53.7		10.2	33	6.4	1.4		9.4		30.5	37.7	8.8 -	9.9		45.7	54.8		
10.2		23.1	12.4	9.0	8.6		9.6	58.2	7.5 GSa	9.9		48.5	18.3		9.6	6	4.7	59.3		
9.4		38.1	46.1		9.6		13.1	4.2		10.2		50.0	40.5		7.9		7.2	26.1	7.7 GSbt	
10.2	19	5.1	28.3		9.8		36.6	26.7		10.2	49	1.8	38.4		10.0	7	12.7	45.3		
8.4		19.1	58.7	9.0 =	8.1		40.6	55.7	8.2 G	9.9		12.8	16.8		8.8		30.7	35.9	9.0 -	
10.2		21.6	37.8		10.2	34	29.6	10.0		9.4		43.3	40.1		10.0		50.9	0.0		
9.8		40.6	45.4		8.5	35	12.6	18.1	8.2 Ga	9.6		50	18.8	38.5		10.0		56.9	38.1	
8.9	20	6.6	8.2		8.8		40.1	59.4	9.0 Ga	10.0		29.8	12.0		9.2	8	50.8	31.3	8.8 =	
10.0		12.1	4.6		9.8	36	2.4	23.2		7.5		34.8	11.3	7.5 GSa	8.8		55.3	50.4	9.1 Ga	
8.8		21.6	22.3	9.0	8.8		47.3	7.8	8.8 Ga	8.8		56.8	14.5	9.0 b	9.5	9	2.8	8.0		
9.0		33.9	57.7		9.0		52.8	45.4		9.0		51	0.8	46.2	9.0	10.0		18.8	4.0	
7.4		52.9	1.4	7.8 GSa	10.2	37	5.7	38.6		10.2		10.8	58.0		9.5		20.8	34.8	9.5	
10.2	21	2.4	13.9		8.2		10.2	1.1	8.5 Ga	9.4		52.3	41.8		10.0		27.3	35.1		
8.6		26.4	42.6	8.5 a	9.6		20.2	1.5		9.4		58.8	19.2		10.0		43.3	16.1		
9.8		32.9	18.9		9.4		20.8	47.0	9.0	9.6		52	10.8	4.5		10.0	10	1.8	22.4	
10.2		45.4	13.3		8.8		39.3	48.8	8.5 G ₂	10.1		20.8	51.8	9.0	10.0		6.3	22.2		
10.2		51.9	10.6		9.3		49.4	1.6		9.6		26.8	5.3		10.0		22.8	8.3		
10.2		52.9	13.6		10.2		56.8	31.5		9.0		38.8	48.1	8.5 Ga	9.0		38.3	21.1	9.0	
9.8		56.9	34.6		7.2	38	35.8	4.8	7.0 GSa	10.2		53	35.8	50.4		10.0		40.8	13.0	
9.2	22	10.4	26.5		9.9	39	20.2	32.7		10.2		36.8	12.7		9.4	11	4.3	43.0		
8.4		15.9	45.7	8.5 Ga	8.8	40	10.2	18.1	9.0 =	9.0		38.8	20.3	9.0	10.0		26.3	31.0		
10.0		30.3	16.9		8.6		41.7	54.5	8.8 -	10.2		52.8	16.0		8.3		51.8	0.9	9.0 Ga	
8.8		37.9	38.0	8.5 a	9.7		58.7	50.7		10.1		54	14.8	25.4		8.3	12	4.8	7.5	8.0 Ga
10.2		45.3	47.0		9.4	41	39.7	18.1		9.0		26.8	13.0		10.0		13.8	25.0		
8.3		50.4	45.1	8.5 Ga	8.8		42.2	3.9	9.0 a	9.1		38.6	35.9	9.0	9.2		19.8	29.6		
10.2	23	2.4	49.4		9.7		44.2	19.9		10.2		42.3	21.1		10.0		31.8	47.8		
9.2		11.4	5.1		9.3	42	4.2	26.3		10.1		45.3	6.2		10.0		41.3	2.1		
8.3		13.4	37.2	8.0 Ga	10.1		12.7	24.7		10.2		56.3	34.1		9.7	13	10.3	13.9		
8.9		45.4	59.5		8.0		29.2	10.3	8.7 Ga	10.0		55	2.4	19.6		9.6		16.8	26.2	
9.2		46.4	33.3		9.2	43	5.7	28.9		7.0		38.2	35.5	7.0 GSb ₂	9.7		20.8	46.6		
9.0	24	13.4	22.0		10.1		21.2	44.3		9.7		56	35.5	23.5		10.0		20.8	50.9	
10.2		25.4	17.6		10.2		38.2	28.2		7.3		35.6	59.6	7.5 GSa	9.4		44.8	54.6	9.0	
10.0		37.4	27.4		9.6	44	3.2	10.2		10.0		41.6	38.5		9.0	14	18.8	47.0	9.0 Ga	
10.0		39.9	41.1		7.7		23.2	29.7	8.0 Ga	9.5		52.1	30.2	9.0 -	10.0		20.8	51.8		
9.8		44.4	23.3		10.1		27.7	25.1		9.8		52.6	3.4		10.0		36.3	20.0		
8.9	25	12.4	50.4		8.4		38.5	18.0	8.8 a	9.5		57	51.1	1.0		9.1		39.8	5.8	
9.3		20.5	25.4		10.1		45	5.0	35.6	10.0		55.9	10.7		9.6		42.8	5.0		
10.2		37.5	26.0		9.4		13.0	23.3	9.0	9.2	58	8.1	15.3		8.8		46.3	36.7	9.5 a	
10.2	26	15.5	42.6		8.4		21.3	2.9	8.8 a	10.0		40.6	21.9		10.0		58.8	7.4		
9.4		19.6	48.0		9.6		24.0	21.4		9.4		49.6	15.7		8.5	15	5.8	17.4	9.0 G	
9.2		21.4	59.7	8.8 a	9.6		52.5	48.9	=	9.9		54.6	25.4		10.0		10.8	19.1		
8.4		32.6	19.0	-	9.6		54.0	50.2		9.5		59	0.1	3.7		9.4		39.7	0.9	
25Pr.	+1	18.5	-8.3		+1	19.8	-8.2			+1	20.8	-8.2		+1	22.2	-8.0				

4681-4740.				4741-4800.				4801-4860.				4861-4920.			
mag.	13 ^h	-28°		mag.	13 ^h	-28°		mag.	13 ^h	-28°		mag.	13 ^h -14 ^h	-28°	
9.6	15	53.8	33.9 a	8.2	34	42.4	7.7 -	9.0	47	43.8	18.7 8.2 a	9.6	59	33.3	53.9
9.6	17	14.8	41.7	10.2	54.6	50.0		9.7	55.3	4.6	9.8	37.8	17.5		
10.0	18	45.3	53.6	8.8	54.9	19.0		9.4	58.3	28.2	9.1	48.8	35.2 9.0 =		
9.8	18	38.1	23.9	9.4	35	3.9	13.7	9.8	48	21.8	25.1	9.1	51.3	6.8	
10.0	19	20.5	26.1	9.2	16.4	29.5		9.8	51.3	55.3	9.4	0	28.8	59.1	
9.4	32.0	5.8		9.6	17.4	30.5		9.7	49	9.3	18.3	9.1	32.3	25.7 8.5 =	
9.6	39.5	55.8		9.2	20.9	33.6		9.7	19.3	36.3	9.4	53.1	3.3		
8.5	20	13.0	24.7 9.0 Ga	10.2	30.4	0.0		9.7	21.6	2.0	9.7	1	4.1	15.4	
10.2	46.1	54.2	9.5	9.0	43.4	2.6 9.5		9.6	46.8	3.6	9.8	21.1	29.0		
9.8	21	10.7	59.0 9.5	9.2	55.4	19.1 9.0 =		9.0	50	2.3	48.7 8.5 a	8.8	32.3	19.5	
9.6	13.0	46.1		9.5	36	7.4	47.6	8.0	10.8	1.4	7.2 Ga	9.9	32.3	7.9	
9.0	22	34.5	26.6 -	10.2	10.4	26.8		8.6	12.3	40.8 8.5	9.9	41.3	50.4		
8.4	55.0	17.8	9.0 =	10.3†	23.0	43.5		9.0	18.8	9.4 9.0 a	8.8	49.3	56.8 9.0		
9.4	58.5	32.3		10.4†	26.0	43.2		8.3	41.8	26.9 8.0 Ga	9.6	2	1.3	19.6	
9.4	23	18.0	9.4 9.0 a	9.4	51.4	5.0		9.9	51	2.3	55.9	9.6	5.6	1.8	
10.1	35.5	9.2		8.4	53.9	2.2 8.0 GWa		9.8	29.8	18.4	9.9	21.1	4.3		
10.2	43.1	16.0		9.6	37	12.4	11.2	9.6	42.8	25.4	9.8	36.3	21.3		
10.1	24	23.0	56.0	10.2	28.4	9.1		9.4	52	5.3	0.8 9.0	9.4	39.3	50.9 9.0	
10.1	25	1.5	4.5	9.6	31.4	18.7		9.6	9.3	30.4	9.9	40.1	30.8		
7.1	36.0	55.3	6.5 GSlπ	8.9	50.4	17.8 9.0 a		9.9	40.8	22.4	9.7	45.8	20.7		
8.1	36.0	39.0	8.0 Ga	8.8	38	14.8	23.2 9.0 a	9.6	50.3	17.2	9.6	47.3	2.1		
6.2	38.5	2.8	6.0 GSbt	10.2	31.8	54.3		9.4	53	11.3	3.9	9.6	58.7	15.4	
9.6	56.5	33.9		9.8	36.5	20.8 9.0		9.0	15.3	39.1 10.0	9.2	3	17.0	32.3 -	
9.4	26	3.5	33.2	9.8	44.0	59.3 9.0 a		9.1	40.8	50.0 8.5 a	9.4	31.0	30.8		
8.5	10.5	39.2	a	9.8	39	10.2	30.3	9.8	44.3	36.6	10.0	47.5	35.9		
8.6	15.0	19.6	9.0 Ga	9.9	18.2	9.1		8.3	45.3	29.3 8.8 ≡	9.0	4	18.5	30.4	
10.2	32.4	1.6		9.4	34.5	31.7		9.1	48.3	17.7	8.6	23.5	12.0 8.0 Ga		
9.5	33.0	55.5	8.8 G	9.4	44.7	11.8		9.4	49.8	26.7	8.4	51.5	18.0 8.5 a		
9.6	34.0	27.6		9.9	58.2	3.5		9.8	53.8	59.2	8.6	7	17.0	39.1 8.5 Ga	
9.6	44.5	31.9		9.9	40	9.4	34.0	9.4	54.3	20.7	8.8	17.0	38.8 8.8 G		
10.1	27	12.5	4.6	9.9	21.7	13.1		9.2	56.3	19.9	9.4	21.0	14.2		
9.6	28	0.0	6.9	9.9	41	1.8	42.9	9.7	54	4.3	31.6	6.9	47.8	41.7 6.5 GSct	
9.0	9.0	44.8		9.9	13.8	21.2		9.9	4.8	35.8	9.0	51.3	44.9 8.5		
10.2	17.1	48.1		9.9	15.3	44.5		8.8	27.8	47.7 9.0	9.0	8	55.3	20.0 9.5	
8.2	31.0	30.8	9.0 =	9.4	21.8	51.9		9.6	41.3	52.2 9.5	8.5	9	5.3	22.1 9.0	
10.2	36.8	56.1		9.0	34.8	7.3		9.4	55	10.3	41.3	9.2	11.3	8.3	
7.9	41.0	44.2	=	8.6	42	10.3	44.2 9.0	9.7	15.8	39.8	9.8	13.3	31.5		
8.4	45.5	27.6	9.0 =	9.2	15.8	47.1 9.0		8.4	36.8	47.7 9.0	9.8	14.8	52.8		
9.2	29	6.6	3.9	9.7	30.3	51.0		9.6	50.3	16.7	9.6	10	15.3	47.0	
10.2	48.1	43.6	9.5	8.4	36.8	49.4 8.5		9.7	52.8	50.0	10.0	15.8	57.5		
8.2	30	16.1	3.2 8.0 Ga	8.2	44.2	1.1 -		9.9	56	17.3	46.7	9.6	17.3	55.7	
9.8	33.1	44.1		9.8	50.8	10.1		8.5	19.8	50.2 9.0	9.2	22.3	30.9 9.5		
10.1	56.1	24.2		9.8	59.3	14.3		8.6	20.8	43.9 9.0	8.6	23.3	53.3 9.0		
10.2	31	21.3	14.0	6.4	43	1.8	27.4 6.5 GSb≡	9.9	38.9	53.6	9.2	34.8	28.1 9.5		
6.8	41.1	55.3	6.3 GStπ	9.2	3.8	51.9 8.5		9.9	39.3	40.9	9.0	37.3	31.1 8.5 =		
10.4†	42.3	53.0	9.5	9.1	11.3	10.0		9.3	43.2	58.8	10.0	51.3	20.5		
9.6	47.6	27.0		9.9	32.8	9.8		9.1	50.8	18.0	10.0	54.3	7.3		
9.4	32	12.1	15.9	8.8	44	19.8	30.3	9.4	51.3	41.9	10.0	56.8	39.3		
9.6	17.1	28.2		9.3	41.8	18.5		9.9	54.3	2.5	9.8	11	12.3	23.4	
9.8	42.6	58.7	9.0	9.9	42.3	6.1		9.4	55.3	31.7	8.2	23.3	45.3 -		
9.6	43.1	29.7		9.2	45.8	37.3		9.3	57	4.8	25.8	10.0	48.3	32.9	
9.6	44.1	21.6		9.9	45	56.8	22.9	7.6	15.8	27.5 7.5 G=	9.2	54.8	27.8 8.8		
9.8	33	19.1	22.5	9.8	46	15.3	48.9	9.3	36.3	55.9 9.0	9.8	12	0.3	12.4	
9.6	39.6	21.0	9.5 -	9.9	18.8	58.9		8.4	40.8	31.7 8.2 G≡	8.0	1.3	28.6 8.5 G=		
9.8	50.1	14.9		8.3	25.3	23.7 8.2 =		9.9	58	0.8	44.7	9.2	5.3	8.5	
9.5	59.1	6.4		9.9	56.3	22.4		9.9	1.3	41.5	9.6	20.3	23.8		
10.2	34	16.4	48.0	7.5	47	10.8	7.6 7.2 GSπ	8.8	32.3	14.9	9.4	21.3	8.1		
9.0	18.4	9.0		9.0	17.3	31.4		9.2	35.8	56.0	9.8	46.8	53.5 9.5		
9.2	22.4	28.4		9.6	32.8	32.8		9.4	37.3	54.5	10.0	50.3	37.6		
8.9	42.4	37.4		9.7	43.3	45.4		8.8	59	11.3	44.8 8.5 a	10.0	59.8	28.5	
25pr.	+1	23.6	-7.8		+1	24.5	-7.6		+1	25.5	-7.3		+1	26.2	-7.1

4921-4930.				4931-5040.				5041-5100.				5101-5160.			
14 ^h .		-28°		14 ^h .		-28°		14 ^h -15 ^h .		-28°		15 ^h .		-28°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.4	13	21.3	2.7	9.0	27	13.2	35.8	10.2	48	16.8	14.4	9.8	6	33.3	49.9
10.0		22.5	2.5	9.9		22.7	21.1	9.5	49	18.3	15.5	10.2		42.3	15.9
9.8		33.8	37.9	8.6		50.7	47.8 9.0	9.5		27.8	47.6 9.0	8.6	7	10.3	36.3 8.5 =
9.0	14	1.3	51.8 9.0	9.9		58.7	45.8	6.6		46.8	38.9 6.5 GSka	10.2		16.8	1.3
10.0		12.3	4.4	8.3	28	29.7	58.1 8.5 -	10.0	50	0.3	42.9	9.6		33.3	7.5 9.5
8.3		24.8	10.6 8.0 Gkb =	8.4	29	12.8	19.0 -	8.8		2.3	42.8 9.8 G	9.9†		39.9	59.0
9.8		32.3	53.6	9.9		14.8	38.5 9.5	8.8		18.3	37.1 9.2 Ga	9.3	9	18.2	8.7 9.0
10.0		55.8	28.4	7.6		26.8	33.3 8.0 G≡	9.8		23.1	14.7	10.2		53.3	8.6
9.8	15	26.0	33.0	7.8		41.8	10.4 8.0 Ga	9.6		27.1	43.4 9.2	9.4		56.6	18.8
9.4		32.5	53.9 9.5	9.9		42.3	25.1	9.2		27.1	3.8 9.0	9.5†	11	4.9	57.2
8.4		54.5	28.1 8.5 Ga	8.8	30	10.8	49.2 9.0	8.8		31.1	13.6 a	8.8		22.6	45.8 8.5 a
9.2		56.5	29.9 9.0	9.0	31	39.3	10.8 9.5	7.8	51	5.1	12.2 8.2 Ga	8.4		46.6	30.9 8.2 Ga
9.2	16	29.5	17.9	8.4	32	23.3	4.7 8.6 a	9.4		16.8	58.2	9.4	12	16.6	17.1
10.0		49.5	6.8	9.9		28.3	54.5	10.2		32.6	27.6	9.6†	13	11.9	57.2
9.6		59.0	33.5	8.6		30.3	6.1 9.2	9.8	52	33.1	44.0	10.0		30.1	19.0
9.8	17	23.0	36.1	7.6	33	2.8	45.7 7.2 GSb	9.3	54	10.1	17.8	9.2		59.6	13.8 9.0 =
9.0		32.5	21.1 a	7.8	34	32.5	49.2 8.0 GSa	9.3		55.1	32.5	9.6	14	54.6	50.1
9.2		44.0	28.2	9.6		38.5	24.3 9.0 G	9.8	55	1.1	50.4	6.9	15	10.6	53.7 6.7 GSat
9.6		46.3	59.8 9.5	7.7		38.5	16.8 8.0 GSa	8.4		13.1	30.6 8.8 Ga	9.6		20.0	43.4 8.5 a
9.0		52.5	22.3	8.6		44.0	22.4 9.0 G-	8.5		23.1	7.4 8.5 Ga	9.6	16	6.7	52.1
9.0	18	8.1	30.1 9.0 a	7.8	49	5.5	19.6 8.7 a	9.5		29.1	19.6 9.5 a	10.0		52.6	19.7
7.4		10.0	19.5 7.5 GSat	9.3		51.5	51.3	10.2		34.1	29.6	9.8	17	2.6	10.2
9.8		29.0	1.6	8.3	35	44.0	27.3 9.0 Ga	9.8		43.6	56.6	9.2		3.6	47.4
9.2		38.0	5.0	9.8		46.5	14.8 9.0	8.2		57.1	33.2 8.5 Ga	9.8	18	14.6	5.9
9.8		39.5	6.8	9.3		55.0	39.6	10.2	56	11.1	31.6	9.2		28.2	59.4 8.5 a
9.8		57.5	55.7	9.2	36	2.0	33.1	10.0		18.0	13.5	9.0		33.6	15.0
9.6	19	3.0	31.7	9.8		25.5	58.1	9.5		19.1	44.2	9.1	19	41.6	17.4 -
9.4		5.0	7.5	9.4		40.5	16.0	9.3		19.1	34.6	9.4	20	4.6	21.4 9.0 Ga
9.2		30.0	30.1	9.4		44.0	25.0	10.0		58.6	47.0	9.8†		6.9	59.3
10.0		45.0	42.4	8.8		52.0	32.0 9.0	9.3		58.6	29.2 a	6.9	21	23.6	25.8 6.8 GSat
9.4		49.0	41.7 8.8 a	9.9		59.5	13.0	9.8	57	18.1	31.5 Ga	10.0		38.1	15.3
10.0	20	7.0	44.9	8.6	37	5.0	28.8 8.0 Ga	8.4	58	12.1	13.6 8.7 -	8.3		52.6	24.7 8.5 a
8.8		38.5	38.2	9.0		33.0	48.3 8.5 a	10.2		19.1	25.2	10.0	22	34.6	57.6
5.2		51.5	55.7 5.0 GSπβ	9.4		33.5	32.8	10.2		23.1	8.2	9.4		45.1	11.2 9.5
9.2	21	2.5	13.1	9.4		42.0	59.4 9.8	10.2		24.0	24.6	10.0	24	0.6	58.9
9.6		17.0	35.7	9.1	38	21.0	39.9 9.0 Ga	10.2		44.1	12.8	9.0		23.6	19.8 9.0 G
9.4		41.0	47.4	9.9		29.0	5.0	10.2	59	23.1	35.1	9.7†	26	23.1	41.8
7.2		51.5	33.2 7.5 GSb≡	9.9		47.0	17.0	10.2		36.1	2.5	9.6	27	4.1	28.7 -
10.0	22	5.0	38.7	9.7	39	32.0	52.7 8.5 a	8.2		37.1	20.2 8.5 ≡	10.0		10.4	16.5 9.0 G
9.4		6.5	5.5	8.6		39.5	14.3 8.5 a	10.2		46.1	19.3	9.7†		15.7	41.9 9.5
9.8		16.8	19.9	9.0		59.5	18.1 a	8.6	0	11.6	24.1 8.5 -	9.4		23.6	32.8 9.0
9.2		32.3	44.9	9.4	41	46.0	35.3 9.5	8.2		36.1	43.2 8.2 G-	9.8		30.1	0.0 9.0
9.8		41.8	48.3	9.6	42	0.0	27.0	8.8		51.1	7.0 9.0 a	8.2		37.6	3.2 7.8 Ga
10.0		47.8	22.4	9.1		3.0	20.6 8.8 G-	9.3		53.6	5.6 9.0 a	7.6		43.6	37.8 7.7 GSb≡
8.4	23	16.8	45.0 7.7 Gatr	9.7		10.0	19.0 9.0	7.8	1	12.1	53.0 8.0 GWa	8.1	28	35.1	34.8 6.8 GSb≡
9.0		22.8	59.8 9.0	9.4		13.5	12.2	9.8	2	1.6	57.5 9.5	9.1		44.4	0.0 8.8
8.6		35.8	57.8 8.5 a	9.3		29.5	49.4	10.0		9.8	35.4	8.8		56.5	7.7 9.0
9.2		41.3	9.1	8.0		33.0	30.8 7.2 GSb≡	10.2		24.3	55.1 a	8.3	29	6.5	25.9 8.5 G
9.0	24	9.3	48.7 a	9.4	43	23.0	52.9 9.0 a	10.2		26.8	40.8	9.4		9.5	46.7 Ga
10.0		11.8	0.0	8.8		35.5	27.8 9.0	9.3		42.3	11.2	10.0		33.5	52.3 9.5
8.3		15.8	4.1 8.3 Ga	9.8	44	18.0	11.8	9.3	3	33.3	54.8 a	9.7†		36.0	58.3 a
9.2		42.8	37.0 9.2 a	8.3	45	24.0	23.8 -	10.2		37.3	20.7	10.0		44.8	59.7
9.8		46.3	32.4	9.6		27.0	52.9	10.2		50.3	48.7	8.4		46.5	53.9 8.4 Ga
9.0		51.8	41.4 9.0 a	9.4		33.0	2.2 9.0	10.0	5	40.8	17.3 8.5 -	10.0		46.5	49.2
8.8	25	24.0	45.9 9.2 a	9.4		34.4	17.5	9.4		55.3	46.5	10.0	30	32.5	52.9
9.9		29.7	53.4	9.9	47	7.3	55.9	10.0	6	11.8	30.7	9.8		43.3	10.2
9.9		38.3	57.6	9.9		39.2	40.4	10.2		18.2	33.6	9.4	31	12.7	3.7
9.1		42.7	51.9 9.0 a	9.4		42.8	22.3 10.0	9.8		21.3	16.5 9.5	9.5		29.0	15.9 -
8.6	26	1.7	29.8	9.5		49.8	25.6	9.4		22.3	33.3	8.7		55.2	5.7 9.0 a
8.6		35.7	47.6	10.2	48	2.8	44.6	10.0		31.2	22.0	8.4	32	27.7	48.9 6.0
25 Pr.	+ 1	27.2	- 6.8	+ 1	28.3	- 6.5		+ 1	29.5	- 6.0		+ 1	30.8	- 5.3	

5161-5220.			5221-5280.			5281-5340.			5341-5400.		
mag.	15 ^h .	-28°	mag.	15 ^h -16 ^h .	-28°	mag.	16 ^h .	-28°	mag.	16 ^h .	-28°
9.5	32	52.0 43.9	8.3	45 45.7	36.6 9.0 a	9.2	0 43.3	33.8 9.0	10.2	25 30.2	51.0
9.0		56.2 55.1 8.8	8.6	46 52.2	46.8 9.0 a	9.0	43.8	5.6 9.5	9.8	48.7	20.4
9.2		56.2 40.1 8.0 -	8.9	54.2	28.0	8.2	44.8	38.0 8.2 Ga	9.9†	26 2.8	59.7 9.5
9.4		56.5 16.1	9.4	54.2	27.0	8.7	55.3	31.0 9.0 G-	9.4	23.2	59.8 9.0 -
9.5	33	2.0 22.8	9.0	56.2	48.8	8.6	56.8	49.6 b	9.6	24.2	38.3
9.5		9.0 38.0	9.0	47 3.7	42.1 9.5	9.0	1 12.5	1.9 9.0	10.2	33.2	10.0
8.6		11.7 59.8 8.9	9.5	25.7	37.8	9.0	23.3	15.4	9.6	52.7	6.0
9.7†		42.0 48.7 9.0	8.5	49.2	49.2 8.2 Ga	9.6	25.8	23.6	9.4	27 5.2	5.8
9.1		46.0 26.4	9.5	50.7	5.3	8.4	27.8	58.2 b	9.8	17.2	43.7
9.6†		46.5 46.3	9.2	48 2.2	3.0 9.5	9.2	59.3	37.8	9.6	22.7	0.5
8.3		53.0 53.8 7.5 GSat	9.2	5.7	43.6	9.6	2 12.6	58.3	9.4	23.2	18.5 -
8.3		58.0 46.9 7.7 GSat	9.4	14.7	35.6	8.8	37.3	57.2 8.3 Ga	8.3	28 15.7	5.9 8.8 a
9.5	34	12.0 38.6	9.0	15.7	57.6	9.2	53.3	0.1 9.0 -	9.4	28.2	54.2 8.8 =
9.2		30.2 1.6	9.0	25.7	30.6 9.0 -	9.6	3 32.3	55.6	9.1	53.2	43.5
8.6		31.0 29.0 8.8	8.9	46.7	22.1 9.5	9.5	52.5	21.0	9.4	56.7	52.0 9.0
8.9		32.0 41.0	9.1	49 7.7	55.2	9.3	4 21.0	45.0	9.8	29 13.2	31.0
8.9		43.0 11.2	4.8	10.2	51.0 4.7 GSμβ	8.1	32.5	40.4 a	9.4	49.2	21.5 9.0 =
8.5	35	41.0 47.6	9.0	12.7	47.4 8.8	6.6	33.0	5.3 GSπμβ	10.2	30 8.2	28.0
8.7		56.0 10.3	8.4	25.7	18.8 8.5 a	10.0†	5 1.8	40.6	8.7	41.7	40.2 9.2 W-
8.2		59.5 10.0 a	9.5	26.2	38.0	9.6	48.1	44.6	9.6	49.2	18.3
9.1	36	3.0 11.6	9.5	30.7	16.9	7.6	53.0	44.0 7.5 GSac	9.3	31 14.2	32.0
9.5		4.5 24.8	9.2	50 22.7	9.2	9.2	57.0	33.1	8.6	16.7	39.0 9.0 SWa
9.3		15.5 44.9	9.4	29.2	12.4	9.6	6 29.0	57.0	9.4	27.7	14.0
8.7		30.0 25.9 9.0 -	9.5	36.7	32.0	9.2	43.0	54.6	10.0	36.2	35.2
9.1		34.5 7.2	9.3	42.2	9.0	9.6	55.0	2.2	10.0	36.4	59.0
9.2		53.9 1.8	9.5	51 29.2	14.4	9.4	57.5	43.6 9.5	7.9	32 21.2	41.3 7.2 GScl
9.2		56.0 30.9 9.0	8.4	51.7	37.8 a	8.7	8 2.5	41.6 a	9.3	26.2	38.6 10.0
9.3	37	9.0 40.9	9.4	52 0.2	44.0	8.8	28.0	55.7 9.0 a	10.2	35.7	17.8
8.4		34.2 8.1 8.0 Gb	9.2	1.7	19.0	9.0	33.5	25.5	10.2	38.2	26.7
9.2		43.2 3.9	9.4	3.2	18.6	9.6	10 27.5	15.8	10.2	43.7	25.0
9.3		43.2 15.0	9.0	53 6.3	28.5	5.5	33.0	17.9 5.5 GSπμ	9.1	33 13.2	28.6
8.7		52.2 6.1	9.0	27.7	14.2	9.5	11 55.6	27.5	10.2	13.2	48.6
8.9		57.2 49.3 8.5	8.7	30.3	38.9 9.0	8.8	12 23.0	47.7 9.0	10.0	20.2	24.8
8.4	38	19.2 47.1 8.8 G	8.8	56.5	6.7 9.0	8.4	30.5	24.7 a	9.8	23.2	25.0
9.5		19.2 2.9	9.5	54 0.7	6.2 9.0	8.8	56.5	26.3 9.0 a	8.4	46.2	20.4 9.0 a
9.5		23.4 43.9 9.5	9.5	2.6	0.6	9.6	13 16.4	48.1	10.2	46.7	54.6
9.5		45.2 55.1 9.5	8.3	11.0	1.3 9.0 a	9.6	36.5	26.8	10.2	48.2	47.0
9.4		54.7 47.6 9.5	8.7	16.0	9.8 9.0 -	9.3	15 36.5	45.2	9.6	59.2	24.2
9.5	39	1.0 58.7	9.4	17.3	37.9 -	10.2	16 14.2	53.1	7.9	34 16.2	52.7 8.0 GSac
8.7		21.2 10.3 9.2	9.0	36.8	30.8	10.0	18 1.2	34.9	8.6	16.7	36.0 9.5 -
9.3		45.2 46.9	9.5	36.8	21.9	9.4	56.7	45.6	9.4	17.2	15.8 -
8.5	40	0.7 55.3 8.7 a	9.2	44.1	51.3	8.4	19 10.2	49.2 a	9.6	52.2	41.4
9.0		36.2 15.1	7.5	55.1	47.2 7.0 GSac	10.2	20 44.2	55.5	10.2	35	13.7 43.7
9.2		40.2 18.7 9.2 G	9.0	58.6	23.2	9.3	21 10.2	46.0	10.2	14.7	27.5
8.0		43.2 24.0 8.2 GSat	9.5	59.8	12.9	9.6	51.7	23.9	9.4	33.2	26.6
8.7	41	32.2 23.4 8.8 -	8.7	55 12.8	7.4 8.3 a	9.0	22 2.2	47.3 9.5	8.2	37.7	4.3 8.0 Ga
8.9		48.2 31.3 8.0 G-	8.6	45.8	8.9 9.0 -	9.3	21.2	17.2	10.2	48.7	43.6
8.9		32.2 31.2 8.0 G-	9.6†	52.5	47.6 9.5 G	9.4	23 1.7	3.4	9.6	3.7	45.6 8.8
8.3	42	2.7 31.2 8.8 G=	8.4	59.8	3.0 9.0 a	9.4	39.2	16.4	8.4	7.2	25.6 9.0 a
9.0		42.2 51.3	8.4	56 46.3	35.1 8.0 GSat	10.2	40.1	25.8 -	9.4	23.2	51.6 9.5
9.5	43	15.2 51.2	9.6	51.4	4.7	10.0	52.2	7.8 -	10.2	35.2	19.7
9.4		19.7 44.2	9.0	57 21.3	9.6 9.0 -	10.2	52.9	59.4	9.2	40.7	46.7
9.5		20.2 32.7	9.6	36.8	50.4	9.6	24 5.7	47.6	9.3	48.7	14.8
8.9		32.2 51.8	8.4	53.3	13.9 8.5 =	9.4	16.2	14.0	10.2	37	4.7 51.6
8.9		37.4 1.1 9.0	9.6	58 23.3	39.6 8.5	9.4	22.2	50.6	6.8	11.7	16.3 6.5 GSπμ
9.5		43.7 48.7	9.6	34.6	1.6 9.0	7.6	36.2	46.2 GSac	10.2	27.2	50.0
8.7	44	9.2 21.7 9.0 -	9.6	51.4	43.8	9.2	52.5	59.2	8.4	38.2	51.0 =
9.0		36.7 5.2	9.6	59 38.3	44.0 9.0 a	9.6	25 3.2	46.7	7.2	44.2	36.3 7.5 GSat
9.4	45	20.7 55.2	8.4	40.8	31.6	9.4	4.2	4.5	9.6	52.2	53.0
9.5		39.6 24.9	9.6	0 21.7	46.7	9.6	23.2	26.4	10.0	56.2	36.8
25pr.	+ 1	31.6 -4.9		+ 1	32.3 -4.4		+ 1	32.9 -3.8		+ 1	33.7 -3.1

5401—5460.				5461—5520.				5521—5580.				5581—5640.							
16 ^h .		—28°		16 ^h .		—28°		16 ^h —17 ^h .		—28°		17 ^h .		—28°					
mag.	m s	m s		mag.	m s	m s		mag.	m s	m s		mag.	m s	m s					
8.3	38	30	58.5	8.0 Ga	9.8	47	57.8	23.9	10.0	57	13.9	58.0	10.4	7	7.9	36.3			
8.8		11.2	37.0		8.5	48	0.8	48.0	9.0		23.6	3.5	9.6		30.9	29.9			
9.3		12.2	33.3		10.0		5.8	41.6	9.4		44.6	15.9	10.2		58.9	40.3			
9.0		25.2	56.2	9.2	9.8		15.6	9.7	9.0		47.6	38.3	8.8	8	3.4	48.7	9.5		
9.0		42.2	17.7		9.4		20.6	31.2	9.4		47.6	13.5	10.2		5.4	21.9			
8.4		52.9	40.8	8.0 =	10.0		22.4	58.8	10.0		53.6	39.5	9.8		12.9	35.1			
9.1	39	0.7	6.2	9.5	9.5		32.1	32.4	—	9.8	58	2.6	26.9	10.4		23.9	29.1		
8.6		2.2	1.7		10.0		32.5	49.9	8.6		3.6	6.9	10.4		40.4	44.3			
10.2		3.3	53.0		10.0	49	6.6	11.7	10.0	7.7		3.6	41.9	7.5 GScl	9.0		42.9	11.3	
10.2		12.3	8.7	9.0	10.0		48.1	31.0	9.0		35.6	49.2	8.8 a	10.4		48.6	0.7		
9.6		23.3	36.8		9.4		56.1	4.9	10.0		36.6	36.6	10.4		54.0	34.8			
9.0		25.8	3.2		9.8		58.1	57.5	10.0		36.9	57.0	9.6		55.4	13.9			
10.2		27.3	39.0		9.0	50	2.1	30.5	9.0 —	8.5		39.1	24.9	10.4		57.9	35.2		
9.6		42.8	24.6		9.6		6.1	8.4	10.0		49.1	5.5	G	10.4	9	10.9	56.0		
7.9	40	4.8	43.8	8.0 GWa	9.4		22.1	13.0	9.8		54.6	54.3	8.8		12.9	32.0	10.0		
8.0		8.1	9.2	8.2 a	10.0		37.1	41.9	9.8		58.1	25.9	10.4		18.0	16.6			
9.5		25.1	31.3		8.8		42.1	37.5	9.0 —	9.6	59	31.1	49.5	10.4		20.0	17.2		
9.1		26.3	31.3		10.0		53.1	45.5	8.6		34.6	38.5	9.5 —	9.6		27.9	28.1		
10.0		35.8	49.9		9.8		53.1	36.0	8.3		56.6	24.7	9.0 —	10.4		38.9	20.1		
9.4		43.0	11.9	9.5 a	10.0		53.3	2.2	9.1		0	11.0	39.9	8.7		47.9	47.8	9.0 =	
8.6		56.3	56.0	—	8.4		57.1	16.1	9.0	8.4		33.5	44.1	a	9.6	10	3.4	39.1	
10.2*	41	4.7	12.8	9.5 —	9.0	51	3.1	58.0	9.5	9.2		34.5	48.0	8.5		20.2	58.3	10.0 —	
8.0		24.0	54.0	8.5 Ga	8.5		12.1	22.0	8.5 —	9.0		58.0	3.1	8.5 G—	10.0		22.9	17.3	
9.1		25.8	29.2	9.0	9.8		14.6	43.6	10.4		1	17.0	20.0	10.4		23.9	16.1		
10.0		32.9	0.4		9.3		23.1	2.3	10.4		23.4	19.1	10.4		32.9	18.3			
9.8		53.3	46.5		8.4		27.1	16.0	8.5 —	9.4		2	10.2	16.9	10.4	11	7.9	3.5	
9.8†	42	3.6	48.3		9.3		33.1	40.0	10.4		17.4	2.9	9.6		12.9	53.7			
9.2		16.8	31.1		9.2		52.6	47.2	9.5	9.8		41.4	10.0	10.4		19.9	43.5		
9.4		21.8	30.5		9.4	52	6.1	54.0	8.6		44.9	53.8	10.0	10.4		30.9	7.9		
9.2		49.8	36.0		9.6		14.1	10.0	9.4		45.2	18.3	8.8		32.9	22.5	—		
8.4	43	17.3	48.5	9.0 G=	7.5		37.1	26.6	8.0 G≡	9.8	3	20.9	28.2	9.5	10.4		33.9	48.5	
10.0		19.8	48.8		9.4		38.6	28.0	10.4		23.9	48.7	10.4		48.4	27.1			
10.0		29.3	20.3		9.8		52.1	25.8	10.4		24.4	43.9	10.4		56.4	16.7			
10.0†		30.0	59.7		8.3	53	3.1	12.6	8.5	9.2		29.4	40.4	10.0		59.6	18.9		
8.6		37.3	14.7	—	10.0		6.6	32.8	10.4		45.5	56.8	10.4	12	2.8	1.1			
10.0		59.4	58.9		8.3		12.1	21.8	8.0 G—	10.4		47.9	39.8	10.4		3.8	1.5		
9.4	44	3.3	10.9		8.4		14.6	26.2	9.5	10.2		53.4	9.5	10.2		4.1	52.4		
10.0		21.8	0.0		10.0		59.3	0.1	9.6		59.9	18.9	9.1		10.1	28.2			
9.3		23.8	23.5		9.3	54	17.6	37.5	9.6	4	17.9	11.0	10.4		14.1	43.4			
9.8		33.8	16.1		9.1		21.6	8.5	9.5		45.4	56.2	9.5	10.0		16.6	35.3		
8.8	45	11.8	2.1	8.5 a	9.3		24.5	22.3	10.0		57.4	7.0	10.0		39.6	28.5			
9.3		16.8	26.0		8.4		34.6	47.6	8.8 G—	9.4	5	4.9	47.6	10.2	13	27.1	30.6		
8.4		22.8	14.1	8.5 Ga	10.0		44.7	20.8	9.2		6.4	52.3	9.5 G	10.1		31.1	15.4		
9.4		25.8	34.7		8.4		46.1	13.4	9.5 —	10.1		12.4	10.0	10.4	14	35.6	22.2		
8.6		47.8	11.6	10.0	9.3		48.6	17.8	9.0		23.6	58.3	10.0	10.4		40.0	44.4		
9.8	46	0.8	52.3		9.8	55	4.1	6.9	9.6		27.9	35.9	7.6	15	29.7	1.2	6.0 GSμβ		
8.0		5.8	44.6	9.0 —	9.3		7.6	30.6	10.4		35.9	2.6	10.4		33.6	13.8			
9.4		26.8	28.0		9.3		9.3	0.9	9.2		39.9	19.1	9.8	16	12.6	8.9			
9.6		31.8	26.7		9.3		14.1	16.5	10.0	9.6		40.9	58.2	10.0		23.1	58.5		
9.0		34.8	52.7		10.0		42.6	18.1	10.4		49.6	1.4	8.0		29.6	31.9	8.5 GSac		
9.0		39.8	21.1	a	9.2	56	3.6	16.1	9.5		53.4	30.4	9.5		36.1	57.9			
9.6		46.3	3.1		9.2		6.6	39.1	9.8		58.9	20.3	9.0		45.1	15.1	9.5		
9.8	47	0.8	59.1		7.8		8.6	4.6	8.0 Gb-1	9.5	6	0.9	5.3	9.5		56.1	38.9		
9.8		3.3	12.5		9.8		13.6	16.1	9.2		23.9	33.4	9.0	17	12.1	48.9	9.0 a		
9.1		12.4	57.7		10.0		26.6	6.8	10.4		26.4	48.2	10.4		14.1	12.6			
10.0		14.8	29.9		10.0		35.6	5.6	9.5		31.7	59.9	9.0		15.6	50.1			
9.2		18.8	51.5		7.7		35.6	23.7	7.0 GSac	9.0		43.9	15.5	9.0 a	9.0		57.1	32.1	9.0 Wa
9.4		25.3	50.9	9.0	9.3		35.6	49.6	9.0		51.4	46.5	9.5 —	10.2	18	10.6	20.0		
9.0		44.8	7.5	8.8 —	10.0		44.4	1.9	10.2	7	3.4	28.4	8.2		13.6	25.5	8.5 Gal		
9.4		46.3	6.5	8.8	9.4		54.6	44.1	9.5 W	10.4		4.9	24.1	10.0		21.6	52.0		
25pr.	+1	33.9	—28		+1	34.1	—24		+1	34.4	—21		+1	34.5	—17				

5641-5700.				5701-5760.				5761-5820.				5821-5880.						
		17 ^h .	-28°			17 ^h .	-28°			17 ^h .	-28°			17 ^h .	-28°			
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'			
7.9	18	22.6	18.1	7.5	GScI	9.5	25	11.4	20.8	8.9	33	29.5	38.0	8.8	37	26.5	21.9	
9.6		35.1	33.9			9.7		24.7	56.5	9.8		35.0	28.3	8.3		27.5	26.2	
10.4		37.0	9.9			10.2		33.4	15.4	10.1		44.5	31.1	10.0		29.0	53.0	
10.4		47.6	59.6			10.0		41.4	49.6	9.6		47.0	9.0	9.2		35.5	43.8	
9.5		52.6	15.3			9.9		43.4	29.0	10.2		49.9	0.8	8.4		38.0	0.6	
8.8	19	6.1	40.9			10.2		46.4	22.0	10.1		55.0	7.8	9.1		39.5	14.8	
7.6		22.1	39.5	8.0	GScI	9.7	26	27.9	36.5	10.2	34	1.6	53.8	8.4		43.5	21.0	
9.2		26.6	7.9			9.5		39.4	11.9	10.0		10.5	38.5	9.5		44.5	0.6	
10.0		27.1	54.1			10.2		44.9	23.6	10.2		15.0	21.6	10.2		59.5	54.4	
10.0		32.1	32.4			10.0		27	8.5	25.4	8.8		34.5	40.9	10.2	38	3.0	51.1
9.2		44.6	10.6			9.8		13.4	33.4	9.6		35.0	40.2	9.2		4.5	37.2	
8.6		47.6	4.2	8.8	b	8.8		17.4	6.9	9.8		35.5	53.4	9.7		4.5	44.5	
7.8		53.1	14.9	8.5	G	9.9		52.4	5.5	9.1		38.5	14.9	9.8		5.5	25.7	
10.4		53.4	18.4			10.2		53.9	51.4	10.2		39.5	17.0	9.0		5.7	2.1	
9.4		57.6	3.6	8.8	b	9.7	28	6.9	52.5	10.0		40.6	41.9	10.2		7.5	53.5	
9.8	20	22.1	43.2			9.0		23.4	29.3	9.8		45.5	9.0	9.2		15.5	28.0	
10.0		24.1	2.2			8.6		43.4	54.7	9.9		46.5	52.7	9.8		17.5	33.6	
10.1		24.1	30.6			9.2		53.4	5.9	9.8		51.0	21.9	9.6		25.5	55.4	
8.4		31.8	57.1	8.0	Ga	9.4	29	9.1	57.4	10.2		53.0	3.8	9.1		43.5	50.7	
10.4		32.6	46.0			9.8		17.4	47.1	9.1		58.0	10.2	9.7		45.5	8.0	
10.4		35.6	34.6			9.7		24.4	24.5	9.1		59.5	23.2	10.2		46.0	52.8	
10.2		38.6	49.9			9.8		24.4	35.8	10.2	35	2.6	34.7	9.9		57.5	48.8	
10.1		41.6	18.8			9.4		37.4	9.9	9.8		3.5	22.5	9.1	39	12.5	6.0	
10.4		44.1	31.4			10.2		46.9	39.6	10.2		17.0	0.8	9.8		15.5	41.1	
10.4		44.6	48.6			8.6		47.4	33.9	10.2		22.5	24.9	9.1		15.5	39.6	
10.2		47.1	29.9			7.9		50.9	21.4	9.6		22.5	0.9	10.2		17.5	58.2	
9.6		51.6	17.2			10.2		51.4	37.1	9.6		24.5	24.3	10.0		22.5	50.8	
8.4	21	3.4	44.3	9.5	b	10.2		59.9	52.7	9.8		24.6	36.8	10.2		24.5	31.0	
8.6		16.4	51.9			9.1	30	3.4	4.5	10.2		25.5	13.5	9.8		34.5	54.7	
10.4		32.4	44.4			9.8		13.4	50.7	10.1		28.0	40.8	9.0		43.0	30.0	
10.4		42.9	3.1			10.1		15.9	0.8	9.8		30.0	9.4	8.8		46.0	24.9	
8.4		48.4	31.7			10.2		19.4	50.7	9.3		31.5	43.2	10.0		57.0	21.6	
8.8		56.9	35.9			10.2		26.4	26.6	10.2		33.5	4.7	9.5		58.5	34.6	
10.0	22	8.4	10.9	9.5		9.0		28.9	11.9	9.7		34.5	54.7	10.2	40	3.5	0.4	
10.4		13.4	40.0			10.2		29.4	49.5	10.0		36.5	43.6	9.5		8.5	22.0	
9.8		21.4	4.3	9.5		9.8		37.4	55.4	9.0		37.5	17.6	8.8		17.0	42.8	
10.0		25.9	30.5			10.1		38.4	31.6	9.8		38.5	14.3	10.0		22.5	9.8	
10.4		31.4	55.7			9.8		47.4	52.1	9.6		39.5	3.7	10.2		27.5	39.7	
9.6		36.4	49.9			9.8		56.9	41.7	9.8		43.5	18.6	9.8		28.5	13.2	
10.4		41.9	51.0			9.7	31	3.4	44.6	10.1		47.5	35.0	10.2		30.2	46.0	
10.0		43.9	27.5			8.2		7.4	20.1	9.9		48.5	22.8	10.0		32.0	38.8	
10.1		54.4	23.5			9.7		8.4	45.8	9.8		52.5	14.0	10.1		37.0	59.9	
8.8		58.7	56.8	9.5	-	10.0		12.9	51.8	9.8		58.5	58.1	10.2		38.0	50.8	
8.8	23	3.4	18.9			9.1		27.4	19.0	10.0	36	0.0	38.6	9.9		43.0	44.7	
9.5		9.9	4.8			10.2		27.4	1.3	9.4		0.5	10.8	9.6		47.0	37.5	
10.4		14.4	46.0			9.5		27.4	15.2	10.2		5.0	37.2	9.7		48.5	55.2	
10.4		32.9	21.8			9.3		35.9	25.5	10.1		17.5	45.2	10.1		53.5	13.5	
9.5		38.4	48.0			9.3		44.9	46.8	10.0		23.5	5.8	10.2		53.5	13.6	
10.2		39.4	26.5			9.6		51.4	9.8	10.1		27.0	13.8	8.9		57.5	12.0	
10.2†		46.5	59.8			9.8	32	3.4	50.0	10.1		27.5	17.8	9.6		57.8	56.8	
10.4		50.9	45.1			9.4		18.4	21.4	10.2		38.5	7.5	9.9		59.5	51.2	
10.0		50.9	56.1			7.6		27.4	51.1	8.5		43.5	7.1	9.6	41	3.0	56.4	
9.8		57.4	56.4			10.1		38.4	50.6	10.2		52.5	45.8	9.8		14.5	51.2	
8.8	24	4.1	1.3	9.2	Ga	10.1		39.9	50.5	9.5		53.5	2.0	10.2		15.5	27.8	
8.9		10.2	44.2	9.0	a	9.9		46.4	0.4	10.0		58.2	2.1	9.7		26.5	54.4	
10.2		14.2	1.2	9.2	G-	10.2		58.4	14.8	9.5	37	3.5	11.0	10.2		29.0	6.4	
10.2		22.4	41.5			8.8	33	7.5	0.3	10.0		5.0	38.8	10.2		29.5	46.6	
9.6		49.2	52.4			9.5		8.5	40.0	9.7		17.5	16.0	10.2		34.5	11.0	
10.2	25	8.9	57.0			10.1		11.5	10.9	8.7		19.0	9.3	9.4		45.5	4.4	
10.2		10.4	53.7			10.0		24.5	15.8	9.5		19.5	24.2	9.5		46.5	27.6	
2.5pr.	+ 1	34.7	- 1.4			+ 1	34.8	- 1.1			+ 1	34.9	- 0.9	+ 1	34.9	- 0.7		

5881-5940.			5941-6000.			6001-6060.			6061-6120.		
mag.	17 ^h .	-28°	mag.	17 ^h .	-28°	mag.	17 ^h .	-28°	mag.	17 ^h .	-28°
9.8	41	49.5	8.8	44	18.2	10.0	46	35.4	9.4	49	53.3
8.8		51.5	8.5		19.2	9.7		40.5	8.1		55.3
8.8		51.5	10.2		19.3	9.3		41.0	10.4		55.3
9.9		55.0	10.2		19.7	9.7		42.0	9.8		59.8
10.2		56.0	9.5		23.2	10.2		44.5	10.2	50	3.3
10.0		57.5	9.2		23.2	10.1		52.5	9.8		11.3
10.1		58.7	10.1		24.7	9.7		54.2	10.0		11.3
9.0	42	3.5	9.5		24.7	10.2		55.5	9.2		11.8
8.8		4.5	10.2		32.7	9.1		59.4	8.1		15.3
9.8		7.5	10.2		38.2	9.5		59.5	8.0		15.8
10.2		11.5	10.1		42.3	8.9	47	3.5	9.8		16.3
9.7		14.5	10.1		42.3	10.0		8.5	10.4		18.3
10.2		15.5	10.2		44.3	10.2		10.0	10.0		21.3
9.7		23.5	10.0		49.2	10.2		17.5	9.6		22.8
10.0		25.0	9.6		54.2	9.6		19.5	9.2		23.3
10.2		33.5	10.2	45	3.7	10.2		20.7	9.0		25.8
10.1		35.5	9.6		5.8	8.9		26.0	10.4		32.6
10.2		36.5	10.1		8.2	9.1		26.5	10.3		32.8
9.3		39.0	10.1		8.3	10.2		27.4	10.3		36.7
9.3		47.5	9.5		8.7	10.0		27.4	10.4		38.2
10.0		50.0	8.5		8.7	9.5		28.0	8.6		41.7
10.0		54.5	9.2		11.2	10.3		29.8	9.5		42.2
10.2	43	0.5	9.8		13.2	10.4		31.5	6.5		43.2
10.1		3.5	9.5		14.2	10.4		34.3	9.9		48.7
9.8		6.0	10.1		14.2	10.4		35.8	10.4		51.7
9.9		6.5	9.8		14.7	10.3		39.3	10.2		56.2
9.0		8.0	10.1		15.7	9.2		41.3	8.7	51	1.7
10.2		9.0	10.1		19.7	10.4		42.3	9.9		2.2
10.1		12.5	10.2		26.2	9.2		50.3	8.8		2.7
10.1		16.0	9.4		27.2	9.8	48	1.3	9.8		6.7
10.1		18.0	8.3		27.7	9.5		1.8	10.4		8.2
9.5		23.5	9.6		33.7	10.3		3.3	8.9		8.7
9.4		23.5	10.0		37.2	8.8		5.8	9.6		13.7
10.2		32.5	8.6		44.7	9.8		9.3	10.3		15.7
9.8		33.0	10.1		45.7	9.6		14.3	9.6		16.7
10.2		34.5	8.8		45.9	10.4		17.4	9.3		18.2
10.2		38.0	9.5		47.2	8.9		27.8	9.8		20.4
10.1		39.5	10.2		47.7	9.3		36.3	10.4		22.7
10.2		42.5	9.7		49.7	9.2		40.3	9.0		23.2
10.1		42.5	10.1		51.2	10.3		40.8	10.2†		25.0
9.3		45.5	8.6		53.2	9.4		45.3	10.4		34.7
9.5		48.0	10.1		53.7	10.2		45.8	10.3		35.2
10.0		49.5	9.8		53.7	6.8		48.3	10.4		39.7
9.5		50.5	10.1		54.3	9.5		51.3	9.0		43.2
10.2		54.5	9.7		55.7	8.6	49	5.8	9.8		45.7
10.2		55.0	9.7		56.5	9.3		7.8	9.4		47.7
9.6		57.5	10.2		57.5	9.8		9.3	10.0		48.2
8.0		57.5	9.5	46	1.5	10.4		11.8	10.3		51.2
10.2	44	3.5	10.0		3.5	10.0		14.3	10.3		52.2
9.9		4.5	10.2		4.7	9.6		16.8	9.4		52.7
9.9		4.5	10.1		5.0	10.4		20.8	9.2		54.2
9.8		4.5	9.3		6.0	9.0		27.3	10.0		54.2
9.3		6.5	9.5		9.0	10.4		30.8	10.4		55.8
10.0		6.5	9.3		9.5	8.8		32.3	9.0		58.2
9.7		7.5	10.2		13.7	9.0		35.8	10.3		58.2
9.8		8.5	10.2		17.0	10.4		36.3	9.4	52	0.2
9.6		13.2	9.3		21.5	9.2		42.3	10.4		0.8
9.3		16.2	10.2		22.5	10.0		46.8	10.2		2.4
10.1		17.7	10.2		24.1	10.0		47.3	10.4†		5.0
9.2		17.7	9.2		30.4	9.4		48.8	10.4		12.7
25pr.	+ 1	34.9		+ 1	34.9		+ 1	34.9		+ 1	34.9
		-0.6			-0.5			-0.4			-0.3

6121-6180.			6181-6240.			6241-6300.			6301-6360.		
mag.	17 ^h .	-28°	mag.	17 ^h .	-28°	mag.	17 ^h .	-28°	mag.	17 ^h -18 ^h .	-28°
10.4	52 16.2	41.6	10.3	54 45.7	26.9	10.0	56 49.4	1.2	10.4	59 58.4	6.2
10.4	17.2	39.7	9.4	49.7	24.3	10.4	50.4	3.0	9.6	59.4	31.8
9.6	21.7	31.1	9.5	52.2	0.9	9.2	52.9	34.0	10.4	0 2.9	42.0
9.4	21.9	59.2	10.4†	52.6	57.8	8.6	55.4	32.3	6.4	10.4	28.0
10.0	22.2	35.9	9.8	55.7	55.5	9.6	56.9	31.2	10.2	12.4	23.6
10.0	23.4	0.4	10.4	57.2	45.5	10.2	57 0.4	25.8	10.0	21.3	54.0
8.6	24.7	36.6	10.4	59.2	0.9	9.3	1.9	6.6	9.5	21.4	37.0
9.4	24.7	3.9	9.8	55 2.1	1.9	9.2	2.6	56.7	10.4	25.4	55.0
9.8	26.7	44.5	9.2	2.7	3.4	9.4	6.4	6.1	9.6	28.4	54.3
10.4	28.7	55.2	10.4	4.7	32.1	9.0	7.9	0.8	10.3	34.9	45.4
10.4	35.2	43.2	9.4	5.7	47.9	9.2	8.9	30.0	9.0	39.4	13.8
9.4	35.7	37.1	10.3	9.2	42.5	9.8	9.2	1.6	10.0	52.9	32.9
10.2	38.7	55.0	9.3	11.7	53.3	10.0	15.4	37.3	10.4	55.4	0.5
10.0	39.2	36.7	9.5	12.0	33.4	8.4	20.9	41.2	7.8	55.9	46.1
9.6	43.7	1.5	9.5	12.5	3.6	8.8	27.4	49.1	10.2	59.4	37.2
9.8	45.7	10.0	10.4	12.9	53.8	10.4	29.4	37.8	10.4	59.9	3.4
9.9	47.2	53.3	9.4	15.5	50.8	10.4	29.4	47.6	10.4	1 1.9	1.7
8.2	47.7	42.1	10.3	15.5	50.4	10.3	31.9	48.1	9.4	8.9	13.9
10.2	48.3	21.3	9.4	17.3	57.8	9.4	38.4	23.0	10.3	20.4	57.2
10.4	51.7	40.1	10.4	18.7	58.4	9.8	39.4	34.4	9.4	21.9	38.3
10.4	52.3	34.0	9.6	22.0	5.7	9.6	40.4	14.6	10.2	23.4	21.2
10.0	52.9	32.7	10.4	26.0	28.9	10.0†	42.9	48.4	10.0	24.4	27.3
10.4	55.3	45.9	9.8	26.5	9.2	8.8	43.9	33.5	9.9	25.4	21.5
9.4	57.7	42.5	9.2	33.0	14.5	9.8	48.9	47.2	9.8	32.2	1.8
9.4	58.2	43.2	9.6	43.0	4.9	10.3	51.2	0.1	10.4	35.4	41.8
10.4	53 0.2	42.7	10.4†	46.6	58.6	9.8	51.9	21.2	9.5	35.4	7.0
10.0	1.9	52.7	10.2	50.0	24.5	10.2	58 1.4	17.8	8.8	37.4	52.3
10.2	2.4	1.1	8.0	51.5	44.0	10.0	4.4	22.8	9.2	37.9	25.9
8.6	2.7	35.2	10.4	51.5	54.0	10.4	12.9	5.6	9.6	43.4	39.1
10.4	3.2	25.6	9.4	52.0	31.7	10.2	16.4	26.6	10.3	44.9	9.7
9.6	5.7	43.9	9.4	52.0	44.6	10.2	21.5	9.0	9.8	46.4	8.7
10.4	7.7	1.0	10.4	53.0	40.6	9.8	27.9	41.3	10.0	51.4	23.9
10.4	11.7	45.5	9.4	53.5	44.2	8.4	32.4	34.2	10.2	53.4	23.1
10.4	12.2	49.9	10.3	55.5	5.0	8.2	40.9	32.3	10.4	53.9	10.1
9.3	14.7	39.8	10.4	56.8	2.2	10.4	42.9	6.2	9.8	54.9	46.3
9.3	16.2	45.3	9.9	56 0.0	18.9	10.4	45.9	28.1	9.5	57.4	44.2
9.0	18.7	31.0	10.4	2.0	57.3	7.4	51.4	22.3	10.4	2 3.4	40.2
9.0	19.7	59.2	10.4	2.7	48.2	9.5	55.4	38.5	9.8	4.4	6.4
8.9	32.7	31.3	10.4	5.0	53.2	10.0	59 3.9	17.2	9.6	7.9	52.5
9.2	32.7	42.9	10.4	7.0	52.1	10.0	4.9	12.5	10.0	12.9	8.6
8.9	33.2	46.7	10.4	11.0	17.0	9.5	5.4	0.5	10.4	14.9	8.2
10.4†	36.3	59.9	10.4	11.0	3.8	10.3	9.9	25.6	9.8	15.4	21.3
9.2	42.2	6.5	10.4	15.0	14.7	10.4	16.1	46.7	10.4	20.9	20.9
10.4	43.2	26.1	10.4	16.0	34.8	9.5	16.9	6.2	10.4†	25.4	57.4
10.4	45.7	55.9	10.3	17.0	2.1	9.9	20.4	57.9	9.4	26.4	7.4
9.4	55.2	4.9	10.0	18.0	1.9	9.8	25.4	10.5	8.7	26.9	27.0
10.4	59.7	6.5	9.5	19.0	46.2	9.8	25.6	59.3	10.4	29.9	52.6
9.9	54 5.7	37.1	10.4	21.9	59.0	9.6	28.4	44.3	9.6	33.4	8.6
10.3	12.2	51.2	8.4	25.0	25.8	10.0	30.4	34.9	10.2	35.9	6.5
8.4	12.7	23.0	10.4	27.2	42.2	9.9	34.9	52.4	8.2	38.9	10.4
9.8	12.7	53.9	10.4	29.0	40.7	10.4	37.9	59.1	10.0	45.2	57.1
9.5	15.7	0.0	10.2	30.5	42.4	10.4	38.9	4.8	9.6	51.4	7.9
10.0	16.2	21.1	8.8	35.5	9.1	9.8	40.4	0.1	9.9	51.4	57.0
9.3	30.7	46.9	10.4	39.6	58.6	10.4	40.9	9.2	9.6	1.4	50.1
9.5	32.7	12.9	10.2	40.4	49.5	10.3	47.4	15.4	10.4	1.9	13.8
9.0	33.2	5.7	9.3	40.5	18.4	10.4	49.4	2.5	9.3	2.2	47.6
10.0	35.2	44.6	10.4	41.4	47.2	10.3	50.4	24.8	8.8	2.4	5.6
8.8	36.7	35.0	9.5	44.9	58.8	10.4	50.5	37.9	10.4	2.4	56.0
10.4	38.2	51.7	10.2	44.9	22.3	10.3	55.9	31.0	8.3	5.2	20.7
10.4	41.9	26.9	9.4	45.4	11.0	10.4	56.4	6.0	9.8	10.2	26.2
25 pr.	+ 1 34.9	- 0.3		+ 1 35.0	- 0.1		+ 1 35.0	- 0.1		+ 1 35.0	+ 0.1

6361—6420.				6421—6480.				6481—6540.				6541—6600.			
18h.		—28°		18h.		—28°		18h.		—28°		18h.		—28°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.6	3	11.2	14.6	10.2	6	21.1	35.1	10.0	8	47.0	58.4	9.0	15	56.8	43.7
9.8		15.2	49.8	10.4		26.1	29.7	10.2		47.5	43.5	10.2	16	33.3	34.1
9.6		21.7	27.1	10.2		26.1	52.1	10.4		55.0	22.3	10.2		39.8	20.9
9.8		23.2	33.2	7.5		36.6	52.2	9.6		58.7	48.4	9.2		42.8	46.1
9.8		26.2	37.7	10.4		37.0	44.6	9.6	9	1.7	48.7	9.8	17	14.8	8.0
9.8		28.2	36.8	9.2		38.6	0.2	9.4		2.4	35.8	10.2		17.8	2.4
9.0		31.7	27.9	10.0		40.6	1.9	9.3		3.0	45.4	10.2		28.8	34.8
10.0		32.2	34.0	8.6		43.0	23.5	9.6		3.5	25.6	10.2		28.8	14.7
10.0		35.7	19.5	10.2		43.1	59.7	9.8		5.0	21.6	10.0		38.3	18.9
10.4		42.3	6.0	8.2		43.4	0.8	10.2		7.1	48.5	9.6		39.3	11.0
10.0		46.7	11.8	10.4		44.6	12.9	9.5		8.5	18.7	10.2		50.8	25.5
8.4		51.2	3.3	9.2		45.1	32.7	10.3		11.0	49.4	9.8		57.3	28.1
10.4		56.2	27.4	8.8		45.1	44.3	10.4		12.0	10.8	10.0	18	2.3	9.7
6.6	4	1.7	55.5	10.2		45.1	16.1	9.2		21.0	23.2	10.2		3.3	32.1
10.3		2.2	51.8	10.0		45.6	46.6	10.4		22.0	34.2	10.0		17.8	24.2
10.4		3.2	21.1	9.2		53.1	12.7	9.6		22.0	27.9	9.0		20.3	6.1
10.4		7.2	17.7	8.8		57.6	29.7	6.8		28.8	41.4	10.2		25.8	31.0
10.4		7.2	16.5	9.2		2.1	42.2	6.9		28.8	19.5	9.9		31.8	51.9
9.0		10.2	37.9	9.2		5.1	24.7	9.6		33.5	10.8	9.4		39.8	39.2
9.3		11.2	15.4	10.2		5.6	3.9	8.6		35.0	18.3	10.2	19	3.8	34.1
9.8		11.6	57.1	10.3		7.6	18.1	10.4		35.8	34.6	10.2		18.8	9.9
10.0		20.7	35.9	10.3		11.6	29.1	8.0		44.0	8.6	9.5		23.8	34.5
9.6		26.2	6.6	10.2		12.1	30.9	8.8		49.1	1.8	9.5		32.3	49.6
9.6		35.7	17.4	9.5		13.1	52.8	10.2		58.2	33.2	10.0		33.8	40.5
9.0		37.3	15.5	10.1†		13.7	56.6	9.6		58.3	27.5	9.6		38.8	17.8
10.3		42.2	44.4	10.4†		16.4	43.9	10.2	10	18.8	9.3	9.6		51.8	20.9
8.0		43.2	15.7	9.6		17.1	46.9	8.8		19.3	55.1	10.2		59.8	52.6
10.0		47.2	41.6	10.0		17.5	3.4	8.4		25.3	41.9	8.3	20	10.3	27.3
9.8		47.2	18.0	7.8		18.0	38.7	9.8		26.3	9.1	10.2		20.1	49.6
9.9		48.2	37.0	9.4		18.0	55.8	8.4	11	8.8	15.6	9.4		32.3	51.2
8.7		48.6	59.3	9.3		26.0	51.2	10.2		11.3	41.7	9.6		45.8	51.8
10.0		51.2	43.2	9.8		32.1	33.4	10.2		22.8	56.7	9.2	21	30.3	2.2
10.2		55.2	2.4	10.4		34.4	43.1	8.5		47.5	29.4	9.6		31.8	14.0
8.8	5	0.2	18.3	9.5		35.5	10.0	10.0		56.3	29.9	10.2		41.3	7.4
8.7		5.2	20.6	8.8		36.0	38.5	10.2	12	19.3	8.4	9.2	22	17.8	6.8
10.2†		9.0	39.7	9.9		38.5	38.1	9.4		24.3	34.6	8.1		35.3	52.6
10.2		9.3	53.1	9.5		39.0	33.7	10.2		44.6	0.3	9.6		52.0	0.8
9.3		11.2	14.9	10.3		41.0	53.7	10.0		53.8	16.0	10.2		52.8	8.9
10.4		11.4	46.0	9.8		45.0	37.6	8.1	13	2.8	10.1	8.8	23	1.3	2.1
9.6		14.7	46.8	10.0		45.0	0.3	9.0		3.8	45.5	9.6		12.6	13.1
9.8		16.2	14.7	7.8		45.5	6.9	8.5		5.8	23.9	9.9		21.9	1.7
9.5		16.6	52.9	10.4		48.0	32.2	9.6		17.3	50.3	10.0		25.6	46.0
9.8		20.6	28.2	9.5		49.5	22.2	9.8		17.8	46.2	8.5		58.1	35.6
9.9		21.6	16.7	10.4		52.5	43.9	10.0		28.8	0.5	9.0	24	17.1	30.3
10.4		25.1	23.2	10.3		55.0	14.7	10.2		53.8	8.6	9.0		50.6	12.0
10.4		26.1	18.5	9.8	8	5.0	20.4	7.2	14	5.8	29.1	9.9		52.6	29.9
8.8		36.1	17.0	9.3		5.0	18.9	9.2		8.8	31.5	9.5		54.6	46.4
10.4		43.0	7.1	9.8		11.0	10.9	9.6		9.8	46.1	9.6	25	22.6	32.5
9.8		46.6	24.0	10.0		11.5	55.2	10.2		10.8	40.5	9.5		36.6	11.6
10.4		46.8	53.8	8.3		15.0	8.1	9.4		17.3	12.7	10.2		39.6	49.8
9.0		51.1	51.3	10.4		16.0	13.6	9.0		18.8	58.6	9.0	26	7.6	10.4
9.3	6	1.1	44.0	9.6		22.5	21.1	8.4		27.8	14.7	8.5		18.6	26.1
10.3		5.1	46.9	8.5		23.5	58.2	9.6		29.8	16.8	9.4		25.6	56.0
8.3		6.1	43.1	10.3		25.0	24.6	10.3†	15	13.3	57.7	9.6		45.6	47.7
10.2		12.1	47.9	10.1†		27.9	51.3	9.1		19.8	28.0	8.8		51.1	9.7
10.3		13.1	44.7	9.8		28.5	56.0	9.9		33.8	20.9	9.4		53.6	43.1
10.4		14.1	57.3	10.2		31.0	39.5	10.2		38.8	14.1	9.4		53.6	45.6
10.2		15.1	43.7	9.0		35.0	20.6	10.2		44.8	36.7	10.2	27	6.6	25.9
10.0		15.1	20.7	10.0		41.5	58.8	9.5		49.5	4.7	10.2		8.6	16.7
9.4		21.1	29.4	9.5		45.0	22.8	9.6		52.8	24.1	10.2		10.1	14.3
25pr.		+ 1 35.0	+ 0.2			+ 1 34.9	+ 0.3			+ 1 34.9	+ 0.4			+ 1 34.9	+ 0.8

6601—6660.				6661—6720.				6721—6780.				6781—6840.					
18 ^h .		—28°		18 ^h .		—28°		18 ^h .		—28°		18 ^h —19 ^h .		—28°			
mag.	m	s	i	mag.	m	s	i	mag.	m	s	i	mag.	m	s	i		
10.0	27	24.6	21.9	9.0	37	5.9	20.9	9.5	10.2†	47	15.9	42.2	7.4	59	38.0	49.5	6.5 G S π μ
10.0		36.6	49.4	8.0		16.4	20.7	8.5 G ≡	8.8		26.9	42.1	10.4		45.0	46.9	
9.8		43.6	11.8	9.1		21.4	29.2		10.1		29.9	55.8	9.4		49.0	31.5	
8.6		44.1	25.2	8.6		25.9	14.2	—	9.5		41.9	55.0	10.4		59.0	30.4	
10.2		45.6	12.4	9.6		42.6	1.2		9.6	48	2.9	17.9	10.0		59.5	45.5	
10.2		48.6	4.3	8.1		45.4	54.2	9.0 =	10.1		5.4	48.9	9.6	0	14.0	45.6	
9.0		56.1	54.8	8.8		46.4	53.3	9.5	8.0		6.9	17.2	9.2		23.5	12.9	
9.6	28	4.4	17.9	9.6		51.6	0.9		10.3†		46.4	57.9	9.8		23.9	14.6	
9.8		17.1	3.8	10.1		58.4	48.6		8.8	49	15.3	16.4	10.2		32.9	53.2	
9.9	29	3.6	19.9	10.0†	38	8.2	50.9		10.1		26.8	39.4	10.4		36.4	52.8	
8.0		8.6	36.5	10.1		11.4	54.3		10.1		43.3	39.1	10.4		42.4	52.4	
10.2		23.1	8.3	9.8		20.8	2.7		9.5		54.8	5.3	10.0		46.4	57.9	
10.2		24.4	42.7	9.6		21.4	3.1		8.3	50	20.3	54.9	9.0	Wa	53.4	43.2	
10.2		28.3	56.6	9.2		28.6	2.8		9.2		53.3	6.8	8.6	1	3.4	56.0	8.0 Gaml
10.2		28.6	32.6	10.1		32.4	42.2		9.2		56.3	26.8	9.2		35.9	44.5	8.5 G
9.2		32.6	51.7	10.0		44.9	56.4		10.1	51	0.3	15.2	9.7		36.9	22.1	
10.2		34.6	39.1	10.0		47.9	54.4		9.8		2.3	33.8	10.3†	2	16.0	58.8	
8.4		48.1	5.3	10.0	39	16.9	41.1		8.6		14.3	45.4	9.5		17.9	7.0	9.5
10.2		55.6	8.9	10.1		18.7	7.7		9.1		32.3	36.2	10.4		26.4	30.0	
9.8	30	17.1	21.7	7.6		45.4	24.6	8.0 GSbc	7.9	52	8.8	13.1	9.2		33.4	12.0	
10.3†		21.6	57.9	10.1	40	3.4	16.3		8.4		11.3	52.1	10.0		54.4	53.1	
10.2		29.6	9.3	10.0		5.4	45.8		9.5		23.3	35.9	9.6	3	2.4	1.0	
9.8		37.1	6.7	9.0		6.4	34.2	9.5	9.6		28.3	42.5	8.8		3.4	17.1	8.2 G=
10.2		40.6	56.0	9.2		12.6	1.3		10.0†		45.3	42.8	10.4		3.4	48.5	
10.2		53.6	39.8	10.1		34.9	12.0		10.0	53	8.3	46.2	8.8		20.6	44.0	8.0 am
9.5		54.1	9.6	9.4	41	0.9	28.1		8.6		13.3	53.0	9.8		43.6	27.0	
9.5	31	5.1	45.3	9.8		5.4	38.5		9.5		27.5	59.6	10.4		53.6	24.2	
10.0		9.1	20.6	9.5		6.4	31.1	9.5	9.8		35.3	14.6	9.9		56.6	48.2	
9.4		16.1	48.9	10.1		12.4	27.5		9.6		59.1	59.2	9.9	4	3.6	44.9	
9.0		20.4	37.2	10.1		12.7	25.0		9.5	54	2.6	31.1	9.4		6.5	15.0	
7.9		21.2	17.2	9.5		30.7	25.3	9.0 Mm	10.0		18.1	19.6	9.7		10.6	52.0	
10.1		27.4	44.2	9.6		41.7	49.5		8.5		21.9	49.3	9.1		15.1	41.1	
10.1	32	27.0	2.4	9.8		42.2	58.9		10.4		28.6	56.7	9.7		29.6	53.8	
10.1		31.2	27.8	9.6	42	4.7	13.9		8.4		39.6	49.0	8.6		32.6	20.7	8.5 am
9.8		44.2	42.8	10.0†		5.5	48.2		9.4	55	22.9	53.8	9.6		37.1	2.2	
8.6	33	11.2	22.0	10.0		7.7	21.1		10.4		25.6	18.6	10.4		40.4	58.1	
7.9		23.3	56.3	8.8		27.7	44.9	MK=m	10.3†	56	0.4	51.6	10.4		43.7	50.6	
9.2		31.2	4.3	9.4		35.7	46.5		9.8		14.6	23.1	9.6		54.6	2.2	
8.8		32.7	13.4	10.1		41.7	55.4		9.6		46.6	17.2	10.4	5	3.6	41.3	
8.6		44.6	4.0	9.5		41.7	56.3		10.4		51.6	38.3	10.4		6.6	47.9	
9.5		48.6	30.5	10.0		49.7	21.9		10.4		54.0	38.5	9.4		11.6	4.0	
9.2	34	0.6	26.3	10.1	43	10.1	54.9		9.2	57	12.0	57.2	9.1		13.6	11.5	9.5 -
10.1		5.1	7.0	10.1		21.7	3.7		9.2		20.5	10.5	9.4		15.1	58.8	
10.4†		12.4	57.8	10.0†		25.5	45.3		10.3†		25.4	55.0	10.4		26.6	32.9	
10.0		12.6	40.8	9.6		59.7	23.9		8.6		25.5	17.8	9.0		32.1	5.8	9.5
10.0		25.6	34.4	8.6	44	1.9	20.5	a	8.8		33.3	2.2	9.4		40.6	52.7	
10.0		27.6	18.4	9.8		2.9	28.2		9.0		46.0	19.9	10.4		44.6	50.3	
9.6		35.6	11.5	9.8		7.4	51.7		9.6	58	2.0	30.3	10.0		45.1	27.1	
9.8		43.6	10.5	10.0		18.9	42.4		10.4		22.5	11.3	10.4	6	22.6	17.2	
10.0		51.6	12.9	8.8		50.9	52.6	9.0	9.9		32.0	51.7	9.2		33.8	52.9	9.5
9.8	35	4.6	10.8	9.4	45	1.9	42.8		9.8		40.5	49.1	9.7		39.8	1.6	
10.0		15.0	14.3	9.8		3.4	30.0		9.6		52.3	57.9	8.6		44.8	59.3	9.0
9.1		15.5	17.5	8.8		6.9	17.5	8.5 Ga	10.2†		56.3	52.1	10.4		45.3	22.6	
8.8		26.0	34.0	9.2		44.9	5.9		10.4	59	7.0	32.5	8.5	7	1.8	14.4	—
9.2		53.5	21.1	9.4		48.9	53.2	9.0	9.4		18.5	43.3	9.2		8.8	38.0	
10.1	36	21.5	45.4	9.8†	46	2.4	45.6		10.4		20.0	2.8	9.2		10.8	26.0	9.5 -
10.0		40.0	21.9	9.2		11.4	45.6	9.0	10.4		22.2	57.9	9.7		26.5	59.0	
9.6		43.0	9.9	9.8†		38.9	49.1		9.1		25.0	50.3	9.5		37.8	37.4	
10.0		52.5	55.1	9.1		41.9	51.3	8.5 G=	10.2		28.5	33.3	10.2†		44.8	50.6	
9.8	37	1.0	21.8	10.1	47	7.9	57.4		10.4		30.3	40.5	10.4		47.9	54.1	
25pr.	+1	34.8	+11		+1	34.7	+15			+1	34.4	+20		+1	34.2	+23	

6841—6900.				6901—6960.				6961—7020.				7021—7080.			
mag.	19 ^h	—28°		mag.	19 ^h	—28°		mag.	19 ^h	—28°		mag.	19 ^h	—28°	
8.4	7	51.8	4.2	8.8	15	44.0	0.8	10.4	25	36.7	37.8	10.0	40	59.3	28.3
10.2		54.3	50.5	9.4		48.2	54.4	8.6		44.6	17.8	10.2	41	3.3	25.9
10.2		57.8	10.8	10.4		52.2	10.3	8.1		52.6	47.9	9.0		19.3	43.0
10.4	8	4.7	58.3	9.1		57.2	54.9	9.8		57.1	35.3	9.8	42	16.3	29.1
10.0		5.3	12.0	8.8	16	8.4	56.6	10.4	26	52.5	53.0	9.8		17.3	37.7
9.2		6.3	6.1	10.4		15.2	5.6	8.8	27	14.1	17.4	10.2		55.8	14.7
9.2		13.8	9.8	9.9		17.2	6.9	10.4		17.1	20.8	9.2	43	1.3	18.1
10.2		28.8	51.2	9.8		23.2	13.6	10.4		17.6	9.4	9.4		2.3	28.7
9.5		31.8	39.6	9.0		27.2	5.0	10.0		41.1	49.2	9.8		23.8	12.3
10.4		43.9	55.9	9.2		42.7	51.2	10.4		50.1	16.4	9.1		27.8	57.9
10.0		45.8	50.7	6.4		43.0	6.3	8.2	28	5.6	58.4	8.6		40.3	46.5
8.6		57.2	53.0	9.4		49.2	29.3	7.6		14.6	56.4	8.2		40.3	32.3
10.4	9	12.7	12.2	9.2	17	9.2	19.2	9.6		28.6	3.3	8.4		41.8	18.2
10.4		14.2	32.6	10.4		13.2	10.8	8.4		37.0	56.8	10.2		48.3	50.7
9.8		32.2	53.4	10.4*		15.8	59.9	9.8	29	7.0	18.9	9.0	44	3.3	56.6
9.1		37.2	41.6	10.2		17.5	53.0	10.4		48.5	54.1	9.4		3.3	15.8
10.4		40.2	9.3	9.9		19.2	8.9	9.8		55.0	1.8	8.4		4.3	52.3
10.0		41.7	51.0	10.4		33.2	3.5	10.4		55.8	52.7	8.6		12.8	48.9
10.0		54.2	41.9	9.8		43.2	18.0	10.4		59.5	16.0	10.2		16.3	25.4
10.4		54.7	37.8	10.3		50.7	24.3	9.4	30	39.0	4.0	10.2		21.3	32.3
10.4		56.2	57.3	9.4		55.2	55.4	6.8	31	8.0	53.2	10.2		29.3	49.7
9.4	10	4.2	32.9	8.8	18	5.2	6.6	9.4		22.0	28.4	10.2		38.3	50.6
10.4		29.2	3.6	10.4		14.2	32.9	9.4		27.0	46.0	10.0	45	0.3	42.0
9.5		31.7	4.9	9.6		54.2	39.8	8.8		28.5	54.6	8.4		1.3	27.5
9.9†		32.5	57.6	9.4	19	17.2	15.9	10.3	32	5.0	33.8	10.2		10.3	41.5
9.2		41.2	34.6	10.3	20	9.2	51.0	10.0		6.0	2.7	9.6		17.3	20.4
9.4		43.0	1.9	9.4		12.7	10.0	10.4		32.5	4.6	10.2		30.3	7.0
9.5		53.2	19.5	9.4		29.2	45.1	10.4		46.5	4.6	8.8		36.8	7.7
9.7		54.2	31.4	9.2		30.7	38.7	9.8	33	5.5	4.4	10.2		37.3	56.0
9.2		54.2	25.0	10.4		33.7	49.0	9.4		58.1	58.3	10.2		53.3	26.7
9.2	11	1.2	52.1	10.2†		35.1	41.1	9.4	34	4.8	27.4	8.8	46	21.3	10.4
8.8		3.2	27.1	10.2		40.7	51.4	9.8		11.8	39.9	10.2		37.3	53.9
10.2		14.6	58.5	10.3		48.7	17.5	10.0†		12.1	50.2	8.7		46.3	39.7
9.0		23.2	4.3	10.4		56.7	52.1	10.4	35	1.2	48.3	10.0		53.3	45.3
9.6		24.2	20.7	9.6	21	15.2	22.9	8.6		22.8	56.3	8.7	47	18.3	45.3
10.4		29.4	44.0	10.4		56.9	43.3	10.3	36	4.8	55.9	9.6		20.3	25.0
9.0		39.7	46.7	10.4		58.9	42.0	9.8		35.8	8.7	9.0		28.3	22.9
9.1		48.2	49.8	10.3†	22	5.8	58.0	9.8		41.3	34.3	10.2		46.8	26.1
10.4		58.4	22.0	9.6		15.1	12.7	10.0†		42.5	59.5	9.4		52.3	36.2
10.4		59.7	17.4	10.3		35.6	21.2	10.4		58.8	44.8	10.2		55.3	31.1
9.8	12	16.2	45.9	10.4		45.1	22.8	10.4	37	2.8	10.7	9.8	48	18.8	45.9
9.9		18.2	45.0	10.3		46.1	24.3	10.4		33.8	9.9	10.0		24.8	17.2
10.4		21.7	8.4	10.4		57.4	42.8	9.0		43.2	0.8	9.8		27.3	22.0
10.4		35.2	4.5	10.3	23	10.6	4.1	8.8		55.2	52.6	9.6		29.3	52.5
10.4		38.2	19.7	8.8		23.6	35.5	10.4	38	5.3	45.9	10.2	49	17.3	27.2
9.2		48.2	13.7	9.2		32.1	12.7	9.0		27.2	55.6	10.2		24.8	48.0
10.0†		1.3	53.2	10.3		35.6	11.0	10.4		33.2	44.7	10.2		37.3	19.9
10.0†		8.3	45.8	7.5	24	15.1	28.3	9.8		49.2	48.9	10.2	50	8.3	1.3
9.8		13.2	43.9	10.3		16.7	49.1	10.4	39	30.5	39.9	9.0		11.3	39.4
10.4		24.2	42.8	8.8		25.6	38.1	10.0		51.6	9.7	8.0		15.3	55.5
9.0		26.2	43.5	9.4		26.9	0.7	10.2		56.3	47.9	9.4		18.3	29.2
10.2†		27.8	49.6	10.4		31.6	6.3	7.3	40	2.3	47.7	10.0		33.3	30.4
9.5		38.2	8.2	9.2		32.1	8.9	9.4		6.3	24.5	10.2		36.3	29.6
9.0		47.2	27.4	10.2		34.6	5.0	7.8		8.5	2.3	9.6		41.8	18.1
9.8		48.2	18.8	10.4		44.1	47.9	10.2		11.3	33.5	9.3		43.8	42.4
9.1		55.5	58.5	9.2		45.1	58.5	9.0		12.3	41.1	10.2		48.3	29.2
9.6	14	2.2	10.6	7.8		52.6	15.5	10.2		23.3	55.1	8.8		54.8	4.0
9.7		41.2	47.7	10.4	25	19.6	30.8	9.4		34.3	8.1	8.2	51	4.5	59.2
10.4		45.7	36.2	10.4		21.6	31.1	10.2		34.3	23.6	9.8		9.8	0.3
10.0		15	13.2	10.4		35.6	11.6	10.0		47.3	9.9	10.2		10.8	12.9
25pr.	+1	34.1	+2.5												
	+1	33.8	+2.9												
	+1	33.4	+3.3												
	+1	33.0	+3.7												

7081-7140.			7141-7200.			7201-7260.			7261-7320.		
mag.	19 ^h -20 ^h .	-28°.	mag.	20 ^h .	-28°.	mag.	20 ^h .	-28°.	mag.	20 ^h .	-28°.
9.6	51 50.8	8.0	10.2	0 42.2	31.5	10.0	16 0.0	56.4	10.4	29 10.5	44.7
9.4	52 10.3	41.0	10.2	44.2	33.7	10.0	3.0	5.3	9.0	12.5	28.1
9.8	14.8	12.5	8.8	I 24.5	18.7	10.0	6.0	20.9	10.4	21.0	53.6
9.6	16.8	25.5	7.8	36.2	48.1	9.4	13.5	36.3	9.6	52.5	42.6
10.0	20.3	15.0	8.0	40.7	19.0	9.8	18.0	17.9	10.4	30 21.2	57.3
9.0	27.8	42.0	8.7	53.2	4.6	8.8	29.5	47.1	10.4	21.5	13.0
10.2	33.3	49.5	10.2	2 4.1	29.9	8.8	31.9	24.3	9.2	30.5	14.2
10.2	39.3	26.6	9.4	12.6	38.9	8.6	40.4	23.9	10.4	36.5	14.4
9.4	42.3	15.2	9.8	18.3	11.6	9.6	47.9	6.9	10.2	50.5	18.2
10.2	48.3	50.2	8.4	25.7	3.7	9.6	56.4	43.0	10.2	57.9	34.3
7.2	52.3	55.5	9.5	27.9	30.5	10.1	58.9	52.4	7.6	31 26.9	51.7
10.2	52.3	39.1	9.2	44.9	21.1	10.1	17 7.4	8.4	10.0	35.9	36.8
9.1	53 3.3	53.7	9.6	56.5	51.4	8.8	12.4	38.5	9.8	39.9	57.8
9.8	32.3	27.8	10.1	3 14.4	13.7	10.0	39.4	47.3	10.0	42.4	46.6
10.0	33.3	51.1	8.8	38.6	59.7	9.2	18 8.4	10.7	9.2	49.4	36.1
10.2	47.0	0.4	10.1	4 26.4	24.8	9.5	57.9	53.1	9.8	32 5.9	12.8
9.6	58.8	39.1	9.2	45.7	32.2	9.4	19 33.8	51.9	7.9	21.9	9.3
10.0	54 6.3	9.0	9.8	55.2	47.9	10.0	37.3	24.4	10.4	32.9	54.7
8.2	23.3	20.3	8.8	5 4.2	17.4	8.8	47.3	54.5	7.4	33 2.7	1.7
9.0	25.3	32.7	10.1	35.2	20.3	10.1	47.3	18.1	7.8	16.6	59.4
10.0	40.3	44.6	10.0	52.7	28.0	10.0	20 13.8	32.0	10.0	19.4	30.2
9.6	47.1	3.0	10.0	6 0.7	28.5	8.1	17.8	40.2	7.2	59.9	26.1
8.7	48.8	17.5	9.6	8.7	43.0	10.1	21.3	14.5	8.8	34 1.9	31.9
10.2	52.3	40.7	9.6	14.7	11.0	9.4	23.8	20.1	9.2	51.4	48.9
6.7	58.3	3.3	9.4	18.2	30.1	9.4	21 28.8	10.0	9.8	35 15.9	50.9
8.4	55 1.3	43.2	10.1	55.7	33.9	9.5	42.3	14.8	9.6	45.2	20.0
8.2	1.7	57.2	9.4	7 5.7	56.8	9.6	51.8	26.6	9.8	45.7	16.5
10.0	8.3	52.0	8.6	35.7	32.5	9.2	22 0.8	22.1	9.6	36 12.2	29.3
10.0	13.7	22.6	8.6	45.2	51.5	9.8	32.3	32.7	10.0	19.7	15.7
9.6	27.2	38.9	8.8	8 0.2	27.3	10.0	49.7	26.6	7.6	22.2	21.7
10.0	33.2	53.8	8.5	9.5	35.0	9.8	54.2	17.1	9.4	36.2	46.2
10.2	40.0	1.2	10.1	50.8	23.4	8.8	23 39.7	50.6	9.4	41.2	36.2
10.2	52.2	15.9	10.1	56.0	31.9	8.0	49.9	10.0	7.3	37 2.2	39.1
10.2	53.2	49.4	9.4	9 38.0	16.8	10.0	56.2	43.7	10.0	38 9.2	16.4
9.6	57.2	52.8	9.0	41.5	52.9	9.2	57.2	25.0	10.4	14.9	37.3
10.2	0.2	7.8	10.0	10 7.5	28.5	10.1	24 1.5	32.1	9.0	19.7	3.5
10.2	3.2	7.7	8.6	19.5	31.0	10.0	5.2	39.2	9.9	20.7	28.6
8.8	17.7	58.6	9.8	25.0	18.8	9.8	9.5	40.7	10.4	29.2	29.7
8.6	26.7	22.0	10.0	29.5	45.1	8.0	9.9	29.5	8.6	42.2	53.6
8.2	44.2	5.8	10.1	31.5	32.9	9.1	14.2	42.2	9.4	39 0.7	38.1
8.8	44.7	52.3	10.0	37.0	3.6	9.5	17.0	30.7	8.6	12.6	44.5
9.8	44.7	50.6	10.0	41.0	55.4	10.1	19.2	33.8	7.8	45.6	9.3
10.2	54.2	58.2	10.0	50.5	36.5	10.0	27.9	28.5	10.0	47.6	28.9
10.2	4.2	35.9	9.0	51.5	11.8	10.1	36.2	54.8	10.4	50.1	33.1
8.6	6.2	37.4	8.8	53.5	31.4	10.4	25 6.2	17.4	9.8	40 10.6	21.5
10.2	6.2	49.5	10.0	11 14.5	31.7	10.0	36.7	25.3	9.0	18.1	54.2
10.2	22.2	39.9	10.0	12 28.8	59.9	9.9	26 10.7	24.4	10.2	21.6	12.8
8.2	36.7	9.8	8.8	32.8	13.7	10.4	20.3	54.0	8.0	22.1	12.5
9.8	51.2	27.3	9.5	50.3	12.9	10.4	38.2	18.2	10.4	57.4	51.8
9.6	55.2	52.1	10.0	52.8	34.6	9.6	40.2	5.8	10.4	58.7	57.7
10.2	58 0.2	12.6	9.1	13 58.8	44.4	10.4	44.2	58.1	8.6	41 7.1	31.7
9.4	26.2	7.4	10.1	14 0.8	1.1	9.6	54.7	19.0	10.4	19.5	2.1
9.6	48.7	18.3	8.6	47.0	7.4	10.2	27 0.7	4.6	9.6	22.6	5.6
7.6	57.2	43.5	10.1	57.0	38.4	10.4	6.2	3.0	10.4	36.4	2.9
10.2	59 8.2	22.8	10.1	15 2.0	10.1	10.2	56.5	3.6	9.6	42.1	35.1
10.2	12.2	2.1	9.1	14.0	9.3	8.6	58.5	24.6	8.4	55.1	48.5
10.2	22.2	22.5	9.6	14.5	52.7	9.6	28 44.5	55.0	9.8	57.1	43.8
10.2	23.2	31.4	9.8	34.0	38.3	9.2	54.5	38.3	9.6	42 49.1	25.2
10.0	0 17.2	9.0	9.0	47.0	33.3	9.4	54.5	10.8	8.8	53.0	8.9
10.0	33.2	34.0	9.0	47.0	50.6	9.2	58.0	38.6	9.0	56.0	28.2
25pr.	+1 32.7	+4.1		+1 32.3	+4.4		+1 31.6	+4.9		+1 30.9	+5.3

7321-7380.				7381-7440.				7441-7500.				7501-7560.			
mag.	20 ^h .	-28°		mag.	20 ^h -21 ^h .	-28°		mag.	21 ^h .	-28°		mag.	21 ^h -22 ^h .	-28°	
	m	s	'		m	s	'		m	s	'		m	s	'
8.8	43	8.0	26.3	10.4	57	49.3	24.2	9.4	17	58.8	13.0	8.6	36	45.1	27.5
9.2		30.0	12.1	10.0	58	50.8	30.5	9.9	18	6.8	21.8	8.9	37	1.6	54.4
6.8	44	5.5	27.6	10.4		53.8	28.8	11.1		26.8	36.0	10.0		1.6	14.9
10.4		13.0	44.1	10.0	59	3.3	24.6	10.0	19.	7.3	53.5	10.2		3.5	40.6
10.0		19.0	24.5	9.6		24.8	9.8	8.0	8.0	24.8	30.6	10.0		33.1	3.0
9.0		51.0	52.6	9.1		28.3	57.0	11.2		26.8	8.1	9.6		52.6	7.6
10.4	45	1.0	8.1	9.6		59.3	38.1	10.6		48.7	56.3	10.0		55.6	12.2
10.4		6.2	54.3	9.6	0	23.3	13.8	10.5	20	2.8	43.0	10.8	38	12.1	12.9
9.4		14.5	31.1	9.0		33.3	45.6	8.0		12.8	15.0	8.0		12.6	41.9
8.8		16.0	46.9	10.4		36.9	46.0	11.1		12.9	25.4	9.4	39	23.0	32.2
				10.0	1	19.3	39.1	9.2		32.8	23.6	7.7	40	27.0	19.6
9.6		21.5	34.4	9.6		27.8	9.6	11.0		34.8	42.7	10.6		53.3	50.1
9.8		25.5	4.1	7.4		31.4	58.6	11.2	21	14.2	51.7	8.5		57.0	47.2
8.8		47.8	49.2	8.3		52.0	35.6	9.4		26.8	44.6	10.0	42	0.5	13.4
8.0		49.3	29.5	10.0	2	25.0	27.4	9.2		27.8	16.8	9.0	43	25.5	23.5
10.4		54.0	15.5	9.6		29.0	8.4	9.0		29.8	30.0	9.6		29.0	6.2
7.3	46	36.7	23.7	10.4		29.5	47.4	10.6	22	19.8	9.0	7.3		33.0	30.8
8.2	47	5.8	24.2	9.6		37.8	23.4	10.6		26.8	7.5	8.9		52.0	18.3
9.8		22.2	43.6	8.3	3	2.5	59.9	11.0		44.3	41.3	10.2	44	10.0	46.7
9.2		26.2	18.3	10.4		28.0	41.0	10.0		46.8	12.8	9.2		10.0	50.4
9.8		31.5	30.2					9.8	23	16.8	29.6	9.8	46	24.5	7.2
8.4		36.8	57.9	9.6	4	43.0	6.0	11.1		46.8	36.0	8.9		42.9	21.0
9.8	48	23.0	10.0	9.1		44.0	6.3	10.5		54.3	50.0	9.4		58.9	54.8
9.6		37.5	6.6	8.3		53.0	24.8	11.0	24	14.3	22.4	10.2	47	1.4	56.1
10.4	49	7.0	13.3	10.0	5	11.0	21.5	10.3		24.8	59.0	9.0		8.4	59.2
10.2		14.0	47.8	9.4		13.3	0.6	8.6		36.8	53.2	8.6		18.4	23.4
10.4		46.6	57.9	10.0		23.5	39.0	9.9	25	5.8	45.6	10.6		38.9	58.2
8.3		50.5	49.1	10.4		33.0	43.0	10.0		33.3	25.0	9.2	48	6.4	52.9
8.1	50	11.5	13.4	9.6		46.5	30.6	8.8		34.3	34.0	9.6		41.9	52.6
10.4		23.5	11.0	9.8		51.8	50.1	11.0		37.8	35.6	9.0	49	11.9	31.7
10.4		23.5	42.0												
9.8		27.5	33.5	6.8		52.5	7.7	11.2	26	5.8	7.8	9.2		21.9	37.7
9.6		42.5	48.2	8.6		53.5	58.3	7.6		10.8	26.3	10.2		27.9	58.9
10.4	51	0.9	1.1	8.8	6	35.0	50.9	11.1		13.8	41.6	7.7		45.9	48.2
10.4		2.0	18.6	10.0		41.5	14.8	11.2		21.3	25.0	8.8	50	32.9	22.4
9.0		13.0	43.3	9.8		52.0	59.4	8.0		50.3	27.1	9.8		36.4	17.4
9.8		38.5	56.9	10.4		53.8	33.6	9.6	27	22.8	5.2	9.4		43.4	17.0
10.0		47.5	58.6	9.8	7	2.5	23.6	9.8		27.3	21.2	10.0	9.8	51	9.2
10.4	52	27.2	51.0	9.8		14.8	5.9	9.9		44.8	18.2	7.2	52	24.4	29.7
10.0		28.5	20.8	10.4		19.0	49.9	8.5		46.8	10.0	10.2		43.7	38.0
8.6	53	16.5	48.2	9.8		47.1	33.7	10.6		54.8	33.8	8.8		52.4	1.9
10.4		22.5	18.9	10.0	8	1.1	6.1	10.6	28	57.3	14.3	10.0	53	40.9	7.2
9.1		24.5	23.8	9.6		2.1	48.2	8.6	30	6.8	11.2	9.8		54.4	18.6
10.4		25.0	40.1	10.2		18.1	3.7	11.1		52.8	26.2	8.8		57.8	54.7
8.6		29.5	42.8	8.0		56.6	47.3	10.5		54.8	29.1	8.2	54	3.9	55.5
9.0		41.5	39.4	10.4	9	11.6	17.1	9.4		57.3	37.0	7.8		20.8	29.1
9.6		47.5	15.5	10.4		27.6	28.0	11.2		57.8	25.0	8.5		36.4	37.1
9.0		53.7	11.7	9.4	10	52.8	22.9	7.6	31	14.2	27.2	8.9		38.9	55.9
9.6	54	1.7	50.7	11.2	11	20.3	27.6	11.0		21.1	33.5	10.2		48.7	47.3
8.0		4.7	17.3	10.4		40.3	45.0	10.5		25.8	7.2	10.0	55	3.4	31.3
10.4		32.2	35.0	11.2	13	1.8	56.5	11.2		32.3	31.2	10.0		29.9	45.1
10.4		46.7	50.0	10.6		2.8	29.5	10.2		44.2	19.4	10.0		30.8	19.8
10.0	55	19.4	59.2	8.1		46.8	15.6	11.0	32	0.8	17.5	10.0		57	17.7
10.0		19.7	42.1	10.6†	14	11.3	59.6	9.8		33	6.6	9.1		58	2.2
10.4		28.7	44.8	10.5	15	17.8	19.6	8.1		34	49.6	7.8		59	1.7
7.2		42.8	13.2	8.3		41.8	37.8	8.8		56.5	2.2	9.0	0	1.7	39.4
9.6		44.2	5.1	11.2	16	13.8	42.1	10.6		35	2.6	7.6		33.2	40.0
9.0	56	6.7	23.8	8.6	17	4.3	38.6	9.6		5.6	54.6	7.3		36.2	45.3
10.2		24.2	51.1	10.5		21.3	32.3	9.4		29.1	3.5	9.8		46.2	40.0
8.5		54.5	1.6	11.2		27.8	47.3	10.2	36	24.1	31.1	9.6		56.2	7.0
9.8		57	34.8	11.2		49.1	47.0	9.6		35.6	31.9	6.8	2	52.7	54.3
25pr.	+1	30.2	+5.6		+1	29.3	+6.1		+1	28.1	+6.5		+1	26.6	+7.0

7561-7608.				7609-7656.				7657-7703.				7704-7750.						
mag.	22 ^h .	-28°		mag.	22 ^h .	-28°		mag.	22 ^h .	-23 ^h .	-28°		mag.	23 ^h .	-28°			
8.4	3	3.2	17.0	8.5 Gam	8.2	27	31.9	2.2	8.2 GWa	9.6	54	13.8	5.9	8.0 Gam	10.0	34	16.5	0.2
10.0		13.7	52.3	9.5	9.8		42.9	10.5	9.0 G	8.4		35.3	40.8		9.3		43.0	5.7
10.0†	5	52.2	58.9		8.8	28	7.4	7.0	8.4 GWam	9.6		43.8	50.5		8.2	35	44.0	19.8
8.8	6	3.6	54.4	8.5 a	8.8		7.4	12.8	8.7 GW	9.4		48.3	42.6		10.0†	36	0.2	47.3
8.4		34.1	4.6	8.5 Gam	9.8		32.4	9.9	9.0 a	8.6	55	22.8	1.4	-	8.1		3.5	52.5
5.4	7	13.6	23.0	5.5 GSπβ	8.2		35.9	23.6	8.0 G	9.4	57	9.2	10.2		9.9		51.0	14.7
9.4		38.6	19.4	9.5 Mm	10.3		40.9	46.4		8.6		19.7	54.6	8.0 Gam	10.0		56.0	41.0
9.4	8	46.1	35.2	9.5	10.0		41.9	24.2	9.5 G	9.8	58	3.2	57.9		9.2	37	23.5	44.1
7.9	10	13.6	0.8	7.2 GSal	9.0	29	17.2	57.5	9.0 Mm	10.3	59	42.2	8.0	-	10.0		44.0	17.5
8.4	11	31.0	44.5	8.0 Gaml	10.3	30	24.7	33.9		10.6	0	0.2	25.0		10.2†	38	36.2	53.7
10.0		35.4	46.1		7.8	31	11.7	5.6	8.0 GWLπ	7.0	2	59.2	45.9	6.0 GSlβ	8.2	39	7.0	12.7
10.0		55.5	8.3		10.0		35.2	44.5		9.6	3	56.9	31.4	-	9.6	40	26.0	1.1
8.2	12	16.0	50.0	7.0 GSal	8.4		53.2	55.2	GWM	8.4	4	5.9	42.9	Gam	10.0		42.5	34.1
9.1		29.0	47.9	9.2	8.8	32	2.2	13.0	8.0 Wa	9.6		55.4	12.8		9.9	41	40.5	6.9
8.3		45.7	1.0	7.8 Gam	7.1		46.7	58.5	7.0 GStl	9.6	5	24.4	21.5	9.5 G-	8.6		50.0	35.3
8.8	13	37.0	51.5	9.0 am	7.1		49.3	59.9	7.7 GStl	9.6		55.8	59.3		9.3	42	16.0	14.6
10.0		38.9	32.8		8.6	33	13.9	18.8	9.5 -	9.4	6	25.9	42.5		8.5		20.0	48.7
9.6	14	59.9	56.1		8.8	34	18.4	41.0		9.4	7	58.9	16.0		5.0		24.5	49.3
8.5	15	32.7	3.0	8.5 Gam	8.2	35	23.1	2.2	8.0 aml	9.3	8	44.9	11.0	-	9.4		38.5	41.1
9.2		49.0	12.8	9.0 G	10.3		39.4	16.0		9.0	9	4.4	29.4		7.0		50.0	32.7
8.2		53.0	11.0	8.3 GMam	8.2		56.4	32.2	8.0 Gbm	8.9	11	8.9	54.6		10.0	43	3.5	32.0
8.8	16	28.0	31.0	8.0 Gam	7.5	36	14.9	48.3	8.0 Gam	9.4	13	2.9	44.2		9.3		12.5	30.0
10.0		45.0	47.8		9.8	39	9.2	3.1	9.5 -	9.6		34.1	49.0		10.0	46	46.4	57.9
9.4		47.0	25.9	9.0	8.1	40	31.3	2.5	7.8 Gaml	8.7	14	14.2	21.5	8.0 Gam	9.8		54.7	1.1
10.0	17	3.3	18.5		10.0		44.4	1.6	8.5 Gam	9.1		26.2	48.6	10.0	10.2†	47	24.8	55.4
9.8		7.8	38.0		7.4	41	36.0	13.1	7.0 GSal	9.3		35.7	29.9	-	10.0		49.9	26.0
8.8		57.8	47.1		10.2	44	12.7	36.0		9.2	15	59.7	9.0	-	9.7	49	3.9	8.1
7.8	19	9.3	38.8	7.5 GSbl	10.0	45	13.2	44.8		9.6	17	1.7	33.1		10.0	50	28.9	14.3
9.1		24.0	59.2	8.9 GW=	9.3		26.2	49.7	9.0 M	9.2		5.7	53.2		10.0		33.9	37.2
8.3	20	21.3	40.1	9.0 am	8.6		36.2	3.0	9.0 am	9.2		47.7	54.9		10.0		44.2	58.1
9.2	21	3.2	53.1	9.0	9.8	46	30.7	53.0		9.3	18	3.2	24.5	8.5 M-m	8.4	51	2.9	44.1
9.8		27.7	50.2	10.0	10.6		46.2	13.5		7.7		4.2	2.3	8.0 Gal	10.2†		33.8	50.7
9.2	22	36.2	13.5		9.8	47	16.2	57.1		9.4		33.2	24.5	9.0 G	8.5		35.9	41.7
10.3		36.7	48.4		10.6		57.2	21.2		7.4	19	33.7	6.8	7.0 GSal	10.0		39.3	0.5
8.8		53.2	28.7	8.5 G	9.3	48	4.2	30.8	9.0 -m	8.3	20	40.2	43.9	Ga	10.0		44.9	37.7
9.2	24	5.9	0.1		7.4	49	11.7	41.2	am	9.6	22	18.1	42.7		9.8	52	19.9	51.6
9.6		58.2	46.3		10.2		51.5	33.3		7.5		28.6	57.2	8.2 Gaml	8.0		24.3	28.2
9.5	25	33.9	14.2		9.8	50	3.0	16.2	-	8.1		39.1	17.0	8.0 Gam	10.0		29.3	55.0
8.6		35.9	21.2	8.0 GWam	9.2		21.5	25.6	-	8.4	24	36.3	3.9	8.5 Ga	10.0		53	29.6
8.4	26	25.9	47.4	8.5 GMm	7.6		53.5	38.0	8.0 Gam	10.0	25	48.5	51.8		9.2		31.3	24.1
10.3		30.9	9.4		9.4	51	9.0	2.2	-	10.0	27	17.4	41.2		8.4	54	19.3	36.2
9.0		35.9	36.9		9.6		24.5	40.0		10.0		55.5	22.8		9.6		54.3	14.2
9.5		46.9	5.9	W	8.6		50.0	58.4	8.8 am	9.3	28	9.5	6.5	G=	10.0		55	9.3
10.3		52.9	46.6		7.8		50.5	49.1	8.2 Gam	8.0		16.0	24.0	8.0 M=m	9.4		17.3	54.8
9.0	27	1.4	57.2		10.6	52	54.3	54.3		7.2	29	4.5	10.6	7.0 GSal	9.6		31.3	49.6
10.2		2.9	47.2		7.8	53	24.3	35.5	8.5 =m	9.9	32	6.5	44.5		10.0		56	52.8
9.2		10.9	17.7	8.8 GMam	10.6		27.8	30.7		8.2		16.3	57.6	8.5 am	10.0		58	27.3
8.4		22.9	11.4	8.3 GMam	9.3		46.8	32.4	9.0 -									
25pr.	+1	24.7	+7.5			+1	22.9	+7.9			+1	20.4	+8.2			+1	17.8	+8.3

ZONE — 29°.

1-30.			31-60.			61-90.			91-120.		
mag.	oh.	-29°	mag.	oh.	-29°	mag.	oh.	-29°	mag.	oh.-1 ^h	-29°
m	s		m	s		m	s		m	s	
9.0	I	9.1 26.7	9.4	16 34.0	11.6	9.4	29 52.2	5.9	9.6	50 23.3	20.0
10.3		20.6 37.2	9.8	34.0	18.3	10.2	30 16.2	58.3	10.2	25.3	6.5
8.7		28.6 1.3 9.2 a	10.2	40.5	33.5	9.4	22.7	40.6	10.6	51 39.3	53.0
10.3		40.6 31.3	8.4	17 23.0	21.2	8.2	22.7	32.5 8.0 a	10.6	52 2.3	38.0
10.3		59.1 36.9	7.1	18 3.0	40.3 8.0 GWa	9.4	31 53.7	26.9	10.2	53 28.3	23.6
10.4	2	15.1 0.7	8.4	16.0	6.5 8.8 a	9.2	33 21.7	46.3	10.0	55 9.8	46.2
8.7		41.6 1.7 9.2 a	9.6	21.0	41.9	9.0	58.4	15.4	8.7	14.3	33.4 8.5 a
9.2	3	26.6 55.4	10.2	19 12.0	40.6	10.4	34 6.9	12.1	10.0	46.8	17.8
9.8		39.1 10.7	9.2	19.0	50.0 8.5 -	10.4	36 22.4	15.8	10.6	47.3	15.5
9.2		45.6 2.1	8.2	20 16.0	6.2 8.0 G	10.6	40.3	0.7 K	10.4	57 8.3	35.5
10.2	4	33.1 23.1	8.4	53.0	59.4	10.4	37 8.9	8.2	11.0	31.8	19.6
10.4	5	3.1 27.1	7.4	22 1.0	43.8 6.8 GSa	8.9	39 24.4	22.1	10.8	45.3	19.5
9.4		58.6 20.9	6.6	12.2	58.6 7.0 GSB	8.7	56.9	30.6 9.0	10.0	58 2.7	43.9
10.0	6	13.1 7.9	9.8	23.0	46.1 9.0	9.8	40 8.4	21.0	10.8	49.2	43.1
10.3		37.1 55.9	8.2	30.0	35.4 8.2 a	9.0	24.4	5.2	11.0	59 22.2	51.6
8.8	8	3.6 37.6 9.5 a	9.8	23 30.0	21.1	8.7	24.9	14.1 9.0 Ga	11.0	26.2	57.3
9.2		28.1 40.1	9.4	24 6.0	8.8	8.7	41 1.9	49.0 8.8 a	11.0	57.2	33.5
9.4		30.6 40.9	10.2	14.0	4.1 8.5 Ga	6.8	42 34.3	10.6 6.7 GSa	10.6	0 10.7	21.1
8.4		48.6 42.1 8.8 Gb	8.4	25.0	13.6	10.6	34.8	9.3 G	10.2	28.2	42.0
10.4	9	43.6 0.1	9.8	25 59.7	38.9	10.6	49.3	5.9	10.5	46.2	4.4
8.8	10	34.3 25.4	8.2	26 21.2	26.2 8.2 Ga	10.4	43 28.8	54.8	8.6	1 36.4	57.5 9.0 -
10.2	12	2.5 49.4	10.2	21.7	32.3	9.8	44 3.3	41.1 9.0 -	8.2	37.2	22.4 8.5 a
10.2		21.0 32.7	8.7	51.7	45.8 9.5 -	10.6	5.3	10.5 8.0 Ga	9.8	48.2	13.8
9.8		50.0 56.1	8.6	27 1.7	3.9 8.8 Ga	8.2	45 43.3	19.9	10.8	2 17.2	35.8
8.4		56.5 11.0	8.6	24.8	1.2 9.2 a	10.2	46 3.8	26.5	10.8	45.2	19.3
10.2	13	0.5 52.9	9.6	57.7	38.2	10.0	26.8	49.3	10.6	47.2	7.4
10.2	14	49.0 40.6	8.2	28 17.7	32.9 8.2 Ga	8.8	47 34.3	38.3	11.0	56.7	26.1
5.8	15	14.0 40.2 5.5 GSlπ	9.4	33.2	28.1	8.7	45.8	13.4 8.5 a	8.8	3 53.2	26.2 9.0 -
9.3		26.5 8.9	8.2	29 5.2	53.8 8.3 a	9.0	51.8	29.0 8.0 Ga	10.8	4 13.2	55.0
9.2		43.5 4.4	10.2	29.2	10.8	10.0	48 3.3	25.8	10.6	5 0.2	2.0
25 pr.		+ 1 16.2 + 8.4		+ 1 14.9 + 8.3			+ 1 13.5 + 8.2			+ 1 12.0 + 8.1	

121-180.				181-240.				241-300.				301-360.			
mag.	h.	m	s	mag.	h.	m	s	mag.	h.	m	s	mag.	h.	m	s
10.4	5	29.2	46.4	9.6	32	36.8	18.2	9.4	5	39.7	45.9	7.4	31	39.2	32.2
10.4		31.2	21.7	8.9		37.8	12.0	9.8	6	2.2	13.3	8.3	32	14.8	52.0
11.0		58.2	22.6	7.2	33	31.8	39.4	8.6		28.2	32.7	9.8		26.3	29.1
10.6	6	29.2	28.5	8.6	36	41.9	12.7	8.8		39.2	34.9	9.8		50.8	6.2
9.6		32.2	42.8	10.1	38	29.9	48.6	9.2		43.2	49.9	10.0		52.2	58.2
8.6		43.2	50.6	7.8	39	12.9	21.1	9.0	7	51.7	16.5	9.2		58.9	19.0
11.0	7	59.2	2.0	10.0		17.4	38.9	8.5		51.7	33.3	10.6	33	56.5	6.6
10.4	8	0.2	54.2	8.1		20.4	10.2	10.2	8	3.7	43.0	9.9		35.0	45.0
10.6		6.2	44.1	9.4	40	30.4	46.1	9.2	9	2.4	9.5	9.1		36.1	4.9
9.6		23.2	13.8	8.7	41	39.6	25.0	9.9		11.4	56.5	10.2		53.0	31.4
10.2	9	25.2	34.6	8.2		43.1	18.5	8.8		26.2	46.2	8.4		55.5	6.5
9.0	10	31.2	52.4	9.2		49.1	32.3	10.2		26.2	54.3	10.0	37	10.0	29.8
10.8		33.2	53.6	9.4	43	0.1	53.6	9.4	10	13.9	14.4	10.4		37.2	33.9
9.2	12	34.7	56.1	10.0		25.1	12.5	8.3		33.4	10.0	10.4	38	12.2	37.6
9.6		37.2	4.4	10.0		35.1	50.0	10.2	12	13.1	6.6	10.0		20.7	56.1
8.1		37.2	23.4	10.1		42.1	3.1	10.2		23.1	21.4	8.6		23.2	20.2
9.8		58.2	31.5	9.3		53.6	54.3	9.4		50.1	54.0	9.9		58.7	44.2
8.8	13	4.2	50.9	9.8	44	11.6	43.8	9.8	13	28.6	24.0	10.4	39	54.3	46.6
10.6		45.7	31.7	8.1		15.1	39.7	8.3		32.1	30.0	8.8	40	29.7	11.7
9.0		48.2	31.1	8.6		51.1	16.3	9.4	14	59.6	25.5	10.2	42	7.2	8.0
9.8	14	19.7	11.9	10.1	45	31.4	37.7	9.6	15	38.1	18.7	10.2		38.7	7.0
10.2		23.9	4.0	8.7		32.1	12.0	8.0	16	29.1	55.2	9.1		54.0	57.6
7.6		29.9	38.6	9.4		52.9	13.4	8.0	17	40.1	36.6	10.6		56.2	52.8
10.6		45.9	10.4	9.3		58.9	26.0	9.2		46.6	48.6	9.0	43	12.2	3.9
8.6	15	30.9	26.9	9.4	46	23.5	38.8	8.2	18	13.6	48.7	10.6		12.2	35.7
9.7		34.9	14.1	9.6		32.5	11.3	10.2	19	3.6	22.5	10.4		48.7	39.3
10.2		39.9	47.1	10.2		58.5	39.4	9.4		10.5	24.1	8.8		58.2	34.7
11.0	16	16.9	57.5	9.0		59.0	17.1	8.0		13.5	13.0	9.3	44	11.7	39.7
10.0		30.9	46.1	10.2	47	14.5	57.9	8.8		17.0	26.8	10.6		30.5	57.6
8.8		51.9	10.1	10.2		52.5	41.4	9.0	20	1.5	33.0	10.0	45	39.0	25.8
10.5	17	0.9	59.4	10.2	48	33.0	54.7	9.0		18.0	19.4	8.6		39.0	31.0
10.6	18	2.9	24.0	9.2	49	10.0	44.0	8.2		51.0	42.3	10.4	46	57.0	15.8
9.4		17.9	35.8	7.8	50	10.0	43.6	10.2	21	1.0	3.2	10.4	47	9.0	12.9
8.2		31.9	9.2	8.6		54.0	29.0	9.0		10.5	39.1	10.2		13.5	16.9
9.7		37.9	24.9	8.2	52	12.5	27.4	9.0		26.0	59.2	9.4		49.5	8.6
9.8		50.4	1.0	8.2		24.5	25.4	9.8		28.0	46.1	10.6	48	3.7	1.3
9.7		51.9	13.5	10.2		34.5	50.6	8.4	22	26.5	21.4	9.4	49	1.2	21.4
8.0	19	35.9	25.9	8.6	54	22.5	40.0	10.0		28.5	46.0	9.9		51.7	20.2
10.2		42.9	8.8	9.6	55	36.5	36.2	10.0	23	8.0	50.0	10.6	50	42.7	42.7
9.6	20	4.9	18.9	9.6		56.6	5.5	9.4		24.25	21.1	9.0		54.2	4.8
10.8		29.4	32.5	9.9	58	6.0	56.7	9.4	25	0.5	13.1	8.0		59.7	27.2
8.2	21	57.9	32.7	9.8		9.0	7.0	8.2		2.2	11.6	7.1	53	46.7	24.3
9.4	22	42.6	14.5	9.8		33.5	47.1	9.0		36.2	4.3	9.8	55	6.7	11.4
9.8		46.8	19.0	9.9		33.5	26.2	8.0		36.7	20.3	10.4		51.7	21.2
10.1	24	12.8	14.7	4.1		53.5	53.8	10.2	26	19.2	29.9	10.4	56	32.7	35.7
8.0		23.8	30.6	9.4		56.5	9.4	9.4	27	55.7	7.1	9.3		53.7	13.5
9.2		36.8	54.8	8.0	59	39.0	9.4	9.6	28	5.2	25.9	10.2	57	52.2	16.9
10.1	25	14.8	9.6	9.8	0	12.5	23.5	9.6		15.2	22.8	9.6	58	3.2	32.3
9.3		40.3	42.6	8.8		34.5	49.3	8.3		26.7	58.6	9.0		28.7	43.9
9.3	26	42.3	0.8	9.4	1	24.5	17.4	10.4		54.7	17.7	10.0	59	20.0	57.4
8.7	27	16.3	44.0	8.2		50.0	29.4	9.8	29	8.2	39.3	9.6†		44.5	2.1
10.1		42.3	24.4	8.8		59.8	55.7	7.4		44.2	14.7	10.0	0	6.8	26.7
9.8	28	11.8	12.1	8.8	2	36.3	19.7	9.8		57.2	30.6	10.0		25.0	36.8
8.8		16.3	56.8	9.4		57.8	8.7	9.4		58.2	34.4	9.4		35.5	25.1
7.6		17.3	25.5	10.2	3	17.3	5.1	9.8	30	2.2	45.3	8.8		51.5	17.7
8.2		46.3	16.8	9.4		36.8	44.8	10.4		13.2	6.5	10.2	1	48.5	29.0
9.8	29	8.8	28.7	9.0		46.3	31.7	10.0		24.7	3.3	9.8	4	36.5	30.2
10.1	30	53.3	1.3	8.5	4	7.3	35.9	10.0		39.7	42.5	8.8	5	38.5	54.9
9.8		31.5	28.5	8.6		9.8	11.7	8.6		40.7	28.3	10.0	6	16.5	33.3
9.8	32	5.8	25.4	10.2	5	35.7	30.1	10.2		52.7	40.6	7.6		33.5	37.9
25pr.	+ 1	10.5	+ 7.9	+ 1	8.2	+ 7.4		+ 1	6.0	+ 6.8		+ 1	4.2	+ 6.3	

361—420.				421—480.				481—540.				541—600.						
mag.	3 ^h .	—29°		mag.	3 ^h .	—29°		mag.	3 ^h —4 ^h .	—29°		mag.	4 ^h .	—29°				
	m	s		m	s			m	s			m	s					
9.6	6	44.8	38.9	9.2	9.8	31	47.6	47.8	10.1	54	59.8	9.8	10.2	11	31.2	28.0		
4.2		46.5	28.5	3.8	10.0		47.6	54.1	10.2	55	8.9	2.2	8.5		45.2	35.8	9.0 G	
8.8		54.0	33.9	9.0	10.4	32	17.6	43.6	8.5		21.3	35.4	9.0	9.8		53.7	54.2	8.2 Gb-1
8.0	7	14.5	53.6		9.8	33	10.6	5.5	10.0		42.3	7.5	8.0		55.2	12.2		
7.9		36.5	14.6	7.8	9.4		51.1	43.1	10.2		57.4	0.0	9.2	12	39.7	41.3		
7.6	8	8.5	26.3	8.0	8.4	34	24.6	30.4	9.1	56	36.3	31.6	a	10.4	13	0.2	14.1	
9.2		20.0	5.9	9.0	9.8	35	27.6	17.1	9.8		51.8	53.0		9.2		31.2	15.1	
10.2		58.8	43.9		9.8	36	6.1	30.0	9.3	57	30.6	1.0	9.5	10.4		41.2	30.3	
9.6	10	19.0	29.6	9.5	9.4		32.1	14.1	9.6		35.3	14.1		9.5		44.7	32.1	
10.4		32.8	44.8		8.6		41.1	11.4	9.2		42.3	58.4		9.0		45.2	12.2	
8.0		48.0	5.8	8.5	10.3	37	3.6	48.0	10.0	58	36.3	43.0		9.8		49.2	3.0	
10.0	12	7.0	1.8		10.3		12.1	45.8	9.7		54.3	13.3		8.2	14	32.7	5.4	7.9 GWal
10.0		14.0	15.6	9.0	10.0		42.6	2.6	10.0	59	20.3	24.0		10.4	16	1.6	22.5	
10.0		38.5	51.6		9.8	38	4.6	54.5	8.8		23.3	51.4		9.0		30.9	13.0	9.0 a
6.0		46.5	15.2	6.0	10.3		12.6	52.9	9.6		39.8	37.9		9.2		35.9	51.2	9.5
10.4	13	0.5	44.2		9.4		14.1	46.3	a	9.4		46.3	59.3	10.4		44.9	4.2	
10.0		16.5	30.0		9.4		19.6	49.2	9.6		48.3	7.4		10.4		49.9	47.4	
8.2		27.1	58.4	8.7	9.4		22.6	54.1	9.4		48.3	15.8		10.4	17	15.9	28.6	
9.8	14	33.6	46.1		9.8		39.6	55.4	9.9		0	26.3	43.4	8.6		18.9	39.4	9.0
8.2		44.1	26.7	7.5	9.4		40.1	41.7	9.8		38.8	29.5	9.5	9.0		25.9	27.2	
8.2		46.1	14.1	8.2	7.3		49.6	1.5	10.2	58.3	10.3		10.4		53.8	2.2		
7.6		46.6	18.3	7.2	10.0	39	53.1	58.2	8.4	2	1.3	8.9	8.5	8.8	18	43.3	3.2	8.8 Ga
9.8	15	45.1	52.4		10.0	40	5.1	18.6	8.8		15.3	1.7	8.8	9.6		46.4	5.9	
9.2	16	3.6	19.1	9.0	10.3		41.6	29.7	9.8	3	21.3	28.7		10.1	19	26.9	21.8	
9.8		11.6	51.5		10.2	41	14.6	2.1	10.2		22.3	21.3		8.4		32.5	30.2	8.8 G-
10.0		46.6	56.1		6.0		21.6	43.6	10.2		34.8	21.1		9.0		42.0	7.7	9.1 Ga
9.4	17	48.6	28.2		10.4		24.6	7.7	9.8		38.3	38.3	9.5	10.0	20	6.0	31.1	
8.6		55.6	48.7	9.0	9.8		26.1	28.4	10.2		38.8	48.6		8.9		7.5	42.1	9.0
8.2	18	33.1	34.1	8.8	9.2		38.1	35.9	9.9		54.7	58.8		8.7		12.0	11.4	8.8 a
9.4		41.6	27.9	9.2	10.3		40.1	0.4	7.9		54.8	14.3	7.8	10.2		20.5	37.0	
9.4	19	52.6	5.1		7.4	42	17.1	51.2	10.0	4	0.3	34.7		10.0		37.0	44.0	
10.0	21	6.8	58.5	G	10.4		30.6	44.8	9.9		2.3	57.8		8.6		48.9	2.3	8.8 a
8.9		12.3	59.1	9.0	10.0		49.1	33.3	9.0		14.3	7.2	8.1	10.2		52.0	53.1	
9.4	23	2.3	51.8	8.8	9.2	43	40.6	37.7	9.6		45.7	2.0		9.8		55.7	27.5	
10.4		16.8	34.6		9.4	44	0.6	8.4	9.9		59.8	15.0		9.3	21	19.5	3.9	
9.4		53.8	25.4	8.3	10.4		40.1	14.1	10.2	5	25.3	55.1		10.4		26.7	6.0	
10.3	24	37.8	44.6		10.4		42.8	0.5	9.9		33.8	23.8		8.8		39.0	14.0	9.0 Ga
9.4		40.3	49.5	a	10.4	45	23.7	39.7	9.9		39.8	55.2		8.9		54.5	36.9	9.5 G
10.3		51.3	48.4		8.6		54.6	46.8	9.0		52.3	22.8	9.0	8.9	22	7.5	37.1	9.5
9.4	25	46.3	30.1	8.5	9.8	46	1.3	13.3	9.4		55.8	18.8	9.5	8.9		19.5	28.3	9.2
9.8	26	9.8	52.8	9.5	10.2		5.4	38.7	9.6	6	13.3	20.2		10.4		22.0	44.0	
10.2		28.3	5.1		9.6		30.2	56.1	10.0	7	3.0	31.5		8.0		28.5	28.8	8.0 GSa1
8.0		54.3	26.4	8.5	8.2		44.8	12.7	8.5		28.5	25.2	Ga	9.0		57.5	29.5	9.0 a
8.6	27	21.8	6.0	8.8	9.6	47	42.8	48.5	9.6		32.5	7.9		9.2	23	20.0	49.7	
9.8		25.8	35.5		9.4	49	29.3	21.9	10.2		37.5	6.1		10.2	24	9.5	4.2	
8.8		25.8	38.2	9.0	10.2		38.4	36.5	10.2		50.5	48.3		10.1		44.0	35.2	
10.4		53.6	59.3		10.1		42.8	27.7	9.7	8	1.5	31.2		8.2		44.5	18.1	8.0 GSb-
8.5	28	20.6	25.4		8.9		55.8	34.8	9.1		11.5	43.6		7.9		58.8	9.2	7.6 GSb-
9.4		22.8	40.1		9.2		59.8	45.9	9.4		46.0	36.7		10.2		59.0	47.9	
8.8		42.6	38.7	9.0	10.2	50	1.3	31.6	9.6		53.5	30.4		10.2	25	8.3	48.3	
10.3	29	38.1	46.1		10.0	51	17.8	12.4	9.1	9	1.5	23.5	9.0	10.1		8.3	10.9	
9.8		45.1	15.6	9.0	10.2	52	13.8	51.7	10.2		20.2	35.5		9.0		15.3	30.8	
8.6	30	6.1	30.5	8.2	10.2		18.2	8.7	9.2		35.3	59.9		10.0		24.8	30.6	
10.0		8.1	57.7		10.0		19.3	2.3	10.0		40.1	33.7		9.2		39.8	47.3	
9.8		21.1	9.7		9.9	53	59.8	42.9	10.4		10	12.2	44.1	8.9		41.3	33.8	9.0 G
10.0		25.1	45.4		9.0	54	6.8	55.0	8.5		12.2	14.0	8.2	10.4	26	13.3	36.3	
9.2		33.6	7.5	9.2	8.6		22.8	7.9	9.0		13.1	15.6	8.8	7.8		21.3	9.1	7.5 GSbl
9.4		42.8	57.0		10.0		23.8	18.1	9.5		21.2	53.1		9.0		24.3	41.9	9.0
8.2	31	2.1	9.9	8.2	8.6		33.8	41.6	8.4	11	2.2	27.9	9.0	9.2		48.3	35.7	
10.3		37.1	6.1		9.8		59.3	23.6	9.6		12.2	6.3		10.4		49.3	42.6	
25 pr.	+ 1	2.4	+ 5.4			+ 1	1.2	+ 4.7		+ 1	0.2	+ 4.1			+ 0	59.7	+ 3.5	

601-660.				661-720.				721-780.				781-840.			
mag.	4 ^h	-29°		mag.	4 ^h	-29°		mag.	4 ^h -5 ^h	-29°		mag.	5 ^h	-29°	
	m	s		m	s			m	s			m	s		
9.0	27	5.8	56.2	9.2	42	52.6	0.2	10.8	53	30.8	19.6	10.5	4	32.0	11.9
8.0		6.3	4.3	10.4		58.1	23.3	11.0		35.8	18.8	9.2		42.5	22.6
9.3		14.3	29.6	11.0	43	8.6	50.2	8.5		38.3	4.8	8.8		47.0	12.8
10.0†		22.8	1.9	9.9		10.6	3.5	10.6		56.3	27.5	10.4		48.2	59.9
9.8		30.5	58.4	9.6		13.6	2.1	9.9	54	0.8	5.0	10.8		50.5	14.4
9.8		44.5	27.6	9.4		15.6	34.4	9.4		16.3	38.2	9.5		55.5	10.6
9.6		53.5	39.0	11.0		30.6	12.8	10.8		34.3	42.0	10.4	5	21.0	33.6
10.0	28	37.0	42.7	10.8	44	27.6	43.3	9.4		37.3	31.3	10.1		23.5	29.9
8.6	29	5.5	27.9	11.0		52.6	56.8	9.9		40.3	8.6	9.8		27.0	42.4
10.4		34.5	2.3	10.6		52.6	45.8	11.0		54.3	7.2	10.5		27.5	30.4
9.2		45.0	33.6	9.4	45	2.6	16.1	11.0	55	3.3	49.8	10.1		27.5	14.7
10.0		49.5	10.7	11.0		16.6	3.4	8.6		4.3	45.7	10.0		28.5	6.9
8.7	30	17.5	53.8	9.1		33.1	53.6	8.6		4.3	3.4	8.2	6	2.5	54.2
8.4		18.5	36.9	10.4		44.6	54.2	9.4		6.8	19.4	9.0		13.5	46.5
9.2		52.5	16.2	9.4		46.6	20.8	11.0		8.8	43.8	8.1		21.5	44.9
9.4	31	10.5	52.2	8.1		49.4	59.4	9.1		16.3	11.2	8.8		43.5	42.8
10.2		32.5	23.1	10.3	46	3.4	55.3	11.0		26.3	20.8	11.0	7	20.5	36.5
8.2	32	4.5	12.4	10.8		38.4	1.5	10.6		32.3	23.0	9.4		24.5	36.0
8.7		11.0	32.9	10.8		52.4	25.0	9.1		32.3	13.3	10.1		40.0	23.6
10.1		49.0	51.9	11.0		54.5	28.0	10.2	56	24.3	11.8	9.2	8	8.5	45.7
10.4	33	27.6	10.0	8.4	47	25.4	38.4	11.0		30.8	25.1	9.8		18.5	46.5
11.0	34	37.1	9.9	9.9		27.4	6.5	9.6		36.7	56.3	8.4		19.5	24.5
10.6		53.8	33.6	9.9		32.9	6.9	10.2		48.3	12.7	9.0		26.5	9.3
9.4	35	16.3	56.0	10.2		46.0	57.0	10.3		55.3	6.8	10.2		50.0	39.8
10.8		30.3	31.5	9.7	48	3.9	42.7	9.8	57	7.8	31.6	9.3		53.5	26.5
9.1		32.8	49.0	9.0		16.4	54.4	9.9		24.6	0.0	10.4		56.5	34.4
9.1		32.8	49.2	10.3		18.4	42.8	9.6		27.3	45.9	10.6	9	5.5	13.0
9.8		58.3	14.8	9.2		31.9	5.0	9.9		38.6	9.8	10.6		24.0	58.2
8.2	36	2.8	37.5	10.3		45.9	17.3	10.8	58	2.8	21.5	9.7		32.0	57.8
9.1		22.3	54.6	8.8		53.4	11.2	8.6		3.0	58.9	10.0		36.5	8.1
11.0		28.6	1.0	11.0		53.9	54.0	10.8		8.3	0.2	10.0	10	3.2	47.3
8.6		36.3	17.6	9.2	49	8.9	43.7	10.6		10.3	42.4	9.7		5.2	20.0
11.0		50.3	53.7	11.0		14.4	54.3	10.8		15.8	18.9	9.5		14.2	1.0
11.0		56.1	23.8	8.4		44.9	5.2	8.8		27.1	5.8	9.6		18.7	23.5
10.6		58.3	42.9	9.0		45.4	9.7	8.8		36.8	5.3	8.0		30.7	54.0
10.6	37	0.8	1.5	9.4		45.9	14.8	9.2		43.1	8.7	10.4		38.2	17.9
10.4		4.3	46.1	9.8		46.4	8.0	8.8	59	7.1	59.4	7.9		41.2	39.2
8.2		8.8	52.4	9.0		50.4	13.4	10.1		16.6	57.5	9.0		52.2	55.2
8.8		25.8	56.8	9.0		56.4	45.7	10.0		20.9	55.1	10.8	11	10.2	45.9
9.9		30.6	57.2	10.3	50	2.9	44.0	10.6		43.9	8.4	8.6		14.2	53.2
10.8		55.6	23.5	11.0		6.5	27.4	10.0		52.9	47.8	9.4		15.2	27.2
11.0	38	14.1	40.2	10.4		38.8	2.3	10.1		56.9	37.0	7.9		26.2	34.4
9.9		47.6	8.5	10.4		39.9	4.0	10.0	0	0.4	45.8	9.6		26.7	44.6
10.8		56.6	30.2	9.7		46.4	25.5	9.0		6.9	12.3	10.8		33.2	23.5
10.6	39	12.6	56.4	10.4		46.9	43.0	10.5		50.6	59.2	9.2	12	4.7	8.0
9.7		39.6	3.2	10.8		53.4	42.3	10.6	1	7.4	19.0	9.8		32.9	1.7
9.6		45.6	35.9	11.0	51	1.9	30.2	11.0		36.4	45.3	10.0		44.2	14.5
10.3		48.1	37.8	10.6		6.4	54.6	10.5		50.4	15.8	10.4	13	6.7	51.1
9.2	40	56.6	33.9	9.1		15.4	39.7	10.5		56.9	53.8	9.4		16.2	3.8
9.9		58.1	6.0	10.8		18.4	23.5	9.4	2	4.9	46.1	8.4		22.7	42.5
9.4	41	3.6	1.0	11.0		26.5	28.4	9.7		26.9	52.8	9.0		27.2	34.3
8.4		8.1	17.4	11.0		45.9	18.5	9.7		29.5	20.8	10.6		37.2	7.8
11.0		40.6	11.2	9.9	52	33.0	57.7	11.0		42.5	39.6	7.7		52.4	0.3
11.0		42.6	44.9	9.0		34.9	21.3	8.4		44.5	8.6	10.5	14	12.2	43.0
9.0	42	1.6	30.9	10.6		42.0	57.9	10.5	3	12.5	55.9	10.8		46.2	39.6
7.8		4.1	38.0	9.4		43.4	42.9	9.3		23.5	20.9	10.8	15	0.5	56.7
10.6		6.6	49.2	10.0	53	0.9	58.2	9.4		42.5	31.5	10.6		4.7	24.4
7.8		7.9	59.2	9.9		16.4	11.8	8.8		49.5	3.7	10.4		6.2	49.4
10.8		41.6	50.9	10.0		23.5	3.9	10.4	4	20.8	0.9	8.8		13.2	49.2
10.4		44.6	23.4	10.6		30.8	41.1	8.6		30.5	27.4	8.6		33.7	56.7
25pr.	+ 0 59.1 + 3.0			+ 0 58.8 + 2.5			+ 0 58.6 + 2.2			+ 0 58.4 + 1.8					

841—900.				901—960.				961—1020.				1021—1080.			
mag.	5 ^h	—29°		mag.	5 ^h	—29°		mag.	5 ^h	—29°		mag.	5 ^h	—29°	
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''
10.0	15	43.0	59.8	10.5	26	29.1	12.4	10.0	37	32.6	22.0	10.4	45	58.1	6.3
9.0		46.2	51.2	10.5		36.4	40.5	10.4		55.6	45.6	8.8		58.4	8.3
10.6		49.7	37.3	8.3		44.1	45.0 a	9.4		56.6	22.0 G	9.6	46	0.4	12.3
7.2		53.2	20.0	9.0		59.6	7.4	8.3	38	2.1	23.3	10.4		7.6	57.5
9.0		59.7	17.0	10.4	27	2.4	56.8	9.8		11.3	59.8	10.4		34.1	37.8
10.8	16	10.2	17.0	9.0		13.1	30.8 a	10.0		48.6	55.4	9.1		41.7	36.1
8.8		13.0	19.6	10.4		16.4	26.0	10.0	39	41.1	3.2	9.1		53.1	1.1
9.8		21.0	44.4	10.0		28.6	9.4	10.2		42.1	6.2	10.0		56.7	51.6
10.5		43.5	30.2	10.0		44.6	7.1	9.0		46.6	30.6	10.2		59.7	33.5
9.5	17	3.0	54.4	9.4	28	11.2	57.9	9.8		46.6	35.5	10.4	47	6.2	54.9
10.6		7.0	16.3	10.0		16.0	32.1	8.3		51.4	58.0	7.9	10.7	28.8	6.2
9.7		10.5	52.8	9.0		34.5	43.7 =	10.0	40	0.3	0.0	10.0		25.7	58.4
10.8		18.3	2.4	9.2		37.5	31.5 -	8.8		2.1	53.4	9.7		32.7	12.5
8.8		42.0	50.4	10.0		49.0	56.7	9.4		2.6	14.2	9.0		33.2	20.6
9.0		58.0	14.6	9.8		50.5	14.7	9.4		10.6	49.2	10.4		35.7	39.0
10.4	18	14.5	28.5	9.0		56.5	5.3	10.2		17.6	15.9	8.8		36.7	8.8
10.6		25.5	44.8	10.5	29	0.0	29.3	9.5		18.6	35.4 -	10.0		39.7	54.7
8.6		42.0	38.0	6.6		3.5	56.3	8.7		31.4	57.8	9.0	48	1.2	3.8
9.2		54.5	26.4	9.0		9.5	48.1	9.8		34.6	24.2	9.4		18.7	38.1
9.7	19	29.0	3.4	9.4		32.5	40.6	10.2		42.9	12.4	10.4		20.6	44.2
9.0		44.0	24.2	9.4		33.5	16.1	10.4		43.6	11.2	9.0		27.2	46.7
9.0		44.0	5.8	10.2		50.0	26.5	10.4		49.4	0.8	9.1		48.7	14.6
10.8		47.0	33.8	10.4	30	4.5	52.7	9.6		50.4	49.1	9.2		55.7	2.0
9.0		49.5	5.3	9.8		11.3	59.2	10.0		58.4	23.8	9.4	49	4.7	1.4
9.7		59.0	36.4	9.8		18.1	21.9	8.3	41	1.9	8.5	9.2		11.7	47.0
10.8	20	17.0	13.6	10.0		33.6	47.0	9.4		10.9	47.1	8.6		17.7	7.7
10.4		28.0	17.4	10.4		55.1	54.3	10.0		11.4	7.6	10.4		22.7	40.8
9.3		56.0	14.0	9.2		55.1	10.2	10.2		28.0	19.1	7.3		23.7	10.3
10.1		57.5	54.0	10.4	31	12.1	37.6	9.2		34.0	3.5	9.9		43.7	49.8
10.2	21	1.5	50.5	9.8		16.6	33.2	10.4		41.0	13.8	9.4		53.2	13.7
8.8		7.8	23.5	10.0		52.6	7.1	9.5		54.0	58.7	9.1	50	14.2	6.3
10.4		8.0	28.8	10.5	32	35.5	51.1	9.6	42	1.5	11.0	8.8		17.7	44.1
10.1		9.8	11.9	8.3		59.0	0.8	10.0		4.5	27.2	10.4		33.4	24.2
10.2		17.8	46.0	10.5	33	0.6	28.1	9.8		6.0	4.4	8.2		48.4	9.4
11.0		33.2	16.9	10.0		9.0	0.2	9.4		10.5	29.3	8.0		48.4	56.3
9.8		33.8	45.2	9.0		28.0	25.6	9.8		10.5	18.4	8.6		50.9	59.3
8.6	22	3.3	10.1	10.2		41.0	24.0	10.2		57.0	38.0	9.9		53.4	47.2
10.2		22.5	40.6	9.5		50.5	15.3	10.2	43	11.0	31.6	8.6	51	8.4	53.2
10.5		26.0	35.6	9.8	34	17.5	54.0	9.5		12.0	36.0	9.7		15.9	54.6
11.0		32.6	11.0	9.8		23.7	2.4	9.4		24.0	51.6	9.4		47.9	33.9
11.0		35.8	9.8	8.3		26.0	46.8	10.4		32.0	30.8	9.4		48.9	42.6
10.5		36.0	35.9	10.0		33.5	32.8	10.2		39.0	25.1	9.8		58.4	16.0
9.6		49.1	21.8	8.6		57.5	42.0	9.6		46.5	44.1	10.0	52	12.4	28.5
10.5		49.1	25.4	9.2	35	3.0	50.5	10.2		56.5	8.9	9.7		22.4	6.1
10.2		53.1	47.7	10.4		8.5	19.4	10.5	44	3.5	30.5	9.0		56.4	11.8
8.3	23	2.1	40.8	10.0		14.0	23.4	9.2		14.6	4.7	8.0	53	23.9	7.4
9.8		18.6	2.1	10.0		15.5	22.1	10.2		20.6	56.5	10.0		25.4	16.2
8.9		34.1	27.8	10.5		18.5	31.8	10.2		22.6	42.0	10.4		30.4	16.5
8.6		39.6	27.2	9.4		21.5	10.0	10.2		24.6	37.5	9.8		58.4	49.7
10.0		42.6	7.4	9.6		35.6	32.8	8.7		34.1	36.0	10.4	54	33.4	47.2
10.0		47.9	56.8	10.4	36	2.6	38.1	9.2		37.1	10.7	10.4	55	2.4	50.6
9.8		51.6	26.8	8.0		3.1	47.2	10.5	45	3.5	23.8	10.4		12.4	30.4
9.5	24	8.6	37.5	9.6		3.6	10.3	9.8		22.4	15.1	8.4		12.4	12.8
9.0		14.1	37.8	9.5		21.6	43.3	10.5		28.6	38.0	9.2		13.9	8.3
9.6		41.6	24.1	10.0		32.6	54.2	10.4		31.1	17.4	10.2		16.4	16.3
10.2	25	5.1	41.3	9.8		53.6	6.2	10.4		34.1	7.9	10.4		21.9	3.2
10.2		35.3	1.2	9.4	37	1.1	9.0	10.5		36.5	17.0	9.7		28.4	18.7
10.4		47.7	59.2	9.4		1.1	5.6	10.4		42.6	16.7	10.0		32.4	17.9
10.2	26	24.1	28.9	10.5		10.1	22.4	8.7		46.6	53.1	10.0		55.4	36.2
10.2		27.4	59.4	10.5		14.1	55.9	8.3		54.1	9.1	9.0	56	9.4	55.8
25pr.		+ 0 58.2	+ 1.4			+ 0 58.0	+ 1.1			+ 0 58.0	+ 0.7			+ 0 57.9	+ 0.4

1081-1140.				1141-1200.				1201-1260.				1261-1320.					
		5h-6h.	-29°			6h.	-29°			6h.	-29°			6h.	-29°		
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s			
10.0	56	32.9	37.4	9.0	5	40.0	18.9	9.0	9.1	13	9.6	48.1	9.0	20	10.0	18.5	
10.4		36.4	33.6	9.0		49.0	45.0	9.5	9.8		17.6	44.6		10.0		12.5	
9.0		40.2	31.0	9.4	6	4.5	15.5		9.4		20.6	8.1	9.0 a	9.6		15.0	
9.0		53.2	52.8	10.4		13.9	18.8		10.2		26.6	18.6		9.8		15.5	
8.8		56.2	25.5	10.4		15.5	36.5		9.6		28.6	9.4		9.8		21.5	
9.7	57	2.2	44.1	9.0		16.0	59.7	9.0 -	10.2		31.6	28.0		9.8		22.0	
9.0		10.2	57.9	9.7		16.0	51.2		10.0		35.6	2.6		10.2		43.0	
10.2		32.7	40.3	10.4		18.0	0.2		9.0		41.1	15.1	9.5	10.0		45.0	
10.4		37.2	22.2	9.2		24.5	8.7	9.5	9.6		41.1	3.5		9.6		49.0	
10.0		48.7	43.5	10.4		30.0	48.8		8.6		42.6	19.1	9.0 Ga	9.8		49.5	
8.6	58	0.2	59.8	10.2		45.8	0.1		10.2		43.6	46.5		7.3		50.9	
10.2		18.7	41.9	10.4	7	14.0	8.0		8.6		56.1	23.1	9.0 a	10.0	21	10.4	
10.0		29.7	39.5	9.2		37.0	25.6	9.0 -	9.6		56.6	10.5		10.0		16.9	
10.4		31.2	38.1	9.9		43.0	5.7		9.2		58.6	21.2	9.5	10.2		24.9	
10.4		40.2	45.5	9.0		57.0	53.0	9.0 G	10.2	14	5.6	35.4		10.2		30.9	
10.4	59	0.2	38.4	9.8		59.0	41.9		10.0		36.6	33.4		8.8		31.9	
9.4		16.7	53.2	10.4	8	16.0	55.5		9.6		2.6	45.2	G	10.0		36.9	
7.6		17.2	19.9	10.4		21.5	50.1		10.0		20.6	15.5		9.4		52.9	
9.2		20.2	30.2	9.0		22.0	24.1	8.5	8.6		25.6	57.9	8.0 GStr	9.0		54.9	
10.4		33.2	23.3	10.0		22.5	46.9		8.4		29.6	33.6	7.8 GW-	9.0		56.4	
9.0		38.2	37.6	10.4		31.7	28.2		9.4		33.1	46.9		9.4		56.9	
9.4		46.2	32.7	6.6		43.7	21.6	7.0 GSA	9.4		33.1	0.6	10.0	10.0		57.9	
9.2		51.2	6.3	9.0		45.7	51.9	8.8 a	9.8		40.1	24.9		9.6	22	2.4	
9.9		52.7	49.5	10.0		48.2	37.5		10.2		41.6	32.4		10.2		18.4	
10.4	0	2.2	58.1	9.7		58.7	40.9		10.2		42.6	17.7		10.2		18.9	
10.0		9.2	10.9	10.0	9	20.7	34.3		10.2		45.0	12.5		10.2		21.9	
9.2		10.7	27.6	10.4		31.7	39.7		9.8		49.0	33.5		10.2		21.9	
10.2		23.2	7.8	9.2		34.3	8.8	Ga	9.8		55.0	46.7		9.6		27.4	
10.4		38.2	15.7	10.0		40.4	4.2		7.9	16	6.0	36.7	7.0 GSA	9.3		31.9	
9.4		47.9	2.4	7.4		41.2	34.1	7.0 GSA	9.8		9.0	6.4		9.2		35.9	
9.4		53.7	33.1	10.2		43.5	18.0		10.2		15.0	33.6		10.2		38.4	
9.9	1	1.2	14.0	10.4		44.7	20.1		10.2		16.0	7.9		10.2	23	0.9	
9.5		3.7	59.1	10.4		48.7	20.7		9.8		22.0	22.8		8.8		4.4	
10.0†		4.7	2.9	9.6		53.7	48.9		10.2		32.7	58.8		9.4		10.9	
9.4		13.2	48.3	10.4		55.2	33.3		8.2		40.5	5.6	7.8 GSB	9.8		13.9	
5.8		16.7	44.8	10.2		55.3	56.7		9.4		51.5	30.2		9.6		18.9	
10.4		27.5	1.0	9.2	10	2.8	27.4	9.2 a	9.3	17	22.0	53.6	9.2	10.2		27.9	
9.4		27.7	3.8	10.2		3.2	0.4		8.4		31.0	47.9	8.5 GSA	10.0		30.4	
9.2		41.2	28.5	7.5		11.8	19.6	7.5 GSB	10.2		31.0	30.4		9.8		43.9	
8.6		47.2	36.1	9.8		25.6	12.5		9.6		34.0	13.0		9.4		44.9	
9.8		54.2	1.8	10.0		29.1	50.5		10.0		34.5	11.1		10.2		45.4	
9.8		56.3	57.9	10.2		49.1	43.1		10.2		42.5	24.8		9.6		45.9	
8.8	2	14.2	6.6	10.2		59.1	7.7		10.0		55.5	47.3		9.0		48.9	
10.4		15.2	27.9	8.2	11	7.6	44.8	6.0 GSet	9.4		58.0	46.1	9.5	10.2		51.9	
9.2		22.2	34.7	10.0		27.6	28.1		10.2		59.0	53.2		9.6		59.9	
10.4		35.2	16.1	9.6		35.8	2.9		9.8	18	1.0	4.5		9.4	24	10.9	
9.8		48.7	38.1	9.4		40.1	24.3		9.8		1.0	7.3		9.1		23.9	
9.2		50.7	23.0	9.4		49.6	36.9		10.2		7.0	22.0		10.2		28.9	
10.0		58.5	24.4	9.1		54.1	35.4		9.2		15.0	12.6		9.6		35.4	
9.2	3	2.0	27.4	9.6	12	5.6	56.7		8.6		37.0	57.2	8.7 a	10.2		38.9	
9.0	+	5.0	23.4	8.8		5.6	16.2	9.0 a	8.2		41.0	47.8	6.8 GSA	8.6		42.9	
10.2		10.5	47.5	8.6		7.6	49.7	8.3 G=	8.7		42.5	12.3	8.5 G=	9.6		54.9	
9.2		32.0	20.1	9.0		11.6	17.7	9.0 Ga	9.2		53.0	19.4		9.6		59.9	
10.0		33.0	52.9	9.2		26.1	33.0		10.0		19	1.5	23.5	10.2	25	2.9	
10.0		36.0	7.8	10.2		28.6	13.8		9.0		8.5	26.5		9.4		10.4	
8.8		55.5	26.2	10.2		35.6	48.1		10.2		35.0	52.9		10.0		18.4	
10.0		57.0	33.3	9.0		39.1	23.6		10.0		41.0	49.8		10.2		40.9	
10.4	5	11.0	21.2	10.2		46.1	48.9		10.0		59.0	51.1		9.0		48.8	
7.4		19.5	47.7	9.3	13	0.6	37.2		10.2	20	2.0	13.8		10.0		49.9	
9.2		20.0	48.7	8.8		9.6	35.7	9.0	9.2		9.5	49.1		10.2	26	54.8	
25pr.	+	0 57.9	0.0		+	0 57.9	-0.4			+	0 58.0	-0.6			+	0 58.0	-0.8

1321—1380.				1381—1440.				1441—1500.				1501—1560.				
mag.	6h.	-29°		mag.	6h.	-29°		mag.	6h.	-29°		mag.	6h.-7h.	-29°		
	m	s	'		m	s	'		m	s	'		m	s	'	
9.8	26	54.8	24.4	9.8	33	3.5	29.4	9.8†	43	20.6	0.9	9.0	51	47.9	34.3	8.5 =
9.8	27	1.8	59.0	9.3		7.5	12.5	8.8		33.7	51.0	9.1	52	11.9	19.0	9.0
8.4		4.8	13.2	10.2		8.5	22.2	8.6		33.7	17.1	8.4		21.9	19.8	8.5 a
10.2		29.8	25.4	9.6		9.5	53.8	9.8		36.7	59.0	9.8		22.4	18.1	
10.2		32.3	55.1	10.0		10.5	26.5	9.8		47.2	33.4	9.8		31.4	25.9	
9.3		33.3	45.8	10.2		15.5	0.9	9.8		48.2	26.4	8.8		34.9	55.5	
9.1		35.3	34.3	9.8		17.0	46.8	9.8		56.7	51.2	8.8		50.9	36.8	
8.8		47.8	29.5	9.8		18.5	36.9	8.2	44	0.2	36.2	9.4	53	9.9	8.6	—
10.0		55.8	45.5	10.2		24.5	2.0	9.4		6.7	5.8	9.1		27.9	28.7	
9.6		56.8	16.0	10.2		27.5	3.7	9.8		21.0	7.9	9.8		33.8	28.0	
9.8	28	11.3	55.9	10.0		30.5	28.8	9.8		23.2	39.2	9.4		43.4	26.7	
9.6		12.8	5.1	9.4		35.5	59.6	9.2		38.4	1.6	9.8	54	32.4	20.1	
8.8		24.8	40.0	10.2		36.0	52.4	9.8		41.4	0.8	7.8		51.9	31.9	8.5 GSa
8.0		36.3	7.1	9.8		40.0	11.5	9.8		41.7	39.1	9.8	55	1.4	3.5	
10.0		39.8	48.0	9.8		51.8	57.6	9.2		54.7	24.7	8.0		3.9	55.0	8.5 Ga
10.2		39.8	59.7	10.2	34	3.5	12.9	9.0	45	2.7	10.3	9.6		6.9	36.2	
10.0		40.3	18.9	9.2		7.6	56.9	8.8		3.7	49.1	9.2		11.8	36.8	
9.0		41.8	31.3	10.0		12.0	17.2	9.8		13.2	12.1	8.0		11.8	54.2	8.0 GSa
9.0		50.8	10.7	8.4		14.6	3.1	9.8		22.2	53.3	8.8		26.3	37.4	
9.8		54.3	7.8	9.8		15.5	50.1	8.6		25.7	14.0	8.6		26.8	14.1	—
9.8		55.8	44.0	10.2		21.5	22.6	9.4		27.2	48.2	9.2		30.4	2.1	
10.0		56.8	23.5	10.2		34.5	4.4	8.0		54.2	18.0	8.5		32.0	58.8	9.5
9.8	29	12.3	49.9	9.8		39.0	42.3	9.0	46	3.7	47.9	9.0		39.8	5.0	
7.5		18.3	31.9	9.8		43.6	55.6	9.8		21.2	47.0	9.1		42.8	3.7	
8.7		21.8	38.5	9.0		58.1	5.3	8.8		21.2	25.9	9.8		48.3	55.9	
9.4		31.8	10.3	9.0		9.1	38.7	9.8		34.2	8.2	9.8		50.3	53.0	
10.0		36.8	32.5	9.0	35	9.1	41.9	8.2		40.2	13.7	9.8		55.3	3.5	
9.4		36.8	45.1	9.1		26.6	47.9	9.0	47	5.2	15.8	9.4	56	10.3	45.0	9.5
9.0		40.8	2.2	9.4		37.1	50.2	8.2		15.2	6.9	9.2		21.8	38.5	
9.0		41.8	37.4	9.2		40.1	37.3	8.8		17.9	33.1	9.8		27.8	42.3	
9.4		46.8	5.0	9.2		47.6	50.6	9.6		18.7	18.3	8.2		31.3	33.0	8.5 G=
10.0		48.8	49.5	9.2	36	56.8	0.8	9.8		24.4	41.1	8.4		43.8	12.3	9.0 —
10.2		55.8	34.2	9.8	37	19.1	26.5	9.8		31.9	59.3	9.8		54.8	40.1	
10.0	30	0.8	37.2	9.8		23.1	26.7	9.0		32.9	6.1	9.8	57	20.6	43.9	
9.0		0.8	13.7	8.6		26.1	56.3	9.8		34.4	42.9	9.2		30.6	29.7	
8.4		5.3	59.8	9.6		59.1	29.2	9.8		41.9	31.1	9.8	58	30.3	40.0	
10.2		20.8	17.9	9.2	38	5.6	33.9	9.8		42.9	21.2	9.8		32.5	37.2	
9.6		31.8	19.3	9.4		12.6	49.0	9.8		46.1	48.1	9.6		39.7	40.2	
9.8		54.8	46.4	7.2		13.6	6.9	8.5		52.4	3.2	9.6		39.8	1.1	
9.3	31	3.5	12.8	9.7†		25.6	2.3	9.8		56.9	23.3	9.6		41.6	51.2	
9.0		5.1	58.0	8.0		40.1	30.5	9.8		59.4	29.0	8.5		56.6	12.2	9.0 G—
10.2		5.8	45.0	9.5†	39	59.1	0.1	9.0	48	11.9	41.5	9.6		56.6	9.2	9.5 G—
9.4		8.5	12.9	9.8	40	2.6	24.0	9.6		21.8	7.7	9.6	59	11.1	28.9	
10.2		14.5	57.4	9.8		22.9	1.4	9.8		43.9	34.9	8.9		45.8	30.9	9.0 —
9.0		19.0	17.6	9.4		25.7	30.7	9.8		45.4	39.3	9.6		47.3	30.2	9.0 —
9.8		24.5	5.9	9.1	41	1.2	12.3	9.8		50.4	39.6	9.6	0	0.8	19.1	
9.3		27.5	11.2	9.2		2.2	57.2	9.8	49	21.4	3.6	8.5		25.5	1.8	8.8 a
9.1		29.5	50.9	9.8		12.7	44.2	9.8		40.4	20.0	9.6		26.8	29.8	
9.6		38.0	38.5	9.0		13.2	8.0	9.8		44.8	47.6	8.6		28.0	0.7	9.5
9.8		38.5	15.9	7.5		25.2	25.7	9.0	50	0.4	43.5	9.1		50.8	37.8	
10.2		42.0	19.8	9.0	42	2.2	3.7	9.8		20.9	54.2	9.2		51.3	44.0	8.5 =
9.0		46.5	5.7	8.0		4.2	28.3	9.0		48.4	31.5	8.8	1	7.8	18.0	
9.8		16.0	37.7	9.8		7.7	2.9	9.0		52.4	47.4	9.1		46.8	59.7	
9.0		16.0	9.9	9.0		32.2	39.5	8.8	51	2.9	57.4	8.8		52.8	57.3	9.5
9.6		26.5	43.8	9.8		33.2	21.2	9.8		17.1	0.4	8.7		53.8	48.5	9.0
10.2		34.0	41.9	9.2		35.9	58.3	9.2		22.9	4.6	8.8		55.3	42.2	9.5
9.2		41.0	55.5	8.5		36.2	14.2	8.8		24.9	24.8	9.6	2	0.3	36.4	9.0
10.2		45.5	34.9	9.8		43.2	45.2	9.0		31.9	32.9	9.6		6.3	46.3	
9.6		55.0	13.3	9.4		56.2	23.1	9.8		40.9	6.8	9.5		10.8	8.4	
9.6		58.5	56.0	8.8	43	20.2	26.0	8.8		43.4	15.1	9.8†		16.3	0.5	
25pr.	+ 0	58.0	- 11	+ 0	58.1	- 1.3		+ 0	58.3	- 1.7		+ 0	58.5	- 2.0		

1561-1620.				1621-1680.				1681-1740.				1741-1800.			
mag.	7 ^h .	-29°		mag.	7 ^h .	-29°		mag.	7 ^h .	-29°		mag.	7 ^h .	-29°	
8.3	2	16.3	20.7	8.4	10	13.1	58.5	9.2	19	11.5	12.2	9.4	23	27.3	29.5
9.4		33.8	13.6	9.6		31.6	59.0	9.4		15.5	2.0	8.7		34.3	4.1
9.2		46.8	7.7	9.6		32.5	31.3	8.8		22.4	53.7	9.0		44.8	35.8
8.4		56.8	14.1	8.6	11	5.5	16.2	8.9		23.9	54.2	8.5 Ga		46.3	28.4
8.6	3	0.8	34.0	9.6		6.7	16.1	8.3		37.9	22.3		10.0	48.3	55.6
9.5		3.6	5.4	8.5		16.2	54.7	9.6		39.2	0.7		8.4	50.8	15.1
9.2		28.8	44.9	8.4		25.7	7.8	9.6		46.6	59.7		10.0	58.7	59.1
8.9		35.3	37.8	9.6		28.7	6.9	9.4		52.4	32.8	G	9.7	24	4.4
9.0		43.3	18.3	9.6		32.7	9.1	9.4		56.4	45.0	G	10.0	5.3	51.8
8.4		46.8	47.8	8.9		37.2	42.9	9.6	20	1.4	27.0		9.5	8.8	8.0
9.6		52.8	9.2	8.9		46.7	9.1	9.6		15.9	43.7		9.8	8.8	28.8
9.6		57.3	33.1	9.6		52.2	7.1	9.4		16.9	44.2		9.4	20.8	55.1
9.6	4	11.3	57.9	8.0	12	5.2	30.3	9.1		24.4	44.6	G	10.0	23.3	9.6
8.7		12.3	6.4	9.6†		11.1	1.4	8.9		26.4	7.2	8.5 a	9.8	23.8	57.1
8.3		18.8	49.1	8.9		19.7	38.7	9.4		32.9	5.6		9.0	26.8	56.2
9.5		41.8	42.8	8.6		46.2	17.2	9.5		32.9	15.4	G	9.0	32.8	9.3
9.2		53.4	57.0	9.2		48.2	32.5	9.6	21	4.7	1.2		9.4	35.8	36.0
9.6		57.3	23.5	9.6		49.7	48.6	9.6		6.3	5.7		10.0	38.3	49.0
9.6		59.8	5.3	9.8†		55.6	0.1	9.6		13.8	56.0		9.4	43.3	12.4
9.6	5	12.8	48.6	8.9		56.2	22.7	9.1		14.8	10.4		8.6	43.8	34.1
9.1		28.8	46.0	9.4	13	13.2	24.8	9.5		15.4	21.5		9.8	47.8	53.4
9.6		31.3	54.7	8.8		16.7	51.5	9.4		16.6	46.0		8.7	50.3	56.0
8.0		32.8	51.1	8.7		19.2	29.2	10.0		27.9	26.3		10.0	53.8	6.8
8.1		35.8	8.7	9.6		19.2	42.0	10.0		27.9	50.9		10.0	53.8	20.5
9.6		40.8	56.3	8.6		23.2	39.4	9.6		29.3	39.2		9.8	10.8	25.8
9.6		42.8	52.2	8.8		23.7	16.4	10.0		32.6	43.9		9.4	18.8	7.4
9.6		43.5	48.3	9.6†		27.6	0.6	9.2		37.6	56.7		9.8	27.8	21.8
8.8		47.0	32.1	9.6		32.1	12.7	10.0		40.4	50.4		9.5	38.3	26.4
8.9	6	18.1	1.9	8.7		37.2	24.3	9.2		47.6	44.1		9.8	40.8	47.8
9.0		23.5	38.4	9.6		40.2	49.7	10.0		47.9	51.4		8.7	46.8	37.8
9.6		26.0	47.4	8.2		43.2	4.2	9.0		55.3	4.0	9.5	9.4	47.8	49.8
9.2		29.0	59.7	9.6		58.7	46.1	10.0		55.9	7.5		10.0	56.3	37.9
8.6		36.5	15.6	8.7	14	6.2	47.1	9.4		56.6	31.2		9.5	56.8	5.0
8.1		48.5	36.0	9.6		23.2	56.7	8.7		57.1	14.1	9.0	9.4	3.8	51.5
9.6†		51.3	1.9	9.1		33.2	6.1	8.6	22	2.6	34.3		9.5	6.8	14.0
9.6		6.5	20.0	9.2		46.2	10.9	9.8		3.8	24.5		10.0	12.3	13.9
9.6	7	11.5	0.9	9.0	15	10.9	59.6	9.6		11.8	21.3		10.0	13.3	3.2
9.6		16.5	22.0	8.2		23.7	6.4	9.4		16.6	14.6		9.3	13.8	30.4
9.6		26.5	47.0	9.6		41.7	7.5	9.8		21.3	40.0		9.3	18.8	52.5
9.6		48.0	7.2	9.6		41.7	35.7	10.0		27.8	29.7		9.7	27.3	53.8
8.4		58.0	42.0	9.1		43.7	29.9	9.5		38.3	30.3		9.6	27.8	48.4
9.2	8	4.9	0.6	7.6		56.2	37.7	9.3		39.0	52.1	G	9.6	44.8	12.0
8.8		10.4	0.3	9.6	16	10.9	1.0	8.6		42.8	16.5	8.5 b-	10.0	49.3	0.4
9.6		11.5	13.0	9.4		25.9	46.1	10.0		51.3	54.4		9.8	49.3	41.9
9.5		13.0	49.4	9.6		26.9	56.0	9.4		55.3	51.8	G	9.8	49.8	35.5
9.6		22.5	19.1	9.6		37.4	9.0	10.0		56.8	2.1		9.6	50.8	31.2
9.5		23.5	6.4	8.6		40.4	48.1	9.8	23	3.8	38.8		9.0	54.8	45.4
9.4		24.5	59.6	8.6		40.9	52.1	10.0		5.3	18.7		8.6	56.8	11.9
9.6		37.0	21.4	8.9		55.9	25.8	10.0		6.3	11.7		8.7	57.8	8.8
9.0		56.5	24.4	9.2		56.4	6.4	9.5		7.3	36.6		9.5	58.8	17.2
9.4	9	0.5	12.2	9.6	17	2.9	0.4	10.0		9.3	52.8		10.0	27	2.3
9.6		2.5	35.2	9.6		46.4	49.9	8.2		13.8	22.2	Ga	10.0	2.3	57.4
9.6		7.0	23.0	8.2	18	2.9	30.7	10.0		13.8	53.2		9.6	8.6	8.2
9.6		12.5	26.9	9.6		19.4	41.7	10.0		14.8	48.8		9.4	9.6	4.8
9.6		14.5	12.0	8.5		25.9	50.2	8.5		16.8	32.0		8.6	11.8	22.1
8.3		16.0	42.8	9.6		31.4	3.1	10.0		18.3	57.8		10.0	14.8	14.7
9.6		32.5	31.1	7.6		55.9	2.9	8.8		21.8	52.3	9.0 G	10.0	14.8	35.1
9.8†		47.2	2.1	7.0	19	2.4	58.5	9.4		22.8	7.8		9.6	16.3	29.0
9.6		56.5	12.8	9.5		2.9	24.9	9.4		23.8	37.8		9.7	17.8	26.9
9.4	10	10.5	27.6	3.8		8.9	3.7	9.6		25.8	38.7		9.8	20.8	4.1
25 Dr.		+ 0 58.7	- 2.4			+ 0 58.9	- 2.7			+ 0 59.1	- 2.9			+ 0 59.2	- 3.1

1801-1860.				1861-1920.				1921-1980.				1981-2040.			
mag.	7 ^h .	-29°		mag.	7 ^h .	-29°		mag.	7 ^h .	-29°		mag.	7 ^h .	-29°	
	m	s	'		m	s	'		m	s	'		m	s	'
9.8	27	23.8	42.0	10.0	31	2.5	19.6	10.0	34	13.8	19.4	10.0	36	46.7	10.2
9.5		28.4	57.3	10.0		3.0	31.8	9.5		16.8	58.4	9.8		47.2	59.3
9.4		28.9	57.8	10.0		5.0	42.1	9.3		23.8	6.4	9.8		50.7	51.7
9.5		32.3	49.2	9.8		12.0	20.5	10.0		28.8	21.9	10.0		53.7	8.1
9.0		32.3	25.2	9.6		12.0	58.4	9.4		29.8	17.9	8.6		54.7	48.7 9.0
10.0		35.8	2.8	9.0		17.5	12.1 a	8.6		33.8	44.9	9.4		54.7	44.5
9.7		36.1	59.1	8.9		23.5	10.5	10.0		36.8	10.1	8.8		56.7	54.5 9.5 G
10.0		41.3	41.1	8.8		23.5	26.7	8.8		36.8	31.1	8.7	37	0.7	1.9 9.0
9.5		43.8	9.0	9.6		24.0	11.8	9.3		46.8	6.7	9.8		1.2	24.9
9.4		46.8	23.1 9.5	9.8		27.0	3.8	9.0		47.8	13.5	9.5		3.7	17.3
9.4		56.8	49.6	9.3		32.5	55.1	9.2		48.8	31.3	9.4		6.6	37.4
9.4	28	4.8	37.1	9.4		37.0	30.6	10.0		57.8	22.9	7.2		10.6	53.6 7.0 GW
9.2		6.8	29.6 9.0	8.4		42.0	30.2 =	9.8		57.8	31.9	9.8		11.6	31.9
8.9		14.3	31.2 9.5	10.0		45.5	50.6	9.8	35	3.8	31.5	8.5		12.1	54.5 9.2
9.4		16.8	31.7	9.5		49.0	42.6	8.4		7.8	52.9 7.5 GSa	9.2		20.6	0.7 a
10.0		16.8	50.2	8.9		51.0	5.4 9.0	8.9		8.3	22.7	10.0		22.6	50.9
9.0		24.8	33.2 8.5	10.0		53.0	17.8	9.8		8.8	1.5	10.0		23.4	10.4
10.0		27.8	31.6	10.0		58.0	38.8	9.4		9.3	44.9	9.7		23.6	14.9
9.2		33.6	57.5	9.7		59.0	16.3	9.4		9.8	30.4	7.9		23.6	56.9 8.2 GWa
9.4		36.3	36.4	9.0	32	0.5	41.1	9.3		12.8	25.0	8.9		32.1	40.5
10.0		38.8	44.9	9.5		1.5	7.6	8.9		16.8	24.1 8.5	10.0		36.4	5.5
10.0		39.3	17.6	9.5		2.0	44.9	9.8		17.8	31.5	9.8		40.1	4.9
9.8		43.8	8.3	9.3		4.0	50.1	9.4		19.8	23.4	10.0		42.1	32.7
10.0		43.8	48.9	10.0		5.5	10.7	8.6		20.8	40.3	9.8		42.6	1.7
8.5		46.8	1.5 -	9.6		8.0	19.0	9.6		22.8	45.3	9.4		45.6	39.3
10.0		50.8	19.5	9.4		9.0	34.2	8.8		23.3	47.1	8.5		46.6	13.4
9.5		50.8	40.2	9.2		9.0	44.9	8.8		24.8	48.5	9.5		49.6	38.4
10.0		52.3	20.5	10.0		18.0	14.4	10.0		25.3	30.6	10.0		52.1	24.9
9.4		54.8	38.9	9.4		24.0	40.5	10.0		26.8	16.1	10.0		54.1	46.7
9.5		56.3	3.1	10.0		28.5	32.1	8.9		27.8	49.1	9.4		54.6	54.9
9.6	29	2.5	18.8	9.8		33.7	10.2	10.0		30.0	58.5	9.2		58.6	54.7
10.0		4.5	18.5	9.3		39.0	5.9	7.2		30.2	47.5 GSa	10.0		59.1	48.5
10.0		7.0	42.8	9.8		46.0	49.6	7.9		33.2	45.6 GSa	10.0	38	0.1	21.2
8.8		7.7	56.6 9.5	10.0		49.0	18.8	10.0		38.7	44.2	9.7		1.1	10.7
9.8		11.0	45.5	10.0		50.0	16.6	8.8		42.2	49.3	9.3		6.6	24.1
9.4		17.5	28.9	10.0		52.0	46.3	9.5		42.2	39.1	10.0		11.6	6.7
9.4		27.5	30.2	9.4		54.0	5.4 9.0	9.6		43.0	56.7	8.4		11.6	15.5 8.5 =
9.3		40.0	29.9	10.0		55.0	24.6	9.5		44.7	38.3	9.7		12.6	13.7
9.4		41.0	55.5	10.0		56.5	27.0	8.8		44.7	29.7 9.0	9.4		12.6	52.2
10.0		43.0	5.9	9.0	33	11.5	39.1	10.0		46.7	37.5	9.6		15.4	14.9
10.0		47.2	59.1	9.8		11.5	20.2	9.2		50.2	27.1	10.0		18.1	56.7
9.8		49.0	48.9	10.0		20.2	41.3	8.8		50.7	52.7 9.2	10.0		19.1	21.6
9.7		49.5	3.1	9.2		20.7	38.7	9.3		52.5	58.1	10.0		21.6	35.9
8.4		50.0	8.2 8.0 GWa	10.0		22.0	17.4	9.4		53.7	45.1	10.0		25.2	59.7
9.4		50.2	59.1	9.2		23.0	18.1	8.1		54.7	43.1 a	8.4		25.6	4.0 8.5
9.3		51.5	28.3	9.8		24.5	13.1	10.0		56.7	2.7	9.2		28.6	1.5
10.0		54.0	24.3	9.5		26.8	14.6	8.8		57.7	15.5 8.5 Ga	10.0		31.6	23.9
9.8	30	0.0	12.6	9.4		27.8	43.9	9.4		58.7	15.1 G	9.8		41.1	7.6
9.8		3.0	25.2	9.8		31.3	30.9	9.7		59.7	1.3	9.8		48.6	44.7
10.0		4.5	7.9	9.2		32.3	46.8 9.5	8.9	36	0.7	27.1 9.0	10.0		53.1	37.7
10.0		8.0	46.9	10.0		48.3	49.9	8.8		12.7	55.1 10.0 G	9.8	39	0.1	17.0
9.4		12.5	33.9	9.4		50.8	26.4	9.8		12.7	6.8	9.0		11.1	39.7
9.7		16.0	39.6	9.0		50.8	46.3	10.0		26.7	50.1	10.0		12.6	35.3
10.0		16.5	7.8	9.7		51.3	16.1	8.5		28.2	42.5	9.3		14.6	16.1 -
9.5		34.0	5.8 9.5	9.8	34	0.8	12.0	9.8		29.7	49.5	8.7		22.1	56.9 9.0
8.6		35.5	7.2 9.0	8.4		3.8	51.1 8.5 W=	10.0		32.7	16.9	10.0		23.2	59.5
9.0		38.0	43.4 8.5 GW≡	9.2		4.8	42.4	9.8		36.2	40.5	10.0		24.6	56.1 8.2 b
8.2		49.0	46.9 8.8 GW≡	10.0		4.8	31.1	9.4		39.2	8.7	10.0		31.6	56.0
8.4		58.0	5.0 8.5 Wa	10.0		12.8	22.4	10.0		43.2	27.7	10.0		31.6	17.7
10.0	31	0.0	48.2	7.9		12.8	11.4 8.0 G=	9.8		46.7	14.5	9.2		34.3	58.1
25Pr.		+0 59.3	-3.2			+0 59.4	-3.3			+0 59.5	-3.4			+0 59.6	-3.5

2041-2100.			2101-2160.			2161-2220.			2221-2280.										
mag.	7h.	-29°	mag.	7h.	-29°	mag.	7h.	-29°	mag.	7h.	-29°								
9.4	39	36.6	21.6	9.3	43	12.1	45.0	8.5	9.8	48	49.7	46.2	9.8	55	3.8	49.1	8.1	GS=	
9.8		42.1	40.1	9.8		15.6	7.9	9.8		53.3	39.9	8.4		4.3	10.3	9.4	9.0		
10.0		44.1	9.9	9.5		16.1	31.9	9.4		54.2	44.3	9.4		15.3	9.4	9.8	5.2		
9.4		46.1	39.5	9.8		29.1	50.1	8.6		56.4	59.9	9.0	G	9.8	24.3	37.5	9.2	25.8	18.5
10.0		59.6	18.2	9.4		32.1	53.7	9.8	49	4.2	37.4	9.0	a	9.8	25.8	46.0	9.8	29.8	46.8
10.0	40	5.1	52.8	9.4		33.6	21.6	9.8		6.7	32.9	9.0		9.8	25.8	46.0	9.0	38.8	8.5
10.0		5.6	53.9	8.7		40.6	57.2	8.6		16.2	12.5	9.0		9.8	29.8	46.8	9.8	45.8	6.7
10.0		7.1	17.5	7.9		46.9	57.0	9.2		21.7	34.7	9.2		9.8	29.8	46.8	9.0	38.8	8.5
10.0		9.6	44.1	10.0		52.6	21.2	9.2		23.2	12.4	9.2		9.8	29.8	46.8	8.6	45.8	6.7
10.0		12.6	47.3	9.0	44	2.6	27.1	9.2		49.7	59.7	9.2		9.8	29.8	46.8	9.4	52.6	14.6
9.8		13.6	13.5	10.0		3.6	28.8	9.2		59.7	36.9	9.8		9.8	57.8	26.1	9.8	56	1.3
10.0		15.6	21.3	9.2		13.6	33.3	9.8	50	10.2	48.6	9.8		9.8	1.3	28.0	8.8	5.8	31.9
10.0		16.6	49.7	9.4		16.1	49.2	9.8		20.2	32.3	9.8		8.8	5.8	31.9	8.4	9.8	12.9
8.9		21.1	34.9	8.6		22.6	55.8	9.8		23.2	4.0	9.8		8.4	9.8	12.9	9.7	11.8	17.3
9.8		22.6	16.5	9.4		23.1	58.5	9.8		35.7	31.9	9.8		9.7	11.8	17.3	9.2	12.8	6.1
9.4		23.6	3.9	9.4		26.1	20.1	9.6		42.2	14.0	9.2		9.8	13.3	31.6	8.8	17.3	9.7
9.4		23.6	7.1	9.4		26.9	1.5	9.2		49.2	12.3	9.2		8.8	17.3	9.7	9.4	22.3	24.1
9.2		24.1	15.9	10.0		27.6	35.5	9.4		57.2	30.4	9.2		9.8	22.8	40.1	9.2	22.8	40.1
9.5		35.1	33.5	9.8		35.6	4.1	9.2	51	2.2	33.8	8.6		9.2	41.8	25.4	9.7	43.3	29.1
9.6		42.6	53.1	8.9		40.1	56.6	8.6		11.2	1.3	9.2		9.8	44.8	50.3	9.6	46.8	6.7
10.0		44.6	26.9	9.5		43.6	56.3	9.2		22.2	7.0	9.2		8.6	53.8	16.4	9.8	57.6	37.1
10.0		45.6	51.5	9.7		52.6	7.8	8.3		23.9	57.1	9.2		8.8	57.6	37.1	8.8	57.6	37.1
10.0		46.1	10.5	9.5		53.6	18.1	8.8		23.9	5.6	9.2		9.8	57.6	37.1	8.8	57.6	37.1
8.4		47.6	38.7	9.6		59.1	51.1	9.4		24.2	0.3	9.8		9.8	57.6	37.1	9.7	10.3	6.2
9.6		49.6	49.5	10.0	45	2.5	5.1	9.6		30.9	40.2	9.6		9.8	10.3	6.2	9.2	11.8	17.3
9.6		51.1	46.1	10.0		6.4	44.6	9.8		31.4	13.0	9.8		9.8	11.8	17.3	9.2	12.8	6.1
8.8		55.6	9.5	8.7		9.5	13.2	8.8		52.9	11.1	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.0		57.1	22.5	8.7		30.2	0.1	9.2		56.0	34.2	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.8	41	5.6	44.3	9.2		41.7	3.5	8.8		56.4	0.9	9.8		9.8	13.3	31.6	9.2	12.8	6.1
10.0		10.6	27.5	9.8		50.5	9.8	9.0		57.9	22.7	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.0		12.6	50.3	10.0		52.4	3.1	8.8		59.9	24.7	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.8		17.6	41.1	10.0	46	3.7	28.6	8.8		15.9	22.5	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.4		19.6	51.0	9.8		5.0	14.7	9.4		18.9	11.5	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.7		22.1	33.5	10.0		15.5	5.0	9.0		26.9	7.1	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.8		22.6	8.6	10.0		26.4	26.0	9.4		36.9	15.8	9.8		9.8	13.3	31.6	9.2	12.8	6.1
10.0		23.1	30.9	10.0		27.5	57.0	9.4		37.7	2.2	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.0		29.1	40.8	8.9		30.0	12.8	9.8	53	4.5	2.9	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.3		31.6	37.3	8.2		44.2	20.7	9.7		5.9	44.2	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.2		33.6	11.9	9.6		54.4	23.6	9.6		8.2	3.0	9.8		9.8	13.3	31.6	9.2	12.8	6.1
10.0		36.6	50.7	9.0	47	0.9	31.1	9.8		9.1	1.7	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.4		37.1	41.2	9.8		8.9	36.3	9.8		13.9	14.7	9.8		9.8	13.3	31.6	9.2	12.8	6.1
8.9		50.6	35.3	9.2		12.4	21.2	9.8		20.4	54.3	9.8		9.8	13.3	31.6	9.2	12.8	6.1
7.9		52.6	38.5	9.7		14.1	23.5	9.4		21.9	40.9	9.8		9.8	13.3	31.6	9.2	12.8	6.1
10.0		52.6	53.9	9.2		15.9	50.5	9.8		35.9	19.5	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.7		53.6	35.5	8.6		20.2	18.6	9.0		41.9	55.5	9.8		9.8	13.3	31.6	9.2	12.8	6.1
10.0	42	2.6	49.1	9.8		30.7	5.8	9.0		51.4	16.1	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.4		2.6	29.8	8.8		34.2	26.6	9.0		52.9	6.9	9.8		9.8	13.3	31.6	9.2	12.8	6.1
10.0		8.6	41.2	9.6		38.7	11.2	9.4		55.9	42.9	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.3		16.1	15.7	9.8		49.2	19.1	9.2		59.4	14.3	9.8		9.8	13.3	31.6	9.2	12.8	6.1
10.0		16.6	47.9	9.6		55.2	33.7	9.8	54	9.9	1.2	9.8		9.8	13.3	31.6	9.2	12.8	6.1
8.9		16.6	47.0	9.7		56.2	24.0	8.5		20.8	0.7	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.3		23.6	16.7	9.0	48	0.2	2.3	9.4		32.8	5.4	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.2		23.6	49.8	9.7		3.3	42.6	9.2		34.8	9.9	9.8		9.8	13.3	31.6	9.2	12.8	6.1
8.5		30.1	23.0	9.6		16.2	28.4	9.8		41.6	13.9	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.4		33.6	55.9	9.4		16.2	28.7	9.6		50.3	17.5	9.8		9.8	13.3	31.6	9.2	12.8	6.1
10.0		46.1	23.6	8.0		27.7	29.9	9.9		53.1	2.7	9.8		9.8	13.3	31.6	9.2	12.8	6.1
9.8		52.6	12.2	8.8		33.2	24.4	9.8		54.6	16.8	9.8		9.8	13.3	31.6	9.2	12.8	6.1
8.4		53.6	49.5	9.8		33.2	34.1	9.6		55.8	53.0	9.8		9.8	13.3	31.6	9.2	12.8	6.1
8.2	43	3.6	4.2	9.8		36.2	48.9	9.2		58.3	45.3	9.8		9.8	13.3	31.6	9.2	12.8	6.1
8.9		5.6	1.1	9.2		48.2	44.7	9.7	55	1.8	29.2	9.8		9.8	13.3	31.6	9.2	12.8	6.1
25pr.	+ 0	59.7	-3.6	+ 0	59.9	-3.7		+ 1	0.1	-3.9		+ 1	0.3	-4.1					

2281-2340.				2341-2400.				2401-2460.				2461-2520.			
7 ^h -8 ^h .		-29°		8 ^h		-29°		8 ^h .		-29°		8 ^h .		-29°	
mag.	m s	'		mag.	m s	'		mag.	m s	'		mag.	m s	'	
9.7	59	39.4	35.2	9.6	3	57.3	8.8	9.0	7	41.5	54.8	10.1	12	33.2	38.0
9.4		42.9	19.6	9.8	4	2.7	52.3	9.8		42.2	1.7	9.4		34.2	17.5
8.8		45.9	5.8	8.6		4.2	30.3	7.8		43.0	32.2	7.7		35.7	18.3
9.8		46.9	11.4	8.4		5.5	57.5	9.8		44.0	13.4	9.0		38.2	28.0
9.8		50.9	40.5	9.8		6.7	50.2	9.8		44.5	21.8	9.2		44.2	13.9
9.4		55.4	50.1	9.8		7.7	42.8	9.4		46.5	44.0	8.6		45.7	13.4
8.6		58.4	35.4	9.0		7.7	18.6	9.6		55.5	13.4	9.2		53.2	46.0
9.4	0	2.4	51.6	9.8		8.7	28.4	9.2		57.5	9.8	10.0		54.0	7.2
8.5		5.9	42.8	9.0		11.7	57.8	9.8	8	2.5	8.6	7.8		54.2	36.9
9.8		6.9	17.0	9.8		13.7	35.3	9.2		11.5	4.2	10.0		59.7	52.6
9.4		9.9	8.9	9.8		16.7	55.9	9.0		35.5	26.6	9.6	13	0.7	18.5
9.0		17.9	13.2	9.8		22.7	21.3	9.7	9	5.0	14.2	10.0		0.7	23.1
9.4		19.9	54.0	9.8		40.7	50.1	9.8		8.0	42.0	9.2		7.2	56.4
9.8		22.9	44.6	9.8		41.7	41.1	9.8		12.5	41.3	8.3		9.0	10.7
8.8		29.8	19.1	9.7		42.7	7.1	9.4		12.5	18.7	9.6		13.2	0.2
9.8		30.3	14.9	9.4		43.7	52.7	9.0		16.0	56.7	10.0		22.2	18.8
8.6		34.8	38.1	9.8		47.2	45.1	8.6		19.5	25.7	9.8		28.7	38.2
8.5		37.3	38.1	9.7		49.7	17.0	9.7		21.5	25.4	9.7		34.2	41.3
9.8		42.3	20.4	9.0		55.7	26.8	10.1*		23.3	52.4	10.0		34.7	20.1
9.8		45.8	34.3	9.8		59.2	24.5	9.7		25.5	13.1	10.1		38.7	27.1
9.8		47.8	47.3	9.8		59.7	54.1	9.7		35.0	28.2	9.8		41.7	21.6
9.6		56.8	25.3	9.8		2.7	18.8	9.6		41.5	7.8	10.0		43.7	21.7
9.8	I	1.8	15.6	9.6	5	4.7	8.3	9.8		41.5	28.9	9.0		44.2	35.2
9.4		9.8	41.2	9.8		5.7	49.9	9.2		42.5	25.6	9.0		46.2	6.9
9.8		15.8	33.6	9.2		16.7	42.4	9.4		47.5	33.7	8.4		49.7	21.2
9.4		22.8	26.6	9.8		19.7	16.6	9.8		53.0	11.4	10.0		50.7	25.0
9.4		23.8	4.0	8.3		19.7	40.2	9.2		53.0	8.0	8.3		53.2	21.8
9.2		24.8	31.8	9.8		20.8	1.1	9.4		54.5	7.2	9.2		53.2	25.5
9.0		25.8	30.0	8.5		21.7	51.9	9.8		55.5	50.2	10.0		54.7	9.9
9.7		29.3	24.7	8.6		23.7	4.9	9.8		59.2	28.8	9.0		56.2	45.7
9.2		31.8	55.0	9.8		35.7	17.9	10.2†	10	1.4	0.2	9.4		58.7	20.8
9.8		32.8	13.3	9.4		39.2	29.7	9.8		3.5	18.6	10.0	14	1.0	45.4
9.2		38.8	26.7	8.6		41.7	7.5	9.4		5.9	26.8	9.6		1.2	30.2
9.8		51.3	15.5	8.0		42.2	46.7	9.6		9.9	4.8	10.1		2.0	37.6
9.8		53.8	46.3	8.6		59.2	18.5	9.6		12.8	10.8	9.6		8.2	22.7
7.8		54.3	2.0	8.8	6	2.7	57.1	8.8		13.0	29.0	10.1		13.2	51.9
9.4		56.8	32.7	9.0		4.7	4.2	9.2		26.3	30.0	10.2†		16.4	1.6
9.8		56.8	19.8	9.6		5.7	13.1	8.6		55.9	24.2	9.6		36.2	31.0
8.9	2	0.3	32.1	9.8		10.7	20.9	8.0		55.9	48.1	8.0		36.7	47.4
9.8		5.8	0.3	9.4		12.7	59.4	9.8		58.3	37.1	10.0†		40.3	1.2
9.8		5.8	48.0	9.6		24.7	52.4	9.8	11	3.8	15.9	9.4		42.7	34.9
9.2		9.8	20.8	9.0		25.7	39.5	10.0		4.0	10.4	9.5		47.7	39.7
9.2		12.8	39.2	9.8		30.7	14.9	9.6		7.8	3.7	9.6		53.2	15.6
9.8		16.8	14.5	9.2		32.7	30.4	10.0		12.3	27.4	10.0		56.2	37.6
9.8		17.3	14.6	9.8		35.7	3.1	10.0		17.8	17.6	10.1	15	0.9	24.1
9.8		19.8	56.8	9.8		41.7	18.5	9.6		18.8	2.4	9.4		4.2	24.6
9.4		21.8	27.1	9.8		42.7	18.0	10.0		27.3	11.8	9.6		6.2	16.5
9.7		26.8	6.2	9.7		42.7	14.9	10.0		31.2	42.7	10.1		6.2	12.0
9.4		48.3	25.1	8.8		43.7	32.8	9.2		32.8	8.0	9.8		7.2	4.2
8.8		49.3	20.7	8.8		49.7	57.1	8.4		33.3	39.5	9.6		10.0	9.4
9.8		50.3	36.4	9.7		52.5	27.4	10.0		33.3	30.5	10.0		10.2	31.9
9.0	3	2.8	34.4	8.2		52.7	50.3	9.6		47.3	12.0	7.5		12.7	8.9
9.7		7.3	18.0	9.2		55.5	7.0	10.0		52.8	7.0	9.4		13.2	24.1
10.2†		18.4	1.4	9.8	7	2.0	16.0	10.0		57.9	0.9	10.0		16.7	37.0
9.0		19.8	4.0	9.4		12.5	10.3	10.0	12	4.3	57.3	9.4		22.2	3.4
9.0		23.3	30.8	9.4		25.5	6.0	9.8		5.8	25.5	9.4		22.2	31.4
9.8		27.8	26.8	9.4		29.5	12.6	9.4		14.3	25.5	9.6		27.2	51.1
9.8		37.8	11.7	9.2		34.5	6.9	10.0		17.3	18.9	9.4		32.2	56.0
9.4		51.3	54.0	9.8		39.7	2.6	9.4		18.8	56.8	10.0		35.7	54.8
9.8		51.8	15.0	9.0		40.5	18.4	9.2		28.2	14.1	9.4		37.2	50.0
25pr.		+ 1 05	-4.2			+ 1 06	-4.3			+ 1 08	-4.5			+ 1 10	-4.6

2521-2580.				2581-2640.				2641-2700.				2701-2760.			
mag.	8h.	-29°		mag.	8h.	-29°		mag.	8h.	-29°		mag.	8h.	-29°	
10.0	15	44.2	10.0	9.0	19	36.3	24.2	10.0	23	45.7	29.8	10.0	28	41.7	36.2
10.0		53.2	56.3	9.4		36.3	42.7	10.1		47.7	42.0	9.2		58.2	52.6
10.1		53.7	21.1	10.1		44.3	58.6	9.0		52.7	17.7	9.6	29	0.2	4.3
10.0		54.0	30.5	8.7		47.3	6.5	9.6	24	1.0	59.6	10.1		1.2	42.5
9.4		55.7	36.6	10.1		48.6	57.8	9.6		3.2	3.2	8.7		6.2	44.7
9.6	16	6.7	43.0	9.8		56.3	51.3	9.4		4.2	0.6	9.6		8.2	27.7
10.1		12.0	55.3	9.8	20	3.8	12.2	9.8		6.2	33.6	10.1		12.2	13.0
9.6		29.7	48.8	10.0		8.8	6.4	9.4		10.7	50.2	10.1		18.7	3.9
10.1		29.7	54.0	9.4		11.3	13.4	10.1		10.7	48.6	9.0		23.2	0.7
9.4		30.2	29.0	9.8		13.2	40.1	8.4		12.5	57.1	9.2		24.7	32.3
											8.5 Wa				
9.8		30.7	49.0	8.7		16.3	35.6	9.8		17.2	50.0	10.1		41.7	19.6
10.1		33.2	31.0	10.0		21.8	5.8	10.1		18.7	55.4	9.8		44.2	31.3
9.6		42.7	27.0	9.4		26.8	0.9	9.2		34.7	27.8	9.2		45.2	40.7
10.1		51.0	9.9	9.4		30.8	50.0	9.2		41.2	16.2	9.4		52.2	57.7
9.4		52.2	33.4	10.1		38.8	59.6	8.8		46.2	54.6	10.1		52.9	38.1
8.4		53.2	10.7	8.4		42.3	30.8	9.6		50.2	0.6	10.1	30	4.2	25.8
9.6		53.2	9.5	9.0		45.3	39.6	9.6		52.7	12.2	10.0		12.2	20.2
9.4		55.2	42.2	9.7		50.3	15.4	9.4	25	4.2	18.2	10.0		12.2	20.2
10.1		57.7	26.4	10.0		54.3	11.0	10.1		14.2	5.0	7.6		18.7	5.7
10.2†		59.8	1.0	9.8		54.8	2.2	9.8		15.7	55.2	8.9		21.7	19.6
												10.0		25.2	22.0
9.6	17	2.2	5.2	9.0	21	3.3	30.2	9.6		26.7	40.7	9.6		32.2	49.0
9.6		3.0	58.5	9.6		3.5	57.5	9.6		27.2	37.3	9.6		44.2	19.8
10.1		5.2	52.1	9.4		13.8	24.8	10.1		33.2	14.6	9.4		44.2	18.2
10.1		8.2	42.6	10.1		16.8	29.2	8.6		33.2	15.0	8.6		56.7	26.3
10.1		23.2	43.8	8.7		20.5	58.1	9.0		36.2	9.2	10.0	31	4.2	33.3
7.6		26.2	17.6	8.8		22.8	36.7	10.0		43.2	5.8	8.6		15.7	36.4
10.0		27.7	40.6	9.6		23.3	14.6	9.4		43.2	36.6	9.7		36.2	48.0
10.0		32.8	59.4	9.7		23.3	51.5	8.6		52.2	37.0	9.6		36.2	53.2
8.7		45.3	37.0	9.2		23.3	41.3	9.4		56.7	49.5	9.8		36.7	49.0
9.6		46.8	40.6	9.7		24.8	16.6	10.1	26	10.7	4.8	9.6		45.0	29.7
9.6		48.3	34.0	9.4		25.3	3.3	9.7		17.7	56.6	9.2		47.7	54.8
9.4		56.3	29.1	10.1		26.7	21.0	9.4		23.7	20.0	9.6		52.7	0.0
10.1		59.8	28.6	9.6		29.8	39.0	9.0		26.2	4.2	9.2		57.2	24.2
10.1	18	9.8	5.2	9.4		33.8	53.2	10.1		34.2	35.2	9.6	32	9.2	15.6
9.7		14.3	35.8	9.2		34.3	21.8	8.9		36.2	46.9	9.6		16.7	47.1
8.6		18.8	53.1	8.6		36.3	31.7	9.6		39.2	7.1	9.4		22.7	52.8
10.1		21.3	0.6	9.2		48.3	10.3	10.1		40.7	47.0	9.0		34.7	29.0
9.2		24.8	23.7	10.0		53.3	34.6	9.4		44.7	8.3	9.0		35.7	44.0
10.0		28.3	41.7	9.4		55.0	59.7	9.0		46.2	45.4	10.1		38.7	36.1
9.0		30.8	6.0	8.8		59.8	20.6	10.0		47.7	31.1	9.0		47.2	24.5
9.6		31.3	15.3	10.1	22	2.3	55.2	10.1		53.2	54.7	10.1		50.7	33.3
10.1		33.3	27.0	9.6		4.3	2.8	10.0		55.7	34.0	8.7		51.2	47.6
9.4		36.3	41.1	9.6		6.8	51.0	9.4		57.2	24.7	9.0		51.7	41.0
7.5		36.8	59.4	10.1		8.0	58.4	10.0	27	1.7	37.0	9.6		56.7	34.0
10.0		39.8	39.1	10.0		23.8	23.5	9.7		8.2	44.7	8.7	33	12.7	32.8
10.1		39.8	37.3	9.8		24.8	5.0	9.8		30.2	56.0	9.7		21.9	39.1
9.2		43.3	16.3	10.0		32.8	20.7	9.6		33.2	23.0	9.7		24.1	42.9
9.2		44.8	14.0	8.6		33.3	0.8	9.8		34.7	38.0	9.6		28.2	30.3
8.1		56.3	27.3	10.1		35.3	44.4	9.8		36.7	48.4	8.3		44.1	56.9
9.2	19	3.8	26.8	10.0		36.2	6.3	9.0		45.2	44.4	9.2		52.7	17.9
10.1		6.2	54.6	10.0		37.3	46.0	10.0		46.2	3.6	9.6	34	4.5	38.0
9.8		6.3	10.6	10.0		46.2	22.2	9.6		53.2	12.0	9.4		4.5	34.0
10.1		16.3	21.0	10.1	23	7.3	16.2	8.6		56.2	32.9	9.8		7.9	1.3
10.0		23.3	42.2	9.4		9.8	58.7	10.0		56.2	52.9	8.7		26.6	17.5
9.8		26.1	59.7	9.8		19.3	36.6	8.6	28	6.7	31.8	9.1		29.1	39.3
9.2		26.3	29.5	10.0		21.3	55.2	9.6		13.7	24.0	7.3		32.0	7.1
10.0		26.8	29.9	9.7		26.2	20.8	9.6		15.7	44.9	8.9		34.5	6.6
9.4		28.8	7.9	9.7		35.2	47.2	9.4		27.7	49.1	9.9		39.5	29.7
9.7		29.8	40.0	9.6		37.7	41.3	9.8		33.5	2.7	9.4	35	8.5	15.1
10.1		33.2	2.3	8.2		45.2	32.1	8.8		39.7	51.1	8.6		15.5	15.1
25pr.	+ 1	12	-4.7	+ 1	13	-4.8		+ 1	16	-5.0		+ 1	19	-5.1	

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
mag.	8h.		-29°	mag.	8h.		-29°	mag.	8h.-gh.		-29°	mag.	gh.		-29°
	m	s		m	s			m	s			m	s		
10.0	35	17.5	41.7	9.4	44	39.6	12.2 9.0	8.4	53	37.1	8.4 9.0 -	9.6	7	18.6	0.2
10.0		24.5	21.9	8.0	45	4.1	57.1 8.5 GSa	10.0		42.1	45.8	9.3		59.3	43.1 9.0
9.5		31.0	12.1	9.2		4.1	26.8	8.6		43.3	1.2 9.0	8.2	8	1.3	9.1 7.2 GSa
10.0		40.4	1.4	9.4		6.6	41.1	9.4		48.1	5.0	9.3		3.7	28.3
8.4	36	4.5	38.4 9.0	10.0		18.6	21.7	9.4	54	5.1	24.9	9.6		53.3	6.2
9.4		6.6	3.0 9.0 G	8.6		22.1	17.0 8.5 a	9.1		7.6	3.7 9.5	9.6		58.2	26.2
9.9		7.0	45.3	9.8		33.6	55.4	9.0		8.1	4.7 9.5	8.8	9	6.7	17.3 8.5 G-
10.0		8.5	50.6	9.9		49.1	43.2	9.8		25.1	30.8	9.8		20.5	59.4
9.9		25.5	28.7	9.9	46	0.6	0.9	9.6		38.6	54.7	8.6		25.2	38.5 8.2 GSa
9.9		26.5	56.0	8.9		10.6	53.4 9.5 W	10.0		55	58.6 1.9	8.0		44.2	50.9 8.0 GSa
9.9		27.4	18.4	9.9		11.6	34.9	9.0	56	3.6	34.1 9.0	9.5		56.7	35.6
10.0		33.5	54.9	9.8		12.1	36.8	9.4		17.1	35.1	10.0†	10	6.3	1.7
9.4		35.5	30.2	9.4		23.1	34.8	9.4		28.1	45.5	8.6	11	12.2	36.5 8.5 a
9.7		47.5	33.6	9.4		34.1	16.4	9.2		29.6	38.9	10.0		17.3	36.1
9.2		53.5	7.9 9.0 G	9.5		41.1	37.0	9.8		51.1	18.5	9.0		23.7	25.7 9.0 Wa
10.0	37	14.5	29.5	8.8		44.1	43.3 9.0	8.8		58.7	19.6 9.2	9.0		33.7	59.3 -
9.6		27.5	2.0	9.2		44.6	49.6 9.0	9.4	57	31.4	33.8	10.0		54.2	32.2
10.0		30.5	33.7	10.0†		47.1	21.9	9.8†	58	13.9	21.7	9.5	12	8.7	36.2
8.7		43.0	19.4 a	9.4		49.1	16.8	8.8-		34.9	48.0 9.0 -	10.0		13.3	2.6
8.0		51.5	4.5 8.2 GSa	9.8		57.1	30.5	8.5		39.4	16.4 8.8 Ga	9.8		32.2	45.3
9.1		59.0	44.6	9.9	47	7.3	59.1	9.5		40.4	30.5	10.0		45.2	21.7
9.5	38	42.3	9.8	10.0		8.6	38.3	9.5		59	14.2 13.0	9.8		50.3	55.9
8.3		52.8	47.4 8.5 a	9.6		13.1	26.0	9.6		27.2	28.9	9.4	13	2.7	45.7
10.0	39	5.3	27.1	8.8		20.1	24.4 8.5 G	9.8		34.7	34.3	9.4		13.7	0.7 9.0
9.9		7.3	41.8	9.9		20.1	27.8	8.5		57.7	25.0 9.2	9.8		49.7	13.2
9.9		15.3	45.1	8.8		25.1	31.1 8.5 a	8.5		12.2	3.1	9.8		53.2	59.6
9.6		17.3	13.1	9.8		29.1	47.4	9.6	0	19.6	29.9	9.2	14	3.7	15.2 9.0 a
9.9		30.3	39.9 9.0	9.4		50.6	39.5	9.6		24.5	1.2	8.8		4.7	11.6 8.8 Ga
10.0		34.1	50.1	9.0		51.1	21.5 9.0	9.8		25.2	26.9 9.5	9.0		16.2	21.2 9.5
10.0		34.8	12.8	10.0		57.1	5.5	9.8		28.2	22.7	9.2		48.2	1.9
9.0		37.8	34.5 9.0	9.8	48	7.1	13.9	9.4		34.7	46.9	8.8	15	12.7	22.8 8.5 a
8.7		47.3	8.9	9.4		17.1	32.1 9.5	9.8		52.9	17.2 9.5	8.8		17.2	17.8 9.5 a
8.6		54.3	59.6 9.0 a	9.9		27.1	44.9	10.0†	1	8.3	1.7	9.3	16	0.0	8.7 a
9.2	40	7.3	15.5	9.4		37.1	48.1	9.8		21.9	22.9 9.0	9.3		14.0	24.1
9.4		14.8	2.5	9.0		38.1	5.1	9.5		43.7	41.2	8.8	17	25.5	20.1
9.4		15.3	51.8 9.5	9.3		39.1	5.9	8.0	2	11.7	34.9 7.8 GSa	8.0		26.0	59.5 8.3 GSa
9.2		28.3	26.6	8.8		44.1	35.6 9.0	9.8		14.6	7.8	9.8		47.2	23.8
9.3		50.3	27.0	9.9		51.6	14.6	8.8		28.7	27.1 8.8	8.3		52.3	57.4 8.5 GWa
9.4		54.8	19.9	9.2	49	4.1	53.3	9.8		47.7	10.6	9.6	18	13.5	38.0
8.4	41	22.8	18.0 7.5 GSa	10.0		7.1	16.1	9.4		52.2	25.8	9.3		46.0	13.7
8.5		24.3	16.2 7.5 GSb	9.2		9.1	25.9 9.0	8.0		57.7	46.2 8.5 a	8.5		55.0	53.1 9.5
9.0	42	18.3	12.8 8.5 a	9.9		20.1	37.1	9.3	3	17.2	29.8	9.8		59.5	55.8
9.9		18.3	16.2	9.9		23.1	42.0	9.6		34.8	5.3	9.1	19	20.0	44.5
9.4		23.3	41.0	8.7	50	25.1	29.0 9.0 -	8.8		42.8	53.6 9.2	9.2		36.0	27.8 9.5
9.2		28.3	36.4	9.8		34.1	44.9	9.8		55.3	42.8	9.1	20	8.0	59.7 -
9.8		47.3	37.5	9.4		39.6	1.8	9.8		59.8	39.2 9.0	9.3		14.0	56.9
10.0	43	14.8	14.0	9.3		40.1	20.5 9.0	9.8		8.8	35.7	9.5		26.5	41.8
9.4		15.3	25.7	9.4		48.1	20.7	9.8	4	15.3	18.6 7.2 GSa	7.6		47.0	29.7 8.0 GSat
8.8		25.3	6.9 9.5	10.0	51	3.6	35.8	7.8		18.8	1.4	9.6		51.5	42.0
9.8		25.8	42.8	10.0		13.6	13.0	9.8		23.3	45.9 9.0	8.6		55.8	9.0 8.5 Ga
8.9		34.8	51.1 9.0	9.3		23.1	56.1	9.6		24.3	22.7	8.8	22	12.7	20.7 9.0 Ga
9.9		37.3	31.1	9.4		34.1	41.5	9.8		38.3	51.4 6.0 GStπ	10.2		21.0	47.3
8.6		52.3	45.3 8.5 Ga	8.8		34.1	42.1	6.9		54.3	14.4	10.0	23	7.5	44.7
9.4	44	5.3	46.7 9.0	8.2		48.1	21.8 8.5 G-	8.8		54.3	14.4	10.6		11.5	32.5
9.7		9.8	51.3	10.0	52	7.1	9.8	9.8		54.7	4.4	8.8		12.5	14.1 9.5 a
9.9		23.1	14.9	10.0	53	3.6	27.1	9.8		50.8	22.8	10.2		17.5	7.4
9.4		23.3	28.2	9.9		6.1	20.5	9.3		53.3	38.3 a	10.4		23.5	12.6
9.5		26.3	21.6	9.9		13.1	10.5	9.8		6	20.8 54.7	9.2		52.5	13.8
10.0		27.3	52.9	9.5		19.1	53.3	9.1		59.3	17.2 9.5	8.9		52.5	27.0
10.0		30.8	34.2	9.0		32.1	54.6	10.0		7	11.8 1.0	10.0		53.0	5.0
25Pr.	+ 1	2.3	-5.4		+ 1	2.8	-5.6		+ 1	3.4	-5.9		+ 1	4.3	-6.3

3001-3060.				3061-3120.				3121-3180.				3181-3240.			
mag.	g ^h .	m	s	mag.	g ^h .	m	s	mag.	g ^h .	m	s	mag.	g ^h -10 ^h .	m	s
9.0	23	59.5	30.3	8.4	34	7.7	18.3	9.6	45	5.5	48.7	9.4	58	45.7	47.6
10.2	24	3.5	36.5	10.0		18.2	19.2	9.8		22.0	32.0	8.7	59	20.1	56.5
9.7		5.0	39.2	9.6		18.7	36.9	9.8		32.2	30.5	8.6		31.2	38.0
10.6		6.5	16.3	9.7		34.1	58.1	9.1	46	24.9	22.4	9.6		41.2	15.0
8.2		45.0	35.8	8.0		35.4	56.1	10.0		45.2	50.4	9.4		51.2	57.7
8.8		57.5	16.7	9.9		46.2	9.9	10.2		46.4	47.2	10.4		51.2	3.2
10.4	25	1.5	20.5	9.7		53.7	54.9	10.0		47.4	23.0	9.5	0	36.2	11.8
9.7		5.0	21.2	10.4		54.7	0.1	9.2		49.4	11.1	8.3		50.2	30.6
8.9		12.0	50.1	10.0	35	6.2	42.3	9.0	47	10.4	16.5	10.0		59.7	26.4
9.7		12.0	45.1	8.9		24.9	59.9	10.2		11.9	6.4	8.8	1	12.2	21.1
9.7		58.0	50.2	9.0		29.7	22.2	8.7		14.9	46.8	10.2		13.3	0.6
9.4	26	3.8	58.3	10.4		34.2	48.3	10.2		45.4	21.6	9.6		39.2	53.2
10.2		6.5	40.0	9.2		46.2	23.6	9.0		59.9	9.0	10.4		45.0	57.6
10.4		17.0	49.4	9.8	36	0.7	16.7	9.4	48	0.9	51.7	10.0	2	3.5	3.0
9.2		56.0	28.5	9.8		20.7	12.5	9.4		6.9	24.5	9.8		3.7	44.3
10.0	27	15.0	41.7	8.4		22.7	31.1	10.0	49	8.2	28.1	10.4		4.6	26.6
10.2		26.1	39.7	8.0		24.2	44.1	8.6		14.4	7.1	8.4		11.2	37.8
10.6		26.6	38.7	10.4	37	6.0	45.0	9.5		31.9	2.5	10.4		17.2	44.1
10.0		29.6	12.9	9.9		6.2	20.1	9.5	50	1.4	19.5	10.0		23.7	39.0
10.4		31.1	24.9	10.6		14.6	57.5	10.0		18.9	52.1	10.0		32.2	21.0
10.0		42.1	56.0	9.7		42.2	49.9	10.2		42.9	19.8	10.2	3	8.2	21.2
10.6		54.6	35.2	8.4		52.2	14.1	8.7		51.9	45.7	9.4		14.2	17.5
8.2	28	34.6	11.0	10.6	38	20.7	11.1	10.4		59.4	2.1	8.2		14.2	8.3
9.6		39.1	20.0	8.4		32.2	44.7	8.7	51	1.9	20.7	10.1†		23.8	2.3
9.2		40.1	13.8	8.9		37.2	38.5	9.0		1.9	31.8	9.8		40.7	18.1
8.8		41.1	20.8	10.2		42.2	36.4	9.4		3.4	47.9	10.2	4	15.8	1.0
10.2		44.6	8.5	9.8		42.7	6.1	10.4		14.2	30.9	10.0		25.2	44.2
10.2		51.1	28.0	9.8		54.2	47.5	9.8		29.4	8.1	9.6	5	32.2	53.0
8.6		52.1	20.8	10.0	39	2.2	28.2	10.4		41.4	45.4	9.2	6	1.7	7.8
9.7	29	2.1	7.2	9.2		8.1	3.0	9.5	52	2.9	5.3	9.6	7	23.2	33.7
8.9		18.6	32.3	10.2		15.2	10.9	9.6		3.2	51.4	10.0		27.2	34.9
8.9		40.6	52.2	9.6		41.2	42.5	9.4		12.4	52.2	8.6		47.2	48.7
9.7		45.1	33.8	10.6		41.2	3.4	9.4		24.9	48.1	10.2		54.7	3.2
10.2	30	8.6	56.9	6.3		52.2	37.7	8.7		32.4	1.7	10.2		54.7	59.5
10.0		29.6	37.8	9.9	41	8.2	36.1	9.6		32.9	22.8	9.6	8	37.2	24.5
10.6		32.1	37.0	9.4		18.2	29.1	9.0		52.9	37.3	10.4		57.4	2.1
10.0		34.1	27.1	9.2		37.5	13.1	9.8	53	14.9	3.7	10.2	9	22.9	7.4
9.6		36.1	26.0	8.9		40.5	41.6	9.0	54	17.9	40.1	9.7		32.4	7.8
10.0		42.1	25.3	9.2		44.5	13.8	9.6		32.4	25.6	9.7	10	34.6	13.1
10.4		56.1	57.0	10.2		49.5	34.7	9.4		53.4	8.1	9.7		48.1	47.5
10.6	31	2.5	57.3	9.4		52.0	22.5	9.8		54.9	6.0	8.1	11	18.8	2.8
9.6		11.6	55.8	9.4		55.0	34.5	9.2		56.9	6.7	10.1		41.5	8.8
10.0		19.1	49.5	10.6		59.5	20.9	10.0	55	1.9	52.5	8.6		57.5	20.8
10.2		32.1	49.9	8.2	42	4.5	6.6	10.2		8.9	35.0	9.6	12	47.1	28.2
7.7		46.1	38.9	10.4		11.8	59.1	10.4		11.9	7.1	9.4	13	17.6	39.2
9.6		52.1	52.3	9.4		25.0	52.1	9.4		20.2	22.5	9.7		29.1	55.4
8.0	32	1.1	14.4	10.4		25.5	27.7	9.0		24.9	22.9	10.0		41.6	21.1
10.0		2.1	12.0	10.6		39.6	57.1	9.0		30.9	29.7	10.1	14	23.1	20.0
9.4		15.1	25.7	9.8		41.5	38.2	10.0	56	32.9	19.6	9.0		48.1	53.1
9.0		15.1	38.7	10.2		43.5	36.5	9.8	57	1.2	33.8	8.6	15	48.1	37.2
9.4		38.6	40.3	10.4		52.0	18.3	7.4		13.7	58.5	8.4		49.6	18.5
9.4		42.1	22.0	8.6	43	2.0	44.5	8.6		25.7	40.0	9.8	17	22.6	32.6
9.7		45.6	6.5	9.7		17.0	8.8	9.0		29.2	18.2	7.4		29.6	31.7
10.0		51.1	48.6	9.9		21.0	11.7	9.6		31.6	56.9	9.4		47.6	28.3
10.2	33	0.6	11.4	9.8		38.5	44.6	10.0		33.2	50.9	8.5	18	5.6	39.0
10.6		21.0	4.8	8.4		51.5	51.4	10.4		47.1	57.8	7.9		10.8	1.1
10.2		24.7	26.1	8.4		53.0	38.3	10.4		52.2	34.0	10.1		11.1	47.8
9.6		28.7	31.6	10.6	44	25.5	10.9	8.1		53.7	38.6	10.0		25.1	47.4
9.2	34	4.4	1.2	7.8		32.0	19.2	10.0	58	2.8	1.0	9.6		34.1	32.7
10.4		4.7	5.1	8.9		55.5	52.9	8.8		29.2	52.9	10.1		43.3	58.0
25pr.	+ 1	5.2	-6.6	+ 1	5.9	-6.8		+ 1	6.8	-7.1		+ 1	7.9	-7.4	

3241-3300.				3301-3360.				3361-3420.				3421-3480.							
mag.	10 ^h .	-29°		mag.	10 ^h .	-29°		mag.	10 ^h .	-29°		mag.	10 ^h -11 ^h .	-29°					
8.5	19	12.1	19.0	8.2 a	10.5	34	35.7	21.4		9.2	46	13.1	22.2		9.2	57	35.7	35.5	9.0 a
10.1		17.1	44.3		8.9		40.0	5.9	8.5 b	9.2		15.1	38.6		9.8		42.4	1.3	a
10.1	20	13.5	4.0		9.8		52.3	21.6		10.2		15.6	55.6		9.8		57.8	5.4	9.3 a
8.2		27.5	29.2	8.5 a	9.8		56.5	57.2		9.2		16.1	25.0	9.0 G Wa	8.9		58.0	9.1	8.8 a
8.9		32.0	13.6	8.8 a	8.8		59.8	5.7	8.2 Gb	8.8		35.1	31.1	8.2 Wa	10.0	58	11.4	12.6	
10.1		33.0	38.6		8.2	35	35.8	52.9	8.8 Ga	10.3		57.1	4.6		10.0		14.4	50.0	
8.4		36.5	59.8	9.0 =	10.0		56.4	4.0		10.0		57.1	25.4		10.2		39.1	21.7	
8.2		40.5	22.5	8.3 Ga	10.5	36	5.4	18.3		8.7	47	2.1	40.8	W-	8.2	59	13.1	45.6	7.5 GSat
7.8	21	6.5	26.2	8.5 Ga	9.8		7.4	51.6		8.4		20.6	25.8	8.0 G Wa	9.0		18.6	51.5	9.2 W
10.1		12.5	33.7		9.8		22.9	26.2		9.3		28.1	38.2		9.5		51.6	0.1	
10.1		36.5	41.3		10.5		36.2	2.2		9.6		40.6	17.0	9.2	9.3	0	9.1	36.7	a
10.0		49.0	9.4	9.5	9.2		36.9	37.7	9.5 a	8.2		48.1	14.8	8.5 a	8.5		20.1	17.5	8.5 a
8.9	22	16.5	3.7	8.7 a	10.5	37	8.9	29.4		9.0	48	3.4	58.3	9.0	10.2		31.6	8.2	9.5
10.0		24.5	12.6		9.8		23.4	10.2		9.5		15.1	8.6		7.4		53.1	52.6	7.0 GSat
9.8		45.5	36.1		10.0		24.9	41.8		10.3		22.1	18.6		9.5	1	12.9	0.8	W-
8.8	23	2.0	5.8	9.0 a	9.6		27.4	28.6		9.2		35.1	48.8	9.0 -	9.0		17.1	49.6	10.0
10.1		31.5	55.7		9.6		34.9	11.0		9.8		41.6	47.3		7.6		57.6	29.6	6.8 GSat
8.5		34.5	54.0	8.5 G Wa	10.5		45.4	57.5		9.8		43.1	6.6		7.1	2	15.1	17.7	6.5 GSat
7.9		43.3	1.7	6.0 G Stπ	10.0		57.4	14.0		8.2		55.1	40.2	8.2 G Wa	8.2		33.6	27.0	8.0 Ga
6.2		50.5	58.1	6.0 G Stπ	9.6	38	5.4	0.4		8.9	49	22.6	57.2	8.8 -	8.0		37.6	4.3	7.5 GSbt
10.1		56.0	18.2		9.8		45.4	42.4		10.0		35.6	3.7		9.0	3	8.1	40.2	9.0
8.9	24	9.0	51.8	8.8 a	8.6	39	12.4	1.7	7.8 atπ	9.8		41.5	5.2		10.2		51.6	12.8	
9.4		52.5	8.2		10.5		34.9	50.0		9.6	50	1.6	5.7		8.1		56.6	7.0	7.0 GSbt
9.6	25	48.5	18.2		10.5		35.4	1.5		9.8		2.1	28.1		8.6	4	33.1	46.6	a
10.1		56.0	31.9		9.8	40	12.4	5.6		10.0		6.1	32.5		10.2		51.1	45.1	
9.7		56.5	3.2	9.0	9.6		18.2	58.0		10.0		13.1	35.5		9.5	5	8.6	26.9	9.5
9.0	26	12.5	53.4	9.5 -	9.6		35.9	6.0		10.5		15.6	32.2		10.2		36.1	59.4	
10.0		16.5	57.1	9.5 -	10.0		52.9	16.3		10.2		41.1	3.5		8.4	6	16.1	6.2	7.3 GSat
9.8		27.3	56.9	9.2	9.8		53.4	46.7		9.2		48.9	1.4	9.5	9.5		23.6	14.9	
10.1		37.5	55.3		10.0		54.7	41.4		9.3		51.1	3.9	9.5	10.2		50.3	41.2	
10.1	27	9.5	6.2		9.6	41	15.4	22.8		9.3	51	16.6	20.7		10.2†		51.6	0.6	
9.8		17.5	3.3		10.5		25.4	44.8		9.2		21.6	53.6	9.5	8.6	7	3.6	10.0	9.0 Ga
8.9		57.0	40.4	9.0 -	8.9		34.7	58.7	9.0 W-	10.3		22.5	2.2		9.6		13.9	55.2	-
10.1	28	30.5	10.1		10.5		39.4	52.8		9.6		22.6	29.5		9.2		29.9	34.4	
8.6		32.5	44.6		9.3		58.4	55.6		10.0		25.1	58.1		9.0		32.7	15.2	9.5 a
9.7		38.5	50.0		10.5	42	22.4	2.0		10.0		29.1	58.6		9.2		45.4	23.0	9.0 a
10.1		45.0	19.3		10.4		37.4	20.1		10.0		38.6	52.1		8.9	8	15.9	28.9	9.5 a
8.9	29	23.2	41.4	9.0 W≡	8.6	43	10.4	49.0	9.0 W-	8.8		42.6	35.5	9.0 =	8.6		19.4	13.4	9.0 a
9.6		44.2	19.7		10.5		11.4	4.0		10.4		52.1	13.9		8.6		23.4	54.8	9.0 =
10.0		56.2	19.1		9.8		14.9	0.1		10.2	52	54.6	36.8		10.2		31.9	7.9	
9.7	30	27.2	50.7		9.8		16.4	6.3		9.8	53	8.6	23.2		10.2		35.5	1.8	
9.2		53.2	4.1		8.0		19.7	59.0	8.2 Wa	9.4		15.6	16.0	9.5	9.4		44.9	37.8	
8.9		54.2	54.8	a	8.9		20.5	57.5	9.5	10.0		20.1	5.5		9.4	9	28.9	25.5	9.0
9.8	31	2.2	46.6		9.6		21.1	40.8		10.5		31.6	39.6		9.8	10	18.9	51.2	
8.5		36.2	20.1	8.5 Ga	7.9		31.1	53.5	8.3 Wb	10.0		49.6	20.9		10.2		27.5	1.9	
9.9		43.2	46.3		9.6		41.1	11.4		10.3	54	2.3	2.2		8.9		35.4	25.9	9.5
10.0	32	8.2	26.9		8.0		42.1	20.0	8.0 W=	10.0		18.6	48.4		9.6	12	12.4	55.1	
9.7		26.2	7.5		10.5		56.6	55.4		10.2		48.6	26.6		9.8		45.4	47.4	
9.7		52.2	54.1		9.4	44	1.6	56.6		8.9		52.1	13.1	9.5	9.6	13	14.9	45.7	
9.6		52.2	30.1		9.3		25.1	52.6	9.0	9.0	55	5.6	18.7	9.5	7.6		20.9	38.3	8.0 Ga
10.1		56.2	5.7		9.8		37.1	27.2		10.5		7.5	34.8		8.2		50.9	45.7	8.2 G Wa
9.9	33	1.4	17.7		8.9		39.6	42.6	9.2	9.2		29.6	3.5	9.0	9.6		56.3	1.2	
10.0		3.0	36.3		9.8	45	17.1	12.5		9.6		30.6	33.2		10.2	14	11.4	18.1	
9.4		15.2	0.8		10.2		34.6	7.2		9.0		55.6	12.0	9.0 a	9.4		23.9	2.3	
9.4		25.0	14.4	9.0 a	10.5		34.6	39.0		9.0		56	18.1	14.8	9.4		46.4	34.7	9.0
10.1		35.0	30.1		10.5		49.9	58.0		10.0		42.6	49.5		9.8		51.9	23.0	
9.2		57.7	9.4	9.5 a	9.6		52.1	4.0	9.5	10.0		44.6	53.9		9.2	15	4.4	15.3	9.0 a
9.8	34	6.3	41.9		9.5		55.1	6.8		9.2	57	5.8	49.9		9.2		9.9	17.8	9.0 a
9.5		16.0	11.1	9.8 a	10.5	46	9.1	31.3		9.2		9.0	30.5	8.5 a	9.4		17	16.3	2.7
9.5		17.0	12.3	9.2 a	10.0		11.1	16.5		9.6		30.4	7.3	9.2 a	9.6		19.5	1.4	
25pr.	+ 1	9.4	-7.7		+ 1	10.4	-7.9		+ 1	11.2	-8.0		+ 1	12.5	-8.1				

3481-3540.				3541-3600.				3601-3660.				3661-3720.							
mag.	11 ^h .	-29°		mag.	11 ^h -12 ^h .	-29°		mag.	12 ^h .	-29°		mag.	12 ^h -13 ^h .	-29°					
	m	s			m	s		m	s			m	s						
9.0	17	31.9	48.3	9.0 =	9.0	42	56.5	58.4	8.5 a	9.5	12	32.6	40.7	9.1	40	6.7	21.6	9.0	
10.2			53.0	0.3	10.4	43	17.0	19.4		9.6		54.5	1.0	8.8		39.2	31.6	-	
9.3	18	22.4	4.5	9.5	10.0		35.5	7.5		9.2	13	2.1	10.1	9.0		59.7	6.7	8.3 a	
9.0		30.8	32.2	9.5 -	10.4		49.3	50.1	9.0	8.2	14	2.6	44.8	8.5 a	9.7	41	58.7	34.8	
10.2		43.7	35.1		9.0		57.0	50.7	9.0 a	8.3		16.6	53.1	8.0 a	9.4	42	53.8	57.7	8.5
9.5	19	47.3	33.0		8.4	47	45.6	17.1	8.5 Ga	9.2		43.6	51.7	8.8	9.0	43	11.7	57.5	
8.6	20	52.4	14.9	8.8 a	9.6		54.6	27.3		9.5		45.6	38.8		8.0		40.2	53.8	7.5 GSb
9.5	21	35.1	40.6		9.2	48	50.6	8.9	9.0	8.4		52.3	1.9	8.2 GW=	9.6		48.2	49.6	
8.0		41.7	48.5	8.8 G≅	9.1	49	29.6	7.0	9.0 a	9.1		58.1	47.5	8.2 G≅	9.2	44	2.7	3.4	
9.2	22	43.7	45.5	9.5	9.6		51.6	29.0		9.6	15	29.6	26.6		9.2		19.2	0.6	
9.7	23	21.7	49.3		9.6	50	18.6	26.7		8.7	16	25.1	38.6	8.8 =	9.0		32.7	47.6	8.5 G-
10.4		47.6	15.7		9.6		39.6	28.5		9.3		49.1	6.8		8.1	45	22.5	57.9	8.2 a
10.4		49.2	45.6	10.0	9.6	51	31.9	58.3	9.5	8.6	17	13.6	59.8	9.5 a	9.6	46	20.2	23.4	9.0 G
8.2	24	21.7	44.9	8.5 a	9.6		33.6	20.0		7.8		15.6	38.4	6.8 GSat	8.2		32.7	20.0	7.5 GSa
8.8		43.2	49.6	9.0 a	7.8	53	0.6	21.8	7.0 GSat	9.2		21.6	27.9	8.2	9.2		33.7	35.0	8.5
8.8		51.7	34.4	9.0 W	9.2		7.6	39.1		8.4		29.1	48.7	8.5 a	9.2		34.7	31.6	9.2
8.8	25	21.2	52.2	8.8 a	9.6		18.6	55.7		9.6		52.6	42.8		9.3	47	15.7	0.8	
10.2		51.7	47.5		8.8		23.1	54.2	9.0 ≡	9.1	18	5.1	32.4	8.5 =	9.8		57.2	31.3	
8.5	26	5.7	44.2	a	9.6		25.9	17.6		9.6		35.6	45.4		9.6	48	4.7	33.0	
10.2		24.2	52.1		9.5		51.4	2.1	8.8 a	8.6		52.1	19.8	8.2 G=	9.0		25.4	0.6	9.0 a
9.4		44.7	47.0		8.0	54	1.9	54.2	7.8 Ga	8.9		54.6	58.6		7.0		46.7	23.4	7.0 GSa
10.2	27	3.7	38.5		7.7		1.9	38.3	8.0 Ga	9.0	19	5.6	4.8	-	9.8	49	33.2	3.0	
8.8		11.7	59.4	9.5	9.6		25.4	0.4	9.0	8.7	20	34.0	58.4	9.0 -	9.3		38.2	27.2	9.0
7.8		35.7	57.9	8.2 Ga	8.8		38.1	0.3	9.0	8.5		53.7	5.5	8.0 b	9.8		38.2	26.7	9.0
9.7		50.2	25.9		9.6		58.4	45.2		8.0		54.7	23.5	8.0 GWa	9.1		51.2	19.5	
8.8	28	2.2	49.6	9.5 -	9.0	55	37.4	47.4	9.0 a	9.2	21	9.2	43.8		9.0	50	33.2	28.4	9.0
9.4		9.7	55.0	9.7	9.5		40.9	44.5		9.3		20.7	38.5		9.7		33.2	44.0	
9.8		25.7	10.7		8.4		49.9	54.6	8.0 Ga	9.4		31.7	42.6		9.1		51.2	36.3	
7.8		49.7	20.5	7.7 GSa	9.6	56	3.4	50.9		8.7	23	29.2	50.5	8.6 G=	9.4	51	56.2	17.2	
8.8	29	36.2	6.9	9.2	9.6		3.9	39.8		9.1		34.2	57.8	9.0	9.0	52	8.2	43.4	
9.4	30	25.7	8.3	9.0 a	9.6	57	31.9	43.8		8.8		35.2	51.7	8.1 G≅	8.3		10.7	19.3	7.5 GSa
9.6	31	30.7	36.9		10.0†		32.4	1.9		8.8	24	11.7	53.8	9.0	9.8		23.2	55.0	
10.4		47.6	20.1		9.0		34.4	55.8	9.0 a	7.8		20.0	59.3	7.6 GSb	8.4		24.7	36.1	8.5 =
8.8	32	14.2	36.0	9.2	9.6	58	51.2	11.4		9.5		47.2	45.5		9.9		41.2	16.7	
10.4		42.6	13.2		8.4	59	10.7	19.1	8.5 a	9.6	25	27.5	56.9		9.6		56.2	44.6	
9.4		42.7	49.5		8.8		43.7	29.5	8.8 a	8.7		35.2	1.5	9.0	9.7	53	20.2	28.6	
8.2	33	2.7	39.3	9.0 Ga	9.6	1	8.2	26.3		9.5		35.3	9.2		9.1		22.2	55.8	8.5 G≅
9.0		18.7	0.9		9.6		33.6	59.8		7.8	26	14.7	21.3	7.0 GSa	9.2	54	21.7	31.2	8.5 G=
9.0		20.2	47.5	9.0 -	9.6		39.7	55.1		9.6		32.6	39.1		9.2		31.7	46.1	
8.2		46.2	47.2	8.0 GWa	8.8	2	22.7	32.3	9.2	9.6	27	29.1	28.1	9.0	9.8	55	18.7	5.1	
9.2	34	23.7	26.7	8.8	9.6	3	16.7	37.4		8.9	28	51.1	37.1	9.0 a	9.2		49.7	58.2	9.0
9.8		51.2	2.3	8.5	9.6	4	9.2	15.6		8.4		57.1	23.7	8.2 G=	9.9		53.7	8.7	
8.6		53.2	35.3	8.5	8.4		29.2	28.2	8.5 a	9.2	29	15.3	57.0		9.2		59.1	12.6	
10.4	35	28.2	59.9		9.6	5	3.2	42.7		9.0	30	32.3	0.8		8.4		59.2	40.0	8.0 Ga
9.4		39.2	13.3		7.6		14.2	54.7	7.8 GStπ	9.5		32.6	49.9	9.0	9.9	56	8.6	12.1	
9.8	36	10.2	20.7		9.4	7	10.0	24.1		8.7		55.1	52.9	9.0 G-	8.4		39.1	11.2	8.5 Ga
9.2		42.2	20.1	8.8 a	9.6		28.4	3.2		9.6	31	11.1	40.9		8.3		52.6	54.7	9.0 b
7.6	37	42.7	3.4	7.0 GSa	9.6		42.5	29.6	-	9.4		41.6	20.3		8.8	58	16.1	31.5	9.0 -
10.4		57.2	16.2		9.6		43.0	48.7		9.6	32	5.1	11.2		8.8		25.3	26.0	9.0 -
9.6	38	2.2	17.3	9.0	9.6		59.0	15.6		9.2		5.6	25.5	9.5 -	9.7	59	39.8	7.1	9.0 G
8.2		23.5	11.6	8.0 Ga	9.6	8	12.0	35.7	9.0 -	7.6		25.1	44.1	6.2 GSct	9.9†	0	1.6	0.8	
8.4	39	14.0	48.2	9.0 -	9.6		15.0	14.4		9.4	33	2.1	40.8		8.9		10.1	31.4	8.0 G-
10.4		37.0	41.8		8.8		29.0	4.5	9.0 a	8.2		37.2	13.8	8.0 Ga	9.4		41.6	30.2	9.0
10.2	40	5.5	28.6		9.6	9	36.1	45.2		9.7		50.6	37.0		7.4		47.6	46.0	7.8 GSa
10.0		8.0	20.1	9.0	9.5		56.6	16.0		8.4	36	5.2	21.5	9.0 G-	9.3	1	39.6	52.7	
10.4		12.5	9.9	9.0 a	9.6	10	4.3	37.7		8.6		25.2	33.8	8.8 b-	9.0		51.6	22.5	9.0
8.4		45.0	48.4	8.5 G=	9.6		16.6	12.1		8.8		31.2	8.5		9.3	2	12.6	20.1	
7.3	41	2.0	35.0	7.0 GSb=	9.6	11	44.8	50.2	9.0	8.4		32.2	33.6	9.0 a	9.2		30.1	38.5	
10.4		16.8	9.1		9.4	12	10.1	32.0		8.1	38	39.7	6.0	8.3 GWa	9.4		31.6	9.9	
9.7	42	55.0	2.6		8.2		17.1	16.0	8.0 Gb-	9.1	39	11.7	30.3		8.9		32.9	56.5	8.5 G-
25pr.	+1	14.3	-8.3		+1	16.6	-8.4			+1	18.8	-8.3			+1	21.1	-8.1		

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
mag.	13 ^h .	-29°		mag.	13 ^h .	-29°		mag.	13 ^h .	-29°		mag.	13 ^h -14 ^h .	-29°	
	m s			m s	m s			m s	m s			m s	m s		
8.8	4 2.3	52.8	9.0	10.4	27 0.1	46.9		10.3	40 7.9	46.2		8.7	56 18.6	59.8	8.2 Ga
9.0	35.3	31.5	9.5 =	10.2	1.1	5.4		9.6	8.9	45.9		9.5	32.6	52.3	
8.2	5 35.3	38.2	8.5 =	9.6	4.1	0.1	9.0 a	9.4	35.9	41.9		9.5	57 1.6	47.0	
9.7	39.8	38.1		10.3	48.1	33.0		9.4	41 16.9	24.1		8.4	12.6	17.8	8.0 Ga
9.6	6 22.8	26.4	9.0 G	8.2	57.1	16.9	-	9.0	26.4	36.3	9.0 -	9.5	32.6	33.8	
9.2	7 9.3	40.1	9.2	9.2	28 3.6	39.8		9.2	45.4	27.5	9.0	9.5	36.1	12.0	
9.2	12.3	12.6	9.0 a	9.0	10.1	38.4		8.1	47.4	2.3	7.8 GSa	8.9	42.6	20.8	9.5
8.3	8 11.3	31.0	8.0 GWa	10.4	53.3	59.2		9.8	51.4	44.6		8.7	58.6	36.2	
8.7	30.3	53.8	9.0 G=	9.6	29 1.6	45.2		9.9	42 21.9	8.3		9.0	58 26.6	44.3	-
9.4	9 42.8	35.2		9.0	12.9	1.3	9.0	9.4	51.4	26.9		9.5	31.6	57.8	
9.2	52.3	25.2		10.2	29.6	52.1		9.2	43 21.9	42.2		8.5	32.1	59.8	8.5 a
7.8	58.8	56.0	7.5 GSat	9.6	49.6	20.0		8.6	31.9	38.3	a	8.7	59 23.6	4.8	9.0
9.6	10 5.8	21.2		10.4	58.6	13.7	G	7.7	37.4	15.1	7.0 GSa	9.5	28.1	40.0	
9.7	32.1	1.3		9.4	30 7.1	38.2	9.0	9.9	45.4	25.2		8.8	0 48.1	9.0	9.0 -
9.2	41.8	29.0		10.3	13.6	17.9		8.5	44 0.8	56.8	7.5 Ga	9.0	53.6	57.4	9.5
8.4	46.3	44.5	8.5 G=	9.4	19.1	32.1	9.0 a	9.4	6.4	26.8		9.5	1 27.1	49.0	
9.6	11 7.8	30.1		9.4	33.6	26.7	9.0 a	10.3	24.4	42.6		9.5	45.6	50.2	
9.6	21.3	16.4		10.3	37.1	15.2		8.7	25.4	48.5	8.5 -	8.2	46.6	30.2	8.0 =
9.2	44.4	13.1		7.6	31 22.1	12.2	7.0 GStπ	8.4	41.4	42.8	8.0 a	8.4	48.1	58.8	9.0
9.4	45.9	53.2		10.3	38.1	37.6		10.3	41.9	50.0		8.7	50.6	15.7	
9.4	8.4	54.7		10.3	39.1	16.7		10.3	49.9	12.9		9.5	56.1	38.0	
9.4	9.4	41.5		10.0	46.6	28.1		10.2	53.4	14.2		9.5	2 37.1	16.0	
7.8	47.4	40.4	8.5 a	8.2	32 0.6	38.3	8.2 Ga	10.4	45 12.4	43.3		8.5	40.1	51.0	8.5 a
8.9	13 46.9	8.0	9.0 a	8.6	3.6	37.3	9.0	10.2	22.9	39.5		9.5	44.6	15.8	
9.7	14 28.9	52.2		10.4	24.1	55.6		8.9	29.4	51.5	8.5 a	9.0	56.6	58.6	
9.4	31.9	19.3	9.5	9.0	26.6	43.1	9.0	8.7	32.6	23.9		9.5	57.6	35.6	
9.2	50.9	33.9	9.0	10.2	34.1	38.9		9.6	57.6	33.0		9.0	3 6.6	58.6	9.0 b
9.3	57.9	48.0		10.3	33 35.4	51.9		10.4	57.9	58.2		7.4	9.6	29.7	7.5 GSb=
8.5	15 45.9	32.5	9.5 -	10.4	37.9	27.0		9.2	58.4	42.6		9.5	29.1	4.0	
8.9	16 0.9	54.3	9.0	10.4	51.4	13.3		9.3	46 10.6	38.0		8.3	4 5.6	11.6	GSa
9.2	18.9	42.5	9.0	8.3	58.9	5.8	7.8 GSat	8.8	31.3	59.0	8.5	9.5	12.1	55.8	
9.2	17 31.4	46.9	9.5	9.2	34 11.9	54.6	9.0	8.4	41.8	40.0	8.0 =	9.5	25.1	11.0	
8.6	18 9.9	43.8	9.5	8.4	11.9	16.6	8.5 Ga	7.9	45.1	23.6	8.0 -	8.8	36.6	18.3	9.0
8.2	14.9	43.6	8.5 Ga	9.6	29.4	57.4	9.0	9.4	47 40.8	7.4		9.4	37.6	31.4	
9.7	24.9	42.0	9.5	9.0	36.4	26.2	8.5 =	9.5	48 25.3	25.3		9.5	40.6	48.2	
9.7	19 9.4	15.9		10.3	40.4	31.7		9.5	44.1	57.9	7.0 GSa	9.1	56.1	8.3	
9.7	48.4	46.2		10.4	42.4	11.0		7.5	44.1	57.9	7.0 GSa	9.5	5 21.3	39.0	9.5
9.2	20 42.4	15.1		9.0	52.4	6.5	9.0	8.4	53.8	16.2	8.0 Ga	9.5	24.1	12.6	
9.0	21 2.7	8.6	9.5	10.4	56.9	36.2		8.6	49 8.8	33.8		9.5	42.6	24.8	8.5 a
9.4	14.7	34.6		8.2	35 12.4	8.2	9.0 a	9.5	50 2.3	44.9		8.4	42.6	24.8	8.5 a
9.9	29.4	43.0		9.6	13.9	5.3	9.0 a	9.0	4.8	10.0		9.0	40.6	34.9	9.0
10.4	29.9	52.8		7.4	56.9	33.0	7.5 GSa	9.5	5.3	31.3		9.2	56.1	41.2	
9.6	30.1	49.1		9.6	36 3.4	57.5	9.5	9.5	41.8	54.3		8.3	7 4.1	36.2	8.5 =
9.4	59.6	29.3		10.4	44.5	59.6		8.0	51 0.8	7.9	7.5 GSat	8.8	16.6	56.9	
10.4	22 3.9	19.2		9.8	54.4	34.9		8.3	7.8	27.8	8.5 a	8.8	49.9	59.7	9.0
9.4	6.4	33.8	9.5 -	10.4	37 3.1	1.8		8.2	48.8	32.7	8.0 a	9.1	8 23.1	58.0	9.0
9.6	12.9	30.7	9.0 a	9.9	3.9	14.6		8.8	52 11.8	6.9		8.8	31.6	7.0	8.8 G
10.2	19.9	17.9		10.0	10.9	59.7		9.2	20.3	36.7		8.4	40.6	13.4	8.5 a
9.2	51.9	25.4		10.4	16.9	3.9		9.1	29.1	56.6		9.1	41.6	5.1	9.5
10.0	23 12.4	52.1		9.0	21.9	29.9		9.5	33.8	37.2		9.5	43.6	41.6	
10.3	27.1	24.4		9.9	46.9	44.6		9.5	53 32.8	50.6		9.1	9 17.1	41.3	-
10.3	35.6	46.8		10.0	51.9	47.1		9.0	33.9	58.6		8.8	32.6	23.3	8.5 G
10.2	51.6	22.0		9.4	53.9	41.3		9.0	37.8	3.2	9.0 -	9.3	33.6	37.2	
9.6	24 28.1	32.4		10.4	38 7.9	15.3		8.9	54 40.6	24.3		9.1	10 18.3	20.9	
10.3	45.6	4.3		8.2	24.4	48.6	8.5 a	9.1	55 53.1	51.1		9.7	20.3	41.4	
9.9	25 4.6	49.4	9.0	9.2	47.9	27.0		9.5	54.6	54.9		9.7	22.3	35.1	
10.3	48.1	32.9		8.9	54.9	38.0		9.3	56.6	45.8		9.0	11 6.3	58.0	
9.4	26 7.1	20.1		10.3	39 2.4	34.7		9.5	56 3.6	20.4		9.7	12 51.3	31.9	
9.0	37.8	59.4	8.5 -	8.2	11.4	50.7	8.0 Ga	9.0	8.6	32.4		8.8	13 6.3	27.5	8.8 a
10.3	43.1	56.9		9.4	52.8	2.7	9.0 a	9.0	10.6	2.6		9.4	28.2	57.0	
25pr.	+ 1 23.0	- 7.9			+ 1 24.3	- 7.7			+ 1 25.2	- 7.5			+ 1 26.6	- 7.2	

3961-4020.				4021-4080.				4081-4140.				4141-4200.			
mag.	14 ^h .	-29°		mag.	14 ^h .	-29°		mag.	14 ^h -15 ^h	-29°		mag.	15 ^h .	-29°	
	m	s		m	s			m	s			m	s		
9.7	14	48.3	21.1 9.5	9.3	35	7.5	22.8	8.4	56	15.3	59.0 8.0 a	9.5	9	59.4	34.8
9.7		57.3	52.2	8.6		43.0	49.4 8.5 ≡	9.9		16.5	10.4	6.9	10	13.9	41.2 5.0 GSπβ
9.7	15	23.6	1.1	8.3		47.0	15.8 a	9.8		20.5	43.4	9.8		52.4	48.7
8.7		26.8	31.7 8.5 G=	7.8	36	2.0	40.3 7.5 GSb≡	9.9		25.5	59.7	9.5	11	9.4	59.4
9.3		32.6	33.1 9.0	7.4		19.0	27.6 7.0 GSa	9.3		30.5	22.9 9.5	9.5		42.4	42.2 9.0
9.7		43.6	55.0	8.6		27.0	36.2 9.0 a	8.6		56.5	28.4 8.8 a	9.8	12	6.1	58.2
9.7	16	5.6	29.8	9.2		28.0	4.4 9.2 a	9.4	57	45.5	0.7	8.6		7.9	36.7 8.5 a
8.8		13.1	14.7 -	9.5		53.0	9.6	8.2		46.0	30.0 7.0 GSa	9.5		13.9	21.5
9.6		17.1	18.0	9.6		11.5	6.0 9.5	9.8		48.5	32.2 9.5	8.8		20.4	39.0 8.5 a
9.6†		36.5	0.9	9.3	37	51.0	24.4	8.7	58	37.4	56.0 8.0 Ga	8.9		28.4	28.2 9.0 a
7.5		37.1	6.4 7.0 GSat	9.8		58.0	40.0	9.9	59	23.9	3.6	9.7	13	9.4	33.8
9.6		57.6	33.3	9.5	38	24.0	10.3	9.4		30.2	59.9	9.6		10.9	55.5
9.6	17	13.6	55.4	9.6	39	45.5	57.6	9.5		30.4	37.6	9.5		19.4	27.2
9.3		14.6	30.5 -	8.8		48.5	54.2 9.0	7.8		43.7	1.1 8.0 GWa	9.9		39.9	40.8
9.0		16.1	37.4	8.4		58.0	49.4 8.2 G≡	9.4		46.4	14.7	9.6		44.4	59.8
8.0		19.1	3.1 8.0 GSa	9.6	40	7.0	27.9	9.5		58.4	29.7	9.4		50.9	4.5 9.0
9.6		45.6	1.1	9.2		9.5	54.0 9.0 G	9.9	0	30.9	55.9	9.5		57.9	50.2
9.7	18	4.1	39.2	9.5		10.5	8.6	9.6		31.9	16.5	9.9	14	5.9	24.0
8.3		40.6	43.1 7.5 Ga	9.6		12.0	13.0	9.8		35.4	28.6	9.7		27.9	25.3
9.7	19	58.8	30.4 9.5 G	8.7		44.0	53.5 8.5 a	9.9	1	9.4	21.5	9.8		49.9	53.8
8.9	20	25.1	25.1 9.5	9.0	41	0.0	6.0 9.2	9.4		20.9	50.7 9.0 a	8.6		52.9	55.8 8.5 GWa
8.6	21	0.6	55.9 8.2 ≡	8.1		5.4	55.2 8.2 Ga	9.8		56.9	7.6	8.9	15	8.9	57.3 8.8 Wa
9.6		47.6	10.5	9.9		18.4	6.5	8.6	2	18.9	21.4 9.5	9.9		17.4	24.3
8.4	22	10.1	8.9 8.5 Ga	8.5		33.4	2.2 9.0 -	9.9		21.4	40.1	9.9		27.9	29.0
9.2		25.1	22.1 9.0 -	9.3	42	4.4	53.3 9.0 a	9.5		43.9	31.0	9.8		30.4	22.4
9.7		32.1	26.7	9.4		21.9	13.9	9.3	3	11.4	40.0	9.9		31.9	56.0
8.0		39.6	4.5 8.0 Ga	9.9	43	0.9	43.7	9.5		20.4	55.6	8.8		53.9	32.6 a
9.0	23	34.1	37.4 9.0 G	9.2		24.9	3.5 a	9.8		27.9	50.0	9.9		54.9	53.8
8.8		37.1	32.3 8.0 Gb	9.4	44	29.4	27.2	9.8		30.9	38.0	9.9	16	3.4	43.0
9.7		39.8	22.8	9.2		56.9	54.5 9.5	9.6		34.0	59.2	9.4		12.4	34.4
9.6	24	43.6	54.5	9.0	46	27.4	13.7	9.9		49.9	49.0	9.1		17.4	48.6
9.7		56.1	53.8 9.5	9.3		35.9	29.0	9.8		49.9	4.6	9.6		21.4	48.0
9.0	25	17.1	46.5 8.8 =	9.4		41.9	15.9	9.6		59.4	32.5	9.9		29.9	42.8
9.0		56.9	1.5 9.0 a	9.9		11.4	15.7	9.8	4	13.4	42.2	9.9		42.4	47.2
9.6	26	7.1	57.4	8.7		12.4	20.3 9.0 -	9.6		32.9	18.0	9.6		54.9	10.0
8.4		39.6	7.2 8.8 Ga	9.3		20.4	10.9	9.6		41.6	0.5	9.7	17	8.4	50.6
9.6		43.1	31.4 9.0	8.3		51.1	1.5 8.3 GWa	9.6	5	4.9	10.8	9.4		29.9	38.2 8.5 Ga
8.8		52.1	54.7 9.0	9.6		53.5	32.0	9.4		8.6	30.0	9.8		40.4	21.6
9.7	27	14.1	55.2	9.8	48	22.5	6.5	9.9		13.8	24.6	9.5		42.7	58.4
9.4	28	2.6	20.1	8.4		52.5	27.0 8.2 Ga	9.8		26.9	25.2	9.5	18	9.4	8.0
9.4		26.1	43.1 8.8 -	9.2	49	19.0	31.4 8.5 G-	9.6		40.4	42.0	9.9		21.9	49.0
9.4		36.6	56.4	9.2		21.5	46.4 9.0	9.9		42.9	18.3	9.2		23.9	39.7 9.0 a
8.6		56.1	58.5 9.0	9.8	50	24.5	53.5 9.5	9.7		48.9	21.4	9.5		29.4	14.3
8.6		57.1	38.9 9.0 a	9.3		31.5	39.9	9.9		54.9	12.4	9.2		33.4	38.9 9.5
9.1	29	18.6	5.5 8.5	9.9		45.0	35.8 a	8.6	6	5.9	17.2 ≡	9.8		41.9	50.5
9.4		19.1	21.7	9.5	51	1.5	55.9	9.9		9.4	58.4	9.7		53.4	14.4
8.8		41.6	35.6 9.2 a	9.5		8.5	43.5	9.5		40.9	9.6	9.5	19	0.9	11.7
8.6		49.1	37.8 8.0 Ga	9.9		30.0	54.8	9.9		57.9	38.6	9.9		31.4	33.5
8.2	30	6.6	8.3 8.0 Ga	9.4	52	3.0	42.0	9.4	7	7.4	48.6	9.7		33.9	48.9
9.1		8.1	8.4 9.0 G!	9.2		15.5	55.0 9.0 a	9.8		10.4	10.0	8.6		57.4	5.5 9.0 a
9.4		19.5	57.9	8.8		21.5	51.4 8.5 Ga	9.8		27.9	29.3	9.5	20	12.9	37.7
9.1	31	22.0	45.4	8.8		53	40.0 7.9 9.2 a	9.9		29.4	26.8	9.6		33.4	42.1
9.0		36.5	58.7	9.9		54	2.5 56.3	9.5		57.9	37.5	9.9		54.4	55.5
9.6		59.0	42.5	9.4		31.0	37.4	9.3	8	8.9	25.8	9.4		58.3	46.6
9.2	32	53.8	52.5	9.3	55	29.0	34.0	9.4		10.9	33.5 9.0	8.2	21	4.0	8.0 8.0 Ga
8.2		59.4	59.9 8.0 Ga	9.4		35.0	28.9	9.8		22.9	44.4	9.9		6.4	29.3
9.8	33	23.7	1.0	8.8		52.5	19.8 9.5 a	9.9		47.9	59.4	9.5		29.4	57.5
7.2	34	22.5	9.7 7.0 GSat	9.2		58.0	39.3	9.3	9	21.4	54.2 9.0	9.4		51.4	46.7
9.6		24.0	58.7	9.8		59.0	20.1 9.5	9.7		29.4	37.5	9.7	22	1.4	44.9
9.2		52.7	59.9	8.8	56	8.5	21.4 8.8 a.	9.9		50.4	7.6	9.6		14.4	30.8
25pr.	+ 1	27.9	- 6.8		+ 1	29.8	- 6.8		+ 1	30.4	- 5.8		+ 1	31.1	- 5.5

4201-4260.			4261-4320.			4321-4380.			4381-4440.					
mag.	15 ^h	-29°	mag.	15 ^h	-29°	mag.	15 ^h -16 ^h	-29°	mag.	16 ^h	-29°			
9.5	22 19.2	58.6	8.4	38 8.1	28.1	8.8 -	9.4	50 58.5	33.4	8.2	9 54.0	29.1 -		
9.4	39.9	58.5	9.7	26.6	23.0		10.0	51 13.5	37.4	9.0	10 4.5	37.7		
9.7	41.9	20.3	9.7	33.1	30.6		8.2	27.5	37.0	8.5 =	9.3	39.0	19.2	
9.9	46.4	20.0	9.1	43.6	4.1		9.5†	32.7	0.2		9.6	53.5	51.2	
9.5	48.0	45.2	9.1	56.6	41.4		9.2	39.5	58.1	9.0	9.7	54.0	55.4	
9.6	50.2	35.6	9.2	39 0.1	9.4		7.7	53.0	43.4	7.5 GSbc	9.8	56.0	36.9	
9.7	23 4.1	23.9	9.4	2.1	24.0		7.6	53.5	16.3	GSb=c	9.9	11 0.0	22.2	
9.7	44.1	25.5	9.1	2.6	55.8		10.0	52 0.5	12.2	9.0	8.4	42.5	38.4	8.5 G-
9.7	48.1	6.1	9.7	31.8	17.7		9.6	3.0	31.6		9.4	45.7	58.1	
9.2	52.6	49.1	9.6	43.1	44.1		8.4	21.5	37.8	9.0 -	9.9	53.7	8.1	9.0 -
9.7	24 6.1	23.7	9.2	40 13.1	58.1		9.4	53 2.5	32.5	10.0	9.4	12 3.0	2.6	
8.6	39.6	46.1	9.2	17.1	0.7	9.2	9.2	31.5	23.7	9.0	9.9	27.5	53.0	
8.8	25 11.1	9.1	9.2	17.1	7.3	9.0	10.0	42.7	3.2		9.8	30.5	46.9	
9.7	25.6	32.0	9.7	17.8	46.4		10.0	54 8.5	55.4		9.9	35.5	30.0	
9.6	29.1	14.0	9.0	19.6	21.5	-	8.4	17.5	21.6	9.0	7.7	45.5	12.6	7.8 GSa
9.0	36.6	17.7	9.6	26.1	14.4		8.8	55 15.5	54.8	8.2 G≡	9.9	13 2.2	30.0	9.0
9.1	46.1	47.9	8.6	54.6	37.5	-	9.2	20.0	19.4		8.8	18.7	39.9	
9.2	26 33.1	49.4	9.7	41 6.6	15.7		10.0	29.0	53.1		8.2	24.7	48.0	8.0 a
9.7	27 40.6	6.6	9.7	8.6	4.1		9.2	33.0	39.5		9.9	43.2	15.0	
8.6	28 13.1	9.3	8.0	10.6	5.8	8.0 GSac	9.6	35.0	53.2		9.2	48.2	4.4	
9.7	23.1	44.1	9.7	12.6	3.4		8.3	46.0	47.2	8.5 Gb	9.0	48.7	3.2	
9.7	46.6	5.7	7.8	29.6	49.4	8.3 G≡	10.0	50.7	56.0		9.1	51.2	51.0	9.5
9.7	29 26.1	39.6	8.6	51.6	51.7	9.2 Ga	9.8	56 2.5	21.2		9.6	14 31.7	12.9	
9.7	39.1	40.0	8.2	57.1	2.7	9.0	10.0	3.0	37.5		9.9	55.5	11.3	
9.7	53.1	42.6	9.4	42 5.6	32.1		9.4	5.5	44.5		9.1	15 6.2	48.0	=
9.7	30 1.6	35.1	9.7	18.8	42.1		9.6	32.5	29.6	9.2	9.9	44.5	5.1	
9.6	20.6	51.1	9.7	27.0	34.7		9.5	38.5	37.3		9.9	57.7	22.1	
9.6	23.1	24.6	8.9	32.5	2.5	9.0	9.4	57 22.5	42.0		8.8	59.7	53.2	8.0 a
9.6	27.1	16.3	8.6	42.0	2.0	8.0 G	9.4	54.5	5.0		9.0	16 3.2	28.9	
8.7	31.1	33.5	9.6	50.5	9.2	9.0	10.0	58 42.0	5.2		8.3	15.7	52.0	8.5 a
9.2	36.6	45.4	9.7	55.0	58.5		9.0	59 15.5	29.0	9.2	6.9	49.2	24.5	6.0 GSπμ
8.0	42.6	11.0	9.6	43 3.0	12.4		10.0	32.5	23.8		9.9	54.2	19.7	
3.9	58.6	21.8	8.4	12.0	7.4	8.5 G	10.0	45.5	41.3		9.7	17 10.2	57.5	
9.2	31 0.1	56.7	9.2	12.0	51.0	8.8 a	8.7	50.0	8.0	8.5 ≡	9.9	23.5	58.6	
9.4	28.6	8.4	8.3	20.0	42.0	8.0 Ga	9.0	51.5	37.4	9.5	9.1	45.7	34.0	9.0
9.6	28.6	23.5	9.4	26.5	23.4		9.4	57.0	19.5		7.8	50.2	6.7	7.8 GSτ
9.6	36.6	15.8	9.0	28.5	56.1		9.0	0 43.5	40.1	8.5 =	8.1	57.2	37.9	7.5 GSbc
8.1	32 14.6	20.3	8.7	36.0	18.2	9.0	8.4	1 14.5	55.5	8.2 Wb	9.8	18 31.2	17.6	
9.0	18.6	32.3	9.6	46.0	13.6		10.0	27.0	25.5	9.5	9.8	19 2.2	0.0	
9.7	23.6	33.4	9.6	44 19.5	22.8		10.0	39.0	52.6	9.5	9.3	20.2	3.3	
8.1	40.6	33.5	9.6	22.5	46.8		9.8	39.7	49.7		9.8	22.2	23.7	
9.4	42.6	54.9	7.6	30.0	30.2	7.0 GSct	9.1	2 6.0	57.0	9.0 -	9.6	28.2	31.0	
9.7	42.6	55.8	9.6	32.0	47.7		9.0	7.0	35.2	a	8.8	29.2	10.7	9.0 Wa
8.6	43.6	22.2	9.1	38.5	9.2	9.0	9.6	23.0	25.1		9.0	34.2	5.2	8.8 Wa
9.2	33 1.6	14.5	9.7	48.5	33.8		9.6	42.5	33.0		7.2	41.4	0.3	7.2 GSac
8.4	34 12.1	44.5	9.1	56.0	3.1	9.2 a	10.0	3 0.5	25.3		9.7	20 51.5	18.0	10.0
9.0	13.6	43.9	9.7	45 3.0	13.1		7.0	16.0	5.2	6.0 GSτ	9.4	21 4.5	52.6	10.0
8.7	53.1	0.2	9.7	4.0	31.3		10.0	41.5	39.0		9.9	35.5	12.0	9.2
9.1	35 30.6	7.0	8.6	8.1	29.2	8.5 a	9.4	4 7.5	33.1	-	9.1	46.0	47.8	
9.4	37.6	33.1	8.1	12.5	27.9	8.5 Ga	9.4	43.5	40.1		8.8	46.5	35.3	8.5 a
8.8	54.1	15.9	9.7	13.5	10.1		8.2	50.0	49.6	8.5 Wa	8.6	59.0	47.6	9.0 -
9.2	36 36.1	21.5	8.7	16.2	52.4	9.0	9.6	5 19.5	40.9		9.6	22 1.0	44.9	
8.2	38.6	48.1	10.0	47 3.6	21.7	9.0	8.4	22.0	19.4	9.0 a	9.8	49.0	41.6	
9.7	51.6	49.1	9.4	59.4	58.3	9.0 a	7.8	6 1.0	53.4	7.5 GSbc	8.0	52.0	12.4	8.0 Ga
9.4	37 2.1	32.8	10.0	48 30.7	7.1		9.6	10.0	53.8	9.5	8.6	23 19.0	43.3	8.5 a
9.6	17.1	44.4	7.8	49 32.5	37.7	8.0 ≡	9.4	43.5	24.8		9.3	26.5	40.4	
9.4	35.6	32.4	10.0	44.5	15.0		9.6	58.5	4.2		9.9	41.5	3.9	
8.8	38 4.1	57.1	10.0	50 30.0	43.5		9.0	8 12.0	42.9		9.7	43.5	46.4	
7.8	4.1	38.7	9.2	46.0	7.3		9.4	18.5	29.8	9.5	8.6	50.5	36.9	8.0 Wa
9.7	7.8	55.0	10.0	55.5	57.2		7.7	9 3.5	25.9	8.0 GSac	9.0	54.5	22.3	
25pr.	+ 1 31.9	- 5.1												
				+ 1 32.4	- 4.6									
								+ 1 33.2	- 4.2					
												+ 1 33.9	- 3.6	

4441-4500.				4501-4560.				4561-4620.				4621-4680.					
16 ^h .		-29°		16 ^h .		-29°		16 ^h -17 ^h .		-29°		17 ^h .		-29°			
mag.	m	s	°	mag.	m	s	°	mag.	m	s	°	mag.	m	s	°		
8.8	24	10.5	47.0	9.0	8.6	39	52.0	42.6	9.0	≡		8.9	8	35.9	35.1	9.0	-
9.9		20.7	39.2	9.5	9.6		52.5	54.1	10.0			10.3		56.9	46.0		
8.8		42.2	55.3	9.0	9.2		56.0	30.7	8.4			9.8		56.9	20.3		
9.3		43.7	56.0	9.0	9.6	40	52.0	45.1	10.0	55	3.2	26.6	10.3	9	20.4	44.0	10.0
9.9		53.2	24.4		9.0	41	9.0	43.2	8.7			9.7		42.0	38.6		
9.9	25	8.2	3.3	9.5	10.0		10.3	4.7	9.6			9.8		43.9	5.9		
9.2		30.2	40.7	-	9.8		11.0	27.8	9.8			9.8	10	4.0	22.5		
9.9		32.2	52.5		9.4		24.0	31.2	8.0	56	1.2	54.1	9.8	9.5	20.5	14.0	
9.8		34.7	36.2		10.0		45.0	19.5	9.4			8.2		25.0	44.1	7.5	GSac
9.7		49.7	39.2		10.0		58.5	45.8	10.0			9.0		29.5	49.7	8.5	Wa
8.6	26	16.7	33.9	a	9.2	42	34.5	21.4	8.8	57	7.7	32.6	8.9	34.5	25.0		
9.7		18.2	22.4		9.8		56.0	0.9	8.2			9.9	9.4	36.0	24.7		
8.8		30.2	26.8	9.0	7.8	43	25.5	51.8	9.8			53.7	9.4	48.5	20.8		
9.6	27	16.2	26.7		8.2		40.5	11.6	10.2			58.6	9.2	53.7	2.8		
8.8		33.7	16.1	8.0	8.2		40.5	11.6	8.6	58	9.7	7.9	10.1	10.1	11	2.5	41.0
9.6		38.7	48.8		9.1		44.0	56.3	8.6			32.2	10.0	22.5	28.2		
9.9		53.2	3.9		10.0	44	13.0	57.0	7.8			41.7	8.8	34.5	9.7	8.8	a
9.9		55.2	12.9		9.4		25.5	57.3	10.3			41.7	10.2	39.5	7.7		
9.8	28	2.2	25.0		9.6	45	7.0	51.2	9.2	59	14.2	32.8	9.7	9.7	43.0	17.3	
8.6		50.2	17.3	8.5	8.8		19.5	46.2	10.0			50.7	9.2	52.5	51.9		
					8.6		53.0	9.8	9.8			54.7	9.7	52.5	53.8		
9.4	29	8.2	21.8	9.5	9.6		59.0	13.7	10.3	0	3.7	3.1	10.1	5.7	5.7	41.6	
9.6		10.7	26.9		10.0	46	7.5	8.3	8.1			19.7	10.3	57.5	44.5		
9.1		27.7	51.5	9.5	9.2		8.0	54.9	9.0			25.7	9.2	12.5	44.5		
8.8	30	18.7	25.3	9.0	8.6		16.5	10.7	9.0			26.7	9.2	13.5	56.3		
8.3		52.7	38.2	8.0	9.4		49.5	56.0	10.3			27.7	10.0	14.0	2.6		
9.3		54.2	39.0		9.1		49.5	7.1	8.6			33.7	9.8	20.0	5.9		
7.4	31	22.2	40.3	7.5	7.8	47	5.0	38.6	8.7			34.9	10.2	21.5	31.3		
9.9		32.14	37.3		9.4		5.5	44.0	10.3			45.9	9.7	30.0	8.6	10.0	
8.8	33	0.4	57.0	9.0	8.8		9.5	5.9	10.0			56.4	7.8	32.0	14.0	7.5	GSac
9.9		10.2	39.5		9.2		22.0	34.1	8.2	1	23.4	44.1	8.6	36.5	9.2	8.5	a
9.1		25.7	18.4		10.0		25.0	0.5	9.6			50.9	8.9	39.5	16.0	8.5	a
9.3		51.7	12.3	-	10.0		38.0	21.1	9.4	2	11.4	48.5	9.7	42.0	43.6		
9.6	34	31.4	23.6	9.5	8.4		39.0	4.3	10.0			29.4	10.2	55.5	19.0		
9.1		39.7	9.0	9.5	9.2	48	27.0	6.4	10.1			3.4	9.2	58.0	6.6	9.5	
9.4		59.7	32.3		8.7	49	51.0	24.3	10.3	3	3.4	53.1	10.2	15.0	11.6		
8.4	35	8.7	12.7	9.0	10.0	50	9.2	43.8	10.3			5.9	9.4	39.0	43.9		
9.6		18.9	59.7		10.0	50	9.2	43.8	10.3			17.4	10.1	42.0	13.9		
10.0		22.7	16.5		8.4		10.5	39.6	10.3			31.9	9.1	42.0	36.1	8.5	a
9.5		26.2	8.5	9.5	10.0		19.5	6.6	10.0			41.6	9.2	4.0	27.5		
10.0		56.2	59.0		9.5		21.0	6.4	9.4			43.4	9.4	10.5	33.5	10.0	
					9.4		34.0	12.8	9.1			57.9	10.0				
8.2	36	2.7	20.9	a	8.0		34.0	12.6	9.1	4	1.4	18.9	10.0	12.5	1.5		
8.4		14.2	3.7	9.0	9.4		37.0	5.0	10.3			7.9	10.2	23.0	38.5		
8.7		40.7	21.5	-	8.4		39.0	55.3	9.2			31.4	9.6	27.5	57.8		
8.8		43.7	23.8	-	9.6		49.0	6.6	8.9			59.9	9.4	31.5	1.4		
9.6	37	9.6	59.9		9.2		50.5	58.6	10.0	5	11.4	8.3	10.3	32.0	7.1		
9.8		17.7	5.7		9.8		53.0	4.8	9.8			21.9	9.6	42.0	3.9		
10.0		26.7	22.3		10.0		54.0	34.0	9.8			38.4	10.3	54.4	28.9		
8.9		39.7	12.3	≧	10.0	51	13.0	10.0	9.8			50.9	9.5	55.9	32.6		
9.1		50.2	3.9	8.8	10.0		14.5	18.9	10.3			53.4	10.0	59.9	27.3		
10.0	38	26.7	52.1		10.0		19.5	24.4	9.0	6	14.9	54.0	10.2	15	0.9	50.6	
10.0		31.2	18.2		9.4		20.0	36.8	9.8			36.4	9.4	8.4	13.7		
10.0		31.2	38.3		9.6	52	2.0	8.6	9.2			42.4	9.0	12.4	24.5		
10.0		37.7	13.1		10.0		20.0	52.0	10.3			0.4	9.4	39.9	7.5	9.2	
10.0		45.2	54.1		10.0		39.0	51.0	9.0			12.9	10.2	50.4	13.3		
10.0		45.7	59.9		8.4		47.0	4.1	10.0			12.9	10.2	52.4	7.4		
9.6		55.2	40.5		8.4	53	6.5	28.9	10.3			16.4	8.6	55.4	41.9	8.0	GSb
8.2	39	11.7	21.7	8.5	neb.		15.7	55.6	10.0			37.9	10.3	2.7	59.9		
10.0		30.2	32.3		9.6		16.4	0.6	9.8			46.9	10.3	5.7	13.0		
10.0		33.2	59.9		8.4		16.7	29.7	9.4	8	20.9	39.6	10.3	10.3	6.9	23.5	
9.2		46.5	3.0	9.5	9.8		59.2	12.6	10.3			23.9	10.0	11.9	13.1		
25pr.	+1	34.4	-3.1		+1	34.7	-2.6		+1	35.1	-2.1		+1	35.3	-1.7		

4681—4740.				4741—4800.				4801—4860.				4861—4920.			
17 ^h .		—29°		17 ^h .		—29°		17 ^h .		—29°		17 ^h .		—29°	
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s
8.0	16 21.4	44.9	8.0 GSa	10.1	21 59.8	31.8		9.4	29 12.2	46.8	—	8.8	37 16.8	47.6	a
9.7	27.4	41.4		10.3	22 4.1	59.7		9.5	16.2	23.1		10.2	20.3	25.1	
10.1	29.4	42.4		10.3	6.8	43.9		9.8	16.4	39.5		9.8	29.8	41.6	
9.8	31.4	43.8		10.2	15.0	44.7		9.8	19.7	46.7		9.8	31.8	15.0	10.0
10.0	48.4	0.7		10.2	19.3	38.1		9.8	32.2	3.3		9.4	33.8	3.8	
9.8	53.9	21.9		10.2	25.8	6.4		9.6	40.7	4.9		9.8	37.3	29.0	
10.3	59.0	16.7		9.0	29.0	19.6		9.6	42.7	11.2		9.7	46.8	10.1	
10.0	17 21.4	33.4		10.2	29.5	22.8		10.2	44.2	46.8		10.2	50.0	32.8	
7.6	31.9	33.2	7.5 GSac	9.9	33.3	33.4		9.4	44.7	11.6		9.0	53.3	27.4	
10.3	33.4	25.3		10.2	49.0	11.2		10.0	46.7	33.7		9.7	53.8	41.0	
9.2	36.9	37.4	10.0	9.0	56.3	32.2	10.0	9.4	56.2	6.5		9.0	38 4.3	1.7	9.5 -
8.8	43.4	26.0	9.0 a	10.0	23 4.5	58.0		8.7	56.7	58.0	10.0	10.2	13.1	4.2	
9.4	54.9	19.8		9.7	10.1	58.8		9.8	56.7	12.5		10.2	16.1	16.2	
10.2	5.0	41.2	10.0	9.7	14.0	51.2		9.2	58.7	23.7		9.6	19.6	16.9	
10.2	6.4	26.7		8.9	15.8	59.6	9.5	9.3	30 7.0	2.4	10.0	10.2	23.6	16.9	
10.2	7.0	19.4		9.4	28.0	33.5		9.4	7.2	2.0	10.0	8.9	37.6	36.7	8.5 =
9.8	9.9	35.0		9.2	34.0	52.2		9.5	7.7	39.9		8.9	42.6	20.2	8.5 Ga
10.1	22.9	25.0		9.4	51.5	32.9	10.0	9.8	9.2	32.4		9.7	44.6	38.6	
10.3	26.9	3.8		10.2	53.0	23.1		10.2	17.7	26.0		8.8	46.1	24.0	9.0 a
10.1	39.4	6.1		10.2	59.5	32.7		10.2	25.2	28.2		9.8	49.1	50.0	9.0
9.2	42.9	11.1		10.0	24 6.5	57.0		10.2	26.2	25.7		10.2	51.6	57.9	
10.2	46.9	21.2		9.9	27.5	21.2		10.2	33.7	32.7		10.2	57.6	27.9	
8.7	55.7	58.9	9.2	10.2	34.5	28.7		9.7	46.7	46.0		9.9	5.6	20.8	
9.8	57.9	19.6		9.4	36.6	57.9		9.8	47.0			9.0	6.1	11.7	10.0
9.4	58.7	59.7		9.7	45.5	48.0		8.1	27.2	27.2	7.5 GSa1	9.7	8.1	15.5	
10.2	5.6	6.9		9.8	25 2.0	49.3		8.1	27.2	53.1	7.8 GSa	10.2	18.7	4.0	
10.3	13.5	58.8		7.7	5.5	33.3	8.0 GSbc	8.8	33.2	16.1	a	9.7	24.1	35.2	9.0 G
9.2	14.1	49.6	9.5	9.3	7.5	1.7	9.5 Ga	9.8	34.7	5.4	10.0	10.2	33.6	21.9	
9.8	21.6	24.0		8.9	9.0	40.5	10.0	9.4	41.4	58.1		9.9	37.1	32.8	
5.4	22.1	45.1	5.0 GSπβ	9.5	16.0	43.9		10.2	43.2	14.2		10.2	41.1	29.8	
10.0	31.1	40.5		10.2	24.0	11.4		9.8	32 11.7	42.0		9.0	58.1	30.0	10.0
10.3	31.1	14.5		10.2	31.0	53.3		9.8	16.7	46.4		9.4	40 4.1	16.9	
6.6	40.1	36.7	7.0 GSτπ	9.9	34.0	52.3		9.6	43.7	40.1		9.6	7.6	9.8	
9.8	50.6	31.4		9.8	35.0	36.7		9.0	54.2	31.7	a	9.8	19.6	17.8	
9.1	3.1	46.6		10.2	37.5	13.8		9.9	33 31.3	35.2		9.2	36.1	54.8	
9.6	3.1	0.1	10.0	10.2	49.0	24.4		10.2	38.8	40.0		9.2	40.1	25.7	
9.4	17.1	7.3		9.4	52.5	21.7		8.7	42.0	56.7	9.0 -	9.8	41.7	23.0	
9.7	21.1	3.2		9.9	57.0	18.2		10.2	44.0	15.6		10.2	42.6	58.1	
9.7	25.6	41.4		9.3	57.5	7.9	8.8 a	9.8	58.3	50.3		9.8	55.7	14.6	
10.3	27.6	20.6		10.2	26 2.5	50.5		8.8	34 2.2	1.6	9.5 -	10.2	41 4.2	11.3	
10.3	31.1	24.9		9.5	14.0	34.4		9.4	23.3	57.6		10.2	12.7	11.8	
10.0	35.1	22.3		9.5	20.5	49.4		8.4	28.8	22.2	8.5 Ga	9.8	14.2	11.0	
9.7	35.6	49.1		10.2	26.5	44.2		9.0	53.8	54.8	10.0	10.2	19.7	39.6	
9.7	40.6	1.3	9.0 G-	10.2	28.5	45.3		9.8	35 0.3	20.9		8.5	28.2	23.6	8.5 ≡
8.6	53.6	29.1	9.0 a	9.4	43.5	10.0	9.2 a	9.7	5.8	28.7		8.4	31.2	16.2	8.5 -
9.8	56.5	57.8		10.0	54.0	46.5		9.0	6.8	52.1	9.5	10.2	31.2	11.8	
10.0	0.1	34.6		10.2	54.0	54.1		9.3	9.3	52.5	9.0 a	9.0	32.7	7.6	
10.2	2.1	50.1		8.8	58.0	3.5	9.5 a	9.4	10.8	28.4		9.2	44.7	14.4	9.5
10.0	4.1	28.0		10.2	27 1.5	31.4		9.4	13.8	6.8		10.0	42 16.2	39.4	
9.4	4.6	18.0		10.0	1.5	6.3		9.9	42.3	47.3		9.9	20.7	32.8	
9.8	12.1	22.7		9.8	28.5	25.4		10.2	44.3	33.3		10.2	23.2	52.6	
10.2	20.1	51.3		9.3	34.0	36.9		9.7	58.8	14.8	—	9.3	28.7	17.9	
10.1	26.1	20.9		9.8	34.5	20.2		8.8	36 3.3	26.6	9.5 a	10.2	34.2	52.1	
10.1	26.1	2.3		9.2	59.5	14.3		9.3	51.3	41.1		9.4	36.2	29.6	
10.0	27.1	21.9		9.4	28 4.5	44.8		9.7	52.8	51.1		10.2	41.7	35.5	
9.8	47.1	33.1	10.0	9.5	16.5	26.5		10.2	37 1.3	22.3		9.9	42.7	13.6	
9.7	47.3	26.3		9.8	17.5	27.0		9.2	2.3	29.9		8.1	43.7	14.2	8.5 =
10.0	52.1	40.6		10.2	32.0	44.2		10.2	3.3	34.0		9.6	43 1.7	39.5	
9.8	55.3	40.4		10.2	33.0	5.5		9.8	10.8	5.2	9.5	9.4	1.7	38.0	
10.3	58.1	25.9		10.0	29 7.2	47.0		10.2	15.3	33.5		9.5	2.7	5.8	
25pr.	+ 1 35.4	- 1.5			+ 1 35.5	- 1.3			+ 1 35.5	- 1.0			+ 1 35.6	- 0.7	

4921-4980.				4981-5040.				5041-5100.				5101-5160.			
		17 ^h .	-29°			17 ^h .	-29°			17 ^h .	-29°			17 ^h .	-29°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.3	43	8.2	17.3	10.4	46	28.0	19.2	10.4	49	27.5	16.5	9.0	51	55.2	14.1
8.9		24.2	55.6	8.7		31.5	45.5	9.6		28.0	15.3	9.9		57.2	54.6
9.8		35.7	48.0	9.8		32.0	52.1	9.4		28.4	2.1	10.4	52	3.7	5.8
9.6		39.1	27.3	9.9		32.5	22.1	9.4		30.9	56.8	10.4		3.7	37.1
9.7		42.1	7.5	9.0		42.0	11.9	9.6		32.0	25.8	10.0		4.7	57.0
9.6		45.1	29.1	9.0		43.5	42.1	9.9		33.5	26.6	10.4		9.7	7.2
9.9		51.6	38.0	10.4		52.0	46.9	10.4		36.0	42.5	8.2		10.3	49.3
10.2	44	2.6	11.7	9.0		56.0	39.3	9.5		36.5	50.5	10.4		11.5	56.1
9.8		6.6	35.7	9.2		57.5	8.9	8.5		47.5	33.1	9.8		12.3	44.3
10.0		7.1	32.5	9.5		57.5	10.5	10.4		55.0	46.9	10.4		13.7	5.9
9.7		9.6	21.4	10.1		58.0	18.7	9.0		56.0	46.3	10.4		13.7	47.9
9.8		11.0	56.8	9.0	47	2.0	29.9	10.2		57.5	14.0	9.0		15.2	52.9
9.8		13.6	53.7	9.6		3.2	38.0	9.2	50	0.5	9.9	10.0		16.7	28.7
9.6		17.6	11.5	10.1		7.5	36.1	10.4		3.0	49.3	9.6		20.2	14.8
10.2		20.6	2.5	8.4		8.5	47.1	9.5		3.5	28.5	10.4		24.2	15.5
9.8		23.6	45.3	10.4		9.0	36.8	10.4		4.5	41.6	10.1		26.0	14.9
9.0		26.6	3.8	10.0		12.0	48.8	8.6		6.4	3.4	8.0		27.5	48.7
8.4		28.1	31.0	10.0		13.5	25.5	9.2		7.4	33.9	10.4		32.0	24.1
9.2		33.6	34.9	9.9		14.5	27.3	9.8		12.1	56.7	10.4		32.5	26.1
9.8		38.1	30.1	10.4		19.0	47.3	10.4		12.4	54.9	10.2		34.0	46.5
10.2		42.6	0.8	9.8		20.0	23.3	10.4		13.4	49.4	10.1		36.5	47.5
10.2		46.6	39.6	9.2		24.5	39.1	10.4		18.4	9.4	10.0		37.0	46.7
10.0		48.6	47.9	9.0		26.0	54.3	9.9		19.9	22.7	10.4		47.4	58.8
10.0		48.6	1.7	8.4		27.5	59.7	10.4		24.4	39.6	9.2		50.0	50.5
9.8		51.6	50.1	8.4		36.5	57.1	8.5		26.9	14.7	8.7		56.0	53.6
10.2		53.6	17.9	9.6		37.0	24.4	10.4		28.9	52.5	10.2		58.0	6.3
10.2		56.8	58.2	10.2		40.0	4.9	9.5		35.4	7.5	9.8		58.0	2.1
9.4		57.1	1.6	9.2		42.0	47.1	9.8		37.4	43.5	9.4		58.5	55.5
10.0	45	0.1	21.8	8.9		44.5	14.7	10.0		38.4	49.8	10.2	53	0.5	22.0
10.2		5.6	24.3	10.0		44.5	52.5	10.1		41.9	34.2	10.4		1.5	32.8
9.8		6.6	13.5	9.8		44.5	53.7	9.4		44.4	13.2	9.9		3.0	14.2
9.5		9.1	20.3	10.2		49.5	53.1	9.0		44.4	23.9	9.9		3.0	8.1
9.9		9.1	54.6	9.9		53.0	11.1	8.2		47.4	54.4	10.4		10.0	22.5
9.9		19.6	19.5	10.0	48	1.5	3.8	10.4		51.4	7.7	10.4		12.0	53.2
9.7		26.1	37.5	9.6		4.0	37.7	9.2		53.9	32.5	10.4		13.5	0.7
10.0		28.6	5.1	10.0		6.0	36.9	10.1		57.4	30.3	8.5		14.5	26.0
9.8		31.6	11.1	10.2		18.5	40.6	10.0		57.4	54.2	8.2		14.5	19.9
10.2		31.6	36.1	10.2		18.5	37.8	10.0		58.4	0.5	10.4		16.5	18.0
9.8		35.0	0.5	10.2		20.0	24.9	9.0	51	5.9	50.9	9.5		22.5	40.4
9.8		38.6	51.3	8.5		21.0	30.2	9.5		8.4	2.3	9.0		25.0	51.9
9.9		42.1	10.6	10.2		21.5	49.0	8.9		10.4	23.8	9.6		26.5	10.9
9.8		42.1	21.3	10.4		23.0	53.2	10.4		13.4	19.8	10.2		26.5	26.9
9.8		45.6	2.9	8.2		23.5	50.5	10.4		14.9	0.4	10.4		27.0	0.9
9.8		47.3	43.3	9.8		24.5	46.9	9.6		16.4	57.6	8.0		28.0	34.6
9.4		50.8	6.1	9.6		26.0	56.6	8.0		17.4	22.5	9.2		32.0	44.2
9.4		51.6	21.3	9.8		27.5	47.9	10.2		18.2	42.1	10.4		32.5	0.3
10.0		55.8	41.2	10.1		31.0	41.6	10.2		18.7	25.6	10.4		32.5	28.7
10.4		57.1	46.8	10.4		36.0	38.8	10.2		22.2	3.5	9.9		33.0	18.9
10.4		57.5	37.9	8.8		40.4	1.7	8.6		24.2	28.1	9.8		35.0	51.9
9.9		58.0	50.1	10.4		42.5	26.2	9.8		24.2	16.3	10.4		42.8	8.7
10.2	46	5.1	57.1	8.2		43.0	54.0	10.4		28.2	13.2	9.9		44.3	20.6
9.9		13.5	14.8	10.1		46.5	25.2	10.2		33.0	0.2	10.4		46.3	37.5
10.4		14.0	12.7	9.9		48.5	52.1	10.4		33.7	25.8	10.4		50.8	6.0
10.2		14.5	36.9	9.5	49	0.0	18.5	10.4		37.2	55.6	8.8		53.3	15.0
10.1		17.5	53.5	9.1		2.0	35.6	9.4		37.4	1.9	10.4		53.8	56.9
10.4		20.0	13.3	10.0		15.0	17.9	10.4		37.7	56.6	10.2		57.8	2.1
8.5		23.5	49.4	9.5		17.5	57.3	10.4		38.2	17.5	9.9		57.8	14.6
10.1		24.0	7.9	9.8		24.0	8.6	10.0		42.7	34.7	8.9	54	0.8	15.6
9.8		26.0	18.3	9.5		25.5	47.0	10.2		53.2	41.9	10.4		2.3	2.5
10.2		27.5	41.5	9.2		26.5	33.1	9.2		54.7	58.6	9.9		3.3	7.5
25pr.	+1	35.7	-0.5	+1	35.7	-0.4		+1	35.7	-0.8		+1	35.7	-0.8	

5161-5220.			5221-5280.			5281-5340.			5341-5400.		
mag.	17 ^h .	-29°	mag.	17 ^h .	-29°	mag.	17 ^h -18 ^h .	-29°	mag.	18 ^h .	-29°
10 ^o 2	54 4.3	21.2	10 ^o 1	56 41.3	1.0	9.5	59 25.3	37.7	8.8	2 29.4	55.6
10 ^o 0	5.8	6.3	9.6	47.3	24.1	9.2	26.3	4.6	10.4	40.4	1.7
9.5	13.3	35.7	9.8	51.8	1.7	10.4	26.8	18.4	10.0	40.9	47.5
10.0	16.0	46.1	10.4	53.3	37.7	9.0	27.3	29.0 a	9.8	45.3	56.5
9.4	16.3	15.9	10.4	54.8	47.5	10.1	30.3	59.1	9.8	3 1.9	10.1
9.5	26.3	20.1	9.4	55.8	49.6	10.4	38.8	52.4	10.4	2.3	57.5
10.1	27.0	39.7	10.4	56.8	10.5	9.8	41.8	52.0 9.5	7.9	3.9	46.2 8.5 Ga
10.1	30.8	14.6	10.1	57.1	1.2	9.2	42.3	27.0 am	9.8	5.4	48.3
9.6	30.8	21.0	10.4	57 2.8	32.4	10.1	48.3	48.2	10.2	12.4	30.8
9.5	33.3	20.6 9.5	6.1	2.8	34.9 5.0 GSπλ	10.0	51.3	53.4	8.9	14.9	31.3
9.8	33.8	35.6	10.2	4.3	38.4	10.4	52.3	7.7	8.6	16.4	39.5 8.0 Ga
10.0	37.3	17.1	9.4	5.8	11.1	9.2	52.8	34.6	9.4	16.9	43.7
10.4	39.0	35.0	9.5	5.8	44.3	8.2	53.8	44.4 8.5 Mm	8.2	18.4	55.4 8.5
9.2	43.3	25.2	9.2	6.8	55.0	10.4	0 2.3	22.0	10.4	24.9	35.9
9.4	44.3	17.1	10.2	14.8	35.1	10.2	4.1	58.0	10.4	29.4	20.9
9.2	44.6	59.5	10.4	16.8	29.6	10.0	13.3	20.7	9.6	31.4	4.8
8.8	44.8	32.0 9.0 a	10.4	17.8	20.6	9.4	13.3	7.2	10.2	31.4	10.7
10.4	44.8	38.5 8.5 GSa	8.4	22.8	5.6 9.0-	10.1	15.3	7.0	10.4	31.9	52.8
8.1	49.8	21.7	9.5	24.8	26.5	10.0	19.4	2.1	9.8	32.4	41.8
10.4	49.8	17.7	9.8	25.8	2.5	10.4	25.8	42.9	9.8	32.9	37.8
10.1	53.3	35.3	9.9	26.8	29.8	9.9	29.6	59.4	9.2	36.4	14.0
9.6	53.1	54.7	9.4	28.5	22.1	10.4	32.8	4.8	8.9	41.9	8.5
9.5	53.6	22.0	9.8	33.5	41.6	9.4	34.3	4.4	8.8	43.9	52.8 9.2
9.9	54.1	34.8	9.8	42.0	23.6	9.8	40.8	35.3	10.0	45.9	12.5
10.1	56.6	50.4	7.8	42.5	16.7 7.5 GSbc	10.4	42.8	34.6	9.0	46.6	57.6 9.5
10.2	55 0.6	55.3	10.0	42.5	31.6	10.1	43.3	10.3	9.8	49.9	51.9
8.7	10.1	31.6 9.5 a	10.0	43.0	52.2	10.0	48.8	35.4	9.0	50.4	6.5
10.2	11.9	1.9	9.5	45.5	32.5	9.9	51.3	50.6	10.4	52.4	18.7
9.2	15.6	27.8 10.0	10.4	52.0	10.5	10.0	54.6	36.0	9.8	53.4	51.1
10.2	16.6	12.0	9.4	54.5	13.7 9.5 G	9.8	55.5	58.6	10.0	58.4	52.6
10.4	18.1	29.3	9.2	56.0	55.5	10.1	58.6	18.4	9.9	4 0.9	54.0
9.6	19.1	24.3	9.6	56.5	35.1	9.9	1 1.6	56.8	8.2	1.6	35.6 Ga
10.4	20.6	48.1	9.9	57.5	46.1	9.4	2.1	1.4	9.8	5.1	13.4
10.2	25.1	5.0	8.0	58 4.5	26.1 9.0 M-m	9.6	5.1	16.5	9.2	13.1	53.0 9.2 =
10.1	27.1	2.4	9.2	15.5	8.1	10.4	5.2	21.3	9.2	20.4	2.9 9.0 =
9.2	29.5	57.9	10.4	17.5	42.5	9.6	13.6	6.7	9.0	24.1	30.0 a
10.2	30.1	28.2	10.1	19.5	21.5	9.8	15.6	44.8	9.4	24.1	49.9
9.9	31.6	32.1	10.1	19.5	7.3	10.1	20.1	29.5	8.8	28.6	22.6 a
10.0	36.1	11.2	10.4	23.0	56.9	10.4	26.1	1.8	9.9	30.1	36.4
8.2	36.1	51.6 7.8 Gam	10.4	28.5	29.5	10.4	27.6	42.8	9.8	31.1	46.0
10.2	37.6	53.2	10.0	32.5	22.1	9.2	31.3	1.7 9.5	9.8	39.6	31.8
10.4	41.1	17.9	10.4	32.5	52.4	9.6	31.6	52.3	9.9	39.6	33.8
10.1	43.6	42.0	10.2	34.5	20.4	9.5	34.6	32.2	9.4	40.7	58.0
10.0	44.1	33.5	9.8	35.5	16.7	10.2	35.1	5.4	10.4	44.6	24.9
10.1	54.6	53.1	10.4	36.5	1.7	9.8	37.1	46.6	10.1	46.1	30.8
10.4	57.6	57.1	10.2	39.5	8.9	10.2	45.6	47.0	10.4	54.1	21.6
10.2	58.1	31.1	9.4	40.5	6.1 10.0	10.4	46.1	26.5	9.9	54.6	19.6
9.5	56 2.1	39.8	10.2	43.9	57.7	10.4	50.6	11.8	10.4	5 1.6	26.2
10.4	2.8	18.7	9.8	45.0	53.9	10.4	56.1	40.8	10.4	4.6	59.6
10.4	5.8	13.9	9.8	46.5	29.9	9.6	56.1	23.0	10.0	5.4	56.8
9.8	10.3	56.0	9.8	46.5	7.9	10.4	58.6	12.6	9.5	8.6	43.4 9.5
9.9	12.8	31.9	9.9	48.5	45.1	9.8	2 5.1	24.7	10.4	11.1	2.8
9.5	13.8	16.9 9.5	8.4	51.7	2.7 8.5 Ga	10.2	7.1	29.0	10.1	11.1	21.6
9.9	13.8	19.1	8.0	59.0	5.1 8.0 am	9.5	8.1	10.5 9.2	10.2	13.1	27.2
10.4	16.3	35.4	9.8	59 2.8	29.8	9.8	9.6	19.2 10.0	10.1	14.1	53.9
9.9	20.3	22.5	9.6	7.8	44.3	9.9	11.6	29.0	10.2	18.6	40.6
9.6	21.8	1.8	10.2	8.8	29.8	9.6	19.6	12.5	9.6	20.1	49.6
10.4	30.8	24.2	10.4	10.3	19.5	8.2	21.1	13.9 8.0 G=m	9.5	22.1	22.7
9.5	34.3	19.1	9.8	16.3	53.4	10.4	22.1	45.8	9.1	23.1	23.0
10.4	37.3	47.9	10.4	25.3	5.9	10.4	22.6	36.8	10.2	30.1	5.6
25pr.	+ 1 35.7	-0.2									
				+ 1 35.7	-0.1						
							+ 1 35.7	0.0			
										+ 1 35.7	+0.1

5401-5460.			5461-5520.			5521-5580.			5581-5640.		
mag.	18h.	-29°	mag.	18h.	-29°	mag.	18h.	-29°	mag.	18h.	-29°
9.5	5	45.9	10.1	9	1.2	10.3	14	12.3	9.9	22	9.8
10.2		46.1	10.2		3.2	10.3		24.8	10.2		15.3
10.4		52.9	10.4		3.2	9.9		26.8	10.3		20.8
10.4		53.4	9.9		9.2	9.6	15	0.8	10.2		27.8
9.5		57.4	9.5		9.7	10.2		5.3	10.3		35.3
10.0	6	1.4	10.4		16.7	10.3		19.3	10.3		43.3
9.5		1.9	10.0		19.2	10.3		41.8	10.2		45.8
9.8		1.9	10.4		19.7	10.3		48.3	9.4		54.3
9.8		1.9	10.0		21.2	10.2		50.8	10.3	23	37.3
10.0		2.4	9.2		24.0	10.2		56.3	8.8	24	8.3
9.8		10.9	9.6		26.0	9.3	16	5.3	9.5		10.8
10.0		20.6	9.9		32.2	9.4		15.3	9.5		11.3
9.9		28.9	10.4		42.1	10.2		25.3	7.7		16.8
9.8		32.9	8.7		42.2	8.8		26.3	10.0		17.3
9.0		34.9	10.1		49.2	8.6		27.8	9.4		19.8
9.1		36.9	9.4		51.5	9.8		29.3	10.0		52.3
10.4		38.9	8.4		59.2	10.3		30.8	10.2		55.3
9.6		46.9	9.2		59.7	8.2		30.8	9.8	25	12.8
10.2		48.4	10.2	10	1.7	10.3	17	15.3	9.4		25.3
10.0		51.9	10.4		3.7	10.3		18.8	9.5		25.3
10.4		0.9	10.4		5.2	9.6		26.3	10.3		35.3
10.4		3.9	10.4		5.2	10.3		36.3	10.2		41.3
10.4		4.4	10.2		5.7	10.3		46.8	10.3		55.8
9.8		4.9	8.4		9.0	10.3		51.8	10.0		57.8
8.2		4.9	10.4		12.0	10.3	18	9.8	10.2		59.3
10.1		5.9	10.2		13.0	9.9		17.3	10.2	26	1.3
10.4		6.4	10.4		13.2	10.3		22.3	10.3		29.5
10.4		6.9	10.4		13.5	9.2		23.8	10.0		50.9
9.9		8.4	10.2		14.7	9.6		24.3	9.9		54.5
10.2		8.9	10.3		37.5	10.0		26.3	7.7	28	1.1
10.4		9.9	10.3		38.8	9.8		32.1	10.3		10.3
9.9		24.2	10.3		59.1	10.2		35.3	10.2		11.6
9.5		24.7	9.2	11	1.8	10.3		37.3	9.0	29	13.1
9.8		28.2	10.2		3.3	10.3		43.3	7.8		20.1
10.4		30.2	8.4		13.8	10.3		53.3	9.0		25.1
10.0		39.2	9.9		22.3	10.3		58.3	10.3		28.6
10.2		46.2	8.2		27.8	8.3	19	6.3	10.3		36.1
9.5		51.7	10.2		32.7	10.2		7.8	10.2		41.6
10.4		54.2	9.9		36.3	10.2		8.8	10.2		43.1
10.0		55.2	8.7		42.7	10.2		32.8	10.2		46.9
8.6		59.7	10.3		48.1	9.4		33.7	9.5		59.1
8.8	8	17.2	8.7		54.8	10.3		34.8	9.3	30	2.8
9.6		23.2	10.3		17.8	9.6		47.8	10.2		24.6
9.8		24.7	10.3	12	3.3	9.4		48.3	10.3		49.1
10.2		25.7	10.2		19.3	7.4		50.8	7.8		49.6
9.2		28.2	9.5		22.3	10.3	20	13.8	9.9		55.1
9.8		28.7	8.1		28.3	10.3		18.8	10.3	31	8.1
9.8		30.2	9.2		35.3	9.6		40.1	10.0		13.0
9.9		31.7	10.3		39.8	10.3		53.3	10.3		22.0
10.4		31.7	10.2		41.3	10.2		58.8	10.2		32.0
10.4		38.0	10.3		41.8	9.8		59.3	9.4		32.0
8.5		40.7	10.2		41.8	8.9	21	5.3	10.3		35.5
9.9		41.0	6.2		59.8	9.0		13.8	10.3		42.0
10.0		41.7	10.2	13	20.3	9.0		14.3	9.1		51.0
9.8		43.2	10.3		20.8	7.8		29.2	10.0		52.5
9.6		44.7	9.6		27.8	10.3		32.8	9.9		55.5
10.4		45.7	10.3		43.7	8.2		34.3	9.9		57.5
8.4		49.2	9.8		52.3	9.3		45.3	10.3		58.0
9.6		50.2	10.2		55.3	9.9		45.8	10.0	32	1.0
9.5		56.2	9.9		57.3	10.2		7.3	9.8		16.0
25pr.	+1	35.7	+0.3		+1	35.7	+0.4		+1	35.6	+0.7
											+10

1896AncCap...3.....1G

5641-5700.

5701-5760.

5761-5820.

5821-5880.

5641-5700.			5701-5760.			5761-5820.			5821-5880.		
mag.	18h.	-29°	mag.	18h.	-29°	mag.	18h.	-29°	mag.	18h.	-29°
10.0	32 19.0	18.0	9.8	38 23.5	34.8 G	10.0	44 52.1	16.6	9.7	50 12.9	11.0
10.0	22.0	7.1	9.7	28.0	50.1	10.3	58.6	5.8	10.4	40.4	18.0
10.3	23.0	18.9	8.2	29.5	39.0 8.5 Gb	9.9	45 2.4	2.9	9.2	51.4	40.1 =
8.3	32.4	59.6	9.6	32.5	32.8	10.4	13.1	45.6	9.5	5.4	13.7 -
10.3	50.0	23.9	9.2	33.9	1.1	9.8	15.1	55.6	9.6	11.4	26.8
8.9	57.0	26.2	9.9	35.5	41.2	10.4	23.1	39.6	9.6	15.9	44.5
10.3	33 2.5	8.3	9.8	37.0	40.1	8.8	25.1	11.6 9.5 -	10.0	20.9	28.3
10.2	3.5	12.7	9.7	44.9	2.7	10.4	29.6	42.7	10.4	24.4	55.6
8.8	5.0	25.7 =	8.2	46.0	37.6 8.5 Ga	10.3	58.6	11.8	10.3	36.9	48.4
10.0	7.0	0.7	8.0	49.5	45.5 7.0 GSac	9.9	46 4.8	59.4	10.4	42.4	55.8
9.8	15.0	54.7	10.3	50.0	13.0	9.6	6.6	54.1	9.7	52 3.9	29.2
10.2	18.0	15.7	10.3	52.5	8.5	8.8	12.6	14.0 8.5 a	9.6	11.9	29.4
9.6	23.0	32.1	10.4	39 2.5	36.2	10.0	16.1	56.0	10.4	22.5	35.0
10.3	25.4	31.9	9.6	9.5	14.3 9.0 am	10.0	17.6	11.0	10.4	31.9	21.1
9.2	32.5	35.5	9.7	15.5	26.3	10.4	20.1	49.1	9.5	37.9	17.4
8.5	40.2	4.4 9.0 -	10.0	20.5	40.9	9.8	25.1	45.0	10.0	38.4	44.1
10.2	45.0	36.1	10.0	29.3	18.4	9.7	45.6	0.5	10.4	53 0.4	47.4
10.3	50.5	21.9	10.4	32.3	49.9	9.9	47.6	47.7	10.0	22.9	29.0
10.2	54.7	31.6	10.0	38.8	18.2	9.2	49.6	30.2	10.3	27.9	41.0
8.3	34 13.8	43.0 9.0 a	9.9	49.8	40.5	10.4	52.6	15.0	9.1	35.4	17.9 -
8.8	15.4	16.1	9.9	40 11.8	31.9	9.5	54.1	22.1	9.7	44.9	22.4
10.3	43.1	57.9	9.9	12.3	3.3	10.0	58.6	21.0	9.7	54 0.9	25.6
8.8	43.6	35.7 8.5 Ga	10.0	18.3	15.5	9.2	47 2.1	50.6	8.4	24.4	30.8 =
9.8	45.3	40.3 10.0	9.9	27.3	24.2	10.4	9.1	7.7	10.3	32.4	9.8
9.4	53.3	21.3	9.4	36.8	51.1	9.7	13.1	15.8	10.4	46.4	4.0
9.8	53.8	11.0	9.2	45.3	33.2	10.0	23.1	22.6	8.8	55 0.9	19.1
10.4	35 2.3	57.4	10.2	41 13.3	12.3	10.4	23.1	17.2	8.4	36.4	47.6 9.0 a
9.7	13.3	8.8	10.4	16.3	1.2	10.4	30.6	22.0 7.0 GS1π	10.3	36.9	10.2
8.4	21.3	46.3 9.0 a	9.4	26.8	29.1	10.0	32.1	10.6	10.4	45.4	25.8
9.7	25.3	59.0	9.1	31.3	12.9 9.5	9.8	40.5	59.9	10.4	52.4	4.6
9.8	25.8	19.0	9.9	45.8	13.9	9.7	40.9	44.8 10.0	9.4	56.9	8.0
10.0	39.8	1.7	10.3	49.8	52.0	10.0	45.4	40.9	9.0	56 37.4	28.2 -
10.2	42.3	17.7	9.2	51.8	52.2	10.3	52.4	35.7	8.8	46.9	2.8 am
10.4	45.3	27.9	9.6	55.8	30.0	10.3	52.9	55.8	10.4	50.9	23.8
9.2	45.8	12.1 9.5 G	10.4	59.3	22.5	10.3	54.9	43.1	10.0	53.4	32.8
9.5	52.8	43.1 9.5 a	10.2	42 7.8	38.2	10.3	8.4	19.1	9.4	53.9	54.6 9.5 =
9.8	4.3	26.8	10.4	16.8	53.2	7.7	12.4	37.9 GSael	9.8	57 26.4	3.9
10.0	4.3	31.9	9.7	30.3	18.9	8.8	25.4	50.9 9.0 -	9.2	28.1	8.8 9.0
10.2	7.8	32.8	9.8	36.3	13.3	9.6	28.4	5.4	8.8	28.3	23.6 9.0 a
8.4	25.0	33.0 8.5 Gam	10.4	41.8	4.5	9.7	32.9	43.7 9.5	9.7	32.6	29.8
10.0	28.0	40.9	10.3	42.3	7.4	9.9	35.9	34.4	9.4	41.2	4.5
9.9	31.5	55.7	10.4	46.3	1.7	9.9	39.4	32.5	10.3	46.4	31.8
9.2	32.5	3.7 9.0	10.0	59.3	1.8	8.8	41.4	33.2 a	7.2	53.4	16.1 7.0 GSac
9.6	45.5	22.5	10.4	3 3.3	19.1	9.1	42.4	5.0 Mm	10.3	54.4	44.8
9.4	51.0	41.5	9.6	5.3	10.2	10.0	54.4	55.5	10.0	57.1	11.0
8.8	37 1.5	37.3 9.0 Ga	9.4	6.3	53.2	9.8	55.9	29.6	10.0	58 2.9	14.6
9.2	11.5	13.1	9.4	18.3	33.8 M=m	10.0	57.4	50.4	10.2	3.9	41.0
9.8	15.5	55.7	10.4	31.3	21.2 -	9.6	5.4	33.3 10.0	9.9	7.8	20.8
9.4	26.6	58.2	8.8	46.6	27.6	9.8	6.7	59.4	9.9	16.3	14.8 9.5
10.0	31.5	10.1	10.4	55.6	31.3	9.8	6.9	34.7	9.0	25.0	25.5
10.4	39.5	27.7	10.3	42.3	7.4	9.9	10.9	52.7	10.3	26.7	15.1
9.1	46.0	33.3 9.5	10.4	46.3	1.7	9.2	19.4	44.7	9.5	32.0	45.5
9.9	48.0	6.3	10.4	5.6	19.9	9.6	28.4	12.7	9.4	38.3	42.2
9.2	50.5	37.2	10.0	21.1	41.1	9.6	37.9	22.3	9.9	6.7	26.3
8.6	38 0.5	5.3 9.0 Mm	10.0	31.1	24.3	9.7	39.9	4.3	8.9	13.0	20.9 ≡m
9.7	2.5	57.9	10.2	32.1	40.8	9.6	45.4	19.4	9.0	16.5	50.0 9.5
9.2	5.4	56.9	9.7	35.1	49.8	9.4	51.4	51.8 -	10.3	21.5	26.9
10.4	11.5	25.7	7.8	41.1	31.4 6.5 GScl	9.2	58.9	56.4	9.6	22.5	17.2
9.4	12.0	34.1 9.5 G	10.0	42.1	11.1	9.7	58.9	4.0	10.3	27.0	30.1
9.7	22.9	0.5	10.3	42.1	23.8	9.1	50 1.7	1.2 9.5	9.9	35.5	23.9
25Pr.	+ 1 35.5	+ 13		+ 1 35.4	+ 15		+ 1 35.3	+ 17		+ 1 35.2	+ 20

5881-5940.			5941-6000.			6001-6060.			6061-6120.		
mag.	18 ^h -19 ^h .	-29°	mag.	19 ^h .	-29°	mag.	19 ^h .	-29°	mag.	19 ^h .	-29°
9.5	59 38.5	39.9	10.3	7 12.8	58.5	10.3	13 51.8	25.4	8.9	19 59.3	50.4 8.7
10.3	40.5	13.9	10.2	21.1	48.7	10.3	55.8	3.8	9.6	20 11.8	17.1
10.2	41.5	3.4	9.1	36.6	41.4 9.0 Ga	10.3	58.2	58.2	9.5	21.8	37.2
9.2	42.5	44.9	10.0	39.1	0.9	10.0	59.8	17.2	10.2	22.3	17.4
8.8	57.0	14.2 9.5 =m	9.6	57.7	44.1 10.0	10.2	14 4.3	49.8	9.6	23.8	42.5
10.2	57.5	5.1	10.2	59.5	24.0	10.3	6.6	33.1	8.8	30.3	38.2 8.0 Gam
9.4	5.0	3.9	10.2	8 5.0	36.5	9.4	7.3	51.9 9.0 a	10.2	32.8	11.0
10.0	15.5	46.0	9.4	12.5	50.9	7.6	9.3	45.2 7.0 GSac	9.7	40.8	19.1
10.3	22.5	27.3	10.3	13.0	41.7	10.0	12.8	57.7	9.5	40.8	7.9
9.1	26.0	19.2	10.3	28.0	31.9	9.5	22.8	15.2	9.6	45.3	25.4
10.3	54.5	33.7	10.0	40.0	32.7	10.2	27.6	31.1	9.8	49.8	2.3
9.7	56.5	18.4	9.7	42.0	55.9	9.7	32.8	11.7 9.5	8.8	59.1	57.4 9.5 a
8.9	56.9	2.2	10.0	9 13.0	3.5	9.4	35.3	11.3	10.3	21 2.2	13.7
10.0	1 0.5	20.0	9.0	13.0	33.2 -	10.0	35.8	58.2	8.2	3.0	13.3 7.5 Gam
9.5	3.5	20.6	10.3	18.0	17.2	10.3	50.6	46.9	10.2	3.2	22.2
9.9	52.0	55.6	9.4	22.0	0.3 9.5	8.9	54.3	49.4 9.5 -	9.9	12.3	18.5
9.7	56.5	36.9	10.2	23.5	0.2	8.4	15 4.8	17.8 7.5 Gam1	10.3	19.3	21.5
10.3	2 3.5	1.9	10.3	25.0	41.1	10.0	10.8	41.9	10.0	22.1	59.7
10.0	8.5	44.9	10.3	44.5	18.1	10.0	15.8	16.4	8.0	31.0	57.7 8.5 Gam
9.0	13.0	18.3	9.7	46.0	55.1	10.2	15.8	6.0	9.8	54.0	48.6
10.0	19.5	30.5	9.7	46.5	4.1	9.7	21.8	2.2	9.6	55.5	27.5
9.0	23.5	4.3 9.5 G=	10.2	10 5.5	8.7	10.3	22.3	46.8	8.6	22 7.5	55.1 9.0 Ga
10.3	30.5	6.8	10.3	11.5	57.4	9.7	52.8	26.0	9.0	47.2	54.7 9.5 G
9.8	53.5	29.2	10.0	23.5	4.6	9.7	59.8	53.4	8.3	58.2	38.3 8.0 GM≡m
9.8	53.7	0.8 9.5	10.3	42.0	12.5	10.3	16 24.3	47.1	9.6	23 6.2	50.3
8.8	59.5	3.6 8.5 Ga	9.2	47.0	47.4	9.4	29.8	5.0	9.8	7.7	33.5
9.6	3 7.5	45.4	10.2	11 8.0	38.0	10.0	41.8	12.2	8.3	14.2	45.1 7.5 G=
9.6	16.0	21.5	9.7	13.0	19.2	9.7	42.8	16.8	9.4	16.2	11.3 8.5 G
10.0	22.5	56.3	10.0	29.8	59.9	9.4	17 2.8	27.3	10.0	34.7	50.9
6.6	24.0	42.2 6.5 GSac	8.4	35.0	14.7 8.5 M≡m	10.3	7.6	20.2	9.8	35.7	44.9
9.5	37.1	29.0	9.8	50.0	2.9	7.7	12.3	32.9 6.0 GSac	9.2	47.2	37.9 9.5 -
10.0	40.5	26.4	10.3	52.0	0.0	9.9	12.8	35.5	9.6	24 19.2	56.8
9.0	56.3	1.4	9.4	55.5	13.2	9.8	14.3	49.9	10.0	23.2	37.2
10.0	57.5	58.9	9.7	12 9.0	2.0	9.8	15.3	57.6	9.6	36.7	30.9
9.0	4 0.1	44.4 9.0 GWa	9.0	14.5	28.0 -	10.2	20.3	21.9	8.6	42.7	17.0 9.2
10.3	3.1	34.0	10.2	15.0	37.8	10.2	26.3	10.4	9.6	45.7	9.7
10.3	7.6	7.9	10.2	19.5	37.5	9.4	33.3	55.3	9.6	51.2	5.2
9.4	12.1	35.2	10.2	23.8	11.8	9.4	35.3	19.2	9.8	25 7.2	37.7
10.0	37.1	23.5	9.6	33.8	49.6	10.0	35.3	14.5	10.4	8.2	41.3
9.8	44.1	25.3	10.2	42.8	2.8	10.4	41.8	13.5	9.8	31.7	0.9
9.7	49.1	22.0	9.6	45.3	52.7	10.2	42.2	18.9	9.8	26 0.2	28.4
9.7	55.1	30.6	9.6	51.8	22.1	9.8	45.3	47.1	9.6	3.7	14.8
10.0	56.6	7.2	10.2	58.6	45.0	9.2	47.8	45.2	10.4	5.7	38.4
10.3	59.6	0.6	9.6	59.3	55.0	10.2	58.3	31.1	10.4	15.2	8.6
8.2	5 13.1	50.7 8.2 am	9.8	13 2.8	38.4	10.3	18 6.2	35.3	9.4	16.2	25.6 -
10.3	14.5	58.5	9.9	2.8	11.9	10.2	25.2	54.4	9.6	30.7	49.8
9.5	17.1	49.1	9.4	4.8	22.4 -	10.2	31.3	49.9	9.4	44.2	3.3
10.2	20.1	7.5	10.3	5.6	59.0	10.3	35.8	3.9	10.4	46.2	44.3
9.6	23.1	24.9	10.3	6.8	55.4	9.5	43.3	30.5 9.5	9.0	52.2	6.5 9.0 G
10.0	27.1	10.5	10.3	12.8	57.9	10.3	45.2	23.6	8.6	55.7	5.4 8.5 Gm
9.9	33.1	4.2	10.3	23.6	27.2	6.1	19 2.7	59.3 6.0 GStπ	9.8	27 23.7	28.3
10.3	47.1	17.1	9.6	24.3	38.7	8.8	14.8	33.1 8.2 Gam	9.8	32.2	48.9
9.8	4.1	17.9	9.6	26.8	5.8	9.6	25.8	31.9	10.4	38.2	2.1
10.3	4.1	22.2	9.0	29.6	42.1 -	10.2	35.8	55.9	8.8	45.7	41.3 9.5
10.3	13.1	37.3	9.4	35.8	42.2	10.2	36.3	49.7	9.8	54.9	44.8
10.0	30.1	35.0	10.2	40.8	2.6	9.5	47.3	3.9	10.0	28 1.9	50.6
8.6	33.1	28.9 8.0 GW=m	8.0	44.3	50.1 7.0 GSbc	10.0	53.3	0.1	10.4	27.4	19.3
9.6	43.1	2.1	9.8	45.3	40.5	10.2	54.2	51.3	10.4	40.9	3.3
7.7	46.1	27.1 7.5 GSbc	10.3	46.6	18.3	10.2	55.3	39.4	9.6	41.9	12.7
10.2	7 0.1	47.8	10.3	50.6	5.9	8.4	59.3	44.8 7.8 Gam	9.8	45.4	31.0
25 pr.	+ 1 35.0	+ 2.3		+ 1 34.8	+ 2.6		+ 1 34.7	+ 2.8		+ 1 34.5	+ 3.0

6121—6180.			6181—6240.			6241—6300.			6301—6360.		
mag.	19 ^h .	—20 ^o	mag.	19 ^h .—20 ^h .	—20 ^o	mag.	20 ^h .	—20 ^o	mag.	20 ^h .	—20 ^o
28	55.4	44.4	43	2.2	45.5	9.2	1 45.3	52.1	8.6	17 52.7	50.5
9.4	29 1.4	46.0	10.4	14.7	32.0	9.2	2 0.8	24.3	8.6	18 22.7	26.5
9.1	2.4	53.5	10.0	16.7	16.5	8.2	6.1	59.8	7.8	52.2	28.6
9.4	8.4	51.1	9.4	33.2	19.9	10.4	30.2	12.6	9.4	19 20.2	30.7
9.0	40.9	34.0	9.8	35.2	21.2	10.0	3 4.3	19.0	10.0	33.0	11.1
8.3	30 4.4	5.6	9.8	44 51.2	46.5	9.4	27.1	0.0	10.0	45.3	11.4
10.0	7.9	0.6	9.8	59.2	22.3	10.0	30.3	48.4	7.8	49.2	13.2
10.4	15.9	10.6	9.8	45 37.5	28.8	9.8	32.3	55.0	9.9	55.2	29.5
9.8	17.4	24.2	9.6	47.7	36.3	8.4	45.3	3.7	8.2	20 25.2	47.0
8.5	46.2	1.2	10.4	46 13.7	12.7	9.2	4 12.8	17.7	9.9	27.2	49.0
10.4	48.9	56.6	8.8	47 12.7	54.9	9.2	26.3	55.3	10.0	21 12.2	37.3
9.2	51.3	8.4	9.8	15.2	43.3	8.8	35.3	3.9	9.0	31.2	48.1
9.6	55.9	11.4	9.8	36.7	24.1	10.2	42.2	51.1	9.3	35.7	15.0
10.0	31 44.9	31.7	8.1	43.7	25.3	9.8	5 4.2	35.2	9.0	22 3.7	26.2
10.0	32 4.9	2.0	8.1	56.7	32.1	9.6	5.8	7.2	9.8	23 8.7	22.4
9.8	5.4	31.4	10.4	48 8.7	30.9	9.8	6 38.3	36.0	9.9	12.9	59.8
10.4	18.9	18.8	10.0	49 0.7	46.1	9.2	43.5	0.6	10.0	15.2	36.4
10.0	32.4	17.3	9.6	26.7	30.9	9.8	7 25.8	17.1	7.0	16.7	31.7
9.0	33 6.4	40.3	8.6	26.7	46.1	9.6	42.3	34.8	9.8	45.7	10.3
10.4	12.9	47.5	10.2	28.4	58.9	10.0	42.3	54.4	9.9	24 5.2	21.6
10.4	15.4	31.2	8.7	54.2	24.8	8.8	8 54.3	27.6	10.0	6.7	36.2
9.8	24.4	23.7	9.6	50 11.7	51.8	9.8	9 53.3	46.6	10.0	20.2	55.0
9.6	30.4	28.2	10.0	46.2	31.8	9.4	10 38.5	34.6	9.0	44.7	1.5
10.0	50.4	14.5	8.8	51 22.2	51.0	10.0	49.9	57.6	9.4	52.7	8.2
8.5	34 2.9	8.4	8.2	26.7	11.3	9.8	57.8	14.0	7.3	25 5.0	1.2
9.6	5.4	16.2	9.8	35.7	38.9	9.9	11 5.8	1.9	9.9	14.7	49.6
9.0	9.9	35.2	10.4	52 22.2	1.8	10.0	14.3	42.2	9.9	26 2.7	46.8
9.6	21.9	55.0	10.0	51.7	23.7	9.9	18.3	20.0	7.3	10.2	43.0
10.4	33.9	57.3	9.6	53 33.2	19.3	9.9	31.8	41.7	9.8	23.7	5.0
10.0	49.4	25.3	9.1	34.7	17.5	10.0	52.3	30.6	9.9	28.2	9.6
10.0	53.9	56.7	9.4	42.7	54.8	9.0	12 6.8	45.8	9.1	29.7	32.3
10.0	58.2	19.6	9.8	43.7	22.7	10.0	12.8	36.0	10.0	35.4	29.9
9.0	35 49.0	1.6	9.2	51.7	52.1	10.0†	31.3	2.3	10.0	45.2	24.2
9.4	52.2	25.0	10.4	54 17.2	33.9	9.8	31.8	32.1	10.0	56.6	6.0
9.6	36 25.2	26.5	9.8	43.2	37.6	8.3	32.8	31.2	9.1	27 5.4	58.3
9.6	55.2	13.6	10.2	55 12.7	50.5	8.1	44.3	34.8	9.0	17.1	1.2
9.6	7.2	34.4	9.4	54.2	21.6	7.6	45.8	35.3	9.9	51.7	48.0
9.2	8.7	13.5	8.7	56 28.7	48.7	10.0	49.3	7.8	9.9	28 4.7	21.2
10.0	24.7	27.5	9.6	48.7	12.1	9.0	51.8	33.8	9.8	51.8	41.1
9.0	24.7	24.6	9.4	57 8.7	1.3	10.0	53.0	10.4	8.7	29 38.8	8.6
10.0	44.7	34.2	7.7	33.8	25.5	10.0	55.3	25.0	9.4	50.3	46.7
9.6	58.2	42.8	9.5	58 0.8	47.6	9.6	13 2.3	13.8	9.9	30 4.8	42.0
9.6	38 33.7	40.3	10.0	3.3	4.4	9.8	19.3	40.0	9.4	11.3	15.5
9.0	53.2	54.2	10.1	4.3	5.3	8.8	14 15.8	29.1	10.0	25.3	15.1
9.0	39 12.2	7.9	10.0	7.3	33.7	10.0	43.8	15.0	9.3	31 6.3	41.8
8.0	40 3.2	27.8	9.8	12.3	0.5	9.8	15 3.3	13.8	9.4	32 22.3	10.0
9.1	15.7	46.6	9.8	18.3	37.4	8.6	15.3	32.8	8.4	32.3	18.6
10.2	22.2	16.6	9.8	27.0	1.0	10.0	21.3	35.6	9.4	38.3	45.7
9.1	24.7	27.2	8.4	32.8	29.9	9.4	45.8	22.5	8.2	47.3	38.3
9.4	34.7	50.0	10.2	59 0.3	3.7	9.9	16 35.8	8.0	9.4	51.8	34.6
8.0	44.2	0.2	10.2	3.3	56.3	9.8	41.3	16.4	9.8	55.3	55.8
9.8	47.2	15.0	8.4	8.3	46.1	9.9	42.3	42.1	10.0	33 19.7	7.6
8.4	52.2	12.4	10.2	39.3	29.3	9.4	43.3	22.0	9.1	22.8	54.0
10.0	58.2	2.8	9.8	42.3	4.3	9.0	56.3	9.0	9.4	39.1	53.5
9.2	41 10.4	58.6	9.1	0 4.3	7.9	9.9	17 0.3	20.7	9.0	42.1	21.9
6.8	23.7	5.7	9.8	27.8	26.3	7.8	2.3	28.6	9.8	47.3	58.0
9.0	42.4	57.5	9.2	41.8	15.1	9.3	9.2	56.9	10.0	52.8	7.8
9.2	45.7	56.2	9.8	1 19.3	33.4	8.4	28.8	15.8	8.8	55.1	35.1
10.4	42 40.7	46.9	10.0	34.8	40.5	9.8	37.3	25.2	10.0	56.1	20.1
10.4	46.5	44.2	9.4	38.3	23.7	7.3	47.3	4.0	10.8	34 6.3	38.4
25pr.	+1 34.1	+3.4		+1 33.4	+4.0		+1 32.6	+4.6		+1 32.0	+5.0

6361-6420.				6421-6480.				6481-6540.				6541-6800.			
mag.	20 ^h .	-29°		mag.	20 ^h .	-29°		mag.	21 ^h .	-29°		mag.	21 ^h .	-29°	
	m	s	'		m	s	'		m	s	'		m	s	'
10.4	34	8.8	31.7	9.8	48	46.3	29.8	10.6	1	26.2	59.6	7.6	11	31.8	17.2
7.4		11.0	12.3	9.8		52.3	22.0	9.6		37.5	35.0	10.6		36.1	58.8
9.4		34.5	23.6	9.9	49	35.8	43.0	9.8		45.5	19.8	8.8		36.8	5.6
9.6	35	4.8	21.6	9.9		35.8	39.0	9.2		52.0	57.9	9.6		40.8	12.6
9.0		11.8	34.6	9.9		48.8	49.4	9.0		55.0	46.0	9.2		43.1	57.8
10.4		19.8	49.7	10.8	50	25.8	6.7	10.6	2	12.0	24.6	9.1	12	0.5	2.4
8.0		26.8	13.0	9.9	51	23.3	40.8	10.6		14.0	19.4	10.0		1.6	44.1
7.4		38.8	51.9	9.6		57.8	55.9	10.6		22.0	48.4	10.6		20.8	54.3
10.8		51.3	36.9	10.4	52	17.3	9.1	10.2		32.0	7.0	8.2		32.8	52.6
10.3	36	25.8	5.9	9.8		22.8	27.2	10.6		33.0	5.6	10.6	13	3.8	23.8
8.2	37	2.8	43.4	9.6		31.3	34.7	10.6		42.5	6.9	10.2		6.8	20.4
9.8		25.8	30.0	9.2		32.0	57.7	10.6		56.0	6.1	10.2		11.3	2.7
10.8		51.8	35.8	9.2		47.3	29.1	10.2	3	11.5	6.4	9.6		19.8	4.3
9.6		54.3	10.2	8.8	53	11.8	16.2	8.7		20.0	8.1	10.2		21.3	44.4
8.8	38	5.8	4.4	9.0		33.3	21.6	10.2		27.0	54.2	9.9		22.3	43.1
10.2		15.8	1.4	10.6		45.3	42.4	8.6		36.5	28.0	10.6		36.3	49.8
10.4		19.3	17.4	10.8		54.2	21.5	9.2		46.3	23.4	9.5		44.8	45.7
8.6	39	1.3	16.2	10.4		55.7	8.4	10.6		50.3	55.1	9.8		54.3	28.3
9.8		5.8	51.9	10.8		58.2	36.6	9.6		51.3	4.5	9.6	14	1.8	12.2
8.8		11.8	48.3	10.3	54	2.7	53.5	9.6	4	3.8	22.1	10.2		2.8	8.6
10.8		49.8	49.9	9.8		34.2	11.2	9.8		6.8	32.5	7.8		23.3	41.7
10.0		54.3	53.9	10.8		35.7	26.6	10.0		10.3	14.9	10.0		52.6	34.5
10.8	40	21.8	16.2	9.8		42.7	19.9	9.8		27.8	52.2	10.6		52.8	9.1
10.8		27.8	29.2	6.9	55	25.7	36.0	10.0		35.3	51.0	10.0	15	13.8	6.5
10.8		45.8	4.6	9.6		41.7	25.9	10.2		38.3	49.3	7.4		15.1	58.1
10.4		53.3	25.0	9.4	56	1.7	11.7	10.2	5	16.3	7.3	10.0		21.1	59.7
10.0		55.8	49.0	10.3		12.7	35.5	9.6		23.3	20.2	9.0		24.8	29.9
10.8		56.8	6.0	9.9		14.7	41.1	10.6		37.3	20.9	10.2		24.8	43.2
9.2	41	3.0	59.4	9.8		16.7	20.8	10.0		51.8	36.1	9.2		24.8	5.5
9.8		15.8	23.4	10.8		25.7	24.4	8.0		55.3	17.6	10.6		35.8	6.6
10.8		23.3	11.3	8.2		41.7	38.3	9.8		56.3	5.0	8.4		50.8	36.2
8.8		26.8	29.4	10.4		52.7	2.3	9.2	6	11.3	22.8	9.2		56.8	44.1
10.0		35.8	32.0	10.0	57	23.7	39.0	10.6		15.3	48.3	10.6	16	59.3	53.8
9.6		35.8	44.7	10.6		33.2	59.2	10.6		25.3	27.1	10.0		4.8	30.0
10.8		46.3	7.0	10.6		34.2	32.1	10.6		32.3	37.8	10.6		26.5	53.5
10.8		56.3	0.4	10.2		35.2	53.9	9.9		33.3	44.9	8.8		49.0	42.2
10.8	42	31.8	45.6	10.6		45.7	16.6	9.9		45.3	7.6	9.9		54.5	25.5
8.8		35.3	56.1	8.8		50.0	57.3	9.8		59.3	16.3	9.2		5.0	46.5
9.2		51.3	12.6	10.6	58	13.0	7.7	10.2	7	0.3	52.1	9.4	18	12.1	0.6
8.4		56.3	28.7	9.0		13.3	37.3	10.6		5.3	6.1	10.2		20.0	4.4
9.2		57.8	17.3	10.0		16.0	48.3	9.9		12.8	46.2	10.0		40.5	25.1
10.2	43	32.8	46.9	10.6		33.0	0.5	10.6		18.8	19.6	10.6	19	0.0	18.7
10.0		32.8	31.1	10.0		41.0	39.6	9.0		25.3	52.4	9.8		13.5	11.0
9.9		41.3	38.9	10.0		46.0	7.1	8.8		28.3	36.6	8.4		20.0	32.9
7.4	44	4.8	54.3	10.6	59	0.0	42.9	10.0		33.3	13.4	10.6		21.5	10.3
9.2		49.3	21.9	10.2		2.0	18.5	10.2		49.3	30.3	10.4		40.5	56.0
10.4	45	2.8	23.0	10.0		14.2	59.9	10.6		57.3	35.1	9.9		45.5	39.1
10.2		3.3	36.9	9.2		20.0	40.2	10.0	8	7.3	10.7	10.6		47.5	30.8
10.8		6.8	9.4	10.2		25.0	55.3	9.2		31.3	10.9	9.0		53.0	40.7
10.3		12.8	53.3	10.6		31.5	55.7	10.6		43.3	19.0	9.9		53.5	41.2
10.8		36.8	43.0	9.4	0	0.5	36.1	9.8		43.3	56.2	10.0	20	0.5	54.8
10.6	46	42.8	36.3	10.6		13.0	44.5	8.8	9	3.0	1.9	10.0		1.5	1.9
8.8	47	11.8	52.9	9.2		20.0	42.4	10.2		16.3	16.1	9.6		12.5	9.0
9.2		27.3	50.1	9.6		31.5	54.6	9.0		32.3	7.4	10.0		13.5	12.4
9.0		48.3	18.7	10.4		42.0	50.4	10.6		49.3	13.0	10.0		32.7	57.1
9.9		59.8	36.4	8.6		46.0	29.2	9.4	10	35.8	45.7	10.6		45.5	5.1
9.9	48	6.8	39.2	10.6		52.0	18.2	8.4		41.3	13.0	9.9		56.0	55.0
9.8		23.3	22.0	9.6	1	6.5	12.9	10.0		58.3	29.7	9.8	21	7.5	14.8
10.2		23.8	52.0	10.6		23.0	28.2	10.0		1.8	17.7	9.8		21.2	2.1
8.8		39.8	32.6	10.6		25.5	32.4	8.3		10.8	46.8	9.5		21.5	55.0
25 pr.	+1	31.2	+5.4		+1	30.4	+5.8		+1	29.8	+6.1		+1	29.2	+6.3

6601-6660.				6661-6720.				6721-6780.				6781-6840.				
21 ^h .		-29°		21 ^h -22 ^h .		-29°		22 ^h -23 ^h .		-29°		23 ^h .		-29°		
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	
9.9	21	46.5	46.9	9.1	54	16.6	22.9 =	10.3	27	47.3	3.5	10.8	8	3.7	33.8	
10.6		50.5	4.3	9.0	55	16.1	14.7 9.0 G=	10.3		54.3	2.5	10.2		22.7	28.5	
10.6		54.5	54.7	9.3		55.1	37.2 9.0 G-	8.6		57.2	26.3 8.5 M≡m	11.4	9	12.2	8.2	
9.8	22	8.5	20.4	9.3	56	6.6	45.3 G-	9.6	28	31.2	56.8	8.8		29.7	3.6 9.5 -	
9.2	23	1.7	23.1 8.5 GM-m	9.6		12.6	11.3 =	9.6		36.2	34.9	11.4		35.2	53.4	
9.4		39.7	9.0 am	6.6		26.6	57.0 7.2 GSa	8.3		46.2	7.5 8.8 Gam	10.2		51.7	14.1	
10.0	24	42.2	17.2	10.0		52.1	14.5	9.0		56.2	11.7 9.3 a	7.5		56.7	21.8 7.5 GStπ	
9.6	25	3.2	20.8 9.5	9.8	57	13.1	45.5	10.3	30	28.7	29.8	11.2	10	5.7	20.8	
10.0	26	55.0	2.3	7.4		30.1	2.5 7.2 GSaI	9.6		33.2	25.2 9.0 =	8.8		17.6	59.1 9.5	
8.4	27	18.7	26.3 Ga	9.2	58	15.1	54.2 M	8.0		43.7	41.6 8.0 Gam	7.4		25.7	7.0 6.5 GStπ	
9.8		20.2	23.0 ≡	9.3		22.1	34.9 10.0	9.2		46.2	47.1 9.5	10.4		53.2	51.1	
9.4	29	0.2	50.4	9.6		37.1	0.4	7.6	31	47.2	23.8 6.5 GSam	8.8	11	31.2	10.0 9.2 -	
10.0		4.7	10.2	9.9		40.6	35.3 9.5	9.6	32	19.5	57.1	8.6		46.7	9.4 8.0 Gtlπ	
9.7		38.2	5.1	7.4	59	3.1	40.7 7.8 Gatπ	8.6		52.2	29.9 8.0 Ga	7.6	12	11.7	25.2 8.0 GSbl	
7.9		41.2	10.0 8.0 GamI	8.0		5.1	18.6 7.5 GWb-	8.7	33	12.2	57.9 8.5 =	9.8		20.7	47.7	
9.4		41.7	14.6 9.5 ≡	9.4		29.7	21.1 9.0 -	9.5	34	15.7	55.6	7.8		21.7	4.3 7.0 GSlπ	
9.9	32	17.2	22.7	9.6	1	7.7	48.7 10.0	9.6		26.2	45.0	9.2		57.2	24.8 9.5 -	
9.9		56.7	31.2	9.8	2	11.7	50.7 10.0	9.8		31.7	48.2	9.0		6.7	20.0 9.5 a	
9.2	33	11.7	47.7 9.5 G	10.0		12.7	5.2	10.0		36.2	28.7	10.6	16	32.7	51.1 9.5 a	
9.0		19.7	8.2 -	9.6	4	43.2	34.1 9.5	8.4	36	4.7	17.0 8.8 W≡	7.8		47.7	21.5 8.0 Gb≡m	
9.6	35	45.2	15.1 =	9.9	6	42.7	17.0 9.5 =	8.5	37	9.2	35.0 9.0 Sb≡	8.6		54.2	41.1 a	
10.0	36	15.7	5.7	9.0	7	16.7	43.2	9.3		30.7	31.1 10.0	7.9	17	3.2	16.1 8.0 am	
10.0		54.7	3.1	8.4		34.7	29.4 ≡	9.8	38	25.0	18.4	11.4	18	5.7	49.5	
9.4	38	5.5	39.2	9.6		35.2	31.1	9.7		31.7	48.8 10.0	9.8		27.2	26.1	
7.8		15.5	17.8 8.0 GSam	9.9	8	29.2	44.2	8.5	41	6.7	10.7 8.2 Ga	10.4		47.2	55.6	
9.6	39	21.5	18.0 -	9.3	9	25.5	57.9 9.5 -	9.7		14.2	36.9	11.2	19	4.7	44.3	
9.2		27.5	3.7	10.0		41.2	48.6	9.3		55.7	18.9 9.0 GW=	9.4		13.2	37.3 9.5	
10.0		46.0	18.2	9.3		47.5	56.7 9.0 Ga	8.6	42	19.7	50.8 8.2 Ga	9.6		26.7	54.3	
9.7		55.5	34.8	9.6		54.8	24.4	8.8	43	54.0	58.1 9.5	10.8	21	0.7	17.5	
8.7	40	1.5	23.5 ≡	9.4	10	43.6	27.9	7.6	45	48.7	50.7 7.9 GSa	11.2		41.0	48.0	
10.0		48.0	39.7	10.0	11	3.9	57.4 10.0 G	9.8		46	28.2	49.1	10.8	22	4.0	48.5
9.2	41	25.0	51.2 9.5 -	9.4		24.9	32.5	8.0		35.7	4.8 8.2 Gam	9.0		34.0	34.4 9.5	
8.4		35.5	56.8 8.2 Ga	9.4		38.9	55.6 9.5 G	9.7		47	48.5	59.0 9.5 G-	9.6	23	57.3	12.4
9.0		39.5	4.0 ≡	9.1	12	57.9	46.4 -	10.2	48	41.7	39.4	9.6		53.8	37.9 9.0 Ga	
9.4		42.5	45.2 10.0	8.8	13	21.9	55.0	8.2		42.2	44.4 9.5 G	10.4		59.3	54.2	
9.8	42	22.0	3.6	10.3		55.9	14.8	8.2		45.7	42.4 9.5 G	10.8	25	8.3	26.5	
8.9		50.0	7.2 a	7.9	14	33.9	23.9 8.2 GWam	7.6	49	37.2	16.4 8.2 Gam	9.1		13.8	31.3	
9.4		57.5	21.1	10.3	15	30.4	44.8	9.7		50	32.3	55.4	10.2	26	6.3	35.3
9.4	43	40.5	18.2	10.0	17	5.7	12.3	9.8		53	50.8	43.9	9.1		16.8	2.7 9.2 G
9.8	44	2.5	43.6	8.0		9.7	18.2 8.8 GWbm	6.4	54	30.3	31.4 6.0 GSam	8.8		38.3	21.9 9.5 am	
10.0		25.5	28.0	10.0	18	20.2	38.6	8.4		36.3	47.4 8.5 =	10.0		27	6.8	13.3
9.4		32.5	11.7 9.5 -	8.6		52.7	21.0 8.5 GWam	9.8		43.8	28.4	10.0		38.8	24.1	
10.0		50.0	30.7	7.9	19	6.2	42.9 7.9 GSam	9.8	55	9.8	55.4 9.2 G	9.4		28	42.3	46.8
10.0	45	0.0	43.7	9.6		53.2	18.0	10.0	57	32.3	15.7	8.6		46.8	25.6 9.0 Ga	
8.9		26.5	28.8 8.8 a	8.8	21	40.7	22.4 =	9.8	58	17.0	9.2 9.2 M-m	9.0		59.3	32.7 9.0 a	
9.0		42.0	21.0 8.8 =	8.2	22	23.2	21.7 8.2 GS=	11.2	59	49.7	30.7	9.3	29	5.8	20.4 9.5 -	
9.8	46	15.5	17.2	7.8		25.2	17.7 7.0 GSb≡	9.4		49.2	15.5 9.5 ≡m	9.3		6.8	15.3 10.0	
9.4		22.0	28.1 -	8.7		28.7	42.9 8.5 a	11.2	1	1.7	8.9	10.8		27.3	42.6	
8.3		26.3	15.1 7.7 GamI	10.2		56.2	50.9	6.8		35.2	29.8 6.0 GStπ	10.0		39.8	25.2	
10.8†		27.4	1.7	10.0		57.7	38.6	10.0	2	36.7	40.5 G	10.4		46.3	34.8	
9.3	47	21.1	25.5 8.8 Ga	9.6	23	13.2	30.8	10.6		45.7	47.5	10.8		49.3	45.3	
9.3	49	6.2	56.3 9.0 -	10.0		56.2	52.9	11.4	3	10.7	23.9	10.8	30	27.8	50.1	
8.4		34.1	24.5 8.0 Gam	9.2	24	5.7	55.8 9.0 -	8.0		21.2	37.3 8.0 G1	10.2		30.8	53.6	
9.2	50	35.6	42.3 8.5 G=	10.0		36.7	2.5	8.0		45.2	6.3 8.5 Ga	10.8		51.8	28.6	
9.9	51	55.1	49.9 9.5	9.6	25	22.7	27.1	10.8	4	34.2	56.4	9.0	31	29.3	27.0 M≡m	
8.0	52	17.6	39.0 7.2 GSam	9.5		23.2	16.0 9.5 G=	10.6	5	44.7	17.0	10.0	32	42.7	52.4	
7.8		36.1	12.9 7.5 Gtlπ	10.3		39.7	5.3	7.3	6	33.7	5.6 8.0 Gbm	10.0		33	1.2	2.3
9.3		52.1	34.0 8.5 Ga	9.5		53.7	23.8	10.8		36.0	5.0	10.4		4.7	3.8	
6.0	53	39.6	3.2 6.0 GSπβ	8.6		59.7	37.5 8.0 Gam	8.0	7	49.2	8.3 8.0 Gatπ	9.3		6.2	23.9	
9.3		51.1	29.0	10.3	27	37.2	3.0	11.4		57.7	19.5	10.4		9.2	38.3	
25pr.	+1	27.7	+6.8		+1	25.4	+7.4		+1	22.8	+7.9		+1	19.9	+8.2	

6841-6862.				6863-6884.				6885-6906.				6907-6927.			
mag.	23h.		-29°	mag.	23h.		-29°	mag.	23h.		-29°	mag.	23h.		-29°
	m	s	'		m	s	'		m	s	'		m	s	'
8.1	33	23.7	38.0	10.0	40	5.9	20.1	10.3	49	59.4	25.9	10.4	55	25.4	42.6
10.0		38.7	37.3	9.2		16.4	28.7	8.6	50	3.9	48.4	9.0		58.6	15.9 am
7.8		41.7	3.0	9.6	41	5.7	0.3	10.2		12.9	23.1	10.3	56	1.1	47.1
8.5		44.2	35.9	10.8		31.9	28.4	9.6	51	6.4	10.3	9.0		14.1	46.1
10.4	34	29.7	16.6	9.4		45.9	24.7	10.0		22.4	23.3	10.4		47.7	2.3
10.0		35	7.2	10.6		53.9	20.3	8.4	52	7.4	54.4	8.6	57	2.1	41.7 -
10.8		20.2	3.6	9.6	42	14.4	49.0	10.4		11.3	15.3	7.6		13.1	6.7 8.2 Gaml
8.1	36	29.7	44.2	10.8		32.4	5.1	9.8		22.3	18.5	8.2		15.1	5.3 8.5 Gal
9.0		37.2	45.7	10.8		49.9	48.7	10.0		26.4	32.3	7.6		28.1	5.3 8.0 Gaml
10.0		51.3	58.3	8.6	43	15.2	2.2	9.0		35.9	20.8	6.1		56.6	57.9 GSB≡
10.0		53.7	53.3	8.5	45	25.4	1.3	9.8		45.9	34.1	10.2	58	3.6	25.3
9.4		57.7	49.3	10.8		41.9	3.8	9.2	53	1.4	32.9	8.4		17.1	32.7 8.5 b
9.6	37	0.2	30.7	9.0		57.7	4.2	8.8		22.9	12.0 =	10.4		19.1	51.3
9.3		45.7	40.3	8.8	46	31.6	3.0	10.2		46.9	27.5	10.3		44.1	54.9
9.3	38	7.2	26.3	10.4		31.6	4.6	9.8	54	10.1	57.6	10.2		52.1	28.7
10.8		29.2	4.6	9.8		52.4	34.2	10.4		13.9	21.8	10.0	59	24.1	39.8
9.6	39	3.2	22.0	9.0	47	34.9	11.0	10.3		21.9	49.8	10.4		33.6	37.9
9.4		13.2	6.0	10.4	48	28.9	41.3	10.2		41.4	52.4	10.2		36.1	53.3
10.0		23.2	57.2	10.4		43.9	23.7	9.8		50.9	11.3	10.3		40.1	4.3
9.6		31.9	23.3	10.3		57.9	8.9	7.6		56.9	25.2	7.6		46.1	50.8 8.5 Ga
10.8		46.5	53.5	9.4	49	36.4	6.0	9.4	55	16.4	2.7	9.2		49.1	10.3
10.8		56.9	10.9	10.3		40.9	16.5	10.4		17.4	50.2				
25pr.	+ 1 18.7		+ 8.3	25pr.	+ 1 18.0		+ 8.3	25pr.	+ 1 17.4		+ 8.4	25pr.	+ 1 17.0		+ 8.4

ZONE - 30°.

1-30.				31-60.				61-90.				91-120.			
mag.	oh.		-30°	mag.	oh.		-30°	mag.	oh.		-30°	mag.	oh.-1h.		-30°
	m	s	'		m	s	'		m	s	'		m	s	'
10.0	0	2.1	33.8	9.0	10	24.7	26.5 -	10.2	27	56.9	25.0	9.4	50	1.3	10.2
9.6	1	12.1	59.0	10.3		48.1	20.8	10.2		58.9	32.5	10.4		1.8	5.4
8.6		40.1	43.7	9.3	11	6.9	30.9 -	10.2	30	32.9	45.6	9.2		52.8	26.1
9.4		40.1	49.7	8.0	12	23.9	39.0	10.2		36.9	11.8	10.4	51	0.3	12.3
9.2		43.1	6.7 -	10.2	14	25.9	10.6	8.7		50.4	24.0	10.2		1.8	26.2
8.8	2	5.1	45.8	7.6		37.9	22.8	9.3	31	52.4	12.0	9.2		7.0	2.3 9.2 Ga
9.8		10.1	25.2	7.6	17	5.9	32.2	10.2	33	1.9	34.9	9.6		31.8	40.5
10.4		22.1	12.9	8.4		21.9	10.8	8.2		23.9	30.4	9.8		51.8	12.1
9.2		38.6	37.7	10.2		21.9	38.7	9.0		29.9	16.8	3.5	52	35.5	2.0 4.3 GSlπ
10.0	3	3.1	0.0	9.4		22.4	4.1	10.6		56.6	31.6	10.4		42.8	46.6
10.3		13.6	49.1	10.0	18	30.9	20.6	8.0	34	22.6	33.5	8.4		59.8	4.7 9.0 G
9.6		30.6	2.3	9.4	19	32.9	6.0	6.4		24.6	6.5	10.6	54	12.8	20.5
10.4		34.6	42.7	9.0		39.9	28.3	9.2		56.6	12.4	9.2	56	0.0	39.6 9.5 -
10.4		54.9	6.3	10.2	20	7.9	38.6	10.6	36	23.6	23.6	10.6		15.3	59.5
8.8	4	56.4	20.0	10.0		36.9	22.1	8.7	38	13.6	47.9	8.9		50.0	55.6 9.5
9.2	6	19.9	2.3	8.4		59.9	16.3	9.0		19.6	25.6	10.6	57	11.0	14.3
8.8		37.9	9.8	8.9	21	5.9	47.0	10.0		29.6	56.4	10.0		15.0	24.0
8.4		38.9	45.1	10.2		21.2	59.0	10.4		46.6	35.0	6.8		19.5	11.8 6.5 GSet
10.4		41.9	17.9	9.6		30.9	13.0	9.4	40	29.5	0.9	10.2	58	4.8	14.8
8.0	7	14.4	16.1	9.2		40.4	8.6	7.0		32.6	52.4	9.2		6.0	4.3
10.4		32.4	16.8	8.4	22	12.9	48.1	9.6		53.1	51.9	8.6		18.0	41.6
10.4		33.4	35.8	8.9		41.4	25.2	9.4	41	15.3	10.9	8.2		31.5	28.0 8.8 G≡
10.4		48.9	17.8	9.8		52.9	32.0 -	7.3		50.8	1.7	9.7	0	29.6	1.7
9.6		56.4	15.6	9.2		59.4	12.0	10.6	42	25.8	8.4	9.7		49.0	49.5
10.4	8	23.1	49.4	8.4	23	45.4	55.3	10.0		54.8	13.0	11.0	1	1.5	33.2
9.0		32.9	51.9	10.2	24	48.4	17.5	10.6	43	11.3	56.2	8.4		3.0	17.1 9.0 G≡
10.4	9	1.1	27.9	10.2	25	2.9	57.7	9.4	45	11.8	22.1	10.2	2	33.0	41.1
8.7		6.6	51.8	10.2		19.9	15.9	10.0	46	33.8	22.8	7.6		54.0	17.2 8.2 a
10.4		13.1	35.8	10.2	26	21.4	58.5	8.5	47	45.8	51.2	10.8	4	21.5	28.9
9.8	10	3.2	34.9	6.8	27	29.9	14.8	9.4	49	43.3	21.4	10.0		41.5	45.9
25pr.	+ 1 16.4		+ 8.4	25pr.	+ 1 15.0		+ 8.3	25pr.	+ 1 13.6		+ 8.2	25pr.	+ 1 11.9		+ 8.1

121-180.				181-240.				241-300.				301-360.			
1 ^h .		-30°		1 ^h .		-30°		1 ^h -2 ^h .		-30°		2 ^h .		-30°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.8	5	30.0	9.4	7.6	29	14.0	33.3	9.0	58	13.4	13.5	9.4	23	51.0	27.4
9.2		49.5	35.9	8.6		17.0	30.9	8.8	59	58.4	54.3	9.4	24	34.5	18.0
10.0	7	1.5	26.2	10.1		40.0	44.1	10.2	1	13.4	20.7	7.8		56.5	54.5
8.8		3.0	21.4	9.8		47.5	19.1	8.8		30.3	45.9	10.0	25	20.0	44.8
11.0		15.0	26.9	9.1		54.0	53.1	9.9		33.4	8.4	10.4		31.0	32.2
11.0		22.0	0.8	6.4	30	22.0	32.8	9.6	2	27.9	17.5	9.8		46.0	54.2
11.0		25.5	59.7	8.7		24.0	2.1	9.8		32.9	52.9	9.4	26	22.5	33.2
11.0		36.5	0.7	9.4		59.5	33.4	10.2		54.9	12.2	10.0		28.0	9.6
10.8		37.0	30.2	8.2	31	20.5	1.9	9.4	4	20.9	0.2	10.0	28	10.6	2.2
8.6		50.7	58.3	10.1		26.6	6.0	8.6		31.9	35.1	7.2		24.5	29.0
			9.0				10.0				9.0 G=				7.5 GSa
10.8		59.8	36.9	9.4	32	25.6	54.0	8.6		55.3	27.9	10.4		35.5	15.3
11.0	8	31.3	8.5	9.8	33	57.6	16.1	10.2		52.4	53.0	8.0	29	7.5	29.8
10.4		35.3	17.1	9.3	34	15.6	18.3	9.2	5	23.4	53.0	10.4		56.0	2.9
9.8		38.8	52.1	10.0	35	25.1	46.6	10.2		32.3	24.0	9.8	30	22.0	53.7
8.8		51.8	3.3	10.0	37	5.6	18.4	10.2		33.3	40.0	6.6		45.5	35.4
10.4	9	12.8	41.9	9.3		36.6	2.7	10.0		33.4	51.2	9.4		57.0	51.1
11.0		19.3	4.2	8.6	38	5.6	26.3	9.0		34.4	49.1	9.8	31	48.5	11.6
9.2		21.8	14.0	9.4	40	51.6	12.8	10.2		54.4	28.7	10.0	32	8.0	3.0
10.6		28.8	56.8	9.0	41	6.1	49.2	10.2	6	6.3	0.9	6.6		55.1	44.0
10.6		55.3	35.1	9.4		37.1	39.5	10.2		7.9	11.1	9.2	33	2.8	51.5
			9.0 a				8.8 GSb-	9.4		12.4	32.0	10.4		30.9	46.9
9.7	10	47.8	37.0	7.8		59.1	20.7	9.4	7	8.9	23.0	10.6	34	2.0	57.9
8.9	11	15.8	38.6	9.6	42	10.6	39.7	9.4		27.4	55.0	10.6		53.0	6.9
10.6		54.3	42.5	9.8	43	5.6	17.0	9.0	8	10.4	28.1	7.8	35	12.1	40.4
10.4	12	12.5	57.2	10.0	45	26.6	19.8	9.2	9	26.4	14.1	10.4		49.1	38.5
9.0		41.3	50.5	10.0	46	7.3	56.8	9.4		34.4	53.4	8.2	36	17.2	35.7
9.2		53.0	59.8	10.2		51.7	0.2	10.0		46.4	39.1	9.0		17.2	50.8
9.2	13	2.8	37.1	8.5		54.3	54.4	9.4		59.4	0.2	7.8	31	2.2	56.4
10.8		21.8	54.0	9.6		59.8	43.0	9.8	10	26.8	59.1	9.3	37	14.2	25.3
10.5	14	18.8	55.4	9.8	47	13.8	10.6	10.4		27.1	45.1	10.6	38	4.2	18.5
8.1		32.3	15.3	9.6		18.3	27.8								9.0
			8.3 Ga				8.5 -								6.0 GStr
8.9		41.8	27.8	10.2		42.3	42.1	10.0		38.3	50.8	9.0		42.7	27.3
10.2	15	52.6	56.5	9.9		49.6	59.2	10.4	12	26.3	7.0	10.4		48.7	41.9
10.5	16	7.3	4.8	9.4		52.1	2.5	8.7		31.3	24.2	9.8	39	19.7	28.5
10.6		34.3	37.8	8.8	48	12.3	55.1	9.2		43.8	18.2	10.6		59.7	31.9
11.0		40.3	5.4	9.6		27.3	55.4	8.2	13	3.8	14.8	9.1	40	13.7	24.5
9.8	17	10.8	40.4	9.4		54.3	13.9	10.4		6.5	15.0	10.2		17.1	16.3
11.0		27.8	11.9	10.0		58.3	45.0	10.2	14	0.3	24.0	10.4		22.1	35.5
10.6	18	29.8	33.8	9.2	50	29.3	26.2	9.2	15	0.8	44.5	9.8		41.8	39.0
11.0	20	11.8	34.1	9.8	51	15.8	47.6	9.8		6.3	18.6	10.6	41	35.8	22.8
7.8		40.3	55.6	9.2		17.6	2.2	10.4		23.5	13.6	10.0	42	3.8	11.9
			7.7 GSb-				a								9.0
9.8		42.8	35.6	9.6		30.3	41.0	9.4		38.3	18.0	10.2		33.8	5.4
8.2		59.3	7.2	9.0		47.3	4.5	9.8		53.8	30.8	10.4	43	22.8	23.5
7.4	21	16.3	53.1	10.0		57.3	21.9	9.0	16	7.3	11.0	10.4		29.3	49.9
8.8		21.8	23.0	9.2		52	35.3	10.4		23.3	17.4	9.0		53.8	4.7
11.0	22	43.8	2.9	10.2	54	13.7	57.5	8.7	17	24.3	29.0	10.6	44	10.8	52.1
8.6		55.0	32.3	8.0		35.8	28.2	7.7		32.3	11.3	10.4		16.8	29.6
7.9	23	52.5	41.5	10.2		38.3	50.8	7.4		46.8	26.0	9.1		22.8	59.2
9.4	24	52.5	43.1	9.0		44.3	6.9	9.0	18	20.8	3.0	10.6		40.6	2.1
7.2	25	42.0	37.8	9.0		48.8	23.0	8.2		28.0	0.2	7.6	46	3.8	57.1
6.8		57.0	55.5	8.6	55	33.3	46.3	7.8	19	21.0	25.7	10.6		41.8	53.2
			6.0 GSet				8.0 G								8.0 GSa
9.2	26	6.0	48.3	6.6		40.3	36.2	8.8		38.0	55.5	10.4		56.8	56.0
9.8		26.0	2.5	8.6		42.3	6.5	9.0		56.0	6.8	8.3	47	54.8	20.7
8.2		42.0	22.1	9.6	56	28.3	18.4	9.8	21	19.0	2.9	10.2	48	45.8	57.0
9.6	27	1.0	9.4	9.9		32.4	6.3	9.4		34.5	3.6	9.6		46.3	7.9
8.2		38.0	34.7	9.2		38.9	29.4	10.0	22	3.3	26.4	10.4		48.3	57.9
9.8		49.0	28.1	6.7		52.9	16.1	8.7		23.5	16.3	10.2	49	16.8	2.8
9.3	28	24.5	35.9	8.8	57	7.4	25.0	9.8		56.0	10.7	8.6		18.3	21.0
9.2		26.0	51.9	8.6		9.4	55.5	9.6		58.5	12.3	10.2		27.8	7.9
8.8		36.5	1.7	9.0		11.9	56.0	10.4	23	3.0	14.8	8.8		29.3	8.2
9.6		50.5	23.5	10.0		53.9	30.2	9.6		36.0	59.3	9.1	50	17.8	30.3
			9.5				9.0								9.0 GS
25pr.	+ 1	10.5	+ 7.9		+ 1	7.9	+ 7.4		+ 1	6.1	+ 7.0		+ 1	4.2	+ 6.4

361-420.				421-480.				481-540.				541-600.						
mag.	2h.-3h.		-30°	mag.	3h.		-30°	mag.	3h.-4h.		-30°	mag.	4h.		-30°			
	m	s			m	s			m	s			m	s				
10.0	50	52.8	26.8	8.8	18	52.0	59.2	8.2	10.0	40	20.9	2.8	9.6	2	31.1	51.4		
10.4	51	16.8	6.4	10.2	53.0	21.9		8.8	40.2	29.0	8.0	9.1	56.1	14.9	10.0	G		
10.6		22.8	20.8	10.2	53.0	13.8		10.2	41	22.1	4.9	10.2	3	8.6	56.7			
10.4		32.8	2.3	9.7	59.5	3.0		9.4	45.3	2.8		9.4	12.6	30.1				
10.0		44.8	54.9	9.4	19	21.5	9.4	8.0	57.1	26.4	7.2	10.2	14.1	34.9				
6.4		55.8	21.5	10.0	28.5	48.0		7.1	42	15.1	17.2	7.0	9.9	21.1	26.9			
10.4	52	9.3	45.5	8.8	20	0.0	36.9	9.0	6.8	53.1	32.8	5.8	9.2	21.6	46.9	-		
9.8	53	16.8	47.9	7.9	2.0	17.1	7.5	7.9	53.1	28.9	8.2	9.6	47.7	57.5				
10.4		30.8	58.2	9.6	22.0	26.4		10.2	43	1.1	24.9	10.2	53.1	4.9				
10.6	54	8.8	17.4	8.8	28.0	59.5	9.5	10.4	5.6	7.8		9.1	4	17.5	44.8			
8.0		32.8	40.1	8.2	21	53.8	54.1	8.3	8.6	26.1	27.7	9.0	8.6	5	28.0	36.5	8.5	
9.1		53.8	42.3	9.5	9.4	22	58.8	39.0	8.8	32.1	47.2	10.0	9.9	6	1.0	44.1		
9.9		57.3	5.5	10.3	24	18.0	3.9		10.0	38.1	28.8	9.5	9.0	54.5	39.2	9.0	G	
8.6	55	26.8	12.3	9.0	10.0	42.3	14.8		8.8	45	21.9	3.4	8.6	58.5	34.5	8.8	G	
10.2		42.8	29.0	10.4	52.8	44.8		9.2	32.1	56.3	9.5	8.6	7	14.0	45.6	8.2	G=	
7.8		42.8	51.4	8.0	8.0	25	28.8	45.8	9.8	32.4	18.4		9.9	26.5	31.4			
9.0	56	43.1	57.2	9.0	8.6	31.8	13.0	8.5	46	0.1	20.4		9.4	34.5	29.1	9.5	G	
8.6	57	4.1	58.7	a	10.0	42.8	52.0	8.8	8.6	21.8	27.2	a	10.1	38.5	58.8			
9.1	58	14.8	23.7	9.0	9.8	57.6	24.4		9.4	47	37.6	56.6	9.0	53.5	38.1	7.8	GSb	
9.9		17.1	37.2	9.4	26	15.1	56.8		9.3	48	4.1	30.4	9.9	8	8.0	37.5		
10.0	59	19.4	56.2	9.2	10.4	18.1	1.4		9.9	44.6	4.7		9.4	32.0	15.1			
10.0		23.9	3.0	8.6	27	38.1	18.8	9.0	9.3	50	34.1	32.1	9.5	9.4	49.5	27.8		
10.4		24.3	58.4	9.4	28	7.6	56.2	9.5	9.9	46.1	41.2		8.2	9	6.0	25.8	7.2	GSat
9.8		37.4	9.4	10.0	31.1	37.8			9.4	56.1	10.5	9.0	10.4	10	7.0	1.2		
9.2	0	47.4	50.5	9.6	40.1	47.7		8.5	10.0	57.1	48.4		7.3	8.7	2.3	7.6	GSa	
7.5	1	25.9	28.2	7.5	46.6	41.1	8.5	Ga	10.0	58.1	10.2		8.7	26.7	40.2			
7.2	2	43.9	47.7	7.6	29	33.1	42.4		10.0	51	6.6	18.2	8.9	45.2	52.3	a		
10.2	4	2.9	49.3	9.4	41.6	22.7		8.1	8.1	8.6	1.5	7.8	9.8	11	16.7	3.3		
10.0		7.9	33.3	9.6	44.1	44.0		8.9	31.1	21.4	8.5	Ga	9.0	12	1.7	23.5	9.0	GS
10.2		23.9	29.4	10.3	55.6	35.0		10.0	37.6	26.4			9.0	3.2	18.7	9.2	G	
9.0		51.9	23.9	9.0	10.4	30	30.6	1.5	9.6	44.1	34.1		9.6	12.2	40.3			
10.4	5	0.9	39.7	9.0	10.3	31	22.6	47.6	9.4	52	6.1	14.3	9.0	9.0	24.7	45.8	9.0	a
8.2	6	1.7	58.5	9.0	10.3	43.6	53.6		10.0	36.1	13.7	9.0	9.6	58.7	10.5			
10.4		11.4	27.9	8.8	32	3.1	14.6	7.2	9.0	53	22.6	31.4	10.1	13	32.7	43.8		
8.2		39.9	44.9	a	8.5	14.2	35.7	8.0	9.7	36.1	46.0		9.4	40.2	47.7			
9.8	7	20.9	4.9	10.4	45.2	28.0		8.9	8.9	37.1	55.5	9.5	10.4	52.3	48.0			
7.9		23.9	37.5	a	9.8	34	2.2	0.1	9.6	50.6	3.9		9.0	14	59.7	42.3	9.5	
9.7		29.9	8.0	10.3	7.7	18.9		10.2	54	50.1	4.9		9.6	16	7.9	27.1		
9.6		45.9	26.2	9.4	35.7	49.4		10.2	55	14.9	58.8		9.5	14.4	24.4			
10.0		58.4	21.3	10.0	36.2	55.4		6.3	6.3	41.6	50.6	6.2	9.0	46.4	30.3	a		
10.4	8	3.9	1.0	9.8	51.2	12.0		9.8	56	58.6	20.7		9.2	17	14.9	53.4		
9.4		5.9	21.4	9.8	35	15.3	43.4		10.0	59.6	24.5		9.6	43.4	44.9			
10.0		15.9	11.0	9.4	19.2	54.9	9.5		9.8	57	2.1	52.6	9.5	8.9	57.4	3.0	8.7	Ga
6.9		24.9	16.2	7.0	9.8	32.2	4.7		8.4	2.6	49.1	8.2	9.2	18	3.9	26.3		
8.0		27.9	41.4	9.0	10.4	43.3	43.1		10.0	9.6	55.2		9.0	5.1	2.0	9.5		
9.6		44.5	18.0	a	10.0	49.7	31.0		10.0	25.6	20.5		9.0	20	35.4	53.1		
9.8	9	41.0	44.8		9.4	36	1.2	49.1	9.9	32.6	34.1		10.1	42.4	49.0			
10.2	10	2.0	13.2		10.3	2.7	19.4		9.6	34.1	28.9		10.1	52.9	18.8			
9.2		18.0	52.6		8.6	5.2	19.9	9.0	9.6	58	8.1	48.8	9.5	10.4	21	5.4	50.6	
10.0	11	37.2	2.9	10.4	34.7	35.5			9.3	18.2	2.2		9.3	13.4	13.8			
10.4	13	24.5	35.0	10.2	35.2	30.6		9.8	22.1	6.3			9.8	15.4	50.6			
9.4	14	24.0	19.0	8.6	35.7	47.0		9.1	59	40.6	20.9		8.5	17.4	36.9	8.0	GS≡	
8.0		44.0	40.7	8.0	37	2.7	39.6	8.0	8.0	53.6	33.9	8.0	9.5	18.9	25.8			
9.7	15	57.0	38.4	a	9.8	4.2	15.5		9.4	56.6	56.6		9.6	20.9	37.6	9.5		
8.9	16	9.0	26.0	9.0	8.6	25.2	34.4	9.0	9.0	0	1.1	31.1	8.5	54.4	17.0	8.5	=	
10.0		48.5	49.4		10.3	38.7	49.3	9.0	9.0	52.1	1.1	8.8	a	10.4	22	3.4	1.9	
10.2	17	10.0	10.9		8.6	39	3.7	25.3	9.6	1	20.6	29.5		10.0	16.4	31.0		
9.7		10.5	12.6		9.8	32.2	37.0		8.8	28.2	59.5	9.0	8.8	30.4	14.4	8.0	G=	
9.4		26.0	38.6	9.0	10.0	44.7	1.3		10.1	2	24.1	29.2	9.8	57.9	11.2			
10.4	18	48.0	40.6	9.6	40	20.7	59.2		9.3	30.6	8.5		8.1	23	38.7	2.1	8.2	GSat
25pr.	+1	2.6	+5.8		+1	1.2	+5.1		+1	0.1	+4.4		+0	59.3	+3.8			

100-Gate-Cop. 11-1-16

601-660.				661-720.				721-780.				781-840.						
mag.	4h.	-30°		mag.	4h.	-30°		mag.	4h.	-30°		mag.	4h.-5h.	-30°				
m	s	'	"/	m	s	'	"/	m	s	'	"/	m	s	'	"/			
8.8	23	38.9	31.3	9.5	10.3	37	42.2	24.7	11.0	49	59.6	49.5	11.0	59	37.3	2.4		
9.6		41.4	14.9		10.6		53.2	19.9	7.2	50	17.6	29.2	7.8	10.8	42.8	35.1		
9.5		41.9	45.0		10.8	38	3.2	57.1	9.6		20.1	13.0	10.5		55.8	34.9		
9.5		44.4	56.1		11.0		6.7	54.4	9.1		30.7	59.9	9.5	9.6	56.8	55.1		
9.8	24	27.9	1.3		9.6	39	8.2	24.7	10.6		41.6	46.8	9.8	0	3.8	42.3		
10.1		43.9	45.8		9.6		13.2	3.6	9.0	51	0.1	31.2	8.8	10.8	14.8	59.9		
8.9	25	9.4	32.4	8.8 G	9.4	40	13.2	8.7	9.7		0.6	16.9	10.4		15.3	5.4		
8.6		10.9	14.1	a	9.4		13.4	1.7	9.8		4.6	5.7	9.7		18.8	3.1		
9.0		16.3	58.4		9.6		26.2	37.1	8.5		36.1	26.1	9.0 -	9.8	1	25.3		
7.4		29.4	43.0	7.5 GS π	10.4		46.7	41.5	10.6		42.6	29.7	10.2		55.8	10.1		
9.3		30.9	29.9		8.8		46.7	53.5	8.8 -	9.1		46.1	33.2	9.5 G	10.0	2	36.8	
9.2		34.4	27.0		9.4		50.2	50.1	10.8		53.6	33.1	9.3		46.8	47.7		
9.2		40.9	47.2		9.4		59.7	0.4	10.8	52	15.1	59.2	10.6		53.8	16.0		
10.1	26	3.9	53.5		11.0	41	8.2	31.8	11.0		17.6	2.5	9.5	3	0.1	56.4		
10.0		14.4	6.5		9.1		13.2	53.2	9.5	9.1		30.6	51.3	11.0		15.3	0.9	
8.4		33.3	2.8	8.0 GSb	8.8		15.7	51.1	9.5	9.0		55.1	25.7	G	9.8		20.5	41.5
9.6		36.4	35.3		9.8		23.2	5.6	10.0		59.1	5.1	10.0		39.0	58.2		
9.2		42.9	0.6		10.0		23.5	58.1	9.1	53	6.6	25.6	9.5 G	10.6		44.5	11.5	
9.2		43.9	37.1		9.4		53.7	8.0	10.3		12.3	33.2	11.0		50.5	24.2		
10.2	27	15.9	59.4		8.8	42	32.7	55.4	9.8 -	9.4		12.6	7.6	8.8		56.5	19.5	
10.2		22.4	20.8		10.8		38.2	52.4	11.0		13.1	20.1	9.3		57.0	52.9		
8.8		24.4	22.4	8.8 Ga	9.7		55.7	53.2	8.2		31.1	36.4	8.8 a	10.8	4	3.5	41.7	
10.4		38.4	46.8		7.6		57.2	14.7	6.8	GS π	9.9		41.1	6.4	11.0		3.5	59.6
10.2		45.4	56.6		9.4	43	12.7	33.7	9.0		52.1	26.2	9.8		18.5	42.5		
10.1	28	31.9	3.4		11.0		21.2	9.4	9.6	54	5.4	5.4	9.5		30.0	20.5		
5.8		36.2	1.4	5.0 GS π β	9.6		28.2	51.2	10.4		17.6	29.4	9.0		51.2	0.5		
8.1	29	14.4	50.0	8.2 GW \equiv	9.9		44.7	32.1	10.0		19.1	17.6	9.0	5	51.5	14.5		
10.0		28.9	25.2		9.0	44	17.7	26.0	9.5 a	10.0		40.1	27.2	9.8	6	12.0	59.5	
9.8		43.4	18.8		10.3		31.7	50.0	10.4		43.6	26.5	7.7		41.5	22.7		
9.8	30	24.9	9.1		10.2	45	1.7	6.1	9.1		44.1	50.6	9.7	7	6.5	36.2		
5.0		41.4	49.1	4.0 GS π β	11.0		9.2	48.5	9.4		56.1	33.4	9.3		11.0	42.3		
10.1		42.4	37.9		9.9		10.7	22.6	10.8		58.6	54.0	9.0		11.0	37.2		
9.5		45.6	59.0		8.5		17.2	28.5	8.5	Ga	9.4	55	31.6	47.9	9.5		12.0	17.1
10.1	31	45.4	32.5		9.7		17.7	32.0	10.8		36.6	24.9	10.5		27.0	4.3		
6.0	32	0.1	58.4	6.2 GS π	9.6		21.2	14.2	10.8		36.6	32.7	8.2		37.5	7.7		
8.0		13.9	40.9	6.8 GS π	10.2		31.7	9.2	9.6		37.6	34.0	9.2	8	28.5	24.2		
8.2		17.4	12.1	8.5 G-	10.2		45.2	2.5	10.3		44.1	57.4	9.4		34.5	29.9		
9.5		43.9	48.4		10.8		57.7	3.7	10.3		55.1	16.1	10.8		52.5	2.9		
8.1		44.4	9.2	8.0 G-	10.8		59.2	19.0	10.6	56	7.1	37.7	10.5		55.0	40.3		
8.9		44.9	42.6	8.5 G	9.4	46	19.2	29.5	9.5	10.8		21.1	56.4	8.4		56.5	42.3	
10.4	33	6.2	39.6		9.6		27.7	52.5	10.8		21.1	1.8	10.6	9	28.5	35.3		
9.0		24.9	35.0		10.8	47	23.7	54.6	10.8		22.1	40.5	9.5		34.0	24.3		
9.3		36.1	40.1		10.6		25.7	2.9	9.2		26.1	1.9	a	11.0		39.0	29.6	
8.8	34	23.2	50.5	8.8 a	9.8		32.7	11.8	9.0		26.1	15.6	9.0 G	9.7		43.5	36.2	
10.8		25.3	45.1		9.9		33.1	11.1	9.2		26.6	16.3	9.5 G	9.4		54.5	46.8	
8.6		31.0	42.1	8.2 Ga	7.5		49.1	52.1	7.8	GS π	9.9		27.1	3.5	9.3	10	2.5	13.8
11.0		46.2	31.9		9.4	48	4.1	0.8	8.2		38.6	25.0	7.8	Ga	10.6		23.5	18.8
8.8	35	5.2	3.2	a	10.6		12.6	55.7	10.4		43.1	26.4	9.2		26.5	15.4		
10.4		43.2	19.4		9.6		31.1	51.1	10.0		55.6	1.0	9.3		28.0	22.6		
10.0		50.7	58.9		9.4		39.6	28.7	9.1	57	15.6	33.4	10.2	11	2.3	17.7		
11.0		55.7	12.3		9.9		44.1	8.6	10.3		21.4	19.5	9.8		10.3	19.1		
9.4	36	9.7	46.8		9.9		55.1	37.2	10.8		40.6	51.4	8.8		37.8	0.2		
10.8		13.2	2.4		9.9		59.6	14.0	9.0		46.4	19.6	9.5 a	8.4		49.3	30.2	
10.8		16.7	1.3		9.2	49	15.6	5.8	10.0		5.1	24.1	9.5	12	7.3	1.8		
9.1		22.7	17.0		11.0		19.6	52.1	11.0		16.6	46.6	10.0		11.8	10.6		
8.8		41.7	42.1	9.0	9.6		22.1	30.1	10.8		24.6	1.9	10.6		26.3	14.5		
9.9		46.4	56.9	10.0	10.8		32.1	5.2	9.5		26.8	40.5	9.7		29.0	56.3		
10.8		58.2	33.3		9.4		34.6	28.1	9.8		56.6	2.8	10.8		40.3	57.4		
9.8	37	3.2	19.3		9.6		36.6	29.4	10.2	59	15.8	6.6	9.4	13	7.3	16.1		
11.0		16.7	55.6		10.3		52.6	26.3	10.6		37.3	52.6	9.0		14.3	8.1		
25Pr.		+0 58.6	+3.2				+0 58.2	+2.7				+0 57.9	+2.8				+0 57.7	+1.9

841-900.			901-960.			961-1020.			1021-1080.		
mag.	5 ^{h.}	-30°	mag.	5 ^{h.}	-30°	mag.	5 ^{h.}	-30°	mag.	5 ^{h.}	-30°
10.8	13 28.8	19.7	9.8	23 11.6	15.8	10.5	30 24.0	22.5	9.2	41 29.4	29.9
9.6	14 37.3	16.5	8.6	19.6	14.3 9.0 G	9.4	43.1	31.7	10.5	37.4	45.2
10.1	43.3	34.4	8.4	23.6	7.8 8.8 a	10.0	46.1	5.3	9.2	49.4	36.8 9.0 a
9.7	43.3	12.0	10.0	37.1	14.6	9.5	54.9	0.6	9.8	52.4	16.9
10.0	44.8	12.3	8.9	44.1	5.4 9.2 G	9.0	59.1	54.5 9.0 a	10.0	54.9	5.7
10.8	50.3	47.9	10.2	54.5	24.7	8.0	31 10.6	37.0 7.5 GSa	10.4	59.9	47.3
10.2	52.8	13.7	10.0	24 2.8	53.4	9.8	13.7	57.1	10.2	42 10.9	50.4
10.8	15 22.3	51.2	10.5	3.5	16.1	9.6	28.8	24.1	9.4	21.4	36.0
10.5	45.3	44.2	7.8	18.8	13.1 7.0 GSa	10.2	33.8	28.4	9.4	38.4	36.6
8.2	48.7	2.7 8.5 G=	10.4	27.3	38.1	8.7	44.8	14.1 -	10.2	45.6	27.7
11.0	57.8	5.3	10.6	37.5	12.1	10.2	52.8	57.4	10.2	50.1	11.1
10.6	16 13.3	6.9	9.2	57.3	20.6	10.2	32 6.3	49.2	9.2	59.6	59.5
8.2	22.3	11.8 7.5 GSa	10.2	57.3	39.1	9.2	13.8	31.7 8.8 Ga	10.5	43 11.1	38.7
10.1	26.3	5.0	9.0	25 16.8	29.1	9.8	36.8	58.5	9.0	11.1	48.9 9.2 a
10.5	30.3	30.3	9.5	27.3	32.0	9.2	42.5	21.4	10.5	14.1	29.5
10.8	36.3	7.0	9.4	43.5	57.0 9.5	10.4	54.7	0.4	8.6	18.1	57.9 9.0 a
9.0	53.3	45.8 9.0 b	9.5	26 0.5	4.5	8.6	33 13.0	35.4 8.5 a	9.5	56.1	39.5 9.5
10.6	53.8	58.4	10.0	2.0	50.5	9.8	16.0	5.3	10.2	44 8.1	26.0
9.0	17 16.3	13.7 10.0	9.6	9.0	19.1	8.9	18.0	10.0 a	10.5	13.1	38.5
10.2	17.3	53.6	8.7	29.5	47.3	10.0	50.5	54.0	9.8	20.6	15.4
10.6	17.3	30.3	9.8	32.5	31.1	9.8	34 8.5	42.0	10.0	30.2	58.3
10.1	25.8	10.3	10.2	35.5	29.1	8.6	32.5	22.0 9.0 a	10.5	41.1	0.5
9.4	26.3	41.6	10.0	43.0	25.5	8.6	35 12.0	42.3 8.0 G-	9.6	43.1	30.1 9.0
8.8	18 10.3	43.0 9.5	10.2	46.0	20.1	10.2	23.2	25.5	10.5	44.1	19.3
10.8	12.3	29.5	9.6	47.5	33.9	10.2	28.7	52.7	9.4	45 1.1	32.5 9.5
9.8	16.3	39.8 9.5	10.0	48.1	12.6	9.4	43.2	34.2	10.2	1.4	0.9
10.1	33.8	20.7	9.8	49.5	50.8	8.8	43.7	47.6	9.6	3.1	39.7
10.5	49.6	21.0	8.2	51.0	58.2 8.2 G=	9.0	36 18.7	32.6 9.0	9.0	7.1	13.1
11.0	19 7.1	7.6	10.4	54.0	14.2	9.2	20.2	10.5	7.5	8.8	39.5 6.5 GSat
8.6	35.6	25.5	8.6	27 13.0	56.5 9.0 G-	8.7	53.2	44.1 9.0	9.5	9.1	13.7
10.6	46.1	8.4	9.8	15.0	31.7	10.0	37 5.7	32.8	10.0	11.8	42.4
9.3	56.1	30.6	9.8	19.0	10.0	10.0	6.7	41.1	10.5	12.8	15.5
9.2	3.7	58.7	10.0	20.5	17.7	10.4	22.0	28.9	10.0	23.0	34.1 10.0
8.8	11.6	15.6 8.5 G-	10.0	24.5	1.6	5.2	25.5	35.8 6.2 GStr	8.1	26.3	52.3 8.5 a
9.5	12.1	50.8	10.5	27.1	54.9	10.5	27.0	15.0	9.6	27.8	21.6
10.4	33.1	40.4	9.8	36.8	21.3	10.0	46.5	53.3	9.8	48.1	3.9
9.0	33.6	43.5 8.3 G-	8.2	42.3	38.6 9.5 Ga	9.4	38 25.5	46.5 9.5 G	9.6	57.5	55.7 9.0
10.6	21 1.1	50.3	9.2	54.8	34.5	10.0	28.0	18.5	10.5	46 10.8	20.2
9.4	9.6	6.7 9.5 a	9.0	28 24.8	39.3	10.0	43.0	53.7	10.4	50.3	2.9
8.6	18.4	47.0 9.0 -	9.8	28.8	44.9	10.2	45.5	24.4	8.6	56.5	29.7 9.0 a
9.0	21.1	20.8	9.5	33.3	35.0	9.8	39 13.0	41.7	9.2	47 0.8	32.3
10.4	22.1	4.0	9.8	37.3	47.5	9.8	13.0	38.9	9.2	6.3	15.9
9.8	23.4	15.6	8.2	38.3	51.3 8.2 Ga	8.3	18.0	40.0	9.7	12.3	37.7
9.0	33.3	33.4	10.5	45.8	24.3	9.4	20.7	10.4	10.4	46.3	23.2
9.4	38.1	23.0	9.8	51.3	42.8	9.0	39.2	39.6 9.0	9.0	57.3	48.5 9.0
10.8	44.5	35.3	7.9	29 2.8	1.7 7.8 GSa	10.5	40 0.4	46.2	10.4	48 8.3	38.0
8.8	59.8	40.8 8.8 G-	10.2	5.3	17.2	8.7	5.2	59.7 9.0 -	8.8	16.3	35.9 7.5 Ga
10.5	22 4.1	44.7	9.8	18.8	58.4	9.4	5.7	16.2	10.0	17.3	33.7
10.8	13.3	2.3	9.8	19.3	18.8	10.0	9.2	15.6	10.4	37.8	6.8
10.0	13.6	34.7	10.2	28.6	41.7	9.2	11.7	25.6 9.0	9.4	43.3	48.8 9.0 -
9.7	14.6	54.1	9.8	36.6	40.1	9.8	12.7	33.3 G	8.5	49 0.3	42.1
9.8	24.4	15.7	8.7	36.6	58.3	9.0	13.7	33.5 9.0 G	8.4	11.8	1.3 =
8.9	25.9	22.8	10.2	36.6	20.5	10.4	16.7	5.2	9.4	39.8	38.3
10.2	33.5	8.5	8.8	44.1	50.3 9.5 Ga	10.0	25.2	28.7	7.8	50 13.8	19.7
9.0	40.1	4.0 9.5 Ga	10.4	46.1	14.5	8.6	49.7	35.4 9.0 G	9.5	23.3	7.0
8.7	46.1	11.0 9.2 a	8.6	47.1	48.0 9.5	8.2	55.2	57.7 9.0 -	10.4	33.3	45.5
10.0	53.1	3.9	9.8	56.1	51.5	9.2	59.7	48.3	9.9	51 0.3	8.7
10.2	53.6	16.5	10.5	56.6	25.5	9.2	41 2.2	2.3 9.5 a	10.2	25.3	53.5
10.5	23 1.9	25.7	10.5	30 11.0	27.9	10.2	25.2	37.4	10.4	38.3	45.9
9.2	3.6	15.2	10.0	18.1	50.1	10.2	25.2	48.0	10.4	47.8	35.8
25pr.	+ 0 57.4	+ 1.5	+ 0 57.3	+ 1.2		+ 0 57.2	+ 0.8		+ 0 57.1	+ 0.5	

1806arCap. 3.....1G

1081-1140.				1141-1200.				1201-1260.				1261-1320.			
5 ^h -6 ^h .		-30°		6 ^h .		-30°		6 ^h .		-30°		6 ^h .		-30°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.4	52	8.5	37.8	10.2	4	10.0	44.0	10.0	13	17.4	10.2	10.2	19	21.2	18.6
8.6		10.3	5.3	9.6		13.0	5.4	10.0		31.4	38.3	10.0		22.8	58.6
9.2		26.3	21.4	9.7		29.5	20.7	9.8		46.4	21.0	10.0		44.7	29.3
9.4		36.3	17.1	9.4		36.0	32.0	10.2		48.4	46.4	10.0		50.2	14.7
10.0		40.0	57.1	9.4	5	22.0	41.4	10.2		52.4	4.3	9.8		56.7	18.9
9.6	53	51.8	42.1	8.8		23.0	53.2	9.4	14	17.4	31.4	9.8	20	0.2	29.5
9.4	54	3.3	28.2	10.4		27.0	0.0	10.2		25.4	34.4	10.0		0.7	0.4
10.4		22.3	17.4	9.2		33.0	38.4	10.2		30.4	24.2	9.4		9.2	47.0
10.4		24.0	58.2	10.4		33.2	49.6	10.2		43.4	15.2	10.2		12.2	55.9
10.0		43.8	20.6	9.2		40.5	37.7	10.2		53.9	49.9	10.2		20.2	6.4
9.1		56.3	40.3	8.3		45.0	46.5	10.2		58.4	41.7	8.8		35.2	48.7
9.7	55	1.8	17.9	10.4		48.0	11.4	9.2	15	1.9	25.7	10.2	21	14.2	21.8
10.4		6.3	1.1	9.7	6	13.0	24.9	10.2		4.9	24.9	9.6		22.2	26.2
9.4		8.3	51.9	10.4		20.2	11.5	9.8		9.9	25.7	9.6		25.2	21.5
10.2		10.8	37.9	9.8		33.0	14.3	8.7		14.4	24.0	9.6		42.2	5.7
8.4		26.3	52.2	10.4	7	2.2	31.6	10.2		28.4	22.6	10.2		54.2	23.0
10.4		26.8	11.6	10.4		7.5	34.3	3.5		31.9	0.7	10.0		58.2	14.5
9.1		48.3	5.4	10.4		16.0	26.7	10.2		36.4	36.9	9.2	22	11.2	24.7
9.4		54.3	28.5	10.0		18.0	36.3	10.2	16	0.9	31.1	10.0		16.0	54.8
10.4		58.3	10.4	10.0		33.0	32.1	10.2		1.4	32.9	10.2		17.0	15.0
8.8	56	3.3	13.6	8.4		36.5	27.0	8.8		4.4	34.8	10.2		21.0	31.0
10.0		16.3	55.9	9.6		39.0	31.8	10.2		13.4	44.0	8.7		24.0	24.2
10.4		18.3	18.0	10.2		44.5	5.7	9.4		29.9	10.7	9.0		32.0	48.1
10.2		26.1	58.6	10.4		53.0	19.2	9.6		32.4	26.4	8.8		35.0	43.3
10.0		54.8	24.1	10.4		55.5	14.3	9.8		38.9	27.1	10.0		39.0	55.7
10.2	57	3.3	10.3	10.4		57.5	17.3	10.2		41.4	27.9	9.8		46.5	34.1
10.4		5.3	29.7	10.0	8	6.0	26.8	10.2		49.4	3.8	10.0		55.5	54.8
9.4		20.3	22.3	9.5		19.0	32.3	9.4		49.4	21.2	10.2		56.0	21.3
10.4		25.6	58.6	8.0		25.9	3.2	10.0		51.9	26.7	10.2		57.5	21.1
10.4		27.4	26.7	9.7		41.9	57.8	10.0		52.9	4.4	10.2	23	2.2	58.9
10.4		27.8	13.6	9.7		43.9	1.5	10.2		53.4	3.2	9.4		2.5	23.7
8.6		33.0	1.0	10.2		49.1	29.5	9.4	17	2.4	58.6	9.8		4.0	26.0
9.0	58	7.3	24.0	9.2		49.4	6.2	10.2		5.4	10.8	9.0		26.0	30.1
8.8		51.8	53.2	8.8	9	5.4	58.5	9.0		5.4	31.2	10.0		36.5	5.3
10.4		58.3	19.0	9.5		7.4	27.9	10.2		9.4	11.1	10.0		44.0	12.6
9.2	59	13.8	33.5	10.4		24.2	57.7	9.8		10.9	14.2	9.8		52.0	56.9
9.2		26.3	19.5	9.4		24.9	52.9	10.2		16.2	0.4	9.6		53.0	42.0
10.2		27.8	48.6	10.2		26.9	16.2	8.6		16.4	28.4	9.3	24	2.0	18.4
10.4	0	10.3	25.8	10.4		53.5	29.3	10.2		30.9	46.6	10.2		21.0	39.1
10.4		12.8	33.0	10.4		55.9	4.4	10.2		33.9	51.6	10.0	25	2.0	35.6
9.2		14.3	44.0	10.4		58.4	8.9	9.4		36.9	45.5	10.2		2.0	54.9
10.2		23.3	10.9	9.0	10	1.1	8.0	9.1		41.4	27.1	9.2		7.5	5.5
9.4		27.8	54.8	8.0		10.6	48.9	10.0		41.4	24.0	10.0		11.5	50.9
8.8		43.3	30.1	10.2		16.6	28.1	10.0		55.4	9.7	10.2		21.0	54.5
9.9	1	43.0	15.2	8.8		31.6	28.6	10.0		0.9	12.7	9.4		36.0	28.3
10.4		56.5	40.0	9.3		33.1	43.9	10.2		13.2	51.0	10.2		43.0	7.9
10.0	2	1.3	0.8	10.2		44.6	47.2	10.2		22.0	57.6	9.6		47.0	25.6
9.2		3.0	52.6	10.2	11	6.1	2.1	10.0		23.2	33.0	9.6	26	4.0	12.5
9.9		9.2	14.1	10.2		17.6	54.5	10.2		25.2	10.6	9.6		38.5	0.3
10.4		19.0	49.5	10.2		32.6	1.0	9.1		28.2	51.1	9.6	27	1.0	8.5
10.4		24.0	34.6	10.0		48.6	22.7	8.2		32.2	52.9	9.8		8.5	41.8
10.4		30.5	50.1	10.2		52.6	32.3	10.2		32.2	46.5	10.2		10.0	39.9
9.0		41.0	36.7	9.8	12	8.6	17.5	10.2		37.7	14.3	9.4		25.0	27.7
9.7		41.5	52.2	10.0		11.1	8.8	10.0		45.2	45.7	10.2		34.2	57.4
10.4		42.2	12.1	10.0		16.6	10.0	10.0		47.7	53.7	10.0		46.5	9.3
9.6	3	0.0	21.4	10.0		27.6	31.2	10.2		54.2	34.3	10.2		48.7	3.5
10.2		32.0	38.6	8.8		33.4	58.8	9.4		54.2	42.2	9.0	28	1.7	25.0
10.4		48.0	32.8	9.8		45.4	36.6	10.0	19	6.2	20.0	10.2		11.7	41.7
9.1		51.0	29.7	8.6	13	6.9	57.8	9.3		6.2	49.0	9.8		12.2	29.8
9.6		52.8	0.0	9.3		12.4	26.9	9.4		6.2	11.8	10.0		12.2	35.5
25Pr.	+ 0	57.1	+ 0.1	+ 0	57.1	- 0.3		+ 0	57.2	- 0.6		+ 0	57.2	- 0.8	

1321-1380.			1381-1440.			1441-1500.			1501-1560.		
mag.	6h.	-30°	mag.	6h.	-30°	mag.	6h.	-30°	mag.	6h.-7h.	-30°
8.6	28 13.7	46.2 =	9.8	34 40.5	34.7	9.4	48 14.6	49.0	8.4	56 26.3	27.0 8.5 W
9.4	20.7	11.5	7.4	55.1	21.1 6.0 GSa	9.4	45.1	19.1	8.1	27.3	26.2 8.5 Wa
9.4	23.2	25.5	9.1	35 2.3	2.7 G	9.0	54.6	14.3	9.6	43.3	29.6
8.8	27.7	59.1 =	9.1	17.6	26.2 9.5	9.0	49 0.6	33.3 9.0	8.8	56.3	13.0
9.3	37.2	42.4	9.8	34.1	10.2	7.6	23.6	27.4 8.0 a	9.0	57 4.0	56.4
9.8	47.7	8.2	9.0	36 13.1	26.1 8.5 ≡	9.4	33.1	18.0	9.1	5.9	27.1 9.0
9.4	51.7	17.5 9.0	7.4	21.6	31.6 7.5 GStπ	9.1	36.1	9.7	9.1	6.3	35.5
10.0	52.7	23.9	9.0	23.1	23.7 9.2	9.8	42.6	18.8 9.0	9.8	23.3	46.0
9.6	55.7	35.3	9.8	36.1	15.0	9.8	48.1	25.8	9.0	36.8	11.0 9.0
9.8	55.7	58.4	9.8	45.1	28.7 9.5	9.4	52.1	25.8	9.8	37.4	28.6
10.0	58.2	25.5	9.8	51.3	2.2	8.0	50 3.1	59.2 ≡	9.8	58 6.4	38.9
9.2	29 0.2	29.3 8.5 =	8.4	57.1	35.2 9.0 G =	9.8	7.1	47.4	9.6	33.2	24.2
9.3	1.2	22.3 9.0	9.8	37 1.1	6.0	9.2	31.1	31.4	9.6	44.2	18.9
9.8	5.2	9.9	9.8	18.3	34.9 9.5 G	9.8	38.1	18.0 9.5	8.5	56.2	24.6 8.5 a
10.0	5.7	10.2	9.8	57.6	7.6 9.0 a	9.8	46.1	46.9	8.5	57.7	32.6 8.5
10.2	12.6	9.4	8.2	38 2.1	46.8 8.5 =	9.0	56.6	9.8	9.5	59 0.2	48.5 9.0 G
8.4	15.7	14.5 8.0 ≡	9.8	5.6	0.6	9.8	5.1	53.0	9.2	12.7	31.9
10.2	16.7	51.9	9.8	20.2	9.0 9.0 a	9.0	10.1	36.1 9.5	9.2	25.2	58.9 9.5
9.8	46.7	10.1	9.0	21.1	47.3 9.8	9.8	11.1	39.0	7.9	32.7	35.3 8.5 Wa
10.2	53.6	33.1	9.6	24.1	4.1 a	9.8	13.1	7.4	9.4	36.7	30.7
10.2	30 3.2	37.8	9.6	47.1	10.9 9.5	8.6	14.1	37.1 9.0	9.6	51.2	49.8
10.0	3.7	49.9	8.8	53.1	51.4 9.5	9.0	16.1	25.2	9.6	13.2	9.0
10.2	4.7	44.4	8.2	39 33.3	2.7 8.7 Ga	9.8	32.1	44.1	8.6	32.2	19.8 8.5 -
8.6	19.7	50.3 ≡	5.1	43.5	56.7 5.9 GStπ	9.6	33.1	25.1	9.2	49.2	31.1
10.0	22.2	33.1	9.0	47.1	53.6 9.2	9.1	53.1	16.4 -	9.6	1 3.2	10.3
10.2	46.7	32.7	8.8	52.1	55.8 9.5	9.6	56.6	19.9	7.2	12.2	27.9 6.5 GS≡
9.4	48.7	48.1	6.8	40 15.1	27.3 6.8 GSa	9.8	58.1	29.2	9.5	14.7	6.4
9.8	50.6	11.9	6.3	46.1	49.1 6.1 GStπ	8.1	52 13.1	43.7 8.5 W =	9.6	26.2	54.0
8.6	52.7	46.2 9.0 =	9.8	48.6	32.4	9.0	24.6	19.7 9.5 -	8.6	37.2	5.1 9.0
8.8	54.7	20.9 9.5 -	9.8	56.1	31.4	9.1	26.1	19.7	9.5	56.2	44.6
10.2	31 26.7	4.6	9.0	41 7.6	20.8 a	9.4	32.1	20.7 9.0	9.2	2 0.0	59.2
10.2	28.7	50.1	8.0	33.6	36.6 8.5 Gb	9.4	33.3	18.8	9.6	6.5	51.0 9.0
10.2	40.2	35.5	9.8	46.1	17.2	9.8	42.3	10.2	9.6	7.5	5.8
10.2	40.6	44.9	9.0	42 14.1	31.2 a	9.8	44.3	58.9	8.8	22.7	36.0 8.0 G-
10.0	41.2	41.3	8.0	24.1	49.2 8.2 Ga	9.4	46.3	41.9 9.0	9.6	22.7	58.0
10.2	32 0.7	34.6	9.8	26.1	7.0	9.1	46.8	10.8	9.6	40.7	30.3
9.6	6.5	53.9	9.4	29.1	38.7 9.0 a	9.0	53 3.3	15.7 9.0 -	9.6	53.5	18.8 9.5 G
9.2	22.5	12.8	8.2	43 13.1	17.8 8.2 a	7.8	20.8	34.6 GSb =	8.5	56.7	18.3 8.5 G-
10.2	24.5	37.8	9.8	43.2	59.3	9.0	22.3	54.0 9.0 G-	9.5	3 2.7	40.9
10.0	38.5	52.0	9.8	54.2	45.2	9.8	25.3	3.7	9.6	15.7	4.7
9.4	44.5	47.8	9.1	44 13.1	15.0	8.5	35.8	5.7 9.0	9.5	34.2	19.5
8.6	47.5	23.1 ≡	9.8	16.1	42.8	9.8	41.8	16.8	9.0	4 15.2	41.1 9.5
10.2	53.0	43.8	9.0	26.1	19.7 9.5	9.0	42.3	20.4	9.2	17.9	53.9
10.2	54.0	0.5 9.5 G	8.2	31.1	42.1 8.5 =	6.8	56.8	49.7 6.8 GSb≡	8.1	19.9	45.2 8.5 =
8.4	33 6.5	31.5 9.0 ≡	9.0	46.1	44.2 9.0	9.0	54 2.3	26.7	9.6	40.1	44.8
10.0	14.0	10.3	9.0	52.1	58.7	9.8	8.3	13.8	9.5	56.4	37.4
9.0	24.5	23.4	8.8	45 24.1	56.9	9.8	20.8	3.9	9.6	57.1	1.1
10.2	31.5	50.2	9.8	43.1	26.7	9.4	22.3	6.4	9.6	58.9	9.0
9.4	42.5	58.5	9.8	54.4	21.5 9.0 -	9.1	55 13.3	19.3	8.9	5 16.4	29.8
10.2	45.5	25.5	9.8	58.6	46.0	8.6	14.3	26.0	7.9	33.4	54.1 8.5 -
10.2	46.5	48.2	9.2	59.1	25.9 8.5 ≡	7.1	23.3	58.2 7.0 GSb≡	7.8	40.9	27.6 8.0 Wa
10.2	48.0	40.8	9.8	46 10.6	41.3	8.8	27.3	53.8 7.8 GW-	9.2	42.4	0.2
9.8	54.5	39.5	9.6	16.6	26.0	8.4	27.3	30.2 7.5 G	9.6	45.4	39.0
8.8	58.5	23.3 9.5	9.1	18.6	35.1 9.5	9.8	34.8	25.2	8.5	54.9	58.7 9.0
10.0	34 6.5	52.3 9.5	9.6	39.6	35.3 9.0	9.8	42.8	3.2	9.2	6 6.4	7.0
10.2	10.5	3.3	9.8	43.6	45.3	8.4	56 0.8	56.0 8.8	9.6	18.4	15.5
10.0	30.5	12.0	9.8	47 13.6	30.2	9.8	2.3	20.7	9.5	24.4	32.4 9.5
9.3	34.0	55.6 9.5	7.8	22.1	16.7 8.0 GW =	8.2	6.3	22.5 8.5 a	9.6	36.9	21.4 9.0
9.6	37.5	14.9	9.8	48 5.6	54.0	7.5	22.4	29.3 7.5 GSa	9.2	43.4	38.2
9.8	39.5	35.2 9.5	9.8	8.1	43.2	9.8	24.3	51.9	9.2	44.4	35.2
25pr.	+0 57.8	- 11		+0 57.4	- 15		+0 57.6	- 19		+0 57.8	2.2

1561-1820.				1621-1630.				1681-1740.				1741-1800.					
7h.		-30°		7h.		-30°		7h.		-30°		7h.		-30°			
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s			
9.6	6	52.9	3.5	9.5	9.6	15	7.3	58.8	9.4	22	13.7	37.6	10.0	26	57.2	20.6	
9.2		59.4	32.1	9.6		23.2	40.6	9.3		17.7	4.7	9.3		27	2.9	4.8	
9.4	7	12.9	14.1	9.6		26.2	13.0	10.0		21.7	25.4	9.4		9.4	3.4	17.2	
7.0		15.9	36.8	6.5	8.3	28.2	58.5	8.5	9.0	26.7	32.6	9.5		9.0	12.4	4.0	
9.4		16.9	40.1	8.5	8.9	31.4	2.7	9.0	10.0	41.7	7.7	10.0		10.0	18.4	39.4	
8.7		17.9	4.4	8.5	9.0	38.2	48.6	10.0		43.7	33.4	10.0		10.0	28.4	20.9	
9.6		20.9	49.6	9.2		40.2	46.4	9.6		46.7	3.4	10.0		10.0	31.9	54.5	
9.6		45.4	13.6	9.2		50.2	3.2	9.3		57.3	27.6	8.8		8.8	32.4	55.5	
9.6		46.4	16.6	9.6		55.2	39.0	9.2		59.5	15.3	9.4		9.4	34.4	19.5	
8.6		46.9	52.4	9.0	9.6	16	5.7	6.7	10.0	23	2.9	23.2	9.5	9.5	39.4	7.8	
9.4		50.4	55.4	9.0	9.6		6.2	39.1	9.0		3.7	42.1	9.8	9.8	41.4	56.9	
9.6	8	1.7	1.7	9.6		6.2	32.8	9.6		6.3	16.3	9.4		9.4	45.6	0.0	
7.6		24.4	45.2	8.0	9.6		14.2	30.3	9.5		11.2	55.9	10.0	10.0	47.4	37.8	
9.6		30.9	7.6	G	8.2		14.2	37.8	8.5	G-	18.2	26.9	10.0	10.0	50.4	41.3	
9.6		37.4	31.8	9.6		15.7	30.9	9.4		26.2	34.1	10.0		10.0	56.8	58.1	
9.6		39.9	47.2	9.4		20.0	2.8	9.5		26.7	35.3	10.0	28	10.0	3.4	49.5	
8.8		42.4	48.8	9.0	9.4		21.2	29.4	9.8		28.3	59.9	8.9	8.9	5.8	0.0	
8.1		43.4	46.2	8.5	9.4		34.2	11.1	10.0		32.7	51.5	8.9	8.9	15.9	18.5	
7.2		58.7	52.2	7.0	8.1		34.7	15.1	=	9.0	37.2	26.3	10.0	10.0	16.9	2.7	
9.6	9	6.2	6.9	-	8.2		44.2	50.1	9.0	=	39.5	46.1	9.0	9.7	20.4	20.4	
7.0		6.2	7.7	7.0	9.6	17	26.9	57.5	9.5		42.0	0.0	10.0	10.0	23.4	36.6	
9.2		22.7	52.1	9.5	9.5		34.7	10.5	9.5		58.5	9.9	9.6	9.6	26.4	5.3	
9.6		29.7	38.7	7.0	9.2		38.7	11.0	8.5	10.0	24	0.0	40.3	10.0	26.4	57.0	
8.0		47.2	26.4	7.0	9.0		48.7	26.0	9.8		7.5	42.2	10.0	10.0	27.4	6.0	
9.6		51.7	6.3	9.6	9.6		56.7	43.0	9.6		9.0	25.7	9.4	9.4	33.4	34.7	
9.6	10	11.7	12.1	9.6	18	2.7	32.1	9.6	9.8		13.0	39.4	9.4	9.4	35.9	40.0	
9.6		19.7	25.2	9.6		28.3	58.5	8.7		22.5	23.2	8.0	G Wa	9.4	36.4	26.1	
6.1		31.7	28.1	6.0	9.6		33.8	42.8	10.0		29.5	27.7	10.0	10.0	37.4	51.6	
8.7		32.7	16.7	9.6	9.6		35.8	8.3	9.0		29.5	7.5	10.0	10.0	42.4	51.3	
9.6		53.7	3.0	GSact	7.5		47.8	12.4	8.9		31.5	37.4	10.0	10.0	47.4	11.0	
9.4	11	1.2	58.8	8.9		51.3	51.1	10.0	9.3		33.5	20.0	9.8	9.8	49.9	43.5	
9.2		3.2	47.0	9.6	19	2.8	23.8	9.6	9.2		41.5	0.2	8.9	8.8	50.1	1.5	
9.6		4.7	39.0	9.6		16.8	8.5	9.6	10.0		43.5	21.8	8.4	8.4	51.9	7.2	
7.7		16.2	12.9	7.5	9.5		25.3	6.8	9.8		46.5	21.8	9.6	9.6	53.9	49.9	
8.6		47.7	29.4	9.6		31.8	21.8	9.6	10.0	25	3.5	52.3	9.5	9.5	57.4	26.4	
9.4		53.0	0.8	9.0	8.7		36.3	40.9	9.0		3.5	46.4	10.0	10.0	58.9	40.1	
8.3		55.7	5.0	8.0	9.2		54.3	50.9	8.5		10.5	20.2	9.2	9.2	58.9	22.9	
9.6	12	7.2	32.5	9.6		56.3	59.1	9.6	10.0		12.0	26.1	9.2	29	13.4	3.1	
8.2		7.2	41.0	GWa	9.2	20	2.3	10.0	8.8		12.5	25.7	8.5	9.4	29.9	32.8	
7.6		7.2	40.4	GSa	8.7		3.3	53.2	9.0	9.4		13.5	58.8	9.4	35.9	5.5	
8.9		13.4	2.8	8.9		4.3	35.7	8.5	-	9.0		23.5	39.9	9.8	38.9	25.3	
8.6		16.2	11.4	8.5	8.3		25.8	13.6	8.5	G-	10.0	23.5	56.1	10.0	40.9	1.2	
9.6		27.7	49.7	9.6		41.8	43.4	9.6	9.2		27.5	42.1	10.0	10.0	40.9	50.7	
9.6		35.2	26.2	9.4		48.8	15.1	9.4	9.2		32.5	6.4	9.8	9.8	43.9	19.0	
9.6		36.7	19.2	9.0	9.6	21	4.3	37.0	9.6		34.0	40.6	9.4	9.4	44.9	24.5	
9.2		46.7	39.3	9.6		12.3	18.3	9.6	6.7		51.5	42.0	5.0	9.4	52.4	30.7	
8.1		12.7	13.7	8.0	9.6		14.3	40.4	9.7		52.5	19.6	G	9.4	52.9	6.8	
8.1	13	13.2	42.7	7.5	8.2		16.1	1.7	8.5	-	10.0	53.0	11.1	9.0	55.1	56.5	
9.6		22.7	49.9	9.4		16.3	57.4	9.4		10.0	53.5	56.7	10.0	10.0	56.4	55.3	
8.8		30.7	35.3	9.5	9.6		25.3	19.1	9.6		53.5	16.4	10.0	10.0	30	3.4	
9.4		37.7	11.0	8.8		26.0	32.3	8.6	26	4.5	16.7	8.8	G	9.4	7.4	33.9	
7.7		43.2	34.2	7.0	9.1		44.0	6.3	10.0		14.5	44.2	9.7	9.7	9.4	33.5	
9.6	14	19.4	17.1	9.6		47.8	9.8	9.8		21.1	59.3	10.0	10.0	10.0	13.3	12.3	
9.0		25.4	0.9	9.6		49.3	7.7	8.4		22.5	15.3	8.5	G-	9.8	16.4	13.6	
9.2		33.2	18.4	9.0	10.0		54.7	25.9	8.9		26.0	8.4	8.3	10.0	17.3	33.9	
8.9		39.7	51.6	9.0	10.0	22	2.7	10.8	9.3		29.5	40.2	9.5	10.0	19.4	35.2	
9.6		46.7	23.0	9.6	10.0		4.7	9.8	10.0		43.4	21.9	10.0	10.0	19.9	14.4	
9.4		52.7	10.1	9.3		4.7	32.8	8.8		43.5	47.0	9.7		9.7	24.4	37.4	
9.2	15	3.2	21.1	-	9.6		4.7	37.6	10.0		47.4	41.1	9.4	9.4	27.4	19.3	
8.2		3.7	23.6	8.0	8.5		6.7	31.2	9.0	9.5		52.9	14.2	10.0	31.4	36.8	
25pr.	+0	58.0	-2.5	+0	58.3	-2.8	+0	58.5	-3.0	+0	58.6	-3.2					

8.3 a

1896Ancap...3...1G

1801-1860.			1861-1920.			1921-1980.			1981-2040.			
mag.	7 ^h	-30°	mag.	7 ^h	-30°	mag.	7 ^h	-30°	mag.	7 ^h	-30°	
10.0	30	32.9	10.0	33	18.5	10.0	36	42.3	10.0	40	3.5	
10.0		37.4	8.8		21.5	9.8		43.3	10.0		5.5	
9.2		37.4	9.4		26.5	9.8		46.3	10.0		6.5	
10.0		39.4	8.9		26.5	9.8		48.3	10.0		6.6	
10.0		42.4	9.7		27.5	8.7		54.3	10.0		8.0	
10.0		44.4	8.6		27.5	9.4		54.3	8.5		16.5	
9.4		44.4	10.0		32.6	9.4		55.3	8.9		17.0	
9.8		46.4	9.2		33.0	9.8		57.3	10.0		21.0	
9.8		48.4	9.7		33.5	8.4		1.3	9.4		21.5	
9.8		56.4	9.8		42.0	9.8		6.3	8.6		22.5	
10.0			10.0			9.2		15.3	10.0		28.0	
9.5	31	6.4	10.0		4.3.5	8.4		16.3	9.5		30.5	
10.0		9.9	9.7		4.3.5	10.0		16.8	10.0		37.5	
10.0		12.9	9.4		44.5	9.4		17.3	10.0		40.5	
9.4		16.9	9.8		46.0	9.2		25.3	9.5		43.5	
10.0		17.9	8.4		50.5	10.0		29.3	8.9		54.5	
9.3		18.4	8.4		53.5	9.8		33.3	9.3		54.5	
10.0		18.9	9.5		53.5	9.5		37.3	10.0		10.5	
9.4		22.9	10.0		53.6	9.5		37.8	9.4		11.7	
9.0		23.4	9.8		54.6	9.2		49.3	9.4		13.5	
10.0		27.7	9.2			9.4		53.3	9.3		13.5	
9.4		37.4	10.0		55.5	10.0		56.3	8.8		14.5	
10.0		37.4	9.6		58.5	9.8		5.3	9.4		14.5	
10.0		46.4	9.8		7.5	8.5		6.3	9.4		33.5	
10.0		52.4	9.8		8.5	9.2		7.8	10.0		35.5	
9.0		52.4	8.7		9.5	10.0		16.3	9.5		35.5	
9.7		52.9	10.0		13.0	8.9		18.8	10.0		36.5	
10.0		53.4	10.0		18.0	10.0		20.8	10.0		37.1	
10.0		53.4	10.0		22.6	10.0		22.3	10.0		51.7	
10.0		53.4	9.5		25.0	9.2		25.0	10.0		54.2	
8.9		54.9	9.0		27.6	10.0		35.3	8.6		55.6	
10.0			10.0		29.5	10.0		35.8	10.0		1.2	
9.6		7.9	10.0		32.5	8.9		46.8	9.5		2.7	
9.5		7.9	9.3		34.0	9.0		46.8	10.0		3.7	
9.3		10.2	9.3		34.0	10.0		57.3	9.8		6.2	
9.6		11.4	10.0		36.5	9.2		3.3	10.0		17.2	
9.8		12.9	10.0		41.6	10.0		3.3	10.0		18.2	
9.0		13.4	8.5		46.5	9.8		6.3	9.4		22.2	
10.0		16.9	9.6		51.3	9.0		6.3	8.9		36.7	
10.0		19.9	9.0		57.3	8.9		6.8	9.4		37.2	
10.0		21.4	10.0		57.3	10.0		6.8	8.1		38.7	
7.6		26.9	9.4		8.3	10.0		7.1	9.8		38.7	
8.9		32.4	8.8		9.8	10.0		10.3	9.3		45.7	
8.9		33.4	9.0		16.3	10.0		12.8	9.6		0.7	
10.0		33.4	10.0		16.3	8.5		17.3	10.0		3.7	
8.9		36.4	10.0		20.3	9.5		18.7	9.7		4.7	
10.0		37.5	9.3		27.3	9.4		26.3	10.0		7.7	
10.0		37.9	9.4		30.3	9.2		26.3	9.8		7.7	
9.4		42.4	8.6		33.3	9.2		27.3	9.6		8.2	
8.4		43.4	10.0		40.2	9.7		33.5	9.6		8.7	
10.0		46.9	10.0		43.3	9.0		35.5	9.4		22.7	
10.0			10.0		58.0	8.9		36.5	9.2		26.7	
10.0		48.4	10.0		0.0	9.8		41.5	10.0		26.7	
10.0		51.5	10.0		2.3	10.0		43.1	9.2		28.2	
9.4		51.9	10.0		6.3	9.4		48.0	9.7		28.7	
8.9		53.4	10.0		10.3	10.0		54.5	9.5		36.7	
9.3		53.5	9.4		16.3	9.8		56.3	10.0		37.2	
10.0		57.5	9.8		26.8	8.9		59.0	7.4		41.7	
9.4		57.5	9.7		26.8	9.5		2.5	8.9		4.7	
10.0		2.0	9.8		33.3	8.5		2.5	10.0		4.7	
8.9		2.5	10.0		33.3	9.4		2.5				
8.8		16.5	10.0		39.3							
25Pr.	+0	58.7			+0	58.8		+0	59.0		+0	
		-8.3				-3.3			-3.5			-3.6

2041-2100.				2101-2160.				2161-2220.				2221-2280.			
7h.		-30°		7h.		-30°		7h.		-30°		7h.-8h.		-30°	
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s
9.0	44 12.2	49.0	9.0	8.8	49 27.0	14.4		8.4	54 49.9	4.3	7.8 Wa	9.7	58 59.9	37.5	
9.0	12.7	17.9		9.4	54.5	39.4		9.2	55.9	26.2	9.2	9.8	59 15.8	18.9	
9.8	14.8	4.9		9.8	50 1.5	7.8		9.8	55.9	54.1		9.8	16.8	18.6	
9.8	17.8	3.8		8.8	6.0	46.2	8.5 -	8.2	57.1	2.2	7.5 GWa	9.6	20.9	4.3	
9.4	18.8	31.8		9.8	7.0	11.8		9.0	55 0.9	4.0		8.8	29.7	58.2	9.0 =
9.8	23.3	45.4		9.8	17.0	25.1		9.2	7.4	46.8		9.4	30.4	37.1	
9.8	26.3	12.9		8.2	17.0	35.3	6.8 GW=	9.0	15.9	19.9	9.5	9.8	39.8	46.1	
8.2	27.8	14.6	7.5 GWa	9.8	17.5	36.8		8.3	17.9	51.3	8.0 Ga	9.4	43.9	56.8	
10.0	33.8	22.8		9.8	21.5	12.9		8.8	17.9	25.9	9.5	9.7	47.4	32.1	
9.2	34.0	58.0		9.0	22.5	38.6	9.2	8.4	21.4	37.7		9.8	47.4	4.7	
9.8	41.8	24.2		9.8	23.0	26.3		9.7	21.9	35.7		9.4	52.9	46.2	
9.5	42.3	30.6		7.8	29.3	1.3	7.8 GWa	9.8	22.4	31.3		9.4	7.9	6.5	
10.0	43.3	9.2		9.7	46.0	8.5		9.8	23.4	43.8		9.6	9.7	57.9	9.0
9.8	56.3	40.6		9.4	49.0	8.2	9.5	9.0	30.4	12.7		9.8	12.4	55.1	
9.8	45 0.8	9.8		9.7	53.5	44.9	9.0	9.4	39.7	56.6		9.8	13.9	39.4	
10.0	2.8	16.4		9.8	56.5	10.7		9.8	42.9	36.3		9.4	15.9	49.7	
8.9	8.3	43.0		9.2	59.0	15.3		9.8	43.6	0.9		9.4	16.4	5.0	
9.2	8.8	18.3		9.4	51 3.0	28.8		8.8	44.9	43.9	8.0 =	9.8	21.9	16.7	
9.3	11.7	59.4	9.0 =	8.2	10.0	34.7	8.2 W-	9.4	45.4	13.1		9.8	22.9	20.0	
10.0	26.8	9.1		9.6	14.0	26.9		9.8	46.9	35.3		9.8	23.9	8.2	
9.3	32.8	57.0		9.8	22.8	57.2		9.8	48.9	49.1	G	9.7	25.9	5.9	?
10.0	43.3	0.0		9.2	24.5	7.6		9.4	49.4	19.1		9.8	26.9	23.9	
10.0	43.3	16.2		8.2	27.0	32.2	8.5 W-	9.8	53.9	51.7		9.8	31.9	10.6	
10.0	44.3	28.8		8.8	33.0	8.1	9.0	9.4	56.9	55.0	8.5 a	8.2	32.9	26.7	8.5 G=
10.0	45.8	44.9		9.7	33.5	31.2	9.5	9.4	56 0.9	19.0		8.5	36.6	0.3	8.5 =
9.6	49.3	3.2		9.7	35.0	13.8		9.8	2.8	10.5		9.0	38.9	59.7	9.5
9.4	52.8	36.9		8.6	43.0	11.5	9.0 G	9.8	8.9	39.4		9.7	45.9	18.3	
8.7	56.8	2.1	8.8	8.8	52.0	55.1	9.5	8.6	10.9	42.7	9.0	9.8	49.9	41.4	
9.3	46 3.4	15.1		8.4	53.0	2.7	9.0 GW	9.8	21.9	11.7		9.8	1 2.9	45.3	
10.0	3.7	2.0		9.6	56.0	54.2	9.5	9.8	21.9	41.7		9.2	21.9	37.6	9.0
9.4	4.8	36.1		9.7	52 7.0	6.3		9.6	35.8	40.3		9.8	27.9	18.4	
9.4	11.8	34.0		9.7	14.0	28.8		8.6	35.9	14.8	8.0 G=	9.0	32.9	27.1	8.8
8.8	23.4	37.7		9.4	26.0	22.5		9.6	36.4	11.4	9.0	9.4	45.4	30.1	9.2
9.6	23.8	42.0		9.8	33.0	18.5		8.4	36.9	16.4	8.0 G-	9.2	45.9	27.7	
9.8	23.8	45.7		6.0	42.0	0.1	5.5 GStπ	9.8	45.9	48.2		9.4	48.6	1.3	9.0
9.8	24.8	42.7		9.8	58.0	53.5		9.4	49.9	18.3		8.2	50.4	48.5	=
9.6	29.0	12.3	9.0	9.8	53 2.0	42.8		8.0	57 5.4	47.3	8.0 Ga	9.4	51.9	25.9	
8.4	46.2	0.2	7.8 G=	9.0	3.0	38.8		9.8	9.4	42.1	G	9.4	52.4	31.1	
9.8	50.5	24.1		9.8	9.5	17.3		9.7	9.9	22.1		9.8	52.9	25.9	
9.2	50.5	39.1		8.4	11.5	54.9	8.5 =	9.7	9.9	25.7		9.8	59.9	22.1	
9.4	54.0	19.1		9.8	13.5	52.2		9.6	11.9	32.6		9.8	2 2.9	34.3	
9.8	58.0	45.5		9.2	22.0	43.4	9.5	8.6	25.9	4.1	8.5	9.8	5.9	28.2	
9.6	47 0.5	6.4		8.8	25.0	27.0	10.0	9.2	26.9	35.9		9.6	6.9	8.1	
9.4	9.5	13.0		9.8	45.9	38.6		9.8	38.4	56.3		9.6	9.4	47.0	
9.7	16.0	40.4		9.4	46.4	31.1		9.6	42.4	28.8		9.8	11.9	9.2	
9.0	22.0	30.6	9.5 -	9.7	56.8	47.8		9.8	42.9	7.4		9.8	18.4	34.7	
9.8	27.0	38.6		9.2	54 1.9	53.4		9.4	51.7	56.4	7.8 Ga	9.6	31.9	42.0	
8.1	42.0	9.2	8.1 a	8.6	2.1	0.2	8.8 GW	8.0	51.9	52.0		9.6	32.9	38.7	
9.2	58.0	46.8	=	9.7	8.7	0.8		9.0	55.4	19.5		9.8	34.9	4.1	
9.0	48 17.5	32.2	8.9	8.2	15.9	44.2	8.5 -	9.8	58 2.9	54.2		9.8	42.9	21.3	
9.8	22.0	29.4		8.6	16.9	28.9	8.0 =	9.8	8.9	6.4		9.8	56.9	53.9	
9.6	26.0	13.1		9.6	20.4	42.9		9.4	15.9	41.2	G	9.8	3 0.9	6.4	
9.8	35.0	8.3		9.8	23.4	23.8		9.8	18.9	59.5		9.8	5.4	35.1	
9.8	52.0	10.1		9.4	25.9	7.7		9.8	22.9	12.5		8.4	6.9	26.3	8.5 a
9.8	52.0	25.2		9.4	26.9	40.2		8.4	25.9	22.9	8.0 a	8.4	9.9	25.7	8.2 a
9.8	52.0	35.2	9.5	9.4	32.9	43.9	9.0	9.8	38.9	8.2		9.8	10.9	1.7	
8.5	52.0	42.3	9.2 =	9.8	36.9	53.9		9.8	42.9	53.2		9.2	18.4	13.4	
9.2	49 13.0	10.2		9.6	39.4	54.0		9.0	52.9	37.1		9.2	19.9	23.3	
9.4	14.0	33.8		9.2	39.4	37.5		8.6	55.9	9.4	9.0	9.8	21.9	11.5	
9.4	16.0	45.8		9.8	45.9	21.0		9.8	55.9	55.3		8.4	25.9	42.9	8.5
25pr.	+ 0 59.2	- 3.7			+ 0 59.5	- 3.9			+ 0 59.7	- 4.1			+ 0 59.8	- 4.2	

1896AnCap...3...1G

2281-2340.			2341-2400.			2401-2460.			2461-2520.				
mag.	8h.	-30°	mag.	8h.	-30°	mag.	8h.	-30°	mag.	8h.	-30°		
8.6	3 36.9	35.8	9.2	9.8	10 10.3	50.6	9.4	13 44.8	56.0	9.7	18 44.3	22.4	
9.4	38.9	13.1	9.6	9.6	12.4	29.0	10.0	44.8	12.1	9.0	50.8	18.9	
8.8	42.7	13.8	9.4	9.4	12.9	19.1	10.0	50.8	6.9	10.0	52.8	35.0	
9.8	52.5	26.3	8.9	9.6	15.8	55.1	10.1	51.8	43.3	10.0	53.8	33.0	
9.8	53.2	37.1	9.6	10.0	16.3	46.0	9.8	53.0	0.3	10.0	57.3	17.2	
9.8	55.7	48.9	10.0	9.6	16.8	43.0	10.1	54.8	10.9	9.8	57.8	42.0	
9.8	4 2.5	36.7	9.6	9.4	21.1	38.5	10.1	57.8	21.6	9.7	19 24.3	7.4	
9.2	2.7	3.4	9.4	9.2	23.8	12.8	10.0	57.8	17.6	9.4	25.8	15.0	
9.4	3.2	58.2	9.2	10.1	25.8	17.3	10.0	14 2.8	14.4	9.6	27.3	15.2	
9.6	7.7	22.5	10.1	9.4	32.8	36.6	10.0	16.3	11.3	10.1	29.3	32.0	
9.2	15.7	47.5	10.1	9.6	35.8	26.2	10.0	17.3	8.9	10.1	35.8	29.0	
8.3	31.7	43.1	8.5 a	8.5	43.8	11.8	W-	9.2	28.3	27.0	9.8	37.3	28.6
9.4	35.5	52.8	9.5	10.1	44.3	22.9	9.6	28.8	41.7	9.6	46.8	21.9	
8.8	41.7	52.7	9.5	8.2	44.8	25.6	9.0 Ga	10.1	36.8	12.1	8.6	53.8	42.0
9.0	42.7	9.8	10.1	8.4	46.8	26.2	9.5	9.8	45.1	59.0	9.4	20 0.8	52.2
9.8	48.2	3.6	8.4	7.5	46.8	13.1	W-	9.8	55.8	45.0	9.6	11.8	39.2
9.2	54.7	6.7	8.4	8.4	52.8	32.6	7.0 GSa	9.4	58.8	50.1	9.4	23.8	16.0
8.8	5 2.7	48.4	8.4	8.4	54.8	26.7	8.5 a	9.4	15 1.8	23.0	8.3	24.8	55.6
9.2	9.2	32.1	8.9	9.2	55.8	46.2	8.5 G	9.2	2.8	47.3	10.0	31.3	49.9
9.2	12.7	8.9	9.4	11 0.3	27.7	9.4	9.4	8.4	3.8	42.2	8.8	39.6	34.7
9.8	21.2	9.6	9.6	9.6	2.8	20.8	10.1	10.1	6.8	32.5	9.0	46.6	19.2
9.8	21.5	1.7	9.6	9.6	6.3	13.5	9.6	9.6	6.8	52.8	10.0	21 8.6	31.6
9.8	21.7	55.9	10.1	9.6	6.3	21.3	9.6	9.2	8.3	34.3	9.6	13.1	33.9
8.8	32.7	14.4	10.1	9.4	12.8	37.1	9.6	9.6	9.8	48.0	10.1	15.1	7.1
8.4	33.2	32.3	9.0 a	10.1	12.8	19.2	9.4	9.4	12.8	14.9	9.4	25.6	15.6
9.8	6 7.2	47.7	10.1	9.4	30.3	38.0	10.1	10.1	15.8	19.3	9.8	26.1	53.7
9.8	9.7	47.0	9.4	9.4	33.3	4.9	9.6	9.6	16.8	9.8	9.7	29.3	56.4
9.4	28.7	16.1	10.1	10.1	33.8	39.8	9.7	9.7	32.8	15.5	8.8	33.1	38.8
9.8	32.7	6.7	10.0	9.8	47.3	28.0	9.4	9.4	38.3	54.2	9.6	34.6	23.0
9.4	41.7	59.1	9.8	10.0	56.3	26.8	10.1	10.1	47.8	12.0	10.1	36.1	21.8
9.8	42.7	38.7	10.0	9.8	59.8	15.9	9.6	16 2.8	16.4	9.6	42.1	50.6	
9.6	52.7	42.1	10.1	10.1	1.3	12.4	9.0	9.0	2.8	11.3	9.8	42.1	56.2
9.7	7 7.2	28.1	G	9.6	5.3	37.2	10.1	10.1	6.8	48.6	10.1	43.1	56.2
9.7	14.2	10.1	9.5 -	9.2	6.3	23.9	8.5 a	10.1	16.8	27.9	10.1	46.1	18.4
9.7	21.5	41.8	9.5 -	10.1	11.8	25.3	9.5	8.8	19.8	2.8	9.6	55.1	22.6
8.8	26.7	19.7	9.5	9.6	15.8	11.9	9.0	10.1	27.3	42.8	9.4	57.1	41.3
9.4	28.2	41.7	9.5	8.8	15.8	19.6	9.0	9.6	28.8	31.2	10.1	57.6	16.6
9.8	30.7	11.0	9.5	9.2	17.3	40.9	9.2	9.0	40.3	59.6	9.4	22 4.1	16.0
9.7	36.7	22.3	9.5	9.4	24.3	47.4	9.7	9.7	52.8	3.6	9.0	9.6	18.3
9.7	40.2	30.9	9.5	9.6	32.8	41.5	9.7	9.7	55.8	43.2	9.4	17.1	7.7
8.6	42.2	42.2	9.0	9.8	37.3	31.1	9.8	9.8	57.8	31.7	8.7	28.6	13.7
9.8	49.5	26.8	9.0	10.0	47.3	32.9	8.7	17 0.8	35.8	9.0 -	10.0	31.1	33.0
9.6	7 7.0	51.1	9.0	10.0	49.8	22.2	9.2	9.2	2.8	36.0	9.7	33.1	53.0
9.2	10.5	45.8	8.7 G-	9.8	50.3	11.9	10.0	10.0	17.3	30.0	9.7	44.1	32.0
9.4	15.5	34.1	9.0	8.4	51.5	4.3	9.8	9.8	26.8	51.9	9.0	44.1	10.6
9.8	30.0	30.0	9.0	9.4	56.3	30.9	9.8	9.8	32.6	56.7	10.1	48.6	59.4
9.8	31.5	50.1	9.0	10.0	13 0.8	33.3	8.6	8.6	32.8	59.6	9.2	48.6	56.8
9.8	34.5	6.7	9.0	9.2	10.3	3.6	9.2	9.2	33.0	2.0	9.6	58.1	7.8
9.6	52.0	36.6	9.0 -	9.4	11.8	20.9	9.4	9.4	33.3	11.3	10.1	23 6.1	40.7
9.8	9 1.5	46.3	8.5 Wa	9.8	16.8	15.9	9.8	9.2	33.8	17.9	9.6	7.1	14.8
10.0	33.3	26.7	9.5	9.8	17.0	0.7	10.0	10.0	36.8	14.8	9.8	7.1	47.8
10.1	33.8	52.1	9.0 -	10.0	22.8	40.3	9.6	9.6	45.8	51.0	9.6	12.1	9.3
10.1	35.8	15.5	9.0 -	9.6	22.8	16.5	10.1	10.1	45.8	11.7	9.6	12.1	16.7
9.6	41.3	28.4	9.5	9.7	24.8	15.5	9.6	9.6	53.3	33.3	9.6	12.1	34.4
10.0	43.3	39.6	9.0 -	9.0	25.8	42.7	10.1	10.1	18 16.0	1.3	10.1	27.1	15.0
8.5	47.3	32.2	8.5 -	10.1	32.3	14.9	9.4	9.4	25.8	25.0	9.8	31.6	20.0
9.0	49.8	36.8	8.5 -	10.1	32.3	15.3	8.3	8.3	26.8	23.9	9.7	43.3	8.0
9.4	56.9	6.9	8.5 -	9.0	32.8	30.2	9.8	9.8	27.8	44.0	8.0	53.3	26.0
8.0	57.9	2.4	8.5 Wa	9.4	43.8	57.0	9.2	9.2	36.0	1.9	9.7	24 3.3	44.0
8.0	10 0.2	28.6	8.5 Wa	9.4	43.8	24.1	10.1	10.1	41.8	48.2	9.6	13.8	9.3
25pr.	+ 1 0.1	-4.4		+ 1 0.8	-4.6		+ 1 0.5	-4.7			+ 1 0.8	-4.9	

2521-2530.				2581-2640.				2641-2700.				2701-2780.						
mag.		8h.		mag.		8h.		mag.		8h.		mag.		8h.				
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s			
10.1	24	14.2	40.1	8.8	30	42.9	8.0	9.0	9.4	37	55.6	15.1	9.4	45	49.6	56.5		
9.7		16.8	50.6	9.6		48.4	31.0	9.0	9.2		57.1	43.1	9.2		58.6	27.2		
10.1		22.3	12.2	10.1		54.4	25.9	9.6	38	7.6	15.7	9.3	46	7.1	55.5			
9.4		30.3	35.8	9.8		58.9	38.0	9.7		14.1	54.4	9.5		14.0	54.2			
10.1		39.3	12.4	8.0	31	6.4	10.0	8.0 G-	10.0		18.6	35.0	9.8		17.5	9.6		
10.0		43.3	8.2	7.4		12.4	54.3	GSb=	9.8		34.1	13.5	9.4		23.0	47.4		
10.0		57.3	40.2	10.0		13.4	10.0		9.1		37.6	18.5	9.3		24.5	36.0		
8.9	25	8.8	3.8	9.5	10.0		17.4	52.1	8.4		44.1	13.3	9.0	8.0		34.0	40.6	
9.4		13.3	36.2	9.2		26.9	55.0	9.3		46.1	36.1	9.7		42.0	33.9			
10.0		14.4	56.6	8.6		34.9	20.4	9.0	9.2		47.1	25.3	10.0		47.0	23.2		
8.6		17.3	5.8	9.0	10.0		44.4	26.3	9.3		48.1	3.5	10.0		57.0	7.1		
10.1		22.3	45.8	8.7		50.4	23.8	9.0-	9.3		52.6	9.5	9.5	9.4		57.0	43.5	
10.1		30.2	22.0	9.6		52.4	30.1		9.7		55.1	16.1	9.4	47	4.5	42.8		
9.8		31.3	13.4	9.8	32	0.4	52.7	9.0 G-	9.5		57.1	15.4	9.9		7.8	15.4		
9.0		44.3	20.0	8.3		2.9	13.7	9.0 G-	10.0	39	2.1	6.1	9.4		14.0	9.5		
7.1		45.3	42.8	10.1		7.4	47.6		9.6		4.1	27.1	8.8		23.0	41.9		
8.7		54.3	23.1	9.0	9.2		12.4	9.0	9.7		6.6	26.7	9.7		27.0	6.8		
9.2	26	3.3	13.8	9.8		16.3	59.4	8.0 G Sa	8.9		16.9	58.6	10.0		50.0	23.8		
9.0		7.3	54.8	7.8		24.0	3.8		10.0		18.1	8.9	9.0	48	0.5	45.1		
10.0		16.3	33.8	9.7		34.0	16.9		7.5		53.1	31.5	8.0 G Sb=	10.0		4.8	1.4	
9.7		22.3	58.0	9.0		48.0	21.6		9.4		55.6	42.9	9.4		7.0	23.6		
9.6		22.8	6.1	10.1	33	2.5	7.8		9.9	40	11.1	18.5	9.9		27.0	12.4		
9.8		24.8	39.0	9.2		14.5	4.0	9.5	9.8		18.1	28.4	9.8		30.8	55.5		
9.6		26.3	5.9	9.8		24.5	37.6		9.7		40.1	51.9	9.0		34.0	1.7		
9.6		26.3	0.5	10.0		28.2	1.8	9.5	9.7	41	10.1	13.4	9.8		34.0	25.3		
10.0		33.3	22.0	10.1		29.5	47.0		8.9		23.1	53.6	9.2	9.5		40.5	31.8	
10.1		43.2	47.0	9.4		36.8	38.3		9.1		28.1	7.0	8.5 -	9.1		41.5	53.2	
8.8		54.8	37.4	10.1		43.9	1.3		9.4		32.1	33.2	8.6		56.0	46.2		
9.7	27	5.3	11.4	9.4		50.8	21.5		9.0		52.1	31.5	9.6	49	5.5	5.6		
10.0		6.3	36.8	9.6		52.1	0.2		9.6		55.6	3.0	9.5		6.0	7.6		
10.1		7.3	4.8	9.6		53.3	39.0		8.5	42	3.1	1.0	8.5 ≡	9.9		43.0	46.8	
10.0		10.3	38.6	9.8	34	19.1	10.4	10.0	9.8		11.1	56.3	10.0		46.5	34.2		
9.2		36.8	25.4	8.6		25.5	9.2	8.5-	9.1		22.1	45.7	9.8	50	4.0	37.0		
10.1		48.3	54.0	8.6		45.0	3.6		9.4		27.6	56.3	8.7		10.0	32.6		
10.0		52.3	22.0	9.2	35	1.1	48.1		9.4		44.1	17.0	9.9		14.0	35.1		
10.0		55.3	1.7	9.1		3.1	19.3		8.6		51.6	46.8	9.0 -	8.6		24.0	48.7	
9.4	28	7.3	54.2	9.9		4.3	1.9		9.2		54.1	27.5	G -	8.3		24.8	2.9	
9.8		22.4	55.9	9.4		5.1	39.9		10.0		57.1	2.3	8.8		25.0	42.7		
9.6		26.4	42.8	8.7		13.1	6.8	9.5	9.6	43	7.1	23.2	9.8		52.5	50.6		
9.4		26.4	1.1	8.5 -	9.9		18.1	6.2	9.3		22.1	14.3	9.8	51	7.5	27.0		
9.7		27.4	31.9	9.2		27.6	9.9		9.2		25.1	19.2	9.0	9.7		16.8	41.3	
9.2		36.4	22.4	10.0		32.8	10.2		9.0		25.9	56.8	9.0 -	9.0		28.0	25.2	
9.6		47.9	48.8	8.9		33.2	57.2	9.5	10.0		26.1	58.7	9.8		31.3	59.0		
10.0		55.4	28.0	9.9		37.6	40.7		10.0		39.6	16.9	8.9		36.8	13.5		
9.2	29	0.4	44.5	9.9		53.1	19.5		9.8		49.1	43.0	9.9		38.3	55.5		
9.2		3.3	52.7	9.0	36	15.2	57.7	9.2 G	9.7		55.1	48.3	9.8	52	11.3	11.2		
9.8		3.9	32.7	9.4		22.1	48.1		9.9	44	12.1	8.9	8.8		14.8	59.2		
9.2		16.4	6.7	9.0	9.9		26.9	58.5	10.0		12.6	44.8	9.8		20.8	11.5		
9.4		17.4	57.4	9.9		42.6	26.7		9.2		13.9	57.2	10.0		24.6	42.6		
9.6		26.4	18.8	9.8		51.6	15.9		8.4		16.1	45.7	9.9		44.8	40.3		
9.6		29.9	12.7	8.6	37	9.1	7.1	9.0 G-	9.3		17.1	31.0	8.9		57.8	37.6		
9.8		33.9	24.2	9.4		13.1	31.0	9.5	8.2		17.6	28.0	8.5 GS≡	9.1		58.8	58.5	
10.0		47.9	21.3	9.4		23.1	16.3		9.9		20.1	31.6	8.4	53	0.8	29.1		
8.7	30	10.4	51.3	8.5 =	9.2		36.1	5.1	9.5	9.0		35.1	3.5	9.5	9.9		31.8	4.2
10.0		15.4	49.0	9.8		38.6	27.1		9.4		56.1	51.9	7.9		33.8	45.6		
9.2		17.4	31.0	9.0	9.1		39.1	14.7	9.5	9.4	45	13.1	45.9	9.3		54.3	2.9	
10.0		22.9	36.9	8.8		44.1	18.3	9.0	9.6		42.1	24.7	9.9	54	4.8	38.0		
10.1		25.9	38.9	9.9		47.1	39.7		9.9		43.6	12.1	9.1		6.8	9.2		
8.6		28.4	28.9	9.0	9.2		47.1	19.1	9.7		43.9	0.2	10.0		22.6	29.7		
10.0		41.4	39.2	8.9		51.1	18.0	9.0	10.0		47.1	30.5	9.3		27.3	53.2		
25Pr.	+ 1	1.0	-5.0		+ 1	1.4	-5.2			+ 1	1.8	-5.4		+ 1	2.2	-5.6		

1896AnCap...3....1G

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
8h.-9h.		-30°		9h.		-30°		9h.		-30°		9h.		-30°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
10.0	54	37.8	18.7	9.1	10	42.5	59.2	9.9	27	53.9	54.4	8.9	39	32.1	33.8 a
9.1		51.8	6.6 10.0	9.4	11	11.3	8.8	9.2	28	2.9	6.9	9.8		33.6	16.8
9.2		52.3	13.3 9.0-	9.8		23.3	51.8	9.2		2.9	22.5	9.7		36.6	53.4 9.5
9.7		54.8	59.6	9.4		36.5	58.9 9.0	10.6		25.4	26.3	10.4		45.1	27.2
10.0	55	17.6	2.1	9.8		39.8	40.4	10.2		29.9	30.7	10.0		57.1	45.6
9.6		22.3	15.6	9.5	12	13.3	40.6 a	10.4		32.9	34.5	10.6	40	23.6	25.5
9.4		28.3	31.9	9.3		23.5	57.1	8.6		34.9	17.6 8.5	8.9		45.7	0.4 -
9.6		30.8	43.9	9.3		31.3	38.9	10.6		40.9	20.8	9.8		54.1	33.9
9.4		43.8	48.2	8.8		43.3	52.8 8.5 a	10.2		41.3	58.5	8.9	41	3.6	47.0 8.8 Ga
9.3		46.8	43.8	8.8	13	8.3	49.1 9.0 Ga	9.8		29	12.9 48.8	8.2		3.6	42.0 8.0 GSa
10.0	56	1.3	17.7	9.8		17.3	56.2	9.6		17.9	8.1	10.6		26.6	34.9
9.0		10.3	13.1 8.2 GW=	9.6		24.3	9.1	10.4		37.4	14.7	8.6		34.1	23.7 8.5 a
9.0		13.3	13.7 9.2 G	9.5		28.6	2.7	9.0		46.9	52.1 8.7 G=	7.3		36.1	41.4 7.0 GSat
9.5		25.3	21.4	9.3	14	16.8	15.2 -	9.4		53.9	21.4 -	9.4		41.6	32.0
9.8		28.8	51.6	9.4		33.3	7.4	9.2	30	5.4	12.5 9.0 =	10.6	42	3.1	2.1
9.8		34.3	48.2	8.8	15	25.8	11.2 9.0 ≡	9.8		12.9	37.8	9.2		32.6	1.7 a
10.0		37.8	17.6	8.1	16	6.3	16.5 8.2 GSa	9.7		27.4	17.8	10.6		33.2	7.5
9.9		38.8	11.0	9.5		8.5	58.4	7.5		39.9	40.5 7.7 GSb	9.0		44.2	23.7 a
9.5		44.8	25.6	9.8		52.3	0.2	9.7		51.4	50.9	9.4		54.7	56.3
9.3		46.8	56.1	9.1	17	36.6	25.3 9.0	10.2	31	11.4	51.8	9.7	43	17.2	49.7
9.6	57	5.3	25.0	9.3		50.1	30.1	9.6		22.9	31.0	9.7		28.7	25.8
8.0		21.1	31.5 8.0 GWa	9.3	18	3.6	51.0	8.8		26.9	42.1	9.8		33.2	31.1
9.8		48.3	37.7	9.3		27.6	22.5	10.4		49.9	33.8	9.4	44	6.2	8.8 9.5
8.6	58	5.3	37.7 8.8 -	9.3		30.6	18.3	8.0		52.4	24.5 7.2 GSb	9.4		11.2	8.6 9.5
9.4		6.3	55.0	9.8		36.1	51.8	9.9	32	6.0	1.5	9.4		24.7	55.3
9.4		13.6	0.0	9.8		46.1	4.8	8.4		21.4	7.1 8.2 GSa	8.8		43.7	47.0 8.5 -
9.8		24.9	12.8	9.8		53.1	10.6	10.4		23.3	1.7	10.6	45	3.2	52.6
9.8		33.6	58.3	9.8		56.1	13.5 10.0	9.9		25.9	41.1	9.7		17.7	34.1
9.8	59	8.4	38.6 9.5	9.6	19	1.1	29.0	8.8		28.4	19.1	8.8		32.2	21.1 8.5 Ga
9.8		11.4	27.2	9.8	20	12.1	19.2	10.2		37.9	28.6	9.4		33.2	30.6
9.3	0	9.3	55.4	8.0		38.3	49.7 8.5 GSb=	9.8		42.9	17.1	7.8		35.2	55.6 8.2 GSbt
9.8		13.6	40.8	9.8	21	11.9	14.7	10.0		44.4	27.1	10.6		41.2	16.7
8.5		34.9	45.6 8.5 -	10.0		13.1	14.1	9.2		53.9	22.5 S	9.4		55.2	20.1
8.3		46.9	22.6 9.0 a	10.2		14.6	14.0	10.6	33	3.9	16.9	10.2	46	1.3	0.2
9.8		54.9	16.6	10.4		14.6	7.2	9.6		35.4	27.3	10.6		5.7	39.6
8.8		55.7	57.1 8.8 G-	10.6		21.6	39.7	10.6		39.4	7.4	10.6		6.7	56.8
8.4		55.9	29.4 9.0 -	10.2		35.1	26.3 -	10.4		47.9	3.5	10.2		12.7	22.9
9.0	1	31.4	6.7 9.0	9.9		54.6	1.4	9.4	34	2.6	7.4	8.9		16.7	8.6 9.0 -
9.8		47.2	10.0	8.8	22	13.1	57.9 8.7 a	9.2		17.6	47.0 a	10.6		28.7	37.2
8.8	2	8.2	36.6 9.5	10.2		24.6	14.6	9.9		31.1	5.6	10.4		32.1	46.5
9.3		10.7	29.3	10.6		34.6	16.4	10.6		36.6	3.9	10.4		45.5	54.1
9.5		38.2	18.9	9.2		56.1	34.6 9.0 -	10.4		51.1	45.2	9.8	47	2.0	4.0
8.8		55.2	35.9 9.0	10.6	23	1.1	36.1	8.3		51.1	21.2 7.8 GSat	8.6		12.0	39.4 9.0 a
9.8	3	16.2	43.4	10.6		16.6	24.7	8.6	35	3.6	10.2 9.0 -	10.4		35.8	53.1
9.0		20.2	2.6 9.0 Ga	10.2	24	10.1	42.2	10.4		15.1	31.6	9.8		37.5	17.0
9.3		28.7	30.1	10.2		12.1	3.1	9.8		23.6	31.3	9.1		50.0	18.9
9.4	5	12.7	51.3	10.6		16.1	14.3	10.6	36	20.6	35.1	10.0		52.5	45.4
9.8		27.2	17.9	8.9		19.6	27.9	10.4		26.4	58.9	9.4	48	5.5	6.5 9.2 Ga
9.6	6	39.2	22.1	10.0		27.1	45.9	9.8		57.6	49.9	10.0		12.5	18.9
8.0	7	39.2	33.1 7.8 GSat	10.4	25	5.1	46.9	10.2	37	11.6	22.9	9.6		43.5	41.9
9.3		45.2	23.1 9.0 =	10.6		19.6	57.8	10.6		38.1	46.0	10.2		49.0	57.1
9.8	8	24.7	25.3	9.7		20.6	58.2	10.6	38	2.1	6.4	9.1		51.5	48.9 9.0 -
8.8		32.7	35.0 9.5 a	10.2		37.1	52.7	10.4		27.6	13.7	10.4		49	45.5 13.0
9.8		33.7	5.1	10.0		44.1	48.5	9.4		28.1	52.8 10.0	9.4	50	29.0	36.6
9.0		44.7	3.6 8.5 a	9.9		50.9	56.8	10.6		37.6	7.2	9.2		29.5	53.2
9.3		48.7	20.7	10.6	26	22.1	23.4	8.5		59.1	49.4 9.0 a	9.0		35.0	42.6
9.8	9	13.7	1.1	10.0		26.6	41.1	10.6		59.4	29.6	9.5		37.5	26.9
9.0		15.7	23.2	9.0		44.1	32.6	8.8	39	17.1	36.4 9.0 a	9.6		43.0	34.3
9.8		22.2	52.3	9.2		45.1	3.4 ≡	10.6		17.6	46.8	7.2		43.5	29.8 7.0 GSbt
9.8	10	30.8	28.9 -	9.8	27	8.1	50.3 9.0	9.8		18.6	46.7	8.8		55.5	16.9 8.5 -
25pr.	+ 1	2.9	- 5.9	+ 1	4.2	- 6.4		+ 1	5.0	- 6.7		+ 1	5.9	- 7.0	

3889 Ancap 1G

3001-3060.			3061-3120.			3121-3180.			3181-3240.					
mag.	10 ^h .	-30°	mag.	10 ^h .	-30°	mag.	10 ^h .	-30°	mag.	10 ^h .	-30°			
8.2	51	2.5	9.5	4	18.7	39.1	6.8	21	26.1	25.8	9.8	39	15.0	32.8
9.6		18.0	8.4		35.2	17.0	9.7		54.6	27.9	8.7		16.0	40.9
10.0		19.5	9.6		35.2	37.8	9.0		56.6	56.8	9.5		25.5	39.8
9.6		30.0	10.0		37.2	42.8	9.7		57.1	56.3	10.5		30.5	10.5
8.1		53.5	10.0	5	25.2	47.1	9.8	22	12.6	36.6	8.7	40	3.0	12.0
9.1		57.0	9.5		36.7	34.7	9.6		34.6	3.7	9.8		25.5	48.8
10.0	52	59.5	10.0		47.2	52.5	9.4	24	50.1	17.7	8.8		37.5	48.1
9.8	53	13.5	10.0	6	14.7	41.7	8.9	25	16.6	50.2	9.8		47.5	29.0
10.0		36.5	10.0		17.2	37.0	9.6		57.6	42.5	10.3		52.5	18.3
7.6		43.7	9.5		32.2	17.7	10.0	26	5.6	24.1	9.6	41	32.5	18.3
10.4		46.5	9.6		41.2	47.5	10.1		39.1	9.2	8.2		42.5	56.7
10.2		50.0	9.6		46.2	10.2	9.4		42.4	22.8	8.7		43.5	32.8
8.2	54	24.5	10.0		51.7	14.6	9.1	27	27.6	41.2	10.4	42	22.0	0.6
9.5		26.5	9.0	7	9.2	26.1	9.6		47.6	17.5	9.2		33.5	50.4
10.0		30.0	9.2		11.2	40.1	9.7		54.1	48.2	9.0		42.5	36.2
9.8		33.0	10.2		25.2	6.0	9.7		57.6	22.9	9.8		45.5	16.0
9.5		37.5	9.4		42.7	49.2	9.7	28	17.6	28.6	8.9		52.5	48.0
9.1		45.5	8.7		52.2	55.3	7.5	29	3.1	41.9	8.0	43	6.0	23.8
9.1		46.5	7.8	9	3.5	11.9	9.2		37.6	19.6	9.6		8.0	44.4
8.6		51.0	10.4		15.2	13.8	9.4		47.6	35.1	10.2		9.0	28.8
8.4	55	13.0	9.6		35.2	28.4	8.2	30	28.1	41.9	8.2		12.5	5.4
10.0		18.7	10.4		52.7	21.5	9.2		36.1	10.2	8.2		25.5	50.7
9.1		22.5	9.0	10	4.2	51.7	8.0		38.6	54.4	9.6		26.0	24.0
10.0	56	3.0	9.5		4.9	59.0	9.4		52.6	20.7	8.6		54.5	45.3
9.0		5.5	7.8		5.2	34.8	10.1	31	2.6	10.3	10.4	44	2.5	18.1
8.4		41.5	9.4		50.9	45.2	9.4		33.2	22.4	9.8		24.0	25.2
10.0		42.5	10.1		57.9	16.8	10.1		36.0	31.3	9.8		31.5	17.2
10.0		53.0	8.1	11	17.9	55.3	9.4		44.9	24.6	10.0		32.5	31.0
9.6		55.5	10.1		18.9	18.0	10.5		48.2	21.2	10.5		37.7	35.3
9.6	57	2.5	10.1		40.9	35.1	10.5		52.7	26.8	10.0	45	7.2	13.2
9.6		6.0	10.1		53.9	22.6	10.5	34	21.2	18.6	9.8		44.7	29.7
10.4		21.5	9.4	12	11.9	15.0	9.8		23.9	11.5	9.6		49.2	40.7
9.0		22.0	10.0		46.9	28.1	10.2		26.2	14.1	10.3		57.7	27.7
10.2		26.5	9.4	13	12.4	47.6	9.8		40.2	49.1	8.8		59.7	33.4
9.5		30.5	10.1		26.9	19.9	9.8		53.7	37.7	9.8	46	1.2	17.3
9.8		55.5	10.1		53.4	54.4	9.8	35	10.7	13.3	10.0		5.7	9.8
9.4	58	52.5	8.0		57.9	22.1	9.4		19.7	8.0	9.6		6.7	29.8
8.7	59	41.5	9.1		1.2	0.3	9.6		39.4	59.6	9.6		25.7	22.7
10.4		44.5	9.2	14	18.9	43.3	8.2		53.7	5.9	10.2		46.7	9.0
9.4		46.5	8.4		26.4	59.3	9.6		55.2	21.3	9.6	47	22.7	0.4
10.4	0	5.5	8.0		32.9	57.3	10.0	36	5.7	39.0	10.0		33.7	33.0
7.6		10.0	10.1		56.4	9.4	10.0		14.7	47.2	10.5		38.2	41.9
10.4		12.5	9.4	15	13.9	29.5	10.2		24.7	0.8	8.7	48	18.7	29.0
10.4		14.7	9.4	16	7.9	8.5	10.5		43.2	46.7	10.5		25.7	13.7
9.1		22.0	8.5		14.9	3.3	9.2		45.7	30.4	8.6		37.2	44.2
9.6		30.0	8.2		31.9	53.2	10.0		45.7	11.6	9.6		41.7	47.1
9.4		50.4	10.0		44.9	23.3	10.0		51.7	9.2	10.0		42.7	55.7
9.4	1	1.2	10.1		52.1	1.1	10.5	37	12.7	4.7	10.4		46.2	34.8
9.5		15.2	8.5		52.4	1.6	8.4		47.0	12.8	10.5		55.7	44.6
9.6	2	3.7	10.0		56.9	0.1	8.0		48.5	26.2	9.6		58.7	56.6
9.6		30.7	9.4	17	29.9	28.3	8.4		49.5	32.9	10.5	49	11.7	17.5
8.7		47.2	8.0		53.9	17.5	10.4		49.5	52.5	8.9		11.7	19.7
9.8		49.2	8.8	18	7.9	55.5	10.4		53.0	11.5	10.5		12.7	19.1
9.4		51.2	8.8		19.1	53.9	9.6		55.5	30.8	10.5		21.2	48.6
8.2	3	1.2	8.8	19	3.1	12.8	9.8	38	12.0	21.0	8.4		26.7	37.2
10.2		40.2	9.4		29.1	58.5	10.0		36.5	13.2	10.4		26.7	1.7
9.4		46.2	9.7		53.6	38.7	10.5		38.0	0.8	10.4		28.2	3.3
10.4		51.2	9.6		53.6	2.5	10.5		42.5	29.3	9.8		45.7	55.8
10.0		56.2	10.0	20	37.6	15.9	9.5		53.0	30.7	9.8		53.7	47.1
9.1	4	1.7	9.4	21	9.6	42.8	10.0	39	3.0	27.9	9.2		57.7	9.9
25pr.	+ 1	6.8		+ 1	7.9	-7.4		+ 1	9.6	-7.8		+ 1	10.5	-7.9

1896Ancap...3....1G

3241-3300.			3301-3360.			3361-3420.			3421-3480.		
mag.	10 ^h -11 ^h .	-30°	mag.	11 ^h .	-30°	mag.	11 ^h .	-30°	mag.	11 ^h -12 ^h .	-30°
8.8	50 2.7	49.3	9.4	9 40.2	36.5	8.8	29 26.8	50.0	9.6	59 56.0	18.7
8.9	31.7	17.4	8.4	49.2	10.0	8.8	42.8	20.2	8.6	57.0	52.1
7.6	56.7	32.2	9.3	56.2	36.5	7.3	31 34.3	31.4	9.6	0 6.0	57.0
9.3	51 12.7	39.9	9.4	10 5.7	6.9	9.4	42.3	31.0	8.2	48.6	1.0
10.3	28.7	10.7	9.5	45.2	36.5	9.4	32 11.8	57.1	9.6	1 5.3	10.0
10.0	45.7	52.8	10.2	46.7	37.9	8.4	51.3	11.1	7.0	9.3	42.6
10.5	49.8	1.6	10.0	11 5.7	40.3	8.8	59.8	21.0	7.6	35.3	26.6
10.2	52.0	34.6	8.4	12 5.2	37.7	9.2	33 10.3	30.9	9.6	43.3	9.6
8.9	52 12.0	28.8	10.2	6.1	59.2	10.2	29.1	59.0	8.8	55.3	15.9
7.9	19.0	53.7	8.3	42.2	40.4	10.0	29.7	52.0	9.2	2 50.8	50.0
8.8	39.0	22.1	8.0	13 0.7	19.5	9.2	43.8	44.1	9.6	3 43.3	22.1
9.8	55.0	22.4	9.4	14 1.7	27.1	9.8	34 15.8	50.7	8.6	51.3	35.8
9.8	57.0	30.3	9.6	42.7	37.5	9.6	35.8	21.4	9.6	4 13.5	59.1
10.4	53 29.0	52.6	9.6	51.0	57.6	10.4	40.8	54.2	9.6	15.3	29.9
10.6	32.0	40.8	9.6	15 5.7	4.4	10.4	36 15.3	35.6	9.0	5 2.3	51.6
10.4	35.0	44.5	8.9	25.7	37.5	9.2	52.3	57.1	9.6	15.8	58.9
9.3	41.0	17.8	8.1	29.7	50.1	8.5	37 14.8	19.7	9.6	22.3	47.7
9.2	41.0	41.4	10.2	40.0	26.2	8.2	38 3.7	56.0	9.6	22.8	15.8
9.4	54.0	14.3	9.0	44.4	59.9	8.4	39 23.7	15.7	8.0	6 25.3	36.6
10.2	54 9.0	24.0	8.2	16 25.5	13.0	10.4	54.2	16.4	8.0	35.3	49.3
10.6	32.0	9.8	9.8	43.5	26.3	8.6	40 16.2	14.0	9.6	7 10.3	7.7
10.4	38.5	33.1	8.6	53.5	12.5	9.4	22.2	25.8	9.6	30.3	34.4
9.6	47.1	2.9	9.3	17 2.0	52.6	7.1	41 8.2	33.6	9.2	30.8	18.6
10.2	53.0	36.2	9.5	25.5	54.3	10.4	11.2	29.2	9.2	57.3	13.3
10.6	58.0	23.2	9.6	35.5	17.9	10.4	42 22.2	24.7	9.6	8 13.8	25.7
9.2	55 12.0	34.2	8.9	45.0	57.8	10.4	56.6	24.2	9.0	22.8	31.3
9.8	14.5	52.7	9.0	18 32.5	50.2	9.6	43 34.7	47.0	9.6	56.5	23.9
9.8	56 6.0	34.6	9.6	33.5	37.8	9.9	44 22.7	31.8	8.0	9 4.6	59.9
10.0	53.0	54.7	10.4	20 58.7	0.3	10.4	54.0	58.8	8.2	27.5	18.5
9.8	57 8.0	49.4	10.2	21 22.7	34.0	8.8	45 8.0	56.0	8.5	29.0	24.9
9.0	16.6	2.9	10.2	37.1	17.8	6.9	22.7	7.8	8.6	38.5	24.6
9.3	36.0	29.6	10.2	46.2	42.9	9.6	44.8	11.3	9.4	55.9	54.2
9.2	57.5	53.2	8.2	22 1.7	32.9	9.0	46 2.8	44.4	9.6	10 0.7	3.6
10.3	58 4.5	28.5	9.0	2.7	33.0	8.8	47 20.4	56.3	8.0	11 16.5	30.5
10.0	13.0	52.8	8.8	45.5	58.8	7.9	51.4	12.8	7.6	56.0	48.0
10.4	15.5	33.2	8.8	55.7	18.3	8.4	48 26.7	58.4	9.6	12 25.5	20.7
8.4	33.7	10.2	9.4	23 45.7	53.2	9.2	50 2.4	29.6	9.6	29.0	55.9
9.8	59 47.2	52.2	9.8	24 11.7	27.7	9.4	10.9	21.8	8.4	31.0	48.2
9.3	0 21.7	25.5	9.0	22.7	37.0	9.6	32.4	47.0	9.2	56.5	58.5
9.4	1 47.4	2.2	10.4	32.3	38.8	9.4	51 6.4	49.1	8.3	13 6.5	13.1
9.5	2 42.7	5.7	9.4	51.6	57.1	9.6	33.4	40.4	9.6	47.5	35.0
9.8	51.2	22.1	9.4	25 23.8	25.2	7.3	43.2	57.3	9.6	49.0	11.3
8.9	52.7	13.1	10.0	25.7	59.1	9.6	52 12.9	40.1	9.6	14 28.0	27.5
9.2	55.2	15.5	8.6	58.2	42.9	9.6	32.4	17.5	9.5	48.0	5.4
8.9	56.2	38.9	8.6	26 4.8	41.4	9.6	53 31.9	21.0	9.2	15 18.0	9.3
10.0	57.0	28.2	10.0	15.8	25.1	9.6	55 7.9	41.3	9.4	28.5	54.8
10.0	3 14.4	58.1	8.8	16.8	16.9	9.6	19.5	11.9	9.3	31.0	33.5
9.4	17.7	56.7	10.4	24.8	15.9	9.6	28.0	8.1	8.2	41.5	28.9
9.4	4 53.7	58.1	10.4	25.8	27.0	9.6	58.5	40.4	9.4	16 0.0	21.2
9.8	5 24.7	42.5	10.4	36.7	57.4	7.9	56 37.5	59.8	8.4	37.5	50.7
9.6	43.7	4.3	7.2	43.8	23.9	9.6	54.5	34.2	8.7	17 11.8	5.4
9.8	6 22.7	39.4	9.4	54.8	18.8	8.4	57 2.0	48.7	9.3	40.3	54.9
8.4	27.7	27.2	9.4	27 35.8	23.9	9.6	15.5	10.0	8.4	18 2.8	32.6
9.2	28.2	37.5	9.9	56.8	50.8	7.7	58 10.0	29.3	9.2	14.8	49.0
10.2	7 40.2	46.9	9.4	28 16.8	52.6	8.8	24.5	13.2	9.6	39.8	43.2
9.4	54.2	28.1	9.7	32.8	56.3	9.5	59 5.8	59.4	8.4	48.8	25.4
9.0	8 5.7	41.5	7.6	51.8	2.2	9.6	13.0	24.8	9.0	50.3	57.1
10.2	43.2	37.5	9.5	29 9.3	55.0	9.6	26.0	34.8	8.3	50.3	26.2
9.2	59.7	21.4	9.6	15.8	27.2	8.4	46.0	19.8	9.6	19 5.8	32.6
9.6	9 33.7	4.1	9.2	22.1	57.3	9.6	52.0	43.4	9.6	26.8	37.9
25pr.	+ 1 11.5	-8.0		+ 1 13.6	-8.2		+ 1 15.6	-8.3		+ 1 17.7	-8.3

3481-3540.				3541-3600.				3601-3660.				3661-3720.			
mag.	12 ^h .	-30°		mag.	12 ^h -13 ^h .	-30°		mag.	13 ^h .	-30°		mag.	13 ^h .	-30°	
m s	m s	m s		m s	m s	m s		m s	m s	m s		m s	m s	m s	
9.5	19 32.3	29.1		9.2	40 50.3	2.5	9.0 -	9.7	1 7.1	20.5		10.4	21 44.0	7.8	
8.1	55.3	56.2	8.3 Ga	9.2	51.8	16.1	9.0 -	9.3	17.1	11.8		9.2	46.8	50.9	9.0
9.5	58.3	27.6		9.9	59.3	15.8		8.6	46.1	35.3	9.0 -	10.2	47.0	20.0	
9.5	20 3.8	32.2		8.0	41 55.8	43.4	=	9.7	2 1.6	57.2		8.4	58.3	23.7	8.0 Ga
9.3	12.5	0.4		9.4	57.3	17.4		9.1	10.1	43.1		10.4	22 8.5	0.2	
8.9	21.8	31.3	8.5 -	8.5	42 9.8	28.4	9.0 -	9.1	21.1	53.8	9.0	9.6	11.2	59.3	9.0
8.8	39.8	37.5	8.5 =	8.6	11.8	31.2	8.5 =	9.2	29.1	11.7		10.3	26.5	10.1	
9.1	58.1	58.1		9.0	21.8	18.3		9.7	3 39.9	0.2	9.0	8.7	41.0	44.4	8.5 =
9.6	21 31.3	12.0	9.5	9.0	27.8	5.1	9.0	9.7	43.2	46.0		9.6	57.3	53.9	9.0
9.6	41.8	8.7		8.3	49.8	8.0	8.5 a	8.9	43.7	48.1	8.5 =	10.2	23 8.1	32.2	
8.7	22 8.3	53.8	9.6	9.6	43 27.3	19.7		9.1	4 23.2	7.2		10.2	32.1	8.9	
9.3	31.3	8.8		8.4	31.8	32.6	8.8 a	9.1	24.2	27.1	9.5 Ga	8.7	24 20.1	41.0	9.0 =
8.4	35.8	50.8	9.0 =	9.3	56.3	5.4		9.2	47.2	8.5		10.4	43.6	54.5	
9.5	38.8	13.9		8.3	45 0.3	24.1	7.5 GSa	8.7	55.7	40.0	=	7.7	46.6	24.6	7.5 GWa
8.5	41.8	8.3	9.0 S=	7.4	5.8	31.1	7.0 GSa	9.6	55.7	24.4		8.5	53.6	57.2	
8.7	23 2.3	58.7	9.0	9.3	9.8	56.5		9.2	5 6.7	3.6	9.0	10.3	25 42.6	1.7	
8.3	8.8	27.4	8.5 G=	9.2	15.3	51.4		8.5	32.7	23.8	8.5 Ga	9.6	51.3	57.1	=
9.6	25.3	14.1		9.9	19.3	13.8		9.7	34.2	24.5		8.8	26 33.1	44.9	9.0 -
8.8	24 11.3	59.3		9.6	46 32.7	4.4		9.3	46.2	21.8		10.4	27 35.4	1.4	
9.2	31.8	24.6		8.4	33.7	40.1	8.0 G=	9.1	56.2	16.1	9.0 =	10.4	38.1	11.2	
7.9	32.8	56.7	8.0 GSb=	9.3	47 56.2	27.2		9.0	6 1.7	52.8	9.0 G-	10.4	40.0	1.2	
8.8	44.8	17.8	9.0	9.9	58.7	34.5		8.3	2.7	3.2	8.0 Ga	8.7	40.1	33.8	9.0
9.2	51.3	38.0		9.0	48 14.7	59.2	9.5	9.3	29.2	17.7		10.4	59.1	44.5	
7.6	25 1.8	17.4	7.0 GSa	8.7	52.7	47.0	8.0 G=	9.2	7 2.7	36.3		8.2	28 12.6	46.0	8.5 a
8.4	26.8	14.1	8.8 -	9.7	49 7.5	57.9		9.4	9.7	37.0		9.2	31.1	47.0	9.0
9.3	45.8	59.7		7.1	15.2	48.2	7.0 GSb=	8.7	17.2	56.8	8.5 -	9.4	59.1	23.2	9.0 =
9.0	53.8	54.5		9.6	21.2	11.8		9.2	17.7	47.3		9.6	29 3.6	56.8	
8.5	56.3	36.0	8.5 G-	8.4	23.2	45.2	8.8	9.7	24.7	15.6		9.9	13.1	29.6	9.0
9.6	26 10.8	3.5		9.8	49.2	8.9		9.2	27.2	57.5	9.0	9.4	18.1	35.3	9.5
9.5	21.1	58.6		8.5	50 1.7	24.2	8.5 a	8.4	52.7	53.1	8.5 =	10.2	24.1	25.0	
8.4	26.1	57.3	8.3 GW-	9.9	2.2	53.1		9.4	8 15.2	8.6		10.2	31.6	17.5	-
9.3	54.1	3.3		9.9	11.7	35.1		9.2	29.7	4.4	9.0	10.0	43.9	57.9	
8.2	27 1.9	59.7	8.5 -	8.8	55.7	25.4	9.0 -	9.0	9 42.7	39.6	9.0 -	10.4	30 25.1	5.0	
9.0	32.1	4.0	9.0 a	9.8	57.2	13.3		6.6	56.7	50.6	5.8 GS _{tr}	10.3	27.6	32.0	
8.8	28 15.6	43.5	8.5 =	9.9	59.7	55.6		9.4	10 0.7	29.6		10.3	38.1	29.9	
9.6	29 11.8	49.8		9.9	51 7.2	34.3		9.3	2.7	37.1	9.5	9.4	53.6	21.8	
9.6	30 35.8	3.6		8.4	28.7	36.1	8.5 Ga	9.0	51.3	12.8	9.0	10.0	54.1	58.5	
8.4	45.6	50.9	8.2 Ga	8.6	37.2	19.3	8.8 a	9.0	11 10.3	4.4	8.3 Ga	10.4	31 10.3	6.8	
9.3	56.6	37.7		9.3	48.7	40.8	9.0 -	9.2	33.3	13.6		10.4	13.6	33.1	
9.6	31 15.8	56.6		9.9	52 16.2	11.8		8.4	12 20.8	13.7	8.0 Ga	9.8	35.1	0.3	
9.6	25.1	40.9		9.8	54 8.2	19.4		9.2	14 39.8	32.3	9.0 -	10.4	38.4	1.1	
8.8	39.1	4.2	8.5 Ga	8.3	10.2	43.1	8.5 =	8.9	15 30.8	9.2	8.5 a	9.9	42.6	45.3	9.0 -
9.5	51.6	30.0		8.0	59.7	9.6	7.5 GSb	9.7	17 21.3	55.7	9.5	8.7	32 0.6	6.7	9.0 =
9.6	32 25.1	17.5		9.0	55 4.2	14.4	9.0	9.6	36.1	7.2		10.0	3.1	20.9	
9.0	41.1	6.2		9.3	10.7	21.9		9.3	43.1	24.4		8.8	21.1	14.9	8.5 W=
9.6	52.6	40.3		9.7	15.2	2.4		9.6	18 0.3	40.0		9.2	44.1	38.5	=
9.2	33 0.9	2.0		8.8	33.2	21.4	9.5	8.3	11.6	32.6	a	10.4	45.0	56.0	
9.9	35 3.8	54.7		9.0	34.7	22.9	9.5 -	8.9	43.1	11.8	9.0	10.4	52.1	50.5	
9.9	12.7	34.1		9.3	35.7	44.5		9.7	19 11.1	46.7	9.5	9.6	34 12.6	9.7	
8.3	36 6.3	15.7	8.2 Ga	9.9	52.7	43.0		9.1	19.6	51.9	9.5	8.7	16.6	16.9	8.8 =
9.2	28.3	11.6	9.0	9.9	56 34.7	0.0		9.0	28.1	32.6	9.0 a	10.4	29.6	3.7	
8.5	52.3	42.0	9.0 -	8.8	36.2	29.4	9.0	8.7	36.1	47.9	8.3 Gb	8.8	35 20.6	1.7	9.0 -
9.9	37 35.3	19.3		8.8	57 19.2	51.6	8.5 =	9.4	42.3	0.0		9.0	22.1	53.8	9.0 -
8.4	57.8	55.5	9.5 =	9.4	58 3.7	3.7		9.0	20 25.1	23.3	9.0 G	10.4	36 14.1	37.3	
9.6	38 37.7	15.8		9.4	50.1	6.1	9.5 -	9.2	26.1	5.4	9.0	8.5	20.1	48.8	8.5 G=
9.1	39 7.3	7.6	9.0 a	9.0	59 3.1	5.8	9.0 -	8.3	46.6	8.2	8.5 G-	9.0	23.1	51.2	8.5 G=
9.2	40 15.8	16.3		9.0	7.1	53.4	8.8 a	10.4	56.0	6.9		9.0	37 15.6	32.3	9.5 G
9.4	16.3	19.8		7.3	46.3	56.4	7.0 GSa	10.0	21 10.5	4.3	9.0	10.4	22.0	41.3	
9.0	41.3	16.8		8.5	0 24.1	51.9	8.5 a	7.5	12.6	54.1	b	10.4	31.3	59.6	
9.4	44.3	12.9		9.7	53.1	52.4		10.3	25.8	56.9		10.4	53.1	17.5	
25pr.	+1 19.0	-8.3		+1 21.1	-8.2			+1 22.5	-8.0			+1 24.2	-7.7		

1896AnCap...3...1G

3721-3780.			3781-3840.			3841-3900.			3901-3960.		
mag.	13 ^h .	-30°	mag.	13 ^h -14 ^h .	-30°	mag.	14 ^h .	-30°	mag.	14 ^h .	-30°
10.4	38 20.1	11.1	8.8	57 54.9	18.9	8.7	18 26.1	56.0	9.9	40 50.2	41.6
9.6	26.6	8.8	9.1	58 45.4	49.9	9.7	19 57.1	24.0	8.3	51.5	52.6
9.4	39 33.1	53.8	9.2	59 31.9	14.0	9.0	20 19.6	1.4	9.6	41 2.5	36.3
9.4	50.3	1.9	9.0	39.4	10.0	8.8	51.1	36.7	9.8	3.2	2.2
10.3	57.1	4.7	8.7	45.4	30.1	9.0	21 15.1	29.2	9.8	54.5	4.4
9.6	40 42.1	55.3	7.7	52.4	48.1	9.1	18.1	42.0	9.8	55.0	29.8
10.3	52.1	28.3	8.2	0 6.4	59.5	9.7	31.6	56.5	8.5	42 16.5	50.4
10.3	41 6.1	22.0	9.4	21.9	28.5	9.6	40.1	6.4	9.9	17.0	6.1
8.6	16.6	7.5	9.3	22.4	23.7	9.7	22 23.1	51.5	9.8	20.5	18.5
10.4	20.1	49.4	9.1	1 32.9	19.5	9.4	33.1	31.8	9.6	22.5	18.2
10.4	22.1	50.5	8.4	51.4	28.8	9.3	23 1.1	55.6	9.2	56.0	25.2
8.6	52.1	45.1	9.5	2 9.4	51.4	9.2	6.6	53.7	9.8	43 59.0	37.5
8.2	53.1	5.2	8.3	15.9	16.4	9.2	54.6	53.2	9.0	44 11.0	21.9
9.8	42 0.6	58.5	9.5	31.4	13.5	9.7	24 19.1	19.2	8.2	11.0	21.4
9.2	26.1	52.3	9.3	53.4	46.0	9.0	26.6	21.6	9.9	43.5	8.5
9.0	34.1	43.7	7.2	58.4	1.7	9.3	27.6	54.8	7.3	45 6.5	3.8
9.9	48.1	45.3	8.8	3 23.7	22.0	9.0	28.3	59.8	9.0	8.0	57.9
10.4	49.1	53.5	9.0	24.7	34.7	9.1	30.1	38.6	8.5	19.5	31.6
10.4	43 7.1	31.5	9.0	4 4.2	31.3	9.7	25 0.1	20.2	9.5	29.5	50.5
7.4	12.6	26.6	9.5	37.7	19.9	7.6	46.1	9.7	9.8	34.8	9.1
10.4	28.3	54.3	9.0	43.2	50.2	9.2	50.1	19.6	9.0	38.6	57.9
7.2	31.8	35.0	9.2	52.2	25.7	8.6	54.1	20.3	9.6	44.3	13.6
8.2	42.8	36.4	9.5	5 33.2	52.8	8.9	56.1	25.0	9.3	47 0.3	20.1
10.3	55.3	26.2	7.9	43.2	38.9	8.8	26 33.1	4.0	9.4	9.8	8.0
9.4	44 5.8	11.0	9.5	6 18.7	22.0	9.6	38.1	3.5	9.6	20.8	25.0
10.4	15.3	56.8	7.6	7 25.7	27.7	9.3	27 0.6	8.3	9.9	32.8	24.3
9.6	25.1	1.1	8.6	32.7	34.4	9.7	8.1	51.7	8.8	53.8	54.6
7.5	31.8	41.9	9.5	48.2	15.4	9.2	33.1	48.3	8.8	48 6.3	40.2
9.9	37.3	51.2	9.0	58.2	13.2	9.6	28 9.6	32.7	9.0	27.3	34.6
10.4	39.8	4.2	9.5	8 12.2	7.7	9.2	29 13.1	38.3	8.3	49.3	22.1
9.0	40.3	11.0	9.3	21.7	36.9	8.2	13.1	29.3	9.4	49 13.3	3.1
6.8	51.3	59.9	8.4	47.2	41.6	9.6	17.1	59.4	9.9	50.8	25.6
7.4	45 9.3	10.0	9.5	9 16.7	56.1	9.6	20.1	54.0	9.6	50 1.3	51.7
8.9	32.5	34.1	9.5	18.2	9.1	9.4	46.6	43.8	8.5	37.5	58.8
9.6	34.1	1.0	9.5	23.2	44.1	9.0	30 18.6	24.7	9.5	40.8	20.9
9.4	43.3	24.3	8.4	26.2	22.6	9.0	43.1	10.5	9.4	51 27.3	7.2
9.0	59.3	34.6	9.7	54.0	47.7	9.1	31 0.1	18.8	9.0	37.1	39.5
8.9	46 15.5	37.7	8.6	10 11.5	45.6	9.6	32 3.1	26.0	9.3	45.6	2.5
9.6	16.0	59.5	9.7	19.5	8.5	9.2	8.2	57.8	7.1	57.1	12.4
9.1	39.5	36.3	8.6	31.8	27.1	9.1	9.1	53.4	8.8	52 40.1	42.2
9.5	46.7	13.8	9.7	41.7	3.4	8.4	30.6	15.8	9.4	53 11.6	28.3
9.0	48 4.2	17.9	8.9	11 30.1	42.2	9.1	33 22.6	30.9	9.5	15.1	56.1
9.5	17.2	22.8	8.7	12 24.6	47.0	7.0	34 24.1	23.7	9.6	31.1	35.3
7.6	33.4	40.3	9.3	27.1	23.8	9.7	29.3	37.9	9.6	57.6	39.3
8.3	42.4	59.6	8.7	43.1	18.0	9.6	30.8	8.9	9.9	54 4.1	0.8
9.0	44.9	6.0	9.1	14 2.1	44.8	9.9	36.5	56.2	9.6	10.1	13.1
9.5	51.4	36.1	9.4	16.1	18.6	8.8	53.5	53.3	9.9	44.6	46.9
8.8	50 15.4	18.6	9.4	15 6.6	23.2	9.6	35 17.0	32.0	9.0	55 17.1	19.4
8.1	43.9	21.1	9.2	23.4	1.7	9.9	23.0	2.3	9.5	41.1	57.3
9.5	53.4	5.4	9.6	33.1	56.6	9.9	58.5	13.0	9.6	51.6	5.5
9.3	51 22.4	31.9	9.1	43.1	29.0	9.9	36 34.2	54.5	8.3	56.6	53.0
8.6	27.4	27.3	9.3	56.6	23.1	8.5	37.5	16.0	9.0	57 6.6	2.0
9.5	52 40.4	6.2	9.6	16 25.6	0.3	8.6	41.0	20.5	9.4	14.6	20.4
8.8	53 42.4	43.4	9.2	33.1	22.1	9.4	37 41.5	49.1	9.2	17.1	47.2
8.6	54 9.4	44.2	9.1	36.6	10.4	8.2	38 42.5	26.3	9.9	29.6	18.2
9.1	46.4	54.5	9.6	40.1	44.3	9.5	39 7.5	18.7	9.3	31.6	30.7
9.0	53.4	35.5	8.7	17 10.1	34.8	8.6	14.5	56.1	7.3	58 0.6	4.0
8.7	55 6.4	55.5	8.6	23.1	39.7	9.8	39.5	54.5	9.3	30.3	29.1
9.5	47.4	8.1	8.4	41.6	14.0	9.6	40 17.0	17.8	9.8	35.5	28.6
9.5	57 48.9	48.5	8.3	18 14.6	17.8	9.9	45.5	57.0	9.3	48.1	37.1
25pr.	+ 1 25.5	- 7.5		+ 1 27.3	- 7.1		+ 1 28.7	- 6.7		+ 1 30.0	- 6.2

3961-4020.				4021-4080.				4081-4140.				4141-4200.			
14 ^h -15 ^h .		-30°		15 ^h .		-30°		15 ^h .		-30°		15 ^h .		-30°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
7.0	58	58.8	25.9	6.5	G Sa	9.9	8	6.7	38.8	9.9	8	4.3	0	8.8	
9.8	59	9.0	50.4	9.8		9.8		9.6	45.5	19.7		9.4	27	56.5	26.9
9.8		15.0	42.2	8.2		8.2		9.4	15	0.5	10.4	9.0	28	35.5	9.6
9.5		19.0	18.6	8.6		8.6		9.8		4.6	49.8	9.6	29	16.5	23.7
9.5		21.0	32.8	9.7		9.7		9.6		12.5	16.2	9.2		16.8	0.1
9.9		26.0	45.8	9.9		9.9		9.9		15.5	36.2	7.8	30	7.0	50.1
9.6		53.0	3.1	9.9		9.9		9.5		17.0	32.2	9.7		29.5	34.2
9.8		54.0	6.9	9.6		9.6		9.8		25.0	50.8	9.6		36.8	25.6
9.9	0	19.0	21.0	9.5		9.5		9.9		44.2	58.4	9.2	31	7.5	23.0
9.6		24.0	23.9	9.8		9.8		9.6		45.7	59.9	9.7		37.0	4.2
												8.8	32	0.5	40.2
9.6		27.5	11.9	9.9		9.9		9.0		55.5	11.0	8.4		2.0	31.5
9.4		41.8	59.0	9.8		9.8		9.4	16	5.5	47.2	8.0		13.5	58.6
9.6	1	26.0	29.3	9.1		9.1		9.1		27.5	34.8	9.6		26.0	11.7
9.8		29.5	28.1	9.3		9.3		9.7		33.0	4.2	9.4		26.5	24.9
8.0		30.5	12.0	9.9		9.9		9.6		46.5	16.6	8.6		27.5	19.5
9.6		48.5	8.4	8.4		8.4		9.1	17	1.5	13.0	8.0		30.5	48.2
9.6	2	3.0	25.1	9.8		9.8		9.7		6.5	2.4	9.7		44.0	26.2
9.6		4.0	14.2	9.9		9.9		9.6		24.5	13.8	9.6	33	20.7	6.5
9.9		24.5	27.1	9.5		9.5		9.6		28.0	24.8	9.4		27.5	3.8
9.9		34.5	0.0	9.2		9.2		9.0		42.0	8.4	9.7		33.0	50.0
8.8		40.0	50.9	9.2 =		9.3		9.9	18	13.0	46.0	8.4		40.5	47.2
9.8		50.5	29.4	8.6		8.6		9.1		21.7	1.5	9.4		45.5	41.8
9.7		51.5	6.5	9.9		9.9		9.5		23.0	5.8	9.7		51.0	3.5
9.8	3	10.5	7.2	9.0		9.0		9.2		29.5	20.1	9.6	34	13.5	18.8
9.8		14.0	27.8	9.9		9.9		9.9		31.5	31.8	9.1		15.5	19.2
9.4		18.5	31.1	9.8		9.8		8.0		45.0	52.7	9.7		27.0	54.0
9.8		23.5	19.6	9.4		9.4		9.7		50.0	4.3	9.7		28.7	32.7
9.5		27.0	59.1	7.7		7.7		9.4	19	4.5	12.7	9.7		35.5	28.2
9.4		27.5	39.8	9.8		9.8		9.9		35.0	13.9	9.6		46.0	40.9
9.8		33.5	24.2	8.9		8.9		9.2	20	0.0	10.3	9.7		53.0	5.9
9.9		39.5	52.6	9.5		9.5		9.8		20.5	12.1	9.0		53.5	5.5
9.0	4	11.3	58.9	9.8		9.8		9.7		21.0	7.8	9.7	35	6.5	41.0
9.6		25.5	22.8	9.6		9.6		9.9		37.3	58.2	8.8		16.0	44.3
7.6		32.5	24.4	9.9		9.9		9.9		38.7	32.0	8.8		20.0	41.3
9.9		38.5	9.5	9.5		9.5		9.5		43.5	43.3	9.0		23.0	51.6
9.4		50.2	40.2	9.8		9.8		9.1		44.0	8.5	7.5		42.5	8.1
8.8		52.7	21.2	9.8		9.8		8.8		54.5	39.7	9.0	36	15.5	39.4
8.6		53.2	18.6	9.7		9.7		9.6	21	0.5	54.3	8.1		22.5	18.7
9.8	5	1.2	50.6	8.6		8.6		8.9		1.7	51.6	9.2		23.0	22.1
9.9		7.2	48.4	9.9		9.9		9.7		12.5	11.9	9.4		56.0	1.0
9.9		19.7	58.0	9.5		9.5		9.9		29.5	46.0	7.8	37	2.5	17.2
8.5		24.7	16.5	9.0		9.0		9.9		33.5	31.2	9.4		9.5	27.2
9.4		36.7	16.3	9.9		9.9		9.8		38.5	23.9	9.7		9.7	5.0
9.9		40.2	26.5	9.8		9.8		9.5		41.5	57.9	9.7		21.0	33.2
8.8		47.7	14.1	9.5		9.5		9.7		51.5	47.9	8.9		40.0	45.4
9.8	6	1.2	13.8	9.7		9.7		9.5		57.5	37.3	9.6		48.7	28.1
9.9		15.2	47.1	9.0		9.0		9.9		58.5	39.0	9.4		53.5	34.2
9.1		19.2	44.3	9.5		9.5		9.9	23	9.5	4.7	9.6		54.5	9.3
9.6		20.2	50.0	9.6		9.6		9.8		9.5	40.5	9.6	38	3.0	10.7
9.8		20.7	21.2	9.6		9.6		9.2		1.5	37.1	9.7		3.0	35.0
9.8		25.7	30.5	9.9		9.9		9.4		3.5	38.1	9.2		17.0	50.6
9.6		40.2	27.0	9.8		9.8		8.3		37.0	42.8	9.7		28.5	1.2
9.5	7	3.2	28.1	9.5		9.5		9.7	25	24.8	14.2	9.4		33.5	30.2
9.4		7.2	23.7	9.6		9.6		9.7		30.0	56.4	8.7		43.5	16.0
9.9		14.2	35.6	9.7		9.7		9.7		46.0	42.9	9.7		44.5	4.8
9.8		27.4	59.5	9.4		9.4		8.2	26	12.0	35.6	9.7		48.7	49.0
8.6		36.7	30.5	9.9		9.9		9.7		16.0	53.9	8.1		56.8	29.9
8.7		52.7	41.6	9.5		9.5		9.4		37.8	21.4	8.6		39	25.3
9.2		55.2	10.5	9.4		9.4		9.7		58.8	46.9	9.2	40	12.8	35.7
8.8	8	0.7	13.9	9.6		9.6		9.7	27	36.8	26.9	9.6		14.6	56.9
25Pr.	+1	30.9	-5.8	+1	31.4	-5.6		+1	31.9	-5.4		+1	32.7	-4.9	

1896ArcCap...3...1G

4201-4260.			4261-4320.			4321-4380.			4381-4440.		
mag.	15 ^h .	-30°	mag.	15 ^h -16 ^h .	-30°	mag.	16 ^h .	-30°	mag.	16 ^h .	-30°
9.6	40 32.8	15.5	10.0	53 50.6	22.6	9.1	8 27.8	23.0	9.1	20 58.7	0.1
9.4	32.8	35.1	9.0	54.6	33.7	9.1	53.0	34.0	9.9	21 17.0	37.2
9.7	44.8	8.1	8.8	54.1	21.1	9.9	9 6.2	11.2	9.9	24.0	3.5
9.7	41 15.8	39.6	9.4	23.6	24.3	9.9	47.7	12.1	9.2	24.5	40.8
9.7	25.3	34.1	8.8	54.6	18.8	9.9	52.2	50.8	9.9	26.0	4.7
8.6	42.8	41.1	10.0	56.6	50.9	9.7	56.0	58.9	9.0	28.5	31.3
8.3	44.3	52.5	9.6	55 2.1	31.4	9.3	10 2.7	10.2	9.1	22 1.0	44.1
9.6	56.3	23.5	7.8	2.6	35.3	9.1	23.2	38.8	9.3	11.0	36.6
8.8	42 13.8	6.0	10.0	4.9	37.7	9.0	43.2	49.0	9.2	38.5	50.9
9.6	41.3	50.1	9.1	45.4	38.1	9.0	11 2.2	38.9	9.9	23 33.0	43.0
9.0	46.3	45.4	10.0	56 6.0	0.4	8.2	3.2	11.4	9.9	38.0	38.3
8.7	56.8	14.1	9.6	57 3.9	48.3	8.3	13.2	7.1	9.7	24 4.0	36.3
9.7	43 1.0	29.6	10.0	31.9	8.4	8.6	20.2	19.0	9.6	9.5	53.8
9.7	15.3	54.2	9.2	43.4	55.2	9.3	23.7	23.6	9.9	10.6	36.1
9.7	22.3	51.9	10.0	50.4	18.0	8.0	38.2	35.6	9.3	14.5	30.7
8.9	33.3	13.2	9.4	58 12.4	51.2	7.0	39.0	36.0	9.2	14.5	49.0
8.1	46.3	19.3	10.0	18.9	42.7	9.9	45.5	54.1	9.0	38.0	47.0
8.6	59.8	50.7	9.4	38.9	49.2	9.9	58.0	14.7	8.4	55.0	36.3
9.7	44 16.8	22.5	9.2	48.4	35.6	9.9	12 10.0	49.6	9.2	59.0	27.4
9.6	24.3	43.1	10.0	59 8.4	24.1	9.8	16.0	27.0	9.1	25 12.0	9.7
9.7	28.3	22.1	10.0	10.4	57.3	9.8	33.0	39.4	9.9	15.0	30.0
9.7	32.8	35.6	10.0	25.4	21.7	9.6	38.0	52.0	9.9	41.0	9.1
9.7	33.0	40.3	9.2	32.4	4.5	9.0	13 11.0	3.1	9.9	51.0	40.0
9.7	45 3.3	40.1	8.2	49.4	13.5	8.6	14 26.5	57.1	9.9	52.0	37.5
9.7	9.3	31.4	9.6	52.9	34.2	8.1	33.5	53.0	9.9	26 26.5	43.2
7.5	25.8	24.1	7.8	59.9	16.3	9.8	35.5	39.8	9.8	26.5	54.5
9.7	46.0	33.2	8.2	0 0.4	22.4	9.1	39.5	28.8	9.9	27 29.0	37.8
9.7	51.8	27.1	9.2	36.4	47.2	9.9	50.5	49.6	8.6	35.5	0.5
9.7	46 13.8	32.9	10.0	1 19.9	59.6	8.5	59.0	27.8	8.4	28 23.5	49.7
9.2	15.3	23.2	9.0	26.9	43.7	9.7	15 0.0	46.8	9.8	32.0	49.6
8.1	41.3	3.2	10.0	27.9	11.6	9.1	1.0	46.6	8.6	42.0	19.5
9.5	48.6	12.3	7.5	36.4	43.0	9.9	25.0	38.7	9.8	50.6	1.0
10.0	50.9	19.4	9.2	40.4	13.7	9.6	16 19.0	24.8	9.1	29 1.0	30.8
9.4	47 20.1	40.7	9.2	2 1.9	54.5	9.2	22.0	53.1	9.2	2.0	12.7
7.6	42.1	42.8	9.4	1.9	5.3	9.1	25.0	44.6	9.6	12.0	19.0
10.0	48 12.1	26.0	8.2	33.9	12.0	9.0	30.0	44.6	9.9	17.0	9.3
9.6	36.6	34.1	9.8	3 8.0	58.3	9.1	37.5	11.3	9.9	18.0	44.6
8.6	47.6	15.7	10.0	8.9	10.9	9.3	50.0	55.7	9.2	42.5	41.8
9.2	49 8.1	54.2	10.0	17.4	55.6	9.1	17 12.5	21.2	9.8	30 16.5	9.3
9.5	11.8	35.0	8.1	23.4	24.5	9.9	13.0	56.0	9.8	27.5	7.2
9.6	11.8	4.9	10.0	44.9	19.6	8.8	16.0	30.3	9.9	33.0	20.5
9.6	18.8	21.4	9.5	4 7.9	47.9	9.9	18.5	31.1	9.1	33.7	50.7
8.3	29.8	25.2	9.4	17.4	32.6	9.8	30.0	48.3	9.9	31 8.7	44.0
9.5	33.8	3.3	9.4	32.3	36.6	8.6	18 1.5	9.2	9.3	10.7	48.8
8.8	35.8	46.6	9.5	37.8	32.2	8.3	5.4	56.7	7.8	25.7	12.8
8.7	50 14.8	6.9	10.0	56.3	53.5	9.6	14.0	50.9	9.9	28.7	18.0
9.4	47.1	4.8	9.0	5 0.8	28.4	9.4	19.5	6.9	9.4	43.7	55.8
9.4	49.6	28.5	9.0	10.8	11.8	9.1	22.0	57.0	9.1	44.7	19.9
8.4	52.6	21.7	9.2	18.8	49.3	9.6	23.0	54.9	9.7	32 15.7	55.4
9.8	53.6	31.9	10.0	21.0	39.3	9.9	47.0	18.0	9.0	16.2	33.3
10.0	58.6	9.0	10.0	42.8	1.7	9.0	54.2	56.8	9.2	19.7	52.4
8.2	51 31.1	7.9	8.6	52.3	9.7	9.6	19 3.0	20.7	8.6	46.0	35.0
7.0	52 2.6	48.4	10.0	53.8	17.2	9.4	3.0	50.8	9.7	48.7	19.8
8.8	16.1	18.5	10.0	6 16.3	59.6	9.4	18.0	4.2	8.8	33 3.0	8.5
10.0	29.1	48.2	9.8	17.8	19.0	9.9	21.0	58.6	9.9	21.2	7.5
9.4	44.1	50.7	10.0	7 20.8	1.4	9.2	25.0	34.4	9.0	37.0	20.6
9.5	52.6	41.0	10.0	8 0.8	11.1	9.0	20 6.5	44.6	9.2	50.7	12.4
10.0	54.6	0.5	9.2	3.3	22.8	8.8	26.0	50.6	9.6	34 5.2	15.9
8.6	53 16.1	13.1	9.6	5.8	48.6	9.3	40.0	23.8	8.3	10.3	17.1
10.0	32.1	15.6	7.8	12.3	18.2	9.0	53.0	28.4	9.8	11.2	23.9
25pr.	+ 1 33.2	-4.6		+ 1 33.9	-4.1		+ 1 34.4	-3.7		+ 1 35.0	-3.2

1899JanCap...3...1G

4441-4500.			4501-4560.			4561-4620.			4621-4680.		
mag.	16 ^h .	-30°	mag.	16 ^h .	-30°	mag.	16 ^h -17 ^h .	-30°	mag.	17 ^h .	-30°
9.8	34 15.7	21.5	7.4	45 10.7	13.1	9.0	55 42.2	35.2	10.0	5 56.8	16.0
9.2	22.8	45.4	9.6	22.2	36.8	9.8	46.0	29.4	9.8	6 28.3	11.6
8.4	35 14.4	9.3	9.6	24.8	3.0	9.4	56 5.2	36.2	9.7	7 14.3	22.6
7.8	35.1	59.2	10.0	29.7	1.8	9.4	11.2	28.5	9.4	16.3	23.3
10.0	48.9	56.2	10.0	36.2	4.5	9.8	18.7	21.6	8.6	30.3	7.2
8.9	36 1.9	33.2	10.0	41.2	42.8	10.0	30.0	54.1	9.6	34.3	58.2
8.8	4.3	1.4	8.2	45.7	11.8	8.8	40.2	1.2	10.1	43.3	14.1
9.2	12.5	46.2	9.8	53.7	3.1	8.7	42.2	59.8	6.6	52.8	3.8
10.0	26.0	2.1	8.2	46 7.7	32.6	9.6	57 4.2	11.1	10.3	53.3	12.7
9.6	31.0	53.5	9.6	15.2	0.1	10.0	10.2	24.0	10.0	55.3	25.9
10.0	40.0	7.0	9.8	17.2	9.1	9.6	45.2	38.6	10.3	8 13.8	7.8
9.6	41.5	47.9	8.8	28.2	30.7	10.3	58 14.4	18.1	10.3	24.3	51.8
9.8	47.7	31.9	10.0	30.2	26.2	9.8	20.9	2.8	10.2	27.3	41.2
9.4	49.0	39.5	10.0	31.7	34.4	9.7	24.4	33.7	10.0	53.3	21.4
9.6	57.0	9.6	10.0	33.2	12.1	9.6	36.4	26.3	7.8	54.3	12.6
10.0	37 8.5	38.1	7.2	37.7	22.7	8.9	38.9	2.3	8.8	9 0.8	12.0
10.0	11.5	32.0	10.0	41.7	28.8	10.0	59 5.4	33.7	9.7	5.3	37.4
7.9	22.0	34.3	10.0	42.7	13.1	9.4	14.2	57.7	9.8	7.3	32.0
10.0	33.0	2.7	8.2	46.7	46.2	9.5	27.4	29.0	9.8	19.0	4.4
9.2	37.0	18.9	9.6	47 1.7	15.9	9.5	29.9	22.3	10.3	19.3	22.0
9.2	42.5	48.4	9.0	39.7	26.5	8.9	34.4	25.3	7.9	22.1	1.5
10.0	50.5	11.8	10.0	49.7	53.2	9.1	41.4	7.9	9.6	27.3	17.0
9.6	38 6.0	55.1	10.0	48 1.2	56.4	7.8	42.4	54.4	9.0	28.8	34.4
9.1	36.5	2.4	10.0	9.2	52.9	10.3	0 2.4	58.0	10.0	35.8	52.0
10.0	40.8	23.3	9.8	11.2	7.0	9.7	35.4	9.9	8.8	42.0	37.7
9.8	42.0	51.0	10.0	29.2	3.2	8.9	49.4	42.7	10.3	42.5	13.4
9.2	39 0.0	46.0	8.8	37.7	46.3	7.0	49.4	14.2	10.0	50.9	58.9
9.5	8.0	4.4	9.2	40.2	22.6	10.1	52.4	0.2	10.0	54.5	49.0
9.8	13.0	54.1	9.4	49 11.2	9.2	10.0	1 1.9	26.0	10.0	10 0.5	43.3
9.8	32.5	21.1	10.0	24.7	21.0	8.9	6.4	19.4	9.2	14.0	17.9
10.0	53.5	25.1	10.0	31.2	4.0	9.6	8.9	39.8	10.3	15.5	13.0
10.0	1.0	7.5	9.4	37.7	53.2	10.1	20.9	31.1	9.7	25.5	26.1
9.2	17.0	50.9	8.2	50 9.7	1.2	10.3	29.9	49.2	10.3	31.0	49.6
10.0	19.5	49.8	9.2	20.7	14.0	8.0	2 4.9	40.4	9.8	32.5	26.3
7.0	26.0	58.8	9.6	22.2	6.3	9.0	11.9	24.6	10.0	45.3	59.7
8.8	31.5	13.3	10.0	32.2	2.0	9.8	13.4	10.4	10.3	52.8	38.3
8.0	32.0	8.4	8.4	35.7	38.8	8.4	20.7	59.2	9.2	57.0	3.7
9.2	44.0	17.9	8.8	57.7	41.4	8.9	20.9	48.4	7.9	57.3	58.6
9.5	41 11.5	16.4	8.2	51 15.5	59.9	10.3	21.4	14.0	10.2	11 12.8	13.5
8.8	13.0	33.3	9.2	32.2	32.4	9.2	42.3	56.2	10.0	20.0	46.0
10.0	17.0	30.1	10.0	41.0	44.2	10.1	44.3	25.4	9.4	24.0	6.1
9.2	44.7	59.1	8.6	52 15.7	17.0	10.3	44.3	20.0	10.0	24.5	11.0
9.1	55.0	27.3	9.4	21.7	38.0	9.7	44.3	50.1	9.8	43.8	0.8
9.4	42 14.5	37.9	8.2	25.7	3.0	10.3	56.3	11.2	8.7	12 0.5	17.6
9.4	21.0	47.4	9.2	41.2	32.1	10.2	3 18.3	32.4	10.3	44.5	14.3
9.1	26.0	37.9	8.6	47.7	19.2	10.0	27.8	29.4	10.1	46.5	57.1
8.6	34.8	2.2	8.9	55.2	27.4	10.3	37.8	39.3	9.5	51.0	18.0
9.8	56.0	23.9	9.6	53 13.2	14.1	10.3	37.8	41.0	9.5	52.0	9.5
10.1	43 7.0	42.9	8.2	33.2	33.4	8.8	54.8	16.4	10.2	13 4.0	58.5
8.6	14.0	27.2	7.8	49.7	35.4	9.5	4 3.8	59.4	9.6	10.5	59.7
9.2	37.5	18.1	9.2	51.7	6.8	10.3	4.3	43.0	9.5	24.0	48.7
10.0	43.7	2.4	8.7	54 9.2	28.0	10.1	6.3	3.0	9.5	24.0	55.0
9.1	51.7	9.5	9.2	9.7	4.0	9.7	7.8	37.0	10.1	29.5	4.0
9.0	44 3.5	59.0	8.7	15.7	50.9	10.3	16.8	51.3	10.3	32.0	53.1
9.2	13.7	49.1	9.6	17.2	58.2	8.8	20.8	20.0	10.3	33.0	9.8
8.8	31.7	33.1	9.2	27.7	26.0	8.8	30.8	53.2	10.3	36.0	52.0
8.4	45.7	28.9	8.9	45.7	14.0	9.8	56.8	46.4	10.3	36.5	21.0
10.0	55.7	32.3	7.9	49.2	52.6	10.3	5 6.3	34.8	10.3	41.5	4.9
10.0	45 3.7	54.5	8.4	55 21.7	27.4	9.1	14.3	51.0	10.3	48.0	15.4
9.6	8.5	25.7	10.0	25.2	37.0	9.4	22.3	22.8	10.3	48.0	20.4
25pr.	+1 35.3	-2.9		+1 35.6	-2.5		+1 35.8	-2.1		+1 36.0	-1.8

1896Ancap...3...1G

4681-4740.				4741-4800.				4801-4860.				4861-4920.			
		17 ^h .	-30°			17 ^h .	-30°			17 ^h .	-30°			17 ^h .	-30°
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
7.7	14	9.0	22.3	10.2	20	6.4	57.8	8.8	26	3.9	58.5	9.4	33	45.2	48.0
9.8		11.0	27.1	8.8		16.9	42.3	10.0		5.2	18.1	9.4		46.0	58.6
8.3		25.5	4.6	10.3		25.9	4.2	10.0		7.4	19.8	9.6		53.6	10.6
10.2		30.5	47.0	8.8		33.9	48.8	10.2		12.9	24.9	9.6		55.1	55.7
9.8		34.0	44.3	9.2		40.9	4.7	10.2		29.4	47.1	8.6	34	2.6	25.5
9.8		35.0	50.0	7.8		42.4	49.5	8.8		41.9	8.4	10.2		7.6	19.3
9.6		47.6	30.3	10.2		43.9	47.7	9.4		52.9	28.9	9.7		20.6	45.7
9.1		50.6	47.9	9.8		56.9	55.0	9.0		8.4	2.5	10.0		27.1	24.7
9.8		53.1	32.8	9.7	21	0.4	38.3	8.9		11.9	6.8	9.6		27.2	30.1
9.8		56.1	5.4	9.4		8.4	29.9	10.2		16.9	55.6	9.2		35.1	38.9
9.6		56.6	55.7	9.6		16.4	54.9	10.2		19.9	30.0	9.4		38.1	13.2
10.2	15	16.1	47.4	10.3		16.4	2.7	9.6		31.9	18.3	9.7		43.6	13.1
9.5		22.6	20.0	9.7		21.9	24.9	10.2		32.4	4.0	9.7	35	29.1	21.3
9.2		23.1	43.0	10.2		23.6	30.1	9.9		39.4	15.1	9.7		29.1	6.9
9.2		36.6	56.4	10.3		35.1	13.9	10.2		45.9	25.2	10.0	36	2.6	53.1
8.8		39.6	16.6	9.8		40.6	45.9	9.2	28	10.4	27.3	9.7		3.6	8.9
10.0		46.6	46.9	9.6		47.4	13.8	9.8		15.4	34.5	10.2		26.7	2.9
10.3		52.6	28.4	10.1		48.9	30.3	10.0		20.5	58.4	9.9		34.1	7.2
10.3		54.1	11.9	9.7		56.4	29.6	10.0		22.9	42.4	10.2		36.6	30.7
9.4	16	0.6	32.0	10.2		59.0	50.9	9.8		23.4	45.3	10.2		39.1	24.7
9.4		3.1	27.1	10.3	22	5.9	52.9	10.2		37.4	3.1	10.2		57.1	14.1
8.6		27.1	24.5	10.1		7.1	45.0	9.8		37.9	46.1	9.4	37	6.6	7.6
9.8		29.1	0.9	8.7		11.9	9.3	9.9		42.9	34.7	10.2		8.1	17.3
9.8		33.0	0.1	9.8		24.4	48.5	9.6		47.9	0.4	10.2		27.1	8.3
9.2		38.6	58.9	9.7		24.8	3.1	9.8		53.4	2.6	8.9		28.6	55.5
9.8		42.1	30.0	10.0		29.3	18.8	9.4	29	3.9	16.8	9.9		50.6	22.2
10.3		45.1	12.1	10.3		40.5	51.1	10.2		7.4	43.3	9.6	38	9.5	50.8
9.8		46.1	29.9	10.3		51.6	50.9	9.4		9.9	38.2	9.7		12.5	24.9
10.3		46.6	37.8	9.0		56.2	8.1	9.2		32.4	5.5	9.8		24.5	22.0
10.2		59.6	9.7	10.2	23	5.7	36.8	9.6		36.9	23.6	10.2		27.5	41.3
9.8	17	5.6	33.6	10.2		8.2	13.3	8.4		46.9	49.8	9.9		28.5	16.8
10.1		21.6	1.4	9.2		16.2	13.3	9.4		56.7	52.2	10.2		31.5	18.6
10.2		26.6	33.4	9.4		26.2	27.8	9.7	30	36.7	22.4	9.5		57.0	20.5
9.6		28.1	4.1	9.9		27.7	45.4	9.8		45.2	28.0	10.2	39	12.5	13.8
9.4		29.6	52.3	10.0		28.5	17.8	8.7		46.9	3.3	10.2		12.5	44.3
9.0		33.6	54.2	8.8		35.2	11.7	10.0		55.7	30.8	9.6		27.0	33.8
8.8		39.6	36.3	8.2		35.2	8.9	9.2	31	18.7	44.6	9.8		29.5	10.6
10.3	18	2.6	34.0	10.0		47.2	38.1	10.0		34.2	4.0	10.2		38.5	29.0
10.3		3.6	7.4	8.2		55.2	18.2	9.5		35.7	49.0	10.0		50.0	39.9
10.3		29.6	5.8	10.0	24	4.2	20.4	10.2		50.7	56.2	8.8		52.5	50.9
10.0		38.6	11.0	8.2		17.2	21.7	9.6		55.7	12.6	10.2		57.0	13.8
9.5		46.1	1.3	10.2		24.1	1.5	10.2		56.7	27.0	9.9	40	3.5	12.9
10.2		52.8	58.9	10.2		34.2	14.4	9.6		57.2	34.0	9.4		5.0	9.9
10.3	19	0.1	16.4	9.2		34.7	1.5	10.0		57.7	13.2	10.2		12.0	17.9
9.8		4.1	49.9	10.2		40.7	23.5	10.2		59.2	16.2	10.2		17.0	27.9
10.3		6.4	29.7	10.2		43.7	15.3	10.2	32	6.7	4.0	10.2		17.5	40.8
10.3		15.4	4.1	9.7		54.2	49.1	8.5		20.7	8.8	9.5		18.0	25.7
10.1		18.5	34.0	8.2		58.2	16.8	9.8		26.7	46.2	8.6		25.5	15.1
10.2		18.5	5.1	9.9	25	2.7	54.3	8.8		39.2	12.7	9.3		28.4	57.1
9.8		18.9	19.3	10.0		14.2	17.0	9.2		43.2	22.2	9.3		35.2	58.1
10.3		21.9	8.1	9.8		17.7	20.3	9.2		48.7	4.5	9.3		35.5	25.7
10.0		22.5	24.5	10.0		22.8	11.1	9.2	33	9.2	44.0	9.6		43.5	49.3
10.3		36.4	42.8	10.2		23.7	57.3	9.3		11.4	0.6	9.8		53.5	26.9
9.5		38.4	17.3	10.0		27.7	10.7	9.8		11.8	58.0	10.2	41	3.5	25.8
9.7		46.9	43.5	9.5		29.7	32.8	9.4		13.2	37.1	10.2		4.0	2.3
9.6		47.3	0.2	8.9		32.2	26.4	10.2		20.2	49.0	9.7		7.0	15.9
10.1		51.9	1.0	9.7		33.7	19.7	10.2		23.2	44.0	9.8		13.0	17.3
10.3		53.0	57.7	7.7	26	0.7	19.1	10.2		23.4	51.4	9.8		14.0	24.9
9.2	20	0.4	25.3	9.5		3.2	17.1	10.0		32.2	50.0	7.8		14.0	33.1
9.1		3.4	15.5	9.4		3.7	48.1	9.2		37.7	57.9	10.2		22.0	26.4
25pr.	+1	36.1	-1.6	+1	36.2	-1.3		+1	36.3	-1.1		+1	36.4	-0.8	

4921-4980.			4981-5040.			5041-5100.			5101-5160.		
mag.	17 ^h .	-30°	mag.	17 ^h .	-30°	mag.	17 ^h .	-30°	mag.	17 ^h .	-30°
10.2	41	27.0	10.2	44	34.7	10.0	47	53.5	9.4	50	48.9
9.6		33.5	9.2		44.2	10.0		58.0	10.2		49.4
9.2		34.5	8.6		44.5	9.8	48	4.5	9.2		50.9
9.9		36.0	9.2		46.7	10.4		7.9	9.6		50.9
9.8		36.0	9.6		56.7	10.4		8.4	8.9		53.4
9.0		41.0	10.2		57.5	10.1		10.4	10.2		53.4
9.0		46.0	10.2		58.2	10.2		21.9	10.1		56.4
10.2		53.5	9.6	45	11.7	10.0		22.4	10.4	51	0.9
9.8		55.5	9.8		13.7	9.9		24.4	9.5		3.4
10.2		56.5	10.0		15.2	8.5		24.4	8.0		4.4
10.2		56.7	10.2		15.5	9.5		31.4	10.4		12.4
9.9	42	0.5	10.2		18.7	10.0		33.4	9.8		13.4
9.4		1.0	9.9		21.2	10.4		37.4	10.1		13.4
8.7		4.5	10.2		27.7	9.9		39.1	9.8		15.9
9.6		7.0	10.2		28.2	8.9		47.4	8.9		18.4
9.6		16.5	10.2		32.7	9.6		48.4	8.2		19.9
9.4		23.5	10.2		32.7	8.6		51.4	9.8		24.9
9.2		26.0	10.2		33.8	9.4		53.4	9.8		26.4
9.5		33.5	10.2		34.7	9.5		54.4	9.0		28.4
10.2		34.0	10.2		37.2	10.0	49	4.4	10.4		28.4
9.8		35.5	9.9		41.8	10.4		6.4	9.9		28.9
9.2		43.5	10.4		43.5	10.4		7.4	9.6		30.4
10.2		46.5	10.0		45.5	10.4		7.4	10.0		30.9
8.9		46.5	10.2		45.8	9.5		8.9	9.9		31.4
9.0		46.5	10.4		46.5	9.8		10.9	9.9		33.4
10.2		47.0	10.2		49.5	8.5		12.4	9.8		33.9
9.8		47.5	10.4		59.1	9.4		16.4	10.4		33.9
9.8		50.0	9.8	46	1.3	10.4		23.4	9.8		37.4
9.4		57.5	10.2		3.4	10.4		23.9	9.8		44.9
10.2		59.0	8.8		4.3	9.9		24.4	9.8		46.4
10.2	43	0.0	8.9		6.3	8.3		27.3	9.2		47.4
8.2		0.5	8.5		7.0	9.8		33.4	9.6		47.4
10.2		7.5	10.4		10.0	9.4		35.9	10.4		52.4
10.2		8.2	9.6		12.0	10.4		36.4	9.6		56.4
6.8		10.2	9.5		16.0	10.4		38.4	9.8		57.4
9.8		16.2	10.0		16.5	9.2		44.4	10.4		59.9
9.7		16.7	10.4		26.8	9.9		48.9	9.9		59.9
9.7		18.2	10.1		38.0	9.8		51.9	9.8	52	2.4
9.7		28.2	9.8		42.0	10.4		59.4	9.8		3.4
9.7		32.7	10.1		47.0	8.1		59.9	9.2		5.4
									8.0 G=		7.4
9.9		33.2	10.2	47	7.5	10.2	50	3.4	10.4		9.4
8.6		33.2	9.8		11.0	10.4		9.4	10.2		9.7
10.0		34.2	9.2		12.8	10.4		14.4	9.2		12.4
9.5		36.7	9.2		13.5	9.8		20.4	9.4		13.4
9.5		46.7	10.4		13.5	9.1		23.4	10.4		13.4
8.8		56.7	9.6		13.7	10.2		23.4	9.6		18.4
8.7		56.7	9.5		16.5	9.4		23.9	9.8		22.9
10.2		57.7	10.4		19.0	10.1		25.4	9.9		24.7
9.7	44	2.2	10.4		21.0	10.4		25.4	10.4		24.9
10.2		6.7	10.2		26.5	10.4		26.4	9.8		26.9
9.8		9.2	10.4		26.5	10.1		27.4	9.4		30.4
9.6		11.7	8.7		30.5	9.2		27.4	9.6		40.9
9.8		11.7	8.4		30.5	9.9		30.7	10.1		45.9
10.0		12.7	10.4		30.5	9.2		32.4	10.1		56.4
9.7		17.9	9.2		33.5	10.2		32.9	10.2		57.4
10.0		21.7	7.7		43.0	10.4		36.4	10.1		57.4
10.2		22.7	10.0		43.5	10.4		39.4	10.4		57.9
9.9		25.5	10.2		45.5	8.7		42.4	10.0		57.9
8.5		27.2	10.4		46.0	9.5		43.4	9.5	53	7.4
9.4		27.7	10.1		46.5	8.7		44.4	8.9		7.9
25pr.	+1	36.4	+1	36.5	-0.5	+1	36.5	-0.4	+1	36.5	-0.3

5161-5220.			5221-5280.			5281-5340.			5341-5400.		
mag.	17 ^h .	-30°	mag.	17 ^h -18 ^h .	-30°	mag.	18 ^h .	-30°	mag.	18 ^h .	-30°
9.2	53 16.4	9.3 9.5	10.4	56 46.4	47.2	10.1	0 20.0	8.3	9.4	3 19.8	47.4
9.6	16.9	0.5	9.1	46.4	33.8	9.2	22.0	28.8	9.8	21.3	22.6
10.2	23.4	28.7	10.2	51.9	27.8	9.8	24.0	2.3	9.9	22.8	50.6
9.8	34.4	20.4	9.9	56.4	22.1	9.6	27.0	21.8	10.4	33.0	34.4
10.4	47.4	56.1	8.5	59.4	13.8	10.1	32.0	41.4	10.4	36.3	34.9
10.4	54.4	30.3	10.4	57 2.9	39.5	9.2	33.0	32.7	10.2	38.3	17.0
9.9	56.4	25.7	9.2	15.4	19.1	10.1	33.0	43.7	10.4	43.0	41.1
9.6	54 3.9	5.3	10.2	16.4	19.5	10.4	36.0	41.7	9.8	43.3	9.2
9.8	5.9	16.8	10.2	16.9	24.8	9.8	40.0	10.7	10.4	47.0	37.0
10.4	7.4	28.7	10.4	21.4	33.3	8.5	43.0	9.7 9.0-	9.6	49.3	41.4
10.2	15.9	17.5	10.2	22.4	5.1	10.0	44.0	54.7	10.4	4 3.8	43.1
9.8	27.4	15.9	8.8	28.4	50.5	9.6	50.0	55.2	10.4	4.8	46.6
10.4	29.9	20.3	9.8	29.4	29.7	10.0	53.0	37.8	9.9	6.9	58.8
9.4	32.4	27.3	10.4	31.9	50.1	8.2	53.5	0.5	9.8	7.1	59.4
10.4	33.4	18.7	9.4	33.4	10.1	9.8	53.5	51.9	10.4	8.5	1.9
9.8	35.9	12.7	9.6	35.7	1.9	10.4	55.5	42.5	10.4	10.0	36.4
9.5	36.4	49.7	10.4	36.0	0.3	10.2	5.0	48.1	10.4	12.8	50.6
10.2	37.4	47.9	10.4	37.4	11.8	10.4	11.0	33.0	10.1	22.8	39.1
10.0	39.4	58.0	10.2	42.4	32.1	9.8	13.0	33.9	10.4	23.8	35.7
10.4	40.4	34.3	9.4	44.9	38.6	10.4	17.0	20.2	8.6	25.8	2.4 8.5 -
10.4	41.9	55.0	5.0	46.4	25.3	9.8	20.5	44.4	9.6	33.3	49.6
8.5	42.9	57.9	8.7	51.4	39.8	10.4	25.0	41.1	10.4	44.3	27.2
10.4	43.4	2.7	9.8	51.9	28.4	10.4	27.0	49.5	8.6	45.8	58.5 8.8 ≡
9.6	53.4	30.9	10.4	52.4	6.3	9.8	28.5	52.1	9.6	48.1	57.9
9.2	54.4	57.9	10.2	52.4	15.5	9.4	32.5	20.8	10.2	54.8	27.0
9.2	54.4	43.3	9.8	57.4	13.2	10.4	40.0	49.1	10.2	5 4.3	30.6
10.2	56.9	14.2	9.8	58 1.4	39.8	10.1	41.9	29.1	10.1	5.3	29.1
9.6	57.4	38.2	9.6	12.9	38.8	9.8	48.5	17.9	9.8	25.3	50.9
9.0	58.9	31.3	10.4	16.4	13.8	10.4	51.5	11.0	10.4	25.8	39.2
10.4	59.4	11.6	9.8	18.4	43.2	10.4	53.0	38.2	10.4	30.8	49.6
8.8	55 3.4	46.7	10.0	22.9	55.0	9.9	53.5	21.9	9.9	31.8	43.3
10.2	3.4	36.3	10.4	24.4	26.7	9.8	0.5	31.1	10.2	43.8	55.0
9.5	14.9	35.4	10.2	24.4	45.5	10.2	1.5	32.6	10.1	43.8	31.2
10.4	17.4	19.8	10.4	30.9	41.4	7.4	2.8	44.6	10.4	46.8	58.0
10.4	32.4	3.1	9.6	32.4	12.9	10.4	5.8	28.3	10.2	47.3	18.0
neb.	34.4	2.1	10.4	36.4	4.1	10.0	11.8	42.0	9.8	53.1	59.3
9.8	36.4	38.9	8.9	38.4	51.6	10.2	13.8	10.4	10.4	55.8	31.2
10.2	37.4	51.1	10.4	46.4	55.2	9.8	18.8	11.7	8.9	55.8	26.9
10.4	42.4	2.2	9.8	46.4	49.4	9.9	18.8	30.2	9.2	56.3	15.8
9.6	43.4	24.2	9.6	47.4	19.3	10.2	21.8	47.9	9.8	59.8	54.4
9.8	47.4	44.8	9.1	47.9	44.3	9.6	24.3	3.9	9.8	6 1.3	50.4
10.4	52.4	57.8	10.2	51.9	53.8	10.4	29.0	52.4	9.8	3.8	55.1
10.4	56 1.9	38.2	10.4	56.2	59.9	10.4	31.3	31.1	9.8	5.8	27.0
10.0	2.1	0.7	10.0	59 2.4	43.0	10.0	31.3	47.9	9.4	11.8	10.2
9.8	2.4	2.3	9.9	14.9	56.7	10.1	32.8	17.1	9.8	15.8	23.8
10.2	3.4	45.9	9.4	16.4	18.4	9.5	33.8	14.8	10.4	19.3	12.9
10.4	3.4	36.8	8.7	18.4	40.3	10.1	35.8	50.3	9.8	22.8	10.1
10.4	4.0	10.1	8.9	22.4	11.2	10.4	35.8	17.3	9.6	23.8	13.8
9.6	4.5	5.3	10.2	22.9	46.1	9.9	37.8	17.9	9.8	25.8	59.3
9.6	6.9	30.4	9.8	33.4	29.7	9.9	50.3	28.0	9.6	25.8	36.0
10.4	12.4	4.1	9.6	38.4	35.1	10.2	50.8	16.3	9.4	30.8	35.8
9.6	17.0	49.1	10.0	47.4	31.5	9.8	56.3	56.1	9.6	32.8	22.9
9.6	22.1	3.1	10.4	48.4	29.7	10.0	3 2.8	16.5	10.4	37.8	17.9
9.6	24.4	28.6	10.4	54.9	41.4	9.8	2.8	27.3	10.2	45.8	42.9
10.0	25.4	46.4	10.4	56.4	30.3	10.4	4.3	20.8	10.2	46.8	37.7
10.0	27.4	54.8	10.4	0 3.0	24.9	10.2	5.8	37.1	8.9	53.8	51.8 9.5
9.1	29.9	52.2	9.8	3.0	32.4	10.4	7.0	3.3	10.1	57.8	15.4
10.4	38.4	31.0	10.2	10.0	59.5	10.4	8.8	17.8	10.2	7 2.8	3.7
9.4	38.9	45.3	9.4	12.5	32.7	9.2	15.3	44.5	10.4	4.1	1.7
9.8	42.4	15.9	10.0	17.0	21.9	9.4	18.8	10.8	9.4	6.8	18.0
25pr.	+1 36.5	-0.2		+1 36.5	-0.1		+1 36.5	+0.1		+1 36.5	+0.2

5401—5460.			5461—5520.			5521—5580.			5581—5640.		
mag.	18 ^h .	—30°	mag.	18 ^h .	—30°	mag.	18 ^h .	—30°	mag.	18 ^h .	—30°
I0 ⁴	7 6.8	33.9	8.6	13 4.8	41.6 =	I0 ²	21 17.4	57.0	I0 ²	28 50.0	10.7
I0 ⁴	11.8	22.4	I0 ³	5.3	27.5	I0 ²	31.4	17.6	I0 ²	29 2.3	1.8
I0 ⁴	13.8	45.2	9.9	12.8	35.9	I0 ²	34.4	53.0 9.5	I0 ²	3.5	50.0
I0 ⁴	17.3	3.6	7.6	12.8	59.7 7.5 GSt π	I0 ³	39.9	13.1	I0 ³	4.0	33.6
I0 ⁴	29.3	30.2	I0 ⁰	14.3	32.5	I0 ²	47.0	55.0	I0 ²	9.5	22.9
I0 ¹	45.3	0.4	9.9	14.8	43.6	I0 ³	56.0	53.7	I0 ²	14.0	18.7
I0 ⁴	46.8	31.2	I0 ²	29.3	41.3	I0 ³	22 16.4	0.5	I0 ²	17.0	5.5
I0 ⁴	52.8	38.6	I0 ²	39.3	40.6	9.0	32.0	54.4 8.5 =	9.0	23.0	52.2 8.8 >
I0 ⁴	55.8	10.6	9.0	41.8	7.6 8.5 a	9.4	44.0	41.1	9.8	23.0	12.3
I0 ⁴	56.8	47.5	I0 ³	47.8	59.1	I0 ³	49.0	4.4	I0 ³	57.0	50.9
I0 ²	8 6.8	9.4	I0 ²	57.3	35.0	I0 ³	23 3.5	40.7	I0 ⁰	30 4.5	34.2
I0 ²	7.8	54.4	9.4	58.8	17.7	I0 ³	16.0	45.6	9.4	5.6	0.8
I0 ¹	14.8	46.6	I0 ³	14 15.8	56.0	I0 ³	16.5	0.1	I0 ⁰	12.0	4.6
8.7	17.8	9.8 9.0	I0 ²	27.8	52.3	9.6	21.0	12.6	I0 ³	18.0	38.0
I0 ⁰	19.8	30.2	9.3	33.8	56.4	I0 ²	31.5	34.6	8.6	30.0	58.3 9.2 -m
I0 ¹	21.8	43.9	I0 ²	35.3	37.4	9.5	38.3	59.6 9.0 =	7.6	42.8	8.0 7.0 GSac
I0 ⁴	23.8	11.0	9.4	39.8	56.5	I0 ³	44.0	6.2	I0 ³	42.8	51.4
8.9	26.3	39.2	8.5	45.3	11.9 8.5 a	8.4	50.0	9.2 8.7 G	7.6	50.3	37.4 8.0 GSbc
8.0	28.8	26.4 8.0 GW =	I0 ³	55.8	19.0	I0 ³	51.0	6.0	I0 ³	31 6.8	58.9
9.9	37.8	26.8	I0 ³	56.8	26.2	I0 ³	53.0	21.7	9.8	21.8	59.7 9.5
9.4	37.8	26.1	I0 ²	15 2.0	57.7	I0 ³	24 3.0	6.3	I0 ³	23.8	13.0
I0 ⁴	42.8	57.0	I0 ⁰	13.8	37.9	I0 ³	5.0	51.0	9.3	25.8	25.3 9.5
9.2	53.8	18.4	I0 ⁰	15.3	33.0	I0 ³	13.3	59.2	I0 ³	33.3	48.0
I0 ²	56.3	18.6	9.2	27.3	19.0 9.5	I0 ³	14.0	15.0	9.3	43.8	25.4 9.0 a
9.6	57.3	43.5	I0 ²	31.8	17.1	I0 ²	24.5	56.4	I0 ⁰	32 7.3	53.7
9.2	58.3	40.8	neb.	38.3	25.1	9.6	43.0	26.4	I0 ⁰	7.8	29.4
I0 ⁴	58.8	40.0	I0 ³	42.8	8.0	9.6	56.5	12.7	I0 ⁰	10.7	51.0
9.5	9 2.8	12.2	9.3	53.8	22.4 9.5	I0 ³	25 3.0	12.7	I0 ⁰	13.3	52.2
9.4	10.8	53.2	9.2	16 3.8	20.4 9.5	I0 ²	6.0	16.9	I0 ²	13.8	17.1
I0 ⁴	13.8	43.0	I0 ³	15.3	42.1	I0 ³	9.5	30.3	9.3	14.3	28.4 9.5
9.2	15.8	45.2	9.8	15.8	47.0	9.4	15.5	20.9	I0 ⁰	14.7	31.0
9.4	21.6	23.4	I0 ⁰	17.8	29.2	8.6	21.5	9.2 8.5 Ga	I0 ³	15.3	2.9
9.6	28.1	2.6	9.0	21.4	12.0 9.0	I0 ³	24.0	56.6	I0 ²	26.8	7.5
I0 ⁴	41.1	41.9	8.2	22.4	45.0 G \equiv	I0 ⁰	31.0	3.9	I0 ²	44.3	54.9
9.2	41.8	36.6 9.5 -	I0 ³	55.4	28.4	9.6	40.5	43.9 9.5	9.0	46.9	0.3
I0 ⁴	42.3	32.5	7.7	58.9	49.0 6.0 GSt π	9.9	26 8.0	37.3	I0 ⁰	53.8	46.8
8.9	42.8	13.8	8.3	17 12.3	59.6 8.5 -	7.1	13.0	58.5 7.5 GSbc	8.4	58.8	38.4 8.0 GSt π
9.6	46.0	58.6	I0 ⁰	16.9	59.0	I0 ²	19.5	12.0	9.8	33 1.3	16.2
9.6	52.0	39.3	8.4	28.9	19.1 7.5 Ga	I0 ³	21.0	15.9	I0 ⁰	8.8	8.2
9.6	56.6	51.6	I0 ²	35.4	9.1	9.8	21.5	57.7 8.8 W	I0 ⁰	16.5	49.9
I0 ⁴	10 2.3	39.5	8.6	35.9	16.8 8.5 a	8.8	24.0	36.2 8.8	I0 ²	25.1	17.3
9.8	10.1	51.9	9.8	57.4	39.4	9.5	28.0	50.4 9.0	9.8	35.8	34.5
9.8	10.8	40.0	I0 ²	18 11.9	22.9	8.8	52.0	49.4 8.5 a	I0 ²	36.1	58.3
9.8	12.5	44.6	9.1	15.9	13.6 9.0 Ga	I0 ³	56.0	19.0	I0 ³	44.2	20.0
9.4	15.8	25.2	I0 ⁰	20.4	42.8	I0 ²	27 9.5	29.0	I0 ³	46.8	38.9
9.4	19.1	45.3 \equiv	I0 ²	22.4	49.2	I0 ⁰	10.0	15.1	I0 ³	47.3	59.9
9.2	33.0	6.0 9.0	9.4	26.9	8.0 G	I0 ²	11.5	23.1	I0 ³	55.8	47.0
I0 ²	34.7	48.4	9.9	30.6	57.6	I0 ⁰	14.0	3.8	I0 ³	34 3.7	14.0
9.1	35.8	45.5	7.8	38.9	27.6 7.0 GSbc	I0 ³	14.0	36.2	9.4	7.4	37.0
I0 ³	38.3	10.5	I0 ²	55.6	0.3	I0 ³	17.0	49.9	8.6	12.9	44.6 9.0 -
I0 ²	39.3	53.7	8.8	19 2.9	8.4 9.2 G	I0 ³	39.0	31.1	I0 ⁰	12.9	41.9
9.6	41.8	21.4	9.8	5.4	28.2	8.3	43.7	2.1 7.0 GSac	9.8	18.3	49.7
I0 ²	56.8	48.9	9.8	5.9	12.0	9.8	53.0	8.1	I0 ³	21.8	58.3
9.5	56.8	30.6	9.0	21.9	11.6 9.0 Ga	8.6	57.5	55.4 9.2 -	I0 ³	27.3	59.0
I0 ⁰	7.3	46.2	9.2	25.4	7.8 9.5	I0 ³	57.5	16.0	9.2	37.1	19.2
I0 ³	15.8	13.4	I0 ³	20 0.4	27.2	I0 ³	28 4.0	17.0	I0 ³	37.4	38.0
9.8	16.3	54.9	I0 ²	25.9	16.3	I0 ⁰	11.0	23.9	I0 ³	38.4	51.1
I0 ⁰	46.8	45.8	I0 ³	36.9	2.3	9.3	15.8	2.0	9.8	49.8	29.5
9.9	12 41.8	10.4	9.9	52.9	20.7	I0 ²	40.5	45.0	8.8	52.4	29.6 -
I0 ³	13 2.8	38.1	I0 ²	21 3.9	14.4	9.8	46.0	9.8	9.4	54.4	9.8
25pr.	+1 36.5	+0.3		+1 36.4	+0.6		+1 36.4	+0.9		+1 36.3	+1.2

5641-5700.				5701-5760.				5761-5820.				5821-5880.			
18 ^h .		-30°		18 ^h .		-30°		18 ^h .		-30°		18 ^h -19 ^h .		-30°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.9	34	54.9	8.1	10.3	41	44.0	34.5	9.8	49	4.5	33.1	9.8	57	13.9	30.8
9.9		59.4	41.2	8.5		55.0	8.7	9.4		27.0	21.2	9.7		25.4	32.7
10.3	35	2.9	8.7	9.6	42	14.0	38.5	9.6		37.0	24.9	10.3		46.2	59.6
10.0		7.4	45.6	9.8		15.0	20.4	10.0		51.0	33.3	10.3		49.9	33.6
10.0		34.4	53.7	9.9		17.0	56.4	7.9	50	5.0	59.2	9.9		56.9	38.1
9.9		37.9	28.4	9.9		17.5	23.6	10.3		17.0	49.2	10.0	58	2.9	40.6
10.3		38.4	28.8	9.1		24.0	21.6	10.4		24.4	57.7	9.5		4.1	26.4
10.3		41.0	35.5	9.9		31.5	44.3	9.5		31.0	25.5	10.0		14.7	21.5
10.3		49.9	54.3	9.8		32.0	36.6	9.0		38.0	57.5	9.2		16.9	7.5
10.0	36	2.4	27.2	10.0		33.0	45.8	10.3		44.9	20.5	10.0		17.9	23.7
9.0		29.4	31.2	9.6		34.0	42.1	9.9		45.4	36.0	10.3		23.2	58.0
10.3		37.4	5.6	10.3		37.0	1.1	9.4		54.4	53.0	9.8		33.5	50.9
8.6		43.9	6.2	8.6		43.0	22.7	9.8		59.9	41.4	10.3		33.9	37.4
10.3		51.8	0.2	8.4		57.0	56.2	9.9	51	3.9	24.6	9.4		38.0	23.5
9.2		56.9	8.4	9.7		57.0	4.9	9.2		17.9	25.2	9.2		43.2	51.3
8.8		59.3	2.1	10.2	43	12.9	2.9	10.4		21.4	15.4	10.3		44.1	41.0
9.4	37	3.3	11.8	8.6		17.0	9.8	10.0		46.9	14.3	9.2		57.7	8.6
9.4		7.3	21.7	8.6		24.0	15.6	9.9		47.9	58.8	10.0	59	10.2	44.8
9.1		8.8	52.6	10.0		25.0	22.3	10.0		47.9	24.9	10.2		12.2	55.9
10.0		12.8	48.2	10.3		25.0	20.8	9.5	52	3.9	12.4	9.6		14.7	11.2
9.6		25.3	26.7	10.0		43.5	34.2	9.7		13.9	59.2	8.6		15.7	21.0
9.9		31.8	36.1	10.3		59.5	0.0	10.0		14.9	0.2	8.8		15.7	8.1
9.8		32.3	50.0	10.3	44	4.0	24.8	9.8		25.9	13.0	9.6		22.7	22.5
9.8		41.3	20.0	9.0		11.2	56.4	9.7		26.9	43.3	9.2		22.7	24.9
9.8		49.3	56.2	10.0		14.0	45.9	10.0		27.2	1.5	9.4		24.2	18.4
10.2		55.8	6.6	8.8		25.0	5.7	9.8		38.9	46.8	8.8		27.5	58.7
9.4		58.3	29.9	10.3		27.0	49.9	10.3		47.9	13.0	10.2		49.7	11.8
8.8		59.3	17.7	9.8		29.5	50.9	10.4		55.4	26.5	10.2		50.7	6.6
8.8	38	4.3	36.9	6.8		40.0	52.8	9.8	53	12.9	9.5	9.4		54.7	11.1
10.4		7.8	3.9	10.3		43.0	23.7	9.5		12.9	14.8	9.7	0	13.7	33.0
10.3		9.8	3.1	10.2		47.0	39.4	9.8		27.9	44.9	10.2		13.7	8.9
10.2		11.8	55.8	9.9		49.0	30.8	9.9		28.9	45.4	10.4		16.7	33.9
9.4		19.9	2.0	9.6		58.0	43.1	9.6		33.9	35.1	10.0		23.7	27.8
10.4		21.3	27.7	9.2		59.0	25.6	9.2		38.9	34.8	9.7		24.7	26.8
10.0		36.3	8.1	9.4	45	14.0	17.7	10.4		45.4	32.5	9.4		26.1	2.8
10.0		51.3	6.6	10.0		28.0	3.9	10.3	54	4.9	52.4	10.2		33.7	6.6
10.0		56.3	34.6	9.6		29.0	32.5	9.6		19.6	2.6	10.0		47.7	13.3
8.8		57.3	5.3	10.4		37.0	3.9	3.7		39.4	3.4	9.5	1	2.7	16.6
10.4	39	0.3	29.3	9.6		39.0	20.9	10.0		47.9	27.4	7.6		7.7	49.3
9.9		6.9	2.7	9.7		44.0	14.1	8.6		56.9	31.3	9.2		8.2	33.9
8.6		15.3	59.5	10.0	46	1.0	32.7	9.7	55	8.4	20.7	8.9		24.7	50.4
10.4		37.3	23.0	10.3		18.0	39.0	9.7		22.9	19.0	10.0		27.7	54.9
9.8		38.3	15.2	10.0		21.0	47.9	10.4		25.9	22.4	10.2		28.9	1.5
9.9		51.3	9.0	9.2		27.0	44.0	10.0		26.9	48.3	9.8		51.2	17.0
10.4		55.2	59.9	9.7		31.0	26.4	9.2		28.9	55.8	10.4		53.3	58.6
8.0	40	10.3	29.3	9.0		38.0	18.3	9.0		36.9	18.9	10.4		54.7	26.1
9.2		17.3	19.2	10.0		0.3	59.7	9.9		46.4	47.4	10.2	2	14.9	0.4
10.0		27.3	54.6	neb.		3.5	37.9	9.1		48.4	50.5	10.0		25.9	30.6
8.8		38.3	8.1	10.4		13.0	32.9	9.1		53.4	7.7	9.8		26.4	32.7
9.9		41.8	12.9	9.8		14.0	11.9	10.2		53.9	19.1	7.3		29.9	12.3
10.4		46.3	11.3	10.0		18.5	8.5	9.9	56	1.9	39.4	9.9		36.9	32.5
8.8		48.3	13.6	10.4		23.0	50.9	10.3		7.9	43.3	8.4		46.2	0.8
9.4		54.3	33.9	10.4		27.0	14.5	9.8		26.7	58.5	10.3		51.9	36.4
8.8		57.3	45.9	9.8		41.0	11.0	10.3		26.9	22.8	8.9		53.9	52.5
10.4	41	13.8	35.0	9.9	48	2.5	48.0	9.7		28.9	53.2	10.0	3	2.9	55.6
10.3		18.0	36.9	10.4		7.0	29.9	9.7		29.9	59.8	10.2		7.4	0.5
8.8		21.0	36.3	10.4		24.0	56.1	9.8		55.4	20.7	9.7		14.9	17.8
10.3		37.0	49.2	10.4		39.5	29.0	9.2		57.9	30.5	9.0		21.9	50.2
10.3		38.0	27.9	9.0		48.0	11.1	10.3	57	1.7	43.6	10.0		32.4	5.3
9.9		39.5	4.2	10.4		48.0	36.3	9.7		8.1	16.9	10.4		33.4	51.9
25pr.	+1	36.2	+14	+1	36.1	+16		+1	35.9	+19		+1	35.8	+22	

5881—5940.			5941—6000.			6001—6060.			6061—6120.		
mag.	19 ^h	—30°	mag.	19 ^h	—30°	mag.	19 ^h	—30°	mag.	19 ^h	—30°
10 ⁴	3 40.9	47.7	9.6	10 52.6	32.7	10.3	18 33.1	5.7	10.0	28 46.3	45.0
10.0	42.9	45.9	10.0	11 6.1	13.7	10.0	36.6	43.4	9.6	29 13.3	39.3
9.4	44.4	9.9	10.2	9.6	8.3	8.9	37.6	37.9	10.0	22.8	45.2
10.2	45.9	0.4	10.3	15.6	13.7	9.2	48.1	32.7	8.2	56.8	34.2
9.5	57.9	5.2	10.3	21.6	35.3	10.3	19 9.6	17.1	9.4	30 33.8	11.3
10.2	4 1.5	1.9	9.2	26.6	18.2	9.0	11.1	56.1	10.0	45.8	50.1
10.0	2.9	34.7	9.8	38.6	2.7	9.4	13.6	7.9	9.6	51.3	5.3
9.7	2.9	28.4	10.2	42.1	49.1	10.0	18.6	36.6	7.8	57.8	33.6
10.4	16.9	43.5	10.3	45.5	41.2	9.5	19.6	53.9	10.0	31 26.1	59.9
10.4	43.9	2.4	9.8	46.1	15.6	10.2	32.6	55.1	9.1	29.1	1.5
9.4	51.9	41.9	10.2	53.6	18.9	10.3	39.3	59.9	9.2	32.8	26.9
9.4	58.9	39.6	8.8	55.6	55.3	10.3	41.6	49.7	9.0	32 2.8	12.2
10.4	59.4	48.2	9.4	55.6	29.7	9.4	53.6	33.1	10.2	5.3	6.3
10.4	5 1.9	14.4	8.9	57.1	41.4	9.5	20 9.1	49.6	9.2	6.8	19.9
10.4	14.9	59.8	9.2	57.6	45.5	9.9	58.9	47.4	10.0	21.8	32.6
10.4	23.4	48.5	9.1	12 0.1	4.4	10.4	21 7.4	26.9	10.4	25.8	52.0
9.2	23.4	2.2	9.6	5.6	29.4	9.5	13.4	19.1	9.8	51.3	55.8
10.0	26.9	7.8	10.2	12.0	1.9	9.5	20.9	25.2	10.4	33 13.3	47.0
10.3	34.4	39.9	9.5	31.1	15.3	10.2	26.4	29.0	8.6	21.6	1.6
9.2	41.9	24.7	9.2	36.1	9.4	9.2	27.9	51.1	9.6	22.3	16.6
10.2	43.4	0.5	10.0	52.1	35.4	10.4	31.4	37.9	9.1	42.3	24.8
9.9	47.9	35.1	10.0	55.1	9.5	9.2	35.9	17.4	9.4	48.3	53.6
10.2	6 1.9	19.6	10.2	58.1	19.9	9.8	45.4	42.2	9.0	34 7.8	36.6
10.3	3.6	53.5	10.0	13 14.6	56.3	10.2	22 6.4	33.0	10.3	23.8	19.4
10.0	20.1	23.3	9.2	23.6	22.6	9.4	11.9	9.7	9.6	36.3	16.2
9.8	25.6	25.1	10.0	24.1	10.3	10.4	15.4	14.5	10.0	41.3	20.5
8.2	40.6	2.6	9.2	24.6	3.6	9.6	16.4	26.7	9.4	45.3	56.8
9.4	42.6	27.6	9.8	26.6	43.9	10.2	25.9	42.5	9.4	52.3	31.5
10.3	54.6	48.7	9.5	53.6	32.3	9.4	37.2	2.6	10.0	53.3	50.8
8.7	56.6	29.8	9.7	14 6.6	21.1	10.0	40.7	28.9	9.6	35 3.3	20.2
10.3	59.6	48.1	10.0	7.6	38.3	8.2	57.7	19.5	9.4	4.1	58.6
10.2	7 2.6	58.2	8.7	16.6	54.5	9.8	23 2.7	21.8	9.4	11.3	53.2
10.2	6.6	36.7	10.3	18.1	38.1	9.6	23.7	42.1	10.4	42.3	57.2
10.2	8.1	1.4	9.4	24.1	13.7	9.6	42.2	34.3	9.8	49.8	5.2
10.4	11.1	44.9	10.0	29.6	35.6	9.1	48.7	10.7	10.3	51.8	55.2
9.7	13.1	42.8	10.2	30.6	26.6	9.1	24 12.7	42.2	9.8	36 5.3	26.3
9.2	25.6	30.7	9.7	33.6	16.1	10.0	16.2	51.7	9.6	11.8	40.6
9.1	32.9	2.1	10.3	35.6	14.5	8.3	25 3.3	51.0	9.6	21.8	11.4
9.9	35.6	27.3	10.3	36.6	13.7	10.0	4.8	28.4	10.4	53.3	59.6
10.0	38.1	21.5	9.7	51.6	16.3	7.8	6.8	37.4	8.6	37 3.3	3.2
8.6	59.6	33.3	10.3	56.6	18.6	10.0	10.3	25.9	9.0	12.8	31.5
10.2	8 2.1	32.6	9.7	56.6	22.4	9.0	13.3	56.4	10.0	14.8	51.0
8.2	7.6	34.7	10.3	15 1.6	33.9	9.6	29.3	21.3	9.8	23.8	22.8
10.2	13.6	37.9	9.4	15.6	40.3	9.6	43.3	23.8	10.0	27.8	42.3
7.6	15.6	40.4	9.8	26.1	35.1	9.8	45.8	34.7	9.8	32.8	53.6
10.2	31.1	36.2	10.0	32.1	47.9	9.6	57.8	11.1	9.1	38 49.0	58.4
10.4	52.6	36.0	9.5	33.6	40.9	9.6	26 4.8	14.1	9.1	39 6.8	6.8
9.9	59.6	7.3	9.8	36.1	13.1	9.1	21.3	17.4	9.0	31.0	58.4
9.4	9 16.1	8.3	8.9	39.6	28.3	8.6	28.8	12.7	9.1	32.3	40.4
10.0	26.1	25.1	9.4	16 44.6	24.9	10.0	32.8	37.0	10.4	41.3	15.6
9.5	32.6	41.3	9.5	17 23.6	37.0	10.2	27 1.3	21.9	9.8	40 11.8	3.2
9.8	34.1	14.6	10.0	35.6	17.1	9.6	3.3	23.7	9.6	25.3	18.6
9.2	36.6	51.1	8.6	35.6	32.1	10.4	6.8	15.1	10.4	26.8	48.4
10.0	36.6	33.7	9.8	51.1	40.7	9.6	6.8	12.4	9.6	49.3	8.8
10.3	44.3	2.0	9.5	53.6	4.5	9.8	7.3	4.8	9.1	41 8.0	2.2
9.1	45.6	34.5	8.2	53.6	20.9	8.6	25.8	50.5	8.0	11.6	42.8
9.1	45.6	23.8	10.3	55.6	52.7	10.4	43.3	5.3	10.2	44.5	35.7
10.3	10 12.3	2.0	9.9	18 18.1	19.1	9.0	45.8	15.3	9.6	47.6	12.9
10.3	32.7	16.9	10.3	19.7	15.6	8.8	28 25.8	50.3	8.3	49.6	34.9
9.9	41.6	42.0	9.5	30.1	33.9	9.6	29.3	15.9	10.4	42 2.6	45.9
25pr.	+ 1 35.7	+ 2.4	+ 1 35.5	+ 2.7		+ 1 35.2	+ 3.0		+ 1 34.8	+ 3.4	

6121-6180.				6181-6240.				6241-6300.				6301-6360.			
mag.	19 ^h .	-30°		mag.	19 ^h -20 ^h .	-30°		mag.	20 ^h .	-30°		mag.	20 ^h .	-30°	
10.2	42 11.4	40.9	10.0	9.8	58 15.6	37.3		9.4	15 11.6	31.5		7.8	30 26.4	59.6	8.5 Ga
10.0	35.1	30.1		9.6	22.1	50.2		10.0	16 21.1	57.1		9.4	31 39.6	7.7	
9.6	43 21.1	0.0		10.4	35.6	8.2		7.8	25.6	53.3	8.2 Gam	9.4	32 23.1	6.8	
9.8	36.6	42.0		9.6	50.1	9.8	10.0	8.6	33.6	14.3	a	10.0	23.6	58.2	
9.2	44 9.6	44.4	-	9.1	58.1	9.4	9.5	8.6	57.6	55.1	10.0 =	9.8	50.1	29.3	
9.4	25.6	39.0		9.2	59 2.1	16.0	-	9.4	57.6	39.3	-	9.9	50.6	52.6	
9.0	27.9	2.2	9.2 -	9.5	15.6	13.9		10.0	17 23.6	52.1		10.0	52.6	25.5	
9.8	30.1	38.2		10.0	22.1	25.1		10.0	26.6	28.5		9.3	57.7	56.5	
8.4	45 14.6	15.4	8.8 Gam	9.8	31.1	43.0		8.4	37.6	23.1	8.0 GSam	9.4	33 17.9	8.8	
8.8	16.6	36.7	8.5 G=	7.8	37.1	4.8	7.0 GSbc	10.0	56.6	31.6		9.4	20.5	2.4	
8.4	34.6	35.3	8.7 am	9.8	45.6	31.8	-	9.3	18 52.6	27.5	-	9.4	26.4	43.9	
9.8	46 11.1	38.4		10.0	0 5.6	1.9		9.0	19 13.1	55.7	-	9.4	32.1	41.5	
9.4	11.4	34.4	10.0	10.4	35.4	50.4		9.0	28.6	38.0	-	9.4	43.1	48.8	=
9.8	15.1	23.4		8.8	36.6	55.9	Gam	9.4	52.6	26.3		9.9	47.8	53.2	
9.8	29.1	14.0		10.0	41.6	2.0		9.4	52.6	7.0		10.8	34 13.2	7.5	
10.2	47 3.1	24.1		10.0	46.1	49.8	9.8	9.8	20 0.1	37.7		10.8	21.7	26.8	
9.4	12.4	57.1		9.5	1 2.1	15.1	-	9.4	14.1	25.3		9.9	41.9	57.2	9.0 =
10.0	39.6	11.7		9.8	6.1	43.5	10.0	9.6	18.7	50.3		9.4	42.2	57.5	9.5
10.2	48 12.6	23.8		8.7	8.6	47.6	9.0 Ga	9.9	30.2	56.5		10.8	53.7	51.9	
9.0	21.1	50.3	9.5 -	10.4	46.6	3.6		9.0	37.7	16.8		9.4	35 2.2	28.1	G-
7.2	56.6	53.9	6.9 GSbc	10.4	53.4	14.3		10.0	21 13.2	40.9		10.4	2.7	49.1	
10.4	49 6.1	50.3		10.0	2 26.1	35.3	-	9.3	34.7	20.9		10.0	3.2	29.9	
10.0	8.1	41.6		8.6	31.1	10.2	8.5 G-	9.0	45.7	48.5	=	10.2	6.2	11.3	
8.2	23.6	31.8	8.0 Ga	9.5	49.1	7.6	9.0	9.8	22 22.4	59.1		9.9	10.2	8.8	
10.4	47.6	0.2		10.4	3 3.1	18.9		9.9	25.7	33.3		10.4	14.2	43.3	
10.4	50 9.1	53.8		10.0	4.6	47.6		10.0	23 3.2	18.7		10.8	20.2	8.5	
10.2	12.1	3.1		9.6	32.6	38.8		7.8	3.2	6.3	8.2 a	10.2	33.2	53.8	
8.3	38.6	24.2	am	10.4	4 5.6	0.2		8.7	24 13.2	35.3	9.5 =	8.0	57.2	40.5	8.0 GM=m
10.2	45.6	45.9		9.8	55.1	9.2		9.8	14.7	25.1		10.0	36 6.2	15.7	
10.0	48.6	47.8		9.2	5 13.1	55.4	-	9.9	20.0	28.0		9.6	6.2	45.4	
10.4	58.6	35.9		10.2	24.4	13.9		10.0	32.7	52.7		9.8	14.2	23.6	
7.7	51 4.6	52.3	6.3 GSbc	9.4	32.1	37.4		10.0	42.2	1.2		10.3	18.2	51.9	
10.0	13.1	50.6		9.2	55.6	47.6		9.8	56.2	42.7		10.8	24.2	42.1	
9.8	33.1	9.1		10.2	6 16.1	35.0		10.0	25 1.2	42.4		8.9	28.2	26.3	
10.0	41.1	2.1		9.8	25.6	39.2		9.0	1.2	22.5	-	10.0	29.7	16.0	
10.4	46.6	11.5		9.8	7 12.1	55.4		9.6	24.0	0.3		9.0	37.2	4.0	
10.4	47.1	9.1		7.9	8 5.6	23.0	6.5 GSbc	10.0	35.2	39.1		9.6	37.2	4.0	
10.4	52 4.6	7.2		9.8	5.6	10.4		10.0	42.2	56.9		37 4.0	2.1		
9.0	43.1	48.6	=	9.8	25.6	7.8		8.6	55.2	36.4	8.2 M=m	9.9	25.2	9.3	
10.4	50.6	50.6		10.4	36.4	50.0		10.0	56.7	39.5		10.4	33.0	1.4	
9.8	59.1	4.1		10.2	56.1	34.4		9.6	26 8.7	25.9		7.0	44.2	55.7	6.8 SWam
10.0	53 6.1	11.7		9.8	9 14.1	54.1	-	10.0	22.0	40.2		9.8	54.2	18.6	
10.4	16.6	51.1		9.6	31.9	29.4		9.8	24.7	28.1		9.9	3.2	36.7	
9.5	21.6	31.5		8.6	10 26.1	54.3	9.2 =	9.6	26.7	34.1		10.0	6.2	47.0	
9.1	42.6	42.7		9.8	40.8	52.5		6.5	27 4.7	53.9	6.7 GSb=	10.2	17.2	20.2	
9.0	47.1	7.8	9.0 am	9.3	11 22.1	5.3	9.3 -	9.8	5.0	41.4		10.0	30.2	7.0	
10.2	54 5.6	17.4		9.9	33.1	45.4		9.9	8.2	48.2		10.0	54.2	49.5	
9.8	38.1	17.6		8.8	33.1	35.8	8.0 =	9.1	26.2	25.5	9.0 -	10.0	3.0	1.3	
9.2	43.6	38.7	9.5 G=	7.6	40.6	0.8	7.8 GSac	9.1	34.7	38.0		10.8	16.2	4.8	
10.4	56 35.3	38.9		10.0	42.1	19.0		9.1	35.6	52.8	8.8 G	9.8	26.7	51.6	10.0 G
8.6	36.1	30.9	7.8 Gam	9.6	12 2.6	34.6		9.3	42.1	32.7		9.8	54.7	10.9	
9.2	43.1	26.7		10.0	6.6	48.1		8.6	28 13.8	58.6	8.8 am	40 7.2	14.0		
9.4	50.1	6.8		9.4	23.1	4.4	8.8	9.6	21.6	53.1	10.0	8.9	18.2	41.7	-
10.4	57 23.1	2.0		10.0	34.6	7.6		9.6	25.1	23.9		9.0	43.0	57.4	-
8.6	24.1	17.4		9.9	43.1	50.8		9.8	36.3	57.7		10.0	47.0	0.3	
9.8	46.1	22.9		10.0	51.6	40.3		9.6	43.6	47.9		10.0	47.2	25.6	
10.4	50.6	21.9		9.8	13 18.1	43.4		10.0	50.6	48.1		9.4	41 1.7	33.0	
10.0	53.6	45.1		9.4	30.6	0.1	9.0	9.9	29 36.8	17.9		8.0	39.2	39.0	7.2 GSb=
10.0	58 11.1	33.9		8.4	14 8.6	46.3	9.0 M=m	9.9	52.0	27.5		10.3	43.2	41.7	
9.8	12.3	16.6		9.9	36.1	58.5		10.0	30 3.6	30.4		9.8	42 6.7	34.3	
25pr.	+1 34.3	+3.9			+1 33.6	+4.3			+1 32.7	+4.9		10.8	11.5	2.4	
													+1 32.1	+5.3	

6361-6420.			6421-6480.			6481-6540.			6541-6600.		
mag.	20h.	-30°	mag.	20h.-21h.	-30°	mag.	21h.	-30°	mag.	21h.	-30°
9.8	42 16.2	32.5	9.8	55 41.7	50.0	10.0	11 55.5	40.1	8.6	27 16.6	35.9
8.6	38.7	53.1	10.8	42.2	14.4	8.7	12 37.0	4.0	6.6	31.6	15.0
8.9	42.7	33.9	10.3	56 42.7	23.0	9.5	45.5	4.1	10.0	45.6	17.2
7.6	44 4.7	14.7	8.6	57 54.2	48.1	8.0	49.9	58.1	9.9	56.6	17.7
8.8	16.2	33.3	10.6	58 6.2	45.5	8.6	56.0	27.5	9.6	43.6	12.4
9.2	28.2	6.3	8.6	25.1	22.7	9.0	13 2.5	55.9	8.6	52.6	59.1
10.4	36.2	47.8	7.3	27.5	37.2	9.8	25.5	6.7	9.0	29 47.6	18.5
10.8	45 7.2	35.3	10.6	33.0	42.6	9.4	45.5	24.1	9.8	30 21.6	18.3
9.6	16.2	4.6	10.2	40.0	28.8	10.2	58.5	23.1	9.4	26.6	14.8
9.2	20.2	5.6	10.6	54.5	31.8	9.2	14 16.0	40.6	9.2	51.1	20.1
9.8	32.2	47.3	10.0	59 22.5	11.8	10.6	45.5	6.7	8.0	31 3.1	12.2
9.9	40.2	38.0	8.4	27.0	5.1	9.9	49.7	57.3	8.4	56.6	52.1
10.4	46 0.2	16.5	9.8	30.5	7.1	10.0	52.5	33.9	8.4	32 8.4	2.0
9.8	4.2	15.5	9.8	0 1.0	40.9	9.9	15 3.0	55.2	10.0	51.6	45.1
9.4	7.2	27.0	10.6	28.0	25.3	10.6	9.5	53.1	10.0	33 3.6	5.5
10.8	13.2	3.8	10.2	41.5	31.8	10.2	18.0	21.1	8.7	27.6	19.3
9.9	23.2	37.7	8.7	1 13.3	2.2	9.2	31.0	33.0	10.0	32.6	45.4
9.4	25.7	31.5	8.7	2.3.0	32.7	10.6	35.0	53.0	9.2	34 42.6	14.3
9.9	26.2	55.4	9.8	53.0	0.1	9.4	48.0	5.3	9.0	35 19.6	53.5
10.3	26.7	42.1	9.5	2 16.0	37.5	10.0	52.5	48.3	8.7	23.1	54.5
10.3	40.2	45.0	9.2	27.0	37.4	9.6	52.5	47.5	9.0	33.1	57.4
9.9	47.2	9.1	7.8	35.5	13.5	9.4	16 23.5	35.1	9.4	41.6	29.3
10.8	57.7	27.1	9.2	3 19.0	29.3	10.2	46.0	53.7	9.9	36 26.1	18.2
9.9	47 33.2	15.2	9.6	57.5	48.5	10.2	57.0	16.1	9.2	53.1	21.3
10.0	37.2	32.1	10.6	4 4.5	44.2	10.2	17 2.5	25.7	9.0	37 2.6	46.3
8.2	37.2	36.7	9.5	15.5	27.4	9.8	13.5	13.4	9.6	38 23.1	56.1
8.5	48 8.2	35.9	9.6	15.5	18.8	10.0	16.5	23.1	9.4	32.1	18.3
10.8	45.4	50.7	9.8	16.0	32.2	10.0	26.5	16.8	9.0	39 9.1	13.3
10.3	49 4.2	20.1	10.2	23.5	2.7	10.6	45.8	2.1	9.9	40 27.8	50.4
9.8	11.7	49.7	10.4	37.0	30.1	9.4	18 17.5	24.2	9.4	46.8	12.6
10.8	26.2	17.1	9.2	43.5	12.3	10.6	35.5	14.8	9.6	47.8	58.1
9.2	31.2	39.3	10.0	5 2.5	15.7	8.3	38.0	27.9	9.6	41 22.3	59.8
9.4	37.2	24.0	9.5	6 12.5	53.6	10.6	59.0	50.1	9.9	29.8	4.7
10.0	54.2	18.4	10.6	14.0	37.0	9.5	19 5.5	59.1	9.4	42 10.8	28.8
10.8	50 7.2	29.5	9.1	18.0	42.4	9.5	46.5	17.8	9.9	16.0	59.4
9.9	20.7	53.0	10.6	21.0	0.0	9.2	20 17.5	47.1	8.7	25.8	42.0
10.4	30.7	29.9	10.6	30.5	23.0	9.8	32.5	32.7	8.8	43 14.8	33.9
10.3	33.2	9.8	7.7	31.5	10.5	10.0	33.0	47.8	9.4	21.3	19.7
9.6	47.2	10.8	10.4	33.5	21.8	9.4	33.5	12.5	8.7	25.8	54.3
10.2	51 7.2	12.0	9.5	48.5	55.5	9.4	49.0	26.1	8.9	44 21.8	33.4
10.8	13.4	6.6	10.0	55.0	8.4	10.6	21 23.0	44.7	7.9	40.8	54.2
10.2	35.7	21.0	9.8	55.0	36.3	9.6	23.3	27.5	9.9	55.2	24.1
7.6	49.2	59.6	8.8	7 5.5	6.0	10.6	31.5	26.9	8.9	46 14.8	54.1
9.9	52 16.7	46.1	10.6	14.5	13.1	10.6	42.5	43.8	9.4	23.3	27.1
9.8	26.2	42.2	8.4	25.5	37.4	10.6	46.0	56.0	9.0	47 7.2	50.5
9.8	48.7	7.1	10.2	37.5	34.5	9.6	52.0	2.5	9.4	45.7	31.3
10.8	51.7	12.9	10.4	8 2.5	14.9	7.9	58.5	57.4	8.3	48 5.7	37.5
10.3	57.4	7.0	9.8	5.5	25.9	10.2	22 2.5	3.9	8.4	25.7	17.5
10.8	53 13.7	55.5	10.0	37.5	1.0	10.6	12.0	14.1	9.6	50 20.7	23.8
10.3	15.2	4.1	9.1	45.0	54.9	9.1	39.3	39.9	10.0	24.7	39.0
10.0	16.2	39.1	9.2	9 11.5	48.3	9.5	44.4	0.6	9.0	51 14.2	19.9
7.4	30.7	12.8	9.6	33.5	5.0	10.0	45.5	18.1	8.7	45.7	45.2
8.0	33.7	14.1	9.6	35.5	4.0	10.0	23 25.1	6.2	8.7	52 29.7	34.7
10.8	47.7	30.5	9.8	41.0	21.1	10.0	35.6	37.8	7.8	56 3.2	30.2
10.0	54 5.7	58.7	10.0	47.5	0.5	9.6	24 43.1	27.4	7.7	57 11.7	31.1
9.6	22.2	46.4	8.6	10 36.5	1.9	9.9	25 22.6	50.1	9.6	13.6	59.8
9.6	23.2	8.6	9.4	53.5	48.5	8.4	35.6	41.4	10.0	35.7	56.1
10.8	24.2	24.4	9.6	11 5.5	25.5	10.0	59.6	49.9	9.3	46.7	27.2
10.8	42.5	0.0	9.2	38.0	49.5	8.4	26 26.6	1.2	8.6	58 2.2	58.9
9.4	55 33.2	28.3	9.8	49.5	48.9	8.4	42.6	38.7	9.0	59 19.9	38.8
25Pr.	+ 1 31.4	+ 5.6		+ 1 30.4	+ 6.0		+ 1 29.6	+ 6.4		+ 1 28.0	+ 6.9

6601-6660.				6661-6720.				6721-6780.				6781-6840.			
21 ^h -22 ^h		-30°		22 ^h -23 ^h		-30°		23 ^h		-30°		23 ^h		-30°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
8:0	59	42.4	13.5	10:2	33	20.8	24.3	10:0	11	11.0	19.5	10:4	39	36.4	24.9
9:6	0	25.9	35.7	9:5		37.9	51.7	9:6	12	6.0	7.7	10:4		48.9	3.2
9:4		46.4	5.7	8:4		41.9	19.5	10:8		23.0	4.6	9:0	40	26.4	33.8
8:7		59.4	51.3	8:7	34	56.4	40.9	10:4		31.0	47.5	10:8		28.4	42.8
8:4	2	40.9	44.9	9:2	35	3.4	11.9	9:4		50.5	44.3	9:1	41	15.7	14.3
10:0	3	6.9	55.5	7:4		24.8	0.9	9:4	13	43.0	45.9	8:8		25.2	35.9
9:2		32.4	32.6	9:8		59.9	57.1	11:4	14	3.5	58.9	10:0		55.7	17.2
9:9		40.4	24.4	9:2	36	0.9	56.2	10:4		23.5	49.7	10:4	42	16.2	40.4
9:0		59.4	49.9	9:0		19.4	19.1	10:0	15	30.5	17.0	10:0		45.2	2.9
9:4	4	35.1	50.2	9:4		39.9	20.8	9:4		35.0	23.5	10:6		52.2	37.9
8:6		41.4	8.6	9:3	37	47.4	54.4	9:4	17	7.0	19.6	9:2	43	32.7	30.2
9:0	5	57.4	9.2	10:2	40	50.9	43.7	10:8		26.0	53.9	9:0		35.7	6.5
9:4	7	7.4	55.3	9:8	41	33.4	0.1	11:4	18	26.0	53.4	8:1		43.7	5.9
8:7		11.4	40.9	9:0	42	8.9	32.1	11:2		39.0	20.4	10:4	44	2.2	17.7
9:9		20.4	21.3	8:8		20.9	12.3	8:2		46.0	41.6	9:3		2.2	3.3
8:3		25.9	1.2	8:5		27.4	31.3	8:8		57.5	14.2	10:8		10.7	15.9
9:9		35.2	58.2	6:9	44	26.9	12.0	10:6	19	11.5	34.1	8:8		15.2	37.6
9:3	9	21.4	12.2	10:0	45	28.9	42.9	11:4		31.0	29.4	10:0		19.7	9.3
9:8		29.5	37.9	10:4		46.4	39.0	11:4	20	44.6	58.3	8:8		50.7	39.7
8:0		58.1	46.4	8:4		53.4	33.4	8:8	21	6.0	12.5	10:8	45	15.1	49.3
9:4	11	37.6	22.5	8:2	46	2.4	53.2	10:4		35.4	13.9	10:8		46	7.1
10:3		43.3	30.0	8:2	47	1.9	23.7	9:6		39.9	29.7	10:4	47	13.5	5.9
8:7	13	14.1	20.8	8:6	48	26.9	16.6	10:4		50.9	33.9	8:2		15.4	5.6
9:0		20.1	52.8	9:8	50	37.9	24.3	10:8	23	3.9	5.4	9:8		30.4	6.3
10:0	14	39.1	27.1	2:2		45.0	16.8	8:6		34.4	47.6	9:0		54.4	54.5
8:7		59.6	13.7	9:8	51	0.0	43.4	10:2		40.4	51.9	9:3	50	2.4	28.7
10:3	15	8.6	13.2	6:2	52	45.5	8.0	9:1	24	5.4	14.5	10:4		3.4	34.3
8:1		38.6	14.7	9:2	54	43.0	9.6	9:0		13.4	32.4	8:2		3.9	12.3
8:7	16	27.8	19.4	8:2		45.5	27.4	9:8		20.4	45.7	9:2	51	9.4	23.9
10:0		41.3	34.7	8:4		45.5	8.2	10:4		47.4	14.1	9:2		12.4	31.8
9:6		58.1	58.0	8:8	56	4.0	31.6	10:8	25	11.4	18.7	9:8		48.4	18.1
10:3		59.8	22.6	10:8	57	11.8	51.2	10:0		40.9	14.1	9:0		53.6	58.6
10:2	17	3.8	19.0	9:4		31.3	57.7	9:6		54.4	35.2	10:4	52	6.4	55.9
9:0		26.6	57.5	10:6	58	7.8	12.7	10:0	26	37.9	0.6	8:4		14.9	11.9
9:1		57.8	18.4	11:4		16.8	27.0	10:0		58.4	28.5	8:6		32.4	36.5
9:8	19	37.8	20.3	11:2		23.3	6.3	10:2	27	10.4	49.0	9:8		36.9	55.1
9:6	20	6.8	26.8	6:5	0	9.8	43.3	10:8		27.9	33.8	7:1	53	2.4	10.9
9:0		23.8	52.0	8:6		54.8	54.6	9:6		31.4	34.8	9:6		9.4	33.7
10:0	21	0.8	52.7	11:4	1	5.3	57.8	9:6		28	11.4	8:4		27.4	1.5
9:2	22	2.8	13.0	10:0	2	12.3	38.9	9:0		29	13.4	10:3		42.4	32.9
7:9		10.3	37.8	9:0		17.8	48.6	10:4	30	12.4	25.1	10:4		58.5	23.6
10:0	23	6.8	3.0	10:8	3	13.8	36.4	10:8		12.9	1.9	10:0	54	27.9	32.1
10:3		26.3	25.0	11:4		43.5	34.1	10:0		16.4	50.9	7:6		30.4	45.6
8:7		33.8	46.2	8:8		57.8	35.6	9:3		23.4	33.9	10:0	55	3.4	54.1
10:3		37.8	50.8	6:9	4	1.8	12.1	9:2		55.4	46.6	10:4		13.4	27.0
9:6	25	6.9	27.4	8:2		23.8	40.8	8:8	31	4.4	6.7	10:4		23.4	4.9
9:8		9.9	31.2	9:8		44.8	49.9	10:0		29.4	20.4	9:2		33.4	51.1
10:3		31.9	4.7	10:2	5	2.8	7.4	8:6		46.4	3.0	9:2		47.0	56.9
8:4	26	26.4	22.3	10:2		43.3	19.2	9:4		50.9	52.5	4:1		55.4	24.9
9:6		27.4	58.6	10:4		46.8	24.9	10:6	32	5.9	23.1	10:0		56.4	29.5
7:8		32.9	18.3	10:2	6	10.3	48.3	9:4		44.4	29.0	10:0		57.4	50.1
9:2	28	7.4	5.0	9:2		21.8	15.6	10:8	33	0.9	31.0	10:4	56	3.4	28.6
8:6		46.2	58.9	11:4		22.3	43.0	8:6		13.9	13.2	8:0		31.4	50.7
10:0		52.4	7.1	10:2		30.8	44.6	8:6	35	28.9	18.9	10:4		42.4	3.5
9:0	30	27.4	36.7	8:3		32.3	44.0	10:0	36	23.9	11.8	10:4		46.9	52.6
9:5	31	46.9	51.3	7:9		50.8	19.1	10:8	37	18.2	9.5	10:2		50.9	1.9
9:4	32	17.9	59.9	9:8		7	54.3	10:8		21.4	18.4	10:3		56.9	31.1
9:1		51.9	24.9	7:3		8	59.3	10:4		30.4	16.8	9:3		57.9	42.9
9:0		54.9	34.6	9:2	10	5.3	59.8	10:0	38	8.9	28.2	10:0	57	0.9	30.5
8:2	33	7.4	35.8	8:0		5.8	35.3	9:3		39	11.9	9:2		7.9	24.8
25pr.	+1	25.3	+7.5		+1	22.3	+8.0		+1	19.8	+8.3		+1	17.5	+8.4

6841—6845.				6846—6849.				6850—6853.				6854—6857.			
		23 ^h .	—30°			23 ^h .	—30°			23 ^h .	—30°			23 ^h .	—30°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10°0	57	8.9	25.6	7.6	57	59.1	4.7	7.6	58	27.1	19.7	8.7	59	3.6	59.2
10°3		26.9	45.7	10.2	58	9.1	20.1	10.0		29.6	28.8	10.4		7.1	34.9
6.8		48.4	49.8	10.4		13.0	38.0	7.6		29.8	57.2	8.7		20.1	39.3
10°0		52.4	26.6	10.4		25.6	42.5	9.8		35.1	58.7	9.8		32.6	46.3
9.4		54.9	31.2												
25pr.	+ 1 17.0 + 8.4			+ 1 17.0 + 8.4			+ 1 17.0 + 8.4			+ 1 16.9 + 8.4			+ 1 16.9 + 8.4		

ZONE — 31°.

1—30.				31—60.				61—90.				91—120.				
		0 ^h .	—31°			0 ^h .	—31°			0 ^h .	—31°			0 ^h .	—31°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	
10°4	0	16.1	21.7	10°3	9	19.6	50.3	10°0	25	33.9	36.4	10°6	45	56.6	16.1	
10°4		21.1	14.7	9°8		59.6	6.2	8°6		34.9	6.1	7.4		46	53.1	2.3
10°0		30.4	1.7	9°0	10	22.8	7.9	9°4		26	6.4	10°6		47	1.1	5.0
9.4		33.1	17.9	9°0		50.4	20.2	9°4		27	2.9	9°6			1.1	35.4
7.6		45.1	15.5	10.2		54.0	59.4	8.2		49.9	0.7	9°6		48	9.1	32.3
10°0	1	3.1	38.6	8.4	13	23.9	21.1	9°8		30	11.9	10°4			23.6	24.3
10°4		59.6	30.1	10.2		26.9	6.8	9°0		19.1	1.4	10°4		49	16.1	12.1
10°3	2	25.1	39.5	8.8	14	11.9	14.9	10.2		32	18.9	10°6		50	15.1	39.7
10.2		42.1	29.1	9.2		36.4	21.5	9°8		33	37.2	9.2			22.1	51.6
10.4		58.6	7.1	9.4		42.4	32.9	8.7		34	23.2	10°0		51	10.1	42.1
																9.5
9.8	3	8.1	24.5	10.2	15	31.9	51.3	8.4		39.2	32.7	9.8			31.1	5.4
10.4		17.1	8.2	9.8		16	8.4	10.6		35	52.0	8.7			40.1	9.9
9.6		17.1	18.5	6.4		56.9	43.7	8.6		36	13.5	10.2		52	32.1	6.5
9.8		29.1	10.7	9.0		17	40.9	10.6		37	13.5	10.6		53	17.6	53.8
9.2	4	4.6	10.5	7.6		18	47.9	8.2		34.5	7.3	8.6			23.6	15.4
7.5		17.1	58.5	10.0		19	14.9	10.2		55.6	50.1	9.2			53.1	2.3
9.4		33.1	54.6	9.3		36.4	45.1	8.6		38	2.6	8.8			55.8	56.8
10.2		37.1	3.3	7.5		42.4	26.3	8.2		39	42.6	8.9			57.1	6.3
9.6	5	33.6	39.7	8.6		20	9.4	7.5		52.1	23.6	10.2		54	34.1	23.6
10.4		45.6	41.7	7.8		21	1.4	9.2		40	7.6	9.6			48.1	25.9
9.8	6	2.1	5.1	10.0		10.9	39.1	10.6		57.1	2.5	10.0		55	22.1	17.0
10.0		7.6	6.4	9.8		46.0	32.5	8.7		41	24.6	8.9			36.6	36.6
8.4		13.6	32.9	8.4		22	7.9	8.7		42	4.6	9.2		56	14.6	28.2
10.3		31.1	8.8	9.6		50.9	27.3	10.0		36.6	55.5	10.4			21.3	55.9
10.0		52.1	2.9	9.3		23	4.9	9.6		43	10.6	9.6			21.8	16.5
9.6	7	20.1	23.5	10.2		21.9	48.0	10.4		54.1	16.3	9.2			25.8	3.9
10.5		23.1	23.0	9.0		40.9	43.9	10.4		44	32.6	9.8			30.3	53.7
8.4	8	17.1	43.0	10.2		24	23.9	9.6		56.1	2.7	10.6		57	2.3	22.3
9.6		41.8	58.3	10.0		37.4	2.9	8.5		45	33.1	10.5			45.3	51.5
8.4		55.6	37.9	9.6		37.9	46.3	8.5		52.1	38.2	7.9			45.3	4.2
25pr.	+ 1 16.4 + 8.4			+ 1 15.1 + 8.3			+ 1 13.5 + 8.2			+ 1 12.0 + 8.1			+ 1 12.0 + 8.1			

121-180.				181-240.				241-300.				301-360.			
mag.	oh.-1h.	-31°		mag.	1h.-2h.	-31°		mag.	2h.	-31°		mag.	2h.	-31°	
	m s	'			m s	'			m s	'			m s	'	
10.6	57	48.3	30.0	10.8	22	35.8	1.3	10.2	2	28.2	10.1	9.8	31	31.5	9.6
10.6	58	27.3	4.6	9.0		56.5	3.4 9.2	9.0	3	10.9	50.4	8.3		41.5	28.6 8.8 G
7.8		38.6	9.7 8.2 Ga	8.7	25	22.8	56.8 8.1 G	10.2		31.4	25.5	10.0	32	25.0	7.0 9.5
10.6		45.8	23.1	10.1	26	26.3	32.0 9.0 G	8.6		53.4	5.0 9.0	8.8		51.5	58.0
9.8	59	40.8	45.8	8.9	27	41.8	44.4 9.0 G	9.2	4	0.4	33.8	9.6	33	9.0	51.7
10.6	0	15.8	18.3	9.8	30	37.1	1.2 9.0	8.6		13.4	19.9 8.8 G	8.2		24.6	8.5 7.8 GS-
11.0		27.8	41.6	10.1	31	43.8	49.8	8.6		35.4	39.3 8.8	10.4		27.5	8.8
9.2		40.6	57.0 10.0	10.1		51.7	59.0	10.2		52.9	38.3	9.8		54.3	51.6
11.0	1	26.3	54.0	10.1	32	15.3	41.4	8.6	5	0.4	23.0 8.0 G-	10.0		58.5	46.4
11.0	2	24.3	4.0	10.1	34	20.8	26.0	9.2	6	6.4	56.3 9.0 G	7.4	34	41.8	10.3 6.5 GSbt
10.8		45.3	1.8	9.8		27.8	24.3	9.2		13.6	59.3 9.0 G	10.0	36	23.1	15.0
9.4		45.8	6.4	9.8		45.8	7.3	10.2		57.4	12.3	10.6		43.1	39.0
8.4	3	0.8	35.6 9.0 -	10.1	36	16.3	38.4	5.5	7	23.9	18.6 5.8 GStπ	10.6	37	17.1	40.2
11.0		11.8	32.2	10.1		17.8	39.8	8.8		25.9	16.4 9.2 Ga	8.0		45.1	36.0 7.5 GS-t
11.0	4	1.8	13.2	9.8	38	8.8	33.0	9.4	8	9.4	35.6	10.6	38	2.1	31.4
10.4	5	4.3	35.8	7.8		15.8	21.2 8.8 G	9.4		52.4	54.5 9.5 G	9.0		36.1	35.5 9.0 G
9.7		20.8	34.8	10.1	39	22.8	33.1	10.2		57.4	14.4	10.4		47.1	24.0
11.0		23.8	56.4	9.5	40	25.8	15.6	10.0	9	6.9	9.6	10.2	40	17.1	36.6
9.2		39.3	13.8 8.8	9.3	41	24.4	59.9 9.2	9.4		53.9	28.1	7.8		35.6	0.4 8.0 Gat
11.0	6	2.8	56.6	10.0	43	11.3	17.7	10.0	10	42.6	56.4	8.7		38.5	56.9 9.0 G
6.4		28.8	27.7 6.5 GSct	9.3		25.8	8.1	9.6		47.6	51.0	9.6		44.1	3.1 9.0 G
10.8		56.8	26.3	7.2		40.8	41.6 6.5 GS	9.4	11	40.1	1.5	9.6	41	0.7	1.9
9.8	7	5.3	32.0	9.8		51.8	13.0	9.8		48.6	42.2	10.3		40.6	49.3
9.4		6.3	6.8 9.5	9.5		52.3	55.0	9.8		50.1	20.3 10.0	9.8	42	30.6	13.9
11.0		35.8	28.4	10.1	44	2.8	59.1	7.4		58.6	17.9 7.8 G-	9.8		33.1	46.9
11.0		49.8	51.4	10.0		32.8	25.0	8.8	12	26.1	2.9 9.0 -	7.8		52.9	56.5 7.5 GS-
7.9		51.8	46.7 8.0 G	9.8		48.3	50.8	8.6		35.1	56.8 8.2 G-	7.8	44	7.9	20.0 8.0 GStπ
10.5		52.8	55.7	7.4	45	34.9	31.4 7.0 GS	9.4		46.1	39.9	9.9		18.4	58.8
8.8	8	11.8	1.8 9.0	9.8		43.6	14.5	8.4		46.6	21.9 8.5 G-	9.6		28.4	26.2
9.7		26.3	7.1	10.2		53.2	34.5	10.4	14	34.1	38.2	10.6	45	8.4	17.8
10.2		31.8	42.0	9.4	46	16.4	57.2 8.8 G	10.4	15	23.0	30.5 10.0	10.6	46	6.8	23.4
10.2	9	6.3	48.8	9.4		17.1	45.4	8.8		52.4	6.7 9.2 G	10.2		7.9	6.9
9.2		53.8	9.1 9.0 G	9.4	47	46.4	27.5 9.5 G	8.6		52.9	30.5 8.8 G-	9.8		7.9	53.2
9.8		59.8	22.1	10.2		56.4	49.8	9.2	16	48.9	36.9 9.5 G	9.6		33.9	32.9
11.0	10	36.3	48.8	8.6	48	40.4	59.9 9.3	9.6	17	6.9	56.5	6.9		38.9	19.8 6.5 GStπ
10.8		52.0	56.9	8.6	49	22.4	50.2 9.0 G	8.4		30.4	58.2 8.0 G-	10.6		53.9	36.3
10.8	11	5.8	17.0	8.6		22.9	56.7 9.3	9.6		58.3	3.0	7.8	47	49.4	55.0 8.0 G
8.2		10.8	34.5 8.2 G	9.0	50	24.4	33.6	9.4	18	12.9	19.4	10.0	48	14.4	28.9
10.8	13	2.8	49.7	8.8		57.4	44.8 9.2	9.2		36.9	39.1 9.5 G	9.2		46.9	45.4
10.8	14	6.3	24.6	7.7	51	33.4	41.6 7.5 GS	10.2		37.9	48.0	9.9		47.4	3.5
10.0		7.3	34.7	10.2		33.4	20.3	10.0		38.9	30.5	7.6	49	21.9	24.0 7.2 GSa
10.4		20.3	0.7	9.2		41.4	20.7	10.0	21	8.9	11.1	9.6		22.9	15.9
10.8		26.7	45.2	9.9	54	13.4	36.2 9.0	8.4	22	33.2	0.2 7.5 G	10.0	50	59.4	16.5
9.8		30.0	1.1	8.5		58.6	1.9	7.0	23	11.9	39.6 6.5 GSct	10.0		59.4	17.0
10.8	15	24.8	41.7	9.9	55	32.4	47.5	9.0		20.4	47.1 9.0 G	9.2	51	3.9	46.6
10.0		29.8	59.8	10.2		41.8	2.1	10.0	24	14.2	57.5	9.2		26.9	21.8 9.0 G
9.7	16	7.8	19.2	10.1	56	8.4	53.0	10.4		59.5	56.6	9.9	52	0.9	6.2
8.4		57.3	16.8 9.0	9.0		20.4	35.8 9.5 G	8.7	25	14.5	49.9 8.8 -	9.6		0.9	22.1
8.0	17	28.8	54.7 7.8 G	9.9		49.7	59.2 9.0 G	8.6	26	28.5	29.7 8.8 G	9.6		50.9	27.7 9.5
7.0		41.8	35.8 6.0 GSct	9.6	57	15.4	39.4	10.4		31.5	7.3	9.6	54	25.9	49.4
9.7	18	19.3	7.6	8.6		51.9	31.8 8.8 G	8.8		40.0	59.9 8.8 G	9.8	55	57.9	14.6
10.0	19	2.8	23.8	9.2	58	44.4	0.6 9.5	9.2	27	1.5	3.8	9.8	56	12.9	33.3
8.8		13.8	19.0 9.5	9.6	59	19.4	12.2	10.2		39.0	15.9	10.0		20.9	11.1
10.8		42.5	1.0	9.4		22.4	23.7	9.4		53.5	13.4 9.5 G	9.8		46.9	31.1
10.0		44.3	25.0	9.2		56.4	11.5 9.2 a	9.8	28	46.0	52.6	9.3		54.9	51.6 9.2 G
10.0	20	12.8	40.3 8.8 G	8.8	1	17.9	39.5	9.2		57.5	7.0	10.4	57	0.9	33.7
10.6		20.8	4.7	10.2		57.4	21.9	9.4	29	0.5	14.8	10.4		18.4	22.1
9.2	21	10.6	36.4	10.2	2	3.4	56.0	8.8		16.5	51.8	10.2		36.9	39.5
8.8		10.8	37.0	9.2		17.9	46.0	9.8		25.0	5.4	9.3		44.9	26.4
9.8		16.1	52.8	8.8		23.4	6.1	10.4		55.0	0.5	9.8		51.2	23.3
25pr.	+1	10.8	+8.0	+1	7.7	+7.5		+1	5.4	+6.9		+1	3.2	+6.3	

361-420.			421-480.			481-540.			541-600.		
mag.	2 ^h -3 ^h	-31°	mag.	3 ^h	-31°	mag.	3 ^h -4 ^h	-31°	mag.	4 ^h	-31°
10.0	59 13.0	3.7	9.4	34 52.6	44.8 9.5	10.0	58 53.7	10.0	9.8	22 22.8	34.5
10.0	35.5	20.5	8.8	54.6	20.9	9.0	59 13.7	37.5 9.0	8.4	25.8	18.3 8.8 ≡
10.4	0 36.0	16.9	8.2	35 41.6	38.4 8.5 G	8.8	18.7	37.9 9.0	8.9	23 1.9	1.5 9.5 G
10.2	54.0	11.3 9.0	9.4	36 6.6	4.7	9.4	20.7	11.8 9.0	8.2	32.3	43.8 8.5 G
8.8	1 6.5	47.9 9.5	10.4	37 32.6	29.4	9.8	25.7	49.8	9.8	24 2.8	25.8
8.9	49.0	8.1 9.0	9.8	52.6	54.0 9.5	8.4	0 10.7	30.6 8.5 G=	9.6	32.8	28.4
10.2	4 3.4	11.7	10.4	55.8	11.2	10.2	17.5	57.2	10.2	25 23.3	48.8
8.2	23.9	43.9 8.2 Gt	8.2	38 9.1	24.9 8.0 GS=	10.0	23.7	32.5	10.1	31.9	2.2
8.8	5 12.9	36.2 9.0 G	9.8	41.1	9.8	7.4	40.7	23.3 7.0 GS≡	10.2	53.6	2.1
9.2	34.9	1.2 9.0 G	8.0	54.1	50.2 8.2 G-	9.6	58.7	59.0	9.5	26 18.3	38.2
10.2	52.9	8.2	9.4	39 19.1	54.2	8.4	1 48.7	15.4 9.0 G=	8.4	42.3	57.8 8.3 G-
10.4	6 11.9	11.0	9.4	25.6	52.9	9.6	2 13.7	38.3	10.4	44.3	38.1
10.2	13.9	9.4	8.6	27.6	18.6	10.1	47.7	20.6	10.0	44.3	13.2
9.4	45.4	15.0 9.0	8.6	50.1	40.2 8.5	9.6	53.7	13.2	7.9	47.3	47.0 7.3 G
7.8	7 28.4	36.0 7.8 GS†	9.2	40 0.1	59.7 9.2	9.6	3 32.7	18.0 9.5	8.9	59.3	11.0 8.5
10.0	38.4	51.7	9.2	33.1	47.3 9.2	10.0	56.2	43.3	10.4	27 6.8	13.8
10.4	58.4	16.1	8.4	42.1	19.4 9.0 G=	9.9	4 2.7	40.3	9.6	27.3	38.9
10.0	9 42.9	12.1	8.4	41 45.6	14.6 8.0 Ga	10.0	23.5	27.6	9.8	56.3	34.3
10.0	10 43.9	28.5	10.4	42 10.1	44.2	9.8	6 3.2	50.2	9.8	28 5.8	49.6
6.4	11 2.9	17.3 6.5 GS†	10.3	52.1	53.4	10.0	7 3.7	49.4	8.9	13.3	23.3 9.0 G=
7.2	47.9	48.7 7.5 GS	9.4	57.1	2.7	10.0	23.4	23.6	10.0	19.3	57.7 9.5
9.0	12 32.4	42.0 9.0	9.8	44 6.1	14.9	8.0	29.9	54.0 7.7 G	8.8	29 48.3	38.9 8.5 G
9.7	40.4	25.7	10.4	45 0.8	43.4	8.2	8 20.4	36.0 8.2 GW≡	10.1	56.8	19.1
9.0	14 50.4	36.4 9.5 G	9.8	21.5	18.9	10.1	29.4	8.2	10.0	30 15.6	2.7
9.2	16 9.9	26.6 10.0	7.9	34.2	4.2 7.5 GS-	9.4	9 12.4	5.9 9.5	8.6	31 32.3	5.3 8.7 Ga
7.8	37.9	33.8 8.0 GS	10.0	48.5	21.6	9.6	21.4	10.8 9.0	10.4	32 25.8	48.5
9.8	43.9	3.9	8.6	46 21.8	15.0 8.0 GS=	10.1	32.6	13.2	8.4	56.0	39.7 8.0 G†
9.4	55.4	33.2 10.0 G	9.6	43.8	54.9	9.8	35.6	49.5	10.1	33 3.1	51.1
9.4	17 7.9	46.1	10.1	45.8	24.8	10.2	10 3.9	49.5	11.0	8.3	13.0
10.4	18 41.4	42.5	9.8	51.3	49.4	10.2	11 5.8	53.5	9.7	18.2	1.8
10.0	19 11.1	57.3	9.4	47 21.8	51.4	9.8	17.3	7.2	9.6	19.3	19.0
7.5	16.9	34.4 7.8 G=	10.0	31.8	36.8	8.5	17.8	10.7 8.8 a	10.4	22.3	20.8
10.0	20 3.4	51.0	9.6	48 45.8	37.4	10.1	24.8	56.9	8.8	32.8	37.4 9.0
8.0	21 2.4	4.0 7.8 G=	9.0	49 14.3	41.1 9.5 G	10.1	45.3	44.9	10.6	35.3	5.6
9.7	9.1	12.1 9.0 G	9.1	50 5.3	57.6 9.5	10.4	12 24.1	58.7	8.8	38.1	24.1 9.0 G-
10.2	22.9	27.6	9.6	37.8	38.9 9.5	8.7	51.8	24.5 9.0 -	9.1	39.4	11.9
9.4	22 25.2	39.4 9.5	9.7	52 15.3	38.0	8.8	13 26.8	9.7 9.2 G-	10.1	39.6	13.5
10.4	23 12.2	24.6	9.6	53 12.3	20.6	10.2	31.3	42.1	10.2	42.5	17.9
10.3	31.2	6.0 G	10.1	15.8	49.2	9.8	36.8	3.3	9.4	51.3	43.5
10.4	32.4	0.1	9.6	18.8	18.6	9.4	42.8	4.5	9.4	56.8	1.3
9.8	35.1	54.5 9.5	9.1	35.8	22.7	8.2	14 12.8	37.9 7.8 GW-	10.6	34 3.1	14.7
9.4	42.1	31.0 9.5	9.1	42.3	38.1	8.7	29.3	52.8 9.0	10.8	7.8	16.1
9.4	24 20.6	19.8	9.0	43.8	57.1 8.8	9.6	32.3	45.8	8.2	8.1	27.4 8.8 G
10.0	25 31.0	20.8	10.1	55.3	37.5	10.2	34.3	46.7	11.0	11.5	13.3
9.8	42.6	7.0	10.2	34 40.0	10.1	8.6	16 15.8	29.4 9.0 -	9.6	24.6	57.6
10.0	26 37.1	40.8	10.2	55 12.8	45.3	9.6	46.8	35.0	9.8	35 11.2	27.6 9.5
9.8	58.0	32.4	9.3	22.7	47.9 8.3 G	10.4	17 23.8	31.2	9.4	17.7	33.1 9.5
7.9	27 11.1	59.8 8.5 G-	10.0	38.5	32.0	9.4	44.3	21.7 8.5 G-	10.4	36 21.2	1.9
9.8	22.6	30.0	10.2	56 1.7	50.3	10.1	18 10.8	6.4	8.6	42.7	3.5 9.5
10.2	51.6	23.1	9.3	11.2	4.8 9.5 G	10.4	46.3	14.7	9.9	37 16.2	0.3
8.0	28 49.6	3.0 7.0 GSa	10.0	47.5	19.7	9.4	19 14.3	8.2 8.8 -	7.6	38 9.7	56.8 7.0 GS-
6.7	54.1	30.1 6.5 GS-	9.5	53.2	7.9 9.5 G	10.4	21.8	29.8	10.8	19.2	20.9
10.4	55.3	57.7	9.6	57 17.2	52.6	10.4	30.3	28.7	7.2	19.4	0.1 6.0 GS†
8.5	30 41.1	33.8 8.8	9.6	26.2	51.0	8.7	50.8	47.4	10.4	39 15.2	40.5
8.4	42.1	9.2 8.8 a	10.2	33.7	29.1	10.2	20 20.3	26.7	9.9	15.2	57.2
9.8	31 55.3	0.6	8.2	53.7	35.3 8.8 =	9.5	36.8	53.1	10.4	17.3	18.8
9.4	32 21.1	20.0	10.2	58 34.7	8.6	9.8	21 19.8	11.1 9.0	8.0	17.7	43.1 7.5 GS
8.8	33 3.1	25.2	10.2	42.7	48.8	9.3	29.8	4.8	9.9	33.7	8.8
8.0	8.6	42.6 7.8 GS	9.0	48.7	23.9 9.5	9.0	43.3	10.5 8.8 =	9.7	54.2	49.3
10.0	34 12.8	0.7	9.4	51.2	41.2	10.1	55.8	1.2	10.0	40 8.7	57.1
25pr.	+ 1 1.2	+ 5.4		+ 0 59.6	+ 4.6		+ 0 58.6	+ 3.8		+ 0 57.8	+ 3.1

601-660.				661-720.				721-780.				781-840.			
mag.	4 ^h .		-31°	mag.	4 ^h -5 ^h .		-31°	mag.	5 ^h .		-31°	mag.	5 ^h .		-31°
	m	s			m	s			m	s			m	s	
8.1	40	19.2	10.2	8.6	53	27.3	9.1	9.3	6	39.8	55.0	10.8	18	32.3	38.0
10.2		32.2	45.3	9.2		51.3	18.9	9.7		40.8	21.5	10.5		42.3	23.6
11.0		51.7	49.1	9.6		51.8	49.6	9.0		41.8	2.5	9.3		43.8	28.1
10.0		53.2	20.0	8.8		54.3	50.0	9.6		50.8	29.5	9.7		53.8	41.8
9.4	41	6.2	45.4	10.0	55	3.8	40.0	8.8	7	55.3	27.3	10.4	19	3.8	0.8
9.9		42.9	57.8	10.6		17.8	29.4	9.0	8	8.4	59.7	9.5		12.3	31.2
11.0		48.2	24.0	8.6		27.3	53.0	10.1		16.8	11.9	10.6		12.8	57.3
9.2		51.2	9.9	9.4		32.3	42.1	9.5		46.3	20.9	9.3		51.8	6.6
10.0	42	29.2	3.0	9.7		51.8	11.1	9.7		51.8	15.8	9.0	20	10.8	54.0
9.1		52.7	31.1	9.6		53.3	37.2	9.6		52.8	42.5	8.8		22.3	35.8
10.8	43	31.2	44.8	10.2		55.3	10.5	9.2		53.8	21.7	10.0		29.8	10.5
9.7		38.2	6.6	10.6	56	14.2	58.1	10.8	9	44.3	7.9	9.0		38.3	54.9
10.0		45.7	21.3	9.6		20.5	23.7	10.1		49.8	21.7	10.2		47.3	3.5
10.6		49.7	15.0	9.2		28.3	26.2	10.6		50.8	25.1	10.5	21	3.8	10.7
10.4	44	12.2	17.0	9.4		28.3	49.9	10.4		54.3	18.6	9.6		6.8	45.1
9.0		21.7	1.9	10.3		32.5	42.0	10.0	10	35.8	8.8	10.0		45.9	24.5
8.0		25.7	38.6	8.8		33.3	51.3	9.6		43.8	40.8	9.8		47.1	47.0
10.8		46.2	51.4	8.6		35.8	34.6	10.0		52.3	45.2	11.0		51.1	44.9
9.2		50.7	38.8	8.6		47.3	35.3	8.6		56.3	18.8	10.4		59.9	43.2
9.6		51.2	43.2	10.0		49.3	54.1	8.4	11	28.3	5.5	7.5	22	24.5	40.4
8.2	45	8.2	11.3	9.4		54.3	51.0	9.4		42.8	53.7	10.0		32.2	51.7
10.4		23.2	49.4	8.0	57	22.3	31.7	10.2		49.8	7.0	10.2		32.5	54.5
8.8		26.2	25.4	9.2		33.8	52.7	11.0		49.8	31.7	9.5		40.4	57.7
9.1		38.2	58.4	7.3		39.3	57.3	9.2	12	0.8	58.4	8.1		43.5	51.7
9.0		56.2	47.6	11.0		55.8	47.1	9.8		4.8	14.1	10.5		43.5	2.8
10.6		57.8	50.1	9.8		57.1	3.6	11.0		12.3	40.8	9.4		53.0	8.3
11.0	46	7.7	41.1	9.1		59.1	1.0	7.6		16.3	25.1	8.8	23	10.5	7.4
9.8		23.7	1.2	10.8	58	5.8	43.7	10.1		43.3	28.3	9.0		12.5	27.5
8.0		53.7	46.7	11.0		22.3	16.8	8.8		48.8	42.0	10.5		14.1	57.4
9.4	47	0.2	40.2	10.1		43.8	11.9	10.2	13	24.3	5.5	8.7		27.5	44.9
9.6		40.2	52.6	9.7		50.3	25.8	10.1		40.3	54.5	8.2		36.6	56.7
10.8		41.2	19.3	11.0		55.8	44.3	10.0		59.3	14.2	8.2		52.5	11.2
9.9		48.2	55.7	10.8	59	34.8	4.2	9.8	14	4.3	47.3	10.2	24	17.5	21.8
9.4		59.2	27.7	10.0		51.8	44.5	9.8		25.8	10.4	9.6		38.0	14.2
10.8	48	0.2	44.8	8.8		59.8	55.4	9.0		26.3	39.8	8.6		39.5	3.4
10.8		15.2	59.0	9.0	0	4.3	45.5	9.0		28.8	48.9	9.2		56.0	41.5
10.6		27.2	19.7	10.1		7.8	50.9	11.0		33.3	25.6	10.2		56.5	36.5
10.2		30.7	37.3	8.2		28.8	22.1	10.6		46.3	51.1	9.4	25	7.0	4.9
11.0		32.7	39.2	9.8		39.8	18.5	10.2	15	4.8	24.6	9.4		24.2	52.1
10.8		46.2	17.4	10.1		57.3	7.4	9.6		6.8	48.7	9.6		51.2	24.3
10.8		53.7	42.1	9.7	1	2.8	8.5	10.1		14.8	25.9	10.4		54.2	16.4
8.8		59.9	57.2	10.5		3.3	0.1	8.8		19.8	17.8	9.5		59.2	49.7
10.8	49	26.2	51.3	9.2		7.8	14.9	10.2		46.8	40.6	10.5	26	18.2	40.0
10.4		30.2	41.4	9.0		11.8	9.6	10.6		55.3	38.1	9.2		30.7	23.8
9.2		37.7	23.1	9.6		57.8	36.8	9.3		57.8	31.1	9.5		32.2	37.4
9.0		42.2	40.7	9.3	2	29.8	28.5	10.6		57.8	58.1	10.0		33.7	7.4
10.8		45.2	3.6	9.3		56.8	14.2	10.2	16	3.8	13.4	10.5		42.9	28.4
9.9		45.2	45.0	9.2	3	12.8	22.5	10.4		26.3	10.1	10.0		47.2	27.2
8.1		56.2	37.6	11.0		16.0	2.3	9.8		40.3	14.4	10.4	27	15.7	26.0
10.8	50	5.7	36.1	9.6		43.8	23.5	10.0		46.6	0.9	9.4	28	18.7	48.5
10.4		11.2	11.8	9.8		56.8	43.4	10.1		51.3	3.6	8.6		25.2	20.0
10.6		14.2	18.4	9.0	4	29.8	15.2	10.6		55.0	57.8	9.4		38.2	48.2
11.0		19.3	22.2	11.0		32.8	23.3	10.8		58.8	53.5	10.5		40.7	17.7
10.8		32.7	33.3	10.2		44.8	46.1	9.0	17	13.8	42.7	8.9	29	4.7	32.2
9.7	51	7.7	3.2	8.6		56.3	5.3	8.6		43.3	34.3	9.2		21.9	29.0
10.3		9.2	8.7	10.4	5	14.3	48.1	8.8		57.3	51.6	8.9		36.4	52.9
8.6		32.7	47.3	7.6		24.8	30.3	9.8	18	1.3	49.9	9.4	30	2.4	12.9
9.0		48.2	54.4	10.5	-6	13.3	35.7	9.3		25.8	48.7	10.0		11.4	48.2
11.0	52	2.3	37.9	9.0		13.3	4.2	9.7		28.8	38.9	6.8		14.0	46.7
9.4		5.3	27.4	10.4		33.8	18.9	7.6		31.3	51.9	9.2		16.5	25.3
2.5pr.	+0 57.4		+2.6		+0 57.0		+2.2		+0 56.7		+1.7		+0 56.6		+1.8

841-900.			901-960.			961-1020.			1021-1080.		
mag.	5 ^h	-31°	mag.	5 ^h	-31°	mag.	5 ^h -6 ^h	-31°	mag.	6 ^h	-31°
9 ⁸	30 20 ⁰	35 ⁰	10 ⁵	42 23 ⁴	31 ⁹	9 ¹	53 16 ²	39 ⁹ 9 ⁵	10 ⁰	2 37 ⁸	38 ⁵
10 ²	22 ⁵	48 ⁸	10 ⁵	36 ⁴	2 ³	9 ⁴	21 ⁷	13 ⁶	10 ⁴	42 ⁸	3 ³
10 ⁴	25 ⁰	23 ⁹	10 ⁵	49 ⁸	11 ⁷	9 ⁷	32 ⁷	7 ⁶	10 ⁴	46 ⁸	43 ⁶
8 ⁹	36 ⁵	30 ¹	10 ⁰	53 ⁴	36 ¹	8 ⁸	42 ⁰	2 ⁰ 9 ⁰ =	10 ²	51 ⁵	58 ⁹
10 ⁴	39 ⁰	55 ¹	8 ⁰	54 ⁴	20 ⁶ 8 ⁵ =	8 ⁵	45 ⁷	53 ⁴ 9 ⁵ G	10 ²	3 1 ⁸	10 ²
9 ⁸	59 ⁵	10 ⁴	9 ⁶	54 ⁹	7 ⁴	9 ⁰	47 ²	45 ²	10 ⁴	12 ⁸	28 ⁴
8 ⁹	31 0 ⁰	31 ⁶	10 ⁵	43 0 ⁸	14 ¹	8 ⁸	54 3 ⁷	32 ⁴	10 ⁴	15 ⁸	26 ³
9 ⁶	1 ⁰	29 ¹	10 ⁵	12 ⁴	13 ⁰	10 ²	16 ²	59 ²	9 ⁷	24 ³	10 ¹
9 ⁶	14 ⁷	9 ⁰	10 ⁴	41 ⁷	57 ⁸	9 ⁰	36 ⁷	37 ⁵ 9 ⁰	9 ⁷	32 ³	55 ⁵
10 ⁵	44 ⁰	10 ⁰	10 ²	45 ⁸	9 ⁰	10 ⁴	42 ⁷	39 ¹	8 ²	33 ¹	20 ⁷ 9 ⁰ G-
9 ⁸	46 ⁵	43 ²	10 ⁰	45 ⁹	19 ²	9 ⁶	44 ⁷	28 ⁰	9 ⁴	40 ⁹	59 ²
9 ⁴	53 ⁰	42 ⁸	9 ²	50 ⁴	48 ⁷	10 ⁴	55 7 ²	3 ²	10 ⁰	54 ¹	8 ⁶
10 ⁵	32 0 ⁰	45 ⁰	9 ⁴	50 ⁹	17 ⁶ 9 ⁵	9 ⁴	12 ²	30 ⁸	8 ⁸	4 5 ¹	34 ⁰
9 ⁸	3 ⁰	42 ⁶	9 ⁸	51 ²	23 ⁰	10 ⁴	36 ⁸	39 ⁸	9 ⁴	16 ¹	21 ⁸ 9 ⁵
10 ⁴	3 ⁰	45 ¹	10 ⁴	44 1 ³	17 ⁴	9 ⁵	38 ⁸	36 ⁴	10 ²	30 ¹	20 ⁵
9 ⁰	13 ⁰	45 ⁰	8 ⁸	1 ⁷	39 ⁷ 9 ⁰	8 ⁶	40 ⁰	3 ⁰ 8 ² G≡	9 ⁹	30 ⁶	22 ⁰
9 ⁵	33 ⁵	51 ⁸	8 ⁰	22 ²	43 ⁸ 7 ⁸ G	10 ⁴	56 27 ⁸	21 ⁸	8 ⁸	40 ¹	50 ⁸ 8 ⁵ G-
10 ⁰	35 ⁷	36 ²	9 ⁶	30 ²	23 ⁶	8 ⁵	29 ³	43 ⁸ 8 ⁵ G-	8 ⁴	46 ¹	0 ³ 8 ⁵ GSa
9 ⁰	43 ⁵	10 ⁷ 9 ⁰ GWa	8 ⁷	35 ²	7 ⁹ 9 ⁰ a	9 ⁶	29 ³	26 ⁰	10 ⁴	5 2 ⁶	17 ⁴
9 ⁵	44 ⁶	47 ⁹	9 ²	45 27 ²	45 ²	9 ⁶	45 ⁸	8 ⁰	9 ⁹	20 ⁶	21 ²
8 ²	47 ¹	8 ² 7 ⁵ GSa	9 ²	50 ²	12 ⁶	9 ⁴	53 ⁸	23 ⁸	8 ⁸	27 ¹	40 ⁰
9 ⁶	33 59 ¹	41 ¹	9 ⁶	55 ⁷	1 ⁵	10 ⁴	55 ³	33 ⁰	8 ⁸	33 ¹	21 ⁹ =
10 ⁵	34 16 ¹	33 ⁴	9 ⁵	57 ⁴	0 ⁴ 9 ⁵	9 ¹	55 ⁸	32 ⁸	10 ⁰	36 ²	51 ⁰
9 ²	50 ⁶	4 ⁹	10 ⁴	59 ¹	49 ²	10 ²	59 ³	28 ¹	9 ⁵	38 ¹	50 ⁵
7 ⁴	35 23 ⁶	18 ⁷ 8 ⁰ G≡	9 ²	59 ⁹	0 ² 9 ⁵	10 ⁴	57 11 ⁸	3 ⁴	9 ⁵	58 ⁸	1 ⁰
9 ²	31 ⁶	38 ⁹	10 ⁴ *	46 2 ³	59 ⁸	9 ²	15 ³	49 ⁴	8 ⁶	6 21 ¹	44 ⁸ 8 ⁰
9 ⁸	40 ⁶	26 ⁹	9 ⁸	2 ⁷	31 ⁶	10 ⁴	36 ³	23 ⁰	9 ²	21 ¹	27 ⁸ -
10 ²	44 ⁶	27 ⁸	10 ²	26 ¹	20 ⁵	8 ⁸	44 ⁸	56 ²	9 ⁸	43 ⁶	16 ⁸
9 ⁰	57 ¹	16 ⁰	10 ²	38 ⁹	31 ⁰	10 ⁴	58 4 ⁸	42 ⁸	8 ⁵	51 ⁶	29 ⁴
10 ²	36 0 ¹	39 ²	9 ¹	49 ¹	32 ¹ 9 ⁰ -	10 ⁴	15 ⁸	19 ⁶	10 ²	54 ¹	55 ⁵
8 ⁹	6 ¹	27 ⁹ 8 ⁵ -	8 ⁶	53 ⁶	47 ⁷ 8 ⁵	10 ⁴	39 ⁸	35 ²	9 ⁷	7 0 ⁶	32 ²
8 ²	10 ¹	24 ² 8 ⁰ G≡	10 ⁴	47 8 ⁶	15 ⁶	9 ⁵	59 3 ⁰	1 ⁰ -	8 ⁶	3 ¹	56 ⁸ 8 ⁸ -
10 ⁰	15 ⁶	35 ¹	9 ⁰	20 ¹	31 ⁶ 9 ⁰ -	10 ⁴	24 ⁸	3 ⁸	9 ⁶	24 ⁴	58 ²
9 ⁴	17 ⁶	29 ⁷	10 ⁰	42 ⁶	6 ⁰	9 ⁷	25 ⁸	13 ⁸	10 ⁴	33 ¹	18 ⁶
9 ⁰	27 ⁶	17 ⁵ 8 ⁵ G-	10 ⁰	46 ¹	48 ⁵	9 ¹	48 ⁸	27 ⁴	9 ²	38 ¹	13 ⁶
10 ⁰	45 ⁶	37 ³	9 ⁹	58 ¹	37 ⁵	9 ⁵	54 ³	6 ² 9 ⁵ G-	10 ⁴	8 13 ¹	19 ⁶
10 ²	59 ⁶	42 ⁹	9 ⁹	48 16 ⁷	28 ⁷	9 ⁸	54 ³	16 ⁶	9 ²	27 ¹	54 ⁸
9 ⁴	37 1 ³	22 ⁴	9 ²	23 ²	48 ⁶	9 ²	0 12 ³	7 ⁸	10 ²	28 ⁶	52 ⁸
9 ⁰	27 ⁰	58 ² 8 ⁵	10 ⁴	37 ⁷	44 ³	9 ²	14 ⁸	34 ⁴	10 ⁴	9 0 ¹	14 ⁵
9 ⁶	43 ³	55 ⁶	9 ¹	49 1 ⁷	42 ⁶ 9 ⁰	9 ⁷	15 ⁸	3 ³	10 ⁴	25 ⁶	4 ⁰
8 ⁷	50 ⁰	57 ⁶ 9 ⁰	10 ⁴	1 ⁷	30 ⁴	9 ⁶	18 ³	18 ⁴	10 ²	10 3 ⁰	37 ⁵
10 ⁴	50 ⁶	58 ⁵	10 ⁰	9 ²	30 ⁹ 9 ⁰ G	10 ²	38 ³	34 ⁴	10 ²	11 ¹	48 ⁹
10 ²	38 46 ⁸	12 ²	8 ⁸	40 ⁷	9 ⁶ 8 ² =	9 ²	42 ⁸	13 ⁶	9 ⁴	14 ⁴	20 ⁷
8 ⁹	39 1 ³	7 ² 9 ² G	9 ⁷	57 ²	15 ²	10 ⁴	56 ⁸	47 ⁹	9 ⁶	27 ⁶	32 ⁷
9 ⁴	12 ⁸	12 ⁹	9 ⁷	50 8 ²	7 ⁵	9 ⁰	58 ⁸	22 ⁸ 8 ⁵ G-	10 ⁰	30 ⁶	44 ⁰
9 ⁸	20 ⁸	42 ⁴	9 ¹	19 ⁷	38 ¹	9 ⁵	1 12 ⁸	13 ⁴	10 ²	40 ⁹	0 ²
9 ⁰	25 ⁸	37 ⁴	8 ⁴	51 3 ²	53 ⁸ 8 ² G	10 ⁴	27 ³	57 ⁴	9 ³	52 ⁴	49 ⁹
9 ⁸	52 ³	52 ²	6 ⁷	17 ²	33 ⁰ 7 ² GS _{tr}	10 ⁰	28 ⁸	33 ⁶	10 ²	57 ⁶	51 ⁶
10 ⁵	56 ³	14 ⁰	9 ⁰	33 ⁰	2 ⁶	9 ⁷	33 ³	30 ⁰	10 ²	11 7 ⁰	57 ¹
7 ²	40 31 ⁹	43 ³ 7 ⁰ GS-	6 ²	39 ²	24 ⁰ 5 ⁸ GS _{tr}	9 ⁰	35 ⁸	1 ⁴ 9 ⁰	9 ⁸	20 ¹	27 ²
10 ⁰	40 ⁹	16 ²	10 ⁰	46 ⁷	27 ²	8 ¹	36 ⁸	39 ⁴	10 ²	26 ⁰	11 ⁸
10 ²	42 ⁹	11 ⁹	10 ⁰	47 ⁷	26 ²	10 ⁰	40 ³	52 ¹	10 ²	12 1 ⁶	52 ²
9 ²	45 ⁴	17 ¹	7 ³	52 9 ⁵	59 ⁶ 6 ⁸ GS _t	10 ⁰	41 ⁸	52 ³	9 ⁰	4 ¹	37 ²
8 ²	58 ⁹	33 ⁹ =	9 ⁸	13 ⁵	59 ⁰	10 ⁴	2 2 ⁰	57 ⁹	8 ⁴	8 ¹	31 ⁷ 8 ⁵ G≡
10 ²	41 12 ⁴	51 ⁴	10 ²	14 ⁶	52 ⁴	10 ²	2 ³	12 ²	10 ⁰	27 ⁰	18 ⁴
10 ⁴	42 0 ⁹	11 ²	8 ⁶	23 ²	16 ² 8 ⁵	8 ²	3 ³	24 ² 8 ⁰ G=	9 ¹	35 ¹	55 ¹
9 ⁴	2 ⁴	41 ⁴	10 ²	43 ⁰	0 ²	8 ⁶	4 ⁵	59 ²	10 ⁰	53 ⁶	9 ⁹
10 ⁴	5 ⁴	11 ⁰	10 ⁴	51 ²	36 ⁷	9 ⁸	6 ³	43 ⁹	9 ⁸	13 4 ¹	15 ⁷
10 ²	8 ⁹	4 ³	9 ⁹	54 ²	27 ⁴	9 ⁰	11 ⁸	30 ⁰ 9 ⁰ -	10 ⁰	15 ⁶	21 ⁷
10 ²	18 ⁸	51 ⁵	8 ⁴	53 16 ²	56 ⁰ 7 ³ G	7 ⁹	26 ⁸	53 ¹ 8 ⁰ G-	10 ²	15 ⁶	25 ³
25 ^{pr.}	+ 0 56 ⁴	+ 0 ⁹		+ 0 56 ⁴	+ 0 ⁵		+ 0 56 ³	+ 0 ¹		+ 0 56 ⁴	- 0 ³

1081-1140.			1141-1200.			1201-1260.			1261-1320.		
mag.	6h.	-31°	mag.	6h.	-31°	mag.	6h.	-31°	mag.	6h.	-31°
10.2	13	16.5	9.4	20	52.1	9.6	26	7.5	7.4	31	46.8
9.8		35.6	8.8		53.6	9.6		11.0	10.2		50.3
9.2		44.1	10.2		54.1	9.8		17.0	10.2	32	51.8
10.2		49.9	10.2		54.6	10.2		25.8	9.8		58.8
10.2		59.4	8.4		56.1	9.6		30.8	9.6		5.8
9.4	14	4.9	10.2		56.3	10.2		31.7	9.6		8.3
10.2		27.6	9.1	21	6.1	10.2		27 13.3	10.0		10.3
9.6		36.4	10.2		6.6	10.2		22.8	9.8		11.8
10.2		52.9	10.2		11.6	9.2		23.8	9.8		12.8
10.2		54.9	9.6		16.1	10.0		24.8	10.0		21.8
			10.2		17.6	9.1		28.8	9.4		23.4
9.3	15	3.4	9.0		27.1	8.8		34.3	10.0		24.6
9.8		7.4	10.0		44.6	10.0		34.8	9.4		41.3
10.2		21.6	9.8		47.6	9.0		38.3	9.8		42.3
9.0		28.6	10.0		56.0	10.2		39.1	9.0		46.3
10.2		42.4	10.2		5.1	9.8		47.8	9.4		50.6
9.1		45.4	8.2	22	8.6	10.2		52.8	10.0		57.8
9.3		57.4	10.2		12.6	10.2		58.8	10.0	33	5.8
10.2	16	6.9	8.8		27.1	10.2		58.9	9.4		12.3
9.4		22.2	9.4		33.3	9.8		28 25.8	10.0		30.3
9.6		32.9	9.8		35.0	10.2		26.3	9.6		34.8
10.0		35.4	10.2		39.2	10.0		51.4	9.8		36.8
10.2	17	10.9	8.8	23	3.5	10.2		56.3	9.3		38.8
9.1		12.4	9.4		7.0	8.8	29	2.8	9.6		44.3
9.3		26.4	10.0		7.2	9.8		5.8	8.7		47.8
9.1		40.9	10.0		11.0	9.0		22.8	9.3		48.3
8.8		50.9	10.2		12.5	9.0		26.3	10.0		51.4
9.0	18	4.9	9.8		16.5	10.2		26.8	10.0	34	1.8
9.6		4.9	10.0		18.5	10.2		33.9	10.2		10.8
9.4		6.9	9.3		25.0	9.4		51.8	10.2		11.8
10.2		15.9	10.2		33.2	10.0		57.8	9.9		11.8
9.0		32.4	9.3		47.5	10.0	30	2.8	10.2		13.3
7.6		33.9	9.3		51.5	9.6		3.9	8.8		15.6
10.2		36.6	9.1		53.0	10.0		11.8	10.2		21.3
9.6		37.4	9.4	24	10.5	9.4		13.2	10.2		22.7
9.6		43.9	10.0		15.0	8.8		13.8	9.1		22.8
9.6		43.9	10.2		19.2	8.0		15.8	9.4		26.8
10.0		54.6	9.4		26.0	9.6		18.3	9.6		28.8
9.4		55.1	10.0		37.0	8.7		26.3	7.2		32.8
9.0	19	21.1	10.2		43.0	9.8		31.8	9.6		32.8
10.2		21.4	10.0		46.0	10.2		32.9	9.1		33.9
10.2		22.1	9.4		54.0	9.1		35.3	9.4	35	32.4
8.2		22.1	10.0	25	2.2	8.8		41.3	9.4	36	47.9
10.2		23.1	10.2		3.0	10.2		41.3	9.6		49.9
10.2		23.6	9.0		10.0	9.0		42.8	9.8		51.9
9.0		32.1	7.6		16.5	7.6		44.8	7.5	37	35.9
8.2		32.1	10.2		20.5	9.4		44.8	9.8		58.4
8.6		43.1	10.2		21.2	10.0		46.8	8.8	38	3.4
8.4		55.1	10.0		24.0	10.0		54.3	9.2		18.9
9.3	20	0.1	9.4		25.0	10.2		54.8	9.0		25.9
8.2		5.1	9.6		27.0	10.0		7.3	9.4		50.9
9.1		7.6	10.0		27.5	10.2		8.3	9.0	39	23.3
10.2		10.9	9.4		30.7	10.2		8.3	9.8		47.4
10.0		11.6	10.0		35.5	10.2		11.8	9.8		57.4
9.6		18.6	9.0		38.0	10.0		12.8	9.8	40	2.9
8.2		33.1	9.6		40.0	9.4		20.8	7.6		24.0
10.0		36.3	9.6		42.5	10.0		24.3	9.6		37.5
9.0		38.1	10.0		50.0	9.8		32.5	9.0		40.0
8.8		42.1	9.8		50.5	10.0		36.3	6.9		42.5
10.2		46.1	9.8		56.0	9.6		45.8	8.5		50.0
9.2		47.6									
25pr.		+0 56.4			+0 56.4			+0 56.5			+0 56.5
		-0.7			-0.8			-11			-12

1321-1380.				1381-1440.				1441-1500.				1501-1560.											
mag.	6h.		-31°	mag.	6h.-7h.		-31°	mag.	7h.		-31°	mag.	7h.		-31°								
	m	s			m	s			m	s			m	s									
9.8	40	55.5	19.7	9.0	9.8	57	26.7	28.7	9.6	8	13.9	24.8	8.6	17	3.1	29.0							
9.4	41	9.5	26.0	9.8		40.4	32.6	9.6		20.7	30.2	8.4		12.4	57.2								
9.0		55.3	1.9	9.5	9.8		57.2	43.0	9.6		21.9	8.8	8.6		15.6	13.0							
9.8	42	15.5	26.1	9.2	58	6.2	22.8	9.0	9.6		22.7	10.7	9.6		18.4	53.9							
9.0		31.0	9.0	9.0	9.1		16.2	7.4	9.5	9.6		30.7	51.6	9.5	8.7		19.6	46.7					
8.8		42.0	53.3	8.2	G-	8.8		46.5	37.3	9.0	9.6		47.7	33.3	8.9		25.1	47.7					
8.8	43	22.0	29.3	9.5	9.6		57.7	7.2	9.6		9	11.9	16.5	9.6		32.4	24.4						
9.8		26.0	41.7	9.2	59	19.7	1.0	9.5	9.5		12.9	24.7	9.6		32.5	46.6							
9.0		39.0	20.4	9.0	8.7		24.7	37.2	8.8		14.2	12.0	9.2		35.5	25.2							
9.6		48.0	11.6	8.5		45.7	47.7	8.0	G	7.7		16.2	25.7	7.5	G≡	8.9		42.5	52.7				
8.0		54.0	13.1	8.0	G≡	9.6		47.7	3.1	9.4		20.7	52.4	8.6		50.0	0.4	8.0	GW≡				
8.4	44	36.0	24.6	9.0	7.8		52.7	49.3	8.0	-	9.2		25.7	43.7	7.2		50.0	48.4	7.5	GStπ			
8.5		55.5	7.1	=	9.6	0	0.2	11.8	9.6		26.2	20.3	6.3	18	14.5	41.0	6.0	GStπ					
6.3	45	40.5	33.7	6.0	GStπ	7.6		1.2	45.6	9.4		42.7	17.4	9.2		24.0	41.0	9.0					
8.0		43.0	19.8	8.5	G	9.2		5.7	23.7	9.4		43.7	23.8	9.0	8.0		29.0	48.3	8.0	G			
7.8		43.5	33.3	8.0	GWtπ	8.7		13.7	20.3	7.5	G=	7.8		47.2	16.7	8.0	G≡	8.8		33.0	14.7		
7.8		54.0	8.0	7.5	GSa	9.6		17.7	5.9	9.6		53.2	39.6	9.6		34.0	35.7	8.5		43.0	31.5		
8.8	46	13.4	58.6	8.5	9.6		34.0	58.0	9.6	10	5.7	11.9	8.1		46.0	3.7	8.5	W≡					
9.8		53.0	1.8	9.6		41.7	15.0	9.5	9.6		7.2	40.0	6.2		46.3	57.7	6.0	GStπ					
9.2	47	2.0	40.9	9.4		50.7	44.3	8.5		33.2	41.4	9.0	9.6		51.8	2.1	8.7	19	0.5	54.7	9.0		
7.5		37.0	51.8	7.7	G-	9.2	1	32.2	11.8	9.0	G	9.6		5.0	29.0	9.5		0.5	10.3				
8.8		47.0	4.1	9.5	8.0		50.2	53.9	8.5	9.6		40.0	44.7	9.0	9.2		7.0	16.3	8.7		6.5	48.7	9.0
9.8	48	2.0	21.7	9.2		54.2	42.2	9.5	9.2		47.7	19.9	9.0	9.2		16.0	21.8	8.5		15.5	43.0		
9.8		7.0	16.3	9.6	2	15.7	44.0	9.0	9.2	II	15.7	31.6	8.7		6.5	48.7	9.0						
9.8		16.0	21.8	9.0		20.7	35.8	9.0	8.4		23.2	3.2	-	8.5		15.5	43.0	9.4		15.5	43.0		
9.8		35.5	39.9	9.0	9.6		22.7	5.1	9.6		32.9	2.7	8.5		16.5	39.0	7.5	G					
8.5		40.5	3.2	9.5	9.6		28.2	5.7	8.2		33.6	49.2	7.0	G-	8.2		16.5	55.0	8.5				
8.8		48.0	37.1	8.5	8.1		37.7	39.6	8.5	≡	8.4		38.6	3.8	-	8.3		20.0	47.0	8.5			
7.8	49	11.0	27.7	8.0	G≡	9.5		42.2	11.1	9.2		42.1	4.0	8.5		20.5	38.9	9.1		21.0	31.5		
9.6		33.0	31.2	9.6		44.2	51.3	9.0	9.6	12	5.4	3.7	9.1		50.0	49.4	9.0						
6.7		36.0	38.7	7.0	GS≡	8.7		46.2	36.7	8.5	=	9.5		39.4	33.6	9.0	9.1		53.0	36.5	9.0		
9.0		41.0	8.5	8.9		52.2	27.8	8.5	9.6		45.6	18.9	9.6		55.1	55.2	9.0						
9.0	50	6.0	32.6	8.0	GW	8.9		55.7	34.4	9.5	9.6		50.1	53.7	9.0	9.6		53.5	28.8				
8.4		8.5	20.4	9.0	9.6	3	3.2	29.3	8.5		55.1	55.2	9.0	9.1		54.0	32.2	8.0	GW-c				
8.4		24.0	13.3	9.0	8.3		13.2	12.8	9.0	GW	9.1		55.6	46.4	9.6		56.5	33.8	5.0	GStπ			
9.6		53.2	12.7	9.0	8.4		14.7	18.1	9.0	G	9.6	13	6.1	16.6	7.9		15.5	58.9	9.0				
6.4	51	12.2	37.7	6.5	GS≡	9.6		17.7	36.0	8.5		6.1	28.0	8.5	≡	7.3		36.0	10.3				
8.8		33.2	5.2	8.5	=	8.7		22.2	45.4	9.2		13.6	8.2	8.5	20	15.5	58.9	9.0					
9.4		43.2	23.0	7.8		24.2	13.8	9.5	GS-	9.5		23.1	48.9	9.0	9.1		37.3	59.2	9.0				
8.8		52.2	13.0	8.0	G	9.5		50.7	13.3	9.0	8.9		24.1	31.6	8.3		47.0	9.0					
9.8	52	0.1	54.5	9.6		55.7	31.2	8.9		41.6	46.2	9.6		47.0	9.0	7.2		55.5	29.4	7.0	GStπ		
9.8		26.2	33.0	9.6	4	14.7	31.7	9.6		50.6	55.5	9.0	9.6		57.5	44.8	9.6		22.0	23.7	7.5	G≡	
9.8		29.7	15.0	10.0	8.7		17.7	42.6	9.0	8.1		55.6	0.0	8.0	GW≡	9.6	21	13.4	23.8				
9.4		36.2	13.4	9.0	G	7.7		23.7	44.0	8.0	G≡	8.5		9.1	38.1	9.0	9.6		22.7	58.7			
8.2		42.2	13.4	8.5	G≡	9.4		25.7	12.5	9.6		9.1	38.1	9.0	9.8		23.7	43.7					
9.8		53.2	49.6	8.3		32.7	16.4	9.0	9.6		13.1	12.0	10.0		24.3	48.3	9.8		25.8	14.9			
9.0		56.7	2.0	9.4	5	25.3	0.1	9.6		23.1	26.4	9.4		26.4	2.5	9.4		26.4	2.5				
9.8	53	12.2	12.2	8.5		31.2	38.6	9.0	9.6		52.6	32.2	9.7		42.3	34.9	10.0		42.7	25.6			
9.8		22.7	53.8	9.6		32.2	57.0	8.9		5.6	34.0	9.5	9.7		43.8	19.9	10.0		51.7	22.0			
9.8		34.2	15.8	8.4		56.7	11.7	=	9.6		12.1	53.3	10.0		55.3	22.7	10.0	22	0.7	25.5			
9.8		58.7	51.8	9.5	6	3.2	28.0	8.6		17.1	28.5	9.0	9.6		57.5	44.8	10.0		55.3	22.7			
9.2	54	29.7	21.1	9.0	9.6		14.9	1.0	9.6		17.6	7.4	10.0		57.5	44.8	10.0		57.5	44.8			
9.8		54.7	7.0	9.6		33.7	36.0	9.5	9.4		34.1	58.0	9.0	9.6		22.0	23.7	7.5	G≡				
9.4	55	0.7	7.8	9.5	8.7		46.2	44.6	9.0	8.6		37.1	25.3	8.5	≡	9.6		23.7	43.7				
8.4		16.2	3.5	8.5	G=	9.6		50.2	16.8	9.6		39.1	19.0	9.6		24.3	48.3	9.6		25.8	14.9		
9.4		18.7	24.0	9.2	7	7.2	16.3	9.6		42.1	56.4	8.5	10.0		25.8	14.9	9.4		26.4	2.5			
8.4		22.7	27.2	9.6		16.7	41.8	8.3		42.1	56.4	8.5	9.6		26.4	2.5	9.7		42.3	34.9			
9.0		30.2	35.8	8.4		38.7	46.3	7.5	G	8.4	16	4.1	48.4	8.5	G-	9.6		27.7	43.8				
9.8	56	0.2	32.5	9.6		46.2	4.1	9.4		27.1	43.8	9.5		3.2	2.1	8.7		4.5	57.5	8.5	G-		
9.0		40.2	11.0	9.0	9.2		47.2	59.1	8.6		29.6	47.4	9.0	9.8		25.1	25.7	9.8		25.1	25.7		
25Pr.	+0	568	-18	+0	571	-23	+0	573	-26	+0	575	-28											

1561-1620.				1621-1680.				1681-1740.				1741-1800.			
		7 ^h .	-31°			7 ^h .	-31°			7 ^h .	-31°			7 ^h .	-31°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10°0	22	33.8	27.9	9°2	26	56.7	24.9	9°4	30	44.3	34.1	9°4	34	12.4	5.6
8°6		36.3	26.1	9°3	27	6.2	31.6	9°4		46.3	15.1	9°4		13.9	47.9
10°0		38.5	0.7	9°4		13.2	52.8	9°6		53.3	19.0	10°0		17.4	26.5
10°0		39.3	3.0	8°7		16.7	19.4	9°8		57.3	53.1	8°6		18.4	49.2
9°5		39.8	0.3	10°0		17.2	20.2	8°6	31	0.8	55.8	10°0		24.4	36.0
8°6		42.9	41.2	9°3		18.2	29.9	9°8		6.8	3.0	8°4		26.4	1.1
9°5		44.4	16.1	10°0		33.2	23.6	10°0		10.4	56.1	9°5		31.9	21.6
10°0		44.9	26.3	10°0		33.3	44.3	9°8		11.9	39.1	10°0		32.4	55.9
10°0		45.4	23.7	10°0		34.5	1.8	9°2		14.4	37.8	10°0		33.4	49.2
9°7		51.4	53.5	8°8		52.2	0.0	9°6		14.6	1.7	10°0		34.4	6.4
9°8		54.4	25.0	9°5		53.7	16.9	9°7		16.4	10.9	9°4		35.9	35.4
8°9		58.4	54.7	9°5		54.2	5.1	9°3		16.4	19.1	8°8		49.4	45.8
8°8	23	7.4	41.6	10°0	28	0.7	33.3	9°4		17.4	5.9	9°8		52.4	54.2
10°0		11.4	54.0	9°4		1.2	47.7	9°4		19.9	6.8	10°0		53.4	54.2
10°0		11.9	44.0	10°0		3.3	16.5	10°0		22.4	55.5	10°0		56.4	31.4
10°0		12.9	5.8	9°8		4.2	47.7	10°0		23.4	13.6	9°2		58.4	11.6
10°0		12.9	34.6	8°9		7.2	11.6	9°8		24.4	28.9	8°4	35	7.4	13.5
10°0		19.4	48.8	9°4		15.2	5.2	10°0		24.4	53.4	9°8		19.4	7.6
9°6		20.2	10.1	9°7		21.7	50.5	10°0		36.4	25.2	10°0		23.4	14.7
9°4		22.4	54.4	9°4		22.2	15.3	10°0		36.4	57.1	8°9		26.4	51.6
9°4		22.4	32.5	10°0		33.2	47.6	8°7		42.9	56.2	9°6		27.4	13.2
8°7		36.4	52.6	9°6		33.8	52.9	10°0		42.9	51.0	10°0		33.4	26.9
10°0		39.0	1.8	8°9		38.8	39.9	8°8		43.4	2.6	9°5		36.4	24.4
8°8		39.0	10.1	9°4		46.3	13.9	8°9		57.4	17.9	9°8		38.4	0.6
9°5		51.9	43.3	9°7		46.3	46.0	9°4	32	2.4	18.9	9°8		40.9	42.2
6°2	24	2.9	35.4	10°0		46.3	3.0	9°4		8.6	2.4	10°0		43.4	32.9
9°4		12.4	24.2	9°4		47.3	38.8	10°0		10.0	4.4	9°6		46.4	24.2
5°6		15.9	11.9	9°8		49.3	16.1	9°2		9.2	5.4	10°0		47.4	25.0
9°4		16.9	38.9	9°4		52.3	8.1	10°0		15.4	41.1	9°2		47.4	50.2
9°4		21.7	56.9	9°5		53.3	17.5	10°0		16.4	48.5	9°7		48.4	20.6
10°0		23.4	56.0	8°9		53.8	38.5	9°4		16.9	50.6	9°5		48.4	58.4
9°8		24.4	13.0	9°2		54.3	3.9	8°8		24.4	59.1	9°4		55.4	34.9
9°2		25.9	7.4	9°5		54.6	1.1	9°4		26.4	37.4	9°5		55.9	22.7
10°0		42.9	43.9	10°0		55.5	14.9	9°2		50.4	19.0	9°6		55.9	22.5
10°0		42.9	25.9	9°2	29	1.8	32.3	9°8		50.4	43.2	9°2		55.9	8.2
10°0		43.4	25.4	9°8		3.5	34.5	10°0		52.4	47.5	8°2		56.4	13.7
10°0		45.9	17.6	9°4		4.8	11.3	10°0		56.4	10.3	9°4		56.4	25.5
9°2		50.4	38.4	9°5		10.3	41.7	10°0		57.4	17.3	10°0		57.4	25.6
8°6		51.9	53.9	9°6		22.3	55.2	10°0	33	7.4	35.2	9°8	36	0.4	26.0
10°0		52.1	11.6	10°0		25.5	56.1	7°6		8.9	50.9	10°0		1.3	24.7
9°8		54.4	27.1	10°0		26.8	34.7	10°0		8.9	27.1	9°0		1.3	39.1
8°9	25	12.2	1.8	9°5		33.3	46.6	10°0		9.9	17.3	8°4		2.3	22.2
9°5		25.7	46.9	9°7		36.3	43.2	9°4		19.4	47.9	9°5		3.3	16.0
9°5		32.2	17.0	8°7		40.8	52.2	7°8		20.4	10.2	9°6		3.3	29.1
9°5		32.2	15.8	9°2		41.4	57.8	9°8		25.4	1.8	8°8		3.3	24.0
9°6		38.2	47.7	10°0		44.5	35.6	9°5		27.4	53.3	9°4		3.3	23.8
10°0		44.7	12.2	10°0		46.5	20.5	9°7		34.5	58.8	9°6		5.3	17.4
9°4		45.7	15.4	8°8		51.3	11.1	8°9		36.4	14.0	10°0		9.3	58.1
10°0		46.3	32.8	9°4		53.3	25.8	10°0		37.4	58.9	9°7		11.5	58.0
9°8		47.2	13.9	9°0		53.8	10.0	9°8		37.4	43.5	9°8		12.3	23.6
9°8	26	6.2	44.2	10°0	30	5.3	12.0	8°4		38.4	34.7	9°6		13.3	30.2
8°8		6.7	4.8	9°4		6.3	47.5	9°3		38.4	3.7	10°0		14.2	45.6
9°8		8.7	54.7	10°0		14.8	31.3	10°0		40.4	35.1	9°4		18.3	35.6
10°0		12.2	13.4	9°8		16.5	20.6	9°2		52.4	51.0	9°5		27.3	17.1
9°4		14.2	54.5	10°0		17.5	11.2	9°4		52.4	2.0	9°8		28.3	43.5
9°4		17.2	50.9	8°6		19.8	14.0	9°3		52.9	29.9	9°8		28.3	48.0
9°4		23.2	50.0	9°2		30.3	4.2	9°7		53.4	18.5	10°0		29.3	13.6
9°5		23.7	25.6	9°4		38.8	54.1	8°4		53.9	26.7	8°5		40.8	6.0
8°6		29.2	7.7	9°8		40.3	33.5	9°7	34	3.9	14.0	10°0		46.8	39.1
9°0		46.2	14.6	10°0		42.5	10.8	9°8		4.5	58.7	9°8		47.3	28.0
25pr.		+ 0 57.7	- 3.0			+ 0 57.9	- 3.2			+ 0 58.0	- 3.3			+ 0 58.1	- 3.4

1801-1860.			1861-1920.			1921-1980.			1981-2040.		
mag.	7h.	-31°	mag.	7h.	-31°	mag.	7h.	-31°	mag.	7h.	-31°
9.6	36 48.3	57.0	9.8	40 6.3	32.0	10.0	43 28.6	52.0	9.4	48 13.1	11.8
9.8	53.2	48.5	9.2	6.8	36.4	10.0	31.1	36.9	8.5	20.6	29.0
8.9	56.3	23.6	9.5	10.3	54.0	9.4	47.6	10.9	9.7	28.6	22.2
9.2	37 5.8	25.6	10.0	14.3	26.0	9.4	48.6	16.6	9.4	30.6	26.2
10.0	6.2	49.5	9.2	17.8	11.4	7.2	48.6	18.4	9.8	31.6	34.8
7.5	12.3	47.2	10.0	20.8	18.0	10.0	44 10.1	51.4	9.8	52.1	12.3
10.0	12.3	42.1	8.9	27.3	4.6	9.8	13.6	30.2	9.4	52.6	32.9
10.0	16.3	6.4	9.8	27.8	27.0	10.0	19.6	49.6	9.4	54.6	8.2
9.0	16.8	24.0	9.4	28.3	19.1	9.0	23.6	39.7	9.8	55.1	52.7
9.2	17.2	24.1	8.7	29.0	36.3	9.8	26.6	54.2	9.8	56.6	22.2
10.0	19.8	25.2	10.0	29.0	41.7	9.5	30.1	28.0	8.4	49 13.1	23.8
10.0	25.2	38.2	10.0	30.5	48.4	10.0	32.6	5.4	9.4	21.6	2.9
9.8	27.8	19.6	10.0	31.5	20.3	10.0	35.5	58.2	9.0	23.6	9.8
8.4	32.3	26.8	10.0	32.5	36.8	9.2	46.6	16.2	9.7	23.6	54.9
9.3	35.8	30.7	8.9	33.5	41.6	9.8	48.6	44.8	8.8	42.6	18.0
9.4	36.3	12.8	10.0	36.5	23.9	8.8	49.6	15.6	9.8	45.6	13.5
10.0	47.0	58.7	9.6	38.5	2.0	9.2	51.6	55.0	9.8	51.6	44.5
9.4	50.3	41.7	9.4	40.5	35.1	9.8	45 1.1	43.0	9.8	51.6	25.5
9.8	53.3	12.2	8.4	43.0	53.0	10.0	3.6	5.1	9.8	54.6	20.3
9.8	38 0.3	58.8	10.0	43.5	16.7	8.8	6.6	19.0	7.6	56.6	12.4
9.0	2.8	21.6	9.5	47.5	3.2	10.0	12.6	10.3	9.7	50 1.6	42.6
10.0	7.5	59.0	9.0	48.0	57.5	10.0	17.8	59.5	9.8	27.6	32.3
10.0	7.8	15.6	9.8	50.5	3.9	10.0	18.6	39.1	9.4	38.6	33.9
8.5	10.3	36.4	10.0	52.5	10.1	9.4	22.1	19.9	9.7	40.1	5.4
9.0	14.3	4.3	8.8	53.5	33.1	9.8	31.1	51.8	9.2	41.6	59.8
8.9	19.3	26.6	8.8	58.0	6.6	8.6	31.1	51.0	9.8	51.6	37.4
10.0	27.8	15.0	10.0	41 2.5	48.5	9.5	33.9	45.8	9.8	51.6	20.6
9.8	33.3	11.0	9.8	8.0	28.8	9.6	34.9	46.6	9.6	55.6	32.5
9.0	33.3	49.0	10.0	15.5	10.0	10.0	36.6	51.9	9.8	51 36.6	5.9
9.4	36.3	31.1	9.3	16.5	29.3	9.5	38.9	38.8	9.4	38.6	17.8
10.0	37.3	5.7	9.6	28.0	0.9	9.7	40.6	25.1	9.7	49.6	53.8
9.8	39.3	53.9	10.0	28.5	2.2	9.8	42.6	43.3	9.4	56.6	45.2
10.0	41.3	38.3	10.0	29.0	48.0	10.0	42.6	20.2	9.8	52 15.6	35.1
9.2	44.3	30.9	9.2	39.0	50.4	10.0	43.6	20.1	9.8	25.1	16.6
10.0	45.8	7.7	9.8	40.5	14.9	9.5	44.9	5.7	9.8	34.6	16.8
10.0	46.3	2.6	9.8	41.5	2.3	9.6	47.6	29.7	9.8	34.6	33.1
9.5	47.3	4.2	9.2	42.5	0.9	8.7	54.9	12.6	9.8	36.6	40.9
9.8	47.3	31.5	9.4	54.2	59.3	10.0	57.4	57.4	9.2	44.1	27.3
10.0	48.3	3.8	9.4	55.0	51.3	9.4	46 6.6	6.6	9.4	46.6	11.3
9.5	53.3	21.4	9.3	56.5	49.3	9.0	6.8	52.9	9.4	51.6	53.9
8.6	58.3	49.6	9.4	57.5	8.7	10.0	10.6	37.6	9.7	52.1	53.8
8.8	39 1.3	10.2	9.5	57.5	27.3	8.6	16.1	18.2	8.6	52.6	33.1
10.0	3.3	55.8	8.6	42 4.5	53.3	9.6	16.6	52.8	9.4	53.6	17.0
8.5	12.5	2.2	9.2	7.5	33.1	9.8	20.9	56.8	9.0	55.8	0.7
10.0	16.8	23.8	10.0	10.7	27.9	9.8	21.1	39.0	8.6	53 11.6	46.1
9.8	17.3	33.0	8.8	11.0	41.7	9.8	22.1	5.5	8.8	19.1	5.9
8.2	18.3	22.9	9.3	13.0	47.6	9.7	22.1	21.7	8.8	36.6	16.9
10.0	20.3	2.8	8.7	19.5	36.1	9.4	22.3	56.4	8.4	40.6	57.6
10.0	25.3	3.1	9.5	22.0	52.3	8.2	25.4	18.9	9.8	41.6	5.5
10.0	31.8	11.0	10.0	23.6	22.4	9.8	36.9	57.8	9.0	45.6	44.1
9.8	33.8	23.6	10.0	26.6	12.2	9.7	50.1	14.6	9.8	45.6	21.9
10.0	36.3	37.8	10.0	34.6	39.4	8.8	51.6	50.8	8.6	54 1.6	29.3
8.6	37.3	24.9	9.8	38.6	54.7	8.1	47 4.6	19.0	9.8	8.6	55.0
9.7	43.3	32.6	9.4	47.6	49.0	9.8	16.6	51.6	9.8	15.6	23.8
10.0	44.8	6.5	9.4	48.1	26.7	8.8	21.6	10.0	8.8	21.6	51.0
8.4	45.3	56.3	10.0	43 6.3	58.0	9.4	24.1	28.5	9.8	41.6	7.6
9.3	50.3	45.9	9.8	9.6	11.9	9.4	29.6	31.6	9.8	47.1	14.2
9.3	50.8	26.2	10.0	12.6	18.6	8.4	46.1	47.8	9.0	48.6	53.8
8.8	52.8	0.0	10.0	15.6	11.7	9.8	55.6	33.7	8.4	55 2.1	38.6
9.2	53.3	28.2	10.0	21.6	50.5	9.2	57.1	56.4	9.0	2.6	57.5
25Pr.	+0 58.2	-3.5		+0 58.2	-3.6		+0 58.4	-3.7		+0 58.7	-3.9

2041-2100.			2101-2160.			2161-2220.			2221-2280.							
mag.	7h.	-31°	mag.	7h.-8h.	-31°	mag.	8h.	-31°	mag.	8h.	-31°					
9.8	55	3.6	46.7	9.4	58	47.5	24.1	9.8	4	48.2	57.2	10.1	10	8.8	44.0	
9.8		6.1	43.9	9.4		47.5	38.9	9.8	5	1.0	5.3	10.0		15.3	33.8	
8.6		12.1	26.1	9.4		51.5	5.4	9.8		1.5	15.6	9.6		15.5	55.9	
8.6		12.6	34.1	9.4		52.5	11.9	9.8		17.3	32.7	8.6		16.8	20.5	
9.4		13.1	4.1	9.8		53.2	26.8	9.4		32.5	44.0	10.1		17.2	20.2	
9.8		19.6	18.6	9.2		55.0	12.3	9.8		45.5	8.2	9.7		21.8	0.5	
9.2		29.1	25.8	8.8		57.0	11.9	=	9.8		46.5	7.7	10.0		21.8	59.9
9.6		32.6	20.9	8.8	59	2.5	38.0	9.0		51.5	35.1	8.8		23.0	48.0	
9.7		32.6	24.2	9.4		9.0	55.4	8.8	6	2.5	53.0	9.7		25.3	33.8	
9.8		34.1	51.9	8.8		14.5	3.3	9.4		5.5	25.2	10.0		26.3	5.0	
9.0		36.6	42.9	9.4		16.0	11.9	9.8		6.5	44.5	10.0		28.1	0.5	
9.4		47.5	20.9	8.5		21.5	3.4	9.0 =	8.6		10.0	40.1	10.1		32.3	48.9
8.5		50.5	24.7	9.4		25.5	56.6	9.8		12.3	46.4	8.0		33.0	35.8	
9.4		51.0	14.5	9.0		26.5	14.1	9.0		22.5	52.9	9.6		33.3	56.5	
9.8		51.0	14.9	9.8		46.0	55.8	9.8		35.5	18.1	10.1		35.1	59.2	
8.6		52.5	12.0	9.8		47.2	1.3	8.6		45.5	46.9	10.0		36.8	7.0	
8.8		58.5	16.2	9.8		53.5	39.8	9.4		47.5	46.7	9.8		41.8	6.7	
9.0	56	0.0	9.5	9.4		55.5	56.9	9.2		58.5	32.1	9.4		44.1	56.7	
9.8		6.1	58.8	9.4		56.0	14.5	9.4	7	6.5	12.1	10.1		46.8	16.5	
9.7		7.5	24.9	9.2		56.5	40.2	9.8		16.2	41.9	9.4		50.3	26.3	
9.8		11.2	57.3	9.8	0	1.5	55.2	9.4		17.2	44.2	9.4		51.3	29.8	
9.4		13.5	27.1	9.6		3.0	14.9	9.4		17.6	18.7	9.6		54.3	53.3	
8.4		15.5	8.9	9.7		11.2	18.4	8.8		25.7	3.8	8.8	11	9.3	22.6	
9.7		17.5	3.5	9.4		16.0	8.2	9.8		28.2	53.9	8.9		9.8	11.2	
9.8		21.5	0.5	9.2		19.5	7.4	9.4		41.7	30.7	9.6		21.8	52.3	
9.2		22.5	53.8	9.2		22.5	17.7	9.2		42.2	18.0	10.1		46.8	28.7	
9.4		32.0	44.3	9.7		35.5	31.7	9.2		54.7	24.9	9.4		54.8	16.7	
9.4		33.0	26.9	9.4		38.0	34.9	9.4	8	2.7	3.1	9.0		55.8	26.9	
9.2		41.0	13.6	9.2		42.5	33.8	9.4		6.2	30.8	10.1		59.3	16.9	
9.8		52.5	57.7	9.6		44.2	31.0	9.4		16.7	43.2	10.0	12	3.3	8.9	
8.8		54.0	7.9	9.4		55.5	22.5	9.6		17.2	25.9	9.4		5.3	31.0	
9.6	57	2.2	25.6	9.2	1	12.5	39.6	8.0		18.7	46.8	10.0		10.8	46.6	
8.6		12.5	5.5	9.6		12.5	7.8	9.6		20.6	13.8	9.4		14.3	58.1	
9.7		20.5	18.6	9.2		15.5	6.3	9.6		22.7	29.5	9.2		18.3	28.8	
9.4		22.0	53.7	9.8		16.0	27.2	9.8		23.6	33.9	8.6		26.3	38.1	
9.8		27.0	25.2	9.8		25.5	15.9	9.0		25.2	29.2	9.6		32.3	24.9	
9.4		31.7	3.1	9.8		59.0	7.0	9.4		33.2	50.8	10.0		39.8	33.5	
8.2		32.5	57.7	9.0	2	4.0	33.2	8.1		39.7	21.7	9.4		45.3	33.9	
9.4		35.0	9.9	9.8		23.0	30.5	9.4		45.7	45.2	9.4		52.3	33.7	
9.7		39.0	52.3	9.8		25.0	12.9	8.6		45.7	10.3	9.6	13	1.8	37.6	
9.7		39.5	56.3	9.0		28.8	58.6	9.8		50.6	8.8	10.0		3.3	15.9	
8.8		43.0	48.7	8.6		31.5	38.9	8.8		53.7	56.6	9.6		5.3	15.7	
8.6		44.0	33.3	8.8		40.0	49.3	9.2		54.2	11.2	9.6		5.3	34.9	
9.8		56.5	5.5	9.8		52.0	5.9	9.8	9	2.6	2.2	10.0		6.3	51.9	
8.5	58	6.0	55.0	8.8		57.5	20.1	9.4		2.7	7.6	8.6		6.8	45.0	
9.0		6.0	29.3	8.8	3	0.2	0.6	9.8		12.6	24.9	9.4		19.3	17.1	
9.4		10.7	2.1	8.6		1.5	44.5	7.1		14.2	45.7	9.4		25.5	2.5	
9.8		21.5	45.9	8.2		2.0	5.5	9.8		15.5	57.9	9.4		45.3	16.0	
9.4		24.0	56.4	8.8		2.5	10.5	9.8		15.6	21.1	9.6		45.3	26.8	
9.8		26.5	17.1	9.7		45.5	54.4	9.0		15.7	6.9	9.6		53.3	9.5	
9.6		28.7	1.9	9.8		50.6	2.8	9.0		17.7	34.5	10.0		59.8	18.1	
9.8		31.0	4.3	9.4	4	5.0	5.1	9.8		31.7	14.4	9.2	14	1.8	52.1	
9.6		31.2	45.2	9.0		5.5	10.8	10.1		39.3	35.2	9.2		2.3	37.1	
9.7		32.5	19.1	8.8		5.5	9.6	10.0		43.3	52.8	9.6		5.3	3.3	
9.4		34.2	0.5	9.8		6.0	5.8	10.1		47.3	20.0	10.0		12.3	18.7	
8.2		35.0	20.1	9.8		6.0	4.4	10.0		51.5	40.8	9.6		17.3	19.5	
9.8		36.5	45.8	8.2		12.5	16.8	9.7		56.0	38.0	9.6		20.8	22.1	
9.8		37.2	24.2	9.4		14.5	25.9	9.0		57.3	13.7	9.7		30.8	30.2	
9.8		45.5	4.0	9.8		41.0	25.6	9.6	10	2.8	23.9	10.0		33.8	49.3	
9.7		46.0	21.8	9.4		43.0	22.0	9.7		5.5	52.5	8.6		34.3	44.7	
25pr.	+0	58.9	-4.1		+0	59.1	-4.2		+0	59.4	-4.4		+0	59.6	-4.6	

2281—2340.				2341—2400.				2401—2460.				2461—2520.			
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.0	14	35.3	6.1	10.1	18	52.3	47.5	10.0	23	43.0	42.8	9.6	29	26.0	7.2
8.5		39.3	25.9	10.1		56.3	52.7	9.8		47.0	30.9	10.1		31.5	27.1
9.2		42.3	41.9	9.6		58.3	22.5	10.1		53.0	11.0	10.1		33.0	4.5
9.4		46.3	59.4	9.2	19	2.8	18.1	10.1	24	8.0	31.3	9.6		45.5	11.0
9.2		50.8	26.6	9.6		20.3	44.7	9.6		11.0	44.3	10.1		53.0	25.1
10.0		53.3	45.9	9.4		35.4	38.0	9.7		20.0	10.6	9.2		53.0	37.1
9.8	15	3.8	36.1	8.8		35.4	24.6	9.7		26.0	54.6	10.1		54.5	26.9
10.0		6.3	27.5	9.2		39.4	14.4	9.8		27.0	33.9	10.1		58.9	41.9
9.6		6.3	32.9	10.1		42.4	14.4	10.1		27.5	42.2	9.6	30	4.0	32.1
10.0		11.3	34.1	8.5		46.4	20.5	9.4		33.0	18.5	9.4		6.0	45.8
9.6		12.3	13.7	9.0		46.4	18.8	9.0		37.5	55.5	8.8		16.0	59.0
9.6		15.3	45.3	10.1		57.4	51.4	10.1		53.5	9.8	10.1		20.0	39.7
10.0		17.3	5.9	10.0	20	2.4	50.8	9.2		55.0	31.8	9.8		21.0	35.5
8.5		22.3	36.5	7.2		11.4	32.1	9.6		58.0	52.3	10.0		31.0	12.0
9.4		37.3	58.2	9.8		27.9	39.5	10.0	25	2.0	13.1	10.1		35.5	33.7
9.4		43.3	15.7	9.6		29.9	25.0	8.9		2.6	57.9	10.1		41.0	23.2
10.0		46.3	16.9	10.0		44.9	16.8	9.0		3.0	26.0	9.2		41.0	46.9
9.0		46.8	19.2	9.4		46.4	16.8	10.0		13.0	15.6	10.1		42.0	21.0
10.0		52.3	14.2	9.6		55.4	54.0	10.1		13.0	27.7	9.0		42.0	10.1
10.1		54.3	16.1	7.6	21	2.4	45.6	9.4		17.5	32.0	9.8		47.0	34.9
9.6	16	2.3	40.1	9.8		3.2	0.6	10.1		26.0	14.0	10.1		57.0	34.2
9.4		2.3	59.4	9.6		4.9	54.7	7.6		27.5	44.4	9.7	31	2.0	30.7
9.4		18.3	37.1	10.1		14.9	4.9	10.1		28.5	46.3	9.6		4.5	29.1
10.1		22.3	9.1	9.4		16.4	6.6	10.1		37.5	10.9	9.8		8.0	58.2
10.1		25.3	26.1	10.1		22.4	59.1	10.1		46.0	58.8	9.0		12.0	37.5
9.6		25.3	29.6	9.6		22.9	47.9	10.1		50.0	3.6	8.9		18.0	46.5
10.1		25.8	12.1	9.6		24.9	51.6	10.1		54.0	3.1	8.3		20.0	49.8
9.6		25.8	10.1	9.8		27.4	21.6	8.6	26	1.0	19.4	8.4		54.0	17.3
9.2		39.3	57.0	10.1		44.4	29.9	10.0		2.5	6.5	10.1		58.5	42.5
9.6		42.8	10.1	9.0		44.9	50.0	9.4		3.0	11.0	9.2	32	3.0	11.0
9.2		51.3	31.0	8.6		49.4	37.0	9.8		3.0	47.2	8.6		16.0	18.6
8.2		53.3	38.7	8.1		52.4	4.3	9.0		18.0	44.1	10.1		28.0	12.0
10.1		55.3	45.2	9.6		52.4	16.8	10.0		26.5	24.6	9.2		36.0	38.9
9.6		55.3	37.1	10.1		52.9	50.6	10.0		34.0	22.3	10.1		46.0	56.5
10.1	17	0.3	24.9	10.1		56.9	54.1	10.1		37.0	33.7	10.1		47.0	12.0
9.6		1.8	19.1	9.2	22	3.4	31.4	9.0		37.0	25.0	9.0	33	20.3	39.3
9.7		4.3	16.7	7.7		4.3	46.3	10.1		56.5	11.8	10.1		21.0	59.5
9.6		9.3	51.5	7.5		14.9	15.7	9.2		57.0	11.0	9.6		23.3	35.0
8.7		15.8	31.3	9.6		24.9	37.9	7.5	27	1.0	17.3	10.0		25.3	37.8
10.1		16.3	34.5	10.1		32.4	26.9	9.4		4.5	5.8	9.7		26.3	40.8
9.6		23.5	57.9	8.6		36.4	34.8	9.6		5.0	19.9	10.1		30.5	33.5
10.1		32.3	35.6	10.0		44.4	52.4	9.8		6.5	6.1	9.4		36.0	34.6
10.0		32.3	32.5	10.0		46.0	48.8	9.0		8.0	48.0	10.0		44.5	10.6
10.1		39.8	13.1	9.2		46.7	57.3	8.1		28.5	48.6	10.1		46.5	53.0
8.5		43.3	18.1	10.0		52.0	31.8	9.4		35.5	54.1	10.1		52.7	57.6
9.4		43.3	11.7	10.1		52.0	42.7	9.2		36.0	22.1	10.1	34	6.0	13.2
7.3		45.3	12.5	9.8		53.0	37.6	10.0		56.0	7.2	10.0		33.3	57.2
9.2		51.3	37.1	10.1		56.0	35.2	7.6		57.0	6.1	9.4		34.4	44.9
8.6		57.3	2.5	10.0		57.0	24.9	9.7	28	0.0	32.6	9.4		42.4	38.9
8.6		58.6	2.4	9.2		57.0	31.6	10.1		9.5	44.9	9.4		35	3.7
10.0	18	5.3	51.4	10.1	23	3.0	44.9	8.8		11.0	21.0	8.8		3.7	50.0
9.6		11.8	10.5	8.8		11.0	58.4	9.6		12.0	42.9	9.2		8.7	25.9
10.1		12.3	28.5	10.1		16.0	50.1	10.1		16.0	55.2	8.0		14.2	43.4
8.8		15.3	53.5	9.2		16.0	27.8	10.1		46.0	29.9	9.0		14.7	35.5
9.6		16.8	54.5	9.7		19.0	36.7	9.4		48.0	33.7	9.9		28.2	42.4
8.1		22.3	55.7	10.1		23.0	4.4	9.4		54.0	49.6	9.6		31.7	38.6
9.2		31.3	9.7	9.6		35.0	50.2	10.0	29	4.4	1.8	8.5		44.7	22.0
9.6		41.3	7.5	9.8		37.0	24.7	9.8		17.0	54.5	10.0		53.7	24.8
9.2		45.3	16.6	10.1		39.5	4.7	10.1		17.5	55.0	9.7	36	4.2	45.3
10.1		47.8	41.5	9.2		40.0	24.2	10.1		21.5	29.1	10.0		17.6	58.2
25Pr.	+ 0	59.8	-4.7	+ 1	0.1	-4.9		+ 1	0.3	-5.0		+ 1	0.6	-5.1	

1896AnCap...3....1G

2521-2580.				2581-2640.				2641-2700.				2701-2760.			
mag.	8h.	-31°		mag.	8h.	-31°		mag.	8h.-9h.	-31°		mag.	9h.	-31°	
	m	s			m	s			m	s			m	s	
10.0	36	30.7	15.7	9.7	45	59.2	36.2 -	10.0	57	24.9	37.9	9.8	12	37.7	40.9
9.7		35.2	18.5	9.7	46	10.7	7.5	9.5		40.4	40.1	9.0		53.2	50.9 9.5
9.8		36.7	38.5	9.2		21.1	2.2	8.5		41.0	24.2 9.0 ≡	9.2		56.7	10.2
9.9		54.7	49.0	10.0		28.7	27.5	7.4		42.4	56.9 7.0 GS	9.8	13	6.7	57.7 9.5
8.6	37	3.2	18.0 8.2 G=	9.8		57.7	18.9	9.4		45.4	18.0	8.8		10.7	24.7 9.5 -
7.6		8.7	47.1 7.5 GS-t	9.7	47	3.7	55.4	10.0		47.9	5.9	9.5		14.9	57.5
10.0		12.7	48.6	9.7		17.5	9.0 9.0	9.9	58	17.9	54.9	8.2	14	3.7	41.7 8.8 -
9.6		24.7	33.7	9.9		21.2	13.0	9.8		44.4	34.5	9.1		10.2	6.5 9.5
9.3		26.7	53.7	10.0		32.2	59.2	9.0		47.9	24.9 ≡	8.8		35.7	10.0 9.0 -
9.7		37.7	57.7 9.0	9.8		42.6	24.0	9.9		52.4	2.9	8.3	15	3.2	31.5 8.5 =
8.6		56.7	8.8 8.5 =	9.1		42.7	52.6 8.5	9.0		57.5	41.4 9.0	9.3		13.7	16.4 9.0
9.4	38	1.2	16.1	9.8		56.6	49.0	9.3	59	0.5	11.0	7.5		26.7	13.8 7.0 GSt*
9.5		2.7	51.6	8.4	48	6.6	29.5 ≡	9.3		6.0	20.9	8.2		54.2	45.0 9.0
9.4		17.7	38.0	9.9		7.6	23.1	8.8		19.0	57.1 8.2 W	9.8		57.2	12.3
9.5		23.7	16.1	9.0		54.1	33.1 9.5	9.4		38.0	40.5	8.3	16	53.2	16.0 8.5 -
10.0		36.6	13.3	9.4		54.1	14.1	9.6		54.5	34.5	9.3		53.4	59.7
9.8		37.6	27.0	8.4	49	3.1	40.9 7.2 GS≡	9.8	0	5.2	2.3	8.8	17	9.2	37.5 9.0 -
9.0		42.9	1.5	9.2		3.6	49.2	9.6		24.0	50.5	9.8		21.7	16.6
9.5	39	19.2	24.0	8.7		5.6	24.7	9.5		31.0	4.2	9.4		33.7	9.6
8.6		23.2	34.1 7.0 GS≡	9.9		6.6	46.1	8.2	1	4.0	5.6 8.2 a	9.2		54.2	39.1
9.5		27.2	33.0	10.0		26.6	49.5	9.8		42.5	18.3	8.8	18	4.2	7.9 9.5
9.8		46.7	57.4	9.1		33.6	15.2	9.8		47.8	19.9 9.5	9.8		54.7	47.8
10.0		55.6	6.9	8.9	50	22.6	36.2 9.0	8.2	2	4.5	24.6 8.0 GW≡	9.3		19.1	44.3 10.0
7.5	40	3.7	47.6 7.0 GSt	8.6		34.1	42.2 8.8 ≡	9.6		7.0	27.9	8.8	20	14.1	43.1 9.0 =
8.2		4.7	8.8 9.0 -	10.0		35.1	54.9	8.0		34.0	46.2 8.5 G	8.8		33.6	38.7 9.0 =
9.5		6.7	47.1	10.0		40.5	52.1	8.6		37.5	32.0 8.0 GW≡	8.6		38.1	53.9 8.8
9.1		33.9	2.5	9.0		41.6	40.8 9.2	8.8	3	37.0	16.3	9.5		47.3	59.2 9.0
9.8		51.2	5.4	9.1	51	34.6	21.6	8.4		40.0	57.0 8.3 G-	8.8	21	3.6	5.3 9.5 -
8.0		52.2	42.5 7.0 GSt	8.6		37.6	36.2 8.7	8.6		45.0	27.2	9.5		14.1	33.9
10.0	41	4.2	56.0	10.0		47.6	53.2	9.8		55.0	37.9	9.8		31.7	31.8
8.7		7.9	1.0 8.2 =	9.4		51.1	15.4	9.3	4	37.5	55.8	10.0	22	8.9	24.4
9.4		23.7	4.5	9.9		53.6	17.0	9.6		45.5	43.9	9.9		11.4	41.0
8.8		26.7	7.2 9.5	9.2		55.6	24.3	9.2	5	16.5	44.0	10.6		48.4	16.2
9.4		38.2	27.9	9.5	52	7.6	32.6	9.3		17.5	10.6	10.6	23	5.9	34.0
10.0		48.2	33.0	10.0		8.5	41.9	9.8		23.0	15.8	10.2		14.9	58.2
9.4		49.5	46.6 9.0	9.9		10.5	42.1	9.8		25.0	26.9	9.2		17.9	43.1
10.0	42	37.7	50.0	9.4		23.1	35.9	9.2		42.5	34.9	10.4		27.4	38.8
9.0		46.7	24.3 7.5	10.0		27.1	56.6	9.8	6	27.5	11.2	9.6		27.4	15.0 9.8
9.4		48.7	7.7	9.2		33.6	22.4	9.3		31.0	14.3	10.6		36.4	40.0
9.9	43	3.2	48.0	9.0		42.6	11.2 8.8 ≡	9.8		32.5	12.3	8.8		37.9	8.1 9.5 -
9.4		34.2	11.7	9.4		46.6	28.0	8.6		44.5	4.7 9.0	9.2		51.4	13.7 9.5
9.4		54.7	40.9	10.0	53	5.1	18.9	8.6	7	4.0	3.3 9.0 -	10.0		54.4	16.6
9.4		59.2	25.5	8.2		8.6	47.8 9.0	8.1		6.0	23.8 8.5 G=	9.4	24	27.4	53.3 -
8.5		59.7	48.9 8.8 G-	8.0		12.6	39.3 8.2 G-	8.5		23.8	1.1 8.8 a	9.2		36.9	28.0 9.5
10.0	44	8.7	55.1 8.0 GS-	8.0		36.6	28.8 8.0 GS-	8.8		37.0	18.6 8.8 a	8.6		38.4	0.1 9.0
9.5		14.2	50.1	9.9		47.6	17.2	9.8		46.5	49.5	10.2		41.4	39.0
9.5		16.7	54.7	9.2		52.6	58.4 -	9.8		47.5	33.6	7.6	25	1.9	0.2 7.2 GSa
9.3		17.7	19.7	9.0	54	46.6	36.0 9.5 G	9.8		48.5	41.0	8.5		8.4	33.8 -
10.0		23.5	15.5	8.9	55	18.6	55.3 9.3 -	9.2		58.5	47.9 9.0 -	10.0		12.4	32.0
9.5		23.7	38.4 9.5	8.9		18.6	11.5	9.4	8	6.0	19.1 9.0	6.2		25.9	20.4 6.0 GSt*
9.5		26.7	4.7	9.8		32.4	54.1	8.8		20.5	53.2 8.8	9.2		45.4	28.0 8.5
10.0		28.2	50.1	9.4		36.4	49.0 9.2	8.8		58.0	50.5 9.5	9.2		46.9	36.2
9.4		33.7	28.0	9.2		48.4	29.8	8.8	9	2.5	37.3 9.0 =	10.6		52.2	52.9
10.0		37.7	15.9	9.9	56	0.4	8.3	9.0		7.0	0.1	9.9		53.2	32.9
9.4	45	8.7	6.5	9.8		14.4	8.1	9.2		8.5	46.5 9.0	8.6		57.7	23.9 9.0
9.5		17.2	27.0	9.7		17.4	59.8	9.5		32.6	53.7	10.6	26	11.2	29.8
10.0		36.2	56.5	9.6	57	5.9	9.5	9.6	10	34.2	35.7 10.0	6.8		12.2	19.3 6.2 GSt*
9.9		52.7	31.4	9.2		7.2	0.9 9.2 -	8.4		35.7	42.5 8.0 G≡	10.6		26.7	32.4
9.9		57.7	26.5	8.6		19.5	47.9 9.0 -	9.3	11	46.7	50.6 9.5	8.2		26.7	14.8 8.8 a
9.7		57.7	26.8	9.4		22.4	38.4	9.8	12	34.2	36.8	8.0		40.2	41.7 8.0
25pr.	+ 1	1.2	-5.4	+ 1	1.8	-5.7		+ 1	2.6	-6.0		+ 1	3.7	-6.4	

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2761-2820.			2821-2880.			2881-2940.			2941-3000.		
mag.	g ^h .	-31°	mag.	g ^h .	-31°	mag.	g ^h .	-31°	mag.	g ^h -10 ^h .	-31°
10.2	26	46.7 5.6	9.6	35	26.7 16.1	10.2	43	59.5 52.0	9.6	56	55.1 5.9
10.2		53.7 19.1	10.6		34.7 20.4	9.6	44	25.0 6.4	9.6		57.6 18.9
9.8		53.7 46.7	10.4		44.7 3.3	10.6	45	7.5 0.0	8.6	57	12.6 22.0 8.0 Ga
9.8	27	3.2 4.8.9	8.8		45.2 1.2	9.7		9.9 12.1	10.2		32.1 21.3
10.6		12.7 29.1	9.4		47.7 56.6	9.8		28.0 9.8	9.8		36.5 33.5
9.2		20.7 26.4 9.0	10.6		55.2 46.6	9.4		36.5 11.8 9.0	9.5		36.6 25.6 9.0 a
9.2		53.2 46.4	10.4	36	15.3 15.0	9.0		42.0 56.4 9.0 -	9.6		42.6 12.6
8.4		54.2 41.6 9.0 -	9.6		18.7 35.0	10.4		55.5 33.6	10.4	58	10.6 18.6
9.6	28	17.7 27.8	8.0		25.2 37.4 8.0 =	9.0		57.0 9.9	9.4		23.1 50.1
8.0		36.7 23.3 7.8 GSa	10.4		28.4 56.8	10.6	46	9.2 0.6	9.6		44.1 59.9
9.4		38.2 9.6	10.0		34.7 28.3	9.4		15.4 29.7	8.7		44.6 8.1 9.2
8.2		39.2 28.1 7.8 GSa	10.6		36.7 5.0	9.4		33.8 50.8 9.0 -	9.2	59	31.6 36.6
9.4		56.2 50.2	10.4	37	9.7 10.0	9.6		39.4 45.7	9.6		35.6 28.6
10.2	29	2.2 29.5	9.9		12.2 24.3	9.8		48.3 11.9	8.4		36.1 32.9 =
9.6		3.2 33.3	8.6		20.2 8.7 9.0 =	10.0		51.8 32.9	9.6	0	3.6 30.7
9.6		8.2 2.1	9.7		29.2 51.3	10.0		52.8 42.4	10.0		9.9 59.9
9.7		22.7 23.1	10.4		45.6 5.7	9.6		57.3 19.3	10.2		20.1 16.9
9.8		32.7 11.5	10.4		48.1 5.4	9.4	47	5.0 57.1	9.1		33.6 58.9
9.2		40.7 48.3 9.0	9.8		51.1 43.5 10.0	9.6		6.3 8.1	10.4		34.6 12.9
8.8		52.7 52.3 8.8 -	10.4		51.5 18.0	8.0		48 12.3 30.7 8.2 GS-	9.6		39.6 8.7
9.9		55.2 44.1	8.6		52.6 0.0 8.5 a	10.4		20.7 20.7	9.5		42.1 3.2 9.5
10.0	30	2.7 56.6	9.4		53.6 12.7 -	10.4		45.8 6.2	9.6		47.1 4.3
9.8		10.7 39.7	8.9		54.6 41.1 9.0	9.6	49	14.3 39.9	10.2		53.1 36.2
8.8		31.2 9.8	10.6		55.1 20.0	10.4		36.3 37.2	8.8	1	11.1 9.2 9.5 -
10.0		40.2 7.8	10.0		59.1 26.1	9.1	50	18.0 59.8 9.0 -	9.6		16.6 8.4
9.6		55.2 29.3	10.4		59.6 55.7	10.0		27.8 26.8	9.1		17.6 23.9 9.5
10.2		56.7 6.6	10.0	38	36.6 13.1	9.1		47.3 6.9 9.5	9.5		21.6 30.7 9.5
10.6	31	2.2 58.9	9.6		49.1 34.0	9.1		52.3 30.3	9.8		33.1 45.4
8.6		16.2 41.1 9.0 =	9.7		56.1 29.0	10.0		54.3 10.7	10.0	2	1.6 31.3
9.6		17.2 12.1	9.8	39	2.6 10.7	10.3		54.7 27.0	9.8		7.6 27.5
9.7		31.2 38.1	9.7		4.4 1.5	9.0		55.8 38.9 8.5 -	8.4		21.4 59.3 9.0 -
9.2		32.7 59.1	8.9		6.1 48.3 9.0	10.0		51 45.8 4.5	7.6		27.1 26.9 7.5 GS-
10.4		32.7 49.9	9.6		15.6 46.2	10.0		51.0 58.0	10.2		28.6 52.3
8.4		40.7 19.7	8.8		30.6 40.7 9.0 -	8.4	52	25.8 11.9 9.0 -	10.0		28.6 52.3
10.0		41.2 28.6	8.9		35.6 32.9 9.5	10.0		25.8 9.7	10.0	3	2.1 12.3 9.5
10.6		42.2 53.3	9.8	40	12.1 24.9	9.4		46.8 11.3	9.0		37.6 10.0
7.6		46.7 37.0 6.0 GS _{tr}	9.6		20.6 18.0	9.4		56.8 23.7	10.2		41.6 7.9
8.8		54.7 37.0 9.0 -	9.7		25.1 52.9	9.6		56.8 14.6	9.6		46.1 31.3
10.4	32	2.0 0.3	10.4		27.1 8.7	8.7		53 15.8 30.9 -	10.4		55.1 58.1
10.6		3.4 58.0	9.7		29.6 45.2	8.7		27.8 11.7 9.5 -	9.1	4	6.6 59.8
10.6		8.2 0.4	10.4		32.6 23.2	10.0		46.3 47.9	10.0		38.6 35.9
10.4		10.7 43.0	10.6		34.0 24.6	10.3	54	11.8 10.7	10.0	5	2.3 15.0
9.9		17.7 12.0	9.6	41	0.1 48.6	9.4		25.3 21.7	9.8		2.8 10.0 9.5
9.0		26.2 15.1 9.5	10.0		15.6 50.4	8.4		25.8 57.9 8.0 G-	10.2		10.2 58.8
10.2		34.7 41.4	10.2		21.6 40.2	9.8		32.0 57.3	9.6		12.8 51.8
8.4	33	26.7 45.8 9.0 ≡	10.6		26.1 9.2	10.3		37.3 35.2	10.0		13.3 51.4
9.8		27.7 50.6	10.2		32.6 53.2	9.6		42.8 55.3	9.2		31.3 29.0
10.4		57.2 43.8	9.7		33.6 53.0	9.6		56.8 52.0	10.0		35.8 15.8
9.2		59.7 42.6 9.0	9.9		35.6 23.6	10.3		59.8 22.2	9.2		37.3 42.2
10.6	34	11.2 53.2	10.4		47.5 10.1	8.2	55	1.8 34.3 9.5 -	10.3		38.3 16.1
8.8		30.7 34.8 9.5	10.2		51.1 15.7	10.0		11.8 16.3	9.6		40.3 25.8
10.0		32.7 11.6	8.9		57.1 40.6 9.0 =	10.0		14.8 3.9	8.4	6	2.3 6.0 8.8 a
10.0		34.2 28.9	9.9	42	5.1 3.0	10.0		34.3 31.9	8.6		4.3 34.0 9.5
9.6		34.2 45.0 9.0 -	8.8		15.1 3.3 9.0 -	9.6		43.3 5.3 9.5	10.0		15.8 9.0
10.6		36.7 10.5	9.4		16.6 16.8	9.8		49.8 45.5	10.0		25.3 58.1
10.6		39.2 47.4	10.0		19.1 44.7	9.4		55.8 3.9	10.0		26.3 38.0
10.6		41.2 8.0	10.4		44.4 58.8	9.5	56	3.8 55.1	10.2		39.3 9.2
9.7	35	1.2 32.6 9.5	9.6		45.5 33.9	9.0		25.3 13.1	9.6		53.8 35.9
10.4		11.2 7.0	9.8		47.5 1.2	10.2		29.1 35.2	9.0		55.8 17.0 a
9.2		22.7 48.1 8.1 G-	10.6	43	54.3 1.5	9.2		35.6 17.7	9.5	7	2.3 33.0
25pr.	+ 1	4.4 -6.7	+ 1	4.9	-6.8	+ 1	5.9	-7.1	8.0		14.8 53.9 7.0 GS-
											+ 1 6.8 -7.3

3001-3060.				3061-3120.				3121-3180.				3181-3240.						
mag.	10 ^h .	-31°		mag.	10 ^h .	-31°		mag.	10 ^h .	-31°		mag.	10 ^h .	-31°				
	m	s			m	s			m	s			m	s				
9.8	7	25.3	55.4	9.5	10.1	26	43.5	56.1	10.5	41	47.4	45.3	9.6	51	1.4	49.2		
9.0		25.3	16.2	9.4		52.5	5.3	9.2 a	10.5		55.4	44.4	8.4		16.4	21.9	9.0 a	
10.0		57.7	56.8	9.2		54.5	56.6	8.8-	10.0		55.9	14.4	9.6		22.4	15.8		
10.0	8	25.3	20.0	9.2		56.5	39.2	8.8	42	15.4	22.2	9.2		45.4	14.8	9.0 a		
8.8		31.8	9.2	8.1	27	0.5	55.0	8.0	10.0		16.9	35.2	10.0		51.4	18.0		
9.6		32.3	12.5	9.8		39.5	7.0	10.0		17.4	40.7	9.8	52	15.4	30.7			
10.2		44.3	12.3	10.1		55.0	3.3	8.8		18.4	21.4	8.8		16.9	7.4			
9.1	9	1.3	48.7	9.5 -	10.1	28	4.5	8.2	6.2		23.2	1.8	6.2 GSa	8.7		22.4	56.0	9.0
10.3		10.4	9.3	8.8		24.5	43.7	9.5 -	10.2		35.4	53.6	10.5		25.9	23.6		
10.3		10.8	51.0	9.4	29	22.5	10.6	9.0	10.0		39.9	11.4	9.2		34.9	26.6	9.5	
10.0		24.7	58.8	10.1		36.5	5.3	10.5		42.4	8.3	10.3	53	30.9	59.0			
9.6		32.5	39.0	10.1		49.0	6.5	9.2	43	5.9	0.4	8.4		46.3	34.1	8.8 ≡		
10.3		33.4	35.1	9.4	30	6.5	51.3	9.5 -	9.4		21.4	23.0	8.8	54	5.3	39.5	9.0 ≡	
10.2		45.3	15.6	9.4		38.5	11.2	8.8 -	10.3		27.9	45.3	9.6		43.8	46.4		
8.8	10	13.5	33.3	8.0 G-	8.8		57.0	1.4	8.5 -	9.8		28.4	5.0	7.4		45.3	10.3	6.5 GSπ
10.3	11	5.4	49.7	8.0	31	26.5	6.9	7.0 GSbt	8.8		32.4	38.7	8.5	9.2		59.3	55.3	
9.0		36.8	14.3	9.5	9.0		31.5	6.6	9.5	9.2		53.4	56.0	9.5	55	4.3	7.9	9.5 -
9.7		42.3	29.8	10.1		46.7	43.2	10.5		53.4	16.8	9.3		5.8	7.1	10.0		
9.4		56.5	50.8	9.1		51.0	28.9	10.5		53.4	40.2	9.8		10.8	11.9			
9.2	12	17.3	26.1	9.6	32	0.5	27.1	9.8		54.3	57.3	9.6		23.4	2.2	9.5		
9.7		33.8	16.0	10.1		8.0	57.5	10.4		55.9	17.3	8.8		30.8	43.5	-		
10.1		46.3	46.1	9.9		46.5	16.8	10.4		57.9	56.6	8.8		32.3	23.2	9.5 -		
10.1		54.8	55.7	10.1		52.9	31.0	9.8	44	13.4	25.4	9.3		36.3	3.7	10.0		
8.5	13	0.3	54.8	7.5 G-	8.9	33	1.5	4.9	9.2 =	10.0		16.9	4.2	9.8	56	10.3	17.4	
9.0		4.8	8.1	9.0 S-	10.1		2.5	2.0	10.0		21.4	58.6	9.6		36.3	31.1		
9.6		46.3	18.5	10.5		22.0	22.2	10.0		25.4	7.6	9.8		51.3	11.1			
9.4		47.8	55.2	9.2		26.3	20.9	8.8		45.4	31.7	9.8	57	19.1	17.2	7.0 GSct		
8.2		50.8	15.8	8.5 -	9.2		45.8	51.8	10.5		46.4	55.6	9.8		19.3	13.1		
9.7	14	10.3	23.1	10.5	34	2.1	21.3	8.6		59.4	16.6	9.0 -	10.5	58	7.3	52.9		
7.3		55.3	11.3	7.0 GSbt	8.4		55.3	16.5	9.0 =	10.4	45	1.9	42.7	9.0		9.3	54.9	-
9.7	15	14.3	52.6	10.5	35	9.0	59.1	10.5		9.9	43.0	10.5		16.2	44.2			
9.6		18.3	41.4	9.6		11.1	12.6	9.8	10.4		11.9	34.4	8.7		22.8	18.3	9.5 -	
9.8		35.8	24.1	9.2		11.6	54.5	9.0 -	8.8		21.4	46.0	8.8		44.8	24.2	10.0 -	
10.1	16	17.8	43.7	10.5		29.1	32.2	9.6		35.3	58.8	10.3		45.8	47.1			
9.9		23.5	59.8	8.6		31.6	11.1	8.8 =	9.3		39.9	2.0	9.8		46.4	9.9		
10.1		26.8	55.6	10.5	36	21.0	10.5	9.5		52.4	1.0	10.0		53.0	32.0			
8.5		37.8	47.1	9.0 =	8.7		37.6	12.8	9.2	10.0		52.4	16.6	8.6	59	10.8	30.1	9.8 -
9.2		44.8	43.4	9.5	10.4		45.1	44.3	10.4	46	26.4	30.6	9.8		53.8	1.4		
9.0		56.8	44.6	9.2 -	9.6	37	2.6	25.5	10.5		31.4	53.7	10.2	0	20.8	36.2		
8.6	17	27.8	55.5	8.4 -	7.6		28.1	6.2	7.0 GSbt	10.4		42.4	55.8	9.6		47.3	12.1	
10.1	18	13.8	46.9	10.2		29.1	0.0	10.3		56.4	6.0	7.3	1	11.3	54.6	7.0 GSa		
9.2	19	46.5	31.5	9.5	9.8		30.4	1.6	9.6	47	2.8	1.8	9.6		22.8	47.2		
9.2		46.5	30.9	9.5	7.4		33.1	28.8	8.0 GS-	8.8		6.4	19.9	10.2	2	2.8	6.1	
9.2	20	3.5	51.2	10.5	38	20.6	18.2	9.6		25.4	43.4	8.9		15.8	24.6	9.0 ≡		
9.9		42.5	37.5	10.4		20.6	46.7	10.0		42.4	35.8	7.4		15.9	58.8	8.5 -		
8.5		55.0	37.4	8.5 G=	9.6		42.3	59.6	8.2		55.4	39.7	8.2 GS≡	10.2		23.4	58.1	
8.4	21	6.5	20.9	9.0 a	10.0	39	13.6	50.7	9.6		56.1	2.3	8.9		51.4	22.6	-	
9.2		7.0	51.8	9.8		17.6	37.9	9.8	48	27.4	51.0	9.6	3	15.9	34.1	9.0 -		
10.1	22	55.0	39.9	9.8		30.6	8.6	9.2		46.9	25.0	8.9		33.9	50.0	10.0 -		
8.9	23	18.5	39.0	9.2 =	10.4	40	2.6	39.6	10.0		49	13.4	11.6	9.8		43.2	58.1	
9.2	24	18.5	52.7	10.5		3.1	43.2	8.8		16.4	8.2	9.5 W=	10.2		44.4	20.3		
0.1		19.5	34.5	10.0		15.4	28.5	9.6		40.9	5.6	9.8	8.6		44.4	38.9	8.8 -	
8.9		23.5	34.0	=	9.8		35.4	20.1	7.6		56.4	7.2	8.0 GSa	6.8		53.9	41.3	6.0 GSπ
9.8		49.0	9.3	10.4		39.9	22.9	10.0		56.9	17.6	9.4	4	15.9	44.6	9.2		
10.0	25	29.5	25.7	8.9		51.4	17.8	9.6	50	29.9	18.0	10.2		21.4	25.1			
10.1		56.0	8.0	9.8	41	0.4	3.6	9.6		35.4	41.4	10.2		32.3	3.2			
9.6	26	23.5	31.6	9.5		2.4	51.7	10.0		38.9	44.0	7.5		35.4	53.2	8.2 GSπ		
9.9		24.0	32.0	10.2		2.9	24.1	8.7		47.2	57.6	9.2	9.4		45.9	32.2	9.5	
8.2		24.0	11.9	8.5 a	10.5		25.4	46.0	10.4		52.4	48.0	10.2	5	3.9	40.0		
9.2		26.0	53.4	9.6		36.4	3.6	8.8		58.9	53.4	9.2 -	9.2		27.9	46.9	9.5	
25pr.	+1	7.8	-7.5	+1	9.4	-7.8		+1	10.2	-7.9		+1	11.3	-8.1				

3241—3300.				3301—3360.				3361—3420.				3421—3480.			
mag.	h ^m . m s	—31°		mag.	h ^m . m s	—31°		mag.	h ^m . m s	—31°		mag.	h ^m . m s	—31°	
9.5	5 32.9	53.7	—	9.8	29 55.9	36.1		9.6	55 53.6	31.3	9.5	8.8	14 30.5	51.1	9.2
9.6	49.4	43.3		10.4	30 7.4	51.7		9.0	58.6	48.5	9.5 —	8.8	15 2.0	35.6	
8.2	6 13.9	45.2	6.8 GS≡t	9.4	22.4	19.3	9.0 —	7.8	57 9.1	33.7	8.0 =	9.6	14.2	17.3	
9.4	23.9	20.4		10.4	25.7	48.3		9.6	14.7	42.8	8.5 —	9.6	29.5	30.6	
9.6	9 25.4	54.6		9.2	42.9	3.8	9.2 —	7.6	26.7	45.4	8.0 —	8.2	33.0	14.8	8.5 a
8.9	31.9	9.2	9.2 G≡	8.4	44.9	47.2	8.5 =	9.6	31.2	37.5		9.1	16 18.5	34.6	
8.4	56.4	41.2	8.8 =	10.4	31 45.9	58.2		9.6	40.2	1.5		9.6	17 20.0	20.1	
10.2	57.9	18.6		9.8	32 45.9	59.9		7.8	52.7	24.5	=	8.8	29.0	32.9	
9.6	10 14.9	52.9		9.2	33 24.9	54.4	9.0 —	8.2	59 55.7	53.4	9.0 =	9.2	32.0	42.3	
9.5	28.4	29.0		9.7	27.4	47.9		9.6	0 6.2	54.7	9.5	8.8	42.5	38.1	9.0 =
9.4	11 43.9	55.0	9.5 G—	9.9	45.9	0.9		9.6	8.2	54.5	9.0	9.6	52.5	6.5	
8.2	12 5.4	4.1	8.0 =	9.4	56.4	5.4		9.5	10.9	54.0	9.5	9.6	18 0.2	32.0	
10.2	6.3	19.6		10.2	34 55.9	27.0		9.6	16.2	51.5		8.8	16.0	54.8	
10.0	24.4	32.6		10.4	35 5.9	26.7		9.6	34.2	53.4		9.6	57.5	53.9	
10.2	13 19.4	52.2		7.0	29.9	48.2	5.7 GSπβ	7.1	56.7	58.0	8.0 G=	8.1	19 26.5	4.6	8.0 Ga
8.3	21.9	49.3	8.5 =	8.0	33.9	47.4	8.5 G—tπ	9.6	59.2	29.5		8.2	36.5	37.6	
7.5	14 25.9	25.0	8.2 GS≡t	9.4	36.9	51.8	8.8	9.6	1 26.7	23.3		7.8	43.0	27.3	8.5 =
9.6	32.9	39.0		10.4	36 55.9	41.2		9.6	30.7	36.1		9.6	46.0	0.6	
9.5	52.4	27.2	10.0	9.4	37 12.9	1.5		9.6	58.2	47.0		9.6	20 13.2	13.9	
9.3	52.9	53.0		10.4	16.4	44.0		9.6	2 17.7	18.9		9.6	16.2	14.9	
10.0	15 15.9	31.2		8.8	28.4	26.0	9.0	9.6	36.2	51.3		8.7	36.0	15.2	
9.6	42.9	24.4		10.2	35.9	15.9	9.0	9.6	3 16.7	31.2	9.5	9.2	52.5	10.0	
10.2	16 6.3	42.6		8.4	45.9	18.4	8.8 —	9.6	24.7	50.6		9.6	21 1.5	6.0	
9.6	51.9	10.9		8.4	38 47.4	5.0	8.2 G>	9.6	48.7	18.3		8.2	4.5	38.2	8.8 —
9.2	55.9	44.8	9.0 =	9.4	39 9.4	1.1	9.2 =	9.6	4 13.6	59.6		9.5	23 26.6	9.1	
9.6	17 5.4	21.5		9.8	17.4	40.9		9.6	16.9	39.0		8.2	27.1	22.0	8.0 GS=
9.6	56.8	58.4		8.8	26.4	34.0	8.5 =	9.6	51.7	11.8	G	9.5	24 33.1	16.1	9.0
9.4	18 5.6	5.1	9.0 ≡	9.4	30.9	17.0		8.6	53.9	56.3	8.3 G	8.4	25 12.6	13.6	8.2 =
9.4	9.6	51.2	—	10.4	40 13.4	28.2		9.4	5 16.7	3.1		8.6	19.1	59.0	8.0
9.2	52.1	19.6	9.8	8.8	16.4	38.0	9.0 —	9.6	40.9	57.9		7.2	27.1	50.6	6.5 GS=
8.2	52.6	18.7	8.2 a	10.4	30.7	21.0		9.6	45.9	40.6	9.5	9.6	30.1	31.6	
10.2	19 25.5	57.7		10.4	43.4	25.0		9.6	54.7	11.8		9.6	52.8	34.0	
10.2	42.6	8.1		9.4	41 4.9	41.8		9.4	56.7	22.9	9.0	7.5	57.1	46.3	7.0 GS=
10.0	46.0	50.1		9.2	39.4	41.6	9.0 =	9.6	6 1.2	9.5	9.5	9.5	59.6	33.4	
9.8	20 5.1	47.1		10.4	42 3.4	9.6		9.6	16.7	40.1		9.6	26 20.6	28.8	
9.2	7.1	55.8	9.5 —	9.8	10.4	16.4		7.6	7 33.7	41.3	7.5 GS—	8.6	52.1	45.8	8.2 GW=
9.6	20.1	27.5		10.4	43 9.7	11.3		8.8	8 15.3	2.3	9.2	9.0	27 1.6	7.4	9.2
10.2	29.6	23.2		9.9	25.9	45.5		9.6	23.2	13.8		8.0	27.1	47.8	8.2 GW=
7.8	33.1	27.6	8.0 ≡	8.2	25.9	45.0	8.0 G≡	9.2	27.7	8.6	8.5 G—	7.5	35.1	24.2	7.0 GSa
8.9	42.1	57.4	9.0	9.8	35.9	48.6	9.0 —	9.0	59.7	24.1		9.6	35.8	8.5	
8.9	44.2	13.0	9.5	10.4	44.4	43.2	9.5	8.6	9 25.8	5.8	8.5 G	8.5	28 5.6	10.8	8.5 a
10.2	44.4	50.1		10.4	44 37.4	10.8		9.0	27.4	4.6	8.5 G—	9.6	39.1	21.2	
10.4	22 13.3	1.0		9.5	45 38.4	14.6	—	9.2	29.7	41.4	—	9.0	29 29.6	16.4	8.5 G—
7.4	21.8	10.2	8.2 a	9.6	47 57.6	20.1	9.5	9.6	37.7	8.6	9.5	8.3	30 14.1	29.1	8.0 GS≡
9.9	23.3	19.8		8.4	48 17.6	25.8	9.0 ≡	8.8	10 7.5	45.2	9.0 —	9.2	16.6	19.2	
9.4	41.8	55.1	—	9.6	44.6	25.1		9.2	12.1	7.6		9.6	17.6	19.7	
8.8	23 43.3	20.6		9.2	47.1	46.6	9.5 —	8.5	25.5	39.4	8.5 G≡	8.3	31 12.1	45.7	8.5 =
9.6	43.3	51.5		9.6	49 26.1	45.5	9.0 —	9.6	11 15.5	20.5		8.7	38.6	48.6	9.0 —
8.4	24 2.3	43.6	9.5 —	9.0	46.6	31.7	8.5 G—	9.6	30.0	21.7		9.6	32 23.1	18.1	
8.4	25 15.3	56.3	8.7 G—	8.6	50 7.6	29.9	9.0	9.5	52.0	53.0	9.5	9.4	46.0	47.3	
8.4	26 45.3	23.0		7.9	23.1	34.3	8.0 GSat	9.6	55.0	42.9		9.6	33 32.2	37.3	
9.7	47.3	20.1		7.8	24.6	34.2	8.0 Gat	8.5	12 11.5	19.7	8.5 —	8.8	34 1.2	58.9	9.0
5.5	51.8	9.9	4.0 GSπβ	9.2	51 4.6	51.1	=	8.6	20.0	25.2		9.4	2.4	37.2	
9.6	27 7.4	48.5		9.6	52 24.1	18.6		9.4	37.5	23.5		8.3	20.4	3.1	7.8 Ga
9.4	45.9	13.4	9.0	9.0	58.1	42.1	9.2 —	9.1	39.5	55.3		9.2	35 13.9	46.0	—
10.4	28 13.4	43.5		8.2	54 35.1	19.5	8.0 G≡	7.8	13 1.5	53.7	8.0 GS—t	9.9	22.4	10.2	9.5
10.4	15.7	5.8		9.5	45.1	40.1	9.5 —	9.6	9.5	18.9		8.4	28.4	8.0	8.2 G=
9.7	18.9	46.6		9.2	55 21.1	55.9	8.8 —	9.6	16.0	18.9		9.1	50.6	1.6	8.9 ≡
8.4	36.9	45.2	8.0 =	8.8	23.1	30.6	8.5 =	8.6	24.0	7.5	9.5	9.4	51.4	14.7	
9.0	38.9	14.6	9.5 —	7.9	24.1	31.9	8.5 —	8.6	14 13.0	51.9	9.2	9.4	53.4	35.9	
25pr.	+ 1 13.2	—8.2		+ 1 15.0	—8.3			+ 1 17.3	—8.4			+ 1 19.0	—3.3		

3481-3540.			3541-3600.			3601-3660.			3661-3720.		
mag.	12 ^h .	-31°	mag.	12 ^h -13 ^h .	-31°	mag.	13 ^h .	-31°	mag.	13 ^h .	-31°
9.4	35 56.9	20.9	8.8	59 57.5	28.6	9.6	21 51.2	43.7 9.0	10.0	36 41.3	51.2
8.8	37 10.9	21.5 9.0	8.9	0 34.8	1.0	9.8	22 4.4	39.1 9.0	8.1	37 2.8	11.1 8.2 Gb
8.8	33.9	43.2 9.0 -	9.0	42.0	45.5 8.5 =	9.8	10.9	51.5	10.2	21.8	5.0
9.7	38 31.0	30.6	9.2	58.0	18.0	10.4	13.9	32.8	10.2	35.3	24.1
9.2	58.9	7.1 9.5	8.4	2 26.5	20.9 8.2 a	10.4	33.9	6.6	9.9	42.8	33.7
9.4	39 1.4	16.5	9.3	47.0	25.9	10.4	45.4	49.9	10.4	38 1.3	37.2 9.5
8.8	13.9	12.2 8.8 =	9.2	52.0	3.1	9.4	46.0	41.0 9.5	9.4	9.8	41.8 9.0 =
8.2	13.9	43.0 8.8 -	7.9	3 21.5	25.6 7.5 GSa	9.4	52.9	10.3	10.4	39 0.8	5.3
8.3	21.4	4.8 8.2 Ga	8.0	32.5	53.3 8.0 G-	8.2	59.4	32.4 8.5 a	10.4	16.8	8.2
8.8	42.4	6.9 8.8 b	9.1	4 45.7	20.4	9.6	23 10.2	5.9 9.0	8.7	25.8	26.4 9.0
9.9	55.4	23.3	9.4	46.0	35.7	9.4	27.9	8.0 9.0	9.6	45.3	28.2 9.0
8.8	40 12.4	39.4 9.5	9.0	46.5	35.9	10.4	37.9	15.0	8.5	40 31.8	48.2 8.5 -
9.9	26.0	18.3 9.5	8.4	5 0.2	52.5 8.0 -	9.8	24 28.4	7.0	8.2	41 0.3	36.8 9.0 G-
9.6	38.9	59.8	9.0	11.2	26.1	7.0	32.4	29.6 8.0 GSat	10.4	6.1	2.0
9.2	41 1.9	41.8 9.5	8.4	17.7	47.2 8.5 =	10.3	33.9	31.4	9.6	10.8	27.2 9.0
9.4	2.9	26.2	7.6	51.7	11.9 7.0 GSb≡	10.4	52.5	45.5	9.4	27.3	13.4
8.2	33.4	38.5 7.2 GS≡	8.8	6 5.2	18.1 9.2	8.2	25 0.4	34.0 8.8	9.0	35.8	35.2 9.0 G-
9.4	41.4	46.1	9.4	28.7	40.3	8.2	22.4	24.7 7.8 Ga	9.6	45.8	45.2
9.4	42 7.4	44.7 9.0	8.9	47.2	14.9 9.2	9.4	28.4	44.7	9.2	47.3	15.1
9.8	43 9.9	10.5	8.4	7 9.7	35.3 8.8 -	9.6	49.9	29.7	10.4	42 26.3	56.3
9.4	48.9	20.9	9.7	11.7	59.8	10.2	53.5	31.6 9.5	9.4	31.8	45.3
9.9	44 18.0	21.0	9.7	43.7	3.7 9.0	9.6	26 3.5	9.0	9.4	43 11.8	26.9
9.8	39.4	59.8	9.7	44.7	28.7	8.4	15.5	14.4 9.0 -	9.4	22.8	29.0
8.4	57.4	21.7 ≡	8.9	47.9	56.9 8.5 -	8.9	16.8	0.8	10.3	23.5	8.3
9.1	45 5.4	34.8	9.4	54.7	8.2 9.5	9.4	20.0	25.0 8.5 -	9.4	36.8	5.4
9.7	54.9	13.7 9.5	9.7	8 25.8	16.0	9.6	43.5	20.2	10.4	44 6.8	16.4
9.6	46 5.0	28.3	9.2	10 8.7	30.1	9.8	27 31.0	28.6	9.9	13.8	44.4
8.6	13.9	10.6 8.5 G=	8.5	21.7	56.3 8.5 -	9.9	48.5	41.7	10.4	19.5	36.9
9.8	18.9	20.7	9.0	11 34.7	26.7 8.8 -	9.2	28 7.0	31.1 9.0 G	10.4	22.5	36.8
9.9	42.9	20.6	9.0	36.2	28.1 9.0 -	7.1	8.5	34.2 7.0 GS≡	9.4	36.3	29.2
9.8	45.9	15.4	9.1	53.2	22.0 9.2	8.1	33.5	22.5 9.2 G	9.4	57.7	0.2 8.8
9.8	47 47.4	1.6	9.1	12 11.7	21.5 9.5	8.1	42.0	44.0 7.5 GW≡	9.8	45 16.3	49.1 9.0
9.9	58.9	35.8	9.3	17.7	14.3	9.6	42.5	36.5	10.2	20.3	45.0
9.6	48 2.8	1.8 9.5	9.7	49.7	36.9	10.4	48.5	45.0	10.4	26.8	7.2
9.8	49 1.4	23.9	9.6	14 11.7	23.9	7.6	29 42.0	45.9 7.5 GW≡	10.4	41.8	45.8
9.7	16.4	27.3	9.6	13.7	55.0	9.2	53.0	38.6 9.5	8.2	47.8	10.9 8.3
9.0	50 19.4	2.8	9.0	14.2	34.9 9.0	9.4	30 3.0	23.5 9.5	9.4	51.4	14.6
9.9	22.9	7.4	9.0	23.7	33.4 9.0	8.5	28.5	30.0 9.0	7.5	58.3	6.2 8.0 =
9.4	23.4	34.6	9.0	25.7	35.2 9.0	8.0	33.0	43.2 8.2 G≡	4.5	46 1.8	18.5 5.1 GSπβ
8.0	48.5	37.2 8.0 GS=	9.6	55.7	38.2	10.4	31 4.0	24.9	9.9	2.1	26.2
9.8	51 30.1	0.8	8.8	56.2	44.5 9.0 -	8.9	4.5	36.0 8.2 G-	9.4	12.1	56.2 9.0
9.0	39.6	8.9	9.0	15 12.2	0.9 9.0 -	9.2	38.0	12.4	10.4	15.7	2.2
9.8	58.5	3.1	9.1	20.2	43.7 9.5	10.4	32 13.2	21.3	9.1	52.3	11.2
9.9	52 49.1	34.5	8.7	21.7	42.5 8.5 G-	10.4	17.0	16.9	7.4	47 7.9	49.7 7.5 GS-
9.1	53 9.1	7.9 9.5	9.7	16 46.7	31.5	9.8	24.5	18.5	9.4	42.1	39.3
9.6	14.6	49.6	9.6	17 25.7	50.8	8.8	34.5	51.2 9.5	8.4	51.1	44.4 8.0 G-
7.8	22.1	22.0 8.5 Ga	9.4	38.2	52.2	9.8	47.5	23.2	9.2	52.1	18.9
8.2	40.1	15.1 8.5 G=	9.6	18 31.8	49.2	10.4	33 19.0	9.0	7.6	48 3.6	28.9 7.5 GSa
9.8	47.6	31.0	9.7	46.7	44.2	9.6	34 22.5	48.5	8.8	10.1	11.7 9.0
9.3	48.1	41.7 9.5	7.4	19 7.2	53.8 7.2 GS-	9.4	33.5	5.3	9.3	36.1	39.9 9.0
9.9	54 15.6	56.5	9.2	21.7	27.3	10.4	38.0	16.4	9.3	42.1	39.2 9.0
8.0	43.6	53.1 8.0 GS-	9.6	33.7	23.3	9.6	38.0	52.6	9.1	42.1	27.8
9.9	56.6	2.6	9.4	20 6.7	17.8	9.6	48.1	59.5	9.5	50.1	47.1
8.6	55 46.6	6.4 8.5 G=	9.6	21 2.7	18.1	9.6	35 38.0	30.6	9.5	49 22.1	12.5 9.5
9.4	56 27.6	14.1	10.4	13.4	29.0	9.6	50.0	10.2	9.5	42.1	36.2
9.9	57.6	37.3	10.4	14.9	17.0	10.4	50.5	52.2	9.2	50 5.1	37.6
9.7	57 5.5	6.0	9.8	19.2	47.6 9.0 -	10.4	36 3.5	43.5	9.0	22.1	2.4 8.8 -
9.7	58 25.6	56.5 9.5	10.4	24.2	46.5 9.5	9.4	5.8	13.2 9.0	9.5	33.1	41.7
9.4	59 36.5	10.1	9.9	25.9	46.0 9.5	10.4	24.8	53.9	9.2	56.6	36.0
8.9	37.5	52.9 8.8 -	10.4	49.9	21.1	10.3	38.8	31.2	8.1	52 10.2	8.1 7.8 Ga
25pr.	+ 1 21.0	- 8.2		+ 1 23.2	- 7.9		+ 1 24.5	- 7.7		+ 1 25.9	- 7.5

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
13 ^h -14 ^h .		-31 ^o		14 ^h .		-31 ^o		14 ^h .		-31 ^o		14 ^h -15 ^h .		-31 ^o	
mag.	m s			mag.	m s			mag.	m s			mag.	m s		
9.1	52	23.2	11.3	9.1	12	23.5	5.6	9.0	30	42.3	48.4	8.8	47	6.8	13.1
9.0		24.7	38.1	9.4		49.8	58.2	9.1		57.3	13.6	9.5		56.3	1.2
9.1		29.2	54.6	9.6		59.5	39.9	8.3	31	3.3	22.4	9.3	48	24.8	33.7
9.4		37.2	25.4	9.3	13	23.1	36.3	9.2		13.8	43.8	9.3		44.8	3.9
9.4	53	9.1	5.6	9.6		25.6	50.9	9.7		19.8	40.3	9.9	49	12.3	29.1
9.3		50.7	41.6	8.6		34.1	15.2	9.2		20.3	40.0	9.4	50	34.8	22.9
9.2	54	0.2	31.7	9.2	14	11.6	9.1	9.6		24.8	7.7	9.3		35.3	16.2
7.7		12.7	0.9	9.7		20.1	17.4	9.6		46.8	9.5	9.4		44.3	26.1
9.0		48.2	38.2	9.7		33.6	12.5	8.9		56.1	58.4	9.5	51	13.3	23.5
9.5	55	40.7	1.3	9.7		41.0	6.5	9.2	32	0.3	7.1	9.4	52	17.3	52.2
7.4		46.7	5.0	8.9		52.0	6.0	9.0		2.3	1.9	9.4		20.8	24.9
8.8	56	19.4	57.2	9.2		56.6	53.1	9.7		33.3	53.1	9.4		23.3	54.2
9.5		21.2	54.6	8.2	15	9.6	8.5	9.7		58.3	9.4	9.2	53	18.8	14.2
8.8	57	31.2	20.1	8.5		16.6	46.7	8.6		8.6		9.8		48.8	27.1
9.5		52.2	56.7	9.7		21.4	10.1	9.3	33	21.8	47.2	9.8	54	2.3	23.1
8.5	58	28.2	48.7	8.8		43.6	8.2	9.3	34	7.3	15.5	9.0		12.3	49.1
9.0		42.7	22.5	9.7		54.8	57.9	9.3		7.8	16.8	8.0		14.0	2.9
9.0	59	10.2	17.7	9.7	16	10.3	57.3	9.9		21.5	22.0	9.8		18.8	50.1
9.5		44.8	0.6	9.2	17	39.6	1.8	9.9		22.0	33.4	9.8		25.3	40.9
9.5		53.2	9.8	9.1		44.1	27.2	9.9		26.0	9.9	9.4		27.5	49.4
8.9		59.8	1.1	9.3	18	13.1	59.8	9.5	35	23.3	1.2	9.9		38.8	11.2
8.6	0	17.2	16.6	9.7		26.1	3.0	9.8		36	12.8	8.6		40.3	5.9
8.8		19.2	28.8	8.8		42.6	40.7	9.0		14.3	43.7	9.8	55	46.3	37.7
9.5		33.7	13.7	9.4		47.1	12.9	9.4		17.8	53.8	9.9	56	10.8	47.3
9.1	1	8.4	58.2	8.4	19	0.1	39.8	9.2		38.3	31.7	8.4		33.3	26.7
9.5	2	4.2	58.6	9.7		12.0	25.6	9.9		39.8	10.1	9.8		40.5	11.2
9.3		21.2	59.6	9.7		15.0	26.5	9.8	37	20.3	38.2	9.8	57	20.8	13.2
9.0	3	18.2	46.2	9.7		16.1	32.2	9.0	38	15.3	17.2	9.8		23.3	40.9
7.8		33.2	29.0	9.3		25.1	45.2	8.4		56.3	9.3	9.3		28.8	47.0
8.3		37.7	12.4	9.6		31.1	42.8	9.6		57.3	32.3	9.8		30.0	1.8
9.5		38.7	45.2	9.2		32.1	39.8	9.8	39	0.1	2.4	9.8		33.7	57.3
8.4	4	4.2	27.4	9.6		44.1	22.9	8.3		1.3	38.6	9.8		34.5	37.2
7.6		10.2	34.6	8.0	20	18.1	18.0	9.9		12.3	15.9	9.4		44.5	30.8
9.0		26.2	0.1	9.7		56.1	8.7	8.8		16.3	53.1	9.4	58	0.5	24.3
9.2		28.7	4.4	9.2	21	7.1	31.2	9.4		19.3	16.0	9.9		25.0	9.0
8.4	5	0.2	32.0	9.7		7.6	23.5	9.5		27.0	57.2	9.5		37.5	14.1
9.4		25.6	12.3	9.2		8.1	34.6	8.5	40	21.3	43.2	9.3		41.7	34.5
9.5		45.6	23.5	8.4		20.6	11.1	9.8	41	18.8	37.0	8.8	59	8.3	58.0
8.9		57.6	48.7	9.6	22	0.7	57.7	9.9	42	11.8	0.0	8.1		21.5	9.5
9.5	6	5.1	27.0	9.4		57.6	29.1	7.8		15.3	54.3	9.8		23.5	26.8
9.5		20.6	8.9	9.2		23	6.1	9.4		22.8	5.3	9.8		27.5	17.7
7.9		35.6	27.5	8.8	24	13.1	27.7	9.6		36.8	17.4	9.6		48.5	49.8
7.8	7	26.1	12.0	8.9		27.1	53.8	9.3		48.3	3.9	9.6		54.0	59.8
8.5		33.6	43.1	8.3		33.6	37.7	9.4		50.8	54.4	9.7	0	1.0	1.5
9.2	8	28.1	54.1	9.2		56.6	21.9	7.6	43	4.8	56.5	9.5		2.5	46.8
9.2		40.1	56.7	9.7	25	42.0	38.9	9.8		37.3	10.5	9.8		27.5	3.3
9.3		42.0	6.6	8.3		42.1	6.6	8.8		43.8	52.1	9.9		29.5	17.7
7.5		58.3	28.4	9.1	26	3.3	2.7	9.5		48.8	18.0	9.5		33.5	53.8
9.5	9	1.0	16.9	8.9		10.3	50.8	9.2	44	18.3	18.4	9.4		40.5	21.6
9.5		11.6	27.5	9.2		34.8	8.4	8.8		57.3	29.7	9.9	1	6.5	40.4
9.5		14.1	18.2	8.3		38.3	24.1	9.4		22.8	5.3	9.9		12.5	59.0
8.6		18.3	38.3	9.6		50.3	44.2	9.2	45	2.8	34.3	9.3		16.5	4.8
9.3		33.1	21.1	8.7	27	13.3	28.8	9.2		13.8	46.5	9.5		21.5	4.0
9.0		42.8	8.2	8.4	28	1.3	53.2	9.2		24.3	46.2	9.9		44.5	16.4
9.2	10	6.5	44.0	8.9		28.3	10.0	9.9		31.8	19.9	9.9		44.5	16.4
9.7	11	16.5	44.0	9.1		29	25.8	8.7		56.3	33.7	8.3	2	7.0	40.1
8.1		22.0	50.9	9.0		47.3	59.0	9.9	46	7.8	29.9	9.9		7.5	11.8
9.6		25.5	43.2	9.2		52.3	32.5	8.1		29.3	6.9	9.0		10.5	13.8
9.0		32.5	7.6	9.1	30	8.3	16.7	9.8		39.3	44.9	9.9		14.0	53.7
8.4		52.0	15.6	9.7		25.3	22.1	9.9		55.3	15.9	9.2		40.0	9.4
25 Pr.	+1	27.4	-7.2	+1	28.6	-6.8		+1	29.9	-6.4		+1	31.2	-6.0	

3961-4020.			4021-4080.			4081-4140.			4141-4200.		
mag.	15 ^h .	-31°	mag.	15 ^h .	-31°	mag.	15 ^h .	-31°	mag.	15 ^h .	-31°
9.6	2 46.5	1.0	9.6	10 50.6	34.5	9.4	16 32.4	50.7	9.7	24 5.6	18.2
9.5	50.5	3.4	9.9	2.6	43.4	9.8	35.9	9.9	9.7	6.0	45.8
9.8	58.5	37.0	9.8	7.6	33.6	9.0	43.9	3.6 8.0 G	9.7	33.0	31.5
9.5	3 24.5	52.1	9.9	9.6	29.4	8.7	57.4	16.0 9.5	9.7	42.8	50.3
9.9	25.0	14.1	8.7	21.6	25.2	8.5	59.9	18.5 8.5 -	8.2	55.8	29.1 9.0 -
9.4	46.0	11.6	9.9	22.6	26.1	8.7	17 3.9	41.7	8.6	25 56.8	36.5 9.5
9.4	52.5	38.8 9.2	9.4	23.6	28.8	9.7	11.9	30.0	9.6	57.8	8.3
9.2	53.0	39.3 8.8	8.6	35.1	34.2 8.5 -	9.9	14.9	52.4	9.7	26 12.8	12.6
9.6	58.5	22.3	9.8	38.6	34.2	7.9	19.4	42.7 7.8	9.2	13.8	6.9
9.4	4 17.5	48.8	9.4	41.1	22.7	9.9	34.2	59.5	9.2	14.3	13.0
9.4	31.5	31.6	9.9	44.6	34.8	9.3	52.6	27.4	9.7	27 15.8	8.6
9.5	34.5	27.6	9.9	48.6	49.0	9.2	52.6	46.3	9.4	21.3	35.3
9.7	39.5	54.8	9.6	58.6	27.4	9.8	54.3	39.2	9.0	27.3	59.8 9.0 W
9.8	40.8	0.9	9.8	12 12.1	9.0	9.5	55.1	8.0	9.7	28.3	4.3
9.8	42.5	7.4	9.5	12.1	6.4	9.8	58.1	2.7	9.1	42.3	28.1 8.5 -
9.9	44.5	38.0	9.6	19.6	15.9	9.4	18 10.8	1.9	9.6	45.5	45.2
9.6	49.5	10.5	8.7	22.1	15.2	9.4	40.1	34.0	9.0	48.8	9.0 G
9.7	56.5	56.7	9.7	30.1	14.8	9.7	44.6	7.8	9.7	28 6.3	0.9
9.9	5 1.0	17.8	9.6	31.1	38.0	9.1	54.1	12.1	9.0	12.3	38.4
9.8	3.0	11.1	9.9	41.1	39.0	9.3	19 9.6	48.5	9.7	37.8	16.3
9.1	13.5	21.7	9.9	42.1	11.2	9.7	15.1	17.9	9.1	29 16.8	11.7
9.8	18.5	6.0	9.4	44.6	33.5	9.6	41.1	34.6	9.6	19.8	28.6
9.3	25.0	23.4	9.5	48.1	27.0	9.3	42.1	38.9	7.7	30.3	38.4 -
9.2	31.3	58.6	9.9	8.6	52.5	9.9	46.6	51.6	8.3	41.8	6.7 8.5 -
9.7	46.5	34.9	9.4	32.1	9.4	9.6	20 0.6	54.8	8.6	48.8	55.5
9.4	47.5	13.8	9.6	40.6	12.6	9.4	3.1	24.6	9.7	49.3	25.1
9.4	58.5	19.0	9.8	41.1	31.0	9.9	8.3	38.5	9.6	55.5	10.5
9.4	6 10.5	58.5	9.9	47.9	30.5	9.9	9.1	34.3	9.7	30 23.3	10.4
9.6	17.5	29.4	9.9	59.4	34.1	9.9	11.1	27.5	9.6	29.3	8.0
9.6	18.5	20.4	9.6	14 5.1	2.7	9.9	11.3	39.0	9.7	44.3	10.4
9.5	33.5	25.0	8.7	21.4	5.0 9.0 a	9.7	13.1	52.0	9.7	54.8	43.6
6.2	58.5	3.1 5.7 GSπβ	8.2	25.9	44.3 7.2 GS=t	9.8	15.1	44.7	9.7	31 19.8	15.0
9.8	7 10.5	47.4	9.9	31.4	45.2	9.7	17.1	44.0	9.2	35.8	30.3 9.5
9.9	20.5	28.8	9.5	38.9	18.1	9.8	21.1	51.7	9.0	42.3	32.0
9.7	34.0	7.3	9.8	39.9	5.0	9.9	25.1	20.5	8.6	50.3	27.6 9.0 -
9.3	46.3	56.0	8.9	52.9	15.7	9.5	39.6	39.3	9.4	52.3	52.6
9.4	54.5	33.6	9.8	54.4	26.7	9.8	43.6	50.2	9.2	32 2.8	35.5
9.6	55.5	30.2	9.9	55.4	27.3	9.9	44.3	32.4	8.6	50.3	49.9 9.0
9.4	56.0	34.3	9.8	55.9	28.7	9.5	49.6	41.2	9.1	51.3	52.1
9.4	58.5	14.8	9.4	57.9	59.6	7.6	21 3.3	2.4 7.1 G≡	9.4	33 32.6	7.1
9.1	8 32.5	22.0 -	9.5	59.9	3.9	9.9	3.3	42.6	8.3	33.1	15.0 8.5
9.9	33.5	18.5	9.7	15 3.4	55.5	9.6	13.1	44.3	8.1	56.6	26.4 7.8 G-
9.8	40.5	18.4	9.5	7.9	24.5	9.6	29.1	13.6	9.7	34 4.8	56.9
9.9	49.5	12.0	9.5	24.4	24.2	9.4	34.3	0.0	9.2	22.6	16.4
9.9	52.0	29.0	9.8	27.9	17.1	9.8	35.6	4.5	9.0	31.1	42.7 9.0
9.2	52.5	15.2	9.5	32.9	4.8	9.7	43.6	12.4	9.2	46.6	31.4
9.6	54.5	18.3	9.6	33.9	52.0 8.0 GW-	9.6	47.9	51.8	7.5	51.6	46.9 7.5 GS-
9.9	9 2.3	1.4	9.4	37.4	5.1	9.6	49.6	32.0	8.8	56.1	21.1
9.4	18.5	3.7	9.8	39.4	44.9	9.6	52.0	35.3	9.7	35 4.6	14.6
9.8	19.5	3.4	9.8	42.4	14.2	9.4	22 0.8	38.1	9.7	26.1	11.9
9.5	36.5	9.6	8.4	42.9	21.4 8.2 -	9.9	1.1	49.8	8.6	40.1	36.4
9.6	10 0.7	36.2	9.9	43.7	13.9	9.8	24.1	21.3	9.1	41.6	13.1
9.8	2.6	29.3	9.7	44.9	17.3	9.8	33.6	48.9	9.7	36 1.6	46.6
9.6	5.6	43.4	9.7	16 0.9	50.4	8.3	40.3	52.2 8.8 W	8.4	14.1	55.2 7.5
9.8	11.6	2.2	9.9	3.9	53.2	9.7	46.4	27.8	8.0	16.1	12.2 7.0 GSbt
9.8	33.6	30.2	9.8	9.4	48.2	8.8	54.6	48.0 8.5	9.7	16.6	8.0
8.7	37.6	23.3 8.5 -	8.9	20.4	34.0	9.6	23 11.0	13.8	9.7	23.1	33.3
9.8	40.1	48.4	9.8	20.9	27.1	9.2	12.5	53.2	9.7	27.6	51.6
9.4	42.6	30.2	9.5	22.9	49.0	9.1	25.5	36.2 9.5 G	9.4	46.1	51.3
9.3	44.1	28.6	9.4	26.4	14.6	9.7	53.0	8.9	9.7	37 26.1	25.0
25ppr	+ 1 31.7	-5.8		+ 1 32.1	-5.5		+ 1 32.5	-5.4		+ 1 33.1	-5.1

4201—4260.				4261—4320.				4321—4380.				4381—4440.			
15 ^h .		—31°		15 ^h —16 ^h .		—31°		16 ^h .		—31°		16 ^h .		—31°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.7	37	27.1	58.2	9.6	45	30.2	3.2	9.6	0	42.5	58.9	9.1	16	5.9	33.6
9.7		44.6	11.8	8.3		37.8	15.5	9.2		55.4	42.0	8.8		15.9	50.9
9.4		49.1	31.0	9.6		47.5	7.0	8.6	1	8.9	45.7	8.2		59.9	16.3
8.4		50.6	33.8	9.7		47.5	20.5	10.0		10.9	44.5	7.2	17	8.9	7.8
9.1		58.6	48.2	9.6		56.5	22.1	7.5		15.9	45.4	9.1		12.9	25.5
9.6	38	3.1	18.1	8.3	46	13.8	41.3	10.0		34.9	25.5	9.8		22.9	3.8
8.8		5.1	20.3	9.0		14.3	59.2	8.7		42.2	0.4	9.8		32.4	51.7
9.1		5.8	37.3	9.8		43.3	44.8	8.2		57.9	16.2	8.6		36.9	2.8
9.7		26.1	9.1	10.0	47	1.6	4.5	9.2	2	26.9	57.1	7.9		37.9	47.0
9.1		41.1	13.6	7.3	48	22.6	25.1	9.2		50.4	49.4	8.0		43.4	24.7
9.6		45.6	58.8	10.0		32.6	1.6	9.4		52.9	26.6	8.8		52.4	52.3
9.4		46.1	29.8	10.0	49	11.6	36.8	7.9	3	20.9	27.4	9.6	18	35.9	12.9
8.6		50.6	31.2	9.4		12.1	53.1	9.4		31.9	53.1	9.9		46.2	40.3
9.2		52.1	33.4	8.3	50	0.1	36.1	8.8		39.2	27.4	9.1	19	37.4	34.1
9.7		53.6	56.7	8.3		1.6	36.3	10.0		46.2	32.9	9.9	20	19.9	2.0
9.7		59.6	6.3	10.0		3.1	32.8	8.4		50.7	55.8	9.9		24.9	1.5
9.7	39	4.1	7.9	7.4		8.1	21.8	9.4		53.2	32.3	9.9	21	6.2	3.2
9.0		13.1	56.1	10.0		33.1	24.2	9.1	4	50.2	15.5	9.3		42.4	27.6
9.7		19.5	10.6	8.2		57.1	41.3	10.0		54.7	26.4	9.6	23	2.9	43.0
9.1		46.5	55.9	10.0	51	11.8	2.2	8.0	5	26.2	48.1	9.9		6.6	6.2
8.9		48.5	46.1	7.4		57.6	28.4	10.0		30.2	27.9	9.1		21.1	26.4
9.0		51.0	40.8	9.1	52	8.6	4.2	9.5		30.2	10.1	8.8		27.1	32.5
9.2		52.0	50.6	9.2		21.6	6.9	10.0		53.7	7.3	9.4		28.1	49.4
9.7	40	2.5	10.4	8.0		38.6	44.5	10.0		54.0	2.8	9.2		41.6	22.7
9.7		6.0	54.8	9.4		42.1	14.4	9.0		57.2	43.0	8.6		55.6	22.3
9.7		9.0	55.0	9.8		55.6	34.8	7.5	6	17.2	20.0	8.8	24	13.6	52.1
9.7		12.8	26.6	10.0		59.6	40.8	8.7		42.7	37.1	9.9		16.4	51.0
8.8		14.0	51.0	9.4	53	2.6	11.6	8.8		53.9	58.3	9.0		30.6	53.9
9.1		29.5	55.5	10.0		7.1	57.0	10.0	8	32.7	30.6	9.6		41.6	45.4
8.0		40.5	41.8	9.0		7.6	56.9	9.6		48.2	29.1	8.8		58.6	39.5
9.2		44.5	44.3	7.6		26.6	32.0	9.6	9	2.2	29.8	8.8	25	3.6	16.9
9.2		50.0	36.4	8.2		29.4	11.5	9.6		6.5	33.9	9.9		7.6	34.9
8.9		57.0	25.6	8.4	54	12.4	45.6	10.0		41.4	42.7	9.6		18.1	49.0
9.2	41	15.5	17.3	10.0		34.9	50.7	9.9		52.2	7.8	8.8		19.6	6.3
9.4		23.5	0.1	9.4		38.4	18.6	9.6		53.4	34.5	8.6		20.1	49.8
9.7		30.5	51.0	10.0		47.4	8.2	7.9	10	10.0	20.4	7.8		43.1	1.3
9.7		32.8	44.2	9.0	55	1.4	53.3	8.6		14.2	16.1	9.9		54.1	54.8
9.7		48.0	18.1	9.0		1.9	22.8	9.3		17.4	18.1	8.0	26	13.1	1.1
8.6		57.0	44.8	8.4		2.9	48.6	9.9		33.4	30.1	9.0		40.1	40.5
9.6	42	4.0	36.0	8.7		30.4	39.5	9.9		44.1	58.0	9.0		40.8	2.3
9.7		19.5	2.5	7.0		41.4	39.0	9.9		55.9	13.7	9.9		47.1	15.6
9.2		30.0	54.0	10.0	56	7.4	46.0	9.9		55.9	55.9	9.8		59.6	11.8
8.9		38.0	9.2	9.0		22.4	54.2	9.9	11	23.9	44.7	8.4	27	5.6	38.0
9.6		53.5	19.0	10.0		45.9	33.7	9.3		33.4	46.8	9.8		21.6	9.1
9.7		59.5	30.6	8.8		57.4	16.9	9.8		59.9	9.9	9.9		31.6	4.9
9.1	43	16.0	32.9	9.4	57	5.7	56.9	9.8	12	21.2	35.6	8.6		59.6	19.9
9.7		17.5	53.5	10.0		12.4	57.9	9.0		23.4	8.3	9.2	28	10.6	12.5
8.1		25.5	7.6	8.2		20.9	6.7	9.7		39.9	56.5	8.3		16.6	15.8
9.7		29.5	57.8	7.6		32.4	6.8	9.4		45.2	15.6	9.6		25.6	12.1
9.2		33.0	28.8	8.2		35.9	53.6	9.9		48.2	45.2	8.6		35.6	6.1
9.1		50.0	2.7	9.5		55.4	9.5	9.6		57.9	42.1	8.8		36.1	13.9
8.6		51.5	34.9	10.0	58	0.4	37.1	8.6	13	10.9	27.5	8.5		40.6	51.0
9.4		54.0	33.1	8.6		36.4	0.1	8.8		50.4	53.1	8.6		41.6	12.5
9.7	44	11.5	14.3	8.8	59	23.4	14.8	9.3	14	10.2	2.7	8.2		50.6	39.9
9.2		12.5	24.7	9.5		29.9	29.1	9.7		26.9	41.9	9.0	29	7.1	53.2
9.6		23.0	27.8	8.4		41.9	12.8	9.9		26.9	49.2	9.1		8.6	55.7
9.2		23.5	40.0	9.4		42.9	53.6	9.6		33.2	37.4	9.8		12.6	52.3
9.7		35.0	46.5	8.8	0	17.9	16.3	9.6		46.9	15.0	9.2		25.6	16.7
9.7		57.2	19.0	9.4		33.9	3.6	9.8	15	8.9	37.7	9.1		36.6	9.5
9.7	45	6.2	26.0	8.7		37.9	35.0	8.2	16	5.2	57.8	9.7	30	0.1	22.5
25pr.	+ 1	33.7	—4.8		+ 1	34.2	—4.4		+ 1	35.0	—3.9		+ 1	35.5	—3.4

4441-4500.				4501-4560.				4561-4620.				4621-4680.				
mag.	16 ^h .	-31°		mag.	16 ^h .	-31°		mag.	16 ^h -17 ^h .	-31°		mag.	17 ^h .	-31°		
	m	s	'		m	s	'		m	s	'		m	s	'	
9.0	30	2.6	47.7	10.0	44	47.9	15.8	10.0	8.6	57	57.9	46.7	9.6	6	48.4	
8.3		27.7	44.9	10.0	45	2.9	11.4	9.4	58	7.0	18.0	8.7	7	0.4	10.8	
9.9		27.7	12.1	7.6		3.9	40.0	7.5	9.1	30.5	6.9	9.4		12.4	23.2	
8.8		43.7	5.3	8.4		6.8	13.0	8.5	10.0	37.0	14.2	10.2		12.9	44.2	
9.9		45.7	30.1	9.6		9.8	49.9		10.1	42.0	24.0	10.2		20.4	18.0	
9.6		49.7	38.1	8.7	46	25.8	57.2	9.5	9.4	59	16.5	38.0	10.0		20.9	25.2
8.8		51.2	38.3	10.0		26.8	58.7	10.0	10.1	16.5	22.9	9.0		21.9	48.4	
9.0	31	15.2	38.3	7.9		35.8	58.9	7.5	10.0	28.5	50.8	9.5		27.9	36.0	
9.9		20.2	38.3	8.5		35.8	7.7	9.0	9.4	34.0	23.2	8.1		40.4	54.0	
9.8		21.2	11.1	8.7	47	7.3	1.1	8.5	9.4	53.5	48.4	9.8		42.9	7.4	
9.9		25.2	56.5	7.4		7.8	11.7	7.0	10.0	58.5	19.1	10.3	8	1.9	6.0	
8.0		29.2	28.3	8.7		13.3	13.2	9.0	9.8	0	23.5	15.4	9.8		10.9	31.9
9.1		31.7	39.2	9.8		32.8	5.3	9.5	9.8	31.2	1.9	10.2		20.9	37.7	
9.9	32	52.2	42.2	8.4		32.8	7.6	8.7	9.6	33.0	56.2	9.1		34.4	41.6	
9.1		57.7	1.0	9.6		33.3	51.1	9.5	9.7	33.5	58.5	9.2		43.4	27.9	
9.3	33	12.2	44.0	9.5		34.3	59.2		9.1	45.0	7.3	10.3		43.9	58.8	
9.2		14.2	8.9	7.7		50.3	15.9	8.0	10.2	57.5	24.0	9.8		47.4	49.6	
9.9		38.7	4.2	8.2	48	11.8	18.8	8.5	9.8	1	2.0	18.5	9.2		54.8	0.5
9.2		46.2	10.7	8.2		15.8	6.3	7.5	9.7	2.0	56.1	8.8	9	2.4	19.4	
9.0		48.9	11.2	9.6		18.3	17.4		10.1	3.0	12.3	8.5		11.9	55.2	
9.0	34	11.2	15.7	9.2		18.3	10.7	9.0	10.3	9.5	34.2	10.2		16.9	46.2	
9.9		30.7	14.9	8.9		39.8	31.0		9.4	9.5	51.1	9.6		24.9	22.0	
9.8		35.2	25.8	8.7		51.3	34.5		9.8	10.0	6.1	9.5		41.9	11.4	
10.0		44.3	53.6	8.4		51.8	47.2	9.0	10.3	12.9	1.7	9.8		43.4	38.4	
9.8		53.6	2.2	8.8	49	6.8	1.1	9.0	8.4	20.0	31.0	8.8		46.9	49.4	
8.8	35	9.4	6.3	9.4		9.3	8.3		9.8	25.0	24.0	10.2	10	10.4	51.0	
7.1		36.9	52.0	8.4		22.3	27.0		10.3	27.0	14.1	9.8		30.4	13.6	
8.6	36	39.9	22.2	10.0		47.8	4.2		9.8	33.0	48.2	10.3		35.6	11.3	
10.0		40.4	5.3	9.6		55.8	46.0		10.0	2	7.5	20.1	10.3		38.6	22.2
9.2	37	4.4	28.7	9.4	50	2.3	52.2	8.8	10.3	11.0	15.8	10.0		47.1	26.6	
8.8		5.9	8.7	10.0		35.3	0.4		10.2	24.0	37.8	8.6		57.3	3.1	
9.6		41.4	1.9	10.0		57.0	1.4		9.5	25.0	19.9	10.1	11	4.6	36.6	
9.4		58.4	7.4	8.9	51	24.3	41.0		8.4	42.0	24.1	7.2		13.1	13.5	
9.2		58.9	33.9	8.0		48.8	31.0	8.5	10.3	42.5	5.1	9.4		20.6	36.2	
9.2	38	1.9	16.2	10.0		50.3	36.7		10.3	52.5	31.3	10.1		29.6	5.8	
10.0		30.9	35.6	8.7		58.3	24.0	9.0	9.2	59.5	25.2	9.5		34.1	19.1	
8.0		52.9	13.3	8.8		58.3	21.4	10.0	9.8	3	7.5	49.4	9.0		38.1	33.2
10.0	39	21.9	28.8	9.2	52	1.3	18.7	10.0	9.8	44.0	48.3	10.3		40.6	3.0	
9.4		30.9	27.8	10.0		2.8	5.2		9.5	46.0	35.4	10.3		51.6	50.2	
8.4		32.9	38.0	10.0		6.6	57.8		9.0	51.5	38.4	10.0	12	14.1	42.6	
8.9	40	11.9	22.3	8.6		52.8	35.1	9.0	10.2	4	7.5	14.0	9.7		14.1	17.6
9.4		14.9	37.3	10.0	53	3.8	20.6		10.3	9.5	12.3	10.3		15.8	0.9	
9.8		16.4	51.0	8.9		5.8	15.8		9.0	17.3	59.5	10.1		26.6	16.1	
10.0		41.9	29.6	9.5		5.8	29.9		10.2	41.0	58.9	9.7		44.1	41.1	
8.9		47.9	40.9	9.2		25.8	18.2		10.0	42.5	5.1	10.0		2.6	32.5	
9.2	41	1.9	34.4	5.7		47.8	57.3	5.5	10.0	58.0	9.1	10.0	13	2.6	29.1	
9.2		21.9	15.2	10.0		59.8	26.8		9.8	5	2.5	50.7	10.1		16.8	0.8
7.9		32.4	25.7	9.8	54	22.8	53.3	7.0	9.6	11.0	10.4	8.2		21.6	27.0	
9.6		42.4	23.6	7.4	55	14.8	25.9		10.3	12.0	21.5	9.7		22.1	38.6	
9.4		55.9	35.7	10.0	56	0.8	6.2		9.8	37.4	44.0	10.2		26.8	58.7	
9.0	42	34.5	0.6	9.5		1.8	41.9		10.3	38.9	45.6	9.7		32.1	45.6	
8.4		37.9	24.9	10.0		28.8	30.9		10.0	43.4	46.2	10.1		34.1	54.0	
10.0		57.4	9.1	10.0		39.3	12.3		10.1	57.9	51.8	10.1		36.8	1.0	
8.4	43	10.4	23.8	8.2		44.3	11.1	7.8	10.3	6	6.9	7.6	10.1		38.0	23.1
9.6		12.9	30.1	8.6		54.3	11.7	8.5	9.6	14.4	3.6	10.2		39.6	4.5	
8.9		50.7	58.0	10.0		59.8	44.9		9.6	22.4	22.8	10.2		52.0	47.2	
8.9		54.9	36.0	10.0	57	0.8	4.2		10.2	23.9	54.1	10.1		54.1	8.7	
10.0	44	6.9	33.8	8.4		10.3	15.6	9.0	9.8	25.9	19.2	9.0	14	8.6	31.6	
8.4		17.9	36.2	10.0		13.8	26.5		10.2	27.9	1.7	7.8		11.1	27.4	
9.4		21.9	10.9	9.4		49.0	0.9		10.3	47.9	6.0	10.1		16.0	30.7	
25pr.	+1	35.9	-3.0		+1	36.4	-2.5			+1	36.6	-2.1		+1	36.8	-1.8

4681—4740.				4741—4800.				4801—4860.				4861—4920.				
mag.	17 ^h .	—31°		mag.	17 ^h .	—31°		mag.	17 ^h .	—31°		mag.	17 ^h .	—31°		
	m	s	'		m	s	'		m	s	'		m	s	'	
8.6	14	16.8	0.4	9.5	9.7	21	23.7	23.5	9.6	25	10.9	2.9	9.8	30	32.6	16.7
8.5		18.1	10.2	9.0 GS-c	9.1		28.7	12.0	9.0		17.9	0.2	9.8		36.4	48.1
9.7		18.3	57.0		9.5		30.7	28.7	9.4		19.6	36.0	9.8		40.3	0.6
10.0		22.1	16.6		9.2		30.7	39.3	9.4		21.6	28.0	9.6		42.9	46.3
9.4		31.1	18.2		9.6		30.7	49.0	10.2		51.6	11.0	9.2		45.9	26.0
10.1		58.1	16.0		10.3		34.7	48.7	9.2		54.6	31.8	10.2		54.4	27.5
10.2	15	6.6	1.6		10.3		35.8	42.0	9.4	26	4.6	37.6	10.0		54.9	37.7
8.9		9.6	21.9	9.5 -	10.2		42.2	2.9	9.0		7.1	49.6	10.2	31	4.9	9.0
9.8		10.6	44.2		10.3		42.7	18.0	10.0		7.6	40.1	9.8		8.4	39.0
9.2		24.1	52.5	9.5 G	10.3		55.7	6.8	9.4		8.8	59.6	9.0		17.4	1.1
9.4		26.1	32.7		9.8		57.7	21.4	10.2		14.6	46.0	10.2		37.4	49.3
8.0		26.6	34.5	8.5 GW=	10.3		59.2	14.5	10.2		26.6	41.2	10.0		43.4	48.0
10.3		28.6	26.3		9.8	22	4.7	36.7	8.0		32.6	46.9	9.2		44.3	57.5
10.3		32.6	56.0		10.0		5.2	35.8	8.5		35.6	13.2	8.7		45.9	57.9 G
9.8		35.1	22.8	10.0	10.3		7.7	58.6	10.2		47.6	45.5	9.2		47.4	38.6
9.2		54.6	20.6		9.4		7.7	55.9	9.5	27	0.6	23.4	9.8		51.9	8.7
9.5	16	5.9	1.7		10.3		12.2	4.9	10.2		7.6	6.0	10.2		58.9	29.8
10.2		6.0	33.3		10.3		13.7	29.9	9.2		9.1	18.7	9.9		59.4	48.8
9.6		6.1	37.8		9.0		14.7	21.0	10.2		13.1	46.3	10.2		59.9	29.5
9.4		8.5	59.1		10.1		16.6	1.2	8.2		17.1	43.7	9.7	32	0.4	28.7
9.1		10.6	51.9	8.5 -	9.4		16.7	2.1	9.8		19.1	59.6	9.8		3.4	56.0
9.7		47.1	26.5		10.3		22.7	2.6	9.7		23.1	23.4	9.8		7.4	55.3
10.0		47.6	15.2		10.3		26.2	1.0	9.9		30.1	33.1	8.8		12.4	48.7
9.6		56.6	34.5		7.6		32.8	57.7	9.5		38.1	44.2	9.0		13.4	50.0
9.2	17	15.6	26.7		9.8		40.3	41.0	9.0		54.6	31.1	10.2		17.4	48.0
10.0		27.0	57.9		9.2		40.6	15.1	9.7		58.6	44.0	8.9		18.4	56.9 G
10.1		27.6	51.7		9.3		41.1	29.0	10.0	28	0.1	18.6	10.2		25.4	20.3
10.3		41.6	47.9		10.0		54.0	34.1	9.8		2.1	24.6	10.2		31.4	18.0
10.2		44.1	34.7		9.4		59.3	14.9	10.2		4.6	45.0	9.5		34.9	9.1
10.3		50.6	24.8		9.9	23	7.6	22.8	9.2		6.6	42.8	9.5		34.9	52.6
9.2		54.1	55.8		9.4		8.6	16.8	9.5		12.6	39.6	10.2		38.1	0.8
9.6	18	11.1	31.6	9.5 -	10.2		16.0	45.0	9.8		13.6	29.0	9.7		51.4	17.7
9.8		18.1	36.8		8.0		17.0	52.2	10.2		14.1	25.5	9.6		56.4	49.6
9.6		28.1	22.1	8.5	10.2		18.6	0.6	9.8		15.6	6.5	10.2		58.4	12.6
8.7		32.1	29.7	9.0 W=	10.2		26.5	14.0	10.2		16.6	49.0	10.2	33	0.4	40.2
7.6		33.6	54.5	7.5 GS-	9.4		29.5	46.4	9.9		19.1	5.2	9.7		0.9	12.0
9.2		34.0	57.6		8.8		30.0	23.6	9.2		50.6	28.8	9.6		3.4	54.0
10.0		38.9	58.2		10.2		31.0	26.9	9.4		58.6	53.7	10.0		4.4	8.9
9.7		47.6	19.2		10.2		32.0	13.9	9.0	29	6.1	19.6	9.9		11.9	30.2
9.7	19	32.6	7.9		9.6		41.5	52.0	9.6		7.1	55.5	9.2		13.3	6.1
10.1		48.6	1.6		9.7		45.4	0.5	9.0		7.6	18.2	9.6		16.3	22.8
10.1		52.6	24.8		9.3		46.5	24.8	9.4		8.6	59.3	10.2		23.3	28.8
9.4		57.1	54.1		9.8		53.5	46.8	9.3		13.6	8.3	9.7		34.3	53.9
8.9	20	0.1	25.9		8.1		55.0	43.8	9.3		21.6	44.7	9.8		37.8	48.8
8.6		7.7	6.0	8.0 GSb	9.6		55.0	43.2	9.8		22.6	30.8	9.8		43.3	43.9
10.3		19.7	2.6		9.9	24	2.0	20.1	10.2		23.6	16.9	9.7		44.3	54.0
10.3		20.7	32.7		8.4		2.0	27.0	10.2		33.6	35.6	9.0		53.3	16.9
9.7		30.7	30.2		10.2		10.5	17.3	9.9		44.1	3.4	10.2		55.6	59.0
10.0		30.7	47.7		10.2		14.0	20.7	9.9		46.1	36.3	9.2		59.3	29.5
9.7		35.7	10.8		9.6		27.6	25.2	9.8		47.6	7.2	9.8	34	6.0	57.8
8.3		36.7	16.6	8.0 GS=c	9.5		27.6	34.3	10.0		50.1	6.3	10.0		6.8	21.6
9.8		43.6	30.2		10.0		28.6	48.6	9.5		54.0	58.7	9.8		11.3	37.2
9.7		43.7	57.7		9.5		34.1	21.2	9.2		55.6	46.0	9.6		19.3	7.1
9.1		47.7	28.1		10.2		47.1	22.6	9.8		57.6	15.0	10.0		32.3	13.9
10.3		49.2	13.1		9.7		48.6	44.0	9.5	30	7.6	31.2	10.0		35.8	28.9
9.2		56.7	39.6		10.2		54.6	1.2	10.2		10.1	12.4	10.0		42.8	11.6
9.6	21	1.7	29.4		9.2		56.6	17.6	9.2		16.1	55.9	8.7		48.8	39.3
9.6		4.7	34.0		8.8		58.1	53.2	9.3		21.6	21.1	9.6		52.8	40.9
7.6		7.7	25.7	7.5 GSb=	9.6	25	3.6	47.5	10.2		23.1	22.0	10.2		58.7	58.9
10.2		16.2	43.2		9.2		8.1	4.0	10.2		30.1	14.7	10.2	35	0.3	31.7
25pr.	+ 1	37.0	- 1.5		+ 1	37.0	- 1.3		+ 1	37.1	- 1.2		+ 1	37.1	- 1.0	

4921-4980.				4981-5040.				5041-5100.				5101-5160.			
mag.	17 ^h .	-31°		mag.	17 ^h .	-31°		mag.	17 ^h .	-31°		mag.	17 ^h .	-31°	
	m	s	'		m	s	'		m	s	'		m	s	'
9.6	35	6.8	22.7	10.2	39	47.4	49.7	10.2	43	43.4	3.7	10.2	47	34.1	23.9
9.6		10.5	0.7	10.2		51.9	24.7	9.7		43.9	5.3	10.4		34.1	45.9
9.8		25.8	56.9	10.2	40	11.4	19.7	9.6		52.9	22.2	10.2		35.6	3.6
9.3		35.8	33.8	9.3		14.9	20.2	9.2		53.9	17.2	10.4		43.1	55.8
9.2		40.3	36.7	10.2		18.4	14.8	8.6	44	2.4	18.8	9.5		44.1	54.0
9.3		43.8	58.3	10.2		21.9	38.2	10.0		3.9	1.1	8.9		45.1	43.0
9.3		47.3	45.1	10.2		26.4	16.3	9.9		6.9	15.0	10.2		47.1	8.5
9.4		47.3	28.2	9.2		29.3	56.7	10.0		8.9	29.6	9.0		48.6	50.9
9.5		47.3	20.9	10.2		41.9	46.0	8.4		11.9	17.5	9.4		48.6	23.4
10.2		52.8	40.0	10.2		42.9	52.9	9.8		20.4	52.9	9.6		48.6	10.4
8.9		59.8	12.8	10.2		43.4	20.6	9.2		26.4	36.0	8.7		53.8	49.1
9.4	36	5.3	4.4	9.6		55.4	6.4	9.8		26.9	51.9	8.6	48	1.8	13.6
9.7		11.8	49.1	9.0		55.9	51.2	9.4		31.4	44.2	9.9		7.8	49.1
9.8		23.4	2.1	8.8		56.7	1.6	8.4		37.9	36.1	9.4		13.8	9.9
10.2		37.3	47.0	5.1	41	3.4	39.4	9.8		41.8	29.2	10.4		15.3	48.0
9.9		39.0	3.4	8.9		3.4	14.5	10.2		43.3	41.9	10.4		20.8	12.2
9.9		41.0	36.1	10.2		5.9	23.9	10.2		44.8	41.5	9.8		28.8	7.0
10.2	37	4.0	26.1	10.2		8.4	16.4	9.9		46.8	8.5	8.5		30.8	5.8
9.8		11.0	21.9	8.2		11.9	12.5	10.2		52.8	44.8	10.4		31.3	34.2
10.0		13.0	28.8	10.2		13.9	16.9	9.4	45	0.8	18.3	9.8		33.3	32.9
9.4		15.5	3.2	8.2		20.8	57.8	10.2		6.8	34.9	9.2		33.8	41.7
9.9		23.0	18.0	9.8		22.9	53.2	9.2		40.8	32.9	10.4		34.8	28.6
9.2		25.5	0.0	9.5		32.5	0.7	9.3		41.9	1.4	9.8		36.8	5.4
10.2		34.5	43.9	10.2		36.9	47.8	9.2		44.2	29.9	8.4		36.8	30.0
10.2		36.5	6.2	9.7		45.9	18.5	10.2		45.8	37.0	9.9		36.8	31.0
9.8		43.5	35.9	10.2		45.9	17.8	9.8		48.8	22.5	9.9		37.8	48.8
9.8		48.5	50.8	8.8		46.9	39.4	10.2		51.8	9.0	10.4		41.3	50.0
9.7	38	1.5	31.7	9.7		54.4	33.1	9.9		55.5	56.1	9.6		41.8	46.2
9.8		23.0	13.1	10.2	42	2.9	42.0	9.8		56.7	47.6	10.4		42.3	23.3
9.9		28.0	46.6	10.2		2.9	22.9	10.2	46	3.2	7.8	10.4		43.8	32.9
9.2		33.0	54.5	10.2		4.4	22.5	9.9		4.1	47.9	10.4		48.8	21.5
10.2		39.5	25.2	10.0		5.4	21.8	10.4		7.1	19.9	10.4		49.8	27.2
10.2		43.0	28.0	9.6		5.9	39.9	10.4		7.7	59.8	10.4		53.8	37.8
9.8		44.5	32.5	9.7		7.9	15.5	8.5		10.5	13.8	9.5		54.8	52.4
9.7		46.0	31.7	10.0		9.4	35.8	9.0		17.7	26.5	10.1		58.3	52.4
9.8		47.2	39.8	10.0		26.4	5.7	10.2		21.6	44.1	9.9		58.3	18.8
10.2		50.0	26.1	8.9		33.4	15.2	9.8		30.6	3.8	10.0	49	1.3	21.6
10.2		50.5	28.4	10.2		36.9	41.9	10.0		33.6	31.3	8.9		4.8	29.0
10.2		52.5	28.0	9.5		47.9	7.2	9.5		33.6	11.2	10.4		12.8	42.3
10.2		53.5	28.5	9.7		48.4	26.8	9.2		33.6	3.7	9.9		12.8	7.8
10.2		53.5	29.0	9.8		53.9	53.2	10.0		36.1	1.6	10.2		14.3	15.3
10.2		53.5	30.6	9.4		54.4	7.2	10.1		42.6	14.6	9.1		17.3	29.0
10.2		57.0	10.6	9.6		56.4	11.2	9.2		45.1	4.0	10.2		17.8	17.6
10.0		57.0	37.7	10.2	43	2.4	22.1	10.4		48.1	53.2	8.9		18.8	29.3
10.2		57.2	30.2	10.2		2.9	1.7	10.4		53.1	4.0	9.8		20.8	9.2
9.7		58.0	30.9	9.8		2.9	36.5	8.9		57.1	5.9	9.2		21.3	54.4
10.0	39	7.2	26.9	9.8		3.4	37.1	9.9		57.1	36.9	10.4		30.3	10.6
9.8		8.0	28.4	9.8		4.9	38.1	9.8	47	3.8	2.8	10.2		30.3	51.3
9.7		8.0	30.1	10.2		7.9	26.9	9.6		7.1	55.1	9.5		38.8	34.6
9.2		14.5	20.2	10.2		10.9	53.1	10.4		10.1	15.6	9.9		42.6	20.6
9.8		16.5	37.5	10.0		22.4	6.7	9.2		10.6	14.1	9.5		44.6	41.8
10.2		17.0	51.7	10.2		26.4	17.6	10.4		12.1	34.9	10.1		50.1	4.7
10.2		17.5	24.9	8.8		27.7	59.8	10.4		14.1	31.4	9.9		50.1	3.4
9.9		20.0	36.5	8.6		29.9	22.5	9.5		19.6	24.6	9.4		54.6	29.9
10.2		21.2	28.8	9.8		31.9	15.8	8.9		19.8	58.4	9.4		55.6	46.0
10.2		24.5	20.2	9.6		31.9	40.1	9.6		20.1	31.5	9.2		56.6	13.1
9.6		26.0	23.5	10.2		37.9	5.3	9.8		25.6	9.2	9.2	50	1.6	31.2
8.9		32.0	8.4	9.7		38.9	36.7	9.1		26.1	55.8	9.8		4.1	31.0
9.6		32.4	11.8	10.0		41.4	32.9	9.6		27.1	44.7	9.5		12.1	7.2
9.6		43.9	9.1	10.2		42.9	14.7	10.2		28.1	39.2	10.2		17.6	26.6
25pr.	+1	37.2	-0.8		+1	37.2	-0.7		+1	37.3	-0.5		+1	37.3	-0.4

5161-5220.				5221-5280.				5281-5340.				5341-5400.			
		17 ^h .	-31°			17 ^h .	-31°			17 ^h -18 ^h .	-31°			18 ^h .	-31°
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
10.0	50	17.8	57.5	10.4	53	40.5	30.0	9.8	57	10.0	19.2	10.4	0	26.4	22.0
10.4		19.6	26.8	9.5		44.5	39.1	10.4		10.5	59.9	9.6		27.4	53.9
8.7		24.6	58.0	10.4		46.5	40.2	10.4		11.0	16.0	10.4		27.9	19.6
9.9		26.6	34.5	10.4		52.5	53.3	10.2		11.5	34.5	9.8		29.4	35.6
9.4		32.6	30.6	9.2		53.5	49.7	9.4		14.5	3.4	9.0		32.9	58.8
8.5		34.6	47.1	9.6		55.5	2.3	9.6		16.5	56.4	9.0		33.4	15.5
8.9		40.6	7.0	8.8		58.5	23.8	8.9		19.0	46.3	9.9		36.4	23.5
9.8		42.1	1.0	10.2	54	3.5	31.9	9.8		20.0	51.0	9.2		42.4	27.3
9.8		51.1	46.1	9.9		3.6	21.1	10.2		26.5	46.0	10.4		46.4	18.7
9.8		54.6	40.9	8.9		18.6	29.0	9.9		27.5	22.4	8.9		48.4	15.7
10.4		58.1	6.3	10.2		18.6	32.4	10.0		27.5	46.0	10.4		48.9	47.8
9.2	51	1.1	55.8	9.8		19.1	57.4	10.4		41.0	53.0	10.4		52.4	28.7
10.0		2.6	18.2	10.0		23.1	45.8	9.9		42.5	33.4	10.2		53.5	56.7
9.5		4.6	34.7	9.5		26.6	0.6	10.4		47.5	50.7	8.0		54.4	10.4
8.7		9.1	25.7	9.5		32.6	59.8	8.9		47.5	55.7	10.4		55.9	50.2
9.8		11.1	13.8	10.2		35.1	53.8	10.4		47.7	56.4	10.4		55.9	8.8
9.2		11.1	36.4	10.4		35.1	5.4	10.4		48.5	20.2	8.7	I	2.9	27.6
9.8		12.1	5.3	10.4		40.6	35.2	10.4		52.0	31.9	9.8		3.9	43.1
9.5		17.6	24.0	9.8		46.6	55.2	9.2		52.5	55.2	10.1		4.4	29.7
10.4		18.6	37.0	10.2		46.6	48.7	9.5		53.5	17.8	10.2		5.4	51.0
9.8		22.6	57.8	9.4		48.6	47.2	9.9		56.5	12.4	10.4		13.4	15.5
9.9		24.1	40.9	9.4		52.6	27.7	10.0		57.0	13.4	10.4		22.4	22.0
10.4		27.1	45.1	9.2		52.6	4.0	8.5		57.5	34.6	9.5		24.4	40.5
9.5		29.6	7.3	9.4		53.6	28.7	8.5		57.5	29.7	10.4		30.4	47.3
10.4		32.1	10.9	9.8		55.1	43.8	10.2	58	0.5	30.8	10.0		33.4	24.5
10.2		32.6	25.3	10.4	55	2.6	33.6	9.8		1.5	59.3	10.4		36.4	18.5
9.8		37.6	6.8	9.2		6.6	53.0	10.4		1.5	20.6	9.6		36.4	34.4
9.9		49.1	40.7	10.4		6.6	23.0	9.9		2.0	27.8	9.8		37.4	4.5
9.9		52.6	56.9	10.2		6.6	11.8	8.9		2.4	33.5	9.6		43.4	36.6
9.6		58.1	31.0	10.4		6.6	10.0	8.7		3.4	14.8	10.4		47.4	13.0
10.4		0.1	51.9	9.4		9.1	4.8	9.8		21.4	5.0	9.9	2	0.9	9.7
10.2		3.5	48.5	8.8		12.6	11.8	9.6		22.6	3.2	9.9		3.4	10.4
9.4		5.5	35.9	10.4		14.4	17.5	10.4		24.4	58.2	9.5		3.4	37.2
10.2		7.5	52.8	9.6		17.6	21.0	9.2		27.4	39.7	10.4		12.9	37.3
10.4		8.6	1.0	10.4		20.1	43.2	9.8		34.4	43.4	8.8		13.4	33.0
9.8		10.0	9.4	9.8		23.6	14.4	9.8		36.4	45.8	8.6		16.4	7.7
10.4		19.0	20.4	9.8		23.6	27.2	9.4		39.4	9.1	10.4		16.4	14.5
9.4		21.5	51.7	10.4		27.4	39.9	10.4		44.4	49.8	10.4		24.9	39.4
9.2		30.0	27.1	10.4		40.6	4.6	8.9		44.4	45.9	9.0		27.1	1.8
9.0		32.5	5.0	10.4		40.6	11.2	9.9		56.4	11.2	10.4		28.1	1.4
9.4		40.0	8.5	9.6		44.6	12.8	10.2		56.4	23.6	9.9		30.4	44.8
10.4		44.5	7.9	10.4		47.6	47.7	10.1		57.2	56.8	9.8		33.4	48.8
9.4		45.5	44.3	10.2	56	3.5	30.0	9.4	59	16.9	40.3	10.4		37.4	35.4
9.6		56.5	41.4	10.0		5.5	17.9	9.6		25.9	25.0	10.0		43.9	42.3
9.9		58.5	48.7	10.4		5.5	31.4	9.2		27.4	40.7	10.4		46.7	46.7
9.1		59.5	37.0	8.2		7.5	38.7	10.1		33.4	51.0	9.8		4.4	52.9
9.8		2.5	7.1	10.0		10.0	13.0	9.8		39.4	43.0	9.6		17.0	36.1
9.6	53	4.5	10.1	9.6		12.0	33.2	9.4		46.4	38.9	9.9		20.5	16.8
8.7		6.0	57.9	9.9		12.5	49.6	10.2		49.4	35.0	10.4		22.0	33.5
10.2		7.5	57.6	10.4		13.3	15.2	10.4		52.9	33.2	10.4		22.5	31.4
10.0		13.5	54.1	10.4		20.5	38.0	8.4		58.2	0.9	10.4		22.5	17.4
10.2		14.5	14.3	9.8		22.5	37.5	10.4	0	0.4	24.8	9.8		25.0	25.4
10.4		14.5	6.9	9.5		24.5	12.9	10.4		3.4	32.9	10.4		33.5	17.5
8.5		15.5	44.3	10.1		27.5	34.8	10.2		13.4	53.5	9.2		34.0	8.2
10.4		17.5	17.9	10.0		33.5	17.8	9.2		14.2	1.2	9.2		36.0	17.2
9.4		19.5	45.1	10.4		45.0	20.0	9.9		14.5	0.0	9.6		37.5	37.5
10.4		23.5	7.5	10.4		52.0	48.0	10.4		16.4	42.2	9.5		42.0	4.3
9.6		24.5	32.1	10.4	57	2.5	53.8	9.2		20.9	13.4	10.4		42.5	22.6
10.4		32.5	58.0	9.8		2.5	13.8	10.1		24.4	27.8	9.6		44.5	4.4
10.0		33.5	21.8	9.4		6.5	48.0	10.0		26.4	50.2	10.4		49.5	18.1
25pr.	+1	37.3	-0.3	+1	37.3	-0.2		+1	37.3	-0.1		+1	37.3	+0.1	

5401-5460.			5461-5520.			5521-5580.			5581-5640.			
mag.	18h.	-31°	mag.	18h.	-31°	mag.	18h.	-31°	mag.	18h.	-31°	
9.8	3 53.0	22.8	9.4	8 0.0	48.0	10.0	13 11.8	16.5	10.3	22 57.2	42.3	
8.9	53.5	17.2	10.4	3.5	51.2	9.1	20.8	16.9	10.2	59.7	9.3	
9.6	56.5	12.3	9.2	4.0	12.2	10.3	23.8	26.8	10.3	23 4.2	17.5	
9.6	58.5	43.1	9.5	4.5	48.8	10.2	46.2	7.5	10.3	6.2	25.2	
9.4	4 10.5	24.5	9.1	4.5	55.9	9.5	48.8	56.4	9.6	13.2	45.3	
9.4	16.5	12.6	9.6	6.5	22.8	8.8	50.8	37.5	9.3	47.2	39.3	
9.4	16.5	31.8	8.4	6.5	11.8	8.0 GS≡c	9.6	52.3	36.0	10.3	56.2	18.2
10.4	16.5	39.8	9.9	10.5	46.9	9.3	14 18.7	59.6	8.6	24 12.7	12.9	9.0 ≡
9.5	22.5	27.1	8.0	13.5	21.4	7.5 GS≡c	9.6	32.3	7.9	10.2	19.2	3.4
10.4	22.5	31.3	8.9	27.5	19.6	8.9	32.8	3.8	10.2	29.2	27.0	
9.5	23.5	31.5	9.6	32.0	35.4	10.3	54.6	2.6	9.6	38.6	1.2	
10.1	24.0	41.6	9.9	52.0	42.8	10.0	15 8.3	24.6	10.0	49.6	7.7	
9.2	29.0	13.9	10.2	9 9.0	24.2	9.3	9.8	27.2	9.5	50.6	32.5	
9.9	34.0	56.9	9.8	11.0	39.8	10.2	33.3	32.5	9.6	51.1	5.0	
9.0	45.5	35.2	7.9	11.0	20.2	9.0 GS≡c	10.0	34.8	13.8	9.5	53.1	30.9
9.4	5 3.5	6.8	10.4	12.5	7.8	10.4	38.8	26.9	10.2	54.1	39.0	
10.4	3.5	6.5	10.4	17.5	21.9	10.3	45.8	21.1	10.2	59.6	56.3	
10.4	7.5	41.5	8.9	22.5	30.6	G-	9.1	16 2.8	11.6	10.0 =		
10.4	15.5	41.2	9.2	24.5	16.0	8.6	3.8	15.7	9.5 =	10.2	0.1	36.1
9.5	26.5	6.2	8.9	26.2	50.9	10.2	22.3	22.7	10.2	8.1	5.1	
7.2	28.7	59.8	9.2	27.5	49.0	10.2	44.2	10.2	9.9	15.1	21.2	
10.4	30.5	32.2	9.2	31.9	28.1	10.2	54.7	39.1	10.3	17.1	7.1	
9.4	37.5	56.4	9.2	33.2	57.0	10.3	17 7.2	32.9	9.8	22.1	44.9	
10.4	38.5	53.4	10.1	35.0	47.3	10.2	32.7	54.4	10.3	25.1	47.3	
8.9	43.5	22.2	10.0	37.2	47.2	9.4	37.7	33.9	10.3	26.1	55.5	
9.4	47.5	5.7	10.4	38.2	58.4	9.8	41.2	14.8	9.9	29.1	31.0	
10.0	53.7	59.0	9.8	40.2	13.8	7.8	47.2	49.3	10.0	30.1	18.6	
10.2	55.0	27.8	9.8	42.2	23.2	10.0	18 25.7	9.1	9.9	33.1	15.1	
10.4	6 2.5	7.0	9.2	44.2	18.2	9.4	31.2	50.1	9.2	45.1	32.9	9.5 -
10.4	10.0	17.5	9.8	44.2	12.1	10.0	36.2	50.7	10.3	26 7.6	29.7	
10.2	29.5	45.2	9.8	49.9	4.1	9.6	51.7	11.7	10.3	10.1	13.7	
10.4	31.0	14.3	10.0	52.9	14.8	8.2	57.2	26.4	9.6	12.1	5.3	
10.0	33.5	7.6	9.9	56.7	1.7	9.2	19 15.7	56.9	9.6	13.1	55.9	
9.2	38.5	4.9	9.8	10 12.4	31.9	8.4	29.2	36.1	10.3	19.1	41.1	
9.8	44.0	43.0	10.4	17.0	7.2	10.2	33.2	20.5	8.5	20.1	14.8	
8.5	47.5	25.0	10.4	20.0	57.6	10.3	41.2	16.1	10.3	21.6	26.1	
9.0	47.5	46.5	10.4	20.5	16.7	9.3	41.7	52.9	10.2	22.1	25.8	
10.4	51.5	56.0	9.2	26.5	50.9	9.2	56.7	38.3	8.5	27.1	21.2	
10.2	53.0	47.7	10.4	26.5	4.7	8.3	20 22.2	12.3	8.0 G=	10.2	30.6	2.7
10.4	56.5	5.0	10.2	26.5	7.0	9.3	30.6	57.6	9.5	9.9	32.1	32.3
10.4	58.5	9.7	9.3	32.9	4.0	10.2	30.7	13.7	10.3	27 23.1	41.7	
10.4	7 2.5	59.2	8.7	45.8	16.4	9.0 -	10.3	38.9	58.5	9.6	45.6	46.9
9.9	6.5	28.6	10.3	46.8	9.4	10.3	46.2	22.8	9.9	57.6	23.8	
8.0	14.0	46.3	10.2	48.5	2.0	10.0	21 0.2	37.1	9.5	10.3	28 18.6	55.3
9.8	17.0	48.2	10.3	48.8	27.0	9.6	1.2	27.6	10.2	30.1	36.0	
9.5	17.0	52.8	10.3	49.8	7.5	8.4	13.2	38.1	8.5 GW=m	10.0	38.1	48.5
9.8	20.5	47.7	10.3	11 12.3	48.5	9.6	24.2	32.7	10.3	39.6	3.9	
10.2	23.5	52.7	10.2	17.8	23.3	10.3	37.2	28.3	10.0	44.1	53.1	
10.4	28.0	12.6	10.3	24.3	44.7	10.2	44.2	18.9	10.2	47.1	5.4	
9.6	29.5	48.0	10.2	27.3	3.8	9.3	55.2	49.3	9.0	10.2	58.1	28.0
10.1	33.5	26.1	10.2	34.3	41.3	10.2	22 3.2	7.3	9.0 ≡	9.9	29 20.1	34.7
10.4	36.0	11.2	10.2	42.3	4.4	9.4	16.2	2.5	9.2	27.1	34.1	9.5
10.4	40.5	48.4	10.3	43.8	52.1	10.3	22.2	17.9	10.2	32.0	17.8	
10.2	46.5	24.4	10.3	53.8	25.2	9.3	27.2	46.5	10.2	48.1	27.7	
10.4	46.5	26.6	10.2	12 1.3	31.3	9.9	29.7	51.5	9.6	56.1	53.8	
9.2	48.5	47.8	10.3	5.8	30.1	9.6	30.7	29.7	10.0	9.6	57.6	27.7
10.4	48.5	48.4	7.8	20.8	21.9	7.5 GS≡c	10.3	37.7	45.5	10.2	30 6.1	46.0
10.1	52.0	15.6	8.6	22.8	36.7	9.5	10.2	43.7	10.1	9.0	16.1	25.1
9.9	53.5	9.9	10.2	36.8	6.9	9.4	44.2	33.3	9.5	10.3	16.1	27.1
10.4	55.5	19.0	10.3	13 8.3	8.9	9.0	47.7	23.3	10.2	22.5	2.2	
25pr.	+1 37.3	+0.2		+1 37.3	+0.4		+1 37.2	+0.7		+1 37.1	+0.9	

5641—5700.				5701—5760.				5761—5820.				5821—5880.			
		18 ^h .	—31°			18 ^h .	—31°			18 ^h .	—31°			18 ^h .	—31°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
8.0	30	31.6	27.4	8.8	38	14.1	15.8	10.4	44	54.1	20.6	9.9	53	28.1	45.0
10.3		43.1	9.3	9.9		20.1	33.7	9.8		56.5	30.0	10.2		30.8	23.9
8.7		44.1	19.6	9.4		23.1	28.1	10.4	45	3.1	32.1	10.3		37.6	1.7
10.0		50.6	16.0	10.4		28.6	21.3	10.0		9.1	29.9	10.4		38.1	8.5
10.2	31	5.6	51.7	10.0		31.1	3.6	9.2		13.1	26.3	9.7		40.6	33.9
10.2		11.6	55.6	10.0		38.1	4.3	9.1		35.1	16.3	8.8		50.1	39.5
10.2		14.0	42.5	10.3		45.1	49.0	8.8		46.1	51.4	10.4		53.1	16.7
10.3		14.6	12.8	9.4		53.6	40.0	10.0		51.1	34.8	10.4		54.1	17.1
10.3		25.0	48.0	9.7		54.6	36.9	9.4		53.1	7.2	10.0	54	7.1	7.2
9.4		32.1	22.4	8.2	39	5.6	52.2	9.9		54.1	4.8	9.9		11.1	36.2
10.3		47.2	1.6	10.3		14.1	28.1	9.2		57.1	20.9	9.8		12.1	40.3
9.6		51.6	4.7	8.5		16.6	40.7	10.0	46	17.6	36.5	8.6		22.1	6.9
8.8	32	4.1	21.4	10.4		17.6	16.2	8.6		24.1	47.0	10.0		27.6	29.1
10.2		34.0	15.8	10.4		49.6	26.0	9.4		34.1	15.3	10.4		29.1	28.2
8.8		42.1	2.0	9.7		51.6	15.0	8.3		37.1	16.8	9.9		33.1	40.8
10.3		43.1	25.0	9.4	40	4.6	58.0	9.6		37.1	21.0	9.9		45.6	12.8
10.3	33	2.0	24.9	10.4		5.6	51.0	9.7		40.1	22.5	10.2		45.8	10.9
8.4		4.6	11.1	9.8		8.6	50.8	10.3		41.1	45.3	9.8	55	14.1	33.3
10.3		5.6	1.8	7.7		15.9	59.9	9.9		48.1	21.2	10.3		29.1	17.3
9.8		14.3	33.3	10.2		23.6	33.2	10.3		50.1	33.1	10.3		41.1	9.9
10.2		38.6	33.1	10.3		27.6	25.0	10.0		51.6	10.7	8.6		42.5	49.0
10.2		38.8	50.1	9.9		35.6	30.4	10.0	47	2.6	30.3	9.8		50.0	48.0
9.9		43.1	5.6	9.9		46.1	50.8	10.0		8.1	10.2	10.4		54.5	0.7
8.7		43.3	17.1	10.3		47.6	17.4	10.0		8.1	28.6	10.3		58.2	58.3
10.2		43.4	2.1	10.4		51.6	6.6	10.4		13.1	25.8	8.6	56	3.0	38.1
8.0		51.8	35.6	9.0	41	4.6	24.2	10.4		14.6	20.4	8.8		4.0	50.7
10.4		58.1	17.4	9.7		6.7	0.0	10.0		19.6	11.9	9.9		20.0	44.1
10.4	34	13.1	17.2	9.8		8.1	25.4	9.6		26.1	23.2	5.4		24.0	13.6
9.6		24.8	41.3	10.0		18.1	30.2	10.0		31.1	7.7	9.9		28.0	13.9
9.2		33.4	11.6	10.0		29.6	28.6	9.5		57.1	34.2	8.2		38.0	33.1
10.3		34.6	28.8	9.5		30.6	1.0	10.0	48	4.1	25.4	9.8		39.5	54.4
10.0		37.8	11.9	9.4		39.1	40.6	8.0		22.6	50.8	8.3		44.0	7.8
9.7		41.6	5.1	9.4		39.6	39.0	9.0		28.1	3.3	10.2		55.0	23.5
9.6		45.6	19.0	10.4		48.1	39.9	10.4		31.1	55.2	10.4		57.0	27.3
9.7		47.6	18.6	9.2		48.1	28.6	10.4		36.7	58.5	9.7	57	1.5	27.2
9.1		56.4	57.6	9.9		55.6	41.0	9.4		47.1	6.9	10.3		11.0	18.9
10.4	35	4.6	13.8	8.6	42	8.6	16.8	10.0	49	7.1	56.1	9.9		14.6	58.0
10.4		6.6	22.1	10.4		28.6	8.3	9.9		14.1	54.0	9.7		20.5	27.0
8.2		10.6	45.2	9.9		38.6	47.5	10.0		27.1	48.0	9.7		22.6	26.6
10.4		21.6	54.1	9.9		41.1	44.0	9.6		30.1	3.5	9.7		23.6	50.6
9.8		46.1	51.4	10.0		41.1	3.0	9.8		44.1	5.2	10.2		28.0	44.8
9.6		54.6	51.6	8.0		55.6	6.2	9.7		46.8	0.1	9.4		44.0	55.5
9.2		57.6	24.7	9.7	43	1.6	50.2	8.6	50	0.2	58.6	10.4		46.8	58.8
10.4	36	4.6	51.9	10.0		6.6	32.4	9.0		7.1	44.4	10.4		47.0	29.5
9.2		11.6	29.9	10.0		18.6	41.8	8.2		19.1	11.8	10.4		53.0	31.1
10.4		26.6	8.1	10.3		26.6	28.2	10.4		25.6	55.3	9.6		58.0	34.8
8.8		33.6	31.3	9.1		29.6	1.2	9.6		26.6	12.9	8.0	58	5.0	52.9
9.0		53.6	58.5	9.7		31.1	29.2	10.4		27.1	28.3	9.9		7.0	10.1
9.9	37	3.6	43.2	8.2		44.6	24.2	10.2		41.1	21.1	10.3		8.0	20.3
9.9		5.1	16.9	9.7		50.6	0.8	10.0		48.6	24.3	9.1		13.6	11.8
9.4		7.6	52.3	10.4	44	17.6	51.1	10.3		51.1	28.7	10.0		14.4	5.1
9.4		24.6	46.4	10.4		21.1	3.8	9.6		55.1	9.8	10.4		15.0	44.7
9.6		33.6	49.8	8.4		23.6	8.0	10.3	51	12.8	31.3	9.8		17.7	39.8
9.5		34.1	4.4	9.4		25.1	2.2	10.4		34.8	23.7	9.8		17.7	40.0
9.7		37.1	9.6	9.8		26.6	49.3	10.0		57.6	11.7	9.4		25.9	47.5
10.0		51.6	43.9	10.3		31.2	57.8	10.0	52	23.6	17.3	9.0		28.2	29.6
9.7	38	3.6	2.0	8.8		32.1	53.2	9.8		37.1	21.3	9.6		31.4	39.0
9.9		4.6	19.9	9.7		38.1	7.2	10.0		47.1	44.1	10.2		35.2	25.2
10.4		9.6	3.7	9.9		45.1	14.5	10.0	53	15.1	40.9	10.3		35.7	13.0
10.3		9.6	48.1	10.4		51.1	11.2	10.4		15.8	49.9	9.4		36.6	16.7
25pr.	+ 1	37.1	+ 1.3		+ 1	37.0	+ 1.5		+ 1	36.8	+ 1.7		+ 1	36.7	+ 2.1

5881-5940.				5941-6000.				6001-6060.				6061-6120.			
18 ^h -19 ^h .		-31°		19 ^h .		-31°		19 ^h .		-31°		19 ^h .		-31°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.3	58	36.9	51.8	10.3	6	40.9	12.9	9.5	13	52.6	22.6	9.6	22	14.7	8.6
10.3		42.7	22.9	9.0		40.9	53.1	9.5	14	5.6	30.0	9.0	23	13.5	59.9
10.3		46.4	46.9	10.3		43.7	22.0	10.3		11.6	0.4	9.4		17.2	28.9
10.0	59	0.7	50.1	9.1		45.7	30.8	9.5		36.1	25.1	10.4		29.2	34.1
10.0		3.2	50.7	8.2		47.2	17.7	9.2		38.1	35.1	10.4	24	4.2	35.9
9.9		4.2	26.5	8.2		50.7	3.0	9.9		53.6	18.7	10.0		6.2	39.6
10.3		5.2	12.4	9.5		57.2	23.6	10.3		59.5	42.6	8.5		14.2	0.6
10.3		9.2	9.2	9.2	7	1.7	20.2	9.5	15	4.6	5.5	8.4		16.7	20.1
9.1		33.2	51.7	9.2		5.2	26.6	10.0		12.1	45.0	9.8		26.2	36.6
8.8		49.2	20.3	10.0		20.2	56.9	9.7		12.6	5.4	9.8		26.2	23.8
10.0		49.2	36.5	9.9		23.7	3.3	10.0		19.6	58.6	10.0		30.2	24.4
10.3		51.2	11.6	9.6		31.2	32.2	9.0		49.6	55.9	9.0		31.7	13.8
9.4		53.2	36.3	9.9		55.2	4.8	10.3	16	21.5	41.1	8.0		31.7	7.8
8.8	0	13.2	32.3	9.2	8	4.2	55.7	9.2		32.6	50.7	9.4		32.2	35.1
9.6		25.2	0.0	9.6		5.2	4.4	10.0		33.1	55.1	10.0	25	12.7	54.6
10.3		28.2	25.9	9.9		5.7	3.2	8.4		35.6	2.3	9.8		17.2	53.8
7.9		30.7	9.9	9.1		12.2	24.6	9.9		39.6	15.0	9.4		44.7	8.3
9.9		33.2	27.4	9.7		13.7	46.6	10.0		41.6	17.5	9.6		46.7	26.6
8.4		33.2	17.1	8.4		29.7	37.3	9.9	17	0.6	30.4	10.4	26	7.4	46.4
7.9		35.2	30.5	9.9		41.7	43.7	9.5		13.5	34.1	9.6		26.2	10.9
9.9		42.2	28.0	9.6		41.7	15.0	9.2		33.0	51.5	10.0		44.7	54.8
9.6		46.2	28.9	9.0		45.7	38.7	10.2		34.3	1.7	9.6		45.7	9.0
10.3	1	5.2	5.4	10.2		45.8	2.5	9.2		42.5	10.1	7.8	27	6.2	52.6
9.5		13.7	53.1	9.5	9	2.7	33.6	9.6		46.5	6.2	10.0		14.7	48.3
9.6		13.7	7.1	10.2		16.2	12.4	9.1	18	2.0	42.0	9.6		26.4	37.9
10.0		25.2	47.5	10.2		19.2	32.1	10.3		13.0	8.1	10.4		37.4	36.7
9.4		32.2	23.3	9.9		45.7	30.8	10.3		19.5	30.0	9.8		38.4	37.0
9.4		45.4	54.7	10.3		53.7	23.3	10.2		31.0	28.8	10.2		54.6	15.7
10.0	2	18.5	58.1	10.3	10	2.7	51.5	10.2		33.0	52.0	10.4		56.9	9.3
10.3		19.9	45.2	9.6		10.2	40.8	8.7		36.5	32.0	10.0		59.4	17.5
9.7		22.9	38.0	10.2		10.7	4.8	10.3		37.0	7.9	10.4	28	20.9	51.9
10.0		44.4	37.1	9.6		13.7	33.0	9.4		40.0	51.1	8.0		26.4	36.4
10.3	3	3.4	40.7	9.0		18.2	28.7	8.2	19	3.0	56.0	9.4		37.9	31.9
9.4		22.4	42.3	8.8		22.2	41.1	9.2		11.5	35.7	9.1		38.4	53.1
8.9		23.9	51.3	9.6		33.7	0.0	9.9		15.5	44.8	9.6		44.4	50.2
9.4		25.9	35.3	8.9		33.9	3.1	10.2		15.5	25.0	9.6		55.6	59.9
10.0		37.9	40.9	9.8	11	1.2	18.8	9.8		19.0	1.0	9.6	29	28.4	11.2
10.0		42.9	20.3	9.4		1.2	17.4	8.6		21.5	11.9	9.6		28.9	11.6
10.0		46.9	57.9	9.9		11.7	48.0	9.1		26.0	11.2	10.4		42.9	9.7
9.8		57.4	23.7	9.6		16.7	47.0	10.3		31.5	12.0	10.4		58.4	40.1
8.4	4	2.9	24.5	9.0		22.7	11.8	8.8		33.5	37.7	10.4	30	15.9	57.1
10.3		2.9	5.3	8.8		27.6	54.8	9.6		56.5	38.9	9.8		26.9	37.9
10.3		5.9	6.7	10.3		32.5	54.9	9.8	20	9.0	47.6	9.8		27.4	51.6
9.4		18.4	18.9	10.3		32.6	59.0	9.9		12.5	0.3	8.0		53.9	41.6
10.3		18.9	16.3	10.0		33.6	43.7	9.2		15.5	7.6	9.6		54.4	13.0
10.3		37.9	25.6	9.9		42.1	36.4	9.9		23.5	35.0	10.2	31	14.4	42.9
9.4		37.9	37.6	10.2		53.6	5.7	8.2		27.0	38.0	9.8		23.4	37.3
9.2		45.9	39.7	9.9	12	12.6	54.8	10.3		28.7	0.7	9.8		29.9	37.8
8.8	5	12.9	7.9	8.7		20.7	57.4	9.2		34.5	14.7	9.8		46.4	51.6
8.8		13.9	7.9	9.0		22.6	4.1	9.1		35.5	52.9	9.6		49.9	32.2
8.2		22.9	53.9	10.3		27.1	48.1	9.8		41.5	58.1	9.0	32	4.4	53.5
8.7		36.9	55.7	9.6		31.6	54.7	10.3		43.0	26.2	9.2		23.4	33.1
8.7		43.3	57.9	10.2		39.6	55.0	10.3		56.0	40.1	9.8		34.1	58.1
9.8		48.9	24.7	10.2		51.1	12.0	10.2	21	13.5	51.2	9.6	33	11.9	56.0
9.1		56.4	16.2	9.0	13	2.6	26.1	10.3		17.0	44.2	8.5		15.9	58.8
9.0		56.9	6.6	10.3		22.6	22.8	9.1		17.0	21.5	9.8		26.4	20.0
9.0	6	4.9	13.5	10.0		32.6	1.0	9.9		21.5	20.6	10.4		36.4	27.8
10.3		13.9	33.3	9.6		36.9	2.8	9.5		21.5	18.2	10.0		53.4	57.5
10.2		15.4	5.4	9.6		42.6	9.0	8.0		43.5	2.7	9.2		53.4	36.9
9.0		35.9	59.8	9.7		49.6	35.6	10.3		52.5	20.4	10.0	34	8.4	45.2
25pr.	+1	36.6	+2.2												
				+1	36.6	+2.5				+1	36.0	+2.8			
												+1	35.8	+3.1	

6121-6180.				6181-6240.				6241-6300.				6301-6360.							
mag.	19 ^h .	-31°		mag.	19 ^h -20 ^h .	-31°		mag.	20 ^h .	-31°		mag.	20 ^h .	-31°					
	m s	'			m s	'			m s	'			m s	'					
9.0	34	32.4	39.3	9.5	9.8	49	10.7	3.2	10.0	9.0	11	55.9	51.6	9.3	27	54.6	2.0		
9.0		56.4	33.3	9.0-	10.2		13.7	19.3		9.9		55.9	56.1	9.1	28	6.6	31.4		
9.4	35	7.4	28.6		9.6		17.7	21.1		9.4	12	5.4	39.2	10.0		9.6	4.6		
9.6		15.9	1.6		10.4		49.4	59.3		9.8		6.4	39.4	9.6		37.1	8.4	9.5	
9.2		17.8	24.1	9.5 G-	9.5		51.7	41.9		10.0		30.4	41.0	9.4		56.1	14.4		
9.0		18.4	55.7	9.0-	8.8		56.7	14.3	9.0	9.0		41.4	23.3	9.0 GM≡m	10.0	29	6.1	13.6	
10.0		22.3	3.7		8.5	50	4.2	5.4	9.2	9.4	13	6.9	33.2	9.3		24.1	4.2		
9.8		53.3	9.6		9.8		28.7	3.9		9.6		9.9	42.7	10.0		24.6	35.6		
10.4	36	0.6	1.9		9.1		45.7	15.5		9.3		22.4	15.8	9.3		24.6	39.9	-	
9.4		2.8	51.9		9.8	51	6.2	39.7		9.4		23.4	26.2	9.4		52.3	27.4	9.5 GMm	
9.4		6.3	12.9		10.2		17.7	10.5		9.6		32.4	21.1	9.6	30	5.3	16.1		
9.1		8.3	47.5		10.2	52	17.7	52.9	9.5 G	9.9	14	3.9	37.1	9.4		11.8	45.9		
9.6		9.3	25.5		9.2		22.4	0.9	-	9.2		3.9	42.5	8.6		13.3	48.2	8.5 G	
9.6		14.3	7.3	9.5	10.4		40.2	14.5		9.6		14.4	9.3	9.9		24.3	38.7		
10.4		22.8	54.8		10.4		57.4	31.3		9.0		22.9	31.8	8.3		25.8	24.7	7.5 GM-m	
9.0		26.3	22.4	9.5 -	8.8	53	1.4	39.0	9.5	9.8	15	25.4	30.1	8.4		34.3	23.1	7.8 G-	
9.8		34.3	17.2		8.8	54	15.4	19.1	-	10.0		40.9	9.5	9.9		34.3	35.6		
9.1		57.8	26.5		10.0	55	25.4	35.8	-	9.8		59.4	27.2	10.0		57.8	31.2		
8.6	37	3.3	20.5	9.5 G	9.5		45.4	36.3		9.4	17	10.9	32.7	8.3	31	55.3	21.6	8.5 ≡m	
10.0		24.3	27.7		10.0		45.4	51.0		9.3		32.4	9.8	10.0	32	28.8	34.4		
7.4		28.8	12.1	6.8 GSt _{tr}	8.7	56	25.4	3.8	8.8 Gam	9.6		33.9	15.8	9.6		49.3	39.4		
8.5		44.3	5.0	8.6 G=	10.0		52.4	41.7		9.9		45.9	37.3	10.0	34	5.8	18.4		
10.0		55.8	20.3		10.2	57	16.4	28.5		9.4		51.9	38.4	10.8		15.2	43.3		
9.6	38	13.3	51.7	9.5	8.8	58	15.4	9.5	8.5 ≡	9.4	18	41.9	22.1	10.8		18.2	27.6		
9.0		48.8	43.1	9.0	10.4		30.9	56.1		8.1		54.4	4.9	9.6		25.7	23.6		
9.8	39	6.3	40.2		8.0		34.4	55.1	8.0 M-m	9.1		59.9	45.3	8.2		35.7	0.2	8.5 Gam	
9.0		8.8	43.9	9.5	10.4		51.9	5.8		9.0	19	37.4	14.2	10.0 -	10.8		45.7	51.3	
9.2		16.3	24.9	8.8 -m	9.8	59	18.4	59.7		7.3		58.9	15.5	6.8 GS≡m	10.8		55.7	29.9	
9.6		28.5	49.7	9.0 G	9.6		42.4	36.8		9.9	20	1.4	47.2	8.8	35	27.7	51.0		
9.6		56.1	0.7		9.6		52.4	0.9	G:	8.8		11.4	39.2	-	10.3		28.2	31.7	
10.0	40	14.8	58.1		8.6		55.4	12.6	9.0 GM=m	9.0		33.1	51.7	8.8		38.7	59.8	9.0 =	
9.8		16.1	1.9		9.6	0	2.4	10.6	9.5 G=	9.6		35.6	5.4	10.0	36	56.2	29.1		
9.6		58.8	8.7		9.1		4.6	32.1		9.4		53.4	59.4	10.8		57.2	5.9		
10.2	41	6.3	16.7		9.4		4.9	37.6		10.0	21	2.6	49.7	9.4	37	3.7	38.8		
10.4		15.7	0.8		9.6		25.4	38.7	-	9.8		19.6	20.8	8.8		24.2	46.8	-	
9.6		20.3	9.6		10.0	1	34.9	30.7		9.6		25.1	32.0	8.5		31.7	24.2	8.8 G=	
9.6		27.3	11.3		8.1	2	21.4	31.7	8.0 G=	9.0		56.1	39.3	10.4		33.7	24.2	G	
9.6		53.8	50.1		9.1		26.4	53.1	9.2 -	10.0	22	22.5	39.4	10.4	38	6.2	31.5		
9.8	42	11.3	11.5		10.4		37.4	32.2		9.0		55.1	42.1	9.0 Mm	8.0		35.7	58.6	8.7 G
8.8		36.3	11.9	8.2 G=m	8.8		44.6	57.2	9.8 G	10.0	23	5.1	32.6	10.8		44.7	51.0		
9.8		50.8	31.9		9.6	3	1.4	1.8		9.0		22.6	7.4	9.5 =	9.2	39	13.2	20.6	
8.6		51.3	14.5	8.2 Gb=	8.6		35.4	10.0	9.0 GM-m	9.6		56.6	47.6	10.8		13.7	54.6		
9.8	43	26.8	24.7		9.6	5	3.9	51.6	9.0	9.6	24	14.1	10.5	10.2		26.7	20.7		
8.6		31.3	26.0	8.5 M-m	9.0	6	5.9	16.6	9.0 GM-m	9.6		17.6	28.4	9.6		26.7	10.0	=	
9.6		45.8	20.8	9.5	9.2		23.4	51.1	-	9.6		36.6	12.0	8.6		32.7	54.6	8.5 G	
9.6	44	23.3	44.7		9.6		37.4	49.4		9.8		52.6	31.9	8.5	40	11.1	59.4	8.8 G	
9.8		25.8	51.4		9.5		39.9	37.8		7.8		56.6	48.2	8.0 GS-m	9.8		13.7	11.5	
9.4		58.8	10.5	9.0 -	9.8	7	10.9	12.0		9.1		57.1	2.0	9.0 a	10.2		33.7	53.0	
9.6	45	14.0	9.0		10.0		43.9	10.3		10.0	25	14.6	43.4	9.2		40.2	28.1		
9.6		29.5	45.6		9.6	8	5.4	4.0	9.5 ≡	9.8		22.6	23.3	8.8		45.7	53.7	8.8 m	
10.4	46	23.3	16.1		8.3		15.4	37.2	9.0 =	9.9		27.6	19.8	8.8	41	18.7	8.1	9.0 G-	
9.4		40.3	37.4		9.4		22.4	45.8		9.4		50.6	12.0	9.2	42	10.7	41.6		
10.4		53.8	47.8		8.0	9	10.9	35.2	8.0 GS=m	9.6	26	13.6	13.8	9.9		20.7	16.0		
8.7	47	39.7	25.1	9.5 ≡m	10.0		38.9	9.2		9.4		14.6	38.0	8.8	10.3		21.7	10.9	
9.0		46.9	58.0	9.5 G	9.6	10	42.9	44.4		9.1		32.9	1.0	-	10.8		25.7	30.0	
9.4	48	21.7	19.5		9.9		49.4	56.7		10.0		57.1	11.8	10.4		35.7	20.0		
7.8		21.9	56.1	8.2 G-	9.9	11	26.4	29.2		9.3	27	3.1	10.3	9.8		43.7	20.9		
9.2		31.7	11.3	9.0 m	9.9		28.4	22.3		9.4		54.1	55.1	10.3		59.7	4.0		
8.6		39.2	39.9		9.9		53.4	50.6		9.6		54.1	50.6	8.0	43	1.7	43.4	8.0 G	
10.0		52.2	59.0		9.8		53.9	8.7		8.2		54.6	3.7	8.3 a	9.9		28.7	30.8	
25pr.	+1	35.4	+3.5		+1	34.5	+4.2			+1	33.6	+4.8			+1	32.8	+5.3		

1896Ancap...3....1G

6361-6420.			6421-6480.			6481-6540.			6541-6600.			
mag.	20 ^h .	-31°	mag.	20 ^h -21 ^h .	-31°	mag.	21 ^h .	-31°	mag.	21 ^h .	-31°	
10.0	43 46.7	35.4	9.8	55 20.9	56.8	10.0 G	8.6	6 59.7	16.0	8.6	20 2.2	23.1
10.8	44 12.7	34.0	8.6	25.2	58.0	9.5 G	8.4	7 21.2	41.8	9.8	2.7	3.0
10.2	16.7	15.9	9.8	30.9	47.1		10.2	23.7	41.4	10.0	3.2	24.5
8.4	35.7	9.7	10.8	35.9	27.7		9.6	26.4	6.0	9.4	21 15.2	0.4
8.4	37.2	51.6	9.2	56 5.9	12.7		9.2	27.9	29.0	10.6	19.2	43.5
10.8	42.7	36.0	10.0	5.9	45.1		8.2	29.9	29.9	10.2	32.2	17.7
10.4	52.7	41.4	9.9	8.2	58.7		9.4	43.9	41.8	7.2	35.2	46.8
10.8	45 5.7	8.2	10.8	19.9	27.1		10.6	55.9	35.2	8.4	22 1.2	10.4
9.2	15.2	55.4	10.4	48.9	52.6		9.8	8 32.7	2.7	10.4	3.7	5.5
9.8	20.2	31.0	10.8	57 25.9	8.0		9.9	36.4	27.9	9.4	6.2	7.8
7.4	30.2	58.9	10.3	25.9	31.9		9.8	49.9	40.3	10.6	10.2	7.8
10.8	32.9	47.4	9.9	31.7	2.9		10.0	9 0.4	25.1	9.5	11.7	54.0
10.2	43.5	59.6	9.9	42.9	51.3		8.8	25.9	33.7	10.6	12.2	11.0
7.4	45.9	11.2	9.9	58 13.4	17.4		10.2	27.4	53.0	9.9	14.5	55.1
10.8	46 1.9	3.1	10.0	19.9	16.2		10.0	35.9	29.7	9.6	26.2	12.6
9.9	11.4	9.8	8.8	36.9	31.9	=	10.6	41.9	54.5	10.0	33.7	4.2
10.8	12.4	29.7	10.2	36.9	13.9		7.8	55.4	16.0	9.9	39.2	42.6
10.2	13.4	36.3	10.6	44.7	56.2		9.4	57.9	34.7	10.0	45.2	35.2
10.8	47 20.0	24.0	10.6	47.2	19.2		8.8	10 31.9	19.9	10.2	23 4.2	37.4
10.3	50.4	41.4	9.2	54.2	34.2		9.6	11 13.4	45.9	9.8	34.4	52.6
8.4	59.9	22.0	9.6	59 0.5	28.7		9.9	46.9	37.8	9.9	35.4	45.7
7.4	48 13.9	58.8	10.0	41.2	24.2		8.6	48.4	42.1	9.4	45.4	11.5
10.4	17.9	3.1	8.2	46.2	59.9	8.3 G	10.6	56.9	30.8	9.4	24 6.4	21.6
9.9	41.9	4.0	10.6	59.7	50.8		9.9	12 5.7	0.3	9.0	51.9	54.4
10.8	42.4	30.3	9.4	0 6.7	38.0		10.6	5.9	7.6	9.6	26 11.4	1.9
10.4	45.9	14.9	7.6	6.7	33.6	7.5 G≡π	9.9	23.4	52.9	10.0	14.4	1.9
10.8	59.9	7.0	9.5	17.7	6.0		10.4	25.9	59.9	9.6	27 4.9	45.2
10.2	49 3.9	31.2	9.5	1 14.3	2.6		8.0	45.9	22.1	10.0	28.4	52.0
10.0	46.4	45.8	8.2	32.7	21.8	9.0 =	8.8	52.1	59.5	9.4	36.9	14.0
10.2	47.9	25.0	9.8	37.2	48.8		8.2	13 22.9	28.9	10.0	37.9	23.9
10.2	51.9	40.0	10.0	48.2	33.8		9.6	22.9	53.0	9.4	55.9	4.5
9.2	50 5.9	18.0	9.9	49.7	14.2		9.0	25.9	26.0	9.9	28 31.4	7.8
9.8	36.4	40.1	9.2	2 1.7	31.2		8.4	28.4	39.2	8.5	51.4	14.0
9.2	38.4	5.8	9.2	2.7	34.4		10.0	14 13.4	27.9	8.2	29 22.4	16.8
10.8	43.4	11.3	10.0	22.7	36.8		9.9	34.0	2.3	8.5	43.4	7.0
10.3	51 17.9	3.5	10.4	26.5	57.4		10.6	15 6.4	23.9	8.8	30 1.4	19.2
9.0	55.4	45.9	9.4	32.7	0.0	9.0 G	9.8	7.4	6.6	10.0	33.4	43.7
9.2	2.9	3.1	8.2	35.7	59.8	8.0 G-	10.6	29.7	12.7	10.0	31 40.9	6.2
9.8	5.9	16.0	10.6	47.2	1.2		8.0	34.7	20.7	9.2	32 51.5	11.8
9.2	8.4	52.6	10.6	49.2	1.4		10.6	16 4.2	35.6	9.9	58.5	8.9
10.8	13.4	13.2	10.6	55.7	20.8		10.4	15.2	24.6	8.9	33 25.5	36.1
9.8	16.9	14.6	9.0	55.7	18.0		10.6	22.9	7.7	8.2	26.0	14.3
9.2	18.4	52.4	10.6	3 33.7	11.0		9.6	26.7	43.3	7.9	34 36.0	49.8
9.8	18.9	38.6	10.6	39.7	10.9		9.8	32.7	16.9	8.5	35 13.0	36.6
8.6	29.9	4.0	9.9	50.2	30.1		10.0	35.2	33.0	10.0	21.5	32.6
10.8	39.9	46.9	9.4	4 6.2	26.9		8.4	17 14.2	38.1	9.9	36.0	11.7
9.4	53 2.9	42.8	10.6	7.7	46.4		10.6	58.7	42.3	8.0	36 8.0	49.1
9.4	6.9	48.3	9.4	25.7	30.6		9.9	18 6.2	17.8	9.9	37 8.0	11.9
9.2	12.9	43.0	7.6	35.7	5.9	7.2 Gam	9.6	22.2	50.5	9.4	23.5	41.9
9.4	17.9	46.0	10.0	58.7	0.8		9.0	26.2	43.0	10.0	38 36.0	30.0
9.2	19.9	14.5	10.6	5 3.2	3.0		10.6	41.2	49.2	9.4	37.0	8.9
10.8	49.4	48.8	10.6	9.7	2.6		9.8	52.2	15.6	9.7	39 27.0	26.2
9.8	55.9	44.8	10.6	13.2	5.8		10.2	59.2	32.5	9.9	41.0	55.2
9.0	55.9	43.7	9.6	32.7	8.6	9.5 G-	8.8	19 2.2	43.6	10.0	46.5	43.8
9.8	54 2.9	12.0	10.6	40.7	2.7		8.8	3.2	0.0	9.9	53.0	16.5
9.4	19.9	25.0	9.8	43.7	42.0		8.6	14.2	1.7	5.5	40 23.5	28.4
9.9	32.9	5.1	9.2	45.7	7.8		9.0	26.7	46.1	10.0	58.8	10.9
10.8	55 2.9	6.3	9.8	56.7	13.4		10.6	38.7	49.2	10.0	41 6.3	15.1
8.5	2.9	16.2	9.2	6 9.7	51.0		10.6	42.2	23.1	10.0	7.3	1.1
9.8	12.4	24.1	10.0	25.2	51.0		9.6	20 1.2	51.0	9.2	44 10.8	5.7
2.5 pr.	+ 1 31.9	+ 5.6										
			+ 1 31.2	+ 6.0			+ 1 30.4	+ 6.2				
									+ 1 29.4	+ 6.6		

1896a n Cap 3

6601-6360.				6661-6720.				6721-6780.				6781-6840.			
21 ^h -22 ^h .		-31°		22 ^h .		-31°		22 ^h -23 ^h .		-31°		23 ^h .		-31°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.0	47	46.5	17.9	9.2	20	46.0	14.1	7.6	56	19.9	48.8	10.2	18	3.3	31.9
7.5	48	37.5	11.8	8.7	21	3.5	42.8	7.2	54.4	7.1	6.8	10.2	41.8	0.5	
8.2	43.0	30.8	8.5	9.6	14.0	45.4		9.7	57	6.2	49.6	10.8	19	25.1	58.6
10.0	44.0	7.7		9.5	18.5	41.7		8.8	18.4	6.4	8.2 =	10.4	20	27.3	47.0
9.9	49	6.0	48.5	9.0	22.5	51.3		9.8	58	7.4	44.0	8.8	57.9	58.0	
7.8	20.3	58.8	8.2	9.0	42.0	51.4		8.8	38.6	29.0	-	10.8	21	25.7	0.5
10.0	51	43.0	42.2	9.0	52.0	17.3		10.6	53.9	52.8		8.5	26.7	31.4	=
10.0	52	4.3	59.0	9.8	54.5	55.1		10.6	59	3.9	30.7	8.8	22	40.8	26.0
10.0	26.0	13.7		9.5	56.5	20.1		9.6	13.6	1.8		10.8	23	3.7	4.1
9.6	53	38.0	6.0	9.6	22	11.5	42.7	8.6	51.9	17.2	8.0	10.8	14.2	21.0	
10.0	54	38.5	54.8	9.6	12.0	56.8		8.7	0	10.9	6.2	9.8	39.2	23.0	
9.3	55	27.0	18.6	9.0	45.5	39.1	-	11.4	16.4	29.8		10.8	59.2	14.6	
10.0	56	48.5	40.4	10.0	52.0	39.5		10.8	40.9	14.9		8.1	24	42.2	47.0
10.0	57	22.0	42.4	10.2	57.5	31.1		9.4	53.9	38.9		10.8	26	6.7	37.0
8.6	26.0	26.2	-	10.2	23	5.5	41.2	10.2	53.9	14.8		9.8	17.2	54.6	
9.8	34.5	28.8		8.0	9.0	4.7	8.2	10.4	1	1.1	2.3	10.4	31.2	1.9	
8.0	58	22.0	18.8	9.1	41.5	6.9	8.2	9.0	3.9	4.6		10.4	32.2	44.1	
8.6	39.3	57.5	9.5	9.4	48.0	38.3		10.0	9.9	53.8		7.8	47.5	58.8	7.0
10.0	59	30.0	14.0	7.4	56.5	39.8	8.0	10.4	23.9	24.6		10.0	27	53.2	25.7
9.2	32.0	33.8		8.4	25	1.0	48.6	8.3	25.4	32.9	-	9.8	28	19.6	1.1
8.0	33.5	8.3	9.0	9.6	26.5	53.2		9.6	2	52.4	35.0	10.0	29	5.2	47.0
8.7	47.0	32.3	8.0	10.3	41.0	2.6		11.4	55.9	16.1		7.6	24.2	20.1	8.0
9.4	0	2.1	2.5	9.4	26	18.0	3.7	10.2	4	29.9	4.1	10.2	30	5.7	17.1
8.4	11.7	2.3	9.5	10.2	42.0	16.0		10.0	5	6.4	11.0	9.0	6.7	56.5	
9.4	13.0	9.1	9.0	10.3	27	7.0	10.4	10.8	9.4	53.3		10.0	57.2	10.1	
9.4	56.1	24.5		10.0	28	15.5	16.2	10.6	11.9	17.7		10.0	31	17.7	0.9
10.0	2	46.6	44.3	9.8	27.0	23.1		10.4	12.9	42.3		8.8	25.7	14.9	-
10.0	3	8.6	41.3	10.0	30	26.7	2.2	9.6	47.4	55.6		10.8	43.2	45.7	
8.6	6	34.1	28.2	9.4	34.0	36.7		11.4	52.9	22.8		8.8	59.7	19.6	
8.6	56.1	5.7	8.8	10.3	43.7	15.3		9.4	6	23.8	7.5	10.0	32	23.2	39.9
8.6	7	28.1	17.9	9.8	58.2	24.2		9.8	7	46.3	21.0	9.0	44.2	24.6	
9.4	9	7.6	1.9	9.1	32	11.7	8.3	9.8	53.3	49.0	-	10.0	33	29.2	0.4
10.0	36.5	38.5		9.4	51.2	5.9	10.0	10.2	11	0.8	45.3	9.8	37.7	29.4	
7.9	37.5	6.7	8.3	10.0	53.7	14.1		10.8	16.8	23.4		10.6	43.9	23.5	
9.2	53.1	46.9		7.6	33	23.7	18.1	10.8	26.8	42.0		9.8	35	6.0	31.8
10.0	10	16.5	40.8	9.0	35	21.7	20.1	7.9	12	11.3	14.0	10.6	43.5	7.9	
8.7	46.6	46.4	9.0	8.8	26.5	18.2	8.5	10.6	13	22.3	54.6	9.4	36	4.5	48.6
9.0	11	26.8	16.4	9.2	36	26.0	8.4	11.2	30.7	59.9		8.4	12.5	55.4	8.5
8.0	29.5	17.7	9.0	8.2	37	29.0	46.9	11.4	14	11.8	6.1	9.8	13.0	19.0	
9.4	32.5	13.7	9.2	8.8	38	35.0	7.0	10.0	25.8	23.6		10.6	17.5	55.8	G
9.4	48.0	29.2		9.2	39	31.0	10.0	10.2	31.8	55.2		9.3	23.9	2.2	
9.5	59.0	20.6	9.5	9.8	40	8.0	26.1	8.5	36.3	15.7	8.0	10.8	31.0	36.6	
9.0	12	11.0	15.2	9.8	45.0	58.0		9.4	36.8	9.9		10.0	32.5	1.5	
9.2	13	21.8	1.4	9.7	42	4.5	31.0	11.4	41.6	12.5		9.6	32.5	42.6	
9.2	29.5	24.0		9.8	9.0	50.6		9.4	15	15.8	38.8	10.8	37.0	21.0	
10.3	14	33.0	2.0	7.6	20.0	51.8	7.8	10.2	32.8	43.2		9.2	55.5	38.6	
9.6	46.0	14.5		9.3	24.0	5.6	9.5	11.2	16	14.3	54.9	9.4	37	14.0	3.9
9.2	15	3.5	45.4	10.0	43	51.0	52.6	10.0	18.3	53.5		10.0	38.0	20.0	9.5
10.0	17.0	20.8		9.4	46	34.0	33.2	8.5	21.8	17.0	8.5	9.4	38	47.5	55.6
9.8	35.0	7.0		9.4	40.0	57.1	9.5	8.8	22.3	2.5	9.5	10.8	47.5	41.9	
9.5	40.0	11.7		8.8	47	13.5	34.6	8.8	24.8	6.3	9.0	8.5	48.5	13.5	
10.0	16	9.0	53.6	8.4	17.5	13.3	8.0	10.6	24.8	4.9		10.0	53.0	31.1	
10.3	28.0	33.9		9.2	48	12.5	30.0	9.6	33.8	48.8		10.4	55.0	20.0	
10.3	17	42.0	13.3	9.6	51	49.5	18.1	11.2	50.8	34.9		8.8	39	1.5	12.5
8.7	54.0	21.0		9.4	52	3.5	7.8	10.4	51.8	11.6		10.8	40	6.0	12.0
9.8	19	50.5	0.7	8.8	29.0	22.0		8.5	17	2.3	47.8	10.8	25.5	40.3	
9.6	58.0	17.0		8.8	41.0	37.1	-	10.0	30.8	40.6		8.5	43.5	7.8	9.5
9.8	20	20.5	29.2	8.8	53.5	47.8	7.5	10.4	32.8	4.6		10.2	56.5	37.3	
9.5	41.5	46.1		8.4	53	22.0	42.8	11.4	33.6	55.5		10.8	41	12.5	31.7
9.6	45.0	15.0		8.4	24.5	46.8	9.0	10.2	46.8	32.4		10.8	27.5	52.0	
25pr.	+ 1	26.5	+ 7.4		+ 1	24.6	+ 7.7		+ 1	21.5	+ 8.1		+ 1	19.2	+ 8.3

6841—6855.				6856—6869.				6870—6883.				6884—6897.					
mag.	23 ^{h.}		—31°	mag.	23 ^{h.}		—31°	mag.	23 ^{h.}		—31°	mag.	23 ^{h.}		—31°		
	m	s			m	s			m	s			m	s			
10.8	42	16.0	2.3	10.0	47	52.0	59.8	10.0	50	4.8	5.4	9.8	56	40.1	48.3		
9.8		32.5	15.8	8.6		54.3	42.1	8.0 G	10.4		13.5	39.0	8.0		48.1	54.5	8.5
10.4		40.5	17.3	9.4		55.8	43.1	G	10.3	51	7.3	4.9	9.4		51.1	0.4	
9.8		51.5	21.0	10.3	48	5.3	40.1	9.0 =	8.6		23.8	8.2	9.6	57	4.6	1.3	
10.0	43	16.0	48.6	10.4		7.8	8.1	10.4			25.8	54.0	9.4		9.6	10.5	
10.8		41.0	15.5	10.3		8.3	22.5	10.4	52	7.3	13.5	7.4		13.1	47.3	8.0 -	
10.3	44	46.0	30.7	10.2		11.3	45.6	10.3	53	9.3	45.9	10.3		36.0	1.2		
10.0	45	9.4	7.3	10.3		12.3	27.8	9.8		19.3	26.4	10.2	58	12.1	19.4		
10.8		19.4	22.2	10.3		17.3	24.3	10.4		28.3	53.8	8.7		13.1	51.9	-	
8.8		36.5	46.2	9.8		25.8	48.1	9.8		46.8	2.6	9.8		25.3	59.7		
9.3	46	12.5	40.6	10.2		32.5	6.4	9.4	54	59.1	20.7	10.3	59	27.1	40.9		
9.4		32.2	7.9	10.4	49	13.3	47.5	9.0	55	15.1	23.1	8.2		31.1	3.5	7.8 Ga	
9.4		32.2	7.3	10.4		29.5	28.0	8.0		39.1	22.7	8.6		33.6	1.5	9.0	
10.4		42.5	22.7	10.4	50	3.3	1.6	10.4	56	8.1	41.1	10.4		55.6	42.2		
7.6	47	29.9	3.1	7.7 G Sa													
25Pr.	+ 1	18.1	+ 8.3		+ 1	17.9	+ 8.3		+ 1	17.4	+ 8.4		+ 1	17.0	+ 8.4		

ZONE — 32°.

1—30.				31—60.				61—90.				91—120.					
mag.	oh.		—32°	mag.	oh.		—32°	mag.	oh.		—32°	mag.	oh.—1h.		—32°		
	m	s			m	s			m	s			m	s			
10.0	0	1.9	34.0	8.4	9	3.1	44.4	7.8 GW	9.3	30	55.8	50.4	10.6	45	40.1	26.9	
8.6		57.9	44.9	9.8		36.7	58.8	6.0 GS _{err}	8.8		55.8	23.1	8.8	46	6.5	50.6	9.2
9.4	1	11.4	57.7	6.9		49.6	8.6	10.3	11	11.6	0.9	8.2	10.4		26.0	47.8	
9.4		32.9	13.0	10.3	11	11.6	0.9	10.2	33	42.8	19.6	9.4		29.5	18.3		
10.4		33.9	20.0	9.4		13.6	6.0	10.0	34	11.8	1.6	9.6		47	46.5	25.7	
10.4		38.8	20.1	10.3		24.1	21.0	8.8		22.1	57.5	8.8		53.5	54.9	9.0	
10.2		39.4	20.4	8.4	12	21.6	23.7	9.0	10.0	35	15.9	0.0	9.0	48	32.5	19.2	9.0 G
10.3		52.9	55.2	10.2		52.6	31.1	10.6		40.9	45.7	9.6		40.5	39.9		
10.4	2	43.4	0.7	10.2	13	9.6	17.4	8.5	36	14.1	36.1	9.4		50	58.5	33.1	8.8 G
9.4		44.7	1.0	8.4		49.6	30.3	10.6		24.1	33.5	10.4		52	31.5	31.0	
9.2		49.9	10.4	8.4	16	30.1	23.9	9.8		36.6	56.2	9.8		38.2	59.9		
10.3	3	5.9	15.4	8.2	18	53.8	32.4	10.4	37	2.1	7.9	8.8		53	28.0	38.4	
9.0		7.4	12.2	8.9	19	57.3	21.7	10.6	38	9.6	54.7	8.2		44.5	0.8	7.5 G—	
9.4		17.9	46.5	7.1	21	15.8	31.2	7.8		40.1	4.5	10.6	54	56.5	54.0		
9.0		18.9	30.8	9.4		16.3	43.3	9.2		46.1	57.3	9.4		55	23.5	32.3	
10.0		46.4	49.0	9.0		22.8	36.4	9.6	39	28.1	43.3	8.4		56	14.5	17.7	8.5 G
9.6		55.9	51.8	8.6		24.8	39.0	9.0	40	5.1	41.6	10.0		22.5	46.7		
9.6	4	38.6	45.0	10.2		50.8	43.3	9.4		9.6	21.4	5.6		28.5	13.5	5.8 GS _{err}	
10.3	5	7.1	39.2	8.2	22	52.8	18.9	10.2		22.1	17.9	8.4		57	27.5	45.0	8.0 GS
10.2		8.6	19.9	7.0	23	36.8	48.4	10.0		32.6	48.0	8.8		53.7	27.5	9.0 G	
9.8		17.1	49.3	8.2		42.3	57.9	9.0		43.1	55.7	11.0		58	35.4	16.1	
10.2		54.1	3.9	8.7	24	49.8	19.4	8.0	41	36.8	2.2	10.6		57.4	32.3		
9.4	6	1.1	9.9	10.2	26	0.8	34.2	9.8	42	13.1	16.2	9.4		59	2.2	34.2	
10.2		28.1	49.0	8.0		15.8	44.8	8.7		20.1	17.9	10.4		32.4	21.9		
8.6		29.1	35.6	9.4		57.3	42.8	10.2	43	16.1	49.1	8.2		47.9	37.2	9.0	
10.2		29.1	9.2	8.4	27	55.5	58.6	8.9		35.6	31.8	7.9		0	5.4	31.3	8.5 G
10.5		34.1	4.9	10.0	28	35.8	26.1	10.6	44	10.1	0.8	9.0		1	39.4	19.9	9.0
10.5	7	34.1	30.0	9.0	29	51.8	5.6	9.8		21.1	28.6	9.8		43.4	27.5		
7.8	8	34.1	50.8	8.4		52.8	19.3	10.6		36.1	40.1	10.6		43.9	15.3		
9.2	9	1.6	10.6	10.2	30	29.8	34.9	10.4	45	37.1	18.3	10.6		2	5.1	2.2	
25Pr.	+ 1	16.4	+ 8.4		+ 1	14.9	+ 8.3		+ 1	13.3	+ 8.2		+ 1	11.7	+ 8.1		

121-180.				181-240.				241-300.				301-360.			
mag.	1 ^h .		-32°	mag.	1 ^h -2 ^h .		-32°	mag.	2 ^h .		-32°	mag.	2 ^h -3 ^h .		-32°
	m	s			m	s			m	s			m	s	
11°0	2	11.4	20.5	9°8	30	9.8	48.1	9°4	8	44.3	8.0	9°0	43	38.9	5.1
10°8		25.4	52.9	10°1		41.8	31.8	9°4		52.3	46.0	5°8		52.4	55.8
11°0		48.3	39.6	7°8	31	6.8	56.1	9°8	9	49.3	41.8	8°6	44	4.4	54.0
7°8		48.4	49.7	8°0	32	14.8	42.3	9°8	10	21.6	31.2	9°2		21.9	55.0
10°4	3	4.9	43.7	9°3		14.8	9.3	10°2		57.0	22.0	10°2		28.9	43.5
9°4		59.4	45.0	9°2		51.8	53.1	9°8	11	13.0	1.5	10°4		48.4	26.5
10°0	4	53.6	0.2	10°0		53.8	13.1	9°4	14	13.0	55.9	10°4		48.9	22.4
9°8		55.4	34.4	7°6		57.5	48.3	8°7		21.5	42.5	9°9		54.4	4.7
8°2	5	16.4	54.8	9°3	33	41.0	42.7	10°0	16	45.5	37.2	9°3	45	22.9	58.0
10°6	7	8.4	53.9	8°6	34	41.5	9.1	9°8	17	14.0	34.0	10°6		44.4	6.3
10°5		16.4	52.7	8°2		54.5	20.7	9°2		17.0	38.9	9°2	46	28.9	55.0
8°4		30.4	34.1	8°9	35	11.5	8.3	8°6		27.5	54.3	10°6		31.9	29.0
9°6		35.4	14.2	9°4		13.0	32.1	10°0	18	8.0	17.3	8°4	47	24.9	4.7
10°5	8	15.4	55.5	8°9		17.0	24.7	10°4		33.0	16.7	9°6	48	14.9	22.4
8°2		37.6	0.3	9°8		19.0	57.0	8°8	20	14.0	21.7	9°3		42.4	50.2
9°0	9	41.4	16.4	8°4		45.5	26.2	10°4		30.0	26.2	10°6		47.4	27.3
8°3	10	18.4	3.2	8°8	36	11.0	47.2	8°7	21	24.0	6.1	9°9		59.9	26.6
10°0		22.6	7.1	8°1		25.5	43.3	10°4		40.0	19.0	9°6	49	14.9	29.9
10°8		41.1	12.7	6°5		30.4	57.5	9°2	23	20.0	1.7	10°0		26.9	46.0
8°8		55.6	4.1	8°2	38	28.5	23.6	8°8		44.0	11.5	9°9		33.9	10.9
11°0	11	25.6	46.1	8°6		41.5	14.9	9°4		44.0	23.8	10°2	50	5.4	2.5
9°4		57.6	41.4	9°4		57.5	19.5	9°6		47.5	20.7	10°2		51.4	57.9
8°9	12	2.1	39.8	7°4	39	22.0	0.9	10°4	25	38.0	27.4	9°9		51.44.9	11.4
11°0		42.1	58.0	8°6		38.5	31.0	8°7	26	12.5	36.0	10°2		52.42.9	17.1
9°6	13	1.6	13.6	9°3	41	15.0	43.0	10°4		29.0	21.0	10°4		53.18.9	12.1
10°0		23.6	4.4	10°0	42	20.0	31.1	10°0		47.5	27.6	10°2		54.9	28.4
9°7		26.6	42.6	10°0		36.0	16.2	10°0	27	44.8	41.9	9°1	55	1.9	8.2
8°4	14	6.6	2.5	8°6	45	16.0	52.0	8°3		55.8	16.1	10°4		10.9	31.2
10°2		8.1	6.9	10°2	46	12.4	36.9	8°0	28	35.8	44.9	10°2		57.14.9	54.2
10°8		8.6	23.2	7°3	51	2.3	45.0	10°4		46.9	2.3	9°0		20.4	5.2
10°2		11.6	24.2	9°6		36.8	31.2	7°4		50.8	4.4	9°9	58	11.3	52.2
10°4		43.6	21.9	8°6	52	43.8	36.0	9°4	29	20.8	17.2	9°9		26.2	30.6
10°4		44.6	13.9	8°2	53	12.3	52.8	10°2	30	23.3	54.8	9°4		59.49.3	44.8
11°0	15	13.1	57.3	9°2		14.3	49.9	10°0		47.8	4.5	10°2	0	4.5	55.7
8°8	16	30.6	4.7	10°2		22.4	53.2	8°0	31	16.3	23.7	10°0	1	45.3	17.0
8°9		38.6	57.3	9°6		28.4	20.5	9°6		16.3	45.1	8°2	2	5.3	49.8
9°8	17	13.1	9.3	9°9		57.4	22.2	10°4		26.8	39.0	10°2		35.5	3.5
10°0		37.6	56.1	8°8	54	15.8	38.4	8°4	32	0.8	1.9	7°5		52.5	7.4
11°0		57.9	59.1	8°2		27.3	21.4	9°4		1.8	49.6	9°0	4	21.5	50.8
10°8	18	11.6	34.4	8°0		47.3	41.6	8°8		15.3	48.8	8°6		52.5	16.2
7°0		23.1	27.7	8°4		56.3	26.3	8°6	33	6.3	36.2	8°6	6	2.5	33.5
11°0		40.5	28.3	10°2	55	54.4	32.7	7°4	35	11.9	0.4	10°6		41.0	44.2
10°2		41.6	6.1	9°4	58	30.3	9.9	10°4		59.9	13.9	8°6	7	14.0	10.5
8°6		49.6	12.1	10°0	59	26.3	47.0	9°9		37.9	7.9	7°6		25.5	52.1
11°0	19	45.6	58.8	9°0		32.3	23.9	9°6	38	32.9	50.5	9°6		37.5	9.2
10°5	20	1.9	2.2	9°4	0	45.3	19.7	8°7	39	1.9	27.7	9°2		43.5	40.9
10°8		17.6	45.0	9°4	1	17.3	30.8	10°4	40	26.9	24.9	10°0		48.0	2.3
10°8		51.6	25.9	9°2		51.3	55.2	9°4		42.9	24.6	10°0	8	32.6	56.9
10°8	21	5.5	31.4	10°0	2	32.3	39.2	9°9	41	18.9	53.0	10°0		34.6	26.5
9°8		8.6	38.9	8°8		39.8	38.4	9°4		32.9	1.1	10°0		9.47.5	21.1
9°2		21.6	3.5	7°8	3	27.3	20.2	10°2		41.4	49.5	8°8	11	23.9	7.0
7°5	22	34.3	8.7	8°5		43.3	24.2	10°2		44.4	46.7	8°9		41.4	33.0
8°3	23	8.5	41.2	9°2	4	0.8	17.2	10°0		58.9	23.7	9°8		41.9	27.7
8°8		45.8	40.2	9°2		9.8	11.2	9°8	42	9.9	56.7	10°0	13	13.6	48.9
8°7	25	5.8	6.2	9°0		54.8	20.0	9°6		46.9	37.6	8°4	14	21.9	1.0
9°8		23.3	45.1	8°0	5	26.8	39.0	8°0		46.9	48.6	10°4		28.4	39.2
9°4		39.3	32.1	8°0	6	33.8	52.6	9°0		57.4	24.3	9°8	15	18.4	14.2
7°0	29	8.3	31.8	8°2		33.8	55.1	10°2	43	15.9	12.7	9°2		42.9	9.1
8°3		22.0	2.3	9°6	8	4.8	8.4	10°0		24.9	12.8	8°4	16	29.9	52.1
9°1		48.8	49.5	9°9		33.0	58.1	10°2		30.9	10.3	10°4		57.9	13.9
25pr.	+1	10.0	+7.9		+1	6.9	+7.4		+1	4.0	+6.7		+1	1.8	+6.0

361-420.				421-480.				481-540.				541-600.			
mag.	3 ^h .	-32°		mag.	3 ^h -4 ^h .	-32°		mag.	4 ^h .	-32°		mag.	4 ^h .	-32°	
8.9	18	44.3	30.5	9.0	42	16.4	21.5	8.4	10	21.3	6.2	9.3	28	36.9	23.6
10.2		50.3	45.3	10.0		57.9	31.6	9.4		23.3	33.4	9.4		29	2.9
9.8	20	41.3	46.7	10.2	43	1.7	29.2	8.2	11	5.8	18.0	10.2		23.4	41.9
10.0		42.3	31.2	7.6		35.2	9.8	8.6		18.0	2.4	9.5		26.4	15.3
9.2	21	4.3	6.1	9.8		35.7	51.0	8.5	12	21.8	57.5	10.1		28.4	51.0
10.4		28.3	51.3	10.0		53.7	17.7	9.3	13	11.8	59.4	8.7	31	51.9	3.6
8.6		36.8	30.8	10.2	44	57.2	8.2	10.2		52.3	19.2	9.6		52.4	6.0
9.2	22	40.6	40.6	10.4	45	5.2	3.2	10.2		55.3	33.5	9.0	32	0.9	49.2
10.2		49.9	2.8	8.0		21.5	39.8	9.2	15	9.0	12.4	10.1		5.4	5.5
10.4	23	9.9	15.5	9.6		50.7	27.8	10.4		16.5	9.9	8.9		22.4	49.4
10.0		42.9	26.1	8.4	46	15.8	1.9	10.3	16	46.0	13.3	9.5		32.9	23.0
9.8		43.4	33.6	10.2		46.7	24.9	10.0		51.0	32.9	9.4		34.4	26.5
8.6	24	15.4	6.2	9.7	48	25.8	52.8	8.9	17	5.0	29.0	9.2		35.4	30.6
9.4		18.9	58.3	9.0		39.8	3.3	9.0		10.5	11.9	9.6		44.4	25.6
8.8		31.4	43.7	8.8	50	12.3	27.9	10.0		28.0	14.7	10.2	33	20.9	38.4
9.2	25	40.9	40.4	9.9		58.8	16.0	9.8		44.5	22.7	10.4		23.9	56.2
10.4		43.9	24.2	9.6	51	7.8	18.3	9.5		45.5	21.1	10.4		25.9	40.1
9.8		51.4	56.0	10.1		8.3	6.1	9.6	18	2.0	24.1	10.4	34	17.3	38.3
9.8	26	12.4	30.2	7.7		33.3	3.6	9.6		23.0	29.8	10.0		17.3	21.7
9.8		14.4	46.1	9.7		48.8	38.1	9.8		27.5	16.9	9.4		35.7	53.8
7.6		32.9	6.0	9.0	52	7.3	5.7	7.2		30.0	26.6	10.0		46.7	48.0
9.8		40.9	36.8	8.9	53	3.8	23.9	9.8		54.0	17.3	9.7		56.7	44.7
7.7	27	12.9	43.8	9.3		44.8	34.1	9.0	19	15.0	22.1	9.4	35	24.2	16.8
9.6		39.9	45.8	9.0		58.5	0.7	9.8		17.5	7.7	10.3		41.2	12.7
8.8	28	20.9	55.7	9.6	54	7.8	56.6	8.5		21.5	18.3	10.4		52.7	4.4
10.3		50.1	57.8	9.9		50.8	16.7	8.9		22.5	23.7	10.4	36	4.2	29.9
8.6		57.9	11.6	9.4	55	32.8	7.3	8.9		35.5	19.4	11.0		7.2	35.6
7.4	29	32.4	17.6	10.0		37.8	32.6	10.4	20	55.0	9.0	8.7		15.2	28.1
10.4	31	19.9	18.4	9.4		43.8	42.1	10.4	21	0.9	52.2	10.4		25.0	58.7
10.4		57.9	6.2	9.7	56	12.8	44.8	9.5		3.0	34.2	9.1	37	1.7	49.7
10.2	32	4.9	18.2	8.6		14.8	56.4	9.6		26.0	26.0	10.0		19.7	52.0
8.6		27.9	3.5	8.9		17.8	25.3	10.4		36.0	52.3	10.8		23.2	54.7
9.0	33	36.4	46.9	10.0		34.3	36.8	10.2		44.5	13.3	11.0		34.7	21.4
10.3		38.9	25.6	9.2		49.8	11.2	9.8	22	53.0	40.4	8.6		56.2	42.6
9.4		55.9	57.6	9.4	57	21.8	24.2	7.2		54.0	41.2	10.8		57.2	38.8
9.6	34	32.4	18.9	9.3		41.8	28.9	10.4	23	2.5	13.8	11.0	38	28.2	6.7
10.3		32.9	50.3	9.9		58	6.8	9.6		3.5	35.8	9.4		36.7	1.3
9.2		35.9	24.2	8.6	59	8.3	7.2	10.1		8.0	42.3	10.0		45.2	28.6
9.8	35	11.4	15.7	9.6		23.3	25.5	8.8		11.5	30.2	8.2		56.7	29.5
9.6		46.4	45.0	8.6		41.8	49.1	10.4		22.5	20.5	9.8		58.2	21.2
7.9		56.9	16.2	10.2		52.8	15.4	7.9		50.5	44.6	9.4	39	13.7	8.4
9.2		58.4	30.3	8.6		0	39.8	10.4	24	11.9	34.0	10.4		32.5	52.1
9.8		59.6	45.5	9.1		1	3.3	9.8		20.5	12.0	10.2		36.5	40.8
10.4	36	4.9	29.9	8.8		55.3	47.6	8.5		25.0	24.4	10.0		52.0	2.7
10.0		44.4	16.9	8.4	2	10.9	4.3	9.4		38.0	37.8	10.2		54.5	51.5
10.3		51.9	26.6	9.6		18.9	9.1	9.8		50.0	45.1	11.0		57.5	32.1
9.6	37	6.3	1.0	9.2		49.9	19.1	10.4	25	21.0	51.2	11.0	40	6.0	48.9
8.6		6.3	0.5	9.4		50.9	50.0	10.4		31.9	33.2	9.1		28.5	15.5
8.6		10.9	52.9	9.6	3	0.9	58.6	8.9		44.4	36.2	11.0		41.5	28.9
4.1		16.4	20.2	10.2		40.7	2.4	10.2		50.9	43.5	9.8		45.5	22.4
10.2		16.4	37.6	9.8		54.9	12.6	9.8		57.9	51.6	10.4		59.0	33.4
8.6		21.9	30.5	9.8	7	27.9	30.9	10.4		59.4	22.3	11.0	41	25.0	29.3
10.3		51.9	41.4	9.4		51.9	25.4	9.8	26	45.4	48.8	8.8		52.0	39.7
8.2	38	12.9	55.7	7.8	9	8.3	21.5	7.8		45.9	47.2	11.0		58.5	57.7
8.2	40	50.4	52.3	9.4		11.5	10.8	9.0		47.9	40.3	9.6	42	1.5	19.5
8.6	41	2.6	22.5	10.2		13.6	14.4	10.4	27	15.9	53.0	10.8		21.0	30.8
8.6		43.9	36.0	9.8		17.9	32.4	10.4		47.4	46.4	11.0		30.5	31.7
9.6		51.4	40.9	9.4		27.3	40.6	9.0	28	2.9	48.9	9.9		31.0	9.1
9.8	42	1.9	8.0	10.0		47.1	5.5	9.8		3.4	21.2	11.0		35.0	21.9
10.3		5.4	56.1	9.8	10	10.6	53.1	8.4		27.9	19.3	10.8		36.5	5.1
25pr.		+ 0 59.8	+ 5.0			+ 0 58.6	+ 4.3			+ 0 57.5	+ 3.5			+ 0 56.9	+ 3.0

601-660.				661-720.				721-780.				781-840.					
mag.	4 ^h .		-32°	mag.	4 ^h -5 ^h .		-32°	mag.	5 ^h .		-32°	mag.	5 ^h .		-32°		
	m	s			m	s			m	s			m	s			
9.1	42	42.5	7.7	9.7	55	5.6	28.8	8.8	4	4.4	13.3	9.5 G	10.1	16	25.6	38.0	
10.8		57.5	37.9	10.8		12.2	29.9	10.1		20.9	25.1	9.5		39.1	35.3		
11.0	43	2.3	36.8	8.8		21.2	35.1	9.5		30.4	29.7	9.7	17	2.6	47.3		
10.4		4.3	25.3	10.8		30.2	49.8	10.8		37.4	25.3	9.8		14.1	54.3		
9.6		8.5	43.5	10.8		36.7	53.3	9.7		49.9	12.1	9.5		16.6	37.3		
10.8		8.5	39.5	9.4		37.7	32.0	8.4	5	46.4	12.9	7.8 G	9.0		18.1	20.3	
10.2		14.5	23.3	7.8		41.0	0.1	10.0 G-	10.8		54.4	20.3	10.0		26.8	2.0	
9.7		32.0	50.5	10.8		49.2	36.3	9.5	6	3.4	16.3	10.6		27.8	15.1		
10.6		51.0	14.5	11.0	56	2.2	12.5	8.2		5.9	59.8	8.0 G	8.1		31.8	39.6	
8.6		53.0	19.6	9.5	10.3		7.2	3.7	8.6		6.4	23.4	9.2	9.5		33.8	25.3
10.0	44	0.5	52.9	10.0		9.7	27.0	9.0		20.4	46.1	8.5	9.5		42.8	27.7	
10.6		12.0	14.4	10.8		18.7	22.8	10.1		25.9	30.3	10.8		58.8	27.0		
11.0		15.5	33.1	9.4		42.2	31.5	8.6		40.4	3.8	8.0	8.2	18	18.8	47.3	
10.6		17.3	0.8	10.0		53.7	13.4	8.2	7	3.4	29.2	9.2	10.4		23.8	9.9	
10.8		30.5	47.1	11.0	57	0.2	44.4	10.4		19.4	28.1	10.6		36.8	19.7		
8.8		41.0	7.4	9.5	10.0		15.2	46.2	10.1		26.4	47.3	9.6		36.8	5.7	
9.4		43.5	9.1	10.0	8.4		27.7	19.6	9.0	10.0		42.9	21.3	9.4		57.8	3.1
10.6	45	17.5	33.7	9.7		29.7	26.4	9.8	8	6.9	7.6	9.0	19	0.3	34.1		
11.0		34.5	34.3	10.3		31.7	59.9	10.6		16.9	27.5	8.6		11.3	16.1		
10.8	46	2.0	30.1	9.8		32.0	6.2	7.4		50.9	3.2	7.2 GS	8.8		20.8	9.1	
11.0		5.0	6.1	10.4		36.8	28.6	7.0		56.4	12.9	8.0 GS	9.3	20	24.5	58.1	
11.0		18.5	11.5	10.6		39.8	48.0	10.1		56.4	34.8	9.5		33.8	16.1		
9.2		25.0	32.9	9.5	11.0	58	2.7	1.2	10.4	9	19.4	10.5	10.4		47.8	42.3	
8.8		34.1	11.5	9.2	9.7		5.2	34.0	10.6		22.4	14.7	9.5		53.3	40.0	
10.8		40.8	57.3	10.8		9.7	9.6	11.0		23.4	43.7	9.6		58.3	29.7		
10.4		42.1	45.3	8.6		12.0	12.8	8.9	8.6		39.9	56.5	9.0	10.1	21	6.8	46.1
9.1	47	1.6	26.9	9.0	10.2		16.7	26.5	10.2	10	11.4	6.3	10.1		9.8	9.0	
9.1		58.6	35.2	9.8		19.2	46.4	10.2		35.4	50.9	7.8		20.8	19.1		
10.8	48	23.6	29.5	10.3		21.8	47.9	10.4		37.9	56.2	7.8		33.8	36.7		
9.8		26.1	38.3	9.4		22.8	4.2	11.0		40.9	8.1	9.3		37.2	56.2		
10.4		46.1	51.5	11.0		28.7	14.4	9.8		53.4	36.6	8.6		42.2	32.5		
10.8		55.1	5.4	10.5		38.1	31.7	9.5	11	26.1	58.5	11.0	22	16.2	9.2		
9.1		56.1	39.5	10.0	11.0		57.8	9.9	9.5		28.6	30.6	11.0		16.3	16.9	
10.8	49	3.1	7.1	10.1	59	2.4	47.2	7.2		44.6	39.1	7.5 GS	11.0		19.3	34.1	
8.8		19.1	12.4	9.0	9.3		2.4	9.3	9.0 G	10.6	12	12.6	47.3	10.5		40.5	57.7
10.2		21.1	7.9	9.3		15.9	6.4	10.8		16.6	54.9	10.4		51.1	46.6		
10.6		53.6	44.6	10.4		21.4	23.8	8.6		33.6	28.5	10.5	23	0.2	17.2		
9.6		58.6	43.8	9.5		48.9	15.7	9.0	9.8		41.6	39.6	9.2		5.1	10.0	
9.6	50	8.1	26.8	11.0		49.9	27.6	10.8		44.6	28.6	7.7		12.1	31.2		
8.8	51	49.6	45.9	9.0	9.6		52.9	53.5	10.8		56.6	22.0	10.2		14.1	39.5	
10.8		52.1	53.5	9.5	0	38.4	52.5	10.5		59.6	13.9	9.4		22.6	6.3		
10.3		55.1	30.1	11.0		52.4	40.5	10.8	13	3.6	53.4	7.8		36.1	55.5		
9.1	52	22.1	53.9	10.0		1.2	11.8	9.0		3.6	57.2	9.8		39.0	0.8		
9.0		32.1	4.9	8.8		3.9	46.0	8.8 G	9.0		6.6	52.9	9.8		43.1	55.7	
9.6		34.6	41.8	9.7		4.9	21.0	9.5		27.1	34.5	9.0	10.2		43.1	59.2	
10.6		51.6	28.4	9.3		16.4	33.3	9.6		44.6	10.8	9.2		43.6	8.9		
10.8	53	10.6	23.8	10.1		33.9	42.5	9.2	14	0.6	27.2	9.8	24	9.3	1.0		
9.6		22.1	18.5	9.6		37.4	20.3	9.0		5.6	7.2	10.4		10.1	56.1		
9.8		27.1	41.9	8.6		52.4	53.6	9.0 G	10.8		21.1	50.3	10.0		32.6	16.3	
10.0		51.5	59.8	9.8	2	43.4	4.4	10.0		21.1	5.4	9.5		42.6	56.3		
9.7		52.1	18.2	9.0		46.9	9.7	9.6		26.1	48.0	8.3	25	24.1	33.7		
10.8		54.1	0.3	10.5		59.4	19.4	9.3		48.6	31.9	G	9.5		33.2	40.1	
9.7		54.1	28.9	9.6	3	6.4	19.0	8.4		54.6	14.2	9.0		45.7	20.5		
10.4	54	4.6	47.1	9.8		8.4	50.6	9.6	15	3.6	42.2	10.2		49.7	42.5		
10.2		6.6	41.7	9.8		12.4	34.7	9.8		6.9	2.9	10.2	26	6.2	22.4		
9.7		14.6	45.1	10.4		17.4	47.7	11.0		27.6	13.2	8.0		13.2	12.4		
11.0		25.1	48.5	10.8		30.4	12.6	9.4		40.6	49.7	10.2		14.7	33.7		
7.8		36.6	25.7	11.0		32.4	24.2	8.2		43.1	44.8	8.7 G	10.5		21.7	29.9	
9.0		37.3	59.7	9.3		52.9	15.6	9.5 G	11.0		45.6	21.8	9.0		33.2	53.0	
9.0	55	4.1	15.9	9.2	4	2.4	25.7	9.6	16	14.6	2.9	9.0 G	10.0		38.2	54.7	
25pr.	+0	56.5	+2.5		+0	56.3	+2.2		+0	56.0	+1.8		+0	55.8	+1.4		

841-900.				901-960.				961-1020.				1021-1080.			
mag.	5h.	-32°		mag.	5h	-32°		mag.	5h-6h.	-32°		mag.	6h.	-32°	
	m	s	'		m	s	'		m	s	'		m	s	'
10.5	26	45.2	4.5	9.0	39	52.7	14.3	9.0	50	45.3	35.7	8.2	1	46.2	59.3
10.2	27	9.7	46.8	8.8	40	5.7	52.2	9.2		49.8	16.2	10.2	2	6.6	27.9
9.0		37.2	36.5	9.2		18.7	23.0	9.5	51	3.0	2.8	8.6		30.7	30.0
10.2	28	3.7	46.0	8.4		37.2	39.9	9.5		5.3	12.7	10.0		42.7	34.9
9.5		18.2	25.5	10.2		43.7	29.2	10.2		17.1	59.9	10.4		49.0	0.3
10.4		32.2	5.0	9.8		46.2	32.7	10.4		53.8	52.7	8.8	3	21.7	55.6
10.2		54.2	56.2	10.2	41	2.7	39.3	9.0	52	46.3	9.5	9.7		25.7	7.5
8.6		59.7	42.5	4.6		21.6	21.2	9.0		49.8	35.1	8.6		29.7	44.5
9.0	29	0.7	36.4	9.4		37.1	18.7	10.0		51.3	22.4	9.8	4	24.7	4.0
10.4		3.2	41.0	10.2		55.6	37.4	10.0		51.3	16.4	9.4		27.7	29.0
10.2		22.2	3.9	9.2	42	15.6	2.4	10.4	53	7.6	35.6	10.0		31.2	45.8
9.4		23.2	21.6	9.2		22.1	2.9	9.9		10.6	37.6	10.4		32.7	40.5
9.2		40.7	35.0	9.8		31.1	31.7	9.0		22.1	50.8	9.0		42.7	23.5
10.2		48.7	41.4	10.5		44.6	59.4	10.4		22.1	3.4	10.0		42.7	58.3
10.2	30	2.7	10.9	10.0		49.6	42.0	9.2		25.6	0.4	9.6		44.7	55.0
8.6		42.7	59.0	9.8		51.6	32.5	9.7		35.6	24.1	9.1		55.2	2.8
9.0		53.2	22.5	9.0		52.6	45.0	9.9		37.6	30.8	9.7	5	13.7	37.5
9.0	31	0.2	29.0	10.4	43	9.6	29.5	10.0		37.6	3.5	9.7		41.7	23.6
8.9		5.2	35.9	9.4		32.1	43.8	9.4		53.1	55.7	8.6		45.2	24.5
10.4		6.2	39.0	9.4		59.1	8.8	8.8		56.6	47.4	9.4		45.2	33.8
9.4		12.7	53.2	10.0	44	2.6	48.6	10.0		58.6	43.9	9.6	6	13.9	1.9
10.0		26.7	14.3	9.5		9.1	12.2	10.0	54	21.2	38.1	10.4		35.2	57.6
10.2		30.2	18.2	8.0		13.1	27.9	9.8		30.1	11.1	9.0		53.2	40.7
9.0		56.2	44.8	9.4		15.1	28.9	9.6		31.1	49.2	10.0		53.6	39.9
9.4	32	11.7	28.3	8.7		26.6	4.4	8.0		37.6	13.1	10.0	7	1.7	54.6
10.0		16.2	21.4	8.1		30.1	32.5	9.9		51.1	10.8	10.0		6.2	39.4
9.5		23.2	48.5	10.2		40.1	10.9	9.5		53.1	13.2	10.0		13.7	26.0
9.0		36.2	5.0	10.0		43.6	50.0	9.1	55	2.1	36.9	10.0		34.2	14.1
9.0	33	30.7	57.6	9.0		59.6	31.5	10.4		31.4	0.1	8.6		58.7	11.5
10.2		36.7	47.5	10.2	45	6.3	28.8	10.4		45.1	35.0	10.4	8	26.2	12.5
10.0		59.2	37.5	9.8		12.8	52.2	9.7		58.6	20.6	8.8		26.7	53.2
9.0	34	20.2	9.5	9.8		14.1	29.3	9.2		59.1	4.7	9.0		30.7	48.1
10.2		26.2	30.9	9.8		22.6	30.9	10.4	56	0.1	17.4	9.9	9	0.2	26.3
10.0		29.7	27.9	7.0		32.6	50.7	9.4		43.1	39.2	9.7		0.7	54.4
10.2		52.2	44.6	10.2		44.6	16.5	10.4		53.6	36.1	9.7		3.2	56.0
8.6		54.2	9.2	10.0		52.4	36.0	10.4		54.6	12.9	10.4		10.2	34.5
9.4	35	1.7	48.4	10.2		57.7	51.4	9.4	57	13.1	34.4	9.9		13.7	34.4
9.8		6.2	52.5	10.4	46	13.1	2.6	9.8		56.4	57.4	9.8		19.2	16.4
6.4		12.2	41.7	8.4		38.9	19.9	8.6	58	1.4	0.9	9.0		29.4	14.8
9.4		41.2	56.7	9.4		42.3	5.6	9.7		28.6	48.6	9.6		31.9	40.9
9.4		49.2	15.1	9.5	47	11.4	56.8	9.0		38.1	4.6	9.8		34.7	13.8
9.4		57.7	39.5	9.2		25.3	8.0	9.7		40.6	20.8	10.4		41.2	30.2
8.6	36	14.2	3.8	9.0		37.8	14.0	10.4	59	2.1	27.9	10.4		49.6	29.8
10.0		17.2	34.7	9.9		50.3	34.8	10.0		7.6	29.8	10.4		56.2	6.8
9.8		37.2	46.3	8.2	48	12.3	22.1	9.2		7.6	11.2	9.2	10	2.9	40.3
9.4		44.2	29.3	10.4		14.3	39.5	10.4		26.1	22.0	9.1		6.7	54.5
9.5		45.7	14.0	9.9		24.3	27.0	9.4		30.1	52.1	10.0		9.7	17.7
9.4	37	9.7	49.5	10.4		27.1	16.6	5.3		42.1	10.2	9.3		16.7	52.9
9.0		12.7	3.0	10.2		34.1	14.4	9.4		42.6	37.0	9.6		19.4	19.6
10.2		27.7	34.1	7.8		38.3	50.0	10.4		44.1	7.2	9.6		33.2	28.6
8.3	38	10.7	57.7	9.6		43.8	18.2	9.1	0	18.6	50.0	8.0		51.7	29.7
8.8		16.3	3.3	10.4		46.3	24.3	8.8		27.4	59.3	9.6		57.7	52.3
9.0		17.2	22.0	10.0		54.8	17.4	7.8		34.6	43.3	9.4	11	3.7	21.4
9.0		32.7	6.1	10.2	49	34.1	26.2	9.9	1	1.6	7.4	10.0		6.2	11.9
9.4		41.7	46.5	10.4		38.3	7.3	9.0		3.6	18.5	9.3		48.2	19.8
9.6	39	17.2	16.5	10.0		48.3	41.1	9.2		3.6	5.3	9.0		50.2	23.9
9.4		18.2	54.7	9.0	50	10.3	55.2	10.4		6.7	22.5	10.2		58.7	24.4
9.5		30.2	40.9	9.9		17.3	21.1	8.6		17.7	2.1	9.3	12	15.2	9.6
10.4		31.7	5.7	10.4		20.8	48.4	9.1		32.7	53.9	10.0		18.7	19.8
10.2		48.6	58.2	10.0		36.3	32.3	9.0		39.7	31.2	9.6		25.2	31.0
2.5pr.		+ 0 55.7	+ 0.9			+ 0 55.5	+ 0.5			+ 0 55.5	+ 0.1			+ 0 55.5	- 0.3

1081-1140.			1141-1200.			1201-1260.			1261-1320.		
mag.	6h.	-32°	mag.	6h.	-32°	mag.	6h.	-32°	mag.	6h.	-32°
8.8	12 28.2	52.0	9.8	20 14.5	22.3	9.4	27 22.8	23.5	9.2	33 8.3	14.8
10.0	37.7	7.2	9.6	17.5	7.6	9.0	23.8	26.8	9.8	14.3	20.8
9.3	45.2	27.6	10.2	21.0	13.3	10.0	31.8	14.3	9.4	16.0	11.3
9.3	47.2	57.4	9.1	32.3	58.4	9.8	32.3	30.0	9.6	24.8	8.9
9.3	48.7	14.2	10.2	44.4	42.1	9.4	33.3	34.2	10.2	31.0	15.1
8.8	13 2.2	51.5	10.2	51.9	13.1	9.0	34.3	18.2	10.2	43.0	5.5
9.6	7.2	12.2	9.2	59.9	55.1	9.4	28 1.8	25.4	8.4	34 13.8	43.2 8.8 G
10.0	10.7	10.0	9.6	21 5.4	41.8	10.0	4.8	55.0	9.6	14.3	0.7
9.2	12.7	15.4	10.2	8.2	0.1	10.0	11.3	46.1	10.0	25.8	41.0
10.0	13.2	7.4	10.2	10.1	14.7	10.0	12.3	47.0	9.4	26.0	25.3
10.0	47.7	38.4	9.0	14.9	15.1	9.1	31.3	20.8	9.8	30.8	32.3
9.6	57.2	16.2	9.6	27.4	34.8	9.2	32.3	56.0	9.8	42.7	48.7 8.5
10.0	14 3.7	37.6	8.8	30.7	1.2	10.0	32.9	23.7	9.6*	35 4.0	33.6
9.2	3.7	3.4	10.2	48.4	25.9	9.6	45.8	7.2 10.0	7.8	21.7	46.7 8.0 G
10.0	5.6	25.6	9.0	50.9	10.1	8.4	46.8	8.0 7.5 GS	8.8	21.7	45.6 9.0 G
8.8	13.7	9.2 9.0 G	9.4	22 10.9	53.9	8.6	53.3	25.0	8.4	23.7	38.1 9.5
8.8	35.2	6.2 9.0	9.1	13.4	10.5 9.0	10.2	29 0.3	2.1	8.0	36 5.7	39.7 8.0
10.2	40.7	0.0	9.4	15.9	14.2	9.8	8.3	25.0	8.8	58.2	10.2 8.5
9.1	15 3.7	49.6	8.1	26.4	5.4 7.5 Gtπ	7.6	12.6	56.6 8.5	8.8	37 54.7	43.9 9.5
8.8	7.2	49.3 9.0	8.6	28.4	49.2	10.2	14.8	4.2	9.8	56.2	55.3
10.2	7.2	33.5	9.1	33.9	23.6	9.8	19.3	28.0	7.3	38 4.7	35.4 7.2 GS
10.2	8.4	1.8	10.0	39.9	42.9	9.8	24.8	31.6	9.8	20.7	15.2
9.6	22.2	42.0	10.2	41.4	21.2	9.4	30.0	1.9	8.4	23.2	52.4 9.0
8.8	23.7	16.4 10.0 G	8.2	47.4	32.5 8.5 S	9.2	33.3	46.6	9.4	40.7	45.9 9.0
9.4	34.2	33.9	9.8	23 1.9	13.1	9.4	36.8	13.6	9.8	39 17.7	48.9
8.6	53.2	32.8 9.0	9.6	7.9	43.9	8.8	52.8	59.9 9.5	8.4	18.2	18.2 8.0
10.2	56.2	47.4	9.0	11.9	30.8	6.0	56.8	37.1 6.0 GStπ	8.6	20.7	37.5 8.2
10.0	16 7.0	47.2	10.0	12.9	23.1	9.6	30 9.3	51.2 10.0	8.1	37.2	11.0 8.5 G
10.0	36.5	30.2	10.2	14.4	36.9	9.4	11.8	51.1 9.5	9.4	42.7	9.8
10.0	52.0	52.0	10.2	16.4	7.3	7.9	16.3	12.5 8.5	8.6	46.7	38.5 9.0 G
8.7	53.5	56.6	10.2	23.4	56.1	9.6	19.8	23.9	9.1	40 48.7	27.2 9.0
9.3	13.2	0.3	9.0	31.4	46.1 8.5	10.2	22.3	25.2	8.8	41 0.2	8.4 8.7 G-
8.8	14.5	45.5	4.4	32.9	30.2 5.2 GStπ	8.8	25.8	54.2 9.0	8.8	11.7	22.3
8.7	32.0	35.7	10.2	34.9	41.3	9.6	25.8	56.8	8.6	16.7	39.5 9.0
9.4	36.0	36.8	10.2	50.9	48.0	9.3	30.8	48.4	9.8	24.2	8.9
10.0	53.0	10.2	5.7	24 1.4	17.4 6.5 GStπ	10.2	40.8	51.2	9.8	42 1.7	43.9
9.4	53.7	0.7	7.9	5.9	45.4 8.5	10.2	42.0	57.8	9.8	16.7	34.7
10.2	56.5	48.0	9.2	20.9	35.3	10.0	55.8	46.0	8.6	25.7	52.9 9.0 G
8.6	18 0.5	16.4	9.6	21.4	41.2	10.2	31 10.8	56.3	9.1	35.7	49.5 9.0 G
9.0	3.5	39.6	9.6	34.9	3.5	9.4	23.8	8.4	9.6	42.7	33.7
9.1	9.5	45.2	10.2	35.4	16.1	9.0	25.8	7.2 9.0 G	9.8	43 13.7	47.8 9.5
8.8	10.0	24.6	10.2	25 4.4	26.1 8.5	10.2	58.3	2.8	9.6	41.7	14.6
10.0	17.0	10.8	10.2	13.9	8.5	9.8	32 10.0	51.1	9.4	51.7	31.9 9.5
10.2	21.0	16.1	10.2	17.3	5.5	9.8	12.8	38.5	8.5	58.7	19.4 8.5
9.2	22.2	2.5 9.0	10.2	32.9	36.1	9.8	13.8	47.4	9.8	44 9.1	57.8
10.2	35.5	36.6	9.0	44.8	26.5	10.2	15.9	57.9	9.4	15.7	34.6
10.2	36.0	27.6	9.0	50.8	50.2	10.2	18.8	25.1	9.4	30.7	45.6
10.0	36.0	1.6	8.2	26 14.3	25.0 8.8 G	8.2	21.3	7.2 8.0 Gtπ	9.8	35.7	53.0
8.7	42.2	2.8 9.0	10.0	17.8	44.3	9.6	21.3	40.6	9.6	44.2	30.6 9.5
9.3	44.5	55.0	10.2	19.9	1.0	10.2	22.5	58.6	7.3	52.7	23.9 7.0 GStπ
10.2	45.7	58.8	10.2	22.8	46.9	10.2	31.8	50.8	3.9	45 10.2	21.9 4.0 GSπ/3
10.0	46.0	12.3	9.1	30.3	9.0 9.0 G	9.0	32.8	16.9 8.5	9.8	19.7	58.5
10.2	19 7.4	18.6	9.8	31.8	6.4	10.0	35.3	19.6	8.5	46 13.7	49.5
8.6	11.0	31.5	10.0	34.8	55.3	9.6	39.3	18.8	9.1	38.7	10.6
10.2	13.0	4.3	8.6	38.8	11.4 9.0	10.2	51.8	41.2	7.6	41.1	2.2 7.2 G
9.3	31.0	37.3	8.6	43.8	48.4 10.0	8.8	52.8	49.8	9.8	43.4	31.7 9.0
9.3	43.0	55.0	8.0	46.3	46.8 7.2 GS	9.2	33 4.8	22.5	9.8	47 22.2	42.2
10.2	45.0	59.3	8.8	27 5.8	49.0 9.5	9.8	5.3	34.2	9.8	34.2	1.9
9.8	49.5	20.2	9.4	16.8	39.6	9.3	5.5	57.5	8.0	56.7	19.9 8.0 G
8.8	20 10.5	4.0	10.2	18.9	39.9	7.2	6.8	14.2 5.8 GStπ	9.8	48 6.7	55.2
25pr.	+ 0 55.6	- 0.6									
			+ 0 55.6		- 0.8						
						+ 0 55.7		- 11			
									+ 0 55.8		- 15

1321-1380.				1381-1440.				1441-1500.				1501-1560.				
mag.	6h-7h.		-32°	mag.	7h.		-32°	mag.	7h.		-32°	mag.	7h.		-32°	
	m	s	'		m	s	'		m	s	'		m	s	'	
9.1	48	21.2	13.3	8.6	6	17.9	25.3	9.5	9.6	17	16.1	29.0	8.7	24	44.9	9.2
9.4		55.7	17.9	8.9		39.9	2.0	9.5	7.8		24.1	20.9	9.5		45.2	57.5
9.8	50	2.2	17.9	9.4		44.9	35.8	8.5 G	9.0		26.6	0.9	9.0		48.9	50.4
9.8		2.2	19.7	9.6		53.4	26.4		8.7		32.6	21.3	9.8		50.4	57.5
8.4		2.7	37.9	9.6	7	11.1	35.9	9.0 G	9.6	18	45.6	17.5	10.0	25	13.9	50.5
9.8		4.7	23.0	9.5		29.8	24.6		9.6		3.8	1.1	8.7		18.4	40.1
9.8		7.7	54.7	9.6		45.8	14.9		8.6		8.1	32.7	10.0		18.4	31.7
9.0		12.7	51.7	9.0	8	0.4	40.7	9.0	9.6		13.6	52.2	8.4		21.9	5.1
9.8	51	6.7	46.5	9.6		6.4	59.8		9.6		20.1	24.5	8.4		22.9	48.1
7.8		19.7	54.7	8.6		12.4	17.8	9.0	9.0	19	47.6	7.7	9.4		27.4	25.1
9.1		26.2	23.4	9.0		33.4	37.1	8.5	8.6	20	5.6	31.2	9.4		27.9	36.7
8.8	52	1.7	22.3	9.6		37.9	45.8		9.2		17.1	50.1	9.4		28.4	16.0
9.8		8.2	47.4	9.5		38.4	15.0		8.9		17.6	25.2	9.3		31.4	20.3
9.1		9.9	52.3	9.0	9.2		38.4	54.6	9.6		25.6	30.6	10.0		31.9	4.5
8.8		18.4	46.2	9.0	8.5		39.4	58.0	9.6		37.6	50.9	9.4		34.9	19.0
9.8		21.7	23.0	9.6	9.6		55.9	10.2	9.6		46.6	26.8	9.7		46.9	45.1
9.2		24.9	16.6	-	9.5	9	1.5	34.9	9.0	9.6	47.6	41.0	9.8		50.4	18.4
9.8	53	12.4	37.3	9.6		2.5	25.2		8.1		52.6	15.7	8.6		51.4	25.4
9.8		28.9	55.0	9.0	9.2		3.5	1.3	8.5 -	9.2	21	16.1	9.0		54.9	10.1
9.8		48.9	51.6	9.5	9.2		7.0	20.3		9.6		20.6	9.6	26	6.9	37.0
9.8		59.9	26.7	9.6		12.6	44.5	9.5	8.7		25.6	9.3	8.8		7.4	3.5
9.0	54	1.8	58.7	8.0 G	8.6		27.0	13.6	9.7		33.1	1.8	9.2		13.9	10.1
9.8		19.9	49.9	9.5	8.3		58.0	20.8	9.5		33.9	8.5	10.0		16.9	12.2
7.8		20.4	33.1	8.0 G	8.7	10	18.0	35.1	8.5	9.5	37.9	30.9	9.8		18.9	17.7
9.8	55	35.4	37.9	9.5	8.5		55.5	51.5	8.5	9.7	38.4	27.3	9.8		20.4	4.5
9.8		46.4	13.5	9.5	9.2	11	15.5	23.1	9.0	10.0	53.9	8.7	9.5		25.9	27.3
9.8		55.4	14.9	9.0	9.6		20.5	5.7	9.5	8.7	55.5	0.7	8.8		37.4	33.0
9.0		57.4	26.3		9.1		22.5	23.5	9.0	9.2	22	0.4	10.0		52.9	41.0
9.2	56	14.4	42.6		8.7		26.0	7.0	9.0	10.0	6.9	21.0	9.4		53.9	15.3
9.8	57	0.8	0.6		9.6		43.0	30.3		9.8	8.9	12.5	8.9		54.9	45.2
9.8		5.9	9.2	9.6		53.5	9.0		9.2		24.9	4.3	9.2		56.9	56.1
9.8		6.5	41.3	9.5	9.0	12	6.5	39.8	9.0	8.6	26.5	19.2	10.0	27	0.9	23.3
9.8		54.2	1.7		9.2		10.0	15.5		8.9	31.4	31.1	9.2		1.4	23.7
9.6		54.5	59.3	8.0 G	7.6		19.5	49.3	8.0 G	9.7	38.4	52.2	10.0		2.4	42.9
9.6	58	21.1	14.2		9.6		39.5	5.7		9.5	43.9	52.1	9.3		3.9	30.2
9.0		26.8	7.0		9.0		40.5	24.2		10.0	46.9	18.8	9.8		9.9	51.2
8.3		56.9	47.9	9.0	8.7		43.0	39.4	9.0	9.4	51.9	34.8	10.0		13.0	45.5
9.6		59.8	3.5	9.5	9.6		53.0	13.4		10.0	53.4	0.4	9.2		15.5	9.9
9.4	59	41.8	47.0		9.6		8.5	5.7		9.7	53.6	2.0	9.8		21.9	57.3
9.2		43.8	54.3		8.1		13.0	34.0	8.5	9.3	57.9	4.9	8.9		24.0	31.5
9.4	1	6.8	20.1	8.5		39.3	3.1	9.0		10.0	23	18.9	9.6		27.0	44.1
9.6		32.4	36.2	7.6		47.0	7.2	7.2 GS-		8.7	26.4	13.0	9.5		32.0	3.9
9.6		50.4	40.1	9.6	14	2.5	16.7		10.0		27.4	33.8	10.0		33.5	16.7
8.3	2	2.9	29.7	9.0	9.6		6.5	35.7		8.6	27.4	26.6	10.0		41.0	54.5
9.6		15.9	57.1		8.9		39.0	2.1		10.0	36.4	30.8	9.8		44.0	32.6
9.6		27.9	58.0		9.2		46.5	34.3		9.4	42.9	49.1	10.0		44.0	20.9
8.6	3	2.4	12.0	8.5	9.5	15	7.5	6.6	9.0	9.4	45.9	54.1	9.6		45.0	30.5
9.0		4.9	16.4		8.7		12.5	11.8	9.0	9.8	51.4	57.8	9.2		49.0	51.5
9.2		14.4	16.0	9.0	9.2		26.5	42.9		9.5	24	3.4	8.6	28	4.0	43.3
9.6		16.9	5.9	9.0	9.0		35.5	50.6		9.4	9.4	50.9	9.4		4.5	18.5
9.6		43.4	33.7	9.6		56.5	5.0			10.0	11.0	22.3	9.2		12.0	51.1
8.3	4	2.9	48.2	8.5	9.6	16	2.0	21.8		10.0	11.9	13.5	10.0		14.0	41.5
9.6		14.9	31.0	8.2		6.0	14.5	7.5 GSt		9.6	18.9	21.3	9.4		17.0	17.1
9.6		23.8	23.0	8.5		9.5	3.8			9.5	19.4	42.9	10.0		16.0	34.1
8.4		25.9	42.3	7.5 G	9.1		14.6	1.5		10.0	21.4	1.0	9.6		21.0	30.5
8.9		46.4	43.6		9.6		34.6	24.7		8.8	27.9	29.2	10.0		23.0	48.8
9.1		47.9	33.8		9.5		37.6	41.0	9.0	9.3	29.1	1.4	9.0		38.0	21.3
9.6	5	11.9	39.8		9.5		52.1	46.3	9.5	9.8	30.4	54.2	9.0		47.0	35.8
9.6		28.4	4.6		9.6		1.1	31.4		9.2	30.7	2.7	9.6		47.5	50.7
8.9		43.9	40.0	9.5	9.6	17	6.1	9.4		9.4	41.9	21.9	9.3		53.0	42.3
25pr.	+0	56.2	-2.1		+0	56.6	-2.6			+0	56.9	-2.9		+0	57.0	-3.1

1561-1620.				1621-1680.				1681-1740.				1741-1800.			
mag.	7 ^h .		-32°	mag.	7 ^h .		-32°	mag.	7 ^h .		-32°	mag.	7 ^h .		-32°
	m	s			m	s			m	s			m	s	
9.0	29	5.0	4.2	9.6	32	23.1	59.5	10.0	36	17.2	21.7	10.0	39	56.9	16.3
9.8		11.9	1.3	9.4		25.1	8.3	8.2		25.7	21.1	10.0		57.9	38.4
10.0		17.0	21.6	9.5		39.1	4.2	8.9		30.2	13.1	8.4		58.4	36.0
8.8		22.0	38.6	9.6		39.6	7.3	10.0		33.2	1.1	9.3	40	10.4	10.5
8.8		24.0	26.3	9.0		40.1	2.8	9.7		33.2	21.0	9.5		12.4	44.5
9.6		25.5	27.2	9.5		40.6	22.4	9.2		37.2	16.7	9.8		22.4	54.3
9.2		33.0	31.1	8.4		41.6	7.0	9.2		38.7	37.3	9.3		26.4	39.8
8.6		34.0	42.6	10.0		52.6	9.0	10.0		45.2	15.1	9.2		31.4	41.9
9.0		36.0	3.2	9.4		52.6	44.4	9.3		53.2	20.1	9.5		32.4	35.6
10.0		38.0	39.3	9.2		57.1	49.5	9.3		55.2	5.1	10.0		35.6	59.2
9.7		40.0	38.3	9.7	33	1.1	29.8	9.5		56.2	30.3	10.0		56.9	24.9
10.0		41.0	5.9	9.6		4.6	48.9	9.8		56.2	0.0	10.0	41	5.4	11.8
8.4		42.0	12.3	9.8		6.6	19.5	10.0		58.1	40.1	9.3		10.4	55.3
9.0		45.0	40.5	9.5		15.1	48.7	8.9		58.7	47.5	10.0		16.4	24.8
9.5		46.5	0.2	9.5		19.6	34.6	10.0	37	4.2	34.9	10.0		21.4	26.0
9.0		53.1	9.9	9.3		22.1	18.3	10.0		7.2	48.7	10.0		22.4	48.9
10.0		53.6	35.2	10.0		23.6	29.5	9.8		11.2	6.4	10.0		30.2	48.0
9.4		57.6	23.7	10.0		29.1	38.7	9.8		16.3	25.1	9.2		34.9	31.1
9.4	30	3.1	0.4	10.0		31.1	54.8	10.0		18.3	34.3	8.9		36.4	0.2
9.8		5.1	49.6	10.0		31.6	12.1	8.8		19.3	27.3	9.2		43.4	23.5
10.0		9.6	47.2	10.0		34.0	17.3	9.8		21.3	14.6	10.0		44.4	0.1
10.0		17.1	14.2	8.5		36.1	13.0	8.4		22.8	39.1	9.4		47.4	57.7
9.4		18.6	36.0	8.6		39.1	28.5	9.4		23.3	24.7	9.4		49.4	19.3
9.8		19.6	52.8	10.0		40.1	4.3	10.0		24.3	5.5	9.2		53.9	58.3
9.5		21.1	12.3	10.0		40.1	6.3	8.8		37.3	25.0	8.5	42	3.4	34.4
9.8		23.1	35.3	8.5		42.1	48.1	8.9		44.3	47.1	9.8		3.9	35.4
10.0		27.1	36.2	9.8		57.1	39.1	10.0		46.3	44.8	9.8		6.2	36.4
9.3		28.1	51.3	9.0	34	0.1	15.3	10.0		53.8	18.8	10.0		6.4	53.4
10.0		32.1	26.7	10.0		4.1	3.3	10.0		55.3	10.6	10.0		16.4	15.0
10.0		41.1	28.9	10.0		6.1	54.3	8.8	38	2.3	55.3	9.4		23.4	50.9
9.6		43.6	54.7	9.5		10.1	23.8	10.0		6.8	52.1	10.0		28.6	59.6
10.0		44.1	40.8	9.3		11.1	3.2	10.0		16.3	42.9	10.0		32.4	36.3
10.0		45.1	57.3	10.0		13.1	42.2	9.8		19.8	11.8	9.5		33.4	56.0
8.6		46.1	56.4	9.5		16.1	46.1	9.0		20.3	21.9	9.7		45.4	18.4
10.0		46.1	56.1	9.8		18.1	13.0	9.7		23.3	39.6	9.5		45.4	5.8
9.5		49.1	40.6	9.7		18.6	44.6	9.5		23.8	48.3	9.4		49.5	0.2
9.0		55.1	55.0	9.2		19.1	1.5	9.3		24.3	19.4	8.4		50.4	33.0
8.9		55.1	18.0	9.4		19.1	26.7	9.5		27.0	58.3	10.0		51.2	18.8
10.0		58.1	5.5	8.8		29.2	8.6	9.2		32.3	2.3	8.0		54.9	21.7
10.0		59.1	47.5	10.0		32.2	1.0	9.4		40.3	3.1	9.5	43	6.8	2.4
9.8	31	6.1	10.2	9.0		34.2	14.0	10.0		42.3	49.8	8.6		8.5	9.1
8.8		8.6	33.5	9.6		36.7	1.0	10.0		46.3	29.9	9.3		11.2	58.2
10.0		18.1	3.2	8.9		42.2	37.0	10.0		53.3	41.2	9.4		12.5	29.1
9.3		19.5	0.2	8.9		46.2	55.3	9.4		54.8	36.1	10.0		20.0	53.1
9.4		30.6	25.4	9.4		47.2	44.6	10.0		57.8	36.8	10.0		22.5	37.2
8.8		37.1	50.9	9.4		55.2	56.6	9.4	39	1.3	1.9	10.0		25.0	2.7
9.0		39.6	12.4	9.4		57.2	52.2	9.4		16.3	47.3	8.9		33.5	35.3
10.0		44.1	7.9	8.2	35	3.2	17.4	9.7		17.3	28.8	9.8		45.0	17.5
10.0		53.1	11.1	8.8		3.7	14.5	10.0		18.3	25.3	9.6		47.0	45.8
9.2		56.1	24.3	10.0		6.2	53.3	8.8		22.8	9.8	9.4		47.5	3.1
9.4		57.1	33.4	8.4		9.2	25.4	9.7		23.3	45.0	9.4		51.5	58.0
10.0		57.1	13.5	9.0		24.2	57.7	9.2		25.3	39.2	10.0		54.0	24.1
9.5		59.1	13.7	10.0		27.2	57.0	10.0		25.8	42.6	9.4		54.5	20.3
9.4	32	13.6	41.2	9.2		37.2	11.3	8.8		41.3	55.4	9.5		58.0	49.9
9.8		14.1	40.5	10.0		42.2	28.1	8.6		41.8	22.7	9.8	44	2.0	20.9
8.5		20.6	9.3	9.3		44.2	16.5	9.4		44.3	21.8	9.8		2.5	6.9
9.6		21.1	55.0	9.4		53.2	39.3	10.0		47.4	19.2	10.0		7.5	8.1
10.0		23.0	24.7	9.6		53.2	50.1	10.0		50.4	12.2	10.0		17.5	57.9
9.8		23.1	43.2	8.9		57.2	29.3	8.8		51.9	46.8	8.6		23.5	37.8
9.4		23.1	8.0	10.0		36	8.7	9.8		54.4	54.4	9.0		24.5	16.9
25Pr.	+ 0	57.1	-3.2	+ 0	57.3	-3.3		+ 0	57.4	-3.5		+ 0	57.6	-3.6	

1801-1860.			1861-1920.			1921-1980.			1981-2040.		
mag.	7 ^h	-32°	mag.	7 ^h	-32°	mag.	7 ^h -8 ^h	-32°	mag.	8 ^h	-32°
	m s		m s			m s			m s		
10.0	44 30.5	18.5	9.2	50 41.8	36.1	9.6	56 51.4	6.7	9.0	0 58.7	44.9 -
10.0		20.3	9.0		42.3	9.0		56.4	9.7	1 15.6	22.6
8.5	40.5	48.3	9.8		48.3	9.0		59.9	9.8	15.6	19.5
7.4	48.5	58.5	9.8		50.8	9.4	57 0.7	0.2	9.2	16.2	12.2
8.4	50.5	6.5	9.7		53.8	9.2		2.4	9.2	17.7	9.0
10.0	50.5	3.3	9.6		54.6	9.8		3.9	9.8	26.2	53.6
10.0	51.0	44.5	9.8		55.1	8.8		4.4	9.8	31.2	30.1
9.7	52.2	57.7	9.4	51 5.3	37.9	8.2		5.4	9.8	34.7	39.1
9.8	53.5	37.3	9.2		12.1	9.0		15.4	9.8	36.2	4.5
10.0	45 3.4	35.0	9.4		15.3	8.8		22.9	9.8	42.7	21.1
9.8	9.5	16.3	9.0		21.3	9.8		26.4	8.6	52.7	54.3
9.2	10.5	18.0	9.8		25.1	9.8		58.2	9.6	56.7	54.1
9.8	20.0	8.5	9.4		25.8	9.8	58 1.9	6.5	9.7	2 9.2	27.3
9.0	22.0	58.3	9.8		32.3	9.2		2.4	9.8	31.7	34.2
10.0	29.5	9.9	9.0		42.3	7.9		3.6	9.2	42.2	42.1
9.4	32.0	30.7	9.8	52 8.8	11.2	9.7		4.6	8.3	55.7	43.7
9.4	37.0	29.7	7.8		20.8	7.9		11.6	9.0	58.0	57.4
9.8	47.8	43.1	9.8		22.1	9.4		13.1	8.8	59.7	9.3
10.0	56.0	6.1	8.4		22.3	9.4		13.5	9.7	3 2.7	3.2
8.4	46 0.3	40.9	9.6		27.8	9.8		14.5	8.6	14.2	38.1
9.8	3.5	2.0	8.8		32.3	9.2		15.8	9.7	18.2	51.0
8.9	7.5	41.5	9.2		39.3	8.8		31.6	7.6	23.2	58.6
8.4	7.5	44.3	9.7		40.8	8.6		35.5	9.6	24.1	57.5
10.0	8.0	15.5	9.2		42.8	8.6		46.6	8.4	24.7	45.7
10.0	13.5	23.9	9.2		53.3	9.8		49.6	9.4	37.2	22.2
10.0	15.5	20.1	9.4		54.3	9.8		52.5	9.2	38.2	53.7
9.5	19.8	37.1	9.4		53 32.3	8.8		55.6	8.8	39.7	20.8
10.0	25.0	31.9	9.8		35.1	9.2		1.1	9.7	47.5	43.0
10.0	27.5	42.1	9.6		57.3	9.4		1.6	9.2	53.7	19.7
9.4	35.9	6.7	8.6	54 3.8	13.1	9.0		6.1	9.8	4 2.7	59.0
9.4	37.5	7.9	9.8		6.3	9.4		16.1	8.0	4.7	52.9
8.3	44.2	23.7	9.4		12.8	9.6		16.6	9.6	19.5	17.8
9.8	55.2	47.1	9.8		13.8	9.8		16.6	9.4	35.7	14.1
9.4	59.7	29.6	8.8		14.8	9.4		17.6	8.8	5 6.2	15.2
9.8	47 6.4	2.8	9.4		50.5	9.4		23.6	8.8	13.7	33.0
9.6	21.7	46.8	9.8		9.4	7.9		34.1	8.4	21.7	22.3
9.4	34.7	52.1	8.6		15.4	9.4		35.6	9.8	23.2	39.1
9.2	44.2	26.2	9.8		22.4	9.2		35.6	8.2	27.2	40.6
9.4	46.2	35.3	9.6		24.5	8.8		41.6	9.4	31.2	10.9
9.2	48.1	1.7	9.6		32.4	9.8		42.6	9.6	35.2	18.6
9.6	57.2	21.2	9.8		36.9	8.6		44.6	9.7	44.2	11.1
7.6	48 12.8	58.4	9.7		37.4	9.8		46.6	8.6	45.7	41.2
9.6	13.2	46.9	9.2		49.4	9.8		48.1	9.4	52.2	13.1
9.8	21.2	10.0	9.8		53.4	9.4		52.6	8.1	53.7	14.2
9.7	31.1	39.8	9.4		55.4	9.8		53.1	8.4	56.7	0.8
9.8	32.2	26.4	8.8	56 4.9	41.4	9.6		56.1	9.8	58.2	43.0
9.8	51.3	51.1	8.8		4.9	9.6		10.6	9.7	6 12.2	42.5
9.0	49 2.3	17.9	9.7		5.2	9.8		11.6	9.2	15.7	14.6
9.2	8.3	55.1	9.8		8.9	9.0		21.6	9.6	19.9	0.4
9.8	12.8	26.4	9.8		10.4	9.4		21.6	8.4	23.8	46.2
9.4	23.3	34.6	9.4		14.9	9.6		21.6	9.4	44.8	9.4
9.2	26.8	16.5	9.8		17.4	9.4		22.6	9.8	53.8	41.0
8.4	37.8	9.8	9.7		21.4	9.8		30.6	9.8	55.3	49.7
9.8	43.8	52.7	9.8		25.4	9.8		32.6	9.8	7 5.3	43.2
9.8	55.8	1.0	9.4		25.9	9.2		33.6	9.2	11.3	1.8
9.2	50 2.0	1.7	9.4		32.9	9.8		51.6	9.6	12.3	37.1
8.8	2.8	59.7	9.4		39.4	8.0		56.1	8.4	15.8	11.7
9.2	11.8	27.8	9.2		46.4	9.8		56.1	9.8	17.8	5.9
8.4	13.3	26.4	9.2		49.9	9.4		56.1	9.8	17.8	16.9
9.8	28.3	56.0	9.2		51.4	9.8		56.3	9.7	26.8	12.6
25Pr.	+ 0 57.8	-3.8	+ 0 58.1	-4.0		+ 0 58.3	-4.1		+ 0 58.6	-4.3	

#10

2041-2100.				2101-2160.				2161-2220.				2221-2280.								
		8h.		-32°				8h.		-32°				8h.		-32°				
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	s			
9.8	7	26.8	24.1	9.4	12	12.0	11.0	10.1	16	14.0	41.1	9.6	20	25.4	0.5	9.2	9.6	20	25.4	0.5
9.4		29.8	52.2	9.2		21.0	44.4	9.0		17.9	0.9	10.0		27.4	38.5					
9.6		31.6	12.1	10.0		21.9	1.8	9.4		19.0	4.4	8.7		35.4	46.6					
9.8		32.6	17.1	10.0		22.0	10.8	9.8		20.5	52.6	10.1		36.4	35.9					
9.7		37.3	12.1	9.8		24.0	47.8	10.0		23.0	28.1	9.6		43.4	17.9					
9.6		49.8	17.5	9.2		25.0	23.1	10.0		23.1	56.8	10.0		44.9	37.9					
9.6		50.3	16.3	9.2		27.0	40.3	10.1		24.0	34.5	10.1		46.4	18.9					
8.6		54.3	32.8	7.4		34.0	29.0	7.3		28.0	39.4	10.0	21	2.4	59.4					
9.8	8	5.6	11.6	9.6		38.5	26.8	9.6		29.0	12.8	10.0		2.4	3.4					
9.7		12.6	19.0	10.0		41.0	4.0	8.8		40.0	39.5	9.0		4.9	21.5					
8.0		25.8	35.5	10.0		45.0	6.7	10.0		42.0	34.6	10.0		15.9	52.9					
9.4		26.3	51.1	9.2		56.5	59.8	9.2		46.0	23.1	8.6		21.4	32.2	8.5	G-			
8.8		27.3	7.4	9.8	13	1.5	39.1	10.1		49.0	25.9	10.0		30.4	41.7					
9.8		30.8	3.3	8.4		5.0	13.3	10.0		51.0	41.2	9.4		34.4	31.2					
9.8		35.6	27.5	9.6		8.5	43.6	8.8		56.0	7.6	8.8		35.4	48.1	8.5	-			
8.4		39.8	55.2	9.7		12.0	24.8	9.0	17	8.2	59.2	10.1		37.4	48.0					
8.6		49.3	19.0	10.0		22.0	1.9	8.2		10.6	57.5	9.6		39.9	59.9					
8.6	9	3.5	1.8	9.8		22.0	8.5	9.8		10.9	45.9	10.1		41.9	41.9					
9.8		9.8	9.5	9.7		22.0	21.0	9.8		14.1	24.5	10.0		50.9	16.6					
9.8		10.8	23.7	9.4		23.0	51.7	10.1		19.1	4.5	9.7		55.4	0.5					
9.7		11.3	40.3	10.0		25.0	16.8	8.6		23.1	51.2	9.4		55.9	3.8					
9.4		16.3	53.5	9.2		25.5	59.7	9.8		28.6	49.3	10.0		56.9	6.7					
9.7		21.8	22.6	10.1		35.0	59.9	9.8		36.1	23.5	10.1	22	4.9	6.9					
9.7		25.8	50.4	8.7		37.0	2.3	10.1		39.1	49.7	9.8		6.4	15.2					
8.8		25.8	50.7	10.0		41.0	25.1	10.1		42.9	38.4	9.8		9.4	21.2					
8.6		31.8	55.7	9.2		41.5	56.3	9.4		59.1	44.9	9.0		12.4	43.7					
9.7		41.8	15.0	10.1		43.5	41.8	10.1	18	1.6	30.4	8.8		38.4	16.7					
9.8		42.8	43.0	8.9	14	1.0	35.7	8.8		11.1	44.7	8.5		40.4	51.2	9.0				
9.8		52.6	25.1	8.8		4.0	42.9	9.0		12.1	1.4	9.2		44.9	13.9					
9.2		52.8	22.8	9.4		4.8	59.1	9.4		21.1	40.1	10.0		45.4	44.6					
9.8		55.3	6.6	10.1		6.5	14.9	10.0		21.6	41.2	8.6		45.7	58.2	8.5	=			
9.2		55.4	53.8	9.6		10.5	54.4	10.1		28.6	19.7	9.4		46.4	18.8					
9.8		59.1	46.4	8.1		15.0	42.8	8.6		43.6	11.6	10.1		53.4	28.3					
9.8	10	2.4	9.5	10.0		15.5	23.2	8.8		45.6	45.1	9.6		56.4	50.0					
8.8		4.5	59.5	10.0		25.0	52.7	10.1		49.1	23.7	10.1	23	6.4	45.9					
8.7		5.6	10.7	10.1		26.0	48.8	9.4		51.6	36.0	10.1		6.4	43.7					
9.2		17.6	32.5	10.0		26.0	49.9	9.0		54.1	34.4	10.1		13.7	46.2					
10.1		18.4	53.7	8.5		26.0	37.9	9.7		54.9	18.4	10.1		14.2	42.0					
8.8		24.9	24.6	8.2		32.8	58.6	9.4		55.1	18.2	10.0		19.2	49.9					
9.0		38.6	26.7	9.7		34.0	52.0	9.2		57.1	3.2	9.6		26.2	19.2					
9.7		44.4	26.8	9.2		37.0	49.9	7.4	19	2.1	29.6	9.6		31.2	38.7					
9.4		44.9	17.0	10.1		37.5	25.5	9.0		5.6	54.0	10.1		31.2	15.7					
9.8		44.9	55.1	9.8		41.0	18.3	9.6		6.1	53.3	9.6		47.7	45.6					
9.6		49.0	56.7	10.1		52.0	2.8	10.0		6.1	5.9	9.4		47.7	11.9					
10.0		51.2	56.2	9.4		53.8	58.4	10.1		12.1	15.1	10.1		52.7	35.8					
9.4		54.9	57.0	10.0	15	0.5	5.3	9.8		12.1	16.5	9.4		26.7	18.4					
9.4	11	2.9	16.0	9.4		5.0	1.8	10.0		24.1	28.3	10.1		32.6	0.9					
9.4		8.4	59.4	9.2		5.0	46.5	9.6		24.6	34.8	9.4		45.7	19.9	8.5				
10.0		14.9	52.8	9.2		12.5	53.9	10.0		37.6	38.1	9.4		52.2	9.6					
9.6		25.9	17.7	10.1		13.0	56.4	9.0		43.1	31.0	9.0	25	1.2	54.6					
9.6		28.5	23.7	9.2		19.3	56.5	8.9		45.1	52.0	10.1		3.7	55.7					
9.4		31.0	39.5	9.8		22.0	39.1	9.4		52.6	41.5	8.6		12.7	39.2	8.5				
8.7		35.0	54.3	9.2		25.0	53.0	8.8	20	6.1	11.9	9.2		14.7	51.8					
10.1		36.0	4.6	10.0		29.0	37.8	10.0		12.1	56.2	8.4		22.7	19.5	8.5	-			
10.0		38.0	51.7	10.0		31.5	28.5	10.1		14.1	22.1	9.4		32.7	10.2					
8.4		45.0	47.5	10.0		32.0	26.6	10.0		15.4	1.3	9.6		35.7	43.6					
9.2		48.5	34.1	9.2		33.0	28.3	10.0		18.7	0.9	8.9		45.2	50.6	9.2				
9.2		55.0	29.6	8.5		55.5	23.9	8.6		19.4	2.8	10.1		48.2	16.1					
8.6	12	2.0	8.6	10.1		59.0	50.7	9.6		22.4	4.6	9.4		49.2	40.9					
8.0		10.0	37.3	9.6	16	2.0	35.4	10.0		22.4	57.8	9.4		49.2	40.5					
25pr.		+ 0 58.8	-4.5			+ 0 59.0	-4.6			+ 0 59.3	-4.7			+ 0 59.5	-4.9					

2281-2340.				2341-2400.				2401-2460.				2461-2520.					
mag.	8h.		-32°	mag.	8h.		-32°	mag.	8h.		-32°	mag.	8h.-9h.		-32°		
	m	s	'		m	s	'		m	s	'		m	s	'		
10.1	25	54.7	27.1	9.2	30	47.0	13.4	10.0	38	47.6	42.1	7.3	50	21.5	55.6	7.5 GS=	
8.2		59.7	51.6	8.5	10.0	31	8.0	20.3	10.0	52.7	43.2	10.0		43.5	23.5		
9.2	26	5.7	51.4	9.6		12.5	51.9	9.4	39	54.9	1.0	9.7	51	4.0	3.9		
9.4		11.2	12.0	10.1		23.0	39.0	9.0		4.7	49.1	8.5 G	9.5		9.5	14.7	
10.0		12.7	53.9	10.1		29.0	39.9	9.3		5.2	47.5		10.0		16.5	31.0	
10.1		12.7	40.2	10.0		29.5	8.2	9.4		40.7	8.0		9.1		17.5	43.1	9.5
10.1		15.7	20.1	10.1		37.8	10.1	9.4		41.7	11.0	-	9.5		27.5	6.7	
9.6		16.7	31.0	9.4		41.0	17.2	9.6		44.7	48.4		9.2		43.5	6.3	
10.0		17.2	15.6	9.8		48.8	1.4	9.4		59.2	40.8		9.7		44.0	40.3	
9.0		19.7	13.7	9.6		49.5	49.1	9.2	40	13.7	31.9		9.5		47.0	52.4	
9.6		37.7	25.8	10.0	32	9.5	0.8	9.4		48.5	59.9	9.0	8.7		50.5	4.1	9.5
9.4		38.2	29.8	9.4		23.0	37.7	8.5 -	9.6	41	3.7	29.0	9.2	52	8.5	33.3	
10.1		42.7	21.0	9.7		27.0	36.6	9.0	9.8		14.7	4.2	9.8		12.5	5.2	10.0
9.4		45.3	59.2	8.8		31.0	7.3	8.4		27.7	23.0	9.0	9.9		33.0	24.7	
10.1		52.7	25.6	9.0		36.0	0.5	8.2		30.2	14.8	8.5 -	9.7		36.5	43.2	
10.0		53.2	50.1	8.8		38.5	18.2	8.3		35.7	47.3	8.0 GW-	10.0		58.5	13.7	
8.9		55.4	9.7	9.4		38.5	27.7	9.8		47.7	34.1		9.6	53	17.5	2.7	
9.8		56.9	54.0	8.4		43.0	55.2	9.3	42	36.7	51.6	8.2 G-	9.2		18.5	30.4	
9.8		5.9	41.8	9.4		44.3	1.9	9.9		43.7	10.3		9.6		31.0	25.8	
10.1	27	11.9	54.8	9.6		52.0	47.0	7.8		48.7	56.3	7.2 GS=t	9.4		45.0	26.7	
9.6		11.9	27.1	10.1	33	1.3	1.6	9.4		50.7	30.0		9.6		47.5	54.2	
9.4		18.4	9.0	9.2		13.2	48.9	9.4	43	3.2	11.2	-	8.6	54	5.0	37.2	9.5 -
9.6		19.9	5.1	9.2		13.5	46.4	9.5	10.0	17.7	6.7		8.8		10.5	38.7	9.0
10.1		26.9	58.7	10.1		26.0	29.9	9.0		36.7	10.3	9.0-	9.8		36.0	33.5	
9.4		32.9	48.9	9.6		30.2	21.9	9.0		44.4	0.5	9.5	8.6		39.5	49.7	8.2
8.6		49.9	1.5	10.1		34.0	28.0	9.4		56.7	10.5		9.9		42.5	28.5	
9.7		52.9	18.5	9.6		49.5	14.1	9.8	44	3.2	9.3		10.0		46.0	4.3	
9.6		57.4	36.8	10.1	34	1.8	45.1	9.9		12.1	14.5		8.6		56.5	50.2	8.2 -
9.6		3.4	55.2	9.4		6.2	20.4	9.9		37.6	22.3		10.0	55	23.0	38.3	
10.0	28	6.4	49.0	9.0		6.5	16.7	8.0		41.1	24.2	8.5 GW-	9.4		29.0	7.2	
10.1		6.9	7.6	9.8		14.7	35.6	9.4		44.1	30.2		9.5		47.5	38.0	9.5
10.0		13.9	35.7	9.6		18.5	32.5	10.0		44.6	11.5		9.6		51.0	31.6	
10.1		20.4	16.8	9.5		20.0	6.2	7.2		46.6	18.8	5.8 GStπ	9.7		52.0	27.6	
9.6		23.9	26.4	10.0		22.5	32.4	9.4	45	4.1	48.8		9.4		53.5	39.8	
9.6		23.9	9.0	9.8		29.8	15.7	8.9		23.6	27.1	9.0	9.4		55.5	22.3	9.0
9.6		31.7	0.8	9.5		33.5	21.4	8.8		37.6	36.0	8.2 G-	9.4	56	12.0	14.7	
9.8		35.9	36.8	9.8		44.0	8.5	8.6		45.6	45.8	9.2	10.0		12.7	31.3	
9.8		42.4	51.8	9.4	35	31.5	17.9	10.0		54.6	58.2	8.8	10.0		20.4	37.2	
10.1	29	0.9	27.0	9.4		47.0	4.4	9.3		59.4	51.2		9.8		21.4	38.0	
10.1		0.9	26.2	9.8		54.5	21.5	9.3	46	26.1	21.7		9.2		33.5	56.0	10.0
9.0		2.9	22.6	10.0	36	11.0	40.5	10.0		31.6	43.8		9.7		40.5	54.7	
10.0		4.4	14.1	8.6		14.0	8.7	9.4		36.1	43.6		9.4		47.5	21.3	
10.0		19.0	17.5	8.4		18.0	47.6	9.8		47.1	38.1		10.0	57	25.0	40.2	
7.6		31.9	10.0	9.5		27.0	21.0	8.0	47	19.2	2.4	7.0 GS-	9.4		58.5	9.5	
9.6		32.9	20.0	9.5		27.0	39.9	9.2		42.6	30.8	9.0 -	9.7	58	15.0	54.7	
10.1		34.9	6.9	8.8		28.0	55.3	8.6		42.6	10.0	8.8 G	10.0		16.5	36.0	
9.2		36.9	59.2	8.6		34.0	53.4	8.6		43.6	5.8	8.0 GW-	9.8		23.4	55.4	
8.6		48.9	6.0	9.4		54.0	24.2	9.6	48	34.1	15.8		9.4		33.9	25.0	
9.4		51.9	33.3	9.0		58.0	10.2	9.8		45.1	9.4		9.8		43.0	10.0	
10.0	30	12.4	43.4	8.6	37	20.0	0.9	8.7		47.6	38.8	8.5 G-	9.0	59	7.7	54.8	9.5
9.7		12.9	56.1	9.6		24.0	24.3	10.0		52.1	53.4		9.6		9.2	17.6	
10.1		14.4	4.1	9.8		24.0	7.3	9.1		56.6	51.0		7.6		14.2	36.3	7.5 G-
9.4		16.9	23.7	9.3		52.5	13.3	9.4	49	14.6	23.8		8.8		16.7	13.2	
10.0		19.9	28.0	10.0		58.0	19.9	9.4		43.6	36.6		9.8		21.6	59.4	
9.4		25.9	24.9	9.8	38	16.2	40.8	9.6		44.1	43.8	9.5	9.3		38.7	38.8	
10.0		28.9	29.7	9.9		26.7	21.1	9.3		57.6	4.8		9.5	0	17.2	11.6	
9.0		31.5	17.6	9.8		31.7	3.9	8.4	50	1.1	57.0	8.2 W-	9.8		24.7	10.2	
9.4		32.9	28.7	8.2		33.7	42.3	9.3		8.1	9.9		9.4		37.7	28.1	8.5 G-
8.6		36.0	8.5	4.1		34.7	44.2	9.4		10.1	23.6		9.8		47.2	29.4	
9.4		44.5	42.6	9.8		38.2	45.9	9.9		16.6	2.8		8.6		49.2	19.9	9.0 -
25pr.	+ 0	59.8	-5.0	+ 1	0.1	-5.2		+ 1	0.8	-5.5			+ 1	1.5	-5.8		

2521—2580.				2581—2640.				2641—2700.				2701—2760.			
		9 ^h .	—32°			9 ^h .	—32°			9 ^h .	—32°			9 ^h .	—32°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.8	1	27.7	37.3	9.4	15	18.2	54.3	10.2	29	43.7	42.7	10.6	39	1.2	47.0
9.8		36.9	22.0	9.8		33.7	14.2	10.4		48.7	55.3	9.7		7.2	11.7
9.5	2	14.1	58.4	9.5	16	34.2	56.6	10.6	30	0.7	33.7	10.2		18.2	51.8
9.0		17.2	39.8	9.4		42.2	49.1	10.4		13.7	23.9	9.8		20.2	10.0
9.8		37.7	0.4	9.3		50.2	4.9	9.7		24.2	9.7	10.0		27.7	50.1
8.8		37.9	2.0	9.6	17	13.2	12.7	10.4		42.7	44.3	10.6		28.7	35.9
9.8		47.9	28.7	9.8		14.2	12.6	9.2		51.2	44.5	10.6		31.6	14.3
9.4		54.3	49.7	9.3		14.2	48.1	10.4	31	7.2	13.6	9.8		49.2	5.5
9.8	3	14.3	6.4	9.1		17.2	4.7	10.4		17.7	7.1	10.0	40	1.2	11.7
9.6		35.3	45.8	9.5		18.2	33.7	7.5		23.7	46.5	7.4		1.7	6.4
															7.0 GS-
8.6		46.8	3.2	9.8	18	21.2	19.4	9.8		26.7	43.5	9.6		13.7	10.0
8.6		50.3	48.7	7.4		24.7	39.8	10.6		47.7	47.9	9.2		33.7	5.9
9.0		56.3	55.5	9.6		38.4	2.1	9.6		59.2	43.9	9.6		44.2	46.8
9.0	4	2.3	47.0	8.8		50.2	18.3	9.8		3.7	24.7	9.6		46.7	4.1
9.4		6.3	51.0	9.4	19	2.2	40.7	9.6	32	20.7	26.1	7.3		53.2	56.0
9.8		29.3	4.8	9.6		6.2	7.5	10.2		33.7	21.5	10.2		53.7	31.5
9.8		38.2	8.2	9.8	20	1.7	53.5	9.4		41.2	32.0	9.0		53.7	17.7
9.0		43.8	7.5	9.3		14.2	24.4	9.7		51.2	29.5	10.4		54.4	13.0
9.8		51.3	33.6	8.8		19.7	19.6	10.0		51.7	24.7	9.2	41	12.7	54.7
8.2	5	27.8	35.5	8.6		25.2	13.7	10.6		59.2	52.0	10.2		23.7	20.6
															9.5
9.0		57.8	54.6	8.5	28.2	38.0		10.6	33	2.7	35.4	9.7	42	1.2	15.3
9.3	6	18.3	20.6	9.4	21	2.2	47.9	9.4		17.7	24.9	7.6		12.7	39.7
9.4		27.3	44.9	9.4		6.2	35.2	9.8		37.7	16.5	10.2		13.7	18.6
9.8		38.1	2.3	9.9		6.7	52.2	10.4		5.2	43.9	8.3		19.7	24.7
9.8	7	5.8	48.2	10.6		9.2	55.6	9.9	34	12.7	38.4	9.2		25.2	21.8
9.6		41.3	9.8	10.4		12.7	50.9	10.2		22.7	38.0	9.6		36.2	10.2
9.3		56.3	36.1	10.6		49.7	42.2	8.4		23.7	22.0	10.4		46.7	23.7
9.8		57.3	18.4	9.6		57.5	52.2	9.9		29.2	33.5	8.9	43	1.7	4.6
9.3	8	9.8	32.0	8.1	22	3.7	20.5	9.9		30.2	49.9	8.5		10.7	5.4
9.8		20.3	16.1	8.9		4.2	4.8	8.0		30.7	21.3	9.6		19.2	32.4
															9.5
9.8	9	4.8	48.6	9.2	23	41.2	29.5	8.8		36.2	33.3	10.0		25.2	5.4
8.0		7.8	2.3	9.7		48.7	12.5	9.8		41.7	18.8	8.2		33.2	14.6
8.0		17.3	54.3	10.0	24	8.2	20.3	10.0		43.7	45.3	9.4		34.2	54.6
9.8		17.8	27.1	10.2		19.2	11.9	10.2		50.7	22.1	9.7		42.7	55.3
9.8		34.3	12.0	8.5		26.7	45.9	9.2		51.5	1.5	9.8		51.2	50.2
8.2		46.3	32.9	7.5	25	3.2	51.3	9.7	35	40.2	18.8	8.4	44	3.2	49.5
9.8		46.3	22.4	8.5		12.2	26.5	9.2		49.7	20.7	10.0		3.7	9.4
9.8		54.0	2.0	9.8		17.2	44.0	7.3	36	3.2	49.6	9.4		3.7	33.2
9.4	10	11.3	19.4	10.4		28.2	4.1	9.6		16.7	20.0	9.4		21.2	45.5
8.0		23.3	48.1	8.8		32.7	1.5	9.0		25.0	0.3	10.0		54.2	17.9
															9.5
9.6		44.3	41.7	8.8	26	17.1	59.4	9.4		25.2	53.6	9.6		55.9	59.6
9.6		58.8	19.2	9.0		21.7	6.1	9.0		43.5	3.3	9.7		58.7	44.6
8.8	11	17.3	26.4	8.4		47.7	52.9	9.8		43.7	9.7	10.6	45	3.5	0.5
9.8		18.1	58.0	10.0	27	1.7	46.5	9.9		5.7	38.6	9.9		5.2	13.9
8.4		26.8	59.3	9.9		13.7	49.4	9.4		23.7	40.8	9.2		11.4	16.8
9.8		53.3	10.4	9.6		15.2	20.1	7.8		29.7	49.9	8.6		12.9	41.2
8.4	12	8.3	6.8	9.7		40.7	36.4	9.9		34.2	26.1	9.2		15.7	30.4
8.0		13.5	0.5	10.2		41.3	37.1	9.2		34.2	20.5	8.5		27.7	47.5
9.8		34.3	21.9	10.6		42.2	19.5	9.7	38	2.9	57.6	9.8		38.9	12.9
9.4	13	1.7	30.0	8.6		47.2	30.9	10.4		13.7	10.3	10.4		56.7	0.5
															9.0
9.6		3.2	2.7	9.7		50.2	27.3	9.8		17.2	28.9	9.8	46	6.7	36.9
9.8		33.2	11.3	10.0		54.7	47.0	10.4		19.7	0.9	10.6		17.5	50.2
9.0		43.7	53.1	10.4	28	1.7	54.7	10.0		31.2	28.7	9.6		28.2	32.1
8.8		56.2	35.7	9.4		13.2	48.9	9.8		34.2	7.9	7.6		29.7	23.7
9.8	14	8.4	31.0	10.2		35.2	42.3	9.7		36.2	24.7	9.4		41.0	56.1
8.6		21.2	24.1	8.2		35.7	23.9	9.0		41.2	55.7	10.4		42.0	7.3
9.8		35.2	50.0	9.9		35.7	34.3	9.8		41.7	27.8	9.4		50.2	16.9
9.5		36.2	30.9	10.2		49.7	23.2	8.2		43.7	32.7	9.6	47	13.2	42.0
8.8		47.2	9.1	10.2		55.7	26.1	10.4		52.2	16.7	10.0		14.7	17.8
8.8		57.7	9.9	8.9	29	1.0	1.1	9.4		58.2	45.2	10.4		30.7	48.2
															9.0
25pr.	+ 1	2.3	- 6.1	+ 1	3.3	- 6.5		+ 1	4.2	- 6.7		+ 1	4.8	- 6.9	

2761-2820.			2821-2880.			2881-2940.			2941-3000.				
mag.	9 ^h -10 ^h .	-32°	mag.	10 ^h .	-32°	mag.	10 ^h .	-32°	mag.	10 ^h .	-32°		
9.5	47 31.2	11.0	9.5	1 42.2	39.4	9.2	10.1	17 3.1	27.1	9.8	34 26.2	32.0	
9.2	50.2	42.2	8.4	2 3.7	38.0	9.0 -	8.8	11.3	59.2	9.2 -	10.0	30.5	16.7
10.4	48 23.9	58.3	9.8	21.7	47.9	9.5	9.8	11.6	4.7	9.8	35 15.0	28.0	
7.4	29.2	38.8	8.0 GS-t	10.4	54.2	19.2	9.8	30.6	8.2	9.8	9.6	16.0	4.4
8.4	48.2	43.6	8.5 G-	9.8	14.7	19.2	9.1	56.1	34.7	9.1	9.5	36.0	36.1
8.7	49 43.2	30.8	8.7	19.7	15.6	8.8 GW=	9.0	18 0.1	36.6	9.0	9.8	37.5	14.1
7.8	45.7	46.2	7.5 GS-t	8.1	35.7	21.5	8.2 G=	9.6	9.1	26.4	9.8	44.0	10.2
9.8	50 2.2	41.1	10.0	10.0	35.9	59.1	9.6	10.1	12.7	9.6	9.8	47.5	16.0
10.0	49.7	26.8	8.0	4 0.2	14.1	8.0 GS=t	9.4	13.1	46.6	9.4	10.0	53.0	40.7
10.4	51 7.2	2.6	9.1	0.2	42.1	9.0	10.0	18.1	16.2	8.5	19 0.6	51.3	8.0 G-
7.2	7.2	49.4	6.5 GS=t	9.0	25.7	23.7	9.0 -	8.5	19 0.6	51.3	10.5	36 9.5	14.8
10.0	12.7	44.4	8.2	8.2	55.2	57.3	8.6 G-	9.8	3.1	31.7	9.8	52.0	39.4
9.8	29.7	39.5	9.0	10.2	5 15.2	8.7	5 15.2	10.1	51.6	19.5	6.4	56.0	3.7
10.0	31.7	18.2	10.2	10.2	32.7	7.0	8.5 G-	10.1	20 2.6	17.6	10.0	37 16.0	13.5
8.7	35.7	34.2	9.0	8.3	36.5	8.3	9.5 G-	9.2	2.8	1.0	10.4	40.5	49.2
9.1	40.7	51.3	9.6	9.6	37.7	21.5	9.6	10.1	37.1	46.7	9.2	53.5	45.3
9.6	43.2	46.4	9.6	9.6	39.7	35.5	9.6	9.8	21 12.6	0.5	9.8	38 9.5	19.0
7.4	47.7	15.7	7.0 GS	9.4	40.7	34.0	9.4	10.1	14.1	8.8	8.7	34.5	55.0
9.0	53.7	5.2	9.5 -	10.4	42.7	13.4	10.4	10.1	22 51.6	13.2	10.5	48.0	22.1
9.2	52 6.7	44.2	9.5	9.6	49.2	59.9	9.0	8.0	23 47.6	46.1	9.3	55.0	37.9
8.2	21.7	40.3	8.5 =	10.2	52.7	5.3	8.2	8.2	52.6	18.1	9.3	56.0	52.0
10.0	53 8.2	16.8	9.6	6 26.7	50.5	9.6	10.1	10.1	56.1	8.7	10.0	39 26.5	53.8
9.5	19.7	7.9	9.2	9.2	35.7	6.9	8.3 G	10.0	24 5.1	24.2	10.5	32.8	26.9
10.0	29.7	36.1	10.0	10.0	41.2	33.8	8.1	9.2	14.1	41.2	10.0	36.0	15.3
8.2	41.7	55.2	8.5 G-	8.1	45.7	3.6	8.2	8.5	32.1	4.4	10.3	49.0	44.5
9.1	54 9.7	52.7	9.2	8.1	52.2	4.4	7.2 GS-	10.0	58.6	50.7	9.6	51.5	25.6
8.4	15.7	0.4	9.6	9.8	7 9.7	8.4	9.7	9.7	25 10.6	55.0	8.9	57.5	30.3
9.6	22.2	33.0	9.6	9.6	15.2	46.9	9.4	9.4	12.1	22.0	10.0	40 29.0	46.0
9.0	24.7	35.3	7.4	7.4	52.7	24.9	6.8 GS=t	9.7	47.1	55.6	8.4	36.5	39.9
9.8	46.2	16.1	8.0	8.0	9 29.1	46.8	8.8 -	8.6	56.9	25.4	9.2	44.0	8.3
10.0	56.7	8.1	8.6	10 6.1	39.7	9.0 -	8.9	26 6.9	16.2	9.5	8.0	41 8.5	45.3
9.5	55 5.7	48.1	10.2	9.8	10.2	9.8	9.1	9.1	7.9	29.7	10.3	8.5	10.2
8.7	37.2	31.1	9.1	9.1	15.3	2.6	9.9	9.9	48.4	9.5	9.2	13.0	14.8
9.5	38.2	15.6	10.4	10.4	16.7	1.4	8.4	27 8.4	43.6	8.0 G-t	8.8	17.5	27.6
10.2	55.2	23.1	8.0	11 9.5	26.2	8.0	9.4	9.4	28.4	53.8	10.2	27.5	30.0
10.0	58.2	9.9	9.2	9.2	29.5	3.0	9.2	9.0	28 11.4	41.7	10.4	44.6	46.5
8.6	56 2.7	36.4	8.5	8.5	36.5	4.0	8.8 -	9.4	37.9	18.0	9.6	43 4.3	25.3
8.7	7.0	58.2	8.4	8.4	38.5	19.9	10.1	29 14.4	28.0	10.0	9.6	5.3	12.1
9.0	35.2	33.2	9.6	9.6	49.0	7.9	9.5	9.8	46.4	13.0	9.2	15.3	43.8
9.4	44.2	45.0	9.7	9.7	51.0	26.2	9.7	10.1	30 7.4	55.1	9.6	32.3	12.0
9.4	51.7	10.5	10.0	12 33.5	45.9	9.2	9.2	9.2	32.4	42.8	9.4	40.3	39.6
9.0	56.2	31.8	9.8	9.8	39.5	24.9	8.0	8.0	34.4	11.0	9.6	45.8	47.3
10.4	57 2.8	42.0	9.7	9.7	52.0	39.0	9.4	9.4	40.9	33.1	9.2	44 13.3	36.7
10.2	43.2	42.9	10.1	10.1	4.0	41.0	9.5	8.9	40.9	33.7	8.9	33.8	50.3
9.0	43.7	5.9	8.5	8.5	16.5	37.1	8.7 G-	7.2	52.4	37.4	10.0	41.8	53.5
7.6	53.7	38.0	9.1	9.1	16.5	35.6	9.5 G	9.2	31 6.4	35.3	10.5	58.8	36.3
10.0	58 10.7	37.8	8.9	8.9	17.5	20.8	9.0 G-	8.9	16.4	8.2	8.8	59.8	4.8
9.8	26.7	8.0	8.6	8.6	20.5	35.2	9.0 G-	9.2	44.4	41.9	8.4	45 25.3	55.1
8.7	41.7	4.4	8.9	8.9	14 6.5	6.4	8.5 -	8.8	32 30.4	36.0	9.8	26.3	20.9
9.0	50.2	42.7	9.4	9.4	24.0	30.0	9.5	10.0	36.9	10.9	9.8	27.3	40.3
8.8	59 2.7	23.6	7.7	7.7	36.0	30.0	7.8 GS-t	10.1	44.4	19.9	9.8	31.3	7.2
9.0	45.7	9.6	9.0	9.0	58.1	7.8	9.0	10.0	33 24.7	54.5	10.5	47.8	8.5
9.0	53.7	30.5	9.4	9.4	58.6	21.4	8.6	8.6	26.2	19.2	10.4	46 12.8	59.1
7.4	0 2.7	47.1	10.1	15 9.1	57.2	9.8	10.0	10.0	26.8	2.3	9.6	16.3	17.7
10.4	5.2	21.1	9.8	9.8	23.6	52.3	9.8	9.8	39.0	56.7	9.8	23.8	27.8
9.8	40.7	23.5	9.8	9.8	36.1	55.2	8.8	8.8	42.2	9.7	8.4	37.8	59.6
10.0	45.7	37.0	9.4	9.4	45.6	30.0	9.0	10.4	34 3.5	58.0	10.3	51.8	8.1
10.4	54.2	39.8	9.6	16 12.1	46.0	9.6	8.4	8.4	5.7	5.1	10.0	47 1.8	37.8
10.0	1 11.7	11.0	9.4	9.4	25.6	5.7	10.4	10.4	5.8	14.6	9.6	3.8	28.2
9.6	40.7	36.4	9.7	9.7	53.1	45.7	8.2	8.2	7.0	57.8	9.6	9.8	26.2
25pr.	+1 5.8	-7.1	+1 7.0	+1 7.0	-7.4	+1 8.3	-7.7	+1 8.3	-7.7	+1 9.6	-7.9	+1 9.6	-7.9

1896a n Cap 3. 1G

3001-3060.				3061-3120.				3121-3180.				3181-3240.							
mag.	10 ^h -11 ^h .	-32°		mag.	11 ^h .	-32°		mag.	11 ^h .	-32°		mag.	11 ^h -12 ^h .	-32°					
	m s	'		m s	'			m s	'			m s	'						
10.0	47	12.8	24.6	9.4	1	39.8	53.3	9.0	10.2	28	14.2	17.3	8.8	53	6.4	31.5			
8.8		22.8	19.4	9.3	3	38.3	22.1	6.7		25.2	10.0	6.5	9.6	10.7	15.0	9.5 -			
10.2		29.8	23.1	9.5	4	2.6	2.2	9.6		47.7	48.9	9.0	9.6	16.1	56.9				
9.6		53.8	16.9	9.5		2.8	36.6	9.9		53.2	15.1	9.6	55	26.4	52.4				
8.8	4.8	14.3	7.6	10.0		22.0	31.6	7.0	30	23.7	52.7	6.5	9.6	28.9	51.2				
9.6		23.8	45.1	9.2		51.8	19.8	8.2		28.2	14.1	8.5 -	9.0	39.9	54.1	9.5			
10.0		23.8	55.4	9.2		53.6	1.9	7.0		49.7	17.6	6.6	9.6	22.9	4.4	-			
9.5		33.8	50.2	9.6	5	11.8	28.0	9.6	31	15.7	43.0	9.6	56	32.7	2.5				
10.5		43.8	9.8	10.2	6	2.8	18.0	9.4		27.2	37.9	9.6		47.4	6.1				
8.8		59.8	32.2	8.8	7	12.8	35.7	9.7		35.5	59.5	9.0		47.7	58.4				
10.0	49	25.8	25.5	10.2		18.3	12.9	10.4		35.5	21.1	9.5		54.9	18.4	9.5			
9.4		26.8	55.9	9.2		51.8	34.6	9.5	7.1	32	9.7	54.9	7.4	9.5	56.9	51.7			
10.4		56.8	57.0	9.4		58.3	6.2	9.0 -	7.4	33	44.7	45.3	7.5	9.4	57	39.9	32.9		
10.0	50	0.8	7.7	10.2	8	8.0	42.9	10.4		59.5	20.7	9.6		47.1	11.2				
8.4		2.8	23.7	8.9		9.8	17.9	9.0	8.4	34	32.2	45.4	8.7 -	7.8	58	25.9	6.4	8.0 S=	
10.4		5.5	39.1	10.0		20.3	19.2	9.8		36	25.7	26.4	9.0	59	16.4	55.0			
9.8		5.5	33.0	9.8		28.8	9.9	10.2	37	3.7	37.4	7.0		40.9	15.4	7.0	GS=t		
10.3		14.0	39.8	9.8		42.8	15.9	10.4		16.7	14.4	8.4	0	7.4	42.4	9.5			
8.4		49.5	52.1	7.4	9	2.3	38.2	7.0	GS-t	10.4		26.7	49.4	8.8		46.9	11.7	G	
8.9		54.5	40.0	9.0		33.3	50.9	9.7		33.2	32.0	9.6	1	1.9	48.6				
10.0		56.5	56.4	9.0		53.3	1.1	8.5 -	10.4		50.7	41.0	9.6	2	38.1	5.3			
10.5	51	6.5	57.9	7.4	11	35.8	51.2	7.0	GS-t	10.2	38	10.7	52.9	8.8		38.4	23.3	8.5 W-	
8.9		18.5	37.4	8.9	12	25.3	27.3	10.2		14.7	18.9	7.4	3	20.9	47.4	8.0	GS-		
9.3		26.0	50.2	9.3		54.0	59.2	8.8 -	10.4		31.5	2.4	8.2		32.4	32.3	9.0	G-	
9.2		27.5	48.8	10.2	13	3.8	59.4	10.2		33.7	34.0	9.5	4	11.4	12.3				
9.8		31.5	35.0	10.2		27.0	4.1	G	9.8		53.2	56.6	7.8		24.9	46.3	8.0	G	
9.8		39.5	37.6	9.5		44.3	25.3	10.0	39	33.2	20.4	8.4		44.4	30.4	8.2	G		
10.0	52	34.0	6.7	9.8		49.3	16.1	7.7	40	49.7	54.0	8.5	8.6	5	2.4	55.6	8.0	G	
10.5		42.5	32.3	9.6	14	30.5	59.9	9.2		51.7	26.8	9.5		33.9	26.2				
10.5	53	10.7	9.4	9.4		31.0	15.4	9.0		56.7	7.4	-	7.2	6	1.9	42.7	7.5	GS	
9.6		23.5	9.8	10.0		35.0	48.0	8.8		58.7	42.8	8.8	9.6		1.9	7.7			
10.0		28.5	23.4	9.2	15	31.0	55.9	9.5	9.6	41	21.3	28.4	9.6		29.4	42.6	8.8		
8.0		39.0	24.3	9.0		45.5	56.6	9.5	8.6		54.2	38.9	9.0	9.4		36.6	4.6		
8.9		41.5	22.4	8.4		46.5	36.9	8.5 -	10.2	42	43.2	9.3	9.6		44.1	51.4			
9.8		41.5	52.4	9.2	16	52.0	5.4	10.0 -	10.2		55.2	54.3	7.8		45.1	38.2	7.7	G	
9.8		49.0	11.6	9.4	17	30.0	48.9	9.8	43	11.7	5.5	9.0 -	8.8		48.1	36.7	8.5	G	
9.8	54	4.2	2.2	9.6	18	30.0	43.2	9.6		22.7	0.9	9.0 -	8.6	8	0.1	59.1	8.2	G	
9.3		13.5	35.8	9.4		57.0	52.0	10.4		26.7	35.1	9.0	9.6		11.1	55.3			
10.3		25.5	27.2	10.2	19	31.0	9.9	10.4		34.7	21.0	9.5	9.4	9	16.1	46.2			
9.0		26.5	6.5	9.6	21	8.8	0.6	7.7	44	25.2	26.6	7.8	GS=	8.3		31.4	31.6	9.0 -	
9.8		26.5	25.6	10.2		47.7	10.0	9.4		41.7	31.4	9.0 -	9.4		54.1	53.7			
10.0		40.0	15.8	9.6		57.9	43.4	8.8	45	2.2	35.9	9.0	9.4	11	5.6	34.9			
10.5		49.5	4.0	10.0		58.1	55.4	9.0		18.8	8.7	9.2	8.6		8.6	32.6	9.5		
10.4		52.7	9.1	9.6	22	2.5	16.7	10.2		23.3	30.0	9.4		37.8	59.7				
9.2	55	14.0	25.6	9.2		3.0	48.0	9.0	8.4		24.0	7.6	9.0 -	9.5	12	19.6	33.7		
9.6		15.5	2.8	9.2		22.6	53.7	10.0	10.4		33.0	45.6	9.0	7.9		28.1	35.9	8.2	G-
10.0		16.5	34.6	9.7		25.6	24.3	10.2		53.2	19.1	9.4		31.6	14.6				
9.2		22.0	52.1	9.9		52.8	28.0	9.6		57.9	23.8	9.6		32.4	35.9				
9.8		25.5	29.4	8.8	23	8.4	44.3	9.2	7.9	47	4.9	57.9	8.5 -	9.5	13	24.1	43.1	9.5	
9.8	56	43.5	4.1	8.2		18.9	29.3	8.8 -	8.4		45.4	59.8	8.5 -	9.6		37.1	45.7		
10.3	57	8.0	36.7	10.4		32.7	22.8	8.8	48	37.4	21.8	9.0	G=	9.6		57.1	43.0		
10.4		53.5	18.0	9.8	24	25.7	22.6	8.2	49	6.9	45.2	8.0	G=	9.2	14	12.6	36.3		
8.4		56.5	46.3	8.8		27.2	42.6	9.5	9.6	50	5.1	27.9	9.4		17.1	59.0	9.5		
10.2	58	5.5	37.8	8.6	25	26.7	56.6	9.5	6.6		43.4	37.1	6.5	GS=t	9.1	15	8.6	27.9	
10.3		20.5	23.1	9.6		42.0	0.4	9.6	51	1.1	3.2	8.4		41.6	37.6	9.0 -			
9.8		41.5	41.3	9.8	26	13.2	42.7	9.6		1.1	19.0	8.0	16	4.6	52.1	8.3	GW-		
10.4	59	8.0	10.2	7.7		26.7	15.4	8.5 =	8.4		14.4	15.7	8.0	G-	8.7		23.6	17.2	
9.0		21.3	24.5	9.8		50.7	39.8	9.5		52.9	45.2	8.8	17	43.6	25.9				
9.6	0.	7.8	39.8	9.9		52.7	11.1	8.4	52	4.4	26.7	9.0	G	9.1		51.4	13.4		
8.5	1.	15.8	52.9	8.2	27	43.7	6.4	9.2	9.6		15.4	37.7	9.2		58.1	11.0			
25Pr.	+1	10.7	-8.0		+1	12.7	-8.2			+1	15.1	-8.3		+1	17.3	-8.4			

3241-3300.				3301-3360.				3361-3420.				3421-3480.							
mag.	12 ^h .		-32°	mag.	12 ^h -13 ^h .		-32°	mag.	13 ^h .		-32°	mag.	13 ^h .		-32°				
	m	s			m	s		m	s			m	s						
9.4	18	26.6	45.9	9.3	40	58.5	36.2	9.6	4	53.1	19.8	10.4	24	18.9	27.1				
9.6		35.1	9.3	8.8	41	31.0	27.9	9.5	9.1	56.1	12.8	9.2	21.9	11.7					
8.2		37.1	23.9	9.0 -	9.8		38.8	58.5	8.9	5	33.1	28.4	10.2	25.9	32.2				
9.6	19	4.6	11.2	9.8	42	6.5	9.2	8.2	6	16.1	57.1	9.0 =	8.2	25	10.4	36.3	8.0 G-		
9.6		55.7	59.1	9.9		15.5	29.5	9.6	9.6	32.1	10.0	8.9	8.9	13.9	19.0	-			
9.2		57.1	34.4	8.4		23.0	4.8	8.3 -	9.3	9.3	33.6	8.2	9.5	10.4	27.9	39.8			
9.2		59.6	2.5	9.0		29.5	21.7	9.0	9.6	9.6	49.6	23.8	10.4	10.4	38.4	8.4			
8.6		59.6	23.6	9.4		57.5	22.3	8.2	7	7.1	43.4	8.5 -	10.4	10.4	52.2	0.1			
9.5	20	9.0	59.1	9.4	43	2.5	5.0	9.1	9.1	35.6	4.4	9.6	26	6.4	47.5				
6.4		16.3	8.2	5.8 GStπ	8.0		9.3	49.5	8.2 -	9.1	8	30.1	51.4	10.4	10.4	22.4	12.4		
8.3		19.3	17.2	8.8 -	9.9		16.8	54.7	9.0	9.0	46.6	11.4	9.8	9.8	22.4	23.0			
9.0		25.3	22.1	9.0	8.1		33.3	55.7	8.0 -	9.2	9.2	55.6	22.0	10.4	10.4	35.9	40.8		
8.5		46.8	5.1	8.0 Gtπ	9.2	44	11.3	53.3	8.7	9	27.1	37.4	8.5 G	8.8	8.8	35.9	52.2	9.0	
9.6	21	12.8	52.8	8.8		36.3	31.3	9.2 -	9.7	9.7	54.1	17.0	10.4	10.4	39.9	2.2			
9.5		34.3	32.9	9.3		55.3	17.7	9.0	10	17.1	44.0	9.0	10.0	10.0	42.9	40.9			
8.7		52.8	52.0	9.5	8.3		57.8	39.9	8.7 -	9.6	9.6	39.1	45.6	9.6	9.6	55.9	4.0		
8.3	23	29.8	38.1	8.0 G	8.2		57.8	46.9	9.0	9.1	9.1	39.1	23.8	9.9	27	32.4	16.8		
9.5	24	7.8	31.8	8.8	45	22.8	38.2	9.2 -	8.4	8.4	42.1	32.8	9.0	7.4	7.4	37.9	40.1	6.5 GS-	
8.0		57.2	58.8	8.5 GW-	9.6		34.5	26.3	9.0	9.0	57.6	45.7	8.0 G-	10.4	10.4	40.4	35.0		
8.8	25	47.3	53.3	9.4	46	32.3	10.3	9.1	9.1	11	2.6	56.0	10.4	10.4	44.4	1.0			
8.3		55.3	29.7	9.0 -	9.9		47.3	57.5	9.2	9.2	17.9	1.0	8.8	28	32.4	9.7	8.0 -		
8.5	26	15.8	29.1	9.0 -	9.1		48.3	41.3	9.0 -	8.8	8.8	40.1	25.8	9.0 =	10.4	10.4	55.4	27.8	
9.4		28.3	50.6	8.8	47	1.3	6.3	9.5	9.0	12	38.6	50.8	9.7	8.8	29	1.4	50.3	8.5 -	
8.8		45.3	3.6	8.0		4.3	29.3	8.8 =	9.6	9.6	52.1	45.4	9.9	9.9	26.4	10.0			
8.9	27	5.3	34.7	W-	9.6		6.3	28.7	9.4	13	27.1	21.5	9.2	9.2	59.4	8.0			
9.0		31.3	20.3	9.9	49	40.3	52.7	9.0	9.0	30.6	46.0	9.0	10.4	10.4	30	59.9	1.7		
9.6		41.3	43.0	9.8	50	37.5	37.5	9.2	9.2	51.6	14.8	7.0	31	42.9	28.3	7.0 GS≡			
9.4		56.8	25.9	8.2		40.0	28.7	7.8 GW=	9.4	14	42.1	48.8	9.5	10.4	10.4	32	12.1	3.3	
9.2	28	25.8	34.5	9.0		57.5	29.7	10.0	9.2	9.2	42.1	39.6	9.6	9.6	23.1	36.0			
9.3		52.0	6.9	8.4	51	11.5	41.8	-	9.6	9.6	46.1	29.6	9.6	9.6	29.6	56.2			
9.5	29	16.8	28.1	8.8 -	8.1		31.5	8.8	8.5 G	8.9	15	20.6	59.6	8.8 -	10.0	10.0	46.6	53.1	
8.8		20.8	25.3	9.0 =	9.3		52.0	50.9	8.8	8.8	41.6	11.4	-	9.6	9.6	48.6	42.5		
9.0		27.8	38.0	9.0		52.5	28.6	8.1	16	8.1	32.1	7.0 GS	9.6	33	23.1	29.8			
8.4		32.3	14.6	8.5 -	8.6	52	2.5	42.8	8.0 G-tπ	8.2	17	41.9	1.0	7.5 G-	10.4	10.4	47.6	47.5	
9.6		35.8	6.7	8.8		36.0	48.3	9.5	9.7	9.7	46.3	37.4	9.2	34	7.1	22.9			
8.7		43.1	59.5	9.0	9.9	53	7.0	49.6	8.7	8.7	47.1	47.8	7.5 G-	9.2	9.2	19.8	1.1		
8.8	30	9.8	42.9	9.5 G	8.6		17.5	17.9	8.8 -	9.7	18	18.7	23.5	9.6	9.6	21.6	41.5		
9.6		17.8	17.3	9.9		19.5	48.2	9.2	9.2	40.2	32.4	9.0 -	7.0	7.0	36.1	57.9	7.2 GS≡		
9.6		50.3	22.4	9.2		41.5	38.5	9.7	9.7	56.0	8.7	10.4	10.4	36.8	36.7				
9.1	31	0.3	4.7	7.0		42.5	49.7	6.5 GStπ	8.9	19	2.7	27.4	9.0	9.2	9.2	39.6	36.3		
9.6		1.0	49.3	7.5		44.5	22.4	6.8 GS-	9.1	9.1	18.7	14.5	9.6	9.6	58.1	30.6			
9.4		43.8	10.0	7.1	54	12.0	57.0	6.9 GStπ	9.0	9.0	22.7	38.9	10.0	35	6.6	48.2			
9.6		45.3	46.7	7.9		14.5	48.2	7.7 GS-tπ	8.3	20	15.7	5.0	9.0 -	8.9	8.9	6.6	38.7	9.0	
9.6		49.0	41.8	8.6	55	23.0	30.8	9.0	9.7	9.7	45.7	29.8	9.2	9.2	10.1	47.2	9.0		
9.5	32	35.8	20.7	9.0	9.3		36.0	50.8	7.8	21	2.2	37.5	8.2 -	10.4	10.4	14.9	2.1		
8.7		35.8	2.2	9.0 -	9.9		56.5	0.3	8.5	8.5	32.0	49.9	8.2 W-	10.4	10.4	40.6	20.1		
9.5	33	3.3	41.0	9.4	56	2.5	6.2	9.4	9.4	51.5	47.0	8.2	8.2	42.3	2.3	7.8 G-			
9.5		5.8	8.3	9.7		37.0	57.8	8.8	8.8	52.3	32.2	10.3	36	10.1	57.9				
9.3		24.6	36.2	10.0	8.8	57	51.5	24.1	9.0 -	10.4	10.4	22	6.9	45.0	9.4	9.4	17.6	18.4	
8.7		30.3	35.2	9.0 -	8.0		58.5	27.9	8.2 G=	10.3	10.3	44.0	9.3	9.4	9.4	37.1	32.1	9.0 -	
8.8	34	0.9	10.6	-	9.0	58	51.3	0.1	9.5	8.4	8.4	52.8	12.6	8.5 G-	9.6	9.6	52.6	16.4	9.5
8.0		36.0	45.4	8.1 G-	8.9	0	20.1	59.4	10.4	10.4	23	2.3	24.9	8.6	37	6.6	34.1	9.0 -	
8.4	35	16.0	49.2	8.7 G-	9.1		36.1	48.0	9.9	9.9	2.5	22.0	9.0	10.4	10.4	7.1	12.1		
9.7		42.5	15.0	9.0		43.6	28.8	9.0 -	9.3	9.3	3.3	19.1	9.5	10.4	10.4	12.2	0.6		
9.8	37	44.5	10.5	9.6	1	37.6	12.4	9.5	10.4	10.4	12.3	58.9	10.4	10.4	13.6	37.3			
9.8		54.5	7.6	9.2		57.1	16.6	9.5	8.1	8.1	20.5	40.9	8.5 -	8.9	8.9	50.1	34.8	9.2	
9.8	38	34.0	23.8	9.5	9.3	2	6.6	26.0	10.4	10.4	26.9	10.0	8.4	38	6.1	38.7	8.0 G=		
9.2	39	37.0	26.0	9.5 -	7.6		6.6	50.0	7.5 GS-	10.4	10.4	46.4	51.1	10.4	10.4	26.1	11.8		
7.7	40	2.0	37.8	6.5 GS-	9.1		12.1	49.2	10.4	10.4	53.9	38.4	4.9	4.9	36.1	24.6	5.0 GSπβ		
9.4		39.0	10.1	8.4	3	25.6	8.2	8.2 -	9.8	9.8	24	16.4	19.8	10.4	10.4	42.6	30.4		
25 pr.	+ 1	19.5	- 8.3		+ 1	21.5	- 8.2		+ 1	23.6	- 7.9		+ 1	25.2	- 7.7				

3481-3540.				3541-3600.				3601-3660.				3661-3720.			
13 ^h .		-32°		13 ^h -14 ^h .		-32°		14 ^h .		-32°		14 ^h .		-32°	
mag.	m s	m s	'	mag.	m s	m s	'	mag.	m s	m s	'	mag.	m s	m s	'
8.7	38	48.5	46.1	9.3	52	23.0	17.0	9.6	10	29.4	38.0	9.7	24	30.3	38.0
9.4		52.0	50.3	7.5		27.0	55.9	9.0		36.6	24.3	9.1	25	27.3	20.5
10.4	39	3.5	2.1	8.9		56.0	19.7	9.7		38.6	51.4	9.6		36.3	16.6
10.4		6.5	28.1	9.0	53	8.0	27.1	8.9		59.4	28.8	9.3		36.4	40.8
10.4		6.9	29.2	8.7		48.5	8.8	7.0	11	0.4	38.4	9.0		36.8	11.1
10.4		9.9	17.1	8.4	56	2.0	50.3	9.2		9.8	27.5	9.6		45.9	30.2
9.6		19.0	40.1	8.6		19.0	52.9	9.6		54.6	9.7	7.4		57.4	45.8
8.7		21.0	6.6	9.6		37.2	56.7	9.1		59.6	52.5	9.1		57.4	18.4
10.4		21.5	59.5	8.8		57.2	30.2	8.8	12	16.1	21.8	9.4	26	12.4	28.1
10.4		34.5	25.7	9.5	57	0.7	44.2	9.1		28.1	39.0	9.7		38.4	25.3
9.8		52.0	16.1	9.5	58	3.2	49.3	8.6	14	11.6	36.8	9.2		42.4	38.2
9.9	40	2.0	50.1	8.0		6.2	4.7	8.8		12.6	35.3	9.3		52.4	38.2
10.4		36.0	6.2	9.5		46.2	47.6	9.6		15.6	17.7	9.7	27	48.4	23.6
8.8		37.0	47.9	8.4	59	13.7	44.8	9.6		25.1	10.9	9.6		49.2	6.4
10.4		42.5	31.1	9.6		33.1	48.0	8.6	15	12.6	38.7	9.3	28	6.9	56.2
10.4	41	1.5	36.8	9.0		37.2	0.7	9.4		26.1	17.0	9.0		10.4	34.2
9.4		16.0	56.5	9.0		40.2	51.2	8.6		58.6	14.6	9.6		41.2	8.0
10.4		37.0	42.3	9.4		53.2	11.8	9.1	16	8.6	9.8	9.3		44.8	0.8
9.6		47.0	44.1	8.5	0	42.2	44.3	8.4		13.3	7.1	9.2	29	21.4	59.6
7.7	42	48.5	2.7	8.3		52.2	10.5	9.4		20.5	1.1	9.3		24.9	2.6
9.6		55.0	32.9	8.3	1	2.2	47.8	7.6		49.8	31.0	8.2		32.9	38.0
8.4	43	15.5	33.3	8.0		2.7	27.4	7.8		57.8	24.7	9.4	30	36.4	31.4
8.8		33.0	41.3	9.6		2.7	31.7	9.6	17	10.3	33.6	9.2		36.9	14.2
10.4		36.2	0.3	9.2		23.0	1.7	9.2		27.3	58.2	9.2		46.9	17.0
10.4		45.5	29.8	9.0		23.2	53.2	9.0		2.3	24.7	9.7	31	15.9	53.0
9.0	44	5.0	37.4	8.8		30.2	59.4	8.0		5.8	24.2	9.2		40.4	32.1
9.9		11.5	25.1	8.9		39.7	28.0	9.3		22.3	30.9	7.8		43.9	50.2
10.4		18.9	48.1	8.9		50.2	30.8	9.7		23.3	30.3	9.4	32	3.4	54.8
10.0		27.0	11.1	9.3		56.2	36.0	9.6		24.3	51.7	9.7		19.9	44.8
9.6		30.5	41.5	9.6	2	23.2	14.6	9.6		27.3	43.6	9.7		32.4	44.9
10.4		33.9	37.2	8.7		27.2	36.9	9.4		33.3	26.3	9.4	33	28.1	26.5
4.1		37.0	22.4	9.1		38.7	43.1	9.2		42.3	29.6	9.3		36.9	5.8
8.9		43.0	34.0	9.6		52.2	21.2	7.8	19	0.3	41.0	9.7	34	6.6	14.6
8.6		45.5	30.3	9.1	3	1.2	0.2	9.6		8.3	22.3	8.7		10.0	34.7
9.6		56.0	43.1	8.3		13.2	38.6	9.7		9.3	20.1	9.5		17.7	29.7
10.0		56.0	25.1	8.9		17.2	31.2	9.7		18.3	36.4	7.8		27.7	16.6
9.9		58.5	23.9	9.1		30.2	3.0	9.0		23.3	41.0	7.6		42.5	13.7
8.8	45	12.2	54.2	8.6		43.2	52.1	9.0	20	13.8	46.1	9.8		46.9	26.2
10.4		27.5	4.0	8.9		47.7	35.2	8.9		22.3	4.4	8.5	35	25.0	16.1
9.6		38.5	34.7	9.6		48.2	14.2	9.1		30.3	49.8	9.9		37.0	18.0
9.8		39.0	5.3	9.1	4	26.2	27.8	8.3		44.3	47.8	9.0	36	5.0	39.1
9.4	46	2.0	49.9	9.6		39.2	5.6	8.6		56.8	56.6	9.9		14.5	21.0
9.4		6.5	58.3	9.5	5	3.2	18.2	9.7	21	1.3	24.3	9.4		17.0	11.9
8.5		21.0	57.9	9.4		3.2	19.6	9.6		12.3	27.4	9.3		34.5	43.5
8.6		36.0	4.9	9.2		13.7	42.8	8.4		14.3	49.6	9.4		48.0	37.8
8.4		54.2	31.5	8.4		30.7	23.0	9.7		30.3	30.1	9.5		58.5	8.5
9.5	47	36.0	46.4	8.0		51.1	58.9	9.7		48.3	43.4	9.6	37	15.0	30.0
9.5		43.0	19.7	7.9		54.6	55.4	9.0		58.8	30.4	8.6		19.0	27.0
9.0	48	2.5	46.7	7.6	6	2.1	55.8	9.6	22	6.3	17.5	9.8		47.5	44.1
8.6		10.5	12.1	8.4	7	13.5	58.5	8.7		10.3	48.7	9.0		54.0	16.7
8.4		25.0	7.3	8.7		16.4	2.2	9.0		34.3	12.1	9.0		58.8	12.2
8.8		30.0	9.7	9.3		26.3	27.3	8.9		36.8	37.0	9.4	38	0.0	4.3
8.1		45.5	8.4	9.1		29.1	8.5	9.2		42.3	28.1	8.4		17.6	58.8
8.8	49	53.5	39.1	8.7	8	0.1	39.2	9.6	23	17.3	14.7	9.8		47.3	7.2
9.4		55.5	44.7	9.0		13.6	57.0	9.1		20.3	44.6	8.6		50.8	35.8
9.2		57.5	43.2	9.5		35.6	46.4	9.6		27.3	8.4	8.5	39	17.8	30.2
9.3	50	42.0	2.1	9.0		46.1	40.4	8.6		27.3	29.2	9.3		53.3	6.4
9.5	51	37.5	11.0	9.0		51.1	20.5	9.0	24	13.3	14.7	9.5		56.8	33.7
8.7		40.0	31.5	7.4		55.1	39.5	9.0		15.3	18.6	9.9	40	3.6	58.7
9.5	52	2.0	19.5	9.6	9	58.6	41.9	8.9		19.3	0.1	9.4		17.8	53.4
25Pr.	+1	26.2	-7.5		+1	27.6	-7.2		+1	28.9	-6.9		+1	30.0	-6.6

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
14 ^h .		-32°		14 ^h -15 ^h .		-32°		15 ^h .		-32°		15 ^h .		-32°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.8	40	30.3	52.7	9.3	56	53.6	53.1	9.9	6	28.6	42.3	9.9	19	1.4	19.1
9.8		31.8	8.9	9.9		59.1	13.8	9.8		40.6	22.1	9.1		17.4	11.6
9.9		53.3	3.0	9.2	57	19.1	21.1	9.9	7	37.6	35.7	9.3		38.4	11.1
8.9	41	12.8	15.9	9.5		25.4	13.0	9.8		37.6	40.9	9.8		47.9	40.7
8.6		13.3	6.0	9.6	58	32.0	19.5	9.5		46.6	31.0	9.9		52.3	22.9
9.3		21.8	44.2	9.9		47.5	33.3	9.4		49.1	49.5	9.6		57.9	4.4
9.9		34.8	21.6	8.9		52.8	7.8	9.8		56.6	49.1	9.1	20	7.4	4.8
9.6		54.3	42.2	7.4	59	33.5	25.4	9.0	8	27.6	12.3	9.7		9.9	30.7
8.3	42	14.3	27.8	9.6		33.5	49.0	8.6		28.6	25.5	9.7		10.4	12.5
9.9		31.3	31.9	9.3		34.5	52.7	9.8		29.6	30.9	9.6		14.4	12.7
9.9		32.8	31.8	9.7		35.5	49.6	9.4		30.6	1.9	9.5		15.4	50.6
9.4	43	24.3	49.9	9.7		48.5	33.3	9.4		39.6	18.3	9.2		19.4	3.3
9.8		27.3	36.1	9.8	0	3.5	17.4	9.4		42.6	31.9	9.7		25.4	30.9
9.6		35.8	42.8	9.0		5.5	41.2	8.8		43.6	11.2	9.5		34.9	50.4
9.9		40.8	17.1	9.9		19.0	21.8	9.9		56.6	46.0	9.6		37.4	15.3
9.6	44	7.8	8.5	8.6		19.5	43.0	9.0	9	21.6	21.8	9.2		40.4	16.1
8.8		47.8	21.5	9.9		26.5	11.0	9.3		43.6	21.1	9.8	21	0.9	36.1
9.6		49.3	27.9	9.8		46.5	15.7	9.8		58.6	21.7	9.9		1.9	37.9
9.0		51.3	5.4	9.6		47.5	26.4	9.6	10	48.6	29.3	9.0		14.4	43.1
8.9		52.8	45.1	9.9		50.0	40.9	9.2	11	8.3	23.8	9.4		20.8	14.3
9.9	45	6.6	35.0	8.5		54.0	48.4	9.2		14.8	35.9	9.1		21.4	22.4
9.2		13.1	56.5	9.0	1	2.5	16.8	9.8		17.8	6.1	9.8		34.4	5.5
9.4		20.6	25.1	9.3		9.5	29.8	9.9		30.8	53.8	9.5		35.9	43.3
9.2		31.8	0.8	9.6		10.5	27.0	9.6		48.3	4.3	9.5		48.4	40.0
8.8		33.8	46.9	9.4		18.5	5.3	9.9		52.8	48.7	9.4	22	5.9	38.3
9.9	46	55.8	47.8	9.6		32.5	8.8	9.9		59.8	26.1	9.8		14.4	40.0
7.7		59.8	47.3	8.8		33.5	21.2	9.4	12	11.3	17.3	9.9		19.4	59.8
9.4	47	17.8	18.1	9.7		40.5	44.7	7.9		18.3	24.5	9.9		24.9	50.9
9.4		33.3	44.6	8.8		48.0	0.7	9.6		32.3	37.1	9.9		35.4	2.9
9.8	48	17.8	22.8	9.6		58.5	27.7	9.8		34.8	40.2	9.5		37.9	8.3
8.7		20.3	33.6	9.8	2	8.5	30.5	9.9		37.8	58.1	9.7		41.4	9.0
7.7		53.8	7.7	9.6		10.0	41.4	9.4		38.8	10.0	9.0		48.2	55.1
9.8		58.6	21.1	9.9		11.0	56.8	9.5		48.8	54.7	9.7	23	37.7	40.4
9.6	49	6.8	3.8	9.8		18.0	27.8	9.6		58.8	27.7	8.4		57.2	11.9
9.8		20.8	4.5	9.8		25.5	23.7	9.7	13	0.8	50.9	7.0	24	2.2	27.1
7.4		43.3	19.6	9.6		37.0	38.4	9.4		3.8	24.9	9.1		5.2	32.4
9.6		44.8	22.1	9.5		48.0	3.0	9.8		8.8	31.9	9.6		26.2	12.1
7.9	50	3.8	19.5	9.5		59.5	25.8	9.5		11.3	32.5	8.2		31.2	51.1
9.4		5.3	37.0	8.8	3	11.5	12.5	9.4		17.3	54.7	9.0	25	22.2	53.1
9.3		6.8	19.6	9.6		14.5	23.9	9.4		38.8	38.9	9.7		36.0	38.2
8.6		6.8	37.0	9.5		24.0	2.4	9.2		47.8	15.1	9.0		42.5	46.0
8.8		12.6	46.0	9.3		42.9	57.8	9.4	14	14.3	5.1	8.8	26	1.0	57.2
9.4		26.6	1.5	9.4		48.1	18.1	9.9		28.8	26.9	7.4		21.0	44.8
9.4		37.1	35.1	9.8		58.1	6.3	9.9		30.8	47.3	8.8		32.5	31.2
8.8	51	29.1	2.3	9.7	4	0.1	31.5	9.9		40.3	37.7	9.2		44.0	39.0
9.2		45.1	18.8	9.8		1.6	12.7	9.6	15	7.3	9.3	9.1	27	31.5	33.6
9.8		49.1	55.5	7.6		14.6	21.3	9.9		19.3	3.9	9.7	28	3.5	0.0
9.3	52	13.6	8.7	9.8		18.6	15.0	9.6	16	21.8	35.9	6.7		21.5	40.4
8.0		22.6	19.9	9.2		30.1	59.4	9.5		34.8	17.1	8.7		35.9	59.1
9.0		31.6	39.0	9.9	5	10.5	28.6	9.5		36.8	45.1	8.0		55.0	13.2
9.4		40.6	34.0	9.5		13.8	59.2	9.6	17	14.8	18.3	8.6		56.5	9.9
9.0	53	37.6	43.1	9.9		18.6	49.7	9.6		20.8	7.5	7.9	29	9.5	24.0
8.8		47.6	12.1	9.7		22.6	35.4	8.8		26.8	34.1	8.2		39.5	4.2
8.8	54	22.7	1.1	8.5		26.1	51.2	9.9		33.8	20.5	9.4	30	1.0	37.9
9.3		40.6	29.3	9.8		30.6	56.0	9.9		53.3	5.6	9.7		9.4	25.1
9.5		40.6	30.9	9.9		35.6	40.9	9.9	18	6.3	7.7	9.7		27.0	4.7
9.6	55	3.1	40.9	8.3		44.6	40.6	9.9		9.4	20.0	9.7		51.4	3.1
5.2		20.6	8.9	9.9	6	5.6	57.1	9.0		19.4	36.3	8.6	31	6.5	23.6
9.2	56	2.1	20.1	9.4		7.6	49.3	9.5		35.9	29.7	9.6		21.5	1.4
9.4		17.6	34.5	9.8		8.6	18.1	9.9		49.4	31.7	9.7		43.5	9.8
25pr.	+1	31.1	-6.2	+1	32.0	-5.9		+1	32.7	-5.6		+1	33.3	-5.3	

1896AnCap...3....1G

3961-4020.				4021-4080.				4081-4140.				4141-4200.			
mag.	15 ^h .	-32°		mag.	15 ^h .	-32°		mag.	15 ^h -16 ^h .	-32°		mag.	16 ^h .	-32°	
	m s	'	''		m s	'	''		m s	'	''		m s	'	''
8.6	31	51.0	33.8	9.7	43	22.2	20.1	10.0	59	26.6	22.6	9.6	16	0.0	32.7
9.6		56.5	2.2	9.6		26.9	19.2	10.0	0	48.1	14.4	9.3		28.0	49.7
9.2	32	50.5	9.2	8.4		33.4	20.8 8.2	10.0		52.6	30.6 9.0	9.9		44.5	7.8
9.7		52.0	24.2	7.8		38.9	18.3 7.2 GS=	9.2	1	1.1	44.1 9.0	9.9	17	45.5	20.0
8.6		55.5	27.2	9.4		39.4	48.3	10.0		28.1	21.6	9.9	18	3.7	59.6
9.7		58.5	21.0	9.2		48.4	3.6 9.0	10.0		29.1	3.5	9.9		33.0	57.6
8.3	33	2.5	44.2 8.5	9.7	44	4.9	35.1	7.4		34.1	18.8 6.5 GSset	8.3		44.0	47.0 9.0
8.2		18.0	14.8 8.8	9.6		19.9	42.0 9.0	8.7		40.1	23.8 9.0	9.9	19	3.0	6.6
9.7		20.5	24.0	9.2		32.9	37.8	10.0		55.6	50.6	9.8		15.5	52.6
9.6		28.0	47.6	8.3		38.4	58.7 8.8	9.0	2	6.1	24.4 9.0	9.4		29.2	0.2 10.0
9.2		35.5	38.2	9.0		47.8	52.5 9.0	9.6		32.6	47.6	9.8		33.0	10.0
9.6		59.5	42.1	9.4	45	0.4	25.2	8.7		38.1	25.8 9.0	9.8		36.0	57.0
9.2	34	26.5	22.2	9.7		6.4	21.2	9.1	3	15.1	18.7	9.7		43.5	45.6
9.0		51.5	47.8	9.7		37.2	38.4	9.1	4	19.1	3.1	8.8	20	34.0	21.8 9.5
8.6		54.0	26.6	9.7		37.4	32.7	9.8		32.6	35.2	9.6	21	6.0	25.7
9.1		58.1	2.1	9.0		46.9	15.8 9.2	9.1		33.6	5.9 9.5	8.8		30.5	8.0 9.0
9.6	35	3.0	31.2	9.7		50.4	28.4	10.0		36.1	53.3	9.9		53.0	46.6
8.9		16.1	3.4 8.8	9.7	46	41.3	58.2	10.0		57.1	40.8	9.6	22	4.0	3.4
8.6		18.8	57.1 8.8	9.6		57.4	34.2	10.0	5	33.3	32.8	9.6		4.0	45.1
9.6		25.8	59.6	9.7		58.2	55.4	9.6		33.8	59.5	9.9		16.0	29.7
9.7		33.9	0.9	9.7	47	0.2	47.7	8.6		45.6	35.3 8.5	9.6		34.0	24.8
9.1	36	23.1	25.2	9.7		1.2	20.0	9.8		54.1	45.4	9.9		40.5	22.8
9.1		23.1	11.1	9.4		46.2	44.5 9.5	7.0	6	22.6	41.4 6.5 GS-	9.7		47.5	38.4
8.9		27.6	55.1	9.4		48.7	8.5	9.8		37.6	5.4	9.2	23	9.0	21.0
9.2		44.1	15.1	9.4	48	16.2	51.0	9.6		37.6	9.0	9.0		29.5	35.2
9.6		52.1	40.3	10.0		16.7	14.8	9.2		46.1	56.4	9.9		43.0	19.1
8.2	37	13.6	26.0 8.5	8.8		17.2	43.1 9.0	8.8		46.6	34.2 9.0	9.2	24	7.5	57.3
9.7		15.1	55.1	10.0		57.7	31.2	8.8		59.1	7.7 8.0 G	9.2		23.0	18.6
9.6		16.8	59.2	9.5	49	31.9	25.0 8.5	9.8	8	1.1	46.1	9.4		24.5	5.4
9.1		54.6	50.2	10.0		33.2	26.1 9.5	10.0		7.3	15.2	9.0		36.5	52.7
9.7	38	4.6	10.6	8.2		35.7	25.0 8.0	8.8		26.6	15.8 9.2	9.9		36.5	12.2
9.2		6.1	53.9	9.4		56.7	6.5 9.0	9.0		45.6	25.6	9.8	25	26.5	39.0
9.1		17.1	34.9	10.0	50	27.7	13.7	10.0		54.1	22.5	9.3		38.5	29.1
9.4		27.1	5.4	10.0		31.2	55.6 9.5	10.0	9	54.9	19.3	9.9		49.0	8.2
8.9		38.1	11.0 9.0	9.4		37.2	29.5 9.0	7.8	10	20.1	38.9 8.0	9.4		50.1	2.9 9.0
9.7		44.1	7.4	9.4		57.2	16.0	9.9		26.5	23.6	9.8	26	6.0	40.0
9.4		48.6	9.2	7.4	51	23.7	39.0 7.0 GS-t	9.8	11	2.7	49.6	9.9		7.0	29.0
9.4		57.1	4.9 9.5	8.7		56.7	18.1 8.0 -	9.9		13.7	0.2 9.5	9.9		18.5	43.5
8.1	39	16.1	53.7 8.3	10.0		52	40.7 13.9	9.3		44.2	36.0 9.0	8.8		27.0	34.9 9.0
9.7		16.1	22.5	10.0		53	5.7 32.8	9.9		50.2	55.2	9.9		38.5	31.9
8.1		24.1	13.3 8.2 -	8.0		7.7	19.9 8.0 G=	9.9	12	26.2	13.4	9.6		52.0	4.9
8.6		43.1	44.3 8.8	9.2		12.2	33.4	8.6		36.2	48.2 9.0	9.7	27	6.5	22.9
8.4		49.1	20.7 7.8 G	10.0		32.7	7.1 8.5	9.4		39.2	37.0	9.9		15.8	8.8
8.1		57.1	44.5 7.5 G-	8.7	54	18.7	29.2 8.0	9.7		45.2	24.3	9.9		25.0	8.9
9.0	40	12.1	34.3	9.6		24.2	9.4	9.9		45.7	47.5	9.6	28	2.0	24.3 9.5
9.2		20.9	43.4	9.1		26.2	3.0 8.6	9.8	13	4.2	29.9	8.4		36.0	59.0 8.5
8.9		27.4	44.8	9.5	55	3.2	18.9	9.9		12.3	43.1	8.8		44.5	11.8 9.0
8.6		27.9	10.9 9.5	7.6		51.7	43.1 7.5 GS-	7.8		31.7	56.0 7.0 GS	8.3		51.0	45.1 9.5
8.4		38.9	34.6	9.2	56	14.2	6.1	9.4		47.2	11.0 9.0	9.1	29	10.0	53.3 9.0
9.0	41	13.9	12.8 9.0 G	9.8		16.7	49.8	8.8		53.7	54.8 9.0	9.3		19.5	7.2
9.0		16.9	19.0	7.2		19.7	51.8 6.5 GS-	9.8	14	21.7	7.3	8.5		30.5	37.7 8.5 -
9.1		17.4	10.2 9.0 G	10.0		23.6	34.2	9.2		22.8	2.0 8.0	9.9		56.3	59.8
8.9		27.4	49.5	9.4		34.1	3.6	9.0		24.2	49.7 8.0 G	9.6	30	4.3	50.5 9.5
7.5		50.4	25.3 8.0 GS-	8.7	57	22.6	33.0 8.8	9.0		31.7	0.8 8.5	9.1		6.3	24.9
9.7		56.9	27.1	8.1		44.6	30.6 8.0 G	9.1		32.2	11.2	9.9		14.3	18.2
9.0	42	14.4	43.4	8.8		53.1	22.0 8.5	9.9		59.2	6.9	8.8		18.8	4.9 8.8 -
9.6		30.9	11.5	10.0		57.6	31.0 9.5	9.2	15	14.2	31.1	9.8		22.8	20.2
9.0		43.6	1.8	8.7	58	30.6	33.2 8.5	9.8		36.2	18.7	8.8		44.0	58.0 9.5
9.6	43	0.4	30.0	10.0		59	4.1 49.0 9.3	7.0		54.0	54.2 6.6 GS-	9.9		53.8	10.9
9.2		20.9	57.0	7.4		11.6	48.4 7.9 GS-	8.8		54.2	52.6 9.0	9.9		55.8	13.7
25pr.	+1	34.1	-4.9		+1	34.8	-4.5		+1	35.6	-3.9		+1	36.3	-3.4

4201-4260.				4261-4320.				4321-4380.				4381-4440.			
16h.		-32°		16h.		-32°		16h.-17h.		-32°		17h.		-32°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
8.6	30	56.8	9.0	10.0	44	46.7	37.5	10.0	53	39.8	57.7	9.1	3	4.8	2.0
8.8	31	39.6	44.4	9.2	45	10.0	9.9	10.0		52.8	14.1	9.1	10.1	10.0	8.1
9.9		47.8	7.5	9.4		12.0	8.2	7.4	54	22.3	4.4	8.6	14.6	36.6	8.5
9.2	32	1.7	57.2	9.4		22.0	43.1	9.4		37.8	40.3	9.7	30.6	33.4	
9.9		5.3	24.1	9.8		27.0	47.8	9.2		38.8	29.0	8.5	31.1	3.6	8.5
9.2		6.3	47.7	9.8		29.7	39.7	10.0		48.8	12.4	10.1	36.1	20.0	
9.9		16.3	54.2	8.8		30.0	8.0	8.0	55	3.3	40.7	10.3	36.1	47.4	
9.1		50.3	53.1	9.4		32.0	33.0	10.0		7.8	42.9	9.7	4	6.1	14.4
9.9		57.3	3.5	10.0		34.0	4.3	8.6		26.8	25.8	9.2	7.9	56.7	9.5
9.4		57.4	2.3	10.0		56.5	41.0	8.2	56	16.3	8.2	10.3	9.0	7.0	
9.2	33	19.6	26.2	10.0	46	20.5	49.0	10.0		22.8	35.9	9.7	14.1	22.2	
9.8		22.8	42.0	9.2		53.2	2.5	10.0		28.3	9.3	10.1	20.6	8.0	
9.0		29.8	4.5	9.2		54.0	46.0	10.0		30.3	7.5	10.2	21.6	43.8	
7.5		38.8	34.5	10.0	47	6.0	5.4	9.8		59.8	33.7	9.7	28.1	39.2	
7.1		40.3	53.9	8.7		10.0	25.3	9.8	57	1.3	41.1	8.8	29.1	47.8	8.5
8.8		43.6	51.0	7.7		22.5	17.8	9.2		4.8	27.5	10.0	29.6	11.0	
8.2		46.6	33.9	10.0		22.5	53.0	8.8		5.6	2.3	9.8	43.7	9.1	
10.0		4.1	23.8	10.0		22.5	52.2	9.8		9.1	5.9	10.1	47.5	33.0	
8.9	34	13.2	32.7	9.4		31.0	11.4	9.1		23.8	47.5	10.0	47.7	11.6	
9.6		24.2	32.4	9.5		36.0	43.2	9.5		43.6	21.7	10.3	48.7	33.5	
8.2		28.9	3.4	8.6		36.5	55.6	10.2		54.3	45.4	10.3	51.7	33.4	
8.2		42.9	26.6	10.0		56.0	48.3	9.7		55.3	33.4	6.5	51.7	17.0	
9.9*		46.1	32.3	9.4	48	17.0	11.6	10.3		59.3	53.2	8.6	52.2	5.3	
9.4		46.9	23.8	9.4		22.0	32.7	8.4	58	1.5	52.9	9.7	54.7	17.0	
10.0		52.4	13.0	9.5		27.0	33.6	10.2		16.3	7.0	9.1	56.2	6.6	
10.0	35	25.9	6.0	10.0		31.8	11.8	10.3		44.3	52.1	9.4	57.7	10.9	
10.0		36.0	47.9	8.4		36.5	57.0	8.8		44.8	57.1	8.2	5	2.7	
10.0		36.9	54.6	7.8		53.0	8.2	10.0		49.3	16.1	10.3	11.7	2.0	
9.8		49.9	47.4	10.0		56.0	57.8	10.3	59	3.8	34.2	10.3	12.7	40.6	
8.9		52.9	19.6	8.9		57.0	16.7	10.3		8.3	35.2	9.6	14.2	31.6	
9.2	36	31.9	20.3	8.7		59.5	13.2	10.2		19.3	53.4	10.1	15.2	19.1	
8.8		34.4	14.6	9.6	49	5.0	9.2	10.3		44.3	28.6	10.0	15.5	28.0	
9.8	37	4.4	41.0	10.0		21.0	40.0	9.8		54.3	46.9	8.9	25.4	58.3	
9.4		7.4	23.9	9.8		29.5	34.8	9.8		58.1	27.4	9.7	33.2	55.0	
8.2		13.4	23.6	9.8		44.5	43.0	9.6		59.1	32.0	7.9	35.2	42.0	
8.2		26.5	16.1	10.0	50	13.0	3.8	10.2	0	0.3	2.9	10.3	35.5	32.0	
9.6		50.5	8.8	8.7		13.0	51.0	9.7		0.8	24.0	8.0	50.7	5.4	
9.4	38	10.0	35.3	9.6		13.5	12.4	9.7		14.1	37.9	10.1	55.2	13.6	
7.9		36.0	43.0	10.0		15.8	29.5	9.2		32.1	16.6	9.4	6	12.2	
10.0	39	6.5	45.0	8.4		22.5	45.6	9.4		33.6	49.9	9.4	16.7	20.1	
10.0		33.5	47.3	9.6		25.5	30.0	10.2		34.0	53.9	10.3	22.9	59.1	
9.0		42.0	57.6	9.2		27.0	10.1	10.3		49.1	36.3	10.3	27.2	48.1	
9.5		50.5	50.8	10.0		28.0	55.2	10.3		55.6	27.2	9.8	29.2	44.9	
10.0	40	6.5	43.1	10.0		31.0	24.0	10.0	1	4.1	19.0	9.8	49.7	33.8	
9.8		22.0	4.0	8.4	51	15.0	43.3	10.0		21.1	53.3	9.0	53.7	40.1	
9.1		29.5	42.0	9.8		19.5	33.0	10.3		33.6	7.0	9.8	7	11.5	
8.4	41	6.5	32.6	10.0		31.5	24.7	10.3		56.6	51.8	9.1	21.3	57.5	
10.0		25.5	47.5	10.0		31.5	30.0	10.3	2	15.6	47.0	8.1	24.7	32.6	
8.7		55.5	14.8	8.8		59.5	0.2	8.4		16.6	51.6	10.3	28.7	52.6	
9.6	42	44.5	39.3	10.0	52	1.7	58.5	10.2		18.1	45.4	10.2	37.7	31.3	
10.0		56.3	58.4	10.0		20.0	43.8	8.4		18.1	27.4	10.0	43.7	33.4	
8.8	43	10.0	44.0	8.4		22.5	54.8	10.3		25.6	29.4	9.7	44.2	34.2	
10.0		17.5	42.4	10.0		26.5	41.0	9.0		31.1	43.6	9.2	45.7	26.3	
9.0		29.0	33.2	9.8		43.0	0.8	10.3		41.6	13.8	9.4	56.7	10.3	
8.9		36.0	19.3	9.2		48.0	50.0	10.1		42.6	40.0	10.3	58.5	53.5	
9.0		53.5	51.3	8.9		56.0	35.9	10.1		48.1	21.2	8	26.7	11.7	
10.0	44	13.5	34.1	9.2	53	19.0	42.7	10.1		58.1	34.0	10.2	27.7	28.1	
10.0		22.5	18.0	9.8		22.8	34.5	10.3		58.1	54.0	10.3	35.9	1.4	
9.8		25.0	46.6	7.9		30.5	27.5	9.6	3	0.1	54.2	9.4	41.2	14.0	
8.6		39.7	31.2	8.7		37.8	14.8	10.2		4.6	9.0	6.2	55.7	31.1	
25pr.	+1	36.7	-3.0	+1	37.1	-2.5		+1	37.4	-2.2		+1	37.5	-2.0	

4441—4500.			4501—4560.			4561—4620.			4621—4680.		
mag.	17 ^h	—32°	mag.	17 ^h	—32°	mag.	17 ^h	—32°	mag.	17 ^h	—32°
10 ^o 3	8 ^m 59 ^s	9 ^o 3	8 ^m 8 ^s	12 47 ^s	41 ^o 8	9 ^o 4	21 47 ^s	44 ^o 0	9 ^o 2	26 47 ^o	35 ^o 0
9 ^o 2	9 1 ^o 7	39 ^o 0	10 ^o 3	13 37 ^o	57 ^o 2	9 ^o 8	51 ^o 2	45 ^o 3	10 ^o 2	49 ^o 5	30 ^o 8
10 ^o 3	3 ^o 5	8 ^o 6	10 ^o 3	44 ^o 0	5 ^o 3	9 ^o 2	22 0 ^o 6	30 ^o 7	9 ^o 7	53 ^o 0	32 ^o 2
10 ^o 3	7 ^o 3	23 ^o 6	10 ^o 0	51 ^o 0	9 ^o 4	8 ^o 6	7 ^o 7	1 ^o 3	9 ^o 0	57 ^o 0	41 ^o 4
9 ^o 8	11 ^o 8	20 ^o 6	9 ^o 1	14 3 ^o	24 ^o 2	10 ^o 2	17 ^o 2	8 ^o 3	8 ^o 8	57 ^o 5	45 ^o 2
10 ^o 3	12 ^o 8	19 ^o 5	8 ^o 6	4 ^o	50 ^o 1	10 ^o 3	20 ^o 3	49 ^o 7	9 ^o 3	27 2 ^o	23 ^o 7
9 ^o 5	15 ^o 3	48 ^o 1	10 ^o 2	8 ^o	26 ^o 4	9 ^o 8	32 ^o 7	8 ^o 0	9 ^o 5	3 ^o 5	9 ^o 5
10 ^o 1	19 ^o 1	4 ^o 0	10 ^o 0	30 ^o	16 ^o 1	9 ^o 4	43 ^o 2	48 ^o 0	9 ^o 8	7 ^o 0	59 ^o 0
9 ^o 7	23 ^o 3	0 ^o 1	9 ^o 2	36 ^o 5	26 ^o 8	9 ^o 0	23 13 ^o 2	14 ^o 2	10 ^o 2	9 ^o 5	16 ^o 8
9 ^o 0	23 ^o 8	1 ^o 6	10 ^o 3	43 ^o 0	44 ^o 1	10 ^o 2	18 ^o 3	14 ^o 0	10 ^o 2	40 ^o 5	8 ^o 3
10 ^o 1	33 ^o 8	45 ^o 3	9 ^o 8	44 ^o 0	21 ^o 8	10 ^o 2	22 ^o 3	13 ^o 5	10 ^o 2	51 ^o 0	51 ^o 6
10 ^o 2	36 ^o 8	4 ^o 0	9 ^o 7	15 5 ^o 3	2 ^o 8	9 ^o 0	33 ^o 2	26 ^o 8	10 ^o 2	52 ^o 0	23 ^o 8
10 ^o 1	37 ^o 3	20 ^o 1	10 ^o 0	21 ^o 5	40 ^o 4	8 ^o 4	38 ^o 5	47 ^o 5	9 ^o 9	28 2 ^o 5	14 ^o 2
10 ^o 0	39 ^o 3	3 ^o 6	10 ^o 3	41 ^o 5	47 ^o 6	10 ^o 2	48 ^o 8	51 ^o 3	9 ^o 4	4 ^o 0	35 ^o 6
10 ^o 0	41 ^o 8	31 ^o 2	10 ^o 3	16 5 ^o	0 ^o 8	8 ^o 8	59 ^o 8	2 ^o 7	9 ^o 4	4 ^o 0	28 ^o 8
10 ^o 0	43 ^o 8	37 ^o 3	10 ^o 3	21 ^o 0	43 ^o 3	10 ^o 2	24 1 ^o 8	16 ^o 7	10 ^o 2	6 ^o 3	2 ^o 0
10 ^o 0	50 ^o 8	3 ^o 1	10 ^o 2	27 ^o 2	13 ^o 9	8 ^o 6	5 ^o 3	11 ^o 1	8 ^o 7	8 ^o 5	36 ^o 6
10 ^o 0	10 2 ^o 3	50 ^o 7	9 ^o 7	31 ^o 0	54 ^o 4	10 ^o 2	14 ^o 3	26 ^o 0	10 ^o 2	15 ^o 5	2 ^o 0
10 ^o 3	8 ^o 1	9 ^o 8	10 ^o 3	32 ^o 5	4 ^o 4	9 ^o 8	26 ^o 8	23 ^o 1	10 ^o 2	16 ^o 0	9 ^o 2
9 ^o 4	9 ^o 3	26 ^o 0	10 ^o 2	41 ^o 5	17 ^o 8	10 ^o 0	29 ^o 3	51 ^o 2	10 ^o 2	38 ^o 0	21 ^o 0
6 ^o 6	12 ^o 3	24 ^o 7	8 ^o 9	45 ^o 0	22 ^o 6	10 ^o 2	31 ^o 3	51 ^o 0	9 ^o 2	40 ^o 5	22 ^o 1
8 ^o 2	13 ^o 3	11 ^o 2	10 ^o 0	54 ^o 0	24 ^o 9	10 ^o 2	32 ^o 8	51 ^o 9	9 ^o 8	47 ^o 5	53 ^o 8
7 ^o 8	14 ^o 3	14 ^o 6	10 ^o 2	17 11 ^o 0	47 ^o 4	9 ^o 4	33 ^o 3	52 ^o 1	7 ^o 7	51 ^o 3	2 ^o 8
8 ^o 5	15 ^o 3	15 ^o 9	10 ^o 3	13 ^o 0	2 ^o 6	9 ^o 2	33 ^o 3	58 ^o 1	10 ^o 0	10 ^o 2	51 ^o 5
9 ^o 8	17 ^o 8	56 ^o 2	10 ^o 2	13 ^o 2	25 ^o 6	7 ^o 5	55 ^o 0	57 ^o 8	7 ^o 5	9 ^o 3	53 ^o 9
8 ^o 8	19 ^o 3	35 ^o 5	9 ^o 2	41 ^o 5	21 ^o 0	8 ^o 9	25 8 ^o 3	20 ^o 8	9 ^o 5	53 ^o 9	5 ^o 8
10 ^o 0	25 ^o 8	14 ^o 4	9 ^o 4	45 ^o 5	10 ^o 0	10 ^o 2	18 ^o 3	57 ^o 9	8 ^o 4	29 0 ^o 9	8 ^o 0
9 ^o 2	28 ^o 3	13 ^o 6	10 ^o 0	49 ^o 0	37 ^o 6	8 ^o 9	18 ^o 3	45 ^o 0	9 ^o 9	7 ^o 4	37 ^o 5
10 ^o 3	29 ^o 3	38 ^o 3	8 ^o 2	54 ^o 2	46 ^o 3	8 ^o 8	19 ^o 8	58 ^o 9	9 ^o 0	16 ^o 9	55 ^o 2
10 ^o 0	29 ^o 8	6 ^o 3	10 ^o 3	59 ^o 5	9 ^o 4	9 ^o 7	20 ^o 8	48 ^o 6	9 ^o 0	17 ^o 9	6 ^o 2
10 ^o 3	33 ^o 1	28 ^o 6	10 ^o 3	59 ^o 7	9 ^o 3	9 ^o 6	37 ^o 3	41 ^o 0	9 ^o 0	23 ^o 9	47 ^o 2
10 ^o 3	33 ^o 3	24 ^o 0	9 ^o 7	18 10 ^o 2	14 ^o 0	10 ^o 2	44 ^o 8	37 ^o 4	10 ^o 2	25 ^o 9	56 ^o 5
9 ^o 2	38 ^o 8	6 ^o 2	10 ^o 2	12 ^o 7	56 ^o 9	9 ^o 8	47 ^o 3	30 ^o 0	10 ^o 2	28 ^o 4	39 ^o 3
9 ^o 4	39 ^o 3	50 ^o 2	9 ^o 6	16 ^o 9	1 ^o 3	9 ^o 6	47 ^o 8	7 ^o 2	9 ^o 8	28 ^o 9	30 ^o 4
9 ^o 7	45 ^o 3	6 ^o 0	8 ^o 6	23 ^o 7	51 ^o 1	9 ^o 2	52 ^o 8	35 ^o 1	9 ^o 8	31 ^o 5	2 ^o 7
9 ^o 6	45 ^o 8	23 ^o 3	8 ^o 5	39 ^o 2	28 ^o 1	9 ^o 2	53 ^o 3	32 ^o 2	9 ^o 8	52 ^o 9	23 ^o 8
10 ^o 0	46 ^o 8	7 ^o 9	9 ^o 8	51 ^o 0	49 ^o 0	9 ^o 8	54 ^o 8	33 ^o 6	10 ^o 2	57 ^o 9	34 ^o 0
8 ^o 2	47 ^o 3	12 ^o 5	8 ^o 4	19 13 ^o 2	25 ^o 9	9 ^o 7	54 ^o 8	18 ^o 6	9 ^o 3	30 1 ^o 4	18 ^o 3
9 ^o 1	47 ^o 8	49 ^o 8	9 ^o 1	19 ^o 2	15 ^o 3	9 ^o 5	26 3 ^o 3	13 ^o 4	9 ^o 6	2 ^o 4	2 ^o 1
9 ^o 7	47 ^o 8	21 ^o 5	10 ^o 3	23 ^o 2	46 ^o 6	9 ^o 9	4 ^o 3	23 ^o 0	10 ^o 2	3 ^o 9	15 ^o 2
10 ^o 0	52 ^o 3	9 ^o 3	9 ^o 2	34 ^o 2	31 ^o 0	10 ^o 2	5 ^o 5	2 ^o 2	7 ^o 7	4 ^o 9	47 ^o 6
8 ^o 8	53 ^o 1	32 ^o 1	9 ^o 6	34 ^o 2	29 ^o 9	9 ^o 0	6 ^o 5	31 ^o 0	9 ^o 6	7 ^o 4	50 ^o 7
9 ^o 2	53 ^o 3	47 ^o 1	9 ^o 4	48 ^o 7	58 ^o 7	8 ^o 4	13 ^o 0	28 ^o 1	10 ^o 2	14 ^o 9	38 ^o 6
10 ^o 3	59 ^o 3	34 ^o 9	9 ^o 2	53 ^o 2	22 ^o 3	8 ^o 6	14 ^o 5	3 ^o 3	9 ^o 4	16 ^o 9	19 ^o 2
9 ^o 4	II 2 ^o 8	34 ^o 4	9 ^o 4	57 ^o 2	4 ^o 5	9 ^o 4	15 ^o 0	40 ^o 6	9 ^o 4	16 ^o 9	33 ^o 1
8 ^o 8	10 ^o 0	0 ^o 6	10 ^o 2	20 10 ^o 2	3 ^o 5	8 ^o 4	15 ^o 0	24 ^o 8	8 ^o 9	23 ^o 9	20 ^o 4
10 ^o 3	10 ^o 3	41 ^o 6	10 ^o 2	12 ^o 2	31 ^o 9	10 ^o 2	18 ^o 0	4 ^o 6	7 ^o 8	25 ^o 9	58 ^o 5
10 ^o 3	11 ^o 3	39 ^o 1	10 ^o 2	19 ^o 2	5 ^o 3	9 ^o 4	24 ^o 5	30 ^o 8	8 ^o 1	28 ^o 4	54 ^o 8
9 ^o 7	13 ^o 1	15 ^o 4	9 ^o 2	22 ^o 2	9 ^o 5	9 ^o 7	24 ^o 8	0 ^o 9	8 ^o 8	31 ^o 9	24 ^o 4
9 ^o 6	20 ^o 3	5 ^o 9	10 ^o 3	45 ^o 7	37 ^o 3	9 ^o 2	25 ^o 0	28 ^o 2	9 ^o 9	35 ^o 4	59 ^o 8
10 ^o 3	22 ^o 1	48 ^o 2	8 ^o 2	51 ^o 2	53 ^o 9	9 ^o 4	28 ^o 5	29 ^o 6	10 ^o 2	37 ^o 4	23 ^o 6
10 ^o 3	41 ^o 5	4 ^o 6	10 ^o 0	52 ^o 2	10 ^o 9	8 ^o 9	29 ^o 0	5 ^o 2	9 ^o 9	41 ^o 4	31 ^o 0
10 ^o 2	47 ^o 2	24 ^o 2	10 ^o 2	54 ^o 2	9 ^o 5	10 ^o 1	29 ^o 1	28 ^o 3	10 ^o 2	42 ^o 9	21 ^o 0
10 ^o 2	47 ^o 5	17 ^o 4	9 ^o 6	21 3 ^o 7	37 ^o 2	9 ^o 3	31 ^o 5	9 ^o 7	10 ^o 2	55 ^o 9	4 ^o 6
10 ^o 1	52 ^o 2	54 ^o 6	9 ^o 7	8 ^o 2	7 ^o 2	9 ^o 8	32 ^o 1	28 ^o 9	9 ^o 3	31 7 ^o 9	3 ^o 2
8 ^o 3	12 5 ^o 5	44 ^o 2	9 ^o 8	11 ^o 2	18 ^o 1	6 ^o 6	33 ^o 5	29 ^o 4	9 ^o 7	10 ^o 9	3 ^o 2
8 ^o 6	16 ^o 8	57 ^o 3	9 ^o 4	27 ^o 2	33 ^o 4	9 ^o 7	35 ^o 5	8 ^o 4	10 ^o 2	12 ^o 4	16 ^o 0
10 ^o 3	33 ^o 0	28 ^o 6	9 ^o 0	36 ^o 2	26 ^o 3	9 ^o 8	36 ^o 5	14 ^o 9	9 ^o 6	13 ^o 9	3 ^o 4
10 ^o 1	39 ^o 0	34 ^o 1	10 ^o 3	39 ^o 7	21 ^o 4	9 ^o 7	40 ^o 1	3 ^o 0	9 ^o 9	14 ^o 9	14 ^o 8
8 ^o 4	45 ^o 8	1 ^o 8	9 ^o 2	46 ^o 2	10 ^o 6	10 ^o 2	46 ^o 5	13 ^o 0	9 ^o 2	18 ^o 4	29 ^o 3
25pr.	+ 1 37 ^o 6	- 1 ^o 8		+ 1 37 ^o 8	- 1 ^o 5		+ 1 37 ^o 9	- 1 ^o 3		+ 1 37 ^o 9	- 1 ^o 1

4921-4980.				4981-5040.				5041-5100.				5101-5160.			
mag.	17 ^h .	-32°		mag.	17 ^h .	-32°		mag.	17 ^h .	-32°		mag.	17 ^h -18 ^h .	-32°	
	m	s			m	s			m	s		m	s		
9.8	43	27.0	0.5	10.0	49	3.0	40.7	8.5	53	32.4	42.5	10.4	57	30.4	16.2
9.7		33.1	13.8	9.5		11.0	16.8	10.4		34.4	53.4	10.4		33.0	2.5
10.2		36.0	1.4	9.8		13.0	37.5	9.8		39.4	37.3	9.6		34.5	48.2
9.0		41.6	15.0	9.6		14.0	56.9	10.4		43.9	58.0	10.4		35.5	42.3
9.3		41.6	53.2	10.1		15.5	11.7	10.2		50.9	14.7	10.4		38.5	26.2
9.2		53.5	1.2	9.4		19.0	50.2	9.4		53.9	46.2	10.4		44.0	43.8
9.5		54.1	50.5	8.2		21.2	1.9	8.4		54.0	3.1	10.1		45.5	32.1
10.2		56.1	49.9	10.1		25.8	56.9	9.4		54.9	16.9	10.2		53.0	10.7
9.8		57.6	42.5	9.9		32.0	28.8	9.8		57.4	48.7	8.9		53.0	40.3
9.8		57.6	22.9	10.4		33.0	48.9	9.2	54	2.7	42.3	10.4		55.5	13.9
9.5	44	3.1	32.1	9.8		33.5	17.8	10.4		2.9	33.0	9.8		56.0	24.9
9.7		4.1	25.9	10.2		36.0	57.9	9.8		3.7	1.0	8.8		59.5	40.2
10.2		10.6	45.0	9.8		37.0	45.0	9.6		5.4	34.5	9.8	58	4.0	5.9
9.6		18.9	57.6	10.2		42.0	20.6	9.6		7.4	58.0	9.2		7.0	34.1
9.4		23.3	2.4	9.9		43.5	55.8	9.9		22.9	8.0	9.5		11.5	5.9
10.2		36.1	22.5	10.4		44.0	46.1	10.1		23.9	4.2	8.5		33.0	23.5
9.8		48.6	31.0	9.6		54.0	44.5	10.4		23.9	21.1	9.6		37.0	33.5
10.0		50.1	17.6	8.7		57.3	58.0	9.8		28.9	52.7	9.4		44.0	30.3
10.2		51.6	38.6	10.4	50	3.5	56.1	8.9		39.9	48.1	9.9		53.0	48.6
8.2	45	4.1	0.0	9.6		8.0	18.8	10.4		45.4	28.3	10.1		55.5	48.3
9.4		9.6	42.9	9.0		10.5	53.6	10.1	55	2.9	19.3	10.1		58.0	44.1
9.8		13.5	0.0	9.6		11.0	42.4	10.4		2.9	0.9	10.4		59	1.5
8.8		15.5	27.5	10.4		15.0	27.1	10.1		4.4	21.9	10.4		15.0	13.8
10.2		31.6	53.4	8.6		15.5	23.8	9.8		17.7	26.6	10.4		19.5	14.7
10.2		31.8	43.7	9.6		17.0	36.1	9.8		18.9	34.1	10.1		22.5	57.0
10.4		33.0	47.5	10.4		22.0	57.7	8.6		32.9	27.5	10.1		27.0	33.1
10.1		37.5	21.3	9.6		26.9	30.4	9.5		36.4	42.5	10.0		27.0	20.3
10.0		41.1	9.4	9.4		37.9	57.1	8.9		37.9	52.5	10.4		28.5	29.9
8.5		43.0	26.8	9.9		37.9	14.7	10.2		39.4	48.5	9.8		31.5	30.9
10.4		45.3	51.0	9.9	51	3.9	32.9	9.8		40.4	19.7	9.8		38.0	6.0
10.4		50.2	31.3	9.4		6.9	59.0	9.6		41.4	26.7	9.5		43.0	25.6
10.0	46	1.1	19.8	9.4		9.4	46.0	10.0		42.2	57.0	10.4		45.0	46.8
10.1		16.3	40.9	10.4		12.9	51.5	10.4		54.0	1.1	8.9		48.5	54.4
8.9		33.5	58.7	9.9		15.9	13.9	10.4		56.9	57.3	10.0		57.5	33.1
10.1		34.0	29.2	10.4		16.4	32.1	9.6		56.9	51.3	9.6	0	5.0	24.7
9.1		39.1	5.2	10.4		19.9	27.3	9.2		58.4	30.7	10.4		5.5	27.4
10.2		52.5	2.9	10.4		24.9	25.5	8.9	56	1.4	19.0	10.4		17.5	16.6
9.4		52.5	57.2	9.8		26.9	47.5	9.1		2.9	38.7	10.4		20.5	53.4
9.9		59.0	13.6	9.6		34.4	12.5	9.9		5.9	43.1	10.4		22.0	44.6
9.4	47	4.0	54.8	9.1		43.4	24.5	10.4		12.4	26.9	10.4		23.5	50.2
10.4		30.0	50.2	8.9		45.4	29.7	9.2		12.9	36.9	10.1		27.5	5.9
9.2		35.5	19.2	9.4		46.9	22.2	9.4		13.4	10.9	10.0		36.5	48.1
9.9		37.3	59.5	10.4		49.4	55.9	9.2		17.9	35.4	10.1		38.5	26.5
10.4		39.0	39.0	9.2		52.9	39.1	10.4		20.4	59.1	10.0		40.5	50.6
10.0		40.0	49.6	9.9		59.4	19.3	8.6		22.9	59.9	9.4		43.0	49.8
10.0		45.0	44.6	10.1	52	3.4	56.7	9.6		26.9	16.7	8.9		47.5	54.5
9.6		57.0	55.9	9.8		12.9	51.6	10.4		27.9	12.5	9.6		48.0	27.3
9.8		59.5	33.8	9.2		21.9	54.1	9.6		33.9	38.7	9.2		48.0	46.0
9.9	48	3.0	50.4	10.4		22.9	24.9	9.2		36.4	14.3	10.4	I	1.0	0.9
7.7		5.5	27.0	9.9		23.9	46.9	10.0		45.7	59.5	10.4		6.0	5.9
10.1		9.5	54.9	9.8		27.9	59.9	10.2		46.4	15.7	10.4		8.0	38.7
9.8		18.0	24.2	9.5		28.4	53.6	10.4		52.9	53.1	10.2		8.5	52.6
10.0		20.5	0.7	10.4		35.4	13.9	9.1	57	4.9	15.7	9.6		9.5	7.3
9.8		22.0	10.2	9.9		36.4	51.5	10.4		10.4	27.9	9.6		12.0	8.4
9.9		26.0	5.9	9.9		45.2	2.0	10.1		11.4	32.9	10.1		15.0	13.1
10.4		34.8	2.3	10.1		48.9	45.7	9.8		15.4	27.3	10.2		16.0	5.1
7.6		38.5	39.9	9.8		50.4	12.1	9.2		23.9	12.3	10.4		24.7	2.1
10.4		49.5	8.9	8.5	53	7.9	43.6	9.2		25.9	50.9	10.4		33.0	13.9
9.6	49	2.5	30.4	9.4		25.4	54.9	9.6		27.7	1.1	9.5		33.5	40.3
9.4		3.0	22.9	10.0		27.9	4.1	10.4		27.9	13.7	9.5		34.0	25.2
25pr.	+ 1	38.1	-0.5	+ 1	38.1	-0.3		+ 1	38.1	-0.1		+ 1	38.1	0.0	

5161-5220.				5221-5280.				5281-5340.				5341-5400.			
mag.	18h.	-32°		mag.	18h.	-32°		mag.	18h.	-32°		mag.	18h.	-32°	
9.6	1	36.5	17.5	10.4	5	35.4	41.7	10.1	9	39.2	51.5	10.3	14	33.7	46.3
8.7		45.0	34.2	10.4		46.0	47.4	9.0		42.7	15.7	8.7		43.7	55.5
7.9		48.0	43.9	9.2		47.4	30.4	9.8		53.2	4.8	10.3		49.8	59.2
9.8		51.5	55.5	8.9		47.4	14.4	8.8	10	3.7	30.0	10.0	15	14.7	56.6
8.0		54.0	9.7	10.4		48.0	14.6	10.4		5.2	12.2	9.2		20.7	8.5
10.4		55.5	41.0	9.2		52.4	10.6	10.4		9.7	12.7	9.8		20.7	50.3
10.4		56.0	43.4	10.4		53.4	15.4	9.2		19.4	34.6	10.2		26.2	8.1
9.8		58.0	26.4	9.2		58.4	10.1	9.6		21.5	5.8	10.2		29.7	54.3
10.2		59.5	18.5	10.2		58.9	49.4	9.8		28.2	51.9	10.0		37.7	25.8
9.5		59.5	30.1	9.6	6	10.4	25.6	10.3		30.2	6.9	9.3		53.2	54.7
9.6	2	4.0	22.3	8.5		13.4	34.3	10.3		33.7	27.8	9.5		57.2	28.9
8.9		26.0	50.5	9.8		21.4	28.5	10.3		39.2	58.7	10.3	16	6.5	59.1
9.5		26.0	16.4	8.8		26.3	58.6	10.3		41.7	54.6	10.3		26.7	39.8
10.4		31.5	3.2	9.8		27.4	32.3	10.0		53.7	48.2	8.4		27.2	21.1
9.8		33.0	17.3	10.4		32.9	33.8	9.6	11	1.5	32.1	8.9		30.2	25.7
10.4		35.5	4.7	10.0		32.9	25.8	9.2		20.5	6.5	9.6		33.2	52.1
9.8		46.5	3.5	10.4		32.9	12.0	10.2		26.0	31.2	10.0		40.5	41.2
10.2		54.0	51.5	10.4		37.9	10.9	10.2		40.0	55.1	9.6	17	2.0	14.7
10.4		54.0	27.2	9.2		39.4	14.8	10.2		40.5	14.6	9.8		9.0	20.6
10.4		57.0	35.9	10.2		39.4	6.1	9.3		52.5	18.8	9.6		24.5	12.6
10.1	3	0.5	38.9	9.6		49.2	14.9	10.3		53.0	24.6	9.6		33.5	9.2
10.4		1.5	35.7	10.4		53.7	17.8	8.9		54.0	25.0	8.4		41.5	54.6
10.4		2.5	32.9	9.5		55.2	56.1	9.8		56.0	57.4	10.3		52.0	55.1
9.9		6.5	50.9	10.4	7	12.7	37.4	8.5		56.5	23.3	10.2	18	3.5	29.6
9.0		7.0	12.5	9.9		15.2	51.8	9.8	12	1.5	45.0	10.3		10.5	11.8
9.9		7.0	32.3	10.4		18.2	47.8	8.2		2.0	25.3	10.3		16.5	25.2
10.4		10.0	0.9	10.4		25.2	51.6	9.8		2.5	49.4	8.8		23.5	50.6
10.1		10.5	20.9	8.0		26.7	22.5	8.1		7.0	23.6	8.5		32.8	58.8
9.8		13.0	17.9	10.4		29.4	58.9	9.8		7.5	26.8	10.2		36.0	26.2
9.8		18.0	54.5	10.1		30.2	48.8	9.0		8.0	43.7	10.3		44.5	17.2
9.9		27.0	52.3	10.4		33.5	6.1	9.8		11.0	8.8	9.9		46.5	53.0
8.4		28.0	25.6	9.9		33.7	52.5	10.3		13.0	7.2	10.0		56.5	31.3
9.6		38.0	12.7	10.0		34.6	2.4	9.8		14.0	20.2	9.8		58.5	45.0
8.2		45.5	40.5	10.4		41.2	43.5	10.2		14.0	15.5	10.0		59.0	8.8
10.4		58.5	15.7	10.4		43.7	3.0	9.4		16.0	50.9	10.3	19	3.5	1.1
9.8		59.0	49.9	10.4		49.2	12.7	9.2		16.0	12.7	9.6		5.5	12.5
8.8	4	4.0	18.2	10.4		53.2	20.1	10.2		17.5	3.2	10.3		10.5	49.8
9.5		10.5	10.7	9.6		56.7	43.3	10.2		23.0	43.8	9.9		13.5	23.2
9.9		12.5	16.9	10.4	8	1.7	42.6	8.4		25.5	24.0	9.5		26.5	27.8
10.4		27.0	51.3	10.0		3.7	21.0	10.3		27.0	7.3	9.8		27.0	46.0
9.2		27.5	19.5	9.8		7.2	30.8	10.3		36.7	0.3	8.3		36.0	11.2
10.1		32.5	35.5	9.2		10.7	32.6	10.2		43.5	39.0	9.8		43.0	26.0
9.6		33.9	14.7	10.0		11.7	53.1	10.0		56.0	18.5	10.2		44.0	13.0
10.1		37.9	21.9	9.2		12.2	3.9	10.3	13	9.0	7.1	9.8		59.5	1.0
10.1		43.4	25.8	10.2		16.2	25.2	7.8		11.5	14.0	7.6	20	1.0	32.4
10.4		43.9	29.8	9.8		23.7	5.9	9.8		12.0	26.9	10.0		1.0	33.8
10.4		46.0	50.8	9.8		35.7	4.4	10.2		17.7	26.9	9.8		5.0	51.6
9.2		49.4	17.2	9.9		44.2	41.8	8.6		21.2	18.1	10.3		7.0	3.0
9.2		53.4	5.7	9.8		46.2	39.9	10.3		26.2	3.0	10.2		10.5	29.6
9.9		53.9	24.6	10.4		46.7	35.2	10.2		27.7	17.9	10.3		18.0	35.0
10.4		53.9	29.3	9.8		46.7	58.9	10.3		28.2	26.3	10.0		22.5	19.4
9.0		54.4	44.9	10.4		46.7	43.3	9.5		36.7	50.0	10.3		36.5	53.2
8.8	5	2.4	24.9	8.7		48.2	24.5	10.2		41.7	59.0	10.3		36.6	4.8
9.4		2.9	10.8	9.2	9	2.7	31.9	10.3		43.7	46.6	9.0		43.1	55.2
9.2		9.9	20.0	9.2		2.7	46.9	10.0		46.5	46.0	10.3	21	17.8	58.0
9.2		13.4	16.1	9.8		3.7	49.7	9.8		46.7	5.3	10.3		22.6	6.8
9.6		14.9	43.4	8.0		4.4	58.7	8.5		47.2	6.0	10.3		23.6	31.0
10.0		28.4	37.3	10.4		15.7	36.0	10.3	14	5.2	50.6	8.1		23.6	51.6
9.2		29.4	32.0	8.6		22.7	47.9	9.5		7.2	17.2	9.3		24.1	42.2
9.5		33.4	17.9	9.2		28.4	32.0	9.6		16.2	16.1	9.8		26.1	30.8
25pr.		+ 1 381	+ 01			+ 1 381	+ 03			+ 1 381	+ 04			+ 1 380	+ 07

5401—5460.				5461—5520.				5521—5580.				5581—5640.			
18 ^{h.}		—32°		18 ^{h.}		—32°		18 ^{h.}		—32°		18 ^{h.}		—32°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
8.8	21	27.6	18.1	9.6	29	36.7	52.0	9.2	36	28.8	32.1	10.4	41	51.8	56.7
9.2		28.1	2.0	9.6		37.7	57.9	9.9		34.8	27.3	10.4		57.8	48.7
10.3		29.7	0.2	10.2	30	0.2	17.3	10.4		35.5	57.9	9.9	42	7.8	47.3
10.3		33.9	2.2	8.6		2.2	18.8	10.3		38.8	10.1	9.6		16.8	45.6
10.2		57.1	31.0	7.8		8.7	47.2	9.0		46.8	0.6	9.6		24.8	25.3
9.1	22	13.6	12.7	10.2		13.7	44.5	10.3		53.8	49.5	10.4		34.8	39.0
10.0		16.6	25.7	10.2		17.2	47.8	8.8		55.8	40.1	9.6		45.8	41.9
8.2	23	1.6	22.2	10.3		32.2	22.5	10.3	37	11.8	30.3	10.0		51.8	23.2
neb.		13.6	25.9	9.4		32.4	58.3	9.6		18.8	11.7	10.4		52.8	0.9
10.3		24.6	15.2	10.2		43.1	57.2	9.6		18.8	14.7	10.4		56.8	24.3
10.2		30.6	16.7	10.2		53.9	2.2	9.6		23.8	0.6	9.0	43	4.8	48.9
9.9		49.6	45.5	10.2		57.2	12.3	9.7		25.8	20.3	10.4		7.3	22.0
9.6		56.6	37.4	9.3	31	1.7	3.2	9.7		40.3	51.2	9.9		11.8	25.8
8.8	24	3.1	13.7	9.3		2.2	49.6	10.4		48.8	5.5	10.4		13.8	28.7
8.0		8.6	40.4	9.4		10.2	25.6	9.0		51.3	19.3	9.6		14.8	8.4
10.2		14.9	1.2	9.6		13.7	52.0	9.4		53.8	31.0	9.6		15.8	54.6
10.3		19.6	53.8	8.5		16.7	31.9	10.3		59.3	41.5	9.6		15.8	55.3
10.2		38.6	9.1	8.6		17.2	8.6	9.6	38	1.8	24.5	9.7		16.8	16.5
10.3	25	3.6	55.0	10.2		27.7	13.0	10.4		3.8	29.3	9.4		47.8	47.0
10.3		7.1	38.1	10.3		41.9	59.0	10.4		4.8	24.0	10.4		49.8	41.3
10.3		13.1	20.0	9.1		44.7	11.0	9.8		8.8	7.6	9.2		51.8	26.0
10.3		17.6	9.6	9.9		50.7	38.8	9.9		8.8	38.9	10.4		52.3	44.9
10.3		30.5	10.0	9.2		51.7	17.1	9.7		11.8	8.7	9.4		58.2	2.6
8.8		37.8	53.6	10.3	32	0.2	24.6	8.1		28.5	2.2	9.9		58.3	49.0
10.2		40.3	35.3	10.3		3.3	57.2	10.4		43.8	39.9	10.2	44	2.8	9.7
10.2		45.9	58.0	10.2		3.6	48.1	10.4		44.3	50.2	10.0		4.8	16.3
10.0		51.8	19.2	10.2		32.2	24.7	10.0		57.0	0.1	10.4		15.0	57.9
9.5	26	1.3	20.2	9.3		35.6	25.1	10.4	39	0.3	35.4	10.4		25.8	41.2
10.2		2.8	44.0	10.3		43.6	43.3	9.4		4.8	39.0	9.5		34.3	22.8
10.3		3.8	51.0	8.5		43.6	7.6	8.5		14.8	46.6	9.7		34.8	13.3
9.0		6.3	48.0	9.6		53.6	1.4	9.4		22.3	31.4	10.4		39.3	56.4
10.3		13.8	18.0	10.3		58.7	16.9	9.9		23.8	53.1	10.2		41.3	8.7
10.3		33.8	40.4	8.6		59.6	49.4	9.2		27.3	35.7	10.3		43.3	51.6
10.0		35.8	41.7	9.8	33	1.6	51.2	8.2		28.8	41.5	9.6		43.8	26.2
9.6		42.8	49.2	10.3		22.6	29.5	10.4		38.8	5.1	9.8		44.8	21.4
10.3		46.8	59.3	10.0		29.1	23.1	9.9		39.8	7.0	9.1		47.8	25.3
10.3	27	0.8	46.1	10.3		33.6	53.1	10.3		41.2	59.1	9.5		52.8	41.3
9.3		3.8	34.6	8.6		42.1	24.4	10.4		46.5	1.6	10.3		53.8	53.9
7.6		14.8	59.2	9.9		50.6	12.2	8.8		47.8	18.1	10.3		54.8	48.2
10.2		25.0	2.9	10.3		54.3	11.9	10.3		48.3	6.3	9.2		55.8	50.5
10.2		39.3	24.3	7.8	34	2.1	28.9	8.8		51.8	15.0	9.8	45	1.8	12.3
10.2		46.8	13.6	10.2		3.1	29.6	10.2		56.3	54.3	9.7		10.8	44.1
10.0		58.8	19.8	9.8		34.8	6.5	9.6	40	3.3	54.1	9.5		24.8	43.8
8.7	28	5.8	41.8	8.1		51.5	52.0	9.4		8.8	37.0	9.7		27.8	34.3
10.2		6.8	45.1	10.4	35	1.8	34.3	10.4		20.8	50.4	9.9		27.8	49.1
9.4		11.8	23.8	9.6		3.8	21.2	9.6		27.8	59.6	8.4		34.8	8.4
9.4		12.8	25.4	neb.		4.8	24.5	9.1		27.8	18.9	10.0		34.8	54.0
10.2		20.8	47.1	10.3		7.8	23.4	10.2		36.3	0.2	9.9		38.8	6.1
10.2		22.8	51.0	10.3		8.8	20.7	9.4		36.8	21.5	10.2		38.8	55.1
10.3		25.8	16.2	9.0		17.8	17.6	10.4		45.2	59.6	9.5		43.8	42.7
10.3		31.8	5.2	9.6		18.8	47.0	9.7		46.3	22.9	10.2		51.3	50.3
10.3		36.8	52.2	9.5		33.8	15.5	10.0		51.8	21.5	9.9		54.8	50.0
10.2		42.3	7.0	9.4		34.3	36.5	7.6		53.8	50.7	8.8		54.8	19.9
10.3		43.3	45.1	10.3		41.3	44.0	9.5		53.8	43.9	10.3		57.8	20.3
10.0		48.8	6.5	8.8		41.8	36.1	8.6	41	14.8	22.5	9.2	46	13.8	47.5
10.0		48.8	6.8	9.7		43.8	59.6	9.7		19.3	6.3	10.4		18.8	28.3
10.2		50.8	14.8	9.4		48.8	36.0	10.4		39.3	6.6	8.8		20.3	35.0
9.8		54.8	27.7	8.8		48.8	9.8	10.4		42.8	52.4	9.7		30.8	40.7
10.2	29	5.7	49.0	9.2		58.8	34.9	9.6		45.8	10.6	10.0		51.3	33.2
9.2		6.2	42.4	10.4	36	16.8	14.2	10.0		45.8	21.2	10.2		54.8	45.5
25pr.	+1	37.9	+0.9	+1	37.9	+1.2		+1	37.8	+1.4		+1	37.7	+1.6	

5641-5700.			5701-5760.			5761-5820.			5821-5880.									
mag.	18 ^h .	-32°	mag.	18 ^h .	-32°	mag.	18 ^h -19 ^h .	-32°	mag.	19 ^h .	-32°							
10.4	46	58.3	33.3	10.4	53	3.8	28.6	9.5	59	52.0	13.2	9.0						
10.0		58.8	32.3	10.0		7.8	4.5	10.0		53.5	58.6	10.3	7	37.0	41.1			
8.4	47	4.8	36.5	8.5	10.3		7.8	7.9	9.7		54.5	24.5	9.9		52.0	4.7		
9.6		11.8	22.0	10.4		15.8	13.1	8.9	0	0.0	41.7	9.5	9.1		53.5	13.9	9.0	
8.8		12.3	41.4	8.5	10.0		18.8	44.5	9.9		28.0	56.2	10.0		56.0	44.8		
9.7		18.8	24.1	10.3		23.3	34.7	10.0		36.0	17.9	9.7		57.5	49.7			
10.3		23.8	14.9	9.8		25.8	22.9	10.0		37.5	59.1	10.3	8	2.0	52.1			
8.6		25.8	10.7	8.5 -	9.6		37.8	33.7	10.3		46.5	13.7	9.8		4.0	4.1		
9.5		41.3	18.9	8.3		44.8	46.3	8.0 G-	10.0	I	3.5	1.7	9.1		19.0	29.1		
10.4		55.8	38.7	9.7		49.8	19.3	9.8		27.5	19.0	9.5		26.5	51.8			
10.2	48	3.8	50.1	9.6		55.8	21.0	9.5	9.9		30.5	43.8	7.8		37.0	6.1	7.0 GW=	
10.0		7.8	34.3	8.8	54	2.7	21.1	9.0 -	9.6		32.5	25.9	10.3		38.5	53.9		
10.0		8.8	52.1	9.7		4.7	5.8	9.9		33.2	41.5	8.7		45.0	3.7	8.5 W		
8.6		44.8	30.7	8.5 -	10.4		7.9	57.4	8.7		38.2	7.1	9.5 -	8.7		52.5	6.8	9.0
10.0		44.8	51.9	9.5		30.7	13.6	10.0		41.7	28.6	10.0	9	5.1	1.1			
10.4		58.8	8.1	9.9		38.7	11.7	8.4		42.7	27.0	9.0	9.7		6.0	45.8		
9.0	49	22.8	45.9	9.5	9.9		51.2	15.9	9.8		44.2	53.7	8.7		16.5	49.7		
10.2		29.8	11.9	8.0		54.2	55.4	8.0 G-	9.0		44.7	42.5	9.6		22.5	28.3		
9.8		41.5	1.3	10.2		54.2	12.3	10.2		47.7	53.0	9.6		23.0	44.3			
9.7		47.8	9.4	9.7		55.7	38.8	9.0		56.7	37.7	8.6		26.0	43.0	8.5		
10.4		50.8	46.0	9.9	55	12.7	34.3	10.0	2	11.2	23.6	10.3		33.0	21.0			
9.8		51.8	19.3	9.4		14.7	41.9	9.0 G	10.3		16.2	59.9	8.2		45.5	54.3	9.0	
10.3		53.8	22.3	9.8		32.9	56.6	10.3		16.2	50.0	9.4		47.0	46.0			
9.7		55.8	45.7	10.4		40.4	15.9	10.0		26.2	29.0	10.3		47.0	23.3			
10.4		57.3	53.3	9.8		47.2	59.3	9.8		34.2	20.1	10.2	10	18.5	38.8			
9.5		57.8	47.4	10.2		49.2	46.1	9.5		42.7	15.3	9.8		24.0	56.8			
9.2	50	1.3	24.6	9.8		55.4	21.9	8.6		43.2	35.5	9.0	10.2		26.0	39.0		
10.3		4.8	33.6	10.4	56	4.4	40.1	10.3		43.2	41.0	10.3		30.5	55.1			
9.9		7.8	53.6	10.3		4.7	22.6	10.3		43.2	1.9	9.9		30.6	2.0			
9.5		8.8	32.2	9.2		7.7	22.7	9.5	9.7		47.2	56.9	9.1		43.0	14.9		
10.3		9.6	26.8	10.3		12.2	46.9	8.2		48.3	0.5	8.0 G	9.4		47.5	22.9		
8.2		10.8	20.1	-	10.2		13.7	41.8	10.0	3	7.2	46.1	10.3		56.0	25.0		
10.3		12.8	14.3	9.9		14.2	28.4	10.3		27.4	2.1	10.2		59.8	54.8			
9.7		15.8	33.6	9.6		17.2	41.2	8.6		36.7	18.2	8.5 -	10.3	11	5.8	35.1		
9.4		15.8	42.1	10.0	10.4		17.4	30.2	9.4		50.7	48.5	G	8.7		5.8	4.4	8.5 W-
9.7		17.8	12.5	10.3		38.2	14.5	8.7		53.2	37.8	9.5	9.1		25.3	42.1		
8.8		21.8	46.9	9.0	9.6		38.7	22.9	8.2		56.2	50.1	8.0 G	10.2		29.8	17.3	
9.9		34.8	24.5	9.2	57	4.2	5.1	10.0	4	19.7	28.9	10.3		31.3	52.3			
9.7		35.8	24.1	8.8		8.7	45.6	9.9	5	8.7	34.5	10.0		34.3	50.8			
10.0		38.9	59.3	8.2		16.7	35.5	9.4		14.2	54.3	10.3		49.3	24.0			
10.0		42.8	13.1	10.0		24.2	49.8	9.7		18.2	27.7	10.2		52.8	16.0			
9.4		45.8	51.0	8.6		44.7	13.8	G	9.0		32.7	27.6	8.9		5.8	29.0		
10.4		47.8	6.8	8.8		44.9	21.3	9.1		33.2	32.7	10.3		7.8	39.0			
9.5	51	1.8	44.7	10.0		47.4	15.2	9.2	6	2.2	52.4	9.0	9.5		17.3	22.4		
9.4		3.1	56.9	9.9	58	5.2	57.0	10.3		4.2	50.1	10.2		19.0	45.3			
9.8		7.8	17.7	9.7		21.1	58.2	10.0		7.2	2.9	8.2		23.8	2.8	7.0 GS-c		
9.6		18.8	38.0	9.7		26.2	14.0	9.4		8.2	27.2	9.5		26.8	5.9			
9.6		27.8	33.5	10.3		35.7	19.5	9.8		17.2	32.4	9.2		40.3	29.2	9.0		
9.8		27.8	22.2	10.4		41.7	3.5	8.6		24.2	38.2	10.2		43.8	55.1			
8.6		42.8	33.3	9.0	10.3		43.2	27.1	10.0		30.0	26.8	9.4		45.8	22.9		
10.0		47.3	33.3	9.8	59	5.9	16.8	9.9		33.5	49.2	9.7		45.8	24.4			
9.9		54.3	52.1	9.7		11.5	50.7	10.0		39.2	3.0	9.2		45.8	43.0			
8.2		55.8	28.3	8.5 -	9.1		13.5	35.3	9.5	9.8		39.5	29.2	10.3		56.3	55.1	
8.0		57.8	25.3	8.0	8.7		16.5	37.1	9.0	9.8		47.0	23.4	10.3		57.0	35.4	
10.3	52	9.8	54.3	9.1		39.5	22.9	7.9	7	23.0	24.7	8.5 G-	10.3	13	0.3	58.5		
10.4		11.8	28.7	8.2		42.5	46.1	8.5 -	8.8		26.0	39.0	9.6		0.3	52.1		
8.8		17.8	24.5	8.5	8.8		45.0	4.6	9.0	10.3		26.8	59.2	10.3		1.8	3.1	
9.7		17.8	51.2	10.0		45.5	28.3	9.8		29.0	6.4	9.8		21.3	40.7			
8.8		24.8	17.7	8.5 G-	9.6		48.5	13.2	10.2		35.5	30.4	10.3		23.8	55.7		
8.8		39.3	55.6	8.9		49.5	39.6	9.0	9.4		36.0	0.3	9.1		45.3	53.3		
25pr.	+1	37.6	+1.8	+1	37.5	+2.0	+1	37.3	+2.3	+1	37.1	+2.5						

5881-5940.			5941-6000.			6001-6060.			6061-6120.		
mag.	19 ^h	-32°	mag.	19 ^h	-32°	mag.	19 ^h	-32°	mag.	19 ^h -20 ^h	-32°
m s	m s	'	m s	m s	'	m s	m s	'	m s	m s	'
9.7	13	45.3	52.8	9.8	20	51.8	2.0	9.6	33	14.8	32.8
9.8		51.3	22.4	9.8	21	5.1	3.4	9.8		20.8	36.9
10.3		51.8	44.3	10.3		6.0	58.0	9.6		21.8	29.5
9.7		53.8	13.1	9.0		7.4	57.5	9.6		30.8	27.2
10.3		58.8	44.5	8.0		22.1	45.8	8.5 -		34	28.8
9.8	14	6.8	31.6	10.3		29.1	51.7	9.6		8.4	34.8
8.2		17.3	38.4	8.8		29.8	0.9	9.2		9.4	36.8
10.2		18.8	42.1	10.0		46.6	31.2	8.5		9.6	37.8
8.2		23.3	10.2	9.0		49.0	9.2	8.5		9.1	35
10.3		29.3	23.4	10.3		55.6	39.7	10.0		35	26.8
										37.3	55.9
9.6		35.5	2.3	10.0		56.8	27.9	10.0		36	7.3
8.8		42.8	44.2	10.2		56.8	35.9	9.8		12.3	50.0
10.3		46.8	0.6	10.2	22	0.1	13.7	9.4		35.8	4.8
10.3	15	1.3	58.6	9.7		7.6	23.2	10.4		42.8	44.9
10.0		1.3	57.0	9.7		10.3	52.2	10.4		49.8	46.0
9.4		1.7	17.3	7.4		12.4	20.7	6.8 GS-		9.6	56.8
10.3		25.7	30.9	8.5		26.0	4.8	9.0 G		8.6	7.3
10.3		26.7	32.2	7.2		52.9	57.3	8.0 GS		9.2	24.8
10.3		27.2	33.0	8.6	23	42.5	8.1	9.5		38	2.8
9.7		32.7	44.0	9.8		47.9	27.7	9.8		3.8	49.5
10.2		36.7	20.9	9.6		47.9	50.5	8.0		36.8	14.1
9.4		38.7	30.0	10.0	24	11.9	3.1	9.6		48.8	27.2
10.2		57.2	38.3	9.2		39.9	13.5	9.1		55.8	8.6
9.1		9.2	10.2	10.0	25	38.4	11.1	10.0		39	41.3
9.6	16	9.2	5.3	9.6		52.8	22.8	9.8		43.8	13.0
10.3		17.2	14.8	9.4		53.5	0.9	9.2		54.6	0.0
8.8		22.7	35.3	8.6	26	6.3	41.8	9.0		40	41.3
10.0		26.0	44.2	10.4		6.8	25.6	9.6		46.8	46.7
10.2		26.0	46.5	9.8		25.3	14.0	10.4		4.1	23.3
9.1		33.2	9.6	9.8		29.3	14.6	9.0		42	1.3
9.4		45.2	27.6	9.6		34.8	27.0	9.6		3.3	46.4
9.1		53.2	8.8	9.6		36.3	13.1	9.8		16.8	14.7
9.4		56.0	58.9	9.0	27	6.8	5.5	10.0		21.8	31.0
10.3		59.2	7.7	10.4		13.5	1.8	10.2		27.3	23.8
9.7		59.7	19.3	10.0		31.8	29.9	7.5		44.3	55.4
9.4	17	1.7	23.8	10.0		34.8	6.5	9.8		43	7.3
8.0		2.7	28.6	8.6		42.8	34.5	9.0		7.8	30.5
10.3		22.7	50.0	9.4		54.7	59.1	9.6		21.8	16.9
9.9		27.7	21.8	9.6	28	15.3	11.0	9.0		25.0	39.3
10.0		37.0	19.9	8.6		19.8	6.4	8.5 =		42	1.3
9.2		49.7	54.2	7.0		33.2	57.9	7.0 GS		9.6	44
9.5		49.7	12.8	10.4		38.3	40.0	9.2		22.8	52.7
9.6		56.7	14.0	8.6		44.8	57.5	10.0		45.3	31.0
9.2	18	1.7	19.2	9.8		46.8	21.2	8.5		45.8	47.4
9.2		2.7	50.9	10.0	29	3.3	51.9	7.4		46.8	17.6
8.4		32.2	55.4	9.4		23.3	15.8	9.8		45	13.8
10.2		41.7	53.4	9.4		37.6	2.4	8.8		15.8	24.4
9.2	19	2.7	23.6	9.2		53.8	17.2	8.6		38.5	59.0
10.2		2.7	15.2	10.4		54.6	49.0	9.6		42.8	56.6
9.5		11.7	45.5	9.8		31	4.3	9.4		49.3	31.0
10.2		19.2	12.2	9.4		6.8	17.8	9.0		46	3.7
9.7		33.2	44.6	10.4		11.3	2.1	9.8		7.8	53.9
9.6		38.2	44.8	10.0		20.8	47.1	10.0		9.5	19.2
10.3		47.2	4.0	8.5		34.3	45.1	8.0 -		9.4	35.3
10.2	20	30.2	48.0	9.6		44.1	2.6	9.5		9.2	56.8
9.4		35.7	33.5	10.2		53.8	55.9	9.8		47	8.6
9.0		36.7	28.9	10.2		57.3	57.0	9.8		41.1	26.0
10.3		37.0	57.0	9.6		32	3.8	41.0		48	35.6
9.0		38.7	14.9	9.2		13.3	45.6	9.0		8.0	32.6
9.9		40.1	34.0	9.1		46.8	29.7	7.8		35.6	57.7
25pr.		+ 1 36.9	+ 2.8			+ 1 36.6	+ 3.1			+ 1 36.0	+ 3.6
										+ 1 35.0	+ 4.3

6121-6180.				6181-6240.				6241-6300.				6301-6360.				
mag.	20 ^h .	-32°		mag.	20 ^h .	-32°		mag.	20 ^h -21 ^h .	-32°		mag.	21 ^h .	-32°		
	m	s	'		m	s	'		m	s	'		m	s	'	
9.6	14	27.7	8.6	10.3	34	2.5	52.2	8.4	48	9.7	1.7	7.5 GS π	10.6	3	33.3	22.1
9.4	15	1.2	47.9	7.4	20.2	29.3	8.0 G-	9.9	15.5	21.4		10.2	49.8	4.7		
9.0	2.7	26.0	9.5	10.8	46.0	14.0		10.0	30.5	30.1		10.6	4	45.8	23.9	
9.3	25.7	56.0		9.9	35	6.2	32.6	8.4	33.0	14.4	8.5	9.2	53.8	35.1		
9.4	29.7	28.4		8.9	17.0	49.0	9.0	9.2	37.5	44.7		9.4	5	5.8	29.0	
9.6	30.7	34.9		9.0	26.2	44.3	9.5!	8.8	53.0	30.7	9.5	10.0	7.8	11.8		
9.1	32.7	51.7		10.8	39.5	25.0		9.2	49	3.0	10.7	9.2 -	10.2	32.3	24.2	
9.9	57.7	37.9		10.4	49.0	6.9		10.4	4.0	31.3		10.2	6	16.3	44.3	
8.7	16	5.7	54.3	10.0	36	14.0	3.5	10.0	5.0	3.9		10.6	29.3	13.3		
9.6	24.2	43.8		10.2	15.5	0.6		10.2	8.0	5.3		9.8	43.8	4.0		
9.4	59.2	15.2		10.2	15.5	14.4		9.0	30.7	1.3		9.5	57.3	56.9		
9.6	17	17.2	56.0	8.0	20.0	22.5	7.8 GS=	9.8	33.0	54.1		10.4	7	12.8	18.6	
9.8	33.2	36.2		10.0	33.0	42.0		10.3	50	7.5	16.3	10.6	21.8	28.3		
8.8	46.7	56.5	8.5 G	10.2	43.5	44.0		10.2	14.0	7.5		9.4	28.3	8.4		
8.8	18	3.2	43.9	10.4	50.6	0.6		8.2	50.0	11.1	8.2 G= π	10.6	42.3	26.1		
9.9	5.7	49.0		9.2	57.0	4.4		10.8	56.0	57.1		8.8	53.8	50.9		
7.8	35.3	44.1	7.5 GS-	10.0	37	16.0	55.0	8.0	51	19.0	7.5	10.2	8	2.3	9.0	
9.4	19	34.8	29.8	10.3	22.5	3.4		9.0	37.0	3.5	9.5	10.0	9.8	51.6		
9.3	39.3	52.1		8.8	30.0	48.7		9.9	41.0	7.9		10.0	15.8	3.2		
8.7	43.3	43.7	8.5	10.8	38.5	27.7		10.8	44.0	58.7		10.0	16.3	20.3		
10.0	20	9.8	9.9	10.8	44.0	15.0		10.8	44.0	49.3		8.0	33.8	19.8	7.5 G-	
10.0	37.8	37.3		10.8	38	33.0	9.7	10.6	46.5	57.5		9.9	40.8	51.2		
10.0	39.8	52.9		8.9	45.5	2.3	9.3	9.2	50.5	29.8		10.2	9	6.7	7.8	
9.0	58.8	38.2		10.2	39	2.5	21.8	10.4	52	4.0	50.1	9.4	8.8	57.7		
9.4	59.3	8.0		10.8	46.5	45.0		9.8	20.5	10.8		9.9	20.2	27.8		
9.4	21	3.8	30.4	8.8	49.5	19.9	8.5 G	9.4	27.0	16.5	9.5	10.2	26.2	34.1		
9.4	3.8	28.9		10.8	40	11.0	6.4	10.2	52.0	26.5		8.7	42.7	24.2	8.5	
9.6	45.3	49.8		9.6	15.0	44.9	9.5 G	9.2	53	13.5	50.1	10.0	55.7	41.7		
9.8	48.8	26.8		9.6	33.5	53.4		5.8	36.5	44.6	5.0 GS $\pi\beta$	4.4	10	21.7	4.8 GS $\pi\beta$	
9.8	22	6.0	36.7	9.0	39.5	21.2		10.8	54	45.2	0.0	9.6	33.2	44.5		
9.6	9.8	9.8		9.4	44.0	21.3		10.8	55	29.5	25.1	10.6	40.2	3.2		
8.6	46.3	4.5	8.8 -	9.8	41	14.5	27.3	9.8	34.0	53.1		9.2	41.7	17.2		
10.0	23	2.3	37.1	8.2	23.0	28.3		8.6	54.0	4.3	9.2	9.2	52.7	24.9		
9.9	24	5.8	42.1	8.8	54.0	6.1		9.9	54.0	7.4		9.4	11	4.7	13.1	
9.8	43.8	25.1		10.0	42	10.6	1.4	10.0	54.0	11.8		9.8	28.2	22.1		
9.6	25	29.3	16.3	10.0	16.0	51.1		10.8	56.0	49.0		8.0	28.2	52.7	7.0 G-	
9.6	42.8	38.5		10.8	22.0	9.1		9.4	56	4.0	50.1	9.8	32.7	51.3		
9.8	55.8	28.4		10.8	34.0	8.0		10.8	15.0	23.1		9.6	35.7	20.7		
9.6	26	22.8	43.8	8.0	57.0	11.2	7.5 GS=	9.8	24.5	50.3		10.6	40.7	8.1		
9.4	53.3	17.7		7.7	43	4.5	6.8 GS-	9.9	33.0	19.6		10.6	52.7	41.2		
9.8	27	21.3	47.2	9.2	16.0	26.3		9.2	57	22.6	2.3	9.8	12	2.7	40.4	
9.6	21.3	43.8		10.0	19.5	42.2		7.6	32.3	50.3	8.2 GW π	10.0	2.7	44.3		
10.0	28.8	8.4		10.8	23.0	51.1		10.8	36.5	55.1		8.7	3.3	57.9	9.5 -	
9.6	46.3	3.1		10.2	26.0	26.2		9.9	58	1.5	48.9	9.8	27.2	16.7		
8.7	28	56.8	38.3	10.3	28.0	59.4		10.8	6.5	36.1		8.8	31.7	35.1	9.5	
9.9	29	27.8	16.1	9.8	52.5	39.1		10.6	9.7	9.0		10.0	37.2	42.9		
9.4	57.3	22.6		9.9	56.0	36.0		10.6	13.2	42.5		8.6	40.2	31.1	9.0 -	
10.0	30	14.8	44.5	9.9	44	41.5	38.6	6.5	45.7	50.4	5.5 GS $\pi\beta$	10.2	42.7	59.6		
9.4	16.3	30.6		8.6	53.5	9.6	8.0 -	10.2	59	0.7	25.9	10.0	56.2	29.9		
9.0	41.8	34.8	9.0	10.8	45	0.5	22.7	9.5	25.7	49.8		10.0	13	4.2	12.9	
10.0	31	16.8	15.2	10.6	8.5	35.0		9.2	0	7.7	10.0	9.4	5.1	59.9		
9.8	34.3	34.8		10.8	46	24.0	51.1	9.9	41.8	52.0		8.8	25.7	33.0	9.0	
9.6	32	1.8	34.0	9.0	33.0	26.4	9.0	10.6	52.3	13.2		9.6	36.7	43.5		
10.0	38.8	42.4	9.0	9.9	39.5	40.8		8.4	53.8	20.2	8.8 =	10.0	44.1	59.9		
10.0	38.8	44.2		10.2	56.0	35.7		9.6	1	26.8	30.6	9.9	45.2	53.5		
9.0	43.8	36.3		9.9	47	33.0	27.2	8.8	28.3	10.3		10.4	14	7.7	47.6	
7.6	33	37.9	2.3	10.4	33.0	45.5		8.2	44.3	31.6	8.0 =	10.2	51.2	5.1		
9.3	44.7	38.3	6.0 GS-	9.8	41.5	30.7		10.2	2	2.8	19.1	9.9	15	36.7	7.5	
9.1	48.2	5.2	8.8	9.8	59.0	25.1		9.5	25.8	47.9		9.6	40.7	4.6		
10.0	53.9	43.2		10.8	48	4.5	23.7	10.0	32.8	49.6		9.0	16	2.8	3.9	
25pr.	+1	34.1	+4.9		+1	33.0	+5.4		+1	32.2	+5.8		+1	31.1	+6.2	

6361-6420.				6421-6480.				6481-6540.				6541-6600.							
mag.	21 ^h .	-32°		mag.	21 ^h -22 ^h .	-32°		mag.	22 ^h .	-32°		mag.	22 ^h -23 ^h .	-32°					
m	s	'		m	s	'		m	s	'		m	s	'					
9.6	17	9.0	0.9	9.0 G	8.5	38	37.9	53.9	8.4	9.0	12	8.9	19.9	9.0 G	9.2	46	34.3	51.5	
10.0		13.3	34.1		9.2	39	13.9	33.2		9.0		35.9	53.4		9.2		37.3	20.6	
8.8		22.8	26.9		8.7		33.9	31.1	9.0 -	9.4		41.9	11.2	10.0		58.8	35.0		
9.4	18	3.1	59.2		9.4		37.9	59.2	9.5 -	8.7		52.4	35.7	10.6	48	7.8	0.3		
9.9		4.3	41.9		8.0	40	40.4	55.2	8.1 G-	8.7	13	1.4	33.2	G	9.7		42.0	25.5	
8.8		6.8	7.3	9.0 -	8.4	41	29.9	58.8	9.1 G-	8.6		53.4	44.8	9.5	7.0		56.6	17.8	
10.6		13.8	19.6		9.7		44.9	3.9		9.2		55.4	47.3		9.6	49	1.1	35.0	
9.9		32.8	8.9		9.7	42	11.4	35.0		9.4	14	19.9	21.5	10.2		11.1	43.4		
10.2	19	1.5	58.1		9.6	44	17.4	42.6		9.5	15	35.9	36.5	9.4		19.1	25.4		
9.9		16.8	18.5		9.7		24.4	18.6		9.6	16	7.4	23.3	7.0		27.1	13.5		
7.9		30.8	28.6	8.5	8.8		37.4	50.8		8.6		54.4	6.6	8.5 G-	8.8	52	48.6	41.4	
9.4		32.8	16.6		9.4	46	12.9	32.8		9.6	17	8.4	52.0		9.7		56.6	4.6	
10.6		41.8	35.2		9.8	47	7.6	52.2		9.1		17.4	37.6		8.2	53	2.6	21.0	
8.2		45.8	54.7	8.5	9.2		46.1	23.1		10.0	18	57.9	8.1		8.4		39.6	15.8	
8.4		47.3	50.1	8.5	9.0	49	21.5	59.3	9.5 G	9.1	19	27.4	45.1	9.5 -	9.8	55	22.1	55.6	
10.0		51.8	17.1		7.7	51	17.6	57.1	8.0 G-	8.7	20	18.9	25.0	9.5	9.8		36.6	35.8	
8.0	20	10.8	20.1	7.8 G-	9.4		29.6	47.8		8.6		24.4	0.5	8.0 G=	10.0		46.8	0.9	
8.2		52.3	54.8	8.5 G	9.3		53.6	8.7	8.8 GS=	7.9		24.9	11.3	7.8 G=	10.2	56	0.5	0.6	
9.9		52.8	30.2		10.0	52	6.1	8.1	9.5 G	9.0		48.8	54.3	G-	8.2		57	0.1	
8.2		56.3	45.8	8.0 G-	9.2		22.1	20.1		9.0	21	1.9	54.1	G	11.4	59	33.9	5.3	
10.6	21	5.8	3.6		10.0		36.6	29.0		9.6		38.4	8.6		10.8	0	12.9	53.4	
9.9		15.8	15.7		7.0		37.6	7.3	7.0 GS=	10.2	23	40.2	1.7		10.8		30.4	40.0	
8.8		57.0	32.3	8.0 G-	10.0	53	47.6	6.4	9.0 -	8.8		44.4	11.0	8.0 G=	8.0		30.9	56.1	
10.6	22	1.8	7.3		9.6	54	31.6	3.0	9.0	9.4	24	15.9	45.0		7.7		40.4	28.6	
9.8		13.0	36.1		9.0		31.6	39.6	9.5 G	9.6		18.4	29.3		11.4	1	20.4	14.8	
9.9		19.3	19.9		7.0	55	14.6	44.1	6.8 GS=	4.5		23.7	59.2	4.8 GSπ ₃	10.0		51.4	15.0	
10.2		36.3	5.4		8.0	56	1.1	2.9	7.2 G=	9.1	25	40.4	56.2	G	9.2	2	16.4	15.8	
9.9		45.8	48.9		9.9		1.2	52.8		10.3	26	53.4	47.0		8.6		29.4	50.4	
9.9		56.8	10.3		9.0		10.7	12.3	8.5 G-	9.5		16.4	16.3		9.8		37.4	51.2	
9.9		57.3	50.8		9.0		25.2	32.2		9.6		17.4	29.0		11.0	3	23.9	15.1	
9.4	23	5.5	42.0		8.0		27.7	57.5	9.0 G-	9.6		53.4	16.0		10.2		46.4	27.8	
9.6		10.7	56.0		9.9	58	29.2	20.2		7.0	27	0.4	47.1	7.0 GS=	10.0		51.9	47.2	
10.0		21.2	42.5		8.7	59	20.7	10.6	8.2 G=	9.0		51.4	37.1		8.0		52.4	51.3	
10.0		22.2	37.6		9.4		38.7	15.1		10.3	28	9.9	22.0		8.7	4	6.6	39.7	
10.0		42.7	8.2		9.0		44.7	18.3		10.3		54.9	57.3		9.4	5	48.6	47.1	
8.2		55.7	18.7	8.5 G	8.4	0	44.6	59.4	8.8 -	7.2	29	33.9	18.4	6.5 GSπ _π	7.6	6	11.8	59.7	
7.7	24	21.7	5.8	8.0 =	10.0	1	36.7	22.0		8.4		36.9	17.3	8.0 GWπ _π	10.2	7	36.6	7.3	
9.8	25	28.7	21.9		10.0		47.7	51.1		9.6	30	12.9	20.1		11.4		46.2	2.1	
8.4		26	38.2	13.0	9.0 =	10.0	4	18.7	5.9		9.0		18.4	35.3		10.4	8	58.6	53.0
8.8	28	35.7	13.3		9.1		38.7	31.3	9.5	9.6	31	21.4	24.3		10.0	9	25.6	11.6	
9.8	29	12.3	45.6		10.0		44.4	0.0	-	9.0		27.4	52.0	9.0 G-	10.6	10	0.6	44.2	
10.0		28.7	40.2		9.9	5	3.7	18.9		9.6		35.4	21.3		11.4	11	14.1	23.0	
9.4		53.3	36.7		7.8		4.7	40.7	8.2 G=	10.3	32	56.4	45.0		9.0		26.1	44.9	
9.4		53.3	52.2	G	10.0	6	12.7	31.3		8.0	33	50.6	38.5	7.0 G-	11.2	12	51.1	5.6	
8.2	30	43.3	17.7	8.0 -	8.6		42.2	7.2	9.2 =	8.6	34	23.4	16.8	-	9.8		57.7	2.2	
9.8	31	20.8	31.6		9.6	7	21.2	55.4	9.0	9.6		31.9	11.2		9.8	13	1.1	43.3	
10.0		22.9	2.0		9.6		25.2	49.4	9.5	10.3		47.9	13.4		9.8	14	6.6	25.6	
8.2		27.3	28.2	8.5 -	8.0		47.2	47.1	8.7	9.7	35	24.6	53.1		10.6		6.6	31.0	
9.2	32	16.3	50.9	9.0	9.9		56.7	20.5		10.0		38.3	6.9		8.8	15	4.6	7.6	
9.4	33	6.3	1.0		9.2	8	36.2	26.7		7.6		52.8	17.0	8.5 -	9.4		10.9	58.5	
9.6		12.3	23.7		10.0		44.2	23.7		10.0	36	58.8	20.6		11.2	16	13.6	57.4	
8.5		33.3	29.2	8.0 -	7.8		44.7	28.9	8.5 GW-	8.8	38	32.8	45.7	8.3 G-	11.4		57.6	46.2	
10.0		54.8	14.1		10.0		47.7	7.5		7.9	39	48.3	31.4	8.5 -	8.6	17	29.4	0.7	
10.0	34	41.3	47.7		8.8		57.7	39.5	9.0	9.0	41	6.8	30.7	G	10.6		54.1	7.3	
10.0		46.3	16.2		9.4	9	3.9	1.0	-	8.8		6.8	26.3	G	11.4	18	2.1	37.4	
9.4	35	54.8	48.8		9.2		7.7	7.1		8.2	43	19.3	29.3	8.0 G=	10.4		36.6	0.6	
8.2	36	0.3	45.2	-	10.0		21.3	14.7		9.7	44	29.8	30.3		10.8		55.1	5.4	
10.0	37	30.4	37.1		7.5	10	27.1	23.3	7.5 GS-	8.5		32.8	37.4	G-	8.8	19	6.6	56.4	
9.4		46.5	1.4		8.7	11	45.4	9.0		8.5	45	31.3	29.8	8.2 =	8.7		8.9	42.6	
8.7		50.9	13.4		9.8		53.9	54.1		10.0		49.3	42.1		11.0		18.4	48.3	
25 ^{pr}	+ 1	30.3	+ 6.5		+ 1	27.8	+ 7.2			+ 1	25.2	+ 7.7			+ 1	21.9	+ 8.1		

6601-6631.				6632-6661.				6662-6691.				6692-6721.			
mag.	23 ^h .	-32°		mag.	23 ^h .	-32°		mag.	23 ^h .	-32°		mag.	23 ^h .	-32°	
	m s	'	''		m s	'	''		m s	'	''		m s	'	''
9.8	19 28.9	33.5	9.0 -	10.0	30 43.3	38.5		9.0	40 22.8	40.5	8.7 G	9.6	49 58.4	24.1	
11.0	29.4	6.1		10.0	31 6.8	8.9		9.2	34.8	36.2		10.2	50 49.9	27.7	
10.4	42.4	44.2		10.2	22.5	0.0		9.2	43.9	0.7		9.8	51 26.9	35.6	
9.6	20 10.9	26.8		10.8	30.0	2.2		9.8	49.3	2.9		10.0	47.9	18.8	
9.4	26.9	25.2		8.6	36.3	44.3	9.0	9.0	55.3	9.4		10.3	51.4	10.9	
8.7	50.9	19.4	9.0 =	8.4	50.8	28.1	8.5 G =	10.2	41 23.3	47.4		10.4	58.8	23.5	
9.8	21 33.1	41.3		9.4	59.8	42.0		10.8	30.8	27.9		8.4	52 22.9	10.5	8.2 =
10.2	47.6	5.5	9.0	8.5	32 26.8	59.5	9.0 G -	9.3	51.8	44.1	9.0	10.2	23.9	14.4	
8.5	22 11.3	4.6	8.0 G ≅	9.8	33 31.8	37.9		8.6	42 7.3	51.5	8.5 G -	10.0	53 7.9	49.8	
9.8	24.6	51.8		9.8	47.8	27.5	G	8.6	43 2.8	5.9	8.0 GW =	7.5	8.9	23.1	7.5 GS -
10.0	23 26.0	1.9		8.5	34 2.8	36.3	8.5 GS	10.2	7.3	5.1		10.4	13.9	32.2	
7.4	24 35.8	10.4	7.8 G ≅	6.2	3.8	45.7	5.8 GS t π	10.0	24.0	58.1		8.2	18.9	54.3	8.0 G -
10.0	57.8	32.2		10.8	6.8	44.6		10.0	54.8	47.7		10.4	38.9	2.5	
7.8	25 3.3	1.5	8.2 GS ≅	10.8	12.3	15.9		9.3	44 30.3	33.9		10.2	54 2.9	50.1	
9.3	12.8	8.4		7.3	32.8	45.9	7.0 GS t π	9.8	53.8	18.8		10.4	14.4	12.8	
9.8	20.8	45.8		10.2	36.3	8.5		10.8	45 5.3	37.0		10.4	16.4	52.6	
8.6	51.3	55.5	8.2 G -	10.2	35 7.8	19.1		10.4	25.9	59.0		8.4	53.9	35.8	8.5
9.6	52.8	37.3		10.4	17.8	51.2		9.8	32.3	4.3	W	10.4	55 2.2	1.6	
10.6	26 13.3	52.8		10.4	36 6.8	34.2		10.0	35.3	37.1		10.4	28.9	52.6	
9.2	22.8	18.4		10.2	15.9	3.2		10.0	45.3	34.3		9.6	40.4	27.8	
10.6	27 17.8	27.9		8.8	46.3	33.8	9.5	10.4	46 44.7	41.0		9.4	52.9	8.0	
10.0	20.8	38.1		10.8	53.8	3.0		10.4	51.2	8.4		10.4	56 6.9	45.2	
10.4	28 6.8	46.5		10.0	37 9.3	17.1		9.2	47 31.7	29.4	-	9.8	12.9	23.2	
9.6	16.3	29.5		10.6	15.8	36.5		10.2	48 15.7	0.6		10.3	15.9	59.0	
10.0	23.3	8.8		10.8	38 2.0	56.5		9.4	22.7	3.6		10.3	23.9	25.8	
9.3	29 6.3	4.9		10.0	18.8	48.1		6.8	48.7	34.8	6.5 GS - t	8.6	27.9	3.2	8.2 =
10.4	17.3	13.5		10.4	27.8	13.5		5.8	48.7	37.1	6.0 GS t	8.4	58 2.4	51.6	8.0
10.8	47.3	25.7		10.2	58.3	38.5		9.8	49 12.7	58.0		8.2	30.9	41.4	7.5 G -
10.0	56.8	37.5		10.4	39 41.3	35.9		10.2	28.2	47.8		10.3	59 10.8	17.9	
7.3	30 28.3	33.7	6.2 GS =	9.1	40 12.8	41.7	8.7 G	10.4	45.7	42.2		9.0	42.9	8.4	9.0
8.1	33.3	21.4	8.0 G -												
25 pr.	+1 20.0	+ 8.3			+ 1 19.1	+ 8.3			+ 1 18.1	+ 8.3			+ 1 17.3	+ 8.4	

121-180.				181-240.				241-300.				301-360.			
mag.	1 ^h .	-33°		mag.	1 ^h -2 ^h .	-33°		mag.	2 ^h .	-33°		mag.	2 ^h -3 ^h .	-33°	
	m	s	'		m	s	'		m	s	'		m	s	'
11°0	6	21.3	18.4	9.4	47	4.5	20.3	10.4	17	11.0	14.9	9.1	51	22.3	17.6
9.2		41.8	2.6	8.5		10.5	51.4	10.4		24.0	13.8	10.2		46.3	54.7
11°0		47.3	50.8	7.5		25.6	23.6	9.9†	18	11.7	59.7	10.6		54.0	37.1
10.5	7	7.8	22.0	8.0		31.6	55.6	9.8		23.5	16.5	9.1	53	10.8	20.5
9.2		31.1	24.2	7.7		36.6	25.4	10.2	19	32.0	30.6	7.8		11.8	39.1
9.2		32.8	29.0	9.2	48	25.6	23.6	9.2	20	8.0	17.3	9.8		43.8	29.9
10.5	9	32.1	58.0	9.6		30.1	9.5	8.6		17.0	44.6	8.6	54	2.3	24.7
11°0		35.3	32.2	9.4	49	52.6	13.2	8.8		17.0	24.0	9.6		22.3	8.8
9.4		52.3	18.3	9.4	50	45.6	6.0	10.4		59.0	47.8	6.3		22.8	0.4
11°0	10	6.8	26.0	8.8	51	5.6	34.8	9.2	21	54.0	51.3	10.0		35.3	50.8
8.6		31.3	22.5	9.4		32.6	47.0	10.0	22	10.0	48.8	7.2	55	56.8	36.3
9.2		32.3	42.1	10.2		43.6	8.5	9.8		14.0	34.9	8.1	56	3.8	40.7
11°0	11	12.3	3.6	8.8	52	31.5	7.6	9.0	23	15.5	29.3	10.6		14.3	11.1
8.9		46.3	51.8	9.9		31.8	55.7	7.7	24	57.0	39.8	9.2	57	47.4	32.8
9.4	12	19.3	19.1	9.2		33.1	0.7	9.8†		57.9	58.0	9.6		52.5	33.9
8.1		26.7	47.8	9.2		35.1	20.6	7.2	25	28.0	33.7	9.0	58	29.2	25.0
9.7		50.7	50.9	7.0		55.5	40.4	9.4		55.0	13.7	10.2		33.8	50.1
11°0	13	8.7	17.1	9.0	53	6.6	50.4	7.4	26	52.5	9.7	9.4	59	37.0	2.8
11°0	14	11.7	19.0	9.9		40.8	33.7	8.0	28	20.0	22.6	10.4	0	7.7	22.0
9.7		14.7	31.7	8.8	54	2.6	42.1	7.5		53.0	39.8	8.9	1	11.2	56.0
7.8	15	51.7	53.2	9.4		32.2	43.1	9.0	29	7.5	16.1	9.2		28.2	9.1
9.4	18	52.7	12.9	9.2		37.7	55.4	9.4		23.0	1.1	9.7		35.2	44.0
10.6	19	13.7	30.4	9.6	56	0.7	38.9	9.8		29.7	55.8	8.8		45.2	11.8
9.2	20	42.7	12.1	9.2		1.2	29.7	10.2		41.2	36.1	9.0	2	5.7	47.0
9.8†	21	12.0	11.6	9.8		50.2	56.1	10.0	31	12.2	54.3	10.2	3	50.4	16.8
10.4		53.2	10.8	9.2	57	21.7	5.3	8.4		41.7	13.9	8.4	5	8.2	49.4
8.4	22	42.8	39.7	9.9		29.8	14.2	9.0		54.2	26.9	8.4		23.2	31.3
9.2	23	18.8	59.9	8.2	58	30.2	7.1	8.4	32	8.2	37.0	10.4	6	2.7	22.0
8.2		42.8	58.1	9.0		43.2	8.9	10.2		33.2	42.6	8.0		48.7	15.2
9.2	24	14.3	41.8	9.0		46.7	5.4	9.8		50.7	53.9	9.7	7	9.4	25.4
8.8	28	23.3	12.1	9.0		49.2	45.3	9.8	33	7.6	11.4	9.4		37.2	23.2
10.1		38.8	59.9	8.6	59	13.2	41.0	10.2		34	43.0	8.0	8	50.2	17.7
10.0	29	30.3	19.8	9.9		43.2	6.9	8.7		35	39.5	10.0		56.4	49.3
10.1		30.8	26.1	9.2	0	36.2	19.9	10.2		36	11.0	9.7	9	12.7	7.1
9.8		41.8	14.5	8.8		52.2	5.9	8.2		20.5	38.4	8.0		48.7	53.7
9.6	30	25.8	20.3	10.2	2	12.7	38.4	10.4		51.4	17.2	9.0	10	30.2	38.2
10.0	31	25.8	57.9	9.4	4	11.7	12.0	9.8	37	21.5	54.7	10.0		44.4	15.7
10.1	32	3.2	13.8	9.2	6	48.7	26.2	9.8	38	25.5	48.9	9.0		45.7	16.0
9.1		29.2	38.3	9.9	8	5.3	48.9	7.5		27.0	34.6	10.0	11	5.2	7.8
10.0		53.8	10.5	7.8		6.3	55.3	8.3		47.0	42.1	10.2		22.2	26.8
10.0	33	24.8	23.1	9.8		12.8	37.6	6.6	39	6.3	3.3	8.8		30.2	16.8
9.1		39.8	24.2	9.4*	9	15.7	59.9	10.2		46.8	44.8	8.4		55.2	23.2
9.3	34	30.3	27.3	10.0		16.8	36.9	10.2	40	5.3	54.9	9.4	12	36.7	42.0
10.1		37	50.8	10.2		19.5	23.3	10.4		37.0	49.8	10.4		43.7	32.2
8.4	39	16.8	27.2	8.6		51.3	3.0	8.0	41	21.8	3.6	9.6	13	40.2	15.4
10.0	40	39.3	14.9	9.8	10	3.5	22.6	10.2	42	9.3	35.1	10.6	14	32.7	17.5
9.3		41.8	38.9	9.8		27.5	26.8	9.8		49.8	6.7	9.2	16	58.9	46.4
8.2	41	40.8	19.1	8.4	11	32.5	34.5	9.9	44	44.8	40.8	9.0	17	21.4	26.4
10.0	42	2.3	7.0	10.4		40.0	12.1	9.0	45	14.3	31.1	9.4		47.4	46.7
9.6		7.8	34.1	10.0	12	1.5	50.0	9.2	46	36.8	12.0	7.9	18	43.4	9.1
9.4		57.3	13.4	9.8		15.0	51.4	9.2		49.8	8.0	9.4	20	52.6	15.5
9.3	43	0.8	6.0	9.8		20.0	57.7	8.3	47	6.8	57.9	9.7	21	53.6	53.9
8.8		15.8	31.1	10.0		26.0	49.9	9.8		10.8	48.8	9.8	22	42.4	24.6
8.8	44	4.8	45.5	9.8		38.5	19.2	8.6		24.8	8.7	9.8	23	20.4	0.6
8.9	45	22.8	54.0	10.0	13	11.5	37.6	9.1	48	36.8	22.5	10.3		29.4	11.3
8.9		22.8	14.6	9.8	14	33.5	34.8	9.8		38.3	29.6	9.4		33.4	13.1
10.1	46	11.8	34.8	8.2	15	1.7	1.2	8.4		58.8	40.9	8.6		45.9	38.3
9.6		14.6	30.9	9.4		51.5	39.9	8.4	49	33.8	26.5	8.2	24	52.9	4.2
10.2		29.0	35.9	10.2	16	30.5	10.6	9.0	50	59.8	10.2	8.6	25	41.5	57.6
7.3		36.5	9.5	8.0		59.5	31.2	9.8	51	2.8	16.7	10.2	26	26.4	7.9
25pr.	+1	8.7	+7.8	+1	5.9	+7.3		+1	3.1	+6.6		+1	0.7	+5.7	

361—420.					421—480.					481—540.					541—600.							
mag.	3 ^h .		—33°		mag.	3 ^h —4 ^h .		—33°		mag.	4 ^h .		—33°		mag.	4 ^h .		—33°				
	m	s	'	''		m	s	'	''		m	s	'	''		m	s	'	''			
7.6	26	28.7	58.4	7.3	GSt	9.4	56	2.8	24.4	9.2	G	9.6	18	27.9	56.7		9.8	31	21.2	10.1		
10.2		36.9	7.4			9.8		10.3	10.1			10.4		51.8	1.4		9.8		52.2	32.9		
8.8	27	25.9	55.4	8.7	G	9.4		22.8	19.1	9.5		8.9		52.4	45.3		9.3		55.7	18.1		
9.4		34.9	50.7			10.1	57	3.8	29.7			10.0	19	4.9	51.3		8.2	32	1.7	51.7	9.0	
10.2		39.9	58.3			9.0	58	15.3	20.1	9.5		9.8		17.4	28.1		8.9		4.7	46.3		
9.8.	28	5.9	52.7			9.2		32.5	2.4	10.0	G	10.4		42.9	30.1		10.1		7.2	45.2		
9.2		58.4	51.4	9.0	G	9.4		53.3	39.2			8.9	20	21.4	0.8	8.7	10.1		8.7	33.8		
8.6	29	37.4	26.4	9.0	G	9.6	59	2.3	14.6			10.4		29.8	42.1		9.6		22.2	49.1		
10.3	30	7.4	24.2			9.1		23.3	46.0	10.0		8.8	21	5.9	14.3	9.0	9.8		46.7	33.4		
9.8	31	20.9	42.7			10.1		38.8	47.9			7.3		44.9	6.0	7.0	GS	9.3	33	8.2	30.1	
8.6	32	21.9	40.6	9.5		10.0	0	0.6	2.0			9.5		46.9	39.8		9.2		15.9	55.3		
10.3	33	1.4	6.0			9.4		6.8	22.3			8.9	22	31.9	3.2	8.5	G	11.0		17.1	1.8	
8.2		6.9	9.1	8.5	G	9.6		9.2	33.5			9.4		35.3	3.9	9.5	G	9.7		25.7	56.9	
8.6		44.9	12.9	8.2		9.9		13.7	53.7			9.8		47.3	31.8		9.2	34	6.2	27.0		
10.3	34	57.9	15.8			9.0		35.7	8.9	9.0		8.7		55.8	26.4	9.0	10.8		11.7	29.9		
9.4		59.4	50.2			9.4		38.2	55.0	9.2		9.5		57.3	50.5		10.4		34.2	6.8		
9.6	35	14.4	35.8			9.6		59.7	47.7			8.9	23	5.8	46.4	9.5	10.8		34.7	52.1		
10.2		29.9	37.6			8.8	2	5.7	42.9	9.5		9.0		11.3	7.5	9.0	7.8		39.2	40.6	8.0	G
10.4		38.4	8.9			9.6		33.2	45.2			10.2		12.3	4.5		9.0	36	12.7	18.5	9.0	G
9.2	36	46.1	47.5	8.5	G	10.1		51.7	49.5			8.8		21.3	41.6	10.0	10.6		26.2	2.7		
9.0	37	13.1	35.6			9.7	3	3.7	5.3			10.2		32.3	41.7		9.1		28.2	43.8		
9.6	38	10.6	25.9			7.5		28.2	11.3	7.8	GS	9.8		32.8	31.9		8.0		58.7	5.2	8.8	
8.2		35.1	53.8	8.5	G	8.9		28.7	35.4	9.5		9.8		58.3	20.7		10.2	37	1.2	29.3	9.0	G
8.6		39.1	33.1	9.0	G	9.4	4	10.2	43.9	9.0		8.8		59.3	41.8	9.0	11.0		13.2	19.7		
10.3	39	16.1	10.3			10.1		17.2	9.0			10.4	24	41.8	17.0		10.8		51.7	29.8		
9.6		23.1	2.4	9.2	G	8.4		46.7	18.1	7.8	GS	9.0		43.3	51.0	9.5	G	10.8	38	1.2	33.5	
8.8	40	10.6	50.6			9.0	5	13.2	28.8	8.5	G	10.4		53.3	22.4		9.2		11.2	58.9		
8.6		27.6	1.9	8.5	G	9.4		22.7	17.8			10.1		58.8	44.5		10.3		16.7	0.0		
9.6	41	2.6	37.1	9.0		9.8		26.2	35.0			9.2	25	15.8	49.0	9.2	8.1		18.7	39.9		
10.4		8.1	43.3			9.4	6	11.2	29.9	10.0	G	9.8		32.3	6.0	9.8	G	10.3		38.7	47.9	
9.4		23.1	52.3			9.7		16.2	45.0			9.5		32.8	19.7	9.0	10.3		55.7	43.5		
8.8		44.1	18.6	9.5		9.0		38.2	10.0	9.8	G	9.5		54.3	46.0		11.0	39	3.2	31.0		
10.4		51.3	54.0			9.2		39.7	40.3			9.6	26	2.8	43.0		9.0		14.9	1.3		
9.8		52.1	52.8			9.6		48.2	16.3			9.8		10.3	26.4		9.1		43.2	44.8		
9.8	42	12.1	40.2			10.1	7	38.7	33.0			10.4		13.3	32.4		11.0		52.7	11.7		
9.4		55.6	3.2			9.1	8	6.7	27.6	9.2	G	10.4		21.8	49.0		9.0	40	3.7	6.2	9.5	
9.0	43	6.6	58.7	9.0	G	7.8		14.2	7.0	7.5	GS	10.4		27.8	28.9		9.9		13.1	14.0		
9.8		47.1	29.2	9.5	G	8.9		49.2	49.4	8.8	G	10.0		35.8	17.2		8.0		26.3	15.7	8.5	
8.2	44	10.6	28.0	9.0	G	9.4	10	42.6	31.3			9.6		39.3	22.3		10.8		49.7	29.0		
8.8		36.1	23.6	9.2		9.8		55.1	41.2			9.0		42.5	10.7		10.0		58.7	7.9		
8.2	45	18.6	29.5	8.0	GSt	8.9		57.6	17.7	9.0	G	10.4	27	22.0	0.1		10.8	41	7.7	28.7		
10.3		49.1	41.3			9.4	12	46.6	45.6			10.4		47.5	52.0		10.8		12.2	55.9		
9.4		2.1	2.1			9.5	13	3.6	59.7			10.4	28	3.5	15.8		10.3		12.2	30.1		
10.8†		29.8	58.7			10.0		9.1	26.5			7.6		13.5	21.8	8.5	G	8.6		13.2	25.8	9.0
9.8	48	16.6	39.8			8.9		12.6	53.9			10.4		16.0	29.5		8.8		28.7	52.3		
9.9		25.1	21.7	10.0		10.0		28.6	4.2			10.4		16.0	5.1		10.0		44.7	22.7		
10.8†		32.3	57.8			9.3		29.6	57.0			10.4		17.5	45.6		10.4		48.7	50.6		
9.0		34.6	21.7	9.0		9.6		49.1	35.9			9.4		19.5	34.4		9.7		52.7	59.4		
9.1	49	15.1	50.1			10.4	14	20.6	56.8			10.4		41.5	13.7		11.0		56.7	45.3		
9.6		49.6	24.7			8.9		26.6	28.9			9.6		47.5	22.6		10.8	42	13.7	33.2		
8.5	50	43.6	34.8	7.8	G	9.4		29.1	38.6			9.6		49.0	45.0		9.0		14.7	24.2		
9.8		5.1	3.6	21.6		9.4		43.6	21.3			9.3	29	1.5	55.1		9.2		25.2	35.3		
10.2		4.6	54.0			8.9	15	29.6	18.3	9.5		8.0		56.2	54.4	7.5	GS	11.0		28.2	22.6	
10.2		16.1	2.0	10.0		9.8		58.6	43.4			9.0		30	2.2	24.1	11.0		34.1	16.2		
8.2		48.8	34.8	8.5		9.8	16	2.1	55.4			8.4		15.2	36.3	7.5	G	8.5		39.0	50.1	9.0
9.1	53	51.8	50.0	9.0	G	8.4		12.6	10.4	8.0	G	10.1		21.2	31.9		8.6		44.5	22.9	9.5	G
9.6	54	4.8	53.1	9.5	G	10.4		45.9	53.7			9.6		21.8	56.8		9.4		59.5	22.8		
9.6		31.8	7.3			9.8		47.9	16.9	10.0	G	9.8		36.2	1.7		10.8	43	5.2	12.1		
9.0		32.8	48.6	9.5		10.4	17	46.9	53.7			9.0		56.2	26.2	8.5	G	11.0		22.0	11.3	
9.6	55	33.3	24.3			9.8		18	2.9	24.2		9.6		56.2	46.4		8.6		28.0	30.0		
25pr.		+ 0 58.6	+ 4.8					+ 0 57.4	+ 4.0					+ 0 56.5	+ 3.3					+ 0 56.0	+ 2.9	

601-660.				661-720.				721-780.				781-840.					
mag.	4 ^h .	-33°		mag.	4 ^h -5 ^h .	-33°		mag.	5 ^h .	-33°		mag.	5 ^h .	-33°			
	m	s	'		m	s	'		m	s	'		m	s	'		
9.1	43	43.5	5.5	9.0	54	52.5	46.4	9.7	7	8.5	36.1	10.2	18	18.2	52.7		
9.2		52.0	48.7	11.0		59.0	13.2	9.8		14.0	31.7	10.1		47.2	34.6		
10.6	44	2.5	32.3	9.4	55	2.0	46.1	10.6		28.0	4.5	9.2		59.2	29.0		
7.8		18.5	41.5	8.5 G	10.8		9.5	47.2	8.8		29.5	26.1	9.0	19	4.7	44.7	
10.8		22.5	14.9	9.4		21.5	19.9	10.5		38.5	26.0	10.1		7.7	50.6		
10.8		28.0	8.3	10.8		28.1	1.5	11.0		40.5	25.0	10.4		11.7	17.7		
8.1		53.0	18.5	8.5 G	9.8		36.5	16.4	9.4		43.5	32.7	10.0		17.7	4.0	
10.2	45	11.0	6.2	9.0	56	16.5	35.5	9.7		44.5	29.7	9.5		26.7	21.2		
10.8		12.0	0.3	11.0		43.5	13.8	10.6		52.5	8.3	9.0		27.7	51.5	9.0	
10.0		27.5	50.5	9.5	10.4	57	6.5	25.4	9.7		57.5	33.8	10.2		33.2	50.0	
10.3		32.0	45.1	11.0		39.0	20.9	9.7	8	13.0	23.4	9.2		58.2	18.2		
9.4		49.5	10.5	10.8		41.5	26.8	11.0		17.0	6.3	10.5	20	2.2	17.1		
9.1	46	34.0	59.5	10.8		41.5	38.6	8.8	9	2.0	10.2	9.0		3.7	16.6	9.5 G	
9.4		41.0	6.9	9.2 G	9.4		50.7	42.9	9.8		12.0	26.7	9.2		24.7	11.5	
8.2	47	9.5	28.7	9.0	58	5.8	20.0	9.0	10.0		22.5	19.0	10.5		37.7	33.3	
9.4		13.0	19.0	8.4		5.8	19.5	8.5	8.1		43.5	29.4	8.0 G	11.0		44.7	33.5
9.7		21.5	43.8	9.4		7.5	17.5	10.1		50.0	34.2	11.0		45.7	33.8		
9.0		22.0	36.3	9.4		58.8	59.9	9.0	10.1		50.5	51.0	9.5	21	6.2	7.0	
10.8		33.0	0.7	10.5	59	3.0	51.7	10.5	10	5.5	5.3	9.7		7.2	22.3		
9.4		46.0	12.2	9.5	10.5		23.5	33.6	8.6		30.2	33.1	8.3 G	10.5		17.0	1.7
8.8	48	.6.0	18.3	9.0	9.5		42.5	7.4	11.0		48.7	27.9	10.5		20.2	11.2	
9.9		14.5	13.8	9.2		59.5	4.3	11.0	11	4.2	47.7	9.0		34.0	42.6		
9.4		23.6	2.6	10.8	0	25.0	23.6	9.3		16.7	46.5	9.5		36.2	27.8		
9.2		27.0	11.8	11.0		26.0	53.7	9.3		26.7	44.4	9.0		42.2	7.4		
9.4		37.0	27.4	9.6		43.5	19.0	9.7		30.7	42.3	9.2		44.0	16.4	9.0	
10.8		44.5	18.2	9.4		50.5	22.5	8.0		43.7	12.3	8.0 G	10.5	22	9.3	41.4	
10.8	49	3.5	42.5	9.5		52.8	58.8	8.0		48.7	40.5	7.0 GStn	9.0		27.0	2.2	
9.7		5.5	44.9	9.3		56.0	50.1	9.2		56.7	13.4	9.0 G	9.4		43.0	59.3	
10.8		8.0	13.4	9.5	1	2.5	18.0	10.2	12	20.7	44.3	8.6	23	3.3	54.3	9.5	
11.0		15.0	49.9	9.5		12.5	43.0	10.4		51.7	44.8	9.2		21.8	45.7		
10.8		26.5	23.9	9.0		19.5	16.9	9.6		52.7	21.1	9.8		22.3	49.3		
10.8	50	16.0	9.7	8.6		20.0	13.3	10.4		54.7	52.9	9.8		26.0	58.7		
9.2		25.0	56.0	9.6		27.5	36.6	9.8	13	6.7	17.9	9.8		57.3	34.0		
9.4		29.0	28.5	9.3	2	16.5	44.7	7.6		9.7	34.0	9.4	24	1.8	33.6		
9.4		35.0	32.9	10.8		17.5	52.2	8.1		32.7	34.4	9.2		4.8	26.7		
9.7		46.5	41.9	10.2		23.0	36.4	11.0		33.7	49.3	9.2		6.3	32.8		
11.0		48.5	3.7	11.0		49.0	3.6	9.7		38.7	17.7	9.2		17.8	56.0	8.5 G	
11.0	51	21.0	3.8	10.8	3	39.0	47.8	9.8		58.2	22.7	9.6		18.8	10.5		
9.9		24.5	2.9	11.0		43.5	44.1	8.8	14	43.2	50.3	8.0 G	10.2		22.3	34.2	
10.8		51.5	41.9	9.4		54.5	29.1	9.2		48.2	11.5	9.4		30.3	7.2		
9.2		58.0	11.6	8.1	4	6.5	55.5	8.8		52.7	32.9	9.3 G	9.4		31.8	31.4	
10.4	52	5.3	1.8	8.4		9.5	27.4	11.0	15	16.7	0.9	9.2		52.8	1.6		
8.6		8.0	35.7	10.2		15.5	6.4	9.4		21.2	33.6	10.5		53.3	3.7		
11.0		11.0	3.8	10.4		16.0	50.4	9.6		23.7	29.9	9.2	25	8.3	22.4		
8.6		17.5	39.5	10.5		22.0	33.0	10.4		46.7	31.3	9.8		34.8	53.7		
9.9		17.5	19.7	11.0		46.5	16.0	9.2		47.2	31.5	9.0		36.8	26.1		
8.5		28.5	29.9	8.4		50.5	2.1	11.0	16	6.7	1.3	8.6		52.3	37.8	8.5	
8.8		31.0	21.3	10.6		59.5	4.7	9.2		23.7	44.6	9.0 G	10.2		54.3	3.1	
9.0		31.5	52.7	9.8	5	0.5	5.1	10.5		30.7	57.1	10.0	26	13.8	59.7		
10.8		43.0	15.8	8.6		8.5	40.7	10.6		40.2	53.6	10.0	27	5.8	12.1		
10.6		44.5	53.7	11.0		20.0	3.4	10.8		42.2	44.1	8.2		7.3	28.6	8.5	
8.4	53	5.5	15.7	10.5		25.6	58.9	9.5		45.2	50.4	10.2		31.1	28.5		
9.0		15.3	0.4	8.8		31.5	56.2	10.4		45.7	25.8	10.2		34.6	31.1		
8.4		32.0	1.2	10.5		37.5	32.8	9.7		46.2	43.2	8.7		43.1	37.2	8.0	
10.0		42.5	28.0	9.5	6	6.5	16.1	10.6		51.7	7.5	8.2	28	3.6	25.2	8.5	
10.6		43.0	4.7	10.8		23.5	37.6	10.4	17	6.2	39.5	10.2		14.6	36.3		
8.6		45.5	52.7	9.3		27.5	49.9	9.6		11.2	15.4	9.8		21.6	15.1		
9.1		46.0	38.7	9.7		44.5	17.4	10.8		24.2	59.2	9.5		22.4	58.4		
9.0	54	45.5	9.8	10.6		49.5	10.2	9.3		42.7	52.7	8.9		38.1	3.2	9.0 G	
10.8		46.5	3.8	10.2		7.6	7.7	9.5		18.13.2	15.3	10.0	29	1.1	34.5		
25pr.	+0	55.7	+2.5		+0	55.4	+2.1		+0	55.1	+1.7		+0	55.0	+1.3		

841-900.				901-960.				961-1020.				1021-1080.						
mag.	5h.	-33°		mag.	5h.	-33°		mag.	5h.-6h.	-33°		mag.	6h.	-33°				
	m s	'	''		m s	'	''		m s	'	''		m s	'	''			
9.4	29	4.6	24.1	10.4	40	6.4	5.0	8.6	52	23.8	50.4	9.0	9.7	3	59.9	34.3		
10.0			33.1	10.0		16.9	24.1	8.8		25.8	30.0	9.0 G	9.2	4	10.4	56.2		
10.2		22.6	7.7	10.4		17.4	2.5	9.7		57.8	33.2		10.0		20.9	46.2		
9.8		23.6	12.0	10.2		20.4	20.5	9.2	53	28.3	34.4		10.0		44.9	19.0		
9.0		39.1	34.8	9.4		22.4	46.1	8.8		40.3	31.1		10.4	5	27.9	30.4		
9.4		42.1	30.6	9.4		34.4	47.7	10.0		54.3	16.0		10.4		33.4	29.5		
9.4		43.1	18.9	9.4	41	21.9	3.7	9.0	54	2.4	57.3		9.8		42.4	19.8		
8.4	30	28.1	40.2	8.8		41.4	1.8	8.8	10.0		4.3	27.8	10.4	6	0.9	29.3		
9.0		30.1	10.1	9.0		52.7	46.2	9.7		34.8	27.2		9.0		5.1	4.7	9.0	
8.6		37.1	38.9	9.0		53.4	50.8	7.8		38.3	49.6	8.5 GS	10.0		7.4	56.9		
6.9		39.6	9.9	9.5		54.2	18.1	9.8		52.3	50.1		9.2		8.1	22.5		
10.2		48.6	46.5	10.4	42	3.2	15.3	8.8		53.3	31.4		7.8		43.6	50.5	GS-t	
7.0		52.1	21.1	8.8		22.7	48.1	8.8	9.1	55	11.8	5.3	9.4		46.6	49.5	G	
9.4		52.1	15.2	10.2		24.2	10.6	9.2		13.3	37.3		10.0	7	34.6	12.1		
10.0		52.1	52.2	10.0	43	13.2	36.8	9.2		27.8	25.6		10.4		36.6	28.7		
10.0		58.1	31.1	8.6		18.7	27.9	9.0	9.4		43.8	36.0	10.2		47.1	16.6		
10.2	31	8.6	23.8	9.4		38.7	16.5	9.0 G	9.2		58.3	41.1	9.5		47.3	57.6		
10.4		14.1	36.4	8.1		45.2	28.3	7.0 GSt	9.7	56	2.2	21.7	9.1		53.1	9.8		
9.8		28.1	52.1	10.0		45.7	47.9	10.0		16.2	4.0		10.4	8	27.2	13.2		
10.5		40.6	8.6	8.9	44	2.2	14.2	9.0	7.4		44.2	54.8	6.0 GStπ	9.1		37.9	2.0	
10.4		50.1	27.4	10.2		5.7	58.8	8.8		50.8	57.6	9.5	10.4		39.1	40.3		
9.5		58.1	18.6	9.0		13.7	54.8	9.0	10.4		56.7	59.3	10.0		40.1	19.0		
9.0	32	13.1	44.8	10.2		21.2	6.6	8.8		57.2	44.7	8.5	9.1		54.1	20.3		
10.0		14.1	48.2	10.4		50.7	34.9	9.7	57	14.2	9.8		9.6	9	1.1	52.8		
10.4		17.1	11.9	9.8		57.7	14.5	9.8		18.7	5.0		10.0		6.1	16.9		
8.6		23.1	55.0	10.2	45	6.2	43.0	9.7		22.2	4.9		10.0		6.6	4.5		
8.4		33.1	53.8	9.6		45.4	52.3	9.7		47.7	14.6		10.0		9.1	19.0		
10.2	33	4.1	6.8	8.6		55.0	23.4	8.8	9.4		59.2	28.4	10.2		14.2	0.9		
10.2		12.1	38.8	10.2	46	12.7	17.4	10.0		58	2.2	32.1	10.2		14.6	34.4		
10.0		14.1	31.1	9.8		31.9	36.0	8.6		2.2	39.3	9.0	9.5		22.2	24.1		
10.0		26.6	8.0	10.4		40.9	43.8	8.0		17.7	18.2	8.5	8.4		28.9	9.6	9.2	
10.2		34.6	59.4	9.4		45.5	51.4	9.0	9.5		35.3	1.0	9.4		31.4	55.5		
9.8	34	3.6	8.3	9.4		0.2	17.5	9.7		41.2	30.1		10.2		32.2	5.5		
9.8		7.6	5.2	10.2		11.8	54.0	9.7		51.3	20.1		9.0		48.2	18.2		
10.0		42.6	0.3	8.8		20.8	16.7	8.8		53.2	37.9		10.2		50.2	5.8		
10.2		48.1	11.7	9.8		27.3	42.1	8.8		53.2	4.4	8.5 G	8.7	10	0.4	33.9	9.5	
8.9	35	0.1	3.0	8.8		49.8	50.9	9.0	9.8	59	6.2	13.6	9.8		0.5	24.2		
9.2		2.1	11.8	5.0	48	34.8	49.9	5.0 GStπ	9.1		48.2	31.9	9.0	9.6		2.4	35.3	
10.4		15.1	37.1	10.4		47.8	32.3	10.4		52.2	51.5		9.8		17.2	2.3		
10.0	36	2.1	22.5	10.2		49	1.3	6.0	9.1		55.2	56.1	8.5 -	9.6		31.2	13.9	
8.4		23.6	22.0	10.0		2.8	12.0	9.6	0	4.7	4.6		9.1		46.7	42.4		
9.0		52.1	9.7	9.7		4.3	11.1	10.0		20.2	14.3		9.0		51.4	10.5		
6.2		52.6	27.7	10.2		15.8	2.5	9.4		36.2	8.3		8.8		54.9	23.0		
8.9	37	2.6	44.2	10.4		37.3	51.8	7.2		55.2	29.4	GS-g	8.8		54.9	19.3		
9.0		4.6	31.1	8.6		46.8	54.2	8.5	9.0		58.2	16.3	8.6	11	5.2	35.2		
9.6		11.6	56.0	9.7		52.8	29.6	9.0		17.2	23.9		8.8		18.2	38.7		
10.4		18.1	37.6	8.8		58.3	47.9	9.0	9.0		22.2	21.4	9.8		22.2	34.6		
8.8		44.6	15.8	9.6	50	0.3	44.8	7.1		30.7	12.5	7.2 GS	9.4		32.2	52.6		
9.4		53.4	16.4	8.6		5.8	38.5	8.5 G	10.4		32.2	21.9	9.4		37.2	24.5		
8.3		57.9	4.0	8.8		11.6	57.7	9.0	9.7		41.7	0.5	9.4		42.2	24.2		
10.5	38	4.4	22.0	8.5		23.8	41.2	8.0 G	9.4		46.2	35.2	9.8		46.2	32.6		
9.8		7.4	46.9	9.6		24.3	14.8	9.6		47.2	21.1		9.4	12	2.2	29.2		
10.0		22.9	10.8	8.5		33.6	56.9	8.5	10.4	2	2.7	9.9	10.0		10.7	42.4		
8.3		40.9	28.9	10.0		51	18.8	21.9	9.9		5.7	5.1	9.3		23.7	22.9		
10.4		52.4	5.9	8.6		20.8	44.6	9.0	10.2		8.2	28.2	10.2		31.7	16.7		
9.8	39	1.4	32.4	9.5		21.8	53.2	9.0	10.0		29.7	46.8	8.8		34.7	21.0	9.5	
9.2		31.0	57.0	9.7		32.8	23.7	9.8		36.4	31.9		10.0		52.5	36.4		
10.0		40.9	11.1	10.4		42.9	15.3	9.6		36.4	15.3		10.2		54.5	9.0		
10.0		47.2	56.8	7.3		58.3	27.1	7.8 GS	8.6	3	22.9	34.6	8.0		56.2	39.3	8.5 G-	
10.4		55.9	58.3	9.6		52	21.8	9.4	9.7		50.9	59.9	8.8	13	3.7	40.2	9.0 G-	
25Pr.		+ 0 54.9	+ 1.0			+ 0 54.7	+ 0.5			+ 0 54.7	+ 0.1				+ 0 54.7	- 0.3		

1081-1140.			1141-1200.			1201-1260.			1261-1320.						
mag.	6h.	-33°	mag.	6h.	-33°	mag.	6h.	-33°	mag.	6h.	-33°				
10.2	13	6.7	17.1	9.6	19	56.0	20.4	9.8	26	42.9	56.0	9.6	32	54.7	48.7
9.8		14.2	26.8	9.3	20	7.0	41.3	10.2		46.4	36.4	9.8	33	1.7	31.3
10.0		16.6	42.9	10.2		13.0	47.3	10.0		46.4	12.3	10.2		12.7	9.8
8.2		34.6	15.5	10.0		14.0	31.0	9.0		46.4	47.6	8.6		15.7	25.4
8.8		52.5	57.0	9.6		15.0	2.8	10.0		57.4	25.7	8.7		17.1	48.2
10.0	14	0.1	15.9	8.7		28.5	41.8	9.1	27	7.4	54.3	10.0		29.7	31.0
8.6		6.1	32.7	10.0		33.5	25.3	9.6		8.4	59.9	9.8		38.7	51.2
10.2		15.1	11.9	10.2		33.5	28.9	10.2		32.9	13.7	9.6		46.7	18.8
9.8		24.6	34.7	10.0		44.5	35.1	10.2		33.4	28.4	9.6		48.7	36.2
10.0		42.1	22.3	10.0		46.5	34.3	9.6		38.4	49.7	10.2	34	3.7	34.9
9.6		42.1	15.7	8.6	21	3.0	54.3	10.2	28	1.9	23.0	10.2		33.7	57.2
10.2		44.6	32.3	9.4		15.0	58.3	10.0		4.9	37.4	10.2		45.2	7.1
9.1		47.1	21.7	9.2		24.5	50.2	8.8		5.9	4.3	9.0	35	2.7	2.8
10.2		49.1	46.9	9.2		38.5	16.8	9.6		14.4	11.1	9.8		7.4	2.3
9.6	15	3.6	18.1	8.6		40.5	23.0	9.6		24.4	15.5	9.0		51.5	15.9
9.2		6.6	53.5	9.1		46.5	42.2	9.0		31.9	10.9	9.5†	36	5.0	41.0
9.1		12.6	56.2	10.2		50.6	21.8	10.0		32.1	33.1	8.6	37	5.5	15.5
9.3		24.1	37.7	10.0		50.6	17.7	9.8		40.9	30.5	8.8		7.5	21.1
9.3		25.6	36.7	8.8		51.1	45.3	9.4	29	0.4	45.4	9.8†		29.0	58.7
8.8		26.1	58.2	8.7	22	1.1	45.1	8.8		3.4	44.0	9.4	38	17.0	28.1
10.2		28.1	14.4	7.8		3.6	20.5	9.2		4.9	40.5	9.5†	39	0.5	33.6
9.0		28.6	44.2	10.2		4.6	50.7	8.8		5.4	16.4	9.2†		37.5	59.9
10.2		36.1	5.7	9.7		5.6	15.9	10.0		11.9	16.9	9.8		53.5	51.0
10.3		40.6	14.7	9.2		8.1	40.7	10.2		20.4	1.5	9.8		56.0	17.9
8.2		49.6	5.2	9.0		9.6	34.1	9.4		51.9	48.2	9.9†	40	3.5	59.7
9.8	16	11.6	30.6	10.2		24.6	15.7	9.6		52.9	57.0	9.6		4.5	39.5
8.7		14.1	31.7	8.6		34.1	20.5	9.0		53.9	6.8	9.2		19.8	0.0
10.0		16.1	18.6	9.0		38.6	12.1	10.0		55.1	16.4	9.6†		35.5	54.7
9.4		35.1	14.5	8.4		45.1	2.3	9.0		57.4	9.8	9.8	41	15.1	57.0
9.4		49.1	27.4	8.8		52.1	3.7	10.0		57.9	24.8	9.8		27.4	55.9
8.4		50.6	0.9	10.0	23	0.6	46.5	10.2	30	0.1	6.0	9.8	42	6.0	53.6
9.6		52.6	42.5	9.3		1.1	13.7	9.4		0.1	0.7	8.2		8.5	32.1
10.0		56.1	43.1	9.6		2.1	27.8	10.2		0.9	32.4	8.4		24.0	53.2
8.4		57.1	40.3	10.0		8.6	11.3	9.3		2.9	36.4	8.4		53.5	22.6
9.4	17	5.1	56.9	10.2		17.1	4.3	7.1		11.4	54.8	9.6	43	15.5	43.7
8.8		6.1	39.3	9.6		24.6	11.1	10.0		13.9	54.3	9.8	44	50.5	16.5
9.6		14.1	38.4	9.4		33.1	9.8	9.8		14.4	25.4	9.8		58.5	33.9
9.0		15.8	2.5	8.8		36.6	55.3	8.8		25.2	7.2	7.4	45	36.0	44.5
8.2		20.6	53.2	9.1		45.6	47.7	9.3		32.7	27.8	9.2	46	34.6	58.3
10.2		30.5	5.3	10.2	24	3.1	34.8	9.4		32.7	21.6	9.0	47	1.5	44.4
9.1		32.5	23.7	9.1		14.6	12.3	10.2		40.7	0.4	9.0		26.0	48.9
5.7		33.5	22.4	10.0		22.1	33.7	9.2		48.2	41.3	7.8		27.5	45.9
9.4		38.5	11.2	10.0		27.1	12.3	8.6	31	4.7	7.4	9.8		44.0	2.2
8.2		57.5	48.5	8.8		35.6	26.3	8.8		10.7	23.0	9.1		49.0	47.7
9.6	18	5.5	7.1	10.2		46.1	43.1	10.0		14.7	54.2	8.4	48	5.0	7.6
9.3		8.5	14.1	9.0		52.1	32.7	9.3		25.7	10.4	9.8		15.2	53.8
10.0		13.1	21.5	9.3	25	2.1	25.7	10.0		28.7	32.4	9.8		25.0	20.9
9.0		20.5	53.1	9.0		32.1	25.2	10.2		31.2	22.3	9.8		36.5	24.9
8.2		20.5	33.1	8.6		47.1	36.9	8.8		34.7	1.1	9.4		49.1	38.1
10.0		25.0	31.3	9.0		51.1	53.9	9.4		35.7	32.6	9.0	50	13.5	34.9
10.0		26.0	34.7	8.8		56.1	20.9	9.2		42.7	29.6	9.0		20.5	30.8
10.2		30.0	23.2	9.4	26	1.1	5.9	8.8		47.7	22.6	9.2		37.5	10.9
9.6		51.5	53.8	9.8		11.1	15.3	8.8	32	9.7	28.1	8.1	51	1.5	38.7
7.6	19	5.0	15.4	10.0		15.5	17.5	10.0		11.7	23.7	9.8		57.3	49.8
8.6		13.0	29.3	9.8		21.6	50.9	9.1		12.2	11.0	8.8	52	1.5	48.2
10.0		18.5	30.3	10.0		22.4	7.4	9.4		14.7	45.0	9.0		55.5	5.8
9.0		20.5	34.3	10.2		28.4	57.1	9.4		19.7	52.4	8.6	53	2.1	13.9
9.6		33.2	0.8	9.8		35.9	51.1	9.6†		28.7	58.2	8.2		5.1	23.7
9.8		34.5	38.0	10.0		35.9	58.9	10.2		48.7	49.6	9.8		19.0	52.2
10.0		35.5	20.2	10.0		38.1	34.1	10.0		53.2	19.7	9.8		20.3	56.7
25pr.	+0	54.8	-0.6	+0	54.8	-0.8		+0	54.9	-1.1		+0	55.0	-1.5	

1321-1380.			1381-1440.			1441-1500.			1501-1580.		
mag.	6h.-7h.	-33°	mag.	7h.	-33°	mag.	7h.	-33°	mag.	7h.	-33°
5.6	53 51.3	56.5	9.6	6 20.6	57.9	8.7	16 54.2	23.8	10.0	23 32.3	36.5
9.8	56.1	43.3	9.2	25.9	30.7	9.6	55.3	16.5	10.0	36.8	52.8
9.6	58.6	16.9	9.6	29.9	25.2	8.3	57.2	46.4	9.2	38.8	59.6
9.8	54 27.9	26.3	9.6	38.0	2.4	9.6	17 6.2	21.0	10.0	40.3	33.7
8.6	36.4	42.6	9.6†	40.6	51.1	9.5	17.7	31.1	8.6	48.6	0.6
7.4	55 4.4	18.1	9.0	46.4	39.6	9.5	35.2	53.0	9.4	49.4	52.6
9.8	15.9	58.2	9.0	55.4	59.1	8.9	39.2	7.9	8.9	50.4	13.5
9.0	42.9	28.5	9.0	7 2.4	16.4	9.1	18 1.7	51.4	10.0	55.4	13.7
9.1	46.4	39.8	9.6	22.7	1.9	8.3	5.7	12.8	8.8	55.4	47.2
8.0	50.4	42.1	9.6	23.9	22.1	9.6	9.7	43.7	9.8	24 0.4	20.7
9.8	56.4	6.4	9.6	27.4	40.6	9.0	19.9	49.2	10.0	2.4	32.1
9.6	56 0.4	19.5	10.0†	30.7	6.2	9.6	21.2	17.2	9.4	22.4	15.2
7.4	12.4	17.4	8.7	45.4	40.7	8.9	21.7	39.2	9.5	23.6	0.5
9.8	33.4	10.5	9.1	56.7	26.5	9.6	31.2	41.2	9.4	31.4	49.4
9.9†	41.0	53.8	8.5	8 32.7	34.3	9.2	33.2	47.8	7.6	38.4	54.8
9.0	57.9	10.8	9.6	41.7	45.4	8.7	49.2	18.9	8.9	42.4	21.3
9.0	57 2.4	11.1	9.6	44.2	31.9	9.6	54.7	46.3	9.2	46.4	47.8
9.8†	29.0	51.8	9.2	9 2.7	59.1	9.6	19 2.2	13.0	9.5	50.9	19.7
9.0	33.8	3.4	8.7	4.7	26.9	9.0	6.7	14.6	9.7	52.9	8.1
8.7	58 14.7	5.5	8.5	15.7	7.3	9.5	7.2	46.2	9.2	25 7.4	54.2
8.9	28.1	1.6	9.6	33.7	36.9	9.6	8.2	31.2	9.2	8.8	56.9
8.7	53.2	24.1	9.6	44.2	34.7	9.6	14.2	52.3	10.0	12.4	57.7
9.6	59 5.2	22.2	8.3	46.2	11.1	9.4	15.2	7.1	10.0	16.4	52.7
9.6	27.2	36.6	8.7	47.2	21.2	9.6	29.2	42.6	8.5	23.4	9.6
9.1	0 1.7	41.9	9.4	10 5.7	44.1	8.7	31.7	52.8	9.5	23.4	13.1
9.6	8.2	31.4	9.6	22.2	40.1	8.9	41.0	57.5	10.0	24.9	30.9
8.8	21.2	18.4	9.5	56.2	41.0	8.7	43.2	40.8	10.0	26.4	41.6
9.2	38.9	34.4	9.6	56.4	25.2	9.4	20 1.2	9.2	8.6	30.9	9.3
8.0	42.1	57.3	9.6	11 33.2	1.9	9.6	15.2	42.2	10.0	37.9	49.6
9.6	46.2	37.6	9.0	34.2	24.1	8.9	28.2	54.7	9.4	40.4	5.1
8.5	55.4	10.7	9.6	51.7	45.2	9.6	31.7	28.0	9.6	42.9	8.7
9.4	56.4	47.1	10.0†	54.2	59.4	8.9	33.2	18.2	10.0	44.4	48.1
9.6	1 3.0	56.0	9.6	12 6.7	43.3	9.6	37.2	46.2	10.0	48.9	14.8
9.4	7.4	23.6	9.8†	10.1	50.1	9.0	5.7	39.3	8.9	53.4	29.4
8.8	15.4	21.0	9.6	12.2	47.1	9.2	17.2	8.4	9.8	54.1	57.0
9.6	23.4	26.6	9.6	22.4	2.0	9.4	18.2	0.8	7.6	54.4	49.7
9.6	25.4	50.0	9.6	25.2	24.4	9.6	23.0	0.9	10.0	54.4	21.8
9.0	37.4	52.0	9.6	42.2	1.1	9.1	32.7	37.9	8.8	59.4	36.8
9.6	2 1.4	45.0	9.6	48.7	56.2	10.0	33.2	50.9	10.0	59.6	58.9
9.6	5.4	51.1	9.2	13 0.2	52.0	10.0	42.3	50.1	9.6	26 0.4	22.1
10.0†	15.7	57.7	9.4	2.7	22.1	9.5	45.2	30.0	9.2	2.9	11.1
9.4	17.6	0.0	9.6	6.2	1.1	8.5	22 3.0	54.6	10.0	13.9	22.1
9.0	21.8	58.5	9.2	12.7	13.1	9.7	3.3	37.5	10.0	30.4	4.6
9.8†	41.1	53.9	8.6	33.7	14.3	6.6	4.0	53.4	9.8	31.7	12.5
9.5	45.9	11.0	8.5	14 32.7	34.9	9.4	12.0	4.9	10.0	45.2	2.9
9.6	3 13.4	2.1	8.0	35.2	29.8	10.0	16.8	27.4	8.6	27 13.7	8.7
10.0†	34.7	57.4	9.4	42.7	35.0	8.7	17.8	28.7	9.4	16.7	7.8
7.8	36.9	10.6	9.6	46.2	8.1	10.0	25.7	57.2	9.5	16.7	17.6
8.5	42.9	31.2	9.5	49.2	22.8	8.9	29.5	34.3	10.0	23.0	58.8
9.0	48.4	30.0	9.6	51.2	31.9	8.2	36.8	38.2	10.0	27.7	12.1
8.2	4 7.9	51.6	9.5	15 3.2	4.1	9.2	41.5	28.7	8.8	36.7	55.8
9.6	24.4	51.7	8.0	23.7	21.8	8.9	49.0	33.0	10.0	46.7	7.4
8.7	37.9	28.7	8.4	45.7	18.9	9.5	23 1.3	31.0	10.0	54.2	48.3
8.4	41.4	6.7	9.5	49.2	20.0	10.0	1.8	58.6	9.3	55.2	44.9
8.9	45.4	15.1	9.6	55.7	10.0	9.5	3.8	45.7	8.8	2.2	9.9
8.7	5 2.4	8.2	9.6	57.2	32.2	9.7	6.3	54.8	10.0	3.7	6.9
9.2	6.4	9.4	8.4	16 1.2	56.2	9.2	7.3	37.0	9.3	10.7	0.0
8.2	20.4	49.7	9.6	6.2	36.9	9.2	8.3	20.5	10.0	18.2	56.9
9.6	26.9	26.5	9.1	11.7	56.4	9.4	13.3	9.9	9.8	20.7	41.7
9.2	32.4	51.1	8.8	49.2	23.8	9.2	20.8	13.8	8.2	21.0	56.6
25pr.	+ 0 55.4	-2.2		+ 0 55.8	-2.6		+ 0 56.0	-2.9		+ 0 56.2	-3.1

1561-1620.				1621-1680.				1681-1740.				1741-1800.				
mag.	7h.	-33°		mag.	7h.	-33°		mag.	7h.	-33°		mag.	7h.	-33°		
	m	s		m	s			m	s			m	s			
10.0	28	22.7	53.5	9.8	33	14.0	2.8	8.0	36	52.1	26.8	8.0 G	10.0	40	45.8	3.4
8.2		24.2	47.2	9.8		18.9	19.0	9.2		57.1	32.2		10.0		47.3	38.9
10.0		26.7	18.7	9.4		21.5	13.8	10.0	37	1.1	22.1	8.8 -	9.0		49.8	34.0
9.4		27.2	11.6	9.2		21.5	28.4	9.0		3.1	53.7		10.0		51.4	44.0
10.0		38.7	36.8	10.0		22.9	22.1	9.8		7.1	5.8	:	9.0		52.9	24.4
7.5		42.7	7.7	10.0		22.9	20.8	10.0		22.6	0.7		10.0		53.4	43.2
9.2		48.7	29.0	9.4		23.0	31.3	9.6		24.6	52.3		10.0		54.4	3.5
10.0		53.0	1.6	10.0		26.0	43.3	9.4		26.1	29.6		7.1		55.4	55.3
9.3		53.7	6.0	9.8		26.5	55.6	10.0		26.4	57.2		9.8	41	0.9	48.0
9.3		57.7	8.9	10.0		28.0	13.6	10.0		28.1	9.6		9.3		2.4	13.4
10.0	29	2.7	48.0	9.8		34.0	23.3	9.0		31.1	26.5		10.0		4.3	58.8
9.3		4.7	7.2	10.0		48.8	1.9	10.0		38.1	21.1		9.5		11.4	47.9
9.4		20.6	2.9	10.0		52.5	15.6	9.8		38.2	27.4		9.4		16.4	20.8
9.4		24.7	43.5	10.4†		55.0	58.6	9.5		38.6	22.4		9.8		22.9	39.2
9.4		26.7	9.9	10.0		56.0	6.8	9.3		47.6	43.3	8.5 -	9.0		25.4	57.7
7.2		30.7	11.6	9.3	34	6.5	3.9	10.0		48.1	16.8		9.7		30.4	57.9
10.0		32.3	55.1	9.4		18.5	8.7	8.7		54.6	28.9		8.0		36.9	7.2
9.5		35.3	34.5	9.2		19.0	36.8	9.2		58.6	33.1		10.0		39.7	59.0
10.0		37.8	47.3	9.2		23.0	33.7	10.0	38	13.6	3.2		10.0		41.2	57.4
10.0		41.8	4.1	9.2		25.0	28.6	9.8		14.8	4.1		8.6		42.4	17.7
10.0		47.3	14.7	10.0		28.0	20.0	10.0		16.3	4.3		10.0		44.9	35.9
9.0		52.3	8.6	9.3		28.0	8.0	10.0		16.8	42.6		9.6		44.9	58.8
9.0		52.8	19.8	9.2		28.6	2.1	8.0		18.3	1.2	7.5 G	10.0		55.6	32.3
9.5		53.8	42.0	9.6		36.0	44.2	9.8		21.8	2.0		10.0		58.4	55.6
10.0		54.8	17.8	9.8		36.5	59.7	9.4		23.0	1.9	8.8 G	10.0	42	13.4	22.4
9.4		55.7	57.0	9.2		36.5	14.0	10.0		23.3	4.2		10.0		17.4	2.0
9.5		57.8	28.8	8.8		40.5	58.7	10.0		25.9	58.1		10.0		18.4	41.8
9.6	30	2.3	7.1	8.8		43.0	29.5	10.0		27.3	27.3		9.5		27.1	2.1
8.9		3.3	13.0	10.0		44.5	18.2	10.0		28.9	57.9		10.0		28.4	48.7
10.0		12.8	47.0	8.8		47.5	5.2	9.4		31.3	35.2		9.2		29.9	44.2
9.3		13.8	30.9	9.0		48.0	16.8	8.0		34.3	30.3	8.0 G-	9.2		31.4	12.7
10.0		14.3	46.9	10.0		48.5	29.9	9.5		37.3	40.7		10.0		32.4	53.5
9.7		18.8	20.9	8.8		53.0	48.0	10.0		38.3	56.9		9.6		33.4	17.0
9.0		26.8	55.5	10.5†		55.0	59.4	10.0		41.8	41.0		8.9		33.4	24.8
9.8		27.8	10.8	10.0		57.1	58.5	10.0		44.0	2.3		9.2		36.9	17.6
8.7		29.8	33.5	8.5		58.0	2.7	10.0		46.8	29.1		9.2		41.9	0.5
10.0		33.8	31.6	10.0	35	2.5	8.0	10.0		47.3	23.2		8.8		47.9	12.3
10.0		36.8	53.3	10.3†		3.5	59.4	9.5		53.8	22.6		8.4		53.4	23.0
10.0		43.8	15.0	9.7		4.0	7.0	9.4		54.8	12.6		10.0		55.9	8.9
10.0	31	2.8	0.0	9.5		17.0	27.5	9.3		55.8	38.7		9.0		58.4	11.2
9.4		3.8	17.7	10.0		17.1	40.2	8.9		58.3	21.2		9.4	43	11.4	36.3
7.4		6.8	6.9	9.5		18.1	26.7	9.6	39	4.3	29.9		10.0		14.4	48.4
8.9		11.8	3.2	9.7		18.6	27.4	9.4		5.3	17.2		10.0		21.9	12.2
10.0		12.8	13.0	9.6		19.1	32.5	9.6		9.3	7.7		9.7		23.9	14.3
10.0		17.3	5.2	10.0		19.6	41.9	10.5†		10.0	58.7		9.8		27.4	21.3
8.9		34.8	27.6	9.5		24.1	8.1	9.8		17.3	26.5		10.0		33.4	31.7
10.0		53.8	0.3	8.8		33.1	16.5	10.0		18.8	25.8		8.5		36.4	15.3
9.2		53.8	34.9	10.0		37.6	46.4	8.2		19.3	6.8	8.5	10.0		41.4	29.6
8.9	32	6.8	17.0	8.2		44.1	45.8	8.6		19.3	34.7	-	10.0		43.4	24.2
10.0		26.8	17.9	9.3		46.6	13.4	8.7		30.3	41.4		10.0		43.9	25.7
9.4		27.6	59.5	8.0		47.1	8.5	10.0		39.7	59.5		8.6		53.4	36.9
9.8		32.8	18.6	10.0		52.6	32.7	10.0		56.8	17.0		9.8	44	14.4	33.9
9.8		34.0	12.3	10.0		53.1	45.4	8.5	40	4.3	26.0	8.5	10.0		14.7	55.7
9.3		39.0	26.1	9.4	36	1.1	46.5	9.8		11.3	25.1		10.0		20.9	46.6
8.8		40.5	13.8	9.8		7.1	23.4	10.0		13.8	7.5		9.8		28.4	6.6
8.6		43.0	13.6	10.0		7.6	4.0	10.0		24.3	48.1		10.0		30.4	23.6
8.5		50.5	24.1	9.8		21.1	23.9	9.8		25.4	27.2		9.4		31.9	44.3
10.0		55.0	4.4	9.7		24.1	55.9	9.2		28.8	24.0	8.5 G	8.4		33.4	1.1
10.0		57.0	32.4	10.0		44.0	59.2	9.4		31.3	8.7		9.4		34.2	59.7
9.6	33	11.0	31.8	9.6		50.1	10.9	9.4		41.3	50.7		9.4		37.4	20.0
25pr.		+0 56.4	-3.2			+0 56.6	-3.4			+0 56.7	-3.5				+0 56.8	-3.6

1801—1860.				1861—1920.				1921—1980.				1981—2040.			
mag.	7 ^h .	—33°		mag.	7 ^h .	—33°		mag.	7 ^h —8 ^h .	—33°		mag.	8 ^h .	—33°	
	m	s	'		m	s	'		m	s	'		m	s	'
10°0	44	47.4	31.6	9°2	51	29.5	32.0	9°8	57	35.2	5.2	9°7	4	0.4	26.2
10°0		53.4	16.3	9°4		32.9	15.7	9°4		42.1	56.1	9°0		0.9	28.6
8°5	45	8.4	20.9	9°8		34.9	18.7	10°2†		48.4	59.5	9°7		10.9	54.9
9°4		15.7	0.2	9°0		37.0	10.4	9°4		52.2	38.0	8°8		25.4	51.3
9°8		19.4	12.6	9°2		45.5	59.0	10°2†		56.9	58.3	9°8		33.7	59.4
10°0		23.4	57.1	9°7		51.0	34.1	9°4	58	9.2	14.1	9°7		45.4	3.6
10°0		24.0	52.9	9°2		51.5	18.6	9°8		11.2	59.6	8°2	5	19.4	39.6
10°0		24.4	17.8	9°7		55.0	59.1	9°8		17.2	1.1	9°7		25.1	3.5
10°0		26.4	43.9	9°8		55.5	41.5	9°2		32.2	46.3	9°2		40.6	40.1
10°0		36.4	39.4	9°0		56.5	48.3	9°6		36.2	46.3	9°2		41.1	38.7
8°9		40.7	11.1	9°0		59.5	5.5	9°8		43.2	48.0	9°8		57.1	49.1
9°7		41.9	26.2	9°4	52	4.9	32.4	8°8		54.7	10.2	9°4	6	18.6	46.7
8°7		47.0	30.1	9°4		6.0	7.3	9°7		59	6.1	9°8		21.6	27.7
10°0		53.9	35.1	9°6		6.5	2.6	9°4		12.2	13.5	9°7		23.6	56.1
9°5		53.9	11.2	9°2		10.5	50.8	9°4		16.2	19.9	8°8		32.6	33.3
9°4		55.2	23.2	9°4		12.0	6.8	9°4		28.7	52.6	9°8		32.6	10.3
10°3†		56.1	53.2	9°2		31.0	40.6	9°0		42.2	26.1	9°0		41.1	47.0
8°2		59.7	21.2	9°6		33.5	44.3	9°0		46.7	47.6	9°2		46.1	42.7
9°2	46	7.0	23.5	9°6		35.0	40.6	9°4		55.4	0.2	8°8		49.6	51.1
10°0		7.4	42.8	9°0	53	2.0	37.5	8°6	0	12.2	12.4	9°6		50.6	9.3
9°4		10.2	53.8	9°4		12.0	51.2	7°6		14.2	14.2	9°4		55.6	47.9
8°0		12.4	44.8	9°6		15.5	16.4	7°9		15.6	57.6	9°8	7	0.5	54.0
9°2		13.0	8.2	9°6		33.1	2.9	8°6		37.4	0.9	9°2		16.6	51.1
9°3		14.4	17.8	8°2		35.0	16.3	9°8		42.9	44.9	9°4		26.1	33.9
9°4		16.0	21.5	8°8		35.0	22.7	9°8		43.5	55.4	9°8		41.6	19.5
8°3		21.5	18.2	8°5	54	17.5	4.7	9°8		51.4	44.1	9°6	8	4.1	49.4
9°0		28.7	25.9	8°8		19.0	34.3	8°6		51.4	31.9	9°2		12.1	39.8
10°1†		31.1	49.8	9°2		26.0	22.4	9°7		55.4	11.5	8°6		16.1	42.9
9°8		47.0	31.0	9°7		26.0	20.4	8°2		55.4	12.7	9°4		18.1	42.8
8°6		52.5	45.6	9°2		30.0	20.1	8°3		56.9	12.7	9°2		18.1	39.2
9°8		54.5	41.9	9°4		42.5	5.0	10°2†		57.9	59.6	8°4		21.1	56.7
10°2†		58.6	53.8	9°0		45.0	17.2	9°7	1	2.4	22.1	8°8		25.6	52.7
9°4	47	1.5	37.3	9°4		54.5	41.8	9°8		6.9	17.9	9°8		26.6	14.5
10°1†		11.1	53.6	9°8		57.5	44.5	10°2†		9.4	59.1	9°8		28.1	12.9
8°4		17.5	37.9	8°6		59.7	49.9	8°8		10.4	10.7	9°8		34.5	19.9
10°0†		19.1	54.8	9°8	55	3.2	30.6	10°2†		10.9	58.5	9°8		35.6	27.1
9°2		34.5	12.5	9°8		13.7	37.9	9°4		11.4	43.7	9°4		35.6	14.0
9°8		35.3	24.2	9°8		17.2	48.6	9°2		15.4	6.5	9°6		39.1	50.3
9°7		41.3	53.2	9°7		21.7	34.5	9°0		16.4	6.8	9°6		43.6	19.7
8°6	48	25.5	20.9	8°4		35.2	7.5	8°8		22.4	8.5	8°8		47.1	30.1
8°4		31.5	42.9	9°8		38.5	1.4	9°2		25.4	36.6	7°9		49.1	11.6
9°0		40.0	0.5	8°0		42.2	46.8	10°2†		31.9	57.4	9°2		54.1	31.1
9°8		45.7	57.8	8°8		52.8	49.9	8°6		31.9	40.8	9°4		54.9	24.3
9°2		57.3	57.7	8°6		57.2	31.3	9°8		33.5	5.9	8°8	9	1.9	12.0
9°6	49	4.0	54.2	9°8	56	0.1	15.0	9°0		44.9	13.8	9°7		58.1	33.1
9°4		18.0	51.7	9°2		10.2	35.2	9°8		51.4	53.8	9°8	10	1.5	2.0
7°8		20.5	41.7	9°8		11.3	57.0	9°6	2	15.0	1.9	9°8		3.8	29.1
9°4		25.0	41.7	9°0		17.7	25.3	9°2		33.4	3.7	9°7		4.1	39.7
9°6		30.5	40.9	9°8		17.7	58.5	9°0		36.4	55.9	9°7		5.1	4.3
9°8	50	5.5	53.3	9°0		19.7	20.2	9°2		36.4	6.4	9°7		11.6	43.9
9°6		15.0	34.9	9°4		21.2	16.9	9°0		49.4	43.5	9°6		12.1	7.5
9°2		26.0	35.7	9°2		23.7	15.8	10°2†		50.4	58.4	10°0		12.6	52.7
9°8		49.9	6.0	9°8		26.2	20.4	9°7	3	11.4	3.8	8°9		12.9	21.1
9°7		54.0	27.8	9°8		33.1	2.0	7°9		11.4	39.3	10°0		15.6	39.4
9°7	51	11.0	14.3	9°2		35.2	16.6	8°5		16.4	4.8	10°0		19.6	32.1
9°4		15.0	16.0	9°7		49.7	29.6	9°4		25.4	29.9	9°6		34.1	31.5
9°2		15.0	6.7	9°0	57	2.2	21.1	9°0		39.4	40.9	9°4		34.6	51.8
8°6		16.0	8.7	9°6		12.2	3.1	9°4		48.9	36.9	10°1		52.6	12.5
8°8		18.5	49.6	8°8		14.7	46.9	9°4		55.4	38.5	8°7		54.6	41.2
9°0		19.5	12.8	9°0		22.2	28.9	9°0		57.9	51.7	10°0	11	1.6	14.5
25pr.	+0	57.0	—3.8	+0	57.4	—4.0		+0	57.7	—4.2		+0	58.1	—4.4	

2041—2100.			2101—2160.			2161—2220.			2221—2280.		
mag.	8h.	-33°	mag.	8h.	-33°	mag.	8h.	-33°	mag.	8h.	-33°
9.6	11 10.6	5.5	9.8	14 58.1	18.6	10.0	18 33.8	48.8	9.2	23 34.6	37.2
9.7	14.6	20.5	9.8	15 2.6	48.0	9.2	37.2	38.0	10.1	36.6	21.7
9.4	15.6	57.0	10.0	9.1	19.9	10.0	47.2	46.4	8.3	39.1	25.9 9.0
9.6	27.1	8.5	9.4	12.2	58.9	9.4	51.2	6.4	10.7†	24 2.2	59.3
9.2	31.6	44.5	9.0	14.6	4.6	10.1	52.2	47.0	8.6	5.6	2.7 9.0
9.4	38.1	2.3 9.5	9.6	21.1	43.5	9.6	55.2	50.3	10.0	10.1	50.2
8.6	50.6	45.6 9.0 -	10.0	21.1	43.0	9.8	55.2	47.7	9.6	21.1	37.9
8.9	55.6	32.5 9.0	9.0	31.6	22.9 9.0	9.7	19 2.2	1.6 9.5	8.6	25.1	28.6
10.2†	12 4.6	59.8	10.0	34.1	42.2	9.0	5.2	1.4 9.5	9.8	27.6	12.0
9.6	8.1	28.5	10.1	34.6	21.0	9.2	7.7	14.8	10.0	33.6	8.6 10.0
9.6	8.1	16.9	9.7	37.1	12.9 9.5 G	9.2	16.7	56.8	8.6	36.6	50.6 8.5 -
9.2	10.6	51.5	10.0	39.1	47.3	8.7	22.2	4.6 8.5	7.9	48.1	38.7 9.0 -
8.8	14.6	45.2 9.5	9.6	39.1	30.0	9.6	26.2	46.0	10.0	55.6	16.0
9.8	14.6	14.0	9.4	44.1	8.1	9.2	30.2	5.4	9.6	55.6	38.8
9.6	22.6	35.3 9.0	9.2	45.6	4.9	9.4	32.2	49.9	9.0	56.1	45.1
8.6	28.1	16.2 9.5	10.0	50.5	1.1	9.2	32.2	14.6	10.1	58.6	17.0
10.1	31.6	8.1	9.6	51.6	39.3	10.1	38.7	36.2	8.9	25 2.6	19.9
10.0	31.6	52.6	8.6	52.6	41.7 9.5	9.4	45.2	2.9	8.7	6.6	45.6 9.0 -
10.1	41.4	59.3	10.0	16 1.1	8.1	9.6	46.7	0.9	9.8	7.1	46.0
10.1	47.6	19.3	9.2	5.8	28.2	10.0	47.1	34.1	9.8	12.1	39.9
9.8	50.6	38.1	9.6	10.8	6.0	10.0	50.2	37.6	10.1	16.1	21.9
9.4	52.6	1.9	9.8	21.8	5.0	8.8	56.2	10.2 8.8 -	9.6	18.1	18.2
9.6	54.6	20.9	10.0	25.3	13.8	9.7	20 9.7	33.3	9.2	20.9	0.0
9.6	55.6	2.9	9.2	25.8	36.2	8.4	21.3	59.5 9.5	9.0	21.1	22.7
9.4	56.6	33.8	9.7	32.1	1.9	8.3	25.2	57.7 8.5 -	10.1	22.6	40.1
10.0	58.1	28.7	10.1	32.8	22.6 -	10.0	40.2	34.3	9.6	29.6	47.2
8.4	58.1	57.0	9.0	38.8	8.6	9.8	45.2	47.6	10.1	35.6	29.9
9.0	58.6	48.0	9.4	39.8	18.6	8.8	48.7	52.3 8.8	10.6†	36.1	59.0
10.0	13 10.6	19.5	10.0	41.8	48.6	10.1	49.1	26.0	10.4†	42.1	57.9
10.1	12.6	31.3	9.7	43.8	48.0	9.4	56.0	1.3	10.0	42.6	32.3
9.6	28.6	14.8	9.6	51.8	53.2	9.4	58.7	9.4 8.8	9.8	43.9	29.1
9.6	30.6	21.5	10.0	57.8	21.0	10.0	21 3.2	35.4	10.0	45.9	49.7
9.8	34.6	54.6	9.8	1.8	8.8	9.2	4.2	46.1	9.4	48.4	29.8
8.9	35.6	6.9 8.8 -	10.0	5.3	33.8	9.0	7.2	8.8 9.5	9.7	50.4	26.3
9.2	36.1	45.9 9.5	10.0	9.3	42.8	10.4†	10.4	59.4	7.6	55.9	13.4 8.2 GS-
9.4	36.6	36.0	9.7	11.3	47.6	9.4	23.2	56.3	8.4	26 2.9	12.9 9.2
10.1	47.6	43.1	8.7	11.8	40.6	10.1	31.7	26.6	10.1	12.9	0.3
10.0	48.1	7.9 9.2	10.1	11.8	51.2	9.4	42.2	1.3	8.9	15.9	45.2 9.5
10.1	52.6	25.1	10.0	21.8	45.1	8.4	56.2	45.8 8.5 G-	8.8	29.4	37.3 8.0 -
9.2	58.6	18.9	9.8	24.8	5.8	9.6	22 1.2	21.4	10.6†	52.1	59.7
9.2	0.8	2.0	8.8	25.8	44.0	10.1	5.2	2.8	10.1	54.9	24.6
10.1	1.6	20.5	10.0	28.3	6.2	9.6	6.2	52.4	10.1	27 5.9	4.1
8.6	3.1	38.4 9.0	9.8	31.3	55.8 9.0	10.1	16.1	43.8	9.0	11.9	50.7 9.0
10.0	4.4	24.9	9.4	38.8	30.6 9.5	8.8	17.2	2.7 9.2	10.0	30.4	57.8
10.0	5.7	1.7	9.8	41.3	13.8	9.6	24.2	15.4	10.0	36.9	43.2
8.9	11.6	26.3	8.1	41.3	31.3 9.0	10.4†	30.3	58.6	8.6	49.9	8.1 8.2
9.4	19.6	38.0	9.0	42.8	45.0	9.6	32.6	20.6	8.8	54.9	23.6
9.6	22.1	3.5	8.8	43.8	26.2 9.5	9.4	36.1	56.4	10.8†	28 2.6	59.1
9.0	24.6	46.4	10.1	51.8	6.8	9.2	36.6	43.3	9.0	21.9	31.4
9.0	25.6	33.2	8.8	53.8	55.6 8.3 -	9.6	39.1	48.7 G	9.8	25.9	10.2
8.8	32.6	20.7 9.0 -	9.4	18 6.8	10.9	9.8	43.6	42.8	9.4	32.9	27.2
9.2	33.1	25.6 9.5	9.2	7.8	27.4 8.8	10.1	49.6	16.4	9.0	42.9	34.2
10.8†	33.8	59.3	8.3	8.3	26.6 9.0 G	9.0	23 4.6	7.6	9.4	49.4	11.1
9.8	39.1	48.0	10.6†	9.2	57.0	9.0	14.6	39.2	8.4	55.9	3.9 8.5 -
10.1	47.1	30.9	9.2	12.8	2.6	9.2	15.6	0.5 9.5	9.0	29 3.4	57.5
10.0	48.6	20.0	8.8	13.8	49.8 7.8 -	10.0	16.6	46.9	9.0	6.9	6.7 10.0
10.0	48.6	15.1	9.4	17.8	9.2	9.0	17.1	32.2	10.0	7.9	23.9
10.1	49.6	8.2	9.7	21.3	51.8	9.2	27.6	24.6	10.1	21.9	28.9
8.6	51.6	23.3 9.5	10.1	22.8	4.7	9.4	29.6	56.1	9.0	32.4	55.3
8.4	52.6	12.6 9.0	9.0	31.8	18.2 9.2	8.8	31.1	12.2 9.5	8.8	32.4	45.8 -
25pr.	+ 0 58.3	- 4.6		+ 0 58.5	- 4.7		+ 0 58.7	- 4.8		+ 0 59.0	- 5.0

2281-2340.			2341-2400.			2401-2460.			2461-2520.						
mag.	8h.	-33°	mag.	8h.	-33°	mag.	8h.	-33°	mag.	8h-9h.	-33°				
9.6	29	42.9	30.1	10.0	34	43.0	40.7	9.2	44	21.8	22.9	9.4	52	17.3	18.6
10.0		53.9	45.8	8.0		51.5	34.0	9.4		30.3	54.2	9.5		40.3	12.6
9.0	30		58.8	9.5		53.5	2.9	9.0		43.3	2.4	9.9		54.3	39.8
10.0		3.9	3.1	9.3	35	3.0	6.3	9.7	45	4.3	10.4	9.4	53	6.3	29.2
10.2†		9.8	57.4	7.9		6.0	34.7	8.1		8.3	45.8	9.0		10.3	17.4
8.1		15.9	35.7	9.0		19.5	37.3	9.7		13.3	18.5	8.3		13.3	55.5
9.6		19.9	44.5	10.0		20.5	35.1	9.5		32.3	51.2	10.0		25.2	56.9
10.0		20.4	59.6	10.0		25.5	19.7	9.9	46	1.8	47.1	9.3		30.3	49.9
9.4		28.4	49.0	9.8		38.5	53.9	7.8		5.4	57.2	9.0		37.3	19.8
9.0		32.9	33.7	9.7		42.8	57.9	9.7		6.3	41.2	9.0		53.3	31.2
9.4		41.9	11.3	9.4	36	54.0	40.3	9.3		9.8	31.4	9.8	54	1.3	46.5
9.2		46.9	33.0	9.5	37	11.0	44.3	10.0		15.3	49.9	8.5		43.3	35.8
9.6		47.0	55.2	9.5		12.5	38.7	9.4		21.7	57.9	9.5		53.3	13.1
8.7		52.0	37.5	9.5		24.5	54.1	9.4		22.3	1.1	8.7	55	2.3	47.1
9.6		53.0	19.6	10.7†		36.0	56.6	9.7		39.8	49.3	9.0		12.3	3.7
8.8		53.0	35.5	9.1		40.0	12.7	9.4	47	8.4	58.1	9.3		33.3	48.1
9.6	31	2.0	6.4	9.4		52.5	36.1	9.7		12.9	56.9	9.3		40.3	39.1
9.4		6.0	46.8	9.6	38	7.8	10.8	10.0		15.2	58.9	10.2†		59.2	58.5
10.1		6.5	27.1	9.3		16.3	37.3	10.0		23.3	15.3	9.6	56	44.3	54.8
9.0		26.0	48.3	9.4		23.3	10.1	9.5		36.8	18.7	8.9	57	7.1	27.5
9.6		34.5	55.1	9.9		34.8	11.6	9.4		38.3	31.2	8.0		21.8	45.2
10.0		35.8	1.0	9.1		40.8	45.1	9.8		59.3	18.2	9.9		38.2	58.2
10.7†		38.0	59.1	8.4		46.5	0.3	8.7	48	3.3	54.2	10.0		45.3	34.2
9.4		39.2	56.6	9.5		53.3	50.4	9.2		25.3	47.0	10.0		47.3	40.1
9.4		49.0	23.4	9.4		56.3	23.8	9.1		27.3	56.4	10.0†	58	4.7	57.5
10.0		53.0	29.8	8.4	39	1.2	0.2	9.4		33.8	2.1	7.4		9.8	6.5
9.4		57.0	43.2	10.2†		5.9	57.9	9.9		33.8	4.1	8.6		15.3	42.4
8.9	32	3.5	43.6	9.8		9.3	27.9	9.2		36.3	58.0	9.2		23.8	33.6
10.6†		10.5	58.8	9.7		16.8	39.6	9.9		40.3	28.4	8.0		32.6	12.0
9.2		17.0	33.2	9.8		46.3	23.7	9.2		42.3	55.0	9.0		35.6	13.0
9.4		23.0	45.6	10.2†		49.4	59.5	9.7		43.3	21.4	9.8		44.7	28.0
9.6		23.0	41.0	8.8		56.3	9.0	9.8		43.8	15.1	9.8	59	9.1	52.9
9.0		26.0	48.0	9.2	40	9.3	40.3	8.9		44.8	18.4	9.3		19.9	39.7
7.1		33.0	18.5	10.0		11.9	57.8	10.2†	49	6.0	59.0	10.2†		25.8	59.7
9.4		34.5	28.3	9.2		18.3	31.0	9.3		14.3	38.7	9.3		32.9	55.9
9.2		36.0	55.9	9.0		26.3	23.9	9.2		25.8	10.7	9.2	0	5.4	3.9
9.4		42.5	26.9	10.0		33.3	48.0	9.6		26.8	50.8	9.5		13.9	32.7
9.8		46.5	32.1	9.8		33.5	1.5	9.6		36.3	26.7	9.8		16.4	22.8
9.8		47.0	28.8	9.9		34.8	44.1	9.4		38.3	41.2	9.8		21.4	15.4
10.1		57.5	8.0	10.0		38.3	53.2	9.4		50.2	2.4	9.8	1	15.9	44.8
10.1	33	9.5	34.9	10.2†		41.7	59.0	8.2		59.3	39.8	9.1		18.4	54.7
9.8		22.3	51.1	8.6		47.0	1.2	10.0	50	2.7	58.1	8.6		35.4	4.0
9.4		23.2	8.7	9.7		55.3	25.1	9.5		12.4	59.7	8.6		44.0	46.1
9.8		27.8	2.9	9.9		7.3	19.5	9.8		37.3	21.9	9.8	2	3.9	55.8
9.0		30.3	59.4	9.6	41	14.3	56.0	8.0		46.3	47.4	8.0		13.0	10.3
9.6		43.0	29.0	8.2		22.3	26.6	9.9		53.3	35.1	10.0†		19.7	58.0
9.0		44.0	5.1	10.0		24.3	54.9	9.4		55.3	37.5	9.8		22.0	6.0
8.8		46.5	36.0	9.9		26.8	24.9	10.0	51	0.8	30.1	8.2		38.0	37.2
8.6		50.2	25.9	9.9		28.8	17.9	9.8		7.8	4.1	9.8		44.2	37.2
9.6		53.5	57.4	7.9		52.3	36.3	9.3		26.8	19.4	9.8		59.0	8.8
9.6		54.0	26.0	9.0	42	4.3	10.6	9.9		37.8	23.3	9.0	3	2.5	45.6
9.2	34	4.0	34.2	9.0		50.8	2.4	9.2		44.3	18.1	9.1		23.0	11.0
10.1		10.0	28.7	8.8		54.3	42.4	9.8		46.3	53.2	10.6†		35.5	58.0
9.2		12.5	46.8	9.7	43	8.8	10.9	9.9		52.8	44.0	9.5		40.0	31.1
8.2		13.0	10.3	9.9		9.3	12.1	8.8		55.8	11.7	9.5		41.0	29.3
9.5		16.0	29.8	9.0		26.8	29.0	9.7		57.8	23.4	9.8		46.3	53.9
9.5		17.5	7.7	9.9		27.3	11.6	10.0	52	0.3	23.7	9.8		48.8	35.4
10.0		21.2	27.6	8.6		59.8	11.2	9.2		4.3	3.6	9.3	4	13.2	42.1
10.7†		25.0	57.6	9.9	44	4.1	2.5	8.6		4.3	42.1	9.8		20.0	12.1
9.4		33.5	16.6	8.7		10.3	50.3	9.4		9.8	8.9	9.2		33.5	39.6
25pr.	+ 0	59.3	-5.1	+ 0	59.9	-5.4		+ 1	0.4	-5.6		+ 1	1.1	-5.9	

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
mag.		9 ^h -10 ^h .	-33°	mag.		10 ^h .	-33°	mag.		10 ^h .	-33°	mag.		10 ^h .	-33°
9.6	5.0	59.1	56.2	9.5	2	5.8	24.7	10.0†	17	38.9	54.0	10.2	35	42.5	12.9
10.4	5.1	2.6	25.0	9.2		8.3	50.1	9.2		46.6	4.1	9.2 -	8.4		44.0
10.2		9.1	19.3	10.4		32.2	31.9	8.8		56.6	5.2	9.0 -	9.8		44.5
8.6		12.1	9.4	10.0		46.7	10.2	8.2	18	3.6	38.3	8.8 -	10.0	36	13.0
9.4		38.6	8.7	10.0		47.2	49.2	9.4		26.1	29.6	9.5	9.6		18.5
9.8		48.1	47.8	8.7		47.7	30.5	9.4		29.6	29.0	9.5	9.2		23.5
9.6	5.2	2.1	45.0	10.4	3	0.0	59.0	9.4		19	53.1	9.9	10.5		25.5
9.6		11.1	42.0	9.8		0.2	13.3	8.2	20	2.1	7.8	8.9 G-	9.0		27.0
8.4		22.6	37.2	8.7		26.2	50.7	8.8		58.6	56.4	9.0	8.2		41.7
10.0		26.6	41.9	9.6		46.2	24.5	8.4	21	1.3	2.9	8.7 S-	9.6		57.1
9.6		33.6	32.8	9.1		56.2	45.9	9.2		16.1	23.5	9.0	9.8	37	29.5
9.8		34.6	7.7	9.6	5	22.2	22.5	10.0		26.1	19.5	9.4		47.0	48.5
10.2		36.6	54.7	10.6†	6	10.3	57.9	9.9		32.1	18.0	10.0		38	25.5
10.0		38.1	49.4	7.2		16.2	42.9	10.1		47.6	51.2	8.6		25.5	9.8
9.8		48.3	58.4	9.0		20.7	5.7	7.8	22	10.1	45.6	9.6		13.5	1.8
10.2		51.7	40.0	10.4		28.7	9.6	8.2		19.1	25.8	10.3		24.5	13.9
9.6	5.3	3.1	21.8	7.6		43.7	17.6	8.8		44.1	39.2	9.8	40	17.3	47.2
9.8		12.6	3.1	10.0	7	30.2	53.9	9.6		53.6	18.1	10.4		24.8	15.0
9.4		15.6	32.9	9.4	8	14.2	44.0	9.2		54.1	2.2	9.6		25.3	5.1
8.2		15.6	4.3	9.6	9	0.4	50.2	9.4	23	0.1	50.2	10.3		41.3	43.2
9.6		21.1	56.9	10.6†		2.3	58.1	9.6		7.1	1.0	8.8	41	13.8	59.9
10.0		21.6	17.7	8.7		30.9	44.5	9.2		17.6	35.8	10.4†		30.5	57.7
9.8		43.8	6.3	9.1		32.4	17.7	9.4		21.6	42.0	8.9		33.8	22.0
9.6		47.3	4.9	10.4		43.2	39.3	9.7		34.1	59.4	8.8		56.8	33.9
10.6†		55.0	57.6	10.2		50.2	23.3	9.7		53.1	37.8	9.2	42	2.8	19.9
9.6	5.4	12.3	14.0	8.8		59.2	37.8	10.2†		53.2	59.4	9.4		8.9	56.3
9.8		36.8	57.2	8.6	10	6.4	53.1	9.1	24	13.1	55.3	9.3		39.8	47.9
10.0		42.3	37.3	9.4		16.4	54.5	9.7		38.1	16.2	10.5	43	11.8	58.8
10.4	5.5	22.3	19.7	9.0		34.4	37.9	10.1		44.0	53.2	10.5		30.4	57.9
10.4		22.8	13.3	9.0		42.9	44.2	9.8	25	4.1	43.6	9.2		41.3	1.5
9.1		25.3	39.3	10.4		51.4	49.2	10.1		13.1	10.2	10.3		48.9	56.3
10.6†		25.5	59.4	8.7		51.9	54.4	10.2†	26	11.2	56.6	9.6	44	3.8	55.0
8.7		34.3	41.5	9.6	11	0.6	44.5	10.1		17.4	59.3	6.0		7.8	23.7
9.0		41.8	41.5	9.5		4.9	17.8	9.7		21.6	45.1	9.8		12.8	19.4
10.4		48.3	7.2	10.4		7.7	48.7	9.4	27	4.6	34.7	9.6		23.8	21.2
10.4		48.3	7.3	9.6		15.7	32.9	9.8		24.6	52.2	8.4		36.8	10.6
9.6	5.6	2.3	19.6	7.5		17.4	30.1	10.1		26.0	43.3	9.8		41.1	0.5
10.0		13.3	54.7	10.1		34.8	34.0	8.8	28	57.1	7.2	9.0		50.8	20.5
10.4†		14.5	58.8	10.1		49.1	46.0	9.7	29	8.6	31.9	8.0		55.8	49.4
8.7		21.3	53.3	8.8		49.6	47.5	10.4†		35.6	58.7	10.4		57.3	28.7
7.6		33.3	34.2	9.6		58.6	1.7	10.2†	30	21.1	56.8	9.3	45	3.8	31.2
9.4		33.3	5.2	12	19.1	20.0	9.2	9.6	31	33.1	42.7	9.3		43.8	52.5
10.0		39.3	24.4	9.7		22.1	9.9	10.0		44.1	33.4	10.2†	46	12.3	59.3
10.2	5.7	26.8	41.7	9.1		23.6	45.5	8.8		46.6	31.7	9.8		27.3	34.8
9.0		54.8	4.9	9.4	13	15.9	3.0	9.8		54.1	55.2	10.0	47	35.8	32.5
10.6†		58.5	56.7	9.4		33.6	36.9	8.8	32	12.6	19.8	9.3		35.8	19.8
9.5	5.8	7.3	10.5	6.9		37.2	59.5	9.2		14.6	45.4	10.5		54.3	8.5
8.9		45.3	37.0	9.4		53.6	56.8	9.7		22.6	54.8	8.4	48	5.8	51.0
10.0		54.3	6.2	9.9	14	11.4	47.5	9.6		33.1	26.0	10.5		20.3	51.3
8.7	5.9	15.1	59.6	8.8		32.6	53.1	9.7		34.1	17.1	10.0		31.8	50.5
9.4		15.3	27.1	9.4		50.6	16.5	9.6		45.0	17.3	10.0†		33.3	57.3
8.7		46.8	16.7	9.2	15	12.6	0.1	10.0		57.0	6.2	9.6		44.8	20.2
10.0	0	6.8	2.5	9.6		28.6	22.1	9.1	33	1.0	50.2	8.9	49	7.8	12.7
9.1		17.8	34.5	10.1		33.6	43.3	10.1		3.9	4.1	10.5		16.3	16.9
9.4	1	9.1	56.4	10.1		50.1	53.1	8.4		25.8	17.6	10.2†		25.8	56.6
10.2†		49.8	58.6	10.1	16	2.6	0.0	10.4†		28.9	56.9	9.2		30.8	29.6
10.4		51.3	51.8	9.4		45.1	16.7	9.3	34	5.0	29.8	9.5		35.8	46.9
9.4		52.8	19.3	9.4	17	2.6	22.3	9.8		56.3	26.8	10.0	50	6.3	14.8
10.0		54.3	10.8	10.1		13.2	52.3	9.2	35	0.3	39.3	8.4		41.1	53.9
9.6		58.3	57.3	8.8		24.6	30.3	10.2†		1.9	59.7	10.4		44.8	7.1
25Pr.		+ 1 5.4	- 7.1			+ 1 6.7	- 7.4			+ 1 7.9	- 7.6			+ 1 9.7	- 7.9

3001-3060.				3061-3120.				3121-3180.				3181-3240.							
mag.	10 ^h -11 ^h .	-33°		mag.	11 ^h .	-33°		mag.	11 ^h .	-33°		mag.	11 ^h -12 ^h .	-33°					
	m s	'		m s	'			m s	'			m s	'						
10.0	51	16.4	41.0	9.3	8	35.8	33.4	9.0	29	42.3	59.5	9.0	9.6	55	13.1	26.6	9.0	-	
9.6		56.6	24.1	10.2		52.6	57.3		10.4		57.5	55.2	G	7.2		24.3	57.3	7.0 GS-t	
10.4	52	52.8	26.8	9.8	9	13.7	56.3		10.2	30	2.7	13.1		9.0	56	22.1	51.1	9.2	-
9.8	53	3.6	49.2	9.2	10	8.3	28.3	9.0	7.7		28.6	57.6	7.5 GStπ	9.0		30.6	16.3		
9.6		8.3	57.5	8.5	10.0		18.8	3.4	10.4		44.7	49.6	9.5	8.8	57	5.1	54.5	9.5	
8.4		13.1	41.9	8.0 G=	7.0		19.6	59.2	7.0 GS-t	9.2	31	55.7	51.1	9.0	9.4		22.1	40.2	
8.8		15.1	38.1	9.0	10.2		52.8	10.1		10.2	32	1.4	40.7		9.6		54.6	37.6	
6.7		20.6	4.0	6.0 GStπ	9.4	11	0.8	4.9		8.4		19.2	32.0	8.8	9.6	58	14.6	13.9	
9.6		35.6	34.1		9.2		3.8	40.6	8.5	10.4		44.1	33.7	9.2	9.6		37.1	29.7	
9.8	54	52.6	36.9	9.8		42.7	29.6		10.0†	33	32.2	52.5		8.4		47.1	30.7	8.0 GW	
10.2		55	19.6	22.6	10.0		55.8	58.7		10.3		35.7	15.6	8.8	59	51.6	46.5	9.0	-
10.5			22.6	8.1	9.8	12	3.7	52.5		9.0	34	6.7	45.4	9.4	0	5.1	49.3	9.5	
10.0			36.1	55.4	9.0		20.3	29.1		10.3		28.2	47.2	9.0			34.1	35.6	-
9.8			39.6	40.8	7.9		35.3	4.2	8.3 G-	9.4		30.7	33.8	9.3†			42.4	50.6	
8.2			50.6	14.2	10.4†	13	20.6	58.8		10.3		40.1	50.8	10.1†	1	5.5	58.5		
10.5			58.1	16.1	10.2		36.3	5.7		8.6		46.7	14.0	9.0	9.6		15.1	12.7	9.0
9.6			56	1.6	10.4†		48.1	59.4		10.3		54.8	52.3	9.0	8.8		23.8	1.5	9.5
9.8†	57	7.8	57.4		10.2	14	31.4	52.2		8.6	35	5.7	48.3	8.5 G-	9.6		40.6	8.0	
10.3			12.6	40.1	9.2	15	47.3	34.2	-	10.3		22.4	51.6	9.2	9.6		45.1	42.9	
8.4			52.1	2.6	9.2	16	2.8	22.7	9.0	9.4		58.7	24.0	7.7			53.6	58.7	7.0 GStπ
10.2			55.6	40.7	8.5		5.8	5.7	8.0 G	10.3	36	19.2	51.0	8.2	2	8.1	7.5	9.2	
10.0			58	2.6	10.4†		10.6	58.5		10.3		37	0.4	50.3	9.4		55.1	27.0	-
9.2			13.6	16.0	9.5		12.8	11.8		8.8		15.7	11.6	8.5 G-	9.6	3	40.4	59.9	9.0
10.0			33.1	38.3	9.3		27.8	46.1	9.0	9.8		33.4	3.3	8.6			41.8	7.6	
10.3			39.6	9.8	8.9		35.8	22.7	9.0	9.0	38	2.2	46.3	9.0	9.6		45.8	10.9	
10.5			45.6	2.1	9.4		46.1	33.0	9.5	10.3		35.7	31.0	8.8			59.3	54.4	9.0
8.6			50.4	13.7	8.2		50.9	58.8	8.5	10.3	39	43.2	31.1	9.0	4	47.1	1.4	9.5	
9.6			59	12.4	9.0		58.1	39.0	9.5	9.6		43.2	8.5	9.5	9.6		57.3	46.0	
9.8			14.3	37.3	10.2	17	2.1	49.5		9.4	40	44.7	28.9	9.6			58.3	1.2	
9.6			21.5	4.5	9.4		10.6	47.6		8.8	41	13.2	12.2	9.4	5	54.5	34.9	9.0	=
9.5			35.9	57.9	10.2		12.6	45.6		8.8		22.7	45.3	8.8	9.6	6	4.3	2.8	
9.8†			40.3	57.0	8.6	18	9.3	58.9	8.2 G	9.8		40.7	23.1	-	9.6		11.3	9.9	
8.6			55.5	34.4	7.4		26.1	35.9	8.0 GS=t	10.2		52.4	1.6	9.6			27.8	10.5	
9.8			55.5	56.8	9.3		42.1	41.1		10.3	42	22.2	41.0	9.6	7.8		44.8	25.7	7.0 GS-
10.2	0	13.7	40.4		10.4†	19	32.6	59.9		10.3	43	56.4	7.6	9.6	7	0.8	34.8		
8.4			29.5	4.4	10.2		44.1	52.4		10.3	44	39.1	35.3	9.6	6.8		7.3	5.8	6.5 GS
10.2	1	2.5	50.7		9.6		47.1	38.3		9.8†	45	49.8	58.9	9.6			23.3	27.2	9.0
9.0			32.5	28.2	9.6		56.1	3.5	9.5	9.2	46	21.2	22.3	9.0	9.0		23.8	1.1	
10.0			39.7	34.7	10.2	20	7.1	21.0		5.2		35.9	12.7	4.5 GSπβ	7.4		49.3	5.1	7.0 GS-
8.4	2	20.5	37.9	8.5 G-	8.4		22.1	29.0	8.5	9.6		55.0	59.1	9.6	8	5.3	6.2		
10.2			24.3	0.9	9.3		24.1	27.1	8.5	9.6	47	8.1	7.9	9.6			13.8	19.8	9.0
8.6			29.5	5.0	8.5	21	15.3	0.0	9.0	9.6		17.1	51.4	9.8†			31.0	55.8	
8.4			49.5	43.7	8.3 G	10.2		24.2	56.6	10.0†		21.3	58.9	8.4			39.3	19.4	9.0
10.2			59.4	59.1	10.0†			42.6	59.7	9.2		29.1	43.4	9.6			41.8	10.8	9.5
9.8	3	5.5	50.7		10.4		56.8	15.7		9.6		40.0	48.9	10.0†			51.0	8.7	9.5
9.8			8.0	52.6	9.5	10.0		56.9	3.1	9.6		47.4	57.6	10.2†	9	42.0	56.9		
10.2	4	22.5	7.9		10.4	23	17.3	41.5		9.6	49	3.1	20.0	9.0			47.6	33.1	8.5
10.2			52.7	5.1	10.4		26.1	14.8	-	8.8		37.1	32.4	9.0	9.0		53.3	6.6	9.0
9.4	5	4.5	25.7	9.5	9.2	24	1.3	21.2	9.0	9.7†	50	9.3	57.2	9.2	10	1.9	45.1		
10.2			9.5	25.1	9.4		22.3	19.6	9.0	8.8		16.6	54.3	9.5	9.6		20.5	8.4	
8.5			15.5	47.1	8.5	9.2	25	13.7	1.9	9.6		41.8	58.8	9.1			58.0	48.6	8.8 G-
9.6			16.0	21.6	10.4		16.3	38.9	-	9.6		48.6	35.4	8.0	12	34.3	3.0	8.0 G-	
8.5			32.8	19.9	9.2	9.6		22.8	28.4	10.0†	51	5.1	57.4	8.4			50.5	6.1	9.0
9.4			56.8	46.4	9.5	10.4	26	18.3	4.2	9.6		57.1	23.9	9.6	13	33.0	14.0		
9.8†	6	29.3	57.7		10.2	27	32.1	9.5		9.6	52	13.6	47.5	9.6			38.3	29.4	
8.6			52.8	43.5	8.5 =	9.2		59.8	11.7	9.6		15.6	49.6	9.6			59.7	18.5	
8.6	7	23.8	16.1	8.5	9.0	28	15.3	31.4	8.5 G-	9.6	53	32.9	57.9	9.3	14	28.8	3.9		
8.9	8	14.6	57.1	8.0 G-	10.2		40.8	36.7		8.8		33.1	9.9	9.2	9.9†		52.8	55.3	
9.4			26.8	8.5	9.5	9.7		48.3	49.1	9.6		51.6	26.0	8.3			56.8	39.4	7.8 G-
9.6			33.3	13.4	8.8	29	15.8	34.0		7.8	55	2.1	21.1	7.0 GS-	9.6	15	2.8	4.7	
25pr.	+1	11.0	-8.1		+1	12.7	-8.2			+1	15.0	-8.8			+1	17.4	-8.4		

3241-3300.			3301-3360.			3361-3420.			3421-3480.		
mag.	12 ^h	-33°	mag.	12 ^h -13 ^h	-33°	mag.	13 ^h	-33°	mag.	13 ^h	-33°
9.5	15 5.3	28.5	9.9	42 16.5	52.1	9.0	4 0.4	3.5	8.4	22 5.4	38.9 9.0
9.2	13.3	11.3 10.0	8.2	57.5	25.2 8.5 =	9.8†	4.6	58.9	10.4	58.6	1.6
9.0	25.8	6.0 9.3	9.3	43 7.5	37.6 9.0 G-	9.6	40.3	59.2	8.4	23 46.7	26.5 8.0 G-
9.6	42.7	35.9 9.0	9.9	27.5	19.2	9.1	56.3	24.5	9.8	24 41.2	8.0
9.2	58.8	39.6 9.5	9.6†	30.7	59.0	9.7	5 36.8	43.3	9.6	52.7	30.5 9.0
8.4	16 17.8	18.0 7.8 G-	5.7	55.0	18.9 5.5 GStr	9.7	6 23.8	18.6	10.4†	25 2.2	57.7
8.8	43.8	42.9 8.5 G-	9.2	44 10.0	38.2	9.7	37.7	57.1	9.6	4.2	52.1
9.6	17 4.8	42.6	9.4	40.5	44.8	9.7	57.5	31.2	10.4	10.7	11.9
9.8†	18 3.3	54.9	8.8	43.0	19.4 9.0 -	8.6	7 30.3	16.0 8.5	9.4	19.7	26.9 9.5
9.0	23.8	38.5 8.8 G=	9.4	45 29.0	19.0	8.2	33.3	23.2 9.0 G-	9.8	34.2	17.1
9.4	35.3	3.5	9.9	30.0	55.2	9.4	40.3	46.9	10.4	26 39.4	56.5
9.6†	42.1	59.8	9.9	42.0	30.5	8.7	41.8	48.6 9.5	8.4	27 3.7	25.5 8.0 -
8.7	51.8	34.8 9.2 -	8.8	59.0	38.0	7.9	55.3	58.2 7.5 G	10.4	3.7	30.9
9.0	20 10.3	19.3 9.0	9.2	46 12.0	26.5 9.0 -	7.4	8 16.8	29.4 8.0 G-	10.0	6.7	11.9
8.2	37.8	26.2 8.0 G-	9.1	18.0	13.7	8.4	37.3	27.6 9.0 -	7.8	7.1	44.8 8.0 G=
8.5	21 54.8	17.4 9.0	10.0†	24.2	58.9	8.7	38.3	51.1 9.0	9.8	9.1	3.1
9.8†	58.8	53.3	9.8†	47 36.0	55.3 9.5	9.1	42.5	57.0 9.5	9.0	34.1	30.8 8.5
9.5	22 9.8	15.2	9.8	48 41.0	22.6	9.1	9 19.3	31.7	8.1	28 22.1	22.5 7.8 G-
9.6	23 19.7	47.4 9.5	9.8	46.0	23.2	9.6	26.8	4.1	9.8	42.6	41.1
9.6	21.8	53.1 G	8.4	53.1	0.3 8.3 G=	8.6	30.8	36.5 9.0 -	8.4	57.1	44.0 8.5 -
8.0	25.8	48.4 9.0 G-	9.3	49 44.5	20.0	7.8	54.8	56.3 8.0 G-	6.8	29 42.1	49.7 6.5 GS-
8.8	41.8	3.8 9.5	8.5	50 6.5	36.2 8.5 =	9.3	57.8	28.1 9.0 G	8.9	45.1	57.8 9.5
9.6	42.8	16.4	9.3	39.3	58.1	9.4	10 38.3	5.9	10.3	53.1	42.8
8.5	24 11.8	50.4 9.0	8.3	45.0	11.7 9.0 =	9.6	50.3	51.8 9.5	8.4	30 21.6	24.6
9.0†	52.1	56.9	9.6	52 2.0	23.8	8.3	11 1.3	27.7 -	9.8	30.6	40.0 8.5 =
9.8†	25 6.5	54.8	9.4	10.5	41.8 -	8.7	22.3	45.2	10.2	45.6	10.8
9.8†	11.5	54.0	9.0	46.3	14.6 9.5	9.2	23.3	56.4 9.0 -	10.4†	31 20.0	58.0
9.6	22.3	5.5	9.7	53 11.5	11.9	9.2	46.3	43.7	9.8	26.6	7.6
9.6	26 43.0	58.4 8.8 -	9.7	37.8	42.7	9.9†	49.6	49.3 9.5	10.4	36.1	23.3
9.6	52.7	54.1 9.5	8.2	46.3	29.8 8.5 =	9.0	12 6.3	55.6 9.0 -	9.6	32 3.1	11.8 9.5
9.4	27 47.3	37.6	9.8	59.3	30.3	9.4	13 0.3	56.9	10.2	47.6	0.1
9.1	28 8.8	8.6	9.8	54 8.8	43.7	8.8	3.3	55.3 8.5 -	10.4	52.8	32.1
8.4	13.8	10.3 8.5 -	8.8	20.8	12.0 9.0	9.1	16.3	4.8	9.4	33 12.6	33.6
8.7	15.8	2.7 9.5	9.2	39.3	48.8 9.0 -	9.2	17.3	6.1	7.6	20.6	43.3 7.5 GS=
9.4	23.7	37.7	8.5	55 10.3	48.3 9.0	10.0†	24.5	57.0 9.5	10.3	30.6	33.0
9.6	34.7	48.3	9.0	26.8	5.7 9.0	8.3	30.3	0.1 7.8 G=	9.8	32.6	46.2
10.0†	35.8	57.9	9.0	30.3	25.4	8.4	14 23.8	18.8 9.0 -	9.6	36.6	19.0
8.7	29 22.8	30.5	8.8	56 2.8	53.0	9.4	36.3	30.8	10.3	45.1	3.3
8.8	22.8	30.1	7.8	9.3	37.2 7.8 GStr	8.7	15 23.3	17.7 8.5 -	6.8	52.1	49.4 7.0 GS-
8.6	28.3	3.5 8.5 GW-	9.9	32.3	53.0	10.4†	39.4	18.2 9.5	10.4	54.5	57.2
9.0	35.3	29.1	8.8	42.8	1.2 9.5	9.6	40.3	39.8	9.4	34 0.4	1.3 8.8
9.0	42.3	37.7	7.4	52.6	34.7 7.2 GStr	8.7	42.4	1.5 9.2 -	10.4†	2.9	59.5
9.6	30 52.3	20.9	9.6	57 8.5	26.7	9.3	47.1	56.1	9.2	35.6	8.0 8.7
9.6	31 36.8	23.4 9.5	9.2	13.1	13.2	9.7	55.6	9.5	10.4	54.1	9.6
9.2	32 14.3	27.8 9.0 -	9.7	30.6	56.9	9.6	16 6.1	41.5	6.8	35 10.1	20.7 6.6 GS
8.7	27.3	35.0 9.0	8.4	35.4	28.7 8.8	9.1	9.1	46.3	10.4	25.6	21.9
9.0	44.8	7.6 9.0	9.7	58 12.4	5.6	9.6	26.1	47.4	9.6	32.6	25.1 9.2
9.4	33 8.3	41.3	9.1	59 59.4	41.2	8.7	17 37.1	46.9 8.8	10.4	43.6	47.5
9.6	10.0	58.4	7.4	0 3.4	26.9 7.5 GStr	8.2	44.0	58.9 8.0 GS-	9.8	36 5.6	55.0
8.0	46.0	23.4 9.0 -	10.0†	9.6	57.2	7.6	45.6	38.1 8.0 GS=t	8.7	19.6	36.3 -
9.1	35 50.5	20.2	9.0	26.4	31.1 9.5	9.6	46.1	12.8	9.6	25.9	19.2 9.5
9.9	36 3.6	53.5 -	9.2	36.9	28.8	8.9	55.6	27.6 9.0	10.4	32.9	20.0
8.8	14.5	36.6 8.5 =	8.7	1 17.9	18.4 9.0	10.0†	18 40.9	59.8	10.3	39.4	7.2
9.1	32.0	0.0 9.0	8.0	28.4	27.0 8.2 =	9.1	49.1	23.5 -	8.9	40.4	31.2
10.0†	32.7	58.8	7.8	2 3.9	40.8 8.0 G=	9.1	56.1	48.8	9.8	41.4	26.3
9.0	37 3.0	20.4	9.3	26.4	49.0	7.9	19 23.1	21.1 7.0 GS-t	10.2	42.9	10.4
9.6†	38 26.9	59.2	9.2	35.3	21.9	9.6	40.6	30.2	10.4	55.9	29.8
9.7	39 28.0	8.3	9.3	41.3	54.0	9.6	46.1	12.9	10.4	37 9.4	21.1
7.8	41 10.0	22.6 8.2 G=	9.4	3 10.5	10.5	8.2	21 10.6	3.4 8.2 =	9.4	17.9	47.0
9.8†	42 14.4	57.8	9.6	53.3	52.7	9.1	55.9	3.7	9.6	22.9	3.1
25pr.	+1 19.4	-8.3	+1 22.0	-8.1		+1 23.8	-7.9		+1 25.5	-7.7	

3481-3540.				3541-3600.				3601-3660.				3661-3720.				
13 ^h .		-33°		13 ^h -14 ^h .		-33°		14 ^h .		-33°		14 ^h .		-33°		
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	
10.4	37	26.9	52.4	9.5	50	29.9	46.3	9.0	9.6	10	58.5	42.0	9.3	29	30.1	12.4
9.6		32.9	18.8	8.4		42.0	34.7	8.5 S=	9.6	11	26.7	31.4	9.6		40.6	14.8
10.4		45.4	41.2	8.0		47.0	21.9	8.0 GS-t	8.8		35.5	5.3	8.5 -	10.0†	50.0	56.7
10.4		51.9	9.9	8.0		50.0	47.0	8.0 GS-	9.2		36.2	49.8	9.0	8.4	58.1	43.6
9.2	38	7.4	51.4	8.3	51	20.0	47.2	8.0 GS-	9.6		49.2	3.2	9.0	9.6	30	21.1
10.0		7.4	5.3	8.3		23.0	22.8	8.0 GS-t	8.6	12	36.7	21.9	9.2 -	9.7	22.6	56.3
9.4		16.4	35.7	9.5		28.5	22.4		9.6	13	9.7	3.8	9.0 -	9.6	51.6	38.4
9.2		18.9	45.5	9.5		34.0	48.3		8.3		13.2	6.6	9.0 -	9.7	55.1	48.6
8.6		20.4	20.7	8.5	52	45.5	58.8	9.0	9.2		21.2	46.9	9.6	31	0.8	46.1
9.6		36.4	14.6	8.6	53	34.0	31.1	8.8	9.6		27.5	33.8	9.1		57.3	42.1
9.6		51.4	18.7	8.8	54	46.0	37.3	9.0	9.0		37.2	15.4	8.8	33	1.1	6.8
7.7	39	16.9	8.8	9.5	55	11.9	3.9	8.8 G=	9.0		51.7	40.7	8.8 G=	9.7	2.3	38.9
9.9		43.9	6.0	9.5		38.5	40.0		9.2	14	12.7	19.7	9.8		37.4	59.9
10.4		56.4	12.3	9.5		41.0	3.2		9.3		25.2	19.3	9.6		44.1	23.5
10.4	40	14.4	52.2	7.8		46.0	56.2	8.0 G-	9.7		26.1	58.8	8.5		49.1	24.7
10.4		22.4	49.2	8.9		52.0	16.6		9.2	15	43.2	50.0	8.6	34	29.1	46.8
10.4		26.7	13.8	9.5	56	16.5	48.6		9.6		55.2	52.1	8.0		42.6	5.9
9.4		30.9	39.4	9.0		36.0	33.1	-	9.6	16	18.2	17.0	-	8.7	35	23.9
10.3		39.9	49.3	8.6		56.0	55.1	8.5	9.3		20.1	56.3	8.8		27.9	43.2
10.0		48.9	10.4	8.0	57	16.0	10.3	8.0 G-	9.2		20.6	8.4	9.6		45.9	41.5
9.6	41	2.2	0.9	9.1		18.5	30.1		9.1		39.1	1.6	9.2		53.9	20.9
9.6		21.9	23.4	9.2		21.5	50.1	8.8	9.6		47.1	7.2	8.6		58.9	14.6
10.2		56.4	21.1	9.5		27.3	57.9	8.5	8.3		47.1	21.5	8.8	36	14.9	30.8
9.6		57.4	9.1	9.6		51.9	11.0		9.6	17	25.6	38.3	9.2		31.9	37.2
7.2	42	9.9	11.9	8.3	58	27.0	35.7	8.5 -	8.2	18	4.1	16.4	9.2		51.9	31.6
6.2		12.4	49.4	8.1		28.5	5.7	8.0 GW-	9.7	19	13.1	0.6	9.9		58.4	57.4
9.9		12.9	12.0	8.5		35.0	23.1	9.0	8.8		25.1	9.6	9.5	37	19.9	51.0
9.8		12.9	23.4	9.6		48.5	5.1		9.4		34.1	19.2	8.6		40.9	34.8
9.2		16.9	36.2	8.9	59	9.5	41.5	9.0	9.4	20	29.6	9.2	9.4	38	12.9	19.0
10.0		51.4	21.6	9.2		22.0	47.7		9.6		43.1	6.3	8.4		45.9	14.2
8.4	43	52.9	9.9	9.6	0	3.0	29.1		8.8		52.1	17.9	8.8 -	9.8	39	0.9
8.2	44	2.4	16.3	9.6		30.0	5.4		9.3	21	34.6	16.6	9.9		2.7	57.9
10.3		3.4	1.1	9.5		32.9	46.2		9.7		40.2	54.6	9.4		13.9	34.7
9.8		21.9	23.4	8.8	1	15.0	53.3		9.2	22	44.1	17.3	9.3		45.9	31.1
9.9		23.9	46.9	8.6		16.3	1.1	9.2 -	8.2		46.1	3.6	8.0 G=	8.9	40	7.9
9.6		46.4	18.3	9.5		18.5	30.1		9.4	23	30.1	21.4	9.0		37.4	13.6
9.9	45	0.7	0.1	8.6		58.0	20.3	8.5	9.0		33.1	37.7	9.9		53.5	56.2
8.8		1.9	14.5	9.5	2	39.5	54.3		10.0†	24	3.3	58.8	9.9		55.9	25.4
10.4		14.9	17.7	9.4	3	32.0	14.9		9.2		14.1	7.6	9.2	41	30.4	54.0
8.6		17.4	42.0	10.4†		32.5	57.0		9.4		15.1	12.3	8.5		38.9	36.5
9.2		30.9	30.9	9.0	4	12.0	5.7		9.2		40.1	31.6	8.5	8.4	39.4	29.8
9.0		44.3	11.0	9.3		13.5	26.1		8.9		43.1	4.9	8.8 G=	9.4	42.9	52.7
8.0		58.0	59.4	8.8		38.5	21.2	9.5	8.4		47.1	3.2	-	9.3	42	54.9
10.4		59.9	32.7	9.0	5	26.5	57.1		8.8		52.1	51.6	8.5 -	9.5	43	18.9
9.5	46	31.7	52.4	10.0†		36.8	57.1		9.2	25	15.1	46.6	9.5		37.9	43.8
9.5		39.5	7.2	9.2		53.0	27.5		9.2		21.6	19.3	9.5	9.9	54.9	0.0
8.7	47	0.7	10.9	9.6	6	7.0	10.0		9.6		24.1	12.2	9.0	44	15.1	57.8
10.4†		10.5	58.5	9.6		19.5	24.4		9.2		52.0	59.5	8.5 -	9.4	28.3	39.0
7.4		22.2	58.7	9.0		33.0	49.6		9.2		56.1	0.3	9.5	9.4	38.3	22.1
8.8		42.7	39.8	9.5		37.5	50.7		9.1	26	3.1	26.3	9.6		39.8	53.2
9.5	48	7.7	48.7	9.6		49.0	21.8		9.6		5.6	35.7	9.6		50.8	7.4
9.5		17.3	57.8	9.6	7	20.0	13.2		9.6		37.1	38.7	9.8	45	5.3	7.6
8.8		25.2	44.1	8.4	8	0.5	15.7	9.0	9.1	27	23.1	22.9	9.0 -	9.0	7.3	6.1
8.4		55.7	15.7	8.3		40.0	50.1	8.0 -	9.6		34.1	3.9	8.2 GS-tr	7.9	13.3	6.8
8.5	49	11.7	21.2	9.0	9	24.5	49.6	9.0	9.4		43.1	49.9	9.0	9.8	19.3	18.2
9.5		13.2	34.8	8.4		36.7	57.3	9.0 -	9.7	28	2.1	39.6	9.8		38.3	28.1
8.8		52.7	36.5	9.0		59.4	27.6		9.6		42.1	22.0	9.0	8.7	46	4.3
9.5	50	1.0	59.6	9.7	10	14.5	21.0		9.6		46.6	44.1	9.0	9.9	8.3	10.6
10.4†		13.5	58.3	9.7		25.2	11.4		8.6	29	7.1	13.6	9.0	8.5	14.3	7.8
8.5		25.0	5.6	9.2		33.9	16.5		9.0		12.1	49.2	9.0	7.3	45.3	37.8
2.5pr.	+1	26.4	-7.5		+1	27.9	-7.2			+1	29.6	-6.8			+1	30.9
																-6.4

3721—3780.				3781—3840.				3841—3900.				3901—3960.			
14 ^h —15 ^h .		—33°		15 ^h .		—33°		15 ^h .		—33°		15 ^h .		—33°	
mag.	m s	m s		mag.	m s	m s		mag.	m s	m s		mag.	m s	m s	
9.5	46	51.3	16.5	9.0	2	10.2	41.8	9.9	14	59.9	5.4	9.6	31	15.6	19.2
9.0	47	18.3	56.1	9.6		23.7	54.4	9.5	16	7.4	28.9	9.2	32	16.6	38.7
9.2		51.8	10.8	9.8		24.2	9.9	9.1		18.9	35.4	9.7		34.1	50.7
6.0	48	4.8	20.7	9.4		28.2	50.7	9.8		33.9	30.3	8.4		36.1	50.1
9.4		24.3	4.8	9.9	3	36.2	47.9	9.9		35.4	9.3	9.7	33	2.6	38.7
8.7	49	7.3	44.3	9.5		59.2	53.7	8.9		43.4	37.1	9.2	34	27.1	5.6
9.8		18.3	15.1	9.9		59.2	2.8	9.3		52.9	21.9	8.0	35	32.8	0.4
9.8		53.3	35.9	7.8	4	0.2	9.7	8.8	17	23.9	5.4	9.0		36.6	18.2
8.4		56.8	55.3	9.6		30.6	53.8	9.1		31.9	4.1	8.2		37.6	5.2
9.8	50	13.3	56.2	9.4		32.6	5.4	9.6		41.4	34.7	9.7		43.6	8.1
9.2		24.3	11.2	9.4		33.6	5.6	9.9		57.9	59.0	9.7	36	44.1	0.0
10.2†		34.5	59.2	9.4		48.6	7.4	9.8		58.9	30.0	9.0	37	0.1	13.4
8.6		47.3	10.6	9.5	5	30.6	38.2	9.8	18	8.9	31.5	9.0		2.1	48.0
9.8		52.3	49.8	8.3	6	6.3	2.9	9.9		11.9	17.9	8.8		12.6	5.2
9.2	51	1.3	53.1	9.9		7.1	30.5	8.9		13.9	17.5	8.7		13.1	45.4
9.9		13.8	4.8	9.5		12.1	56.8	9.7		42.4	11.4	9.7		22.1	16.8
9.8		24.3	24.2	9.4		57.1	25.9	9.8	19	58.9	50.4	9.1		24.6	18.1
9.8		28.3	41.0	9.5	7	0.6	25.6	9.9	20	9.9	29.0	9.2		36.1	48.1
9.0		29.3	19.3	9.5		29.6	16.8	7.5		12.4	6.4	8.8	38	2.1	49.9
9.6	52	3.8	24.6	9.9		53.6	32.3	9.0		19.9	44.5	8.8		13.1	43.7
8.8		8.3	53.6	9.6		59.6	4.0	9.4		20.4	11.4	8.8		29.6	30.1
8.6		16.3	15.4	9.5	8	47.6	26.1	9.7		21.4	5.2	9.7	39	2.1	57.1
9.8	53	7.8	18.1	8.8		49.1	25.5	9.9		37.9	2.9	9.0		33.1	16.7
8.0		22.3	20.3	9.9	9	20.6	36.6	9.5		43.9	13.8	8.2		34.6	4.7
9.8	54	10.3	53.1	9.6		27.6	43.6	9.8		44.8	21.3	8.8	40	9.1	6.4
6.8		14.3	51.7	9.8		39.6	34.9	9.2		58.3	53.8	9.7		14.1	30.4
9.8		36.3	45.6	9.5	10	38.6	15.8	9.4	21	11.6	29.6	9.6		15.0	19.7
8.4		55.3	20.3	9.5		43.1	12.0	9.6		14.4	18.6	9.4		50.1	20.3
9.8		58.3	46.8	9.9		51.5	21.4	9.9		49.2	38.5	9.7	41	40.1	36.1
9.6	55	47.3	28.7	9.9	11	1.6	25.4	9.5		51.1	1.5	9.2		52.6	36.4
9.3	57	1.3	7.4	9.9		10.6	11.1	9.5		54.2	23.9	8.4	42	4.1	44.3
9.8		7.3	44.5	9.5		21.6	44.2	9.4	22	29.0	33.3	8.0		47.6	16.8
9.3		54.4	54.6	9.8		24.6	4.5	9.8		29.2	17.1	4.3	43	1.1	14.5
9.8	58	17.7	28.0	9.9		30.1	18.4	9.6		31.2	25.8	9.7		9.4	0.0
9.8		23.0	29.2	7.7		33.6	34.3	9.5		33.4	26.0	9.7		56.8	0.9
9.8		26.7	12.0	9.9		36.1	10.9	9.8		44.2	12.7	9.7	44	0.2	56.4
9.8		30.7	47.1	9.6		41.1	26.0	8.2		48.2	8.9	9.2		2.7	23.8
9.9		33.2	38.7	9.8		43.6	25.1	9.4		53.8	16.4	9.6		13.2	36.2
9.8		44.2	9.7	9.5		56.6	49.1	9.7		55.0	20.8	7.7		16.7	44.4
9.3	59	20.5	0.2	9.7		58.1	47.7	9.8	23	16.2	10.3	9.7		53.2	13.8
9.4		27.2	29.7	9.9	12	1.6	33.7	7.2		25.8	23.3	9.7	46	11.2	51.6
9.6		28.2	45.4	9.3		3.1	5.9	9.7		32.3	14.3	8.4		23.0	41.2
9.6		30.7	46.0	9.5		20.6	38.8	9.7		37.2	33.3	9.7		31.7	3.2
9.4		34.7	4.7	9.5		32.9	3.1	9.7		59.3	9.1	9.7		35.7	17.4
9.3		37.2	10.2	9.9		41.4	22.0	9.7	24	20.8	57.1	9.6		49.5	2.4
9.8		40.2	21.0	9.4		47.9	32.3	9.7		42.3	11.8	8.4	47	10.7	52.2
9.5		42.7	8.0	9.9		49.9	18.6	9.0		57.3	32.0	9.7		13.8	18.9
9.6		48.2	49.0	9.9	13	0.9	37.7	9.4	25	2.3	6.9	9.6		17.4	17.2
9.8		58.2	0.3	9.9		2.4	6.0	8.7		12.8	42.4	9.6		32.9	2.0
9.0		58.2	10.9	9.5		7.9	14.1	9.6		35.2	55.8	9.8	48	20.9	5.4
9.9	0	58.2	20.6	9.8		14.8	14.1	8.0		39.3	56.0	5.8		54.4	35.7
8.5		58.2	28.0	9.5		18.9	24.5	9.2	26	11.3	18.9	9.6		49.4	24.0
9.8	1	8.2	34.8	9.5		27.9	38.4	8.9		24.3	31.0	8.6	50	15.9	42.5
9.9		9.7	53.1	9.9		31.9	21.5	9.4		29.3	13.3	10.0	51	38.9	15.5
9.8		40.2	11.7	9.8		52.9	47.2	9.7		45.3	0.9	7.4		57.4	1.6
9.4		46.2	4.0	9.5	14	17.4	33.1	9.7	27	13.3	48.9	9.5	52	8.9	53.9
9.4		49.2	19.6	8.9		38.9	15.8	9.7		40.8	50.9	9.2		20.4	14.6
9.6		50.7	53.4	7.6		38.9	42.4	9.7	28	1.8	31.0	10.0		23.4	45.9
8.2	2	0.2	20.0	9.5		38.9	39.0	9.7		29.3	51.3	9.6	53	7.9	44.1
9.1		3.2	54.2	9.0		53.9	9.9	9.0	30	15.6	52.2	8.3		35.9	52.5
25 pr.	+1	32.2	-6.0	+1	33.2	-5.6		+1	33.9	-5.3		+1	35.0	-4.7	

3961-4020.				4021-4080.				4081-4140.				4141-4200.			
15 ^h -16 ^h .		-33°		16 ^h .		-33°		16 ^h .		-33°		16 ^h .		-33°	
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s
9.5	53 36.9	42.9		9.9	12 3.6	54.4		9.2	30 56.2	40.1		10.0	45 1.9	42.6	
10.0	54 0.9	41.0		9.7	14.9	5.3		9.4	31 0.2	59.7	9.5	9.4	35.1	56.5	
8.3	23.4	18.1	8.5 -	9.9	23.9	6.7		9.1	0.2	38.8		9.4	48.6	16.6	9.0 -
10.0	48.9	46.7	9.0	7.8	13 23.9	0.0	7.2 GS-	9.9	7.2	37.5		8.2	46 16.1	7.9	8.5 G
9.4	59.9	43.0	9.0	9.4	48.4	17.1		8.6	13.2	53.2	8.5 G	7.4	17.6	15.9	7.0 GStπ
9.2	55 10.3	45.5	9.0	9.8	51.4	9.3		9.7	14.4	58.8		10.0	40.0	1.6	
10.0	30.8	8.9		8.8	14 9.9	59.1	8.8 -	8.0	16.7	52.4	8.0 G-	10.0	48.6	9.5	
9.6	50.8	47.9		9.9	15.0	24.3		8.0	21.9	57.3	8.2 G-	9.8	47 7.6	10.9	
8.2	56 26.8	29.0	8.5 G-	8.2	30.4	22.5	8.0 G	9.9	27.2	33.5		8.0	48.1	18.1	GSetπ
10.0	57 11.3	4.0	9.0	9.9	35.9	58.9		9.9	30.2	41.2		10.0†	57.4	58.0	
7.8	27.3	39.5	8.0 =	9.8	15 1.4	14.5		9.9	38.7	41.0		9.8	48 0.6	39.6	
10.0	33.2	52.2		9.0	3.9	43.3	8.5	9.9	59.9	58.8		9.4	4.5	53.8	9.0 -
10.0	58 43.8	36.0		9.4	25.4	12.2	8.5	7.6	32 5.2	29.6	7.0 GS-	10.0	5.6	25.6	
10.0	44.8	36.0		9.0	16 10.9	43.9	9.0	9.1	26.7	39.0	8.0	10.0	8.5	46.9	-
9.0	57.8	56.7	9.0	8.1	17 41.4	16.6	7.5 GS-	9.4	34.5	6.6		9.4	26.0	53.1	9.5
9.0	59 3.8	49.3	9.0	9.9	47.9	32.3		8.8	47.0	47.7		9.6	46.0	10.8	
8.0	16.8	22.1	8.0 GS-	9.6	19 4.2	2.0		9.9	33 33.9	52.9		7.6	49 3.0	3.5	5.8 GSπμ
10.0	19.8	31.9		9.6	20 12.7	45.2	8.5 G	10.0	46.1	53.2		9.6	40.5	20.6	
10.0	22.8	28.9		9.0	21 20.7	57.5		8.8	34 0.4	31.4	-	9.6	59.0	35.2	
10.0	42.8	46.2	9.0 -	7.6	23.7	2.6	7.2 GS-	10.0	41.8	16.5		10.0	50 5.5	33.8	
9.7†	0 14.1	40.2	9.0	9.9	32.7	35.0		9.6	35 6.2	47.9	10.0	10.0	6.5	28.8	
8.1	14.3	41.7	8.8 -	9.0	42.2	55.5	9.5	10.0	32.2	59.9		7.6	10.0	24.6	7.0 G≡
9.0	1 42.8	9.4	8.2	8.2	22 1.7	50.5	8.0 G-	10.0	36.7	2.0		10.0	21.8	28.0	
8.6	44.9	1.6	9.2	9.8	3.4	0.9		9.2	46.7	18.1		9.5	22.5	13.4	
6.0	52.3	12.7	6.0 GStπ	9.9	10.2	49.7		9.6	36 3.2	4.9		8.8	30.0	36.5	
10.0	2 12.3	50.2		9.6	36.7	24.8		10.0†	6.1	59.6		10.0	32.0	9.2	
8.7	34.3	6.2	8.7	9.6	45.7	3.6	8.2	9.6	6.6	45.5	9.5	10.0	33.0	18.0	
9.5	3 0.8	21.3		9.6	54.7	57.8		10.0	10.1	26.3		9.6	45.5	13.2	
10.0	20.3	26.8		9.8	58.7	53.5		10.0	29.1	11.1		10.0	52.0	21.7	
9.1	32.8	18.1	9.0	8.3	23 21.7	10.3	8.5	8.8	40.1	33.6		8.0	52.5	19.8	8.0 =
8.8	47.3	11.8	8.2 G-	8.0	24 3.2	12.0	8.0 GW-	10.0†	47.7	8.1	10.0	8.6	59.5	13.8	8.5
10.0	56.8	52.5		9.4	9.7	18.0		9.5	37 0.1	13.9	8.0	8.6	51 6.0	26.5	9.0
9.4	4 24.4	41.1		8.2	14.7	57.9	8.2 -	10.0	12.6	23.0		9.4	9.0	58.2	10.0
10.0	43.1	53.0		9.8	31.2	23.9		7.8	26.1	36.8	6.5 GS-	9.8	52 46.0	37.9	9.5
9.1	52.9	31.2		9.1	32.2	28.0		9.6	32.1	36.8	10.0	10.0	46.8	8.3	
8.6	5 8.6	59.0	7.5 GS-	9.9	36.7	47.9		10.0	38 12.6	9.7		10.0	53.5	41.3	8.5 =
9.2	20.4	32.1		7.3	54.7	15.6	7.0 GS-	9.4	27.1	8.0		9.2	53 23.0	11.6	
9.2	26.4	40.7		9.9	25 13.7	32.7		9.5	30.1	58.3		7.5	33.5	10.8	7.2 GS
8.7	26.4	15.9	9.0	9.1	41.2	4.9	9.5	10.0	49.1	53.0		8.2	40.0	42.8	8.0 =
10.0	6 19.4	54.9		9.9	49.2	43.7		9.8	39 0.1	3.7		9.5	49.0	27.4	
9.8	28.4	5.6		8.8	26 16.4	1.7	8.5	9.6	12.1	18.8		10.0†	51.2	59.6	
9.0	7 10.4	50.2	9.0	9.9	39.7	22.0		9.2	23.6	59.5	9.2	10.0	54 10.5	28.5	
10.0	8 1.6	1.5		9.1	46.7	46.6		7.8	27.1	28.1	7.0 G=tr	9.0	13.0	19.8	8.2 -
9.0	44.7	33.1		7.8	52.2	57.4	8.0 W	10.0	32.1	13.4		9.4	22.0	4.3	
10.0	9 0.2	32.3		9.9	52.7	33.3		9.2	40.6	51.8	9.5	10.0	41.8	46.5	
8.8	1.2	16.4		9.0	56.7	22.9		10.0	40 1.5	2.0	9.0 G	9.2	42.0	37.6	
9.0	34.9	27.9	9.5	8.6	27 15.7	45.0	8.5	9.8	40.1	47.5		10.0†	52.0	39.5	9.5
9.1	10 16.7	19.8	9.0	8.2	16.2	33.0	8.0	8.4	46.1	42.7	8.5 G-	10.0	55 12.0	28.6	
8.8	23.7	42.0	8.0 G	7.7	28 6.2	56.2	7.0 GS-	8.4	48.6	30.2	9.0 -	10.0	37.5	48.0	
10.0	24.4	41.6		8.8	46.7	47.7	8.0 -	7.4	41 9.1	47.5	7.0 GStπ	9.4	47.0	5.7	
9.4	27.4	48.8		9.9	29 1.7	27.0		10.0	58.1	58.8		10.0	56 9.8	33.8	
9.0	33.4	48.8		9.8	27.2	29.0		10.0	42 20.1	16.6		10.0	31.0	17.8	
9.9	35.7	51.1		8.6	28.9	0.2	8.8	9.6	46.1	7.2		6.2	36.0	56.7	5.5 GStπ
9.7	49.4	46.2		9.0	40.2	52.3		9.8	52.6	1.9		9.8	44.0	59.5	
9.1	11 3.6	30.1		9.8	42.2	3.9		9.4	43 6.6	32.9		10.0	55.8	25.6	
9.9	4.0	26.4		9.8	43.2	16.6		9.4	14.1	36.5		10.0	57 5.8	15.8	
9.1	5.9	20.9	9.0	8.8	56.7	45.7	8.5 -	9.6	38.1	30.6		8.2	9.6	35.4	8.5 -
8.1	43.4	50.6	8.8 -	8.8	30 7.2	38.6	9.0	9.4	44 5.6	27.1		9.8	58 7.6	40.7	
9.4	46.4	36.3		9.9	36.4	14.5		9.2	58.6	10.2	8.5	10.2	29.1	8.1	
9.8	12 3.4	24.5		9.9	54.4	52.8		7.5	45 0.1	4.2	7.5 GS-	9.6	30.1	5.3	
25pr.	+ 1 36.2	- 4.1		+ 1 37.0	- 3.4			+ 1 37.5	- 3.0			+ 1 37.9	- 2.5		

4441-4500.			4501-4560.			4561-4620.			4621-4680.		
mag.	17 ^h .	-33°	mag.	17 ^h .	-33°	mag.	17 ^h .	-33°	mag.	17 ^h .	-33°
10.2	24 54.6	57.0	10.2	30 6.4	49.9	9.6	35 33.3	53.1	10.2	40 53.7	26.0
10.2	25 17.6	51.7	10.2	13.9	32.6	10.2	39.3	37.3	10.2	56.2	21.6
10.2	27.6	42.1	10.2	14.4	52.3	10.0	52.3	54.7	10.0	57.7	12.2
10.2	38.1	8.0	9.8	16.4	52.7	9.4	54.3	38.3	10.2	41 3.2	10.2
7.8	39.9	59.2	9.2	24.2	58.5	10.2	59.3	51.8	10.2	6.2	56.6
9.2	42.1	34.0	10.2	43.4	39.6	10.2	59.8	40.7	9.5	13.7	20.0
10.2	46.6	54.7	9.6	43.4	33.1	10.2	36 0.3	31.9	9.5	20.2	25.4
10.2	47.1	23.9	9.9	44.4	49.1	9.6	16.3	15.3	10.2	25.7	11.4
9.2	54.1	31.9	10.0	51.4	29.5	10.2	18.3	50.5	9.8	27.7	36.0
10.0	59.6	52.7	9.4	31 8.4	55.8	10.2	19.3	50.3	10.0	32.4	1.9
9.9	26 8.1	18.7	8.8	13.9	33.3	8.7	24.3	12.7	9.6	35.7	44.7
10.2	8.6	17.0	9.8	15.4	9.6	9.0	24.8	20.9	10.2	38.2	17.4
10.2	16.1	35.4	8.1	15.9	28.6	9.3	33.3	6.7	9.2	40.2	44.8
9.2	16.6	38.2	9.7	23.9	24.3	9.9	33.3	4.9	10.2	42.0	57.0
9.5	19.3	0.9	9.4	31.4	43.0	9.6	38.3	28.7	9.0	42.7	20.0
8.8	24.6	34.2	8.9	33.9	4.7	9.7	38.8	37.7	9.7	47.2	18.9
9.2	45.1	31.6	9.8	35.9	58.9	9.5	53.7	45.9	9.6	52.2	10.6
9.7	52.5	36.0	8.2	44.9	3.9	9.0	37 3.2	15.1	10.2	57.2	57.3
9.8	53.5	4.3	8.9	50.4	7.7	10.2	5.6	0.3	9.5	57.7	5.4
9.7	55.5	41.2	9.8	32 22.9	43.3	10.0	15.7	27.5	9.6	42 21.7	30.9
8.5	27 17.0	39.2	9.8	35.4	37.1	10.2	16.7	32.9	9.9	23.7	51.2
9.9	24.5	59.1	10.2	43.4	49.3	9.4	18.2	45.9	10.2	30.7	10.3
9.6	27.0	6.7	9.5	44.4	55.3	10.2	20.7	53.6	10.2	35.7	27.9
8.1	39.0	45.8	10.0	45.9	19.7	10.2	23.2	52.5	8.8	36.7	39.8
9.2	41.0	3.8	10.2	52.9	1.1	10.2	24.2	13.0	9.6†	36.8	58.0
9.8	43.0	20.8	8.2	54.4	53.9	9.9	25.2	3.6	10.2	37.2	29.0
9.8	49.5	52.5	9.2	33 3.4	39.9	10.2	27.7	14.4	8.9	38.2	53.8
10.2	56.5	24.6	9.2	4.4	37.2	9.2	43.2	8.9	10.2	50.7	14.2
9.5	57.5	48.7	10.0	7.9	31.1	9.9	55.7	40.8	10.2	59.6	56.6
10.2	57.5	23.7	10.2	8.4	51.7	10.2	38 3.7	50.2	10.0	43 3.7	49.9
9.4	59.5	24.2	10.2	10.3	2.9	9.0	6.2	42.9	8.2	4.2	47.4
8.7	28 4.0	13.3	9.2	24.8	39.3	10.2	8.2	38.0	9.6†	9.8	57.3
9.9	15.5	58.9	10.0	27.3	28.0	9.8	19.7	37.7	9.4	10.7	27.0
10.2	19.5	9.2	9.7	31.3	17.1	10.2	20.2	59.3	9.0	13.0	58.3
9.3	20.0	30.9	10.2	32.8	30.7	9.4	25.7	54.8	10.2	14.2	17.1
10.2	27.0	16.3	10.2	33.8	25.9	8.7	34.2	46.3	9.5	17.7	37.7
10.2†	38.2	57.8	9.4	41.3	55.9	10.2	37.7	48.5	9.6	21.7	24.8
9.4	40.0	18.3	7.8	44.8	26.1	9.8	43.7	5.9	10.2	35.2	50.6
10.2	54.3	53.9	9.6	51.3	34.4	10.0	53.2	5.9	10.2	35.2	9.8
10.0	58.5	16.8	9.5	54.3	22.7	10.2	39 4.7	53.3	10.2	46.2	44.9
10.2	59.0	34.2	9.4	54.3	4.9	9.8	13.7	40.0	9.9	44 1.2	7.0
9.6	29 11.5	24.7	9.5	57.8	32.3	9.0	16.2	18.1	10.2	16.3	59.9
10.2	22.0	10.2	9.7	59.8	32.9	9.9	18.2	17.9	9.6†	19.8	59.0
9.2	22.5	36.0	9.5	34 0.8	47.5	10.0	21.7	29.3	10.2	24.2	13.5
9.3	24.0	50.7	9.0	1.8	23.7	9.4	28.2	51.7	9.3	29.2	48.5
9.7	24.5	21.7	9.6	7.8	55.9	10.2	29.2	29.3	9.7	48.2	58.1
9.0	26.0	34.7	10.0	11.3	54.1	10.2	41.2	7.7	9.6†	59.8	59.6
9.4	27.5	9.4	9.6	14.8	3.9	8.2	43.2	57.1	8.7	45 5.7	43.8
10.2	29.0	35.4	9.6	27.8	12.6	8.8	43.4	57.7	9.0	8.2	42.2
10.0	30.0	54.1	9.3	45.3	10.7	10.2	51.2	48.3	10.2	13.2	17.0
10.0	31.0	5.4	9.6	45.8	8.9	9.5	53.7	31.1	9.4	13.7	19.0
9.5	35.4	9.9	9.6	47.4	59.1	10.2	40 1.2	22.9	10.2	18.2	50.8
9.4	41.9	24.1	9.3	49.3	50.5	10.0	3.2	16.4	10.0	23.4	4.3
9.6	46.9	9.1	8.8	35 1.8	32.9	10.2	3.7	34.9	10.2	25.2	5.3
8.9	53.4	24.8	10.2	4.3	43.1	10.2	5.2	47.9	10.2	29.7	26.9
9.9	58.9	40.5	9.9	12.3	27.4	9.8	9.2	29.9	9.8	33.9	30.6
9.8	58.9	7.2	10.2	15.8	56.0	9.6	30.7	11.5	10.2	34.1	44.1
9.5	30 1.4	55.7	10.2	16.3	29.7	8.4	35.7	48.9	10.4	42.7	46.5
9.8	4.7	57.6	9.4	22.8	27.7	10.2	50.7	26.1	10.4	42.7	52.7
8.9	5.9	32.0	10.2	28.3	19.0	10.2	52.7	52.5	9.8	45.9	14.7
25Pr.	+1 38.7	-1.2	+1 38.7	-1.0		+1 38.8	-0.8		+1 38.8	-0.6	

4681-4740.			4741-4800.			4801-4860.			4861-4920.		
mag.	17 ^h	-33°	mag.	17 ^h	-33°	mag.	17 ^h	-33°	mag.	17 ^h -18 ^h	-33°
9 ^h 8	45 48.4	26.5 -	9 ^h 8	50 59.6	15.0	9 ^h 8	54 57.5	50.0	10 ^h 4	59 23.1	41.7
9 ^h 0	59.1	53.1	9 ^h 8	51 2.6	10.3	8 ^h 9	58.0	20.7 -	10 ^h 4	24.1	9.0
8 ^h 7	46 9.9	35.1 =	10 ^h 4	7.6	56.8	10 ^h 4	55 2.0	37.3	9 ^h 4	42.6	44.9
8 ^h 5	17.1	54.9 8.5	9 ^h 8	9.5	56.5	9 ^h 6	3.0	47.8	9 ^h 6	43.3	1.6
10 ^h 4	17.1	46.9	9 ^h 2	14.0	1.9	10 ^h 1	12.0	28.5	10 ^h 4	43.6	55.5
8 ^h 0	22.4	55.6 8.0 -	8 ^h 8	25.5	38.3 9.5	10 ^h 1	13.0	50.0	9 ^h 2	44.1	15.6
7 ^h 7	25.4	52.7 8.0 -	10 ^h 4	40.0	53.0	10 ^h 2	14.0	30.6	9 ^h 2	47.1	45.0
9 ^h 6	32.1	45.3	8 ^h 2	40.0	52.7 8.3 G-	10 ^h 4	21.5	9.1	9 ^h 8	55.6	18.4
9 ^h 8	33.6	53.2	10 ^h 4	40.5	55.1	9 ^h 6	25.0	36.8	9 ^h 4	57.1	44.3
10 ^h 4	36.6	57.2	9 ^h 2	42.0	38.8	10 ^h 1	30.0	20.1	10 ^h 4	0 0.3	2.0
8 ^h 5	41.6	10.1	7 ^h 8	43.0	23.6 8.0 GS=0	8 ^h 5	45.5	13.3 8.5 -	10 ^h 4	6.6	20.4
10 ^h 4	43.1	5.7	10 ^h 0	43.0	10.9	10 ^h 2	47.0	10.5	9 ^h 9	10.1	2.9
10 ^h 2	47.1	39.6	9 ^h 2	44.5	45.0	8 ^h 9	55.5	1.6 8.5	9 ^h 9	16.6	23.9
8 ^h 6	47 4.6	59.5	10 ^h 4	47.0	52.8	10 ^h 4	56 3.0	40.6	10 ^h 1	31.1	55.8
10 ^h 4	5.6	34.2	10 ^h 4	51.0	8.1	9 ^h 4	9.5	6.9	10 ^h 4	42.1	59.0
9 ^h 9	5.9	59.9	9 ^h 8	52 3.5	15.6	9 ^h 5	11.5	39.0	9 ^h 9	47.1	55.6
9 ^h 8	8.6	45.3	9 ^h 4	4.0	10.7	8 ^h 7	18.5	32.3	10 ^h 4	50.0	56.3
9 ^h 8	10.6	57.0	10 ^h 4	5.0	53.7	9 ^h 9	25.0	10.7	9 ^h 8	51.6	33.5 G
8 ^h 7	16.6	48.1 9.0 G	10 ^h 4	12.0	55.0	9 ^h 2	34.0	26.0	8 ^h 4	53.1	34.7 8.5 G≡
9 ^h 2	23.1	20.9	10 ^h 4	13.5	37.6	9 ^h 9	43.0	1.9	9 ^h 2	54.1	19.9 9.0 -
9 ^h 5	25.6	25.0	9 ^h 8	15.5	41.6	10 ^h 0	45.0	27.1	10 ^h 4	1 0.1	32.8
9 ^h 8	34.1	25.3	9 ^h 5	16.5	54.3 9.0 G	9 ^h 8	59.5	32.8	8 ^h 8	1.1	18.5 9.5
10 ^h 4	34.6	55.2	10 ^h 4	17.0	53.0	9 ^h 6	59.5	33.1	9 ^h 9	9.6	19.2
8 ^h 5	41.6	6.4 9.0	9 ^h 9	23.5	49.0	9 ^h 8	57 1.5	30.1	9 ^h 4	12.1	59.2
10 ^h 4	45.1	31.4	10 ^h 4	25.5	50.5	10 ^h 2	2.0	37.6	8 ^h 7	13.1	15.0 7.5 G
8 ^h 7	45.6	36.1 -	10 ^h 1	27.0	24.8	10 ^h 4	17.0	26.1	10 ^h 4	16.6	11.8
9 ^h 0	46.4	59.9	9 ^h 8	27.3	57.9	10 ^h 4	18.5	31.3	9 ^h 8	22.1	40.0
9 ^h 5	50.6	11.2	9 ^h 8	28.2	0.5	10 ^h 2	23.0	45.8	9 ^h 6	28.6	18.0
9 ^h 9	48 3.1	47.3	9 ^h 5	29.2	1.5	9 ^h 2	23.0	18.9 -	10 ^h 4	37.1	32.0
10 ^h 4	13.1	52.9	9 ^h 5	34.0	6.5	9 ^h 5	31.0	52.4	10 ^h 2	43.1	21.2
10 ^h 2	22.6	6.1	8 ^h 5	41.5	59.9 8.0 G-	9 ^h 6	33.5	22.8	10 ^h 4	46.1	12.1
10 ^h 0	31.6	5.0	10 ^h 1	51.5	36.0	9 ^h 9	34.0	46.4	10 ^h 4	48.1	43.2
10 ^h 1	38.1	6.9	8 ^h 9	54.7	2.7	9 ^h 9	37.0	12.8	10 ^h 4	49.8	59.6
8 ^h 3	47.1	23.1 8.0 G-	10 ^h 1	53 1.0	24.1	10 ^h 4	39.0	58.9	9 ^h 8	53.1	51.2
9 ^h 8	48.1	37.0	9 ^h 8	3.5	34.0	9 ^h 8	41.0	16.5	10 ^h 2	54.6	52.8
9 ^h 5	50.1	5.2	10 ^h 4	7.0	47.2	9 ^h 8	42.5	39.7	10 ^h 4	55.6	50.5
10 ^h 2	50.6	49.9	10 ^h 1	19.5	13.3	9 ^h 6	43.0	33.9	10 ^h 4	56.1	38.7
10 ^h 4	49 0.6	18.9	10 ^h 4	23.0	41.7	9 ^h 0	43.5	58.5	10 ^h 2	58.1	30.8
10 ^h 4	2.1	8.5	9 ^h 6	25.7	2.4	9 ^h 9	50.5	38.5	10 ^h 4	59.6	56.3
10 ^h 4	6.1	49.4	10 ^h 4	27.5	31.0	9 ^h 6	58 3.0	9.0	9 ^h 4	2 7.6	10.8
9 ^h 2	13.1	11.0	10 ^h 4	28.0	45.3	10 ^h 1	3.5	36.3	8 ^h 5	9.1	41.3
9 ^h 2	15.6	31.5 9.0	9 ^h 9	33.5	33.4	10 ^h 4	4.0	18.2	10 ^h 2	14.1	54.9
9 ^h 4	17.6	50.5	9 ^h 8	34.0	8.1	10 ^h 4	6.0	53.3	10 ^h 2	15.6	52.0
10 ^h 4	20.6	37.3	10 ^h 4	36.5	53.1	10 ^h 4	7.5	59.2	9 ^h 8	24.3	2.3
10 ^h 0	32.6	38.7	9 ^h 0	43.0	48.8	10 ^h 4	8.5	15.6	10 ^h 2	24.6	28.3
8 ^h 0	43.1	55.8 8.5 G-	9 ^h 6	44.0	11.6	10 ^h 4	11.5	54.5	8 ^h 2	25.1	56.2 7.0 GS-
9 ^h 8	45.1	57.1	10 ^h 4	50.5	21.7	10 ^h 4	28.0	41.6	9 ^h 4	30.6	8.6
10 ^h 4	45.6	20.3	9 ^h 9	54 1.0	56.2	9 ^h 9	35.5	26.7	9 ^h 8	34.1	46.3
10 ^h 4	53.1	11.5	7 ^h 9	2.0	45.6 8.0 -	9 ^h 4	51.6	29.0	6 ^h 6	39.1	49.2 6.5 GS-
9 ^h 8	56.6	37.1	9 ^h 8	3.0	33.2	10 ^h 1	54.6	27.1	10 ^h 2	40.3	0.2
10 ^h 4	59.1	26.1	9 ^h 6	4.0	2.1	9 ^h 8	56.6	50.7	10 ^h 4	41.6	6.7
9 ^h 2	50 14.1	19.5	9 ^h 8	17.0	18.9	10 ^h 4	59 2.1	39.1	10 ^h 2	44.1	34.7
9 ^h 8	15.6	21.7	10 ^h 4	18.0	56.3	10 ^h 1	7.6	40.0	10 ^h 4	44.6	19.9
10 ^h 1	22.1	18.1	9 ^h 6	22.0	32.9	10 ^h 1	8.1	4.8	10 ^h 0	47.6	19.0
10 ^h 4	27.1	26.2	7 ^h 6	26.5	53.1 8.0 -	10 ^h 4	8.1	53.5	8 ^h 9	55.3	0.7 9.0
8 ^h 8	29.1	18.5 -	9 ^h 2	38.0	34.6	10 ^h 2	9.1	37.3	10 ^h 4	58.1	15.7
9 ^h 9	45.1	35.1	9 ^h 6	43.5	33.1	10 ^h 4	10.6	39.7	9 ^h 9	3 0.1	24.1
10 ^h 4	47.6	51.0	10 ^h 4	48.5	19.9	10 ^h 4	11.6	53.7	8 ^h 2	9.6	20.7 7.5 G-
8 ^h 9	56.6	43.5	10 ^h 0	56.0	21.4	10 ^h 4	13.1	21.3	10 ^h 4	12.1	26.0
9 ^h 1	57.4	59.6 9.5	9 ^h 8	56.5	12.3	9 ^h 9	14.3	2.9	10 ^h 2	12.1	42.0
25pr.	+1 38.9	-0.4		+1 38.9	-0.3		+1 38.9	- 1		+1 38.9	+ 0.1

4921-4980.				4981-5040.				5041-5100.				5101-5160.			
18h.		-33°		18h.		-33°		18h.		-33°		18h.		-33°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.4	3	19.1	44.3	10.1	7	31.1	34.6	10.0	13	21.4	3.4	10.2	20	27.6	19.0
10.0		19.6	4.9	10.4		32.6	47.7	10.3		21.4	10.4	9.3		28.1	42.0
10.4		23.6	5.6	10.2		36.1	49.3	10.3		24.9	23.0	9.3		35.6	33.8 =
9.8		32.8	2.2	9.6		39.6	55.7	10.3		59.1	58.0	9.0		40.9	58.4
9.8		33.1	25.8	9.8		41.6	11.7	8.9	14	2.9	34.9 9.5	9.4		45.1	37.0
10.4		43.1	16.2	9.4		44.1	32.1	10.2		5.9	26.6	9.5		58.6	54.8
9.8		46.6	22.1	10.2		44.6	8.0	10.3		16.7	57.8	9.8	21	17.6	54.3
10.4		48.6	41.8	8.3		46.1	47.5 7.7 G=	10.2		23.4	57.1	8.8		19.1	23.6
10.2	4	10.9	58.9	10.2		48.6	47.1	10.3		33.1	50.5	8.4		28.1	35.0 9.0 G-
10.4		12.6	10.8	9.4		51.1	8.5	10.3		35.3	45.7 9.0	10.3		29.6	25.4
9.2		13.1	51.1	9.1		52.1	20.7 8.0	10.2	15	14.2	2.8	10.2		32.1	7.0
10.4		16.1	49.1	10.4	8	4.1	1.1	10.2		19.7	30.2	9.6		42.1	33.2 9.0 G
10.4		21.6	34.3	10.4		10.1	52.7	10.2		20.7	25.0	9.4		46.1	37.5 8.5 GStπ
10.4		24.1	11.0	10.0		10.1	16.0	9.3		22.7	4.5 8.5 -	9.4		47.1	34.3 8.0 GStπ
9.6		35.6	33.3	10.4		16.6	16.4	10.3		23.7	46.0	7.4		49.1	7.6 8.0 GStπ
10.4		35.6	20.2	8.7		18.1	10.5 8.5	9.2		44.2	18.3	9.8		51.3	44.3
10.2		42.6	28.1	9.6		22.1	10.8 9.0	10.3	16	1.7	52.1	8.2	22	2.3	11.7 -
10.4		46.1	39.0	9.4		23.6	53.9 9.5	10.3		2.2	53.0	10.0		13.8	7.7
10.4		46.6	20.6	9.9		24.6	35.9	10.2		3.7	25.0	10.3		16.8	51.0
9.4		48.6	34.7	9.8		31.6	3.7	10.3		9.2	53.1	10.3		31.2	57.9
9.6		55.6	17.8	10.4		57.1	37.8	10.3		15.7	24.8	10.3		33.3	44.8
10.4		58.1	30.6	10.4	9	2.6	11.5	8.0		15.7	20.6 -	10.0		43.3	14.4
10.2		58.6	42.7	10.1		7.1	3.9	10.3		41.7	21.2	9.6		48.3	16.2
9.2	5	1.6	34.2 8.0 =	10.1		7.1	18.8	10.0		46.2	45.4	6.5		53.3	4.2 6.0 GStπ
10.4		11.6	45.3	9.6		13.1	27.0 -	9.5		47.7	23.6	9.7†	23	2.6	59.8
10.4		12.6	14.0	9.6		13.1	17.7 -	9.6		50.2	54.4	9.3		7.8	19.7 9.0
10.2		16.1	16.7	10.4		14.6	18.3	9.8		56.7	34.0	10.3		13.3	8.1
10.4		16.1	31.6	9.9		22.1	23.1	10.3	17	10.2	56.9	10.0		20.8	50.8
8.8		19.6	31.1 8.0 G=	10.4		23.1	32.7	10.2		14.2	28.2	10.2		24.3	51.2
9.8		25.3	1.1	9.4		33.1	24.1	8.8		15.2	11.0 9.0	10.2		27.3	17.1
10.1		31.1	11.6	9.4		35.6	25.9	9.3		16.2	14.1 8.5 -	9.8		35.8	35.1
10.2		40.6	20.4	7.7		37.1	26.2 7.5 GS=e	8.9		16.7	6.2 9.0	9.8		36.8	34.9
9.8		41.1	0.8	9.9		43.1	25.9	10.3		20.9	57.7	9.8		45.8	18.5
8.0		48.6	15.8	10.1		58.6	23.5	9.5		26.7	7.4	9.2		58.3	23.4 9.5
10.4		53.6	28.8	10.4	10	1.7	43.9	10.3		34.7	23.4	10.3	24	10.2	53.4
10.4		59.1	55.4	8.2		3.6	48.9 8.5	9.9		49.7	18.4 9.0	7.8		12.5	1.6 8.0 GStπ
9.5	6	3.1	33.0	9.8		20.4	38.5	9.6		52.7	53.2	9.6		22.3	19.8
9.9		3.6	38.0	10.4		21.1	8.3	10.3		53.7	52.8	10.3		37.3	28.5
10.4		11.6	15.8	10.4		26.1	20.9	9.3	18	0.2	15.2 8.5	10.0		39.3	57.4 9.0 G
9.8		15.6	51.4	10.4		27.1	30.9	9.8		16.7	47.0	10.3		44.8	22.0
10.0		23.1	41.9	10.3		38.3	6.2	8.9		19.7	39.2	9.9		56.3	6.8
10.2		27.1	45.5	9.3†		43.6	59.1	10.2		19.7	0.8	9.3		57.3	30.9 8.5 G-
8.0		28.6	10.3 8.8 -	9.6		48.8	56.0	10.3		22.9	56.3	8.4	25	0.8	4.2 8.8 GW
10.4		33.6	21.3	10.3		53.3	53.5	10.3		32.7	49.0	10.3		6.3	17.4
10.2		37.1	29.9	10.3		55.8	0.2	10.3		38.2	20.7	9.5		13.3	13.9
9.5		39.1	56.1	10.3		57.3	48.5	9.0		48.6	11.0	10.3		14.3	18.4
9.8		42.1	33.8	10.3	11	2.5	2.9	9.5		49.6	30.1	8.2		18.8	42.6 8.5 -
8.6		45.6	37.7 9.0 =	10.3		14.7	35.0	10.3		56.6	30.8	10.3		23.8	11.3
10.4		46.1	13.7	8.3		23.9	4.2 8.5 -	10.3	19	1.0	58.0	10.0		26.8	1.0
8.8		47.1	30.5	10.3		28.9	44.2	9.8		12.1	36.8	10.3		32.8	50.9
10.4		50.1	7.7	9.8		57.9	44.2	7.9		17.6	28.8 GStπ.	9.9		39.3	3.6
9.6		51.1	49.9	9.8		32.4	55.2	10.3		18.1	23.0	9.9		41.9	29.6
10.4		56.1	7.0	10.0		34.4	17.8	10.3		33.6	11.9	10.0		42.9	54.1
10.4	7	2.1	16.9	7.6		42.4	23.0 GS=c	10.3		41.6	25.5	6.1		46.4	6.4 5.8 GStπ
9.6		11.6	14.2	9.6		55.9	18.8	10.3		44.1	37.2	9.9		46.9	20.5
10.2		12.6	17.5	10.2		57.9	27.0	10.0		51.6	20.8	7.8		53.9	3.2 7.5 GStπ
10.0		14.1	32.9	10.3	13	2.9	11.0	8.3		58.1	25.2	9.8		56.4	31.2
10.1		16.6	20.9	9.4		2.9	37.0	9.2	20	2.1	52.6	9.8	26	3.9	20.5
10.1		26.6	46.6	8.8		15.9	40.1 9.0	9.0		17.1	51.2	10.2		14.4	24.8
7.6		27.1	7.5 7.5 GStπ	9.0		19.9	35.0 7.5 G=	9.8		25.6	40.6	10.0		20.4	36.1
25pr.	+1	38.9	+0.2	25pr.	+1	38.9	+0.4	25pr.	+1	38.8	+0.6	25pr.	+1	38.8	+0.9

5161-5220.			5221-5280.			5281-5340.			5341-5400.		
mag.	18h.	-33°	mag.	18h.	-33°	mag.	18h.	-33°	mag.	18h.	-33°
10.3	26 39.9	47.2	10.0	33 16.6	1.4	9.1	39 2.5	5.8 8.5 G-	10.3	46 45.2	43.4
10.3	46.4	41.9	8.5	17.6	24.4 -	9.7	16.5	34.0	9.4	50.2	14.5
9.8	27 1.4	19.4	10.2	39.7	25.7	9.4	17.0	42.3	9.9	52.7	20.7
9.6†	11.6	58.0	10.2	48.7	58.4	10.4	30.9	51.2	8.8	54.2	55.5 9.5
neb.	33.6	5.1	9.6	53.9	16.0	9.1	41.1	23.1	9.6	56.4	39.4
10.2	38.4	32.7	9.7	56.5	15.3	10.4	43.6	56.0	9.8	47 17.4	9.0
10.0	39.4	31.1	9.4	34 0.4	44.9	8.6	40 2.6	6.3 9.0 -	9.6	17.9	21.1
9.1	40.9	16.2 -	10.0	1.7	19.6	9.2	3.6	54.7	10.3	18.4	58.9
10.0	52.4	51.5	10.4	4.5	0.3	9.5	25.1	22.3	9.6	20.9	28.6
9.5	28 0.9	16.8	8.8	7.4	46.6	9.7	32.1	16.0	9.8	21.2	57.0
10.3	2.9	56.9	10.4	16.0	36.0	9.7	32.6	46.9	10.4	27.4	40.0
9.0	13.4	48.2	10.4	18.0	43.6	10.4	35.6	21.2	9.4	36.4	35.8 9.5
10.3	44.4	7.2	9.0	23.8	47.4	9.8	40.6	30.2	8.0	47.4	24.8 7.5 GW-
10.2	44.4	28.2	8.6	23.9	45.0 -	10.3	41.6	15.7	10.0	54.4	21.9
10.2	45.6	34.8	10.0	36.9	32.5	10.4	44.1	0.8	7.9	48 7.9	25.5 7.5 GW-
10.2	47.4	36.2	8.8	40.9	34.2	9.7	50.8	59.7	9.4	8.9	0.1
9.6	29 1.9	44.0	9.9	41.9	53.2	10.4	55.1	0.9	10.4	18.1	1.5
9.0	13.9	22.3	9.7	44.4	32.4	9.7	41 4.6	26.2	9.2	26.4	36.4 G
9.6	21.9	47.5	10.0	46.4	51.5	9.7	5.6	36.2	9.1	34.4	30.7 9.0
10.2	35.9	38.9	10.4	49.0	55.9	9.5	19.6	52.3	10.4	35.4	13.1
9.4†	38.1	58.6	9.8	50.4	11.2	10.4	25.1	2.8	9.1	39.4	0.3
10.3	44.6	33.1	8.0	53.9	36.7 8.5 -	8.0	27.6	44.0 GS-	8.1	44.9	16.9
10.3	53.4	3.7	10.2	57.9	28.5	10.4	28.1	53.2	7.3	45.4	29.2 7.0 GS-
10.0	56.9	29.6	10.4	35 6.9	52.2	9.9	36.6	35.1	8.5	45.9	28.4 9.0 GS-
10.0	30 3.6	22.5	9.6	13.0	26.0	8.0	56.6	44.1 GS-	9.7	46.9	20.2
10.2	15.1	30.0	10.0	18.0	48.2	8.4	58.6	39.7 =	9.7	48.4	8.4
9.6	16.6	32.5	9.1	32.5	30.7	10.0	42 14.6	34.2	9.2	48.9	13.8
8.4	17.1	34.9 G=tr	10.3	42.2	1.1	9.8	18.1	34.0	9.9	49.9	12.9
10.3	27.6	7.9	10.2	47.0	8.1	9.8	19.1	23.9	9.4	56.9	34.4
10.3	27.6	55.0	9.8	36 4.5	31.1	9.9	34.6	21.9	9.2	57.9	51.0
10.2	36.6	19.2	9.1	14.0	35.3 9.0 -	9.4	44.6	52.8	9.2	57.9	2.0
10.3	37.1	0.9	10.4	25.3	50.9	10.4	48.4	57.5	10.4	49 5.9	53.2
9.9	46.1	55.6	9.6	29.5	6.8	8.8	55.7	1.3 9.0	9.7	14.4	12.0
10.2	46.4	2.1	9.2	36.5	47.9	9.7	10.7	40.8	8.8	14.9	39.3
10.2	50.1	21.0	8.2	37.0	30.3 8.0 G=	10.4	16.6	58.0	9.5	18.4	24.1
10.2	31 4.1	33.2	9.1	37.5	5.3 9.5	10.0	27.7	41.2	9.7	27.4	13.4
8.1	18.6	6.2 8.0 GS-c	10.0	39.5	6.8	9.5	50.7	40.2	9.2	39.4	5.2
10.3	20.6	54.5	10.0	41.5	30.0 9.0	9.7	52.7	42.1	9.0	47.4	22.5
9.1†	24.1	57.4	9.9	43.0	7.6	9.8	53.2	14.2	9.7	50.4	45.1
9.4	29.1	51.6	9.9	43.3	24.3	9.9	59.7	20.4	10.0	57.4	44.1
9.8	33.6	55.5	8.5	49.0	22.7 9.0	10.4	44 3.7	38.8	9.9	58.4	54.6
10.2	35.1	46.1	10.4	37 0.9	52.0	9.8	12.2	14.7	10.4	50 3.4	46.5
9.6†	38.1	58.8	8.6	3.5	25.4 9.0	9.8	15.0	1.1	9.9	9.0	50.6
10.3	49.6	55.2	10.4	26.9	53.1	9.9	28.2	48.8	9.6	10.0	6.4
10.2	57.6	21.7	9.9	42.0	34.9	8.8	54.2	21.5	8.4	18.9	1.5 8.0 G-
9.4	59.1	29.2	9.4	44.5	6.5	9.7	54.2	20.5	10.0	23.0	21.7
9.0	32 3.0	45.9 9.0	9.9	49.0	39.1	9.8	45 0.7	56.0	10.3	25.5	22.9
10.0	14.6	45.6	9.9	53.0	6.3 G	9.2	4.7	39.2	9.6	36.0	10.4
8.6	15.6	6.6 8.8 G	9.2	38 6.0	23.5 9.0 G	10.4	8.2	14.0	10.3	54.5	13.3
7.9†	20.1	58.1 7.5 GS-	9.4	9.5	16.7 9.5 G-	10.4	14.2	52.5	9.7	56.0	24.3
9.5†	29.1	59.3	9.2	15.2	2.8	10.0	16.2	16.5	9.6	56.2	2.0
8.8	31.6	19.3 9.0	9.5	15.5	15.1	9.9	16.7	57.4	10.3	58.0	2.4
10.3	36.1	35.2	9.6	22.0	13.3	9.4	26.2	6.0	10.3	58.0	3.1
10.3	40.6	18.6	9.8	22.2	2.2	10.0	36.2	14.2	10.0	58.5	3.6
10.3	40.6	0.9	9.5	30.0	6.3	8.6	42.7	54.1	10.4	58.7	16.0
10.3	42.6	3.9	9.4	30.0	5.5	9.4	57.2	14.6	10.3	58.9	2.3
9.6†	48.6	58.1	10.4	32.9	55.3	10.4	59.7	57.5	9.4	51 1.0	23.6
8.7†	48.6	59.0 8.0 G	10.3	53.0	46.1	10.4	46 1.7	9.5	9.6	1.5	59.8
10.3	33 4.1	11.0	9.2	56.0	28.8	10.0	23.2	36.7	10.0	4.0	27.9
10.0	10.6	26.4	9.9	39 2.0	58.1	10.4	35.4	51.8	8.6	4.5	38.9
25Pr.	+1 38.7	+1.1		+1 38.6	+1.8		+1 38.5	+1.6		+1 38.4	+1.8

5401-5460.			5461-5520.			5521-5580.			5581-5640.		
mag.	18 ^h .	-33°	mag.	18 ^h -19 ^h .	-33°	mag.	19 ^h .	-33°	mag.	19 ^h .	-33°
9.7	51	6.0	9.2	57	54.1	10.3	4	48.5	8.2	10	57.4
9.7		6.2	10.4		56.9	10.3		50.5	10.0	11	2.4
10.0		18.0	8.8		58.9	9.6		52.1	10.2		2.9
9.9		18.5	10.3	58	1.3	10.3		53.1	10.2		3.9
8.6		27.5	10.3		2.5	8.9	5	7.1	10.0		12.4
9.7		37.5	8.9		23.5	9.9		19.1	9.9		13.4
10.4		38.8	10.3		35.7	9.4		22.1	9.2		37.4
10.0		46.0	10.3		42.8	10.2		34.1	10.3		39.9
10.4		54.3	10.3		45.5	9.5		46.1	9.7		52.4
9.8	52	3.5	10.3		50.5	8.8		51.6	10.3		55.9
10.3		3.5	10.3	59	0.3	10.3		52.6	9.0		58.9
10.4		5.0	10.0		4.5	9.2		57.1	7.8	12	2.9
8.5		7.5	10.3		11.0	9.8	6	7.1	10.2		4.9
8.6		8.7	10.2		13.5	9.9		10.1	9.1		17.4
9.8		13.0	9.4		13.5	9.9		13.6	9.5		36.9
10.0		13.7	9.5		20.7	8.9		21.6	8.0		46.4
10.0		18.0	10.3		33.5	10.2		22.1	8.8		53.9
9.9		20.0	10.3		34.0	10.2		22.1	9.2		59.4
9.9		23.5	9.1		36.5	9.9		27.6	9.4	13	12.9
10.0		31.5	10.3		46.5	10.0		30.1	9.9		14.9
7.8		49.5	10.0		50.0	10.2		35.6	10.0		25.9
10.4	53	0.0	9.8		53.5	10.1†		38.8	9.9		31.4
9.9		10.0	9.1	0	7.3	9.6		40.1	10.2		33.9
10.4		10.7	10.0		22.3	10.3		44.6	10.3		51.4
8.8		22.9	8.7		23.8	9.4		47.1	9.9	14	4.4
9.9		25.5	10.0		27.8	10.3	7	6.1	9.1		5.9
10.4		28.7	8.0		32.6	10.3		28.1	9.9		13.4
10.2		59.6	10.3		32.7	7.4		36.6	10.0		25.9
10.0	54	8.2	8.7		38.8	8.0		39.6	9.8		35.9
9.7		18.2	8.8		56.3	10.0		53.6	10.2		40.4
9.5		23.2	9.2	1	16.3	8.4	8	16.6	7.9		45.9
9.4		25.6	10.3		41.8	8.0		23.1	10.3		49.9
10.4		26.8	8.8		48.5	10.2		23.6	9.6		54.9
10.4		45.9	10.0	2	4.3	10.0		27.6	10.2		55.9
10.4	55	1.9	9.6		7.3	9.4		40.1	9.4		56.4
9.7		8.8	10.2		12.3	9.5		56.7	9.9	15	12.9
10.3		25.2	10.3		12.8	9.4		57.1	10.0		12.9
10.3		30.2	10.2		17.3	10.0	9	2.6	9.4		24.4
9.8		35.2	9.1		22.8	9.9		7.1	10.3		29.9
10.4		39.4	9.9		35.3	10.2		21.6	9.1		45.4
9.6		56.7	8.8		52.8	10.2		21.6	9.1		45.9
9.5		56.7	9.4	3	4.8	10.0		25.1	7.5		52.9
10.0	56	0.7	10.0		5.8	10.3		29.9	10.3	16	1.9
10.4		9.1	9.2		9.1	9.2		35.9	9.1		28.9
9.7		16.7	8.7		29.1	9.3		41.9	9.9		31.9
10.0		24.7	9.9		30.8	9.9		43.9	9.1		31.9
9.8		25.7	8.4		36.3	10.0		44.4	9.9	17	1.4
9.1		29.7	10.0		37.8	10.3		47.9	9.8		21.4
10.0		31.7	10.2		41.8	10.3		57.4	9.4		53.9
10.4		35.2	9.7		42.8	10.3		57.9	10.0		55.9
9.8		38.7	9.6		53.3	9.9	10	2.4	10.3		58.4
10.4		43.2	9.8		56.3	7.7		12.9	10.3	18	2.9
8.8		44.7	9.2		59.3	10.2		15.9	7.9		15.9
9.8		56.7	9.4	4	4.8	10.3		25.9	10.0		16.9
9.9		59.7	9.8		5.8	9.2		25.9	9.7		30.4
9.4	57	4.2	10.2		10.3	8.7		32.9	10.3		31.9
8.6		8.7	8.0		16.6	9.8		45.4	10.3		45.9
9.0		15.7	9.8		33.1	9.8		46.9	9.9		53.4
8.0		26.7	9.7		46.1	7.7		50.9	10.0		53.9
10.4		53.8	10.2		46.1	9.5		56.4	9.8	19	9.4
25pr.	+1	38.3		+1	38.2		+1	38.0		+1	37.7
		+2.0			+2.2			+2.4			+2.7

5641-5700.				5701-5760.				5761-5820.				5821-5880.			
mag.	19 ^h .	-33°		mag.	19 ^h .	-33°		mag.	19 ^h -20 ^h .	-33°		mag.	20 ^h .	-33°	
	m s			m s				m s				m s			
9.9	19	27.4	56.7	10.4	32	37.1	42.0	8.6	50	38.0	5.8	10.0	5	57.9	50.8
10.3		32.9	30.1	10.4		45.1	32.5	9.4		39.0	34.7	9.8	7	15.7	47.8
10.0		37.9	5.9	9.0		46.1	40.9	9.6		49.5	44.7	10.1†		30.5	59.2
9.9		37.9	41.3	9.1		49.1	32.7	8.0	51	27.5	2.2	8.5	8	5.4	38.0
10.0		44.4	25.1	9.0	33	1.1	20.3	10.0		30.5	22.3	10.2		25.7	46.9
10.2	20	11.4	6.7	9.6		7.1	8.9	9.1		37.0	52.5	9.8	9	1.4	21.6
9.8		21.9	11.4	8.1		11.6	9.3	9.0	52	21.5	0.4	9.2		22.3	13.5
10.3		39.4	5.1	8.8		36.6	45.1	9.1		25.5	21.6	9.5		32.4	6.7
10.3		46.6	50.1	10.2		40.4	57.8	9.4		32.0	58.3	10.0		54.6	18.3
10.2		47.4	27.1	8.8	34	21.1	19.2	9.8		49.0	5.3	9.4	10	16.8	21.0
10.2	21	3.4	13.7	9.8		36.9	16.3	8.6		55.5	50.4	9.9		23.9	56.6
9.2		6.9	36.5	9.8		3.9	12.4	9.8		57.0	11.4	10.1†		36.0	58.4
10.2		7.9	13.2	9.8	35	12.4	32.0	8.7	53	1.5	10.5	9.6		41.5	52.9
10.3		32.9	53.4	8.2		15.9	56.2	9.6		19.5	17.7	9.9		46.1	9.3
10.0		42.4	48.5	10.0		17.9	6.5	10.4		38.9	59.9	9.8		52.9	49.8
10.3		45.9	2.4	10.2		19.9	26.9	9.8		46.0	37.7	9.4	11	1.1	25.5
9.8		51.9	5.8	10.4		26.9	9.7	8.0		49.5	17.0	7.6		16.1	7.1
10.0	22	20.9	5.4	10.2		30.9	53.9	9.1	54	20.0	21.1	9.6		27.1	32.5
10.3		29.9	1.7	8.6	36	23.9	31.7	10.4		31.0	9.0	9.3		49.1	37.3
10.3		31.9	15.2	9.8		28.9	19.6	10.0		45.5	31.8	8.2		52.1	15.6
9.8		36.4	6.4	9.6		52.9	33.0	10.4		55	32.0	7.5	12	4.9	0.4
9.7		36.6	22.1	10.4		37	16.9	9.8		37.5	36.0	8.4		26.1	20.9
10.4		41.9	17.1	10.0	39	11.4	5.4	9.6	56	56.9	45.6	10.0		36.1	42.3
9.0	23	24.9	40.3	9.4		20.9	6.5	9.0		57	1.2	9.9	13	2.6	14.3
10.0	24	3.9	17.5	9.6	40	5.4	53.4	10.4		25.7	33.4	7.8		18.1	7.9
8.8		3.9	17.9	9.6		10.4	4.3	7.1		33.9	21.0	9.0		22.1	27.3
8.6		8.9	26.3	9.6		44.9	21.3	9.2		43.4	3.9	9.9		35.6	18.0
9.1		16.9	1.2	9.8		54.9	29.7	9.6		45.4	3.0	10.0		36.3	44.0
8.4		27.6	9.9	9.8		55.4	38.1	10.0		53.9	2.9	9.9		41.6	33.6
9.6		38.1	0.6	9.8		56.9	15.0	10.0		53.9	10.9	9.3		57.6	25.6
9.0	25	18.6	3.1	8.5	41	13.9	16.6	10.4		58	18.9	8.6	14	26.1	6.4
8.4		54.1	24.9	8.6		19.4	10.6	10.4		32.9	40.6	9.9		30.6	24.0
10.4	26	8.1	7.1	9.6		26.4	44.1	9.4		45.4	32.2	8.2	15	9.6	39.2
9.2		12.6	21.1	9.8		32.9	32.1	10.4		58.4	13.0	8.6		11.6	26.8
8.4		47.1	3.7	8.0		42.9	4.2	10.4		59	14.4	9.9		22.6	32.6
9.6		52.6	33.3	10.4	42	3.9	25.3	10.4		32.4	39.8	8.8		37.1	6.4
9.0	27	2.6	46.3	9.8†		14.5	57.4	8.4		39.9	41.4	9.6		46.1	31.0
8.6		34.1	22.7	9.6		14.9	51.0	9.2		48.9	12.6	10.0		49.6	7.8
8.6		40.1	5.7	9.4		33.9	2.4	9.8	0	21.9	13.1	9.9		52.6	2.0
9.8		45.1	38.5	9.6	43	2.9	1.5	9.1		34.4	39.5	10.0	16	13.6	9.0
10.0		47.1	24.5	10.0		9.4	52.4	10.4		34.9	57.8	9.3		26.6	28.3
10.2		54.1	26.1	9.6		9.9	20.7	10.4		58.4	50.3	8.8		27.1	6.2
9.4	28	18.1	23.5	10.0		56.9	20.4	9.1	1	0.9	22.3	8.8		41.6	25.8
10.2		19.1	26.3	9.6	44	7.4	36.1	7.8		15.9	43.5	9.6		53.1	18.7
10.4		27.9	1.6	9.6		40.4	3.5	9.4		22.9	4.8	9.0	17	6.6	31.3
10.2		35.1	4.1	8.2		42.9	5.0	9.8		31.9	30.8	9.0		23.1	46.0
9.8		45.6	19.3	9.4	45	4.7	37.5	10.0		35.9	46.5	9.0	18	32.6	42.7
10.4	29	13.1	56.8	9.6†		18.2	57.6	9.4	2	3.4	47.6	9.6		44.1	23.6
9.6		19.1	40.5	10.2		42.1	24.0	8.4		32.9	54.6	9.9		49.6	17.4
9.4		34.1	7.0	10.0		47.0	45.6	9.5		54.2	58.8	9.0	19	33.1	56.7
9.6		48.1	10.3	9.8		59.4	6.2	10.2		3	2.4	9.9		34.1	43.6
7.6		56.6	11.3	9.5		46	40.0	9.4		5.4	7.0	9.6		47.6	20.0
9.6	30	4.1	0.7	7.2		47	4.2	9.4		9.4	48.9	9.4		56.1	18.0
9.4		32.1	48.1	10.0		48	3.5	9.6		9.9	6.6	9.6	20	16.1	42.5
8.8		54.1	29.4	9.5		34.0	50.9	10.4	4	1.4	4.0	10.0		23.1	29.1
9.6	31	8.6	32.7	9.6		58.0	56.2	9.6		33.9	42.8	9.4		43.6	14.0
9.8		38.1	43.1	10.4	49	3.5	27.2	10.4		5	2.9	10.1†		43.9	57.6
10.4		39.6	2.9	10.2		23.5	31.4	8.8		4.4	6.8	10.0		47.1	20.1
9.6	32	14.1	24.3	9.8		55.5	13.3	9.8		18.9	36.6	9.4		59.6	37.9
10.4		20.6	16.8	10.2		50	8.0	8.7		30.9	39.5	8.6	21	9.1	33.0
25pr.	+1	37.4	+3.0		+1	36.8	+3.6		+1	36.1	+4.1		+1	35.3	+4.6

5881-5940.			5941-6000.			6001-6080.			6061-6120.		
mag.	20 ^h	-33°	mag.	20 ^h	-33°	mag.	20 ^h -21 ^h	-33°	mag.	21 ^h	-33°
9.1	21 13.1	52.0	10.8	36 37.4	4.6	10.8	49 18.3	25.6	9.8	4 46.0	59.4
7.8	49.6	26.2	8.6	37.4	56.3	10.8	31.5	52.6	8.7	5 2.0	37.9
9.1	22 0.1	44.9	10.0	54.9	36.3	9.2	50 0.3	16.7	10.0	3.0	5.9
9.0	36.1	34.2	10.3	37 5.9	18.7	10.8	51 6.3	10.0	10.0	5.0	58.3
10.1†	44.4	59.8	10.2	38.4	24.0	10.8	7.4	58.5	10.6	7.0	52.9
10.1†	47.4	58.1	10.3	47.4	11.4	9.6	22.3	29.3	9.9	10.0	31.9
9.0	23 36.1	1.7	9.0	38 3.9	9.6	9.6	25.8	52.5	10.0	26.0	8.8
10.0	24 0.6	38.4	10.8	28.9	40.2	10.3	26.3	53.7	9.4	30.0	28.8
9.0	26.6	26.3	10.2	54.9	11.9	10.8	33.3	44.8	9.8	6 6.0	13.8
8.3	31.6	27.2	9.9	58.9	51.7	10.3	43.3	19.9	9.6	10.0	18.7
9.8	25 17.0	50.2	10.3	59.4	34.7	10.3	46.3	2.1	8.8	12.0	18.1
9.8	23.5	8.7	10.0	39 26.9	36.0	10.8	52 9.8	44.0	10.6	16.0	8.3
9.3	53.5	38.7	10.6	42.9	41.4	10.0	46.3	30.5	9.8	32.0	3.0
9.6	56.4	0.5	8.0	42.9	25.8	9.2	56.3	44.3	8.7	33.0	10.0
9.8	57.0	8.0	10.2	59.4	30.7	8.5	53 12.3	26.6	10.6	36.0	0.3
9.4	26 52.5	13.1	9.6	40 1.9	1.0	8.6	23.3	10.3	8.0	46.0	3.2
9.1	27 24.5	39.6	10.0	2.9	21.8	6.9	44.3	22.8	9.9	59.5	26.1
9.8	29.0	55.1	8.0	3.4	57.7	9.8	56.3	0.6	8.7	7 2.0	25.5
9.6	28 34.2	2.6	9.8	3.9	51.1	8.0	54 9.2	58.4	10.6	24.0	18.0
9.4	46.0	33.8	10.3	39.9	46.7	9.8	39.8	59.3	8.1	38.0	42.1
9.9	54.7	0.3	10.8	47.4	57.0	10.4	43.3	50.3	9.6	42.5	47.6
9.6	29 7.5	30.3	9.8	59.9	34.9	9.8	55 0.8	23.6	8.4	46.0	32.1
9.9	10.5	49.6	10.8	59.9	53.0	9.9	6.8	50.5	10.0	47.0	55.2
9.9	13.0	5.6	8.5	41 16.9	28.4	8.0	16.8	4.7	10.6	58.5	34.0
10.0	18.0	56.4	10.8	32.9	8.1	9.9	17.8	43.8	9.4	8 6.5	32.0
9.3	28.5	38.0	10.8	46.9	52.8	10.4	56 2.8	20.9	9.9	7.0	37.6
9.3	55.0	8.8	9.6	58.9	25.4	8.6	9.9	0.4	8.2	24.0	14.4
9.1	57.5	49.3	9.0	42 16.9	42.4	9.9	17.3	46.5	9.9	41.0	43.5
9.8	30 2.5	12.8	8.0	8.0	21.9	10.8	27.3	35.1	9.4	9 12.0	32.9
7.8	3.5	52.5	9.4	25.9	42.0	9.2	27.8	35.8	9.8	23.0	56.6
9.9	14.5	32.0	9.6	28.9	26.6	10.2	30.3	8.3	9.8	48.0	26.1
9.9	22.5	50.7	9.6	43 12.9	23.8	10.4	34.3	6.2	9.2	57.0	52.8
9.6	41.5	8.9	9.9	21.9	55.0	10.2	38.8	49.2	9.8	10 17.0	43.8
9.8	31 11.0	33.1	10.8	53.4	56.2	10.3	42.6	29.6	9.4	24.0	31.4
9.8	15.5	13.6	9.2	56.9	43.9	9.0	52.6	8.8	8.0	27.0	23.0
9.6	17.5	29.9	10.2	44 2.9	8.9	9.8	57 3.3	29.9	9.8	33.0	12.4
8.3	19.0	36.7	9.6	4.9	4.8	7.8	24.8	19.1	9.8	51.5	14.6
9.9	25.5	17.6	6.4	12.9	38.5	9.6	58 2.0	4.6	10.2	52.0	42.2
9.6	45.0	39.1	9.8	12.9	34.2	8.6	5.0	58.7	10.6	53.0	50.5
10.0	58.0	34.9	9.9	13.4	15.2	9.4	6.8	55.4	8.1	11 7.0	35.5
9.6	32 13.5	45.7	10.8	35.9	8.7	8.8	16.8	20.6	9.0	16.0	34.1
7.0	28.5	52.4	10.8	52.4	53.9	10.2	59 26.0	0.6	10.0	22.0	35.4
8.2	37.5	17.5	10.8	54.2	2.1	10.0	38.9	2.7	9.8	12 24.0	6.3
9.4	41.7	3.0	8.8	45 11.4	13.5	10.2	0 6.0	23.5	9.9	32.0	5.3
9.9	44.4	0.2	10.8	13.9	44.5	9.9	12.0	32.0	8.2	42.5	2.4
9.6	54.5	28.7	10.0	54.4	23.2	10.6	1 4.5	53.0	10.6	13 6.0	56.1
9.0	33 15.7	53.0	9.2	54.9	12.4	9.4	10.0	45.8	9.2	6.0	19.8
10.4	23.9	5.0	9.4	46 3.9	22.9	9.9	15.5	11.2	10.2	11.0	48.8
10.0	26.4	23.8	10.8	18.9	27.3	9.8	22.0	28.8	9.9	16.5	46.2
10.2	31.7	41.1	9.0	26.9	19.3	9.9	27.0	49.3	8.8	44.0	3.7
9.0	46.9	21.7	10.8	33.9	2.1	10.6	43.0	9.0	9.9	14 0.5	52.6
10.4	34 16.4	36.0	9.6	36.3	10.9	9.4	47.0	41.0	9.9	4.5	49.0
8.6	33.2	54.8	9.8	37.3	13.1	10.6	2 10.0	50.9	9.9	2.5	21.0
8.6	37.7	46.4	10.8	44.3	52.2	9.5	23.0	28.2	10.6	52.5	42.9
10.3	35 12.4	24.9	9.2	47 10.8	17.9	9.2	33.5	51.4	9.8	58.5	26.2
10.2	32.9	6.9	10.8	48.3	47.6	10.6	41.5	45.8	10.6	15 13.5	32.8
9.2	55.9	23.1	9.8	48 3.3	48.3	7.5	42.0	21.2	10.0	22.5	45.7
9.8	56.9	14.8	10.8	9.8	40.2	10.0	3 3.0	31.0	9.8	24.0	1.3
9.2	36 4.9	13.3	9.0	34.3	15.0	10.2	9.0	6.3	10.6	50.5	24.3
9.9	17.4	7.1	8.9	37.3	46.7	10.0	4 16.0	29.1	8.4	55.5	19.1
25pr.	+1 34.3	+5.1		+1 33.7	+5.4		+1 32.7	+5.8		+1 31.7	+6.2

6121-6180.			6181-6240.			6241-6300.			6301-6360.		
mag.	21 ^h .	-33°	mag.	21 ^h -22 ^h .	-33°	mag.	22 ^h .	-33°	mag.	22 ^h -23 ^h	-33°
16	2.0	46.5	9.4	36 8.6	3.5	10.0	8 48.0	13.9	5.8	49 1.9	12.2
10.0	16.0	41.9	9.0	55.6	21.0	9.2	9 7.2	30.2	9.5	9.6	50 45.0
9.9	18.5	49.7	8.6	37 23.6	15.8	9.9	8.0	7.6	-	7.6	49.9
10.6	37.5	22.8	5.0	30.6	35.7	9.9	29.2	33.2	9.0	10.0	51 22.9
10.2	46.0	39.9	8.6	38 46.6	26.9	8.2	10 13.7	25.6	9.0	9.6	53 14.0
10.6	55.0	42.8	7.9	58.1	17.3	8.2	41.5	5.9	8.5 -	8.2	47.4
10.0	17 1.0	34.3	9.4	39 20.6	2.4	8.2	11 20.0	58.0	8.0 G	9.0	56 22.9
9.8	3.0	32.8	9.2	49.6	31.1	8.7	37.0	21.5	9.5 -	8.4	57 23.4
10.0	20.0	54.9	9.4	40 47.6	16.3	10.2	50.5	49.0	9.0	10.8	35.1
10.2	56.5	50.3	9.2	41 1.1	29.9	9.6	12 20.0	17.6	7.8	7.8	47.6
9.8	18 4.2	39.8	9.6	16.6	16.0	10.3	34.5	37.3	11.2	58 22.6	42.3
9.9	19 14.2	40.5	10.0	46.6	53.4	9.0	37.5	4.7	9.0 -	9.0	43.6
10.2	35.7	17.2	10.0	42 25.6	55.6	9.4	43.5	40.4	G	8.8	55.1
10.2	51.9	59.2	8.9	47.6	10.0	9.5	14 18.0	18.5	9.0 -	9.2	2 15.6
8.2	20 0.7	24.8	9.4	56.6	30.4	9.6	22.0	6.8	9.0 -	9.6	7 20.6
8.8	2.5	2.6	9.4	43 32.6	9.6	8.4	15 24.5	31.4	8.5 G-	11.2	8 0.1
9.0	13.2	58.8	9.2	58.3	43.4	10.2	17 23.5	55.5	8.0 G-	8.0	9 13.1
10.6	18.3	0.8	8.0	44 7.8	7.0	7.8	28.0	53.9	8.0 G-	10.2	16.6
9.5	23.2	32.4	9.4	36.8	11.0	9.6	49.0	11.9	G	11.2	26.6
10.0	57.7	40.0	9.4	53.8	12.0	8.8	19 57.5	11.2	G	10.2	10 21.6
9.8	21 5.2	50.4	9.4	45 16.8	10.0	9.5	20 28.0	49.3	9.0	9.4	23.6
10.0	30.7	20.2	9.4	32.6	48.1	10.3	22 34.0	54.0	9.0 -	9.8	51.6
9.6	54.2	36.4	9.2	47 25.0	26.8	10.0	24 20.0	1.6	9.0 -	11.4	57.0
10.6	56.2	39.6	8.4	58.0	35.8	10.2	25 9.8	57.0	9.0 -	9.0	11 18.6
10.2	59.7	9.4	8.8	48 31.5	4.7	9.6	53.5	28.2	9.0 -	11.4	12 0.1
10.6	1.2	21.0	9.4	36.5	47.2	8.7	26 53.0	18.3	9.0 -	6.2	4.1
9.9	12.2	34.8	8.7	51.5	36.5	9.4	55.5	30.3	9.0 -	7.9	43.6
9.8	22.3	1.4	9.8	49 20.3	50.8	10.3	27 22.5	3.4	9.0 -	9.2	55.1
9.6	36.8	59.2	8.3	50.8	3.2	10.2	52.0	24.0	9.0 G	10.2	13 8.2
10.0	42.7	44.4	8.8	50 21.5	10.2	9.0	55.0	33.8	9.0 G	10.2	11.1
9.8	23 5.2	36.6	9.9	52 24.0	46.1	9.0	28 27.5	24.8	9.0	10.4	16.6
9.6	7.2	25.2	9.3	54 36.5	37.7	9.0	39.0	5.3	9.0 -	9.2	33.8
10.6	9.8	10.5	10.0	56 18.3	54.1	9.1	29 2.5	32.0	9.5	9.1	36.8
10.6	18.5	54.3	9.6	34.0	20.1	9.4	23.0	28.7	9.0	10.0	56.8
9.4	26.0	57.0	9.4	40.0	8.8	10.0	30 3.0	52.8	9.0	11.4	14 18.3
9.7	3.4	49.8	9.0	57 29.0	9.5	8.6	11.0	9.3	9.0 G-	11.4	16 4.6
9.4	18.4	5.9	9.3	44.5	33.9	10.3	15.0	4.2	G	10.0	17 12.8
9.0	26.4	49.6	9.4	58 14.5	53.1	10.2	31 12.0	18.4	G	11.4	25.1
9.4	15.4	10.6	9.9	0 1.0	22.1	6.6	47.5	43.8	6.0 GS-	9.2	27.8
10.0	29.6	50.4	10.0	43.5	48.1	9.4	32 48.0	33.6	9.0 G	11.2	36.3
9.0	28 17.4	1.1	5.3	1 5.0	35.8	8.2	33 19.5	17.4	8.0 G=	8.8	18 11.3
8.8	29 7.6	39.2	8.0	7.0	33.3	9.0	41.0	9.1	9.2 -	10.4	58.8
6.7	18.1	36.3	6.3	25.0	44.2	10.3	35 14.2	6.4	9.0 -	11.2	19 34.3
9.0	25.6	48.3	8.3	38.0	6.2	10.0	37 1.7	46.1	9.0 -	11.2	20 9.8
10.0	49.2	59.3	9.9	2 41.0	9.8	8.4	39 12.7	27.3	8.0 G-	11.4	21 10.8
9.4	54.6	2.5	8.6	43.0	12.2	10.5	43.3	35.0	9.0 G-	10.8	11.4
9.4	30 20.1	12.3	6.0	49.5	9.7	7.0	53.2	50.3	7.0 GS-	9.8	12.5
10.0	29.1	18.0	9.6	50.0	14.0	7.5	40 7.2	19.9	7.5 GS-	10.8	22 9.8
9.4	31 12.1	55.0	9.6	3 44.5	48.0	10.6	53.0	41.6	G	10.8	32.8
8.6	32 13.1	19.2	9.6	4 37.0	20.5	9.8	54.2	26.6	9.0 -	9.8	53.8
8.9	34.6	45.1	8.6	55.0	9.1	8.2	42 13.2	24.8	8.5 -	10.2	58.8
9.0	33 28.6	28.8	8.6	5 0.4	1.7	8.4	29.7	13.3	9.0 -	8.4	24 25.5
8.7	3.6	9.3	10.0	8.0	2.2	6.4	43 1.2	27.9	6.5 GSStπ	9.4	36.3
7.6	12.6	5.8	9.4	28.0	33.2	9.7	18.7	29.1	9.0 -	10.0	25 27.3
10.0	38.1	17.7	10.0	49.0	52.2	8.4	34.2	5.3	9.2 -	10.2	38.3
7.8	46.6	4.4	9.9	6 7.0	36.3	9.2	55.7	9.1	8.8 -	10.8	42.6
8.6	35 18.6	12.8	10.0	7 4.0	23.9	9.4	44 17.7	37.9	9.0 -	10.0	26 52.8
8.8	33.6	49.6	9.2	34.0	45.7	9.2	27.7	30.5	9.0 -	10.8	28 16.8
8.6	36.6	12.2	9.4	8 14.0	48.9	4.5	45 34.7	32.3	4.8 GSπβ	10.8	42.8
8.6	52.6	20.3	8.8	37.0	19.5	9.7	46 8.4	6.2	9.5 -	10.0	29 0.8
25Pr.	+1 30.8	+6.5		+1 28.6	+1		+1 25.5	+7.7			+1 21.3
											+8.2

6361-6381.				6382-6401.				6402-6421.				6422-6441.			
mag.	23 ^h		-33°	mag.	23		-33°	mag.	23 ^h		-33°	mag.	23 ^h		-33°
	m	s	'		m	s	'		m	s	'		m	s	'
8:1	29	26.3	18.8	8:5	36	30.3	29.3	8:8	43	44.8	12.0	10:3	53	55.8	17.4
10:6		42.3	54.0	10:8		32.3	40.7	10:8	44	37.3	53.0	10:4	54	6.3	17.7
10:8		46.6	34.5	9:2		35.3	14.8	7:3		58.1	7.6	9:2		16.8	15.2
9:1	30	13.8	16.8	10:8		35.8	0.7	9:6	45	16.6	44.3	9:4		23.3	44.6
10:0		18.5	58.7	10:2		41.3	5.3	10:8		18.6	32.7	8:8		24.8	25.8
10:2		37.8	41.4	7:5		48.3	46.5	7:2	7.2	25.1	49.1	9:2		45.7	27.1
10:0		54.3	42.0	10:0	37	36.3	24.1	8:8	8.8	26.9	11.3	10:0	55	8.2	57.4
10:8	31	26.8	3.9	9:1	38	4.3	32.9	9:6		52.7	7.4	10:3		21.2	29.1
10:8		45.5	59.0	10:0		10.3	8.6	10:8	46	25.6	14.0	10:0		56	49.2
10:8		51.8	56.2	8:8		15.8	34.4	10:0		42.0	11.1	9:0		57	46.9
9:1	32	18.8	52.0	7:5	39	20.3	37.3	8:4	48	0.7	10.0	9:2		47.2	41.0
10:8	33	4.8	56.1	10:6		45.3	20.6	9:4		7.3	49.8	9:8	58	3.7	22.8
10:8		13.9	29.1	10:4	40	2.3	54.5	10:4		58.8	4.4	9:2		15.2	12.2
7:3		14.8	25.4	10:2		18.3	5.1	10:3	49	1.8	4.2	8:4		22.2	3.5
8:4		35.8	22.2	9:2		45.3	6.3	10:4		48.3	37.3	8:4		28.7	11.2
10:8		40.6	40.0	10:0	41	31.8	54.3	9:2	50	13.3	45.3	7:8		47.7	9.8
9:4	34	53.3	47.7	10:2		35.8	9.1	7:5	51	10.3	53.0	8:6		59.7	6.7
10:8		57.8	13.6	9:0		43.8	28.2	10:0		18.3	8.8	10:4	59	13.7	4.6
10:8	35	2.8	13.7	10:4		45.8	22.7	8:4		42.3	49.7	10:4		17.6	30.1
9:8		7.8	5.5	10:8	43	3.3	28.5	10:4		46.8	41.9	8:4		51.2	30.7
9:1		35.3	20.2												
25pr.	+1	19.5	+8.3		+1	18.8	+8.3		+1	18.1	+8.3		+1	17.0	+8.4

ZONE — 34°.

1-30.				31-60.				61-90.				91-120.			
mag.	oh.		-34°	mag.	oh.		-34°	mag.	oh.		-34°	mag.	oh.-1h.		-34°
	m	s	'		m	s	'		m	s	'		m	s	'
9:4	0	11.2	20.7	8:6	21	5.0	34.3	8:7	36	19.0	40.6	8:5	55	25.7	2.0
9:9		24.2	41.5	8:7		16.3	59.2	9:8	37	24.5	48.8	9:2	57	53.7	40.8
10:4		58.7	47.0	9:0		19.5	49.9	9:8		56.0	3.8	9:5	58	22.7	11.5
10:2	1	24.9	16.7	8:4	22	25.5	39.6	8:5	38	15.3	33.5	10:0		23.2	18.9
6:4		41.9	13.5	9:8		40.5	31.1	9:4		26.2	20.3	7:5		38.7	12.2
9:8	2	13.4	5.1	8:8	23	5.0	47.6	9:6	39	17.0	1.1	10:0	59	46.4	26.7
10:0		43.9	29.1	9:6		33.0	1.9	9:8		25.7	42.1	10:0	0	53.4	39.1
9:8		58.4	3.1	8:6		40.0	6.5	9:4	40	2.2	15.7	10:0	1	59.4	54.7
8:2	3	9.9	48.3	9:3		59.0	5.6	10:0		9.7	15.1	9:4		24.9	40.5
8:6		29.9	28.9	9:6	25	0.0	51.9	10:0		15.7	11.4	8:8		49.4	59.0
9:9	4	13.4	38.1	9:8		10.0	57.0	9:4		39.2	6.3	9:6	3	7.3	19.4
10:4		43.4	13.9	9:6	26	31.5	59.9	9:0	41	51.7	8.9	8:2		13.1	16.5
10:4	8	42.9	44.7	8:2		43.5	51.6	10:0	42	5.7	16.4	9:4	4	15.8	24.5
8:6		44.4	16.7	8:7		55.0	27.8	9:5		20.7	44.0	9:4		29.8	12.9
10:4	9	39.6	8.8	8:4	27	43.5	6.0	8:4	43	4.7	30.5	9:6	5	29.8	59.6
9:2	10	1.6	9.8	9:8	29	26.5	54.5	8:8	45	14.7	45.9	9:6		29.8	52.9
10:2		24.6	45.1	9:8		35.0	53.6	10:0	46	1.7	48.5	9:8	7	19.8	35.9
10:2		35.6	27.7	9:4		40.0	22.7	10:0		32.7	11.6	9:2		22.3	25.9
8:2	12	1.6	52.2	8:8	30	5.0	35.0	10:0	47	29.7	43.7	8:6		50.3	23.5
8:0		37.8	1.2	9:8		10.0	35.2	9:6		51.2	57.1	9:4		54.0	1.7
8:2		59.4	36.1	9:6		38.5	47.9	10:0	48	39.2	44.2	9:2	8	23.3	29.1
9:8	14	23.9	40.6	9:6		41.0	32.4	8:2		39.7	38.1	8:6	9	45.3	41.5
9:4		41.4	55.5	9:5		45.0	58.2	9:2	49	42.2	25.7	7:6	10	18.8	48.6
9:3		51.3	2.6	9:5	31	43.5	11.7	10:0		53.2	16.1	7:4	12	16.3	47.8
8:2	15	16.9	51.8	8:7	32	22.5	9.5	9:4	50	15.7	23.5	9:2		55.3	49.8
9:8		50.9	14.0	7:5	33	49.5	38.7	8:8		29.7	29.6	9:6	13	23.3	43.3
9:8	16	18.4	37.5	9:0	34	36.5	59.0	9:6	51	8.7	32.8	9:6		35.3	46.6
8:7	18	25.9	1.8	9:5	35	19.5	36.9	9:4		38.7	37.2	8:6		55.3	22.6
9:2	19	27.7	1.2	9:2		23.5	25.1	9:4	54	57.7	21.7	9:4	14	34.8	49.2
9:6	21	1.0	23.1	9:8		41.0	20.2	10:0	55	14.7	30.9	9:2		47.8	3.6
25pr.	+1	15.8	+8.3		+1	14.0	+8.3		+1	12.4	+8.2		+1	10.4	+8.0

121-180.				181-240.				241-300.				301-360.			
mag.	rh.	m	-34°	mag.	rh.-2h.	m	-34°	mag.	2h.	m	-34°	mag.	2h.-3h.	m	-34°
9.4	16	1.3	8.9	7.8	47	54.8	10.9	9.8	24	30.4	54.6	9.0	52	1.2	21.0
9.4		28.8	14.4	9.8	48	20.8	41.4	10.1	25	1.4	21.3	8.8		19.7	41.5
9.2		29.3	51.4	8.9		32.3	23.7	9.6		32.9	20.2	10.2		25.0	57.9
9.8	17	19.8	5.7	9.0	49	17.3	9.1	10.0	26	11.9	15.4	10.4	53	27.5	59.2
9.8		19.8	9.1	9.8	50	18.8	48.4	10.2		46.4	36.0	9.8		42.2	25.5
9.0		28.8	11.3	9.7		32.8	20.1	10.1	28	29.4	11.8	7.6		57.2	41.2
8.8		30.8	8.1	8.4		51.3	20.6	8.0	29	11.4	23.8	9.9	55	54.3	9.0
7.6		30.8	12.1	9.4	51	23.3	18.6	8.6		13.9	31.4	10.4	57	4.3	14.9
9.8	18	49.4	19.3	8.6		33.3	17.8	9.0		14.4	40.7	10.4	58	14.8	16.1
7.1		55.3	47.7	7.4		33.8	33.1	8.8		18.4	13.4	10.4	59	4.3	44.8
9.4	19	9.8	14.9	9.0	52	22.8	1.1	9.0		50.4	4.3	8.8		13.3	53.9
9.1		19.3	51.2	8.4		29.5	43.0	10.2	31	21.4	45.3	9.2		40.3	40.0
9.6		29.8	6.3	8.8		58.8	1.8	10.2		34.9	47.4	9.4		43.3	28.1
8.9	20	39.8	14.4	9.5	53	11.4	3.1	9.6		54.4	9.1	9.5	1	32.0	21.2
9.0		39.8	33.6	9.2		52.1	6.6	8.6	32	7.4	11.6	8.8		46.0	3.9
8.6	21	1.3	48.7	9.9	54	37.0	54.6	10.2		10.9	28.0	10.4		58.0	56.9
8.6		29.8	59.3	9.8	56	33.3	47.0	10.0		29.4	54.0	10.2	2	4.2	20.4
9.8	22	35.3	55.9	8.4		50.8	13.6	7.7		39.6	13.2	9.2		2.0	16.5
9.6		39.3	25.3	9.9		59.3	4.0	9.6		59.4	26.2	10.2	3	58.5	45.1
9.4		42.3	38.0	9.9	57	31.8	53.8	10.2	33	14.4	24.4	8.2	4	15.5	24.3
6.6	23	0.8	24.7	9.6	58	34.8	4.8	9.6		28.4	25.2	10.2		59.0	38.9
9.6		10.8	59.4	9.6		9.8	32.8	10.0		34.4	58.7	9.6	5	11.5	17.4
9.8	24	2.8	40.3	9.7		33.8	13.0	9.4		39.4	33.1	8.1		17.5	35.1
9.4		40.8	33.2	8.6		42.3	29.6	8.0	34	34.4	25.6	9.2	6	43.7	56.4
9.6	25	13.3	51.2	9.8		50.8	14.3	9.8	35	16.9	17.0	8.6	8	8.7	50.8
9.0		15.3	48.7	9.4	1	8.8	48.2	9.4		18.4	36.1	9.4		10.5	1.8
9.8		27.8	58.3	8.5	2	14.3	3.0	9.8		37.9	36.1	9.4	9	13.9	4.8
8.9		54.8	47.6	9.8		18.0	12.9	9.6	36	29.4	44.8	10.4		21.4	33.2
8.4	26	15.3	3.6	9.0		47.5	35.6	8.6		35.4	44.3	10.0		35.4	4.9
9.8		19.3	1.8	9.9	3	47.0	15.9	8.6	37	22.9	20.1	8.2		45.4	19.6
9.1	28	36.3	58.0	9.7	4	40.0	24.1	10.2		55.4	13.2	9.4	10	25.6	6.6
9.9	30	14.5	36.1	9.4	5	12.5	28.0	9.8	38	2.9	0.6	9.8	11	36.1	20.3
8.0		41.1	1.4	9.4		55.0	52.7	7.7		14.4	37.4	8.4	14	4.1	33.9
9.7	31	2.0	3.7	8.8	6	8.5	31.9	10.2		14.5	45.4	10.0		15.1	58.6
9.5		30.5	8.7	9.7		54.0	46.7	9.4		34.4	39.2	9.2		40.1	28.6
9.9	32	1.0	11.9	9.7	7	21.0	29.2	10.1	39	23.1	59.1	7.7	15	0.1	27.8
9.2		21.0	28.3	9.6	8	14.0	56.1	10.2		43.5	2.8	10.0		15.1	58.5
9.8	33	9.6	20.8	8.8	9	3.0	54.1	9.8		50.5	0.8	10.0		40.6	11.0
8.5		23.1	6.0	9.9		40.0	25.9	10.2		59.9	0.0	8.2		59.3	0.3
7.1		43.1	12.0	8.6	10	9.0	20.8	10.2	40	7.6	59.5	10.0	16	21.2	20.0
9.0		49.1	9.1	8.4		26.0	20.5	8.0		26.5	23.5	10.0	20	7.6	19.5
9.2	34	1.9	1.1	9.6	13	39.7	25.8	7.9		30.5	24.0	8.4	21	14.7	13.1
9.2		3.1	6.0	9.4		51.7	39.6	9.8		48.9	1.6	9.1		49.7	13.8
7.7	35	34.1	1.9	8.8	14	19.2	11.7	10.0		54.5	45.6	9.4	22	29.7	56.6
9.7		36.59.1	6.8	9.2	15	18.2	29.9	8.4	41	17.5	28.9	9.8		49.7	49.8
9.9	38	17.6	46.8	8.8		41.2	27.6	8.6	42	2.0	45.7	9.8		52.2	42.1
8.4		53.1	28.0	8.5	18	4.7	39.0	9.4		9.5	3.5	7.6	23	58.0	5.1
9.9	40	3.6	1.9	9.9		31.0	2.1	10.2	43	8.5	55.3	8.6	24	20.5	46.9
9.9		19.6	56.2	8.8		39.2	40.5	7.0		21.5	18.2	9.8	26	49.5	2.9
9.6		25.1	7.1	10.1	19	16.4	15.2	10.1		53.5	15.9	10.0	28	30.8	16.4
9.8	42	14.1	26.5	8.4		28.8	3.3	9.4	44	49.8	53.8	10.0		58.3	20.7
9.0	43	7.6	51.6	7.2	20	10.4	37.1	10.2	45	0.0	33.5	10.0	30	23.8	1.0
8.9		10.3	14.1	10.0		15.4	22.6	9.8		6.0	31.8	8.5		52.8	8.6
9.0		37.3	55.1	8.6	21	9.4	10.6	10.1		15.5	56.9	10.0	31	35.3	32.4
9.2		54.8	38.2	8.8		23.9	18.0	9.7		48.9	59.7	10.0		50.3	28.1
9.0	45	26.8	15.3	7.0	22	25.4	27.5	10.4	46	20.1	55.0	7.1		57.8	11.6
7.6	47	3.3	48.7	5.5		44.4	22.3	10.0	47	15.1	27.0	8.2	32	24.8	16.2
8.9		18.8	3.0	10.1		51.4	52.3	10.2	49	28.1	21.7	8.8		26.3	26.1
9.0		29.3	54.3	9.8		54.4	56.4	7.1		41.5	2.1	7.8		38.8	21.6
9.6		50.3	14.9	9.8	23	19.4	39.8	9.6	51	26.7	45.0	9.2	33	12.2	31.6
25pr.	+1	8.3	+7.8		+1	5.0	+7.2		+1	2.2	+6.4		+0	59.9	+5.6

361-420.				421-480.				481-540.				541-600.			
mag.	3 ^h .	-34°		mag.	3 ^h -4 ^h .	-34°		mag.	4 ^h .	-34°		mag.	4 ^h -5 ^h .	-34°	
	m	s	'		m	s	'		m	s	'		m	s	'
9.6	33	20.7	15.1	9.2	56	3.8	8.4	10.6	19	20.4	37.8	10.4	46	10.2	48.0
9.5		24.2	44.4	10.3		14.8	36.4	5.7		20.4	18.5	9.8		13.2	26.7
9.8		44.2	8.5	10.7	57	12.3	8.5	10.0		33.9	30.1	10.2		17.2	4.8
8.2	34	10.5	22.4	7.0		15.8	49.9	10.4		39.9	28.6	8.9		19.7	13.6
9.5		39.7	23.5	9.8		25.3	55.0	10.8		53.4	48.8	10.0		35.1	39.0
9.5		44.2	43.9	10.8	58	44.8	32.0	9.4		57.9	34.5	10.6		41.1	15.6
9.8	35	6.2	56.6	10.6		57.3	29.7	9.4		58.9	51.9	10.0		59.6	28.0
7.6		13.0	57.2	10.8		57.3	30.0	10.8	20	8.9	3.4	8.4	47	12.1	25.9
10.8		19.8	42.0	9.2	0	9.8	12.3	10.8		57.9	45.5	7.1		18.6	27.0
9.2		49.5	58.8	10.4		26.3	42.6	10.8	21	8.9	2.1	8.6		19.6	27.8
10.7		52.3	49.4	10.3		42.1	15.3	10.2†		23.8	0.8	10.6	48	9.1	38.8
10.8	37	4.6	57.9	10.8		51.3	12.4	9.0		33.4	59.2	10.8		49.6	49.2
9.2		15.7	0.2	10.4	1	4.9	7.4	9.2		37.4	25.5	10.8	50	3.1	6.4
9.0		19.8	49.3	10.3		19.9	11.2	9.4		38.9	25.9	10.6		32.5	7.3
10.3	38	9.8	31.2	10.2		54.9	58.5	9.8	22	0.4	5.3	10.6	51	4.7	0.5
10.8		54.3	48.3	8.8	2	29.9	37.5	9.6		40.9	6.1	10.6		14.4	51.0
9.8		58.8	13.2	8.6	3	53.9	27.0	10.8		48.9	8.5	10.0		40.4	35.1
10.6	39	4.8	1.3	9.8	4	18.9	25.7	10.6	23	10.9	33.1	10.6†	52	38.5	1.3
10.7		5.3	38.1	9.8		39.9	20.0	10.3		48.9	32.8	10.6		51.4	14.0
10.0		11.3	27.2	9.8		45.4	4.5	10.6	24	38.4	4.7	10.2	53	3.4	32.2
10.8		17.8	9.0	8.2	5	20.9	49.5	10.6		39.5	13.4	10.0		24.4	14.4
9.6		56.8	6.1	10.6		29.4	57.2	9.8	25	4.4	41.4	10.6		27.2	2.6
10.8	40	39.3	29.5	10.8		44.7	51.5	10.2		25.0	18.1	10.6	54	0.4	33.3
9.0	41	5.3	44.2	10.6		55.7	26.8	10.3		25.9	29.6	9.4	55	5.9	41.8
10.8		49.3	29.5	8.0	6	20.7	26.2	10.8		42.9	6.3	8.7		11.4	18.6
9.8		49.8	52.1	10.6		52.7	25.1	10.8		55.4	44.8	10.6		17.4	15.1
10.8		56.8	29.8	10.8	7	0.2	35.0	10.3	26	18.9	30.9	10.6		26.9	6.3
9.8	42	6.3	5.2	10.6		7.2	1.3	9.4		56.9	3.1	7.2		27.4	21.2
10.7		7.3	15.4	10.8		10.7	5.3	10.8	27	2.4	43.3	10.0		51.4	31.7
9.0	43	15.3	6.1	9.4		12.7	5.5	10.6		18.9	43.3	10.6	56	32.3	0.0
10.2		44.8	51.2	9.4		20.7	39.7	7.4		19.4	10.0	10.6		40.4	12.5
10.7		46.3	4.5	10.3		29.2	39.7	9.8	28	20.9	22.1	9.8		44.6	54.1
9.2		48.8	12.8	9.6		45.2	32.2	10.6		21.4	30.9	9.6		45.1	37.7
9.2	44	31.3	42.1	10.0	8	0.7	4.8	10.8	29	27.9	43.5	10.2		55.1	59.3
9.6	45	6.8	10.4	10.8		29.7	20.0	9.6	32	24.4	46.0	10.6	57	10.1	40.6
9.8		12.3	0.4	9.8		40.2	52.7	9.2	33	16.9	8.9	10.6		23.1	39.8
8.4		13.3	24.4	10.8	10	23.2	59.3	8.1		31.4	21.5	10.0		49.1	35.6
10.8		42.3	39.9	9.2		34.7	42.1	10.4	34	18.9	57.1	10.2		52.1	5.7
9.8	46	16.7	1.1	10.4		45.2	35.8	8.0		49.9	14.9	9.8	58	34.1	44.0
9.5		27.8	51.3	8.8		50.7	28.1	10.4	35	25.4	9.0	10.6		52.1	49.9
7.9		28.3	7.6	10.4		59.7	28.3	10.0		36.6	45.3	10.0	59	22.7	57.7
10.3		31.3	22.1	10.3	12	13.4	44.6	9.8	37	13.1	57.1	10.6	0	10.1	4.6
9.8		35.3	46.1	10.8		52.9	22.8	10.4		27.9	8.9	10.6		13.1	38.2
10.7		44.3	28.9	10.8		56.4	56.8	9.2	38	9.9	50.7	9.6	1	2.6	59.1
8.8	47	17.3	34.5	7.4	13	9.4	29.5	8.0		14.9	27.1	10.6		20.1	40.9
8.8		32.3	44.2	3.1		9.4	6.4	10.8		52.9	9.7	10.6		26.6	26.2
9.0	48	18.3	20.7	9.2		20.0	2.9	9.8	39	12.9	40.3	10.2		27.6	19.8
8.8		28.3	39.1	10.4	14	2.4	34.8	10.0	40	29.2	21.9	10.6		37.6	25.0
9.8		44.8	41.5	7.9		5.9	25.5	9.6		41.2	24.1	10.4		54.6	2.0
9.8	49	2.8	24.2	10.8		12.9	44.8	7.1	41	11.7	14.0	10.2	2	11.1	44.8
9.6		9.8	36.7	6.0		20.4	12.5	10.0		36.7	21.7	10.2		42.0	0.6
10.8		31.3	21.1	9.6		44.4	30.0	11.0†		51.2	0.9	10.2		59.1	37.0
10.8	52	3.6	59.7	10.2	16	3.4	29.3	9.3	42	1.2	21.2	8.7	3	3.1	9.4
10.3		6.3	13.3	10.3		19.4	10.6	10.6		6.1	34.4	9.1		50.6	4.1
9.6		20.8	31.2	9.2		36.4	7.9	10.6		18.2	17.7	9.4	4	15.1	40.7
9.8	53	4.8	37.2	8.8		39.9	13.2	9.8	44	10.3	2.1	10.6		21.6	36.1
9.6		9.8	52.2	10.8		48.7	30.0	7.6		36.2	31.7	9.2		44.6	40.9
9.8		35.8	0.1	10.8	18	46.4	44.5	9.2	45	20.2	49.8	10.0		54.6	55.0
10.8	54	59.8	29.5	10.2	19	9.4	45.3	9.6		20.7	56.0	10.6		55.1	49.7
10.7		55	44.8	9.0		14.4	41.7	8.2		59.7	25.3	10.0	5	1.1	4.0
25pr.		+0 57.8	+4.7			+0 56.5	+4.0			+0 55.7	+3.3			+0 54.7	+2.3

601-660.				661-720.				721-780.				781-840.				
mag.	5 ^{h.}	-34°		mag.	5 ^{h.}	-34°		mag.	5 ^{h.}	-34°		mag.	5 ^{h.} -6 ^{h.}	-34°		
10.6	5	9.1	53.0	7.6	20	50.6	57.7	7.3 G	10.0	39	6.1	31.1	10.2	53	4.9	35.4
9.4		19.1	59.7	9.9	21	20.6	14.2		9.0		8.6	40.4	10.2		14.9	59.5
10.4	6	0.1	15.1	9.6		24.1	13.8	9.5	10.0		22.6	58.9	10.8		22.4	3.6
9.4		10.1	33.8	9.0		39.6	45.6		10.0		25.1	2.6	10.7		22.9	38.6
8.2		56.0	2.0	8.7	22	30.1	43.0	9.0 G	9.8		29.1	55.1	7.6		23.9	29.3
10.6	7	12.6	46.9	7.6		45.1	43.2	8.0 G	10.0		53.0	0.3	9.4		34.9	3.1
10.0		17.6	39.1	8.8	23	34.2	12.1		9.3	40	25.6	49.5	9.8		57.9	31.0
8.6		24.1	17.7	10.0	24	23.2	20.0		10.0		32.6	9.3	10.8	54	8.8	38.5
10.4		33.9	4.3	8.4		40.7	53.3	8.5	9.0	41	5.2	15.0	8.6		26.8	22.1
8.7	8	3.9	37.7	8.2		53.7	36.9	8.5	9.3		7.9	5.1	10.8	55	3.3	37.9
				9.1	25	0.7	53.1		9.8		10.4	58.5	10.8		6.3	40.8
9.8		33.2	1.0	9.8		21.2	45.5		10.3		45.3	41.2	9.4		12.3	38.4
10.2		33.4	59.0	10.0		39.2	23.2		10.3		55.1	11.9	8.8		30.3	27.5
9.4		39.4	43.9	9.4		51.2	27.3		9.9	42	17.6	6.9	10.8		35.8	48.6
10.6		50.4	2.9	8.8	27	12.2	51.0	9.5	10.6		20.6	56.2	10.8		36.8	59.7
10.6	10	8.0	2.3	9.9		18.2	35.2		9.0		21.1	56.8	8.8		42.3	6.3
10.6		9.9	41.0	9.6		50.7	32.6		10.6	43	12.6	11.8	10.4	56	13.3	16.5
10.6		36.9	27.6	9.4	28	0.7	12.1		8.4		31.1	30.7	9.6		14.3	30.6
10.2		45.4	24.7	8.7		31.2	30.1	9.0	10.8		38.4	0.8	9.2		23.8	13.5
10.2		49.9	13.2	8.8		35.7	34.6	9.0	10.7		40.6	16.5	10.8		29.3	27.8
				7.0		45.7	23.4	7.0 GStπ	10.2		42.1	48.0	9.2		33.3	0.7
10.2	11	21.4	11.9	8.8		46.7	18.9	9.5	8.0		54.3	58.7	9.4		38.8	16.9
10.2		39.9	18.6	9.9	29	5.7	33.1		10.8	44	0.1	17.0	10.2		54.8	46.9
10.6		49.4	48.3	10.0		41.2	3.9		10.0		27.1	6.5	10.0		54.8	35.1
10.4		53.9	44.7	9.0		43.7	51.0	9.0	10.7		40.6	21.8	10.8	57	9.3	49.9
10.4		58.6	57.0	8.4	30	5.7	33.6	8.5 G	9.4		45.6	35.9	8.4		29.3	30.7
9.8	12	8.4	15.3	10.0		37.7	0.0		9.8		46.7	52.6	10.8		33.3	33.9
10.0		11.9	47.1	9.6		54.2	31.2		10.2		50.7	3.4	9.4		34.3	22.5
10.6		24.4	50.3	9.6	31	10.7	13.9		10.2		54.7	9.9	10.8		35.8	38.5
9.6		41.4	37.5	9.1		11.7	13.4		10.2	45	0.2	18.2	10.8		37.3	32.2
10.2		54.9	0.8	9.9		30.7	42.4		10.7		27.2	22.6	10.2		52.8	34.6
10.6	13	3.9	19.7	9.4		55.7	49.0		10.2		33.2	44.5	9.3	58	30.8	14.5
9.8		5.4	54.8	9.6	32	4.6	2.4	9.0 G	8.4		33.7	35.5	10.7		40.8	8.5
10.6		9.4	44.9	8.2		6.2	48.0	8.0 GS	10.8	46	12.2	7.5	10.7		44.8	6.4
7.8		29.8	9.7	9.0		29.6	18.7		10.7		12.2	41.7	9.4		48.0	2.9
10.0	14	18.8	21.2	9.4		49.6	50.3		10.0		34.2	30.1	10.0	59	6.3	22.3
10.0		38.3	47.2	9.6	33	0.1	55.8		10.8		55.7	59.8	10.6		14.8	40.3
10.6		54.8	25.9	7.6		19.6	45.8	7.0 GS	9.6	47	17.2	36.4	10.0		23.3	22.0
9.4	15	12.8	5.2	9.0	34	1.6	19.3		10.6		19.2	33.2	10.8		24.8	53.7
9.4		21.3	28.9	9.4	35	0.6	41.2		10.7		22.2	53.6	9.6		29.3	14.9
10.6		28.8	29.6	8.8		3.6	49.6	9.5	10.4		50.2	36.4	10.0		38.8	17.7
				9.9		4.6	23.6		10.2		56.2	13.0	10.6		46.8	52.5
10.4		33.3	41.9	3.1		6.6	8.5	2.2 GSπλ	10.0	48	2.7	41.2	10.8		48.3	51.7
10.6		40.8	25.3	8.7		12.1	42.2		7.3		20.2	35.3	10.3		49.8	16.7
8.7		45.3	36.7	9.6		32.6	24.2		10.4		46.9	5.6	9.8		59.8	3.1
6.4		50.8	49.6	9.6	36	34.1	42.0		10.2	49	21.3	2.8	10.8	0	19.6	13.3
9.9	16	9.1	24.2	10.0		50.6	26.9		10.4		22.9	24.9	10.8		22.6	14.0
9.6		9.6	54.8	9.0		51.6	25.9		9.3		39.4	19.7	10.8		34.6	53.8
6.4		45.2	28.1	9.6	37	10.6	42.6		9.4	51	14.4	8.4	10.0	1	29.6	14.7
9.9		51.1	37.2	10.0		41.6	46.4		8.8		16.9	26.9	10.3		30.6	27.5
8.7	17	3.6	13.8	5.4		46.1	43.8	5.5 GSStπ	9.4		35.9	16.4	9.8		30.6	53.6
10.0		23.1	14.4	9.6		54.1	5.9		10.6		36.4	46.9	10.6		33.1	13.8
				9.1		56.6	3.6		10.4		50.4	6.2	10.2		44.6	30.9
9.4		31.1	37.6	8.8		58.0	2.9		10.8		54.9	43.5	8.4		56.1	42.7
10.1	18	18.5	28.5	9.9	38	3.6	19.2		9.6		56.4	45.0	9.9		59.6	57.9
9.6		28.6	23.1	9.9		11.1	3.3		9.9	52	4.4	53.1	5.8	2	33.6	17.7
9.6		31.6	54.8	9.3		12.1	46.7		8.7		5.4	45.4	10.0		42.6	50.0
10.0		55.6	40.6	8.2		19.1	8.4	8.2 G	9.8		26.4	40.6	10.6		54.6	16.5
9.0	19	29.6	23.9	7.7		21.6	1.1	7.5 GSg	10.8		45.4	29.8	10.8	3	11.6	29.1
10.0		29.6	6.9	9.1		39.6	43.1		9.8		56.9	0.4	10.8		11.6	28.1
7.4		36.6	31.9										8.3			
10.0	20	4.1	30.1													
8.0		26.1	19.4													
25pr.		+0 54.3	+1.77			+0 54.0	+1.11				+0 53.9	+0.5			+0 53.8	+0.1

841-900.				901-960.				961-1020.				1021-1080.							
mag.	6h.	-34°		mag.	6h.	-34°		mag.	6h.	-34°		mag.	6h.	-34°					
7.9	3	12.6	37.4	8.5	8.9	16	6.3	32.9	9.0	10.0	28	27.1	19.0	8.5	39	27.5	6.8	9.0	
9.9		49.1	38.6		9.4		9.3	52.2		10.0		32.1	13.9		9.9		44.5	28.3	
10.4	4	2.6	1.7		9.5		12.3	40.5		9.0		49.6	38.2		9.6		56.5	29.6	
8.2		18.1	23.6		10.0		59.8	17.9		10.0		52.1	54.3		7.8	40	29.3	59.7	8.5 G
10.7		27.6	45.6		8.3	17	22.3	42.1		10.0	29	16.1	41.4		9.9		48.5	51.4	
9.2		36.6	18.5		9.0		28.3	27.1		9.4		23.1	20.1		9.2		52.0	29.8	
9.0		49.6	4.4	9.0	8.2		37.1	59.1	7.5 GSg	10.1		39.4	58.9		9.9		56.0	38.4	
8.2		59.1	55.8	9.0 G	8.6	18	20.8	23.3		8.3	30	24.6	44.2	8.5	8.6	41	2.5	34.0	
10.4	5	7.1	27.0		10.0		28.3	48.2		7.9		31.9	57.2	8.0 GSt	9.9		5.5	50.9	
8.2		7.6	9.4	8.5 G-	10.1		34.8	44.9		10.1		40.0	33.5		9.9		24.2	29.6	
10.8		17.1	36.8		7.0		45.3	55.9	GSg	9.5		42.0	9.7		7.2		41.2	6.6	7.5 GS-g
10.8		28.6	19.7		9.8		59.3	22.0		10.1		42.1	15.3		9.9		42.7	27.6	
7.3	6	4.1	47.4	GSct	8.6	19	45.3	0.5	9.0	10.1		49.5	33.1		9.8		49.2	0.1	
9.4		14.6	13.1	9.5	9.8	20	4.8	41.9		9.8		56.0	39.2		9.4	42	37.7	0.4	
10.8		29.1	0.2		9.8		9.8	10.5		9.4		57.3	56.9		9.1		48.2	36.7	
8.6		30.1	27.0	9.0	9.0		16.8	15.2		9.4	31	9.5	50.5		9.8	43	10.2	56.1	
8.6		30.6	11.5	8.5	8.5		18.8	2.6	8.5 G-	9.6		31.0	11.0		9.8		29.2	27.2	
10.8		33.6	16.4		10.1		33.3	58.6		9.8		50.3	33.5		9.6		33.7	24.0	
9.6		59.6	18.0		9.4		33.8	16.8		8.2	32	3.0	34.4		9.2		49.2	38.9	
10.8	7	3.6	13.4		9.0		39.8	55.6		9.2		4.3	52.9	9.0 G	9.9		52.2	1.0	
9.3		4.1	20.6		8.4		46.3	18.3		10.0		15.4	29.9		9.6	44	4.7	31.6	
9.8		14.4	23.5		10.1		49.3	28.3		9.2		21.0	38.8		9.0		9.2	27.3	
10.1		22.4	12.3		9.8		52.3	38.3		10.1		22.0	26.3		9.6		10.7	32.6	
10.1		25.0	19.7		9.0	21	1.3	9.7		9.9		26.2	51.8		7.2		19.2	47.8	7.2 GSg
10.1		58.9	41.7		7.2		2.3	59.5	6.8 GSg	9.8		39.2	42.0		9.9		38.7	24.4	
10.1		59.9	4.0		7.4		10.3	58.1	8.0 GSg	9.9		42.7	58.3		9.9		50.7	44.0	
9.4	8	0.4	44.5		10.0		35.6	2.7		9.6	33	0.1	23.2		9.6	45	0.7	45.1	
10.0		7.9	4.2		9.8		39.3	25.5		9.9		22.2	11.2		9.6		31.2	5.0	
10.1		22.4	30.8		9.3	22	10.3	19.7		9.9		53.5	2.9	9.0	9.4		58.2	27.5	
8.2		31.9	32.4	8.0 G	10.0		24.6	18.9		9.6	34	7.5	38.9		9.0	46	17.2	15.2	9.5
9.4	9	40.9	13.1	8.5	9.5		36.6	52.2		8.7		30.0	10.8	9.0	7.1		19.7	13.2	5.0 GSt*
10.0		45.4	45.5		8.8	23	9.6	46.3		9.0		35.5	20.1		9.6		27.7	59.8	9.0
10.1	10	18.4	53.9		9.2		18.1	26.6		9.0		40.0	54.2	8.5	9.8		29.7	43.4	
9.4		24.4	23.4		10.0		19.4	18.1		9.9		58.5	55.6		8.4		32.7	7.7	8.0 G-tr
10.0		38.4	13.5		9.5		38.6	11.7		9.2	35	2.5	46.6	9.0	9.8		50.2	4.7	
10.0		49.4	22.7		10.1		41.1	11.3		9.0		42.5	44.9		9.8		50.2	39.0	
10.1		49.4	50.3		8.9		47.6	18.1		9.0		50.5	41.2		9.9		59.1	13.7	
8.0		55.9	54.7	8.5 G	10.1		49.6	54.4		7.8	36	1.0	5.8	8.5-	9.6	47	22.2	35.0	
10.1	11	14.9	26.0		9.8	24	19.6	13.3		9.9		28.5	14.5		9.9		43.7	20.6	
8.4		25.4	19.6	9.0	9.5		32.6	26.2		9.6		35.5	58.0		9.0		53.7	19.2	8.0
10.1		32.4	3.9		10.1		32.6	41.5		8.2		40.0	23.4	8.0	9.8	48	11.2	44.8	
8.4		41.5	0.7	8.2 G-	10.0		33.6	32.0		9.9		40.5	33.6		9.2		12.2	34.6	
9.0	12	39.4	41.4	8.5	7.8		55.8	0.8	8.5 G-	9.1		54.5	16.3		8.8	49	5.2	30.6	9.0
10.1		46.4	24.8		10.1	25	2.6	10.2		9.9		21.5	31.3		9.0		7.7	34.8	9.0
10.1		57.4	22.6		10.1		14.1	44.2		8.6	37	23.5	3.4		9.4		32.2	58.8	9.5
9.8	13	1.4	8.7		10.1		23.6	0.9		9.2		29.5	28.9		7.2		41.2	4.0	7.8 GS-g
9.4		22.4	47.1		8.8		34.1	54.7	G	9.9		30.5	41.0		9.8	50	15.2	47.5	
10.1		36.4	7.0		9.6		38.6	16.4		9.0		31.5	50.3	8.8	8.4		24.2	3.2	8.8 G
8.6	14	2.9	32.5		7.5	26	24.1	54.9	7.5 GSg	9.2		36.5	25.5		9.9		26.2	54.5	
9.4		5.4	35.6		8.4		47.6	32.9	8.5	9.8		48.0	53.6		9.9		38.9	39.6	
9.2		29.3	37.3		9.8		48.6	40.4		8.8		58.5	21.9	9.0	9.0		39.9	16.9	9.5
10.0	15	9.3	42.8		9.2		51.6	29.8		9.2		59.0	38.0		9.2		54.4	18.4	9.0
6.2		10.3	20.6	6.5 GSt*	9.4		56.6	21.8		7.8	38	0.5	14.3	8.5-	8.0	51	28.9	47.8	8.0 G
10.0		19.8	25.6		8.2	27	13.1	24.6	9.0	9.9		7.5	58.7		8.0		31.4	33.4	8.0 G
9.5		54.8	43.1	9.0	9.6		24.6	12.7		8.5		11.5	39.4		9.9		40.4	42.4	
10.1	16	0.8	4.2		8.5		53.6	7.7	9.0-	9.9		16.5	23.7		9.5		45.4	52.0	
9.0		4.5	44.7	9.5	9.6		54.6	14.1		8.7		33.5	36.4		9.9		46.9	26.6	
5.5		4.8	5.3	6.0 GSt*	8.9		59.6	14.5		9.9		59.5	17.3		9.9		59.9	20.2	
10.1		4.8	53.6	9.5	8.6	28	16.1	45.7		8.7	39	10.0	26.5		8.5	52	24.9	13.8	-
9.0		5.3	8.9	8.5	10.1		20.0	0.2		9.9		17.5	35.5		9.8		32.4	43.5	
25pr.		+ 0 53.9	-0.3				+ 0 53.9	-0.8				+ 0 54.1	-1.2				+ 0 54.8	-1.7	

1081-1140.				1141-1200.				1201-1260.				1261-1320.			
6 ^h -7 ^h .		-34°		7 ^h .		-34°		7 ^h .		-34°		7 ^h .		-34°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.0	52	40.9	37.2	10.0	1	26.7	24.4	9.5	8	20.2	41.0	9.8	15	1.5	8.2
8.6		58.9	53.8	8.9		29.7	18.5	9.5		22.7	1.0	10.0		7.5	58.0
9.9		59.4	44.0	9.4		32.2	26.9	9.8		25.2	47.7	9.0		23.5	50.4
9.6	53	4.9	45.3	9.0		49.7	32.4	9.2		38.2	36.2	8.4		38.0	51.2
9.1		27.9	26.4	9.8		53.2	19.3	10.0		41.2	45.3	9.0		42.5	46.0
9.9		38.9	31.0	9.0		55.2	50.8	10.0		41.2	19.4	9.4	16	14.5	5.5
9.8		41.4	6.9	8.2		59.2	32.5	10.0		41.2	6.6	9.8		24.5	20.4
9.9		53.4	53.1	9.0	2	3.2	9.7	9.8		41.2	13.3	8.8		33.5	1.2
8.8	54	9.9	50.9	9.2		10.2	13.1	10.0		51.2	25.0	10.0		35.0	18.4
9.4		32.9	48.4	9.2		19.2	11.8	8.9	9	6.2	11.9	10.0		35.5	47.7
9.0		56.4	10.8	10.0		24.2	7.3	10.0		9.7	23.8	9.4		51.5	36.1
9.4	55	2.4	42.3	9.8		38.2	11.1	9.7		17.2	43.0	10.0		57.0	21.0
9.8		13.4	32.4	9.2		38.7	12.6	9.5		17.7	54.7	8.5	17	15.5	20.0
9.6		29.9	19.5	10.0		41.2	4.6	9.7	10	0.2	6.0	10.0		16.5	8.8
9.9	56	5.2	49.5	8.5		44.2	14.6	9.5		12.2	22.2	8.9		21.0	7.6
9.2		5.2	45.1	9.4		49.7	15.3	9.6		20.2	53.2	9.8		26.0	44.0
9.8		5.9	24.1	9.4		50.1	55.0	8.7		33.7	11.4	10.0		40.3	32.0
9.9		21.4	14.2	10.0		55.2	32.2	8.9		35.2	47.6	8.8		44.3	57.0
8.5		23.4	58.0	8.6	3	1.2	25.6	10.0		39.2	30.0	8.8		58.3	49.8
9.2		37.0	30.9	9.2		6.7	0.6	9.8	11	0.2	29.9	8.8	18	0.3	30.8
9.9		45.6	48.1	9.0		18.2	44.9	9.4		0.9	0.0	9.2		3.3	41.9
9.9		53.5	24.6	8.2		20.2	38.5	9.8		6.7	28.4	9.8		24.3	21.4
9.9		58.4	24.7	9.4		43.2	26.6	10.0		7.7	11.2	9.8		39.3	16.5
9.5	57	11.5	7.8	10.0		50.2	28.4	10.0		8.2	50.2	8.2		55.3	16.4
10.0		15.1	44.5	10.0		52.7	33.9	9.6		9.2	6.3	9.4	19	2.3	5.3
8.8		17.2	15.2	10.0		56.2	0.6	9.6		10.2	11.8	9.7		9.3	6.8
10.0		20.1	51.8	9.4		59.2	56.2	9.5		17.2	19.3	10.0		10.3	13.9
8.6		30.1	36.4	10.0	4	0.1	52.6	10.0		19.2	49.2	10.0		18.3	48.5
10.1		35.1	2.2	9.8		10.1	19.6	9.4		21.2	32.4	9.0		44.3	37.9
9.2		40.1	43.4	9.3		10.2	38.2	8.8		30.2	31.0	8.4		44.5	2.1
9.8		57.1	26.7	9.5		15.7	6.0	8.5		31.2	6.0	8.4		50.3	6.8
9.4	58	11.1	4.2	9.7		29.2	42.4	9.3		43.2	3.4	10.0	20	8.3	21.4
9.2		13.1	17.1	9.0		31.7	58.2	10.0		50.2	55.0	10.0		20.8	36.0
9.4		25.6	14.5	9.8		32.2	26.9	9.8		58.5	52.8	9.3		25.8	52.8
10.0		26.1	40.0	9.2	5	10.2	6.0	9.3	12	18.0	10.4	10.0		30.8	8.5
9.8		29.1	10.7	9.8		19.7	30.2	10.0		20.0	32.6	9.6		34.3	11.1
9.8		38.2	35.4	8.8		30.2	26.6	10.0		34.9	26.1	10.0	21	8.3	58.1
10.0		45.2	17.2	10.0		34.2	31.2	9.8		39.0	21.6	10.0		24.3	12.3
8.2		51.2	34.3	9.8	6	9.2	20.5	10.0		42.9	3.2	10.0		41.0	5.8
10.0		52.2	5.4	9.2		15.2	50.2	9.6		45.0	54.2	10.0		44.0	6.2
10.0		56.2	29.3	10.0		20.1	16.3	9.4		45.0	47.2	9.2		45.1	23.8
9.8		56.7	2.4	9.3		25.2	38.4	9.0		46.0	10.6	8.0		48.5	55.7
9.8	59	10.2	48.0	10.0		25.2	51.8	9.2		55.5	57.8	9.8		49.8	30.1
9.7		11.7	44.1	9.3		26.2	45.4	10.0		58.5	50.8	10.4		53.3	31.0
9.4		14.2	42.3	9.4		40.2	38.0	9.6	13	0.0	51.8	10.5		55.3	14.5
8.6		21.2	4.9	7.8		41.2	10.9	10.0		4.0	2.8	10.4		58.3	29.0
9.8		30.2	59.9	9.6		42.7	23.0	9.8		15.0	55.3	10.5	22	1.3	35.7
8.9		55.2	50.7	9.0		45.2	22.4	9.2		21.5	26.0	8.2		5.3	41.2
10.0		59.2	11.7	9.2		45.2	16.0	9.8		28.9	46.9	10.3		8.3	21.2
9.8	0	8.9	57.1	9.7		52.2	7.2	9.8		30.0	6.3	10.5		16.3	52.4
9.8		33.2	1.3	9.2	7	1.2	54.2	10.0		36.5	43.6	7.5		22.8	3.8
10.0		34.2	25.8	10.0		20.1	12.0	10.0		45.0	45.2	10.5		35.3	6.6
9.6		43.2	42.1	10.0		39.2	52.2	10.0		45.5	23.5	9.8		41.8	5.8
10.0		48.2	5.6	8.8		43.2	53.3	9.2		53.0	12.9	9.8		41.8	44.6
9.2		56.7	35.1	8.9		47.7	2.8	9.2		7.9		9.8		54.8	37.0
9.2		59.2	50.6	9.8	8	5.2	29.1	8.4		41.0	36.8	9.8		55.8	13.3
7.3	1	0.2	35.4	9.5		5.7	51.4	10.0		41.5	26.0	9.8		57.1	8.8
9.4		6.2	54.9	9.2		10.2	36.4	9.5		43.0	27.3	10.2		59.3	25.0
9.2		14.2	16.8	9.3		16.2	51.8	8.6		45.0	48.4	10.3	23	0.3	19.8
9.5		16.2	56.1	9.8		19.7	47.4	8.8		57.4	1.3	9.0		20.3	38.2
25pr.	+0 54.6		-21	+0 54.7	-23			+0 55.0	-26			+0 55.2	-29		

1321-1380.			1381-1440.			1441-1500.			1501-1560.		
mag.	7h.	-34°	mag.	7h.	-34°	mag.	7h.	-34°	mag.	7h.	-34°
10.4	23 21.3	55.1	9.6	26 56.8	5.7 9.0	9.8	30 12.0	6.7	10.3	33 27.0	25.8
10.5	26.8	48.0	10.5	27 0.3	10.2	10.5	14.0	15.0	10.2	28.0	17.0
10.5	29.2	50.4	10.1	2.3	29.4	10.5	19.0	54.2	10.5	28.0	11.6
9.6	31.3	14.1	10.4	2.3	7.8	10.1	20.0	47.8	9.2	33.7	58.2 9.0
9.6	31.3	10.8	9.8	6.3	28.0	10.4	24.5	27.4	10.1	34.0	7.9
9.8	43.5	1.5 9.0	9.8	10.3	32.0	10.4	25.8	52.2	9.0	37.5	21.8
10.5	45.3	44.0	10.0	12.8	27.0	10.3	26.5	3.6	7.8	38.0	41.8 8.0 G
9.8	47.4	57.2	9.0	22.6	59.8 9.0	9.2	34.5	44.8	10.0	42.5	14.6
9.0	47.8	17.9 9.5	10.1	24.3	21.9	10.0	35.0	22.6	9.0	45.0	22.8
10.3	49.2	24.2	10.2	26.3	43.4	10.0	40.0	27.7	10.4	48.5	48.8
9.8	49.8	53.3	10.1	30.3	24.4	10.3	41.0	12.4	10.4	51.0	33.2
9.8	50.3	4.7	10.4	30.3	24.0	10.4	43.0	51.2	10.2	52.0	36.2
10.2	50.3	1.5	10.1	31.3	37.1	9.6	47.0	36.8	9.8	34 0.0	57.4
10.1	51.3	7.4	10.0	31.3	22.2	9.8	47.0	31.0	9.6	0.0	51.1
9.2	58.3	4.6 9.5	9.8	39.8	47.2	10.1	31 4.5	9.4	10.3	9.0	45.9
10.5	24 0.3	7.1	9.6	40.3	9.6	10.0	6.0	45.0	10.3	10.0	45.1
9.8	20.3	44.1	10.4	45.3	0.7	10.4	9.0	36.7	10.0	11.0	30.0
7.2	20.3	39.6 GSg	10.5	50.3	27.5	10.4	11.0	52.4	10.4	12.5	52.2
10.2	25.3	6.3	10.0	55.3	21.5	9.5	13.0	58.7 9.5	10.5	18.5	35.1
10.5	37.8	28.1	9.3	57.3	24.2 9.0	10.1	14.5	26.8	10.0	19.0	17.9
9.8	41.3	45.3	10.4	28 6.3	41.9	10.1	20.0	4.8	9.8	24.0	50.4
10.5	49.3	51.4	9.8	11.3	55.1	8.6	20.0	8.8 =	9.5	28.5	35.8
10.5	50.3	27.2	9.2	12.3	24.8 9.5	10.5	24.5	17.8	8.4	40.0	32.1 W
10.2	56.3	47.0	10.3	14.3	28.0	9.2	27.2	59.3 9.5	10.5	40.5	49.3
10.5	25 9.2	24.8	9.5	16.3	19.0 9.0 -	10.3	38.0	13.9	10.0	41.0	33.0
10.3	10.3	20.8	10.5	25.3	40.6	10.5	39.0	50.2	10.1	42.0	15.2
10.5	15.3	32.9	10.5	28.9	57.4	10.4	49.0	37.6	10.5	44.0	49.9
10.0	20.3	20.4	10.0	36.3	6.2	10.4	50.0	19.6	9.8	48.5	3.7
10.4	24.3	33.0	10.4	41.3	36.2	10.5	54.5	58.6	10.1	52.0	15.7
10.4	31.3	19.1	10.4	41.3	49.5	10.1	55.5	40.5	10.1	52.0	58.6
10.5	32.3	54.6	10.0	43.3	26.8	10.3	56.0	0.2	9.6	55.5	55.8 9.5
9.4	40.3	28.7	9.8	43.3	29.8	10.3	32 1.0	30.5	9.8	35 1.0	50.0
10.0	45.8	8.9	8.9	46.3	46.0 9.0	9.8	1.0	9.5	8.3	1.0	4.5 8.5
10.0	49.8	7.8	10.5	48.3	27.7	9.3	2.0	8.5	10.5	4.0	8.4
10.3	50.3	11.6	10.5	55.3	6.8	10.3	5.0	44.4	9.6	9.0	51.4 9.0
10.5	54.8	44.6	9.8	29 5.9	59.4	9.8	6.5	44.1	10.5	10.0	22.4
8.9	58.9	2.6 9.0	8.8	6.0	19.1 9.5 -	9.5	10.0	0.2 9.2 G	10.2	12.0	49.9
9.3	26 2.8	1.1 9.5	9.6	6.0	17.8 9.5	9.5	13.0	49.3 9.0	9.6	15.0	17.2
10.2	5.3	42.0	10.2	8.5	12.8	10.5	15.5	48.8	9.4	18.0	12.6
8.6	6.3	42.2 8.5	10.4	10.0	6.0	10.5	22.0	30.8	8.9	21.5	30.6 W
9.6	9.8	27.8	9.3	10.5	56.9 9.5	10.5	23.8	59.4	10.5	26.5	35.5
9.4	10.3	44.9 9.0	10.0	12.0	9.7	9.2	24.5	0.8 9.2 G	9.4	29.0	37.8
9.8	11.3	20.7	9.6	13.5	53.7	9.8	29.0	59.8	10.4	31.0	6.8
9.8	15.3	32.2	8.8	19.0	44.4 8.5	9.6	32.5	3.9	10.5	32.5	13.1
10.3	20.3	34.1	10.1	19.0	26.6	10.4	37.0	19.1	9.6	39.0	49.2
8.2	25.3	43.2 8.0 Gt	10.0	20.0	30.6	10.4	42.0	8.6	10.2	41.0	34.2
10.3	28.6	2.0	10.5	22.0	17.0	4.8	44.5	41.2 4.5 GStp	9.3	43.0	11.1 9.0
9.8	28.8	10.0	9.8	28.0	6.4	9.3	51.0	55.3	10.3	44.5	47.7
10.3	29.3	32.0	9.6	35.5	39.9	9.8	52.5	35.2	10.0	45.0	25.2
9.8	30.3	6.7	9.6	47.0	53.0	9.8	56.0	41.0	9.6	49.0	48.8
10.0	31.8	31.4	10.0	52.5	6.2	10.5	33 0.0	13.0	10.2	58.5	51.8
10.0	35.3	40.1	9.0	55.5	39.2 9.5	10.1	2.0	1.9	10.2	59.5	18.2
10.5	40.3	37.4	10.4	58.8	31.0	10.3	7.5	39.8	10.5	36 0.0	29.0
10.0	44.3	7.2	10.5	59.0	54.6	9.4	8.5	23.1	10.4	4.5	52.1
9.8	48.8	16.0	10.1	30 0.0	4.9	8.0	9.0	59.8 7.0 GSg	9.2	6.5	19.2 9.0
10.4	49.3	50.9	9.6	1.0	28.7	9.0	17.5	18.0	10.5	10.5	6.0
10.2	51.0	0.3	9.8	3.5	8.2	10.5	18.0	52.0	9.8	21.5	11.1
9.8	53.3	23.4	9.8	4.5	35.3	10.0	20.0	8.0	10.4	32.0	27.0
9.6	54.3	14.0	9.6	9.0	29.2	9.6	20.0	30.8 8.5	10.3	47.5	51.8
9.0	54.3	27.4	9.6	9.5	31.8	10.5	26.0	58.1	9.8	50.0	33.4
25pr.	+ 0 55.4	- 3.1		+ 0 55.6	- 3.2		+ 0 55.7	- 3.3		+ 0 55.8	- 3.4

1561-1620.			1621-1680.			1681-1740.			1741-1800.		
mag.	7 ^h	-34°	mag.	7 ^h	-34°	mag.	7 ^h	-34°	mag.	7 ^h	-34°
0.5	36	51.5	10.2	39	51.0	10.3	42	55.5	10.5	45	49.6
0.2		57.5	10.3		59.0	10.5		59.5	9.6		51.1
0.8		59.0	8.2		59.0	9.8	43	5.0	10.5	46	53.6
0.8	37	0.0	9.2	40	1.1	10.5		5.5	10.5		0.6
10.5		0.4	10.4		5.0	9.8		6.0	9.6		8.6
10.0		1.5	10.1		9.5	10.3		7.0	10.1		9.6
10.3		2.5	9.8		10.0	9.8		8.5	8.4		14.1
9.6		4.0	9.6		10.3	10.0		10.1	8.1		14.6
10.3		8.5	10.5		15.0	8.5		15.0	9.8		23.6
9.5		16.0	10.5		18.0	9.6		16.5	10.2		26.1
9.6		21.0	10.2		21.5	9.6		20.0	10.0		27.6
10.4		23.5	10.4		27.0	10.4		22.0	10.3		29.1
9.6		24.0	10.5		28.0	10.3		24.0	9.2		34.6
10.2		28.0	9.2		29.0	10.3		36.5	10.3		39.6
10.0		30.0	10.3		35.0	9.8		40.0	9.3		41.1
10.0		39.0	9.2		40.0	10.4		43.5	10.3		41.1
9.6		40.0	10.1		48.5	10.2		44.0	9.2		42.1
10.2		42.5	10.3		58.0	10.0		44.5	9.8		48.6
10.5		50.0	10.3		58.5	9.4		51.5	9.8		54.1
9.8		56.0	9.8		59.0	10.3		51.5	8.2		55.6
10.0		57.1	10.5	41	0.7	10.3		52.5	9.8		57.6
9.6	38	0.0	9.2		4.5	10.5		55.5	8.6		58.6
9.0		4.0	9.8		9.5	10.5		58.5	10.5		58.6
9.8		6.8	9.8		10.5	10.5	44	8.0	9.5	47	0.1
10.1		10.0	9.8		16.0	9.5		12.0	10.3		4.6
10.3		14.0	10.0		19.0	9.5		13.0	10.3		9.1
10.5		16.0	10.4		20.0	9.8		17.5	9.6		13.6
8.8		16.5	10.3		22.0	9.8		20.2	10.4		14.1
10.4		16.5	10.1		23.5	9.8		21.5	10.2		20.1
10.5		18.0	10.0		26.5	9.6		22.5	10.5		23.1
10.0		31.0	10.0		26.5	9.8		22.5	9.5		26.4
9.6		34.5	10.2		26.5	10.0		28.0	10.4		26.6
10.0		36.4	10.3		35.5	9.6		30.0	10.3		27.3
10.5		40.0	10.1		41.5	10.2		30.5	9.3		30.1
10.5		42.0	10.2		42.5	9.8		34.5	10.4		32.1
10.1		42.0	9.8		45.0	9.8		35.5	6.4		35.6
10.3		44.0	9.8		49.5	6.3		35.5	10.5		47.6
9.5		56.0	10.1		51.5	10.3		41.5	10.3		52.6
9.8	39	1.0	10.5		53.5	9.6		41.5	9.8		57.9
10.5		2.5	9.8	42	1.5	9.6		45.0	9.0	48	0.4
10.5		2.5	10.5		2.4	10.5		50.0	9.4		5.4
10.2		5.0	9.8		2.5	10.0		53.5	10.2		15.9
10.2		11.0	10.2		12.0	9.6		57.0	10.0		29.4
9.3		12.0	10.5		13.0	10.5	45	1.0	9.6		30.4
9.6		12.5	10.4		24.0	10.1		1.0	7.5		31.9
10.4		16.5	10.4		24.0	10.4		8.5	10.0		34.9
9.8		23.5	10.5		25.0	10.0		10.0	10.0		39.9
10.0		30.5	9.2		25.0	10.4		10.2	9.8		40.4
10.5		33.5	8.2		27.2	10.2		12.0	9.8		45.4
10.5		33.5	9.6		27.5	10.4		16.2	9.0		45.9
10.3		34.0	9.6		29.5	10.5		18.5	10.2		46.4
9.6		35.0	9.0		30.0	9.8		18.5	9.4		54.9
9.6		37.5	10.4		30.0	10.5		19.0	9.4		59.9
9.8		38.5	9.8		37.0	9.8		19.8	9.8	49	0.6
10.4		38.5	10.1		38.0	7.9		20.0	9.3		5.4
10.0		39.3	10.2		40.0	10.3		34.5	10.0		30.9
10.1		42.5	9.6		43.0	9.2		38.6	10.0		39.9
10.2		46.2	10.5		49.5	9.0		41.6	10.2		40.9
9.6		49.0	9.8		50.0	10.0		43.6	10.2		48.9
9.6		49.7	8.6		55.2	10.2		46.6	9.6		56.9
25pr.	+0	55.9	+0	56.0	-3.6	+0	56.2	-3.7	+0	56.3	-3.8

1801-1860.				1861-1920.				1921-1980.				1981-2040.			
		7 ^h .	-34°			7 ^h .	-34°			7 ^h -8 ^h .	-34°			8 ^h .	-34°
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
9.6	49	58.4	24.6	9.0	54	17.5	2.1	8.8	57	50.9	39.3	10.0	0	28.4	28.4
7.4		58.9	31.1	8.4		21.9	58.0	10.2		51.4	29.3	10.2		32.4	37.9
10.2	50	6.9	55.1	9.8		25.4	41.3	9.4		57.9	47.5	10.2		35.4	49.2
9.4		8.4	9.6	10.2		34.9	42.1	10.2		59.9	50.8	9.6		37.4	16.2
9.0		19.9	59.9	9.6		41.9	42.1	9.6	58	3.4	7.3	10.2		39.9	37.3
10.2		19.9	56.9	10.0		44.9	29.5	8.4		4.9	11.8	8.7		43.4	20.0
9.8		21.9	45.1	10.2		59.4	32.3	9.6		5.9	4.1	10.2		47.9	5.6
10.0		23.4	23.5	10.2	55	0.8	42.5	10.2		5.9	29.0	9.6		54.9	5.3
9.3		33.9	7.3	10.2		1.1	59.6	10.2		6.9	10.0	9.8		54.9	27.4
10.0		36.4	51.1	10.2		10.9	18.7	9.3		7.6	58.7	8.5		55.9	33.3
10.0		43.4	58.1	9.8		12.4	11.2	10.2		9.9	56.9	10.2	1	0.4	22.0
10.0		50.9	50.7	9.8		14.9	5.7	9.0		11.9	12.0	10.2		4.9	3.9
10.0	51	4.4	45.5	9.8		20.4	25.2	10.0		11.9	1.9	10.2		8.4	51.7
10.0		7.9	42.1	9.6		20.4	45.1	10.2		11.9	6.7	8.1		18.4	23.8
10.2		21.9	48.8	9.3		25.6	56.5	10.2		13.9	33.1	9.4		19.4	24.5
9.6		27.9	22.8	10.2		30.4	31.9	10.2		16.4	24.1	10.2		20.9	20.3
9.8		31.4	27.3	10.2		30.9	3.9	10.2		16.4	5.1	10.0		28.4	51.2
10.0		37.4	3.0	10.0		31.9	12.7	10.2		18.9	7.8	10.0		29.9	43.2
9.8		39.9	14.1	10.2		38.4	55.7	10.2		19.9	15.1	9.6		31.1	58.2
10.2		41.9	49.8	9.4		38.9	18.6	10.2		22.4	35.3	10.2		31.4	40.2
10.0		48.9	44.0	10.0		38.9	9.1	8.4		23.4	44.1	10.2		31.9	48.6
10.0		49.9	28.3	10.2		39.4	2.9	10.2		23.9	17.6	9.8		31.9	43.3
10.2	52	17.9	26.9	9.0		43.1	59.3	8.4		25.6	1.5	9.8		38.9	3.0
8.0		19.2	2.8	9.1		44.4	44.1	9.6		25.9	31.0	10.2		39.9	27.3
10.2		19.9	17.5	9.8		45.9	21.7	10.0		26.9	59.7	10.2		42.9	34.7
8.2		27.4	53.0	9.8		48.9	25.8	10.2		28.4	56.1	9.1		44.4	39.9
9.1		38.4	34.6	10.2		51.4	17.3	10.0		32.4	0.7	10.0		45.4	36.1
9.3		41.9	35.1	9.6		59.9	20.3	10.2		35.4	13.7	10.2		48.9	55.2
9.0		44.4	3.6	10.2	56	3.9	15.6	10.2		36.2	3.3	10.2		48.9	37.3
10.2		44.9	31.1	9.6		4.9	27.9	9.1		37.9	22.4	9.8		52.9	4.6
10.2		45.9	52.9	10.2		9.9	48.3	10.2		39.4	3.1	10.2		57.4	39.1
10.2		45.9	17.2	9.8		15.9	25.7	9.8		40.9	38.7	9.8	2	2.4	57.4
9.4		46.9	36.1	7.8		26.4	18.7	9.0		42.4	32.3	10.0		9.9	12.8
9.6		48.4	36.4	9.4		35.4	15.0	9.8		42.7	15.4	9.4		11.4	38.2
9.3		53.9	34.1	9.8		40.5	1.0	10.2		44.9	3.2	9.8		18.4	10.8
9.6		57.9	8.1	9.0		43.4	4.0	8.8		59	0.9	9.8		19.4	41.0
8.6		2.9	27.8	9.6		44.9	16.5	9.8		6.4	49.6	10.2		20.9	26.6
8.8		4.9	28.8	8.7		45.4	14.1	9.3		6.4	35.2	9.8		33.4	4.1
8.8		6.4	35.5	9.3		48.9	41.4	10.2		8.4	57.3	9.8		40.3	32.0
10.2		11.4	22.8	9.3		49.9	39.3	9.8		10.4	45.0	10.0		42.4	23.8
10.2		21.0	59.1	10.2		51.9	8.5	10.2		11.9	47.0	10.2		43.4	6.4
10.2		29.9	39.1	10.2		54.4	46.1	10.2		13.4	44.1	9.8		49.4	44.1
10.2		49.9	6.1	7.7		54.9	20.7	10.2		19.9	55.3	10.2		52.9	27.9
10.2		50.9	17.7	10.0		55.9	52.7	9.8		23.4	47.0	10.2		53.4	4.4
9.4		52.9	30.1	9.6		57.9	3.1	9.6		28.9	12.5	9.3	3	3.4	38.1
8.6		54.9	17.0	8.5	57	1.9	8.3	10.2		30.9	0.1	10.0		4.9	4.9
10.2		56.4	30.5	10.2		1.9	6.7	9.4		34.9	38.5	10.2		9.9	6.1
8.2		57.9	36.7	10.2		2.4	42.9	10.0		39.9	34.7	7.7		16.4	50.9
10.2		57.9	30.8	9.6		2.9	9.1	9.8		39.9	42.0	10.2		21.9	5.2
10.2		58.9	29.3	10.2		13.9	49.1	9.8		41.4	45.5	10.2		27.9	19.3
10.0	54	0.4	21.9	9.8		14.9	51.3	9.8		42.9	42.0	10.2		29.4	42.8
9.6		2.9	39.2	8.1		15.9	57.4	10.2		49.6	59.9	9.0		29.9	15.1
10.0		4.4	42.0	10.0		17.4	24.1	9.4		54.9	34.3	10.0		34.9	36.3
10.0		4.9	1.3	8.8		19.9	48.1	7.9		55.4	32.5	9.8		35.4	4.6
10.2		7.4	45.8	10.2		32.4	47.1	9.6	0	2.9	42.0	10.2		37.9	39.8
10.2		7.9	16.0	9.0		34.9	16.8	10.2		4.4	28.1	9.4		40.9	17.1
9.4		9.4	31.0	8.8		36.4	4.6	10.2		11.9	43.2	9.6		41.9	10.1
9.4		11.4	19.8	9.6		36.9	1.7	9.2		19.4	27.3	10.2		44.4	45.0
9.6		11.9	43.1	8.8		41.9	13.0	10.2		24.9	30.1	10.2		44.4	12.6
9.2		11.9	6.1	10.0		47.9	31.9	10.2		25.4	4.6	9.6		51.4	13.0
25Pr.		+ 0 56.5	-4.0			+ 0 56.7	-4.1			+ 0 56.8	-4.1			+ 0 57.0	-4.2

1866 ArcCap.....1G

2041-2100.				2101-2160.				2161-2220.				2221-2280.			
mag.		-34°		mag.		-34°		mag.		-34°		mag.		-34°	
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s
0.2	3 58.4	48.7		9.2	6 54.6	54.7	9.0	10.0	10 15.6	31.0		10.4	12 59.8	11.5	
9.2	4 1.4	4.1		10.2	59.6	59.9		10.2	16.6	46.4		10.8	13 0.3	26.1	
10.2	9.9	41.1		10.2	7 3.1	4.1		10.2	17.6	58.8		9.6	0.8	32.5	
10.2	10.9	6.4		9.6	13.6	42.1		10.0	19.1	46.2		10.8	5.4	12.0	
10.2	18.9	27.8		9.4	14.6	34.5		9.0	19.6	34.0		10.8	8.3	23.1	
10.2	29.9	45.7		10.2	18.1	46.1		9.8	19.6	10.6		10.4	10.3	14.8	
10.2	29.9	26.8		10.2	23.1	19.1		9.1	24.1	15.3	9.5	10.6	10.8	54.1	
10.0	35.4	28.1		9.0	24.1	51.4	9.2	9.0	25.6	17.0	8.5 -	10.7	13.3	18.5	
9.6	40.4	39.0		9.8	25.1	48.1		10.0	27.6	22.2		10.4	17.3	24.1	
9.4	41.9	24.0		10.2	27.1	28.5		10.2	29.1	57.4		10.8	22.0	56.6	
9.3	41.9	16.1	9.5	10.2	27.6	33.9		10.0	32.6	29.3		9.4	22.8	44.1	
8.7	42.9	42.9	8.5 -	10.0	28.6	0.3		10.0	39.6	29.9		9.0	31.8	32.5	
9.8	48.9	53.4		9.0	30.6	49.0	8.5	9.4	41.6	55.0		10.7	32.3	51.7	
10.2	48.9	30.5		8.6	33.1	6.9	9.5 -	10.2	49.1	17.2		10.6	40.3	0.1	
10.2	51.4	31.7		8.8	37.1	41.4	9.0 -	9.6	51.1	1.5		10.4	47.8	1.9	
10.2	51.4	39.9		10.2	41.6	32.6		10.0	52.1	16.0		10.4	48.8	26.9	
9.8	51.4	33.6		10.0	44.1	31.6		9.6	58.3	57.8		10.7	49.3	38.3	
9.8	51.9	52.1		10.2	47.1	33.8		10.2	II 4.6	38.7		9.8	54.8	51.8	
10.0	55.9	10.6		10.0	47.1	45.5		10.2	8.6	16.4		10.8	14 8.8	31.0	
10.2	59.4	49.1		9.8	51.6	46.3		10.2	10.6	18.6		10.8	10.3	25.3	
10.0	5 1.9	9.0		10.2	53.6	55.9		10.2	12.1	54.8		10.0	12.8	1.1	
9.4	3.4	45.2	9.0	10.0	55.1	44.1		9.8	14.6	24.0	9.5	9.8	12.9	57.5	
9.8	7.9	52.8		9.8	56.6	43.2		10.0	15.6	15.0		10.2	15.3	24.3	
9.6	8.4	11.1		10.2	59.6	25.2		10.2	23.5	22.6		9.4	15.8	49.9	
9.8	10.1	1.3		9.1	8 9.1	35.8		9.8	24.6	26.5		10.8	17.5	55.3	
9.0	11.9	8.4	9.0	8.8	9.6	46.5	8.5	10.2	25.6	9.7		10.7	19.8	40.9	
9.6	11.9	11.2	9.5	8.8	15.6	12.1	7.8 G-	10.0	25.6	36.2		9.6	24.3	7.9	
9.8	13.9	18.2		10.2	18.6	52.2		10.2	26.6	44.2		9.8	31.3	40.5	
9.8	13.9	22.3		9.8	19.1	4.1		10.2	27.6	21.0		10.6	34.8	4.5	
10.2	16.4	40.4		10.2	34.1	7.9		9.4	28.1	30.9		10.4	35.8	5.1	
10.0	18.4	19.2		10.2	37.6	10.9		9.3	28.5	26.5	9.5	7.1	40.8	11.9	7.0 GS=g
10.0	19.6	32.6		8.4	39.3	59.7	8.7 G	9.2	29.6	42.7		10.0	50.8	23.1	
10.0	20.1	49.7		10.0	42.1	38.2		10.0	38.6	16.5		10.7	50.8	57.5	
9.6	20.6	14.0		9.8	43.6	5.0		9.8	38.6	49.1		10.6	52.8	42.5	
9.0	25.1	38.3		9.0	47.6	6.1		10.2	41.1	48.8		10.0	55.8	6.9	
10.2	25.6	28.9		10.0	54.1	57.8		10.2	45.6	0.4		9.6	56.3	42.0	
9.4	27.6	0.2		10.2	54.6	6.6		10.2	47.6	4.8		7.6	58.3	55.5	8.0 -
9.8	29.6	27.3		9.4	56.6	20.0		10.0	48.6	10.1		10.7	58.8	39.3	
10.2	36.1	40.9		10.2	58.6	48.9		10.2	57.6	17.8		10.2	15 1.8	40.3	
10.2	43.6	28.3		8.1	59.6	21.6		10.0	59.1	28.8		10.7	3.3	21.1	
9.8	44.6	24.4		10.2	9 3.6	1.3		8.8	12 5.6	15.3		10.2	4.3	32.7	
10.0	50.6	15.1		7.7	4.6	49.8	7.5 G-	8.4	8.1	28.4	9.0 -	10.8	10.8	41.9	
10.0	54.1	55.5		9.0	4.6	23.9		10.2	11.8	34.0		9.0	11.1	1.8	9.0
8.8	55.1	36.9	8.5	10.2	10.6	1.2		9.4	13.6	52.5	9.5	9.4	11.8	1.6	9.0
10.0	56.8	57.7		10.2	11.1	25.1		10.2	15.8	50.1		10.8	11.8	41.9	
9.4	57.1	21.3	8.0	10.2	19.6	28.9		10.2	16.8	56.7		10.0	17.3	13.5	
8.4	59.6	33.0	8.8 G-	8.7	23.6	24.9		9.8	17.2	23.9		10.2	19.8	55.7	
9.8	6 1.1	30.3		10.2	28.1	30.2		7.7	17.2	6.8	7.5	10.2	21.8	7.0	
10.0	8.6	19.5		10.2	31.6	1.1		9.8	25.4	44.9		10.2	22.3	39.8	
9.4	10.6	44.6		9.3	32.1	26.3		10.2	25.4	49.1		9.0	26.3	22.3	
8.5	20.1	31.0	8.5 -	9.8	36.6	46.3		10.2	25.6	6.2		10.8	28.8	59.7	
9.8	24.6	43.1		10.0	40.6	51.3		10.2	27.6	9.4		8.6	32.8	3.7	8.5
10.0	25.1	7.1		10.0	43.1	11.2		10.2	28.1	1.0		9.6	35.8	51.8	
9.6	28.6	3.1		10.2	48.1	59.9		10.2	30.2	31.1		9.2	36.8	57.9	
10.2	28.6	28.3		10.2	51.1	49.2		10.2	33.4	50.7		10.8	36.8	37.8	
10.2	29.6	30.3		10.0	53.6	3.8		9.3	41.1	18.4		10.8	40.8	44.1	
10.0	34.1	31.6		10.0	57.6	43.5		8.8	43.7	47.0	8.5	8.3	41.8	6.5	9.0
9.0	35.3	2.5		10.2	10 2.6	43.1		10.2	49.8	49.9		10.8	41.8	14.5	
10.2	42.6	22.9		9.8	5.6	23.6		10.8	52.9	2.8		10.4	45.8	45.5	
10.2	50.6	23.1		10.2	14.6	41.0		10.4	53.7	53.5		9.8	45.8	4.3	
25pr.	+ 0 571	-43		+ 0 573	-45			+ 0 575	-45			+ 0 577	-46		

2281-2340.				2341-2400.				2401-2460.				2461-2520.			
mag.	8h.		-34°	mag.	8h.		-34°	mag.	8h.		-34°	mag.	8h.		-34°
10.2	15	51.3	19.7	10.0	17	55.0	1.4	10.8	19	53.5	15.8	10.6	21	25.4	0.4
10.7		54.8	10.2	10.8		55.7	49.4	10.8		56.5	5.6	10.8		29.4	6.0
10.8		57.8	56.0	10.8		59.7	39.2	10.0		57.5	41.6	9.4		32.4	19.8
10.8	16	4.3	35.7	10.2	18	0.7	4.0	10.8		58.5	6.4	10.4		33.9	39.4
9.6		6.3	19.5	10.0		4.2	33.2	10.2	20	0.4	0.4	10.0		36.9	2.0
10.4		9.8	0.5	10.8		5.2	3.0	10.7		0.4	32.0	8.9		38.9	13.8
10.0		12.8	31.9	10.0		5.7	57.8	8.9		0.5	25.5	10.7		39.4	41.0
10.8		13.8	51.9	10.6		7.2	9.2	10.8		1.4	7.4	8.6		40.4	14.2
9.4		14.0	1.6	10.4		8.7	7.0	10.4		1.9	37.6	10.8		45.3	49.3
9.6		14.8	16.9	10.2		10.7	5.0	9.4		4.9	19.2	10.8		46.3	44.7
9.6		15.8	19.5	10.2		12.3	58.0	10.8		10.4	11.6	9.6		46.4	28.8
10.7		16.3	5.9	10.4		13.2	40.8	10.2		11.4	34.4	10.4		52.3	53.1
9.8		16.8	20.4	10.2		13.7	7.6	10.7		16.4	39.9	10.2		55.8	8.8
9.8		16.8	23.9	8.4		14.7	33.7	9.8		20.4	40.8	8.2		57.8	11.2
9.8		16.8	25.9	10.4		15.7	11.8	9.8		21.9	23.8	10.6		58.3	14.1
8.2		19.8	29.7	9.8		20.7	31.4	10.8		23.9	15.2	10.6		59.0	39.3
10.0		21.3	54.5	9.8		21.7	45.6	10.8		24.2	34.6	10.8		59.8	52.2
10.4		22.8	49.8	8.4		22.2	16.7	10.4		30.4	32.0	10.2	22	0.3	33.5
10.6		28.3	43.9	10.8		23.7	9.2	10.2		30.4	35.0	10.4		0.8	12.3
10.4		29.8	40.3	9.4		28.7	40.2	10.7		30.4	25.6	10.8		1.8	9.8
10.8		30.3	29.9	10.0		39.7	41.7	10.0		32.4	51.0	10.6		3.3	11.0
10.8		31.8	29.0	9.4		43.7	7.0	10.2		32.4	46.1	10.0		9.8	32.0
8.8		34.8	4.6	10.7		44.2	13.4	10.4		33.4	13.3	10.4		11.3	45.6
10.8		41.0	58.7	10.7		46.2	14.0	10.6		33.4	42.0	10.7		11.3	43.8
10.8		41.3	34.0	9.8		48.2	39.6	10.7		34.3	58.1	10.8		12.3	44.0
10.7		42.3	5.8	10.4		48.7	12.0	10.0		35.4	23.2	10.2		17.8	53.9
10.4		44.3	14.9	10.4		50.7	24.6	10.6		35.9	4.8	10.7		24.3	1.8
10.6		45.8	37.0	10.0		50.7	36.0	10.8		36.4	53.5	10.4		25.3	9.6
10.7		45.8	8.9	10.6		50.7	39.8	10.6		37.4	25.8	8.8		29.8	17.2
10.8		52.8	38.7	10.8		51.7	52.2	10.6		39.4	48.1	10.8		35.8	23.5
9.8		53.8	35.6	10.8		56.7	7.0	10.4		40.9	35.2	9.3		41.3	52.6
10.8		55.8	40.1	10.6		59.5	33.0	9.6		41.1	58.8	8.8		42.3	36.9
10.0		57.8	7.0	10.7	19	0.5	12.8	10.8		42.4	27.6	10.8		42.3	0.0
10.2		58.8	8.1	10.8		0.5	29.8	10.6		46.4	56.0	10.2		44.8	56.2
10.4		58.8	47.0	10.6		8.5	39.8	10.6		47.4	22.5	9.2		48.3	6.3
10.2		59.3	5.0	10.8		10.0	18.0	10.7		49.4	51.8	9.4		49.8	44.0
10.8	17	0.8	42.5	10.6		10.5	21.0	10.4		50.4	2.6	9.2		54.3	36.2
9.2		3.3	46.1	9.8		10.8	1.0	8.8		52.4	21.1	10.2		55.3	19.0
10.8		3.8	48.0	10.8		14.0	9.5	10.2		52.4	45.2	10.8		56.0	11.6
10.4		5.3	50.0	8.2		16.5	33.8	9.4		55.4	25.2	10.4		57.3	0.2
10.0		8.8	15.8	10.8		17.5	44.3	10.2		59.4	18.0	10.7		59.3	35.0
10.6		10.3	48.1	10.6		20.0	30.6	10.0	21	0.4	10.2	10.2	23	0.3	6.4
10.0		10.8	19.1	10.8		20.5	14.8	10.8		0.4	23.1	10.8		2.0	23.9
10.4		20.3	43.1	10.7		22.0	28.8	10.7		0.4	3.7	10.4		2.3	2.8
10.2		20.8	32.9	10.0		22.0	54.4	10.0		0.4	5.2	10.0		6.8	11.3
10.4		26.3	28.5	10.6		22.5	14.6	10.6		0.9	6.4	10.0		7.8	28.5
10.2		28.3	53.5	10.6		26.5	31.8	10.4		1.9	59.0	10.0		5.6	9.7
10.6		28.8	34.0	10.0		26.5	50.2	10.4		6.9	52.8	10.4		12.2	29.0
10.0		29.8	40.1	8.7		27.0	46.7	10.7		8.4	5.9	10.2		16.2	58.6
9.8		30.8	33.6	10.0		27.5	54.2	10.8		10.4	50.2	10.0		19.7	45.6
9.4		33.8	21.1	10.8		29.0	14.2	10.6		10.4	54.8	10.7		20.7	50.2
10.8		39.3	34.9	10.8		29.3	57.7	10.4		10.9	51.2	10.8		24.2	26.0
10.8		40.3	22.6	10.4		31.5	33.8	10.8		11.4	29.0	10.6		24.2	9.8
10.6		41.3	20.6	9.8		32.5	57.4	10.6		14.9	3.8	10.2		24.5	58.6
10.0		43.8	29.7	10.8		36.0	18.7	10.8		15.4	11.0	8.4		30.2	45.2
10.6		45.8	39.6	10.8		36.5	10.4	10.6		18.4	45.3	10.6		32.7	24.6
10.0		46.8	20.8	10.8		40.5	28.2	10.8		20.4	35.9	10.2		32.7	23.2
10.6		47.8	47.0	9.0		40.5	34.8	10.2		20.4	36.4	10.6		33.2	4.0
10.8		52.2	23.6	10.2		50.5	37.7	10.2		23.9	54.6	10.2		36.2	52.0
10.6		54.7	28.9	10.8		52.5	8.3	10.2		24.4	39.6	10.8		38.7	44.2
25pr.	+ 0 57.8 -4.7			25pr.	+ 0 57.9 -4.8			25pr.	+ 0 58.1 -4.8			25pr.	+ 0 58.2 -4.9		

16964cap...3...1G

8h

2521-2580.				2581-2640.				2641-2700.				2701-2760.			
		8h.	-34°			8h.	-34°			8h.	-34°			8h.	-34°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.8	23	38.7	48.6	10.2	25	15.6	34.4	10.4	27	56.6	31.9	10.6	30	5.6	40.3
10.7		40.2	1.5	9.8		16.1	39.0	10.4		57.6	3.3	10.6		6.1	4.1
10.8		40.2	28.0	10.1		16.6	45.0	10.6	28	4.1	0.6	10.8		9.3	42.8
9.8		43.2	18.6	9.8		18.1	7.0	7.5		5.1	12.6	10.4		9.8	55.8
10.8		45.2	35.6	10.0		20.1	43.8	10.7		8.6	25.6	10.0		9.8	26.0
10.7		45.2	45.2	10.4		20.6	52.9	10.2		10.1	17.6	10.2		9.8	57.6
9.8		46.2	54.8	10.2		21.1	24.8	10.7		19.1	39.6	10.4		10.3	48.1
9.6		46.7	28.8	9.6		22.1	27.9	9.8		20.6	9.4	10.2		10.8	38.9
10.8		50.2	42.1	10.6		22.6	9.3	10.8		23.5	58.2	10.4		13.3	26.1
9.8		51.2	5.2	10.7		29.1	6.9	9.8		25.6	34.6	10.4		17.8	28.4
8.2		51.2	19.0	9.4		30.1	57.2	7.8		31.1	13.4	10.0		17.8	32.3
10.8		52.2	35.5	10.7		31.6	52.2	10.8		31.1	25.5	10.7		19.3	51.7
10.7		54.2	43.2	10.8		32.6	9.5	10.8		32.1	42.0	10.2		23.8	49.2
10.8		55.2	35.5	10.6		50.1	7.4	10.0		37.6	55.5	10.7		28.8	30.1
10.8		55.7	11.8	9.2		50.1	29.7	10.0		38.6	41.0	10.8		29.8	53.9
9.0		56.2	8.2	10.8		50.6	47.4	10.4		43.6	49.4	10.7		31.8	15.1
10.0		56.2	13.0	10.8		52.1	5.2	10.7		44.6	49.7	10.6		33.8	19.6
10.8		58.7	12.5	10.4		55.1	30.8	9.0		44.6	0.4	10.4		35.3	47.7
10.2	24	2.7	17.3	10.0	26	3.1	32.2	10.4		45.1	2.9	10.4		36.8	1.1
10.8		3.2	58.8	9.3		3.6	49.6	10.8		47.1	7.2	10.2		37.8	33.0
9.8		3.2	18.2	9.0		9.6	49.4	10.6		51.1	51.0	10.2		42.8	4.2
9.3		5.2	4.8	9.2		15.1	18.2	10.6		51.1	2.8	10.0		45.8	42.9
10.8		8.7	5.9	10.0		15.1	18.6	10.2		59.6	38.2	10.4		47.3	17.9
10.4		8.7	54.8	9.3		15.4	59.9	10.6	29	0.1	35.6	10.0		47.3	42.1
10.2		10.1	56.1	10.7		18.1	58.6	10.8		0.1	11.0	10.7		51.8	3.2
10.7		10.6	33.8	10.0		22.1	59.6	9.2		2.1	23.3	10.8		56.8	55.5
9.0		11.1	30.1	9.8		25.1	28.7	10.8		2.6	12.6	10.7		59.3	24.0
10.8		11.1	30.8	10.6		27.1	54.2	9.8		5.1	31.0	10.6	31	0.8	12.9
10.4		11.1	23.9	9.6		28.1	48.9	10.0		6.1	5.9	9.4		1.3	35.1
10.7		15.6	9.6	10.6		29.1	3.1	10.7		9.6	24.7	10.2		1.8	25.3
9.8		16.1	42.1	10.8		29.1	47.9	9.2		10.1	55.0	10.7		8.8	39.1
10.8		18.1	47.6	10.2		31.6	21.1	10.8		11.1	30.1	10.8		9.4	59.1
10.2		19.6	26.2	9.0		38.6	10.1	9.4		11.1	39.4	10.8		9.8	14.2
10.4		20.6	15.6	10.8		41.1	41.1	10.0		12.1	7.9	10.0		17.8	14.6
10.8		21.6	29.4	8.4		45.6	46.6	9.8		12.1	36.1	10.4		19.8	2.7
10.6		22.1	9.1	10.2		50.1	6.0	10.7		15.1	23.0	9.3		23.5	1.9
10.8		22.1	54.0	9.6		52.2	2.8	9.8		15.6	18.1	10.0		23.5	17.4
10.6		24.1	53.7	10.8		52.6	56.1	10.0		16.1	3.9	10.8		24.5	21.0
9.2		24.3	0.6	10.4		53.6	33.0	10.6		18.6	3.6	10.4		28.5	2.9
9.2		27.6	17.1	10.7	27	6.1	11.8	10.8		19.1	54.0	10.8		28.5	9.5
10.2		30.1	58.2	10.7		6.6	31.0	10.8		20.1	16.9	10.6		28.5	29.9
10.2		30.6	47.6	10.7		9.1	14.0	9.6		22.1	30.8	10.0		29.5	45.0
9.8		33.1	23.5	10.8		13.6	53.2	10.4		22.6	13.5	10.4		30.0	47.1
10.8		34.1	12.3	9.8		13.6	32.3	10.4		28.1	43.8	10.8		30.0	22.6
8.4		34.1	17.0	10.8		15.1	27.0	10.4		33.1	27.2	10.6		30.5	28.7
10.8		34.6	23.8	10.8		19.1	25.9	10.6		36.6	40.4	10.8		32.0	33.7
10.0		40.6	0.3	9.8		28.6	42.9	10.8		39.1	46.1	10.7		32.2	47.2
9.4		41.1	50.7	10.4		29.6	40.1	10.4		41.1	35.2	10.2		35.0	48.9
10.8		41.1	43.5	10.2		30.1	21.6	10.6		42.1	48.6	10.8		43.0	47.1
10.6		44.6	37.4	10.8		35.1	1.2	10.7		49.1	19.2	9.4		49.0	46.5
9.2		46.6	30.8	10.7		39.1	7.5	9.4		50.1	26.9	10.7		50.5	40.7
10.2		59.1	21.7	10.7		39.6	44.0	10.8		51.1	13.2	10.2		51.0	37.1
10.7	25	0.1	10.2	10.0		41.1	18.8	10.8		52.1	56.2	10.4		52.0	20.7
10.0		2.9	59.9	10.7		41.1	22.0	10.8		54.6	7.2	10.7		55.7	59.2
10.4		5.6	22.0	10.8		42.1	11.0	10.6		56.1	14.2	10.0		58.5	34.1
9.8		7.6	50.8	9.8		44.1	4.8	10.6		57.6	6.9	7.9		59.0	39.3
10.7		8.6	29.6	10.8		47.6	53.0	10.8	30	2.6	2.5	9.8	32	0.0	48.6
9.2		8.6	7.2	10.4		53.6	26.9	10.4		3.6	17.9	10.8		0.5	11.9
10.4		10.6	13.4	10.6		53.7	37.9	9.2		4.1	38.4	10.7		5.5	0.3
10.4		11.1	12.2	10.8		55.1	46.0	10.8		5.1	2.0	9.3		7.5	13.2
25pr.		+ 0 58.2	- 4.9			+ 0 58.4	- 5.0			+ 0 58.5	- 5.1			+ 0 58.7	- 5.1

2761-2820.			2821-2880.			2881-2940.			2941-3000.		
mag.	8h.	-34°	mag.	8h.	-34°	mag.	8h.	-34°	mag.	8h.	-34°
10.4	32 10.5	42.7	10.8	34 21.0	22.9	10.4	36 39.5	12.7	9.4	40 51.7	19.7
10.8	10.5	51.1	10.4	22.5	33.2	10.2	39.5	56.1	10.2	41 6.7	23.9
9.8	15.5	27.0	10.6	25.0	32.7	10.8	49.5	13.5	9.8	7.2	32.2
10.8	18.0	2.3	10.0	25.5	45.0	10.0	54.5	23.4	10.2	9.7	24.5
10.4	18.0	16.9	10.0	26.0	2.0	10.8	57.5	5.1	10.0	11.7	48.5
10.4	20.5	42.4	10.4	28.0	0.5	10.4	59.5	40.2	8.8	13.7	44.2 9.0
10.0	20.7	56.9	10.7	28.0	50.2	10.4	37 2.5	21.2	9.8	14.2	33.6
10.4	25.0	29.7	10.7	29.0	56.1	9.8	4.5	11.9	9.8	23.7	26.5
10.2	29.5	5.4	9.8	31.5	48.9	10.8	18.5	22.0	9.2	31.0	58.9
10.2	31.0	31.0	10.6	31.5	31.1	10.8	22.5	26.8	9.3	31.2	48.7
10.8	31.5	39.1	10.4	35.0	22.9	10.8	34.0	59.8	8.8	32.7	31.1 -
10.4	32.0	46.1	10.0	35.5	1.9	10.4	35.0	5.3	9.6	34.7	35.5
10.8	35.0	38.9	10.6	39.5	0.6	10.8	35.5	53.2	9.8	35.2	52.8
9.4	35.0	32.9	10.8	40.5	8.0	9.6	42.0	4.7	10.2	38.2	12.8
8.4	36.0	53.2 8.5 -	9.8	41.5	30.8	10.8	49.2	58.7	7.3	51.2	9.8 GS Sgt
10.4	42.0	5.5	10.4	42.5	12.5	9.2	49.7	14.9 9.0	10.2	51.7	34.7
10.6	42.5	47.7	10.0	50.0	51.9	9.2	51.2	17.1 8.0 -	9.4	54.7	55.1
9.8	45.5	20.7	10.8	50.3	17.9	9.6	54.7	41.7	9.6	55.5	57.1
10.8	49.0	43.8	10.8	50.5	2.0	9.4	57.7	14.8	9.3	58.7	7.1
10.4	50.0	53.1	9.2	51.5	30.0	10.8	38 9.0	46.8	9.6	42 5.2	26.0
10.0	50.7	58.5	9.3	54.5	45.0	10.7	9.5	15.4	9.3	10.0	59.8 8.8 -
10.6	56.5	37.9	10.0	1.5	25.0	10.2	10.5	3.3	10.2	18.7	55.6 9.2
10.4	56.5	29.9	9.8	2.0	46.1	9.8	12.2	59.5	9.6	19.7	25.6
8.3	59.5	26.6 8.5	10.7	10.5	18.5	9.8	15.0	39.3	7.7	25.7	8.4 7.0 GS-g
10.0	33 1.0	35.9	10.8	11.5	4.0	9.6	19.5	25.8	9.3	28.7	9.0 Gg
9.6	4.5	21.5	5.4	12.5	52.0 4.2 GS Str	10.0	26.9	25.2	9.8	30.2	45.8
10.7	4.5	23.7	9.4	13.5	10.4	10.2	32.9	5.1	10.2	39.7	54.6
10.6	5.5	32.0	10.6	14.4	59.3	9.8	34.4	20.7	10.0	40.2	43.0
10.7	8.0	12.1	10.6	18.5	44.6	9.8	35.4	29.6	9.4	45.5	19.1
10.8	10.0	33.9	10.8	25.0	4.6	9.3	39.4	8.7 9.0	9.8	50.0	3.6
10.7	10.5	14.3	9.2	25.5	37.5 9.5	10.0	39.9	46.9	10.2	55.0	52.3
10.8	11.0	53.5	9.3	26.0	40.9 9.5	10.2	41.4	55.3	10.0	58.5	3.3
10.2	15.0	41.5	10.8	27.0	14.5	10.0	49.9	17.0	10.2	43 1.5	18.3
10.0	17.0	56.5	10.7	31.5	21.7	8.8	55.4	11.1 8.5 -	9.8	10.0	13.9
10.2	17.0	40.1	10.4	37.5	1.2	9.6	15.9	44.8	8.6	11.5	50.8 8.5 -
9.2	18.5	7.1 9.5	9.8	39.5	28.8	10.0	18.2	58.5	10.0	12.5	2.3
9.8	21.2	57.5	10.8	41.2	58.9	9.6	21.4	43.1	9.4	13.5	37.6
10.8	22.0	3.3	9.4	44.5	9.6	10.2	22.4	6.4	10.0	21.5	20.0
9.8	24.5	38.8	10.7	48.0	20.8	10.2	29.9	16.1	10.0	22.0	28.4
10.7	25.0	9.1	10.8	50.5	9.2	9.0	34.9	41.2 9.5	10.2	22.5	45.7
10.7	25.5	4.0	10.4	52.0	26.0	9.8	34.9	38.4	10.2	23.5	52.6
9.8	34.0	8.3	10.0	53.0	25.6	10.2	35.9	38.1	10.2	31.0	8.2
9.8	37.0	9.5	9.8	53.5	29.2	9.4	40.4	25.9	9.3	32.5	37.1
10.8	39.5	5.2	9.6	56.0	32.5 9.0	10.2	41.4	33.5	10.2	46.0	2.0
10.6	41.5	29.7	9.8	59.5	56.1	9.4	42.4	58.5	10.2	50.0	12.1
9.6	42.0	38.5	10.8	36 2.0	37.8	9.8	43.9	17.1	8.8	56.5	19.2 8.5
10.8	46.5	17.7	10.0	4.5	25.9	9.6	45.9	40.4	10.2	59.0	0.2
10.7	47.0	17.7	10.0	8.0	54.9	9.6	46.9	11.2	10.2	44 0.0	17.6
10.8	47.0	42.9	10.6	15.0	11.8	10.2	50.4	46.7	9.6	12.0	26.6
9.8	49.5	1.1	10.7	17.5	16.7	10.2	56.4	22.0	9.2	14.0	55.9 8.8 G-
10.7	51.0	25.1	9.4	17.8	0.0	10.2	40 0.4	8.2	9.4	14.0	18.3
9.8	54.0	16.4	9.6	18.5	2.7	10.0	5.4	49.8 9.5	10.2	14.5	6.1
9.8	56.0	29.2	10.0	20.5	18.6	9.1	12.4	44.2 9.5 -	10.2	20.5	2.1
9.3	58.5	55.9	10.2	23.5	16.3	9.6	15.9	31.1	10.2	22.5	2.6
10.8	58.5	15.0	10.6	26.5	29.7	10.2	24.2	24.5	9.8	29.5	12.0
10.8	59.5	4.2	10.8	29.5	52.4	9.6	25.2	38.7	10.0	29.5	28.2
10.4	59.5	39.9	10.2	30.5	3.4	9.6	32.2	10.2	10.2	30.5	3.1
10.0	34 1.0	45.3	10.2	34.0	3.5	9.3	33.7	10.1 8.5 -	9.6	33.5	21.5
10.6	5.0	37.3	9.4	36.0	15.7	9.4	35.7	48.6	9.4	42.0	23.0 9.0 -
10.0	5.5	10.9	10.8	37.5	12.1	9.1	50.2	49.7 9.5	9.6	47.0	39.0
25 pr.	+ 0 58.8	- 5.2		+ 0 58.9	- 5.2		+ 0 59.1	- 5.3		+ 0 59.4	- 5.5

3241-3300.				3301-3360.				3361-3420.				3421-3480.				
mag.	g ^h	-34°		mag.	g ^h	-34°		mag.	g ^h	-34°		mag.	g ^h	-34°		
m	s	'	"/	m	s	'	"/	m	s	'	"/	m	s	'	"/	
10.2	2	45.8	33.5	10.2	6	51.0	58.0	10.0	10	22.3	27.2	7.6	14	50.8	58.3	7.3 G
10.2		47.2	43.5	8.7		51.3	26.0	10.6		38.3	26.5	10.8		52.3	25.7	
9.0		49.0	48.5	9.4		57.8	27.1	10.8		39.3	43.1	10.0		59.3	37.7	
10.4		50.8	29.0	9.8	7	2.8	34.6	9.8		40.3	56.0	10.2	15	2.3	59.9	
10.8		51.3	7.1	10.0		2.8	37.0	8.7		45.8	55.0	10.4		2.8	50.4	
10.8		58.3	13.6	10.8		5.3	40.3	10.0		48.3	51.0	10.8		2.8	53.0	
10.8	3	6.5	0.0	9.3		18.8	27.5	10.6		52.3	31.0	9.4		5.3	14.8	9.0
9.8		9.3	50.8	10.6		20.0	57.6	9.2		54.3	11.8	10.0		17.8	6.5	
10.8		15.8	35.5	10.6		20.8	50.6	10.8		59.3	39.8	10.4		18.8	21.3	
10.8		16.0	11.0	10.8		30.3	33.0	10.4	11	0.1	59.3	10.8		20.8	53.1	
10.6		25.8	56.9	9.5		31.3	53.9	9.8		0.3	50.7	10.0		22.8	25.9	
10.0		29.7	28.8	10.4		31.3	29.2	10.0		6.8	4.6	10.8		29.8	55.5	
10.2		30.5	45.0	10.6		32.3	58.9	10.0		7.8	41.0	10.6		31.3	29.7	
10.8		31.3	33.9	10.8		34.3	22.6	9.8		11.8	31.4	10.0		39.3	41.2	
10.8		34.8	2.3	10.8		36.3	52.3	10.8		21.6	57.9	10.6		47.8	21.1	
10.6		37.8	55.9	10.8		36.8	39.6	10.0		21.8	15.0	10.4		50.3	15.5	
10.8		38.3	49.7	9.8		38.3	44.8	10.6		30.3	24.6	10.0		50.8	25.0	
10.6		45.3	19.7	10.8		40.8	11.0	10.8		31.3	3.5	9.8		53.8	31.2	9.5
8.4		46.5	50.6	10.4		49.3	21.8	10.8		35.8	5.0	10.4		54.3	39.8	
10.6		52.5	8.4	10.8		55.3	53.9	10.8		36.3	42.0	9.8	16	1.3	24.8	
8.1		53.3	48.4	9.8	8	0.3	49.9	10.0		45.3	17.5	7.6		2.3	49.7	8.8 GW-g
10.4	4	0.3	20.8	10.8		10.3	25.0	10.0		48.8	47.0	10.8		3.8	46.3	
8.8		9.3	21.6	10.8		11.8	5.8	10.4		50.3	52.6	9.7		14.3	54.3	
10.6		19.8	18.6	10.8		12.3	46.0	10.6		58.3	1.0	10.8		20.3	31.2	
10.2		21.3	30.6	10.8		13.8	20.5	10.8		58.3	11.0	10.8		24.3	43.9	
10.8		29.3	48.6	10.8		16.8	21.0	10.0	12	2.8	55.8	10.4		30.3	50.3	
10.6		29.3	6.0	9.6		18.4	1.8	10.6		9.3	56.2	9.6		44.3	13.1	
10.8		31.8	41.1	9.5		18.8	55.1	10.0		10.8	38.5	10.8		49.8	8.2	
10.6		40.3	34.4	10.8		18.8	8.6	10.2		15.3	24.3	10.8		54.3	45.5	
9.8		49.3	56.4	10.8		20.3	25.6	10.8		15.8	28.4	8.9		55.3	30.8	
9.7		59.3	4.7	10.4		25.3	44.0	10.8		25.3	4.5	9.6		59.3	50.3	9.5
10.8	5	1.3	31.2	10.4		26.3	27.2	9.7		32.8	52.9	10.2	17	1.3	14.4	
9.0		13.3	24.1	10.8		33.8	50.0	10.8		35.8	41.0	10.6		9.3	13.2	
9.6		17.3	50.7	10.8		39.3	39.0	10.4		36.3	24.0	8.4		12.3	26.6	7.5 G-
10.8		19.8	23.1	10.8		41.8	43.6	10.8		40.3	20.0	10.2		13.8	23.5	
10.6		20.3	40.4	10.2		58.8	33.0	8.4		47.3	50.2	10.6		16.8	2.9	
10.8		21.3	32.8	10.4	9	0.3	1.9	10.4		49.8	29.2	10.0		18.3	4.8	9.5
10.6		21.3	18.2	10.8		6.3	38.4	10.0		53.8	21.0	10.8		21.3	55.5	
9.0		27.3	6.1	10.8		11.3	8.3	10.4		56.3	35.6	10.8		25.8	30.1	
9.3		33.8	51.0	10.8		11.3	52.0	10.8	13	15.3	31.6	10.8		35.8	58.4	
10.8		35.3	46.6	10.6		11.8	20.3	10.8		16.8	10.8	7.8		41.8	59.3	8.0 GW-
10.8		37.3	23.3	9.8		12.3	9.6	10.8		18.3	36.0	10.4		42.3	30.2	
10.4		45.8	42.9	10.8		14.3	35.2	10.8		24.8	1.7	10.6		42.8	16.2	
10.6		49.3	41.0	10.4		18.6	58.3	10.8		25.3	22.8	8.1		45.3	20.3	8.0 =
10.8		50.8	25.4	10.8		20.3	29.8	10.8		25.3	25.9	10.8	18	0.3	54.1	
9.0		56.3	54.8	9.0		30.3	22.3	10.8		30.3	40.0	10.8		0.3	28.5	
10.4		58.8	26.9	9.5		35.3	17.7	10.8		30.8	49.0	10.2		0.3	34.1	
8.9		59.8	12.8	10.6		35.3	1.0	10.8		46.8	10.7	10.8		4.3	26.5	
10.8	6	0.3	26.8	10.6		37.3	42.3	10.2		50.3	30.9	10.2		5.8	45.7	
10.4		1.3	46.2	9.8		40.3	4.6	9.4		55.5	0.2	10.8		7.3	53.1	
10.4		7.8	5.4	10.8		40.3	40.9	10.8		58.8	48.2	10.6		8.3	20.9	
10.8		13.3	20.5	10.6		41.3	6.0	10.6	14	20.8	12.2	10.6		11.3	12.9	
9.3		19.8	36.4	10.4		50.3	20.1	10.8		22.3	40.4	10.4		14.8	15.1	
9.0		25.3	27.1	9.8		50.8	18.6	10.4		22.3	24.7	10.8		15.8	25.3	
10.8		30.0	59.9	10.4		51.8	27.8	9.8		30.3	20.0	10.4		24.8	47.1	
10.8		31.3	6.9	10.0	10	0.3	59.8	10.0		35.3	16.1	10.8		34.3	25.7	
9.8		32.3	42.2	10.6		1.3	19.4	10.2		36.3	56.2	10.8		34.8	19.5	
10.8		38.8	6.0	10.6		9.3	5.0	10.6		44.3	48.2	10.8		40.3	4.7	
10.2		40.3	35.0	10.4		9.3	45.4	10.2		44.3	52.3	7.0		40.3	42.7	6.5 GS=g
10.6		49.8	38.0	10.8		20.3	6.4	10.6		45.3	52.8	10.8		40.3	28.1	
25pr.	+1	0.9	-6.0	+1	11	-6.1		+1	1.4	-6.2		+1	1.8	-6.3		

3481-3540.			3541-3600.			3601-3660.			3661-3720.		
mag.	9 ^h	-34°	mag.	9 ^h	-34°	mag.	9 ^h	-34°	mag.	9 ^h	-34°
10.2	18 41.3	38.1 9.5	10.8	22 30.3	37.7	10.2	26 51.8	17.3	9.5	32 10.9	32.1
10.8	48.8	14.7	10.6	31.3	50.4	10.6	55.3	38.7	9.8	12.9	24.5
10.4	50.3	56.1	10.4	33.8	10.3	10.8	59.8	8.9	9.4	15.9	43.7
10.8	19 2.3	3.9	10.8	34.5	58.0	10.8	27 0.3	17.1	8.6	16.4	22.9 9.0 =
10.8	6.3	53.9	10.6	34.8	8.5	10.8	4.8	16.5	9.4	30.4	52.5
10.4	12.3	38.8	10.4	41.3	36.1	10.8	13.3	15.7	9.2	42.4	7.9
10.0	16.3	56.1	10.8	42.8	24.5	10.8	15.3	47.8	9.8	42.4	50.5
10.8	25.3	42.7	10.8	48.8	20.9	10.8	16.3	41.9	8.7	47.9	30.7 8.2 -
10.6	25.3	43.1	10.0	51.3	9.1	10.2	16.8	46.5	9.4	54.4	34.1
10.6	25.3	11.1	10.8	23 0.3	23.5	10.0	19.3	23.0	9.8	54.4	23.5
10.8	25.3	35.3	7.5	2.3	21.6 7.5 GSg	10.8	20.3	9.0	9.8	33 0.4	42.3
10.6	25.3	35.1	10.4	5.3	14.0	10.0	25.8	35.9	8.8	1.4	52.1 8.2 G-
10.8	31.3	25.2	10.8	6.3	23.4	10.8	27.8	12.9	9.6	2.2	59.2
10.4	35.8	54.7	10.8	11.3	40.0	10.8	36.3	31.7	9.4	5.4	27.0
10.8	38.3	39.8	10.6	21.3	7.8	10.0	41.3	38.7 9.5	9.8	14.9	15.9
10.8	40.3	42.9	9.3	23.8	29.4 9.0	9.7	45.3	27.7	9.8	15.9	23.5
10.8	41.3	42.9	10.4	27.8	51.9	10.8	48.8	42.1	9.4	22.9	45.3
10.8	48.8	33.6	10.2	28.3	17.8	10.8	49.8	32.3	9.4	39.2	43.5
10.0	54.3	7.9 9.8	10.6	29.8	29.4	10.8	50.3	27.9	9.4	56.2	39.0
9.0	20 1.8	7.2 9.5	10.6	32.8	9.2	9.1	53.3	44.9 -	9.8	34 17.2	14.3
10.8	7.8	23.6	10.4	36.3	32.4	10.4	53.8	21.7	9.7	19.7	32.7
10.4	12.3	40.5	8.9	37.4	1.4	10.8	54.3	53.9	9.8	19.7	7.6
9.4	13.8	20.5	10.4	38.3	59.6	10.2	54.8	20.7	9.6	26.7	19.7
9.5	14.8	44.0	10.6	40.8	44.4	10.2	28 0.6	17.5	9.4	43.7	15.1
10.2	16.3	25.0	10.0	45.8	24.4	10.8	0.8	2.1	8.6	57.7	36.9 =
10.0	17.3	53.3	9.4	54.3	39.3	10.0	0.9	11.7	9.3	59.7	20.6
10.8	18.8	31.1	10.4	57.8	39.7	10.4	2.9	20.6	9.0	35 14.7	9.8
10.8	19.8	10.8	10.8	24 1.3	28.9	10.0	6.1	32.9	9.6	14.7	49.9
10.8	22.3	7.9	9.0	4.3	3.3	9.6	6.3	54.7	9.4	15.7	53.8
10.0	26.3	8.9	10.2	5.3	4.9	10.8	9.8	26.1	9.8	31.7	56.2
10.2	31.3	44.1	10.4	12.3	33.3	10.8	12.8	53.1	9.8	46.2	10.9
10.0	36.3	50.4	10.4	15.3	29.4	9.1	14.4	25.5	9.6	50.2	48.9
10.6	38.3	38.1	10.8	16.8	3.9	9.4	16.4	34.7	9.7	50.2	40.0
10.6	40.3	37.1	10.8	25.0	58.5	9.8	19.4	5.9	9.5	50.7	38.2
10.4	48.8	41.6	10.8	26.5	59.2	9.2	27.9	36.3	9.8	51.7	46.2
10.4	52.3	39.5	8.5	34.3	47.7 9.0 -	9.8	28.9	10.5	9.4	53.2	45.7
10.6	21 0.3	36.3	9.3	34.8	21.2	9.8	36.1	39.8	9.0	57.7	55.0 8.5 -
10.6	2.3	29.1	10.4	36.3	36.4	9.7	39.9	3.0	9.6	36 18.2	15.6
10.2	10.8	39.5	10.8	49.5	57.8	9.0	40.4	54.9	9.0	23.2	40.0 9.0
9.4	12.3	13.2	10.2	51.8	27.0	9.6	29 8.4	42.7	8.8	23.7	17.4 -
8.8	22.8	37.3 -	10.2	56.8	51.6	9.8	9.4	46.0	8.8	47.7	16.1
9.0	24.8	2.5 -	10.4	57.8	21.7	9.0	14.9	22.9	9.8	51.7	2.5
10.0	28.7	59.0	10.8	58.8	58.5	9.8	20.4	54.5	9.8	54.7	40.0
10.8	29.8	44.1	10.3	25 0.3	33.5	9.8	42.4	31.8	9.0	7.7	39.0 9.0
10.8	51.3	42.6	10.3	5.3	1.9	9.2	44.4	33.0	9.6	10.7	6.7
10.0	51.3	21.2	10.6	16.0	59.9	9.8	44.4	22.0	9.6	18.2	28.9
10.0	54.3	42.3	9.8	16.3	19.5	9.8	30 8.4	13.9	7.4	24.7	55.9 6.8 GS-t
10.4	57.3	1.7	10.8	22.3	19.8	9.4	13.9	55.3	9.7	26.7	29.1
10.8	58.3	19.9	10.8	25.3	54.5	9.2	33.2	57.8	9.6	36.2	22.5
10.8	22 1.3	21.0	10.4	30.8	18.1	9.2	37.4	17.1	9.8	38.7	12.0
10.6	2.8	31.0	10.0	34.3	19.0	9.8	48.4	13.1	9.6	39.7	52.9
10.4	5.3	1.8	10.2	38.8	22.8	9.8	48.9	31.5	9.8	42.7	46.4
9.0	6.3	52.6 9.5	10.0	41.3	44.3	9.7	31 9.7	57.5	9.5	52.7	43.9
10.8	14.8	34.9	10.8	50.2	29.3	9.4	10.4	50.9	9.8	54.7	24.7
9.7	14.8	51.8 9.5	10.4	51.8	52.8	9.8	16.4	29.7	9.8	38 3.2	5.9
10.0	20.3	46.6	10.2	55.3	22.9	9.1	17.4	42.6	9.2	7.7	41.8
10.0	24.3	44.9	10.8	26 3.3	28.9	9.8	17.4	29.5	9.8	7.7	37.9
10.8	24.8	46.1	9.2	11.3	53.5	9.7	30.4	10.7	9.2	11.7	12.5
7.2	27.3	27.8 7.0 GSct	10.4	17.8	13.1	9.8	38.9	9.9	9.7	20.7	1.1
10.0	28.3	5.0	10.0	51.3	35.7	9.8	32 2.9	35.6	9.1	31.2	0.6
25pr. +1	2.1	-6.4	+1	2.3	-6.5	+1	2.6	-6.6	+1	3.3	-6.8

3721-3780.			3781-3840.			3841-3900.			3901-3960.				
mag.	g ^h	-34°	mag.	g ^h	-34°	mag.	g ^h	-34°	mag.	g ^h -10 ^h	-34°		
9.8	38 ^m 37.2 ^s	55.8	9.8	45 ^m 33.7 ^s	4.3	9.2	52 ^m 36.5 ^s	42.8	7.2	59 ^m 59.3 ^s	16.5	7.0 GStπ	
9.0	42.2	30.9	9.8	34.7	0.1	9.5	46.0	28.6	10.6	0	4.3	46.1	
9.7	45.2	29.1	9.6	44.7	58.1	9.8	50.0	35.3	9.6	9.6	5.8	23.0	
9.0	50.7	29.6	9.6	46	5.7	48.1	8.8	53	5.0	10.6	10.3	59.8	
9.8	39	7.7	45.8	9.8	13.7	26.4	9.8	5.5	6.1	10.3	17.3	41.6	
9.4	9.7	31.7	9.8	13.7	11.1	9.8	11.5	37.2	10.6	10.6	20.3	16.1	
9.8	32.7	45.1	9.6	16.2	22.9	9.6	14.8	51.3	10.6	10.6	21.8	58.0	
9.8	34.2	51.3	8.6	22.7	40.8	8.8	21.7	31.2	10.6	10.6	27.8	42.1	
9.8	40	0.7	42.1	9.8	28.7	46.3	9.8	39.0	49.0	10.0	37.8	24.2	
9.8	21.7	39.3	9.2	30.2	18.9	9.2	10.6	46.6	26.9	10.4	43.8	38.0	
9.8	23.7	38.4	9.8	38.2	3.2	9.8	54	0.0	32.7	9.4	48.8	24.6	
9.2	29.7	4.8	9.0	39.7	39.3	9.5	9.4	4.0	15.9	10.4	49.8	22.4	9.5
9.8	43.7	54.0	9.8	42.2	58.6	9.8	9.8	9.2	16.8	10.3	53.3	1.6	
9.8	48.7	53.6	9.6	42.7	52.4	9.6	10.6	10.5	56.0	10.6	55.3	28.3	
9.6	50.7	22.5	9.8	48.2	32.4	9.8	9.4	21.5	45.6	10.6	59.8	54.4	
9.6	58.7	59.2	9.7	55.7	52.8	9.7	9.0	24.5	25.2	10.6	4.8	14.9	
9.4	41	4.7	11.9	9.6	57.7	44.5	10.3	27.5	22.0	7.8	5.8	34.2	8.5 =
9.8	5.7	45.6	8.3	47	1.7	31.3	7.7	50.0	42.9	10.0	9.8	16.5	
9.6	11.2	19.3	9.8	1.7	3.5	9.8	9.2	59.0	19.3	9.4	10.3	37.7	
9.7	32.7	22.8	9.6	14.7	46.8	9.6	10.6	55	9.9	9.4	11.8	48.4	
9.8	44.2	44.9	9.5	21.7	25.9	9.5	9.2	11.0	5.0	10.6	23.3	29.2	
9.8	47.7	30.4	9.4	30.7	27.5	9.2 G	10.6	17.5	40.9	9.8	23.8	51.7	
9.0	51.7	38.3	9.5	38.7	43.1	9.5	9.0	43.5	1.9	10.6	27.8	9.0	
9.4	42	3.2	51.3	9.5	39.7	2.1	9.8	53.0	37.7	10.6	28.8	41.9	
9.6	4.2	0.6	9.3	40.7	46.9	9.3	10.6	53.5	13.8	10.6	31.8	26.5	
9.6	8.2	5.1	9.7	44.7	6.4	9.7	10.6	58.0	35.4	9.8	38.3	17.9	
9.5	11.2	36.1	9.8	45.7	27.8	9.8	8.6	56	10.0	10.6	40.3	31.2	
9.8	11.2	25.2	9.8	59.7	33.5	9.8	9.8	10.0	7.9	9.2	44.3	16.1	8.5
9.8	12.7	59.2	9.6	59.7	44.5	9.6	9.4	14.0	10.9	9.8	47.8	18.2	9.5
9.4	19.7	2.1	9.8	48	4.2	0.4	10.6	25.0	0.0	10.0	57.8	35.1	
9.7	24.2	44.5	9.8	6.2	4.6	9.8	10.3	30.5	42.3	10.6	58.8	50.2	
9.6	28.7	39.3	9.8	14.9	30.1	9.8	10.6	35.0	41.4	10.6	8.3	10.5	
9.0	29.2	33.5	9.8	15.9	42.3	9.8	10.0	38.0	39.0	8.4	9.8	37.2	9.0
9.8	38.7	32.5	9.8	23.2	54.3	9.8	10.6	38.0	43.1	10.2	9.8	43.8	
9.5	47.2	8.1	9.8	40.7	16.9	9.8	9.8	40.0	57.6	10.2	13.3	0.0	
9.2	43	19.7	50.7	9.6	47.7	28.1	9.4	41.5	21.1	10.4	19.8	6.7	
9.7	19.7	44.5	8.0 GS=g	49	9.7	18.9	9.4	57	6.0	10.0	23.3	38.3	
7.7	25.7	26.3	8.5 GS-g	9.2	23.2	15.1	10.6	20.1	44.2	10.3	24.3	17.7	
9.7	53.2	59.3	8.8 =	9.4	30.7	57.1	10.6	22.0	27.5	10.6	45.3	44.8	
8.7	53.7	20.9	9.8	39.7	6.0	9.8	9.8	24.0	44.3	7.6	54.3	24.1	7.5 GS-t
9.8	1.2	50.9	9.2	57.7	13.4	9.2	10.3	35.0	10.0	9.4	4.8	33.8	
9.8	1.7	22.1	9.6	50	16.7	45.7	10.6	40.0	29.0	10.0	11.3	6.6	
9.6	4.7	55.1	9.6	18.7	58.0	9.6	9.8	40.5	52.1	10.6	26.8	33.0	
9.8	6.2	17.6	9.2	19.7	51.6	9.2	9.4	58	1.0	8.2	28.3	19.0	8.5 =
9.3	9.7	38.5	9.8	33.7	13.0	9.8	9.4	23.7	1.3	10.4	38.8	17.9	
9.8	13.7	19.7	9.8	34.2	11.8	9.8	10.6	26.0	53.3	9.6	39.3	11.5	
9.4	13.7	0.5	9.4	36.7	34.3	9.4	8.6	28.3	16.1	10.2	39.8	32.2	
9.1	14.7	26.8	9.8	46.2	31.2	9.8	10.6	30.8	47.5	10.6	41.3	43.8	
9.8	18.7	4.5	9.5	51	3.9	3.1	10.4	34.8	54.0	10.6	41.3	41.7	
9.8	24.7	3.9	9.8	14.2	38.4	9.8	10.4	36.8	22.6	8.8	41.8	28.2	
9.8	29.7	56.7	9.8	24.2	10.9	9.8	10.2	38.3	30.2	10.0	41.8	41.2	
9.4	38.7	29.1	9.8	32.7	37.4	8.0 GS=t	10.3	47.8	42.7	9.8	7.8	22.5	
9.8	40.7	22.9	8.2	34.7	13.9	9.8	9.8	59	4.8	10.6	11.8	11.9	
9.8	48.7	35.3	9.4	38.7	27.1	8.5 =	10.4	16.3	7.4	9.8	14.8	44.7	
9.2	49.7	31.2	8.0	50.7	29.4	9.6	8.6	28.8	32.7	10.6	24.3	22.2	
9.8	59.7	31.0	9.6	51.2	3.9	9.0	9.8	38.8	41.1	10.0	24.8	2.3	
9.4	45	0.7	14.9	9.1	58.2	56.6	10.0	44.8	43.6	10.2	32.8	26.1	
9.2	1.2	53.1	9.8	59.7	20.2	9.8	9.8	48.8	12.5	9.6	34.3	48.2	
9.5	17.3	57.3	8.9	52	1.5	6.1	10.4	51.8	36.1	10.3	41.3	22.2	
9.8	23.2	0.7	9.6	22.5	48.0	9.6	10.3	53.3	45.1	9.6	43.3	19.8	
25 pr.	+ 1	3.8	- 6.9	+ 1	4.3	- 7.0	+ 1	5.0	- 7.2	+ 1	5.5	- 7.3	

3961-4020.				4021-4080.				4081-4140.				4141-4200.			
mag.	10 ^h .	-34°		mag.	10 ^h .	-34°		mag.	10 ^h .	-34°		mag.	10 ^h .	-34°	
	m s	'	''		m s	'	''		m s	'	''		m s	'	''
9.8	4	45.3	32.5	10.2	11	19.3	38.5	10.6	18	40.3	22.7	10.0	24	39.2	34.9
10.3		50.3	9.9	10.2		21.8	34.1	10.4		49.5	3.4	10.2		41.2	11.8
10.2		50.3	45.3	9.6		23.3	31.7	8.7	19	4.7	59.6	9.2 -	10.4	43.2	25.3
9.8		52.8	56.1	10.6		41.3	40.9	10.4		32.0	41.1	10.0		45.2	27.1
10.4		52.8	3.8	9.2		45.3	4.5	10.4		37.5	43.1	10.4		54.2	30.9
9.8		55.8	27.3	10.3		49.8	6.8	9.8		40.5	54.7	10.4	25	1.7	11.0
10.3	5	19.3	32.3	9.8		59.8	44.2	10.0		40.5	26.5	9.6		8.2	12.7
8.6		21.3	11.6	9.6	12	5.8	53.1	9.4		48.2	6.6	10.4		12.2	55.2
10.0		22.3	14.3	9.0		6.3	14.3	9.8	20	0.2	13.8	9.2		19.7	24.4
9.8		22.8	5.3	10.6		12.8	52.4	10.4		1.2	49.0	10.4		22.2	32.6
9.8		40.3	7.4	9.8		33.8	53.1	10.2		1.2	45.1	10.2		24.7	6.2
10.3		40.8	45.4	10.6		35.3	48.7	9.6		1.2	56.2	10.0		30.2	22.2
10.3		51.8	55.6	10.3		37.8	13.0	10.2		2.2	9.6	8.6		31.2	15.7
8.0		53.8	10.5	10.4		37.8	42.0	9.2		19.7	7.2	10.0		34.7	55.9
9.0		55.3	33.5	9.8		44.8	33.6	10.4		20.2	17.8	10.0		35.2	13.9
10.4		56.8	43.9	10.3		53.8	11.6	9.8		23.7	1.6	9.4		40.2	10.1
10.2	6	4.8	1.9	9.8	13	13.3	23.6	10.0		31.2	16.2	10.0		48.7	36.6
10.6		5.8	13.6	10.3		23.3	59.7	10.4		55.2	15.0	8.2		51.2	29.1
10.6		10.3	19.0	9.8		35.8	20.4	9.8		57.7	14.7	10.4		55.7	13.5
8.8		17.8	39.2	9.8		36.8	10.8	9.0		58.2	3.8	9.4	26	1.2	19.7
10.6		23.8	13.9	10.6		40.8	6.8	10.0	21	5.7	56.2	10.2		12.2	41.6
8.1		24.3	42.5	10.0		46.3	22.8	10.0		12.7	38.4	10.4		30.7	45.3
10.0		32.3	41.8	10.2		56.8	6.0	9.6		14.7	38.2	10.0		51.7	18.6
9.0		38.8	36.8	9.4		57.3	43.8	10.2		17.7	28.8	10.4	27	13.7	20.8
10.0		50.3	44.8	10.0	14	0.3	9.4	10.2		20.7	19.0	9.6		14.2	12.9
10.3		52.3	26.4	9.8		0.3	22.7	10.2		42.2	25.6	9.8		14.7	57.2
8.6		55.8	26.9	9.4		8.8	50.0	9.6		50.2	40.8	9.6		29.7	51.2
10.6	7	4.8	24.2	10.3		18.8	1.3	10.2		51.2	6.1	10.4		30.2	6.1
8.6		11.3	36.7	10.4		33.3	14.9	9.6		54.7	8.6	10.4		37.7	47.0
9.4		15.3	47.9	10.6		41.8	58.0	9.4		56.7	24.2	10.0		40.2	52.3
10.6		15.8	12.5	10.2		46.3	49.8	9.8		58.2	26.6	10.0		52.2	14.5
10.4		17.3	48.4	10.6		54.3	6.5	10.2		59.7	37.8	10.0		52.7	9.2
10.3		22.8	18.8	10.6		55.3	36.4	9.6	22	3.7	17.7	10.0		55.2	50.2
9.4		28.8	44.4	10.4	15	3.3	56.5	9.0		20.2	45.0	10.4	28	1.7	6.7
10.6		42.3	38.7	10.3		9.8	51.7	10.4		29.2	43.2	10.0		1.7	49.6
10.6	8	6.4	59.3	10.3		9.8	32.1	10.4		32.7	46.3	10.4		1.7	16.5
10.6		9.8	32.6	10.2		16.8	42.4	10.4		36.2	9.9	10.4		3.2	40.0
10.6		19.3	2.6	10.3		36.3	46.9	10.0		38.7	41.5	9.8		4.7	17.7
10.4		36.3	32.8	10.6		37.3	54.9	10.2		40.2	48.2	9.6		4.7	26.6
9.8		37.3	11.9	10.4		38.3	19.4	10.2		41.2	15.1	9.0		6.7	16.6
8.4		54.8	38.0	9.8		49.3	9.2	9.6		41.7	47.2	10.2		14.7	11.1
10.6	9	11.3	23.5	10.6		50.3	59.7	10.4		42.2	53.7	9.0		15.2	20.0
10.4		14.8	43.1	8.6		51.3	43.8	9.4		50.2	22.0	9.6		19.2	44.1
8.6		23.8	19.3	9.8	16	14.3	51.8	10.0		54.2	2.4	9.8		21.2	43.9
10.2		25.8	47.6	10.6		28.8	58.3	10.2	23	1.7	43.1	10.2		25.7	52.0
10.6		38.3	27.9	9.0		33.8	32.8	10.2		5.5	59.1	9.6		32.1	53.5
10.6		47.3	43.4	10.3		42.3	18.8	10.0		6.2	6.4	10.4		32.6	7.4
10.4		54.8	21.5	10.6	17	10.3	30.6	10.2		15.2	51.9	9.5		45.6	44.6
10.4		55.8	55.8	9.0		15.3	4.6	10.2		15.7	47.2	9.2	29	2.1	45.6
8.6	10	2.8	51.6	10.3		24.3	18.7	9.6		28.7	36.8	10.2		11.6	37.2
9.8		12.3	26.1	10.3		29.3	56.0	10.0		34.7	40.7	8.7		12.1	26.4
10.4		28.3	32.9	10.6		34.3	18.7	10.2		36.7	24.0	9.0		15.6	37.4
10.3		34.3	10.8	10.3		52.3	2.0	8.8		41.2	23.0	9.8		39.6	57.7
10.0		35.3	32.1	10.0		58.8	36.6	10.0		51.2	46.4	10.4		43.6	26.1
10.3		51.8	48.7	8.6	18	3.0	18.8	10.4		57.7	12.0	9.0		45.1	13.9
10.6		59.8	10.4	10.6		11.7	23.4	10.0	24	13.7	32.9	9.8		50.1	29.3
10.6	11	1.8	34.3	10.6		15.8	47.3	9.8		15.7	30.7	9.0	30	1.1	55.6
10.2		3.3	46.7	10.3		30.3	45.6	10.0		17.2	3.3	10.4		4.1	18.3
10.4		15.3	25.0	10.3		31.6	57.9	10.4		22.5	59.3	10.4		10.1	40.8
8.8		19.3	47.3	10.3		34.3	33.4	10.4		23.7	57.2	9.8		15.6	31.0
25pr.	+1	5.9	-7.4	+1	6.7	-7.5		+1	7.3	-7.6		+1	7.8	-7.7	

4201-4260.				4261-4320.				4321-4380.				4381-4440.			
mag.	10h.		-34°	mag.	10h.		-34°	mag.	10h.		-34°	mag.	10h.		-34°
	m	s			m	s			m	s			m	s	
10.0	30	18.1	8.8	10.4	36	39.3	42.0	10.2	42	46.5	26.8	10.2	49	5.3	14.7
9.6		24.1	15.7	9.6		47.3	0.9	10.2		50.5	32.7	9.8		11.3	18.0
10.0		29.6	21.8	10.2		48.3	46.7	10.2		57.5	46.8	9.5		12.3	41.5
10.4		38.1	30.7	10.0		49.8	17.6	10.4	43	12.0	21.2	10.2		14.8	39.5
10.4		39.9	59.9	9.0		53.8	51.6	9.6		17.0	38.7	9.6		16.8	39.0
10.4		50.1	56.7	10.4	37	6.8	10.9	9.8		20.5	41.0	10.2		22.3	56.1
10.2		54.6	21.2	10.4		8.3	22.8	9.8		21.5	17.2	10.2		29.8	41.9
10.0	31	0.1	21.9	10.2		10.8	42.4	8.7		23.0	18.0	8.0		30.3	49.9
10.2		5.6	0.6	10.2		15.8	28.2	10.0		29.5	23.7	9.0		30.3	50.5
10.2		12.1	23.3	10.4		19.8	53.9	9.2		37.5	54.8	9.5		35.8	0.5
9.8		14.6	14.1	8.7		22.1	57.7	10.4		42.5	25.3	10.2		49.5	27.4
8.8		20.1	3.0	8.4		24.3	20.8	10.2		44.5	56.0	9.8		51.0	57.5
9.0		20.1	15.4	10.0		40.8	37.6	8.4		57.0	17.1	9.0		53.8	45.2
10.4		42.1	16.5	10.4		44.8	42.4	10.4		59.5	0.9	10.0		54.8	12.2
10.4		42.1	52.6	10.4		55.3	31.3	8.6	44	2.5	22.2	7.8	50	3.3	26.7
10.4		44.2	36.8	10.4		9.8	55.9	10.4		11.5	16.8	9.4		10.3	40.0
9.1		47.6	49.1	10.0	38	9.8	28.0	10.0		14.5	52.2	9.2		17.8	12.5
9.0		53.6	14.7	10.2		9.8	39.5	10.4		14.5	35.4	10.2		46.3	7.8
9.4	32	11.4	29.4	10.4		10.8	49.9	10.4		15.5	45.8	10.2		47.8	40.3
10.4		11.4	58.5	10.2		12.3	43.5	9.8		20.5	55.1	10.0		51.8	0.9
10.0		18.9	2.2	9.4		17.3	24.1	10.4		39.0	23.8	9.6	51	21.3	22.6
10.0		41.9	39.0	9.8		19.8	41.3	10.2		45.0	55.3	10.2		23.8	58.0
9.8		42.4	46.9	10.4		30.8	32.8	10.4		48.0	46.3	10.2		36.8	32.5
10.4		42.9	25.0	10.2		31.3	42.9	10.2		50.5	24.4	9.2		45.8	52.9
9.6		45.9	40.7	10.2		53.3	41.2	10.4		53.0	46.0	10.2		52.3	15.1
10.2		59.9	43.9	9.6		59.8	38.6	10.0	45	3.7	5.6	10.2		54.8	27.0
10.2	33	0.9	30.0	39	5.8	41.3	8.2	10.4		11.5	50.8	7.8	52	0.0	58.4
10.0		1.4	23.4	9.5		14.8	37.1	9.4		15.3	30.0	9.6		5.8	36.3
9.6		3.9	17.9	10.0		16.3	10.0	10.0		21.3	18.5	9.6		6.3	9.3
8.8		19.9	5.4	10.4		18.3	22.6	10.2		29.3	0.9	9.8		8.3	1.6
9.4		20.9	4.5	9.1		38.8	3.3	9.6		34.8	29.9	8.2		15.3	53.8
10.4		28.9	30.4	9.2		49.5	50.6	10.2		35.3	15.2	9.6		23.3	48.2
10.2		44.4	46.1	10.4		51.5	8.8	8.6		45.3	44.1	10.2		30.3	54.7
10.0		53.4	7.7	9.1		54.0	49.1	9.4		54.8	26.5	10.2		34.3	25.4
10.0	34	2.9	50.4	10.4		59.5	21.8	10.2		57.3	14.7	10.2		48.8	48.9
10.0		18.9	2.4	10.2	40	4.0	44.6	10.0	46	10.3	34.3	9.0		52.8	55.0
9.6		21.9	28.9	9.6		13.0	35.6	9.0		20.3	31.1	10.2	53	0.3	15.3
9.5		24.9	30.8	10.4		26.5	51.4	10.2		35.3	11.2	10.2		6.3	7.2
9.0		31.9	13.6	10.0		26.5	17.8	9.8		49.3	9.8	7.6		11.8	12.3
9.5	35	1.9	51.6	9.1		27.5	8.2	10.2	47	9.3	13.6	10.2		17.3	2.2
9.1		19.4	45.7	10.2		34.0	38.2	6.7		12.8	49.5	9.5		28.8	28.7
10.4		28.9	17.8	10.2		34.5	26.2	10.2		18.3	13.7	9.2		29.3	17.9
10.2		39.9	29.3	10.4		49.0	38.6	9.8		25.8	33.3	10.2		43.8	46.1
10.2		44.9	52.7	10.4		51.5	27.8	10.2		28.3	10.3	9.6		47.3	36.9
10.4		45.0	11.6	10.0		57.0	13.3	9.5		32.3	39.5	10.2		50.3	7.1
10.4		47.4	33.7	10.0		59.5	5.0	9.6		35.3	19.4	10.2		52.3	12.0
10.0		50.9	22.8	10.4		0.5	7.0	10.2		40.4	45.4	9.8		53.8	21.7
10.4	36	1.9	54.9	10.2	41	10.0	34.8	9.8		41.0	57.8	7.4		55.3	28.3
9.4		2.9	24.1	10.0		21.5	21.9	10.2		51.8	19.2	9.2		55.3	44.1
10.4		4.9	31.6	10.4		28.0	30.8	10.2	48	0.3	6.2	10.2		56.3	6.9
10.4		13.9	22.7	9.5		31.5	8.5	9.4		2.0	1.2	10.2		57.8	24.5
8.8		15.9	24.8	10.2		44.5	2.0	8.8		5.3	34.1	9.5	54	6.3	56.8
10.4		16.9	6.2	10.2		49.0	25.6	10.2		5.8	35.2	10.2		20.3	49.7
9.6		19.8	30.3	8.6	42	1.0	21.2	10.0		19.3	16.1	9.6		21.5	56.9
10.2		20.3	6.7	10.4		17.5	14.4	9.2		24.3	38.2	10.2		35.3	39.3
9.0		20.3	16.6	10.4		19.5	57.9	8.4		28.3	17.8	9.8		44.3	27.5
10.4		30.8	46.7	10.0		22.5	23.2	9.6		36.8	28.8	10.0		50.3	10.0
10.4		32.6	2.1	10.4		36.0	2.2	10.2		59.3	19.3	8.8		55.3	9.8
10.4		33.3	47.5	10.0		39.5	23.0	9.6	49	2.3	47.1	8.2		59.8	53.4
10.2		37.8	3.6	10.0		44.5	8.8	9.5		2.3	51.2	10.2		59.8	49.9
25pr.	+1	8.3	-7.8	+1	8.9	-7.8		+1	9.5	-7.9		+1	10.1	-8.0	

4441-4500.				4501-4560.				4561-4620.				4621-4680.					
mag.	10 ^h -11 ^h .		-34°	mag.	11 ^h .		-34°	mag.	11 ^h .		-34°	mag.	11 ^h .		-34°		
	m	s			m	s			m	s			m	s			
8.6	55	0.3	17.3	8.5	10.2	1	51.8	19.4	9.6	9	3.8	29.6	10.0	16	7.1	6.4	
9.0		3.3	7.8	9.0	10.2	2	11.3	5.2	10.0		4.3	2.1	10.0		20.6	5.4	
9.6		12.3	33.0	10.0	10.0		16.8	11.1	9.6	10.0	10.3	3.9	10.4		23.1	55.1	
9.6		30.3	37.2	10.2	10.2		45.3	18.1	10.2	10.2	11.3	52.9	9.7		24.6	15.5	
9.2	56	10.3	53.1	9.2	9.2		49.3	12.2	9.8	9.8	15.8	17.0	9.0		34.6	43.0	
10.2		17.8	19.8	9.6	9.6		56.3	6.3	10.2	10.2	19.3	23.2	10.4		46.1	31.2	
10.2		18.5	57.3	10.2	3	15.8	26.0	10.2	8.6	8.6	26.8	38.0	9.0		50.6	35.3	
10.2		19.3	46.8	10.2	10.2		20.3	16.2	10.0	10.0	34.0	57.1	8.8	17	5.6	17.8	
10.2		30.3	56.6	10.2	9.4		24.8	48.4	9.8	9.8	36.0	4.7	10.2		10.1	10.3	
9.6		33.3	41.2	10.2	10.2		32.8	25.2	8.3	8.3	36.3	49.9	10.2		10.6	44.5	
9.6		34.3	3.0	9.8	9.8		34.8	6.1	10.2	10.2	41.3	15.1	9.8		25.6	42.1	
9.6		44.8	23.4	9.0	9.6		38.8	1.1	10.2	10.2	46.5	37.9	10.2		36.6	13.2	
9.4		54.8	23.9	9.8	8.4		50.3	43.6	8.5 G	10.2	48.0	7.9	9.6		41.7	58.9	
10.2	57	1.3	51.2	9.5	9.5		57.8	51.3	10.2	10.2	57.2	13.9	10.2	18	10.6	42.2	
10.2		11.3	37.3	9.8	9.8	4	12.3	22.7	10.2	10.4	10.4	31.8	9.4		20.6	51.1	
10.2		16.8	11.1	10.2	10.2		12.3	6.3	10.2	10.4	10.6	43.6	9.4		28.6	17.4	
10.0		25.3	1.6	10.2	10.2		20.3	10.9	8.0 G-	10.4	19.6	40.1	9.6		41.6	30.4	
9.2		32.3	42.4	8.6	8.6		20.8	43.2	10.2	8.8	25.1	54.7	8.6		42.6	36.5	
10.2		35.3	5.9	10.2	10.2		24.8	18.7	9.7	9.7	31.6	29.6	10.2		49.6	21.4	
9.6		35.8	38.5	10.2	10.2		30.3	18.8	10.4	10.4	35.1	36.5	9.8		49.6	38.1	
9.0		41.1	15.6	9.5	10.0		38.3	18.1	8.2	8.2	45.1	25.0	9.2		51.1	27.3	
10.2		55.8	35.9	10.2	10.2		41.3	40.1	8.6	8.6	55.6	51.6	9.4		51.6	40.1	
9.6		59.3	37.8	10.2	10.2		42.3	1.4	7.4	7.4	57.1	14.7	10.4		59.6	54.1	
10.2	58	0.3	6.7	9.6	9.6		46.3	7.6	9.0	11	3.1	28.0	10.2	19	6.1	3.3	
9.6		2.3	49.5	10.0	10.0		58.0	57.6	6.6	6.6	37.8	3.3	9.2		14.1	53.6	
9.6		20.3	8.7	9.5	9.5		58.8	21.2	10.0	10.0	46.6	19.7	9.8		19.1	52.7	
10.2		21.3	39.5	9.4	9.4	5	3.8	14.4	10.4	10.4	49.6	16.7	10.4		22.1	36.5	
9.8		31.3	12.2	10.2	10.2		5.8	14.1	10.2	10.2	51.1	2.0	9.8		23.6	8.6	
9.4		40.3	6.1	10.0	10.0		19.3	0.2	9.8	9.8	53.1	32.0	9.7		25.6	9.5	
10.2		40.3	32.8	10.2	10.2		25.8	20.2	10.4	12	9.6	29.1	9.4		26.6	45.7	
10.2		45.3	10.6	8.9	8.9		38.3	48.9	10.0	10.0	15.6	5.8	10.2	20	0.1	43.7	
10.2		56.3	8.3	9.4	9.4		49.3	26.1	10.4	10.4	17.1	47.4	9.0		4.1	20.5	
10.2	59	1.3	17.7	8.3	8.3		50.8	8.3	10.0	10.0	29.6	18.4	10.4		10.6	23.6	
10.2		2.8	25.8	9.8	9.8		51.3	15.7	10.0	10.0	50.6	47.5	9.2		15.1	31.1	
9.2		6.3	56.0	9.0	10.2	6	0.8	58.8	8.4	8.4	55.1	31.1	10.2		19.1	3.2	
9.8		6.3	47.9	10.0	10.0		5.3	51.6	9.8	13	0.1	45.2	8.6		19.6	19.5	
10.0		9.3	44.8	10.0	10.0		5.3	10.6	10.4	10.4	4.1	50.1	10.0		33.1	13.6	
9.5		12.3	35.5	9.0	10.2		10.0	58.1	9.8	9.8	4.6	49.6	10.0		38.6	31.7	
9.8		18.3	27.4	10.2	10.2		10.3	18.7	10.0	10.0	10.6	52.6	10.4		41.1	7.1	
10.2		35.8	20.0	10.2	10.2		20.3	32.6	10.2	10.2	30.6	44.1	10.4		43.1	9.1	
10.0		39.3	30.1	10.2	10.2		20.3	35.9	10.0	10.0	35.6	56.4	10.0		45.6	21.8	
8.5		49.8	47.9	8.2 G	9.5		30.3	45.3	9.6	9.6	44.6	47.4	9.0		50.6	55.2	
10.2		51.2	50.3	10.2	10.2		38.3	17.6	9.0	14	0.6	34.3	10.4		52.6	7.1	
9.8		55.3	33.1	7.7	7.7		38.3	43.4	10.4	10.4	2.6	53.2	10.4		57.6	56.5	
9.0	0	1.3	52.7	8.9 -	10.2		53.3	52.5	10.4	10.4	5.1	41.2	10.0	21	0.6	20.1	
10.2		2.3	8.6	10.0	10.0		56.3	54.2	10.2	10.2	15.1	42.0	10.0		5.1	16.9	
10.2		6.8	1.9	10.2	10.2		59.8	16.1	10.4	10.4	16.6	40.5	9.2		15.6	55.6	
9.6		10.3	21.6	9.4	9.4	7	1.3	22.1	9.7	9.7	25.6	9.2	9.4		16.6	21.2	
8.9		18.3	12.1	9.2 -	9.6		12.5	0.1	10.4	10.4	40.2	58.0	10.4		20.6	45.1	
10.2		32.8	46.0	10.0	10.0		25.3	43.0	8.7	8.7	41.2	58.4	10.0		27.6	49.1	
9.2		38.3	35.0	9.5	10.2		37.3	44.8	9.2	9.2	42.1	35.8	9.0		28.6	33.9	
10.2		46.3	8.4	10.2	10.2		56.3	15.0	10.4	15	0.6	21.3	10.2		35.1	8.4	
10.2		50.3	46.1	10.0	10.0	8	9.5	59.4	6.9	6.9	7.6	50.4	10.4		40.6	3.1	
9.8		51.3	9.8	9.2	9.2		15.0	58.2	10.4	10.4	21.1	10.6	10.0		43.1	39.0	
9.6	I	10.3	50.4	9.0	10.0		15.8	40.8	9.8	9.8	29.6	1.2	9.6		48.6	58.6	
9.6		14.3	51.4	8.5	8.5		23.3	17.9	10.2	10.2	34.6	35.8	10.2		50.1	59.2	
10.2		19.0	59.7	10.0	10.0		25.3	37.7	10.4	10.4	42.1	32.9	8.0		50.6	51.8	
10.0		19.8	25.8	9.6	9.6		27.3	41.9	9.0	9.0	49.1	39.3	7.5		52.1	38.4	
10.2		39.8	37.6	10.2	10.2		34.8	27.1	10.4	16	0.6	7.3	8.4	22	0.6	30.6	
10.2		51.3	31.4	10.2	10.2		40.3	13.0	9.0	9.0	3.6	41.1	9.6		17.6	21.1	
25pr.	+1	10.8	-8.1		+1	11.4	-8.1		+1	12.0	-8.2		+1	12.8	-8.2		

4681-4740.			4741-4800.			4801-4860.			4861-4920.		
mag.	rh.	-34°	mag.	rh.	-34°	mag.	rh.	-34°	mag.	rh.	-34°
10.4	22	19.6 50.1	9.7	28	41.6 58.4	10.0	35	15.7 58.8	9.8	43	7.3 51.2
10.0		25.6 8.3	10.4		41.6 36.9	10.0		23.3 53.7	10.0		8.8 20.4
10.0		32.6 23.4	10.4		45.6 32.4	9.2		26.2 13.6	9.0		15.3 16.5
10.4		33.6 4.2	10.4		50.1 3.7	10.0		30.2 14.6	9.3		29.8 40.2
10.0		40.6 30.0	10.4		59.6 42.9	10.0		38.7 45.5	10.0		33.8 37.1
10.4		41.6 25.4	10.0	29	0.1 23.8	9.8		48.2 31.8	8.7		48.8 15.2
9.8		45.6 13.9	10.4		2.1 14.9	10.0	36	6.2 57.0	9.0		54.8 37.1
8.7		54.1 58.9	7.0		5.1 55.3	10.0		15.2 56.8	10.0	44	9.8 49.1
10.0		59.6 12.8	10.0		5.6 35.0	10.0		16.2 44.9	9.8		19.8 43.8
10.4	23	7.1 51.3	10.4		7.6 53.1	9.0		43.7 36.8	9.8		20.3 30.7
10.4		18.6 4.6	10.4		18.6 0.0	9.7	37	0.2 54.0	9.5		30.8 21.5
10.4		19.6 19.5	10.2		21.1 58.1	9.5		20.7 30.4	9.3		54.3 55.7
10.4		19.6 21.5	10.4		22.6 20.3	9.8		25.2 17.2	9.3		57.3 13.5
10.4		40.1 18.0	10.2		24.1 27.9	8.7		36.2 33.2	9.5	45	2.3 39.1
10.4		48.6 8.9	9.4		33.1 54.0	10.0		36.7 14.2	10.0		2.3 42.2
10.4		50.6 11.1	9.0		36.1 43.0	10.0		44.7 15.9	9.0		4.8 49.6
10.2		59.6 3.3	8.6		38.6 5.8	9.5		49.7 54.5	9.7		29.8 51.8
10.0	24	2.1 22.1	10.2		42.6 2.3	9.6	38	15.2 30.2	9.2		34.3 34.9
10.2		17.6 7.0	10.0		51.6 2.1	10.0		34.2 10.1	9.6		39.8 22.4
9.2		25.6 44.8	9.8		58.1 48.1	8.8	39	2.7 7.0	9.5		42.3 22.9
10.4		25.7 35.9	10.4	30	1.6 7.8	9.6		10.7 38.8	9.8	46	8.3 41.2
10.4		29.6 21.0	10.4		4.1 37.3	10.0		14.2 59.9	8.6		9.8 17.6
10.4		31.1 0.7	10.2		4.1 20.1	8.2		22.2 54.8	10.0		11.8 23.8
9.6		44.1 46.8	10.2		12.1 12.3	9.2		39.7 37.7	10.0		15.8 50.1
10.0		47.6 51.1	9.4		26.1 27.3	10.0		51.2 20.7	10.0		19.8 25.1
9.8		56.6 29.0	9.8		26.6 30.8	10.0	40	0.2 50.7	9.2		31.8 53.0
10.0		58.6 2.8	9.7		30.1 10.3	7.3		6.2 3.5	9.8		33.3 40.0
8.4	25	5.6 57.5	9.7		38.1 39.7	10.0		9.7 45.0	9.6		34.3 0.9
10.4		7.1 35.5	8.8		55.1 53.7	9.7		11.2 17.0	9.2		40.3 18.5
9.8		14.6 2.0	8.7	31	6.6 22.7	9.0		11.7 7.4	9.4		50.8 36.3
9.7		14.6 33.0	10.2		14.6 16.7	9.5		20.2 52.8	10.0		54.8 47.3
10.2		15.6 18.0	10.0		15.1 15.0	9.7		28.7 39.4	7.0	47	8.8 22.2
9.8		16.6 16.0	10.0		21.1 36.1	9.8		34.2 57.9	9.0		22.3 56.9
10.2		30.6 42.3	9.8		22.1 36.6	10.0		40.2 49.1	10.0		38.3 13.0
9.4		32.6 43.8	9.8		39.1 18.0	7.9		55.2 42.1	9.5		53.3 26.7
10.4		34.6 3.9	10.4		46.1 41.9	10.0	41	1.2 10.5	8.7		57.8 11.0
9.4		37.6 27.3	10.2		47.4 58.2	10.0		2.7 4.1	10.0	48	1.3 17.5
10.4		47.1 17.0	9.4	32	1.6 43.5	10.0		3.2 9.6	9.8		3.3 52.2
10.0		47.6 55.1	9.8		9.1 10.2	10.0		8.2 25.7	10.0		8.8 20.9
9.7		50.6 2.5	10.0		21.6 53.9	10.0		10.2 24.7	9.7		9.8 9.3
10.4		51.1 42.9	9.7		26.6 35.0	10.0		10.2 20.3	10.0		19.8 17.4
10.4	26	0.1 32.4	10.4		28.6 45.6	9.2		21.2 40.7	8.8		30.8 34.5
9.8		9.6 40.5	10.0		40.6 17.1	10.0		22.2 30.4	9.3		40.3 6.4
9.8		21.6 17.3	10.4		42.6 52.1	9.7		31.2 47.2	8.6		59.1 58.6
10.4		49.6 51.6	9.4		44.1 55.3	7.6		49.7 31.7	9.8	49	11.3 51.6
10.0		57.1 15.7	10.4		45.6 22.8	9.8		52.7 17.2	10.0		19.8 54.0
9.2		59.1 9.3	10.4	33	0.1 0.2	9.5		59.2 31.5	10.0		45.8 2.0
9.2	27	4.6 5.7	10.4		1.1 46.1	10.0	42	9.2 49.7	9.7		45.8 36.0
10.2		26.6 42.8	10.4		7.1 28.2	9.5		14.2 11.5	9.5		48.8 9.6
9.4		39.6 40.9	9.4		12.1 4.1	9.3		15.2 43.3	10.0		54.3 40.0
9.4		46.1 51.0	10.4		20.6 59.5	10.0		39.3 4.1	10.0		59.8 53.9
9.7		51.1 38.6	7.9		27.1 32.4	9.5		40.8 51.2	9.8	50	3.3 11.6
10.4		59.6 7.6	8.4		33.1 17.3	9.6		42.3 58.5	10.0		5.3 43.2
10.4	28	0.6 40.6	10.4		50.6 33.8	9.3		43.3 38.6	9.4		17.3 11.9
9.8		1.6 36.5	10.4		56.7 16.0	10.0		44.3 13.8	10.0		23.3 3.9
9.4		23.6 33.2	4.6	34	1.0 3.1	10.0		49.8 15.4	10.0		29.8 50.4
9.0		23.6 28.6	9.2		2.2 32.8	10.0		49.8 13.8	10.0		35.3 41.2
10.0		24.6 28.2	10.4		50.6 7.9	10.0		49.8 13.8	9.6		36.3 18.4
10.0		25.6 56.5	9.5	35	10.4 32.6	10.0	43	1.3 32.2	9.8		40.6 35.2
10.4		29.6 3.4	7.2		10.7 54.7	9.7		1.3 39.4	8.4		44.6 12.2
25pr.	+1	18.3 -8.3	+1	18.9 -8.3	+1	14.8 -8.3	+1	15.5 -8.3			

4921-4980.				4981-5040.				5041-5100.				5101-5160.				
mag.	11 ^h		-34°	mag.	11 ^h -12 ^h		-34°	mag.	12 ^h		-34°	mag.	12 ^h		-34°	
	m	s			m	s			m	s			m	s		
8.4	50	54.6	29.8	7.5 GS-g	8.7	59	42.2	12.6	9.6	5	19.4	57.7	9.4	11	39.6	10.3
9.6	51	11.6	11.8		10.0		45.4	52.3	9.7		28.1	17.0	10.0		40.6	34.5
10.0		49.1	44.9		10.0		46.4	52.9	9.7		32.1	35.4	10.0		51.6	51.1
9.8		51.1	12.1		10.0	0	1.2	37.6	10.2		37.6	16.6	10.0		54.1	47.3
9.8	52	8.6	8.2		9.7		1.9	37.9	9.7		40.1	18.0	9.9	12	4.6	47.0
10.0		24.6	48.1		9.6		4.0	12.3	10.1		48.1	14.1	9.4		9.1	0.9
10.0		38.1	11.9		9.4		8.7	17.0	10.1		50.1	23.1	10.1		11.1	41.7
10.0		41.6	43.8		10.0		9.5	32.4	9.9		52.1	29.7	10.2		15.6	35.2
9.0		59.1	27.1	9.0	10.2		22.3	36.0	9.6	6	8.1	51.4	9.4		26.1	1.4
7.8	53	10.1	36.8	7.5 GSg	9.6		25.4	29.7	8.2		10.1	24.1	9.4		31.6	33.2
9.0		24.6	53.0	9.0	9.9		40.9	7.2	10.0		15.1	19.2	9.6		34.1	45.9
9.8		24.6	11.7		9.0		58.0	15.3	9.0		31.1	53.6	9.8		35.1	34.6
10.0		30.6	16.9		9.6	1	9.5	51.8	10.2		39.6	53.9	9.9		37.6	42.3
9.8		39.6	19.3		9.9		28.5	5.7	10.2		44.1	58.2	10.2		39.1	31.5
10.0		39.6	2.3		9.4		31.0	49.6	8.8		44.6	40.2	9.7		56.1	10.1
9.7		44.6	23.4		9.9		40.0	25.1	10.1		49.6	29.8	9.2		59.1	44.5
9.5		48.6	49.2		10.0		46.0	47.7	10.1		57.6	1.0	9.6		59.6	9.0
9.6		50.1	10.9		10.1		58.0	49.7	10.2	7	2.1	21.4	9.7	13	1.1	13.7
8.7	54	1.6	4.7	9.5 -	10.2	2	0.0	8.9	10.1		4.1	6.0	9.4		1.6	1.8
9.5		15.6	28.1		10.2		0.0	32.0	9.4		35.6	51.0	9.5		16.6	7.2
9.2		18.6	20.6		10.2		1.5	38.9	10.1		48.6	11.5	10.2		17.1	23.5
9.4		18.6	14.1		9.2		6.0	47.9	10.0		51.1	13.0	9.9		17.1	1.3
10.0		25.1	21.2		10.2		12.5	29.0	10.2		59.6	12.1	10.2		17.1	56.3
9.7		34.6	32.1		9.7		20.5	11.3	10.1	8	9.6	31.6	10.0		19.6	39.5
9.2	55	9.6	29.6		9.8		21.5	28.6	10.1		12.9	59.6	9.6		41.4	59.3
8.9		17.6	53.2	9.0 =	9.4		25.0	10.0	9.6		16.6	27.0	9.8		43.1	28.6
10.0		41.1	53.1		10.0		25.0	4.4	10.1		22.1	13.9	10.0		44.1	43.9
9.6		48.1	6.7		9.7		39.0	52.5	9.4		22.1	12.8	10.1		58.6	6.5
10.0		49.6	15.8		9.4		39.5	14.1	9.8		31.6	13.8	9.0		59.6	5.8
8.5		59.6	15.2	9.0	9.7		40.0	50.8	9.9		32.6	5.3	9.2	14	2.6	32.1
9.6	56	6.1	27.3		9.9		41.0	29.4	9.2		32.6	40.2	10.2		26.1	55.2
9.8		16.6	25.0		9.8		45.0	18.8	10.1		34.6	47.4	10.2		27.6	52.2
9.8		25.1	2.6		9.7		51.0	47.8	10.2		34.6	40.7	10.0		31.1	14.3
9.4		40.9	25.0		9.6		1.5	31.4	10.2		40.1	29.6	9.4		38.1	22.9
10.0		44.4	8.4		10.2	3	2.5	20.5	10.1		40.6	44.1	10.2		38.1	25.9
10.0		49.4	15.2		10.0		3.5	53.6	10.0		44.1	31.5	10.1		40.1	32.8
9.2		49.4	16.0	9.5	9.7		14.5	39.3	8.9		48.6	22.1	8.6		43.6	17.0
9.7		0.4	52.2		10.0		18.5	28.8	9.9		54.1	31.1	9.9		54.6	1.1
9.6		19.4	51.7		10.1		24.6	43.3	8.8		54.6	19.0	10.0		15	1.4
10.0		20.9	16.6		9.6		29.6	14.7	9.7		54.6	29.4	10.2		4.1	20.1
9.8		21.4	43.0		10.0		33.1	29.1	9.0		59.6	22.7	9.2		14.6	5.1
8.5		28.9	6.7	8.2 G-	6.6		35.1	0.6	10.1	9	0.1	6.6	9.6		20.1	56.2
8.9		29.9	15.2		8.2		49.6	21.5	9.7		31.1	22.4	8.1		35.1	49.1
9.7		39.4	4.0		10.2		51.1	23.5	10.1		44.1	25.2	10.2		38.1	11.0
8.5		43.4	38.8	9.0	8.1		54.1	32.3	10.0		47.6	6.8	10.2		50.1	8.8
10.0		51.1	0.9		10.2	4	0.6	3.5	9.9		48.1	12.8	9.7	16	15.1	42.1
9.7		52.4	9.0		9.4		20.1	59.0	10.1		49.6	37.0	10.2		21.6	26.2
9.0	58	14.4	26.0	9.5	9.6		29.6	54.6	10.2		51.1	8.2	9.9		21.6	48.1
10.0		19.4	16.2		9.6		34.1	21.9	9.0		52.1	2.3	10.2		35.6	31.2
10.0		25.9	42.9		10.0		37.1	20.5	9.9		57.1	34.7	10.0		37.6	4.7
8.1		26.9	5.0	8.5 -	9.7		39.6	5.0	10.1	10	11.6	48.1	10.2		41.6	33.5
9.8		27.9	8.2		10.2		41.6	1.9	10.2		15.1	10.2	10.2		58.6	21.5
10.0		29.4	15.1		9.6		49.6	3.9	10.1		50.6	49.1	9.0		59.1	30.8
8.6		35.9	57.2	8.5 =	9.8		50.1	53.0	10.0		54.1	8.2	5.0		17	0.6
9.2		40.9	20.0	9.5	9.6		50.1	16.5	9.2	11	2.1	34.2	10.1		7.1	7.0
9.5		52.9	29.5		9.9		50.1	28.0	9.8		4.1	12.6	10.0		10.6	30.2
10.0	59	9.8	51.4		10.2		54.1	40.4	10.2		13.6	31.0	10.2		19.0	28.2
9.5		19.4	29.3		9.7		59.6	23.8	10.1		29.6	57.1	9.8		24.1	41.8
6.8		31.2	59.9	6.5 GS=g	8.8	5	12.6	8.4	9.7		30.1	41.0	10.2		34.1	52.4
9.5		41.9	28.8		10.0		15.1	30.3	9.6		38.6	30.0	9.6		36.1	4.5
25pr.	+ 1	16.4	-8.4		+ 1	17.1	-8.4		+ 1	17.7	-8.3		+ 1	18.2	-8.3	

5161-5220.				5221-5280.				5281-5340.				5341-5400.			
mag.	12h.		-34°	mag.	12h.		-34°	mag.	12h.		-34°	mag.	12h.		-34°
	m	s			m	s			m	s			m	s	
8.9	17	37.4	56.4 =	10.2	23	31.6	12.3	9.6	31	23.8	56.0	9.4	37	58.4	21.0
9.9		39.6	36.4	9.9		34.1	55.0	10.0		30.3	25.9	9.8	38	1.4	19.1
9.7		43.1	18.6	10.2		35.6	24.9	9.6		31.8	8.8	10.0		6.4	6.6
10.2		49.1	19.1	9.6		37.1	53.8	9.4		42.5	36.3	10.0		16.6	58.0
10.1		55.1	17.0	10.2		39.1	33.5	10.0		43.3	58.0	10.0		44.4	18.7
10.2		56.1	48.5	10.1		41.6	13.9	10.0		44.3	34.8	10.0		46.4	16.8
9.0		58.1	39.1	9.7		41.6	23.9	8.1		59.3	28.5	10.0		59.9	15.1
10.2	18	3.1	12.7	10.1		48.6	5.3	9.6	32	12.8	10.4	9.0	39	8.9	40.8
9.7		8.1	54.6	9.4	24	1.6	26.4	10.0		21.8	25.3	9.8		21.9	36.1
10.2		18.6	21.4	10.2		15.1	9.1	10.0		28.8	24.0	10.0		27.9	43.9
10.2		20.6	11.0	9.6		23.1	25.3	10.0		30.5	51.7	10.0		36.9	24.9
9.7		31.1	43.6	9.6		31.9	52.9	10.0		31.3	8.8	10.0		40.9	52.7
9.6		39.1	55.0	9.8		39.4	51.3	9.6		41.3	11.9	10.0		42.2	59.1
9.8		44.6	37.6	10.2		44.1	34.8	10.0		46.8	8.2	10.0		42.4	51.9
6.0		47.1	29.5	10.2		50.1	32.7	10.0		49.2	2.2	9.8		43.4	3.7
9.9		50.1	56.9	10.2		55.0	14.9	10.0		51.2	36.2	10.0		48.4	44.6
9.7		54.1	40.2	9.6		55.6	44.9	10.0	33	5.8	11.5	10.0		53.4	35.1
10.1	19	4.6	50.0	9.6		59.6	39.2	9.6		20.7	58.9	10.0	40	0.9	44.4
9.6		11.6	8.9	10.1	25	5.1	8.3	10.0		22.2	53.7	9.6		19.4	49.7
9.2		24.6	6.8	10.2		6.1	11.9	10.0		25.2	29.5	8.8		20.4	1.7
9.4		28.6	2.4	9.8		9.9	31.7	10.0		29.2	24.9	9.0		28.4	29.2
9.6		30.1	9.5	8.6		18.9	57.7	9.6		30.2	39.4	10.0		50.4	53.5
10.0		39.1	49.8	9.2		19.6	52.0	10.0	34	2.2	29.0	9.8		51.4	1.5
10.1		44.1	13.0	10.2		19.6	32.3	9.1		20.7	16.6	9.4	41	13.4	19.8
9.6	20	9.6	43.9	10.2		21.1	19.0	10.0		22.0	56.3	9.2		36.9	42.9
9.9		9.6	43.1	9.6		21.4	59.7	10.0		36.2	35.8	9.8		42.9	26.7
10.2		14.1	1.8	10.2		33.1	23.7	9.2		50.2	50.1	9.4		53.9	16.6
9.6		15.1	39.3	10.0	26	4.9	0.9	10.0		55.7	11.4	10.0	42	16.4	1.1
10.2		15.1	28.6	9.8		4.9	44.4	10.0	35	0.7	10.9	10.0		18.4	49.0
9.7		17.1	49.6	8.9		9.7	47.5	9.8		9.2	27.9	10.0		25.4	48.2
10.2		17.8	57.3	10.0		41.9	44.3	10.0		12.2	36.2	9.8		36.2	8.8
9.0		28.1	16.8	10.0		54.2	32.0	9.6		15.7	22.7	7.8		45.7	6.6
10.1		28.1	42.0	10.0		55.2	41.0	10.0		18.7	31.2	9.8		46.7	19.1
10.2		30.8	57.8	9.8	27	9.7	32.1	9.6		26.7	1.7	9.6		51.2	5.0
10.2		31.1	55.5	10.0		21.7	27.0	9.2		37.2	24.5	10.0		58.2	53.3
9.6		51.1	39.9	10.0		27.2	3.9	9.6		47.2	34.2	9.8	43	9.2	10.0
9.6		51.1	51.0	9.1		29.7	2.6	10.0		47.8	26.1	10.0		18.2	19.7
10.1	21	12.1	9.9	9.6		35.7	21.6	10.0		55.7	28.9	9.8		28.2	3.4
9.8		13.1	10.5	9.8		40.3	41.4	9.4	36	2.7	2.6	9.6		46.2	20.0
8.9		26.1	44.4	10.0		41.8	42.1	8.8		8.7	10.1	10.0		48.7	52.5
10.2		29.6	14.1	10.0		57.8	16.1	10.0		8.8	53.8	10.0		54.2	15.0
9.4		29.6	14.8	9.2	28	5.3	5.2	9.4		20.7	15.3	10.0		57.2	33.9
9.7		40.1	47.0	10.0		10.8	15.1	10.0		28.2	57.7	10.0		57.2	42.0
10.1	22	3.1	9.7	9.2		14.8	35.6	8.9		31.2	17.1	8.7		59.7	57.2
10.2		4.1	7.7	9.2		50.3	13.1	9.4		37.7	5.4	10.0	44	1.7	7.4
9.2		6.3	58.7	10.0		50.3	53.0	9.6		39.7	48.0	9.8		6.7	55.2
10.2		7.6	23.5	8.3		55.3	11.3	10.0		41.7	24.7	10.0		11.2	55.9
9.8		17.1	56.9	10.0	29	9.3	47.9	9.8		54.7	27.6	10.0		26.2	46.6
8.0		31.1	8.6	9.2		11.3	10.9	7.9		55.7	43.7	10.0		31.2	39.0
10.2		37.6	44.1	8.8		13.8	31.4	10.0	37	2.2	33.6	10.0		33.2	39.8
9.9		39.6	51.7	8.1	30	10.8	44.5	9.4		7.2	9.1	9.6		47.2	41.3
10.0		44.1	0.1	10.0		15.8	19.7	10.0		10.7	42.4	10.0		49.7	43.1
9.4		59.6	44.9	9.2		19.3	16.2	8.4		14.2	26.0	9.8		49.7	40.0
9.8	23	11.6	40.3	8.8		28.8	21.6	10.0		25.2	5.2	10.0		54.2	53.9
9.9		12.6	7.5	8.8		31.3	17.5	9.8		25.7	58.3	7.8	45	8.7	24.0
10.2		16.1	58.4	8.0		33.3	24.7	10.0		35.7	33.6	9.4		25.2	50.0
9.7		19.6	6.0	9.6		43.8	52.8	10.0		40.9	29.0	9.8		28.7	0.7
9.2		26.3	58.4	9.8		52.3	1.1	9.4		49.9	18.7	10.0		35.2	57.0
9.2		28.6	6.7	9.4	31	10.1	59.8	9.8		49.9	34.5	10.0		36.7	9.1
9.7		28.6	37.1	10.0		15.3	7.4	9.8		57.9	16.3	10.0		41.2	34.7
25pr.	+ 1	18.8	-8.3	+ 1	19.4	-8.3		+ 1	20.3	-8.3		+ 1	21.1	-8.2	

5401-5460.				5461-5520.				5521-5580.				5581-5640.			
12 ^h .		-34°		12 ^h -13 ^h .		-34°		13 ^h .		-34°		13 ^h .		-34°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
9.8	45	43.7	29.1	10.0	51	57.1	17.9	8.7	0	58.6	30.3	9.8	7	52.2	48.5
10.0		51.2	35.0	9.6	52	10.6	28.2	9.9	1	0.6	15.1	9.9	8	0.2	3.7
9.6	46	0.2	46.0	9.0		10.6	3.0	10.0		4.6	18.9	9.9		9.2	44.0
9.6		1.2	13.0	8.9		41.6	58.6	9.6		10.6	17.1	10.0		33.7	52.9
9.8		11.2	46.6	9.9		43.6	26.7	8.6		13.6	50.0	9.6		35.2	5.8
10.0		23.7	5.2	10.0		45.6	22.9	9.6		16.1	33.6	10.0		54.2	59.1
9.6		45.8	31.9	10.0	53	0.1	32.8	9.6		30.6	28.7	10.0		58.0	4.4
9.8		51.3	44.1	9.5		3.2	57.6	8.9		34.1	41.9	10.0	9	0.0	37.2
9.6		51.3	36.8	10.0		14.6	15.0	10.0		40.6	46.6	10.0		1.3	57.4
10.0		55.3	12.6	10.0		30.6	9.9	9.9		41.6	5.5	9.0		2.7	2.1
9.4		59.8	30.7	9.3		52.6	48.3	8.9		47.1	52.5	9.2		4.7	26.7
9.6	47	9.8	15.8	10.0	54	16.1	39.4	9.6		55.6	6.9	10.0		29.2	43.4
10.0		11.3	3.0	9.6		35.6	50.9	9.9	2	5.6	35.4	8.6		41.1	46.6
9.4		16.8	25.1	9.6		42.1	50.9	10.0		23.6	54.9	10.0		49.6	57.4
9.8		21.3	55.8	10.0	55	6.6	8.1	10.0		39.6	6.1	9.4	10	1.1	36.8
10.0		26.8	28.2	10.0		23.6	41.7	9.9		39.6	38.9	10.0		13.6	29.6
8.8		31.3	25.1	10.0		25.1	21.7	9.9		51.1	50.4	9.5		29.6	39.4
10.0		41.3	7.3	9.9		26.1	55.8	10.0		52.6	43.5	9.2		40.6	5.0
9.6		46.8	38.4	9.6		33.6	37.0	9.8		53.6	6.6	9.9		43.6	48.6
9.1	48	6.8	28.8	9.0		39.6	26.5	9.8	3	6.1	38.6	8.5	11	7.6	0.1
9.2		10.3	51.9	10.0		39.6	16.3	9.6		14.6	55.8	10.0		10.1	4.1
9.2		21.3	32.0	9.0		40.1	2.6	9.6		22.6	26.7	10.0		14.6	38.2
10.0		32.8	46.5	8.8		41.1	10.9	8.3		24.1	6.7	10.0		15.6	23.0
10.0		33.8	41.6	9.9		55.6	22.1	10.0		32.6	19.4	10.0		17.1	49.2
10.0		40.8	20.4	10.0	56	2.6	39.9	10.0		34.6	58.7	9.8		26.6	10.8
9.4		41.3	42.9	10.0		26.1	35.5	8.8		43.1	22.7	10.0		42.6	41.5
9.6		46.3	9.7	10.0		40.6	19.4	8.3		45.1	58.5	9.2		59.6	37.2
10.0		48.8	24.9	9.8		51.1	15.8	10.0		50.6	38.0	10.0	12	10.1	40.8
10.0		49.1	26.5	9.8		58.1	51.0	9.3		50.6	19.2	8.7		46.6	11.2
9.8	49	11.3	16.1	9.6	57	0.6	18.7	9.8		54.6	20.9	10.0	13	4.1	31.4
10.0		31.3	14.5	9.6		16.1	52.7	10.0	4	6.6	32.5	10.0		7.1	46.0
10.0		37.3	55.2	9.6		16.1	58.9	9.8		30.6	27.8	9.6		33.6	31.2
9.6		41.3	28.6	9.9		29.6	46.9	7.8		32.6	27.7	10.0	14	15.6	17.3
8.6		41.8	26.5	9.8		30.6	52.6	10.0		36.1	57.9	10.0		18.6	22.8
9.0		43.1	57.4	9.9		31.6	22.0	8.6		47.6	57.2	9.6		26.1	50.9
9.4		43.8	10.9	9.9		43.1	16.2	9.6		51.6	7.7	9.8		31.6	20.3
9.8		45.3	33.9	10.1		52.1	38.9	9.5		59.6	57.9	8.3		39.1	14.4
10.0		46.3	44.1	9.0	58	4.1	9.2	9.0	5	5.9	59.5	10.0	15	9.7	56.9
8.4		49.0	9.8	9.6		10.6	30.2	9.2		34.6	4.9	9.4		38.8	33.0
10.0		52.8	34.9	9.6		12.6	50.5	8.0		36.1	4.5	9.2		41.6	7.2
10.0		53.3	41.2	10.0		17.6	25.2	10.0		38.4	59.5	10.0		46.1	4.6
10.0		53.6	58.8	9.8		25.1	20.1	9.4		54.2	22.7	9.5		47.5	58.0
10.0		55.9	53.0	10.0		25.6	15.1	9.3		57.7	33.5	9.4		51.5	16.5
9.6	50	0.3	41.2	8.8		42.6	32.2	9.6	6	0.2	2.2	10.0	16	2.0	34.0
9.8		1.3	43.5	8.3		52.1	26.4	9.6		0.2	9.1	10.2		8.5	49.0
9.4		2.0	41.7	10.0		54.6	54.3	8.9		12.2	40.3	10.3		14.2	57.5
10.0		2.3	50.5	10.0	59	5.6	48.8	8.9		13.7	19.9	10.2		15.5	56.6
9.4		5.8	28.7	10.0		10.6	57.9	9.8		24.7	53.1	10.3		23.5	34.4
9.8		9.0	33.7	10.0		11.1	41.8	10.0		29.2	53.9	10.4		38.5	49.7
9.2		9.2	1.1	9.6		13.6	7.7	10.0		33.2	6.0	10.4		48.5	9.0
10.0		14.0	5.5	9.8		36.6	47.1	9.3		33.2	41.9	8.4		59.5	54.1
10.0		35.0	41.1	9.8		45.6	36.1	7.8		50.5	0.7	9.6	18	1.0	33.0
10.0		39.0	59.5	9.6		52.1	7.2	10.0		58.7	20.9	10.2		2.5	18.6
9.9		58.8	46.9	9.5		53.1	2.8	8.4		59.7	29.2	10.0		17.5	1.2
10.0	51	1.0	46.7	9.2		54.1	48.8	9.4	7	12.2	1.3	10.3		19.4	43.1
9.6		12.6	24.8	10.0	0	15.1	59.3	10.0		21.2	26.5	10.4		24.9	14.0
9.6		13.6	6.0	9.6		22.6	12.4	9.8		25.2	34.7	10.2		30.4	1.4
9.8		39.6	45.2	10.0		24.6	40.9	7.8		25.7	46.6	7.6		53.4	25.4
10.0		49.6	42.1	10.0		30.6	3.9	9.8		38.2	50.1	9.3	19	7.4	42.0
9.4		51.6	39.6	9.8		39.1	57.9	10.0		45.2	40.7	9.3		7.4	39.3
25 Pr.	+1	21.7	-8.2	+1	22.4	-8.1		+1	23.1	-8.0		+1	24.0	-7.9	

5641-5700.				5701-5760.				5761-5820.				5821-5880.							
mag.	13 ^h	-34°		mag.	13 ^h	-34°		mag.	13 ^h	-34°		mag.	13 ^h	-34°					
	m	s	°		m	s	°		m	s	°		m	s	°				
9.0	19	36.4	15.8	9.5	10.0	26	28.1	29.9	10.3	31	45.0	58.6	10.4	39	8.6	43.8			
10.4		43.4	42.1		9.6		30.1	4.2	9.0	9.8	32	1.9	9.6	9.8		13.6	38.1		
10.0		45.9	34.3		9.6		39.1	25.1	9.5	10.4		7.8	2.1	10.3		34.6	50.2		
9.6		49.4	40.5		10.0		40.1	13.8		10.0		8.9	25.4	9.6		35.1	40.0		
10.2		53.4	2.0		10.0		44.1	25.2		8.8		9.4	41.0	8.5 -	9.4		36.1	49.1	
8.2		56.4	58.2	W=	9.8		50.3	56.8		10.4		10.9	31.7	10.4		40.5	20.3		
9.6	20	11.9	25.4		9.8		52.1	45.4		10.4		11.4	31.1	9.6		48.0	35.9		
9.8		16.4	44.5		9.8		54.1	55.1		9.2		49.9	47.6	9.2	10.4		55.0	11.8	
9.6		19.4	32.0		10.4		59.1	51.2		10.2		53.9	51.4	9.6	40	19.2	7.4	9.5	
9.4		20.9	37.2		9.4	27	1.1	42.3	9.0 -	10.0	33	8.4	4.5	9.2		34.3	29.2	8.5 -	
9.8		27.4	27.6		10.3		1.6	39.2		10.3		18.9	8.3	9.8		38.7	10.8		
9.8		31.4	2.5		10.0		13.1	23.1		9.8		22.9	33.8	10.4		39.5	5.6		
10.0		34.4	40.5		9.4		14.6	8.9		10.4		27.4	49.3	10.0		47.7	57.2		
9.0		35.4	41.0	9.0 -	10.4		24.1	26.6		10.3		28.9	53.6	9.8		48.7	35.6		
9.3		37.4	28.3		9.6		28.6	19.4		10.4		48.9	0.2	10.3	41	5.0	46.0		
10.3		48.7	59.5		9.8		47.6	20.2		10.3		56.9	57.9	10.4		24.9	44.4		
9.6		51.4	34.0		9.3		52.6	13.4		10.4	34	4.4	21.4	10.4		36.0	30.8		
10.3		53.4	28.8		10.4		57.1	35.9		10.4		16.9	32.5	10.4		47.3	32.0		
10.2		59.4	7.2		10.2	28	7.1	16.6		10.4		28.8	33.3	10.4	42	2.0	9.9		
10.4	21	9.9	12.2		8.9		11.3	0.1	8.8	10.3		30.9	51.5	9.0		9.0	10.1		
10.4		19.4	49.0		9.0		12.6	29.4	9.5	10.4		33.4	39.7	9.6		10.0	40.0		
9.2		35.4	32.6		9.4		14.6	32.5		9.2		39.9	8.9	-	10.4		15.5	50.1	
9.8		39.4	47.6		9.0		18.6	24.0	9.0	9.6		44.4	15.5	9.6		30.5	9.9		
10.4	22	4.4	25.4		9.4		20.1	46.3		10.4		50.4	15.1	9.6		35.0	13.4		
9.2		14.2	12.3	8.8 -	9.8		21.1	30.4		9.0		58.4	56.5	9.5	9.3	43	0.7	51.8	9.5
7.6		16.2	55.3	7.2 GW=	10.4		26.1	13.9		10.0	35	16.5	58.4	9.4		2.7	44.2	9.5 -	
9.8		22.2	9.9		10.0		28.1	20.7		10.4		25.4	53.7	9.5		4.2	14.1		
9.8		23.1	58.1		9.8		45.1	34.7		9.8		25.4	23.2	10.4		11.2	2.2		
9.8		27.2	22.8		9.8		48.1	28.0		9.3		35.4	17.7	-	10.0		12.7	47.2	
10.4		34.7	9.1		10.3		53.6	57.4		9.8		35.9	34.8	10.0		24.7	3.7		
10.2		37.2	24.5		10.4		56.1	33.8		9.6		39.4	8.8	10.4		56.7	29.6		
10.0		39.2	10.1		10.4	29	16.5	33.2		10.0		42.6	48.1	8.9	44	29.7	2.9	9.5 -	
10.0		46.2	6.6		10.0		19.0	53.4		9.3		56.6	35.2	9.5	10.4		30.7	32.6	
10.0	23	1.7	38.1		9.4		41.5	43.0		7.4		59.6	39.5	7.5 G-	9.3		32.7	45.4	
10.0		2.7	18.6		10.2		49.0	4.6		10.0	36	7.6	1.2	10.2	45	15.7	49.6		
9.4		9.7	30.7	9.5	10.3		58.0	27.0		9.0		18.1	42.6	9.0	8.4		16.2	27.0	9.0 -
9.6		30.6	59.9		9.8		59.0	39.1		10.2		19.6	19.0	10.4		31.7	33.5		
10.4		31.2	4.1		10.4	30	17.4	59.8		10.2		20.8	59.0	10.4		40.7	18.3		
9.8		42.2	30.1		9.6		22.0	24.2		10.4		21.6	43.2	10.4		43.2	2.4		
10.3		44.2	10.0		9.6		23.5	28.8		10.4		29.1	5.8	10.4		45.7	13.7		
10.3	24	3.7	18.1		7.6		24.0	24.6	7.0 GS-t	8.4		47.6	41.2	8.5 -	9.3		46.7	36.1	
10.4		7.2	4.1		10.2		29.5	38.1		10.4	37	12.6	35.9	9.0		53.2	44.0	9.0	
10.0		23.7	24.3		9.3		39.0	48.8		10.4		16.6	40.4	8.8	46	11.7	0.1	8.0 G-	
10.4		24.7	26.9		7.7		39.0	25.5	7.0 GS-t	10.4		19.1	38.1	10.0		20.7	31.5		
10.3		28.2	31.0		9.0		45.0	12.4	8.5	10.3		28.6	34.4	10.4		21.7	33.2		
9.6		29.2	25.9		9.4	31	3.5	45.5		8.8		30.6	59.0	9.2 -	7.8		25.7	2.8	7.8 G
9.2		35.2	38.9	9.0	10.2		11.5	30.2		10.0		47.1	20.1	7.0		37.2	41.7	5.6 GS-	
9.6		45.2	26.3		10.2		12.5	28.3		9.8		58.6	39.2	10.0		42.7	8.0		
10.2	25	8.7	48.2		9.6		15.5	52.2	8.5 -	9.6	38	3.1	49.8	9.8		56.2	12.4		
10.0		9.2	10.1		10.3		19.0	16.1		9.6		14.6	19.1	8.4	47	2.2	46.8	8.5 =	
10.3		12.7	4.7		10.4		22.0	1.3		9.0		19.6	20.0	10.4		8.2	19.4		
9.4		15.2	38.1		9.8		23.0	26.1		9.8		21.1	41.0	8.4		8.7	50.2	8.5 G	
10.4		25.7	20.3		9.8		28.0	46.4		10.3		23.1	40.5	8.2		10.0	26.5		
10.4		26.1	59.2		10.4		33.0	20.4		8.6		32.6	7.0	8.5	9.4		10.5	16.9	
10.4		26.2	50.3		10.4		33.5	51.1		10.4		38.1	16.9	9.6		21.5	23.5		
9.0		27.7	12.5	9.0 -	9.6		34.5	33.7		10.4		38.1	5.3	10.0		28.5	52.0		
10.2		31.6	27.4		10.4		37.0	50.9		10.4		45.6	41.0	10.2		32.5	9.0		
9.6		54.1	32.2		10.3		39.0	47.8		9.4		46.6	31.4	9.0	9.7		46.5	14.0	
9.6	26	6.1	0.0		9.8		39.0	30.9		8.1		58.1	32.7	8.0 GW-	9.3		52.5	46.0	
10.4		19.1	27.2		9.8		45.0	40.3		10.4	39	3.6	57.0	9.8	48	0.5	36.1		
25pr.	+1	25.0	-7.8		+1	25.5	-7.7		+1	26.1	-7.6		+1	26.9	-7.5				

5881-5940.				5941-6000.				6001-6060.				6061-6120.				
mag.	13 ^h	-34°		mag.	13 ^h -14 ^h	-34°		mag.	14 ^h	-34°		mag.	14 ^h	-34°		
	m	s			m	s		m	s			m	s			
10.4	48	10.0	15.5	9.7	56	12.4	33.7	10.2	3	3.5	32.8	9.3	13	30.1	59.6	8.5 G
9.0		11.5	20.5	9.4		25.4	11.1	9.8		4.0	11.4	9.5		31.6	31.1	
10.0		20.5	0.5	10.0		33.9	49.5	10.2		10.0	42.8	10.0		37.1	8.4	
9.2		45.5	22.3	9.6		50.4	21.0	10.0		19.0	16.0	9.6		44.6	26.5	
8.8	49	0.5	56.0	10.4	57	8.2	25.3	10.4		36.0	19.8	10.0	14	45.1	11.7	
10.4		3.5	34.3	10.2		10.2	5.3	10.2		40.0	44.9	7.0		50.6	12.8	6.0 GStr
8.6		4.5	29.3	10.4		11.2	1.1	10.4		45.0	41.3	9.5	15	2.1	24.0	
9.7		10.0	47.9	10.4		28.2	16.1	9.8	4	0.5	44.1	10.0		8.1	32.7	
8.4		16.5	42.1	10.0		32.2	6.0	9.8		4.5	40.4	9.7		13.6	28.9	
10.4		35.5	35.4	10.4		37.7	53.8	9.5		29.0	59.5	9.7		22.1	33.3	
8.1		50.5	17.4	10.4		44.2	31.4	10.4		40.2	59.7	8.8		52.1	34.9	9.5 -
9.7		59.5	47.1	9.8	58	11.2	28.1	10.4		43.8	41.0	9.1	16	22.1	41.5	
10.0	50	5.5	45.5	10.4		11.7	24.2	9.5	5	5.3	3.1	9.3		27.1	55.3	9.5
10.4		10.0	1.8	10.4		22.2	31.8	8.8		7.8	49.1	9.6		40.1	18.2	
8.6		11.0	49.8	10.4		23.7	11.1	8.9		15.8	46.9	9.7	17	14.4	35.2	
9.0		27.0	34.6	10.4		31.2	0.3	8.9		21.8	46.8	9.2		49.9	46.3	9.0 =
8.8		33.0	22.8	10.4		40.2	28.3	8.4		37.0	1.9	10.0		57.9	2.0	
9.5		57.0	34.0	9.4		45.2	17.1	10.0		37.8	13.3	9.8		59.9	31.8	
10.4		59.5	30.6	10.4		55.2	22.5	10.4		39.8	25.1	9.2	18	27.4	6.5	9.0 -
9.8	51	0.5	15.8	9.0		56.2	6.7	10.4		47.8	34.8	10.0		31.4	4.2	
10.4		1.5	45.2	10.4		57.7	6.1	9.7		48.0	27.0	10.0		34.4	12.1	
10.4		17.5	49.1	9.8		59.2	17.1	10.4		53.8	45.9	9.5		49.9	38.8	
9.0		20.5	49.6	8.8	59	0.7	18.2	10.4		59.8	44.4	10.0	19	1.9	6.1	
8.9		22.5	20.6	10.4		4.7	41.6	10.0	6	18.8	23.3	9.2		18.1	58.7	
9.5		36.0	10.0	8.2		7.7	17.9	10.2		20.8	16.4	9.6		45.4	25.6	
10.4		56.5	5.7	10.4		8.2	50.0	10.0		22.8	44.2	9.9		49.9	38.6	
10.4	52	15.0	21.7	9.7		15.2	46.3	8.9		29.8	31.0	9.8		54.4	14.9	
10.2		20.4	24.7	10.4		26.7	33.3	10.4		30.8	0.4	7.8		58.9	53.0	7.0 GS=t
8.5	53	2.4	40.2	9.0		36.2	23.9	10.4		40.1	59.2	9.4	20	5.4	31.7	
10.4		5.9	35.2	10.2		40.2	48.7	10.4		40.8	56.0	8.4		13.9	41.4	7.5 G-
10.4		10.5	41.2	10.4		43.4	3.5	8.0	7	5.5	30.8	9.7		24.1	59.4	
10.4		11.4	25.2	8.0		43.7	53.8	9.6		10.5	52.1	8.6	21	1.8	27.0	9.0
10.4		14.4	14.2	10.2		51.7	36.3	9.9		20.5	40.3	10.0		31.8	25.9	
8.2		14.4	4.6	10.4	0	0.4	51.5	9.1		22.5	9.7	9.9	22	7.3	8.7	
10.0		20.4	49.7	10.2		11.2	39.3	9.8		40.5	31.6	9.2		12.3	12.4	9.0 -
8.9		23.4	52.2	9.0		19.7	9.2	8.5		49.5	32.7	9.4		15.8	39.5	
10.0		24.4	49.6	7.8		24.2	21.1	9.7	8	17.0	7.3	10.0		23.8	22.2	
10.4		35.9	22.0	10.4		27.2	58.8	9.5		58.5	11.8	9.7		35.3	10.0	
9.7		45.9	59.9	10.4		29.2	46.1	7.9	9	15.5	25.5	9.8		35.3	44.0	
9.5		46.9	48.0	8.7		55.7	22.5	9.8		18.5	24.0	9.1		41.0	58.6	9.0
10.2		49.4	36.1	10.0		58.0	9.7	9.5		20.5	40.2	7.7	23	40.3	7.4	8.0 GS-t
10.4	54	2.4	33.1	8.8		59.0	42.2	9.7		47.0	40.4	9.8		40.8	48.0	
10.4		8.9	19.1	9.7	1	22.5	39.7	9.9		48.5	20.0	10.0		48.8	16.0	
9.8		12.9	27.2	9.8		25.5	42.8	8.6	10	2.5	10.1	9.6		49.8	11.1	
10.4		15.4	32.1	10.4		31.0	6.9	9.4		11.5	24.5	8.4		56.8	47.7	8.5 =
9.8		17.0	59.2	10.4		31.5	57.5	9.2		16.5	53.6	9.0		59.8	43.8	9.5
9.8		21.4	17.3	10.2		33.0	37.3	9.6		44.5	17.8	10.0	24	33.3	28.5	
9.5		22.4	14.2	9.8		40.0	58.9	9.7		49.5	12.3	10.0		33.3	26.0	
10.2		31.4	11.8	10.4		41.0	37.6	10.0		50.5	15.6	10.0		41.3	1.3	
9.5		44.4	7.9	10.4		44.5	7.9	9.9		50.5	0.2	9.9		49.3	25.9	
9.8		58.4	30.2	10.4		47.0	31.2	10.0	11	39.5	41.7	9.4	25	6.8	38.4	
10.4	55	20.4	59.8	9.6		52.5	48.6	9.7	12	4.5	19.4	9.5		11.3	55.9	
10.4		23.4	54.6	10.2		53.5	41.4	8.6		6.5	38.7	10.0		11.8	25.3	
8.0		32.9	34.6	7.8	2	1.0	17.2	8.6		9.5	30.6	8.8		20.0	58.5	9.0 -
9.8		32.9	41.3	10.0		23.5	44.6	9.8		32.5	7.8	9.8		23.8	27.2	
10.4		44.9	37.1	10.4		33.5	49.9	10.0		47.0	29.9	9.7		30.8	27.7	
9.8		48.9	7.0	9.0		41.0	19.2	8.6		48.0	48.8	8.5		35.8	8.6	8.5 -
9.5		52.4	2.5	9.8		46.0	30.0	9.7		48.5	11.9	9.4		38.3	47.1	
10.2		56.4	26.3	10.4		58.5	1.1	7.8	13	9.5	6.1	8.8		38.8	9.9	8.0 G-
10.4		58.4	12.8	10.4	3	1.5	58.1	9.4		22.5	58.8	8.9		47.3	23.9	
25pr.	+ 1	27.7	-7.4		+ 1	28.3	-7.2		+ 1	28.9	-7.1		+ 1	30.0	-6.8	

6121-6180.				6181-6240.				6241-6300.				6301-6360.					
mag.	14 ^h .	-34°		mag.	14 ^h .	-34°		mag.	14 ^h .	-34°		mag.	14 ^h -15 ^h .	-34°			
	m	s			m	s			m	s			m	s			
9.4	26	12.8	2.7	8.8	9.6	37	10.9	9.7	9.4	45	49.8	27.1	10.0	53	49.6	46.0	
9.6		14.5	57.8	9.4		11.4	30.5	9.8	46	3.8	35.7	10.0		54.3	57.2		
9.3		30.8	36.3	9.0	9.8		20.4	13.0	9.8		8.8	43.7	10.2		54.5	52.1	
9.0		53.1	3.3	8.0 G-	5.8		20.4	39.6	5.5 GSt*	10.0		23.8	8.8	10.0	54	4.5	27.2
7.8	27	9.6	54.8	8.0 GS-	10.2		44.4	55.1	9.6		30.8	8.1	10.0		7.0	12.2	
8.7		18.6	34.9	8.8 -	10.2	38	17.4	33.6	9.8		36.0	59.9	9.8		10.5	34.5	
9.1		27.6	27.0	9.5	9.8		20.9	8.8	8.8		48.8	24.4	10.2		19.5	32.5	
9.8		29.6	8.7	9.6		28.4	6.5	9.6		51.8	51.1	10.2		43.5	5.1		
10.0		39.6	11.9	9.1		36.4	49.2	9.0 G	9.8		58.8	39.4	10.0		57.5	49.0	
10.0		40.1	9.2	10.2		48.9	0.6	-	10.2	47	8.8	42.6	10.0	55	23.0	29.1	
9.8	28	2.6	3.2	10.2	39	27.4	10.2	10.2		13.0	14.6	9.2		29.5	19.1		
9.5		4.6	20.7	10.2		35.4	50.6	10.2		19.5	26.9	8.4		35.5	13.0	9.0 G	
9.8		13.6	42.1	9.4		50.4	15.8	9.5	9.4		40.5	9.6	9.0		36.0	23.5	9.0 -
9.2		15.6	16.0	10.2	40	0.4	56.0	10.0		41.0	8.1	9.8		55.3	46.6		
9.8		18.6	48.2	10.2		0.4	54.0	10.2		41.5	13.7	9.2		56.8	51.8	9.0	
9.7		30.6	16.2	9.0 G	8.0		0.9	12.4	8.0 G=	10.2		43.5	55.1	10.0	56	7.5	17.7
8.5		31.1	21.4	9.5 GS-	10.2		1.4	19.4	10.2		50.0	12.6	9.6		9.3	25.7	
8.6		31.6	13.0	8.0 G-	10.2		11.4	46.3	10.2	48	13.5	15.0	10.0		24.0	58.0	
9.2	29	1.6	49.8	9.6		22.4	12.0	9.5	10.0		23.0	14.6	10.2		33.0	12.8	
9.8		15.1	12.0	9.4		35.9	58.8	9.4		27.5	52.9	9.5 =	9.4		50.8	41.2	9.0
10.0		15.2	59.3	8.0 GW-	10.2		36.4	42.9	7.5		49.5	7.4	7.8 GS-g	10.2	57	15.0	56.0
8.0		15.6	14.9	9.8		43.4	20.8	9.8		50.0	6.7	10.2		29.5	13.8		
9.5		20.1	56.5	10.2		44.4	21.4	9.8		54.5	59.0	10.2		37.5	20.2		
10.0		28.7	17.3	9.8		48.4	9.9	8.3		57.5	43.9	9.0 G-	9.8		38.6	53.9	
9.7		59.0	4.6	10.2		51.4	33.7	10.2	49	1.5	24.4	9.6		50.6	3.1	8.6	
10.0		59.2	29.5	9.8	41	10.9	44.0	9.3		14.5	22.3	8.4		58	30.6	55.1	8.5 -
10.0		59.2	16.1	9.8		13.9	6.1	10.2		15.0	30.0	9.1		59	0.6	35.7	
10.0	30	0.2	9.7	9.6		28.9	31.6	10.0		20.5	36.0	9.8		58.6	58.7		
10.0		0.7	23.0	9.6		41.9	25.5	9.5	9.6		33.5	51.9	9.2	0	2.3	24.4	8.5
10.0		1.7	25.4	9.6		46.4	5.7	9.6		36.0	13.6	9.6	2	22.3	40.5		
9.7		4.2	15.0	8.0 G=	9.8		58.9	11.8	10.0		40.0	4.1	9.0		54.3	34.4	9.0 -
8.2		6.8	58.5	10.0	42	0.4	36.6	9.4		48.0	34.1	9.6	3	4.3	43.9		
9.2		27.2	22.1	9.6		10.4	30.2	8.2		49.5	52.8	9.5		15.3	53.0		
9.8		30.7	55.2	10.2		19.4	3.9	9.6		50.5	22.8	9.6		25.3	45.6		
7.5		49.2	43.8	7.0 GS-t	10.2		22.9	57.7	9.3	50	37.5	16.4	9.2		47.6	22.0	
9.4	31	21.2	55.9	9.4		38.8	22.2	9.6	51	4.0	17.6	9.2		55.1	54.2	9.0	
9.8		38.4	42.3	10.0		44.8	35.6	9.4		13.0	19.2	7.9	4	2.1	17.2	8.0 G	
9.6		40.4	15.3	7.9		49.8	34.3	9.0 -	10.2		19.5	34.6	9.8		4.6	48.4	
10.0	32	9.9	3.1	9.8		56.8	35.9	9.4		24.5	20.2	9.0		5.1	56.3	9.2	
10.2		44.4	15.8	10.2	43	17.8	1.3	10.2		29.3	41.5	7.7		31.1	29.6	8.0 -	
10.2	33	19.4	59.2	10.0		19.3	42.3	10.2		31.5	12.4	9.1	5	4.1	23.5		
10.2		40.4	3.4	9.4		20.8	14.0	10.2		44.5	52.5	9.6		30.1	41.8	8.5 G	
9.3		40.4	4.6	8.7 -	10.0	44	0.8	31.0	10.0		57.2	1.5	9.8		53.1	0.1	9.0
10.2	34	34.9	55.0	9.8		3.3	40.5	9.8		57.3	34.4	9.0	6	51.1	17.4	8.5	
8.8		41.4	12.3	8.8 -	10.0		5.3	33.9	10.0		59.5	25.6	9.8	7	41.1	30.0	
9.8		50.4	18.6	10.2		11.8	35.3	10.2	52	2.0	20.3	9.1	8	0.1	20.1	8.0 G-	
9.8		52.4	13.0	10.2		13.8	32.1	10.2		8.0	44.8	7.9	9	21.2	6.8	8.0 G=	
10.2		56.4	51.5	9.6		20.8	30.6	9.6		17.0	42.5	9.4	10	38.7	44.9	9.0	
9.8	35	11.4	36.6	9.4		29.8	30.4	8.8		29.5	36.3	9.8	11	18.7	25.2		
9.6		12.4	24.9	10.0		31.8	2.3	10.2		34.0	41.0	8.1	12	22.2	28.0	8.0 GS-	
9.8		20.9	7.0	10.2		33.3	3.0	10.2		49.5	14.8	9.1	13	33.2	43.9	9.0	
9.8		24.9	39.0	9.6		49.0	59.0	9.0		50.0	33.2	9.5 -	9.8	14	1.2	17.3	9.0
9.8		26.9	23.4	9.6		54.8	30.2	9.6		50.5	33.7	8.6		31.4	10.3	8.8 -	
10.0		45.4	27.3	9.4		59.8	40.1	10.2		50.5	54.8	8.6		33.4	15.3	7.5 GS=	
6.6	36	0.4	38.1	4.0 GSt*	10.2		59.8	37.2	10.2	53	0.0	8.6	8.2	15	41.4	17.6	7.5 GS=
9.8		6.4	56.3	10.2	45	9.8	6.7	9.4		9.5	26.2	9.8	16	33.9	33.1	9.0	
9.8		21.4	29.9	8.8		9.8	52.0	9.2	10.2		10.0	53.2	9.8		51.4	19.4	
10.0		32.4	12.4	10.2		21.8	47.9	10.2		17.5	6.1	9.8		52.4	22.1		
9.1		36.4	39.9	9.5	10.0		34.8	27.2	10.2		33.5	56.5	9.6	17	16.9	32.2	
8.8		58.4	22.0	9.4		49.8	47.8	9.2		42.5	55.1	9.6		54.9	3.0	9.5	
25pr.	+ 1	30.8	- 6.6	+ 1	31.7	- 6.4	+ 1	32.3	- 6.2	+ 1	33.2	- 5.9					

6361—6420.				6421—6480.				6481—6540.				6541—6600.			
mag.	15 ^h .	—34°		mag.	15 ^h —16 ^h .	—34°		mag.	16 ^h .	—34°		mag.	16 ^h .	—34°	
	m	s		m	s			m	s			m	s		
8.4	18	14.9	10.8	8.7	9.0	48	27.3	57.5	8.5	8.0	9	10.3	30.5	8.0	GS-
9.6		25.0	39.7		8.5		41.8	3.7	8.8	9.3		36.8	25.6		
9.8		39.0	37.2		9.7	49	4.8	23.7		9.1		55.8	18.8	8.5	
9.2	20	15.0	23.9	9.0	8.6		41.9	4.8	9.0-	8.3	10	6.8	36.2	7.5	GS-
9.0		19.0	29.0	9.0	9.7		44.9	50.2		9.6		30.8	33.4		
9.2		19.0	16.0	9.0	9.3	50	28.4	26.2		9.4		45.8	30.9		
9.6		43.0	46.8		9.7		32.9	20.3		9.2		46.8	26.7	8.5	G
9.8	21	0.3	7.6		9.3		55.9	20.1	9.0	8.6	11	47.8	12.8	9.0	
9.8		28.5	4.3		9.4	51	38.4	25.9		10.0	12	3.4	47.6	9.5	
8.6		30.3	58.1	8.3 =	9.2		44.9	14.8	9.0	9.8		19.6	40.4	9.0	W
9.3		38.2	25.9		9.4	52	45.9	56.4		10.0		51.1	54.6		
9.7		53.7	2.0		9.4	53	7.4	5.6		9.2	13	41.6	35.6	9.2	
9.0	22	43.3	5.8	9.5	9.7		21.9	28.0		10.0	14	6.6	20.4		
9.6	23	59.2	9.6		9.7		31.4	19.5		9.8		11.1	18.8		
9.4	25	46.7	56.3	9.0-	9.7		41.6	35.7	9.5	10.0		19.6	2.7	8.5-	
9.7	26	52.0	2.1		8.6		44.4	16.3	7.5	9.5		32.6	50.5		
9.7	27	20.5	21.9	9.5	9.4		55.4	41.1		6.6	15	2.6	37.5	7.5	GS-
9.7	28	35.5	18.9		9.7	54	4.9	21.1		8.5		5.1	16.0	8.5	
8.6		55.5	16.6	9.0-	8.3		13.9	55.0	8.8	8.6		24.1	22.0	9.0	
9.7	31	11.0	59.2		9.7		28.9	58.4		9.4		24.6	39.1		
8.6		28.5	22.2	8.2-	9.6		29.9	32.2		9.1		30.1	22.5	9.0	
8.4		30.5	13.3	7.8	8.2		33.4	54.1	8.8-	9.6		54.9	44.2		
6.6		50.5	5.0	GS $\pi\beta$	9.3		35.4	26.8		9.2	16	9.9	53.9		
8.4		56.0	14.8	8.5-	8.0		38.9	51.3	8.7	7.4		21.4	53.0	8.0	GS=
8.2	33	55.5	29.0	8.0-	9.6	55	3.9	32.0		9.6		24.9	45.0		
9.7	34	18.0	55.0		9.2		7.4	21.6		7.0		34.4	36.1	7.5	GS
5.0		43.5	18.3	5.0	7.9		8.9	56.2	8.2	10.0	17	10.4	39.0		
8.4	35	0.0	17.6	8.5	9.7		19.4	3.0		9.6		11.6	0.2		
8.3		17.5	50.4	8.5-	8.8		39.9	53.0	9.5	7.9		59.9	41.5	8.0	GS=
9.0		42.5	36.9		8.8	56	1.9	49.7	9.0	9.0	18	2.9	39.4	8.5	G
9.0		51.1	57.8	9.0	9.7		26.6	35.0	9.5	9.4	19	2.6	2.6	8.5	G
9.0	36	16.5	52.9	8.2	9.7		39.6	49.1		9.8		12.4	6.7		
7.7	37	6.5	42.3	7.5	9.0	57	28.6	11.8	9.5	9.4		23.4	10.0		
9.0	38	25.0	41.2	9.0	9.2		55.1	31.2		9.6		39.9	55.1		
6.1		45.5	17.3	6.0	8.6	0	20.1	10.8	8.8	9.4		40.9	50.2	8.5	
9.2	39	19.9	9.4		9.3		25.1	15.9	9.0	9.6		41.9	21.5		
9.7		47.1	6.7	9.5	8.0		25.1	49.6	8.0 =	10.0	20	31.4	47.4		
9.4		49.4	17.7		9.2		52.1	26.5	9.5	9.8		32.9	10.5		
9.2	40	1.9	13.0		9.2		54.1	24.7	8.5	9.1		39.9	17.1	9.0	
8.6		33.9	21.4	9.0-	8.1	1	19.6	38.1	8.0-	9.8	21	21.4	47.9		
8.6		34.9	0.8	8.5-	9.1		25.6	49.2	8.5	10.0		35.9	13.8		
9.4	41	44.4	7.2	9.5	9.2	2	22.1	3.2		9.6		37.9	3.1		
8.0	42	54.4	39.9	8.0	9.3		40.1	8.8		9.8		38.4	49.8		
9.7	43	17.6	0.7		9.7		55.8	1.6		9.8	22	20.4	19.6		
9.6		34.4	20.9	9.0	9.2	3	24.6	38.0		9.6		47.4	17.5		
9.7		39.9	29.2		9.4		29.3	47.2		10.0		59.1	21.8		
8.6		59.9	26.9	8.8	9.2		43.8	9.8	8.5	7.3	23	1.9	3.5	7.2	GS $\pi\pi$
9.4	44	25.4	54.8		9.2	4	49.3	19.8		4.1		12.9	25.8	5.0	GS $\pi\pi$
9.4	45	4.4	51.4		9.1		49.3	9.7	9.0	9.2		33.9	37.9		
9.2		12.4	30.1		9.6		59.3	38.8		10.0		39.4	38.1		
8.8		19.9	48.1	9.0-	9.4	5	16.3	16.1	9.5	9.4		39.9	30.8		
9.0		53.9	53.2	9.0	9.7		19.3	17.0		10.0		49.9	11.0		
9.4	46	16.1	1.7	9.0	9.6		46.3	33.7		10.0	24	0.4	8.9		
9.6		42.3	3.0		9.7	6	3.3	2.4		10.0		13.9	54.6		
9.4	47	18.9	16.6		9.7		26.3	16.3		9.2		17.4	43.6		
9.3		44.1	6.5		9.6		58.7	31.2		9.8		21.9	36.1		
9.2		49.9	25.8		9.2	7	8.3	31.8	9.5	10.0		28.4	38.1		
9.7		50.1	26.2		9.1		22.3	56.9	9.2	10.0		42.9	55.7		
9.7		51.8	41.6		9.7		30.3	11.2		9.5	25	4.2	34.1		
9.7	48	7.6	31.7		9.6	9	14.3	21.4	9.0	10.0		9.7	34.5		
25pr.	+ 1	35.4	-4.9		+ 1	36.5	-4.3			+ 1	37.6	-3.6			
													+ 1	38.0	-3.2

6601-6660.				6661-6720.				6721-6780.				6781-6840.					
mag.	16h.	-34°		mag.	16h.	-34°		mag.	16h.-17h.	-34°		mag.	17h.	-34°			
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''		
8.8	32	21.1	13.2	9.6	49	39.7	8.0	9.5	8.8	58	56.8	49.1	8.8	7	18.6	20.8	
9.6		41.1	28.1	8.4		39.7	12.3	9.0-	9.4		56.8	20.5	7.4		24.1	12.3	
10.0		48.6	14.3	8.6	50	9.7	23.4	9.0-	9.4		58.3	51.4	9.6		28.6	11.9	
9.8	33	8.1	45.4	10.0		14.7	46.7		9.1	59	6.3	18.4	8.4		29.6	47.7	
9.6		39.6	15.1	10.0		31.7	20.6		8.0		17.8	20.2	8.5-	9.1		29.6	3.0
8.5		58.1	13.0	9.8		39.2	1.7		9.0		18.8	52.2	9.8		47.6	7.2	
9.6	34	0.1	25.5	10.0		51.2	15.7		10.0		30.8	28.8	9.8		52.1	39.0	
10.0		13.6	29.0	10.0		51.7	14.0		9.2		36.8	16.5	9.5	10.0	8	14.6	22.4
9.6		24.1	0.3	9.6	51	9.2	34.1	9.5	9.2		42.8	18.7	10.2		29.6	38.1	
10.0		25.6	9.2	10.0		9.2	17.3		9.1		43.8	16.0	9.5	10.2		33.6	7.7
9.0		29.6	30.2	9.1		19.2	37.8	9.5	9.8		51.3	38.9	9.6		38.1	4.9	
10.0		32.6	21.6	10.0		19.2	12.1		9.6		54.3	3.0	9.6		41.1	3.9	
9.2		49.6	17.8	10.0	52	7.2	30.2		7.4		57.3	50.2	7.5 GS=	9.2		57.6	8.3
10.0		54.1	24.4	10.0		21.2	10.3		10.0	0	16.3	46.6	9.6	9	1.6	6.5	
9.4		58.3	57.7	9.4		59.2	17.8		9.1		31.8	40.4	9.0	9.5		5.1	42.2
10.0	35	15.1	18.2	10.0	53	21.2	42.0		9.8		36.8	1.0	9.4		20.6	26.2	
9.8		16.1	49.9	10.0		23.2	31.5		9.4		42.3	56.2	10.2		34.6	37.0	
10.0		24.6	55.7	9.4		37.9	1.3		10.0		50.8	33.6	9.5	9.6		37.6	32.0
9.8		45.1	37.6	9.6		46.7	20.0		9.2		53.3	7.5	8.3		45.1	5.1	
10.0		57.1	5.8	10.0		57.7	43.1		10.0		58.8	25.9	9.2	10	7.6	16.2	
9.4	36	8.6	12.0	9.4	54	39.2	56.5		10.0		59.3	1.1	9.4		19.1	3.0	
8.6		51.1	3.9	10.0		43.7	41.2		9.2	1	6.8	35.3	8.0 G-	10.2		28.1	6.0
8.6	37	15.4	22.7	10.0		43.7	12.5		10.0		13.3	22.7	7.2		29.6	50.9	
10.0		22.6	41.9	9.6	55	2.7	51.1		9.4		16.8	27.1	9.6	11	41.1	6.0	
9.8	38	11.4	52.6	10.0		3.4	34.0		10.0		26.8	34.4	9.6		57.6	21.6	
10.0		20.6	24.7	10.0		3.7	15.0		9.4		36.8	30.5	9.8	12	4.1	0.0	
10.0		30.7	55.3	9.0		9.7	36.7	9.5	10.0		58.8	3.2	9.8		28.6	4.0	
9.2		54.4	54.2	10.0		10.7	12.1		10.0	2	5.8	18.9	9.6		53.1	14.0	
9.4		54.7	15.4	9.6		17.2	24.6		9.8		20.3	18.1	9.0	13	8.1	13.8	
9.4		57.7	19.6	10.0		17.2	10.1		9.8		40.8	3.4	10.2		32.6	17.2	
9.4	39	19.7	40.9	9.4		20.8	23.4	8.5	10.0		58.8	46.6	9.2	15	12.1	22.0	
9.6		27.2	56.4	10.0		42.3	32.0		10.0	3	1.8	8.5	9.5	7.4		50.6	40.3
9.6	40	41.7	51.2	9.4		48.3	25.4		8.6		6.0	5.1	9.2-	9.5	16	13.1	48.7
9.6		44.2	38.5	10.0		59.1	40.4		9.8		20.2	32.7	9.6		15.6	20.4	
5.0	42	3.2	3.8	9.8	56	2.3	14.1		9.8		22.5	0.4	10.2		29.6	51.9	
9.2		22.7	2.7	10.0		4.3	35.2		9.6		23.8	47.4	9.6		37.6	37.5	
9.6		40.2	58.3	9.8		30.8	33.2		9.2		39.7	51.0	9.2	6.6		44.6	34.6
9.6	43	5.2	11.6	9.2		48.3	19.1		9.8		41.6	33.5	7.2		50.6	26.5	
10.0		49.7	33.0	9.8		49.8	41.1		9.8		57.9	20.5	7.5		57.6	18.6	
10.0	44	41.2	17.4	9.2		58.8	24.3		8.2	4	6.1	12.8	8.5	7.7	17	2.1	7.9
9.8		49.2	29.5	8.6	57	8.8	54.2	8.8 G-	9.8		21.8	0.1	10.2		23.6	21.8	
9.8	45	26.2	28.8	10.0		12.3	38.0		9.4		30.1	6.4	8.7		36.1	44.0	
10.0		30.2	34.7	9.6		13.8	14.9		10.2		41.1	26.9	8.7		52.1	26.5	
9.6		47.9	0.9	9.6		18.3	57.5		10.2		49.1	12.1	10.2		57.6	28.2	
9.4		50.2	13.0	9.6		26.8	49.2		10.0	5	1.1	7.9	9.2	18	10.1	10.1	
10.0		55.2	19.7	8.6		32.8	47.8	9.0	10.2		4.1	8.0	10.2		35.1	20.8	
10.0		57.7	8.2	9.1		36.8	43.1	9.5	10.2		10.6	10.1	10.2		46.1	33.5	
10.0	46	11.2	15.3	9.2		39.8	25.4		10.2		41.6	38.1	10.2		49.6	30.3	
10.0		41.7	5.4	10.0		44.8	32.7		9.5		55.1	23.8	9.6	19	15.3	59.0	
10.0	47	14.7	22.4	9.6		50.3	10.6		8.0		59.4	58.8	8.0 G-	10.2		26.7	16.3
9.2		36.2	17.2	8.8		58.8	31.2	9.0	9.6	6	2.1	0.9	9.4		27.2	29.4	
9.8		38.7	51.5	8.8	58	2.8	25.9		10.2		10.6	35.3	9.4		34.2	51.1	
10.0	48	16.7	22.5	9.1		5.8	18.2		9.8		11.6	12.8	9.8		39.2	36.0	
10.0		21.7	20.9	9.0		18.8	30.5	9.0	9.6		13.6	39.5	10.2		46.9	59.8	
8.8		24.2	5.1	10.0		26.8	1.4		9.6		25.1	19.1	10.2		56.2	34.8	
9.8		43.6	0.0	9.8		32.3	41.8		8.8		25.1	14.1	9.5		57.7	30.0	
10.0		44.7	24.0	9.8		40.3	18.4		9.4		27.6	13.1	10.0		59.2	42.4	
10.0		49.2	39.4	10.0		48.8	44.3		9.6		43.1	24.5	10.0	20	3.7	26.0	
10.0	49	14.2	32.3	10.0		51.1	4.0		10.2		54.1	16.0	9.2		34.7	39.2	
10.0		34.2	3.7	10.0		52.3	25.7		10.2	7	9.1	12.9	10.2		42.2	28.0	
25pr.	+ 1	38.4	-2.9		+ 1	38.8	-2.8			+ 1	39.1	-2.1		+ 1	39.3	-1.7	

6841-6900.			6901-6960.			6961-7020.			7021-7080.		
mag.	17 ^h .	-34°	mag.	17 ^h .	-34°	mag.	17 ^h .	-34°	mag.	17 ^h .	-34°
9.8	20	57.7	9.6	29	6.0	8.3	32	56.0	9.6	36	36.0
10.2		57.7	9.6		9.5	9.6		58.0	9.4		36.0
10.2	21	33.7	9.4	10.0	33.5	9.5	33	0.0	9.2	37.0	48.8
10.2		44.9	9.4	10.5	45.9	9.4		9.0	9.0	38.0	59.9
9.0	22	2.2	9.6	11.3	1.0	9.6		12.0	8.3	40.0	8.9
8.5		13.2	9.2	14.0	33.9	7.9		14.0	9.4	41.0	55.2
9.8		44.2	9.2	15.5	55.9	9.2		14.5	9.2	42.9	57.8
10.2		59.2	9.6	16.2	56.9	9.6		16.0	9.4	44.0	3.4
10.2	23	2.2	8.8	18.3	21.6	9.6		21.0	9.1	45.2	58.5
10.2		29.2	7.6	19.6	16.3	9.0		21.0	9.4	49.0	7.2
10.2		29.2	9.4	21.5	42.6	8.6		24.7	9.4	49.7	57.0
9.0		30.2	8.9	36.0	42.9	9.6		25.5	9.5	50.0	7.4
10.0		32.2	9.4	37.0	44.1	9.0		27.0	9.6	50.0	13.6
10.2		36.7	9.4	45.0	8.6	9.6		30.0	9.6	54.0	14.0
10.2		55.7	9.6	56.5	45.1	9.6		31.0	9.2	54.0	14.0
10.2	24	1.2	9.6	30	0.0	9.6		34.0	9.0	37	8.2
7.0		8.2	9.2	2.0	50.7	9.6		34.0	9.6	8.5	30.0
10.2		17.7	9.2	4.5	13.9	9.2		38.5	9.6	22.0	26.7
8.4		19.2	9.2	7.5	53.0	9.4		50.0	9.6	27.5	10.2
10.2		19.2	9.2	18.0	39.2	9.6		54.0	9.6	29.1	1.9
									9.2	30.0	6.3
9.8		27.7	9.5	22.5	6.8	9.6		56.0	9.2	30.0	15.3
9.6		44.2	9.6	22.5	50.5	8.9		0.0	9.4	30.5	29.2
9.8		46.7	8.8	29.0	39.1	8.1	34	16.0	9.4	36.0	51.4
9.6		57.7	9.2	30.0	37.7	9.6		16.0	8.8	39.0	26.7
10.0		59.2	9.2	33.0	43.7	9.0		20.0	8.8	42.0	31.8
8.8	25	2.2	9.2	33.0	52.0	9.5		22.0	9.5	43.5	12.4
9.6		17.2	9.6	38.5	20.0	9.2		27.0	9.1	46.0	15.9
9.8		19.2	8.0	41.0	24.3	9.6		30.0	9.6	48.0	56.0
10.2		20.7	9.2	45.0	42.5	9.6		32.0	9.6	50.0	27.8
9.4		24.4	9.1	45.5	44.2	9.0		35.5	9.6	50.0	28.2
9.6		30.2	9.5	48.5	37.0	9.5		44.0	9.6	52.0	19.2
9.6		54.2	9.4	51.0	50.7	9.4		46.0	9.6	53.0	44.9
9.6	26	7.7	9.1	51.0	48.9	9.2		46.5	9.6	57.9	0.8
7.6		29.2	9.6	54.0	45.0	9.6		54.5	9.2	58.0	0.5
9.1		45.2	9.6	59.0	8.8	9.4		58.0	8.8	6.0	42.3
9.6		49.2	9.6	59.0	27.2	9.6	35	6.0	7.8	8.5	49.9
9.8		55.2	9.0	31	2.0	9.4		11.5	9.6	9.0	25.2
9.5		56.4	9.2	3.0	12.2	9.6		12.5	8.2	18.0	32.0
9.4	27	3.2	9.0	4.0	17.5	9.6		16.0	8.6	20.0	18.0
9.6		6.9	8.8	7.0	3.9	9.4		18.0	9.6	22.0	25.5
9.5		27.7	9.2	11.0	29.4	7.9		19.7	9.6	23.0	25.9
9.8		32.7	9.4	12.0	7.8	8.3		21.0	9.2	26.0	2.7
9.8		39.7	9.4	15.5	24.5	9.6		21.0	9.2	28.0	46.2
10.2		43.4	9.2	15.7	59.5	9.4		25.0	9.2	28.5	39.1
10.0		44.7	9.4	16.0	42.3	8.7		29.0	9.2	30.5	40.7
10.2		48.2	9.4	20.0	7.1	8.7		33.0	9.6	33.0	33.4
10.2		54.7	9.4	26.0	59.2	9.2		39.7	9.2	35.0	25.9
9.6		57.2	9.4	29.5	13.2	9.6		44.0	9.6	36.5	49.6
10.0	28	1.2	9.5	44.5	16.3	9.2		44.0	9.4	49.2	58.7
9.0		10.2	9.4	50.0	7.6	9.4		46.0	9.6	49.5	13.5
9.8		19.9	9.2	51.0	32.6	8.2		55.0	8.6	53.5	47.9
10.2		24.2	9.4	32	2.0	9.1		57.0	9.6	1.5	23.1
9.6		30.2	9.4	3.0	37.1	9.6		3.5	8.8	2.0	41.0
10.2		33.7	9.4	19.5	44.7	8.7	36	4.0	8.9	5.0	29.0
10.2		34.2	9.6	24.5	35.3	9.6		5.5	9.5	6.5	34.1
10.0		38.7	9.6	29.7	58.1	9.6		12.0	9.6	10.0	14.2
10.2		42.2	9.6	32.0	9.5	9.6		12.0	9.4	11.5	47.1
10.2		48.4	9.6	36.5	11.5	9.0		16.5	9.4	12.0	49.1
9.6		57.2	9.4	40.0	15.5	9.6		31.0	8.8	12.0	35.1
9.5	29	1.7	8.4	45.0	49.4	9.4		33.0	9.2	14.0	4.0
25pr.	+1	39.5	+1	39.6	-11	+1	39.7	-0.9	+1	39.7	-0.8

7081-7140.			7141-7200.			7201-7260.			7261-7320.		
mag.	17 ^h .	-34°	mag.	17 ^h .	-34°	mag.	17 ^h .	-34°	mag.	17 ^h .	-34°
9.4	39	15.0	8.8	41	29.8	9.0	43	33.3	9.6	44	53.3
9.6		18.3	9.6		31.8	9.6		34.3	9.4		54.3
9.5		21.5	9.6		34.8	9.2		39.8	7.7		56.8
9.6		21.7	9.4		39.8	9.6		41.8	9.5		57.8
7.7		30.0	9.1		44.8	8.5		44.3	8.8		58.8
9.4		35.0	9.6		49.8	9.6		44.8	7.2		59.8
8.8		35.7	8.8		50.8	9.6		47.8	9.4		59.8
9.6		39.5	9.2		58.8	9.2		49.8	9.6		59.8
9.6		40.0	8.3	42	0.3	8.6		49.8	8.0	45	2.0
9.5		41.0	9.5		0.8	8.4		49.8	7.4		2.8
9.2		43.5	9.6		6.8	9.4		49.8	9.4		4.3
9.5		46.5	9.6		8.3	9.6		49.8	8.8		7.3
9.4		48.2	8.4		8.8	9.6		49.8	8.9		7.7
9.5		50.0	9.4		9.8	8.9		53.8	8.6		7.8
9.2		51.0	8.9		10.3	7.0		53.8	7.8		9.7
8.0		52.0	9.6		14.8	8.8		54.8	9.6		9.7
9.6		52.0	8.9		15.8	9.6		58.8	9.2		9.7
9.6		53.2	8.9		19.5	9.6		58.8	8.7		10.2
8.8		53.5	8.9		19.8	8.3		59.8	9.6		10.7
9.5		55.0	9.6		20.6	8.6		59.8	9.2		11.2
9.2		55.0	9.5		20.8	7.7	44	0.8	9.6		11.8
9.0		55.0	9.4		23.8	9.6		1.8	8.8		12.7
9.6		58.5	9.6		24.8	9.2		1.8	9.0		12.7
9.6	40	5.0	9.6		24.8	9.6		1.8	8.8		13.7
8.8		6.0	8.8		25.8	9.6		4.3	8.0		14.7
9.0		6.0	8.2		27.8	8.5		4.8	8.3		16.7
9.2		8.5	9.6		29.3	9.6		7.8	9.2		17.2
9.4		9.1	9.6		33.3	9.5		9.8	9.1		17.7
9.4		10.0	9.2		33.3	8.8		11.8	9.2		18.2
9.4		10.0	9.5		34.8	8.5		12.8	9.4		19.2
9.6		10.0	9.4		37.8	9.2		17.8	9.2		23.2
9.6		11.0	9.5		37.8	9.2		17.8	8.8		23.7
9.2		12.0	9.2		41.3	9.2		18.8	8.0		24.2
9.5		12.0	9.6		43.8	8.1		19.8	9.5		24.7
9.0		16.0	9.6		44.3	9.2		20.3	8.6		24.7
9.0		16.5	9.6		44.3	8.9		22.3	9.1		24.7
9.2		18.0	9.6		44.8	9.2		24.8	7.6		24.7
9.5		22.0	9.6		50.6	8.9		25.3	9.5		25.2
8.4		24.5	8.8		54.3	9.5		25.3	8.2		25.7
9.4		24.5	8.8		54.8	8.8		27.8	9.6		28.7
8.7		25.0	8.8		56.3	9.2		29.8	9.4		29.2
9.4		27.0	9.6		56.3	7.7		31.8	9.0		30.7
9.6		28.0	9.2		58.8	9.5		34.8	9.2		30.7
9.6		30.0	9.2	43	0.8	7.8		34.8	9.0		31.2
8.8		35.5	8.6		4.8	8.6		34.8	9.2		32.7
9.2		40.0	9.4		4.8	8.4		38.3	7.0		34.7
8.8		40.0	8.6		6.3	9.6		38.8	9.6		38.7
9.5		40.5	9.6		6.8	8.9		39.3	7.6		38.7
9.6		50.0	9.6		12.6	9.6		39.3	8.4		40.7
9.6		51.5	9.6		13.8	9.2		39.8	9.2		43.7
9.5		55.0	9.4		22.8	9.4		39.8	8.4		43.7
8.6	41	7.0	9.4		23.3	9.6		40.8	9.4		44.7
9.0		9.0	8.8		24.8	9.6		41.3	9.6		45.7
9.6		10.0	9.6		29.3	8.6		44.8	9.2		45.7
8.8		16.5	9.6		30.8	9.6		45.8	9.5		45.7
9.4		16.5	8.4		30.8	9.2		47.8	8.5		46.2
9.4		17.3	8.8		30.8	8.8		47.8	9.4		48.2
9.4		18.8	9.4		31.3	9.6		49.3	9.6		48.2
9.6		23.3	9.4		31.3	9.0		49.8	9.0		49.7
8.8		24.3	7.7		31.8	8.8		50.8	9.2		49.7
25pr.	+ 1	39.7	+ 1	39.7	- 0.6	+ 1	39.7	- 0.6	+ 1	39.7	- 0.5

7321—7380.				7381—7440.				7441—7500.				7501—7560.			
17 ^h .		—34°		17 ^h .		—34°		17 ^h .		—34°		17 ^h .		—34°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
8.4	45	50.2	46.2	9.4	47	24.7	5.0	9.4	49	42.7	20.2	9.4	52	30.2	2.1
8.4		52.7	47.5	9.2		29.2	40.0	9.6		43.2	33.6	9.2		30.7	23.1
8.4		53.2	49.0	8.9		31.7	58.0	9.4		48.2	41.4	8.9		36.0	57.4
9.5		53.2	36.8	9.2		33.7	25.4	9.6		57.7	44.4	9.2		37.2	13.8
7.7		54.2	41.9	8.1		38.7	15.7	8.8	50	3.2	26.0	9.2		39.7	20.3
9.6		58.2	32.0	9.2		41.9	59.9	9.6		4.7	47.1	9.4		46.4	2.7
9.6	46	0.4	16.6	9.6		44.7	7.2	9.6		5.7	35.2	9.6		48.2	18.4
7.6		1.2	50.9	9.6		45.7	10.2	9.6		7.7	37.4	9.4		49.7	5.4
9.4		1.7	31.8	8.9		45.7	9.2	9.4		9.7	17.4	9.4		51.2	41.8
8.9		4.7	23.5	9.4		46.2	6.2	9.6		9.7	31.0	9.6		54.2	2.6
8.8		5.2	37.2	9.2		54.2	54.0	9.6		9.7	7.0	8.8		54.7	47.7
9.1		6.2	16.6	9.2		55.7	19.9	9.6		11.2	56.0	9.4		54.7	10.8
8.8		6.7	45.0	9.4		58.2	33.7	9.4		14.7	24.2	9.6	53	0.2	43.1
7.4		8.2	26.0	9.2		1.7	4.4	9.5		17.2	50.7	9.1		3.7	47.1
9.4		11.7	43.4	8.8	48	2.2	48.6	9.6		18.2	19.4	9.6		6.7	9.0
9.6		13.7	0.2	8.4		4.7	28.4	9.2		18.7	47.0	9.6		8.7	51.3
8.8		13.7	43.2	8.7		4.7	43.8	9.4		27.2	50.7	9.6		9.2	53.6
8.7		14.2	49.8	8.8		13.7	9.6	9.6		28.7	6.2	9.4		9.7	24.6
9.5		14.7	44.0	9.6		13.7	6.3	9.6		30.7	6.8	9.6		10.7	39.4
9.2		15.7	50.2	8.8		16.7	4.0	9.4		30.7	25.9	9.6		11.7	47.1
9.2		17.7	32.0	9.4		18.7	39.0	9.2		34.7	29.4	9.6		12.7	45.0
9.6		18.2	17.4	9.0		19.7	57.8	9.4		39.5	58.8	9.4		14.7	7.3
9.5		18.7	54.4	9.4		20.7	36.5	9.6		39.7	59.7	9.6		15.6	25.2
8.8		18.7	9.6	8.4		21.2	30.4	9.5		41.7	51.2	9.2		19.2	3.2
9.6		19.2	28.5	8.8		25.7	34.2	9.4		47.7	6.0	9.2		19.7	49.4
9.4		19.7	22.8	9.2		27.2	17.2	9.6		49.7	23.0	8.9		19.7	24.2
9.1		22.2	36.8	9.1		28.7	24.8	9.4		59.7	44.8	9.4		20.2	13.9
8.8		23.2	14.8	8.4		35.7	43.7	9.6	51	5.7	29.0	9.2		24.1	42.3
8.9		27.0	57.4	9.6		39.7	30.0	9.2		8.7	26.3	9.2		30.4	34.4
7.6		29.7	30.8	9.6		41.7	59.0	9.0		11.2	50.2	9.5		34.7	54.1
9.1		29.7	7.2	9.6		45.8	34.7	9.5		11.7	18.2	9.2		35.7	42.4
8.8		30.7	49.0	8.9		48.7	56.6	9.6		18.7	55.4	9.6		37.7	1.8
8.5		32.2	43.4	9.6		48.7	57.1	9.1		19.7	40.6	8.8		38.7	7.8
9.6		33.2	51.8	9.6		49.7	44.0	9.2		21.7	6.2	9.2		39.4	47.9
9.2		35.2	24.3	9.2		50.2	32.2	9.6		21.7	59.5	9.6		47.7	19.3
9.6		39.4	50.3	8.6		52.2	13.8	9.0		24.7	28.8	9.6		53.2	31.8
8.8		40.7	57.4	9.6		53.2	39.0	9.6		28.2	20.4	9.6		58.2	22.9
9.4		43.7	36.4	9.2		54.2	21.0	9.5		34.7	12.4	8.8	54	0.7	33.0
9.2		49.2	9.2	9.2		54.7	4.3	9.6		39.7	42.4	9.6		1.7	38.2
9.6		51.2	16.7	9.2		55.4	1.0	9.2		41.2	2.4	9.6		2.2	56.1
9.6		51.7	48.4	9.1		59.7	7.8	9.6		42.2	59.4	10.4†		5.5	0.4
9.6		55.7	16.1	9.6		59.7	52.2	9.2		44.7	7.8	8.4		6.0	11.1
8.0		57.7	12.4	9.2		59.7	52.9	9.2		49.7	40.5	9.7		6.5	17.9
9.0		58.2	54.4	9.4	49	1.2	52.0	9.6		50.2	9.3	9.5		15.0	52.3
8.7		59.7	20.4	9.2		2.2	17.3	9.6		51.2	6.2	9.6		17.5	33.1
9.6	47	1.7	22.3	9.6		3.7	51.4	9.6		57.2	51.6	9.7		22.0	15.0
9.2		3.7	8.2	8.3		4.7	54.6	9.6		57.8	16.3	9.7		29.5	0.9
9.4		4.7	2.0	9.4		6.7	47.1	9.6	52	1.2	4.9	9.7		31.9	14.8
9.5		4.7	25.1	9.6		7.7	1.3	9.6		2.8	21.5	10.4†		45.5	1.7
9.2		4.7	54.2	9.1		10.7	19.2	8.8		4.7	46.5	9.0		51.5	57.8
9.2		7.7	6.2	9.6		20.7	3.4	9.6		8.7	29.2	8.2	55	7.0	50.6
9.6		9.2	35.4	9.6		21.7	14.2	9.2		9.7	47.6	9.0		9.0	4.6
9.4		9.7	15.5	9.6		25.7	13.5	9.5		10.7	26.7	9.7		12.0	41.3
9.2		11.7	49.2	9.6		25.7	7.4	9.6		13.2	12.5	9.6		15.0	58.8
9.1		11.7	8.3	9.6		29.7	30.2	9.5		14.2	53.4	9.7		25.0	45.4
9.2		11.7	27.2	9.4		32.7	13.8	8.8		16.2	11.5	9.7		31.5	53.5
9.6		13.7	5.2	9.6		34.7	37.4	8.7		25.7	41.9	9.2		51.5	49.2
9.6		14.2	35.7	9.6		36.7	19.8	9.4		26.7	50.2	8.0		52.0	3.3
9.2		21.7	28.8	9.6		37.2	22.0	9.6		29.7	44.2	9.7	56	5.0	40.5
9.2		24.2	50.8	9.6		39.7	47.4	9.6		30.2	39.4	9.4		10.0	27.0
25pr.	+1	39.7	-0.5	+1	39.7	-0.4		+1	39.7	-0.3		+1	39.7	-0.2	

7561-7620.			7621-7680.			7681-7740.			7741-7800.		
mag.	17 ^h -18 ^h	-34°	mag.	18 ^h	-34°	mag.	18 ^h	-34°	mag.	18 ^h	-34°
9.6	56 24.5	46.8	9.7	I 10.0	9.4	9.7	5 44.6	53.5	9.3	10 36.6	49.7
9.6	28.0	50.4	9.3	13.8	1.9	8.1	46.6	37.6	9.3	38.1	25.0
8.8	30.0	43.9	9.0	20.5	5.1	9.7	46.6	27.3	9.7	49.6	17.8
9.1	32.0	23.9	8.8	30.5	45.9	9.7	54.6	9.7	9.7	53.4	18.3
9.7	37.5	6.0	8.5	37.5	53.2	9.1	6 9.6	21.6	8.3	59.1	47.2
9.6	54.5	15.7	9.3	38.0	10.5	9.5	19.6	30.2	9.7	0.1	30.0
9.6	57 0.5	18.2	9.7	58.0	28.9	9.4	32.6	56.3	8.9	6.6	41.4
8.4	2.5	42.4	9.7	2 8.0	47.2	9.7	33.6	48.1	9.6	25.6	55.6
9.7	11.0	56.8	9.7	10.0	30.3	9.7	49.6	11.2	9.7	28.6	55.3
9.3	12.0	16.3	8.4	12.5	33.3	9.7	51.9	59.1	9.4	30.1	38.6
9.7	15.0	48.3	9.7	23.0	52.7	9.2	58.6	10.1	9.7	30.3	58.0
9.5	15.5	5.5	9.1	36.5	14.8	9.7	59.1	23.8	9.5	30.6	25.1
9.7	21.5	37.4	9.7	40.0	57.9	7.1	7 8.6	37.7	9.6	32.1	54.2
9.4	22.0	37.1	9.2	40.0	33.0	9.5	8.6	6.9	9.7	39.6	46.2
9.5	37.0	38.7	8.8	3 0.0	53.9	9.7	13.6	9.0	9.5	39.6	25.5
9.5	41.5	24.2	9.4	1.0	15.8	9.3	24.1	43.1	9.6	40.6	36.8
9.4	59.9	19.4	9.7	7.5	33.7	9.3	24.6	56.2	7.8	49.6	49.4
9.0	58 2.0	36.9	9.3	7.5	33.1	9.5	31.6	3.0	9.3	57.1	31.1
8.0	2.0	19.2	9.5	11.5	25.1	9.7	34.1	38.4	8.8	12 14.6	22.5
8.3	8.0	30.4	9.7	14.5	7.9	9.6	41.6	34.4	9.7	15.1	43.9
9.7	9.4	59.4	9.2	15.0	11.7	9.7	50.6	33.5	9.5	17.6	27.8
8.8	12.5	31.2	9.3	15.0	44.1	9.7	53.6	9.4	9.7	22.6	56.8
9.5	16.5	43.8	8.4	31.5	24.9	9.7	8 4.6	35.3	9.7	35.6	36.2
9.3	18.0	13.0	9.7	32.0	28.1	9.6	9.6	8.9	9.1	47.6	10.5
9.7	30.0	48.3	9.7	32.1	57.7	9.7	12.6	24.8	9.7	48.6	36.4
9.5	32.0	5.6	9.1	32.5	37.1	9.1	21.1	42.9	9.7	49.6	11.1
9.7	32.5	6.2	8.2	41.0	36.9	9.7	24.1	29.0	9.2	53.6	27.0
9.7	34.0	6.7	9.7	41.5	39.7	9.7	25.6	29.1	9.7	53.6	2.1
9.6	38.0	42.0	9.4	48.0	53.1	9.7	25.6	54.5	9.7	13 4.6	10.0
9.7	59 5.0	52.9	9.5	48.0	50.7	9.7	26.1	39.5	8.8	5.6	47.6
9.7	10.5	24.9	7.4	50.0	5.5	9.7	42.1	9.4	9.7	17.6	50.8
9.7	14.0	51.7	9.5	54.5	31.3	9.7	54.1	29.1	9.7	29.6	11.3
9.3	20.5	8.5	8.9	55.0	16.1	9.5	54.6	13.0	9.3	30.6	40.6
9.6	25.0	52.9	8.8	55.0	52.9	9.5	9 4.1	1.7	9.4	30.6	55.5
8.6	25.0	15.3	9.7	57.5	46.2	9.7	5.1	24.7	9.2	14 13.6	25.2
9.3	32.0	32.0	9.4	4 10.0	32.8	9.5	9.6	59.7	9.2	19.6	27.9
9.6	36.0	45.1	9.7	16.6	28.1	9.6	13.6	51.3	9.3	31.6	45.4
9.3	38.5	7.8	9.2	17.6	18.2	9.7	15.1	44.2	9.7	34.6	29.8
9.5	45.0	8.6	9.5	23.1	50.0	7.0	19.6	8.9	9.6	37.6	54.4
8.8	49.0	35.2	9.2	24.6	34.4	9.5	19.6	34.6	9.7	39.6	3.4
9.7	52.0	56.3	9.7	28.1	28.4	9.0	21.6	8.9	9.1	40.1	43.2
9.4	54.0	46.5	9.7	30.8	19.8	8.1	23.6	7.8	9.7	52.6	25.3
9.7	59.0	38.5	9.5	31.6	42.0	8.9	24.1	26.3	9.2	15 2.1	19.8
9.7	0 0.0	33.1	9.7	33.1	49.1	9.7	29.6	22.2	9.7	11.6	40.2
8.0	5.0	31.3	8.8	37.6	21.3	8.8	38.6	46.0	8.8	18.3	57.6
8.8	5.0	50.3	9.6	41.1	41.6	9.4	47.1	31.1	9.1	23.6	27.1
9.7	9.0	27.0	9.6	52.1	17.9	9.7	53.6	16.3	8.8	30.6	15.3
8.8	18.0	30.6	9.7	58.6	32.4	9.3	59.1	40.4	9.5	32.6	26.4
9.4	26.0	56.1	9.7	5 13.6	28.0	9.7	10 5.6	11.5	9.7	33.6	2.9
9.2	36.0	21.8	9.0	14.6	52.3	9.6	9.6	35.5	8.8	36.1	43.0
9.2	40.0	47.7	8.9	15.1	18.1	7.2	10.1	43.7	9.7	37.6	24.0
9.1	41.5	46.5	9.6	17.6	20.7	9.7	10.6	24.2	9.3	37.6	52.4
8.8	45.0	12.9	8.6	18.6	56.0	9.7	15.1	51.0	7.3	45.6	23.6
9.0	50.0	35.0	9.2	18.6	9.6	8.6	15.6	29.1	9.3	48.6	33.5
9.7	53.0	6.9	9.7	19.6	32.1	9.7	16.1	19.5	9.7	50.6	13.3
8.7	56.5	1.5	9.7	20.1	55.1	8.8	21.6	13.4	3.9	53.1	26.4
9.1	I 1.5	15.2	9.7	26.1	44.1	9.1	25.1	50.0	9.7	53.6	57.0
9.0	4.0	11.1	9.7	30.6	40.7	9.6	26.6	13.0	16 4.6	20.1	20.1
9.7	5.5	42.3	9.7	37.6	27.2	8.8	29.6	27.9	9.3	15.6	54.2
9.7	7.0	7.7	7.9	44.6	19.1	9.4	31.6	31.5	9.2	19.1	3.7
25pr.	+1 39.8	0.0									
			+1 39.8	+0.1		+1 39.7	+0.3		+1 39.7	+0.5	

7801-7860.				7861-7920.				7921-7980.				7981-8040.					
18 ^h .		-34°		18 ^h .		-34°		18 ^h .		-34°		18 ^h .		-34°			
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s			
9.0	16	19.6	7.6	9.0	8.5	21	5.1	36.8	G-	9.7	27	3.6	13.0	9.4	31	39.6	50.7
8.7		20.1	41.2	9.8	9.8		15.1	7.9		9.8		4.6	11.2	8.8		41.1	42.3
9.6		27.6	30.5	7.5		21.1	0.7	GSW		9.2		9.1	0.8	9.7		54.1	33.9
9.7		28.1	50.6	9.0		25.1	54.7			9.2		14.1	39.9	9.4		54.1	11.3
9.5		28.6	22.0	9.0		27.1	20.8	8.5 G-		9.6		22.1	2.9	9.7		57.1	17.7
8.2		29.6	27.9	9.8		29.6	19.8			9.2		26.1	58.5	9.2	32	0.1	20.5
8.8		33.6	14.9	9.5		30.1	41.9			9.4		26.6	7.9	9.2		3.1	41.0
9.6		33.6	12.9	9.4		30.1	34.1	G		8.8		31.1	2.9	9.5		7.6	48.9
9.7		42.1	3.2	9.5		32.1	33.4			9.6		32.6	50.9	9.5		12.1	45.1
9.3		49.6	56.9	9.2		41.1	50.0			9.8		33.6	49.8	9.2		16.1	52.3
9.7		54.6	18.3	9.5		56.6	9.4			9.6		44.1	16.7	9.2		20.1	12.9
9.3		59.6	43.0	9.8	22	14.1	29.2			9.4		45.6	35.3	9.8		23.1	30.1
9.0	17	12.1	38.0	9.8		22.1	54.9			9.2		50.1	34.9	9.0		24.1	15.5
9.7		15.2	30.9	9.0		25.1	43.5			8.6		54.1	12.7	9.5		25.6	3.3
9.2		29.6	18.8	9.0		30.1	27.4			9.2	28	2.1	5.2	9.4		26.1	10.5
9.2		39.1	26.2	9.8		32.1	30.6			9.2		4.1	28.7	8.6		39.3	59.5
7.1		39.1	0.6	9.2		40.1	4.8			8.7		9.1	48.2	9.2		42.6	29.9
9.5		43.6	33.4	9.2		45.6	33.5			9.4		10.1	41.9	9.2		46.6	26.2
9.2		58.6	5.6	8.2	23	4.1	49.9	=		9.8		14.6	49.6	9.0		53.6	39.2
8.8	18	9.1	42.0	9.8		5.1	44.6			9.8		27.1	42.1	9.8		59.6	42.9
9.4		10.6	10.6	9.4		22.1	50.8			9.1		28.6	51.6	9.4	33	0.1	0.7
9.7		20.1	2.5	9.5		24.6	49.1			9.2		35.1	52.6	8.8		3.1	29.3
9.0		20.4	29.3	9.8		27.8	9.6			9.1		37.1	59.2	9.8		4.6	14.6
9.7		28.6	21.0	9.8		30.1	43.9			9.2		46.6	37.4	9.8		5.6	12.8
9.3		28.6	33.9	9.2		36.6	39.7			9.7		46.6	0.8	9.8		16.1	52.2
8.8		31.4	4.0	9.4		56.1	6.1			9.8		47.4	11.7	9.8		20.1	22.9
9.7		52.3	6.6	9.1		58.6	41.4			9.1		54.1	2.2	9.8		21.1	31.3
9.0		53.1	4.0	9.2		30.1	27.1			8.7		54.6	16.7	9.2		25.1	37.9
9.7		57.1	51.1	9.8	24	32.6	49.8			9.4	29	1.1	57.7	9.2		26.1	1.2
8.6	19	5.6	48.6	9.7		47.1	56.1			8.3		9.1	56.8	9.8		30.1	45.2
9.7		10.1	32.1	9.8		50.6	52.8			9.2		19.1	28.5	9.4		35.1	33.3
9.7		18.3	37.4	9.4		54.1	39.9			9.7		19.4	11.2	9.8		36.1	19.7
8.9		20.1	14.4	9.4		57.1	41.1			9.1		24.1	10.9	9.2		41.1	25.7
8.7		29.1	11.1	9.4	25	1.1	33.2			7.9		25.1	38.8	8.3		45.1	34.7
9.6		31.4	13.5	9.2		10.1	16.9			9.2		30.1	50.6	9.6		49.6	43.7
9.2		39.1	22.3	9.0		11.1	24.8			9.1		33.1	24.3	9.7		50.1	10.1
9.4		43.1	34.4	9.8		16.1	0.2			9.2		39.6	33.3	9.4		51.1	6.9
9.1		50.1	42.6	9.2		20.1	48.8			9.2		40.1	6.4	8.6		55.6	9.3
9.8		50.1	24.1	9.4		20.1	50.1			9.6		43.1	56.0	9.6		1.1	19.1
9.4		52.1	36.5	8.7		30.1	12.5			9.2		52.1	55.0	9.8	34	5.1	2.2
9.4		58.1	33.9	8.9		30.1	34.8			9.7		54.6	30.0	9.0		8.1	51.5
9.0	20	10.1	22.0	9.5		32.1	48.9			9.4		56.1	16.3	9.6		10.1	41.4
9.1		14.1	34.9	9.8		36.1	23.8			9.4		57.1	5.6	9.0		12.6	18.0
9.4		15.8	59.4	9.8	26	6.1	52.7			9.4		58.1	39.4	9.6		31.6	46.8
9.5		21.6	6.4	7.1		8.1	54.5	7.5 GS-		9.4		59.1	44.1	9.8		42.6	47.2
9.0		26.1	51.0	9.2		10.6	40.8			9.4		59.6	25.0	9.7		49.6	41.1
9.4		29.1	36.1	9.0		13.1	14.1			9.0	30	14.1	24.9	9.8		53.1	51.7
9.8		31.1	43.9	9.4		15.1	56.6			8.0		16.1	6.1	9.8		57.6	31.9
9.8		37.6	14.9	9.8		24.1	46.1			9.1		23.1	22.2	9.8		58.6	19.9
9.8		42.1	31.8	9.5		25.1	8.6			9.2		26.6	24.2	9.2	35	1.1	25.5
9.8		44.1	4.1	8.5		25.1	27.0	-		9.5		32.1	0.4	9.4		4.1	47.7
9.8		54.1	20.5	9.0		36.1	0.5			9.8		39.1	45.6	9.6		6.1	25.1
9.7		55.1	48.9	9.8		36.1	8.0			9.4		58.1	52.9	9.8		7.1	29.9
9.4		55.6	30.1	9.6		40.1	24.7			9.2		0.1	8.7	9.7		7.6	29.3
9.4		57.1	43.8	9.1		40.1	41.5			9.1		1.1	20.9	8.6		8.1	9.1
9.2		59.1	52.2	9.2		43.1	26.7			7.6		1.1	16.3	9.1		8.1	45.3
9.2	21	0.1	42.5	9.8		45.1	23.9			9.2		15.1	21.3	8.3		15.3	2.6
9.4		2.1	35.7	9.8		54.6	9.4			9.2		16.1	44.3	9.6		30.1	26.5
9.6		2.6	11.6	8.7		59.1	30.0			9.8		19.1	45.1	9.8		30.1	23.4
9.1		4.6	20.1	9.8	27	1.6	29.7			9.7		27.6	25.7	8.8		34.1	3.7
25pr.		+ 1 39.7	+ 0.7			+ 1 39.7	+ 0.9					+ 1 39.6	+ 1.1			+ 1 39.5	+ 1.2

8041-8100.				8101-8160.				8161-8220.				8221-8280.			
mag.	18 ^h	-34°		mag.	18 ^h	-34°		mag.	18 ^h	-34°		mag.	18 ^h	-34°	
	m	s			m	s			m	s			m	s	
9.5	35	35.1	18.7	9.8	41	24.5	7.5	10.1	48	9.5	31.6	9.4	52	45.0	55.3
9.5		52.1	12.9	8.7		30.0	40.0	9.6		10.0	14.8	10.2		46.5	31.9
9.7		57.1	8.1	9.2		35.0	29.6	10.2		13.0	30.0	9.4		51.0	22.9
9.4		57.1	44.8	7.9		36.0	19.7	10.2		16.0	29.7	7.9	53	11.5	40.5
9.8		57.6	11.8	9.2		54.0	14.9	9.3		21.0	53.2	8.3		13.4	32.9
9.7	36	4.6	20.9	9.8		58.3	0.3	9.6		22.0	20.9	9.7		16.4	30.3
9.8		5.1	28.5	9.8	42	8.1	0.0	10.2		23.1	33.4	9.7		19.4	26.2
9.8		10.8	0.0	9.7		14.0	13.3	10.0		27.0	20.8	9.8		19.9	17.1
9.4		26.1	8.1	9.0		22.0	30.4	10.2		34.1	3.2	10.2		27.4	55.9
9.8		30.0	56.2	9.2		25.0	56.0	9.6		44.0	58.8	8.9		28.9	12.1
9.5		31.1	17.8	9.8		26.0	51.0	9.4		49.0	38.2	10.2		29.6	52.4
8.9		48.0	26.0	7.5		30.0	26.7	9.3		54.5	51.9	8.4		39.9	58.7
9.2	37	7.5	6.2	9.7		42.0	5.0	9.9		56.0	13.9	10.2		48.9	31.2
9.4		9.0	23.5	9.4		49.5	55.4	10.4	49	4.4	1.8	9.7		57.4	33.2
9.8		19.0	9.1	9.1		51.0	36.8	9.0		9.0	1.6	7.2	54	16.4	48.5
9.6		20.0	52.2	9.2	43	5.5	14.0	9.7		12.0	4.7	10.0		17.4	51.4
9.8		22.5	12.0	9.6		6.0	49.2	9.7		24.0	44.3	9.4		25.4	7.4
9.5		23.0	47.2	9.7		13.5	1.6	9.8		30.0	41.7	10.1		29.6	26.9
9.8		32.0	25.5	9.7		18.5	26.0	10.0		31.5	18.1	10.0		34.4	43.9
9.7		34.5	33.1	8.6		31.0	9.4	9.9		38.0	28.5	9.9		47.9	8.1
8.6		38.0	42.0	9.2		34.0	22.8	10.2		39.5	17.9	9.8		53.9	46.1
9.2		39.5	36.2	9.7		42.5	42.2	10.1		41.5	23.6	10.1		55.9	32.9
9.2		41.5	11.0	9.7		46.5	6.1	9.0		47.0	21.2	10.2		59.9	10.0
9.4		42.5	15.4	9.5		51.5	32.9	10.1		48.0	0.2	10.2	55	15.4	30.6
9.2	38	12.5	58.6	9.8		57.0	31.8	10.2		50.0	5.2	10.2		16.9	32.9
9.7		15.5	32.7	9.8	44	2.8	48.9	10.0		50.0	11.4	9.6		20.4	31.7
8.4		15.8	2.2	9.7		15.0	58.8	8.5		59.0	25.9	10.2		20.9	4.0
9.8		31.5	43.1	9.7		17.3	25.5	10.1	50	4.0	6.7	9.9		31.9	35.1
9.2		35.0	20.8	9.8		36.0	38.9	9.7		5.0	9.7	10.1		41.9	26.1
9.1		44.5	42.8	8.7		37.3	42.1	9.7		5.5	49.0	9.9		42.4	6.1
9.8		53.0	39.8	9.4		39.8	15.2	9.4		9.2	22.5	10.2		43.6	32.3
9.4		55.0	44.3	9.7		44.8	42.1	8.3		10.0	59.9	8.9		49.9	33.1
9.6	39	1.5	24.0	9.2		49.8	34.9	7.2		12.5	22.7	10.2		50.4	13.3
9.5		13.0	38.0	9.6		52.3	4.7	10.2		20.0	42.1	10.2		53.9	32.2
9.5		14.5	44.5	9.1	45	6.0	45.8	10.2		21.5	47.3	10.2		55.9	12.3
9.6		28.5	25.9	10.0		18.5	24.0	9.7		26.0	20.5	9.8		57.9	5.1
9.7		28.5	28.2	10.2		22.5	30.6	10.2		32.5	46.2	10.0	56	1.9	50.9
9.2		30.0	41.3	9.4		25.0	42.8	10.2		43.5	35.6	9.4		7.9	22.6
9.8		35.7	0.5	9.9		26.0	5.7	10.2		44.5	55.3	9.6		8.4	46.7
9.5		47.5	36.6	9.7		33.5	31.4	10.2		49.5	26.3	10.2		24.4	37.1
9.4		50.5	33.4	10.2		47.5	17.5	10.1		50.0	10.3	10.2		25.4	8.3
7.4		59.8	2.4	10.2		53.0	49.1	9.7		57.5	3.5	10.0		26.9	16.2
9.7	40	0.0	46.0	10.1	46	4.5	20.6	9.4		59.5	44.5	10.2		27.4	49.1
9.2		4.5	40.0	10.2		11.0	11.3	9.2		59.5	4.7	9.6		28.6	37.5
9.8		5.5	31.2	10.1		14.5	40.2	9.9	51	15.0	52.1	10.2		29.1	31.9
9.7		10.8	2.4	9.4		27.0	15.1	9.6		19.5	32.7	9.3		33.9	39.9
9.7		17.3	2.4	9.1		36.0	24.1	10.2		19.5	28.5	9.4		33.9	45.9
9.4		19.1	0.6	10.0		39.5	24.4	10.0		28.5	33.2	8.5		35.4	31.6
9.8		33.5	35.4	9.4		48.5	8.6	8.6		29.0	38.1	10.1		39.9	44.2
9.2		34.5	52.0	10.2		50.1	34.5	8.6		37.0	6.6	10.2		46.4	34.0
9.8		39.5	27.0	9.3		52.0	14.4	8.9		38.0	34.1	10.2		46.9	17.7
9.2		44.5	41.0	9.4	47	1.0	29.7	9.6		48.0	58.0	9.6		56.4	35.3
9.2		50.0	9.2	9.9		13.5	21.5	9.4		58.5	58.5	9.7	57	3.4	24.1
9.0		59.0	53.0	9.2		19.5	48.0	9.9		59.7	2.1	10.0		8.4	31.7
9.2	41	1.0	51.8	9.4		20.0	46.2	10.2	52	3.0	52.8	8.5		11.4	27.5
9.8		9.5	43.2	10.2		22.0	8.9	10.1		3.6	22.9	10.2		14.9	14.2
9.4		10.0	23.6	10.1		38.0	39.3	8.9		11.0	11.5	10.0		26.4	57.6
9.7		11.5	5.1	9.9		48.0	13.9	10.2		14.0	44.5	9.4		31.9	15.5
9.8		12.5	43.2	8.8		52.0	28.3	9.6		21.0	32.2	9.6		34.9	31.9
9.0		24.0	49.2	8.8	48	2.5	28.1	10.0		39.0	31.1	10.1		46.4	40.2
25pr.	+1	39.4	+1.4	+1	39.3	+1.6		+1	39.2	+1.8		+1	39.1	+2.0	

1896ARCcap...

8281-8340.				8341-8400.				8401-8460.				8461-8520.			
18 ^h -19 ^h .		-34°		19 ^h .		-34°		19 ^h .		-34°		19 ^h .		-34°	
mag.	m s			mag.	m s			mag.	m s			mag.	m s		
9.8	57	59.9	57.8	10.2	5	14.9	52.2	9.6	14	7.1	50.1	10.0	25	48.2	15.1
9.2	58	9.9	23.0	10.2		16.9	32.0	8.9	15	0.6	52.3	9.4	26	7.2	9.2
9.9		22.9	5.5	10.2		19.9	30.6	10.0		1.6	39.2	10.0		10.2	56.2
10.1		36.9	53.4	10.2		54.4	56.1	9.8		6.1	10.9	9.4		12.2	35.1
10.2		58.4	55.3	10.2		54.9	39.3	9.2		12.1	39.8	10.0		41.2	40.7
10.0	59	11.4	22.4	10.1		56.4	22.0	8.8		17.1	45.7	10.0		50.2	13.6
9.7		20.4	48.7	9.4	6	5.4	33.8	9.8		22.6	27.6	9.6		50.2	26.0
10.2		29.9	14.9	10.1		9.4	45.6	9.6		56.1	47.0	9.8	27	5.7	23.6
10.2		35.2	59.5	9.1		9.9	20.7	9.8	16	35.6	28.3	10.0		11.4	57.4
9.6		44.9	14.7	10.0		11.9	45.9	9.6	17	12.1	34.6	9.2		16.2	15.6
8.8		47.9	40.1	9.9		16.8	4.2	9.0		25.6	31.4	9.1		20.9	1.7
10.2		59.9	49.2	9.9		24.8	29.2	10.0		33.7	14.1	9.4		27.7	24.1
8.9	0	6.4	9.0	8.8		41.8	17.1	9.4		35.7	15.4	8.6		36.2	46.9
10.2		22.3	59.1	9.9		55.0	57.7	8.3		36.2	38.9	10.0		40.2	40.0
10.2		29.9	17.3	9.4		57.8	52.1	9.2		55.7	18.1	8.4	28	5.2	55.8
9.7		39.6	2.1	9.9		59.8	53.2	9.4	18	23.2	31.3	9.8		12.7	47.9
10.2		46.9	49.4	8.5	7	3.3	29.9	10.0		34.2	41.1	10.0		17.2	29.3
8.8		52.4	12.7	8.3		3.8	8.8	9.4		36.2	41.4	9.8		34.2	8.1
10.0		55.4	52.3	9.8		5.7	56.9	9.8		38.2	37.0	9.6		45.2	24.4
10.0		56.9	4.7	9.9		14.8	27.0	8.8		38.7	21.4	10.0		54.7	9.0
10.2		59.7	21.4	10.2		27.3	34.9	10.0		39.7	33.8	10.0		56.7	29.2
8.6	1	6.9	41.1	10.2		27.8	7.0	9.7		41.7	54.8	8.6	29	4.7	34.0
9.9		9.7	59.3	10.2		29.8	34.6	9.8		57.7	11.0	8.8		22.2	31.9
9.2		13.9	29.8	9.7		32.0	57.8	10.0		19	4.2	9.4		27.7	42.0
9.8		15.4	17.3	8.9		32.3	28.9	9.8		9.2	4.6	9.1		31.9	59.9
10.2		18.4	48.7	9.9		40.3	37.0	9.6		49.2	14.0	9.1		33.7	31.3
8.7		18.9	11.7	10.2		48.3	23.5	10.0		55.2	44.3	8.8		37.7	28.5
8.1		24.9	52.9	10.2		50.8	13.5	9.4		59.2	25.9	9.2		40.2	6.8
9.7		27.9	51.9	10.2		51.4	4.0	9.8	20	0.2	29.7	9.8		53.7	55.8
9.4		35.9	42.9	10.2	8	1.3	37.4	10.0		54.2	38.0	9.8	30	24.2	27.2
9.6		50.9	54.7	10.0		4.3	34.0	10.0†	21	12.4	0.1	7.4		24.2	49.4
9.7	2	1.9	25.1	8.5		4.3	39.7	10.0		26.2	46.9	9.4		27.2	11.8
10.0		3.9	17.9	10.1		11.3	14.2	9.1		27.7	11.6	10.0		46.7	56.0
8.9		21.4	29.6	7.6		17.2	1.7	10.0		32.2	22.7	8.9		49.7	34.2
10.1		25.6	19.0	10.1		20.3	25.7	9.4		39.7	53.0	9.2		58.2	42.3
10.0		27.9	11.1	10.0		34.3	51.3	10.0		22	4.2	8.8	31	40.2	19.7
10.2		35.4	38.6	10.0		43.8	31.1	9.8		14.7	34.5	9.1		50.9	0.8
10.2		37.9	10.8	8.6		52.8	25.0	8.6		20.2	10.0	8.6		57.7	24.8
9.2		41.4	17.8	10.0	9	0.6	57.2	9.7		24.2	48.7	9.2	32	14.7	14.4
10.0		44.9	47.0	10.0		1.4	53.3	9.4		32.2	39.6	10.0		31.7	28.1
9.6	3	10.9	16.5	9.8		5.4	11.8	9.6		35.0	0.8	8.4		44.7	12.5
9.6		19.9	47.2	9.8		15.4	47.7	9.8		35.2	38.8	9.8		45.2	47.2
8.6		24.4	25.4	8.2		22.9	44.7	8.8		50.2	21.8	9.8		58.7	9.3
9.4		33.4	9.9	9.4		41.9	20.8	10.0	23	15.2	32.3	9.8		35	34.6
9.6		36.4	50.4	7.9		42.4	44.3	9.8		39.2	14.2	8.2		47.0	58.6
9.9		39.9	35.5	9.2		50.9	51.9	9.6		45.2	13.7	9.5	36	18.5	48.6
10.2	4	1.9	45.0	8.9	10	2.9	13.7	10.0		45.2	21.5	8.4		18.5	17.6
10.0		13.9	53.8	8.4		12.9	11.1	9.8		51.7	30.5	9.8		37	14.5
10.2		20.9	43.8	9.6		30.9	33.0	9.2	24	8.7	36.9	9.6		32.5	52.2
9.9		30.9	33.0	8.6		33.4	22.6	9.4		14.2	1.1	9.6		39	3.0
9.4		30.9	41.3	8.4		40.9	26.1	9.4		30.2	17.9	9.8		10.0	24.0
7.6		32.4	3.2	10.0	11	36.4	6.9	9.8		30.2	12.9	9.8		17.2	1.0
10.2		34.4	19.0	10.0		12	4.9	8.9		53.7	39.8	9.5		36.0	54.6
8.3		34.9	38.3	9.4		6.4	29.7	9.6	25	0.2	38.4	8.9	40	11.5	55.2
10.2		42.9	4.2	9.8		55.4	27.9	9.6		24.2	27.3	9.8		21.5	39.3
10.2		45.9	52.4	10.0	13	2.4	2.9	7.2		32.2	27.7	9.8		29.5	30.7
9.5		50.4	55.0	8.2		5.9	58.4	9.1		32.2	47.7	9.3	41	14.7	0.9
9.4	5	0.9	9.2	9.8		8.9	36.3	9.4		32.2	54.9	8.6		39.5	34.0
9.4		9.9	41.0	8.9		44.6	10.9	10.0		45.2	22.5	8.4	42	9.5	58.5
9.9		12.9	19.9	10.0		51.1	32.1	10.0		46.2	15.0	9.8		39.5	38.0
25pr.	+1	38.9	+2.2		+1	38.8	+2.4		+1	38.4	+2.9		+1	38.0	+3.2

8521-8580.			8581-8640.			8641-8700.			8701-8760.						
mag.	19 ^h	-34 ^o	mag.	19 ^h -20 ^h	-34 ^o	mag.	20 ^h	-34 ^o	mag.	20 ^h	-34 ^o				
9.8	42	43.7	29.0	9.0	56	43.4	20.5	9.8	10	30.5	53.7	10.1	18	14.5	33.7
9.3	43	7.7	35.0	8.3	58	9.0	6.2	10.1	10.1	57.0	8.4	10.0	10.0	17.5	43.1
9.4		30.2	39.0	9.1	57	1.9	22.2	10.1	11	4.0	39.6	8.9	9.5	29.0	56.9
9.5		51.2	43.1	9.1		30.9	15.2	9.6		20.5	29.1	9.5	9.4	30.5	21.9
9.8	44	31.2	19.7	9.8	9.1	32.9	34.9	10.1	10.1	22.5	16.4	9.4	10.0	34.0	1.6
9.8	45	8.7	9.0	9.0	58	8.9	1.3	9.4	9.4	31.0	9.1	10.0	10.1	40.5	34.9
9.8		24.2	2.2	9.5	9.5	22.9	50.5	9.2	9.2	38.5	43.9	10.1	10.1	45.5	43.1
9.8		30.2	28.9	9.8	9.8	26.9	21.8	8.8	8.8	38.5	12.3	9.4	9.4	45.5	57.3
9.8	46	8.7	36.0	9.5	9.5	45.4	23.0	10.1	10.1	39.5	37.8	10.0	10.0	49.0	40.5
9.8		12.2	9.1	9.0	59	25.0	18.4	9.0	9.0	51.0	42.4	9.4	9.4	49.1	2.0
8.4		13.2	48.3	9.8	9.8	29.4	17.2	9.2	9.2	57.6	1.1	10.1	10.1	19	40.4
9.6		29.2	47.1	9.2	9.2	29.7	38.4	9.2	12	5.0	19.5	9.2	9.2	48.9	25.9
9.8		32.2	52.4	9.8	9.8	34.3	3.0	10.0	10.0	8.0	16.3	9.0	9.0	59.4	48.7
9.5		56.7	56.1	10.1	10.1	0	1.0	7.0	7.0	13.5	58.5	9.4	9.4	3.4	49.2
9.8		57.7	3.3	8.6	8.6	2.9	13.3	10.1	10.1	18.5	39.5	8.8	8.8	3.9	47.1
9.6	47	4.7	32.6	10.1	10.1	10.5	21.3	9.8	9.8	18.9	58.5	10.1	10.1	18.9	48.0
9.8		8.2	10.0	7.7	7.7	14.5	59.3	9.4	9.4	36.5	39.4	7.7	7.7	34.4	49.2
8.9		13.7	59.9	7.7	7.7	27.5	52.3	10.0	10.0	39.7	14.9	9.6	9.6	59.4	5.1
9.4	48	1.2	32.6	7.0	7.0	1	24.0	9.4	9.4	44.0	15.4	9.8	21	2.9	20.5
9.8		34.7	47.4	10.1	10.1	31.5	2.0	10.0	10.0	47.0	18.1	10.0	10.0	18.4	13.0
9.8		57.2	26.3	8.7	8.7	33.5	21.9	10.1	10.1	51.5	52.5	8.4	8.4	25.9	31.3
8.2	49	2.7	53.4	8.4	8.4	34.5	53.8	10.1	10.1	54.7	13.9	9.4	9.4	37.4	48.9
8.4		6.7	40.1	10.1	10.1	52.0	18.3	9.8	13	1.0	23.6	10.0	10.0	42.4	19.7
9.1		33.7	3.9	10.1	10.1	2	1.5	10.1	10.1	30.5	28.6	9.8	9.8	43.9	25.9
9.8		38.7	51.3	9.3	9.3	25.0	38.2	9.4	9.4	32.5	24.0	10.0	10.0	48.9	27.0
9.5		38.7	12.5	9.4	9.4	33.0	55.9	7.8	7.8	38.5	52.3	10.0	10.0	49.9	47.1
8.2		44.7	32.8	10.0	10.0	3	4.0	10.1	10.1	38.5	0.0	9.8	22	9.9	12.5
9.2		51.7	8.8	10.1	10.1	4.2	20.8	9.6	14	3.0	9.7	9.6	9.6	16.4	39.2
9.8	50	22.7	43.7	10.0	10.0	4	11.0	8.8	8.8	5.0	50.1	10.1	10.1	28.4	25.3
9.2		22.7	3.0	9.4	9.4	17.0	42.8	10.0	10.0	33.5	27.1	10.0	10.0	29.4	7.2
9.2		23.7	35.9	10.1	10.1	20.5	26.4	9.8	9.8	36.0	25.1	10.1	10.1	29.9	44.1
9.1		24.2	9.1	10.1	10.1	22.0	28.2	9.2	9.2	57.5	37.5	8.0	8.0	34.4	43.8
9.3		41.7	40.8	8.9	8.9	27.0	59.0	9.4	15	1.0	43.6	9.2	9.2	38.9	9.2
9.8		54.7	8.0	8.4	8.4	39.5	43.4	8.4	8.4	19.0	5.3	9.6	9.6	43.9	32.7
9.8		59.2	25.2	9.8	9.8	59.0	43.3	9.0	9.0	36.0	56.3	10.0	10.0	44.4	18.2
9.8	51	18.9	21.0	10.1	10.1	5	12.0	9.0	9.0	37.0	40.1	9.4	9.4	48.9	27.9
8.7		19.4	43.6	10.1	10.1	21.5	28.5	10.1	10.1	49.0	55.9	10.0	10.0	49.9	24.1
9.5		30.9	48.9	8.7	8.7	29.5	55.2	8.8	8.8	58.0	33.1	10.1	10.1	58.4	21.6
9.8		41.4	24.0	8.8	8.8	29.5	46.7	8.4	16	9.5	52.3	10.1	10.1	16.2	16.7
9.8		44.4	5.0	7.1	7.1	40.5	29.3	10.0	10.0	24.5	54.5	10.1	10.1	23.7	58.9
6.6	52	17.0	2.0	10.1	10.1	46.5	47.2	10.0	10.0	25.0	3.1	10.1	10.1	31.2	22.6
9.8		18.4	11.4	8.4	6	17.6	9.6	7.9	7.9	33.8	0.8	9.5	9.5	35.2	10.8
9.8		21.9	2.9	10.0	10.0	41.0	1.2	10.1	10.1	39.0	24.5	8.8	8.8	38.2	10.9
9.5		42.4	38.4	9.8	9.8	43.5	39.5	9.6	9.6	47.5	24.9	9.8	9.8	44.7	32.6
8.4	53	27.4	27.7	9.6	9.6	54.0	56.9	10.1	10.1	49.0	32.7	10.1	10.1	57.2	52.6
8.2		33.4	55.5	9.4	7	16.5	24.1	10.0	10.0	17	3.5	10.1	10.1	57.2	22.6
9.6	54	8.9	23.1	10.1	10.1	19.0	31.6	9.6	9.6	5.0	19.5	8.0	8.0	58.7	54.9
9.5		10.9	16.3	10.1	10.1	8	27.0	10.1	10.1	13.5	58.5	10.0	10.0	6.7	22.0
9.0		28.9	35.2	9.4	9.4	43.9	59.9	9.5	9.5	19.5	24.7	9.2	9.2	9.7	55.1
9.8		29.4	32.8	10.1	10.1	9	0.0	10.0	10.0	27.0	48.9	8.6	8.6	24.2	53.3
8.4		29.4	12.7	8.0	8.0	39.0	4.0	10.0	10.0	30.0	21.9	9.4	9.4	39.2	30.6
9.0		31.4	7.9	9.2	9.2	41.5	20.1	8.6	8.6	31.0	42.6	9.4	9.4	50.2	51.7
9.5	55	3.9	24.0	8.4	8.4	47.5	21.4	9.2	9.2	35.5	41.6	9.8	25	7.7	20.7
9.5		5.9	22.1	8.8	10	10.5	47.3	9.4	9.4	37.0	35.2	9.2	9.2	9.2	1.5
9.8		8.4	48.0	10.1	10.1	13.0	57.3	10.1	10.1	44.0	16.3	9.5	9.5	13.2	25.9
9.8		23.4	32.1	9.8	9.8	17.0	21.0	10.0	10.0	47.5	42.1	10.0	10.0	18.2	3.5
9.0		43.4	22.0	10.0	10.0	24.0	35.0	9.4	9.4	49.5	36.9	10.1	10.1	44.2	41.8
9.8	56	14.9	33.9	8.6	8.6	25.5	36.9	7.3	18	0.8	2.4	9.2	9.2	46.0	41.9
9.8		16.9	51.2	9.8	9.8	27.5	28.3	10.0	10.0	10.5	23.4	9.0	9.0	3.8	51.4
9.1		38.9	15.1	9.8	9.8	28.5	0.2	9.8	9.8	10.5	27.5	8.8	8.8	30.8	11.3
25 pr.	+1	37.2	+3.9	+1	36.5	+4.3		+1	35.9	+4.6		+1	35.5	+4.9	

9001-9060.					9061-9120.					9121-9180.					9181-9240.				
21 ^h -22 ^h .		-34°			22 ^h .		-34°			22 ^h .		-34°			22 ^h -23 ^h .		-34°		
mag.	m	s	'		mag.	m	s	'		mag.	m	s	'		mag.	m	s	'	
9:1	39	55	8	42.7	9:6	3	13	6	37.9	9:7	20	49	9	24.4	10:6	44	17	0	50.1
8:6	40	17	8	15.4	7:4	14	6	26.3	9:9	21	59	9	58.4	9:8	45	22	0	42.5	
9:9		21	4	59.9	9:6	30	5	5.8	10:2		0	9	26.7	9:0		23	0	50.9	
9:9	41	8	7	4.5	9:8	4	2	5	38.6	7:3		31	9	24.5	10:0		36	0	25.8
9:8		15	8	26.1	9:9	25	0	58.0	10:0		44	4	28.6	10:6		36	3	47.1	
9:2		17	3	25.2	9:8	35	5	49.6	9:2		44	4	32.3	9:6		41	5	52.0	
9:6		29	2	7.0	9:9	5	4	5	24.2	8:2	22	22	9	29.3	10:0		58	0	9.9
9:2		48	7	30.6	9:8	48	0	46.8	10:2		24	9	32.2	10:4	46	14	0	15.2	
9:2	42	6	7	13.2	10:2	6	12	4	5.3	10:2		28	4	20.2	10:6		15	5	9.9
9:0		16	7	7.2	9:2	7	9	9	46.0	10:0		52	4	41.8	10:6		23	5	2.7
9:9		21	7	12.8	9:9	29	9	30.6	10:0	23	51	9	45.4	10:4		47	5	24.2	
9:8	43	18	7	0.4	10:0	32	4	25.0	10:2		59	9	53.8	10:4		57	5	7.5	
9:4	44	4	7	32.5	9:6	8	19	9	14.5	8:8	24	26	9	29.3	10:0	47	53	5	7.1
8:9		16	2	28.7	9:9	23	9	40.0	10:2	25	10	9	50.8	10:0		56	0	44.7	
9:9		29	2	49.7	9:8	30	4	8.0	10:2		47	9	0.0	10:2	48	8	0	56.0	
9:9	45	4	2	42.2	10:2	59	9	24.5	9:7		48	9	2.3	10:4		13	0	5.1	
9:8		20	7	37.7	10:0	9	26	9	31.2	10:2	26	31	4	29.1	10:2		24	5	38.2
9:4		39	2	21.5	9:9	40	9	39.8	8:2		38	9	31.1	8:8	49	16	0	32.7	
9:4	46	33	7	57.0	8:4	48	9	50.2	9:1		44	4	5.7	10:0		59	5	6.4	
9:9		38	4	58.0	9:0	10	0	4	24.9	9:2		44	9	24.0	8:6	50	37	0	9.0
9:4	47	9	2	6.0	9:9	5	4	59.7	9:4	27	5	4	19.4	10:0		49	0	0.2	
8:0		17	7	43.5	10:0	23	9	51.9	9:0		7	4	20.0	9:0	51	21	5	15.9	
8:8		19	7	8.3	9:6	49	9	15.9	10:0		35	4	28.2	8:8		42	0	6.7	
9:0		51	7	53.9	9:0	11	29	9	16.4	9:1	28	59	4	11.8	9:8		44	0	45.3
9:2	48	9	7	59.3	9:4	12	29	9	22.5	9:9	29	11	9	53.4	10:6	53	10	5	43.5
9:6	49	9	7	58.2	9:0	32	9	11.0	10:0	30	7	9	11.0	10:6		30	0	42.5	
9:4		31	2	16.2	7:8	50	4	18.9	7:6		56	9	7.0	8:4		32	5	24.5	
9:9		53	2	53.9	9:9	13	2	4	31.0	9:1	31	3	4	56.0	9:2		39	0	30.0
9:9	51	41	7	34.3	10:2	31	4	11.6	10:2		7	9	25.6	10:0		54	0	8.8	
9:4	52	15	7	22.3	10:2	42	4	21.2	10:4	32	38	0	52.0	10:0	54	18	0	30.6	
9:4		50	7	46.6	10:0	14	21	4	53.2	10:6	34	27	5	27.6	10:6	55	10	0	57.4
8:8	53	21	2	6.3	10:2	42	4	46.4	9:8		36	0	45.1	9:0	56	13	7	10.4	
7:8	54	4	7	26.0	9:6	58	4	55.7	9:6	35	1	5	13.6	9:8	57	12	4	46.1	
9:0		7	7	17.6	9:9	15	1	4	43.9	10:6		8	5	3.1	9:6		19	9	28.4
8:4		41	4	59.1	9:6	27	9	11.2	7:8		10	5	55.9	10:2		36	4	51.8	
9:9		45	2	24.0	8:8	33	9	33.9	10:6		23	5	43.6	7:6	0	33	9	53.0	
9:9	56	11	7	39.0	9:4	49	9	56.9	10:2		24	5	2.8	10:2	3	14	4	9.0	
8:4	57	9	7	21.7	9:2	16	23	9	46.8	10:4	36	0	0	8.6	9:2		16	4	35.0
9:9		21	9	57.4	9:2	32	1	58.8	9:8		20	5	48.1	8:2	4	5	4	18.0	
9:9		38	7	28.2	8:4	55	4	21.2	10:6		32	0	36.5	10:2		16	4	50.4	
9:9	58	5	7	45.0	9:6	17	1	9	11.6	9:0		59	5	7.0	10:2	5	13	4	4.0
8:6		28	7	14.5	8:6	19	9	59.4	8:4	38	16	0	0.9	9:5	6	30	9	48.6	
9:8		55	2	25.5	9:4	27	4	49.2	9:2		55	0	28.0	10:0		41	9	10.1	
9:9	59	1	2	28.7	9:8	30	4	1.5	7:0	40	18	5	49.2	10:2	7	48	9	12.5	
9:0		28	7	11.5	9:1	45	9	57.2	10:6		25	5	40.5	9:0	8	2	4	42.9	
9:0		46	7	35.4	9:9	53	4	50.4	10:0	41	31	0	49.7	10:2		12	4	26.8	
9:2	0	8	7	11.6	9:9	57	9	57.5	10:0		39	5	53.3	10:2		26	9	46.9	
9:9		16	2	38.6	10:2	18	5	4	3.8	10:6		46	3	23.2	10:2		49	4	10.0
9:8		22	2	1.8	8:8	10	9	15.5	9:8		51	5	17.7	9:5	9	6	9	34.3	
9:0		31	7	38.1	10:2	16	4	25.5	9:8		53	1	59.4	9:6		35	4	21.1	
8:9		34	7	22.5	8:4	38	5	0.4	10:0	42	0	0	37.3	10:2		40	4	48.8	
9:9		43	7	4.1	9:2	41	4	49.9	9:8		4	5	42.1	9:8	10	15	9	6.2	
9:4		43	7	50.1	10:2	59	9	26.9	10:2		10	0	32.6	9:4	11	2	4	7.1	
6:4	1	6	2	39.2	9:1	20	7	4	56.4	10:6		11	5	36.2	10:2		12	9	42.7
9:4		19	1	43.9	10:2	7	4	38.1	10:6		21	0	44.6	10:2		36	9	39.6	
9:9		54	1	46.2	8:6	28	9	7.9	10:6		48	0	20.5	9:8		50	4	22.6	
9:8	2	1	6	44.5	10:2	29	9	47.3	10:6		56	5	4.0	10:2	12	10	4	30.3	
9:4		20	1	21.6	9:1	29	9	7.1	9:8	43	26	0	18.6	7:2		56	9	23.4	
8:9		24	6	21.8	10:2	37	9	20.7	10:2		50	0	0.5	10:2	13	5	9	37.7	
5:7		37	6	37.7	10:2	47	4	39.8	10:2		53	5	31.5	9:0	14	1	4	35.0	
25Pr.	+1	29	0	+71	+1	27	0	+75	+1	25	3	+78	+1	23	2	+80			

9241—9265.				9266—9290.				9291—9315.				9316—9339.			
23 ^h .		—34°		23 ^h .		—34°		23 ^h .		—34°		23 ^h .		—34°	
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s
9:2	14 14.4	34.0		10:0	23 48.7	10.6		8:8	34 44.7	15.8	—	10:0	48 24.2	17.8	
9:2	52.4	20.5	9.0	10:0	24 59.3	57.9		10:0	52.2	56.3		10:4	30.2	29.2	
9:8	15 5.8	57.2		8:2	25 39.2	21.9	—	8:2	54.7	53.1	9.0	10:4	46.2	18.8	
9:2	16 22.9	9.0	9.0	10:0	56.7	9.7		10:0	35 2.1	3.0		10:4	49 9.2	55.8	
9:2	33.4	14.8		10:0	26 14.7	22.9		6:9	37 18.7	7.2	7.0 GS—	10:4	19.7	54.9	
9:2	50.4	59.4		8:2	27 15.2	21.0	7.5 G—	10:0	39.7	31.4		10:0	55.2	46.2	
9:8	51.2	8.2		9:8	30.7	59.1		10:0	38 8.7	50.0		10:4	51 25.2	7.0	
8:2	17 4.7	3.7	8.2 GW	10:0	44.6	42.9		10:0	21.7	27.9		9:4	53.2	37.4	
8:4	17.7	59.1	8.5 —	9:1	29 53.7	4.5		9:6	39 17.2	30.3		8:6	52 2.3	58.9	8.2
9:8	21.7	10.0		9:4	30 17.5	0.3		10:0	43.5	19.0		9:9	10.0	59.8	9.5
9:8	29.7	8.1		10:0	24.7	53.1		10:0	40 13.7	56.8		10:4	22.2	15.0	
10:2	50.2	21.6		9:6	43.5	40.5		10:0	41 16.5	24.2		10:4	23.7	10.1	
9:2	54.7	7.6	8.5 G	9:8	44.2	17.8		10:0	57.2	29.8		10:4	53 25.2	25.1	
10:2	18 2.2	37.8		9:6	45.7	21.5	—	9:6	42 26.2	45.9		10:4	54 7.2	34.8	
10:2	27.7	53.1		9:1	31 14.7	30.3		10:0	43 40.7	25.1		8:2	55 5.2	29.3	8.5 —
10:0	32.7	45.0		10:0	23.7	5.1		8:2	44 26.7	15.4	9.0 —	9:4	50.2	25.5	
10:2	55.2	45.0		9:6	30.5	4.9		10:0	45 10.2	4.9		10:2	56 0.7	5.1	
10:2	58.2	11.0		9:6	31.7	54.5		7:8	19.7	9.0	8.2 GS—	9:4	8.7	41.3	
8:8	19 48.2	58.7	9.0	10:0	59.7	49.9		10:0	54.7	7.9		9:2	41.2	4.1	9.0
9:8	20 34.7	23.2		9:1	32 20.7	38.6		10:0	55.5	48.0		10:0	57 46.7	30.7	
7:5	58.7	18.7	GW—	9:2	30.7	24.0		10:0	58.2	9.9		9:0	59 0.2	11.8	—
10:2	21 45.2	7.5		8:1	47.7	11.0	8.5 —	8:6	46 2.7	47.8		10:4	3.2	2.8	
10:0	22 35.3	53.0		9:2	33 3.7	19.6		10:0	16.2	5.9		9:8	5.2	4.3	
9:6	23 2.2	27.2		10:0	17.7	48.6		10:0	47 4.9	1.8		10:4	31.7	11.3	
10:0	30.7	19.3		9:8	21.5	13.4		8:4	48 16.2	20.1	9.0 —				
25 pr.	+1 210	+8.2			+1 197	+8.3			+1 186	+8.3			+1 175	+8.4	

ZONE — 35°.

1-30.				31-60.				61-90.				91-120.			
mag.	oh.	-35°		mag.	oh.	-35°		mag.	oh.	-35°		mag.	oh.-1 ^h .	-35°	
	m	s	'		m	s	'		m	s	'		m	s	'
10.4	0	0.8	32.2	10.0	12	59.2	21.3	9.3	27	59.6	27.0	10.0	49	23.1	8.0
9.8		21.3	13.0	10.4	13	2.3	8.8	9.5	28	8.1	17.8	10.0		30.6	5.2
9.6		32.8	56.4	8.9		49.1	49.1	9.8	30	40.1	37.1	9.5	50	13.1	44.3
10.4		36.5	2.4	9.6	14	34.0	59.2	9.6	33	0.6	31.8	9.5		24.7	49.5
9.4		51.8	55.1	9.3		39.2	0.2	9.8		3.5	20.2	8.3		48.6	20.4
10.4	1	34.6	59.0	8.2		42.6	37.8	9.3	35	8.1	13.1	9.4	51	55.6	7.1
10.4	2	5.3	14.8	9.8		53.1	7.3	9.5	37	13.9	33.1	10.0	52	7.6	28.6
7.6		24.8	29.4	9.8	15	44.0	0.2	10.0		51.7	4.6	9.6		40.4	6.0
7.6		40.8	47.2	9.8	16	1.1	45.2	10.0	38	12.2	47.8	8.2	53	29.4	18.7
9.4		45.3	26.4	8.8		20.6	27.3	9.6		28.4	46.1	10.0	54	36.9	40.6
10.2	3	2.3	55.3	9.8		40.6	30.1	10.0		46.7	30.6	10.0	55	54.4	24.9
7.1	4	25.8	33.3	8.7		54.1	15.5	10.0	39	20.2	49.6	9.4	56	5.9	24.1
9.0		29.3	58.5	9.6	17	13.1	36.9	8.8	40	49.7	0.9	10.0		12.4	24.3
10.4		59.8	58.2	8.9	19	4.1	22.3	9.2		59.7	15.1	9.0		39.4	2.7
8.0	5	11.3	9.4	8.4		11.1	31.5	9.2	41	6.7	45.6	9.6		56.4	44.6
6.0		22.3	49.9	9.8		26.7	6.5	9.2	42	19.2	57.7	9.6	57	13.4	17.4
9.8	7	0.8	33.0	8.6		28.1	31.2	10.0		27.7	25.4	9.8	58	2.9	37.3
9.4		51.8	16.4	9.8		50.1	33.4	9.2		49.7	35.8	8.4		6.4	20.9
7.1	8	39.8	35.9	9.6	20	35.1	55.9	9.4	43	4.7	7.2	10.0		6.9	50.1
8.2		54.8	11.6	9.5	21	5.1	22.8	9.6		14.2	50.7	9.6		7.4	20.2
8.6	9	25.8	50.8	9.8		28.6	56.2	9.2	44	19.7	10.1	8.8		14.9	7.3
8.4	10	6.3	31.4	9.8		53.1	28.8	10.0		59.7	43.2	8.2	0	25.4	28.0
9.2		19.8	32.8	9.8	22	6.1	57.4	8.8	45	26.7	27.7	9.4	1	29.4	31.6
10.4		37.8	27.0	9.5		42.6	0.3	10.0		39.7	33.8	10.0	2	26.9	46.9
10.4	11	3.3	32.2	8.4		45.6	34.7	10.0	46	14.8	18.0	9.8	3	30.0	2.7
9.9		29.8	7.7	9.6	24	10.1	8.4	8.6		19.6	16.7	10.0		53.4	46.0
10.4		55.8	24.0	9.2		50.1	34.8	10.0		38.4	1.3	9.4	4	14.8	55.1
10.2	12	1.5	48.6	9.8	25	46.1	34.2	9.5		38.6	28.6	9.8		21.6	55.7
9.2		33.8	40.2	8.4	27	29.6	51.4	9.1	47	28.1	31.9	8.6		24.6	10.2
10.4		51.3	28.2	7.0		35.6	40.5	9.4	48	20.6	50.2	8.6		28.6	42.8
25pr.	+ 1	16.2	+ 8.4		+ 1	14.8	+ 8.3		+ 1	12.5	+ 8.2		+ 1	10.9	+ 8.1

1899JanCap.....1G

121-180.				181-240.				241-300.				301-360.			
mag.	1 ^h .	m	-35°	mag.	1 ^h -2 ^h .	m	-35°	mag.	2 ^h -3 ^h .	m	-35°	mag.	3 ^h .	m	-35°
9.8	5	5.6	52.3	9.2	52	48.0	7.7	10.0	33	16.8	14.0	9.9	3	27.1	27.6
8.0	6	0.1	27.6	9.7	53	9.0	55.2	8.8	24.8	28.2		7.3	45.6	54.6	7.0 GSct
7.0		59.1	52.2	8.0	54	11.5	2.9	10.2	34	10.3	11.8	10.4	58.1	56.0	
9.6		59.6	6.0	9.6		13.8	21.9	9.8		21.3	29.0	10.2	5	8.6	56.7
9.6	8	51.1	39.9	9.0	55	19.8	1.8	8.5		24.3	3.0	8.3	12.6	24.4	8.2 G
9.8	9	24.6	33.6	9.9		51.3	15.0	8.0		38.3	33.8	9.9	19.6	8.6	
9.8	10	28.6	46.0	9.2	56	18.8	48.9	10.0	35	54.8	50.1	7.6	37.6	2.5	8.3 G
7.8	11	30.6	19.3	9.9		30.8	43.6	9.4	36	6.3	57.4	9.4	6	3.6	6.4
9.2	12	20.6	51.0	9.9		37.8	14.4	9.4		10.3	48.8	8.6	7	13.6	21.2
9.6		49.6	27.3	9.0		50.8	36.8	8.0		52.7	22.0	10.2	34.3	16.4	8.0 G
8.4		49.6	28.7	9.2	57	48.8	52.9	9.4	37	48.3	49.7	9.5	54.8	47.5	
7.6	13	31.6	9.0	9.9	58	14.8	47.6	9.6	38	14.3	24.8	9.8	8	48.6	6.9
7.8	16	43.6	19.1	8.2	59	17.8	52.5	10.2		49.3	43.6	10.4	9	0.1	18.0
8.2		54.6	38.7	9.9	0	59.3	37.1	10.2	39	3.8	17.1	9.6		11.3	35.3
8.9	17	44.6	18.0	9.0	1	9.3	25.4	9.4		41.8	54.3	9.2		11.9	56.5
8.8		49.6	58.6	9.4		23.8	51.0	10.0		54.3	50.5	10.4		54.8	49.0
9.6	18	12.6	53.1	9.6		31.8	44.3	9.8	40	8.8	19.3	8.2	10	31.3	18.5
9.8	20	19.1	22.8	8.3		36.3	20.9	9.8		32.3	42.9	9.4	11	40.5	31.3
9.8	21	31.6	20.5	9.0	2	5.3	52.0	10.2	41	10.3	53.5	9.6		57.8	15.8
9.2		49.6	7.1	9.9	5	49.3	49.7	7.7		13.3	26.1	9.5	12	24.3	0.3
9.6	24	3.6	4.6	7.8	7	29.8	7.6	10.0		20.3	34.9	10.0		32.3	57.4
9.4		30.6	21.6	9.6	8	5.3	5.2	8.3		25.3	19.0	9.0	13	29.3	36.0
9.2	25	29.6	55.0	8.5	9	12.8	45.6	10.2		33.3	3.1	8.4		46.3	37.4
9.8		30.6	45.0	8.0		50.3	42.1	9.6	42	7.3	38.3	9.4	14	9.3	22.0
9.4		30.6	25.5	9.6	10	28.3	31.6	8.8		9.3	18.7	8.3		19.3	57.1
8.3	26	18.6	8.6	8.6	11	22.5	33.7	10.2		10.3	40.7	6.9		23.3	27.4
9.1		23.6	7.8	8.8	13	1.0	2.6	10.2		32.8	3.9	10.0		25.3	5.4
9.2		51.6	39.6	9.9		8.5	20.8	9.4	43	0.5	20.3	10.0	15	6.8	2.3
9.2	27	0.6	36.8	9.4	14	49.5	6.2	9.1		30.8	35.3	10.0		49.1	39.0
9.1		32.9	32.0	8.6	15	13.0	41.1	10.2		59.3	16.2	9.0	17	4.1	51.8
7.8	29	6.6	59.2	9.8		54.5	40.8	10.2	44	11.3	37.9	9.4		31.1	5.2
9.9		38.3	45.6	8.8	16	21.0	24.4	9.4		14.5	40.7	10.0	18	33.6	57.0
9.0	32	42.8	50.9	9.4		22.5	49.9	10.2	45	0.3	18.1	10.0	19	15.1	12.1
9.9	33	49.3	31.1	9.6		51.0	5.0	10.2		7.8	11.3	9.8		15.1	42.4
9.9	34	30.3	2.5	9.9		59.5	35.3	10.4		20.2	24.9	9.6		35.6	3.3
9.9		32.3	49.9	9.8	18	30.5	49.8	9.5		50.2	20.4	9.5		54.1	45.0
8.1		40.3	6.6	10.2		38.5	50.1	8.1	48	4.7	33.1	10.0	20	10.1	16.1
9.9	35	0.8	16.0	10.0	19	10.0	49.1	7.8		9.9	0.2	10.0		29.6	49.4
9.9		8.8	18.0	8.0		23.3	20.7	10.4	49	12.2	4.1	9.2	21	10.1	47.5
9.7		10.4	58.8	8.5		48.5	8.2	9.0		48.9	3.1	8.8		38.5	57.3
9.9		26.8	47.9	9.4	21	0.5	15.9	10.4	50	19.9	59.5	9.6		48.9	43.1
8.4		27.8	13.3	10.2		18.5	8.4	9.2		46.9	51.2	10.0	22	10.4	38.9
9.7		27.8	20.7	9.2	23	10.0	20.4	9.6		59.4	55.0	10.0		18.4	31.0
8.4	36	23.8	28.0	10.2	24	52.0	16.6	10.0	51	0.4	6.0	9.6	23	44.3	0.8
7.7	39	2.4	2.1	10.0	25	44.5	40.9	9.6		9.9	40.1	9.8	24	0.7	0.1
9.9		12.8	5.5	10.2	26	55.5	36.5	9.8		12.4	59.8	9.6		14.7	2.6
9.9	40	9.8	55.3	6.7	27	54.5	12.0	10.0		20.4	27.0	10.0	25	5.6	45.1
9.9	42	9.8	2.2	9.6	28	41.5	10.8	7.4		46.9	53.0	10.0		14.9	17.6
9.9		30.3	3.0	9.8	30	1.5	31.6	9.7		52	48.7	8.8		11.1	10.3
9.7	43	39.3	20.8	10.0		18.5	31.0	10.4	53	42.7	10.5	9.1	27	31.6	23.4
9.5		49.3	55.4	9.2		55.0	46.2	10.4	54	34.2	11.1	8.8	29	8.6	13.0
8.2	44	5.8	4.9	10.2	31	26.0	48.0	8.8		55	20.7	7.2		39.6	15.0
8.0	47	5.3	41.2	9.8		32.8	37.5	8.8		32.2	17.1	8.8	31	40.6	12.3
8.2		18.8	28.1	9.2		39.3	54.5	9.4		34.0	19.4	7.9	32	30.6	3.8
9.0		28.8	16.0	7.9		43.8	51.9	10.0		34.2	51.4	9.0	33	17.1	23.2
9.7		57.3	28.0	6.8		47.3	6.8	10.2		44.0	7.5	9.2		30.8	14.2
9.4	50	54.3	26.6	9.4	32	0.3	32.0	9.0		57	5.5	7.5		54.5	36.8
8.5	52	29.0	43.1	10.0		7.3	7.7	10.4		0	44.0	10.0	34	10.5	44.0
9.7		33.5	1.8	10.2		10.3	10.5	9.0		2	32.5	10.0		18.0	49.9
9.0		48.0	42.9	8.8		32.8	4.9	10.4		53.5	29.3	10.8		21.2	48.1
25Pr.	+ 1	7.9	+ 7.7	± 1	3.5	+ 6.9		+ 1	1.2	+ 6.3		+ 0	58.8	+ 5.5	

361-420.			421-480.			481-540.			541-600.			
mag.	3h.	-35°	mag.	3h.-4h.	-35°	mag.	4h.	-35°	mag.	4h.-5h.	-35°	
10.8	34	23.7	38.3	9.2	56	21.6	4.3	9.8	20	13.0	34.7	9.5
10.8		50.7	12.9	10.0	57	10.1	53.8	10.4		17.5	3.1	9.4
10.0	35	36.7	45.8	9.2	59	45.1	4.7	9.2		18.5	25.0	10.8
9.4		49.2	29.7	10.8	0	1.6	18.8	6.5		19.0	2.6	6.5
9.8	36	10.2	25.0	10.8		10.1	11.9	10.8		34.0	20.9	9.7
8.6		23.2	18.5	7.5	7.5	16.3	47.1	10.4		37.5	41.1	9.4
8.4		31.0	50.6	10.2		29.9	2.3	10.8		45.5	0.0	10.6
10.3		34.0	51.4	8.4		59.8	48.3	8.0		49.0	57.6	8.0
10.0	37	4.0	44.1	8.4	1	13.4	24.4	9.0		52.0	8.9	9.5
10.8		10.0	3.8	10.3		59.1	18.0	9.0		54.0	7.9	8.5
9.2		30.0	7.4	9.2	2	15.1	51.9	9.4	21	30.5	19.3	9.0
10.8		30.0	21.1	9.6		26.1	38.8	10.4	22	3.2	15.3	8.9
10.8		30.5	58.4	8.5		30.1	52.9	9.8		29.0	40.7	10.6
9.6		50.0	6.8	9.4		49.1	20.0	10.3	24	2.5	41.7	10.8
10.6		59.0	36.9	10.8		50.7	1.8	9.0		53.0	33.7	9.5
9.6	38	17.0	20.7	7.6		52.5	43.7	10.6	25	13.5	18.0	8.8
10.6		33.0	52.6	10.2	3	35.5	28.3	10.8		34.0	35.1	10.6
10.8		56.5	39.0	9.0		40.0	44.6	10.8		57.2	49.1	8.0
10.6	39	0.0	20.4	10.3		50.0	56.5	10.8	26	7.8	55.6	6.5
9.5		0.5	6.8	9.8	4	49.5	13.7	9.7		10.8	13.5	8.4
10.8	40	6.0	45.0	10.4	5	2.0	41.8	10.2		21.3	51.9	10.6
9.5		59.0	32.7	9.6		8.4	0.1	10.2		44.7	22.6	7.8
10.6	41	22.5	33.5	7.0	6	7.5	35.9	10.2	27	7.7	32.2	10.2
10.3		23.0	57.6	10.4		54.5	36.5	10.8		12.3	51.8	10.6
10.2	42	9.0	11.7	9.0	7	29.5	16.7	10.6		52.7	16.3	9.6
10.8		17.5	8.9	10.8		42.3	2.0	8.2	28	24.7	57.9	8.0
10.8		55.5	34.8	10.8		44.0	36.3	8.9	29	29.7	6.2	9.5
10.8	43	28.0	35.6	10.8		56.5	56.1	7.7	30	7.2	54.7	7.5
10.3	44	5.5	35.0	10.8	8	1.0	23.2	8.0		8.2	4.7	7.2
8.8	45	11.0	47.7	10.6	9	15.5	57.0	7.4		22.2	50.1	7.0
9.2	46	5.0	10.2	9.0		58.0	29.1	10.8		50.2	48.8	10.4
10.4		55.0	11.6	10.8	10	30.5	2.6	8.4	32	28.7	52.4	8.5
10.8		57.5	57.6	7.6	11	24.0	34.4	9.2	33	21.2	46.6	8.5
10.0	48	0.5	9.3	10.8	12	34.0	55.2	9.8		51.7	26.1	10.6
4.5		53.0	6.1	9.6		40.0	12.0	9.3		57.7	45.4	9.0
10.0	49	1.5	30.1	10.2		41.5	24.0	10.8		59.2	12.8	9.4
10.0		49.0	4.0	9.4		54.0	34.5	8.3	34	4.7	32.9	9.0
9.8		53.0	50.8	10.4	13	14.5	24.2	10.8		11.2	3.1	9.0
8.4	50	25.5	56.0	10.0		24.0	30.3	10.8	35	12.2	21.8	9.1
10.8		51.5	16.1	10.8		32.0	20.1	8.3		13.7	24.6	10.6
9.0		59.0	36.9	9.4		33.5	48.0	8.1		20.2	53.4	8.5
10.6	51	0.7	56.9	10.8		33.5	7.5	8.4		34.2	15.6	8.5
10.0		7.5	15.5	9.6	15	11.5	19.3	9.7		57.7	50.2	9.1
9.5	52	9.0	53.7	9.8		32.0	32.0	10.8	36	29.2	49.2	10.4
9.6		21.5	53.3	9.0		57.5	23.0	10.2		42.2	28.3	10.4
10.0		29.5	19.8	8.0	16	15.5	1.8	10.6		44.2	3.0	6.0
10.8	53	5.0	45.8	10.6		49.0	19.9	9.0		37	15.7	21.0
10.6		10.6	57.2	8.2	17	24.0	11.6	9.8		25.7	34.0	9.5
10.8		11.1	15.0	8.5	18	16.5	7.2	8.3		37.7	42.8	9.0
9.0		25.6	3.6	9.0		28.5	45.1	8.9	38	14.7	49.8	8.5
8.4		53.1	33.8	7.3		32.5	50.2	8.6		33.2	5.0	8.5
10.8		57.1	22.7	9.6	19	6.0	14.4	10.8		39	9.7	42.4
10.4	54	24.6	48.9	10.4		10.0	56.0	10.0		40	7.7	40.1
10.8		32.6	32.3	10.8		10.5	37.9	10.0		8.7	15.8	9.5
10.8		57.1	17.6	8.2		15.9	2.2	10.2	41	1.6	34.5	10.0
10.8	55	7.6	19.6	10.6		20.0	0.2	10.8		39.6	6.3	9.8
9.2		21.8	59.7	10.4		27.5	34.2	10.8		42	0.6	13.4
10.8		30.6	55.9	10.8		47.0	20.7	10.8		17.1	36.0	9.1
9.2		42.6	12.2	9.4		47.5	53.1	8.8		4.5	55.4	3.0
10.2		42.6	13.0	9.0		48.5	34.1	10.8		43	30.7	0.8
2.5pr.	+ 0	56.9	+ 4.6	+ 0	55.7	+ 3.9		+ 0	54.8	+ 3.2		
												+ 0
												54.0
												+ 2.4

601-660.			661-720.			721-780.			781-840.		
mag.	5 ^h .	-35°	mag.	5 ^h .	-35°	mag.	5 ^h .	-35°	mag.	5 ^h -6 ^h .	-35°
9.4	3 59.4	46.5	10.0	24 12.4	16.1	10.0	38 0.5	23.0	9.2	53 8.4	11.1
9.0	4 15.9	33.9	10.0	14.4	59.7	8.8	24.3	9.4	9.0	19.9	6.6
10.0	26.9	35.7	9.3	19.4	53.8	10.0	37.3	2.5	9.6	29.9	56.1
10.6	36.4	19.5	9.9	20.4	54.6	8.8	39.8	19.4	8.4	39.9	48.7
9.0	44.4	47.9	9.3	25 8.4	30.0	8.7	53.3	33.0	9.2	56.4	40.6
9.0	5 32.9	27.4	9.0	20.4	38.2	9.6	39 20.8	37.4	9.0	54 13.6	1.2
9.8	33.9	12.5	9.9	51.4	21.6	8.5	41.3	32.0	9.9	32.4	6.4
7.6	6 28.9	3.5	9.4	59.4	29.4	10.0	48.8	28.1	10.2	47.9	46.0
10.4	29.9	24.2	9.0	26 9.4	0.8	10.0	40 0.8	51.1	10.3	56.4	49.7
9.4	34.9	26.4	10.0	25.4	14.7	8.4	13.8	28.4	8.0	55 13.9	21.6
9.6	7 33.4	25.4	8.4	32.4	27.6	9.4	15.8	44.2	10.4	32.4	38.0
9.0	44.4	47.3	5.8	46.9	33.8	10.0	27.8	6.5	9.4	49.9	18.5
10.6	59.9	35.2	9.8	27 5.9	32.5	9.9	35.8	27.8	10.6	56 15.9	29.0
10.0	8 9.9	4.2	9.4	12.4	14.5	8.8	36.1	51.1	10.8	19.9	10.2
9.8	36.4	5.2	10.0	40.4	44.2	9.8	54.3	42.8	10.8	33.7	22.5
10.6	54.9	26.1	9.0	49.9	23.6	9.9	41 45.1	26.7	9.3	45.4	20.3
10.6	9 6.9	43.8	10.0	28 10.4	6.1	10.3	54.9	36.7	10.4	54.9	29.1
7.8	19.9	58.3	10.0	11.4	6.9	10.4	42 9.9	13.8	7.4	57 13.6	2.8
9.8	19.9	26.8	9.0	30.4	4.0	9.3	25.9	41.4	10.8	14.9	54.2
9.0	41.2	58.0	10.0	35.4	21.4	7.4	54.9	43.3	10.8	18.9	4.7
10.6	10 1.4	12.3	6.8	39.9	13.5	9.8	43 19.4	20.0	9.4	19.4	5.5
10.6	9.4	57.6	9.0	41.5	31.7	8.6	36.4	22.3	9.6	19.9	27.0
9.8	43.4	14.8	8.8	29 19.0	5.2	10.4	41.9	49.4	9.9	39.4	35.9
9.8	54.9	7.6	7.9	30 3.0	56.4	10.8	50.9	45.6	10.8	46.7	15.2
6.8	11 17.9	4.1	8.2	9.0	29.0	9.2	44 18.9	52.1	10.2	58 4.4	16.3
9.0	44.9	57.2	9.0	34.0	27.2	9.4	45 28.7	57.0	9.9	31.9	57.9
10.6	12 33.9	44.2	8.0	36.5	33.3	10.8	39.9	18.1	10.3	40.9	6.4
5.9	58.9	1.2	9.6	39.0	43.3	10.3	44.9	38.6	10.6	57.9	23.9
10.6	59.9	37.3	8.5	51.5	53.4	10.6	46 14.7	40.8	10.8	59 12.9	46.4
9.1	13 0.9	44.0	9.9	31 50.5	43.3	9.1	14.7	58.0	10.3	14.4	48.9
8.4	29.9	29.8	8.1	32 9.5	8.4	10.3	24.4	57.4	10.3	19.9	17.9
10.2	14 34.4	54.0	10.0	11.5	7.5	5.1	33.4	48.9	10.6	23.9	25.6
9.8	49.9	43.0	9.4	20.5	6.0	10.4	38.4	50.2	10.8	31.9	49.6
10.0	15 35.1	47.2	9.3	21.5	46.7	10.8	51.9	53.4	9.3	32.4	6.7
10.6	16 36.2	32.6	9.9	25.0	55.8	7.4	47 32.6	56.5	10.6	0 7.4	44.5
9.4	47.2	7.8	9.9	34.5	35.4	10.8	49.4	55.8	10.2	23.9	24.4
9.4	50.4	50.3	9.3	33 11.3	2.3	10.4	51.2	58.0	9.1	39.4	47.5
8.6	51.2	19.3	9.4	13.5	36.7	10.8	54.9	50.2	10.8	39.4	46.6
9.8	54.9	37.7	10.0	14.0	25.5	8.3	48 1.9	23.3	10.0	59.6	29.6
9.6	17 1.4	12.9	8.8	16.8	2.9	10.4	14.4	19.9	5.7	1 2.1	30.3
10.0	13.2	48.7	9.2	29.5	16.3	8.4	26.4	38.6	8.2	4.6	31.7
9.8	30.4	49.9	9.6	29.5	19.7	10.8	59.4	29.6	9.6	14.6	15.0
8.0	50.9	25.0	8.6	51.5	32.4	9.4	49 6.4	51.1	10.8	19.1	52.3
9.3	59.4	22.7	9.8	34 11.0	48.9	10.8	24.9	45.2	10.8	20.6	37.8
9.9	18 17.4	44.9	10.0	14.5	17.9	10.2	40.9	22.1	10.6	29.1	36.9
8.4	19 43.4	54.0	10.0	21.0	19.0	7.2	44.4	55.8	10.8	58.6	28.0
8.2	45.4	15.9	9.4	24.5	33.9	8.2	50 5.4	6.4	10.4	2 4.6	48.3
9.2	20 44.4	5.7	9.3	25.5	5.2	10.6	31.9	9.0	10.8	13.1	33.8
8.2	21 20.4	41.5	8.5	37.5	14.5	10.8	41.9	53.8	10.8	39.6	37.3
7.6	25.9	27.8	9.6	36 11.5	30.8	10.8	51 18.4	6.6	10.8	59.1	57.1
10.0	31.4	25.0	8.7	30.5	40.6	10.3	28.4	0.8	7.5	3 3.1	12.5
9.9	40.4	36.6	8.8	49.0	3.4	9.0	28.9	7.3	10.2	9.6	47.4
9.4	51.4	55.2	8.0	54.5	18.6	10.8	30.4	59.8	9.9	29.1	25.0
9.9	22 32.9	20.7	8.4	37 0.0	46.4	9.3	31.9	20.0	10.4	4 12.6	28.3
8.7	23 5.9	6.3	9.9	11.5	30.2	10.3	43.9	52.8	8.4	14.4	0.0
9.9	30.4	26.1	9.6	21.3	8.1	9.6	52 50.9	28.6	10.8	15.6	58.2
9.1	41.9	34.0	9.9	23.3	12.9	10.6	59.7	59.2	10.4	50.1	58.8
9.4	24 5.4	42.6	9.1	36.8	31.2	9.6	53 0.6	1.1	9.2	56.1	17.8
9.2	8.9	3.1	9.9	40.8	43.3	9.9	5.4	45.7	10.8	57.6	39.6
9.2	9.4	50.3	10.0	41.8	0.7	3.6	6.4	17.7	8.8	5 4.6	6.7
25 pr.	+ 0 53.4	+ 1.7		+ 0 53.2	+ 1.0		+ 0 53.0	+ 0.5		+ 0 53.0	0.0

841-900.				901-960.				961-1020.				1021-1080.							
mag.	6h.	-35°		mag.	6h.	-35°		mag.	6h.	-35°		mag.	6h.	-35°					
9.1	5	34.6	44.0	9.5	10.0	15	51.8	26.6	8.9	27	53.1	53.4	9.8	39	36.3	8.2			
10.8		35.6	40.3	9.0	16	9.3	13.3	8.9	28	2.2	46.8	9.9		36.8	59.9				
9.0		36.6	49.4	10.1		9.3	21.4	9.0		40.2	27.8	9.0	9.4	48.8	11.8				
9.9		39.6	26.9	7.8		16.3	35.4	10.1		40.2	10.9	9.9	40	31.1	56.1				
9.9		49.1	34.5	9.0		21.8	29.3	9.0		50.2	21.8	9.0	8.8	45.1	4.5	9.2			
8.4		58.1	44.7	9.0	10.1		21.8	24.8	10.1	29	4.2	27.9	9.8		48.1	2.2	9.5		
10.3	6	4.1	22.0	8.5		42.8	3.9	8.5	10.1		9.7	7.3	9.8	41	30.1	31.3	9.5		
8.8		12.1	9.0	8.6		44.3	4.1	9.0	9.4		17.2	27.0	9.6		37.6	9.9			
9.6		43.6	27.5	9.8		58.3	34.0	10.0		17.7	24.9	8.4	42	27.6	42.7	8.5			
9.0	7	1.6	32.1	10.0	17	9.3	11.3	10.0		28.2	21.6	9.6		29.1	31.2				
10.8		6.6	33.7	10.1		11.3	31.4	9.2		32.9	0.5	8.8		34.1	52.3	9.0			
10.8		7.1	26.9	8.8		43.8	50.0	8.6		54.2	6.9	9.0	8.4	55.1	48.3	8.5			
10.4		9.4	27.9	8.4		49.3	17.5	9.4	30	5.2	6.7	9.9	43	4.6	35.3				
10.3		19.6	38.2	10.1	18	2.8	34.9	8.9		9.2	35.8	9.6		19.1	46.1	9.0			
10.1		30.3	27.4	8.6		38.8	37.6	9.2		19.2	35.4	9.2		30.1	5.6				
9.4		37.0	0.5	9.8		44.3	3.3	10.1		59.7	12.3	9.9		45.1	9.3				
9.8		38.1	54.7	10.1		48.3	16.9	7.2	31	30.7	59.1	7.0	GSg						
9.2	8	0.6	13.6	9.6		59.8	58.5	7.8		31.2	4.2	8.5	G						
10.0		29.1	12.8	9.8	19	0.8	18.0	9.4		52.7	56.2	9.0	44	14.6	33.3	9.5			
10.0		34.1	37.2	10.0		9.3	33.9	10.1		54.1	10.1	8.8		34.6	11.5	8.0	G		
10.1		53.9	24.1	9.2		13.8	3.9	9.0	9.0		59.7	13.7	9.0		41.6	4.5	9.2		
10.1	9	4.1	55.3	10.0		14.8	40.3	8.8	32	29.7	2.7	8.5	9.1		49.6	11.9			
8.4		8.6	46.1	8.5	8.6		23.3	44.9	9.4		32.5	45.6	9.8		59.6	56.7			
9.8		8.6	2.1	9.4		43.8	47.7	9.4		36.2	31.2	9.6	45	9.1	24.3				
10.1		10.0	1.9	9.8		48.3	3.7	10.0	33	6.6	50.5	9.4		19.6	34.9				
8.9		10.6	54.0	8.6		56.1	12.9	8.5	10.1		12.6	7.8	9.9	46	7.1	41.6			
8.4		16.6	41.0	8.5	G	9.8	20	13.6	30.8	10.1		19.6	32.7	8.5		44.1	19.1	8.5	
10.0		18.6	58.7	9.8		14.1	52.5	9.8		22.3	38.0	9.9	47	10.1	57.8				
10.1		25.6	25.0	10.1		19.1	55.0	9.6		46.3	43.1	8.5		25.1	55.1	8.8	G		
10.1		26.1	22.8	10.0		36.6	18.1	9.4		55.8	18.7	9.8		45.1	26.3				
8.4		44.6	14.7	9.0	9.2	21	15.1	30.3	9.9	34	24.8	9.6	7.8		51.1	8.4	8.0	G	
9.4		49.1	41.6	10.0	7.4		18.1	37.6	8.5	9.1		28.3	18.3	9.9	48	25.1	56.3	9.0	
8.9	10	10.6	24.9	9.4		20.1	18.7	8.5		32.3	23.5	G	9.9		55.2	57.3			
8.5		54.6	24.1	8.2		30.6	15.9	7.5	G	8.2		34.3	1.6	8.2	G				
9.2	11	59.1	56.2	9.5		40.6	44.5	9.9		40.8	59.5	8.5	49	20.1	41.0	8.5			
7.6	12	0.6	23.2	7.5	G	9.2	22	9.6	45.5	8.0		49.7	25.1	8.0	G				
6.4		6.1	6.0	4.8	GStπ	10.0		26.1	15.0	8.2		58.3	53.9	9.0					
9.2		10.6	53.6	9.4		36.1	14.4	9.0	35	8.7	49.0	9.5	9.9	50	17.1	46.9			
8.4		28.1	51.6	8.5	G	9.4		51.1	55.7	9.5		10.6	22.0	9.9		28.1	25.2		
9.2		42.6	6.0	9.4	23	12.1	50.1	9.6		44.7	7.7	9.9		44.1	33.5				
7.4		43.1	55.5	8.0	G	10.1		14.6	21.5	9.2		59.8	40.1	9.0	51	34.6	32.3	8.5	
9.2		45.1	40.9	9.2		23.1	27.2	9.1	36	2.3	18.6	9.9		48.8	2.2				
10.1		58.6	16.3	9.8		35.1	21.3	9.2		10.3	53.5	9.0	7.6	52	16.8	10.5	6.5	GSet	
10.1	13	20.1	7.0	8.9	24	9.6	4.9	9.5	9.2		27.3	34.7	9.1		30.8	56.0	9.0	G	
10.1		20.1	4.0	8.2		9.6	10.9	8.8	G	9.9		27.8	31.8	9.9	6.8	34.8	6.1		
10.0		30.1	36.5	9.6		11.6	26.2	9.4	37	11.3	26.1	9.0	9.9		49.3	20.5	6.5	GSc	
10.1		44.6	12.0	10.1		20.6	24.5	9.8		29.8	8.2	8.0	53	6.8	17.9	7.5	GS		
10.0		46.1	13.9	9.4		29.6	55.3	9.2		33.8	28.7	8.5	9.4		9.3	28.6			
10.1		51.8	29.8	10.1	25	6.6	53.9	9.9		46.8	41.9	7.5		48.3	15.1	7.8	G		
10.1		55.8	30.0	10.0		35.6	12.7	9.9		49.3	56.3	9.8		55.3	34.7				
10.1		59.8	31.9	9.4		38.6	47.4	9.2		52.3	54.5	9.0	9.5	54	46.6	58.7			
8.2	14	21.8	51.7	8.5	G	9.4		39.6	38.1	9.2	38	17.3	33.4	9.2	55	14.3	38.7		
9.4		21.8	9.6	10.0		58.6	8.3	9.9		28.8	16.4	9.9		27.0	51.6	9.2			
9.4		24.8	11.1	9.0	26	0.6	23.7	10.0	9.2		29.3	54.2	9.6		35.8	57.9			
9.2		28.3	33.2	10.0		34.6	16.3	9.2		49.3	42.4	9.9		37.6	33.9				
9.6		49.3	34.5	8.2		36.6	23.3	8.0	9.9		49.8	42.0	9.0		39.8	25.0			
9.6	15	4.8	57.1	7.4		46.1	10.2	6.5	GSet	8.2		52.8	30.4	8.8	9.8	56	6.3	19.9	
9.8		6.8	6.8	8.0		49.6	32.2	8.5	G	9.9		54.3	35.9	7.9		10.1	39.7	8.0	G
8.6		23.3	29.9	10.0	27	1.1	43.2	9.2	39	12.8	44.0	8.4		12.0	51.6	8.2	G		
9.5		27.3	50.1	10.1		45.6	36.5	9.9		25.3	10.7	9.2		43.3	42.1				
25pr.	+0	53.0	-0.4	+0	53.1	-0.8		+0	53.2	-1.2		+0	53.5	-1.7					

1081-1140.				1141-1200.				1201-1260.				1261-1320.			
6h.-7h.		-35°		7h.		-35°		7h.		-35°		7h.		-35°	
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s
10.0	56 46.6	10.7	9.0	9.8	6 30.2	17.7		9.2	15 56.6	34.9		9.2	24 29.9	7.2	
8.5	57 3.3	10.2	7.5 G	9.4	33.2	13.3	9.0	9.6	16 2.6	43.8		10.2	34.6	2.7	
10.0	15.0	36.6		9.6	42.7	29.2		10.0	7.6	11.0		10.4	37.4	41.5	
7.2	19.0	22.2	7.0 GSc	9.6	45.7	17.0		9.7	10.1	43.2		9.6	38.9	7.2	9.5
8.7	31.0	24.5	9.0	10.0	7 7.4	0.0		9.8	24.6	30.9		10.3	25 4.9	26.3	
9.0	32.7	35.8	8.5	9.0	7.7	25.3	9.0	9.7	36.6	7.8		10.3	22.9	48.3	
9.8	51.7	41.4		9.8	11.7	40.1		7.9	42.6	15.6	8.5	10.0	28.4	18.1	
9.0	58 11.2	14.7		9.7	8 3.7	56.3		8.9	49.6	31.8	8.5	10.3	35.3	1.3	
10.0	11.2	53.2		9.3	16.2	11.0		9.0	54.6	3.6	9.5	10.3	39.9	4.7	
9.8	13.2	31.4	9.0	9.7	32.7	7.4		9.4	58.6	33.1		9.8	39.9	14.5	9.5
9.4	22.2	21.0		9.0	41.2	26.6		9.8	59.6	45.8		9.3	44.9	23.7	
9.4	25.2	4.3		10.0	43.7	29.7		8.7	17 10.6	12.1	8.5	10.5	46.9	27.3	
10.0	37.2	46.2		9.4	56.2	55.4		8.8	19.6	4.0	9.0	9.6	51.9	35.7	
10.0	54.2	50.0		10.0	9 6.2	51.5		7.4	45.6	40.8	GSc	10.5	26 1.6	38.0	
8.6	55.2	8.2	8.5	8.9	15.7	6.3	8.5	10.0	57.1	48.7		9.6	1.9	9.2	
10.0	59 2.2	32.7		9.0	19.2	14.5	9.5	9.8	58.6	6.8		10.2	6.9	6.1	
10.0	11.2	53.9		8.4	25.2	52.2	8.5	9.8	18 14.1	15.2		10.5	9.9	41.3	
9.5	15.2	6.8		10.0	45.2	56.1		9.0	43.6	50.2		10.2	10.9	55.1	
10.0	15.7	57.8		10.0	47.2	0.9		8.2	51.6	32.8	8.5	10.4	11.6	43.3	
9.4	18.7	46.2		8.5	10 2.7	57.2	8.5	10.0	58.1	51.2		10.4	12.4	7.3	
10.0	26.2	11.5		8.6	10.2	34.5		9.3	19 6.6	27.1		9.8	13.9	17.4	
10.0	33.7	13.4	9.0	8.4	14.7	1.9	8.5	9.0	9.6	31.2	9.5	9.4	27.8	0.3	9.5
9.4	36.5	57.0	9.5	10.0	18.8	39.9		6.8	26.6	35.6	6.5 GSc	10.4	36.4	5.3	
9.0	39.2	57.5	9.0 G	9.0	30.3	19.3		10.0	37.6	24.6		9.8	36.9	10.3	
9.4	39.7	18.8		10.0	42.3	21.0		10.0	20 9.1	5.8	9.5	10.0	39.9	11.1	
10.0	41.8	35.5		9.4	44.8	55.6		9.4	41.1	28.2		10.5	49.6	56.3	
9.3	57.2	48.0	9.0	9.0	11 6.8	42.0	9.0	10.0	55.6	11.0		9.0	49.9	25.2	9.0
10.0	57.7	0.8		8.2	7.8	28.8	8.5	10.0	21 4.3	13.3		7.2	54.9	53.5	7.0 GSc
8.6	0 15.7	43.7	9.0	8.2	21.3	35.7	8.5	9.5	12.1	8.6		10.5	27 7.9	35.9	
8.4	45.7	45.0	7.5 G	10.0	29.8	51.7		9.5	17.6	41.3		9.6	8.4	15.9	
8.7	47.2	34.4	9.5	8.7	39.8	57.4		8.8	21.1	20.7	9.5	10.1	9.4	19.5	
9.8	1 1.2	50.4		9.5	44.8	7.3		10.5	25.9	37.2		7.2	9.9	37.3	6.5 GSc
9.8	2.2	31.6		10.0	48.8	49.2		10.5	29.9	30.2		9.3	18.4	15.7	
9.4	24.7	31.8	9.0	9.0	59.8	40.2	9.5	8.6	38.4	20.7	9.0	10.3	19.9	10.7	
9.8	31.7	51.2		10.0	12 11.8	50.4		9.6	59.9	56.0		9.8	42.1	2.7	
9.8	44.2	0.2		8.7	44.1	2.9	9.5	10.3	22 7.9	37.2		10.1	45.4	12.5	
8.6	52.2	33.4	8.0	9.4	45.3	8.2		9.6	24.2	8.5	9.5	6.7	49.9	41.6	6.5 GSc
10.0	2 16.2	22.2		9.2	56.8	36.6		9.8	28.4	48.0		10.4	52.9	40.9	
9.6	33.7	53.0		10.0	59.8	24.2		9.6	34.2	9.1		9.4	56.9	18.1	
10.0	35.2	35.7		9.8	13 18.3	55.1	9.0	10.2	45.9	55.3		10.0	57.1	56.8	
10.0	57.2	35.0		10.0	25.3	26.0		10.5	49.9	53.9		10.3	59.9	40.1	
8.8	3 0.2	40.7	8.5	10.0	31.8	2.2		10.0	50.4	38.5		9.6	28 1.4	17.9	
8.8	9.2	11.2	8.5	10.0	32.8	30.4		9.8	51.9	5.1		10.1	2.9	21.6	
8.8	16.7	45.3	9.0 G	10.0	33.8	51.2		10.5	54.9	27.8		9.6	8.9	44.1	
9.2	20.2	9.6	9.0	8.5	34.3	23.2	9.0	10.4	23 0.9	52.9		10.5	11.9	14.6	
8.2	21.2	37.0	7.5 G	8.7	39.8	35.4	9.0	10.5	9.9	30.1		10.5	13.9	24.0	
9.8	42.2	34.9		10.0	44.8	48.1		10.4	13.1	0.1		9.0	16.4	20.8	
8.9	51.7	21.0		10.0	14 11.8	45.1		10.4	20.1	2.3		10.4	17.4	20.3	
9.3	53.7	5.9		10.0	38.8	46.2		10.3	24.9	43.7		10.5	17.9	42.4	
9.4	4 35.2	16.6		9.8	38.8	6.6		10.4	30.3	1.5		10.3	25.4	5.6	
8.5	49.2	35.6	8.5	7.7	43.8	56.3	8.5	10.0	35.9	9.7		10.5	25.9	5.2	
8.2	59.2	5.1	8.5	9.3	50.8	33.5		9.8	44.4	9.0		10.5	29.9	22.2	
7.7	5 2.2	47.4	7.5 G	9.0	54.8	51.3	9.5	9.8	45.9	8.5		9.6	29.9	30.0	
9.5	9.7	15.4		10.0	15 5.8	9.0		7.9	49.3	0.3	7.0 GS	9.8	30.4	35.6	9.5
9.7	38.2	3.5		10.0	10.8	48.6		10.2	54.9	56.3		10.1	30.6	25.8	
9.6	42.2	15.8		8.8	18.8	54.0	9.0	8.9	24 3.9	27.3	9.0	10.3	32.9	22.4	
9.8	50.7	31.8		10.0	29.8	19.6		10.5	25.4	0.6		9.8	37.4	32.7	
8.6	6 19.2	8.8		9.2	41.3	37.5		10.4	28.4	9.2		10.5	41.4	37.3	
10.0	20.2	3.6		9.2	45.8	13.9		9.6	28.4	49.8		10.3	45.4	53.0	
10.0	26.7	48.3		9.4	49.8	3.0		9.6	28.4	47.7		10.4	50.4	53.4	
25pr.	+0 53.8	-2.2		+0 54.2	-2.6			+0 54.4	-2.9			+0 54.7	-3.1		

1321-1380.				1381-1440.				1441-1500.				1501-1560.			
mag.	7h.	-35°		mag.	7h.	-35°		mag.	7h.	-35°		mag.	7h.	-35°	
	m s				m s				m s				m s		
9.8	28	54.9	3.4	10.4	31	30.8	28.4	9.5	34	47.8	26.6	10.4	38	25.6	3.8
10.1		58.9	7.1	10.5		32.3	57.6	9.8		54.3	52.1	10.0		27.6	17.8
9.8	29	5.4	33.2	10.5		40.5	59.7	10.5		54.8	13.0	9.6		36.1	3.1
10.5		5.6	0.2	9.0		45.3	18.6	9.2		57.8	57.4	5.2		38.1	45.2
9.8		5.9	51.2	10.1		50.8	21.7	9.8		59.8	7.4	9.8		50.6	48.0
9.0		15.4	41.4	9.6		54.3	19.1	8.2	35	5.3	24.2	9.8		52.0	58.7
10.4		15.6	50.3	10.5		54.3	32.3	9.6		7.8	1.9	10.5		59.8	59.2
8.9		16.9	32.5	10.3		59.8	34.8	10.2		8.8	44.8	10.5	39	0.6	51.4
10.1		23.4	10.4	10.5		59.8	55.9	10.0		12.8	46.3	10.5		1.6	19.8
9.2		29.9	0.1	10.5	32	1.8	39.9	10.5		14.3	31.9	10.3		8.1	21.1
10.1		30.9	30.4	9.8		1.8	35.8	10.4		14.3	23.2	10.5		9.6	25.6
10.2		33.9	32.0	8.6		4.3	27.9	8.8		18.0	56.9	10.4		9.6	19.6
10.1		37.4	30.6	10.4		9.8	3.3	10.5		19.8	10.3	9.5		13.1	4.9
8.4		42.4	16.8	10.5		16.3	24.4	10.5		23.8	19.8	8.5		14.1	55.2
9.8		47.9	52.0	10.5		19.8	39.6	9.6		25.3	18.7	10.2		16.1	45.2
10.5		50.4	59.9	10.0		24.8	38.2	10.2		31.3	11.1	10.3		18.1	52.8
10.4		50.9	22.4	9.6		25.3	59.9	10.4		36.3	14.1	9.8		19.5	57.4
9.8		53.9	6.9	10.2		26.8	4.5	9.6		38.3	30.2	10.4		23.1	26.7
10.1		54.8	51.5	8.9		31.8	2.5	10.5		38.4	26.1	10.3		24.1	41.9
10.5		55.8	21.0	9.6		34.3	7.7	9.0		39.3	14.8	10.5		24.2	35.0
10.2	30	2.8	36.0	9.6		34.4	2.2	10.5		44.8	8.4	9.5		24.6	33.4
9.8		4.8	40.9	10.3		40.8	7.1	10.5		52.3	6.6	9.8		24.6	38.2
10.2		7.3	39.4	10.4		46.3	28.9	10.4		54.8	23.3	10.4		29.5	18.1
10.5		9.8	25.0	10.3		47.8	13.8	9.3	36	0.3	30.2	10.5		30.1	13.0
10.0		9.8	55.7	10.5		49.3	12.1	10.5		0.8	20.2	10.3		30.6	7.3
10.0		13.8	28.2	10.3		49.8	50.6	9.0		11.8	21.1	10.0		31.6	30.8
9.8		16.3	38.8	9.8		52.3	44.2	10.5		24.8	3.4	9.8		34.6	6.3
8.9		19.8	28.9	9.6		53.5	59.3	10.3		25.8	59.6	6.8		35.1	45.9
10.5		21.8	26.9	10.0		58.8	15.2	9.8		31.8	26.4	10.5		35.5	33.9
10.2		22.3	45.2	9.2	33	10.3	50.0	10.3		32.3	8.8	9.8		39.1	59.2
10.5		25.8	27.2	9.6		10.3	52.0	9.8		38.3	45.7	9.4		46.3	59.0
9.8		28.3	46.7	10.5		11.3	51.1	9.2		39.8	17.6	9.0		49.1	54.2
10.0		28.3	24.3	10.0		13.8	17.3	10.1		42.3	32.1	9.8		51.6	47.9
10.0		30.8	22.6	10.0		15.3	12.6	10.2		43.3	43.1	10.5		58.6	12.3
9.8		31.8	12.7	10.1		18.8	25.7	10.4		50.8	13.8	10.4	40	0.6	17.8
10.5		33.8	49.9	10.1		21.8	43.1	10.5		54.0	0.7	9.8		8.6	18.7
10.1		36.3	41.3	10.3		23.1	0.3	9.6		56.8	20.8	9.5		9.6	8.4
9.6		39.8	17.1	10.5		23.8	22.2	9.8		59.3	3.3	10.5		10.1	3.8
9.8		41.8	0.0	8.4		24.3	49.8	9.2	37	0.3	53.3	10.4		16.6	45.3
10.1		42.3	41.1	10.5		29.8	20.3	10.5		0.3	5.7	10.5		17.6	3.3
10.1		43.8	9.2	10.2		32.3	54.3	10.4		3.3	58.7	10.5		19.6	3.0
9.8		44.8	7.6	10.5		34.3	50.5	9.6		9.3	57.3	10.5		20.1	55.3
10.5		49.3	24.5	10.5		35.8	30.2	9.6		15.1	7.9	10.5		27.6	27.6
10.5		49.8	22.9	10.4		44.8	53.0	10.4		34.6	46.8	10.4		29.6	35.5
10.5		54.8	48.8	10.3		51.3	15.4	10.5		38.1	29.0	10.0		31.1	34.2
10.5	31	1.8	46.6	10.1		52.3	14.3	10.0		45.1	29.1	9.6		31.1	50.2
10.3		3.3	48.0	10.3		53.3	55.6	8.0		48.1	51.2	10.3		35.1	29.9
8.0		4.8	53.3	9.8		59.3	43.2	9.8		51.6	48.7	10.5		36.6	48.2
10.5		4.8	1.4	9.6	34	2.3	10.4	10.3		55.6	42.0	10.1		56.6	31.8
9.3		5.8	32.1	10.0		3.8	23.3	8.8		59.6	58.3	8.8	41	1.6	3.4
10.4		11.3	2.7	9.6		7.8	29.3	9.2		59.6	15.0	8.8		5.6	44.3
10.3		11.8	32.6	8.3		11.8	31.1	10.0	38	5.1	48.1	10.4		6.6	11.2
10.5		14.8	40.1	8.4		11.8	12.1	9.8		6.6	49.4	10.5		11.1	53.9
9.6		19.3	3.2	10.3		15.8	10.9	10.5		9.6	53.4	9.6		12.6	30.2
9.6		19.3	30.1	9.8		20.8	45.1	10.5		15.6	19.1	8.2		18.1	3.0
10.3		20.8	29.0	10.1		21.3	33.1	10.3		19.1	18.2	10.0		24.6	35.2
9.8		21.8	8.7	9.0		24.8	53.0	10.4		19.6	17.6	10.4		27.6	50.6
9.8		24.8	26.3	9.2		31.7	2.4	9.8		20.6	6.2	9.8		30.6	12.8
10.3		29.8	30.9	10.1		44.3	38.7	10.3		21.6	15.8	10.5		44.1	38.2
9.8		30.3	7.7	9.8		46.8	52.0	8.8		23.6	17.5	10.5		50.1	39.7
25 pr.		+0 54.8	-3.2			+0 54.9	-3.3			+0 55.1	-3.4			+0 55.2	-3.5

7^h 1600 Cap. 1G

1561—1620.				1621—1680.				1681—1740.				1741—1800.			
7 ^h .		—35°		7 ^h .		—35°		7 ^h .		—35°		7 ^h .		—35°	
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s
10.4	41 56.6	29.9	10.3	44 17.6	24.3	10.1	47 39.6	53.0	10.2	52 25.8	6.5	10.2	52 25.8	6.5	
9.1	56.6	30.2	10.3	25.1	45.0	10.5	45.4	38.3	8.4	31.3	2.7	8.4	31.3	2.7	8.2 G-
10.1	59.6	3.3	10.1	27.6	27.4	9.8	47.2	38.6	10.2	35.6	0.6	10.2	35.6	0.6	
10.5	42 1.6	21.0	9.6	29.6	45.2	10.2	51.0	54.9	8.8	46.8	25.8	8.8	46.8	25.8	9.0
10.5	7.1	49.2	9.6	31.6	49.3	10.0	59.8	16.7	10.0	47.3	39.1	10.0	47.3	39.1	
9.8	11.6	30.3	9.6	31.6	45.6	9.2	48 1.6	1.6	10.2	50.8	32.0	10.2	50.8	32.0	
10.4	14.6	8.2	10.2	37.4	28.1	10.0	9.8	53.0	9.8	53 26.3	34.1	9.8	53 26.3	34.1	
10.3	16.6	15.2	9.8	38.1	42.8	10.2	19.8	56.7	9.2	28.8	29.7	9.2	28.8	29.7	
9.8	17.1	40.2	10.0	39.1	42.5	9.8	25.3	29.5	10.0	35.3	21.9	10.0	35.3	21.9	
9.8	17.6	3.3	9.5	39.6	28.3	10.2	28.3	4.1	9.8	36.8	47.4	9.8	36.8	47.4	
10.1	21.1	42.8	10.5	39.6	1.0	10.2	29.8	20.7	10.2	57.8	9.5	10.2	57.8	9.5	
10.3	21.6	28.8	10.3	46.8	1.3	9.8	34.3	15.4	10.2	54 10.3	14.7	10.2	54 10.3	14.7	
10.4	27.1	0.8	10.2	50.6	23.8	9.8	34.3	26.8	10.2	11.3	12.8	10.2	11.3	12.8	
9.8	30.6	28.9	10.5	50.6	7.0	10.2	38.8	42.9	10.2	17.6	2.0	10.2	17.6	2.0	
9.8	31.6	12.2	10.5	45 0.6	11.5	10.0	42.3	13.7	10.0	19.3	22.1	10.0	19.3	22.1	
10.2	32.6	19.6	10.5	9.1	18.3	8.8	42.3	29.7	10.0	19.8	47.3	10.0	19.8	47.3	
10.5	34.1	2.7	10.5	9.6	17.4	9.3	45.8	17.7	10.2	38.3	53.7	10.2	38.3	53.7	
8.6	37.1	4.4	10.5	7.4	13.6	10.2	52.1	0.7	10.0	44.3	21.0	10.0	44.3	21.0	
7.6	39.6	46.0	9.8	13.8	0.5	10.2	53.8	39.9	10.2	45.3	9.4	10.2	45.3	9.4	
10.5	40.6	27.8	9.8	14.1	19.0	9.4	59.8	8.9	9.1	59.8	46.1	9.1	59.8	46.1	
10.5	44.6	27.0	10.0	15.6	37.3	10.0	59.8	1.0	10.2	55 0.8	11.2	10.2	55 0.8	11.2	
9.8	49.1	10.1	9.6	15.6	10.1	9.0	49 27.3	53.8	9.6	3.8	5.0	9.6	3.8	5.0	9.0
10.4	50.6	53.5	10.5	26.4	9.0	9.0	29.3	24.4	10.0	12.3	31.2	10.0	12.3	31.2	
10.0	43 0.6	39.3	9.8	29.6	48.6	9.0	29.3	32.8	10.0	13.8	54.8	10.0	13.8	54.8	
9.8	1.1	27.3	10.3	31.6	33.7	5.7	32.8	33.0	10.2	14.8	21.9	10.2	14.8	21.9	
9.8	1.6	26.9	9.5	34.6	24.4	10.2	35.3	9.3	9.0	19.3	56.0	9.0	19.3	56.0	9.0
10.2	3.1	50.6	8.6	42.1	26.1	9.6	37.8	12.2	7.8	19.3	9.4	7.8	19.3	9.4	8.5-
10.2	6.6	58.9	7.9	43.6	28.4	10.2	39.8	47.2	9.8	28.8	25.8	9.8	28.8	25.8	
10.3	8.6	29.7	9.8	45.6	25.9	9.4	40.8	14.8	9.8	33.3	51.3	9.8	33.3	51.3	
10.5	15.1	24.1	7.2	50.6	55.6	10.2	52.3	25.1	7.4	35.8	38.9	7.4	35.8	38.9	7.5 G
10.3	18.1	49.4	9.8	50.6	50.7	10.2	54.7	4.8	9.4	39.8	31.8	9.4	39.8	31.8	
9.4	19.6	52.2	9.8	54.1	33.3	10.2	55.3	14.8	10.0	44.8	49.5	10.0	44.8	49.5	
10.1	21.6	16.8	9.8	55.1	29.1	10.2	55.3	48.3	9.0	49.8	30.0	9.0	49.8	30.0	
10.1	23.1	44.7	7.6	46 0.1	56.6	9.8	59.8	5.4	9.8	59.3	35.8	9.8	59.3	35.8	
10.5	23.6	46.1	9.6	0.1	2.8	8.1	50 4.6	56.9	10.2	56 9.8	25.7	10.2	56 9.8	25.7	
10.5	24.1	29.9	10.5	11.6	40.3	9.8	5.8	8.6	9.1	13.8	46.6	9.1	13.8	46.6	
10.0	27.6	43.0	10.3	16.1	7.8	9.6	9.3	13.4	10.2	29.3	49.4	10.2	29.3	49.4	
10.5	28.6	0.0	9.8	19.6	0.7	10.2	12.3	44.3	10.2	29.8	9.8	10.2	29.8	9.8	
10.2	30.6	28.9	10.5	20.9	59.3	8.8	17.3	14.7	10.0	33.3	43.7	10.0	33.3	43.7	
10.2	34.6	41.0	9.2	24.1	54.9	10.2	21.8	51.7	10.2	34.3	14.9	10.2	34.3	14.9	
10.0	35.1	30.5	10.5	24.1	28.2	9.6	30.3	9.7	8.4	40.3	33.5	8.4	40.3	33.5	7.5 G
10.2	38.6	56.5	10.4	28.6	43.6	9.6	30.3	3.2	10.2	42.8	56.2	10.2	42.8	56.2	
9.6	40.6	6.4	10.5	30.1	7.6	9.8	41.8	40.3	10.2	45.3	32.0	10.2	45.3	32.0	
10.5	42.1	55.9	9.2	30.6	3.5	10.0	49.8	43.9	9.6	46.3	36.2	9.6	46.3	36.2	
10.2	42.1	4.2	9.6	39.6	28.2	10.2	51 1.3	27.9	7.8	48.3	2.0	7.8	48.3	2.0	8.0 G-
10.5	43.4	28.0	8.8	49.6	29.4	10.0	1.8	40.7	9.8	53.3	9.6	9.8	53.3	9.6	
9.6	43.6	6.1	9.8	58.6	11.5	9.6	4.8	42.1	10.2	55.3	3.9	10.2	55.3	3.9	
10.5	44.6	31.1	9.6	59.1	44.9	10.2	16.8	29.9	7.7	56.8	26.5	7.7	56.8	26.5	G
9.6	49.6	52.2	9.6	59.8	1.6	7.8	20.8	34.9	10.2	59.8	0.2	10.2	59.8	0.2	
10.2	49.6	35.0	9.8	47 2.9	52.0	9.8	28.8	38.4	10.2	59.8	46.0	10.2	59.8	46.0	
10.3	51.6	40.1	10.2	3.6	29.9	10.2	35.6	2.2	9.8	57 1.8	41.0	9.8	57 1.8	41.0	
9.8	51.6	35.2	10.0	9.6	28.9	9.8	36.8	15.5	9.0	3.3	3.4	9.0	3.3	3.4	9.5
10.0	55.6	52.4	10.0	10.6	44.2	10.0	39.3	49.9	9.8	7.3	2.0	9.8	7.3	2.0	
10.5	59.6	45.4	9.6	21.6	50.3	8.8	39.8	13.4	9.4	7.3	37.9	9.4	7.3	37.9	
9.6	59.6	3.5	10.5	23.6	36.9	10.2	45.8	56.9	9.3	8.3	21.8	9.3	8.3	21.8	
9.6	44 5.1	24.6	10.5	25.6	36.6	10.2	53.3	49.3	8.2	9.8	50.0	8.2	9.8	50.0	
9.3	9.6	36.8	9.8	27.6	9.2	10.2	55.3	2.1	10.0	18.0	4.7	10.0	18.0	4.7	
8.3	11.6	25.7	10.1	30.6	51.6	10.2	52 4.8	14.7	9.3	20.3	4.6	9.3	20.3	4.6	
9.5	15.0	1.6	10.5	31.1	2.0	9.6	4.8	24.0	10.0	35.8	18.4	10.0	35.8	18.4	
10.5	16.1	47.8	8.4	38.1	44.5	9.1	10.3	47.2	9.0	36.3	33.0	9.0	36.3	33.0	
25pr.	+ 0 55.3	- 3.6		+ 0 55.5	- 3.7		+ 0 55.7	- 3.9		+ 0 56.0	- 4.1		+ 0 56.0	- 4.1	

196 Ancap...

2041-2100.				2101-2160.				2161-2220.				2221-2280.			
mag.		8h.		mag.		8h.		mag.		8h.		mag.		8h.	
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s
8.4	10.4	1.2	8.8	9.4	10.2	13.9	9.9	10.2	12	39.4	56.2	10.4	14	50.5	33.0
10.2	17.9	37.1		10.2	15.4	41.7		10.0		39.4	0.3	10.6		51.5	6.8
10.2	20.4	26.9		10.2	18.9	33.4		8.8		39.9	6.0	10.0		56.0	10.0
10.2	20.4	37.9		8.8	20.9	56.9		10.8		43.5	49.4	10.0		57.5	48.4
10.0	25.4	10.9		8.8	33.4	21.2		10.8		43.5	46.0	10.0	15	0.0	56.7
10.2	26.9	47.3		10.2	33.4	41.5		10.7		45.9	27.7	10.8		1.0	49.9
10.2	29.9	50.1		9.8	36.9	36.8		10.4		46.4	48.9	10.7		9.5	27.8
10.2	30.4	28.7		9.6	39.9	42.3		10.8		50.1	8.8	10.2		19.5	9.3
8.2	34.9	39.7		10.2	40.0	37.8		10.0		51.7	33.5	10.8		19.5	3.2
7.5	37.2	58.0	8.8 G-	9.0	40.4	11.2		10.6		51.7	9.6	10.4		20.5	55.2
10.2	37.4	12.9		10.2	41.0	26.9		9.6		53.4	13.7	10.8		20.6	45.3
10.2	39.2	51.6		8.2	44.9	50.6	9.0	10.8		55.0	24.7	10.4		21.0	53.3
10.0	39.4	13.0		8.4	49.4	32.6	9.0	10.8		56.1	53.8	10.6		25.4	1.3
7.4	40.9	56.1	8.0 GSt	10.2	50.9	33.0		9.6	13	0.7	15.2	9.6		33.0	16.1
10.0	40.9	5.6		10.2	57.9	17.0		10.7		0.7	5.1	10.2		36.0	49.4
10.2	42.9	10.0		10.2	0.4	49.9		7.5		1.7	40.7	9.2		36.5	11.2
10.0	42.9	10.1		8.4	3.9	14.8	G	10.2		4.5	39.7	10.4		40.5	42.3
4.7	45.4	31.2	5.5 GSt _{tr}	10.2	4.2	39.9		10.8		6.5	13.7	10.0		43.0	5.3
10.2	48.9	38.6		9.8	4.4	23.7		10.7		8.5	26.9	10.8		46.5	53.1
10.0	50.9	55.2		9.6	9.4	54.5		10.8		10.5	58.4	9.6		49.0	44.3
9.8	54.4	42.9		9.4	9.4	28.5		10.8		12.5	48.3	10.8		50.5	53.7
10.2	54.4	40.8		10.2	11.4	41.0		10.8		16.0	54.5	10.8		51.0	56.0
8.8	59.4	21.9		9.8	13.4	47.2		10.0		20.5	45.2	9.6		53.5	43.6
9.2	0.4	53.5		7.5	14.9	31.1	6.5 G-	9.8		20.5	37.7	10.7		54.0	41.8
9.4	2.4	49.6		9.8	17.9	28.9		10.4		22.5	56.1	10.0		56.0	42.1
9.2	6.9	38.8		8.7	19.4	42.2		10.6		24.5	52.8	10.8		57.5	51.9
10.2	8.9	43.7		9.6	21.9	30.5		9.3		30.5	5.1	10.4		58.5	49.5
9.8	8.9	45.5		10.2	24.9	53.9		7.2		31.0	3.7	10.0	16	3.0	54.3
10.2	11.9	47.9	7.0 GSct	10.0	24.9	6.0		10.4		34.0	32.5	10.8		3.5	44.0
6.8	17.4	57.9		8.1	29.2	29.9	7.5 G=	10.2		36.0	34.5	10.7		7.0	17.4
5.7	17.4	56.6	6.0 GSct	10.2	29.4	18.3		10.6		36.0	31.9	9.8		9.0	28.6
10.2	17.9	34.0		9.8	30.9	38.9		10.2		38.5	41.9	10.2		9.5	49.2
9.4	18.9	7.6	9.5	10.0	31.9	29.3		9.2		41.1	57.0	9.2		13.0	23.4
10.2	20.9	13.9		10.0	35.9	17.7		10.0		44.6	56.7	10.7		14.7	2.5
10.2	21.2	59.8		10.2	40.2	38.0		7.9		45.5	7.7	10.8		16.5	53.6
10.0	23.9	6.7		8.8	40.4	21.2	9.5	10.4		45.5	21.5	9.8		18.5	29.9
9.8	24.9	31.7		9.6	40.4	2.1		10.8		45.6	27.5	10.8		19.5	37.8
8.6	27.9	55.8	9.0	7.2	41.9	49.1	=	10.8		47.0	27.1	10.4		30.3	59.9
7.2	28.9	6.6	6.5 GSg	8.4	45.9	20.7	9.5	9.4		53.5	54.5	10.8		32.5	14.9
10.0	29.4	43.9		9.4	47.9	15.8		9.0		54.5	6.6	10.6		36.0	4.5
9.8	30.4	44.1		8.8	50.9	17.8		10.7		59.0	16.6	10.8		38.5	21.3
8.8	31.4	34.3		10.0	53.9	17.9		10.4	14	0.3	58.9	10.6		39.5	50.3
10.0	32.4	33.3		10.2	58.9	1.8		10.6		1.0	34.7	10.8		41.0	53.0
10.2	32.9	28.4		9.6	12	0.4	10.3	10.8		1.0	30.7	9.0		50.5	34.5
10.2	37.4	3.8		10.2	3.4	53.8		10.4		3.5	25.6	9.2		52.0	24.9
10.2	37.9	12.8		10.0	3.9	52.0		10.0		6.0	49.2	10.2		54.0	22.5
8.2	39.4	45.7		8.8	7.9	58.3		10.8		8.0	20.2	10.4		54.5	13.7
10.0	40.9	9.0		10.0	10.2	1.2		10.4		9.0	16.1	9.0	17	3.5	41.1
9.6	42.9	23.6		9.8	10.7	58.6		9.4		10.5	44.4	10.8		6.0	29.8
10.2	46.9	26.7		10.2	13.4	17.3		10.0		11.5	49.4	10.6		8.0	20.9
10.2	59.0	46.7		10.2	13.7	4.6		10.8		17.0	43.9	9.2		10.5	55.7
9.8	0.9	52.0		10.2	15.4	41.7		8.8		20.5	45.3	10.0		14.9	56.0
10.2	1.4	11.0		8.5	27.7	31.9		10.7		21.0	3.2	9.8		16.0	13.7
10.0	2.4	50.3		9.8	29.2	14.1		10.7		27.0	42.5	9.4		18.0	59.4
10.2	2.4	31.1		8.4	29.4	6.7	8.8	10.8		28.5	26.1	10.2		18.3	58.1
10.2	6.4	53.1		9.8	30.2	22.6		8.9		30.0	31.0	10.7		19.5	19.8
9.8	9.4	36.9		10.2	34.4	27.1		10.8		31.5	48.2	9.4		20.5	6.5
7.7	12.4	18.5	G	10.2	35.9	50.7		10.7		33.5	44.8	9.4		21.8	59.6
8.8	12.9	40.4		10.2	37.8	40.4		10.0		43.0	13.6	10.8		22.5	13.0
9.8	12.9	21.3		9.4	39.1	35.1		9.4		45.0	42.2	10.4		22.5	34.5
25pr.	+ 0 56.6	-4.5			+ 0 56.8	-4.5			+ 0 56.9	-4.6				+ 0 57.1	-4.7

2281-2340.				2341-2400.				2401-2460.				2461-2520.			
mag.	8h.	-35°		mag.	8h.	-35°		mag.	8h.	-35°		mag.	8h.	-35°	
	m	s	'		m	s	'		m	s	'		m	s	'
10.2	17	26.0	35.2	10.8	19	20.3	16.0	10.4	21	12.8	2.1	9.8	23	44.8	50.0
10.8		26.0	3.0	10.4		20.8	33.1	10.4		19.3	3.6	10.6		44.8	29.8
10.8		31.5	13.2	10.8		21.3	6.4	10.2		21.3	23.9	9.6		49.3	32.8
10.7		33.0	57.0	10.0		25.3	5.7	10.4		22.3	27.4	10.8		49.8	26.2
10.2		36.0	40.1	10.0		25.8	30.3	10.8		28.3	41.3	10.2		50.3	29.3
10.4		36.5	27.2	9.6		27.8	26.0	10.2		29.4	56.9	10.4		50.8	6.9
9.8		39.0	37.0	10.8		29.3	12.0	9.6		30.3	16.8	9.8		51.8	18.2
10.0		41.5	36.1	10.8		30.3	17.1	10.8		31.3	5.1	10.0		53.3	58.2
10.0		45.3	57.6	9.8		30.3	17.9	10.0		33.8	46.1	10.0		54.3	41.4
10.2		46.0	46.5	10.7		38.3	0.9	10.7		34.8	49.0	10.0		56.8	28.0
10.8		47.5	50.2	10.2		43.8	18.7	10.0		35.8	39.0	9.2	24	0.3	34.3
10.6		48.4	0.8	10.7		43.8	34.8	10.7		41.8	20.2	10.7		0.3	48.7
10.0		50.5	31.4	10.8		46.3	52.1	10.6		44.3	4.5	10.0		3.3	13.0
10.8		50.5	40.1	9.4		50.3	13.0	9.8		45.6	59.0	10.6		14.3	4.8
10.4		50.5	57.0	10.2		50.8	36.3	10.4		48.3	5.1	10.7		24.1	48.2
9.8		50.5	51.7	10.7		54.8	52.7	10.8		48.3	23.1	10.0		26.3	30.6
10.6		50.5	21.0	10.2		56.8	49.0	9.0		48.8	50.6	9.6		28.8	55.0
10.8		53.0	15.1	10.4	20	2.8	59.2	9.8		50.3	8.6	10.0		28.8	45.6
10.0		54.5	46.9	10.2		2.8	31.2	10.6		50.3	1.2	10.7		32.3	47.3
10.6	18	0.5	10.8	9.0		5.3	12.1	9.8		50.8	35.1	9.8		33.8	10.1
10.8		1.5	42.8	10.0		11.3	33.9	10.8		53.3	53.7	9.8		36.6	58.1
10.7		3.0	6.0	10.4		12.3	41.6	9.4		53.3	6.6	9.8		37.3	3.5
10.6		5.5	10.8	9.8		12.3	13.0	9.2		54.3	6.4	10.8		38.5	57.1
10.8		8.0	42.7	10.8		16.3	38.1	9.8		54.3	55.1	10.0		38.8	58.1
9.2		8.8	23.9	10.8		17.8	38.6	9.6		55.1	57.1	10.0		40.3	36.3
10.7		8.8	53.3	10.8		18.8	49.7	10.4		55.3	22.0	10.8		44.8	34.8
10.7		9.3	52.5	10.0		19.3	51.6	10.6		58.3	42.0	10.0		44.8	9.2
10.8		10.3	35.2	10.4		19.8	10.9	10.4		59.8	27.2	10.8		48.3	39.6
10.8		10.8	52.0	10.8		20.1	18.2	10.2	22	3.3	43.2	10.0		49.3	34.9
10.2		11.8	13.6	10.7		20.1	58.5	10.7		10.3	4.0	10.6		50.3	34.3
10.8		12.7	0.8	10.8		20.3	18.0	10.4		11.3	34.4	10.8		50.8	29.6
9.8		12.8	47.6	9.8		21.4	59.4	10.2		20.3	22.1	10.8		50.8	28.4
10.7		18.8	22.0	10.6		25.3	52.1	10.7		27.8	51.2	10.8		50.8	35.5
10.8		20.3	9.6	10.8		29.8	15.8	10.4		30.3	41.0	10.6		53.3	42.0
10.0		20.3	46.6	10.6		30.3	0.3	10.6		43.3	12.0	10.0		54.8	53.8
10.6		20.3	22.5	9.4		30.3	38.4	10.0		49.3	24.3	9.8		54.8	25.6
10.8		21.3	42.9	10.6		33.8	28.6	9.2		51.6	59.1	9.8	25	0.3	32.7
10.6		22.8	51.5	9.8		38.3	23.2	9.6		52.3	3.2	10.8		4.8	17.4
10.8		25.3	39.1	10.0		42.6	57.9	9.3	23	3.3	50.0	10.4		6.3	56.3
9.3		30.1	58.5	10.0		42.8	27.1	9.8		4.3	46.3	8.4		8.8	7.3
10.7		30.3	30.0	10.4		43.3	31.4	10.8		10.3	41.5	10.7		11.3	28.8
10.0		31.8	55.6	9.0		45.3	17.2	10.0		10.8	18.7	10.8		13.3	57.9
10.8		34.8	12.9	10.4		46.6	57.1	10.4		12.3	47.0	10.4		15.8	9.7
9.8		34.8	53.2	10.0		47.8	48.9	10.7		12.8	0.8	9.2		16.3	25.9
10.0		36.1	58.0	10.2		49.8	44.1	9.4		12.8	1.3	10.6		17.8	57.0
10.8		39.8	58.9	10.2		50.3	32.2	10.2		12.8	47.5	10.0		20.3	49.3
10.4		40.3	11.2	9.4		50.8	46.4	10.8		16.3	19.0	10.8		21.3	23.4
10.8		40.3	43.0	10.8		50.8	28.5	9.6		19.3	48.8	9.3		22.8	21.9
10.8		42.3	14.3	10.8		51.3	1.8	10.0		20.3	37.2	10.7		30.3	45.4
10.0		44.6	59.2	10.0		52.8	11.3	10.4		21.3	22.1	10.8		31.1	57.4
10.4		47.3	53.3	10.7	21	0.3	50.1	10.7		24.3	56.0	10.0		31.3	13.9
10.8		49.8	1.0	10.8		0.3	34.4	10.2		26.8	40.3	10.0		33.8	32.7
10.8		54.3	53.3	10.8		0.8	10.2	9.4		30.8	53.1	10.4		36.8	36.2
10.7	19	1.3	40.9	9.6		2.3	44.2	10.2		33.3	19.9	10.6		36.8	40.6
10.7		3.6	28.3	10.8		2.3	4.0	9.6		36.8	26.4	10.2		40.3	16.5
10.8		4.3	6.6	10.0		2.8	48.1	9.8		37.3	3.6	10.4		40.3	41.3
9.3		6.3	38.4	10.8		4.8	7.1	9.4		37.3	8.6	10.8		42.3	40.2
10.8		15.3	39.1	10.4		6.1	1.2	10.8		39.8	59.3	10.4		45.3	31.0
10.6		16.3	24.6	9.3		9.3	51.1	10.2		42.3	22.3	9.8		45.8	9.0
10.8		18.3	45.9	10.8		10.3	21.4	10.0		43.8	20.5	10.6		48.3	26.5
25pr.	+0	57.2	-4.7	+0	57.3	-4.8		+0	57.4	-4.9		+0	57.6	-4.9	

2521-2580.			2581-2640.			2641-2700.			2701-2760.		
mag.	8h.	-35°	mag.	8h.	-35°	mag.	8h.	-35°	mag.	8h.	-35°
10.8	25	55.8 54.1	10.6	27	50.9 15.2	10.7	30	6.9 3.8 G	10.0	32	25.4 19.2
10.8		58.8 11.3	10.6		57.9 49.0	9.8		8.9 11.2 9.5	9.8		29.9 20.0
10.4		59.8 8.2	10.2		59.4 42.8	9.8		14.4 3.7	9.2		30.9 8.4
10.0	26	1.8 50.6	9.6		59.9 48.1	10.6		14.9 16.9	8.8		32.9 42.0 8.0 G=
9.8		2.1 13.5	10.7		59.9 11.4	10.8		15.9 35.9	10.0		33.9 43.2
10.4		4.3 24.6	10.8	28	5.9 43.6	9.8		15.9 37.0	9.8		33.9 22.7
10.8		8.8 29.2	10.8		15.9 39.7	9.8		17.4 33.9	9.8		34.9 3.2
9.8		9.8 14.0	9.8		15.9 47.2	10.0		19.9 53.3	10.2		36.4 38.1
10.6		10.3 51.1	10.6		17.9 7.0	10.8		19.9 35.0	10.8		36.8 32.2
10.8		11.3 27.9	9.8		18.4 19.8	9.8		27.9 34.7	10.4		37.9 9.1
10.8		12.3 1.0	9.8		18.9 4.8	10.0		30.9 38.1	9.8		38.9 9.6
10.2		14.3 40.4	10.0		22.4 57.6	10.8		31.9 58.2	9.8		39.4 16.9
10.6		18.3 21.3	10.8		23.5 58.7	10.8		32.0 44.2	10.6		39.4 23.6
9.6		20.3 6.3	10.0		23.9 36.3	10.4		32.4 57.7	10.8		41.9 36.9
10.6		20.3 48.1	10.0		25.9 52.3	9.6		32.9 27.0	10.6		43.9 3.7
10.0		23.3 39.2	9.3		26.9 17.0 10.0	10.8		38.9 55.9	9.3		43.9 20.9
10.8		30.3 56.3	10.4		27.9 25.0	10.8		38.9 46.1	10.0		44.9 7.3
10.8		30.3 35.3	9.8		28.4 24.0	10.0		39.9 23.8	10.0		48.9 57.0
10.0		30.3 29.3	10.8		38.4 42.2	10.6		41.4 46.1	10.7		48.9 48.4
9.8		30.8 0.7	9.8		39.9 17.0	9.8		41.9 3.0	10.8		51.9 23.7
9.8		30.9 39.6	10.0		45.4 18.1	10.0		49.4 20.6	10.4		52.9 34.3
10.4		35.9 54.2	10.2		48.4 49.1	10.2		51.4 49.9	10.2		55.4 6.6
10.0		35.9 14.1	10.0		49.9 57.3	10.4		51.9 27.9	10.4		59.9 21.9
9.2		36.4 46.8 9.5 -	10.6		51.5 59.1	10.6		51.9 25.9	9.8	33	7.4 37.0
9.8		39.9 2.0	10.8		58.4 17.4	10.8		53.4 5.9	10.8		9.8 59.1
10.8		40.7 30.3	10.4		58.9 26.3	9.8		54.9 24.3	9.8		9.9 23.3
10.4		40.9 18.1	9.3		59.9 54.4	10.7		59.4 1.3	10.7		9.9 15.6
10.8		46.9 48.3	10.7	29	0.9 53.3	10.7	31	5.9 56.1	9.8		9.9 9.6
9.8		48.4 44.5	10.4		0.9 52.5	10.6		9.9 0.2	9.2		13.9 7.5
10.4		49.4 5.3	10.0		0.9 14.8	10.7		9.9 46.0	10.7		18.9 49.4
10.0		50.4 40.2	10.2		1.9 4.3	10.8		11.9 35.0	9.8		27.9 50.0 9.5
10.0		54.4 18.2	9.8		2.9 49.0	9.8		13.3 58.1	9.8		28.4 43.9
10.7		59.9 29.7	10.0		3.4 55.7	10.8		15.9 53.5	10.6		29.2 0.7
10.0		59.9 31.1	10.0		3.4 56.4	10.6		17.4 35.0	10.4		30.9 38.0
10.6	27	0.9 0.3	10.8		5.4 14.2	10.0		18.9 28.1	9.2		32.4 45.1 9.0
10.8		1.4 4.9	9.2		7.9 13.4 9.5	8.4		21.4 49.9 8.5 -	9.2		32.4 5.2
10.0		2.4 31.2 10.0	10.0		19.9 10.5 10.0	10.0		21.9 38.7	10.7		34.9 52.3
10.8		4.7 14.3	10.8		20.9 10.0	10.2		23.4 38.6	8.6		36.4 23.0 9.0
10.4		4.9 55.3	10.8		24.9 43.0	10.6		23.9 24.9	10.4		39.4 34.8
10.4		5.5 57.1	10.0		26.8 57.0	10.6		28.9 6.8	9.8		39.9 55.2
10.8		7.9 51.1	10.8		29.9 24.2	9.8		30.4 15.5	10.6		42.4 34.1
10.6		8.9 6.1	9.8		30.4 17.3	10.4		31.9 30.2	10.4		43.9 26.1
10.4		13.4 19.3	10.7		30.9 49.6	10.8		34.9 45.0	10.0		45.9 16.8
10.0		13.9 52.9	9.8		32.4 38.6	10.6		35.4 11.9	10.8		45.9 51.0
10.8		15.9 56.4	9.6		33.9 37.1	9.3		39.9 50.8 9.5	10.8		47.9 30.0
9.8		18.4 10.0	10.4		35.4 47.6	10.2		40.4 10.1	10.4		49.9 25.1
9.8		20.4 27.2	10.6		38.4 44.0	10.4		43.9 56.9	9.8		49.9 16.0
9.2		20.4 41.0	10.7		38.4 37.1	10.7		45.4 8.5	9.6		53.9 55.5
10.7		20.6 59.7	10.8		39.4 24.1	10.2		46.4 11.9	10.6		57.4 10.3
10.7		20.9 16.3	9.8		39.9 12.5	10.7		49.9 5.9	10.7		58.9 20.4
10.4		21.4 37.3	10.8		47.9 53.0	9.8		52.4 3.4	10.2		58.9 41.6
10.6		23.7 51.1	10.8		49.9 49.9	10.2		54.9 37.2	10.6		58.9 33.8
10.0		23.9 31.1	9.8		49.9 24.9	9.8		59.4 26.2	10.8	34	2.4 7.3
9.2		26.9 18.2 9.5	10.8		54.4 55.4	10.6		59.9 49.9	10.4		9.4 35.1
10.4		29.9 10.1	10.4	30	0.4 11.9	9.8		59.9 49.9	10.8		9.4 26.8
10.4		30.4 10.2	10.8		1.9 9.7	10.6		10.9 27.9	10.8		9.9 16.9
10.8		30.9 25.9	10.8		2.4 11.3	10.4		13.9 42.7	10.4		11.9 16.1
9.8		31.9 32.4	10.0		4.4 42.1	10.8		19.9 13.4	10.6		12.4 32.1
10.8		39.9 11.2	10.6		5.9 49.3	9.8		19.9 3.1	10.8		17.9 32.9
9.4		46.4 55.3	10.6		5.9 20.7	10.8		20.9 13.0	10.8		22.4 38.5
25pr.		+ 0 57.7 - 5.0			+ 0 57.8 - 5.1			+ 0 58.0 - 5.1			+ 0 58.1 - 5.2

2761-2820.			2821-2880.			2881-2940.			2941-3000.		
mag.	8h.	-35°	mag.	8h.	-35°	mag.	8h.	-35°	mag.	8h.	-35°
9.8	34	29.9	9.3	36	56.5	10.2	39	58.3	10.0	45	3.3
10.8		38.4	9.3		59.5	10.2	40	5.3	9.6		5.8
10.4		39.9	9.3	37	5.5	9.6		6.8	9.8		7.8
9.6		41.9	10.8		8.5	10.2		20.2	10.0		10.3
10.0		49.9	10.2		14.0	9.4		30.3	9.6		12.8
10.6		53.9	9.8		16.5	10.2		39.3	9.8		14.9
9.4		57.9	9.3		18.0	10.2		39.9	7.6		29.3
9.8		58.9	10.0		20.0	10.0		42.5	10.2		29.3
10.4		59.5	9.6		20.5	10.2		44.3	10.2		32.3
10.8	35	0.4	10.8		22.5	9.6		46.3	10.2		35.3
10.7		1.9	10.8		25.0	9.8		53.8	10.2		37.8
10.0		9.9	9.8		25.0	10.0		54.8	10.2		41.8
9.6		9.9	10.8		26.5	10.2		54.8	10.2		49.8
10.8		9.9	10.6		28.0	10.2		57.8	10.2		53.3
10.7		9.9	10.2		29.5	10.2	41	6.3	10.2		55.8
10.8		9.9	10.2		30.0	9.0		11.8	10.2		59.8
10.0		9.9	9.8		31.0	10.2		20.8	9.4		59.8
10.0		10.9	9.8		34.4	9.4		29.3	10.0	46	1.8
9.8		15.9	9.8		39.5	10.2		30.3	10.2		2.3
10.4		18.4	10.7		41.5	10.2		33.8	9.6		4.3
9.8		30.9	9.6		46.5	9.4		35.3	10.2		9.8
10.8		31.4	10.4		48.4	10.2		40.3	10.2		12.1
9.8		33.9	10.6		50.5	8.8		43.3	10.2		12.8
10.8		39.9	10.0		51.6	10.2		43.8	9.4		19.8
10.0		41.9	9.2		54.9	10.0		53.8	9.2		20.8
10.4		45.9	10.2		56.2	9.8		59.8	9.4		21.8
10.2		48.0	7.3	38	5.2	9.6	42	13.3	9.6		37.3
10.2		48.5	10.4		5.5	10.0		14.6	9.4		38.3
10.8		49.0	10.2		7.5	10.0		18.8	9.4		46.3
8.4		49.5	10.8		8.5	10.2		25.3	9.8		50.3
10.4		49.5	10.4		9.0	9.4		27.8	10.2		54.8
10.8		51.5	10.7		9.5	10.0		29.3	10.2		57.8
10.4		52.5	9.4		13.2	10.2		29.8	10.2		57.8
10.0		54.0	9.8		25.0	9.8		38.3	10.2		59.8
10.8		56.0	10.6		26.5	9.4		59.3	10.2	47	8.3
10.2		57.0	10.8		29.6	10.2		59.8	9.0		10.8
9.3		59.5	10.2		34.9	8.8	43	1.8	9.4		12.8
10.8	36	1.5	10.2		41.2	9.0		7.3	9.6		31.8
10.4		2.5	10.6		41.8	10.0		8.6	9.4		42.8
10.0		4.5	10.8		43.3	10.2		8.8	10.2		48.3
10.6		6.5	10.2		44.2	9.0		15.8	9.6	48	52.3
10.4		7.0	9.6		47.8	10.2		20.3	9.6		11.8
9.8		8.5	10.0		48.4	10.0		36.3	10.0		12.8
10.8		10.5	9.6		48.7	10.0		37.3	9.6		12.8
10.2		19.5	10.2		49.9	10.0		47.3	9.3		19.8
10.8		20.5	10.0		50.9	9.6		49.3	9.3		20.3
8.4		22.5	10.2		59.4	9.6		59.8	10.2		25.3
10.2		23.5	10.0		59.4	8.8		59.8	9.4		28.8
10.4		27.5	9.6	39	9.9	10.2	44	28.8	9.4		30.8
10.2		28.5	10.2		16.4	9.6		30.8	10.2		44.8
10.0		29.5	9.4		16.9	9.4		37.8	8.4		48.8
10.7		29.5	10.0		18.6	9.8		38.3	9.8		50.3
8.0		30.5	10.2		19.9	10.2		44.3	10.2		51.8
10.2		31.5	9.6		28.4	9.6		45.3	9.8		58.8
10.7		40.5	8.8		38.4	10.2		46.3	9.4	49	2.1
10.7		41.5	10.0		43.9	10.2		52.3	7.8		4.3
10.4		44.5	8.2		48.9	10.2		53.3	9.6		9.3
10.6		53.5	10.2		54.8	10.2		58.8	10.0		11.8
10.0		54.5	9.6		54.9	10.0		59.8	9.4		15.8
10.2		54.5	9.2		55.3	10.2		59.8	10.2		17.3
25pr.		+0 58.8			+0 58.5			+0 58.7			+0 59.0
		-5.3			-5.3			-5.4			-5.6

3001-3060.			3061-3120.			3121-3180.			3181-3240.		
mag.	8h.	-35°	mag.	8h.	-35°	mag.	8h.-9h.	-35°	mag.	9h.	-35°
8.6	49 23.8	15.1	9.4	53 0.8	3.0	9.8	57 45.8	12.5	10.0	I 54.8	26.4
9.0	24.3	41.7	9.6	3.3	49.2	10.0	48.3	13.6	10.2	59.3	22.0
10.2	29.8	23.5	10.2	5.3	50.3	10.2	53.8	20.2	10.2	2 2.3	50.3
10.2	36.8	55.9	9.6	8.8	9.9	9.4	53.8	39.9	10.2	4.3	50.5
9.6	40.3	56.8	10.0	9.8	44.8	9.3	57.3	45.8	10.0	4.3	15.0
10.0	47.3	32.9	9.4	19.3	36.9	9.8	58.3	25.7	9.8	10.3	8.9
8.8	47.8	32.1	10.0	23.8	5.8	9.4	58.8	52.8	8.6	12.3	51.1 8.5 =
8.8	48.8	1.8	10.0	24.3	57.8	10.2	58 1.8	29.0	9.4	15.3	51.0 9.5
8.1	56.8	34.7	10.2	30.8	32.5	9.1	5.3	7.0	10.2	20.6	20.9
9.8	58.3	44.8	10.2	32.8	55.2	9.4	8.3	41.1	9.8	36.8	13.0
10.2	59.3	1.0	10.2	36.3	24.6	9.8	9.3	19.1	9.6	38.3	52.5 10.0
10.2	59.8	14.6	10.2	36.8	17.6	9.6	11.8	42.1	10.0	40.0	26.9
9.4	50 4.8	23.5	10.2	41.8	29.1	9.6	13.3	43.0	9.8	41.5	14.8
9.6	5.3	32.1	10.0	51.8	29.1	9.4	18.8	27.0	10.0	45.3	42.0
9.4	5.8	19.7	8.5	54.3	8.3 8.8	8.8	22.8	53.4	9.8	52.3	17.8
9.2	7.3	44.9	10.2	57.3	18.3	9.4	40.3	35.5	10.2	57.1	46.6
10.2	8.8	48.2	9.4	58.3	34.2	10.2	44.3	3.0	10.2	58.5	17.9
10.2	11.8	21.4	10.0	59.8	52.3	9.4	51.8	50.9	10.2	59.9	59.9
10.0	14.8	15.9	10.2	54 28.3	1.6	10.2	54.8	29.6	10.2	3 4.1	48.0
10.2	19.8	41.5	8.5	33.8	53.8 8.8 =	9.6	55.3	44.5	10.2	13.1	10.5
9.2	20.4	57.9 9.0	10.0	38.8	31.0	10.2	55.8	30.1	9.3	13.8	8.6
10.2	29.3	7.8	10.2	38.8	13.1	10.2	59 9.3	41.6	9.8	17.5	47.5
10.2	29.8	48.5	9.6	39.8	3.5	10.2	10.3	12.7	10.2	21.4	29.9
10.2	33.7	49.3	9.3	45.3	54.0 10.0	10.0	10.3	52.7	10.2	21.8	56.0
10.2	36.8	48.1	10.2	49.3	31.1	10.2	18.3	42.9	9.4	22.9	25.1
10.2	39.8	44.8	10.0	49.8	52.1	10.2	20.3	51.2	9.6	23.3	45.4
10.2	43.8	12.1	10.2	51.4	1.2	10.2	21.8	50.1	9.4	24.5	13.1
10.0	51.3	23.8	9.6	54.3	43.8	10.2	31.3	45.2	9.0	29.5	45.8 9.5
9.6	57.8	22.7	10.0	56.3	22.5	9.6	31.8	45.6	9.0	34.5	12.8 -
9.4	51 0.8	13.9	9.8	55 3.8	16.1	10.0	37.8	18.9	9.5	36.5	37.5
9.4	4.8	33.6	10.0	4.8	45.9	9.4	38.8	34.4	10.8	37.0	10.9
9.4	5.3	16.0	9.8	5.8	30.0	9.6	42.8	15.3	9.6	44.7	19.6
10.0	12.3	1.1	10.2	22.3	17.5	10.0	44.8	32.2	10.8	47.7	14.0
10.2	16.3	34.8	9.6	33.8	7.1	9.8	49.3	27.5	9.2	49.2	4.2
10.2	17.8	49.9	9.0	37.3	36.6 9.5	9.4	51.3	43.7	10.6	53.7	25.3
10.0	19.8	41.0	9.6	38.3	17.8	10.0	53.3	35.2	10.4	55.7	43.2
10.2	19.8	19.6	10.2	56 11.3	51.0	10.2	58.3	18.1	10.4	59.7	10.8
10.2	26.8	25.1	10.2	14.3	33.7	9.8	0 0.8	11.3	8.7	4 5.7	25.1 -
9.6	29.8	55.8	10.2	14.8	6.6	10.0	1.3	32.7	10.8	9.7	8.1
10.2	34.8	13.1	10.0	19.3	26.3	10.2	3.1	44.7	8.6	9.7	38.2 9.5 -
9.4	40.3	28.2	10.0	34.8	49.8	10.2	9.8	52.6	10.6	10.2	2.4
10.0	51.8	32.3	10.2	36.8	19.7	9.4	9.8	27.5	10.8	10.2	12.8
10.2	53.8	26.9	9.0	36.8	34.8 9.5	10.2	11.3	36.8	10.8	11.7	34.9
9.6	58.3	2.8	8.8	47.8	8.8 8.0	9.6	15.3	50.7	9.0	11.7	36.1
10.0	52 0.8	0.0	10.2	48.8	22.2	10.0	17.8	28.0	9.3	25.7	45.0 9.5
10.2	4.8	13.9	10.2	49.3	21.2	10.2	25.3	49.1	10.8	29.7	8.0
10.2	10.8	11.0	9.6	52.3	19.6	8.6	40.8	43.4 9.0 -	10.6	37.2	45.5
9.8	16.3	43.8	9.8	59.3	31.1	9.8	45.8	30.9	9.8	43.2	24.0
10.2	19.8	13.5	7.8	57 1.8	11.8 8.0 W-	8.5	57.8	35.7 7.0 G=	10.8	45.2	39.5
9.8	20.8	29.4	9.8	5.3	8.9	9.8	I 0.3	25.0	10.4	48.7	1.5
10.2	33.3	31.1	10.2	16.8	21.0	10.2	1.3	30.9	10.8	49.3	59.0
10.2	38.8	8.1	10.2	21.3	44.1	9.8	1.8	17.8	10.8	50.7	37.8
9.4	39.3	33.1	10.2	22.3	28.5	9.4	3.8	30.8 9.5	10.8	5 4.7	45.4
10.0	43.8	50.4	9.4	29.8	32.7	10.2	7.8	49.9	10.8	10.7	20.1
9.6	45.3	50.4	9.6	30.3	48.3	9.4	11.3	55.8	9.7	12.2	41.1
8.8	50.8	30.7 9.0 =	9.6	32.3	49.9	10.0	34.8	14.6	10.2	18.7	21.5
10.2	55.3	28.2 10.0	10.2	32.8	47.2	10.2	38.0	59.4	9.0	20.7	24.4 9.0 -
9.0	55.3	25.6	8.8	40.8	24.4 9.5	9.6	43.3	19.8	10.6	24.2	55.7
10.2	59.8	14.0	9.6	41.8	7.7	9.4	50.8	31.8	10.8	27.7	59.8
10.0	53 0.3	6.0	8.8	42.8	23.4 9.5	10.2	53.8	33.9	10.8	29.7	34.0
25pr.	+0 59.3	-5.7									
				+0 59.6	-5.8		+1 0.0	-5.9		+1 0.3	-6.0

3241—3300.				3301—3360.				3361—3420.				3421—3480.			
mag.	g ^h .	-35°		mag.	g ^h .	-35°		mag.	g ^h .	-35°		mag.	g ^h .	-35°	
	m s	'	''		m s	'	''		m s	'	''		m s	'	''
10.8	5	30.7	18.5	10.8	9	11.9	47.2	10.8	12	38.9	10.7	10.8	16	26.5	53.2
8.7		33.2	29.5	10.6		13.9	10.8	10.8		38.9	34.9	10.6		27.5	6.0
9.4		35.7	29.9	10.4		14.4	1.0	8.7		40.9	10.0	10.8		28.0	44.8
10.0		39.2	54.1	10.0		22.4	49.6	9.8		41.9	45.4	10.8		29.0	31.4
10.8		50.2	34.6	10.0		31.4	24.0	10.8		50.9	7.6	10.6		33.5	59.5
8.4		50.7	34.2	10.8		34.9	8.6	10.2		53.4	9.7	10.8		35.0	19.6
10.8		53.2	29.3	10.8		40.4	3.4	10.4		55.9	58.5	10.6		36.0	6.0
10.8		54.5	57.6	9.0		40.9	34.9	10.8	13	7.4	16.3	10.8		39.9	39.4
9.8		56.0	58.7	9.2		41.9	24.5	10.4		8.9	46.7	10.8		50.0	43.0
10.6		56.7	3.9	7.5		42.4	26.7	9.6		10.9	32.0	10.6		55.5	43.1
8.2		59.7	35.7	9.6		51.9	46.4	10.0		14.9	48.0	10.8	17	0.5	4.9
9.8	6	0.3	59.0	10.8		54.9	47.6	10.8		18.9	15.5	10.0		8.0	52.5
10.2		3.2	41.0	10.0	10	0.9	9.1	8.9		21.9	12.3	9.3		13.0	55.8
10.8		3.7	44.0	10.4		9.9	55.6	8.8		26.9	27.6	10.2		15.0	6.9
8.6		14.2	41.9	9.4		11.9	41.7	9.7		27.9	35.8	10.6		16.5	0.2
10.8		19.5	58.0	10.8		11.9	56.3	10.8		35.9	25.1	10.8		17.9	9.0
10.4		19.7	37.6	10.4		18.9	50.0	10.8		39.9	24.9	10.8		19.0	21.9
7.8		22.2	14.2	10.2		18.9	44.4	10.8		39.9	39.0	9.8		19.5	17.2
10.2		22.7	20.6	10.8		18.9	46.0	10.2		39.9	48.3	10.8		20.0	59.9
10.8		34.2	45.9	10.2		24.4	35.3	10.6		41.9	19.3	9.8		21.0	15.4
10.0		40.2	12.9	10.2		30.3	2.0	10.8		44.9	20.9	10.8		25.5	7.7
9.3		41.7	30.5	9.4		31.4	10.6	10.0		55.9	40.3	10.4		29.6	58.1
9.4		51.2	1.0	10.8		34.9	51.3	10.8	14	6.5	32.1	10.0		30.0	54.0
9.6		51.7	36.1	9.5		39.9	49.0	10.4		11.0	9.6	10.8		30.9	5.6
10.6		52.7	15.9	9.7		41.9	47.1	10.8		15.5	34.7	10.2		32.0	52.0
9.6		53.2	22.4	10.6		44.4	24.4	10.0		21.0	19.9	10.8		44.0	57.2
10.0		54.2	35.9	9.2		44.9	54.5	10.0		21.0	28.4	10.8		50.0	17.1
10.0		54.7	17.3	10.4		53.4	41.0	10.8		22.0	41.2	9.2		51.0	32.2
10.2		55.7	39.3	10.4		59.9	22.7	10.4		26.0	32.1	10.8		51.5	56.1
10.2	7	0.2	26.0	9.7	11	0.9	40.8	9.4		30.0	14.1	10.8		54.0	38.3
9.6		1.7	3.6	10.2		8.9	36.0	10.4		30.5	45.0	10.8		54.0	43.4
9.2		23.7	41.4	10.0		9.9	29.9	10.0		32.0	10.5	10.8		56.9	0.1
8.4		28.2	10.2	10.8		19.4	31.5	10.6		32.0	22.3	10.8		59.0	15.6
10.8		39.2	34.9	10.8		19.9	29.3	9.8		34.0	41.0	10.0	18	8.0	15.4
10.6		39.7	25.5	9.8		20.9	22.9	10.6		40.0	27.5	9.8		17.0	31.3
10.2		41.7	8.3	10.4		26.9	51.9	10.0		40.0	42.0	9.4		31.0	29.5
10.0		44.2	3.2	10.2		28.4	41.7	10.0		50.5	25.6	10.8		33.5	5.7
9.3		49.7	1.2	10.4		31.9	21.7	10.8		54.1	58.2	9.0		36.5	16.1
10.2		54.7	11.8	10.8		35.4	36.1	10.8	15	1.5	26.6	10.8		38.0	39.8
10.2		59.9	42.0	9.2		37.9	14.5	10.2		5.5	39.4	10.6		40.0	28.8
10.8	8	3.4	25.3	9.7		37.9	3.5	10.6		12.0	4.0	10.2		41.5	31.8
10.6		3.9	24.4	10.8		39.9	6.0	10.4		14.0	49.1	10.8		45.0	55.2
10.4		4.9	26.2	10.8		41.4	4.9	10.6		16.0	7.3	10.2		46.5	28.4
9.0		8.4	21.8	9.8		44.9	2.0	10.8		19.0	49.0	10.8		47.5	41.3
10.4		9.9	3.1	10.8		48.4	43.4	10.0		20.0	57.5	9.7		58.0	44.8
10.8		14.9	25.1	10.6		57.4	34.5	9.0		22.0	22.3	10.8	19	2.5	16.0
10.8		16.9	9.1	10.8	12	1.4	50.5	9.8		22.5	43.0	10.8		14.5	39.8
9.0		18.4	27.8	10.8		1.9	34.1	9.8		27.5	46.0	9.8		20.0	58.5
10.8		18.9	43.1	10.8		1.9	14.2	10.8		32.0	20.0	10.8		24.5	52.5
10.4		25.4	24.0	10.0		2.4	47.9	9.0		34.5	15.0	10.0		29.5	28.6
10.8		28.4	6.9	10.0		8.9	39.4	9.4		36.0	14.2	10.4		32.0	15.2
10.8		30.1	0.7	10.2		15.9	18.7	9.4		38.0	24.2	10.4		39.0	20.6
9.8		34.9	36.1	10.8		22.9	26.6	10.0		45.0	43.7	10.6		51.2	56.6
10.8		40.9	40.6	10.8		23.9	40.0	10.0		50.0	37.3	8.2		52.2	22.0
10.8		42.4	32.9	10.0		25.9	47.1	10.8		52.0	29.9	10.4		54.2	37.2
10.0		46.4	53.2	9.8		28.9	31.2	9.8	16	6.0	40.0	9.6		54.2	23.9
9.0		51.9	51.0	10.8		29.9	15.4	9.7		8.0	5.3	8.5		51.2	51.0
10.6		58.4	51.0	9.0		29.9	51.0	10.0		15.0	32.7	10.8		13.7	44.1
10.8	9	9.9	59.9	10.8		35.4	45.6	10.8		15.5	10.5	10.8		30.2	55.0
10.8		9.9	48.9	10.4		38.4	33.0	10.8		21.0	25.1	9.3		35.2	14.8
25pr.	+1	0.5	-6.1	+1	0.8	-6.2		+1	1.1	-6.3		+1	1.3	-6.4	

9h

8481-3540.			8541-3600.			3601-3660.			3661-3720.		
mag.	m	s	mag.	m	s	mag.	m	s	mag.	m	s
IO 20	38.7	28.6	IO 4	23	47.7	8.7	27	6.2	9.8	31	36.4
IO 8.8	39.2	1.9	IO 8	49.2	51.8	IO 8	12.2	45.8	8.9	39.9	33.8
IO 0.0	44.2	55.4	9.7	54.2	0.1	9.7	21.2	52.6	9.7	45.5	29.8
9.0	44.7	48.8	IO 4	55.2	28.3	IO 6	22.2	22.6	9.4	48.0	41.6
8.8	50.2	47.1	IO 0	56.2	22.4	IO 0	24.7	12.0	9.5	48.5	53.0
9.1	54.7	25.6	6.9	5.2	24.3	IO 4	25.0	0.8	8.8	53.3	50.2
IO 4	0.2	36.5	IO 0	5.7	54.4	9.8	25.7	11.5	9.8	53.3	18.0
IO 2	0.7	0.2	IO 4	10.5	0.8	IO 2	30.2	13.0	9.5	3.0	55.2
9.4	10.7	40.0	IO 4	12.2	2.7	IO 2	30.2	54.9	9.8	6.7	1.0
IO 4	13.7	34.2	IO 0	12.7	44.4	IO 4	34.2	46.6	7.6	16.0	32.1
IO 0	16.2	30.1	IO 6	13.2	16.8	IO 8	40.2	32.9	9.6	20.0	18.9
IO 4	21.2	6.6	IO 8	19.7	53.0	IO 6	49.7	40.8	9.4	20.5	30.8
IO 0	23.7	48.6	8.9	20.2	44.2	9.3	52.2	12.9	9.8	21.1	59.9
IO 4	30.2	15.1	IO 8	22.2	34.0	IO 2	54.2	36.8	9.8	29.0	14.9
8.5	42.2	27.7	IO 4	23.7	54.4	IO 2	58.2	56.4	9.6	38.0	40.8
IO 4	43.2	6.0	IO 6	27.2	41.6	7.8	28	0.2	9.5	39.5	41.1
IO 0	45.2	5.0	IO 0	35.2	54.0	IO 4	4.2	6.9	9.5	48.1	59.9
IO 2	46.2	40.0	IO 8	38.2	17.0	9.8	10.2	50.4	9.8	58.5	49.1
IO 8	54.2	12.2	9.2	43.2	56.2	IO 0	15.7	16.4	9.8	0.0	20.8
IO 8	2.2	5.2	IO 4	45.2	34.2	IO 8	18.7	36.4	9.8	5.0	35.9
IO 0	6.2	31.2	IO 4	49.2	57.2	9.7	20.2	51.2	9.7	8.0	49.6
IO 4	7.7	4.0	IO 6	50.2	42.6	9.0	24.3	8.6	9.7	9.5	40.5
IO 8	8.7	17.6	IO 2	53.2	36.6	IO 8	29.2	14.0	9.8	14.0	45.0
IO 8	9.7	4.5	IO 8	56.7	15.2	9.5	29.9	40.8	9.8	14.0	34.9
IO 8	9.7	50.1	IO 8	57.2	27.8	9.8	31.9	28.8	9.6	21.5	42.4
IO 8	10.2	52.6	IO 8	59.7	12.8	9.7	39.4	53.8	9.7	25.5	30.4
9.7	12.2	28.6	IO 8	5.2	49.8	9.8	40.1	0.7	8.5	36.5	58.0
9.6	18.2	30.0	IO 8	10.2	22.8	9.2	42.9	1.4	9.3	46.0	20.7
IO 4	20.2	16.6	9.3	10.4	57.4	7.8	51.9	35.2	9.0	27.5	42.4
IO 2	21.2	19.8	9.6	11.2	56.3	IO 8*	53.2	59.8	9.0	33.0	31.7
8.6	25.7	39.6	IO 4	14.2	51.7	9.5	53.6	2.0	9.8	44.5	32.9
IO 4	26.2	42.9	IO 8	16.2	25.3	9.6	57.9	15.6	9.8	59.5	52.8
IO 0	28.2	53.0	9.8	18.2	15.7	9.8	59.4	41.4	9.5	18.5	19.1
IO 2	28.2	29.4	IO 8	23.2	5.9	9.4	29	7.4	9.8	20.5	14.5
IO 4	32.2	3.0	IO 8	32.7	13.4	9.4	11.9	33.6	9.2	21.5	58.3
IO 8	41.2	35.6	IO 8	44.7	18.8	9.7	19.9	39.6	9.8	23.5	48.1
IO 6	42.7	5.5	IO 2	45.2	11.8	9.8	30.9	28.3	9.0	24.5	21.4
IO 4	44.2	45.6	IO 8	46.7	42.7	9.0	33.9	7.7	9.8	33.0	5.7
IO 4	45.2	21.0	7.8	0.2	22.5	9.4	37.9	43.8	8.1	57.5	27.6
IO 8	50.2	14.6	IO 8	0.7	49.1	9.6	44.9	23.4	9.8	36	4.0
IO 4	23	2.2	IO 2	4.2	53.5	9.7	51.9	11.5	9.8	23.0	20.7
IO 4	8.7	35.8	IO 6	5.7	35.8	9.6	52.9	23.9	9.7	26.5	19.8
IO 8	19.2	28.8	9.7	9.2	3.1	7.5	59.9	16.0	9.7	27.0	18.9
IO 0	19.2	17.0	IO 4	16.2	3.3	9.4	30	6.9	9.5	32.5	38.9
9.0	20.7	38.1	IO 8	19.7	52.8	8.9	18.9	15.5	9.6	39.0	55.5
IO 0	21.2	21.6	7.2	20.2	9.6	9.6	23.9	49.6	9.7	46.0	4.5
IO 8	21.7	57.2	IO 8	22.7	51.2	9.8	27.9	13.9	9.8	48.5	59.2
IO 8	24.7	23.0	9.8	31.2	23.6	9.5	28.9	54.6	9.8	51.5	8.5
IO 8	28.7	45.0	IO 4	33.2	23.2	9.4	30.9	17.6	9.8	54.0	22.0
IO 8	29.2	50.2	IO 2	39.2	42.4	9.4	31.9	30.8	9.6	59.5	47.0
IO 8	30.2	54.6	8.9	40.0	59.2	9.8	38.9	18.9	9.8	37	8.5
8.2	32.2	4.2	IO 8	42.2	41.4	9.7	38.9	8.1	9.7	10.0	39.7
IO 4	32.2	7.8	IO 2	43.7	47.9	9.8	39.9	16.2	9.8	10.5	15.5
IO 6	32.7	31.5	IO 8	53.1	27.2	8.9	53.4	43.2	8.0	13.3	0.6
IO 0	33.7	28.7	9.6	54.2	20.7	9.3	55.9	15.2	9.8	19.5	9.9
IO 8	36.7	36.1	9.7	54.2	27.8	9.8	59.9	18.6	9.3	20.6	57.9
IO 6	41.2	36.8	IO 4	55.2	3.2	8.0	59.9	28.4	9.2	27.0	18.7
IO 8	42.2	25.4	IO 8	55.7	42.2	9.8	31	8.4	9.8	36.5	7.5
IO 8	44.1	31.4	IO 4	27	1.7	8.1	11.9	44.5	9.7	42.3	59.0
IO 8	46.2	16.8	IO 0	4.2	53.8	9.6	26.9	13.4	9.0	49.5	8.9
25Pr. + 1	1.7	-6.4	+ 1	1.9	-6.5	+ 1	2.2	-6.6	+ 1	2.7	-6.7

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
mag.	g ^h .	m	s	mag.	g ^h .	m	s	mag.	g ^h .	m	s	mag.	g ^h -10 ^h .	m	s
9.8	37	51.0	6.3	9.0	44	39.4	45.3	9.8	51	21.7	16.8	10.3	57	45.0	1.7
8.7		59.0	4.9	9.8		47.9	8.2	9.8		35.7	7.1	10.2		54.5	41.9
9.8	38	15.5	35.6	9.8		57.4	16.6	8.9		38.7	5.9	10.6	58	9.0	43.2
9.8		17.5	42.9	9.8	45	2.1	54.3	9.8		40.2	22.6	10.6		9.0	40.7
9.7		27.8	57.9	9.8		2.4	15.9	9.3		48.2	22.8	10.6		11.0	42.1
9.8		34.5	23.7	9.2		3.9	29.0	9.8		50.7	27.8	9.8		14.0	47.5
9.2		43.0	11.9	9.4		5.3	2.3	9.7		54.5	59.3	9.0		19.0	43.8
9.8		49.5	54.7	8.1		13.9	40.7	9.8	52	19.7	20.7	10.6		20.3	59.6
9.5	39	9.0	30.0	9.4		14.4	51.1	9.1		22.7	3.9	9.8		27.0	38.6
9.7		19.5	12.2	9.8		19.4	19.0	9.8		30.7	48.6	10.6		27.7	58.9
9.6		25.0	8.0	9.6		20.4	47.2	9.8		33.2	51.0	9.8		30.0	29.6
9.8		27.0	49.9	9.5		27.4	26.2	9.3		58.2	25.1	9.8		30.0	3.8
9.8		27.5	7.6	9.8		34.9	45.0	8.7	53	0.2	27.6	8.8		42.0	58.8
9.7		52.0	29.3	9.7		40.9	10.9	9.3		13.4	39.5	10.0		45.0	52.3
9.4	40	10.5	16.4	9.5	46	0.3	40.9	9.8		19.9	5.4	10.3		59.0	14.1
9.8		15.0	9.8	9.2		5.3	42.0	9.8		25.6	47.9	10.6	59	3.5	19.4
7.9		42.5	17.1	9.2		6.8	55.8	7.0		30.6	17.5	10.3		4.0	55.5
9.8		43.0	27.2	9.5		13.3	19.0	9.8		35.2	40.9	10.0		10.0	50.3
9.6		44.5	29.7	9.4		19.3	32.5	9.8		38.7	19.5	9.8		10.0	4.9
9.8		47.0	31.6	9.8		30.8	49.6	9.4		46.9	33.4	10.6		10.0	25.8
9.4		49.5	48.3	9.4		35.3	26.4	9.8		54.9	8.8	10.4		18.5	53.9
9.6		57.0	49.2	9.8		51.0	58.5	9.6		55.9	55.0	9.2		19.0	35.4
9.4	41	1.5	27.9	9.8		55.8	57.0	9.6		59.6	52.9	9.4		19.0	6.3
9.0		5.5	11.8	9.4	47	13.3	17.3	9.8	54	2.2	49.9	10.3		39.0	16.9
9.2		14.0	43.2	9.7		20.8	38.2	9.6		3.1	58.2	9.6		47.5	38.0
9.8		23.0	42.2	9.6		42.8	50.3	10.6		10.6	24.3	10.2		48.0	51.4
9.8		28.0	40.0	9.4		42.8	47.8	9.4		11.6	5.8	10.6		49.0	0.7
9.8		34.0	56.3	9.1		43.8	22.8	10.0		12.1	13.9	10.3		49.5	45.1
9.8		36.5	36.6	9.5		45.8	52.7	9.8		21.1	9.6	7.0		51.0	46.6
9.8		39.5	45.0	9.8		49.3	39.9	10.6		26.6	41.2	9.8		55.0	44.6
9.8		50.5	42.0	9.5		59.3	50.4	10.6		30.6	54.2	10.6	0	16.0	52.0
9.8	42	0.0	17.1	9.8	48	0.3	57.9	10.6		30.6	53.1	8.8		20.0	21.9
9.4		5.0	38.5	9.7		14.8	50.0	10.3		40.1	3.5	9.0		21.0	11.3
9.2		8.0	39.3	9.4		18.8	12.4	10.6		40.6	42.9	10.6		28.5	34.0
9.8		13.5	27.9	9.8		21.8	37.0	7.4		45.6	26.8	10.6		33.5	42.1
9.1		19.0	45.8	8.8		23.3	48.1	10.3		58.6	29.9	10.6		37.5	44.0
9.8		39.0	23.0	8.9		53.8	45.6	10.6	55	6.1	28.8	10.3		45.0	25.5
9.3		42.5	8.1	9.8		57.3	50.9	9.8		14.6	43.9	8.2		49.0	46.6
9.8		49.4	43.0	8.9		58.3	12.0	10.6		15.1	29.1	10.6		58.0	43.0
9.8	43	12.9	7.6	9.7		59.3	19.8	9.0		15.6	20.5	9.8		58.0	56.3
8.7		16.4	14.5	9.8	49	11.8	24.6	10.6		51.6	17.9	10.4		58.5	28.6
9.8		18.4	9.0	9.8		23.3	19.1	9.0	56	2.1	4.4	9.4		59.0	5.4
9.8		19.4	16.3	9.2		31.5	2.3	9.6		4.1	5.9	10.6	1	2.5	36.7
9.8		29.4	50.0	9.2		34.8	43.8	9.8		18.1	49.6	10.3		9.2	0.9
9.8		29.9	58.8	8.8		36.8	2.5	10.4		19.6	24.7	10.3		21.0	35.8
9.5		32.9	33.5	9.3		54.3	23.5	9.8		23.1	43.4	9.2		24.0	38.8
9.0		34.4	19.0	9.4		59.3	3.1	9.4		27.1	57.2	9.8		28.0	16.3
9.2		51.9	21.4	9.4		59.8	0.5	9.4		33.6	36.1	10.2		29.5	55.0
9.8		51.9	16.4	9.8	50	6.3	9.1	10.3		41.3	9.3	9.6		32.0	25.4
9.8		59.9	3.0	9.8		23.8	5.4	9.0		49.6	30.0	10.0		32.5	38.3
8.7	44	0.4	22.8	9.6		23.8	24.4	10.3		54.1	9.3	9.2		42.0	8.3
9.8		3.4	45.7	9.5		25.4	2.1	9.8	57	8.0	4.7	10.6		50.0	3.0
9.3		6.9	45.3	9.8		25.8	3.5	9.8		12.0	55.1	10.0	2	0.0	10.6
9.6		8.9	13.7	9.8		27.8	23.9	10.3		20.5	22.1	9.6		0.0	56.3
9.8		9.9	52.1	9.6		29.2	16.6	9.4		30.0	31.0	10.6		20.0	44.1
9.6		19.4	37.8	9.8		36.7	56.4	10.2		31.5	50.6	10.3		27.5	31.3
9.7		20.4	42.9	9.8		50.2	37.8	9.4		40.0	35.7	10.4		28.0	28.3
7.8		33.4	41.1	9.7		54.7	40.0	10.2		41.0	48.3	9.8		31.0	0.3
9.8		35.4	6.1	9.8	51	0.7	41.8	10.2		41.0	27.9	10.0		40.0	29.5
9.6		38.9	30.7	9.1		10.0	56.5	10.4		43.0	52.4	10.6		40.0	17.0
25pr.	+1	3.3	-6.9	+1	3.8	-7.0		+1	4.4	-7.1		+1	4.9	-7.2	

1896AnCap...3...1G



3961-4020.				4021-4080.				4081-4140.				4141-4200.			
mag.	loh.	m s	-35°	mag.	loh.	m s	-35°	mag.	loh.	m s	-35°	mag.	loh.	m s	-35°
10.0	2	40.0	46.6	10.0	9	50.0	45.2	10.4	15	30.0	1.2	10.0	20	44.5	58.2
10.3		44.5	54.7	10.3		51.5	28.4	9.8		30.5	32.0	10.0		53.2	27.2
10.6		53.5	57.3	7.4		52.0	53.8	10.6		43.8	21.0	10.0		54.2	12.9
10.6		56.5	11.7	10.6		55.5	9.0	10.6		49.3	16.2	10.2	21	9.2	7.2
9.8	3	15.0	57.4	9.6		59.0	57.1	10.6		55.8	46.1	10.4		10.7	0.8
10.6		29.5	28.9	9.8	10	20.5	46.2	10.6		59.8	7.2	9.8		10.7	45.5
10.2		36.5	55.1	9.8		22.0	6.5	10.4	16	13.8	32.9	9.4		18.4	1.7
10.6		40.5	39.6	10.6		29.7	58.7	10.3		17.8	35.2	9.6		20.7	48.1
10.3		44.0	11.8	10.4		30.0	27.8	9.4		21.3	19.8	10.0		29.2	41.2
9.8	4	0.0	53.4	9.4		51.5	22.7	8.0		28.3	35.5	9.4		37.7	52.6
											W≡				
8.6		1.5	46.9	10.6		52.3	59.2	9.4		46.3	30.9	9.8		46.7	22.6
10.0		5.0	33.5	10.2		56.5	14.0	10.0		47.8	45.5	9.4		47.7	36.6
9.2		8.7	2.9	10.2	11	0.0	51.4	10.6		57.3	29.6	10.4		53.7	9.5
6.6		9.0	14.6	10.4		0.0	39.7	10.3		58.3	41.1	9.6	22	1.2	11.6
10.0		9.5	31.2	10.6		1.0	41.3	10.2		59.8	47.1	10.2		9.7	23.5
9.8		12.0	44.7	10.4		12.5	3.3	10.6	17	0.3	21.9	9.6		18.2	41.6
9.8		23.2	59.0	9.4		20.9	1.5	10.4		2.3	6.5	9.6		19.2	8.0
9.8		28.5	35.3	9.0		22.0	13.9	10.4		3.8	24.9	10.4		35.0	59.2
9.6		32.5	30.1	10.0		27.0	48.0	10.6		11.3	23.7	7.7		39.7	34.8
9.8		33.5	46.5	9.4		29.0	54.8	9.8		12.3	34.0	9.8		42.2	43.2
10.6		36.0	53.9	8.6		30.5	57.2	9.8		15.8	11.0	10.4		59.7	37.9
10.4		46.0	13.6	10.6		33.0	47.2	9.4		18.8	47.7	9.8	23	10.2	25.4
10.6		46.4	0.1	10.3		42.0	32.9	10.6		18.9	40.7	9.4		17.8	58.1
10.2		47.5	29.6	9.8		44.5	19.2	10.6		20.8	8.8	9.6		18.7	9.4
9.8		50.0	41.1	10.0		50.0	19.6	9.4		21.3	6.8	10.4		21.7	18.4
9.8	5	8.5	55.9	9.4		50.0	43.0	10.0		21.8	13.7	9.6		22.7	23.8
9.8		9.5	35.9	10.6	12	1.5	6.9	10.2		30.3	39.9	10.2		31.7	49.5
7.7		11.8	58.9	9.8		3.5	26.6	9.4		48.8	40.9	10.2		41.2	27.0
10.2		18.5	54.9	10.6		5.0	40.2	8.6		53.8	45.1	9.6		44.7	15.9
10.0		44.5	38.9	10.6		12.5	44.6	9.8		58.8	25.0	9.6		52.2	24.4
10.6		57.5	46.9	10.3		34.5	31.2	10.2	18	16.3	38.0	10.4		58.7	11.8
9.6	6	0.0	38.9	9.8		35.5	5.9	9.8		20.8	31.3	9.6		59.7	48.1
10.6		8.0	53.4	8.0		2.0	8.2	10.6		20.8	48.0	9.4	24	11.7	39.7
9.4		25.0	18.1	10.6		4.5	39.8	9.6		26.5	44.6	9.5		15.2	37.9
10.6		43.0	1.1	9.8		6.4	2.2	9.8		27.3	3.1	10.2		24.7	33.8
10.0		44.0	6.7	10.4		10.5	45.0	9.8		29.8	6.2	10.2	25	0.7	19.4
9.6		55.4	0.2	10.6		15.5	29.0	10.2		34.5	34.2	10.2		0.7	21.2
10.6	7	8.5	31.6	10.6		19.0	44.2	10.0		37.0	21.0	10.2		4.7	2.0
9.0		10.0	36.9	9.8		27.0	9.8	8.2		43.0	1.0	9.0		15.2	37.2
9.8		29.5	31.2	10.6		28.5	10.6	10.6		45.5	16.6	9.5		19.2	12.1
10.6		29.5	27.9	8.8		29.5	46.8	9.4		52.8	49.9	10.4		19.7	50.0
8.6		36.5	27.1	10.3		39.0	10.7	10.6	19	0.5	4.7	10.2		27.7	5.3
9.8		40.0	18.9	10.6		39.7	58.7	10.4		2.3	59.2	10.0		27.7	40.4
10.6		59.5	21.0	10.6		49.5	1.1	10.0		4.8	5.6	10.2		29.2	19.9
9.6	8	0.0	16.2	10.6		52.5	31.1	10.0		8.5	42.7	9.0		36.2	34.9
9.6		0.5	13.2	10.4		53.5	14.4	10.6		9.8	45.7	10.4		47.7	46.6
9.6		1.5	40.6	10.3		56.3	44.0	10.4		26.5	49.7	10.4		50.7	4.1
9.6		9.0	10.5	10.6	14	1.0	31.9	9.4		33.0	19.9	10.2		54.2	4.0
10.6		19.0	52.8	10.6		1.5	50.8	10.0		40.7	15.9	10.2		57.2	45.5
10.4		40.0	32.2	10.3		2.5	29.2	9.5		42.2	55.5	10.4		57.7	41.5
10.6		45.5	42.9	10.4		16.0	55.6	9.8	20	1.7	11.5	9.6	26	0.4	1.5
10.6		50.0	6.4	10.3		21.3	57.2	10.4		4.4	9.1	9.1		14.7	50.3
9.0		55.0	18.0	10.6		29.7	0.8	9.8		7.7	19.9	10.4		32.2	51.0
9.8	9	6.0	27.2	10.6		31.5	37.2	10.2		9.2	18.1	10.0		37.7	21.1
9.0		11.0	45.2	9.4		34.5	9.7	9.8		10.2	56.2	9.4		38.2	7.3
10.6		15.0	57.6	8.5		50.0	34.5	10.4		15.7	59.4	10.4		44.7	45.8
10.2		21.0	29.0	10.6		54.0	24.4	10.2		18.7	34.3	10.4		49.7	5.5
9.4		29.5	53.6	9.0		58.5	14.8	10.0		25.2	41.6	8.4	27	3.2	48.8
10.6		32.0	10.0	10.2		59.0	46.5	9.8		30.2	32.0	8.6		6.2	51.5
10.4		49.0	55.2	10.6	15	15.1	57.4	9.5		39.2	10.1	10.4		11.7	38.5
25Pr.	+ 1	5.4	-7.3	+ 1	6.0	-7.4		+ 1	6.5	-7.5		+ 1	7.1	-7.6	

4201—4260.				4261—4320.				4321—4380.				4381—4440.					
mag.	10 ^h .		-35°	mag.	10 ^h .		-35°	mag.	10 ^h .		-35°	mag.	10 ^h .		-35°		
	m	s			m	s			m	s			m	s			
9°0	27	15°0	59°8	8°5	9°5	31	33°2	32°0	9°4	35	12°4	54°5	9°6	40	0°9	43°9	
9°1		19°7	10°5	9°5	10°0		45°4	0°0	10°4		16°4	12°3	10°0		1°9	7°9	
10°4		28°7	31°1		10°4		49°7	58°1	10°2		23°4	43°8	10°4		9°4	41°6	
9°5		29°2	37°2		10°4		52°2	29°1	9°6		38°9	21°0	10°4		9°9	28°0	
10°4		29°7	1°2		9°8		55°2	53°4	7°4		48°4	4°8	10°4		12°4	56°9	
10°4		39°2	27°9		10°4		58°7	56°2	10°0		49°9	8°1	9°5		17°9	25°0	
10°0		39°2	8°0		10°2		59°7	27°3	10°4		49°9	55°5	10°4		19°4	54°0	
10°4		41°2	22°5		7°4	32	1°2	4°3	10°4		52°9	40°8	10°4		29°4	29°0	
10°2		42°2	8°2		9°8		2°2	5°3	10°4		36	4°9	56°8	9°8		32°9	38°0
10°2		49°7	23°7		9°4		5°2	53°0	10°4		7°4	54°0	9°6		49°9	29°1	
8°1		51°2	25°2	8°0 W≡	10°0		6°2	16°6	10°2		9°4	16°0	8°2		49°9	37°2	
10°2		51°7	51°9		10°2		9°3	57°2	10°0		10°4	59°0	10°4		54°4	29°0	
10°4		55°2	3°5		9°6		14°7	40°0	8°8		15°9	45°8	10°0		59°4	31°1	
10°4		55°2	12°8		10°4		18°7	40°4	10°4		17°9	32°3	9°6	41	2°4	17°6	
10°2	28	6°7	19°9		9°8		19°7	34°9	9°4		34°9	25°6	9°5	9°4		7°9	36°0
10°4		9°7	53°1		10°0		20°2	26°3	10°2		37°9	54°5	10°4		9°5	56°9	
10°4		9°7	24°1		10°0		24°5	18°8	8°6		37°9	32°9	8°8		15°0	26°2	
10°4		13°7	14°2		10°2		29°5	42°3	10°4		41°4	13°6	10°2		17°0	43°7	
10°0		15°7	5°0		9°5		32°0	14°9	10°2		51°4	49°5	9°5		22°5	21°2	
10°2		37°7	27°1		9°5		34°0	6°1	10°4		37	11°2	37°2	9°1		32°5	33°1
10°2		41°7	15°4		10°2		37°5	52°8	9°6		11°4	55°6	10°4		34°5	44°1	
10°2		43°2	49°3		9°6		43°0	42°7	9°4		15°9	51°0	10°4		40°0	59°9	
10°4		44°6	0°1		8°7		45°0	38°1	10°4		16°4	13°4	10°4		44°5	25°5	
10°2		47°2	3°4		9°4		50°0	27°9	10°2		17°4	10°0	8°4		50°0	27°9	
9°8		56°7	49°0		10°4		50°5	2°8	10°2		25°4	48°1	9°0		52°0	8°3	
9°8		58°0	57°1		10°0	33	1°0	36°6	8°8		39°4	4°0	10°4	42	6°0	44°5	
9°8		58°2	14°3		9°6		4°0	48°6	10°4		47°9	43°2	10°4		25°0	10°8	
10°4	29	2°2	26°0		10°0		14°5	19°8	9°1		49°6	2°2	10°4		25°5	47°1	
9°6		19°7	53°4		10°3		25°0	38°8	10°2		53°9	34°7	10°4		30°5	34°1	
9°6		21°7	53°0		10°3		27°5	29°1	10°4		56°4	42°3	10°2		31°5	32°2	
10°2		30°7	9°5		9°6		29°5	13°8	10°4		57°9	5°8	10°4		40°0	47°6	
8°6		40°2	10°8	9°0 -	10°2		33°0	23°9	10°0	38	1°9	11°7	10°4		46°0	14°7	
9°8		42°4	0°0		10°2		34°0	10°7	10°4		6°9	28°3	9°6		48°0	29°7	
10°4		45°7	24°5		9°6		39°0	46°5	8°8		9°4	22°0	10°2		48°0	11°4	
10°4		50°2	26°0		10°0		39°5	23°0	10°4		19°4	13°0	10°2		49°5	57°6	
10°2		51°7	55°9		10°4		44°0	20°0	10°0		22°9	12°8	9°5		50°5	28°0	
9°4		53°2	44°4	W	9°6		45°0	7°6	10°2		28°1	0°4	10°4		52°0	50°4	
9°5		58°2	43°0		10°2		47°7	57°0	9°4		47°9	52°4	9°5		54°0	51°5	
10°4		59°7	28°2		9°6		52°0	26°9	10°4		54°4	48°8	10°2		54°5	25°8	
8°8	30	1°2	40°5	9°0 W	10°4		59°0	54°5	10°4		58°9	40°3	9°1		56°0	12°5	
10°4		5°2	37°2		10°0	34	0°0	4°0	10°2		58°9	4°1	10°0	43	1°5	16°1	
10°2		14°7	38°1		10°4		1°5	14°6	9°4		59°9	0°7	9°4		7°0	5°1	
9°4		18°7	24°2		9°4		4°0	53°2	9°4	39	0°9	36°4	9°6		8°0	27°6	
10°0		19°2	3°2		10°4		8°5	49°0	9°5		6°9	39°4	10°2		9°5	45°8	
10°2		21°2	54°0		10°2		11°5	31°5	10°4		15°4	35°0	9°8		10°0	53°0	
8°6		33°7	43°2	8°0 W-	9°8		14°5	19°0	10°4		18°9	51°4	8°6		10°5	16°8	
9°6		35°2	36°5	9°5	9°6		20°5	12°1	9°6		18°9	19°1	10°0		16°5	24°7	
9°6		37°7	56°2		10°0		43°5	2°6	10°2		22°9	27°0	9°5		18°0	9°4	
10°4		41°7	8°8		9°8		48°5	28°1	9°5		22°9	44°7	10°2		24°0	48°5	
10°2		47°5	59°8		9°5		49°5	11°3	10°2		29°9	51°6	9°4		24°0	17°0	
10°2		53°7	55°1		10°4		49°5	31°8	9°6		29°9	50°0	10°4		29°0	24°4	
10°4		59°7	14°1		8°6		58°0	20°9	10°2		33°9	16°9	10°4		30°0	45°0	
9°8	31	3°2	16°3		10°4		59°0	30°3	10°2		38°0	4°9	9°0		30°5	32°8	
10°0		4°7	35°3		10°4		59°5	53°9	10°4		40°4	45°8	8°8		40°5	36°2	
9°6		9°2	58°9		10°0		59°5	7°5	9°6		51°4	0°0	10°0		43°5	27°4	
10°2		11°2	31°5		10°2	35	0°5	46°8	10°2		51°9	10°1	9°0		50°0	13°0	
10°2		13°2	38°2		10°2		5°4	42°4	10°4		54°0	17°9	8°8		51°5	12°7	
10°0		19°2	38°3		10°4		6°2	1°5	9°6		56°4	12°4	10°2		59°0	8°2	
9°5		21°2	50°0		9°0		9°4	56°2	10°2		58°9	19°2	10°4	44	8°5	56°0	
10°4		25°2	9°4		7°4		9°4	5°3	10°4		59°4	12°7	7°3		9°5	8°6	
25pt.	+1	7°6	-7°7		+1	8°0	-7°8		+1	8°4	-7°8		+1	8°9	-7°9		

4441-4500.				4501-4560.				4561-4620.				4621-4680.			
10 ^{h.}		-35°		10 ^{h.}		-35°		10 ^{h.} -11 ^{h.}		-35°		11 ^{h.}		-35°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.6	44	15.2	1.7	9.8	50	10.7	21.1	10.2	56	30.7	35.8	10.2	1	44.2	32.3
10.4		19.1	55.4	9.2		14.7	51.6	9.2		31.5	0.4	9.8		51.0	8.1
10.0		19.6	28.6	10.0		19.7	2.9	10.0		33.2	44.0	9.8		55.2	3.9
10.2		25.1	48.0	9.6		45.6	57.7	10.0		33.2	34.0	10.2		56.7	34.2
9.8		29.1	6.6	8.6		50.7	54.9	9.6		39.7	19.8	9.5		57.7	44.7
8.7		31.1	50.8	10.2		58.7	35.3	10.2		43.7	52.0	10.2		58.7	48.9
9.6		36.6	15.5	10.2		59.7	35.3	9.4		47.7	44.0	9.8		59.7	55.0
10.4		38.1	28.7	9.6	51	10.2	6.1	9.0		47.7	23.9	10.2	2	10.2	14.7
10.2		39.3	1.7	9.6		21.2	53.5	10.2		58.2	45.9	9.6		27.2	24.1
10.4		46.9	37.8	10.2		22.2	27.8	10.0	57	1.7	41.3	9.6		36.2	50.9
10.2		56.6	36.6	8.8		23.7	32.8	9.6		5.2	20.3	9.8		39.7	30.1
10.0		56.6	48.2	9.6		26.2	20.7	9.6		9.7	58.9	9.5		47.7	45.0
8.2	45	6.1	7.0	10.2		39.2	18.9	10.0		11.7	57.9	10.2		50.7	29.0
10.2		6.6	50.4	9.8		40.2	11.2	9.5		13.2	30.8	9.4		57.2	8.0
10.2		14.4	21.3	10.2		44.4	20.6	10.2		14.7	33.8	9.4		58.2	44.1
9.4		19.9	51.1	9.6		50.7	18.5	9.2		18.7	8.9	9.4	3	0.7	44.3
9.8		20.2	12.3	10.0		54.7	55.2	10.2		30.2	57.0	9.6		0.7	30.8
9.6		23.2	22.6	9.8	52	5.7	3.0	10.2		35.7	39.6	10.2		20.2	48.6
10.0		34.7	45.7	10.2		8.7	55.0	8.6		41.7	59.5	10.2		25.7	45.7
9.6		39.7	33.1	9.8		9.7	48.5	9.8		57.5	1.4	9.4		28.7	55.1
9.2		40.2	5.2	10.2		10.7	22.6	10.2	58	1.7	18.2	9.8		34.7	47.3
10.0		45.2	52.6	9.8		14.2	21.4	9.5		3.2	40.8	9.0		48.7	12.2
10.2		58.2	24.0	8.2		20.7	0.0	10.2		3.7	41.5	10.2		53.7	26.1
9.6	46	5.7	21.7	9.8		24.7	11.9	9.8		29.7	19.1	9.8		54.2	58.9
10.2		10.2	30.9	10.0		29.7	1.7	10.2		30.7	10.9	9.4		57.2	33.3
9.2		27.7	9.9	10.2		33.7	15.1	9.8		31.7	35.1	9.6	4	2.2	12.2
10.2		27.9	59.3	9.8		35.7	52.6	9.6		33.2	33.9	9.8		14.7	59.9
10.2		31.2	37.0	10.0		46.2	35.7	9.8		42.2	51.3	8.6		15.2	19.2
9.5		34.2	38.3	9.4		51.2	32.4	10.2		44.7	28.1	8.5		25.2	25.1
10.2		34.7	46.1	9.8		53.1	1.7	8.9		49.7	8.1	10.2		28.2	59.3
10.0		44.7	45.8	9.2		7.7	49.9	10.0		49.7	43.0	10.2		30.4	6.1
10.2		49.2	53.3	9.2		9.7	26.5	6.2		59.7	7.9	10.2		31.2	15.5
9.4	47	1.0	2.8	9.4		10.7	26.5	9.6	59	3.7	52.9	9.6		35.2	30.8
10.2		4.7	17.9	7.9		19.7	50.0	8.8		8.2	12.3	9.8		35.7	12.2
10.2		13.2	21.2	10.2		21.2	59.3	10.2		10.7	20.7	10.2		39.2	22.9
10.2		25.2	45.7	9.4		33.7	37.3	9.8		14.2	19.9	10.0		45.7	11.3
9.5		35.7	58.7	9.6		39.7	44.1	10.2		20.7	2.1	10.2		47.7	15.2
10.0		48.7	46.0	9.8	54	5.7	7.6	9.6		25.2	47.8	9.6		50.7	20.3
8.8		50.7	29.3	9.6		6.2	52.8	10.2		25.7	47.1	10.2		50.9	59.1
10.0		53.7	54.9	9.4		15.7	4.0	9.6		40.7	58.0	10.2		55.2	56.3
10.2		54.4	6.0	10.0		23.7	14.8	10.2		47.2	40.0	7.8	5	4.7	32.9
9.8	48	4.7	18.5	10.2		28.2	6.2	10.2		57.7	18.7	9.8		5.2	41.3
10.2		9.7	4.7	10.2		31.7	28.1	10.2		59.7	38.0	10.2		7.7	31.1
6.8		9.7	47.5	9.8		35.2	41.0	10.2	0	2.2	23.5	10.0		9.7	14.9
10.2		12.7	8.3	10.2		44.7	37.7	9.8		4.2	36.7	9.6		13.2	40.9
10.2		29.7	36.2	10.2		46.7	38.0	9.2		5.2	26.0	9.8		16.2	30.1
10.2		34.7	43.5	10.2		50.4	11.5	10.2		9.7	46.5	9.8		16.2	3.1
9.5		48.7	19.3	9.8		59.7	34.0	10.2		9.7	40.5	9.4		18.2	52.2
10.2		59.7	53.9	10.2	55	11.2	2.8	10.2		18.2	26.3	9.8		31.7	48.2
9.5	49	6.7	16.5	10.2		11.7	34.8	9.4		27.2	4.3	9.6	6	6.2	29.0
9.8		27.2	40.8	9.8		13.2	32.2	9.8		30.2	13.2	9.2		12.7	7.4
9.5		38.2	6.2	10.2		21.2	33.6	10.0		30.7	9.8	10.2		15.7	8.8
9.8		38.7	37.7	9.6		22.2	56.6	9.8		41.7	2.7	9.8		19.7	33.9
9.4		42.7	28.8	10.2		44.7	42.9	10.2		54.7	25.1	10.2		26.7	49.5
10.2		49.2	32.8	9.8	56	10.7	45.6	8.6	1	3.2	12.2	10.2		32.7	15.9
9.6		58.7	59.9	10.2		11.7	31.2	9.8		27.2	37.9	10.2		50.0	0.2
9.8		59.7	15.1	9.2		13.7	25.8	10.2		27.7	38.5	9.6		50.2	22.8
9.6	50	0.2	46.9	10.2		16.2	56.2	9.6		30.7	43.3	10.2	7	14.2	46.8
9.6		1.7	44.9	10.2		19.2	25.7	10.2		35.2	16.9	10.2		19.7	5.2
10.2		10.2	50.9	9.2		28.7	47.0	10.2		35.8	58.5	9.6		38.7	27.4
25 ^{Dr.}	+ 1	9.3	-7.9		+ 1	9.9	-8.0		+ 1	10.5	-8.1		+ 1	11.0	-8.1

4681-4740.				4741-4800.				4801-4860.				4861-4920.				
mag.	11h.	-35°		mag.	11h.	-35°		mag.	11h.	-35°		mag.	11h.	-35°		
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''	
8.6	7	45.7	58.4	9.0	10.0	16	2.8	47.7	10.4	22	15.3	31.8	9.7	27	59.3	7.9
9.6		59.7	36.1		10.4		3.8	54.1	9.2		16.3	12.0	9.4	28	0.3	17.8
9.6	8	6.2	3.9		10.0		4.8	58.9	9.8		28.8	12.0	10.4		0.8	17.1
10.2		7.7	49.0		10.4		9.8	29.7	10.4		30.3	10.3	10.0		9.8	55.1
8.6		19.7	34.3	-	7.8		14.8	48.1	10.4		30.3	26.0	8.0		12.3	30.8
10.2		21.5	0.0		10.4		36.8	39.5	10.4		38.8	41.1	10.2		19.3	20.2
8.3		29.7	36.2		7.3		45.3	33.3	10.4		40.3	40.5	10.4		22.3	25.8
9.8		30.7	11.5		8.2		45.8	11.1	10.4		40.3	28.5	9.4		24.8	22.6
10.2		32.2	45.7		10.4		48.8	39.0	9.2		40.3	51.9	9.8		25.3	44.2
10.2		32.2	17.3		9.6		53.3	22.7	10.4		43.3	43.5	10.0		25.3	15.1
10.2		37.7	16.7		8.6		58.8	42.6	10.0		50.8	45.3	10.4		27.5	59.8
9.0		41.7	24.6		6.6	17	9.8	28.8	10.4	23	0.8	4.1	9.4		36.3	49.2
8.8		43.1	25.9	=	9.7		18.3	13.6	10.4		6.3	5.2	9.4		37.8	10.2
9.6		45.2	50.2		10.2		20.8	51.1	9.6		19.3	29.5	9.4		57.3	41.7
10.2		48.7	43.3		10.4		23.8	54.3	9.7		21.3	37.0	9.8	29	10.3	10.9
10.2		49.7	25.8		10.0		27.8	53.4	10.0		36.0	57.9	10.4		21.3	4.7
10.2	9	0.7	20.6		10.4		37.8	3.6	10.0		50.3	54.7	10.4		26.3	3.1
9.8		39.7	8.8		10.4		42.8	43.4	10.4		55.3	34.5	9.4		28.0	59.2
10.2		41.7	2.5		7.2		44.3	24.2	10.4	24	0.0	59.9	10.0		32.8	16.3
9.0		47.2	32.9	9.0	9.8		47.3	28.4	10.0		5.3	9.6	9.4		49.3	16.6
9.0		52.1	33.7	9.0	9.6		50.8	29.6	10.4		15.3	21.5	9.7		51.3	54.0
8.8		58.2	37.9	7.5 G-	9.6		54.8	2.3	9.8		22.3	46.4	10.4		55.3	9.0
10.4	10	20.3	55.7		10.2		58.3	43.8	9.7		24.8	44.2	10.4	30	0.3	46.8
10.4		28.0	8.7		10.4	18	15.8	39.2	9.7		36.3	37.8	9.8		4.3	23.8
10.4		28.3	42.0		8.8		30.8	42.7	10.0		38.3	7.7	9.7		7.8	23.8
9.8		29.5	26.1		9.7		33.3	50.5	10.2		44.5	59.0	10.0		15.3	54.2
9.0		29.6	10.5	-	10.4		44.8	48.4	10.2		49.8	41.7	10.4		19.3	29.2
10.4		29.7	45.1		8.8		51.8	13.3	10.4		50.7	1.0	7.2		25.3	25.8
10.0		31.0	12.2		8.6		53.8	14.1	10.4		52.3	22.3	10.4		39.3	32.9
10.4		39.0	56.0		10.0		55.7	2.9	9.2		52.3	31.3	10.4		46.3	12.1
10.2	11	24.5	7.1		10.4		55.8	16.5	9.7		56.3	12.2	10.4		54.3	20.2
10.4		25.5	25.2		10.4		56.7	6.0	10.4		57.3	3.4	10.4		54.3	29.5
7.2		44.0	51.1	7.0 GS-g	10.0		58.3	30.2	9.2	25	10.3	52.0	10.4		55.3	26.9
10.4		50.5	0.0		9.4		59.3	35.1	10.4		11.8	13.2	9.0		57.8	51.2
10.4		53.5	30.2		10.4	19	8.8	8.7	9.2		21.3	20.6	10.2	31	0.3	5.0
10.4		58.5	56.2		6.4		26.3	22.6	10.2		22.8	55.2	10.0		0.3	33.4
7.8		59.5	54.6	8.5 G	10.2		26.8	25.3	10.4		30.3	4.0	9.7		2.8	21.1
8.3	12	9.8	45.1	9.0	10.4		32.3	37.3	10.0		42.7	3.0	10.2		6.3	41.2
9.7		30.3	4.9		9.8		34.3	19.8	10.4		44.8	46.6	10.4		14.3	51.1
10.0		46.3	53.5		10.4		34.8	36.3	10.4		45.3	13.0	10.4		18.3	0.6
10.2		49.8	28.5		10.0		40.8	43.0	10.2		47.8	25.0	10.4		29.3	27.1
10.4	13	3.8	45.1		9.7		44.3	57.6	10.4		48.3	18.5	9.4		34.8	25.3
9.4		17.8	57.3		9.4		49.3	44.1	10.4		55.8	15.4	9.8		36.3	18.4
10.0		43.3	47.2		9.6		49.8	54.5	10.4		57.8	14.0	10.4		40.8	34.5
9.4		44.4	2.3		8.6	20	4.3	36.3	10.4		59.8	22.0	8.7		41.3	52.4
10.4		50.8	21.2		10.0		17.8	30.6	10.2	26	2.8	13.0	9.6		43.8	11.6
10.4		52.8	41.3		9.7		20.8	39.2	8.2		15.3	38.0	9.0	32	9.0	58.4
9.7		54.8	5.2		10.4		22.3	26.3	10.4		15.3	20.2	10.2		10.3	43.2
10.4	14	9.6	59.8		10.2		23.8	34.7	10.4		24.8	55.0	10.0		18.3	48.5
10.4		11.3	44.1		10.4		52.6	0.2	10.4		31.8	8.2	10.4		30.3	29.0
9.4		14.8	26.4		10.4		56.3	10.6	10.4		34.3	10.1	9.8		37.8	15.6
10.4		19.8	33.1		10.0	21	9.5	59.8	9.4		35.3	0.8	10.2		40.3	14.0
10.4		25.3	39.6		10.4		12.3	43.2	9.4		36.8	2.6	10.0		43.8	15.6
9.0		31.8	17.9		9.8		12.3	49.9	10.4		41.3	41.9	9.0		50.3	33.1
10.4		32.3	42.1		8.8		37.8	21.6	7.5		45.3	31.0	10.2	33	0.3	5.2
7.7		40.2	2.1	8.0 GSg	8.6		42.3	23.1	9.4	27	15.3	15.3	10.2		5.8	6.8
10.4	15	2.8	35.9		10.2		42.3	28.2	10.4		24.8	28.4	9.8		15.3	27.8
9.4		39.3	43.3		10.4		51.8	39.9	10.4		36.3	41.4	9.4		33.8	14.8
9.4		53.2	0.8		9.7	22	0.3	17.8	10.4		51.3	15.3	9.8		35.3	40.1
8.3	16	0.3	33.5	8.5 G-	10.2		5.3	24.3	10.4		55.3	34.6	10.0		35.8	39.2
25pr.	+ 1	11.7	-8.2		+ 1	12.6	-8.2		+ 1	13.2	-8.3		+ 1	13.8	-8.3	

4921-4980.				4981-5040.				5041-5100.				5101-5160.			
mag.		11 ^h .	-35°	mag.		11 ^h .	-35°	mag.		11 ^h .	-35°	mag.		11 ^h -12 ^h .	-35°
9 ^o	33	39 ¹	59 ^o	9 ^o	40	48 ⁴	50 ^o	8 ^o	47	19 ⁴	45 ^o	9 ^o	10 ^o	55	2 ^o
10 ^o		41 ³	17 ⁵	7 ^o		50 ⁴	12 ⁷	9 ^o		25 ⁴	59 ^o	10 ^o			8 ⁴
10 ^o		51 ³	57 ²	9 ^o		50 ⁹	47 ³	10 ^o		39 ⁹	58 ^o	9 ^o			14 ⁴
9 ^o		56 ⁶	28 ⁹	9 ^o	41	9 ⁹	23 ⁴	10 ^o		44 ⁹	56 ^o	10 ^o			17 ⁹
10 ^o	34	0 ⁸	26 ²	9 ^o		33 ⁴	40 ⁴	7 ^o		50 ⁴	17 ^o	9 ^o			23 ⁹
10 ^o		7 ³	12 ^o	9 ^o		39 ⁴	18 ³	10 ^o	48	8 ^o	53 ⁴	9 ^o			39 ⁴
8 ^o		10 ¹	9 ²	9 ^o		52 ⁴	43 ¹	9 ^o		29 ⁹	5 ^o	9 ^o			40 ⁹
10 ^o		30 ³	50 ²	9 ^o	42	1 ⁴	18 ^o	9 ^o		31 ⁹	28 ^o	10 ^o			41 ⁴
10 ^o		35 ³	37 ⁴	9 ^o		2 ⁶	1 ⁹	9 ^o		32 ⁴	50 ³	10 ^o			49 ⁴
10 ^o		50 ³	26 ⁴	7 ^o		23 ⁴	17 ⁵	10 ^o		35 ⁹	8 ^o	9 ^o			51 ⁹
				10 ^o		27 ⁴	16 ^o	9 ^o		50 ⁴	28 ^o	9 ^o			56 ⁴
9 ^o		56 ⁶	2 ⁴	9 ^o		39 ⁹	14 ³	9 ^o		53 ⁹	50 ⁴	10 ^o	56		4 ⁹
9 ^o	35	0 ³	56 ⁵	9 ^o		39 ⁹	16 ⁴	9 ^o	49	3 ⁹	4 ¹	8 ^o			9 ⁹
10 ^o		3 ¹	26 ²	9 ^o		40 ⁹	19 ^o	10 ^o		18 ⁹	34 ¹	10 ^o			9 ⁹
10 ^o		5 ⁶	57 ¹	10 ^o		49 ⁹	55 ^o	9 ^o		54 ⁴	14 ¹	10 ^o			9 ⁹
10 ^o		8 ¹	54 ⁹	10 ^o	43	13 ⁹	18 ⁴	9 ^o		59 ⁹	0 ⁹	9 ^o			9 ⁹
10 ^o		9 ⁹	56 ⁵	10 ^o		27 ⁹	56 ³	9 ^o	50	0 ⁹	27 ^o	9 ^o			19 ⁴
10 ^o		11 ⁹	58 ²	9 ^o		30 ⁴	3 ⁹	10 ^o		3 ⁹	13 ^o	8 ^o			24 ⁴
9 ^o		37 ⁹	19 ⁸	10 ^o		33 ⁴	59 ^o	10 ^o		4 ⁹	54 ²	9 ^o			29 ⁹
10 ^o		39 ⁹	35 ⁹	10 ^o		38 ⁹	17 ⁹	9 ^o		5 ⁴	52 ⁷	10 ^o			29 ⁹
10 ^o		53 ⁹	18 ¹					9 ^o		8 ^o	5 ¹	10 ^o			33 ⁹
10 ^o	36	18 ⁴	44 ⁵	10 ^o		44 ⁹	35 ⁴	10 ^o		11 ⁹	57 ⁵	10 ^o			35 ⁹
8 ^o		20 ⁹	17 ⁹	9 ^o		58 ⁹	45 ⁸	10 ^o		13 ⁹	56 ^o	9 ^o			51 ⁴
8 ^o		34 ⁹	7 ³	9 ^o	44	5 ⁴	4 ¹	10 ^o		20 ⁴	48 ^o	9 ^o			57 ⁹
8 ^o		50 ⁴	19 ⁷	9 ^o		9 ⁹	20 ^o	9 ^o		24 ⁴	47 ^o	10 ^o			57 ⁹
10 ^o		50 ⁹	18 ¹	9 ^o		23 ⁹	46 ^o	9 ^o		24 ⁴	47 ^o	10 ^o			59 ⁹
8 ^o	37	3 ⁴	2 ⁷	10 ^o		24 ⁴	18 ⁷	9 ^o		42 ⁴	23 ¹	9 ^o	57		2 ⁴
10 ^o		6 ⁴	49 ⁸	9 ^o		28 ⁴	28 ^o	8 ^o		51 ⁹	23 ^o	10 ^o			13 ⁴
8 ^o		9 ⁹	37 ¹	8 ^o		37 ⁴	40 ¹	9 ^o		52 ⁹	23 ⁵	10 ^o			29 ⁶
10 ^o		10 ⁹	41 ⁵	9 ^o		40 ⁶	0 ⁹	9 ^o	51	0 ^o	57 ^o	9 ^o			29 ⁹
10 ^o		41 ⁴	16 ⁶	9 ^o		41 ⁴	26 ⁹	9 ^o		9 ⁹	43 ¹	9 ^o			44 ⁹
				10 ^o		42 ⁹	57 ⁸	10 ^o		11 ⁴	7 ⁵	10 ^o			51 ⁴
7 ^o		48 ⁴	36 ²	10 ^o		43 ⁹	52 ^o	9 ^o		45 ⁹	14 ⁴	9 ^o			54 ²
10 ^o		51 ⁹	25 ⁷	9 ^o	45	0 ⁴	0 ⁷	10 ^o		48 ⁸	1 ^o	10 ^o	58		9 ⁹
9 ^o	38	2 ⁹	51 ²	9 ^o		4 ⁴	17 ⁹	9 ^o		53 ⁴	29 ⁹	9 ^o			15 ⁴
10 ^o		10 ⁴	2 ⁸	9 ^o		10 ⁹	15 ⁷	9 ^o	52	0 ⁹	17 ⁸	10 ^o			15 ⁹
9 ^o		14 ⁹	51 ⁵	9 ^o		11 ⁴	6 ⁹	10 ^o		1 ⁹	4 ^o	10 ^o			19 ⁹
10 ^o		17 ⁴	54 ⁸	10 ^o		11 ⁴	23 ¹	10 ^o		21 ⁹	11 ³	9 ^o			25 ⁹
10 ^o		17 ⁹	28 ⁹	8 ^o		12 ⁹	47 ²	9 ^o		23 ⁹	17 ⁹	9 ^o			35 ⁴
10 ^o		23 ⁴	26 ¹	9 ^o		19 ⁹	8 ⁹	8 ^o		29 ⁴	43 ^o	9 ^o			38 ⁹
10 ^o		34 ⁴	48 ⁵	9 ^o		19 ⁹	56 ²	9 ^o		29 ⁴	45 ²	8 ^o			45 ²
7 ^o		39 ⁴	43 ¹					10 ^o		53	8 ^o	9 ^o			49 ⁴
	39	4 ⁹	42 ⁵	10 ^o		20 ⁴	6 ^o	9 ^o		12 ⁹	13 ⁵	9 ^o	59		2 ²
9 ^o		9 ⁹	52 ¹	10 ^o		24 ⁹	12 ⁴	10 ^o		15 ⁴	7 ^o	9 ^o			12 ⁹
9 ^o		9 ⁹	42 ⁹	10 ^o		30 ⁹	23 ⁹	10 ^o		18 ⁹	27 ³	9 ^o			20 ⁶
7 ^o		12 ⁴	39 ³	9 ^o		37 ⁴	10 ¹	10 ^o		19 ⁹	47 ⁵	9 ^o			38 ⁶
9 ^o		24 ⁴	41 ¹	10 ^o		43 ⁹	13 ⁶	9 ^o		26 ⁴	44 ⁹	10 ^o			49 ⁶
9 ^o		30 ⁸	2 ⁵	10 ^o	46	1 ⁴	12 ⁶	9 ^o		29 ⁹	27 ^o	10 ^o			54 ⁴
9 ^o		38 ⁴	53 ⁹	10 ^o		4 ⁹	13 ¹	8 ^o		30 ⁹	30 ¹	10 ^o			57 ⁸
9 ^o		43 ⁴	14 ⁵	9 ^o		8 ⁴	6 ⁹	9 ^o		52 ⁴	10 ¹	10 ^o			58 ⁸
9 ^o		59 ⁹	25 ^o	10 ^o		10 ⁹	20 ²	10 ^o		54 ⁹	35 ²	9 ^o			59 ⁶
9 ^o	40	2 ⁹	56 ⁶	10 ^o		14 ⁹	58 ⁴	8 ^o				9 ^o			59 ⁶
				10 ^o		39 ¹	0 ⁸	10 ^o		54 ⁹	17 ¹	10 ^o	0		3 ⁶
9 ^o		2 ⁹	8 ¹	10 ^o		39 ⁹	51 ^o	10 ^o		57 ⁴	53 ⁴	9 ^o			3 ⁸
8 ^o		5 ⁴	14 ⁸	8 ^o		51 ⁹	40 ¹	9 ^o	54	4 ⁴	46 ^o	9 ^o			14 ⁵
10 ^o		9 ⁹	4 ¹	9 ^o		57 ⁹	21 ⁷	9 ^o		11 ⁹	43 ^o	10 ^o			19 ⁵
9 ^o		9 ⁹	2 ^o	7 ^o		58 ⁴	52 ⁸	9 ^o		14 ⁴	22 ^o	10 ^o			31 ²
9 ^o		11 ⁸	58 ²	9 ^o	47	1 ⁴	0 ⁵	9 ^o		21 ⁹	0 ⁹	9 ^o			44 ^o
10 ^o		20 ⁴	6 ⁴	8 ^o		1 ⁴	20 ⁹	9 ^o		23 ⁹	23 ¹	9 ^o			45 ⁵
10 ^o		28 ⁴	30 ³	10 ^o		5 ⁴	40 ⁸	10 ^o		25 ⁹	54 ⁷	10 ^o			58 ⁶
10 ^o		36 ⁴	40 ⁹	10 ^o		6 ⁴	30 ¹	10 ^o		42 ⁴	16 ⁹	10 ^o	1		5 ⁷
8 ^o		44 ⁴	43 ^o	10 ^o		19 ^o	59 ⁵	10 ^o				10 ^o			12 ⁵
9 ^o		46 ⁹	42 ^o												
25pr.	+ 1	14 ⁵	-8 ³	+ 1	15 ²	-8 ³		+ 1	15 ⁹	-8 ³		+ 1	16 ⁶	-8 ⁴	

5161-5220.			5221-5280.			5281-5340.			5341-5400.		
mag.	12 ^{h.}	-35°	mag.	12 ^{h.}	-35°	mag.	12 ^{h.}	-35°	mag.	12 ^{h.}	-35°
9.8	1	29.7	34.9	9.7	7	59.7	21.0	9.4	14	2.7	10.2
10.2		40.7	56.3	9.6	8	3.7	20.9	9.0		4.2	6.6
9.8		49.2	20.6	9.8		23.2	55.4	8.0		10.7	30.5
10.2		59.2	49.8	9.2		23.2	51.7	9.6		16.2	37.8
10.2	2	7.7	3.8	7.6		29.2	31.5	9.8		27.2	33.0
9.9		10.5	56.7	9.7		41.7	8.6	9.9		29.2	23.1
9.4		18.2	21.7	9.7	9	5.2	43.3	10.2		34.7	41.6
10.2		20.2	11.5	9.7		7.7	43.4	9.4		54.2	25.0
10.0		27.2	35.7	9.4		9.2	29.6	9.9		58.2	46.7
10.2		27.7	48.8	9.7		21.7	46.0	9.7		59.2	41.3
10.2		30.2	1.4	10.2		24.2	27.1	9.4		59.2	20.8
10.2		30.2	49.5	9.7		30.2	50.0	10.2	15	0.7	2.9
10.2		34.0	57.6	10.2		39.2	24.9	10.0		9.2	47.6
9.8		40.2	5.8	9.7		41.7	43.1	9.4		14.2	8.0
10.2		45.2	6.3	9.8		49.2	31.3	10.2		21.2	27.7
8.5		48.0	59.8	9.8		53.7	23.6	9.4		23.7	56.3
9.2		50.2	12.6	9.6	10	20.7	56.6	9.6		45.2	49.9
9.9	3	9.2	9.7	10.2		23.7	46.0	10.2		48.7	54.3
10.2		18.2	8.8	9.6		26.2	45.5	9.7		51.2	17.1
10.0		18.7	39.5	10.1		28.2	47.0	9.0		59.2	49.4
9.7		19.2	11.5	10.0		47.7	25.5	10.2	16	4.2	25.0
9.6		20.2	47.0	9.7		48.2	43.1	9.0		11.7	36.9
10.2		44.2	34.0	10.2		49.2	8.8	10.0		14.7	22.2
10.2		52.7	43.8	10.2		51.2	29.5	9.2		23.0	59.9
9.7	4	1.2	22.7	9.2		51.2	23.1	8.9		36.7	8.2
10.1		3.2	51.7	10.2		51.2	2.4	10.0		49.2	7.1
9.0		29.2	47.7	10.0		53.0	58.7	9.7		54.2	25.8
9.6		36.7	6.5	10.1	11	0.2	25.7	9.7	17	2.7	18.8
9.4		45.7	4.5	9.7		12.7	26.5	10.2		5.2	20.8
9.7		57.7	47.1	8.6		15.2	38.3	10.2		11.4	2.5
10.0		59.2	48.8	10.2		15.4	37.0	10.2		14.2	30.2
10.2	5	0.2	13.1	6.8		16.2	23.8	10.2		19.7	6.2
10.2		9.2	22.1	8.8		21.7	19.6	9.6		24.7	23.6
10.0		14.2	38.8	8.6		24.2	8.1	9.6		31.2	5.4
8.6		28.2	34.7	9.2		24.7	10.6	9.6		34.7	12.6
10.2		28.7	46.5	10.2		39.7	20.0	10.2		48.2	35.6
9.8		38.2	18.5	9.6		43.7	29.5	9.6		50.7	32.3
10.1		39.4	44.7	9.7		45.2	27.8	10.1		59.7	38.0
9.6		49.2	10.1	9.8		51.2	27.1	10.2	18	1.7	7.1
9.4		56.7	36.8	9.8	12	15.2	52.4	9.9		11.2	48.0
10.2	6	9.2	8.1	9.2		18.2	7.1	9.6		15.2	34.9
9.6		21.0	59.1	10.1		23.2	39.7	10.0		17.7	54.9
10.0		36.7	11.9	9.4		24.2	38.8	9.2		22.2	53.9
8.8		39.2	15.5	9.9		25.2	32.7	10.1		33.7	30.9
9.9		43.2	53.3	10.2		31.7	19.9	10.0		40.2	7.1
9.6		50.0	57.9	9.6		54.2	48.7	9.8		42.2	43.2
9.6		52.7	41.1	8.9		59.2	0.9	10.1		43.7	39.0
9.9		52.7	23.9	10.2	13	0.7	33.1	9.8		49.9	2.3
9.7		59.2	31.1	10.0		5.2	49.5	10.2	19	16.1	4.2
10.1		59.7	54.3	10.2		7.2	7.6	10.2		17.1	48.3
10.1	7	4.2	52.1	9.6		16.7	14.9	9.0		19.1	27.6
9.2		10.7	36.8	9.7		17.2	55.6	10.2		24.1	30.7
10.2		13.2	56.4	9.7		29.2	54.8	10.2		29.1	22.7
10.2		21.7	53.0	8.8		43.2	56.2	9.6		30.1	4.7
10.2		24.2	21.6	10.2		47.2	21.7	10.0		33.6	12.5
9.6		27.7	37.9	9.7		49.7	36.6	10.2		38.6	7.2
10.1		33.2	14.5	10.1		54.2	21.0	10.2		39.6	30.4
7.8		38.2	51.7	10.2		59.2	48.9	10.2		49.1	49.0
10.2		59.2	17.2	10.2	14	0.2	38.8	10.2		50.6	56.7
9.6		59.2	27.3	9.2		0.7	20.0	10.2		58.1	49.4
25pr.	+ 1	17.3	-8.4	+ 1	17.9	-8.3		+ 1	18.6	-8.3	

5401-5460.			5461-5520.			5521-5580.			5581-5640.		
mag.	12 ^h .	-35°	mag.	12 ^h .	-35°	mag.	12 ^h .	-35°	mag.	12 ^h -13 ^h .	-35°
10 ^o	26	47.8	10 ^o	35	6.7	9 ^o	45	32.7	10 ^o	52	11.8
9.4	49.3	34.0	9.8	16.7	39.9	9.8	45.2	1.1	10 ^o	14.3	38.4
9.4	57.3	22.8	9.8	40.2	27.1	10 ^o	45.7	22.2	10 ^o	24.3	38.1
8.4	57.8	41.4	9.8	58.2	25.0	10 ^o	53.7	13.9	10 ^o	53	1.8
10 ^o	27	8.3	9.4	36	10.9	9.8	57.2	25.1	8.7	9.3	34.7
9.4	19.3	40.0	9.4	20.2	30.9	8.6	46	4.7	7.6	10.3	30.3
9.2	21.3	33.4	8.7	21.2	46.6	9.8	6.2	37.1	10 ^o	24.3	1.1
9.6	25.3	41.8	9.0	29.2	19.4	10 ^o	18.7	21.7	8.5	39.8	11.8
9.2	28.3	40.2	10 ^o	39.2	19.0	9.8	20.2	31.1	10 ^o	40.3	34.9
10 ^o	37.8	28.0	10 ^o	40.2	34.7	9.6	21.2	32.6	8.8	49.3	28.6
9.8	39.3	48.2	10 ^o	57.2	42.1	10 ^o	28.2	40.8	8.5	54	3.3
9.4	4.8	21.1	9.8	37	13.2	10 ^o	32.7	54.6	10 ^o	5.3	51.2
8.8	9.3	49.4	7.2	13.2	39.8	9.4	55.2	15.1	10 ^o	20.3	53.9
10 ^o	25.8	36.9	10 ^o	37.7	46.7	10 ^o	56.2	49.0	9.4	21.8	36.6
9.6	43.8	10.2	9.6	42.2	27.5	9.6	47	0.7	9.9	43.8	52.0
8.4	57.3	8.0	8.4	44.7	32.1	9.4	3.2	7.1	9.9	54.9	1.0
10 ^o	57.4	21.8	10 ^o	48.2	7.7	10 ^o	20.2	17.0	8.2	58.3	26.4
9.4	19.3	46.8	9.4	51.2	33.8	10 ^o	24.7	18.1	10 ^o	55	14.3
8.7	25.3	8.0	10 ^o	38	25.2	10 ^o	26.0	58.4	10 ^o	26.3	27.6
9.4	49.3	42.1	9.4	40.2	14.0	10 ^o	35.7	47.9	9.6	42.8	51.8
9.6	54.3	35.0	8.8	46.7	46.0	9.6	37.2	28.0	9.5	48.3	13.0
10 ^o	0.8	13.8	8.8	53.7	44.8	9.8	40.7	20.0	9.2	56	2.3
9.8	19.3	33.7	10 ^o	39	0.2	9.8	50.7	52.2	10 ^o	9.3	42.6
10 ^o	31.3	13.4	10 ^o	8.2	48.1	9.8	51.2	48.5	9.6	20.8	35.0
10 ^o	34.8	48.5	10 ^o	49.9	28.8	9.4	48	1.7	10 ^o	21.7	2.2
10 ^o	46.3	54.3	9.4	52.4	51.7	9.6	10.7	54.1	10 ^o	27.7	1.1
10 ^o	48.6	2.1	10 ^o	40	28.4	8.9	32.7	46.8	9.5	50.3	7.2
10 ^o	48.8	22.1	9.4	53.6	2.7	9.8	47.7	27.4	9.5	55.3	40.1
10 ^o	51.8	28.3	8.9	56.4	33.8	10 ^o	50.2	7.1	10 ^o	57	4.8
10 ^o	59.3	23.9	9.6	59.4	40.0	10 ^o	53.7	29.2	9.9	5.3	20.0
10 ^o	31	11.8	8.2	41	20.2	8.4	49	4.7	9.0	30.3	27.7
9.6	14.8	8.3	10 ^o	25.4	5.0	9.2	8.7	3.2	9.6	52.3	14.8
9.8	24.3	4.3	10 ^o	40.9	47.8	9.2	10.9	42.5	10 ^o	58	4.1
10 ^o	24.3	18.8	10 ^o	45.4	0.6	9.2	25.9	27.0	10 ^o	5.3	58.2
9.6	37.8	5.2	10 ^o	48.4	34.1	9.8	32.9	50.3	9.8	12.3	28.2
9.1	50.3	15.1	8.6	42	0.4	9.2	33.9	43.1	9.6	37.8	53.6
10 ^o	59.0	0.1	10 ^o	18.4	18.1	9.4	49.4	58.2	9.8	42.3	48.0
10 ^o	32	16.3	10 ^o	24.4	51.0	8.9	50	5.6	9.6	54.8	5.0
9.4	27.3	14.7	10 ^o	31.4	19.0	10 ^o	7.9	0.2	9.6	59	22.3
9.4	39.5	57.1	10 ^o	42.4	16.0	9.8	7.9	18.5	9.9	34.1	18.0
9.8	39.8	47.9	10 ^o	43	4.9	9.6	14.4	3.9	9.4	36.6	31.4
9.6	43.3	39.7	9.8	6.9	36.4	10 ^o	18.0	15.2	9.6	45.8	0.2
9.2	44.8	19.9	9.2	10.4	45.7	10 ^o	30.5	3.7	9.6	51.1	10.3
9.2	49.3	50.2	9.8	21.4	44.7	10 ^o	30.9	37.3	9.8	52.1	45.3
9.4	51.8	34.9	10 ^o	29.9	5.6	10 ^o	30.9	51.5	6.6	58.1	11.4
10 ^o	53.8	15.9	9.0	42.4	32.1	10 ^o	31.9	57.8	8.8	0	3.1
9.6	57.3	58.9	9.0	59.4	25.7	10 ^o	52.9	16.7	10 ^o	8.1	28.7
10 ^o	33	6.3	10 ^o	44	5.4	10 ^o	58.9	36.4	8.9	16.1	53.2
10 ^o	24.3	22.9	8.9	22.9	13.1	10 ^o	59.4	47.6	10 ^o	24.3	1.0
9.8	25.8	40.4	10 ^o	31.4	3.0	9.4	59.9	59.5	9.6	26.1	56.2
9.2	41.3	48.3	10 ^o	34.9	31.2	9.5	51	4.8	10 ^o	36.1	31.0
8.9	47.8	49.1	10 ^o	38.6	58.0	9.5	9.3	9.8	9.8	40.8	2.6
10 ^o	52.3	22.8	10 ^o	42.9	25.8	10 ^o	10.8	12.1	10 ^o	50.1	50.0
9.6	54.3	52.1	8.9	58.9	23.0	10 ^o	41.3	39.3	9.5	55.1	17.2
9.2	9.7	59.1	10 ^o	45	2.9	9.8	41.8	44.2	8.9	55.6	43.9
10 ^o	16.2	27.7	9.4	7.9	35.7	7.2	48.3	35.9	7.5	1	25.1
10 ^o	21.2	37.9	10 ^o	11.7	28.5	9.2	52.3	19.9	10 ^o	30.1	26.9
10 ^o	29.2	14.8	10 ^o	21.2	32.2	9.8	52	1.8	10 ^o	44.1	8.0
9.2	32.2	31.6	9.4	25.7	19.9	9.6	4.8	26.0	10 ^o	2	4.1
9.4	55.2	49.6	8.9	26.7	15.2	9.5	10.3	15.1	9.2	14.1	12.9
25pr.	+ 1 20.0	- 8.3		+ 1 21.1	- 8.2		+ 1 21.9	- 8.2		+ 1 22.7	- 8.1

5641-5700.			5701-5760.			5761-5820.			5821-5880.		
mag.	13h.	-35°	mag.	13h.	-35°	mag.	13h.	-35°	mag.	13h.	-35°
8.5	2 39.1	4.6 9.0	9.4	11 39.1	59.5	10.0	19 4.0	31.8	9.6	26 24.0	26.2
8.1	45.1	29.5 =	9.5	12 0.9	26.6	10.3	18.2	0.6	9.0	28.0	57.6 9.5
9.3	47.1	9.3	10.0	21.4	12.2	10.4	22.0	52.7	10.4	30.0	29.8
8.2	50.1	51.9 8.0 G-	10.0	34.4	45.0	10.4	29.0	47.9	10.3	39.0	47.8
10.0	3 9.1	35.1	10.0	34.4	12.1	10.4	47.0	19.0	10.4	41.0	40.3
9.9	19.1	38.4	9.6	38.9	40.9	8.4	20 8.0	58.8 9.0	10.0	45.0	38.5
9.2	22.1	27.7 9.0	10.0	42.9	21.6	10.4	9.0	26.3	10.2	46.5	28.2
10.0	31.1	29.4	9.8	56.9	44.1	9.6	19.0	40.8	9.6	50.0	7.8
9.2	45.1	38.5	9.0	57.9	39.1	10.2	34.0	46.0	9.8	54.5	26.3
9.3	45.6	55.7	9.4	59.9	50.5	10.4	47.0	1.0	9.3	27 9.0	52.9 9.5
10.0	50.3	0.5	9.2	13 9.9	33.7	9.8	47.5	17.3	10.0	13.5	17.1
9.9	54.6	54.0	9.6	12.9	35.1	9.0	49.0	16.2	10.4	20.5	3.9
9.0	55.6	47.4	9.9	29.6	23.4	8.2	50.2	1.2 8.8 GW-	9.6	22.5	47.8 9.5
9.8	4 0.1	43.8	8.9	39.1	11.7 9.5 -	9.8	59.0	44.0	10.4	28.0	26.4
9.2	5.1	7.0	9.5	14 9.6	5.8	10.0	21 0.0	12.9	10.0	29.0	42.0
9.3	17.1	31.0 9.5	10.0	12.1	52.5	10.0	20.0	33.6	10.0	45.5	21.1
10.0	39.6	19.5	9.8	13.1	58.4	9.2	24.5	4.0 9.0 -	9.8	49.0	15.2
10.0	54.1	45.0	9.6	13.6	12.0	10.4	48.1	1.8	10.4	50.0	18.9
10.0	5 0.1	33.5	9.4	23.6	39.9	9.4	51.5	56.0	10.4	50.0	53.1
9.9	1.6	50.5	9.8	25.1	12.9	8.2	59.0	7.6 8.0 G-	9.4	59.5	37.1 9.5
9.6	24.1	38.4	9.3	31.6	5.1	10.4	22 7.7	0.6	9.6	28 3.0	50.3
10.0	33.6	45.2	8.4	33.6	53.6 8.5 G-	10.0	28.0	34.9	8.2	3.8	0.4 8.5 W-
9.6	33.6	55.2	9.6	43.6	16.0	10.4	29.0	32.0	10.2	8.0	37.6
10.0	45.1	0.7	9.9	44.6	13.0	10.2	55.5	28.8	10.3	11.0	25.5
10.0	58.1	5.7	7.4	45.6	27.2 7.5 GS=	10.4	57.3	0.2	9.6	11.0	48.4
10.0	6 0.1	19.7	10.0	49.6	21.1 9.5	9.0	23 4.0	45.6	9.8	11.0	31.2
9.3	0.1	3.8	10.0	49.6	14.8	10.4	5.1	1.6	10.2	13.0	35.9
9.5	1.6	58.5	10.0	52.4	58.5	9.2	8.0	32.8 9.5	9.3	40.0	37.8
9.6	8.1	53.4	10.0	59.4	20.0	9.6	8.0	44.4	9.4	43.0	52.9
9.5	10.1	8.8	9.8	15 2.3	54.7	9.8	10.5	33.5	9.8	29 7.3	6.0
10.0	27.6	30.0	9.2	9.1	12.9	10.0	11.0	51.2	9.6	12.8	43.3
10.0	30.1	51.8 9.0 GW=	8.6	10.4	2.5 9.0 =	10.4	21.0	35.6	10.4	14.8	15.1
8.4	43.1	16.9	10.0	11.8	2.9	10.4	31.5	40.0	10.4	21.3	40.7
10.0	45.1	19.0	9.9	14.6	0.9	10.4	40.0	30.4	10.3	30.8	0.4
9.8	7 20.1	42.2	10.0	20.3	37.6	10.3	44.0	38.9	10.4	33.3	24.2
10.0	30.1	19.0	10.3	22.1	10.4	8.6	46.0	31.2 9.0	10.0	43.8	54.7
10.0	31.6	54.3	10.0	24.9	50.3	9.2	49.0	18.0	8.8	52.8	52.4 8.5
9.4	47.1	51.9	10.3	26.9	12.8	9.4	58.0	17.2	10.4	58.8	42.3
9.5	55.1	35.3 9.0	10.4	30.9	41.4	10.0	58.0	43.3	9.3	30 10.8	4.0 9.5 -
10.0	55.1	20.4	10.0	33.3	26.0	10.4	24 4.0	14.9	9.8	10.8	5.4
10.0	55.1	27.3	9.8	39.3	48.8	10.3	4.0	49.7	10.0	13.3	24.1
10.0	55.6	9.4	10.0	49.3	42.6	10.2	6.0	32.8	9.2	14.8	4.5 9.5
7.2	9.1	42.5 6.5 GSg	9.6	50.3	15.7	10.4	19.0	12.2	10.4	14.8	46.1
9.8	24.4	35.5	10.0	50.6	53.0	8.8	23.7	57.8 8.5 G	7.6	19.8	56.0 8.0 GW-
9.6	29.9	9.1	8.8	56.6	45.5 9.0	10.4	40.0	32.1	10.0	21.8	15.9
9.8	55.4	26.9	9.0	16 0.3	0.7	10.0	41.5	23.9	9.8	30.8	11.2
10.0	58.9	43.7	10.3	12.1	32.2	10.4	48.0	28.0	10.4	43.8	42.6
9.8	7.9	22.0	10.4	14.0	27.8	9.4	25 1.0	42.8	10.3	31 0.8	42.2
9.2	8.9	26.8	10.4	18.4	16.8	10.3	18.0	55.9	10.4	0.8	39.9
9.8	25.4	20.0	10.3	21.1	25.8	10.0	18.1	1.2	10.4	8.3	22.2
10.0	10 24.5	2.6	10.3	29.1	32.2	9.4	20.0	47.1	9.8	8.8	1.3
9.8	28.9	43.0 9.0 -	9.0	17 8.6	35.4	10.2	21.0	38.8	9.2	14.8	11.1 8.5 G
9.9	29.9	11.8	9.8	31.6	19.8	9.6	29.0	30.6	10.2	19.8	55.2
10.0	31.1	57.9	9.2	47.1	8.2 8.5 -	9.8	35.2	58.5	9.4	26.8	13.1 9.5
10.0	31.4	7.7	10.2	18 18.1	35.1	9.8	38.0	55.2	9.2	35.3	15.8 9.5
9.9	32.4	17.9	9.0	23.1	36.8 9.5	10.2	43.5	4.8	9.6	43.8	56.4
9.8	55.9	27.3	9.0	26.7	56.4	9.6	51.0	52.4	10.4	45.3	13.3
10.0	11 1.4	7.1	9.6	38.6	12.6	10.4	26 0.0	31.1	10.3	46.8	42.9
8.8	21.9	38.5 9.5	9.4	52.1	53.8	9.0	19.0	24.6	10.4	55.8	0.9
8.7	29.9	43.1 9.5	9.6	19 3.0	27.0	9.6	22.5	15.8	9.6	58.8	1.0
25pr.	+ 1 23.6	- 8.0		+ 1 24.5	- 7.9		+ 1 25.3	- 7.8		+ 1 25.8	- 7.7

1895 JANCAP... 3.....1G

5881-5940.			5941-6000.			6001-6060.			6061-6120.		
mag.	13 ^h .	-35°	mag.	13 ^h .	-35°	mag.	13 ^h .	-35°	mag.	13 ^h -14 ^h .	-35°
9.4	32 2.3	45.9	7.7	38 13.5	17.7 7.5 GS=g	10.4	45 36.0	57.9	10.4	53 28.1	38.0
10.0	4.3	34.9	10.4	14.5	11.4	9.7	58.1	14.0	10.2	35.1	32.0
9.2	9.3	38.1 9.5	9.8	17.5	53.3	10.4	59.1	1.5	10.4	39.1	52.7
9.8	11.3	31.9	10.0	19.5	43.7	10.4	46 2.1	10.8	10.0	50.0	13.1
7.9	12.8	36.2 7.5 =	9.0	33.5	13.2 9.5	9.5	6.1	54.5	10.0	51.0	27.7
10.4	25.8	36.7	10.3	34.0	0.5	8.8	10.1	44.2 8.5 =	10.4	51.6	27.1
10.0	27.8	2.5	10.4	46.5	0.6	9.0	14.4	1.7 8.5 =	10.2	54 20.0	5.1
9.6	40.8	9.5	10.4	49.3	1.4	6.6	15.1	2.7 6.0 GS π	10.4	43.5	41.7
9.8	41.3	58.2	10.3	52.5	23.2	9.8	16.6	9.7	10.4	49.0	17.1
10.4	43.6	18.3	9.4	56.5	37.3 9.5	10.0	36.1	48.7	10.4	50.0	52.7
9.4	58.6	52.9	10.0	59.3	7.2	10.4	44.1	47.9	6.9	59.5	34.3 W-
9.8	33 5.6	57.2	10.4	39 0.3	9.1	10.0	46.4	0.3	9.5	55 0.0	41.6
10.2	8.6	38.0	10.4	17.8	57.1	9.2	49.1	37.6 9.5	10.4	9.5	39.0
10.4	30.6	31.9	9.0	28.9	58.8 9.5	9.0	49.1	56.3 8.5	8.6	11.0	11.3 8.0 G
10.4	31.6	37.4	8.4	29.3	46.7 8.0 G-	9.0	50.1	15.2	8.7	16.0	15.7 8.5
9.8	32.1	36.0	9.6	38.3	53.9	10.4	51.6	55.1	10.2	18.5	50.3
10.2	36.6	21.4	6.2	39.3	37.5 5.5 GS π	9.0	55.1	1.9	9.3	39.0	18.9
10.0	34 22.5	1.2	10.4	58.3	6.2	9.7	47 14.1	43.1	10.2	50.2	1.5
10.3	27.6	23.7	10.2	40 21.8	37.9	10.4	20.1	20.9	10.4	56.0	27.9
10.2	29.6	27.1	7.9	26.4	58.8 =	10.2	42.6	32.1	10.0	56 0.0	48.0
10.0	38.6	1.9	10.4	28.3	12.0	9.3	45.1	31.3 9.5	8.9	10.0	51.7 8.0 G-
10.3	42.3	59.0	10.3	31.8	23.1	10.4	48.6	54.9	10.2	18.5	23.5
9.3	46.1	13.5	9.6	36.5	24.0	10.2	59.1	13.0	10.4	27.5	42.4
10.4	53.6	38.1	10.3	38.3	22.6	10.4	48 7.6	2.7	10.4	32.0	53.9
9.8	56.6	28.1	10.4	42.8	31.3	8.4	15.1	12.9 9.0 =	10.4	32.5	6.9
10.3	35 0.6	21.3	10.4	53.8	22.5	10.0	16.6	21.1	9.7	34.0	45.0
10.4	13.1	39.9	9.6	55.3	49.0	9.0	29.6	16.7 9.5	10.4	38.5	27.9
9.2	22.1	24.1 9.0 =	9.8	41 0.3	48.2	10.4	31.1	55.7	10.4	48.5	28.3
10.2	24.1	42.0	9.8	2.5	45.8	9.8	52.1	55.6	10.4	51.0	8.3
10.0	28.6	4.1	10.4	6.2	18.6	10.4	49 20.1	31.5	9.8	58.0	38.7
10.2	37.1	45.9	9.8	12.9	44.6	10.4	31.6	42.9	9.8	57 10.0	36.0
10.0	42.6	3.6	10.4	16.9	26.7	10.4	45.1	12.9	7.6	13.5	2.6 7.5 GS-
9.8	46.6	8.8	10.0	20.7	5.2 9.5	10.2	50 6.1	52.7	9.8	18.5	35.7
9.6	52.6	15.6	7.0	43.6	4.4 6.7 GS=t	9.4	16.1	25.5	10.4	28.5	58.9
9.3	36 8.6	56.0	10.2	55.5	48.0	10.4	21.1	27.4	9.4	52.0	5.8
10.3	11.5	59.9	10.4	42 15.1	28.6	9.0	35.1	52.1 -	9.6	54.5	34.0
10.0	14.5	30.0	8.6	18.3	1.8 8.8 -	10.4	36.1	4.5	10.4	57.5	11.0
10.2	28.5	39.4	10.2	20.1	56.6	10.2	55.6	47.0	8.2	58 4.2	56.7 8.5 G-
10.4	38.5	10.2	9.0	21.6	33.3	9.6	51 0.1	14.9	9.5	5.2	56.9 G
9.2	43.5	15.5	8.2	23.8	59.0 7.5 GW=	10.4	4.6	31.0	9.5	25.0	28.3
9.8	49.5	19.1	10.4	34.8	0.8	9.8	15.1	33.9	9.0	29.0	24.9 8.5 G
10.4	58.0	32.0	9.3	45.1	44.5	9.3	30.1	17.1	8.8	31.0	59.7 8.5 G-
10.4	58.5	24.9	10.4	46.6	20.8	10.4	38.1	21.8	8.2	50.0	33.2 8.0 G
8.6	59.0	55.8 8.0 GW=	10.4	54.1	4.0	10.0	45.1	16.9	10.4	50.0	40.7
10.4	37 8.5	9.0	10.4	43 0.1	58.9	9.7	48.1	49.7	9.4	56.5	15.9
9.6	8.5	6.3 9.5	10.4	8.6	12.2	9.7	54.6	56.3	10.4	59 7.0	26.9
9.4	10.5	26.7	9.3	10.6	9.5	9.2	55.1	44.4	9.7	7.8	0.2
10.0	10.5	3.1	10.4	40.6	5.0	10.4	52 4.1	16.0	9.4	13.0	37.4
10.2	12.5	53.2	9.7	58.1	51.9	10.4	9.6	39.4	3.4	20.0	45.3 2.0 GS π β
10.4	13.5	32.6	9.3	44 9.1	21.9 -	9.0	21.1	13.1 9.5	10.4	30.0	1.3
10.4	14.0	30.0	6.8	18.6	48.5 GS-t	9.2	24.1	15.1	9.8	35.0	32.3
10.2	18.5	43.3	9.7	24.1	58.3	10.4	27.1	31.7	10.4	40.5	56.1
9.8	20.5	12.3	10.0	40.6	55.8	9.0	34.1	0.1 8.5 G	9.5	45.5	15.1
10.0	27.5	46.7	10.2	46.1	37.2	10.4	47.1	2.3	9.4	50.0	9.7 9.0
10.2	41.5	9.2	10.0	47.1	56.0	8.6	51.6	10.1 8.0 G-	10.4	54.0	10.7
10.4	43.5	24.5	9.7	45 10.1	23.5	8.2	53 2.1	24.7 8.0 G	10.2	0 1.5	43.7
10.3	44.5	2.9	10.4	10.6	29.5	10.4	6.1	32.9	8.8	1.5	1.6 8.5 -
10.0	51.5	45.7	10.4	14.1	7.9	7.8	6.6	10.7 8.0 G-	10.0	10.0	3.1
8.8	38 8.5	45.2 8.5 G-	10.4	20.6	29.0	9.2	26.6	18.7 8.5 G	10.4	20.5	47.8
10.0	12.0	39.1	9.0	32.1	59.0	9.4	27.6	57.6 9.0 G-	10.2	21.5	12.0
25pr.	+1 26.5	-7.6	+1 27.0	-7.6		+1 27.7	-7.4		+1 28.4	-7.3	

6121-6180.			6181-6240.			6241-6300.			6301-6360.		
mag.	14 ^{h.}	-35°	mag.	14 ^{h.}	-35°	mag.	14 ^{h.}	-35°	mag.	14 ^{h.}	-35°
10.4	0	25.0 27.7	10.0	7	25.0 26.1	9.2	19	0.0 20.2 9.5	9.6	29	36.4 34.6
10.2		34.0 50.9	9.4	8	5.5 0.2 9.5	9.8		7.3 29.1	10.0		43.9 10.0
10.0		42.0 18.9	10.0		31.0 3.9	9.7		32.3 17.5	9.2	30	3.9 12.0
9.6		44.7 58.2 9.5	9.9		45.5 4.0	9.7		33.8 19.9 9.5	9.4		9.9 27.3
9.8		50.0 44.3	9.9	9	15.5 17.8	10.0		53.3 3.9	9.9		19.4 31.1
9.8		50.0 17.9	9.5		15.5 33.6	9.4	20	5.3 58.7	9.7		22.4 42.4
9.8		56.5 29.8	9.7		35.7 52.1	9.9		13.8 11.9	9.8		22.9 54.6
10.2	1	8.5 32.9	10.0		48.7 19.4	8.9		17.8 53.3 8.5 G-	9.0		44.4 28.0 9.0
9.7		14.5 8.7	9.3	10	9.2 11.9	10.0		20.8 28.9	9.9		44.9 20.1
10.4		25.0 8.7	9.4		10.2 37.0	9.7		29.3 54.0 9.5	10.0		59.9 41.4
10.4		59.5 15.0	10.0		33.2 11.1	10.0		48.8 35.1	7.7	31	18.9 3.2 7.7 G-t
9.5	2	0.0 13.9	9.1		41.7 53.9 9.5 -	9.3		49.8 32.0 9.0	9.3		25.9 21.4
9.0		2.0 11.6	10.0		43.7 13.6	10.0		53.3 6.7	9.4		29.7 12.0
9.7		5.5 43.1	10.0		45.7 4.7	9.2	21	5.3 57.7	8.8		36.5 41.2 8.0 G-
10.4		5.5 27.9	9.4		47.2 38.5	9.2		27.8 10.2 9.0	10.2	32	6.1 28.1
10.2		9.5 26.5	9.6		59.2 16.7	9.0		54.8 14.3 9.0	10.2		10.1 29.9
10.2		15.3 5.7	8.8	11	0.2 17.8	9.9	22	21.3 24.1	10.2		20.1 43.6
10.4		32.3 30.4	8.6		5.7 18.9	9.8		26.8 35.7	9.0		25.1 11.0 8.5
9.8		38.3 2.9	9.0		25.0 58.9 8.5 G	10.0		42.8 49.0	6.6	33	21.1 35.7 6.0 GS=
10.0		51.3 32.1	9.6		30.2 0.7	9.6		49.8 53.0 9.5	8.8		24.6 37.0 9.0
10.0		4.3 32.7	9.4		46.2 47.1	9.7		54.8 48.9	10.0		30.1 10.1
10.2		8.8 48.9	9.2		59.2 52.7	10.0	23	8.8 13.3	9.6		42.1 21.4
9.8		9.3 41.6	9.1	12	20.2 12.0	9.2		8.8 8.5	9.4		45.1 56.2
10.0		9.8 12.4	9.8		23.7 10.4	9.8		15.3 23.8	9.6		47.6 15.4
9.5		9.8 27.9	8.3		38.7 40.7 8.5 -	8.4		18.8 53.3 8.7 G-	10.0	34	8.6 19.0
9.5		10.8 16.0	9.0		40.2 19.9	9.8		20.8 20.9	9.6		16.5 58.6
9.4		11.8 7.3	9.4	13	11.2 56.0	9.4		28.8 24.3 9.0	10.2		18.6 10.1
10.0		14.8 36.6	8.4		12.2 4.2 8.0 G-	9.5		44.8 46.3	10.2		24.1 39.1
10.4		19.8 17.8	10.0		17.7 15.3	9.8		46.8 29.3	9.6	35	4.1 20.3
9.7		28.3 10.5	9.8		25.7 13.8	9.5		59.8 19.5	9.8		8.1 58.6
8.4		31.3 40.4 -	9.8		32.2 27.0	9.8	24	0.8 22.7	10.2		58.1 24.6
10.0		42.3 34.4	10.0		44.2 53.2	10.0		1.3 36.9	10.2	36	16.1 56.1 9.0
9.0		47.8 16.8	9.8		52.2 8.6	10.0		13.6 21.5	8.8		31.1 33.3
10.4		55.3 5.9	9.8		57.2 25.9	9.9		17.6 13.3	9.8		35.1 30.2
10.0		56.8 56.5	10.0	14	12.2 49.8	9.9		20.1 18.9	9.8		45.1 49.9
9.0	4	18.8 8.7 9.0	9.4		24.7 34.6	10.0		28.6 40.3	9.8		45.1 22.8
10.4		44.8 33.4	9.0		29.0 22.8 9.5	10.0		30.1 11.4	10.0		46.6 10.0
9.7		52.8 7.0	9.8		43.5 37.7	9.0		34.1 39.1 9.5	9.8		53.6 39.3
8.7	5	0.5 1.2 8.5	9.2		46.0 33.6 9.5	10.0	25	8.1 6.5	10.2	37	6.1 2.1
10.2		1.3 14.3	10.0		54.0 3.7	9.8		13.1 23.1	10.2		12.6 22.0
10.4		2.8 8.7	9.7		59.5 37.1	9.7		14.6 9.7	10.2		23.6 14.7
10.4		6.3 8.8	10.0	15	2.8 58.7	10.0		18.1 26.9	10.2		24.1 34.6
10.2		9.8 41.6	9.5		22.5 0.3	9.8		19.6 47.5	9.4		30.6 13.1 9.5
9.7		23.2 12.0	8.9		30.0 24.3 8.5 W-	9.4		24.1 17.2	7.6		39.1 37.0 7.5 GS=
10.4		28.8 6.8	8.4		39.0 6.9 8.5 G-	9.8		40.6 44.8	9.4		40.1 38.5
10.0		31.4 46.7	9.0		43.5 15.6	9.3	26	4.6 43.0 8.5	10.2		43.6 24.3
9.8		33.2 2.4	9.6		54.0 46.3	9.9		8.1 9.1	9.8		52.1 8.3
10.4		37.8 39.3	9.7	16	9.8 59.2	9.4		9.6 19.2 9.0	9.0	38	16.6 55.0 8.8
9.5	6	0.1 10.0 9.0	9.5		42.0 16.7	9.9		29.6 14.5	9.6		26.6 30.9
9.7		9.6 53.3	9.6		59.5 4.7	9.9		47.1 7.9	10.2		26.6 33.6
10.4		38.8 19.7	9.8	17	20.5 42.7	9.7		49.6 36.9	10.2		31.6 8.7
10.4		39.8 48.3	9.6		22.5 19.4 9.5	9.9	27	32.1 6.3	9.0		37.6 10.0
10.0		50.8 19.5	10.0		31.0 13.5	8.5		36.6 34.5 9.0 -	10.2		40.1 8.0
10.2		54.8 45.4	9.4		38.0 2.4	8.9		43.6 35.3 9.0	9.0		40.1 12.2
10.2	7	8.3 28.2	10.0		41.0 58.3	9.0		57.1 17.3	9.2		45.6 55.6 9.0
10.4		8.3 16.5	9.5	18	17.0 36.2	9.4	28	8.1 8.8	10.2		50.1 44.0
10.2		9.8 54.3	9.0		40.5 11.5 8.5	8.5		37.4 22.0 9.0	10.2		50.1 49.7
9.3		10.5 46.7 9.0	9.9		45.5 42.8	10.0		40.4 40.0	9.4		51.1 55.3 9.5
9.4		16.5 41.2 8.5 -	9.0		56.0 55.9 8.5 G-	9.8		52.9 15.2	10.2		59.6 51.9
9.8		17.0 24.1	9.4		57.0 17.7	10.0		29 13.9 21.0	10.2	39	4.1 43.3
25pr.	+ 1	29.0 -7.2		+ 1	29.9 -7.0		+ 1	30.8 -6.8		+ 1	31.8 -6.5

6361-6420.			6421-6480.			6481-6540.			6541-6600.		
mag.	14 ^h	-35°	mag.	14 ^h	-35°	mag.	14 ^h -15 ^h	-35°	mag.	15 ^h	-35°
9.8	39	5.1 20.0	10.2	47	52.2 33.3	10.2	56	1.5 6.5	9.2	11	50.8 47.7 9.0
10.2		15.1 6.5	10.2	48	5.2 15.5	10.2		8.5 25.3	9.8	12	55.8 54.5
10.2		22.1 23.0	9.3		44.2 27.7	10.2		19.5 19.7	9.6	13	3.8 42.5
9.6		22.1 51.6	10.0		49.7 50.5	10.2		30.5 15.3	9.8		9.2 57.8
9.6		43.1 31.2	9.6		53.7 4.9	8.0		36.6 47.7 8.5 GS	9.8		30.0 31.3
10.2		46.6 2.3	10.0		59.7 54.0	10.2		46.4 58.9	9.6		35.5 25.2
9.8	40	7.6 50.1	10.2	49	4.7 43.4	10.0		49.5 1.7	9.8		38.5 47.9
9.6		20.1 16.6	10.2		7.7 34.3	8.5		59.8 26.1 9.0 =	9.1		44.0 17.5
9.8		30.1 17.7	8.0		9.7 11.2 8.5 G	10.2	57	4.5 40.5	9.2		50.5 51.4 8.5
9.8		48.5 1.0	9.6		31.7 42.0	9.0		5.0 27.9 9.0	6.3		53.0 48.4 4.0 GS _{tr}
7.7		50.1 19.0 6.9 GS-t	9.8	50	9.7 52.6	10.2		30.5 20.4	9.4	14	4.0 36.1
10.2	41	0.7 22.1	9.6		9.7 46.2	9.5	58	11.1 36.3 9.0	9.5		32.5 29.7
9.4		9.7 3.1	9.6		15.2 10.9	9.8		14.1 36.9	9.0		33.0 42.7
9.1		17.7 7.0 9.5	9.8		15.7 56.8	9.6		22.6 35.5	9.8		48.2 47.2
7.8		20.0 1.7 8.0 GS-t	10.0		26.7 52.9	7.2		24.1 46.6 7.0 GSt	9.2	15	17.7 43.7 8.5
9.8		29.7 52.1	7.6		27.7 33.6 8.5 G-	9.8		40.6 22.9	9.8		36.2 27.2
9.6		44.7 31.1	10.2		51.2 10.2	9.8		50.1 0.6	9.8		40.2 30.5
9.6		49.2 51.0	10.2		52.2 40.4	9.0	59	10.1 48.3 9.0	9.6	16	6.7 13.5
10.2		56.7 7.2	9.6		57.7 51.7	9.0		14.6 33.0	8.8		10.2 34.1 8.5
9.4	42	1.7 5.7	10.2	51	9.7 30.4	9.0		19.3 8.6 9.0	9.8		11.2 40.0
9.3		9.7 6.0	9.6		26.7 37.3	9.6		51.8 17.3	9.8		28.2 23.7
10.0		9.7 6.3	8.8		33.7 13.3 9.0 G	9.6	0	33.8 39.7	9.4		44.2 21.9
9.1		19.7 16.0	10.0		39.2 9.0	8.0	1	7.9 57.1 8.0 GS-t	7.2		44.2 28.2 7.0 GS-t
9.4		29.2 43.3	9.6		45.7 50.7	9.0		13.8 25.7	9.8		51.2 56.7
10.2		29.7 31.6	10.0		53.7 11.2	9.8		33.8 45.0	9.8	17	21.7 19.6
9.4		38.7 49.0	10.0		54.7 19.5	7.8		49.8 23.0 7.5 G-	9.8		30.0 40.1 9.5
10.2		43.7 30.4	9.8		57.2 17.0	9.6		50.8 1.9	9.6		33.2 16.5
10.2	43	5.7 56.0	8.0	52	11.7 31.8 7.8 G=(^o)	9.2	2	33.8 11.9 9.0	7.5		33.2 45.3 8.0 GSt
8.8		14.7 52.0 9.0	10.2		19.7 20.0	9.8	3	1.8 31.8	9.0		53.2 30.8 9.0
9.4		19.7 42.2	10.2		35.7 28.9	9.2		4.3 20.1 8.5	9.2	18	28.2 56.5 9.5
9.4		19.7 22.8	9.0		44.7 37.2 9.0	9.4		32.8 31.2	9.1		29.7 54.5 8.5
10.2		26.2 29.7	10.0		47.0 39.8	8.6		34.8 46.3 9.0	7.6		50.2 20.2 GS-
10.2		27.7 55.9	10.2		58.0 21.5	9.6		55.8 20.3	9.0	19	43.7 47.9
10.2		35.2 26.5	10.2		58.0 20.9	9.0		59.8 0.7 7.8 G=	9.2	20	5.2 8.9 8.8
10.2		53.2 36.4	9.0		59.5 42.1 9.5	9.8	4	13.8 12.4	9.6	21	41.3 20.7
8.8		54.2 34.4	10.2	53	3.0 58.7	9.2		13.8 26.1 9.0	9.3	22	16.0 40.7
9.8		9.7 48.9	10.2		4.5 14.0	8.3		38.3 26.5 8.5	9.8	23	6.3 34.3
9.8	44	9.7 48.9	9.6		5.5 25.9	6.8	5	14.8 37.1 6.5 GSct	7.6		6.7 12.5 8.0 G-
10.0		49.7 13.2	8.8		5.5 19.9	9.8		49.3 52.8	9.4		25.8 39.3
10.2	45	1.7 34.1	9.3		11.0 41.4 9.5	8.1		55.8 21.7 8.5 -	9.2		40.3 13.4
10.2		10.7 6.2	10.0		14.0 44.3	9.6	6	7.8 55.9	9.8		41.8 48.1
9.8		18.3 57.7	9.4		24.5 39.5	9.6		11.3 47.3	9.0		51.8 7.1 8.5 -
10.2		22.7 23.1	10.0		28.5 14.3	9.2		25.3 44.7 9.0	9.7	24	19.8 5.3
10.0		41.7 37.7	9.4		54.0 16.3	8.7		35.8 45.9 9.0	9.4		35.3 51.9
10.2		44.0 58.9	9.6		54.5 39.7	9.8	7	37.8 29.1	9.7	25	9.0 58.8 9.0
10.0		49.7 50.1	9.4		57.5 29.7	9.8		40.7 2.9 9.0	9.7	28	39.7 5.7
9.3		49.7 43.1 9.0	10.2	54	1.5 40.9	9.8	8	19.8 4.5	9.6		45.2 8.6
10.2		54.2 35.6	10.2		13.0 3.1	9.0		24.3 46.4	9.4	29	15.2 53.5
10.2		57.2 38.7	9.8		29.5 40.0	9.2		27.8 13.9 8.5	9.3		49.7 54.0
9.8	46	1.7 35.5	9.8		44.0 17.9	9.2		35.3 27.5	9.6	31	8.5 24.8
9.8		10.2 47.1	9.4		49.5 3.3	9.8		49.8 17.1	9.0		10.2 36.0 8.5
10.2		46.7 33.4	9.1		54.5 49.3	9.4	9	31.3 29.7 9.0	9.6		50.7 14.1
10.2		49.2 15.2	9.6	55	2.0 21.5	9.8		31.8 30.0 9.5	7.7		57.2 45.8 8.0 GW
8.8	47	4.2 38.4 9.0	9.4		11.0 10.6	9.4		37.8 51.3	9.4	32	1.7 15.1
9.6		7.7 4.6	9.8		15.5 53.9	9.0	10	1.3 52.8 9.0	9.0		5.7 17.5
7.7		8.2 55.2 8.0 GS	9.8		29.5 28.1	9.4		43.3 21.7 9.5	9.6		9.7 24.7
10.2		11.7 27.4	9.4		29.5 37.7	9.8		50.3 59.1	9.6		22.7 40.6
8.8		16.7 39.2 9.0	10.0		41.5 31.5	9.0	11	9.8 54.1	7.6		48.7 1.1 7.3 GS-
9.6		32.7 9.8	7.4		45.8 27.1 6.5 GS-t	9.1		28.3 14.8 8.0 -	9.6	34	19.7 31.0
9.6		40.2 53.4	10.2		59.5 24.7	9.2		50.3 8.8 8.2 -	8.2		29.7 21.3 8.5 W-
25pr.	+ 1	32.3 -6.3		+ 1	33.1 -6.1		+ 1	33.9 -5.8		+ 1	35.0 -5.4

(^o) To both the Washington observations a correction of + 1 min. in R.A. must be applied.

6601-6660.				6661-6720.				6721-6780.				6781-6840.									
mag.	15 ^h .	-35°		mag.	15 ^h -16 ^h .	-35°		mag.	16 ^h .	-35°		mag.	16 ^h .	-35°							
	m	s			m	s			m	s			m	s							
9.7	35	7.7	46.9	9.2	59	21.3	28.3	8.8	19	39.6	30.0	9.0	9.8	39	44.6	55.9	9.5				
8.6		46.2	4.5	9.2		29.8	34.8	10.0		40.6	10.4		10.0	40	6.0	36.6					
9.0		54.7	53.9	9.7		39.3	20.1	8.5		54.1	29.8	9.0	8.8	41	30.1	4.5	8.8	G-			
9.0	37	34.7	55.3	9.7		44.8	20.4	10.0	20	4.1	0.7		10.0	42	10.4	28.2					
9.4		40.2	10.7	6.6		54.3	53.7	8.8		32.6	24.4	8.0	9.8		57.4	40.8					
9.2	38	15.2	27.9	9.7	0	6.8	28.1	8.6		48.6	44.6	9.5	10.0	43	27.9	37.5					
8.1		23.7	29.3	9.0		40.3	12.6	9.0	21	1.1	11.6	8.5		9.2	31.4	31.5	8.5				
9.7		47.2	33.9	9.1	1	6.8	49.3	9.6	22	0.1	6.3			8.6	42.4	14.6	8.0	-			
9.4		48.2	38.5	8.4		9.3	9.7	10.0		29.1	45.3	9.5		9.2	57.4	48.6					
7.2	39	2.2	7.2	9.7		11.3	36.7	10.0		42.6	1.6			10.0	44	34.9	23.1				
7.6		4.2	7.6	9.4		12.8	24.1	8.5		50.1	49.8	8.8	10.0		57.9	29.0					
8.2		51.7	19.6	7.8		52.3	18.4	9.1	23	6.6	47.3		8.9	45	9.4	14.8	9.5				
8.8	40	3.2	38.4	9.4	2	20.3	40.1	9.5		22.1	49.8	9.2	9.4		26.9	15.0					
8.6	41	10.2	38.5	9.7		28.5	58.1	10.0		33.8	21.9		8.9		49.9	48.8	9.5				
8.6		33.2	29.2	9.0		56.3	34.2	9.6		39.6	4.3		10.0		55.4	3.8					
9.4		50.7	51.0	9.6	3	21.8	10.6	9.8		44.1	31.6		10.0	46	13.4	38.6					
9.2	44	9.2	51.9	9.1		22.8	22.3	9.0		50.6	30.8	9.5	9.8		41.4	44.6					
9.0		14.7	55.2	9.7		31.3	3.3	8.8		57.6	27.2	9.5	10.0		44.9	14.0					
9.2		25.7	3.3	8.4		43.8	16.7	10.0	24	4.1	22.0		10.0		46.4	16.8					
9.7	45	2.2	2.3	8.4	4	45.8	47.0	9.6		42.6	37.6		8.8		49.4	37.6					
9.4		40.2	13.5	9.7	5	32.8	34.3	10.0	25	3.1	37.8		10.0	47	4.9	46.0					
9.3	46	18.4	13.8	8.6		34.3	28.5	8.0		38.6	16.4	8.0	10.0		23.4	40.4					
8.6		52.6	55.4	9.4		55.8	26.5	10.0		58.6	54.3		10.0		28.9	53.1					
9.0	47	11.6	14.9	9.6	6	1.8	5.3	10.0	26	19.1	41.6		10.0		29.4	45.6					
9.7		19.1	11.9	9.7	8	12.8	36.1	10.0		28.6	44.7		9.1		38.4	43.2					
8.1		45.6	18.4	9.4		14.8	35.6	8.5		51.1	47.2	8.2	9.2		50.9	14.8					
9.0		58.9	3.6	9.3		37.3	38.3	6.8		59.6	27.6	7.0	10.0		53.7	59.4					
9.2	48	0.6	25.1	9.2	9	9.3	38.1	9.1	27	9.1	17.9	9.0	10.0		59.9	20.4					
9.7		13.4	34.2	9.7	10	18.6	50.0	8.8		28	11.6	2.9	8.4	48	0.4	16.8	8.5	-			
9.6		16.1	36.2	9.4		28.6	53.8	7.0		25.1	39.4	GSt	10.0		18.4	34.9					
9.1		23.1	22.8	8.5		29.1	5.9	9.4		30.6	31.5		10.0		49.9	51.8					
6.8		59.6	33.5	9.2		34.6	18.8	9.4		36.1	53.4	8.5	9.4		50.4	58.7					
6.9	49	14.0	49.2	9.6	11	1.6	24.3	9.8		36.6	46.1		8.3	49	38.4	32.4	8.5	-			
9.2		42.5	50.3	7.4		7.6	10.8	8.8		29	15.6	56.8	9.4		50	1.4	29.4	9.0	-		
9.0	50	0.0	10.2	9.4		43.1	34.0	9.8		42.6	15.1		9.4		7.4	59.7					
9.6		20.5	21.7	9.6		53.6	32.8	10.0		59.5	26.0		10.0		24.4	11.8					
9.3		45.0	13.6	8.6		54.9	58.8	9.0	30	15.5	49.1	8.5	10.0		40.2	59.0					
7.8	51	40.0	29.0	8.6		55.1	54.3	9.0		24.5	49.3	9.0	9.8		51.4	53.9					
9.2		50.5	56.4	9.6		56.7	28.8	10.0		28.0	38.6		9.8		55.9	22.8					
9.6		55.5	22.0	9.0	12	10.7	22.8	9.6	31	8.0	7.0		10.0	51	43.4	35.0					
8.0	52	23.5	43.8	9.2		29.8	58.9	8.5		39.5	0.5	9.0	10.0		57.4	26.6					
8.3		47.5	38.2	9.2		43.7	34.7	9.2	32	18.0	49.9		9.8	52	15.4	58.4					
9.7	53	23.3	59.0	9.0	14	33.2	51.8	7.0		22.0	26.3	7.0	7.1		17.9	44.4	6.5	GS			
8.8	54	26.0	27.2	9.4		15	0.7	10.0		59.0	45.8		8.6		17.9	33.8	8.5				
8.2		38.5	49.9	8.5		16	2.7	10.0	33	0.9	46.1		9.2		17.9	55.6	9.5				
9.2		42.5	53.9	8.8		34.7	47.5	9.8		20.5	17.0		9.4		49.1	43.2					
9.3		50.5	39.0	8.0		49.7	51.2	9.6		45.0	22.9	9.0	9.4		49.6	39.9					
9.4	55	22.5	29.0	10.0		55.7	5.0	9.4		59.5	49.7		9.6	53	17.1	11.2					
8.8		24.5	1.8	10.0		56.7	22.9	9.6	34	22.0	44.4		9.2		31.6	12.3					
7.9	56	2.0	5.9	10.0	17	5.7	32.1	8.0		54.5	25.3	8.5	9.8		39.6	54.6					
9.7		54.5	23.5	10.0		17.7	43.6	10.0	35	30.5	32.2		9.6		42.6	35.5					
8.2	57	5.0	55.3	9.4		38.2	21.1	10.0		38.0	44.4		10.0	54	3.6	31.1					
9.0		18.3	18.5	9.1	18	20.1	38.3	10.0	36	54.3	54.6		9.2		6.1	51.8					
8.0		21.3	49.4	9.6		22.1	32.3	10.0	37	22.9	36.8		10.0		13.1	4.5					
8.5		53.8	41.8	9.1		25.6	21.5	8.6		30.3	38.0	9.0	10.0		26.1	2.5					
9.1	58	0.8	26.0	9.4		42.1	32.8	9.4		45.0	24.2	9.0	8.8		39.6	36.6	9.0				
9.6		10.3	55.6	9.8		49.6	12.8	8.8		49.5	22.9	9.0	10.0	55	19.1	41.7					
9.7		31.4	33.9	8.8	19	19.6	10.3	9.8		56.8	40.8		10.0		22.1	19.0					
9.7		52.8	49.3	9.8		25.1	55.1	8.8		38	20.6	33.7	9.8		24.1	52.8					
9.7		59	0.8	10.0		33.6	21.3	9.2	39	19.3	49.0	9.5	8.8		37.1	5.6	8.2	-			
25pr.	+1	36.8	-4.6	+1	38.0	-8.9		+1	38.7	-3.3		+1	39.5	-2.5							

16h-17h

6841-6900.				6901-6960.				6961-7020.				7021-7080.			
mag.	16h.-17h.	-35°		mag.	17h.	-35°		mag.	17h.	-35°		mag.	17h.	-35°	
8.0	56	15.6	24.9	8.8	5	29.7	9.2 9.0 W	9.1	16	14.4	43.1 9.0	10.2	23	55.1	52.3
8.6		27.6	8.4 8.5 -	9.6		47.2	35.7	9.4		17.4	15.9 W	10.2		59.6	39.7
8.8		39.1	46.8 9.0	10.0	6	9.2	54.9	10.2		33.9	36.6	9.5	24	2.1	42.0
9.4		39.6	4.2	10.2		12.7	32.9	9.5		37.9	5.8	9.6		13.7	51.9 9.0
10.0	57	9.1	27.5	9.6		16.7	38.4	9.6	17	2.9	19.2	9.2		16.7	5.4 9.0
8.4		17.1	45.2 8.5	8.8		38.7	21.0 8.8	8.8		19.4	38.3 8.5 G-	9.4		23.7	9.7
9.2		34.1	48.0 9.5	8.8		59.2	43.8 8.5	10.2		24.9	40.2	9.5		39.2	22.9
9.4		55.6	47.5 9.5	10.2	7	27.7	6.9	9.6		27.4	8.0	10.2		41.7	21.6
7.1	58	9.6	16.6 6.5 GS	7.1	8	0.7	35.7 6.2 GS-	9.6		30.4	12.7 9.5	10.2		42.2	16.1
9.4		19.1	24.0	9.0		32.2	20.2 8.5 W	10.0		44.9	13.4	10.2		52.2	22.6
9.8		19.1	28.1	9.8		38.2	21.2	9.6		59.4	10.3	8.8		54.2	32.2 8.8
7.4		19.1	54.3 7.5 G	10.2		45.7	6.1	10.2	18	16.9	14.9	10.0		56.7	48.9
9.4		19.1	43.3	10.2		54.7	30.9	9.6		17.9	15.6	10.2		58.7	8.6
9.4		19.6	10.2	10.0		59.2	15.9	10.2		19.4	33.9	10.2		58.7	34.2
9.6		21.6	41.2	8.0		59.7	24.3 8.0 GS-	10.2		26.9	0.9	10.2	25	15.7	45.9
8.3		28.1	42.9 7.7	8.2	9	6.7	23.7 8.0 GS=	9.6		34.4	51.5	10.2		17.2	41.8
10.0		30.4	6.3	9.8		8.2	18.1	9.8		37.9	55.2 8.8	8.8		18.2	40.4 8.8
9.2		32.6	27.5	10.2		22.2	11.5	9.8		3.5	2.0	9.2		19.2	32.7 9.0
8.2		39.1	12.3	7.9		26.2	5.1 8.2 GW-	9.8		18.9	16.7 9.0	10.2		28.2	56.7
8.6		44.6	35.2 8.2	10.2		29.2	21.5	10.2		21.6	10.7	9.8		34.2	27.0
10.0		45.6	22.3	10.2		35.2	41.7	9.6		22.1	43.7 9.2	9.8		38.2	27.6
10.0		54.4	37.6	10.2		54.2	37.9	10.2		31.1	54.6	9.8		39.2	51.4 9.0
8.3	59	0.6	43.2 8.0	10.2	10	6.7	25.4	10.0		37.1	25.1	9.8		40.7	42.5
10.0		4.1	38.0	9.6		12.2	18.0	10.2		43.6	48.7	9.6		45.2	31.8 9.0
9.8		5.1	21.7	8.5		15.2	57.0 8.5 -	10.2		45.1	52.0	10.2		46.4	13.6
9.2		8.1	4.8	9.8		21.7	12.3	10.2		51.6	5.1	7.4		50.7	38.6 8.0 G=
9.6		11.6	22.3	10.2		27.7	40.5	9.8	20	5.1	5.9	10.2	26	1.2	34.2
10.0		14.1	20.0	9.4		30.7	26.0	9.4		6.1	18.6	10.0		5.0	58.8
8.3		16.6	1.9 8.5 -	9.6		33.7	4.5	10.2		7.1	5.5	10.0		8.2	10.8
10.0		17.4	54.0	8.7		45.7	42.2 8.8	9.6		7.2	0.5	10.2		25.2	41.8
9.4		18.9	14.1	9.8		53.7	45.9	10.0		19.6	14.5	9.6		34.7	36.1
9.6		30.4	27.0 8.5	9.4	11	9.2	34.5 9.0	9.4		31.6	5.8 9.2	10.2		43.7	47.6
10.0		37.9	18.6	10.2		22.8	57.9	10.2		43.6	19.3	9.6		53.2	56.7
10.0		39.4	3.0	9.6		28.6	0.9	9.6		51.6	39.6	9.6		57.7	52.6 9.0
8.3		48.9	28.7 8.0	10.2		41.2	48.7	10.0		53.6	55.9	8.8		59.2	26.6 8.2 =
10.0	0	9.2	0.0	9.8		49.2	35.7	9.1	21	8.6	35.0 9.0	9.5	27	18.7	48.8
9.4		26.9	39.5 9.5	9.6	12	2.7	34.5	8.8		15.6	40.1 8.8 G	10.0	28	1.5	26.2 9.0
9.8		31.4	51.6	9.6		4.4	36.1	9.6		19.1	51.2	10.2		1.7	48.7
9.4		58.4	4.5	9.1		4.4	41.3 9.0	9.6		20.6	31.7	9.6		3.3	9.1
10.0	1	9.9	5.3	9.6		28.9	43.9	10.0		30.1	11.4	9.2		43.3	52.2
9.8		28.9	54.6 9.5	9.2		29.4	56.6 9.0	9.8		31.9	1.3	9.6		53.1	50.2
9.6		34.9	16.0	10.0		34.4	26.9	10.2		51.0	32.3 9.0 G	8.2		59.5	38.7 8.0 ≡
9.8		47.4	15.0	10.2		54.9	26.8	7.8		52.6	45.4 8.2 G=	9.6	29	0.3	16.0
9.8		48.9	17.8	8.6	13	5.4	28.2 8.8	10.2		56.2	32.9	8.2		9.3	15.2 8.2 W-
10.0	2	20.2	58.1	8.4		27.4	13.1 8.5 GW-	10.2	22	18.1	15.9	9.4		11.3	18.4
10.0		21.9	47.9	10.2		51.7	0.3	9.0		42.1	47.9 8.0 =	9.6		23.3	58.1
9.6		32.4	17.0	9.6		51.9	52.1 9.5	10.2		45.7	2.6	9.6		24.8	20.0
10.0		44.3	33.8	7.9	14	13.4	15.2 8.5 W-	10.2		54.1	39.8	9.4		36.3	49.0
10.0		47.4	46.8	6.9		14.9	47.2 6.7 GS-	9.5		59.6	22.0	9.2		37.3	18.2 9.0
9.6		56.4	59.2	9.2		23.4	6.7 9.0	10.2	23	0.1	2.8	9.4		44.3	31.3 9.0
9.8	3	13.3	40.4	10.0		23.4	10.9 9.0	9.1		9.9	58.8 8.5 -	9.6		58.3	6.7
9.5		14.2	50.6	9.4		32.4	46.4	10.0		21.1	52.8 9.0	9.6	30	12.8	5.0
9.0		21.8	30.8 9.5	9.4		37.4	40.7 9.5	10.2		24.1	32.9	8.8		25.3	22.5 9.0 G
9.5		31.1	53.5 9.5	10.2		38.9	20.9	10.0		29.6	16.0	9.6		34.8	0.2
10.2		48.7	36.1 9.0	10.2		40.9	53.8	9.6		29.6	19.3	9.6		35.3	59.9
9.8	4	11.4	2.4	10.0		42.9	16.9	9.4		31.9	0.2	8.3		35.3	55.0 8.0 -
10.2		21.2	41.8	9.5		44.4	51.3	10.0		38.1	8.0	9.6		40.3	12.2
9.4		54.7	10.0 9.2	9.2	15	5.4	4.7	10.0		39.1	28.5	9.0		44.3	23.5 9.0
9.6	5	0.7	54.6	9.6		44.9	9.9	10.2		50.6	28.1	9.0		49.3	52.8 9.0
10.2		29.7	55.4 9.0	9.4	16	13.1	54.8 9.5	10.2		53.1	24.2	9.6		49.3	18.9
25pr.	+ 1	39.8	-2.2	+ 1	40.1	-1.8		+ 1	40.3	-1.5		+ 1	40.4	-1.2	

7081-7140.			7141-7200.			7201-7260			7261-7320.		
mag.	17 ^h .	-35°	mag.	17 ^h .	-35°	mag.	17 ^h .	-35°	mag.	17 ^h .	-35°
9.4	30	52.8	9.6	34	43.4	9.6	37	18.9	9.5	39	48.5
9.2		59.8	9.0		44.4	9.6		21.4	7.8		50.5
9.2	31	0.3	9.6		44.4	9.6		21.4	9.4		51.0
9.6		1.3	9.4		44.9	9.6		24.9	9.6		54.0
9.6		4.3	9.6		45.4	9.6		27.9	8.5		54.0
9.4		5.3	9.2		49.4	9.6		33.4	8.6		54.5
9.6		7.3	9.2		50.4	9.6		33.4	9.2		55.0
9.0		9.3	9.6		52.5	9.6		33.4	8.9		55.5
9.6		9.3	9.6		56.9	9.4		34.9	9.4		56.0
9.5		16.3	9.5		56.9	9.2		37.4	9.5		56.0
9.5		16.3	8.8		57.9	9.6		39.4	8.7		58.0
9.4		17.3	9.6	35	0.9	9.2		40.4	9.6	40	0.0
9.2		33.4	8.9		1.4	9.5		44.4	9.5		0.0
9.6		34.9	9.4		4.0	9.2		44.4	9.6		6.5
9.5		39.4	8.5		4.4	9.6		45.9	8.7		9.0
9.6		41.4	9.6		5.4	9.4		51.4	9.6		11.0
9.6		43.9	9.4		7.9	9.6		52.9	8.9		14.0
9.6		45.9	9.5		8.9	9.6		59.9	9.6		16.5
9.6		49.4	9.2		9.4	9.6	38	0.9	9.6		20.0
8.9		51.9	9.1		10.4	8.8		1.4	9.2		21.5
9.6	32	1.9	9.4		15.9	8.9		3.4	9.6		25.0
9.4		3.4	9.4		18.9	9.2		6.4	7.8		26.5
9.6		10.4	9.6		19.9	9.2		10.7	9.6		34.8
8.0		13.4	9.4		22.4	9.6		13.4	8.8		39.5
9.1		15.4	9.5		24.4	9.6		19.4	9.0		42.5
9.1		18.4	9.6		25.4	9.6		20.4	9.4		43.2
9.0		24.9	8.3		29.4	9.6		20.9	9.5		45.0
9.6		27.4	9.2		31.4	9.2		25.9	9.0		50.0
9.4		29.4	9.6		32.9	9.2		29.4	9.6		50.8
9.0		30.4	9.4		33.9	9.6		29.4	9.6	41	0.0
9.4		31.4	9.6		37.9	9.4		31.9	8.1		6.5
9.4		31.4	9.2		39.4	9.5		33.4	9.6		10.0
9.4		37.4	9.6		44.4	9.2		34.4	9.4		14.0
9.6		38.9	9.6		49.4	9.1		35.9	9.0		14.5
9.4		39.4	9.6		50.9	9.5		39.9	8.9		17.5
9.4		41.4	8.7		55.4	9.4		41.4	9.6		18.0
8.8		42.9	9.4		55.4	9.6		42.9	9.6		19.8
9.6		55.9	9.1		59.4	9.6		44.9	9.6		24.5
9.6		56.4	9.4	36	0.4	9.2		51.4	9.6		28.0
9.2	33	0.4	9.4		3.4	8.8		51.6	9.6		31.5
9.6		14.4	9.2		5.4	9.4		57.1	9.4		31.5
9.2		18.4	9.4		13.4	9.1	39	1.1	9.2		34.0
9.2		23.9	9.6		14.7	9.6		4.1	9.4		39.0
9.6		24.4	9.6		17.4	9.4		6.1	8.4		46.5
9.4		29.4	9.5		19.4	9.6		6.6	8.6		50.5
9.4		30.4	9.6		21.4	9.4		8.6	9.6		55.0
8.8		51.9	9.6		21.4	9.5		9.6	9.2		58.0
8.2		54.4	9.4		29.4	9.4		12.6	8.7	42	0.0
8.2		59.4	9.4		34.4	9.5		14.6	9.4		0.0
9.6	34	1.4	7.8		39.4	8.6		15.1	9.5		1.0
9.6		7.4	9.6		44.9	8.0		20.0	9.6		6.5
9.2		13.4	9.0		51.4	9.4		20.5	9.2		9.0
9.2		15.9	9.6		55.9	9.2		23.5	8.7		15.5
9.6		19.4	8.8		57.9	9.4		24.5	8.1		20.0
9.6		22.9	9.5		59.4	9.2		30.0	9.2		23.5
9.6		28.4	9.6		59.9	8.6		30.0	9.2		31.0
9.4		29.4	9.2	37	0.9	9.6		30.0	9.2		32.5
9.6		35.9	9.2		2.9	9.6		33.5	9.6		38.0
8.9		37.4	9.2		9.9	9.2		35.0	9.5		40.0
9.6		39.4	9.4		17.9	9.6		36.0	9.6		40.0
25pr.	+1	40.5	-1.0		+1	40.5	-0.9	+1	40.5		-0.7

7321-7380.			7381-7440.			7441-7500.			7501-7560.		
mag.	17 ^h .	-35°	mag.	17 ^h .	-35°	mag.	17 ^h .	-35°	mag.	17 ^h .	-35°
42	41.0	1.9	44	31.4	37.2	46	1.7	54.4	48	4.7	8.1
9.6	43.0	34.8	9.6	32.4	28.7	9.6	3.7	54.4	9.4	5.2	16.1
7.7	44.0	18.3	7.6	33.4	35.3	9.4	4.7	26.3	9.6	5.2	34.3
8.7	44.7	1.3	8.4	33.9	11.6	9.2	4.7	18.1	9.4	8.7	21.0
8.4	45.5	17.8	9.2	34.4	39.2	9.6	6.2	37.1	9.2	9.7	23.4
9.5	46.0	25.5	9.4	35.9	12.4	9.5	7.7	27.9	9.4	10.2	40.6
9.2	47.5	19.9	8.8	40.9	3.6	9.2	7.7	15.0	9.4	10.7	28.7
9.6	47.5	57.9	9.6	40.9	10.4	9.6	8.2	59.6	9.5	11.7	24.4
8.5	50.5	51.1	8.7	41.4	7.9	9.5	9.7	13.4	9.6	12.7	18.0
9.4	52.0	52.1	9.6	41.7	5.1	9.5	9.7	15.7	9.6	12.7	12.6
9.2	53.0	13.8	9.4	45.4	15.2	9.2	10.7	42.6	9.6	14.7	27.9
9.6	57.5	14.0	9.2	47.2	18.8	8.2	12.2	28.1	9.4	15.7	13.0
9.6	59.0	52.1	9.6	47.2	53.9	9.6	12.2	38.7	9.5	15.7	32.0
9.4	43 5.5	14.1	9.6	50.7	27.0	9.6	12.7	23.7	9.0	17.2	16.1
9.5	5.5	3.9	9.6	51.7	19.7	9.4	18.7	32.2	9.4	17.7	14.1
9.4	5.8	24.6	9.6	53.7	16.9	9.6	22.0	58.5	9.2	19.7	30.3
9.6	9.0	28.6	9.2	54.2	5.0	9.4	22.2	35.0	9.5	19.7	12.3
9.6	9.0	28.8	9.2	54.2	8.7	9.6	24.7	5.3	9.6	20.7	31.6
9.5	10.0	6.9	9.6	56.2	27.9	9.6	29.7	8.1	9.5	20.7	16.0
9.6	11.5	15.6	9.6	58.7	45.2	9.5	29.7	7.9	9.2	21.7	14.9
9.2	11.5	49.2	9.6	45 0.5	7.1	9.5	30.2	15.1	9.6	23.7	14.6
9.4	20.0	43.5	8.8	4.7	28.7	8.2	31.7	3.7	9.6	24.2	19.1
9.6	21.0	1.1	9.0	6.2	4.9	9.6	33.7	32.8	7.8	24.7	10.6
9.6	21.0	7.6	9.6	8.0	57.4	8.8	34.7	40.9	9.5	24.7	13.4
9.4	22.5	32.4	9.2	9.7	38.4	8.8	43.2	44.8	9.5	24.7	21.0
9.4	23.5	49.5	9.2	10.2	53.6	8.4	46.7	7.3	9.6	25.2	48.7
8.8	25.5	29.3	9.1	10.2	31.2	9.2	48.2	26.8	9.4	27.7	3.1
9.4	26.0	49.0	9.6	10.7	40.1	9.6	49.7	1.7	9.5	32.7	12.7
9.1	26.4	0.8	9.2	12.7	38.2	9.6	51.7	7.9	9.6	32.7	13.8
9.6	27.8	59.0	9.6	14.5	25.2	9.6	52.2	40.5	9.5	34.2	14.4
8.8	28.9	3.9	9.6	16.2	40.1	8.9	57.7	9.2	9.2	35.7	14.7
7.8	29.9	19.6	9.6	17.7	8.1	9.6	47 3.7	44.9	9.0	38.2	40.0
9.6	29.9	54.2	9.6	30.7	21.5	8.7	14.2	42.2	9.4	39.7	15.9
9.4	31.4	54.1	9.6	34.2	24.4	9.6	14.7	51.2	9.2	39.7	12.8
8.4	33.9	2.8	9.6	35.0	0.7	9.6	20.2	20.7	9.1	39.7	4.2
9.6	48.9	59.2	9.6	35.7	16.1	9.2	22.4	0.1	9.6	41.7	16.1
9.6	51.7	15.0	9.2	35.7	34.7	8.8	24.7	17.6	9.4	41.7	13.1
8.8	52.4	13.5	8.8	37.2	7.4	9.0	34.2	16.7	9.2	42.7	3.4
9.2	52.4	12.7	9.2	40.2	25.5	9.0	34.2	16.2	9.5	43.7	47.3
9.6	54.9	9.2	8.8	40.7	7.9	9.2	34.2	13.7	9.6	45.2	25.5
9.1	54.9	56.5	9.4	40.7	13.5	8.2	39.7	1.3	9.5	45.7	29.1
9.5	58.4	40.6	9.5	40.7	11.0	9.2	40.7	35.2	9.4	50.7	6.7
9.6	59.0	59.5	8.3	41.7	10.4	9.4	41.7	0.4	9.2	52.7	8.0
9.4	59.4	10.2	9.4	44.7	58.6	9.6	41.7	16.6	9.6	53.2	15.7
9.6	59.9	47.5	8.2	47.7	51.2	9.6	43.2	17.0	9.2	54.2	20.2
9.6	44 4.9	2.2	9.6	47.7	47.2	9.4	43.7	10.4	9.6	57.5	0.7
9.6	7.9	4.0	9.0	48.7	1.7	9.5	43.7	14.2	9.6	59.7	6.2
9.5	7.9	33.0	9.5	48.7	44.0	9.6	45.7	20.3	9.4	49 0.7	23.9
9.4	11.9	27.6	9.0	49.2	28.7	7.6	47.0	1.6	9.6	1.7	5.6
9.5	14.9	26.5	9.5	50.7	53.7	9.6	47.7	9.0	9.2	1.7	4.1
8.7	17.4	28.7	9.6	50.7	33.9	9.4	49.7	0.1	9.6	4.7	10.9
9.5	20.4	15.1	9.6	51.2	43.1	8.9	49.7	47.9	9.4	12.7	13.8
9.6	20.9	46.9	9.6	53.7	40.4	9.6	54.7	24.2	9.6	13.7	51.2
9.6	22.7	59.4	9.4	53.7	33.7	9.4	57.7	20.7	8.8	15.1	57.2
8.9	23.4	21.7	9.4	53.7	8.4	9.6	58.7	16.1	9.6	19.1	58.9
9.4	23.9	46.5	9.6	58.7	16.8	9.2	48 0.7	24.4	9.2	19.7	34.6
9.6	24.7	31.4	9.6	59.7	22.5	9.6	1.2	45.3	9.2	19.7	30.2
9.0	29.9	5.1	9.5	59.7	42.2	9.4	1.7	18.2	9.4	23.7	42.1
9.6	29.9	44.9	9.2	46 1.0	58.4	9.6	2.2	34.5	8.8	23.7	15.4
9.6	31.4	46.2	9.6	1.2	36.8	9.5	2.7	56.8	9.6	24.7	30.7
25pr.	+1 40.5	-0.6									
			+1 40.6	-0.5		+1 40.6	-0.5		+1 40.6	-0.4	

7561-7620.				7621-7680.				7681-7740.				7741-7800.			
mag.	17 ^h .	-35°		mag.	17 ^h .	-35°		mag.	17 ^h .	-35°		mag.	17 ^h -18 ^h .	-35°	
9.2	49	25.7	15.1	9.6	51	55.7	44.5	9.6	55	8.7	48.0	9.7	59	50.7	49.0
9.2		27.7	24.5	9.0		58.7	34.9	9.5		10.2	36.6	9.7		55.2	6.4
7.6		30.7	59.4	9.6		59.7	49.4	9.7		13.2	28.7	9.4	0	4.7	17.6
9.6		30.7	20.8	9.2		59.7	25.0	9.4		20.7	30.5	9.0		19.7	48.6
9.6		33.2	48.0	8.8	52	4.7	44.1	9.6		29.7	42.2	9.5		20.5	57.4
9.6		36.7	5.3	9.4		7.2	49.9	9.3		40.2	37.5	9.7		21.7	0.6
9.6		38.2	52.3	9.6		7.2	25.7	9.3		44.2	21.1	9.6		22.2	35.2
9.4		38.7	50.8	9.6		12.3	59.9	9.7		46.7	9.2	9.7		31.7	49.8
9.6		41.2	18.7	9.6		13.7	58.6	9.7		49.2	22.1	9.0		34.2	48.0
9.6		44.2	8.9	9.6		19.2	41.5	9.3		49.7	12.8	9.5		43.1	1.2
9.6		44.7	10.2	9.6		19.7	55.9	9.3		51.2	32.6	9.5		50.2	10.4
9.6		49.7	42.3	9.4		24.7	13.1	9.3		53.7	59.7	9.2		51.8	29.3
9.2		50.7	48.1	8.9		35.2	37.6	8.0		56.7	6.4	9.2		54.7	56.4
9.5		51.2	24.9	9.6		39.7	42.0	9.3	56	3.7	48.9	9.3		59.7	53.2
9.6	50	1.7	27.2	9.2		44.4	56.7	9.7		8.7	9.9	8.8	1	0.2	45.4
8.9		4.7	8.3	9.6		44.5	22.5	9.1		10.7	30.9	8.4		0.7	43.3
8.7		5.0	2.9	9.5		46.7	40.1	9.6		24.7	22.5	9.7		4.7	9.0
9.6		6.2	4.7	9.6		48.6	36.1	7.3		25.2	54.2	9.7		7.7	41.2
9.4		8.2	27.0	8.4		49.7	19.1	9.0		25.2	36.4	9.7		8.7	10.8
9.2		17.2	48.0	9.6		51.1	23.0	9.5		33.7	58.9	9.3		8.7	28.6
9.6		19.7	34.7	9.6		54.6	57.1	8.2		38.7	24.9	9.7		11.2	57.4
9.4		19.7	23.3	9.5		58.6	10.3	9.7		39.7	16.7	9.7		11.7	32.4
9.0		21.2	6.5	9.1		59.6	44.3	9.7		47.2	25.8	9.7		11.7	37.4
9.2		22.2	48.1	9.1	53	4.6	20.4	9.7		51.2	18.8	9.3		14.7	6.2
9.6		22.7	3.6	9.2		4.6	31.2	9.1		54.2	10.0	9.7		18.7	36.5
9.4		27.7	23.0	9.6		8.6	22.7	9.3		57.2	33.4	9.7		29.7	48.8
9.6		33.1	59.0	9.2		9.6	41.8	9.5	57	11.7	8.2	9.7		29.7	31.8
9.6		33.2	24.0	9.6		10.3	57.1	9.3		18.7	52.0	9.7		30.2	26.0
9.1		36.7	18.8	8.3		13.4	0.2	8.4		19.2	40.9	8.8		36.7	45.4
9.6		40.2	47.1	9.4		14.4	4.7	8.8		19.7	18.3	8.4		38.2	36.1
9.2		40.5	39.3	9.4		14.6	34.2	9.5		39.2	6.8	9.3		40.2	15.9
9.6		43.7	10.0	9.5		15.6	52.9	9.6		39.7	41.1	8.9		41.7	39.1
9.2		44.2	58.2	9.4		25.8	36.6	9.1		48.2	47.1	8.4		41.7	31.1
9.6		44.7	57.9	9.2		37.6	8.0	9.5	58	9.7	33.8	9.7		53.7	47.9
9.6		47.7	44.6	9.6		37.6	42.0	9.6		10.7	4.9	9.3	2	7.7	43.3
9.4		49.7	32.9	8.9		38.8	38.4	9.6		29.2	11.4	9.3		9.2	31.4
9.6		50.2	27.8	9.6		39.6	34.9	9.0		35.2	48.5	9.7		10.7	16.2
8.2		50.7	59.6	7.9		41.1	39.7	9.5		35.2	42.2	9.7		11.5	57.7
9.6		57.7	29.9	9.2		44.4	15.0	9.5		40.2	58.1	9.7		11.7	1.1
9.6	51	2.7	31.9	8.8		49.6	32.1	9.2		53.7	17.6	8.8		21.7	24.3
9.6		4.2	35.0	9.5		51.6	14.6	9.7		59.2	20.8	8.8		23.2	29.9
9.6		5.7	28.0	9.6		51.6	37.7	8.9	59	3.6	0.0	8.8		25.7	19.7
9.2		7.7	7.6	8.8		54.4	33.9	9.5		7.2	48.3	9.0		48.2	24.5
9.5		9.5	28.0	9.4		54.6	52.1	9.7		7.7	41.9	9.7		52.2	48.9
9.2		9.7	36.8	9.6		54.6	8.1	9.3		13.2	41.2	9.6		54.2	57.0
9.6		10.7	19.7	9.4		59.6	39.6	8.8		18.7	24.0	9.2		54.7	8.1
9.4		10.7	51.5	9.7	54	2.6	30.2	9.4		19.7	50.1	9.3		54.7	55.2
9.5		11.2	47.8	9.5		4.8	1.7	9.7		29.7	54.8	9.7	3	2.2	10.1
9.0		12.7	25.3	9.7		9.6	14.9	9.7		30.7	57.0	9.5		4.7	30.3
9.6		17.2	34.0	9.7		14.6	22.1	8.2		33.1	2.1	9.2		11.2	19.0
9.6		27.7	9.4	9.2		19.6	59.6	9.7		35.2	5.4	9.7		13.7	12.1
8.9		30.7	47.9	9.5*		25.5	57.1	8.8		36.7	28.0	7.6		19.7	2.9
9.2		31.2	59.5	8.5		29.6	31.5	8.9		38.2	24.9	9.3		28.7	49.1
9.5		34.1	56.6	9.7		34.6	38.5	9.6		39.7	19.6	9.7		29.2	5.1
9.2		39.7	16.4	9.5		34.6	53.5	9.7		39.7	35.4	9.7		39.7	36.8
9.2		39.7	54.9	8.0		49.6	36.6	9.7		41.2	21.2	9.2		40.5	56.8
8.9		43.7	49.3	9.5		55.4	59.6	8.8		41.7	26.8	8.8		49.2	8.0
9.6		45.7	16.7	9.5		57.1	15.3	9.7		43.7	37.1	9.7		49.7	11.9
8.5		47.7	38.1	9.6		58.1	33.6	9.4		46.2	28.4	9.2		53.2	51.1
8.8		53.7	55.6	8.8		59.2	43.1	9.7		46.2	14.7	9.7		58.7	34.3
25pr.	+1	40.6	-0.3		+1	40.6	-0.3		+1	40.6	-0.1		+1	40.6	+0.1

7801-7860.				7861-7920.				7921-7980.				7981-8040.			
18h.		-35°		18h.		-35°		18h.		-35°		18h.		-35°	
mag.	m s			mag.	m s			mag.	m s			mag.	m s		
9.7	4 0.7	11.9		9.1	9 7.7	36.7		9.0	13 28.0	34.1		9.8	19 24.8	9.7	
9.7	12.7	6.3	9.2	9.3	15.7	8.0		9.3	29.0	49.7		9.2	34.8	46.5	
9.6	22.2	33.7		9.3	19.7	32.2		9.5	29.5	36.1		9.2	35.8	37.1	
8.3	31.2	14.1	8.5	9.7	21.2	46.2		9.7	29.5	23.4		9.4	38.5	9.6	
9.7	48.7	20.9		9.2	25.7	42.2		8.7	29.5	6.1	-	9.8	54.5	31.1	
9.4	51.7	43.2		9.3	37.2	40.3		9.0	33.0	30.0		8.6	58.0	24.8	9.0
9.5	57.7	43.9		9.5	39.5	32.5		9.7	35.5	22.4		9.7	58.0	20.8	
9.7	5 0.8	58.4		9.2	39.5	31.1		9.7	49.5	5.5		9.8	20 0.0	11.8	
9.7	5.7	35.5		9.3	45.5	55.2		9.3	52.0	28.1		9.4	1.0	23.2	9.5
9.1	9.7	40.1		9.7	59.5	35.9		9.2	14 3.5	51.2		9.4	7.5	44.0	
9.7	13.2	22.1		8.3	10 0.3	0.8		9.7	15.5	15.1		9.7	11.6	59.6	
8.7	20.7	38.2	9.0	8.8	1.5	48.5	9.0	9.7	36.2	41.0		9.8	16.0	51.6	
9.2	32.2	13.0	9.0	9.7	4.5	9.1		9.7	39.3	1.7		9.2	39.0	20.3	
9.7	35.5	21.1		9.7	9.5	58.5		9.7	49.5	3.6		9.8	44.8	0.9	
9.2	39.7	34.0	9.0	8.3	10.5	5.5		9.7	15 7.5	8.8		8.4	46.0	39.4	8.5
9.5	43.7	36.3	9.0	9.5	16.5	9.7		8.8	9.5	5.7		8.6	21 6.0	50.7	
9.7	47.2	45.3		9.6	19.0	35.9		9.7	10.0	12.1		9.8	10.0	30.1	
9.6	48.7	40.3		9.5	19.0	36.2		9.7	29.5	6.5		9.8	20.0	36.4	
8.8	51.7	26.5	8.0 -	9.7	19.5	15.8		9.3	35.5	34.6		9.2	22.5	26.0	
9.3	54.7	27.1		9.5	28.0	35.8		9.7	37.5	19.4		9.2	26.5	31.4	9.5
9.7	55.2	3.7		8.8	44.0	12.1		9.5	39.5	38.8		9.8	40.0	29.0	
9.6	6 11.7	4.0		9.2	54.5	15.1		8.4	44.5	3.9	7.5 G	9.8	22 1.5	5.4	
9.7	21.2	53.0		9.6	11 0.5	9.9		9.6	47.8	1.4		9.8	10.5	4.7	
9.3	21.2	35.3		9.2	5.5	0.2		8.4	49.0	49.4		9.7	13.0	48.3	
9.7	21.5	8.5		9.7	16.0	19.1		9.5	49.5	42.2		9.0	23.5	25.4	
9.7	26.7	57.9		9.7	18.5	24.2		9.6	50.0	20.1		8.2	32.5	24.1	GW
8.2	30.7	6.8	7.7 GS-	9.7	19.5	5.0		9.7	59.5	34.5		9.2	34.5	10.6	
9.6	44.7	20.3		9.3	19.5	49.7		9.7	16 3.1	0.7		8.4	35.5	57.0	
8.8	48.7	51.1	8.8 -	9.3	19.5	30.1		9.6	10.0	59.1		9.1	47.0	57.7	
9.7	56.4	39.1		9.7	21.0	15.1		8.8	11.5	12.6	8.5	9.4	55.0	8.2	
9.5	59.3	58.3		9.5	24.5	38.8		9.3	12.0	26.8		9.8	55.0	21.2	
9.7	7 1.2	24.9		9.7	28.5	6.1		9.5	12.0	42.0	9.5	9.8	55.0	33.4	
9.7	5.7	34.3		9.7	29.5	8.9		9.7	24.9	57.8		9.4	57.5	44.2	
8.3	6.7	4.3	7.3 GS-	9.3	33.5	57.7		9.3	28.0	17.1		9.4	23 5.0	4.5	
9.0	10.7	49.9	9.0	8.5	38.5	56.3	8.5 G-	9.6	49.5	59.6		9.6	18.0	32.0	
9.7	14.7	16.7		8.8	43.0	29.3		9.7	59.5	16.3		9.6	20.0	6.9	
9.1	21.7	48.7	9.2 G	9.2	49.5	19.9		9.7	17 0.0	31.5		9.1	21.5	21.1	
9.7	21.8	58.3		7.3	54.5	28.6	7.0 GS	9.6	19.0	59.8		8.8	26.0	11.0	8.5 G
9.7	24.7	50.1		8.7	59.5	1.8	9.0	9.3	28.5	32.1		9.2	28.0	46.8	
7.6	26.2	40.2	7.8 G	9.7	12 2.0	29.6		9.7	29.5	41.8		9.7	29.0	52.9	
8.8	28.7	17.0		9.7	4.5	36.4		9.7	29.5	6.8		9.2	31.0	11.7	
9.4	34.2	59.9		9.7	24.5	33.1		9.0	39.5	10.2		9.8	31.5	19.0	
9.7	39.7	16.1		9.7	30.5	26.2		9.1	45.5	56.3	9.5	9.8	32.0	0.1	
9.5	40.7	14.3		9.2	31.0	17.9		9.1	47.5	33.9		9.7	40.0	43.9	
9.7	49.7	32.8		9.3	31.5	52.6		9.7	50.0	24.6		9.8	40.0	24.7	
9.7	49.7	56.1		9.3	33.5	36.1		9.7	52.0	6.3		9.1	43.5	27.9	
8.3	50.7	16.6	6.6 GS-	9.7	36.0	11.0		8.6	58.5	22.7	9.5	9.7	48.0	7.9	
8.8	54.7	49.5		9.5	36.5	37.6		9.7	59.5	53.9		9.2	54.0	10.6	
9.5	8 1.2	24.6		9.7	43.0	41.6		9.7	18 13.5	4.3		9.2	55.0	0.0	
9.2	18.7	40.3		9.7	45.5	0.7		9.6	23.5	20.5		9.8	24 3.0	30.1	
9.2	19.7	48.3	9.0	9.3	54.0	10.7		8.3	27.0	21.4	8.5 =	7.9	11.0	26.0	7.5 GS-
8.8	26.7	46.2	9.0	9.7	54.5	14.9		8.3	28.0	26.2	9.0	9.8	16.0	5.5	
9.7	31.7	25.4		9.5	54.5	6.9		9.3	33.5	18.6		9.7	19.0	38.8	
9.6	36.2	7.1		9.5	1.5	30.1		9.2	35.4	37.1		9.8	30.0	28.2	
9.5	51.7	42.0		9.7	4.0	21.0		8.7	35.5	24.1	8.0 G-	9.4	40.0	44.7	
9.3	59.7	7.7		9.7	9.5	37.0		8.8	39.2	59.1	9.0	9.5	40.5	27.8	
8.4	9 0.7	35.8	8.5	9.2	21.5	11.2		9.6	47.0	40.9		9.7	42.0	11.2	
9.3	0.7	5.0		9.5	22.5	8.4	8.0	9.7	56.6	54.7		9.6	44.9	58.6	
9.7	3.2	53.8		9.3	23.5	39.5		9.7	58.0	13.3		9.8	53.5	2.3	
9.5	5.2	9.8		8.9	25.0	39.0		9.2	19 15.1	28.5		9.8	58.0	2.4	
25pr.	+ 1 40.6	+ 0.3			+ 1 40.6	+ 0.4			+ 1 40.5	+ 0.6			+ 1 40.5	+ 0.8	

8041-8100.				8101-8160.				8161-8220.				8221-8280.			
		18 ^{h.}	-35°			18 ^{h.}	-35°			18 ^{h.}	-35°			18 ^{h.}	-35°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
9.4	25	1.3	1.9	9.7	29	10.5	9.0	9.8	34	7.0	33.7	9.2	39	38.0	30.9
9.7		5.0	39.9	9.8		13.5	31.2	9.2		7.0	9.0	9.8		40.0	5.6
9.1		10.5	51.9	9.8		21.0	18.5	8.7		10.0	16.1	9.5		47.0	21.5
9.8		11.0	35.3	9.7		23.5	14.0	8.8		12.5	22.9	9.8		50.0	43.5
9.8		14.5	43.4	9.8		25.5	39.7	9.8		20.0	15.5	9.5		52.5	7.8
9.8		17.0	26.1	8.7		28.0	47.1	9.5		22.0	50.5	9.4		53.1	37.1
9.1		21.0	45.1	9.6		29.5	30.5	9.8		26.0	19.2	9.4		54.0	43.2
8.9		27.0	43.8	9.7		30.0	25.5	9.8		42.5	21.0	9.8	40	5.1	54.2
9.8		32.0	5.8	9.4		32.5	38.1	9.2		59.0	9.7	9.2		8.5	18.9
9.5		34.0	40.0	9.6		33.0	24.8	9.8		59.5	28.9	9.7		10.0	6.6
9.0		44.0	49.4	9.2		35.0	42.3	9.2	35	0.0	21.0	9.5		12.0	28.9
8.7		52.0	30.5	9.4		40.3	2.2	8.8		6.0	45.9	9.4		22.0	26.8
8.6		53.0	53.0	9.1		45.8	58.2	9.2		25.5	37.4	9.0		25.5	45.8
9.5		55.0	29.2	9.1		46.0	55.7	9.4		26.0	11.0	9.2		58.0	17.5
9.7	26	1.5	14.8	9.6		56.0	45.8	9.2		26.0	43.9	8.6	41	5.0	10.3
9.2		2.0	51.4	8.8	30	2.5	55.9	9.7		30.5	21.9	9.0		25.5	9.7
9.7		5.5	5.8	9.2		3.0	21.3	9.8		32.5	25.0	9.8		30.5	11.2
9.1		15.0	32.7	9.8		9.5	17.8	9.8		33.0	59.8	9.5		38.0	12.6
9.4		20.0	42.5	9.8		26.5	33.7	9.8		34.5	16.1	9.2		49.8	1.7
8.8		24.0	38.4	9.8		37.0	33.2	9.6		34.5	23.9	9.4		55.0	48.3
9.8		25.5	13.9	9.1		44.5	47.7	9.5		39.5	33.1	9.4	42	23.0	37.0
9.2		30.0	12.4	9.8		46.0	3.1	9.5		43.5	8.4	9.7		24.2	58.5
9.7		35.0	54.9	9.8		50.0	39.1	9.8		55.0	40.2	9.8		34.5	12.8
9.7		39.0	48.5	9.8		55.0	42.1	5.4		57.5	45.7	9.0		38.0	5.6
8.9		40.5	8.0	9.7	31	8.0	16.0	9.8	36	0.0	48.9	9.7		38.5	15.9
9.0		40.5	2.0	9.0		14.5	43.6	9.7		0.0	3.9	9.1		40.0	20.0
9.8		42.5	39.5	8.7		19.0	24.0	9.0		2.0	19.9	9.4		40.3	0.0
9.2		56.0	3.0	9.6		25.0	20.7	9.6		10.0	27.8	9.7		42.5	39.9
9.8		56.0	49.0	9.8		28.1	23.4	9.7		14.7	59.9	9.2		46.5	3.1
9.8	27	0.5	48.2	9.8		38.0	46.2	9.6		16.5	53.0	9.2		55.0	13.1
9.8		0.5	22.9	9.8		41.5	57.8	9.0		20.5	40.4	9.6	43	0.0	40.8
9.8		8.3	59.7	9.2		43.5	21.6	9.2		23.7	59.3	9.5		5.0	49.0
9.1		12.5	53.1	9.8		44.0	10.1	9.8		41.2	59.7	8.4		10.0	5.9
8.8		24.0	0.2	9.2		56.0	13.8	9.2		46.0	5.5	9.8		14.0	11.1
9.8		26.5	53.3	8.5		58.0	16.1	9.2		46.0	15.3	9.8		15.5	41.0
9.7		27.5	3.5	8.9		59.0	12.9	9.2		54.5	6.3	8.4		17.2	31.5
8.6		31.5	0.0	9.7		59.5	36.3	8.0		55.0	58.8	9.8		31.7	56.3
9.6		31.5	7.9	9.0	32	0.5	23.0	8.7		57.5	36.3	9.7		39.8	27.9
9.8		44.0	17.5	9.7		1.2	57.3	9.8	37	0.0	3.5	9.6		39.8	33.9
8.7		48.0	14.3	9.7		10.0	3.5	9.4		1.0	36.3	9.8		50.2	54.0
9.4		51.0	32.1	9.8		15.0	39.8	9.2		2.0	10.3	8.8		54.4	17.7
9.8		51.5	34.0	9.6		20.0	41.1	9.7		31.0	13.7	8.0		56.4	46.1
8.9		55.0	38.0	9.5		20.5	58.0	9.6		31.5	22.1	9.8	44	11.8	55.6
9.2		57.0	11.3	8.6		23.0	11.2	9.8		33.5	23.5	9.1		19.8	25.9
8.2	28	4.0	32.6	9.2		28.0	36.9	9.4		44.5	8.9	9.6		25.8	32.1
9.8		15.0	38.7	8.9		33.5	3.6	9.4		45.0	42.1	8.0		29.8	11.4
9.8		19.5	46.9	8.4		36.0	13.3	9.8		50.0	42.2	9.8		31.8	26.7
9.7		21.5	12.9	9.8		36.0	50.0	8.7		56.2	59.3	9.6		37.8	36.3
9.8		23.5	10.2	9.7		48.5	41.8	9.7		59.0	8.9	9.6		46.3	27.1
9.8		25.0	22.7	9.4	33	4.5	15.4	9.8	38	13.0	17.9	9.4		49.8	31.9
9.2		39.0	34.8	9.8		11.5	47.6	9.8		20.0	32.7	9.6		50.0	42.6
9.6		39.0	30.0	9.1		26.5	32.5	9.7		43.5	25.5	10.2		50.0	39.1
9.2		42.5	12.3	9.8		30.0	18.5	9.0		45.5	51.6	9.6		50.2	13.3
9.7		45.0	39.7	9.2		30.0	42.5	9.8		55.5	57.9	10.0	45	35.5	3.0
9.5		53.0	32.7	9.8		34.5	11.5	9.6	39	0.5	35.5	9.8		39.8	1.8
9.8		54.5	31.8	9.8		35.5	33.1	9.7		3.5	46.0	9.3		49.3	53.3
9.4	29	0.5	51.7	9.8		43.0	44.7	9.4		6.5	10.7	8.9	46	3.8	18.7
9.6		0.5	35.3	9.8		45.5	44.5	9.2		8.5	44.5	9.6		29.3	31.2
9.8		4.5	43.0	9.2		46.0	10.9	9.2		26.5	46.6	10.2		32.4	52.9
9.0		5.0	3.8	9.8	34	1.0	43.6	8.4		30.0	37.8	8.9		34.3	53.0
25pr.	+1	40.5	+1.0	+1	40.5	+1.2		+1	40.4	+1.3		+1	40.2	+1.6	

8281-8340.			8341-8400.			8401-8460.			8461-8520.						
mag.	18 ^h	-35°	mag.	18 ^h	-35°	mag.	18 ^h -19 ^h	-35°	mag.	19 ^h	-35°				
10.0	46	39.3	42.0	8.7	53	5.3	12.7	9.0	8.7	3	8.0	6.3	8.0 G-		
8.3		41.3	16.4	9.4		10.3	11.7	9.5	10.2		35.0	30.6			
10.2		47.3	37.7	9.6		10.3	51.8		10.2		50.0	30.2			
10.2	47	13.8	4.0	9.7		15.3	18.8		9.7		58.5	9.5			
9.8		27.8	16.0	10.2		20.3	23.6		8.7		4	10.5	34.6		
10.2		31.4	2.2	9.2		21.8	38.0		10.2		9.4	14.5	10.5		
10.2		34.3	54.8	10.2		29.8	42.0		9.6		9.9	16.5	57.1		
10.1		39.8	6.2	10.1		38.3	54.1		9.9		9.4	18.0	37.7		
10.2		40.3	30.9	9.4		43.8	37.2		10.2		9.4	30.5	13.5		
9.3	48	26.8	27.4	9.0		45.3	53.8		9.7		10.0	37.5	45.0		
10.1		35.8	19.0	9.7		50.0	40.7		9.6		9.6	40.5	5.4		
10.0		39.3	11.0	10.0		50.0	30.4		10.2		9.6	40.5	19.0		
9.9		55.8	17.0	8.1		50.5	10.8	7.3 G	10.2		10.2	42.8	58.6		
9.6	49	8.8	21.0	8.7		50.5	30.1		10.2		9.8	47.5	20.3		
9.6		20.3	24.7	9.8		54	3.5	4.2	10.2		10.2	57.5	41.2		
9.7		30.3	3.0	10.2		3.6	0.2		9.0		9.2	59.7	3.5		
9.8		30.3	40.5	10.2		4.0	10.9		8.8		9.4	5	0.7	4.1	
9.6		30.8	42.6	8.5		7.5	19.2	8.5	10.2		10.2	4.7	15.1		
9.3		40.3	30.2	9.2		11.5	27.2		9.6		9.7	6.2	15.3		
10.2		40.3	3.4	9.6		16.0	22.5		10.2		9.2	11.2	48.1	9.5	
9.6		40.8	17.4	9.6		16.0	41.1		9.4		10.2	36.7	6.3		
9.0		43.3	54.4	10.1		21.7	58.9		10.1		10.1	45.2	45.9		
9.8		44.3	9.0	9.4		39.5	45.0		9.9		9.9	6	0.2	30.7	
9.6		45.8	24.0	10.2		41.5	56.3		10.2		10.2	4.2	13.3		
10.2		52.8	54.0	10.2		45.5	47.8		8.9		9.6	10.2	34.7		
9.8		53.3	26.4	10.0		45.5	45.9		9.7		10.2	11.2	37.7		
9.9		53.8	58.5	9.6		47.5	25.0		10.2		9.6	11.7	49.3		
10.2		54.3	46.6	9.2		48.5	33.7		10.2		10.2	12.0	33.1		
10.0		56.8	14.0	9.8	55	1.5	14.0		9.6		9.9	17.7	30.2		
9.0		59.3	2.2	10.0		9.0	33.8		10.2		10.2	42.7	33.1		
10.2	50	9.8	47.8	8.6		21.5	4.8	8.0 G-	10.1		9.6	44.2	29.7		
9.7		9.8	46.5	10.2		32.0	32.1		8.8		7.6	7	3.0	1.5	
10.2		23.3	0.4	10.0		32.2	57.9		10.1		10.0	9.7	16.3		
9.9		33.3	0.0	10.2		34.5	42.6		10.2		8.9	10.7	22.2		
9.7		36.8	31.2	9.6		34.5	29.1		9.9		10.2	20.7	8.3		
10.1		38.9	2.0	10.2		39.5	9.5		10.2		10.0	22.2	49.3		
9.7	51	4.3	48.7	10.2		42.0	25.9		8.9		9.6	30.2	4.9		
9.7		16.1	59.6	10.1		47.0	18.8		10.2		9.4	47.7	58.8		
9.8		16.8	20.6	8.9		50.0	16.4		9.3		9.6	50.2	17.7		
9.9		19.8	55.0	10.2		51.5	18.3		10.2		10.2	51.2	54.7		
9.9		19.8	41.9	9.0		55.5	32.6	9.5 G-	9.2		10.1	55.2	14.7		
10.2		35.3	40.1	9.6		58.0	3.6		10.2		10.0	59.7	32.1		
8.5		50.8	4.8	10.1	56	8.5	56.4		9.8		10.1	8	30.7	9.5	
10.1		54.3	38.8	9.4		20.0	38.5	9.5	10.2		10.2	31.1	57.5		
9.8		58.8	17.0	10.0		20.5	57.1		9.3		9.6	35.2	8.3		
9.7	52	2.3	17.0	10.2		29.9	33.0		9.8		9.9	38.7	26.1		
10.2		3.8	32.9	9.9		30.0	44.1		9.6		10.1	39.7	37.1		
9.8		12.3	9.9	10.2		40.0	20.3		9.6		8.9	41.0	0.4		
10.1		25.3	18.7	10.2		40.0	42.4		10.1		8.7	41.2	24.1		
9.9		26.8	29.2	10.2		49.9	28.9		9.4		10.0	59.3	1.3		
10.1		29.3	9.3	9.0		52.0	42.7		9.4		8.2	9	0.5	10.6	8.5
8.6		31.8	3.0	9.4		53.5	43.6		10.1		10.1	14.2	31.7		
9.6		34.3	54.1	10.2		53.7	17.9		10.1		10.1	22.7	55.5		
10.2		45.3	24.0	10.2		55.5	7.2		10.0		8.9	38.2	9.7	9.0	
10.2		55.3	25.1	9.4	57	1.0	4.2		9.7		10.0	49.7	35.3		
10.1		56.8	43.8	10.2		2.5	40.0		9.6		9.6	10	8.7	25.9	
9.4		59.3	12.0	10.1		10.0	33.7		9.8		10.0	10.2	48.4		
10.2	53	1.3	15.0	8.9		18.5	33.2		9.8		9.4	21.7	25.1	9.0	
10.2		3.3	58.0	9.8		19.5	47.7		9.1		9.2	30.2	37.8		
8.9		3.8	3.8	9.6		21.5	48.2		10.1		9.2	30.7	41.8		
25pr	+1	40.1	+1.8	+1	39.9	+2.0	+1	39.8	+2.2	+1	39.6	+2.4			

8521-8580.			8581-8640.			8641-8700.			8701-8760.		
mag.	19 ^h .	-35°	mag.	19 ^h .	-35°	mag.	19 ^h .	-35°	mag.	19 ^h -20 ^h .	-35°
10.0	10	45.2 23.3	10.0	21	19.7 5.8	9.5	37	42.9 38.4	5.7	51	44.1 2.0
9.8		56.2 43.9	8.5		23.7 20.1	9.6	38	4.4 43.3	9.5	52	17.1 18.6
9.6		56.2 27.4	9.4		37.7 11.0	9.8		33.4 22.0	9.8		39.1 35.1
10.0	11	1.2 19.2	9.8	22	1.2 6.3	8.3	39	17.9 28.8	9.8		46.1 54.3
8.8		10.2 52.1	10.0		11.2 18.0	9.8		36.9 6.1	9.2		46.1 26.7
8.3		12.7 13.6	9.8		13.7 58.1	9.1		44.4 18.2	9.6		49.1 23.7
10.0		14.2 14.7	10.0		15.2 11.3	9.6		53.9 4.9	9.8		50.1 47.0
6.2		23.2 38.6	9.8		41.2 34.3	8.7	40	0.4 55.9	9.8	53	33.1 11.0
9.6		38.3 57.6	9.8		44.2 48.9	9.8		8.9 39.3	8.9		40.1 57.2
10.0		52.2 52.2	10.0		51.7 43.0	9.8		33.4 13.6	8.6		52.8 2.5
10.0	12	6.2 56.5	9.4		54.2 51.1	9.8		41.4 7.8	9.8	54	6.6 33.4
9.4		6.2 34.0	8.6	24	18.7 43.0	9.8		49.4 29.5	9.8		14.1 39.3
10.0		11.7 27.9	10.0		40.2 38.9	9.1		54.4 28.6	8.9		16.6 37.1
9.6		13.2 7.4	9.4		40.4 59.2	9.2	41	4.9 4.0	9.8		51.1 29.0
10.0		32.2 47.0	9.4		51.7 6.6	9.5		31.4 39.1	8.4		58.1 39.9
9.8		35.2 53.6	10.0	25	35.8 58.0	9.6		37.9 22.0	9.0	55	15.1 53.8
10.0		35.2 14.8	10.0		48.2 15.4	9.8		53.4 15.6	9.6		20.6 46.9
10.0		45.7 39.9	10.0		57.2 17.6	9.8		59.4 27.0	9.5		57.1 12.0
9.8	13	6.3 24.7	9.4	26	4.2 58.1	9.8		59.4 35.0	9.3	56	0.1 24.3
9.8		11.2 46.4	9.1		35.2 44.4	9.8	42	13.4 57.0	8.3		10.1 41.2
9.2		12.7 37.3	10.0		56.5 23.2	9.6		23.9 23.9	9.8		17.1 29.9
7.0		14.2 12.6	9.6	27	0.2 18.3	9.8		25.4 56.2	9.8		17.1 56.1
10.0		27.7 19.7	9.8		3.7 21.5	9.3		26.4 23.8	8.4		29.1 33.7
9.4		29.7 48.8	9.6		16.7 41.1	9.8		29.9 55.6	9.8		41.1 33.5
9.4		31.2 3.1	10.0	28	12.7 48.0	9.3		50.4 14.4	9.3		43.1 27.5
9.4		41.2 55.8	9.8		13.2 49.7	8.9		59.9 29.8	9.5	57	4.1 28.5
10.0		50.2 4.1	8.8		43.7 6.9	7.6	43	7.4 37.4	6.9		21.1 1.2
10.0		54.2 16.8	8.4	29	14.2 30.9	9.8		7.4 38.9	9.8		32.4 26.5
9.8		58.2 15.9	9.8		20.2 10.8	9.0		10.9 33.0	8.4		32.6 16.1
10.0	14	1.2 42.2	9.6		35.7 33.7	9.1		42.9 29.0	9.5		41.6 54.4
9.4		28.2 28.6	10.0		52.2 17.8	8.9	44	4.9 24.4	9.8	58	14.1 57.4
9.6		38.7 6.6	10.0	30	13.2 6.3	9.6		9.4 51.8	8.9		19.8 26.1
10.0		41.7 21.6	10.0		17.7 9.8	8.7		34.6 0.0	9.6		39.3 49.9
9.4		45.2 13.5	10.0		26.2 45.4	9.8	45	0.4 55.0	9.8		59.8 17.8
8.6		48.2 23.0	10.0		54.2 34.0	9.8		39.4 2.4	8.4	59	11.6 17.7
10.0		52.7 35.5	10.0	31	1.7 19.4	9.8		53.9 37.8	7.7		12.1 53.3
8.8		55.7 37.2	9.8		4.0 29.8	9.8		56.7 2.3	9.8		24.1 55.8
7.9	15	35.2 12.3	8.8		4.5 6.4	9.8	46	45.4 10.6	9.8		27.6 33.7
10.0		40.2 50.3	9.8		20.5 51.0	9.4		54.4 41.0	8.4		28.1 3.7
9.2		47.7 49.2	10.0		25.0 31.9	9.6	47	8.4 52.2	9.8		43.8 33.1
9.8		48.2 23.8	10.0		41.0 10.9	9.8		29.4 50.3	8.0	0	3.3 7.7
9.6		50.2 22.1	9.8	32	16.5 51.8	9.8		39.4 10.2	9.8		4.1 9.5
9.8	16	20.2 17.0	10.0		20.0 17.1	9.3		50.4 10.6	9.3		9.6 24.5
10.0		20.2 55.6	9.8	33	45.0 35.5	9.8		54.1 59.4	9.8		10.7 33.3
9.4		40.2 43.2	10.0		58.0 32.7	9.8	48	4.4 22.2	9.8		29.1 6.9
8.6		40.2 12.9	9.6	34	6.9 39.0	8.2		25.9 49.8	10.0		53.4 44.0
9.8	17	20.2 36.2	10.0		27.5 11.5	9.4		53.1 0.3	8.4	1	8.9 2.3
9.6		33.7 10.8	10.0		45.5 41.4	9.2		57.8 57.2	10.1		10.4 37.1
9.4		36.7 48.0	9.8		50.0 2.8	9.1	49	4.9 47.4	7.8		19.4 31.5
10.0	18	10.2 34.1	8.0	35	39.4 32.3	9.6		9.6 43.0	9.5		33.9 38.7
9.8		44.7 24.3	9.0		54.2 56.9	9.4		12.1 6.9	7.5		48.4 58.1
10.0		50.2 19.6	9.1		55.4 16.7	9.1		13.6 25.8	7.5		53.9 41.9
9.6	19	5.7 9.5	8.6		55.4 22.9	9.8		19.1 9.1	10.0		53.9 49.1
10.0		51.7 38.2	9.5	36	1.9 51.7	8.0	50	1.6 31.0	9.5	2	19.3 0.4
8.4	20	6.2 22.7	9.5		7.4 5.4	9.6		22.1 49.9	9.0		41.3 44.7
9.8		18.2 53.9	8.6		20.4 25.9	9.8		35.1 32.2	10.1		43.3 47.7
9.2		18.7 23.0	9.2		55.9 25.1	9.5		54.1 1.6	8.7		48.3 8.1
10.0		27.2 39.8	9.4	37	12.9 24.4	9.8		51 4.1 34.0	9.5	3	9.8 39.8
10.0		29.7 5.6	9.8		21.9 40.0	4.0		35.1 36.7	10.1		18.3 51.9
10.0		31.7 11.5	9.5		41.4 54.4	9.8		37.1 11.7	9.6		21.8 7.0
25pr.	+ 1	39.4 + 2.7	+ 1	38.8 + 3.2	+ 1	38.2 + 3.7	+ 1	38.2 + 3.7	+ 1	37.6 + 4.1	

8761-8820.			8821-8880.			8881-8940.			8941-9000.		
mag.	20 ^h .	-35°	mag.	20 ^h .	-35°	mag.	20 ^h .	-35°	mag.	20 ^h -21 ^h .	-35°
10.1	4 21.3	31.1	10.1	17 18.6	47.2	9.4	25 57.2	59.3	10.0	49 58.0	59.8
10.0	26.3	42.0	9.4	25.6	41.7	9.2	26 1.4	20.6	10.0	50 18.0	52.6
10.1	42.8	24.5	9.2	29.1	7.1 G	9.2	43.9	0.8	10.0	43.5	7.9
9.5	46.8	16.5	10.0	43.1	26.3	8.4	27 4.4	9.4 -	10.0	51 9.7	57.6
9.5	47.3	16.3	9.2	43.1	25.9	9.2	28 15.4	31.7	9.4	12.2	34.0
10.0	49.3	16.8	9.4	59.4	38.5	9.2	40.4	42.0	9.4	15.7	11.4
9.8	59.8	33.8	8.8	7.9	37.0	9.2	59.4	0.0	10.0	17.5	52.8
10.0	5 4.3	2.1	9.6	29.9	24.8	9.2	29 10.4	40.9	9.6	25.0	15.9
8.8	19.8	45.0 -	10.1	35.9	42.0	8.5	25.4	10.0 8.5	10.0	45.0	16.3
10.1	47.8	47.2	9.5	36.9	4.3	9.0	30 28.9	44.0 9.0 G	9.4	57.5	21.0
10.1	53.8	47.1	10.1	45.4	32.0	9.2	31 3.4	40.2	8.5	52 3.5	18.9
9.5	54.3	54.1	9.0	55.4	48.8	8.2	9.4	51.3 8.5 G	10.0	24.1	58.8
9.2	57.8	4.0 9.0 G	9.4	19 8.4	48.2	8.5	44.4	41.4	9.4	45.0	31.1
9.8	6 10.3	3.0 -	10.1	13.9	53.3	9.2	32 4.4	26.1	9.2	50.0	51.2
10.1	23.8	45.9	10.0	20.9	27.9	8.8	16.4	9.3 9.0 G	7.0	50.0	46.5 GS
9.8	37.4	0.1	10.1	40.4	24.9	9.2	34 4.9	6.9	8.0	53 16.0	26.8 GS
10.1	39.3	30.2	8.8	54.4	48.0	9.2	11.9	18.5	7.5	25.5	40.1 GS
9.8	39.8	37.6	10.1	59.4	20.4	9.2	53.9	0.1	9.7	35.0	9.0
9.8	47.8	44.4	9.8	20 17.4	23.0	9.2	54.9	51.8 8.5	9.2	55.5	57.6
9.0	7 43.8	56.3	10.0	18.4	18.0	8.4	35 37.9	58.6 8.0 G-	9.8	54 10.0	39.2
9.0	8 15.3	39.1 9.0	10.1	22.4	58.9	9.2	47.9	33.4	9.4	11.5	8.4
6.8	22.8	34.8 6.5 GS-	9.4	27.9	44.9	9.2	50.4	32.3	9.2	27.5	28.0
8.0	35.8	25.3 8.5	9.8	38.9	43.6	9.2	36 0.4	29.9	8.8	52.5	48.2 8.5
10.1	9 3.3	37.0 -	8.7	40.9	6.8	9.2	5.9	13.4	9.2	53.0	17.8
8.8	5.8	46.4 -	10.0	45.4	19.0	9.2	31.9	12.7	9.2	55 28.7	53.9
10.1	14.8	48.7	8.0	48.4	46.4 WK-	9.2	51.9	19.2	9.8	56 2.2	44.5
10.1	18.3	43.2	10.0	52.4	14.9	7.4	37 17.4	36.9 7.0 GW	9.2	25.2	18.1
9.8	29.3	37.2	10.0	21 8.9	38.8	8.5	19.4	43.1 9.0 G	9.8	27.2	41.3
9.4	31.8	31.3	9.6	13.9	48.0	8.9	23.4	25.0	8.9	44.6	0.1
9.2	10 21.3	46.5	9.8	16.4	26.9	9.2	28.4	50.8	10.0	57 17.7	26.0
9.4	28.1	24.7	8.9	20.1	2.4	8.7	33.9	5.8 9.5 G	9.7	41.7	29.0
10.1	34.6	33.5	9.0	27.4	36.6	8.2	40.4	49.3 8.5 G	10.0	58 20.7	55.0
8.8	43.6	16.0 8.5	10.0	50.9	28.8	9.2	54.4	2.1	10.0	31.7	28.8
9.4	51.6	55.3	8.6	51.4	9.3	9.2	38 20.4	1.9	7.4	38.7	7.6 7.0 GS-
9.5	54.1	39.3	10.0	55.4	11.1	9.0	39.4	32.6	9.7	59 2.4	1.2
9.2	59.1	56.1	9.5	22 4.9	50.5	9.2	59.4	38.3	8.9	13.2	33.2 8.5 G
9.4	11 2.6	25.4	8.4	5.9	6.4	8.2	39 21.4	36.3 8.5 GW	9.8	15.2	21.9
9.6	24.6	37.5	9.0	17.9	46.2 9.0	8.5	40 5.9	50.7 9.0 G	10.0	31.7	24.0
9.2	28.1	56.4	10.0	23.9	1.3	9.0	11.4	30.8	9.6	54.7	25.2
10.0	12 1.3	2.3	9.5	27.9	4.8	8.6	12.9	12.3 9.0 G-	10.0	59.7	23.7
9.0	20.1	37.1	9.8	30.9	14.8	9.2	41 30.4	34.1	9.4	0 15.2	9.5
9.0	37.6	32.1	10.0	34.9	22.4	9.2	54.9	39.9	9.7	19.7	51.1
8.6	47.6	10.0	10.0	37.4	55.0	9.2	42 2.4	14.0	10.0	31.2	46.4
10.1	52.6	19.4	9.4	44.4	47.7	9.2	33.9	23.0	9.7	31.7	49.9
9.0	53.6	13.2	9.8	54.9	11.8	9.2	59.4	40.0	9.6	51.7	12.1
10.1	14 19.6	14.2	10.0	58.9	11.9	9.2	43 41.4	39.3	9.2	55.7	32.3
10.1	23.2	6.1	9.4	23 13.7	40.3	9.0	44.9	19.4 9.0	10.0	1 3.2	11.6
10.1	35.6	19.9	10.1	20.2	59.3	8.7	59.4	1.7	10.0	36.6	0.9
9.2	45.1	9.9	9.2	37.7	50.5	9.2	44 15.9	44.3	9.7	39.7	44.4
7.1	58.1	46.4 7.0 GS-	8.7	40.7	56.4	9.2	29.4	53.2	9.6	40.2	40.3 8.5 G
10.1	15 18.6	17.0	9.4	57.7	40.0	8.6	47.9	38.8	10.0	45.2	6.1
7.7	43.1	31.6 7.5 GS-	10.1	58.7	3.5	8.5	45 26.9	7.8 9.0 -	8.8	48.7	49.1
9.5	46.1	47.1	9.6	59.2	11.4	8.8	59.4	50.2	9.8	2 11.2	38.7
8.8	48.1	22.0 9.0	10.1	24 10.3	6.5	9.2	46 1.4	46.1	10.0	19.2	21.9
10.0	50.1	7.7	9.5	18.7	28.7	8.1	8.4	29.7	8.6	51.7	18.9
9.5	16 4.1	4.8	9.5	47.2	36.9	8.8	9.4	30.5	9.8	3 9.7	8.5
8.1	31.1	6.8 8.5 G-	9.8	53.2	38.0	8.9	32.9	28.2	9.7	11.7	27.8
9.5	37.6	26.3	9.4	25 11.2	6.7	8.7	54.4	21.0 8.5 G	8.8	23.2	29.9 -
9.4	38.6	8.3	9.8	24.2	26.1	9.0	49 14.9	54.2	9.2	56.7	21.4
10.1	40.1	8.7	10.0	24.7	57.9	9.0	18.2	7.6	9.2	4 53.7	12.6
25pr.	+ 1 36.9	+ 4.5									
			+ 1 36.2	+ 4.8		+ 1 35.2	+ 5.3		+ 1 33.8	+ 5.9	

9001-9060.				9061-9120.				9121-9180.				9181-9240.			
mag.	21 ^h .	-35°		mag.	21 ^h .	-35°		mag.	21 ^h .	-35°		mag.	21 ^h -22 ^h .	-35°	
	m	s			m	s			m	s			m	s	
8.8	5	19.5	20.2	9.8	19	4.2	38.2	9.8	38	0.2	50.7	9.9	59	13.6	1.0
10.0		23.5	59.1	8.4		13.7	33.5	8.8		7.2	25.1	9.9		20.6	24.3
8.0		29.5	38.7	8.1		37.2	26.5	9.3		9.5	58.5	8.8		42.1	48.8
8.8		30.0	36.3	9.6	20	12.7	25.4	9.8		13.2	30.8	9.2	0	30.1	38.1
8.7		31.0	0.2	9.8		13.7	49.1	9.8		20.7	2.1	7.8		59.1	9.8
10.0		31.0	45.2	9.8		0.7	13.6	9.6		37.4	2.3	9.4	1	6.6	36.1
10.0		39.5	51.2	9.8		34.2	9.1	9.8		44.2	44.9	9.9		18.6	2.5
9.4		47.5	33.1	9.8		49.7	21.0	9.6		47.0	23.9	9.9		20.6	59.2
9.7		48.0	46.0	9.8		50.8	21.3	9.4		58.2	20.8	9.0		51.1	22.8
9.6	6	2.0	25.5	9.1	23	31.7	45.6	9.5	39	19.2	55.4	9.0	2	16.6	23.2
9.4		9.5	48.1	9.8		44.7	55.1	8.2		31.7	15.7	9.8	3	7.1	37.8
7.5		29.5	53.3	8.8		51.7	39.3	9.8	40	9.7	30.5	8.9	4	6.1	33.1
10.0		54.5	47.6	7.6	24	1.7	37.4	9.8		29.2	21.0	6.8		19.6	4.7
9.4		55.5	26.1	9.5		7.0	1.6	9.8		54.7	12.5	9.6		22.6	46.9
10.0		59.5	34.1	9.8		8.7	12.0	9.1	41	12.7	46.9	9.8		44.1	53.3
10.0	7	5.0	29.4	9.1		33.7	15.7	9.8		41.7	48.4	9.9	5	0.6	11.5
9.2		6.5	34.7	8.6	25	7.2	9.2	9.2		56.9	24.3	7.4	6	34.8	22.7
10.0		13.8	58.5	9.6		7.2	22.8	9.4	42	3.0	29.3	10.2		53.8	17.9
9.8		14.5	30.7	9.8		19.7	51.4	9.9		10.0	53.1	9.7	7	31.8	20.7
9.8		19.7	57.0	9.1		44.7	4.2	9.9		59.0	39.4	10.2		59.8	51.3
8.6		25.5	31.2	7.6	26	1.7	29.5	9.9	43	1.0	40.2	10.0	8	29.6	59.9
9.4		59.5	1.0	9.2		5.7	57.5	9.9		59.0	6.8	9.7		31.8	32.1
10.0	8	13.5	57.2	9.8		11.7	11.4	9.4	44	23.5	37.1	9.8	9	8.8	43.1
9.6		19.2	59.7	9.2		13.2	58.6	9.4		33.7	57.1	8.4		11.8	48.5
10.0		31.5	31.0	9.8		35.2	57.2	9.9	45	11.5	16.6	9.8		35.8	23.5
9.6		42.0	50.7	9.3		48.2	28.5	8.2		40.6	27.0	7.6		53.3	22.9
10.0		42.5	50.4	9.1	27	7.2	41.8	9.4		57.6	49.8	9.1	10	29.8	23.3
9.8		49.5	18.1	9.8		21.0	37.8	9.8	47	32.6	47.1	10.2		53.8	37.4
10.0		50.5	1.8	9.1		21.7	57.5	8.6		40.6	12.9	10.2		58.3	21.1
9.6	9	11.3	58.1	9.0		46.7	2.6	8.4		53.6	14.1	8.3	11	1.8	11.5
9.4		29.5	55.7	9.5	28	25.2	53.0	9.4		58.6	44.7	9.4		3.8	12.6
10.0		41.5	35.7	8.4		44.7	44.1	8.4		58.6	5.6	9.8		5.8	56.7
9.4		41.5	37.1	9.8		52.0	46.6	9.2	48	14.6	36.0	10.0	12	45.8	16.6
9.6		54.5	3.9	9.3	29	19.2	33.6	9.8		49.1	42.4	7.7	13	30.3	8.6
9.4	10	11.5	33.1	9.8		24.2	51.1	9.2		52.6	19.1	9.8		52.8	37.3
10.0		22.5	22.9	9.5		24.2	35.2	9.8	49	8.6	7.3	10.2	14	10.8	32.2
9.6		37.0	50.5	9.1		40.7	8.6	7.0		28.6	57.2	9.7		12.3	49.2
9.2		40.5	27.5	8.6	30	26.2	14.3	8.8	50	0.1	27.5	7.8		43.3	9.0
9.4	11	38.5	46.4	9.8		39.7	53.0	8.2		36.6	39.0	7.6		49.8	7.1
9.2		47.1	57.5	8.8		41.7	3.2	8.6	51	9.1	46.6	10.2		59.8	0.8
8.8		58.0	4.6	9.5		57.2	4.6	9.9		29.1	56.4	10.0	15	35.8	56.0
8.4	12	26.5	7.2	9.1	31	9.2	25.2	9.9		30.7	23.7	10.2		42.3	53.9
9.4		40.5	8.1	9.6		10.2	44.6	9.9	52	26.1	51.2	9.9		59.3	50.8
10.0		43.2	28.5	9.4		19.2	21.0	8.4		27.6	41.8	9.1	16	3.8	25.2
9.4		56.2	42.9	9.0		45.2	34.0	8.9		29.1	8.8	8.8		7.8	35.0
10.0		58.7	28.0	9.2		55.7	31.8	9.2		33.1	35.1	9.4		11.8	16.0
10.0		59.2	13.2	8.8		34.2	8.2	8.8		34.6	15.3	10.2		14.8	10.7
9.1	13	31.2	57.8	7.4		55.7	5.8	8.9		53	52.1	9.4		31.3	32.1
9.0	14	8.2	50.3	8.5	33	24.2	5.2	9.9		54	43.1	10.2	17	0.3	55.1
10.0		25.7	33.6	9.8		40.7	12.8	9.9		55	2.1	9.2		31.8	26.0
9.1		29.7	54.1	9.8	34	30.7	34.9	9.9		35.1	48.0	10.2		47.8	9.1
9.2		34.7	31.9	9.8		33.7	54.2	9.2		54.6	22.8	9.6		51.8	54.0
7.8	15	0.2	26.6	9.6		46.7	31.8	9.6	56	32.6	9.4	9.7	18	0.3	55.9
9.4		12.7	24.0	9.8		52.0	40.2	9.2		57	9.6	10.2		2.3	6.3
10.0		41.2	4.8	9.4		55.7	56.0	8.6		39.6	46.9	9.2		6.8	30.8
9.2	16	21.2	36.2	9.8		56.7	15.2	9.8		58.6	53.1	10.2		23.8	32.4
7.0		59.9	30.1	9.8	36	16.2	32.6	8.8		59.1	46.1	10.2		40.3	37.9
6.3	17	37.2	23.4	9.1		21.2	36.0	9.9	58	24.6	24.9	10.2		48.3	19.8
9.5	18	1.7	29.5	9.1		27.2	16.9	9.6		38.6	25.1	9.6	20	4.3	14.3
9.6		40.7	56.7	9.2		51.7	30.4	9.0		40.4	0.4	10.2		28.3	41.2
25pr.	+1	33.0	+6.1	+1	31.5	+6.6		+1	29.8	+7.0		+1	27.7	+7.4	

ZONE — 36°.

1-30.				31-60.				61-90.				91-120.							
mag.	oh.	-36°		mag.	oh.	-36°		mag.	oh.	-36°		mag.	oh.-1h.	-36°					
	m	s			m	s		m	s			m	s						
7.9	0	16.5	46.8	7.8	8.0	16	30.8	4.8	7.5	9.4	30	29.2	54.0	9.5	8.0	46	8.1	25.6	9.0
10.4	1	5.5	40.1		9.2		37.7	20.5		9.6		48.9	13.9		10.0	47	30.6	32.9	
9.0		21.0	28.9	9.5	9.0	17	7.2	22.0	9.5	8.2	31	11.2	6.5	8.5	10.0		38.6	0.8	
10.4		44.0	20.7		8.4	18	5.7	19.9	8.0	9.8		49.2	35.0		8.8	48	27.1	4.8	9.5
10.4	2	12.0	18.2		9.8	21	10.2	2.6		9.4	32	38.7	16.8	10.0	9.4		37.6	6.0	
9.4		31.0	30.8		9.6		33.7	50.0		9.4		45.7	38.9	10.0	9.5		46.1	12.0	
9.4	3	19.0	6.8		9.0	22	17.2	24.6	W-	8.4		47.2	37.9	8.5	10.0		54.1	36.1	
9.2		22.2	57.2		8.2	23	12.2	24.8	9.0	9.2	33	22.7	18.4		9.2	49	29.1	27.8	
10.2		32.5	40.4		9.8		15.7	18.8		9.8		39.9	42.9		10.0	50	10.1	4.0	
10.0	4	49.5	46.3	9.5	8.6		24.2	30.8	9.0	9.0	34	8.2	45.3		8.4		23.1	17.2	8.0
					9.8		41.2	12.5		9.3		20.2	10.7		10.0	51	46.6	5.8	
8.9	5	31.5	14.4		9.8		53.2	49.2		9.8		29.7	59.2		9.4		48.1	38.1	
9.4		57.0	26.3		9.0	24	19.7	38.6		9.8		41.7	34.6		9.1		49.1	12.1	
10.4	6	51.5	3.6		9.6		27.7	37.5		9.8	35	38.9	17.9		8.8	52	9.1	52.6	9.5
10.2	7	10.0	51.2		9.8		44.9	39.8		9.5		44.7	23.7		9.4		24.1	9.5	
10.4		21.5	24.0		8.7		48.2	55.8	8.5	9.8	36	2.9	19.0		8.5	53	20.6	9.9	8.5
10.4		26.5	22.9		9.8		55.2	52.7		9.6		27.7	4.2		10.0		24.6	3.6	
10.4		47.0	2.1		9.6	25	4.2	9.9		8.0		34.7	42.5	7.0	10.0	54	9.1	39.4	
8.2		54.5	30.1	8.0	8.9		24.7	58.0	8.5	9.3		55.0	0.0		7.8		41.5	54.8	7.0
10.4	8	23.0	45.4		9.8		44.7	30.0		9.2	38	27.7	47.5	9.0	10.0		43.0	27.7	
10.2		23.5	45.6		9.5		58.2	55.9		9.4		39.6	0.0		9.2	55	3.7	2.1	
					8.6	26	30.7	6.9	9.0	8.8		55.0	39.0	9.0	10.0	56	4.5	59.0	
					9.6		32.7	11.2		10.0	40	29.2	24.1		10.0	56	27.0	8.0	
	9	25.5	47.3	9.0	9.5		37.2	25.4		8.0		38.7	42.9	9.0	9.1		49.0	21.9	
	10	7.5	0.6		9.2	28	1.2	42.8		10.0	42	14.7	24.9		10.0	58	4.5	56.1	
10.4		35.5	53.6		9.2		4.7	57.2		9.2		48.7	37.1		8.8		48.5	54.2	9.0
9.0	11	59.2	31.1	9.5	9.8	29	7.2	38.1		7.8	43	0.5	56.7	7.6	10.0		49.5	1.0	
8.0		54.8	35.9	8.0	9.8		21.2	27.5		10.0	44	21.1	13.8		6.9	0	34.5	19.7	6.5
7.9	14	59.8	29.5	7.0	9.2		32.2	20.5		9.6		24.1	47.2	9.0	10.0		51.0	48.0	
8.4	15	18.8	3.4	9.0	9.6		41.7	15.0		8.6	45	10.6	4.7	9.0	9.5	1	31.5	46.8	
25pr.	+1	16.0	+8.4		+1	14.1	+8.3			+1	12.9	+8.3			+1	11.2	+8.1		

121-180.				181-240.				241-300.				301-360.			
mag.	m	s	-36°	mag.	m	s	-36°	mag.	m	s	-36°	mag.	m	s	-36°
8:0	2	30.7	56.1	8:8	53	55.4	20.8	10:2	22	26.4	58.6	9:4	51	49.5	39.0
8:8	3	19.2	48.6	9:4	54	4.4	34.9	10:2	48.4	41.2		7:5	53.5	48.1	7.3 GS _t
9:1	6	0.0	6.0	7:6	16.9	1.8	7.5 GS	10:2	52.4	43.5		10:2	52	10.5	13.0
7:1	7	8.0	24.5	8:6	55	29.7	15.8	7:6	23	6.4	54.2	7:3	14.0	56.2	7.7 GS _t
8:4	8	7.5	51.0	9:0	56	10.2	20.8	8:5	44.4	14.6	9.0	10:4	40.0	29.0	
9:2	11	0	31.6	9:9	36.2	3.3		7:8	24	10.4	29.9	10:0	53	38.5	21.4
9:8	9	26.0	33.2	9:4	57	44.7	31.5	8:6	15.9	42.3	8.0 G	8:8	55	40.5	26.1
9:2	26.5	21.8		9:4	58	54.2	42.5	10:2	26	32.2	47.5	10:4	47.2	1.0	9.0
9:0	11	34.3	2.4	9:3	55.2	5.2	3.3	7:0	27	5.4	58.8	9:7	56	16.0	46.7
8:0	12	48.9	55.2	9:4	59	51.7	24.9	9:8	8.9	5.8		10:4	57	12.0	12.3
9:2	13	9.4	58.2	9:8	0	30.7	44.4	10:1	28	26.4	46.3	10:4	50.0	1.2	
6:8	14	32.9	54.0	9:3	1	26.7	14.9	9:8	27.4	3.8		9:4	58	12.0	39.0
8:6	15	21.9	15.8	9:6	59.7	41.1		9:0	27.9	40.2	9.0	8:8	59.0	24.1	9.5
9:6	42.9	20.2	9.0 G	9:9	2	5.2	53.5	10:2	52.4	8.7		10:4	59	40.8	0.9
9:8	16	8.4	0.1	9:9	14.2	24.9		9:4	54.4	6.3		10:2	0	19.0	10.2
9:6	17	28.4	14.5	9:4	29.2	11.8	9.0	9:4	55.4	18.6		10:4	1	8.3	8.8
9:6	18	3.9	42.4	9:6	31.2	11.2	9.5 G	10:1	57.4	10.6		8:8	2	51.5	15.3
9:2	9.3	37.7		8:0	3	28.7	25.0	9:8	29	3.4	40.6	9:6	3	54.5	47.5
8:5	14.3	22.4		8:0	34.2	23.0	8.0 GS	10:2	40.2	13.4		8:8	58.5	31.3	9.2
9:1	35.8	21.3		9:8	4	14.2	37.1	10:0	40.4	5.7		8:8	4	28.5	26.5
9:4	20	14.8	24.1	8:2	5	15.2	6.0	8:8	30	16.4	51.7	10:4	5	42.7	22.9
9:6	50.8	52.4		9:9	23.7	30.8	7.5 GS	9:4	21.4	3.6		10:0	59.7	44.9	
9:6	21	23.2	2.3	9:3	6	24.5	1.8	8:8	31	5.9	40.5	9:9	6	10.2	4.5
8:8	22	40.8	43.4	9:0	31.7	53.9	9.8	9:2	11.4	11.0		9:9	23.7	5.9	
9:1	23	27.3	32.2	9:2	56.5	0.6		8:0	37.9	22.2	7.0 G	10:3	7	13.9	13.6
8:4	42.2	2.9	8.5 G	9:7	7	22.2	31.8	10:2	32	8.2	20.4	9:4	25.7	16.7	9.5
8:9	24	19.4	28.9	9:9	29.3	58.0		9:8	14.4	45.8		6:6	8	8.2	24.6
9:0	49.4	56.3	9.0 G-	8:8	42.2	11.0		8:2	30.4	42.1	7.8 G	8:8	15.7	57.0	8.8
8:5	25	11.4	19.5	8:8	58.7	59.9	8.2	9:8	33	14.4	45.5	9:4	40.4	51.9	8.8 G
9:2	27	50.6	39.3	8:0	59.7	38.8	7.5 GS	9:1	34	18.4	28.1	9:6	9	33.4	13.4
9:8	28	44.8	56.2	9:4	8	1.8	58.8	10:2	20.1	57.2		6:9	44.9	1.5	7.0 GS _t
9:9	29	12.5	35.8	9:4	31.2	47.6		10:0	31.1	57.5		9:6	48.9	48.6	
9:8	21.0	44.6		8:8	9	18.7	5.7	8:5	39.5	3.0	8.5	10:4	10	9.7	54.8
8:4	30	22.2	38.8	8:3	57.2	54.4	7.5 GS	9:0	35	14.0	36.7	9:6	18.7	51.9	9.0
9:9	58.2	41.1		9:2	11	7.2	44.6	8:6	50.5	25.8	8.8	9:9	27.4	15.8	
8:5	33	58.7	41.0	9:8	27.2	44.0		10:0	36	8.5	30.4	10:4	42.5	0.0	
9:9	34	55.7	42.2	7:4	12	2.2	33.8	10:2	28.0	42.1		9:5	48.8	28.1	
8:6	37	25.7	9.3	9:9	39.7	21.2	7.0 GS _t	10:2	39.5	8.2	9.0	9:6	11	18.6	47.9
8:5	28.7	26.5	8.5 G-	9:4	59.7	55.0		8:6	37	0.5	46.9	7:0	39.1	9.0	7.0 GS _t
9:7	38	21.7	17.2	9:2	13	4.7	20.1	8:6	38	48.5	52.1	8:4	58.6	10.3	8.5 G
9:9	59.7	5.1		8:2	14	32.2	1.4	7:2	39	9.5	50.2	9:5	13	16.1	44.7
8:4	39	56.2	44.0	9:9	47.7	40.7	8.0 GS	9:4	41	1.5	46.6	9:4	16.6	16.6	G
9:9	40	10.2	45.9	9:3	56.7	59.6		10:1	21.0	56.7		9:4	22.6	36.8	
9:6	24.2	15.8		9:6	15	49.7	34.6	10:2	31.0	53.0		7:9	14	0.6	34.8
9:0	42	6.2	30.6	9:9	59.2	35.3		7:0	42	29.5	4.4	9:6	18.6	8.6	
8:6	25.2	56.5	8.8 G	9:8	16	9.2	13.5	10:2	31.5	57.1		9:0	15	44.6	36.0
9:2	43	19.1	9.6	9:9	19.7	37.7		8:8	34.5	37.9		10:0	19	21.6	7.4
8:0	44	29.1	9.5	9:7	30.7	36.5	9.5 G	8:8	59.0	57.0		9:0	20	6.6	39.2
9:0	46	1.6	17.6	8:2	52.2	40.5	7.5 G	10:1	43	16.5	16.4	9:6	21	1.6	22.8
8:4	42.1	51.7		9:9	17	15.7	34.5	10:0	17.0	50.0		6:4	5.6	21.6	6.5 GS _t
9:0	53.6	23.7	9.0	9:4	25.2	48.5		10:2	44	5.0	41.6	7:2	9.4	23.8	8.0 GS _t
9:2	47	18.6	38.9	9:3	18	6.7	38.3	10:0	24.1	11.8		9:4	39.6	2.2	
9:2	22.6	30.7		9:8	40.0	40.9		10:2	26.0	45.8		8:4	22	20.6	21.9
9:9	49	4.1	22.3	10:2	19	24.4	44.0	6:6	45	11.1	21.6	9:5	29.6	41.7	
9:9	10.9	29.9		8:2	45.4	27.0	7.5 G	6:4	37.1	11.5	5.0 GS _t	7:0	42.6	7.0	6.0 GS _t
8:8	43.9	4.2	8.0 G	10:2	20	45.9	7.9	8:4	48	57.1	24.6	8:8	23	18.6	20.7
9:9	51.4	24.9	9.0	8:2	21	20.4	15.2	10:4	50	9.1	24.0	6:9	22.6	17.2	6.5 GS _t
7:2	50	30.9	51.5	9:6	28.4	13.3		10:2	28.2	1.2		7:7	30.6	26.8	8.0 G
9:0	34.9	30.7		8:0	44.4	48.8	9.0 G	8:8	30.0	4.1	8.2 G	8:4	24	4.6	20.2
6:8	51	58.9	40.1	8:8	52.9	44.0	9.0 G	8:9	51	24.0	31.2	10:0	30.6	0.9	9.0
25Pr.	+1	7.6	+7.7	+1	3.7	+7.1		+1	1.4	+6.5		+0	58.6	+5.6	

361-420.				421-480.				481-540.				541-600.											
mag.	3 ^h .	-36°		mag.	3 ^h -4 ^h .	-36°		mag.	4 ^h .	-36°		mag.	4 ^h .	-36°									
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s								
7.2	25	9.7	10.6	7.0	G	10.8	46	40.0	19.5		9.0	3	56.8	36.1	9.5		10.8	24	49.5	39.0			
10.0		27.2	42.8			10.7		41.0	6.8		8.4	4	54.1	59.1	8.0	G	9.0	25	2.3	50.1	9.5		
10.0	26	20.7	37.9			10.0	47	3.0	27.3		10.8	5	7.6	19.8		10.4		10.0	34.6	10.0			
8.6		56.7	7.8	9.0	G	10.8		21.2	1.7		10.8		39.1	22.7		9.4	26	34.8	30.8				
10.0	27	28.7	34.7			10.8		42.1	4.2		10.3	6	6.6	48.3		8.1		42.8	2.6	8.0	GS		
9.6		30.2	4.8			10.3	48	13.0	40.4		10.6		17.1	43.1		7.6	27	2.3	10.4	8.0	G		
9.4		49.7	40.9			10.8		26.8	58.1		9.6	7	12.6	22.5	9.5		9.3		55.3	36.4			
9.6	28	9.7	54.2			10.7		58.0	12.0		10.2		14.1	13.4		10.6	28	35.8	20.2				
9.8		9.7	15.8			10.4	49	6.0	27.7		10.2		15.6	17.4		10.6	29	9.8	13.3				
10.0		20.7	2.8			10.7		23.0	56.9		10.8		28.1	57.4		10.8	30	19.3	3.0				
9.4	30	14.7	2.4			9.2		31.5	24.4		7.3		55.6	28.3	7.5	G	10.8		20.3	8.0			
8.2		19.7	21.2	7.5	GS	7.6	50	6.5	4.7	8.0	G	7.6		59.1	27.8	8.0	G	9.3		23.3	1.1		
8.4		45.7	17.2	8.5		10.2		11.3	41.2		10.0		8	0.1	5.2		9.0		28.8	12.4	9.0		
10.0		59.7	46.1			10.8		16.8	33.5		10.6		28.1	11.2		9.7		34.0	0.7				
9.0	31	9.7	43.8	8.5		9.5		25.3	59.8		9.0		34.1	51.9	8.0	G	10.8		51.3	36.7			
10.0		19.7	36.1			10.7		25.8	27.4		10.4		48.1	12.2		8.9	32	27.3	5.6	9.5			
9.6		39.7	56.5			7.4		50.3	40.6	7.5	GS	9.0		9	43.6	32.4	9.0	G					
9.0		8.7	29.7	9.0	G	10.7		53.8	59.4		10.4		46.1	58.9		9.6		33.8	47.0				
9.2		14.7	46.3	9.0	G	10.7	51	20.3	14.8		10.4		49.1	32.9		10.0	33	13.3	10.4				
7.0		20.2	42.2	7.5	GSet	9.0		43.3	25.4	9.0		10.4		10	29.1	13.8		10.0	34	21.3	55.9		
																	9.0		27.3	25.6	9.0		
10.0		24.2	6.5			10.8	52	11.3	53.8		8.2		50.1	30.9	7.8	G	10.8		29.8	58.2			
8.2	34	12.7	2.7	8.5		10.7		21.3	24.2		10.8	11	21.6	31.0		9.7		44.8	23.4				
10.0		34.7	39.7			10.6		25.3	24.8		9.6		39.6	39.5		10.6		46.8	19.3				
9.6		45.4	26.5			10.7		52.8	42.8		8.4		54.1	48.7	8.8		10.4	35	6.3	20.1			
8.0		50.7	20.8	8.5	GS	10.6		53	4.3	57.8		9.2	12	4.6	57.9	9.2		10.4		21.3	5.8		
9.6		55.7	12.2			8.2		17.3	37.4	8.5		10.0		24.6	52.4		10.2		23.8	18.7			
10.8	35	12.5	15.0			8.6		45.3	23.1	9.5		9.6	13	6.1	16.4		10.8		49.3	50.5			
10.8		20.0	13.9			10.2		50.3	12.1		9.0		20.2	23.9	8.8		10.8	36	10.3	13.7			
10.7		30.0	17.8			8.0		54	16.1	8.1	8.0	G	9.4		56.2	49.1	9.5		9.7		11.8	57.8	
10.6	36	1.5	53.6			9.6		20.1	1.1		9.0	15	26.7	56.4	8.8		10.6	37	12.3	55.1			
10.7		29.0	44.7			10.2	55	5.6	14.8		10.8		35.7	46.0		10.0		20.3	49.6				
9.2		45.0	49.3			10.2		11.0	57.6		10.8	16	4.2	27.4		10.8		39.3	1.8				
10.8		22.5	13.1			9.0		13.6	22.5	9.0		10.8		33.2	46.2		8.8	38	40.3	38.7	9.5		
10.8	39	9.0	14.6			10.8		19.1	13.1		10.3	17	19.2	31.8		8.6	39	56.3	41.1	8.5	Gt		
10.8		15.0	18.4			10.2		36.6	34.6		10.8		22.7	31.7		10.8	40	48.8	56.2				
10.8		25.5	56.5			9.8		53.1	39.7		10.6		26.7	26.9		10.8		51.8	18.9				
9.5		40.0	9.9	9.5	G	10.8	56	13.6	10.1		10.8		57.2	54.4		10.8		59.6	58.6				
10.8		5.0	33.7			9.4		15.6	31.7		9.0	18	18.7	5.0	8.5	G	10.2	41	0.4	52.9			
10.8		35.0	28.0			9.6		46.1	19.0		8.4		30.2	47.0		10.4		20.4	29.4				
10.6		40.5	58.0			7.9	57	20.6	26.9	8.0	G	7.9		42.2	37.5		10.8		24.4	35.8			
10.8		51.0	7.6			10.8		29.6	7.9		10.8		44.7	16.2		8.3		56.9	2.0	8.0	GS		
10.0	41	11.0	8.7			9.0		30.6	57.9		10.8	19	10.2	38.3		9.6	42	50.9	25.9	8.0	G		
9.2		26.5	31.5	8.5		10.8	58	10.6	48.3		7.5		19.2	45.7		10.4	43	49.4	22.9	10.0			
10.8		38.0	31.8			10.8		14.6	13.3		8.4	20	12.7	4.4		9.7		52.4	23.8	10.0			
10.0		40.0	15.3			10.7		28.6	9.3		9.0		19.2	45.6		10.8	44	9.9	43.3				
10.6		41.1	4.3			10.2		59.5	31.2		10.8		26.5	26.2		8.6		11.9	14.4	9.5			
9.8		52.0	3.5			10.8	59	5.6	9.5		10.8		46.3	29.5		10.8		14.4	3.8				
10.0		12.5	46.5			9.8		21.6	27.3		9.8		47.8	54.0		10.8		14.5	1.9				
9.5		51.0	55.1	9.0	G	9.8		59.1	56.3		10.8	21	15.5	15.4		9.2		20.4	55.9	9.0	G		
9.8		55.5	26.9			7.5		0	15.3	10.7		10.4		28.3	22.2		10.8		21.4	27.9			
5.9	43	7.5	29.5	6.5	GSt π	10.4		28.2	12.4		10.2		29.3	48.9		10.0		30.4	58.1	9.2	G		
10.8		58.5	55.3			9.4		28.3	43.9	8.5		10.8	22	5.8	17.4		10.8	45	39.9	54.8			
8.6	44	22.5	22.3	9.0	G	10.4	1	59.8	23.9		9.6		32.3	47.0		8.9		40.4	34.2	9.0			
7.8		40.0	28.3	6.0	GS	10.4	2	2.3	6.1		10.8		47.8	58.0		10.8	46	4.4	36.5				
5.4		46.0	34.7	4.0	GSt π	9.4		15.3	47.0		10.8		54.8	32.7		10.3		9.9	23.6				
10.7		50.5	40.2			10.4		26.3	21.1		10.3		59.3	58.4		9.7		47.7	57.9				
10.8	45	20.1	50.7			10.8		34.8	22.2		10.0	23	19.3	55.7	9.5		10.8	47	16.4	35.6			
10.7		35.0	51.9			7.4		43.3	28.5	8.0		10.3		24.3	19.6		8.2		18.9	3.1	8.0	G	
10.2		45.0	3.1			10.8	3	18.3	16.3		10.0		37.8	39.9		10.8		38.4	54.7				
6.5		58.0	48.3	7.0	GS	10.0		27.3	57.8		10.8	24	27.1	11.9		8.9		49.9	32.0	9.5			
25pr.	+0	56.7	+4.9			+0	55.7	+4.3			+0	54.6	+3.7			+0	53.6	+3.0					

601-660.

661-720.

721-780.

781-840.

601-660.			661-720.			721-780.			781-840.		
mag.	4 ^h -5 ^h	-36°	mag.	5 ^h	-36°	mag.	5 ^h	-36°	mag.	5 ^h	-36°
9.3	4.8 12.9	12.0	9.8	6 39.8	21.4	9.8	23 58.1	52.0	8.7	37 44.1	27.0
10.6	4.9 0.9	25.9	8.8	58.8	38.0	9.6	24 7.1	2.2	9.3	38 11.1	56.7
10.3	37.9	16.5	10.6	59.8	20.0	9.0	8.1	42.9	9.8	41.1	39.3
10.0	40.9	3.5	9.4	7 3.8	50.2	8.4	15.1	59.1	9.0	45.1	38.4
10.8	49.4	13.8	9.4	20.8	52.6	10.0	44.6	58.3	9.9	39 7.6	1.5
10.8	55.9	38.4	8.2	21.3	32.1	9.6	49.6	6.0	10.0	29.1	20.3
10.8	50 0.4	4.7	10.6	32.8	10.6	8.6	58.6	40.1	9.6	29.1	53.7
10.8	4.8	9.3	10.6	8 49.8	4.5	10.0	59.6	59.9	8.8	37.6	7.9
10.0	13.6	48.7	10.2	50.6	58.3	9.9	25 37.6	23.7	9.9	40 58.8	9.7
9.7	19.4	25.1	10.2	9 0.8	54.3	9.9	38.6	21.5	8.4	41 9.8	55.9
10.6	21.8	58.1	9.8	1.8	11.9	9.6	26 59.6	54.7	10.0	15.4	26.7
10.6	21.9	26.4	10.6	4.3	0.2	8.8	27 9.6	6.4	9.8	40.6	49.4
10.6	22.2	59.9	10.6	10.8	9.9	9.6	28.3	12.1	10.7	42 6.9	38.9
10.6	51 59.6	57.3	10.0	55.4	51.8	9.3	32.8	26.6	7.2	19.9	16.6
9.8	52 10.1	36.9	9.0	10 2.9	18.8	9.6	35.8	31.0	9.4	31.9	33.3
10.6	21.8	49.2	10 2.9	3.4	7.3	8.8	41.1	2.7	9.4	31.9	13.8
10.6	35.8	9.8	9.8	20.4	57.5	9.6	41.3	27.7	10.8	49.9	12.1
10.0	51.5	1.6	9.1	44.9	47.6	9.6	49.8	28.2	8.2	43 5.9	31.9
10.6	58.8	20.4	7.4	46.4	47.8	8.5	59.8	10.7	8.7	23.4	42.9
9.8	53 0.3	2.5	9.1	12 8.9	24.2	8.2	28 0.8	18.3	9.0	29.4	34.9
10.6	15.8	50.8	9.1	21.9	27.8	9.4	28.8	55.1	9.9	45 25.9	44.9
10.6	19.8	1.3	9.8	59.4	58.1	9.2	30.3	32.8	8.4	39.4	14.1
10.4	53.6	2.2	10.2	13 0.9	31.8	9.3	29 41.8	6.5	10.8	46 10.4	54.9
10.6	54 13.8	12.4	9.4	53.8	57.6	9.9	54.3	31.0	10.6	47 9.4	58.6
9.8	41.3	35.9	10.6	59.9	18.2	9.8	55.8	44.8	9.4	12.9	48.0
8.2	55 27.8	48.7	9.1	14 0.9	19.8	9.9	30 27.9	2.3	10.2	14.4	39.4
9.6	35.3	26.1	9.4	25.9	10.2	9.6	53.3	4.7	8.8	42.4	19.0
10.6	40.8	28.1	9.8	36.4	39.0	9.6	31 19.8	9.1	10.4	44.4	7.1
10.0	44.3	9.7	9.0	40.9	52.4	9.9	35.3	29.1	10.3	48 4.4	21.7
9.4	58 11.3	3.1	10.4	41.9	38.6	8.8	37.3	8.9	9.4	19.4	44.7
9.8	14.8	27.9	9.6	56.9	27.2	10.0	44.8	2.3	10.0	36.9	21.9
10.6	20.8	23.9	8.2	15 4.4	52.5	9.6	45.8	56.5	9.4	45.9	27.9
10.2	49.8	44.5	10.6	29.7	1.9	9.6	48.8	45.5	8.0	49.4	58.2
10.4	59.8	7.8	10.0	47.5	39.3	9.0	32 7.3	4.9	8.7	54.4	17.3
9.4	59 14.8	38.1	10.0	16 40.2	24.5	8.8	28.8	51.3	9.4	59.4	30.9
9.4	19.8	14.5	9.3	17 39.5	48.2	8.4	44.8	57.3	10.8	49 4.4	16.9
10.2	20.3	36.8	9.9	57.0	31.2	9.6	48.8	20.2	9.0	7.9	52.6
10.4	41.8	19.1	9.9	18 18.5	35.3	10.0	33 1.3	40.1	10.8	57.9	37.9
9.4	0 10.8	21.0	8.5	52.6	29.4	10.0	6.3	36.1	10.7	50 44.9	42.5
9.6	19.3	12.9	9.6	57.1	25.9	9.9	29.8	28.5	9.3	51.4	57.9
10.0	44.8	52.4	9.9	57.6	21.1	9.6	40.8	48.9	9.6	59.6	0.9
10.2	1 5.8	32.6	8.4	59.6	47.7	10.0	34 9.3	5.3	10.8	51 34.9	5.4
10.4	49.8	30.0	9.6	19 9.6	52.1	9.4	13.8	41.1	10.6	36.4	59.0
10.6	3 38.3	25.4	9.1	40.6	7.2	9.9	20.3	18.2	9.3	40.9	7.0
9.8	47.3	14.6	9.0	47.6	12.5	8.6	22.8	4.4	10.7	52 16.4	7.7
9.8	50.8	46.8	9.6	20 29.6	19.4	9.0	27.3	46.0	8.7	28.4	21.9
10.6	4 2.0	2.0	8.2	55.1	36.4	9.6	37.3	43.4	9.8	31.9	5.3
9.8	7.3	9.0	8.6	21 36.6	15.9	9.9	37.9	2.1	10.3	48.9	5.8
9.6	14.3	11.3	9.4	39.6	21.6	9.0	35 9.8	38.0	10.8	58.4	43.3
8.7	39.8	37.5	9.9	59.6	43.9	10.0	21.8	47.1	10.6	53 12.4	12.3
9.4	42.3	42.1	9.6	22 22.6	16.4	8.8	35.1	6.7	9.8	27.6	0.7
9.1	54.8	45.0	6.9	23.6	41.6	8.8	38.6	46.4	10.8	34.4	39.9
10.2	54.8	24.1	9.6	42.6	41.1	10.0	36 11.2	28.8	9.6	54.9	20.3
9.4	5 6.8	43.7	9.9	23 1.1	1.1	9.3	14.6	56.4	8.6	59.9	50.0
10.6	24.8	20.0	10.0	2.1	42.1	7.9	23.6	39.0	10.8	54 13.9	47.9
10.2	6 2.3	6.0	9.8	14.6	33.1	9.2	34.0	3.0	10.0	29.4	28.4
10.6	11.3	42.0	8.5	15.1	5.3	9.2	46.6	27.9	10.7	30.4	56.3
7.6	18.3	25.8	9.6	22.1	38.9	9.2	58.9	57.7	10.8	38.9	10.1
10.6	21.8	38.9	9.6	47.1	13.1	9.8	37 10.1	21.8	10.2	55 39.4	29.3
10.6	34.3	51.2	9.6	55.1	15.4	9.4	30.6	5.2	10.0	56 4.6	1.9
25pr.	+0 53.0	+2.2		+0 52.6	+1.6		+0 52.3	+1.0		+0 52.1	+0.4

841-900.			901-980.			981-1020.			1021-1080.									
mag.	5h-6h	-36°	mag.	6h	-36°	mag.	6h	-36°	mag.	6h	-36°							
10.8	56	33.4	32.9	10.0	10	58.1	15.7	9.0	21	20.7	16.2	9.8	34	19.8	32.6			
7.4		48.9	28.2	8.5 G	9.4	11	13.1	38.2	9.5	9.0		31.7	6.1	9.8		34.3	32.1	
10.3	57	4.4	47.1	9.0		24.1	10.0	9.6		50.2	22.1	9.9	35	2.3	2.2			
9.1		9.9	45.1	10.1		40.1	15.7	9.2		51.7	0.2	9.9		23.3	4.7.6			
10.7		16.4	59.7	10.1	12	6.1	38.6	9.0	9.4	22	19.0	58.6	8.4		42.8	50.5	8.0 G	
10.4		30.9	6.9	9.2		58.1	37.5	9.4		37.7	44.2	9.9		49.3	40.8			
9.2		47.4	23.9	9.0	10.0		11.1	31.6	10.0	23	0.1	14.8	8.6	36	4.3	1.2	8.0 G	
10.3	58	14.4	12.7	8.9		23.1	45.7	10.1		8.2	51.4	9.9		21.8	21.9			
9.9		16.4	31.9	9.8		39.1	51.1	9.4		9.2	32.7	8.7		32.3	21.4	9.0		
10.7		17.9	20.1	10.1		39.8	33.2	10.0		10.2	35.4	9.0		46.8	51.0	9.0		
10.8		19.4	31.3	8.9		47.3	1.5	9.5		49.7	24.9	9.9	37	19.8	14.8			
9.4		26.3	58.3	9.4	13	25.6	29.4	9.8	24	1.7	34.4	9.4		20.8	44.4			
9.2		47.4	37.1	9.5		47.6	7.8	9.5		10.7	3.9	9.9		33.8	19.1			
6.8		49.4	52.3	7.0 GSg	10.0		58.1	31.6	10.1		36.7	47.2	9.2	38	0.8	44.3		
9.6		50.4	13.4	10.0	14	12.1	3.8	10.1		41.7	47.2	9.4		8.8	19.4			
10.8	59	36.4	21.7	10.0		29.1	50.0	9.6		47.2	14.3	8.7		9.8	6.0	8.5 G		
9.2	0	16.4	9.8	8.5		30.1	16.2	9.5	9.0		58.7	46.1	9.0					
9.6		16.9	42.1	8.5	9.8		40.1	27.1	8.4	25	19.7	6.1	9.0					
8.2		17.4	38.7	8.5	7.9		50.1	28.4	8.5	10.1		20.7	39.0	9.9		10.8	49.5	
10.4	1	10.9	29.1	9.6		57.6	36.6	9.8		36.7	9.4	7.6		18.8	30.4	8.2 G		
9.9		34.9	54.0	9.5		59.1	40.8	9.4	26	7.7	6.7	9.6	39	20.8	24.9	9.0 G		
9.8		44.4	20.7	9.2	15	7.6	25.3	9.0	8.6		31.4	59.6	9.0					
10.6	2	16.4	48.6	10.0		32.1	10.4	10.0		38.7	23.4	9.6		35.8	21.2			
10.8		29.4	56.9	10.1		43.1	49.3	9.5		54.2	51.7	9.6		42.3	26.1			
9.3		36.9	43.4	10.0		55.6	7.5	10.1	27	1.7	50.8	8.6		59.8	11.1	8.5 G		
9.3		44.9	31.8	7.8		56.6	17.8	8.0 G	10.0		9.2	50.2	9.6	40	0.8	58.1		
7.6	3	9.4	17.6	8.0 GSg	9.2	16	24.1	38.5	9.4		14.2	36.2	8.2		12.8	19.6	9.0	
10.7		10.6	57.6	9.0		30.1	19.8	9.4		15.2	51.2	7.0 GSSt	9.9		14.3	50.1		
9.9		16.4	51.0	9.0		58.6	36.3	7.4		31.2	16.2	9.9		19.0	1.3			
10.0		39.4	54.5	8.9	17	24.1	9.2	9.8	28	3.7	7.0	8.2		23.3	31.6	8.5 G		
10.0	4	6.9	59.9	9.4		54.1	25.8	10.1		37.7	0.0	9.2		38.8	38.5	9.5		
8.0		26.4	6.3	8.5 GSg	10.1		59.1	19.4	8.9		46.2	12.5	9.9		38.8	39.1		
8.8		39.4	46.7	10.1	18	20.1	11.7	9.5	29	19.3	3.6	9.6		49.3	44.0	9.0		
9.9	5	11.9	6.8	9.5	10.1		22.1	9.2	6.9		26.3	8.3	6.0 GSSt	7.8	41	7.8	43.1	8.0 GSSt
9.9		42.9	0.8	10.1		27.6	13.5	9.2		34.3	27.2	9.6		11.3	23.6			
10.7		50.9	7.9	9.0		31.9	56.6	9.5	10.1	30	4.3	6.3	9.9		39.3	7.8		
10.8	6	28.9	41.4	10.1		39.6	3.9	10.1		7.8	31.3	9.6		42.8	49.2			
10.8		29.9	37.0	8.9		51.6	4.1	9.6		33.3	47.1	9.5		56.3	17.0			
10.7		37.4	45.6	10.1	19	14.1	23.8	10.0		49.5	29.1	9.2	42	5.8	38.3			
10.2		44.4	12.4	6.9		27.4	57.1	7.0 GSSt	10.1		55.5	3.9	9.5		18.3	3.7		
9.4		59.9	19.5	8.5		29.6	0.3	6.0		4.0	40.7	6.0 GSSt	8.3		18.8	27.7	8.0 GSSt	
8.0	7	0.4	22.8	9.0 G	9.2		30.1	32.3	10.0	31	8.5	38.3	9.2		24.3	46.6		
10.7		17.9	29.8	10.1		31.9	57.2	7.2		10.0	9.3	7.5 GSg	9.9		51.8	3.6		
8.6		20.6	48.6	9.5	8.9		34.1	46.8	10.0		21.0	22.0	9.6		56.8	52.7		
9.8		21.1	27.8	7.2		41.1	38.6	6.5 GSSt	9.8		22.0	34.8	9.4	43	4.3	40.0		
10.1		35.1	34.3	10.1		44.1	36.1	7.0 GSSt	9.4		36.2	31.2	9.9		24.8	33.4		
10.1		40.1	34.6	7.7		46.6	38.1	9.0	10.0		38.5	36.1	8.7		33.8	4.8	9.0	
9.4		42.1	7.4	10.0		47.1	3.8	7.7		49.5	2.1	7.5 GSg	8.8		46.8	51.7	9.0	
10.1		44.1	25.7	10.0		48.6	14.2	7.8		52.0	32.7	8.0	9.6	44	14.3	8.2		
10.0		52.1	12.1	9.8	20	17.6	10.8	9.0	32	15.5	8.8	9.5	8.7		27.8	26.6		
8.8		54.1	43.5	9.0	9.6		24.2	15.9	9.0		18.0	5.2	8.0 G	9.2		54.3	59.5	
7.0	8	9.1	32.0	7.0 GSSt	8.6		25.7	31.7	8.0 GS	10.0		34.5	54.7	8.0	45	7.8	51.7	8.5 G
8.4		24.1	36.0	8.0 G	8.8		27.7	18.7	10.0		41.0	2.8	9.8		17.8	23.6		
9.0		30.1	32.2	9.5	8.6		31.7	34.3	9.0	6.2		53.9	53.2	6.2 GSSt	9.6		35.3	13.6
8.9		56.1	15.7	10.1		37.7	24.9	9.9	33	6.0	45.9	8.5		55.8	36.0	8.0 G		
8.6		58.6	42.0	9.0	10.1		44.7	39.0	7.8		26.4	0.2	8.0 G	8.4	46	24.3	50.2	8.0 G
9.8	9	2.1	49.8	10.1	21	4.2	13.6	9.9		30.3	27.6	9.9		30.3	54.8			
10.1		58.1	35.4	9.8		6.7	17.6	9.8		42.3	51.1	8.8		58.3	19.6	9.0		
8.9	10	26.6	54.7	8.5	10.1		7.7	9.3	9.8		54.3	35.5	9.5	6.9	47	18.3	4.8	6.0 GSSt
9.0		50.6	34.6	10.0	9.6		19.7	15.9	9.4	34	14.8	24.6	9.9		33.7	55.3		
25Pr.	+ 0	52.1	- 0.1	+ 0	52.2	- 0.7	+ 0	52.3	- 1.0	+ 0	52.4	- 1.5						

1081-1140.				1141-1200.				1201-1260.				1261-1320.						
6h-7h		-36°		7h.		-36°		7h.		-36°		7h.		-36°				
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s			
47	44.3	38.4	8.6	1	34.7	13.7	8.5	10.0	11	24.5	2.1	7.1	18	50.0	5.9	GS-g		
9.9	44.3	56.3	8.7		51.2	25.3	9.0	10.0		30.7	23.0	9.6		57.3	1.4			
9.8	58.3	15.4	8.6		59.2	52.2	9.0	8.9		50.7	14.0	9.0		19	3.5	53.6		
8.5	48	38.3	31.5	9.0	9.4	2	18.7	29.3	9.5	10.0		53.2	18.4	7.9		27.5	43.3	8.5 G
9.2	46.3	11.3	9.2		38.2	59.6	10.0		54.2	31.8	9.0	8.5		35.5	25.5	9.0		
8.6	48.3	52.7	8.8	10.0		39.7	34.5	8.8	12	0.7	44.2	8.5		49.5	36.1	9.0		
8.0	48.8	34.6	8.5 G	9.4		44.7	4.4	10.0		17.7	3.5	9.8		59.5	12.3			
9.8	49.8	43.5	9.8		3	9.7	34.8	5.5		22.7	22.1	5.5	GS π	9.4	20	5.0	22.2	
9.9	49	13.8	41.9	9.4		37.7	53.3	10.0		39.7	24.0	9.5		9.5	38.2			
9.0	25.8	29.3	8.2		40.2	51.4	8.5	7.8		40.2	53.4	8.5	Gg	9.2		11.5	18.8	9.0 S
8.2	32.8	24.0	8.0 G	10.0		47.2	15.1	6.3		44.7	52.4	3.0	GS π λ	9.6		19.5	29.8	
9.1	59.3	29.3	9.0	9.0	4	9.0	1.1	9.0	8.2		44.7	37.1	9.0	10.0		21.5	31.6	
9.1	50	9.8	7.8	9.8		5	5.0	7.0	10.0		47.7	7.2	9.3		24.0	38.2	9.0	
9.2	25.3	20.3	10.0		19.5	26.5	10.0		49.7	18.0	9.3		28.5	44.5				
9.9	27.8	30.1	10.0		30.0	26.7	10.0		51.2	41.8	10.0		34.5	34.6				
8.6	32.3	9.7	8.0 G	9.0		33.5	27.2	9.0	9.2		53.7	3.8	9.0	9.4		42.3	1.0	
9.6	33.8	41.9	10.0		6	0.5	56.5	10.0	7.8	13	1.7	45.7	8.5	9.2	21	4.0	31.8	
9.9	51	9.3	34.5	9.8		7.0	44.4	9.8		8.7	42.9	10.3		20.2	9.5			
9.0	13.3	49.6	9.0	9.8		29.5	50.5	8.0		8.9	59.2	8.5	10.5		22.2	14.5		
9.9	52	25.3	26.1	9.7		40.5	28.3	9.6		23.7	14.5	10.2		29.7	42.9			
9.9	47.8	54.4	10.0		42.5	50.1	7.9		25.2	56.1	8.2	G	9.3		41.7	15.8	10.0	
7.1	49.3	43.3	8.0 GS π	9.8		55.0	52.3	10.0		38.7	51.2	10.4		49.2	8.7			
9.9	59.8	41.6	10.0		7	0.0	57.1	10.0		38.7	17.4	9.2		53.2	20.8	9.5		
9.1	53	10.8	28.9	9.8		2.0	36.3	10.0		44.7	4.8	9.4		57.6	10.0			
7.8	28.3	51.3	8.5	9.8		10.0	12.3	5.0		51.7	30.4	5.0	GS π	9.6	22	8.1	4.0	
9.2	44.3	31.4	9.5	9.4		20.0	22.8	9.5	9.2		58.0	0.7	10.5		17.7	25.6		
8.4	44.3	6.5	10.0		35.0	5.2	7.8	14	5.7	32.4	8.5	G	10.1		33.6	38.8		
9.2	57.8	23.4	8.9		40.0	17.9	9.5	9.5		6.7	40.0	10.4		41.8	55.4			
7.8	54	14.3	39.6	8.5 G	6.1	8	0.0	20.0	6.5	GS π	10.0		9.7	24.8	10.5		41.8	48.1
9.9	24.3	41.5	10.0		3.5	7.1	5.6		11.2	30.7	5.5	GS π	10.3		43.3	1.0		
9.9	41.3	53.2	7.9		7.0	1.5	8.0	GSg	8.1		14.2	59.9	8.2	10.5		43.8	40.0	
9.9	46.8	30.1	8.6		8.3	0.7	8.5	Gg	9.8		31.7	44.4	10.5		48.4	57.6		
8.2	48.8	38.6	8.0 G	9.6		19.0	45.3	10.0		15	4.7	4.8	9.8		49.7	27.4	9.5	
9.8	54.3	49.4	9.4		38.5	39.0	9.8		13.2	17.3	9.8		50.7	43.3				
9.6	59.3	44.6	10.0		47.0	23.4	9.0		22.2	45.4	10.4	23	5.2	48.0				
9.5	55	43.3	12.0	10.0		54.0	17.1	9.4		25.2	16.1	10.4		8.7	31.8			
9.9	56	13.8	27.4	10.0		9	1.5	8.9	8.8		32.7	23.7	10.5		15.7	19.0		
9.0	27.5	29.8	9.0	9.2		3.5	56.0	9.2		44.2	13.2	9.4		31.2	46.0	9.0		
9.8	29.8	59.8	9.8		5.0	6.4	10.0		16	1.7	35.6	10.2		40.7	36.2			
8.6	39.5	27.3	9.0	9.7		10.5	45.3	9.2		6.7	41.0	9.0	10.1		50.7	30.4		
9.8	55.5	3.4	9.8		12.0	17.7	9.3		22.7	8.0	10.2		52.0	1.0				
9.3	57	8.0	59.0	9.0	9.8		30.0	4.3	8.5	17	7.7	12.6	9.0	G	10.5		52.2	27.8
10.0	17.2	30.8	10.0		35.0	57.0	8.0		9.2	15.4	8.5	G	9.8		52.7	12.6		
9.5	22.5	20.5	9.5	9.2		45.0	5.8	9.5	10.0		14.7	49.3	9.6		1.7	39.5	9.5	
10.0	28.4	0.0	8.1		46.5	12.7	7.2	G	10.0		16.2	17.2	10.5		4.7	49.0		
9.2	33.2	43.0	8.9		55.0	50.1	9.7		16.2	34.6	10.2		9.1	56.7				
8.5	44.5	22.6	9.5	10.0		57.0	11.0	8.9		18.5	20.2	9.0	9.4		9.7	8.1		
8.2	58	4.2	59.6	8.5 G	9.0	10	1.0	36.5	9.5	8.0		25.5	23.3	8.5	10.5		9.7	22.6
8.9	4.2	25.4	9.0	10.0		15.0	17.4	8.2		34.5	16.8	8.5	10.5		14.2	12.9		
10.0	39.7	19.8	9.0	8.4		22.0	8.5	8.5	10.0		35.0	14.2	9.8		29.7	19.3		
10.0	59	13.6	8.6	8.4		32.0	47.1	9.0	G	10.0		48.5	38.1	10.5		30.7	36.1	
9.4	34.7	10.5	9.5	9.3		37.5	37.2	8.9		59.7	59.1	10.0		39.1	58.0			
10.0	57.7	7.7	7.5		43.7	0.5	7.5	G	8.8	18	5.5	30.2	10.5		45.7	31.0		
9.4	0	15.7	33.1	9.0	8.6	11	1.0	20.4	8.0	GS-	9.3		5.7	59.4	9.8		48.7	8.3
9.8	39.7	59.9	9.8		3.0	42.3	8.8		10.0	48.6	9.0	10.5		54.7	45.7			
9.7	58.7	45.5	10.0		3.5	53.9	10.0		14.5	24.4	8.4	25	1.2	25.5	8.0	G		
8.8	1	19.2	31.8	9.0	G	10.0		3.7	17.4	9.4		18.5	30.8	9.8		17.2	6.4	
8.8	24.7	39.6	9.0	9.8		5.7	59.2	8.0		25.0	50.2	8.2	10.3		18.2	44.5		
10.0	29.7	32.1	10.0		9.7	19.6	8.0		44.0	34.7	9.0	9.5		19.7	3.7			
10.0	32.2	44.6	10.0		19.7	19.1	8.7		47.5	47.4	8.5	10.5		32.7	53.8			
25pr.	+ 0 52.8	- 2.0	+ 0 53.1	- 2.4	+ 0 53.3	- 2.7	+ 0 53.6	- 3.0										

1321-1380.				1381-1440.				1441-1500.				1501-1560.			
mag.	7 ^h .	-36°		mag.	7 ^h .	-36°		mag.	7 ^h .	-36°		mag.	7 ^h .	-36°	
	m s	'	''		m s	'	''		m s	'	''		m s	'	''
9.5	25	39.7	34.9	10.5	30	24.0	58.0	10.5	33	33.2	5.8	10.1	36	1.2	13.2
10.5		40.7	59.0	10.4		24.7	22.1	10.5		35.7	4.9	10.3		1.7	35.1
10.3		49.7	17.2	8.1		36.2	50.6	10.2		36.7	11.2	10.2		4.7	41.2
10.2		54.7	16.8	9.6		36.2	42.0	9.2		38.7	13.3	9.8		7.7	11.8
10.2		59.7	29.4	9.8		38.7	2.1	10.5		42.2	24.0	10.5		9.7	52.9
10.1	26	0.1	59.9	10.1		52.7	25.2	10.5		51.7	53.0	10.3		9.7	4.8
10.5		3.2	49.6	9.6	31	0.2	6.8	10.3		53.2	13.6	9.3		15.7	17.1
10.1		17.2	56.0	10.3		3.2	53.7	10.1		54.2	12.2	10.4		17.2	29.9
10.1		34.4	21.1	10.1		5.2	53.2	10.4		54.7	23.2	10.5		18.7	6.0
9.8		37.2	5.1	8.6		9.7	32.8	10.2		56.7	48.2	9.8		24.2	35.1
10.3		39.7	40.4	10.2		23.7	54.6	9.8	34	0.7	10.8	9.8		26.5	57.1
10.5		40.7	49.8	8.6		25.2	48.1	9.6		5.7	13.1	10.3		28.7	17.4
8.6		45.2	12.6	8.6		28.7	25.4	9.4		7.7	52.0	8.5		29.7	34.6
10.0		54.2	13.5	9.2		28.7	22.8	10.1		8.7	12.4	10.5		40.7	6.1
10.0		54.2	26.3	10.0		29.7	30.0	10.5		8.7	19.4	9.6		41.7	34.0
10.4		59.2	4.4	10.4		31.7	41.0	9.6		8.7	10.6	9.6		42.7	19.6
8.4	27	0.7	37.6	9.8		31.7	55.5	6.2		11.7	12.7	10.0		44.7	23.2
10.1		3.2	40.2	10.0		32.2	28.2	10.5		22.2	13.1	10.5		45.2	30.1
9.8		9.7	10.2	9.0		32.7	21.3	10.5		22.7	27.7	10.3		45.7	8.7
9.0		11.2	35.6	9.6		40.2	35.1	10.5		23.7	22.8	10.5		47.2	28.1
9.6		13.7	40.2	10.3		49.7	55.7	10.1		24.2	35.8	9.2		47.7	43.1
9.0		24.7	48.9	10.3		53.0	2.0	10.5		27.2	31.4	10.2		49.7	13.7
10.3		24.7	0.6	9.6		55.7	30.0	9.2		29.2	7.3	8.8		51.2	53.5
10.2		30.2	39.5	9.8		56.0	1.4	9.6		29.2	28.5	10.5		52.1	27.8
10.1		35.2	59.2	10.3		58.7	35.1	9.4		29.7	26.5	10.5		52.2	46.9
10.4		37.7	30.9	9.5	32	1.2	17.5	10.1		29.7	28.8	10.0		52.7	38.6
9.6		38.2	40.5	9.8		5.7	17.9	9.6		32.7	36.5	10.5		58.1	48.9
10.4		41.7	30.9	9.8		8.7	14.4	9.4		34.7	5.3	10.5		58.2	23.8
10.4		46.2	40.8	10.4		12.2	45.1	10.4		38.7	42.9	10.5	37	9.7	43.1
10.5		49.2	20.9	10.0		16.7	45.2	10.5		46.2	16.8	10.3		10.7	22.5
10.1		53.2	12.5	10.4		17.2	41.6	9.8		51.7	30.1	10.3		10.7	41.8
10.2		54.2	1.2	8.6		17.2	26.4	10.4		52.7	24.0	9.6		14.2	49.8
10.1		59.7	51.8	9.8		20.7	3.9	9.6		57.7	14.7	10.1		22.2	53.3
10.2	28	0.1	28.3	10.1		23.7	17.9	10.1		59.7	27.0	9.8		25.7	26.9
8.9		0.7	50.1	10.4		24.7	21.4	9.8		59.7	31.5	10.0		28.2	25.4
10.3		7.2	25.3	9.8		30.7	15.9	9.6	35	0.7	45.1	10.4		37.7	29.7
10.3		11.2	34.7	10.5		30.7	55.9	10.4		3.2	40.3	10.3		38.2	18.9
9.6		12.2	22.6	9.8		31.2	19.0	8.3		4.7	12.9	8.8		54.7	5.7
9.8		14.7	43.5	10.4		34.7	25.0	10.1		6.2	31.2	10.5		56.2	23.8
9.6		15.2	33.1	10.5		39.7	17.2	10.4		9.7	51.0	10.5	38	0.2	57.5
10.3		16.9	58.7	10.5		41.2	41.2	10.5		15.2	20.7	7.8		0.7	4.8
10.2		20.7	30.5	9.0		43.7	5.3	10.5		16.3	0.9	9.8		7.7	6.1
8.8		27.2	13.4	10.5		49.7	32.8	10.5		19.7	12.8	9.2		10.7	3.2
10.4		27.7	7.0	8.2		51.2	8.2	10.2		20.2	36.7	10.3		10.7	5.0
9.8		43.2	48.9	9.6		51.2	23.9	8.8		24.2	52.5	9.8		20.2	14.3
10.3		59.7	37.3	9.8		53.2	36.6	9.3		24.2	50.7	9.8		20.7	45.9
9.5		59.7	39.4	10.1		55.2	37.1	10.0		27.7	15.5	10.5		21.1	27.1
9.0	29	0.7	3.9	10.3		55.7	33.8	9.6		27.7	9.1	10.5		22.7	46.0
10.2		4.0	0.2	9.6		55.7	22.4	9.6		29.2	21.7	10.5		23.7	9.2
10.2		4.7	6.5	10.3	33	1.2	16.1	9.4		29.7	56.8	10.3		29.9	25.1
8.4		9.7	9.6	9.6		3.0	59.1	10.5		31.7	0.9	9.8		32.9	13.6
5.2		19.7	4.0	10.1		9.7	51.7	10.1		38.2	6.6	10.4		34.9	36.3
9.8		20.7	51.1	10.5		10.7	30.6	10.5		41.2	48.0	10.1		35.4	36.5
9.4		21.2	6.5	9.6		14.7	54.8	10.4		41.7	22.4	9.4		44.9	12.0
10.1		33.0	59.7	10.5		14.7	39.6	10.5		49.7	50.0	9.8		48.4	10.1
10.2		40.2	46.3	10.1		14.7	23.1	9.8		50.7	26.9	10.1		51.4	20.1
10.3		50.2	30.6	10.5		24.2	47.9	10.5		50.7	22.1	10.5		51.9	14.8
9.6	30	8.2	27.6	10.0		29.7	19.7	10.4		54.2	50.8	10.4		57.4	11.2
10.0		19.7	5.0	10.5		30.7	32.7	10.5		54.2	47.3	10.3		59.9	52.0
10.5		21.7	48.3	10.5		32.2	19.3	9.8		59.2	23.9	8.8		59.9	23.6
25pr.	+ 0	53.9	- 3.1	+ 0	54.1	- 3.3		+ 0	54.2	- 3.4		+ 0	54.3	- 3.4	

1G
7h
3.7h
8.2h
Ancap...

1561—1620.			1621—1680.			1681—1740.			1741—1800.			
7h.	—36°		7h.	—36°		7h.	—36°		7h.	—36°		
mag.	m	s	mag.	m	s	mag.	m	s	mag.	m	s	
IO.3	39	0.1	IO.3	41	57.9	IO.5	45	8.7	IO.3	49	38.4	
IO.5	3.4	28.8	IO.5	59.9	15.3	IO.4	10.7	53.8	IO.8	49.4	32.8	
8.3	5.4	47.5	9.6	42	5.9	IO.0	12.2	41.9	IO.0	54.9	16.4	
IO.5	7.0	0.4	IO.4	7.9	7.2	9.2	20.7	41.0	9.8	58.4	23.9	
IO.0	8.4	47.1	9.0	18.9	9.8	IO.1	21.2	25.6	IO.0	50	0.4	
IO.2	9.9	48.4	9.8	19.9	51.6	9.8	21.5	57.6	9.4	1.4	54.4	
IO.0	15.4	16.9	9.3	20.4	16.6	IO.5	22.2	20.8	IO.3	9.4	4.1	
IO.4	15.9	47.4	IO.3	26.9	4.0	9.2	23.7	47.5	IO.2	11.4	20.4	
IO.1	17.9	36.0	IO.5	29.9	19.9	IO.0	27.2	18.3	9.8	17.4	7.0	
IO.3	20.9	24.1	IO.0	29.9	12.9	IO.5	29.2	16.0	IO.0	19.4	36.1	
IO.2	23.9	32.0	IO.5	31.9	21.1	9.4	29.5	59.3	9.8	20.9	27.6	
9.8	28.9	17.8	IO.2	31.9	24.6	IO.5	30.2	29.0	IO.2	21.9	46.9	
9.8	29.9	15.3	9.8	31.9	40.6	IO.5	31.2	5.5	9.3	37.4	14.9	
9.8	32.4	48.1	9.8	40.1	57.0	9.6	38.7	37.3	IO.2	45.8	1.5	
IO.3	39.9	21.3	IO.5	44.4	7.4	8.9	41.2	49.0	9.6	47.9	40.5	
9.6	39.9	52.0	IO.5	49.8	24.5	IO.5	42.2	30.2	8.0	51	3.9	
IO.4	43.9	59.5	IO.5	49.9	20.2	IO.3	42.2	8.0	9.8	7.4	33.1	
IO.3	45.9	48.0	9.6	50.9	42.0	IO.5	50.8	0.2	IO.0	11.4	17.7	
IO.4	51.9	47.8	9.8	50.9	55.5	9.3	54.2	43.9	IO.2	19.9	1.6	
IO.4	53.9	46.9	IO.5	51.9	3.3	IO.3	55.4	0.1	IO.2	27.0	59.3	
9.6	59.9	49.9	IO.0	54.9	30.1	IO.1	55.7	53.6	IO.2	30.4	36.9	
9.6	1.9	49.1	IO.3	58.9	37.0	IO.0	57.9	1.1	IO.2	39.9	12.3	
IO.5	4.9	54.3	IO.5	43	2.4	IO.4	58.2	6.2	9.6	43.4	49.3	
IO.3	8.9	57.1	9.2	10.9	50.7	IO.0	46	1.2	9.8	44.4	38.0	
IO.2	13.9	45.5	IO.4	12.4	49.1	IO.5	2.3	21.3	IO.2	51.9	40.7	
IO.3	17.4	5.8	IO.2	16.9	17.0	IO.4	12.8	44.6	9.8	55.4	10.1	
9.8	19.9	15.0	9.2	19.9	59.3	IO.5	15.3	47.2	8.7	52	12.9	
IO.5	20.0	35.9	IO.4	19.9	24.8	IO.2	20.3	12.0	8.4	20.9	34.3	
IO.1	25.9	34.8	IO.0	21.9	5.9	IO.2	28.8	46.9	9.6	25.9	54.7	
IO.3	27.4	44.1	IO.5	28.9	54.7	8.0	31.3	9.4	9.3	25.9	10.8	
IO.1	29.4	21.8	9.4	30.9	7.7	9.8	35.8	50.8	9.8	40.9	58.7	
IO.5	38.4	40.5	IO.2	34.9	30.9	IO.5	36.3	18.8	IO.2	44.4	9.9	
IO.5	39.0	39.8	9.0	41.9	58.1	IO.3	40.3	36.2	9.6	49.9	19.1	
IO.4	39.9	43.1	9.8	48.9	37.1	9.8	42.8	35.4	9.6	54.9	20.4	
9.4	40.9	26.0	9.6	49.9	40.9	IO.3	53.8	55.6	9.6	59.4	29.3	
9.6	42.9	33.0	9.4	50.9	32.0	9.6	57.1	51.6	IO.2	53	2.4	
IO.5	44.0	26.2	9.8	51.9	27.4	IO.5	47	2.8	IO.0	9.2	58.7	
IO.5	44.9	39.6	9.5	54.9	27.3	IO.3	9.8	50.8	IO.2	9.9	51.1	
IO.4	49.9	40.0	IO.1	44	3.9	IO.5	10.3	51.0	IO.2	21.4	52.5	
IO.4	50.9	46.6	9.6	4.2	10.7	IO.1	10.9	9.0	IO.2	26.9	34.3	
9.8	53.5	1.5	9.8	11.7	9.4	IO.3	16.3	39.6	IO.2	34.4	40.7	
IO.5	54.9	58.2	IO.0	16.2	52.3	IO.2	48.8	13.1	IO.2	39.4	42.9	
IO.5	58.4	22.0	9.8	18.7	51.8	9.6	48	2.1	IO.0	47.9	18.2	
IO.5	41	4.0	IO.5	19.2	28.0	8.6	15.4	35.4	IO.0	47.9	12.1	
9.8	4.9	31.1	IO.5	20.2	38.8	IO.0	20.4	54.5	8.1	54.9	5.1	
9.8	9.9	39.8	IO.2	20.2	27.6	9.8	22.4	25.1	8.5	57.4	17.7	
IO.4	10.4	18.1	IO.3	21.2	15.4	IO.2	24.4	59.5	9.8	58.4	6.5	
8.4	21.9	11.6	IO.4	21.7	36.8	IO.0	26.4	15.0	9.8	58.9	34.8	
9.2	23.9	37.0	9.8	25.2	51.0	6.6	28.8	2.4	7.7	54	2.4	
9.8	25.4	36.9	IO.2	25.2	37.9	9.6	31.4	11.9	IO.2	7.9	7.9	
IO.2	25.4	26.1	IO.5	27.2	24.5	9.6	39.4	46.8	IO.0	8.4	33.8	
IO.1	28.9	23.3	9.8	34.2	43.6	8.8	44.4	11.8	IO.2	14.4	28.8	
IO.5	29.9	35.5	IO.0	37.3	59.0	7.8	49	0.4	IO.2	15.9	13.9	
IO.3	33.9	54.9	9.6	41.7	54.5	IO.0	13.3	2.0	9.6	39.9	9.8	
IO.4	36.9	25.1	9.6	50.2	52.6	IO.2	14.9	24.0	9.6	49.4	31.8	
9.5	40.9	19.5	9.8	51.7	10.5	IO.2	21.4	3.6	7.5	58.0	57.8	
9.6	44.9	18.3	IO.1	52.7	31.1	IO.2	23.9	38.7	9.6	58.4	30.5	
IO.5	49.9	16.0	IO.5	54.2	36.5	IO.3	25.9	28.9	IO.2	59.4	46.9	
IO.4	54.4	43.4	IO.0	55.2	38.6	IO.0	26.9	17.0	IO.2	55	4.4	
IO.3	55.9	20.7	IO.5	45	4.2	9.0	33.4	59.5	IO.2	6.9	16.1	
25pr.	+0	54.4	-3.5	+0	5	-8.6	+0	54.7	-	+0	55.0	-3.9

1801-1860.			1861-1920.			1921-1980.			1981-2040.		
mag.	7 ^h .	-36°	mag.	7 ^h -8 ^h .	-36°	mag.	8 ^h .	-36°	mag.	8 ^h .	-36°
9.8	55	12.4	10.0	58	40.4	9.8	1	30.0	8.8	4	34.5
10.0		14.4	9.4		42.4	10.2		37.5	8.8		34.5
8.7		19.4	9.6		43.9	9.8		41.0	9.8		37.5
10.2		21.4	10.2		48.4	10.2		43.0	9.6		38.5
9.6		25.7	10.0		49.4	9.8		45.5	10.0		41.0
10.2		25.9	9.4		49.4	10.0		49.0	9.0		42.0
10.0		27.4	8.8		51.4	9.6		55.5	10.2		44.0
10.2		29.4	8.4		59.4	10.2		57.9	10.2		53.5
10.0		35.4	10.0	59	3.9	10.2		59.5	10.2		54.0
10.0		37.4	9.8		7.9	10.0		59.5	9.2		55.5
8.2		40.4	10.2		8.4	10.2	2	3.0	9.4		58.0
9.4		40.4	9.4		8.9	9.4		5.0	9.8		58.0
10.0		40.4	9.6		10.9	8.7		7.5	8.8		59.5
9.6		55.4	10.2		11.4	9.8		10.0	10.0	5	1.0
9.3		55.4	10.0		14.9	10.0		10.5	9.6		3.0
10.0		55.4	9.8		14.9	10.2		19.5	9.8		3.5
9.0		56.9	9.8		21.4	10.0		20.0	9.0		7.5
10.2	56	4.4	10.2		24.9	10.0		29.5	10.2		8.6
8.8		19.9	10.2		25.9	9.4		35.5	10.2		16.5
8.2		20.4	8.4		26.4	9.8		43.5	10.0		17.5
9.3		24.9	8.8		29.4	10.2		44.0	10.2		18.0
9.3		26.9	10.2		30.5	9.6		45.5	10.0		19.5
10.0		27.9	10.0		30.9	10.0		52.0	9.8		23.0
10.0		46.4	10.2		31.9	10.2		55.0	10.0		24.5
10.2		52.4	10.0		37.4	9.8		59.5	8.8		25.5
10.2		57.4	10.2		40.4	9.8		59.5	10.2		28.0
10.0		57.4	9.8		41.9	10.2	3	2.5	10.2		28.5
8.2		59.4	10.2		43.4	10.2		10.0	10.2		28.5
10.2		59.6	9.0		44.9	10.2		12.0	9.6		29.0
8.2	57	1.4	9.3		46.1	10.2		15.5	9.4		31.5
								19.5	9.4		34.5
6.9		3.4	10.2		46.4	10.2		28.5	10.2		35.0
10.2		7.4	10.2		47.4	10.2		29.5	9.8		37.0
9.8		10.4	10.2		47.4	10.0		43.0	10.0		38.0
10.2		19.4	10.2		49.4	10.0		45.5	9.0		41.5
8.0		30.4	10.2		53.4	9.8		46.0	8.1		43.0
9.3		39.4	10.0		54.9	8.4		47.5	9.4		54.5
9.8		40.4	10.0		55.4	10.2		48.0	10.2		54.5
9.8		42.6	8.8		56.9	9.8		48.0	9.8		58.5
9.8		42.9	9.6	0	0.4	10.0		50.5	10.0	6	0.5
7.9		48.4	9.6		4.4	10.2		53.0	9.1		2.5
10.2		54.4	10.0		6.5	9.0		57.5	8.7		3.5
7.5		59.4	10.0		22.5	10.2	4	0.5	10.2		4.5
10.0	58	0.4	9.6		25.0	9.0		4.5	10.2		6.0
10.0		0.9	10.2		31.0	10.2		5.5	9.4		9.5
9.6		8.4	10.2		39.0	10.2		6.0	10.2		14.9
10.0		8.9	9.4		39.5	9.2		10.5	8.4		18.5
9.8		10.3	8.4		39.5	9.6		13.5	10.2		19.5
9.6		12.9	9.8		45.5	9.6		14.0	9.2		19.5
10.0		15.4	8.8		50.5	10.0		14.5	9.4		19.5
10.2		15.4	8.4		54.0	10.2		15.5	10.0		20.0
9.4		15.9	9.6		55.5	10.0		17.5	9.4		20.5
10.2		20.4	10.0		59.5	10.2		17.5	10.2		21.0
9.8		21.9	9.6		59.5	10.2		18.0	10.2		22.0
9.1		23.9	9.8	I	1.5	10.2		20.5	10.0		23.5
9.6		24.4	10.0		1.5	10.2		21.5	6.9		24.5
10.0		31.9	10.0		13.0	10.2		28.5	9.8		24.5
10.0		33.9	9.3		19.9	9.4		28.5	10.0		28.5
10.0		35.4	8.8		21.0	10.0		29.5	10.2		29.5
10.2		37.4	10.2		29.5	9.6		30.0	9.4		30.5
10.2		39.4	8.8		29.9	10.0		31.0	9.6		37.0
25pr.	+0	55.2		+0	55.4		+0	55.6		+0	55.8
		-4.1			-4.2			-4.3			-4.4

1895 Ancap... 3... 1G

2041-2100.			2101-2160.			2161-2220.			2221-2280.				
mag.	8h.	-36°	mag.	8h.	-36°	mag.	8h.	-36°	mag.	8h.	-36°		
6	39.5	17.8	10.2	48.5	2.9	10.2	10	59.7	32.9	10.8	13	19.3	52.7
9.1	40.7	57.1	8.4	50.7	1.9	10.2	11	1.7	1.4	10.4		19.4	8.3
8.1	41.5	25.7	9.1	50.7	2.2	9.8	6.2	46.1		8.6		21.4	30.3
9.8	41.5	43.0	10.2	54.0	40.7	9.6	6.2	24.1		10.8		21.6	19.0
9.8	44.2	1.5	10.0	54.0	34.0	10.2	9.2	30.5		10.7		25.1	16.0
8.8	46.5	23.0	9.6	58.5	4.7	9.4	11.2	48.7		10.8		30.6	6.7
8.8	48.0	15.4	9.8	59.0	6.4	9.4	13.7	10.3		10.6		32.6	32.7
10.2	53.5	14.0	10.0	59.5	6.0	9.6	17.7	53.9		6.9		34.4	59.3
9.8	54.5	3.1	10.2	9	2.0	10.2	21.2	11.5		10.0		37.1	47.6
10.2	56.0	45.6	10.0	4.0	59.3	8.7	22.4	52.9	9.5	10.4		38.1	55.2
10.0	58.5	11.5	9.8	4.5	1.9	9.4	23.2	12.4		9.8		40.1	15.8
8.5	59.5	50.5	9.8	9.5	53.3	10.2	25.2	52.1		10.4		40.6	41.8
8.6	7	4.5	10.0	12.0	31.2	9.6	28.2	17.2		9.4		44.1	13.6
10.2	10.5	24.2	10.2	14.0	20.1	9.6	30.7	43.7		9.8		51.1	55.3
10.2	14.5	3.6	10.2	19.5	22.6	10.2	31.7	21.9		5.4		52.1	16.1
10.0	16.0	38.2	10.2	21.5	12.3	9.8	33.2	33.3		10.8		54.6	21.6
9.8	18.0	54.2	7.2	24.0	34.3	9.8	36.7	10.4		10.7		55.1	13.5
10.2	19.5	25.6	7.9	24.5	2.9	10.2	36.7	53.7		10.7		59.1	38.8
9.3	19.5	52.7	9.0	29.5	21.7	9.0	37.7	8.9	8.5	9.8	14	0.1	0.6
9.6	23.5	19.5	9.1	31.5	34.9	10.2	42.2	27.6		9.2		0.1	27.0
10.2	29.5	6.2	10.2	33.2	17.9	9.8	43.2	41.7		10.7		1.6	50.9
10.2	30.0	9.5	10.2	33.2	37.0	10.2	47.7	32.1		10.7		6.6	45.1
9.8	30.0	39.9	8.8	38.2	6.4	10.0	48.2	54.7		10.4		7.6	10.4
9.8	30.5	24.8	10.0	39.7	58.7	9.8	51.7	25.9		10.8		10.1	43.0
9.6	31.5	45.8	10.2	41.0	55.2	10.2	54.7	17.5		10.0		12.1	45.3
10.0	40.5	5.0	10.2	42.2	52.3	9.8	57.2	22.7		10.8		12.1	42.8
8.1	43.5	34.1	9.8	42.7	4.5	8.6	59.7	15.1	8.0 GSg	9.4		13.1	32.5
10.0	49.0	42.6	9.6	49.7	16.0	9.4	12	2.2	49.1	10.8		14.1	20.0
7.3	49.5	36.8	10.0	52.7	55.8	9.8	3.2	43.7		10.8		14.1	22.2
9.6	49.5	56.1	10.2	55.0	51.4	8.6	6.9	33.1	9.5	10.4		18.6	23.0
10.2	50.0	24.8	9.8	55.2	6.6	9.6	7.4	47.9		10.8		20.9	58.8
10.2	51.0	10.0	10.2	56.7	55.1	9.4	9.2	29.6		9.3		21.1	33.5
8.6	55.5	17.6	10.2	57.7	28.0	9.6	9.9	13.9		10.8		22.6	6.6
8.8	58.5	17.9	9.8	59.2	52.8	10.2	16.3	38.2		10.2		24.1	26.6
10.2	59.0	7.9	8.8	59.7	27.1	9.8	22.2	9.0		9.2		25.1	47.6
9.8	8	2.4	10.2	0.7	35.7	10.2	24.2	5.1		10.4		25.6	23.6
10.0	3.5	8.6	10.2	8.2	57.8	10.2	29.4	6.8		10.6		28.1	7.5
10.2	5.5	11.6	10.2	10.2	2.6	9.8	29.7	10.0		10.7		32.6	28.7
10.2	5.5	14.7	10.2	10.7	28.2	10.2	29.7	24.2		10.7		38.6	8.4
9.8	7.0	34.9	9.6	11.2	39.9	10.2	29.9	27.1		9.0		40.1	46.7
8.4	8.0	8.1	10.0	14.2	43.6	8.2	30.2	43.6	9.0	10.8		40.6	5.1
10.0	9.5	38.9	10.2	17.0	28.8	9.8	31.7	45.1		10.4		42.6	28.9
8.0	9.5	40.5	9.4	17.7	0.5	10.0	35.4	47.0		9.2		44.1	53.7
9.0	11.0	17.8	9.8	17.7	46.5	10.2	39.3	52.8		10.7		45.1	7.2
10.2	11.0	18.7	10.2	18.7	12.0	9.8	41.4	6.0		9.8		47.6	38.0
9.6	12.5	23.2	9.8	19.2	48.5	9.0	42.2	3.5		10.7		50.1	12.3
8.8	16.5	47.6	10.2	20.5	1.9	10.0	44.4	1.3		10.4		50.1	7.4
9.8	17.0	38.9	10.0	21.2	48.9	9.8	44.4	25.6		10.8		51.6	27.5
10.0	27.5	47.3	7.7	22.2	16.3	10.2	44.9	59.2		10.8		56.1	7.9
10.0	29.5	28.6	10.2	23.2	22.2	9.0	58.9	17.5		10.8	15	0.1	55.9
10.0	29.7	2.7	9.6	24.7	58.3	9.8	59.4	37.8		10.4		2.6	22.1
9.4	30.0	55.3	10.2	24.7	15.1	10.0	13	0.1	43.1	10.8		4.6	6.6
9.8	34.5	42.9	9.0	37.7	31.7	10.2	1.3	8.0		9.2		5.1	8.2
10.2	36.0	18.3	8.2	39.7	5.3	10.2	2.3	6.3		9.8		5.1	24.5
10.2	38.5	17.1	7.0	49.7	59.5	10.0	4.4	38.3		9.2		6.1	31.9
10.2	39.5	2.3	10.2	49.7	24.1	9.8	7.9	47.4		10.8		10.1	29.1
9.0	39.5	45.7	9.6	50.7	0.8	10.2	9.8	36.3		8.0		12.6	48.7
9.8	39.5	57.5	8.7	51.2	44.1	10.2	9.8	13.4		10.0		15.1	24.9
9.8	46.5	11.7	10.2	54.2	26.7	9.8	12.4	57.9		7.5		16.1	13.1
10.2	47.5	10.2	10.2	57.2	22.7	8.7	15.9	9.7		10.4		20.1	8.8
25pr.	+ 0 55.9	-4.4											
				+ 0 56.0	-4.5								
							+ 0 56.1	-4.6					
												+ 0 56.2	-4.6

2281-2340.			2341-2400.			2401-2460.			2461-2520.		
mag.	8h.	-36°	mag.	8h.	-36°	mag.	8h.	-36°	mag.	8h.	-36°
10.6	15 21.1	18.2	9.8	17 17.1	23.8	10.7	19 10.8	40.5	10.0	20 43.9	38.4
10.8	24.1	12.0	10.0	17.8	2.7	9.2	10.9	3.4	9.2	43.9	27.6
10.0	24.6	53.7	10.7	25.6	26.5	9.6	11.8	38.2	10.8	44.9	17.4
9.4	24.6	27.0	9.8	28.6	16.7	10.8	11.9	45.0	10.7	49.9	33.8
10.8	25.1	17.8	8.9	30.1	18.4	10.6	12.9	21.0	9.8	50.9	55.6
10.8	31.1	56.3	10.4	31.6	21.8	10.4	13.4	41.2	10.4	54.9	53.8
10.4	31.1	35.2	10.6	32.1	21.1	10.6	14.4	20.2	10.4	57.9	41.8
10.7	31.1	6.8	9.0	32.3	0.9	10.4	17.9	29.4	10.8	21 3.8	59.5
10.0	32.1	3.4	10.6	35.6	37.3	10.4	17.9	18.8	10.0	7.4	20.2
9.2	35.1	55.3	10.4	37.6	45.9	10.6	20.4	5.4	10.8	8.9	51.4
9.0	36.1	44.7	9.6	38.1	3.9	10.4	24.4	8.8	9.6	9.9	23.1
10.0	36.1	40.0	10.2	38.6	50.2	10.8	26.9	41.6	10.8	10.4	21.3
10.6	36.6	14.1	10.4	39.1	20.5	10.8	27.4	50.0	10.7	10.9	52.3
10.2	39.1	14.8	10.4	39.6	16.6	10.0	28.4	8.2	10.0	13.9	38.2
10.7	39.6	4.9	9.8	40.1	45.1	9.4	29.9	48.6	10.0	15.4	48.1
9.0	44.1	42.1	10.0	40.2	33.3	10.6	29.9	11.8	10.0	18.4	15.2
9.0	45.1	51.8	10.8	42.1	30.0	10.4	30.3	1.4	10.7	20.9	50.4
10.4	48.1	20.8	10.7	44.1	35.3	10.4	30.9	48.2	10.4	20.9	46.4
10.0	51.1	50.1	10.4	49.1	35.1	9.8	31.8	8.8	9.6	21.4	3.2
10.6	52.1	35.1	10.6	51.1	47.3	10.4	32.9	12.5	10.0	26.4	3.1
10.7	52.6	27.5	10.4	53.6	15.5	9.6	35.4	50.7	9.8	27.9	5.6
9.0	58.1	54.8	10.8	55.1	56.9	10.8	37.1	2.0	10.2	27.9	36.8
10.7	59.1	49.6	10.8	56.6	50.5	10.4	39.9	26.4	10.7	28.9	51.0
9.2	16 1.1	41.7	10.4	59.9	33.0	10.8	39.9	5.2	10.6	31.4	50.0
9.4	2.6	25.1	10.8	18 0.1	5.3	9.4	39.9	28.5	9.0	32.2	4.2
10.0	7.1	6.6	10.8	0.1	31.0	10.2	41.9	29.6	10.8	33.4	44.5
10.6	8.6	47.5	10.8	0.9	22.9	10.0	41.9	29.4	9.8	36.4	3.4
8.6	11.1	49.5	10.6	1.4	21.0	10.4	42.4	45.6	10.4	37.4	33.0
10.4	11.1	40.0	10.8	8.4	6.2	10.7	50.4	11.6	10.6	39.9	4.0
10.4	14.1	40.1	10.7	9.9	30.0	10.4	51.9	11.8	10.8	40.9	18.2
10.2	15.1	21.2	10.2	9.9	56.2	9.2	59.9	26.4	10.2	46.9	17.0
8.3	17.6	12.1	10.4	9.9	5.8	9.8	20 0.4	23.2	10.8	47.9	45.0
10.8	20.1	11.8	9.4	20.4	15.4	10.2	1.9	33.8	10.4	50.4	38.0
9.2	22.6	29.8	9.2	21.4	23.2	10.8	3.4	23.1	10.4	50.9	36.3
10.6	30.1	26.3	10.0	21.9	26.4	10.0	4.9	55.5	10.4	22 0.9	26.6
10.0	30.1	24.8	10.2	23.0	20.8	8.7	5.9	37.6	10.6	2.9	40.6
10.7	30.1	27.5	10.4	24.1	0.6	10.8	5.9	33.5	10.2	3.4	35.6
9.4	30.6	50.2	10.4	24.4	15.4	10.0	7.9	54.0	9.8	3.9	49.4
10.7	31.1	35.5	9.2	26.9	43.5	9.8	9.9	55.8	10.8	5.4	28.6
8.8	35.1	26.7	10.6	30.9	32.8	9.4	10.9	43.4	10.7	6.4	24.8
5.3	38.6	5.2	10.0	35.4	19.5	10.8	13.9	41.0	10.8	9.9	39.6
10.0	39.1	57.6	10.0	38.9	36.0	9.6	18.4	29.0	10.2	10.9	34.2
9.4	43.6	3.0	10.8	39.9	42.0	10.6	19.9	6.0	9.8	10.9	26.1
10.8	45.6	2.9	10.8	39.9	17.0	9.6	20.9	55.2	8.8	11.9	16.1
10.4	48.1	19.4	9.8	40.9	40.5	10.6	21.9	16.0	10.6	12.4	6.1
10.4	48.1	59.6	9.8	42.4	40.0	10.0	23.4	15.0	10.2	13.4	42.0
10.2	51.1	12.1	10.2	47.4	53.6	10.8	25.9	56.1	8.8	19.9	15.6
10.4	52.6	55.3	10.6	48.9	31.4	10.8	26.4	27.7	9.6	22.4	35.5
9.8	55.1	13.9	10.4	49.9	18.4	10.8	29.9	54.0	10.8	24.4	7.0
10.4	55.4	59.3	10.4	51.9	46.8	10.4	32.9	42.0	10.7	25.2	15.9
10.8	17 1.1	3.7	9.6	52.4	47.0	10.8	32.9	48.8	8.7	25.4	30.8
10.7	2.6	16.8	10.8	53.9	9.0	10.1	32.9	16.1	8.4	27.9	14.6
10.2	2.6	44.9	10.8	59.9	9.9	10.1	34.9	8.6	10.8	29.9	7.8
9.8	4.1	8.6	10.8	19 0.9	1.4	9.8	35.4	1.0	10.8	31.9	50.3
10.8	8.1	36.6	10.8	0.9	0.3	10.2	37.4	23.4	10.7	36.4	53.8
10.0	9.1	47.4	10.2	1.4	35.8	10.2	38.4	22.1	9.6	39.9	52.1
10.7	10.6	9.0	10.4	1.9	32.3	10.8	38.9	56.0	9.4	39.9	59.2
10.0	11.1	54.8	10.0	3.4	30.5	10.2	39.9	36.8	10.8	42.4	53.4
10.4	12.1	51.5	10.8	4.4	53.0	10.7	40.9	16.6	8.6	50.9	15.7
10.6	13.6	52.2	10.6	7.8	30.3	10.6	41.9	52.2	10.8	50.9	25.5
25pr.	+ 0 56.3	-4.7		+ 0 56.4	-4.7		+ 0 56.5	-4.8		+ 0 56.6	-4.9

2521-2580.			2581-2640.			2641-2700.			2701-2760.		
mag.	8h.	-36°	mag.	8h.	-36°	mag.	8h.	-36°	mag.	8h.	-36°
9.4	22 54.4	26.2	9.0	25 27.1	54.8	10.0	27 29.6	14.9	10.8	30 23.1	38.9
9.8	23 8.9	38.0	10.8	28.1	44.1	10.0	30.6	43.3	9.8	29.6	15.4
9.8	9.9	48.4	10.7	29.1	30.6	10.7	31.1	42.6	10.4	33.1	35.2
9.8	13.6	3.0	10.4	29.1	31.0	10.8	39.6	29.0	10.6	36.1	24.5
9.8	14.4	15.8	10.8	29.6	58.2	9.6	39.6	54.5	10.2	36.1	10.1
10.8	14.4	14.0	10.8	29.6	58.0	10.6	40.6	3.9	10.4	38.6	28.9
10.7	15.9	12.0	10.8	30.6	40.6	10.6	40.6	17.7	10.8	39.6	36.8
10.7	19.9	17.2	9.4	33.1	11.1	10.7	41.1	29.4	10.8	41.1	11.9
10.2	19.9	14.2	9.4	33.6	9.8	10.6	50.6	25.3	10.8	41.4	58.5
10.8	23.4	22.1	10.2	33.6	55.4	10.8	28 0.6	5.4	10.6	42.6	5.2
10.0	23.9	13.8	10.4	35.1	35.4	9.8	5.5	56.3	10.0	51.6	51.8
10.8	24.4	42.1	10.7	37.6	5.9	10.8	9.1	4.1	9.8	53.1	16.7
8.3	28.9	18.6	10.2	38.6	13.5	10.2	10.6	47.2	9.8	57.1	35.9
9.4	29.4	54.5	8.3	39.6	18.0	9.8	11.6	26.3	10.4	58.1	19.4
9.3	31.1	1.4	10.4	39.6	14.0	10.6	12.0	0.0	10.6	59.1	33.9
9.8	36.4	18.4	10.4	39.6	14.2	10.0	13.2	57.0	9.8	59.6	32.5
8.4	55.9	8.0	10.4	39.6	31.0	10.0	27.1	25.4	10.6	31 0.1	5.3
10.8	24 0.4	29.4	8.8	44.6	18.1	10.4	29.6	6.9	10.2	1.6	17.9
10.8	3.9	6.4	10.7	46.1	21.8	10.0	29.6	52.1	10.7	7.1	29.3
10.7	6.9	42.8	9.8	46.1	22.6	10.0	32.1	39.1	10.2	9.6	37.1
9.4	9.9	56.4	10.4	47.1	38.5	7.8	34.1	14.1	10.4	9.6	40.0
10.6	9.9	18.0	10.7	47.6	15.0	10.0	35.1	17.1	10.4	15.1	5.4
10.4	10.9	11.0	10.8	47.6	59.8	10.2	36.6	56.3	10.7	15.1	9.5
10.2	10.9	37.0	7.8	48.6	9.3	9.8	39.1	29.9	10.8	15.6	53.1
10.8	11.9	42.3	10.7	48.6	26.0	10.8	39.6	10.0	10.6	17.1	49.5
10.8	17.4	51.1	9.0	56.6	13.2	10.6	44.6	47.3	10.6	21.6	54.1
9.6	17.4	39.4	10.6	59.6	34.8	10.4	45.1	3.4	9.8	22.1	27.7
10.8	17.4	50.6	10.0	59.6	42.0	10.7	45.6	32.3	9.2	29.6	28.6
10.8	18.9	11.2	10.4	26 0.1	16.7	10.8	46.1	59.0	10.8	29.6	7.2
10.8	23.9	53.0	10.8	5.6	17.2	9.2	49.6	48.9	10.8	31.6	21.4
10.7	29.4	16.4	10.6	10.6	23.4	10.0	55.6	55.7	10.8	31.6	40.3
10.7	29.9	40.6	10.7	11.1	53.1	10.2	58.6	44.7	10.8	41.6	26.1
9.8	29.9	19.1	10.7	23.1	46.4	10.4	29 0.6	14.7	10.2	* 43.6	46.1
10.7	31.0	5.9	10.2	24.6	40.4	10.4	2.6	52.5	9.4	49.6	5.4
10.4	32.9	2.4	10.7	25.6	7.3	9.8	8.9	59.9	9.8	53.6	57.4
10.7	34.1	1.5	10.6	25.6	22.9	10.2	15.6	6.6	8.9	55.1	13.4
10.8	34.4	21.0	10.6	27.6	22.9	9.4	17.1	31.9	10.8	57.6	7.3
9.8	35.4	22.0	10.8	29.1	25.9	7.7	26.1	28.7	10.0	59.6	41.6
10.2	38.9	24.1	10.6	29.6	53.8	10.8	32.1	2.4	9.6	32 0.5	2.3
10.7	42.4	21.9	10.2	30.6	23.8	9.6	34.4	57.1	10.7	8.1	35.2
9.3	44.9	30.1	10.2	32.6	18.0	8.2	37.6	15.8	10.6	8.1	7.9
10.8	45.9	1.1	10.0	37.1	16.8	9.3	39.1	58.6	10.7	11.1	17.4
10.2	48.9	41.8	9.4	39.1	19.5	10.6	39.1	19.8	10.8	11.6	46.8
9.8	49.9	28.5	8.2	39.6	16.2	10.7	45.6	42.7	10.7	14.1	21.0
10.8	54.4	21.2	10.4	43.1	56.2	10.0	50.6	30.0	9.8	21.1	17.1
10.4	56.4	10.1	10.7	46.6	36.4	9.8	50.6	51.1	10.0	23.1	0.2
10.7	59.9	24.6	10.7	47.6	38.3	9.6	53.6	57.8	8.9	26.1	41.8
10.7	25 1.9	25.7	10.0	48.6	10.4	10.8	59.6	47.5	10.2	29.6	39.8
10.4	3.1	53.7	9.6	49.1	9.0	10.8	59.6	11.0	10.7	31.3	59.3
10.7	5.1	12.6	10.2	49.6	7.5	8.6	30 0.6	33.1	9.8	34.6	37.6
10.4	6.1	14.9	9.6	55.1	55.1	10.8	4.1	14.9	10.0	35.1	51.1
9.6	7.1	25.4	10.4	27 0.1	49.0	9.8	5.1	22.0	10.4	38.1	31.1
9.8	8.6	13.1	10.0	6.6	47.8	10.7	6.6	43.1	10.2	38.1	4.2
10.0	9.6	34.2	10.6	10.1	21.4	10.2	7.1	7.8	9.8	39.6	50.0
10.4	9.6	38.9	10.4	11.1	48.9	8.0	14.1	54.8	9.6	40.1	7.9
9.0	15.6	22.6	10.6	11.1	16.2	10.4	16.4	56.7	10.4	43.6	58.5
10.2	18.6	20.3	10.4	18.6	40.7	10.8	16.4	59.2	10.4	49.6	35.1
10.7	19.6	18.2	10.4	19.6	49.5	10.6	19.1	27.0	10.8	50.1	12.9
9.8	24.6	5.2	10.8	20.6	47.1	10.4	20.1	41.8	10.8	59.1	38.3
10.8	24.8	1.4	10.0	20.6	58.4	10.8	21.1	11.3	9.8	33 1.6	54.5
25pr.	+ 0 56.8	-4.9		+ 0 56.9	-5.0		+ 0 57.1	-5.1		+ 0 57.3	-5.1

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
mag.		8h.		mag.		8h.		mag.		8h.		mag.		8h.	
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s
8.7	33	7.6	1.0	9.8	35	24.6	41.1	10.8	37	55.6	53.7	10.2	41	16.4	8.2
10.6		11.5	0.8	10.8		28.6	0.9	10.8		57.6	35.8	10.2		21.4	49.0
8.8		11.8	56.6	10.2		29.6	25.6	8.4		59.3	4.1	9.8		21.4	41.0
10.2		19.6	47.9	10.8		29.9	1.8	10.7		59.6	37.1	10.2		25.3	33.1
10.4		21.1	57.9	10.6		31.6	27.3	10.0	38	9.6	56.3	9.0		26.4	16.6
10.2		24.6	32.9	10.8		47.1	20.0	10.6		13.1	15.0	10.2		27.4	19.6
10.4		24.6	3.0	9.8		49.1	30.5	10.0		17.3	2.9	10.0		28.4	48.2
10.7		31.1	13.5	9.3		50.6	33.9	10.0		18.0	5.4	10.2		29.1	58.9
10.7		31.1	21.7	10.2		53.1	41.2	10.6		21.1	31.0	10.2		39.9	29.9
10.6		32.1	8.6	10.8		55.1	39.1	10.8		23.6	30.0	9.6		40.1	1.0
10.8		32.6	11.1	10.0		55.6	25.8	10.8		26.6	18.3	10.2		41.3	23.2
9.8		34.6	29.1	10.8		57.1	31.9	10.8		27.1	21.0	10.2		41.4	7.0
10.0		38.1	40.7	10.8		59.1	3.5	10.7		28.1	9.3	10.2		47.9	41.2
10.8		43.6	54.2	10.8		59.6	11.0	10.0		28.1	39.3	10.2		48.3	22.5
10.4		44.6	46.2	10.8	36	1.1	28.1	10.8		29.1	57.4	9.3		49.4	15.1
10.0		45.1	52.1	10.8		8.6	42.9	10.8		29.9	46.7	10.2		55.9	9.7
10.0		46.1	24.4	10.0		10.6	22.9	9.4		34.4	25.9	10.0		57.9	51.4
9.8		50.6	17.9	10.8		12.1	23.3	9.4		39.4	38.1	10.0		59.4	50.3
10.4		51.8	20.3	10.8		12.1	34.5	9.0		47.9	12.1	8.8		59.4	20.4
9.2		55.6	30.9	10.8		12.6	29.9	9.6		50.4	12.5	10.2	42	0.4	52.8
10.2		57.1	23.9	9.8		15.6	6.5	10.0		59.4	34.7	10.2		11.9	37.6
10.2		57.1	36.9	10.2		15.6	39.6	8.8	39	4.9	6.4	10.2		17.9	52.4
9.8		58.6	55.7	10.8		17.1	32.4	10.2		5.9	9.1	9.4		24.9	49.7
10.6	34	3.1	53.2	10.0		18.6	23.0	10.2		10.9	43.7	9.4		32.4	24.1
10.8		7.1	39.2	10.4		20.6	47.1	10.2		13.9	11.4	10.2		32.9	48.0
10.8		7.1	41.6	10.8		21.1	51.0	10.0		22.9	22.9	7.6		34.4	17.5
10.4		8.6	27.0	10.6		27.6	43.1	10.2		24.4	29.5	10.2		38.8	59.3
10.0		10.6	36.6	10.7		29.1	51.1	10.0		24.4	21.3	10.0		42.9	51.1
10.7		18.6	29.6	10.6		29.1	29.0	10.2		33.9	41.7	10.2		46.3	33.7
10.7		19.1	11.3	10.8		37.6	6.2	9.4		35.4	48.3	9.1		47.9	40.1
10.8		23.1	2.1	10.0		38.6	57.8	10.2		40.4	44.8	10.0		55.4	58.1
10.7		25.1	39.4	9.8		42.1	6.4	10.2		42.4	45.1	9.4	43	1.5	23.1
10.2		25.1	25.9	9.6		47.6	23.4	10.2		47.4	9.5	10.2		11.0	1.4
9.2		29.6	6.7	9.8		49.1	36.0	10.0		51.1	0.8	9.8		16.4	2.2
10.6		32.6	27.2	10.8		54.6	10.6	10.0	40	2.9	41.5	9.2		19.0	46.5
10.4		34.6	44.0	10.6		55.6	42.8	10.2		5.4	34.1	10.2		23.5	22.0
7.3		35.1	10.1	10.8		59.1	53.8	10.2		5.4	12.2	10.2		32.5	17.2
10.8		38.1	42.2	10.2		59.6	29.2	10.0		8.1	1.1	10.0		37.0	15.3
9.8		39.1	8.9	10.0	37	5.1	14.4	9.8		11.5	57.7	9.4		45.5	42.1
10.4		41.6	14.3	8.8		11.1	43.6	10.2		11.9	24.9	10.2		50.5	55.4
9.2		42.6	40.8	10.7		11.1	40.2	10.0		13.4	41.2	9.4		51.0	15.0
9.6		43.6	34.8	10.8		12.1	3.8	10.2		13.6	58.1	8.6		53.0	8.3
10.2		43.6	4.4	10.8		14.6	4.8	10.2		15.4	16.0	10.2	44	0.0	54.0
9.4		47.5	2.4	9.6		15.1	33.6	10.2		23.4	1.3	9.6		3.5	47.9
10.4		49.6	52.3	10.6		19.6	21.6	9.8		37.9	44.6	9.8		7.5	52.9
10.4		54.1	44.9	10.4		20.6	38.8	10.2		40.4	28.0	10.0		9.5	36.1
10.2		55.1	38.9	10.0		28.1	11.6	9.4		44.4	45.0	10.2		11.0	42.0
10.6		59.6	37.3	9.6		29.6	32.7	9.6		44.9	22.7	10.0		12.0	6.9
10.8		59.6	9.5	10.0		35.1	35.2	9.4		54.4	6.7	9.6		13.0	6.7
10.8		59.6	33.6	9.3		38.3	55.0	7.6		58.4	17.2	9.6		15.0	50.1
9.6	35	1.6	26.7	10.8		39.1	33.6	9.6		58.9	13.9	10.2		18.3	58.9
10.6		6.1	55.1	10.0		39.6	54.8	9.8		59.4	16.9	10.0		23.5	20.2
10.8		9.6	22.9	10.8		43.6	53.2	10.2		59.9	4.9	9.6		26.4	57.8
10.0		9.6	32.2	10.8		45.6	32.8	9.8	41	0.4	54.5	9.6		28.5	7.8
10.8		11.1	55.9	10.6		47.1	52.2	10.2		2.3	39.0	10.2		41.0	14.5
10.7		14.9	39.9	10.0		47.9	59.7	10.2		2.4	18.6	10.2		42.5	37.6
10.2		16.4	59.1	10.8		50.6	58.8	9.6		3.4	9.3	8.2		44.0	29.9
10.7		17.6	6.1	8.2		50.6	56.1	10.2		10.9	9.6	10.0		44.5	6.0
9.8		20.1	43.8	10.8		53.3	40.8	10.2		14.4	3.0	10.0		49.0	44.0
10.4		21.1	31.3	10.8		55.1	48.6	8.6		14.9	33.6	10.2	45	2.5	32.0
25pr.		+ 0 57.5	- 5.2			+ 0 57.7	- 5.3			+ 0 57.9	- 5.4			+ 0 58.1	- 5.5

3001-3060.				3061-3120.				3121-3180.				3181-3240.					
8h.		-36°		8h.		-36°		8h.		-36°		8h.-9h.		-36°			
mag.	m s			mag.	m s			mag.	m s			mag.	m s				
8.0	45	4.5	9.1	7.5 G=	9.4	48	19.0	43.2	9.4	52	9.5	3.7	9.5	9.8	57	5.1	44.5
10.2		9.5	40.2		10.2		22.4	46.5	10.2		21.5	48.2	10.2			9.1	44.6
9.4		9.5	10.7	9.0	10.2		24.5	27.2	9.8		24.5	40.5	10.2			9.6	48.0
9.4		15.5	35.6		9.4		30.5	22.2	10.0		38.5	38.7	9.4			11.6	41.5
8.5		20.5	12.6	7.5 G	10.2		39.3	58.2	10.2		39.5	15.1	10.2			11.6	6.0
9.4		23.1	56.8	9.5	10.2		45.0	51.2	10.2		43.5	15.8	9.3			20.6	30.6
9.8		29.5	9.2		8.8		48.5	26.2	10.2		53.5	43.0	9.2			30.6	44.0
10.2		30.0	46.9		9.4		51.5	17.4	10.2		59.8	59.2	10.0			32.6	24.6
10.2		30.5	29.2		9.8		57.5	55.0	9.6	53	1.5	48.7	9.4			34.6	32.0
9.8		34.1	58.0		10.2		59.5	47.1	10.0		3.6	46.2	9.4			34.6	21.2
9.8		38.0	9.6		9.8	49	0.5	43.0	10.2		5.6	46.0	9.4			34.6	3.1
9.6		38.0	40.0		10.2		7.0	30.4	10.0		12.1	17.6	10.0			37.6	27.3
9.8		38.0	48.6		10.2		8.0	22.6	10.0		14.6	37.0	9.6			38.1	59.0
9.6		38.0	49.8		9.4		8.0	44.7	10.0		23.6	48.2	10.2			43.6	10.4
10.0		44.0	0.6		10.2		9.3	58.5	10.2		29.6	10.5	10.0			45.1	31.4
9.8		49.5	45.2		10.2		14.0	36.6	10.0		34.1	39.5	9.4			46.1	49.7
9.0		51.0	28.0		9.4		16.5	53.7	10.0		34.6	31.5	10.2			53.1	47.8
10.2		53.0	26.0		9.4		22.5	57.0	8.8		42.6	9.6	9.8	58	1.4	59.7	
10.2		56.5	19.8		9.6		23.5	24.0	10.2		44.1	5.2	9.8			4.6	50.8
8.6		58.0	49.3	8.5	10.0		25.1	58.9	10.0		47.6	47.3	8.8			9.1	7.9
10.2		58.0	52.4		9.1		29.5	33.2	10.0		59.1	14.2	10.2			10.1	15.0
8.8		59.0	22.7		9.8		37.5	49.4	10.2		59.6	12.0	9.8			11.1	56.0
9.6		59.5	18.4		10.0		44.5	35.6	10.0	54	0.6	10.9	10.2			12.6	49.5
8.6	46	2.5	39.1		9.8		47.5	56.0	10.0		8.6	48.6	9.0			24.6	51.5
10.2		5.0	54.4		10.2		49.0	35.5	10.2		12.1	51.0	9.0			24.6	1.0
9.6		10.5	52.1		9.8		49.5	35.2	9.6		25.1	6.6	9.4			24.6	5.2
9.6		13.9	59.7		10.0		58.0	38.1	9.8		29.6	28.2	9.6			26.2	3.0
9.8		15.0	32.2		9.8	50	5.3	59.4	10.2		35.6	51.9	8.8			31.6	9.8
10.0		30.0	51.2		9.4		9.0	47.1	9.2		37.6	33.0	10.2			43.6	21.0
10.2		34.5	39.0		9.4		10.0	52.2	9.4		43.6	33.2	10.2			55.6	51.8
10.0		36.0	37.9		10.2		22.0	19.7	10.2		46.6	42.0	7.8	59	1.6	14.7	8.0 G
10.0		37.0	50.2		9.8		30.5	38.1	9.6		53.6	35.0	10.2			14.1	53.7
10.0		38.5	7.6		10.2		31.5	39.7	8.6		58.1	48.0	9.8			30.6	4.6
10.2		40.5	1.5		10.0		31.5	25.0	10.0		59.1	43.8	9.6			39.6	1.3
9.6		48.0	26.7		10.2		32.0	41.2	10.2		59.1	18.8	10.2			51.6	11.2
10.2		51.0	28.9		9.0		34.0	20.1	9.4	55	1.1	7.4	9.8			53.6	20.2
9.8		56.5	47.9		9.8		34.5	8.6	10.0		4.1	48.9	10.0			56.6	13.2
10.0		56.5	38.1		10.2		50.5	28.1	10.0		6.1	48.5	10.2			59.6	2.1
10.2		59.4	38.7		9.6		52.5	25.1	9.4		20.6	21.8	10.2			0	8.6
9.4		59.5	51.0		9.6		59.3	58.5	10.2		20.6	19.4	9.4			20.6	43.3
10.0	47	4.0	38.8		10.2		59.5	12.4	10.2		23.6	40.0	9.8			22.1	18.4
9.8		4.5	27.0		9.0	51	0.5	56.2	10.2		30.6	29.4	9.6			26.6	33.2
10.2		5.0	39.2		10.2		1.0	36.2	10.2		33.1	31.6	9.6			30.6	42.0
9.8		6.9	0.2		10.2		3.5	2.0	9.4		44.6	8.2	10.0			36.6	27.1
9.8		8.0	44.0		10.2		4.0	5.0	9.6		45.6	21.4	10.2			36.6	39.4
9.6		10.0	21.8		10.2		10.5	26.7	9.6		45.6	46.0	10.2			40.6	50.0
9.4		14.0	11.4		10.2		10.5	12.5	9.8		52.1	39.4	10.0			50.1	21.4
9.6		15.0	25.9		10.2		21.5	40.2	10.2		53.8	1.9	10.2			52.6	28.5
10.2		16.5	34.0		10.2		21.5	2.9	10.0		56.1	48.9	10.0	I	12.6	41.3	
10.2		31.5	32.2		10.2		23.5	4.9	9.8		59.6	53.2	8.8			13.6	39.2
7.1		45.0	4.4	6.8 GS≡	7.6		29.0	38.5	10.2	56	6.6	10.0	10.2			20.6	16.2
9.8		49.5	24.6		9.4		33.5	29.0	9.8		10.1	2.0	9.6			23.1	31.6
9.1		59.5	19.5		10.2		38.0	55.1	10.0		10.6	30.0	8.2			25.6	18.2
9.4	48	3.0	16.2		9.3		40.5	23.6	10.0		25.6	15.8	8.5			31.1	52.6
9.6		4.0	17.0		10.2		41.0	24.2	10.2		29.1	37.6	9.6			31.1	7.0
8.5		5.0	48.6	9.0	10.2		43.0	7.7	9.4		42.6	50.6	9.6			39.6	6.7
9.4		9.5	21.9		10.2		44.5	3.3	10.2		53.6	31.2	9.8			40.4	56.4
9.6		10.5	52.2		8.8		54.5	29.9	10.2		57.6	33.8	10.2			42.6	13.0
10.2		13.4	46.1		9.0		54.5	4.2	10.0		57.6	39.2	10.2			53.6	48.8
9.6		14.5	54.0	9.0	10.0		55.5	12.8	8.8		4.6	22.9	9.1			59.6	49.9
25pr.		+0 58.4	-5.6				+0 58.6	-5.6			+0 58.9	-5.8				+0 59.2	-5.9

3241-3300.				3301-3360.				3361-3420.				3421-3480.			
mag.	g ^h .	-36°		mag.	g ^h .	-36°		mag.	g ^h .	-36°		mag.	g ^h .	-36°	
m	s			m	s			m	s			m	s		
9.0	0.1	58.6		10.2	5 16.3	41.1		10.6	8 42.3	45.0		10.4	11 50.7	14.3	
9.1	4.1	77.9	9.0	10.8	18.3	4.0		9.0	44.8	46.4	8.8 G	10.6	52.2	37.8	
9.4	4.6	55.9		10.8	19.3	39.5		10.8	50.3	24.0		10.8	57.7	48.5	
9.6	11.6	25.5		9.8	27.8	7.7		10.8	57.8	7.1		10.8	57.9	57.3	
10.2	18.6	29.8		10.2	31.3	28.9		10.0	9 1.3	59.4		10.2	58.2	8.9	
10.2	23.1	58.7		8.2	33.8	20.1	8.0 -	10.6	1.3	12.8		10.8	12 1.2	40.8	
9.8	24.4	56.9		9.7	47.8	3.4		9.6	6.8	43.7		10.8	7.7	39.2	
9.8	34.2	19.6		10.8	48.8	42.6		10.4	8.8	25.1		10.2	9.7	4.7	
10.0	36.1	53.6		10.4	53.8	49.2		10.0	10.8	44.8		10.8	11.7	20.8	
10.0	38.2	18.0		10.8	6 3.3	49.0		10.4	13.3	26.4		10.4	12.7	4.8	
9.8	40.6	53.9		10.4	3.8	43.4		10.8	13.3	25.0		10.8	20.7	24.4	
10.2	42.1	42.4		10.2	7.3	19.2		10.4	13.3	48.5		10.4	23.7	28.1	
9.4	43.5	0.1		10.8	8.3	35.5		10.8	17.8	2.8		10.2	29.2	43.7	
10.2	48.9	52.9		10.8	9.8	25.3		10.4	18.3	40.1		10.2	30.7	3.6	
10.0	49.1	8.1		10.4	10.3	2.8		10.4	18.3	47.5		10.4	31.7	39.5	
9.4	49.2	49.1	9.5 G	10.0	29.8	12.5		10.0	19.3	52.7		9.8	47.7	4.0	
10.8	58.8	53.5		10.0	30.8	43.5		10.0	25.8	43.5		10.8	49.2	41.2	
10.6	59.4	0.1		10.0	37.3	47.8		10.6	31.8	0.8		10.0	57.7	9.1	
10.8	3 3.3	46.1		10.2	38.8	53.2		10.8	32.8	57.7		9.6	57.7	35.0	
10.8	9.3	42.9		10.0	39.3	22.8		10.8	40.8	17.4		7.2	58.2	52.5	7.5 GSg
6.8	10.8	51.3	8.0 GSt	10.8	39.8	23.7		10.6	49.3	21.6		10.2	58.4	57.0	
9.8	15.1	57.9		8.8	48.8	57.1	9.0	10.4	50.3	31.7		10.4	58.7	27.0	
8.4	19.8	36.7	8.5	9.7	48.8	15.4		10.2	52.8	47.1		10.4	58.7	31.3	
10.8	23.0	14.7		10.6	48.8	14.7		10.8	54.3	25.6		10.2	3.2	36.8	
10.8	27.2	9.7		10.8	49.3	17.2		10.8	54.8	12.5		10.8	4.2	32.5	
9.7	29.2	32.9	9.5	10.6	50.8	10.3		9.2	10 4.7	37.3		10.4	12.2	50.8	
10.8	29.4	4.0		10.8	58.8	4.4		10.8	9.2	46.3		10.4	14.7	4.3	
9.8	32.0	56.1		10.0	58.8	6.5		10.4	9.7	5.5		10.8	16.7	42.3	
9.8	36.8	48.1	9.5	10.0	7 10.3	14.9		9.4	10.2	10.0		10.0	18.2	47.8	
10.4	36.8	40.1		10.8	14.3	17.2		10.2	16.2	47.1		10.8	19.6	37.7	
10.8	36.8	23.9		9.7	18.8	33.6		10.8	16.7	31.1		10.0	23.7	50.9	
9.7	39.2	24.1		9.8	25.3	40.3		10.8	19.7	40.1		10.0	24.7	17.0	
10.8	39.3	21.9		9.5	26.3	21.8	G	10.8	22.2	1.5		10.0	25.7	37.8	
9.3	46.3	59.6		9.6	27.8	51.8	9.0 G	10.6	22.2	53.5		10.8	26.2	5.7	
10.6	49.4	23.5		9.7	28.8	6.0		10.8	44.7	10.9		10.8	27.2	54.2	
10.2	50.7	14.4		10.8	30.3	18.4		5.5	45.2	53.6	5.0 GSt ^{rr}	9.5	30.7	14.7	
9.3	50.8	55.4		10.8	30.3	31.9		9.2	45.2	42.8	8.8	10.8	30.7	54.0	
10.8	57.4	43.4		10.2	31.3	15.5		10.0	45.7	3.0		10.4	31.2	41.4	
10.2	4 0.8	59.7		10.8	34.7	6.5		9.7	51.2	49.9		10.6	34.2	32.9	
8.7	0.8	19.6	9.0	9.6	36.8	51.4		10.8	54.7	36.8		10.6	38.2	28.6	
10.6	6.8	12.8		10.6	37.3	22.4		10.8	58.2	4.0		10.2	38.7	44.3	
10.2	8.3	15.7		10.8	38.8	52.9		9.8	58.7	31.0		10.0	41.7	36.1	
10.8	8.8	2.0		10.8	43.8	16.0		10.2	59.7	16.5		8.4	44.7	53.0	8.8
10.2	18.8	23.7		10.8	43.8	58.2		10.8	0.7	43.3		10.4	48.7	39.8	
9.8	21.8	21.0		10.8	47.3	45.3		10.2	8.2	22.8		9.8	1.2	6.4	9.0
10.8	25.8	42.3		10.8	49.3	3.9		10.4	8.7	31.5		10.8	11.2	24.9	
10.8	28.8	12.0		10.8	55.8	31.3		10.8	8.7	44.1		10.4	14.7	28.2	
10.8	30.8	49.5		10.8	56.3	17.0		10.6	10.2	6.8		9.6	16.2	17.6	
10.2	33.8	56.2		10.2	8 8.8	27.9		10.4	10.3	3.0		10.4	19.7	6.0	
10.8	35.8	24.9		9.4	20.8	19.7	G	10.2	12.2	20.3		10.4	20.7	22.9	
9.3	39.8	47.6		9.0	23.3	20.2	9.2 G	9.8	14.2	12.9		10.4	22.2	13.3	
9.4	40.8	29.4	9.0 G	10.4	24.8	3.2		10.2	18.7	26.5		10.8	23.2	27.6	
10.8	47.8	12.9		10.8	25.3	54.2		10.8	23.7	43.4		10.2	29.7	19.9	
10.8	52.3	40.3		10.8	26.3	25.9		10.2	26.2	52.7		10.8	40.7	11.8	
10.2	53.8	14.1		9.3	28.8	48.3		10.8	29.7	7.9		10.8	41.7	53.9	
10.2	57.3	45.9		10.8	32.3	41.8		10.8	30.7	16.5		9.8	42.7	55.8	
10.8	5 2.3	9.6		9.4	33.3	46.2	9.0 G	9.6	34.7	24.0		9.2	48.2	34.2	9.0
10.4	7.8	12.2		10.8	34.3	39.9		10.0	41.7	21.4		9.8	54.2	1.6	
9.7	10.8	26.9	9.5	10.2	37.3	28.7		10.8	43.7	54.3		10.8	54.7	22.8	
10.8	14.3	4.3		9.8	37.3	8.5		10.0	45.7	46.8		10.8	59.2	31.8	
25pr.	+ 0 59.6	-6.0			+ 0 59.9	-6.1			+ 1 0.1	-6.2			+ 1 0.8	-6.2	

3481-3540.				3541-3600.				3601-3660.				3661-3720.			
mag.		9h.	-36°	mag.		9h.	-36°	mag.		9h.	-36°	mag.		9h.	-36°
9.0	15	1'2	2'2	10.6	17	46.2	24.5	9.8	20	45.6	9.4	10.6	23	33.6	27.1
8.5		10.2	25.4	9.8		49.7	16.5	10.4		48.1	4.8	9.7		39.6	54.7
10.8		10.2	12.7	10.4		55.2	23.9	10.0		50.1	21.0	8.8		40.1	23.3
9.8		11.2	53.9	10.4		59.2	29.5	10.8		54.7	1.9	10.8		44.6	13.6
10.0		12.2	23.6	10.4	18	4.2	43.5	9.0		58.1	14.8	10.8		45.1	41.7
10.8		13.2	49.3	10.8		5.2	1.4	10.8	21	0.1	6.7	10.8		45.6	1.0
9.0		13.7	50.3	10.8		8.2	7.4	10.8		0.1	21.7	10.8		57.1	47.9
10.8		21.2	21.7	9.8		13.7	23.9	10.8		5.9	0.8	10.8	24	0.0	6.0
9.0		23.2	48.6	10.8		15.2	16.1	9.8		10.1	49.1	10.8		2.1	15.0
9.4		23.7	46.4	10.8		18.7	6.8	10.6		14.1	54.4	9.7		2.1	58.8
9.7		29.7	23.5	10.8		23.2	8.2	9.8		15.1	25.9	10.6		5.6	54.2
10.0		30.2	16.0	10.8		24.7	16.1	10.8		16.0	14.9	10.2		24.1	39.5
10.4		34.2	21.4	9.2		28.7	50.5	10.8		16.6	38.7	10.6		24.1	41.9
10.8		37.2	19.5	9.7		34.7	53.2	10.0		25.6	14.4	10.0		34.1	33.6
10.8		38.7	4.5	10.6		37.7	30.3	10.8		26.6	29.9	10.8		36.6	42.7
10.8		39.4	25.5	10.8		38.2	19.3	10.4		31.1	39.6	10.8		52.1	33.9
9.4		40.7	17.6	10.8		38.2	23.2	10.8		32.1	30.0	10.8		57.1	23.7
10.8		43.2	38.0	10.0		38.7	4.9	9.0		32.6	18.0	10.2	25	2.1	17.0
10.8		45.2	5.8	9.2		42.2	7.8	10.2		38.6	17.3	10.0		5.4	2.1
10.8		45.7	40.8	10.8		44.2	49.0	10.0		40.6	3.8	9.5		6.1	22.1
10.6		45.7	12.6	10.4		45.2	27.0	10.2		41.1	5.9	8.0		8.6	32.4
10.8		51.7	51.6	10.8		48.3	59.0	10.8		50.1	48.9	9.0		9.1	2.0
10.8		55.9	58.3	10.0		50.2	15.6	10.0	22	3.6	32.6	10.8		12.1	34.9
10.4		56.2	24.6	10.8		56.7	25.0	10.4		4.1	52.2	10.8		19.1	11.9
10.8		59.7	12.6	10.8		57.3	20.0	10.2		5.1	45.9	10.0		20.6	45.9
10.4	16	6.2	52.5	10.2		58.2	18.9	10.2		10.1	45.0	9.3		21.1	25.2
10.2		8.9	58.6	9.8		59.7	14.9	9.5		10.1	46.5	9.0		23.1	27.9
10.4		9.2	10.5	10.0	19	4.2	46.2	10.8		11.1	2.4	10.8		26.1	15.2
10.8		9.2	37.2	10.2		4.2	24.3	10.8		16.1	3.4	10.8		29.1	54.4
8.9		11.2	19.6	10.8		4.3	42.1	8.1		16.6	20.2	10.8		32.0	8.2
10.8		14.2	51.5	10.8		11.2	58.5	10.8		17.1	9.9	9.0		33.1	5.8
9.4		18.2	13.6	10.8		15.2	39.4	9.8		18.1	4.6	10.8		42.1	55.3
10.0		19.2	12.9	9.6		23.7	33.0	10.8		19.1	21.1	10.8		42.1	25.0
10.0		19.2	53.5	10.8		24.7	28.7	10.8		21.1	6.7	10.8		44.1	17.9
10.6		25.7	12.1	10.8		27.2	20.1	10.8		29.6	55.1	10.8		45.1	18.9
9.8		25.7	8.2	10.8		29.2	42.4	10.4		30.1	42.9	9.3		51.6	16.2
10.0		26.7	48.5	8.7		31.2	24.8	10.8		31.1	58.8	10.8		59.6	5.5
9.2		34.7	38.7	10.8		35.3	23.5	10.8		31.1	9.5	10.8	26	1.1	52.2
10.0		39.2	29.6	10.0		36.7	34.6	10.2		38.1	54.7	9.8		1.6	11.8
10.4		40.7	2.7	10.8		38.2	35.1	9.2		39.1	49.1	10.8		6.6	1.9
10.8		45.2	41.6	10.8		41.3	4.1	10.2		46.6	55.0	9.8		7.7	19.8
10.0		46.2	52.7	10.4		41.7	28.9	10.8		48.1	21.7	10.6		8.7	4.9
9.5		48.2	38.2	10.8		44.7	30.6	10.6		48.6	49.8	10.0		10.5	1.9
10.0		50.2	14.0	9.3		46.2	46.7	10.0		52.1	51.9	10.8		10.6	42.0
10.0		53.7	51.8	10.0		49.7	0.5	10.8		58.6	8.2	8.2		21.7	12.0
10.8		53.7	28.3	10.4		50.7	15.4	10.0	23	2.1	17.7	10.8		26.7	5.9
10.4		54.7	28.6	9.6		51.2	42.2	10.4		2.1	55.3	10.8		30.7	54.0
9.8		59.7	38.2	10.6		51.2	28.0	10.8		7.1	8.0	10.8		34.6	3.7
10.0	17	3.7	31.8	10.4		51.7	51.9	10.4		10.6	28.2	10.8		38.7	18.9
10.8		9.7	18.1	9.8	20	5.2	10.7	10.0		10.6	31.4	10.8		39.6	52.9
9.8		13.2	26.5	10.4		10.8	56.6	10.4		13.6	22.8	9.7		39.7	3.8
10.0		17.7	10.1	10.2		17.4	0.7	10.4		15.1	54.0	10.4		39.7	32.0
10.8		19.7	52.9	9.3		17.6	30.0	10.0		18.6	8.9	10.0		40.2	53.3
10.6		23.2	38.9	9.5		21.6	54.1	10.4		19.6	46.0	8.7		49.7	18.6
10.4		24.7	22.2	10.8		25.6	31.1	10.4		20.1	40.4	9.0		51.2	29.6
10.8		28.2	36.2	10.8		31.0	4.0	10.4		21.1	11.1	9.6		53.7	5.1
10.0		29.7	16.9	10.8		31.6	36.1	10.4		24.6	38.8	10.4		54.2	33.8
10.0		38.2	6.6	9.0		31.6	43.9	10.6		30.1	14.3	10.4		55.7	32.3
10.0		41.2	22.3	9.0		40.1	16.0	10.2		32.6	40.7	10.8	27	0.6	11.1
10.0		43.2	14.9	10.0		44.1	4.8	10.8		33.1	51.0	10.2		0.7	30.3
25pr.	+1	0.6	-6.3	+1	0.8	-6.4		+1	1.1	-6.4		+1	1.4	-6.5	

3721-3780.				3781-3840.				3841-3900.				3901-3960.			
mag.	9 ^h .		-36°	mag.	9 ^h .		-36°	mag.	9 ^h .		-36°	mag.	9 ^h .		-36°
	m	s	'		m	s	'		m	s	'		m	s	'
10 ⁴	27	7.2	5.2	9 ⁸	31	25.2	53.9	9 ⁴	35	55.2	40.2	9 ³	42	44.2	46.3
10 ⁰		9.7	43.3	9 ⁸		29.7	56.6	9 ⁶		55.2	34.0	9 ⁸		53.2	29.7
10 ⁸		9.7	22.8	9 ⁸		39.2	20.8	9 ⁸		57.7	42.3	9 ⁴	43	25.2	49.4
10 ⁸		12.2	16.9	9 ⁰		40.2	16.9	8 ⁸		58.2	19.2	9 ²		31.7	6.0
9 ⁶		15.7	16.6	9 ⁴		44.7	37.0	9 ⁷	36	12.7	22.6	8 ⁸		37.2	43.8 8.5
10 ⁸		28.7	13.9	9 ⁸		46.7	10.8	9 ⁴		17.7	34.0	9 ⁸		44.0	57.4
10 ²		31.7	14.3	8 ⁹		49.2	28.7	9 ⁸		18.2	51.8	9 ⁴		51.2	12.6
10 ⁴		34.7	36.2	9 ⁸		49.2	14.8	9 ⁶		20.2	19.7	9 ⁸		57.2	44.0
10 ⁴		36.2	43.9	9 ²		58.7	53.7 9.5	9 ⁸		24.7	3.2	7 ⁶	44	13.7	36.2 6.5 GS-g
8 ¹		37.7	40.4 9.0	9 ⁷	32	3.7	22.1	8 ¹		49.2	30.8 8.0-	9 ⁸		23.2	34.8
10 ⁸		43.6	59.4	8 ⁶		5.2	47.7	8 ⁴		58.2	49.7 8.5	9 ²		24.2	40.2 8.8
10 ⁶		44.7	10.2	9 ⁷		24.2	51.9	9 ⁸	37	37.7	27.7	9 ⁸		28.2	42.0
10 ⁰		52.4	54.9	9 ⁸		41.2	44.9	9 ⁸		41.7	28.1	9 ²		29.2	23.6
9 ⁸		52.5	6.5	9 ⁸		44.2	21.3	9 ³		42.2	33.1	9 ⁸		34.2	41.6
10 ⁸		59.7	39.3	8 ²		45.7	21.9 8.5 GW-	9 ⁸		46.2	15.8	9 ⁸		48.2	50.4
9 ⁸	28	1.2	42.8	9 ²		47.2	6.1	8 ⁷		46.7	23.7 8.0	9 ⁸		54.2	17.2
9 ³		2.7	15.3	9 ⁴		50.2	7.8	9 ⁵		55.2	28.3	8 ⁹	45	28.2	40.4
10 ⁸		4.2	3.9	9 ²		54.7	37.3	9 ⁵		59.2	31.8	9 ⁸		35.7	3.8
9 ²		5.2	26.4	9 ²		54.7	2.3	9 ³	38	7.2	55.0 9.0	9 ⁶		39.7	13.0
10 ⁶		12.7	41.8	9 ⁸	33	15.2	15.9	9 ⁷		9.2	38.3	9 ⁸		42.7	49.1
10 ⁶		16.7	8.6	9 ³		19.2	50.1	9 ⁸		41.7	52.7	9 ²		50.2	14.8 9.0
10 ⁴		21.2	11.4	9 ⁷		24.7	13.1	9 ⁶		44.7	7.2	9 ⁵	46	9.2	8.0
10 ⁴		26.0	16.8	9 ⁶		28.7	14.0	9 ⁷		49.2	21.1	9 ⁰		16.7	8.0
10 ⁶		30.7	9.9	9 ⁸		29.9	59.9	9 ⁸		58.9	57.4	9 ⁷		18.7	38.5
10 ⁰		32.7	46.8	9 ⁸		30.2	10.0	9 ⁶	39	2.2	12.3	9 ⁸		40.2	54.8
10 ⁸		36.7	3.0	9 ⁴		33.2	8.0	9 ⁸		15.7	18.1	9 ⁸		43.2	57.0
9 ⁷		37.2	22.6 9.0	9 ⁸		37.7	15.3	9 ⁸		26.1	0.0	9 ⁸		53.2	56.1
10 ⁷		37.7	48.0	9 ⁵		39.2	10.3	9 ⁴		29.7	33.4	9 ⁸		56.5	59.6
9 ⁴		40.7	3.8	9 ⁸		40.2	21.3	9 ⁸		31.2	49.1	9 ⁶	47	5.2	55.5
9 ⁷		49.2	31.4	9 ⁸		40.7	47.2	9 ⁶		34.7	46.5	9 ⁸		6.7	43.2
10 ⁸		53.7	53.9	9 ⁸		45.2	23.6	9 ⁸		35.2	23.8	9 ⁸		15.7	14.8
10 ⁸		54.7	59.0	9 ³		47.7	31.0	9 ⁷		35.2	56.3	9 ⁸		24.2	52.4
10 ⁸		54.7	4.4	9 ⁸		53.7	3.2	9 ³		35.2	49.6	9 ⁸		25.2	53.1
9 ⁵		56.2	2.9	9 ⁶		59.2	32.0	8 ⁰		39.7	59.2 8.5	9 ⁷		27.2	9.9
9 ²		59.2	34.7	9 ⁷	34	7.7	5.5	9 ⁷		40.2	32.4	9 ⁴		29.7	9.2
9 ⁷	29	1.2	38.9	9 ⁸		9.2	21.1	9 ⁵		43.2	11.8	9 ³		33.2	43.9 9.0
9 ⁸		2.2	15.1	9 ⁶		16.4	58.0	9 ⁸		43.2	55.0	9 ⁶		41.7	38.2
8 ⁴		11.2	16.4 9.0	9 ²		19.2	16.1	9 ³		47.9	56.8	9 ⁶		43.7	39.4
8 ²		20.2	52.1 8.7 S	9 ⁰		20.7	6.7	9 ⁵		52.7	45.4	9 ⁶		45.2	3.8
8 ⁶		41.2	43.5 9.0	8 ⁸		29.2	3.4	9 ³	40	11.2	53.2	9 ³		53.3	57.8
8 ⁵		42.7	42.3 9.0	9 ⁸		33.2	44.2	9 ⁸		35.2	27.1	9 ⁴		54.2	20.0
9 ⁸		42.7	35.5	9 ⁸		35.3	20.2	9 ⁰		41.2	37.8	9 ⁸		55.1	57.6
9 ⁸		49.1	30.3	9 ⁸		36.7	30.7	9 ⁶		43.2	1.9	9 ⁶		58.2	38.0
9 ²		54.2	42.1	9 ⁸		40.2	29.9	9 ⁶		44.2	47.2	8 ⁶		59.2	50.4 8.5 G
9 ⁸	30	1.7	57.0	9 ⁸		41.7	32.0	9 ²		53.7	41.6	9 ⁶	48	2.7	47.1
9 ⁴		9.2	6.1	9 ⁶		47.7	38.4	9 ⁸		59.2	12.8	8 ⁵		4.2	40.6 9.0
9 ⁸		17.7	20.7	9 ⁸		48.2	23.1	9 ⁸	41	2.2	32.1	9 ⁶		31.7	37.2
9 ⁸		19.2	28.5	9 ⁸		49.2	58.0	9 ³		10.2	24.8	9 ³		33.2	18.9
9 ⁸		29.2	48.1	9 ⁸		59.2	15.7	9 ³		20.2	9.2	9 ⁸		39.2	12.9
9 ⁸		29.2	10.9	9 ⁸	35	4.2	49.0	9 ⁸		39.2	1.4	9 ⁸		43.2	23.1
9 ⁸		40.2	27.1	9 ⁸		16.2	46.7	9 ⁷		42.8	59.8	8 ⁷		46.2	1.8 -
9 ⁴		43.4	57.8	7 ⁸		31.7	35.5	9 ⁷		49.2	54.0	9 ⁵		46.7	53.0
9 ⁸		48.2	21.7	9 ⁶		36.2	52.8	9 ⁶		59.2	42.1	9 ⁶		56.2	50.6
9 ⁸		49.2	7.3	9 ⁶		37.7	34.0	9 ⁸	42	5.2	29.8	9 ⁶		59.2	58.2
9 ²		49.7	33.7	9 ⁷		39.2	4.8	9 ⁸		6.2	26.8	9 ⁸	49	2.1	16.9
9 ⁸		59.2	16.7	9 ⁸		41.2	59.4	9 ²		14.2	43.3	9 ⁶		2.2	59.1
9 ⁷	31	11.2	8.9	9 ²		43.2	33.4	9 ⁸		15.2	11.2	8 ¹		11.7	41.8 7.5 G-
9 ⁷		12.7	18.9	9 ⁸		49.7	21.5	9 ⁸		36.7	26.9	9 ³		18.7	23.6
9 ⁷		23.2	47.3	9 ⁸		50.1	43.9	9 ⁶		38.2	9.2	9 ⁸		19.7	20.0
9 ⁸		23.2	10.7	9 ⁶		51.7	4.8	9 ⁸		39.7	40.4	9 ⁶		23.7	38.8
25pr.	+1	1.7	-6.6	+1	2.1	-6.7		+1	2.6	-6.8		+1	3.2	-7.0	

3961-4020.			4021-4080.			4081-4140.			4141-4200.		
mag.	g ^h .	-36°	mag.	g ^h -10 ^h .	-36°	mag.	10 ^h .	-36°	mag.	10 ^h .	-36°
9.8	49	36.2 56.4	9.8	55	45.4 20.7	9.8	I	6.4 6.2	8.6	6	4.6 10.9 8.5 =
9.8		36.2 22.2	10.6		48.9 3.7	10.3		7.4 16.3	9.8		7.6 45.2
8.4		36.2 20.2	10.6		52.6 58.3	9.4		12.9 13.2	8.8		8.1 57.0 8.5
9.5		37.7 44.9 8.0	10.6		54.4 33.8	9.8		14.4 23.9	10.3		38.1 22.3
9.7		44.2 23.8	10.6	56	0.4 18.2	10.6		14.9 17.1	8.4		49.6 42.2
9.8		49.2 15.0	9.6		9.9 51.1	9.8		39.4 37.7	10.6		52.1 58.1
9.6		51.8 58.2	10.6		22.9 28.4	8.8		41.4 5.5 8.5 -	10.6		53.6 52.1
9.8		54.2 19.4	9.4		25.4 46.9 9.5	10.6		43.9 35.1	9.4	7	2.3 2.8
9.8		54.7 27.1	10.2		27.4 44.0	10.3		44.9 46.0	10.3		7.6 56.6
9.8	50	1.2 14.4	10.0		40.4 44.2	10.6		45.4 34.9	9.4		9.6 20.6
9.8		10.2 12.7	10.0		40.4 33.6	10.6		50.9 40.7	8.8		34.6 53.1
9.3		12.7 12.9	10.4		41.4 11.4	9.2		55.9 3.7 8.5 =	10.6		38.1 37.5
9.8		19.2 46.5	10.3		50.4 19.2	8.6	2	6.9 53.7 8.5	9.8		39.6 38.6
9.3		25.7 29.8 9.0	10.6		57.4 52.2	10.6		8.9 57.2	9.4		54.6 56.5
9.0		26.7 18.2	9.8	57	4.9 55.0	9.8		11.9 10.3	10.6	8	0.6 3.3
8.8		29.7 34.1 8.5	10.4		11.4 13.2	10.6		31.9 41.2	10.3		2.6 18.2
9.8		33.2 43.2	9.8		14.9 24.9	10.6		36.4 10.9	10.6		9.6 34.7
9.8		45.2 38.8	10.6		17.4 49.0	10.2		37.4 15.1	10.6		17.1 47.7
9.3		47.2 47.8	10.0		17.9 24.1 9.5	7.0		38.9 43.3 7.0 GS-t	9.2		18.1 49.8 9.5
9.8		49.2 4.7	10.3		21.9 3.1	9.8		40.4 11.1	10.2		20.1 51.3
9.8		49.2 47.2	10.6		26.4 50.0	8.4		44.4 26.9	10.0		21.8 0.3
9.4	51	9.2 38.0	10.3		30.9 43.7	10.2		57.4 20.4	10.6		28.1 36.5
9.5		21.2 44.0	9.8		39.4 12.0	9.0		58.1 57.5 9.0	10.3		39.6 50.0
9.3		23.7 32.6 10.0	10.4	58	0.4 51.8	10.6		59.4 54.1	10.2		40.0 18.9
8.7		33.7 55.0 9.5	8.0		3.4 44.4 9.0	10.6	3	0.4 42.5	9.8		44.0 22.0
9.5		38.7 52.0	10.6		11.9 12.6	9.8		1.9 54.5	10.6		47.5 44.3
9.8	52	0.7 24.7	10.3		15.9 26.7	10.4		7.9 58.2	10.0		51.0 27.8 9.5
9.8		3.2 7.6	9.6		18.4 28.5	9.4		19.4 15.8	10.6	9	8.5 28.9
9.4		9.7 5.0	9.8		24.4 19.0	10.2		19.4 13.7	8.4		12.0 1.8 8.5 =
9.8		11.2 12.8	10.2		29.4 10.4	10.4		26.4 47.5	10.6		12.0 6.4
9.5		14.2 36.8	9.8		29.4 39.9 9.0	9.2		29.4 40.8 9.5	10.0		13.5 3.9
9.8		16.2 6.9	10.0		32.9 21.1	9.8		36.4 5.2	10.6		17.0 20.3
9.7		45.2 34.1	10.3		37.4 49.9	9.8		44.4 16.3	10.2		22.0 42.4
9.8		49.2 51.8	10.6		48.9 41.2	10.2		49.4 42.7	10.0		25.0 47.7
9.8		50.2 11.8	10.3		57.4 58.8	9.8		52.9 45.6	10.4		30.0 43.3
9.8		54.7 39.0	10.6	59	0.4 32.1	9.8		58.9 35.1	9.8		32.8 0.8
9.4	53	4.2 13.8	10.3		2.4 54.1	10.2		59.4 23.9	10.4		35.0 50.5
9.8		5.7 5.3	10.6		3.4 47.0	9.8	4	2.4 38.9	10.4		41.0 32.0
9.8		13.5 58.7	10.6		5.4 15.8	10.0		4.4 44.5	9.8		48.0 16.1
9.5		21.7 14.8	9.8		8.4 12.8	10.6		8.4 59.1	10.3		54.0 9.2
9.8		23.6 13.2	10.3		8.4 38.4	8.6		9.4 55.1	10.4	10	0.0 46.3
9.6		29.1 14.6	10.3		15.9 53.6	9.8		11.4 32.8	9.8		1.5 39.8
9.8		39.2 19.1	10.6		24.4 10.3	10.6		24.9 9.5	10.6		7.5 51.9
9.3		40.2 34.1	10.6		26.4 6.9	8.4		26.9 9.0	9.8		15.0 37.5
9.0		47.2 46.8	9.8		27.9 23.6	9.4		28.4 5.4	10.2		15.5 42.7
9.8		49.8 10.8	10.6		28.9 7.9	9.8		39.4 42.9	9.4		16.5 21.4 10.0
9.2		52.0 46.3	10.6		29.4 22.9	10.0		44.4 19.2	10.6		25.0 11.1
9.4		56.8 10.3	10.6		38.5 25.1	10.6		46.4 34.1	10.4		28.5 44.8
10.6	54	15.0 45.0	9.4		41.9 41.1	10.3		59.4 15.1	10.0		32.0 25.4
10.6		28.8 49.5	7.8		44.4 3.8 8.0 G=	10.4	5	7.1 24.7	10.2		46.5 45.3
10.3		30.9 26.7	10.0		49.4 35.0	10.6		24.6 32.0	8.0		54.5 17.1 7.5 G
9.4		43.4 27.2	9.6		49.9 54.0	10.6		26.1 28.0	10.6		58.0 57.5
10.6		46.4 54.4	10.4	0	3.9 52.3	9.6		29.6 13.8	10.2	II	2.0 18.1
10.3		50.9 53.5	10.6		4.4 42.5	10.2		32.1 4.6	9.4		9.0 1.0
8.6		57.4 8.4 =	9.0		9.9 0.8 9.0	10.4		33.6 25.7	10.2		11.0 19.1
10.6		59.7 0.8	10.6		18.7 2.0 ?	9.8		38.3 2.4	9.8		15.0 28.1
10.6	55	15.4 56.8	9.8		21.4 20.8	9.8		53.1 26.1	10.6		25.0 33.1
10.6		15.9 49.9	9.8		53.4 17.9	10.4		57.6 39.6	10.0		29.5 15.4
9.8		17.4 14.2	9.4	I	2.9 14.0	10.6		58.1 8.0	10.6		35.0 53.3
10.6		30.9 3.2	10.6		4.6 57.9	10.2		58.6 13.5	10.6		40.0 2.7
25pr.	+1	3.7 -7.1	+1	4.3	-7.2	+1	4.8	-7.3	+1	5.3	-7.4

4201-4260.			4261-4320.			4321-4380.			4381-4440.		
mag.	10 ^{h.}	-36°	mag.	10 ^{h.}	-36°	mag.	10 ^{h.}	-36°	mag.	10 ^{h.}	-36°
10.6	II 41.2	32.5	9.8	16 45.0	48.8	10.2	20 30.1	41.2	10.2	24 57.3	19.3
10.6	44.2	31.9	10.6	53.5	47.1	10.2	38.3	54.4	10.2	25 0.8	48.0
10.6	45.0	10.0	10.6	55.0	27.8	10.4	43.8	9.5	10.4	12.8	31.0
10.6	45.5	54.2	10.6	57.5	24.9	9.4	48.8	28.1	8.8	15.8	8.6
10.6	48.5	11.7	10.0	17 0.0	53.3	10.4	51.8	53.4	10.4	17.8	2.1
10.6	49.5	15.9	10.6	5.5	3.6	9.8	56.8	41.6	10.4	18.8	58.2
10.6	50.0	33.5	10.3	8.0	22.6	9.0	21 7.3	28.6	10.4	27.3	49.0
9.4	52.0	41.7	9.0	16.5	27.8	10.4	9.3	22.9	8.8	27.8	19.6
10.6	53.5	39.7	9.8	19.0	33.3	10.4	13.8	7.7	10.4	32.9	43.3
10.6	12 19.8	58.2	10.4	21.5	13.3	10.4	14.8	0.0	10.0	36.8	48.2
10.0	20.0	5.3	10.6	23.0	34.6	9.5	18.3	40.8	10.4	54.8	11.1
9.6	21.0	33.4	9.0	26.5	42.7	10.0	20.3	59.0	10.4	26 2.8	48.3
9.8	21.5	55.1	10.3	35.0	36.6	10.0	20.8	20.0	10.4	27.8	25.2
10.6	34.0	2.0	10.2	38.5	8.8	10.2	21.0	58.0	10.4	38.8	52.0
9.6	41.0	43.1	10.6	49.5	21.7	10.2	21.3	21.3	10.4	49.3	50.0
9.4	42.5	10.8	10.0	51.0	46.8	10.4	29.5	59.6	10.4	27 0.8	6.0
10.6	44.0	50.9	10.0	51.8	59.2	8.7	37.8	34.6	9.8	3.8	23.1
10.3	53.0	24.5	8.5	18 1.0	0.4	9.6	41.0	57.2	9.8	3.8	32.8
10.6	13 1.0	8.5	10.4	6.0	33.6	9.8	41.8	23.2	10.4	6.8	30.4
10.6	4.5	44.3	10.6	11.0	36.2	10.2	42.8	56.1	8.7	9.3	25.5
9.8	9.0	53.0	10.6	11.0	5.4	10.0	54.8	57.5	9.6	9.8	17.0
7.4	9.5	10.8	10.0	16.0	42.6	10.4	22 8.3	49.0	10.4	16.8	19.2
9.4	30.0	27.0	9.8	17.3	57.7	9.6	9.3	59.6	10.0	22.3	53.5
10.3	31.5	48.7	10.6	20.6	55.3	9.8	9.8	20.3	10.0	27.8	38.6
9.8	40.0	23.4	8.8	28.0	40.5	10.4	16.8	32.5	10.2	28.8	18.0
9.0	46.8	57.4	9.2	30.0	41.9	9.1	19.3	19.0	9.4	29.8	3.4
10.3	48.0	28.1	10.6	30.5	9.7	10.0	19.8	9.0	10.4	33.3	17.0
9.8	51.5	22.6	10.6	33.1	56.5	9.6	20.3	10.9	10.2	35.8	12.6
9.2	52.0	3.3	10.0	45.0	53.0	9.0	23.7	57.2	10.4	37.8	47.8
10.2	14 2.5	12.5	10.4	49.7	16.1	9.6	29.3	51.6	9.8	39.3	4.0
10.3	17.0	25.6	10.6	52.0	25.3	9.8	34.3	26.8	10.4	48.3	6.7
9.8	29.5	14.9	10.6	52.5	56.7	9.6	42.8	3.3	10.4	49.0	1.4
10.3	34.0	6.8	10.6	53.1	26.4	10.0	49.8	7.9	10.4	50.8	51.3
9.8	35.0	55.4	10.3	19 1.6	20.9	10.4	54.3	13.6	10.4	7.3	22.8
10.4	44.0	5.7	10.4	11.3	27.9	9.4	15.8	19.2	10.4	10.8	10.2
9.8	48.0	56.2	9.6	15.8	8.0	10.0	25.8	8.0	9.4	18.8	30.4
10.6	15 2.5	40.5	10.4	20.3	50.9	8.2	30.8	16.0	10.4	20.6	59.7
9.8	4.5	7.5	9.8	24.1	4.6	10.4	36.3	0.2	9.5	30.3	10.1
9.8	5.0	22.3	10.4	29.8	20.3	9.8	41.8	21.8	10.4	35.3	52.0
10.6	6.0	17.5	9.4	30.3	8.9	9.6	41.8	3.3	7.0	40.8	44.4
9.8	12.0	29.8	9.8	30.3	53.1	8.6	42.5	0.8	10.2	41.3	6.0
10.6	12.8	57.2	10.4	37.8	50.0	10.2	50.3	24.3	10.4	45.3	9.2
10.6	14.5	26.5	10.4	38.8	55.4	10.2	52.8	18.1	10.4	49.8	21.8
10.2	18.5	51.2	10.2	40.3	31.8	9.6	54.3	27.5	10.2	51.3	7.3
10.4	21.5	24.6	9.6	43.3	41.2	10.4	58.3	9.0	8.2	54.8	42.6
10.6	22.5	56.2	9.0	49.3	37.7	9.8	58.8	59.3	10.4	58.3	55.0
10.4	41.5	56.3	9.0	49.8	3.1	9.4	59.5	51.7	9.6	59.3	0.8
8.0	45.5	30.2	10.4	52.3	19.8	10.2	24 8.8	16.2	10.0	29 13.3	17.6
8.5	51.7	2.9	10.4	53.6	49.1	9.0	9.8	15.2	9.6	14.8	36.6
8.4	52.5	43.4	10.0	56.3	27.0	9.8	11.3	22.6	9.8	29.3	40.0
10.6	53.5	34.8	9.1	56.8	7.0	10.4	26.3	47.1	9.1	40.3	18.1
9.8	56.0	22.8	10.2	59.3	22.0	10.0	29.3	56.0	10.2	40.3	16.5
9.8	57.5	16.8	10.4	20 4.8	15.6	8.4	36.0	3.2	10.0	40.8	37.4
9.2	7.0	17.4	10.4	5.3	38.0	10.0	36.8	40.4	10.2	46.3	34.4
10.6	9.0	23.5	10.4	11.3	57.8	10.4	37.9	47.3	7.7	51.3	42.9
9.4	16.5	28.1	9.6	13.3	11.4	9.8	37.9	59.7	9.8	51.8	52.0
10.0	23.0	2.2	9.0	13.8	15.5	10.4	40.8	5.4	10.4	54.3	11.8
10.6	30.5	19.0	9.8	18.3	45.0	10.4	43.3	10.8	9.2	30 7.8	28.5
10.6	32.0	22.9	9.6	19.3	56.1	10.2	43.8	16.7	8.8	12.8	8.4
10.6	44.5	5.0	9.8	23.8	40.6	10.4	49.3	12.4	10.4	23.9	10.9
25 pr.	+1 5.8	-7.5	+1 6.3	-7.6		+1 6.7	-7.6		+1 7.2	-7.7	

4681-4740.			4741-4800.			4801-4860.			4861-4920.		
mag.	10 ^h .	-36°	mag.	10 ^h .	-36°	mag.	10 ^h -11 ^h .	-36°	mag.	11 ^h .	-36°
8.8	47	33.1	10.2	54	28.9	10.2	59	58.4	10.2	7	33.9
9.6	48	8.6	10.2		42.9	10.2	0	8.4	9.5		39.9
8.3		23.6	9.6		43.9	9.8		15.9	9.8		52.9
10.0		31.6	9.5		47.9	10.2		24.9	9.6	8	53.4
10.2		38.6	8.9		56.0	9.4		25.4	9.6		0.9
10.2		40.6	10.0	55	0.4	9.2		26.9	9.5		13.9
10.2		54.6	9.8		18.9	9.6		56.9	9.8		14.9
9.0		55.6	10.0		19.4	9.8		56.9	10.2		19.4
10.2	49	21.1	9.6		19.9	10.0	1	7.9	10.2		24.4
8.2		33.1	9.8		23.9	9.4		24.9	9.5		34.4
											19.3
9.8		39.6	10.0		29.1	8.9		28.4	10.2		42.4
9.6		41.6	9.8		33.4	10.2		29.9	9.5		49.4
10.2		42.6	10.0		34.4	10.2		33.9	9.8	9	3.1
9.2		57.2	10.0		34.9	9.8		45.4	10.2		3.8
9.6		58.1	8.9		37.9	10.0		59.4	9.8		8.8
9.0	50	28.1	9.2		38.4	10.2	2	29.4	8.8		10.4
10.2		38.6	10.2		38.4	9.8		29.4	9.0		22.4
10.2		39.2	10.2		48.4	10.0		34.4	10.0		25.3
10.0		40.5	9.2		52.9	10.2	3	11.4	10.2		26.8
6.6		54.5	10.2	56	3.0	9.6		15.9	9.6		35.6
											10.0
10.2	51	2.5	8.9		9.4	10.2		26.9	10.2		39.6
10.0		14.5	9.5		11.4	10.2		39.4	10.2		58.3
10.2		16.5	10.2		17.9	10.2		47.4	10.4	10	0.1
9.8		20.0	10.2		19.9	9.5		49.4	10.2		1.3
10.2		27.5	10.0		28.9	9.8		58.4	10.2		15.1
9.5		33.5	9.8		34.4	9.8		58.4	9.4		18.1
10.2		50.5	8.6		39.4	10.2	4	1.4	10.4		27.3
10.0		53.0	10.2		44.4	9.5		3.9	10.4		29.3
9.6	52	1.0	8.6		50.9	9.5		13.4	9.6		31.8
10.0		7.0	9.5		53.9	9.6		17.4	9.4		33.7
											57.8
10.2		14.5	9.4		56.4	10.2	9.5	20.4	8.6		40.3
10.2		16.0	10.2		58.9	10.2		27.9	10.4		47.3
10.2		22.5	10.2		58.9	8.8		28.9	10.0		48.3
10.2		23.5	10.2		0.9	10.2		33.4	10.0		50.3
9.6		24.0	9.5		11.4	10.2		33.4	9.6	11	4.3
9.0		29.0	10.0		14.9	10.2		45.4	10.4		13.3
10.0		29.0	9.6		27.4	10.2		51.4	8.6		19.3
9.6		35.0	9.8		30.9	10.2		55.4	10.0		23.3
10.2		38.8	10.2		33.4	8.8		57.9	10.4		31.3
9.4		39.3	10.2		34.4	10.2	5	1.9	9.2		34.8
											5.8
9.6		48.5	10.2		35.4	10.2		14.4	10.4		35.3
9.4		53.5	10.2		38.4	8.6		20.4	9.8		52.8
9.2		54.5	10.2		57.9	9.4		21.9	8.2		53.8
8.6	53	0.0	10.2		3.4	9.6		29.4	7.8		57.3
10.2		0.5	10.2		3.4	9.8		30.4	10.4	12	0.3
9.8		9.0	9.6		3.9	9.8		32.3	9.4		11.8
10.2		15.0	10.2		3.9	9.8		52.9	8.3		15.0
9.8		18.5	10.2		13.4	9.6		53.4	10.0		28.3
9.8		18.7	10.0		18.9	10.2		53.9	10.2		29.8
10.0		19.0	8.4		21.4	8.8		6.1	9.7		31.3
											51.1
10.2		19.5	7.6		24.3	9.8		19.4	9.6		31.3
9.8		21.5	10.2		30.9	9.0		19.4	10.0		32.3
9.6		30.5	10.2		30.9	9.8		22.9	10.0		42.3
10.2		54.5	10.2		41.9	9.8		24.4	10.4		42.3
10.2		55.0	9.2		50.4	10.2		40.8	10.2	13	2.8
10.0		55.0	9.8		59	21.4		46.4	10.4		3.3
9.6	54	8.0	10.0		23.4	9.2		47.4	9.2		20.3
9.5		11.4	10.2		28.4	10.2		7.16.4	9.8		21.3
9.6		13.9	10.0		49.4	10.2		17.4	9.6		26.8
9.6		16.9	10.2		54.4	8.6		26.9	9.4		31.8
											2.9
25pr.	+1	9.6	-8.0	+1	10.1	-8.0	+1	10.8	-8.1	+1	11.6

4921-4980.			4981-5040.			5041-5100.			5101-5160.			
mag.	11 ^h .	-36°	mag.	11 ^h .	-36°	mag.	11 ^h .	-36°	mag.	11 ^h .	-36°	
10.4	13 49.3	18.3	8.0	21 13.7	50.9	8.5	10.4	26 43.7	16.9	7.4	33 19.8	44.3
10.4	14 3.3	43.7	10.4	29.2	57.2	10.4	51.7	15.3	9.4	20.8	20.9	
9.0	4.3	21.3	10.4	34.7	47.5	10.4	55.2	47.3	9.7	28.8	19.2	
10.4	5.3	40.3	10.4	40.7	50.5	10.4	27 7.2	29.4	10.0	29.8	14.8	
10.4	12.8	46.0	8.7	48.7	36.0	10.2	8.7	42.3	10.4	35.3	41.1	
10.4	18.5	17.1	8.8	58.2	19.9	10.4	12.7	9.8	10.4	38.3	43.6	
9.0	24.0	57.6	10.4	22 1.7	2.1	10.0	23.2	50.2	9.2	40.8	48.0	
7.4	26.0	52.8	7.4	2.7	23.9	9.8	38.0	57.8	8.8	49.8	12.3	
10.0	15 4.5	43.4	10.0	14.7	26.7	9.8	42.2	17.3	10.4	54.3	41.7	
10.0	7.0	41.7	10.2	19.7	18.5	9.2	49.5	56.9	9.4	34 2.7	44.7	
10.4	12.0	40.4	10.4	40.7	37.0	10.2	50.7	7.5	10.4	27.5	25.6	
9.6	13.0	27.6	9.8	51.7	3.9	10.4	52.2	5.5	10.4	30.8	10.6	
9.8	13.5	20.5	10.4	23 12.7	3.2	9.4	28 1.7	17.1	10.2	33.5	40.9	
10.0	29.5	3.4	10.0	17.7	22.7	10.4	7.2	46.9	10.2	43.5	52.0	
9.8	36.5	10.0	9.2	20.7	37.4	10.4	23.7	17.2	9.4	49.8	58.6	
9.0	39.5	23.2	9.2	21.2	47.0	10.4	25.2	23.2	10.2	51.8	53.3	
9.0	40.5	22.0	10.4	34.2	26.9	10.4	45.2	1.3	9.7	35 0.3	27.2	
9.8	16 0.5	56.1	10.4	40.2	1.7	9.4	53.7	23.6	9.8	11.7	11.1	
10.0	1.5	36.8	10.2	41.2	25.1	9.2	54.4	59.1	9.8	19.6	27.8	
9.0	8.5	12.9	10.4	43.7	44.0	9.4	29 20.4	59.1	8.6	20.6	6.1	
9.4	14.0	43.4	10.4	45.7	51.7	10.4	21.7	14.0	10.0	23.8	59.0	
9.8	16.5	37.0	10.0	50.7	8.9	10.2	29.7	26.2	10.0	29.6	58.0	
10.2	45.0	13.6	9.2	52.2	8.5	10.0	32.2	48.6	10.0	33.2	1.1	
9.8	56.0	52.0	10.4	52.7	33.9	9.6	35.2	58.1	10.0	35.7	12.8	
10.4	17 7.5	42.9	10.2	58.7	31.1	9.4	38.7	46.6	9.4	36.1	2.2	
10.4	12.0	22.0	10.0	24 8.7	27.1	9.7	39.8	32.5	9.2	36.6	16.1	
8.3	38.5	45.4	10.0	18.2	4.3	9.4	47.8	19.8	10.0	45.6	57.9	
10.4	38.6	46.3	10.2	20.7	40.7	9.0	50.8	27.4	9.8	49.6	6.0	
9.7	43.5	6.0	10.2	21.7	7.4	10.0	51.6	0.7	10.0	36 12.6	39.0	
10.2	18 9.5	43.6	10.4	25.7	7.9	9.7	54.8	49.3	10.0	15.6	11.3	
10.4	19.5	21.7	9.0	28.2	4.9	10.2	55.3	50.1	9.2	25.6	54.9	
8.3	23.0	23.7	10.4	29.7	23.5	10.4	55.8	7.5	9.7	29.6	51.8	
8.3	29.5	30.0	9.8	38.7	31.7	8.3	30 1.8	22.1	9.7	30.1	48.1	
9.7	30.5	25.0	9.8	39.2	15.3	10.4	4.3	42.2	9.3	33.1	42.3	
8.6	30.5	17.6	8.3	46.5	57.3	10.4	4.8	14.9	8.5	39.6	54.7	
10.4	39.5	55.4	10.0	48.2	36.0	9.0	6.0	58.2	9.4	43.6	56.1	
10.0	46.5	29.8	10.4	58.7	29.1	9.0	7.8	29.2	10.0	50.1	23.1	
8.8	49.5	3.2	10.2	25 5.7	21.3	10.4	17.8	21.6	10.0	37 2.1	19.0	
10.4	19 1.0	53.9	10.4	8.2	46.1	10.4	28.8	12.3	7.1	14.6	29.7	
10.4	5.2	29.3	10.4	34.7	27.6	6.6	30.8	32.7	9.8	19.6	43.6	
10.4	7.7	43.1	9.4	35.2	12.1	9.7	34.8	21.6	9.0	22.1	26.7	
10.4	21.2	55.1	10.4	35.7	37.4	8.3	38.3	20.8	10.0	27.6	32.1	
10.4	27.2	54.1	10.4	37.7	10.3	9.8	38.8	54.0	8.6	55.1	4.9	
10.4	29.7	57.3	10.4	40.7	31.2	10.0	38.8	46.6	9.3	59.6	32.1	
10.2	46.2	16.1	10.0	48.2	13.0	9.6	46.8	56.5	10.0	38 9.6	29.8	
8.7	48.2	13.0	10.4	49.7	36.5	8.0	31 20.0	2.2	10.0	11.1	53.3	
9.0	20 5.7	46.3	10.4	54.2	54.1	10.4	21.8	2.7	9.8	14.6	33.5	
9.8	9.2	37.7	10.4	54.7	35.9	9.6	26.8	57.2	9.6	23.1	39.7	
10.4	9.7	0.1	9.7	59.7	16.4	9.6	27.3	10.7	10.0	24.6	7.6	
10.2	16.7	52.3	10.4	59.7	19.0	8.8	50.8	32.9	10.0	40.6	38.9	
10.4	16.7	16.1	8.8	26 4.7	16.7	8.8	51.6	59.1	9.3	49.9	58.3	
10.4	25.2	28.7	9.4	9.7	33.0	10.4	55.8	35.4	9.3	56.6	49.4	
10.4	27.7	18.5	10.0	18.7	9.7	9.0	55.8	7.2	9.7	56.6	15.6	
8.4	28.7	11.7	10.0	19.7	33.8	9.8	32 29.3	5.6	9.7	58.6	28.8	
9.8	31.7	22.5	10.4	26.2	11.3	9.6	29.8	51.8	10.0	39 2.6	7.4	
10.2	34.7	19.1	10.4	27.7	45.5	9.7	42.8	29.2	7.9	14.6	55.8	
10.4	37.7	23.6	10.4	28.9	25.6	9.4	53.8	19.1	8.9	35.1	47.3	
10.0	43.7	18.0	10.0	33.2	4.1	9.7	33 0.8	57.3	10.0	41.6	16.9	
10.4	49.7	39.4	9.2	39.2	49.0	10.4	15.3	33.2	10.0	43.6	33.9	
9.7	53.7	38.1	10.4	39.7	40.8	9.4	15.8	15.8	9.8	49.0	2.7	
25pr.	+1 12.3	-8.2	+1 12.9	-8.3		+1 13.6	-8.3		+1 14.2	-8.3		

5161-5220.				5221-5280.				5281-5340.				5341-5400.			
mag.	11h.		-36°	mag.	11h.		-36°	mag.	11h-12h.		-36°	mag.	12h.		-36°
	m	s			m	s			m	s			m	s	
10.0	39	49.1	13.2	10.0	46	17.6	55.5	9.2	52	37.6	6.1	9.6	0	44.1	11.7
9.5		52.6	46.0	9.8		19.6	50.2	9.8		37.6	36.2	9.6	I	0.7	52.9
10.0	40	9.1	12.2	9.6		29.1	49.6	10.0		42.1	8.4	9.0		11.7	29.3
10.0		43.6	17.8	10.0		39.6	1.0	9.5		42.6	6.2	10.2		29.7	12.4
10.0		53.6	32.6	9.8		43.6	29.1	10.0		48.6	46.6	9.6		39.7	4.8
9.2		54.6	10.2	10.0		44.6	3.9	10.0		54.6	2.3	9.6		44.9	2.4
10.0		55.1	2.8	9.2		55.1	12.1	10.0		59.1	22.7	9.2		57.7	33.1
9.2		56.1	26.1	9.6		58.6	29.0	10.0	53	1.6	20.9	9.6		57.7	14.8
9.4	41	11.6	48.1	10.0		58.6	47.8	10.0		33.3	57.8	9.4		58.7	18.6
10.0		20.1	15.0	8.5	47	21.1	36.3	9.0		35.6	43.6	10.2	2	28.7	36.2
8.5		21.1	41.5	9.6		21.4	19.5	9.8		38.6	27.2	10.2		32.6	11.5
9.7		32.6	52.2	10.0		22.6	34.1	8.2		53.1	3.0	10.1		40.7	12.5
9.8		40.6	39.4	10.0		26.0	1.4	10.0	54	18.6	35.1	9.7		54.2	56.5
8.5		41.6	34.0	10.0		40.6	3.4	8.1		26.1	47.0	9.6	3	20.2	34.7
9.4		43.6	28.3	10.0		47.4	59.6	9.2		52.6	15.8	9.7		26.7	34.7
10.0		48.6	23.2	9.8		49.6	3.5	9.3	55	9.6	55.2	9.4		38.2	7.8
10.0		55.6	25.6	9.2		53.6	50.0	9.0		34.6	1.0	9.6		44.7	8.0
9.6	42	9.6	52.7	8.5		54.1	54.3	8.7		46.0	0.0	8.9		48.7	29.8
10.0		9.6	47.1	10.0		54.1	0.1	10.0	9	50.1	8.4	10.1		59.7	54.9
10.0		18.6	4.1	9.4	48	3.1	49.0	9.3	56	1.1	2.4	10.2	4	7.9	59.3
9.4		22.1	16.0	9.6		9.6	13.0	10.0		9.6	11.2	9.8		8.6	41.7
9.5		23.1	10.7	10.0		12.6	7.8	9.2		19.6	54.6	7.8		8.7	8.3
9.6		31.1	32.4	9.0		14.6	19.4	8.4		21.1	17.8	8.8		12.2	41.4
9.2		51.1	52.3	9.7		15.1	13.2	10.0		26.6	36.1	10.1		15.7	16.9
9.8	43	6.1	40.0	10.0		28.6	18.3	9.2		41.1	55.9	10.2		20.7	17.9
9.5		9.6	58.5	9.6		31.1	56.2	9.7		47.1	6.7	8.8		26.7	9.0
10.0		12.1	5.1	10.0		44.6	17.0	10.0		47.6	5.1	9.4		30.2	51.1
10.0		38.1	38.0	9.3	49	8.0	1.7	10.0		51.6	20.8	9.6		30.7	8.5
10.0		39.6	16.7	8.7		8.6	35.5	9.5		56.1	12.7	9.9		31.7	40.0
9.6		48.6	18.4	10.0		19.6	7.1	9.4	57	3.1	55.5	10.2		36.7	46.9
9.5		57.6	24.0	9.5		31.6	7.8	8.9		4.6	38.9	10.2		44.7	15.6
8.6	44	2.1	10.4	9.3		33.6	57.2	9.2		5.1	50.9	9.7		46.7	5.1
9.0		10.6	10.3	9.4		34.6	10.6	8.6		8.6	13.0	10.2		57.7	1.1
8.0		19.4	59.2	10.0		36.1	35.0	9.7		11.1	31.0	9.7	5	8.2	33.0
9.5		29.6	18.2	10.0		42.1	8.3	10.0		19.1	47.7	9.2		9.7	46.1
9.0		43.6	56.2	9.4		51.1	14.4	9.4		29.1	56.5	10.2		13.2	31.2
10.0		48.1	46.4	10.0		55.6	32.4	10.0		39.6	3.6	10.2		26.7	54.3
9.5		49.6	20.4	9.3	50	4.6	2.8	9.0		41.6	29.5	8.4		43.7	53.1
9.7		49.6	29.0	9.8		6.1	56.5	9.5		45.1	51.1	9.6		46.7	12.0
7.8		53.6	14.3	10.0		14.1	30.4	10.0		54.6	48.8	9.7		48.2	53.1
10.0		53.9	57.4	9.0		18.6	35.6	10.0	58	4.6	41.7	10.1		58.7	43.8
10.0		54.6	16.0	9.8		21.1	10.0	9.6		15.6	50.6	10.0	6	7.2	27.5
9.2	45	5.1	4.4	9.2		41.6	9.1	9.0		17.6	22.2	10.1		7.7	50.2
10.0		9.6	30.6	10.0		41.8	58.8	8.4	59	2.6	51.4	8.2		18.7	49.8
10.0		13.4	34.0	9.7		43.1	14.3	10.0		9.6	44.8	9.4		22.7	41.4
9.8		17.6	26.3	9.2		48.1	33.1	9.5		18.6	8.8	9.8		37.7	34.2
9.8		19.6	59.5	9.8		53.1	9.8	10.0		19.2	6.2	10.2		38.7	44.1
10.0		30.6	0.1	9.5	51	12.1	55.7	9.3		32.1	53.5	9.7		40.7	42.0
9.7		32.6	29.2	9.0		21.8	57.2	10.2		33.7	48.1	10.2		42.2	26.3
10.0		39.6	16.2	9.2		40.1	46.0	8.6		38.4	23.4	9.4		48.7	13.2
8.9		50.1	16.2	9.7	52	3.6	21.4	9.7		49.9	29.1	10.2		58.2	8.1
9.3		51.1	33.3	9.8		11.1	16.2	8.5		55.4	38.7	9.8	7	3.7	47.2
9.8		52.6	42.9	9.6		14.6	34.9	10.2		55.6	33.9	10.2		17.7	4.0
9.4	46	11.1	45.6	10.0		19.1	7.8	10.2		57.9	26.9	10.2		20.2	6.1
9.7		13.1	17.3	10.0		19.6	30.9	10.1		59.1	10.6	9.4		23.7	26.4
9.4		15.3	59.7	9.8		26.0	1.0	10.2		0.4	12.6	10.2		28.7	18.2
9.3		15.6	38.8	10.0		26.1	45.0	10.1		4.4	23.7	9.0		30.2	13.0
9.0		16.1	10.0	10.0		26.6	49.0	9.6		27.9	31.1	9.6		30.2	22.8
9.7		16.1	4.0	9.5		29.6	22.0	10.2		32.7	57.8	8.0		37.7	2.0
10.0		17.4	40.2	9.8		33.6	55.0	9.7		39.9	47.6	10.2		38.7	19.9
25pr.	+1	15.0	-8.3	+1	15.6	-8.3		+1	16.5	-8.4		+1	17.4	-8.4	

5641-5700.				5701-5760.				5761-5820.				5821-5880.			
mag.	12 ^h .	-36°		mag.	12 ^h .	-36°		mag.	12 ^h -13 ^h .	-36°		mag.	13 ^h .	-36°	
	m	s	'		m	s	'		m	s	'		m	s	'
9.6	38	31.4	48.1	9.2	45	55.9	9.6	9.8	52	50.8	28.1	10.0	3	27.3	43.9
9.2		38.9	11.8	9.4		55.9	15.0	10.0		58.8	32.1	9.8		47.3	51.7
8.1		41.4	45.9	9.8		58.4	13.7	10.0	53	5.8	56.9	10.0	4	10.8	28.3
10.0		56.4	38.1	9.6	46	9.9	16.2	10.0		16.3	3.9	9.5		15.3	58.2
10.0		57.4	36.8	9.6		13.4	19.1	9.8		24.8	27.3	9.9		31.3	12.3
10.0	39	6.4	29.7	9.4		25.9	48.9	9.8		31.8	23.7	8.0		42.3	43.9
9.8		10.4	34.8	9.8		32.4	36.3	9.3	54	17.3	12.4	10.0	5	18.3	14.1
8.9		20.2	58.3	10.0		53.7	59.9	9.2		40.8	35.8	10.0		38.8	50.9
9.6		23.4	6.3	9.2	47	5.4	14.5	9.8		42.8	23.4	9.8		46.8	40.2
10.0		39.4	12.8	9.8		12.4	55.6	9.6		44.3	15.1	9.9		59.8	10.7
9.4		49.4	11.2	10.0		22.4	51.8	9.9		59.3	33.4	10.0	6	15.9	58.9
9.6	40	18.4	42.3	10.0		28.9	19.3	9.8	55	13.6	1.3	10.0		19.8	32.3
9.6		18.4	26.2	9.6		34.9	30.7	8.6		32.8	46.4	9.3		40.3	22.9
10.0		18.4	5.0	10.0		35.9	32.8	10.0		38.8	23.9	9.6		43.8	59.7
10.0		20.4	17.1	8.8		40.9	7.9	9.6	56	35.3	35.2	9.0		44.8	3.9
9.4		30.4	44.1	9.8		40.9	42.0	10.0		54.8	22.5	10.0		50.3	59.0
10.0		31.1	2.6	9.8		50.4	40.7	10.0		54.8	4.4	10.0		55.3	20.5
9.6		40.9	41.4	9.2	48	1.1	43.2	9.3		59.8	23.0	10.0	7	1.8	39.7
9.4		47.4	15.1	9.8		1.1	27.7	9.8	57	5.3	57.2	9.9		5.3	23.7
10.0		51.4	27.1	9.4		4.6	25.5	10.0		9.8	42.2	9.6		9.3	20.5
10.0		52.4	21.8	9.8		12.1	33.6	9.3		9.8	27.1	10.0		26.3	51.0
9.4	41	9.9	26.0	9.2		12.1	46.6	9.4		11.8	19.8	10.0		51.3	14.5
9.6		22.4	14.1	10.0		21.1	53.3	10.0		17.8	39.8	10.0		53.3	47.9
10.0		22.9	34.2	9.6		22.6	29.3	9.3		31.8	9.7	9.2		54.3	11.4
9.6		40.4	15.6	9.8		22.9	0.0	9.8		58.3	32.4	7.4	8	11.3	45.7
9.6		47.4	13.0	9.8		26.1	15.2	8.6	58	2.8	51.2	9.9		11.3	54.1
9.2	42	1.4	39.3	10.0		32.6	42.4	9.2		6.3	22.8	10.0		12.3	16.9
10.0		2.9	40.3	9.8		53.1	28.0	10.0		9.8	27.3	9.6		12.3	37.1
8.0		3.9	21.4	9.6	49	5.1	22.0	9.8		18.3	20.2	9.8		14.8	48.4
10.0		6.2	40.6	10.0		9.1	12.6	9.2		18.8	58.8	9.9		15.8	30.9
9.2		13.4	44.1	10.0		11.1	50.9	10.0		18.8	44.4	10.0		29.8	19.4
10.0		18.4	32.6	8.3		15.1	12.2	10.0		45.3	37.2	10.0		36.3	38.3
8.7		35.4	7.6	9.2		30.6	42.5	10.0		45.8	6.2	9.3		53.9	0.9
9.0		36.4	21.5	10.0		30.8	57.8	9.5		54.5	2.2	8.6	10	2.3	30.6
9.4		45.4	5.1	9.2		36.1	1.2	10.0		55.8	26.5	10.0		5.3	28.3
9.2		46.4	43.5	9.6		37.0	59.6	10.0	59	4.3	41.0	10.0		7.8	29.5
10.0		51.9	4.9	9.6		37.1	26.6	9.9		5.8	53.9	10.0		15.3	4.5
9.8	43	20.4	31.1	10.0		41.6	23.0	9.8		20.8	37.6	9.9		17.3	38.5
8.6		20.9	47.9	9.6		47.1	39.9	9.9		21.8	23.1	8.8		21.3	9.5
10.0		31.9	9.0	9.8	50	1.1	32.7	10.0		27.3	23.0	9.2		30.3	16.7
10.0		5.4	56.0	10.0		6.2	51.0	8.8		56.8	52.8	7.8		35.3	21.3
9.6		14.9	28.9	9.6		8.7	1.6	10.0	0	13.8	25.0	10.0		48.8	34.1
9.8		19.9	31.6	10.0		10.2	10.1	10.0		14.8	26.0	9.6		58.3	51.3
10.0		19.9	40.5	10.0		16.1	19.4	10.0		21.3	25.2	8.9	11	24.3	38.3
10.0		20.9	15.0	10.0		30.2	40.0	10.0		24.8	16.0	9.8		27.3	53.7
8.8		21.4	49.9	10.0		30.6	57.6	10.0		45.3	30.6	10.0		42.8	43.2
9.6		30.9	27.6	9.6		39.6	30.8	9.6		46.3	30.4	10.0		45.8	34.3
9.8		32.9	17.1	9.1		43.1	55.5	10.0	1	2.3	25.2	10.0		52.8	9.3
10.0		35.9	3.0	9.8		46.6	38.2	9.8		5.3	22.7	10.0	12	2.8	27.6
9.1		45.7	2.7	10.0		55.8	30.1	9.8		7.3	46.2	8.8		26.8	20.5
10.0		46.4	33.0	7.9	51	2.7	7.2	10.0		11.3	44.8	9.6		34.8	35.7
9.4	45	4.9	44.4	10.0		11.5	5.3	10.0		31.8	40.5	10.0		40.3	22.2
9.8		20.9	55.7	10.0		18.1	55.2	10.0		39.8	4.6	9.8		40.3	48.4
10.0		35.2	59.0	8.8		19.8	7.7	8.8		41.8	17.2	9.6		42.3	40.5
10.0		35.4	4.3	9.8		36.8	58.5	10.0	2	9.8	30.3	9.8		44.3	42.5
10.0		35.9	28.9	9.0		56.3	17.8	9.2		10.8	37.1	10.0		44.3	22.6
10.0		39.4	45.1	10.0	52	0.0	2.6	8.8		39.8	54.8	10.0		51.3	36.0
9.8		43.9	49.7	10.0		10.8	36.2	9.5		49.8	4.7	10.0	13	0.3	15.9
9.6		52.4	48.1	9.4		29.8	57.8	9.6	3	10.8	13.5	10.0		4.8	8.1
9.6		53.4	15.8	10.0		39.8	1.5	9.6		18.8	45.1	4.2		35.3	3.1
		+1 21.3	-8.2			+1 22.1	-8.2			+1 23.1	-8.1			+1 24.0	-8.0

5881-5940.				5941-6000.				6001-6060.				6061-6120.			
		13h.	-36°			13h.	-36°			13h.	-36°			13h.	-36°
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.0	14	0.3	0.0	10.4	22	53.8	4.8	9.4	27	46.8	57.6	10.4	31	53.5	11.9
9.9		14.8	19.1	10.4	23	6.8	41.8	9.8		48.8	26.0	9.6		58.0	8.9
9.4		20.3	21.2	10.3		8.8	14.9	9.8		49.3	27.2	10.0	32	11.7	58.3
9.5		23.3	31.3	8.8		10.8	16.0	8.6		51.8	54.8	10.4		18.0	50.1
10.0		31.3	21.4	10.3		13.8	4.0	10.4		52.8	10.8	10.0		18.3	59.7
9.2		40.8	44.9	10.3		16.3	37.2	10.4		53.8	48.6	10.4		19.5	4.6
10.2		47.6	27.6	9.8		18.3	24.7	10.3		56.8	6.8	10.4		26.0	25.7
10.4		57.8	14.8	9.6		18.8	0.8	10.4		58.8	54.5	10.4		28.5	12.5
9.4	15	8.3	9.0	10.4		30.3	27.0	10.4	28	0.8	11.6	10.0		28.5	33.0
10.0		17.5	32.9	9.8		31.0	58.7	10.4		3.8	3.7	10.0		42.0	56.5
10.4		25.0	14.1	10.3		36.3	36.5	9.8		16.8	11.3	10.4		53.0	59.2
10.4		39.6	12.5	10.3		49.3	15.7	9.0		19.8	42.5	10.3	33	30.2	59.9
9.2	16	2.3	38.4	9.8		50.3	41.7	10.0		33.3	3.6	10.0		34.0	5.2
9.4		27.0	54.6	10.4		50.8	20.3	10.4		42.8	41.1	10.4		40.5	47.0
9.4		35.8	13.0	10.3		52.8	20.7	10.2		48.3	33.9	10.0		58.5	49.0
9.4		45.8	22.1	10.4		57.6	59.3	10.3		50.8	48.8	10.0		58.5	38.5
9.8		56.8	44.7	9.6		57.8	54.4	10.4		56.8	9.4	9.6	34	5.5	15.9
9.0	17	10.8	37.8	10.0		58.8	16.8	10.2		58.8	38.3	10.4		6.0	5.8
10.4		22.3	22.9	10.4	24	3.3	3.9	10.4		58.8	25.9	10.4		7.5	7.8
10.4		46.8	25.3	9.2		3.9	2.5	9.3		59.8	2.3	10.4		12.5	46.4
7.7		52.8	22.9	9.8		7.8	51.7	10.4	29	0.8	48.5	10.0		14.0	35.9
10.3		54.8	22.9	9.8		13.8	49.9	10.2		10.8	23.9	10.0		15.0	44.6
9.8	18	2.8	58.9	10.4		15.3	21.9	8.9		11.8	52.9	9.8		18.0	58.3
10.4		13.8	37.8	10.4		23.8	33.6	10.2		12.8	32.5	10.4		22.5	25.4
10.2		14.8	35.1	10.4		24.8	12.8	9.8		13.3	2.9	10.4		26.0	8.3
9.6		32.3	44.8	9.6		28.3	56.9	9.6		25.3	36.9	10.2		28.5	32.2
9.8		56.3	38.5	8.8		38.3	50.1	9.8		25.3	29.9	10.4		40.5	32.5
9.8		57.3	5.6	9.6		43.8	37.8	10.4		35.3	24.6	9.8		51.0	6.6
10.3		58.3	34.3	10.4		45.8	19.0	10.4		44.8	48.7	9.4	35	4.5	52.4
8.6	19	0.8	34.6	10.4		58.3	35.4	7.8		47.3	27.5	9.0		10.5	44.6
9.8		2.8	4.0	9.6	25	0.8	10.1	9.4		49.8	52.0	10.2		11.0	54.9
9.8		4.8	15.5	10.4		8.8	49.3	10.4		50.8	31.8	10.3		16.5	16.6
9.6		14.8	10.7	10.4		18.8	54.9	10.4		50.8	11.0	8.4		18.5	53.2
10.2		22.8	8.3	10.2		20.3	27.9	9.6	30	2.8	48.8	10.3		27.5	3.7
10.0		24.3	43.5	9.0		25.3	5.9	10.2		29.8	48.2	10.3		30.0	3.8
10.3	20	8.8	56.3	10.4		30.8	33.9	10.4		34.3	55.3	10.0		36.5	57.9
10.3		19.8	6.7	8.1		38.8	12.6	10.4		42.1	2.9	10.3		42.5	49.8
9.6		24.3	53.8	10.4		43.3	53.5	10.2		44.8	40.1	10.2		49.0	25.2
9.6		27.3	15.2	10.0	26	3.3	56.5	9.4		48.8	12.5	10.4		56.0	9.9
10.3		38.3	24.4	9.8		17.3	9.1	10.2		50.3	41.8	9.8		57.5	34.0
9.8		44.3	6.0	9.6		18.8	3.8	10.2		52.8	42.2	9.0		59.5	46.6
9.6		52.4	59.8	10.4		22.3	17.8	8.5		54.8	50.7	10.0	36	25.5	31.9
10.4		52.8	26.0	9.4		23.8	5.2	9.0	31	2.8	42.2	10.3		35.0	30.8
10.3		56.3	40.8	9.8		27.4	58.1	9.2		3.8	20.7	9.6		50.5	2.0
10.3		58.8	55.4	10.4		30.8	44.3	10.0		14.3	17.7	10.4		51.0	50.2
10.4	21	9.3	55.8	10.4		32.8	56.1	9.8		17.3	39.5	10.0		51.5	17.1
10.2		12.8	20.3	10.2		32.8	46.7	9.6		17.3	8.2	9.3		53.5	6.4
10.4		32.8	30.9	9.6		35.8	49.2	9.8		17.3	27.9	10.4	37	19.5	57.9
9.6		33.8	20.9	9.8		39.8	33.5	9.6		19.8	48.9	10.3		20.5	36.6
10.0		40.8	26.7	9.8		44.8	2.2	9.0		20.3	24.9	10.0		23.0	58.7
9.8		55.1	59.2	10.0		49.3	12.7	9.0		29.8	18.5	10.0		31.5	4.6
10.2	22	12.3	6.4	9.0	27	1.8	39.8	10.2		29.8	37.9	10.4		39.0	53.9
10.0		14.3	45.4	9.4		11.3	38.6	10.2		30.8	53.9	10.2		49.5	42.9
10.4		23.7	2.0	10.2		13.8	33.2	9.8		32.8	20.9	10.3	38	10.0	48.7
10.4		23.8	8.8	10.0		20.8	19.9	10.4		33.3	35.6	9.8		10.0	52.3
10.0		24.8	42.5	9.4		21.3	18.5	10.3		46.3	44.7	10.4		30.3	2.2
9.0		26.8	54.7	9.6		30.8	3.0	9.8		47.8	51.3	9.6		30.5	48.7
10.4		40.8	47.9	9.4		43.8	46.4	9.6		49.0	42.2	10.4		57.5	41.2
10.0		41.8	23.8	9.2		46.3	30.4	10.2		50.5	14.7	10.4		58.5	34.2
25pr.	+1	25.2	-7.9	10.4		46.3	18.3	10.4		53.5	25.8	10.4		58.5	0.2
					+1	25.8	-7.8		+1	26.3	-7.7		+1	26.7	-7.6

6121-6180.				6181-6240.				6241-6300.				6301-6360.						
mag.	13 ^h .		-36°	mag.	13 ^h .		-36°	mag.	13 ^h -14 ^h .		-36°	mag.	14 ^h .		-36°			
	m	s			m	s			m	s			m	s				
9.2	39	2.5	17.3	-	9.0	47	10.4	15.1	G	9.6	54	28.0	23.6	9.6	1	33.5	55.7	
10.3		2.5	23.9		10.4		13.4	56.7		10.4		33.5	11.0	9.7		37.0	21.9	
10.3		6.5	13.4		10.4		22.9	28.3		10.4		46.5	2.4	10.4		37.0	36.8	
10.0		8.5	23.6		9.6		34.9	5.3		9.6		47.0	38.9	9.6		39.0	42.7	
10.4		27.1	58.8		10.4		35.9	56.3		9.7		58.0	22.7	9.8		39.5	24.0	
9.6		38.5	25.0		10.4		48.4	16.7		10.4	55	2.5	7.1	10.4		43.5	21.5	
10.4		42.0	30.7		9.7		48.9	28.5		10.0		6.0	52.0	10.0		48.2	1.5	
9.8	40	0.5	5.4		8.8		54.9	5.7		9.5		11.0	33.2	10.2		53.5	40.9	
10.3		2.0	18.7		9.0	48	8.4	17.0		10.4		27.5	31.9	10.4		57.0	31.3	
9.8		23.5	8.6		10.4		9.9	18.7		10.4		39.3	59.1	8.9	2	0.5	6.1	9.5
9.8		28.5	42.6		10.4		39.9	12.1		9.7		57.0	48.4	9.0		1.5	10.0	9.5
10.4		31.5	50.9		9.7		47.9	41.3		10.0	56	2.0	6.4	10.2		31.0	45.5	
8.8		33.5	21.3	8.0 G-	10.4		59.9	56.7		10.4		15.5	6.3	8.2		33.5	23.9	8.5
10.4		40.6	53.9		10.4	49	0.9	22.9		9.7		21.5	32.1	10.0		37.5	58.1	
9.8		58.9	48.2		10.4		19.4	50.1		10.2		27.5	19.3	10.4		53.0	11.5	
9.2	41	2.2	15.0	9.0 G	10.0		19.4	10.6		9.6		28.5	4.1	9.8	3	4.5	51.2	
6.7		22.2	30.2	7.0 GS-t	8.6		54.4	27.0	9.0	8.2		39.0	40.7	10.0		4.5	27.1	
10.4		28.1	5.2		8.4		58.9	33.1	8.0 G-	7.6		40.0	39.7	9.6		6.5	16.7	
10.4		29.7	43.3		9.7	50	8.9	6.1		9.7		51.0	34.9	10.2		11.5	31.9	
10.4		33.4	13.8		8.9		18.9	37.7	8.5	10.4	57	1.1	58.1	8.9		17.5	25.5	8.5 G
10.0		39.9	36.6		9.7		19.9	40.7	9.5	10.4		5.0	16.1	9.6		20.0	44.7	
9.8	42	3.9	29.5		10.4		20.0	0.1		10.4		7.5	44.3	8.9		20.0	14.7	8.5 G
9.8		20.4	2.8		10.4		23.9	1.1		10.2		10.5	0.5	10.4		21.5	40.4	
10.4		30.9	34.9		9.7		30.4	12.4		9.8		22.0	11.5	9.5		28.5	53.3	
10.0		37.9	4.7		10.4		49.9	40.7		8.7		30.0	22.5	9.5		41.5	28.6	9.5
10.4		38.4	12.3		10.4		50.9	3.9		8.8		31.0	9.7	9.5		46.0	20.9	
10.0		41.4	53.9		10.4		52.4	7.0		10.4		56.5	2.9	10.4	4	6.0	52.7	
10.2		41.9	1.6		10.4		55.4	45.7		9.0		57.0	4.7	9.7		18.5	29.1	
10.2		50.4	8.2	9.5	10.0		59.4	29.0		10.2	58	1.5	55.3	10.2		46.5	37.8	
10.4		53.9	48.5		9.2	51	16.4	41.5	9.5	9.5		8.5	16.9	10.2	5	0.0	58.6	
10.4	43	7.4	46.0		10.4		30.5	14.6		10.4		11.5	27.7	10.0		9.0	39.5	
10.4		13.4	16.4		8.9		31.0	45.2	9.0 G	10.4		28.5	51.0	9.5		18.5	41.1	
9.6		13.9	11.0	9.5	10.0		35.0	25.3		10.4		30.0	20.9	9.5		20.0	12.3	
10.4		28.4	0.8		9.5		39.5	26.8		10.4		43.5	41.9	10.0		20.0	3.9	
10.4		53.4	12.7		8.2		43.6	59.1	7.8 GW	10.4		48.5	31.5	9.7		25.0	4.2	
10.4		55.1	28.9		9.5		50.5	16.6		10.4		56.0	40.5	9.7		30.5	20.1	
8.0	44	4.9	46.3	8.0 G-	8.5	52	3.5	42.8	8.5 G	10.0		56.0	14.9	10.4		31.5	57.4	
9.7		4.9	19.3		10.2		10.5	27.8		9.8	59	2.0	7.3	9.3		36.0	19.8	
10.4		19.9	30.2		10.4		19.0	10.1		10.4		33.0	41.9	10.4		38.1	48.0	
8.4		37.2	0.2	9.5	9.5		19.0	58.4		10.0		40.5	21.9	10.2		40.2	58.6	
10.4		39.9	45.1		10.4		26.0	33.5		10.4		43.5	41.9	9.8		53.2	18.0	
10.4		45.9	1.0		10.2		29.5	32.9		9.5		50.7	0.7	10.4		58.5	11.0	
9.8		50.4	23.2		10.4		36.0	44.5		9.4		54.0	7.5	10.4		58.5	44.8	
8.7	45	8.4	12.9	8.0 G-	10.4		50.5	11.4		10.4	0	3.0	2.9	10.4	6	13.2	49.9	
10.0		8.4	54.0		9.0		52.0	30.5		10.0		14.0	2.0	7.6		17.2	2.1	7.5 G=
9.6		14.9	16.8		8.5		56.5	47.3	7.5 GS-	10.0		20.0	38.3	10.4		24.5	30.4	
9.8		24.9	12.9		8.9	53	7.8	0.6	8.5 G-	9.0		22.4	59.9	9.7		28.0	10.0	
10.4		25.9	56.5		10.0		14.5	8.1		10.4		23.0	16.5	9.7		50.0	14.0	
10.0		51.4	46.1		10.4		22.0	38.8		10.4		30.0	27.7	9.7		53.2	46.6	
8.8		58.9	51.2	9.0	9.5		31.5	56.6		9.7		31.0	5.9	9.4		55.0	6.8	
10.4	46	14.4	1.2		9.4		34.5	9.9		9.0		38.5	22.1	10.0	7	7.5	51.1	
10.4		22.7	0.0		9.0		35.5	40.4		10.4		39.0	4.3	10.4		10.5	28.3	
9.7		31.9	58.7		9.4		36.0	18.4		10.2		45.0	49.9	9.8		12.9	40.3	
10.4		34.1	59.6		8.1		41.5	51.7	7.5 GS=t	10.4		52.0	23.3	10.0		13.1	48.6	
10.0		34.9	27.1		10.4		50.0	38.7		9.7	I	2.5	36.3	9.4		29.8	21.8	
10.4		36.8	57.7		10.2		50.7	1.2		9.5		9.0	8.1	10.0		41.8	30.9	
8.4		48.9	14.8	G-	8.4		55.5	43.4	7.5 GS-t	10.2		24.5	53.7	8.6		49.8	14.9	8.5
10.0		57.9	58.8		10.4		59.0	53.1		10.4		25.0	32.1	9.6		51.8	9.8	9.0
10.4	47	2.9	29.9		10.4	54	0.0	12.5		10.0		25.5	47.8	8.6		59.8	57.5	9.0
10.4		8.9	13.7		9.0		14.5	53.0	9.5 G	9.5		33.5	38.3	9.7	8	16.8	50.7	
25pr.	+1	27.5	-7.5		+1	28.4	-7.4		+1	29.0	-7.3		+1	29.6	-7.1			

6361-6420.				6421-6480.				6481-6540.				6541-6600.				
I ⁴ h.		-36°		I ⁴ h.		-36°		I ⁴ h.		-36°		I ⁴ h.		-36°		
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s		
9 ^o 8	8	19.8	37.7	9 ^o 9	18	45.1	10.1	9 ^o 3	28	42.5	45.2	7.4	38	39.8	41.6	8 ^o G
10 ^o 0		26.3	4.9	9 ^o 6	19	19.1	35.0	9 ^o 8		49.5	25.9	10 ^o 2		48.8	49.2	
9 ^o 9		26.8	49.5	9 ^o 7		33.0	45.2	8 ^o 9		55.5	32.8	10 ^o 2	39	4.8	56.4	
10 ^o 0		29.8	21.9	9 ^o 4		36.0	38.0	9 ^o 5	29	5.0	44.9	9 ^o 6		9.3	14.2	
9 ^o 5		49.8	7.9	8 ^o 8		36.0	13.3	7 ^o 8		7.0	7.1	9 ^o 8		9.8	4.4	
10 ^o 0		51.3	4.9	9 ^o 4		59.5	27.8	9 ^o 3		16.0	51.1	10 ^o 2		14.3	56.1	
9 ^o 5		55.3	55.9	9 ^o 8	20	17.5	29.4	9 ^o 0		25.5	22.7	9 ^o 8		21.8	34.9	
9 ^o 0	9	1.8	54.3	9 ^o 1		18.5	42.8	7 ^o 6		27.0	59.2	9 ^o 6		25.8	49.6	
9 ^o 2		3.4	2.7	10 ^o 0		23.5	5.3	8 ^o 5		39.0	10.2	9 ^o 1		35.3	14.8	9 ^o 0
9 ^o 9		19.8	50.8	9 ^o 4		32.0	7.1	7 ^o 7		44.5	10.6	8 ^o 6		47.8	26.2	8 ^o 5 G
9 ^o 7		20.3	12.9	9 ^o 2		37.5	12.8	10 ^o 0		53.0	7.2	10 ^o 0		49.8	6.4	
10 ^o 0		49.8	3.0	9 ^o 9		57.0	43.8	10 ^o 0		54.0	42.6	10 ^o 2		59.8	16.1	
9 ^o 1	10	3.2	1.2	9 ^o 8	21	0.5	37.3	10 ^o 0	30	13.0	18.9	8 ^o 8	40	0.8	36.9	9 ^o 0
9 ^o 8		20.2	46.5	8 ^o 9		2.5	30.5	9 ^o 9		14.5	16.5	10 ^o 0		3.3	26.2	
8 ^o 6		21.2	45.5	9 ^o 7		12.5	15.3	8 ^o 2		27.5	27.8	10 ^o 2		5.8	46.9	
9 ^o 2		43.2	10.3	9 ^o 9		39.5	43.7	10 ^o 0		29.5	1.0	9 ^o 8		10.3	52.8	
8 ^o 1	11	17.2	45.0	9 ^o 8		39.5	32.0	9 ^o 6		59.0	56.3	10 ^o 2		12.3	12.1	
9 ^o 9		26.7	53.5	7 ^o 9		55.5	28.7	9 ^o 5	31	9.4	56.1	9 ^o 4		14.8	54.9	
9 ^o 7		44.7	48.4	9 ^o 9	22	13.5	40.6	9 ^o 7		11.0	53.9	9 ^o 8		18.3	46.0	
7 ^o 0		50.7	25.4	9 ^o 5		19.5	23.1	10 ^o 0		14.5	19.7	8 ^o 8		24.8	23.4	9 ^o 0
10 ^o 0		54.7	17.3	9 ^o 4		43.0	43.1	9 ^o 5		15.0	3.1	9 ^o 6		25.8	15.5	
10 ^o 0	12	0.7	37.1	9 ^o 9		47.5	36.9	9 ^o 5		19.4	31.4	7 ^o 4		52.3	6.6	7 ^o 0 GS=t
9 ^o 8		9.7	48.3	9 ^o 7	23	2.5	14.8	10 ^o 2		49.4	42.9	9 ^o 8	41	0.8	21.6	
8 ^o 1		11.2	16.8	9 ^o 8		5.5	28.0	10 ^o 2	32	10.8	0.0	10 ^o 2		1.8	23.2	
9 ^o 1		14.2	48.6	9 ^o 0		9.6	57.3	9 ^o 0		10.8	39.5	10 ^o 2		5.8	13.4	
9 ^o 5		19.7	4.0	9 ^o 5		18.5	55.1	10 ^o 2		11.3	55.4	10 ^o 2		6.8	13.1	
8 ^o 8		24.7	16.6	9 ^o 8		19.5	45.0	8 ^o 8		13.8	11.8	10 ^o 2		21.8	28.8	
9 ^o 8		24.7	21.3	9 ^o 9		30.0	37.9	10 ^o 2		16.3	1.7	10 ^o 2		33.8	26.1	
10 ^o 0		32.7	12.1	9 ^o 1		31.3	59.0	9 ^o 8		21.8	23.1	10 ^o 2		39.8	8.3	
9 ^o 8		38.2	6.6	10 ^o 0		44.5	52.1	10 ^o 0		49.8	19.2	9 ^o 0		40.3	45.7	9 ^o 0
9 ^o 2		58.9	57.6	9 ^o 2		54.3	18.9	9 ^o 1	33	2.3	52.9	9 ^o 0		48.8	36.5	
10 ^o 0	13	4.7	58.9	9 ^o 8		56.8	36.1	8 ^o 8		26.8	45.1	10 ^o 2		53.3	13.3	
10 ^o 0		13.7	17.0	9 ^o 2	24	19.3	51.4	8 ^o 0		36.8	20.7	10 ^o 0		53.8	23.3	
9 ^o 6		19.7	11.2	9 ^o 2		26.7	59.1	10 ^o 0		41.8	23.8	10 ^o 2	42	15.8	11.0	
8 ^o 8		30.7	56.6	9 ^o 3		28.3	16.6	9 ^o 1		48.3	27.4	7 ^o 8		19.3	52.4	8 ^o 0 GW-
10 ^o 0		35.7	11.3	9 ^o 4		30.3	13.3	9 ^o 6	34	0.3	13.5	9 ^o 0		20.8	41.0	8 ^o 5
9 ^o 7	14	21.7	33.9	10 ^o 0		38.3	44.6	10 ^o 2		24.8	9.8	10 ^o 2		39.8	10.2	
8 ^o 9		31.2	54.5	10 ^o 0		54.3	54.7	10 ^o 0		54.8	42.8	9 ^o 3		51.8	43.0	9 ^o 0
10 ^o 0		53.6	34.0	9 ^o 7	25	31.7	2.4	10 ^o 0		58.8	37.0	9 ^o 4	43	4.8	21.0	
9 ^o 1	15	2.6	20.5	8 ^o 7		39.3	41.2	9 ^o 2		1.8	13.8	9 ^o 8		7.8	41.7	
8 ^o 7		10.6	34.5	9 ^o 1		40.3	42.0	9 ^o 0		13.8	48.4	10 ^o 2		14.8	8.2	
9 ^o 4		23.1	5.1	9 ^o 2		43.3	55.5	10 ^o 0		15.3	36.7	9 ^o 0		16.3	34.5	9 ^o 0
9 ^o 9		28.6	56.2	9 ^o 7		45.8	57.1	9 ^o 8		30.8	26.1	10 ^o 0		19.8	49.4	
9 ^o 8		32.6	6.5	10 ^o 0		46.8	23.6	9 ^o 8		54.8	46.5	9 ^o 4		27.3	35.0	
9 ^o 8		55.1	40.1	10 ^o 0		48.3	20.2	9 ^o 6		59.8	31.5	9 ^o 4		44.3	13.8	
9 ^o 8	16	1.6	7.4	10 ^o 0		58.8	25.1	9 ^o 2	36	18.8	40.6	10 ^o 0		44.3	24.9	
8 ^o 0		5.1	51.6	10 ^o 0	26	1.8	52.3	9 ^o 1		24.3	46.8	9 ^o 2		44.3	46.9	
9 ^o 2		9.6	53.3	10 ^o 0		18.8	27.8	10 ^o 0		32.9	2.7	10 ^o 2		52.3	13.8	
9 ^o 4		15.6	9.4	9 ^o 0		34.8	33.6	10 ^o 0		33.3	32.0	9 ^o 1	44	9.0	2.1	8 ^o 5
10 ^o 0	17	15.6	58.6	9 ^o 1		39.3	27.5	9 ^o 8	37	0.8	24.7	10 ^o 2		9.8	41.6	
7 ^o 1		24.1	52.7	10 ^o 0		57.8	51.9	10 ^o 2		7.8	17.8	8 ^o 6		11.3	6.6	8 ^o 0
9 ^o 9		38.6	47.0	9 ^o 6	27	4.8	31.2	10 ^o 2		23.8	12.6	10 ^o 2		14.3	51.0	
9 ^o 4		46.1	13.1	9 ^o 2		12.8	47.5	10 ^o 0		30.8	45.6	10 ^o 2		22.3	30.0	
9 ^o 8		49.6	8.8	7 ^o 9		15.3	39.2	10 ^o 0		44.8	30.7	9 ^o 2		23.8	54.0	
9 ^o 0	18	8.4	58.2	10 ^o 0		44.3	22.3	9 ^o 2		48.3	6.3	10 ^o 2		24.8	9.7	
9 ^o 2		9.6	18.6	10 ^o 0		59.3	24.2	9 ^o 6	38	2.8	35.6	10 ^o 2		31.3	32.5	
9 ^o 4		18.1	39.0	8 ^o 2		59.3	0.2	9 ^o 8		24.3	42.2	10 ^o 2		33.3	44.0	
10 ^o 0		22.2	22.2	9 ^o 8	28	11.3	20.0	10 ^o 2		32.3	51.0	10 ^o 2		33.8	0.4	
9 ^o 9		39.1	54.1	10 ^o 0		19.3	24.8	10 ^o 0		34.8	45.2	10 ^o 0		48.8	31.0	
8 ^o 7		39.6	56.3	10 ^o 0		41.8	13.8	9 ^o 8		37.3	35.6	10 ^o 2		51.3	37.0	
25pr.	+1	30.4	-7.0	+1	31.4	-6.8		+1	32.1	-6.6		+1	32.9	-6.4		

6601-6660.			6661-6720.			6721-6780.			6781-6840.		
mag.	14 ^h .	-36°	mag.	14 ^h .	-36°	mag.	14 ^h -15 ^h .	-36°	mag.	15 ^h .	-36°
10.2	44 51.8	31.1	10.0	50 24.3	41.3	8.0	58 19.5	48.0 9.0	8.2	14 31.0	34.7 8.0
10.2	57.3	40.8	7.0	33.3	51.4	9.6	59 27.0	53.0	9.8	38.5	54.8
9.8	45 1.3	53.2	10.0	35.8	58.5	9.8	54.5	8.8	9.8	39.0	43.5
9.8	1.8	46.1	9.1	40.8	16.1	8.6	0 13.5	4.2 8.8 G	8.8	39.5	1.6
8.6	6.3	48.4	10.2	59.0	15.9	9.4	16.0	37.1	8.4	39.5	6.2 8.0
10.2	9.8	35.5	9.2	59.5	48.7	8.4	1 14.5	38.5 9.0	8.7	59.1	31.8 8.5
9.8	24.3	5.7	10.0	51 4.5	41.7	9.6	47.5	16.1	4.8	15 10.1	24.4 5.0 GStπ
9.8	28.8	58.9	10.2	30.5	7.7	9.8	51.5	41.9	9.8	10.6	7.3
9.8	37.8	20.4	10.2	39.5	44.3	9.8	54.0	56.4	9.6	19.6	21.3
10.2	39.8	7.2	10.0	41.5	9.9	9.8	2 3.0	36.8	9.6	16 2.6	26.5
10.2	39.8	28.9	9.6	49.5	47.7	9.8	13.4	57.9	9.8	13.1	51.2
10.2	39.8	3.4	8.1	52.5	23.3	9.8	15.0	22.6	9.4	14.1	4.6
9.4	44.8	17.7 9.5	10.0	53.0	6.3	8.2	17.5	4.7 8.5	9.8	46.6	57.8
10.2	49.8	15.4	10.2	52 2.0	8.1	7.9	19.0	59.8 8.5 W	8.8	56.6	14.2 8.5
10.2	46 4.8	48.3	10.2	9.5	4.1	9.6	24.5	15.9	9.8	17 9.1	26.0
10.2	4.8	42.8	9.4	18.0	33.9	9.8	32.0	30.4	9.5	14.1	25.5
9.6	4.8	13.9	9.8	37.5	16.3	9.8	32.5	24.5	9.6	18.6	51.0
9.1	12.8	21.2	9.8	39.0	40.5	9.8	51.5	23.3	9.4	24.1	26.3
10.0	20.3	3.2	10.2	40.5	48.4	9.8	52.9	2.7	8.6	34.1	41.5
9.8	23.8	1.5	10.0	46.5	17.8	9.1	3 48.5	47.8 8.5	8.3	18 4.6	2.0 8.0 GS
9.4	31.3	43.4	8.8	53 3.0	10.1	9.4	4 11.5	37.0	9.6	6.1	17.9
9.6	35.8	21.5 9.5	9.8	10.5	35.3	8.4	18.5	9.0	7.6	18.1	9.3 GS-t
9.6	35.8	38.0	8.6	13.0	2.2 9.5	8.4	19.0	51.7 8.8	9.8	20.1	40.2
10.0	39.8	3.8	10.0	15.5	7.1	9.2	20.5	22.5	9.5	32.1	46.4
9.3	42.8	16.0	10.2	17.5	14.1	9.8	23.5	28.8	9.8	19 3.1	17.2
10.0	47.8	4.5	8.8	18.5	20.8 9.0 G	9.2	39.5	8.3	9.6	10.6	5.2
8.3	49.8	15.1 8.0	10.2	20.0	5.5	9.2	59.5	28.6	6.0	18.6	19.6 6.0 GStπ
8.8	47 9.8	0.3 8.5	10.0	38.5	44.7	7.1	5 4.5	46.4 7.7	9.8	21.1	39.9
9.8	27.3	38.6	9.6	42.0	36.5	9.6	19.5	53.0 9.0 G	9.8	30.6	17.3
10.2	29.8	28.5	10.2	50.5	16.1	9.2	48.0	26.2	8.2	20 10.6	55.2 7.5 G
10.2	30.8	12.1	7.9	57.5	25.7 9.0 G	9.8	59.0	51.5	9.8	42.6	3.9 9.5
9.1	31.8	43.3 -	10.2	54 5.5	15.5	9.0	59.5	24.3 9.0	9.8	44.1	40.5
10.0	33.8	6.5	9.8	9.5	39.9	9.8	6 1.5	39.3	9.8	21 0.1	5.2 9.0
9.8	39.3	41.5	10.2	11.5	7.9	9.2	19.0	43.5	9.4	13.1	34.5
7.9	39.8	39.0	10.0	18.5	9.9	8.3	29.5	23.6 8.5	9.4	18.1	10.9
10.2	39.8	12.9	10.0	23.4	52.7	9.1	33.0	25.5 9.0	9.8	20.1	12.2
9.0	41.3	3.5 9.0	10.0	29.4	52.4	8.4	7 1.5	39.7 9.0 G	9.6	21.6	42.9
10.2	49.8	29.4	10.0	35.9	13.4	7.8	51.5	40.9 8.0 GSt	9.8	44.4	53.9
9.6	51.8	42.9	9.8	59.4	48.8	8.4	51.5	41.2 8.5 G	9.8	55.1	39.0
9.8	59.8	8.5	9.6	55 3.9	5.6	9.8	55.5	54.2	9.8	22 0.6	11.5
10.2	9.8	36.6	10.2	9.6	58.1	7.9	56.0	31.9 8.5 G	8.5	21.4	57.4 9.0
10.0	19.8	25.7	10.0	25.4	47.4	9.8	8 10.5	19.3	8.6	34.3	56.0 9.5
8.8	24.3	33.3 9.0	8.0	26.2	25.1 8.0 G	9.8	9 11.5	13.6	9.7	43.8	24.2
10.2	28.8	7.3	9.4	26.7	34.8	9.2	24.5	16.4	9.0	53.0	57.1 9.0
10.0	32.8	21.7	10.2	31.4	51.9	9.4	26.5	6.8 9.0	9.4	23 23.8	41.6
9.6	41.8	12.0	9.0	49.4	8.9 9.0	9.2	39.5	6.2	9.6	24.3	44.6
10.2	45.8	0.7	10.2	56 11.9	23.8	8.3	42.5	27.5 8.5	9.0	51.3	29.2
10.2	53.8	3.9	10.2	18.4	19.5	9.1	54.5	30.9 9.0	9.6	25 49.8	38.9
10.0	49 7.8	44.8	9.4	31.2	10.6	9.2	10 9.5	52.2	9.3	26 1.3	43.7
10.2	18.3	52.1	10.2	31.9	8.5	9.8	31.5	44.8	9.4	10.3	42.7
10.2	19.8	53.5	9.4	37.7	21.2	9.0	11 13.0	19.1	9.6	15.3	47.1 9.5
10.2	19.8	11.9	10.2	42.9	43.5	9.8	19.5	53.4	9.4	18.8	55.1 9.0
8.6	30.5	0.3 9.0	10.2	55.9	15.5	8.0	24.5	14.3 8.0	9.2	19.8	52.1
9.8	30.8	35.1	9.0	3.7	25.6 9.0	9.8	25.0	44.3	9.4	20.8	34.4
9.4	31.8	52.0 9.0	8.2	15.4	53.9 8.5 G	7.2	34.0	38.1 6.5 GS-t	9.2	22.8	59.1 8.5
9.0	36.3	37.3 8.5 G	10.2	15.4	3.2	9.5	5.0	32.6	9.6	27.8	48.9
10.2	37.8	55.0	9.4	15.9	44.9	9.1	6.0	52.6	9.4	52.8	33.9
9.6	50 8.3	53.7 8.5	9.8	24.5	53.8	9.5	24.0	16.2	8.6	27 25.3	44.3 9.0
10.0	11.8	7.7	9.4	49.0	13.6	9.8	31.5	52.4	9.4	28 9.3	12.0
10.0	15.3	3.5	8.6	49.5	25.5 9.5	9.8	13 35.5	32.8	7.9	22.8	57.2 8.0
25pr.	+1 38.8	-6.2		+1 33.8	-6.1		+1 34.7	-5.8		+1 35.7	-5.4

6841-6900.			6901-6960.			6961-7020.			7021-7080.		
mag.	15 ^h .	-36°	mag.	15 ^h -16 ^h .	-36°	mag.	16 ^h .	-36°	mag.	16 ^h .	-36°
28	41.3	51.6	9.7	49 19.0	20.3	9.0	8 13.1	26.0 8.5	8.8	32 49.4	24.8 8.8
8.4	56.8	49.5	9.7	38.0	29.7	9.2	24.1	15.2 9.0	9.4	33 48.4	18.7 8.8
8.0	23.8	37.5	9.6	58.5	9.8 9.5	8.8	32.1	0.4 9.0	9.5	59.8	24.6
9.0	32.3	10.8	9.0	50 19.0	3.9 9.0	9.4	59.6	15.2	7.3	34 7.8	50.0 7.0 GS-t
9.4	31 37.3	10.5	9.1	51 9.5	50.1	7.6	10 6.6	15.4 8.0 GS-	10.0	10.7	40.1
8.0	49.6	1.6	9.6	29.0	8.3 9.5	9.3	11.1	4.1 0	9.4	18.3	23.6
9.2	54.1	7.7	9.0	50.0	53.5 9.0	9.2	30.6	5.1	10.0	40.8	48.2
9.0	32 16.1	56.1	9.3	54.5	25.0	9.4	45.1	33.4	10.0	40.8	21.6
9.6	33 11.6	29.1	9.3	59.0	54.9 8.5	9.4	11 6.6	54.2	8.3	44.8	23.2 8.0-
9.2	30.1	43.4	8.6	52 4.0	8.6 8.5 G	8.8	20.6	5.8 9.2	8.8	35 21.3	48.8 9.0
9.0	33.4	0.8	9.2	19.1	6.8 9.5	8.8	54.3	15.7	8.8	22.8	38.5 9.0
9.4	39.6	32.8	9.7	36.9	2.4 9.5	10.0	13 39.9	11.7 9.5	9.8	36.8	3.0
9.2	42.1	42.8	9.2	53 11.1	37.1 9.5	9.8	14 32.1	49.6	10.0	38.7	24.0 9.0
9.4	34 18.6	37.3 8.5	9.4	35.1	6.7	10.0	15 24.1	12.2 9.0	9.6	39.3	1.0
9.4	24.6	32.1	6.9	54.1	23.4 7.0 GS-	8.0	32.1	9.4 8.5 GS-	9.5	36 58.3	8.0 9.2
9.0	52.6	38.0	9.2	54 14.6	31.0	10.0	16 21.6	7.0	9.6	37 9.6	10.4
9.7	35 4.1	43.0	9.6	18.9	56.8	9.4	17 16.8	58.2	9.5	33.8	11.8 9.5
9.0	26.6	46.1 8.0	9.6	19.1	21.4	9.2	36.1	26.6	10.0	38 18.4	58.0
9.4	40.1	54.9 8.5 G	9.6	29.1	29.1	9.6	19 7.1	29.2 9.5	9.2	20.6	37.8 9.5
9.7	36 7.1	16.1	9.7	29.9	44.3 9.5	9.4	38.6	32.6	10.0	29.1	32.9
7.8	32.6	56.2 8.0 GS	9.7	46.1	10.0	9.6	49.1	15.5	10.0	39 26.6	49.8
9.2	37 31.6	16.7 9.0	8.2	55 10.1	47.0 8.0 GS-t	9.6	49.6	25.1	9.3	45.4	34.5 10.0
9.7	38 15.6	50.0	8.8	10.6	30.9 8.0	7.0	55.1	53.7 6.5 GS-t	7.6	49.9	39.3 7.5 GS-t
9.2	18.6	38.1 9.5	9.4	20.6	3.8	10.0	20 34.9	20.3 9.0	8.3	50.4	39.7 9.0 S-
7.4	44.6	32.5 8.0 GS	9.7	32.1	39.8	9.4	38.4	53.4 9.0	9.8	58.9	46.2
9.0	53.6	11.4	7.7	59.1	57.7 8.0 G	9.5	21 34.9	17.5 9.5	10.0	40 18.4	20.2
9.6	39 4.1	36.7	8.6	56 4.1	50.1 8.8	9.2	22 50.4	51.9	9.2	31.9	30.0 9.5
9.2	10.6	43.2 9.0 G	9.2	17.6	39.4 9.0 G	9.2	23 43.9	31.1	8.8	43.4	17.4 9.0
9.3	13.1	12.4	9.1	30.1	34.9 9.5	7.6	25 6.2	58.7 8.0 G	9.1	13.9	7.1 10.0
9.2	27.6	51.4 9.0	9.7	47.6	12.1	9.2	18.9	46.8 8.5 G	8.5	23.4	11.0 8.2 G-
9.0	30.1	42.7 9.5	8.6	57 6.6	17.0 8.5	9.8	33.9	34.1	9.6	52.4	53.3
9.4	51.3	58.6	8.6	40.1	47.0 8.5 S	9.6	39.4	9.0	9.8	42 13.4	29.9
8.6	26.6	56.1 8.8	9.2	52.1	10.9	9.2	43.2	1.9	8.6	35.4	32.0 8.5-
9.2	30.6	9.6	4.6	58 23.6	27.5 5.0 GS-t	9.6	26 53.4	31.9	10.0	42.9	53.3
9.3	34.6	29.9	9.2	29.1	8.4	8.8	27 14.4	50.9 9.0	9.2	44.4	33.1 9.5
9.4	37.6	42.1	8.5	48.4	3.2 8.2	9.6	29.9	33.3	9.8	43 0.9	52.6
9.7	48.4	34.5	9.7	51.1	31.5	8.0	28 32.9	53.0 8.0 G	10.0	8.4	33.6
8.8	50.1	16.0	6.8	59 3.1	24.8 6.5 GS-t	10.0	38.9	15.3	9.8	41.5	59.6 9.0
9.2	41 28.1	13.9 8.0	7.6	21.6	22.8 7.0 GS-t	9.6	44.9	6.2	9.4	43.4	15.0
9.4	57.1	10.0 9.5	9.2	32.6	52.1	8.6	50.9	36.1 8.5	9.2	44 9.4	30.9 9.0
9.7	42 3.4	32.7	8.4	34.6	40.2	9.2	29 2.9	53.2 8.8	10.0	17.4	34.4
8.8	10.6	36.0 9.5	9.7	37.2	13.5	9.8	14.4	55.1	8.3	26.4	47.8 7.5 GW-
9.2	40.1	35.3 9.5	9.0	0 44.1	36.1 8.5	9.4	29.4	34.3	10.0	29.4	5.1
8.6	43 1.6	48.9 9.0	9.4	49.1	48.2 9.0	10.0	46.6	26.6	9.6	49.4	25.3
8.8	5.6	46.0 9.0	9.1	1 4.1	50.0 9.2	9.2	30 9.4	28.4	10.0	59.9	47.2
9.4	27.1	49.2	9.0	11.1	43.8 8.5	9.5	9.4	8.5	8.9	45 3.4	26.8 9.0
8.4	51.6	19.2 8.5	8.2	17.1	50.6 8.2	10.0	19.4	18.3	9.4	5.4	50.8
8.4	44 20.6	20.3 9.0	8.8	52.6	18.7	8.4	23.9	36.0 8.2 G-	9.6	39.4	48.2 9.0
9.4	28.1	10.2	9.7	59.2	48.3	9.4	32.4	59.0	9.4	49.4	55.3 10.0
9.0	45 11.6	29.8	9.6	2 14.6	23.6	6.4	43.2	57.9 6.1 GS	9.4	46 8.9	36.9
9.6	27.6	45.1	8.6	22.1	30.7	9.0	52.4	45.3 8.5	8.8	19.4	1.1 8.2-
9.2	43.6	35.1 9.0	9.3	23.1	50.4 9.0 G	10.0	53.4	27.4	8.9	21.4	40.8 9.0
9.4	46 21.5	47.4	9.6	35.6	37.5	10.0	31 2.9	47.8	9.4	24.9	3.8
9.0	54.1	24.4 9.0	9.2	47.6	11.4	9.8	29.9	2.9	10.0	30.0	57.0
8.8	47 39.6	15.6 9.2	9.7	3 19.1	3.1 9.0	9.4	33.9	7.8	9.8	40.4	7.8 9.0
9.0	49.1	3.8 9.5	9.7	21.2	31.5	9.8	45.4	56.9	10.0	47 29.4	40.6
8.5	56.5	31.4 9.0	9.4	4 33.6	46.1	8.2	48.9	13.9 8.0 G-	9.6	30.4	53.7 9.0
8.4	48 8.8	12.7 8.5	9.2	49.1	23.0 9.5	9.8	32 19.4	26.3 7.0 GS	8.0	44.9	59.0 7.8 GW
9.2	30.3	11.5	9.6	5 24.1	8.3	7.2	24.9	54.3	9.2	56.6	57.3 9.5 G
8.8	49 11.0	49.2 9.0	9.6	8 10.1	8.6	9.8	40.9	12.5	10.0	48 21.0	23.9
25pr.	+ 1 37.0	-4.8		+ 1 38.1	-4.3		+ 1 39.4	-3.4		+ 1 40.1	-2.8

1896AnCap...3....1G

7081-7140.				7141-7200.				7201-7260.				7261-7320.			
16h.		-36°		16h-17h.		-36°		17h.		-36°		17h.		-36°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
8.5	48	25.9	51.2	8.5	58	7.9	31.3	9.4	4	42.9	41.5	9.8	15	14.9	56.1
10.0		27.4	4.8	9.6		11.4	48.3	9.8		56.4	38.6	10.2		19.4	19.5
9.8		35.4	32.0	9.8		14.9	41.6	9.4		58.4	44.1	9.8		19.4	21.7
9.4		39.4	23.2	10.0		19.4	28.5	10.0		59.4	40.1	9.8		19.4	40.5
9.2		58.9	2.7	9.8		24.2	58.1	9.6		59.4	30.3	9.0		19.4	46.2
9.8	49	9.4	38.2	10.0		28.9	27.0	9.8	5	21.3	1.0	10.2		33.4	14.0
9.8		12.9	9.6	9.1		31.9	32.8	9.8		23.9	42.6	9.8		43.9	52.7
9.8		44.9	33.9	9.2		37.4	23.2	10.2		31.4	17.7	9.2		47.9	20.8
9.2		45.4	27.1	10.0	59	2.9	52.6	10.2		59.4	16.1	10.2		48.9	44.5
9.2	50	18.4	19.4	10.0		6.9	25.4	10.2	6	19.9	45.4	9.4	16	2.9	37.6
9.6		41.4	45.0	10.0		8.4	39.7	9.1		31.4	18.1	8.8		17.9	20.2
9.4	51	33.9	27.1	10.0		9.4	38.7	9.6		35.6	57.9	8.8		20.4	35.7
10.0		39.4	44.6	10.0		9.4	52.0	10.2		56.4	55.3	9.4		28.9	45.5
10.0		54.4	10.4	9.4		10.4	53.5	10.2	7	16.8	0.5	10.2	17	3.9	39.2
9.8	52	7.4	13.6	9.6		11.4	33.4	9.8		18.4	49.8	8.8		4.4	46.1
9.4		22.4	52.0	9.8		18.4	50.4	9.6		23.9	53.4	9.6		15.9	54.2
10.0		39.9	27.6	10.0		19.9	25.6	9.4		34.9	29.4	9.8		43.9	35.4
10.0		44.4	2.0	9.4		21.4	55.1	9.6		36.9	34.4	10.2		46.9	11.7
9.2		49.9	31.0	9.4		21.9	36.1	9.8		47.9	45.4	10.2		50.9	6.3
8.8		59.9	39.6	9.6		28.9	7.0	10.2		59.6	37.8	8.6	18	0.4	59.9
10.0		59.9	57.0	10.0		29.7	15.0	9.6	8	1.4	54.2	9.6		4.9	42.5
10.0	53	10.4	38.5	9.8		47.4	31.9	9.6		40.4	3.8	10.2		9.4	5.0
9.2		12.4	28.7	8.8	0	1.9	9.8	9.6	9	5.4	36.1	9.8		12.4	18.2
9.6		54.9	47.7	10.0		4.9	36.3	10.2		41.9	54.7	9.5		12.9	54.2
9.6	54	0.4	38.3	10.0		8.4	26.8	9.8		47.9	42.4	10.0		17.9	59.4
9.4		7.4	50.6	7.8		9.4	28.3	9.6		54.4	42.5	9.8		21.4	53.6
9.8		18.9	59.8	10.0		10.4	12.1	9.8	10	23.2	57.3	9.8		25.4	32.4
9.4		18.9	59.9	10.0		13.2	59.2	10.2		49.4	35.2	9.8		26.4	33.0
7.5		29.9	40.6	9.4		23.4	57.2	10.2		57.4	38.2	10.0		32.4	44.0
9.8		32.9	31.4	9.4		24.9	41.9	9.4		57.9	58.1	9.6		34.9	26.1
10.0		45.4	48.4	9.8		52.4	31.8	9.2	11	41.4	28.5	10.2		40.4	46.3
10.0		59.4	24.4	9.4	1	8.4	25.7	10.2		59.9	39.5	9.6		54.4	35.1
9.8	55	1.9	58.9	9.8		9.9	25.0	9.8	12	12.4	51.5	9.0		54.4	34.7
9.8		11.9	27.7	10.0		14.9	19.0	9.2		14.4	33.0	10.2		59.9	23.2
8.4		12.4	58.8	10.0		22.9	48.3	8.6		29.4	29.7	8.8		59.9	18.9
9.8		19.1	59.2	9.8		31.4	30.1	9.5		32.9	53.7	8.8	19	0.9	13.6
10.0		21.9	30.3	9.4		37.4	6.5	10.2		34.9	57.7	9.5		4.4	45.9
8.8		42.9	26.3	9.8		37.9	2.9	10.2		59.1	59.0	10.2		9.9	34.1
8.6		49.9	27.7	10.0		53.9	49.1	9.6		59.4	21.0	10.2		14.9	48.5
9.4	56	0.4	27.5	9.8		59.4	6.5	10.2	13	35.9	20.9	10.2		19.4	58.4
9.4		1.4	20.2	10.0	2	4.4	54.7	10.0		39.4	29.8	10.2		20.5	35.7
10.0		22.9	5.6	10.0		19.9	21.5	9.8		43.4	29.0	8.5		21.4	24.8
10.0		27.4	50.0	8.3		24.6	14.9	9.4		49.4	35.5	10.2		21.9	23.6
10.0		27.4	3.4	9.6		33.4	11.1	10.2		52.4	47.0	10.2		24.4	44.0
10.0		31.7	11.8	10.0		35.9	6.3	8.9		53.6	57.5	10.0		25.4	26.8
9.6		31.9	41.9	10.0		36.9	0.0	10.2	14	4.4	50.4	7.4		35.4	46.3
10.0		40.9	27.6	10.0		37.9	32.5	9.8		4.9	50.9	10.2		37.6	58.8
9.8		57.2	57.6	9.6		45.1	16.9	8.3		5.9	23.1	9.4		38.4	14.2
9.8		59.4	55.6	9.6		45.9	6.0	9.6		6.9	46.1	9.8		45.4	45.1
10.0	57	10.9	5.3	10.0		3	0.9	9.6		7.4	38.8	9.6		50.4	32.5
7.8		19.4	33.8	10.0		8.4	52.0	10.2		10.4	54.5	9.8		53.4	47.8
8.6		21.9	22.2	10.0		9.7	54.1	10.2		15.9	39.6	10.2		55.9	45.0
10.0		27.4	41.8	9.8		16.1	24.4	9.8		24.4	56.4	10.2	20	4.9	17.5
8.0		29.4	24.7	9.2		19.4	40.6	9.8		25.9	13.4	10.0		12.9	9.0
10.0		39.7	40.1	10.0		20.9	33.8	9.5		32.4	25.2	7.3		29.2	40.2
10.0		39.9	54.5	10.2		34.9	11.2	10.2		39.4	12.9	9.8		33.7	9.1
9.4		42.4	31.5	9.0		35.4	15.8	10.2		39.4	52.1	9.8		39.7	42.6
9.6		52.4	57.0	9.4		46.9	58.0	10.0		41.4	42.8	10.2		41.2	55.8
7.8		57.4	55.5	8.8	4	0.2	59.4	8.0	15	1.4	57.2	9.8		41.7	26.9
9.8	58	1.4	51.6	9.6		34.4	10.6	10.2		3.9	26.0	10.2		42.7	23.1
25pr.	+1	40.6	-2.3	+1	40.7	-2.1		+1	41.0	-1.8		+1	41.2	-1.5	

7321—7380.			7381—7440.			7441—7500.			7501—7560.						
17 ^h .	—36°		17 ^h .	—36°		17 ^h .	—36°		17 ^h .	—36°					
m	s	'	mag.	m	s	mag.	m	s	mag.	m	s				
20	43.7	51.0	10.2	25	11.2	42.8	9.5	29	4.0	34.5	9.6	33	37.5	24.9	
	54.7	29.0	10.2		17.7	46.7	9.6		9.6	23.1	9.0		39.0	6.1	
9.2	55.2	47.8	10.0		17.7	4.2	9.6		11.5	30.9	9.2		45.5	25.5	
10.2	56.7	16.2	10.2		20.2	52.6	9.0		14.5	2.9	9.0		50.5	52.3	
9.6	59.7	18.4	10.2		24.7	42.6	9.2		17.5	6.8	9.4		50.5	8.7	
9.8	21	9.7	9.0		24.7	32.1	9.6		20.7	13.1	9.1		59.5	21.5	
9.8		10.7	10.2		25.7	50.2	9.6		21.5	9.4	9.6	34	1.0	27.9	
10.2		28.7	9.4		32.7	7.5	9.6		30.5	13.3	9.2		2.0	40.1	
9.8		33.2	9.6		33.7	10.1	8.6		35.0	29.2	9.5		3.0	15.9	
8.2		35.0	10.2		34.2	54.2	9.4		37.0	48.9	9.5		6.0	14.1	
10.2		37.7	10.2		35.2	18.1	9.6		40.0	31.3	9.2		9.5	3.9	
10.2		50.2	9.6		45.7	44.3	9.0		43.0	9.3	9.6		10.5	50.1	
10.0		53.9	9.6		49.7	53.0	8.7		44.0	30.6	9.2		20.0	14.1	
10.2		55.5	8.5		53.2	37.7	9.6		51.0	50.0	7.7		22.0	57.7	
10.0		56.2	9.2	26	8.2	18.7	9.4		58.0	50.9	9.0		23.5	37.3	
9.8		58.2	9.5		14.2	25.0	8.9	30	16.5	58.7	9.4		24.5	3.9	
10.0		59.2	10.2		17.7	0.0	9.6		19.5	54.6	9.0		35.9	2.9	
10.0	22	4.2	8.8		18.7	12.9	9.2		24.0	53.8	8.9		38.5	12.0	
9.6		7.7	10.2		32.5	59.0	9.4		25.0	42.4	9.4		42.0	32.7	
9.5		9.2	9.4		43.2	54.5	9.1		29.5	55.9	9.4		45.5	52.8	
10.0		39.2	10.2		45.2	44.2	8.4		33.0	20.0	9.0		46.5	15.8	
9.6		39.7	9.8		49.0	59.6	9.6		41.0	18.2	9.6	35	4.0	46.5	
9.6		43.7	8.0		53.7	49.2	9.5		57.6	56.8	9.6		8.2	2.9	
9.8		44.2	10.2		57.2	29.8	9.2		4.5	39.4	8.9		9.5	7.9	
10.2		50.6	10.2		57.2	10.6	9.5	31	5.5	44.9	9.2		11.5	37.8	
9.8		53.7	10.2		58.7	52.6	9.6		8.7	58.8	9.4		14.0	18.9	
9.6		57.7	10.0		58.7	42.1	9.4		11.5	19.0	9.6		18.5	3.8	
8.4		58.7	8.7	27	0.2	24.9	9.4		12.0	11.1	8.8		19.5	15.2	
9.6		7.7	9.5		3.7	33.8	9.6		24.0	15.7	9.0		32.0	55.3	
9.5	23	9.2	9.2		4.2	47.7	9.5		24.5	52.3	9.1		34.0	48.6	
9.2		14.2	10.2		4.2	6.0	9.6		34.0	2.1	8.4		36.0	42.5	
9.5		17.7	10.2		6.7	30.2	9.2		34.5	44.3	9.2		36.5	17.5	
9.4		20.2	9.2		6.7	42.0	9.5		35.5	51.9	9.2		39.5	0.2	
9.6		21.2	9.6		10.7	13.3	9.6		41.5	53.9	9.4		43.0	6.0	
10.2		21.7	9.4		13.7	4.9	9.4		44.5	52.5	9.4		48.5	26.7	
10.2		23.7	9.4		19.7	38.9	9.6		45.0	10.4	9.6		50.0	16.4	
10.0		28.7	9.4		30.2	43.8	9.4		45.0	55.7	9.5		50.5	22.4	
9.8		29.7	10.2		32.7	27.1	9.4		46.5	51.5	9.2		53.5	47.8	
9.5		30.9	7.7		37.7	41.6	9.4		46.5	16.5	9.6		59.5	6.8	
9.6		38.2	9.4		39.2	40.9	9.4		48.0	56.1	9.4	36	4.5	46.2	
9.6		38.2	9.4		40.7	30.4	9.5		50.0	9.5	9.6		6.5	6.1	
8.6		42.7	9.4		44.2	8.1	9.4		55.0	54.8	9.2		7.5	22.3	
8.8		55.2	10.2		51.7	42.7	9.2		57.0	49.6	9.2		13.5	53.8	
8.8		58.2	9.8		55.2	46.6	9.0		6.9	1.9	9.6		14.0	59.5	
8.2		58.2	9.8	28	9.2	4.6	9.2		12.0	46.3	9.1		14.5	44.1	
9.6		1.2	9.6		9.2	19.2	9.4		12.0	35.4	9.6		17.5	6.2	
9.8		19.7	10.2		18.7	2.4	9.6		18.5	26.5	9.4		19.5	52.2	
9.6		26.2	8.7		21.1	26.9	9.6		20.5	0.0	9.2		23.0	39.6	
10.2		27.7	10.2		21.5	20.6	9.6		31.0	57.3	9.6		28.5	23.8	
10.2		30.7	10.2		21.7	56.0	9.4		36.5	44.5	9.6		28.5	11.9	
9.8		40.4	9.4		32.2	37.0	9.6		38.5	9.5	9.2		30.0	4.2	
10.0		46.2	9.1		35.6	51.7	9.5		38.5	2.9	9.2		33.5	19.4	
9.2		47.7	10.2		44.2	31.0	9.2		44.0	46.7	9.6		39.5	26.9	
10.0		50.7	9.4		45.1	5.0	9.5		1.0	33.3	9.6		44.0	41.0	
10.2		51.7	10.2		45.1	14.3	9.6		3.0	49.7	9.1		49.0	31.6	
9.8		57.7	9.8		47.7	16.8	8.4		11.0	49.5	9.4		49.5	43.7	
8.8	25	3.0	9.6		49.0	18.9	9.4		11.0	26.0	9.6		53.5	0.1	
10.0		4.7	9.6		55.9	24.7	9.4		26.0	46.3	9.6		57.5	55.8	
10.2		8.7	9.4		57.0	30.6	9.1		27.0	14.8	9.6		57.5	30.7	
10.2		9.2	9.6		59.1	4.3	9.6		32.0	58.2	9.0		9.5	13.9	
25pr.	+ 1	41.2	-1.3		+ 1	41.3	-1.2		+ 1	41.3	- 11		+ 1	41.4	-0.9

7561-7620.				7621-7680.				7681-7740.				7741-7800.						
mag.	17 ^h .	-36°		mag.	17 ^h .	-36°		mag.	17 ^h .	-36°		mag.	17 ^h .	-36°				
	m	s			m	s		m	s			m	s					
8.8	37	11.0	38.8	9.5	8.8	40	27.8	18.6	9.5	42	47.3	33.6	9.2	45	18.8	28.6		
8.9		24.0	12.8		9.0		29.3	41.2	9.6		49.7	15.0	9.4		29.8	30.1		
9.2		25.0	5.0		9.4		33.8	54.7	9.0		50.8	7.1	9.6		31.8	50.6		
9.6		29.5	23.8		8.1		40.3	28.6	8.5 G	9.5		52.3	20.5	9.4		34.8	27.4	
9.6		34.5	11.7		9.4		40.3	15.4	9.4		54.8	11.8	9.1		37.8	32.1		
8.2		38.0	36.1	8.5	9.6		40.8	32.3	9.2		59.8	6.1	9.6		38.3	22.3		
9.4		38.5	11.5		9.5		46.8	19.0	9.4	43	0.8	7.4	9.1		44.8	12.1		
9.2		39.0	45.2		9.6		47.8	34.9	9.4		1.3	39.6	9.6		49.8	19.9		
9.2		39.5	6.5		9.6		52.8	27.2	9.5		1.3	12.2	8.1		51.3	20.5		
9.6		47.0	8.0		9.4		54.8	8.0	9.6		7.8	22.4	9.6		53.8	31.7		
9.2		49.0	33.7		9.4		54.8	7.2	9.6		7.8	14.0	9.2		55.8	5.1		
9.4		51.3	20.8		9.4		55.8	43.7	9.2		9.8	4.0	9.0	9.4	46	8.8	7.4	
9.6	38	0.3	53.1		9.5		57.3	32.3	9.6		11.8	26.0	9.2		16.3	24.8		
9.2		3.3	49.5		9.1		57.8	31.2	9.0 G	8.6		14.3	5.5	8.8	9.6		19.8	33.8
8.9		4.8	52.9		9.2	41	3.3	35.8	9.0	8.1		14.8	25.7	8.0 -	9.6		20.8	20.6
9.4		9.8	26.7		8.8		4.8	34.0	9.0	9.6		17.8	4.4	9.6		24.3	44.1	
9.6		9.8	46.1		9.5		4.8	24.0		9.1		33.3	17.4	9.6		31.8	12.3	
9.6		11.8	47.6		9.4		4.8	39.8		9.2		34.8	4.5	9.5		38.8	50.9	
9.5		14.3	21.6		9.4		10.8	16.5		9.6		36.8	44.1	7.4		40.3	26.8	
9.0		14.8	18.0		9.2		10.8	28.6		9.2		39.8	24.2	9.2		40.3	15.5	
9.6		15.8	25.0		9.2		12.8	32.0		9.6		44.3	38.3	9.2		40.3	10.2	
9.2		23.3	7.0		8.8		13.8	2.1	8.8	9.2		48.8	4.4	9.2		40.8	47.2	
7.9		24.8	29.6	8.5	9.2		14.8	17.2		9.6		49.3	25.9	9.2		41.1	56.6	
9.2		25.8	22.9		8.8		23.3	20.3		8.4		49.8	20.7	9.0	9.6		46.3	1.2
9.2		26.3	5.4		9.6		23.8	17.0		8.3		50.8	39.6	9.0	9.2		49.8	30.9
9.4		42.3	54.6		9.6		25.0	28.6		9.4		51.8	37.4	9.2		51.8	8.1	
9.1		42.3	21.0		9.2		28.8	18.6		9.0		53.8	48.6	9.2		53.8	49.7	
8.4		43.3	56.0	8.0 G	9.4		30.8	10.5		9.6		59.3	34.3	9.2	47	0.6	58.8	
9.4		44.3	55.0		9.1		30.8	10.8		9.6		59.8	42.3	9.4		3.8	26.1	
9.6		45.8	4.4		9.6		33.8	18.0		9.6		59.8	16.3	9.6		5.8	37.9	
9.4		50.3	46.6		9.6		33.8	45.3		9.4	44	4.3	55.0	9.4		7.8	34.0	
9.2		51.3	19.4		9.4		41.8	33.7		9.6		4.3	9.4	9.6		10.8	22.9	
9.6	39	4.8	59.0		9.6		42.8	35.8		9.1		4.8	33.2	10.0	8.8		13.8	22.3
9.4		6.3	34.1		8.8		43.8	30.7	9.0 G	9.2		10.8	45.2	9.6		22.0	2.0	
9.5		7.3	34.3		8.9		45.8	41.7		9.4		14.8	20.5	9.2		23.8	0.1	
9.2		14.3	11.9		9.6		45.8	9.0		9.2		18.3	41.9	9.4		25.3	23.7	
8.7		15.3	1.7	9.0	9.6		48.8	19.2		9.6		18.3	19.4	8.9		26.3	33.7	
9.6		25.3	33.5		9.2		49.8	44.3		9.2		19.3	15.2	9.2		34.7	45.2	
9.6		28.8	14.6		9.6		53.8	56.7		9.1		19.8	13.1	9.6		39.3	18.9	
9.2		31.8	42.8		9.4		54.3	49.2		9.6		22.3	25.6	9.4		41.3	31.4	
9.6		32.3	18.9		9.4		55.8	48.3		9.5		27.8	53.2	9.2		42.3	7.4	
9.6		34.8	43.1		9.5		56.3	28.3		9.6		30.8	2.4	9.6		45.0	4.6	
9.4		38.8	34.1		9.6		57.3	21.7		9.2		31.8	37.8	9.4		49.0	25.7	
9.6		39.8	27.9		8.9		59.8	36.1		9.5		33.8	44.1	9.2		49.5	53.5	
9.6		43.3	6.1		9.6	42	0.0	49.7		9.6		41.8	12.5	9.4		49.5	11.8	
8.3		46.3	40.9	8.5	9.5		0.8	44.0		9.5		43.8	7.0	9.2		53.0	53.5	
9.6		50.3	27.1		9.4		7.8	16.1		8.8		43.8	1.5	9.4		53.5	31.7	
9.4		50.8	45.2		9.6		8.3	6.0		9.6		47.3	54.9	9.4		53.5	6.7	
9.4		50.8	24.6		9.4		11.3	29.9		9.6		49.8	29.2	9.5		54.5	30.6	
9.5		52.8	13.1		9.6		12.8	10.2		8.8		58.8	55.9	9.5	9.6		55.5	33.8
9.6		59.3	19.6		8.8		15.8	6.3		9.6		59.8	34.4	9.2	48	1.0	54.6	
9.6	40	2.8	15.3		9.2		15.8	3.9		9.6		59.8	39.7	9.2		1.5	48.8	
9.2		2.8	14.5		8.9		20.3	53.9		9.5	45	0.8	15.0	9.2		6.2	59.2	
9.2		3.3	7.7		9.6		27.3	57.2		9.6		0.9	10.9	9.2		6.5	40.9	
8.3		4.8	54.9	8.0 G	8.9		29.8	40.1		8.0		1.8	28.4	8.5 GS-	9.4		7.0	43.5
9.6		10.3	24.4		9.2		29.8	3.6		9.2		7.8	10.0	9.4		8.0	57.8	
9.6		13.8	29.4		9.5		29.8	24.1		9.6		10.3	15.2	9.2		10.5	3.0	
9.2		15.2	3.0		9.5		37.8	12.8		8.6		10.8	46.8	9.6		12.0	37.6	
9.6		15.3	24.8		9.0		41.8	33.3		9.1		13.8	15.2	9.6		13.5	59.7	
9.6		23.8	1.9		9.4		42.3	19.9		9.2		14.8	6.2	8.8		19.5	57.7	
25pr.	+1	41.5	-0.8		+1	41.5	-0.7		+1	41.5	-0.6		+1	41.5	-0.5			

1896 ArcCap

7801-7860.			7861-7920.			7921-7980.			7981-8040.		
mag.	17 ^h .	-36°	mag.	17 ^h .	-36°	mag.	17 ^h .	-36°	mag.	17 ^h -18 ^h .	-36°
9.2	48	20.5	8.7	9.6	51	23.0	21.0	8.8	53	10.5	8.3
9.4		21.5	7.2	9.6		23.5	37.4	9.5		14.5	31.8
9.6		22.5	6.0	9.6		26.5	3.3	9.2		15.0	0.0
9.0		23.0	38.4	8.8		27.5	27.8	7.7		21.0	22.2
9.4		25.5	34.2	9.4		28.5	13.4	9.6		26.0	56.8
9.2		29.5	52.2	9.6		29.5	50.2	9.2		29.5	33.1
9.2		29.5	47.9	9.4		30.0	59.6	8.8		30.8	36.5
9.4		29.5	18.0	9.6		30.5	39.2	9.5		32.0	37.8
8.9		31.5	15.0	9.2		30.5	13.8	9.5		32.5	40.9
9.6		34.5	15.8	9.4		31.5	40.2	9.6		37.0	43.6
9.4		41.5	27.9	9.4		34.5	55.6	9.4		37.6	59.7
9.6		42.7	57.8	9.4		34.5	14.9	9.6		40.0	46.4
9.4		54.5	32.0	9.4		35.0	0.8	9.6		40.0	35.6
9.2		59.5	5.9	9.2		39.5	53.9	9.6		41.5	35.6
9.4	49	6.0	35.2	9.4		40.0	49.9	9.4		42.4	9.7
9.6		6.0	53.6	9.4		41.5	40.7	7.9		43.0	21.2
9.6		7.0	0.0	9.5		42.5	44.6	9.6		43.5	15.7
9.6		9.5	33.3	9.2		42.5	24.1	9.5		44.5	5.8
9.6		12.4	59.5	9.4		43.5	48.9	8.6		50.8	14.6
9.6		17.5	53.0	9.2		44.0	13.8	9.2		52.6	22.5
9.4		19.5	23.4	9.2		44.5	43.2	9.2		53.3	40.3
9.5		19.5	54.2	9.2		44.5	11.9	9.5		59.5	38.8
9.6		19.5	50.2	9.4		45.0	38.0	8.8	54	2.6	21.2
9.4		21.5	3.6	9.4		45.0	49.6	8.8		3.1	40.2
9.5		29.5	48.0	9.6		53.5	36.0	9.2		9.5	15.2
9.4		35.5	26.0	9.2		54.5	30.0	9.6		10.0	47.4
9.6		37.5	3.1	9.6		58.5	50.5	9.2		12.3	44.9
9.6		52.5	57.7	9.6	52	0.5	50.4	9.6		19.5	39.0
8.8	50	4.5	25.9	9.6		2.0	37.2	9.1		20.0	44.9
9.6		9.5	25.0	9.5		2.6	1.7	9.6		23.0	41.3
9.4		14.5	26.2	9.0		4.0	52.8	9.2		24.3	53.5
9.2		14.5	18.8	9.4		8.5	21.8	9.6		24.5	11.4
8.3		22.5	50.7	9.2		9.5	51.1	9.6		25.5	49.5
9.6		25.0	16.2	8.4		9.8	57.4	9.2		26.5	30.2
9.4		26.0	35.8	9.5		10.5	52.2	9.4		29.0	50.4
7.5		27.0	50.6	9.4		19.5	55.2	8.9		29.0	43.1
9.6		28.5	12.4	9.6		25.0	22.4	8.4		44.1	32.5
8.9		30.5	58.4	9.2		29.5	26.5	9.7		52.1	26.5
9.6		31.5	52.0	9.6		30.0	8.0	9.7		52.2	1.1
8.8		34.0	39.2	9.6		30.4	19.2	9.6		54.6	39.7
9.6		35.5	48.1	9.4		30.5	18.8	9.7	55	0.1	55.6
9.6		43.0	43.0	9.4		31.0	43.6	9.7		4.6	43.1
7.6		43.5	55.4	9.5		31.5	10.0	9.4		16.1	27.8
8.4		44.0	1.1	9.6		32.0	42.7	9.7		20.6	18.6
9.4		46.0	47.9	9.2		33.5	3.6	9.5		26.1	8.2
8.7		50.5	4.9	9.4		34.5	0.4	9.7		26.6	13.2
9.2		51.0	18.3	9.5		34.5	50.5	9.6		31.1	6.7
9.4		51.0	14.4	9.4		39.5	7.7	9.4		35.4	0.7
9.4		53.5	39.0	9.2		42.5	7.2	9.3		43.6	3.0
9.2		54.5	37.9	9.6		43.0	49.0	9.7		43.9	58.4
9.6		57.5	36.5	9.4		43.5	5.0	9.5		47.1	57.1
9.2		59.5	56.8	9.2		45.0	10.0	9.3		58.6	24.3
9.6	51	0.0	20.2	9.0		47.5	41.9	9.7		0.1	2.6
7.6		2.5	0.4	9.4		49.5	18.4	9.6		0.6	33.7
9.6		9.5	31.0	8.4		54.5	22.8	9.7		4.4	58.8
9.5		11.5	45.2	9.6		58.5	59.6	9.3		9.1	57.2
9.6		15.0	38.2	9.6		59.4	12.3	9.2		9.1	55.0
9.5		18.0	45.9	9.4	53	1.5	25.4	9.7		11.6	33.5
9.4		19.5	22.6	9.6		2.0	11.4	9.5		19.6	34.3
9.4		22.5	22.8	9.6		10.0	54.2	9.6		20.1	28.3
2.5pr.	+1	41.5	-0.4	+1	41.5	-0.3		+1	41.5	-0.2	

1896AnCap...3....1G

8041-8100.			8101-8160.			8161-8220.			8221-8280.							
mag.	18 ^h .	-36°	mag.	18 ^h .	-36°	mag.	18 ^h .	-36°	mag.	18 ^h .	-36°					
9.3	2	5.3	8.5	9.6	7	11.3	54.1	8.4	11	53.3	28.7	8.4	16	59.8	47.8	9.0
9.7		16.3	58.7	9.7		12.8	4.5	9.0		57.3	44.3	9.7	17	1.8	1.2	
9.1		22.3	53.0	8.5	9.7	13.3	41.0	9.2		59.3	16.7	9.3		4.3	51.2	
9.3		24.3	40.8		9.7	21.3	46.1	9.3	12	1.8	6.3	9.3		4.3	31.1	
9.3		26.3	0.6		8.0	23.3	47.9	8.2 G		3.3	5.6	9.5	9.4	10.3	15.0	
9.5		29.0	1.1		7.0	23.8	36.5	7.5 GS=t		4.3	57.9	9.7	9.7	11.3	31.2	
9.1		34.3	21.2	8.8	9.7	36.3	47.9			4.8	2.8	9.7	9.7	13.3	55.2	
9.5		48.8	4.7		9.7	37.3	50.3			6.8	32.1	9.5	9.5	13.8	14.0	
9.1		54.3	16.5	9.5	9.7	40.3	48.1			10.8	49.5	GS†	9.7	17.8	50.4	
9.7		54.8	48.6		9.6	43.8	43.3			19.3	13.9		9.7	20.8	45.4	
9.6		58.3	45.1		8.9	44.3	38.1	8.5		31.3	43.2		9.7	23.3	47.0	
9.7		59.3	39.3		9.7	49.3	16.1			39.8	12.1		9.7	27.3	5.2	
9.6	3	4.3	34.4		9.7	50.0	38.8			50.3	8.3		9.7	29.3	30.8	
9.6		7.3	31.7		9.7	51.3	14.6			54.3	9.5		9.7	29.3	1.9	
9.7		13.8	7.2		9.7	58.3	9.1			54.3	25.9		9.4	29.3	41.2	
8.4		14.3	3.4	9.0	9.7	59.8	6.3			13.3	57.7		9.4	58.3	23.0	
9.7		17.8	12.6		9.5	59.8	16.3			25.3	7.6		9.7	1.3	1.8	
9.5		28.3	4.4		9.7	8	8.8	55.6		26.3	19.9		8.2	12.3	0.1	9.0
9.2		30.3	14.6		9.7	9.3	7.3			32.8	53.9		9.5	12.8	19.6	
9.4		32.3	41.9		9.5	14.3	25.1			36.3	20.9		9.7	24.8	38.5	
9.2		34.3	24.3		9.3	15.3	40.7			45.8	34.5		9.2	30.8	30.5	
9.7		42.8	42.1		9.7	24.3	20.2			50.3	30.7		9.6	35.1	18.8	
9.4		58.3	6.4		9.7	30.8	25.4			58.3	7.3		7.7	57.8	57.4	8.0 G-
9.3	4	5.3	17.6		9.0	37.3	19.5			11.3	23.9		7.6	58.8	5.2	7.5 GS=
9.4		8.3	17.9		9.3	39.3	45.5			11.3	39.5		9.6	59.1	17.9	
9.2		10.3	13.1		9.6	53.3	10.2			16.3	14.6		9.7	59.8	23.4	
9.2		11.3	52.1		9.2	9	2.8	46.9		16.3	40.1		9.5	19	3.3	33.2
9.3		13.5	57.5	9.5	6.6	9.8	47.8	3.0 GSπλ		16.8	47.5		9.7	5.8	53.6	
8.0		14.8	30.3	8.0 G-	9.7	19.3	37.1			20.3	31.7		8.8	11.3	35.7	
9.7		21.3	39.7		9.5	25.3	32.9			24.3	43.5	6.0 GS†π	9.8	16.3	24.0	
8.8		29.3	52.8	9.5	9.6	27.3	56.5			27.3	55.1		9.8	19.3	13.7	
8.6		34.3	14.8		9.3	32.3	14.5			46.3	22.4		8.9	19.3	33.4	
9.7		44.3	21.4		9.7	35.3	9.0			49.3	27.3		9.8	20.8	54.7	
9.3		45.3	20.5		9.0	38.3	55.3			55.8	25.1		9.2	29.3	3.2	
8.8		47.3	24.7		8.3	49.3	23.7	9.0		59.3	57.4		9.1	30.3	16.1	
8.8		58.3	45.5	8.2	9.5	57.8	41.1			1.8	17.7	6.0 GS†π	9.1	33.3	21.7	
9.7	5	7.3	15.0		9.7	10	1.3	53.9		3.8	24.0		9.1	33.3	21.7	
9.2		32.3	21.5		9.7	10.8	53.3			4.3	47.3		9.8	41.3	57.0	
7.9		36.3	54.1	8.2 G	9.7	13.1	1.1			5.3	12.5		7.8	42.8	2.7	8.0 GS=
9.5		42.3	24.9		9.7	15.3	55.9			12.8	52.7		9.2	45.8	19.5	
9.7		44.3	55.0		9.5	23.8	30.7			18.4	5.1		9.4	48.8	4.7	
9.1		49.3	10.5	9.5	9.5	24.3	55.1			20.3	33.7		9.8	49.3	55.9	
9.7		59.3	56.9		9.3	27.3	29.7			20.3	4.1		9.2	50.8	9.7	
9.7	6	1.5	0.5		9.3	28.8	36.0			20.8	57.9		9.0	53.8	15.2	
9.7		7.0	1.1		9.4	39.3	38.1			29.3	43.3		9.2	56.3	9.0	
9.4		7.8	13.3	9.0	9.6	41.3	10.7			29.3	8.1		9.8	57.3	26.1	
7.5		9.3	55.9	7.8 G	9.7	42.8	42.0			32.8	41.8		9.8	57.8	35.5	
9.7		10.8	48.6		9.6	48.3	2.7			45.8	20.4		8.7	20	2.3	36.7
9.7		13.8	40.0		9.0	53.3	49.6			53.3	30.5		8.8	3.1	0.4	9.0
9.6		15.5	0.9		9.7	54.3	9.2			58.3	48.0		9.7	3.8	48.7	
9.5		16.8	35.1		9.5	11	3.3	23.6		59.3	59.0		9.1	7.8	14.3	
9.3		21.3	42.3		9.5	17.3	4.1			5.3	22.4		9.8	9.3	2.3	
9.6		23.3	26.3		9.6	20.8	42.9			7.3	37.0		9.8	17.3	40.9	
9.7		41.3	27.9		9.2	24.3	38.5			9.3	49.1		8.9	20.8	38.7	
9.0		46.8	25.2		9.4	25.3	49.1			13.3	18.0		9.2	23.3	26.0	
8.8		57.3	48.3	9.0	9.2	29.3	56.3			19.3	46.0		9.2	39.3	25.8	
9.7	7	1.5	4.7		8.5	34.3	3.4	9.0 G-		32.8	53.6		8.6	58.8	20.9	
9.1		7.3	40.1		9.7	35.8	20.3			37.8	56.3		8.8	59.8	21.9	
9.1		9.3	35.1		8.2	36.8	5.1	8.5		56.8	3.4	6.5 GS=	9.5	21	13.8	52.7
9.7		9.3	18.2		9.7	49.3	3.8			58.3	56.8		9.2	13.8	44.4	
25pr.		+1 41.5	+0.1			+1 41.5	+0.3			+1 41.5	+0.5			+1 41.5	+0.7	

8281-8340.				8341-8400.				8401-8460.				8461-8520.			
18h.		-36°		18h.		-36°		18h.		-36°		18h.		-36°	
mag.	m	s	/	mag.	m	s	/	mag.	m	s	/	mag.	m	s	/
9.7	21	23.3	6.5	8.2	25	9.3	51.3	9.2	31	3.1	13.4	9.8	36	31.8	17.9
9.1		35.3	34.9	9.2		9.3	28.8	9.7		8.1	54.8	9.6		39.8	24.0
8.7		48.8	54.1	7.8		11.3	53.7	9.7		15.1	57.9	9.6		44.3	1.0
9.7		48.8	17.6	8.5		29.3	28.1	8.9		16.6	4.8	9.8		47.7	59.8
9.8		50.3	15.9	9.8		36.8	49.4	9.2		19.6	52.1	9.2		53.8	56.9
9.4		55.8	55.5	9.8		37.3	43.5	9.8		25.6	7.5	9.2		54.8	55.2
9.8		59.8	41.3	9.2		44.8	28.8	9.2		29.6	40.9	9.8		56.3	36.2
9.7	22	4.8	50.9	9.8		49.3	8.1	9.7		31.6	33.7	9.5		58.3	15.8
9.4		5.0	8.9	9.1		54.3	13.1	9.4		35.6	22.5	9.4	37	0.8	35.1
8.8		5.3	54.9	9.8	26	4.3	17.7	9.8		41.6	34.5	9.7		20.8	56.8
8.7		9.0	29.0	9.8		6.8	22.3	9.0		43.6	8.8	9.4		23.8	11.7
8.3		10.0	52.5	9.5		9.3	51.7	8.8		45.1	37.2	9.2		29.8	51.0
9.8		11.5	59.7	8.9		9.8	49.9	9.2		48.1	54.3	9.6		29.8	19.2
9.4		14.0	40.7	9.8		10.3	15.5	9.7		51.6	25.1	9.7		44.8	7.0
8.7		20.5	2.5	9.7		17.3	39.8	9.5		51.6	39.9	9.7		49.8	23.0
9.7		25.5	11.9	9.6		19.4	2.0	9.8		54.8	43.1	9.8	38	2.3	6.0
9.6		27.5	14.7	9.2		23.8	4.3	9.0		54.8	30.3	9.0		11.3	56.7
9.8		34.5	50.0	8.8		29.0	58.0	8.7		59.8	12.3	9.6		14.3	59.1
9.5		35.1	34.7	8.6		32.8	8.7	9.4	32	11.3	18.2	9.0		14.3	33.0
9.8		37.0	26.9	9.7		40.8	37.9	9.7		12.8	5.0	9.0		18.8	36.3
9.5		37.5	13.3	9.2		41.3	11.7	9.8		22.3	59.8	9.8		19.8	44.0
8.6		37.5	48.0	9.2		53.3	12.3	9.5		32.3	53.7	8.9		29.8	7.9
9.8		39.5	28.0	9.6		55.3	54.4	8.8		41.8	0.0	9.2		34.8	27.1
7.5		43.0	53.5	9.8	27	5.3	37.3	9.8		49.8	42.7	9.5		36.8	19.2
9.2		47.5	17.6	9.7		9.3	49.2	8.8		51.3	25.1	9.8		37.8	32.8
9.8		49.0	58.0	9.8		12.3	35.8	9.1		54.8	52.6	9.4		39.8	57.1
9.8		54.0	44.2	9.8		12.8	33.8	9.0		59.8	22.0	9.8		40.8	32.0
9.8		54.0	38.0	9.4		19.3	52.1	9.7	33	8.3	55.8	9.7		40.9	33.3
9.4	23	0.5	0.0	9.7		21.3	32.3	9.5		9.8	16.0	9.0		42.3	38.4
9.2		2.0	11.3	8.1		24.3	54.5	9.5		15.3	32.3	9.5		49.3	11.0
9.8		3.0	43.4	9.8		31.3	27.5	9.8		16.8	51.9	9.4		56.3	34.7
9.2		13.5	54.9	9.2		35.3	44.6	9.8		18.8	49.7	9.7	39	10.8	47.1
9.5		22.5	7.8	9.7		40.3	18.5	9.2		20.8	8.4	9.7		11.8	12.7
9.8		23.0	57.2	9.0		50.3	7.4	9.2		23.3	22.9	9.6		13.3	17.9
9.8		30.0	54.8	9.7		59.3	40.8	9.5		24.3	32.7	8.8		14.8	40.6
9.7		31.0	37.8	9.8	28	4.6	24.8	9.8		30.8	24.6	9.4		20.3	15.6
9.4		33.0	56.6	9.2		11.6	20.9	9.8		44.8	15.1	9.5		32.3	37.2
9.0		38.0	34.0	9.4		22.1	53.7	9.7		47.8	33.5	9.1		35.3	47.9
9.8		40.5	39.5	9.4		24.6	46.3	9.7	34	0.8	4.7	9.2		49.8	25.9
9.4		43.0	33.3	9.8		28.6	11.3	9.2		1.8	14.5	9.8		54.3	23.0
9.8		44.0	21.6	8.4		47.1	9.4	9.5		4.3	54.9	9.8		59.8	25.0
9.8		47.5	7.3	9.8		49.7	24.9	9.4		16.3	50.7	9.1	40	5.3	30.6
9.0		50.0	8.8	9.5		50.1	44.3	9.8		19.8	53.1	8.7		5.8	27.1
9.5		54.5	47.4	9.8		50.6	45.5	8.1		37.3	18.0	8.7		14.3	45.4
9.1	24	0.0	47.8	9.2		50.6	47.5	9.8		50.8	37.0	9.0		14.8	44.7
9.8		0.1	40.9	9.8		52.6	16.1	9.2		55.3	8.0	9.8		25.8	15.5
9.7		8.5	37.7	9.8	29	0.7	10.3	9.5		56.8	38.2	9.4		46.3	23.4
9.8		10.5	48.7	9.8		20.1	56.1	9.1	35	5.3	18.7	9.8		48.8	36.4
9.8		13.5	3.1	9.7		22.6	55.4	9.2		9.8	55.5	9.0		49.3	2.0
9.2		31.0	55.1	9.4		28.6	33.9	9.2		19.8	8.5	9.0		49.8	23.1
9.8		33.0	39.4	8.7		29.6	58.8	9.5		21.8	56.7	9.2		49.8	52.5
9.8		34.0	43.8	9.8		57.1	32.9	9.7		27.8	42.3	9.0		51.8	14.9
9.2		35.0	11.3	9.2	30	9.6	12.3	9.8		27.8	44.1	8.4		54.8	46.2
9.2		37.0	10.2	9.8		12.1	5.4	9.8		36.3	37.1	9.4		55.8	54.0
9.2		40.3	31.8	9.7		27.6	24.9	7.4		40.8	50.2	9.5	41	0.3	42.2
9.7		44.8	16.5	9.8		46.6	11.6	9.8		47.8	40.4	9.8		3.8	35.3
9.8		53.3	50.9	9.5		47.1	44.9	9.2	36	3.8	4.0	9.5		4.8	14.6
9.8		59.3	32.8	9.5		48.1	49.8	9.5		6.3	53.6	9.4		14.3	8.2
9.8	25	8.3	41.3	9.7		50.6	43.1	9.4		15.8	10.0	9.8		28.8	27.2
9.7		8.3	34.7	8.2		54.1	19.9	9.8		22.8	59.9	9.2		31.3	56.3
25pr.	+ 1	41.4	+ 0.8		+ 1	41.4	+ 1.0		+ 1	41.3	+ 1.2		+ 1	41.2	+ 1.4

8521-8580.				8581-8640.				8641-8700.				8701-8760.			
mag.	18 ^h .	-36°		mag.	18 ^h .	-36°		mag.	18 ^h .	-36°		mag.	18 ^h -19 ^h .	-36°	
9.0	41	35.3	11.7 8.5 G	9.4	47	21.8	43.9 8.5	10.0	52	45.8	22.6	8.5	57	35.0	22.8 8.5 G-
9.8		53.3	12.9	9.1		52.3	32.4 8.5 G	10.2		48.3	6.9	9.8		40.5	42.0
8.9		58.8	25.9	9.4		52.8	21.0	10.1		48.8	10.7	10.2		49.5	5.6
9.7	42	1.8	39.7	10.2		55.3	5.4	8.9		49.8	8.3	10.2		52.0	6.6
8.1		3.3	57.3 8.0 G-	8.4		59.0	1.8	9.7		58.8	41.5	9.7		54.5	39.1
9.1		5.8	52.8 9.5 G	10.2	48	1.9	23.8	8.9		59.5	2.7	9.6	58	2.5	11.0
8.8		15.8	36.5 9.0	10.2		2.9	34.4	10.2	53	9.3	15.6	10.2		11.5	12.6
9.5		22.8	23.9	10.2		5.8	1.0	8.7		13.3	24.5	10.0		14.0	8.0
9.5		25.3	31.7	10.2		8.8	34.4	10.2		16.3	44.8	10.2		16.0	13.8
9.5		28.3	3.4	9.9		9.8	7.3	9.6		19.3	3.1	9.7		23.0	35.1
9.7		29.8	34.2	10.1		13.8	18.7	7.7		25.0	2.6 =	10.2		28.0	6.2
9.5		35.8	9.0	9.2		19.8	32.0	8.7		25.3	50.1	10.2		42.0	35.2
9.8		41.3	20.7	9.7		26.3	10.4	9.1		29.8	34.4	9.4		46.0	47.7 9.0
9.4		43.8	52.4	9.4		28.8	48.2	10.2		33.8	3.5	9.8		46.0	21.4
9.7		51.3	21.5	9.0		38.8	54.5 9.0	8.5		42.3	32.0	10.2		50.0	4.0
9.4		59.8	38.3	10.0		41.8	42.1	10.1		44.5	8.6	10.2		51.0	39.0
9.5		8.8	19.0	9.8		42.8	26.5	10.1		44.5	18.6	10.2		53.0	17.2
8.4	43	13.3	36.3 7.5 G=	9.0		44.3	54.9 9.0	9.8		50.5	19.6	9.6		56.0	23.2
9.7		13.8	20.2	9.8		48.8	5.0	10.2	54	1.5	10.3	9.9	59	0.5	51.0
9.4		24.3	23.3	10.2		54.8	52.6	9.6		10.5	46.7	9.4		2.0	19.5
9.7		26.0	2.2	10.2		57.0	1.2	9.2		19.5	50.1	9.6		5.0	49.0
9.0		27.3	18.6	10.1	49	0.8	29.4	7.7		20.5	16.3 8.0 GS	9.6		5.0	33.8
9.8		29.0	55.1	9.4		6.3	27.9	9.4		31.5	9.7	10.0		6.5	33.9
9.7		29.3	54.0	10.2		8.3	20.2	10.2		36.6	6.3	10.2		20.0	27.2
9.2		31.8	29.1	10.2		8.8	36.8	10.2		40.5	16.2	9.0		21.0	8.8
9.6		35.3	57.6	9.4		28.8	27.5	10.2		42.5	33.5	10.2		26.5	6.1
9.7		37.1	56.4	10.2		33.8	4.5	9.6		52.0	40.7	10.2		27.7	58.6
8.7		38.0	34.0 9.0	9.6		38.8	48.7	9.6		56.5	54.1	10.2		29.5	50.5
9.4		44.8	57.2	9.3		46.3	28.5	10.2	55	0.0	15.0	9.9		31.0	0.6
9.8		45.8	5.5	9.9		55.8	36.7	10.1		9.0	9.7	10.0		35.0	3.5
9.5		47.0	22.2	10.2		58.8	35.2	10.2		18.5	41.0	9.6		37.0	42.1
9.7		57.5	18.1	9.3		59.8	22.2	10.2		20.0	41.0	9.4		38.0	21.5
8.5	44	7.8	43.7	10.1	50	0.3	16.7	10.1		20.5	8.7	10.2		40.5	7.6
10.2		10.3	19.9	9.6		8.8	14.2	8.9		33.0	18.3 9.5	10.2	0	8.5	34.2
10.2		14.3	51.2	8.8		8.8	3.1 8.5	10.2		37.5	38.9	9.6		26.0	24.4
9.6		15.0	10.0	10.1		9.3	16.9	9.8		56.5	12.0	10.0		36.5	7.9
9.6		22.5	5.7	9.8		11.8	54.1	10.2		59.0	52.0	10.0		40.0	37.6
9.4		42.0	19.1 9.5	10.2		14.1	1.1	9.2	56	4.0	17.8 8.5	9.6		41.0	50.4
9.4		54.3	34.0	9.4		14.8	15.1	10.2		5.3	1.5	9.4		43.5	22.2
9.6	45	0.3	2.6	10.1		24.8	29.5	10.2		8.7	57.9	10.2		52.0	44.7
9.9		8.3	59.0	7.7		30.8	7.7 7.5 GS=	10.0		14.5	46.6	9.4		58.5	22.8
10.2		14.8	34.8	9.7		41.3	9.1	9.7		18.0	12.1	10.0	1	0.5	53.2
9.4		20.8	45.1	10.0		52.3	3.4	10.2		20.0	3.4	10.0		12.5	47.2
7.4		23.3	26.1 7.5 GS-	8.5	51	2.3	4.7 8.0 G	9.6		22.5	51.1	6.8		15.0	21.6 7.0 GS-
10.2		38.8	4.1	10.2		10.8	33.1	9.6		24.0	41.5	9.6		21.0	18.4 9.5
10.0		41.8	31.9	10.2		13.8	40.0	9.6		34.5	5.0	9.4		31.0	33.2
9.6		41.8	48.2	9.6		15.3	45.1	10.2		45.5	3.7	10.2		38.0	55.9
9.6		58.3	28.7	8.7		17.8	57.2 8.8	10.1		53.5	5.5	9.4		50.0	37.6
9.9	46	4.8	31.0	9.7		19.3	23.0	10.1		55.3	0.0	9.8		50.3	2.8
10.2		5.9	21.2	10.2		46.3	16.5	9.4		58.0	28.5	10.0		52.5	30.3
10.2		29.8	47.0	8.4		57.8	26.0 9.5	10.1	57	0.5	35.6	9.8	2	1.5	3.0
8.3		35.3	40.1 8.0 G	10.2		59.3	40.5	10.1		1.0	31.1	10.0		24.0	55.4
10.2		41.3	6.3	10.1	52	4.3	25.2	9.7		2.0	21.0	9.6		32.0	30.5
10.2		48.9	19.1	10.0		12.3	2.8	8.5		2.0	21.2 9.0 G-	10.0		40.5	7.3
10.0		54.3	27.2	10.2		13.3	43.9	9.6		5.0	55.0	9.8		44.0	58.0
10.1	47	2.3	23.4	10.2		16.3	43.6	10.1		12.0	11.5 9.5	10.2		44.5	36.9
10.2		13.8	4.7	10.2		20.8	9.9	9.9		12.0	15.2	9.8		55.0	23.9
9.6		13.8	21.9	9.9		29.0	2.0	9.6		20.0	53.8	10.1		57.5	37.9
9.8		16.3	25.6	10.1		31.8	33.8	9.7		21.0	41.2	9.1	3	9.0	35.0
9.4		17.3	59.4	9.6		44.8	20.6	9.6		21.0	34.8	10.2		10.5	14.0
25pr	+ 1	41.1	+ 1.6	+ 1	41.0	+ 1.8		+ 1	40.8	+ 2.0		+ 1	40.7	+ 2.2	

8761-8820.				8821-8880.				8881-8940.				8941-9000.				
19h.		-36°		19h.		-36°		19h.		-36°		19h.		-36°		
mag.	m s			mag.	m s			mag.	m s			mag.	m s			
9.1	3	19.0	42.5	10.2	8	40.0	35.5	9.8	27	34.1	54.8	7.8	45	56.7	18.3	8.0 GS-
9.9		20.5	35.7	9.3		51.0	25.2	8.8		45.1	23.8	9.1	46	10.7	17.8	9.0
9.4		28.5	23.3	10.2		58.5	26.6	8.5		57.6	44.0	8.1		13.2	53.9	
8.9		40.0	21.4	10.2	9	12.5	39.5	10.0	28	10.6	19.5	9.3		14.2	51.4	
9.6		40.0	37.9	10.1		15.5	27.1	9.2		43.1	13.4	9.8		16.2	14.8	
10.2		46.1	26.2	9.1		17.2	28.3	9.6		47.8	58.5	9.8		32.7	28.1	
9.8		50.0	54.7	10.0		29.0	44.8	9.2	29	16.1	52.8	6.9		49.2	31.4	7.0 G=
10.1		52.7	57.2	9.8	11	5.8	19.7	10.0		23.6	10.0	9.2	47	9.2	50.4	
9.0	4	0.0	8.8	7.4		9.3	52.9	9.4		36.1	18.7	9.8		29.2	8.1	
10.2		1.0	6.9	8.4		52.3	27.2	10.0		41.1	16.8	9.8		30.1	29.1	
9.4		5.5	47.3	8.4		59.3	16.5	8.5		41.1	40.3	9.1		48.6	59.8	8.5
10.2		8.1	39.3	10.0	12	0.8	24.7	8.5	30	10.1	18.8	9.8		59.2	53.9	
8.6		15.5	21.7	10.0	13	5.8	29.4	8.6		14.6	9.3	9.6	48	19.2	8.7	
9.6		21.0	7.0	10.0		27.3	7.7	9.6		29.6	9.5	9.8		21.2	38.4	
9.9		22.0	18.6	8.5		43.8	6.0	10.0		50.6	26.5	9.5		28.2	25.2	
10.2		24.1	26.8	9.8	14	0.8	8.6	10.0	31	0.1	55.2	8.4		39.2	42.2	
10.2		30.1	16.8	10.0	15	9.8	16.8	10.0		0.1	32.8	9.8	49	10.7	27.4	
10.2		33.5	39.2	8.6		43.8	10.7	9.8		19.1	34.0	9.6		13.2	6.7	
9.6		35.0	37.9	10.0	16	22.8	54.7	9.4		20.1	33.7	9.6		50.2	30.1	
9.7		37.0	11.0	9.4		44.8	5.6	9.2		40.1	51.8	9.8		50.2	6.4	
10.2		40.1	3.9	9.2		59.8	36.5	9.2	32	10.1	54.0	9.1		54.2	37.3	
10.2		50.0	33.5	10.0	17	45.8	16.3	10.0		32.6	3.8	9.5		57.2	23.5	
10.0		53.0	54.4	9.4	18	36.8	27.0	9.0		33.1	9.7	9.8		59.6	1.9	
10.2	5	10.0	44.2	9.8		37.8	23.1	8.0		54.1	37.0	9.8	50	10.2	10.5	
10.2		14.5	12.1	9.6		56.3	20.8	10.0	33	5.1	38.2	9.8		23.2	5.9	
9.6		18.0	38.7	8.8	19	13.8	19.0	8.5		21.1	0.4	9.8		36.2	1.9	
9.7		20.0	2.1	9.8		49.3	32.7	7.1		55.8	55.2	9.6		44.2	32.7	
9.3		22.0	28.7	10.0		56.3	50.8	9.8	34	4.3	10.5	9.3	51	0.2	6.0	
10.2		22.0	35.1	7.6	20	29.8	15.1	9.6		14.1	22.4	9.8		11.2	59.5	
9.7		26.0	50.0	10.0		33.8	28.5	10.0		15.8	36.8	9.8		21.2	54.4	
9.9		28.0	16.2	9.0		36.8	8.4	10.0		23.6	52.0	9.6		32.2	21.1	
10.1		36.0	6.0	10.0		38.3	27.5	8.0		44.6	16.3	9.2		44.7	44.4	
10.1		38.0	6.3	8.2		44.8	3.1	9.2		59.6	40.3	9.6		49.2	15.1	
10.1		40.5	4.9	9.0		52.8	41.9	9.6	35	13.0	15.9	9.0	52	1.2	53.2	
9.0		53.5	27.1	8.6	21	30.8	33.0	9.8		21.5	26.8	8.4		9.2	25.0	
10.2		55.0	4.2	10.0	22	0.9	59.1	9.8		33.8	42.3	9.8		26.7	15.8	
9.7	6	8.0	39.6	9.8		9.1	40.8	9.8		57.0	26.1	9.5		28.7	45.6	
10.1		16.0	1.8	9.4		32.1	18.4	9.1	37	41.0	17.3	9.5		33.2	29.3	
9.6		16.0	51.7	10.0	23	5.1	7.0	9.4	40	7.7	31.0	9.2		34.2	10.3	
9.0		16.0	47.0	9.8		20.1	7.0	9.8		23.2	15.6	9.8		47.7	7.8	
8.9		17.5	27.5	8.0		30.6	13.0	9.3	41	13.2	27.0	9.8		51.2	49.7	
9.0		17.5	4.9	10.0		42.6	39.0	9.8		18.2	35.0	9.8	53	9.2	58.7	
10.2		22.0	48.9	9.4	24	15.1	53.0	9.8		20.2	14.0	9.0		19.2	34.4	
10.2		22.2	19.1	10.0		28.6	48.7	9.8		45.7	50.5	9.8		32.7	30.2	
10.0		30.5	19.9	9.2		39.6	48.3	9.8		52.7	28.9	9.8		40.7	39.9	
8.7		32.5	34.4	9.4		45.6	26.7	9.8		59.2	57.2	9.6		44.7	32.8	
9.3		36.5	38.8	10.0		47.6	16.1	8.4	42	29.2	46.9	9.8	54	1.7	15.1	
10.2		40.0	37.8	10.0	25	24.6	24.0	9.8		35.7	44.9	8.6		20.2	19.2	
10.2		42.0	44.0	10.0		27.1	55.5	9.8	43	22.1	21.0	9.1		25.2	44.8	
9.3		50.5	14.9	9.2		34.1	53.9	9.1		39.2	51.0	9.5		49.7	0.8	
10.2		1.0	4.2	9.6		42.1	9.9	9.8		41.7	41.3	9.8		52.7	44.9	
9.6		5.5	7.6	10.0		52.1	9.0	9.3		48.7	9.4	9.8	55	11.7	31.9	
10.2		7.5	54.0	9.0	26	2.1	30.8	9.8	44	4.1	38.9	6.9		19.2	56.6	GS-
8.7		10.0	55.5	8.4		10.6	18.8	9.0		10.2	23.4	8.7		29.2	11.8	
10.2		23.0	42.3	10.0		32.1	29.6	9.4		20.2	42.1	9.8		30.2	30.1	
8.9		48.5	37.9	8.8		33.4	1.2	9.8	45	25.2	33.8	7.7		31.2	24.3	7.0 GS-
9.2		49.5	28.9	10.0		39.1	3.0	9.8		29.2	49.3	8.9	56	0.7	30.6	9.0
10.2		57.2	36.1	9.4		46.6	14.0	9.8		30.7	36.1	9.0		3.2	8.1	
10.2	8	4.0	27.6	9.6		57.6	26.0	9.8		42.7	10.0	8.4		30.2	21.1	-
8.0		35.0	15.2	9.6	27	33.1	41.6	9.8		43.2	52.4	9.0		48.2	8.3	
25pr.	+1	40.6	+2.3		+1	40.0	+2.9		+1	39.4	+3.3		+1	38.7	+3.9	

9001-9060.			9061-9120.			9121-9180.			9181-9240.		
mag.	19 ^h -20 ^h	-36°	mag.	20 ^h	-36°	mag.	20 ^h	-36°	mag.	20 ^h	-36°
9.8	56 50.2	5.3	10.0	5 13.5	26.0	10.1	14 50.7	39.5	9.6	22 23.0	46.4
7.5	57 4.7	43.7	9.6	15.5	51.0	10.1	55.2	49.0	10.0	24.0	47.3
9.4	20.2	54.5	8.0	41.5	24.8	10.1	58.7	40.9	9.6	33.0	37.8
9.4	24.2	41.8	9.6	45.5	54.8	10.1	15 15.7	12.1	10.1	39.0	55.8
9.1	28.7	31.0	9.0	54.5	59.3	10.0	19.2	51.1	10.1	43.5	38.9
8.9	29.2	53.3	8.5	6 21.5	12.6	10.1	20.2	7.1	10.1	45.5	14.4
9.3	29.2	17.6	8.2	28.9	37.1	8.2	44.7	44.3	9.0	50.0	15.6
7.7	34.2	51.0	10.0	39.9	27.7	9.6	49.2	4.1	9.2	52.5	17.2
9.0	38.2	10.3	10.0	41.2	57.3	9.4	16 1.2	34.5	9.4	23 3.5	47.4
9.8	58.7	43.2	9.8	57.9	46.6	8.7	9.2	15.2	9.8	10.5	22.2
9.8	58 0.7	8.7	9.4	7 16.9	1.9	10.1	23.7	40.3	9.6	14.5	56.1
8.4	15.7	32.6	9.4	28.4	45.8	8.9	26.7	49.8	9.8	23.0	6.2
9.4	39.7	54.2	7.6	8 14.9	49.9	9.4	35.2	4.0	9.6	42.0	21.5
9.6	58.2	8.9	10.1	21.4	37.8	10.1	41.2	21.1	8.8	43.5	23.3
9.6	59 1.7	46.9	8.6	24.9	3.9	9.5	44.2	1.7	8.8	44.0	34.0
9.6	26.9	35.5	9.6	31.4	11.1	10.1	17 4.2	15.9	10.1	50.5	16.4
7.4	28.2	0.8	9.4	46.4	49.6	10.1	8.2	6.2	10.1	24 17.0	33.7
9.8	38.2	6.3	9.8	55.4	42.5	9.4	13.7	30.6	10.1	19.0	41.8
8.6	0 0.2	17.7	10.0	9 9.4	48.5	9.2	28.7	12.4	9.0	27.0	35.8
9.8	1.2	5.4	9.8	18.9	18.1	10.1	30.7	39.9	9.4	28.0	42.6
9.5	22.8	38.3	10.1	31.9	4.7	9.8	32.2	56.0	7.5	43.8	39.0
9.5	33.6	19.5	10.1	40.9	17.4	8.9	32.2	1.8	10.1	44.0	9.5
8.7	43.0	48.8	10.1	56.9	4.2	10.1	46.2	10.9	10.1	25 0.5	57.1
8.0	I 12.0	51.8	10.1	10 3.4	41.3	9.5	49.7	46.6	10.1	1.0	28.2
9.4	22.0	56.1	8.8	42.9	58.7	10.0	52.0	57.5	8.6	8.3	17.9
10.1	24.5	54.9	10.0	49.4	53.4	10.0	52.2	27.5	10.1	14.0	49.1
9.0	34.0	21.4	10.0	49.9	42.1	10.1	18 5.2	51.2	10.0	16.0	7.5
8.9	40.0	23.8	10.0	11 4.9	31.9	10.1	11.0	35.8	10.1	20.5	0.1
9.0	53.5	47.7	9.8	12.9	37.7	9.4	26.5	55.0	10.0	28.5	41.3
9.4	55.2	1.5	10.1	20.9	21.3	9.8	34.5	46.8	10.0	40.0	7.1
9.5	2 0.5	19.0	9.2	47.9	11.8	9.8	39.5	23.1	9.2	26 34.6	16.2
9.5	1.5	15.1	8.0	48.4	53.7	10.0	49.0	16.2	9.2	59.1	51.6
10.1	24.0	20.8	10.1	51.9	53.1	10.0	49.5	7.1	8.7	27 4.1	42.0
10.1	42.5	14.8	9.8	54.4	13.1	9.4	19 1.0	24.0	9.0	45.6	8.4
10.0	44.5	41.0	9.5	56.4	44.3	10.1	1.5	46.0	9.0	28 23.6	10.8
10.0	54.5	51.0	10.1	12 8.5	1.0	8.2	1.5	9.3	9.0	29 35.1	58.3
6.6	59.5	25.1	10.1	13.9	2.4	9.8	5.5	22.8	8.3	46.6	30.0
9.5	3 0.5	11.6	9.4	19.4	36.2	10.1	31.5	12.3	8.5	30 51.1	53.2
9.8	3.5	8.5	9.0	44.9	24.3	10.0	53.5	25.7	7.7	31 3.1	47.6
9.5	6.0	43.9	7.7	47.9	3.9	8.6	53.5	46.0	7.4	52.6	28.1
10.1	7.5	7.7	9.8	51.4	14.3	10.0	59.0	24.0	9.0	32 19.1	2.8
10.0	13.5	20.1	8.2	13 4.9	18.4	10.0	0.5	29.4	7.6	20.1	14.2
9.8	15.0	49.4	10.0	20.9	11.3	10.1	13.5	53.1	9.0	40.1	10.2
10.0	16.0	22.7	10.1	23.2	3.9	10.1	16.7	13.7	9.2	33 14.5	59.6
9.0	30.0	37.3	9.4	33.7	43.2	10.0	17.0	20.9	9.2	14.6	13.6
10.0	35.5	17.1	9.0	35.7	51.9	8.0	29.0	36.2	9.2	34 32.1	9.5
9.8	41.5	38.8	10.1	36.2	27.1	10.1	30.7	40.2	8.9	43.5	31.0
8.4	43.0	27.3	9.8	42.7	50.9	8.6	39.0	46.4	8.6	35 46.5	5.1
8.6	54.0	54.7	10.1	57.7	28.2	9.6	43.0	7.0	7.4	36 43.5	16.6
10.1	4 11.5	48.2	9.6	58.2	10.2	5.8	45.0	0.4	9.0	45.5	32.5
8.7	16.5	9.1	9.6	14 4.2	33.7	9.4	53.0	24.9	9.2	51.0	39.1
8.6	25.5	7.4	8.6	5.2	5.2	10.1	21 0.5	32.9	8.8	37 0.5	31.3
8.4	38.0	42.6	8.3	9.2	3.9	9.6	13.5	10.9	8.5	8.0	33.3
9.2	50.5	31.5	8.6	9.2	55.1	10.0	20.0	3.6	7.0	38 20.5	34.2
9.8	50.5	10.3	10.1	13.7	37.1	10.0	30.0	8.2	9.0	20.5	43.8
10.1	52.7	58.8	8.8	21.2	16.4	9.5	41.0	26.2	9.2	26.4	18.8
10.0	53.0	43.6	8.0	24.2	28.8	10.1	49.5	18.2	9.2	39 45.5	13.8
10.1	53.5	50.0	9.5	34.2	53.7	10.1	54.5	4.7	9.2	47.5	14.0
9.5	5 3.0	34.0	9.0	39.2	43.3	10.1	59.0	6.6	9.2	59.5	5.0
8.9	10.5	40.4	9.5	43.2	44.6	10.1	22 7.4	59.4	8.8	40 58.5	40.3
25 Pr.	+1 38.1	+4.2									
				+1 37.6	+4.6		+1 37.2	+4.8		+1 36.7	+5.0

9241-9300.				9301-9360.				9361-9420.				9421-9480.			
20 ^h .		-36°		20 ^h -21 ^h .		-36°		21 ^h .		-36°		21 ^h .		-36°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
8.3	41	8.5	27.0	9.7	56	19.5	22.9	10.0	10	7.6	43.0	9.8	26	35.7	6.9
9.2		11.2	56.8	10.0		21.5	26.0	9.6	11	7.1	34.7	9.6		39.0	9.3
9.2		28.0	43.5	8.4		24.0	51.8	8.6		15.1	45.1	9.2		40.5	32.3
9.2		39.0	46.1	8.8		39.0	31.8	9.1	12	27.1	23.5	9.6		41.5	48.1
8.7		39.5	6.5	9.4		47.5	49.5	9.6		28.6	10.9	9.1	27	1.5	26.1
8.4	42	10.2	1.2	10.0	57	38.6	57.6	8.9		29.3	2.2	9.5		14.0	44.8
8.8		43.0	13.1	8.4		42.9	57.8	8.1		49.1	13.7	9.3		21.5	15.8
9.0		49.5	27.8	8.3		44.5	11.8	9.4		51.6	55.5	9.3	28	17.0	58.3
9.2	43	3.5	17.0	8.9		47.5	51.0	9.4	13	0.1	51.3	9.1		42.5	34.3
8.8		41.5	45.7	9.4	58	7.5	22.3	9.2		4.6	20.2	9.5	29	2.5	36.3
9.2		44.5	6.4	10.0		8.0	13.2	9.2		39.6	56.1	8.5		12.5	26.4
9.2		51.5	52.7	7.5		9.0	45.3	10.0		41.1	22.9	9.8		14.5	39.3
8.8		54.5	19.0	10.0		13.5	32.6	10.0		51.1	25.1	7.2		20.5	26.4
9.2	44	30.0	48.6	10.0		34.5	32.0	8.8		59.1	16.9	9.8		43.0	16.7
9.0		40.0	21.7	7.9	59	15.0	22.0	8.8	14	2.6	56.9	9.8	30	3.5	30.7
8.5	45	12.5	20.1	10.0		32.0	40.1	8.2		22.1	56.6	9.0		16.0	48.5
7.6		17.7	58.9	9.4		40.5	3.0	10.0		44.1	22.5	9.5	31	23.5	54.1
9.0		20.5	34.6	9.4		49.9	57.2	9.4		44.3	32.1	9.1		57.0	35.5
9.2		33.5	6.5	10.0	0	17.5	27.9	8.6	15	2.8	30.9	9.6	32	10.8	19.3
7.9		44.5	39.8	10.0		51.0	41.7	10.0		26.6	19.7	8.0		20.5	24.2
9.2	46	19.0	38.4	10.0	1	2.9	59.9	10.0		44.6	20.3	9.8		52.0	30.1
9.0		23.5	16.5	9.6		34.5	8.3	9.2		59.3	13.1	9.8	33	16.8	24.1
9.0		24.0	24.3	8.4	2	0.0	5.8	10.0	16	30.1	10.8	7.8		29.5	12.7
9.2	47	8.5	43.3	9.2		20.4	0.9	10.0		48.9	42.8	7.6		44.5	9.1
9.2		42.0	55.9	9.6		32.4	48.7	9.6		53.3	17.7	8.1	34	11.5	8.5
8.8		59.5	30.1	10.0		41.9	35.7	9.2		55.3	41.0	9.1		24.5	17.7
9.0	48	29.5	33.6	10.0		59.4	9.2	10.0		55.6	31.9	8.4	35	11.0	9.1
9.2	49	36.4	0.5	10.0	3	2.9	2.0	9.5	17	32.0	59.1	9.8		18.8	37.2
10.0		50.8	13.5	8.8		20.4	25.1	9.1		40.0	23.6	8.8		33.0	12.8
10.0		58.8	38.3	9.7		23.9	24.9	8.4		51.5	7.2	9.2		38.0	21.9
9.0		59.8	56.0	9.6		29.4	36.6	9.1	18	7.0	17.0	9.3		43.0	50.2
9.2	50	7.9	24.5	9.7		38.4	33.9	7.8		8.5	22.3	9.5		45.0	39.1
9.4		44.3	12.9	9.4		46.4	29.9	9.8		10.5	0.2	8.8		48.7	22.0
9.8		49.8	37.6	8.0		56.9	24.4	9.1		35.5	4.5	9.2		49.2	57.1
9.0		54.3	11.0	9.4	4	15.4	22.7	9.5		40.5	55.2	9.3		49.4	1.0
9.6		57.1	8.3	9.8		21.9	6.2	9.8		41.0	50.7	9.6	36	29.7	52.3
10.0	51	9.8	41.7	9.6		26.9	36.1	8.0		44.5	58.9	9.8		30.5	45.7
10.0		39.8	2.9	10.0		30.9	59.7	9.5	19	0.0	47.1	9.3		34.7	51.0
9.4		44.3	34.0	9.6		39.4	20.7	8.6		10.5	29.9	9.8		48.2	40.0
9.4		46.4	30.7	9.4		40.4	7.1	8.8		21.0	5.8	8.2	37	6.7	11.1
9.6		50.8	54.5	9.4		52.4	8.1	9.6		29.0	28.6	9.6		21.2	51.9
6.7	52	5.3	36.6	7.9		59.4	16.3	9.8	20	5.0	37.0	9.1		31.7	52.9
8.8		18.3	35.5	7.0	5	29.9	56.3	8.8		13.0	46.8	9.8		33.7	5.1
9.7		20.8	35.0	9.8		32.4	48.5	9.8		19.5	0.1	9.8		34.5	25.2
8.8		23.8	47.7	9.7		40.4	22.9	9.6		28.0	24.7	9.8		55.2	51.9
9.4		49.5	21.4	10.0		43.4	57.0	9.8		54.0	30.9	9.3	38	25.7	4.5
7.0	53	0.5	32.5	8.6	6	11.9	4.0	9.8	21	9.0	49.1	9.8		25.7	54.5
9.6		19.5	13.5	8.8		16.4	36.2	9.8	22	33.6	43.0	9.8		33.5	17.2
10.0		21.0	36.2	9.6		51.6	57.7	9.1		37.0	30.3	9.8		55.7	15.9
10.0		34.5	29.0	10.0	7	3.9	18.2	9.8		49.6	48.8	9.6	39	10.2	31.0
10.0	54	19.0	34.8	8.4		43.4	13.9	8.2		50.5	32.6	7.6		15.7	16.9
8.2		57.0	17.7	7.3		59.4	43.7	9.1	23	39.5	40.4	9.5		40.2	4.1
9.4		59.5	24.0	8.6	8	6.2	1.3	9.8		45.0	31.9	9.2		58.5	23.0
10.0	55	16.0	42.4	9.6		7.4	39.6	9.8		56.5	40.4	8.4	40	10.7	12.1
10.0		22.0	44.1	9.7		25.4	48.8	8.0	24	10.0	7.1	9.8		13.7	16.8
10.0		36.5	58.0	8.8		33.9	36.4	9.5		12.5	10.4	8.8		40.7	25.0
10.0		54.5	54.2	9.2		49.4	49.0	9.1	25	9.0	18.2	9.2		51.0	38.4
9.8	56	14.0	39.9	7.8		50.9	41.5	9.8		12.5	34.0	9.3		56.2	13.8
9.8		15.0	26.7	9.4	9	11.1	21.4	9.2	26	23.0	24.5	7.8	41	40.5	12.9
8.5		19.5	17.5	10.0		24.1	44.9	9.4		29.5	12.7	8.0		46.0	3.9
25pr.	+1	35.0	+5.6		+1	34.0	+6.0		+1	32.9	+6.4		+1	31.4	+6.8

9481-9540.				9541-9600.				9601-9660.				9661-9720.				
mag.	21 ^h -22 ^h .	-36°		mag.	22 ^h .	-36°		mag.	22 ^h .	-36°		mag.	22 ^h -23 ^h .	-36°		
	m s	'		m s	'			m s	'			m s	'			
9.9	42	12.3	20.3	9.0	5	34.2	2.9	9.0	23	9.2	7.9	7.4	44	43.4	33.0	7.0 GS=
8.9		59.8	35.5	10.2	6	3.6	31.2	9.2		9.7	38.6	9.2	45	55.9	45.4	9.0 -
9.9	43	24.8	20.3	8.6		14.2	21.6	10.0		29.7	8.9	9.0	46	20.4	29.1	
8.9	44	17.3	32.1	9.8		39.4	21.5	9.9	24	40.7	15.4	9.2		44.9	39.1	9.0
9.2		17.3	14.2	10.0		59.2	18.2	9.0	25	3.7	33.6	9.8		57.9	54.3	
9.9		20.3	7.2	10.0	7	8.4	58.5	9.9		39.7	14.4	10.2	47	1.9	20.8	
7.6	45	13.3	35.1	10.2		14.4	26.9	9.9	26	5.2	30.9	9.4		10.5	57.2	
9.4		13.3	45.7	8.6		30.4	48.4	7.8		18.2	5.0	10.0		39.1	0.4	
9.8		17.3	3.4	9.7	8	43.4	25.2	10.2		30.7	25.7	10.0		44.9	34.4	
8.9		43.3	36.9	9.2	9	30.4	24.2	8.4		51.2	14.8	10.6		52.9	51.0	
9.8	46	7.3	37.9	8.4	10	0.4	34.3	10.2	27	29.2	36.7	9.2	48	48.4	50.0	
8.7		8.3	25.1	9.6		1.4	35.9	8.6	28	14.7	27.4	10.0		48.4	50.7	
7.4		48.8	38.9	9.4		11.4	56.0	9.9		24.7	38.9	10.4	49	26.4	40.8	
9.8		51.8	9.9	9.4		21.6	2.1	10.2		43.4	1.1	10.0		50.5	9.3	
9.4	47	10.3	59.3	9.0		41.9	50.3	9.9		53.2	21.9	10.6		21.9	47.6	
8.7	48	37.3	43.1	9.0		53.9	53.1	9.6		57.7	13.8	9.2		40.4	25.6	
9.6	49	6.3	32.2	8.8	11	1.4	7.2	8.8	29	30.7	6.2	10.6	51	2.4	27.0	
9.6		8.3	53.1	10.2		32.0	36.9	8.8		40.0	8.1	10.6		20.4	34.0	
9.9		14.3	19.1	10.0	12	3.0	9.5	10.2		41.7	40.6	6.8		36.9	11.4	6.5 GStπ
9.9		39.3	15.1	9.9		32.5	29.4	8.7		42.7	6.0	9.8	52	11.4	52.6	
9.9		51.8	6.0	8.8	13	31.0	31.9	10.2	30	31.7	58.1	10.2		31.9	15.0	
9.2	51	18.8	42.4	10.2		34.0	46.0	9.2		35.9	34.3	9.8		37.4	36.8	
9.0		57.0	56.5	10.0		39.5	19.6	9.4		38.2	18.8	10.6	53	14.4	14.8	
9.6	52	28.8	55.5	8.7		49.5	58.1	9.8	31	13.7	22.5	9.4		50.9	8.2	
9.8		39.8	33.7	8.1	14	19.5	33.9	10.2		19.7	31.9	9.8		57.4	41.6	
9.9	53	1.3	42.1	10.2	15	24.5	12.0	9.4		20.7	24.9	9.2	54	43.4	44.8	9.5 G-
7.6		33.8	3.3	10.2		43.0	19.4	9.4		27.2	17.0	10.6	55	30.4	8.7	
8.2	54	3.3	39.3	10.2	16	15.0	25.9	10.0		49.5	6.4	10.6		40.9	50.8	
8.4		11.3	43.3	10.2		24.5	16.6	10.6	32	38.0	49.1	10.6		46.9	41.4	
8.7		18.3	54.6	10.2		29.5	43.1	9.0	33	36.0	7.1	9.6	56	5.9	9.9	
8.1		39.3	8.8	8.7		39.5	21.0	8.6	35	34.0	27.5	10.0		39.4	45.3	G
7.5		59.3	25.9	10.2		47.5	12.0	8.4		38.0	0.1	10.7	57	2.3	43.0	
9.4	55	8.0	57.6	9.0		56.5	1.4	10.4		40.0	56.5	9.2		53.1	20.0	G
9.6	56	52.3	44.6	9.4	17	0.5	10.6	9.2	36	20.0	37.3	8.2		56.1	34.0	7.5 GS
8.4	57	18.3	18.0	10.2		6.0	35.8	10.6	37	24.5	12.1	10.0	58	29.1	17.1	G
9.8		40.8	18.8	9.9		8.5	43.6	10.6		50.0	13.9	10.2	59	21.6	31.1	
9.8		41.3	24.8	9.9		19.0	6.4	10.6	38	0.5	40.1	9.4		0.26.9	57.6	G
9.9		58.3	4.5	9.7		35.5	18.1	9.6		29.5	16.2	8.8		41.1	44.8	8.5 G-
9.9	58	23.3	21.9	9.9	18	9.5	27.0	10.0		44.0	34.7	10.2	1	5.6	4.0	
9.9		28.8	34.8	8.2		40.5	17.4	10.2	39	6.5	0.1	10.0		11.1	11.6	
9.9	59	29.3	12.7	10.2		54.5	12.5	9.2		20.0	47.9	9.8		16.6	17.6	9.5
9.9	0	5.8	22.0	9.7	19	13.5	50.0	9.6		35.5	35.2	9.6		24.6	50.8	
9.8		47.8	28.2	8.6		44.5	18.5	9.8		53.0	5.3	9.4	2	22.6	6.7	
9.9		53.3	26.8	9.9	20	9.5	50.8	9.0	40	29.5	10.7	10.2	3	8.6	58.2	
9.8		55.3	55.4	10.2		30.5	38.6	10.0		48.5	53.3	8.6		24.6	4.6	7.5 G=
8.8	1	7.3	54.9	9.7		32.0	15.0	10.2		56.4	6.6	10.2		38.6	9.4	
9.9		8.3	34.2	10.2		46.4	2.7	10.4		59.4	54.2	10.2	4	6.6	40.5	
9.6		34.3	33.3	10.2		50.5	55.1	9.6	41	13.9	20.3	10.2		26.0	59.8	
9.2		36.8	40.9	9.7	21	9.7	15.0	10.2		15.4	43.6	10.2		55.1	52.9	
7.8		37.3	39.9	9.1		13.2	26.1	10.6	42	32.3	2.3	9.8		55.6	27.1	
9.9	2	42.3	38.8	9.8		42.2	33.1	10.6		57.9	3.3	9.8		59.6	28.1	
8.2		52.3	35.3	10.2		53.7	53.4	10.4	43	13.4	3.2	9.5	5	6.6	34.9	10.0
9.9	3	53.5	17.7	10.2		55.7	42.8	8.6		15.5	57.4	10.0	6	15.6	19.9	
9.2	4	3.0	39.2	8.6	22	7.7	59.7	8.4		22.9	39.2	9.0	7	5.1	53.5	9.2
9.9		6.0	25.9	9.8		10.7	37.8	9.8		32.9	3.6	8.8	8	30.6	23.5	9.5
9.4		15.5	29.5	9.4		19.7	26.4	10.2		36.9	17.1	10.2	9	1.6	35.7	
9.4		53.5	47.0	10.2		27.7	27.9	10.6	44	2.9	14.0	8.4		9.6	23.9	8.5 =
9.6	5	17.5	46.9	9.4		39.7	11.0	10.2		26.1	3.4	8.4		15.1	21.9	8.0 -
9.2		24.2	9.4	10.2		41.7	53.0	10.0		28.4	13.4	8.8		51.6	2.5	9.5 -
9.9		28.9	2.8	9.1		53.7	42.8	10.2		32.9	1.2	10.2	10	6.1	31.1	
25pr.	+ 1	29.7	+ 7.1	+ 1	27.5	+ 7.5		+ 1	25.9	+ 7.8		+ 1	23.6	+ 8.0		

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9721-9750.				9751-9780.				9781-9809.				9810-9838.				
23 ^h		-36°		23 ^h		-36°		23 ^h		-36°		23 ^h		-36°		
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s		
10	39.6	34.3		10.0	22	41.5	45.5	10.0	32	10.5	28.9	10.0	47	28.0	15.8	
8.8	55.6	43.6	9.0 -	10.0	50.1	0.1		9.0	39.5	18.9		10.4	48	48.5	25.3	
10.2	5.6	48.1		9.0	23	9.0	31.1	9.5	10.0	33	5.5	4.4	10.0	49	12.0	46.0
9.8	6.6	44.1		9.6	34.0	19.3		9.0	35	18.5	40.0	10.4	50	5.0	52.8	
9.5	11.6	50.7		9.2	34.2	1.7	9.0	9.0	36	8.5	23.0	10.0	52	22.0	38.4	
10.2	36.6	15.1		9.6	24	19.0	56.9	9.0	37	33.5	56.5	9.2	9.2	51.0	44.1	
9.8	9.6	48.2		8.2	53.6	58.6	8.0 GS-	10.0	54.5	48.2		10.2	59.5	57.3		
9.8	10.6	52.1		10.0	25	43.0	30.9	10.0	38	50.5	41.1	10.0	53	31.5	50.4	
7.8	36.6	48.7	8.0 G-	10.0	26	9.0	13.7	10.0	39	28.5	2.2	8.9	8.9	44.5	39.4	
10.2	14	0.6	53.3	9.4	31.9	9.0		10.0	29.5	16.9		9.0	48.0	41.3	8.5 G	
8.8	44.6	40.1	9.0 G-	10.0	44.4	18.9		10.0	37.5	23.7		9.2	51.5	37.0		
9.6	15	38.6	20.5	8.8	45.4	27.7		10.0	40	1.0	42.2	10.4	58.4	23.9		
9.8	44.1	4.9		9.2	49.9	27.9		8.8	8.0	34.1	9.5	10.0	54	0.5	48.9	
9.2	54.6	43.9	9.0 -	7.0	27	4.4	57.3	7.0 GS-	8.8	13.5	41.2	10.4	40.5	59.8		
10.2	16	20.6	59.1	8.2	6.4	12.0	9.0 G-	9.6	41	0.5	18.9	10.2	52.5	33.3		
9.6	17	24.1	23.7	10.0	13.9	34.4		10.0	14.5	34.3		10.4	55	5.0	55.2	
9.6	18	7.6	26.9	9.6	29.9	49.9	9.5 G	10.0	42	4.5	34.7	9.4	22.0	54.7	9.0	
7.4	29.6	52.3	8.0 GS-	10.0	39.4	33.3		9.6	13.5	55.4	G	10.4	38.0	19.3		
10.0	39.6	15.8		10.0	47.4	25.8		9.4	23.0	8.8		8.6	56	54.5	14.9	
9.8	19	1.6	13.9	9.2	28	29.4	36.7	8.8	31.5	31.7		8.4	57	0.0	39.7	
10.2	14.6	17.5		10.0	50.4	1.7		9.2	43	50.7	40.2	6.8	1.0	56.9	7.5 GSet	
9.0	21.6	30.2		10.0	59.4	34.6		9.0	44	8.2	16.5	9.2	3.5	32.3		
9.4	25.1	3.8		8.4	30	0.4	2.7	8.8 -	9.8	8.7	5.2	8.9	7.0	17.9	8.5	
9.2	20	35.7	52.0	10.0	17.8	13.9		10.0	18.2	40.0		10.2	22.0	31.1		
10.0	46.2	23.1		9.6	31	6.0	52.2	G	7.6	51.7	43.6	10.0	51.5	55.0		
10.0	51.7	17.4		10.0	17.0	47.5		10.0	52.2	18.2		7.6	58	37.5	42.8	
8.6	21	4.7	18.4	8.6	21.5	34.1	8.8 -	9.2	45	3.7	31.7	9.2	59	9.5	11.9	
7.3	18.6	13.9	6.5 GS _{st} π	10.0	39.0	53.3		9.2	46	3.7	52.0	10.4	20.5	12.1		
9.2	35.4	34.6		10.0	54.0	4.0		9.6	46	19.7	31.8	10.4	47.5	7.1		
9.4	22	4.0	25.1	10.0	32	3.5	23.0									
25pr.	+ 1	21.4	+ 8.2													
				+ 1	20.3	+ 8.3			+ 1	18.9	+ 8.3		+ 1	17.4	+ 8.4	

ZONE — 37°.

1-30.				31-60.				61-90.				91-120.			
mag.	oh.	-37°		mag.	oh.	-37°		mag.	oh.	-37°		mag.	oh.-rh.	-37°	
	m s	'		m s	'			m s	'			m s	'		
9.8	0	2.5	50.5	9.8	20	16.4	7.6	9.6	34	20.0	42.1	9.8	56	53.2	35.8
10.4		25.5	18.1	9.8		39.9	14.0	9.6	36	0.0	56.9	8.2	57	0.2	59.1
10.4		33.5	46.1	9.0		54.9	15.5	9.8		49.2	33.2	8.3		0.7	57.4
10.4	1	29.0	37.5	9.2	21	4.4	5.9	9.3	37	20.5	24.1	10.0		28.2	19.4
8.2	2	26.0	26.2	9.8		39.9	42.0	9.2	38	4.2	7.0	10.0		30.8	1.8
9.6		44.5	20.7	9.5		55.9	24.1	8.7		31.0	31.6	9.6		39.7	9.4
9.6	6	15.7	10.9	9.2	22	14.9	51.1	8.8		35.0	21.4	10.0	58	24.2	32.3
10.4		19.7	55.0	9.0		30.9	42.1	9.8		35.1	37.7	8.4		30.2	58.4
10.4	7	18.2	43.0	9.6		34.9	23.4	9.8		38.0	1.4	8.8		52.7	15.6
10.4		21.2	19.0	9.8		40.1	36.9	10.0	39	29.6	16.2	9.5	0	0.2	48.8
10.2		29.7	0.0	9.8		53.4	32.1	9.2		43.4	58.3	10.0		9.2	6.9
10.2	8	58.7	17.7	9.8	24	50.4	38.7	9.4	41	28.5	2.1	9.2		24.0	56.6
9.4	9	7.2	24.8	8.2	25	19.9	53.5	8.0	8.0	32.8	36.8	9.8		29.7	25.1
8.4	10	10.7	29.4	9.6		29.9	58.5	10.0	43	48.8	40.2	8.6		38.2	36.2
9.8		51.7	22.4	9.2		38.4	34.0	10.0	45	44.2	1.1	9.6	2	47.2	34.1
9.4	11	29.7	35.4	9.8	26	28.9	11.9	10.0	46	14.8	58.4	9.5		52.0	44.7
7.5	12	2.2	12.2	9.8		39.9	6.5	8.0	47	58.8	45.4	9.6	3	52.5	54.3
10.0		22.7	54.0	8.8		58.9	37.0	9.2	48	13.8	5.0	9.6	4	5.0	49.5
10.4		46.2	46.6	9.8	27	1.9	4.7	9.4		45.8	53.6	8.2		19.0	12.7
8.7	14	14.9	37.7	8.2		19.9	28.7	9.8	49	20.2	20.6	9.2	5	17.8	18.2
8.6		34.9	10.3	9.0	28	20.4	19.1	9.4		38.7	18.0	9.4	6	15.8	7.2
9.8	15	59.9	7.7	9.6		49.9	53.6	10.0		40.2	38.6	9.2	7	16.3	11.9
9.6	16	0.4	42.6	9.8		59.4	38.4	9.2	50	49.2	53.6	9.4	8	28.8	15.3
9.6	17	7.4	39.8	9.6	29	17.4	55.0	8.4	51	18.2	6.6	7.8		38.3	40.2
9.8		11.6	0.7	9.8		29.9	25.5	9.1		39.2	7.7	9.2	9	33.2	59.1
9.8		21.9	53.1	8.7	30	3.0	37.3	9.6		43.2	21.0	9.6		38.8	20.2
9.8	18	22.4	51.0	7.4	31	11.9	58.6	8.8	52	18.2	55.6	9.6	11	25.6	0.2
9.5		25.4	11.5	9.8		42.0	17.6	9.1		32.2	44.1	8.8		33.2	56.3
9.5		25.9	29.6	9.5		50.5	6.5	9.6	54	15.2	53.6	8.2		38.8	55.9
9.8	19	23.4	7.8	9.2	32	46.0	8.6	9.6	56	12.2	32.1	8.0	12	8.8	11.5
25pr.	+1	15.6	+8.3	+1	13.9	+8.3		+1	11.7	+8.2		+1	9.9	+8.0	

121—180.			181—240.			241—300.			301—360.		
mag.	h.	m s	mag.	h.-2h.	m s	mag.	h.	m s	mag.	h.-3h.	m s
8.8	12	9.8	8.1	53	32.7	8.8	22	39.1	10.4	45	7.8
8.9	13	30.0	8.0	54	29.9	8.8	23	52.6	9.0	46	12.8
9.0	15	28.3	9.9	55	34.7	10.2	26	22.1	10.0	47	46.0
6.6	16	28.8	9.4	56	2	9.4	27	1.1	10.4	48	31.0
9.6	17	0.3	9.9	57	29.7	9.4	28	8.1	10.2	49	27.5
9.4	18	8.3	7.8	58	12.7	8.6	31	2.4	8.3	55	25.8
9.0	20	34.3	9.8	59	9.2	9.8	32	19.1	10.2	56	14.0
8.2	21	9.5	8.1	1	15.0	8.2	35	19.2	10.0	59	44.0
9.6	22	7.8	9.2	2	39.7	8.2	38	2	8.8	68	1
9.8	23	11.3	7.9	4	48.4	8.8	39	8.2	9.6	7	9.0
8.0	24	24.5	9.4	48	7	9.4	40	14.2	10.4	8	1.0
8.6	26	40.5	9.8	54	7	9.4	43	7.7	9.6	11	14.8
9.1	27	11.5	9.8	5	59.9	10.1	44	50.5	10.0	12	39.3
6.4	28	17.4	9.7	6	2.9	10.1	45	46.5	10.0	13	33.3
9.2	29	3	9.7	7	7.9	9.8	46	7.7	7.8	14	32.8
9.2	30	24.5	8.6	8	19.9	9.8	47	8.1	10.4	15	48.3
9.0	31	6.0	8.8	11	34.9	9.8	48	31.1	10.4	16	16.0
9.8	32	31.5	8.8	12	8.4	8.0	49	27.6	8.8	17	23.5
9.0	34	38.5	9.9	13	15.9	10.2	50	28.2	6.8	18	5.5
9.9	35	2.5	9.8	13	15.9	8.8	51	19.2	10.4	19	1.4
9.7	36	32.0	9.9	15	3.4	9.4	52	26.2	10.4	20	5.5
6.1	37	39.0	9.9	16	9.4	9.4	53	28.7	8.8	21	22.6
9.8	38	20.5	9.3	17	32.9	9.2	54	38.7	8.8	22	28.1
9.8	39	20.0	9.9	18	23.5	9.8	55	44.8	8.8	23	29.0
9.0	41	3.5	9.9	18	23.5	10.1	56	52.2	10.4	24	33.2
6.8	42	20.0	8.5	19	1.4	7.8	57	57.2	10.2	25	39.8
9.0	43	1.0	8.5	20	36.1	8.4	58	2	9.2	26	46.0
9.9	45	46.0	9.9	21	22.6	9.4	59	7.7	10.4	27	54.1
9.8	46	16.0	6.9	21	22.6	8.2	60	12.3	10.4	28	58.3
7.1	47	50.7	9.9	22	2.4	10.1	61	17.4	10.4	29	62.5
9.9	48	16.5	9.0	22	31.6	9.4	62	22.1	10.4	30	66.7
9.8	48	16.5	8.3	20	36.1	7.4	63	27.1	10.0	31	70.9
7.8	52	18.5	10.0	21	22.6	6.4	64	32.1	10.0	32	75.1
9.9	53	4.0	9.4	21	22.6	9.4	65	37.1	10.0	33	79.3
8.6	53	4.0	9.0	22	31.6	9.6	66	42.1	10.0	34	83.5
9.9	53	4.0	7.8	22	31.6	8.6	67	47.1	7.5	35	87.7
25Pr.	+1	6.7	+1	2.8	+7.0	+1	0.8	+6.5	+0	58.6	+5.9

361-420.			421-480.			481-540.			541-600.		
mag.	3 ^h .	-37°	mag.	3 ^h -4 ^h .	-37°	mag.	4 ^h .	-37°	mag.	4 ^h .	-37°
8.4	16 13.3	54.1	10.8	43 14.8	32.0	9.6	5 18.4	41.0	10.4	28 49.8	55.0
8.6		41.8	10.8		45.3	9.8		38.9	10.6		52.8
9.2	17 16.3	4.6	10.8	44 47.8	11.1	10.8	6 2.9	15.8	9.3	30 28.8	40.1
9.6		30.8	10.0	45 54.8	36.9	10.8		39.4	10.8		38.3
8.4		59.3	10.3		55.8	10.0	8 6.4	35.0	10.8		48.8
10.0	19 9.3	41.5	10.8	46 18.8	19.3	9.0		20.4	10.0		54.8
8.0		13.6	10.6		32.3	10.4		43.4	10.8	31 27.8	18.5
8.8		17.1	10.8		42.8	10.8	9 13.9	51.5	10.8		40.3
8.6		55.1	10.8		53.3	10.2		14.4	10.6	32 0.3	14.9
9.5	20 15.4	57.7	9.2	47 31.8	6.4	9.4		23.4	10.6		9.3
6.7		27.6	8.4		47.3	7.6		26.4	9.0	33 9.3	42.9
10.0	22 10.1	55.0	10.2	48 1.3	12.4	9.8		50.4	10.8		19.3
9.8	23 0.1	28.9	10.8		2.3	10.6	10 23.4	59.0	10.6		50.8
9.2		35.1	9.4		12.8	6.3		40.9	10.4	34 30.3	49.9
9.4	24 40.1	26.5	10.4		45.8	10.2		30.4	8.6		31.3
10.0	25 23.1	0.0	10.3	49 20.6	9.9	9.0	12 29.0	3.7	10.6	35 58.8	32.7
7.2	26 9.1	47.9	10.6		29.6	8.8		48.5	8.9	37 25.9	25.7
9.0		40.1	10.2		50.1	10.6		54.0	10.8		30.9
9.4	27 29.1	20.8	9.2		53.6	9.8	13 44.0	34.9	5.2		38.9
9.5		29.1	10.4	50 13.6	34.5	9.6		14 45.0	6.5		45.4
10.0		49.1	10.4		45.1	9.8		51.5	9.8		45.9
8.8	28 40.1	31.6	10.8		59.6	9.8	15 10.0	43.9	10.8	38 10.4	7.1
8.8	29 54.1	39.1	10.8	51 16.6	48.5	10.8		20.5	9.8	39 32.9	20.2
9.6		58.6	9.2		31.1	10.8	16 12.5	1.0	10.0		43.4
9.5	30 59.1	28.4	10.8		38.6	8.4		44.0	10.2	40 13.9	10.7
9.5	33 23.1	37.9	10.2		39.6	9.4	18 26.5	33.2	10.0		17.9
10.0		34.1	10.4		50.6	9.8		28.5	10.4		23.1
8.2		40.4	10.2	52 28.6	14.1	9.6	19 7.5	4.9	10.8		49.9
8.3		43.6	10.8		50.1	9.8		19.5	9.8	41 0.9	43.0
10.0		49.1	10.0	53 27.4	14.3	10.8		48.5	9.8		9.4
9.2		52.9	10.8		41.4	10.8	20 2.0	29.6	8.4	42 9.4	40.9
10.8	34 29.2	51.6	9.0		57.4	10.6		9.0	10.8		18.4
9.8	35 12.9	45.0	10.0	54 3.4	6.2	9.0		12.5	10.2	43 9.4	29.3
10.8		28.7	10.8		5.4	8.8		14.0	10.4		51.9
9.4	36 26.5	3.9	10.0		31.4	9.6		25.0	10.0		54.9
10.6		39.7	10.4	55 4.4	41.9	10.8		30.0	8.2	44 13.9	39.1
10.1		57.5	10.8		15.9	9.8		42.5	9.8		45 17.9
9.0	37 10.0	19.5	9.2		35.4	9.0	21 10.0	33.8	8.6		57.4
10.8		11.0	10.0		36.9	10.4		51.0	10.6	46 26.9	55.4
5.9	38 12.0	42.5	10.3		57.4	10.8		24.1	9.8		37.4
7.2		28.0	10.2	56 1.4	27.9	9.6		32.6	10.4		49.9
10.4		45.3	10.8		45.9	9.0		44.1	9.8	47 48.1	1.0
9.0	39 0.0	17.0	9.6		49.4	9.0	23 0.1	3.0	10.0		48 24.4
10.8		12.0	10.8	57 40.9	18.1	10.4		23.6	10.8		47.9
10.8		12.5	10.8		58.2	9.0		49.1	9.8		51.9
10.8		17.0	8.6	58 27.2	4.6	7.9	24 1.6	53.2	10.0	49 52.6	37.4
9.8		19.3	10.8		37.7	10.0†		9.4	10.8	50 39.1	19.4
10.2		25.0	10.4	59 2.9	33.8	10.4		37.1	10.6		41.9
9.0		30.0	10.8		11.2	10.1†		48.6	10.8	51 45.9	6.6
10.6	41 12.0	39.5	10.8		20.7	9.0		25 33.2	10.4		52 3.1
10.8		15.5	10.8		38.7	9.6		49.1	10.4		10.3
10.8		21.0	10.8		38.7	10.8		57.7	10.6		12.0
9.8		33.5	10.6	1 17.2	8.2	10.4	26 8.2	45.4	10.2		28.8
10.3		37.7	9.2		32.9	9.0		12.1	9.8		30.3
10.4	42 6.5	29.0	7.0	3 3.9	23.8	10.0		12.6	9.4	53 23.3	31.4
9.2		8.5	10.8		58.9	8.0		25.7	10.0	54 19.3	34.5
10.8		34.5	10.8	4 24.4	11.2	10.8		45.7	10.4		28.8
9.0		55.0	10.6		29.4	8.9		45.7	6.8		58.3
10.8	43 1.0	0.0	10.8		51.9	10.6	27 58.7	4.8	8.4	55 35.3	0.2
10.8		6.8	10.8		5 1.4	9.0		28 42.2	10.6		44.8
2.5pr.	+ 0 56.2	+ 5.0		+ 0 55.0	+ 4.4		+ 0 53.6	+ 3.5		+ 0 52.6	+ 2.8

601-660.				661-720.				721-780.				781-840.					
4 ^h -5 ^h -37°				5 ^h -37°				5 ^h -37°				5 ^h -37°					
mag.	m	s	l	mag.	m	s	l	mag.	m	s	l	mag.	m	s	l		
10.8	55	54.0	1.2	8.8	13	22.8	45.1	8.5	G	8.7	31	4.5	37.5	9.2	45	13.9	57.5
9.8	56	55.8	59.7	9.1	14	19.8	39.5	9.0		9.8		19.5	49.8	9.5	10.8	24.4	12.7
10.6	57	10.8	18.6	9.6		39.8	28.1	8.8	G	9.1		37.0	55.7	9.0	10.2	41.4	7.6
7.5		31.3	9.5	9.1		41.3	5.4			9.6		38.5	53.1		10.4	45.9	18.8
8.4		34.8	13.3	9.8		48.8	46.0			9.8		44.5	11.7		10.4	47.9	7.9
10.0		44.3	49.3	10.0		51.3	48.3			8.8		59.3	59.3	9.5	9.3	49.9	47.2
10.4		49.3	38.9	9.4	15	29.6	46.0			9.6	32	32.5	18.5		10.7	46	7.9
10.4		58.8	42.9	8.9		46.3	23.7	8.0	G	8.8		42.5	17.1	8.5	8.2	13.4	39.4
10.0	58	4.8	32.0	9.6		49.0	10.4	9.5		9.9	33	59.5	56.3		9.2	14.4	6.5
9.4		30.3	31.5	9.4		51.3	16.0			9.2	34	16.5	50.7	8.5	10.8	18.4	36.9
9.8		42.3	27.9	10.0	16	9.3	47.0			9.9		18.5	51.9		8.6	38.4	41.6
10.6		56.3	8.2	9.8	17	4.3	56.3	9.0		9.6		25.5	10.1		8.4	42.4	19.6
9.2	59	28.3	51.0	10.0	18	4.0	58.5			9.6		27.5	30.9		9.6	47	17.4
10.0		50.3	11.8	9.2		17.3	31.9			9.4		37.0	15.1		10.8	29.4	45.9
10.4	0	3.8	31.1	9.8		40.3	42.1			9.9		37.5	58.2		10.8	30.4	49.3
8.9		11.3	32.0	9.8		40.3	24.9			8.7		38.5	49.8	8.5	9.9	30.9	43.2
10.2		13.3	43.9	9.6	19	4.3	31.9			8.4		48.5	44.9	9.0	9.6	50.9	20.5
10.0		47.3	18.9	7.2		20.3	27.1	7.0	GSt π	9.9	35	1.0	41.1		9.0	53.4	10.2
9.8		47.8	0.5	9.9		31.3	5.0			9.2		9.5	18.4		9.6	48	1.4
9.4	1	47.8	48.6	9.9	21	22.8	35.6			9.9		16.5	10.5		8.0	4.4	44.0
8.4	2	30.8	21.1	9.6		24.3	7.5			9.2		24.5	43.9	9.0	10.0	9.9	49.9
9.1		48.8	52.1	8.4		30.3	25.6			10.0	36	23.2	32.6		9.8	10.4	33.6
10.6	3	16.8	36.3	8.7		44.3	6.2			9.6		34.7	45.8		6.8	18.4	39.5
8.9		30.3	48.2	9.8		59.3	9.8			9.4	37	14.2	28.2	9.0	9.4	28.4	41.9
9.2		36.8	31.4	10.0	22	19.3	44.7			10.0		45.2	54.8		9.2	48.4	27.3
8.8	4	6.8	46.4	9.2		21.3	25.0	8.5	G.	9.8		54.7	46.8		9.4	49	0.9
10.6		14.3	27.6	9.9		26.3	23.5	G		10.0		59.7	2.2		10.8	4.4	18.9
10.6	5	8.3	11.9	9.6		39.3	0.1			8.2	38	4.2	31.0	8.0	10.4	19.2	45.3
9.4		20.8	28.7	9.6	23	28.3	0.3			8.7		10.7	25.6	9.5	7.4	37.2	33.3
9.8		29.3	33.6	10.0		41.3	5.2			9.9		25.7	41.7		9.0	50	49.2
9.8	6	1.0	57.0	10.0		52.8	3.4			9.9	39	1.7	28.8		10.8	54.2	33.2
10.6		13.3	33.6	5.9		57.3	20.1	6.0	GSt π	8.0		25.7	46.0	8.5	10.3	51	4.7
10.6		14.8	3.7	10.0		59.1	58.9			9.9		30.7	27.1		10.2	12.2	7.0
9.0		15.1	56.9	9.8	24	8.3	33.5			9.0		36.2	54.2	10.0	6.7	12.2	8.4
10.6		16.8	56.0	10.0		21.2	58.7			10.0		52.7	32.1		9.6	49.2	20.5
10.6		22.8	12.9	9.2		38.8	48.4			9.6		57.2	32.0		10.6	52	23.2
10.2		26.8	58.7	9.0	25	29.3	30.9			10.0	40	6.2	11.8		9.4	53	14.7
9.1		31.0	58.4	9.2		49.3	30.5			9.4		42.8	33.5		8.8	54.2	22.5
9.6		38.8	3.0	8.4	26	10.3	18.1	8.0	G	9.3		44.8	41.9		10.8	54	16.7
7.9	7	16.8	32.8	9.3		15.8	25.1			9.8		52.8	29.9		10.4	32.2	38.0
10.0		23.4	56.7	10.0		18.3	25.3			10.0	41	0.8	54.8		8.3	38.2	0.2
10.0		45.3	23.6	10.0		26.3	48.1			9.9		28.1	59.1		10.8	39.2	41.6
10.6	8	13.8	17.1	9.3		45.3	50.2	8.0	G	8.7		37.9	5.7		8.8	55	13.7
10.6		15.3	11.8	9.6		45.3	33.2			8.8		50.6	53.5	9.0	9.4	30.2	11.9
8.4		43.8	34.0	9.0	27	13.8	20.5	8.5		10.8	42	11.9	26.6		8.6	35.7	4.2
10.6		56.8	47.0	9.9		19.3	51.6			9.4		28.4	22.9	9.0	8.8	59.2	37.3
10.4	9	12.3	22.7	9.3		25.3	52.2			10.8		58.9	31.6		8.3	56	8.5
9.8		20.3	54.3	9.9		27.8	6.0			8.8	43	10.9	48.4	9.0	10.2	19.2	23.5
10.2	10	6.8	50.6	10.0		29.3	5.3			9.6		17.4	52.7		10.8	39.2	6.3
9.4	11	2.8	32.0	9.4		44.3	44.9			10.4		20.4	39.6		7.6	44.7	4.5
10.4		18.8	8.9	9.3		48.3	42.7			10.2		29.4	36.0		10.8	57	19.2
9.6		39.8	18.2	9.9		58.8	30.1			10.8		52.4	47.0		10.8	20.1	31.5
10.6		53.5	58.1	9.6	28	44.3	44.4			10.7	44	0.4	34.7		9.0	29.7	37.1
9.8	12	4.8	28.2	9.9		46.0	57.5			9.9		47.4	40.1		9.3	37.7	23.1
10.0		9.3	5.7	8.4	29	6.0	48.1			10.3		54.9	19.7		10.4	54.7	41.9
7.9		11.3	42.7	9.4		6.5	38.5			9.1		58.9	33.1	8.5	10.8	58	38.7
8.7		27.8	15.7	9.9		7.0	19.5			7.1	45	8.9	13.3	8.0	7.2	48.2	32.7
9.2		30.3	31.1	8.5		13.0	38.1	8.5		10.0		9.8	48.6		9.0	59.2	57.8
9.8		45.8	2.1	9.9		29.5	51.4			10.7		9.9	59.1		10.4	59	2.0
8.4		59.8	7.7	9.4	30	2.5	27.8			9.4		11.9	2.4	9.2	10.0	30.7	34.2
25pr.	+0	51.9	+2.0	+0	51.5	+1.3				+0	51.2	+0.8			+0	51.2	+0.3

1896ArcCap...3....1G

841-900.				901-960.				961-1020.				1021-1080.					
5 ^h -6 ^h .		-37°		6 ^h .		-37°		6 ^h .		-37°		6 ^h .		-37°			
mag.	m s	m s		mag.	m s	m s		mag.	m s	m s		mag.	m s	m s			
10.8	59	35.2	14.1	10.0	14	44.0	29.9	9.5	27	40.7	42.2	8.0	40	13.6	40.4	8.5	
10.8	0	4.7	18.4	10.1		57.5	19.1	8.6		49.7	22.6	8.5	10.3†	20.4	57.6		
9.6		32.4	59.3	8.4	15	4.0	24.6	10.0		53.7	22.2		9.8	52.6	40.6		
10.4		48.2	53.2	10.0		16.5	11.3	6.9	28	4.2	36.1	5.0 GStπ	8.6	59.1	29.1	9.0	
10.8		56.7	25.8	10.1		24.5	42.9	10.1		5.2	23.0		9.5	41	12.6	52.3	9.0
9.8	1	20.7	24.2	9.4		29.0	0.0	10.0		35.2	49.4		8.6	13.1	10.2	9.0	
10.4		32.2	12.9	10.1		47.5	49.3	10.0		39.7	43.2		8.8	20.1	39.1	9.2	
10.2		44.7	56.9	10.0	16	11.4	18.8	9.6		45.7	40.7		9.8	24.1	24.5		
10.7		45.2	56.1	8.0		13.5	26.8	9.4		49.2	14.7		9.6	32.7	44.8	9.2	
9.4	2	0.2	41.5	9.2		28.5	26.6	7.4		56.2	43.6	7.5 G	8.2	35.2	17.8	8.5 G	
8.4		59.2	1.3	8.2		38.0	26.1	8.6	29	6.6	59.9	9.0	9.4	37.7	36.0	9.5	
7.9	3	1.7	10.9	9.6	17	23.5	43.1	10.1		15.2	47.0		9.2	39.2	59.3		
10.3		2.2	16.9	10.1	18	7.7	6.8	9.2		22.7	19.1		9.0	44.2	21.2		
9.9		10.7	13.7	9.8		9.2	43.1	10.1	30	8.7	26.7		9.5	44.7	8.3		
4.9		14.2	14.1	9.4		9.7	37.7	8.5		8.7	2.6	9.0 G	9.6	45.2	51.3		
9.9		14.2	22.9	10.0		13.7	40.5	10.1		9.7	25.9		6.2	54.7	38.5	6.8 GStπ	
9.6		33.2	55.3	8.8		15.7	55.3	9.8		17.7	11.3		9.6	58.7	29.6		
10.8		43.2	22.1	9.6		50.7	9.7	10.1		30.0	59.3		9.6	42	3.7	25.4	
9.8		48.2	53.7	9.2		52.7	51.1	8.6		53.6	0.5		9.9	28.7	5.0		
10.8	4	4.7	25.3	9.5	19	0.2	27.7	8.4	31	2.7	20.7	8.0 G	9.5	29.2	37.9		
9.4		14.2	12.9	9.6		14.7	24.7	10.0		5.7	20.0		9.4	36.7	16.4		
10.7		34.7	56.5	10.1		18.2	44.9	8.0		15.7	45.3	7.5 G	8.8	40.2	57.7	8.5	
8.8		36.2	21.9	9.5		21.2	40.7	10.0		40.7	12.1		9.6	47.7	27.1		
9.4	5	8.2	6.1	9.6		29.7	16.5	10.1		50.7	21.3		9.9	52.6	1.5		
10.2		29.2	3.3	9.0		34.2	54.9	10.0		57.7	20.7		9.8	43	1.2	47.2	
10.6		34.2	20.1	10.1		55.7	6.3	9.6	32	7.4	44.1		6.0	4.7	47.5	5.5 GStπ	
10.7		58.1	53.4	10.0	20	3.7	39.9	10.1		25.6	2.6		9.4	7.7	32.9		
8.6		59.7	49.7	9.2		8.2	27.9	10.1†		59.4	57.6		9.8	24.2	2.4		
10.6	6	20.2	36.5	8.9		13.7	31.9	10.1	33	11.7	6.2		8.8	53.2	50.0	8.5 G	
10.2	7	14.2	37.2	9.8		41.2	37.5	9.5		13.4	30.5		8.8	44	0.2	44.3	9.5 G
10.7		28.7	9.1	10.1	21	3.7	40.5	9.6		13.9	22.7	9.0	8.8	5.7	51.5	9.0 G	
10.1	8	4.0	7.5	8.4		35.2	13.2	9.0		21.6	50.5	8.5	7.8	7.2	27.3	8.2 G	
9.8		25.8	54.1	9.2		54.7	47.3	9.9		56.6	14.0		9.9	36.4	8.1	9.0	
7.6		32.3	2.9	10.0		55.2	16.8	9.1	34	17.1	26.2	8.5 G	9.9	45	44.6	7.2	
9.6	9	15.8	26.4	9.4		56.7	45.8	9.9		23.6	23.2		9.9	46.7	47.0		
8.5		36.8	31.5	9.4		59.0	0.9	7.0		24.1	53.2	7.2 GStπ	9.5	46	9.2	21.1	9.0
10.1		43.3	49.1	10.0	22	19.2	22.5	9.9		31.1	26.5	9.5	9.4	15.2	59.8		
10.1	10	23.3	7.2	7.8		29.2	9.5	8.7		40.6	38.6	9.0	9.0	20.7	48.9	9.5	
8.4		51.8	43.8	10.1		37.2	2.8	8.4		48.6	25.2	8.0 G	9.6	23.7	40.0		
10.1		54.3	3.7	8.5		52.7	28.1	8.4		59.6	1.0	8.5 G	9.9	28.7	38.8		
9.5	11	29.8	20.0	7.0		53.2	49.2	8.2	35	10.6	31.1	8.5 G	9.9	29.7	10.2		
9.5		41.5	42.9	8.0		53.2	1.6	9.9		14.1	48.9		9.2	47	43.9	57.2	10.0
9.4		49.5	37.8	9.4	23	25.7	26.4	8.4		27.6	36.3	9.0	9.9	57.7	16.0		
9.2	12	15.0	45.5	10.1		43.7	53.6	9.9		43.4	1.3		9.6	59.2	49.5		
9.6		23.5	44.2	10.0	24	16.7	32.8	9.9	36	9.1	50.6		9.9	59.7	23.3		
10.0		24.0	49.1	8.9		20.7	3.1	9.9		20.6	8.8		8.5	48	7.7	42.0	
10.0		27.9	57.2	9.2		23.7	46.0	9.9		21.1	41.7		9.9	19.2	0.7		
9.8		29.0	9.8	9.2		29.7	47.3	9.2		26.6	9.4		9.2	34.7	47.2	9.5	
9.4		44.0	49.1	8.8		34.7	15.6	9.9		3.6	48.5	8.5	9.8	49	11.2	41.0	
7.1		46.5	41.7	8.8	25	9.2	41.3	9.9		18.6	51.2		9.9	12.7	50.0		
6.5		52.5	12.5	10.1		28.2	7.5	9.9		37.1	40.2		9.9	14.4	38.5		
8.5	13	10.5	49.3	7.8		34.2	55.3	8.2		49.6	53.1	8.3 G	9.9	17.7	51.0		
9.0		37.5	23.1	10.1		39.7	35.5	9.8		53.6	33.7		9.0	28.3	47.5	9.5	
9.5		58.5	38.0	9.4		45.7	43.9	9.6	38	21.1	12.8		9.9	54.8	17.7		
9.5	14	7.3	56.4	9.6	26	28.2	36.1	9.2		35.1	52.4		8.6	50	18.8	9.5	9.0 G
10.1		25.5	45.1	9.4		48.7	47.8	9.9		37.6	22.7		9.2	24.3	12.8	8.5 G	
10.1		37.5	51.0	10.1		56.5	57.7	7.8		44.1	14.7	8.0 G	8.0	37.8	46.8	G	
10.0		39.5	15.7	9.6	27	21.7	57.2	8.0	39	20.1	38.9	7.8 G	9.9	39.8	44.9		
10.1		41.5	51.9	7.6		27.2	5.1	9.5		40.1	30.6	9.0	9.9	44.3	20.6		
10.1		43.0	20.1	8.0		37.1	59.0	8.2	40	12.1	56.3	8.5	7.8	44.8	20.4	8.5 G	
25pr.	+ 0 51.2 - 0.8			+ 0 51.2 - 0.8			+ 0 51.4 - 1.2			+ 0 51.6 - 1.6							

1081-1140.			1141-1200.			1201-1260.			1261-1320.		
6 ^h -7 ^h	-37°		7 ^h	-37°		7 ^h	-37°		7 ^h	-37°	
mag.	m	s	mag.	m	s	mag.	m	s	mag.	m	s
9.5	50	50.3	10.0	2	9.0	10.0	12	30.5	10.3	21	41.5
9.9		51.3	9.8		17.5	10.0		31.3	9.4		41.5
9.6	51	9.3	9.2		39.5	8.9		31.6	10.5	22	9.5
9.9		23.3	8.9		52.5	9.4		33.6	10.0		15.0
8.2		59.3	8.8		53.5	10.0		48.1	10.0		21.2
7.8	52	0.8	9.4		57.5	9.2		56.1	10.3		29.5
9.9	53	10.8	9.0	3	45.0	9.8		56.6	10.5		53.5
9.9		20.7	10.0		54.5	9.8	13	28.1	10.1		56.5
9.6		44.6	9.4		56.5	9.6	14	0.8	10.5	23	8.5
9.8	54	21.8	10.0		56.5	8.8		2.1	9.0		8.9
9.2		29.8	8.4		57.5	9.8		3.1	10.5		21.5
9.9		35.0	8.9		24.5	10.0		23.6	10.1		36.5
8.0		35.8	8.9	4	32.0	8.0		47.1	9.4		38.5
9.0		38.8	10.0		34.5	10.0		47.6	10.4		46.5
9.2		44.6	9.6		37.0	9.2		48.1	10.5		54.5
9.9		44.6	8.7	5	17.0	8.0		48.6	9.6		56.5
9.5	55	0.1	10.0		31.5	7.6	15	4.1	7.2		58.5
9.6		0.6	10.0		44.5	10.0		4.6	9.8	24	9.0
9.9		34.1	8.5		48.5	9.4		8.6	10.0		12.0
9.9		55.1	10.0		49.5	9.6		10.9	10.5		21.0
9.9	56	0.9	10.0		52.0	10.0		11.9	10.3		31.8
9.9		5.1	8.6	6	3.2	8.4		18.4	10.4		36.5
8.8		12.4	8.6	7	20.5	9.2		49.4	10.5		39.5
8.0		16.6	9.2		48.5	10.0		50.9	9.6		49.0
10.0		29.3	8.2		55.8	9.3		55.7	10.4		49.0
10.0		30.4	8.6		57.0	9.8		57.9	10.2		54.0
10.0	57	24.7	9.4	8	49.5	10.0	16	28.9	9.8		54.6
10.0		39.7	9.6	9	27.0	10.0	17	1.9	10.1	25	0.0
8.1	58	10.2	9.7		30.5	9.8		4.4	10.2		2.3
10.0		19.7	9.4		33.0	9.8		4.9	7.9		8.5
10.0		28.7	10.0		44.5	9.3		5.4	10.1		14.5
8.9		38.7	9.6	10	0.6	10.0		5.4	9.8		19.0
9.0	59	4.7	9.3		2.1	8.7		31.4	10.0		19.8
10.0		16.7	10.0		4.3	10.0		34.2	9.6		26.5
9.8		38.7	9.4		4.6	9.3		36.4	10.2		32.5
9.7		39.2	10.0		5.6	8.9		40.9	9.6		39.0
8.8		46.2	10.0		9.3	9.0		44.4	9.5		39.5
10.0	0	0.7	8.9		14.6	9.8		46.4	10.4		42.5
10.0		3.7	7.8		23.3	10.0		46.9	9.3		52.5
9.3		9.2	8.4		31.5	9.8		51.4	9.8		52.5
10.0		29.7	8.8		38.1	10.0	18	46.9	9.8		59.0
9.2		34.2	9.7		49.6	10.0		49.4	10.1	26	2.0
9.5		44.2	8.7		51.6	9.7	19	9.4	8.2		7.5
10.0		51.7	9.4		51.8	9.0		17.9	9.3		9.5
10.0		6.7	9.4		51.6	10.0		19.2	7.4		17.5
9.7	I	16.2	9.8		55.1	8.9		29.2	10.2		18.0
8.4		19.2	9.2	11	1.1	9.6	20	14.4	10.5		24.1
10.0		21.5	9.5		8.1	7.0		21.4	10.0		39.1
9.4		29.5	10.0		11.1	9.4		24.4	10.2		40.1
10.0		33.0	10.0		13.3	7.1		40.9	10.2		44.1
9.7		34.0	9.0		14.6	10.0		53.2	10.5		49.1
9.0		34.5	10.0		25.6	9.0		56.9	10.5		49.1
8.2		53.5	10.0		27.3	9.2		56.9	8.4		55.1
9.0		54.3	10.0		29.6	9.5	21	8.9	10.4		59.1
9.2		58.3	10.0		34.3	9.7		9.4	9.6	27	0.6
9.3	2	0.0	10.0		34.6	9.0		24.2	9.8		17.1
7.9		0.5	10.0		59.6	8.2		29.2	10.3		18.6
10.0		4.0	10.0	12	5.1	10.2		34.0	10.3		22.6
9.0		4.0	9.5		19.1	10.4		36.0	10.4		24.6
9.2		6.0	9.2		21.6	10.1		37.5	10.1		25.1
25pr.	+ 0	52.0		+ 0	52.3		+ 0	52.6		+ 0	52.9
		- 2.1			- 2.5			- 2.8			- 3.0

1821-1880.			1881-1440.			1441-1500.			1501-1560.		
mag.	7h.	-37°	mag.	7h.	-37°	mag.	7h.	-37°	mag.	7h.	-37°
10.1	27	40.1 29.6	10.0	31	58.8 14.2	6.3	35	23.7 58.5 6.2 GStr	9.6	38	39.7 50.2
9.8		42.1 43.6	10.0	32	9.3 25.7	9.5		26.7 11.7	10.2		51.7 44.0
10.5		44.1 55.9	9.8		9.3 50.2	8.5		30.2 5.2 8.8	7.4	39	1.2 27.2 G-
9.6		50.1 18.7	9.5		13.3 43.0	6.3		30.7 17.4 6.5 GStr	8.5		4.7 50.4 8.5 G
10.1		50.6 54.8	10.5		29.5 59.1	10.2		31.7 27.3	10.4		5.2 10.7
8.2		54.1 54.6 8.5	10.0		36.8 10.9	9.6		33.4 1.8	10.0		10.2 7.4
10.5		54.1 42.1	10.5		41.3 36.8	10.3		35.7 49.6	10.0		13.2 56.3
10.0	28	2.6 8.8	9.8		41.8 13.3	10.3		37.7 32.3	6.8		18.2 54.3 7.0 GStr
10.0		5.1 21.5	8.6		55.8 24.3 9.0 G	10.4		37.7 2.5	10.3		18.2 16.4
10.5		18.6 3.6	9.4	33	3.8 45.3	10.0		48.7 18.3	10.2		19.7 13.3
9.6		37.1 18.1 9.5	10.4		9.3 35.1	9.8		51.2 22.7	8.6		21.2 22.4 G
10.1		40.6 6.2	9.8		13.3 24.7 10.0	10.4		54.7 33.7	10.0		21.7 8.4
10.1		48.6 10.5	9.0		16.8 40.2 9.0	10.1		59.7 22.3	9.8		21.7 35.9
9.8		54.1 41.5	10.4		19.3 3.1	10.0		0.7 28.3	9.3		22.7 40.1
10.3		59.1 26.0	7.5		19.8 43.8 7.0 GS-c	10.4	36	1.2 9.9	7.8		24.7 25.3 Gπ
10.0	29	4.6 2.1	10.3		24.3 49.3	9.6		9.7 10.0	10.5		29.7 19.5
10.5		5.1 19.0	9.6		30.3 14.9	10.3		25.7 53.7	9.2		37.7 50.7 8.5 G
10.0		11.1 40.4	10.1		30.8 20.3	9.0		26.2 10.8 9.0	9.6		39.2 12.6
10.5		15.1 4.1	9.4		37.8 43.9 9.0	10.5		29.2 4.5	9.6		39.7 35.7
10.5		25.6 28.3	9.5		41.3 40.1	8.5		33.7 39.6	9.0		41.7 41.0 G
10.1		32.1 25.1	10.5		44.8 43.3	10.5		35.7 39.0	9.4		41.7 51.0 G
8.0		35.2 2.9 8.0 G	10.3		47.8 44.9	10.1		38.7 27.6	9.8		43.2 3.1
9.8		47.2 39.1	10.5		49.2 47.7	9.8		38.7 32.7	9.2		45.7 20.9 G
10.3		48.2 14.2	10.5		49.3 50.0	10.2		38.7 20.2 9.0	9.6		49.7 12.8
9.8		51.2 27.5	9.8		57.8 49.2	10.5		43.7 13.1	10.1		54.7 21.2
9.3		51.2 24.7	9.6		59.3 11.2	9.0		45.7 18.3 9.0	10.2		56.7 37.5
9.6		59.2 8.9	9.6	34	5.8 4.6	10.0		46.2 35.9	8.0		59.7 21.8 G
10.0	30	7.7 31.9	10.5		6.3 0.3	10.4		49.7 4.8	8.3	40	1.2 41.2 9.0 G
10.4		9.2 39.5	9.6		7.3 58.4	9.8		49.7 11.9	9.6		2.2 7.3
10.3		10.2 52.9	10.4		11.8 41.1	10.2		50.7 55.3	9.6		3.2 27.3 G
8.9		15.2 36.3 9.5	10.3		13.8 53.7	9.4		51.7 36.3	10.0		5.2 44.1
9.8		27.2 25.2	10.0		15.3 54.3	9.8		51.7 34.7	6.4		7.7 38.5 7.0 GSet
10.5		29.2 30.1	10.4		19.3 23.7	10.5		59.7 4.7	9.8		10.7 23.2
10.4		29.2 34.6	10.3		21.8 39.0	9.4	37	0.2 19.1 9.0	9.8		10.7 20.5
10.1		42.2 27.9	10.1		24.7 30.2	10.3		0.7 45.3	9.6		11.7 55.3
10.5		43.2 17.7	9.8		25.7 22.5	8.3		2.2 53.1	8.1		17.2 47.9 8.5 G
10.3		48.3 58.1	10.4		30.7 44.5	10.0		9.2 47.5	7.5		18.7 45.3 8.0 G
10.0		51.7 52.7	10.0		38.2 39.0	10.4		9.2 25.1	10.3		18.7 33.0
10.4		54.2 5.4	9.5		44.7 38.7	10.5		9.7 36.3	10.4		19.7 34.1
8.5		59.2 8.7 8.2 GSg	10.3		46.7 51.6	10.5		9.7 14.1	10.5		20.2 59.9
10.1	31	6.7 55.1	10.0		49.2 43.2	10.5		14.7 37.9	9.6		21.7 22.1
10.0		7.2 32.6	9.8		49.7 5.4	9.8		20.9 0.5 9.5	10.4		21.9 56.8
9.6		8.3 57.9	9.8		51.7 37.2	9.8		21.7 31.2	10.4		22.7 34.5
10.0		9.4 56.9	10.0		52.2 36.0	10.0		22.7 16.1	10.0		23.7 49.9
10.5		9.7 16.8	10.1		53.2 58.2	9.4		27.2 38.0	9.8		29.2 46.7
10.5		11.2 14.5	10.4		55.2 25.2	9.6		30.7 39.0	9.2		29.7 3.1 9.2
8.9		13.7 22.1 9.0	10.4		59.7 13.8	10.5		31.2 11.0	9.4		29.7 42.2 G
10.1		23.2 31.5	10.4	35	1.8 8.1	9.8		38.7 48.5	7.9		32.7 47.6 G
10.2		24.2 12.6	9.3		4.2 36.9	10.5		45.7 54.8	10.5		33.2 42.1
7.5		29.2 10.2 7.5 GSg	8.6		5.2 4.3 9.0	10.4		49.2 20.2	9.6		34.2 53.5
9.8		34.7 19.5	9.2		8.7 14.7	10.5		59.7 37.5	9.5		34.7 44.3
9.8		38.2 49.7	10.5		8.7 18.5	9.2	38	2.7 40.5 9.0	7.6		34.7 51.4 8.5 G
9.8		39.2 38.9	9.0		9.7 13.2	8.9		4.2 48.9 9.0	10.1		34.7 29.1
9.8		41.7 50.7	10.5		10.2 4.1	10.5		13.7 33.6	9.8		35.2 6.5
9.8		43.2 46.2	9.4		11.7 45.4	9.3		17.7 45.2	7.0		37.7 35.1 7.0 GS-t
9.6		43.2 8.1	10.2		14.7 27.5	10.5		19.2 48.6	10.3		42.2 42.1
10.5		45.7 31.9	10.3		17.7 11.4	9.8		25.7 18.1	10.4		47.7 31.1
10.0		47.2 47.1	10.5		19.2 4.1	10.5		26.2 45.0	6.8		48.7 39.9 3.5 GStr
10.4		53.2 22.3	5.8		19.7 51.2 6.2 GStr	10.0		27.2 45.8	9.6		49.7 53.9
9.3		58.3 35.9	10.5		20.7 26.3	10.3		38.2 31.2	10.4		49.7 5.2
25 pr.		+ 0 53.1 - 8.2			+ 0 53.3 - 3.3			+ 0 53.4 - 3.4			+ 0 53.6 - 3.5

1561—1620.			1621—1680.			1681—1740.			1741—1800.		
mag.	7 ^{h.}	—37°	mag.	7 ^{h.}	—37°	mag.	7 ^{h.}	—37°	mag.	7 ^{h.}	—37°
10.0	40	50.6	10.2	43	25.3	10.0	47	7.8	10.2	52	21.5
9.8		50.7	10.0		26.6	10.2		8.8	10.0		25.5
10.1		51.7	10.5		36.8	10.4		15.8	9.8		27.0
10.3		52.2	8.0		40.8	10.3		16.3	10.2		38.1
10.5		53.7	10.5		43.3	9.5		19.6	10.0		39.0
10.3		55.2	10.5		45.8	10.2		21.0	9.8		40.0
10.5		58.7	9.8		50.3	10.5		21.7	10.2		44.1
7.2		59.2	9.6		54.8	9.0		22.8	10.0		47.0
10.5		59.6	9.6		57.3	9.0		27.8	8.8		51.4
10.3		59.8	10.3	44	0.8	10.3		31.3	10.2		52.5
10.0		59.8	9.8		4.8	10.1		36.0	10.2		56.1
10.4	41	10.8	10.3		4.8	8.6		39.3	10.2		57.0
10.1		13.8	9.0		13.3	10.0		47.5	9.8		58.0
9.6		15.3	10.4		15.1	10.1		50.8	9.8		59.0
8.6		19.8	10.2		16.8	10.5		57.7	10.0		59.0
10.2		19.8	9.4		17.3	9.8		58.8	9.4	53	4.0
10.4		20.8	10.5		18.8	10.3		59.8	9.4		10.5
9.2		22.8	10.3		19.6	10.3	48	5.8	10.2		13.5
10.5		30.3	10.0		22.3	10.0		8.8	9.4		20.0
9.0		30.8	7.3		22.8	9.6		9.3	9.0		20.0
9.8		31.1	9.6		22.8	8.8		12.3	10.2		24.0
10.5		33.8	10.5		24.8	9.8		17.8	9.0		27.5
9.8		39.8	8.4		26.3	9.8		18.8	10.0		29.5
10.2		39.8	9.8		44.3	10.0		19.8	10.2		30.0
10.3		41.8	10.5		44.8	8.7		20.8	7.2		32.5
9.8		42.8	8.4		44.8	10.2		32.3	10.2		41.0
6.4		43.3	10.5		44.8	10.2		38.8	10.0		41.0
8.0		43.3	9.4		49.8	10.2		49.8	9.8		41.5
10.4		48.5	9.8	45	3.8	10.2	49	0.8	9.8		45.0
10.4		49.8	9.8		4.3	10.2		1.3	10.0		48.0
9.6		50.8	9.5		9.8	10.2		21.3	9.8		52.0
7.6		50.8	10.5		25.0	9.3		33.3	10.2		58.0
10.0		51.8	8.8		27.8	9.6		38.8	9.2		59.0
9.8		58.3	9.5		35.3	9.6		48.8	10.2	54	8.5
10.3	42	3.3	10.2		36.3	10.2		48.8	9.6		9.0
7.6		4.8	10.5		37.3	10.2		53.3	10.2		29.0
10.3		6.3	10.4		39.8	10.0	50	6.8	9.4		31.5
9.2		9.3	10.3		40.8	10.2		11.3	9.6		32.8
10.0		9.8	9.8		53.8	10.0		30.8	10.2		34.0
9.0		10.3	9.2		56.8	10.0		36.8	9.6		37.0
9.8		10.8	9.3		58.8	10.4†		39.3	7.7		38.0
10.1		11.3	10.3	46	3.6	10.2		40.3	9.0		39.0
10.3		13.3	10.3		6.1	8.8		58.8	9.4		41.0
10.5		15.3	10.4		8.8	10.2	51	7.3	10.2	55	4.5
9.0		21.8	9.8		17.8	8.2		8.8	9.4		19.0
10.5		23.3	9.8		19.8	9.8		19.3	10.2		26.0
10.5		29.8	9.2		29.3	9.8		20.8	9.2		29.5
9.8		30.1	9.8		30.8	9.4		25.0	10.2		35.0
10.1		34.3	10.5		30.8	10.2		28.5	9.4		45.5
7.8		44.3	9.8		35.8	10.2		40.0	9.1		54.5
10.2		50.1	9.6		35.8	10.0		41.5	10.2	56	0.5
9.8		50.3	10.1		43.3	9.2		43.0	10.0		2.5
9.3		55.1	8.9		46.3	10.2		48.0	10.0		8.0
10.0		58.8	9.8		48.8	10.2		53.0	10.2		19.3
9.6	43	0.8	9.4		56.3	10.2	52	0.5	10.2		21.0
9.6		6.3	9.6		56.8	10.2		6.5	10.2		22.0
10.0		7.3	10.4		58.3	10.0		7.5	10.0		23.0
8.0		9.3	9.8		59.2	10.2		14.0	9.8		24.0
9.0		15.3	8.2		18.9	10.2		20.5	9.4		33.1
9.6		19.3	9.8		1.5	10.2		20.5	10.2		34.1
25pr.	+ 0	53.7	+ 0	53.8	- 3.7	+ 0	54.0	- 3.8	+ 0	54.3	- 4.0

1801-1860.				1861-1920.				1921-1980.				1981-2040.			
mag.	7h.-8h.	-37°		mag.	8h.	-37°		mag.	8h.	-37°		mag.	8h.	-37°	
m	s	'	''	m	s	'	''	m	s	'	''	m	s	'	''
10.2	56	39.1	22.9	9.1	0	32.3	57.5 9.5	9.8	4	33.9	22.9	8.8	6	59.9	1.9
10.2		39.1	20.9	10.2		36.3	58.1	10.0		34.4	8.0	8.2	7	0.4	0.7 8.0
10.2		56.1	19.7	10.0		48.1	28.7	8.2		37.4	25.9 8.0-	9.6		0.4	27.2
10.0	57	2.1	46.0	9.4		53.1	41.5	9.4		38.4	56.0	9.3		1.4	0.1
9.8		2.6	35.9	10.2		59.1	13.0	10.0		39.4	44.1	10.2		1.4	33.1
10.2		4.6	33.5	9.4		59.6	50.8	10.2		40.9	6.1	9.0		5.4	29.0
9.8		9.1	52.2	9.6	I	4.6	37.2	9.0		50.4	51.8	9.1		9.4	19.0
8.6		14.6	47.1	10.0		8.9	26.5	9.6		50.4	29.3 9.5 G	9.4		9.4	19.5
9.8		17.1	36.3	10.2		9.4	14.4	10.2		53.4	27.3	10.0		10.9	26.8
10.0		23.6	8.2	10.0		10.4	53.8	10.2		59.4	26.0	10.0		10.9	20.8
10.2		27.1	17.9	9.6		15.4	44.9	10.2	5	1.9	36.4	9.4		12.9	6.6
10.2		30.6	39.7	10.2		17.9	7.4	8.8		6.9	48.4	8.8		14.9	4.1
10.2		39.6	16.0	9.8		17.9	33.8	10.2		9.9	59.0	10.2		14.9	46.3
10.0		43.6	27.5	10.2		25.4	32.1	9.6		11.9	53.7	8.4		15.4	12.1 8.5
9.4		48.1	7.2	9.6		28.4	37.1	10.2		15.4	12.1	9.6		15.4	21.4
10.2		51.6	18.0	10.0		30.9	27.1	10.2		17.4	41.4	8.4		15.4	33.9 9.0 S
9.0		52.1	44.0	9.4		34.4	19.8 9.5	9.3		19.4	59.6 9.5	10.0		18.4	24.3
10.2		54.6	53.8	10.2		40.4	26.0	10.0		19.4	13.3	9.4		19.4	14.6
9.8	58	11.6	10.0	10.2		51.9	13.0	10.2		21.4	52.1	9.6		20.4	7.3
10.2		18.1	4.1	9.6		54.4	22.4	10.2		29.4	6.6	10.2		21.4	11.0
10.2		19.6	22.2	10.2		57.9	13.8	10.2		30.4	7.2	8.7		22.9	9.2 9.0
9.8		21.1	45.6	10.2	2	12.9	30.6	10.0		37.4	54.4	9.6		23.4	18.5
10.0		23.1	35.0	9.6		14.7	2.0 9.5	8.2		39.4	47.7 -	9.6		25.9	40.7
9.8		28.1	52.5	10.0		15.4	40.7	9.6		43.4	36.1	10.2		28.4	5.5
9.6		30.6	21.0	9.1		16.9	10.6 10.0	9.8		49.4	29.9	10.2		28.4	13.6
10.2		32.1	36.4	9.6		20.4	59.0	9.8		50.4	5.4	8.8		30.9	17.3 9.0
9.6		33.6	47.5	9.3		20.4	10.3 8.8 G	10.2		50.7	36.3	9.1		31.4	17.0
9.4		38.1	46.9	9.6		26.5	2.6	10.0		53.9	6.7	8.6		39.4	9.4 9.0
10.2		39.6	31.7	9.6		30.4	12.8	10.2		54.4	2.8	9.4		40.4	23.1
8.5		39.6	50.8	9.6		32.2	2.8	10.0		55.4	38.4	9.6		44.4	27.5
8.8		43.1	12.2	10.0		32.7	1.4	9.2		59.4	52.0	9.4		47.4	10.9
10.2		47.2	12.0	10.0		38.9	33.9	9.6		59.4	21.0	9.8		47.4	41.1
10.2		50.5	2.0	9.8		45.4	3.2	10.2	6	0.4	21.9	10.0		48.4	22.6
10.0		54.6	36.5	9.8		47.9	58.0	8.7		10.4	4.9	10.2		49.4	3.8
9.8		57.6	53.0	9.6		54.4	5.4	7.8		14.4	53.9 8.0 G-	9.4		50.4	19.6
9.6		59.1	27.5	10.2		54.9	56.3	9.8		14.4	3.9	9.8		51.9	27.3
9.6		59.6	15.8	9.4		56.9	32.8	9.8		15.4	25.6	10.2		53.4	17.4
9.6	59	0.6	40.7	9.6		59.4	30.2	9.8		28.4	39.9	10.2		53.4	6.7
9.6		7.1	37.0	8.5	3	2.4	4.5 8.0 Gg	10.0		30.4	54.7	9.8		53.9	3.5
10.0		16.1	5.0	10.0		5.4	50.9	10.2		34.9	15.6	10.0		56.4	0.2
9.8		19.1	6.2	8.6		9.4	3.9 8.0 Gg	9.6		36.4	55.3 9.5	9.8		58.4	12.1
10.2		20.1	47.4	10.2		9.6	0.5	9.0		39.4	17.7 8.5	9.6		59.4	2.4
10.0		23.6	18.1	10.0		13.4	59.5	10.2		40.4	25.8	9.6	8	59.4	27.0
10.2		26.1	3.6	10.0		21.9	14.0	9.3		40.4	18.3	9.4		0.4	6.5
10.0		28.1	36.4	10.0		24.4	6.4	9.0		41.4	14.4 8.5	10.2		0.4	17.0
9.6		28.1	35.1	10.2		25.9	2.9	10.2		41.9	51.3	9.6		0.4	36.1
10.0		44.1	11.9	10.2		26.8	57.1	8.8		42.9	5.4	10.2		0.9	29.8
9.6		49.1	51.1	8.4		26.9	37.5 8.5	10.0		44.4	5.0	9.6		0.9	37.5
9.8		50.1	45.4	10.0		28.4	38.0	9.2		48.4	5.6	9.6		1.4	0.9
9.8		50.6	3.9	9.3		40.9	51.0	9.8		48.7	5.3	9.6		6.4	9.5
10.2		54.6	11.1	10.2		43.9	43.0	9.8		49.4	3.3 G	9.4		7.9	32.7
10.2		55.1	15.5	10.0		49.4	0.0	9.1		49.4	19.7	9.8		10.4	9.4
10.2	0	1.6	58.0	10.2		58.7	27.7	10.0		49.9	13.1	9.4		12.9	13.6
9.6		7.6	8.5	9.4		59.4	9.4	9.2		51.9	18.3	9.6		13.2	1.2
9.2		9.1	11.5 9.0	9.4		59.9	15.3	9.4		51.9	3.0	10.0		13.4	23.9
9.6		9.1	31.9	7.1	4	2.9	18.9 7.0 GS-g	10.2		52.9	0.0	9.6		13.9	22.7
10.0		9.1	48.4	10.0		4.4	45.1	9.6		53.7	2.2	8.6		14.4	20.6 9.0
10.0		14.1	49.7	10.2		5.9	13.9	9.6		53.9	1.5	7.2		16.4	32.9 7.0 G:g
10.0		27.1	51.2	9.6		8.1	59.7	10.2		57.6	59.2	9.0		19.4	26.4 8.5
10.2		29.1	39.9	9.8		14.9	31.0	10.0		59.9	2.5	10.2		19.4	48.4
25pr.	+0	54.5	-4.1	+0	54.8	-4.3		+0	55.0	-4.4		+0	55.1	-4.4	

1006-3-23-16

8^h

2041-2100.			2101-2160.			2161-2220.			2221-2280.					
mag.	8h.	-37°	mag.	8h.	-37°	mag.	8h.	-37°	mag.	8h.	-37°			
9.2	21.9	25.0	10.0	20.4	16.8	10.4	12	47.1	45.0	10.2	16	0.1	6.2	
10.2	22.4	14.1	10.2	23.9	53.8	10.4		47.1	18.4	9.8		0.1	49.8	
9.6	24.4	32.3	10.2	27.5	42.1	10.8		48.6	9.5	10.7		2.1	55.8	
9.3	24.4	13.9	10.0	30.4	52.1	10.8	13	5.1	47.2	10.4		5.1	48.1	
8.7	26.4	23.9	9.6	37.4	52.1	10.6		7.6	25.1	10.4		9.1	45.5	
10.2	28.4	42.3	10.2	38.4	27.5	10.0		7.6	20.4	10.8		10.2	35.1	
10.2	32.9	41.3	10.0	38.9	2.0	10.8		9.1	9.0	10.6		10.2	40.9	
9.8	34.4	15.9	9.8	39.4	24.3	10.6		11.6	32.5	9.2		11.1	27.4	
9.8	36.9	20.8	10.2	40.9	25.3	10.4		15.1	2.1	10.2		12.1	58.7	
10.0	39.4	17.8	10.0	45.4	28.0	10.2		18.1	33.2	9.8		13.6	35.1	
10.0	39.4	6.1	9.6	47.0	57.2	9.2		19.8	13.1	9.3		16.1	45.0	
10.2	49.9	48.9	10.2	48.4	47.5	10.8		24.1	55.0	10.8		21.3	1.1	
10.2	50.9	56.1	9.8	49.4	20.8	10.7		30.6	30.5	10.8		28.1	16.3	
9.0	54.9	13.1	9.6	49.4	3.8	7.7		32.1	5.4	10.4		30.1	10.9	
8.5	55.4	6.6	9.4	56.9	8.8	10.2		40.1	49.8	10.7		34.1	42.1	
10.2	58.4	13.1	9.4	57.4	12.1	10.8		40.1	28.8	9.0		34.1	45.1	
8.8	58.4	9.0	10.2	57.4	8.1	8.4		42.6	33.1	10.0		40.1	41.8	
10.2	59.4	11.5	10.2	58.4	7.0	8.6		52.1	22.1	9.8		40.1	6.3	
10.2	59.4	22.0	10.2	58.5	39.0	9.8		52.1	42.9	9.2		41.1	6.7	
10.2	9	4.4	9.6	59.4	40.4	10.2		54.1	24.7	10.6		43.3	0.8	
9.1	4.4	31.7	9.8	59.4	31.2	10.7		54.6	39.3	10.0		45.6	6.6	
10.0	9.4	28.4	10.2	11	0.4	10.8		54.6	44.9	10.4		45.6	40.5	
10.0	9.4	39.3	10.2	5.4	54.0	10.7	14	0.6	17.3	8.6		47.6	0.2	
10.0	9.9	3.3	9.6	9.4	17.0	9.8		1.1	43.0	9.6		47.6	23.1	
8.0	10.4	20.8	10.2	10.4	11.9	10.2		5.1	19.5	9.6		49.6	26.1	
10.0	12.9	29.7	9.8	10.9	45.5	10.8		8.6	46.4	9.8		53.6	6.6	
10.2	14.9	36.1	8.8	13.9	24.4	9.8		10.1	29.4	10.8		54.2	16.9	
10.2	15.4	26.6	9.3	14.4	9.8	10.0		15.3	0.9	10.0		55.6	3.2	
10.0	17.4	28.6	10.2	21.4	53.0	10.7		16.1	28.4	10.2		56.6	18.6	
8.6	19.4	18.0	9.6	27.9	4.5	10.0		17.1	23.5	10.8	17	0.1	17.8	
10.2	20.4	1.3	10.2	29.9	29.9	10.7		20.6	5.8	10.7		2.1	48.6	
10.0	23.4	16.6	10.2	35.4	51.5	10.8		21.3	4.9	10.0		2.1	12.4	
10.0	27.9	41.2	9.6	35.4	24.1	10.8		22.1	29.4	9.6		4.1	36.3	
10.2	30.7	15.5	10.2	42.4	20.0	9.3		23.1	40.9	10.0		4.6	39.5	
10.2	31.7	17.0	10.2	44.4	43.6	10.0		23.1	56.5	10.4		4.6	53.7	
10.2	32.4	52.3	10.2	45.4	43.4	9.8		30.1	6.1	8.9		4.6	48.0	
10.0	32.9	27.4	10.2	46.9	18.9	10.8		31.1	41.9	10.7		5.4	1.9	
10.2	38.9	16.0	10.0	49.4	9.5	7.8		32.1	47.1	10.0		6.1	33.5	
9.6	40.4	32.1	8.5	56.9	5.2	9.2		36.6	18.1	10.4		6.6	24.9	
10.2	43.4	14.0	9.8	12	6.4	18.7		40.1	52.9	10.8		8.6	54.7	
10.0	46.4	18.4	10.2	9.9	6.6	9.6		47.6	55.0	10.8		10.1	35.2	
9.8	46.9	10.3	10.2	12.4	25.3	9.6		48.1	43.9	10.4		11.1	17.4	
10.0	49.4	31.5	10.2	17.3	42.6	10.4		54.1	38.9	9.4		12.6	21.6	
10.0	49.4	41.1	9.6	19.4	38.3	10.7		54.1	30.9	10.6		13.6	55.1	
10.0	50.4	53.6	10.2	19.7	16.9	10.2		55.1	34.7	10.4		14.1	19.9	
8.8	51.4	29.0	10.2	21.4	0.3	10.8	15	0.1	15.1	10.6		18.1	39.2	
10.0	55.4	26.8	9.8	21.4	9.4	10.4		2.1	21.5	10.4		20.1	4.6	
9.8	55.9	40.0	10.2	22.4	15.9	7.3		6.6	1.6	9.0		25.6	6.6	
10.2	57.4	55.2	10.2	25.4	28.2	9.8		15.1	25.3	10.8		30.1	13.1	
10.2	10	2.4	10.2	27.4	27.3	10.2		22.1	47.8	9.4		32.1	38.2	
10.2	8.4	50.1	10.0	29.4	54.0	10.0		26.1	35.9	10.7		32.1	48.0	
7.8	9.4	32.3	10.2	31.8	13.5	10.8		31.6	3.9	10.6		35.6	38.6	
10.2	10.4	49.0	10.2	32.9	41.1	10.4		32.1	51.7	10.4		40.6	38.2	
10.0	10.9	13.5	10.7	33.0	33.4	10.8		37.6	16.7	10.6		44.1	10.2	
10.2	11.5	42.2	10.8	34.6	28.8	8.8		43.1	55.2	10.8		47.1	23.6	
10.0	16.4	56.1	10.0	35.2	13.4	10.7		50.1	9.5	9.0		49.1	14.5	
10.0	16.9	6.8	10.0	36.7	30.8	10.6		50.1	37.7	10.0		49.1	28.8	
9.6	17.4	35.5	9.4	42.1	25.5	10.0		51.1	39.5	10.8		49.6	4.8	
10.0	17.4	54.7	9.0	42.1	30.9	10.7		53.1	26.2	10.4		50.1	5.0	
10.0	17.9	11.8	10.2	42.1	46.1	10.4		59.2	43.4	10.7		50.1	26.5	
25pr.	+0	55.1	-4.5	+0	55.3	-4.5		+0	55.4	-4.6		+0	55.6	-4.7

2281-2340.				2341-2400.				2401-2460.				2461-2520.			
mag.	8h.	-37°		mag.	8h.	-37°		mag.	8h.	-37°		mag.	8h.	-37°	
m s				m s				m s				m s			
10.2	17	51.1	7.3	9.6	19	54.6	54.4	9.4	22	30.2	17.4	9.0	25	9.7	7.2 9.5
9.8		52.1	46.0	10.8		55.6	11.1	10.4		33.7	52.8	10.0		9.7	9.2
10.6		52.1	28.6	10.8		59.6	6.2	9.4		34.7	31.2 10.0	10.4		10.1	11.7
10.4		55.1	31.0	10.4	20	1.6	47.1	10.0		42.7	35.0	10.8		10.2	42.2
10.0		56.1	56.5	10.7		5.1	49.1	10.0		44.2	49.7	10.8		11.2	45.0
9.8		56.1	54.9	10.4		7.6	18.9	10.0		47.2	40.1	10.7		11.7	24.8
9.2		56.6	26.3	10.0		20.6	29.4	10.0		51.2	10.0	10.0		13.2	59.7
10.7		57.8	1.7	10.0		20.6	24.6	10.4		51.2	53.8	9.6		15.2	10.3 9.5
8.4		58.1	24.2 9.5	10.7		20.6	54.0	9.0		55.2	20.3 10.0	10.0		18.7	45.0
10.2	18	0.1	34.2	9.6		21.6	59.1	10.4		58.7	8.4	9.8		21.7	38.4
10.8		0.1	0.4	9.2		23.6	7.5	9.6		59.2	19.6	10.1		21.7	21.5
10.0		0.8	1.5	10.2		25.6	26.4	9.0	23	0.2	6.3	10.7		31.2	53.1
9.6		4.1	28.1	10.4		28.1	9.6	10.4		1.2	42.9	10.8		33.2	3.8
9.3		4.6	56.3	10.7		29.6	35.7	10.6		2.7	16.5	10.8		42.0	2.2
8.7		5.1	54.3 9.0	10.8		31.6	25.1	10.6		3.2	10.0	10.4		43.2	53.0
10.8		10.1	53.9	9.6		32.1	39.7 10.0	9.6		3.7	27.2	10.6		46.7	11.3
10.8		11.0	42.0	10.0		34.1	7.7	9.8		9.2	49.1	10.7		49.7	57.5
10.4		11.6	16.0	10.7		36.1	23.5	10.6		11.5	59.1	9.8		53.7	9.6
10.4		15.1	39.3	10.4		36.6	5.8	10.7		14.7	47.2	9.8		55.2	10.5
9.4		17.1	44.2	10.8		37.6	31.0	10.7		17.7	29.0	10.7		55.7	20.0
10.8		21.1	16.9	10.2		38.6	16.5	9.8		18.2	10.8	10.6		59.2	40.1
10.4		21.1	12.0	10.7		38.6	20.6	10.7		20.2	54.4	9.8	26	0.7	26.3
10.4		25.1	18.0	9.4		40.6	50.5	10.8		22.2	9.9	10.0		4.2	42.9
10.8		26.1	40.1	9.4		40.6	26.1	10.8		25.2	29.7	10.0		5.7	25.5
8.3		27.1	50.7 9.0 -	9.8		43.1	28.0	10.8		29.5	59.7	10.4		9.7	0.9
10.8		27.6	31.0	10.0		43.6	26.8	10.8		30.7	29.4	10.8		11.7	28.7
10.6		31.1	3.2	10.4		49.6	1.4	10.7		31.2	52.7 9.0 -	10.0		13.7	54.4
10.7		32.1	28.6	10.7		51.1	48.2	8.4		31.7	19.0	10.2		16.2	23.5
10.7		36.1	20.5	10.7		56.6	37.1	10.0		33.2	26.8	10.0		16.2	26.3
10.2		38.6	37.2	10.8		59.1	17.6	9.8		34.7	12.2	10.8		18.2	55.5
7.7		40.1	53.1 7.0 GS=0	9.8	21	0.6	42.0	10.2		36.2	25.5	9.0		18.7	39.1 9.5
9.6		45.1	10.8	8.6		4.6	24.0 8.5 -	9.0		40.7	38.9	10.2		23.2	20.1
10.8		48.6	58.6	10.8		6.6	46.5	10.6		43.2	22.9	10.0		26.2	46.9
10.6		51.1	18.6	10.8		11.1	22.0	9.2		50.2	15.0 9.5	8.4		27.2	8.7 8.5
10.8		51.6	58.1	10.7		14.1	2.3	9.8		50.7	28.0	10.6		29.7	32.2
9.2		52.1	10.8	10.8		19.6	36.2	10.7		50.7	4.5	10.7		29.7	33.1
9.4		57.6	15.4	10.7		21.1	48.2	10.7		52.2	6.1	10.7		38.4	0.6
10.4		58.1	37.7	10.6		21.1	51.7	10.6		58.2	6.4	10.2		39.2	44.8
10.8		59.6	34.7	10.0		21.1	55.0	10.7		58.7	56.4	9.8		40.5	59.6
10.6	19	2.1	16.8	10.8		21.4	30.0	9.6		59.7	9.7	10.8		42.8	3.8
10.6		2.6	7.4	10.7		26.4	55.2	10.8		59.7	29.1	10.7		45.7	1.0
10.7		3.0	11.5	9.8		26.6	48.0	10.7		59.7	45.1	9.6		46.7	1.2
9.8		4.1	19.2	10.8		30.4	36.3	10.6	24	5.2	38.1	10.7		48.2	38.7
10.6		6.1	4.8	9.2		34.1	14.5	10.7		9.2	44.2	10.2		51.2	5.5
10.4		8.6	12.5	10.0		35.6	46.9	9.8		18.5	59.8	10.6		51.7	36.8
10.2		12.0	12.9	10.0		38.6	48.3	10.0		29.2	21.6	9.4		52.7	51.1
10.0		12.1	37.6	10.0		41.6	13.1	10.8		30.2	11.5	9.8		54.7	47.6
9.4		12.6	21.9	10.6		43.6	7.1	10.4		31.7	11.5	9.8		59.7	45.2
10.8		14.6	2.9	10.8		46.1	46.2	10.7		32.2	30.9	9.8		59.7	4.1
10.8		18.6	23.9	10.4		46.6	45.5	10.0		37.2	42.0	10.8	27	0.8	46.6
10.8		19.6	20.2	10.6		48.1	26.9	9.3		37.7	27.0	10.8		1.7	37.1
10.0		20.6	49.0	10.8		50.6	21.5	10.8		40.7	15.0	10.7		1.7	20.9
10.8		24.6	18.0	10.4		53.1	51.6	10.8		49.7	4.1	10.2		5.2	13.1
10.8		31.6	21.5	10.7	22	0.6	47.4	10.4		50.7	10.0	10.0		5.2	34.5
10.8		37.6	20.5	10.7		0.6	19.7	9.8		51.7	30.9	10.8		5.2	56.9
9.4		40.6	46.6	10.6		2.6	40.9	10.7		55.7	15.5	10.0		8.9	1.4
10.2		49.1	44.5	9.4		8.2	0.6	9.8		57.7	48.2	10.8		13.7	58.7
9.0		50.6	20.0	10.4		10.2	25.7	10.4	25	0.7	25.3	10.4		14.7	47.9
10.6		51.6	58.4	10.7		18.7	15.7	10.7		1.7	6.1	10.4		15.7	5.6
10.8		54.6	33.5	8.7		23.7	32.0 8.0 G-	10.6		6.2	49.6	9.8		15.7	40.5
25.1P.	+ 0	55.7	-4.8	+ 0	55.9	-4.8		+ 0	56.1	-4.9		+ 0	56.2	-5.0	

2761-2820.				2821-2880.				2881-2940.				2941-3000.			
mag.	gh.	-37°		mag.	gh.	-37°		mag.	gh.	-37°		mag.	gh.	-37°	
	m s	'	''		m s	'	''		m s	'	''		m s	'	''
10.2	39	17.2	3.1	10.2	42	14.2	35.0	9.4	45	43.2	45.5	9.8	49	34.6	37.1
9.2		23.7	33.1	9.6		22.2	49.1	9.8		48.7	21.8	10.2		46.1	35.1
10.2		23.7	23.9	8.6		29.7	39.7	10.2		52.7	51.1	10.0		48.6	32.1
9.6		26.7	37.9	9.8		31.2	52.6	10.2		52.7	10.6	9.0	50	1.1	55.8
9.6		29.7	17.1	9.6		34.7	32.1	9.4		53.7	57.5	9.6		2.1	20.7
7.4		30.7	4.7	8.5		39.2	34.4	10.2		56.7	16.0	10.2		9.1	43.1
10.2		33.2	46.9	10.2		40.2	37.6	10.0		57.7	39.5	10.2		19.1	48.3
10.2		36.2	2.2	9.0		42.7	30.3	8.8	46	58.7	46.6	9.8		20.6	9.0
9.6		37.2	43.1	10.2		43.2	14.5	10.0		7.1	59.9	10.0		24.4	11.3
10.0		38.7	10.0	9.6		44.7	38.7	10.0		18.7	44.8	8.8		29.6	51.0
10.2		39.7	59.4	9.4		48.7	36.5	9.0		22.2	30.1	10.0		32.1	7.0
10.2		40.7	11.1	10.2	43	2.7	12.5	9.8		27.2	8.8	9.4		34.6	18.4
10.0		44.2	31.0	8.6		6.7	31.8	9.6		28.7	12.1	9.6		39.1	20.9
9.6		48.2	24.1	10.2		8.7	13.8	10.2		28.7	19.2	10.2		52.1	24.8
8.8		48.7	30.8	10.2		10.7	16.8	10.0		28.7	3.4	10.2	51	2.3	2.0
9.8		56.2	53.3	10.2		10.7	43.1	9.8		38.7	16.5	10.2		2.6	40.2
10.2		58.7	29.6	9.6		10.7	53.4	10.0		40.7	0.8	9.4		4.1	40.3
8.5		58.7	33.0	9.4		18.7	34.4	8.4		42.8	8.5	9.4		4.1	52.0
10.2	40	2.7	41.1	9.4		24.2	25.5	10.2		47.1	35.0	9.6		5.6	20.3
10.2		6.7	36.5	10.0		26.7	53.8	10.0		49.6	35.1	9.6		13.1	45.9
9.6		8.7	29.5	9.4		28.7	3.8	10.2		54.6	42.3	9.6		17.6	34.0
10.0		12.7	12.8	8.8		28.7	37.5	9.8		55.6	44.4	9.4		18.6	17.1
10.2		14.7	57.9	9.8		29.1	2.4	10.2	47	4.1	33.0	9.8		19.1	51.0
10.2		17.7	37.5	9.4		29.2	45.2	8.8		11.1	10.5	9.6		21.1	45.2
10.2		18.4	56.6	9.8		36.7	42.1	10.0		15.1	17.9	9.8		22.6	56.5
10.2		18.7	18.4	9.4		42.2	27.9	10.0		17.1	30.6	10.2		29.1	10.6
9.0		24.2	29.4	10.0		45.7	20.8	9.6		22.6	26.9	9.3		30.1	23.6
10.2		26.7	15.6	10.0		51.2	44.9	10.2		26.6	42.6	10.2		41.1	22.4
10.0		28.2	27.1	10.2		52.2	57.0	9.4		49.1	54.1	10.2		44.1	45.9
10.0		30.0	2.2	9.1		54.7	17.2	9.8		50.6	48.5	9.4		48.1	10.0
8.8		33.7	12.6	8.0		57.2	32.5	10.2		58.6	50.2	10.2		50.1	2.8
10.2		37.8	1.0	9.6		57.7	30.2	9.1	48	0.1	44.5	10.0		55.1	43.0
9.6		43.7	28.2	10.2		58.4	57.3	10.0		1.6	39.8	10.2		55.6	40.1
10.2		44.2	4.2	10.2	44	2.2	23.1	8.6		2.6	43.6	10.2		59.1	11.2
9.6		57.2	13.2	9.6		3.2	31.0	9.6		6.6	39.7	9.8		0.1	27.6
9.8		59.2	40.2	9.6		8.7	43.9	9.8		6.6	12.2	9.8	52	5.1	56.0
10.0	41	2.7	35.8	10.2		12.7	5.6	10.2		12.1	55.9	10.0		10.1	35.1
10.2		3.7	38.6	9.6		15.4	56.9	10.2		15.1	25.1	9.6		11.6	33.1
10.2		4.7	33.8	10.2		18.7	23.3	9.8		15.6	5.6	10.2		19.1	2.8
7.3		4.7	25.3	9.6		18.7	14.0	10.2		17.5	33.0	10.0		24.1	26.2
9.4		8.2	19.9	10.2		27.2	36.6	10.2		22.1	0.8	9.2		28.6	21.5
10.0		8.7	17.9	10.2		28.7	17.3	10.2		22.5	42.2	9.4		29.1	8.4
9.6		11.2	30.0	10.2		28.7	43.1	10.2		27.1	38.9	10.2		35.6	51.6
10.2		15.2	53.0	8.8		47.2	28.9	9.8		29.1	10.2	10.2		39.1	39.5
10.2		19.2	34.9	10.2		48.2	57.3	9.4		29.6	42.8	10.2		40.1	36.3
10.2		24.2	38.4	10.0		48.7	6.7	10.0		30.6	36.6	10.2		41.1	23.3
9.8		32.2	22.9	10.2		49.7	22.5	9.8		35.6	4.9	9.8		43.6	49.7
9.4		33.7	36.2	10.2		54.7	13.9	10.2		40.1	47.1	9.6		43.6	53.7
9.3		37.7	50.9	9.8		56.7	35.9	9.4		40.3	2.9	10.2		44.1	6.5
10.0		37.7	52.8	9.8		58.7	49.1	10.2		49.1	33.6	10.2		47.1	58.3
10.0		40.7	57.8	9.4		59.7	40.7	10.0		52.1	13.6	9.8		47.6	10.2
10.0		46.9	58.6	10.2	45	14.7	14.2	9.4		53.1	50.7	10.2		49.6	21.8
9.1		48.2	27.2	8.8		20.2	22.2	9.6		59.3	0.0	10.0		52.6	42.5
9.8		48.7	17.4	10.2		23.2	8.8	10.2	49	6.6	32.3	10.2		56.6	12.9
10.0		54.7	7.4	9.4		24.7	20.9	10.0		11.6	40.1	10.2		57.6	49.1
9.4	42	0.2	10.3	10.0		26.7	21.7	9.4		13.6	43.2	9.8	53	1.1	26.0
10.2		0.2	33.1	8.4		36.2	50.9	9.4		16.1	12.3	9.4		5.1	16.6
9.6		1.7	23.0	10.0		38.2	18.3	10.2		23.1	32.8	9.3		7.1	14.1
9.4		9.2	55.0	10.2		39.9	57.6	10.0		25.1	5.1	10.2		9.6	34.1
10.0		9.2	19.0	9.4		43.2	38.4	10.2		30.1	35.5	9.4		11.1	45.8
25pr.	+0	57.2	-5.4		+0	57.4	-5.5		+0	57.7	-5.6		+0	58.1	-5.7

1896AnCap...3....1G

3241-3300.				3301-3360.				3361-3420.				3421-3480.			
mag.	gh.		-37°	mag.	gh.		-37°	mag.	gh.		-37°	mag.	gh.		-37°
	m	s			m	s			m	s			m	s	
10.8	9	3.1	7.9	10.8	12	24.0	34.5	10.0	14	59.0	33.4	10.8	18	9.4	34.1
10.8		5.6	18.2	10.6		25.0	12.6	10.2	15	10.0	5.3	10.2		12.9	46.1
9.8		6.1	55.0	10.8		28.5	18.2	9.5		11.0	16.7	10.0		15.9	37.9
10.6		10.6	43.0	9.5		29.0	21.1	10.0		12.0	33.0	10.8		17.9	53.0
10.6		11.6	15.4	10.8		29.0	10.9	10.8		14.5	13.0	10.4		18.3	1.0
10.6		14.1	42.2	10.0		32.5	34.6	9.8		17.0	18.7	10.8		18.4	53.7
10.8		18.6	27.8	8.7		34.5	29.5	10.8		18.0	51.0	10.8		19.4	47.9
9.4		18.6	47.2	10.6		37.0	38.2	10.8		19.5	47.0	9.0		21.4	47.3
9.2		26.6	59.8	10.8		37.5	46.4	9.2		24.0	19.9	10.2		21.4	21.3
10.2		31.1	39.2	10.8		42.2	43.1	9.7		27.5	23.6	10.0		21.9	2.1
10.4		37.6	4.1	10.0		44.0	40.3	7.6		28.5	3.1	10.0		23.4	12.2
8.6		38.6	11.7	9.8		44.0	23.7	10.4		54.0	40.3	9.2		24.4	42.8
10.4		41.6	6.6	10.0		44.0	9.6	9.7		56.5	26.2	10.4		27.4	4.3
10.6		43.1	37.6	9.7		44.5	45.1	10.4		59.0	6.2	10.4		27.4	8.6
9.7		52.1	3.8	10.4		51.0	49.3	10.4	16	1.5	14.6	10.8		28.4	26.0
10.4		52.1	32.3	10.6		55.5	49.2	10.8		4.0	20.0	10.8		28.4	2.5
10.8		54.1	17.9	10.8	13	2.0	36.2	10.8		10.0	52.1	8.9		28.9	36.3
10.6		54.6	30.9	10.8		3.0	0.5	10.8		10.5	37.2	10.8		30.9	26.8
7.0		58.6	5.0	10.8		10.0	17.9	10.8		11.0	37.9	10.6		32.9	8.9
10.8	10	2.6	37.0	10.8		16.5	48.5	10.8		14.0	41.1	10.4		36.4	9.5
10.6		3.6	50.6	10.6		19.0	15.2	10.4		15.0	5.4	10.8		36.9	39.6
10.8		11.6	43.0	10.8		19.3	2.2	9.8		24.0	51.1	10.8		36.9	30.2
9.5		12.6	56.2	9.2		19.5	51.2	10.4		24.5	6.1	10.4		37.4	54.4
10.8		17.6	42.1	9.8		20.0	18.1	10.0		28.0	27.3	7.0		43.4	13.3
10.0		19.6	14.8	10.8		25.0	50.3	10.4		30.0	45.5	9.8		44.9	35.0
10.2		23.6	52.9	10.6		27.0	16.1	10.6		30.0	23.9	10.0		48.4	46.4
10.0		29.6	44.3	10.6		36.0	21.5	10.8		31.7	58.7	9.6		48.4	40.1
10.4		31.6	46.0	10.8		39.0	50.0	10.4		34.0	27.4	10.0		49.9	32.7
10.0		31.6	44.4	9.8		43.0	18.2	10.8		36.5	21.0	10.8		53.4	37.1
10.8		32.6	20.9	10.8		46.5	4.4	10.8		37.5	11.9	10.8		57.4	8.1
10.8		34.6	25.0	9.8		48.0	35.7	10.4		39.0	15.3	9.8		59.4	12.6
9.0		35.6	41.7	10.8		49.0	4.1	10.4		39.0	33.2	10.8	19	0.4	7.4
10.8		36.1	38.6	10.8		59.0	31.5	10.2		44.0	46.9	9.5		2.9	25.1
10.8		38.6	46.6	10.8	14	0.0	47.6	10.4		44.0	5.0	10.8		7.4	2.4
10.8		41.1	39.4	10.0		1.0	4.0	9.2		49.0	21.3	10.6		11.4	16.2
7.6		52.6	6.5	9.6		3.0	4.3	10.8		49.0	5.0	10.0		13.9	52.6
10.4		57.6	46.5	10.6		8.0	11.7	9.4		50.0	55.0	10.6		15.4	10.9
10.4		59.1	0.8	10.8		15.5	36.2	10.8		50.0	33.8	10.8		19.9	8.5
10.8	11	0.6	50.7	10.8		17.0	41.1	10.4		54.0	56.6	10.2		21.9	30.8
10.8		7.1	1.5	10.6		17.0	3.1	10.2		59.0	52.0	10.8		31.4	2.1
9.8		9.6	13.6	10.4		17.5	11.1	10.8	17	3.5	3.7	10.8		31.4	2.4
9.7		14.6	15.3	10.2		19.0	37.9	10.8		9.0	35.0	10.0		39.4	17.8
9.7		16.1	19.5	10.0		20.0	24.6	10.6		19.4	3.3	9.5		40.4	31.2
10.8		18.6	44.7	9.6		20.0	31.6	9.4		21.4	47.8	9.4		43.4	19.2
10.2		19.4	0.7	9.8		21.5	9.0	9.6		23.4	6.4	9.2		49.4	10.1
9.2		27.6	3.8	9.8		22.5	7.2	10.0		25.4	58.4	10.8		49.9	33.9
9.8		28.6	14.6	9.8		27.0	45.5	9.4		27.9	40.7	10.0		55.9	58.1
9.0		28.6	39.6	10.8		30.1	2.0	10.8		32.4	8.2	9.4	20	1.4	30.1
10.6		28.6	37.1	10.4		31.0	41.5	10.0		32.9	45.1	7.8		4.4	32.5
10.8		29.6	51.0	10.4		33.5	35.0	9.0		33.9	55.8	10.8		8.4	0.7
10.4		33.6	36.4	10.2		34.0	44.1	10.8		37.4	12.1	10.6		9.4	18.4
10.8		33.6	54.3	9.0		38.0	37.0	10.0		41.4	40.3	10.8		11.4	7.1
10.6		39.0	28.7	10.8		38.3	2.4	10.0		41.4	20.9	10.6		14.4	40.3
10.4		39.0	36.9	10.8		39.0	45.0	9.8		44.9	32.1	10.8		14.9	23.4
10.8		47.0	42.9	10.0		41.5	19.7	10.8		50.4	19.0	10.8		20.9	23.1
10.8		52.0	22.8	10.4		43.0	33.8	10.0		55.4	53.4	10.8		21.4	17.7
10.8	12	7.0	22.8	10.8		45.0	27.0	10.8		56.4	58.4	10.4		31.6	19.8
9.8		15.0	14.8	10.8		48.0	40.7	10.0	18	2.9	0.2	10.8		36.1	52.2
9.4		15.0	43.2	10.8		49.0	32.9	10.0		7.4	41.2	8.6		43.6	3.6
10.0		22.5	20.0	9.8		55.5	35.0	10.4		8.4	53.0	10.8		49.1	19.8
25Pr.	+ 0	59.6	-6.2	+ 0	59.8	-6.3		+ 1	0.1	-6.3		+ 1	0.2	-6.4	

3481-3540.			3541-3600.			3601-3660.			3661-3720.								
mag.	g ^h .	-37°	mag.	g ^h .	-37°	mag.	g ^h .	-37°	mag.	g ^h .	-37°						
20	49.6	41.2	8.7	23	51.8	17.4	8.5	27	54.5	36.7	8.5						
9.6	54.1	20.1	10.6	52.3	31.1	9.7	28	0.1	1.0	8.8	32	24.6	26.0				
10.8	59.6	5.1	10.8	52.8	52.7	10.8	3.1	31.6	9.8	44.6	16.3	9.0					
21	1.1	16.3	10.0	55.3	9.1	10.0	3.8	59.4	9.8	58.6	25.8	9.2	59.6	9.4			
10.8	2.1	27.1	10.8	55.3	52.5	9.8	4.8	39.7	10.0	33	7.1	43.6	9.8	33	7.1	43.6	
9.7	5.6	1.0	10.8	58.3	18.7	9.8	4.8	7.3	9.6	9.6	9.6	12.1	9.6	9.6	9.6	12.1	
10.8	9.1	15.8	10.4	8.8	44.1	10.4	9.5	46.1	9.5	27.8	57.1	9.5	27.8	57.1	9.5	27.8	
9.8	12.6	22.1	9.6	12.3	48.5	9.2	15.0	6.0	9.8	34.6	37.4	9.8	34.6	37.4	9.8	34.6	
10.6	18.1	54.2	6.6	14.8	51.4	6.5 GS	19.1	5.9	9.4	34.6	43.9	9.4	34.6	43.9	9.4	34.6	
9.3	19.6	43.2	10.6	21.8	54.9	10.6	25.0	10.5	9.8	37.1	9.6	9.8	37.1	9.6	9.8	37.1	
10.4	24.6	10.6	10.8	23.8	42.9	10.8	29.5	14.3	9.4	37.6	20.0	9.4	37.6	20.0	9.4	37.6	
9.4	24.6	19.8	9.5	31.8	8.1	10.4	29.8	9.2	9.5	45.1	16.1	9.5	45.1	16.1	9.5	45.1	
10.0	28.6	12.7	10.2	34.8	34.5	10.8	37.0	57.0	9.2	28.6	54.1	9.2	28.6	54.1	9.2	28.6	
9.4	29.1	5.5	10.0	39.8	47.0	9.0	44.8	17.3	9.0	32.6	9.0	9.0	32.6	9.0	9.0	32.6	
10.0	29.6	8.7	9.5	47.3	4.2	9.3	46.3	14.6	8.8	40.4	0.6	8.8	40.4	0.6	8.8	40.4	
10.0	30.1	21.2	9.3	48.3	38.0	G	47.3	50.0	9.0	42.1	49.2	9.8	42.1	49.2	9.8	42.1	
10.8	32.1	33.2	10.8	52.2	0.9	10.8	48.5	43.6	8.8	44.1	8.8	8.8	44.1	8.8	8.8	44.1	
10.8	33.6	50.1	10.8	25	1.8	20.5	50.5	54.2	9.3	47.1	38.9	9.3	47.1	38.9	9.3	47.1	
10.2	34.6	44.0	9.7	2.8	8.5	9.8	7.3	52.7	9.7	48.6	47.3	9.7	48.6	47.3	9.7	48.6	
9.2	37.6	40.9	10.6	4.8	20.4	9.8	10.1	37.7	9.5	49.1	15.1	9.5	49.1	15.1	9.5	49.1	
10.0	43.6	39.9	10.0	6.8	17.2	9.8	11.1	54.8	9.7	50.1	3.9	9.7	50.1	3.9	9.7	50.1	
10.8	49.6	36.6	9.3	8.8	23.8	8.5	13.6	31.8	9.0 -	59.6	13.9	9.8	59.6	13.9	9.8	59.6	
10.4	52.1	47.3	10.8	22.3	34.3	10.5†	18.0	59.2	9.5	1.9	2.1	9.5	1.9	2.1	9.5	1.9	
10.6	52.6	14.7	10.8	24.8	16.8	9.7	18.6	3.6	9.7	8.6	53.5	9.7	8.6	53.5	9.7	8.6	
10.0	53.6	38.4	10.6	25.8	51.1	9.8	20.6	42.9	9.8	19.1	33.8	9.8	19.1	33.8	9.8	19.1	
10.8	56.1	7.6	9.6	27.3	41.2	9.5	31.6	42.0	9.4	19.6	48.2	9.4	19.6	48.2	9.4	19.6	
10.4	59.1	39.2	10.4	29.8	30.4	10.4	34.6	26.5	9.4	27.9	0.2	9.4	27.9	0.2	9.4	27.9	
10.0	59.6	37.2	10.0	30.8	43.4	10.5†	43.0	59.2	9.6	29.1	8.5	9.6	29.1	8.5	9.6	29.1	
10.4	59.6	13.4	8.5	31.8	48.8	9.0 G-g	57.6	32.4	9.6	30.1	6.2	9.6	30.1	6.2	9.6	30.1	
10.4	22	5.6	10.0	42.8	50.2	9.5	58.6	14.7	9.5	43.6	40.0	9.5	43.6	40.0	9.5	43.6	
10.8	8.6	7.2	8.5	43.8	52.0	8.5 Gg	58.6	56.0	9.8	48.1	31.8	9.8	48.1	31.8	9.8	48.1	
10.8	14.1	41.9	9.7	43.8	53.4	G	4.1	47.1	9.8	56.6	2.6	9.8	56.6	2.6	9.8	56.6	
9.8	18.3	37.1	10.8	54.8	24.1	9.7	8.6	46.7	9.8	3.1	17.6	9.8	3.1	17.6	9.8	3.1	
10.8	19.8	48.3	10.8	55.3	9.2	9.5	9.1	38.9	9.8	6.6	47.6	9.8	6.6	47.6	9.8	6.6	
10.8	21.3	48.5	10.0	55.8	52.7	9.8	26.6	45.2	9.6	17.6	0.9	9.6	17.6	0.9	9.6	17.6	
10.2	21.3	43.4	9.3	26	16.8	20.7	35.6	29.1	9.6	22.6	43.2	9.6	22.6	43.2	9.6	22.6	
10.8	25.8	41.6	10.4	17.8	50.6	9.6	35.6	16.8	9.8	23.6	19.0	9.8	23.6	19.0	9.8	23.6	
9.8	31.8	13.7	10.8	20.8	32.9	9.8	40.6	22.0	9.6	28.6	59.1	9.6	28.6	59.1	9.6	28.6	
9.8	34.3	41.9	10.6	30.8	7.1	9.3	43.3	58.9	8.4	28.6	55.8	8.4	28.6	55.8	8.4	28.6	
10.8	37.8	14.2	10.2	44.3	23.5	9.8	48.6	18.0	9.7	33.3	57.6	9.7	33.3	57.6	9.7	33.3	
9.8	39.8	35.1	10.4	48.8	22.4	9.6	49.1	16.7	9.0	38.6	46.9	9.0	38.6	46.9	9.0	38.6	
10.4	50.9	57.3	10.2	48.8	5.7	9.7	51.1	23.2	9.8	49.6	4.8	9.8	49.6	4.8	9.8	49.6	
10.0	54.3	36.4	10.0	49.8	23.0	9.8	57.1	30.6	9.8	58.6	6.9	9.8	58.6	6.9	9.8	58.6	
10.8	54.8	13.2	10.2	50.8	47.1	9.8	57.6	28.0	9.6	5.6	40.1	9.6	5.6	40.1	9.6	5.6	
10.0	23	0.8	9.4	57.0	21.1	9.6	59.6	17.7	9.4	8.1	36.2	9.4	8.1	36.2	9.4	8.1	
10.0	4.8	59.5	10.2	27	6.0	20.7	6.1	37.4	9.2	18.9	1.8	9.2	18.9	1.8	9.2	18.9	
10.8	5.8	24.0	10.2	6.5	50.4	9.8	8.6	26.0	9.4	19.6	13.6	9.4	19.6	13.6	9.4	19.6	
10.8	7.8	48.9	9.8	10.5	25.0	9.8	19.1	30.1	9.8	22.1	17.5	9.8	22.1	17.5	9.8	22.1	
10.4	9.8	9.0	10.6	13.5	8.8	9.8	20.6	32.9	9.3	23.6	20.2	9.3	23.6	20.2	9.3	23.6	
8.1	15.8	40.3	8.9	21.0	53.5	10.0	23.1	41.9	9.4	36.6	19.4	9.4	36.6	19.4	9.4	36.6	
10.8	18.8	31.8	9.7	22.0	7.9	9.4	26.1	57.7	9.2	36.6	52.2	9.7	36.6	52.2	9.7	36.6	
10.4	19.8	41.6	8.1	27.0	45.8	9.0	35.1	36.8	9.5	8.1	3.0	9.5	8.1	3.0	9.5	8.1	
8.9	22.3	32.9	10.8	30.0	38.3	9.6	36.1	51.9	9.4	23.6	17.3	9.4	23.6	17.3	9.4	23.6	
10.8	22.8	26.5	10.8	30.5	38.0	9.8	37.1	34.3	9.8	45.6	17.9	9.8	45.6	17.9	9.8	45.6	
10.8	27.3	36.2	10.0	32.0	20.3	9.3	42.1	16.8	9.8	47.6	48.5	9.8	47.6	48.5	9.8	47.6	
10.4	41.8	23.3	10.4	32.3	57.7	9.6	45.4	0.0	9.6	2.1	31.0	9.6	2.1	31.0	9.6	2.1	
10.4	44.8	53.3	10.8	32.5	17.9	8.5	56.6	43.7	9.0 -	4.1	17.4	9.3	4.1	17.4	9.3	4.1	
10.4	47.8	47.8	10.6	34.0	40.4	9.8	59.6	15.9	9.0	6.1	53.3	9.0	6.1	53.3	9.0	6.1	
10.8	48.8	40.0	10.8	48.0	40.0	8.9	32	2.6	9.0	20.6	32.1	9.4	20.6	32.1	9.4	20.6	
10.8	49.8	18.1	10.2	52.0	30.6	9.0	8.1	24.7	9.0 -	21.1	45.3	9.0	21.1	45.3	9.0	21.1	
25pr.	+ 1	0.5	-6.4	+ 1	0.8	-6.5	+ 1	1.2	-6.6	+ 1	1.7	-6.8	+ 1	1.7	-6.8	+ 1	1.7

3721-3780.				3781-3840.				3841-3900.				3901-3960.				
mag.	g ^h .	-37°		mag.	g ^h .	-37°		mag.	g ^h .	-37°		mag.	g ^h -10 ^h .	-37°		
	m	s	'	m	s	'		m	s	'		m	s	'		
9.7	39	24.6	44.4	9.8	44	52.4	56.1	8.7	51	0.9	55.0	8.0	10.6	57	34.4	18.0
9.8		34.6	14.1	9.6		53.9	9.1	9.8		3.4	16.6		10.6		47.9	2.0
9.7		38.6	6.7	9.8		56.8	28.4	9.8		13.9	7.5		10.6		50.9	30.2
9.5		46.1	45.2	9.8	45	13.9	9.1	9.8		17.9	31.3		10.0		51.4	33.8
9.8	40	0.1	1.0	9.8		27.4	4.4	9.4		27.4	44.1		9.0		56.4	39.5
9.4		4.3	56.8	9.6		33.4	26.1	9.8		43.6	57.7		9.6	58	0.4	41.6
9.0		12.1	32.7	8.8		37.9	9.5	9.0		45.9	56.6		9.4		1.9	31.6
9.0		15.1	20.2	9.7		37.9	44.0	9.8		46.4	50.7		10.6		8.9	25.7
8.3		18.1	9.5	9.6		43.4	31.9	9.8	52	1.3	0.9		10.2		17.4	20.2
9.8		18.6	41.7	9.3		43.9	52.0	9.6		10.9	41.9		10.2		23.9	14.5
8.2		26.1	14.2	9.8		44.4	3.6	9.7		13.9	34.1		9.8		28.9	19.2
9.8		29.6	59.4	9.8		57.0	59.9	9.5		16.9	48.3		10.3		30.4	3.6
9.6		31.6	43.8	8.8	46	0.4	27.3	9.4		36.9	5.3		10.6		32.9	1.8
9.8		33.6	52.3	8.8		12.9	56.0	8.7		38.9	34.1	9.5	9.6		41.9	13.7
9.8		38.1	50.2	8.9		14.9	23.3	9.6		44.4	19.1		10.6		42.0	29.1
9.6		38.6	42.5	8.4		24.4	36.2	9.8		53.9	37.7		9.8	59	9.4	46.2
9.0		48.3	59.1	9.4		24.8	1.7	9.8	53	2.2	2.2		10.6		9.9	41.7
9.8		48.8	57.0	9.7		30.4	0.7	9.1		11.4	35.3	9.0	10.6		12.9	47.1
9.8		49.6	6.9	9.2		34.9	35.2	9.8		14.1	53.4		9.8		13.9	7.6
9.8		52.6	48.4	9.8		35.6	36.1	9.8		18.9	56.1		10.6		20.9	33.8
9.8		56.1	41.0	9.7		39.9	36.9	9.6		21.6	30.1		10.6		42.4	17.5
9.8		57.6	25.8	9.8		51.4	17.3	9.5		25.4	6.3		9.6		42.9	40.3
9.5		59.1	20.0	9.4		57.4	15.9	9.8		26.1	2.9		10.6		48.9	59.3
9.8	41	13.4	17.1	9.5	47	3.9	33.3	9.6		36.9	31.3		10.6		51.4	52.5
9.8		20.4	48.8	9.8		3.9	27.8	9.3		41.9	51.4		9.8		54.9	42.6
9.8		27.9	10.1	9.0		8.9	38.1	9.4		42.6	15.2		9.8	0	3.4	25.2
9.8		34.4	8.4	9.0		32.9	33.3	9.8		58.9	7.9		10.4		8.4	22.9
9.4		38.9	54.5	9.3		36.9	56.1	9.3		58.9	20.9		10.3		17.0	21.4
9.8		42.4	40.6	9.4		40.9	32.3	9.8		59.1	42.7		9.4		17.0	11.1
9.7		46.9	37.2	9.8		54.9	10.3	9.6	54	5.9	53.9		10.4		28.5	25.2
9.8		58.9	36.9	9.8		55.4	52.7	9.8		9.8	55.9		10.4		31.5	17.2
8.9	42	10.9	21.8	8.0	48	8.9	49.3	9.8		12.4	43.1		9.8		35.0	33.2
9.8		13.4	3.1	9.8		9.2	57.8	9.8		22.1	49.0		10.3		51.0	12.3
8.2		15.4	8.8	9.8		28.4	29.9	9.2		27.8	22.2	10.0	9.4		54.0	54.5
7.8		23.4	36.5	9.8		29.9	39.1	10.4		30.3	21.1		10.6	1	0.0	48.3
9.8		23.7	57.8	8.7		33.9	28.2	9.6		30.8	32.1		10.6		2.0	12.4
9.8		23.7	1.4	9.8		38.9	10.1	9.8		43.8	55.2		9.0		9.0	36.9
9.8		25.4	1.5	8.4		44.4	41.9	10.4		48.1	1.9		10.6		19.0	40.8
9.7		27.4	3.9	9.7		48.9	16.2	10.0		49.3	54.4		10.4		21.0	14.0
9.8		27.4	22.0	9.8		50.9	52.3	10.6		52.8	10.0		10.0		29.0	11.1
9.8		28.9	49.1	9.8		57.9	20.5	10.6	55	14.8	40.0		10.0		31.0	25.2
9.4		43.4	39.2	9.8	49	0.9	44.7	10.6		33.3	29.8		9.4		38.0	48.7
9.8		44.9	27.1	9.2		8.9	26.1	10.6		47.3	50.0		10.6		38.4	1.7
8.0		49.9	47.3	9.8		9.9	4.9	10.4	56	2.8	48.0		10.6		41.5	12.1
9.8	43	8.7	57.1	9.1		14.9	35.9	8.0		5.8	29.8	GS=g	10.0		44.0	14.0
8.2		14.9	3.3	9.8		33.9	41.3	9.4		11.8	29.4	G-g	10.0		48.0	18.5
9.3		19.4	6.9	9.7		48.9	6.1	9.2		12.8	5.8	9.5	10.3		49.0	8.9
9.2		22.9	9.3	9.2	50	8.9	24.2	10.6		16.8	49.6		10.0	2	1.4	0.5
9.8		23.4	14.3	9.2		8.9	56.1	10.4		21.3	43.5		10.6		4.0	53.7
8.2		29.9	15.5	9.3		12.9	50.3	10.4		23.8	37.1		10.6		4.7	2.3
8.6		35.4	44.1	9.6		21.9	37.7	10.3		28.8	29.5		10.6		10.0	44.0
9.6		42.9	36.3	9.8		22.4	31.1	9.4		30.8	40.0		10.6		10.0	18.2
8.7		58.9	39.7	9.8		28.8	22.0	10.6		32.6	58.1		8.4		18.5	17.2
9.6		58.9	34.1	9.4		36.9	10.7	9.8		36.3	35.6		10.4		19.5	14.0
9.8	44	1.4	24.3	9.4		48.4	7.7	10.6		41.3	46.4		10.4		20.0	44.1
9.8		6.9	49.7	9.7		49.9	25.2	10.6		58.9	42.5		8.0		34.0	44.8
8.6		12.9	46.1	9.8		51.9	29.8	10.3	57	27.4	36.8		10.4		40.5	16.2
9.2		28.9	52.3	9.5		58.9	35.1	10.4		29.4	20.6		10.6		42.5	4.7
8.8		49.4	4.7	9.8		58.9	35.9	10.6		29.9	3.7		8.4		49.5	53.6
9.4		49.9	28.2	9.8	51	0.8	25.2	10.6		33.2	59.6		10.6		53.0	4.1
25pr.	+ 1	2.3	-6.9	+ 1	2.8	-7.0		+ 1	3.4	-7.1			+ 1	4.0	-7.2	

3961-4020.			4021-4080.			4081-4140.			4141-4200.				
mag.	10 ^{h.}	-37°	mag.	10 ^{h.}	-37°	mag.	10 ^{h.}	-37°	mag.	10 ^{h.}	-37°		
2	53.0	19.5	7	59.8	9.3	10.4	13	53.6	26.8	10.4	19	0.4	21.1
9.4	53.5	32.1	9.6	8	3.3	39.0	10.2	0.1	54.8	10.4	0.8	32.5	
9.4	58.0	11.2	10.6	4.8	30.8	10.4	17.1	3.9	10.4	8.5	18.5		
10.6	2.7	49.9	10.2	7.6	56.8	10.6	27.1	50.9	10.4	16.4	55.0		
10.6	3.2	10.1	10.6	19.3	6.6	9.8	32.1	19.5	10.2	24.3	40.7		
10.6	16.2	12.0	8.6	23.3	25.5	10.3	33.1	31.3	7.2	28.0	40.1	7.0 GSg	
10.6	24.2	17.0	8.6	25.3	22.4	10.0	37.1	8.3	9.8	28.5	8.7		
8.6	26.7	33.8	10.4	26.8	58.6	10.4	45.6	4.4	10.2	29.0	28.3		
9.8	39.2	17.2	10.3	36.8	34.8	10.4	48.1	28.1	10.4	38.5	12.1		
10.2	40.2	8.9	10.0	39.3	55.4	10.4	49.1	29.8	9.6	50.5	22.0		
10.6	43.2	5.2	10.6	39.3	22.1	10.3	15	0.6	9.5	58.5	5.1	9.2	
9.6	49.2	53.5	9.2	40.3	48.8	10.6	13.1	50.6	10.2	20	0.0	4.7	
9.2	49.2	48.1	10.2	41.8	58.3	10.6	13.6	55.0	10.2	13.5	41.7		
10.6	50.2	15.6	10.0	43.8	3.3	10.6	24.1	26.5	9.8	30.0	52.8		
8.8	4	4.7	10.6	48.8	22.9	9.6	25.1	38.5	10.0	39.0	52.9		
10.6	9.2	36.9	9.8	46.8	31.8	10.3	25.6	18.7	10.4	21	1.5	53.8	
10.0	12.2	49.3	9.6	55.3	32.0	10.6	36.1	50.9	9.6	7.5	16.3		
10.4	12.3	11.2	10.6	57.5	18.0	10.4	43.1	26.7	7.9	10.5	28.5		
10.6	13.7	27.9	8.6	57.8	43.8	10.4	51.1	44.9	9.2	13.0	24.4		
10.6	14.2	36.8	10.2	9	1.5	17.8	9.6	57.1	9.5	10.4	14.5	23.6	
10.6	16.2	27.3	10.3	2.5	0.9	10.2	16	3.6	10.4	24.7	48.8		
7.6	21.2	7.1	10.0	7.5	35.5	10.3	12.1	33.5	9.6	25.9	58.5		
10.6	28.2	14.1	10.6	8.0	55.0	9.8	12.1	27.7	10.4	26.2	1.6		
10.6	28.2	31.7	9.4	9.5	8.2	8.8	13.1	35.8	9.6	39.2	55.6		
10.3	28.7	22.2	10.2	25.5	54.0	10.3	24.8	2.7	10.2	39.2	16.0		
10.2	36.2	20.9	10.3	30.5	50.1	10.6	30.1	37.5	10.2	45.2	46.1		
9.2	48.2	51.5	9.6	50.5	31.5	9.6	33.1	14.3	10.4	49.2	13.9		
9.0	49.2	35.7	10.6	10	2.5	36.1	9.8	35.1	10.2	52.2	3.9		
10.4	5	2.2	9.8	7.5	26.1	10.4	36.6	7.3	9.5	54.2	20.6		
10.2	4.7	19.0	9.4	33.0	50.9	10.6	40.1	21.9	9.6	54.7	1.0		
10.4	11.7	7.8	10.0	42.5	34.3	10.6	41.6	21.9	10.4	22	0.2	5.1	
10.6	17.2	9.4	10.6	55.0	26.8	10.4	17	2.6	10.2	0.2	25.1		
10.6	27.2	49.7	9.8	11	9.5	57.9	9.8	6.6	10.2	5.2	31.8		
9.8	31.3	58.0	9.2	23.5	27.0	10.3	8.6	15.1	10.2	9.2	26.1		
10.6	45.2	10.9	10.2	28.5	7.7	9.6	9.1	6.7	10.0	10.2	43.8		
8.8	49.2	15.7	9.4	29.5	5.3	9.6	10.1	7.1	9.6	10.5	0.5		
10.0	49.2	12.8	9.2	37.7	2.1	10.0	20.1	6.5	10.4	21.7	7.7		
9.4	56.2	9.9	10.6	43.0	39.2	10.6	22.1	12.2	10.4	25.7	42.1		
9.8	1	1.2	9.6	45.5	6.1	10.6	23.6	55.7	10.4	26.1	5.6		
9.4	31.3	31.6	10.6	50.0	56.9	9.8	40.1	19.3	10.4	27.2	57.9		
10.6	34.3	13.8	9.4	58.0	39.4	10.6	45.1	45.9	10.0	29.2	39.2		
9.8	34.8	31.5	9.2	12	5.5	14.1	10.0	56.1	9.6	30.5	2.7		
9.4	42.8	4.4	10.6	7.5	42.2	9.0	6.2	0.6	10.2	34.2	20.7		
10.4	44.3	58.7	10.4	12.0	31.9	10.6	1.1	46.7	10.4	34.7	32.5		
9.8	45.3	50.7	10.4	14.5	41.3	10.6	16.1	34.8	9.8	35.7	51.8		
8.6	47.3	32.9	9.2	17.5	28.8	9.8	19.6	21.1	9.6	40.7	56.1		
9.0	50.8	44.1	10.4	18.5	27.8	10.6	19.7	12.4	9.5	40.7	38.2		
10.6	7	14.8	9.4	45.9	58.3	9.4	19.8	52.5	10.4	42.2	27.5		
9.8	15.3	37.6	10.4	47.0	20.2	9.4	26.8	9.5	10.2	51.2	1.7		
10.6	16.3	18.9	9.4	47.5	27.5	10.6	29.4	49.9	10.0	55.7	21.1		
9.8	17.8	2.2	9.8	47.5	20.9	10.6	37.1	18.0	9.8	56.2	18.0		
9.8	18.3	32.4	8.8	51.5	44.8	10.2	39.6	58.1	10.2	23	3.2	21.6	
10.2	26.8	0.6	9.8	56.5	12.0	10.4	40.0	42.2	10.2	4.2	44.8		
10.4	30.8	50.0	10.6	58.5	38.4	10.4	41.8	55.5	9.6	18.7	46.5		
10.0	35.1	57.1	9.4	13	1.0	0.8	9.6	41.8	10.2	23.7	37.8		
9.4	39.3	36.2	9.8	4.0	50.5	10.4	48.0	2.9	10.2	23.7	47.2		
9.4	49.8	24.3	9.2	11.0	6.4	10.4	56.0	50.6	10.4	29.2	15.5		
9.2	50.8	44.3	9.4	14.5	47.0	8.5	7.7	56.9	10.2	29.4	13.8		
10.6	50.8	45.7	10.4	32.6	44.9	10.4	58.5	47.0	7.7	34.4	25.2	7.5 GS-t	
9.8	58.3	41.5	7.7	46.0	0.3	8.0	10.2	19	10.4	38.9	42.0		
25 pr.	+ 1	4.5	- 7.8	+ 1	5.1	- 7.4	+ 1	5.7	- 7.5	+ 1	6.2	- 7.6	

4201—4260.			4261—4320.			4321—4380.			4381—4440.		
mag.	10 ^h .	-37°	mag.	10 ^h .	-37°	mag.	10 ^h .	-37°	mag.	10 ^h .	-37°
9.5	23 48.9	9.5	9.6	29 50.9	6.4	10.2	34 59.8	16.9	10.0	39 38.8	47.8
10.4	56.4	13.7	9.0	30 10.4	23.8 9.0	10.4	35 1.3	6.9	10.4	44.8	30.7
9.6	24 3.9	27.9	10.4	10.9	33.9	10.2	4.8	6.8	9.1	46.8	36.9 10.0
9.6	5.9	31.2	9.8	10.9	56.9	8.3	10.3	10.9 8.0 GSg	10.4	50.8	31.9
10.4	12.4	35.9	10.4	20.5	16.2	9.6	14.3	55.9	10.2	51.8	12.8
9.8	19.4	17.1	9.4	24.4	38.5	10.2	23.8	20.9	10.0	40 7.8	13.8
10.4	22.4	13.3	10.4	34.5	4.0	9.4	31.3	25.1	9.8	12.8	7.3
10.0	22.9	28.7	10.0	35.8	0.3	9.6	33.3	3.2	10.2	16.3	35.2
10.4	26.4	19.2	10.0	39.4	57.4	9.4	42.8	11.5	10.4	18.9	12.3
9.6	42.4	47.0	10.4	49.6	7.5	10.4	44.8	10.9	10.2	23.8	29.7
10.0	46.9	28.2	10.2	52.6	44.1	9.6	44.8	14.7	9.6	23.8	26.8
9.0	25 0.4	48.6	10.4	31 1.6	5.1	9.8	49.3	56.1	9.8	24.3	21.9
10.2	5.4	11.3	9.6	2.6	39.4	9.5	49.6	1.5	10.2	29.3	16.7
10.4	8.9	22.6	7.9	9.1	48.5 8.5	9.0	54.8	45.3	10.2	33.3	25.0
9.0	14.9	58.2	10.2	16.6	21.7	10.4	57.8	18.0	9.2	35.3	19.1
10.0	16.9	37.6	10.4	19.6	53.1	9.8	36 4.8	33.2	9.0	39.3	10.9
10.0	20.4	30.8	10.4	20.1	32.1	9.6	6.3	55.0	9.5	47.3	19.4
10.2	25.4	34.1	9.5	25.1	31.1	9.8	9.8	31.0	9.4	49.8	3.6
9.5	33.4	19.0	9.8	28.1	50.6	10.0	12.3	19.4	10.4	58.8	28.4
9.6	48.9	50.5	9.6	29.1	25.3	10.4	21.3	54.0	10.4	41 14.3	14.3
10.2	58.9	42.2	10.0	39.1	3.8	10.4	32.3	46.5	9.5	16.8	44.9
9.6	59.4	51.8	10.0	43.6	35.5	9.4	34.8	43.1	9.5	18.3	17.7
10.4	26 1.6	2.0	9.6	50.6	40.1	10.0	36.3	6.2	9.4	19.8	35.5
10.2	5.9	37.0	9.6	52.1	52.3	10.4	38.8	48.7	10.2	26.5	0.7
10.4	6.4	9.7	9.1	55.1	24.8	9.6	43.8	39.1	10.4	29.3	1.1
9.8	22.9	39.6	9.8	32 9.1	31.6	10.2	43.8	15.5	10.2	32.8	10.8
9.8	24.4	20.9	10.2	9.1	48.9	9.8	49.3	58.3	9.8	39.8	25.8
10.4	30.4	31.0	9.4	12.1	35.7	9.5	50.8	7.6	10.0	41.3	34.9
10.2	39.4	32.2	9.5	17.6	15.8	10.0	56.8	48.6	10.0	41.3	49.3
10.0	41.4	21.4	9.6	19.4	2.9	9.4	59.3	56.3	9.6	45.8	43.0
10.0	47.9	6.0	9.5	22.6	10.2	10.0	37 2.8	13.8	10.0	42 0.3	11.6
10.2	49.4	20.5	10.4	28.0	24.7	10.4	4.8	28.0	9.8	2.8	37.6
9.4	59.4	3.6	9.4	29.1	38.7	10.2	7.3	8.6	9.0	9.8	19.6
10.4	27 14.4	31.1	10.4	29.1	19.5	9.6	24.8	30.1	9.0	22.3	33.0
10.4	18.9	3.6	10.4	30.6	24.1	10.4	32.9	11.0	10.2	25.3	1.3
10.2	20.9	36.0	9.6	36.1	30.7	9.5	37.8	3.7	8.8	28.8	58.6 =
9.8	30.4	45.6	10.2	39.1	9.0	10.4	40.8	25.3	10.2	30.8	1.9
10.2	49.4	44.3	9.6	44.6	34.1	10.0	45.8	0.6	10.2	47.8	55.6
10.4	49.4	14.4	9.6	44.6	51.8	10.4	57.8	56.3	10.0	59.3	27.3
10.4	49.9	29.8	10.4	50.1	3.7	10.0	38 8.3	36.1	10.0	59.3	22.8
10.0	58.9	16.1	10.4	33 28.1	25.3	10.2	9.3	39.8	8.8	59.3	3.7 9.5
10.4	59.9	16.0	10.4	29.6	27.5	8.8	10.8	11.8 9.0	8.4	43 5.3	23.4 9.0
10.4	28 18.9	30.8	10.4	49.1	28.4	9.4	14.3	41.2	10.0	5.8	2.1
9.6	25.9	13.8	9.6	50.6	52.3	9.8	17.3	27.1	9.8	9.3	8.8
9.6	25.9	42.8	8.4	51.6	9.7 Gg	10.2	20.3	9.7	8.8	19.8	15.4 9.5
9.4	29.4	46.8	10.4	59.8	14.4	9.4	20.8	18.6	8.2	27.8	39.0 W-
10.4	30.3	2.1	10.0	59.8	14.8	9.0	40.3	50.1	9.4	39.8	19.3
10.2	38.4	30.2	10.2	34 0.3	54.0	9.5	52.3	43.7	9.6	41.8	16.6
8.8	38.4	13.1	8.8	3.8	53.4 9.5	10.4	58.8	41.8	10.4	44.8	13.0
10.2	39.9	42.9	10.4	3.8	36.4	8.1	59.3	29.1 8.0 GS=t	9.8	49.8	45.5
9.8	45.4	52.1	9.6	4.3	55.8	9.2	39 1.3	13.1	9.6	51.8	25.2
9.6	47.4	7.7	10.0	13.1	46.0	10.2	10.3	45.3	9.6	52.8	26.3
9.6	48.4	28.9	9.6	14.8	20.2	10.2	14.3	59.9	9.8	57.3	43.8
8.4	57.9	29.0 8.0 W	10.2	19.8	29.9	9.8	14.8	6.8	10.2	58.8	50.9
10.4	58.4	16.7	9.6	24.8	42.9	10.4	16.8	40.5	10.4	59.3	45.9
10.2	29 8.9	17.0	10.2	30.3	5.2	9.8	17.8	17.7	9.8	44 13.8	7.4
9.5	11.9	27.2	10.2	37.8	20.3	10.4	25.8	43.4	9.6	16.3	49.7
10.4	13.4	41.2	9.8	44.8	41.5	9.6	28.8	12.4	10.4	19.1	1.3
10.2	19.9	8.3	10.4	50.8	2.3	10.0	31.8	19.9	10.0	21.3	16.0
10.0	38.9	9.6	10.2	56.8	4.2	10.4	38.8	48.9	9.6	24.3	48.0
25pr. + 1 6.7	-7.7		+ 1 7.2	-7.7		+ 1 7.7	-7.8		+ 1, 8.2	-7.9	

4441-4500.				4501-4560.				4561-4620.				4621-4680.						
mag.		10 ^h -37°		mag.		10 ^h -37°		mag.		10 ^h -11 ^h -37°		mag.		11 ^h -37°				
m	s	m	s	m	s	m	s	m	s	m	s	m	s	m	s			
9.4	44	31.3	45.5	8.0	51	41.7	10.4	7.5	GSgt	10.2	58	24.1	49.1	8.0	8	49.6	31.4	
9.0		34.3	0.8	10.2		54.2	4.9	9.4		9.4		42.6	55.1	9.4		52.3	33.6	
9.6		40.1	43.8	10.0	52	12.7	6.1	9.6		9.6		53.6	13.3	10.2		53.6	53.6	
10.4		40.3	22.3	10.2		32.5	37.4	8.3		8.3	59	0.6	1.9	10.2	9	8.7	46.1	
8.8		49.3	44.2	9.4		36.2	3.1	10.2		10.2		18.1	18.8	10.2		10.4	49.0	
8.8		50.5	21.9	10.0		40.2	12.1	10.0		10.0		19.1	27.1	8.5		16.6	46.4	
9.2		56.7	48.7	8.0		49.2	32.0	10.2		10.2		59.1	9.2	7.9		18.6	45.6	
10.2	45	1.3	4.6	10.0		58.2	50.2	8.8		8.8		59.6	15.2	10.2		24.1	30.3	
10.4		8.3	8.5	9.6	53	5.2	4.4	10.2		10.2	0	12.6	11.2	10.2		27.1	32.0	
10.2		9.8	20.2	9.6		14.2	40.6	10.2		10.2		14.6	15.2	7.8		37.6	34.6	
9.5		12.7	53.2	9.2		17.2	28.5	9.0		9.6		18.1	47.1	10.2		37.8	57.1	
10.2		20.5	36.5	10.2		22.2	35.6	10.2		10.2		40.1	26.4	9.8	10	1.1	9.9	
9.8		20.6	57.3	9.4		25.7	24.5	8.6		8.6		41.1	23.8	8.2		14.6	8.7	
10.0		35.0	11.6	9.8		32.7	53.5	10.2		10.2		50.1	12.0	9.2		18.1	32.1	
8.9		36.7	43.1	9.6		38.7	21.3	10.2		10.2	1	7.6	52.8	10.4		18.6	31.3	
10.2		37.8	16.5	8.2		49.7	47.3	10.2		10.2		50.1	7.7	9.6		26.7	0.8	
8.9	46	1.7	44.7	9.4		53.7	45.1	10.2		10.2		57.6	54.4	9.7		33.6	25.9	
9.5		35.9	1.8	10.0		53.7	5.8	8.2		8.2		59.1	43.9	9.7		40.1	31.6	
10.2		36.7	16.3	9.6		56.7	59.2	10.2		10.2	2	13.1	45.1	9.7		43.6	28.8	
8.8		53.7	28.7	10.2	54	1.7	40.0	9.2		9.2		16.6	48.2	10.4		45.6	52.9	
10.2	47	2.7	48.0	8.8		7.2	14.9	8.5		10.2		23.6	44.2	10.0		48.7	1.3	
10.0		6.6	57.4	9.2		19.2	52.1	10.2		10.2		38.9	49.2	7.2		56.6	43.0	
10.2		11.2	34.0	10.2		23.0	0.3	10.0		10.0		40.1	58.3	6.7	11	14.1	19.8	
9.5		16.2	28.8	10.2		27.2	50.4	10.2		10.2		46.1	1.1	10.4		29.1	13.2	
9.8		30.2	19.0	9.2		28.7	3.1	10.2		10.2		49.9	3.8	10.0		37.6	55.4	
9.8		41.2	28.0	10.2		30.4	0.0	9.8		9.8		51.1	52.6	8.2		38.6	41.9	
10.2		41.2	59.6	10.2		37.2	55.7	10.2		10.2		59.6	48.9	10.4		41.6	56.2	
9.5		41.2	12.1	9.5		38.2	31.1	10.2		10.2	3	1.1	7.3	9.2		58.1	6.0	
10.0		43.2	23.0	10.0		41.7	32.0	9.6		9.6		9.6	4.7	10.2	12	3.7	30.1	
10.2		50.2	22.5	10.2		45.0	0.2	9.8		9.8		19.1	9.1	8.7		12.7	31.9	
10.2		57.2	14.0	10.2		54.2	34.0	10.2		10.2		32.1	38.6	10.4		16.2	36.2	
10.0	48	4.2	47.1	10.2	55	5.9	59.2	9.8		9.8		41.6	28.7	10.4		19.7	11.9	
9.6		5.2	51.2	10.2		12.3	34.3	10.0		10.0		48.1	52.7	9.4		32.7	21.2	
9.5		8.2	49.3	9.8		17.2	8.7	10.2		10.2		59.9	15.0	9.6		32.7	41.0	
10.2		8.7	34.5	9.6		17.7	20.9	9.0		9.0	4	9.6	25.5	9.4		8.2	8.1	
10.2		12.2	55.2	10.2		24.2	41.7	8.9		8.9		11.6	40.9	8.0		17.2	2.5	
10.2		17.2	24.1	9.4		36.2	37.7	8.8		8.8		15.5	2.8	10.4		20.7	35.0	
9.6		19.7	14.6	9.6		40.2	56.4	10.2		10.2		28.1	37.1	8.0		22.7	10.4	
9.0		19.7	30.9	10.0		44.2	40.7	9.5		9.5		30.6	42.7	9.7		29.7	50.0	
10.2		29.2	6.9	10.2		49.2	43.7	9.5		9.5		33.8	58.8	9.7		33.2	29.8	
10.2		30.7	37.9	8.6		49.5	2.4	8.8		8.8		35.1	44.7	9.6		48.7	8.9	
9.8		31.2	30.2	9.2		50.7	14.7	10.0		10.0		47.6	26.2	10.0		55.2	2.0	
10.0		43.2	13.0	10.2		55.7	23.9	10.0		10.0		57.6	49.8	8.8	14	9.2	34.1	
9.8		44.2	38.8	10.2		58.7	9.6	9.2		9.2	5	15.1	26.9	9.4		14.2	33.3	
10.0	49	3.2	16.5	10.2	56	1.7	10.2	10.0		10.0		24.6	0.5	10.0		22.2	32.4	
9.6		54.2	43.2	9.5		2.6	57.6	9.6		9.6		25.1	52.4	9.8		31.2	31.3	
9.8	50	3.2	11.2	10.2		9.7	1.8	10.2		10.2		39.6	54.8	10.4		37.2	15.2	
10.0		7.7	45.9	8.5		9.7	9.7	9.6		9.6		49.1	7.7	10.2		48.2	14.3	
9.6		8.2	49.9	9.0		43.2	31.2	9.6		9.6	6	8.6	52.6	10.0		57.7	25.3	
10.2		13.7	43.1	10.2		54.7	37.0	9.8		9.8		10.1	10.1	10.4	15	6.2	3.1	
9.8		19.2	55.7	9.6	57	3.6	46.1	9.0		9.0		20.6	47.9	8.6		27.2	37.4	
9.8		27.7	50.4	10.2		19.6	5.6	9.6		9.6		23.6	10.0	10.4		29.2	50.2	
10.2		37.2	10.4	9.5		23.9	59.7	10.2		10.2		39.6	19.3	9.4		29.3	58.1	
9.5		38.7	4.0	10.2		28.6	10.2	9.0		9.0		47.6	50.2	9.8		43.7	6.4	
9.2		53.2	36.2	10.2		29.4	57.5	10.2		10.2		52.6	34.2	10.2		59.7	33.1	
9.8		59.7	49.8	9.6		31.6	18.3	8.9		8.9	7	12.6	50.4	10.0		8.7	30.3	
10.2	51	7.2	8.2	8.6		41.6	43.7	10.2		10.2		49.1	39.6	10.4	16	10.7	17.3	
10.2		9.2	14.8	10.2		53.6	18.7	10.2		10.2		8	19.6	10.4		20.7	31.2	
8.6		32.7	3.4	10.2		59.6	24.2	9.6		9.6		39.1	16.2	10.4		25.1	19.3	
9.4		33.7	4.1	9.8	58	4.6	38.7	10.2		10.2		47.6	28.4	10.4		28.6	29.9	
25pr.	+1	8.9	-7.9	+1	9.6	-8.0		+1	10.5	-8.1		+1	11.5	-8.2				

4681-4740.				4741-4800.				4801-4860.				4861-4920.			
mag.	11h.	-37°		mag.	11h.	-37°		mag.	11h.	-37°		mag.	11h.	-37°	
		m	s			m	s			m	s			m	s
9.4	16	28.6	47.7	10.4	22	49.3	48.8	9.4	28	50.7	49.5	9.0	34	21.9	44.7
10.4		50.6	19.2	10.4		50.8	25.2	10.0		56.7	8.2	8.2		30.2	53.0
10.4		51.8	0.6	8.6		54.6	56.4	9.4		59.7	24.8	10.4		46.4	10.2
10.4		55.1	50.1	10.4		54.8	38.8	10.4		59.7	28.1	8.9	35	0.8	5.9
10.2		59.9	59.3	9.0		58.3	13.8	10.0	29	1.0	3.1	10.0		20.3	6.9
9.6	17	8.6	29.9	9.0		59.3	35.6	9.4		4.2	30.3	9.8		26.8	31.9
10.4		13.1	48.2	10.4	23	1.3	35.9	9.2		6.2	6.6	10.0		40.6	25.6
8.8		22.6	12.8	10.4		3.3	11.9	9.6		13.7	58.3	10.0		44.6	6.9
9.4		24.6	52.0	9.2		8.3	4.1	10.2		29.7	27.9	9.8		48.1	24.7
10.2		29.1	27.6	10.4		9.5	0.5	8.8		30.7	28.9	10.0		50.6	6.7
10.0		41.6	33.3	10.2		13.8	34.0	10.4		34.5	1.1	9.6		50.6	7.5
9.7		42.6	48.7	9.2		30.4	2.8	10.0		36.2	38.1	9.0	36	0.1	38.9
10.4		43.6	17.4	7.3		37.4	46.0	9.4		36.7	34.1	9.8		7.1	44.7
8.3		45.6	47.9	9.7		40.4	0.9	10.4		39.7	28.1	10.0		37.5	57.9
9.0	18	2.1	35.2	10.0		40.9	4.4	10.4		45.7	27.9	9.2		38.6	24.4
10.4		14.1	50.0	8.8		45.4	24.1	9.7		49.2	28.1	10.0		39.6	53.3
10.4		25.1	33.3	9.7		59.4	18.4	10.0	30	0.7	17.7	8.1		39.6	35.7
9.4		46.6	52.4	10.4	24	2.4	33.7	9.7		8.2	20.6	10.0		53.6	19.0
10.4		51.1	18.3	10.2		14.0	16.6	10.4		11.7	39.1	9.3	37	0.1	49.3
9.8		51.4	56.7	10.4		14.4	24.1	9.8		42.7	37.1	10.0		27.6	45.6
10.4	19	5.6	5.1	10.4		15.4	6.4	9.7		45.2	20.3	9.6		31.1	4.8
9.4		11.1	33.2	10.4		20.4	33.2	10.4	31	2.9	36.9	9.7		36.1	29.0
10.4		11.1	50.9	9.8		20.7	58.9	10.4		4.2	17.1	10.0		48.6	59.0
10.4		26.1	50.6	10.0		21.4	25.1	10.4		4.7	28.2	9.2	38	8.1	14.6
7.0		30.1	3.6	9.6		26.9	58.8	9.0		8.9	21.2	10.0		14.6	6.2
9.4		31.1	46.1	9.4		32.4	54.7	8.8		20.9	17.8	8.8		19.1	47.2
10.4		37.6	8.6	10.2		50.4	44.3	10.4		23.9	56.3	8.7		29.6	27.6
9.7		46.6	59.0	10.4		50.4	21.0	10.4		35.4	35.1	10.0		39.6	56.1
10.0		52.1	38.0	10.0		51.4	10.2	10.4		37.4	25.3	8.2		49.6	39.0
9.8	20	1.1	10.8	9.7		53.4	23.9	10.4		41.4	55.8	9.7		58.1	11.8
9.7		14.1	39.1	10.0		54.4	57.6	10.4	32	10.4	45.0	9.6		59.1	27.1
10.4		21.6	5.3	8.4		56.9	3.6	9.0		12.9	47.1	9.3	39	0.6	4.2
7.7		39.3	28.1	9.4	25	7.4	45.9	10.4		14.9	5.3	9.2		41.6	13.7
10.4		40.3	28.9	10.4		12.4	20.8	10.0		21.9	34.8	9.4		50.1	19.9
10.4		41.8	29.3	9.4		12.9	8.6	9.8		49.9	16.7	8.4		50.6	26.8
8.4		48.8	35.6	9.4		17.9	6.2	8.4		55.4	3.8	10.0		54.6	40.0
10.4		49.3	57.6	9.8		29.9	54.1	10.4		59.4	28.4	9.8		57.6	2.9
9.4		51.3	3.5	9.8		31.9	49.6	9.7	33	0.4	8.5	10.0	40	0.1	7.8
9.8		55.3	35.0	10.2		33.4	27.1	10.4		1.9	30.5	10.0		10.1	8.0
10.4		58.8	49.6	10.4		58.4	10.9	10.4		6.9	4.1	8.5		20.6	27.2
10.0	21	0.3	17.8	10.0	26	11.4	37.7	9.6		10.9	44.8	10.0		40.6	46.2
10.2		8.3	42.4	10.0		39.4	54.8	9.2		14.9	11.4	10.0	41	11.6	55.8
10.2		11.8	7.3	9.7		40.9	0.1	9.7		20.9	26.0	9.4		18.1	22.5
10.2		17.3	34.7	10.0		47.9	56.1	9.4		30.4	37.9	9.5		23.6	16.4
8.6		19.8	6.8	10.0	27	0.4	15.4	10.2		31.4	15.8	9.3		24.6	29.2
10.2		28.3	22.8	9.8		4.4	30.1	9.4		41.4	6.8	8.8		33.1	25.6
9.4		32.3	53.8	9.8		8.9	36.8	10.0		42.4	48.6	10.0		37.6	12.6
10.4		41.8	7.9	9.4		10.9	10.2	10.0		48.9	26.6	10.0		39.6	24.0
10.4		41.8	25.4	9.7		12.9	52.1	7.2		48.9	24.8	10.0		39.8	2.6
9.7		49.5	1.0	9.7		15.0	57.5	10.2		51.9	37.1	10.0		51.6	36.0
9.8		50.8	50.1	9.0		24.7	44.8	9.7		55.8	26.1	9.3	42	8.1	18.0
9.2		54.3	51.9	9.4		29.7	47.2	9.8	34	1.5	10.6	9.8		21.6	14.8
10.4	22	11.3	10.5	10.2		52.7	47.6	9.4		2.4	13.9	8.7		21.6	15.0
9.7		14.3	27.3	10.2		59.7	8.8	10.4		7.4	54.8	9.2		22.6	36.6
9.7		28.3	22.6	10.4		59.7	53.1	9.0		8.7	55.4	9.8		25.1	15.1
9.4		28.3	17.3	9.4	28	1.7	13.6	9.8		9.9	20.0	9.0		36.1	38.4
9.8		32.1	58.1	9.8		1.7	7.1	10.4		9.9	57.1	10.0		50.1	48.9
10.0		35.3	9.3	9.2		9.2	3.1	10.4		10.8	42.7	9.8		52.1	8.0
10.4		35.3	32.2	10.4		19.7	24.5	9.2		17.2	49.0	9.5		55.6	18.5
10.4		44.3	33.6	10.4		37.7	44.3	10.4		19.9	56.1	10.0	43	3.1	19.8
25pr.	+ 1	12.3	-8.2	+ 1	13.0	-8.3		+ 1	13.7	-8.3		+ 1	14.5	-8.3	

4921-4980.				4981-5040.				5041-5100.				5101-5160.			
11 ^h .		-37°		11 ^h .		-37°		12 ^h .		-37°		12 ^h .		-37°	
mag.	m	s		mag.	m	s		mag.	m	s		mag.	m	s	
9.8	43	10.6	27.9	10.0	52	20.1	26.1	10.0	0	12.0	9.7	9.6	6	49.1	42.8
9.2		14.6	15.1	10.0		24.6	40.8	9.7		13.8	50.9	9.9		57.1	18.3
9.4		15.1	12.0	10.0		30.6	42.8	8.8		14.0	9.1	9.9	7	0.1	28.5
9.5		33.1	34.1	10.0		37.6	13.0	10.2		14.5	3.9	10.0		13.6	26.2
8.9		46.1	8.1	9.7	53	19.1	0.1	8.9		29.3	24.5	9.8		18.1	49.6
8.9		52.6	49.1	9.4		25.6	38.3	10.2		32.3	57.0	10.1		36.1	11.3
9.5	44	4.1	14.0	9.4		34.6	44.0	10.2		38.0	37.8	10.1		47.9	16.3
9.4		8.6	45.5	10.0		42.6	22.5	9.8		40.0	23.1	10.0		51.9	21.4
9.7		15.1	6.5	10.0		48.6	59.1	9.9		43.0	15.1	9.4		57.9	30.7
10.0		20.1	37.0	10.0		48.6	18.6	9.4	1	20.0	50.3	10.2		59.4	8.5
10.0	45	2.1	43.0	10.0		59.6	35.1	10.0		23.0	22.7	9.8	8	7.9	30.1
9.8		8.1	17.4	10.0	54	10.1	25.7	9.4		27.1	58.7	9.8		10.9	33.9
9.6		29.6	8.9	9.8		16.1	38.4	9.7		30.0	5.7	8.9		15.9	4.8
9.8		36.1	6.3	9.3		34.1	47.2	10.2		48.0	2.2	10.2		21.8	1.1
9.6		39.1	0.9	9.8		39.6	21.4	9.4		56.4	59.7	10.2		23.4	16.3
8.0		58.6	3.5	10.0		42.1	15.5	9.0	2	11.3	2.7	9.7		24.4	17.8
8.0	46	10.6	24.0	9.7		44.1	18.3	9.6		19.5	52.6	10.0		28.4	52.1
7.6		24.1	17.5	10.0		48.6	41.9	10.1		21.5	22.6	10.0		29.9	42.5
8.2		29.6	38.6	10.0		55.1	19.1	10.0		22.0	47.9	9.4		37.3	56.5
9.4		35.6	30.8	9.8		59.6	42.5	10.2		27.0	46.7	9.4		40.4	31.5
10.0		53.6	0.8	9.2	55	4.6	40.0	10.1		27.0	47.9	10.0		40.9	46.0
9.8		59.6	50.6	9.6		12.1	41.2	9.4		28.0	8.7	10.2		42.4	16.0
10.0	47	2.1	0.1	10.0		18.1	22.9	10.0		47.5	15.6	10.2		48.4	58.6
9.4		4.9	1.3	9.2		21.1	16.0	10.2		48.0	8.1	9.8		49.4	8.0
9.8		22.1	40.2	9.3		28.6	59.7	9.9		51.0	23.7	10.2		49.4	12.8
10.0		25.1	21.4	10.0		30.1	29.6	9.6		58.0	4.6	10.2		50.4	56.0
8.2		30.6	44.8	9.4		33.6	37.8	9.6		58.8	57.4	10.2	9	21.4	33.7
10.0		30.6	11.6	9.8		51.1	18.2	9.4		59.0	13.6	10.2		26.4	44.4
10.0		36.1	47.4	9.2		51.1	28.2	10.0	3	8.1	48.5	9.2		58.9	46.5
9.5		37.1	40.1	10.0		56.1	51.5	10.2		9.1	12.5	8.9	10	28.4	17.5
10.0		51.1	49.4	10.0	56	5.1	39.6	10.2		10.1	15.4	9.6		35.4	7.1
10.0	48	7.6	42.8	9.5		6.6	2.1	10.1		14.6	33.0	9.6		38.4	38.0
7.0		9.6	3.2	9.3		10.1	31.1	10.1		17.1	39.9	10.0		48.4	23.4
9.8		14.6	21.0	10.0		11.1	14.9	9.0		44.6	18.8	9.6		49.9	17.2
9.0		20.6	53.8	9.8		14.1	27.9	8.5		54.6	28.9	9.8	11	4.9	42.5
9.0		22.1	14.0	10.0		26.1	13.2	10.0		59.1	25.0	8.9		12.4	51.9
10.0		36.1	26.0	10.0		29.6	54.4	10.2	4	0.9	0.7	10.2		35.4	11.1
10.0		49.6	21.6	9.0		42.1	16.6	6.6		5.6	10.4	9.6		38.4	50.4
9.3	49	17.6	30.1	7.9		43.1	55.5	9.6		14.1	7.3	9.6		42.4	38.0
10.0		21.1	28.6	9.6		48.0	54.8	9.9		16.6	30.6	9.6		53.4	55.2
9.4		22.5	57.0	10.0		51.1	46.8	9.4		29.1	29.1	10.2		55.9	5.6
10.0		26.6	2.6	10.0	57	16.1	6.0	9.7		35.1	6.8	10.2	12	9.4	37.2
9.6		29.1	12.5	9.0		19.6	7.4	10.2		35.6	14.6	10.2		18.4	56.3
10.0		29.1	50.2	10.0		45.1	34.1	10.0		47.6	55.5	10.0		46.9	11.9
10.0		38.9	0.2	10.0	58	0.6	57.7	10.2		49.1	51.4	10.2		57.9	44.5
10.0		40.6	46.1	10.0		5.1	35.9	8.8	5	3.1	52.3	10.0	13	20.7	7.1
10.0		48.1	12.4	9.4		9.1	36.6	9.0		17.1	33.8	9.6		22.5	58.8
9.7		52.6	17.0	10.0		21.1	21.3	9.6		18.1	30.1	8.8		25.7	35.2
9.5	50	28.6	54.0	9.8		23.6	26.9	10.2		18.1	26.8	8.0		32.7	6.3
8.4		28.6	38.0	9.3		33.1	6.9	9.4		32.1	48.5	9.6		36.7	32.0
9.8		47.1	44.2	10.0		34.1	5.0	10.2		38.1	50.4	9.4		39.2	52.0
9.7		48.6	49.2	10.0		48.1	16.7	10.2		40.1	10.0	10.2		39.7	2.0
10.0	51	3.6	29.3	9.2		48.1	10.3	9.4		47.1	28.9	10.0		45.7	43.1
7.3		10.1	48.0	10.0		49.6	55.7	10.2		54.6	5.4	10.2		49.2	8.8
9.3		11.1	16.1	9.4		55.5	36.0	10.1		58.1	42.1	10.1		51.2	36.9
9.6		17.6	33.2	10.0	59	6.3	20.9	10.2	6	0.6	16.1	10.2		58.7	3.1
9.8		29.6	11.5	7.3		48.1	58.8	9.8		17.1	8.1	9.7	14	9.2	46.0
9.7		34.1	8.6	9.3		50.3	59.9	9.8		17.1	53.1	9.6		13.7	7.5
9.2	52	0.1	28.7	9.8		50.3	23.9	9.9		22.1	7.9	9.4		22.7	37.1
9.3		11.1	19.1	9.8		59.6	22.7	9.2		38.1	20.2	9.6		24.7	18.4
25pr.	+ 1	15.5	-8.3		+ 1	16.4	-8.4		+ 1	17.1	-8.4		+ 1	17.9	-8.3

5161-5220.				5221-5280.				5281-5340.				5341-5400.			
mag.	12h.	-37°		mag.	12h.	-37°		mag.	12h.	-37°		mag.	12h.	-37°	
	m	s			m	s		m	s			m	s		
9.4	14	28.2	23.2	9.2	19	44.1	17.5	10.0	27	56.9	13.9	10.0	37	19.8	13.7
10.2		29.2	56.3	9.6		58.1	24.0	9.8	28	17.4	21.9	10.0		28.3	18.1
10.1		34.2	17.9	10.0	20	0.1	20.2	10.0		18.4	41.9	10.0		29.8	34.5
8.0		36.2	36.4	8.3		10.1	55.9	10.0		41.7	59.8	9.8		34.3	49.7
10.0		45.7	20.2	10.2		20.0	37.5	10.0	29	12.2	21.4	9.8		35.8	52.0
9.0		49.7	14.0	10.1		27.6	39.4	9.6		27.2	5.0	8.8		38.4	58.1
9.0		50.7	27.8	9.6		30.1	49.7	10.0		29.2	41.8	8.8		45.8	5.7
10.1		57.2	51.8	9.6		31.1	20.8	10.0		38.2	10.0	10.0		50.8	48.1
9.7		57.7	32.4	9.9		40.6	42.3	10.0		49.2	12.4	8.9		57.3	26.5
9.8		58.6	43.1	9.9		48.1	12.0	9.8	30	3.2	1.4	10.0		58.0	12.7
10.0		59.2	7.6	10.1		55.1	47.7	10.0		4.2	49.9	9.8	38	9.0	51.9
10.1	15	3.2	21.0	8.8		58.1	44.8	10.0		27.0	59.1	9.6		23.5	53.5
9.2		3.7	6.6	10.2	21	14.6	7.1	9.4		28.2	23.6	9.8		26.0	12.3
9.4		20.7	54.2	10.1		19.1	21.2	9.4		31.2	40.3	9.4		30.0	11.9
9.9		27.7	21.1	10.2		28.1	17.6	9.4		40.2	16.0	9.8		31.0	31.3
9.6		28.2	18.0	9.0		39.1	9.0	10.0		42.2	28.8	9.6		41.0	19.1
9.6		28.2	12.1	8.3		40.1	24.4	10.0		49.2	12.2	8.8		51.0	8.1
9.7		28.7	6.4	9.7		41.1	43.8	10.0		59.2	11.8	9.2		54.5	30.3
10.2		36.7	2.9	10.2		57.1	57.1	9.8	31	19.2	33.8	9.0		58.0	19.1
10.2		38.7	35.1	8.9	22	1.6	26.8	9.6		20.2	36.7	9.8	39	2.0	11.8
8.2		39.7	45.4	10.0		3.1	3.2	8.8		21.2	31.4	9.8		13.0	48.7
10.2		42.2	9.6	8.0		15.1	16.4	10.0		25.7	13.4	9.2		15.0	18.8
9.0		49.7	27.7	8.4		19.1	19.7	10.0		34.2	8.6	10.0		15.0	56.3
9.6	16	8.2	42.7	10.1		30.6	18.8	10.0		46.2	10.8	9.8		45.0	56.1
9.0		9.3	24.7	10.0		42.1	59.0	9.8		50.7	51.9	9.8		45.0	6.9
10.0		19.0	2.0	10.2		56.6	9.9	10.0		52.7	18.9	10.0		53.5	22.1
10.0		25.8	53.0	9.7	23	14.6	50.0	10.0	32	3.2	24.4	10.0		53.5	17.1
10.2		33.8	35.0	8.0		21.1	38.8	8.9		5.2	29.2	9.8	40	1.5	17.1
9.7		55.8	2.9	9.9		23.1	12.0	9.4		41.2	34.4	10.0		12.5	30.0
10.2	17	0.3	29.9	9.9		23.6	15.6	9.0		51.7	43.3	9.4		15.0	14.6
9.6		2.8	4.9	9.4		50.1	43.0	9.6	33	2.7	54.3	10.0		30.0	19.3
10.2		5.3	17.3	10.1	24	6.6	52.0	10.0		4.2	10.9	10.0		57.5	39.5
8.4		7.3	25.6	10.2		9.1	41.1	9.8		10.8	25.5	9.2		58.5	22.9
10.2		18.8	45.1	9.0		18.8	6.9	9.6		17.3	2.8	9.8	41	11.0	27.9
10.2		20.8	11.9	9.6		27.1	51.0	9.1		20.8	35.9	9.8		21.5	38.1
10.2		31.3	38.4	10.0		35.5	1.8	7.9		31.8	10.1	8.8		30.0	41.1
10.2		33.8	0.4	10.2		42.9	58.9	10.0		50.5	0.0	10.0		42.5	33.4
10.0		47.3	33.2	9.6		49.1	2.7	10.0	34	1.3	7.0	10.0		49.5	3.6
9.6		50.8	17.8	9.2	25	1.1	13.5	10.0		13.3	51.9	9.4		57.9	57.8
9.6		52.3	11.0	10.2		7.6	25.4	10.0		28.8	26.1	10.0	42	0.0	6.0
10.1	18	0.3	18.8	10.1		10.1	7.0	9.8		40.4	59.0	10.0		0.5	59.0
10.0		0.8	19.7	10.2		10.2	2.5	10.4†		47.0	57.6	10.0		25.5	41.4
9.4		24.8	26.5	10.2		14.9	58.8	10.0		48.3	17.8	9.6		26.5	6.9
9.2		25.3	57.6	10.2		16.9	15.1	8.8	35	0.8	12.0	9.4		30.5	7.4
10.2		28.3	27.4	10.2		19.1	3.7	9.4		4.8	34.8	10.0		31.5	15.8
10.0		29.8	27.9	10.0		21.1	19.0	9.1		16.8	15.4	10.0		36.5	32.0
10.0		31.8	39.1	10.1		25.6	10.7	9.2		27.8	42.1	8.6		47.0	11.2
10.1		32.8	18.1	9.8		29.4	38.8	9.6		29.8	31.5	9.4		54.0	33.0
10.0		34.8	41.1	10.4†		37.7	59.1	9.4		29.8	29.5	10.0	43	0.5	36.6
10.2		43.8	32.3	9.6		53.0	6.6	8.2		47.8	12.9	9.4		4.5	37.3
9.6		54.8	49.6	10.0		57.7	15.7	9.6	36	2.8	50.6	9.2		15.5	5.6
10.2	19	0.8	29.3	8.6	26	5.9	23.1	9.6		11.8	45.9	10.0		28.0	13.8
9.2		3.8	34.1	10.0		12.5	57.5	9.6		16.8	8.0	10.0		32.0	24.1
10.0		3.8	29.8	10.0		13.4	17.3	9.4		32.8	53.3	8.6		45.5	15.2
10.2		7.8	35.5	10.0		39.4	52.1	9.6		36.8	26.3	8.6		46.0	32.6
9.4		18.3	8.8	9.4	27	8.4	33.0	9.6		49.8	6.4	10.0	44	6.0	35.1
10.2		25.3	54.3	9.2		13.4	20.1	9.8		56.8	52.0	9.8		19.0	34.2
9.6		28.8	20.0	9.0		25.4	58.0	9.6		59.8	50.3	9.4		42.0	31.9
10.2		32.3	29.5	8.9		41.4	17.0	7.9	37	1.6	1.0	10.0		53.5	22.7
10.2		34.8	38.1	9.2		48.4	46.3	9.6		8.3	35.7	10.0	45	0.5	11.1
25pr.	+1	18.7	-8.3	+1	19.5	-8.3		+1	20.5	-8.3		+1	21.2	-8.2	

5401-5460.			5461-5520.			5521-5580.			5581-5640.		
mag.	12 ^h .	-37°	mag.	12 ^h -13 ^h .	-37°	mag.	13 ^h .	-37°	mag.	13 ^h .	-37°
9.6	45 5.5	13.3	9.6	55 50.5	28.7	9.9	4 52.5	2.2	10.4	15 53.0	18.8
10.0	14.0	56.0	9.4	55.5	50.7	10.0	5 3.0	0.7	9.0	16 2.8	55.1 9.0
10.0	20.5	8.0	10.0	59.5	17.1	6.7	5.0	8.4	10.4	10.5	16.9
9.6	25.5	51.6	10.0	56 6.5	13.4	9.5	27.5	43.2	10.4	14.5	14.9
9.8	42.5	48.2	9.6	18.0	12.8	10.0	45.0	11.0	10.4	33.5	50.9
9.8	45.0	19.3	10.0	21.0	45.1	10.0	55.0	38.1	10.4	34.0	11.2
10.0	53.0	45.8	10.0	23.1	58.3	9.8	7 8.0	11.3	9.2	41.3	43.3 9.5
9.8	46 0.5	35.0	10.0	32.0	0.4	10.0	13.0	28.3	9.0	49.5	24.8
9.2	0.5	49.4	8.8	34.0	35.8	9.8	20.0	32.8	9.6	58.0	23.1
10.0	8.0	3.4	9.2	42.5	6.6	7.2	36.6	59.3	8.2	17 15.0	22.6 7.5 GS-t
10.0	20.5	26.5	9.6	46.0	30.3	10.0	50.0	18.5	10.0	17.0	9.7
9.8	31.0	41.0	9.9	54.0	27.8	9.0	8 5.5	15.0 9.5	10.3	22.0	39.0
8.9	33.0	22.7	9.5	57 13.5	28.0	10.0	7.5	36.0	10.4	22.5	56.9
10.0	34.0	50.6	9.2	31.0	28.5	10.0	15.5	52.5	10.0	28.5	14.4
9.2	35.0	26.0	8.9	36.0	7.2	9.0	40.0	38.3	9.6	38.5	35.2
10.0	38.3	44.8	9.9	39.0	50.4	9.5	47.0	43.1	9.3	48.5	19.7 9.5
10.0	51.5	21.8	8.4	40.5	43.3	9.6	49.0	52.5	10.4	48.5	39.8
9.8	47 5.5	20.7	10.0	45.0	52.0	8.0	51.5	49.7	9.0	58.5	45.0
10.0	10.0	26.2	10.0	49.0	18.6	10.0	52.0	15.8	9.3	18 0.0	48.7
9.4	16.0	34.8	9.6	51.0	45.9	9.0	9 12.5	42.3	10.3	0.5	9.0
10.0	45.5	2.2	9.8	52.5	14.0	10.0	22.0	31.9	9.0	3.5	16.3 8.5 -
10.0	51.0	51.7	9.2	57.5	31.0	9.5	30.0	28.5	9.3	5.0	8.2 9.5
10.0	48 2.5	26.4	9.0	58 1.0	11.8	10.0	40.0	4.1	9.6	12.5	30.4
9.8	49 0.0	51.9	9.6	6.0	58.0	9.4	45.0	34.5	10.2	19.3	57.2
9.8	5.5	34.2	10.0	10.0	18.0	10.0	52.5	11.0	9.8	26.5	29.5
10.0	21.5	34.0	10.0	46.5	15.8	10.0	59.5	21.1	9.3	28.5	0.1 9.5
10.0	41.0	15.6	9.0	58.0	50.5	9.8	10 4.0	33.6	9.8	38.5	4.2
10.0	54.0	50.2	9.2	59 28.5	43.0	10.0	5.0	30.2	9.6	53.0	53.1
9.8	50 1.5	10.4	8.8	39.5	16.1	10.0	8.0	32.2	10.2	19 6.0	29.2
10.0	48.0	54.5	10.0	50.0	26.7	9.9	12.0	56.9	10.3	7.0	4.7
10.0	53.0	35.8	10.0	51.5	3.4	10.0	22.5	39.0	10.0	13.5	12.5
10.0	54.5	59.7	9.8	55.0	27.9	8.9	11 0.0	49.2	10.3	20.5	30.0
9.6	54.8	24.7	8.4	0 1.0	4.3	10.0	5.5	56.8	9.8	22.0	15.3
10.0	55.0	57.1	10.0	20.0	38.1	10.0	24.0	25.5	10.0	29.5	34.5
9.8	51 0.0	45.5	9.3	25.5	1.5	9.6	43.5	6.4	9.8	38.5	33.6
10.0	10.5	35.5	9.0	31.0	22.9	10.0	54.5	39.9	10.4	43.3	48.7
10.0	21.5	22.3	9.5	31.5	55.6	8.4	12 3.0	0.5	10.3	44.0	52.0
9.3	39.5	31.4	9.6	35.0	49.4	9.8	11.0	38.4	10.0	20 13.5	12.3
8.8	46.0	8.7	9.4	36.5	7.6	9.8	16.5	32.4	10.0	20.5	26.3
10.0	52 5.0	41.1	10.0	42.0	36.0	10.0	55.5	40.3	10.3	28.5	8.7
10.0	25.5	32.5	10.0	45.5	35.7	9.8	13 0.0	54.6	9.8	43.5	21.3
10.0	28.5	12.4	10.0	46.0	20.1	9.9	9.0	43.1	10.3	49.0	30.9
9.3	34.9	1.8	10.0	1 32.0	33.1	9.8	20.0	56.1	10.3	52.5	29.0
9.2	38.5	32.5	8.3	38.0	25.5	9.9	31.0	13.9	9.8	52.6	2.4
9.8	48.5	35.7	9.2	2 4.0	2.8	9.6	41.0	21.0	9.4	53.0	14.8
9.3	53 1.9	0.8	10.0	12.0	54.9	9.8	52.5	3.9	10.4	54.5	33.6
10.0	7.0	5.7	10.0	20.0	9.0	10.0	14 0.0	45.1	10.4	21 22.0	27.0
9.6	8.5	7.3	10.0	27.0	14.0	10.0	25.0	53.3	9.8	24.5	43.5
9.5	11.5	20.1	10.0	34.0	21.3	9.2	29.5	11.1	9.8	29.5	2.0
9.3	13.5	3.4	8.9	40.5	40.4	9.8	31.0	14.5	9.6	48.0	33.4
9.3	15.0	18.4	8.8	54.5	40.8	9.0	55.5	33.5	10.0	57.5	23.0
10.0	27.5	28.9	10.0	58.0	24.4	10.0	15 5.9	34.6	9.6	22 2.0	3.1
9.8	32.0	35.9	9.3	3 42.5	24.3	10.0	8.0	42.7	8.6	8.5	6.2 -
10.0	42.5	4.7	10.0	55.0	26.5	9.0	9.5	12.4	9.0	29.5	51.9
10.0	54 19.0	31.4	9.9	4 2.0	48.1	9.8	13.0	1.8	10.2	34.0	40.7
10.0	20.0	57.5	9.8	13.2	58.7	8.8	14.2	50.0	10.4	34.5	21.4
8.5	55 0.5	37.8	9.8	16.5	9.0	10.4	18.5	13.6	9.8	41.0	26.0
9.4	15.1	1.4	9.2	40.0	52.0	10.4	25.0	16.2	9.6	52.5	6.0
9.8	21.0	46.4	9.8	41.0	46.4	9.8	30.5	40.5	10.4	23 1.0	51.9
10.0	28.5	13.9	8.8	45.0	23.7	9.6	38.0	44.8	10.4	4.0	13.8
25pr.	+1 22.4	-8.2		+1 23.5	-8.1		+1 24.5	-8.0		+1 25.5	-7.9

5641-5700.			5701-5760.			5761-5820.			5821-5880.						
mag.	13 ^h	-37°	mag.	13 ^h	-37°	mag.	13 ^h	-37°	mag.	13 ^h	-37°				
10 ^o	23	11 ⁵	42 ⁹	10 ³	29	31 ⁵	9 ⁴	9 ⁶	34	28 ²	40 ³	10 ²	41	7 ⁴	34 ⁷
9 ⁸		17 ⁰	9 ⁵	10 ³		39 ⁰	30 ⁷	10 ⁴		32 ²	33 ⁰	10 ³		9 ⁷	50 ²
9 ⁶		22 ⁴	2 ³	10 ⁴		54 ⁰	1 ⁰	9 ³		46 ⁷	31 ⁰	9 ⁸		13 ⁰	23 ⁶
10 ⁴		48 ³	20 ⁸	10 ⁰		57 ⁰	15 ⁴	10 ⁴		48 ²	55 ⁴	10 ⁴		16 ²	56 ⁰
9 ⁸		51 ⁵	27 ⁷	10 ⁰		58 ⁵	24 ⁴	10 ³		55 ²	53 ³	10 ³		23 ²	49 ⁸
10 ⁰	24	3 ⁵	40 ⁴	9 ⁸		59 ⁰	30 ⁵	9 ⁸	35	4 ⁷	9 ⁶	10 ⁴		29 ⁵	12 ⁸
10 ³		6 ⁰	4 ⁰	10 ⁰	30	8 ⁰	29 ⁸	9 ⁸		8 ²	39 ⁶	10 ⁰		31 ²	48 ⁶
9 ⁸		6 ⁰	42 ⁵	9 ⁰		9 ⁰	4 ⁵	10 ⁴		15 ⁷	26 ⁰	10 ⁴		40 ⁴	52 ⁰
10 ²		7 ⁰	43 ²	10 ⁴		14 ⁰	31 ⁷	10 ⁰		35 ⁷	6 ⁹	10 ⁴		47 ⁸	56 ²
10 ⁰		8 ⁰	27 ⁰	9 ²		18 ⁰	28 ⁸	9 ⁸		38 ²	44 ⁹	10 ⁴		49 ²	5 ¹
9 ⁸		10 ⁵	12 ⁰	9 ³		18 ⁵	4 ⁰	8 ¹		41 ⁷	42 ²	10 ⁴		54 ²	32 ²
10 ⁰		15 ⁰	35 ²	9 ⁶		20 ⁵	54 ⁰	9 ⁸		53 ⁷	54 ⁴	10 ⁰		54 ²	8 ⁰
9 ⁶		27 ⁰	23 ⁰	9 ⁸		23 ⁵	37 ⁸	9 ⁰		56 ⁷	29 ¹	10 ⁴	42	9 ⁷	7 ⁹
10 ²		28 ⁵	49 ²	10 ²		24 ⁵	59 ⁰	9 ⁶		57 ⁷	3 ⁴	8 ⁹		24 ²	46 ⁵
10 ²		43 ⁵	31 ⁸	8 ⁴		29 ⁵	27 ³	8 ²	36	6 ⁷	37 ⁴	9 ⁷		53 ⁷	40 ²
7 ⁴		52 ⁵	45 ¹	10 ⁴		29 ⁵	38 ⁰	10 ⁰		8 ⁷	46 ⁶	10 ²		55 ²	54 ²
9 ⁸		55 ⁵	34 ⁵	10 ³		33 ⁵	50 ⁶	10 ⁰		13 ²	35 ⁶	10 ²	43	16 ²	14 ⁹
10 ⁴		58 ⁰	42 ⁵	10 ³		33 ⁵	37 ⁰	8 ⁷		13 ²	1 ⁶	7 ⁸		28 ²	30 ⁸
9 ⁶		58 ⁰	50 ³	10 ²		38 ⁵	13 ³	10 ²		27 ²	24 ⁸	10 ⁴		37 ²	35 ⁹
10 ⁴	25	3 ⁵	24 ⁷	10 ⁴		42 ⁵	22 ⁰	10 ⁴		30 ²	18 ²	10 ⁴		42 ²	47 ²
10 ³		3 ⁵	31 ⁴	10 ⁴		46 ⁰	6 ⁰	10 ⁴		48 ²	43 ⁹	10 ⁴		58 ²	34 ⁴
10 ⁴		5 ⁵	30 ⁰	10 ⁴		49 ⁰	19 ⁸	10 ²	37	8 ²	55 ⁸	10 ⁴	44	0 ²	56 ⁹
10 ³		17 ⁵	42 ⁰	9 ⁶		58 ⁵	49 ⁴	10 ²		16 ⁷	7 ³	8 ⁹		0 ⁷	17 ⁴
10 ⁴		19 ⁵	3 ²	10 ²	31	0 ⁰	18 ⁴	10 ⁰		22 ²	36 ⁴	10 ²		8 ⁷	5 ⁰
9 ⁴		30 ⁵	32 ²	10 ²		0 ⁵	32 ⁴	9 ⁸		23 ²	18 ⁹	9 ⁸		18 ²	31 ⁸
9 ⁸		30 ⁵	1 ²	9 ⁸		7 ⁰	4 ⁷	10 ⁴		27 ²	7 ⁷	10 ⁴		24 ⁷	49 ⁸
9 ²		32 ⁵	11 ⁶	10 ⁴		8 ⁰	23 ⁷	10 ⁴		33 ²	21 ⁶	9 ⁶		32 ²	8 ¹
9 ⁸		34 ⁵	52 ⁸	9 ⁰		12 ⁵	41 ⁰	8 ⁴		40 ²	51 ¹	10 ⁴		39 ⁷	56 ⁸
9 ⁸		38 ⁰	46 ⁰	10 ⁴		28 ⁵	39 ⁸	10 ⁴		48 ²	6 ⁸	10 ⁴		40 ⁷	8 ⁸
9 ⁶		38 ⁵	28 ⁶	10 ⁰		32 ⁵	40 ⁴	10 ⁴		50 ⁷	9 ⁷	10 ²	45	29 ⁷	7 ⁶
9 ⁸		40 ⁰	28 ⁹	10 ³		34 ⁵	25 ⁴	8 ³	38	10 ²	53 ⁰	10 ⁰		48 ²	18 ⁹
10 ⁰		45 ⁰	41 ⁷	10 ⁴		37 ⁵	29 ⁵	10 ³		14 ²	26 ⁹	8 ⁵	46	0 ²	41 ²
10 ⁴		48 ⁰	50 ⁸	9 ⁴		38 ⁵	45 ⁴	10 ⁰		19 ²	49 ¹	9 ⁸		1 ²	31 ⁰
9 ²		55 ⁵	54 ⁵	10 ⁴		43 ⁵	12 ⁰	9 ⁸		20 ²	8 ²	7 ²		9 ⁷	38 ⁷
9 ⁰		59 ⁵	20 ⁸	9 ⁰		43 ⁵	23 ⁰	10 ³		38 ⁷	17 ⁶	10 ⁴		46 ²	28 ⁹
10 ⁴	26	6 ⁰	3 ³	9 ⁸		53 ⁵	42 ²	10 ⁴		47 ²	11 ⁰	9 ⁷	47	5 ⁰	0 ⁹
8 ¹		31 ⁰	36 ⁸	10 ⁴	32	4 ⁰	47 ²	9 ⁶		48 ⁷	26 ⁷	9 ⁸		9 ⁷	16 ⁴
8 ⁷		31 ⁰	39 ³	10 ⁰		7 ⁵	34 ³	10 ⁴		55 ⁷	52 ¹	10 ²		19 ⁷	10 ¹
9 ⁸		46 ⁰	4 ⁰	8 ⁷		29 ⁰	7 ⁸	9 ⁶	39	2 ⁴	59 ⁷	9 ⁰		20 ⁷	40 ⁵
10 ⁰		48 ⁵	1 ⁷	9 ⁸		32 ⁵	46 ²	9 ⁶		6 ⁷	6 ⁷	9 ⁸		22 ⁷	56 ⁵
10 ⁴		53 ⁵	30 ²	10 ⁴		33 ⁵	56 ³	10 ⁴		14 ²	24 ¹	8 ⁶		25 ⁷	18 ⁵
10 ⁰		57 ⁵	3 ⁸	10 ⁰		39 ⁵	46 ²	10 ⁰		19 ²	33 ⁰	9 ⁷		30 ²	12 ³
9 ⁶		58 ⁵	42 ⁴	10 ⁴		44 ⁵	50 ⁵	10 ³		23 ⁷	32 ⁹	9 ⁷		31 ⁷	38 ⁹
9 ⁸	27	8 ⁰	54 ⁷	9 ⁸		48 ⁰	12 ⁰	10 ²		23 ⁷	43 ⁵	10 ⁴		34 ²	37 ⁰
9 ⁸		18 ⁵	37 ²	10 ³		53 ⁰	59 ⁹	10 ⁰		28 ²	23 ⁸	10 ⁰		41 ⁷	40 ²
10 ³		18 ⁵	57 ⁶	9 ⁸		53 ⁵	31 ⁶	9 ⁸		34 ²	48 ¹	9 ⁸		44 ²	23 ⁴
9 ²		39 ⁵	52 ⁶	10 ²	33	8 ⁰	17 ⁶	9 ⁸		34 ²	47 ⁷	10 ⁰		45 ⁷	50 ⁵
9 ⁸		42 ⁰	35 ⁰	10 ⁰		15 ⁵	52 ⁴	9 ⁴		36 ⁷	13 ⁷	10 ²		47 ⁷	8 ⁵
9 ⁶		47 ⁰	34 ⁴	10 ⁰		18 ⁰	34 ⁶	10 ⁴		50 ⁷	28 ⁰	10 ⁴	48	3 ²	5 ¹
10 ⁴		57 ⁵	23 ¹	9 ³		24 ⁰	27 ⁷	8 ⁴		53 ⁴	34 ³	9 ⁷		9 ⁷	13 ⁷
9 ⁶		59 ⁰	18 ⁸	9 ⁸		27 ⁵	8 ⁴	10 ³	40	2 ⁷	59 ⁵	10 ⁴		11 ⁷	38 ⁹
10 ⁴	28	18 ⁵	11 ²	10 ⁴		29 ⁵	4 ⁰	10 ⁰		6 ⁹	56 ¹	8 ⁹		15 ⁷	24 ⁶
10 ⁴		22 ⁰	35 ⁶	8 ⁶		29 ⁵	42 ⁵	9 ⁶		7 ²	55 ⁰	10 ⁴		34 ²	26 ²
10 ⁰		34 ⁰	49 ⁰	10 ³		33 ⁰	56 ⁰	10 ⁴		10 ²	22 ³	10 ⁴		37 ⁷	18 ³
10 ⁴		41 ⁰	56 ⁰	10 ³		34 ⁵	51 ⁴	9 ⁸		35 ⁹	59 ⁴	9 ⁸		41 ²	26 ⁰
10 ⁴		48 ⁰	22 ⁸	10 ⁰		37 ⁰	53 ²	9 ⁴		50 ⁹	35 ⁹	9 ⁷		46 ⁷	57 ⁷
9 ⁶		58 ⁵	10 ⁰	10 ⁴		40 ⁵	26 ⁸	9 ⁶		51 ⁹	17 ¹	9 ⁵		51 ⁷	54 ⁹
9 ⁶	29	22 ⁵	28 ⁴	10 ⁴		57 ⁰	44 ⁶	8 ⁶		53 ⁴	56 ⁸	9 ³	49	12 ⁷	44 ³
10 ⁴		24 ⁰	10 ⁵	10 ⁴	34	0 ⁵	8 ⁸	8 ⁶		53 ⁷	38 ²	7 ⁶		17 ²	42 ¹
10 ³		26 ⁰	31 ⁰	9 ⁸		16 ²	58 ¹	10 ⁴	41	1 ²	9 ²	8 ⁴		24 ⁷	47 ²
25 ^{pr}	+1	26 ²	-7 ⁸	+1	26 ⁸	-7 ⁷		+1	27 ⁵	-7 ⁶		+1	28 ²	-7 ⁵	

5881-5940.				5941-6000.				6001-6060.				6061-6120.			
13 ^h .		-37°		13 ^h -14 ^h .		-37°		14 ^h .		-37°		14 ^h .		-37°	
mag.	m	s	'	mag.	m	s	'	mag.	m	s	'	mag.	m	s	'
10.4	49	24.7	53.2	10.0	57	10.7	48.4	9.5	5	41.2	14.4	9.9	15	43.6	18.9
9.5		40.7	45.8	9.8		12.2	58.7	9.0		54.2	8.9	10.0		48.1	19.2
9.3		54.7	2.6	10.4		19.2	47.8	10.4	6	17.7	32.8	10.0		52.1	20.7
9.0	50	3.2	28.6	8.7		25.7	40.8	9.0		22.7	30.5	9.8		59.6	20.4
10.0		20.7	43.2	10.4		26.0	11.1	10.0		40.7	31.8	9.1	16	19.1	31.3
10.4		25.7	22.0	10.4		34.7	41.7	9.5		47.8	32.9	10.0		22.6	20.0
10.4		29.7	11.8	9.7		37.7	8.0	10.2		49.1	46.3	9.0		26.6	48.2
10.4		31.6	59.4	10.4		40.7	55.0	10.0		59.7	8.0	9.5		29.6	23.0
7.2		35.2	33.4	8.7		54.7	3.9	10.4		59.7	36.0	9.4		33.1	36.1
10.4		47.7	48.6	10.4		56.1	0.0	8.3	7	11.0	47.7	9.7		38.1	30.5
9.8	51	5.7	2.6	9.6		58.7	1.6	9.5		39.0	33.1	9.5		53.6	33.0
10.4		9.7	20.7	10.0	58	1.2	41.3	9.4		44.0	47.3	9.8	17	13.1	5.7
9.7		28.2	43.4	10.0		4.2	32.0	9.0		49.5	53.0	9.6		13.5	59.2
9.6		29.2	55.7	9.4		26.7	35.3	8.5		51.5	22.1	10.0		19.1	4.1
9.2		31.7	44.8	7.6		28.7	7.8	8.8	8	15.4	1.0	10.0		47.6	3.7
9.5		41.7	18.0	10.2		45.2	37.8	10.0		17.5	9.0	9.0		50.6	1.7
9.2		48.2	21.9	10.0		49.2	16.4	10.0		26.5	37.4	8.8	18	12.6	28.6
10.2		57.7	41.9	9.6		52.7	48.3	9.8		32.0	0.7	10.0		36.1	19.4
9.6	52	4.7	42.3	10.4		59.7	34.7	9.1		45.0	17.0	10.0		37.1	40.0
9.8		5.7	49.7	10.4	59	13.2	15.5	10.0	9	2.0	12.1	9.8		47.6	42.7
10.2		12.7	11.4	10.0		20.7	20.9	9.7		9.5	17.9	9.9	19	3.1	31.0
10.2		15.7	49.2	9.7		43.7	7.8	10.0		19.0	57.0	9.9		3.6	17.4
9.3		42.6	57.9	10.2	0	7.7	1.4	8.6		31.0	3.3	9.3		13.1	6.6
10.0		45.7	31.0	10.2		13.7	57.0	9.3		39.5	59.1	9.8		19.6	25.3
10.2		48.7	58.8	10.4		23.2	17.5	8.3		41.0	21.9	10.0		39.8	1.0
10.4		50.2	21.0	10.4		39.7	42.9	10.0	10	0.0	5.8	9.9		42.3	58.3
9.7	53	10.7	33.7	9.8		45.2	34.9	10.0		8.5	4.3	9.0		53.1	10.8
9.5		12.7	24.8	9.6		54.7	56.4	9.4		15.5	13.9	9.8	20	18.1	14.3
8.1		18.7	31.0	8.5	1	14.7	36.8	10.0		28.0	6.1	10.0		19.1	59.4
7.8		27.7	24.3	9.5		25.7	17.0	9.6		51.6	51.8	10.0		21.3	1.7
9.5		38.7	4.6	7.2		54.7	50.2	10.0		59.1	54.2	9.9		26.6	16.3
8.5		39.7	26.4	9.7	2	3.2	37.9	9.9	11	15.1	39.4	9.6		28.6	14.1
9.4		44.7	37.0	9.7		9.7	0.0	10.0		29.1	12.3	9.8		30.1	38.1
9.8		47.7	41.2	10.4		9.7	29.9	9.7		48.6	38.2	9.8		35.1	21.4
9.8		51.7	38.0	10.2		29.7	17.0	9.4		49.1	42.5	8.8		38.6	11.9
10.2		58.2	5.9	10.4		36.2	11.1	9.7		51.1	36.2	9.0		40.1	38.3
9.3	54	9.7	30.2	9.8		38.7	32.8	10.0	12	8.1	10.7	10.0		40.1	33.2
9.0		9.7	22.1	10.4		40.7	43.2	9.8		11.1	11.4	10.0		45.1	30.7
9.7		38.7	36.4	10.2		49.2	46.0	10.0		19.1	57.2	8.2		45.1	59.6
8.9		40.2	6.1	8.9	3	0.7	4.1	8.9		29.1	21.1	10.0		59.3	0.9
10.4		51.7	15.2	9.7		2.7	13.3	9.8		44.1	54.8	9.8	21	15.1	14.1
9.7	55	3.7	18.1	9.8		7.7	49.5	10.0		47.1	33.4	9.8		19.1	20.1
9.7		6.2	42.3	10.2		9.7	14.9	9.7		53.1	11.5	10.0		19.1	41.2
9.8		23.2	35.3	10.4		10.9	33.4	10.0		56.6	34.2	9.4	22	16.6	36.1
10.4		37.7	47.4	9.5		12.2	45.7	5.4		58.1	18.4	9.4		57.1	53.0
9.5		41.2	29.1	9.3		36.2	42.6	8.5		59.1	38.3	9.6		59.1	33.1
9.5		41.7	2.5	8.8		37.7	18.8	10.0	13	20.6	3.6	9.8	23	2.6	22.5
10.2		44.7	12.5	9.8		40.7	46.5	9.8		58.1	16.1	10.0		23.6	21.1
9.8		49.7	17.7	10.4		51.2	22.8	9.3	14	2.1	52.2	10.0		24.6	15.0
9.5		55.7	33.0	9.8		52.7	49.2	10.0		10.4	2.1	9.6		29.1	58.2
10.4		59.7	16.9	8.9	4	27.2	31.9	9.8		19.1	7.3	9.4		37.6	32.3
10.2	56	7.7	24.4	9.7		48.7	21.4	9.5		39.1	27.6	9.9		44.1	40.1
10.2		19.2	20.4	9.6		49.7	51.4	10.0		40.1	37.3	9.5		49.1	3.4
8.2		31.7	51.4	10.4	5	2.2	55.5	10.0		47.1	59.7	9.9	24	21.1	24.2
8.8		34.7	10.2	10.2		4.7	44.7	10.0		59.1	12.3	9.8		31.6	4.0
10.4		44.2	46.0	9.8		9.2	19.2	9.6	15	10.1	4.4	9.8		43.1	3.2
9.8		49.2	7.7	10.2		18.2	16.0	9.8		26.6	10.5	8.4		44.1	15.6
9.6		54.7	57.8	10.4		25.7	14.7	10.0		29.1	55.1	9.9		49.1	42.7
9.6		55.2	53.1	10.4		35.7	43.2	9.5		39.1	40.4	9.4	25	9.1	14.3
9.8	57	8.7	45.7	10.0		37.6	39.0	9.3		41.3	0.4	10.0		12.6	36.1
25pr.	+1	29.0	-7.3		+1	29.8	-7.2		+1	30.7	-7.0		+1	31.5	-6.8

6121-6180.			6181-6240.			6241-6300.			6301-6360.		
mag.	14 ^h	-37°	mag.	14 ^h	-37°	mag.	14 ^h	-37°	mag.	14 ^h	-37°
10.0	25	21.6 7.3	9.6	33	30.8 16.2	8.8	41	5.3 6.5 8.5 GW	10.0	48	8.6 36.5
9.2		29.1 42.7	10.0		35.3 54.6	10.0		6.3 45.3	10.2		26.6 1.3
9.4		36.6 34.3	9.8	34	2.3 15.1 G	10.0		9.8 34.0	9.6		34.6 0.5
9.6		43.6 4.4	10.2		5.8 53.9	10.2		17.8 7.0	9.6		49.6 17.1
9.8		53.1 21.7	4.5		11.3 15.2 4.0 GStr	10.2		43.8 10.3	10.0		55.1 49.8
10.0	26	25.1 33.0	10.2		16.3 12.1	10.2		44.8 29.5	9.1	49	0.1 6.9
10.0		38.1 44.1	10.2		31.8 59.1	10.0		56.3 29.9	10.0		7.1 46.1
9.8		40.1 39.0	9.6		38.8 13.3	9.6		58.8 36.7	9.0		7.6 25.6
10.0		42.1 28.4	9.3		49.8 32.5	10.2	42	6.3 47.0	10.2		9.1 46.3
10.0		43.1 18.0	10.0		59.8 55.5	10.0		10.3 55.7	10.2		9.6 40.8
10.0		44.6 33.4	10.2	35	23.8 35.1	10.0		17.3 22.3	9.8		16.6 12.3
9.9		49.6 34.8	9.4		23.8 22.3	10.0		24.8 25.3	9.6		40.7 59.0
9.2		50.4 1.7	8.6		30.8 0.4 9.0 G-	10.2		29.8 48.8	9.2		44.6 44.9 8.5
8.8		52.1 39.2	10.0		40.3 24.6	9.8		53.3 43.3	10.0		50.6 12.3
9.9	27	6.1 15.8	10.2		43.8 35.3	9.6	43	0.3 24.7	10.0	50	14.6 48.4
9.8		9.1 51.7	9.2		55.3 33.7 9.5	10.2		0.7 28.2	10.2		17.1 46.2
9.9		28.6 4.7	10.0		59.8 31.4	10.2		1.3 53.5	9.0		59.1 49.0 8.5 -
8.6		33.3 57.3 8.5 =	9.2	36	16.3 28.2	9.8		1.3 53.1	10.2	51	3.6 42.3
9.9		39.1 31.4	9.0		24.8 36.5 9.0 -	10.2		2.3 32.8	10.2		7.1 38.0
10.0		49.1 43.2	9.0		29.8 46.6	9.6		15.3 53.6	9.0		7.4 59.3 8.8
10.0		10.1 58.7	9.6		36.8 39.9	10.2		16.3 1.3	9.4		14.1 12.8
10.0		22.6 33.2	10.2		40.8 50.1	10.2		22.6 1.9	6.8		20.6 22.6 6.5 GS=t
9.3		24.6 16.9	10.2		41.8 41.4	10.2		29.3 14.6	10.2		28.6 35.3
10.0		42.2 0.4	10.0		44.3 29.2	9.8		29.8 41.6	10.2		34.1 34.0
9.4		49.1 20.0	9.6		45.8 46.1	8.8		29.8 51.1 8.5 =	9.4		49.1 36.4 9.0 G
9.2		51.1 4.0	9.4		46.8 7.7	10.0		31.8 41.3	10.2		54.6 25.4
9.3	29	21.1 4.9 9.5	10.0		49.8 45.7	9.8		33.8 21.0	10.2		58.1 11.3
9.3		26.6 19.2	9.1		51.3 28.5 9.5	9.6		34.3 9.7	10.2		59.6 34.0
9.0		33.1 19.3 9.5	10.0		58.8 6.7	9.6		46.8 4.9	10.0	52	11.6 4.2
9.8		36.6 57.1	10.2		59.8 1.1	9.6		49.8 27.5	9.8		18.1 57.8
9.8		38.1 4.8	10.2	37	1.8 51.2	9.8	44	11.3 12.3	10.0		19.8 0.7
10.0	30	13.1 54.3	10.2		15.4 55.6	10.2		11.3 34.7	10.0		20.6 16.5
10.0		14.6 6.7	9.4		19.8 2.1	10.0		14.3 33.2	9.3		25.6 22.2 8.5
9.8		17.6 4.1	9.0		29.3 59.7 8.2 G	9.8		15.3 28.1	9.3		39.1 25.7
8.9		23.1 35.8	10.2		31.3 36.9	9.4		20.8 26.9	9.4		50.6 43.0
10.0		24.6 27.1	8.6		43.8 25.3 W=	9.6		20.8 43.1	9.4		52.6 17.8
9.4		29.1 36.9	9.8		44.8 56.1	10.2		24.3 5.1	9.8		59.5 43.2
9.5		29.1 24.0	9.6	38	17.8 26.1	10.0		29.3 12.7	9.2		59.6 30.2 8.8 G
9.4		30.1 19.5	9.8		19.8 52.0	9.8		36.3 12.8	10.2	53	0.6 47.8
10.0		31.6 4.6	10.0		42.3 52.1	8.5		41.3 39.7 8.5	9.6		10.6 10.1
9.8		37.6 5.2	10.0		43.3 21.1	10.0	45	0.3 13.9	9.6		15.1 46.3
9.4		49.1 33.3	10.0		48.8 13.0	5.1		0.3 17.1 6.0 GS=t	7.1		19.1 33.5 6.2 GS=t
9.7		51.1 35.1	10.2		50.8 34.9	10.2		3.8 35.5	9.3		21.6 31.3 8.5 G
9.7		59.4 18.1	9.4		53.8 3.3	9.4		8.8 3.2 9.0	10.0		29.6 46.2
8.4		59.4 16.9	9.4		54.3 6.1	9.8		11.3 6.7 9.0	10.2		30.1 6.1
10.0	31	35.0 26.0	9.8		54.8 31.1	10.0		11.3 15.2	10.2		35.6 16.3
10.2		50.8 39.5	9.8		59.5 59.9	7.2		14.8 44.5 6.5 GS-	9.8		41.6 18.6
10.2		58.5 35.0	10.2	39	12.3 8.1	10.2		21.8 25.0	9.6		42.1 11.1
10.2	32	10.5 5.3	7.0		14.8 45.5 6.5 GS=t	10.0		39.8 6.1	9.6		45.1 5.5
10.2		14.8 5.5	10.2		27.3 6.7	10.2		39.8 17.7	9.1		46.6 36.1 8.5
9.3		30.3 41.0	10.2		30.8 17.1	10.0		46.8 4.7	10.2		49.6 23.0
10.2		33.0 2.2	9.6		40.8 15.2	10.2		46.8 16.3	9.0		57.6 49.2 8.5
10.2		35.3 36.1	9.6	40	8.3 24.1	9.6	46	25.8 6.5	10.2		59.6 58.1
9.4		55.8 32.0	9.6		14.5 58.9	8.8		39.8 44.9 8.5	9.0	54	11.1 13.1
10.2	33	5.8 23.6	10.2		20.8 46.2	10.2		45.3 24.1	10.0		19.6 27.5
10.2		5.8 27.0	9.6		46.3 46.7	10.2		49.8 25.1	9.4		29.6 7.6
10.0		10.3 28.2	9.4		47.8 5.5	8.6		59.8 43.1 8.5	9.8		33.1 33.0
10.2		14.8 29.0	9.0		50.8 20.5 W	10.2	47	20.3 54.1	9.4	55	5.1 19.8 9.0
10.2		27.8 45.0	9.6		56.8 46.8	10.0		50.3 9.1	10.2		5.6 8.0
9.4		29.8 6.0	9.6		59.8 58.2	10.0		53.3 19.0	8.8		13.6 36.9 8.5 G
25pr.	+ 1	32.4 - 6.6	+ 1	33.0 - 6.5	+ 1	33.6 - 6.3	+ 1	34.3 - 6.1			

6361-6420.				6421-6480.				6481-6540.				6541-6600.			
mag.	14 ^h -15 ^h	-37°		mag.	15 ^h	-37°		mag.	15 ^h	-37°		mag.	15 ^h	-37°	
	m s	'	''	m s	'	''		m s	'	''		m s	'	''	
10.0	55	14.1	43.3	8.7	5	43.4	4.5	9.6	16	17.1	55.0	9.4	30	53.0	51.8
10.2		15.1	8.4	9.6		45.9	18.8	9.6		45.6	2.5	9.7	31	40.5	12.0
9.6		19.6	29.9	9.2		50.7	58.5	8.2		54.1	3.3	9.7		59.3	54.4
9.8		20.6	32.8	9.8		54.4	11.0	9.8		58.6	12.0	9.0	32	2.0	52.6
10.2		28.1	11.3	9.8		54.9	18.1	9.8	17	0.6	41.2	9.2	33	4.0	41.7
10.2		32.1	33.5	9.1		57.2	42.6	6.8		2.1	43.3	9.7		14.0	46.0
10.2		43.6	24.9	9.0	6	7.4	40.9	8.1		12.6	42.8	9.4		15.0	41.3
8.4		52.2	49.6	9.8		8.9	41.2	9.2		25.1	27.3	8.8		18.0	50.2
9.0	56	0.1	46.3	9.8		29.4	55.9	9.8		45.6	11.4	9.4		18.5	31.7
10.2		1.1	58.5	9.8		30.4	53.5	8.6		53.1	25.1	9.4		50.5	48.9
9.8		7.1	38.5	9.5		30.9	1.3	8.3		53.4	2.5	9.3		52.0	11.3
10.2		7.1	16.3	9.8		32.6	0.0	9.0		58.1	45.8	8.8	34	19.0	11.2
9.8		14.6	27.1	9.5	7	4.2	58.9	9.8		0.1	20.2	6.8		31.0	1.4
10.0		39.6	53.9	9.8		19.7	50.2	8.7	18	0.1	42.8	9.7		57.5	41.4
9.8		39.6	55.0	9.8		20.7	16.0	8.1		14.1	16.8	9.6	35	0.0	11.6
10.2		49.6	58.7	9.2		26.7	51.7	9.0		20.1	19.8	8.4		1.5	30.9
8.8		53.4	1.1	9.8		43.2	10.5	9.8		32.1	28.1	9.7		2.0	12.2
9.6		57.6	28.1	9.8		56.2	36.7	9.4		45.1	24.1	9.7		3.5	18.1
9.6		59.6	52.4	9.5	8	7.2	39.5	9.8		53.1	35.8	9.7		4.5	17.8
9.3	57	1.6	47.6	9.0		9.7	2.2	9.8	19	7.1	2.4	9.0		11.5	37.8
8.0		3.0	11.9	9.4		33.2	56.1	9.6		30.6	41.2	9.7		15.3	2.9
10.2		13.1	17.4	7.4		58.7	58.9	9.2		40.1	54.5	9.2		39.5	20.7
10.0		16.1	21.9	8.1	9	4.2	15.5	9.8		49.1	15.9	9.7	36	30.5	44.4
9.8	58	7.4	5.5	9.8		5.2	13.0	7.6	20	18.1	11.6	9.7		50.5	58.7
9.0		13.9	20.8	9.4		7.2	4.5	9.8		28.1	51.9	9.6	37	15.0	54.4
9.8		13.9	15.9	9.4		9.2	19.1	9.5		49.1	38.8	9.6		16.2	2.8
9.6		36.9	54.1	9.8		43.7	21.2	9.8		50.1	21.1	8.3		16.5	14.0
9.6	59	0.9	55.1	9.6		49.2	57.5	9.8	21	36.1	57.0	neb.		53.0	23.2
6.9		9.4	27.5	9.4	10	9.7	15.0	8.8		47.6	23.0	9.4	38	0.0	0.0
9.8		49.4	12.4	9.4		23.2	32.7	8.4	22	16.9	53.1	9.3	39	0.0	22.3
9.8		57.9	40.7	9.8		27.7	10.2	9.4		18.1	8.2	6.9		21.5	31.1
9.5	0	19.4	20.1	9.0	11	25.7	7.0	9.8		19.1	37.1	7.8		39.5	52.2
9.5		25.4	31.9	9.8		29.2	24.8	8.8		30.3	16.8	9.0		45.5	38.7
9.5		29.4	29.4	9.6		35.2	38.0	7.2		32.4	15.5	7.6		50.5	17.1
9.4		42.4	46.1	9.8	12	10.2	55.0	9.2	23	42.8	13.0	9.7	40	9.0	33.5
8.3		45.4	6.4	8.7		10.7	55.3	9.6		51.3	43.0	9.2	41	7.5	52.8
9.4	1	26.7	59.3	9.8		21.1	0.1	8.4	24	16.8	27.3	8.6		13.5	27.9
9.2		34.9	4.8	9.6		21.2	10.9	9.2		24.3	43.8	9.6		27.5	7.8
8.5	2	36.9	32.0	9.6		51.2	5.4	7.0		24.8	38.5	8.5	42	46.0	28.7
8.7		50.4	52.9	9.8		51.2	10.6	9.3		42.8	34.0	9.0		52.5	22.6
8.6		50.4	39.0	9.8	13	10.2	34.4	9.7		55.8	37.0	9.7	43	0.5	27.5
9.8	3	1.4	30.2	9.8		16.7	19.0	8.8		58.8	35.0	9.7		9.4	34.5
9.8		9.4	8.2	9.2		17.2	9.0	9.7	25	2.3	16.4	7.8		24.5	3.5
9.6		18.4	3.9	9.6		23.2	48.6	9.2		4.3	50.9	9.2		29.0	46.7
9.6		25.0	0.3	9.4		24.2	28.4	8.4		40.8	12.8	8.8		36.5	44.0
9.0		29.4	34.3	6.6		28.2	45.8	9.0		49.8	38.4	9.6		48.0	16.1
8.7		30.7	1.9	9.5		48.6	56.5	9.0	26	19.8	51.3	8.6		52.5	24.8
9.8		32.4	24.2	7.8		51.2	5.8	9.3		29.8	25.0	8.8	44	10.5	17.0
9.8		32.4	49.0	9.8		58.2	50.0	9.6		34.3	7.9	9.0		33.0	27.7
9.8		54.4	40.4	8.7	14	8.2	54.5	9.4		48.3	25.5	7.6		40.8	1.2
9.8		59.4	40.0	6.8		10.2	10.9	9.7		49.8	20.5	9.7		49.0	48.9
8.8	4	0.4	55.3	8.8		26.7	46.2	8.4	27	33.8	2.5	9.7		56.5	58.6
9.2		9.4	47.9	8.7	15	4.2	56.2	9.7		28	13.3	8.6	45	23.0	36.9
9.8		16.4	19.0	9.8		19.2	41.0	9.4		42.3	55.8	9.4		46	10.0
9.0		21.9	2.5	9.8		23.7	10.1	7.5		45.3	45.7	9.0		20.0	55.9
8.3		49.4	3.0	9.4		38.2	58.8	9.4		56.3	1.6	8.4		42.5	8.6
9.8		53.9	0.1	9.6		57.6	59.1	9.7		29	22.3	9.7		47	14.8
9.2	5	4.4	52.9	9.6	16	7.1	8.8	9.4		47.3	48.2	9.6		29.6	48.9
9.6		7.4	56.3	9.0		8.1	25.4	9.0	30	19.3	5.5	9.4		41.8	58.0
9.6		10.9	35.3	8.4		11.6	7.2	9.2		37.5	57.0	9.7		48	5.6
25.pr.	+1	35.0	-5.9	+1	35.7	-5.6		+1	36.6	-5.3		+1	37.7	-4.8	

6601-6660.				6661-6720.				6721-6780.				6781-6840.			
mag.	15 ^h -16 ^h	-37°		mag.	16 ^h	-37°		mag.	16 ^h	-37°		mag.	16 ^h	-37°	
	m	s			m	s			m	s			m	s	
9.6	49	46.1	18.6	9.6	15	4.5	46.3	9.4	32	43.5	19.3	8.5	45	54.3	53.2
9.2		57.8	57.6	10.0	16	9.0	19.4	10.0		46.5	37.9	9.2	46	5.3	53.0
9.7	50	3.6	45.4	5.8		12.5	16.3	8.5	57.0	49.9	9.0	8.5		6.3	53.8
7.0		18.6	8.5	10.0		17.6	1.3	9.6	33	7.0	45.8	10.0		28.3	47.9
9.7		24.6	12.4	9.0		23.0	53.9	9.5	48.0	46.7		9.6		33.9	2.2
9.6		29.1	39.4	8.8		34.0	37.3	8.2	34	22.0	37.3	10.0		55.8	41.3
9.7		43.6	8.6	10.0	17	32.0	37.5	7.8		23.5	5.9	9.2	47	2.3	20.4
8.0	51	8.6	10.1	10.0	18	4.0	36.7	9.2		48.0	54.5	9.4		5.3	51.0
9.2		27.6	21.7	10.0		32.0	49.1	10.0		49.0	47.1	9.8		10.8	18.2
9.6		52.6	50.8	8.4	19	6.0	11.4	10.0	35	5.0	48.0	10.0		14.8	48.0
9.7	52	7.1	56.9	10.0		9.2	32.2	10.0		9.9	2.2	8.6		19.3	41.6
9.7		13.1	53.0	9.4	20	17.0	2.1	6.8		20.5	54.9	9.2		24.3	43.6
9.1	53	16.6	51.3	9.4	21	24.0	1.7	10.0		39.0	45.4	10.0		30.3	1.2
7.2		45.1	10.7	10.0		40.0	30.3	9.8		59.5	9.3	8.0		34.8	18.3
9.6		49.1	11.9	7.6	22	0.0	41.6	9.4	36	21.5	25.5	9.4		39.8	24.3
9.7		52.1	43.1	10.0	23	14.5	48.1	10.0		36.5	40.5	9.1		42.8	51.2
9.4	54	7.6	6.9	10.0		31.0	44.3	9.4		57.0	5.1	9.4		43.3	6.6
8.2		9.6	42.0	9.5		34.0	39.1	10.0		19.0	37.3	9.8		49.3	7.4
8.6		17.6	27.6	9.2	24	37.0	27.9	10.0		49.5	15.1	9.4		51.3	3.6
9.7		34.6	40.8	10.0		38.5	45.7	10.0		53.7	25.9	10.0		59.3	46.0
8.8		58.6	54.6	7.4	25	19.5	6.9	9.6		57.2	29.8	9.0	48	8.8	10.9
9.4	55	2.6	54.0	9.5		32.0	10.5	9.4		38	2.5	10.0		8.8	17.8
9.2		21.6	14.6	9.8	26	32.5	38.3	10.0		13.5	55.1	10.0		12.3	53.2
9.6		26.1	8.5	10.0	27	13.5	25.6	9.8		39	58.7	8.8		41.9	58.5
9.7		27.6	32.9	10.0		19.0	56.3	10.0		40	3.0	10.0	49	0.3	44.4
9.7		38.6	39.8	8.5		34.5	6.0	10.0		7.3	14.5	8.8		10.8	36.3
8.0		49.6	53.5	10.0		50.6	58.8	8.6		8.6	17.0	8.6		15.3	33.7
9.7	56	4.3	0.0	9.8	28	10.0	43.3	10.0		34.5	53.1	10.0		19.8	59.4
6.6		22.3	30.7	8.5		17.8	57.3	10.0		41	32.5	8.9		19.8	42.7
7.0		27.3	28.1	9.6		48.5	32.1	9.2		53.5	19.9	7.5		23.3	47.8
8.6		34.8	33.8	9.6		59.0	8.9	8.0		58.0	49.6	9.6		37.8	13.0
9.1		40.3	30.1	10.0	29	18.0	29.0	9.6		42	10.5	10.0		42.3	44.8
9.7		47.3	18.0	9.1		29.5	17.5	10.0		34.0	50.1	10.0		52.3	37.2
9.7	57	12.8	27.9	9.4		38.4	2.2	6.6		35.0	17.6	9.8		54.8	14.8
9.4		20.8	10.1	9.6		39.7	2.4	9.6		45.5	33.4	8.6		59.8	12.3
7.8		52.3	41.7	10.0		42.5	53.8	9.8		43	9.0	9.4	50	6.3	51.0
9.6	58	50.3	14.1	9.6		43.5	3.6	10.0		9.5	31.1	9.8		11.3	50.4
9.7	59	11.3	15.0	9.6		44.5	17.1	10.0		19.0	47.0	9.0		20.8	55.9
8.4		24.8	5.0	9.5		54.5	55.1	8.9		19.0	50.1	6.9		24.8	25.3
8.1		27.8	41.9	9.4		57.5	9.1	3.9		24.2	49.8	9.2		29.8	27.2
8.8		30.8	24.2	9.6	30	29.0	39.3	9.8		37.5	44.5	9.2		47.3	22.6
9.4	0	8.0	10.1	10.0		44.0	22.3	8.4		40.5	46.6	10.0		48.3	55.0
9.0		45.0	44.7	8.8		49.0	41.7	4.3		51.7	48.0	10.0		49.8	55.1
9.7	1	3.5	24.4	9.6		52.0	12.1	9.2		57.2	1.4	9.8		53.8	10.3
9.3		41.5	58.6	10.0		59.0	50.9	10.0		59.0	7.9	10.0		59.3	13.0
9.6		59.9	59.7	9.5	31	11.0	1.1	8.5		59.0	23.4	9.2	51	9.3	17.2
9.3	2.	16.5	3.9	8.6		19.0	41.1	7.6		44	9.5	8.8		16.3	14.7
8.5		59.0	7.8	9.1		23.5	30.0	10.0		31.5	13.3	9.4		17.8	40.9
9.2	3	39.0	52.9	9.6		27.5	42.3	9.8		34.5	41.2	9.0		26.3	22.1
9.3	4	12.5	46.7	9.0		39.5	51.3	10.0		39.0	8.9	9.8		35.3	4.1
9.7	5	4.3	6.3	8.5		42.5	48.4	9.8		41.5	10.2	10.0		55.3	39.8
9.6		32.5	48.1	10.0		55.0	59.1	9.4		45.0	32.7	8.2		57.3	44.7
9.4	6	34.5	42.4	7.8		59.5	23.3	10.0		45	0.5	9.8		58.8	8.4
9.7		56.0	58.3	10.0		1.0	35.7	8.8		5.5	46.5	9.0		52.8	29.4
9.3	8	8.5	54.1	8.3		3.5	32.5	10.0		9.5	3.4	10.0		10.8	27.5
9.4		11.5	32.7	9.0		7.3	58.7	9.2		14.0	18.3	10.0		36.8	22.3
9.0		27.5	37.2	9.6		9.5	58.1	10.0		23.8	43.0	10.0		39.8	12.0
7.6	9	27.0	26.3	10.0		10.0	41.7	10.0		39.3	25.4	10.0		46.3	8.4
10.0	13	24.8	28.6	10.0		27.0	46.3	9.2		41.3	21.8	10.0		48.8	45.0
7.2	14	49.0	7.7	7.7		39.5	38.5								
2.5 pr.	+1	38.8	-4.3		+1	40.5	-3.2		+1	41.0	-2.8		+1	41.2	-2.5

6841-6900.				6901-6960.				6961-7020.				7021-7080.			
16h.		-37°		16h.		-37°		16h.-17h.		-37°		17h.		-37°	
mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s	mag.	m s
10.0	52	49.6	59.6	10.0	56	12.0	48.1	8.8	59	37.4	43.4	8.8	4	29.2	39.3
9.8		50.3	32.5	9.8		13.0	47.3	9.6		38.9	52.7	9.4		37.2	26.1
8.6	53	0.8	48.4	9.6		13.9	46.0	9.4		47.9	49.3	7.1		38.7	47.8
10.0		1.8	19.8	10.0		14.0	2.2	10.0		47.9	23.1	9.8		40.7	40.5
8.0		5.8	55.9	9.8		14.9	34.4	9.2		51.6	1.3	9.0		43.7	4.7
10.0		9.5	3.5	9.6		15.4	11.8	9.6		53.9	43.9	10.0		45.6	14.3
10.0		14.3	9.6	9.4		15.9	57.3	9.8		56.9	35.3	10.0		53.7	15.9
9.6		14.8	15.3	9.8		17.4	49.8	8.9		58.9	39.1	10.2		56.2	15.9
10.0		15.8	53.0	8.2		18.4	42.4	9.6		58.9	23.5	9.2		57.2	47.7
				8.0		18.9	55.8	8.9		59.9	48.9	8.4	5	0.7	28.8
8.0		29.3	6.9	8.4		18.9	54.4	8.6	0	6.4	25.7	8.8		7.7	50.1
10.0		30.8	34.4	8.0		18.9	46.7	10.0		8.4	42.7	9.6		7.7	19.5
10.0		39.2	6.1	8.6		18.9	47.8	9.8		13.9	16.5	9.8		8.2	13.9
9.2		41.3	45.2	8.9		18.9	54.9	10.0		14.4	24.9	8.7		13.7	44.1
8.9		49.3	44.1	8.6		19.4	15.8	9.6		23.4	38.0	9.6		14.2	34.6
9.1		54.8	52.9	8.8		19.4	41.9	9.4		38.4	43.1	9.2		16.2	29.0
10.0	54	9.8	14.1	9.4		19.9	44.8	8.6		38.4	44.7	8.5		26.2	39.3
9.1		23.8	17.7	8.8		21.4	48.1	9.6		41.4	43.9	9.4		27.7	50.9
7.6		31.3	32.0	8.9		40.4	46.9	9.0		57.4	5.9	10.2		36.7	20.4
9.1		34.8	13.3	8.6		44.1	58.2	10.0		59.9	10.1	8.4		42.7	28.7
10.0		36.3	35.2	10.0		44.4	35.6	9.6	I	6.4	28.3	10.0		44.7	35.6
10.4		37.3	58.6	9.8		48.4	43.9	9.6		17.4	33.5	8.8		52.7	37.9
10.0		39.3	46.1	9.4		53.9	23.1	9.2		20.9	18.5	10.2		54.2	34.9
10.0		52.8	51.9	9.2		58.9	10.5	9.4		22.9	12.1	9.6	6	0.2	41.9
10.0		53.3	56.1	9.4	57	0.9	33.2	10.0		36.4	46.9	10.2		5.2	29.6
9.8		57.9	1.8	9.4		0.9	45.0	10.0		47.9	30.9	10.2		10.0	0.6
9.8		58.9	49.9	10.0		3.9	54.6	9.4		55.4	9.9	9.4		24.7	56.9
9.6		59.4	24.2	10.0		15.9	32.3	9.6		58.9	29.9	9.2		30.9	29.8
9.8	55	5.4	0.2	9.4		21.4	55.3	10.0		58.9	27.3	10.0		36.4	56.3
10.0		10.9	49.1	9.4		22.4	50.1	9.2		58.9	47.0	10.2		39.4	10.8
10.0		11.4	9.2	10.0		22.4	25.4	9.6		59.9	23.7	10.2		42.9	48.5
9.4		14.9	43.1	9.4		29.4	32.0	9.6	2	3.9	17.9	9.1	7	0.4	56.4
9.8		16.4	44.6	10.0		32.4	6.2	9.2		11.4	8.6	10.2		2.4	25.9
6.9		19.3	58.3	9.4		38.9	38.1	9.8		17.0	46.4	10.2		6.9	54.0
10.0		21.9	37.4	9.6		38.9	25.4	10.0		18.9	32.3	10.2		9.9	11.5
10.0		28.0	43.3	9.4		52.9	42.7	10.0		29.9	27.6	10.2		12.9	5.9
7.0		28.4	39.8	6.7		53.9	3.2	10.0		50.8	16.4	9.8		18.9	56.3
9.2		29.3	57.8	9.8		55.4	10.2	10.0		52.8	4.8	10.0		35.4	38.2
8.6		31.4	22.8	9.2		58.9	38.9	9.6		55.0	9.3	9.6		57.9	47.2
10.0		33.0	59.6	9.8	58	7.4	44.9	9.6	3	0.9	39.0	9.6	8	4.9	12.8
9.2		36.6	57.0	10.0		8.4	52.7	9.2		2.3	32.6	9.6		11.9	39.4
9.2		38.9	54.7	9.8		11.4	41.5	10.0		5.3	7.3	9.2		18.4	16.0
8.8		39.8	58.8	9.2		12.9	3.6	8.8		7.9	41.6	9.6		31.9	44.3
8.4		40.4	35.2	9.6		24.4	42.8	9.8		9.2	53.9	10.2		46.9	47.8
8.8		45.4	52.2	9.8		29.9	54.1	9.6		9.2	30.6	9.8		51.9	7.8
9.6		48.9	25.0	9.8		31.4	57.1	9.8		9.2	13.4	10.2		52.4	46.7
9.8		52.4	36.4	10.0		31.9	27.8	9.8		10.7	17.8	9.6		54.9	39.2
9.4		54.4	44.2	9.2		32.4	47.8	9.8		13.7	13.5	7.8	9	7.9	7.2
9.2		57.4	45.6	9.8		43.4	40.0	10.2		19.7	45.0	9.0		8.4	3.0
9.2		58.9	52.4	9.2		50.4	30.9	8.8		27.7	22.1	10.0		22.4	59.6
9.0		58.9	43.8	9.4		51.9	20.9	9.8		36.3	26.0	9.6		44.9	50.7
8.6		59.4	46.6	9.2		53.9	48.9	9.0		36.7	30.4	10.2		48.9	50.5
9.6	56	3.9	47.3	10.0		58.9	57.9	10.2		43.2	28.8	10.2		54.9	29.0
8.5		6.4	48.8	8.8	59	0.9	8.1	9.4		48.7	30.1	10.2	10	1.9	9.6
10.0		6.4	4.2	10.0		9.4	56.8	10.0		51.7	28.2	9.0		7.9	56.0
8.5		6.9	43.8	9.2		9.4	13.1	10.0		53.6	15.7	9.4		9.9	12.0
9.0		7.9	49.8	9.4		20.9	21.6	10.2		59.8	27.9	9.8		11.4	3.6
9.8		7.9	45.2	9.4		28.4	22.6	9.6	4	10.2	3.4	9.6		17.9	42.4
10.0		8.9	48.0	9.1		28.7	57.9	9.6		16.2	12.8	8.8		29.9	19.5
9.4		9.4	22.8	9.8		33.9	51.4	8.0		19.7	18.4	8.2		34.9	57.7
25pr.	+1	41.4	-2.3	+1	41.5	-2.3		+1	41.7	-2.1		+1	41.8	-1.9	

1896AnCap...3....1G

7081-7140.			7141-7200.			7201-7260.			7261-7320.			
mag.	17 ^h	-37°	mag.	17 ^h	-37°	mag.	17 ^h	-37°	mag.	17 ^h	-37°	
10:2	10	37.9	36.8	10:2	15	27.1	33.7	10:2	19	34.2	56.8	
8:8		46.9	13.3	8:4		27.6	53.4	9:8		41.7	42.6	
7:8		52.4	52.1	9:8		31.0	1.2	10:2		44.7	29.0	
9:8		58.9	35.1	10:2		33.6	48.0	9:5	20	0.2	35.9	
10:0		59.9	24.7	9:8		36.1	44.4	9:6		6.7	40.9	
10:2	11	4.9	51.1	10:2		37.6	12.1	8:8		12.7	49.4	
10:2		12.2	47.0	10:2		38.6	12.5	10:2		14.2	29.8	
9:5		15.2	44.7	9:8		39.1	56.8	10:0		19.2	0.1	
9:6		16.7	14.0	9:8		42.1	46.1	10:2		19.7	44.6	
9:5		25.2	0.3	9:4		46.9	58.8	9:2		23.7	41.4	
9:8		25.2	20.2	9:2		47.1	14.4	9:6		26.7	38.3	
10:0		35.7	47.0	8:8		49.1	49.0	10:0		33.2	15.2	
9:6		37.2	26.0	9:8		50.1	46.7	9:8		39.2	27.9	
9:0		38.7	7.4	9:1		50.6	50.5	9:6		45.2	46.1	
10:2		39.2	6.2	9:6		53.1	51.4	10:2		47.2	59.1	
9:8		44.2	28.2	10:2	16	8.1	13.0	9:6		48.6	37.3	
9:6		47.2	55.5	9:5		9.1	46.6	10:0		50.7	43.5	
10:2		50.7	48.0	10:2		20.1	3.1	10:2		54.7	25.9	
10:0		52.2	41.8	9:4		20.6	40.2	9:8		59.2	52.3	
10:2		56.7	57.0	10:2		21.1	30.7	9:6	21	6.2	36.7	
9:8	12	7.2	28.8	10:0		26.1	42.4	10:2		10.7	0.4	
10:2		8.9	28.4	9:0		27.6	4.4	10:2		12.6	20.5	
9:6		9.2	16.8	9:0		29.1	38.4	9:2		13.7	10.3	
6:9		10.7	53.3	9:8		31.7	21.1	9:6		16.7	55.7	
10:2		38.2	22.4	9:8		31.6	36.7	9:6		19.2	30.7	
9:4		43.7	51.3	10:0		32.6	54.5	9:5		19.7	20.0	
9:2		44.2	11.1	9:8		41.6	38.8	10:2		20.7	57.0	
10:2		44.7	31.1	10:2		45.6	55.0	10:0		28.7	31.4	
10:0		48.9	4.0	10:0		46.7	14.4	10:2		30.7	15.2	
9:6		53.7	56.3	9:8		49.2	44.3	9:4		33.4	57.5	
10:0	13	10.2	27.2	9:6		57.7	6.2	9:8		43.7	43.9	
10:2		10.7	38.3	10:2		58.7	33.1	9:6		46.2	25.0	
10:2		17.2	41.1	9:4	17	7.7	24.1	8:2		49.2	36.8	
10:0		22.2	5.2	9:6		10.5	1.5	9:6		59.7	29.8	
9:2		30.7	46.7	10:2		16.7	16.6	10:2	22	7.2	42.2	
10:0		35.2	41.9	9:8		19.2	39.4	10:2		8.7	24.3	
10:2		54.2	55.9	10:2		20.7	32.0	9:4		10.7	59.1	
10:0		57.7	36.4	10:2		22.2	21.6	10:2		15.6	39.6	
10:2		58.9	19.2	10:2		35.7	28.2	3:5		16.7	11.7	
9:8	14	8.2	4.8	7:9		35.7	29.6	7:4		18.2	20.0	
7:1		8.7	40.7	9:0		38.7	11.1	9:6		24.2	51.1	
10:2		12.7	33.5	10:2		53.7	17.1	10:0		34.2	47.5	
10:2		12.8	2.3	10:2		54.7	34.4	10:2		39.2	58.6	
9:0		16.2	31.8	9:6	18	3.7	44.5	9:8		46.2	11.4	
7:2		25.7	5.7	10:2		18.7	45.0	8:8		49.2	3.4	
10:2		28.7	35.5	9:6		19.2	24.3	10:2		57.2	21.6	
10:2		34.6	56.8	9:4		29.4	59.2	10:2		57.2	36.5	
9:8		34.6	57.4	10:2		31.7	35.2	10:2	23	4.2	23.1	
9:1		45.6	51.9	9:8		44.2	32.0	9:6		9.2	19.3	
9:6		48.1	45.1	9:5		45.7	0.3	9:6		16.2	27.1	
9:4		52.6	50.4	8:0		50.4	57.0	9:0		23.2	15.7	
10:2		53.6	4.9	8:8	19	3.7	26.4	8:2		24.2	34.9	
10:2		53.6	11.0	9:6		4.2	48.8	10:2		31.7	57.0	
9:6		58.1	52.8	9:2		6.2	4.1	9:8		40.2	11.9	
9:2	15	0.6	43.2	9:2		9.2	29.0	9:8	24	14.2	44.0	
9:2		1.1	42.8	7:6		12.7	4.5	10:2		14.7	49.9	
10:2		2.1	35.0	9:8		19.2	19.7	9:8		15.2	30.8	
10:2		15.6	7.9	9:8		21.7	31.0	9:2		21.7	15.1	
9:0		19.1	59.3	10:2		25.2	32.0	9:6		22.7	52.2	
10:2		25.6	0.0	8:4		31.9	57.9	9:0		29.7	4.5	
25Pr.	+1	42.0	-1.7	+1	42.0	-1.6	+1	42.1	-1.4	+1	42.2	-1.2

1896 Arcap... 3... 1G

7321-7380.			7381-7440.			7441-7500.			7501-7560.		
mag.	17 ^h	-37°	mag.	17 ^h	-37°	mag.	17 ^h	-37°	mag.	17 ^h	-37°
9.2	28 59.1	29.8	9.4	32 45.5	28.7	9.4	37 32.8	8.7	9.6	40 28.9	40.5
9.5	59.6	3.4	9.4	46.0	45.9	9.4	35.3	47.4	9.5	29.1	9.2
8.9	29 0.1	52.1	9.6	54.0	16.8	9.4	37.8	26.0	8.4	29.6	14.8
9.6	1.2	27.3	9.2	54.5	6.8	8.8	38.8	46.8	9.6	30.6	34.6
9.6	12.1	35.9	9.2	33 3.0	28.0	9.2	39.3	45.7	8.8	31.6	18.1
9.6	16.1	50.8	8.8	8.5	17.2	8.9	39.8	14.0	9.0	33.1	41.1
9.5	16.6	33.1	9.6	9.0	4.7	9.4	43.8	21.0	9.4	36.6	35.4
9.2	17.6	41.2	9.6	16.5	40.8	9.5	49.3	40.4	9.4	40.6	16.8
9.6	18.1	33.4	9.2	18.0	17.5	9.4	49.8	23.5	9.2	44.1	14.6
7.7	18.7	46.6	9.6	27.5	17.3	9.0	51.8	3.1	9.2	48.6	30.6
9.2	21.2	5.3	9.6	30.5	44.4	9.5	56.1	0.6	9.6	52.9	1.7
8.8	24.2	34.7	9.6	42.5	43.0	9.5	59.3	34.2	9.2	54.1	8.8
9.5	24.7	21.2	8.1	53.5	45.7	9.6	38 8.3	33.6	9.4	54.1	13.8
8.3	27.2	19.6	9.4	58.2	1.1	9.2	8.8	30.0	9.5	57.6	59.9
9.6	27.2	13.1	8.4	59.0	57.3	9.4	10.8	20.5	9.0	59.1	19.8
8.6	27.7	38.3	9.0	34 2.0	40.3	8.8	18.8	2.9	9.5	59.6	36.1
9.2	27.7	50.5	9.5	4.0	23.8	9.4	22.3	25.0	9.6	41 12.1	55.2
9.2	33.7	21.7	9.6	6.0	12.3	8.9	24.8	6.0	9.0	15.1	52.2
8.8	35.1	0.5	9.6	7.9	40.9	9.2	24.8	8.2	9.3	21.2	0.0
9.4	37.7	37.6	9.4	9.0	48.3	9.6	27.3	40.6	8.8	21.9	29.2
9.6	39.7	48.0	9.6	21.5	28.1	9.6	28.3	17.9	9.4	23.9	9.2
9.1	40.2	32.6	9.6	29.0	10.6	9.6	29.3	17.7	9.2	24.4	29.2
9.6	44.2	45.5	9.5	29.0	52.7	9.6	29.3	2.8	9.6	32.9	53.9
9.5	49.7	19.9	9.4	31.5	33.9	9.6	37.8	59.6	9.6	34.9	37.7
9.6	54.2	43.4	9.6	33.0	48.4	9.4	39.3	6.1	9.5	36.4	23.7
8.9	56.7	36.3	9.6	35.0	10.5	9.6	39.8	17.0	8.8	37.9	1.4
9.6	58.7	41.9	9.6	39.0	35.7	9.6	48.8	40.2	9.2	38.9	17.2
9.6	58.7	38.8	9.2	41.9	56.8	9.2	49.3	31.3	9.6	39.4	37.0
9.4	58.7	29.7	9.4	49.3	5.3	9.6	52.8	21.3	9.6	39.9	53.3
8.8	59.7	49.8	9.4	50.3	49.2	8.9	58.3	47.6	neb.	43.3	0.6
9.5	30 0.2	44.9	9.6	51.3	44.0	9.1	59.3	16.4	9.6	55.4	48.9
9.5	7.1	0.9	9.4	35 0.3	53.0	9.6	39 2.8	55.0	9.6	56.9	20.0
9.0	9.2	39.9	9.6	1.3	28.0	9.6	4.8	50.6	9.6	59.9	32.8
9.4	11.7	39.6	9.6	3.8	25.1	9.4	10.3	25.2	9.5	59.9	59.4
9.4	14.7	34.7	9.6	9.3	41.8	9.2	17.8	48.1	9.4	0.1	6.9
9.4	19.7	19.9	8.8	10.8	45.3	9.5	23.7	42.5	8.8	3.4	31.0
9.6	31.2	54.6	9.4	15.8	5.4	8.6	25.8	35.4	9.6	4.9	21.0
8.0	32.7	41.8	9.6	17.3	49.2	8.9	29.8	7.4	9.4	12.9	31.5
8.6	58.2	17.3	9.6	27.5	29.4	8.9	31.1	23.7	9.6	14.9	31.9
9.6	31 0.7	56.7	9.4	29.8	12.9	9.6	36.6	51.1	9.6	15.9	10.5
8.8	27.2	9.9	8.7	33.8	9.1	8.6	38.1	22.0	9.1	21.4	55.0
9.5	36.7	44.7	8.6	34.8	33.3	9.5	42.1	50.4	9.6	25.4	40.6
9.5	37.2	23.8	9.4	39.3	53.9	9.0	43.6	43.2	9.4	31.9	37.2
8.9	39.1	1.4	9.2	41.3	7.0	9.6	44.1	2.3	9.5	34.9	45.9
9.5	42.0	58.3	9.2	55.3	5.5	9.2	45.6	3.8	9.2	35.4	50.9
9.5	42.0	37.4	9.6	36 8.3	32.5	9.6	47.6	6.3	9.1	38.4	47.7
9.6	49.0	9.9	9.4	21.3	21.1	9.4	48.1	46.8	9.2	39.9	29.2
8.4	52.0	2.4	8.8	29.3	26.8	9.5	49.6	39.8	8.0	42.4	46.2
9.2	32 9.0	33.0	8.8	31.3	8.5	9.2	49.6	11.6	9.6	44.4	23.9
9.6	9.5	29.8	9.2	34.8	13.0	9.4	52.6	47.5	9.4	44.9	52.4
9.2	10.5	40.2	8.5	42.3	17.2	9.6	58.1	20.0	9.4	47.4	8.5
9.4	15.0	3.1	9.4	49.3	30.7	9.6	59.6	42.6	9.4	49.4	34.8
9.2	19.0	57.2	8.4	53.8	26.3	9.2	40 1.1	17.6	9.2	50.9	25.7
9.6	25.5	27.3	9.4	55.3	37.1	9.4	7.1	23.3	8.8	54.9	24.1
9.6	28.0	59.3	9.5	37 7.8	11.9	9.6	10.1	15.4	9.6	55.4	21.4
9.6	30.0	38.4	9.4	14.3	58.2	9.4	14.1	8.1	9.4	59.9	49.0
8.4	31.5	34.9	8.9	15.3	31.8	9.1	15.6	1.0	9.6	43 3.4	7.9
9.4	32.5	55.9	9.6	25.3	27.9	8.3	19.1	21.8	9.6	4.4	43.0
9.2	33.5	35.4	9.4	26.3	12.5	9.6	19.6	20.6	9.6	8.4	29.9
9.5	39.5	46.1	9.5	27.3	18.5	9.6	24.1	31.0	9.4	11.1	58.5
25pr.	+ 1 42.2	- 11		+ 1 42.3	- 0.9		+ 1 42.3	- 0.8		+ 1 42.3	- 0.7

7561-7620.			7621-7680.			7681-7740.			7741-7800.							
mag.	17 ^h	-37°	mag.	17 ^h	-37°	mag.	17 ^h	-37°	mag.	17 ^h	-37°					
9 ²	43	23.9	28.0	9 ⁶	46	17.9	47.3	9 ⁵	48	53.9	7.0	9 ⁵	51	11.0	2.1	
9 ⁶		28.9	17.6	9 ⁴		20.9	55.0	9 ⁶		56.4	29.7	9 ⁴		11.4	53.7	
9 ²		29.9	21.0	8 ⁵		24.4	32.4	9 ¹		59.7	2.6	8 ⁹		15.4	54.1	
9 ²		29.9	32.9	9 ⁵		40.9	20.5	8 ⁸		59.9	12.1	9 ⁵		16.4	18.6	
9 ⁶		33.9	29.9	9 ⁵		42.4	22.0	9 ²	49	0.9	42.0	9 ⁴		19.9	5.4	
9 ⁶		34.4	40.7	9 ⁴		44.4	45.1	9 ⁴		5.9	22.6	9 ²		22.9	50.1	
9 ⁶		35.9	16.2	9 ⁶		44.9	5.0	9 ²		5.9	35.7	8 ⁰		24.9	15.4	
8 ⁸		37.4	30.8	9 ²		49.9	24.8	9 ⁴		5.9	31.0	8 ⁸		27.9	28.1	
9 ²		38.4	47.9	9 ⁶		50.9	53.8	9 ⁶		13.9	16.2	9 ⁴		29.7	17.5	
8 ⁸		39.9	47.1	9 ⁵		53.4	43.1	9 ²		26.4	30.9	9 ⁶		29.9	27.9	
9 ⁰		43.9	5.7	8 ⁹		53.9	46.6	9 ⁴		29.4	46.0	9 ⁶		32.2	27.4	
8 ³		45.4	42.8	9 ⁴		54.4	34.5	9 ⁶		29.9	22.8	9 ⁴		32.4	25.0	
8 ⁸		50.4	51.9	9 ²		55.4	25.1	9 ⁵		30.9	13.9	8 ⁵		37.4	20.5	
8 ⁴		50.4	54.2	8 ⁸		59.9	15.4	9 ⁶		32.4	46.5	8 ²		39.4	53.0	
9 ⁶		54.9	11.4	9 ¹	47	1.4	30.7	9 ⁶		33.4	20.2	9 ⁶		40.7	4.6	
9 ⁶	44	1.9	44.0	9 ²		1.4	59.9	8 ⁷		37.4	26.0	7 ⁹		43.7	23.7	
9 ⁶		4.4	37.2	9 ²		2.4	42.5	8 ²		39.9	18.9	9 ²		45.7	3.5	
9 ⁵		4.4	6.1	9 ⁶		2.4	24.0	9 ⁶		40.4	10.6	9 ²		46.7	5.7	
9 ⁶		9.1	38.4	9 ²		4.9	23.3	9 ¹		40.4	55.2	9 ²		49.7	52.5	
9 ⁶		14.9	38.8	8 ⁷		5.4	55.7	9 ⁵		42.4	14.5	9 ¹		50.2	28.2	
9 ²		19.9	43.6	9 ⁶		9.1	18.6	9 ⁴		42.4	11.6	9 ⁴		55.2	9.1	
9 ²		24.4	42.1	9 ⁴		9.4	33.1	9 ⁵		42.9	23.3	9 ²		55.2	12.6	
9 ²		24.9	46.7	9 ⁵		12.4	32.6	9 ⁶		45.4	37.7	9 ⁰		58.2	29.3	
9 ⁴		29.4	45.8	8 ⁹		17.9	58.5	9 ⁶		46.4	26.8	9 ⁴		58.2	53.9	
9 ⁶		29.9	22.1	9 ⁴		18.9	21.2	9 ⁵		46.9	50.9	8 ⁶		58.7	41.3	
9 ²		31.9	46.3	8 ⁸		19.9	7.6	9 ⁵		49.4	6.0	9 ⁴	52	0.7	42.2	
9 ⁶		39.9	55.0	9 ⁶		24.9	53.7	9 ⁴		50.9	0.9	9 ²		0.7	14.2	
9 ⁶		41.1	49.3	8 ⁴		26.4	2.0	9 ²		55.4	32.0	9 ²		6.7	10.6	
8 ²		44.9	2.8	8 ⁸		29.4	53.0	9 ⁵		57.4	44.8	9 ²		9.7	3.4	
9 ²		45.9	42.4	9 ⁶		39.9	53.3	9 ⁴		59.4	14.1	9 ⁶		9.7	37.3	
9 ²		47.4	40.2	9 ⁶		40.4	53.1	9 ⁵	50	1.4	9.8	9 ²		9.9	1.9	
9 ¹		54.9	56.6	8 ⁸		44.9	33.7	9 ⁴		1.4	16.9	9 ⁶		10.2	32.2	
9 ⁶		55.4	17.9	9 ⁴		45.4	13.3	8 ²		1.6	57.4	9 ⁴		10.4	19.5	
9 ⁶	45	0.9	27.4	9 ⁶		45.4	15.6	9 ²		4.4	14.1	9 ⁶		13.2	38.2	
9 ⁴		0.9	32.7	8 ⁸		53.4	30.4	9 ⁴		5.4	50.1	8 ⁹		15.7	29.2	
9 ⁵		1.6	2.3	8 ⁸		54.2	1.2	9 ¹		5.4	9.3	9 ²		16.2	6.8	
9 ⁶		3.4	22.0	9 ⁶		58.4	50.1	9 ⁵		10.4	25.3	9 ⁰		20.2	5.3	
9 ⁶		4.4	27.0	9 ²	48	2.4	59.5	9 ⁶		10.4	11.1	9 ⁶		22.7	52.4	
9 ⁶		5.4	4.6	8 ⁹		2.4	40.2	9 ⁶		15.9	53.0	9 ⁵		25.2	39.6	
9 ⁴		7.4	41.8	9 ⁶		5.4	4.8	9 ⁵		16.4	35.5	9 ⁴		28.7	54.0	
8 ⁹		9.4	32.8	8 ⁵		12.9	39.8	9 ⁵		16.4	12.6	9 ⁴		30.2	42.6	
9 ⁴		9.9	16.3	9 ⁴		13.9	53.8	9 ⁵		18.4	52.5	9 ⁶		30.2	24.5	
9 ⁶		19.9	16.3	9 ⁴		20.9	28.1	9 ²		22.4	59.9	9 ⁶		33.2	28.1	
9 ⁰		29.4	38.0	9 ⁶		20.9	59.0	9 ⁶		25.4	32.6	9 ⁵		34.2	23.9	
9 ²		35.9	3.3	9 ²		24.4	35.6	9 ⁶		28.2	46.2	9 ⁶		34.7	52.9	
9 ⁶		36.4	7.9	9 ⁶		24.9	28.5	9 ⁴		29.9	57.2	8 ⁰		36.2	29.3	
9 ⁶		39.9	8.9	9 ⁴		25.4	21.9	9 ⁶		34.9	53.7	9 ⁴		39.2	26.0	
9 ⁶		45.4	6.9	9 ⁰		25.9	46.3	8 ⁸		37.9	33.3	8 ⁸		40.2	14.8	
9 ⁶		47.8	0.9	9 ⁴		31.4	45.1	9 ²		39.9	28.3	9 ²		40.2	30.6	
8 ⁶		55.4	25.1	9 ⁶		33.9	25.5	9 ²		42.4	13.9	9 ¹		41.7	39.7	
9 ²		57.9	17.9	9 ⁴		40.9	35.5	8 ⁷		45.9	16.7	9 ⁶		49.7	9.6	
9 ⁶		59.9	35.5	9 ⁰		41.4	14.1	8 ⁶		46.4	52.0	8 ⁸		51.7	16.3	
9 ⁶	46	0.1	55.6	9 ²		42.4	27.2	9 ⁵		48.4	59.5	9 ⁶		53.2	25.7	
9 ¹		2.4	39.1	9 ⁶		43.4	14.4	9 ²		48.9	8.9	9 ⁴		54.7	47.1	
9 ⁵		3.4	37.7	9 ⁶		45.9	3.6	9 ⁴		51.9	24.2	9 ²		56.7	55.4	
9 ²		4.9	30.1	9 ²		47.9	32.0	9 ²		51.9	5.1	8 ⁸		57.1	35.0	
9 ⁴		5.4	55.0	9 ¹		48.9	10.8	9 ⁴		51.9	31.7	9 ²	53	0.7	51.6	
9 ⁶		6.4	4.7	9 ⁶		50.4	36.0	9 ⁶		55.2	4.8	9 ²		0.7	32.2	
9 ⁴		14.4	49.2	9 ⁶		50.4	45.4	9 ²	51	4.2	1.5	9 ²		5.2	12.5	
9 ⁴		17.9	46.7	9 ⁶		51.4	57.3	9 ⁵		10.4	28.9	9 ²		6.2	7.0	
25pr.	+1	42.4	-0.5	+1	42.4	-0.4			+1	42.4	-0.4			+1	42.4	-0.3

7801-7860.			7861-7920.			7921-7980.			7981-8040.		
mag.	17 ^h	-37°	mag.	17 ^h -18 ^h	-37°	mag.	18 ^h	-37°	mag.	18 ^h	-37°
9.4	53 8.2	41.7	9.7	57 24.2	49.6	9.0	1 15.2	45.1	9.2	5 41.2	33.5
9.6	10.2	50.4	9.7	29.2	33.2	8.8	17.2	43.0	9.6	44.2	3.1
9.2	12.1	56.6	8.3	32.7	26.2	9.0	20.2	48.4	9.1	49.2	12.9
9.6	15.2	52.7	9.7	35.7	5.7	9.7	21.2	6.3	9.7	53.2	15.1
9.6	18.2	0.5	7.6	40.2	30.0	9.7	26.5	1.0	8.7	54.2	40.9
9.6	19.7	41.5	9.7	41.7	13.1	9.6	27.7	54.6	9.7	58.7	7.2
9.4	20.2	34.7	9.7	45.2	21.6	9.2	29.2	23.9	9.7	58.7	43.7
9.2	22.2	9.9	9.5	49.2	19.9	9.5	29.2	15.0	9.6	6 7.7	38.1
9.6	22.7	36.9	9.7	51.2	11.6	9.4	30.7	35.8	9.7	19.2	33.2
9.4	23.2	13.5	8.9	51.2	30.8	9.7	32.7	32.8	9.6	19.7	41.5
9.6	30.2	36.5	8.8	59.2	59.3	9.5	36.0	0.8	9.7	25.7	23.3
9.4	33.7	25.5	9.6	58 0.7	10.2	9.7	43.7	48.2	9.0	26.7	17.3
9.6	34.2	32.7	9.5	5.2	17.9	9.7	48.2	26.5	9.3	26.7	33.3
9.2	34.9	26.4	9.6	8.2	53.5	7.8	59.2	14.4	8.7	27.2	34.1
9.4	37.1	57.1	9.7	16.3	0.4	9.7	2 5.2	27.2	9.7	31.2	41.1
9.6	39.7	50.9	9.7	26.2	43.7	8.7	14.2	15.9	9.0	9.7	42.7
9.4	42.1	41.5	9.2	28.2	23.7	9.4	23.7	7.1	9.7	45.2	57.9
9.2	45.7	8.7	9.7	31.2	56.7	8.8	32.2	54.8	9.7	52.7	41.5
9.4	47.2	34.7	9.5	33.7	24.7	9.6	41.5	1.9	9.7	54.2	10.5
9.6	49.7	14.5	9.4	37.7	46.6	9.4	49.2	42.0	9.3	7 3.2	14.4
9.4	50.7	34.8	9.7	39.2	25.8	9.4	3 1.2	2.0	9.7	5.2	42.3
9.2	51.4	14.5	9.5	41.7	50.2	9.3	9.2	52.1	9.7	10.7	44.2
8.8	54.2	57.1	9.7	46.7	49.3	9.5	9.2	46.0	9.5	11.2	22.6
9.2	54.9	25.8	8.6	50.7	32.1	9.7	18.7	47.9	9.5	19.2	24.8
9.2	54 0.2	30.9	9.6	53.3	57.6	9.7	24.2	48.8	9.5	19.2	52.2
9.4	0.7	19.9	9.7	59 1.7	20.3	9.6	28.7	53.5	9.6	23.2	16.3
9.6	3.2	11.1	9.3	1.7	36.0	9.7	30.7	48.7	9.7	23.2	35.8
9.0	4.2	52.5	9.3	7.9	0.2	8.1	35.2	4.0	9.7	25.2	28.7
9.1	4.2	21.0	9.6	10.7	23.1	9.1	39.7	39.9	9.7	28.7	40.0
10.2†	7.0	59.7	9.0	15.2	20.4	9.3	41.7	55.0	8.1	29.2	5.2
9.4	7.7	49.5	9.7	18.7	20.4	9.4	43.2	1.7	9.7	31.2	25.6
9.6	8.7	16.9	9.6	19.7	21.0	9.3	45.2	57.1	9.7	35.2	35.0
9.5	9.7	34.9	9.7	21.7	32.0	9.7	45.2	27.8	9.4	35.7	38.3
9.3	11.3	40.7	9.7	27.2	34.8	9.7	46.7	12.9	9.7	38.2	42.2
9.5	23.0	20.3	9.7	28.7	7.0	9.7	49.2	56.2	8.8	40.2	30.5
9.2	29.8	57.0	9.7	28.7	26.7	7.8	51.7	46.6	9.2	42.7	21.8
9.1	44.5	31.5	9.7	29.2	14.1	9.6	54.7	12.9	9.7	48.2	37.6
9.6	48.0	16.6	9.7	30.7	48.4	9.7	4 11.7	33.9	9.7	55.2	1.9
8.0	50.8	14.5	9.3	32.7	47.8	9.3	16.7	11.6	9.7	8 1.2	19.4
9.7	55 1.8	39.1	9.7	35.7	38.2	8.6	19.2	12.7	9.3	7.2	5.0
8.0	6.3	43.6	9.7	36.7	11.3	9.0	29.2	50.7	9.7	15.2	30.1
9.5	8.8	23.1	9.6	44.7	18.6	9.5	31.2	19.9	9.4	25.2	27.0
9.7	10.8	28.1	10.2†	51.2	58.2	9.5	35.2	21.0	9.7	30.7	8.2
9.7	27.3	2.8	9.5	52.7	24.2	9.7	41.7	48.9	9.3	39.2	42.1
8.9	49.2	37.1	9.7	56.2	49.1	9.5	44.2	31.3	9.3	40.7	21.2
9.5	56 1.7	18.5	9.7	0 0.2	1.1	9.6	49.2	35.5	9.7	41.7	12.1
9.7	4.7	21.6	9.5	4.2	45.5	9.3	54.7	56.4	9.3	44.2	16.3
10.2†	13.0	59.3	9.7	14.7	3.0	9.5	55.2	50.5	9.2	46.7	23.7
9.7	26.7	9.9	9.6	15.7	52.9	9.4	59.2	4.1	9.5	51.7	4.6
9.7	27.2	11.0	9.3	25.2	51.5	9.7	5 7.2	47.7	9.7	53.7	47.6
9.7	29.7	33.9	9.1	29.2	40.8	8.5	12.2	16.9	9.7	59.2	38.8
9.7	39.2	35.2	9.7	31.0	0.0	9.7	17.2	15.9	9.6	59.2	29.1
7.8	41.2	43.3	9.7	39.2	12.3	9.6	17.7	42.0	9.6	9 5.2	48.9
9.7	48.2	29.4	9.7	44.2	32.4	8.8	18.7	41.7	9.3	24.2	37.3
9.7	49.2	25.6	9.7	47.2	56.4	9.4	19.2	29.0	9.7	29.3	1.0
9.4	51.2	55.6	9.3	53.2	52.9	9.7	21.2	7.0	8.8	34.2	9.0
9.7	57 0.2	23.1	9.2	54.2	33.3	9.7	26.7	25.1	9.7	35.7	0.8
7.6	0.2	28.4	9.5	59.2	34.1	9.3	34.2	27.5	9.7	36.2	20.2
10.1†	3.5	59.0	8.8	1 7.7	37.9	7.8	37.2	38.9	9.7	53.7	22.2
9.2	19.2	49.5	9.3	13.7	29.0	9.3	40.2	49.1	8.2	10 8.7	16.0
25pr.	+ 1 42.4	- 0.2		+ 1 42.5	0.0		+ 1 42.5	+ 0.1		+ 1 42.4	+ 0.3

8041-8100.				8101-8160.				8161-8220.				8221-8280.			
mag.	18h.	-37°		mag.	18h.	-37°		mag.	18h.	-37°		mag.	18h.	-37°	
	m	s	/'		m	s	/'		m	s	/'		m	s	/'
9.3	10	9.2	34.1	7.8	15	59.7	17.1	9.8	22	12.8	42.3	9.7	28	23.1	27.4
9.1		9.7	9.1	9.2	16	12.7	49.8	9.2		18.8	0.3	9.2		24.1	20.6
9.6		10.2	48.2	9.3		14.2	9.9	9.5		20.8	21.6	8.1		27.1	30.7
9.4		11.7	57.7	9.7		24.2	20.1	9.2		22.8	44.5	8.8		28.6	18.7
9.4		18.2	23.5	9.3		28.2	43.0	9.7		26.8	57.9	9.8		32.6	15.9
9.5		34.2	40.0	8.9		34.2	41.6	9.7		27.3	56.1	9.8		37.1	11.5
9.7		35.2	14.7	9.2		41.2	34.6	9.8		32.3	15.4	9.4		44.1	7.4
9.1		50.2	50.0	9.2		42.7	31.1	9.8		45.8	16.4	9.8		54.1	2.5
9.7		59.7	25.0	9.5		43.7	37.2	9.8		47.8	27.6	9.2		54.6	1.8
9.1	11	4.7	14.2	9.6		50.2	9.5	7.8		52.8	40.4	9.8		59.1	44.2
9.7		7.7	4.8	9.6		56.7	21.1	9.6		57.8	25.0	9.8		59.1	39.7
9.2		10.2	1.9	7.7	17	0.7	12.8	9.8		58.3	33.1	9.7	29	4.6	51.9
9.7		14.2	38.5	9.5		8.2	23.4	9.4	23	3.8	50.8	9.6		10.1	35.0
8.3		15.2	38.9	9.7		30.4	4.9	9.6		8.8	17.5	8.8		11.6	45.8
9.7		17.7	26.4	8.8		32.7	58.7	9.8		18.8	40.9	9.8		19.1	24.0
9.4		18.7	0.7	8.7		41.2	52.6	7.8		42.8	17.7	9.2		21.1	42.6
8.7		21.0	1.9	9.3		41.5	0.3	9.7		44.8	8.4	9.4		21.1	9.9
9.6		22.7	33.7	9.3		41.7	7.1	9.8		52.8	34.3	9.2		25.1	36.5
8.8		23.2	43.8	9.7		47.2	36.7	8.8		57.8	10.4	9.2		27.6	21.7
9.7		39.2	22.3	9.6		50.2	24.5	9.5		59.3	20.0	9.8		28.1	48.9
9.3		47.7	17.3	9.0		55.2	3.9	9.8	24	8.8	47.7	9.5		31.6	23.9
9.7		49.0	1.8	9.3	18	3.2	48.1	9.0		18.8	28.1	8.6		33.1	54.4
8.9		54.2	3.8	9.7		12.2	33.4	9.2		28.8	44.3	9.8		33.6	40.9
9.7		58.2	30.7	9.3		29.2	41.1	9.8		48.8	3.0	9.6		37.6	1.9
9.7	12	7.2	44.1	9.2		35.2	16.1	8.5		49.8	24.7	9.1		40.1	30.4
9.7		14.2	44.1	8.9		39.0	21.9	9.6	25	4.8	17.9	9.8		58.1	26.8
9.7		21.2	46.5	9.8		48.0	32.8	9.1		8.8	37.9	9.7	30	1.1	8.3
7.6		22.7	32.2	9.8		50.5	1.4	8.4		12.8	10.3	8.8		2.1	4.8
9.7		31.7	52.9	9.7		50.5	39.6	9.7		26.8	23.5	9.4		9.1	27.6
9.3		35.7	43.7	9.7		56.0	56.4	8.8		28.8	47.9	9.8		10.6	9.3
8.8		37.2	19.8	9.8	19	1.5	58.1	8.6		36.8	0.6	8.3		13.1	6.3
9.6		46.2	17.5	9.7*		4.2	35.4	9.7		37.6	23.1	8.2		20.6	45.6
9.3		54.7	7.8	9.8		9.5	21.7	9.8		40.3	8.9	9.8		22.1	44.2
8.1		57.7	17.9	9.2		19.5	55.4	9.4		41.3	19.4	7.7		23.1	58.7
9.3	13	11.7	47.7	9.8		29.0	40.6	9.7		53.8	26.7	9.2		25.1	3.5
9.3		22.2	19.9	9.7		29.8	20.6	9.7		54.8	19.0	9.6		31.1	3.4
8.9		22.7	59.2	9.4		32.8	24.7	9.8		57.8	11.2	9.7		34.1	32.5
8.0		39.2	48.8	8.4		35.3	26.8	9.4		59.3	58.8	9.7		35.1	31.3
8.9		45.2	47.6	9.7		47.8	56.7	9.6	26	2.3	58.9	9.8		40.6	17.8
9.4		49.2	52.1	8.9	20	6.8	11.8	9.2		7.8	21.3	8.6		48.6	48.1
9.7		54.2	4.3	9.4		11.3	7.1	9.1		17.3	31.6	9.1		49.1	14.8
9.7	14	5.2	23.1	9.0		14.8	33.4	9.1		18.8	31.9	9.5		51.6	31.6
9.4		14.7	46.3	8.9		17.8	34.2	8.8		25.3	28.3	8.5		52.3	23.5
9.7		19.2	24.0	9.8		18.3	15.1	9.2		43.8	29.1	9.8	31	19.3	23.1
9.5		29.7	37.1	8.4		18.3	4.4	9.4		50.8	5.9	9.8		23.8	23.2
9.7		35.2	36.0	9.4		22.3	11.0	9.5		56.3	38.9	9.7		28.8	39.0
9.7		44.2	35.3	9.5		28.8	58.7	9.7		56.8	55.7	8.4		34.8	36.7
9.4		58.2	7.1	9.8		29.8	47.2	9.8		57.3	58.5	9.7		39.3	55.9
8.7	15	11.2	53.1	8.4		36.3	22.5	9.8	27	0.8	25.3	9.1		40.8	38.4
9.7		20.2	57.4	9.2		36.3	12.5	9.2		1.8	4.8	9.0		47.3	28.0
9.7		24.2	3.9	8.2		38.8	5.2	9.8		4.8	43.7	9.2	32	1.3	4.7
9.4		37.7	45.1	9.8		59.8	49.6	9.0		18.3	45.2	9.2		10.3	3.3
8.2		38.2	16.5	9.8	21	6.8	13.0	9.8		19.8	58.9	9.7		32.3	14.1
9.5		39.2	4.8	9.8		34.8	48.2	9.4		29.3	6.0	9.2		32.3	45.8
9.7		41.2	25.5	8.6		49.3	3.3	9.8		34.6	24.3	9.6		33.8	17.7
9.7		44.2	39.5	9.8		51.8	3.7	9.5		43.8	53.9	9.2		34.8	56.9
9.3		48.7	26.0	9.4		59.8	21.9	9.2		58.8	54.6	8.7		44.3	35.7
9.1		51.2	49.8	8.5	22	0.3	37.8	8.2	28	8.8	45.1	9.4		44.3	36.5
9.2		51.2	27.3	9.5		1.8	52.9	9.0		9.1	14.9	9.8	33	8.3	1.7
9.7		55.2	35.6	9.7		9.8	5.1	9.2		13.1	2.9	9.2		12.3	1.2
25 pr.	+1	42.4	+0.5	+1	42.3	+0.7		+1	42.2	+0.9		+1	42.2	+1.1	

8281-8340.			8341-8400.			8401-8460.			8461-8520.		
mag.	18 ^h .	-37°	mag.	18 ^h .	-37°	mag.	18 ^h .	-37°	mag.	18 ^h -19 ^h .	-37°
9 ⁸	33 29 ³	17 ⁹	9 ⁰	39 42 ⁵	36 ⁶	9 ⁴	46 36 ³	21 ²	9 ⁷	56 25 ⁵	15 ⁴
9 ⁸	33 39 ³	52 ⁶	9 ⁸	44 ⁵	22 ³	10 ²	38 ¹	9 ⁸	9 ¹	57 3 ⁵	3 ⁵ 9 ⁵
9 ⁸	34 14 ³	5 ⁰	9 ⁴	47 ⁰	18 ⁸	9 ⁷	39 ¹	36 ¹	10 ²	27 ⁵	48 ⁸
9 ⁷	14 ⁸	40 ⁶	9 ⁸	49 ⁵	29 ⁹	9 ⁹	39 ⁶	18 ³	5 ⁵	58 ⁰	14 ³ 5 ⁰ GS π
9 ¹	15 ³	39 ²	8 ¹	53 ⁵	8 ⁷	10 ²	46 ⁶	16 ⁸	10 ²	59 ⁰	6 ⁹
8 ⁸	21 ³	11 ⁶	9 ⁸	40 5 ⁰	31 ⁹	8 ⁰	48 ⁶	38 ⁵ 8 ⁰ G	7 ¹	58 24 ⁷	59 ² 7 ⁰ GW-
9 ⁷	29 ⁸	49 ⁰	9 ⁴	15 ¹	42 ⁴	7 ²	54 ⁶	32 ⁴ 7 ⁰ GS π	9 ⁶	59 0 ⁵	47 ³
9 ⁴	32 ³	58 ⁰	9 ⁸	31 ⁹	35 ⁰	10 ²	55 ⁰	25 ³	10 ²	4 ⁵	56 ¹
9 ²	37 ¹	57 ⁸ W	9 ²	41 ⁶	40 ⁴	10 ²	58 ⁶	31 ⁰	10 ²	16 ⁵	49 ⁹
9 ⁸	35 20 ³	5 ⁸	9 ⁸	43 ⁶	12 ²	9 ⁰	47 7 ⁶	29 ⁶	9 ¹	29 ⁵	4 ⁰ 9 ²
9 ¹	21 ³	14 ⁷	9 ⁷	56 ¹	34 ⁸	9 ⁴	13 ¹	11 ⁵	9 ⁶	32 ⁵	50 ⁵
8 ⁸	33 ³	52 ¹	9 ⁸	41 6 ⁶	53 ⁴	9 ⁶	14 ⁶	47 ⁸	10 ²	0 6 ⁰	43 ¹
9 ⁴	46 ⁷	2 ⁷	8 ⁶	9 ⁶	26 ⁹ 8 ⁰ G-	10 ²	14 ⁶	32 ⁵	8 ⁹	40 ⁵	3 ⁸ 9 ⁰
9 ²	57 ⁸	24 ⁷	9 ²	32 ¹	11 ²	10 ¹	19 ⁶	34 ¹	10 ⁰	42 ⁰	35 ⁷
9 ⁷	57 ⁸	0 ¹	9 ²	35 ⁹	57 ⁹	9 ⁸	42 ¹	48 ²	10 ¹	52 ⁰	37 ⁷
9 ⁰	36 10 ⁸	38 ³ 9 ⁵	9 ⁴	48 ⁶	44 ²	9 ¹	42 ⁶	2 ⁰ 9 ⁵	10 ²	1 1 ⁰	51 ¹
9 ⁰	13 ¹	0 ⁶ 8 ⁵ S	9 ⁴	49 ⁶	43 ⁹	5 ⁴	48 11 ¹	29 ⁹ 6 ⁰ GS π	9 ⁴	38 ⁷	1 ⁷ 9 ²
9 ⁷	17 ³	37 ⁴	9 ²	51 ⁶	8 ⁷	9 ²	35 ¹	52 ³	9 ⁰	2 6 ⁰	33 ³
9 ⁸	29 ³	27 ²	9 ⁸	59 ⁹	11 ⁹	10 ²	35 ¹	39 ⁷	10 ¹	9 ⁰	10 ²
9 ⁷	29 ³	7 ⁹	9 ⁷	42 5 ⁶	27 ⁵	10 ²	35 ¹	49 ²	10 ¹	11 ⁷	1 ⁷
9 ⁸	32 ⁸	28 ⁰	9 ⁶	13 ⁶	54 ⁵	9 ²	40 ¹	41 ⁸	8 ⁹	52 ⁵	24 ⁵
9 ⁴	35 ³	46 ⁰	9 ²	19 ⁶	26 ⁰	10 ²	53 ¹	2 ²	8 ⁹	58 ⁵	3 ³ 9 ⁵
9 ²	42 ³	22 ⁸	9 ²	27 ⁶	15 ¹	10 ²	49 4 ¹	15 ⁵	9 ²	3 11 ⁵	31 ⁸
9 ⁸	47 ⁵	6 ¹	8 ⁴	37 ⁶	23 ³ 7 ⁵ GW-	10 ²	11 ⁶	52 ⁴	9 ⁸	21 ⁵	25 ¹
8 ⁸	49 ⁰	59 ⁸ 9 ⁰	9 ⁸	42 ¹	26 ⁴	10 ²	13 ¹	35 ⁸	9 ⁶	24 ⁵	29 ⁷
9 ²	49 ⁵	9 ³	9 ⁸	49 ⁶	49 ¹	10 ²	40 ⁶	38 ⁰	9 ⁷	38 ⁵	45 ³
9 ⁷	49 ⁵	48 ⁹	9 ⁸	1 ¹	52 ²	8 ⁷	47 ¹	28 ⁷ GW-	7 ⁶	42 ³	47 ¹ 7 ⁰ GS-
8 ⁸	37 2 ⁴	57 ⁸ 9 ⁰	9 ⁸	9 ⁶	58 ⁶	9 ⁷	52 ¹	37 ⁰	7 ³	4 7 ³	43 ⁶ 7 ⁵ GS-
8 ⁸	3 ⁵	45 ⁸ 9 ⁰	9 ⁸	19 ¹	34 ⁷	9 ⁶	54 ¹	17 ⁷	10 ⁰	48 ³	22 ²
9 ⁸	9 ⁰	4 ⁶	9 ²	21 ⁰	2 ²	10 ²	50 5 ⁶	31 ⁹	10 ²	53 ³	28 ⁶
9 ⁴	21 ⁵	49 ⁵	8 ⁸	35 ⁶	17 ⁸	9 ⁹	8 ¹	44 ⁶	10 ²	5 7 ³	10 ⁹
9 ⁸	24 ⁵	26 ⁴	8 ⁵	42 ⁶	8 ⁶	10 ²	11 ⁰	45 ⁰	10 ²	19 ⁸	31 ⁹
9 ⁰	30 ⁵	4 ⁵	9 ²	50 ⁶	10 ³	5 ⁶	17 ⁶	16 ⁰ 6 ⁰ GS π	10 ²	38 ³	31 ⁸
9 ⁸	33 ⁰	26 ¹	9 ²	44 2 ¹	29 ⁶	9 ⁷	21 ¹	22 ⁷	9 ⁶	51 ³	19 ⁸
9 ⁸	39 ⁰	18 ⁴	9 ⁴	3 ⁶	11 ⁶	10 ⁰	44 ⁶	46 ⁰	9 ²	59 ⁸	29 ⁸ 9 ⁵
9 ¹	41 ⁵	8 ⁰	9 ⁵	6 ¹	45 ⁶	9 ⁹	55 ¹	33 ³	9 ⁰	6 6 ⁸	30 ⁵ 9 ⁵
9 ⁸	41 ⁵	19 ⁵	9 ⁷	12 ¹	48 ¹	10 ²	51 1 ¹	46 ²	8 ⁴	31 ⁸	35 ⁸ 8 ⁵ G-
9 ⁰	59 ⁵	50 ⁰	9 ⁷	12 ⁵	5 ⁹	9 ⁶	16 ¹	46 ² 9 ⁰	9 ⁹	7 1 ⁸	49 ⁶
9 ⁸	38 11 ⁵	24 ⁹	9 ⁷	14 ¹	24 ¹	10 ²	16 ¹	50 ⁸	7 ⁴	11 ³	9 ⁸ 7 ⁵ GS=
9 ⁶	14 ⁵	13 ⁵	9 ⁸	19 ⁶	2 ⁴	9 ²	48 ¹	25 ⁶	10 ¹	14 ³	25 ⁹
9 ⁴	17 ⁰	28 ⁶	9 ⁸	29 ⁶	32 ⁷	9 ⁷	52 ⁶	8 ⁵	9 ³	21 ⁸	43 ⁸
9 ²	18 ⁰	52 ⁶	9 ⁸	29 ⁶	18 ⁷	10 ²	59 ⁶	55 ⁶	9 ⁸	42 ³	1 ¹
9 ⁴	27 ⁵	29 ⁹	9 ⁴	31 ⁶	53 ¹	9 ⁴	52 7 ¹	19 ¹	9 ⁸	9 5 ⁸	27 ⁶
9 ⁵	39 ⁵	43 ⁹	8 ⁸	35 ¹	11 ⁰	9 ⁹	31 ⁶	48 ⁸	10 ²	22 ⁸	17 ¹
8 ⁸	41 ⁵	8 ⁹ 9 ⁵	9 ⁵	49 ⁶	19 ⁹	10 ¹	37 ¹	58 ³	10 ⁰	26 ³	48 ⁰
9 ⁷	44 ⁵	52 ⁸	9 ⁸	49 ⁶	41 ⁰	6 ⁴	37 ¹	13 ⁷ 6 ⁵ GS=t	7 ⁵	10 59 ⁶	7 ¹ 7 ⁰ GS π
7 ³	49 ⁵	40 ⁶ 7 ⁵ GS-	10 ²	52 ⁰	36 ⁶	9 ⁸	39 ⁶	42 ¹	9 ²	11 0 ⁶	52 ⁷
9 ⁵	49 ⁵	56 ³	7 ⁴	56 ⁰	25 ³ 7 ⁵ GS-	10 ¹	44 ⁵	52 ³	10 ⁸ †	22 ⁵	57 ⁷
9 ⁶	58 ⁵	11 ⁴	10 ²	59 ⁷	51 ²	7 ²	53 13 ⁵	3 ⁶ 7 ⁰ GS-	9 ⁴	50 ¹	36 ³
9 ²	39 1 ⁰	51 ⁴	9 ⁴	45 1 ³	44 ¹	8 ⁷	15 ⁰	2 ⁸ 9 ⁵ G	8 ⁹	12 9 ⁶	37 ⁵ 9 ⁰ G
9 ⁸	13 ⁰	7 ⁸	9 ⁸	14 ³	58 ⁰	9 ⁶	22 ⁵	57 ⁴	10 ⁸ †	36 ⁵	59 ⁰
9 ⁷	16 ⁰	59 ⁸	10 ²	16 ³	17 ³	10 ¹	28 ⁰	7 ⁵	8 ⁸	13 46 ⁶	27 ¹ 8 ⁵ G-
9 ⁸	17 ⁰	39 ¹	10 ²	25 ⁸	34 ⁰	9 ⁶	35 ⁰	18 ⁰	9 ⁸	14 57 ⁶	12 ⁶
9 ⁸	19 ⁵	1 ⁸	9 ⁷	38 ⁸	50 ³	9 ⁸	36 ⁰	33 ⁵	8 ⁰	15 20 ⁶	18 ⁸ 8 ⁰ G-
9 ²	21 ⁵	20 ⁵	10 ¹	39 ³	56 ⁴	9 ³	54 29 ⁰	50 ⁵	9 ⁴	24 ⁶	28 ⁷
9 ⁴	22 ⁵	18 ⁷	10 ¹	49 ³	41 ⁹	9 ³	43 ⁰	39 ⁷	9 ⁶	16 33 ¹	13 ³
9 ⁵	25 ⁰	45 ⁸	10 ²	46 2 ⁹	26 ³	9 ⁴	55 47 ⁰	5 ⁰	9 ⁶	36 ⁶	38 ⁰
9 ⁵	27 ⁵	52 ²	10 ²	8 ⁸	48 ¹	10 ⁰	49 ⁰	7 ⁹	9 ¹	36 ⁶	47 ² 8 ⁵ G
9 ⁷	29 ⁵	58 ⁰	10 ⁰	29 ³	23 ⁶	9 ⁸	56 7 ⁵	52 ⁰	9 ⁸	17 13 ⁶	13 ¹
8 ⁶	39 ⁵	42 ⁹ 9 ⁵	9 ⁸	29 ³	39 ⁴	7 ⁸	19 ⁷	1 ⁵ 8 ⁰	10 ⁰	20 ²	2 ⁴
25pr.	+1 42 ¹	+13		+1 42 ⁰	+16		+1 41 ⁹	+18		+1 41 ⁴	+23

8521-8580.				8581-8640.				8641-8700.				8701-8760.				
mag.	19 ^h .	-37°		mag.	19 ^h .	-37°		mag.	19 ^h -20 ^h .	-37°		mag.	20 ^h .	-37°		
	m s			m s				m s				m s				
10.0	17	54.6	6.6	6.5	35	17.1	49.7	6.0 GS-	9.2	51	53.5	56.1	10.1	2	21.5	49.2
9.8	18	17.1	39.6	9.5	36	49.3	11.4		9.2		59.5	34.1	9.5		23.0	35.5
8.6		23.6	53.3	9.5	38	14.8	41.4		9.6	52	0.5	16.8	10.1		32.0	13.1
9.8		28.1	52.8	9.6		21.3	18.4		9.3		14.5	15.2	10.1	3	0.5	16.3
9.8		43.1	15.3	9.8		49.3	13.0		9.8		25.0	29.1	7.9		12.0	36.7
10.0	19	13.6	18.2	8.9		51.8	27.6		8.7	53	1.5	41.8	9.4		17.5	8.0
10.0		23.6	1.9	9.5	40	5.3	42.5		8.6		1.5	41.9	10.1		30.5	13.5
8.8		58.1	27.2	9.8		12.3	56.8		9.1		5.5	57.3	10.1		44.0	31.6
8.4	20	3.6	14.3	9.3		14.3	24.5		9.8		10.5	45.1	10.1		46.0	55.8
9.8		58.1	35.9	9.1		39.3	11.9		8.2		19.5	11.5	8.7		51.5	19.3
10.0	21	10.6	33.4	9.3		52.3	28.0		8.1		19.5	1.2	9.0		53.5	42.2
9.4		23.1	55.2	9.0	41	24.3	8.7	9.0	8.4		30.5	52.0	9.8	4	14.0	13.8
8.6		29.6	17.4	9.4		24.8	42.1		9.8		34.5	8.5	10.0		19.5	10.3
8.8		39.6	0.4	9.3		28.3	28.2		9.5		56.0	52.2	9.2		50.5	15.0
9.4	22	38.6	22.8	9.6		31.3	15.8		9.6	54	15.0	14.5	9.8	5	4.0	34.0
9.6		43.1	21.2	9.0		44.8	16.0		9.6		27.5	43.9	10.1		8.0	38.9
8.8	23	38.1	26.1	9.8	42	10.3	21.9		9.8		59.5	17.0	10.0		18.0	29.3
10.0		46.1	28.5	7.6		52.8	12.6	8.5 GS	9.5	55	3.5	43.9	8.7		19.0	12.8
9.8	24	44.6	14.2	9.6	43	10.3	28.6		9.1		9.5	6.8	9.5		26.0	52.1
8.6		59.6	53.7	8.8		22.8	48.4		7.3		19.5	52.3	10.0		29.5	47.3
9.4	25	5.1	6.1	9.3		23.3	39.9	9.5 GS-	9.6		30.5	32.7	10.0		33.5	4.2
9.8		24.6	55.2	7.6		27.8	38.8	7.0 GS-	9.4		31.6	2.5	9.6		38.7	58.0
8.5		33.6	7.8	9.2		43.8	14.2		9.8		38.6	19.9	10.0		42.5	3.2
8.6		54.6	48.0	8.3	44	28.0	58.8	7.5 GS	8.3		43.5	15.3	10.0		57.3	18.6
9.8		59.6	15.1	9.8		43.3	13.3		9.8		55.5	19.0	10.1	6	4.5	17.9
9.2	26	22.6	35.5	9.4	45	1.0	5.3		9.8	56	9.5	29.8	9.5		12.0	2.0
9.2		25.6	49.3	9.2		15.0	42.2		9.6		30.5	21.3	8.4		14.5	42.4
10.0		34.6	5.3	9.8		15.6	24.1		9.2		33.0	53.5	10.0	7	3.5	14.9
10.0		45.1	3.2	9.8		23.5	42.2		8.6		50.0	35.1	9.0		24.0	29.6
9.4		58.6	27.7	9.8	46	4.0	58.2		8.7	57	4.5	19.0	9.6		32.7	57.1
9.6	27	2.6	24.3	8.6		5.0	39.0	9.0	9.8		14.5	38.0	10.0		36.0	23.4
9.4		12.6	19.1	8.4		14.5	34.2	9.0	9.3		19.5	31.2	9.8		37.5	4.0
8.9		17.6	16.2	9.4		18.5	0.4		9.8		50.5	27.7	9.3		52.0	18.1
9.8		31.1	36.9	9.1		19.5	55.0		9.8	58	6.5	7.9	10.1		57.3	59.0
9.8		32.1	4.7	8.9		20.5	14.7		9.5		20.0	49.3	8.2	8	4.7	58.8
9.4		35.1	2.5	9.5		24.5	19.1		9.4		20.5	43.2	9.4		11.0	10.0
7.8		37.6	4.6	9.4		24.5	17.0		8.8		29.5	26.7	10.1		23.0	55.1
10.0		45.1	8.7	8.9	47	13.0	38.3	8.5	9.8		33.5	51.8	9.2		28.5	35.0
9.4	28	30.6	27.1	9.5		20.5	47.8		9.3		49.5	3.7	8.0		33.5	56.2
9.8		45.6	51.6	9.6		33.5	3.2		9.5		51.5	10.2	9.4		57.5	45.2
9.6	29	1.6	6.7	9.6		52.5	18.4		9.4		54.0	8.9	10.1		59.0	22.2
9.8		24.6	28.6	9.1	48	4.5	17.1		9.3		55.0	52.8	10.1		59.5	40.7
9.8		49.1	38.0	9.0		14.5	12.9		9.5	59	2.2	55.1	10.0	9	4.5	25.9
8.9		49.1	53.7	9.8		19.5	59.9		9.8		8.5	10.0	9.5		4.5	25.1
9.1	31	18.1	13.1	7.9		28.5	26.0		10.1		25.0	55.9	7.8		10.2	0.7
10.0		20.6	0.9	9.3		35.0	24.0		9.5		27.5	30.0	9.5		10.5	46.1
10.0		21.6	27.2	8.9		40.5	47.8		9.0		30.8	13.7	10.1		11.3	1.0
9.8		41.1	16.9	9.8		54.0	32.4		10.1		34.8	42.2	9.5		30.0	39.7
8.6		43.6	41.0	8.3	49	30.5	59.6	8.5 GW	9.5		39.5	45.9	9.5		32.0	45.7
9.8	32	11.1	33.6	9.4		32.5	3.9		9.6		52.8	7.8	9.8	10	14.5	56.9
9.4		23.6	36.5	9.0		43.0	24.1		9.5	0	29.5	25.8	9.2		20.5	56.1
9.4		30.6	26.0	9.0		51.5	6.8		9.5		50.0	54.0	9.2		29.0	38.2
9.4		31.6	56.6	7.0		59.5	1.2	7.0 GS-	10.0	1	2.0	19.9	9.8		30.5	17.5
9.4		32.0	57.2	8.8	50	10.0	24.1	9.0	10.1		10.5	14.8	10.1		42.5	57.1
10.0		44.6	21.5	8.3		12.0	47.5		9.4		22.0	18.7	10.0		45.5	37.9
7.2	33	30.6	10.5	9.8		17.5	22.1		9.4		26.5	19.8	9.8	11	11.0	27.3
10.0		51.6	20.1	9.4	51	0.5	22.4		9.6		27.0	55.3	9.4		38.0	29.2
9.4		55.8	25.6	7.0		25.5	42.8	7.0 GS	8.9		37.0	53.6	10.1		42.0	38.7
7.6	34	34.3	43.7	9.2		29.5	41.5		9.4		42.5	29.0	9.4		51.5	0.7
8.4	35	8.6	15.6	9.8		41.5	30.2		8.3		58.5	1.1	10.0	12	0.5	3.9
25pr.	+1	40.6	+3.1	+1	39.7	+3.7			+1	39.2	+4.1		+1	38.5	+4.4	

1896JanCap...3.....1G

8761-8820.			8821-8880.			8881-8940.			8941-9000.		
mag.	20 ^h	-37°	mag.	20 ^h	-37°	mag.	20 ^h	-37°	mag.	20 ^h -21 ^h	-37°
10.1	12 9.5	22.2	9.4	19 39.4	3.3	8.8	38 49.4	12.3	8.6	54 48.3	40.7 9.0
9.6	27.5	8.8	10.0	41.4	55.2	9.2	39 0.9	29.8	9.0	55 19.3	56.8
10.0	28.0	32.9	10.0	43.4	14.0	8.8	46.2	3.0 9.0 G	8.8	22.8	14.9
9.4	31.5	57.1	9.8	54.4	5.8	8.3	40 21.4	49.1 8.0 -	10.0	28.8	39.8
9.8	35.0	26.6	10.1	20 0.4	23.6	9.2	42.4	37.2	10.0	39.3	50.9
8.4	38.0	14.6 8.5	9.8	4.4	9.0	9.2	48.9	52.8	10.0	56 0.3	18.0
9.4	39.0	46.3	8.2	43.9	15.1 7.5	7.9	41 2.4	14.2 8.0	10.0	32.8	22.5
10.0	40.5	55.8	10.1	46.4	47.9	9.2	23.4	21.2	9.4	37.3	47.2
10.0	44.5	30.2	8.8	57.9	56.8	8.1	49.4	18.9 7.5 G	9.2	40.3	55.8
9.5	45.5	39.7	10.1	21 14.4	58.5	9.0	42 1.4	30.2	9.7	50.8	19.2
8.3	49.0	47.8	8.8	28.4	55.7	9.0	35.4	3.4	7.4	57 12.8	43.3 7.0 GS
10.1	13 10.5	50.0	9.2	32.9	3.2	8.8	39.4	12.9	9.4	24.8	38.6
9.2	18.0	33.3	10.1	49.9	23.8	9.2	50.9	28.0	9.7	39.8	52.9
10.1	23.0	40.1	9.4	54.3	57.8	9.0	43 5.9	31.4	9.6	42.8	34.4
9.8	33.5	18.8	9.4	22 7.4	28.2	8.7	19.4	17.4	9.2	58 13.8	50.6
7.4	34.5	0.2 7.0 G-	8.6	22.4	32.8 9.0	8.8	39.4	20.6	9.7	19.3	4.4
7.6	39.5	17.6 G	8.6	23.9	26.9 9.0	8.9	47.9	19.8	9.4	33.3	52.3
10.1	46.0	4.4	10.1	27.7	30.8	9.2	45 19.8	0.0 9.5	10.0	33.3	41.0
9.2	49.5	16.8	9.0	52.4	55.9	9.2	35.0	1.5	9.4	34.3	35.9
10.1	59.5	8.9	9.5	23 12.9	16.4	9.2	35.5	10.9	10.0	42.3	34.0
9.8	14 1.0	46.6	9.4	16.9	20.8	9.2	39.5	39.4	10.0	53.8	43.4
9.8	19.5	56.4	8.8	28.9	50.2	8.6	48.5	10.7 8.5	8.8	59.3	0.5
7.8	36.5	39.3	9.4	29.4	58.4	9.2	52.5	16.7 8.5	9.6	59.3	46.3
9.4	42.0	48.4	9.4	38.9	41.7	8.3	55.5	26.3	10.0	59 4.3	33.0
10.1	51.5	59.4	9.5	38.9	48.2	9.2	46 31.5	8.9	9.4	11.8	42.5
9.8	15 5.5	39.0	10.1	45.4	27.2	8.4	37.5	21.8 8.5	10.0	21.8	29.7
8.3	10.5	5.2 7.5 G-	9.6	24 5.4	28.7	9.2	47 9.5	8.2	10.0	22.8	14.5
10.0	23.0	24.8	10.0	15.9	40.5	8.6	23.5	33.7 9.0	8.8	23.4	0.6
8.7	29.5	53.2 8.5 -	9.4	17.9	8.0	8.8	39.5	52.7	10.0	33.8	55.7
9.5	34.4	12.1	8.6	20.4	15.4 8.5	8.1	48 29.5	48.6 8.0 -	8.8	56.3	45.9 8
8.1	40.4	53.9 8.0 -	10.1	29.4	39.9	9.2	33.5	11.6	8.0	0 14.3	32.7
9.4	9.4	28.9	9.8	43.9	29.2	9.2	44.6	58.2	9.4	44.3	49.3
8.2	41.4	23.8 7.5 G	8.4	48.9	52.2 9.0	9.2	49 4.5	10.7	6.8	48.3	44.7 7.0 GS
9.4	42.9	52.8	8.7	25 42.4	8.5 9.0	8.8	15.0	2.7	9.4	1 27.8	48.4
9.2	53.4	3.4	10.0	46.9	7.6	9.0	31.2	1.6	7.0	30.8	12.3 6.8 GS-
9.8	54.4	46.4	10.0	50.4	24.9 9.5	9.2	49.9	37.4	10.0	37.8	7.0
9.6	54.4	28.4	9.4	53.9	4.9	10.0	57.3	30.7	9.4	50.3	55.5
10.1	17 4.4	53.0	9.2	26 15.1	56.9	10.0	50 21.8	54.0	9.4	56.3	23.8
9.4	16.4	26.0	8.8	24.9	12.0 8.5	9.8	37.8	43.6	9.4	2 56.0	59.7
9.8	40.4	57.4	8.8	28 18.9	32.2 8.5	8.8	40.3	23.9 8.5	8.4	3 15.3	47.4 9.0 G
9.4	18 1.4	41.6	8.2	50.4	49.0 7.0 G-	9.7	41.3	7.8	9.4	4 9.3	23.1
9.4	5.4	30.7	9.2	30 48.4	48.8	9.7	47.3	22.4	10.0	18.3	49.3
10.0	14.4	30.3	9.0	48.9	19.4	9.2	51 9.3	37.1	10.0	5 3.3	14.8
9.4	14.9	52.4	8.8	49.4	45.0	9.8	25.4	41.9	10.0	8.8	18.2
10.0	15.9	4.2	9.2	31 9.4	50.9	9.2	32.8	47.5	9.7	45.8	30.5
8.8	18.9	30.9 8.0	8.6	15.4	11.8 8.0	8.8	52.1	30.8 9.5	9.6	46.8	33.8
9.8	19.9	56.0	9.2	53.5	0.3	9.1	59.3	12.7	10.0	6 25.8	58.8
10.1	20.3	20.6	9.2	32 3.4	28.8 G	10.0	52 8.3	28.8	10.0	29.3	42.0
9.4	21.9	7.7	9.2	11.9	21.8	8.9	18.3	20.8	10.0	50.3	48.1
9.8	44.4	49.7	9.0	40.4	47.8	10.0	19.3	20.5	9.6	51.8	36.6
6.9	45.9	48.3 6.5 GSt*	9.2	33 51.9	37.4 8.5 G	8.0	57.3	1.5 8.8 GS	8.5	55.8	39.8
10.1	51.9	29.9	9.2	35 19.9	38.1	9.0	53 4.3	7.0	10.0	7 3.3	16.1
9.4	52.9	42.9	9.2	29.4	56.8	10.0	22.3	52.8	8.6	36.3	10.5 9.0
10.1	54.9	15.9	9.0	44.4	1.5	10.0	23.3	4.7	8.9	42.3	52.8
8.8	5.9	28.3	8.6	36 19.4	11.3 8.8 G	7.7	57.3	3.8 7.0 GSt*	9.1	54.3	42.0
9.8	6.4	52.0	9.2	37 11.2	57.5	10.0	54 14.8	29.7	10.0	8 35.8	46.1
9.8	10.4	44.0	9.2	35.4	46.8	10.0	20.8	52.7	9.2	9 4.3	17.7
10.1	10.4	52.3	9.2	48.4	46.6	9.7	27.3	29.0	9.4	49.3	24.4 9.0
9.5	19.4	3.7	9.0	59.4	29.2	9.4	32.3	52.9	10.0	10 20.8	41.9
9.2	37.4	6.8	8.9	38 3.4	2.6	9.6	45.8	25.1	9.4	25.8	51.9
25Pr.	+1 38.0	+4.7		+1 37.6	+4.9		+1 35.8	+5.6		+1 35.0	+5.9

-37°

9001-9060.				9061-9120.				9121-9180.				9181-9240.			
mag.	21h.	-37°		mag.	21h.	-37°		mag.	21h.-22h.	-37°		mag.	22h.	-37°	
	m	s		m	s			m	s			m	s		
10.0	10	42.3	37.4	8.8	27	30.2	12.7 8.5 G	9.9	47	36.6	5.0	9.9	12	49.7	27.3
9.0	11	9.3	7.0	9.8		56.2	31.0	9.4		38.6	40.2	9.9		50.2	32.1
10.0		33.8	46.5	9.8	28	22.4	57.9	9.8	48	26.6	1.3	10.2	13	3.3	0.9
10.0		44.8	13.4	8.6		36.2	49.2	9.0		40.1	44.1 9.5	9.0		20.7	9.9 9.0
9.4	12	10.8	18.0	9.4		53.2	48.0	8.0		50.1	24.1 8.2	9.1		29.2	55.8
8.3		33.8	18.8 8.5	9.8	29	53.2	12.5	5.7		51.1	50.6 6.0 GStr	9.6	14	27.1	56.9
9.4		47.3	44.6	8.2	30	24.2	43.3 8.0	9.0	49	35.1	23.8	9.6	15	28.2	4.1
9.8		47.8	58.3	9.8		57.2	15.1	8.2	50	13.6	13.9 8.0 G	10.2	16	1.7	38.0
10.0	13	0.3	13.1	9.1	31	27.7	0.4	9.4	51	2.1	3.7	9.4		50.2	14.9
9.6		2.8	45.5	9.3		31.3	45.9	8.6		21.6	26.2	10.2	17	18.2	24.9
9.0		4.3	36.2	9.8		34.2	42.6 10.0	8.7	52	2.1	51.9 8.5 G-	10.0	18	8.2	15.8
8.4		6.8	11.0 8.5 -	8.8		38.8	23.1	9.2		3.2	14.8	10.0		9.7	5.6
10.0		15.3	14.7	7.8		40.3	42.0 8.2 G	8.6	53	26.2	27.4 9.0	9.9		19.2	45.1
8.8		31.8	18.0 9.0	8.2		59.3	13.2	7.3		30.2	9.2 7.0 GS-g	10.2		33.2	9.1
9.4		37.3	0.4	9.1	32	26.0	58.4	9.4	54	15.2	25.3	10.2		36.2	49.6
9.2		39.3	31.7	9.6		29.9	2.0	8.0		28.7	46.5 8.7	10.2		51.7	52.2
10.0		51.3	56.7	9.0	33	3.8	38.4 9.0	8.9		49.8	3.1	8.8		54.7	53.9 9.0 G
9.4		54.8	22.4	9.8		28.3	35.8	8.2	55	4.2	42.0 9.0	10.2	19	3.7	15.3
10.0	14	16.8	27.0	9.8		50.3	23.0	9.6		16.7	50.2	9.6		15.7	12.0
10.0		22.3	24.4	9.1		51.6	1.2	9.9		48.7	1.2	10.0		30.7	38.8
9.4		56.3	24.6	9.6	34	8.8	10.3	9.9	56	0.2	18.1	10.2		43.7	49.4
9.4	15	17.8	14.9	9.5		15.3	43.7	8.8		1.2	33.9 9.5	10.2		49.7	43.8
9.7		24.3	24.0	9.8		18.8	43.8	9.0	57	16.7	38.5	9.4		59.7	4.1 9.2 -
8.8		51.3	38.6	8.4		27.3	36.9 8.5 G	9.0		20.4	58.0 9.5	10.2	20	13.2	21.1
9.4		54.3	33.6	9.6		35.8	28.9	9.0		35.7	7.0	10.2		30.7	55.9
10.0	16	19.3	10.0	9.8		51.6	19.0	9.9		38.7	21.7	9.0		36.2	42.8 9.0
9.8		37.7	38.3	9.2	37	19.8	58.4	8.8		47.7	55.2 9.0	10.2		39.7	46.8
9.8		40.0	25.1	9.6		48.8	53.7	9.4	58	26.2	20.9	9.6	21	1.7	23.2
9.8	17	13.2	48.0	9.1	38	17.8	14.0	9.2		33.7	53.5	8.2		51.7	36.3 8.0 GS
9.6		20.2	27.0	9.0		20.3	45.2	9.9		47.2	26.3	8.8		51.7	37.1 9.0 G
9.8		37.7	36.7	9.0		26.8	20.2	9.9		48.7	59.9	8.8	22	29.7	23.9
9.6	18	1.6	10.3	9.5	39	23.8	0.2	9.8	59	28.2	43.6	9.1		39.7	6.0 9.2
9.8		20.2	21.1	9.8		31.3	3.3	9.6		29.7	54.4	10.2	23	19.7	59.6
9.8	19	13.7	32.3	9.1		36.8	59.5	9.6		39.2	22.6	10.0		39.7	5.6
9.4		25.2	43.0	9.4		53.8	27.7	9.9	0	18.2	14.6	10.0		49.7	22.4
9.0		38.7	38.9	9.8	40	1.8	18.9	9.0		47.2	13.0 9.0 G	10.2		56.7	18.8
8.4		42.2	22.6 8.0 G	9.1		31.3	46.7	9.0		1.45.2	51.1	10.2	24	32.7	8.3
9.6	20	4.2	4.2	9.5		58.7	17.1	9.9	1	16.2	15.5	10.2		44.2	52.8
9.6		27.7	57.2	9.2	41	7.3	53.9	9.9		26.2	58.4	9.2		49.7	9.7 9.5
9.8		28.7	17.3	9.4		35.7	44.5 9.0	9.9		48.2	23.6	9.8	25	41.2	32.7
9.2		33.7	32.7	9.2		53.9	29.7	9.9	4	47.2	16.7	10.2		51.2	49.0
9.5		59.7	30.2	8.9	42	1.9	16.6 8.5 G	9.9	6	9.2	4.1	10.2	26	36.7	59.9
9.4	21	5.7	18.6	9.8		17.1	0.4	10.2		23.2	47.2	9.6		37.2	3.9
7.8		8.7	56.8 7.2 G-	9.8		34.1	10.5	10.2		44.2	30.7	10.0		46.7	48.4
9.8		10.2	4.2	9.8		42.0	59.7	7.7	7	27.7	10.3 8.5	10.2		48.2	42.0
9.6		55.2	28.1	9.4		44.6	54.5	9.7	8	7.7	11.0	8.4		59.7	18.8 GW
9.2		59.2	24.1	9.2		46.1	22.4 9.2	9.7		18.7	50.1	9.2	27	45.7	24.6 9.0
6.6	23	16.2	5.6 7.5 GS	9.9		52.1	4.4	9.1		33.2	31.4 9.0	9.4		49.7	16.9
9.0		17.2	38.5	9.9		59.1	54.0	9.8		51.2	33.7	9.7	28	1.7	12.3
9.8		44.7	56.0	9.0	43	49.3	59.5 9.0 G	9.6		9.47.2	4.0	10.0		17.7	11.1
8.6	24	2.2	39.4 9.0	9.4		55.1	14.8	9.2	10	9.2	41.3	9.4		25.5	49.0
8.8		5.7	42.2 9.0	9.8	44	3.6	48.8	10.2		29.2	47.2	9.2		51.3	1.2
9.1		17.2	58.2 9.0	9.0		26.1	29.9	9.6		37.2	32.3	9.4	29	1.0	16.3
9.0		20.2	31.2	9.4		40.6	54.7 9.2 G	7.2		57.2	13.1 8.0 GS	10.2		26.0	53.8
9.3		43.2	13.1	7.6	45	42.6	28.8 7.0 GS	9.1	11	39.2	15.5 9.0	9.9		29.5	35.3
9.4		58.7	33.9	9.2		56.6	56.5	10.2		42.2	17.9	10.2		38.5	9.3
9.5	25	51.2	51.6	9.8	46	14.1	38.9	9.2		49.2	58.8	10.0		51.5	38.9
9.3	26	9.2	22.1	8.4		19.1	26.1 9.2 G	10.2	12	31.2	53.8	9.1	30	24.5	9.4 9.0 -
9.6		30.2	22.2	3.1		21.6	57.2 3.0 GSπλ	9.4		33.2	12.1	9.4		49.5	45.7 9.0
7.3		59.7	11.9 7.0 GS-	8.9	47	11.6	48.4	9.1		37.2	19.1	10.0		52.0	16.1
25pr.		+ 1 33.5	+ 6.3			+ 1 31.7	+ 6.8			+ 1 29.7	+ 7.2			+ 1 27.5	+ 7.6

9241-9290.				9291-9339.				9340-9388.				9389-9437.					
mag.	22 ^h .	-37°		mag.	22 ^h -23 ^h .	-37°		mag.	23 ^h .	-37°		mag.	23 ^h .	-37°			
	m	s			m	s			m	s			m	s			
10.2	31	3.5	8.0	10.4	53	13.7	9.7	9.0	17	30.9	23.8	9.0	10.0	34	37.2	7.2	
9.6		18.3	32.6	10.6		35.7	56.1	6.7		40.9	53.2	7.0	9.6	35	2.2	30.7	
10.2		30.5	23.3	10.0		55.2	38.1	10.2	18	26.9	38.4		10.0		5.2	3.9	
10.0		39.8	11.6	9.8	54	14.2	11.3	9.8		47.9	2.2		10.0		10.2	53.7	
7.7.		53.5	41.4	10.6		16.2	50.1	9.4		55.9	49.7		10.0		32.2	19.1	
10.6	34	56.0	39.4	9.0		36.2	25.5	8.8	19	4.9	14.1	8.5	7.3	36	31.2	28.7	
9.2		59.5	48.1	7.0	55	36.7	5.6	9.8		7.9	56.6		9.2	37	5.2	21.0	
10.2	35	27.4	9.3	8.6		58.5	9.4	9.6		14.4	55.8	9.5	9.1		39.2	48.6	
9.8		37.4	31.2	10.0	56	1.7	6.0	10.0		16.9	33.9		10.0		43.2	5.5	
7.9		37.7	59.9	8.6		3.2	46.1	9.4		56.9	11.0		9.0	39	4.2	48.9	
10.4	37	5.9	32.8	9.6		10.7	4.9	8.8	20	3.4	40.1		10.0		45.7	8.7	
10.6	38	13.5	1.2	9.2		37.0	24.9	9.2		11.2	9.5		10.0	40	1.2	17.0	
10.6		15.9	41.1	10.4		45.7	38.1	9.8	21	32.6	18.8		10.0		14.2	56.0	
9.0		30.4	46.4	10.6		50.8	21.7	10.2	22	1.2	15.7		9.2		28.0	53.7	
9.6		58.9	15.7	10.6	57	2.7	47.3	8.8		6.1	30.2		10.0		49.5	28.6	
9.8	39	54.9	41.4	10.0		3.2	33.2	10.0		19.2	11.9		10.0		57.6	6.8	
10.2	41	15.1	7.1	9.6	58	4.7	34.7	10.0		56.9	34.9		9.4	41	10.5	22.0	
9.6		41.6	32.4	8.8		20.7	37.1	9.8	23	17.1	57.3		9.1		20.5	48.8	
10.6		51.6	6.8	8.8	0	34.2	44.5	9.2		28.6	4.8	9.0	10.0		54.5	36.0	
10.6	42	27.6	46.1	8.2		49.7	9.4	10.0		41.6	17.0		10.0	42	31.0	43.0	
9.6	43	10.6	15.3	9.8		50.7	47.1	9.8		45.6	11.6		10.0		48.5	28.4	
10.6		26.0	2.1	10.0	1	20.2	47.8	7.3		51.6	38.7	7.0	10.0	44	9.5	42.6	
9.6	44	10.1	46.1	8.6	3	42.9	26.4	9.6	24	32.6	49.9		10.0		15.5	59.8	
9.2		52.1	51.1	8.8		58.4	55.5	10.0		58.6	48.0		10.0		21.5	31.0	
10.6	45	9.1	46.5	10.2	4	16.4	5.6	9.0	25	13.6	28.2	9.0	8.0		24.5	35.0	
10.6		36.6	37.4	9.8		35.9	5.1	9.2		33.1	56.8	9.5	10.0		54.5	44.3	
10.6	46	22.6	33.5	10.2	6	2.9	34.4	9.8		53.8	1.8		9.8	45	4.5	58.8	
10.6		33.6	10.7	9.2	7	10.9	0.2	9.2	26	27.6	35.4		8.8		7.0	40.7	
10.2		49.6	48.9	9.6	8	30.9	8.9	9.8		31.1	10.0	9.5	8.8		12.0	47.6	
9.8		51.6	49.4	9.8		40.9	30.2	9.1		40.6	30.3		10.0		27.5	19.2	
9.8	47	16.6	45.4	9.5	9	10.4	53.8	9.6		48.6	48.8		9.4		57.5	8.6	
9.4	48	9.7	23.2	7.6		17.9	48.1	9.4		48.6	50.2		10.0	46	43.0	7.0	
7.2		13.7	3.2	10.0		50.9	15.9	10.0		52.6	20.0		10.0	47	3.3	25.8	
9.2		26.2	11.0	10.2	10	35.4	17.5	10.0		54.6	47.1		9.8	48	39.3	37.9	
7.8	49	11.2	20.5	10.2	11	18.9	22.1	10.0	28	33.6	11.4		10.4		49.3	41.9	
10.0		20.7	45.4	9.4		23.9	4.8	10.0		51.6	33.8		10.4	49	37.3	9.8	
10.2		21.2	36.0	9.5		41.4	21.9	9.4	29	55.0	2.8		7.6	51	1.3	24.0	
10.6		50.7	24.2	9.6	12	12.9	31.1	9.8	30	7.7	23.9		7.8		27.8	47.8	
10.0		56.7	6.9	10.2		23.1	4.2	7.2		18.2	29.4	7.5	10.4	52	9.3	27.4	
10.4	50	7.2	30.7	8.1		24.9	32.5	9.8		30.2	4.9		8.0		9.3	34.3	
10.4		28.2	33.0	8.6		49.4	21.1	10.0		31.2	51.9		9.8		18.3	12.0	
9.0		51.2	12.8	9.6	15	0.9	34.9	10.0		38.2	5.3		9.4	53	24.3	7.0	
10.2	51	28.2	58.6	8.0		37.9	29.5	10.0		43.2	9.8		9.8	54	41.3	42.2	
10.6		43.7	15.8	9.4		44.9	11.2	8.8		52.7	21.0	9.0	6.8	55	30.8	55.4	
10.6		44.7	20.3	10.0	16	27.0	0.0	9.1	31	59.2	20.2	G	10.4		39.5	38.0	
10.6		49.2	33.1	10.2		30.4	24.8	10.0		33	4.2	21.9	10.2	56	45.0	55.8	
9.6		49.2	42.0	10.2		46.9	46.0	9.4		14.2	46.1		8.8	58	9.5	59.0	
10.0		59.7	7.6	9.4	17	12.9	3.6	8.8	34	22.2	56.0	G-	9.4		32.0	59.6	
9.4	52	4.0	57.0	9.6		30.4	2.4	10.0		27.7	5.1		9.8	59	21.5	28.2	
10.4		26.2	51.9														
25Pr.	+1	25.1	+7.9		+1	23.0	+8.1		+1	20.7	+8.3			+1	18.6	+8.3	