

APPENDIX I.

SEVEN-YEAR CATALOGUE

OF

2022 STARS,

DEDUCED FROM

OBSERVATIONS,

EXTENDING FROM 1854 TO 1860,

AT THE

ROYAL OBSERVATORY, GREENWICH,

AND REDUCED TO THE EPOCH

1860.

GREENWICH SEVEN-YEAR CATALOGUE FOR 1860.

b

E R R A T A.

Page.

- {xxiv} No. 196, γ Persei, Mean N.P.D. 1860, Jan. 1, *for* $37^{\circ}.3'.42''.76$ *read* $37^{\circ}.2'.42''.76$.
- {xxx} No. 303, 46 Tauri, Mean R.A. 1860, Jan. 1, *for* $4^{\text{h}}.5^{\text{m}}.57^{\text{s}}.24$ *read* $4^{\text{h}}.6^{\text{m}}.1^{\text{s}}.04$.
- {xxxii} No. 328, ν^6 Eridani, Mean N.P.D. 1860, Jan. 1, *for* $121^{\circ}.3'.8''.56$ *read* $120^{\circ}.3'.8''.56$.
- {xliv} No. 569, Star's Name, *for* Piazzi VII. 267 *read* Piazzi VII. 67.
- {xliv} No. 591, Star's Name, *for* Piazzi VII. 755 *read* Piazzi VII. 155.
- {l} No. 694, f Ursæ Majoris, Mean N.P.D. 1860, Jan. 1, *for* $37^{\circ}.49'.0''.18$ *read* $37^{\circ}.50'.0''.18$.
- {lii} No. 733, 10 Leonis Minoris, Mean N.P.D. 1860, Jan. 1, *for* $52^{\circ}.57'.59''.86$ *read* $52^{\circ}.58'.59''.86$.
- {lxii} No. 943, Star's Name, *for* Piazzi XI. 247 *read* Piazzi XI. 207.
- {lxx} No. 1117, Star's Name, *for* Piazzi XIII. 221 *read* Piazzi XIII. 228.
- {lxx} No. 1118, Star's Name, *for* Piazzi XIII. 228 *read* Piazzi XIII. 263.
- {lxxii} No. 1127, Star's Name, *for* Piazzi XIII. 299 *read* Piazzi XIII. 306.
- {lxxii} No. 1139, Star's Name, *for* Piazzi XIV. 52 *read* Piazzi XIV. 22.
- {xcvi} No. 1625, Star's Name, *for* Groombridge 2894 *read* Groombridge 2984.

INTRODUCTION
TO THE
GREENWICH SEVEN-YEAR CATALOGUE
OF
2022 STARS,
DEDUCED
FROM OBSERVATIONS,
EXTENDING FROM 1854 TO 1860,
AND REDUCED TO THE EPOCH
1860.

IN describing the process of formation of the star-places in this Catalogue, I shall commence with the formation of the Right Ascensions.

I. The determinations of Right Ascension of each star, which are to be combined in order to form the Right Ascension in this Catalogue, are those given in the Annual Catalogues printed in the successive Volumes of Greenwich Observations from 1854 to 1860. The Right Ascensions of each Annual Catalogue depend essentially upon the Right Ascensions assumed for the Stars whose transits are employed, in each year, to ascertain the errors of the Transit-Clock; it is necessary therefore, in the first place, to ascertain the amount of correction required for the assumed Right Ascensions of the Clock Stars.

The Right Ascensions of the Clock-Stars used in the years 1854 and 1855 were deduced immediately from the places in the 12-year Catalogue. Those used in the subsequent years, 1856 to 1860, were formed immediately from the places in the six-year or 1850 Catalogue. In order to refer all the places to the same catalogue, it will be necessary to compare the places for some of the stars most frequently used, as deduced from the two catalogues.

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The following are the Mean Right Ascensions for 28 stars, for 1850 January 1, as obtained from the two catalogues :—

MEAN RIGHT ASCENSIONS 1850, JANUARY 1.

—	From 12-Year Catalogue.	From 6-Year Catalogue.	Excess of 6-Year Catalogue.
	h m s	h m s	s
α Andromedæ	0. 0. 38.59	0. 0. 38.61	+ 0.02
β Ceti	0. 36. 3.44	0. 36. 3.49	+ 0.05
α Arietis	1. 58. 43.69	1. 58. 43.68	— 0.01
α Ceti	2. 54. 26.59	2. 54. 26.60	+ 0.01
η Tauri	3. 38. 34.57	3. 38. 34.57	0.00
Aldebaran	4. 27. 19.14	4. 27. 19.12	— 0.02
Rigel	5. 7. 19.88	5. 7. 19.88	0.00
β Tauri	5. 16. 48.82	5. 16. 48.82	0.00
δ Orionis	5. 24. 20.72	5. 24. 20.72	0.00
ϵ Orionis	5. 28. 36.25	5. 28. 36.24	— 0.01
α Orionis	5. 47. 3.15	5. 47. 3.15	0.00
δ Geminorum	7. 11. 9.69	7. 11. 9.66	— 0.03
Pollux	7. 36. 7.82	7. 36. 7.85	+ 0.03
α Hydræ	9. 20. 12.97	9. 20. 12.97	0.00
Regulus	10. 0. 22.74	10. 0. 22.75	+ 0.01
δ Leonis	11. 6. 7.48	11. 6. 7.49	+ 0.01
β Leonis	11. 41. 24.28	11. 41. 24.34	+ 0.06
Spica	13. 17. 17.80	13. 17. 17.81	+ 0.01
η Boötis	13. 47. 32.55	13. 47. 32.57	+ 0.02
β Libræ	15. 8. 56.49	15. 8. 56.46	— 0.03
α Coronæ	15. 28. 20.29	15. 28. 20.32	+ 0.03
δ Ophiuchi	16. 6. 29.35	16. 6. 29.35	0.00
α Ophiuchi	17. 27. 58.38	17. 27. 58.40	+ 0.02
γ Aquilæ	19. 39. 7.69	19. 39. 7.67	— 0.02
α Aquilæ	19. 43. 27.81	19. 43. 27.85	+ 0.04
ζ Cygni	21. 6. 33.25	21. 6. 33.27	+ 0.02
ζ Pegasi	22. 33. 58.90	22. 33. 58.93	+ 0.03
α Pegasi	22. 57. 17.53	22. 57. 17.53	0.00
		Mean	+ 0.009

It appears therefore that the assumed Right Ascensions of the Clock Stars used in 1854 and 1855 ought to be increased by 0^s.009 to make them such as would have been used if the 6-year Catalogue had been employed; and the same correction +0^s.009 is to be applied to all Right Ascensions obtained in 1854 and 1855 to make them such as would have been obtained if the 6-year Catalogue had been employed. But the Right Ascensions obtained in the years 1856 to 1860 are already referred to the 6-year Catalogue.

Now it appears from the discussion of the observations for the Position of the Ecliptic, in the several volumes of Greenwich Observations, that the Right Ascensions of the Clock-stars used in those volumes require the following corrections :—

In 1854.....	+0.061
1855.....	—0.011
1856.....	—0.068
1857.....	—0.016
1858.....	—0.025
1859.....	+0.044
1860.....	—0.019

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But, as is stated above, the Clock-star Right Ascensions used in 1854 and 1855 are less than those of the 6-year Catalogue by $0^s.009$. Hence we find the following corrections to the Right Ascensions of the 6-year Catalogue as deduced from the several years :—

In 1854.....	+0.052
1855.....	—0.020
1856.....	—0.068
1857.....	—0.016
1858.....	—0.025
1859.....	+0.044
1860.....	—0.019

The mean of these is $-0^s.007$, which may be considered as the correction to the 6-year Catalogue. And, as the Right Ascensions of the 12-year Catalogue require the addition of $+0^s.009$ to bring them up to those of the 6-year Catalogue, the general correction required to the 12-year Catalogue is $+0^s.002$.

Hence, confining ourselves to the second place of decimals, the corrections to be applied to all deduced Right Ascensions are,—

In 1854 and 1855.....	0.00
From 1856 to 1860	—0.01

The following is the actual process by which the Right Ascensions of this Catalogue were formed. It differs slightly according as the Annual Variations were or were not taken from the Nautical Almanac.

(A.) For stars of the Nautical Almanac List, whose variations include Proper Motions, and whose daily places in the Nautical Almanac are formed from the mean places by the use of those Proper Motions in combination with Geometrical Precession; the mean places in each Greenwich volume inferred from the daily apparent places, by use of the Nautical Almanac corrections, do include all corrections for Proper Motion during the fractions of the year. And consequently those mean places are fit for immediate combination, provided that, in bringing them up to the epoch 1860, Annual Variations including Proper Motions be employed. Each Annual Variation therefore was formed by the combination of Geometrical Precession computed from Peters's elements with Main's Proper Motion, or with that of the British Association Catalogue, and was multiplied by 6, 5, 4, 3, 2, 1, 0, according as the year of the annual catalogue was 1854, 1855, 1856, 1857, 1858, 1859, or 1860, and the product was added to the R.A. in the annual catalogue (corrected as has been mentioned). A series of determinations for 1860 being thus obtained, their mean was taken by combining them with weights proportional to the number of observations; and this mean is the Adopted Right Ascension 1860 of the Catalogue. The fraction of year in each annual catalogue was added to the numeral of the year; their mean was taken in the same way; and this is the Mean Year of the Catalogue.

(B.) For stars not included in the Nautical Almanac List, but whose proper motions are supposed to be known, another correction is necessary. Here, the mean places in each Greenwich volume are inferred from the daily places by use of the formula

$Ee + Ff + Gg + Hh + L + l - 300^s.000$, which gives the effect of Aberration and Nutation combined with Geometrical Precession for the fraction of the year, but without any effect of Proper Motion. Consequently, the mean places in each Greenwich volume require the application, with changed sign, of the Proper Motion corresponding to the fraction of the year; and then they are fit to be combined in the same manner as the places of the Nautical Almanac Stars, requiring, in the same manner, an Annual Variation composed of Geometrical Precession and Proper Motion.

The Geometrical Precession in R.A. which has been used here is computed by the formula $3^s.072 + [\text{number, log.} = 0.12614] \times \sin \text{R.A.} \times \cotan \text{N.P.D.}$ The Proper Motions are taken from Mr. Main's papers, Memoirs of the Royal Astronomical Society, Volumes XIX. and XXVIII. Failing that authority, they are taken from the Catalogue of the British Association.

The small correction here described, peculiar to stars which have Proper Motion but are not included in the Nautical Almanac List, was neglected in the Twelve-year and Six-year Catalogues.

II. Before entering upon the combination of the annual determinations of the N.P.D. of each star, it appeared desirable to consider the corrections applied in different years, for the discordance between the results of direct observations and observations by reflexion which is usually indicated by the symbol $R - D$. And, as anterior to all other investigations, I will express my deliberate opinion that no part of the discordance is due to the circular instrument itself. The construction of the Mural Circle made flexure of the telescope almost impossible; and the care given to the graduation, and the number of reading-microscopes, make it exceedingly improbable that systematic discordances could arise from errors of division. In the Transit-Circle, the errors of division and the horizontal flexure of the telescope have been severely examined, and the corresponding corrections are applied to every observation. The effect of convergence of verticals upon the position of the surface of the quicksilver has usually been neglected; but, considered as due solely to the general form of the earth, it could never produce the effect $0''.1$ on the reflexion-observations.

The course which has been uniformly followed in the annual reductions is the following:—A nominal assumed colatitude has been added to the star's observed zenith-distance (which, for circumpolar stars, has a negative sign), and thus its N.P.D. has been formed. The N.P.D. given by reflexion-observations has been compared with the N.P.D. given by direct observations, and thus $R - D$ is formed. Half this quantity (or rather half the quantity found from a formula which on the whole represents $R - D$) has been added to the D result and subtracted from the R result, and the adopted N.P.D. are thus obtained: each is evidently the same (accidental errors excepted) as $\frac{R + D}{2}$. The adopted N.P.D. above pole and below pole are compared, and a correction to the N.P.D. depending on polar error, or a correction to the nominal assumed colatitude, is found.

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As the D and R observations are, by the nature of the process, made to give the same result (accidental errors excepted) we may consider the D observations alone. Let c be the correction $\frac{R-D}{2}$ which has been applied to the D observations of close circumpolar stars. Then the process stated above may be described thus. The N.P.D. from D observation = Observed Z.D. (as taken purely from the Circle) + Nominal assumed colatitude + c = Observed Z.D. + (Nom. ass. colat. + c). It is seen here that, if we consider the Circle D observations to be entirely without fault, we are in fact reducing them with a Real assumed colatitude = Nom. ass. colat. + c ; and when we come to discuss the results of circumpolar stars above pole and below pole for correction of colatitude, we shall in fact find the correction which is applicable, not to the Nominal assumed colatitude, but to the Real assumed colatitude = Nominal assumed colatitude + c ; always supposing that the Circle D observations are free from defect.

This being premised, I shall collect from the volumes of Observations the different numbers here concerned. I shall divide them into three groups, the first ending with 1841 and the last beginning with 1851, for reasons which will shortly appear; and I shall omit the years 1849 and 1850, because the Mural Circle was then mounted on a temporary support in a wooden shed. The numbers in the following table suppose that the Circle D observations are free from defect.

Year.	Nominal assumed Colatitude.	Correction c for Circumpolar Stars.	Real assumed Colatitude.	Correction found from Observations of Circum- polar Stars.	Apparent resulting Colatitude.
	° ' "	"	° ' "	"	° ' "
1836	38. 31. 21'00	— 0'44	38. 31. 20'56	+ 0'93	38. 31. 21'49
1837	21'00	— 0'40	20'60	+ 0'77	21'37
1838	21'93	— 0'28	21'65	— 0'27	21'38
1839	21'00	— 0'05	20'95	+ 0'67	21'62
1840	21'00	0'00	21'00	+ 0'80	21'80
1841	21'00	0'00	21'00	+ 0'78	21'78
1842	21'00	0'00	21'00	+ 0'95	21'95
1843	21'00	0'00	21'00	+ 0'60	21'60
1844	21'80	0'00	21'80	+ 0'12	21'92
1845	21'80	0'00	21'80	— 0'07	21'73
1846	21'80	0'00	21'80	— 0'13	21'67
1847	21'80	0'00	21'80	+ 0'19	21'99
1848	21'80	0'00	21'80	+ 0'17	21'97
1851	21'80	+ 0'25	22'05	+ 0'15	22'20
1852	21'80	+ 0'25	22'05	+ 0'14	22'19
1853	21'80	+ 0'12	21'92	+ 0'26	22'18
1854	21'80	+ 0'18	21'98	+ 0'30	22'28
1855	22'00	+ 0'15	22'15	— 0'09	22'06
1856	22'00	+ 0'22	22'22	— 0'17	22'05
1857	22'00	+ 0'22	22'22	— 0'20	22'02
1858	22'00	+ 0'22	22'22	— 0'24	21'98
1859	22'00	+ 0'52	22'52	— 0'44	22'08
1860	22'00	+ 0'21	22'21	0'00	22'21

It must be remarked that in the years 1836–1839 two Mural Circles were employed, and care has been used in combining their results. It is also to be observed that the observations 1851–1860 were made in a locality south by $0''.05$ of that in which the former observations were made, and therefore $0''.05$ must be subtracted from the last determination of colatitude to make it comparable with the others.

Now, first, taking the mean for each group, we have the following results, on the supposition that the Circle D observations require no correction:—

Period.	True resulting Colatitude.
	° ' "
1836–1841.....	38. 31. 21.57
1842–1848.....	21.83
1851–1860.....	22.08

The discordance of these is greater than can be well tolerated; at the same time, the order of progression of the results cannot fail to attract attention.

Secondly, let us examine the effect of applying to the Circle D observations the correction c or $\frac{R-D}{2}$. The means of the values of c for close circumpolar stars are:—

Period.	Value of c .
1836–1841.....	— 0.20
1842–1848.....	0.00
1851–1860.....	+ 0.23

A + value here denotes that the N.P.D. resulting from the observations will be algebraically increased; and, therefore, that the numerical magnitude of N.P.D. resulting from observations above pole will be increased, and the numerical magnitude of N.P.D. resulting from observations below pole will be diminished; and, therefore, that the result of the application of this quantity to the Circle D observations will be that the assumed colatitude ought to be diminished by that amount. Therefore, changing the sign of c in each case, we find the following values of colatitude, on the supposition that Circle D observations are to be corrected by the application of $\frac{R-D}{2}$:—

Period.	Formation of Colatitude.	Deduced Colatitude.
	° ' " "	° ' "
1836–1841.....	38. 31. 21.57 + 0.20.....	38. 31. 21.77
1842–1848.....	21.83	21.83
1851–1860.....	22.08 — 0.23.....	21.85

The accord now is sufficiently close. It would have been a little more perfect if c had been increased by $\frac{1}{2}$ part, that is, if we had applied $\frac{3}{2}(R-D)$; but the difference is not worth considering.

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Thirdly, let us examine the effect of supposing that the R observations require no correction. This will be done by applying to the D observations the correction $R-D$, or $2 \frac{R-D}{2}$, or $2c$. Thus, we find the following results:—

Period.	Formation of Colatitude.	Deduced Colatitude.
	° ' " "	° ' "
1836-1841.....	38. 31. 21.57 + 0.40.....	38. 31. 21.97
1842-1848.....	21.83	21.83
1851-1860.....	22.08 — 0.46.....	21.62

The agreement of these is not sufficiently close; and the discordance is progressive.

The change in the position of the reflecting surface, arising from the convergence of verticals, is sensibly the same in all the cases compared, and does not affect the comparison; but it causes the colatitude to appear too small; the effect, however, on the mean will never exceed $0''.04$.

It appears from the examination of the results of these three principles of reduction that the correction $\frac{1}{2}(R-D)$ or $\frac{3}{5}(R-D)$ is a real correction, founded upon some physical cause. And a suggestion may be offered as to the nature of the physical cause.

From 1836 to the later months of 1842, the entire opening of the shutters of the Circle Room was about 2 feet; but Mr. Pond had found this entire opening to be inconvenient for reflexion-observations, and he had fitted the shutters with subsidiary shutters, leaving an opening of about 6 in. or less. The consequence of this was, that the full opening was never practically used; and it may be understood that all the observations in the first period were made with an opening of 6 inches.

Near the end of 1842, I removed the small shutters, and so arranged the large shutters that their whole opening was necessarily used. Therefore, in the second period, the opening was about 2 feet.

In the third period, the observations were made solely with the Transit-Circle, and the room for the Transit-Circle is so constructed that the opening of the shutters is necessarily 3 feet, and that a greater length of shutter is opened at once. The dimensions of the room were also altered, and the collimation piers were introduced.

Therefore, we have these corresponding quantities,—

Shutter- opening.	Value of c for Circumpolar Stars.
ft. in.	"
0 6.....	— 0.20
2 0.....	0.00
3 0.....	+ 0.24

The comparison of these seems to render it extremely probable that the origin of the discordance expressed by $R-D$ lies in some conformation of the warmer and cooler strata of the atmosphere in the immediate neighbourhood of the Circle.

The whole investigation appears to indicate the great advantage of maintaining reflexion-observations of stars.

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GREENWICH SEVEN-YEAR CATALOGUE OF STARS FOR 1860.

As regards the formation of the present Catalogue, it is evident that the numbers of the Annual Catalogues, having already received the correction $\frac{R-D}{2}$ to D observations or $-\frac{R-D}{2}$ to R observations, are to be combined without further modification.

For explanation of the formation of the Adopted North Polar Distance, 1860, of the Catalogue, the description of the process for Right Ascension (above), with the division into classes (A) and (B), applies throughout, with no difference, except in the formula for Geometrical Precession. Here the formula is, $-20''.056 \times \cos R.A.$

I now proceed to explain the separate columns of the printed Catalogue. The formulæ by which the various numbers have been prepared will be described under these explanations.

The "No." is the ordinal number of this Catalogue, the stars being arranged in the order of R. A. 1860.

The "Magnitude" is taken from the *Uranometria Nova* of Argelander, in preference to all other authorities. The magnitudes derived thence are distinguished by asterisks. When the magnitudes are not to be found in that work, they are taken in the order of preference from the British Association Catalogue of 8377 stars; Lalande's Catalogue, published by the British Association; Lalande's Catalogue by Fedorenko; Weisse's *Catalogus Stellarum ex Zonis Regiomontanis*.

If these authorities fail, the magnitudes are taken from other works, or from the Greenwich Observations. The works really used are specified in the notes on the left-hand page.

The "Star's Name" is taken from one of the following authorities, the order of preference being the order of mention of the authority, below:—

1. Flamsteed's constellation-No. and constellation, with Bayer's letter; taken from Baily's edition of Flamsteed. When the description thus found differs from that in the British Association Catalogue, the difference is mentioned in the notes.
2. The No. in Bessel's *Fundamenta*, &c., deduced from Bradley's observations.
3. The hour and No. in Piazzini's Catalogue, edition 1814.
4. The No. in Groombridge's Catalogue.
5. The No. in Baily's edition of Flamsteed's Catalogue.
6. The No. in Santini's Catalogue of 1,677 stars (Mem. R. Ast. Soc. vol. xii.).
7. The hour and No. in Weisse's Catalogue of the stars in Bessel's Zones.
8. The No. in Lalande's Catalogue published by the British Association, or in that edited by Fedorenko.
9. The No. in Lacaille's Catalogue of southern stars published by the British Association.
10. The No. in Rümker's Catalogue of 12,000 stars.
11. The No. in Oeltzen's Catalogue of Argelander's Zone Observations.
12. The No. in the Radcliffe Catalogue.
13. The No. in the Red Hill Catalogue.
14. The No. in the Greenwich Catalogues; or in the British Association Catalogue; or in the First Cambridge Catalogue.

The formation of the "Mean Right Ascension 1860, Jan. 1," has been fully described, as also that of the "Mean Year and Fraction of Year." The computations were made singly, but carefully examined.

The "Number of Observations" gives the aggregate number of all the observations in the different years, which are combined to form the Mean Right Ascension last mentioned.

The "Annual Precession in R.A." is computed by the formula $3^{\text{h}}07^{\text{m}}20^{\text{s}} + [\text{number log.} = 0.12614] \times \text{log. sin R. A.} \times \text{log. cotan N.P.D.}$. The R. A. and N. P. D. are taken for 1860. The calculations were made singly, but were carefully examined; and log. (precession + 25) was compared with the corresponding quantity found in previous years.

The "Secular Variation of Precession in R.A." consists of two parts; one, which is due to the change in the star's place, and which was properly exhibited in the Twelve-year and Six-year Catalogues; the other, which arises from the change in the numerical coefficients, and which had been neglected as insignificant, but whose importance was indicated to me by Don F. de P. Marqua.

The formula for the first part, as exhibited in the introductions to the 12-year and 6-year Catalogues, is $1500 n^2 \sin 1'' \times a b + 1500 n \sin 1'' \times P d$, where $a = \frac{1}{15} \cdot \cos \text{R. A. cosec N.P.D.}$, $b = \frac{1}{15} \sin \text{R. A. cosec N.P.D.}$, $d = \frac{1}{15} \cos \text{R. A. cotan N.P.D.}$, $n = 20.0556$, $P = \text{precession in R. A. in seconds of time, found above.}$ The numerical expression is $[\text{number, log.} = 0.4661] \times a b + [\text{number, log.} = 9.1639] \times P d$. The unit of the result is one second of time.

For the second part, assuming the formula for precession in R.A. to be

$$\begin{aligned} & \frac{1}{15} \left\{ 46^{\text{s}}.0795 + 0^{\text{s}}.0002849 t \right\} \\ & + \frac{1}{15} \left\{ 20^{\text{s}}.0556 - 0^{\text{s}}.0000863 t \right\} \times \sin \text{R.A.} \times \cot \text{N.P.D.} \end{aligned}$$

where t is the number of years from 1860; the second part of the secular variation of precession in R.A. is

$$\begin{aligned} & \frac{0.02849}{15} - \frac{0.00863}{15} \times \left(\frac{P}{1.337} - \frac{3.072}{1.337} \right), \\ & = - [\text{number log.} = 6.6338] \times P + 0.00322. \end{aligned}$$

in which also the unit is one second of time.

As the logarithms of a , b , c or P , and d , are computed in the preparation of the Constants for Reduction to be mentioned shortly, the calculation of the secular variations is sufficiently easy. The computations were made singly, and examined.

The "Annual Proper Motion in R.A." has been taken from Mr. Main's papers in the Memoirs of the Royal Astronomical Society, Volumes XIX. and XXVIII., in preference to other authority. When not given by Mr. Main, they have been taken from the British Association Catalogue.

The quantities "log. e, log. f, log. g, log. h, l," are computed by the formulæ,—

$$e = 1.2 + \frac{1}{15} \cos \text{R.A. cosec N.P.D.};$$

$$f = 1.2 + \frac{1}{15} \sin \text{R.A. cosec N.P.D.};$$

$$g = 25 + 3.0720 + 1.3370 \sin \text{R.A. cotan N.P.D.};$$

$$h = 1.2 + \frac{1}{15} \cos \text{R.A. cotan N.P.D.};$$

$$l = 210.00 - 25 \times e - 25 \times f - 1.2 \times g - 25 \times h;$$

and, when combined with the numbers E, F, G, H, L, now published in the Nautical Almanac, by the formula,

$$Ee + Ff + Gg + Hh + L + l - 300.00$$

give the correction from Mean R.A. to Apparent R.A. in seconds of time. The numbers E, F, G, H, L are in all cases positive. The numbers e, f, g, h, l are positive, except for a very few stars within $3^{\circ} 10'$ of the pole; for these instances the constants are not printed in the columns, but are inserted in the notes below. The numbers were computed singly, but carefully examined and compared with previous calculations (as numbers, from elements sensibly the same, but calculated with star-places corresponding to other years, had in all cases been computed before).

The process for forming the "Mean North Polar Distance 1860, Jan. 1," has been explained. The numbers were computed singly, and carefully examined.

The "Mean Year and Fraction of Year" has been explained.

The "Number of Observations" is the aggregate of all the numbers of observations combined to form the Mean N.P.D.

The "Annual Precession in N.P.D." is formed from the expression $-20''.056 \times \cos \text{R.A.}$

The "Secular Variation of Precession in N.P.D.," like that in R.A., consists of two parts. One arises from the change in the star's place; its value, as investigated in the introductions to the 12-year and 6-year catalogues, is

$$1500 \cdot n \cdot \sin 1'' \times P d';$$

where $n = 20.056$, P = precession in R.A. expressed in seconds of arc, and d' (computed in the formation of h' to be mentioned shortly) $= \sin \text{R.A.}$

The other part arises from the secular variation of the coefficient. The entire formula for precession being

$$(-20''.0556 + 0''.0000863 \cdot t) \cdot \cos \text{R.A.},$$

where t is the number of years after 1800; the secular variation from change of the coefficient is

$$\begin{aligned} &+ 0''.00863 \times \cos \text{R.A.}, \\ &= -\frac{0.00863}{20.056} c'; \end{aligned}$$

(where it is to be remarked that c' is computed in the formation of g' , to be mentioned shortly); and the whole expression for Secular Variation of Precession in N.P.D. is, in seconds of arc,

$$1500 \times 20.056 \times \sin 1'' \times P d' - \frac{0.00863}{20.056} \times c',$$

$$= [\text{number, log.} = 9.1639] \times P d' - [\text{number, log.} = 6.6338] \times c'.$$

These numbers have been calculated and examined.

The “log. c' , log. f' , log. g' , log. h' , l' ,” are computed by the formulæ,

$$\begin{aligned} e &= 1.2 - \tan \text{obliquity} \cdot \sin \text{N.P.D.} + \sin \text{R.A.} \cdot \cos \text{N.P.D.}; \\ f' &= 1.2 + \cos \text{R.A.} \cdot \cos \text{N.P.D.}; \\ g' &= 25 - 20.056 \cdot \cos \text{R.A.}; \\ h' &= 1.2 + \sin \text{R.A.}; \\ l' &= 210.00 - 25 \times e' - 25 \times f' - 1.2 \times g' - 25 \times h'. \end{aligned}$$

By use of these numbers in the formula $E e' + F f' + G g' + H h' + L + l' - 300.00$, the correction from Mean N.P.D. to Apparent N.P.D. is found in seconds of arc. The numbers e' , f' , g' , h' , l' , are in all cases positive. The calculations have been made singly, but have been carefully examined, and have been compared with previous calculations.

The remaining columns contain references to other Catalogues of Stars. In deciding among the great number of excellent catalogues now in existence, upon those to be mentioned here, I have been guided principally by the consideration that the main purpose in the collation of the different catalogues will probably be the examination into Proper Motions; and I have therefore taken none but original catalogues not later than 1830. The titles and places of publication of those adopted are as follows:—

- LACAILLE.—A Catalogue of 9,766 Stars in the Southern Hemisphere, for the beginning of the year 1850, from Observations made at the Cape of Good Hope, in the years 1751 and 1752. London, 1847.
- BESSEL'S BRADLEY.—Fundamenta Astronomiæ pro anno MDCCLV., deducta ex Observationibus viri incomparabilis James Bradley, in Specula Astronomica Grenovicensi, per annos 1750–1762 institutis. Regiomonti, 1818.
- FEDORENKO'S LALANDE.—Positions Moyennes pour l'Epoque 1790.0 des Étoiles Circumpolaires dont les Observations ont été publiées par Jérôme Lalande, dans les Mémoires de l'Académie de Paris de 1789 et 1790. St. Petersburg, 1854.
- BRITISH ASSOCIATION LALANDE.—A Catalogue of those Stars in the Histoire Céleste Française of Jérôme De Lalande, for which Tables of Reduction to the Epoch 1800 have been published by Professor Schumacher. London, 1847.
- GROOMBRIDGE.—A Catalogue of Circumpolar Stars, deduced from the Observations of Stephen Groombridge, Esq., F.R.S., S.R.A., Nap. Fellow of the Royal Astronomical Society of London, &c., reduced to January 1, 1810. Edited by George Biddell Airy, Esq., A.M., Astronomer Royal. London, 1838.
- PIAZZI.—Præcipuarum Stellarum inerrantium Positiones Mediæ ineunte Sæculo XIX., ex Observationibus habitis in Specula Panormitana. Ab anno 1792 ad annum 1813. Panormi, 1814.

- SCHWERD.—Beobachtungen von Circumpolarsternen in Mittleren Positionen, 1828·0. Von Wilhelm Oeltzen, Assistenten der Kaiserlich-Königlichen Sternwarte zu Wien. Aus dem X. Bde der denkschriften der Mathem.-Naturw.-Classe der K. Akademie der Wissenschaften besonders abgedruckt. Wien, 1856.
- ARGELANDER.—DLX. Stellarum Fixarum Positiones Mediæ ineunte anno 1830. Helsingforsia, 1835.
- POND.—A Catalogue of 1,112 Stars, reduced from Observations made at the Royal Observatory at Greenwich, from the Years 1816 to 1833. London, 1833.
- AIRY.—A Catalogue of 726 Stars, deduced from the Observations made at the Cambridge Observatory, from 1828 to 1835; reduced to January 1, 1830: called the FIRST CAMBRIDGE CATALOGUE. Memoirs of the Royal Astronomical Society of London, vol. xi., page 21.
- JOHNSON.—A Catalogue of 606 Principal Fixed Stars in the Southern Hemisphere: deduced from Observations made at the Observatory, St. Helena, from November 1829 to April 1833. London, 1835.
- FALLOWS.—Results of the Observations made by the Rev. Fearon Fallows, at the Cape of Good Hope, in the years 1829, 1830, 1831. Reduced under the superintendence of G. B. Airy, Esq., Astronomer Royal. Memoirs of the Royal Astronomical Society of London, vol. xix., page 1.
- STRUVE.—Stellarum Fixarum imprimis duplicium et multiplicum Positiones Mediæ pro Epocha 1830·0, deductæ ex Observationibus Meridianis annis 1822 ad 1843 in Specula Dorpatensi institutis. Petropoli, 1852.
- WEISSE'S BESSEL.—Positiones Mediæ Stellarum Fixarum in Zonis Regiomontanis a Besselio inter -15° et $+15^{\circ}$ declinationis observatarum, ad annum 1825 reductæ. Petropoli, 1846.
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GREENWICH
SEVEN-YEAR CATALOGUE OF STARS,
FOR
1860;
FROM OBSERVATIONS
MADE AT THE
ROYAL OBSERVATORY, GREENWICH,
1854 to 1860.

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATIONS

[illegible]

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8377 Stars; from the Catalogue of Lalande published by the British Association; from Weiss's *Catalogus Stellarum ex Zonis Regionumantis*; or, for the variable stars, from the *Notes on Short-Periodic Observations, 1854 and 1856*. The authorities for any remaining magnitudes are given in the Notes.

No.	Star's Name.	Mean Right Ascension, 1845 to 1850.	Mean Year and Fraction of Year.	Number of Observations.	Annual Precession for 100 Years, in Elements.	Secular Variation of Precession in R.A.	Annual Proper Motion in R.A., from R.A.C.	Logarithms of					Value of	Mean North Polar Distance, from 1845 to 1850.	Mean Year and Fraction of Year.	Number of Observations.	Annual Precession for 100 Years, in Elements.	Secular Variation of Precession in P.R.D.	Annual Proper Motion in P.R.D., from Main or R.A.C.	Logarithms of					Value of	No. in Bessel's Catalogue, 1755.	No. in Lalande or Ptolemaic (or other) Catalogue (R.A. 1845).	Hour and No. in Fixed Stars.	No. in Weisse's Recens.	No. in Argelander.	No. in Piazzi's Atlas.	No. in Flamsteed's Catalogue.	No. in Bessel's Catalogue.	No. in Struve.	No.
								e	f	g	h	i						e'	f'	g'	h'	i'													
81	54° 34' Piscium.....	1. 5. 56.03	1859	3	3.308	+0.0168	+0.005	0.10353	0.08641	1.45037	0.08767	83.364	69. 42. 38.59	1859	3	-19.28	+0.1757	+0.001	934.866	99.7583	0.75735	0.16891	123.751	150	2120 (B.A.)	1	6	..	..	34	..	..	81		
82	54° 36' Piscium.....	1. 6. 4. 25.18	1859	3	3.148	+0.0090	+0.006	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 57.91	1859	3	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17195	118.691	150	2187 (B.A.)	16	..	75	31	..	..	..	96	82	
83	54° 38' Piscium.....	1. 6. 4. 36.59	1859	8	3.148	+0.0090	+0.007	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1859	8	-19.28	+0.138	+0.007	990.842	0.03582	0.76195	0.17197	118.683	159	2189 (B.A.)	17	..	77	..	..	..	..	..	83	
84	54° 40' Piscium.....	1. 6. 4. 46.59	1859	6	3.185	+0.0090	+0.007	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1859	6	-19.28	+0.138	+0.007	990.842	0.03582	0.76195	0.17197	118.683	159	2189 (B.A.)	17	..	77	..	..	..	..	..	84	
85	38 Ceti.....	1. 7. 40. 38.13	1853	3	3.086	+0.0047	+0.006	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1853	3	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	85	
86	54° 38 Ceti.....	1. 8. 30.5	1857	380	3.066	+0.0047	+0.005	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1857	380	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	86	
87	40 Ceti.....	1. 9. 49.05	1859	3	3.051	+0.0047	+0.004	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1859	3	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	87	
88	40 Ceti.....	1. 9. 49.05	1859	3	3.051	+0.0047	+0.004	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1859	3	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	88	
89	W.B. L. 266.....	1. 11. 48.18	1854	75	3.057	+0.0047	+0.004	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1854	75	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	89	
90	54° 48 Andromedae.....	1. 1. 4. 6.87	1859	5	3.044	+0.0047	+0.005	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1859	5	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	90	
91	54° 38 Castelle.....	1. 1. 16. 4.36	1860	3	3.044	+0.0047	+0.005	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1860	3	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	91	
92	45 Ceti.....	1. 1. 17. 1.53	1859	69	3.003	+0.0018	+0.002	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1859	69	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	92	
93	6 Piazzi I. 69.....	1. 1. 18. 5.56	1860	3	3.045	+0.0018	+0.002	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1860	3	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	93	
94	93 Piscium.....	1. 1. 18. 7.39	1857	6	3.044	+0.0018	+0.002	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1857	6	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	94	
95	54 Piscium.....	1. 1. 19. 8.34	1857	6	3.044	+0.0018	+0.002	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1857	6	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	95	
96	54° 38 Piscium.....	1. 8. 21. 5.13	1858	8	3.125	+0.0094	+0.009	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1858	8	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	96	
97	.....	1. 8. 21. 5.13	1858	8	3.125	+0.0094	+0.009	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1858	8	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	97	
98	.....	1. 8. 21. 5.13	1858	8	3.125	+0.0094	+0.009	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1858	8	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	98	
99	.....	1. 8. 21. 5.13	1858	8	3.125	+0.0094	+0.009	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1858	8	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	99	
100	W.B. I. 400.....	1. 8. 21. 5.13	1858	4	3.090	+0.0073	..	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1858	4	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	100	
101	43° 59 Piscium.....	1. 13. 5. 5.97	1857	76	3.097	+0.0041	+0.004	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1857	76	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	101	
102	6° 18 B. A. C. 488.....	1. 24. 5. 5.97	1856	1	4.636	+0.0181	+0.001	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	1	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	102	
103	40 Castelle.....	1. 27. 24. 5.97	1856	1	4.636	+0.0181	+0.001	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	1	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	103	
104	101 Piscium.....	1. 28. 17. 5.97	1856	7	3.127	+0.0138	+0.004	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	7	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	104	
105	6 Piazzi I. 120.....	1. 28. 10. 5.97	1856	6	3.127	+0.0138	+0.004	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	6	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	105	
106	6° 18 B. A. C. 488.....	1. 29. 0. 5.97	1856	4	3.039	+0.0121	..	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	4	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	106	
107	6° 18 Bradley.....	1. 29. 40. 5.97	1856	11	3.175	+0.0121	+0.007	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	11	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	107	
108	6° 18 Castelle.....	1. 30. 13. 5.97	1856	1	3.175	+0.0121	+0.007	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	1	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	108	
109	6° 18 Castelle.....	1. 32. 7. 5.97	1856	8	3.219	+0.0150	+0.006	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	8	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	109	
110	6° 18 Piscium.....	1. 32. 7. 5.97	1856	8	3.219	+0.0150	+0.006	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	8	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	110	
111	6 Piazzi I. 120.....	1. 33. 16. 5.97	1856	8	3.219	+0.0150	+0.006	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1856	8	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	111	
112	54° 38 Piscium.....	1. 34. 8. 5.97	1857	61	3.147	+0.0090	+0.004	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1857	61	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	112	
113	54° 38 Piscium.....	1. 34. 54. 5.97	1859	5	3.161	+0.0076	+0.001	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1859	5	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)	15	..	104	35	..	..	..	..	113	
114	54° 38 Piscium.....	1. 35. 49. 5.97	1859	3	3.161	+0.0076	+0.001	0.10187	0.08507	1.44983	0.08194	83.999	81. 9. 47.14	1859	3	-19.28	+0.138	+0.007	990.842	0.03582	0.76194	0.17197	118.683	165	2126 (B.A.)										

94, 95. The right ascensions of these stars given in Lalande are 1^m too great

† For No. 84, $\log u = 0.52360$, $\log f = 0.00045$; $\log \sigma = 0.50000$. †† Identical with Laeille 500.

† For No. 86, $\log. e = 0.57313$, $\log. f = 0.29620$, $\log. g = 1.64015$, $\log. h = 0.57303$, $l = -78.2$.

10S. Bradley has no N.P.D.

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the *Index of Professional Observations* of the 8377 Stars; from the Catalogue of Lalande published by the British Association; from Weiss's *Catalogus Stellarum ex Zonis Regionemantis*; or, for the variable stars, from Mr. Pearson's lists in the "Radcliffe Observations, 1854 and 1856." The authorities for any remaining magnitudes are given in the Notes.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 0. Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion in R.A., for 100 Years. Elements.	Secular Variation of Precession in R.A.	Annual Proper Motion in R.A., from Greenwich, 1854 to 1860.	Logarithms of				Mean North Polar Distance, 1860, Jan. 0. Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	
									e	f	g	h				
121	8	W. B. I. 790.....	1.46. 59.84	1857	1	+3.638	..	0.10035	0.08969	1.44774	0.07792	84.208	93. 19. 51.07	1854.7	1	
122	5*	46 Cassiopeia.....	1.45. 11.22	1856	3	+4.579	+0.159	0.000	0.17160	1.47071	0.19666	74.897	81. 20. 17.95	1853.0	21	
123	43*	1 Arietis.....	1.45. 51.19	1859	6	+0.017	+0.001	0.001	0.10160	0.09318	1.45157	0.08635	83.124	71. 23. 59.53	1859.4	7
124	43*	5 Arietis.....	1.45. 51.21	1859	6	+0.017	+0.001	0.001	0.10160	0.09318	1.45157	0.08635	83.124	71. 23. 59.53	1859.4	7
125	3*	6 Arietis.....	1.45. 54.72	1857	51	+3.923	+0.018	+0.002	0.10155	0.09055	1.45165	0.08700	83.119	69. 52. 41.15	1857.3	56
126	6*	8 Arietis.....	1.49. 44.24	1858	6	+3.662	+0.016	+0.007	0.10103	0.09066	1.45120	0.08374	83.787	72. 51. 3.75	1858.0	7
127	4*	50 Cassiopeia.....	1.51. 33.34	1860	1	+4.968	+0.185	+0.009	0.14375	0.11777	1.47661	0.13944	78.152	12. 35. 53.1	1860.4	1
128	6	Piazzi I. 222.....	1.51. 49.80	1857	8	3.505	+0.013	+0.017	0.10131	0.09108	1.45186	0.08703	83.864	69. 57. 41.81	1857.6	8
129	6	113 Pleiad.....	1.51. 50.73	1860	4	+3.999	+0.085	+0.013	0.09973	0.09045	1.44886	0.08083	83.560	87. 34. 36.76	1860.9	4
130	4*	59 Ceti.....	1.53. 24.49	1859	9	+2.819	+0.015	+0.009	0.10147	0.09134	1.44643	0.07965	84.771	111. 45. 28.5	1859.7	7
131	23*	57 Andromedæ.....	1.55. 19.21	1858	19	+3.646	+0.031	+0.001	0.10659	0.09448	1.45706	0.08790	81.296	48. 20. 38.66	1859.3	14
132	7*	Andromedæ.....	1.55. 20.09	1858	11	+3.646	+0.031	+0.001	0.10659	0.09448	1.45706	0.08790	81.296	48. 20. 38.66	1859.3	10
133	..	W. B. I. 990.....	1.55. 47.97	1855	1	3.195	+0.017	..	0.10101	0.09083	1.45618	0.08310	83.584	79. 11. 11.80	1855.0	1
134	7	W. B. I. 990.....	1.55. 49.86	1855	1	3.518	+0.062	..	0.09978	0.09079	1.44774	0.08565	84.165	91. 3. 11.21	1854.0	1
135	9	W. B. I. 988.....	1.55. 48.43	1855	0	3.198	+0.018	..	0.10107	0.09093	1.45021	0.08365	83.573	79. 1. 12.23	1855.0	2
136	6	Piazzi I. 243.....	1.56. 21.35	1856	7	+3.227	+0.067	+0.007	0.10077	0.09118	1.45144	0.08583	83.207	67. 25. 17.23	1856.2	7
137	3*	13 Arietis.....	1.57. 17.28	1857	75	3.552	+0.020	+0.015	0.10131	0.09101	1.45158	0.08790	83.892	72. 12. 5.60	1857.1	4
138	3*	4 Trianguli.....	1.57. 17.49	1856	1	3.533	+0.030	+0.013	0.10170	0.09168	1.45181	0.08810	82.018	55. 40. 19.19	1856.1	1
139	6*	15 Arietis.....	1.58. 3.35	1860	3	3.505	+0.016	+0.008	0.10057	0.09101	1.45186	0.08640	83.132	71. 9. 43.98	1860.6	1
140	6*	6 Persei.....	1.59. 19.05	1860	1	3.907	+0.050	+0.035	0.10146	0.09130	1.46100	0.10348	79.996	39. 35. 15.90	1860.9	1
141	5*	17 Arietis.....	1.59. 48.15	1857	6	+3.312	+0.018	+0.009	0.10067	0.09255	1.45238	0.08685	83.261	69. 26. 35.75	1857.6	6
142	43*	65 Ceti.....	1.59. 51.15	1859	9	+3.774	+0.015	+0.004	0.09950	0.09170	1.44983	0.08316	83.016	81. 48. 46.63	1859.7	8
143	..	W. B. I. 999.....	1.59. 51.15	1859	9	+3.774	+0.015	+0.004	0.09950	0.09170	1.44983	0.08316	83.016	81. 48. 46.63	1859.7	8
144	..	W. B. I. 999.....	1.59. 51.15	1859	9	+3.774	+0.015	+0.004	0.09950	0.09170	1.44983	0.08316	83.016	81. 48. 46.63	1859.7	8
145	8	W. B. I. 109.....	1.59. 51.15	1859	9	+3.774	+0.015	+0.004	0.09986	0.09226	1.45244	0.08469	83.245	74. 49. 55.57	1855.0	1
146	6*	8 Trianguli.....	1.59. 51.15	1859	9	+3.774	+0.015	+0.004	0.10305	0.09433	1.45551	0.09254	82.051	56. 25. 7.35	1860.8	5
147	6*	67 Ceti.....	1.59. 51.15	1859	40	+3.983	+0.049	+0.009	0.09921	0.09053	1.44689	0.08059	83.287	4.7. 8.89	1860.4	16
148	6*	22 Arietis.....	1.60. 10.10	1857	7	2.934	+0.019	+0.009	0.10000	0.09103	1.45121	0.08621	83.801	70. 44. 51.21	1857.8	7
149	Var.	68 Ceti.....	1.60. 10.10	1857	1	2.934	+0.063	+0.003	0.09983	0.09118	1.44716	0.07991	84.727	93. 36. 24.99	1860.7	1
150	..	W. B. I. 744.....	1.60. 10.10	1857	1	2.937	+0.057	..	0.09958	0.09181	1.45146	0.08278	83.748	70. 20. 59.29	1854.9	1
151	6*	69 Ceti.....	1.60. 10.10	1857	1	2.937	+0.057	..	0.09958	0.09181	1.45146	0.08278	83.748	70. 20. 59.29	1854.9	1
152	6	Lalande 4458.....	1.60. 10.10	1857	1	2.937	+0.057	..	0.09958	0.09181	1.45146	0.08278	83.748	70. 20. 59.29	1854.9	1
153	5*	24 Arietis.....	1.60. 10.10	1857	1	2.937	+0.057	..	0.09958	0.09181	1.45146	0.08278	83.748	70. 20. 59.29	1854.9	1
154	..	B. A. C. 744 (1st Star)	1.60. 10.10	1857	1	2.937	+0.057	..	0.09958	0.09181	1.45146	0.08278	83.748	70. 20. 59.29	1854.9	1
155	4	Bradley 33a.....	1.60. 10.10	1857	4	2.937	+0.057	..	0.09958	0.09181	1.45146	0.08278	83.748	70. 20. 59.29	1854.9	1
156	..	B. A. C. 744 (3rd Star)	1.60. 10.10	1857	1	2.937	+0.057	..	0.09958	0.09181	1.45146	0.08278	83.748	70. 20. 59.29	1854.9	1
157	4*	73 Ceti.....	1.60. 10.10	1857	50	+3.748	+0.015	+0.001	0.09865	0.09300	1.44909	0.08389	83.654	81. 20. 10.77	1859.6	35
158	8	Bradley 713.....	1.60. 10.10	1857	1	3.512	+0.135	..	0.09183	0.08602	1.46077	0.13649	49.253	3. 24. 2.20	1860.4	1
159	27	Arietis.....	1.60. 10.10	1857	11	3.112	+0.066	+0.006	0.09918	0.09070	1.45191	0.08316	83.715	72. 55. 30.91	1857.8	11
160	9	W. B. I. 381.....	1.60. 10.10	1859	3	3.518	+0.044	..	0.09884	0.09147	1.45181	0.08380	83.726	23. 13. 49.95	1859.9	3

149. The limits of magnitude are 2, and smaller than 12.

151. Identical with Lacaille 718.

158. Identical with Schwed 119 or 120.

Annual Proper Motion in R.A., from Greenwich, 1854 to 1860.	Secular Variation of Pre- cession in R.A.	Annual Proper Motion in P.D., from Greenwich, 1854 to 1860.	Logarithms of				Value of sin δ in Bessel's Tables, 1855.	No. in Lalande Ptolemaic or H. & A. Catalogue (R.A.) 1860.	Hour and Min. in Planet.	No. in Greenwich Catalogue.	No. in Weisse's Bessel.	No. in Argelander, 1837.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	No. in Piazzi's 1810.	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No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, 1860, from 1854 to 1860.	Annual Variation of Position in R.A.	Annual Variation of Position in Declination	Logarithm of Annual Proper Motion in R.A. or Declination.	Value of μ	Mean Right Ascension, 1860, Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.
161	5 6	Bradley 348	a	1857 2	3	+ 5.534	+ 0.0004	- 0.0001	0.13861	0.13861	17.47.55.75	1858.8	10
162	5 6	Plauz II. 118	a	1857 3	3	+ 3.169	+ 0.0012	+ 0.0002	0.03186	0.03186	12.48.57.59	1858.9	10
163	9	W.B. II. 453	a	1858 1	1	+ 1.160	+ 0.0009	- 0.0001	0.08515	0.08515	27.46.56.56	1859.1	1
164	7	79 Ceti	a	1859 3	3	+ 3.013	+ 0.0005	- 0.0007	0.06351	0.06351	21.48.18.95	1859.3	3
165	6 7	Plauz II. 123	a	1858 6	29	+ 3.160	+ 0.0009	+ 0.018	0.03186	0.03186	21.48.18.95	1858.6	30
166	5 7	78 Ceti	a	1859 5	11	+ 3.142	+ 0.0003	- 0.0008	0.03556	0.03556	21.48.18.95	1859.5	11
167	6 7	31 Arietis	a	1859 7	7	+ 3.042	+ 0.0016	- 0.0008	0.03837	0.03837	21.48.18.95	1859.7	7
168	6 7	32 Arietis	a	1859 7	7	+ 3.042	+ 0.0016	- 0.0008	0.03837	0.03837	21.48.18.95	1859.7	7
169	4	B.C. II. 1856	a	1859 5	5	+ 3.048	+ 0.0018	- 0.0003	0.03921	0.03921	21.48.18.95	1859.5	5
170	8 9	Radecliff 745	a	1858 7	4	+ 26.411	+ 0.0068	- 0.0001	0.03837	0.03837	21.48.18.95	1858.7	4
171	5 4	83 Ceti	a	1859 5	4	+ 2.889	+ 0.0003	+ 0.011	0.03837	0.03837	21.48.18.95	1859.5	4
172	6	Bradley 166	a	1859 0	4	+ 5.042	+ 0.01350	- 0.0004	0.13861	0.13861	17.47.55.75	1859.0	4
173	6 5 7	34 Arietis	a	1859 6	6	+ 3.066	+ 0.0019	- 0.0004	0.03837	0.03837	21.48.18.95	1859.6	6
174	6	Bradley 181	a	1859 3	3	+ 3.824	+ 0.0018	- 0.0001	0.03837	0.03837	21.48.18.95	1859.3	3
175	6 7	14 Persi	a	1859 4	1	+ 3.973	+ 0.0017	- 0.0001	0.04046	0.04046	21.48.18.95	1859.4	1
176	5 7	15 Arietis	a	1859 5	5	+ 3.501	+ 0.0033	- 0.0002	0.03837	0.03837	21.48.18.95	1859.5	5
177	5 7	Ceti	a	1858 1	1	+ 3.111	+ 0.0093	- 0.0001	0.03837	0.03837	21.48.18.95	1858.1	1
178	5 4	86 Ceti	a	1859 6	16	+ 3.111	+ 0.0093	- 0.0001	0.03837	0.03837	21.48.18.95	1859.6	16
179	5 7	Groombridge 551	a	1860 0	4	+ 4.046	+ 0.015	- 0.0001	0.04046	0.04046	21.48.18.95	1860.0	4
180	5 8	38 Arietis	a	1858 6	6	+ 3.250	+ 0.0016	+ 0.008	0.03837	0.03837	21.48.18.95	1858.6	6
181	4 7	87 Ceti	a	1858 5	5	+ 3.214	+ 0.0014	+ 0.017	0.03837	0.03837	21.48.18.95	1858.5	5
182	4 5 7	1 Eridani	a	1858 5	5	+ 3.214	+ 0.0014	+ 0.017	0.03837	0.03837	21.48.18.95	1858.5	5
183	7	Groombridge 554	a	1858 5	5	+ 3.214	+ 0.0014	+ 0.017	0.03837	0.03837	21.48.18.95	1858.5	5
184	6 7	Groombridge 556	a	1858 5	5	+ 3.214	+ 0.0014	+ 0.017	0.03837	0.03837	21.48.18.95	1858.5	5
185	6	40 Arietis	a	1858 7	7	+ 3.347	+ 0.0018	+ 0.005	0.03837	0.03837	21.48.18.95	1858.7	7
186	6 5 7	41 Arietis	a	1859 6	6	+ 3.335	+ 0.0063	- 0.0002	0.03837	0.03837	21.48.18.95	1859.6	6
187	4 7	41 Arietis	a	1860 7	7	+ 3.508	+ 0.0028	+ 0.0001	0.03837	0.03837	21.48.18.95	1860.7	7
188	5 4 7	14 Persi	a	1859 3	3	+ 3.743	+ 0.0033	+ 0.0001	0.03837	0.03837	21.48.18.95	1859.3	3
189	6 7	41 Arietis	a	1859 5	5	+ 3.749	+ 0.0049	- 0.0001	0.03837	0.03837	21.48.18.95	1859.5	5
190	5 4 7	2 Eridani	a	1859 7	4	+ 3.754	+ 0.0016	- 0.003	0.03837	0.03837	21.48.18.95	1859.7	4
191	7	Plauz II. 203	a	1858 1	1	+ 3.134	+ 0.0057	+ 0.008	0.03837	0.03837	21.48.18.95	1858.1	1
192	6 7	Bradley 400	a	1858 1	1	+ 3.134	+ 0.0057	+ 0.008	0.03837	0.03837	21.48.18.95	1858.1	1
193	6	47 Arietis	a	1859 7	7	+ 3.403	+ 0.0080	- 0.0016	0.03837	0.03837	21.48.18.95	1859.7	7
194	4 5 7	48 Arietis	a	1859 7	7	+ 3.471	+ 0.0084	- 0.0001	0.03837	0.03837	21.48.18.95	1859.7	7
195	5 6 7	5 Eridani	a	1858 3	3	+ 3.024	+ 0.0053	+ 0.001	0.03837	0.03837	21.48.18.95	1858.3	3
196	5 7	43 Persi	a	1859 5	6	+ 4.295	+ 0.0093	- 0.0001	0.03837	0.03837	21.48.18.95	1859.5	6
197	5 3 7	92 Ceti	a	1858 8	8	+ 3.112	+ 0.0098	- 0.0001	0.03837	0.03837	21.48.18.95	1858.8	8
198	5 7	Plauz II. 248	a	1859 2	2	+ 3.566	+ 0.0007	+ 0.017	0.03837	0.03837	21.48.18.95	1859.2	2
199	4 7	45 Persi	a	1858 8	8	+ 3.806	+ 0.0031	- 0.001	0.03837	0.03837	21.48.18.95	1858.8	8
200	4 5 7	11 Eridani	a	1859 0	5	+ 3.565	+ 0.0016	- 0.012	0.03837	0.03837	21.48.18.95	1859.0	5

Annual Proper Motion, 1860, from 1854 to 1860.	Secular Variation of Pre- cession in R.A. or Declination.	Annual Motion in Right Ascension from Mean R.A. or Declination.	Logarithm of				Value of	No. in Bessel's Catalogue, 1857.	No. in Johanne Foderberg's or British Association Catalogue, 1860.	Hour and Min. Plaz.	No. in Groombridge Catalogue.	No. in Wolskel's Bessel.	No. in Argelander.	No. in Piazzi's Catalogue, 1814.	No. in First Catalogue of the British Association, 1836.	No. in Johanne Foderberg's Catalogue, 1836.	No. in Piazzi's Catalogue, 1814.	No. in Argelander.	No. in Bessel.																																																																																																																																																																																																																																																																																																																																																																																																																												
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μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	λ'	μ'	ν'	ξ'	η'	θ'	ι'	κ'	<

No.	Magnitude	Star's Name.	Mean Right Ascension, Jan. 1, from Observations, 1844 to 1850.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, for 1844 to 1850, from Peters' Elements.	Secular Variation of Precession in R.A.	Annual Proper Motion, in R.A., from Peters' Elements.	Logarithm of Parallax.	Value of μ .	Mean North Polar Distance, Jan. 1, from Observations, 1844 to 1850.	Mean Year and Fraction of Year.	Number of Observations.
									α	δ			
201	6 ^m	10 Eridani	15 55. 42.09	1854.1	3	+0.018	+0.005	+0.007	0.0068	1.44650	0.00671	1854.1	3
202	4 ^m	Persei	15 58. 58.95	1850.0	1	4.157	+0.0407	+0.129	0.00459	0.00456	0.00651	1850.0	1
203	Var ^a	26 Persei	15 59. 47.77	1859.9	1	3.874	+0.0051	-0.003	0.01011	0.01004	0.00650	1859.9	1
204	6	53 Arietis	15 59. 37.05	1855.1	1	3.367	+0.061	-0.005	0.00974	0.00967	0.00641	1855.1	1
205	4.5 ^m	27 Persei	16 0. 40.09	1855.6	3	3.996	+0.0404	+0.016	0.01039	0.01040	0.00633	1855.6	3
206	7	Piazzi II. 361	3. 1. 18.86	1860.5	4	+3.424	+0.0178	+0.005	0.00689	0.00709	0.00639	1860.5	4
207	5.6	Bradley 431	3. 2. (40.)	..	..	7.387	+0.0018	-0.003	0.01499	0.01504	0.00757	1860.5	4
208	4.5 ^m	57 Arietis	3. 3. 37.74	1857.6	51	+0.0047	+0.0018	-0.001	0.00661	0.00716	0.00633	1857.6	51
209	4.5 ^m	94 Ceti	3. 5. 37.91	1854.1	1	3.043	+0.0078	-0.014	0.00954	0.00963	0.00633	1854.1	1
210	6	Greenwich 648	3. 6. (42.)	..	..	5.634	+0.0154	..	0.01350	0.01363	0.00633	1860.5	1
211	4.5 ^m	58 Arietis	3. 6. 51.60	1858.4	1	+3.436	+0.0177	-0.006	0.00950	0.00974	0.00633	1858.4	1
212	5	W. B. III. 139	3. 7. 42.18	1859.4	4	5.186	+0.0119	-0.015	0.01690	0.01719	0.00633	1859.4	4
213	9	Bradley 456	3. 8. 41.56	1856.0	4	3.704	+0.0038	..	0.00957	0.00955	0.00633	1856.0	4
214	7.8	W. B. III. 168	3. 8. 43.56	1854.1	1	2.913	+0.0051	-0.001	0.00949	0.00966	0.00633	1854.1	1
215	8	W. B. III. 168	3. 10. 8.47	1856.1	4	3.506	+0.0038	..	0.00961	0.00979	0.00633	1856.1	4
216	6 ^m	95 Ceti	3. 11. 12.73	1854.1	3	+3.047	+0.0079	+0.030	0.00950	0.00971	0.00633	1854.1	3
217	8	Lalande 6129	3. 12. 4.98	1854.1	1	3.376	+0.0156	..	0.00974	0.00981	0.00633	1854.1	1
218	5 ^m	64 Arietis	3. 13. 8.99	1858.1	17	3.448	+0.0175	-0.001	0.00980	0.00981	0.00633	1858.1	17
219	6 ^m	97 Ceti	3. 13. 47.63	1854.1	1	3.117	+0.0095	-0.002	0.00949	0.00959	0.00633	1854.1	1
220	2 ^m	53 Persei	3. 14. 20.73	1857.1	40	4.240	+0.0046	+0.002	0.01303	0.01311	0.00633	1857.1	40
221	9	Greenwich 655	3. 15. 14.41	1860.0	4	+4.219	+0.0070	..	0.00964	0.01088	0.00633	1860.0	4
222	6 ^m	64 Arietis	3. 16. 2.87	1854.1	1	3.526	+0.0146	-0.003	0.00960	0.00971	0.00633	1854.1	1
223	7.8	Gr. Cat. 1850, No. 217	3. 16. 3.73	1855.1	1	4.245	+0.0470	..	0.01029	0.01044	0.00633	1855.1	1
224	7.8	Greenwich 660	3. 16. 5.77	1855.1	5	4.243	+0.0090	..	0.01027	0.01053	0.00633	1855.1	5
225	6 ^m	65 Arietis	3. 16. 12.17	1859.9	5	3.446	+0.0172	-0.004	0.00972	0.00980	0.00633	1859.9	5
226	4.3 ^m	1 Tauri	3. 17. 16.96	1856.6	3	+3.234	+0.0015	-0.005	0.00970	0.00970	0.00633	1856.6	3
227	7.8	Piazzi III. 55	3. 17. 39.94	1860.0	3	4.245	+0.0474	..	0.01052	0.01070	0.00633	1860.0	3
228	5.4 ^m	Piazzi III. 55	3. 17. 45.70	1856.6	1	4.273	+0.0274	+0.005	0.01090	0.01183	0.00633	1856.6	1
229	5.4 ^m	34 Persei	3. 19. 12.40	1860.0	4	4.249	+0.0470	-0.001	0.01028	0.01043	0.00633	1860.0	4
230	4.3 ^m	1 Tauri	3. 19. 15.46	1855.6	5	3.238	+0.0017	+0.002	0.00972	0.00979	0.00633	1855.6	5
231	7	W. B. III. 334	3. 19. 36.50	1856.0	6	+3.094	+0.0130	..	0.00981	0.00987	0.00633	1856.0	6
232	6	Bradley 471	3. 19. (56.)	..	..	6.394	+0.0359	..	0.01189	0.01177	0.00633	1856.0	6
233	6	Greenwich 664	3. 19. 1.52	1857.7	1	3.857	+0.0484	..	0.00957	0.00968	0.00633	1857.7	1
234	..	Gr. Cat. 1850, No. 216	3. 21. 3.30	1858.7	4	3.240	+0.0127	..	0.00954	0.00970	0.00633	1858.7	4
235	8	Greenwich 683	3. 21. 19.99	1860.0	3	4.255	+0.0466	..	0.01023	0.01059	0.00633	1860.0	3
236	7	Greenwich 693	3. 21. 48.81	1860.0	3	+4.255	+0.0464	..	0.01019	0.01061	0.00633	1860.0	3
237	..	Gr. Cat. 1850, No. 217	3. 22. (33.)	..	..	3.300	+0.0010	..	0.00948	0.00987	0.00633	1860.0	3
238	5 ^m	4 Tauri	3. 23. 45.63	1854.1	1	3.270	+0.0023	-0.001	0.00947	0.00978	0.00633	1854.1	1
239	4 ^m	5 Tauri	3. 25. 1.89	1857.9	22	3.301	+0.0136	+0.002	0.00953	0.00978	0.00633	1857.9	22
240	5 ^m	17 Eridani	3. 25. 42.47	1859.0	4	3.971	+0.0066	+0.004	0.00940	0.00971	0.00633	1859.0	4

201. The limits of magnitude are 2 and 4.0; the period 2.6727 days.

207. Identical with Schwab 164.

224. The magnitude is taken from Greenwich.

227. The magnitude is taken from Piazzi.

235. Bradley has no R.A. for this star in the same as Schwab 180.

237. This star is the same as Schwab 176.

238. The magnitude is taken from Greenwich.

No.	Magnitude	Star's Name.	Mean Right Ascension, Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, for 1854 to 1860, from Peters' Elements.	Secular Variation of Precession in N.P.D.	Annual Proper Motion, in N.P.D., from Peters' Elements.	Logarithm of				Value of μ .	No. in British N. H. 1855.	No. in Falcoum (F.) or British Association (B.A.) 1860.	Hour and No. in Piazzi.	No. in Decimale.	Hour and No. in Weiss's.	No. in Argelaine.	No. in Paris 1793.	No. in First Edge of Catalogue.	No. in Second Edge of Catalogue.	No. in Third Edge of Catalogue.	No. in Fourth Edge of Catalogue.	No.
									α	δ	ρ	λ													
1234	+0.36	000	9 38 56.9	11440	103769	021834	100414	435	5699 (B.A.)	253	..	II. 1021	..	104	..	57	..	..	..	..	..	..	..	201	
1235	+0.43	000	016608	918615	103763	021763	96727	..	5705 (B.A.)	253	613	..	81	105	..	..	..	..	..	..	..	..	..	202	
1242	044	-001	012261	918965	103184	017791	97335	436	5717 (B.A.)	254	615	..	..	106	62	..	..	..	..	..	..	..	309		
1243	0335	+001	999830	939516	103304	038006	99735	439	5742 (B.A.)	257	..	..	..	..	..	..	..	..	..	..	..	..	205		
1248	044	+015	014011	942839	103434	038021	97087	438	5757 (B.A.)	256	617	..	82	107	..	..	..	..	..	..	..	..	205		
1249	+0.361	+015	004051	938993	103740	038219	99554	..	..	261	..	..	..	..	..	..	..	..	..	..	..	..	206		
1250	0766	+004	035566	971475	104028	038233	90934	431	{ 510 (F.) 5745 (B.A.) }	255	616	..	..	108	..	..	..	..	..	..	..	..	207		
1251	0363	000	001134	997310	104316	038290	..	446	5822 (B.A.)	2	III. 2	84	109	63	..	..	..	..	..	..	..	..	208		
1293	0757	+008	987129	008660	104038	038226	99357	450	{ 518 (F.) 5916 (B.A.) }	8	..	628	..	..	..	..	..	..	..	..	..	..	209		
1296	0604	..	031707	974703	105073	038299	91210	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	210		
1297	0751	+007	000063	998244	105114	038511	98089	451	5983 (B.A.)	11	..	..	..	111	65	..	..	..	..	..	..	..	211		
1298	0558	+003	022539	976370	105318	038566	91659	448	{ 528 (F.) 6048 (B.A.) }	7	634	..	..	..	..	..	..	..	..	..	..	..	212		
1301	0595	..	997650	000238	105560	038631	98173	..	6016 (B.A.)	..	..	139	..	..	..	..	..	..	..	..	..	..	213		
1303	0741	+009	938125	011716	105574	038635	99719	456	6028 (B.A.)	20	..	144	86	..	..	..	..	..	..	..	..	..	214		
1354	0364	..	937676	000283	105914	038737	98002	..	6048 (B.A.)	..	..	168	..	..	..	..	..	..	..	..	..	..	215		
1347	0335	+009	973361	008549	105968	038799	98531	461	6112 (B.A.)	31	..	186	87	..	..	..	..	..	..	..	..	..	216		
1349	0379	..	000091	000201	105982	038857	97324	..	6122 (B.A.)	..	..	..	..	..	..	..	..	..	..	..	..	..	217		
1355	0381	+003	030248	972877	106636	038295	96789	465	..	40	..	..	..	..	..	..	..	..	..	..	..	..	218		
1350	0477	+006	990741	006573	106803	038267	97971	468	6191 (B.A.)	44	238	..	..	..	..	..	..	..	..	..	..	..	219		
1327	0270	+005	017216	942834	106950	039001	92161	462	528 (F.)	41	650	..	89	114	67	..	..	..	..	..	..	..	330		
1312	+0.469	..	010701	973890	107156	039059	99425	..	6205 (B.A.)	..	655	..	..	..	..	..	..	..	..	..	..	..	221		
1315	036	+007	040283	994894	107258	039215	97598	472	6248 (B.A.)	49	..	..	..	..	..	..	..	..	..	..	..	..	222		
1315	0477	..	017298	978659	107261	039215	97598	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	223		
1315	0385	..	017298	978659	107261	039215	97598	..	..	..	660	..	..	..	..	..	..	..	..	..	..	..	224		
1313	0366	+002	033133	982083	107431	039134	96116	474	6257 (B.A.)	50	..	..	..	..	..	..	..	..	..	..	..	..	225		
1307	+0.364	+010	939616	000465	107654	039189	97061	477	6287 (B.A.)	55	..	594	..	117	..	..	..	..	..	..	..	..	227		
1305	0476	..	017319	983651	107747	039214	91711	..	566 (F.)	53	664	..	..	..	..	..	..	..	..	..	..	..	227		
1304	0573	-004	031317	980500	107770	039214	91711	..	604 (B.A.)	51	664	..	..	116	..	..	..	..	..	..	..	..	228		
1293	0479	+006	017391	985139	107837	039265	91697	479	{ 6119 (B.A.) 6339 (B.A.) }	59	..	335	..	119	68	..	..	..	..	..	..	..	230		
1292	0367	+003	995163	000919	108210	039316	96122	481	..	..	..	..	..	..	..	..	..	..	..	..	..	..	231		
1292	+0.353	..	997230	000667	108213	039335	96340	..	6357 (B.A.)	..	..	334	..	..	..	..	..	..	..	..	..	..	232		
1290	0720	+008	035666	976754	108292	039336	86388	471	..	..	669	..	..	..	..	..	..	..	..	..	..	..	233		
1283	0208	..	028735	774938	108517	039424	87301	..	519 (F.)	..	622	..	..	..	..	..	..	..	..	..	..	..	234		
1282	0369	..	995226	000451	108561	039444	96322	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	235		
1280	0281	..	017487	938122	108649	039441	90761	..	567 (F.)	..	689	..	..	..	..	..	..	..	..	..	..	..	236		
1277	+0.424	..	017493	938739	108765	039457	90643	..	{ 570 (F.) 6397 (B.A.) }	..	693	..	..	..	..	..	..	..	..	..	..	..	237		
1272	0755	+003	997635	000579	108920	039517	95783	..	..	..	69	..	..	..	..	..	..	..	..	..	..	..	238		
1271	0755	+003	997635	000579	108920	039517	95783	485	644 (B.A.)	75	..	392	..	..	..	..	..	..	..	..	..	..	239		
1268	0758	+003	997465	000628	109064	039515	95668	486	644 (B.A.)	77	..	..	..	121	70	..	..	..	..	..	..	..	240		
1262	0322	+003	974601	000071	109187	039582	96918	487	6495 (B.A.)	80	..	413	..	122	..	65	38	..	..	..	..	..	241		

[illegible]

264, 279. Bradley has no N.P.D.

268. This star is the same as Lacaille 1320.

271 Bradley has no D.A.

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8377 Stars; from the Catalogue of Lalande published by the British Association; from Weisse's *Catalogus Stellarum ex Zonis Regionumtatis*; or, for the variable stars, from Mr. Rosson's lists in the R. Radcliffe Observations, 1854 and 1856.⁷ The authorities for any remaining magnitudes are given in the Notes.

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATIONS.

AT THE ROYAL OBSERVATORY, GREENWICH, FROM 1854 TO 1860.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1845 to 1860.	Mean Year and Fraction of Year.	Observed Number of Stars.	Annual Proper Motion in R.A., from Observations, 1845 to 1860.	Secular Variation of Proper Motion in R.A., from R.A.C.	Logarithms of							Value of μ	Mean North Polar Distance, 1845 to 1860.	Mean Year and Fraction of Year.	Number of Stars.	Annual Proper Motion in Declination, 1845 to 1860.	Secular Variation of Proper Motion in Declination, from R.A.C.	Logarithms of							Value of μ	No. in Band of Pogorelov (P. 1890) (R.A.C. obs.)	Hour and No. in Planz.	Hour and No. in Weiss's Band.	Hour and No. in Argander's Band.	Hour and No. in Pöschl's Band.	Hour and No. in Fraunhofer's Band.	Hour and No. in H. R. Band.	No.
								e	f	g	h	e'	f'	g'							h'	e'	f'	g'	h'											
181	3 ^h	34 Eridani.....	3.51.59.90	1857.0	4	+ 7.994	+ 0.0047	+ 0.003	0.09811	0.09973	1.14391	0.07599	8.4504	103.54.54.30	1856.9	3	-.1067	+ 0.149	+ 0.13	0.75794	0.13117	1.15640	0.03110	94.049	546	7166 (B.A.)	III. 110	..	III. 1009	..	147	..	80	69	..	281
182	3.4 ^h	35 Tauri.....	3.51.55.47	1857.0	8	3.316	+ 0.0015	..	0.09199	0.09697	1.14304	0.08189	8.1347	77.54.30.35	1856.8	10	-.1036	-.014	..	0.79976	0.03728	1.15961	0.03180	90.136	548	7406 (B.A.)	218	..	1059	..	148	81	70	..	282	
183	3.4 ^h	Groundridge 756.....	3.51.47.46	1857.3	5	16.383	+ 1.8211	..	0.08485	0.07328	1.16781	..	8.0437	44.49.15.49	1857.8	8	-.1051	..	..	0.79379	0.93083	1.16028	0.03121	74.018	..	7465 (B.A.)	..	..	..	..	..	..	..	283		
184	3.4 ^h	Lalande 7423.....	3.51.45.78	1857.8	9	3.684	..	..	0.09199	0.09697	1.14304	0.08189	8.1347	55.49.15.49	1857.8	10	-.1049	-.005	..	0.10360	0.93467	1.16166	0.03155	85.495	..	7467 (B.A.)	221	..	1056	..	150	..	82	71	..	284
185	3.4 ^h	35 Eridani.....	3.51.46.46	1854.1	3	3.318	+ 0.0072	0.000	0.09199	0.09697	1.14304	0.08189	8.1347	91.56.42.39	1854.1	1	-.1048	-.038	+ 0.05	0.93634	0.03555	1.16496	0.03153	74.018	550	7467 (B.A.)	221	..	1056	..	150	..	82	71	..	285
186	4 ^h	38 Tauri.....	3.51.42.71	1858.0	6	3.184	+ 0.0092	+ 0.001	0.09151	0.09947	1.14501	0.08001	8.2996	84.74.78.83	1858.0	4	-.1045	+ 0.048	+ 0.01	0.93634	0.06516	1.16584	0.03174	90.973	553	7490 (B.A.)	228	..	1060	..	152	..	..	..	..	286
187	4.5 ^h	47 Persei.....	3.56.10.16	1859.4	3	3.437	+ 0.0416	0.000	0.09051	0.10103	1.14889	0.09371	8.0100	40.1.58.33	1859.4	1	-.1031	-.060	+ 0.05	0.19797	0.96040	1.16681	0.03135	81.751	549	624 (F.)	234	777	..	151	..	..	..	..	287	
188	5 ^h	37 Tauri.....	3.56.25.18	1856.9	3	3.459	+ 0.0454	+ 0.004	0.09051	0.10103	1.14889	0.09371	8.0100	68.18.14.95	1856.9	10	-.1030	-.046	+ 0.09	0.04624	0.00418	1.16731	0.03137	75.019	549	7501 (B.A.)	231	..	..	..	153	82	..	..	..	288
189	..	.....	3.55.45.88	1858.1	3	3.426	+ 0.0306	..	0.09251	0.10647	1.14648	0.08749	8.1197	67.31.15.07	1858.1	1	-.1020	-.051	..	0.14681	0.93739	1.17036	0.03140	80.751	..	..	..	..	..	..	..	..	..	..	..	289
190	6.5 ^h	41 Tauri.....	3.58.1.49	1858.0	5	3.664	+ 0.0181	+ 0.006	0.09251	0.10647	1.14648	0.08749	8.1197	62.46.55.00	1858.1	1	-.1018	-.045	+ 0.02	0.02182	0.93883	1.17093	0.03143	86.265	558	7566 (B.A.)	243									

283. This star is the same as Schwerd 243

205 This star is the same as Schmidt 2.

2.07. (This step is the same as Schmidt 2.2.)

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 1877 Stars; from the Catalogue of Lalande published by the British Association; from Weisse's *Catalogus Stellarum ex Zonis Regionumantis*; or, for the variable stars, from M. Pogson's Note on the *Heliophot* Observations for 1854 and 1856.¹⁰ The authorities for any remaining magnitudes are given in the Notes.

No.	Magnitude.	Star's Name.	Mean Right Ascension, Jan. 1, 1854 to 1860.	Mean Year and Fraction of Year.	Mean Declination, 1854 to 1860.	Annual Proper Motion, in R.A. for one year, from Mean or B.A.C.	Annual Variation of Precession, in R.A. for one year, from Mean or B.A.C.	Logarithm of	Value of	Mean North Polar Distance, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.
a	f	g	h	i	j	k	l	m	n	o	p	q
321	Var.	.....	4. 1. 30.19	1860.1	3	+ 3.478	+0.0091	0.00883	1.45145	82.707	1860.1	3
322	5.5	81 Tau.	4. 2. 39.97	1857.9	3	+ 3.407	+0.0048	+0.013	0.00397	1.01048	1858.1	3
323	6.0	57 Persei.	4. 21. 34.39	1856.3	3	+ 4.201	+0.0048	+0.004	0.00340	1.01049	1856.3	3
324	5.6	43 Eridani.	4. 44. 43.04	1858.0	7	+ 3.065	+0.0066	0.0000	0.00874	1.01071	1858.0	7
325	5.8	58 Persei.	4. 47. 0.38	1856.4	1	+ 4.139	+0.0035	-0.003	0.00164	1.01079	1856.4	1
326	6.7	46 Eridani.	4. 47. 5.46	1858.0	6	+ 2.920	+0.0054	+0.005	0.00867	1.01096	1858.0	6
327	1.7	87 Tau.	4. 47. 58.99	1859.3	3	+ 3.430	+0.0048	+0.004	0.00391	1.01173	1859.3	3
328	4.7	50 Eridani.	4. 48. 3.18	1856.6	8	+ 3.360	+0.0031	-0.007	0.00413	1.01211	1856.6	8
329	3.7	43 Eridani.	4. 49. 14.97	1855.5	8	+ 3.904	+0.0053	-0.001	0.00874	1.01203	1855.5	8
330	4.3	54 Eridani.	4. 49. 45.60	1857.9	19	+ 3.334	+0.0039	-0.003	0.00379	1.01240	1857.9	19
331	6	Piazzi IV. 1st.	4. 51. 24.88	1859.1	1	+ 4.338	+0.0033	-0.004	0.00366	1.01240	1859.1	1
332	6.5	93 Tau.	4. 51. 35.89	1854.1	1	+ 3.334	+0.0091	+0.002	0.00829	1.01248	1854.1	1
333	4	.....	4. 51. 37.97	1854.9	1	+ 3.500	+0.0117	0.0000	0.00869	1.01248	1854.9	1
334	6	Bradley 65e.	4. 51. 59.41	1854.1	3	+ 3.748	+0.0044	+0.009	0.00831	1.01253	1854.1	3
335	9	Lalande 898d.	4. 51. 4.70	1854.9	1	+ 3.560	+0.0116	0.0000	0.00864	1.01250	1854.9	1
336	4.5	94 Tau.	4. 53. 50.78	1855.5	6	+ 3.594	+0.0112	0.0000	0.00868	1.01284	1855.5	6
337	.....	.....	4. 54. 31.35	1858.1	3	+ 3.583	+0.0112	0.0000	0.00868	1.01281	1858.1	3
338	.....	Lalande 8845	4. 54. 35.35	1856.0	3	+ 3.627	+0.0083	0.0000	0.00800	1.01318	1856.0	3
339	.....	.....	4. 55. 30.80	1858.1	3	+ 3.604	+0.0112	0.0000	0.00851	1.01399	1858.1	3
340	6	Eridani IV. 169.	4. 56. 40.47	1854.7	7	+ 3.315	+0.0085	+0.013	0.00784	1.01516	1854.7	7
341	4.3	57 Eridani.	4. 58. 30.24	1855.5	32	+ 3.057	+0.0056	+0.003	0.00787	1.01597	1855.5	32
342	6	Lacaille 1569.	4. 58. 37.43	1860.1	7	+ 2.410	+0.0033	-0.010	0.00794	1.01791	1860.1	7
343	4.1	9 Camelopardali.	4. 58. 39.94	1857.1	7	+ 3.408	+0.0073	+0.007	0.00905	1.01813	1857.1	7
344	7.8	Piazzi IV. 190.	4. 59. 30.54	1860.1	7	+ 3.494	+0.0102	+0.013	0.00797	1.01847	1860.1	7
345	.....	.....	4. 40. 40.27	1854.8	1	+ 3.569	+0.0111	0.0000	0.00790	1.01923	1854.8	1
346	.....	.....	4. 41. 12.84	1854.8	1	+ 3.579	+0.0111	0.0000	0.00787	1.01997	1854.8	1
347	5.4	3 Orionis.	4. 41. 17.13	1860.1	5	+ 3.464	+0.0044	+0.010	0.00717	1.01614	1860.1	5
348	5.6	97 Tau.	4. 41. 37.90	1854.1	1	+ 3.597	+0.0053	+0.003	0.00743	1.01658	1854.1	1
349	.....	.....	4. 41. 37.90	1854.8	1	+ 3.580	+0.0049	0.0000	0.00760	1.01658	1854.8	1
350	4.5	61 Eridani.	4. 46. 0.96	1854.5	5	+ 2.946	+0.0050	-0.003	0.00881	1.01519	1854.5	5
351	6	3 Orionis.	4. 46. 4.80	1854.7	4	+ 3.121	+0.0061	+0.004	0.00867	1.01511	1854.7	4
352	4	8 Orionis.	4. 46. 57.60	1858.0	6	+ 3.104	+0.0061	+0.003	0.00867	1.01513	1858.0	6
353	3.1	3 Aurigae.	4. 47. 51.87	1857.0	5	+ 3.396	+0.0146	-0.003	0.00799	1.01569	1857.0	5
354	5.9	9 Orionis.	4. 47. 52.83	1857.9	3	+ 3.373	+0.0083	-0.003	0.00751	1.01616	1857.9	3
355	6	Bradley 606.	4. 49. 17.33	1855.6	6	+ 3.360	+0.0090	+0.004	0.00797	1.01517	1855.6	6
356	9	W. B. IV. 107.	4. 49. 23.48	1854.9	1	+ 3.421	+0.0066	0.0000	0.00848	1.01502	1854.9	1
357	6.1	62 Eridani.	4. 49. 30.49	1854.1	1	+ 2.954	+0.0049	-0.001	0.00840	1.01569	1854.1	1
358	6	Lalande 9347.	4. 49. 46.46	1860.1	5	+ 2.954	+0.0033	-0.003	0.00840	1.01569	1860.1	5
359	4.0	10 Camelopardali.	4. 50. 58.84	1859.1	3	+ 3.104	+0.0146	+0.004	0.00737	1.01327	1859.1	3
360	5.4	10 Orionis.	4. 51. 17.69	1856.0	4	+ 3.505	+0.0057	+0.008	0.00815	1.01639	1856.0	4

321. This star is the variable S Tau; its maximum magnitude is the 10th.

330. This star is the same as Lacaille 1559.

335. Bradley has no N.P.D.

337. This star is the same as Lacaille 1553.

338. This star is the same as Lacaille 1541.

343. This star is designated a Camelopardalis in the B.A.C.

358. This star is the same as Lacaille 1642.

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8737 Stars; from the Catalogue of Latitude published by the British Association; from Weisse's *Catalogus Stellarum et Zonis Repugnantis*; or, for the variable stars, from Mr. Pogner's lists in the "Radcliffe Observations, 1854 and 1856." The authorities for any remaining magnitudes are given in the Notes.

No.	Star's Name.	Mean Right Ascension, 1860, Jan. 1.	Mean Year and Fraction of Year.	Number of Observations.	Annual Precession in R.A. from 1850 to 1860.	Secular Variation of Precession in R.A. from 1850 to 1860.	Annual Proper Motion from 1850 to 1860.	Logarithm of				Value of μ .	Mean Year and Fraction of Year.	Number of Observations.	Logarithm of				Value of μ .	Mean Year and Fraction of Year.	Number of Observations.	Logarithm of				Value of μ .	Mean Year and Fraction of Year.	Number of Observations.	Logarithm of				Value of μ .	Mean Year and Fraction of Year.	Number of Observations.
								a	f	g	h											e	f	g	h										
401	..	h m s																																	
401	..	5. 19. 49.46	1854.1	1	+7983	..	009509	0.16221	1.51810	0.09455	7.91918	15. 2. 59.84	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	401
402	8	Lalande [10331]	5. 19. 49.46	1854.1	1	+7983	..	009509	0.16221	1.51810	0.09455	7.91918	15. 2. 59.84	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	402	
403	64	128 Tauri	5. 20. 39.68	1854.1	1	+7983	..	009509	0.16221	1.51810	0.09455	7.91918	15. 2. 59.84	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	596	403
404	6	Lalande 1849	5. 21. 47.40	1860.1	1	+2409	+00057	00000	0.08339	0.01392	1.44424	0.07767	8.9770	110. 52. 25.91	1855.5	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	404	
405	34*	9 Leporis	5. 22. 14.83	1855.5	11	+569	+00030	00000	0.08339	0.01392	1.44424	0.07767	8.9770	110. 52. 25.91	1855.5	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	405	
406	..	..	5. 22. 50.37	1854.1	1	+3739	+00072	..	008359	0.10499	1.58312	0.08147	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	406	
407	5*	25 Aurigæ	5. 23. 35.64	1857.3	7	3900	+00081	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	407	
408	64*	119 Tauri	5. 24. 04.1	1860.1	3	3514	+00057	00000	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	408	
409	40*	34 Orionis	5. 24. 35.76	1857.3	38	3065	+00057	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	409	
410	..	Or. Cat. 1850 No. 390.	5. 26. 7.65	1856.6	1	3734	+00067	..	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	410	
411	8	Lalande 10430	5. 26. 13.19	1856.0	1	+3739	+00072	..	008359	0.10499	1.58312	0.08147	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	411	
412	67	Lalande 10456	5. 26. 25.16	1856.1	3	3043	+00037	..	008469	0.10343	1.42874	0.07905	8.9464	61. 25. 18.84	1856.1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	412	
413	3*	11 Leporis	5. 26. 33.16	1857.3	5	1644	+00057	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	413	
414	6*	121 Tauri	5. 26. 54.25	1856.6	6	3660	+00057	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	414	
415	3*	37 Orionis	5. 27. 8.16	1859.1	5	3291	+00064	+0005	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	415	
416	34*	39 Orionis	5. 27. 57.3	1856.4	5	3302	+00045	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	416	
417	..	Orionis	5. 27. 56.01	1857.3	4	3302	+00045	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	417	
418	9	Pinnis V. 145	5. 28. 20.21	1855.1	1	2934	+00064	..	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	418	
419	7	Pinnis V. 145	5. 28. 24.41	1857.3	3	3742	+00064	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	419	
420	56	R. A. C. 1751	5. 28. 25.09	1859.1	1	5993	+00087	..	007714	0.13353	1.74237	0.08643	7.7749	24. 23. 5.96	1857.7	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	420	
421	7*	44 Orionis	5. 28. 35.18	1856.1	5	+2933	+00033	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	421	
422	..	Orionis	5. 28. 35.64	1857.3	2	+2933	+00033	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	422	
423	4*	46 Orionis	5. 29. 6.60	1857.6	28	3042	+00036	+0007	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	423	
424	54*	40 Orionis	5. 29. 12.37	1857.3	3	3257	+00043	+0007	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	424	
425	34*	123 Tauri	5. 29. 16.18	1856.3	12	3382	+00055	00000	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	425	
426	5*	49 Orionis	5. 30. 6.68	1854.1	4	+2902	+00031	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	426	
427	4*	50 Orionis	5. 31. 47.17	1857.3	3	3025	+00033	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	427	
428	..	Orionis	5. 31. 41.96	1860.1	1	3025	+00033	..	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	428	
429	4*	Columbe	5. 34. 14.79	1857.8	11	1721	+00032	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	429	
430	6	Lalande 10796	5. 37. 55.33	1860.1	1	6437	+00049	..	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	430	
431	..	Leporis	5. 38. 36.42	1860.1	1	+2521	+00026	+0007	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	431	
432	4*	13 Leporis	5. 38. 37.64	1860.1	5	+2521	+00026	+0007	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	432	
433	6	129 Tauri	5. 38. 41.51	1854.1	4	3448	+00030	00000	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	433	
434	43*	14 Leporis	5. 40. 36.80	1859.1	6	2718	+00026	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	434	
435	32*	23 Orionis	5. 41. 7.00	1859.9	7	2844	+00027	00000	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	435	
436	6	Pinnis V. 239	5. 42. 10.02	1854.1	4	+3303	+00033	+0007	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	436	
437	56*	31 Canis majoris	5. 42. 46.15	1857.9	1	5367	+00017	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	437	
438	..	..	5. 42. 46.15	1857.9	1	5367	+00017	+0003	008361	0.06424	1.60849	0.08157	8.9427	63. 31. 43.40	1854.1	1	..	..	..	..															

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATIONS,

No.	Magnitudes.	Star's Name.	Mean Right Ascension, 1850, Jan. 1, to 1856, Dec. 31, 1856.	Mean Year and Fraction of Year.	Annual Proper Motion, 1850, Jan. 1, to 1856, Dec. 31, 1856.	Annual Variation of Position in R.A.	Secular Change in R.A. from Mean of R.A. & G.	Logarithm of Annual Proper Motion in R.A. from Mean of R.A. & G.	Value of μ	Mean Right Ascension, 1850, Jan. 1, to 1856, Dec. 31, 1856.	Mean Year and Fraction of Year.	Number of Observations.	
No.	Magnitudes.	Star's Name.	Mean Right Ascension, 1850, Jan. 1, to 1856, Dec. 31, 1856.	Mean Year and Fraction of Year.	Annual Proper Motion, 1850, Jan. 1, to 1856, Dec. 31, 1856.	Annual Variation of Position in R.A.	Secular Change in R.A. from Mean of R.A. & G.	Logarithm of Annual Proper Motion in R.A. from Mean of R.A. & G.	Value of μ	Mean Right Ascension, 1850, Jan. 1, to 1856, Dec. 31, 1856.	Mean Year and Fraction of Year.	Number of Observations.	
441	3 ^h	Columbe.....	5.46. 14.9	1853.9	9 + 2.109	+0.0026	+0.0028	0.00899	0.0791	143.11	0.07812	85.366	10
442	5 ^h 4 ^h	54 Orionis.....	5.46. 14.9	1850.0	6 3.564	+0.0034	-0.0016	0.00899	0.0791	143.11	0.07812	85.366	10
443	6	Piazzi V. 246.....	5.46. (16.)	..	..	6.315	+0.0044	-0.0011	0.00899	0.0791	0.08216	77.795	10
444	Var. 5 ^h	58 Orionis.....	5.47. 35.59	1856.9	36	3.245	+0.0038	+0.0011	0.00899	0.0791	84.265	84.265	10
445	3 ^h	34 Aurigæ.....	5.49. 15.70	1857.5	17	4.404	+0.0043	+0.0011	0.00899	0.0791	0.08011	84.265	10
446	5 ^h 4 ^h 13 ^h	Tauri.....	5.49. 15.70	1856.6	3	3.722	+0.0034	-0.0004	0.00899	0.0791	83.858	83.858	10
447	3 ^h 3 ^h	32 Aurigæ.....	5.50. 15.70	1856.1	3	4.036	+0.0036	-0.0004	0.00899	0.0791	83.858	83.858	10
448	6	Greenbridge 100.....	5.50. (56.)	..	..	2.676	+0.0046	+0.0039	0.00899	0.0791	83.858	83.858	10
449	8	Piazzi V. 282.....	5.50. 57.31	1854.1	2	3.114	+0.0044	-0.0004	0.00899	0.0791	83.858	83.858	10
450	6 ^h	59 Orionis.....	5.51. 8.26	1854.1	2	3.722	+0.0034	-0.0004	0.00899	0.0791	83.858	83.858	10
451	6	35 Camelopardalis.....	5.51. 23.06	1854.3	3	4.757	+0.0038	+0.0003	0.00899	0.0791	83.858	83.858	10
452	6 ^h	61 Orionis.....	5.51. 10.17	1860.0	5	3.550	+0.0033	+0.0010	0.00899	0.0791	83.858	83.858	10
453	5 ^h	62 Orionis.....	5.51. 36.16	1859.1	5	3.566	+0.0033	+0.0010	0.00899	0.0791	83.858	83.858	10
454	5 ^h	1 Gemmorum.....	5.51. 36.66	1856.9	18	3.647	+0.0033	-0.0008	0.00899	0.0791	83.858	83.858	10
455	6 ^h	66 Orionis.....	5.51. 36.66	1854.1	2	3.722	+0.0034	-0.0004	0.00899	0.0791	83.858	83.858	10
456	..	.....	5.58. 45.40	1854.3	3	3.722	+0.0038	-0.0004	0.00899	0.0791	83.858	83.858	10
457	5 ^h 4 ^h	67 Orionis.....	5.59. 34.74	1859.3	12	3.245	+0.0038	+0.0011	0.00899	0.0791	83.858	83.858	10
458	..	.....	5.59. 47.18	1855.4	2	3.722	+0.0038	-0.0004	0.00899	0.0791	83.858	83.858	10
459	5 ^h 4 ^h	18 Leporis.....	5.59. 49.18	1859.1	4	2.716	+0.0031	+0.0004	0.00899	0.0791	83.858	83.858	10
460	..	.....	5.59. 58.61	1855.1	3	3.722	+0.0038	-0.0004	0.00899	0.0791	83.858	83.858	10
461	..	.....	6. 0. 24.63	1854.1	1	3.643	+0.0036	..	0.00899	0.0791	83.858	83.858	10
462	6	3 Gemmorum.....	6. 1. 13.97	1861.1	1	3.643	+0.0036	+0.0006	0.00899	0.0791	83.858	83.858	10
463	8	Lalande 1684.....	6. 2. 11.75	1854.8	1	3.722	+0.0038	..	0.00899	0.0791	83.858	83.858	10
464	..	.....	6. 2. 34.77	1859.1	4	3.680	+0.0034	..	0.00899	0.0791	83.858	83.858	10
465	6	5 Gemmorum.....	6. 2. 57.17	1856.9	4	3.680	+0.0034	0.0000	0.00899	0.0791	83.858	83.858	10
466	5 ^h 4 ^h	Piazzi V. 315, B. 234.....	6. 3. 24.77	1860.1	1	6.622	-0.0037	+0.0003	0.00899	0.0791	83.858	83.858	10
467	3 ^h 4 ^h	7 Gemmorum.....	6. 6. 25.85	1854.3	3	3.647	+0.0038	-0.0007	0.00899	0.0791	83.858	83.858	10
468	5 ^h 4 ^h	44 Aurigæ.....	6. 6. 27.45	1857.9	18	3.317	+0.0039	-0.0005	0.00899	0.0791	83.858	83.858	10
469	6 ^h 5 ^h	21 Orionis.....	6. 6. 28.61	1860.1	3	3.722	+0.0038	-0.0004	0.00899	0.0791	83.858	83.858	10
470	5 ^h 4 ^h	2 Lynceæ.....	6. 7. 16.19	1859.1	4	5.501	-0.0031	+0.0003	0.00899	0.0791	83.858	83.858	10
471	6 ^h 1 ^h	73 Orionis.....	6. 8. 7.57	1854.1	2	3.722	+0.0038	-0.0004	0.00899	0.0791	83.858	83.858	10
472	5 ^h	1 Monocerotis.....	6. 8. 11.37	1859.1	5	2.331	+0.0016	+0.0003	0.00899	0.0791	83.858	83.858	10
473	1 ^h 1 ^h	5 Columbar.....	6. 11. 34.37	1859.6	2	2.134	+0.0031	-0.0001	0.00899	0.0791	83.858	83.858	10
474	9	W. B. VI. 234.....	6. 11. 50.27	1854.6	2	3.722	+0.0038	-0.0004	0.00899	0.0791	83.858	83.858	10
475	8	W. B. VI. 248.....	6. 12. 17.44	1855.1	2	2.733	+0.0017	..	0.00899	0.0791	83.858	83.858	10
476	6 ^h	7 Monocerotis.....	6. 12. 58.26	1854.9	7	2.890	+0.0015	+0.0004	0.00899	0.0791	83.858	83.858	10
477	3 ^h 1 ^h	13 Gemmorum.....	6. 14. 24.33	1857.4	48	3.647	-0.0002	-0.0005	0.00899	0.0791	83.858	83.858	10
478	3 ^h 1 ^h	1 Canis Majoris.....	6. 14. 56.20	1857.4	48	3.647	-0.0002	-0.0005	0.00899	0.0791	83.858	83.858	10
479	7	Piazzi VI. 78.....	6. 16. 6.30	1855.1	1	2.697	-0.0007	+0.0001	0.00899	0.0791	83.858	83.858	10
480	3 ^h 1 ^h	1 Canis Majoris.....	6. 16. 31.26	1856.1	1	3.647	+0.0031	+0.0001	0.00899	0.0791	83.858	83.858	10

441. This star is identical with Lacaille 2059.

444. The limits of magnitude are 1.0 and 1.5; the period 196 days.

451. In the B. A. C. this star is placed in the constellation Aurigæ.

475. This star is identical with Lacaille 2215.

443. This star is identical with Schwebel 342.

469, 472. Bradley has no N. P. D.

478. This star is identical with Lacaille 2215.

AT THE ROYAL OBSERVATORY, GREENWICH, FROM 1854 TO 1860.

Annual Variation in R. P. D. from Mean of R. A. & G.	Secular Variation in P. P. D. from Mean of R. A. & G.	Annual Proper Motion in R. A. & G.	Logarithm of				Value of μ	No. in the Series	No. in the Catalogue of P. P. D. from the Association (R. A. & G.)	Hour and No. in Planet.	No. in Greenbridge.	Hour and No. in Welles.	No. in Argonne.	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. 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P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. 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P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R. A. & G.)	No. in P. P. D. from the Association (R.
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[illegible]

The magnitudes of stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 3777 Stars; or from the Catalogue of Lalande published by the British Association; or from Weiss's *Catalogus Stellarum ex Zonis Regionemantis*; or, for the variable stars, from lists in the *Hydrolithi* Observations, 1854, and 1856.* The authorities for any remaining magnitudes are given in the Notes.

[illegible]

653. The magnitude is taken from Groombridge: the star is identical with Schwed 526.
 657. This star is identical with Lacaille 3462.
 663. This star is the variable δ Cancri; the limits of magnitude are 3 and 10.5; the period 9.43397 days.
 676. This star is the variable δ Hydre; the limits of magnitude are 8.5 and 13.5; the period about 260 days.
 679. This star is the variable τ Cancri; the limits of magnitude are 8.5 and 13.5; the period about 260 days.

658. This star is identical with Schwerd 531.
668. This star is identical with Lacaille 3487.

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8377 Stars; from the Catalogue of Lalande published by the British Association; from *Weisse's Catalogus Stellarum ex Zonis Regionemans*; or, for the variable stars, from Mr. Pogson's lists in the "Radclyffe Observations for 1854 and 1856." The authorities for any remaining magnitudes are given in the Notes.

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATION

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 1, 0h. to 24h.	Mean' and Fraction of Year.	Number of Observations.	Annual Proper Motion in R.A., from Observations in Besseliana.	Secular Variation of Proper Motion in R.A.	Annual Proper Motion in R.A., from Observations in R.A.C.	Logarithms of				Value of μ .	Mean North Polar Distance, 1860, Jan. 1, 1864 to 1860.	Mean Time of Year.	Number of Observations.
									a	f	g	h				
721	3 ⁴	23 Ursa Majoris.....	h m s	1858.5	5	+ 4.805	-0.0138	+ 0.001	0.03510	0.11237	1.47248	0.04060	87.993	46.19.44.79	18567	19
722	5 ⁴	30 Hydre.....	g. 50.46.44	1857.9	49	+ 0.951	-0.0051	- 0.004	0.06005	0.09454	1.44640	0.08179	86.793	38. 1.17.16	18573	21
723	6 ⁴	W. B. IX. 419.....	g. 50.50.60	1857.9	5	+ 0.990	-0.0024	..	0.03903	0.09444	1.44701	0.08085	86.565	35.27.30.49	18574	7
724	5 ⁴	4 Leonis.....	e. 50.54.60	1860.8	5	+ 2.118	-0.0038	+ 0.006	0.05995	0.14656	1.45055	0.07601	85.793	30. 0. 5.55	1860.8	5
725	5 ⁴	14 Ursa Majoris.....	g. 53. 2.54	1856.3	3	+ 0.605	-0.0175	- 0.009	0.06997	0.13374	1.43811	0.05316	87.737	19.15.27.46	1856.4	5
726	7 ⁴	Greenbridge 1552.....	g. 3.15.17.9	1860.3	3	+ 4.042	-0.0281	..	0.04737	0.10180	1.45035	0.05735	86.993	41. 3. 10.23	1860.3	1
727	7 ⁴	Greenbridge 1553.....	g. 3.15.41.4	1860.3	4	+ 0.506	-0.0479	..	0.04835	0.10172	1.45094	0.05526	86.993	37. 4. 1. 1. 1	1860.3	1
728	3 ⁴	25 Ursa Majoris.....	h. 55.18.21	1857.4	55	+ 4.164	-0.0565	- 0.011	0.04483	0.10340	1.45885	0.05769	86.971	37.41.14.17	1857.3	55
729	5 ⁴	5 Leonis.....	g. 53.45.64	1856.5	9	+ 3.440	-0.0173	- 0.004	0.05826	0.14597	1.45793	0.07093	86.711	66. 25. 3.24	1856.6	9
730	6 ⁴	4 Leonis.....	g. 54. 2.74	1858.9	9	7.349	-0.0100	- 0.009	0.05165	0.19440	1.45101	0.05731	86.649	38. 4. 46.57	1858.9	1
731	6 ⁴	6 Leonis.....	g. 54. 4.79	1860.8	5	+ 3.215	-0.0092	- 0.008	0.05965	0.09343	1.45063	0.07574	86.614	39.49. 8.60	1860.8	5
732	5 ⁴	13 Leonis Minoris.....	g. 54. 5.19	1857.3	3	3.707	-0.0246	+ 0.004	0.05933	0.09777	1.45796	0.06471	86.615	35.53.44.50	1857.3	3
733	5 ⁴	13 Leonis Minoris.....	g. 53.19.19	1858.7	3	3.265	-0.0095	..	0.05420	0.09576	1.45790	0.06472	86.859	35.55. 5.86	1858.7	3
734	9	W. B. IX. 563.....	g. 56. 6.61	1857.3	1	3.704	-0.0104	..	0.05128	0.14117	1.45749	0.06465	86.645	37.15. 3.76	1857.3	1
735	7	Greenbridge 1559.....	g. 3.16.39	1860.1	1	4.030	-0.0488	..	0.04923	0.10149	1.45685	0.05676	87.089	40. 55.18.42	1860.1	1
736	6 ⁴	11 Leonis Minoris.....	g. 52.7.15.04	1860.1	1	+ 3.684	-0.0289	- 0.056	0.05498	0.13774	1.45761	0.06465	86.989	53.13.34.69	1860.1	1
737	6 ⁴	33 Hydre.....	g. 52.33.44	1854.3	3	+ 0.928	-0.0043	- 0.003	0.05649	0.09388	1.44709	0.06094	86.567	91. 31. 3.19	1854.3	3
738	6 ⁴	7 Leonis.....	g. 52.18.13.5	1854.2	3	3.293	-0.0117	- 0.004	0.05023	0.09427	1.45167	0.06720	86.700	74.59.53.23	1854.2	3
739	6 ⁴	4 Leonis.....	g. 52.18.15.5	1854.1	1	3.354	-0.0103	..	0.05943	0.09409	1.45106	0.06798	86.685	77. 36. 0.10	1854.1	1
740	6 ⁴	45 Lynce.....	g. 59.36.70	1856.3	1	3.777	-0.0346	+ 0.003	0.05314	0.08218	1.45906	0.06531	87.011	49. 8. 1.70	1856.1	1
741	6	9 Ursa Majoris.....	h. 55.5.42	1855.4	4	+ 3.978	-0.0186	- 0.008	0.05848	0.15514	1.45419	0.07008	86.618	64.40.10.49	1855.4	4
742	6 ⁴	9 Ursa Majoris.....	g. 59.40.46	1857.1	11	3.179	-0.0078	- 0.008	0.05945	0.13777	1.44993	0.06766	86.644	38.26.49.15	1857.1	11
743	8 ⁴	Lalande (F.) 1479.....	g. 31. 3.17	1860.7	2	3.179	-5.8806	..	8.8665	0.2836	1.5616	8.8910	80.990	4. 45. 47.48	1860.7	2
744	+3 ⁵	33 Hydre.....	g. 52.34.30	1854.3	3	+ 0.903	-0.0041	- 0.003	0.05943	0.13741	1.44816	0.06735	86.645	90.30.33.08	1854.3	3
745	7	Greenbridge 1573.....	g. 3.13.29.55	1860.2	3	3.969	-0.0489	..	0.04857	0.10061	1.46218	0.05626	87.997	40. 56. 3.87	1860.2	3
746	5 ⁴	16 Leonis.....	g. 31.35.76	1859.2	3	+ 2.978	+0.0009	+ 0.005	0.05878	0.09374	1.44556	0.08387	86.525	101.41.56.16	1859.2	3
747	+3 ⁵	14 Hydre.....	g. 31.40.54	1857.2	12	-0.0093	-0.003	..	0.05929	0.13573	1.45056	0.07355	86.734	79.28.24.47	1856.0	12
748	..	..	g. 34. 4.61	1854.3	1	3.240	-0.0040	..	0.05816	0.10187	1.45147	0.06735	86.797	18. 18. 36.84	1854.3	1
749	5	28 Ursa Majoris.....	h. 55.46.41	..	47	3.179	-0.0186	- 0.006	0.05848	0.15514	1.45419	0.07008	86.618	64.40.10.49	1855.4	47
750	6 ⁴	16 Leonis.....	g. 31.35.76	1859.2	6	3.179	-0.0115	- 0.008	0.05878	0.09373	1.44556	0.08387	86.525	75.20.19.44	1859.2	6
751	3 ⁴	17 Leonis.....	g. 37. 53.93	1856.4	49	+ 3.452	-0.0180	- 0.004	0.05876	0.09341	1.45370	0.07917	86.631	34. 5. 5.63	1856.5	55
752	16	W. B. IX. 1383.....	g. 38.47.56	1857.1	1	3.172	-0.0076	..	0.05802	0.14981	1.44981	0.06663	86.619	38. 28.49.35	1857.1	11
753	6 ⁴	18 Leonis.....	g. 38.50.65	1860.0	3	3.413	-0.0103	- 0.003	0.05854	0.13400	1.44948	0.08145	86.713	73.34.49.16	1860.0	7
754	7	4 Scutellus.....	g. 39.46.11	1860.5	2	3.346	-0.0101	..	0.05851	0.13416	1.45081	0.07494	86.624	77. 55.32.39	1860.5	2
755	7	16 Leonis.....	g. 30. 5.16	1856.4	5	+ 3.132	-0.0102	- 0.003	0.05849	0.13404	1.45084	0.08847	86.847	77. 47. 10.13	1856.4	5
756	Var.	Bradley 1375.....	g. 49. 5.18	1858.4	18	+ 3.336	-0.0101	- 0.003	0.05849	0.13404	1.45081	0.08847	86.847	77. 55.45.49	1858.4	18
757	+3 ⁵	30 Ursa Majoris.....	g. 44.1.31	..	47	+ 3.179	-0.0084	- 0.013	0.06105	0.10164	1.46799	0.06386	87.911	30.18.19.17	1857.3	47
758	7 ⁴	30 Ursa Majoris.....	g. 44. 3.40	1859.3	3	4.138	-0.0637	- 0.009	0.03850	0.10161	1.44467	0.08085	87.731	35.17. 1.90	1859.3	3
759	6	4 Scutellus.....	g. 41.12.88	1860.5	2	+ 3.18	-0.0064	- 0.005	0.05888	0.14999	1.45735	0.07661	86.85	80. 4. 9.41	1860.5	2
760	7 ⁴	19 Hydre.....	g. 44.44.86	1859.4	4	+ 2.438	+0.0015	+ 0.002	0.05800	0.09281	1.44513	0.08228	86.768	11.20.29.87	1859.4	4

526 The magnitude of λ is $\lambda = 1.0 \times 10^{-10}$ m.

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743. This star is identical with Schwerdt

AT THE ROYAL OBSERVATORY, GREENWICH, FROM 1854 TO 1860.

[illegible]

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8377 Stars; from the Catalogue of Lalande published by the British Association; from Weisse's *Catalogus Stellarum ex Zonis Regionemontanis*; or, for the variable stars, from *Revue des Étoiles Variables*. *Small italicized magnitudes* are given in the Notes.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1850, Jan. 1, from Observations, α to α_{1850} .	Mean Year and Fraction of Year.	Mean Value of $\Delta\alpha$ per Annum.	Annual Precession in R.A., for 100 Years, μ in α_{1850} .	Secular Variation of Precession in R.A., ν in α_{1850} .	Annual Proper Motion in R.A., λ in α_{1850} .	Logarithm of λ .	Value of λ .	Mean Distance, 1850, Jan. 1, from Observations, ρ to ρ_{1850} .	Mean Year and Fraction of Year.	Mean Value of $\Delta\rho$ per Annum.
									α	ρ	ρ		
801	5.6	29 Leonis Minoris.	10. 17. 59.97	1856.3	3	+3.494	-0.0084	+0.008	0.01537	0.09190	1.54755	0.06099	87.875
802	6	44 Leonis Minoris.	10. 17. 55.78	1856.2	3	+3.458	-0.0086	-0.007	0.01633	0.09090	1.54755	0.06099	87.875
803	5.4	30 Leonis Minoris.	10. 17. 54.79	1856.2	3	+3.468	-0.0086	-0.007	0.01633	0.09090	1.54755	0.06099	87.875
804	6	41 Hydre.	10. 19. 19.38	1856.1	4	+2.908	+0.0039	-0.010	0.01581	0.09271	1.54755	0.06099	87.875
805	6	Greenbridge 166.	10. 19. 24.31	1856.2	4	+3.738	-0.0089	..	0.04474	0.09271	1.54755	0.06099	87.875
806	5.3	31 Leonis Minoris.	10. 19. 46.61	1856.2	6	+3.565	-0.0088	-0.010	0.05074	0.09186	1.54755	0.06099	87.875
807	4	W. B. X. 334.	10. 19. 49.17	1856.2	3	+3.404	-0.0080	..	0.01643	0.09186	1.54755	0.06099	87.875
808	6	45 Leonis.	10. 20. 15.13	1856.7	3	+3.176	-0.0085	-0.003	0.01634	0.09240	1.54755	0.06099	87.875
809	4	Piazzi X. 82.	10. 20. 45.04	1856.9	3	+2.743	-0.0087	-0.005	0.01503	0.09276	1.54755	0.06099	87.875
810	..	.....	10. 21. 13.65	1856.3	3	+3.499	-0.0036	..	0.04936	0.09240	1.54755	0.06099	87.875
811	6	Piazzi X. 83.	10. 21. 19.35	1856.7	3	+3.222	-0.0081	-0.007	0.01586	0.09240	1.54755	0.06099	87.875
812	6	Bradley 1439.	10. 21. 21.01	1856.2	..	6.681	-0.5930	+0.004	0.04831	0.14056	1.50086	0.09024	87.449
813	6	36 Urse Majoris.	10. 21. 38.55	1856.1	1	+3.919	-0.0065	-0.013	0.01746	0.09709	1.46118	0.04443	87.104
814	6	W. B. X. 378.	10. 21. 59.44	1856.3	3	+3.199	-0.0098	..	0.01665	0.09813	1.50421	0.07415	87.357
815	7	30 Sextantis.	10. 23. 0.07	1856.1	1	+3.073	-0.0030	0.000	0.01659	0.08897	1.44892	0.07913	87.151
816	6	45 Leonis Minoris.	10. 24. 43.18	1856.2	7	+3.215	-0.0089	-0.008	0.05571	0.08915	1.45048	0.07348	87.428
817	5	Greenbridge 1658.	10. 25. 3.07	1856.2	1	+3.424	-0.0043	..	0.04811	0.09190	1.54755	0.06099	87.875
818	..	.....	10. 25. 4.94	1856.1	1	+3.209	-0.0066	..	0.05576	0.08909	1.45048	0.07348	87.428
819	4	47 Leonis Minoris.	10. 25. 26.22	1856.6	5	+3.167	-0.0081	0.000	0.01611	0.08891	1.44976	0.07348	87.428
820	6	34 Leonis Minoris.	10. 25. 30.00	1856.3	4	+3.457	-0.0077	0.000	0.01606	0.09093	1.54755	0.06099	87.875
821	6	48 Leonis Minoris.	10. 27. 29.61	1856.2	1	+3.143	-0.0067	-0.008	0.01569	0.08884	1.44937	0.07348	87.428
822	7	W. B. X. 500.	10. 29. 39.44	1856.3	4	+3.206	-0.0076	..	0.05558	0.08884	1.44937	0.07348	87.428
823	6	Bradley 1438.	10. 29. 47.44	1856.2	3	+3.139	-0.0063	+0.001	0.01611	0.08891	1.44976	0.07348	87.428
824	5.4	37 Leonis Minoris.	10. 30. 49.99	1856.2	7	+3.508	-0.0043	+0.004	0.05561	0.08891	1.44976	0.07348	87.428
825	6	38 Leonis Minoris.	10. 31. 6.61	1856.3	3	+3.276	-0.0038	-0.002	0.01606	0.09093	1.54755	0.06099	87.875
826	5.6	a Hydre.	10. 31. 45.75	1856.2	6	+2.937	+0.0047	-0.005	0.01556	0.08884	1.44937	0.07348	87.428
827	6	Greenbridge 166.	10. 31. (48)	1856.2	..	4.392	-0.1385	..	0.01616	0.08891	1.44976	0.07348	87.428
828	5.8	38 Urse Majoris.	10. 31. 30.94	1856.3	1	+3.117	-0.0041	-0.017	0.01611	0.08891	1.44976	0.07348	87.428
829	..	.....	10. 31. 34.84	1856.3	3	+3.198	-0.0043	..	0.01611	0.08891	1.44976	0.07348	87.428
830	6	33 Sextantis.	10. 31. 16.26	1856.3	3	+3.063	-0.0080	-0.011	0.01581	0.08791	1.44814	0.07248	87.317
831	7.8	W. B. X. 604.	10. 31. 18.39	1856.2	3	+3.771	-0.0086	..	0.05561	0.08809	1.44937	0.07348	87.428
832	7	37 Sextantis.	10. 31. 37.45	1856.2	3	+3.924	-0.01761	..	0.09940	0.10707	1.47117	0.09065	87.473
833	6	34 Sextantis.	10. 31. 23.63	1856.3	4	+3.100	-0.0047	-0.008	0.01601	0.08891	1.44976	0.07348	87.428
834	6	36 Sextantis.	10. 31. 36.53	1856.3	5	+3.098	-0.0040	-0.008	0.01581	0.08791	1.44814	0.07248	87.317
835	5.5	41 Leonis Minoris.	10. 31. 48.34	1856.7	4	+3.538	-0.0028	+0.003	0.01586	0.08896	1.45048	0.07348	87.428
836	6	37 Sextantis.	10. 31. 48.19	1856.6	6	+3.130	-0.0060	-0.003	0.01575	0.08891	1.44976	0.07348	87.428
837	6	Lalande 20748.	10. 31. 54.72	1856.3	3	+3.183	-0.0061	-0.001	0.01561	0.08891	1.44976	0.07348	87.428
838	6.4	54 Leonis Minoris.	10. 31. 01.15	1856.2	3	+3.165	-0.0051	-0.001	0.01561	0.08891	1.44976	0.07348	87.428
839	..	.....	10. 31. 37.79	1856.3	3	+3.174	-0.0091	..	0.01561	0.08891	1.44976	0.07348	87.428
840	5.5	53 Leonis Minoris.	10. 31. 57.74	1856.9	6	+3.161	-0.0082	-0.003	0.01555	0.08891	1.44976	0.07348	87.428

809. This star is identical with Lalande 4938.

812. This star is identical with Schwed 631.

823. This star is identical with Schwed 640.

No.	Annual Precession in R.A., or in Polar Elements	Secular Variation of Pre- cession in R.A., or in Polar Elements	Annual Proper Motion in R.A., or in Polar Elements	Logarithm of				Value of ρ	No. in Bessel's Catalogue	No. in Tahiti Polymer (P), or 1795, or 1800	Hour and Min. in Polar Element	Hour and Min. in Woods's Base.	No. in Alder, 1824	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar Element	No. in Polar Element in Polar 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No.	Magnitudes.	Star's Name.	Mean Right Ascension, 1850, Jan. 1, from Observations, α to α to α .	Mean Year and Fraction of Year.	Mean Declination, 1850, Jan. 1, from Observations, δ to δ to δ .	Annual Proper Motion, in R.A., from 1850, Jan. 1, to 1860, Jan. 1, in μ Secs.	Annual Proper Motion, in Declination, from 1850, Jan. 1, to 1860, Jan. 1, in μ Secs.	Logarithm of	Value of	Mean North Polar Distance, 1850, Jan. 1, from Observations, α to α to α .	Mean Year and Fraction of Year.	Number of Observations.
								e	f	g	h	i
842	7	W. B. X. 281	10. 45. 46.82	1854.3	3	+ 3.167	- 0.003	+ 0.0518	0.0771	1.49955	0.07417	87.599
842	4*	46 Leonis Minoris	10. 45. 43.42	1856.6	3	3.371	- 0.0458	+ 0.05055	0.0849	1.45437	0.08439	87.313
843	5*	45 Ursa Majoris	10. 45. 54.45	1857.8	16	+ 0.168	- 0.004	+ 0.04619	0.0749	1.45464	0.07456	88.006
844	6	Bradley 1514	10. 47. 58.68	1853.3	1	3.351	- 0.049	+ 0.05049	0.0871	1.45461	0.0871	88.556
845	4.5*	54 Leonis (Ant Star)	10. 48. 1.84	1853.3	6	3.269	- 0.0173	+ 0.05058	0.0736	1.45431	0.06809	88.019
846	2	54 Leonis (Ant Star)	10. 48. 2.73	1859.3	1	+ 3.269	- 0.0173	+ 0.05058	0.0736	1.45431	0.06809	88.019
847	6*	55 Leonis	10. 50. 12.03	1856.7	5	3.383	- 0.0027	+ 0.05158	0.0863	1.45437	0.0863	88.717
848	5.6	Plazet X. 199	10. 50. 12.03	1858.8	2	3.377	- 0.0158	+ 0.04961	0.0863	1.45437	0.0863	88.717
849	5*	47 Ursa Majoris	10. 51. 37.03	1860.1	1	3.416	- 0.038	+ 0.05049	0.0863	1.45437	0.0863	88.717
850	7	Plazet X. 305	10. 51. 37.03	1854.5	5	3.158	- 0.004	+ 0.05158	0.0863	1.45437	0.0863	88.717
851	5*	58 Leonis	10. 53. 19.75	1856.7	42	+ 3.101	- 0.0039	+ 0.05158	0.0863	1.45437	0.0863	88.717
852	5*	59 Leonis	10. 53. 29.27	1858.4	12	3.118	- 0.0054	+ 0.05158	0.0863	1.45437	0.0863	88.717
853	7	Plazet X. 312	10. 53. 53.35	1860.1	3	3.077	- 0.004	+ 0.05158	0.0863	1.45437	0.0863	88.717
854	8	Lalande (F.) 1749	10. 54. 30.71	1858.0	3	1.651	- 0.0056	+ 0.05158	0.0863	1.45437	0.0863	88.717
855	5*	61 Leonis	10. 54. 47.16	1860.3	4	3.061	- 0.008	+ 0.05158	0.0863	1.45437	0.0863	88.717
856	4.5*	60 Leonis	10. 54. 51.08	1856.3	3	3.215	- 0.0137	+ 0.05158	0.0863	1.45437	0.0863	88.717
857	2*	50 Ursa Majoris	10. 55. 3.40	1857.4	61	3.079	- 0.0088	+ 0.05158	0.0863	1.45437	0.0863	88.717
858	7*	Lalande 2118	10. 55. 40.38	1859.3	1	3.350	- 0.0271	+ 0.04917	0.0746	1.45437	0.0746	88.669
859	6*	62 Leonis	10. 56. 16.65	1860.1	3	3.077	- 0.009	+ 0.05158	0.0863	1.45437	0.0863	88.717
860	5*	63 Leonis	10. 57. 47.66	1856.7	44	3.123	- 0.0057	+ 0.05158	0.0863	1.45437	0.0863	88.717
861	4.5*	9 Octantis	10. 58. 58.49	1859.3	3	+ 3.295	+ 0.0114	+ 0.05158	0.0863	1.45437	0.0863	88.717
862	7.8	Lalande 2146	10. 58. 58.58	1859.3	6	3.121	- 0.0036	+ 0.05158	0.0863	1.45437	0.0863	88.717
863	5	Bradley 1538	10. 59. 10.57	1859.3	3	3.297	+ 0.0114	+ 0.05158	0.0863	1.45437	0.0863	88.717
864	6*	65 Leonis	10. 59. 45.63	1860.3	6	3.089	- 0.0088	+ 0.05158	0.0863	1.45437	0.0863	88.717
865	7	W. B. X. 107	10. 59. 54.43	1854.3	3	3.113	- 0.0072	+ 0.0477	0.0850	1.44931	0.07464	87.745
866	7.8	Lalande 2152	11. 1. 0.54	1858.4	1	+ 3.098	- 0.0035	+ 0.05158	0.0850	1.44867	0.07743	87.594
867	5*	10 Octantis	11. 1. 57.83	1856.3	3	+ 3.099	+ 0.011	+ 0.05158	0.0850	1.44867	0.07743	87.594
868	7.8	Lalande 2160	11. 1. 6.35	1854.3	3	3.141	- 0.0076	+ 0.0460	0.0850	1.44915	0.07013	87.803
869	5*	Plazet XI. 3	11. 1. 9.75	1860.1	3	3.070	+ 0.0144	+ 0.05081	0.0850	1.44714	0.07013	87.803
870	7	W. B. X. 25	11. 1. 17.94	1854.3	3	3.144	- 0.0077	+ 0.0460	0.0850	1.44714	0.07013	87.803
871	6	Groombridge 1746	11. 4. (34.)	..	..	+ 3.541	- 0.0567	+ 0.0554	0.0850	1.45456	0.07447	88.021
872	5*	69 Leonis	11. 6. 35.54	1860.3	5	3.076	- 0.0044	+ 0.05505	0.08472	1.44883	0.07447	87.564
873	1.6*	68 Leonis	11. 6. 39.56	1856.4	3	3.192	- 0.0033	+ 0.05151	0.0811	1.45013	0.06994	88.129
874	6	B. F. 1589	11. 6. 41.86	1853.4	4	3.088	- 0.0046	+ 0.0501	0.08472	1.44851	0.07793	87.860
875	6*	Plazet XI. 12	11. 6. 45.37	1854.3	3	3.120	- 0.0047	+ 0.0501	0.08472	1.44901	0.07554	87.764
876	3.4*	71 Leonis	11. 6. 53.40	1859.3	7	3.164	- 0.0005	+ 0.0502	0.0849	1.44965	0.07743	87.594
877	5*	72 Leonis	11. 7. 45.19	1859.3	7	3.206	- 0.0015	+ 0.05160	0.0811	1.45451	0.06866	88.234
878	6*	73 Leonis	11. 8. 32.34	1854.3	3	3.147	- 0.0086	+ 0.0501	0.0849	1.44949	0.07447	87.564
879	4*	74 Leonis	11. 9. 12.68	1859.5	5	3.057	- 0.0005	+ 0.04944	0.0843	1.44805	0.08030	88.513
880	4.3*	Ursa Majoris	11. 10. 42.15	1855.1	6	3.253	- 0.0015	+ 0.05160	0.0811	1.45451	0.06866	88.234

No.	Annual Proper Motion, in R.A., from 1850, Jan. 1, to 1860, Jan. 1, in μ Secs.	Secular Variation, in R.A., from 1850, Jan. 1, to 1860, Jan. 1, in μ Secs.	Annual Proper Motion, in Declination, from 1850, Jan. 1, to 1860, Jan. 1, in μ Secs.	Logarithm of					Value of μ	No. of Stars, in Bessel's Catalogue.	No. in Lalande's Catalogue (No. in Piazzi's Catalogue).	Hour and No. in Piazzi.	No. in Greenwich.	Hour and No. in Weinek's Bessel.	No. in Argelander.	No. in Piazzi III.	No. in Piazzi's Catalogue (No. in Bessel's).	No. in Lalande.	No. in Argelander.	No.	
				e'	f'	g'	h'														
e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
1896	0.7143	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1901	+0.149	+0.34	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1902	0.153	+0.00	0.0456	0.0690	0.1364	0.1819	0.1179	0.4599	1.201	2091	(B.A.)	181	1703	..	..	..	..	..	..	..	..
1907	0.143	+0.70	0.0045	0.0536	0.1461	0.1879	0.1879	0.5018	1.164	2091	(B.A.)	181	1703	..	..	..	..	..	..	..	..
1908	+0.159	+0.01	0.0757	0.0668	0.1449	0.1786	0.5517	1.115	2099	(B.A.)	190	..	..	..	..	..	..	..	..	..	..
1908	+0.159	..	0.0757	0.0668	0.1449	0.1786	0.5517	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1909	0.130	0.00	0.0880	0.0801	0.1443	0.1789	0.6543	1.157	2100	(B.A.)	193	..	876	..	..	..	..	..	..	..	..
1913	0.113	+0.00	0.0879	0.0819	0.1447	0.1766	0.8610	..	..	..	..	199	..	..	..	..	..	..	..	..	..
1917	0.126	0.00	0.0816	0.0630	0.1451	0.1741	0.7139	1.152	..	..	..	205	1718	..	..	..	..	..	..	..	..
1918	+0.138	+0.01	0.0935	0.1407	0.1451	0.1734	0.6513	..	..	..	..	..	..	937	..	..	..	..	..	..	..
1921	+0.121	+0.03	0.09713	0.1048	0.1455	0.1705	0.6821	1.156	2115	(B.A.)	210	..	954	..	..	..	..	..	..	..	..
1923	0.131	+0.06	0.0937	0.1156	0.1456	0.1705	0.6821	..	..	..	..	211	..	960	..	..	..	..	..	..	..
1924	0.119	+0.05	0.08655	0.0840	0.1450	0.1717	0.7026	..	..	..	..	212	..	965	..	..	..	..	..	..	..
1924	0.095	..	0.1242	0.1322	0.1486	0.1705	0.9117	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1925	0.217	+0.03	0.09755	0.06855	0.1459	0.1708	0.7156	1.150	2116	(B.A.)	218	..	..	979	..	..	..	..	..	..	..
1925	+0.213	+0.04	0.09717	0.1235	0.1459	0.1709	0.5840	1.159	2116	(B.A.)	219	..	..	..	..	..	..	..	..	..	..
1926	+0.146	+0.09	0.09698	0.1310	0.1459	0.1707	0.7223	1.153	2117	(B.A.)	217	1739	..	..	..	..	..	..	..	..	..
1927	0.137	..	0.08030	0.0467	0.1461	0.1693	0.5043	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1928	0.215	+0.03	0.09383	0.0871	0.1463	0.1684	0.7043	1.153	2118	(B.A.)	217	1007	..	..	..	..	..	..	..	..	..
1934	0.114	..	0.09751	0.1254	0.1466	0.1697	0.6514	1.155	2124	(B.A.)	236	..	..	1036	922	954	333	..	199	..	..
1934	+0.104	+0.03	0.09751	0.1254	0.1466	0.1697	0.6514	1.155	2124	(B.A.)	236	..	..	..	..	..	..	..	..	..	..
1935	0.211	..	0.09655	0.1240	0.1466	0.1693	0.6721	..	..	..	..	..	..	1053	..	..	..	..	..	..	..
1935	0.213	+0.03	0.09473	0.08388	0.1467	0.1693	0.8316	1.158	2129	(B.A.)	240	..	..	..	..	..	..	..	..	..	..
1937	0.109	+0.08	0.09148	0.09544	0.1469	0.1695	0.6148	1.159	2135	(B.A.)	243	..	..	1073	243	..	..	..	..	..	..
1937	0.210	..	0.09156	0.14106	0.1469	0.1691	0.6599	..	..	..	..	..	..	1075	..	..	..	..	..	..	..
1940	+0.107	..	0.09519	0.10436	0.1474	0.1694	0.6897	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1942	0.098	+0.02	0.09448	0.07837	0.1474	0.1693	0.8079	..	..	..	..	..	..	106	..	..	..	..	..	..	..
1944	0.014	..	0.09471	0.10567	0.1479	0.1696	0.6081	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1944	+0.104	+0.12	0.09461	0.14714	0.1479	0.1696	0.8507	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1945	0.104	..	0.09745	0.14695	0.1473	0.1693	0.6804	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1947	+0.115	..	0.06183	0.3037	0.1489	0.1586	0.4781	..	..	..	..	..	..	1746	..	..	..	..	..	..	..
1951	0.095	0.00	0.08887	0.0833	0.1489	0.1572	0.7129	1.167	2146	(B.A.)	11	81	..	..	..	..	..	..	..	..	..
1953	0.099	+0.14	0.09449	0.19123	0.1481	0.1555	0.6003	1.146	2146	(B.A.)	10	..	..	..	..	..	..	..	..	..	..
1953	0.095	..	0.09141	0.09733	0.1481	0.1558	0.7008	..	..	..	..	..	..	81	..	..	..	..	..	..	..
1953	0.096	+0.12	0.09666	0.1016	0.1483	0.1531	0.6933	..	..	..	..	..	..	85	..	..	..	..	..	..	..
1954	+0.098	+0.06	0.09289	0.16776	0.1485	0.1555	0.6861	1.148	2149	(B.A.)	13	..	..	..	..	..	..	..	..	..	..
1954	0.099	+0.01	0.09158	0.02046	0.1478	0.1541	0.5846	1.149	2149	(B.A.)	18	..	..	..	..	..	..	..	..	..	..
1955	0.094	+0.04	0.09205	0.15744	0.1487	0.1531	0.6216	1.150	..	..	..	..	..	..	..	..	..	..	..	..	..
1957	0.093	0.00	0.09289	0.08004	0.1490	0.1519	0.7131	1.151	2151	(B.A.)	23	..	..	..	..	..	..	..	..	..	..
1959	0.063	+0.57	0.07653	0.13610	0.1498	0.1508	0.5409	1.153	2153	(B.A.)	28	..	..	..	..	..	..	..	..	..	..

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1850 Jan. 0, from Observations 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, from Elements.	Annual Variation of Position in R.A.	Annual Proper Motion in R.A. from B.A.C.	Logarithms of	Value of	Mean North Polar Distance, 1850, from Observations 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.
									a	f	g	h	
881	4.3	53 Urs Majoris.....	11. 10. 49.2	1855.0	7	+3.53	-0.0015	-0.037	0.05016	0.03513	1.45106	0.04600	88.433
882	7	Piazzi XI. 31.....	11. 11. 1. 275	1854.3	3	3.136	-0.0077	+0.013	0.05431	0.04639	1.44926	0.07381	87.904
883	5	55 Urs Majoris.....	11. 11. 29.94	1853.3	4	3.399	-0.0088	-0.004	0.04774	0.03565	1.45177	0.05681	87.903
884	3.4	12 Crateris.....	11. 12. 26.6	1851.3	3	3.003	-0.0063	-0.009	0.04830	0.04830	1.44721	0.05854	87.734
885	4	77 Leonis.....	11. 12. 50.1	1853.5	40	3.104	-0.0042	-0.009	0.04740	0.04837	1.44877	0.07655	87.310
886	6.5	Piazzi XL 45.....	11. 14. (5n)	..	..	+3.640	-0.0037	-0.003	0.03914	0.04569	1.45099	0.09350	88.126
887	5.7	Piazzi XL 53.....	11. 16. 26.24	1853.3	4	2.893	-0.0180	+0.015	0.04909	0.04744	1.44549	0.08370	88.113
888	4.7	78 Leonis.....	11. 16. 37.45	1854.8	8	3.122	-0.0066	+0.007	0.04543	0.03739	1.44905	0.07441	87.988
889	14	Crateris.....	11. 17. 34.24	1853.3	5	3.088	-0.0046	+0.001	0.04816	0.04767	1.44680	0.08338	87.948
890	6.1	Piazzi XL 60.....	11. 17. 43.71	1854.3	3	3.125	-0.0070	+0.001	0.04521	0.03868	1.44909	0.07403	87.968
891	6.1	Piazzi XL 59.....	11. 18. 1. 794	1853.3	4	+3.444	-0.0557	-0.007	0.03758	0.03709	1.45395	0.04160	90.784
892	6.1	81 Leonis.....	11. 18. 19.24	1853.3	3	3.147	-0.0010	-0.003	0.05360	0.03774	1.44943	0.07383	88.113
893	7	Piazzi XL 57.....	11. 19. 3. 071	1854.1	3	3.112	-0.0054	-0.001	0.04548	0.03515	1.44888	0.05734	87.901
894	..	..	11. 19. 14. 133	1853.3	3	3.083	-0.0030	..	0.04646	0.03846	1.44859	0.07721	87.918
895	7	83 Leonis (1st Star).....	11. 19. 40.05	1853.9	7	3.097	-0.0023	-0.057	0.04740	0.03839	1.44851	0.07761	87.915
896	7.8	83 Leonis (2d Star).....	11. 19. 41.12	1853.9	7	+3.087	-0.0023	-0.057	0.04740	0.03839	1.44851	0.07761	87.915
897	5.7	84 Leonis.....	11. 20. 44.20	1856.8	45	3.086	-0.0022	-0.001	0.04567	0.03818	1.44850	0.07767	87.965
898	8	W. B. XI. 549.....	11. 20. 45.17	1856.0	4	3.086	-0.0022	..	0.04567	0.03818	1.44849	0.07767	87.965
899	6.1	85 Leonis.....	11. 21. 44.11	1854.3	3	3.135	-0.0091	+0.003	0.05366	0.03817	1.44925	0.07281	88.144
900	7	Piazzi XL 85.....	11. 22. 20.02	1854.3	3	3.104	-0.0046	+0.004	0.04543	0.03814	1.44877	0.07566	87.904
901	6.1	58 Urs Majoris.....	11. 22. 56.03	1856.3	3	+3.279	-0.0345	+0.011	0.04479	0.03854	1.45147	0.05560	89.563
902	3.4	1 Draconis.....	11. 23. (3.)	..	..	+3.665	-0.1133	-0.009	0.04479	0.03854	1.45147	0.05560	89.563
903	5.7	87 Leonis.....	11. 23. 9. 69	1855.5	10	3.064	-0.0010	-0.001	0.04566	0.03805	1.44814	0.08041	87.619
904	6.1	88 Leonis.....	11. 24. 31. 11	1854.2	3	3.118	-0.0048	-0.018	0.05371	0.03831	1.44914	0.07681	88.144
905	..	17 Crateris (1st Star).....	11. 25. 17.99	1853.3	4	+2.963	+0.0149	..	0.05316	0.03830	1.44658	0.07195	87.719
906	5.7	17 Crateris (2d Star).....	11. 25. 20.21	1853.3	4	+2.963	+0.0149	-0.005	0.05316	0.03830	1.44658	0.07195	87.719
907	4.1	Bradley 1580.....	11. 26. 3. 78	1857.4	19	2.953	-0.0045	-0.018	0.05316	0.03830	1.44658	0.07195	87.719
908	6.1	89 Leonis.....	11. 27. 10.16	1856.4	9	3.085	-0.0019	-0.001	0.04575	0.03816	1.44847	0.07578	88.113
909	6	90 Crateris.....	11. 27. 41.70	1858.1	10	2.954	+0.0173	-0.035	0.05003	0.03816	1.44645	0.07391	87.920
910	6	3 Draconis.....	11. 27. 47.23	1860.2	1	2.954	-0.1094	+0.003	0.05003	0.03816	1.44645	0.07391	87.920
911	9	W. B. XI. 486.....	11. 28. 27.16	1854.2	1	+3.027	+0.0053	..	0.05382	0.03815	1.44757	0.08506	87.444
912	6.1	Piazzi XL 111.....	11. 28. 57.66	1856.3	3	3.170	-0.0170	-0.001	0.05438	0.03818	1.44979	0.08577	88.113
913	5.7	89 Leonis.....	11. 29. 3. 96	1860.3	3	3.074	-0.0005	..	0.05438	0.03818	1.44934	0.08611	87.718
914	7	Piazzi XL 113.....	11. 29. 25.45	1854.3	4	3.094	-0.0015	+0.002	0.05438	0.03818	1.44934	0.08611	87.718
915	5.4	91 Leonis.....	11. 29. 46.84	1857.4	42	3.072	+0.0022	-0.003	0.05438	0.03818	1.44934	0.08611	87.718
916	..	W. B. XI. 534.....	11. 30. 58.55	1854.3	1	+3.080	-0.0011	..	0.05453	0.03822	1.44840	0.08505	87.846
917	6.1	1 Virginia.....	11. 31. 14.40	1854.2	3	3.098	-0.0044	0.000	0.05453	0.03823	1.44868	0.08541	88.004
918	7	Piazzi XL 116.....	11. 31. 15.00	1854.3	3	3.067	+0.0011	+0.008	0.05453	0.03823	1.44868	0.08541	88.004
919	7	Piazzi XL 118.....	11. 31. 17.47	1854.3	3	3.077	-0.0005	+0.008	0.05453	0.03823	1.44868	0.08541	88.004
920	..	..	11. 31. 33.78	1854.3	1	3.075	-0.0008	..	0.05453	0.03823	1.44868	0.08541	88.004

887. This star is identical with Lacaille 4725.
902. This star is identical with Schwab 68.
905, 906, 909. These stars are placed in the constellation Hydrus in the D. A. C.
910. This star is identical with Schwab 681.

Annual Variation in R.A. (N. or S. of Pole) in 1850 from Elements	Star's Name	Annual Proper Motion in R.A. (N. or S. of Pole) in 1850 from Elements	Annual Variation in P.D. (N. or S. of Pole) in 1850 from Elements	Logarithms of				Value of	No. in Bessel's Catalogue	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	Hour and Min.	No. in Gauss's Catalogue	Hour and Min. in Western Bessel.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or Gauss's Association (G.) 1800.	No. in Argander.	No. in Lalande Polariscope (P.) or
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No.	Magnitude.	Star's Name.	Mean Right Ascension, for 1850, from Observations 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, from Elements.	Secular Variation of R.A. from Preceding R.A.	Annual Proper Motion, from Main or B.A.C.	Logarithms of	Value of	Mean North Polar Distance, for 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.
									α	δ	ϵ	ζ	
921	5 ^m	61 Urum Majoris.....	11. 33. 40.77	1860.3	3	+ 3.179	-0.0210	+0.0004	0.0489	0.0854	1.44993	0.06067	89.134
921	5 ^m	3 Draconis.....	11. 34. 37.88	1855.8	3	+ 3.429	-0.0081	-0.0005	0.01146	0.08610	1.45136	0.01699	89.133
923	7	Piazzi XI. 144.....	11. 34. 57.73	1854.3	3	+ 3.086	-0.0084	-0.0005	0.05149	0.08181	1.44849	0.07866	87.940
924	9	.....	11. 37. 55.51	1854.2	1	+ 3.076	-0.0004	-0.0001	0.05446	0.08150	1.44831	0.07848	87.816
924	9	W. B. XI. 657.....	11. 37. 56.57	1854.2	1	+ 3.076	-0.0004	-0.0001	0.05446	0.08150	1.44831	0.07848	87.816
927	5 ^m	4 Virginis.....	11. 38. 41.00	1854.1	1	+ 3.092	-0.0041	+0.0001	0.05448	0.08151	1.44859	0.07855	88.071
927	5 ^m	3 Virginis.....	11. 38. 39.73	1854.1	1	+ 3.082	-0.0043	+0.0001	0.05448	0.08144	1.44851	0.07859	88.013
928	6 ^m	4 Virginis..... A'	11. 40. 47.37	1855.1	4	+ 3.090	-0.0040	-0.0005	0.05441	0.08143	1.44855	0.07853	88.095
929	6 ^m	93 Leonis.....	11. 40. 45.58	1856.5	7	+ 3.115	-0.0110	-0.0014	0.05164	0.08135	1.44894	0.06985	88.549
930	8	Piazzi XI. 162.....	11. 41. 46.40	1854.3	3	+ 3.101	-0.0074	-0.0001	0.05350	0.08116	1.44872	0.07256	88.319
931	2 ^m	94 Leonis..... B	11. 41. 54.98	1856.5	53	+ 3.101	-0.0074	-0.0036	0.05349	0.08115	1.44872	0.07253	88.322
931	2 ^m	5 Virginis..... B	11. 41. 54.13	1855.1	31	+ 3.076	-0.0004	-0.0036	0.05445	0.08093	1.44834	0.07851	87.947
931	6	Piazzi XI. 169.....	11. 41. 55.03	1855.9	9	+ 3.065	+0.0006	+0.0011	0.05474	0.08088	1.44841	0.07840	87.759
934	6 ^m	Greenidge 1835.....	11. 44. 57.30	1857.9	18	+ 3.143	-0.0040	-0.0144	0.04977	0.08121	1.44936	0.05944	89.554
935	4 ^m	28 Crateris.....	11. 45. 50.69	1856.9	9	+ 3.018	+0.0019	-0.0008	0.04941	0.08095	1.44744	0.09464	87.516
936	.....	.....	11. 45. 55.00	1854.2	1	+ 3.050	+0.0090	-0.0001	0.05350	0.08071	1.44793	0.08355	87.512
937	2 ^m	64 Urum Majoris..... 7	11. 46. 30.78	1855.8	32	+ 3.183	+0.0437	+0.0011	0.05361	0.08163	1.44998	0.04406	89.204
937	7	Piazzi XI. 179.....	11. 46. 42.67	1854.3	3	+ 3.068	+0.0027	+0.0011	0.05416	0.08058	1.44821	0.08044	87.803
939	.....	.....	11. 47. 7.54	1860.3	3	+ 3.079	-0.0015	-0.0001	0.05430	0.08053	1.44837	0.07701	88.213
940	8	W. B. XI. 804.....	11. 47. 11.47	1854.2	1	+ 3.056	-0.0046	-0.0001	0.05394	0.08055	1.44849	0.07854	88.314
941	8	Lalande 22547.....	11. 51. 51.98	1855.1	10	+ 3.113	-0.0031	-0.0001	0.04975	0.08032	1.44888	0.05945	88.653
941	8	.....	11. 51. 46.31	1854.3	1	+ 3.089	-0.0024	-0.0001	0.05417	0.08010	1.44854	0.07046	88.564
941	6 ^m	.....	11. 51. 53.68	1854.3	3	+ 3.073	+0.0002	-0.0017	0.05437	0.08004	1.44829	0.07863	88.417
944	9	W. B. XI. 890.....	11. 52. 15.83	1854.1	1	+ 3.060	+0.0066	-0.0001	0.05431	0.08003	1.44808	0.07843	88.343
945	6 ^m	7 Virginis..... b	11. 52. 46.64	1857.2	3	+ 3.075	-0.0008	-0.0001	0.05430	0.07995	1.44831	0.07731	88.056
946	6	Greenidge 1845.....	11. 54. (55)	.....	..	+ 3.153	-0.0387	-0.0001	0.04941	0.08049	1.44560	0.07812	108.398
947	5 ^m	8 Virginis.....	11. 54. 41.49	1856.4	44	+ 3.077	-0.0003	-0.0000	0.05411	0.08031	1.44813	0.07810	88.118
947	5 ^m	1 Comm.....	11. 54. 33.74	1857.1	4	+ 3.085	-0.0011	-0.0001	0.05418	0.08024	1.44841	0.07808	88.061
950	6 ^m	.....	11. 56. 51.38	1860.3	3	+ 3.079	-0.0009	-0.0001	0.05417	0.08013	1.44831	0.07806	88.043
951	6 ^m	Greenidge 1850.....	11. 57. 37.58	1860.6	4	+ 3.186	-0.0335	-0.0001	0.04974	0.08303	1.45151	0.07850	128.621
951	4 ^m	9 Virginis..... o	11. 58. 4.69	1856.0	1	+ 3.074	-0.0031	-0.0013	0.05401	0.07939	1.44830	0.07512	88.266
952	.....	.....	11. 58. 14.19	1855.3	1	+ 3.071	+0.0045	-0.0001	0.05446	0.07935	1.44826	0.08137	87.846
953	6	Greenidge 1833.....	11. 58. (34)	.....	..	+ 3.089	-0.0037	-0.0001	0.05406	0.07914	1.44853	0.07810	87.914
954	8	W. B. XI. 1013.....	11. 58. 0. 37	1855.3	1	+ 3.072	+0.0047	-0.0001	0.05418	0.07918	1.44847	0.07844	87.833
955	4 ^m	1 Corvi..... a	11. 59. 11.90	1859.3	3	+ 3.075	+0.0155	+0.0010	0.05394	0.07905	1.44831	0.08097	87.515
956	6 ^m	10 Virginis.....	12. 0. 30.89	1859.0	8	+ 3.071	+0.0008	+0.0001	0.05433	0.07890	1.44826	0.07805	87.879
957	3 ^m	2 Corvi..... c	12. 0. 55.79	1856.2	19	+ 3.079	-0.0027	-0.0001	0.05388	0.07883	1.44831	0.08874	87.655
958	.....	.....	12. 4. 7.95	1854.2	1	+ 3.073	+0.0027	-0.0001	0.05436	0.07875	1.44826	0.07867	87.876
959	6 ^m	4 Comae.....	12. 4. 44.81	1854.3	3	+ 3.058	-0.0117	-0.0001	0.05313	0.07862	1.44806	0.06690	89.096
960	5 ^m	Bradley 1634.....	12. 5. 35.51	1858.6	3	+ 3.213	-0.1250	+0.0007	0.04987	0.07644	1.44581	0.09225	105.105

953. This star is identical with Lalande 4951.

949. This star is the variable R Comae: it is of the 8th magnitude at the maximum.

955. This star is identical with Lalande 5035.

946. This star is identical with Schwed 707.

950. This star is identical with Schwed 720.

950. This star is identical with Schwed 711.

No.	Magnitude.	Star's Name.	Mean Right Ascension, for 1850, from Observations 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, from Elements.	Secular Variation of R.A. from Preceding R.A.	Annual Proper Motion, from Main or B.A.C.	Logarithms of	Value of	Mean North Polar Distance, for 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.
									α	δ	ϵ	ζ	
959	5 ^m	10 Virginis.....	12. 0. 30.89	1859.0	8	+ 3.071	+0.0008	+0.0001	0.05433	0.07890	1.44826	0.07805	87.879
959	5 ^m	2 Corvi..... c	12. 0. 55.79	1856.2	19	+ 3.079	-0.0027	-0.0001	0.05388	0.07883	1.44831	0.08874	87.655
959	5 ^m	4 Comae.....	12. 4. 44.81	1854.3	3	+ 3.058	-0.0117	-0.0001	0.05313	0.07862	1.44806	0.06690	89.096
959	5 ^m	Bradley 1634.....	12. 5. 35.51	1858.6	3	+ 3.213	-0.1250	+0.0007	0.04987	0.07644	1.44581	0.09225	105.105
959	5 ^m	Greenidge 1850.....	11. 57. 37.58	1860.6	4	+ 3.186	-0.0335	-0.0001	0.04974	0.08303	1.45151	0.07850	128.621
959	5 ^m	Greenidge 1845.....	11. 54. (55)	.....	..	+ 3.153	-0.0387	-0.0001	0.04941	0.08049	1.44560	0.07812	108.398
959	5 ^m	8 Virginis.....	11. 54. 41.49	1856.4	44	+ 3.077	-0.0003	-0.0000	0.05411	0.08031	1.44813	0.07810	88.118
959	5 ^m	1 Comm.....	11. 54. 33.74	1857.1	4	+ 3.085	-0.0011	-0.0001	0.05418	0.08024	1.44841	0.07808	88.061
959	5 ^m	.....	11. 56. 51.38	1860.3	3	+ 3.079	-0.0009	-0.0001	0.05417	0.08013	1.44831	0.07806	88.043
959	5 ^m	Greenidge 1833.....	11. 58. (34)	.....	..	+ 3.089	-0.0037	-0.0001	0.05406	0.07914	1.44853	0.07810	87.914
959	5 ^m	W. B. XI. 1013.....	11. 58. 0. 37	1855.3	1	+ 3.072	+0.0047	-0.0001	0.05418	0.07918	1.44847	0.07844	87.833
959	5 ^m	1 Corvi..... a	11. 59. 11.90	1859.3	3	+ 3.075	+0.0155	+0.0010	0.05394	0.07905	1.44831	0.08097	87.515
959	5 ^m	10 Virginis.....	12. 0. 30.89	1859.0	8	+ 3.071	+0.0008	+0.0001	0.05433	0.07890	1.44826	0.07805	87.879
959	5 ^m	2 Corvi..... c	12. 0. 55.79	1856.2	19	+ 3.079	-0.0027	-0.0001	0.05388	0.07883	1.44831	0.08874	87.655
959	5 ^m	4 Comae.....	12. 4. 44.81	1854.3	3	+ 3.058	-0.0117	-0.0001	0.05313	0.07862	1.44806	0.06690	89.096
959	5 ^m	Bradley 1634.....	12. 5. 35.51	1858.6	3	+ 3.213	-0.1250	+0.0007	0.04987	0.07644	1.44581	0.09225	105.105

The magnitudes of Stars taken from Argelande are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8727 Stars; from the Catalogue of Lalande published by the British Association; from Weisse's Catalogue *Stellorum et Zonis Regionum*; or, for the variable stars, from Mr. Pogson's lists in the "Radcliffe Observations, 1854 and 1856." The authorities for any remaining magnitudes are given in the Notes.

No.	Star's Name.	Mean Right Ascension, 1845, Jan. 1.	Mean Polar Distance, 1845 to 1860.	Mean Year and Fraction of Year.	Annual Proper Motion in Right Ascension.	Annual Proper Motion in Declination.	Annual Proper Motion from Parallax in R.A.	Logarithms of										Value of l	Mean North Polar Distance, 1845, Jan. 1.	Mean Year and Fraction of Year.	Number of Observations.
								a	b	c	d	e	f	g	h	i	j					k	l
961	..	12. 5. 50.1	1854.1	1	+ 3.061	-0.0082	..	0.05176	0.07853	1.44830	0.07045	87.841	70. 14. 49.70	1854.1	1						
962	..	12. 7. 50.3	1854.1	1	+ 3.071	+0.0015	..	0.05136	0.07835	1.44830	0.07090	87.886	91. 24. 42.46	1854.1	1						
963	6	Greenidge 1861..	12. 8. 45.6	1854.3	3	2.959	-0.0761	..	0.09306	0.06453	1.44606	0.00019	96.617	19. 1. 13.63	1859.3	1					
964	5*	6 Comm.	12. 8. 54.5	1853.5	3	3.057	-0.0509	-0.003	0.05138	0.07821	1.44830	0.07026	88.556	74. 19. 17.18	1859.3	9					
965	7	8 Comm. Venetian..	12. 9. 6.46	1860.0	3	3.013	-0.0131	+0.003	0.05177	0.07819	1.44755	0.07036	90.919	43. 13. 36.05	1860.0	1					
966	5*	7 Comm.	12. 9. 15.18	1859.6	3	3.047	-0.0112	+0.005	0.05180	0.07811	1.44759	0.07094	90.947	61. 16. 33.45	1859.6	11					
967	5*	Plaz. XII. 19.	12. 9. 27.54	1859.6	3	3.015	-0.0171	+0.005	0.05144	0.07799	1.44770	0.07021	89.561	56. 9. 20.03	1859.6	11					
968	8*	W. D. II. 116.	12. 9. 31.54	1854.1	1	3.046	+0.0035	..	0.05136	0.07818	1.44830	0.07011	87.991	91. 24. 42.46	1854.1	9					
969	6	13 Virgins.	12. 11. 29.70	1859.5	6	3.074	+0.0266	+0.000	0.05148	0.07798	1.44827	0.07018	88.064	90. 0. 31.70	1859.5	6					
970	6	8 Comm.	12. 11. 24.75	1853.3	2	3.084	-0.0103	+0.002	0.05102	0.07777	1.44779	0.06821	89.001	66. 11. 24.18	1853.3	10					
971	6-3*	Bradley 1650.	12. 11. (31).	..	+ 3.780	-0.0937	+0.0024	0.05666	0.07372	1.44173	0.07046	100.510	14. 3. 43.07	1860.3	4						
972	3*	15 Virgins.	12. 11. 44.44	1858.8	55	3.074	+0.0266	+0.000	0.05149	0.07784	1.44827	0.07013	88.076	89. 53. 18.38	1858.8	4					
973	3*	16 Virgins.	12. 11. 42.51	1859.3	6	3.067	-0.0005	-0.019	0.05146	0.07778	1.44819	0.07046	88.301	91. 24. 42.46	1859.3	6					
974	5*	11 Comm.	12. 11. 48.04	1859.3	4	3.045	-0.0107	+0.000	0.05100	0.07767	1.44786	0.07010	88.764	71. 25. 25.75	1859.3	4					
975	6	Bradley 1622	12. 14. 21.46	1860.5	3	-0.073	+1.1777	+	..	..	..	..	..	1.31. 59.16	1860.5	3					
976	5*	12 Comm.	12. 15. 27.36	1859.3	6	3.027	-0.0117	+0.003	0.05138	0.07735	1.44757	0.06694	89.222	61. 22. 35.60	1859.3	6					
977	5*	13 Comm.	12. 17. 17.01	1854.3	3	3.041	-0.0117	+0.004	0.05133	0.07718	1.44748	0.06681	89.181	61. 7. 39.07	1854.3	3					
978	5*	14 Comm.	12. 19. 28.80	1859.4	4	3.012	-0.0123	+0.003	0.05107	0.07687	1.44736	0.06684	89.312	61. 27. 12.11	1859.4	4					
979	4*	15 Comm.	12. 19. 57.37	1859.3	4																
980	5*	16 Comm.	12. 19. 57.37	1859.3	4	3.017	-0.0123	+0.004	0.05107	0.07687	1.44736	0.06684	89.312	61. 27. 12.11	1859.3	4					
981	6	16 Comm.	12. 19. 57.37	1859.3	4	3.018	-0.0119	+0.007	0.05115	0.07688	1.44733	0.06693	89.293	61. 23. 54.79	1859.3	5					
981	6	D. F. 1728.	12. 19. 59.44	1855.3	3	3.028	-0.0114	..	0.05135	0.07664	1.44728	0.06676	89.257	61. 50. 37.37	1855.3	11					
982	..	Corvi.	12. 22. 36.58	1856.8	3	3.109	-0.0117	..	0.05149	0.07691	1.44885	0.07090	89.756	105. 44. 28.13	1856.8	11					
983	23*	7 Corvi.	12. 22. 37.51	1856.8	3	3.109	-0.0117	..	0.05149	0.07691	1.44885	0.07090	89.756	105. 44. 28.13	1856.8	11					
984	5*	4 Draconis.	12. 23. (57).	..	3.689	-0.0578	+0.004	0.05375	0.07167	1.44311	0.06701	96.671	90. 12. 12.51	1860.1	11						
985	5*	8 Corvi.	12. 24. 51.49	1859.3	7	3.112	+0.0117	-0.027	0.05082	0.07647	1.44889	0.08354	87.915	105. 25. 21.33	1859.3	7					
986	6*	21 Virgins.	12. 26. 53.34	1858.8	3	3.306	+0.0080	-0.009	0.05421	0.07635	1.44864	0.08584	87.903	98. 04. 46.05	1858.8	3					
987	23*	9 Corvi.	12. 26. 53.34	1858.8	3	3.308	+0.0081	-0.009	0.05421	0.07635	1.44864	0.08584	87.903	98. 04. 46.05	1858.8	3					
988	43*	8 Comm. Venetian..	12. 27. 12.75	1858.9	3	3.178	-0.0163	-0.008	0.05161	0.07600	1.44929	0.08075	89.550	112. 57. 19.18	1858.9	16					
989	7	Plaz. XII. 125.	12. 27. 12.75	1856.3	5	3.048	-0.0088	-0.009	0.05166	0.07533	1.44606	0.06906	89.772	74. 3. 32.33	1856.3	16					
990	7*	5 Draconis.	12. 27. 22.75	1858.9	9	2.619	-0.0516	-0.012	0.00066	0.07024	1.44180	0.00538	97.119	90. 18. 7.07	1858.9	47					
991	5*	21 Comm.	12. 27. 51.36	1859.3	4	3.304	-0.0088	+0.013	0.05327	0.07598	1.44719	0.08689	87.917	66. 35. 35.66	1859.3	4					
992	9	W. B. XII. 475.	12. 28. 45.46	1856.3	1	3.074	+0.0268	..	0.05166	0.07610	1.44830	0.07025	88.155	100. 11. 21.01	1856.3	1					
993	6*	19 Virgins.	12. 29. 13.05	1854.1	1	3.037	-0.0057	..	0.05138	0.07594	1.44742	0.07018	88.734	74. 6. 30.18	1854.1	1					
994	6*	21 Virgins.	12. 29. 14.74	1857.1	11	3.087	+0.0061	+0.006	0.05167	0.07606	1.44851	0.08310	88.023	95. 3. 35.12	1857.1	10					
995	5*	26 Virgins.	12. 31. 9.19	1858.2	11	3.096	+0.0075	+0.005	0.05160	0.07578	1.44864	0.08304	87.974	97. 13. 28.18	1858.2	11					
996	6	Plaz. XII. 147.	12. 31. 9.19	1860.5	3	3.306	+0.0075	+0.009	0.05160	0.07577	1.44864	0.08304	87.974	97. 13. 28.18	1860.5	3					
997	3*	19 Virgins (as com.)	12. 31. 34.70	1858.0	22	3.074	+0.0062	-0.017	0.05166	0.07554	1.44831	0.07946	88.190	90. 45. 49.68	1857.6	22					
998	3*	25 Virgins.	12. 31. 34.70	1856.5	5	3.074	+0.0062	-0.017	0.05166	0.07554	1.44831	0.07946	88.190	90. 45. 49.68	1856.5	22					
999	3*	25 Virgins.	12. 31. 34.70	1857.7	16	3.074	+0.0062	-0.017	0.05166	0.07554	1.44831	0.07946	88.190	90. 45. 49.68	1857.7	22					
1000	6	28 Virgins.	12. 31. 43.45	1857.1	10	3.096	+0.0074	+0.005	0.05168	0.07550	1.44864	0.08199	88.001	96. 43. 47.74	1857.1	10					

963, 971, 975, 984 and 990. These stars are respectively identical with Schwarz 723, 728, 733, 741 and 742.

† For No. 975, $\log. e = -0.11460$, $\log. f = 0.01335$, $\log. g = 1.30667$, $\log. h = -0.11431$, $l = 310^{\circ}.085$.

[illegible]

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue 8377 Stars; from the Catalogue of Lalande published by the British Association; from Weiss's *Catalogus Stellarum ex Zonis Regionantibus*; or, for the variable stars, from Mr. Poisson's lists in the "Radjcliffe Observations, 1854 and 1856." The authorities for any remaining magnitudes are given in the Notes.

No.	Magnitude.	Star's Name.	Mean Right Ascension, Jan. 1, 1854.	Mean Right Ascension, Jan. 1, 1860.	Mean Declination, 1854 to 1860.	Annual Variation in R.A. per 100 Years.	Annual Variation in Declination per 100 Years.	Logarithm of Value of μ	Value of μ	Mean North Polar Distance, Jan. 1, 1854.	Mean North Polar Distance, Jan. 1, 1860.	Mean Variation of Position in 100 Years.	Number of Observations.
			α	α	δ	μ	ν	$\log \mu$	μ	θ	θ	θ	
1001	5 ^h	10 Virginis.....	12.34.47.87	12.35.46.6	1859.9	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.9
1002	6 ^h	76 Ursa Majoris.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1003	6 ^h	W. B. XII. 603.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1004	7 ^h	W. B. XII. 619.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1005	6 ^h	31 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1006	5 ^h	27 Comae.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1007	6 ^h	35 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1008	6 ^h	35 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1009	6 ^h	11 Canum Venetium.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1010	6 ^h	50 Comae.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1011	7 ^h	Piazzi XII. 193.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1012	Var.	W. B. XII. 747.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1013	6 ^h	37 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1014	6 ^h	38 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1015	5 ^h	35 Comae.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1016	5 ^h	40 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1017	3 ^h	43 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1018	7 ^h	11 Canum Ven. (1st Star)	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1019	3 ^h	21 Can. Ven. (2d Star)	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1020	5 ^h	8 Draconis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1021	8 ^h	W. B. XII. 880.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1022	5 ^h	56 Comae.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1023	6 ^h	44 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1024	6 ^h	46 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1025	5 ^h	37 Comae.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1026	5 ^h	9 Draconis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1027	3 ^h	76 Ursa Majoris.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1028	3 ^h	47 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1029	6 ^h	48 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1030	5 ^h	.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1031	5 ^h	14 Canum Venetium.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1032	5 ^h	59 Ursa Majoris.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1033	6 ^h	35 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1034	6 ^h	35 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1035	6 ^h	49 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1036	6 ^h	B. F. 1865.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1037	5 ^h	59 Ursa Majoris.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1038	6 ^h	35 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1039	4 ^h	51 Virginis.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6
1040	4 ^h	41 Comae.....	12.35.46.6	12.36.26.70	1859.6	+0.0017	-0.0017	0.05418	0.07546	144767	0.07451	88.616	1859.6

1008. In the B. A. C. this star is designated 25 Comae.
1014. The magnitude has been taken from Groombridge.

1012. This star is the variable U Virginis: it is of the 7th magnitude at the maximum.
1040. In the B. A. C. this star is designated 42 Comae.

Annual Variation in R.A.	Secular Variation in R.A.	Annual Variation in Declination in N.P.D.	Logarithms of				Value of μ	No. in Bessel's Catalogue	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right Ascension	Hour and Minute of Declination	Hour and Minute of Right 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[illegible]

1043. In the B. A. C. this star is designated 43 Comae β .

This star is identical with Lacaille 5466.

1055. This star is identical with Schwarz 235.

1068. This star is identical with Schwerd 788. The magnitude has been taken from Groombridge.

1070. This star is the variable R Hydra; the limits of magnitude are 4 and under 10; the period 495 days.

1077. This star is identical with Lacaille 5578.

For No. 1055, $\log. e = -0.03058$, $\log. f = 0.67732$, $\log. g = 1.12847$, $\log. h = -0.02022$, $l = 0.25771$.

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8377 Stars; from the Catalogue of Lalande published by the British Association; from Weisse's *Catalogus Stellarum ex Zonis Regionibus*; or, for the variable stars, from *1866*. The authorities for our remaining magnitudes are given in the Notes.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1850, Jan. 1.	Mean Year and Fraction of Year from Observations, 1854 to 1860.	Mean Number of Observations.	Annual Variation in R.A. from Elements.	Secular Variation from Motion in R.A.	Annual Motion from Motion in R.A. & D.C.	Logarithms of	Value of	Mean Polar Distance, 1854 to 1860.	Mean Year and Fraction of Year from Observations.	Number of Observations.
									e	f	g	h	
1081	6	Piazzi XIII. 133	13. 25. (49)	...	...	+ 0.467	+ 0.1105	- 0.009	93638	0.0851	1.40598	9.93297	109.413
1082	6	Piazzi XIII. 136	13. 27. 14.74	1857	7	3.182	+ 0.0189	- 0.002	0.0561	0.0690	1.44997	0.0812	88.058
1083	7	Virginia	13. 27. 37.70	1858	6	3.27	- 0.0087	- 0.003	0.0763	0.0709	1.44836	0.07913	88.487
1084	6	80 Virginis	13. 28. 14.46	1855	6	3.173	- 0.0047	- 0.001	0.0474	0.0699	1.44891	0.08101	88.715
1085	5	Piazzi XIII. 136	13. 28. 12.66	1855.4	2	2.688	- 0.0094	+ 0.011	0.0990	0.0670	1.44812	0.06123	90.139
1086	5	24 Canum Venaticorum	13. 28. 43.75	1859.4	3	2.476	+ 0.0131	- 0.005	0.0517	0.0486	1.43396	0.05797	92.210
1087	7	81 Virginis (ad Star)	13. 30. 15.23	1856.3	4	3.136	- 0.0010	- 0.003	0.0621	0.0675	1.44927	0.08130	88.348
1088	7	81 Virginis (ad Star)	13. 30. 15.23	1856.4	1	3.136	- 0.0010	- 0.003	0.0621	0.0675	1.44927	0.08130	88.348
1089	7	Piazzi XIII. 145	13. 30. 15.84	1858.3	4	3.095	+ 0.0077	- 0.001	0.0659	0.0679	1.44861	0.08107	88.401
1090	6	Piazzi XIII. 146	13. 30. 50.60	1858.6	10	3.356	+ 0.0444	- 0.011	0.0500	0.0682	1.45565	0.09126	87.616
1091	7	Piazzi XIII. 152	13. 31. 51.73	1859.1	4	3.177	+ 0.0124	- 0.015	0.0591	0.0647	1.44989	0.08565	88.107
1092	8	Greenwich 2023	13. 32. 2.82	1860.4	3	2.476	- 0.0014	- 0.001	0.0411	0.0643	1.43393	0.05308	88.107
1093	6	W.B. XIII. 557	13. 32. 40.41	1857.3	2	2.965	+ 0.0135	- 0.011	0.0593	0.0679	1.44664	0.08769	87.945
1094	6	Piazzi XIII. 158	13. 33. 34.77	1858.3	4	3.188	+ 0.0087	- 0.003	0.0593	0.0627	1.44503	0.08389	88.094
1095	6	1 Boötis	13. 33. (59)	...	...	- 2.873	- 0.0023	- 0.005	0.0587	0.0678	1.44515	0.07075	89.275
1096	6	82 Virginis	13. 34. 16.03	1859.7	10	3.147	+ 0.0007	- 0.010	0.0665	0.0693	1.44943	0.08288	88.245
1097	6	83 Urne Majoris	13. 35. 25.45	1859.3	4	3.233	- 0.0134	- 0.006	0.0349	0.0615	1.43538	0.06597	93.333
1098	6	84 Virginis	13. 36. 1.56	1859.6	6	3.033	- 0.0048	- 0.003	0.0636	0.0693	1.44685	0.07754	88.084
1099	6	83 Virginis	13. 36. 16.95	1859.9	9	3.244	+ 0.0054	+ 0.004	0.0551	0.0678	1.44564	0.08163	88.101
1100	6	R.F. 583	13. 37. (8)	...	...	- 2.834	- 0.0031	- 0.001	0.0453	0.0683	1.44458	0.06956	89.598
1101	7	Piazzi XIII. 179	13. 37. 36.76	1858.3	4	3.319	+ 0.0102	- 0.001	0.0546	0.0693	1.44931	0.08184	88.771
1102	4.5	4 Centauri	13. 37. 46.96	1857.4	16	3.422	+ 0.0278	- 0.018	0.0537	0.0613	1.43566	0.09287	87.944
1103	6	85 Virginis	13. 38. 30.77	1857.5	7	3.211	+ 0.0448	- 0.001	0.0583	0.0689	1.44508	0.08505	88.108
1104	6	86 Virginis	13. 38. 28.99	1860.4	7	3.188	+ 0.0121	- 0.004	0.0613	0.0689	1.44506	0.08371	88.114
1105	6	87 Virginis	13. 39. 47.77	1859.8	8	3.246	+ 0.0061	- 0.005	0.0566	0.0640	1.44596	0.08589	87.956
1106	7	Piazzi XIII. 192	13. 40. 6.77	1854.3	2	3.312	+ 0.0267	+ 0.006	0.0661	0.0850	1.44919	0.08711	88.211
1107	5.4	4 Boötis	13. 40. 36.56	1856.7	36	2.886	- 0.0008	- 0.034	0.0357	0.0685	1.44538	0.07716	89.365
1108	5	5 Centauri	13. 41. 20.80	1859.4	3	3.245	+ 0.0011	- 0.004	0.0513	0.0669	1.44515	0.09353	87.947
1109	5	43 Urne Majoris	13. 42. 13.77	1857.8	5	3.186	- 0.0015	- 0.013	0.0493	0.0621	1.43755	0.05320	89.394
1110	8	W. B. XIII. 720	13. 42. 4.81	1854.3	1	2.965	+ 0.0022	- 0.001	0.0647	0.0647	1.44657	0.05040	88.996
1111	6	Greenwich 2053	13. 42. (6)	...	...	+ 0.079	+ 0.0188	- 0.013	0.0497	0.0323	1.40091	0.95885	108.773
1112	5.4	89 Virginis	13. 42. 16.50	1859.7	7	3.253	+ 0.0037	- 0.009	0.0571	0.0685	1.44510	0.08396	87.944
1113	6	R. F. 1901	13. 43. 25.23	1854.3	2	2.868	- 0.0011	- 0.001	0.0554	0.0679	1.44456	0.06516	89.596
1114	4.5	3 Centauri	13. 43. 45.42	1857.4	13	3.444	+ 0.0293	- 0.001	0.0579	0.0652	1.44576	0.09669	87.956
1115	7	Centauri	13. 43. 46.47	1856.4	2	3.444	+ 0.0293	- 0.001	0.0579	0.0652	1.44576	0.09669	87.956
1116	4.5	4 Centauri	13. 45. 9.63	1857.4	3	3.431	+ 0.0269	- 0.012	0.0531	0.0650	1.44580	0.09211	87.985
1117	6	Piazzi XIII. 221	13. 45. 48.90	1860.3	4	3.285	- 0.0002	- 0.012	0.0577	0.0677	1.44375	0.09348	74.12
1118	6	Piazzi XIII. 228	13. 45. 48.90	1860.3	1	- 2.150	+ 0.0372	- 0.003	0.0491	0.0726	1.45990	0.98187	115.774
1119	5	10 Draconis	13. 47. 10.61	1857.6	3	3.173	- 0.0017	+ 0.002	0.0649	0.0618	1.42737	0.09597	96.351
1120	6.5	90 Virginis	13. 47. 11.03	1854.4	2	3.080	- 0.0075	- 0.001	0.0711	0.0681	1.44440	0.07949	88.544

1087. This star is identical with Schwab 790.
1092. This star has been taken from Greenwich.
1108, 1114, and 1116. These stars are respectively identical with Lacaille 5688, 5687, and 5725.
1112 and 1115. These stars are respectively identical with Schwab 804 and 809.

1090. This star is identical with Lacaille 5623.
1102. This star is identical with Lacaille 5621.

1115. The magnitude has been taken from Piazzi.

No.	Annual Variation of Pro- per- ties from Elements.	Secular Variation of Pro- per- ties from Elements.	Annual Motion in R.A. from Motion in R.A. & D.C.	Logarithm of				Value of $\frac{1}{r}$	No. in La- titude or Polar Distance (R.A.) from 1850.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	Hour and No. in Planet.	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No.	Magnitude.	Star's Name.	Mean Right Ascension, 1850, from Observations, 1844 to 1850.	Mean Declination, 1850, from Observations, 1844 to 1850.	Annual Proper Motion, in R.A., from Proper Elements.	Secular Variation of Precession, in R.A., from Mean of Main or Minor Elements.	Annual Parallax, in R.A., from Main or Minor Elements.	Logarithm of Distance, in P.C.	Value of ρ	Mean North Polar Distance, 1850, Jan. 1, from Observations, 1844 to 1850.	Mean Year and Fraction of Year.	Mean Distance, in P.C.
1161	3 ⁴	30 Boötis.....	14. 34. 37.86	1854 ⁴	15	+ 2.859	+ 0.0034	+ 0.002	0.05928	1.44696	89.321	1854.4
1162	5 ⁴	31 Boötis.....	14. 34. 46.30	1859 ⁴	1	2.943	+ 0.0050	- 0.005	0.05956	1.44681	89.040	1859.4
1163	5	Piazzi XIV. 150 ..	14. 35. 65.35	1858 ⁶	4	3.649	+ 0.0050	- 0.005	0.05951	1.44711	89.096	1858.4
1164	4 ⁴	107 Virginis.....	14. 35. 11.09	1860 ⁴	3	3.146	+ 0.0104	+ 0.007	0.05961	1.44639	88.565	1860.4
1165	9 ¹⁰	Lalande 26865 ..	14. 36. 48.60	1854 ⁴	2	1.941	+ 0.0066	..	0.04951	1.05392	93.320	1854.4
1166	6 ⁴	14 Boötis.....	14. 37. 16.17	1859 ⁴	4	+ 2.618	+ 0.0000	+ 0.005	0.05795	1.44155	89.129	1859.4
1167	6	5 Libræ.....	14. 38. 15.01	1856 ⁶	6	3.928	+ 0.0152	- 0.003	0.05947	1.44079	89.168	1856.4
1168	5 ⁴	35 Boötis.....	14. 38. 45.50	1859 ⁴	3	2.802	+ 0.0044	- 0.005	0.05951	1.44072	89.168	1859.4
1169	..	Boötis.....	14. 38. 52.27	1857 ⁸	3	2.644	- 0.0001	..	0.05791	1.04141	94.119	1857.4
1170	3 ¹⁰	36 Boötis.....	14. 38. 51.39	1857 ⁴	72	2.644	- 0.0001	- 0.005	0.05791	1.04141	94.119	1857.4
1171	5 ⁶	55 Hydræ.....	14. 39. 14.59	1857 ⁴	1	+ 3.472	+ 0.0016	- 0.007	0.05824	1.06180	1.46441	1857.4
1172	5	56 Hydræ.....	14. 39. 24.90	1858 ³	9	3.481	+ 0.0020	- 0.000	0.05818	1.06169	1.46456	1858.3
1173	5	57 Hydræ.....	14. 39. 46.43	1859 ⁴	3	3.269	+ 0.0024	- 0.005	0.05810	1.06159	1.46472	1859.4
1174	6 ⁴	7 Libræ.....	14. 41. 13.87	1859 ⁴	3	3.281	+ 0.0045	- 0.004	0.05946	1.06079	1.46315	1859.4
1175	6 ⁵	6 Libræ.....	14. 42. 4.53	1859 ⁴	3	3.522	+ 0.0033	- 0.001	0.05801	1.06116	1.46518	1859.4
1176	6	8 Libræ.....	14. 42. 56.87	1858 ⁸	1	+ 3.313	+ 0.0154	- 0.007	0.05979	1.06533	1.47518	1858.4
1177	3 ¹⁰	9 Libræ.....	14. 43. 3.31	1856 ⁶	58	3.314	+ 0.0155	- 0.007	0.05981	1.06521	1.47599	1856.4
1178	6	Bradley 1895 ..	14. 43. 45.44	1857 ⁴	14	3.343	+ 0.0146	- 0.005	0.05981	1.06520	1.47543	1857.4
1179	7	10 Libræ.....	14. 44. 0.40	1859 ⁴	3	3.533	+ 0.0168	- 0.001	0.05964	1.06523	1.47560	1859.4
1180	7	6 Uræ Minoris ..	14. 45. (?)	..	..	0.666	+ 0.0086	..	0.01407	0.02236	1.40453	1859.4
1181	6 ⁴	12 Libræ.....	14. 46. 12.73	1856 ⁶	7	+ 2.628	+ 0.0087	+ 0.001	0.05894	1.06129	1.47317	1856.4
1182	..	Libræ.....	14. 46. 27.92	1856 ⁴	1	+ 3.358	+ 0.0141	..	0.05808	1.06487	1.47091	1856.4
1183	5 ⁶	Piazzi XIV. 204 ..	14. 47. 7.77	1858 ⁵	5	3.657	+ 0.0081	- 0.004	0.05911	1.05951	1.47231	1858.4
1184	6 ⁴	Piazzi XIV. 217 ..	14. 47. 57.59	1860 ⁴	3	3.522	+ 0.0091	- 0.001	0.05949	1.06479	1.47337	1860.4
1185	6 ⁵	15 Libræ.....	14. 49. 10.56	1858 ⁵	8	+ 2.644	+ 0.0130	- 0.001	0.06084	1.06323	1.47093	1858.4
1186	6	Piazzi XIV. 213 ..	14. 49. 17.76	1859 ⁴	2	+ 3.444	+ 0.0185	+ 0.008	0.05967	1.06445	1.47333	1859.4
1187	3 ¹⁰	17 Uræ Minoris ..	14. 51. 9.16	1857 ⁴	54	- 0.514	+ 0.0151	- 0.005	0.06012	1.06100	1.39350	1857.4
1188	..	Uræ Minoris ..	14. 51. 28.88	1857 ⁴	1	+ 3.228	+ 0.0104	- 0.005	0.06091	1.06115	1.47067	1857.4
1189	5 ⁴	19 Libræ.....	14. 53. 27.75	1858 ⁴	16	3.300	+ 0.0116	- 0.006	0.05981	1.06112	1.47066	1858.4
1190	5 ⁴	40 Boötis.....	14. 54. 14.92	1855 ⁴	4	3.304	- 0.0003	- 0.003	0.05580	1.05668	1.43622	1855.4
1191	7	Piazzi XIV. 226 ..	14. 55. 14.69	1858 ⁴	4	+ 3.536	+ 0.0061	+ 0.011	0.05915	1.05665	1.08720	1858.4
1192	5 ⁴	Piazzi XIV. 226 ..	14. 55. 22.19	1860 ⁴	1	0.943	+ 0.0134	+ 0.001	0.03321	1.05144	1.47402	1860.4
1193	5	110 Virginis.....	14. 55. 27.79	1857 ⁴	3	3.029	+ 0.0075	- 0.000	0.06444	1.06029	1.44671	1857.4
1194	3 ⁴	30 Libræ.....	14. 55. 57.01	1859 ⁴	15	3.500	+ 0.0029	- 0.007	0.05963	1.05484	1.08911	1859.4
1195	3 ⁴	42 Boötis.....	14. 56. 20.25	1858 ⁸	12	2.654	- 0.0001	- 0.003	0.05356	1.05653	1.43559	1858.4
1196	4 ⁵	43 Boötis.....	14. 58. 26.85	1856 ⁶	35	+ 2.883	+ 0.0031	- 0.013	0.05954	1.04604	1.09177	1856.4
1197	6 ⁴	21 Libræ.....	14. 58. 49.43	1857 ⁴	4	3.337	+ 0.0153	- 0.004	0.06098	1.06118	1.45453	1857.4
1198	6 ⁵	23 Libræ.....	14. 59. 0.49	1854 ⁴	14	3.341	+ 0.0154	- 0.003	0.06098	1.06114	1.45453	1854.4
1199	5 ⁴	44 Boötis.....	14. 59. 10.24	1860 ⁴	3	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1860.4
1200	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4

1163, 1171, 1179, 1175, 1185, 1183, and 1192. These stars are respectively identical with Lacaille 6063, 6097, 6105, 6104, 6143, 6146 and 6121.

1165. In Piazzi and Pond this star is designated c' Centauri.

1175. This star is identical with Lacaille 6162; it is designated 58 Hydræ in the B.A.C.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1850, from Observations, 1844 to 1850.	Mean Declination, 1850, from Observations, 1844 to 1850.	Annual Proper Motion, in R.A., from Proper Elements.	Secular Variation of Precession, in R.A., from Mean of Main or Minor Elements.	Annual Parallax, in R.A., from Main or Minor Elements.	Logarithm of Distance, in P.C.	Value of ρ	Mean North Polar Distance, 1850, Jan. 1, from Observations, 1844 to 1850.	Mean Year and Fraction of Year.	Mean Distance, in P.C.
1196	4 ⁵	43 Boötis.....	14. 58. 26.85	1856 ⁶	35	+ 2.883	+ 0.0031	- 0.013	0.05954	1.04604	1.09177	1856.4
1197	6 ⁴	21 Libræ.....	14. 58. 49.43	1857 ⁴	4	3.337	+ 0.0153	- 0.004	0.06098	1.06118	1.45453	1857.4
1198	6 ⁵	23 Libræ.....	14. 59. 0.49	1854 ⁴	14	3.341	+ 0.0154	- 0.003	0.06098	1.06114	1.45453	1854.4
1199	5 ⁴	44 Boötis.....	14. 59. 10.24	1860 ⁴	3	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1860.4
1200	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1201	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1202	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1203	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1204	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1205	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1206	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1207	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1208	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1209	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1210	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1211	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1212	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1213	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1214	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1215	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1216	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1217	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1218	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1219	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1220	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1221	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1222	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1223	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1224	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1225	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1226	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1227	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1228	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1229	6	Boötis.....	14. 59. 50.56	1859 ⁴	2	3.018	+ 0.0014	- 0.045	0.05370	1.05590	1.43666	1859.4
1230	6	Boötis.....	14. 59. 50.56	1859 ⁴	2							

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATIONS.

No.	Magnitude.	Star's Name.	Mean Right Ascension, Jan. 1, 1850.	Mean Year and Fraction of Year.	Number of Observations.	Mean value of Positional Elements.	Secular Variation of Proper Motion in R.A.	Annual Proper Motion in R.A. & G.	Logarithm of	Value of	Mean North Polar Distance, 1850 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Secular Variation of Proper Motion in R.A. & G.	Annual Proper Motion in R.A. & G.	Logarithm of	Value of	No. in Bessel's Catalogue, 1755-1850.	No. in Pulkovo (P. B.) Association (B. A.) 1860.	Hour and Minute in 1850.	Hour and Minute in 1860.	No. in Argelander's Catalogue, 1830-1850.	No. in Piazzi's Catalogue, 1830-1850.	No. in Bessel's Catalogue, 1850-1860.	No. in Pulkovo's Catalogue, 1850-1860.	No.		
						α	δ	h	l	b						α	δ											
1301	5	Groombridge 2196...	15. 0. 304	1860:5	3	+ 4734	+ 07312	...	990975	990766	130699	990927	124353	6. 35. 1840	1860:5	3	+ 4734	+ 07312	...	2604 (P.)	XIV.	...	...	...	...	1301		
1302	5.4	43 Bodei	15. 1. 915	1859:3	3	+ 4731	+ 00015	+ 0013	990977	990777	144213	990704	90023	6. 35. 1840	1859:3	3	+ 4731	+ 00015	...	2570 (B.A.)	...	...	345	601	...	...	1302	
1303	6	Piazzi XIV. 282	15. 1. 4174	1859:9	7	+ 3485	+ 00198	+ 0006	990612	990603	145463	990637	87879	113. 26. 5121	1859:9	7	+ 3485	+ 00198	...	...	...	...	...	...	...	...	1303	
1304	6	Groombridge 2197...	15. 1. (56)	...	...	+ 02438	+ 00298	...	990418	990403	141303	990437	97256	6. 35. 1840	...	...	+ 02438	+ 00298	...	2590 (P.)	...	...	...	...	...	...	1304	
1305	5.4	34 Lihem	15. 4. 1425	1859:8	3	+ 3484	+ 00177	+ 0002	990617	990607	145255	990639	88003	109. 15. 2327	1859:8	3	+ 3484	+ 00177	...	2569 (B.A.)	...	...	...	602	454	...	...	1305
1306	7	B. F. 2052	15. 4. 1545	1859:9	9	+ 3746	+ 00019	...	990615	990605	145255	990637	88003	109. 15. 2327	1859:9	9	+ 3746	+ 00019	...	2569 (B.A.)	...	...	...	...	...	...	1306	
1307	6.5	25 Lihem	15. 5. 2103	1859:1	4	+ 3407	+ 00170	+ 0000	990618	990608	145255	990637	88003	109. 15. 2327	1859:1	4	+ 3407	+ 00170	...	2569 (B.A.)	...	...	...	...	...	...	1307	
1308	9	W. B. XV. 74	15. 5. 3195	1854:4	3	+ 3407	+ 00131	...	990617	990607	145255	990637	88003	109. 15. 2327	1854:4	3	+ 3407	+ 00131	...	...	...	...	...	...	...	...	1308	
1309	...	...	15. 5. 6362	...	...	+ 3404	+ 00133	...	990617	990607	145255	990637	88003	109. 15. 2327	...	...	+ 3404	+ 00133	...	...	...	...	...	...	...	...	1309	
1310	7	Piazzi XV. 14	15. 5. (26)	1859:3	3	+ 3386	+ 00162	+ 0003	990617	990607	145255	990637	88003	109. 15. 2327	1859:3	3	+ 3386	+ 00162	...	2724 (B.A.)	...	...	...	...	...	...	1310	
1311	8	Groombridge 2198...	15. 6. 5433	1860:4	3	+ 1943	+ 00026	...	990310	990314	141303	990357	92600	40. 46. 4129	1860:4	3	+ 1943	+ 00026	...	...	...	...	...	...	...	...	1311	
1312	7	Groombridge 2199...	15. 6. 1159	1860:1	3	+ 1943	+ 00026	...	990310	990314	141303	990357	92600	40. 46. 4129	1860:1	3	+ 1943	+ 00026	...	...	...	...	...	...	...	...	1312	
1313	6	Piazzi XV. 19	15. 8. 1644	1859:1	10	+ 2465	+ 00019	+ 0009	990581	990571	141303	990574	92600	53. 53. 4448	1859:1	10	+ 2465	+ 00019	...	2782 (B.A.)	...	...	...	...	...	...	1313	
1314	5.4	48 Bodei	15. 8. 1830	1859:1	3	+ 2513	+ 00013	+ 000	990581	990571	141303	990574	92600	53. 53. 4448	1859:1	3	+ 2513	+ 00013	...	2782 (B.A.)	...	...	...	...	...	...	1314	
1315	5	27 Lihem	15. 9. 2866	1859:8	63	+ 3225	+ 00118	+ 0009	990611	990603	145463	990637	90320	60. 18. 5029	1859:8	7	+ 3225	+ 00118	...	2782 (B.A.)	...	...	...	...	...	...	1315	
1316	3	49 Bodei	15. 9. 5656	1857:5	4	+ 2812	+ 00009	+ 0009	990590	990574	141303	990580	90697	56. 4. 3928	1857:5	4	+ 2812	+ 00009	...	2878 (B.A.)	...	...	...	...	...	...	1316	
1317	6	Piazzi XV. 36	15. 12. 8	1859:1	5	+ 2689	+ 00047	+ 0003	990615	990591	141303	990592	90697	68. 54. 4612	1859:1	5	+ 2689	+ 00047	...	2797 (B.A.)	...	...	...	...	...	...	1317	
1318	...	...	15. 12. 1920	1854:4	1	+ 2604	+ 00000	...	990583	990588	141303	990655	91059	52. 19. 1728	1854:4	1	+ 2604	+ 00000	...	...	...	...	...	...	...	...	1318	
1319	...	...	15. 12. (21)	...	...	+ 05836	+ 00010	...	990586	990581	141303	990660	91059	52. 14. 5058	1859:5	1	+ 05836	+ 00010	...	...	...	...	...	...	...	...	1319	
1320	...	W. B. XV. 210	15. 12. 3713	1854:4	1	+ 0310	+ 00138	...	990620	990599	141303	990621	88183	103. 27. 2351	1854:4	1	+ 0310	+ 00138	...	...	...	...	...	...	...	...	1320	
1321	6	25 Lihem	15. 12. 5725	1858:4	7	+ 3730	+ 00019	+ 0000	990596	990589	141303	990590	90697	56. 4. 3928	1858:4	7	+ 3730	+ 00019	...	2793 (B.A.)	...	...	...	...	...	...	1321	
1322	5.6	Groombridge 2214...	15. 13. (0)	...	...	+ 0617	+ 00137	...	990602	990583	141303	990592	90697	70. 7. 5419	1858:4	7	+ 0617	+ 00137	...	2793 (P.)	...	...	...	...	...	...	1322	
1323	5	Lupl	15. 14. 1334	1857:1	3	+ 0810	+ 00096	+ 0006	990589	990561	141303	990598	90697	70. 7. 5419	1857:1	3	+ 0810	+ 00096	...	2801 (P.)	...	...	...	...	...	...	1323	
1324	6	30 Lihem	15. 15. 1355	1859:5	29	+ 3115	+ 00143	+ 0003	990444	990406	141303	990431	88121	109. 47. 5727	1859:5	29	+ 3115	+ 00143	...	2801 (B.A.)	...	...	...	...	...	...	1324	
1325	5	11 Uran Minoris	15. 17. 1411	1859:4	3	+ 0135	+ 00133	+ 0003	990538	990428	141303	990465	10130	17. 40. 504	1859:5	3	+ 0135	+ 00133	...	2801 (P.)	...	...	...	...	...	...	1325	
1326	4	35 Lihem	15. 20. 2197	1857:1	24	+ 3771	+ 00148	+ 0002	990626	990546	141303	990636	88089	106. 13. 3779	1857:1	24	+ 3771	+ 00148	...	2816 (B.A.)	...	...	...	...	...	...	1326	
1327	3	18 Deneb	15. 21. 491	...	...	+ 1345	+ 00133	+ 0004	990626	990494	141303	990636	88089	106. 13. 3779	1857:1	24	+ 1345	+ 00133	...	2816 (P.)	...	...	...	...	...	...	1327	
1328	7	B. A. C. 5099	15. 22. 1865	...	...	+ 0817	+ 00156	...	990627	990539	141303	990636	88089	106. 46. 1090	1855:4	3	+ 0817	+ 00156	...	...	...	...	...	...	...	...	1328	
1329	7	Piazzi XV. 91	15. 23. 4049	1858:4	6	+ 3443	+ 00095	+ 0000	990627	990583	141303	990639	87981	109. 45. 5947	1858:4	6	+ 3443	+ 00095	...	...	...	...	...	...	...	...	1329	
1330	...	Groombridge 2283...	15. 24. 4124	1860:1	2	+ 2553	+ 78313	...	...	...	...	...	...	...	...	...	+ 2553	+ 78313	...	...	...	...	...	...	...	...	1330	
1331	6	Piazzi XV. 66	15. 24. 3616	1858:4	6	+ 3434	+ 00016	+ 0009	990583	990583	141303	990641	87995	109. 11. 4228	1858:4	6	+ 3434	+ 00016	...	2828 (B.A.)	...	...	...	...	...	...	1331	
1332	7	Lacaille 645	15. 25. 3619	1860:4	2	+ 3551	+ 00192	+ 0003	990629	990573	141303	990636	88089	114. 38. 459	1860:4	2	+ 3551	+ 00192	...	...	...	...	...	...	...	...	1332	
1333	5	35 Bodei	15. 25. 5474	1856:8	8	+ 2153	+ 00221	+ 0001	990571	990539	141303	990577	91446	48. 21. 586	1856:8	7	+ 2153	+ 00221	...	2836 (B.A.)	...	...	...	...	...	...	1333	
1334	4	53 Bodei	15. 26. 4939	1856:4	6	+ 2148	+ 00201	+ 0001	990581	990519	141303	990581	91453	48. 27. 255	1856:4	6	+ 2148	+ 00201	...	2837 (B.A.)	...	...	...	...	...	...	1334	
1335	4	4 Cume	15. 27. 1715	1859:4	4	+ 2420	+ 00019	+ 0003	990616	990566	141303	990628	90425	58. 9. 574	1859:4	4	+ 2420	+ 00019	...	2838 (B.A.)	...	...	...	...	...	...	1335	
1336	4.5	38 Lihem	15. 27. 4203	1854:4	2	+ 3141	+ 00013	+ 0003	990554	990512	141303	990596	88144	109. 4. 1217	1854:4	2	+ 3141	+ 00013	...	2838 (P.)	...	...	...	...	...	...	1336	
1337	4.5	39 Lihem	15. 28. 3196	1860:4	5	+ 3465	+ 00201	+ 0002	990612	990572	141303	990636	88144	117. 40. 481	1860:4	5	+ 3465	+ 00201	...	2838 (P.)	...	...	...	...	...	...	1337	
1338	5	5 Corone	15. 28. 4519	1857:1	91	+ 2519	+ 00204	+ 0009	990621	990571	141303	990636	88144	117. 40. 481	1857:1	91	+ 2519	+ 00204	...	2838 (P.)	...	...	...	...	...	...	1338	
1339	4.5	40 Lihem	15. 30. 371	1857:8	18	+ 3468	+ 00201	+ 0007	990621	990564	141303	990636	88144	117. 40. 481	1857:8	18	+ 3468	+ 00201	...	2838 (P.)	...	...	...	...	...	...	1339	
1340	5	6 Corone	15. 30. 677	1859:5	3	+ 2198	+ 00013	+ 0001	990573	990541	141303	990636	91255	58. 9. 574	1859:5	3	+ 2198	+ 00013	...	2838 (P.)	...	...	...	...	...	...	1340	

† For No. 1230, $\log. e = 9.09758$, $\log. f = -0.10609$, $\log. g = 0.16506$, $\log. h = 0.10041$, $\log. i = 0.01516$.

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 33 Stars; from the Catalogue of Lalande published by the British Association; from Weisse's *Catalogue Stellarum ex Zodiis Rejovmentanis*; or, for the variable stars, from Mr. Johnson's lists in the "Radcliffe Observations, 1854 and 1856." The authorities for any remaining magnitudes are given in the Notes.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1850, Jan. 1, 0h.	Mean Right Ascension, 1854 to 1860, Jan. 1, 0h.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, for 100 Years, in Right Ascension.	Secular Variation of Position in R.A.	Annual Proper Motion, for 100 Years, in Declination.	Logarithm of										Value of μ .	Mean Year and Fraction of Year, 1850, Jan. 1, 0h. to 1860, Jan. 1, 0h.	Mean Year and Fraction of Year.	Number of Observations.
										a	b	c	d	e	f	g	h	i	j					k	l
1281	23 ^h	7 Scorp.	15. 5. 34.6	1857.3	30	1 5555	+0.0060	-0.0001	0.0515	0.01650	14.5538	0.0438	87.878	112. 13. 11.43	1857.4	30							
1282	56	49 Libae	15. 5. 34.1	1856.5	3	3 4000	+0.0033	-0.0000	0.0515	0.01573	14.5533	0.0438	87.878	106. 7. 4. 38	1856.5	4							
1283	63	45 Coronae	15. 5. 34.1	1856.4	1	1 3008	+0.0033	-0.0001	0.0515	0.01539	14.5483	0.0438	87.878	106. 48. 16.59	1856.4	1							
1284	54	44 Serpente.	15. 5. 34.1	1856.4	3	3 5814	+0.0033	+0.0003	0.0515	0.01647	14.5601	0.0438	87.878	106. 48. 16.59	1856.4	3							
1285	1	8 Scorp.	15. 5. 34.1	1857.4	40	3 4777	+0.0043	-0.0002	0.0515	0.01659	14.5450	0.0330	87.878	109. 25. 1. 37	1856.8	1							
1286	56	Scorp.	15. 5. 34.1	1856.4	9	3 4777	+0.0043	-0.0003	0.0515	0.01659	14.5450	0.0330	87.878	109. 25. 1. 37	1856.8	9							
1287	45	Lupi	15. 5. 34.1	1856.7	4	3 3921	+0.0047	-0.0005	0.0515	0.01659	14.6121	0.0316	87.878	106. 48. 1. 19	1856.7	4							
1288	63	45 Coronae	15. 5. 34.1	1856.4	1	1 3008	+0.0033	-0.0001	0.0515	0.01573	14.5533	0.0438	87.878	106. 7. 4. 38	1856.4	1							
1289	4 ^h	9 Scorp.	15. 5. 34.1	1857.7	10	3 4999	+0.0043	-0.0003	0.0515	0.01659	14.5483	0.0316	87.878	110. 17. 11.58	1857.7	10							
1290	45	10 Scorp.	15. 5. 34.1	1857.7	10	3 5046	+0.0046	-0.0003	0.0515	0.01659	14.5450	0.0316	87.878	109. 25. 1. 37	1857.7	10							
1291	5	Piazzi XV. 265	15. 5. 34.1	1856.6	6	3 3655	+0.0073	+0.0010	0.0515	0.01659	14.5690	0.0503	87.765	115. 56. 53.51	1856.6	6							
1292	11	.....	16. 1. 14.86	1857.5	3	3 4000	+0.0033	-0.0000	0.0515	0.01684	14.5711	0.0503	87.878	106. 7. 4. 38	1857.5	3							
1293	13	Scorp.	16. 1. 14.86	1857.5	3	3 3681	+0.0073	+0.0004	0.0515	0.01674	14.5651	0.0503	87.878	117. 33. 10.49	1857.5	3							
1294	5 ^h	16 Coronae	16. 1. 14.86	1856.4	3	3 1916	+0.0031	-0.0003	0.0515	0.01630	14.5450	0.0703	87.907	109. 5. 4. 53	1856.4	3							
1295	4 ^h	14 Scorp.	16. 1. 14.86	1856.4	3	3 4777	+0.0043	-0.0003	0.0515	0.01666	14.5449	0.0316	87.878	109. 5. 15.77	1856.4	3							
1296	5 ^h	15 Scorp.	16. 1. 14.86	1856.4	3	3 3872	+0.0031	-0.0003	0.0515	0.01681	14.5516	0.0316	87.878	106. 7. 4. 38	1856.4	3							
1297	4 ^h	11 Hercules	16. 1. 14.86	1856.5	3	3 1289	+0.0066	-0.0019	0.0515	0.01707	14.5938	0.0263	87.967	99. 41. 53.09	1856.5	4							
1298	9	Lalande 23400	16. 1. 14.86	1856.5	3	3 3500	+0.0033	-0.0003	0.0515	0.01659	14.5516	0.0316	87.878	106. 7. 4. 38	1856.5	3							
1299	6	.....	16. 1. 14.86	1856.5	3	3 3500	+0.0033	-0.0003	0.0515	0.01659	14.5516	0.0316	87.878	106. 7. 4. 38	1856.5	3							
1300	6	Piazzi XVI. 10	16. 1. 14.86	1856.5	8	3 3543	+0.0043	-0.0003	0.0515	0.01588	14.5550	0.0316	87.888	111. 20. 20.63	1856.5	8							
1301	10	Lalande (F) 2774	16. 1. 14.86	1856.5	3	3 1052	+0.0033	-0.0003	0.0515	0.01631	14.5509	0.0316	87.878	106. 7. 4. 38	1856.5	3							
1302	1	.....	16. 1. 14.86	1856.5	3	3 3500	+0.0033	-0.0003	0.0515	0.01631	14.5509	0.0316	87.878	106. 7. 4. 38	1856.5	3							
1303	67	Greenbridge 2331	16. 1. 14.86	1856.4	3	3 0983	+0.0036	-0.0003	0.0515	0.01603	14.5607	0.0451	87.883	113. 45. 17.33	1856.4	3							
1304	3	Ophiuchi	16. 1. 14.86	1856.5	71	3 1411	+0.0066	-0.0019	0.0515	0.01843	14.6003	0.0404	87.904	109. 21. 4. 06	1856.5	71							
1305	3	15 Scorp.	16. 1. 14.86	1856.5	3	3 3238	+0.0094	-0.0011	0.0515	0.01751	14.5983	0.0387	87.887	97. 59. 50.56	1856.5	46							
1306	7	Piazzi XVI. 18	16. 1. 14.86	1856.5	4	3 4907	+0.0035	-0.0009	0.0515	0.01659	14.5480	0.0316	87.878	109. 45. 9.40	1856.5	4							
1307	Var.	.....	16. 1. 14.86	1856.5	3	3 3655	+0.0073	-0.0005	0.0515	0.01584	14.5583	0.0316	87.878	112. 15. 43.50	1856.5	3							
1308	7	Piazzi XVI. 33	16. 1. 14.86	1856.5	1	3 3773	+0.0087	-0.0011	0.0515	0.01614	14.5399	0.0387	87.869	110. 33. 31.66	1856.5	1							
1309	6	Piazzi XVI. 36	16. 1. 14.86	1856.4	9	3 3774	+0.0087	+0.0005	0.0515	0.01614	14.5399	0.0387	87.869	110. 33. 31.66	1856.4	9							
1310	7	Piazzi XVI. 39	16. 1. 14.86	1856.4	3	3 3054	+0.0033	-0.0005	0.0515	0.01626	14.5487	0.0316	87.890	109. 54. 22.21	1856.4	3							
1311	34 ^h	10 Scorp.	16. 1. 14.86	1856.4	11	3 3655	+0.0073	-0.0005	0.0515	0.01626	14.5487	0.0316	87.890	109. 54. 22.21	1856.4	11							
1312	1	.....	16. 1. 14.86	1856.5	3	3 3588	+0.0047	-0.0004	0.0515	0.01618	14.5618	0.0383	87.810	113. 42. 7.32	1856.5	3							
1313	19	Ursa Minoris	16. 1. 14.86	1856.4	1	1 8119	+0.0171	-0.0031	0.0515	0.01787	14.5979	0.0164	87.904	106. 7. 4. 38	1856.4	1							
1314	5	Greenbridge 2331	16. 1. 14.86	1856.4	3	3 0983	+0.0036	-0.0003	0.0515	0.01621	14.5465	0.0406	87.878	99. 54. 16.67	1856.4	3							
1315	50	Serpente.	16. 1. 14.86	1856.5	3	3 3044	+0.0068	-0.0007	0.0515	0.01638	14.4783	0.0393	87.959	88. 28. 10.24	1856.5	3							
1316	2 ^h	12 Hercules	16. 1. 15.24	1856.5	25	3 1800	+0.0051	-0.0004	0.0515	0.01624	14.5876	0.0278	87.866	43. 21. 5.33	1856.5	25							
1317	5 ^h	10 Hercules	16. 1. 15.24	1856.5	25	3 1800	+0.0051	-0.0004	0.0515	0.01624	14.5876	0.0278	87.866	43. 21. 5.33	1856.5	25							
1318	5 ^h	4 Ophiuchi	16. 1. 15.48	1856.4	3	3 3456	+0.0033	-0.0003	0.0515	0.01588	14.5488	0.0295	87.948	70. 20. 56.12	1856.4	3							
1319	5 ^h	19 Coronae	16. 1. 15.48	1856.4	3	3 3456	+0.0033	-0.0003	0.0515	0.01588	14.5488	0.0295	87.948	70. 20. 56.12	1856.4	3							
1320	50	Coronae	16. 1. 15.31	1856.8	3	3 2541	+0.0033	-0.0003	0.0515	0.01509	14.5166	0.0204	87.978	55. 52. 8.93	1856.8	3							

1287, 1291, 1292, 1299, and 1311. These stars are respectively identical with Lacaille 6678, 6701, 6715, 6788, and 6999.
 1291. This star is identical with Schwab 960.
 1308. The magnitude has been taken from Piazzi.
 1309. This star is identical with the variable B Scorp. 1; the maximum magnitude about 5.

Annual Proper Motion in Right Ascension, for 100 Years, in Seconds of Time.	Secular Variation of Position in R. A., in Seconds of Time.	Annual Proper Motion in Declination, for 100 Years, in Seconds of Time.	Logarithm of					Value of μ .	No. in Bessel's Catalogue, 1755- 1860.	No. in Lalande Polaris or in British Nautical Almanac (B. A.) 1860.	Hour and No. in Planet.	Hour and No. in Greenwich, 1810.	Hour and No. in Woolen's Bessel, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	Hour and No. in Greenwich, 1810.	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CATALOGUE OF THE MEAN PLACES OF STARS FROM SEVEN YEARS' OBSERVATIONS

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 1.		Mean Year and Fraction of Year.	Longitude of Observer.	Annual Precession in R.A.	Secular Variation in R.A.	Annual Proper Motion in R.A. from R.A.C.	Logarithms of								Value of μ .	Mean North Polar Distance, 1860, Jan. 1, 1860.	Mean Year and Fraction of Year.	Longitude of Observer.
			h	m						e	f	g	h								
1321	5 ^m	5 Ophiuchi γ (N. Star).	16	17. 11. 45	1860.3	4	+ 3.586	+ 0.0141	+ 0.0081	0.06765	0.05483	1.45616	0.08164	87.807	121. 7. 12.59	1860.0	1				
1322	5 ^m	5 Ophiuchi ρ (S. Star).	16	17. 11. 45	1860.3	4	+ 3.586	+ 0.0141	+ 0.0081	0.06765	0.05483	1.45616	0.08164	87.807	121. 7. 12.59	1860.0	1				
1323	5 ^m	11 Coroni	16	17. 11. 49	1860.2	3	+ 2.538	+ 0.0034	+ 0.001	0.06671	0.05131	1.43550	0.07205	90.465	55. 58. 7.67	1860.2	1				
1324	6 ^m	4 Hercules	16	17. 14.	1860.1	..	+ 2.399	+ 0.0034	+ 0.004	0.06637	0.05131	1.43516	0.07244	90.343	55. 26. 15.3	1859.4	1				
1325	6 ^m	7 Ophiuchi	16	18. 37.59	1860.1	3	+ 3.648	+ 0.0120	+ 0.003	0.06810	0.05559	1.45436	0.08151	87.941	108. 8. 6.74	1860.1	1				
1326	5 ^m	14 Hercules	16	18. 37.59	1860.5	3	+ 2.763	+ 0.0045	+ 0.009	0.06624	0.05655	1.44146	0.07656	87.795	75. 38. 1.26	1860.2	1				
1327	5 ^m	B. F. 2455	16	20. 10.74	1860.5	3	+ 2.327	+ 0.0086	..	0.06810	0.05655	1.45066	0.08164	87.740	78. 30.93	1860.2	4				
1328	5 ^m	5 Ophiuchi	16	20. 10. 73	1860.6	3	+ 3.644	+ 0.0088	+ 0.013	0.06810	0.05655	1.45093	0.08164	87.740	78. 30.93	1860.2	1				
1329	6 ^m 5 ^m	13 Hercules	16	20. 15.00	1860.4	3	+ 2.134	+ 0.0035	+ 0.003	0.06615	0.05019	1.43355	0.07125	90.746	54. 17. 46.7	1860.2	1				
1330	1 ^m 1 ^m	21 Scorp.	16	20. 49.70	1857.0	50	+ 3.667	+ 0.0151	+ 0.001	0.06736	0.05404	1.45738	0.08121	87.721	116. 7. 2.96	1857.0	47				
1331	5 ^m	Crossbridge 243..	16	22. 21. 21	1860.5	1	+ 3.500	+ 0.0103	..	0.06102	0.03864	1.42000	0.06427	93.554	34. 28. 31.85	1860.5	1				
1332	5 ^m	24 Umi Minor ..	16	22. 38. 31	1860.5	1	+ 3.500	+ 0.0103	..	0.06102	0.03864	1.42000	0.06427	93.554	34. 28. 31.85	1860.5	1				
1333	5 ^m	Dracoma	16	23. 5. 46	1856.1	1	+ 1.818	+ 0.0119	+ 0.005	0.03539	0.02979	1.36489	0.03666	104.1	13. 55. 25.83	1860.5	1				
1334	3 ^m 4 ^m	14 Dracoma	16	23. 5. 46	1858.1	39	+ 1.800	+ 0.0119	+ 0.003	0.03539	0.02979	1.41161	0.06102	93.007	10. 10.	1858.1	..				
1335	..	.....	16	23. 8. 24	1857.5	1	+ 3.021	+ 0.0063	..	0.05797	0.05666	1.44751	0.07878	88.609	87. 26. 15.34	1857.5	41				
1336	4	Norma	16	23. 12. 47	1856.9	7	+ 3.309	+ 0.0195	+ 0.003	0.06691	0.05171	1.46087	0.08596	87.571	124. 13. 43.70	1856.9	7				
1337	5 ^m	8 Ophiuchi	16	23. 14.82	1859.5	1	+ 3.449	+ 0.0110	+ 0.001	0.06851	0.05163	1.45376	0.08107	87.818	120. 18.	1859.5	..				
1338	9	W. B. XVI. 43..	16	23. 15. 31	1857.5	1	+ 3.044	+ 0.0063	..	0.06107	0.03658	1.44754	0.07885	88.605	87. 43. 5.90	1857.5	1				
1339	5 ^m	10 Hercules	16	23. 50.56	1856.0	3	+ 3.025	+ 0.0137	+ 0.001	0.06851	0.04819	1.45553	0.07897	87.843	111. 9. 46.51	1856.0	2				
1340	4 ^m 3 ^m	10 Ophiuchi ..	16	23. 51.37	1858.0	16	+ 3.023	+ 0.0063	0.000	0.06924	0.05655	1.44751	0.07887	87.867	77. 42. 35.59	1858.0	16				
1341	5 ^m 6 ^m	30 Hercules ..	16	24. 28. 30	1860.2	4	+ 1.965	+ 0.0041	+ 0.005	0.05635	0.04386	1.43030	0.07039	87.603	47. 48. 29.48	1860.2	1				
1342	5 ^m 6 ^m	29 Hercules ..	16	24. 36. 30	1859.5	3	+ 2.816	+ 0.0047	+ 0.008	0.05615	0.04596	1.44449	0.07177	89.000	112. 15. 17.45	1859.5	3				
1343	3 ^m 4 ^m	31 Scorp.	16	24. 37. 13	1858.3	8	+ 3.273	+ 0.0154	+ 0.001	0.06819	0.05333	1.45833	0.08240	87.666	117. 55. 18.38	1858.3	1				
1344	5 ^m 5 ^m	15 Draconis ..	16	24. 38. 16	1860.2	2	+ 1.418	+ 0.0143	+ 0.003	0.05003	0.03051	1.39517	0.05810	97.990	30. 55. 45.94	1860.2	1				
1345	6 ^m 4 ^m	13 Ophiuchi ..	16	24. 39. 04	1860.4	2	+ 3.016	+ 0.0069	+ 0.030	0.06753	0.05031	1.44995	0.07951	88.000	51. 1. 12.99	1860.4	2				
1346	1 ^m 1 ^m	.....	16	24. 39. 17.74	1855.5	1	+ 3.565	+ 0.0124	..	0.06905	0.05454	1.45383	0.08388	87.813	111. 46. 0.45	1855.5	1				
1347	4 ^m	16 Hercules ..	16	24. 39. 17.74	1856.5	36	+ 3.566	+ 0.0083	+ 0.001	0.06694	0.05393	1.45174	0.08388	88.145	110. 16. 48.41	1856.5	36				
1348	4 ^m	31 Hercules ..	16	24. 39. 15.48	1860.5	3	..	1.973	+ 0.0043	+ 0.001	0.06637	0.04794	1.45087	0.07033	91.467	47. 16. 30.38	1860.5	3			
1349	..	.....	16	24. 31. 67.4	1855.0	1	+ 3.500	+ 0.0076	..	0.06102	0.03864	1.42000	0.06427	93.554	34. 28. 31.85	1855.0	1				
1350	6 ^m	36 Hercules ..	16	24. 33. 38.15	1855.0	2	+ 2.975	+ 0.0156	+ 0.004	0.07018	0.05607	1.44676	0.07849	88.649	50. 25. 58.68	1855.0	2				
1351	6 ^m	3 ^m Hercules ..	16	24. 33. 43.83	1855.2	3	+ 2.974	+ 0.0056	+ 0.008	0.07018	0.05668	1.44676	0.07849	88.649	50. 25. 58.68	1855.2	3				
1352	6 ^m	Lacaille 6550 ..	16	24. 34. 38.88	1857.8	9	+ 2.845	+ 0.0161	..	0.06893	0.04819	1.46007	0.06604	87.549	121. 50. 7.01	1857.8	9				
1353	3 ^m 4 ^m	.....	16	24. 34. 57.08	1859.5	5	+ 1.638	+ 0.0064	+ 0.004	0.06537	0.04333	1.42535	0.06810	90.050	47. 40. 46.46	1859.5	5				
1354	6 ^m	30 Hercules ..	16	24. 35. 56.74	1849.4	2	+ 2.461	+ 0.0033	+ 0.006	0.06154	0.03184	1.42724	0.07479	89.811	64. 48. 39.15	1849.4	2				
1355	3 ^m 4 ^m	40 Hercules ..	16	24. 36. 36.56	1857.0	40	+ 2.976	+ 0.0033	+ 0.034	0.06883	0.04813	1.43611	0.07387	89.749	88. 8. 29.93	1856.6	47				
1356	6 ^m	44 Hercules ..	16	24. 38. 10.96	1856.5	4	+ 2.934	+ 0.0055	+ 0.005	0.06605	0.05181	1.44611	0.07824	88.900	53. 38. 13.45	1856.5	4				
1357	6 ^m 4 ^m	43 Hercules ..	16	24. 38. 46	1859.4	6	+ 2.877	+ 0.0048	+ 0.004	0.06606	0.05166	1.44555	0.07805	88.900	53. 38. 13.45	1859.4	6				
1358	5 ^m 5 ^m	13 Draconia ..	16	24. 39. 57.18	1858.8	6	+ 2.967	+ 0.0034	..	0.05931	0.02624	1.40496	0.06182	91.565	8. 8. 49.43	1858.8	24				
1359	3 ^m	W. B. XVI. 79..	16	24. 41. 40	1857.3	1	+ 2.958	+ 0.0064	+ 0.005	0.06565	0.05087	1.44313	0.06485	87.845	124. 5. 5.83	1857.3	1				
1360	8 ^m	Scorp.	16	24. 41. 25.70	1856.0	2	+ 2.926	+ 0.0041	..	0.07074	0.05134	1.43316	0.07715	88.000	75. 54. 5.83	1856.0	2				

1330, 1336, 1343, and 1359. These stars are respectively identical with Lacaille 6853, 6859, 6897, and 6

The designation is Lacaille's

[illegible]

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 3377 Stars; from the Catalogue of Lalande published by the British Association; from Weiss's *Catalogus Stellarum ex Zonis Rejionemantis*; or, for the variable stars, from *Procyon's* list in the *Hydrographic Observations*, 1854, and 1856.* The authorities for any remaining magnitudes are given in the Notes.

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATIONS.

No.	Magnitude.	Star's Name.	Mean Right Ascension, from Observations, 1846 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion in R.A., for 100 Years, in Seconds.	Secular Variation of Proper Motion in R.A.	Annual Proper Motion in R.A., from Mean of Elements.	Logarithms of				Value of μ .	Mean North Polar Distance, 1850, Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.
									α	δ	μ	h				
1364	7	B. F. 216.	16.45. 31.19	1855	3	+ 8.19	+ 0.0044	0.07084	0.05535	1.44433	0.07754	88.904	78.37. 4.71	1855	3	
1364	5 ^a	10 Ophiuchi.	16.45. 31.19	1858	3	+ 3.56	+ 0.0080	0.07099	0.05541	1.45188	0.08068	88.904	100.31. 54.63	1858	3	
1363	5	Groombridge 2177.	16.45. 31.68	1860	4	1.127	+ 0.0019	0.07099	0.05541	1.45188	0.08068	88.904	36.58. 0.31	1860	4	
1364	6.5 ^a	47 Hercules.	16.43. 31.63	1855	5	2.906	+ 0.0043	0.07099	0.05556	1.44750	0.08181	88.904	83.30. 27.89	1855	5	
1365	6 ^a	21 Ophiuchi.	16.44. 19.06	1854	8	3.040	+ 0.0057	0.07099	0.05571	1.44777	0.07898	88.904	88.30. 32.25	1854	8	
1366	4.5 ^a	52 Hercules.	16.45. 8.36	1860	4	+ 1.750	+ 0.0050	0.07099	0.05584	1.45333	0.07754	89.504	43.46. 15.66	1860	4	
1366	6 ^a	50 Hercules.	16.45. 11.14	1861	3	+ 1.350	+ 0.0033	0.07099	0.05615	1.45379	0.07469	89.504	57.75. 7.66	1861	3	
1368	7	Laocine 767.	16.46. 44.71	1856	1	3.871	+ 0.0045	0.07097	0.05615	1.45379	0.07469	89.504	121.16. 16.71	1856	1	
1369	6.5	23 Ophiuchi.	16.47. 6.07	1854	4	3.304	+ 0.0068	0.07098	0.05551	1.45051	0.07997	88.916	95.55. 18.81	1854	4	
1370	5.5	53 Hercules.	16.47. 39.61	1855	5	2.830	+ 0.0033	0.07096	0.05581	1.45384	0.07468	89.504	80.34. 51.53	1855	5	
1371	5.4 ^a	27 Ophiuchi.	16.51. 2.56	1857	3	+ 4.856	+ 0.0044	0.07097	0.05516	1.44992	0.07788	88.771	80.24. 15.95	1857	3	
1372	7	Bradley 2153.	16.51. 2.56	1855	1	3.664	+ 0.0010	0.07096	0.05581	1.45051	0.07997	88.771	114.52. 35.50	1855	1	
1373	6	26 Ophiuchi.	16.51. 35.20	1854	8	1.366	+ 0.0009	0.07096	0.05581	1.45051	0.07997	88.771	114.52. 35.50	1854	8	
1374	..	..	16.51. 39.36	1856	1	3.359	+ 0.0078	0.07095	0.05581	1.45051	0.07997	88.771	101.40. 11.35	1856	1	
1375	6.7	B. F. 215.	16.51. 35.36	1854	4	1.919	+ 0.0046	0.07095	0.05555	1.44979	0.07836	88.771	83.12. 20.19	1854	4	
1376	5.4 ^a	58 Hercules.	16.56. 56.10	1858	11	+ 2.997	+ 0.0051	0.07211	0.05514	1.43611	0.07528	88.947	58.51. 54.96	1858	11	
1377	5.4	B. F. 215.	16.55. 11.27	1854	1	2.724	+ 0.0038	0.07211	0.05449	1.44861	0.07335	88.947	77.3. 4.95	1854	1	
1378	5	19 Draconis.	16.55. 15.93	1860	3	2.724	+ 0.0015	0.07211	0.05449	1.44861	0.07335	88.947	74.50. 36.16	1860	3	
1379	5	Piazzi XVI. 468.	16.55. 35.75	1856	14	3.936	+ 0.0017	0.07204	0.05514	1.44961	0.07335	88.947	113.55. 17.00	1856	14	
1380	5	59 Hercules.	16.56. 46.04	1857	3	2.212	+ 0.0033	0.07204	0.05514	1.44961	0.07335	88.947	56.13. 35.64	1857	3	
1381	6	Piazzi XVI. 277.	16.56. 48.08	1847	10	+ 3.720	+ 0.0070	0.07244	0.05487	1.45000	0.08044	88.947	100.53. 18.96	1847	10	
1382	5	60 Hercules.	16.56. 57.50	1855	3	+ 2.320	+ 0.0009	0.07240	0.05487	1.45000	0.08044	88.947	77.3. 4.95	1855	3	
1383	4.5	24 Ursæ Minoris.	16.57. 1.18	1853	5	6.637	+ 0.0046	0.07240	0.05487	1.45000	0.08044	88.947	74.50. 36.16	1853	5	
1384	3.7	35 Ophiuchi.	16.57. 2.10	1856	49	+ 3.476	+ 0.0001	0.07240	0.05487	1.45000	0.08044	88.947	74.50. 36.16	1856	49	
1385	5	Piazzi XVII. 3.	16.57. 4.46	1855	3	+ 2.212	+ 0.0034	0.07227	0.05492	1.45131	0.07683	89.076	56.13. 35.64	1855	3	
1386	6 ^a	37 Ophiuchi.	16.57. 5.13	1855	4	+ 2.825	+ 0.0038	0.07240	0.05464	1.44444	0.07811	88.731	79.4. 31.79	1855	4	
1387	8	Laocine (F.) 289.	16.57. 6.21	1860	1	1.1465	+ 0.0057	0.07141	0.05463	1.43146	0.07617	88.731	106.44. 42.47	1860	1	
1388	..	Ophiuchi.	16.57. 6.42	1856	13	+ 3.718	+ 0.0004	0.07227	0.05463	1.43146	0.07617	88.731	58.51. 54.96	1856	13	
1389	..	Ophiuchi.	16.57. 6.42	1857	9	3.718	+ 0.0004	0.07227	0.05463	1.43146	0.07617	88.731	58.51. 54.96	1857	9	
1390	5	36 Ophiuchi. (as one A.)	16.57. 6.46	1857	1	3.718	+ 0.0004	0.07227	0.05463	1.43146	0.07617	88.731	58.51. 54.96	1857	1	
1391	..	..	16.57. 7.37	1854	1	3.961	+ 0.0078	0.07240	0.05393	1.44511	0.07778	88.879	106.44. 42.47	1854	1	
1392	9	W. B. XVII. 106.	16.57. 7.30	1856	1	3.969	+ 0.0049	0.07240	0.05393	1.44511	0.07778	88.879	106.44. 42.47	1856	1	
1393	7	30 Scorp.	16.57. 7.37	1857	8	3.969	+ 0.0004	0.07240	0.05393	1.44511	0.07778	88.879	106.44. 42.47	1857	8	
1394	5.6	Piazzi XVII. 43.	16.57. 7.55	1856	1	3.717	+ 0.0004	0.07240	0.05414	1.44984	0.07881	88.879	116.26. 25.11	1856	1	
1395	Var.	46 Hercules.	16.57. 8.15	1856	57	3.724	+ 0.0035	0.07240	0.05419	1.44984	0.07881	88.879	75.46. 30.25	1856	57	
1396	8	Hercules.	16.57. 8.15	1855	4	+ 2.724	+ 0.0035	0.07240	0.05419	1.44984	0.07881	88.879	75.46. 30.25	1855	4	
1397	3	21 Draconis.	16.57. 8.21	1860	1	1.016	+ 0.0013	0.07240	0.05419	1.44984	0.07881	88.879	75.46. 30.25	1860	1	
1398	8.9	W. B. XVII. 127.	16.57. 8.21	1855	3	3.969	+ 0.0048	0.07240	0.05419	1.44984	0.07881	88.879	106.44. 42.47	1855	3	
1399	..	..	16.57. 8.21	1856	1	3.969	+ 0.0004	0.07240	0.05419	1.44984	0.07881	88.879	106.44. 42.47	1856	1	
1400	5.4	41 Ophiuchi.	16.57. 8.21	1854	3	3.969	+ 0.0047	0.07240	0.05419	1.44984	0.07881	88.879	106.44. 42.47	1854	3	

1374, 1375, 1376, 1390, 1393, and 1394. These stars are respectively identical with Lacaille 7082, 7083, 7109, 7193, 7203, and 7204.
 1383 and 1387. These stars are respectively identical with Schwab 1007 and 1059.
 1395. The maximum magnitude is about 3.
 1387. The magnitude has been taken from the Radcliffe Catalogue 145.

AT THE ROYAL OBSERVATORY, GREENWICH, FROM 1854 TO 1860.

Annual Proper Motion in R.A. (in seconds)	Annual Proper Motion in Declination (in seconds)	Secular Variation of the Position in R.A. (in seconds)	Annual Proper Motion in R.A. (in seconds)	Annual Proper Motion in Declination (in seconds)	Logarithms of				Value of l'	No. in Bessel's Catalogue		No. in Landolt Photocentric Fundamental Catalogue (F.)		Hour and Min. Planet.	No. in Greenwich Bessel's Catalogue	Hour and Min. Planet.		No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	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No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue (F.)	No. in Greenwich Bessel's Catalogue	No. in Landolt Photocentric Fundamental Catalogue
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No.	Magnitude.	Star's Name.	Mean Right Ascension, 1850, Jan. 1, 0h.	Mean Declination, 1850, Jan. 1, 0h.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, in R.A., from 1850 to 1856.	Secular Variation of Pre- cession in R.A.	Annual Proper Motion in Declination, from 1850 to 1856.	Logarithms of					Value of μ .	Mean North Polar Distance, 1850, Jan. 1, 0h.	Mean Year and Fraction of Year.	Number of Observations.
										α	β	γ	δ	ϵ				
1401	5 ^m	40 Ophiuchi	17. 11. 36.96	1859.4	4	3.573	+0.0074	+0.0017	0.07385	0.05313	1.45596	0.08108	87.664	120. 57. 30.40	1859.4	4	1401	
1402	5 ^m	46 Hercules	17. 12. 50.62	1859.5	3	2.905	+0.0033	-0.0001	0.07393	0.04873	1.45499	0.09060	90.650	101. 42. 34.18	1859.5	3	1402	
1403	5 ^m	53 Serpens	17. 12. 57.25	1859.4	4	3.367	+0.0066	+0.0001	0.07411	0.05287	1.45481	0.08039	89.903	103. 44. 36.88	1859.4	4	1403	
1404	7 ^m	37 Bradley 2188	17. 13. 6.75	1859.7	3	3.466	+0.0081	-0.0003	0.07375	0.05325	1.45512	0.08748	86.631	114. 45. 20.47	1859.7	3	1404	
1405	3 ^m	43 Ophiuchi	17. 13. 24.86	1859.3	43	3.679	+0.0081	-0.0003	0.07379	0.05321	1.45516	0.08743	87.599	114. 45. 20.47	1859.3	43	1405	
1406	6	43 Ophiuchi	17. 14. 33.12	1859.3	10	3.679	+0.0087	+0.0003	0.07377	0.05313	1.45493	0.08710	87.566	118. 0. 3.85	1859.3	10	1406	
1407	6	44 Ophiuchi	17. 14. 34.46	1859.5	3	3.468	+0.0087	-0.0001	0.07411	0.05181	1.45512	0.08748	86.631	118. 0. 3.85	1859.5	3	1407	
1408	6	Groombridge 2475	17. 18. 24.46	1860.5	3	-0.060	+0.0038	-0.0001	0.07490	0.05096	1.45974	0.08666	87.330	118. 3. 46.49	1860.5	3	1408	
1409	5 ^m	45 Ophiuchi	17. 18. 35.10	1859.7	14	3.583	+0.0085	-0.0003	0.07492	0.05096	1.45976	0.08668	87.332	119. 44. 9.81	1859.7	14	1409	
1410	5 ^m	49 Ophiuchi	17. 19. 34.74	1859.6	68	2.974	+0.0038	-0.0001	0.07493	0.05098	1.45977	0.08669	87.333	119. 44. 9.81	1859.6	68	1410	
1411	5 ^m	51 Ophiuchi	17. 22. 52.55	1859.5	10	3.655	+0.0067	0.0000	0.07494	0.05213	1.45972	0.08690	87.335	121. 51. 0.74	1859.5	10	1411	
1412	6	B. A. C. 5917	17. 23. (5a)	...	..	0.770	+0.0090	...	0.07510	0.05084	1.46111	0.08752	91.367	121. 50. 0.73	1859.6	..	1412	
1413	5 ^m	76 Hercules	17. 25. 4.48	1859.4	4	2.831	+0.0038	-0.0001	0.07508	0.05175	1.46180	0.08731	90.739	121. 46. 53.07	1859.4	4	1413	
1414	5 ^m	B. A. C. 5925	17. 25. 33.85	1859.6	6	3.954	+0.0079	...	0.07488	0.04994	1.46110	0.08748	87.334	122. 38. 48.88	1859.6	6	1414	
1415	3 ^m	33 Draconis	17. 27. 16.32	1859.6	45	3.315	+0.0051	-0.0003	0.07351	0.05317	1.46180	0.08740	91.776	121. 35. 37.29	1859.6	45	1415	
1416	2 ^m	55 Ophiuchi	17. 28. 26.23	1859.7	105	2.774	+0.0031	+0.0004	0.07577	0.05397	1.46436	0.08743	88.650	121. 30. 6.46	1859.7	105	1416	
1417	6	Groombridge 2444	17. 28. 40.98	1859.6	1	1.707	+0.0031	...	0.07496	0.04611	1.46381	0.08768	88.915	121. 34. 19.75	1859.6	1	1417	
1418	4 ^m	74 Draconis	17. 29. 25.27	1859.5	3	3.160	+0.0058	+0.0010	0.07351	0.05304	1.46183	0.08752	91.823	121. 34. 19.75	1859.5	3	1418	
1419	4 ^m	15 Draconis	17. 29. 30.72	1859.5	3	3.160	+0.0058	+0.0010	0.07351	0.05304	1.46183	0.08752	91.823	121. 34. 19.75	1859.5	3	1419	
1420	4 ^m	55 Serpens	17. 29. 34.72	1860.2	4	3.435	+0.0048	-0.0004	0.07586	0.05366	1.45783	0.08005	87.755	105. 18. 22.82	1860.2	4	1420	
1421	5 ^m	57 Ophiuchi	17. 30. 14.16	1859.5	3	3.739	+0.0044	+0.0003	0.07601	0.05433	1.45612	0.07963	87.944	121. 8. 47.89	1859.5	3	1421	
1422	7	Piazzi XVII. 16a	17. 30. 53.80	1859.5	3	3.905	+0.0068	+0.0009	0.07556	0.04997	1.46099	0.08110	88.718	121. 7. 4.33	1859.5	3	1422	
1423	..	76 Hercules	17. 31. 3.65	1859.4	1	3.160	+0.0058	-0.0001	0.07577	0.05397	1.46099	0.08110	88.718	121. 7. 4.33	1859.4	1	1423	
1424	7	Piazzi XVII. 167	17. 31. 51.17	1859.5	3	3.906	+0.0067	-0.0003	0.07577	0.05397	1.46099	0.08110	88.718	121. 7. 4.33	1859.5	3	1424	
1425	5 ^m	47 Draconis	17. 32. 31.79	1859.5	3	3.051	+0.0053	-0.0007	0.07351	0.05304	1.46183	0.08752	91.823	121. 34. 19.75	1859.5	3	1425	
1426	5 ^m	58 Serpens	17. 33. 28.93	1859.5	13	3.374	+0.0043	-0.0008	0.07631	0.05389	1.45791	0.07983	88.798	120. 47. 47.84	1859.5	13	1426	
1427	5 ^m	16 Ophiuchi	17. 35. 26.95	1859.5	3	3.599	+0.0043	-0.0010	0.07635	0.05458	1.45654	0.08023	87.587	121. 36. 41.07	1859.5	3	1427	
1428	7	40 Ophiuchi	17. 36. 13.76	1859.7	73	4.166	+0.0030	-0.0005	0.07601	0.05433	1.45612	0.07963	87.944	121. 8. 47.89	1859.7	73	1428	
1429	7	39 Draconis	17. 36. 33.36	1859.5	3	4.063	+0.0039	-0.0001	0.07697	0.05395	1.46034	0.07933	89.965	121. 41. 15.78	1859.5	3	1429	
1430	5 ^m	33 Draconis	17. 37. 46.42	1859.9	3	-0.365	+0.0039	+0.0003	0.07686	0.05395	1.46034	0.07933	89.965	121. 41. 15.78	1859.9	3	1430	
1431	5 ^m	3 Sagittarii	17. 38. 44.94	1859.7	4	3.773	+0.0049	-0.0010	0.07665	0.05515	1.45799	0.08016	87.439	127. 46. 23.66	1859.7	4	1431	
1432	4 ^m	47 Ophiuchi	17. 40. 52.39	1859.5	12	3.008	+0.0009	-0.0007	0.07717	0.05463	1.45788	0.07969	88.799	127. 46. 23.66	1859.5	12	1432	
1433	4 ^m	26 Hercules	17. 40. 56.86	1859.0	54	3.369	+0.0026	-0.0006	0.07691	0.05511	1.45787	0.08013	89.963	127. 46. 23.66	1859.0	54	1433	
1434	6	47 Hercules	17. 41. 8.84	1860.4	4	4.161	+0.0039	-0.0001	0.07721	0.05563	1.45884	0.08031	89.963	127. 46. 23.66	1860.4	4	1434	
1435	4 ^m	31 Draconis ψ (ast Star)	17. 44. 49.49	1859.3	9	-1.087	+0.0014	-0.0003	0.07739	0.05621	1.45784	0.07945	87.470	127. 47. 2.88	1859.3	9	1435	
1436	4 ^m	Draconis ψ (ast Star)	17. 44. 49.49	1859.6	6	-1.087	+0.0014	-0.0003	0.07739	0.05621	1.45784	0.07945	87.470	127. 47. 2.88	1859.6	6	1436	
1437	6	Piazzi XVII. 265	17. 45. 16.88	1854.5	12	3.358	+0.0031	-0.0003	0.07760	0.05595	1.45786	0.07945	87.472	127. 46. 23.66	1854.5	12	1437	
1438	6 ^m	9 Hercules	17. 49. 46.38	1859.7	10	3.418	+0.0034	-0.0001	0.07799	0.05618	1.45786	0.07945	87.472	127. 46. 23.66	1859.7	10	1438	
1439	5 ^m	Piazzi XVII. 294	17. 50. 5.93	1858.8	3	3.854	+0.0033	+0.0003	0.07798	0.05615	1.45786	0.07979	87.468	127. 46. 23.66	1858.8	3	1439	
1440	5 ^m	4 Sagittarii	17. 51. 14.82	1859.4	3	3.661	+0.0028	-0.0005	0.07818	0.05500	1.45789	0.07959	87.468	127. 47. 56.30	1859.4	3	1440	

1404, 1405, 1406, 1407, 1409, 1411, 1422, 1431, 1432, and 1440. These stars are respectively identical with Lacaille 7450, 7454, 7456, 7459, 7533, 7534, 7440, 7521, and 7526. 1408, and 1429. These stars are identical with Schwab 1202, and 1204.

1422. The magnitude has been taken from Piazzi.

Annual Motion in R.A. (N.P.D.)	Secular Variation of Precession in N.P.D.	Annual Motion in Declination from 1850	Longitude of				Value of	No. in Bessel's Catalogue	No. in Landolt Photocentric (F.) Association (G.) 1800.	Hour and Min. Planet.	No. in Greenwich 1850.	Hour and Min. in Walmesley 1850.	Hour and Min. Argelander.	Hour in health ris.	No. in Friedländer's Catalogue	No. in Friedländer's Catalogue (H.)	No. in Friedländer's Catalogue (I.)	No. in Friedländer's Catalogue (J.)	No.
			α	β	γ	δ													
418	-0.51a	+0.31	0.001881	0.05175	1.45415	0.34959	117.378	2186	31454 (B.A.)	XVII.	47	..	..	404	73a	523	418	..	1403
410	0.597	-0.11	0.001794	0.05174	1.45415	0.34944	117.378	2185	31534 (B.A.)	59	..	..	..	73a	..	..	..	1404	
409	0.581	-0.10	0.001794	0.05174	1.45415	0.34944	117.378	2185	31534 (B.A.)	59	..	..	..	73a	524	431	..	1405	
407	0.581	-0.10	0.001794	0.05174	1.45415	0.34944	117.378	2185	31534 (B.A.)	59	..	..	..	73a	..	..	..	1406	
405	0.587	-0.03	0.001851	0.04934	1.45314	0.34556	117.301	2189	31453 (B.A.)	53	..	..	..	731	..	43a	..	1407	
395	-0.541	0.00	0.010566	0.04435	1.45166	0.33041	110.151	2191	31533 (B.A.)	60	..	..	..	731	..	..	..	1408	
367	-0.56	+0.13	0.008603	0.03133	1.45743	0.33664	117.935	2198	31661 (B.A.)	83	..	..	..	734	..	..	..	1409	
364	+0.135	..	0.119404	0.17374	1.45668	0.33534	116.965	2200	31489 (F.)	..	..	..	..	737	..	..	..	1410	
363	-0.50	+0.18	0.011760	0.04552	1.45666	0.33534	116.965	2200	..	86	..	..	..	737	..	435	..	1410	
355	0.449	..	0.094493	0.00188	1.45515	0.33534	117.299	2206	..	103	..	..	..	737	..	..	..	1410	
343	-0.58	+0.05	0.007998	0.03498	1.45077	0.33856	112.167	2209	31824 (B.A.)	115	..	..	..	739	..	438	..	1411	
315	0.511	..	0.105157	0.15187	1.44926	0.33777	114.311	2213	..	..	..	..	..	741	..	..	..	1411	
304	-0.50	-0.03	0.075287	0.03079	1.44783	0.33549	110.035	2213	31950 (B.A.)	..	..	..	..	741	..	..	..	1412	
300	0.566	..	0.151513	0.09097	1.44719	0.33481	109.001	2217	31896 (F.)	..	..	..	..	741	..	..	..	1413	
285	0.197	0.00	0.071758	0.1817	1.44475	0.33534	114.759	2221	31053 (B.A.)	155	2443	..	..	408	741	526	..	1415	
275	-0.408	+0.20	0.074774	0.08995	1.44338	0.33177	116.731	2218	32049 (B.A.)	153	..	53a	409	743	527	..	..	1960	
273	0.277	..	0.120103	0.08085	1.44316	0.33044	117.745	2219	32083 (B.A.)	..	2444	..	..	..	..	..	..	1417	
267	0.169	-0.06	0.040515	0.04734	1.44196	0.33193	115.790	2223	32131 (B.A.)	168	2445	..	..	410	746	..	..	1418	
266	0.169	-0.03	0.041083	0.11695	1.44187	0.33194	115.402	2224	32140 (B.A.)	169	2446	..	..	411	747	..	..	1964	
266	0.498	..	0.001828	0.06635	1.44178	0.33194	115.402	2224	..	151	..	549	..	744	541	281	..	1420	
260	-0.476	+0.01	0.093851	0.07258	1.44087	0.33193	115.903	2220	32088 (B.A.)	157	..	565	..	745	549	441	..	1421	
254	0.522	+0.08	0.093851	0.07258	1.44087	0.33193	115.903	2220	..	161	..	..	..	..	..	..	..	1421	
253	0.556	..	0.111729	0.05817	1.43977	0.33102	109.456	2221	..	..	..	..	..	..	..	..	..	1421	
246	0.565	+0.07	0.011367	0.05492	1.43868	0.33171	109.481	2221	..	162	..	..	..	..	..	..	..	1421	
240	0.031	-0.11	0.068506	0.17164	1.43774	0.33164	136.236	2234	32097 (B.A.)	198	2451	..	..	749	..	..	..	1421	
231	-0.490	+0.04	0.099870	0.06984	1.43631	0.33154	117.776	2235	32209 (B.A.)	184	..	647	..	748	530	445	..	1421	
218	0.543	-0.06	0.065551	0.06445	1.43431	0.33139	114.169	2238	32140 (B.A.)	198	..	..	..	750	..	446	..	1421	
205	0.431	-0.17	0.093700	0.08015	1.43134	0.33124	116.827	2240	32146 (B.A.)	209	..	705	411	751	..	..	..	1421	
195	+0.440	-0.04	0.096951	0.05339	1.42814	0.33124	116.827	2240	32150 (B.A.)	241	2460	..	..	..	..	..	..	1421	
194	+0.455	-0.31	0.061018	0.10790	1.43044	0.33111	137.415	2238	32094 (F.)	241	2461	..	415	754	532	..	..	1421	
186	+0.518	+0.03	0.070728	0.08319	1.43097	0.33000	118.755	2235	32098 (B.A.)	217	..	..	..	753	..	448	..	1421	
176	0.749	+0.03	0.087463	0.06369	1.43056	0.33055	124.841	2230	32194 (B.A.)	239	..	805	..	756	..	..	..	1421	
166	0.515	+0.74	0.354681	0.09396	1.43059	0.33040	133.169	2237	32193 (B.A.)	244	..	..	..	756	..	..	..	1992	
148	-0.751	-0.21	0.576511	0.00316	1.42833	0.33088	130.944	2239	32053 (B.A.)	256	2475	..	417	758	..	..	..	1421	
136	-0.518	+0.36	0.097004	0.10198	1.42907	0.33000	138.755	2235	32098 (F.)	217	2477	..	418	759	..	..	..	1421	
116	+0.455	+0.18	0.098131	0.06728	1.42197	0.33055	119.656	2231	32051 (B.A.)	265	..	900	..	..	..	..	..	1421	
90	0.155	-0.03	0.056611	0.08642	1.43132	0.33118	134.311	2249	..	298	..	..	..	..	..	..	..	1421	
89	0.161	-0.08	0.013366	0.07134	1.43130	0.33035	111.743	2247	..	294	..	..	..	760	..	..	..	1421	
077	0.534	+0.04	0.008146	0.07357	1.43104	0.33058	114.290	2246	..	299	..	..	..	761	531	451	..	1421	

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 1, 0h 0m 0s.	Mean Declination, 1860, Jan. 1, 0° 0' 0".	Annual Proper Motion, in R.A., from 1854 to 1860.	Annual Proper Motion, in Dec., from 1854 to 1860.	Secular Variation of Precession in R.A.	Annual Proper Motion, in R.A., from 1854 to 1860.	Logarithm of				Mean North Polar Distance, 1860, Jan. 1, 90°.	Mean Year of Observation.	Number of Observations.	
									μ	μ	μ	μ				
Value of μ .																
μ																
1481	5 ⁴	1 Lyræ	18. 51. 57.3	18° 51' 35"	3	+ 0.003	+ 0.003	080812	040836	143501	080831	89319	51. 59. 47.5	1859	3	
1482	6 ⁴	39 Draconis	18. 16. 57.3	18° 16' 35"	3	- 0.004	+ 0.004	080818	070828	139828	080836	94375	11. 47. 45.3	1853	4	
1483	9	Lalande 13885	18. 16. 18.37	18° 16' 18"	3	- 0.004	+ 0.004	080818	070828	139828	080836	94375	11. 47. 45.3	1853	4	
1484	4 ⁵	1 Ursæ Minoris	18. 17. 30.19	18° 17' 30"	1	+ 0.004	- 0.004	080818	084968	145676	070828	137007	5. 23. 57.19	1856	162	
1485	6	38 Draconis	18. 17. 48.00	18° 17' 48"	4	- 0.004	- 0.004	080818	070828	139828	080836	94399	11. 48. 50.6	1853	5	
1486	5	Groombridge 2555	18. 17. 57.88	18° 17' 58"	1859	5	+ 0.005	+ 0.005	080820	040836	143501	080836	94344	40. 56. 51.3	1859	6
1487	3 ⁴	21 Sagittarii	18. 19. 19.48	18° 19' 19"	1857	11	+ 0.007	- 0.007	080823	040836	143500	070828	87308	115. 29. 41.3	1859	19
1488	7	Groombridge 1563	18. 19. 50.79	18° 19' 50"	1856	1	+ 0.008	+ 0.008	080829	040836	143500	080836	94696	47. 36. 15.4	1856	6
1489	7	Piazzi XVIII. 79	18. 20. 49.97	18° 20' 49"	1857	6	+ 0.004	+ 0.004	080829	040836	145651	070775	75173	11. 8. 0.68	1857	1
1490	6	W.B. XVIII. 483	18. 21. 15.09	18° 21' 15"	1859	1	+ 0.001	+ 0.001	080841	040836	144651	070944	79955	83. 28. 59.3	1856	3
1491	5	Bradley 2513	18. 21. 57.09	18° 21' 57"	1860	5	+ 0.003	+ 0.003	080848	040836	145363	070860	87492	104. 59. 50.6	1860	5
1492	5 ⁴	19 Draconis	18. 21. 58.03	18° 21' 58"	1856	3	+ 0.004	- 0.004	080836	040836	145148	070775	75183	31. 16. 49.9	1856	3
1493	5 ⁴	Piazzi XVIII. 79	18. 21. 58.03	18° 21' 58"	1856	1	+ 0.004	- 0.004	080836	040836	145148	070775	75183	31. 16. 49.9	1856	3
1494	6 ⁴	4 Ursæ Minoris	18. 21. 31.1	18° 21' 31"	1856	1	- 0.004	- 0.004	080836	040836	145148	070775	75183	31. 16. 49.9	1856	3
1495	6	Piazzi XVIII. 88	18. 21. 36.19	18° 21' 36"	1860	4	+ 0.004	- 0.004	080836	040836	145350	070834	87308	108. 59. 36.4	1860	5
1496	4 ³	44 Draconis	18. 21. 34.68	18° 21' 34"	1859	1	+ 0.004	- 0.004	080841	040836	145375	080705	95871	17. 19. 43.97	1859	3
1497	6	24 Sagittarii	18. 21. 30.00	18° 21' 30"	1856	4	+ 0.004	- 0.004	080841	090507	145675	070799	75251	114. 7. 56.36	1856	4
1498	7	25 Sagittarii	18. 21. 58.95	18° 21' 59"	1856	4	- 0.004	- 0.004	080841	090507	145674	070795	75288	114. 7. 56.36	1856	4
1499	8	Lalande 14310	18. 21. 58.95	18° 21' 59"	1859	4	- 0.004	- 0.004	080841	090507	145674	070795	75288	114. 7. 56.36	1859	4
1500	5	Groombridge 2612	18. 21. 46.12	18° 21' 46"	1859	5	+ 0.003	+ 0.003	080843	080846	145740	070834	90410	37. 45. 25.3	1859	5
1501	1 ⁷	3 Lyræ	18. 34. 19.32	18° 34' 19"	1856	9	+ 0.006	+ 0.006	080849	040836	145358	070821	89212	51. 20. 40.73	1856	97
1502	5 ⁴	2 Aquilæ	18. 34. 36.38	18° 34' 36"	1860	10	+ 0.006	+ 0.006	080843	040836	145357	070860	91010	49. 19. 50.70	1860	7
1503	4 ³	27 Sagittarii	18. 34. 56.46	18° 34' 56"	1859	11	+ 0.004	+ 0.004	080851	040836	145356	070830	87187	17. 19. 43.97	1859	12
1504	4	4 Lyræ * (1st Star)	18. 39. 42.04	18° 39' 42"	1859	5	+ 0.004	+ 0.004	080851	040836	145313	080860	91318	50. 18. 27.58	1859	5
1505	4	4 Lyræ * (2d Star)	18. 39. 42.07	18° 39' 42"	1859	5	+ 0.004	+ 0.004	080851	040836	145313	080860	91318	50. 18. 27.58	1859	5
1506	5	5 Lyræ * (1st Star)	18. 39. 44.31	18° 39' 44"	1859	6	+ 0.004	+ 0.004	080851	040836	145316	080859	91316	51. 31. 53.57	1859	6
1507	4 ⁴	5 Lyræ * (2d Star)	18. 39. 44.55	18° 39' 44"	1859	5	+ 0.004	+ 0.004	080851	040836	145316	080859	91316	51. 31. 53.57	1859	5
1508	5 ⁴	46 Draconis	18. 39. 54.30	18° 39' 54"	1856	1	+ 0.003	+ 0.003	080843	040836	145318	080859	91316	34. 16. 55.9	1856	4
1509	4 ⁴	6 Lyræ	18. 39. 57.12	18° 39' 57"	1856	1	+ 0.005	+ 0.005	080843	040836	145316	080857	90007	51. 31. 53.57	1856	5
1510	5	1 Lyræ	18. 39. 58.93	18° 39' 59"	1856	1	+ 0.005	+ 0.005	080843	040836	145318	080858	89004	51. 31. 53.57	1856	5
1511	Var.	.....	18. 40. 46.46	18° 40' 46"	1860	5	+ 0.006	+ 0.006	080851	040836	145316	070876	97539	51. 31. 53.57	1860	5
1512	.....	.....	18. 40. 53.88	18° 40' 54"	1856	1	+ 0.006	+ 0.006	080851	040836	145316	070744	87423	51. 31. 53.57	1856	5
1513	5	Groombridge 2671	18. 43. 35.40	18° 43' 35"	1856	1	+ 0.007	+ 0.007	080861	030808	145306	080816	90163	39. 5. 64.4	1856	5
1514	.....	.....	18. 43. 39.30	18° 43' 39"	1856	1	+ 0.005	+ 0.005	080846	090991	145377	080848	88718	56. 48. 30.1	1856	5
1515	6 ⁷	Lacaille 7898	18. 43. 42.22	18° 43' 42"	1858	10	- 0.006	- 0.006	080848	080866	145306	070644	89928	120. 53. 45.4	1858	9
1516	6	Groombridge 2672	18. 43. 51.61	18° 43' 51"	1857	1	+ 0.004	+ 0.004	080861	040836	145302	080843	89797	40. 56. 51.3	1857	6
1517	5 ⁶	Groombridge 2673	18. 44. 34.66	18° 44' 34"	1860	6	+ 0.003	+ 0.003	080861	040836	145301	080842	89821	41. 43. 27.8	1860	6
1518	Var.	10 Lyræ	18. 44. 54.71	18° 44' 54"	1859	124	+ 0.005	+ 0.005	080846	040836	145279	070824	88666	56. 47. 51.9	1856	114
1519	8	1 Lyræ	18. 44. 56.73	18° 44' 57"	1855	14	+ 0.005	+ 0.005	080846	040836	145279	070824	88666	56. 47. 51.9	1855	14
1520	5 ⁴	21 Sagittarii	18. 45. 43.93	18° 45' 43"	1858	4	+ 0.004	+ 0.004	080846	040836	145279	070725	87211	112. 34. 47.79	1858	5

1487, 1489, 1495, 1497, 1498, 1501, and 1520. These stars are respectively designated by the numbers 7245, 7246, 7247, 7248, and 7249.
 1494. This star is identical with Subsequent 1021. This star is the variable δ Renti; the limits of magnitude are 5 and 9; the period 71975 days.
 1518. The limits of magnitude are 34 and 45; the period 1290630 days.
 † For No. 1494, log. μ = -0.1196, log. ν = -0.7723, log. ρ = 0.4550, log. h = 0.2190, l = 111.04°.

No.	Annual Proper Motion, in R.A., from 1854 to 1860.	Annual Proper Motion, in Dec., from 1854 to 1860.	Secular Variation of Precession in R.A.	Annual Proper Motion, in R.A., from 1854 to 1860.	Logarithm of				Value of μ .	No. of Latitudes Taken, or of Positions of the Star.	Hour and No. in Planis.	Hour and No. in Greenwich's Bandel.	No. in Planis.	Hour and No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	No. in Planis.	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No.	Magnitude.	Star's Name.	Mean Right Ascension, 1850, Jan. 1, 1860, Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Variation in R.A. for 100 Years, from Peters' Catalogue.	Secular Variation of Proper Motion in R.A.	Annual Proper Motion in R.A. from the Mean of R.A.C.	Logarithm of					Value of μ	Mean North Polar Distance, 1850, Jan. 1, 1860, Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.
									μ	δ	α	β	γ				
1521	3 rd	34 Sagittarii	18.46.34.95	1857.7	10	+3.744	+0.0052	..	0.08459	0.05194	14.5884	0.07655	87.147	116.27.58.14	1857.7	11	4
1522	5 th	35 Sagittarii	18.46.39.16	1857.5	4	+3.664	+0.0044	+0.006	0.08444	0.05257	14.5679	0.07713	87.199	114.50.31.66	1857.5	1	1
1523	5 th	Groombridge 469	18.46.36.90	1856.6	1	+1.150	+0.0010	..	0.08747	0.03810	14.2078	0.08380	90.036	37.12.46.25	1856.6	1	1
1524	5	11 Lyræ	18.46.50.19	1856.6	1	+2.004	+0.0014	+0.004	0.08551	0.04687	14.3438	0.08892	88.817	53.12.4.15	1856.6	1	1
1525	4 th	13 Hercules	18.46.50.31	1856.5	3	+2.512	+0.0011	+0.005	0.08467	0.05283	14.5831	0.08919	89.173	67.31.47.39	1856.5	1	3
1526	8	Groombridge 4700	18.49. 6.35	1856.6	1	+1.864	+0.0010	..	0.08610	0.04581	14.5917	0.08389	89.173	47.14.19.99	1856.6	1	1
1527	9	Draconis	18.49. 6.90	1857.7	4	+1.078	+0.0044	..	0.08610	0.04561	14.4193	0.08730	90.243	46.45.17.61	1857.7	1	1
1528	7	Groombridge 4701	18.49. 6.94	1856.4	4	+1.365	+0.0010	..	0.08611	0.04581	14.5919	0.08389	89.173	46.17.17.93	1856.4	1	1
1529	5 th	47 Draconis	18.49. 7.38	1856.7	4	+1.078	+0.0044	+0.003	0.08610	0.04581	14.5919	0.08389	89.173	30.46.54.80	1856.7	9	9
1530	5	Groombridge 4719	18.49. 7.96	1860.2	1	+1.640	+0.0419	+0.003	0.09373	0.03449	13.7180	0.06681	95.213	46.4.41.89	1860.2	3	3
1531	6 th	83 Serpens	18.49. 15.58	1856.6	3	+2.880	+0.0004	+0.003	0.08431	0.05183	14.6685	0.07654	87.674	85.58.31.66	1856.6	1	1
1532	5 th	Brady 2377	18.49. 16.99	1856.6	3	+2.880	+0.0004	+0.003	0.08431	0.05183	14.6685	0.07654	87.674	85.58.31.66	1856.6	1	1
1533	4 th	37 Sagittarii	18.49. 22.53	1858.9	7	+3.811	+0.0044	+0.001	0.08468	0.05183	14.6667	0.07717	87.806	85.11.11.89	1858.9	7	7
1534	5 th	12 Lyræ	18.49. 36.54	1856.6	3	+2.087	+0.0014	+0.003	0.08610	0.04581	14.5919	0.08389	89.173	54.43.58.84	1856.6	3	3
1535	6 th	50 Draconis	18.50. 51.95	1860.0	3	+1.898	+0.0043	+0.018	0.09318	0.07310	13.6838	0.08953	95.800	46.14.58.84	1860.0	3	3
1536	5 th	13 Lyræ	18.51. 45.53	1857.9	34	+1.823	+0.0003	+0.001	0.08610	0.04531	14.4851	0.08437	89.199	46.14.11.39	1857.9	34	34
1537	4	Piazzi XVIII. 259	18.52. 50.80	1859.3	3	+1.725	+0.0006	..	0.08485	0.04517	14.4487	0.08666	90.213	75.3.30.00	1859.3	3	3
1538	4 th	13 Aquilæ	18.53. 16.11	1857.5	67	+2.726	+0.0005	+0.008	0.08486	0.04519	14.4489	0.08666	90.213	75.7.8.61	1857.5	67	67
1539	..	.....	18.53. 17.98	1854.7	1	+1.770	+0.0004	..	0.08485	0.04518	14.4357	0.0847	89.859	76.35.31.54	1854.7	1	1
1540	3 rd	38 Sagittarii	18.53. 42.10	1856.3	5	+3.845	+0.0074	+0.005	0.08561	0.05118	14.5977	0.07592	87.060	120.4.13.61	1856.3	5	5
1541	9	W. B. XVIII. 1364	18.53. 59.60	1856.7	1	+1.866	+0.0000	..	0.08486	0.04574	14.4501	0.07592	87.060	80.49.47.79	1856.7	1	1
1542	6 th	48 Draconis	18.54. 22.94	1860.0	3	+1.078	+0.0005	+0.005	0.08485	0.04501	14.4534	0.0804	90.431	53.22.02.86	1860.0	3	3
1543	5 th	50 Draconis	18.56. 5.94	1858.9	1	+1.078	+0.0005	+0.005	0.09688	0.00000	13.8537	0.09430	94.310	48.31.26.12	1858.9	1	1
1544	4 th	40 Sagittarii	18.58. 18.12	1857.9	9	+3.716	+0.0007	+0.008	0.08569	0.05129	14.5957	0.07596	87.060	117.52.15.56	1857.9	9	9
1545	3 rd	71 Aquilæ	18.58. 58.84	1857.7	117	+2.718	+0.0001	+0.006	0.08568	0.05128	14.5956	0.07596	87.060	76.30.30.71	1857.7	117	117
1546	Var.	.....	18.59. 37.67	1860.5	3	+1.890	+0.0003	..	0.08541	0.04597	14.4645	0.08006	87.665	81.58.44.61	1860.5	3	3
1547	6 th	Brady 2400	19. 0.48.26	1860.6	4	+2.497	+0.0011	..	0.08605	0.05391	14.5928	0.08199	88.909	65.47.49.49	1860.6	4	4
1548	4 th	44 Sagittarii	19. 0.48.21	1859.5	1	+1.575	+0.0005	+0.004	0.08569	0.05129	14.5957	0.07592	87.060	110.14.33.34	1859.5	1	1
1549	6 th	50 Aquilæ	19. 5.43	1859.3	3	+1.816	+0.0030	+0.001	0.08568	0.05128	14.5956	0.07592	87.060	98.10.31.19	1859.3	3	3
1550	6 th	44 Sagittarii	19. 6. 57.18	1858.8	16	+3.883	+0.0027	+0.000	0.08568	0.05128	14.5956	0.07585	87.046	105.19.38.66	1858.8	16	16
1551	Var.	.....	19. 8.23.76	1860.5	5	+1.566	+0.0000	..	0.08666	0.05200	14.5943	0.07665	87.112	109.33.29.31	1860.5	5	5
1552	5 th	20 Lyræ	19. 8.57.59	1856.6	4	+2.021	+0.0010	+0.003	0.08485	0.04517	14.5897	0.08666	90.213	51.5.4.39	1856.6	4	4
1553	5 th	53 Draconis	19. 9. 1.69	1857.7	4	+1.134	+0.0047	+0.003	0.09300	0.05115	14.7017	0.08924	90.881	34.12.41.45	1857.7	4	4
1554	6	55 Draconis	19. 9. (14.)	..	..	..	+0.239	+0.0074	0.09300	0.05115	14.7017	0.08924	90.881	34.12.41.45	1857.7	4	4
1555	5 th	43 Sagittarii	19. 9. 26.51	1860.0	3	+1.516	+0.0060	+0.004	0.08674	0.04509	14.5959	0.07665	87.112	101.11.53.06	1860.0	3	3
1556	5 th	1 Vulpeculæ	19. 10. 11.66	1859.5	3	+1.579	+0.0007	+0.003	0.08661	0.05129	14.5957	0.07592	87.060	68.51.16.61	1859.5	3	3
1557	6	Piazzi XIX. 50	19. 11. 1.07	1860.5	1	+1.612	+0.0005	+0.004	0.08677	0.04564	14.5980	0.07710	87.146	105.46.35.71	1860.5	1	1
1558	6 th	54 Aquilæ	19. 11. 44.79	1856.9	68	+2.817	+0.0005	+0.005	0.08661	0.05129	14.5957	0.07592	87.060	76.14.5.14	1856.9	68	68
1559	5 th	54 Draconis	19. 11. 45.09	1857.7	4	+1.077	+0.0005	+0.003	0.08671	0.04513	14.4666	0.08063	89.206	32.3.77.93	1857.7	4	4
1560	4 th	51 Lyræ	19. 11. 30.55	1856.6	3	+2.082	+0.0011	+0.005	0.08487	0.04507	14.4681	0.08941	88.645	6.4.64.95	1856.6	3	3

1530, 1535, and 1543. These stars are respectively identical with Schwab 1119, 1120, and 1121.
 1541, 1542, 1540, 1544, and 1550. These stars are respectively identical with Lacaille 7925, 7926, 7927, 7928, 7929, and 7930.
 1546. This star is the variable δ Aquilæ; it is of the 6th magnitude at the maximum; the period 551.5 days.
 1551. This star is the variable δ Sagittarii; the probable maximum magnitude is 7.9.

Annual Mean Right Ascension for the epoch 1850.	Secular Variation of Proper Motion in R.A. N. P. D.	Annual Proper Motion in R.A. or N. P. D.	Logarithm of				Value of μ	No. in Bessel's Catalogue (1850).	No. in Fehrenberg's (P) or Fehrenberg's (B.A.) (1860).	Hour and Min. in Planet.	Hour and Min. in Longitude.	Hour and Min. in William's Bessel. (1860).	No. in Argemone. (1860).	No. in Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	No. in Argemone's Polaris (1860).	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No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860 Jan. 1, from Observations, 1854 to 1860.	Mean Declination, 1860 Jan. 1, from Observations, 1854 to 1860.	Annual Proper Motion in R.A., from Proper Motion elements.	Secular Variation of Pro-cession in R.A., from Motion of Earth.	Logarithms of										Value of μ	Mean North Polar Distance, 1860 Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.
							e	f	g	h	i	j	k	l	m	n				
1561	3 ^m	57 Draconis.....	19. 12. (30.)	..	..	0.0017	0.0022	0.0000	0.09830	0.01495	1.39824	0.09686	9.507	22. 35. 5.51	1886.0	16				
1562	3 ^m	Groombridge 1881.....	19. 12. 18.12	1856.0	3	1.600	0.0009	..	0.09053	0.04264	1.44241	0.09780	8.9105	40. 49. 30.46	1886.0	7				
1563	4 ^m	44 Sagittarii.....	19. 13. 37.04	1858.0	7	3.487	0.0006	0.0001	0.09818	0.04540	1.45465	0.09769	8.9099	108. 6. 45.43	1886.0	3				
1564	5 ^m	44 Sagittarii.....	19. 13. 42.47	1858.6	5	3.441	0.0006	0.0001	0.09818	0.04540	1.45594	0.09769	8.9123	106. 11. 51.58	1886.6	5				
1565	4 ^m	1 Cygni.....	19. 13. 52.00	1857.3	27	1.382	0.00025	0.0004	0.09917	0.03927	1.42121	0.09525	8.9355	36. 55. 18.93	1887.6	25				
1566	6 ^m	47 Sagittarii.....	19. 16. 45.21	1857.7	1	3.655	0.0086	0.0001	0.08783	0.05331	1.45750	0.09751	8.6998	114. 46. 16.38	1857.7	1				
1567	6 ^m	49 Sagittarii.....	19. 17. 1.09	1856.9	9	3.640	0.0083	0.0001	0.08783	0.05331	1.45750	0.09751	8.7004	114. 13. 5.95	1856.9	9				
1568	5 ^m	6 Draconis.....	19. 18. 13.37	1856.7	8	1.075	0.0063	0.0001	0.10411	0.03926	1.37889	0.09497	8.9236	16. 54. 19.91	1856.9	9				
1569	5 ^m	31 Aquilæ.....	19. 18. 17.60	1860.1	8	1.812	0.0054	0.0049	0.08735	0.05513	1.44424	0.08084	8.7543	78. 21. 8.04	1860.1	34				
1570	5 ^m	30 Aquilæ.....	19. 18. 26.31	1857.6	6	3.010	0.0097	0.0014	0.08731	0.05581	1.44713	0.07938	8.7312	79. 9. 40.97	1857.6	40				
1571	6 ^m	Groombridge 1831.....	19. 19. 31.09	1855.6	6	1.895	0.0005	..	0.09027	0.04951	1.42505	0.09680	8.6166	46. 54. 58.25	1855.6	6				
1572	5 ^m	58 Draconis.....	19. 19. 56.56	1858.7	6	0.322	0.0028	0.0009	0.09859	0.04086	1.43819	0.09686	8.6923	22. 33. 17.74	1858.7	31				
1573	6 ^m	Platz XIX. 116.....	19. 21. 12.16	1856.6	7	3.718	0.0102	0.0006	0.08850	0.05495	1.45246	0.09485	8.6943	117. 14. 6.01	1856.6	7				
1574	4 ^m	6 Vulpeculæ.....	19. 22. 52.83	1858.2	16	2.05	0.0099	0.0011	0.08846	0.05168	1.45141	0.08301	8.7790	65. 36. 58.61	1858.2	39				
1575	7 ^m	Lalande 1687.....	19. 23. 56.61	1860.6	4	3.744	0.0110	..	0.08889	0.05182	1.45854	0.07450	8.6919	118. 17. 3.48	1860.6	3				
1576	6 ^m	7 Cygni.....	19. 24. 0.35	1858.6	6	1.172	0.0021	0.0009	0.09300	0.04093	1.42279	0.09021	8.9026	37. 57. 49.11	1858.6	5				
1577	9 ^m	Groombridge 1858.....	19. 26. 7.19	1859.7	4	1.630	0.0019	..	0.09817	0.04610	1.42815	0.09015	8.9271	40. 47. 1.74	1859.7	4				
1578	4 ^m	10 Cygni.....	19. 26. 10.58	1858.7	7	1.512	0.0019	0.0001	0.09817	0.04610	1.42815	0.09015	8.9271	38. 36. 1.74	1858.7	8				
1579	5 ^m	31 Aquilæ.....	19. 27. 14.99	1858.6	49	2.918	0.0013	0.0013	0.08813	0.05600	1.45389	0.08029	8.7507	84. 54. 55.61	1858.6	31				
1580	6 ^m	31 Aquilæ.....	19. 27. 24.28	1859.6	3	3.310	0.0024	0.0004	0.08823	0.05556	1.45104	0.07746	8.7090	100. 51. 46.04	1859.6	2				
1581	6 ^m	51 Sagittarii.....	19. 27. 31.77	1857.6	1	3.651	0.0100	0.0001	0.08900	0.05375	1.45724	0.09497	8.6928	115. 1. 19.22	1857.6	1				
1582	5 ^m	54 Sagittarii.....	19. 28. 11.01	1858.8	27	3.655	0.0101	0.0001	0.08900	0.05375	1.45724	0.09497	8.6928	115. 1. 19.22	1858.8	25				
1583	4 ^m	41 Aquilæ.....	19. 29. 48.65	1859.6	3	3.106	0.0030	0.0001	0.08827	0.05466	1.44881	0.09181	8.7197	91. 35. 38.48	1859.6	4				
1584	6 ^m	Groombridge 1876.....	19. 29. 50.40	1859.6	3	1.653	0.0011	..	0.09300	0.04093	1.42815	0.09021	8.9026	40. 47. 1.74	1859.6	3				
1585	7 ^m	Bradley 5496.....	19. 30. 10.87	1855.6	3	1.610	0.0015	0.0001	0.09301	0.04124	1.43054	0.08660	8.6663	40. 4. 25.16	1855.6	2				
1586	5 ^m	61 Draconis.....	19. 32. 37.49	1857.2	10	0.003	0.0038	0.0096	0.10533	0.01093	1.39459	0.09374	8.9997	20. 34. 3.36	1857.2	14				
1587	5 ^m	13 Cygni.....	19. 32. 41.21	1857.5	8	1.612	0.0015	0.0001	0.09368	0.04330	1.42508	0.09010	8.8460	40. 6. 6.00	1857.5	6				
1588	5 ^m	Platz XIX. 137.....	19. 34. 3.57	1859.6	3	1.664	0.0011	0.0001	0.09360	0.04411	1.42508	0.09010	8.8554	41. 2. 17.70	1859.6	4				
1589	4 ^m	6 Sagittarii.....	19. 34. 43.68	1859.6	4	2.694	0.0001	0.0004	0.09821	0.03524	1.43198	0.08166	8.7457	72. 50. 5.38	1859.6	10				
1590	..	.....	19. 34. 52.87	1858.6	3	3.416	0.0072	..	0.09815	0.05561	1.45565	0.08463	8.6977	105. 40. 43.65	1858.6	4				
1591	6 ^m	14 Cygni.....	19. 34. 53.07	1856.2	11	1.951	0.0004	0.0001	0.09225	0.04813	1.43057	0.09799	8.8205	47. 30. 12.77	1856.2	11				
1592	5 ^m	Groombridge 1897.....	19. 35. 21.38	1858.7	6	1.349	0.0001	..	0.09574	0.04972	1.42266	0.09179	8.8929	35. 11. 19.99	1858.7	6				
1593	6 ^m	Groombridge 1917.....	19. 35. (35.)	..	..	0.537	0.0407	..	0.10871	0.00831	1.58822	0.07019	8.7182	18. 40. 23.24	1858.7	6				
1594	6 ^m	Platz XIX. 137.....	19. 36. 22.03	1859.6	19	1.812	0.0014	0.0001	0.09574	0.04972	1.42266	0.09179	8.8929	35. 11. 19.99	1859.6	18				
1595	5 ^m	Platz XIX. 143.....	19. 37. 49.33	1857.3	6	3.841	0.0149	0.0001	0.09976	0.05136	1.46001	0.09788	8.6809	122. 14. 31.31	1857.3	6				
1596	6 ^m	16 Cygni.....	19. 38. 5.65	1855.9	7	1.612	0.0016	0.0001	0.09455	0.04346	1.42508	0.09010	8.8542	39. 47. 53.65	1855.9	17				
1597	5 ^m	56 Sagittarii.....	19. 38. 8.14	1859.7	7	1.612	0.0001	0.0001	0.09455	0.04346	1.42508	0.09010	8.8542	39. 47. 53.65	1859.7	16				
1598	5 ^m	56 Sagittarii.....	19. 38. 11.50	1859.7	6	1.517	0.0001	0.0001	0.09455	0.04346	1.42508	0.09010	8.8542	39. 47. 53.65	1859.7	17				
1599	5 ^m	15 Cygni.....	19. 39. 13.70	1859.6	3	1.517	0.0001	0.0001	0.09455	0.04346	1.42508	0.09010	8.8542	39. 47. 53.65	1859.6	3				
1600	3 ^m	50 Aquilæ.....	19. 39. 36.21	1856.8	115	1.855	0.0001	0.0001	0.08938	0.05635	1.44446	0.08101	8.7273	79. 43. 31.05	1856.8	94				

1561. The magnitude has been taken from Groombridge.

1566, 1567, 1573, 1575, 1581, 1584, 1594, and 1595. These stars are respectively identical with Lacaille 8200, 8101, 8123, 8125, 8162, 8166, 8202, and 8211.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860 Jan. 1, from Observations, 1854 to 1860.	Mean Declination, 1860 Jan. 1, from Observations, 1854 to 1860.	Annual Proper Motion in R.A., from Proper Motion elements.	Secular Variation of Pro-cession in R.A., from Motion of Earth.	Logarithms of					Value of μ	Mean North Polar Distance, 1860 Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	
							e	f	g	h	i					
1601	3 ^m	57 Draconis.....	19. 12. (30.)	..	..	0.0017	0.0022	0.0000	0.09830	0.01495	1.39824	0.09686	9.507	22. 35. 5.51	1886.0	16
1602	3 ^m	Groombridge 1881.....	19. 12. 18.12	1856.0	3	1.600	0.0009	..	0.09053	0.04264	1.44241	0.09780	8.9105	40. 49. 30.46	1886.0	7
1603	4 ^m	44 Sagittarii.....	19. 13. 37.04	1858.0	7	3.487	0.0006	0.0001	0.09818	0.04540	1.45465	0.09769	8.9099	108. 6. 45.43	1886.0	3
1604	5 ^m	44 Sagittarii.....	19. 13. 42.47	1858.6	5	3.441	0.0006	0.0001	0.09818	0.04540	1.45594	0.09769	8.9123	106. 11. 51.58	1886.6	5
1605	4 ^m	1 Cygni.....	19. 13. 52.00	1857.3	27	1.382	0.00025	0.0004	0.09917	0.03927	1.42121	0.09525	8.9355	36. 55. 18.93	1887.6	25
1606	6 ^m	47 Sagittarii.....	19. 16. 45.21	1857.7	1	3.655	0.0086	0.0001	0.08783	0.05331	1.45750	0.09751	8.6998	114. 46. 16.38	1857.7	1
1607	6 ^m	49 Sagittarii.....	19. 17. 1.09	1856.9	9	3.640	0.0083	0.0001	0.08783	0.05331	1.45750	0.09751	8.7004	114. 13. 5.95	1856.9	9
1608	5 ^m	6 Draconis.....	19. 18. 13.37	1856.7	8	1.075	0.0063	0.0001	0.10411	0.03926	1.37889	0.09497	8.9236	16. 54. 19.91	1856.9	8
1609	5 ^m	31 Aquilæ.....	19. 18. 17.60	1860.1	8	1.812	0.0054	0.0049	0.08735	0.05513	1.44424	0.08084	8.7543	78. 21. 8.04	1860.1	34
1610	5 ^m	30 Aquilæ.....	19. 18. 26.31	1857.6	6	3.010	0.0097	0.0014	0.08731	0.05581	1.44713	0.07938	8.7312	79. 9. 40.97	1857.6	40
1611	6 ^m	Groombridge 1831.....	19. 19. 31.09	1855.6	6	1.895	0.0005	..	0.09027	0.04951	1.42505	0.09680	8.6166	46. 54. 58.25	1855.6	6
1612	5 ^m	58 Draconis.....	19. 19. 56.56	1858.7	6	0.322	0.0028	0.0009	0.09859	0.04086	1.43819	0.09686	8.6923	22. 33. 17.74	1858.7	31
1613	6 ^m	Platz XIX. 116.....	19. 21. 12.16	1856.6	7	3.718	0.0102	0.0006	0.08850	0.05495	1.45246	0.09485	8.6943	117. 14. 6.01	1856.6	7
1614	4 ^m	6 Vulpeculæ.....	19. 22. 52.83	1858.2	16	2.05	0.0099	0.0011	0.08846	0.05168	1.45141	0.08301	8.7790	65. 36. 58.61	1858.2	39
1615	7 ^m	Lalande 1687.....	19. 23. 56.61	1860.6	4	3.744	0.0110	..	0.08889	0.05182	1.45854	0.07450	8.6919	118. 17. 3.48	1860.6	3
1616	6 ^m	7 Cygni.....	19. 24. 0.35	1858.6	6	1.172	0.0021	0.0009	0.09300	0.04093	1.42279	0.09021	8.9026	37. 57.		

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATION.

A. No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 1, 0h. to 24h. to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion in R.A., from 1860 to 1860.	Secular Variation of Proper Motion in R.A.	Logarithms of					Value of $\log$	Mean North Polar Distance, 1860, Jan. 1, to 1860, Jan. 1, 1860.	Mean Year and Fraction of Year.	Number of Observations.
								a	b	c	d	e					f	g	h
1601	..	.....	19.40.47.30	1860?	4	+ 1.736	-00134	..	009070	005351	1.44841	007351	86.81	118.45.15.13	1860?	1
1602	5	Greenbriar 1955.....	19.40.47.30	1857?	4	+ 1.58	-00074	..	009791	001647	1.4761	009508	88.90	18.45.19.57	1857?	1
1603	18	Cygni.....	19.40.47.30	1857?	9	+ 1.871	-00004	+ 0006	009140	005747	1.44928	008894	88.79	45.14.24.96	1856?	6
1604	5.6 ^h	17 Cygni.....	19.40.47.30	1856?	3	+ 1.825	+00013	..	009130	005243	1.43576	008815	87.17	56.35.46.48	1856?	1
1605	7	Lalande 7565.....	19.40.47.37	1860?	1	+ 3.689	-00126	..	009667	005400	1.45771	007386	86.25	17.4.34.66	1860?	1
1606	6 ^h	51 Aquile.....	19.42.41.65	1860?	4	+ 2.827	-00029	+ 0008	009656	001638	1.44447	008129	87.45	78.51.42.46	1860?	4
1607	7	Lacaille 8243.....	19.42.43.31	1860?	1	+ 3.768	-00131	..	009081	001368	1.45651	007364	86.13	116.7.14.75	1860?	1
1608	5 ^h	8 Sagittæ.....	19.42.43.48	1855?	3	+ 3.004	-00004	+ 0007	009099	005559	1.44128	008715	87.83	11.41.49.18	1860?	1
1609	7	Lalande 7507.....	19.43.40.48	1860?	1	+ 3.677	-00193	..	009084	005399	1.45784	007371	86.17	117.8.6.90	1860?	1
1610	1.5 ^h	53 Aquile.....	19.43.57.12	1859?	159	+ 2.894	-00014	+ 0036	009874	001667	1.44594	008076	86.94	81.29.55.53	1859?	118
1611	..	.....	19.44.38.38	1854?	4	+ 3.503	-00095	..	009034	005554	1.44588	007536	86.09	109.43.44.45	1854?	7
1612	Var.	55 Aquile.....	19.45.45.21	1857?	3	+ 3.500	-00093	..	009037	005558	1.44586	007536	86.06	109.47.37.15	1857?	7
1614	6 ^h	Greenbriar 1910.....	19.45.45.47	1854?	3	+ 2.059	-00001	- 0001	009306	005700	1.44804	007931	87.05	89.21.31.31	1860?	6
1615	5.6 ^h	20 Cygni.....	19.47.47.61	1858?	4	+ 1.509	-00030	- 0007	009674	004998	1.44331	008819	87.08	49.45.37.13	1854?	4
									009674	004916	1.44331	008819	87.08	57.31.57.74	1858?	4
1616	5 ^h	38 Sagittæ.....	19.47.57.50	1850?	6	+ 3.761	-00130	+ 0013	009139	005439	1.45745	007368	86.77	116.40.20.20	1850?	6
1617	5 ^h	59 Aquilæ.....	19.47.57.50	1850?	6	+ 3.761	-00016	+ 0007	009026	005683	1.44564	008731	87.15	181.53.52.91	1850?	15
1618	5.4 ^h	13 Vulpeculæ.....	19.48.50.64	1856?	6	+ 3.543	+00048	+ 0005	009039	005501	1.44609	007384	87.12	66.17.01.16	1856?	6
1619	4 ^h	60 Aquilæ.....	19.48.51.10	1859?	7	+ 3.671	-00136	- 0001	009139	005466	1.45777	007342	87.11	117.4.17.64	1859?	6
1620	4 ^h	60 Aquilæ.....	19.48.51.17	1856?	85	+ 3.946	-00038	..	009103	005703	1.44631	008605	87.13	81.56.44.94	1856?	60
1621	4 ^h	61 Draconis.....	19.48.57.78	1850?	40	- 0.181	-00237	+ 0015	001013	001168	1.39479	001830	90.77	50.3.15.58	1850?	74
1622	6.5 ^h	64 Sagittariæ.....	19.50.45.41	1860?	3	+ 3.469	-00084	- 0001	009056	005614	1.44545	007365	86.65	50.3.15.58	1860?	4
1623	5 ^h	66 Sagittariæ.....	19.50.45.18	1850?	3	+ 3.645	-00133	- 0004	009160	005646	1.45734	007355	86.70	116.7.14.75	1850?	76
1624	4.5 ^h	21 Cygni.....	19.51.31.36	1857?	3	+ 2.851	+00014	+ 0008	009665	005240	1.44540	008860	86.99	55.17.15.35	1856?	6
1625	5	Greenbriar 1891.....	19.51.32.17	1857?	4	+ 2.034	-00011	..	009377	005057	1.44369	008691	87.09	50.2.22.87	1857?	7
1626	6.5 ^h	14 Vulpeculæ.....	19.51.32.11	1856?	6	+ 3.579	+00007	- 0008	009140	005551	1.44058	008394	87.39	67.16.37.39	1856?	3
1627	5 ^h	34 Sagittariæ.....	19.51.32.46	1856?	3	+ 3.769	-00146	..	009039	005446	1.45785	007939	86.74	118.5.54.07	1856?	36
1628	5 ^h	15 Vulpeculæ.....	19.51.35.74	1856?	3	+ 3.816	-00014	+ 0008	009045	005460	1.44389	008571	87.63	51.7.44.07	1856?	3
1629	5	Piazzi XIX. 366.....	19.51.35.49	1857?	3	+ 3.816	-00075	+ 0001	009077	005519	1.44594	007212	86.80	122.26.43.17	1857?	3
1630	5	Bradley 259.....	19.51.35.85	1857?	3	+ 3.541	+00009	+ 0003	009083	005517	1.44598	008445	87.30	65.35.15	1856?	3
1631	7	Lalande 8166.....	19.56.39.25	1860?	4	+ 3.372	-00143	..	009221	005183	1.44546	007369	87.17	111.20.00.00	1860?	4
1632	6	Piazzi XIX. 377.....	19.56.39.25	1859?	9	+ 3.579	-00114	+ 0005	009045	005587	1.44540	007947	86.74	114.18.29.00	1859?	60
1633	26 Cygni.....	X.....	19.57.31.91	1859?	9	+ 1.697	-00013	+ 0008	009099	005373	1.44546	009094	87.94	40.17.36.18	1859?	9
1634	..	.....	19.57.36.34	1860?	6	+ 1.698	-00013	..	009709	004538	1.44547	009094	87.98	40.17.36.17	1861?	5
1635	..	.....	19.57.36.34	1860?	6	+ 1.763	-00001	- 0008	009139	005666	1.44484	008705	87.14	71.18.21.18	1860?	6
1636	5	5 Sagittæ.....	19.57.37.81	1860?	3	+ 3.755	-00144	..	009253	005596	1.44515	007366	86.74	116.3.37.26	1860?	7
1637	7	Lalande 8498.....	19.57.37.81	1860?	1	+ 3.627	-00139	..	009255	005545	1.44540	007367	86.74	116.3.37.26	1860?	1
1638	5 ^h	69 Draconis.....	19.58.20.49	1857?	3	+ 3.869	-00131	+ 0001	001006	001166	1.40504	001078	90.39	25.4.7.39	1857?	78
1639	6 ^h	66 Draconis.....	19.58.20.49	1857?	4	+ 3.869	-00131	+ 0001	001006	001166	1.40504	001078	90.39	25.4.7.39	1857?	78
1640	5	Ursæ Minoris.....	19.58.20.49	1857?	8	+ 3.869	-00131	+ 0001	001006	001166	1.40504	001078	90.39	25.4.7.39	1857?	78

1605, 1609, 1616, 1619, 1623, 1627, 1629, 1631, and 1637. These stars are respectively identical with Lacaille 8241, 8248, 8268, 8277, 8294, 8315, 8322, 8334, and 8364. 1613. The limits of magnitude are 4³ and 4⁵; the period 7¹¹651 days. 1640. This star is identical with Schwed 1221; in the N.A. it is designated Urae Minoris λ . 1621. This star is identical with Schwed 1186.

† For No. 1640, $\log. e = 0.47599$, $\log. f = -0.24339$, $\log. g = -1.49286$, $\log. h = 0.47294$, $l = 142^{\circ}54.2$.

AT THE ROYAL OBSERVATORY, GREENWICH, FROM 1854 TO 1860.

[illegible]

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of precedence from the British Association Catalogue of 8377 Stars; from the Catalogue of Lalande published by the British Association; from Weisse's *Catalogus Stellarum ex Zonis Reijomontanis*; or, for the variable stars, from Mr. Poisson's lists in the "Radcliffe Observations, 1854 and 1856." The authorities for any remaining magnitudes are given in the Notes.

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATIONS

No.	Magnitude.	Star's Name	Mean Right Ascension, 1860, Jan. 1, 0 ^h to 24 ^h .	Mean Year and Fraction of Year.	Number of Observations.	Annual Precession, in R.A., from R.A.C.	Secular Variation of Pre- cession, in R.A.	Annual Proper Motion in R.A., from R.A.C.	Logarithm of			Value of λ	Mean North Polar Distance, 1860, Jan. 1, 0 ^h to 24 ^h .	Mean Year and Fraction of Year.	Number of Observations.	
									ρ	δ	h					
1641	5 ⁴	65 Aquilæ	8 30. 4. 47 ⁸	1857 ³	58	+ 2.397	— 0.0042	— 0.001	0.0944	0.5759	1.4466	0.0378	86.82 ¹	91. 24. 21 ¹	1856 ⁹	1
1642	5 ⁴	18 Cygni	8 30. 4. 13 ⁰	1857 ³	57	+ 2.397	— 0.0016	— 0.001	0.0945	0.5759	1.4466	0.0378	87.40 ⁰	91. 24. 14.24 ⁸	1856 ⁹	1
1643	6 ⁴	18 Vulpeculæ	8 30. 4. (43.) ..	1857 ³	58	+ 2.397	— 0.0013	— 0.001	0.0943	0.5758	1.4456	0.0377	87.13 ⁵	91. 20. 31.37 ⁵	1856 ⁹	1
1644	7	Tilant XX. 79	8 30. 6. 33.04	1856 ⁶	4	3.661	— 0.0154	— 0.003	0.0932	0.5751	1.4375	0.036	86.61 ¹	67. 16. 26.54 ⁵	1854 ⁴	4
1645	7	Lacaille 5136	8 30. 7. 2.38	1858 ¹	11	3.740	— 0.0175	—	0.0938	0.5749	1.4383	0.036	86.65 ⁴	100. 25. 45.08	1858 ⁴	11
1646	Var.	.....	8 30. 7. 49.19	1860 ⁷	3	3.740	— 0.0003	—	0.0938	0.5750	1.4431	0.0389	89.10	73. 41. 45.75 ¹	1860 ⁷	3
1647	5 ⁴	67 Aquilæ	8 30. 7. 47.89	1859 ³	3	3.773	— 0.0003	— 0.001	0.0939	0.5747	1.4434	0.0381	88.99 ³	73. 41. 36.10	1859 ³	3
1648	5 ⁴	.....	8 30. 8. 0.80	1860 ⁷	3	3.740	— 0.0002	—	0.0931	0.5753	1.4430	0.0389	89.00 ⁶	73. 40. 55.05	1860 ⁷	3
1649	5 ⁴	.....	8 30. 8. 29.73	1860 ⁷	3	3.740	— 0.0002	—	0.0935	0.5755	1.4430	0.0380	89.08	73. 38. 59.12	1860 ⁷	3
1650	6 ⁴	Groombridge 368	8 30. 8. 38.03	1856 ³	3	3.679	— 0.0016	—	0.0915	0.5740	1.4366	0.0378	87.739	73. 37. 53.80	1856 ³	3
1651	..	.....	8 30. 8. 46.63	1860 ⁷	2	3.741	— 0.0005	—	0.0937	0.5757	1.4431	0.0393	89.95 ¹	73. 40. 30.44	1860 ⁷	2
1652	6	Groombridge 368	8 30. 9. 2.35	1855 ⁷	2	3.749	— 0.0012	—	0.0937	0.5757	1.4431	0.0393	89.95	47. 4. 29.36	1855 ⁷	2
1653	4 ⁴	31 Cygni	8 30. 9. 14.49	1855 ⁷	2	3.889	— 0.0004	— 0.003	0.0976	0.5860	1.4507	0.0700	87.55 ⁴	47. 48. 35.85	1855 ⁷	2
1654	7 ⁴	Piazzi XX. 61	8 30. 9. 16.65	1855 ⁷	1	3.889	— 0.0004	—	0.0976	0.5863	1.4509	0.0700	87.46 ⁰	47. 48. 35.85	1855 ⁷	1
1655	5	Lacaille 3896	8 30. 9. 17.91	1856 ³	2	3.841	— 0.0012	—	0.0931	0.5765	1.4398	0.0380	87.103	64. 50. 02.2	1856 ³	2
1656	6	4 Cephei	8 30. 9. 57.14	1856 ³	2	3.533	— 0.0137	— 0.006	0.0935	0.5666	1.4355	0.0378	86.67 ³	102. 16. 10.65	1856 ³	2
1657	3 ⁴	1 Cephei	8 30. 9. 58.10	1856 ³	2	3.533	— 0.0084	— 0.002	0.0938	0.5778	1.4346	0.036	86.79 ⁴	112. 54. 16.17 ¹	1856 ³	2
1658	5 ⁴	5 Vulpeculæ	8 30. 9. 57.10	1856 ³	2	3.481	— 0.0014	— 0.002	0.0934	0.5763	1.4319	0.0383	87.13 ⁵	66. 36. 48.10	1856 ³	2
1659	4 ⁴	31 Cygni	8 30. 10. 8.66	1856 ³	3	3.534	— 0.0055	— 0.007	0.0937	0.5767	1.4348	0.0378	87.208	63. 31. 33.23	1856 ³	3
1660	3 ⁴	6 Cephei	8 30. 10. 17.03	1857 ³	3	3.534	— 0.0084	— 0.004	0.0932	0.5780	1.4347	0.0379	87.117	79. 08. 33.07	1857 ³	3
1661	6 ⁴	14 Vulpeculæ	8 30. 10. 47.65	1857 ³	3	3.565	+ 0.0011	— 0.005	0.0935	0.5652	1.4406	0.0361	87.06 ⁷	65. 45. 30.49	1857 ³	3
1662	4 ⁴	31 Cygni	8 30. 11. 3.73	1858 ⁴	4	3.855	+ 0.0002	— 0.002	0.0980	0.5821	1.4490	0.0711	88.35 ⁴	42. 4. 5.14	1858 ⁴	4
1663	7 ⁴	7 Vulpeculæ	8 30. 11. 18.75	1858 ⁴	3	3.747	— 0.0014	— 0.004	0.0938	0.5721	1.4404	0.0365	86.684	109. 33. 7.82	1858 ⁴	3
1664	7	Lacaille 3947	8 30. 11. 22.16	1856 ³	3	3.611	— 0.0148	—	0.0937	0.5768	1.4364	0.0383	86.651	115. 9. 27.80	1860 ⁷	3
1665	5 ⁴	8 Cephei	8 30. 12. 53.66	1856 ³	3	3.534	— 0.0087	— 0.003	0.0935	0.5794	1.4351	0.0369	86.707	103. 11. 48.01	1856 ³	3
1666	6 ⁴	Piazzi XX. 79	8 30. 12. 54.40	1856 ⁶	6	3.536	— 0.0065	— 0.005	0.0936 ⁷	0.5793 ¹	1.4356 ⁷	0.0375 ⁵	86.664	103. 12. 53.24	1856 ⁶	6
1667	5 ⁴	7 Cephei	8 30. 13. 8.50	1857 ³	4	3.536	— 0.0093	— 0.001	0.0937	0.5796	1.4351	0.0375 ⁵	86.661	103. 13. 13.16	1857 ³	4
1668	4 ⁴	1 Cephei	8 30. 13. 34.70	1857 ³	5	3.577	— 0.0167	— 0.003	0.013566	0.57940	1.43604	0.1347	90.344	12. 47. 43.3	1857 ³	5
1669	..	.....	8 30. 13. 34.70	1857 ³	3	3.577	— 0.0167	—	0.013566	0.57940	1.43604	0.1347	90.344	12. 47. 40.70	1857 ³	3
1670	6	Groombridge 3740	8 30. 15. (11.) ..	1857 ³	..	3.705	— 0.0119	—	0.0961	0.5595	1.4346	0.0893	87.234	51. 2. 21.66	1858 ⁴	2
1671	7	Lacaille 8437	8 30. 16. 6.34	1858 ⁴	13	3.700	— 0.0177	—	0.0944	0.5558	1.4387	0.0748	86.603	119. 5. 17.97	1858 ⁴	13
1672	7	Lacaille 3153	8 30. 16. 11.96	1858 ⁴	1	3.619	— 0.0156	—	0.0939	0.5592	1.4366	0.0671	86.61	116. 15. 29.29	1858 ⁴	1
1673	7	Lacaille 8433	8 30. 16. 55.15	1858 ⁴	1	3.688	— 0.0175	—	0.0944	0.5572	1.4375	0.0716	86.602	119. 3. 1.31	1858 ⁴	1
1674	5	Groombridge 3745	8 30. 17. 42.36	1859 ³	3	3.718	— 0.0018	—	0.0967	0.5516	1.4341	0.0972	86.08	40. 25. 18.2	1859 ³	3
1675	7	Lacaille 8442	8 30. 17. 57.03	1858 ⁴	16	3.636	— 0.0179	—	0.0945	0.5573	1.4372	0.0717	86.593	119. 31. 37.3	1858 ⁴	16
1676	5 ⁴	39 Cygni	8 30. 18. 16.24	1856 ⁶	4	3.571	+ 0.0030	+ 0.005	0.0948	0.5517	1.4361	0.0876	87.050	58. 15. 35.80	1856 ⁶	5
1677	5 ⁴	10 Cephei	8 30. 19. 19.23	1856 ⁶	3	3.547	— 0.0135	— 0.002	0.0949	0.5578	1.4397	0.0740	86.638	108. 42. 3.69	1856 ⁶	3
1678	7	Lacaille 3554	8 30. 20. 10.02	1860 ⁷	6	3.660	— 0.0169	—	0.0947	0.5569	1.4397	0.0739	86.590	114. 47. 4.88	1860 ⁷	6
1679	7	Lacaille 3554	8 30. 20. 10.02	1860 ⁷	6	3.660	— 0.0168	—	0.0946	0.5568	1.4397	0.0740	86.591	114. 47. 4.88	1860 ⁷	6
1680	5 ⁴	11 Cephei	8 30. 20. 52.16	1859 ³	20	3.433	— 0.0114	— 0.006	0.0935	0.5791	1.4384	0.0377	86.620	108. 16. 30.80	1859 ³	20

1644, 1664, 1672, and 1678. These stars are respectively identical with Lacaille 8381, 8407, 8410, and 8458.

1654. The magnitude has been taken from Piazzi. 1646. This star is the variable (R) Sagittæ; the limits of magnitude are 10.11 and 8.4.

AT THE ROYAL OBSERVATORY, GREENWICH, FROM 1854 TO 1860

Annual Mean Temp. in shades, Fahrenheit.	Annual Precipitation in inches, Fahrenheit.	Seasonal Variation of Precipitation in inches, Fahrenheit.	Annual Proportion of P.E. in Rain or Snow or H.C.	Logarithms					Value of V	No. in Moore's Barometer 1755.	No. in Laboratory of P.E. or British Standard (H.A.) 1860.	Hour and No. in Plant.	Hour and No. in Gnomonage. 1860.	Hour and No. in Women's House. 1867.	No. in Experiment. 1870.	No. in Experiment. 1875.	No. in Experiment. 1880.	No. in Experiment. 1885.	No. in Experiment. 1890.	No.		
				d'	e'	h'	l'															
10-11	0-874	..	0-83465	0-83118	1-16666	9-53531	13-9535	2576	38647 (B.A.)	XX.	..	XX.	63	..	887	..	507	325	..	1641	..	
10-12	0-381	-0-06	0-53448	0-99175	1-16593	9-53574	15-9539	2582	38682 (B.A.)	..	..	..	..	..	889	..	..	..	..	1622	..	
10-13	0-108	..	0-61347	0-98634	1-16486	9-53713	14-8874	2583	..	..	..	..	..	..	..	..	..	..	..	1643	..	
10-14	0-545	+0-16	0-08185	0-15890	1-16080	9-54313	11-7678	..	38711 (B.A.)	24	..	..	..	..	..	..	..	..	..	1644	..	
10-15	0-459	..	0-09916	0-16638	1-15948	9-54606	11-5844	..	..	..	..	..	..	..	..	..	..	..	..	1645	..	
10-16	-0-315	..	0-73664	0-00185	1-15861	9-54554	14-0081	..	..	..	..	..	..	..	..	..	..	..	..	1646	..	
10-17	-0-139	-0-07	0-73664	0-00240	1-15797	9-54590	14-2118	2590	38181 (B.A.)	48	..	..	..	..	461	890	..	..	..	1647	..	
10-18	0-465	..	0-73664	0-00164	1-15747	9-54653	14-0045	..	..	..	..	..	..	..	..	..	..	..	..	1648	..	
10-19	0-304	..	0-73664	0-00135	1-15660	9-54700	14-0000	..	..	..	..	..	..	..	..	..	..	..	..	1649	..	
10-20	0-108	..	0-94943	0-89545	1-15610	9-54828	15-7604	..	{ 3188 (B.A.) 13902 (B.A.)	..	3887	..	..	..	..	..	..	..	..	1650	..	
10-21	0-314	..	0-73701	0-00135	1-15570	9-54871	14-0070	..	..	..	..	..	..	..	..	..	..	..	..	1651	..	
10-22	0-045	..	0-94886	0-92045	1-15527	9-54934	15-5245	..	38913 (B.A.)	..	3088	..	..	..	..	..	..	..	..	1652	..	
10-23	0-181	-0-05	0-94610	0-91247	1-15477	9-54999	15-4648	2603	38955 (B.A.)	62	3091	..	..	..	892	..	..	..	..	1653	..	
10-24	0-028	..	0-94610	0-91247	1-15477	9-55001	15-4648	..	38957 (B.A.)	63	..	..	..	..	..	..	..	..	..	1654	..	
10-25	0-309	..	0-95128	0-89792	1-15452	9-55100	14-0082	..	38986 (B.A.)	..	..	..	..	..	..	..	..	..	..	1655	..	
10-26	-0-430	+0-05	0-04820	0-14706	1-15351	9-55158	12-0094	2591	..	53	..	..	..	..	..	..	603	..	..	1656	..	
10-27	0-045	..	0-98493	0-20063	1-15338	9-55187	12-0060	2592	38977 (B.A.)	58	..	..	..	..	463	891	604	508	..	2444	1055	
10-28	0-101	-0-06	0-63022	0-97707	1-15310	9-55210	14-0051	2600	38990 (B.A.)	64	..	..	..	..	894	..	..	..	..	1657	..	
10-29	0-167	-0-04	0-94196	0-90705	1-15272	9-55255	13-7829	2612	39029 (B.A.)	76	3102	..	..	..	895	..	..	..	..	1658	..	
10-30	0-405	..	0-98380	0-20088	1-15238	9-55309	12-0078	2595	38988 (B.A.)	59	..	223	464	893	605	509	326	2445	1056	..	..	
10-31	-0-310	..	0-66616	0-99247	1-15153	9-55447	14-0117	2605	38967 (B.A.)	70	..	..	..	..	896	..	..	..	..	1660	..	
10-32	0-245	..	0-94924	0-90044	1-15043	9-55548	15-7099	2617	{ 3405 (B.A.) 13948 (B.A.)	78	3108	..	..	..	898	..	..	..	..	1661	..	
10-33	0-041	-0-02	0-95032	0-20052	1-15005	9-55595	12-0171	2593	38948 (B.A.)	67	..	..	..	..	897	606	..	327	2447	1058	..	
10-34	0-188	..	0-96061	0-15679	1-14986	9-55618	11-8785	..	38947 (B.A.)	..	..	..	..	..	..	..	..	..	..	1662	..	
10-35	0-418	+0-02	0-98923	0-20126	1-14951	9-55643	12-0156	2608	39028 (B.A.)	81	..	..	..	..	899	608	510	..	..	1663	..	
10-36	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-37	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-38	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-39	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-40	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-41	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-42	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-43	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-44	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-45	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-46	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-47	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-48	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-49	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-50	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-51	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-52	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-53	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-54	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-55	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-56	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-57	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-58	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-59	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-60	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-61	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-62	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-63	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-64	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-65	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-66	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-67	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-68	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-69	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-70	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-71	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-72	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-73	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-74	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-75	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-76	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-77	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-78	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-79	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-80	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-81	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-82	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-83	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-84	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10-85	..	..	..</																			

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8377 Stars; from the Catalogue of Landolt published by the British Association; from Weisse's *Catalogus Stellarum ex Zonia Reymontensis*; or, for the variable stars, from *Ponomarev's* in the *Radiolife* Observations, 1854 and 1856." The authorities for any remaining magnitudes are given in the Notes.

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATIONS

No.	Magitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 1, from Observations 1854 to 1860.	Mean Year and Fraction of Year.	Mean Year of Observation.	Annual Precession in R.A., from 1860 to 1854.	Secular Variation of Precession in R.A.	Annual Precession in R.A., from 1860 to 1854.	Logarithm of			Value of	Mean North Polar Distance, 1860, Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Mean Year of Observation.	
			<i>h m s</i>		<i>Number of Observations in Elements</i>	<i>in R. A.</i>	<i>in R. A.</i>	<i>in R. A. & C.</i>	<i>a</i>	<i>b</i>	<i>c</i>	<i>h</i>				
1721	9	Lalande 40436	20. 47. 15.93	1857	3	+ 1919	+00017	..	0.02311	0.05767	1.43055	0.09941	85.613			
1722	5.6 ⁺	57 Cygni	20. 48. 17.81	1857	4	+ 1918	+00031	..0001	0.02302	0.05361	1.43138	0.09945	85.551	1857	7	
1723	8	48 Vulpeculæ	20. 48. 35.96	1853	6	+ 555	+00026	..0003	0.02307	0.05183	1.43021	0.09854	86.128	1853	1	
1724	8	Greenbridge 3327... ..	20. 49. 24. 13	1857	5	+ 1915	+00019	..	0.02307	0.05111	1.43034	0.09949	86.053	1857	5	
			20. 50. 11. 11	1854	7	+ 377	+00012	..	0.02351	0.05017	1.43597	0.07409	85.711	1854	7	
1725	6 ⁺	Bradley 2720	20. 51. 6.27	1867	6	+ 2024	+00044	+0006	0.02054	0.05247	1.43175	0.06355	86.040			
1727	6	20 Capricorni	20. 51. 38.58	1857	5	+ 1430	+00136	..	0.02054	0.05247	1.43175	0.06355	86.040	191. 7. 307	1867	6
1728	4	53 Cygni	20. 51. 57.28	1857	3	+ 2431	+00017	+0001	0.02054	0.05247	1.43175	0.06355	86.040	49. 1. 3. 293	1857	5
1729	6 ⁺	75 Draconis	20. 50. 54. 39	..	..	+ 3880	+0151	+0006	0.02044	0.05241	1.43249	0.06137	86.040	49. 1. 11. 34	1856	6
1730	5	Bradley 2727	20. 50. 54. 34	1857	4	+ 1686	+00026	..	0.01997	0.04618	1.43188	0.08308	85.500	107. 16. 59. 18	1857	4
													11. 39. 1. 51	1857	7	
1731	6	21 Capricorni	20. 50. 54. 72	1853	13	+ 3390	+00128	0.0000	0.02064	0.05029	1.43516	0.07376	86.379	108. 4. 26. 99	1857	12
1732	5	Bradley 2749	20. 50. 43. 57	1856	7	+ 2646	+0306	..0008	0.02183	0.05281	1.43523	0.14458	86.174	9. 58. 19. 28	1856	14
1733	5.6	59 Cygni	20. 55. 36.92	1858	29	+ 2037	+00021	..0005	0.02063	0.05083	1.43509	0.07377	86.454	41. 1. 27. 24	1858	19
1734	6	Bradley 2748	20. 56. 36.00	..	..	..0144	..	..	0.02107	0.05283	1.43616	0.09671	86.394	13. 1. 27. 8	1859	18
1735	5.6 ⁺	21 Capricorni	20. 56. 55. 89	1857	5	+ 3449	+00143	..	0.02107	0.05281	1.43820	0.13920	86.401	14. 36. 59. 99	1856	6
									0.02067	0.05029	1.43576	0.08438	86.355	10. 57. 44. 11	1857	5
1736	7.8	Piazzi XX. 441	20. 56. 59.66	1855	6	+ 3438	+00127	+0003	0.02065	0.05063	1.43598	0.07377	86.350	107. 43. 4. 11	1856	6
1737	4	21 Capricorni	20. 58. 4. 32	1856	41	+ 3128	+00128	+0004	0.02065	0.05063	1.43598	0.07377	86.350	107. 47. 12.06	1857	1
1738	..	.....	20. 58. 37. 17	1856	6	+ 3436	+0309	..	0.02154	0.05665	1.43518	0.16636	86.218	9. 57. 38. 84	1856	6
1739	5 ⁺	24 Capricorni	20. 58. 55.94	1857	5	+ 2748	+00021	+0003	0.02065	0.05097	1.43555	0.07390	86.348	113. 31. 15. 12	1857	5
1740	6 ⁺	63 Cygni	20. 59. 50.46	1858	3	+ 3478	+00041	..0001	0.02062	0.05104	1.43433	0.09499	86.296	46. 37. 24. 94	1858	19
1741	6 ⁺	25 Capricorni	21. 0. 31.17	1858	3	+ 3428	+00155	+0001	0.02073	0.05051	1.43460	0.07230	86.368	10. 45. 12.95	1858	3
1742	5.6 ⁺	61 Cygni (1st Star) ..	21. 0. 37.45	1857	31	+ 2334	+00043	+0339	0.02088	0.05070	1.43570	0.07392	86.458	51. 56. 15. 13	1857	53
1743	5.6 ⁺	61 Cygni (2nd Star) ..	21. 0. 38.93	1856	48	+ 2334	+00043	+0339	0.02088	0.05070			51. 56. 19. 47	1857	44	
1744	5.6 ⁺	63 Cygni	21. 1. 4. 84	1856	5	+ 2063	+00037	+0003	0.02073	0.05158	1.43418	0.07392	86.408	51. 56. 46. 74	1857	53
1745	4.5 ⁺	13 Aquari	21. 1. 57. 8	1860	6	+ 3720	+00098	+0001	0.02064	0.05155	1.43533	0.07553	86.106	46. 37. 24. 95	1860	0
1746	5.4 ⁺	5 Equulei	21. 1. 31.95	1856	4	+ 1.2915	+00013	+0009	0.02040	0.05181	1.44584	0.08309	86.613	80. 25. 49. 90	1856	6
1747	..	.....	21. 4. 17. 35	1846	2	+ 3459	+00125	..	0.02065	0.05135	1.44533	0.07392	86.350	106. 36. 43. 13	1846	6
1748	3 ⁺	35 Cygni	21. 6. 58. 15	1857	1	+ 2988	+00130	..	0.02071	0.05133	1.44583	0.07395	86.388	105. 45. 2. 84	1857	4
1749	3 ⁺	64 Cygni	21. 6. 58. 75	1856	8	+ 2988	+00130	+0003	0.02071	0.05093	1.44583	0.07395	86.388	106. 20. 44. 55	1856	9
1750	5.6 ⁺	28 Capricorni	21. 7. 39. 44	1857	7	+ 3427	+00155	+0003	0.02069	0.05121	1.43573	0.07398	86.467	111. 13. 48. 81	1857	7
1751	5.4 ⁺	7 Equulei	21. 7. 39. 68	1856	9	+ 2.930	+00013	+0008	0.02065	0.05124	1.44584	0.08320	86.614	80. 31. 30. 7	1856	10
1752	5 ⁺	29 Capricorni	21. 7. 59. 63	1858	1	+ 3329	+00159	+0001	0.02074	0.05125	1.44543	0.08310	86.421	102. 45. 1. 85	1858	1
1753	6 ⁺	Greenbridge 3415... ..	21. 8. 14. 30	1856	4	+ 1531	+00040	+0011	0.02125	0.05161	1.43736	0.08303	86.510	30. 35. 16. 73	1857	4
1754	..	.....	21. 8. 35. 40	1856	1	+ 3430	+00125	..	0.02075	0.05177	1.43741	0.08310	86.460	106. 36. 37. 29	1856	1
1755	4 ⁺	8 Equulei	21. 9. 12. 73	1857	41	+ 2947	+00028	+0002	0.02060	0.05041	1.44713	0.08063	86.610	85. 19. 44. 18	1857	5
1756	4 ⁺	65 Cygni	21. 9. 24. 34	1861	1	+ 2.978	+00049	+0010	0.02067	0.05090	1.43759	0.08055	86.619	82. 33. 2. 75	1860	11
1757	5 ⁺	4 Pictis Aurigula	21. 9. 26. 30	1856	4	+ 1655	+00028	+0010	0.02097	0.05070	1.43750	0.08070	86.627	124. 45. 17. 18	1856	2
1758	3 ⁺	W. B. XXI. 198	21. 9. 46. 66	1857	4	+ 2968	+00028	..	0.02097	0.05068	1.43750	0.08070	86.627	124. 45. 17. 18	1857	4
1759	5 ⁺	Lalande 43137	21. 10. 5. 32	1856	8	+ 2339	+00125	..	0.02076	0.05068	1.43518	0.08310	86.461	51. 11. 26. 78	1857	4
1760	4.5 ⁺	67 Cygni	21. 11. 15. 18	1857	3	+ 2351	+00054	+0003	0.02100	0.05094	1.43600	0.08310	86.461	51. 11. 26. 78	1857	6

1729 and 1732. These stars are respectively identical with Schwerd 1248, and 1240.

1739 and 1757. These stars are respectively identical with Lacaille 8689, and 8761.

AT THE ROYAL OBSERVATORY, GREENWICH, FROM 1854 TO 1860

[illegible]

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8377 Stars; from the Catalogue of 10,000 Stars published by the British Association; from Weisse's *Catalogus Stellarum ex Zonis Regionemantis*; or, for the variable stars, from the *Journal de l'Observatoire de Paris*, 1854, and 1856.² The authorities for any remaining magnitudes are given in the Notes.

CATALOGUE OF THE MEAN PLACES OF STARS, FROM SEVEN YEARS' OBSERVATIONS.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, in R.A., from Pole Star, 1860, Jan. 1, from R.A.C.	Secular Variation of Position in R.A., from R.A.C.	Logarithms of				Value of $\log \mu$.	Mean North Polar Distance, 1860, Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	
								e	f	g	h					
1801	5 ^m	9 Piscis Australis.....	21. 56. 35.75	1860.7	3	+5.94	—0.0051	0.0000	0.01026	0.06187	1.45637	0.06596	86.137	183. 30. 44.53	1860.7	3
1802	.....	.....	21. 37. 41.18	1858.8	4	+3.96	—0.0013	—	0.00910	0.04847	1.45127	0.07583	86.238	106. 0. 45.53	1858.8	4
1803	5 ^m 4 ^m	80 Cygni.....	21. 37. 7.39	1858.8	5	+2.13	—0.0049	—0.005	0.01867	0.05643	1.43334	0.10136	85.109	66. 26. 53.39	1858.8	5
1804	.....	8 Pegasus.....	21. 37. 18.60	1860.6	66	+2.93	—0.0007	—0.005	0.00860	0.04695	1.40651	0.08316	85.895	40. 40. 55.05	1860.6	55
1805	5 ^m 4 ^m	46 Capricorni.....	21. 37. 32.09	1860.7	4	+3.05	—0.0088	—0.003	0.00864	0.04949	1.45033	0.07581	85.966	99. 43. 26.66	1860.7	4
1806	7	Greenbridge 3556.....	21. 37. 33.08	1858.4	4	+2.78	—0.0098	—	0.00808	0.05734	1.43441	0.10115	85.744	41. 2. 18.02	1858.4	4
1807	5 ^m	9 Pegasus.....	21. 37. 58.97	1860.4	4	+2.89	—0.0040	—0.007	0.01089	0.04699	1.44665	0.07583	85.818	73. 17. 48.08	1860.4	4
1808	.....	78 Cygni.....	21. 37. 58.99	1860.4	3	+2.65	—0.0054	—0.006	0.01089	0.04699	1.44180	0.08355	85.647	61. 53. 17.85	1860.4	7
1809	4 ^m 1 ^m	78 Cygni.....	21. 37. 53.37	1859.9	1	+2.65	—0.0054	—0.016	0.01089	0.04699	1.44180	0.08355	85.647	61. 53. 10.84	1859.9	1
1810	5 ^m 4 ^m	43 Capricorni.....	21. 38. 58.69	1860.7	5	+3.16	—0.0100	—0.003	0.00887	0.04741	1.45081	0.07399	85.997	102. 0. 35.68	1860.7	5
1811	3 ^m	49 Capricorni.....	21. 39. 18.53	1857.7	16	+3.04	—0.0038	—0.014	0.00943	0.04648	1.45185	0.07583	86.055	106. 45. 37.98	1857.7	16
1812	5 ^m 4 ^m	Piscis Austrinus.....	21. 39. 36.56	1860.2	3	+3.44	—0.0149	—	0.01075	0.05737	1.45555	0.06690	86.109	121. 32. 39.19	1860.2	3
1813	4 ^m 1 ^m	11 Cephei.....	21. 51. 50.40	1860.1	3	+0.83	—0.0039	—	0.01510	0.05119	1.43103	0.13113	81.818	19. 18. 58.30	1860.1	3
1814	5	78 Draconis.....	21. 41. 20.77	1859.9	3	+0.76	—0.0040	—0.016	0.01314	0.05734	1.43111	0.13583	81.874	19. 17. 37.31	1859.9	3
1815	5	10 Cephei.....	21. 41. 24.61	1859.6	1	+1.73	—0.0455	—0.000	0.01771	0.05040	1.42701	0.11889	82.444	21. 31. 27.90	1859.6	1
1816	4 ^m 5 ^m	81 Cygni.....	21. 41. 37.47	1858.8	3	+2.09	—0.0034	—0.000	0.01026	0.05793	1.43471	0.10119	85.746	41. 20. 14.48	1858.8	3
1817	5 ^m	14 Pegasus.....	21. 41. 39.30	1859.7	3	+2.68	—0.0068	—0.002	0.01016	0.06136	1.44166	0.09035	85.528	60. 28. 35.12	1859.7	3
1818	.....	Greenbridge 3577.....	21. 41. 51.95	1859.7	4	+2.11	—0.0088	—	0.01066	0.05809	1.43474	0.10166	85.971	40. 38. 46.70	1859.7	4
1819	.....	.....	21. 44. 16.71	1858.4	1	+1.04	—0.0038	—	0.01391	0.05035	1.43659	0.08359	83.703	20. 34. 39.28	1858.4	1
1820	5	Greenbridge 3590.....	21. 44. 35.50	1855.7	9	+0.79	—0.0330	—0.016	0.01393	0.05389	1.43659	0.12978	83.703	20. 39. 58.90	1855.7	9
1821	.....	.....	21. 44. 57.44	1860.7	1	+1.09	—0.0245	—	0.01287	0.05319	1.43647	0.12965	83.686	20. 32. 47.96	1860.7	1
1822	5 ^m	51 Capricorni.....	21. 45. 39.48	1860.6	7	+3.19	—0.0112	—0.001	0.00943	0.05619	1.45116	0.07406	85.960	104. 12. 32.37	1860.6	7
1823	.....	.....	21. 46. 36.19	1857.4	3	+1.46	—0.0061	—	0.01513	0.04597	1.44260	0.12126	85.444	30. 40. 59.00	1857.4	3
1824	5 ^m	16 Pegasus.....	21. 46. 41.65	1858.5	50	+2.73	—0.0055	—0.001	0.01026	0.04647	1.44288	0.08359	85.734	64. 43. 15.93	1858.5	60
1825	6 ^m	Piazzi XXI. 320.....	21. 46. 51.53	1860.8	5	+3.13	—0.0063	—0.001	0.00897	0.05668	1.44925	0.07744	85.877	94. 55. 51.76	1860.8	5
1826	.....	.....	21. 46. 51.67	1860.8	3	+1.82	—0.0053	—	0.01485	0.04536	1.42224	0.09356	84.759	24. 45. 51.58	1860.8	3
1827	5 ^m 6 ^m	13 Cephei.....	21. 50. 11.01	1859.11	11	+2.01	—0.0040	—0.005	0.01410	0.05144	1.43513	0.08181	84.505	31. 3. 2.18	1859.11	11
1828	7	Lalande 4837.....	21. 51. 46.46	1858.1	1	+3.70	—0.0380	—	0.01021	0.05529	1.43529	0.08359	85.061	119. 17. 13.08	1858.1	1
1829	.....	Runkler 9704.....	21. 51. 8.83	1858.1	4	+2.98	—0.0068	—	0.00958	0.05694	1.43624	0.08359	85.655	78. 28. 28.05	1858.1	4
1830	7	Lalande 4883.....	21. 51. 29.12	1859.35	35	+2.68	—0.0068	—	0.01003	0.04634	1.44220	0.09347	85.734	60. 25. 47.98	1859.35	38
1831	5 ^m	Piazzi XXI. 360.....	21. 51. 42.55	1854.7	4	+1.69	—0.0016	—0.013	0.01220	0.05025	1.42635	0.11760	84.015	27. 2. 25.42	1854.7	4
1832	5 ^m 6 ^m	12 Piscis Austrinus.....	21. 51. 47.11	1859.7	17	+3.65	—0.0119	—0.003	0.01026	0.04813	1.43431	0.06760	86.015	119. 7. 25.91	1859.7	17
1833	.....	Lalande 4899.....	21. 51. 45.59	1859.7	1	+3.73	—0.0243	—	0.01009	0.05619	1.43529	0.08359	85.061	106. 4. 41.98	1859.7	1
1834	.....	29 Aquarii (1st Star).....	21. 51. 46.37	1854.7	1	+3.93	—0.0113	—0.000	0.01009	0.05619	1.43529	0.08359	85.061	107. 38. 15.08	1854.7	1
1835	6	29 Aquarii (2nd Star).....	21. 51. 46.63	1854.8	4	+3.93	—0.0113	—0.000	0.01009	0.05619	1.43529	0.08359	85.061	107. 38. 14.91	1854.7	1
1836	.....	29 Aquarii (3rd Star).....	21. 51. 46.64	1854.7	3	+3.93	—0.0113	—0.000	0.01009	0.05619	1.43529	0.08359	85.061	107. 38. 13.71	1854.7	3
1837	5 ^m 6 ^m	31 Aquarii.....	21. 51. 55.43	1858.6	6	+3.19	—0.0037	—0.003	0.00954	0.04646	1.44166	0.07656	85.816	97. 11. 40.98	1858.6	6
1838	5 ^m 4 ^m	31 Aquarii.....	21. 51. 56. 47	1858.7	7	+3.16	—0.0054	—0.003	0.00941	0.04657	1.44180	0.07741	85.774	92. 49. 46.37	1858.7	7
1839	5 ^m 6 ^m	16 Cephei.....	21. 51. 74.04	1860.1	4	+0.96	—0.0036	—0.003	0.01437	0.05181	1.43130	0.14050	85.826	19. 17. 10.66	1860.1	4
1840	5 ^m	54 Aquarii.....	21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40

1801 and 1802. These stars are respectively identical with Lalande 3901 and 3917.

AT THE ROYAL OBSERVATORY, GREENWICH, FROM 1854 TO 1860.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 1, from Observations, 1854 to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion, in R.A., from Pole Star, 1860, Jan. 1, from R.A.C.	Secular Variation of Position, in R.A., from R.A.C.	Logarithms of				Value of $\log \mu$.	Mean North Polar Distance, 1860, Jan. 1, from R.A.C.	Mean Year and Fraction of Year.	Number of Observations.	
								e	f	g	h					
1841			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1842			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1843			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1844			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1845			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1846			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1847			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1848			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1849			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1850			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1851			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1852			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1853			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1854			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1855			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1856			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1857			21. 51. 58.50	1859.4	70	+3.04	—0.0042	—0.003	0.00954	0.04681	1.44180	0.07883	85.729	90. 59. 54.48	1859.4	40
1858			21. 51. 58.5													

No.	Star's Name.	Mean Right Ascension, 1860, Jan. 1, 0h. 1m. 1s. to 1860.	Mean Year and Fraction of Year.	Number of Observations.	Annual Motion in R.A. from 1850, from Elements.	Secular Variation of Pro-cession in R.A.	Annual Motion in R.A. from 1850, from R.A.C.	Logarithms of				Value of	Polar Distance, 1860, Jan. 1, 0h. 1m. 1s. to 1860.	Mean Year and Fraction of Year.	Number of Observations.
								a	f	g	h				
1941 67	Groombridge 3950.....	h 5. 10. 18.31	1859.9	3	+2.615	+0.0213	..	0.11294	0.08033	1.44109	0.10488	83.374	41. 0. 47.87	1859.9	3
1942 89	Groombridge 3918.....	h 5. 24. 46.78	1859.8	3	+2.644	+0.0218	..	0.11309	0.08314	1.44128	0.10505	83.315	40. 53. 45.03	1859.8	3
1943 6	81 Aquarii	h 5. 54. 7.01	1856.1	5	+3.144	+0.0157	+0.0024	0.10193	0.07225	1.43908	0.10498	83.746	97. 48. 44.68	1856.1	5
1944 6	54. 50. 59.57	1854.7	3	+3.156	-0.0084	..	..	0.10292	0.07219	1.44955	0.07360	85.411	102. 7. 29.23	1854.7	3
1945 6	82 Aquarii	h 5. 54. 50.95	1856.4	5	+3.150	+0.0254	+0.0021	0.10192	0.07255	1.44901	0.07620	85.416	97. 19. 29.13	1856.4	5
1946 43*	1 Andromedæ.....	h 5. 25. 29.74	1855.9	4	+2.743	+0.0186	+0.0021	0.10914	0.07202	1.44315	0.09927	83.767	48. 25. 31.99	1855.8	1
1947 54*	4 Placidium.....	h 5. 26. 45.15	1860.3	8	+3.053	+0.0001	..	0.10183	0.07154	1.44797	0.08048	85.150	86. 55. 28.86	1860.3	8
1948 21*	53 Pegasi.....	h 5. 26. 56.19	..	..	+2.884	+0.0116	+0.004	0.10456	0.07175	1.44536	0.09101	84.745	62. 40. 33.69	1860.4	4
1949 54*	54 Pegasi.....	h 5. 27. 47.33	1856.4	54	+2.980	+0.0155	+0.0074	0.10155	0.07245	1.44684	0.08514	84.814	75. 34. 50.49	1856.6	44
1950 65*	83 Aquarii.....	h 5. 27. 51.65	1857.2	7	+3.145	+0.0159	+0.013	0.10207	0.07259	1.44910	0.07571	85.317	98. 46. 55.46	1857.2	8
1951 5	Brailley 3054.....	h 5. 28. 13.58	1860.8	3	+2.555	+0.0039	..	0.10338	0.06820	1.45345	0.07595	86.666	23. 24. 41.88	1860.8	16
1952 55	55 Pegasi.....	h 5. 29. 57.18	1859.7	3	+3.019	+0.0039	+0.003	0.10214	0.07282	1.44746	0.08271	84.939	82. 10. 46.73	1859.7	3
1953 55	56 Pegasi.....	h 5. 30. 17.24	1859.8	3	+2.914	+0.0017	+0.005	0.10141	0.07228	1.44581	0.08378	84.964	61. 17. 13.71	1859.8	3
1954 .....	.....	h 5. 30. 17.24	1859.8	3	+2.914	+0.0017	..	0.10141	0.07228	1.44581	0.08378	84.964	61. 17. 13.71	1859.8	3
1955 65*	5 Placidium.....	h 5. 31. 06.66	1858.4	6	+3.004	+0.0062	+0.011	0.10193	0.07105	1.44813	0.07974	85.094	88. 10. 49.00	1858.4	6
1956 4*	88 Aquarii.....	h 5. 31. 58.65	1859.8	3	+3.207	+0.0140	+0.005	0.10366	0.07261	1.45035	0.06968	85.513	111. 55. 53.51	1859.8	3
1957 .....	.....	h 5. 32. 12.61	1854.6	1	+3.143	+0.0077	..	0.10243	0.07299	1.44936	0.07422	85.345	101. 55. 10.51	1854.6	1
1958 5*	89 Aquarii.....	h 5. 32. 55.96	1859.9	3	+3.215	+0.0149	+0.004	0.10390	0.07260	1.45041	0.06904	85.359	113. 12. 36.91	1859.9	3
1959 8	Groombridge 3966.....	h 5. 32. 57.13	1859.9	3	+2.655	+0.0020	..	0.10177	0.07294	1.44835	0.10219	85.883	41. 6. 46.79	1859.9	3
1960 34*	33 Cephei.....	h 5. 32. 27.46	1860.0	6	+1.884	+0.0232	+0.002	0.15955	0.05636	1.44950	0.15691	77.296	15. 22. 9.16	1860.0	8
1961 57	7 Andromedæ.....	h 5. 6. 8. 83	1859.8	3	+2.718	+0.0245	+0.008	0.11131	0.07259	1.44277	0.10505	83.534	41. 21. 29.30	1859.8	3
1962 45*	90 Aquarii.....	h 5. 7. 4.53	1857.4	14	+3.109	+0.0046	+0.001	0.10222	0.07358	1.44884	0.07637	85.014	96. 48. 11.54	1857.4	13
1963 6	B. F. 3183.....	h 5. 8. 21.44	1856.1	5	+3.094	+0.0031	..	0.10155	0.07375	1.44864	0.07243	85.154	94. 15. 21.84	1856.1	5
1964 54*	91 Aquarii.....	h 5. 8. 23.12	1857.2	5	+3.144	+0.0062	+0.003	0.10243	0.07370	1.44907	0.07508	85.260	99. 50. 59.61	1857.2	5
1965 50*	92 Aquarii.....	h 5. 9. 55.41	1856.7	8	+3.116	+0.0034	-0.005	0.10236	0.07383	1.44895	0.07565	85.266	101. 29. 21.46	1856.7	8
1966 89*	W. B. XXIII. 173.....	h 5. 9. 46.91	1857.9	1	+3.129	-0.0068	..	0.10253	0.07381	1.44916	0.07585	85.276	98. 2. 14.8	1857.9	1
1967 4*	6 Placidium.....	h 5. 9. 54.47	1858.4	60	+3.059	+0.0064	+0.007	0.10214	0.07391	1.44808	0.08022	85.290	87. 28. 56.11	1858.4	44
1968 54*	93 Aquarii.....	h 5. 10. 37.55	1854.8	4	+3.183	-0.0007	..	0.10248	0.07391	1.44901	0.07505	85.246	90. 45. 59.45	1854.8	4
1969 54*	Scutellarii.....	h 5. 11. 15.32	1859.8	3	+3.257	+0.0222	+0.004	0.10155	0.07305	1.45113	0.06843	85.634	137. 17. 41.59	1859.8	3
1970 56*	8 Andromedæ.....	h 5. 11. 15.81	1859.8	3	+2.756	+0.0253	+0.002	0.10131	0.07246	1.45036	0.07256	85.198	104. 44. 58.35	1859.8	3
1971 8	W. B. XXIII. 222.....	h 5. 11. 30.16	1855.7	1	+3.103	-0.0041	..	0.10239	0.07205	1.44876	0.07653	85.171	96. 23. 36.35	1855.7	1
1972 5*	95 Aquarii.....	h 5. 12. 11.51	1856.1	5	+3.123	-0.0065	-0.002	0.10257	0.07205	1.44908	0.07484	85.248	100. 22. 31.42	1856.1	5
1973 153*	96 Aquarii.....	h 5. 12. 8.73	1860.4	6	+3.102	-0.0038	-0.011	0.10222	0.07211	1.44879	0.07674	85.155	97. 53. 19.07	1860.4	6
1974 .....	.....	h 5. 12. 12.46	1858.7	3	+3.131	-0.0027	..	0.10270	0.07210	1.44919	0.07505	85.246	100. 12. 39.20	1858.7	3
1975 65*	34 Cephei.....	h 5. 12. 53.1	..	..	+2.418	+0.0338	-0.019	0.13655	0.06620	1.43824	0.13318	79.835	22. 39. 15.02	1860.5	5
1976 54*	6 Pegasi.....	h 5. 13. 15.1	..	..	+2.958	+0.0109	+0.007	0.10413	0.07390	1.44651	0.08099	84.348	67. 1. 31.98	1860.2	4
1977 54*	98 Aquarii.....	h 5. 13. 36.72	1859.8	4	+3.170	-0.0018	+0.007	0.10281	0.07391	1.44979	0.07505	85.247	110. 51. 52.68	1859.8	4
1978 6*	6 Pegasi.....	h 5. 13. 18.0	..	..	+2.923	+0.0160	+0.002	0.10618	0.07391	1.44915	0.08555	83.917	58. 3. 0.99	1854.9	1
1979 54*	60 Pegasi.....	h 5. 18. 23.71	1859.8	5	+2.971	+0.0101	+0.013	0.10416	0.07444	1.44971	0.08555	83.917	58. 3. 0.99	1859.8	5
1980 6*	4 Cuspidæ.....	h 5. 18. 38.07	1859.8	3	+2.630	+0.0384	+0.003	0.11850	0.07000	1.44138	0.12026	81.012	28. 39. 9.14	1859.8	15

1921. The magnitude has been taken from Groombridge.

1938 and 1949. These stars are respectively identified with Lacaille 9386 and 9415.

The magnitudes of Stars taken from Argelander are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 8777 Stars; from the Catalogue of Lande published by the British Association; from Wain's Catalogue Stelliarum et Zonæ Repetendæ; or, for the variable stars, from Mr. Pogson's list in the "Rafflesia Observations, 1852 and 1856." The authorities for any remaining magnitudes are given in the Notes.

CROSSLIST OF THE MEAN ELEMENTS OF STARS FROM SEVEN YEARS' OBSERVATIONS.																			
No.	Magnitude.	Star's Name.	Mean Right Ascension, 1860, Jan. 1, from Observations, <i>signs to nine.</i>	Mean Year and Fraction of Year.	Number of Observations.	Annual Proper Motion in R.A., from Proper Motion Elements.	Secular Variation of Precession in R.A.	Annual Proper Motion in R.A., from Proper Motion Elements.	Logarithms of μ	Value of μ	Mean North Polar Distance, 1860, Jan. 1, from Observations, <i>signs to nine.</i>	Mean Year and Fraction of Year.	Number of Observations.						
									α	δ									
1961	5*	99 Aquarii	B	23. 18. 45.30	1859.8	4	+3.166	-0.0127	-0.003	0.01593	0.07450	1.44973	0.06978	85.946	111. 24. 32.00	1859.8	4		
1962	54*	8 Piscium	e	23. 19. 45.31	1857.4	56	3.070	-0.0001	+0.005	0.01513	0.07455	1.44821	0.07318	84.954	89. 24. 37.31	1857.4	56		
1963	41*	10 Piscium	0	23. 20. 51.00	1859.0	5	2.450	+0.0028	-0.011	0.01446	0.07505	1.44821	0.07318	84.954	84. 23. 22.55	1859.0	5		
1964	6*	Bradley 3125	h	23. 21. 21.80	1859.9	3	3.269	+0.0048	+	0.01451	0.07648	1.44383	0.08185	78.715	24. 30. 36.04	1859.9	3		
1965	5*	70 Pegasi	g	23. 22. 4.56	1859.8	3	3.045	+0.0059	+0.005	0.01285	0.07510	1.44755	0.08421	84.624	78. 0. 41.45	1859.8	3		
1966	62*	Piazzi XXIII. 96....	h	23. 22. 17.79	1860.4	4	+3.703	-0.0030	+0.003	0.01046	0.07550	1.44859	0.06965	85.064	91. 22. 46.00	1860.4	4		
1967	7*	Piazzi XXIII. 100....	h	23. 23. 18.46	1859.8	4	+3.054	-0.0165	+	0.01131	0.07193	1.44581	0.01541	81.519	31. 13. 22.11	1859.8	4		
1968	5*	Piazzi XXIII. 103....	h	23. 23. 34.95	1859.8	4	+3.736	-0.0166	+0.015	0.01173	0.07196	1.44305	0.01541	81.514	31. 13. 21.19	1859.8	4		
1969	7	Piazzi XXIII. 103....	h	23. 24. 17.54	1860.8	4	3.000	-0.0045	-0.001	0.01047	0.07584	1.44851	0.07126	85.181	94. 21. 7.46	1860.8	4		
1970	54*	101 Aquarii.....	h	23. 25. 56.69	1859.7	4	+3.515	-0.0124	+0.001	0.01443	0.07531	1.44949	0.06959	85.366	111. 41. 16.95	1859.7	4		
1971	54	Bradley 3127	h	23. 27. 47.93	1860.9	1	-0.017	-0.0492	+	0.01604	0.01941	1.37665	0.35386	39.321	3. 27. 54.31	1860.9	1		
1972	78	Lalande 46594	h	23. 28. 1.16	1857.7	1	+3.087	-0.0003	+	0.01551	0.07581	1.44851	0.07723	85.003	94. 37. 41.86	1857.7	1		
1973	6*	16 Piscium	h	23. 29. 14.66	1857.3	3	3.068	-0.0049	-0.006	0.01047	0.07594	1.44821	0.07723	85.135	88. 40. 37.79	1857.3	3		
1974	..	..	..	23. 30. 1.83	1855.8	1	3.912	-0.0046	+	0.01109	0.07489	1.44799	0.01009	83.044	47. 27. 53.95	1855.8	1		
1975	4	16 Andromedae.....	A	23. 30. 47.43	1859.8	3	+3.897	-0.0029	+0.017	0.01126	0.07476	1.44556	0.03048	82.767	44. 18. 0.32	1859.8	3		
1976	4	17 Andromedae.....	A	23. 31. 16.80	1858.6	18	+2.919	-0.0048	-0.005	0.01049	0.07507	1.44590	0.01008	83.028	47. 30. 24.94	1858.6	18		
1977	54	102 Aquarii.....	h	23. 32. 31.21	1859.7	3	+3.145	-0.0077	-0.005	0.01030	0.07618	1.44893	0.07278	85.200	104. 59. 44.99	1859.7	3		
1978	41*	17 Piscium	h	23. 33. 44.39	1857.7	69	3.059	-0.0029	+0.003	0.01058	0.07630	1.44830	0.01011	83.727	85. 7. 56.21	1857.7	69		
1979	4	19 Andromedae.....	e	23. 33. 31.34	1859.9	3	3.925	-0.0030	+0.004	0.01105	0.07533	1.44600	0.01040	82.867	46. 28. 18.15	1859.9	3		
1980	3.4	13 Cephei.....	h	23. 33. 37.90	1857.3	26	2.415	+0.0734	-0.030	0.01751	0.06683	1.43799	0.17128	73.578	13. 8. 36.56	1857.3	26		
1981	5	103 Aquarii.....	A	23. 34. 18.58	1859.8	3	+3.123	-0.0030	+0.004	0.01030	0.07631	1.44906	0.07094	85.264	108. 48. 2.16	1859.8	3		
1982	5	104 Aquarii.....	A	23. 34. 29.58	1859.9	3	3.122	-0.0009	+0.000	0.01037	0.07634	1.44904	0.07094	85.259	108. 35. 34.3	1859.9	3		
1983	9	Groombridge 4165....	h	23. 34. 37.21	1859.9	4	2.904	-0.0107	+	0.01440	0.07512	1.44566	0.01059	83.745	12. 24. 18.60	1859.9	4		
1984	5	Orion. Arg. 4597....	h	23. 34. 47.81	1857.3	1	2.436	-0.0053	+	0.01700	0.06519	1.43364	0.16967	75.355	17. 44. 18.03	1857.3	1		
1985	5	18 Piscium	A	23. 34. 54.20	1858.5	4	3.069	-0.0010	-0.011	0.01053	0.07653	1.44831	0.07643	85.813	88. 59. 24.06	1858.5	4		
1986	Var.	.....	h	23. 36. 34.45	1860.9	1	+3.121	-0.0084	..	0.01347	0.07661	1.44888	0.07221	85.196	106. 3. 38.78	1860.9	1		
1987	5*	106 Aquarii.....	h	23. 36. 56.16	1859.8	4	3.118	-0.0010	+0.003	0.01338	0.07661	1.44879	0.07081	85.253	109. 3. 34.50	1859.8	4		
1988	5*	78 Pegasi	h	23. 37. 31.34	1859.8	3	2.999	-0.0061	+0.010	0.01059	0.07624	1.44714	0.09207	83.799	61. 24. 49.29	1859.8	3		
1989	5*	20 Andromedae.....	h	23. 39. 6.28	1859.8	4	2.948	-0.0027	-0.000	0.01126	0.07603	1.44634	0.01030	83.608	44. 21. 24.54	1859.8	4		
1990	6*	19 Piscium	h	23. 39. 14.31	1856.5	6	3.066	-0.0021	+0.002	0.01055	0.07699	1.44818	0.08031	84.734	77. 17. 21.15	1856.5	6		
1991	5*	5 Cassiopeiæ.....	e	23. 40. 13.65	1859.9	4	+2.888	-0.0046	+0.006	0.01218	0.07525	1.44544	0.01586	83.12	3. 7. 39.89	1859.9	4		
1992	6*	20 Andromedae.....	h	23. 40. 44.75	1857.7	4	3.079	-0.0020	+0.003	0.01067	0.07616	1.44750	0.07740	84.824	93. 23. 12.37	1857.7	4		
1993	6*	Bradley 3166	h	23. 41. 14.34	1860.5	3	2.814	-0.0594	+0.007	0.01381	0.07440	1.44446	0.01350	78.797	22. 58. 17.56	1860.5	3		
1994	41*	Scutellarii.....	0	23. 41. 37.60	1857.6	17	3.131	-0.0616	+0.009	0.01084	0.07696	1.44919	0.06570	85.415	118. 34. 15.15	1857.6	17		
1995	6*	21 Piscium	h	23. 42. 17.38	1857.4	14	3.072	-0.0011	+0.003	0.01055	0.07731	1.44827	0.07931	84.773	89. 42. 3.22	1857.4	14		
1996	6	23 Piscium	h	23. 44. 47.89	1856.7	8	3.069	-0.0028	+0.004	0.01064	0.07738	1.44828	0.08009	84.700	87. 50. 51.92	1856.7	8		
1997	..	.....	h	23. 45. 10.20	1859.9	3	3.083	-0.0030	..	0.01076	0.07764	1.44844	0.08094	84.737	97. 44. 41.24	1859.9	3		
1998	..	.....	h	23. 46. 37.03	1859.8	3	3.083	-0.0009	..	0.01088	0.07774	1.44844	0.08094	84.737	97. 46. 18.03	1859.8	3		
1999	6	26 Piscium	h	23. 47. 58.21	1857.0	5	3.064	-0.0045	+0.005	0.01077	0.07791	1.44811	0.08183	84.755	83. 43. 16.40	1857.0	5		
2000	5	Groombridge 4165....	h	23. 48. 3.78	1859.1	4	+3.835	-0.0027	+0.007	0.01273	0.07847	1.44455	0.01535	75.123	12. 26. 6.94	1859.1	4		

1964, 1971, and 1980. These stars are respectively identical with Schwed 1355, 1564, and 1375.
1984. The magnitude has been taken from Olcott's Argemideæ.
1986. This star is supposed to be the variable R Aquarii, though it differs 40" in R.A. from the place assigned by Mr. Pogson. If so, the limits of magnitude are 7 and under to 1, the period 338.5 days.

1967. The magnitude has been taken from Piazzi.
1978. As the limits of magnitude are 7 and under to 1, the period 338.5 days.
1994. This star is identical with Lacaille 9653.

The magnitudes of stars taken from Argemideæ are marked with Asterisks. Other magnitudes are taken in the order of preference from the British Association Catalogue of 1737 Stars from the Catalogue of Lalande published by the British Association; or, from Weiss's *Catalogue Stellarum et Zoni Regionum*; or, for the variable stars, from Mr. Pogson's lists in the "Hedcliffe Observations, 1854 and 1855." The authorities for any remaining magnitudes are given in the Notes.

No.	Magnitude.	Star's Name.	Mean Right Ascension, 1850, Jan. 1, from Observations, etc. to 1850.	Mean Year and Fraction of Year.	Number of Observations.	Annual Precession for 1850, from Peter's Elements.	Secular Variation of Precession in R.A.	Annual Proper Motion in R.A. from Mean or R.A.	Logarithms of				Value of l	Mean North Polar Distance, 1850, Jan. 1, from Observations, etc. to 1850.	Mean Year and Fraction of Year.	Number of Observations.
									e	f	g	h				
1001	..		h m s			+	+	+								
1002	9	W. B. XXIII. 1032..	23. 59. 47.92	1856.4	2	+ 3.067	+ 0.0038	..	0.10272	0.07809	144820	0.08116	82.586	85. 16. 57.13	1859.9	3
1003	5 6	17 Piscium.....	23. 51. 30.77	1857.1	4	+ 3.068	+ 0.0038	..	0.10272	0.07820	144821	0.08113	82.581	85. 12. 28.73	1856.0	1
1004	4 8	28 Piscium.....	23. 51. 7.39	1857.5	3	+ 3.076	+ 0.0008	- 0.008	0.10272	0.07858	144833	0.07735	82.826	94. 19. 57.55	1857.1	5
1005	6 7	Bradley 3194	23. 51. 1.66	1860.5	2	+ 3.067	+ 0.0006	+ 0.010	0.10278	0.07834	144820	0.08175	82.524	83. 54. 42.53	1858.3	3
1006	8	Lalande 47098	23. 54. 17.14	1858.5	5	+ 3.068	+ 0.0047	..	0.10278	0.07857	144822	0.08172	82.591	83. 59. 15.54	1858.5	5
1007	5	Bradley 3195	23. 54. 29.74	1857.8	3	+ 3.015	+ 0.0053	..	0.10255	0.07801	144796	0.07976	80.143	39. 31. 25.39	1859.8	3
1008	5 6	29 Piscium.....	23. 54. 38.96	1857.1	4	+ 3.076	- 0.0002	- 0.002	0.10271	0.07864	144831	0.07751	82.791	93. 48. 24.08	1857.1	4
1009	5 6	30 Piscium.....	23. 54. 46.76	1855.5	3	+ 3.076	- 0.0002	+ 0.002	0.10282	0.07863	144833	0.07750	82.867	96. 47. 11.36	1855.5	8
1010	8	Groombridge 4202..	23. 55. 31.87	1857.8	3	+ 3.039	+ 0.0054	..	0.11447	0.07838	144776	0.07607	81.953	41. 0. 28.28	1859.8	3
1011	9	Lalande 47132	23. 55. 13.48	1858.2	7	+ 3.075	- 0.0020	..	0.10282	0.07867	144832	0.07769	82.866	96. 50. 14.87	1858.8	7
1012	6 11	31 Piscium.....	23. 55. 14.09	1857.9	5	+ 3.068	+ 0.0059	- 0.001	0.10290	0.07867	144821	0.08263	82.431	81. 49. 21.65	1857.9	6
1013	6 11	32 Piscium.....	23. 55. 20.48	1856.9	6	+ 3.068	+ 0.0057	- 0.002	0.10287	0.07868	144822	0.08243	82.446	82. 17. 32.34	1856.9	6
1014	7 8	Groombridge 4207..	23. 55. 58.19	1855.8	1	+ 3.051	+ 0.0022	..	0.11047	0.07861	144795	0.07605	82.038	41. 1. 33.04	1855.8	2
1015	4 3	2 Ceti.....	23. 56. 35.88	1859.4	27	+ 3.079	- 0.0081	- 0.001	0.10237	0.07880	144838	0.07712	82.923	108. 6. 55.42	1859.0	20
1016	8	Groombridge 4215..	23. 56. 58.52	1859.9	2	+ 3.052	+ 0.0059	..	0.11164	0.07866	144796	0.07608	81.889	40. 47. 28.68	1859.9	2
1017	7 8	Groombridge 4216..	23. 56. 59.60	1859.9	5	+ 3.052	+ 0.0058	..	0.11164	0.07870	144796	0.07617	81.903	40. 46. 33.74	1859.9	5
1018	5	Groombridge 4222..	23. 57. 53.49	1859.9	3	+ 3.050	+ 0.0059	..	0.11165	0.07873	144794	0.07611	80.033	39. 27. 56.87	1859.9	3
1019	5 6	33 Piscium.....	23. 58. 10.13	1855.4	11	+ 3.073	- 0.0016	- 0.002	0.10281	0.07899	144829	0.07663	82.837	39. 29. 26.85	1855.4	10
1020	8	Groombridge 4226..	23. 58. 10.85	1859.8	3	+ 3.060	+ 0.0059	..	0.11146	0.07879	144808	0.07608	81.892	41. 0. 25.10	1859.8	3
1021	7 8	Groombridge 4229..	23. 58. 44.74	1859.9	3	+ 3.064	+ 0.0058	..	0.11169	0.07898	144814	0.07604	81.908	41. 5. 26.71	1859.9	3
1022	6 7	Bradley 3222	23. 59. (21).	..	..	+ 3.070	+ 0.0079	+ 0.005	0.10574	0.07910	144824	0.07916	82.534	..	1857.7	2

2005. This star is identical with Schwab 1328.

No.	Star's Name.	Mean Right Ascension, 1850, Jan. 1, from Observations, etc. to 1850.	Mean Year and Fraction of Year.	Number of Observations.	Annual Precession in R.A. from Peter's Elements.	Secular Variation of Precession in R.P.D.	Annual Proper Motion in R.A. from Mean or R.A.	Logarithms of				Value of l	No. in Bessel's Catalogue.	No. in Lande's Catalogue (P.)	No. in the British Association (B.A.)	Hour and No. in Planet.	No. in Greenwich.	Hour and No. in Wilson's Bessel.	No. in Argel.	No. in Poulkova 1822.	No. in the First Catalogue of the Russian Astronomical Observations (Poulkova).	No. in the Russian Astronomical Observations (Poulkova).	No.
								e'	l'	g'	h'												
1023	..	h m s			+	+	+																
1024	..	0018	..		829.98	0.04839	0.65588	0.06560	128.145	..	..	..	..	..	..	XXIII.	..	..	..	..	..	..	2001
1024	0010	..	..		831.21	0.04835	0.65555	0.06545	127.981	..	..	..	..	..	..	..	..	..	..	..	..	..	2002
1024	0008	..	+ 0.12		830.65	0.10568	0.65631	0.06555	128.837	3189	..	46992 (B.A.)	244	..	..	..	..	..	..	..	..	..	2003
1024	0007	..	+ 0.13		831.60	0.03594	0.65611	0.06541	127.617	3191	..	46217 (B.A.)	246	..	..	..	..	..	..	..	..	..	2004
1024	0005	..	..		830.49	..	0.65691	0.06800	121.058	3194	..	4620 (F.)	..	4193	..	..	..	..	..	..	..	..	2005
1025	- 0003	..	..		831.47	0.03550	0.65663	0.06995	128.164	..	..	47998 (B.A.)	..	..	..	..	..	..	..	..	..	..	2006
	0002	..	+ 0.01		831.57	0.15186	0.65607	0.06415	124.756	3195	..	4656 (F.)	..	..	..	..	..	..	..	..	..	..	2007
	0002	..	+ 0.03		835.64	0.10253	0.65497	0.07065	121.775	3196	..	47113 (B.A.)	255	..	1114	..	1102	733	605	431	..	2008	
	0005	..	+ 0.04		830.05	0.10004	0.65455	0.07037	121.376	3197	..	47115 (B.A.)	256	..	..	..	..	..	..	..	..	..	2009
	0001	..	..	..	835.81	0.64831	0.65451	0.07131	120.934	..	..	47128 (B.A.)	..	4202	..	..	..	..	..	..	..	..	2010
1025	- 0001	..	..		837.45	0.12021	0.65451	0.07156	121.316	..	..	47131 (B.A.)	..	..	..	..	..	..	..	..	..	..	2011
	0001	..	+ 0.01		838.08	0.04345	0.65451	0.07159	128.950	3200	..	47135 (B.A.)	260	..	..	..	..	..	..	..	..	..	2012
	0001	..	+ 0.03		834.97	0.07077	0.65446	0.07175	128.737	3201	..	47138 (B.A.)	261	..	..	..	..	..	..	..	..	..	2013
	0005	..	- 0.01		837.33	0.73545	0.65438	0.07197	127.159	..	..	47139 (B.A.)	..	4207	..	..	..	..	..	..	..	..	2014
	0001	..	0.00		839.89	0.17294	0.65430	0.07133	116.857	3202	..	47179 (B.A.)	264	..	..	..	..	..	..	..	..	..	2015
1025	+ 0003	..	..		975.57	0.66630	0.65246	0.07456	120.661	..	..	47191 (B.A.)	..	4215	..	..	..	..	..	..	..	..	2016
	0005	..	..		975.73	0.66778	0.65246	0.07439	120.499	..	..	47195 (F.)	..	4216	..	..	..	..	..	..	..	..	2017
	0005	..	..		979.65	0.74473	0.65218	0.07583	141.556	..	..	46513 (F.)	..	4225	..	..	..	..	..	..	..	..	2018
	0006	..	- 0.03		986.61	0.11821	0.65474	0.07658	120.301	3208	..	47207 (B.A.)	272	..	1189	..	1111	734	606	434	..	2019	
	0006	..	..		978.91	0.64869	0.65474	0.07431	120.798	..	..	47230 (B.A.)	..	4226	..	..	..	..	..	..	..	..	2020
1026	+ 0006	..	..		959.23	0.65035	0.65474	0.07221	120.266	..	..	46557 (F.)	..	4229	..	..	..	..	..	..	..	..	2021
	0007	..	+ 0.17		931.96	0.78614	0.65410	0.07817	135.555	3212	..	47261 (B.A.)	276	..	..	..	..	..	..	..	..	..	2022

CORRECTIONS

TO

THE TWELVE-YEAR CATALOGUE

OF 2156 STARS,

FOR THE EPOCHS 1840 AND 1845,

AND TO

THE SIX-YEAR CATALOGUE

OF 1576 STARS,

FOR THE EPOCH 1850.

{cxx}

It is stated in the Introduction (above), page {vi}, line 14, and page {x}, line 5, that the correction for the Proper Motion during the fraction of each year of observation, peculiar to stars which have Proper Motion but are not included in the Nautical Almanac List, is omitted in the Twelve-Year and the Six-Year Catalogues. The calculation of this correction has now been made for all the stars whose Annual Proper Motion amounts to $0^{\circ}.03$ in R.A., or $0''.30$ in N.P.D.; the corrections are retained when they rise respectively to $0^{\circ}.03$ or to $0''.06$; and the corrected places are given below. In the same tables are included the corrected places for all stars in whose places errors have been produced by any other cause.

Corrections are also given for all other errors in the Twelve-Year and Six-Year Catalogues which have been discovered since their publication.

It is stated in the Introduction (above), page {xi}, line 14, that a part of the numerical expression for the Secular Variation of Precession is omitted in the Twelve-Year and the Six-Year Catalogues. The formulæ for the omitted terms are—

In R.A. (expressed in seconds of time), $0^{\circ}.00322 - 0^{\circ}.0004304 \times$ Precession in R.A.

In N.P.D. (expressed in seconds of arc), $- 0^{\circ}.0004304 \times$ Precession in N.P.D.

As it is impossible to exhibit these in a short Table, and as they are easily computed in any particular instance, I content myself with calling the reader's attention to them.

CORRECTED MEAN RIGHT ASCENSIONS and MEAN NORTH POLAR DISTANCES for 1840 and for 1845, and MEAN YEAR and FRACTION of YEAR, for STARS of the GREENWICH TWELVE-YEAR CATALOGUE of 2156 STARS.

(The asterisk * denotes that a correction is introduced for Proper Motion; and the obelus † denotes that a correction is made for some error of computation or printing.)

No.	Star's Name.	Mean Right Ascension, 1840, Jan. 1.	Mean Year and Fraction of Year.	Mean Right Ascension, 1845, Jan. 1.	Mean Year and Fraction of Year.	Mean N. P. D., 1840, Jan. 1.	Mean Year and Fraction of Year.	Mean N. P. D., 1845, Jan. 1.	Mean Year and Fraction of Year.	No.
		h m s		h m s		° ' "		° ' "		
3*†	11 Cassiopeia... β	0. 0. 40.67	1837.8			31. 43. 58.68				3
37*	Piazzi O. 130...	0. 29. 7.08	1838.8							37
46*	24 Cassiopeia... η			0. 39. 45.47	1843.9	33. 2. 5.88	1837.2	33. 0. 29.54	1843.9	46
47*	{ B.F. 75 } { Piazzi O. 189. }					85. 32. 35.91	1837.9			47
52*	Bradley 74	0. 40. 21.93	1839.9							52
59*	2 Ursæ Minoris...	0. 48. 2.94	1837.8							59
70*	30 Cassiopeia... μ	0. 57. 40.17	1838.4			35. 52. 1.74	1838.4	35. 50. 33.34	1844.8	70
89*	37 Ceti					98. 47. 5.40	1838.9	98. 45. 26.14	1847.9	89
107*	37 Cassiopeia... δ			1. 15. 43.58	1843.9					107
115*	48 Andromeda... ω			1. 18. 24.51	1843.9					115
135*	50 Andromeda... ..					49. 23. 51.07	1841.9	49. 22. 19.20	1845.5	135
141*	Piazzi I. 139...	1. 31. 51.55	1837.9							141
221*	Piazzi II. 123...	2. 27. 18.70	1838.2					83. 51. 22.90	1846.4	221
260†	92 Ceti	2. 53. 55.23								260
274*	12 Eridani					119. 37. 18.36	1838.5	119. 36. 3.20	1846.0	274
402†	9 Camelopardali...			4. 38. 40.96						402
428*	13 Aurigæ					44. 10. 22.52	1838.4	44. 10. 1.00	1844.8	428
435*	15 Aurigæ					50. 3. 4.89	1840.7	50. 2. 44.83	1846.7	435
500*	Groombridge 1004			5. 43. 33.63	1844.5					500
533†	1 Lyncis			6. 3. 37.15						533
622*	Piazzi VI. 305...					60. 24. 6.12	1841.3			622
642*	18 Lyncis					30. 5. 13.41	1841.2	30. 5. 41.24	1845.5	642
643†	....	7. 1. 14.20		7. 1. (30.)						643
644†	....			7. 1. (30.)						644
714†	....			7. 51. (50.)						714
730*	Canceri					71. 52. 34.90	1841.2	71. 53. 27.70	1845.3	730
818*	Piazzi IX. 37...	9. 13. 42.23	1838.7	9. 14. 29.29	1845.0					818
867*	Bradley 1399...	10. 5. 15.95	1838.9							867
869†	33 Ursæ Majoris... λ					46. 17. 22.78				869
963*	20 Crateris					121. 59. 5.71	1837.3			963
976*	Groombridge 1830			11. 44. 1.53	1845.8			51. 10. 10.90	1846.1	976
979*	Lacaille 4933...					114. 49. 38.82	1837.3			979
988*	Piazzi XI. 218...					46. 0. 8.22	1840.3			988
1004*	Bradley 1656...	12. 12. 6.32	1839.3							1004
1005†	16 Virginis	12. 12. 13.46		12. 12. 28.64						1005
1007*	Bradley 1672...	12. 14. 28.39	1839.4	12. 14. 23.99	1842.5					1007
1021†	....			12. 37. (10.)						1021
1022†	Groombridge 1918	12. 36. 1.48								1022
1053*	43 Comæ							61. 20. 5.86	1845.6	1053
1056*	61 Virginis	13. 10. 2.52	1838.4	13. 10. 18.37	1846.1			107. 26. 50.49	1846.1	1056
1106*	Lacaille 5712...					120. 49. 24.68	1839.3			1106
1109*	8 Boötis					70. 47. 51.47	1839.5	70. 49. 22.92	1845.1	1109
1120*	5 Centauri					125. 34. 48.13	1839.2			1120
1135*	99 Virginis					95. 14. 0.40	1836.3	95. 15. 28.29	1847.4	1135
1157*	23 Boötis					37. 24. 26.59	1837.9	37. 25. 50.24	1844.7	1157
1176*	107 Virginis							94. 58. 52.25	1845.4	1176
1202*	Piazzi XIV. 212.	14. 48. 7.93	1838.5					110. 42. 42.72	1846.3	1202
1206†	....							55. 42. ...		1206
1236*	5 Serpentis							87. 38. 39.16	1845.8	1236
1274†	41 Libræ					108. 46. ...				1274
1289†	....	15. 39. 20.89								1289
1313*	49 Libræ					106. 3. 23.64	1837.5			1313
1325*	13 Draconis			15. 58. 59.61	1843.9	31. 0. 21.30	1837.5	31. 1. 9.37	1843.9	1325
1336*	14 Herculis					45. 44. 59.45	1836.9			1336
1392*	40 Herculis					58. 6. 12.61	1839.5			1392
1402*	26 Scorpii					123. 59. 46.38	1837.5			1402
1432*	Piazzi XVI. 291.							33. 4. 55.56	1843.4	1432
1452*	36 Ophiuchi.... A ¹					116. 21. 38.87	1837.7	116. 22. 4.83	1842.4	1452
1453*	36 Ophiuchi.... A ²					116. 21. 34.95	1837.6	116. 22. 0.64	1842.4	1453
1454*	30 Scorpii					116. 18. 30.26	1837.5			1454
1472†	53 Serpentis					102. 40. 41.99				1472

CORRECTED MEAN RIGHT ASCENSIONS and MEAN NORTH POLAR DISTANCES for 1840 and for 1845, and MEAN YEAR and FRACTION OF YEAR, for STARS of the GREENWICH TWELVE-YEAR CATALOGUE of 2156 STARS—concluded.

No.	Star's Name.	Mean Right Ascension, 1840, Jan. 1.	Mean Year and Fraction of Year.	Mean Right Ascension, 1845, Jan. 1.	Mean Year and Fraction of Year.	Mean N. P. D., 1840, Jan. 1.	Mean Year and Fraction of Year.	Mean N. P. D., 1845, Jan. 1.	Mean Year and Fraction of Year.	No.
		h m s		h m s		° ' "		° ' "		
1507†	53 Ophiuchi f ²	17. 27. (0.)								1507
1520*	26 Draconis					28. 0. 7'12	1839'5	28. 0. 22'17	1846'5	1520
1566*	70 Ophiuchi (1st Star)							87. 27. 31'58	1845'4	1566
1567*	70 Ophiuchi (2d Star)							87. 27. 33'76	1845'6	1567
1593*	36 Draconis			18. 13. 0'14	1844'5					1593
1594*	58 Serpentis							92. 56. 2'57	1845'6	1594
1628*	Bradley 2335 ...							110. 10. 26'45	1846'0	1628
1701*	Piazzi XIX. 50..							105. 48. 2'24	1843'7	1701
1730*	31 Aquilæ			19. 17. 34'70	1844'6					1730
1739†	Piazzi XIX. 140.			19. 20. 28'69						1739
1762*	61 Draconis					20. 36. 37'62	1840'5	20. 36. 7'30	1845'1	1762
1776*	53 Aquilæ					81. 32. 57'65	1839'4	81. 32. 12'05	1844'7	1776
1823*	{ B.F. 2790 ... } { Piazzi XX. 119 }	20. 13. 24'63	1836'8							1823
1866*	3 Cephei					28. 46. 51'73	1837'8	28. 45. 44'19	1844'1	1866
1897*	65 Cygni					52. 38. 5'87	1838'8	52. 36. 49'11	1847'7	1897
1911†	.....							74. 55. ...		1911
1918†	Groombridge 3492					33. 12. 7'28				1918
1970*	17 Cephei			21. 59. 17'32	1845'8					1970
1971*	17 Cephei			21. 59. 18'40	1845'8					1971
1994*	23 Cephei	22. 9. 9'13	1841'5							1994
2023*	Bradley 2993 ...	22. 25. 4'49	1840'1							2023
2029*	31 Cephei			22. 31. 56'44	1845'8					2029
2087*	91 Aquarii	23. 7. 30'05	1837'9							2087
2088*	6 Piscium	23. 8. 52'16	1840'0	23. 9. 7'82	1845'5					2088
2094†	.....							67. 1. ...		2094
2112*	39 Cephei (Hev.)...	23. 27. 48'36	1839'5	23. 27. 48'14	1842'9					2112
2115*	16 Andromedæ ...					44. 24. 29'27	1840'0	44. 22. 53'08	1844'3	2115
2119*	17 Piscium	23. 31. 43'26	1839'4	23. 31. 58'76	1844'9					2119
2148†	.....			23. 55. 25'79						2148
2156*	Bradley 3212 ...			23. 58. 34'53	1844'7					2156

CORRECTIONS for other ERRATA in the GREENWICH TWELVE-YEAR CATALOGUE of 2156 STARS.

No. 402. R.A. Constants, Value of l , for 77°344 read 76°344.
Foot note, *dele* "the R.A. differs by more than 1° from that Catalogue."
No. 474. Number of Observations for Mean R.A. 1840, Jan. 1, *insert* 2.
No. 529. N.P.D. Constants, Log. g' , for 1'39700 read 1'39888.
Value of l' , for 65°193 read 65°065.
No. 533. R.A. Constants, Log. e , for 0'08010 read 0'07827.
Value of l , for 79°846 read 79°973.
No. 560. R.A. Constants, Log. h , for 0'07739 read 0'07839.
Value of l , for 84°232 read 84°164.
Nos. 576 and 577. These stars appear to be identical.
No. 609. R.A. Constants, Value of l , for 85°619 read 85°557.
Nos. 643 and 644. Place these stars after No. 639.
No. 714. Star's Name, *insert* Lalande 15595.
R.A. Constants, *substitute* for those given,—
Log. e = 0'06694, Log. f = 0'10129, Log. g = 1'45493,
Log. h = 0'07499. Value of l = 85°348.
N.P.D. Constants, *substitute* for those given,—
Log. e' = 0'04048, Log. f' = 0'13425, Log. g' = 1'53674,
Log. h' = 0'31867. Value of l' = 55°131.
No. 753. N.P.D. Constants, Value of l' , for 30°'633 read 30°'533.
No. 760. N.P.D. Constants, Value of l' , for 43°'276 read 43°'327.
No. 818. Magnitude, for 5 read 4'5*.
No. 835. Star's Name, for Weisse IX. 614 read Weisse IX. 611.
No. 925. N.P.D. Constants, Log. e' , for 0'89741 read 0'89741.
No. 970. Magnitude, for 4'5 read 4'5*.
No. 1005. R.A. Constants, Value of l , for 88°015 read 88°201.

No. 1021. R.A. Constants, *substitute* for those given,—
Log. e = 0'02541, Log. f = 0'07079, Log. g = 1'44192,
Log. h = 0'03210. Value of l = 93°953.
N.P.D. Constants, *substitute* for those given,—
Log. e' = 9'93069, Log. f' = 0'31609, Log. g' = 1'65118,
Log. h' = 0'01612. Value of l' = 57°'230.
P. (cxvi). Line 5, No., for 1555 read 1055.
No. 1120. R.A. Constants, Log. g , for 1'44549 read 1'45549.
Value of l , for 89°284 read 87°504.
No. 1176. N.P.D. Constants, Log. f' , for 9'71628 read 0'05386.
Value of l' , for 113°'340 read 98°'047.
No. 1202. N.P.D. Constants, *substitute* for those given,—
Log. e' = 0'01360, Log. f' = 9'97204, Log. g' = 1'60057,
Log. h' = 9'72310. Value of l' = 99°'714.
No. 1206. R.A. Constants, *substitute* for those given,—
Log. e = 0'05719, Log. f = 0'05890, Log. g = 1'43857,
Log. h = 0'06694. Value of l = 90°'742.
N.P.D. Constants, *substitute* for those given,—
Log. e' = 9'66172, Log. f' = 0'20780, Log. g' = 1'59908,
Log. h' = 9'71700. Value of l' = 97°'485.
No. 1289. R.A. Constants, *substitute* for those given,—
Log. e = 0'06299, Log. f = 0'05575, Log. g = 1'45786,
Log. h = 0'08700. Value of l = 87°'691.
N.P.D. Constants, *substitute* for those given,—
Log. e' = 0'09015, Log. f' = 9'96188, Log. g' = 1'56191,
Log. h' = 9'57931. Value of l' = 103°'082.
No. 1434. Star's Name, for 34 Ophiuchi read 34 Ophiuchi.
No. 1443. R.A. Constants, Value of l , for 84°495 read 88°495.

CORRECTIONS for other ERRATA in the GREENWICH TWELVE-YEAR CATALOGUE of 2156 STARS—concluded.

- No. 1535. Secular Variation of Precession in R.A. for $+0^{\circ}0015$ read $+0^{\circ}0115$.
 No. 1562. Reference to Pond's Catalogue, for 773 read 774.
 No. 1784. N.P.D. Constants, Log. f' , for $0^{\circ}06159$ read $0^{\circ}09612$. Value of l , for $137^{\circ}521$ read $135^{\circ}136$.
 No. 1809. R.A. Constants, Log. g , for $1^{\circ}44209$ read $1^{\circ}44309$. Value of l , for $87^{\circ}092$ read $87^{\circ}015$.
 No. 1810. R.A. Constants, Log. g , for $1^{\circ}44208$ read $1^{\circ}44308$. Value of l , for $87^{\circ}084$ read $87^{\circ}007$.
 No. 1811. R.A. Constants, Log. g , for $1^{\circ}44209$ read $1^{\circ}44309$. Value of l , for $87^{\circ}080$ read $87^{\circ}003$.
 No. 1831. R.A. Constants, Value of l , for $86^{\circ}573$ read $86^{\circ}637$.
 No. 2094. Star's Name, insert *Piazzi XXIII. 48*. R.A. Constants, *substitute* for those given,—
 Log. $e = 0^{\circ}10409$, Log. $f = 0^{\circ}07372$, Log. $g = 1^{\circ}44640$, Log. $h = 0^{\circ}08908$. Value of $l = 84^{\circ}368$.
 N.P.D. Constants, *substitute* for those given,—
 Log. $e' = 9^{\circ}85715$, Log. $f' = 9^{\circ}91246$, Log. $g' = 0^{\circ}73041$, Log. $h' = 9^{\circ}99717$. Value of $l' = 140^{\circ}283$.
 No. 2148. R.A. Constants, Log. g , for $1^{\circ}44607$ read $1^{\circ}44762$. Value of l , for $80^{\circ}793$ read $80^{\circ}673$.

CORRECTED MEAN RIGHT ASCENSIONS and MEAN NORTH POLAR DISTANCES, for STARS of the GREENWICH SIX-YEAR CATALOGUE of 1576 STARS.

(The asterisk * denotes that a correction is introduced for Proper Motion, and the obelus † denotes that a correction is made for some error of computation or printing.)

No.	Star's Name.	Mean Right Ascension, 1850, Jan. 1.	Mean N.P.D., 1850, Jan. 1.	No.	Star's Name.	Mean Right Ascension, 1850, Jan. 1.	Mean N.P.D., 1850, Jan. 1.
		h m s	° ' "			h m s	° ' "
26*	13 Cassiopeiæ.....	0. 22. 50.45		741*	53 Ursæ Majoris. ξ^1		57. 37. 39.19
46*	24 Cassiopeiæ.... η	0. 40. 3.27	32. 58. 52.25	756*	20 Crateris.....		122. 2. 13.80
47*	B.F. 75.....	0. 40. 31.14	85. 29. 28.07	770*	Groombridge 1830	11. 44. 19.04	51. 12. 20.04
50*	Bradley 65.....	0. 44. 31.45		780*	Piazzi XI. 218..		46. 3. 33.54
56*	2 Ursæ Minoris...	0. 49. 9.80		797*	Bradley 1656...	12. 12. 24.72	
67*	37 Ceti.....		98. 43. 50.26	800*	Bradley 1672...	12. 14. 23.58	
75*	37 Cassiopeiæ.... δ	1. 16. 2.76		813*	8 Canum Venat. β	12. 36. 36.64	
78*	38 Cassiopeiæ.... A	1. 20. 9.16		832*	Bradley 1731...	12. 48. 5.79	
104*	Piazzi I. 157....	1. 35. 22.10		844*	43 Comæ.....		61. 21. 37.03
105*	52 Ceti..... τ	1. 37. 5.97	106. 43. 44.56	848*	61 Virginis.....	13. 10. 34.03	
148*	Piazzi II. 83....		80. 1. 50.65	880*	5 Centauri..... θ		125. 37. 41.18
159*	Piazzi II. 123....	2. 27. 51.81	83. 49. 56.99	890*	99 Virginis..... ι		95. 16. 56.43
205*	12 Eridani.....		119. 34. 51.39	914*	107 Virginis..... μ		95. 0. 10.23
232*	18 Eridani..... ϵ	3. 25. 52.02		1013*	41 Serpenteis..... γ		73. 50. 43.28
242*	23 Eridani..... δ		100. 16. 28.84	1024*	13 Draconis..... θ		31. 1. 57.76
272*	40 Eridani..... σ^2	4. 8. 22.11	97. 53. 22.72	1048†	....	16. 21. 38.16	
390†	....	5. 25. 30.41		1070*	26 Scorpis..... ϵ		124. 0. 54.14
411*	13 Leporis..... γ		112. 30. 3.28	1101*	36 Ophiuchi.... A ¹		116. 22. 36.76
425*	Groombridge 1004	5. 45. 46.17		1196*	58 Serpenteis..... η		92. 55. 59.95
543*	18 Lynceis.....		30. 6. 9.74	1275*	61 Draconis..... σ		20. 35. 38.38
597*	14 Cancri..... ψ^2		64. 2. 30.90	1342*	53 Cygni..... ϵ		56. 35. 21.03
599*	Cancri..... ζ^2		71. 54. 24.05	1472*	Bradley 2993...	22. 24. 29.80	
666*	Piazzi IX. 37....	9. 15. 15.49		1533*	39 Cephei (Hev.)...	23. 27. 49.26	
697*	Bradley 1399...	10. 6. 58.54		1573*	Bradley 3212...	23. 58. 50.20	
705*	Piazzi X. 22....	10. 12. 17.57					

CORRECTIONS for other ERRATA in the GREENWICH SIX-YEAR CATALOGUE of 1576 STARS.

- No. 151. N.P.D. Constants, Log. e' , for $0^{\circ}92829$ read $9^{\circ}2829$.
 P. (xxxviii). Reference to Foot Note, for 204 read 205.
 No. 288. Annual Proper Motion in R.A., for $+0^{\circ}088$ read $+0^{\circ}008$.
 No. 482. R.A. Constants, Log. h , for $0^{\circ}07739$ read $0^{\circ}07839$. Value of l , for $84^{\circ}232$ read $84^{\circ}164$.
 No. 664. Secular Variation of Precession in N.P.D., insert $+0^{\circ}372$.
 No. 786. Star's Name, for 2 Corvi γ read 2 Corvi ϵ .
 P. (lxxvi). Last Foot Note, for No. 850 read No. 847.
 P. (lxxviii). Foot Note, for No. 89 read No. 889.
 No. 972. Star's Name, for 31 Boötis μ^1 read 51 Boötis μ^1 .
 No. 1048. Annual Precession in R.A., for $+3^{\circ}546$ read $+3^{\circ}022$.
 No. in Greenwich 12-year Catalogue, *dele* 1363.
 Nos. 1171 and 1172. Add Foot Note:—"These stars are designated in the B.A.C. as γ^1 Sagittarii and γ^2 Sagittarii."
 No. 1294. N.P.D. Constants, Value of l , for $135^{\circ}136$ read $137^{\circ}521$.
 No. 1316. R.A. Constants, Value of l , for $86^{\circ}573$ read $86^{\circ}636$.
 P. (cviii). Foot Note, Nos. 1404, 1407, 1408, *dele* the last number (1408).
 P. (cix). Last column, No. following 1407, for 1608 read 1408.