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A SEARCH FOR FAINT BLUE STARS IN HIGH GALACTIC LATITUDES I. NINE PSS FIELDS NEAR THE NORTH GALACTIC POLE

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Continuing the survey for faint blue stars at high galactic latitudes of Haro and Luyten, this search was made, following the Tonantzintla three image method, with the 48″ Schmidt telescope of Mt. Palomar. In this first paper, a catalogue of 4431 stars and 84 compact objects found in nine PSS fields scattered around the NGP is presented, with the 1950 positions and the estimated magnitudes and colour classes.
The catalogue contains also extensive identifications with previous surveys, including some known QSS s; 16 QSS candidates are proposed; spectra are available for most of the unknown stars brighter than 14 mag.

Key words: blue stars – blue objects – catalogue – galactic halo

INTRODUCTION

Searches for faint blue stars in high galactic latitudes are made using various techniques. Two or three colour photographic observations on the same plate with Schmidt telescopes are especially profitable. Such a method was used by Iriarte and Chavira (1957), Chavira (1958, 1959), Haro and Luyten (1962), Luyten and Sandage (1966), Luyten *et al.* (1967a, 1967b, 1967c, 1968a, 1968b), Barbieri *et al.* (1968), Barbieri and Rosino (1972) and others. Technical data, of course, are somewhat different according to these observers: number and nature of the used filters, exposure times, telescope... The purpose of the present survey was initially to give a continuation near the NGP to the 8746 faint blue star list established by Haro and Luyten (1962) in the SGP zone. Indeed the plates were obtained by one of us (J.B.) with the same instrument: the Palomar 48″ Schmidt telescope; the same filters – Scott UG1, Wratten no. 12 and no. 47 – with the same exposure times – respectively 40 min., 4 min., 8 min., and the same emulsion – 103aD – were used; finally centres of the plates were identical with those of the Palomar Sky Survey (PSS). In both sets of observations the lack of time has permitted only to get one plate of every field.

In fact the weather conditions permitted to get 26 new fields in the SGP zone and only 9 new fields in the NGP region. However some statistical discussions will be possible, for example concerning the space distribution of the blue stars in the SGP zone with the PHL fields joined with our own fields, or any comparison between the number of blue stars found in the SGP and the NGP regions.

Finally, our spectroscopic observations of the brightest stars of our survey have to be added to the data of the other observers of blue stars at high galactic latitudes: Greenstein (1966), Greenstein and Sargent (1974), ...

SELECTION OF STARS

An important problem was to calibrate our selection of blue stars: some PHL fields were repeated in three colours in the course of our programme: SA. 68, PS 21^h36 0°, PS 22^h24 0°, PS 23^h12 0°, PS 21^h36 −6°. Using only the equatorial coordinates because individual charts for identification were not available in the literature, the search of PHL stars was possible with a variable success according to their colour:

a) The "very definitely blue stars" (table II of Haro and Luyten's list) could be found easily in most cases:

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90 to 95%.

b) The percentage of identified "blue stars" (table III) is variable between 60 and 90% according to the observed fields; identification is not sure for a percentage between 4 and 20%.

c) The percentage of "bluish or white stars" (table IV) which are identified with a good probability is only between 30 and 40%.

A variability in colour or magnitude is probably the cause of non-identification for the PHL stars in the table II and a substantial part of the PHL stars in the table III. But for the PHL stars in the table IV, the great subjectivity in the choice and the importance of small variations in the conditions of observation or changes in sensitivity on the plate are probably the causes of doubtful or impossible identifications. These difficulties have been already exposed by Haro and Luyten (1962).

Finally this preliminary study has led us to set up the search on the bluest stars (tables II and III of Haro and Luyten 1962) which correspond with the colour classes I and II used in some papers of the series "A Search for Faint Blue Stars" by Luyten (1952–1969). However blue stars of class III (table IV of Haro and Luyten 1962) are included in the catalogue but their search is quite incomplete for most fields.

A significant comparison can be made between the numbers of the blue stars found by Haro and Luyten (tables II and III) and by ourselves (classes I and II) near the SGP. Every set of observations includes 26 PSS fields with almost the same declinations ($\delta \geq -12°$) to eliminate the effects of change in zenithal distance.

The data are given in table 1.

The PHL and PB fields are different but closely interlaced and the good agreement of the homologous numbers in the table 1 is significant of an excellent correlation between the two surveys.

However some differences have to be pointed out:

Thus, an ambition of Haro and Luyten was to eliminate from their catalogue all extra galactic objects and stars apparently associated with galaxies or globular clusters and to keep only blue stars representative of the Halo Population. Later the discovery of quasars and quasi-stellar galaxies (Sandage 1965), especially among the faintest PHL stars (Sandage and Luyten 1967) was proving their endeavour was unfruitful. At the same time, the interest for Zwicky's compact galaxies or Markarian's objects was growing.

Consequently we have included in the catalogue some non-stellar blue objects but their search is quite incomplete, the chief purpose being the blue stars of classes I and II. On the other hand the exposure times used here do not seem quite adapted for the search of the blue compact galaxies: so the UV image of Markarian's objects is generally fainter as the yellow image on the three colour plates.

The non-stellar appearance is indicated in the catalogue. Zwicky's nomenclature according to Sargent (1970), is used:

"compact object" if diameters are 2″-5″;

"moderately compact object" if diameters are 5″-10″;

for larger diameters the usual denomination "galaxy" is attributed. All these objects are not counted in the table 1.

Many blue stars or objects found by other investigations were rediscovered in the present survey. In order to make more easy an eventual statistical study, all known stars were maintained in the catalogue and a special effort was made to get all objects or stars published previously. As a principle, for the stars present in several lists, only one identification is indicated, but occasionally two or more identifications are pointed out if not yet in the literature. Identification charts were available for Tonantzintla stars (TN), Asiago (A2 and A3) and Feige stars (F). For the other lists, identical equatorial coordinates, magnitude and colour with a reasonable approximation were the sole tests for identification.

Known quasi-stellar radio sources are mentioned and possible new identifications of blue stars with radio sources are proposed. The principal sources for these optical identifications are: A master list of radio sources (Dixon 1970); and to get more recent data:

The B2 catalogue of radio sources (Colla *et al.* 1972, 1973) and also Ohio Survey, VRO Survey, 5C Survey, NRAO Survey, UTRAO Survey...).

COLOURS, MAGNITUDES, POSITIONS

No attempt was made to estimate the indices $B-V$, $U-B$, $U-V$, like Haro and Luyten (1962); the photoelectric measures of Sandage and Luyten (1967) showed appreciable differences between Haro and Luyten's indices and the real values of $B-V$ and $U-B$ and we give only a qualitative estimation of the colour by the classes I, II, III which are corresponding with tables II, III, IV of Haro and Luyten (1962) as said previously.

Magnitudes, called B, were estimated from measurements of blue image diameters; the chief calibration was given by the photoelectric data of SA.68 and SA.57 (Stebbins *et al.* 1950, Baum (private communications)). These latter were especially fruitful to get a sequence beyond the 18th mag. and we express our gratitude to Dr. W.A. Baum. For some fields, known faint stars permitted to check-off magnitudes, chiefly in Selected Areas; the corrections to faint star magnitudes given by Stebbins *et al.* (1950) for SA.57, 61, 68, were applied to all values of Sears *et al.* (1930).

Systematic differences of the image diameters with the conditions of seeing are conspicuous and photoelectric sequences not being available for most fields, practically with the three qualities of plate (good, fair, poor) used by Haro and Luyten (1962) were related three magnitude-image diameter curves. Such a method does not permit a large precision; further the Wratten no. 47 filter does not give exactly the photographic magnitude used by the different authors.

Because of these various considerations, the individual values of B are given only in steps of 0.5 mag. which correspond with the estimated precision.

The plate limit is reached near 18.5 or 19 mag. according to the observation conditions.

The rectangular X, Y positions were measured with a precision of 0.1 mm – about 7″ on Palomar plates – for the blue stars and the reference stars included in AGK2 and Yale Catalogues. The equatorial coordinates at the Equinox 1950.0, calculated with the IBM computer of the Paris-Meudon Observatory, take into account this precision.

Identification charts are not published with the catalogue, but they will be provided on request. Our own experience permits to assert many blue stars can be easily found with only the coordinates and the comparison between the E and O prints of the Palomar Sky Survey.

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And finally we would like to record our gratitude to M.-A. Falipou for her helpful suggestions to adapt the computer programme of equatorial coordinates with our observation data.

I. NINE PSS FIELDS NEAR THE NORTH GALACTIC POLE

The initial purpose of this survey was chiefly to observe in the NGP zone a number of PSS fields, in three colours, comparable with the 49 PHL fields of the SGP zone.

Because of unfavourable weather conditions, the material collected was by far not as extensive as originally planned.

The nine observed fields are scattered around the NGP and some data for these nine regions are given in table 2 which requires no further explanation.

The total number of the blue stars – classes I and II – is 2931 with the distribution: class I = 974, class II = 1957. Again there is a very good agreement with the distributions showed by the table 1 for the SGP:

The rate $\frac{N \text{ blue stars class II}}{N \text{ blue stars class I}}$ is near 2 in both regions.

But the space density of the blue stars in the region of the NGP seems larger than it is in the region of the SGP: upon an average 325 blue stars – classes I and II – per PSS field were found for the NGP and only 132 and 122 for the two surveys of the SGP.

It is to be mentioned the higher galactic latitude for the fields near the NGP: most of them have $b \geq 70°$, whereas for the fields near the SGP, generally $50° > |b| > 70°$. But the same analysis with five PSS fields near the NGP observed by Luyten and Sandage (1966), Luyten *et al.* (1967a, 1967b, 1967c, 1968a), gives a similar result: 367 blue stars – classes I and II – per field and they have a moderate galactic latitude: respectively 37°, 45°, 56°, 58° and 71°. Finally the effect of the galactic latitude is not proved.

On the contrary the differential extinction at the lower declinations bringing on a general "reddening" of the stars is certainly a non negligible cause of the missing blue stars when the surveys near the SGP are using telescopes located in the north hemisphere. This effect was shown by Haro and Luyten (1962) for $\delta < -12°$, but a real larger concentration of blue stars toward the NGP is not incredible.

The blue stars of class III are not mentioned in the table 2, they are present in the catalogue, but as said in the introduction, their search was sporadical. For only two fields PS 14^h00 $+42°$ and PS 11^h16 $+30°$ a special effort was made to introduce in the catalogue a representative number of these "bluish or white stars": respectively 627 and 507 stars.

84 objects with a non-stellar appearance are included in the catalogue; some were previously found by Markarian (1967), Markarian and Lipovetsky (1974), Zwicky *et al.* (1961), Zwicky and Herzog (1963, 1966). Their search has to be seen as quite incomplete. All were checked on PSS prints, however their non-stellar character remains sometimes uncertain.

About 10 known or suspected quasi-stellar radio-sources were identified and are mentioned in the footnotes.

On the other hand, 16 blue stars which have positions very close to known radio sources are proposed as new QSS candidates and would need spectroscopic confirmation. Their data are gathered in the table 3. The quality of the radio positions has been taken into account in the setting-up of this list: thus the radio sources in the Ohio Survey had a right to deviate more from the star positions considering their relative inaccuracy.

Spectrograms were obtained for most of the new blue stars brighter than 14 magnitude, with different instruments of the Haute-Provence Observatory:

- Coudé spectrograph of the 193 cm telescope; dispersion 40 Å.mm^{-1}.
- Pediscou spectrograph with an image tube at the coudé focus of the 152 cm telescope; dispersion 120 Å.mm^{-1}.
- Chalonge spectrograph (Chalonge *et al.* 1952) at the Cassegrain focus of the 193 cm and 80 cm telescopes; dispersion 220 Å.mm^{-1} at Hγ.

Spectral types are estimated for all observed stars.

MORE DATA ABOUT OBSERVED FIELDS

PS 13^{h}02+48°. Stars of SA.32 present in the field were used for the calibration of the magnitudes.

PS 10^{h}30+42°. No sequence of known faint stars in this field: an intermediate magnitude-image diameter curve was used for magnitude estimations (quality fair) as said in the introduction.

PS 14^{h}00+42°. No sequence of known faint stars in this field; the magnitude-image diameter curve of the field PS 11^{h}16+30° taken on the same night was used. The large number of blue stars found in this field seems confirmed by numerous controls on PSS E and O prints.

PS 11^{h}16+30°. Stars of SA.55 present in the field were used for the magnitude calibration. This same field has been observed with an identical technique by Luyten *et al.* (1967b). However some differences between the two surveys warrant the inclusion of this field in the present catalogue:

a) This one contains 40 stars of class I, 140 of class II and more than 400 of class III not included in Luyten's list (among them 6 compact objects). The colour of a large number of these new blue stars was checked on PSS E and O prints, more particularly the class I stars which are easily detected with the Palomar Sky Survey.

b) If the two lists are showing a fair agreement for the colours of the common stars, a systematic difference for the magnitudes has to be noted: many LB stars are brighter of 0.5 to 1.5 mag., chiefly for $B \geq 17$. Photoelectric photometry would be necessary to say which scale is erroneous: it is available only for the radio source 3C 261 identified with LB 10265 ($m=16.6$) and PB 2964 ($B=18$); Sandage (1965) gives $V=18.24$, $B-V=+0.24$, $U-B=-0.56$; his measures are in favour of our estimation; but the radio source can be variable, only one example is insufficient to conclude and the two sets of magnitudes have to be considered.

c) Identifications with previous lists are present only in this paper. They make conspicuous a systematic error of +3′ in the declination of Tonantzintla stars for this region and this rectification allows to propose TN 580 = PB 2843 as QSS candidate. The 12 Tonantzintla stars present in this field were found and are included in the catalogue.

PS 13^{h}00+30°. Stars of SA.57 present in the field were used for the magnitude calibration with the values of Stebbins *et al.* (1950) and Baum (private communication). A part of this field was observed by Barbieri and Rosino (1972). The 45 stars common to both these lists are showing an excellent agreement in magnitude and colour: the mean difference in magnitude is 0.0 and for 36 stars this difference is equal or smaller than 0.5 mag. The same remark can be made for the 11 stars of Weistrop's list (1973) present in the catalogue. 50 Tonantzintla stars are in this field, but only 22 were considered as blue enough to be a part of the catalogue; most rejected stars were classed "violeta" but TN 674, TN 695, TN 697, classed "muy violeta" and which do not seem blue on the Palomar plate are suspected to be variable stars. TN 670 and TN 687 could not be identified. The systematic error in declination of the Tonantzintla stars is somewhat smaller: +1′ or +2′.

PS 14^{h}18+30°. No sequence of known faint stars in the field: the magnitude-image diameter curve of the field PS 13^{h}02+48° taken on the same night was used. Among 32 Tonantzintla stars present in this field, 28 are included in the catalogue and show no systematic error in declination.

The average difference between the magnitudes of Tonantzintla and the magnitudes of this catalogue for the three latter fields is close to +0.5 mag. in compliance with the value +0.7 mag. given by Kinman (1965) from photoelectric data.

PS 12^{h}00+18°. The magnitudes are from SA.80 and the globular cluster NGC 4147 (Sandage and Walker 1955) present in the field.

PS 13^{h}36+18°. No sequence of known faint stars in this field. This one was observed on the same night as the preceding field but the seeing was not so good and an intermediate magnitude-image diameter curve was used, like for the field PS 10^{h}30+42°.

PS 12^{h}48+6°. No sequence of known faint stars in this field. The magnitude-image diameter curve of PS 11^{h}16+30° taken on the same night was used.

THE CATALOGUE

It contains entries for 4515 stars or compact objects, more 4100 of which are new. The nine fields being scattered around the North Galactic Pole, the blue stars are given for every field successively in the order of the table 2.

The first column gives our serial number for which the designation PB, from the observer's name, is suggested (like PHL designation). The next columns give the 1950 positions, the estimated magnitudes B in steps of 0.5 mag., the classes according to the colours such as they are described previously. In the last column, asterisks refer to foot-notes, identifications and numbers of stars previously found are given with the following symbols:

A2 Barbieri and Rosino (1972)
A3 Barbieri and Benvenuti (1974)
CII Table II of Cowley (1958)
F Feige (1958)
G Giclas *et al.* (1971)
GD Giclas *et al.* (1965, 1967)
HZ Humason and Zwicky (1947)
LB Luyten (1952 to 1969)
LP Luyten (1970)
LTT Luyten (1961)
M Markarian (1967), Markarian and Lipovetsky (1974)
RMB Rubin *et al.* (1967)
SSII Table II of Slettebak and Stock (1959)
TN Tonantzintla NGP: Iriarte and Chavira (1957), Chavira (1959)
W Weistrop (1973)
ZL Zwicky and Luyten (1967)

Other used abbreviations:

CGCG "A Catalogue of Galaxies and Cluster of Galaxies": Zwicky *et al.* (1961), Zwicky and Herzog (1963, 1966)
cp. obj.: compact object
m. cp. obj.: moderately compact object
spectra: U: coudé 193 cm telescope
B: Chalonge's spectrograph
GD: Pediscou spectrograph (no relation with Giclas stars GD)

Double or multiple stars with a blue component which could be physical systems are indicated in the foot-notes with the presentation used by Luyten in different papers (e.g. Luyten 1970): successively the estimated magnitude and colour of the other component, then the position angle and separation. But the symbols A–F–G–K–M had to be used for Luyten's colours a–f–g–k–m, because the computers print only capital letters; some bright stars have a BD number and a spectral type from AGK2 catalogue. Qualitative directions substitute for position angles; their purpose is only to make more easy eventual identifications.

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Table 1 A comparison between the PHL and PB fields

		PHL fields	PB fields
Total number of blue stars for 26 fields	class I (Table II)	1105	1150
	class II (Table III)	2075	2300
Total number of blue stars (classes I and II) for one field	the richest one	201 ($PS\ 1^h36 + 6^\circ$)	234 ($PS\ 0^h00\ 0^\circ$)
	the poorest one	51 ($PS\ 3^h12\ -12^\circ$)	56 ($PS\ 23^h36\ +6^\circ$)

Table 2 PSS observed fields

	PS design.	Plate center coordinates (1950)				N bl.st. cl. I,II
		R.A.	Dec.	l	b	
1	$13^h02^m\ +48^\circ$	$13^h06^m13^s$	$+47^\circ29'32''$	114.6°	69.6°	165
2	$10^h30^m\ +42^\circ$	10 35 33	+41 30 21	176.9	59.3	428
3	$14^h00^m\ +42^\circ$	14 03 58	+41 31 48	80.5	69.1	853
4	$11^h16^m\ +30^\circ$	11 21 05	+29 28 45	201.6	70.6	329
5	$13^h00^m\ +30^\circ$	13 04 33	+29 29 25	65.4	86.0	403
6	$14^h18^m\ +30^\circ$	14 22 08	+29 34 26	44.6	69.5	156
7	$12^h00^m\ +18^\circ$	12 04 51	+17 28 16	255.0	75.8	196
8	$13^h36^m\ +18^\circ$	13 40 35	+17 31 14	356.0	74.5	175
9	$12^h48^m\ +6^\circ$	12 52 49	+ 5 29 03	305.5	68.1	226

Table 3 QSS candidates

PB No Radio sources	R.A. (1950)	Dec.	B	class	
193	$10^h20^m15^s$	$40^\circ03'.5$	17.5	I	
B2 1020 40	10 20 13.8	40 03.5			
480	10 37 19	39 58.8	17.5	I	
B2 1037 39	10 37 18.4	39 57.5			
1097	13 56 43	39 18.7	18.5	I	
B2 1356 39	13 56 41.4	39 18.3			
2262	11 07 58	30 35.4	18.5	I	
B2 1107 30	11 07 59.3	30 35.3			
2452	11 14 24	27 17.0	18.5	II	*
B2 1114 27B-A	11 14 24.4	27 16.9			
2568	11 18 31	30 56.7	17.5	III	
B2 1118 30	11 18 30.4	30 56.8			
2823	11 28 03	30 48.1	18	II	
B2 1128 30A	11 28 04.1	30 48.4			
2843	11 28 31	31 30.7	16.5	I	*
B2 1128 31	11 28 31.4	31 31.1			

PB No Radio sources	R.A. (1950)	Dec.	B	class	
3348	$13^h06^m33^s$	$27^\circ24'.2$	18.5	I	
UTRAO 1306+274	13 06 32.99	27 24.153			
3397	13 10 27	31 28.9	18	I	
B2 1310 31	13 10 28.5	31 27.0			
3530	14 09 36	31 36.6	17.5	I	
B2 1409 31	14 09 34.3	31 35.4			
3697	14 35 32	31 32.0	18	I	*
B2 1435 31	14 35 31.3	31 32.2			
3870	12 08 27	15 14.2	17.5	II	
ON 114.2	12 08 30	15 13			
4011	13 33 47	16 31.1	18.5	I	
OP 157	13 33 46	16 36			
4012	13 33 55	18 15.9	18.5	I	
OP 158	13 33 53	18 18			
4308	12 49 48	+3 32.2	17	III	
ON 083.1	12 49 51	+3 31			

* known QSS candidates : references are in the catalogue

1977A&AS...28..123B

Catalogue

PS 13:02 +48

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1	12 48 39	+47 19.2	18.5	I	
2	12 48 41	+44 29.5	17.5	II	
3	12 48 44	+45 28.6	17.5	I	
4	12 48 46	+47 12.5	17.5	I	
5	12 48 51	+46 48.1	18.	I	
6	12 49 14	+48 24.0	18.	II	
7	12 49 17	+46 16.5	18.	II	
8	12 49 22	+49 17.2	18.5	II	
9	12 49 32	+47 2.4	18.5	II	*
10	12 49 33	+47 2.8	18.5	I	*
11	12 49 51	+48 24.9	16.5	II	CP.OBJ.
12	12 50 14	+45 3.5	18.5	II	
13	12 50 35	+48 21.5	17.	I	
14	12 51 0	+45 12.1	18.5	I	
15	12 51 3	+46 49.2	18.	II	
16	12 51 4	+46 15.7	18.5	II	
17	12 51 35	+48 41.2	18.	II	
18	12 51 57	+47 28.2	17.	I	*
19	12 51 59	+48 25.0	18.	I	
20	12 53 8	+48 16.9	18.	I	
21	12 53 11	+48 13.6	16.5	I	GD320
22	12 53 12	+48 48.1	17.5	II	
23	12 53 59	+46 11.3	18.5	II	
24	12 54 15	+46 20.6	18.	II	
25	12 54 39	+45 17.3	18.	I	
26	12 54 53	+46 2.2	17.5	I	
27	12 55 2	+44 45.8	17.	I	
28	12 55 19	+49 13.6	18.	II	
29	12 55 44	+48 48.5	16.5	II	
30	12 56 11	+44 30.9	18.5	III	
31	12 56 33	+47 9.1	18.5	I	
32	12 56 47	+46 58.9	17.	I	
33	12 56 50	+49 35.1	18.5	I	
34	12 57 0	+48 2.9	18.	II	
35	12 57 24	+45 52.1	16.5	II	
36	12 57 27	+45 10.9	18.5	I	
37	12 57 37	+47 31.8	17.	I	
38	12 57 50	+47 13.1	18.	II	
39	12 57 55	+49 24.7	18.	I	
40	12 58 9	+48 15.8	18.5	II	
41	12 59 5	+47 44.1	18.5	II	
42	12 59 6	+47 21.8	18.5	II	
43	12 59 12	+45 55.2	17.5	II	
44	13 0 0	+47 15.8	18.5	II	
45	13 0 3	+48 35.5	18.	I	
46	13 0 6	+48 27.9	16.5	II	
47	13 0 39	+44 26.5	18.	II	
48	13 0 50	+46 0.8	11.5	III	
49	13 1 15	+48 22.0	15.	II	
50	13 1 16	+45 10.0	18.	II	
51	13 1 19	+46 53.9	18.5	II	
52	13 2 0	+45 56.4	18.	I	*
53	13 2 4	+46 6.5	18.	I	
54	13 2 8	+47 41.7	18.	I	
55	13 2 18	+47 27.8	17.5	II	
56	13 2 19	+46 58.8	18.	I	
57	13 2 22	+46 17.7	17.5	II	
58	13 2 24	+47 57.2	18.	I	
59	13 2 27	+49 47.6	18.	II	
60	13 2 42	+45 20.2	18.5	II	

9 AND 10 : FT COMP. TO 12, G, S 15" AND NE 20".
18 : COMP. TO 16.5 K, S 10".
52 : COMP. TO 18. M, SE 8".

PS 13:02 +48

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
61	13 3 2	+49 50.7	18.	II	
62	13 3 5	+46 54.3	18.	II	
63	13 3 13	+46 43.1	18.	II	
64	13 3 28	+47 53.9	17.	II	
65	13 3 28	+46 36.4	16.5	II	
66	13 3 31	+49 41.7	17.5	I	
67	13 3 32	+46 40.2	18.5	II	
68	13 3 35	+46 37.6	18.	I	
69	13 3 49	+45 50.1	18.5	I	
70	13 3 54	+44 44.1	18.	II	
71	13 4 3	+49 6.5	13.5	I	* F73
72	13 4 9	+44 56.1	17.5	II	
73	13 4 14	+45 0.6	17.5	II	
74	13 4 34	+49 12.5	18.5	I	
75	13 4 46	+49 13.6	18.	II	
76	13 4 58	+49 44.0	18.5	II	
77	13 5 26	+46 25.4	17.5	II	
78	13 5 43	+48 49.4	18.5	II	
79	13 6 18	+44 16.9	18.	II	
80	13 6 31	+49 50.1	18.	II	
81	13 6 33	+47 27.4	18.5	II	
82	13 6 35	+49 46.0	17.5	I	
83	13 6 53	+49 30.9	18.	II	
84	13 6 53	+44 41.4	18.5	II	
85	13 6 54	+49 30.1	17.5	I	
86	13 7 3	+46 20.2	17.5	II	
87	13 7 7	+47 33.0	17.5	II	
88	13 7 19	+49 50.9	18.5	II	
89	13 7 45	+49 40.6	13.	III	
90	13 7 52	+45 42.2	18.	II	
91	13 7 58	+45 3.4	18.	I	
92	13 7 59	+46 17.4	17.	I	
93	13 8 0	+45 3.2	18.	I	
94	13 8 1	+49 21.4	17.	I	
95	13 8 13	+47 25.6	17.5	I	
96	13 8 15	+44 50.1	18.5	II	
97	13 8 24	+46 12.4	17.5	II	
98	13 8 39	+47 36.9	18.5	I	
99	13 8 46	+45 58.4	18.5	II	
100	13 8 49	+45 7.5	18.	II	
101	13 8 51	+47 27.9	17.5	I	
102	13 9 17	+45 14.2	18.5	II	
103	13 9 18	+49 25.0	17.	II	CP.OBJ.
104	13 9 23	+49 14.1	18.	I	
105	13 9 30	+49 24.5	17.	II	
106	13 9 40	+48 56.9	18.	III	
107	13 9 42	+45 14.2	18.	II	
108	13 9 54	+50 2.5	18.	I	
109	13 9 56	+45 46.5	18.	I	
110	13 10 0	+48 25.4	17.5	I	
111	13 10 9	+46 37.1	17.5	II	
112	13 10 59	+46 33.1	18.5	I	
113	13 11 18	+44 15.8	18.	I	
114	13 11 20	+46 13.6	17.5	I	
115	13 11 22	+48 45.4	18.	II	
116	13 11 22	+45 32.2	18.5	II	
117	13 11 47	+46 32.5	18.	II	
118	13 12 4	+49 26.4	17.	II	
119	13 12 6	+48 54.6	18.5	II	
120	13 12 15	+48 27.8	15.5	II	

71 = F73 : GD SPECTRUM GIVES THE TYPE B5.

PS 13:02 +48

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
121	13 12 21	+45 39.8	18.5	II	
122	13 12 32	+48 11.8	18.	II	
123	13 12 37	+48 47.3	18.5	II	
124	13 12 41	+49 32.5	18.	II	
125	13 12 54	+46 30.0	18.5	II	
126	13 12 57	+48 10.3	18.5	I	
127	13 12 58	+48 28.6	18.5	II	
128	13 12 58	+46 53.2	18.	II	
129	13 13 17	+48 23.9	16.	II	
130	13 13 23	+47 27.2	18.	II	
131	13 13 28	+49 6.1	15.5	III	
132	13 13 30	+47 51.3	16.	II	
133	13 13 52	+47 26.4	18.5	I	
134	13 13 53	+46 6.9	18.5	II	
135	13 13 56	+46 59.8	17.5	II	
136	13 14 42	+49 9.7	17.5	II	
137	13 14 43	+48 35.4	18.5	II	
138	13 14 48	+48 43.1	18.	II	
139	13 15 16	+44 48.5	18.	II	
140	13 15 32	+47 37.7	18.5	II	
141	13 15 48	+45 54.8	18.	I	
142	13 16 7	+49 45.6	17.	II	
143	13 16 20	+50 19.6	17.5	I	*
144	13 16 22	+48 31.0	17.	II	
145	13 16 32	+49 30.0	18.5	II	
146	13 16 35	+44 51.4	14.5	I	
147	13 17 0	+49 47.7	18.5	II	
148	13 17 4	+45 20.8	14.	II	* G177-31
149	13 17 14	+47 39.2	17.5	I	
150	13 17 16	+45 6.4	18.5	II	
151	13 17 18	+46 20.5	18.5	I	
152	13 17 44	+49 35.2	18.	I	
153	13 18 2	+47 28.1	17.5	I	
154	13 18 8	+44 29.4	18.	II	
155	13 18 27	+46 13.3	18.5	II	
156	13 19 5	+48 19.6	18.5	II	
157	13 19 7	+46 38.9	14.5	II	
158	13 19 44	+47 11.2	18.	II	
159	13 20 14	+47 1.3	17.5	I	
160	13 20 17	+48 36.2	18.	I	
161	13 20 32	+47 55.2	18.5	II	
162	13 21 7	+46 46.9	17.	I	CP.OBJ.
163	13 21 27	+45 28.4	18.	I	
164	13 21 41	+45 41.0	18.	II	
165	13 21 46	+49 37.6	18.	I	
166	13 21 55	+49 38.2	12.5	I	*
167	13 21 56	+45 4.9	18.5	II	
168	13 22 17	+47 4.2	18.	II	
169	13 22 28	+48 13.5	18.	I	
170	13 22 35	+48 24.6	17.5	III	
171	13 22 36	+48 13.7	18.5	I	
172	13 22 57	+45 57.5	18.5	II	
173	13 23 13	+48 17.9	18.5	II	
174	13 24 4	+48 58.4	17.	II	

143 : FT COMP. TO 13.5 K, NW 25".
148 : FT COMP. TO BD+45°2104, 9.0 F5, SW 60".
166 : B AND GD SPECTRA GIVE THE TYPE B2.

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
175	10 18 57	+43 59.7	16.	II	
176	10 18 59	+42 24.1	17.	II	
177	10 19 6	+42 16.8	17.5	II	*
178	10 19 14	+41 52.6	17.5	III	
179	10 19 15	+42 24.5	18.	III	
180	10 19 22	+41 12.1	16.	I	
181	10 19 41	+39 47.0	16.5	II	
182	10 19 42	+41 8.8	18.	II	
183	10 19 46	+39 9.4	16.	II	
184	10 19 55	+43 50.4	17.	III	
185	10 19 55	+39 56.2	17.5	II	
186	10 19 56	+40 59.4	18.5	II	
187	10 20 1	+39 6.7	17.	I	
188	10 20 3	+40 55.1	18.5	I	*
189	10 20 5	+43 45.1	16.5	II	
190	10 20 6	+41 12.0	18.5	I	
191	10 20 14	+40 34.3	17.5	I	
192	10 20 15	+40 39.3	17.5	II	*
193	10 20 15	+40 3.5	17.5	I	* QSS?
194	10 20 16	+38 36.3	16.5	III	
195	10 20 20	+44 20.3	17.5	I	
196	10 20 28	+43 24.3	17.5	II	
197	10 20 34	+43 10.2	17.5	II	
198	10 20 37	+40 8.4	18.	I	
199	10 20 41	+42 37.0	18.5	II	
200	10 20 41	+38 22.3	18.5	II	
201	10 20 50	+42 25.4	18.5	II	
202	10 20 51	+42 6.7	18.5	II	
203	10 20 51	+38 51.6	18.	III	
204	10 20 53	+39 45.8	14.	III	
205	10 20 58	+39 54.0	18.	II	
206	10 20 59	+41 12.5	14.	III	
207	10 21 6	+44 3.7	15.5	III	
208	10 21 11	+39 38.1	17.5	I	
209	10 21 15	+40 9.6	18.5	II	
210	10 21 17	+43 21.0	17.5	I	
211	10 21 21	+43 22.7	18.	II	
212	10 21 22	+39 45.7	18.5	II	
213	10 21 31	+42 51.9	18.5	III	
214	10 21 31	+42 0.3	13.	II	
215	10 21 32	+43 51.6	15.5	II	
216	10 21 33	+42 42.5	18.5	III	
217	10 21 38	+38 20.2	16.5	III	
218	10 21 42	+38 54.6	16.	I	*
219	10 21 47	+38 36.6	18.	II	*
220	10 21 48	+39 59.6	17.5	I	
221	10 21 54	+41 33.0	18.5	II	
222	10 21 55	+41 23.1	18.	II	
223	10 22 0	+41 36.2	18.	III	
224	10 22 3	+42 41.4	15.5	III	
225	10 22 4	+41 3.3	17.5	II	

177 : FT COMP. TO 16.5 K, SE 12".
188 IS NOT A BLUE STAR ON PSS PRINTS, PROBABLY A VARIABLE STAR.
192 : FT COMP. TO 15. F, N 5".
193 : POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE B2 1020 40 (COLLA ET AL., 1973).
218 : FT COMP. TO 15. F, SE 20".
219 : FT COMP. TO 14.5 F, SW 10".

Catalogue *(continued)*

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
226	10 22 6	+41 58.8	18.	I	
227	10 22 7	+40 1.1	18.5	II	
228	10 22 9	+42 45.7	18.5	II	
229	10 22 9	+41 59.2	15.5	III	*
230	10 22 15	+43 12.5	16.5	I	
231	10 22 38	+41 18.0	17.	III	CP.OBJ.
232	10 22 49	+43 41.3	18.	II	
233	10 22 53	+44 13.0	17.	II	
234	10 22 53	+42 19.4	18.5	II	
235	10 22 56	+40 27.9	17.	II	
236	10 22 58	+38 34.2	14.5	II	
237	10 23 0	+43 59.2	17.5	I	
238	10 23 3	+41 28.6	18.	II	
239	10 23 4	+38 32.6	15.	III	
240	10 23 5	+44 10.6	16.5	II	
241	10 23 5	+39 57.6	18.	II	
242	10 23 8	+38 29.4	16.	II	
243	10 23 16	+42 33.6	18.5	I	
244	10 23 16	+40 29.6	15.	II	
245	10 23 19	+43 50.5	18.	I	
246	10 23 27	+44 13.7	16.	II	
247	10 23 29	+38 45.3	15.5	II	
248	10 23 32	+43 1.9	18.5	II	
249	10 23 36	+39 17.1	17.	II	
250	10 23 37	+39 21.4	17.5	II	*
251	10 23 42	+43 33.4	18.	II	
252	10 23 45	+38 36.8	18.	II	
253	10 23 46	+43 17.8	18.	II	
254	10 23 48	+40 7.7	18.	II	
255	10 23 53	+40 14.4	18.5	II	*
256	10 23 54	+40 21.3	18.	II	
257	10 23 57	+39 56.5	16.	II	
258	10 24 1	+41 54.7	18.5	II	
259	10 24 4	+39 36.7	18.5	II	
260	10 24 5	+39 23.3	16.5	I	
261	10 24 12	+40 5.7	18.	II	
262	10 24 19	+44 3.8	16.	I	
263	10 24 25	+39 39.0	17.	II	
264	10 24 29	+43 33.0	16.	II	
265	10 24 29	+39 34.7	17.5	I	
266	10 24 33	+41 35.0	17.	II	*
267	10 24 39	+41 50.8	18.5	I	
268	10 24 43	+40 7.9	18.	II	
269	10 24 43	+38 40.1	14.	III	
270	10 24 59	+41 16.7	18.	II	
271	10 25 5	+44 15.1	18.5	I	
272	10 25 10	+40 51.8	18.	I	
273	10 25 10	+38 53.0	18.	II	
274	10 25 11	+44 19.3	16.	III	
275	10 25 12	+42 42.5	18.	II	
276	10 25 18	+43 43.8	18.5	II	
277	10 25 41	+38 22.5	18.5	I	
278	10 25 44	+41 44.7	18.	II	
279	10 25 51	+40 5.0	15.	II	* GALAXY
280	10 25 51	+39 33.3	16.5	I	

229 : COMP. TO 15.5 K, NW 6".
250 : FT COMP. TO 14.5 G, N 12".
255 : VARIABLE? : PSS.O PRINT GIVES M > 20; NOT VISIBLE ON PSS.E PRINT.
266 : FT COMP. TO BD+42°2122, 10.2 F8, N 60".
279 : IN CGCG GALAXY WITH A MODERATELY COMPACT APPEARANCE, BLUER NUCLEUS.

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
281	10 25 53	+42 24.4	17.	II	
282	10 25 59	+40 14.4	18.	II	
283	10 26 1	+40 22.8	18.	II	
284	10 26 3	+43 3.0	18.	I	
285	10 26 3	+42 44.5	18.5	I	
286	10 26 5	+40 0.5	18.	II	
287	10 26 10	+42 33.4	17.	II	
288	10 26 13	+39 59.7	17.5	I	
289	10 26 16	+40 57.7	17.5	I	
290	10 26 17	+39 19.0	19.5	II	
291	10 26 18	+41 3.6	17.5	III	
292	10 26 29	+42 7.6	17.	III	
293	10 26 44	+41 20.8	17.5	II	
294	10 26 46	+42 36.8	18.	II	
295	10 26 47	+39 42.6	17.	II	
296	10 26 47	+39 41.4	19.5	I	
297	10 26 50	+40 34.5	16.5	III	CP.OBJ.?
298	10 27 2	+40 51.1	18.	II	
299	10 27 4	+41 55.3	18.	III	
300	10 27 6	+42 55.3	17.	II	
301	10 27 9	+43 36.6	18.	I	
302	10 27 12	+39 52.6	18.5	I	
303	10 27 20	+43 6.4	17.5	II	
304	10 27 21	+38 34.8	18.5	II	
305	10 27 26	+42 57.1	17.5	III	
306	10 27 31	+38 25.1	16.	II	
307	10 27 32	+41 49.1	18.	II	
308	10 27 37	+41 2.3	17.5	III	
309	10 27 42	+40 54.5	19.	II	
310	10 27 44	+39 27.4	16.5	III	
311	10 27 45	+40 28.5	16.5	I	
312	10 27 47	+41 32.3	17.5	I	
313	10 27 51	+41 20.6	16.5	III	
314	10 27 58	+42 1.2	16.5	II	
315	10 27 59	+42 9.2	17.5	III	
316	10 28 4	+41 35.4	17.	III	
317	10 28 5	+41 27.7	16.5	III	
318	10 28 12	+40 31.7	18.	II	
319	10 28 21	+39 11.7	14.5	III	
320	10 28 24	+39 12.5	18.	III	
321	10 28 26	+43 42.6	18.	I	
322	10 28 28	+43 15.6	16.	III	
323	10 28 35	+41 18.3	16.	II	CP.OBJ.
324	10 28 36	+39 27.7	16.5	II	
325	10 28 36	+38 44.6	17.	II	
326	10 28 41	+43 19.0	18.	II	
327	10 28 46	+43 18.7	18.5	II	
328	10 28 46	+42 52.2	16.	II	
329	10 28 48	+42 9.8	17.5	II	
330	10 28 57	+42 28.2	18.5	III	
331	10 28 57	+38 44.9	18.5	II	
332	10 28 59	+41 34.1	17.	I	
333	10 29 0	+40 37.1	17.5	III	
334	10 29 1	+41 41.7	16.	II	
335	10 29 7	+44 2.6	17.	II	
336	10 29 12	+41 10.5	17.	I	
337	10 29 15	+39 11.8	17.	I	
338	10 29 23	+41 10.1	17.5	II	
339	10 29 24	+42 37.0	17.	II	
340	10 29 24	+41 20.3	17.5	II	
341	10 29 25	+42 12.8	17.5	II	
342	10 29 25	+39 36.9	18.	I	
343	10 29 36	+40 13.5	17.	III	
344	10 29 44	+42 30.8	17.5	III	
345	10 29 52	+39 25.5	18.5	II	

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
346	10 30 1	+43 7.8	17.5	III	
347	10 30 7	+41 31.7	18.5	II	
348	10 30 11	+41 36.5	17.5	II	
349	10 30 11	+39 13.1	18.	II	
350	10 30 14	+38 32.4	13.	III	
351	10 30 16	+42 24.6	18.	I	
352	10 30 22	+44 11.0	17.5	II	
353	10 30 24	+44 12.7	18.	III	
354	10 30 25	+42 40.1	18.	I	
355	10 30 25	+38 55.0	18.5	III	
356	10 30 29	+40 21.2	15.5	II	
357	10 30 29	+40 14.6	18.5	I	
358	10 30 36	+40 7.3	16.5	III	
359	10 30 38	+42 35.9	16.5	III	
360	10 30 44	+41 32.7	18.	I	
361	10 30 44	+39 49.1	17.	III	
362	10 30 52	+40 43.0	16.	II	* GALAXY
363	10 30 52	+38 37.6	18.5	II	
364	10 30 53	+40 36.2	17.5	II	
365	10 30 56	+38 56.5	17.5	II	
366	10 31 1	+41 10.5	18.5	I	
367	10 31 13	+42 8.7	17.5	II	
368	10 31 14	+43 29.8	17.	II	
369	10 31 16	+41 45.0	17.5	III	
370	10 31 22	+39 18.6	17.5	II	
371	10 31 25	+44 21.8	17.	III	
372	10 31 32	+41 59.6	18.	II	
373	10 31 32	+40 41.0	17.	I	
374	10 31 32	+38 43.0	18.	I	
375	10 31 36	+41 29.8	17.	II	
376	10 31 49	+41 8.9	17.5	III	
377	10 31 52	+42 12.9	17.	II	
378	10 31 59	+39 46.8	17.5	I	
379	10 32 2	+39 26.1	18.5	I	
380	10 32 5	+39 47.7	18.	II	
381	10 32 7	+40 22.6	17.	III	
382	10 32 8	+44 23.4	16.	II	
383	10 32 18	+43 32.3	18.5	II	
384	10 32 21	+39 22.8	18.	II	
385	10 32 22	+40 36.8	11.5	I	* CII20
386	10 32 24	+43 37.9	17.5	I	
387	10 32 34	+41 35.3	18.5	II	
388	10 32 38	+40 44.1	18.	III	
389	10 32 41	+40 10.5	16.	I	
390	10 32 46	+41 30.7	17.5	III	
391	10 32 50	+42 16.5	17.	II	
392	10 32 51	+43 44.2	18.5	II	
393	10 33 0	+42 26.4	18.	I	
394	10 33 3	+40 58.6	17.5	II	
395	10 33 6	+42 27.5	17.	II	
396	10 33 16	+40 59.3	18.5	I	
397	10 33 17	+42 32.0	18.5	I	
398	10 33 22	+41 58.3	17.	I	
399	10 33 23	+41 4.3	17.5	II	
400	10 33 26	+41 43.6	17.5	III	
401	10 33 28	+43 2.8	16.5	II	
402	10 33 28	+39 52.4	17.	II	
403	10 33 30	+41 58.2	17.	II	
404	10 33 32	+43 31.0	18.	II	
405	10 33 34	+40 58.5	18.	II	

362 : GALAXY, STRETCHENED COMPACT APPEARANCE.
385 = CII20. B SPECTRA GIVE THE TYPE SUBDWARF B.

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
406	10 33 37	+40 3.6	18.5	I	
407	10 33 40	+40 18.1	16.	III	
408	10 33 46	+40 23.5	17.	III	
409	10 33 50	+41 8.6	18.	I	
410	10 33 54	+42 41.0	16.5	II	CP.OBJ.?
411	10 33 54	+41 2.0	18.	I	
412	10 33 56	+42 23.1	17.	I	
413	10 33 59	+40 41.0	18.	I	
414	10 34 2	+40 21.2	16.5	III	
415	10 34 5	+44 17.9	17.5	I	
416	10 34 8	+41 22.3	17.5	III	
417	10 34 17	+39 42.4	18.	II	
418	10 34 19	+39 48.6	18.5	II	
419	10 34 23	+41 59.9	14.5	II	CP.OBJ.?
420	10 34 39	+44 8.1	16.	II	
421	10 34 43	+40 18.6	17.	III	
422	10 34 49	+43 58.0	18.5	I	
423	10 34 50	+40 11.2	17.5	II	
424	10 35 0	+43 56.9	18.	I	
425	10 35 2	+44 2.3	18.5	II	
426	10 35 8	+42 23.0	15.	III	
427	10 35 13	+40 53.5	18.5	II	
428	10 35 15	+43 17.6	16.5	II	
429	10 35 17	+40 13.5	17.	II	
430	10 35 17	+38 33.4	15.5	II	
431	10 35 21	+40 51.0	16.5	III	
432	10 35 24	+38 19.6	17.5	II	
433	10 35 27	+44 17.8	17.5	I	
434	10 35 30	+39 43.4	18.	III	
435	10 35 30	+38 28.7	18.5	I	
436	10 35 31	+42 25.3	18.	II	
437	10 35 40	+40 26.9	18.	II	
438	10 35 42	+39 8.3	17.	II	
439	10 35 49	+42 41.1	17.	II	
440	10 35 56	+42 11.0	17.5	II	
441	10 35 56	+40 6.8	16.	II	
442	10 35 56	+38 48.4	17.	I	
443	10 35 59	+42 25.3	17.	I	
444	10 36 6	+43 24.4	18.5	II	
445	10 36 6	+38 59.1	17.	III	
446	10 36 7	+42 31.5	18.	I	
447	10 36 8	+39 23.7	18.	II	
448	10 36 12	+42 45.3	18.	I	
449	10 36 18	+40 13.4	18.5	II	
450	10 36 20	+41 17.9	17.5	I	
451	10 36 21	+39 12.2	16.5	II	CP.OBJ.
452	10 36 22	+41 10.3	17.	II	
453	10 36 22	+40 52.6	18.	II	
454	10 36 25	+44 13.8	18.	II	
455	10 36 28	+41 35.1	18.	II	
456	10 36 30	+41 43.8	16.	III	
457	10 36 34	+43 25.9	17.5	II	
458	10 36 34	+40 38.4	18.	II	
459	10 36 35	+39 39.3	16.5	II	
460	10 36 39	+38 56.7	16.5	II	
461	10 36 40	+43 32.1	17.	II	
462	10 36 41	+43 21.9	11.	I	F34
463	10 36 41	+42 59.5	16.5	II	
464	10 36 41	+40 9.5	17.5	I	
465	10 36 42	+43 0.5	17.	II	
466	10 36 44	+41 51.3	17.	II	
467	10 36 45	+38 20.5	16.	II	
468	10 36 48	+42 43.1	18.	I	
469	10 37 0	+39 16.7	18.	III	
470	10 37 1	+41 48.1	17.5	III	

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Catalogue *(continued)*

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
471	10 37 2	+41 15.0	18.	II	
472	10 37 2	+40 29.2	17.	III	
473	10 37 5	+42 23.4	16.5	II *	
474	10 37 6	+40 51.5	17.5	I	
475	10 37 7	+40 18.1	17.	I	
476	10 37 8	+43 25.3	17.5	II	
477	10 37 9	+41 7.7	18.5	I	
478	10 37 11	+41 6.8	18.5	II	
479	10 37 15	+43 44.0	18.	II	
480	10 37 19	+39 53.8	17.5	I * QSS?	
481	10 37 20	+43 49.2	17.	III CP.OBJ.	
482	10 37 21	+38 51.3	18.	II	
483	10 37 22	+41 38.4	18.5	II	
484	10 37 24	+38 26.4	18.	II	
485	10 37 36	+41 40.4	18.5	II	
486	10 37 37	+43 23.9	18.	II	
487	10 37 47	+38 24.0	17.	I	
488	10 37 50	+44 16.0	18.	I	
489	10 37 54	+39 56.2	18.	II	
490	10 37 54	+38 25.4	18.	II	
491	10 37 56	+40 12.8	15.5	III	
492	10 38 6	+44 16.5	18.5	II	
493	10 38 6	+41 37.1	16.5	III	
494	10 38 10	+43 13.1	18.5	II	
495	10 38 13	+41 31.1	18.	III	
496	10 38 18	+40 53.2	17.	II	
497	10 38 21	+39 34.0	17.	III	
498	10 38 25	+38 39.4	17.5	II	
499	10 38 29	+39 0.2	17.5	III	
500	10 38 36	+42 23.0	18.	III	
501	10 38 36	+40 11.5	16.5	III	
502	10 38 41	+44 16.2	17.	II CP.OBJ.	
503	10 38 44	+42 14.9	17.	II *	
504	10 38 46	+41 9.7	14.5	II	
505	10 38 47	+38 46.3	16.5	II	
506	10 38 49	+40 8.7	17.5	III	
507	10 38 58	+38 48.7	17.	III CP.OBJ.?	
508	10 38 59	+44 4.5	18.5	II	
509	10 39 2	+40 24.6	16.5	II	
510	10 39 7	+39 47.8	18.	II	
511	10 39 12	+38 41.1	17.	II	
512	10 39 13	+42 42.4	17.5	II	
513	10 39 14	+40 27.6	18.	III	
514	10 39 14	+38 27.4	17.5	II	
515	10 39 15	+40 3.4	17.5	I	
516	10 39 17	+42 52.4	17.	II	
517	10 39 17	+40 23.0	18.	I	
518	10 39 34	+42 8.4	17.	II	
519	10 39 38	+38 26.8	17.	I	
520	10 39 40	+41 13.0	15.5	II	
521	10 39 45	+40 27.6	18.5	II	
522	10 39 47	+41 56.8	17.5	III	
523	10 39 48	+38 50.3	13.5	III *	
524	10 39 53	+40 45.2	17.	II	
525	10 39 54	+44 21.5	17.	II	

473 HAS A FT COMP. 18. M, NW 12".
480 : POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE B2 1037 39 (COLLA ET AL., 1973).
503 HAS A FT COMP. 19. M, E 12".
523 : FT COMP. TO 12.5 G, NW 20".

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
526	10 39 54	+44 0.9	18.	II	
527	10 39 54	+39 3.8	17.5	III	
528	10 39 59	+39 50.5	18.5	I	
529	10 40 2	+43 16.6	17.5	I	
530	10 40 7	+43 49.8	17.5	II	
531	10 40 8	+40 42.5	17.5	III *	
532	10 40 8	+38 34.3	16.	II	
533	10 40 11	+41 32.7	17.	II	
534	10 40 15	+39 51.2	18.	II	
535	10 40 15	+38 43.8	18.	II	
536	10 40 17	+44 21.3	13.	II	
537	10 40 18	+40 3.5	17.5	III	
538	10 40 34	+44 26.6	17.	II	
539	10 40 41	+43 10.0	18.	II	
540	10 40 41	+40 31.0	17.5	III	
541	10 40 54	+40 9.3	19.	I	
542	10 40 55	+40 41.7	17.	I	
543	10 40 57	+43 49.7	18.5	I	
544	10 41 3	+42 20.1	17.	II	
545	10 41 5	+43 14.4	16.5	II	
546	10 41 9	+40 22.7	17.	I	
547	10 41 10	+42 5.8	17.5	I	
548	10 41 18	+39 28.0	17.	II	
549	10 41 20	+38 42.5	18.	I	
550	10 41 26	+41 11.7	16.5	I	
551	10 41 27	+43 47.7	18.	I	
552	10 41 30	+44 21.4	18.	II	
553	10 41 31	+38 54.5	18.	I	
554	10 41 32	+39 29.0	11.	II CII22	
555	10 41 33	+41 33.5	17.	II	
556	10 41 33	+39 4.4	17.	II	
557	10 41 43	+41 3.6	18.	III	
558	10 41 46	+39 17.0	17.5	III	
559	10 41 47	+38 18.3	18.	II	
560	10 41 47	+43 14.7	17.5	II	
561	10 41 51	+40 26.6	17.5	III	
562	10 41 55	+42 20.4	17.	II	
563	10 41 55	+39 51.4	14.5	III	
564	10 42 5	+39 34.8	17.5	III	
565	10 42 8	+41 43.9	17.5	III	
566	10 42 10	+43 35.6	17.5	II	
567	10 42 11	+43 50.3	18.	III	
568	10 42 12	+40 57.1	16.5	II	
569	10 42 14	+41 4.0	18.5	I	
570	10 42 18	+38 54.1	17.5	II	
571	10 42 19	+41 34.8	17.	III	
572	10 42 29	+39 3.7	18.	I	
573	10 42 41	+43 4.6	18.5	II	
574	10 42 44	+40 21.4	17.5	II	
575	10 42 52	+41 25.1	17.5	I	
576	10 42 57	+41 18.8	18.	II	
577	10 43 4	+41 59.4	18.	I	
578	10 43 16	+38 51.9	17.	III CP.OBJ.	
579	10 43 20	+40 46.7	17.	II	
580	10 43 20	+40 14.9	17.	III	
581	10 43 23	+40 16.3	17.5	I	
582	10 43 26	+38 23.2	17.	II	
583	10 43 28	+42 20.1	17.	II	
584	10 43 31	+44 20.2	17.	III	
585	10 43 32	+43 13.9	17.5	II	

531 : FT COMP. OF A TRIPLE SYSTEM : 15. K + 17. F, N 18" + 17.5 A, NW 18".

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
586	10 43 36	+41 27.0	17.5	II	
587	10 43 38	+41 15.0	18.5	II	
588	10 43 38	+40 24.4	15.	II	
589	10 43 42	+38 20.7	15.5	I	
590	10 43 43	+41 7.9	18.	II	
591	10 43 47	+42 42.9	16.5	III	
592	10 43 49	+39 36.1	17.	I	
593	10 43 56	+42 59.9	17.	III	
594	10 43 56	+39 35.8	15.5	II	
595	10 44 1	+42 45.3	18.	I	
596	10 44 3	+44 11.9	17.5	I	
597	10 44 7	+44 27.2	17.5	I	
598	10 44 9	+43 9.1	17.5	II	
599	10 44 11	+43 24.4	18.	II	
600	10 44 25	+39 46.3	17.5	II	
601	10 44 33	+41 30.9	18.	I	
602	10 44 35	+43 4.0	17.5	III	
603	10 44 37	+42 30.9	16.5	III	
604	10 44 51	+42 29.9	18.	I	
605	10 44 51	+40 39.7	17.	III	
606	10 44 54	+42 50.9	17.5	III	
607	10 44 56	+43 29.6	18.	II	
608	10 45 2	+42 13.3	18.	II	
609	10 45 2	+39 9.0	17.	III	
610	10 45 3	+40 40.9	17.	I	
611	10 45 8	+43 14.2	17.	II	
612	10 45 11	+41 9.5	17.5	II	
613	10 45 12	+41 26.6	17.5	II	
614	10 45 14	+38 53.5	17.5	II	
615	10 45 22	+42 44.4	18.5	II	
616	10 45 24	+39 8.2	17.5	II	
617	10 45 26	+40 34.0	17.	III	
618	10 45 29	+42 11.0	15.	II CP.OBJ.	
619	10 45 35	+39 56.1	18.5	I	
620	10 45 38	+39 47.6	16.5	I	
621	10 45 41	+38 34.3	18.5	I	
622	10 45 43	+42 0.5	17.	III	
623	10 45 44	+38 26.0	17.5	II	
624	10 45 50	+41 14.7	17.	I	
625	10 45 54	+38 26.0	17.5	III	
626	10 45 55	+39 51.3	16.5	II	
627	10 45 56	+40 39.0	18.	II	
628	10 45 56	+40 6.1	18.	I	
629	10 46 2	+44 7.3	17.5	II	
630	10 46 11	+41 1.3	18.5	II	
631	10 46 13	+41 25.7	18.	I	
632	10 46 20	+38 16.3	11.	I * CII23	
633	10 46 24	+38 29.3	17.	II	
634	10 46 25	+39 34.5	16.5	II	
635	10 46 26	+42 32.2	18.5	II	
636	10 46 28	+43 40.2	18.5	II	
637	10 46 36	+43 29.2	17.	II	
638	10 46 36	+41 0.7	17.	III *	
639	10 46 36	+39 52.4	17.5	II	
640	10 46 36	+38 54.8	17.5	I	
641	10 46 40	+40 38.5	18.	II	
642	10 46 48	+40 11.1	18.	III	
643	10 46 52	+42 58.1	17.	II	
644	10 46 55	+42 4.5	18.	II	
645	10 46 55	+40 28.4	18.5	II	

632 = CII23 = BD+38°2182.
638 : COMP. TO 16.5 K, SW 10".

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
646	10 46 56	+40 39.4	18.	I	
647	10 46 57	+44 18.8	17.5	I	
648	10 47 0	+44 9.9	17.	II	
649	10 47 0	+42 57.3	17.5	II	
650	10 47 10	+38 25.5	17.5	II	
651	10 47 18	+44 4.5	16.	II	
652	10 47 23	+41 6.5	17.	II	
653	10 47 23	+38 55.9	18.	II	
654	10 47 31	+40 54.3	18.	III	
655	10 47 39	+44 9.0	17.5	II	
656	10 47 42	+39 36.0	17.5	III	
657	10 47 46	+42 0.1	17.	II	
658	10 47 49	+41 40.0	18.	II	
659	10 47 52	+40 38.6	17.5	I	
660	10 47 56	+42 51.9	18.	III	
661	10 47 59	+41 49.1	17.5	II	
662	10 48 17	+42 53.8	16.5	III	
663	10 48 17	+40 21.8	17.	II	
664	10 48 23	+41 5.0	18.5	II	
665	10 48 24	+44 20.6	16.5	II CP.OBJ.	
666	10 48 30	+38 51.3	18.	I	
667	10 48 34	+39 59.4	18.5	I	
668	10 48 39	+43 55.2	18.	II	
669	10 48 44	+38 57.2	13.	II	
670	10 48 45	+41 15.1	16.5	II	
671	10 48 54	+42 25.5	19.	II	
672	10 48 56	+41 13.6	18.5	II	
673	10 48 59	+42 54.5	13.	III	
674	10 49 8	+40 33.6	16.	I	
675	10 49 10	+39 16.5	18.5	II	
676	10 49 12	+41 47.8	18.	II	
677	10 49 15	+43 58.0	18.	II	
678	10 49 28	+44 20.6	17.5	I	
679	10 49 28	+43 43.5	13.5	II CP.OBJ.?	
680	10 49 29	+43 43.3	17.5	II CP.OBJ.?	
681	10 49 29	+38 53.0	18.	III	
682	10 49 31	+41 48.0	18.	II	
683	10 49 33	+43 55.5	18.	I	
684	10 49 40	+44 22.9	15.5	II	
685	10 49 41	+39 58.1	19.	III	
686	10 49 43	+39 50.9	18.	II	
687	10 49 44	+43 53.4	16.5	II	
688	10 49 47	+41 45.5	17.	I	
689	10 49 48	+39 55.1	17.	III	
690	10 49 49	+40 8.4	18.	II	
691	10 49 53	+39 10.0	17.5	II	
692	10 50 1	+42 9.6	17.5	II	
693	10 50 4	+43 50.0	17.	III	
694	10 50 4	+41 9.2	18.5	II	
695	10 50 6	+41 9.0	18.5	II	
696	10 50 25	+43 5.8	17.	II	
697	10 50 25	+40 23.9	18.	II	
698	10 50 25	+39 27.8	18.5	II	
699	10 50 28	+39 55.9	19.5	I	
700	10 50 30	+42 42.9	18.5	I	
701	10 50 32	+39 43.3	19.5	I	
702	10 50 33	+40 32.1	17.5	I	
703	10 50 34	+42 10.7	17.	II	
704	10 50 39	+44 12.9	17.5	I	
705	10 50 59	+39 55.4	17.5	III	
706	10 51 1	+38 55.2	18.	II	
707	10 51 3	+39 12.6	17.	II	
708	10 51 5	+41 1.4	17.5	II	
709	10 51 8	+43 6.8	17.5	II	
710	10 51 9	+42 51.2	17.5	II	

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Catalogue *(continued)*

PS 10:30 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
711	10 51 12	+44 8.5	16.5	II	
712	10 51 13	+42 8.9	18.	II	
713	10 51 15	+38 35.5	16.	III	
714	10 51 16	+41 6.9	18.	I	
715	10 51 16	+40 52.0	18.5	I	
716	10 51 30	+41 22.3	18.5	II	
717	10 51 37	+40 20.3	16.5	III	
718	10 51 38	+42 25.4	18.5	II	
719	10 51 38	+38 21.1	16.5	II	
720	10 51 41	+39 11.4	16.5	II	*
721	10 51 44	+41 16.3	18.5	II	
722	10 51 47	+39 28.9	18.5	II	
723	10 52 1	+41 46.4	17.	III	
724	10 52 7	+40 20.7	18.5	II	
725	10 52 14	+40 12.0	17.	II	
726	10 52 18	+41 1.5	18.5	III	
727	10 52 26	+44 15.9	18.	II	
728	10 52 29	+42 46.5	17.5	I	
729	10 52 29	+40 43.2	16.5	I	
730	10 52 40	+42 2.1	17.5	III	
731	10 52 51	+43 6.4	17.	II	

720 HAS A FT COMP. 17.5 K, NW 15".

PS 14:00 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
732	13 46 48	+44 14.7	18.	II	
733	13 46 54	+43 29.0	18.5	III	
734	13 47 5	+43 52.2	18.5	III	
735	13 47 8	+42 43.1	17.	II	
736	13 47 9	+43 5.3	18.5	II	
737	13 47 17	+43 47.5	18.5	I	
738	13 47 24	+42 15.8	18.5	II	
739	13 47 27	+42 41.6	17.5	III	
740	13 47 30	+42 39.0	18.5	I	
741	13 47 32	+41 23.0	17.5	II	
742	13 47 34	+42 41.1	17.	II	
743	13 47 35	+43 58.0	18.5	I	
744	13 47 36	+41 23.1	17.	III	
745	13 47 36	+41 0.7	18.	II	
746	13 47 39	+40 48.5	17.	II	
747	13 47 41	+43 56.5	18.	I	
748	13 47 42	+43 39.1	18.5	II	
749	13 47 43	+44 3.9	17.5	II	
750	13 47 44	+42 17.4	16.5	III	
751	13 47 45	+40 37.4	17.	II	
752	13 47 46	+43 47.8	17.5	III	
753	13 47 48	+41 33.8	16.	III	
754	13 47 49	+42 13.9	18.	II	
755	13 47 51	+43 58.0	17.5	III	
756	13 47 51	+41 29.9	18.5	III	
757	13 47 55	+41 21.8	11.	III	*
758	13 47 57	+39 42.7	17.	III	
759	13 48 0	+42 53.9	18.	II	
760	13 48 1	+44 14.6	18.	III	
761	13 48 1	+39 26.5	18.	III	
762	13 48 2	+42 53.3	17.5	III	
763	13 48 2	+39 13.2	18.	III	
764	13 48 4	+43 6.1	18.5	III	
765	13 48 6	+44 6.1	16.5	III	
766	13 48 7	+42 8.5	18.	II	
767	13 48 9	+41 44.4	17.	III	
768	13 48 12	+41 46.8	18.5	III	
769	13 48 12	+41 1.0	18.	II	
770	13 48 13	+38 52.8	17.5	II	
771	13 48 15	+41 47.8	17.	I	
772	13 48 16	+44 12.7	17.	I	
773	13 48 18	+44 7.8	17.	III	
774	13 48 18	+42 45.9	18.	III	
775	13 48 18	+39 19.1	17.5	I	
776	13 48 19	+40 54.0	17.5	II	
777	13 48 20	+43 48.2	17.5	II	
778	13 48 22	+43 7.7	17.5	III	
779	13 48 26	+44 13.4	18.5	II	
780	13 48 31	+44 10.2	18.5	I	
781	13 48 42	+41 42.9	17.5	II	
782	13 48 48	+43 59.9	17.5	III	
783	13 48 52	+44 18.4	17.	III	
784	13 48 53	+43 41.4	17.	II	
785	13 48 54	+42 1.5	17.	II	
786	13 48 54	+41 59.3	18.5	I	
787	13 48 54	+38 29.7	17.5	II	
788	13 48 54	+38 29.4	18.	II	
789	13 49 55	+38 55.9	18.	II	
790	13 48 56	+40 40.6	17.	II	CP.OBJ.

757 : GC SPECTRUM GIVES A TYPE LATE B.

PS 14:00 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
791	13 48 57	+39 23.7	18.	III	
792	13 48 58	+42 13.3	18.	II	
793	13 49 2	+42 32.7	18.5	III	
794	13 49 4	+43 32.8	18.	III	
795	13 49 4	+41 8.3	19.	III	
796	13 49 5	+42 57.6	17.	II	
797	13 49 5	+42 3.3	17.	II	
798	13 49 6	+41 3.8	18.5	II	
799	13 49 7	+41 25.1	13.	II	*
800	13 49 7	+39 25.6	17.5	III	
801	13 49 9	+38 42.3	17.5	I	
802	13 49 10	+43 11.8	19.	II	
803	13 49 13	+43 8.2	17.	I	
804	13 49 13	+38 56.5	18.	II	
805	13 49 13	+38 50.4	17.5	II	
806	13 49 14	+38 36.7	18.5	III	
807	13 49 14	+38 21.5	17.5	III	
808	13 49 18	+43 4.2	16.5	II	
809	13 49 20	+42 54.2	18.5	III	
810	13 49 22	+42 9.1	19.	III	
811	13 49 25	+42 54.5	17.5	III	
812	13 49 27	+42 31.0	17.5	III	
813	13 49 28	+43 22.6	18.5	III	
814	13 49 31	+38 44.0	18.	III	
815	13 49 32	+44 22.9	16.5	III	
816	13 49 33	+44 10.8	17.5	II	
817	13 49 34	+44 1.8	17.5	II	
818	13 49 34	+40 44.9	17.5	III	
819	13 49 39	+40 22.3	18.	III	
820	13 49 39	+39 56.4	17.	II	
821	13 49 40	+43 14.1	18.5	III	
822	13 49 42	+42 53.0	18.5	III	
823	13 49 43	+43 41.7	18.5	III	
824	13 49 44	+39 57.9	18.5	I	
825	13 49 46	+44 7.3	18.5	II	
826	13 49 47	+42 25.0	18.	II	
827	13 49 49	+43 20.9	18.	II	
828	13 49 49	+38 22.9	17.5	II	
829	13 49 50	+42 8.8	18.5	II	
830	13 49 51	+41 41.6	17.5	III	
831	13 49 53	+39 6.8	17.5	I	
832	13 49 54	+38 34.1	18.	III	
833	13 49 58	+43 35.7	18.	II	
834	13 49 58	+41 36.7	18.5	III	
835	13 49 59	+44 21.2	17.5	III	
836	13 49 59	+38 20.6	18.	II	
837	13 50 1	+44 21.5	18.	III	
838	13 50 3	+40 26.5	18.5	III	
839	13 50 4	+43 43.2	18.5	III	
840	13 50 5	+38 33.1	18.	III	
841	13 50 7	+38 52.1	17.5	III	
842	13 50 7	+38 21.7	17.5	II	
843	13 50 8	+42 24.0	18.	II	
844	13 50 8	+39 54.7	16.5	II	
845	13 50 8	+38 48.3	17.	III	
846	13 50 9	+41 53.3	18.5	II	
847	13 50 11	+43 39.5	18.5	III	
848	13 50 12	+43 0.0	18.5	II	
849	13 50 12	+39 3.6	18.5	III	
850	13 50 14	+43 41.0	18.	III	

799 : GD SPECTRUM GIVES THE TYPE B9; SHARP BALMER LINES : HB STAR?

PS 14:00 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
851	13 50 16	+44 16.3	17.	II	
852	13 50 16	+44 3.5	18.5	I	
853	13 50 16	+43 2.2	18.	I	
854	13 50 24	+39 53.0	19.	I	
855	13 50 24	+39 42.9	18.	III	
856	13 50 27	+39 42.4	18.	III	
857	13 50 27	+39 28.5	17.5	III	
858	13 50 30	+42 28.3	18.	II	
859	13 50 37	+40 53.0	13.5	III	
860	13 50 39	+43 29.4	18.5	II	
861	13 50 43	+43 41.2	16.	III	
862	13 50 44	+38 45.8	18.5	III	
863	13 50 46	+41 9.0	18.	III	
864	13 50 46	+39 23.4	17.5	II	
865	13 50 47	+43 15.7	18.	III	
866	13 50 48	+42 19.7	17.	III	
867	13 50 52	+40 8.5	19.	III	
868	13 50 53	+43 4.6	17.5	II	
869	13 50 54	+40 58.8	18.	II	
870	13 50 55	+43 21.2	18.	III	
871	13 50 57	+42 43.8	18.	III	
872	13 50 57	+39 9.8	18.5	III	
873	13 51 0	+42 54.9	17.5	I	CP.OBJ.?
874	13 51 0	+39 6.7	18.	III	
875	13 51 8	+40 50.4	17.5	III	
876	13 51 9	+44 25.0	18.5	II	
877	13 51 9	+38 59.9	17.5	III	
878	13 51 9	+38 31.6	18.	II	
879	13 51 10	+41 44.8	18.5	II	
880	13 51 10	+39 24.8	18.	II	
881	13 51 12	+41 46.6	18.	II	
882	13 51 13	+43 39.6	18.	II	
883	13 51 17	+43 54.9	17.5	III	
884	13 51 17	+39 25.1	17.5	II	
885	13 51 18	+39 22.8	16.5	II	
886	13 51 23	+40 50.2	17.5	II	
887	13 51 24	+40 33.4	18.5	II	
888	13 51 25	+41 56.2	17.5	III	
889	13 51 25	+39 25.4	17.5	II	
890	13 51 26	+39 19.1	14.	II	
891	13 51 28	+41 57.9	17.5	II	
892	13 51 33	+41 12.3	18.5	II	
893	13 51 34	+43 53.9	18.5	III	
894	13 51 34	+41 15.8	18.5	II	
895	13 51 35	+42 47.0	17.5	II	
896	13 51 36	+41 28.5	18.5	II	
897	13 51 37	+43 25.6	17.5	I	
898	13 51 37	+41 16.5	17.5	III	
899	13 51 40	+39 49.5	18.	I	
900	13 51 42	+43 5.9	17.	III	
901	13 51 42	+38 19.0	16.5	I	
902	13 51 43	+41 7.9	18.5	III	
903	13 51 44	+36 19.5	18.5	II	
904	13 51 48	+42 30.2	18.	II	
905	13 51 48	+41 42.9	18.5	III	
906	13 51 48	+40 27.2	19.	III	
907	13 51 48	+40 13.0	18.5	I	
908	13 51 50	+39 3.6	18.5	III	
909	13 51 52	+44 26.7	16.5	II	
910	13 51 52	+41 20.4	18.	III	
911	13 51 54	+40 12.0	18.	III	
912	13 51 55	+42 58.9	18.5	II	
913	13 51 56	+42 49.6	18.	III	
914	13 51 56	+40 35.3	18.	II	
915	13 51 57	+41 7.3	18.5	II	

Catalogue *(continued)*

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
916	13 51 58	+41 20.3	18.	III	
917	13 52 0	+42 45.6	18.	II	
918	13 52 1	+40 29.5	18.	II	
919	13 52 2	+43 18.0	17.5	III	
920	13 52 3	+41 32.2	19.	III	
921	13 52 3	+40 2.4	17.5	II	
922	13 52 4	+41 32.4	18.5	III	
923	13 52 6	+38 41.4	18.	III	
924	13 52 8	+40 49.6	18.5	II	
925	13 52 9	+43 56.8	17.	III	
926	13 52 10	+43 22.9	18.	III	
927	13 52 11	+41 2.7	18.	III	
928	13 52 14	+43 5.4	18.	III	
929	13 52 15	+42 24.3	18.	III	
930	13 52 15	+39 9.4	18.5	III	
931	13 52 16	+41 58.8	17.5	III	
932	13 52 17	+41 21.4	17.	III	
933	13 52 17	+40 58.6	18.	III	
934	13 52 21	+42 56.6	18.5	I	
935	13 52 24	+43 17.5	17.5	III	
936	13 52 25	+41 43.3	19.	III	
937	13 52 27	+43 24.8	16.	II	
938	13 52 29	+38 33.5	17.	II	
939	13 52 31	+41 21.3	18.	III	
940	13 52 33	+42 36.1	18.5	II	
941	13 52 34	+39 51.3	19.	I	
942	13 52 36	+41 34.0	18.5	III	
943	13 52 36	+39 11.9	18.5	III	
944	13 52 37	+43 14.8	18.5	III	
945	13 52 38	+43 7.7	18.	III	
946	13 52 38	+43 7.1	17.5	III	
947	13 52 39	+39 11.5	18.5	II	
948	13 52 43	+42 21.3	19.	I	
949	13 52 44	+44 26.5	19.	II	
950	13 52 45	+41 17.2	18.	III	
951	13 52 45	+39 37.3	17.5	I	
952	13 52 46	+42 24.8	18.	III	
953	13 52 46	+40 50.6	18.5	I	
954	13 52 49	+41 58.9	19.	III	
955	13 52 51	+38 22.5	18.	II	
956	13 52 52	+43 59.7	17.	II	
957	13 52 53	+41 7.0	18.5	II	
958	13 52 56	+40 52.9	17.5	II	
959	13 52 56	+40 3.5	18.	II	
960	13 53 0	+44 25.6	18.5	III	
961	13 53 0	+44 24.3	18.	II	
962	13 53 3	+41 8.2	18.5	III	
963	13 53 5	+38 39.9	17.5	II	
964	13 53 9	+42 36.1	18.	II	
965	13 53 9	+38 57.9	18.	III	
966	13 53 10	+43 57.4	19.	III	
967	13 53 11	+43 9.5	18.	II	
968	13 53 11	+40 18.1	17.	I	
969	13 53 13	+44 25.5	17.	I	
970	13 53 13	+39 5.7	19.	I	
971	13 53 18	+40 17.8	18.5	III	
972	13 53 21	+39 30.2	18.5	III	
973	13 53 23	+40 25.0	18.	II	
974	13 53 24	+40 30.5	17.5	III	CP.OBJ.
975	13 53 24	+38 42.5	18.	II	
976	13 53 26	+41 41.6	18.	III	
977	13 53 26	+40 58.1	18.5	III	
978	13 53 26	+39 23.1	19.	III	
979	13 53 28	+40 23.4	19.	I	
980	13 53 28	+40 13.8	19.	I	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
981	13 53 30	+43 39.7	18.5	II	
982	13 53 31	+42 49.3	18.	II	
983	13 53 32	+44 21.5	17.	II	
984	13 53 36	+44 7.6	18.5	III	
985	13 53 36	+40 29.7	18.	II	
986	13 53 36	+38 58.3	18.5	III	
987	13 53 37	+43 3.2	18.	II	
988	13 53 38	+40 40.2	19.	I	
989	13 53 38	+40 33.8	19.	II	
990	13 53 39	+43 40.9	19.	III	
991	13 53 39	+42 9.4	16.5	III	
992	13 53 40	+43 13.9	18.	II	
993	13 53 44	+44 11.4	19.	II	
994	13 53 44	+40 32.5	18.5	II	
995	13 53 44	+38 42.7	18.	III	
996	13 53 45	+38 49.1	17.	II	
997	13 53 48	+42 49.9	18.	II	
998	13 53 48	+41 42.9	18.	II	
999	13 53 50	+40 55.6	15.5	I	
1000	13 53 51	+41 34.9	18.	II	
1001	13 53 54	+43 36.6	18.	III	
1002	13 53 55	+41 51.3	18.5	III	
1003	13 53 57	+40 25.7	17.5	III	
1004	13 53 59	+39 7.8	17.	III	
1005	13 54 2	+42 20.5	17.	III	
1006	13 54 2	+41 50.9	18.	I	
1007	13 54 6	+42 57.2	17.	III	
1008	13 54 7	+41 28.5	17.5	III	
1009	13 54 8	+40 25.1	18.5	III	
1010	13 54 9	+44 12.8	16.5	II	
1011	13 54 9	+39 33.5	17.5	II	
1012	13 54 13	+43 5.7	18.	III	
1013	13 54 13	+41 38.9	18.	III	
1014	13 54 16	+38 45.2	17.5	II	
1015	13 54 16	+38 25.1	18.	III	
1016	13 54 20	+42 49.0	19.	II	
1017	13 54 21	+41 33.3	18.	III	
1018	13 54 21	+41 20.3	17.5	II	
1019	13 54 22	+42 52.2	18.	II	
1020	13 54 23	+41 36.3	18.5	II	
1021	13 54 31	+43 13.9	19.	I	
1022	13 54 32	+43 0.5	17.5	III	
1023	13 54 32	+41 5.2	17.	III	
1024	13 54 35	+44 27.9	18.5	III	
1025	13 54 35	+43 16.8	18.	III	
1026	13 54 37	+42 7.9	18.5	III	
1027	13 54 37	+38 31.6	18.	III	
1028	13 54 38	+43 46.6	17.	II	
1029	13 54 38	+41 53.0	17.5	III	
1030	13 54 38	+41 31.7	18.	II	
1031	13 54 45	+42 3.6	17.5	II	
1032	13 54 54	+38 52.2	19.	II	
1033	13 54 57	+44 7.8	18.	II	
1034	13 54 57	+41 6.7	17.	III	
1035	13 55 0	+42 13.3	18.	II	
1036	13 55 0	+39 3.7	18.5	II	
1037	13 55 9	+43 6.7	18.5	III	
1038	13 55 13	+43 36.2	19.	II	
1039	13 55 15	+43 19.5	17.	II	
1040	13 55 20	+44 22.3	18.	III	
1041	13 55 20	+43 35.4	17.	I	
1042	13 55 21	+44 0.5	17.5	III	
1043	13 55 22	+40 56.7	17.5	II	
1044	13 55 23	+43 50.2	18.	II	
1045	13 55 27	+38 28.0	18.5	II	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1046	13 55 29	+42 31.0	18.	II	
1047	13 55 33	+41 46.7	17.5	III	
1048	13 55 33	+38 57.2	15.	II	
1049	13 55 35	+44 16.1	17.	I	
1050	13 55 36	+43 36.7	16.	III	
1051	13 55 39	+40 21.4	17.5	I	
1052	13 55 40	+43 32.8	17.	III	
1053	13 55 41	+43 19.6	18.	III	
1054	13 55 42	+39 56.2	16.	II	
1055	13 55 42	+39 39.7	18.5	II	
1056	13 55 45	+39 10.8	17.	II	
1057	13 55 45	+38 56.4	13.5	III	
1058	13 55 46	+40 3.8	17.	II	
1059	13 55 48	+44 30.4	18.	I	
1060	13 55 50	+44 22.5	17.	III	
1061	13 55 53	+43 51.6	16.5	III	
1062	13 55 55	+44 20.5	17.	III	
1063	13 55 56	+44 25.4	18.5	III	
1064	13 55 57	+42 23.0	18.5	II	
1065	13 55 58	+39 49.8	19.	III	
1066	13 56 0	+41 23.9	18.	II	
1067	13 56 0	+39 20.6	18.5	II	
1068	13 56 2	+43 40.4	18.	II	
1069	13 56 5	+43 31.6	17.	II	
1070	13 56 6	+40 54.5	18.5	I	
1071	13 56 7	+39 38.7	17.5	I	
1072	13 56 8	+42 35.0	18.5	II	
1073	13 56 11	+40 50.8	17.5	II	
1074	13 56 11	+39 40.9	18.5	III	
1075	13 56 15	+43 22.8	17.5	II	
1076	13 56 16	+43 34.0	18.5	I	
1077	13 56 17	+39 16.1	18.5	II	
1078	13 56 20	+41 31.4	18.5	I	
1079	13 56 22	+43 16.0	19.	III	
1080	13 56 22	+38 49.3	18.	II	
1081	13 56 24	+41 53.2	18.	II	
1082	13 56 24	+38 58.5	16.	I	
1083	13 56 25	+40 50.2	19.	III	
1084	13 56 25	+39 38.6	18.5	II	
1085	13 56 27	+40 35.0	18.	II	
1086	13 56 30	+44 11.8	18.	II	
1087	13 56 32	+40 12.6	17.5	III	
1088	13 56 33	+39 44.7	17.5	III	
1089	13 56 34	+40 56.0	18.5	II	
1090	13 56 35	+42 3.2	16.5	III	
1091	13 56 35	+40 5.2	17.5	II	
1092	13 56 39	+39 11.1	18.5	I	
1093	13 56 40	+44 16.0	18.	II	
1094	13 56 41	+39 43.1	18.	II	
1095	13 56 42	+43 36.7	18.	III	
1096	13 56 43	+43 57.1	17.	III	
1097	13 56 43	+39 18.7	18.5	I	* QSS?
1098	13 56 46	+44 8.4	18.5	III	
1099	13 56 46	+41 59.7	17.	III	CP.OBJ.
1100	13 56 49	+41 5.2	19.	II	
1101	13 56 50	+42 42.9	18.	II	
1102	13 56 52	+43 18.9	17.5	III	
1103	13 56 54	+43 21.1	16.5	II	
1104	13 56 54	+41 32.3	19.	II	
1105	13 56 57	+43 46.8	18.	III	

1097 : POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE B2 1356 39 (COLLA ET AL., 1973).

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1106	13 56 59	+44 26.4	18.	III	
1107	13 57 1	+44 17.7	18.	II	
1108	13 57 1	+40 17.8	19.	II	
1109	13 57 4	+43 40.7	17.	I	
1110	13 57 5	+43 31.3	17.5	III	
1111	13 57 5	+40 16.9	19.	II	
1112	13 57 9	+39 35.6	18.5	II	
1113	13 57 9	+38 22.7	18.5	III	
1114	13 57 10	+41 29.6	17.5	III	
1115	13 57 10	+40 10.5	17.5	II	
1116	13 57 11	+44 2.7	16.	II	
1117	13 57 11	+38 58.5	19.	III	
1118	13 57 14	+38 23.5	18.5	II	
1119	13 57 15	+42 15.1	18.	III	
1120	13 57 20	+44 6.6	18.	III	
1121	13 57 21	+44 11.9	18.5	II	
1122	13 57 24	+43 43.3	17.5	III	
1123	13 57 25	+40 45.7	18.5	III	
1124	13 57 29	+40 55.7	17.5	III	
1125	13 57 30	+43 55.7	17.5	III	
1126	13 57 32	+43 47.0	18.5	III	
1127	13 57 32	+39 14.6	19.	II	
1128	13 57 33	+43 38.1	18.	II	
1129	13 57 34	+42 2.2	18.	III	
1130	13 57 35	+43 58.4	16.5	III	
1131	13 57 35	+43 0.9	17.	III	
1132	13 57 39	+43 44.4	16.5	II	
1133	13 57 39	+42 16.6	16.	III	
1134	13 57 39	+39 8.7	17.	I	
1135	13 57 41	+41 30.5	18.	III	
1136	13 57 45	+40 0.3	17.5	III	
1137	13 57 46	+40 9.3	18.5	II	
1138	13 57 48	+43 18.6	17.	II	
1139	13 57 51	+41 16.0	18.	III	
1140	13 58 5	+38 55.6	19.	I	
1141	13 58 9	+44 3.2	19.	I	
1142	13 58 9	+43 8.4	17.5	II	
1143	13 58 10	+43 30.6	17.5	II	
1144	13 58 11	+42 54.6	19.	III	
1145	13 58 14	+43 49.6	17.5	II	
1146	13 58 14	+42 58.0	17.5	III	
1147	13 58 15	+41 14.2	18.	II	
1148	13 58 19	+43 22.6	18.	III	
1149	13 58 19	+42 28.8	19.	III	
1150	13 58 19	+39 31.1	17.5	III	
1151	13 58 20	+44 27.7	18.5	III	
1152	13 58 20	+40 29.2	18.	II	
1153	13 58 21	+43 17.8	17.	II	
1154	13 58 22	+43 53.4	18.5	I	
1155	13 58 24	+41 27.2	19.	III	
1156	13 58 29	+43 42.4	18.5	I	
1157	13 58 35	+44 14.0	19.	II	
1158	13 58 35	+42 34.5	16.5	III	
1159	13 58 35	+39 7.4	18.	II	
1160	13 58 39	+41 6.9	17.5	II	
1161	13 58 42	+43 13.6	17.	III	
1162	13 58 45	+43 50.8	18.5	II	
1163	13 58 49	+40 43.7	18.	II	
1164	13 58 52	+39 6.2	17.5	I	
1165	13 58 55	+42 45.9	18.	II	
1166	13 58 57	+41 8.9	18.	I	
1167	13 58 58	+39 15.7	18.5	I	
1168	13 59 1	+43 6.3	18.	III	
1169	13 59 4	+41 12.7	18.	III	
1170	13 59 4	+40 40.3	19.5	II	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1171	13 59 8	+41 55.5	17.5	II	
1172	13 59 8	+41 13.5	18.	II	
1173	13 59 8	+39 44.8	18.5	III	
1174	13 59 12	+41 8.9	17.	I	*
1175	13 59 15	+43 5.1	17.5	III	
1176	13 59 16	+40 25.9	18.5	I	
1177	13 59 17	+42 31.2	18.5	II	
1178	13 59 19	+39 13.3	18.	II	
1179	13 59 21	+43 12.4	19.	III	
1180	13 59 21	+41 20.9	17.5	I	
1181	13 59 22	+43 59.4	18.	III	
1182	13 59 22	+40 15.1	19.	II	
1183	13 59 24	+40 13.6	19.	III	
1184	13 59 26	+39 27.3	18.5	II	
1185	13 59 27	+43 41.3	17.5	II	
1186	13 59 27	+39 27.3	18.	I	
1187	13 59 28	+41 47.1	17.	II	
1188	13 59 29	+41 12.3	18.	III	
1189	13 59 30	+44 19.9	17.5	III	
1190	13 59 31	+43 57.6	18.5	I	
1191	13 59 37	+43 56.3	13.5	I	*
1192	13 59 40	+43 9.3	16.5	III	
1193	13 59 41	+44 10.3	16.	III	
1194	13 59 41	+38 27.8	18.5	I	
1195	13 59 46	+43 2.2	18.5	III	
1196	13 59 48	+42 7.2	17.	II	
1197	13 59 50	+42 44.2	19.	III	
1198	13 59 51	+44 1.7	17.5	III	
1199	13 59 51	+40 34.5	17.5	III	
1200	13 59 56	+41 56.3	19.	I	
1201	13 59 57	+38 49.2	18.	I	
1202	13 59 59	+44 23.4	17.5	II	
1203	13 59 59	+40 52.6	18.5	III	
1204	14 0 1	+42 54.6	18.5	II	
1205	14 0 2	+42 56.4	17.5	III	
1206	14 0 2	+41 2.8	18.5	II	
1207	14 0 2	+38 51.6	12.	I	*
1208	14 0 4	+40 29.1	13.5	II	*
1209	14 0 8	+40 3.5	16.5	I	
1210	14 0 10	+40 19.3	19.	II	
1211	14 0 12	+41 3.7	17.	I	
1212	14 0 14	+42 1.2	17.5	III	
1213	14 0 15	+38 47.5	18.	III	
1214	14 0 19	+42 57.0	18.5	I	
1215	14 0 20	+38 47.5	18.	II	
1216	14 0 22	+43 39.7	17.5	III	
1217	14 0 22	+40 53.8	18.5	I	
1218	14 0 28	+42 42.0	18.5	II	
1219	14 0 30	+39 27.5	18.5	I	
1220	14 0 32	+38 44.3	18.	III	
1221	14 0 33	+40 15.0	18.	III	
1222	14 0 33	+38 43.1	19.	I	
1223	14 0 34	+39 52.3	19.	III	
1224	14 0 41	+42 23.6	18.5	II	
1225	14 0 43	+42 29.6	18.5	II	

1174 HAS COMP. 16.5 K, NW 15m.
1191 : GD SPECTRUM GIVES THE TYPE B7.
NO HEI LINES SEEN : HB STAR?
1207 : B SPECTROGRAMS GIVE THE TYPE B3V.
1208 : GD SPECTRUM GIVES THE TYPE AO WITH SHARP LINES.

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1226	14 0 44	+44 9.2	16.5	II	
1227	14 0 44	+42 30.4	19.	II	
1228	14 0 46	+42 52.9	17.5	III	
1229	14 0 46	+39 28.0	15.5	I	
1230	14 0 47	+43 14.3	18.	II	
1231	14 0 50	+42 56.5	17.5	III	
1232	14 0 50	+42 8.2	18.5	I	
1233	14 0 53	+44 23.0	17.5	III	
1234	14 0 54	+43 22.5	18.5	III	
1235	14 0 54	+42 16.0	18.	I	
1236	14 0 55	+41 4.9	19.	II	
1237	14 0 55	+40 34.8	19.	I	
1238	14 0 59	+43 23.2	17.	II	*
1239	14 0 59	+40 5.1	18.	III	
1240	14 0 59	+39 30.8	19.	III	
1241	14 1 0	+38 26.5	18.5	I	
1242	14 1 2	+42 16.8	19.	III	
1243	14 1 2	+40 56.1	19.	III	
1244	14 1 5	+42 10.7	19.	II	
1245	14 1 7	+41 4.4	18.	II	
1246	14 1 9	+43 18.4	18.5	III	
1247	14 1 10	+44 8.7	19.	I	
1248	14 1 10	+41 50.9	16.5	I	* CP.OBJ.
1249	14 1 10	+40 30.5	19.	II	
1250	14 1 12	+43 32.2	17.5	II	
1251	14 1 12	+41 50.6	16.	II	* CP.OBJ.
1252	14 1 13	+42 28.1	19.	II	
1253	14 1 14	+41 51.4	18.5	III	
1254	14 1 15	+44 16.4	18.	II	
1255	14 1 16	+43 3.1	19.	III	
1256	14 1 16	+42 42.0	17.	III	
1257	14 1 18	+43 36.6	17.	II	
1258	14 1 18	+42 22.7	16.5	II	
1259	14 1 19	+40 53.7	18.5	I	
1260	14 1 20	+44 14.6	14.	III	
1261	14 1 23	+43 31.3	17.	III	
1262	14 1 24	+43 17.8	18.5	II	*
1263	14 1 25	+43 21.9	17.5	III	
1264	14 1 25	+41 17.5	17.	III	
1265	14 1 26	+42 5.2	18.5	II	
1266	14 1 28	+40 1.4	19.	II	
1267	14 1 30	+41 59.6	17.5	III	
1268	14 1 33	+43 45.9	19.	III	
1269	14 1 33	+42 31.0	18.5	II	
1270	14 1 33	+42 12.8	18.5	III	
1271	14 1 35	+43 27.4	18.5	III	
1272	14 1 36	+43 9.4	18.	III	
1273	14 1 36	+41 17.2	18.	II	
1274	14 1 36	+38 29.0	19.	II	
1275	14 1 40	+42 59.5	17.5	I	
1276	14 1 41	+41 3.6	17.	III	
1277	14 1 43	+44 20.5	18.5	III	
1278	14 1 47	+42 21.8	16.5	II	
1279	14 1 48	+43 34.5	18.5	I	
1280	14 1 49	+40 19.4	18.5	II	
1281	14 1 53	+43 49.3	17.5	I	
1282	14 1 55	+41 7.2	18.5	I	
1283	14 2 0	+40 32.0	18.5	III	
1284	14 2 1	+39 23.5	19.	I	
1285	14 2 3	+39 0.2	19.	I	

1238 HAS FT COMP. 19.5 K, NW 13m.
1248-1251 SEEM A PHYSIC PAIR OF COMPACT GALAXIES.
1262 : FT COMP. TO 13.5 G, E 20m.

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1286	14 2 4	+44 6.2	18.5	II	
1287	14 2 7	+42 15.7	17.5	III	
1288	14 2 7	+39 25.6	18.5	II	
1289	14 2 8	+41 56.3	17.	I	
1290	14 2 9	+40 34.4	18.5	II	
1291	14 2 10	+40 37.7	18.5	I	
1292	14 2 11	+43 46.9	18.	III	
1293	14 2 13	+38 38.7	18.5	II	
1294	14 2 13	+38 32.5	19.	I	
1295	14 2 13	+38 27.8	18.5	II	
1296	14 2 14	+43 19.4	19.	III	
1297	14 2 25	+42 57.6	18.	III	
1298	14 2 25	+39 30.5	18.	II	
1299	14 2 26	+43 50.1	18.5	III	
1300	14 2 28	+43 53.8	17.5	II	
1301	14 2 29	+44 25.9	18.	III	
1302	14 2 29	+39 21.1	18.5	II	
1303	14 2 30	+43 50.3	18.	III	
1304	14 2 32	+39 20.0	18.5	III	
1305	14 2 33	+39 18.0	17.5	II	
1306	14 2 35	+42 39.7	18.	II	
1307	14 2 36	+42 21.7	17.	III	
1308	14 2 37	+42 9.1	18.5	II	
1309	14 2 38	+43 41.5	16.	III	
1310	14 2 38	+43 5.8	18.	I	
1311	14 2 40	+39 32.1	19.	II	
1312	14 2 40	+38 44.8	18.	II	
1313	14 2 41	+43 5.8	17.5	II	
1314	14 2 41	+42 57.0	19.	II	
1315	14 2 41	+40 11.0	19.	III	
1316	14 2 41	+39 24.1	17.	III	CP.OBJ.
1317	14 2 42	+43 33.1	18.5	III	
1318	14 2 42	+42 34.3	19.	I	
1319	14 2 43	+43 3.9	18.5	II	
1320	14 2 45	+44 25.4	19.	II	
1321	14 2 45	+41 46.7	18.	II	
1322	14 2 47	+43 34.2	18.	II	
1323	14 2 47	+42 6.3	18.	I	
1324	14 2 47	+41 36.9	17.5	I	
1325	14 2 48	+42 57.8	17.5	III	
1326	14 2 50	+41 19.2	19.	II	
1327	14 2 51	+44 21.7	19.	III	
1328	14 2 51	+39 38.2	19.	II	
1329	14 2 55	+44 26.5	19.	III	
1330	14 2 55	+39 13.6	18.5	II	
1331	14 2 56	+40 57.6	18.	II	
1332	14 2 56	+38 24.4	16.5	I	
1333	14 2 59	+40 9.2	18.	II	
1334	14 3 6	+42 18.9	16.	II	
1335	14 3 6	+39 53.3	19.	I	
1336	14 3 6	+39 4.5	18.5	I	
1337	14 3 9	+43 12.8	18.5	III	
1338	14 3 10	+41 2.1	18.5	I	
1339	14 3 10	+39 52.5	19.	I	
1340	14 3 14	+43 7.9	18.	III	
1341	14 3 14	+41 39.0	18.5	III	
1342	14 3 14	+38 31.8	18.5	I	
1343	14 3 21	+40 58.2	18.5	II	
1344	14 3 24	+43 41.5	19.	II	
1345	14 3 24	+42 27.2	18.	II	
1346	14 3 24	+41 56.4	18.	III	
1347	14 3 25	+41 40.6	18.	III	
1348	14 3 26	+43 42.6	17.	II	CP.OBJ.
1349	14 3 26	+43 12.7	19.	III	
1350	14 3 26	+42 55.5	18.5	II	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1351	14 3 27	+42 26.6	18.	III	
1352	14 3 28	+43 36.7	19.	II	
1353	14 3 29	+41 20.7	19.	I	
1354	14 3 31	+41 40.1	18.	II	
1355	14 3 31	+38 31.2	18.5	II	
1356	14 3 32	+42 33.2	17.	II	
1357	14 3 34	+42 55.0	18.5	III	
1358	14 3 38	+44 23.5	18.	II	
1359	14 3 38	+41 1.5	18.5	II	
1360	14 3 39	+44 11.5	17.	III	
1361	14 3 39	+41 12.2	19.	III	
1362	14 3 39	+40 31.2	19.5	III	
1363	14 3 39	+39 5.0	18.5	II	
1364	14 3 41	+41 5.9	18.	II	
1365	14 3 43	+42 33.7	18.	II	
1366	14 3 44	+43 18.5	17.	III	
1367	14 3 44	+42 5.9	18.	III	
1368	14 3 48	+42 50.6	19.	III	
1369	14 3 48	+41 4.3	18.5	II	
1370	14 3 49	+39 59.3	18.5	II	
1371	14 3 51	+43 10.5	18.	III	
1372	14 3 52	+42 10.4	18.5	I	
1373	14 3 56	+42 33.1	18.	II	
1374	14 3 56	+41 40.6	17.5	I	
1375	14 3 57	+43 14.4	19.	II	
1376	14 3 59	+40 50.3	19.	II	
1377	14 4 0	+41 11.3	17.	III	
1378	14 4 3	+40 4.1	17.5	II	
1379	14 4 3	+39 24.2	19.	I	
1380	14 4 4	+41 37.0	18.5	II	
1381	14 4 8	+44 5.9	18.	III	
1382	14 4 9	+41 16.1	19.	I	
1383	14 4 11	+41 38.6	17.5	II	
1384	14 4 12	+42 7.2	18.5	II	
1385	14 4 13	+39 47.8	18.5	II	
1386	14 4 14	+39 53.8	18.	II	
1387	14 4 15	+43 23.9	18.	III	
1388	14 4 18	+38 44.3	18.5	III	
1389	14 4 19	+39 26.7	18.5	II	
1390	14 4 24	+39 55.1	18.5	III	
1391	14 4 24	+38 32.6	18.5	II	
1392	14 4 25	+39 7.6	18.5	II	
1393	14 4 27	+40 46.5	16.5	II	
1394	14 4 27	+39 6.0	18.5	III	
1395	14 4 29	+43 25.2	17.	III	
1396	14 4 29	+41 36.0	18.	I	
1397	14 4 31	+42 42.2	17.	III	
1398	14 4 32	+43 0.4	18.	III	
1399	14 4 33	+38 40.6	18.	II	
1400	14 4 36	+39 37.8	17.5	III	
1401	14 4 37	+42 53.0	18.5	III	
1402	14 4 38	+41 12.6	18.	I	
1403	14 4 39	+43 12.3	16.	III	
1404	14 4 39	+41 46.0	18.5	II	
1405	14 4 40	+41 24.7	18.	II	
1406	14 4 41	+41 25.8	16.	I	
1407	14 4 42	+44 1.4	18.	III	
1408	14 4 43	+40 58.7	18.	II	
1409	14 4 47	+43 22.7	18.	II	
1410	14 4 47	+41 27.2	18.5	III	
1411	14 4 49	+42 49.8	19.	II	
1412	14 4 51	+43 51.3	17.5	I	
1413	14 4 52	+42 53.0	18.5	III	
1414	14 4 52	+42 45.1	18.	I	
1415	14 4 52	+42 23.8	19.	II	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1416	14 4 54	+42 4.3	18.	II	
1417	14 4 54	+38 42.1	19.	II	
1418	14 4 55	+39 8.4	19.	I	
1419	14 4 56	+40 28.5	18.	II	
1420	14 4 57	+42 17.7	18.5	III	
1421	14 4 59	+42 51.3	18.	I	
1422	14 4 59	+42 15.1	18.	II	
1423	14 5 0	+44 1.5	17.	II	
1424	14 5 0	+42 19.0	19.	II	
1425	14 5 1	+40 44.0	18.	II	
1426	14 5 2	+41 39.7	18.	II	
1427	14 5 6	+39 54.3	18.5	II	
1428	14 5 9	+38 25.4	18.	II	
1429	14 5 11	+40 5.5	18.	I	
1430	14 5 14	+43 11.0	18.	II	
1431	14 5 15	+42 44.6	18.	I	
1432	14 5 16	+44 8.8	16.5	III	
1433	14 5 18	+44 8.6	18.	II	
1434	14 5 21	+42 5.8	18.5	II	
1435	14 5 21	+41 19.8	18.	III	
1436	14 5 22	+43 25.8	19.	II	
1437	14 5 23	+40 18.2	17.	II	
1438	14 5 24	+38 40.3	17.5	III	
1439	14 5 25	+42 7.4	18.	II	
1440	14 5 25	+38 27.5	17.	II	
1441	14 5 28	+44 8.4	17.	I	
1442	14 5 29	+42 8.1	17.5	II	
1443	14 5 31	+43 32.5	18.5	II	
1444	14 5 31	+42 57.4	19.	III	
1445	14 5 31	+41 2.5	18.5	II	
1446	14 5 31	+39 20.1	18.5	II	
1447	14 5 35	+40 8.7	19.	I	
1448	14 5 36	+39 42.8	17.5	III	
1449	14 5 39	+42 49.6	18.5	III	
1450	14 5 40	+42 40.3	17.5	II	
1451	14 5 41	+44 7.8	18.	II	
1452	14 5 41	+43 31.2	18.	II	
1453	14 5 43	+40 6.9	17.5	III	
1454	14 5 45	+41 23.1	18.	II	
1455	14 5 47	+43 51.9	16.5	III	
1456	14 5 48	+42 2.3	18.	III	
1457	14 5 48	+39 20.3	17.5	III	
1458	14 5 51	+42 11.3	17.	II	
1459	14 5 51	+41 41.5	17.5	II	
1460	14 5 53	+38 34.8	18.5	III	
1461	14 5 54	+38 26.1	18.5	II	
1462	14 5 56	+40 19.9	18.5	III	
1463	14 5 58	+40 41.6	18.5	I	
1464	14 5 59	+41 24.9	18.	II	
1465	14 6 1	+44 30.9	17.5	III	
1466	14 6 1	+43 21.4	17.5	II	
1467	14 6 1	+43 9.6	17.5	II	
1468	14 6 3	+41 24.3	18.	I	
1469	14 6 4	+43 28.9	17.5	III	
1470	14 6 5	+43 10.9	18.	II	
1471	14 6 6	+43 36.0	17.5	I	
1472	14 6 7	+43 17.5	17.	I	
1473	14 6 7	+42 35.9	18.5	I	
1474	14 6 8	+42 43.1	18.5	II	
1475	14 6 11	+44 23.9	18.	III	
1476	14 6 13	+39 14.0	18.5	III	
1477	14 6 14	+44 12.9	17.	I	
1478	14 6 14	+39 56.9	18.5	II	
1479	14 6 15	+42 42.4	17.5	II	
1480	14 6 20	+41 9.9	18.	II	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1481	14 6 21	+40 57.4	18.5	III	
1482	14 6 22	+38 22.5	18.	II	
1483	14 6 23	+43 17.8	16.5	II	
1484	14 6 24	+39 56.0	17.5	III	
1485	14 6 25	+43 45.6	17.	II	
1486	14 6 30	+40 0.8	19.	II	
1487	14 6 31	+41 2.9	17.5	II	
1488	14 6 32	+43 24.5	18.	II	
1489	14 6 32	+40 37.1	18.5	III	
1490	14 6 37	+41 23.6	19.5	II	
1491	14 6 37	+40 58.9	19.	II	
1492	14 6 39	+41 38.7	18.5	II	
1493	14 6 39	+38 55.8	17.5	II	
1494	14 6 45	+40 36.4	19.	II	
1495	14 6 46	+41 7.6	18.5	III	
1496	14 6 46	+41 6.6	19.	II	
1497	14 6 50	+43 17.9	18.5	III	
1498	14 6 51	+42 21.0	17.5	II	
1499	14 6 53	+43 18.4	17.	III	
1500	14 6 53	+38 37.5	18.5	II	
1501	14 6 55	+40 10.0	18.	I	
1502	14 6 56	+43 25.6	19.	III	
1503	14 6 56	+42 5.5	17.	I	
1504	14 6 57	+44 9.7	18.5	III	
1505	14 6 59	+40 39.8	19.	III	
1506	14 7 0	+42 40.1	18.5	II	
1507	14 7 1	+40 49.2	18.	II	
1508	14 7 3	+38 47.9	17.5	II	
1509	14 7 4	+42 50.4	18.	II	
1510	14 7 4	+41 30.3	19.	III	
1511	14 7 5	+43 56.1	18.	III	
1512	14 7 5	+42 57.9	18.	III	
1513	14 7 7	+38 26.4	18.5	II	
1514	14 7 8	+43 15.2	17.	III	
1515	14 7 10	+43 0.3	17.5	II	
1516	14 7 10	+38 42.7	16.5	I	
1517	14 7 17	+43 21.9	17.5	II	
1518	14 7 18	+42 19.1	18.	II	
1519	14 7 18	+40 9.9	17.5	III	
1520	14 7 19	+42 55.7	17.	III	
1521	14 7 19	+38 34.4	18.5	II	
1522	14 7 20	+41 12.6	19.	II	
1523	14 7 21	+43 7.5	19.	I	
1524	14 7 21	+42 29.0	18.5	II	
1525	14 7 22	+39 34.1	18.	III	
1526	14 7 25	+42 47.5	16.5	II	
1527	14 7 26	+38 52.3	18.5	I	
1528	14 7 29	+44 31.6	17.	II	
1529	14 7 29	+40 51.8	15.5	II	
1530	14 7 30	+43 14.2	18.5	III	
1531	14 7 33	+44 9.4	18.	II	
1532	14 7 33	+42 15.3	18.5	II	
1533	14 7 34	+44 27.4	18.	III	
1534	14 7 34	+43 55.1	19.	III	
1535	14 7 34	+38 50.9	18.5	II	
1536	14 7 35	+42 6.1	17.	III	
1537	14 7 35	+39 41.9	17.5	II	
1538	14 7 36	+44 6.2	18.5	III	
1539	14 7 36	+38 56.6	18.5	III	
1540	14 7 37	+40 46.3	19.	II	
1541	14 7 38	+44 0.8	18.5	II	
1542	14 7 38	+39 29.7	17.5	II	
1543	14 7 38	+38 42.1	18.	III	
1544	14 7 39	+44 25.6	17.	II	CP.OBJ.
1545	14 7 39	+43 1.0	18.5	II	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1546	14 7 42	+39 6.2	18.5	II	
1547	14 7 43	+44 9.2	17.5	II	
1548	14 7 43	+40 0.3	18.	II	
1549	14 7 44	+42 30.2	15.5	I	
1550	14 7 44	+42 6.8	18.	II	
1551	14 7 44	+39 20.5	18.5	II	
1552	14 7 46	+40 53.5	17.5	I	
1553	14 7 46	+39 11.0	19.	II	
1554	14 7 49	+43 48.4	17.	III	
1555	14 7 50	+43 18.5	18.	III	
1556	14 7 50	+43 6.0	18.5	III	
1557	14 7 52	+39 41.8	19.	I	
1558	14 7 53	+41 27.6	18.5	III	
1559	14 7 55	+44 3.1	18.5	II	
1560	14 7 55	+42 51.1	18.5	II	
1561	14 7 56	+43 33.0	18.	II	
1562	14 7 59	+40 47.1	17.5	II	
1563	14 8 0	+44 13.2	18.5	III	
1564	14 8 0	+43 2.2	19.	III	
1565	14 8 0	+41 16.3	18.5	II	
1566	14 8 1	+43 39.8	17.5	III	
1567	14 8 1	+43 22.8	17.5	II	
1568	14 8 1	+39 20.1	18.5	I	
1569	14 8 1	+38 42.0	18.5	III	
1570	14 8 5	+41 36.1	18.5	III	
1571	14 8 7	+38 42.1	19.	III	
1572	14 8 9	+41 33.9	18.5	I	
1573	14 8 10	+39 41.5	17.5	II	
1574	14 8 10	+38 52.5	17.	III	
1575	14 8 12	+42 39.0	19.	II	
1576	14 8 13	+39 41.6	18.5	III	
1577	14 8 16	+41 48.4	18.	I	
1578	14 8 16	+38 45.2	17.5	III	
1579	14 8 17	+42 20.8	18.	II	
1580	14 8 21	+39 41.8	18.5	III	
1581	14 8 22	+43 15.8	17.	II	
1582	14 8 22	+41 49.9	17.	II	
1583	14 8 25	+44 29.0	16.	I	CP.OBJ.
1584	14 8 25	+41 38.9	18.	III	
1585	14 8 25	+38 46.8	18.5	II	
1586	14 8 29	+42 57.0	19.	III	
1587	14 8 30	+42 46.0	19.	I	
1588	14 8 31	+40 10.3	19.	II	
1589	14 8 35	+42 39.4	18.5	II	
1590	14 8 35	+42 22.5	19.	II	
1591	14 8 36	+42 35.0	18.	III	
1592	14 8 36	+38 50.7	18.5	I	
1593	14 8 37	+40 13.7	18.5	I	
1594	14 8 38	+42 6.6	17.5	III	
1595	14 8 38	+40 8.0	18.5	III	
1596	14 8 40	+43 47.8	18.	II	
1597	14 8 41	+38 36.0	18.	II	
1598	14 8 41	+39 35.8	19.	I	
1599	14 8 42	+38 44.0	18.5	II	
1600	14 8 49	+42 46.7	18.	II	
1601	14 8 49	+41 50.6	19.	II	
1602	14 8 53	+38 44.6	17.	I	
1603	14 8 55	+43 43.8	17.5	II	
1604	14 8 58	+40 38.5	17.5	II	
1605	14 8 58	+39 41.8	18.5	III	
1606	14 8 59	+43 17.0	18.5	I	
1607	14 9 0	+43 58.2	17.5	III	
1608	14 9 0	+42 25.1	18.	III	
1609	14 9 0	+41 15.7	18.	III	
1610	14 9 1	+41 14.4	17.5	II	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1611	14 9 4	+42 49.4	18.5	I	
1612	14 9 6	+41 31.9	18.5	III	
1613	14 9 6	+38 51.5	17.5	I	
1614	14 9 8	+43 4.4	17.5	II	
1615	14 9 8	+42 58.7	18.5	I	
1616	14 9 8	+41 15.5	18.	II	
1617	14 9 10	+44 5.3	19.	III	
1618	14 9 11	+42 20.9	17.	II	
1619	14 9 11	+41 19.0	18.5	II	
1620	14 9 13	+39 49.6	17.	II	
1621	14 9 14	+41 21.0	19.	II	
1622	14 9 14	+39 21.8	17.	II	
1623	14 9 15	+43 44.7	18.	II	
1624	14 9 15	+40 19.8	19.	III	
1625	14 9 17	+40 49.9	17.	II	
1626	14 9 17	+38 28.8	18.5	II	
1627	14 9 19	+44 1.7	16.	III	
1628	14 9 19	+43 31.1	17.	III	
1629	14 9 20	+40 50.1	18.	II	
1630	14 9 24	+42 10.0	17.5	II	
1631	14 9 24	+38 42.0	17.	II	
1632	14 9 25	+43 54.2	17.5	III	
1633	14 9 26	+41 6.2	18.5	III	
1634	14 9 29	+42 9.7	17.	I	
1635	14 9 30	+38 36.0	17.5	III	
1636	14 9 31	+43 49.0	18.	I	
1637	14 9 32	+41 43.6	17.	II	
1638	14 9 33	+41 50.1	18.5	III	
1639	14 9 33	+38 45.2	19.	II	
1640	14 9 37	+39 5.1	18.5	II	
1641	14 9 39	+39 50.8	17.5	III	
1642	14 9 43	+39 42.7	18.	II	
1643	14 9 43	+38 39.2	18.5	II	
1644	14 9 44	+43 3.5	18.5	II	
1645	14 9 45	+43 45.2	18.	I	
1646	14 9 46	+40 38.9	18.5	I	
1647	14 9 46	+39 42.0	15.5	II	
1648	14 9 48	+43 29.6	18.5	III	
1649	14 9 48	+42 12.2	18.	III	
1650	14 9 48	+41 1.2	18.	II	
1651	14 9 49	+43 23.8	16.5	II	
1652	14 9 56	+43 59.5	17.5	III	
1653	14 9 57	+41 14.4	18.	II	
1654	14 9 58	+44 9.0	17.	III	
1655	14 10 0	+43 15.6	18.	III	
1656	14 10 0	+42 53.9	18.	I	
1657	14 10 1	+43 32.2	17.	II	CP.OBJ.
1658	14 10 1	+43 24.4	18.	II	
1659	14 10 1	+38 29.5	19.	II	
1660	14 10 2	+43 3.4	17.	II	
1661	14 10 3	+43 10.5	19.5	III	
1662	14 10 4	+39 31.2	17.5	I	
1663	14 10 6	+43 43.1	17.5	III	
1664	14 10 6	+42 47.4	18.5	III	
1665	14 10 7	+42 30.6	16.	I	
1666	14 10 7	+38 59.5	18.5	II	
1667	14 10 9	+38 45.4	18.	II	
1668	14 10 10	+41 37.6	15.5	II	
1669	14 10 12	+42 16.2	19.	II	
1670	14 10 15	+43 54.5	17.	III	
1671	14 10 18	+41 41.9	18.	I	
1672	14 10 19	+38 54.6	17.5	II	
1673	14 10 22	+43 1.5	18.	I	
1674	14 10 23	+42 6.5	17.5	III	
1675	14 10 25	+43 53.0	18.5	II	

Catalogue *(continued)*

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1676	14 10 25	+43 12.3	18.5	II	
1677	14 10 27	+42 16.9	19.	I	
1678	14 10 27	+39 24.4	18.	II	
1679	14 10 30	+41 11.4	18.5	III	
1680	14 10 30	+40 33.5	17.	II	
1681	14 10 30	+38 59.1	17.5	III	
1682	14 10 32	+43 20.5	18.	III	
1683	14 10 33	+41 10.1	18.	III	
1684	14 10 33	+38 28.0	19.	II	
1685	14 10 34	+43 23.2	17.5	I	
1686	14 10 35	+44 23.9	17.5	II	
1687	14 10 38	+43 36.9	18.5	III	
1688	14 10 39	+43 32.8	18.	I	
1689	14 10 43	+41 23.0	17.	II	
1690	14 10 45	+42 12.7	18.5	III	
1691	14 10 49	+40 39.8	18.	I	
1692	14 10 51	+40 29.5	19.	III	
1693	14 10 51	+38 27.1	18.	III	
1694	14 10 56	+39 29.6	18.5	II	
1695	14 10 57	+44 27.8	18.	II	
1696	14 11 4	+44 5.8	17.5	III	
1697	14 11 4	+43 8.1	18.5	III	
1698	14 11 7	+44 20.6	18.	III	
1699	14 11 9	+42 42.4	17.5	I	
1700	14 11 10	+44 8.6	17.	I	
1701	14 11 12	+41 30.7	18.5	II	
1702	14 11 16	+42 55.9	17.5	III	
1703	14 11 16	+40 13.1	17.5	III	
1704	14 11 17	+43 45.5	17.5	II	
1705	14 11 17	+40 34.4	17.	III	
1706	14 11 21	+42 11.4	17.5	III	
1707	14 11 21	+41 38.3	18.	II	
1708	14 11 21	+39 35.4	17.	III	
1709	14 11 22	+37 47.3	17.	II	
1710	14 11 23	+43 46.5	19.	II	
1711	14 11 23	+39 59.5	18.	II	
1712	14 11 23	+39 51.1	17.5	III	
1713	14 11 26	+41 14.9	18.5	II	
1714	14 11 26	+40 2.0	18.5	II	
1715	14 11 27	+40 0.1	19.	III	
1716	14 11 27	+39 31.0	18.	II	
1717	14 11 33	+41 51.3	18.	II	
1718	14 11 36	+41 37.2	16.5	II	
1719	14 11 37	+44 15.7	18.	III	
1720	14 11 37	+40 36.8	18.	II	
1721	14 11 37	+39 23.3	18.	II	
1722	14 11 37	+38 28.2	18.	I	
1723	14 11 39	+41 42.4	18.5	III	
1724	14 11 40	+42 1.5	17.5	I	
1725	14 11 40	+39 27.3	17.	II	
1726	14 11 41	+39 30.2	17.5	II	
1727	14 11 42	+40 30.8	18.5	II	
1728	14 11 42	+40 26.0	18.	I	
1729	14 11 46	+42 15.3	18.	II	
1730	14 11 47	+44 9.2	17.	III	
1731	14 11 49	+40 20.6	17.5	II	
1732	14 11 50	+44 14.3	15.	I	
1733	14 11 50	+42 20.0	17.	I	
1734	14 11 50	+41 26.4	17.5	III	
1735	14 11 51	+42 15.8	18.5	III	
1736	14 11 52	+42 24.5	16.5	III	
1737	14 11 53	+44 2.9	16.5	III	
1738	14 11 54	+43 21.3	18.5	III	
1739	14 11 56	+42 37.9	18.5	II	
1740	14 11 56	+38 41.2	19.5	II	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1741	14 11 56	+38 20.6	18.	II	
1742	14 11 59	+42 42.0	19.	II	
1743	14 12 0	+41 33.6	19.	II	
1744	14 12 0	+41 24.6	18.	II	
1745	14 12 1	+43 37.5	18.5	III	
1746	14 12 2	+40 35.6	18.5	II	
1747	14 12 2	+40 8.5	16.5	II	
1748	14 12 2	+38 33.9	18.	II	
1749	14 12 3	+41 37.5	18.5	?	
1750	14 12 4	+41 39.0	17.5	III	
1751	14 12 5	+43 50.0	16.	II	
1752	14 12 7	+43 3.5	18.5	II	
1753	14 12 7	+41 29.7	18.5	II	
1754	14 12 8	+44 26.4	18.	III	
1755	14 12 9	+41 23.7	18.	III	
1756	14 12 10	+43 17.0	18.5	III	
1757	14 12 10	+41 16.8	17.5	?	
1758	14 12 12	+39 59.2	18.5	III	
1759	14 12 13	+43 53.6	17.5	III	
1760	14 12 13	+43 24.7	17.5	II	
1761	14 12 13	+39 51.7	17.5	I	
1762	14 12 13	+38 37.4	17.	III	
1763	14 12 14	+42 30.2	16.5	III	
1764	14 12 15	+38 40.3	18.5	II	
1765	14 12 17	+41 21.6	18.	II	
1766	14 12 18	+39 30.7	17.5	II	
1767	14 12 19	+44 14.6	17.5	II	
1768	14 12 21	+39 51.1	17.5	II	
1769	14 12 22	+42 24.7	17.	III	
1770	14 12 22	+41 17.7	18.5	III	
1771	14 12 23	+43 32.3	18.5	III	
1772	14 12 23	+41 52.5	18.5	II	
1773	14 12 23	+38 43.8	15.5	II	
1774	14 12 24	+43 18.7	17.	III	
1775	14 12 24	+41 43.7	16.	III	CP.OBJ.
1776	14 12 24	+41 33.5	18.	II	
1777	14 12 24	+41 20.8	18.	II	
1778	14 12 26	+39 54.8	18.	II	
1779	14 12 29	+43 7.9	18.	I	
1780	14 12 29	+40 54.8	17.5	II	
1781	14 12 32	+39 12.8	18.	II	
1782	14 12 35	+42 24.1	19.	III	
1783	14 12 36	+41 46.1	17.	II	
1784	14 12 36	+38 21.8	18.5	III	
1785	14 12 38	+40 32.7	19.	II	
1786	14 12 38	+40 15.7	17.5	III	
1787	14 12 38	+40 15.3	17.	II	
1788	14 12 38	+38 42.9	17.5	II	
1789	14 12 40	+38 32.5	18.5	II	
1790	14 12 41	+43 32.1	17.5	II	
1791	14 12 43	+43 36.9	17.5	III	
1792	14 12 43	+40 32.7	17.	II	
1793	14 12 43	+38 38.0	17.	III	
1794	14 12 44	+42 31.9	18.5	III	
1795	14 12 44	+40 7.5	18.	II	
1756	14 12 45	+41 35.1	16.5	III	
1797	14 12 46	+41 50.8	19.	II	
1798	14 12 49	+39 21.4	18.5	II	
1799	14 12 50	+43 39.2	17.5	I	
1800	14 12 51	+44 20.7	18.	III	
1801	14 12 51	+41 19.5	17.5	III	
1802	14 12 51	+40 28.0	18.5	II	
1803	14 12 52	+43 44.4	18.5	III	
1804	14 12 54	+38 51.3	18.	II	
1805	14 12 55	+40 38.3	18.	I	

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1806	14 12 56	+44 11.4	17.5	III	
1807	14 12 57	+43 51.0	18.	II	
1808	14 12 58	+39 3.9	19.	III	
1809	14 13 0	+40 12.2	19.	II	
1810	14 13 1	+41 22.4	18.	III	
1811	14 13 3	+42 3.4	15.	I	
1812	14 13 4	+40 40.2	18.	III	
1813	14 13 5	+38 40.8	17.5	II	
1814	14 13 8	+41 25.9	17.	III	
1815	14 13 9	+38 30.7	17.5	III	
1816	14 13 11	+39 56.1	15.5	III	CP.OBJ.
1817	14 13 12	+38 54.4	17.5	II	
1818	14 13 13	+39 42.4	18.5	II	
1819	14 13 17	+39 4.7	17.5	I	
1820	14 13 18	+38 43.5	18.5	II	
1821	14 13 19	+44 10.8	17.	I	
1822	14 13 19	+40 3.6	18.5	II	
1823	14 13 20	+42 37.2	15.	II	
1824	14 13 20	+40 7.5	18.	II	
1825	14 13 24	+43 20.8	18.	II	
1826	14 13 26	+42 12.6	17.5	III	
1827	14 13 26	+40 30.0	16.5	III	
1828	14 13 28	+43 24.0	17.	III	
1829	14 13 28	+42 25.2	18.5	II	
1830	14 13 28	+42 20.6	18.5	II	
1831	14 13 29	+39 37.9	17.5	I	
1832	14 13 31	+43 37.5	17.	II	
1833	14 13 31	+40 10.4	18.5	I	
1834	14 13 32	+41 48.5	18.5	III	
1835	14 13 33	+44 12.0	18.5	III	
1836	14 13 33	+39 10.0	18.5	II	
1837	14 13 34	+42 25.0	18.	III	
1838	14 13 34	+42 5.8	17.5	III	* CP.OBJ.
1839	14 13 35	+39 37.4	18.	II	
1840	14 13 36	+38 57.3	18.	III	
1841	14 13 37	+39 55.7	17.5	III	
1842	14 13 38	+40 24.9	17.5	II	
1843	14 13 38	+39 30.2	18.5	II	
1844	14 13 39	+43 54.2	18.	I	
1845	14 13 39	+38 49.9	18.	III	
1846	14 13 40	+41 36.3	18.5	III	
1847	14 13 41	+43 52.9	17.5	III	
1848	14 13 44	+44 11.4	18.5	III	
1849	14 13 44	+39 44.6	18.5	III	
1850	14 13 47	+41 16.6	16.5	II	
1851	14 13 47	+41 13.5	16.	II	CP.OBJ.
1852	14 13 49	+40 4.1	18.	II	
1853	14 13 49	+39 35.0	17.5	III	
1854	14 13 49	+39 17.0	18.	II	
1855	14 13 51	+43 49.0	17.5	I	
1856	14 13 51	+43 12.7	16.5	I	
1857	14 13 52	+40 51.0	18.	II	
1858	14 13 53	+39 34.2	17.5	II	
1859	14 13 54	+42 1.5	18.	II	
1860	14 13 57	+41 15.0	18.	III	
1861	14 13 57	+39 18.9	18.	II	
1862	14 13 59	+40 59.3	19.	III	
1863	14 14 1	+43 51.1	18.	III	
1864	14 14 1	+39 52.1	18.	III	
1865	14 14 2	+42 20.3	18.5	III	

1838 : DOUBLE COMPACT OBJECT ON PSS PRINTS.

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1866	14 14 3	+44 5.3	17.	II	
1867	14 14 5	+38 19.8	19.	III	
1868	14 14 8	+41 15.6	18.	II	
1869	14 14 9	+43 52.3	17.	II	
1870	14 14 9	+40 50.2	18.	III	
1871	14 14 10	+43 3.5	17.5	II	
1872	14 14 11	+41 18.6	17.5	II	
1873	14 14 12	+43 52.3	17.	III	
1874	14 14 12	+43 7.3	18.5	III	
1875	14 14 13	+42 9.2	17.5	II	
1876	14 14 13	+40 22.8	18.	I	
1877	14 14 16	+44 17.8	17.	II	
1878	14 14 17	+39 26.0	17.5	II	
1879	14 14 18	+38 49.6	17.5	II	
1880	14 14 19	+44 10.1	17.	III	
1881	14 14 19	+38 54.3	19.	II	
1882	14 14 22	+43 23.2	16.5	II	
1883	14 14 24	+40 43.6	17.	III	
1884	14 14 26	+41 4.2	19.	III	
1885	14 14 28	+40 30.8	19.	II	
1886	14 14 28	+40 21.4	18.	II	
1887	14 14 30	+41 54.7	19.	III	
1888	14 14 30	+40 54.1	19.	II	
1889	14 14 30	+39 25.2	18.5	III	
1890	14 14 30	+38 53.0	18.5	III	
1891	14 14 31	+42 1.5	19.	II	
1892	14 14 33	+39 52.4	17.5	II	M.CP.OBJ.
1893	14 14 34	+40 17.6	18.5	II	
1894	14 14 34	+38 25.9	16.	III	
1895	14 14 36	+43 6.7	17.5	II	
1896	14 14 36	+41 11.4	17.5	II	
1897	14 14 37	+40 22.8	18.5	III	
1898	14 14 39	+42 18.6	19.	III	
1899	14 14 39	+41 41.7	18.5	III	
1900	14 14 39	+41 29.8	13.5	I *	
1901	14 14 42	+38 21.5	17.5	II	
1902	14 14 43	+44 26.5	17.5	II	
1903	14 14 43	+39 15.6	18.5	II	
1904	14 14 45	+43 8.2	18.5	III	
1905	14 14 45	+40 30.4	17.	II	
1906	14 14 46	+43 4.0	19.	III	
1907	14 14 46	+42 19.2	19.	I	
1908	14 14 48	+44 12.0	18.5	III	
1909	14 14 48	+42 6.4	17.5	II	
1910	14 14 49	+43 49.0	18.	II	
1911	14 14 50	+43 54.5	16.	III	
1912	14 14 50	+42 15.0	19.	III	
1913	14 14 50	+41 16.7	19.	III	
1914	14 14 50	+40 30.4	19.	II	
1915	14 14 52	+44 12.9	16.	III	
1916	14 14 52	+43 41.2	18.	II	
1917	14 14 52	+39 55.5	16.5	III	
1918	14 14 53	+43 56.1	18.	III	
1919	14 14 53	+38 41.9	18.	III	
1920	14 14 57	+38 39.5	18.	III	
1921	14 14 59	+39 0.8	17.	III	
1922	14 15 0	+38 21.0	17.	II	
1923	14 15 1	+42 6.3	19.	II	
1924	14 15 1	+40 3.0	18.5	III	
1925	14 15 1	+38 20.3	17.	II	

1900 : GD SPECTRUM GIVES THE TYPE B3-B5 BUT HEI IS DOUBTFUL.

Catalogue *(continued)*

PS 14:00 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1926	14 15 2	+40 19.4	19.	III	
1927	14 15 4	+43 44.0	16.	I	* GALAXY
1928	14 15 5	+39 7.7	18.	II	
1929	14 15 7	+42 50.3	18.5	III	
1930	14 15 7	+42 40.8	18.	II	
1931	14 15 8	+43 53.7	17.	II	
1932	14 15 9	+42 39.0	19.	II	
1933	14 15 9	+40 10.0	12.	II	
1934	14 15 9	+40 9.2	18.5	III	
1935	14 15 9	+38 49.1	18.5	II	
1936	14 15 10	+42 34.2	19.	I	
1937	14 15 12	+40 20.6	18.5	II	
1938	14 15 13	+42 5.7	18.	II	
1939	14 15 16	+40 55.5	18.5	II	
1940	14 15 17	+39 28.9	18.5	II	
1941	14 15 19	+39 49.0	12.5	III	*
1942	14 15 19	+38 19.1	17.	II	
1943	14 15 21	+40 28.5	18.5	III	
1944	14 15 22	+39 57.3	19.	III	
1945	14 15 24	+41 26.5	19.	III	
1946	14 15 27	+44 13.6	18.5	II	
1947	14 15 31	+40 42.6	17.	II	
1948	14 15 32	+43 47.6	17.	III	
1949	14 15 33	+42 41.0	17.5	III	
1950	14 15 36	+38 32.4	18.5	I	
1951	14 15 37	+44 26.9	18.	II	
1952	14 15 37	+39 0.7	17.	II	
1953	14 15 38	+44 26.3	17.5	III	
1954	14 15 38	+42 12.5	17.5	III	
1955	14 15 41	+43 3.4	18.5	III	
1956	14 15 41	+41 34.3	19.	II	
1957	14 15 42	+43 59.1	17.5	III	
1958	14 15 42	+43 16.7	17.	III	
1959	14 15 42	+39 50.1	18.	III	
1960	14 15 42	+38 58.3	19.	II	
1961	14 15 43	+44 19.8	17.5	III	
1962	14 15 44	+41 33.8	18.	II	
1963	14 15 45	+41 28.0	18.	II	
1964	14 15 47	+40 19.1	18.5	II	
1965	14 15 48	+42 11.9	18.	III	
1966	14 15 48	+40 15.7	18.	II	
1967	14 15 49	+39 54.0	18.5	III	
1968	14 15 51	+40 32.8	18.	II	
1969	14 15 54	+42 57.3	18.	III	
1970	14 15 57	+43 25.7	18.	I	
1971	14 15 57	+39 27.7	19.	III	
1972	14 15 58	+43 24.9	16.	I	
1973	14 15 58	+40 49.0	17.5	II	
1974	14 15 58	+39 25.4	18.5	III	
1975	14 15 59	+39 25.7	17.5	III	
1976	14 16 0	+42 29.8	18.	II	
1977	14 16 0	+41 53.3	18.	III	
1978	14 16 0	+41 25.2	18.5	III	
1979	14 16 4	+38 33.6	19.	II	
1980	14 16 6	+39 26.6	18.	III	
1981	14 16 9	+41 11.7	18.	III	
1982	14 16 11	+41 3.0	19.	I	
1983	14 16 11	+39 4.0	18.	II	
1984	14 16 12	+38 35.3	19.	III	
1985	14 16 13	+41 28.5	18.	III	

1927 : STRETCHENED GALAXY WITH A BLUE COMPACT EXTREMITY.
1941 : GO SPECTRUM GIVES THE TYPE F0; SHARP BALMER LINES : SUBDWARF F?

PS 14:00 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
1986	14 16 13	+39 11.6	19.	III	*
1987	14 16 15	+42 58.7	17.5	III	
1988	14 16 15	+39 45.3	19.5	II	
1989	14 16 16	+42 15.5	17.5	III	
1990	14 16 16	+39 9.7	17.	II	* CP.OBJ.
1991	14 16 17	+39 11.2	18.5	II	*
1992	14 16 19	+44 15.0	18.	II	
1993	14 16 20	+44 7.5	18.	I	
1994	14 16 20	+40 18.1	18.	III	
1995	14 16 20	+40 17.1	18.	II	
1996	14 16 20	+39 17.4	18.5	III	
1997	14 16 22	+42 34.2	19.5	II	
1998	14 16 22	+39 19.3	19.	II	
1999	14 16 23	+41 44.6	19.	II	
2000	14 16 23	+39 27.1	17.	II	
2001	14 16 24	+44 7.9	17.5	II	
2002	14 16 24	+43 15.1	18.	II	
2003	14 16 24	+40 34.6	17.	III	
2004	14 16 25	+44 13.8	18.	III	
2005	14 16 29	+41 4.9	17.5	III	
2006	14 16 29	+39 13.0	18.5	II	*
2007	14 16 31	+42 40.8	18.5	II	
2008	14 16 32	+43 45.0	18.	III	
2009	14 16 32	+41 31.1	18.	II	
2010	14 16 34	+43 16.5	18.	II	
2011	14 16 34	+41 28.1	19.	I	
2012	14 16 34	+40 4.3	17.5	II	
2013	14 16 34	+39 46.9	19.	II	
2014	14 16 35	+43 17.3	17.5	II	
2015	14 16 37	+43 36.4	16.5	II	
2016	14 16 37	+39 14.8	19.	II	
2017	14 16 38	+43 10.7	16.5	III	
2018	14 16 38	+41 4.8	18.	II	
2019	14 16 38	+39 36.6	19.	I	
2020	14 16 40	+44 23.1	18.	II	
2021	14 16 42	+44 11.8	17.	II	
2022	14 16 42	+40 9.2	19.	III	
2023	14 16 44	+43 20.9	17.5	II	
2024	14 16 46	+41 16.6	18.5	III	
2025	14 16 46	+39 1.8	17.	III	
2026	14 16 49	+40 9.0	19.	I	
2027	14 16 49	+38 50.4	18.	III	
2028	14 16 50	+42 15.2	17.5	III	
2029	14 16 52	+42 40.6	17.5	III	
2030	14 16 52	+40 21.9	18.5	II	
2031	14 16 52	+39 23.8	18.5	III	
2032	14 16 54	+41 17.4	18.5	III	
2033	14 16 54	+38 30.7	18.	II	
2034	14 16 56	+43 46.8	19.	II	
2035	14 16 56	+43 36.7	18.	II	
2036	14 16 58	+38 25.9	17.5	III	
2037	14 16 59	+42 49.8	18.5	III	
2038	14 17 0	+41 20.1	16.	I	
2039	14 17 1	+42 34.0	19.	III	
2040	14 17 1	+38 40.9	16.5	II	
2041	14 17 2	+43 21.7	18.	II	
2042	14 17 3	+42 53.7	17.	III	
2043	14 17 3	+42 49.9	18.	III	
2044	14 17 5	+41 10.7	17.5	III	
2045	14 17 7	+42 49.7	17.5	III	

1986-1990-1991-2006 SEEM A PHYSICAL GROUP OF BLUE OBJECTS, WITH A STELLAR APPEARANCE, EXCEPT 1990.

PS 14:00 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2046	14 17 8	+39 43.7	18.5	III	
2047	14 17 10	+42 34.8	18.	II	
2048	14 17 10	+42 53.8	18.5	III	
2049	14 17 11	+42 21.6	17.5	I	
2050	14 17 12	+43 50.1	19.	III	
2051	14 17 12	+40 49.5	18.	I	
2052	14 17 14	+39 33.7	19.	II	
2053	14 17 14	+38 46.6	18.	II	
2054	14 17 16	+42 9.3	18.5	III	
2055	14 17 17	+42 5.1	19.	II	
2056	14 17 17	+41 47.1	18.5	III	
2057	14 17 17	+41 34.4	18.5	III	
2058	14 17 17	+41 14.4	18.5	II	
2059	14 17 18	+39 11.4	18.	II	
2060	14 17 19	+43 29.3	17.	II	
2061	14 17 19	+40 7.4	18.5	I	
2062	14 17 20	+40 56.6	17.5	III	
2063	14 17 20	+39 11.4	17.5	II	
2064	14 17 21	+40 28.8	17.5	III	
2065	14 17 21	+40 14.1	18.	II	
2066	14 17 23	+43 52.7	18.	II	
2067	14 17 23	+38 48.1	17.5	II	
2068	14 17 24	+40 5.1	15.	II	CP.OBJ.
2069	14 17 25	+41 53.4	19.	II	
2070	14 17 26	+44 4.5	17.	III	
2071	14 17 26	+39 17.2	17.	II	*
2072	14 17 27	+42 38.1	18.5	II	
2073	14 17 29	+43 43.8	18.5	III	
2074	14 17 29	+42 51.0	18.	III	
2075	14 17 29	+42 34.7	17.5	III	
2076	14 17 29	+42 25.4	19.	III	
2077	14 17 30	+39 35.7	19.	III	
2078	14 17 31	+39 29.7	19.	III	
2079	14 17 33	+43 29.9	18.	III	
2080	14 17 33	+42 38.0	18.5	III	
2081	14 17 33	+42 16.4	18.5	III	
2082	14 17 34	+41 32.0	18.	II	
2083	14 17 34	+41 23.4	17.5	II	
2084	14 17 34	+38 56.8	18.	II	
2085	14 17 35	+41 10.0	19.	III	
2086	14 17 37	+42 19.4	18.	III	
2087	14 17 37	+41 6.4	18.	III	
2088	14 17 38	+43 41.6	18.	III	
2089	14 17 39	+39 40.0	16.5	III	
2090	14 17 41	+38 56.7	18.	II	
2091	14 17 42	+39 27.1	19.	I	
2092	14 17 43	+42 47.2	17.	I	
2093	14 17 44	+43 30.6	18.5	III	
2094	14 17 44	+42 16.5	16.5	II	
2095	14 17 44	+42 8.5	18.	III	
2096	14 17 44	+41 2.1	18.5	I	
2097	14 17 44	+39 6.7	19.	II	
2098	14 17 46	+41 45.1	17.5	II	
2099	14 17 46	+41 27.5	18.	II	
2100	14 17 46	+40 26.2	17.5	III	
2101	14 17 47	+42 43.3	11.5	III	
2102	14 17 48	+43 28.5	18.5	III	
2103	14 17 48	+39 28.1	18.5	III	
2104	14 17 48	+39 4.5	19.	II	
2105	14 17 49	+42 29.1	18.	III	

2071 HAS COMP. 17. M, NW 20".

PS 14:00 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2106	14 17 49	+41 44.3	13.5	III	
2107	14 17 49	+40 44.8	18.	II	
2108	14 17 50	+38 32.8	17.5	II	
2109	14 17 51	+39 7.9	18.5	II	
2110	14 17 52	+44 19.8	17.	III	
2111	14 17 52	+40 2.5	19.	III	
2112	14 17 53	+42 15.7	19.	II	
2113	14 17 54	+42 14.6	19.	I	
2114	14 17 54	+40 2.1	19.	III	
2115	14 17 55	+40 4.0	18.5	III	
2116	14 17 55	+39 31.3	17.5	II	
2117	14 17 56	+43 3.5	19.	I	
2118	14 17 57	+39 25.7	18.	II	
2119	14 17 59	+42 27.3	18.	II	
2120	14 17 59	+42 14.7	18.5	I	
2121	14 17 59	+42 12.6	17.5	II	*
2122	14 18 2	+40 5.3	19.	II	
2123	14 18 4	+41 46.1	18.5	II	
2124	14 18 8	+41 47.7	18.	III	
2125	14 18 10	+39 52.3	18.5	III	
2126	14 18 12	+40 33.4	18.5	III	
2127	14 18 12	+38 46.0	19.	I	
2128	14 18 14	+41 26.5	18.	III	
2129	14 18 14	+40 20.6	18.5	III	
2130	14 18 17	+43 49.1	17.5	III	
2131	14 18 18	+40 24.6	17.5	III	
2132	14 18 20	+43 47.7	18.5	III	
2133	14 18 22	+40 49.1	18.5	II	
2134	14 18 23	+38 43.4	19.	III	
2135	14 18 24	+44 6.8	19.	III	
2136	14 18 24	+42 35.9	18.5	III	
2137	14 18 24	+41 28.0	17.5	III	
2138	14 18 24	+39 29.8	19.	III	
2139	14 18 25	+39 52.4	18.	III	
2140	14 18 27	+39 32.2	17.5	II	
2141	14 18 31	+42 25.8	19.	I	
2142	14 18 35	+40 1.9	18.5	III	
2143	14 18 36	+38 45.7	18.5	II	
2144	14 18 40	+39 44.8	18.5	III	
2145	14 18 42	+44 26.9	18.5	III	
2146	14 18 44	+42 1.7	17.5	II	*
2147	14 18 44	+39 38.7	17.5	II	
2148	14 18 45	+43 13.9	18.	III	
2149	14 18 47	+40 51.5	19.	II	
2150	14 18 47	+38 32.4	18.	III	
2151	14 18 50	+43 53.7	18.	II	
2152	14 18 50	+43 36.8	18.	II	
2153	14 18 52	+39 46.6	18.	III	
2154	14 18 53	+40 51.7	19.	II	
2155	14 18 54	+44 4.6	18.5	III	
2156	14 18 54	+39 4.6	18.5	II	
2157	14 18 56	+43 26.4	17.	III	
2158	14 18 57	+44 22.3	16.5	III	
2159	14 18 57	+39 57.8	19.	II	
2160	14 18 58	+40 53.0	18.5	II	*

2121 : FT COMP. TO BD+42°2484, 11.4 G5, N 10".
2146 HAS COMP. 17. G, SE 8".
2160 : FT COMP. TO 14. K, N 20".

Catalogue *(continued)*

PS 14:00 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2161	14 18 59	+44 16.6	17.5	III	
2162	14 19 3	+42 1.9	18.5	II	
2163	14 19 3	+39 9.2	19.	II	*
2164	14 19 4	+43 4.1	18.	II	
2165	14 19 7	+43 26.7	18.5	II	
2166	14 19 7	+40 48.3	18.	III	
2167	14 19 8	+41 33.4	19.	I	
2168	14 19 9	+39 45.4	17.5	III	
2169	14 19 11	+40 56.1	18.5	II	
2170	14 19 11	+39 47.7	18.	III	
2171	14 19 12	+41 47.6	19.	II	
2172	14 19 12	+41 16.4	19.	II	
2173	14 19 14	+39 6.6	17.5	III	
2174	14 19 16	+43 54.7	17.	III	
2175	14 19 16	+41 41.2	18.	II	
2176	14 19 16	+41 16.3	18.5	II	
2177	14 19 19	+39 4.8	18.	III	
2178	14 19 23	+42 4.2	17.	III	
2179	14 19 24	+41 8.8	17.5	III	
2180	14 19 24	+39 57.3	18.5	I	
2181	14 19 25	+38 54.4	18.	III	
2182	14 19 26	+41 28.8	17.	III	
2183	14 19 28	+42 51.4	18.	III	
2184	14 19 30	+43 32.9	17.5	III	
2185	14 19 31	+41 32.1	19.	I	
2186	14 19 32	+40 54.1	18.5	III	
2187	14 19 32	+40 41.3	18.5	III	
2188	14 19 33	+43 30.6	17.	III	
2189	14 19 34	+40 41.0	17.5	II	
2190	14 19 34	+39 55.1	18.	III	
2191	14 19 35	+42 37.8	17.5	III	
2192	14 19 35	+40 27.7	17.	III	
2193	14 19 40	+43 17.5	18.	III	
2194	14 19 40	+39 53.7	18.	II	
2195	14 19 41	+43 28.8	17.	III	
2196	14 19 41	+42 49.2	18.5	III	
2197	14 19 41	+41 47.5	18.	III	
2198	14 19 46	+40 7.4	17.5	II	
2199	14 19 46	+39 14.3	17.5	II	
2200	14 19 47	+40 49.7	18.	III	
2201	14 19 48	+42 52.1	18.	II	
2202	14 19 48	+42 40.2	17.5	I	
2203	14 19 51	+40 34.5	18.	II	
2204	14 19 55	+38 46.5	17.5	III	
2205	14 19 58	+43 36.3	18.	II	
2206	14 20 0	+40 56.1	17.	III	
2207	14 20 6	+42 59.1	14.5	III	
2208	14 20 9	+41 53.3	17.5	II	
2209	14 20 9	+39 35.7	18.5	II	
2210	14 20 11	+43 33.1	17.5	III	
2211	14 20 13	+41 38.4	17.5	III	
2212	14 20 14	+42 38.1	18.	II	
2213	14 20 18	+44 7.1	17.	II	
2214	14 20 19	+41 0.6	17.5	III	
2215	14 20 19	+40 2.7	17.5	II	
2216	14 20 20	+44 15.2	17.	II	
2217	14 20 22	+43 42.1	18.	II	
2218	14 20 24	+42 18.7	18.5	II	
2219	14 20 28	+41 33.0	18.	III	
2220	14 20 30	+43 53.7	17.	III	

2163 HAS COMP. 19. F, N 20", BLUE (CLASS II) ON PSS PRINTS.

PS 14:00 +42

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2221	14 20 32	+43 33.0	16.5	II	*
2222	14 20 33	+44 5.2	18.	III	
2223	14 20 33	+41 51.4	17.	III	
2224	14 20 36	+43 55.7	16.5	II	
2225	14 20 38	+44 4.6	19.	II	
2226	14 20 39	+44 0.9	17.	III	
2227	14 20 41	+44 16.6	17.5	III	
2228	14 20 41	+42 2.8	16.5	III	
2229	14 20 53	+43 23.8	17.5	II	

2221 : FT COMP. TO 13. K, SW 20".

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2230	11 6 24	+31 33.3	17.5	II	
2231	11 6 38	+29 41.9	17.5	III	
2232	11 6 41	+31 25.5	17.5	II	LB10004
2233	11 6 49	+30 48.4	18.	III	LB10006
2234	11 7 0	+30 12.9	18.	III	
2235	11 7 4	+31 41.9	17.5	III	
2236	11 7 6	+28 41.3	18.5	I	LB10008
2237	11 7 9	+30 1.8	18.5	II	
2238	11 7 9	+28 40.0	17.5	II	LB10009
2239	11 7 11	+32 16.2	16.	II	LB10007
2240	11 7 12	+26 37.1	18.	II	
2241	11 7 14	+29 15.5	18.	III	
2242	11 7 19	+30 26.6	18.	III	
2243	11 7 19	+26 35.2	16.	I	* TN573
2244	11 7 21	+27 30.5	17.	III	TN574
2245	11 7 23	+30 25.7	18.5	I	LB10011
2246	11 7 25	+32 6.6	17.5	III	LB10013
2247	11 7 25	+30 35.3	18.5	II	
2248	11 7 31	+27 52.3	18.5	III	
2249	11 7 32	+31 55.2	17.	III	LB10014
2250	11 7 38	+30 23.3	17.5	II	*
2251	11 7 39	+31 4.1	17.	I	LB10016
2252	11 7 39	+30 20.1	18.	III	
2253	11 7 39	+27 51.3	18.	II	*
2254	11 7 41	+31 20.5	18.5	I	LB10015
2255	11 7 42	+29 52.5	18.	III	
2256	11 7 43	+28 10.5	17.5	III	
2257	11 7 51	+28 38.5	16.5	III	LB10017
2258	11 7 52	+30 54.9	17.5	III	
2259	11 7 52	+28 27.2	17.5	III	
2260	11 7 55	+28 8.8	18.5	II	
2261	11 7 58	+30 53.8	18.	II	
2262	11 7 58	+30 35.4	18.5	I	* QSS?
2263	11 7 59	+26 40.8	18.	III	
2264	11 8 2	+29 14.6	17.5	III	
2265	11 8 3	+32 14.4	17.	II	
2266	11 8 3	+31 28.6	18.5	I	
2267	11 8 3	+27 55.3	18.5	II	
2268	11 8 3	+27 12.5	18.	III	
2269	11 8 4	+30 10.8	18.	I	LB10021
2270	11 8 5	+30 2.5	18.5	III	
2271	11 8 7	+27 12.1	18.5	I	LB10020?
2272	11 8 13	+29 55.3	19.5	III	
2273	11 8 18	+29 33.5	18.	III	
2274	11 8 22	+31 54.9	15.5	I	* PECULIAR
2275	11 8 23	+30 10.1	18.	III	
2276	11 8 28	+28 25.5	17.	III	
2277	11 8 36	+28 22.8	18.5	III	
2278	11 8 39	+28 50.0	18.	III	
2279	11 8 41	+30 28.1	17.5	III	LB10023
2280	11 8 45	+29 49.7	17.5	I	LB10025

2243 = TN573 = LB10012.
2250 HAS COMP. 17.5 G, E 15".
2253 : FT COMP. TO 16.5 K, SW 12".
2262 = LB10019 : POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE B2 1107 30 (COLLA ET AL., 1970).
2274 : PECULIAR : BLUE IMAGE STRONG RELATIVELY TO UV IMAGE.

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2281	11 8 45	+29 7.6	18.5	III	
2282	11 8 45	+28 41.5	18.	III	
2283	11 8 56	+31 45.9	17.	II	
2284	11 8 57	+28 2.9	18.5	III	
2285	11 8 59	+28 3.7	18.5	III	
2286	11 9 3	+28 18.8	18.	III	
2287	11 9 5	+30 33.1	18.	I	
2288	11 9 7	+31 46.9	18.5	I	LB10027
2289	11 9 9	+27 41.4	17.5	III	
2290	11 9 10	+28 53.5	18.	III	
2291	11 9 15	+30 24.6	17.5	III	
2292	11 9 20	+29 14.3	19.	III	
2293	11 9 21	+30 29.4	17.5	III	
2294	11 9 21	+27 16.2	18.	III	
2295	11 9 23	+31 20.3	18.	III	
2296	11 9 30	+26 29.5	17.5	III	
2297	11 9 31	+30 37.7	18.	II	LB10030
2298	11 9 31	+29 44.3	18.	III	
2299	11 9 33	+30 46.7	19.	III	LB10029
2300	11 9 33	+27 44.8	17.	III	LB10028
2301	11 9 34	+26 44.7	18.	II	
2302	11 9 36	+27 18.7	18.	II	
2303	11 9 38	+28 2.0	18.5	II	
2304	11 9 39	+29 15.0	18.5	III	
2305	11 9 39	+27 42.7	17.	III	
2306	11 9 40	+27 1.9	18.5	III	
2307	11 9 44	+27 10.8	18.	III	
2308	11 9 45	+26 49.9	17.5	III	
2309	11 9 46	+27 31.5	18.	I	LB10034
2310	11 9 53	+30 33.2	18.	III	
2311	11 10 9	+31 50.4	16.5	III	
2312	11 10 11	+32 4.4	18.	II	
2313	11 10 14	+30 41.5	19.	III	
2314	11 10 14	+28 19.3	17.5	II	
2315	11 10 16	+30 44.8	18.5	II	LB10036
2316	11 10 17	+30 35.4	18.	III	
2317	11 10 19	+30 39.8	18.	III	
2318	11 10 19	+30 26.7	18.5	III	
2319	11 10 20	+31 56.0	17.5	III	
2320	11 10 20	+28 26.9	18.	III	
2321	11 10 23	+29 30.2	18.	I	LB10037
2322	11 10 23	+29 24.1	14.	I	* TN62
2323	11 10 25	+29 39.3	18.	III	
2324	11 10 33	+28 47.6	17.5	III	
2325	11 10 34	+31 11.8	18.5	I	LB10039
2326	11 10 35	+30 7.9	18.5	III	LB10040
2327	11 10 35	+28 6.9	18.	II	
2328	11 10 39	+30 29.8	18.5	III	
2329	11 10 40	+26 56.0	17.5	III	
2330	11 10 41	+26 42.5	18.	III	LB100437
2331	11 10 50	+30 37.3	17.5	I	LB10041
2332	11 10 54	+27 23.4	18.5	II	LB10042?
2333	11 10 55	+32 19.1	18.	II	LB10044
2334	11 10 57	+29 6.2	18.5	III	
2335	11 11 1	+28 4.0	18.5	III	LB10045
2336	11 11 2	+30 57.0	18.	II	
2337	11 11 2	+29 55.6	18.	II	
2338	11 11 4	+29 46.4	18.	II	
2339	11 11 6	+30 57.2	19.5	I	LB10047
2340	11 11 6	+28 33.3	18.	III	

2322 = TN 62 = LB10038.

Catalogue *(continued)*

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2341	11 11 6	+27 53.2	15.5	III	
2342	11 11 8	+28 41.5	18.	III	
2343	11 11 8	+28 40.0	18.	III	
2344	11 11 10	+32 12.8	18.	I	LB10046
2345	11 11 10	+30 31.9	18.	II	
2346	11 11 10	+30 24.5	18.	II	LB10048
2347	11 11 11	+29 17.6	18.	III	
2348	11 11 12	+28 55.3	19.5	II	
2349	11 11 15	+29 42.7	18.5	I	LB10049
2350	11 11 15	+27 42.6	18.	I	TN575
2351	11 11 17	+27 19.8	17.5	III	
2352	11 11 18	+29 41.0	17.5	III	
2353	11 11 21	+27 51.2	19.	III	
2354	11 11 25	+30 33.5	18.5	III	
2355	11 11 26	+31 37.7	18.	II	
2356	11 11 31	+30 34.9	18.5	II *	
2357	11 11 32	+28 9.8	18.	III	
2358	11 11 33	+31 52.9	18.	I	LB10050
2359	11 11 33	+29 12.1	18.5	I	LB10053
2360	11 11 34	+31 9.2	18.	III	
2361	11 11 35	+30 54.3	18.5	III	
2362	11 11 35	+26 25.1	17.5	III	
2363	11 11 36	+30 35.6	18.5	II *	
2364	11 11 45	+30 14.0	17.	III	
2365	11 11 48	+31 54.6	18.5	I	
2366	11 11 48	+31 3.1	18.5	I	LB10054
2367	11 11 50	+29 40.9	17.5	III	
2368	11 11 52	+31 9.4	18.5	II	LB10051?
2369	11 11 52	+28 19.6	18.	III	
2370	11 11 54	+28 3.5	18.	III	
2371	11 11 55	+27 4.8	18.	III	
2372	11 11 56	+30 31.1	19.	II	
2373	11 11 57	+32 5.7	18.5	I	
2374	11 11 58	+32 6.2	18.5	I	
2375	11 11 58	+29 33.1	17.5	III	
2376	11 11 58	+27 4.6	18.5	III	
2377	11 11 59	+28 42.3	17.5	I *	
2378	11 12 1	+29 13.8	18.	III	
2379	11 12 2	+26 28.1	18.5	II	
2380	11 12 3	+27 27.8	18.5	II	
2381	11 12 6	+31 56.2	17.	I	LB10057
2382	11 12 7	+29 49.1	18.5	I	LB10059
2383	11 12 15	+31 17.2	18.	II	
2384	11 12 15	+29 8.8	17.5	III	
2385	11 12 15	+28 45.1	19.	III	LB10062
2386	11 12 17	+26 26.6	18.5	III	
2387	11 12 18	+27 17.5	18.5	III	
2388	11 12 19	+26 44.8	18.	III	
2389	11 12 20	+28 36.6	18.5	III	
2390	11 12 21	+32 23.6	17.	III	
2391	11 12 21	+31 2.5	18.5	III	LB10060
2392	11 12 21	+27 16.2	18.5	III	
2393	11 12 23	+27 23.5	18.	II	
2394	11 12 24	+30 56.1	16.	II	
2395	11 12 25	+30 42.8	18.	I	LB10061
2396	11 12 25	+29 38.5	18.	III	
2397	11 12 27	+29 18.0	17.5	III	LB10064?
2398	11 12 28	+26 51.1	18.5	III	
2399	11 12 30	+32 12.0	18.	III	
2400	11 12 30	+29 51.7	18.5	III	

2356 OR 2363 : PROBABLE IDENTIFICATION WITH LB10052.
2377 : COMP. TO 17. G, E 25".

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2401	11 12 30	+29 44.5	17.5	III	
2402	11 12 32	+29 32.7	16.	II	M.CP.OBJ.
2403	11 12 35	+31 4.6	18.	II	
2404	11 12 35	+26 45.4	18.5	III	
2405	11 12 36	+29 58.0	17.5	III	
2406	11 12 37	+28 22.0	18.	I	
2407	11 12 45	+26 22.3	18.	II	LB10066
2408	11 12 48	+28 31.3	19.5	II	
2409	11 12 52	+27 31.6	18.5	III	
2410	11 13 3	+31 44.5	18.	I *	LB10069
2411	11 13 5	+27 12.6	17.5	III	
2412	11 13 7	+27 50.9	18.5	III	
2413	11 13 8	+29 26.4	18.	III	LB10071
2414	11 13 12	+27 50.8	18.	III	
2415	11 13 15	+28 4.0	18.5	II	
2416	11 13 17	+27 14.9	17.5	III	
2417	11 13 18	+32 18.6	17.5	III	
2418	11 13 19	+30 1.2	17.5	III	LB10073
2419	11 13 19	+27 35.6	18.	III	
2420	11 13 20	+30 35.0	16.	II	LB10072
2421	11 13 21	+28 53.5	19.	III	
2422	11 13 27	+29 19.2	18.	III	
2423	11 13 36	+31 24.5	17.5	III	
2424	11 13 38	+29 50.3	17.5	III	
2425	11 13 38	+28 57.4	18.	III	LB10075
2426	11 13 41	+29 28.3	18.	III	
2427	11 13 42	+26 26.2	17.	II	LB10079
2428	11 13 43	+29 26.2	18.	III	
2429	11 13 44	+31 24.4	18.5	II	LB10076
2430	11 13 46	+32 2.9	18.	III	LB10080
2431	11 13 50	+27 14.2	19.	III	
2432	11 13 51	+28 55.1	18.5	III	
2433	11 13 52	+26 30.5	18.5	III	
2434	11 13 55	+30 13.4	17.5	II	LB10081
2435	11 13 56	+26 26.0	17.	III	LB10078?
2436	11 13 59	+29 16.8	18.	II *	
2437	11 14 0	+29 54.8	18.	III	
2438	11 14 1	+29 14.3	18.	III	
2439	11 14 2	+27 26.4	17.5	III	
2440	11 14 3	+26 30.7	18.5	II	
2441	11 14 6	+30 27.0	18.	III	
2442	11 14 7	+31 45.3	18.	I	LB10083
2443	11 14 7	+27 7.4	17.5	III	
2444	11 14 8	+29 53.9	18.	III	
2445	11 14 11	+29 27.7	17.5	III	
2446	11 14 14	+31 39.7	18.5	II	LB10084
2447	11 14 14	+28 16.6	18.	I	
2448	11 14 18	+27 45.4	18.5	III	LB10085
2449	11 14 22	+31 55.4	17.5	III	
2450	11 14 23	+30 50.5	17.5	III	LB10086
2451	11 14 23	+30 36.0	15.	III	
2452	11 14 24	+27 17.0	18.5	II *	QSS
2453	11 14 27	+30 33.3	18.5	I	LB10087?
2454	11 14 30	+29 50.7	17.5	II *	LB10088
2455	11 14 31	+26 21.4	18.5	III	

2410 = LB10069 : COMP. TO 17.5 K, S 12".
2436 : FT COMP. TO 13. G, N 10".
2452 = LB10089; IS PROBABLY THE BLUE STAR IDENTIFIED WITH THE RADIO SOURCE B2 1114 27N-A (GRUEFF AND VIGOTTI, 1975).
2454 = LB10088 : COMP. TO 17.5 G, S 4".

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2456	11 14 32	+32 8.6	18.	III	
2457	11 14 33	+26 37.8	18.	II	
2458	11 14 35	+28 28.0	18.	III	
2459	11 14 36	+32 15.0	13.	III	
2460	11 14 38	+27 14.2	17.5	III	
2461	11 14 41	+28 56.4	17.	II *	LB10090
2462	11 14 47	+29 53.0	17.5	III	
2463	11 14 51	+29 18.1	18.5	III	
2464	11 14 52	+32 10.2	17.5	III	
2465	11 14 53	+30 26.7	18.	III	
2466	11 14 53	+29 9.6	17.5	III	
2467	11 14 56	+30 5.4	18.5	II	
2468	11 14 58	+26 52.3	18.	III	
2469	11 15 1	+30 46.2	18.	I *	LB10093
2470	11 15 2	+27 19.6	18.	II	
2471	11 15 3	+28 17.9	18.	III	
2472	11 15 4	+26 58.8	17.5	I	LB10092
2473	11 15 6	+28 28.9	17.	III	
2474	11 15 6	+26 40.1	18.	III *	
2475	11 15 7	+22 0.9	14.	III	TN1381
2476	11 15 7	+27 19.0	18.	III	LB10094
2477	11 15 7	+26 38.2	17.5	I *	
2478	11 15 8	+30 51.8	18.5	I	LB10095
2479	11 15 8	+29 32.6	18.5	II	LB10096
2480	11 15 9	+29 42.2	18.	III	
2481	11 15 12	+30 49.0	18.5	III	
2482	11 15 12	+30 24.3	18.	III	
2483	11 15 14	+26 50.6	16.5	II *	TN576
2484	11 15 15	+27 48.5	18.	III	
2485	11 15 16	+27 13.9	17.	III	CP.OBJ.
2486	11 15 17	+26 23.8	18.	II	
2487	11 15 22	+28 38.4	18.5	III	LB10101
2488	11 15 22	+28 57.1	17.5	III	LB10102?
2489	11 15 27	+26 22.3	17.5	III	
2490	11 15 28	+30 15.8	18.	III	
2491	11 15 30	+27 3.1	18.	III	
2492	11 15 36	+29 2.1	18.5	II	LB10106
2493	11 15 37	+27 3.4	18.5	II	LB10105
2494	11 15 39	+29 8.2	18.	I	LB10104
2495	11 15 41	+29 39.0	18.	II	LB10103
2496	11 15 44	+29 19.3	18.5	III	
2497	11 15 45	+30 1.5	18.	III	
2498	11 15 49	+27 33.5	15.5	I *	TN577
2499	11 15 55	+28 27.1	18.	III	
2500	11 15 56	+31 48.6	18.	II	LB10109
2501	11 15 59	+26 27.9	19.	III	
2502	11 16 1	+31 19.7	17.5	I	LB10110
2503	11 16 3	+27 59.8	18.	I	LB10112
2504	11 16 4	+31 7.9	18.5	I	LB10111
2505	11 16 8	+30 52.9	17.	I	LB10113
2506	11 16 13	+31 55.2	17.5	III	
2507	11 16 13	+29 12.1	14.5	III	LB10114
2508	11 16 13	+27 44.4	18.5	I	LB10115
2509	11 16 15	+28 15.6	18.	II	
2510	11 16 17	+28 25.9	18.	III	

2461 = LB10090 HAS FT COMP. 18. K, SE 12".
2469 = LB10093 : COMP. TO 18. F, SE 25".
2474 OR 2477 : PROBABLE IDENTIFICATION WITH LB10098.
2483 = TN576 = LB10097.
2498 = TN577 = LB10108.

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2511	11 16 18	+32 0.9	17.5	III	
2512	11 16 18	+28 53.4	16.5	III *	TN578
2513	11 16 20	+29 13.1	18.5	I	LB10119
2514	11 16 24	+32 21.8	17.5	III	
2515	11 16 24	+30 8.4	14.5	I *	TN63
2516	11 16 24	+29 49.4	19.	III	
2517	11 16 33	+28 23.7	18.5	I	
2518	11 16 36	+30 2.6	18.	II	LB10120
2519	11 16 41	+31 22.9	17.5	II	
2520	11 16 41	+31 3.1	18.	II	
2521	11 16 41	+27 51.8	18.	II	
2522	11 16 43	+30 11.0	17.	III	LB10122
2523	11 16 45	+28 57.0	18.5	III	
2524	11 16 46	+32 0.5	18.5	I	
2525	11 16 51	+27 36.3	18.5	II *	
2526	11 16 52	+26 59.5	17.5	III	
2527	11 16 53	+27 34.5	18.5	II *	
2528	11 16 55	+30 57.6	18.	II	
2529	11 16 56	+28 51.8	18.	II	
2530	11 17 0	+27 26.8	18.5	III	
2531	11 17 2	+27 43.2	17.	III	
2532	11 17 6	+30 54.5	17.5	III	
2533	11 17 9	+29 24.1	18.	III *	
2534	11 17 10	+27 44.8	17.5	III	
2535	11 17 12	+29 14.6	19.	III	
2536	11 17 14	+27 56.4	18.	III	
2537	11 17 16	+31 43.9	17.5	II	LB10126
2538	11 17 16	+31 2.5	17.5	II *	
2539	11 17 19	+31 13.4	14.5	I *	TN64
2540	11 17 21	+31 2.0	18.5	II *	
2541	11 17 24	+31 14.0	19.	III	LB10130
2542	11 17 30	+31 34.5	17.5	III	
2543	11 17 38	+30 38.7	18.	I	
2544	11 17 44	+27 15.5	18.5	II *	LB10134?
2545	11 17 45	+27 14.0	18.	II *	LB10136?
2546	11 17 46	+29 14.4	18.	III	
2547	11 17 47	+27 16.6	18.	II *	LB10133?
2548	11 17 48	+28 12.9	18.	III	
2549	11 17 49	+26 53.8	18.	III	
2550	11 17 50	+27 11.4	18.	III	
2551	11 17 54	+28 20.5	17.5	III	
2552	11 17 54	+27 6.2	18.5	III	
2553	11 17 56	+31 44.1	18.5	III	LB10137
2554	11 17 56	+29 19.4	18.	I	LB10135
2555	11 18 2	+29 19.2	18.5	II	
2556	11 18 3	+31 22.2	18.	III	
2557	11 18 3	+31 12.9	18.5	III	
2558	11 18 6	+28 15.3	18.5	II *	LB10138?
2559	11 18 7	+31 2.6	17.5	III	
2560	11 18 10	+30 48.4	18.5	II	

2512 = TN578 = LB10116 = G147-43.
V=16.56 B-V=+0.25 U-B=-0.58 (EGGEN, 1968).
2515 = TN63 = LB10117.
2525 OR 2527 : PROBABLE IDENTIFICATION WITH LB10023.
2533 HAS COMP. 18. G, N 12". THIS PAIR HAS THE POSITION OF LB10124 AND LB10125. PSS PRINTS GIVE B+G COLOURS.
2538 OR 2540 : PROBABLE IDENTIFICATION WITH LB10128.
2539 = TN64 = LB10127.
2544-2545-2547 : RELATED WITH THE CLOSE GALAXY NGC 36292
2558 = LB10138? NOT VISIBLE ON PSS-E PRINT; VERY FAINT ON PSS-O PRINT : A VARIABLE STAR.

Catalogue *(continued)*

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2561	11 18 14	+28 15.1	18.5	I	
2562	11 18 15	+26 38.9	17.	III	
2563	11 18 18	+31 4.9	18.	III	
2564	11 18 25	+31 35.6	18.	III	
2565	11 18 25	+28 16.1	18.5	II	
2566	11 19 27	+26 43.3	17.5	III	
2567	11 18 30	+32 14.4	18.	II	
2568	11 18 31	+30 56.7	17.5	III	* QSS?
2569	11 18 33	+29 52.1	17.	III	LB10141
2570	11 18 50	+26 41.6	18.	III	
2571	11 18 51	+27 21.1	17.5	III	
2572	11 18 56	+29 37.4	18.5	I	
2573	11 18 57	+31 41.3	18.	I	LB10144
2574	11 19 1	+28 26.1	18.	III	
2575	11 19 8	+29 6.6	18.5	III	
2576	11 19 8	+29 5.8	18.	III	
2577	11 19 9	+30 57.5	18.5	II	LB10146
2578	11 19 10	+27 2.1	17.	III	
2579	11 19 11	+30 4.1	18.5	II	LB10147
2580	11 19 13	+31 10.6	17.5	III	LB10145
2581	11 19 13	+29 51.6	18.	I	LB10148
2582	11 19 14	+32 18.3	18.	III	
2583	11 19 14	+30 28.4	18.	III	
2584	11 19 15	+32 18.5	17.5	III	
2585	11 19 15	+32 13.9	18.	II	
2586	11 19 23	+31 26.7	18.	II	
2587	11 19 25	+27 42.2	18.	II	
2588	11 19 27	+31 12.2	18.	III	LB10149
2589	11 19 36	+30 47.1	18.5	III	
2590	11 19 37	+27 7.3	18.	III	
2591	11 19 43	+29 55.9	17.5	III	
2592	11 19 46	+32 23.2	17.	III	LB10151
2593	11 19 47	+32 26.0	18.5	I	LB10150
2594	11 19 49	+31 23.1	17.5	III	
2595	11 19 49	+27 7.5	18.5	III	
2596	11 19 52	+28 5.7	18.	III	
2597	11 19 53	+28 6.6	18.	I	LB10153
2598	11 19 56	+29 55.6	18.5	I	LB10152
2599	11 19 56	+27 32.5	18.5	II	LB10154
2600	11 20 0	+27 22.0	18.	III	
2601	11 20 1	+30 52.0	17.	I	LB10155
2602	11 20 11	+26 36.1	18.5	III	
2603	11 20 13	+30 40.8	18.	III	
2604	11 20 17	+27 16.6	18.	III	
2605	11 20 18	+30 47.5	17.5	III	
2606	11 20 20	+31 0.3	17.5	III	
2607	11 20 20	+26 44.2	12.5	III	* LB10157
2608	11 20 23	+30 20.5	18.	I	LB10158
2609	11 20 26	+26 35.8	18.5	III	LB10159?
2610	11 20 27	+30 45.3	15.	I	* M.CP.OBJ.
2611	11 20 29	+32 9.5	18.	III	
2612	11 20 30	+27 5.3	17.5	III	
2613	11 20 32	+27 55.7	18.	III	
2614	11 20 33	+31 34.1	18.	II	
2615	11 20 33	+28 25.4	17.5	III	LB10163

2568 : POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE B2 1118 30 (COLLA ET AL., 1970).
2607 = LB10157 : GD SPECTRUM GIVES THE TYPE A5.
2610 : IN CGCG.

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2616	11 20 36	+29 46.9	17.5	III	LB10160
2617	11 20 37	+30 18.6	18.5	II	
2618	11 20 37	+29 32.5	18.5	I	LB10161
2619	11 20 38	+31 20.1	18.5	II	
2620	11 20 38	+29 6.3	17.5	I	LB10162
2621	11 20 40	+29 57.9	19.5	I	LB10165
2622	11 20 41	+26 42.4	18.	III	
2623	11 20 44	+27 34.0	18.5	III	
2624	11 20 45	+29 26.8	18.	III	
2625	11 20 49	+32 10.2	18.5	III	
2626	11 20 50	+27 4.0	18.5	III	
2627	11 20 51	+28 48.9	17.5	III	LB10167?
2628	11 20 52	+26 30.2	18.5	III	
2629	11 20 53	+27 39.0	19.5	II	
2630	11 20 56	+28 35.0	18.5	III	
2631	11 20 59	+32 9.5	17.5	III	
2632	11 21 0	+29 54.9	18.	III	LB10168
2633	11 21 1	+31 43.3	18.	I	LB10169
2634	11 21 5	+31 20.0	17.5	III	
2635	11 21 9	+29 46.9	18.	III	*
2636	11 21 9	+26 38.4	18.	III	
2637	11 21 10	+31 43.6	17.5	III	
2638	11 21 10	+29 42.6	18.	III	
2639	11 21 12	+26 58.3	18.	III	
2640	11 21 13	+29 48.0	18.	III	*
2641	11 21 13	+28 40.5	17.	III	
2642	11 21 15	+27 26.0	18.5	III	
2643	11 21 17	+31 20.7	18.	II	
2644	11 21 18	+26 44.1	18.	III	
2645	11 21 19	+27 25.8	18.5	III	
2646	11 21 25	+28 11.2	18.	II	
2647	11 21 27	+32 21.7	19.	I	LB10171
2648	11 21 27	+31 7.4	18.	I	LB10172
2649	11 21 28	+31 7.4	18.	III	
2650	11 21 30	+28 45.1	18.	III	
2651	11 21 33	+27 57.4	18.5	III	
2652	11 21 34	+26 24.5	18.	III	
2653	11 21 35	+26 44.5	18.	III	
2654	11 21 36	+31 57.8	18.	I	LB10176
2655	11 21 38	+32 8.8	18.	I	LB10175
2656	11 21 40	+29 48.2	17.5	III	
2657	11 21 46	+31 32.5	19.5	II	LB10177
2658	11 21 46	+27 51.8	17.5	III	
2659	11 21 51	+30 46.2	17.5	III	
2660	11 21 52	+26 31.2	17.5	III	
2661	11 21 53	+32 12.9	18.5	I	LB10179
2662	11 21 53	+29 45.5	17.5	III	
2663	11 21 54	+31 50.9	18.5	II	
2664	11 21 57	+28 33.0	18.5	I	
2665	11 21 58	+26 59.4	17.5	III	
2666	11 21 59	+31 33.0	18.5	II	*
2667	11 22 2	+31 33.0	18.	II	*
2668	11 22 2	+26 41.1	18.	II	LB10181?
2669	11 22 6	+21 48.2	18.5	III	
2670	11 22 7	+28 28.3	18.	III	
2671	11 22 9	+31 11.0	18.5	III	
2672	11 22 9	+30 28.7	18.	III	
2673	11 22 10	+29 24.0	18.5	II	
2674	11 22 14	+27 19.1	18.5	III	
2675	11 22 16	+30 29.3	18.	III	

2635 OR 2640 : PROBABLE IDENTIFICATION WITH LB10170.
2666 OR 2667 : PROBABLE IDENTIFICATION WITH LB10180.

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2676	11 22 18	+30 8.8	18.5	II	
2677	11 22 25	+27 21.4	17.5	III	
2678	11 22 28	+30 49.3	18.	I	LB10184
2679	11 22 30	+27 6.9	18.5	III	
2680	11 22 35	+28 1.9	18.5	III	
2681	11 22 36	+31 53.5	17.5	III	
2682	11 22 37	+29 13.3	18.5	II	
2683	11 22 38	+30 3.7	18.5	II	LB10185
2684	11 22 39	+30 9.1	18.	III	
2685	11 22 40	+27 9.0	18.	III	
2686	11 22 41	+31 54.4	17.5	III	
2687	11 22 41	+26 57.9	12.5	III	* LB10186?
2688	11 22 41	+26 53.8	18.5	II	LB10187
2689	11 22 45	+29 35.5	18.5	III	
2690	11 22 48	+32 23.0	18.	I	LB10188
2691	11 22 49	+28 1.8	18.	III	
2692	11 22 52	+27 37.6	18.5	III	
2693	11 22 54	+28 57.2	18.5	I	
2694	11 22 56	+31 11.3	17.5	III	
2695	11 22 56	+26 34.3	18.	III	
2696	11 23 4	+30 26.5	18.5	III	
2697	11 23 4	+27 12.5	18.	III	
2698	11 23 4	+26 39.0	17.	III	
2699	11 23 8	+31 54.1	18.5	III	
2700	11 23 11	+29 26.8	18.5	I	LB10189
2701	11 23 13	+29 15.7	16.5	II	CP.OBJ.
2702	11 23 13	+26 44.1	18.	III	
2703	11 23 14	+28 44.0	17.5	III	
2704	11 23 15	+26 26.9	18.5	II	* QSS?
2705	11 23 18	+28 12.6	18.5	II	
2706	11 23 19	+28 35.2	18.5	II	
2707	11 23 20	+30 56.6	18.	I	LB10191
2708	11 23 20	+29 24.1	18.5	II	LB10192
2709	11 23 25	+32 4.9	18.5	III	
2710	11 23 27	+26 50.1	18.5	III	
2711	11 23 28	+32 23.3	17.5	III	
2712	11 23 33	+29 0.6	18.5	I	LB10194
2713	11 23 34	+26 33.9	17.5	III	
2714	11 23 35	+31 19.3	18.	I	LB10193
2715	11 23 35	+26 28.4	18.	II	
2716	11 23 37	+29 4.5	18.	III	
2717	11 23 38	+31 23.0	18.	III	
2718	11 23 39	+27 33.8	18.	I	*
2719	11 23 39	+26 36.8	17.5	III	
2720	11 23 40	+27 36.7	18.5	II	*
2721	11 23 41	+32 8.1	18.5	III	
2722	11 23 41	+32 0.9	18.	I	LB10196
2723	11 23 44	+27 49.0	18.5	I	
2724	11 23 54	+27 55.5	18.	I	LB10199
2725	11 24 3	+31 18.6	18.5	I	
2726	11 24 6	+29 37.6	18.	II	
2727	11 24 14	+27 2.4	18.5	II	
2728	11 24 18	+28 0.6	17.5	III	
2729	11 24 20	+31 19.3	19.	III	
2730	11 24 20	+27 10.1	19.5	I	LB10200

2687 = LB10186? GD SPECTRUM GIVES A TYPE LATE F. THE DISAGREEMENT IN MAGNITUDE AND COLOUR SUGGESTS THAT LB10186 (14.8 I) IS ANOTHER STAR, VARIABLE, NOT VISIBLE ON THE PB PLATE.
2704 : POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE B2 1123 26B (COLLA ET AL.,1972) AND A QSO WITH NO SPECTROSCOPIC CONFIRMATION OF JOHNSON (1974).
2718 OR 2720 : PROBABLE IDENTIFICATION WITH LB10195.

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2731	11 24 20	+26 56.8	19.	III	
2732	11 24 26	+27 31.5	19.	III	
2733	11 24 27	+32 2.5	18.	III	
2734	11 24 30	+26 44.9	18.	III	
2735	11 24 33	+32 9.4	18.5	III	
2736	11 24 34	+29 18.8	17.5	III	
2737	11 24 37	+32 2.0	17.5	III	
2738	11 24 37	+29 11.2	17.5	III	
2739	11 24 37	+27 18.5	18.	II	
2740	11 24 41	+31 6.4	18.5	III	
2741	11 24 41	+30 4.0	17.	III	
2742	11 24 51	+31 20.5	17.5	III	
2743	11 24 53	+27 42.2	19.	I	LB10202
2744	11 24 54	+28 48.8	17.5	III	
2745	11 24 56	+31 2.9	18.	III	
2746	11 24 57	+27 21.4	17.5	III	
2747	11 24 58	+27 11.3	17.	II	LB10203
2748	11 25 2	+30 43.3	19.	III	
2749	11 25 3	+27 20.1	19.	III	
2750	11 25 8	+26 50.0	19.	II	
2751	11 25 12	+28 11.7	18.5	III	
2752	11 25 12	+27 49.0	17.	III	LB10205
2753	11 25 13	+29 40.2	18.	III	
2754	11 25 14	+32 21.2	18.	II	LB10204
2755	11 25 15	+29 36.3	17.5	III	
2756	11 25 17	+23 58.4	19.	III	
2757	11 25 20	+28 27.1	19.5	I	LB10207
2758	11 25 21	+31 12.3	19.5	III	
2759	11 25 21	+27 10.9	18.5	III	
2760	11 25 24	+28 7.6	19.	III	
2761	11 25 25	+31 26.9	17.5	III	
2762	11 25 25	+28 38.2	18.5	III	
2763	11 25 26	+31 30.6	17.5	III	LB10206
2764	11 25 27	+29 9.4	18.5	III	
2765	11 25 30	+23 43.4	19.	III	
2766	11 25 30	+29 39.7	19.5	II	
2767	11 25 31	+29 33.2	19.5	I	
2768	11 25 33	+31 39.4	18.5	III	
2769	11 25 36	+29 55.0	17.5	III	
2770	11 25 40	+32 9.7	18.5	II	
2771	11 25 40	+26 36.5	10.5	III	* BD+27°2028
2772	11 25 45	+28 7.6	18.	III	
2773	11 25 48	+31 24.6	18.5	II	*
2774	11 25 50	+29 31.7	15.	I	TN67
2775	11 25 57	+31 35.7	18.5	III	
2776	11 25 59	+31 16.0	17.5	III	
2777	11 26 0	+29 18.7	18.	III	
2778	11 26 3	+29 39.1	18.5	III	
2779	11 26 4	+32 13.8	19.5	III	
2780	11 26 5	+28 16.6	18.5	II	
2781	11 26 6	+29 40.7	17.5	III	
2782	11 26 9	+29 6.4	18.	I	LB10211
2783	11 26 13	+26 57.2	17.5	II	
2784	11 26 17	+29 59.7	18.	III	
2785	11 26 18	+29 2.8	18.5	III	
2786	11 26 19	+28 50.8	19.5	I	LB10212
2787	11 26 21	+31 14.0	19.	I	LB10213
2788	11 26 22	+32 17.8	18.	III	
2789	11 26 22	+30 25.7	18.5	III	
2790	11 26 23	+29 13.2	18.	III	

2771 = BD+27°2028. B AND GD SPECTRA GIVE THE TYPE F0 WITH UV EXCESS POSSIBLE (SUBDWARF?).
2773 : FT COMP. TO 17. G, NE 12".

1977A&AS...28..123B

Catalogue *(continued)*

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2791	11 26 27	+29 36.1	18.	III	LB10214
2792	11 26 35	+30 13.5	18.	II	
2793	11 26 36	+29 5.1	17.5	III	LB10215
2794	11 26 36	+26 49.4	18.5	III	
2795	11 26 37	+28 17.7	18.	III	
2796	11 26 37	+27 48.3	18.	II	
2797	11 26 48	+26 42.0	18.	III	
2798	11 26 50	+30 28.3	18.	III	
2799	11 26 54	+28 39.5	17.5	III	
2800	11 26 54	+28 22.0	18.	I	* LB10216
2801	11 26 58	+30 53.1	17.5	II	
2802	11 27 0	+30 9.0	18.	III	LB10217
2803	11 27 4	+26 47.6	17.5	III	
2804	11 27 8	+28 44.4	18.5	I	LB10220
2805	11 27 9	+31 37.8	18.5	II	
2806	11 27 9	+27 51.0	18.	III	
2807	11 27 11	+31 20.0	18.	II	* LB10218
2808	11 27 12	+27 9.4	16.5	II	LB10221
2809	11 27 15	+30 16.7	18.5	II	LB10219
2810	11 27 18	+28 59.8	17.5	III	
2811	11 27 23	+27 55.5	18.5	II	
2812	11 27 32	+28 47.2	18.	III	
2813	11 27 33	+32 10.2	17.5	III	
2814	11 27 39	+30 44.5	18.	III	
2815	11 27 43	+31 56.1	18.	II	LB10226
2816	11 27 44	+30 46.8	18.	III	
2817	11 27 46	+30 57.1	18.	II	
2818	11 27 49	+32 5.4	18.	III	
2819	11 27 50	+30 27.9	18.5	II	LB10227
2820	11 27 55	+28 18.6	18.5	III	
2821	11 28 2	+30 5.3	18.	II	LB10231
2822	11 28 2	+26 55.7	18.5	II	
2823	11 28 3	+30 48.1	18.	II	* QSS?
2824	11 28 9	+30 0.4	18.5	II	
2825	11 28 9	+26 49.2	17.5	III	
2826	11 28 10	+26 30.8	17.5	III	
2827	11 28 10	+26 28.4	18.5	III	
2828	11 28 11	+29 38.6	18.	III	
2829	11 28 12	+29 58.8	18.5	III	
2830	11 28 12	+26 28.8	17.	I	LB10234
2831	11 28 15	+29 40.6	18.	III	
2832	11 28 15	+29 34.9	18.	III	
2833	11 28 19	+26 26.1	18.5	III	
2834	11 28 20	+30 53.5	18.	III	
2835	11 28 22	+32 18.8	18.	III	
2836	11 28 22	+29 10.6	18.	III	
2837	11 28 22	+27 24.1	18.	III	
2838	11 28 25	+30 44.3	17.5	II	
2839	11 28 26	+27 19.0	18.	III	
2840	11 28 27	+28 52.3	18.	III	
2841	11 28 28	+27 15.7	17.5	II	
2842	11 28 29	+32 23.9	17.5	III	
2843	11 28 31	+31 30.7	16.5	I	* TN580 QSS?
2844	11 28 31	+26 48.8	17.5	I	LB10235
2845	11 28 35	+29 0.1	18.	III	

2800 = LB10216 : FT COMP. TO BD+28°2008, 10.5 MO, W 40".
2807 = LB10218 : COMP. TO 18. M, SE 10".
2823 = LB10230. POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE B2 1128 30A (COLLA ET AL., 1970).
2843 = TN580 = LB10236 : IDENTIFIED WITH THE QSS CANDIDATE OF FANTI ET AL. (1975) PROPOSED FOR THE R.S. B2 1128 31 (COLLA ET AL.,1970).

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2846	11 28 40	+29 21.2	17.5	I	* LB10237
2847	11 28 49	+28 59.7	17.5	II	
2848	11 28 49	+26 45.8	18.	III	
2849	11 28 50	+30 13.4	18.5	I	
2850	11 28 50	+27 30.4	18.	III	
2851	11 28 50	+26 24.4	18.5	I	
2852	11 28 51	+28 54.3	13.	II	* LB10238
2853	11 28 52	+28 15.3	18.	II	
2854	11 29 0	+32 17.8	18.	III	
2855	11 29 0	+31 29.3	15.5	II	LB10240
2856	11 29 4	+27 24.2	17.5	II	
2857	11 29 5	+28 21.1	18.5	I	LB10241
2858	11 29 6	+29 23.9	17.5	I	LB10242
2859	11 29 9	+27 38.7	17.5	III	
2860	11 29 11	+31 44.0	18.	II	LB10243
2861	11 29 11	+31 16.6	18.	III	
2862	11 29 11	+27 7.3	19.	III	
2863	11 29 12	+26 25.6	17.5	III	
2864	11 29 16	+26 36.3	18.	III	
2865	11 29 17	+27 23.9	17.5	III	
2866	11 29 19	+28 20.6	18.	II	
2867	11 29 20	+30 43.2	18.	III	
2868	11 29 21	+32 16.9	17.5	III	
2869	11 29 21	+29 31.8	18.5	I	
2870	11 29 21	+28 43.6	18.	III	
2871	11 29 22	+27 13.1	19.5	III	
2872	11 29 23	+29 42.6	18.5	II	
2873	11 29 24	+29 12.5	17.5	III	
2874	11 29 25	+31 16.0	19.5	II	
2875	11 29 25	+30 52.4	18.5	I	
2876	11 29 31	+30 12.4	17.5	II	
2877	11 29 33	+28 42.4	18.	III	
2878	11 29 36	+30 37.9	18.	III	
2879	11 29 37	+29 46.1	17.5	II	
2880	11 29 38	+28 26.2	17.	I	
2881	11 29 44	+29 42.0	17.5	III	
2882	11 29 44	+29 36.9	17.	III	
2883	11 29 48	+30 53.5	18.5	III	
2884	11 29 51	+31 33.2	18.	II	
2885	11 29 53	+30 35.4	17.5	I	LB10246
2886	11 29 55	+27 26.1	18.5	II	
2887	11 29 57	+27 12.7	18.	III	
2888	11 30 2	+26 44.7	18.	II	
2889	11 30 3	+32 26.7	17.	III	
2890	11 30 4	+27 39.3	17.5	II	LB10247
2891	11 30 5	+29 56.1	18.5	III	
2892	11 30 5	+27 15.1	18.	II	
2893	11 30 6	+31 35.4	18.5	I	LB10249
2894	11 30 10	+28 51.9	18.5	I	LB10250
2895	11 30 12	+31 14.8	17.5	III	
2896	11 30 12	+28 48.5	18.	III	
2897	11 30 14	+29 25.4	17.5	III	
2898	11 30 14	+29 43.6	18.	III	
2899	11 30 15	+30 39.0	18.5	III	
2900	11 30 15	+30 14.9	18.5	III	
2901	11 30 16	+26 52.0	18.	III	
2902	11 30 17	+31 46.7	18.	II	LB10248
2903	11 30 17	+29 39.5	17.5	II	
2904	11 30 17	+29 24.9	18.5	III	
2905	11 30 18	+28 57.7	17.	II	CP.OBJ.

2846 = LB10237 : COMP. TO 17.5 G, SE 15".
2852 = LB10238. GD SPECTRUM GIVES THE TYPE B5 (BALMER LINES), NO HEI LINES VISIBLE.

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2906	11 30 19	+26 56.3	17.5	III	
2907	11 30 20	+28 53.8	17.5	III	
2908	11 30 23	+30 2.5	17.5	II	
2909	11 30 23	+27 15.5	18.	III	
2910	11 30 26	+29 19.1	17.	I	LB10251
2911	11 30 29	+26 36.3	18.5	II	
2912	11 30 31	+31 4.5	18.5	III	
2913	11 30 31	+29 40.3	18.	II	LB10253
2914	11 30 32	+30 23.4	17.5	III	
2915	11 30 32	+29 31.1	17.	III	
2916	11 30 33	+31 40.6	18.	III	
2917	11 30 33	+30 24.3	17.5	III	
2918	11 30 33	+28 22.4	18.	I	LB10252
2919	11 30 37	+28 28.6	17.5	II	LB10254
2920	11 30 39	+27 24.5	17.	I	LB10255
2921	11 30 43	+28 21.0	18.5	II	
2922	11 30 55	+29 30.5	18.	III	
2923	11 30 55	+26 42.7	17.5	II	
2924	11 30 57	+31 34.9	18.	II	
2925	11 30 59	+27 21.1	17.	III	
2926	11 31 4	+30 54.8	17.5	III	
2927	11 31 5	+26 53.0	17.5	III	
2928	11 31 8	+30 53.5	18.5	II	
2929	11 31 9	+28 44.0	18.	III	
2930	11 31 11	+30 49.8	18.5	II	
2931	11 31 11	+30 29.9	17.5	III	
2932	11 31 13	+27 26.3	17.	III	
2933	11 31 19	+30 3.9	17.5	III	
2934	11 31 19	+28 1.8	18.	III	
2935	11 31 22	+30 2.1	17.	III	
2936	11 31 23	+31 38.8	18.5	I	LB10257
2937	11 31 27	+29 36.5	18.	III	
2938	11 31 27	+29 30.6	17.	III	
2939	11 31 28	+30 2.9	18.	III	
2940	11 31 30	+29 59.5	17.5	II	
2941	11 31 31	+29 35.2	17.5	III	
2942	11 31 34	+28 37.4	18.	III	
2943	11 31 38	+29 59.2	18.	III	
2944	11 31 40	+30 35.9	18.	III	
2945	11 31 42	+29 51.5	18.	II	
2946	11 31 43	+32 14.4	18.	III	
2947	11 31 45	+32 2.7	15.	II	
2948	11 31 46	+29 54.9	18.	III	
2949	11 31 47	+27 2.1	18.	III	
2950	11 31 53	+27 38.0	18.	III	LB10259
2951	11 31 54	+30 57.4	17.5	III	
2952	11 31 58	+31 35.3	17.5	I	LB10262
2953	11 31 59	+27 45.8	18.	III	
2954	11 32 1	+27 12.5	17.5	III	
2955	11 32 1	+26 30.3	17.5	III	
2956	11 32 3	+28 43.9	17.	II	LB10263
2957	11 32 6	+32 6.4	18.5	II	LB10261
2958	11 32 7	+30 9.1	18.5	I	
2959	11 32 8	+31 42.6	18.5	III	
2960	11 32 8	+31 15.5	18.	III	
2961	11 32 9	+30 12.7	18.5	I	LB10266
2962	11 32 13	+29 36.9	17.5	III	
2963	11 32 16	+32 1.3	18.5	II	
2964	11 32 16	+30 22.1	18.	I	* QSS
2965	11 32 16	+29 35.3	18.	II	

2964 = LB10265. IDENTIFIED WITH 3C 261 (VERON, 1965).

PS 11:16 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
2966	11 32 17	+27 43.2	18.5	III	
2967	11 32 17	+27 18.8	18.5	III	LB10267
2968	11 32 20	+29 38.6	18.	III	
2969	11 32 21	+31 33.2	18.	III	
2970	11 32 23	+31 34.7	18.	III	
2971	11 32 27	+29 34.5	18.	I	
2972	11 32 27	+26 46.5	17.5	III	
2973	11 32 29	+26 59.0	18.	III	
2974	11 32 31	+26 46.9	17.5	I	LB10268
2975	11 32 32	+29 32.9	18.	III	
2976	11 32 33	+30 31.2	17.	III	
2977	11 32 34	+30 50.4	16.5	II	CP.OBJ.
2978	11 32 34	+30 49.9	17.	III	
2979	11 32 37	+31 20.6	18.	II	
2980	11 32 37	+26 34.4	18.5	III	
2981	11 32 40	+27 38.8	17.5	II	
2982	11 32 42	+31 50.6	18.	III	
2983	11 32 42	+28 18.0	17.5	III	
2984	11 32 45	+31 28.9	18.	II	
2985	11 32 45	+28 40.1	18.	III	
2986	11 32 47	+30 16.8	18.	III	
2987	11 32 47	+26 59.1	18.	III	
2988	11 32 49	+31 13.3	18.	II	
2989	11 32 51	+30 46.1	17.5	III	
2990	11 32 52	+28 5.1	18.5	III	
2991	11 32 52	+27 25.3	19.	III	
2992	11 32 54	+28 47.4	18.	II	
2993	11 32 55	+28 22.1	17.5	III	
2994	11 32 55	+27 11.1	18.5	III	
2995	11 33 2	+29 28.4	17.5	II	
2996	11 33 2	+27 8.8	18.	II	
2997	11 33 4	+31 15.9	17.	III	
2998	11 33 5	+29 7.3	17.5	III	
2999	11 33 6	+30 32.6	18.5	III	
3000	11 33 7	+31 20.6	17.	II	LB10270
3001	11 33 7	+29 11.5	17.5	II	
3002	11 33 8	+26 59.5	17.5	III	
3003	11 33 9	+29 52.5	18.	III	
3004	11 33 10	+30 40.9	18.	III	
3005	11 33 11	+31 55.7	18.5	III	
3006	11 33 13	+32 17.4	18.	II	
3007	11 33 15	+30 14.4	17.5	III	
3008	11 33 15	+26 43.2	17.5	III	
3009	11 33 18	+29 53.3	18.5	I	LB10271
3010	11 33 22	+29 21.1	18.5	III	
3011	11 33 22	+27 49.6	18.	III	
3012	11 33 28	+26 50.4	17.5	III	
3013	11 33 32	+32 9.4	17.5	III	
3014	11 33 36	+29 18.2	14.5	II	* F45
3015	11 33 36	+27 36.7	18.	III	
3016	11 33 40	+30 47.1	18.5	II	
3017	11 33 40	+28 53.1	17.5	III	
3018	11 33 43	+27 55.3	18.5	II	LB10273
3019	11 33 45	+32 20.7	18.5	I	*
3020	11 33 48	+32 1.8	16.5	III	
3021	11 33 50	+31 42.7	17.5	III	
3022	11 33 51	+26 56.6	18.	III	
3023	11 33 52	+32 11.4	18.	I	
3024	11 33 52	+27 30.1	18.	II	
3025	11 33 53	+29 25.4	17.5	III	

3014 = F45 = LB10272.
3019 : DOUBLE ON PSS-D PRINT, FT BLUE COMP. M~20.

Catalogue *(continued)*

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3026	11 33 53	+29 8.4	18.	III	
3027	11 33 54	+32 13.3	18.5	I	
3028	11 33 55	+31 53.6	19.5	II	
3029	11 33 56	+28 16.4	17.5	III	
3030	11 33 56	+27 30.3	17.5	III	
3031	11 33 59	+30 39.1	19.5	III	
3032	11 34 0	+29 45.0	18.	III	
3033	11 34 2	+30 29.9	17.	III	
3034	11 34 4	+31 9.6	19.	II	
3035	11 34 6	+29 6.5	18.	II	
3036	11 34 6	+27 22.2	19.	III	
3037	11 34 8	+31 33.9	18.	II	
3038	11 34 8	+30 4.4	17.5	III	
3039	11 34 9	+30 20.5	17.5	III	LB10274
3040	11 34 9	+30 9.4	17.5	III	
3041	11 34 10	+28 56.3	17.5	III	
3042	11 34 10	+26 42.9	17.5	III	
3043	11 34 13	+29 3.8	18.	II	
3044	11 34 14	+28 26.7	17.5	III	
3045	11 34 17	+32 5.3	17.5	III	
3046	11 34 17	+30 30.7	17.5	III	
3047	11 34 17	+30 8.2	18.5	I	
3048	11 34 18	+31 0.6	17.5	III	
3049	11 34 20	+29 44.7	18.	II	
3050	11 34 20	+29 26.8	18.	III	
3051	11 34 26	+29 3.7	17.	III	
3052	11 34 27	+30 4.7	12.5	II *	LB10276
3053	11 34 29	+30 19.0	17.5	III	
3054	11 34 30	+29 20.2	18.	I	LB10277
3055	11 34 30	+27 46.4	17.5	III	
3056	11 34 32	+28 23.3	18.5	I	
3057	11 34 34	+27 28.1	18.	III	
3058	11 34 37	+29 59.6	17.5	II	
3059	11 34 38	+30 2.7	17.	III	
3060	11 34 38	+29 42.9	17.	III	
3061	11 34 40	+29 44.9	18.5	II	
3062	11 34 45	+29 25.7	18.	II	
3063	11 34 46	+28 53.4	18.5	I	
3064	11 34 47	+29 59.1	18.	II	
3065	11 34 48	+28 40.1	18.	II	
3066	11 34 50	+29 55.1	18.	I	
3067	11 34 56	+31 57.8	18.	III	
3068	11 35 6	+31 2.8	17.5	II	
3069	11 35 9	+32 21.5	17.5	III	
3070	11 35 13	+31 17.6	17.5	II	
3071	11 35 22	+32 18.8	18.	II	LB10279

3052 = LB10276 = GD140 : U AND GD SPECTRA GIVE THE TYPE DA.

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3072	12 49 45	+30 13.7	18.	II	
3073	12 49 56	+31 36.4	18.	I	LB11392
3074	12 49 59	+29 29.9	17.5	II *	A2-112
3075	12 50 3	+31 59.1	18.	II	LB7291
3076	12 50 9	+31 56.7	17.5	I	
3077	12 50 13	+30 19.7	17.5	I	A2-117
3078	12 50 17	+28 27.2	18.5	I	A2-120
3079	12 50 20	+28 23.1	17.5	II	A3-121
3080	12 50 22	+28 50.8	19.	I	
3081	12 50 22	+28 0.7	17.5	II	
3082	12 50 25	+29 39.3	18.5	III	
3083	12 50 28	+28 20.4	19.	I	
3084	12 50 29	+26 49.7	17.5	III	A2-123
3085	12 50 35	+29 21.3	18.5	I	
3086	12 50 41	+29 21.6	18.	II	
3087	12 50 41	+28 39.0	19.	II	
3088	12 50 46	+28 11.8	19.	III *	A2-128
3089	12 50 48	+29 22.2	18.	II	
3090	12 50 53	+31 22.1	17.	I	LB11408
3091	12 50 54	+30 22.9	15.5	I	HZ35
3092	12 50 55	+27 37.7	19.5	I	LB7221
3093	12 50 58	+29 26.4	18.5	II	
3094	12 51 2	+29 32.8	18.	II	
3095	12 51 3	+26 18.7	18.	II	LB21
3096	12 51 6	+27 39.8	19.5	II	
3097	12 51 10	+26 38.8	18.	II	
3098	12 51 14	+26 41.0	15.	III	TN136
3099	12 51 17	+32 21.1	18.	II	
3100	12 51 34	+30 3.6	16.	II	M.CP.OBJ.
3101	12 51 34	+26 41.9	18.	II	
3102	12 51 35	+30 14.5	18.5	II	
3103	12 51 36	+28 2.0	18.5	II	
3104	12 51 38	+29 8.1	12.	III *	SSII229
3105	12 51 39	+27 15.1	18.	III	
3106	12 51 47	+30 24.7	18.	II	
3107	12 51 49	+28 1.9	19.	I	
3108	12 51 52	+29 7.4	18.5	III	
3109	12 51 53	+31 49.4	15.	II	
3110	12 51 54	+31 42.0	18.	I	LB11426
3111	12 51 56	+27 54.8	18.	I *	A2-152
3112	12 51 57	+26 36.6	18.	I	A2-153
3113	12 51 59	+31 6.7	18.5	I	LB7366
3114	12 52 3	+26 37.1	18.	II	A2-156
3115	12 52 9	+29 56.3	19.	II	
3116	12 52 10	+26 24.4	18.	II	
3117	12 52 33	+29 52.3	12.5	III	LB11435
3118	12 52 35	+27 35.6	18.5	III	
3119	12 52 36	+27 36.5	18.	II	
3120	12 52 38	+27 41.8	18.5	II	
3121	12 52 54	+27 41.6	18.	II	A2-183
3122	12 52 55	+31 11.3	19.5	II	LB7400
3123	12 53 5	+28 44.2	18.	II	
3124	12 53 16	+30 18.3	18.5	II	
3125	12 53 21	+32 7.6	18.5	II	

3074 = A2-112 = LB11394.
3088 = A2-128 = LB7315.
3104 = SSII229. GD SPECTRUM GIVES THE TYPE AP : K LINE FAINT, BACKGROUND OF UNRESOLVED LINES.
3111 = A2-152 = LB7368.

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3126	12 53 27	+27 40.2	17.5	I	A2-197
3127	12 53 31	+27 19.1	19.	II	
3128	12 53 39	+28 23.5	12.5	I	TN139
3129	12 53 41	+27 57.0	14.	II *	CP.OBJ.
3130	12 53 52	+30 26.9	19.	II	
3131	12 53 56	+26 30.1	17.5	II	
3132	12 53 58	+31 47.7	17.5	II	
3133	12 53 58	+30 39.4	17.5	II	
3134	12 54 2	+27 58.7	15.5	I *	TN140
3135	12 54 4	+27 31.3	18.5	II	
3136	12 54 8	+32 27.0	17.	II	
3137	12 54 11	+26 53.0	18.	I *	ZL108
3138	12 54 12	+30 48.3	18.5	II	
3139	12 54 12	+29 40.5	19.	II	
3140	12 54 18	+30 0.7	18.	II	A2-218
3141	12 54 18	+26 16.4	17.	II	
3142	12 54 21	+27 21.3	19.5	II	LP322-141
3143	12 54 23	+32 16.7	19.	II	
3144	12 54 24	+30 25.8	18.5	II	
3145	12 54 29	+30 29.5	18.5	I	A2-221
3146	12 54 30	+31 36.4	17.	I	TN676
3147	12 54 31	+27 7.5	16.5	II	TN675
3148	12 54 39	+27 56.2	18.5	II	
3149	12 54 42	+29 12.1	18.	I *	A2-225
3150	12 54 43	+27 29.7	18.5	II	
3151	12 54 46	+29 9.1	18.5	III	
3152	12 54 46	+27 58.4	18.5	II	
3153	12 54 51	+27 7.5	18.5	I	
3154	12 54 52	+31 27.7	19.	I	
3155	12 55 5	+31 6.6	18.5	II	
3156	12 55 11	+32 5.0	16.5	I	
3157	12 55 13	+29 42.3	19.5	II	
3158	12 55 14	+29 27.8	19.	II	
3159	12 55 15	+29 27.8	18.	II	
3160	12 55 35	+30 14.7	18.5	II	
3161	12 55 40	+31 32.8	19.	II	
3162	12 55 41	+31 1.6	19.	II	
3163	12 55 47	+30 9.6	18.5	II	
3164	12 55 48	+29 51.2	19.	II	
3165	12 55 54	+30 21.4	18.	I	A2-251
3166	12 55 54	+26 44.4	18.5	II	
3167	12 55 56	+28 30.1	19.	II	
3168	12 56 1	+27 17.5	19.	II	
3169	12 56 4	+29 28.5	18.5	I	
3170	12 56 4	+26 46.8	18.	I	
3171	12 56 10	+31 34.2	18.	II	
3172	12 56 10	+31 23.6	18.	I	A2-255
3173	12 56 10	+30 35.3	17.5	I *	A2-256
3174	12 56 21	+28 48.7	19.	II	A2-259
3175	12 56 23	+31 48.1	19.	II	
3176	12 56 30	+26 45.4	18.5	II	A2-266
3177	12 56 32	+28 9.7	19.	II	
3178	12 56 33	+31 27.4	17.	II	
3179	12 56 34	+28 9.3	18.5	I	
3180	12 56 35	+26 42.2	19.	II	

3129 = M53.
3134 = TN140 = A2-211.
3137 = ZL108 VARIABLE (ZWICKY AND LUYTEN, 1967). THIS VARIABILITY IS CONFIRMED.
3149 = A2-225 : FT COMP. TO 16.5 M, NW 8".
3173 = A2-256 = LB23, BARBIERI AND ROSINO (1972) IDENTIFIED A2-256 WITH LB198. COMP. TO 17. K, SE 20".

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3181	12 56 36	+31 34.0	19.	I	
3182	12 56 37	+30 43.1	18.	III	
3183	12 56 38	+30 43.8	18.5	I	A2-275
3184	12 56 49	+27 33.0	18.	II	
3185	12 56 52	+28 9.8	18.5	I	ZL119
3186	12 56 56	+27 50.2	13.5	I	HZ38
3187	12 56 58	+26 32.5	18.5	II	
3188	12 57 1	+27 37.5	15.	I	HZ47
3189	12 57 3	+27 54.3	16.5	I	
3190	12 57 6	+28 43.2	19.	I	
3191	12 57 9	+28 11.0	17.5	I	TN686
3192	12 57 16	+27 34.5	18.5	II	A2-293
3193	12 57 16	+26 21.1	18.5	II	
3194	12 57 18	+29 58.2	18.	I	A2-294
3195	12 57 22	+27 40.9	19.	II	
3196	12 57 23	+26 55.5	19.	I	A2-296
3197	12 57 25	+30 3.3	18.5	II *	
3198	12 57 27	+26 42.7	17.5	II	
3199	12 57 30	+29 7.1	18.	II	
3200	12 57 40	+30 2.3	19.	II	A2-300
3201	12 57 44	+26 54.2	13.	III	A2-302
3202	12 57 46	+29 18.0	15.	III	TN689
3203	12 57 50	+29 47.3	19.	I	
3204	12 57 51	+29 28.5	18.5	II	
3205	12 58 2	+30 24.4	17.5	II	
3206	12 58 3	+26 21.9	18.5	II	
3207	12 58 4	+28 46.2	17.	I *	SC4 105
3208	12 58 15	+29 16.4	19.	II	
3209	12 58 16	+21 48.0	18.	I	
3210	12 58 16	+29 8.7	16.	III	TN691
3211	12 58 16	+28 47.2	16.	II	M.CP.OBJ.
3212	12 58 16	+28 9.9	19.	II	
3213	12 58 18	+28 24.9	18.5	II	
3214	12 58 23	+28 39.3	18.	I *	A2-327
3215	12 58 26	+27 7.8	18.	II	
3216	12 58 36	+28 35.7	18.	I *	A2-330
3217	12 58 43	+31 31.9	18.	I	
3218	12 58 44	+29 42.2	18.	I *	LP322-329
3219	12 58 48	+31 45.5	19.5	I	
3220	12 58 51	+27 4.4	17.	II	
3221	12 58 58	+32 24.9	17.5	II	
3222	12 59 1	+26 42.5	18.5	II	
3223	12 59 3	+28 7.1	19.	I	
3224	12 59 6	+31 13.6	17.	II	
3225	12 59 15	+29 55.6	18.5	II	
3226	12 59 16	+30 37.6	18.5	II	
3227	12 59 18	+30 11.0	18.	II	
3228	12 59 20	+28 27.5	19.	I	A2-347
3229	12 59 26	+32 26.3	18.5	II	
3230	12 59 28	+31 51.3	19.	II	
3231	12 59 29	+29 50.9	11.	III *	F71
3232	12 59 32	+32 22.0	17.5	I	
3233	12 59 38	+27 14.1	17.	II	A2-353
3234	12 59 41	+29 9.2	19.	I	
3235	12 59 46	+31 34.0	18.5	I	

3197 : COMP. TO 18.5 K, SW 6".
3207 = SC4 105 = A2-316 (BARBIERI AND ROSINO, 1972).
3214 = A2-327 = W61972.
3216 = A2-330 = W62385.
3218 = LP322-329 = A2-333.
3231 = F71 = BD+30°2355

Catalogue *(continued)*

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3236	12 59 49	+30 57.5	19.	I	A2-354
3237	12 59 57	+31 43.4	19.	II	
3238	12 59 57	+31 12.5	19.	I	
3239	12 59 58	+29 41.8	18.5	II	
3240	13 0 0	+32 14.1	15.5	I	CP.OBJ.
3241	13 0 1	+29 7.5	17.	I	CP.OBJ.
3242	13 0 6	+27 10.4	18.5	I	A2-359
3243	13 0 7	+26 22.2	19.	I	
3244	13 0 8	+32 29.7	18.	II	
3245	13 0 8	+31 59.1	19.	II	
3246	13 0 12	+31 41.7	18.5	II	
3247	13 0 13	+31 7.9	17.5	I	
3248	13 0 13	+29 33.4	18.5	II	*
3249	13 0 13	+28 7.4	18.5	II	
3250	13 0 16	+27 20.0	18.5	I	A2-366
3251	13 0 17	+27 56.6	14.	I	* LB27
3252	13 0 18	+30 38.2	19.	II	
3253	13 0 25	+27 15.1	18.5	I	A2-369
3254	13 0 30	+27 57.8	19.	II	
3255	13 0 31	+30 5.2	18.	I	A2-370
3256	13 0 33	+29 2.5	18.5	II	
3257	13 0 34	+32 11.9	18.5	II	
3258	13 0 41	+29 34.0	19.	II	
3259	13 0 49	+28 27.0	17.5	I	* TN694
3260	13 0 50	+29 59.3	17.	II	CP.OBJ.
3261	13 0 53	+28 0.5	19.	II	
3262	13 0 57	+30 15.6	19.	II	
3263	13 1 0	+26 23.3	19.	II	
3264	13 1 3	+31 43.5	17.	II	CP.OBJ.
3265	13 1 10	+28 36.3	18.5	II	
3266	13 1 21	+26 49.1	18.	I	A2-390
3267	13 1 22	+27 2.4	15.	I	* TN143
3268	13 1 25	+28 49.3	19.	II	
3269	13 1 38	+29 22.7	19.	II	
3270	13 1 40	+28 35.0	19.	II	
3271	13 1 46	+29 22.9	18.5	II	
3272	13 1 48	+27 40.2	18.5	II	
3273	13 1 49	+30 9.7	18.	II	
3274	13 1 50	+27 14.6	18.	II	A2-404
3275	13 1 52	+27 48.2	19.	II	
3276	13 1 54	+31 40.3	18.5	I	
3277	13 1 58	+27 54.2	18.	II	
3278	13 2 8	+28 34.1	17.5	II	CP.OBJ.?
3279	13 2 11	+32 22.6	18.	I	
3280	13 2 15	+31 14.0	18.5	II	
3281	13 2 17	+32 9.4	18.5	II	
3282	13 2 17	+31 45.3	16.5	I	LB28
3283	13 2 20	+30 35.3	19.	II	
3284	13 2 25	+28 23.5	15.	I	HZ39
3285	13 2 27	+31 46.6	18.5	II	
3286	13 2 30	+31 40.6	19.	II	
3287	13 2 39	+28 22.0	19.	II	
3288	13 2 42	+29 46.4	18.	II	
3289	13 2 46	+30 33.3	19.	II	
3290	13 2 48	+31 47.3	19.	II	

3248 : FT COMP. TO 15.5 K, S 12".
3251 = LB27 = W64217.
3259 = TN694 = W62579.
3267 = TN143 = A2-391.

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PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3291	13 2 52	+26 29.2	19.	II	
3292	13 2 56	+30 32.8	16.	III	* CP.OBJ.
3293	13 2 57	+31 35.7	19.	II	
3294	13 3 3	+30 13.8	19.	II	
3295	13 3 22	+29 9.3	17.	II	M.CP.OBJ.
3296	13 3 32	+30 49.9	18.	I	W22722
3297	13 3 35	+27 6.7	12.5	II	*
3298	13 3 42	+27 51.6	16.	II	TN144
3299	13 3 43	+27 48.5	19.	I	
3300	13 3 47	+30 21.8	18.5	II	
3301	13 3 48	+31 30.1	19.	II	
3302	13 3 50	+27 55.9	19.	II	
3303	13 3 51	+27 52.6	19.	I	* QSS?
3304	13 3 54	+31 21.5	18.	I	* LB30
3305	13 3 55	+26 40.8	19.	I	
3306	13 3 59	+29 24.2	18.	I	A2-435
3307	13 4 0	+31 50.0	18.5	I	
3308	13 4 0	+28 20.5	18.	II	
3309	13 4 0	+26 39.4	11.5	II	*
3310	13 4 4	+30 9.4	19.	II	
3311	13 4 6	+29 28.4	18.5	I	
3312	13 4 14	+22 27.6	18.5	I	
3313	13 4 15	+29 7.0	16.	III	*
3314	13 4 19	+30 30.4	18.5	II	
3315	13 4 23	+28 40.0	18.5	I	
3316	13 4 26	+26 47.6	19.5	II	
3317	13 4 28	+30 24.8	19.	II	
3318	13 4 28	+29 25.6	19.	I	
3319	13 4 28	+29 15.9	18.5	I	A2-441
3320	13 4 29	+29 30.3	19.	I	
3321	13 4 34	+32 14.7	16.	II	
3322	13 4 38	+31 19.5	18.	II	
3323	13 4 40	+28 39.3	19.	I	
3324	13 4 42	+29 17.6	19.	II	
3325	13 4 48	+29 27.7	18.5	II	
3326	13 4 56	+26 20.3	19.5	II	
3327	13 4 58	+27 33.5	18.	II	
3328	13 5 0	+29 40.1	16.	II	* CP.OBJ.
3329	13 5 4	+29 30.3	18.5	II	
3330	13 5 6	+28 3.0	18.5	II	* QSS?
3331	13 5 12	+30 17.8	18.5	II	
3332	13 5 21	+32 31.9	17.5	II	
3333	13 5 26	+31 23.9	18.	II	
3334	13 5 32	+31 0.6	19.	I	
3335	13 5 32	+30 51.8	18.	I	
3336	13 5 41	+30 6.6	18.5	I	
3337	13 5 48	+30 6.7	19.	II	
3338	13 5 52	+30 29.6	19.	II	
3339	13 5 54	+31 44.2	19.	II	
3340	13 5 54	+29 35.3	19.	II	

3292 = M62.
3297 : GO SPECTRUM GIVES A TYPE EARLY A? (POOR QUALITY).
3303 IDENTIFIED WITH THE BLUE STAR GIVEN BY WILSON (1970) FOR 5C4 178 BUT IDENTIF. NOT CONCLUSIVE FOR BARBIERI AND BERTOLA (1972).
3304 = LB30 = W21541.
3309 : GO SPECTRUM GIVES THE TYPE F; SUBDWARF? (UV EXCESS).
3313 : CENTRAL NUCLEUS OF A DIFFUSE FAINT GALAXY; IN CGCG.
3328 = A2-449.
3330 IDENTIFIED WITH THE BLUE STAR GIVEN BY WILSON (1970) FOR 5C4 186.

PS 13:00 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3341	13 5 57	+28 38.7	17.5	I	* A2-468
3342	13 5 59	+29 7.4	18.5	II	
3343	13 6 5	+27 5.7	18.5	I	
3344	13 6 8	+30 21.8	17.5	III	W23694
3345	13 6 10	+31 12.6	17.5	I	
3346	13 6 23	+29 20.7	18.5	II	
3347	13 6 25	+27 36.5	18.5	II	
3348	13 6 33	+27 24.2	18.5	I	* QSS?
3349	13 6 37	+29 22.1	18.5	II	
3350	13 6 43	+29 54.3	18.	II	
3351	13 6 49	+31 12.5	19.	I	
3352	13 6 50	+27 48.7	15.	III	
3353	13 7 4	+32 8.1	18.5	II	
3354	13 7 5	+29 15.3	18.5	II	
3355	13 7 5	+26 23.9	18.	I	
3356	13 7 14	+30 14.5	18.	II	
3357	13 7 22	+28 43.6	18.	II	A2-482
3358	13 7 23	+30 47.0	19.	II	
3359	13 7 29	+27 58.6	18.5	I	
3360	13 7 31	+30 43.3	18.	II	
3361	13 7 34	+29 44.1	18.	I	
3362	13 7 36	+30 56.4	18.5	I	
3363	13 7 39	+31 31.9	18.	I	
3364	13 7 52	+32 13.3	15.	II	* TN145
3365	13 7 54	+31 41.2	18.5	II	
3366	13 7 54	+30 20.4	18.5	II	
3367	13 7 57	+31 9.3	19.	II	
3368	13 8 12	+27 59.9	19.	II	
3369	13 8 12	+26 53.6	19.	I	
3370	13 8 15	+27 57.0	18.	I	
3371	13 8 29	+26 31.3	18.5	II	
3372	13 8 36	+26 40.9	17.5	II	*
3373	13 8 37	+30 17.2	18.	I	
3374	13 8 48	+31 38.9	17.	I	
3375	13 8 57	+29 14.2	18.5	II	
3376	13 8 58	+31 55.3	18.5	I	
3377	13 9 1	+27 16.9	16.	I	* CP.OBJ.
3378	13 9 3	+26 39.8	18.	II	*
3379	13 9 7	+27 16.4	19.	I	
3380	13 9 8	+31 21.8	18.	I	
3381	13 9 9	+31 32.0	19.	I	
3382	13 9 14	+30 42.7	17.5	III	
3383	13 9 14	+28 16.8	18.5	III	
3384	13 9 18	+29 33.6	18.5	II	
3385	13 9 38	+30 8.0	18.	I	
3386	13 9 49	+30 12.5	17.5	I	
3387	13 9 59	+31 33.8	18.5	I	
3388	13 10 0	+29 53.7	19.	I	
3389	13 10 1	+30 32.1	18.5	III	
3390	13 10 1	+27 55.3	18.5	I	
3391	13 10 7	+31 32.3	18.	II	
3392	13 10 11	+28 48.0	19.	II	
3393	13 10 11	+28 37.6	19.	I	
3394	13 10 12	+27 6.8	18.5	II	
3395	13 10 16	+28 37.4	18.	II	

3341 = A2-468 = W51148.
3348 : POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE UTRAO 1306+274 (GHIGO AND OWEN, 1973) = B2 1306 27A (COLLA ET AL., 1972).
3364 = TN145 HAS COMP. 15.5 K, NE 10".
3372 HAS FT CCMP. ON PSS PRINTS 19.5 G, SW 4".
3377 = TN698.
3378 : FT CCMP. TO BD+27°2224 9.7 KO, NW 30"

PS 13:00 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3396	13 10 22	+28 37.3	19.5	II	
3397	13 10 27	+31 28.9	18.	I	* QSS?
3398	13 10 28	+29 31.2	18.	II	
3399	13 10 28	+26 39.6	17.	III	TN700
3400	13 10 29	+30 11.6	18.5	I	
3401	13 10 33	+31 2.2	18.	I	
3402	13 10 34	+26 24.3	18.	II	
3403	13 10 36	+31 57.0	15.5	II	TN148
3404	13 10 37	+30 20.0	18.	III	
3405	13 10 37	+29 7.1	18.5	III	
3406	13 10 38	+26 23.2	18.5	II	
3407	13 10 39	+26 40.0	17.5	III	
3408	13 10 52	+31 37.9	14.5	II	HZ42
3409	13 10 52	+30 49.1	18.	I	
3410	13 11 7	+31 23.1	19.	II	
3411	13 11 11	+31 3.5	18.5	I	
3412	13 11 15	+30 14.3	19.	I	W13323
3413	13 11 17	+29 29.9	18.5	II	
3414	13 11 22	+32 1.7	18.5	II	
3415	13 11 22	+26 49.2	19.	II	
3416	13 11 26	+29 57.9	18.5	I	
3417	13 11 27	+32 6.7	19.	II	
3418	13 11 32	+26 56.1	18.5	II	
3419	13 11 34	+28 3.4	17.	III	LB35
3420	13 11 36	+30 20.6	18.	I	
3421	13 11 38	+26 55.2	18.	II	
3422	13 11 40	+30 40.1	17.5	II	
3423	13 11 47	+32 23.7	18.	II	
3424	13 12 0	+31 6.6	18.	I	*
3425	13 12 0	+31 6.6	18.5	I	*
3426	13 12 1	+31 27.7	17.	I	CP.OBJ.
3427	13 12 1	+29 25.9	18.	I	
3428	13 12 1	+27 35.2	18.5	I	
3429	13 12 13	+29 25.8	18.	II	
3430	13 12 14	+30 34.0	18.5	II	
3431	13 12 16	+29 8.5	18.5	II	
3432	13 12 35	+32 29.7	16.	I	TN150
3433	13 12 42	+29 24.1	18.	III	
3434	13 12 45	+28 4.8	18.5	II	
3435	13 12 52	+27 20.5	19.	II	
3436	13 12 59	+27 33.6	19.	I	
3437	13 13 1	+32 15.2	18.	I	*
3438	13 13 5	+27 19.6	18.5	II	
3439	13 13 8	+31 33.6	18.5	II	
3440	13 13 13	+27 7.2	18.5	II	
3441	13 13 17	+26 30.8	16.5	II	TN701
3442	13 13 19	+29 24.8	19.	I	
3443	13 13 20	+30 2.1	17.5	III	
3444	13 13 20	+27 30.2	19.	II	
3445	13 13 24	+27 55.6	19.	II	
3446	13 13 25	+29 5.8	18.5	II	
3447	13 13 26	+26 49.4	18.5	II	
3448	13 13 38	+30 31.9	18.5	II	
3449	13 13 42	+29 38.7	15.5	II	* CP.OBJ.
3450	13 13 48	+30 55.3	18.5	I	

3397 : POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE B2 1310 31 (COLLA ET AL., 1970).
3424 AND 3425 : SEPARATION < 3". FT COMP. TO 12. K, NW 15".
3437 : FT COMP. TO 13. G, NE 15".
3449 = TN151.

PS 13:00 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3451	13 13 50	+28 22.4	17.5	III	
3452	13 13 54	+28 32.6	18.	III	
3453	13 13 56	+30 46.1	18.5	II	
3454	13 14 1	+29 21.9	12.5	I	HZ43
3455	13 14 2	+30 35.8	18.	II	
3456	13 14 5	+32 14.3	18.	I	
3457	13 14 9	+30 36.2	18.	II	
3458	13 14 13	+27 46.3	18.	III	
3459	13 14 15	+29 0.2	18.5	II	
3460	13 14 23	+29 45.7	19.	I	
3461	13 14 24	+30 41.8	18.5	II	
3462	13 14 29	+26 59.2	18.5	II	
3463	13 14 30	+28 55.6	19.	II	
3464	13 14 38	+31 7.6	18.5	I	
3465	13 14 44	+27 30.2	18.	I	
3466	13 14 49	+30 5.5	19.	I	
3467	13 14 56	+30 56.8	19.	I	
3468	13 14 59	+29 48.4	19.	II	
3469	13 15 13	+26 28.2	19.	II	
3470	13 15 16	+27 5.0	19.	II	
3471	13 15 17	+30 12.3	18.	I	
3472	13 15 20	+32 7.3	18.5	I	
3473	13 15 23	+30 29.8	18.5	I	
3474	13 15 27	+28 48.2	19.	II	
3475	13 15 28	+26 50.8	18.	III	
3476	13 15 29	+31 35.5	18.5	I	
3477	13 15 29	+26 30.5	18.5	II	
3478	13 15 32	+30 13.8	19.	II	
3479	13 15 35	+29 15.2	18.5	II	
3480	13 15 36	+31 42.1	18.	II	
3481	13 15 38	+26 37.4	19.	I	
3482	13 15 59	+29 25.8	18.	I	
3483	13 16 0	+30 45.2	18.5	II	
3484	13 16 5	+29 25.3	19.	I	
3485	13 16 13	+31 24.5	18.	II	
3486	13 16 17	+31 25.0	17.5	II	
3487	13 16 20	+31 13.6	18.5	I	
3488	13 16 20	+26 59.6	18.	II	
3489	13 16 22	+32 16.3	17.	II	
3490	13 16 30	+30 47.0	18.5	III	
3491	13 16 31	+30 35.0	18.5	II	
3492	13 16 31	+28 37.4	18.	II	
3493	13 16 46	+27 34.2	19.	I	
3494	13 16 47	+30 53.4	18.5	II	
3495	13 16 53	+26 24.1	17.5	II	
3496	13 16 56	+26 41.7	18.5	II	
3497	13 16 57	+30 38.0	18.5	I	
3498	13 16 57	+28 40.3	19.	I	*
3499	13 17 0	+27 14.5	18.5	III	
3500	13 17 3	+28 46.2	17.5	I	TN152
3501	13 17 17	+30 41.0	19.	I	
3502	13 17 20	+29 30.5	18.5	II	
3503	13 17 23	+29 39.5	13.5	III	F78
3504	13 17 25	+30 26.0	18.	II	
3505	13 17 25	+29 22.5	18.	I	
3506	13 17 27	+31 5.4	16.	II	* CP.OBJ.
3507	13 17 34	+27 43.9	16.	II	* TN153
3508	13 17 37	+28 48.9	18.5	II	
3509	13 17 43	+27 57.7	17.	I	
3510	13 18 3	+31 12.1	18.5	II	

3498 : FT COMP. TO 13. G, N 10m.
3506 : GALAXY IN CGCG.
3507 = TN153 GIVEN FOR QSO BY JANES AND LYNDS (1969).

PS 13:00 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3511	13 18 8	+29 21.1	17.	II	
3512	13 18 14	+30 51.1	18.5	I	
3513	13 18 15	+30 37.6	19.	II	
3514	13 18 16	+31 9.9	18.5	I	
3515	13 18 39	+30 13.2	18.5	II	
3516	13 18 42	+31 16.7	17.	II	
3517	13 18 43	+30 5.9	18.5	II	
3518	13 18 46	+29 52.3	19.	I	
3519	13 18 50	+29 36.7	18.	I	
3520	13 18 54	+29 3.6	17.5	I	TN155
3521	13 18 55	+29 3.0	17.	I	* TN156
3522	13 19 5	+30 7.4	19.	II	
3523	13 19 7	+32 21.8	18.5	I	

3521 = TN156 GIVEN FOR QSO BY JANES AND LYNDS (1969).

PS 14:18 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3524	14 8 10	+29 4.3	13.	I	*
3525	14 8 16	+32 22.8	13.5	I	* LTT14141
3526	14 8 17	+29 5.9	18.5	II	
3527	14 8 24	+30 10.0	18.	I	
3528	14 8 28	+27 56.1	18.	I	
3529	14 9 25	+26 56.0	17.	III	
3530	14 9 36	+31 36.6	17.5	I	* QSS?
3531	14 9 37	+30 29.8	12.	III	*
3532	14 10 2	+31 56.4	18.5	I	
3533	14 10 17	+26 55.1	18.	I	
3534	14 10 22	+31 48.1	16.	I	
3535	14 10 24	+29 26.7	13.5	III	TN754
3536	14 10 36	+29 35.1	18.	I	
3537	14 10 38	+26 38.6	17.	II	
3538	14 10 42	+27 51.3	18.5	II	
3539	14 10 54	+27 5.1	18.5	I	
3540	14 11 2	+29 20.7	18.	I	
3541	14 11 6	+27 11.4	14.5	II	TN755
3542	14 11 20	+29 13.8	11.	III	* BD+29°2506
3543	14 11 28	+30 13.1	18.5	I	*
3544	14 11 50	+31 40.1	17.	II	
3545	14 11 59	+27 7.8	17.5	I	
3546	14 12 3	+30 34.7	17.	I	
3547	14 12 11	+29 55.1	16.	I	
3548	14 12 21	+31 44.5	16.	II	
3549	14 12 23	+26 52.5	18.	I	
3550	14 12 24	+30 20.0	19.5	II	
3551	14 12 29	+29 50.5	18.	II	
3552	14 12 34	+29 20.5	18.	II	
3553	14 12 40	+31 3.8	18.5	I	
3554	14 12 47	+28 58.6	18.	II	
3555	14 12 47	+27 26.9	17.	II	
3556	14 12 49	+30 5.1	13.5	III	
3557	14 12 51	+27 41.5	16.	I	TN192
3558	14 12 55	+27 27.8	18.	II	
3559	14 13 19	+30 9.4	18.	I	
3560	14 13 33	+32 23.8	17.5	I	
3561	14 13 38	+30 15.7	18.5	II	
3562	14 13 49	+29 53.4	18.	I	
3563	14 14 0	+29 1.8	17.5	II	
3564	14 14 1	+28 49.8	15.5	III	TN757
3565	14 14 7	+26 46.9	13.	III	
3566	14 14 15	+31 29.9	15.	I	*
3567	14 14 15	+26 45.9	17.	II	CP.OBJ.
3568	14 14 16	+27 31.1	17.	III	TN758
3569	14 14 17	+28 2.1	18.5	II	
3570	14 14 38	+26 52.1	16.5	III	TN759
3571	14 15 26	+30 22.7	17.	II	
3572	14 15 45	+29 55.9	18.	II	
3573	14 16 22	+26 39.7	17.5	II	
3574	14 16 24	+26 34.8	17.5	II	
3575	14 16 25	+29 34.6	18.5	II	

3524 : GD SPECTRUM GIVES THE TYPE SUBDWARF B.
3525 : GD SPECTRUM GIVES THE TYPE DA.
3530 : POSSIBLE IDENTIFICATION WITH THE RADIO SOURCE B2 1409 31 (COLLA ET AL., 1970).
3531 : GC SPECTRUM GIVES A TYPE EARLY F.
3542 : GD SPECTRUM GIVES A TYPE EARLY F.
3543 : FT COMP. TO 16.5 G, NE 15m.
3566 HAS FT COMP. 18. M, NW 10m; THE RED STAR IS BRIGHTER AS THE BLUE STAR ON THE PSS-E PRINT.

PS 14:18 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3576	14 16 30	+28 23.7	18.5	II	
3577	14 17 3	+29 1.3	16.	III	TN760
3578	14 17 7	+32 16.8	17.	I	
3579	14 17 8	+31 51.3	17.	II	
3580	14 17 10	+30 0.6	17.	I	TN761
3581	14 17 10	+27 45.5	17.5	II	
3582	14 17 13	+27 38.6	18.	I	
3583	14 17 18	+28 45.1	18.	II	
3584	14 17 21	+28 23.7	17.5	I	TN762
3585	14 17 27	+28 14.6	18.5	II	
3586	14 17 39	+31 32.7	18.	I	
3587	14 17 47	+29 0.8	18.5	I	
3588	14 17 54	+26 34.5	16.5	III	TN763
3589	14 17 57	+31 30.4	17.5	I	
3590	14 18 2	+27 10.4	17.5	I	
3591	14 18 13	+26 35.6	17.5	II	
3592	14 18 14	+27 53.7	18.5	II	
3593	14 18 18	+28 15.4	15.	III	TN765
3594	14 18 22	+27 48.7	16.	III	TN764
3595	14 18 29	+29 3.9	19.	II	
3596	14 18 36	+29 39.1	15.5	II	TN195
3597	14 18 42	+27 0.4	18.	II	
3598	14 18 59	+27 53.9	18.	II	
3599	14 19 1	+28 38.5	18.	I	
3600	14 19 10	+27 20.6	12.5	III	*
3601	14 19 29	+30 21.1	18.	II	
3602	14 19 46	+26 49.8	18.5	II	* TN767
3603	14 20 1	+31 10.0	17.	I	
3604	14 20 22	+32 8.3	18.5	II	
3605	14 20 22	+30 12.4	14.5	II	
3606	14 20 26	+31 27.4	18.	I	
3607	14 20 30	+28 50.2	17.	II	
3608	14 20 32	+27 41.2	18.	II	
3609	14 20 37	+30 40.9	17.5	II	
3610	14 21 30	+28 47.1	18.5	II	
3611	14 21 31	+31 43.6	15.	I	TN197
3612	14 22 0	+30 37.5	18.5	I	
3613	14 22 4	+30 18.2	15.	II	
3614	14 22 18	+28 29.2	18.5	II	
3615	14 22 33	+26 42.8	18.5	II	
3616	14 22 34	+29 53.2	17.5	II	
3617	14 22 39	+27 4.5	15.	II	TN198
3618	14 22 40	+26 36.6	18.	I	
3619	14 22 43	+26 56.1	12.5	III	*
3620	14 22 49	+32 29.8	18.	II	
3621	14 22 49	+31 21.3	18.	II	
3622	14 22 49	+29 30.6	15.	II	CP.OBJ.
3623	14 23 1	+32 15.0	17.5	I	
3624	14 23 6	+27 38.0	18.5	I	
3625	14 23 10	+28 50.3	19.	I	
3626	14 23 21	+28 14.9	18.	II	
3627	14 23 37	+32 14.7	16.	II	
3628	14 23 38	+31 12.3	17.	I	
3629	14 23 47	+29 0.7	16.5	I	
3630	14 23 54	+29 43.3	16.5	II	

3600 : GD SPECTRUM GIVES A TYPE B8 OR AP.
3602 = TN767; SEEMS TOO FAINT FOR A TONANTZINTLA STAR; VARIABLE?
3619 : GC SPECTRUM GIVES THE TYPE AP (SILICIUM 4128-31).

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Catalogue *(continued)*

PS 14:18 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3631	14 24 4	+32 12.5	15.5	II	
3632	14 24 22	+27 52.2	15.5	I	*
3633	14 24 23	+28 24.8	15.5	III	TN772
3634	14 24 33	+30 7.7	18.5	II	
3635	14 24 54	+29 30.3	17.5	I	
3636	14 25 7	+30 0.9	18.	II	
3637	14 25 16	+30 9.3	18.	I	
3638	14 25 22	+26 45.6	15.5	I	* QSS
3639	14 25 41	+28 42.7	18.5	I	
3640	14 25 54	+30 52.3	18.5	II	
3641	14 26 1	+27 51.4	18.	II	
3642	14 26 21	+30 39.6	17.	I	*
3643	14 26 23	+32 35.4	17.5	II	
3644	14 26 29	+32 20.1	17.5	I	
3645	14 26 29	+30 51.5	17.	I	* CP.OBJ.
3646	14 26 29	+29 9.0	17.	I	TN773
3647	14 26 31	+27 11.1	17.5	II	
3648	14 26 33	+30 57.0	18.	II	
3649	14 26 39	+27 24.0	18.5	I	
3650	14 26 42	+27 5.9	18.5	I	
3651	14 26 51	+32 38.4	18.	II	
3652	14 27 7	+30 18.5	18.5	II	
3653	14 27 17	+29 40.4	18.	I	
3654	14 27 18	+30 8.9	17.	II	
3655	14 27 25	+26 57.7	18.5	I	*
3656	14 27 37	+32 35.8	17.5	II	
3657	14 27 47	+28 16.8	15.	I	TN203
3658	14 27 53	+32 32.8	18.	II	
3659	14 28 0	+30 5.7	17.	I	
3660	14 28 7	+28 24.3	18.	II	
3661	14 28 43	+30 50.4	17.5	I	
3662	14 28 44	+30 34.6	17.5	I	
3663	14 28 45	+28 40.9	16.5	I	TN204
3664	14 28 49	+30 13.8	18.5	II	
3665	14 28 53	+28 30.5	14.5	II	* CP.OBJ.
3666	14 28 56	+32 11.4	17.5	I	
3667	14 29 13	+28 35.6	18.5	I	
3668	14 29 15	+30 55.1	18.5	II	
3669	14 29 17	+31 14.4	17.	I	
3670	14 29 19	+29 30.4	18.	II	
3671	14 29 33	+28 43.7	17.5	I	*
3672	14 29 35	+31 54.7	15.	II	M.CP.OBJ.
3673	14 29 53	+26 57.4	18.5	II	
3674	14 29 56	+29 48.7	17.5	II	
3675	14 30 17	+29 2.6	17.	I	
3676	14 30 35	+28 19.9	15.	III	TN776
3677	14 30 54	+28 47.8	18.	I	
3678	14 31 2	+31 32.3	18.5	I	
3679	14 31 34	+29 56.0	17.	II	
3680	14 31 35	+31 5.9	18.	II	
3681	14 31 35	+29 47.0	17.	I	TN206
3682	14 31 37	+31 29.2	17.5	I	
3683	14 31 41	+29 49.2	18.	II	
3684	14 31 45	+28 43.6	17.5	I	
3685	14 31 47	+28 0.9	15.	III	TN777

3632 : FT COMP. TO BD+28°2325, 8.7 F8, NE 20".
3638 = TN202 : QSS (GREENSTEIN AND OKE, 1970).
3642 : FT COMP. TO BD+31°2619, 9.1 G5, NE 30".
3645 : COMPACT ZONE IN A DIFFUSE STRETCHENED GALAXY INCLUDED IN CGCG.
3655 : FT COMP. TO 14. K, SW 10"
3665 = M684 = TN774 : NUCLEUS OF A GALAXY INCLUDED IN CGCG.
3671 : COMP. TO 17. M, W 15".

PS 14:18 +30

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3686	14 32 44	+29 28.7	18.	I	
3687	14 32 56	+29 0.9	15.5	I	TN208
3688	14 33 37	+31 45.3	17.5	II	
3689	14 33 37	+27 9.9	18.	II	
3690	14 33 39	+29 19.6	18.5	II	
3691	14 33 44	+30 19.8	12.5	III	F97
3692	14 33 58	+28 40.0	14.	II	* M.CP.OBJ.
3693	14 34 27	+29 46.4	18.	II	
3694	14 34 29	+28 36.1	18.	I	
3695	14 34 31	+28 57.8	15.	I	TN210
3696	14 35 18	+27 34.9	16.	II	TN779
3697	14 35 32	+31 32.0	18.	I	* QSS?
3698	14 35 34	+27 50.3	18.	II	
3699	14 35 41	+32 0.1	18.	II	
3700	14 35 45	+31 40.5	18.	I	
3701	14 35 50	+30 55.0	17.	I	
3702	14 35 51	+30 43.9	16.	II	M.CP.OBJ.
3703	14 35 55	+30 4.1	17.	I	
3704	14 36 4	+27 42.4	11.5	III	F98
3705	14 36 22	+28 1.8	18.	I	

3692 : GALAXY IN CGCG.
3697 : IDENTIFIED WITH THE QSS CANDIDATE OF FANTI ET AL. (1975) PROPOSED FOR THE R.S. B2 1435 31 (COLLA ET AL.,1973).

PS 12:00 +18

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3706	11 51 30	+19 17.6	16.	III	
3707	11 51 36	+20 12.2	17.	II	*
3708	11 51 38	+19 38.3	17.	III	
3709	11 51 39	+19 35.8	17.5	III	
3710	11 51 39	+19 36.0	17.5	II	
3711	11 51 40	+18 39.3	16.5	III	
3712	11 51 43	+18 54.0	10.	II	* F51
3713	11 52 2	+14 51.5	16.	III	
3714	11 52 3	+15 10.4	18.	II	
3715	11 52 4	+19 20.5	15.5	II	
3716	11 52 5	+19 5.2	17.5	I	
3717	11 52 9	+18 25.1	17.5	III	
3718	11 52 37	+19 49.9	17.5	II	
3719	11 52 44	+19 56.3	16.	I	
3720	11 52 50	+15 24.8	17.	I	
3721	11 52 57	+17 35.0	17.	II	
3722	11 53 0	+18 32.5	18.	II	
3723	11 53 18	+19 5.9	18.	II	
3724	11 53 26	+14 17.3	16.5	I	*
3725	11 53 31	+18 32.6	17.	I	
3726	11 53 36	+15 9.6	17.5	II	
3727	11 53 40	+20 10.4	18.5	II	
3728	11 54 2	+19 5.6	18.5	II	
3729	11 54 6	+15 37.4	18.	II	
3730	11 54 7	+19 2.5	18.	I	
3731	11 54 11	+18 38.9	16.	I	* LTT13302
3732	11 54 13	+19 9.1	17.5	II	
3733	11 54 14	+16 12.1	18.	II	
3734	11 54 18	+18 2.5	16.5	I	
3735	11 54 21	+19 5.6	15.5	III	
3736	11 54 23	+19 46.8	16.5	II	
3737	11 54 23	+15 18.6	16.	II	
3738	11 54 38	+18 1.8	18.	I	
3739	11 54 41	+15 50.9	17.5	III	
3740	11 54 48	+18 15.6	16.5	II	
3741	11 54 49	+17 55.9	18.	I	
3742	11 54 57	+19 30.8	18.	II	
3743	11 55 1	+16 55.6	17.5	II	
3744	11 55 4	+19 11.7	17.	I	
3745	11 55 7	+15 30.8	17.	I	
3746	11 55 15	+17 7.3	17.5	II	
3747	11 55 26	+16 38.0	17.	I	
3748	11 55 43	+19 25.5	17.	II	
3749	11 56 0	+14 38.6	17.5	II	
3750	11 56 15	+17 32.5	17.	I	
3751	11 56 18	+19 58.5	18.	III	
3752	11 56 24	+16 27.8	18.	II	
3753	11 56 26	+19 53.5	16.	II	
3754	11 56 36	+18 30.1	17.5	II	
3755	11 56 37	+18 15.3	17.5	II	
3756	11 56 43	+18 38.9	16.	II	
3757	11 56 53	+17 50.0	17.	III	
3758	11 57 5	+20 13.2	17.	III	
3759	11 57 6	+15 6.1	17.	III	
3760	11 57 7	+17 21.9	16.5	II	

3707 HAS FT COMP. 18. K, NW 15".
3712 = F51 = BD+19°2515.
3724 HAS COMP. 17. K, E 25".
3731 = LTT13302 = L1261-24 : TYPE DC (EGGEN AND GREENSTEIN, 1965). FT COMP. TO 15. G, N 10".

PS 12:00 +18

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3761	11 57 24	+20 5.5	18.	II	
3762	11 57 40	+20 2.4	18.5	II	
3763	11 57 42	+16 48.7	18.	II	
3764	11 57 44	+17 31.1	17.5	III	
3765	11 57 47	+16 3.3	17.5	I	
3766	11 58 3	+15 37.1	12.5	III	* CII40
3767	11 58 31	+20 0.1	16.	II	
3768	11 58 37	+14 22.9	15.	II	* GALAXY
3769	11 59 38	+15 52.5	17.	III	
3770	11 58 40	+17 51.2	17.5	II	
3771	11 58 42	+18 26.5	17.5	II	
3772	11 59 1	+15 14.1	18.5	II	
3773	11 59 6	+17 0.8	17.	II	
3774	11 59 10	+17 23.7	18.	III	
3775	11 59 12	+20 14.7	17.5	I	
3776	11 59 14	+17 44.1	18.	II	
3777	11 59 22	+17 16.8	17.5	II	
3778	11 59 59	+14 19.1	18.	I	
3779	12 0 2	+18 37.3	13.	I	
3780	12 0 6	+18 32.2	18.	II	
3781	12 0 9	+17 23.3	17.5	II	
3782	12 0 10	+17 47.6	17.5	II	
3783	12 0 11	+16 48.3	17.	II	
3784	12 0 12	+17 39.2	17.	II	
3785	12 0 18	+16 23.8	17.5	II	
3786	12 0 20	+18 23.2	17.	I	
3787	12 0 26	+18 23.8	18.5	II	
3788	12 0 26	+17 52.9	17.	II	
3789	12 0 32	+19 15.6	18.5	II	
3790	12 0 37	+14 54.2	17.5	II	
3791	12 0 50	+16 27.0	16.	II	
3792	12 0 51	+18 8.3	17.	III	
3793	12 1 1	+17 12.1	17.5	III	
3794	12 1 1	+14 38.1	18.5	II	
3795	12 1 3	+15 8.1	17.5	I	
3796	12 1 3	+14 38.8	18.5	II	
3797	12 1 22	+20 14.7	17.5	III	
3798	12 1 28	+15 57.2	17.5	II	
3799	12 1 29	+18 51.5	17.	III	
3800	12 1 30	+18 22.5	17.	II	
3801	12 1 30	+17 34.6	17.5	II	
3802	12 1 32	+20 4.4	15.5	II	
3803	12 1 33	+18 7.5	17.	II	
3804	12 1 34	+15 52.7	16.5	I	
3805	12 1 44	+16 53.3	17.5	II	
3806	12 1 46	+17 25.5	17.5	II	*
3807	12 1 49	+20 9.7	17.5	II	
3808	12 1 50	+19 48.8	17.	II	
3809	12 1 54	+17 44.3	18.	I	
3810	12 1 54	+15 50.9	18.	II	
3811	12 1 59	+18 7.0	17.5	II	
3812	12 2 2	+20 5.4	18.	II	
3813	12 2 7	+17 7.3	18.	II	
3814	12 2 10	+17 31.9	17.5	II	
3815	12 2 11	+20 13.1	18.5	II	
3816	12 2 12	+16 41.9	18.5	I	
3817	12 2 14	+17 19.5	18.	I	
3818	12 2 18	+17 58.6	16.5	II	
3819	12 2 20	+17 35.7	17.5	II	
3820	12 2 28	+19 40.9	18.5	II	

3766 = CII40 : GD SPECTRUM GIVES THE TYPE AP (EUROPIUM, CHROMIUM LINES?)
3768 : SEEN EDGEWISE GALAXY, DIAM. 50".
3806 : COMP. TO 17.5 G, SW 15".

Catalogue *(continued)*

PS 12:00 +18

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3821	12 2 31	+16 24.3	17.5	I	
3822	12 2 38	+16 15.1	17.	I	
3823	12 2 44	+19 33.1	17.5	III	
3824	12 2 44	+15 41.0	17.	II	
3825	12 2 53	+17 3.9	17.5	II	
3826	12 3 3	+18 30.6	18.	II	
3827	12 3 5	+19 3.1	17.	II	
3828	12 3 16	+18 19.8	17.5	I	
3829	12 3 39	+20 15.7	18.	II	
3830	12 4 0	+18 23.2	16.	II	
3831	12 4 6	+19 2.9	18.5	II	
3832	12 4 6	+17 25.3	17.	II	
3833	12 4 8	+15 44.2	17.5	II	
3834	12 4 25	+16 24.1	17.	III	
3835	12 4 31	+16 32.0	17.5	III	
3836	12 4 40	+18 5.3	17.5	II	
3837	12 4 50	+19 50.8	17.5	I	
3838	12 4 54	+18 59.6	17.5	II	
3839	12 5 6	+16 9.0	18.	II	
3840	12 5 14	+19 7.4	18.	II	
3841	12 5 21	+19 2.7	18.5	II	
3842	12 5 22	+17 46.1	18.	II	
3843	12 5 33	+17 29.4	17.5	I	
3844	12 6 5	+16 44.9	17.5	II	
3845	12 6 10	+16 12.9	18.	II	
3846	12 6 16	+18 47.3	17.5	II	
3847	12 6 19	+15 1.4	17.5	II	
3848	12 6 21	+17 16.6	18.	II	
3849	12 6 25	+16 51.7	17.	II	
3850	12 6 40	+19 19.1	18.5	II	
3851	12 6 41	+20 20.2	17.5	II	
3852	12 6 41	+18 58.9	18.	II	
3853	12 6 42	+18 18.6	17.	III	
3854	12 6 44	+16 28.4	13.5	I *	
3855	12 6 51	+16 47.0	17.	I	
3856	12 6 59	+18 31.3	17.5	II	
3857	12 7 0	+14 35.5	17.5	II	
3858	12 7 5	+18 25.5	17.5	II	
3859	12 7 18	+16 32.6	17.	II	
3860	12 7 20	+18 28.7	18.	II	
3861	12 7 25	+18 51.3	17.	III *	
3862	12 7 30	+18 22.2	18.	II	
3863	12 7 38	+17 0.7	17.5	I	
3864	12 7 43	+19 4.7	18.	I	
3865	12 8 1	+18 52.0	11.	III *	
3866	12 8 2	+15 35.5	17.5	II	
3867	12 8 5	+18 8.9	15.	II	* CP.OBJ.
3868	12 8 16	+17 19.7	17.5	III	
3869	12 8 23	+16 49.2	16.	III	
3870	12 8 27	+15 14.2	17.5	II	* QSS?
3871	12 8 33	+17 53.6	17.5	III	
3872	12 8 38	+19 17.5	18.	II	
3873	12 9 1	+18 33.0	16.5	II	
3874	12 9 2	+18 39.7	15.5	II	
3875	12 9 16	+17 46.4	17.	II	

3854 : GD SPECTRUM GIVES THE TYPE SUBDWARF B (BALMER LINES) OR A (K LINE): COMPOSITE?
3861 = SWI13 IN THE GLOBULAR CLUSTER NGC 4147 (SANDAGE AND WALKER, 1955).
3865 : B AND U SPECTRA GIVE THE TYPE EARLY A WITH SHARP BALMER LINES.
3867 : EXTREMELY COMPACT GALAXY IN CGCG.
3870 CLOSE TO THE POSITION OF THE RADIO SOURCE ON+114.2 (FITCH ET AL., 1969).

PS 12:00 +18

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3876	12 9 16	+16 50.4	17.	I	
3877	12 9 17	+14 54.0	17.5	I	
3878	12 9 23	+19 23.5	17.	II *	
3879	12 9 26	+18 8.4	15.	I	
3880	12 9 51	+17 43.8	16.5	III	
3881	12 9 52	+19 16.0	17.	I	
3882	12 9 55	+18 17.5	17.5	I	
3883	12 9 59	+18 3.4	16.	II	
3884	12 10 19	+17 53.0	17.	III	
3885	12 10 35	+15 7.8	17.5	I	
3886	12 10 36	+14 25.2	18.	II	
3887	12 10 39	+18 8.0	17.	II	
3888	12 10 39	+18 12.7	17.	I	
3889	12 10 52	+19 22.2	18.	II	
3890	12 11 5	+14 42.9	17.5	II	
3891	12 11 19	+18 27.9	18.5	II	
3892	12 11 25	+18 14.0	17.5	II *	
3893	12 11 31	+20 2.7	17.5	II	
3894	12 11 45	+14 19.9	15.	I	
3895	12 12 4	+18 49.3	17.	II	
3896	12 12 7	+14 45.7	18.	II	
3897	12 12 8	+18 55.4	17.	III	
3898	12 12 12	+15 44.5	16.	III	
3899	12 12 13	+14 38.5	17.5	III	
3900	12 12 14	+20 9.7	15.5	II	
3901	12 12 16	+18 9.3	18.	II	
3902	12 12 20	+15 51.6	18.	I	
3903	12 12 21	+19 10.7	18.	III	
3904	12 12 46	+19 58.4	17.5	II	
3905	12 12 57	+14 45.4	18.	II	
3906	12 13 2	+14 45.4	15.	III	
3907	12 13 16	+16 56.8	18.5	II	
3908	12 13 19	+18 37.7	18.	II	
3909	12 13 23	+15 46.2	18.5	II	
3910	12 13 24	+17 4.5	18.	III	
3911	12 13 44	+17 9.7	17.5	II	
3912	12 13 49	+17 0.7	18.5	II	
3913	12 13 57	+17 1.9	17.5	II	
3914	12 14 1	+18 35.8	19.	I	
3915	12 14 9	+18 13.9	18.	II	
3916	12 14 12	+18 57.1	18.	II	
3917	12 14 16	+19 4.7	17.	I	
3918	12 14 47	+16 20.5	13.5	II *	
3919	12 14 48	+14 37.7	18.	II *	
3920	12 14 49	+15 51.5	11.5	III F59	
3921	12 14 53	+14 48.5	18.5	II *	
3922	12 14 58	+19 22.2	16.5	I	
3923	12 14 58	+16 45.4	17.	II	
3924	12 15 2	+18 7.6	17.5	II	
3925	12 15 3	+19 17.4	16.5	I	
3926	12 15 4	+18 21.0	17.5	II	
3927	12 15 16	+15 37.5	18.	III	
3928	12 15 44	+19 5.4	18.5	II	
3929	12 15 59	+18 51.6	17.5	II	
3930	12 16 3	+18 14.6	17.	II	

3878 HAS FT COMP. 19.5 K, S 5" AND FT COMP. TO 14.5 F, SW 20".
3892 : FT COMP. TO 16.5, NE 3".
3918 : GD SPECTRUM GIVES THE TYPE AP.
3919 AND 3921 ARE RESPECTIVELY THE STARS 33 AND 35 IN S.A.80 (SEARS ET AL., 1930).

PS 12:00 +18

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3931	12 16 11	+14 36.7	17.	II	
3932	12 16 14	+17 54.9	18.	II	
3933	12 16 14	+14 40.7	17.5	I *	
3934	12 16 14	+14 40.6	17.5	I *	
3935	12 16 19	+17 20.0	18.	II	
3936	12 16 26	+15 24.1	12.5	III F60	
3937	12 17 26	+19 58.6	18.	II	
3938	12 17 29	+19 56.7	18.5	II	
3939	12 17 34	+15 51.5	16.	II RMB52	
3940	12 17 50	+17 23.2	17.	II	
3941	12 17 51	+14 56.1	16.5	I A3-16	
3942	12 17 55	+17 50.9	17.	III	
3943	12 17 57	+20 18.3	17.	I	
3944	12 18 8	+17 35.0	17.5	II	

3933 AND 3934 : HII REGIONS IN NGC4254 : A3-3 AND A3-4 (BARBIERI AND BENVENUTI, 1974).

PS 13:36 +18

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
3945	13 27 28	+19 59.1	18.	II	
3946	13 27 30	+18 36.2	17.	I	
3947	13 27 47	+15 56.5	17.5	I	
3948	13 27 54	+19 26.0	17.5	I	
3949	13 27 57	+15 14.7	18.5	II	
3950	13 28 0	+19 37.3	17.5	II	
3951	13 28 7	+20 13.3	15.	II	
3952	13 28 28	+15 42.5	18.	I	
3953	13 28 34	+19 41.3	15.5	II *	
3954	13 28 46	+15 55.7	18.5	II	
3955	13 28 48	+20 17.5	17.	II	
3956	13 28 49	+15 14.3	18.5	II	
3957	13 28 52	+17 59.6	18.	I	
3958	13 29 2	+18 39.7	18.	I	
3959	13 29 13	+18 59.4	16.5	I	
3960	13 29 21	+18 47.9	17.	I	
3961	13 29 22	+19 40.2	17.5	I	
3962	13 29 23	+14 25.0	14.5	I	
3963	13 29 27	+15 56.7	13.5	I F81	
3964	13 29 28	+15 50.0	18.	I	
3965	13 29 47	+16 34.4	18.	I	
3966	13 29 59	+15 34.8	17.5	I	
3967	13 30 5	+19 50.6	15.5	III	
3968	13 30 5	+19 35.3	16.	II	
3969	13 30 8	+17 10.7	19.	I	
3970	13 30 35	+16 22.8	18.	I	
3971	13 30 50	+18 21.8	17.5	II	
3972	13 30 50	+16 6.2	17.5	II	
3973	13 30 57	+17 17.4	18.	II	
3974	13 31 1	+18 17.7	18.	II	
3975	13 31 3	+19 28.2	18.5	II	
3976	13 31 7	+18 17.5	16.5	III	
3977	13 31 10	+17 4.4	16.5	I	
3978	13 31 11	+16 15.8	18.5	II	
3979	13 31 16	+14 44.3	16.5	II	
3980	13 31 20	+20 17.1	17.	I	
3981	13 31 25	+19 33.6	16.5	II	
3982	13 31 28	+16 16.1	18.5	II	
3983	13 31 29	+19 29.9	18.	II	
3984	13 31 38	+19 40.1	16.5	II	
3985	13 31 52	+17 54.2	18.5	I	
3986	13 31 54	+16 38.0	18.	II	
3987	13 31 58	+18 14.7	17.	II	
3988	13 32 6	+17 27.1	17.5	I	
3989	13 32 10	+19 38.0	17.	II	
3990	13 32 13	+16 15.1	16.	I	
3991	13 32 14	+16 43.1	18.	I	
3992	13 32 16	+16 45.8	19.	I	
3993	13 32 17	+16 46.8	17.	II	
3994	13 32 18	+18 47.5	16.	II	
3995	13 32 20	+19 25.9	17.5	II	
3996	13 32 36	+19 53.1	18.	II	
3997	13 32 48	+20 7.3	17.5	I	
3998	13 32 49	+20 23.3	17.	I	
3999	13 32 51	+18 49.0	18.5	I	
4000	13 32 54	+17 41.2	15.5	III	

3953 : COMPACT ZONE IN A GALAXY OF CGCG :
"NUCLEUS ECCENTRIC".
= OBJ. 13 28.6 +19 42 (ZWICKY ET AL., 1975).

1977A&AS...28..123B

Catalogue *(continued)*

PS 13:36 +18

PB	ALPHA (1950)	DELTA (1950)	B	CLASS	NOTES OTHER NAMES
4001	13 33 3	+17 39.8	15.5	III	
4002	13 33 6	+18 16.0	16.	II	
4003	13 33 7	+15 27.1	18.5	II	
4004	13 33 17	+19 29.4	18.5	I	
4005	13 33 21	+18 2.6	16.5	I	
4006	13 33 31	+19 1.3	17.5	I	
4007	13 33 36	+17 40.5	15.5	I	
4008	13 33 38	+16 56.8	18.	II	
4009	13 33 43	+20 10.6	17.	II	
4010	13 33 46	+19 0.8	17.	I	
4011	13 33 47	+16 31.1	18.5	I	* QSS?
4012	13 33 55	+18 15.9	18.5	I	* QSS?
4013	13 34 7	+20 19.7	16.5	I	
4014	13 34 9	+15 7.5	19.	II	
4015	13 34 29	+17 26.0	18.	II	
4016	13 34 36	+18 25.8	17.5	I	
4017	13 34 39	+19 5.4	16.5	III	
4018	13 34 45	+19 10.9	17.	III	
4019	13 34 47	+14 47.9	18.5	II	
4020	13 35 8	+19 1.0	17.	II	
4021	13 35 26	+15 43.9	17.	II	
4022	13 35 48	+19 50.6	18.	I	
4023	13 35 49	+17 30.9	16.	II	
4024	13 35 51	+20 17.7	18.5	I	
4025	13 35 52	+14 37.0	18.	II	
4026	13 36 1	+17 19.9	17.5	II	
4027	13 36 2	+17 54.6	14.5	III	CP.OBJ.
4028	13 36 5	+17 51.3	16.	III	
4029	13 36 31	+14 38.6	18.5	II	
4030	13 36 41	+19 23.4	16.5	I	*
4031	13 36 51	+15 56.4	16.5	II	
4032	13 37 1	+18 53.6	16.5	III	*
4033	13 37 4	+17 11.5	19.	II	
4034	13 37 11	+19 43.8	18.	II	
4035	13 37 18	+18 45.2	19.	II	
4036	13 37 25	+17 5.5	16.	III	
4037	13 37 28	+18 55.8	17.5	II	
4038	13 37 43	+18 56.5	18.	I	
4039	13 37 43	+16 49.6	18.5	II	
4040	13 37 50	+18 54.5	18.	I	
4041	13 38 35	+15 55.5	18.5	I	
4042	13 38 37	+19 22.1	17.	II	
4043	13 38 40	+15 46.7	12.	III	CII63
4044	13 38 54	+18 55.5	18.5	II	
4045	13 38 59	+19 7.4	17.	I	
4046	13 39 0	+18 27.2	14.	II	*
4047	13 39 8	+18 26.4	18.	II	
4048	13 39 33	+16 12.8	17.5	II	
4049	13 39 40	+16 42.1	18.	II	
4050	13 39 45	+17 22.3	18.5	II	
4051	13 39 48	+15 50.5	17.5	II	
4052	13 40 8	+16 13.3	16.5	I	*
4053	13 40 11	+19 28.8	16.5	I	* CP.OBJ.
4054	13 40 21	+19 36.9	18.	II	
4055	13 40 23	+18 59.9	17.	I	

4011 AND 4012 ARE RESPECTIVELY CLOSE TO THE RADIO SOURCES OP157 AND OP158 (FITCH ET AL., 1969).
4030 : FT COMP. TO 15. G, S 20".
4032 HAS FT COMP. 18. M, E 10".
4046 : GD SPECTRUM GIVES THE TYPE AP (G BAND, FAINT K LINE).
4052 HAS FT COMP. 19. M, SW 15".
4053 : BLUE CP. OBJ. ASSOCIATED WITH A RED CP. OBJ. W 12".

PS 13:36 +18

PB	ALPHA (1950)	DELTA (1950)	B	CLASS	NOTES OTHER NAMES
4056	13 40 32	+20 2.4	18.	II	*
4057	13 40 38	+15 1.3	18.5	II	
4058	13 40 48	+20 7.8	17.5	II	
4059	13 40 57	+15 24.2	17.	I	
4060	13 41 8	+20 13.2	15.	II	
4061	13 41 10	+15 22.5	17.	II	
4062	13 41 14	+15 8.4	18.	II	
4063	13 41 23	+19 48.3	16.	II	CP.OBJ.
4064	13 41 35	+17 6.7	16.5	III	
4065	13 41 39	+18 57.5	17.	III	*
4066	13 41 41	+18 58.0	14.5	II	
4067	13 41 45	+19 12.0	15.5	III	
4068	13 42 0	+19 57.2	18.	II	
4069	13 42 3	+19 4.5	18.	I	
4070	13 42 12	+19 28.8	17.5	II	
4071	13 42 14	+18 52.3	17.	I	
4072	13 42 36	+15 25.1	18.	I	
4073	13 42 37	+18 29.5	16.	III	
4074	13 42 41	+14 28.9	19.	II	
4075	13 42 42	+19 23.0	18.5	II	
4076	13 42 46	+17 22.5	15.5	III	
4077	13 43 5	+18 27.1	18.	II	
4078	13 43 13	+16 33.8	18.	II	
4079	13 43 16	+17 11.3	17.	I	
4080	13 43 19	+20 8.4	16.	III	
4081	13 43 46	+17 4.9	18.5	I	
4082	13 43 54	+17 8.3	17.	II	*
4083	13 44 2	+19 33.2	15.	III	
4084	13 44 3	+18 46.1	16.5	I	
4085	13 44 10	+18 41.0	18.5	II	
4086	13 44 47	+15 36.0	16.5	II	
4087	13 45 10	+17 39.6	16.5	II	
4088	13 45 12	+20 16.3	18.	II	
4089	13 45 24	+17 49.7	17.5	II	
4090	13 45 38	+16 32.4	17.	I	
4091	13 45 58	+18 25.2	16.	III	
4092	13 45 59	+19 54.5	18.5	II	
4093	13 46 1	+19 53.7	16.	III	
4094	13 46 15	+18 57.9	17.5	I	
4095	13 46 18	+18 49.0	17.	I	
4096	13 46 27	+16 44.0	18.5	II	
4097	13 46 28	+15 36.2	17.5	II	
4098	13 46 38	+14 34.9	17.	II	G63-57
4099	13 46 47	+19 50.9	16.5	II	
4100	13 47 14	+17 23.6	16.5	II	
4101	13 47 22	+16 57.0	16.5	II	
4102	13 47 31	+18 5.6	17.	I	
4103	13 47 33	+17 56.4	16.5	III	
4104	13 47 49	+18 27.8	17.	I	
4105	13 47 55	+15 42.4	18.	II	
4106	13 47 57	+15 31.2	15.5	III	
4107	13 48 0	+20 10.6	16.5	II	
4108	13 48 6	+16 6.5	15.5	II	
4109	13 48 7	+17 0.2	18.5	I	
4110	13 48 15	+16 7.3	15.5	II	CP.OBJ.

4056 : COMP. TO 17.5 G, E 15".
4065 HAS FT COMP. 19. M, NW 3".
4082 : FT COMP. TO 15. G, NW 10".

PS 13:36 +18

PB	ALPHA (1950)	DELTA (1950)	B	CLASS	NOTES OTHER NAMES
4111	13 48 22	+19 45.5	16.	III	
4112	13 48 27	+17 7.4	18.	I	
4113	13 48 40	+14 54.9	18.5	I	
4114	13 48 55	+18 33.9	17.	I	*
4115	13 48 55	+17 34.6	17.5	I	
4116	13 49 14	+19 10.3	15.	II	
4117	13 49 28	+14 24.6	15.5	I	
4118	13 49 30	+17 27.4	16.5	III	
4119	13 49 35	+16 9.7	18.	II	
4120	13 49 36	+18 34.7	16.5	III	
4121	13 49 42	+19 8.4	18.5	II	
4122	13 50 6	+16 53.9	15.5	III	
4123	13 50 15	+20 12.1	18.5	II	
4124	13 50 20	+20 2.6	19.5	II	
4125	13 50 54	+18 47.3	17.	I	
4126	13 50 58	+19 31.3	16.5	II	
4127	13 51 2	+15 16.9	18.	II	
4128	13 51 6	+19 59.9	18.	I	
4129	13 51 16	+19 49.0	16.5	II	*
4130	13 51 19	+17 11.6	16.5	II	
4131	13 51 22	+19 48.1	18.5	I	
4132	13 51 25	+18 45.8	16.	I	
4133	13 51 28	+17 6.1	18.5	I	
4134	13 51 29	+19 15.9	18.5	I	
4135	13 51 30	+20 16.6	17.	II	
4136	13 51 36	+20 18.5	16.	III	
4137	13 51 39	+14 51.8	18.5	II	
4138	13 51 51	+20 13.8	18.5	II	
4139	13 51 52	+15 25.6	18.5	II	
4140	13 52 0	+14 56.6	18.5	I	
4141	13 52 7	+16 41.8	18.5	II	
4142	13 52 13	+18 19.9	16.	I	
4143	13 52 19	+15 14.9	19.	II	
4144	13 52 26	+15 5.9	18.5	I	
4145	13 52 28	+18 28.1	18.	II	
4146	13 52 50	+20 11.4	16.	I	
4147	13 52 58	+18 34.7	17.	III	
4148	13 53 10	+16 14.9	15.5	I	
4149	13 53 11	+16 12.5	16.5	I	
4150	13 53 14	+15 9.4	16.	I	
4151	13 53 38	+18 20.5	16.5	III	

4114 : IN A TRIPLE SYSTEM : FT COMP. TO 13.5 K, N 10" AND THE THIRD COMP. IS 18. G, NE 30".
4129 : FT COMP. TO 13.5 K, NW 15".

PS 12:48 +6

PB	ALPHA (1950)	DELTA (1950)	B	CLASS	NOTES OTHER NAMES
4152	12 39 59	+ 4 23.2	15.5	I	TN108
4153	12 40 3	+ 5 58.7	17.5	III	
4154	12 40 7	+ 6 23.0	18.	II	
4155	12 40 9	+ 6 27.9	16.5	III	
4156	12 40 10	+ 4 28.2	17.5	III	
4157	12 40 19	+ 5 44.4	17.5	III	
4158	12 40 23	+ 5 29.8	18.5	II	
4159	12 40 24	+ 3 44.1	17.5	III	
4160	12 40 26	+ 2 58.6	18.	II	
4161	12 40 32	+ 2 40.9	17.5	III	
4162	12 40 33	+ 7 55.6	17.5	II	
4163	12 40 36	+ 3 4.9	18.5	III	
4164	12 40 48	+ 6 35.0	19.	II	
4165	12 40 54	+ 4 12.0	18.	III	
4166	12 40 57	+ 2 23.8	19.	II	
4167	12 40 59	+ 6 33.3	19.	II	
4168	12 40 59	+ 4 15.0	18.5	III	
4169	12 41 2	+ 2 43.2	17.	III	
4170	12 41 13	+ 5 32.5	18.	II	
4171	12 41 15	+ 4 59.1	18.	III	
4172	12 41 20	+ 4 21.4	18.	III	
4173	12 41 49	+ 7 17.5	17.5	I	
4174	12 41 55	+ 6 2.6	19.	I	
4175	12 41 56	+ 8 23.9	18.5	II	
4176	12 41 57	+ 3 51.9	19.	III	
4177	12 42 5	+ 5 17.0	18.5	I	
4178	12 42 5	+ 5 16.9	18.5	III	
4179	12 42 13	+ 8 11.6	19.	I	
4180	12 42 16	+ 5 45.7	19.	II	
4181	12 42 17	+ 2 57.7	18.5	III	
4182	12 42 19	+ 4 43.8	18.5	I	
4183	12 42 22	+ 4 18.7	19.	I	
4184	12 42 34	+ 4 32.5	18.	III	
4185	12 42 39	+ 6 4.9	18.	III	
4186	12 42 39	+ 4 33.0	18.5	II	
4187	12 42 41	+ 8 11.4	18.5	I	
4188	12 42 43	+ 2 29.7	18.5	II	
4189	12 42 45	+ 4 3.1	19.	III	
4190	12 42 47	+ 5 18.9	19.	III	
4191	12 42 48	+ 7 35.8	19.	I	
4192	12 42 48	+ 3 26.2	18.5	I	
4193	12 42 50	+ 4 32.3	18.	III	
4194	12 42 54	+ 6 45.6	18.5	II	
4195	12 42 54	+ 6 45.4	18.5	II	
4196	12 42 56	+ 5 58.9	18.	III	
4197	12 43 1	+ 2 34.6	18.	II	
4198	12 43 12	+ 7 11.2	17.	III	
4199	12 43 16	+ 5 46.4	17.	II	M.CP.OBJ.
4200	12 43 17	+ 4 36.9	18.5	III	
4201	12 43 18	+ 3 37.8	18.	I	*
4202	12 43 22	+ 8 21.1	17.	II	
4203	12 43 22	+ 6 45.6	18.	I	
4204	12 43 24	+ 4 31.0	18.5	I	*
4205	12 43 28	+ 3 53.7	18.	III	
4206	12 43 31	+ 5 32.4	19.	II	
4207	12 43 44	+ 6 13.5	18.	II	
4208	12 43 47	+ 7 6.5	17.	I	
4209	12 43 47	+ 5 16.8	19.	III	
4210	12 43 51	+ 7 17.4	19.	I	

4201 : A VARIABLE STAR? : PSS PRINTS GIVE CLASS III.
4204 : FT COMP. TO 15. K, N 15".

Catalogue *(continued)*

PS 12:48 +6

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
4211	12 43 53	+ 4 12.3	17.5	III	
4212	12 43 57	+ 7 55.9	19.5	II	
4213	12 43 59	+ 4 17.6	18.5	III	
4214	12 44 1	+ 5 2.6	18.5	III *	
4215	12 44 1	+ 2 54.6	19.	II	
4216	12 44 6	+ 2 24.8	17.5	III	
4217	12 44 9	+ 2 40.5	18.5	I	
4218	12 44 15	+ 4 59.4	19.	I	
4219	12 44 16	+ 4 59.9	18.5	II	
4220	12 44 16	+ 3 2.8	18.5	I	
4221	12 44 19	+ 3 51.7	18.5	III	
4222	12 44 20	+ 3 54.8	14.5	III	
4223	12 44 25	+ 4 58.6	18.5	III	
4224	12 44 39	+ 5 33.2	18.5	III	
4225	12 44 45	+ 7 2.7	18.5	I	
4226	12 44 53	+ 7 53.2	18.	II	
4227	12 44 54	+ 8 11.1	17.	III	
4228	12 44 54	+ 7 21.8	17.5	I	
4229	12 44 54	+ 3 51.8	16.	II	* CP.OBJ.
4230	12 44 56	+ 7 55.3	18.5	I	
4231	12 44 56	+ 7 55.3	18.	II	
4232	12 45 0	+ 6 30.4	18.	III	
4233	12 45 2	+ 4 58.0	19.	II	
4234	12 45 7	+ 5 45.9	19.	II	
4235	12 45 9	+ 4 58.9	18.5	III	
4236	12 45 17	+ 2 57.1	18.	III	
4237	12 45 21	+ 7 31.6	17.5	III	
4238	12 45 21	+ 5 25.0	18.	III	
4239	12 45 24	+ 5 25.0	18.5	III	
4240	12 45 31	+ 6 33.0	17.5	III	
4241	12 45 33	+ 6 49.0	19.	II	
4242	12 45 41	+ 3 31.0	18.5	II	
4243	12 45 42	+ 7 48.0	18.	I	
4244	12 45 46	+ 4 6.4	16.5	I	TN129
4245	12 45 54	+ 8 11.4	19.	II	
4246	12 45 56	+ 3 18.9	19.	II	
4247	12 45 58	+ 2 26.5	17.5	III	
4248	12 46 4	+ 7 23.9	18.	II	
4249	12 46 10	+ 2 52.8	18.	I	
4250	12 46 11	+ 4 43.8	18.5	III	
4251	12 46 11	+ 2 51.6	12.	III *	
4252	12 46 28	+ 6 30.4	17.5	III	
4253	12 46 30	+ 5 36.6	18.	III	
4254	12 46 30	+ 4 46.3	18.5	III	
4255	12 46 43	+ 6 37.2	18.	I	
4256	12 46 43	+ 4 8.2	18.5	III	
4257	12 46 52	+ 4 38.3	18.5	II	
4258	12 46 58	+ 4 56.2	18.	III	
4259	12 47 5	+ 7 44.2	17.5	II	CP.OBJ.
4260	12 47 10	+ 5 7.6	18.	III	
4261	12 47 16	+ 4 19.1	18.5	I	
4262	12 47 22	+ 6 7.4	19.	I	
4263	12 47 23	+ 6 22.5	18.5	II	
4264	12 47 24	+ 4 29.7	18.5	I	
4265	12 47 27	+ 4 13.6	16.5	I	*

4214 : FT COMP. TO 13. K, NW 12".
4229 : PSS PRINTS GIVE DOUBLE CP.OBJ. : FT COMP. 19., E 15"; IN CGCG "DOUBLE NEBULA".
4251 : GD SPECTRUM GIVES THE TYPE EARLY F.
4265 = G60-38B, V=16."1 B-V=-0.02 U-B=-1.13 (EGGEN, 1968).

PS 12:48 +6

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
4266	12 47 28	+ 4 44.9	18.	I	
4267	12 47 29	+ 4 13.5	17.5	III	
4268	12 47 33	+ 5 41.0	17.5	II	
4269	12 47 39	+ 7 22.3	18.	II	
4270	12 47 44	+ 5 14.0	17.5	III	CP.OBJ.
4271	12 47 49	+ 3 53.7	17.5	III	
4272	12 47 57	+ 6 52.5	17.	I	
4273	12 48 1	+ 6 39.8	18.5	III	
4274	12 48 18	+ 6 35.2	18.	III	
4275	12 48 19	+ 7 31.0	17.5	II	
4276	12 48 19	+ 6 25.6	17.	III	
4277	12 48 25	+ 4 16.0	18.	II	
4278	12 48 33	+ 6 38.9	18.	III	
4279	12 48 37	+ 6 33.0	17.5	I	
4280	12 48 40	+ 6 19.9	19.	I	
4281	12 48 44	+ 7 21.1	14.5	II	
4282	12 48 44	+ 6 59.9	16.5	II	
4283	12 48 47	+ 6 6.6	16.5	III	CP.OBJ.
4284	12 48 48	+ 8 10.2	18.5	I	
4285	12 48 52	+ 6 10.7	17.	I	
4286	12 48 52	+ 4 52.9	17.5	II	
4287	12 48 53	+ 4 8.2	14.	II	CP.OBJ.
4288	12 48 57	+ 6 38.2	16.	I	
4289	12 48 58	+ 6 45.2	17.5	III	
4290	12 48 58	+ 3 58.3	18.	II	
4291	12 49 2	+ 8 19.0	16.5	II	* CP.OBJ.
4292	12 49 9	+ 8 23.6	18.5	I	
4293	12 49 9	+ 3 58.9	19.	II	
4294	12 49 9	+ 3 27.9	18.5	II	
4295	12 49 14	+ 3 59.9	18.	III	
4296	12 49 16	+ 6 21.2	18.	III	
4297	12 49 19	+ 3 42.0	14.	III	
4298	12 49 20	+ 5 20.6	18.	I	
4299	12 49 23	+ 4 23.2	17.	II	
4300	12 49 24	+ 7 25.9	18.5	I	
4301	12 49 26	+ 6 30.1	17.	I	
4302	12 49 29	+ 6 54.1	17.	III	
4303	12 49 38	+ 8 18.7	16.	I	
4304	12 49 43	+ 4 26.9	16.5	II	
4305	12 49 44	+ 5 43.9	17.	I	
4306	12 49 45	+ 7 20.3	18.5	I	
4307	12 49 48	+ 6 21.6	17.5	II	
4308	12 49 48	+ 3 32.2	17.	III	* QSS?
4309	12 49 52	+ 4 21.4	19.	III	
4310	12 49 54	+ 3 40.0	18.	I	
4311	12 49 56	+ 5 28.2	17.	III	* CP.OBJ.
4312	12 49 58	+ 2 22.8	17.5	II	
4313	12 50 0	+ 7 43.9	18.5	II	
4314	12 50 4	+ 4 1.3	18.	III	
4315	12 50 9	+ 4 50.6	18.5	II	
4316	12 50 20	+ 7 43.4	19.	II	
4317	12 50 27	+ 6 20.5	18.	III	
4318	12 50 30	+ 2 34.7	14.5	II	
4319	12 50 31	+ 3 3.3	18.	I	
4320	12 50 36	+ 4 49.2	18.5	II	
4321	12 50 46	+ 7 12.9	18.5	III	
4322	12 50 48	+ 2 36.8	18.5	II	
4323	12 50 56	+ 4 36.9	16.5	I	
4324	12 50 59	+ 5 37.4	19.	I	
4325	12 51 1	+ 6 2.8	17.5	III	

4291 : GALAXY IN CGCG.
4308 : CLOSE TO THE POSITION OF THE RADIO SOURCE ON 033.1 (EHMAN ET AL., 1974).
4311 : DOUBLE CP. OBJ. ON PSS PRINTS.

PS 12:48 +6

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
4326	12 51 2	+ 3 30.6	18.5	II	
4327	12 51 5	+ 5 29.7	18.5	III	
4328	12 51 10	+ 4 25.3	18.5	II	
4329	12 51 11	+ 4 25.4	16.5	I	CP.OBJ.
4330	12 51 11	+ 2 30.7	18.	I	
4331	12 51 14	+ 6 27.4	18.5	III	
4332	12 51 14	+ 3 18.7	18.5	III	
4333	12 51 15	+ 5 24.5	18.	I	
4334	12 51 15	+ 4 16.2	16.5	III	
4335	12 51 19	+ 7 45.6	18.	III	
4336	12 51 27	+ 7 23.8	17.	II	*
4337	12 51 34	+ 3 56.3	17.	II	*
4338	12 51 35	+ 7 15.5	19.	I	
4339	12 51 38	+ 3 21.0	18.5	III	
4340	12 51 39	+ 6 10.9	18.	I	*
4341	12 51 47	+ 6 57.5	16.	I	M.CP.OBJ.
4342	12 51 47	+ 4 34.1	17.5	II	
4343	12 52 0	+ 3 32.0	18.	III	
4344	12 52 4	+ 5 53.6	16.5	I	
4345	12 52 4	+ 4 39.4	18.	II	
4346	12 52 4	+ 3 16.8	18.5	II	
4347	12 52 9	+ 2 51.8	18.5	I	
4348	12 52 11	+ 2 22.9	18.	I	
4349	12 52 12	+ 4 6.5	18.5	II	
4350	12 52 14	+ 5 29.7	17.5	III	
4351	12 52 28	+ 6 56.4	17.5	III	
4352	12 52 28	+ 3 56.9	18.	I	
4353	12 52 33	+ 5 25.7	18.	III	
4354	12 52 36	+ 7 39.7	17.5	II	
4355	12 52 36	+ 5 9.1	17.5	II	
4356	12 52 45	+ 6 46.7	18.	II	
4357	12 52 59	+ 4 35.0	18.	III	
4358	12 52 59	+ 3 33.6	17.	I	
4359	12 53 0	+ 8 11.2	18.5	I	
4360	12 53 4	+ 8 2.5	18.5	I	
4361	12 53 8	+ 2 42.0	18.	I	
4362	12 53 9	+ 6 30.3	18.	I	
4363	12 53 19	+ 4 48.9	19.	I	
4364	12 53 20	+ 2 30.7	17.5	II	
4365	12 53 22	+ 4 53.9	17.5	III	
4366	12 53 23	+ 2 26.9	18.	III	
4367	12 53 31	+ 6 12.3	17.	II	
4368	12 53 34	+ 4 7.2	17.5	III	
4369	12 53 51	+ 6 13.0	18.5	III	
4370	12 53 56	+ 5 19.2	18.5	I	
4371	12 53 58	+ 2 56.2	18.	III	
4372	12 54 3	+ 2 18.7	18.	II	
4373	12 54 9	+ 8 20.0	17.	III	*
4374	12 54 13	+ 5 52.1	17.5	III	
4375	12 54 13	+ 2 16.9	18.	II	
4376	12 54 17	+ 5 49.5	18.5	II	
4377	12 54 19	+ 5 44.4	18.	II	
4378	12 54 19	+ 4 45.0	19.	I	
4379	12 54 23	+ 4 53.6	18.	III	
4380	12 54 25	+ 4 54.5	18.	II	
4381	12 54 28	+ 4 43.9	16.5	II	
4382	12 54 33	+ 6 52.2	18.5	II	
4383	12 54 38	+ 5 5.3	18.	III	
4384	12 54 41	+ 6 31.8	18.	III	
4385	12 54 44	+ 3 11.0	17.	II	

4336 HAS FT COMP. ON PSS PRINTS 19.5 M, SW 3".
4337 : FT COMP. TO BD+4°2663, 10.9 G5, NE 40".
4340 : FT COMP. TO 14. G, NE 8".
4373 HAS FT COMP. ON PSS PRINTS 19.5 K, NW 6".

PS 12:48 +6

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
4386	12 54 51	+ 2 54.9	17.	II	
4387	12 54 55	+ 7 14.3	18.	I	
4388	12 54 56	+ 6 4.1	16.	II	
4389	12 54 58	+ 6 42.3	17.	II	
4390	12 55 11	+ 5 37.0	17.	II	
4391	12 55 17	+ 6 32.7	18.5	I	
4392	12 55 23	+ 3 48.5	17.	II	
4393	12 55 24	+ 2 39.9	17.5	II	
4394	12 55 27	+ 4 14.3	17.5	II	
4395	12 55 32	+ 6 47.1	17.	III	
4396	12 55 33	+ 5 55.9	17.5	I	
4397	12 55 34	+ 5 20.4	19.	I	
4398	12 55 35	+ 3 15.9	19.	II	
4399	12 55 36	+ 4 4.6	18.5	III	*
4400	12 55 37	+ 2 57.4	18.5	III	
4401	12 55 57	+ 7 53.2	17.5	II	
4402	12 55 57	+ 6 15.5	17.	II	
4403	12 55 59	+ 4 0.8	18.5	III	
4404	12 56 3	+ 5 57.2	17.5	III	
4405	12 56 3	+ 5 56.7	18.	III	
4406	12 56 4	+ 2 49.9	18.	II	
4407	12 56 25	+ 3 21.1	19.	I	
4408	12 56 34	+ 5 47.5	19.	II	
4409	12 56 42	+ 7 44.0	19.	I	
4410	12 56 42	+ 5 24.2	18.5	II	
4411	12 56 46	+ 6 38.7	17.	II	
4412	12 56 53	+ 3 57.3	17.5	I	
4413	12 56 55	+ 4 17.6	17.5	II	
4414	12 57 1	+ 9 11.7	18.	II	
4415	12 57 3	+ 8 8.1	18.5	III	
4416	12 57 7	+ 2 23.5	19.	I	
4417	12 57 14	+ 8 1.2	18.5	I	
4418	12 57 16	+ 6 28.1	18.	III	
4419	12 57 18	+ 4 47.6	15.	I	
4420	12 57 19	+ 6 33.6	18.5	I	
4421	12 57 24	+ 3 12.0	15.5	I	
4422	12 57 37	+ 3 57.9	18.	II	
4423	12 57 45	+ 6 44.2	18.	II	
4424	12 57 46	+ 7 11.7	18.5	II	
4425	12 57 46	+ 4 13.8	18.5	II	
4426	12 57 47	+ 6 34.6	17.	III	
4427	12 57 48	+ 5 15.1	18.5	I	
4428	12 57 48	+ 3 44.2	17.5	I	
4429	12 57 57	+ 6 34.9	17.5	II	
4430	12 57 58	+ 6 4.4	18.	III	
4431	12 58 5	+ 2 53.0	18.5	III	
4432	12 58 6	+ 2 46.1	14.	II	* CP.OBJ.
4433	12 58 23	+ 6 12.6	18.5	II	
4434	12 58 23	+ 4 22.0	18.5	I	
4435	12 58 27	+ 3 14.1	18.	III	
4436	12 58 32	+ 7 13.3	18.5	I	
4437	12 58 38	+ 5 37.4	18.5	I	
4438	12 58 41	+ 3 16.4	18.5	III	
4439	12 58 53	+ 6 36.4	19.	II	
4440	12 58 55	+ 7 54.5	17.	III	
4441	12 58 56	+ 3 57.9	18.	II	
4442	12 58 58	+ 6 5.4	19.	III	
4443	12 58 59	+ 6 40.3	17.	II	CP.OBJ.
4444	12 59 13	+ 4 6.3	18.5	II	
4445	12 59 15	+ 4 5.7	18.	II	

4399 : FT COMP. TO 13. K, NE 15".
4432 : NUCLEUS OF THE GALAXY NGC 4900.

Catalogue *(continued)*

PS 12:48 +6

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
4446	12 59 18	+ 4 21.4	18.	III	
4447	12 59 21	+ 6 29.7	18.5	III	
4448	12 59 28	+ 5 56.0	18.5	III	
4449	12 59 40	+ 5 36.1	19.5	II	
4450	12 59 43	+ 5 6.8	18.	III	
4451	12 59 51	+ 6 22.7	19.	I	
4452	12 59 53	+ 5 18.0	19.	I	
4453	12 59 54	+ 7 33.5	19.5	II	
4454	12 59 55	+ 6 44.2	13.5	II	*
4455	12 59 56	+ 6 24.7	19.	I	
4456	13 0 35	+ 4 53.7	18.	I	
4457	13 0 38	+ 3 55.9	18.	I	
4458	13 0 44	+ 6 41.4	18.5	III	
4459	13 0 44	+ 6 16.4	18.	III	
4460	13 0 45	+ 5 15.0	18.	II	
4461	13 0 46	+ 5 8.0	16.	I	
4462	13 0 46	+ 3 24.2	18.5	II	
4463	13 0 54	+ 5 29.1	19.5	II	
4464	13 1 7	+ 3 11.1	18.5	III	
4465	13 1 9	+ 7 43.0	18.	III	
4466	13 1 10	+ 3 23.2	18.	III	
4467	13 1 10	+ 3 10.7	18.	III	
4468	13 1 12	+ 7 26.0	18.	I	
4469	13 1 19	+ 5 44.8	18.5	II	
4470	13 1 19	+ 5 34.3	18.5	II	
4471	13 1 20	+ 4 48.9	17.5	III	CP.OBJ.
4472	13 1 21	+ 7 3.0	18.5	I	
4473	13 1 23	+ 7 36.5	19.5	II	
4474	13 1 27	+ 6 23.0	18.	II	
4475	13 1 29	+ 6 51.7	18.5	I	
4476	13 1 33	+ 6 12.5	18.5	I	
4477	13 1 37	+ 4 42.1	19.	II	
4478	13 1 38	+ 7 37.1	18.	II	
4479	13 1 39	+ 7 36.1	18.5	II	
4480	13 1 44	+ 2 21.7	18.5	I	
4481	13 1 46	+ 4 28.9	18.5	II	
4482	13 1 47	+ 6 21.5	19.	I	
4483	13 1 49	+ 6 30.9	19.	I	
4484	13 1 55	+ 7 11.2	17.5	I	
4485	13 1 58	+ 5 59.4	19.	I	
4486	13 2 0	+ 3 34.1	18.5	III	
4487	13 2 0	+ 3 31.1	17.5	III	
4488	13 2 9	+ 6 35.9	19.5	II	
4489	13 2 12	+ 5 44.4	19.	II	
4490	13 2 16	+ 5 13.4	18.	III	
4491	13 2 17	+ 6 37.3	17.5	II	
4492	13 2 21	+ 8 1.5	18.	I	
4493	13 2 33	+ 6 17.5	18.5	I	
4494	13 2 46	+ 3 55.6	18.	II	
4495	13 2 52	+ 4 13.5	18.5	I	
4496	13 2 52	+ 3 2.7	18.	II	
4497	13 3 3	+ 6 14.8	11.5	III	F72
4498	13 3 4	+ 5 27.0	17.5	II	H.CP.OBJ.
4499	13 3 7	+ 6 42.2	18.5	III	
4500	13 3 9	+ 4 33.3	18.5	III	
4501	13 3 10	+ 5 40.3	17.	III	
4502	13 3 12	+ 2 25.1	15.	II	
4503	13 3 18	+ 5 18.1	18.	III	
4504	13 3 47	+ 5 58.6	19.5	III	
4505	13 3 52	+ 5 50.3	19.5	II	

4454 : GD SPECTRUM GIVES THE TYPE B8.

PS 12:48 +6

PB	ALPHA (1950)	DELTA	B	CLASS	NOTES OTHER NAMES
4506	13 4 4	+ 7 38.6	18.5	II	
4507	13 4 20	+ 5 20.1	18.	II	
4508	13 4 21	+ 3 20.2	18.	I	
4509	13 4 29	+ 6 27.9	18.	III	
4510	13 4 40	+ 4 39.9	18.	III	
4511	13 4 50	+ 5 42.2	17.5	I	
4512	13 4 52	+ 7 33.5	18.5	II	
4513	13 5 6	+ 7 17.0	18.	III	
4514	13 5 19	+ 6 25.0	19.5	II	
4515	13 5 23	+ 6 58.4	18.	I	* QSS

4515 = 3C 281 ACCORDING TO THE OPTICAL POSITION OF VERON AND VERON (1973).