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SPACE DISTRIBUTION OF STARS IN A REGION OF CEPHEUS AROUND NGC 7160

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SPACE DISTRIBUTION OF STARS IN A REGION OF CEPHEUS AROUND NGC 7160

ABSTRACT

Objective prism spectral types and photographic U, B, V magnitudes have been determined for 1810 stars in a region of 19.5 square degrees of Cepheus centred on the galactic cluster NGC 7160. A catalogue of data together with identification charts is given. The magnitude limit is approximately V=12.5. The field contains a part of the supposed older subsystem of the association Cepheus OB2. The interstellar absorption in the region is smooth. The visual absorption is $1^m.0$ at the distance of the association for the northern part of the field, and is about $1^m.4$ for the southern part. Space densities of the stars have been computed as a function of spectral type and distance from the sun. Concentrations of B and early A type stars are found at 800 pc from the sun. General luminosity functions were derived at 200, 400, 600, 800, 1000 and 1200 pc, and an attempt was made to derive the shape of the luminosity function of the association subgroup.

INTRODUCTION

This paper is the second part of a study of stellar distributions in the association Cepheus OB2. It was shown by *Blaauw* (1964) that most OB associations consist of several subgroups of different ages. *Simonson* and *van Someren Greve* (1976) suggest that Cep OB2 consists of two subgroups: Cep OB2a is the older and more dispersed one; it is situated between $l=100^\circ$-105° and $b=+2^\circ$-$+8^\circ$. The younger subgroup, Cep OB2b, is the open cluster Tr 37 embedded in the HII region IC 1396 at $l=99^\circ.7$ and $b=+3^\circ.7$. In a previous paper (*Kun*, 1979, hereinafter Paper I) the distribution of main sequence stars and the absorbing matter in the region of IC 1396 was described. It was shown that this group contains a great number of B3-B7 and B8-A1 stars in addition to the earliest type stars defining the group. In the present paper a similar study is made for the supposed older subgroup.

The field chosen for this study is centred on the galactic cluster NGC 7160. The coordinates of the plate centre are: $\alpha(1950)=21^h52^m$, $\delta(1950)=+62^\circ20'$ ($l=104^\circ.6$, $b=+6^\circ.4$). The total area is 19.5 square degrees. The field contains a part of Cep OB2a, the older subgroup of Cep OB2. Since no significant obscuration in this region can be observed, this field should be suitable for the statistical study of the space distribution of the stars.

Figure 1 shows the surface distribution of the early type

and supergiant members of the association, according to *Simonson* (1968) and *Humphreys* (1978).

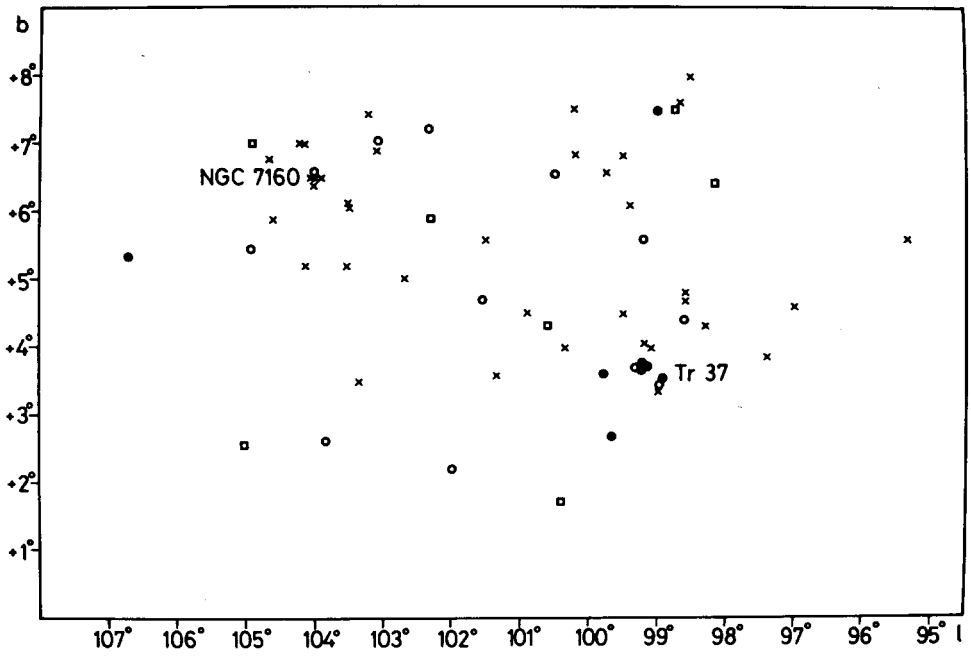


Figure 1: Surface distribution of the members of Cep OB2. Open circles denote blue supergiants and main sequence O stars; squares indicate red supergiants, dots BOV stars, and crosses B1V-B3V stars.

OBSERVATIONAL DATA

a) Spectral classification

Spectra were classified from Kodak IIa-O plates taken with the 5^{o} ultraviolet transmitting objective prism attached to the 60/90/180 cm Schmidt telescope of Konkoly Observatory. It provides a dispersion of 580 A/mm at Hγ. Spectra were widened to 18" on each plate. Exposure times were 30^{s}, 6^{m} and 24^{m}. Criteria described by *Seitter* (1975) were used in classifying the spectra. In the case of stars later than F8 luminosity classes were also determined. Each star was classified on at least two plates. The number of classified stars is 1810.

Figure 2 shows a comparison between the adopted spectral types and those of the *Henry Draper Catalogue*. This comparison involves 51 stars. There is a tendency in this work to classify the late B and early A stars slightly earlier than the corresponding classification in the HD Catalogue. *Lindoff* and *Lynga* (1966) found the same differences between the HD and MK types.

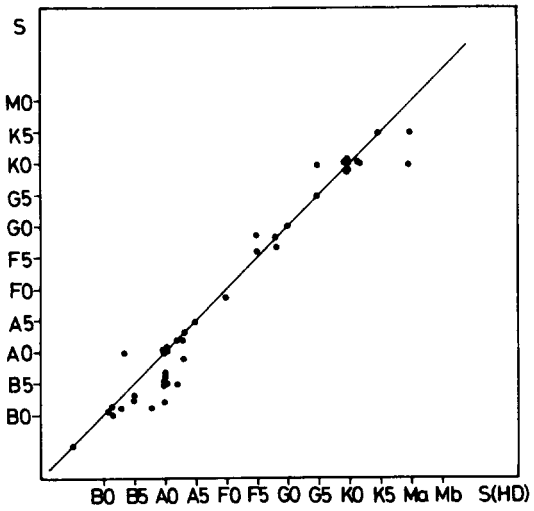


Figure 2

MK classification of some early type stars of this field (*Simonson*, 1968) shows a good agreement with the present classification (Table 1).

TABLE 1

HD number	Sp.	Sp(Simonson)	S(HD)
207 198	B0	O9.5II	B2
207 951	B1	B2V	B8
208 185	B3	B1V	A0
208 266	B1	B3V	B5
208 761	B2	B3V	B5

In accordance with the sharpness of the classification criteria and so that the space densities can be calculated the stars have been grouped into broad spectral ranges. These spectral ranges and the number of stars included in them are given in Table 2.

TABLE 2

Spectral range	number of stars
earlier than B3	36
B3-B7	90
B8-A1	572
A2-A6	270
A7-F1	104
F2-F8	356
gG-gK	207
dG-dK	158
M	17

b) Photographic photometry

U, B, V photographic magnitudes were obtained for all the stars that have been classified. Five plates were taken in each colour. The plate-filter combinations and exposure times are those described in Paper I. The plates were measured with the Cuffey irisphotometer of Konkoly Observatory. The photoelectric sequence for the photographic measures was taken from *Hoag* et al. (1961), *Argue* (1966) and *Simonson* (1968). The mean internal errors of the photometry are ± 0.06 for both V and B, and ± 0.08 for U. In addition to these random errors the ultraviolet filter had a field error in a restricted area. The estimated probable errors of U magnitudes of the stars affected by this field error are about $\pm 0^{m}.2$.

The limiting magnitude of the spectral classification is about $B=13^{m}.0$. Figure 3 shows the distribution of the stars of different spectral ranges as a function of apparent B magnitude. The limiting magnitude in V depends on the colour of the stars; on the average, the limiting V is about $12^{m}.5$, but for the K stars it is about a magnitude lower.

The Q colour differences have been determined for all stars earlier than A2 in order to have an independent spectral classification. For the stars showing a discrepancy between the classified spectra and the Q value taken from *Johnson* (1958), the average of the two subclasses was adopted for the spectral type.

c) Completeness of spectral data

Because the region investigated is situated close to the galactic plane, the surface density of stars is high, thus there

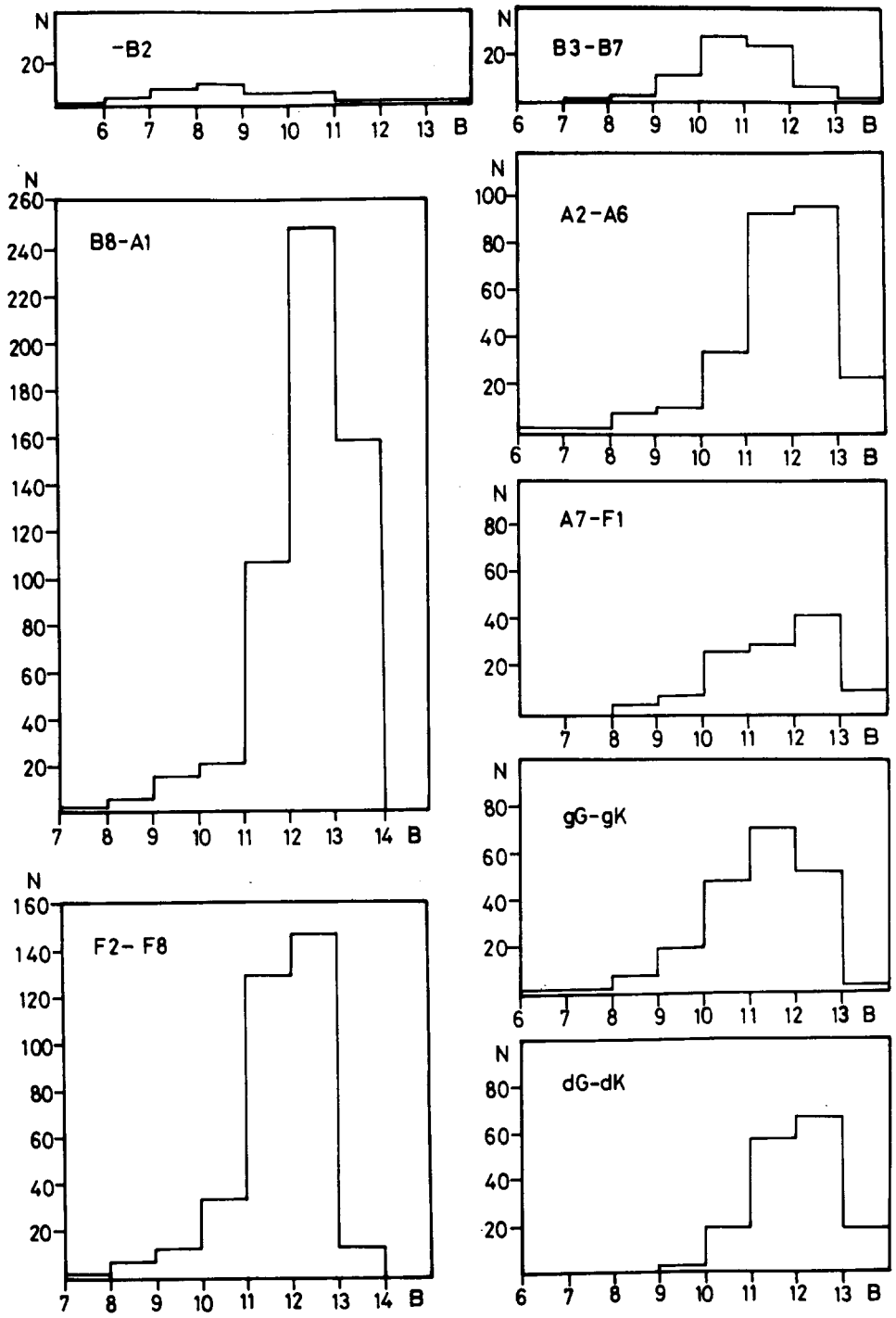

N
-B2
20
6 7 8 9 10 11 12 13 B
N
B3-B7
20
6 7 8 9 10 11 12 13 B
N
B8-A1
260 240 220 200 180 160 140 120 100 80 60 40 20
7 8 9 10 11 12 13 14 B
N
A2-A6
100 80 60 40 20
6 7 8 9 10 11 12 13 B
N
A7-F1
80 60 40 20
7 8 9 10 11 12 13 B
N
gG-gK
80 60 40 20
6 7 8 9 10 11 12 13 B
N
F2- F8
160 140 120 100 80 60 40 20
7 8 9 10 11 12 13 14 B
N
dG-dK
80 60 40 20
6 7 8 9 10 11 12 13 B

Figure 3

are a great number of overlapped spectra. It is hard to estimate how the unclassifiable overlapped spectra affect the completeness of our data. Figure 4 gives $\lg N(m_B)$ values, where $N(m_B)$ is the total number of stars per square degree brighter than m_B, as a function of B magnitude. *McCuskey's* study of LF4 (1951) and *Kubinec's* (1973) work for an adjacent Cepheus region provide values of lgN(m) for comparison with present data; they are also plotted in Fig. 4. Though these surveys are made at slightly lower galactic latitudes, they do allow us to make an estimate of the completeness of the present survey: it is estimated that the survey is complete to $B=13\overset{m}{.}0$.

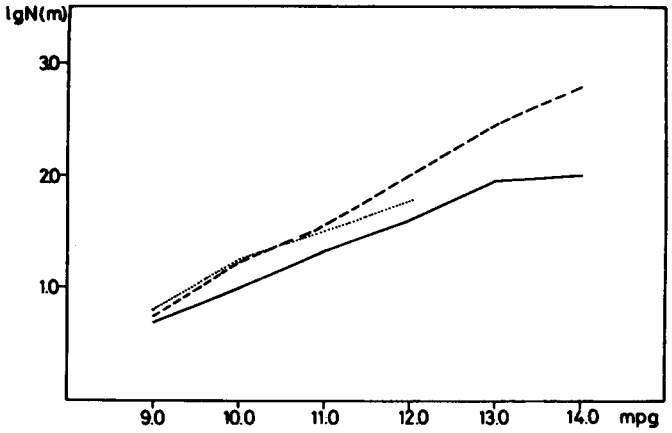


Figure 4: logN(m) versus m. Dashed line refers to McCuskey's LF survey, dotted line Kubinec's (1973) result. The solid line shows the present survey.

INTERSTELLAR ABSORPTION

By examining *Khavtassi's Atlas of Galactic Dark Nebulae* it can be seen that the interstellar absorption pattern is relatively smooth in this region. There are two dark nebulae of moderate obscuration in the southern part of the field: Khavtassi 170 and 173. We can distinguish two regions with slightly different reddenings: Figs. 5a and 5b show the E_{B-V} colour excesses against the uncorrected distance modulus. The higher reddening affects about five hundred stars in the southern part of the field.

The solid lines in Figs. 5a and 5b represent the adopted relation between colour excess and distance modulus. The relations between the total visual absorption, a_v and the distance, r are given in Figs. 6a and 6b for the two regions. These were determined from Figure 5 with R=3.0.

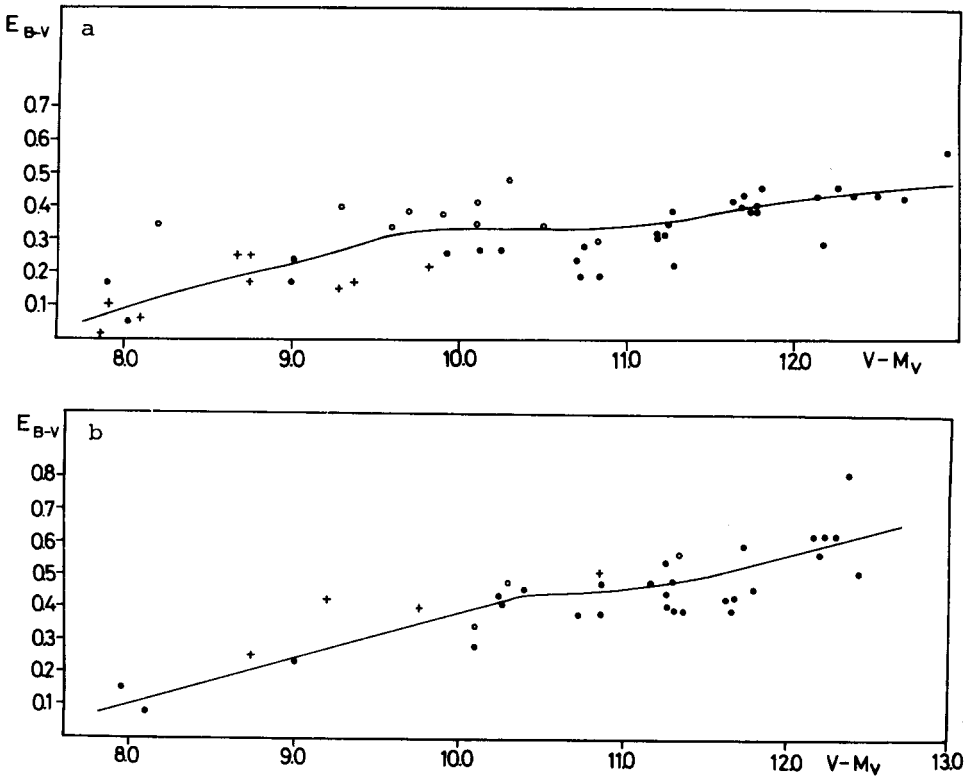


Figure 5: E_{B-V} versus distance modulus a) for the region of low reddening; b) for the region of high reddening. Dots indicate A0 type stars, crosses F type stars, and open circles photoelectric measurements taken from Hoag et al. (1961), and Simonson (1968).

Stars of the association Cep OB2 are situated between distances of 600 and 1100 pc (*Simonson*, 1968). It can be seen from Fig. 6 that there is no obscuring matter in this region in the northern part of the field, but in the region covered by the dark nebulae an absorption begins about 850 pc.

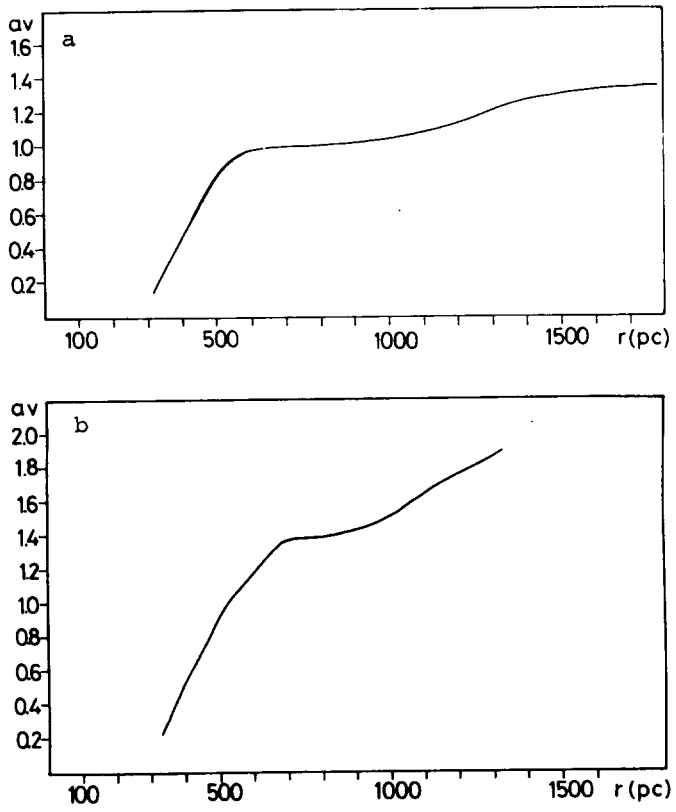


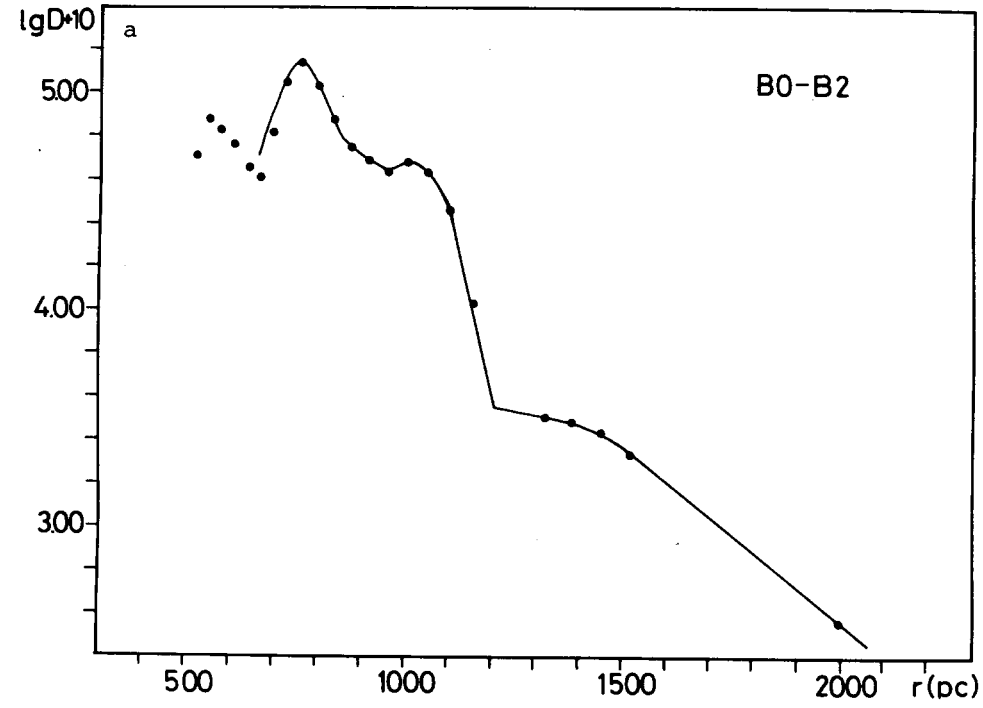
Figure 6

SPACE DENSITIES

The stellar space densities can be determined after having corrected the apparent magnitudes of stars for the interstellar absorption. For this purpose *Dolan*'s (1974) matrix method was used. The adopted mean absolute magnitudes and dispersions for the spectral ranges are taken from *Allen* (1973).

The resulting space densities as functions of the distance from the sun are given in Figs. 7-10. The general characteristics of spatial distributions of stars can be summarized as follows:

B0-B2 stars: (Figure 7a) The density curve has a sharp maximum at 700 pc, and a "shoulder" between 900-1100 pc. Beyond 1100 pc there is a sudden decrease. As the region is $6^{\circ}.5$ above the ga-


lgD+10
a
B0-B2
5.00
4.00
3.00
500
1000
1500
2000
r(pc)

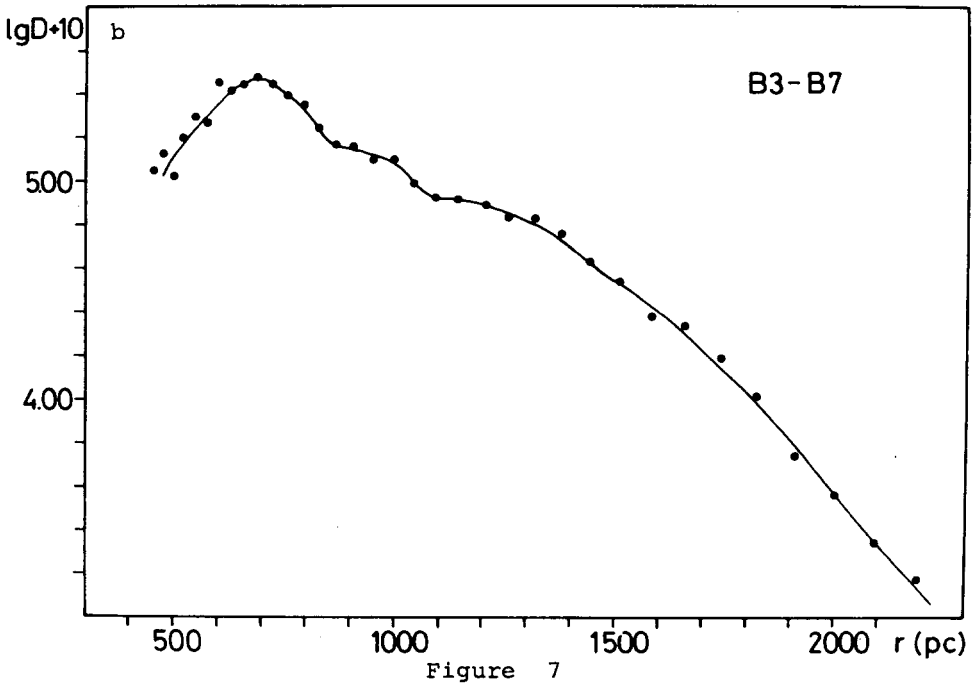

lgD+10
b
B3-B7
5.00
4.00
500
1000
1500
2000
r (pc)

Figure 7

lactic plane, and at 1200 pc it corresponds to z=130 pc, not many background stars of this type can be expected.

B3-B7 stars: (Fig. 7b) The structure of this curve is similar to the previous one. The maximum is broader than in the case of the earlier group. The shoulder can also be seen. The density of the background slowly decreases between 1100 and 1400 pc, and a faster decrease begins beyond 1400 pc.

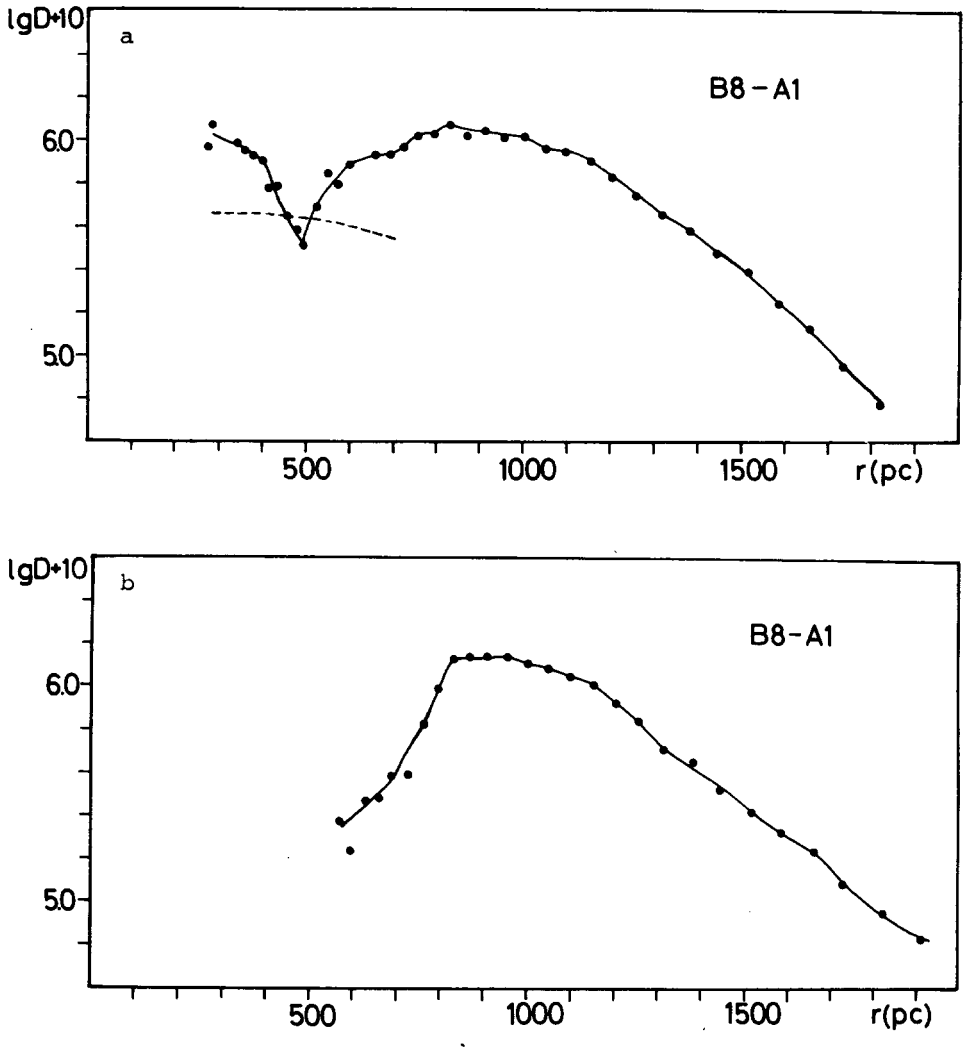


Figure 8

B8-A1 stars: (Fig. 8a) The density continuously decreases to 600 pc and it has a broad maximum at 800 pc. For comparison, *van Rhijn*'s (1955) density data obtained at $l=100^{\circ}$, $b=+7^{\circ}$ are also indicated in Fig. 8a (dashed line). The curve suggests that the place of its maximum indicates the same stellar group as the early type stars. The density maximum at the distance of the association is more pronounced when we consider the distribution of B8-A1 stars in a smaller region around the cluster. Fig. 8b shows this arrangement for a circle of radius of one degree centred on NGC 7160. This region contains 107 B8-A1 stars. Here the density sharply increases to 830 pc, it is nearly constant between 830-1000 pc, and then it decreases similarly to the previous curve.

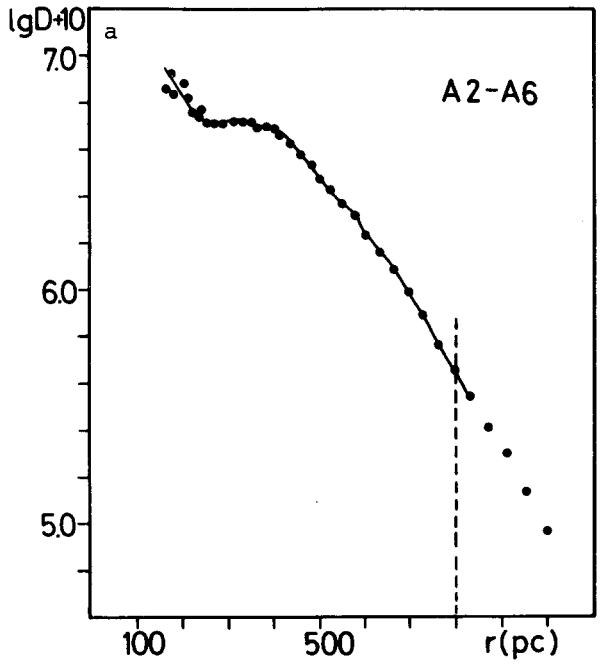


Figure 9a

A2-A6 stars: (Fig. 9a) The density is constant between 250 and 400 pc, and has a large negative gradient beyond 400 pc. The dashed line indicates the plate limit.

A7-F1 stars: (Fig. 9b) The density continuously decreases beyond 300 pc. It stops decreasing at about 650 pc. Unfortunately it is

near the plate limit.

F2-F8 stars: (Fig. 9c) The curve has a maximum at 250 pc and sharply decreases beyond it.

G0-K3 giants: (Fig. 10) The curve is also characterized by the large negative gradient.

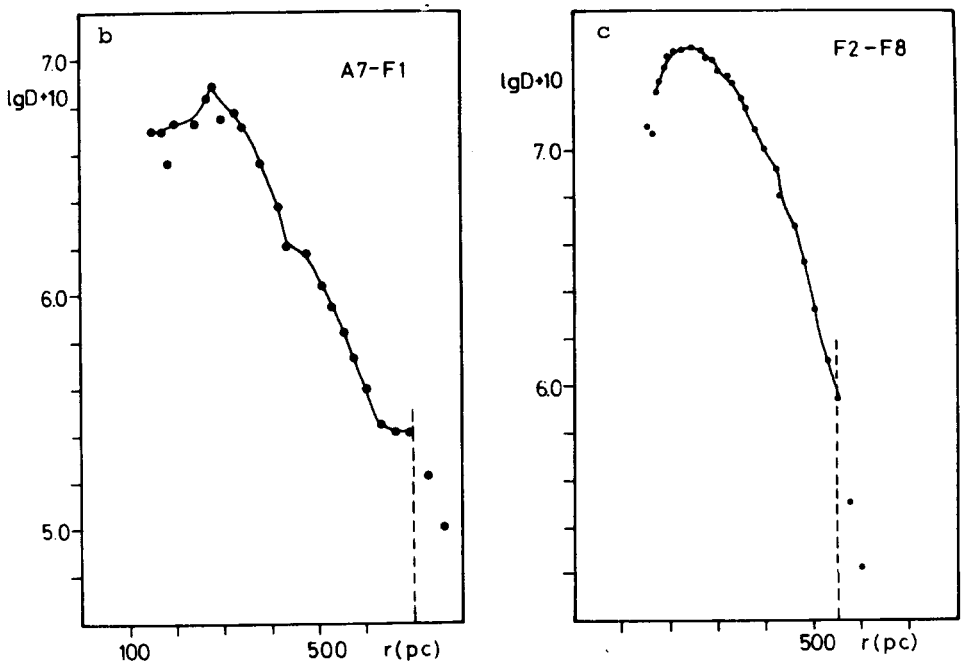


Figure 9b-c

The density of G-K dwarfs has not been calculated; they are very faint, thus the plate limit is about 200 pc.

The most significant features of the space density distributions are the presence of the association in the distribution of stars earlier than A2, and the large negative gradients for the later types, and even for the early types at greater distances. In the case of B and early A stars this gradient can be explained by the increasing distance from the galactic plane. In the case of A2-F8 stars, however, there must be a true concentration of stars near the sun. The same phenomenon was found by *Kubinec* (1973) for an adjacent region, lying exactly in the

galactic plane.

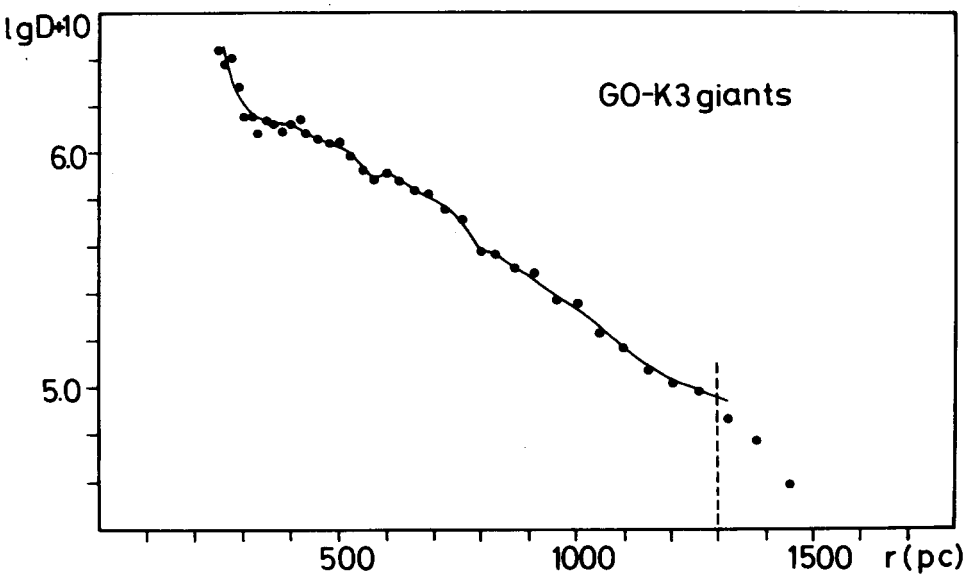


Figure 10

The ratio of B8-A1 main sequence stars to the G8-K3 giants has been calculated as a function of apparent V magnitude. Because the absolute visual magnitude of these two groups are nearly the same ($+0^m.5$), equal apparent magnitudes correspond to equal distance moduli. It was shown by *Sandage* (1957) that this ratio has evolutionary implications: N(A)/N(K) is large for the relatively young regions of the Galaxy. Figure 11 gives the ratio N(A)/N(K) as a function of V for both subgroups of Cep OB2. The data for the region of IC 1396 are taken from Paper I. In this region there is an excess of bright K giants; and in both regions the ratio shows a steep increase at V=10. Unfortunately it is not possible to follow this ratio to the fainter stars because the K giants having a V magnitude larger than 11.0 are near the plate limit. The high value of N(A)/N(K) between V=10 and 11 (the corresponding corrected distance moduli are 8.5-9.5 for IC 1396 and 9.0-10.0 for NGC 7160) also indicates an excess of main sequence A stars in the volume of the association.

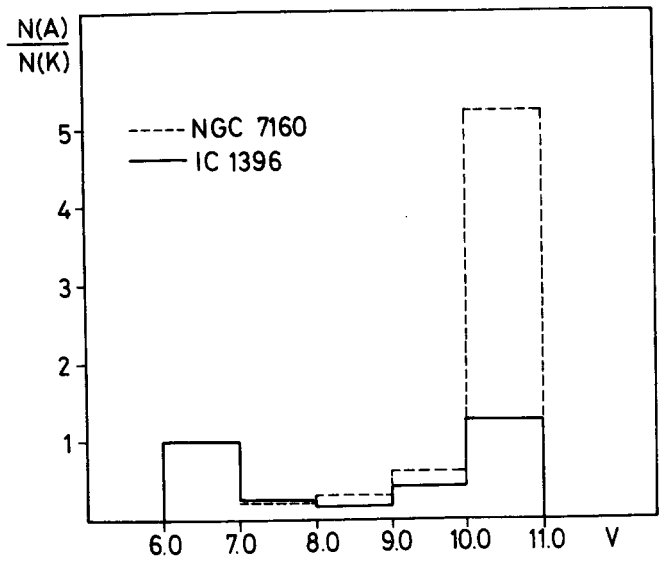


Figure 11

LUMINOSITY FUNCTIONS

The stellar luminosity function is defined as the number of stars per cubic parsec with absolute magnitudes in the range M-1/2, M+1/2, at distance r. It can be calculated from the space densities by the formula:

$$\Phi(M,r) = \sum_s (2\pi\sigma_s^2)^{-1/2} \exp -\left(\frac{M-\bar{M}_s}{\sigma_s/2}\right)^2 D_s(r)$$

The luminosity function has been determined for this field at distances of 200, 400, 600, 800, 1000 and 1200 pc, between the absolute magnitudes -5^m and $+1^m$ and for the lower distances to $+2^m$. The results are shown in Fig. 12. The dashed lines indicate *McCuskey*'s (1966) luminosity function for the solar neighbourhood. At 200 pc our luminosity function agrees well with this function, and at 1200 pc (at z=130 pc) they are nearly parallel with each other. Between these limits there is an excess of bright stars, showing the presence of the association.

Using the resulting space densities we made an attempt to determine the luminosity function of the association subgroups.

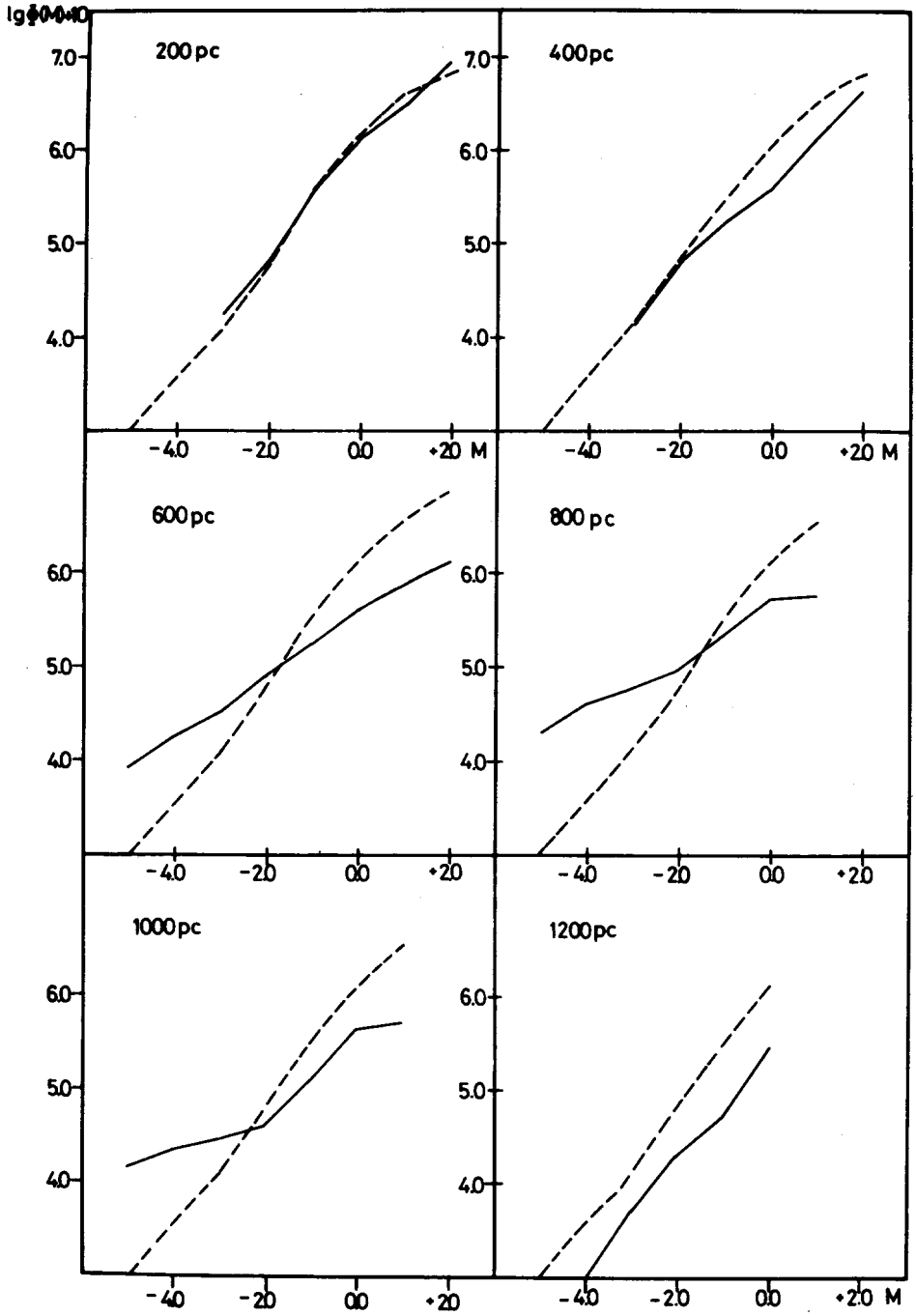


Figure 12

From the shape of the density curves of B0-B2 and B3-B7 stars an estimate can be made for the density of the field stars at the distance of the association by extrapolating the density values beyond 1100 pc to the smaller distances. Thus the space densities of the true association members can be estimated. A somewhat less reliable estimation can be made for the density of the B8-A1 members using *van Rhijn*'s data for the density of the field. His survey was made near the assumed border of Cep OB2.

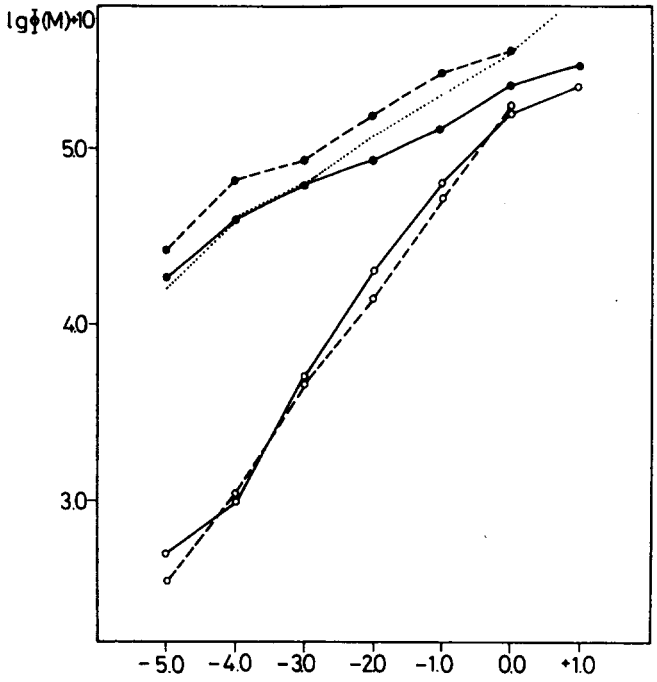


Figure 13: Luminosity functions of the two subgroups of Cep OB2 and those of the underlying field, derived from the stellar densities. Open circles denote the field and dots the association. Dashed line: Cep OB2a, solid line: Cep OB2b. Dotted line: Limber's (1960) initial luminosity function.

On the basis of these extrapolated densities the luminosity functions of the two subgroups have been calculated. For the region of IC 1396 the density curves given in Paper I were used. The resulting luminosity functions are shown in Fig. 13 together with the so obtained field star luminosity functions. It can be seen that the gradients of the luminosity functions of the two

subgroups do not differ significantly from each other nor from the standard initial luminosity function published by *Limber* (1960). The smaller values obtained for Cep OB2a may indicate the more dispersed nature of this group. The relative proportions of stars of different absolute magnitudes, however, are remarkably similar in the two subgroups. The supergiants are not included in these luminosity functions, but according to *Humphreys* (1979) the number of supergiants is nearly the same for the two subgroups. This close similarity of the two subgroups indicates that they were produced under similar physical conditions.

ACKNOWLEDGEMENT

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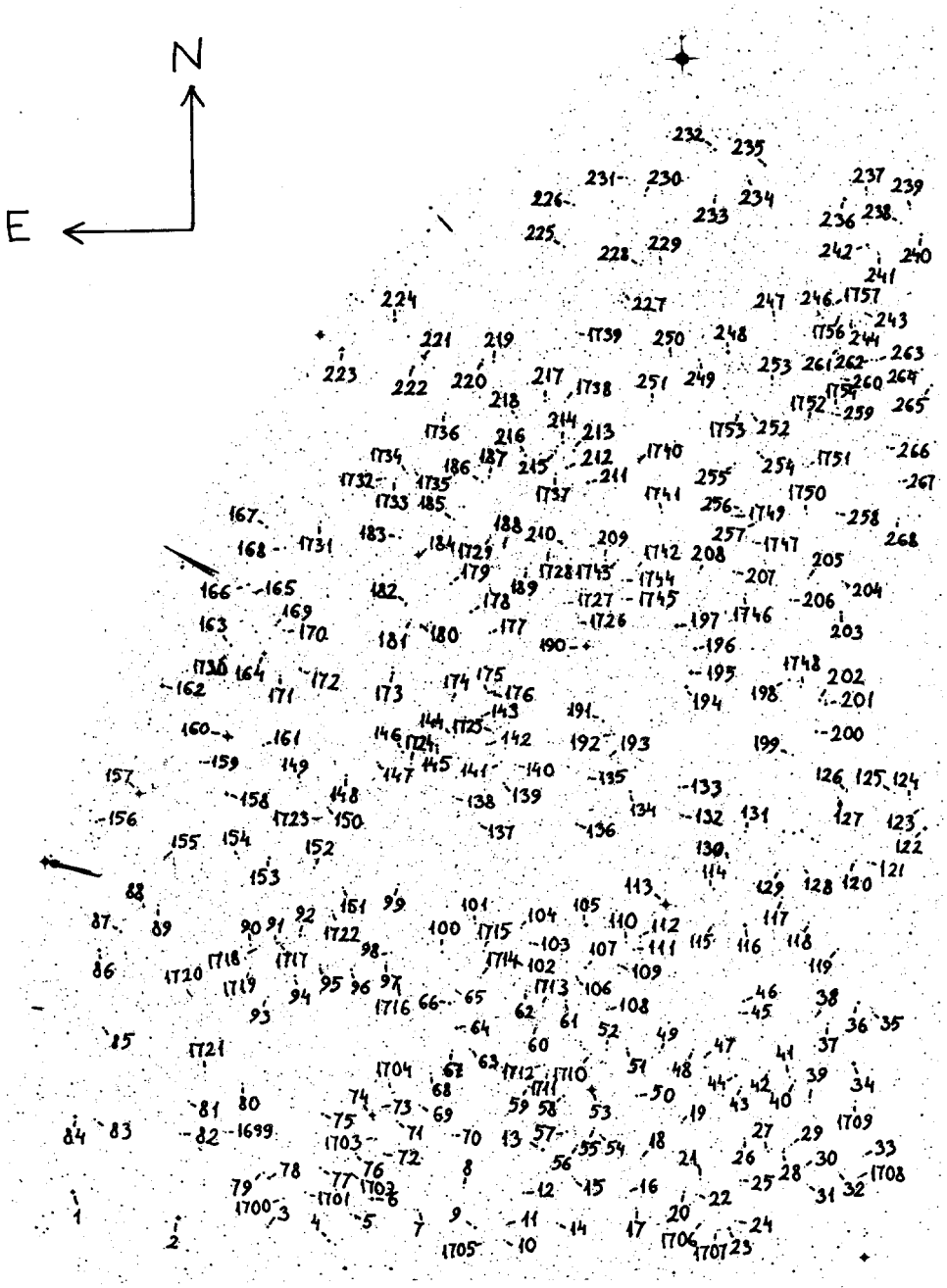
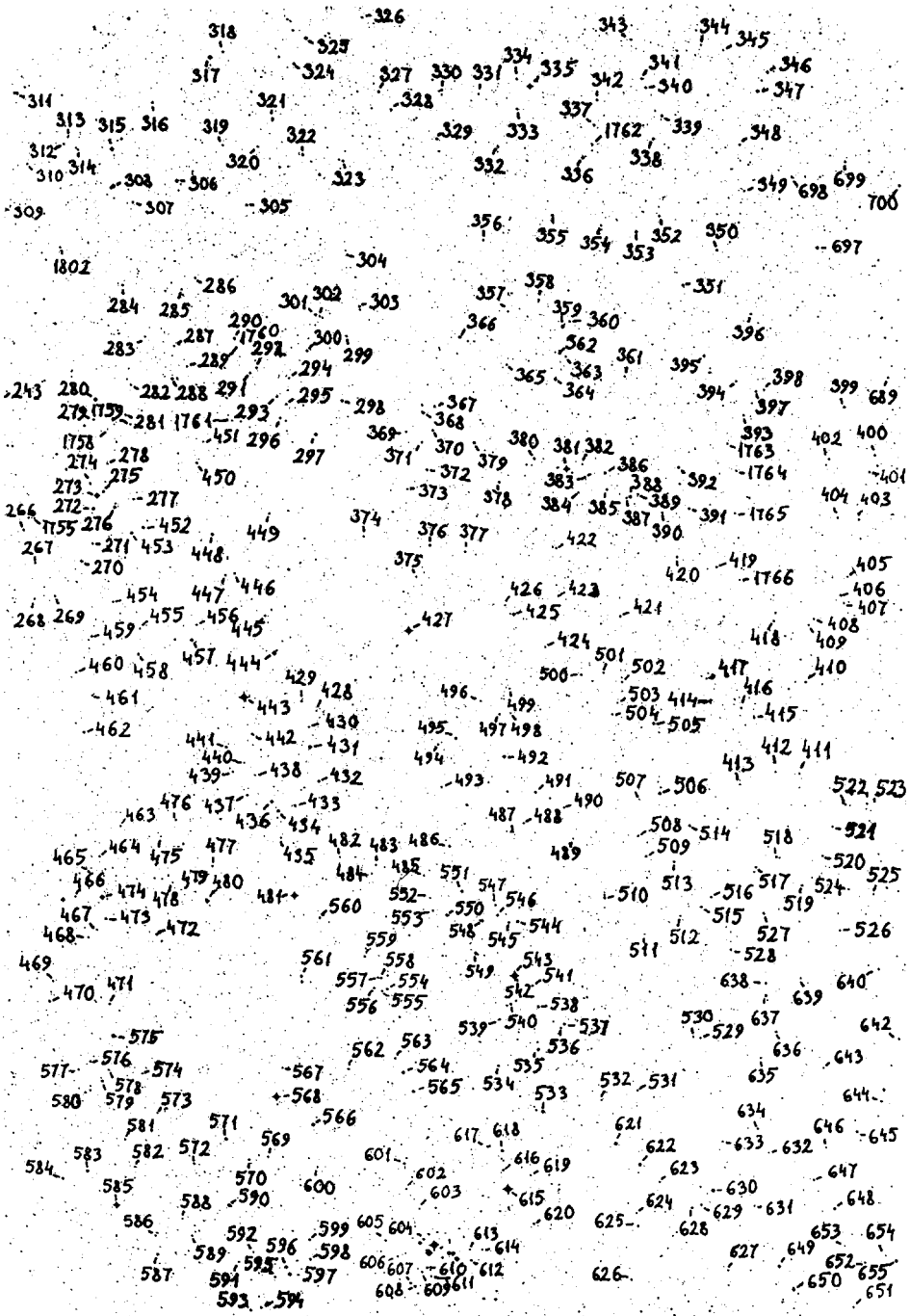
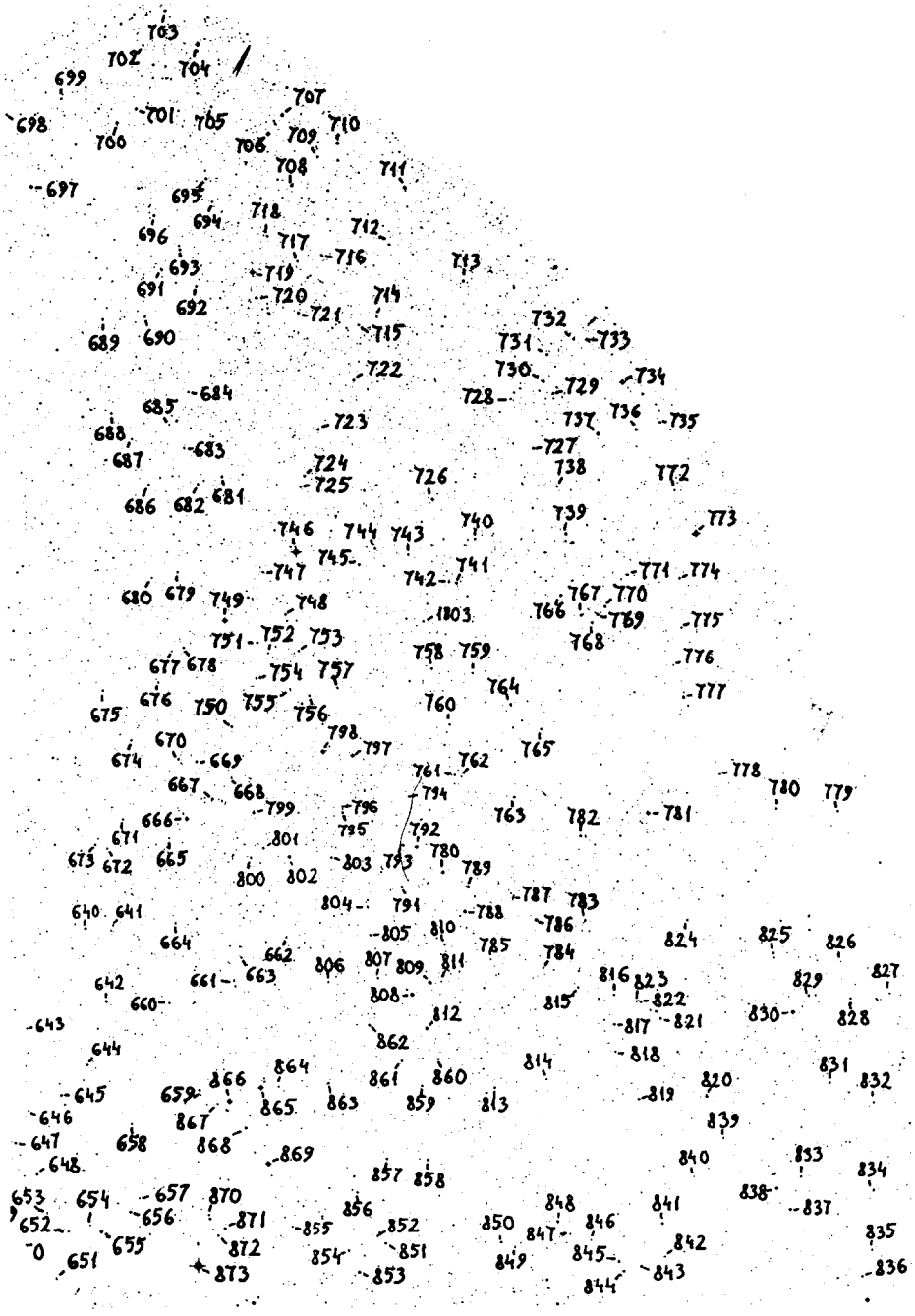


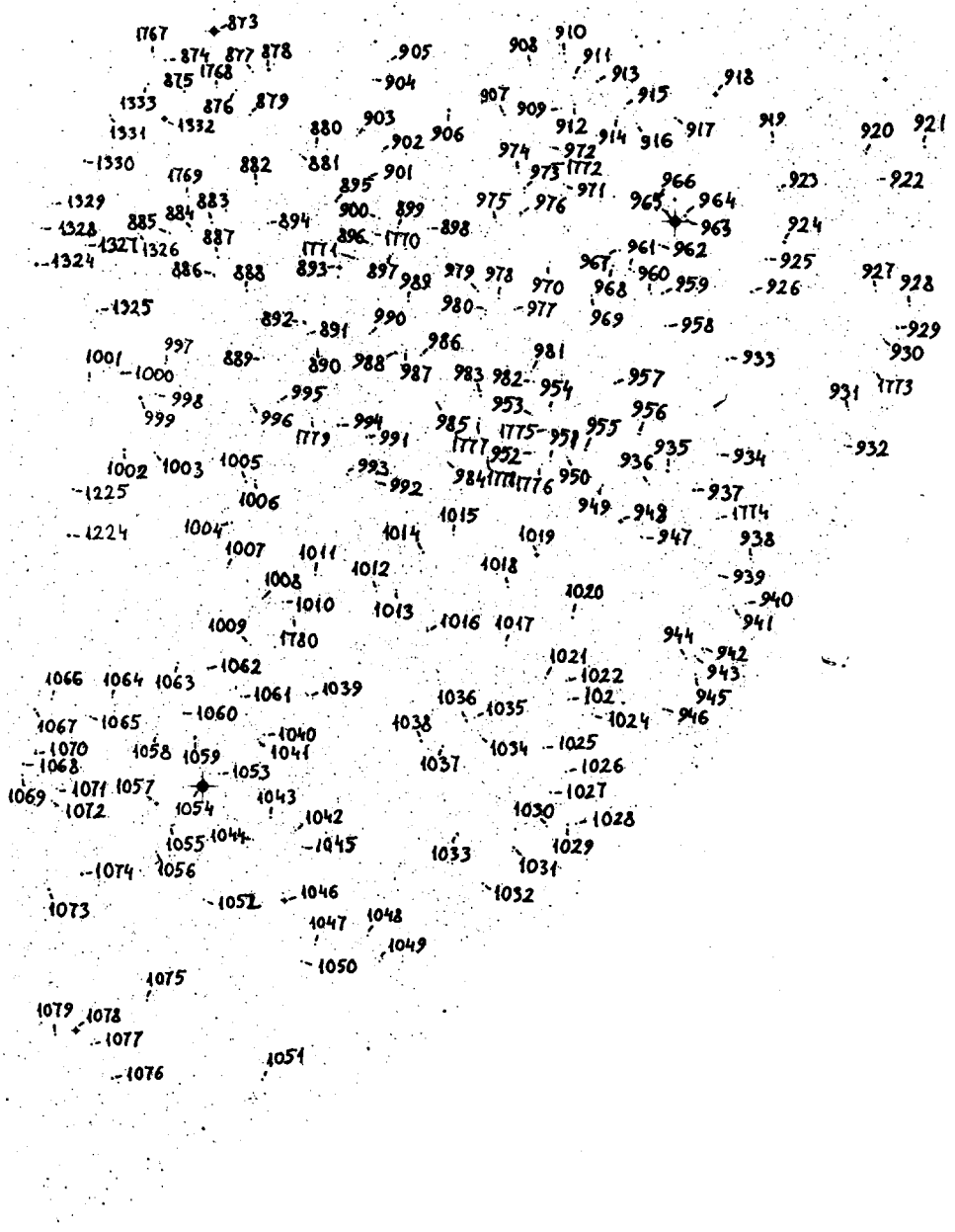
Finding chart of the survey stars I.
North-eastern part of the field



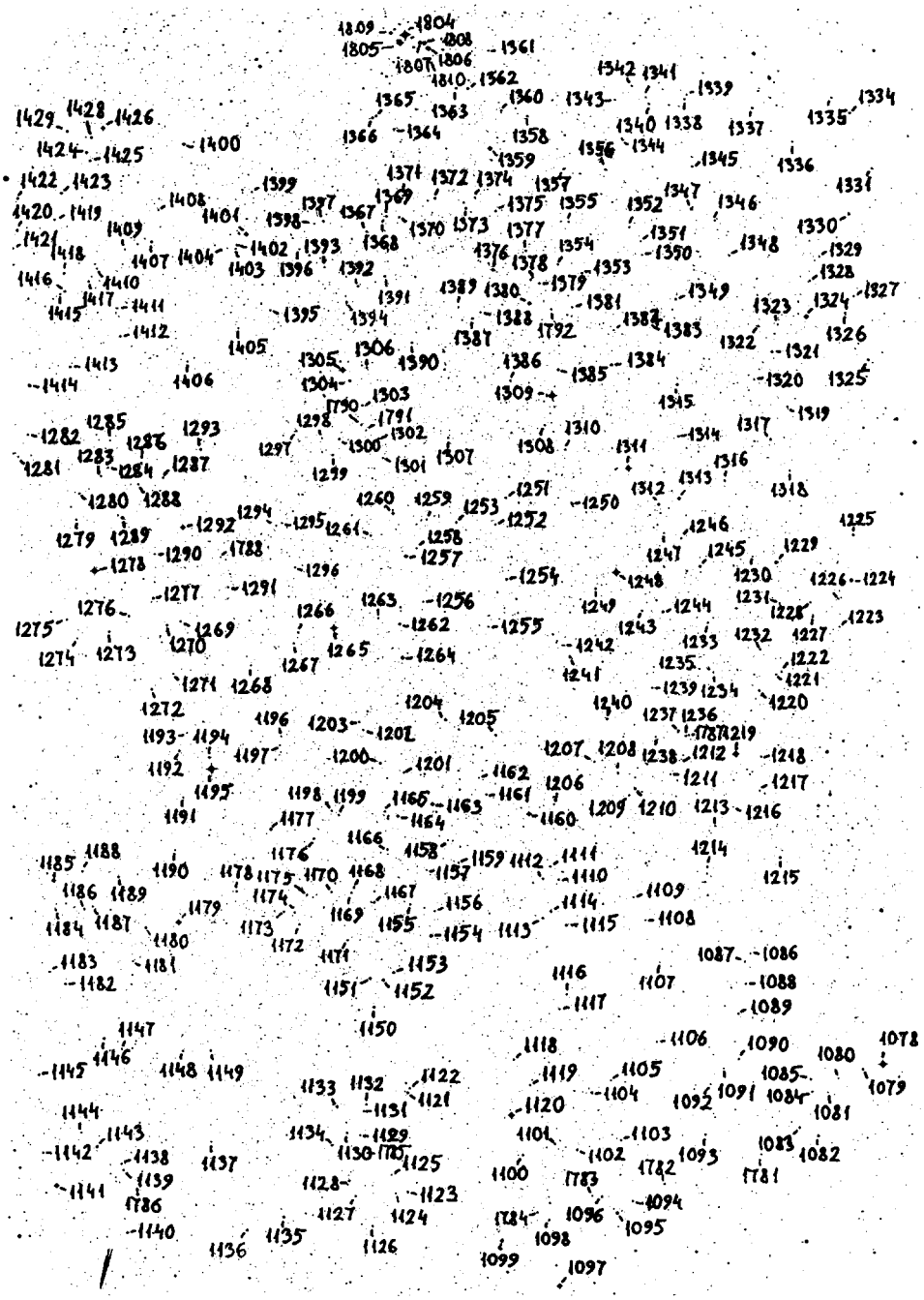
Finding chart of the survey stars II.
Northern part of the field



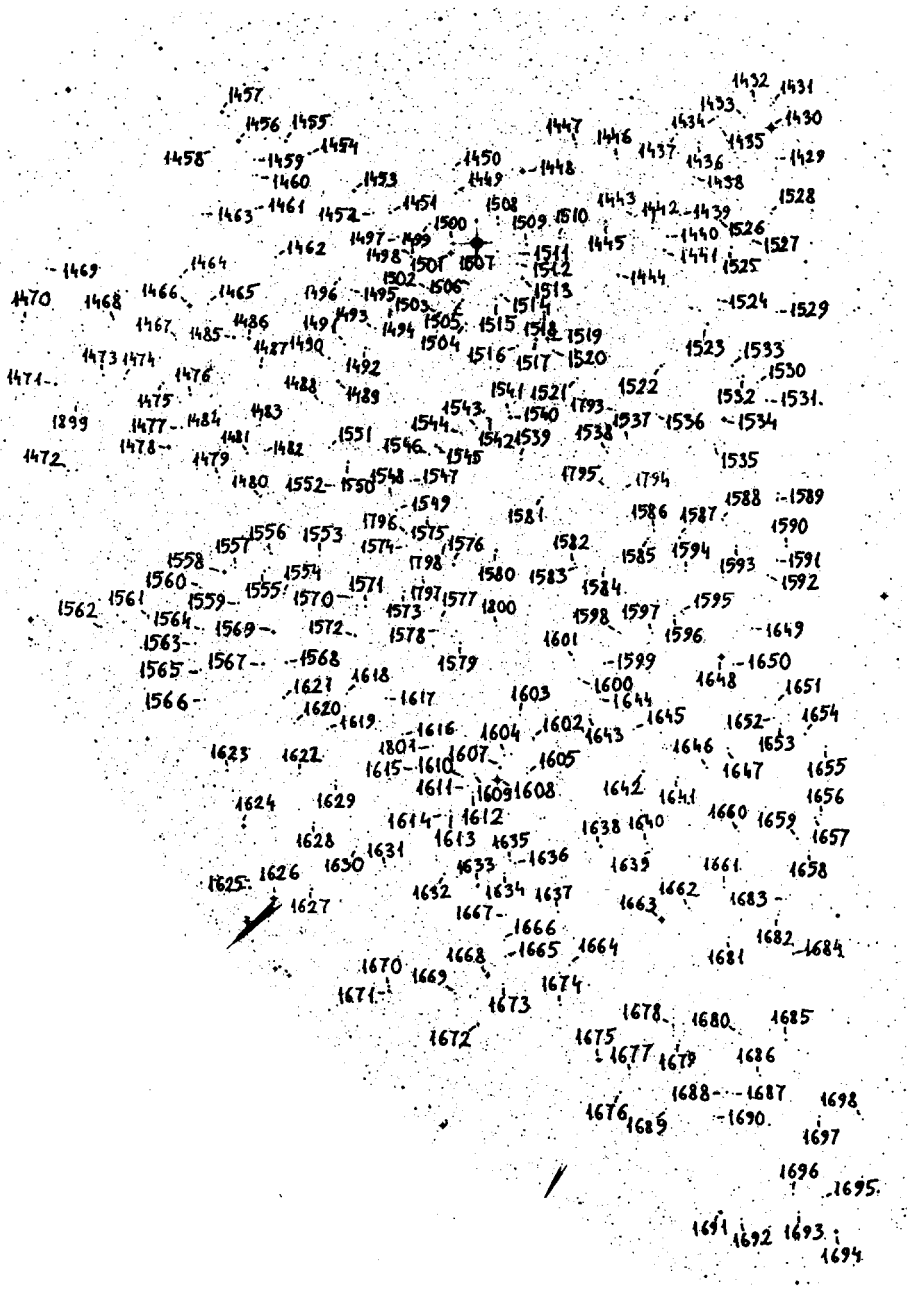
Finding chart of the survey stars III.
North-western part of the field



Finding chart of the survey stars IV.
South-western part of the field



Finding chart of the survey stars V.
Southern part of the field



Finding chart of the survey stars VI.
South-eastern part of the field

CATALOGUE

Spectra and UBV data of the survey stars

No.	Sp.	V	B-V	U-B	remarks
1	A0	8.59	0.13	-0.24	BD+61°2266
2	A0	8.46	0.07	-0.10	BD+61°2265
3	B7	10.65	0.10	-0.31	
4	gK	8.63	1.01	1.29	BD+61°2259
5	A2	11.44	0.14	0.28	
6	G0	9.26	0.50	0.19	BD+61°2256
7	A2	11.92	0.24	0.38	
8	gK	10.39	1.90	2.60	
9	A2	10.32	0.15	-0.04	
10	A0	12.37	0.54	0.48	
11	K0	12.67	1.06	0.69	
12	A0	11.22	0.14	0.11	
13	G8III	8.48	0.85	0.64	BD+61°2249
14	F8	11.67	0.47	0.03	
15	A0	12.08	0.33	0.15	
16	A2	11.60	0.18	0.27	
17	A2	13.02	0.44	0.31	
18	A0	12.60	0.30	0.17	
19	A2	11.80	0.59	0.18	
20	G0	10.24	0.49	0.07	BD+61°2238, blend
21	A0	12.08	0.38	0.27	
22	G5III	11.00	1.29	0.96	
23	B6	9.63	0.23	-0.06	BD+61°2237
24	A0	11.78	0.74	0.35	
25	K0III	10.71	0.97	0.94:	blend
26	A0	11.63	0.25	0.28	
27	A2	11.68	0.11	0.13	
28	B5	10.23	0.11	-0.51	
29	K0III	11.05	1.11	1.08	
30	A0	12.80	0.62	0.15	
31	A0	13.04	0.35	0.10	
32	A0	13.03	0.48	0.16	
33	A0	12.26	0.81	0.19	
34	F8	8.39	0.40	-0.13	BD+62°2016
35	K2III	10.72	1.29	1.22	
36	B6	9.68	0.08	-0.04	BD+62°2015
37	A5	11.56	0.22	0.26	
38	A0	11.68	0.67	0.04	
39	F5	11.17	0.71	0.22	
40	F5	10.55	0.40	-0.07	
41	G2	11.28	0.62	0.13	
42	A2	11.91	0.27	0.07	
43	G5	11.64	0.50	0.09	
44	A6	10.12	0.21	0.01	
45	G5IV	11.06	0.66	0.26	
46	A2	10.78	0.12	-0.11	
47	G8III	9.64	1.39	0.72	
48	F8	11.32	0.55	0.01	
49	A0	11.68	0.26	0.24	
50	F4	10.75	0.42	0.11	
51	G2	10.19	1.17	0.95	

CATALOGUE

/Continued/

No.	Sp.	V	B-V	U-B	remarks
52	AO	11.44	0.09	0.18	
53	K5	5.05	1.50	1.85	BD+62°2029
54	A2	10.95	0.97	0.58	
55	AO	12.52	0.30	-0.05	
56	F8	11.80	0.53	-0.03	
57	M2III	9.05	1.68	1.98	BD+62°2031
58	B6	10.85	0.14	-0.42	
59	B6	11.33	0.13	-0.29	
60	AO	12.43	0.18	0.16	
61	B8	11.42	0.09	0.05	
62	FO	11.68	0.39	0.12	
63	FO	11.98	0.34	0.28	
64	A2	9.88	0.16	0.11	BD+62°2035
65	F2	12.60	0.42	0.18	
66	F2	9.68	0.39	0.06	BD+62°2036
67	KOIII	10.03	1.08	1.21	
68	GO	11.36	0.57	0.26	
69	AO	12.38	0.21	0.08	
70	F8	11.71	0.42	-0.02	
71	G5	10.89	0.99	1.16	
72	A2	10.73	0.16	0.26	BD+62°2254
73	GO	11.81	0.39	0.12	
74	AO	7.91	0.03	0.07	BD+62°2039
75	B4	10.60	0.07	-0.49	
76	A5	11.59	0.37	0.16	
77	G8	10.20	1.03	1.08	
78	B5	9.90	0.04	-0.48	BD+61°2263
79	K5V	9.45	1.77	2.43	
80	F2	11.26	0.58	0.06	
81	F2	11.42	0.35	0.09	
82	KOII	10.26	1.42	1.65	
83	F8	11.24	0.55	0.07	
84	B2	9.28	0.45	-0.01	BD+62°2051
85	AO	10.70	0.34	-0.07	
86	F8	9.07	0.51	0.01	BD+62°2049
87	G8	9.87	0.68	0.12	
88	AO	10.50	0.31	0.16	
89	AO	11.44	0.40	0.21	
90	AO	10.94	0.36	0.29	
91	AO	11.09	0.18	0.13	
92	KOIII	9.25	1.34	1.43	BD+62°2041
93	FO	12.37	0.39	0.37	
94	F8	11.28	0.52	0.09	
95	A2	11.79	0.23	0.21	
96	KOIII	9.61	0.97	1.16	
97	A2	12.34	0.06	0.22	
98	A7	11.86	0.20	0.33	
99	KOIII	10.95	0.95	0.96	
100	F8	10.60	0.85	0.34	
101	A2	11.89	0.29	0.17	
102	G5IV	10.98	0.28	0.44	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
103	G0V	11.66	0.52	0.17	
104	G2V	11.05	0.69	0.15	
105	A2	8.38	1.07	0.15	BD+62°2030
106	A4	11.74	0.18	0.19	
107	A0	10.75	0.11	-0.36	
108	G0	11.53	0.16	-0.09	
109	K0III	10.91	0.62	0.48	
110	G8III	11.03	1.08	0.74	
111	dM	10.37	1.55	1.96	
112	B3	11.32	0.22	-0.39	
113	K0	5.10	1.55	1.79	BD+62°2028
114	A0	11.45	0.37	0.19	blend
115	A0	12.57	0.35	-0.14	
116	B1	9.61	-0.02	-0.63	BD+62°2020
117	G5	10.90	0.43	-0.03	
118	F6	11.40	0.59	0.14	
119	A2	11.58	0.61	0.24	
120	A2	12.02	0.30	0.16	
121	A0	11.55	0.15	0.07	
122	G5III	8.44	0.63	0.27	BD+62°2014
123	F8	11.81	0.77	0.09	
124	A0	12.02	0.32	0.09	
125	K0III	11.18	1.56	1.19	
126	F2	11.53	0.43	0.14	
127	A2	11.64	0.16	-0.01	
128	A0	13.48	0.83	0.04	
129	A0	12.22	0.89	0.38	
130	A0	12.79	0.40	0.05	
131	F8	10.78	0.47	-0.03	
132	A7	9.72	0.36	0.27	BD+62°2024
133	K0V	10.50	0.96	0.61	BD+62°2026
134	G5V	9.79	0.90	0.69	BD+62°2028
135	F8	11.34	0.52	0.11	
136	A0	10.22	0.21	-0.03	
137	A2	12.01	0.38	0.19	
138	G0	11.88	0.45	0.18	
139	A2	10.72	0.30	0.21	
140	Me	12.13	1.41	1.19	
141	A4	12.05	0.49	0.32	
142	F8	10.51	0.53	-0.01	
143	A0	11.82	0.29	0.12	blend
144	F8	12.00	0.41	0.04	
145	A5	10.14	0.24	0.33	
146	G0	10.34	0.47	0.12	
147	A4	11.82	0.31	0.15	
148	A0	10.54	0.18	-0.04	blend
149	F2	12.59	0.52	0.24	
150	A0	11.27	0.14	0.32	
151	A0	12.00	0.07	0.06	
152	G0	11.18	0.43	0.15	
153	B7	10.50	0.11	-0.35	
154	F0	11.47	0.28	0.12	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
155	B3e	10.64	0.28	-0.40	
156	G8III	9.30	1.30	0.89	BD+62°2050
157	M	5.57	1.67	1.99	BD+62°2048
158	F0	8.66	0.36	0.13	BD+62°2044
159	A0	10.83	0.40	0.31	
160	B2	7.37	0.06	-0.52	BD+62°2045
161	A0	10.55	0.25	0.20	
162	K0III	7.59	0.97	1.01	BD+62°2047
163	A2	10.38	0.29	0.25	
164	B6	8.79	0.14	-0.48	BD+62°2042
165	B3	9.95	0.25	-0.41	BD+62°2043
166	Ap	10.88	0.34	0.15	
167	M	9.06	1.55	2.05	BD+63°1817
168	A0	11.53	0.46	0.09	
169	A0	11.59	0.03	0.19	
170	A5	11.07	0.59	0.35	
171	K2III	10.58	1.48	1.48	
172	B6	10.35	0.17	-0.33	
173	B7	9.93	0.18	-0.22	BD+62°2035
174	K2III	10.18	1.25	1.34	
175	F0	11.00	0.31	0.09	
176	A7	11.36	0.31	0.21	
177	A7	10.80	0.34	0.09	BD+62°2033
178	A4	10.08	0.26	-0.02	BD+62°2034
179	K2III	8.99	1.43	1.74	BD+62°2037
180	A2	10.58	0.54	0.09	
181	F2	12.86	0.76	0.02	
182	A5	11.96	0.36	0.21	
183	A0	11.17	0.19	0.01	
184	B1	7.99	0.29	-0.61	BD+63°1807
185	G0V	11.57	0.65	0.15	
186	A0	11.74	0.26	0.01	
187	F2	12.06	0.60	0.00	
188	dK	9.29	1.06	0.73	BD+63°1806, blend
189	K3V	9.93	1.83	1.93	
190	gG5	6.81	0.87	0.53	BD+62°2032
191	A4	10.92	0.29	0.09	
192	A2	11.47	0.22	0.08	
193	A0	11.33	0.20	-0.23	
194	B6	9.63	0.00	-0.55	BD+62°2025
195	B6	9.02	-0.05	-0.48	BD+62°2023
196	A7	9.45	0.21	-0.12	BD+62°2022
197	A0	9.23	0.03	.0.01	BD+62°2027
198	F0	10.63	0.33	0.09	
199	A2	11.49	0.22	0.27	
200	K0III	9.06	1.07	0.81	BD+62°2019
201	A2	9.98	0.16	-0.14	
202	K5III	8.39	1.76	2.19	BD+62°2018
203	F0	9.79	0.24	0.06	BD+62°2017
204	F0	11.54	0.32	0.06	
205	A0	11.92	0.37	0.16	
206	A2	10.89	0.36	-0.01	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
207	GOIII	10.72	0.60	0.06	
208	A7	11.73	0.34	0.07	
209	A2	12.04	0.48	0.02	
210	AO	12.36	0.00	0.08	
211	F2	9.49	0.31	-0.04	BD+63°1803
212	F4	10.32	0.45	-0.31	
213	GOIII	10.38	0.62	-0.18	BD+63°1805
214	B8	10.80	0.28	-0.01	
215	G8V	11.68	0.55	0.28	
216	BO	11.06	0.18	-0.86	
217	AO	11.41	0.26	0.11	
218	AO	11.45	0.17	-0.03	
219	AO	10.78	0.32	-0.34	
220	AO	11.58	0.12	-0.32	
221	A5	9.09	0.18	-0.14	BD+63°1809
222	A2	9.74	0.29	-0.10	BD+63°1810
223	A3	8.57	0.29	-0.64	BD+63°1814, blend
224	KOIII	8.13	1.03	0.88	BD+63°1812
225	F2	11.61	0.60	0.14	
226	G8III	10.79	0.66	0.03	BD+63°1804
227	A2	11.52	0.26	0.17	
228	G8	11.64	0.97	0.23	
229	G5	11.86	0.51	-0.12	
230	dG	11.73	0.59	0.16	
231	F2	12.04	0.92	0.34	blend
232	A4	10.21	0.33	0.09	BD+63°1801
233	AO	12.64	0.38	0.18	
234	FO	12.34	0.70	-0.02	
235	F5	10.10	0.40	-0.08	BD+63°1799
236	AO	9.46	0.13	0.01	BD+63°1797
237	F8	12.10	0.47	-0.21	
238	A2	12.25	0.47	0.17	
239	AO	12.85	0.45	-0.06	
240	GO	10.65	0.58	0.14	
241	F8	11.7	0.63	0.04	
242	FO	9.91	0.60	0.26	BD+63°1796
243	KOIII	10.18	1.24	0.85	
244	AO	12.17	0.52	0.08	
245	GO	11.51	1.14	0.08	
246	A5	12.40	0.69	0.-9	
247	AO	12.01	0.36	-0.17	
248	KOIII	8.11	0.95	0.75	BD+63°1800
249	FO	11.30	0.41	-0.13	
250	F5	11.20	0.55	-0.28	
251	A2	11.76	0.35	0.05	
252	KOIII	10.77	1.26	1.15	
253	AO	11.90	0.28	-0.10	
254	B6	10.11	0.34	-0.49	
255	FO	11.24	0.73	0.03	
256	AO	11.93	0.42	-0.07	
257	AO	12.84	0.53	0.09	
258	KOIII	10.12	0.98	0.52	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
259	A7	11.14	0.56	0.11	
260	A5	12.10	0.52	-0.22	
261	KOV	11.63	1.13	0.62	
262	F8	11.94	0.56	0.13	
263	AO	11.81	0.17	0.23	
264	F5	11.25	0.56	-0.19	
265	G8III	10.06	1.12	0.68	
266	B8	11.03	0.11	-0.38	
267	G8III	10.92	0.99	0.66	
268	F5	11.68	0.44	0.01	
269	KOIII	10.66	1.12	0.95	
270	B8	10.75	0.36	0.22	
271	B8	10.99	0.96	0.62	
272	B6	10.26	-0.02	-0.57	BD+63°1795
273	B5	8.49	0.19	-0.54	BD+63°1794
274	KOIII	10.05	1.16	0.83	
275	B6	10.80	0.18	-0.7	
276	F8	10.53	0.49	-0.22	blend
277	B7	11.75	0.80	0.19	
278	AO	12.33	0.46	-0.07	
279	M	10.51	1.65	2.24	
280	B5	9.57	0.23	-0.57	
281	dG	11.77	0.78	0.17	
282	F8	11.46	0.64	-0.19	
283	AO	12.13	0.62	0.03	
284	F8	11.80	0.57	-0.16	
285	A2	11.98	0.52	-0.05	
286	K5I-II	11.48	1.15	0.99	
287	AO	12.30	0.31	-0.01	
288	B7	10.81	0.29	-0.43	
289	K2	10.96	1.44	0.98	
290	KO	9.00	1.55	1.41	BD+63°1789
291	AO	12.08	0.30	0.00	
292	A2	11.74	0.29	-0.34	
293	AO	11.02	0.38	-0.12	
294	A7	12.07	0.46	-0.03	
295	B8	11.70	0.25	-0.31	
296	F8	11.51	0.46	-0.02	
297	GOIII	9.35	0.74	0.18	BD+63°1786
298	GOV	9.23	1.10	0.73	BD+63°1785
299	G8V	11.68	0.58	0.19	
300	KOIII	10.77	1.20	0.76	
301	KOIII-IV	9.50	1.50	1.63	BD+63°1787
302	AO	12.36	0.46	0.23	
303	F5	10.97	1.28	1.12	
304	GO	11.65	0.48	0.11	
305	AO	11.50	0.12	-0.25	
306	G2III	9.30	0.87	0.39	BD+63°1791
307	F8	11.06	0.57	-0.12	
308	KOIII	8.63	0.58	-0.20	BD+63°1792
309	GOV	11.57	0.56	-0.08	
310	F8	11.97	0.48	-0.23	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
311	AO	11.12	0.04	-0.11	
312	AO	12.19	0.34	-0.25	
313	AO	12.47	0.48	-0.08	
314	AO	12.77	0.43	0.03	
315	A2	9.54	0.08	-0.38	BD+63°1793
316	F8	12.34	0.38	-0.25	
317	A2	9.21	0.20	-0.14	BD+63°1610
318	G8V	10.75	0.90	0.39	
319	A6	12.34	0.62	0.14	
320	AO	12.36	0.36	0.02	
321	G3V	11.15	1.26	0.29	
322	F8	10.92	0.47	-0.15	
323	G5III	10.85	1.07	0.54	
324	F8	10.73	0.28	-0.05	
325	A7	10.30	0.03	-0.02	BD+63°1605
326	A2	11.62	0.21	-0.04	
327	KOIII	10.21	0.95	0.70	
328	AO	11.96	0.22	0.21	
329	AO	11.57	0.32	0.05	
330	A5	11.41	0.49	0.14	
331	AO	12.57	0.32	0.07	
332	AO	11.73	0.20	-0.26	
333	F6	11.88	0.51	-0.26	
334	F8	11.36	1.01	0.80	
335	G8III	7.57	0.82	0.60	BD+64°1599
336	KOIII	9.41	1.17	1.02	BD+63°1778
337	F8	11.05	0.32	-0.26	
338	AO	11.17	0.20	0.32	
339	KOIII	10.21	1.00	0.67	BD+63°1776
340	F8	11.57	0.46	-0.01	
341	F4	11.60	0.62	-0.08	
342	G5V	11.37	0.66	0.10	
343	F4	11.31	0.75	-0.17	
344	AO	12.14	0.51	-0.01	
345	A5	12.50	0.72	-0.16	
346	KOIII	9.79	1.13	0.85	
347	G2	10.02	0.41	-0.19	
348	AO	11.86	0.24	-0.03	
349	F8	11.70	0.63	-0.07	
350	KOIV	10.26	1.46	1.39	
351	B8	11.02	0.16	-0.20	
352	KOIII	10.98	1.07	0.57	
353	GO	10.34	0.55	-0.13	
354	F8	12.06	0.67	-0.19	
355	B8	11.03	0.25	-0.33	
356	KOIII	11.46	1.16	0.78	
357	AO	12.82	0.79	0.09	
358	A2	11.37	0.38	0.00	
359	K2III	8.35	1.62	1.67	BD+63°1780
360	F2	11.97	0.55	-0.26	
361	GO	11.93	0.58	-0.12	
362	G	10.55	0.77	0.06	blend

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
363	KOV	11.09	1.09	1.03	
364	FO	10.42	0.50	-0.02	BD+63°1781
365	AO	11.86	0.64	0.09	
366	B6	10.45	0.40	-0.13	
367	F8	10.86	0.55	-0.13	
368	F6	11.21	0.23	0.00	
369	A2	11.78	0.47	0.15	
370	F2	11.72	0.49	0.07	
371	F8	11.41	0.64	-0.01	
372	F2	11.41	0.47	-0.16	
373	A2	12.37	0.28	-0.01	
374	AO	11.98	0.24	0.09	
375	G8III	11.22	1.33	0.49	
376	AO	11.15	0.49	0.17	
377	KOIII	11.22	0.93	0.72	
378	KOII	10.00	1.24	1.15	
379	FO	10.38	0.43	-0.03	BD+63°1786
380	F4	10.50	0.59	-0.16	
381	B2	8.19	0.10	-0.66	BD+63°1779
382	F8	12.25	0.77	-0.25	
383	F8	11.78	0.88	0.08	blend
384	AO	11.73	0.73	0.25	
385	AO	11.61	0.39	0.11	
386	AO	10.47	0.52	0.09	
387	F5	12.55	0.46	-0.14	
388	AO	9.64	0.40	0.03	BD+63°1777
389	AO	11.95	0.27	0.14	
390	G2III	11.42	0.71	0.13	
391	K2III	10.53	1.25	1.12	
392	KOIII	9.44	1.43	1.34	BD+63°1775
393	AO	11.46	0.32	-0.01	
394	AO	12.21	0.59	0.10	
395	KOIII	10.02	1.03	0.76	BD+63°1774
396	AO	12.03	0.19	0.12	
397	G5V	11.72	0.59	-0.04	
398	AO	12.09	0.55	0.09	
399	F6	10.54	0.49	-0.17	
400	A5	11.18	0.30	0.06	
401	G8III	10.85	0.88	0.78	
402	F8	11.39	0.62	0.04	
403	F8	11.29	0.65	-0.05	
404	KOIII	10.40	1.39	1.30	
405	AO	12.45	0.22	0.25	
406	AO	11.56	0.43	-0.06	
407	A2	12.37	0.38	-0.10	
408	K2III	10.66	1.52	1.29	
409	AO	12.04	0.33	0.02	
410	AO	11.48	0.30	0.16	
411	F8	11.85	0.75	0.12	
412	A2	12.08	0.25	0.18	
413	A6	12.39	0.31	0.27	
414	AO	12.32	0.77	0.15	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
415	G8V	11.36	0.70	0.18	
416	A4	11.18	0.49	0.02	
417	FO	12.31	0.50	0.03	
418	F6	11.23	0.46	-0.21	
419	F6	11.39	0.48	-0.13	
420	A2	11.49	0.37	-0.21	
421	G5III	10.44	1.44	1.25	
422	KOV	11.38	0.95	0.69	
424	AO	12.27	0.73	0.05	
425	F5	10.14	0.60	-0.25	BD+63°1782
426	AO	12.11	0.53	0.12	
427	B7	7.73	-0.03	-0.31	BD+63°1784
428	AO	12.39	0.38	0.07	
429	F5	11.25	0.44	-0.26	
430	AO	11.78	0.34	0.00	
431	A2	9.57	0.12	-0.20	
432	A4	10.62	0.41	0.04	
433	G8	10.06	1.16	0.77	
434	KOV	11.12	1.19	0.99	
435	B7	10.29	0.25	-0.30	BD+62°2005
436	B7	9.80	0.23	-0.30	
437	G2	11.22	0.24	0.36	
438	AO	12.40	0.44	0.03	
439	A2	11.96	0.65	0.30	
440	AO	12.03	0.68	0.07	
441	A7	10.95	0.68	0.13	
442	AO	11.55	0.24	0.17	blend
443	M2IB+B8Ve	4.78	1.96	0.30	BD+62°2007
444	AO	9.10	0.11	-0.71	BD+63°1788
445	KOIII	10.62	1.29	1.09	
446	KOIII	10.50	1.13	0.58	
447	F8	11.64	0.70	-0.07	
448	K5III	8.78	1.55	1.44	BD+63°1790
449	KOIII	10.78	1.33	1.17	
450	A2	11.65	0.18	-0.23	
451	G8V	12.15	0.71	0.00	
452	G2III	9.93	0.75	0.27	
453	F8	10.23	0.50	-0.16	
454	AO	12.58	0.37	0.07	
455	AO	12.11	0.29	-0.27	
456	F2	12.75	0.50	0.21	
457	B6	10.22	0.15	-0.67	
458	AO	10.63	0.55	-0.21	
459	B8	11.34	0.21	-0.52	
460	AO	12.03	0.35	-0.10	
461	AO	12.23	0.41	0.11	
462	F8	10.52	0.46	-0.28	
463	G8V	11.85	0.83	0.39	
464	AO	11.66	0.34	0.12	
465	AO	11.12	0.03	-0.38	
466	K5III	10.71	1.44	1.68	
467	AO	12.29	0.31	0.13	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
468	KOIII	10.53	1.21	0.85	
469	dM	10.01	1.85	2.21	
470	FO	10.45	0.33	-0.01	
471	AO	11.40	0.57	0.15	
472	F8	10.35	0.90	-0.07	
473	F5	10.49	0.40	-0.09	
474	A2	8.71	0.06	-0.20	BD+62°2012
475	AO	13.20	0.32	0.19	
476	F8	11.23	0.66	-0.09	
477	F8	11.77	0.48	-0.09	
478	AO	13.07	0.49	-0.03	
479	AO	13.06	0.63	0.12	
480	B7	9.21	0.11	-0.36	BD+62°2009, blend
481	F2	7.19	0.63	0.07	BD+62°2004
482	AO	13.07	0.52	0.18	
483	FO	11.77	0.45	0.00	
484	AO	12.94	0.29	0.05	
485	AO	12.23	0.38	0.01	
486	K2V	9.40	1.70	2.02	BD+62°2000
487	F6	11.34	0.43	-0.22	
488	F6	11.55	0.71	0.14	
489	A6	12.49	0.41	-0.12	
490	A4	12.60	0.34	0.06	
491	A2	10.99	0.35	0.09:	
492	B5	10.05	0.15	-0.90:	
493	AO	11.88	0.47	-0.28	
494	FO	11.90	0.58	-0.18	
495	KOI-II	9.21	1.47	1.22	
496	AO	12.69	0.58	0.22	
497	FO	11.47	0.57	-0.16	
498	AO	12.91	0.72	0.15	
499	AO	12.59	0.67	0.19	
500	G5IV	10.38	1.13	0.57	
501	F2	11.90	0.51	-0.26	
502	AO	11.83	0.12	-0.13	
503	AO	12.84	0.31	-0.15	
504	F5	12.21	0.73	0.28	
505	F2	10.68	0.61	-0.28	
506	KOIII	9.04	1.05	0.55	BD+62°1983
507	FO	12.85	0.44	0.13	
508	A2	11.81	0.43	0.15	
509	F2	10.92	0.40	-0.27:	BD+62°1984
510	G5III	10.06	1.64	1.69	BD+62°1987
511	AO	12.93	0.38	0.19:	
512	AO	12.31	0.56	0.02:	
513	A2	11.46	0.40	0.15:	
514	A2	10.54	0.76	0.17:	BD+62°1982
515	F8	10.84	0.36	-0.18:	
516	AO	11.60	0.45	0.29:	
517	A2	11.35	0.18:	-0.44:	
518	KOIII	10.15	1.36	0.71	BD+62°1980
519	AO	11.52	0.27	-0.17	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
520	A0	11.64	0.13	-0.08	
521	F6	11.56	0.44	-0.19	
522	A6	11.09	0.27	0.13	
523	A0	11.89	0.28	0.03	
524	A2	11.73	0.38	0.14	
525	A4	12.09	0.69	0.08	
526	F0	11.90	0.52	0.02	
527	A0	11.06	0.42	0.07:	
528	A0	11.69	0.08	-0.15:	
529	A0	12.40	0.24	-0.03	
530	A0	12.40	0.59	0.20	
531	A7	11.98	0.58	0.20	blend
532	dK	10.88	1-71	2.10	
533	F8	9.58	0.61	-0.13	BD+62°1981
534	A2	12.07	0.26	0.00	
535	G0	10.17	0.07	-0.11:	
536	A0	12.64	0.19	-0.07	
537	A0	11.15	0.09	-0.22:	
538	F0	10.83	0.42	0.11	BD+62°1990
539	A0	11.82	0.21	0.11	
540	F8	11.08	0.61	0.11	BD+62°1991
541	F0	12.11	0.49	0.19:	
542	A2	11.56	0.09	0.11	
543	B3	7.42	0.09	-0.78	BD+62°1992
544	F8	10.26	0.45	-0.17	BD+62°1991
545	A0	11.25	0.38	0.05	
546	F5	10.61	0.40	-0.20	BD+62°1996
547	A2	11.68	0.23	0.06	
548	KOIII	9.55	1.09	0.76	BD+62°1997
549	KOIII	9.43	1.05	0.73	BD+62°1998
550	A7	10.34	0.30	-0.13	BD+62°2001
551	K2III	8.17	1.85	1.98	BD+62°1999
552	F8	12.43	0.74	0.32	
553	A0	11.81	0.67	0.27	
554	F8	11.23	0.56	0.01	
555	A5	12.22	0.22	0.09	
556	F8	11.39	0.55	-0.02	
557	F0	12.26	0.29	0.00	
558	A0	11.60	0.36	0.03	
559	KOIII	10.25	1.36	1.57	
560	F8	11.43	0.61	-0.19	
561	F0	10.37	0.26	0.17	BD+62°2003
562	A7	11.88	0.25	0.31	
563	G0	11.81	0.49	0.04	
564	A0	10.70	0.11	-0.28	
565	B7	10.75	0.12	0.06	
566	B3	9.85	0.03	-0.53	BD+62°2002
567	dM	10.88	1.79	1.77	
568	B0	7.77	-0.16	-0.73	BD+62°2006
569	F8	11.59	0.60	0.03	
570	F0	10.92	0.36	0.09	
571	A7	9.86	0.17	-0.02	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
572	A2	11.50	0.37	0.17	
573	B8	12.09	0.75	-0.15:	edge of plates
574	F0	12.53	0.35	0.24	
575	F4	13.40	0.92	0.27	
576	A7	11.64	0.44	0.22	
577	A0	12.20	0.29	0.00	
578	A0	12.74	0.60	0.14	
579	G2III	9.69	1.29	1.34	BD+62°2011
580	F4	11.19	0.97	0.39	
581	A0	12.12	0.58	0.01	
582	G2V	11.63	1.34	1.16	
583	K0III	9.08	0.81	1.06:	BD+62°2013
584	K0III	9.99	1.11	0.85	
585	M	5.76	1.74	1.90	BD+62°2010
586	F8	11.40	0.57	-0.05	
587	F0	10.83	0.34	0.13	
588	A0	12.41	0.59	0.16	
589	F8	11.82	0.57	0.06	
590	A0	9.73	0.19	-0.03	BD+62°2008
591	F8	12.07	0.77	0.23	
592	A0	12.80	0.42	0.26	
593	B8	11.19	0.16	0.07	BD+61°2223
594	A2	11.34	0.35	0.34	
595	A4	11.88	0.42	0.29	
596	A2	10.17	0.29	0.49	
597	A0	9.76	0.17	-0.11	BD+61°2222
598	F8	11.01	0.75	0.22	
599	A4	11.38	0.55	0.28	
600	A0	12.36	0.63	0.30	
601	B7	11.44	0.19	0.00	
602	A0	12.57	0.61	0.28	
603	A0	12.65	0.41	0.40	
604•	A0	11.52	0.36	0.23	
605	K0III	11.22	1.43	1.29	
606•	A0	12.14	0.34	0.42	
607•	A0	11.62	0.46	0.53	
608	A0	10.97	0.11	-0.18	
609•	A0	12.24	0.39	0.28	
610•	B7	12.07	0.34	0.28	
611	A2	13.02	0.41	0.31	
612	F2	11.39	0.54	0.06	
613•	A0	12.39	0.46	0.39	
614•	A0	12.53	0.46	0.38	
615•	B1	6.69	0.24	-0.57	BD+62°1994
616	F8	11.73	0.20	0.00	
617	G5III	10.85	1.04	0.99	
618	A7	10.50	0.26	0.28	
619	F8	12.03	0.63	0.36	
620	A2	11.49	0.48	0.36	
621	F5	9.53	0.32	-0.06	BD+62°1986
622	F8	9.51	0.50	0.17	BD+62°1985
623	K0III	11.25	1.44	1.22	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
624	A0	12.29	0.20	-0.09	
625	F6	10.91	0.40	-0.04	
626	A0	12.05	0.50	0.18	
627	A0	11.91	0.37	0.36	
628	F8	11.43	0.59	-0.04	
629	A0	11.32	0.39	0.09	
630	F8	9.10	0.41	-0.19	BD+61°2203
631	F2	12.21	0.75	-0.12	
632	B7	12.84	0.52	-0.23	
633	G8V	11.62	0.76	0.60	
634	M2III	10.33	1.76	2.41	
635	A7	11.96	0.42	0.25	
636	F5	11.93	0.68	0.26	blend
637	A5	10.52	0.19	0.00	
638	B8	10.40	1.14	1.21	
639	K2III	10.57	1.44	2.23	
640	A2	11.23	0.32	0.17	
641	F8	11.83	0.63	0.23	
642	F2	11.07	0.71	0.35:	blend
643	A0	12.53	0.43	0.24	
644	F8	10.86	0.57	-0.13:	blend
645	F5	10.68	0.32	-0.09	
646	M2V	11.32	1.43	1.22	
647	F2	10.82	0.55	0.29	
648	B7	10.59	0.28	-0.20	
649	A0	9.74	0.14	-0.05	BD+61°2201
650	F0	9.29	0.32	0.11	BD+61°2206, blend
651	A2	11.58	0.48	0.23	
652	F0	11.37	0.72	0.29	
653	dM	12.15	1.80	0.64	
654	A2	12.40	0.88	0.08	
655	B8	9.73	0.07	-0.03	BD+61°2197
656	F6	10.53	0.42	-0.07	
657	A4	11.89	0.78	0.34	
658	F8	11.76	0.76	0.07	
659	K2V	8.91	2.50	2.03	BD+62°1977
660	F8	12.15	0.38	0.45	
661	A0	12.60	0.36	0.18	
662	F8	12.13	0.56	0.12	
663	A2	12.18	0.28	0.15	
664	A2	12.06	0.26	0.24	
665	A0	12.64	0.40	0.00	
666	F2	9.27	0.26	-0.06	BD+62°1978
667	F2	11.07	0.54	0.14	
668	A0	12.16	0.30	-0.20	
669	F6	11.00	0.46	-0.02	
670	A0	12.01	0.18	0.06	
671	F8	11.72	0.75	0.07	
672	F6	12.15	0.68	0.00	
673	F5	11.54	0.39	-0.02	
674	F8	11.13	0.84	0.41	
675	G2V	10.81	1.06	0.37	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
676	AO	12.49	0.50	-0.10	
677	AO	13.28	0.42	0.26	
678	AO	12.16	0.34	0.23	
679	A2	11.80	0.60	0.28	
680	AO	12.81	0.45	0.22	
681	B8	11.89	0.12	0.07	
682	A4	11.51	0.23	-0.29	
683	F8	11.78	0.75	0.24	
684	KOV	11.17	1.29	1.26	
685	dG	13.04	0.60	0.19	
686	F5	11.33	0.45	-0.10	
687	F8	12.08	0.44	-0.13	
688	F4	11.98	0.52	0.02	
689	F8	11.19	0.91	0.28	
690	dM	10.19	1.81	1.95	
691	FO	11.86	0.43	-0.01	
692	G8III	11.23	1.18	0.77	
693	KOV	10.44	1.14	1.21	
694	AO	12.32	0.26	0.07	
695	F2	11.38	0.65	0.20	
696	GO	11.03	0.34	0.03	
697	F8	9.82	0.34	-0.20	BD+63°1773
698	G8III	11.31	0.97	0.77	
699	F8	11.50	0.48	-0.07	
700	F8	10.66	0.38	-0.18	
701	A2	11.32	0.28	0.04	
702	F5	11.51	0.92	0.14	
703	AO	12.14	0.34	0.17	
704	A2	9.16	0.20	0.14	BD+63°1769
705	A4	12.04	0.32	0.01	
706	A2	9.77	0.10	-0.24	BD+63°1765
707	K2III	8.91	1.36	1.50	BD+63°1763
708	A7	10.33	0.31	0.17	BD+63°1762
709	FO	11.63	0.49	-0.13	
710	KOIII	8.54	1.50	1.44	BD+63°1761
711	A7	10.41	0.22	0.24	BD+63°1760, blend
712	AO	11.76	0.50	0.17	
713	F5	10.94	0.70	0.07	
714	KOIII	11.11	1.15	1.08	
715	F5	11.74	0.39	-0.06	
716	FO	12.31	0.49	-0.34	
717	F6	11.90	0.40	-0.13	
718	KOV	11.25	0.83	0.65	
719	F2	8.31	0.21	-0.11	BD+63°1768
720	K2III	9.85	1.08	1.01	BD+63°1767
721	FO	11.05	0.56	-0.07	
722	AO	11.37	0.05	-0.39	
723	K2III	9.97	1.36	1.24	
724	FO	11.37	0.50	-0.05	
725	AO	12.21	0.43	0.11	
726	AO	11.05	0.20	0.14	
727	F6	11.08	0.37	-0.01	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
728	dK	11.89	1.39	0.92	
729	GO	11.91	0.68	0.08	
730	G2	10.18	0.58	0.07	
731	F8	11.41	0.56	0.09	
732	K2	10.31	1.43	1.92	
733	B5	10.61	0.16	0.04	
734	A4	9.19	0.13	0.04	BD+63°1755
735	KOIII	11.22	1.12	1.49	
736	A5	10.78	0.29	0.15	
737	AO	10.02	0.11	-0.61	BD+63°1757
738	B3	12.40	0.73	0.05	
739	F6	10.85	0.03	-0.47	
740	F6	11.77	0.46	-0.04	
741	G8V	11.77	0.61	-0.06	
742	F8	11.56	0.44	-0.13	
743	KOIII	10.81	1.46	1.22	
744	KOIII	11.10	1.03	0.80	
745	A2	11.51	0.41	0.35	
746	F5	6.95	0.45	-0.23	BD+63°1764
747	A2	12.12	0.52	0.00	
748	A2	11.87	0.30	0.19	
749	F5	8.16	0.30	-0.02	BD+62°1975
750	B8	11.55	0.23	-0.17	
751	G5	11.26	1.19	0.87	
752	A2	12.20	0.52	0.20	
753	F5	11.-3	0.61	0.25	
754	F8	11.47	0.54	0.07	
755	A5	12.65	0.68	0.25	
756	F5	11.46	0.61	0.29	
757	G5V	11.10	0.72	0.30	
758	AO	11.58	0.33	0.24	
759	F2	11.99	0.56	0.27	
760	GOV	11.15	0.76	0.02	
761	gK	11.11	1.34	1.43	
762	AO	12.83	0.71	0.31	
763	F8	11.68	0.56	0.00	
764	G2	10.56	0.72	0.42:	
765	K5III	10.23	1.76	1.93	
766	F8	10.46	0.60	0.04	
767	AO	11.43	0.24	0.18	
768	KOIII	9.94	1.18	1.09	BD+62°1960
769	B7	11.21	0.17	-0.03	
770	GO	10.76	0.82	0.24	
771	K2V	10.63	1.45	1.25	
772	AO	12.70	0.17	0.28	
773	B2	8.09	0.06	0.01	BD+63°1753
774	AO	12.02	0.68	0.29	
775	AO	12.75	0.56	0.43	
776	AO	13.23	0.49	0.32	
777	G8III	10.54	0.62	-0.08	
778	FO	12.12	0.77	0.38	
779	K2III	10.32	1.65	1.68	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
780	A2	12.00	0.44	0.18	
781	F6	9.14	0.31	0.09	BD+62°1959
782	F5	11.07	0.60	-0.04	
783	F2	11.24	0.65	0.26	
784	AO	12.71	0.38	0.23	
785	dK	12.59	0.89	0.27	
786	K2III	8.57	1.82	2.49	
787	AO	11.96	0.44	-0.28	
788	GO	9.81	0.52	0.13	BD+62°1962
789	F8	10.78	0.60	0.22	
790	K2	8.95	0.95	0.79	BD+62°1963
791	AO	11.25	0.30	-0.17	
792	GO	10.33	0.68	0.10	
793	A2	11.03	0.43	0.20	
794	GO	11.29	0.65	-0.03	
795	G8	10.73	1.18	1.07	
796	G	12.31	0.63	0.10	
797	A4	9.91	0.14	-0.42	BD+62°1968
798	F6	8.96	0.34	-0.07	BD+62°1969
799	K5III	9.59	1.84	2.04	BD+62°1972
800	G8III	11.39	0.81	0.39	
801	K2III	10.63	1.37	1.18	
802	KO	9.46	0.90	0.93	BD+62°1971
803	AO	12.12	0.31	0.06	
804	F8	11.58	0.60	0.20	
805	F4	11.35	0.40	-0.13	
806	K2III	11.29	1.32	0.86	
807	A2	12.42	0.35	0.22	
808	B6	9.36	0.04	-0.20	BD+62°1967, blend
809	A2	9.62	0.36	0.21	BD+62°1964
810	A2	12.01	0.27	0.06	
811	AO	12.55	0.50	0.24	
812	FO	10.15	0.28	-0.09	BD+62°1966
813	F8	11.22	0.52	0.07	
814	FO	12.30	0.58	0.12	
815	AO	12.43	0.30	0.09	
816	AO	12.30	0.37	0.31	
817	AO	11.66	0.18	-0.31	
818	GO	11.77	0.70	0.23	
819	gK	10.20	1.82	2.15	
820	AO	10.82	0.21	-0.21	
821	F5	11.11	0.57	0.08	
822	F6	11.03	0.54	0.01	
823	AO	12.98	0.44	0.14	
824	AO	11.97	0.39	0.18	
825	F2	10.78	0.73	0.34	
826	A2	11.07	0.50	0.53	
827	A5	12.57	0.86	0.53	
828	FO	12.15	0.61	0.42	
829	A2	11.61	0.46	0.02	
830	FO	9.27	0.35	0.03:	BD+62°1957
831	AO	12.09	0.57	0.57	

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No.	Sp.	V	B-V	U-B	remarks
832	AO	12.37	0.14	0.21	
833	G5V	11.13	0.62	0.35	
834	K2III	8.88	1.56	1.95	BD+61°2157
835	AO	12.10	0.37	0.43	
836	AO	11.45	0.48	0.42	
837	B5	10.42	0.09	-0.46	BD+61°2161
838	F5	9.86	0.51	0.07	BD+61°2162
839	A2	12.45	0.42	0.42	
840	F8	13.43	0.86	0.31	
841	F6	10.65	0.51	0.04	
842	F6	12.00	0.55	-0.04	
843	B5	10.50	0.24	-0.46	BD+61°2170
844	F8	10.64	0.37	0.12	BD+61°2173
845	K2III	9.96	1.07	1.19	BD+61°2174
846	AO	13.09	0.33	0.31	
847	AO	12.60	0.30	0.18	
848	A2	11.12	0.32	-0.15	
849	F8	11.83	0.78	0.12	
850	F4	11.17	0.43	-0.05	
851	F2	11.43	0.74	0.30	
852	dM	10.33	1.60	0.93	
853	B8	10.19	0.26	-0.25	
854	A2	11.48	0.51	0.26	
855	AO	12.55	0.85	0.15	
856	F6	11.46	0.60	0.09	
857	A2	11.62	0.28	0.13	
858	FO	10.48	0.38	0.04	
859	G8V	11.78	0.59	0.22	
860	K2III	10.97	1.31	1.28	
861	B5	10.97	0.48	-0.03	
862	A2	10.97	0.23	-0.12	
863	G2	11.62	0.66	0.04	
864	AO	12.24	0.46	-0.02	
865	B5	8.76	0.10	-0.70	BD+62°1973
866	FO	8.41	0.14	-0.06	BD+62°1976
867	GO	12.14	0.82	0.06	
868	A5	10.43	0.47	-0.04	
869	F5	8.32	0.34	-0.26	BD+61°2188
870	B8	11.79	0.14	-0.02	
871	K2III	8.94	1.77	2.15	BD+61°2120
872	A5	11.39	0.55	0.10	
873	B2	5.87	0.32	-0.60	BD+61°2193, blend
874	gK	11.84	1.53	0.99	
875	F8	12.00	0.58	-0.12	
876	F5	11.11	0.75	0.51	
877	F4	11.86	0.73	0.18	
878	F6	9.20	0.45	0.00	
879	F6	10.86	0.49	-0.10	
880	AO	12.26	0.57	0.25	
881	F8	11.76	0.29	0.09	
882	KOIII-IV	9.89	1.00	0.60	BD+61°2189
883	F2	11.03	0.43	0.02	

CATALOGUE
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No.	Sp.	V	B-V	U-B	remarks
884	A2	12.03	0.55	0.08	
885	G8	10.58	1.19	0.95	
886	A2	11.27	0.14	0.09:	
887	A2	10.87	0.29	0.12	
888	K2III	9.84	1.21	1.21	BD+61°2191
889	AO	12.45	0.39	0.21	
890	FO	12.17	0.64	0.22	
891	A2	12.08	0.48	0.26	
892	F6	9.56	0.40	-0.02	BD+61°2187
893	A2	8.35	0.02	0.00	BD+61°2185
894	AO	11.79	0.39	0.00	
895	K2II-III	8.45	1.45	1.41:	BD+61°2186
896	A2	12.56	0.50	0.10	
897	AO	12.72	0.56	0.28	
898	AO	12.53	0.40	0.19	
899	A2	12.46	0.45	0.16	
900	AO	11.63	0.42	0.22	
901	AO	12.02	0.48	0.23	
902	gK	11.80	1.71	1.46	
903	AO	11.86	0.78	0.38	
904	AO	12.20	0.40	0.32	
905	AO	12.44	0.62	0.33	
906	AO	9.66	0.10	-0.05	BD+61°2182
907	KOV	11.72	0.65	0.45	
908	A2	12.42	0.38	0.16	
909	AO	12.25	0.50	0.23	
910	F5	10.76	0.67	0.19	
911	AO	10.60	0.20	-0.36	
912	AO	11.92	0.20	-0.04	
913	B5	10.59	0.18	-0.55	BD+61°2178
914	FO	12.94	0.42	0.17	
915	F8	12.30	0.67	0.23	
916	AO	12.47	0.62	0.51:	
917	F5	11.27	0.68	0.31	
918	G2III	7.11	0.91	0.71	BD+61°2166
919	AO	13.52	0.39	0.49	
920	dK	10.43	1.39	1.48	
921	A2	10.07	0.33	0.24	
922	AO	12.75	0.56	0.52	
923	AO	11.39	0.37	0.27	
924	A7	9.33	0.51	-0.36	BD+61°2163
925	G2	11.54	0.34	-0.04	
926	F8	10.53	0.46	0.08	BD+61°2164
927	AO	12.56	0.55	0.65	
928	AO	12.18	0.84	0.38	
929	F5	10.08	0.32	0.05	
930	AO	12.52	0.60	0.39	
931	AO	12.82	0.63	0.13	
932	AO	12.44	0.38	0.14	
933	FO	9.92	0.19	0.16	BD+61°2165
934	A2	12.20	0.10	0.08	
935	F5	8.98	0.30	0.03	BD+61°2274

CATALOGUE
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No.	Sp.	V	B-V	U-B	remarks
936	F5	11.72	0.52	-0.16	
937	A0	9.87	0.12	0.00	BD+60°2273
938	G8III	11.32	0.92	0.57	
939	B7	11.38	0.27	0.10	
940	A0	12.43	0.87	0.06	
941	A0	12.49	0.52	0.02	
942	F8	10.64	0.48	-0.34	
943	A0	12.05	0.16	-0.21	
944	A0	11.81	0.36	0.16	
945	A0	11.33	0.44	-0.05	
946	F0	10.53	0.37	-0.30	
947	A0	11.45	0.53	-0.01	
948	A7	8.81	0.05	-0.57	BD+60°2276
949	F8	10.95	0.59	-0.34	
950	A0	12.40	0.45	-0.01	
951	A0	12.81	0.43	0.18	
952	gK	11.49	1.93	2.08	
953	A0	13.45	0.69	0.05:	
954	A0	12.60	0.73	0.48	
955	K0III	9.25	1.15	0.94	BD+61°2177
956	F8	11.11	0.60	0.07	
957	K2II	8.83	1.28	1.56	BD+61°2175
958	A2	11.98	0.35	0.23	
959	B8	10.14	0.32	-0.16:	
960	F2	11.76	0.51	0.11	
961	F2	11.73	1.01	0.26:	blend
962	A4	11.50	0.41	0.25	
963	F6	9.84	0.41	0.06	BD+61°2167
964	B6	10.53	0.12	-0.45	BD+61°2168
965	O9II	5.96	0.31	-0.64	BD+61°2172
966	A7	11.11	0.37	0.31	
967	F2	11.52	0.56	0.13	
968	F8	11.31	0.46	0.05	
969	A0	12.35	0.62	0.43	
970	A0	12.34	0.61	0.42	
971	F2	11.68	0.49	0.00	
972	dK	11.29	2.26	2.19	
973	A2	10.69	0.20	0.10	BD+61°2179
974	G2V	11.51	1.02	0.69	
975	A0	13.10	0.48	0.26	
976	B5	9.79	0.25	-0.32	BD+61°2180
977	A0	12.24	0.44	0.44	
978	A0	12.26	0.62	0.23	
979	F8	10.92	0.72	0.21	
980	F0	11.73	0.75	0.18	
981	A0	12.36	0.35	0.17	
982	A2	11.91	0.26	0.02	
983	G8III	9.71	1.12	0.77	BD+61°2181
984	F8	11.59	0.60	0.28	
985	A5	11.26	0.52	0.40	
986	A7	11.32	0.70	0.42	
987	F0	12.05	0.73	0.45	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
988	GOV	10.84	0.42	0.48	
989	A2	10.29	0.07	0.19	BD+61°2183
990	F5	11.30	0.61	0.16	
991	KOIII	10.31	1.30	1.08	
992	F2	11.71	0.59	0.24	
993	G5V	11.86	0.87	0.16	
994	A2	10.07	0.16	0.14	BD+61°2184
995	G8III	10.96	1.01	0.61	
996	F8	11.43	0.45	-0.02	
997	AO	11.51	0.46	0.38	
998	F8	11.17	0.63	0.09	
999	GO	8.65	0.48	-0.07	BD+61°2195
1000	B8	9.17	0.73	0.29	BD+61°2198
1001	B8	11.33	0.29	-0.17	
1002	AO	10.07	0.21	-0.31:	BD+61°2196
1003	F5	11.48	0.50	-0.07	
1004	K3III	9.23	1.67	2.09	BD+60°2287
1005	A2	10.19	0.39	0.26	BD+60°2286
1006	A5	11.03	0.56	0.33	
1007	AO	12.50	0.58	0.17	
1008	A2	11.75	0.54	0.40	
1009	G5V	11.98	0.74	0.11	
1010	AO	12.03	0.56	0.29	
1011	A2	12.11	0.45	0.15	
1012	A7	12.53	0.39	0.50	
1013	FO	11.94	0.63	0.37	
1014	F2	10.33	0.67	0.43	blend
1015	FO	12.14	0.61	0.26	
1016	A2	10.83	0.40	0.13:	
1017	K2III	11.06	1.61	1.44	
1018	F8	11.77	0.58	0.25	
1019	A5	8.71	0.22	0.18	BD+60°2278
1020	A2	10.70	0.34	0.28	
1021	A2	11.49	0.49	0.25	
1022	A2	12.44	0.59	0.38	
1023	AO	12.60	0.56	0.25	
1024	AO	12.80	0.47	0.41	
1025	A5	11.92	0.75	0.63	
1026	A2	11.90	0.40	0.51	
1027	A2	10.97	0.52	0.21	
1028	AO	11.32	0.57	0.07	
1029	GO	11.12	0.59	0.29	
1030	AO	11.67	0.60	0.25	
1031	A2	10.48	0.49	-0.01	BD+60°2280
1032	GO	10.92	0.75	0.43	
1033	A7	10.36	0.45	0.08	BD+60°2282
1034	AO	12.77	0.70	0.59	
1035	AO	12.84	0.73	-0.05	
1036	GOV	10.22	0.69	-0.05	BD+60°2281
1037	A2	10.79	0.46	0.52	
1038	F8	10.17	0.47	0.13	BD+60°2284
1039	F8	11.15	0.75	0.27	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
1040	F5	11.37	0.52	0.27	
1041	A0	12.13	0.62	0.43	
1042	A2	12.09	0.60	0.14	
1043	F5	10.84	0.54	0.30	
1044	A2	12.41	0.81	0.40	
1045	A0	12.20	0.49	0.29	
1046	G0III	7.31	0.76	0.34	BD+60°2285
1047	A7	11.56	0.76	0.69	
1048	K0V	11.92	0.82	0.27	
1049	F8	12.11	0.74	0.21	
1050	A0	11.44	0.64	0.32	
1051	A2	10.94	0.73	0.72	
1052	A0	11.92	0.49	0.12	
1053	A0	11.63	0.54	0.45	
1054	A2Ia	4.29	0.52	0.14	BD+60°2288
1055	A0	11.63	0.45	-0.01	
1056	A0	12.02	0.49	0.36	
1057	G0	8.59	0.41	0.14	BD+60°2290
1058	A0	12.29	0.46	0.30	
1059	B7	9.57	0.53	-0.22	BD+60°2289
1060	A7	10.29	0.32	0.18	
1061	F6	11.65	0.51	0.06	
1062	F5	11.12	0.40	-0.01:	
1063	F6	10.93	0.49	0.13:	
1064	A0	12.29	0.59	0.24	
1065	A0	11.97	0.25	0.20	
1066	F6	11.13	0.56	0.13	
1067	K2III	9.09	1.18	1.38	BD+60°2296
1068	F8	10.14	0.63	0.15	
1069	A5	11.54	0.53	0.41	
1070	F4	9.31	1.00	0.85	BD+60°2297
1071	B0n	11.90	0.37	-0.53	
1072	A5	11.75	0.41	0.37	
1073	K0III	9.04	1.09	0.90	BD+60°2295
1074	F0	9.03	0.33	0.11	BD+60°2291
1075	A2	11.14	0.45	0.30	
1076	G0	10.17	0.69	0.30	
1077	F5	11.59	0.57	0.13	
1078	M	5.31	1.61	2.06	BD+60°2294
1079	G8V	11.09	0.56	0.24	
1080	A0	12.90	0.68	0.39	
1081	A0	13.53	0.64	0.34	
1082	K5III	9.10	2.03	2.31	BD+60°2302
1083	A2	11.20	0.58	0.62	
1084	K2III	10.37	1.79	1.36	
1085	A0	11.69	0.71	0.15	
1086	A0	12.47	0.65	0.38	
1087	A0	11.87	0.80	0.22	
1088	A0	11.94	0.62	0.55	
1089	A5	11.42	0.84	0.73	
1090	A0	11.90	0.52	0.35	
1091	A0	13.22	0.47	0.43	

CATALOGUE
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No.	Sp.	V	B-V	U-B	remarks
1092	A0	12.66	0.88	0.27	
1093	F8	11.18	0.63	0.32	
1094	K0II	10.24	1.46	1.60	
1095	K0III	9.01	1.11	1.13	BD+59°2425
1096	F8	11.59	0.77	0.69:	
1097	G5III	7.59	0.60	1.44	BD+59°2428
1098	F0	12.01	0.62	0.47	
1099	A2	9.51	0.07	0.42:	BD+59°2431, blend
1100	F6	10.90	0.92	0.26	
1101	K0V	10,90	0.93	0.97	
1102	A7	11.15	0.45	0.16	
1103	A0	12.36	0.31	0.49	
1104	G8III	9.77	1.35	1.78	BD+59°2426
1105	A0	12.84	0.68	0.39	
1106	A0	12.18	0.62	0.41	
1107	A0	13.76	0.75	0.68	
1108	A0	12.66	0.73	0.40	
1109	A2	12.22	0.92	0.31	
1110	F8	11.66	0.55	0.06	
1111	A0	11.83	0.70	0.46	
1112	F0	11.06	0.95	0.67	
1113	G5III	10.67	0.88	0.93	
1114	G0III	10.19	0.85	0.85	
1115	F8	10.42	0.63	0.21	BD+60°2305
1116	G0V	11.56	0.61	0.29	
1117	K0III	10.97	1.15	1.46	
1118	F8	11.64	0.49	0.13	
1119	F8	11.74	0.68	0.27	
1120	B1	8.07	0.36	-0.57	BD+59°2430
1121	A5	10.76	0.26	0.33	
1122	A0	11.69	0.61	0.50	
1123	B7	11.02	0.34	-0.01	
1124	A0	12.47	0.68	0.54	
1125	A0	12.18	0.81	0.88	
1126	A0	11.83	0.29	0.34	
1127	F0	11.56	0.55	0.15	
1128	A0	11.57	0.45	0.02	
1129	A0	12.60	0.56	0.42	
1130	K2III	9.56	1.77	2.37	BD+59°2433
1131	F0	12.08	1.05	0.39	
1132	A0	11.46	0.73	0.49	
1133	A7	10.18	0.52	0.39	
1134	A0	12.02	0.51	0.26	blend
1135	B6	10.73	0.33	-0.05	
1136	B8	10.80	0.33	0.23	
1137	A2	12.41	0.63	0.51	
1138	dK	10.97	1.27	1.30	
1139	F8	11.43	0.62	0.10	
1140	A7	10.65	0.54	0.95	
1141	A4	8.45	0.15	0.35	
1142	K2II-III	10.28	1.41	1.56	
1143	A2	10.20	0.32	-0.06	

CATALOGUE
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No.	Sp.	V	B-V	U-B	remarks
1144	AO	12.49	0.22	0.17	
1145	B5	11.23	0.33	-0.39	
1146	AO	10.24	0.27	-0.06	
1147	AO	12.66	0.34	0.05	
1148	F2	11.85	0.62	0.25	
1149	A2	11.57	0.46	0.36	
1150	GO	10.42	0.56	0.38	BD+60°2317
1151	F4	10.23	0.48	0.24	BD+60°2316
1152	F8	9.56	0.64	0.15	BD+60°2315
1153	A2	10.81	0.42	0.33	
1154	B5	9.99	0.38	-0.28	
1155	A4	11.89	0.38	0.29	
1156	F8	11.88	0.55	0.12	
1157	AO	13.04	0.47	0.57	
1158	AO	12.86	0.53	0.30	
1159	AO	12.68	0.37	0.36	
1160	AO	9.09	0.12	0.03	BD+60°2306
1161	AO	12.01	0.28	0.17	
1162	AO	13.05	0.39	0.32	
1163	FO	9.52	0.39	0.23	BD+60°2308
1164	K5III	8.78	1.75	2.35	BD+60°2313
1165	A2	11.62	0.35	0.32	
1166	A2	11.64	0.37	0.34	
1167	AO	11.60	0.25	0.36	
1168	K2III	9.81	1.54	1.80	
1169	AO	11.86	0.34	0.34	
1170	G5V	11.32	0.70	0.41	
1171	AO	12.13	0.19	0.18	
1172	F8	11.50	0.61	0.22	
1173	A5	11.79	0.53	0.41	
1174	KOIII	10.95	1.26	1.26	
1175	AO	11.99	0.76	0.59	
1176	AO	11.82	0.23	0.07	
1177	F5	10.48	0.36	0.12:	BD+60°2319
1178	AO	11.58	0.36	0.00	
1179	F8	7.72	1.02	0.27:	BD+60°2321
1180	F6	11.01	0.67	0.19	
1181	A2	11.86	0.58	0.21	
1182	F8	10.83	0.50	-0.13	
1183	F8	11.48	0.72	0.17	
1184	GOIII:	10.88	0.75	0.65	
1185	AO	8.97	0.17	0.28	BD+60°2324
1186	F8	11.68	0.67	0.16	
1187	GOV	11.94	0.67	-0.12	
1188	G8III	10.75	1.14	0.89	
1189	AO	11.75	0.52	-0.17	
1190	dK	10.67	1.89	2.53	
1191	AO	12.76	0.48	0.14	
1192	F2	11.12	0.45	-0.02	
1193	AO	12.89	0.38	0.19	
1194	AO	10.89	0.38	-0.05	
1195	AO	7.03	0.07	-0.31	BD+60°2320

CATALOGUE
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No.	Sp.	V	B-V	U-B	remarks
1196	AO	12.69	0.26	0.31	
1197	F8	12.62	0.37	0.22	
1198	G8V	11.40	0.78	0.50	
1199	GO	11.79	0.73	0.31	
1200	F8	10.56	0.57	0.09	
1201	A2	12.19	0.59	0.41	
1202	F8	12.00	0.66	-0.10	
1203	F2	11.82	0.67	0.33	
1204	GOIII	9.85	0.70	0.39	BD+60°2307
1205	K5III	9.77	1.69	1.99	
1206	AO	12.29	0.44	0.36	
1207	AO	12.22	0.82	0.45	
1208	A2	11.38	0.21	0.20	
1209	AO	10.17	2.03	2.45	
1210	F8	10.84	0.52	0.00	
1211	F8	12.21	0.59	0.40	
1212	AO	13.05	1.21	1.13	
1213	AO	12.17	0.54	0.59	
1214	A2	11.39	1.03	0.37	
1215	KOV	10.32	0.53	0.18	BD+60°2299
1216	A2	13.35	1.61	0.46	
1217	dG	12.35	0.75	0.22	
1218	AO	12.80	0.33	0.44	
1219	M	5.93	1.97	2.18	BD+60°2300
1220	F8	11.30	0.64	0.24	
1221	AO	12.52	0.72	0.45	
1222	AO	12.34	0.18	0.23	
1223	A2	12.65	0.46	-0.05	
1224	KOIII-IV	8.37	1.02	0.79:	BD+60°2293
1225	KOIV	9.10	1.56	1.46:	BD+60°2292
1226	F5	12.25	0.61	0.02:	
1227	AO	12.28	0.26	0.09:	blend
1228	AO	12.56	0.30	-0.06:	
1229	F5	9.03	1.03	0.46:	BD+60°2298, blend
1230	AO	12.94	0.51	0.12	
1231	A2	12.78	0.53	0.30	
1232	A2	12.10	0.38	0.17	
1233	G5V	11.42	0.88	0.17	
1234	F8	11.84	0.76	1.81	
1235	F8	11.74	0.94	0.41	
1236	AO	12.61	0.48	0.09:	
1237	A2	11.28	0.35	0.08:	
1238	AO	12.72	0.60	0.07:	
1239	AO	12.27	0.31	-0.17:	
1240	A2	11.11	0.46	0.17:	
1241	F5	10.60	0.56	-0.21:	BD+60°2304
1242	AO	12.40	0.39	0.02:	
1243	B6	11.38	0.28	-0.29:	
1244	B8	10.71	0.26	-0.07:	
1245	A2	10.67	0.33	0.04:	
1246	AO	12.24	0.31	-0.09:	
1247	AO	13.08	0.65	0.09:	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
1248	B5	7.21	0.24	0.05:	BD+60°2303
1249	A0	11.80	0.29	0.01:	
1250	B6	11.06	0.25	-0.23:	
1251	A0	11.64	0.38	-0.15	
1252	F8	11.83	0.66	-0.08	
1253	F8	11.55	0.58	-0.12	
1254	A5	10.88	0.52	0.28:	
1255	K0III	11.18	1.36	1.09	
1256	A2	12.70	0.31	0.07	
1257	B7	9.75	0.23	-0.44	BD+60°2310
1258	A0	12.89	0.71	-0.21:	
1259	A0	12.42	0.32	-0.17	
1260	A4	10.44	0.20	-0.40:	
1261	A2	12.19	0.38	-0.09	
1262	K0III	9.74	1.22	1.02:	BD+60°2312
1263	A0	12.09	0.34	-0.22	
1264	K0III	8.49	0.95	0.57:	BD+60°2311
1265	G8Ib	6.13	1.60	1.60	BD+60°2318
1266	A7	11.27	0.58	0.25	
1267	A0	12.09	0.44	0.14	
1268	A0	12.57	0.44	-0.11	
1269	A2	11.46	0.42	0.23	
1270	A2	11.27	0.89	0.26	
1271	F2	12.00	0.59	0.10	
1272	A2	11.21	0.42	0.36	
1273	K0IV	9.90	1.43	1.59	
1274	K0	12.76	0.51	0.02	
1275	A0	11.82	0.48	0.03	
1276	F2	10.83	0.57	0.31	
1277	A4	10.42	0.30	-0.34	BD+60°2322
1278	A5	7.12	0.30	-0.20	BD+60°2323
1279	A0	11.79	0.60	0.15	
1280	A0	12.12	0.44	0.16	
1281	A0	12.43	0.42	0.05	
1282	A7	11.38	0.46	0.23	
1283	F5	12.02	0.91	-0.22	
1284	A4	12.23	0.53	0.11	
1285	A2	12.04	0.51	-0.17	
1286	A2	12.04	0.51	0.12	
1287	F5	11.56	0.67	-0.01	
1288	B7	11.74	0.34	-0.40	
1289	A2	9.68	0.34	-0.23	BD+61°2225
1290	A2	11.85	0.39	-0.05	
1291	dM	11.10	1.56	1.54:	
1292	F6	8.37	0.46	-0.26:	BD+61°2224
1293	F8	10.66	0.48	-0.22	
1294	A0	12.69	0.66	0.09	
1295	F2	12.08	0.78	0.03	
1296	A0	12.31	0.22	-0.12	
1297	K0III	10.22	1.35	1.36	
1298	F0	12.65	0.51	0.13	
1299	A4	11.92	0.63	0.05	

CATALOGUE

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No.	Sp.	V	B-V	U-B	remarks
1300	B7	11.43	0.22	-0.55	
1301	A0	12.59	0.32	-0.01	
1302	B8	11.40	0.24	-0.20:	
1303	K2III	10.38	1.27	0.81	
1304	G8III-IV	9.69	0.95	0.28	BD+61°2221
1305	G8III	7.10	1.01	0.53:	
1306	A0	11.78	0.41	0.11	
1307	A0	11.97	0.50	0.22	
1308	F8	11.77	0.88	0.20	
1309*	B3V	7.56	0.13	-0.52	BD+61°2209
1310	G8III	10.89	1.22	0.81	
1311*	B2V	8.18	0.14	-0.57	BD+61°2208
1312	F2	10.66	0.40	-0.05:	
1313	K3II	8.16	1.49	1.65:	BD+61°2207
1314	K2III	9.80	1.73	1.90:	BD+61°2205
1315	G5III	9.96	0.79	0.30:	BD+61°2206
1316	F8	11.25	0.57	-0.18:	
1317	F5	10.78	0.51	0.02:	
1318	A0	12.13	0.65	0.00:	
1319	K3I-II	10.63	1.49	1.32	
1320	F0	12.20	0.49	0.21:	
1321	A7	10.74	0.58	0.34	
1322	G5III	10.76	1.34	0.74	
1323	A0	12.36	0.60	0.15	
1324	A3	8.36	0.30	0.14:	BD+61°2199
1325	F6	10.42	0.58	0.02	
1326	A0	13.54	0.49	0.09	
1327	F2	11.59	0.75	0.05	
1328	A0	12.26	0.58	0.24	
1329	A0	12.19	0.41	0.10	
1330	F5	10.15	1.00	0.21:	blend
1331	B6	11.08	0.31	-0.49	
1332	B0	7.53	0.31	-0.85	BD+61°2194
1333	F0	10.65	0.64	0.27	
1334	dK	11.77	1.56	0.90	
1335	A2	11.51	0.53	0.15	
1336	A0	12.58	0.40	0.07	
1337	F0	10.39	0.57	0.21	BD+61°2202
1338	A2	11.44	0.91	0.04	
1339	F8	12.48	0.38	0.04	
1340	F0	11.69	0.73	0.26:	blend
1341	A0	12.20	0.62	0.15	
1342	A0	12.09	0.50	-0.02	
1343	A6	11.69	0.63	0.11	
1344	F8	11.43	0.93	0.19	
1345	A2	11.45	0.61	-0.05	
1346	A0	12.18	0.62	0.74	
1347	K2IV	9.63	0.87	0.24	BD+61°2204
1348	gK	11.21	1.42	1.24	
1349	A2	10.93	0.41	0.01	
1350	A0	12.53	0.55	0.09	
1351	A0	12.67	0.74	0.04	

CATALOGUE
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No.	Sp.	V	B-V	U-B	remarks
1352	AO	12.03	0.30	0.12	
1353	AO	11.78	0.78	0.06	
1354	AO	12.79	0.38	0.03	
1355	AO	12.23	0.77	0.14	
1356	AO	11.46	0.46	0.17	
1357	AO	11.75	0.44	0.06	
1358	AO	11.60	0.22	0.14	
1359	B5	9.16	0.15	-0.41	BD+61°2211
1360	F8	11.59	0.59	0.09	
1361	gK	10.51	1.96	2.33	
1362	F4	10.50	0.44	0.02	
1363	AO	11.18	0.30	0.13	
1364	AO	11.92	0.45	0.06	
1365	AO	11.62	0.41	0.06	
1366	B7	10.88	0.42	-0.20	
1367	AO	12.95	0.47	0.21	
1368	AO	11.90	0.25	-0.02	
1369	AO	11.75	0.42	0.01	
1370	AO	11.93	0.51	0.12	
1371	AO	12.56	0.38	0.09	
1372	A4	10.87	0.43	0.18	
1373	B8	11.30	0.33	-0.30	
1374	F8	12.01	0.65	0.17	
1375	G8III	10.79	1.15	0.89	
1376	FO	10.23	0.43	-0.17	BD+61°2212
1377	G8II	10.79	1.25	1.01	
1378	AO	11.21	0.29	-0.09	
1379	AO	11.35	0.46	0.01	
1380	F8	8.92	0.51	-0.13	BD+61°2210, blend
1381	F2	12.06	0.85	-0.05	
1382	AO	12.80	0.49	0.10	
1383	F2	12.09	1.33	1.27	
1384	F8	10.36	0.38	-0.11:	
1385	F8	10.87	0.51	-0.29:	
1386	AO	12.49	0.23	-0.05	
1387	F8	11.35	0.58	-0.12	
1388	AO	12.54	0.45	0.38	
1389	FO	12.29	0.55	0.14	
1390	F8	11.29	0.45	0.06	
1391	KOIII	10.03	1.59	1.66	
1392	KOIII	10.52	1.15	1.25	BD+61°2219
1393	F8	11.79	0.75	-0.01	
1394	B8	11.28	0.26	-0.21	
1395	F2	11.97	0.38	0.25	
1396	AO	12.82	0.56	0.20	
1397	KOV	10.66	0.88	0.44	
1398	AO	13.04	0.38	0.30	
1399	AO	12.54	0.23	0.43	
1400	B6	10.15	0.22	-0.31	
1401	F8	8.89	0.47	-0.01:	BD+61°2223
1402	KOIII	10.50	1.06	1.18:	
1403	AO	12.35	0.42	0.23:	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
1404	A7	13.32	0.86	0.48:	
1405	K2III	11.15	1.48	1.49:	
1406	A0	12.36	0.59	0.14	
1407	A2	11.02	0.31	-0.21:	
1408	F6	12.62	0.63	0.24	
1409	A0	12.64	0.25	0.40	
1410	F8	12.17	0.49	0.31	
1411	gK	11.33	1.36	1.37	
1412	B8	11.54	0.28	0.12:	
1413	A2	11.18	0.29	-0.19	
1414	F8	10.15	0.20	0.28	BD+61°2228, blend
1415	A0	12.07	0.40	0.36	
1416	F8	11.16	0.53	0.09	
1417	G5	11.57	0.92	0.51:	
1418	F8	10.10	0.86	0.75	
1419	F0	11.65	0.55	0.14	
1420	A4	10.54	0.40	0.32	BD+61°2230
1421	A2	9.91	0.10	0.08	BD+61°2231
1422	K0III	9.64	1.28	1.20	BD+61°2229
1423	F5	10.55	0.68	0.05	
1424	K0III	9.55	0.97	0.92	
1425	F0	10.74	0.34	-0.04	
1426	F5	8.79	0.43	-0.05	BD+61°2226
1427	F5	10.44	0.39	-0.10	
1428	K0V	10.01	1.00	0.77	BD+61°2227
1429	F8	10.95	0.78	0.45	
1430	B1	6.68	0.09	-0.76	BD+61°2233
1431	K2III	11.64	0.58	0.04	
1432	A2	11.37	0.27	-0.29	
1433	F0	11.08	0.51	-0.03	
1434	G0	11.90	0.65	-0.16	
1435	G	12.41	0.93	0.12	
1436	K0	9.94	1.58	1.09	BD+61°2239
1437	F2	11.31	0.77	0.06	
1438	A0	12.82	0.53	0.30	
1439	A0	12.39	0.29	0.07	
1440	A2	10.90	0.17	-0.04	
1441	A0	10.52	0.29	-0.01	
1442	A0	11.89	0.64	0.28	
1443	G5	12.68	0.90	0.26	
1444	gK	9.58	1.64	1.38:	
1445	B6	10.65	0.21	-0.51	
1446	F0	11.44	0.49	0.20	
1447	K0III	9.83	1.23	0.93	
1448	A0	8.42	0.14	-0.03	BD+61°2243
1449	B7	11.05	0.10	-0.27	
1450	A3	10.87	1.14	0.74	BD+61°2248
1451	A2	10.86	0.08	-0.15	
1452	A0	12.49	0.42	0.37	
1453	G0	8.92	0.50	0.11	BD+61°2250
1454	F0	10.06	0.40	0.29	BD+61°2252
1455	G5IV	9.35	0.85	0.51	BD+61°2253

CATALOGUE
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No.	Sp.	V	B-V	U-B	remarks
1456	F8	8.63	0.36	0.05	BD+61°2258
1457	K2III	8.61	1.03	1.27	BD+61°2259
1458	A0	12.08	0.57	-0.01	
1459	A0	11.79	0.42	0.14	
1460	F8	11.66	0.51	0.05	
1461	A2	11.82	0.13	0.10	
1462	K2II-III	10.51	1.36	1.55	
1463	F0	11.07	0.52	0.13	
1464	K2I-II	9.96	1.37	1.51	
1465	F2	11.48	0.73	0.23	
1466	A0	8.73	0.04	0.01	BD+61°2260
1467	A0	12.19	0.43	0.19	
1468	A0	11.79	0.56	0.13	
1469	F6	11.26	0.70	-0.13	
1470	F2	10.34	0.72	0.08	
1471	K0III	9.26	1.14	0.80	BD+61°2264
1472	A2	11.26	0.37	0.13	
1473	K0III	9.49	1.58	1.75	BD+61°2265
1474	A2	11.55	0.48	0.36	
1475	F8	11.01	0.56	-0.14	
1476	F8	10.90	0.56	0.07	
1477	G0	11.21	0.59	0.23	
1478	A0	9.02	0.01	0.05	
1479	A0	11.96	0.21	-0.14	
1480	A2	11.23	0.50	0.38	
1481	K0III	9.44	1.49	1.46	
1482	F8	11.83	0.68	0.09	
1483	A0	11.76	0.39	-0.03	
1484	G5	11.78	0.51	0.01	
1485	K3II	8.77	1.05	1.11	BD+61°2257
1486	F6	9.82	0.41	-0.18	
1487	K3II	8.82	1.02	0.93	BD+61°2255
1488	F2	12.00	0.54	0.20	
1489	K2II	8.51	1.07	1.02	BD+61°2251
1490	K0III	9.82	1.07	0.89	
1491	F6	10.95	0.74	0.08	
1492	A2	11.07	0.32	-0.10	
1493	A0	11.67	0.30	-0.09	
1494	A0	11.67	0.31	-0.03	
1495	K3III	11.05	1.08	0.99	
1496	A2	11.45	0.47	0.08	
1497	A0	11.84	0.51	0.09	
1498	A0	12.10	0.34	-0.24	
1499	K2III	11.19	1.35	0.85	
1500	B7	10.31	0.10	-0.40	BD+61°2247
1501	O5e	8.86	-0.03	-0.73	BD+61°2248
1502	A0	12.33	0.65	0.06:	
1503	A2	10.58	0.25	0.48	
1504	A0	11.91	0.55	0.18	
1505	A2	10.68	0.44	0.07	
1506	A2	11.41	0.42	0.18	
1507	O9.5Ib	5.10	0.09	-0.84	BD+61°2246

CATALOGUE
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No.	Sp.	V	B-V	U-B	remarks
1508	AO	10.95	0.28	0.15	
1509	B7	10.71	0.33	-0.31	
1510	AO	11.39	0.39	0.16	
1511	FO	11.24	0.64	0.28	
1512	AO	11.67	0.35	-0.09	
1513	AO	9.91	0.19	-0.38	BD+61°2242
1514	B3e	10.92	0.19	-0.43	
1515	AO	11.45	0.49	0.03	
1516	KOV	10.07	1.07	0.56	BD+61°2244
1517	AO	9.95	0.35	-0.26	BD+61°2241
1518	AO	11.52	0.41	0.05	
1519	A5	9.39	0.28	0.13	BD+61°2240
1520	AO	11.59	0.44	0.15	
1521	F5	11.26	0.57	0.03	
1522	G5III	9.31	1.04	0.61	
1523	KOIII	8.90	1.22	1.21	BD+61°2336
1524	M	8.98	1.85	2.26	BD+61°2227
1525	AO	10.78	0.62	0.30	
1526	F6	11.37	0.67	0.04	
1527	F6	12.66	0.35	0.22	blend
1528	F6	11.16	0.72	0.11	
1529	A7	11.61	0.58	0.34	
1530	F5	11.65	0.65	-0.02	
1531	KO	9.34	1.54	1.57	
1532	A3	10.51	0.36	0.22	
1533	A2	10.59	0.24	0.13	
1534	KOIII	6.95	1.17	1.18	BD+61°2334
1535	FO	11.76	0.98	0.04	
1536	AO	12.95	0.56	0.21	
1537	AO	12.13	0.84	0.24	
1538	K2	11.34	1.15	0.-5	blend
1539	F8	10.86	0.79	0.22	
1540	AO	9.18	0.21	-0.04	BD+61°2245
1541	AO	11.82	0.50	0.16	
1542	KOV	10.60	0.98	0.55	
1543	A2	11.70	0.53	-0.04	
1544	AO	11.96	0.43	0.19	
1545	A4	10.94	0.59	-0.46	
1546	G8	12.01	0.72	0.29	
1547	F8	12.00	0.69	0.15	
1548	B8	12.83	0.86	0.43	
1549	AO	11.45	0.28	-0.01	
1550	A2	11.00	0.26	-0.04	
1551	KOIII	11.13	1.60	1.09	
1552	KOV	11.76	1.02	0.62:	
1553	F8	11.76	0.49	0.15	
1554	A2	12.00	0.37	0.30	
1555	K2II-III	9.69	1.30	1.61	
1556	F8	11.39	0.47	0.23	
1557	G2	11.29	0.65	0.09	
1558	B6	9.27	0.14	-0.30	BD+60°2359
1559	B8	11.58	0.12	-0.07	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
1560	A2	11.76	0.41	0.31	
1561	A0	11.14	0.32	0.18	
1562	G0	10.79	0.59	0.46	
1563	A0	11.40	0.25	-0.18	
1564	F8	11.55	0.95	0.38	
1565	A0	11.62	0.21	0.25	
1566	A0	12.35	0.33	0.18	
1567	B2III	10.19	0.06	-0.25	BD+60°2355
1568	F8	10.18	0.47	0.06	
1569	K0III	8.18	0.99	0.94	BD+60°2353
1570	A4	12.00	0.34	0.28	
1571	B7	11.12	0.15	-0.16	
1572	B8	10.86	0.19	0.16	
1573	A0	12.27	0.57	0.29	
1574	A0	12.33	0.37	0.04	
1575	A0	12.70	0.35	-0.47	
1576	A2	10.04	0.29	0.23	
1577	F4	11.81	0.62	-0.04	
1578	A0	12.91	0.39	0.11	
1579	F2	10.71	0.52	0.13	
1580	A2	10.00	0.18	-0.20	
1581	A2	11.48	0.57	0.16	
1582	A0	12.46	0.32	0.08	
1583	A4	11.93	0.37	0.18	
1584	F8	11.94	0.70	0.19	
1585	G0	10.50	1.16	0.69	
1586	F6	11.24	0.75	0.05	
1587	B8	10.56	0.29	-0.09	
1588	A0	11.92	0.38	-0.35	
1589	B5	10.80	0.31	-0.01	BD+61°2232
1590	A5	10.79	0.53	0.13	
1591	F8	10.76	0.68	-0.07	
1592	A2	11.35	0.31	0.02	
1593	A0	11.51	0.33	0.19	
1594	B6	11.47	0.38	-0.37	
1595	A0	11.54	0.21	0.17	
1596	F8	11.63	0.48	-0.11	
1597	A0	12.50	0.19	0.15	
1598	A2	11.93	0.51	0.19	
1599	A5	10.90	0.22	-0.02	
1600	A7	11.17	0.61	0.24	
1601	K0III	11.12	1.28	0.91	
1602	A2	10.74	0.42	0.02	
1603	F8	12.04	0.62	0.05	
1604	G5III	10.87	1.29	0.97	
1605	G0	11.99	0.68	0.17	
1607	K0III	8.36	1.74	2.30	BD+60°2333
1608	A2	7.29	0.08	0.06:	BD+60°2334
1609	A0	11.60	1.35	1.30	
1610	A0	11.35	0.26	-0.11	
1611	A0	12.90	0.36	0.19	
1612	A0	12.87	0.69	0.28	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
1613	AO	11.71	0.44	0.14	
1614	AO	12.77	0.38	0.03	
1615	KOV	11.76	0.67	0.11	
1616	AO	12.50	0.46	0.22	
1617	A2	11.52	0.35	0.19	
1618	F8	11.52	0.48	0.05	
1619	A2	11.77	0.33	0.21	
1620	AO	12.03	0.32	0.12	
1621	FO	9.96	0.42	0.27	
1622	AO	12.32	0.04	0.22	
1623	G	10.46	0.57	0.47	
1624	K	7.68	0.93	1.28	BD+60°2357
1625	AO	10.21	0.11	-0.42	BD+60°2356
1626	B2	8.15	0.03	-0.65	BD+60°2352
1627	AO	10.81	0.18	-0.19	
1628	AO	11.81	0.14	0.08	
1629	AO	11.76	0.39	0.11	
1630	AO	13.06	0.36	0.25	
1631	AO	11.68	0.67	0.27	
1632	AO	11.25	0.36	0.13	
1633	A7	10.27	0.32	-0.04	BD+60°2336
1634	AO	12.54	0.72	0.27	
1635	dG	12.18	0.69	0.24	
1636	GO	11.40	0.59	0.12	
1637	F8	11.43	0.50	-0.02	
1638	A2	9.10	0.61	0.58	BD+60°2332
1639	AO	12.34	0.58	0.30	
1640	K	11.79	1.47	1.08	
1641	F8	11.04	0.91	0.24	
1642	B8	10.30	0.43	-0.02	
1643	F5	11.61	0.61	0.19	
1644	AO	12.72	0.54	0.06	
1645	F8	12.04	0.67	0.14	
1646	A2	11.75	0.45	0.28	
1647	GO	11.23	0.70	0.33	
1648	B2	7.88	0.18	-0.70	BD+60°2329
1649	K2III	9.67	1.79	1.93	
1650	B6	11.94	0.36	-0.18	
1651	AO	12.85	0.48	0.46:	
1652	AO	11.73	0.53	0.45	
1653	gK	11.08	1.51	1.41	
1654	G2	10.56	0.60	0.00	
1655	A2	11.13	0.33	-0.05	
1656	F8	11.51	0.88	0.42	
1657	K2III	8.99	2.04	2.48	BD+60°2325
1658	gK	11.52	1.27	1.04	
1659	F8	10.62	0.55	0.06	
1660	AO	12.44	0.53	0.30	
1661	F8	11.50	0.61	0.02	
1662	F5	11.56	0.55	0.11	
1663	AO	7.97	0.01	-0.12	BD+60°2330

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
1664	A0	11.88	0.32	0.05	
1665	A0	11.92	0.33	0.19	
1666	A0	12.35	0.81	0.72	
1667	A0	12.43	0.41	0.39	
1668	F6	8.15	0.66	0.43	BD+60°2335
1669	B6	11.11	0.29	0.13	
1670	F8	11.27	0.29	0.24	
1671	A4	10.00	0.49	0.57	BD+60°2339
1672	B6	10.96	0.35	-0.07	
1673	A0	11.57	1.10	0.86	
1674	F8	11.00	0.63	0.26	
1675	K0	7.30	1.60	0.77:	BD+60°2331
1676	A2	11.09	0.26	-0.08	
1677	A2	12.61	0.34	0.27	
1678	K	10.28	1.42	1.14	
1679	A5	11.10	1.24	0.77	
1680	A0	12.47	0.36	0.36	
1681	F8	12.28	0.23	0.14	
1682	A0	12.26	0.24	0.43	
1683	A0	12.45	0.85	0.35	
1684	K3III	9.13	1.67	2.21	BD+60°2326
1685	F8	10.17	0.64	-0.03	
1686	A2	10.83	0.85	0.64	
1687	F6	11.43	0.78	0.13	
1688	B6	11.46	0.33	-0.28	
1689	A0	12.80	0.26	0.15	
1690	A0	12.58	0.37	0.03	
1691	A0	10.05	0.67	0.26	
1692	F8	11.70	0.82	0.33	
1693	F5	11.10	0.57	0.15	
1694	A5	8.39	0.27	0.35	
1695	A0	10.29	1.46	1.53	
1696	K2III	9.53	1.42	1.44	
1697	B5	11.20	0.28	-0.27	
1698	B5	11.31	0.27	-0.36	
1699	F5	11.46	0.71	0.12	
1700	K0III	10.75	1.21	0.89	
1701	A0	11.96	0.31	0.19	
1702	A0	12.72	0.58	0.08	
1703	B6	11.90	0.18	-0.19	
1704	A0	12.66	0.49	0.39	
1705	A0	14.08	0.75	0.65	
1706	B8	12.68	0.46	0.02	
1707	A0	13.00	0.67	0.47	
1708	A0	12.74	0.48	0.20	
1709	A0	11.88	0.54	0.08	
1710	A0	12.18	0.87	0.36	
1711	A0	13.24	0.20	0.80	
1712	A0	12.57	0.18	0.18	
1713	A0	13.15	0.50	0.20	
1714	A0	12.46	0.57	0.07	
1715	A0	11.91	0.35	0.18	

CATALOGUE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
1716	AO	12.57	0.43	0.08	
1717	AO	12.37	0.38	0.04	
1718	AO	12.73	0.54	0.18	
1719	FO	11.63	0.71	-0.17	
1720	AO	12.25	1.23	0.17	
1721	AO	12.44	0.69	0.00	
1722	AO	12.36	0.91	0.11	
1723	AO	12.59	0.46	0.72	
1724	F2	12.15	0.61	0.00	
1725	AO	12.48	1.32	0.33	
1726	AO	13.09	0.93	0.19	
1727	AO	12.44	0.61	0.29	
1728	AO	12.97	0.79	0.40	
1729	AO	12.67	0.56	0.07	
1730	AO	13.67	1.03	0.72	
1731	AO	12.00	0.83	0.07	
1732	F8	11.30	1.46	0.91	
1733	GO	12.55	0.55	0.08	
1734	AO	12.06	0.98	0.22	
1735	A7	13.67	0.93	0.25	
1736	B8	10.73	1.64	1.41	
1737	FO	11.82	0.52	0.01	
1738	F2	12.57	0.49	0.14	
1739	A5	12.95	1.02	0.20	
1740	F8	12.24	0.84	0.28	
1741	KO	11.25	1.16	0.51	
1742	AO	13.09	1.08	0.16	
1743	AO	12.88	0.70	0.09	
1744	AO	12.14	0.71	0.15	
1745	AO	12.50	0.51	0.10	
1746	AO	12.24	0.49	0.19	
1747	AO	12.57	0.67	0.34	
1748	AO	11.21	0.52	0.09	
1749	AO	13.00	0.61	0.22	
1750	AO	12.56	0.63	0.20	
1751	AO	12.35	0.64	0.23	
1752	AO	12.70	0.60	0.17	
1753	AO	12.19	0.98	0.41	
1754	A5	12.98	0.95	0.15	
1755	AO	12.75	0.75	0.20	
1756	AO	13.12	0.89	0.26	
1757	AO	12.59	0.68	0.16	
1758	AO	13.02	1.76	-	
1759	AO	13.00	0.75	0.11	
1760	AO	12.79	0.62	0.06	
1761	AO	12.88	0.69	0.04	
1762	KOIII	11.23	1.26	0.86	
1763	FO	11.88	0.69	0.13	
1764	AO	12.68	1.05	0.01	
1765	FO	13.09	0.51	--	
1766	A2	12.25	0.49	0.05	
1767	AO	12.68	0.65	0.22	
1768	A2	12.72	0.75	1.11	

TABLE
/Continued/

No.	Sp.	V	B-V	U-B	remarks
1769	F2	12.27	0.72	0.33	
1770	A0	12.05	1.68	1.60	
1771	A0	12.96	0.81	0.28	
1772	A2	12.73	0.89	0.19	
1773	A0	12.93	0.87	0.20	
1774	K2III	10.92	1.61	1.25	
1775	A0	12.95	0.92	0.28	
1776	A0	12.88	0.65	0.37	
1777	A0	12.81	0.80	0.41	
1778	F5	11.73	0.59	0.11	
1779	A0	12.76	0.63	0.06	
1780	A0	13.09	0.92	0.14	
1781	A0	11.95	1.13	0.27	
1782	A4	12.04	1.03	0.23	
1783	A0	12.65	0.90	0.58	
1784	K2III	10.16	1.71	2.03	
1785	A0	12.75	0.81	0.52	
1786	A5	12.58	1.18	0.56	
1787	A0	12.81	0.76	0.04	
1788	A2	12.95	0.75	0.27	
1789	A0	12.83	0.75	0.15	
1790	gK	10.86	1.70	1.53	
1791	A2	12.75	0.76	0.06	
1792	A0	12.66	0.44	0.08	
1793	A0	12.90	0.69	0.04	
1794	A0	13.31	0.78	0.26	
1795	A0	12.86	0.74	0.18	
1796	A0	13.01	0.71	0.23	
1797	A0	13.28	0.61	0.09	
1798	A0	13.16	0.68	0.23	
1799	A0	12.73	0.38	0.09	
1800	A0	13.18	0.19	0.81	
1801	A5	13.22	0.75	0.24	
1802	Me	11.34	2.20	2.00	
1803	Me	10.98	2.24	2.43	
1804*	B1	6.69	0.24	-0.57	BD+61°2216
1805*	B1	7.02	0.26	-0.56	BD+61°2217
1806*	B1	7.90	0.08	-0.73	BD+62°2006
1807*	B3	8.92	0.17	-0.46	BD+61°2215
1808*	B3	9.34	0.18	-0.40	BD+61°2214
1809*	B3	9.83	0.23	-0.33	BD+61°2213
1810*	B3	10.01	0.15	-0.49	

NOTES TO THE CATALOGUE

A point at the right upper side of the running number denotes photoelectrically measured magnitudes.

Blend is remarked if the photographic image of the measured star is distorted by a neighbouring star.

A colon beside the U-B colour denotes that the ultraviolet magnitude of the star is uncertain because of the field error of the ultraviolet filter.

Star No. 1501: The HD type of this star is A3. On our plates it shows an O-type spectrum, with HeII 468.6 in emission.

Star No. 1514: HeI 4026 can be seen in emission.