

# UBV PHOTOGRAPHIC PHOTOMETRY OF STARS IN THE REGION

$\text{AR}_{1950} : 17^{\text{h}}03^{\text{m}} - 17^{\text{h}}41^{\text{m}}$   $\text{Decl}_{1950} : -28.8^{\circ} \text{ to } -33.4^{\circ}$

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**Abstract:** The UBV photographic photometry of 2460 stars and the computed quantities, the interstellar absorption  $A_V$ , the photometric distance  $d$ , the spectral type are given in the Catalogue (Tab. 2). The catalogue number is used to mark the stars in the identification maps 1 to 8 and the number for Tr 28 in map 9, NGC in map 10 and NGC 6416 in map 11. The accurate equatorial and galactic coordinates of 250 OB stars are in Table 3. Figures 2, 3 and 4 represent the pattern of interstellar absorption as a function of distance in the region investigated.

## Introduction

The region investigated in the Milky Way is of rectangular shape with an area of 34 square degrees, limited in right ascension from  $17^{\text{h}}03^{\text{m}}$  to  $17^{\text{h}}41^{\text{m}}$  and in declination from  $-28.8^{\circ}$  to  $-33.4^{\circ}$  at the 1950 equinox. The observational material for three-colour photographic photometry was obtained by the Big Schmidt at Mt. Palomar. The data on the filters and emulsion used are in Table 1.

The effective wavelengths of this colour system  $ubr$  were determined by Vetešník (1962). The comparison of the  $ubr$  photometric system with Johnson's UBV system (1953) was carried out by Perek (1962) and Vetešník (1962); according to these papers the  $ubr$  to UBV transformation is linear. The systems have the following effective wavelengths:

$$\begin{array}{ll} u = 3640 \text{ Å}, & U = 3500 \text{ Å}, \\ b = 4430 \text{ Å}, & B = 4350 \text{ Å}, \\ r = 6410 \text{ Å}, & V = 5550 \text{ Å}. \end{array}$$

## Transformation of the $ubr$ system to the UBV

Rohlfs et al. (1959) published the photoelectric UBV magnitudes of 132 stars from NGC 6405 (M6) obtained by the 60-inch reflector of the Boyden Observatory. The photographic brightnesses of the stars of the present observational material were measured by means of a Becker-type iris photometer at the Konkoly Observatory. The method of least squares was used to derive the transformation equations of the  $ubr$  colour system to the UBV system. The transformation equation for the individual colours read as follows:

$$\begin{aligned} U &= -0.01190 u + 18.907 \\ &\quad \pm 20 \quad \pm 071 \\ B &= -0.01099 b + 18.252 \\ &\quad \pm 06 \quad \pm 061 \\ V &= -0.01122 r - 0.00452 (b - r) + 16.872 \\ &\quad \pm 31 \quad \pm 19 \quad \pm 052 \end{aligned} \quad (1)$$

The computation of transformation equations (1) is based on 40 stars in  $U$ , 60 in  $B$  and 42 stars in  $V$ . The faintest star observed had  $m_V = 15^m42$ , which is not the limiting brightness of the photographic plate, but the weakest standard star.

The mean square deviations of the individual colours were determined not only for the standard stars, measured by Rohlfs et al. (1959), but also for other stars from NGC 6405, which were measured by Eggen (1961):

$$\begin{array}{ll} \sigma U = 0^m06, & (72 \text{ stars}) \\ \sigma B = 0^m06, & (113 \text{ stars}) \\ \sigma V = 0^m05. & (117 \text{ stars}) \end{array} \quad (2)$$

## The Interstellar Absorption Determined by the Q-method

The three-colour photometry makes it possible to determine the interstellar absorption from interstellar reddening. The method is more suitable for star clusters (approximately the same reddening) and for the stars of the field the reduction is determined under the assumption of  $V$ th class luminosity. In the present paper the following relations were used for the computation:

$$Q = (U - B) - 0.72(B - V), \quad (3)$$

$$(B - V)_0 = 0.332 Q, \quad (4)$$

$$E_{B-V} = (B - V) - (B - V)_0, \quad (5)$$

$$A_V = 3.0 E_{(B-V)}. \quad (6)$$

$$V_0 = V - A_V. \quad (7)$$

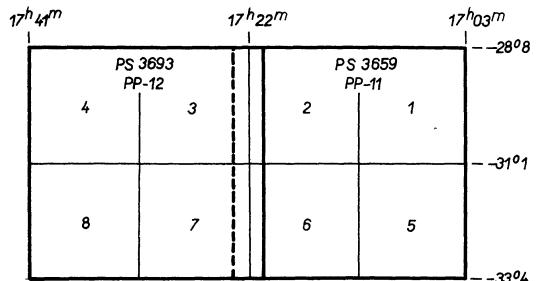


Fig. 1. The scheme of the investigated region in the Milky Way. The numbers on the figure correspond to the numbers on the identification charts 1 to 8.

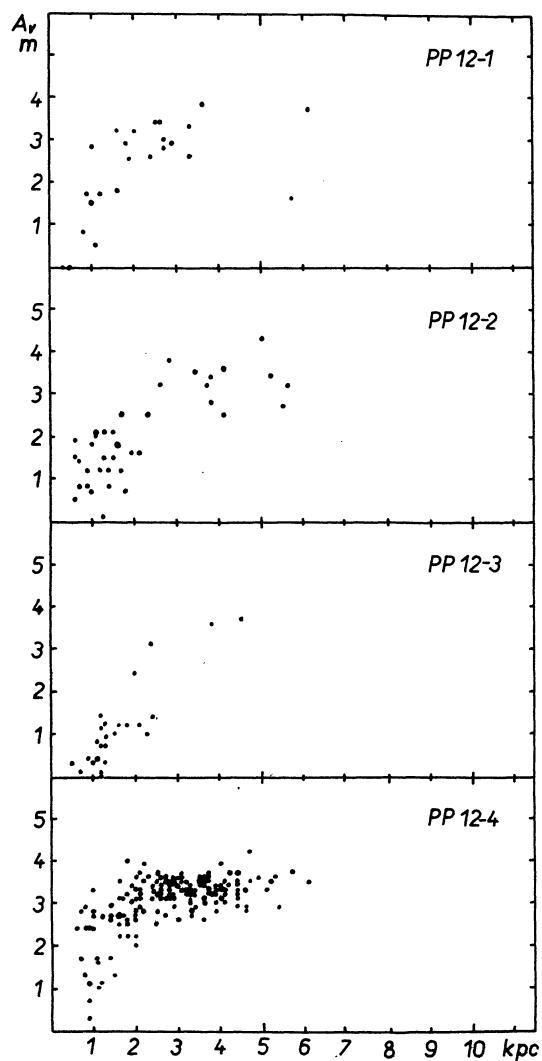


Fig. 2. The dependence of the interstellar absorption on the direction and on the distance. The centre of the regions PP 12-1 to PP 12-4 are listed in Table 4.

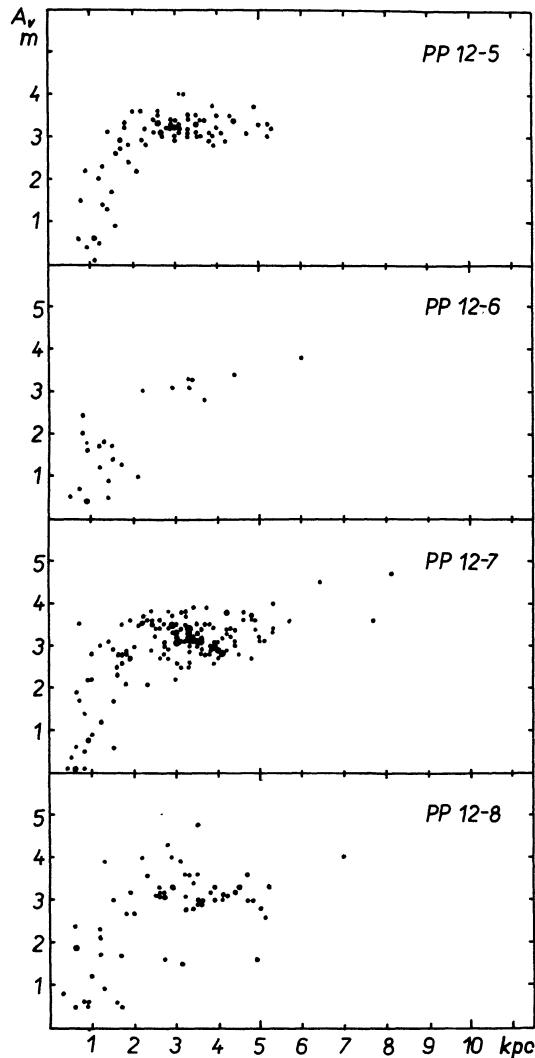


Fig. 3. The dependence of the interstellar absorption on the direction and on the distance. The centre of the regions PP 12-5 to PP 12-8 are listed in Table 4.

The numerical coefficients for the reddening line in the two-colour diagram and the ratio of the total and differential absorption, in other words Eqs (3), (4), and (6), were investigated in the papers of Blanco (1956, 1957). Blanco determined the value  $R = A_V/E_{B-V} = 3.0$ . Hiltner and Johnson (1956) derived  $R = 3.0 \pm 0.3$ . Fernie's and Marlborough's paper (1963) implies that  $R$  changes with galactic longitude. These authors derived the value  $R = 2.90 \pm 0.19$  for the region  $1^{II}$  in the interval  $(342-348^\circ)$ , which is closer to our value of 3.0 in Eq. (6). The absolute magnitude  $M_V$  for the computed values of  $(B-V)_0$  was adopted from Weaver and Ebert (1964). The luminosity was not differentiated in the computa-

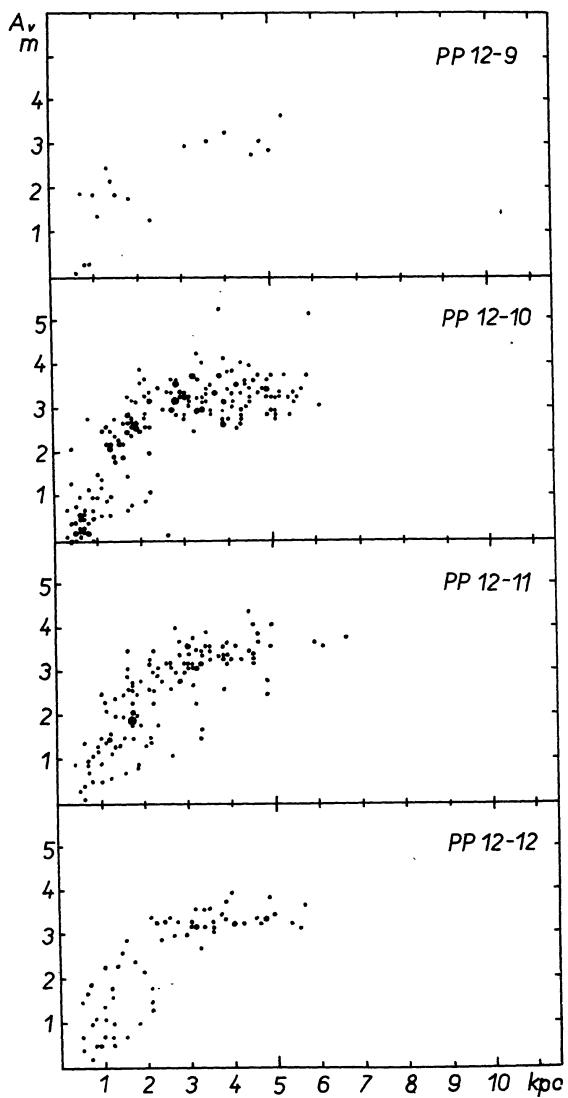


Fig. 4. The dependence of the interstellar absorption on the direction and on the distance. The centre of the regions PP 12-9 to PP 12-12 are listed in Table 4.

tion, all stars having  $M_V$  for the  $V$ -th luminosity class, irrespective.

The determination of the intrinsic colour  $(B - V)_0$  according to Eqs (3) to (7) was thus affected by the observation errors, and its reduction (errors with values (2)), as well as by the fact that the coefficients in Eqs (3) to (7) are only

average values and may differ considerably for some regions of the Milky Way. In determining the spectral type and the implied  $M_V$  the undifferentiated multiplicity of stars is reflected considerably.

As regards the undifferentiated stars with emissions and also a higher luminosity than class V, the values, computed in the usual manner from Eqs (3) to (7), yield values higher than in reality and, therefore the reddening correction is too high. The estimate of the said factors leads to a 20% relative error in the photometric distance.

#### Catalogue of 2460 Stars (Table 2) and Identification Maps

The stars, included in the catalogue, were selected for photometry by comparing the diameters of the stars in the  $u$ ,  $b$ , and  $r$  colours by a blinkcomparator. This method yields good results for weak stars and also in regions with a high surface density of stars. As can be seen in the catalogue, the spectral type computed from the  $UBV$  photometry are close to the spectra determined in HDE for the brighter stars. 29 brighter stars, denoted as OB in the spectral review Luminous Stars in the Southern Milky Way (Stephenson, Sanduleak, 1971), were denoted as OB independently by this method and published in an earlier paper (Antalová, 1970).

The selecting of the stars for measuring is the following. By a suitable exposure of the individual colours (Tab. 1) one can achieve that stars of spectral class O-B3 have the diameter of the disk  $u$  larger than  $b$  and the diameter  $r$  equal to  $b$ , or slightly smaller. Stars with the difference  $u - b$  larger than  $b - r$  were adopted for this photometry. As a result of reddening the differences  $u - b$  and  $b - r$  are shifted towards redder values.

The selected stars were processed by an iris photometer of the Becker type (Becker 1956). The photometric system of this catalogue was created by connecting up our  $ubr$  photographic data with the  $UBV$  photo-electric brightnesses of the stars of NGC 6405 in Rohlfs et al. (1959). A different photometric system was created by transforming our  $ubr$  measurements to  $UBV$  photo-

Table 1

Plate	Emulsion	Filter	Length of exposure	Colour
3693, 3659	103 and 0	UG 1	30 <sup>m</sup>	u
3692, 3658	103 and 0	Wratten	6 <sup>m</sup>	b
3691, 3657	103 and E	OR 1	3 <sup>m</sup>	r

electric brightnesses of the stars of the field (uniformly distributed in maps 1, 2, 5, 6), published in Roslund's paper (1964). This system is indicated by a comma over the number of the star. The third system, marked with a + sign above the number of the star, is Roslund's actual *UBV* system, and the photometric quantities were computed from his *UBV* data.

The stars, measured in this paper, are listed under the same number in the catalogue (Table 2) and in the identification maps 1 to 8. The investigated region in the Milky Way is of a rectangular shape, 34 square degrees in area. The region is divided into 8 parts according to the pattern in Figure 1. The numbers of the individual parts in the diagram correspond to the numbers of the identification maps, reproduced from the Palomar-Big Schmidt plates in the *U* range. The stars are numbered in the sense of increasing right ascension for the whole rectangular region; it begins with a right ascension of  $17^{\text{h}}03^{\text{m}}$  from north to south (from  $-28.8$  to  $-33.4^{\circ}$ , i.e. currently from map 1 to map 5) and again for a right ascension larger by  $20^{\circ}$  one proceeds from north to south. With a view to the density of the measured stars, the tens and units of the number of the star are given in the identification map with the star and the thousands and hundreds are indicated in the map margin by a vertical line.

The more detailed identification maps indicate the stars of the regions of opened star clusters. The stars from region Tr 28 are given under numbers 2130–2207 in the catalogue and shown in

map 9 by numbers identical with those in column 8 of Table 2. Stars 2208–2393 from region NGC 6405 are indicated in identification map 10 by numbers identical with those in column 8 of Table 2. The stars actually belonging to NGC 6405 are denoted by underlined numbers in map 10. Stars 2394–2460 of region NGC 6414 are denoted in map 11 by the numbers in column 9 of Table 2. A more detailed investigation of the appropriateness of the stars to the star clusters, as well as the pattern of the interstellar absorption in the neighbourhood of the star clusters, were published in Antalová's papers (1971, 1972). Only those stars in the catalogue have all their photometric quantities computed, which are uniquely located in the two-colour diagram.

The accurate equatorial and galactic coordinates were computed for 250 OB stars and are given in Table 3. These stars were published in the catalogue of the 250 OB stars itself (Antalová, 1970), however, in order to preserve continuity with previous papers, in which the old OB numbers were used, and with the present catalogue of 2460 stars, the renumbering is given in Table 3. These OB stars, together with the stars with computed B3–B5 spectra, given for the first time in this catalogue, are really early-type stars. In the notes to the catalogue, in Section 5, attention is, therefore, drawn to these OB stars, as well as to IS photometrically interesting stars from an earlier paper (1970).

The catalogue of 2460 stars (Tab. 2) contains the following data:

#### Column

- 
- 1 Current number of star. The same number is used to identify the star in the appropriate identification map.
  - 2 Visual brightness of star *V*, reduced as per Eq. (1); in the fundamental photometric system for the whole region 1 to 8. The bar above the catalogue number of the star indicates the photometric system derived from the *UBV* photoelectric measurements of Roslund (1964). The + sign above the number of the star indicates Roslund's actual *UBV* system.
  - 3 Colour index (*U*–*B*) in the appropriate photometric system.
  - 4 Colour index (*B*–*V*).
  - 5 Total interstellar absorption  $A_V = 3 E_{B-V}$ .
  - 6 Photometric distance of the star *d*, given in kpc.
  - 7 Spectral type of star calculated by the *Q*-method.
  - 8 The letter R indicates a note concerning the given star; the notes are given in Section 5, following the catalogue.

Table 2

1	2	3	4	5	6	7	8
1.	10.38	-0.84	+0.08	1.1	3.5	BO	R
1'	10.67	-0.60	+0.31	1.7	2.7	BO	R
2.	9.63	-0.45	-0.04	0.3	1.1	B6	-
2'	10.21	-0.06	+0.02	0.1	0.9	A0	-
3.	10.44	-0.42	+0.29	1.5	1.2	B3	-
3'	10.52	-0.12	+0.69	2.7	0.7	B3	-
4.	11.15	-0.43	+0.33	1.6	1.6	B3	-
4'	11.24	-0.07	+0.63	2.4	1.0	B5	-
5.	10.55	-0.44	+0.35	1.7	1.3	B2	R
5'	10.55	-0.10	+0.82	3.2	0.7	B2	R
6.	12.80	-0.28	+0.52	2.2	2.6	B3	-
7.	11.91	+0.12	+0.47	-	-	-	-
7'	11.68	+0.09	+0.98	-	-	-	-
8.	12.30	+0.22	+0.54	-	-	-	-
9.	12.57	+0.20	+0.48	-	-	-	-
10.	12.77	+0.42	+0.44	1.2	1.2	A1	-
11.	8.94	-0.68	+0.45	-	-	-	-
12.	11.06	+0.03	+0.46	-	-	-	-
12'	11.07	+0.14	+0.84	-	-	-	-
13.	11.97	-0.04	+0.32	1.2	1.5	B8	-
13'	11.94	-0.01	+0.64	2.4	1.4	B5	-
14.	12.31	+0.10	+0.51	-	-	-	-
15.	13.27	+0.54	+0.41	1.0	1.3	A3	-
16.	14.91	-0.39	+0.63	2.7	-	BO	-
17.	12.09	+0.13	+0.38	-	-	-	-
17'	12.00	+0.06	+0.75	-	-	-	-
18.	12.30	-0.48	+0.22	1.3	3.2	B3	R
18'	12.32	-0.37	+0.46	2.1	2.7	B2	R
19.	13.78	-0.08	+0.09	3.4	2.8	B2	R
20.	11.68	-0.19	+0.31	1.4	1.7	B6	R
20'	11.70	-0.08	+0.62	2.4	1.3	B5	R
21.	10.83	-0.79	-0.07	0.5	2.8	B2	R
21'	11.28	-0.70	-0.04	0.6	2.8	B3	R
22.	14.25	-0.87	+1.15	-	-	-	-
23.	11.28	+0.19	+0.51	-	-	-	-
23'	11.22	+0.22	+0.92	-	-	-	-
24.	12.14	+0.04	+0.02	-	-	-	-
25.	12.42	+0.11	+0.49	-	-	-	-
26.	10.43	-0.24	+0.05	0.4	1.1	B8	-
26'	10.75	+0.03	+0.23	1.1	1.1	B7	R
27.	13.10	+0.15	+0.39	-	-	-	-
28.	10.79	-0.36	-0.04	0.2	1.6	B7	-
29.	10.50	-0.25	+0.06	0.5	1.0	B8	-
29'	10.91	+0.04	+0.16	0.6	1.0	B9	-
29+	10.76	+0.02	+0.24	0.9	0.9	B9	R
30.	14.01	+0.68	+0.55	1.4	1.5	A3	-
31.	11.25	-0.14	+0.62	2.4	1.2	B3	-
32.	14.00	+0.78	+0.25	-	-	-	-
33.	9.60	-0.05	-0.29	0	0.4	A2	R
33+	9.59	-0.23	+0.14	0.7	0.6	B8	R
34.	8.59	-0.72	+0.23	1.6	1.1	B0	R
34+	8.64	-0.74	+0.01	0.8	0.9	B2	R
35.	12.55	+0.22	+0.36	-	-	-	-
36.	15.27	-0.56	+0.36	-	-	OB:	R
37.	10.39	-0.11	+0.04	0.3	1.0	B9	R
37'	10.73	+0.16	+0.22	0.7	0.8	A0	R
37+	10.69	+0.04	+0.23	1.1	1.1	B7	R
38.	11.20	-0.23	0	0.2	1.6	B8	R
38'	11.53	+0.12	+0.10	0.3	1.4	A0	R
38+	11.50	-0.03	+0.22	1.1	1.5	B7	R
39.	11.49	-0.64	+0.11	1.0	3.0	B2	R

1	2	3	4	5	6	7	8
39'	11.70	-0.24	+0.28	1.3	1.8	B6	R
40	15.00	-0.69	+1.05	-	-	-	-
41	13.36	+0.21	+0.42	-	-	-	-
42	12.06	+0.55	+0.22	0.3	0.9	A5-	-
43	9.27	-0.59	+0.27	1.6	1.2	B1	R
43+	9.41	-0.58	+0.24	1.5	0.9	B2	R
44	10.80	-0.63	-0.07	0.8	2.0	B3	R
44'	11.32	-0.32	-0.11	30	1.9	B8	R
44+	11.32	-0.26	+0.13	0.7	1.7	B7	R
45	10.19	-0.27	+0.23	1.1	0.9	B6	R
45'	10.38	-0.01	+0.57	2.1	0.6	B6	R
45+	10.62	-0.05	+0.21	0.8	0.8	B9	R
46	10.92	+0.14	+0.09	0.2	0.8	A1	R
46+	10.88	+0.08	+0.21	0.7	0.9	A0	R
47	9.58	-0.70	-0.26	0	1.4	B5	-
48	9.51	-0.69	-0.18	0	1.5	B4	R
48+	9.46	-0.64	-0.03	0.5	1.2	B3	R
49	11.44	-0.08	+0.18	0.8	1.3	B9	R
50	11.39	-0.33	+0.53	2.3	1.6	B2	R
50'	11.29	-0.18	+0.97	3.8	1.4	B1	R
51	14.72	-0.50	+0.20	1.2	-	B3/	-
52	11.62	-0.01	+0.27	1.0	1.2	B9	-
52'	11.68	+0.06	+0.55	2.0	1.4	B7	-
53	8.50	-0.53	+0.11	0.9	0.4	B3	-
54	11.33	-0.44	+0.11	0.8	2.2	B5	R
54+	11.19	-0.32	+0.13	0.8	1.7	B6	R
55	6.00	-0.74	+0.06	1.0	0.4	B1	R
56	9.42	-0.43	+0.28	1.5	0.8	B3	R
56+	9.59	-0.46	+0.09	0.8	1.0	B5	R
57	10.62	-0.46	-0.13	0	1.7	B7	R
57+	10.52	-0.51	-0.04	0.4	1.9	B5	R
58	14.86	-0.18	+0.30	1.3	1.9	B6	-
58'	11.86	-0.10	+0.62	2.4	1.5	B4	-
59	11.14	-0.65	-0.07	0.4	2.8	B3	-
59'	11.53	-0.31	-0.02	0.2	1.9	B8	-
60	10.92	+0.08	+0.26	0.9	0.9	A0	R
60+	10.84	-0.08	+0.24	1.0	1.0	B8	R
61	12.73	-1.14	+0.67	-	-	-	-
62	9.32	-0.78	+0.01	0.8	1.7	B1	R
63	15.00	-0.01	+0.67	-	-	-	-
64	10.68	-0.63	+0.12	1.1	2.0	B2	R
64'	10.68	-0.29	+0.26	1.3	1.5	B5	R
65	8.01	-0.43	+0.06	0.6	0.5	B5	R
65+	8.01	-0.50	+0.66	0.7	0.5	B5	R
66	12.49	+0.16	+0.22	0.6	1.9	A0	-
67	7.91	-0.11	+0.32	1.3	0.3	B7	R
67+	7.93	-0.25	+0.15	0.8	0.3	B7	R
68	9.86	-0.34	-0.16	0	1.0	B8	R
68+	9.84	+0.09	+0.17	0.5	0.6	A0	R
69	10.98	-0.30	+0.19	1.0	1.4	B6	R
69'	11.20	+0.07	+0.39	1.4	0.8	B9	R
69+	11.32	-0.04	+0.35	1.4	1.0	B8	R
70	14.15	-1.10	+3.01	-	-	-	R
71	11.84	+0.16	+0.26	0.8	0.8	A0	-
71'	11.88	-0.16	+0.54	2.2	1.5	B5	-
72	13.04	+0.20	+0.47	1.5	1.7	B9	-
73	9.12	-0.65	-0.14	0.1	1.2	B4	-
74	9.02	-0.28	+0.10	0.7	0.6	B7	-
75	10.92	-0.05	+0.26	4.0	0.9	B9	-
75'	11.11	+0.23	+0.50	1.6	0.7	B9	-
76	11.53	+0.26	+0.43	1.3	0.9	A0	-
76'	11.49	+0.25	+0.81	2.7	0.6	B8	-
77	9.89	-0.09	+0.34	1.3	0.6	B7	R
77+	9.85	-0.24	+0.26	1.2	0.8	B6	R

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
78	11.96	-0.16	+0.29	1.2	1.8	B7	-	108 <sup>+</sup>	11.76	0	+0.42	1.6	1.1	B8	R
78'	11.95	-0.09	+0.59	2.3	1.5	B5	-	109-	11.87	-0.22	-0.05	0	2.1	B9	R
79-	11.91	-0.26	+0.29	1.3	2.3	B5	-	109'	12.13	-0.08	+0.05	0.3	2.0	A0	R
79'	11.92	-0.16	+0.59	2.4	1.6	B3	-	109 <sup>+</sup>	12.18	+0.06	+0.21	0.7	1.6	A0	R
80-	11.86	-0.02	+0.58	2.2	1.2	B6	R	110-	11.17	+0.05	+0.13	0.4	1.1	A0	R
80'	11.65	-0.02	+1.06	-	-	OB:	R	110'	11.42	+0.18	+0.30	0.9	1.0	A0	R
81-	11.52	-0.42	0	0.4	2.4	B6	R	110 <sup>+</sup>	11.34	+0.10	+0.29	1.0	1.1	B9	R
81'	11.80	-0.09	+0.11	0.5	1.7	B9	R	111	12.27	0	+0.16	0.6	1.8	A0	R
81 <sup>+</sup>	11.80	-0.03	+0.21	0.8	1.4	B9	R	111'	12.31	0	+0.39	1.4	1.6	B8	R
82-	10.77	-0.48	-0.06	0.3	1.8	B6	-	111 <sup>+</sup>	12.34	+0.27	+0.44	1.4	1.3	A0	R
82'	11.21	-0.16	-0.01	0.1	1.5	B9	-	112-	10.89	-0.81	+0.01	0.9	3.5	B1	R
83-	11.57	-0.42	-0.04	0.3	2.3	B7	-	112'	11.27	-0.59	+0.10	1.0	2.5	B3	R
83'	11.85	-0.09	+0.06	0.3	1.7	A0	-	112 <sup>+</sup>	11.24	-0.28	+0.19	1.0	1.6	B6	R
84-	11.79	+0.11	+0.01	0	1.3	A1	-	113'	8.47	-0.31	+0.12	0.8	0.5	B6	R
84'	12.02	0	+0.13	0.5	1.7	A0	-	113 <sup>+</sup>	8.50	-0.21	+0.09	0.5	0.4	B8	R
85-	10.68	-0.48	+0.27	1.4	1.5	B3	R	114-	9.70	-0.38	+0.48	1.9	0.9	B2	R
85'	10.73	+0.04	+0.68	2.5	0.6	B6	R	114 <sup>+</sup>	9.75	-0.40	+0.21	1.2	1.0	B3	R
86-	12.12	+0.09	+0.34	1.2	1.4	B9	-	115	15.15	+0.21	+0.89	3.1	3.7	B6	R
86'	12.05-	+0.04	+0.68	2.5	1.2	B6	-	116	15.15	-0.15	+0.86	3.3	5.5	B2	R
87-	10.61	-0.46	+0.29	1.6	1.4	B3	R	117-	9.84	-0.48	+0.09	0.8	1.2	B4	R
87'	10.65	-0.14	+0.72	2.8	0.8	B3	R	117'	10.24	-0.21	+0.27	1.2	0.8	B7	R
88-	9.67	-0.64	+0.04	0.8	1.3	B2	R	117 <sup>+</sup>	10.33	-0.17	+0.21	1.0	0.9	B7	R
88 <sup>+</sup>	9.64	-0.57	+0.03	0.7	1.2	B3	R	118	10.16	-0.65	+0.03	0.8	1.8	B2	R
89-	11.56	-0.18	+0.14	0.7	1.6	B8	R	118'	10.56	-0.40	+0.18	1.1	1.5	B4	R
89'	11.74	-0.04	+0.33	1.3	1.3	B8	R	118 <sup>+</sup>	10.61	-0.28	+0.12	0.7	1.2	B7	R
89 <sup>+</sup>	11.76	-0.01	+0.31	1.2	1.4	B8	R	119-	9.94	-0.97	+0.04	1.0	3.1	B3	R
90-	11.73	-0.63	+0.38	2.0	4.3	B0	R	119'	10.37	-0.41	+0.19	1.1	1.3	B4	R
90 <sup>+</sup>	11.69	-0.43	+0.73	3.1	3.3	09	R	119 <sup>+</sup>	10.31	-0.49	+0.10	0.9	1.5	B3	R
91-	8.40	-0.29	-0.08	0	0.5	B8	R	120	14.70	+0.21	+1.16	-	-	-	R
91 <sup>+</sup>	8.32-	-0.28	+0.05	0.5	0.5	B7	R	121-	10.41	-0.46	+0.06	0.7	1.5	B5	R
92-	9.51	-0.56	+0.22-	1.4	1.0	B2	R	121 <sup>+</sup>	10.72	-0.43	+0.27	1.4	1.2	B3	R
93-	9.95	-0.42	-0.14	0	1.0	B8	R	121 <sup>+</sup>	10.73	-0.33	+0.13	0.8	1.4	B6	R
93 <sup>+</sup>	9.84	-0.15	+0.09	0.5	0.7	B9	R	122-	9.22	-0.45	+0.24	1.3	0.8	B3	R
94-	8.12	-0.64	+0.16	1.2	0.6	B2	R	122 <sup>+</sup>	9.21	-0.59	+0.08	0.9	0.9	B3	R
94 <sup>+</sup>	8.19	-0.72	+0.13	1.2	0.9	B1	R	123	14.86	-0.02	+0.88	3.3	4.2	B3	-
95-	8.03	-0.10	+0.29	1.2	0.2	B8	R	124-	11.39	-0.12	+0.15	0.7	1.4	B8	R
95 <sup>+</sup>	8.22	-0.33	+0.14	0.8	0.4	B6	R	124'	11.58	-0.02	+0.35	1.3	1.2	B8	R
96-	11.14	+0.15	+0.27	0.8	0.9	A0	R	124 <sup>+</sup>	11.57	+0.04	+0.35	1.3	1.1	B9	R
96 <sup>+</sup>	11.11	+0.70	+0.29	1.0	1.0	B9	R	125-	11.35	+0.07	+0.09	0.3	1.3	A0	R
97-	13.32	+0.20	+0.36	-	-	-	-	125'	11.59	+0.18	+0.25	0.7	1.2	A0	R
98-	10.97	-0.11	+0.25	1.0	1.0	B8	R	125 <sup>+</sup>	11.62	+0.19	+0.28	0.8	1.1	A0	R
98 <sup>+</sup>	10.95-	-0.11	+0.22	0.9	1.1	B8	R	126-	12.05	+0.39	+0.20	0.4	1.0	A3	-
99-	11.71	-0.05	+0.01	0.1	1.7	A0	-	126'	12.10	+0.27	+0.46	1.4	1.1	A0	-
99 <sup>+</sup>	11.95	-0.05	+0.14	0.6	1.7	B9	-	127-	10.01	-0.68	+0.19	1.4	1.9	B1	R
100'-	19.39	-0.26	+0.25-	1.2	1.0	B6	R	127'	10.28	-0.42	+0.47	2.2	1.4	B1	R
100 <sup>+</sup>	10.42	-0.21	+0.21	1.0	1.0	B7	R	128-	11.84	+0.07	+0.13	0.4	1.5	A0	R
101-	9.59	-0.55	+0.29	1.6	1.4	B1	R	128'	11.97	+0.11	+0.33	1.1	1.2	B9	R
101 <sup>+</sup>	9.66	-0.54	+0.17	1.2	1.0	B3	R	128 <sup>+</sup>	11.97	+0.10	+0.37	1.3	1.2	B9	R
102-	9.97	-0.20	+0.28	1.2	0.8	B6	R	129-	10.91	-0.22	+0.27	1.2	1.2	B6	R
102 <sup>+</sup>	10.02	-0.23	+0.22	1.1	0.8	B7	R	130-	10.56	-0.44	+0.12	0.9	1.5	B5	R
103-	10.12	-0.55	+0.32	1.7	1.7	B1	R	130'	10.91	-0.13	+0.27	1.1	1.1	B7	R
103 <sup>+</sup>	10.23	-0.41	+0.73	3.1	1.3	B0	R	130 <sup>+</sup>	10.87	-0.28	+0.21	1.1	1.3	B6	R
104-	10.92	-0.63	+0.11	1.0	1.4	B2	R	131-	9.22	-0.42	+0.40	1.9	0.7	B2	R
104 <sup>+</sup>	11.21	-0.30	+0.27	1.3	1.7	B5	R	132-	9.49	-0.68	-0.05	0.5	1.3	B3	R
104 <sup>+</sup>	11.24	-0.31	+0.26	1.3	1.7	B5	R	132 <sup>+</sup>	9.43	-0.64	+0.05	0.8	1.3	B2	R
105-	9.88	-0.52	+0.22	1.3	1.1	B2	R	133	14.06	+0.08	+0.97	3.5	2.5	B3	-
105 <sup>+</sup>	10.14	-0.30	+0.53	0.9	1.5	B2	R	134-	12.38	+0.37	+0.28	0.7	1.2	A2	R
106-	11.78	+0.26	+0.22	0.5	1.0	A1	R	134 <sup>+</sup>	12.40	+0.23	+0.47	1.5	1.4	B9	R
106 <sup>+</sup>	11.86	+0.25	+0.47	1.5	1.0	A0	R	135-	11.31	+0.09	+0.08	0.2	1.3	A0	R
106 <sup>+</sup>	11.82	+0.29	+0.46	1.4	1.0	A0	R	135 <sup>+</sup>	11.56	+0.20	+0.23	0.7	1.2	A0	R
107-	11.58	-0.05	+0.16	-	-	-	R	136-	11.36	+0.05	+0.24	0.8	1.2	B9	R
107 <sup>+</sup>	11.67	-0.01	+0.21	-	-	-	R	136	11.35	-0.38	+0.6	0.6	2.1	B6	-
108-	11.63	-0.09	+0.21	0.9	1.5	B8	R	136'	11.61	-0.02	+0.19	0.7	1.4	B9	-
108 <sup>+</sup>	11.73	+0.01	+0.46	1.7	1.1	B8	R	137	10.09	-0.38	+0.01	0.4	1.1	B7	R

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
137'	10.46	-0.27	+0.27	1.3	1.2	B5	R	164'	9.57	+0.09	+0.50	1.8	0.4	B8	R
137 <sup>+</sup>	10.36	-0.32	+0.15	0.9	1.1	B6	R	165	14.82	+0.44	+0.99	—	—	—	—
138'	8.22	-0.58	+0.01	0.6	0.7	B3	R	166	13.96	+0.53	+0.79	—	—	—	—
138 <sup>+</sup>	8.15	-0.74	+0.01	0.8	0.7	B2	R	167	14.82	-0.08	+0.81	3.1	4.4	B3	—
139'	9.32	-0.64	+0.19	1.3	1.4	B1	R	168	8.71	+0.07	+0.62	2.2	0.2	B7	—
140 <sup>2</sup>	9.02	-0.55	+0.10	0.9	0.8	B3	—	169	9.31	-0.49	+0.39	1.9	1.0	B1	R
141 <sup>1</sup>	8.70	-0.38	+0.29	1.5	0.6	B3	R	170	12.37	+0.06	+0.49	—	—	—	R
142-	14.36	-0.49	+0.03	0.6	2.5	B5	R	171	14.48	+0.05	+0.57	—	—	—	—
142 <sup>2</sup>	11.64	-0.10	+0.15	0.7	1.4	B9	R	172	12.58	-0.14	+0.48	1.9	2.1	B5	—
142 <sup>+</sup>	11.65	-0.18	+0.19	0.9	1.8	B7	R	173-	11.30	-0.02	+0.27	1.0	1.0	B9	—
143-	12.01	+0.11	+0.06	0.1	1.4	A1	R	173'	11.96	+0.10	+0.54	1.9	0.8	B8	—
143 <sup>3</sup>	12.17	+0.12	+0.22	0.7	1.6	A0	R	174	14.55	+0.06	+0.80	2.9	3.7	B5	—
143 <sup>+</sup>	12.09	-0.04	+0.25	1.0	1.5	B9	R	175	11.03	+0.08	+0.49	—	—	—	—
144 <sup>3</sup>	9.02	+0.63	+0.43	1.0	0.2	A3	R	176	11.55	+0.99	+1.01	—	—	—	—
144 <sup>+</sup>	9.09	+0.10	+0.29	1.0	0.4	B9	R	177	9.36	0	+0.33	—	—	—	—
145-	10.62	-0.36	-0.01	0.3	1.4	B7	—	178	14.00	+0.55	+0.38	0.9	1.9	A3/	—
145 <sup>1</sup>	11.06	-0.06	+0.06	0.3	1.2	B9	—	179	14.68	+0.12	+0.68	—	—	—	—
146-	10.57	-0.37	+0.07	0.7	1.4	B6	R	180	13.41	+0.66	+0.48	—	—	—	—
146 <sup>1</sup>	10.95	-0.07	+0.19	0.8	0.8	B9	R	181	11.91	+0.61	+0.95	—	—	—	—
146 <sup>+</sup>	10.72	-0.23	+0.16	0.8	1.2	B7	R	182	11.41	+1.34	+1.12	—	—	—	—
147 <sup>1</sup>	9.66	+0.09	+0.35	1.2	0.4	B9	R	183	9.48	-0.60	+0.48	—	—	—	—
147 <sup>+</sup>	9.73	-0.34	+0.16	0.9	1.0	B5	R	184	13.73	+0.20	+0.37	—	—	—	—
148-	12.30	+0.18	+0.13	0.3	1.5	A1	R	185	13.35	+0.14	+0.65	—	—	—	—
148 <sup>1</sup>	12.36	+0.10	+0.34	1.0	1.6	B9	R	186	11.47	+0.16	+0.37	—	—	—	—
148 <sup>+</sup>	12.36	+0.13	+0.30	1.0	1.7	B9	R	187	14.60	+0.35	+1.35	/4.7	1.9	B3/	R
149 <sup>1</sup>	9.74	-0.22	+0.10	0.6	0.7	B8	R	188	10.86	-0.67	+0.28	1.7	2.9	B0	R
149 <sup>+</sup>	9.72	-0.53	+0.06	0.8	1.2	B3	R	188 <sup>2</sup>	11.03	-0.31	+0.54	2.3	1.3	B2	R
150-	9.87	-0.57	-0.08	0.4	1.6	B3	R	189 <sup>1</sup>	10.55	-60	+0.19	1.3	1.8	B2	R
150 <sup>2</sup>	10.43	-0.19	-0.03	0.3	1.0	B9	R	190	12.07	-0.24	+0.28	1.3	2.3	B6	—
150 <sup>+</sup>	10.61	-0.42	+0.15	1.0	1.5	B5	R	191	11.52	-0.15	+0.49	1.9	1.5	B5	—
151-	12.33	+0.10	+0.14	0.4	1.9	A0	R	192	11.57	-0.12	+0.57	2.2	1.4	B4	—
151 <sup>1</sup>	12.37	+0.04	+0.37	1.4	1.6	B8	R	193	9.97	+0.71	+1.50	—	—	—	—
151 <sup>2</sup>	12.27	+0.12	+0.33	1.1	1.6	B9	R	194	12.14	+0.36	+0.49	—	—	—	—
152-	10.54	-0.48	+0.13	1.0	1.7	B3	R	195	14.61	+0.03	+0.94	3.5	3.7	B2	R
152 <sup>1</sup>	10.76	-0.16	+0.41	1.7	0.9	B6	R	196	12.80	-0.88	+4.04	—	—	—	R
152 <sup>2</sup>	10.79	-0.38	+0.14	0.9	1.7	B5	R	197	9.72	+1.08	+1.22	—	—	—	—
153 <sup>1</sup>	8.76	-0.42	+0.21	1.2	0.7	B3	—	198	9.49	-0.44	+0.07	0.70	1.0	B5	—
154-	10.68	+0.53	+0.09	—	—	—	R	199	14.66	+0.31	+0.96	—	—	—	—
154 <sup>1</sup>	11.03	-0.21	+0.22	1.0	1.1	B7	R	200	11.03	-0.26	+0.17	0.9	1.4	B7	—
154 <sup>2</sup>	10.89	-0.37	+0.11	0.8	1.2	B5	R	201	14.50	+0.28	+0.92	—	—	—	—
155-	9.48	-0.23	+0.08	0.5	0.7	B8	R	202	12.28	+0.07	+0.19	—	—	—	—
155 <sup>1</sup>	9.97	+0.06	+0.22	0.8	0.6	A0	R	203	15.38	+0.01	+0.99	3.7	5.3	B2	—
156-	11.24	-0.26	+0.43	1.9	1.5	B3	R	204	14.42	+0.02	+0.89	3.3	3.4	B3	—
156 <sup>1</sup>	11.25	-0.10	+0.80	3.1	1.0	B2	R	205	14.78	+0.54	+1.04	—	—	—	—
156 <sup>2</sup>	11.32	-0.18	+0.53	2.2	1.4	B3	R	206	13.23	+0.95	+1.27	—	—	—	—
157-	9.93	+0.24	+0.17	0.4	0.5	A1	R	207	13.84	+0.18	+0.55	—	—	—	—
157 <sup>1</sup>	10.23	+0.47	+0.44	1.2	0.3	A2	R	208	10.25	-0.08	+0.49	1.9	0.7	B6	—
157 <sup>2</sup>	10.18	+0.19	+0.34	1.1	0.6	B9	R	209	14.49	+0.05	+0.85	3.1	3.6	B4	—
158-	10.50	-0.21	+0.06	0.4	1.1	B8	R	210	10.59	-0.31	+0.62	2.6	1.4	B1	R
158 <sup>1</sup>	10.90	+0.07	+0.17	0.6	1.0	B9	R	211	14.41	+0.45	+0.71	—	—	—	—
158 <sup>2</sup>	10.79	+0.06	+0.23	0.8	0.9	B9	R	212	14.93	+0.39	+0.91	—	—	—	—
159-	9.31	-0.08	+0.30	1.2	0.4	B8	R	213	13.90	+0.16	+0.85	—	—	—	—
159 <sup>1</sup>	9.64	+0.34	+0.35	1.0	1.1	A1	R	214	14.19	+0.15	—	—	—	—	—
159 <sup>2</sup>	9.61	0	+0.19	0.7	0.5	B9	R	215	14.02	+0.20	+0.77	—	—	—	—
160-	10.98	-0.06	+0.04	0.2	1.2	A0	R	216	15.16	+0.28	+0.94	—	—	—	—
160 <sup>1</sup>	11.32	+0.27	+0.15	0.3	0.8	A2	R	217	13.87	+0.25	+0.92	—	—	—	—
160 <sup>2</sup>	11.26	-0.06	+0.24	1.0	1.2	B8	R	218	12.29	+0.15	+0.61	—	—	—	—
161-	10.33	+0.03	+0.12	0.3	0.8	B9	R	219	13.36	+0.25	+0.69	—	—	—	—
161 <sup>1</sup>	10.60	+0.31	+0.37	1.2	0.6	B9	R	220	12.60	+0.16	+0.63	—	—	—	—
161 <sup>2</sup>	10.55	+0.08	+0.23	0.8	0.8	B9	R	221	15.45	-0.11	+1.00	—	—	—	R
162-	11.40	+0.11	+0.07	0.2	1.0	A1	R	222	12.59	+0.32	+0.59	—	—	—	—
162 <sup>1</sup>	11.65	+0.20	+0.22	0.6	1.3	A0	R	223	14.83	-0.07	+0.82	3.1	4.8	B2	R
162 <sup>2</sup>	11.59	+0.09	+0.27	0.9	1.3	B9	R	224	14.86	+0.08	+0.77	—	—	—	—
163	13.81	+0.21	+1.13	—	—	—	R	225	15.22	+0.85	+0.91	—	—	—	—
164	9.24	-0.55	+0.44	2.2	1.1	B1	R								

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
226	12.10	+0.25	+0.21	–	–	–	–	287	10.14	-0.16	+0.46	/1.9	0.8	B5/	R
227	11.49	+0.11	+0.14	–	–	–	–	288	10.82	-0.68	+0.18	/1.2	1.3	B2/	R
228	10.94	+0.30	+0.59	–	–	–	–	289	11.84	+0.22	+0.46	–	–	–	–
229	12.84	+0.39	+0.72	–	–	–	–	290	11.26	+1.81	+1.20	–	–	–	–
230	10.40	+0.02	+0.08	0.3	0.8	A0	R	291	12.44	+0.26	+0.38	–	–	–	–
231	14.02	+0.10	+0.86	3.1	2.9	B4	–	292	11.35	+0.10	+0.12	0.3	1.3	A0	R
232	11.37	-0.27	+0.24	1.2	1.6	B6	–	293	7.61	+0.35	+1.28	–	–	–	R
233	11.81	+0.13	+0.54	–	–	–	–	294	14.58	+0.19	+0.92	3.2	3.3	B5	–
234	13.75	+0.28	+0.57	–	–	–	–	295	14.39	+0.26	+0.95	–	–	–	–
235	14.27	+0.16	+0.92	3.3	3.0	B4	–	296	15.10	+0.18	+0.84	–	–	–	–
236	14.92	+0.17	+0.72	–	–	–	–	297	10.19	-0.16	-0.03	0	1.0	B9	R
237	11.67	+0.33	+0.82	–	–	–	–	298	13.48	+0.20	+0.74	–	–	–	–
238	13.35	+0.24	+0.73	–	–	–	–	299	8.69	-0.30	0	0.3	0.5	B8	R
239	15.22	+0.05	+0.92	3.4	4.7	B3	–	300	13.88	+0.16	+0.82	–	–	–	–
240	13.96	+0.41	+0.90	–	–	–	–	301	12.53	+0.39	+0.67	–	–	–	–
241	15.59	+0.03	+1.02	3.7	5.6	B2	R	302	13.44	+0.62	+0.67	–	–	–	–
242	13.78	+0.34	+0.83	–	–	–	–	303	14.44	+0.12	+0.77	–	–	–	–
243	13.58	+0.26	+0.67	–	–	–	–	304	15.23	+0.47	+1.06	–	–	–	–
244	12.62	+0.26	+1.15	–	–	–	R	305	14.64	+0.13	+1.69	–	–	OB:	R
245	11.64	-0.34	+0.18	1.0	2.3	B5	–	306	15.21	+0.10	+0.81	–	–	–	–
246	10.55	-0.08	+0.23	0.9	0.9	B8	R	307	15.59	+0.13	+1.08	3.9	4.8	B2	R
246'	10.66	+0.28	+0.60	1.9	0.5	B9	R	308	15.49	+0.32	+0.90	–	–	–	–
247	12.92	+0.16	+0.62	–	–	–	–	309	13.79	+0.40	+0.84	–	–	–	–
248	13.97	+0.23	+0.64	–	–	–	–	310	14.90	+0.29	+0.76	–	–	–	–
249	12.55	+0.07	+0.59	–	–	–	–	311	10.59	-0.02	+0.63	/2.4	0.8	B5/	–
250	11.80	-0.40	+0.37	1.8	2.2	B2	R	312	11.66	+0.44	+0.38	–	–	–	–
251	9.61	-0.61	+0.16	1.2	1.2	B2	R	313	12.30	+0.47	+0.63	–	–	–	–
251'	9.99	-0.20	+0.38	1.6	0.8	B5	R	314	12.69	+0.42	+0.31	0.7	1.3	A2	–
252	13.42	+0.32	+0.77	–	–	–	–	315	11.35	-0.35	+0.38	1.8	1.7	B3	R
253	15.30	+0.05	+1.01	3.7	4.5	B2/	R	316	14.52	+0.30	+1.02	–	–	–	–
254	13.01	+1.56	+1.24	–	–	–	–	317	14.71	+0.38	+1.44	–	–	OB	R
255	12.34	+0.44	+0.74	–	–	–	–	318	14.47	+0.24	+0.97	–	–	–	–
256	14.11	+0.19	+0.79	–	–	–	–	319	14.57	+0.18	+0.76	–	–	–	–
257	11.33	-0.21	+0.20	1.0	1.5	B7	–	320	10.36	-0.33	+0.23	1.2	1.2	B5	R
258	11.94	+0.06	+0.53	–	–	–	–	321	11.69	-0.09	+0.53	2.0	1.5	B5	R
259	12.25	+0.27	+0.38	–	–	–	–	322	8.27	+0.08	+0.33	–	–	–	–
260	13.66	-0.87	+2.82	–	–	–	R	323	14.82	+0.33	+0.83	–	–	–	–
261	15.26	+0.34	+0.91	–	–	–	–	324	11.02	+0.12	+0.17	–	–	–	–
262	12.91	+0.33	+0.73	–	–	–	–	325	10.97	-0.24	+0.41	1.8	1.3	B4	R
263	13.29	+0.38	+0.67	–	–	–	–	326	14.89	-0.44	+1.31	–	–	–	–
264	12.16	-0.11	+0.49	1.9	1.9	B5	–	327	14.81	+0.34	+0.81	–	–	–	–
265	11.06	+0.06	+0.55	–	–	–	–	328	10.39	-0.17	+0.03	0.3	1.0	B9	–
266	8.40	-0.33	+0.01	0.4	0.5	B7	R	329	9.52	-0.04	+0.17	0.7	0.5	B9	R
267	15.28	+0.16	+0.94	3.3	4.2	B5	–	330	15.17	+0.66	+1.20	–	–	–	–
268	13.14	+0.51	+0.65	–	–	–	–	331	13.06	+1.53	+1.50	–	–	–	–
269	13.33	+0.50	+1.00	–	–	–	–	332	13.06	+1.60	+1.26	–	–	–	–
270	14.02	+0.29	+0.98	–	–	–	–	333	14.31	+0.34	-0.26	–	–	–	–
271	11.28	-0.44	+0.20	1.2	2.1	B3	–	334	12.77	+0.49	+0.62	1.8	1.2	A0	–
272	10.88	-0.18	+0.06	0.4	1.1	B9	R	335	12.57	+0.36	+0.53	1.6	1.2	A0	–
273	13.94	+0.43	+1.01	–	–	–	–	336	13.91	+0.26	+0.89	–	–	–	–
274	14.26	+0.44	+0.88	–	–	–	–	337	10.95	+0.14	+0.36	–	–	–	–
275	10.38	-0.29	+0.05	0.5	1.2	B7	–	338	12.45	+0.31	+0.63	0	0.3	G8	R
276	14.19	+0.37	+0.73	–	–	–	–	339	13.15	+0.54	+0.63	–	–	–	–
277	13.99	+0.44	+1.60	–	–	–	OB: R	340	12.82	+0.29	+0.72	–	–	–	–
278	11.82	+0.01	+0.36	–	–	–	–	341	13.51	+0.57	+0.70	–	–	–	–
279	13.79	+0.31	+0.94	–	–	–	–	342	12.79	+0.41	+0.70	–	–	–	–
280	13.78	+0.37	+0.52	–	–	–	–	343	14.58	+0.16	+0.84	–	–	–	–
281	12.42	+0.20	+0.48	–	–	–	–	344	12.25	+0.35	+0.43	–	–	–	–
282	11.64	+0.04	+0.24	–	–	–	–	345	13.83	+0.43	+0.58	–	–	–	–
283	10.53	-0.08	+0.14	0.6	0.9	B9	–	346	13.03	+0.34	+0.66	–	–	–	–
283'	10.74	+0.29	+0.43	1.3	0.6	A0	–	347	10.42	-0.01	+0.09	0.3	0.9	B9	R
284	10.98	-0.13	+0.55	1.9	0.7	B8	–	348	14.38	+0.20	+0.70	–	–	–	–
285	7.64	+0.17	+0.77	–	–	–	–	349	15.16	+0.28	+0.94	–	–	–	–
286	15.73	+0.02	+1.01	3.8	6.0	B2	R	350	10.69	-0.10	+0.45	1.8	0.9	B6	–

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
351	12.35	+0.44	+0.33	0.8	1.1	A2	–	414	12.87	+0.42	+0.53	–	–	–	–
352	10.35	-0.31	-0.06	0.1	1.2	B8	R	415	13.35	+0.40	+0.55	–	–	–	–
353	11.44	+0.19	+0.56	–	–	–	–	416	13.53	+0.30	+0.66	–	–	–	–
354	15.07	+0.32	+0.81	–	–	–	–	417	13.87	+0.26	+0.60	–	–	–	–
355	13.96	+0.66	+1.77	–	–	–	–	418	13.18	+0.43	+0.46	–	–	–	–
356	13.91	+0.23	+0.79	–	–	–	–	419	15.47	+0.05	+0.95	3.5	4.9	B3	–
357	13.72	+0.27	+0.90	–	–	–	–	420	15.23	+0.13	+0.94	3.4	4.5	B4	–
358	11.84	+0.47	+0.58	1.7	0.6	A0	R	421	12.85	+0.28	+0.77	–	–	–	–
359	13.85	+0.42	+0.88	–	–	–	–	422	15.17	+0.29	+0.57	–	–	–	–
360	14.10	+0.27	+0.66	–	–	–	–	423	14.02	+0.50	+1.00	–	–	–	–
361	10.20	+0.08	+0.46	–	–	–	–	424	12.70	+0.14	+0.41	–	–	–	–
362	13.83	+0.28	+0.50	–	–	–	–	425	14.77	+0.15	+0.80	–	–	–	–
363	12.68	+0.37	+0.52	–	–	–	–	426	14.49	+0.12	+0.87	3.1	3.3	B5	–
364	14.67	+0.11	+0.79	–	–	–	–	427	14.82	+0.37	+1.10	–	–	–	–
365	11.09	-0.20	+0.09	0.5	1.4	B8	–	428	13.49	+0.38	+0.57	–	–	–	–
366	12.44	+0.31	+0.49	–	–	–	–	429	10.42	-0.41	+0.39	1.9	1.2	R2	R
367	13.82	+0.41	+0.54	–	–	–	–	430	9.56	+0.05	+0.05	0.1	0.6	A0	R
368	11.17	-0.38	+0.37	1.7	1.5	B3	–	431	12.50	-0.03	+0.47	1.8	1.8	B7	R
369	11.72	+0.06	+0.78	–	–	–	–	432	10.09	-0.31	+0.28	1.4	1.1	B4	R
370	14.00	+0.34	+0.92	–	–	–	–	433	14.15	+0.40	+0.79	0	0.5	K0	R
371	14.53	+0.44	+0.95	–	–	–	–	434	14.87	+0.21	+0.65	–	–	–	–
372	14.88	+0.31	+0.98	–	–	–	–	435	14.59	+0.47	+1.09	–	–	–	–
373	15.46	+0.01	+0.90	3.3	5.3	B3	–	436	13.64	+0.44	+0.70	–	–	–	–
374	12.79	+0.68	+1.30	–	–	–	–	437	14.43	+0.37	+0.92	–	–	–	–
375	14.23	+0.46	+1.13	1.4	0.5	G0	R	438	13.65	+0.52	+0.66	–	–	–	–
376	12.20	+0.44	+0.57	–	–	–	–	439	8.24	-0.40	+0.29	1.5	0.5	B3	R
377	11.64	+0.06	+0.29	–	–	–	–	440	12.37	0	+0.64	2.4	1.7	B5	–
378	13.27	+0.65	+0.92	–	–	–	–	441	15.20	+0.21	+0.84	–	–	–	–
379	12.44	+0.62	+0.61	–	–	–	–	442	14.18	+0.41	+0.89	–	–	–	R
380	12.78	+0.44	+0.42	–	–	–	–	443	10.92	-0.21	+0.41	1.7	1.2	B5	–
381	13.10	+0.61	+0.45	1.1	1.2	A3	–	444	14.04	+0.15	+0.83	–	–	–	–
382	13.85	+0.24	+0.95	–	–	–	–	445	12.96	+0.42	+0.70	–	–	–	–
383	13.84	+0.24	+0.93	–	–	–	–	446	14.03	+0.23	+0.64	–	–	–	–
384	9.21	-0.21	-0.06	–	–	–	–	447	9.55	-0.10	0	0.1	0.7	B9	–
385	13.53	+0.46	+0.60	–	–	–	–	448	12.58	+0.34	+0.52	–	–	–	–
386	13.03	+0.31	+0.71	–	–	–	–	449	15.64	-0.26	+1.06	–	–	OB:	R
387	14.92	+0.24	+0.94	–	–	–	–	450	10.43	-0.09	+0.07	0.3	0.9	B9	–
388	10.73	+0.12	+0.14	0.4	0.9	A0	R	451	10.96	-0.39	+0.86	3.6	3.8	O5	R
389	14.41	+0.36	+0.70	–	–	–	–	452	13.34	+0.25	+0.64	–	–	–	–
390	13.91	+0.29	+0.67	–	–	–	–	453	10.80	-0.39	+0.54	3.5	1.0	B1	R
391	11.76	+0.19	+0.64	–	–	–	–	454	15.19	+0.07	+0.94	3.4	4.4	B3	–
392	14.04	+0.20	+0.74	–	–	–	–	455	11.29	+0.39	+0.29	0.7	0.7	A2	R
393	15.25	+0.15	+0.85	–	–	–	–	456	13.79	+0.42	+0.86	–	–	–	–
394	14.08	+0.42	+0.94	–	–	–	–	457	15.02	+0.29	+0.88	–	–	–	–
395	14.09	+0.42	+0.77	–	–	–	–	458	14.62	+0.20	+0.80	0.6	0.9	G0	R
396	14.17	+0.18	+0.64	–	–	–	–	459	14.65	+0.38	+1.35	4.7	2.0	B3	R
397	12.99	+1.19	+1.34	–	–	–	–	460	15.13	+0.19	+0.94	1.0	1.4	G0	R
398	12.91	+0.12	+0.58	–	–	–	–	461	14.31	+0.46	+0.89	–	–	–	–
399	13.55	+0.44	+0.80	0	0.3	K0	R	462	10.48	+0.10	+0.12	0.3	0.9	A0	–
400	13.91	+0.26	+0.97	1.0	0.5	G2	R	463	15.04	+0.18	+0.95	–	–	–	–
401	12.44	+1.00	+1.28	1.0	0.1	K1	R	464	14.54	+0.37	+1.03	–	–	–	–
402	14.48	+0.25	+0.68	0	0.6	G8	R	465	15.21	+0.13	+1.07	3.8	3.8	B3	–
403	14.87	+0.21	+0.77	0.2	1.0	G2	R	466	13.34	+0.47	+0.78	–	–	–	–
404	13.50	+0.93	+0.82	–	–	–	–	467	14.52	+0.19	+0.89	–	–	–	–
405	15.18	+0.38	+1.32	–	–	–	–	468	13.26	+0.46	+0.58	–	–	–	–
406	12.32	-0.08	+0.54	2.2	1.9	B4	–	469	11.09	-0.20	+0.33	1.4	1.2	B6	R
407	14.73	+0.40	+1.23	–	–	–	–	470	13.25	+0.25	+1.91	–	–	OB:	R
408	15.47	+0.44	+1.03	–	–	–	–	471	12.91	+0.30	+0.69	–	–	–	–
409	11.33	+0.08	+0.63	–	–	–	–	472	14.12	+0.14	+0.72	–	–	–	–
410	10.85	-0.17	+0.57	2.3	1.0	B3	–	473	10.06	-0.19	+0.49	2.0	0.8	B4	R
411	14.00	+0.13	+0.92	3.3	2.7	B4	–	474	9.42	-0.26	+0.57	2.4	0.6	B3	R
412	9.11	-0.04	-0.10	–	–	–	–	475	12.45	+0.55	+0.81	0	0.2	K1	R
413	11.62	+0.03	+0.19	–	–	–	–	476	11.02	+0.15	+0.45	0.6	0.4	A7	R

Table 2 – continued

1	2	3	4	5	6	7	8
477	14.15	+0.24	+1.09	3.8	2.2	B4	R
478	13.29	+0.45	+0.73	–	–	–	–
479	14.39	+0.77	+1.00	–	–	–	–
480	14.08	+0.21	+0.78	–	–	–	–
481	14.24	+0.19	+0.69	–	–	–	–
482	13.12	+0.16	+0.72	–	–	–	–
483	13.49	+0.27	+0.63	–	–	–	–
484	14.21	+0.61	+1.02	–	–	–	–
485	14.63	+0.30	+0.81	–	–	–	–
486	13.87	+0.18	+0.71	–	–	–	–
487	14.26	+0.58	+1.34	–	–	–	–
488	14.30	+0.19	+0.69	–	–	–	–
489	14.18	+0.33	+0.85	–	–	–	–
490	15.27	+0.39	+0.94	–	–	–	–
491	13.77	+0.24	+0.85	–	–	–	–
492	11.69	-0.34	+0.24	1.3	2.1	B5	R
493	15.48	+0.28	+0.91	0.6	1.2	G2	R
494	9.70	–	–	1.1	1.0	B4	R
495	12.10	-0.07	+0.24	1.0	1.8	B8	R
496	11.77	+0.02	+0.20	0.7	1.5	B9	R
497	10.28	-0.15	+0.23	1.0	0.7	B8	–
498	12.07	+0.15	+0.62	–	–	–	–
499	11.34	+0.07	+0.57	–	–	–	–
500	11.65	+0.16	+0.36	–	–	–	R
501	13.42	+0.26	+1.19	–	–	–	–
502	13.33	+0.42	+0.79	–	–	–	–
503	10.57	-0.23	+0.12	0.7	1.2	B7	R
504	12.51	+0.26	+0.67	–	–	–	–
505	12.75	+0.31	+0.59	–	–	–	–
506	12.21	+0.34	+0.58	–	–	–	–
507	13.78	+0.17	+0.82	–	–	–	–
508	10.25	-0.20	+0.39	1.6	0.9	B5	R
509	12.67	+0.44	+0.76	0	0.2	K0	R
510	14.71	+0.08	+0.89	3.2	3.8	B4	R
510				1.0	1.0	F6	R
511	12.35	-0.06	+0.79	3.0	1.5	B3	–
512	14.44	+0.18	+0.71	–	–	–	–
513	12.91	+0.44	+0.76	–	–	–	–
514	9.88	-0.23	+0.07	0.5	0.8	B8	–
515	15.96	-0.24	+1.12	–	–	–	R
516	15.22	+0.27	+0.98	–	–	–	–
517	15.04	+0.29	+1.04	–	–	–	–
518	13.46	+0.36	+0.76	–	–	–	–
519	13.39	+0.39	+0.73	0	0.3	K0	R
520	14.50	+0.23	+0.82	0.6	0.9	G0	R
521	14.03	+0.30	+1.04	–	–	–	–
522	10.68	-0.32	+0.11	0.7	1.2	B7	R
523	10.08	-0.73	+0.14	1.3	3.7	B1	R
524	13.91	+0.27	+0.84	–	–	–	–
525	13.26	+0.49	+0.56	–	–	–	–
526	10.33	-0.03	+0.39	–	–	–	–
527	11.81	+0.15	+0.60	–	–	–	–
528	12.13	+0.25	+0.62	–	–	–	–
529	14.10	+0.19	+0.67	–	–	–	–
530	13.73	+0.44	+0.76	–	–	–	–
531	11.82	+0.02	+0.28	–	–	–	–
532	13.39	+0.37	+0.64	–	–	–	–
533	13.25	+1.80	+1.02	–	–	–	–
534	13.78	+0.47	+0.52	–	–	–	–
535	14.50	+0.50	+1.07	–	–	–	–
536	11.76	+0.24	+0.51	–	–	–	–
537	14.94	+0.49	+0.87	–	–	–	–
538	9.89	-0.28	+0.08	0.6	0.8	B8	–
539	14.09	+0.27	+0.85	–	–	–	–
540	14.41	+0.86	+1.00	–	–	–	–
541	15.44	+0.19	+1.12	/4.0	3.9	B3/	R
542	14.96	+0.32	+1.48	–	–	OB:	R
543	9.55	-0.04	+0.02	0.1	0.6	B9	R
544	13.94	+0.73	+0.89	–	–	–	–
545	15.20	+0.21	+0.85	–	–	–	–
546	15.27	+0.18	+0.90	–	–	–	–
547	10.62	+2.44	+2.72	–	–	–	–
548	13.39	+0.39	+0.73	–	–	–	–
549	9.82	–	–	1.4	1.0	B3	R
550	14.39	+0.21	+0.86	–	–	–	–
551	10.11	-0.32	+0.09	0.7	1.0	B7	R
552	14.06	+0.24	+0.87	–	–	–	–
553	12.81	+0.17	+0.40	–	–	–	–
554	14.08	+0.11	+0.69	–	–	–	–
555	13.94	+0.13	+0.87	3.1	2.5	B5	–
556	14.00	+0.28	+0.84	–	–	–	–
557	14.54	+0.21	+0.86	–	–	–	–
558	11.58	+0.08	+0.40	–	–	–	–
559	14.27	+0.11	+0.80	–	–	–	–
560	13.11	+0.47	+0.70	–	–	–	–
561	13.33	+0.53	+0.78	–	–	–	–
562	10.79	-0.01	+0.40	1.5	0.8	B8	–
563	14.11	+0.20	+0.82	–	–	–	–
564	12.45	+0.40	+0.75	–	–	–	–
565	11.15	-0.19	+0.56	2.3	1.2	B3	–
566	13.13	+0.66	+2.53	–	–	–	–
567	13.23	+0.32	+0.74	–	–	–	–
568	10.87	-0.22	+0.22	1.0	1.2	B7	R
569	14.79	+0.36	+1.06	–	–	–	–
570	14.86	+0.19	+0.80	–	–	–	–
571	15.57	+0.20	+0.97	3.4	4.7	B5	–
572	14.50	+0.58	+0.80	–	–	–	–
573	15.35	+0.48	+0.88	–	–	–	–
574	15.09	+0.20	+0.93	3.3	4.0	B5	–
575	13.26	+0.30	+0.85	–	–	–	–
576	14.75	+0.16	+0.91	3.2	3.5	B5	–
577	13.63	+0.48	+0.76	–	–	–	–
578	14.07	+0.26	+0.97	–	–	–	–
579	14.85	+0.55	+1.02	–	–	–	–
580	11.57	-0.27	+0.24	1.2	1.7	B6	–
581	10.80	-0.07	+0.02	0.1	1.2	B9	–
582	11.08	-0.40	+0.36	1.8	1.6	B2	R
583	12.95	+0.48	+0.82	–	–	–	–
584	12.04	+0.29	+0.22	–	–	–	–
585	12.72	+0.27	+0.56	–	–	–	–
586	14.32	+0.58	+0.93	–	–	–	–
587	14.52	+0.14	+0.77	–	–	–	–
588	14.84	+0.43	+1.11	–	–	–	–
589	13.99	+0.40	+0.94	–	–	–	–
590	13.93	+0.12	+0.84	–	–	–	–
591	14.75	+0.07	+0.94	3.4	3.7	B3	–
592	14.57	+0.31	+1.02	–	–	–	–
593	13.23	+0.37	+0.57	–	–	–	–
594	11.71	+0.12	+0.33	–	–	–	–
595	12.85	+1.57	+1.24	–	–	–	–
596	14.57	+0.33	+0.93	–	–	–	–
597	13.71	+0.32	+0.58	–	–	–	–
598	13.04	+0.39	+0.76	–	–	–	–
599	14.58	+0.12	+0.81	–	–	–	–
600	14.76	+0.18	+1.16	–	–	OB:	R
601	14.22	+0.51	+0.81	–	–	–	–

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
602	13.91	+0.10	+0.95	3.4	2.2	B3	–	663	13.32	+0.69	+0.89	–	–	–	–
603	13.09	+0.33	+0.91	–	–	–	–	664	14.98	+0.15	+0.76	–	–	–	–
604	13.03	+0.28	+0.74	–	–	–	–	665	14.37	+0.54	+0.77	–	–	–	–
605	14.82	+0.31	+1.01	–	–	–	–	666	14.05	+0.58	+1.11	–	–	–	–
606	14.44	+0.07	+0.81	2.9	3.6	B5	–	667	14.21	+0.10	+0.89	3.2	3.0	B4	–
607	13.00	+0.86	+0.84	–	–	–	–	668	11.11	+0.34	+0.12	–	–	–	–
608	12.55	+0.19	+0.67	–	–	–	–	669	12.89	+0.36	+0.73	–	–	–	–
609	13.16	+0.39	+0.72	–	–	–	–	670	14.09	+0.24	+0.94	–	–	–	–
610	13.21	+0.38	+0.66	–	–	–	–	671	14.34	+0.20	+0.92	–	–	–	–
611	14.06	+0.14	+0.67	0	0.9	G2	R	672	14.63	+0.54	+1.06	–	–	–	–
612	14.05	+0.29	+0.94	0.4	0.4	G8	R	673	14.41	+0.28	+0.74	–	–	–	–
613	13.88	+0.24	+0.99	–	–	–	–	674	15.06	+0.10	+0.84	–	–	–	–
614	14.75	+0.14	+0.80	–	–	–	–	675	14.32	+0.46	+0.87	–	–	–	–
615	9.97	+0.05	+0.19	0.2	0.7	B9	R	676	13.89	+0.37	+1.00	–	–	–	–
616	11.01	-0.03	+0.01	0.1	1.3	B9	R	677	11.21	-0.25	+0.11	0.6	1.6	B7	R
617	15.63	0	+1.17	4.3	5.0	B0	R	678	14.60	+0.41	+1.00	–	–	–	–
618	10.82	-0.33	+0.27	1.3	1.4	B5	R	679	14.68	+0.05	+0.83	3.0	4.1	B4	–
619	10.71	+0.11	+0.05	0.1	1.1	A0	R	680	13.94	-0.07	+0.95	3.6	3.4	B2	R
620	14.38	+0.39	+0.83	–	–	–	–	681	14.36	+0.71	+1.35	–	–	–	–
621	13.64	+0.41	+0.60	–	–	–	–	682	12.61	+0.31	+0.57	–	–	–	–
622	9.88	-0.14	+0.11	–	–	–	–	683	14.31	+0.46	+0.93	–	–	–	–
623	15.11	+0.37	+0.94	–	–	–	–	684	15.82	-0.09	+0.62	3.2	5.5	B2	–
624	14.31	+0.33	+0.78	–	–	–	–	685	13.86	+0.18	+1.26	–	–	OB:	R
625	14.14	+0.24	+0.88	–	–	–	–	686	14.12	+0.20	+0.81	–	–	–	–
626	15.42	+0.01	+0.99	3.7	4.9	B2	R	687	12.59	+0.11	+0.80	–	–	–	–
627	14.53	+0.27	+1.77	–	–	OB	R	688	14.98	+0.30	+0.94	–	–	–	–
628	13.91	+0.18	+0.74	–	–	–	–	689	14.53	+0.19	+0.87	–	–	–	–
629	15.40	+0.13	+0.72	–	–	–	–	690	13.30	+0.32	+0.73	–	–	–	–
630	11.23	+0.19	+0.21	0.6	1.1	A0	R	691	14.77	+0.20	+0.94	–	–	–	–
631	13.23	+0.37	+0.80	–	–	–	–	692	13.57	+0.62	+0.73	–	–	–	–
632	14.83	+0.19	+1.12	–	–	–	R	693	14.03	+0.22	+0.95	–	–	–	–
633	15.27	+0.20	+0.93	–	–	–	–	694	14.21	+0.29	+0.95	–	–	–	–
634	13.30	+0.29	+0.75	–	–	–	–	695	13.71	+0.52	+0.51	–	–	–	–
635	14.59	+0.23	+0.71	–	–	–	–	696	13.22	+0.43	+0.92	–	–	–	–
636	14.05	+0.77	+1.01	–	–	–	–	697	13.52	+0.38	+0.47	–	–	–	–
637	13.10	+0.15	+0.77	–	–	–	–	698	9.44	-0.20	+0.48	2.0	0.6	B4	R
638	14.47	+0.42	+0.99	–	–	–	–	699	12.17	+0.29	+0.63	–	–	–	–
639	14.55	+0.36	+0.92	–	–	–	–	700	12.88	+0.25	+0.61	–	–	–	–
640	14.85	+0.29	+0.98	–	–	–	–	701	13.24	+0.36	+0.74	–	–	–	–
641	14.80	+0.37	+1.22	–	–	–	R	702	14.13	+0.10	+0.84	–	–	–	–
642	14.04	+0.16	+0.96	3.4	2.5	B4	R	703	11.64	+0.32	+0.44	–	–	–	–
642				1.0	0.6	G0	R	704	15.29	+0.33	+1.00	–	–	–	–
643	14.40	+0.04	+0.83	/3.1	3.5	B4/	R	705	15.48	+0.17	+0.89	–	–	–	–
643				1.0	0.9	F6	R	706	12.08	-0.01	+0.46	1.7	1.5	B7	–
644	15.59	-0.18	+0.95	–	–	–	R	707	14.19	+0.44	+0.87	–	–	–	–
645	13.28	+0.46	+0.74	–	–	–	–	708	12.87	+0.27	+0.73	–	–	–	–
646	15.87	-0.15	+1.09	–	–	–	R	709	14.42	+0.09	+0.77	–	–	–	–
647	14.93	+0.25	+1.02	3.6	3.3	B5	–	710	13.89	+0.33	+1.03	–	–	–	–
648	14.13	+0.12	+0.84	3.0	2.9	B5	R	711	14.24	+0.30	+1.23	–	–	–	R
649	14.37	-0.01	+0.67	–	–	–	–	712	15.05	+0.37	+0.79	–	–	–	–
650	10.07	-0.21	+0.16	0.8	0.7	B8	R	713	13.63	+0.67	+1.37	–	–	–	–
651	15.17	+0.13	+0.94	3.3	4.4	B4	–	714	14.99	+0.41	+0.96	–	–	–	–
652	13.76	+0.22	+0.55	–	–	–	–	715	13.71	+0.55	+0.89	–	–	–	–
653	14.22	-0.03	+0.83	3.1	3.3	B3	–	716	11.35	-0.47	+0.28	1.5	2.1	B2	R
654	13.63	+0.20	+0.67	–	–	–	–	717	14.81	+0.05	+0.90	3.3	4.0	B3	–
655	11.72	+0.07	+0.21	–	–	–	–	718	15.26	+0.11	+0.93	3.3	4.6	B4	–
656	14.95	+0.01	+0.94	3.5	4.3	B2	R	719	11.95	-0.26	+0.40	1.8	2.1	B4	–
657	19.36	+0.38	+0.48	–	–	–	–	720	8.86	-0.56	+0.14	1.0	0.8	B3	R
658	14.22	+0.09	+0.88	3.2	3.1	B4	–	721	11.85	0	+0.62	2.3	1.3	B6	–
659	14.73	+0.50	+1.02	–	–	–	–	722	13.95	+0.38	+1.21	–	–	–	–
660	13.50	+0.30	+0.63	–	–	–	–	723	12.93	+0.38	+0.65	–	–	–	–
661	14.20	+0.31	+0.93	–	–	–	–	724	11.09	-0.44	+0.35	1.8	1.6	B2	R
662	15.15	+0.25	+0.95	–	–	–	–	725	10.44	-0.39	+0.76	–	–	OB:	R

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
726	14.10	0	+0.91	3.4	3.0	B2	R	789	12.40	+0.26	+0.36	–	–	–	–
727	14.43	+0.28	+0.92	–	–	–	–	790	13.79	+0.37	+0.59	–	–	–	–
728	13.25	+0.22	+0.74	–	–	–	–	791	8.92	–	–	–	–	–	R
729	13.87	+0.13	+0.76	–	–	–	–	792	11.60	+0.03	+0.61	–	–	–	–
730	14.25	+0.14	+0.94	3.4	2.9	B4	–	793	12.56	+0.01	+0.33	–	–	–	–
731	14.91	-0.12	+0.85	3.3	5.0	B2	R	794	10.45	-0.09	+0.09	0.4	0.9	B9	R
732	14.56	+0.48	+0.88	–	–	–	–	795	13.59	+0.22	+0.95	–	–	–	–
733	14.43	+0.16	+0.90	3.2	3.1	B5	–	796	11.95	-0.05	+0.37	1.4	1.3	B8	–
734	13.48	+0.29	+0.60	–	–	–	–	797	13.38	+0.27	+0.59	–	–	–	–
735	8.23	-0.02	+0.05	–	–	–	R	798	12.65	+0.24	+0.70	–	–	–	–
736	13.38	+0.18	+1.02	–	–	OB:	R	799	14.25	+0.07	+0.86	–	–	–	–
737	15.12	0	+0.8x	3.0	5.2	B3/	–	800	14.23	+0.17	+0.77	–	–	–	–
738	14.12	+0.21	+1.04	3.7	2.4	B4/	–	801	13.50	+0.32	+0.49	–	–	–	–
739	13.58	+0.42	+0.58	–	–	–	–	802	11.61	-0.03	+0.54	2.0	1.2	B6	–
740	13.92	+0.21	+0.76	–	–	–	–	803	14.51	+0.22	+0.88	–	–	–	–
741	14.43	+0.25	+0.85	–	–	–	–	804	13.40	+0.28	+0.86	–	–	–	–
742	14.78	+0.24	+0.93	–	–	–	–	805	13.87	+0.36	+0.76	–	–	–	–
743	12.35	+0.34	+0.83	–	–	–	–	806	13.28	+0.35	+0.88	–	–	–	–
744	10.98	+0.11	+0.41	–	–	–	–	807	13.84	+0.09	+0.87	3.2	2.6	B4	–
745	13.84	+0.14	+0.81	–	–	–	–	808	14.47	+0.14	+0.88	3.1	3.2	B5	–
746	15.11	+0.32	+0.89	–	–	–	–	809	13.61	+0.32	+0.98	–	–	–	–
747	14.12	+0.12	+0.90	3.2	2.9	B4	–	810	13.07	+0.04	+0.87	3.2	1.9	B3	–
748	13.19	+0.30	+0.75	–	–	–	–	811	13.39	+0.30	+0.64	–	–	–	–
749	10.66	-0.24	+0.40	1.7	1.2	B4	–	812	14.39	+0.75	+0.99	–	–	–	–
750	7.60	-0.15	+1.01	–	–	–	R	813	15.24	+0.18	+0.89	–	–	–	–
751	10.57	+1.20	+1.18	–	–	–	–	814	12.74	+0.45	+0.98	–	–	–	–
752	10.29	-0.02	+0.50	–	–	–	–	815	12.53	+0.14	+1.25	–	–	OB:	R
753	12.75	+0.44	+0.87	–	–	–	–	816	14.68	+0.39	+1.18	–	–	–	–
754	13.88	+0.10	+0.87	3.1	2.6	B4	–	817	13.32	+0.20	+0.73	–	–	–	–
755	14.63	+0.27	+0.85	–	–	–	–	818	14.65	-0.09	+0.86	3.3	4.5	B2	R
756	13.83	+0.07	+0.84	3.0	2.7	B4	–	819	14.56	+0.32	+0.99	–	–	–	–
757	13.94	-0.05	+0.41	–	–	–	–	820	11.02	-0.27	+0.16	0.9	1.3	B6	–
758	14.55	+0.21	+0.96	–	–	–	–	821	12.42	+0.16	+0.66	–	–	–	–
759	14.09	+0.13	+0.94	3.1	3.2	B4	–	822	11.83	-0.04	+0.18	0.7	1.5	B9	–
760	13.73	+0.50	+0.82	–	–	–	–	823	14.72	+0.33	+0.92	–	–	–	–
761	15.32	+0.06	+1.07	3.9	4.6	B2	R	824	13.67	+0.30	+1.12	–	–	–	R
762	13.61	+0.16	+0.69	–	–	–	–	825	13.97	+0.10	+0.77	–	–	–	–
763	10.61	-0.39	+0.29	1.5	1.3	B3	–	826	10.56	+0.06	+0.29	1.0	0.7	B9	R
764	11.34	+0.14	+0.42	–	–	–	–	827	14.09	+0.16	+0.59	–	–	–	–
765	15.09	-0.06	+0.84	3.2	5.3	B2	R	828	12.67	+0.34	+0.76	–	–	–	–
766	13.53	+0.44	+0.77	–	–	–	–	829	13.98	+0.11	+0.88	3.2	2.5	B5	–
767	14.09	+0.09	+0.90	–	–	–	–	830	12.83	+0.44	+0.71	–	–	–	–
768	14.14	+0.58	+0.92	–	–	–	–	831	11.74	+0.11	+0.53	–	–	–	–
769	14.04	+0.08	+0.87	3.2	2.8	B4	–	832	11.71	-0.31	+0.28	1.4	2.1	B5	R
770	13.87	+0.21	+0.65	–	–	–	–	833	11.44	-0.09	+0.38	1.5	1.2	B7	R
771	12.21	+0.18	+0.60	–	–	–	–	834	10.84	-0.20	+0.32	1.4	1.1	B6	R
772	14.22	-0.02	+0.94	3.5	3.3	B2	R	835	13.84	+0.36	+0.75	–	–	–	–
773	13.33	+0.05	+0.69	–	–	–	–	836	11.34	+0.08	+0.28	0.9	1.0	A0	R
774	14.98	+0.19	+0.88	–	–	–	–	837	11.11	-0.18	+0.26	1.1	1.2	B7	R
775	13.46	+0.62	+0.78	–	–	–	–	838	10.19	+0.04	+0.24	0.9	0.7	B9	R
776	13.97	+0.05	+1.02	–	–	OB	R	839	9.33	+0.11	+0.26	0.9	0.4	B9	R
777	12.00	+0.17	+0.33	–	–	–	–	840	11.74	-0.14	+0.51	1.8	1.0	B8	–
778	14.40	+0.18	+0.86	–	–	–	–	841	13.53	+0.33	+0.53	–	–	–	–
779	14.29	+0.23	+0.92	–	–	–	–	842	11.22	-0.18	+0.50	2.0	1.3	B4	–
780	15.31	+0.16	+0.92	3.3	4.5	B5	–	843	14.94	+0.23	+0.74	–	–	–	–
781	14.68	+0.20	+0.84	–	–	–	–	844	15.16	+0.37	+0.91	–	–	–	–
782	13.95	+0.08	+0.90	3.3	2.6	B4	–	845	12.42	+0.14	+0.75	–	–	–	–
783	11.48	+0.12	+0.27	–	–	–	–	846	12.54	+0.26	+0.61	–	–	–	–
784	12.61	+0.72	+0.98	–	–	–	–	847	11.42	+0.18	+0.26	–	–	–	R
785	13.94	+0.34	+1.00	–	–	–	–	848	10.90	+0.39	+0.53	–	–	–	–
786	15.23	+0.07	+0.97	3.5	4.4	B3	–	849	11.59	+0.02	+0.36	–	–	–	–
787	12.95	+0.44	+1.95	–	–	OB	R	850	13.63	+0.53	+0.71	–	–	–	–
788	14.89	+0.30	+1.27	–	–	–	R	851	14.71	+0.34	+1.04	–	–	–	–

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
852	15.00	+0.25	+1.23	—	—	—	R	915	12.21	-0.09	+0.47	1.8	1.7	B6	—
853	15.04	+0.55	+1.08	—	—	—	—	916	13.92	+0.23	+0.73	—	—	—	—
854	15.38	+0.43	+1.10	—	—	—	—	917	14.33	+0.32	+0.96	—	—	—	—
855	15.41	+0.47	+1.05	—	—	—	—	918	9.74	-0.08	+0.06	0.3	0.5	B9	R
856	15.18	+0.13	+0.94	3.4	4.4	B4	—	919	15.43	+0.06	+0.87	3.2	5.6	B3	—
857	14.18	+0.13	+1.42	—	—	—	R	920	15.23	+0.22	+0.92	—	—	—	—
858	14.39	+0.25	+1.02	—	—	—	—	921	11.12	-0.13	+0.54	2.1	1.1	B5	—
859	13.42	+0.27	+0.72	—	—	—	—	922	10.99	-0.51	+0.44	—	—	OB:	R
860	13.12	+0.21	+0.81	—	—	—	—	923	11.02	-0.54	+0.28	1.6	1.9	B2	/ R
861	15.38	+0.07	+0.91	3.3	5.2	B3	—	924	14.52	+0.07	+0.79	—	—	—	—
862	13.01	+0.18	+0.98	—	—	—	R	925	13.31	+0.38	+0.66	—	—	—	—
863	14.75	+0.55	+1.21	—	—	—	—	926	13.28	+0.20	+0.63	—	—	—	—
864	14.13	+0.26	+1.84	—	—	OB:	R	927	12.06	+0.22	+0.32	—	—	—	—
865	10.19	-0.43	+0.44	2.1	1.2	B2	R	928	15.03	+0.23	+0.87	—	—	—	—
866	14.85	+0.35	+1.08	—	—	—	—	929	14.83	+0.21	+0.86	—	—	—	—
867	14.82	-0.02	+0.72	—	—	—	R	930	12.77	+0.17	+0.50	—	—	—	—
868	14.62	+0.18	+0.90	—	—	—	—	931	11.08	-0.31	+0.16	0.9	1.6	B6	—
869	14.49	+0.27	+1.08	3.8	3.1	B5	—	932	11.23	+0.13	+0.55	—	—	—	—
870	13.62	+0.27	+0.73	—	—	—	—	933	11.14	-0.13	+0.11	0.5	1.2	B9	R
871	14.57	+0.26	+0.97	—	—	—	—	934	14.11	+0.23	+1.02	—	—	—	—
872	13.80	+0.20	+0.92	—	—	—	—	935	13.37	+0.20	+1.06	/3.8	1.7	B3/	—
873	13.39	+0.16	+0.77	—	—	—	—	936	13.60	+0.26	+0.57	—	—	—	—
874	14.42	+0.33	+0.94	—	—	—	—	937	14.44	+0.32	+0.92	—	—	—	—
875	13.59	+0.36	+0.68	—	—	—	—	938	13.97	+0.18	+0.75	—	—	—	—
876	14.51	+0.31	+1.07	—	—	—	—	939	13.73	+0.46	+1.80	—	—	OB:	R
877	14.81	+0.29	+0.85	—	—	—	—	940	15.10	+0.27	+0.90	—	—	—	—
878	14.85	+0.41	+0.95	—	—	—	—	941	13.65	+0.51	+0.64	—	—	—	—
879	14.72	+0.45	+1.14	—	—	—	—	942	14.84	+0.51	+1.04	—	—	—	—
880	11.67	+0.03	+0.56	—	—	—	—	943	13.38	+0.35	+0.76	—	—	—	—
881	14.90	-0.41	+0.76	—	—	OB:	R.	944	14.18	+0.53	+0.86	—	—	—	—
882	14.38	+0.19	+0.69	—	—	—	—	945	14.42	+0.24	+0.81	—	—	—	—
883	12.91	+0.10	+0.60	—	—	—	—	946	15.13	+0.28	+0.97	—	—	—	—
884	9.52	-0.12	+0.10	0.5	0.6	B9	R	947	8.76	+0.53	+1.60	—	—	—	R
885	14.10	+0.26	+0.73	—	—	—	—	948	13.88	-0.01	+0.81	3.0	3.0	B3	—
886	12.56	+0.25	+0.67	—	—	—	—	949	13.59	+0.29	+1.10	—	—	—	—
887	14.63	+0.24	+0.62	—	—	—	—	950	14.52	+0.15	+0.79	—	—	—	—
888	13.43	+0.40	+0.67	—	—	—	—	951	14.54	+0.14	+0.90	3.2	3.3	B5	—
889	14.10	+0.25	+0.82	—	—	—	—	952	14.50	+0.29	+0.97	—	—	—	—
890	14.38	+0.18	+0.72	—	—	—	—	953	10.97	+0.33	+0.50	—	—	—	—
891	15.14	+0.26	+0.94	—	—	—	—	954	13.92	+0.41	+1.06	—	—	—	—
892	11.59	+0.35	+0.32	—	—	—	—	955	14.69	+0.31	+0.88	—	—	—	—
893	14.10	+0.01	+0.84	3.1	3.1	B3	—	956	15.08	+0.01	+0.97	3.6	4.7	B2	R
894	12.93	+0.19	+0.75	—	—	—	—	957	13.12	+0.69	+0.74	—	—	—	—
895	13.35	+0.27	+0.70	—	—	—	—	958	14.43	+0.47	+1.05	—	—	—	—
896	14.24	+0.18	+0.75	—	—	—	—	959	13.89	+0.50	+0.98	—	—	—	—
897	13.87	+0.35	+0.85	—	—	—	—	960	14.23	+0.32	+0.87	—	—	—	—
898	14.07	+0.31	+0.92	—	—	—	—	961	13.44	+0.23	+0.79	—	—	—	—
899	12.23	+0.21	+0.59	—	—	—	—	962	12.26	+0.20	+1.08	/3.8	2.5	B3/	—
900	14.00	+0.09	+0.85	3.1	2.7	B5	—	963	14.55	+0.39	+1.05	—	—	—	—
901	14.80	+0.11	+0.89	3.2	4.0	B4	—	964	14.83	+0.23	+0.93	3.12	3.0	B6	—
902	10.67	+0.13	+0.18	—	—	—	—	965	13.68	+0.72	+0.88	—	—	—	—
903	13.36	+0.24	+0.76	—	—	—	—	966	13.93	+0.25	+0.73	—	—	—	—
904	12.80	+0.18	+0.54	—	—	—	—	967	9.87	-0.20	+0.08	0.5	0.8	B8	—
905	15.50	0	+1.07	/4.0	7.0	B1/	R	968	10.91	-0.21	+0.61	/2.5	1.0	B3/	—
906	12.25	+0.02	+0.14	0.5	1.7	A0	—	969	10.65	-0.12	+0.31	1.3	0.9	B8	R
907	15.49	+0.12	+0.93	3.3	5.2	B4	—	970	12.57	+0.18	+0.74	—	—	—	—
908	14.50	+0.37	+0.99	—	—	—	—	971	13.83	+0.34	+0.56	—	—	—	—
909	13.86	+0.18	+0.81	—	—	—	—	972	13.51	+0.46	+0.73	—	—	—	—
910	13.42	+0.27	+0.74	—	—	—	—	973	10.51	-0.29	-0.05	0.1	1.3	B8	R
911	11.69	+0.01	+0.43	—	—	—	—	974	12.97	+0.23	+0.70	—	—	—	—
912	14.42	+0.10	+0.82	—	—	—	—	975	12.48	+0.10	+0.66	—	—	—	—
913	13.79	+0.21	+1.04	3.6	2.3	B4	—	976	12.62	+0.20	+0.58	—	—	—	—
914	13.39	+0.18	+0.69	—	—	—	—								

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
977	15.02	+0.13	+0.98	3.5	4.0	B3	–	1040	13.91	+0.10	+0.85	3.1	2.7	B4	–
978	13.59	+0.81	+0.64	–	–	–	–	1041	13.51	+0.92	+0.85	–	–	–	–
979	12.98	+0.30	+0.56	–	–	–	–	1042	13.36	+0.30	+0.72	–	–	–	–
980	14.37	+0.22	+1.04	/3.6	2.6	B4/	–	1043	14.95	+0.16	+0.88	–	–	–	–
981	13.36	+0.44	+0.90	–	–	–	–	1044	13.33	+0.24	+0.65	–	–	–	–
982	13.72	+0.23	+1.02	–	–	–	–	1045	12.77	+0.19	+0.57	–	–	–	–
983	14.04	+0.32	+1.02	–	–	–	–	1046	14.57	-0.05	+0.89	3.3	3.9	B2	R
984	14.46	+0.02	+0.94	3.5	3.5	B2	R	1047	13.24	+0.11	+0.76	–	–	–	–
985	14.93	+0.29	+1.18	–	–	–	R	1048	14.56	+0.25	+0.91	–	–	–	–
986	14.72	+0.04	+0.93	3.4	3.6	B3	–	1049	9.46	-0.23	+0.44	1.9	0.6	B4	R
987	15.12	+0.25	+0.93	–	–	–	–	1050	13.79	+0.56	+1.00	–	–	–	–
988	13.77	+0.14	+0.89	3.2	2.3	B5	–	1051	12.32	-0.08	+0.45	1.7	1.7	B6	–
989	13.34	+0.25	+0.65	–	–	–	–	1052	12.53	+0.19	+1.15	–	–	–	R
990	13.96	+0.32	+0.97	–	–	–	–	1053	13.68	0	+0.58	–	–	–	–
991	13.76	+0.39	+1.07	–	–	–	–	1054	14.78	+0.26	+0.89	–	–	–	–
992	13.24	+0.31	+0.86	–	–	–	–	1055	14.12	+0.40	+1.04	–	–	–	–
993	14.66	+0.16	+0.96	3.4	3.4	B4	–	1056	10.50	-0.26	+0.06	0.5	0.9	B8	–
994	13.16	+0.34	+0.70	–	–	–	–	1057	13.28	+0.21	+0.82	–	–	–	–
995	12.74	+0.12	+0.70	–	–	–	–	1058	14.73	+0.39	+0.99	–	–	–	–
996	14.18	+0.09	+0.79	2.8	3.2	B5	–	1059	13.43	+0.54	+0.82	–	–	–	–
997	13.24	+0.31	+1.12	–	–	–	R	1060	13.96	+0.57	+1.19	–	–	–	–
998	14.64	+0.14	+0.83	–	–	–	–	1061	14.77	+0.21	+0.88	3.1	3.2	B6	–
999	14.43	-0.03	+0.97	3.6	3.5	B2	R	1062	12.70	+0.14	+0.78	–	–	–	–
1000	14.58	+0.40	+0.98	–	–	–	–	1063	14.68	+0.25	+1.05	/3.7	2.8	B5/	–
1001	14.27	+0.42	+0.95	–	–	–	–	1064	13.95	+0.16	+0.82	–	–	–	–
1002	13.57	+0.43	+0.62	1.9	1.7	A0	–	1065	10.71	-0.54	+0.11	0.9	1.8	B3	R
1003	12.90	+0.46	+0.91	–	–	–	–	1066	13.73	+0.19	+0.63	–	–	–	–
1004	13.17	+0.44	+0.55	1.6	1.2	A1	–	1067	14.38	+0.42	+1.12	–	–	–	–
1005	14.06	+0.53	+1.16	–	–	–	–	1068	9.50	-0.58	0	0.6	1.2	B3	R
1006	12.38	+0.16	+0.43	–	–	–	–	1069	9.63	-0.14	+0.33	/1.3	0.6	B7/	R
1007	10.81	-0.29	+0.28	/1.3	1.3	B5/	R	1070	12.77	-0.10	+0.59	2.3	2.2	B5	–
1008	12.99	+0.27	+0.82	–	–	–	–	1071	13.45	+0.26	+0.85	–	–	–	–
1009	11.19	-0.13	+0.53	/2.1	1.1	B5/	R	1072	14.34	+0.49	+0.87	–	–	–	–
1010	13.26	+0.41	+0.76	–	–	–	–	1073	11.82	-0.45	+1.31	–	–	–	–
1011	12.77	+0.24	+0.81	–	–	–	–	1074	14.84	+0.30	+1.09	–	–	–	–
1012	11.24	+0.06	+0.54	–	–	–	–	1075	13.00	+0.10	+0.53	–	–	–	–
1013	10.35	+0.07	+0.22	0.7	0.7	B9	R	1076	10.43	-0.16	+0.16	0.8	0.9	B8	R
1014	11.75	+0.23	+0.75	–	–	–	–	1077	14.35	+0.04	+0.64	–	–	–	–
1015	14.28	+0.37	+0.89	–	–	–	–	1078	13.24	+0.24	+0.61	–	–	–	–
1016	11.47	-0.25	+0.13	0.7	1.8	B7	R	1079	14.09	0	+0.81	3.0	3.3	B3	–
1017	13.66	+0.25	+0.56	–	–	–	–	1080	14.88	-1.00	+0.77	–	–	–	R
1018	12.81	+0.22	+0.55	–	–	–	–	1081	12.63	-0.06	+0.58	2.2	2.1	B5	–
1019	12.73	+0.48	+0.68	–	–	–	–	1082	13.56	+0.49	+0.82	–	–	–	–
1020	11.40	+0.09	+0.30	–	–	–	–	1083	10.89	+0.35	+0.35	–	–	–	–
1021	13.42	+0.38	+0.83	–	–	–	–	1084	12.35	-0.11	+0.62	2.4	1.9	B4	–
1022	12.02	+0.03	+0.48	–	–	–	–	1085	14.55	+0.26	+0.94	–	–	–	–
1023	13.53	+0.28	+0.71	–	–	–	–	1086	12.56	+0.24	+0.77	–	–	–	–
1024	13.74	+0.33	+0.17	–	–	–	–	1087	14.27	+0.01	+0.89	3.3	3.1	B3	–
1025	13.82	+0.77	+0.50	–	–	–	–	1088	14.57	+0.12	+0.83	–	–	–	–
1026	11.24	+0.09	+0.19	0.6	1.1	B9	R	1089	13.79	+0.19	+0.77	–	–	–	–
1027	14.40	+0.43	+0.95	–	–	–	–	1090	13.80	+0.19	+0.67	–	–	–	–
1028	14.69	+0.09	+0.82	–	–	–	–	1091	12.18	+0.16	+0.80	–	–	–	–
1029	12.77	+0.25	+0.71	–	–	–	–	1092	14.80	+0.18	+0.80	–	–	–	–
1030	12.33	-0.03	+0.68	2.6	1.6	B5	–	1093	12.76	+0.22	+0.80	–	–	–	–
1031	15.19	+0.30	+1.16	–	–	–	R	1094	14.43	+0.20	0	–	–	–	–
1032	10.45	-0.13	-0.03	0	1.0	B9	R	1095	14.17	+0.09	+1.56	–	–	OB:	R
1033	10.65	+0.97	+1.09	–	–	–	–	1096	14.10	+0.07	+0.96	3.5	2.6	B3	–
1034	14.79	+0.11	+0.80	–	–	–	–	1097	12.54	+0.12	+0.86	–	–	–	–
1035	12.12	+0.20	+0.54	–	–	–	–	1098	14.66	+0.15	+0.88	–	–	–	–
1036	11.45	+0.07	+0.48	–	–	–	–	1099	13.57	+0.27	+0.71	–	–	–	–
1037	14.71	-0.01	+0.98	3.6	3.9	B2	R	1100	12.25	+0.12	+0.65	–	–	–	–
1038	12.28	+0.22	+1.30	–	–	OB:	R	1101	14.57	+0.38	+0.89	–	–	–	–
1039	11.77	+0.07	+0.55	–	–	–	–	1102	13.89	+0.13	+0.87	3.1	2.5	B5	–

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1103	14.59	+0.12	+0.85	–	–	–	–	1166	13.32	+0.03	+0.68	–	–	–	–
1104	13.01	+0.21	+0.82	–	–	–	–	1167	11.54	-0.30	+0.50	2.1	1.5	B3	–
1105	14.99	+0.06	+0.77	–	–	–	–	1168	13.36	+0.42	+0.73	–	–	–	–
1106	13.43	+0.54	+0.82	–	–	–	–	1169	13.43	+0.13	+0.66	–	–	–	–
1107	14.70	-0.04	+0.85	3.2	4.4	B2	R	1170	10.92	-0.15	+0.52	2.1	1.1	B4	R
1108	14.92	+0.25	+1.02	–	–	–	–	1171	13.21	+0.16	+0.69	–	–	–	–
1109	9.30	-0.45	+0.04	0.6	0.9	B5	R	1172	14.13	+0.09	+1.29	–	–	OB:	R
1110	11.22	-0.35	+0.11	0.8	1.8	B6	–	1173	13.96	+0.26	+0.83	–	–	–	–
1111	14.44	+0.10	+0.90	3.2	3.3	B4	–	1174	9.36	+0.03	0	–	–	–	–
1112	12.88	+0.17	+0.71	–	–	–	–	1175	13.42	+0.22	+0.82	–	–	–	–
1113	13.75	+0.29	+0.65	–	–	–	–	1176	14.30	+0.13	+1.05	–	–	–	R
1114	13.78	+0.25	+0.70	–	–	–	–	1177	13.72	+0.32	+0.59	–	–	–	–
1115	11.79	-0.40	+0.19	/1.1	2.6	B4/	–	1178	11.49	-0.13	+0.59	2.3	1.3	B4	R
1116	8.63	-0.52	+0.15	–	–	–	R	1179	14.82	+0.22	+0.98	3.4	3.3	B5	–
1117	10.76	-0.68	+0.27	/1.7	3.3	B1/	–	1180	13.78	+0.63	+0.72	–	–	–	–
1118	13.21	+0.34	+0.75	–	–	–	–	1181	12.84	+0.11	+0.81	–	–	–	–
1119	13.83	+0.30	+0.78	–	–	–	–	1182	14.31	-0.04	+0.87	3.3	3.5	B2	R
1120	13.83	+0.43	+0.78	–	–	–	–	1183	15.19	+0.30	+1.16	–	–	–	R
1121	13.68	+0.20	+0.54	–	–	–	–	1184	13.01	+0.11	+0.80	–	–	–	–
1122	13.58	+0.47	+0.53	1.5	1.5	A1	–	1185	12.63	+0.06	+0.75	–	–	–	–
1123	14.23	+0.27	+0.88	–	–	–	–	1186	14.66	+0.24	+0.89	–	–	–	–
1124	13.13	+0.36	+0.87	–	–	–	–	1187	13.25	+0.36	+0.72	–	–	–	–
1125	13.10	+0.37	+0.76	–	–	–	–	1188	14.75	+0.30	+0.91	–	–	–	–
1126	12.11	+0.06	+0.53	–	–	–	–	1189	14.20	+0.19	+1.34	–	–	QB:	R
1127	12.99	+0.12	+0.68	–	–	–	–	1190	11.96	-0.05	+1.26	–	–	OB:	R
1128	14.01	+0.12	+0.88	3.2	2.6	B5	–	1191	12.49	+0.01	+0.67	–	–	–	–
1129	14.34	+0.02	+0.76	2.8	3.9	B4	–	1192	14.39	-0.06	+0.89	3.4	3.9	B2	R
1130	13.98	+0.16	+0.75	–	–	–	–	1193	13.93	+0.13	+1.03	/3.7	2.2	B3/	–
1131	12.13	+0.33	+0.45	–	–	–	–	1194	14.51	+0.20	+0.82	–	–	–	–
1132	13.64	+0.22	+0.91	–	–	–	–	1195	14.90	-0.01	+0.88	3.3	4.2	B3	–
1133	15.06	+0.46	+1.18	–	–	–	–	1196	10.89	+0.06	+0.79	/2.9	0.7	B5/	–
1134	15.26	+0.30	+1.00	–	–	–	–	1197	13.82	+0.06	+0.84	3.0	2.7	B4	–
1135	14.78	+0.39	+1.06	–	–	–	–	1198	13.35	+0.64	+0.85	–	–	–	–
1136	15.07	+0.24	+0.91	–	–	–	–	1199	12.25	+0.10	+0.69	–	–	–	–
1137	14.87	+0.19	+0.95	3.3	3.5	B5	–	1200	11.31	-0.43	+0.24	/1.3	2.0	B3/	R
1138	13.70	+0.51	+0.73	–	–	–	–	1201	9.96	-0.18	+0.06	0.4	0.6	B9	R
1139	10.75	-0.09	+0.56	2.2	0.9	B5	R	1202	11.20	+0.03	+0.64	–	–	–	–
1140	14.58	+0.41	+0.78	–	–	–	–	1203	13.19	+0.27	+0.78	–	–	–	–
1141	12.45	-0.16	+0.71	2.8	1.9	B2	R	1204	11.53	-0.02	+0.39	1.5	1.2	B8	R
1142	13.51	+0.60	+0.72	–	–	–	–	1205	14.57	+0.09	+0.97	3.5	3.3	B3	–
1143	14.17	+0.17	+0.93	3.3	2.6	B5	–	1206	9.58	-0.80	+0.07	–	–	–	–
1144	8.69	+0.01	+0.22	0.8	0.3	B8	R	1207	12.08	+0.35	+0.77	–	–	–	–
1145	14.27	+0.09	+1.31	–	–	OB:	R	1208	15.09	+0.17	+1.13	–	–	–	R
1146	14.81	+0.17	+1.08	3.9	3.1	B3	–	1209	14.74	+0.40	+1.07	–	–	–	–
1147	13.71	+0.44	+0.99	–	–	–	–	1210	13.75	+0.44	+0.66	2.0	1.8	A0	–
1148	14.41	+0.39	+0.98	–	–	–	–	1211	12.36	+0.05	+0.71	–	–	–	–
1149	14.43	+0.28	+0.90	–	–	–	–	1212	13.60	+0.55	+1.28	–	–	–	–
1150	10.33	-0.81	+0.21	–	–	OB:	R	1213	12.65	+0.26	+0.47	–	–	–	–
1151	15.00	+0.01	+0.87	3.2	4.5	B3	–	1214	15.13	+0.74	+0.85	–	–	–	–
1152	14.35	-0.06	+0.92	3.5	3.5	B2	R	1215	12.78	+0.55	+0.46	–	–	–	–
1153	13.10	+0.26	+0.90	–	–	–	–	1216	14.21	-0.03	+0.80	3.0	3.5	B3	–
1154	10.73	+0.01	+0.29	1.1	0.8	B9	R	1217	14.38	+0.19	+0.91	–	–	–	–
1155	13.50	+0.20	+0.75	–	–	–	–	1218	14.21	+0.13	+0.93	3.3	2.9	B4	–
1156	14.27	+0.22	+0.89	–	–	–	–	1219	13.81	+0.21	+0.71	–	–	–	–
1157	10.75	-1.14	+0.19	–	–	–	R	1220	14.42	+0.21	+0.95	–	–	–	–
1158	11.33	-0.60	+0.23	/1.5	3.3	B1/	R	1221	15.10	+0.33	+0.94	–	–	–	–
1159	13.22	+0.32	+0.80	–	–	–	–	1222	13.91	+0.09	+0.86	3.1	2.7	B4	–
1160	14.04	+0.11	+0.79	–	–	–	–	1223	14.16	+0.25	+0.89	–	–	–	–
1161	13.25	+0.32	+0.76	–	–	–	–	1224	14.65	+0.02	+0.84	3.1	4.1	B3	–
1162	11.53	-0.12	+0.33	1.3	1.4	B7	–	1225	13.75	-0.02	+1.06	–	–	OB:	R
1163	14.52	+0.32	+0.86	–	–	–	–	1226	11.93	+0.11	+0.32	–	–	–	R
1164	14.72	-0.27	+0.59	2.5	1.7	B2	R	1227	13.37	+0.07	+0.76	–	–	–	–
1165	11.38	+0.20	+0.36	1.2	0.9	B9	R	1228	12.64	+0.09	+0.73	–	–	–	–

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1229	13.82	+0.22	+0.72	–	–	–	–	1292	14.73	-0.03	+0.96	3.6	4.1	B2	R
1230	14.95	+0.25	+0.89	–	–	–	–	1293	13.36	+0.39	+0.69	–	–	–	–
1231	13.13	+0.13	+1.74	–	–	OB:	R	1294	14.25	+0.61	+1.29	–	–	–	–
1232	14.92	-0.06	+2.230	–	–	–	R	1295	9.92	-0.17	+0.34	1.4	0.7	B6	R
1233	14.64	-0.01	+0.92	3.4	3.8	B2	R	1296	11.98	+0.09	+0.52	–	–	–	–
1234	12.34	+0.04	+0.65	–	–	–	–	1297	15.34	+0.04	+1.09	/4.0	5.3	B1/	R
1235	15.04	-0.01	+0.75	/2.7	5.5	B4/	–	1298	12.73	+0.15	+1.15	–	–	OB:	R
1236	12.28	-0.17	+0.39	1.6	2.1	B6	–	1299	14.04	+0.27	+0.93	–	–	–	–
1237	12.09	+0.16	+0.22	–	–	–	–	1300	11.71	-0.12	+0.51	2.0	1.5	B5	–
1238	12.60	+0.39	+1.58	–	–	OB:	R	1301	7.70	–	–	–	–	/BO/	R
1239	14.78	+0.24	+0.94	–	–	–	–	1302	11.04	+1.47	+1.14	–	–	–	–
1240	14.78	+0.25	+0.86	–	–	–	–	1303	14.48	+0.03	+0.95	3.5	3.4	B2	R
1241	14.25	+0.15	+0.92	/3.3	2.9	B5/	R	1304	12.24	-0.05	+0.65	2.5	1.6	B5	–
1242	12.74	+0.82	+1.04	–	–	–	–	1305	14.30	+0.03	+0.86	3.2	3.2	B4	–
1243	14.84	+0.09	+0.79	–	–	–	–	1306	14.56	+0.43	+1.46	–	–	–	R
1244	14.95	+0.16	+0.85	–	–	–	–	1307	11.07	-0.22	+0.80	/3.1	1.1	B2/	R
1245	14.85	+0.23	+1.04	/3.6	3.2	B5/	–	1308	14.17	+0.14	+0.80	–	–	–	–
1246	14.20	-0.02	+0.79	3.0	3.6	B3	–	1309	14.63	-0.02	+0.88	3.3	3.7	B3	–
1247	11.70	-0.03	+0.30	1.2	0.9	B8	R	1310	14.35	+0.21	+0.93	–	–	–	R
1248	13.47	+0.25	+0.69	–	–	–	–	1311	14.72	+0.26	+1.14	–	–	–	R
1249	11.77	+0.19	+0.57	–	–	–	–	1312	14.56	+0.01	+0.85	3.2	3.8	B3	–
1250	14.94	+0.09	+0.98	3.6	3.8	B3	–	1313	12.00	-0.30	+0.50	2.2	2.0	B2	R
1251	14.60	+0.02	+0.97	3.6	3.5	B2	R	1314	14.04	+0.11	+0.87	3.1	2.6	B5	–
1252	11.87	-0.16	+0.62	2.5	1.5	B3	–	1315	14.57	-0.02	+0.87	3.3	3.7	B3	–
1253	11.37	-0.07	+0.59	2.3	1.1	B5	–	1316	14.88	+0.19	+0.88	–	–	–	–
1254	13.76	+0.07	+0.96	3.5	2.2	B3	–	1317	12.77	-0.06	+0.53	2.0	2.0	B6	–
1255	14.05	+0.34	+1.08	–	–	–	–	1318	14.39	+0.04	+0.91	3.3	3.3	B3	–
1256	15.11	0	+0.90	3.3	4.5	B3	–	1319	10.94	-0.22	+0.24	1.1	1.2	B7	R
1257	14.43	+0.17	+1.00	–	–	–	–	1320	14.98	+0.23	+0.98	–	–	–	–
1258	14.78	+0.11	+1.00	3.6	3.4	B3	–	1321	13.72	+0.38	+0.53	–	–	–	–
1259	13.57	+0.31	+0.58	1.8	1.9	A0	–	1322	13.20	+0.13	+0.60	–	–	–	R
1260	14.07	+0.16	+0.91	3.2	2.6	B5	–	1323	14.84	+0.31	+1.24	–	–	–	R
1261	13.84	+0.15	+0.77	–	–	–	–	1324	14.86	+0.15	+1.00	3.6	3.5	B4	–
1262	13.39	+0.21	+0.69	–	–	–	–	1325	13.87	+0.07	+0.97	/3.6	2.3	B3/	–
1263	13.43	+0.31	+0.77	–	–	–	–	1326	15.50	-0.04	+0.92	3.5	6.1	B2	R
1264	14.34	+0.08	+1.04	–	–	OB:	R	1327	11.13	+0.15	+0.50	1.7	0.7	B9	R
1265	14.90	+0.13	+0.95	3.4	3.8	B4	–	1328	15.12	+0.01	+0.89	3.3	4.6	B3	–
1266	14.72	+0.31	+0.93	–	–	–	–	1329	13.91	-0.02	+0.72	2.7	3.3	B4	–
1267	11.42	+0.72	+0.74	–	–	–	R	1330	13.75	+0.19	+0.88	–	–	–	–
1268	11.98	+0.01	+0.32	–	–	–	–	1331	11.84	+1.15	+1.25	–	–	–	–
1269	14.87	+0.03	+1.11	4.1	4.9	B1	R	1332	13.90	+0.10	+0.93	/3.4	2.6	B3/	–
1270	14.02	+0.05	+0.75	2.7	3.1	B5	–	1333	14.56	+0.45	+1.19	–	–	–	–
1271	14.93	+0.10	+0.87	–	–	–	–	1334	15.35	+0.11	+1.01	3.7	4.4	B3	–
1272	12.78	+0.06	+0.68	–	–	–	–	1335	14.18	+0.29	+1.20	–	–	–	R
1273	14.85	-0.11	+0.95	3.6	6.1	B1	R	1336	12.13	-0.30	+0.47	2.1	2.3	B2	R
1274	11.38	-0.45	+0.28	/1.5	2.1	B3/	R	1337	14.00	+0.39	+1.27	–	–	–	R
1275	12.93	+0.12	+0.65	–	–	–	–	1338	15.11	+0.16	+0.95	–	–	–	R
1276	14.32	+0.09	+0.87	3.2	3.3	B4	–	1339	14.81	+0.09	+1.07	–	–	OB:	R
1277	12.70	+0.16	+0.51	–	–	–	–	1340	12.27	-0.04	+0.56	2.1	1.7	B6	–
1278	12.86	+0.08	+0.74	–	–	–	–	1341	13.70	+0.28	+0.67	–	–	G8?	–
1279	13.29	+0.26	+0.83	–	–	–	–	1342	11.58	-0.06	+1.12	–	–	–	R
1280	12.53	+0.12	+1.02	–	–	–	R	1343	14.04	+0.20	+1.03	–	–	–	R
1281	13.80	+0.46	+0.70	–	–	–	–	1344	13.91	+0.29	+0.72	–	–	–	–
1282	13.47	+0.42	+1.32	–	–	–	R	1345	10.38	-0.26	+1.43	–	–	–	R
1283	13.43	+0.40	+0.58	1.8	1.7	A0	–	1346	13.12	+0.23	+0.82	–	–	–	R
1284	15.47	+0.09	+0.93	3.4	5.2	B3	–	1347	13.88	+0.10	+0.73	–	–	–	–
1285	13.03	+0.26	+0.64	–	–	–	–	1348	13.06	+0.39	+0.86	–	–	–	–
1286	14.35	-0.08	+0.94	3.6	4.1	B1	R	1349	8.58	-0.22	-0.06	0	0.5	B8	R
1287	15.09	+0.24	+1.16	–	–	–	R	1350	13.74	+0.38	+1.05	–	–	–	–
1288	14.32	+0.31	+1.64	–	–	OB:	R	1351	13.30	+0.26	+0.72	–	–	–	–
1289	15.02	-0.86	+0.52	–	–	–	–	1352	14.55	+0.40	+0.98	–	–	OB:	R
1290	14.11	-0.07	+0.92	3.5	3.2	B2	R	1353	14.26	+0.19	+0.90	–	–	–	–
1291	13.34	+0.24	+0.65	–	–	–	–	1354	10.68	-0.07	+0.32	1.3	0.8	B8	R

Table 2 – continued

1	2	3	4	5	6	7	8
1355	10.54	-0.21	+0.59	/2.4	0.9	B3/	R
1356	13.27	+0.31	+0.94	-	-	-	-
1357	13.70	+0.53	+1.14	-	-	-	-
1358	15.13	+0.22	+1.39	-	-	-	-
1359	14.83	+0.02	+0.84	3.1	4.4	B3	-
1360	12.11	-0.15	+0.56	2.2	1.8	B4	-
1361	15.99	-0.06	+1.16	-	-	-	R
1362	14.39	-0.11	+0.86	3.3	4.0	B2	R
1363	14.52	-0.05	+0.95	3.6	3.7	B2	R
1364	11.01	+0.09	+0.33	1.1	0.9	B9	R
1365	14.93	+0.36	+1.32	-	-	-	R
1366	14.19	+0.18	+1.07	-	-	-	R
1367	14.06	+0.21	+1.13	-	-	-	R
1368	14.51	+0.15	+1.05	-	-	-	R
1369	14.58	+0.22	+1.32	-	-	OB:	R
1370	15.02	-0.08	+0.87	3.3	5.3	B2	R
1371	11.32	+0.01	+0.42	1.5	1.0	B8	R
1372	14.49	+0.12	+1.00	/3.6	3.0	B3/	-
1373	13.94	+0.82	+1.23	-	-	-	-
1374	13.72	+0.32	+0.89	-	-	-	-
1375	14.62	+0.07	+1.06	-	-	OB:	R
1376	14.37	+0.04	+1.18	4.4	4.4	B0	R
1377	10.61	-0.17	+1.43	-	-	-	R
1378	13.50	+0.15	+0.84	-	-	-	-
1379	13.88	+0.08	+0.66	-	-	-	-
1380	13.47	+0.29	+0.81	-	-	-	-
1381	14.31	+0.15	+1.01	-	-	-	R
1382	14.85	+0.13	+0.98	3.5	3.5	B4	-
1383	14.44	+0.06	+0.90	3.3	3.4	B3	-
1384	11.69	-0.10	+0.33	1.3	1.5	B7	-
1385	15.57	+0.43	+0.86	-	-	-	-
1386	14.20	-0.14	+0.87	3.4	4.2	B1	R
1387	14.24	+0.25	+0.92	-	-	-	-
1388	13.66	+0.23	+0.65	-	-	-	-
1389	13.51	+0.23	+0.61	-	-	-	-
1390	14.80	+0.39	+1.04	-	-	-	-
1391	11.86	+0.33	+0.88	-	-	-	-
1392	14.23	+0.14	+1.04	/3.7	2.5	B3/	R
1393	13.91	-0.08	+0.91	3.4	3.0	B2	R
1394	13.80	+0.08	+0.61	-	-	-	-
1395	13.69	-0.17	+1.21	-	-	OB:	R
1396	14.29	+0.25	+1.05	-	-	-	R
1397	12.37	+0.08	+0.93	3.1	1.4	B3	-
1398	14.91	+0.25	+0.96	-	-	-	R
1399	14.83	+0.14	+1.06	-	-	-	-
1400	13.83	+0.01	+0.76	/2.8	4.8	B4/	-
1401	13.65	+0.27	+1.01	-	-	-	-
1402	14.87	-0.10	+0.97	3.7	5.9	B1	R
1403	14.13	+0.25	+0.95	3.3	2.1	B6	-
1404	14.05	+0.17	+0.89	-	-	-	-
1405	14.39	+0.19	+0.90	-	-	-	-
1406	11.29	-0.08	+1.10	-	-	-	R
1407	10.48	+0.03	+0.46	-	-	-	R
1408	11.23	-0.47	+0.28	1.5	1.0	B3	R
1409	14.20	+0.51	+1.11	-	-	-	-
1410	12.52	+0.12	+0.68	-	-	-	-
1411	11.60	-0.13	+0.41	1.7	1.4	B6	-
1412	13.44	+0.28	+0.74	-	-	-	-
1413	13.50	-0.04	+0.83	/3.1	2.4	B3/	-
1414	13.12	+0.13	+0.65	-	-	-	-
1415	12.62	+0.13	+0.56	-	-	-	-
1416	13.11	+0.26	+0.52	-	-	-	-
1417	12.43	-0.07	+0.66	-	2.5	1.8	B4
1418	14.74	+0.15	+1.38	-	-	-	OB:
1419	14.13	+0.01	+0.80	3.0	-	3.3	B4
1420	13.83	+0.03	+0.78	2.9	-	2.9	B4
1421	15.04	+0.25	+0.96	-	-	-	-
1422	10.08	-0.13	+0.42	1.7	0.7	B6	-
1423	13.30	+0.15	+0.76	-	-	-	-
1424	14.34	-0.18	+0.79	/3.1	5.1	B1/	R
1425	15.05	-0.86	+0.16	-	-	-	OB:
1426	14.02	-0.04	+0.89	3.4	-	3.3	B2
1427	13.51	+0.26	+0.51	-	-	-	-
1428	15.22	+0.06	+0.89	3.2	-	5.0	B3
1429	13.75	+0.12	+1.25	-	-	-	OB:
1430	14.58	+0.37	+1.20	-	-	-	-
1431	9.36	+0.27	+0.50	-	-	-	-
1432	9.64	-0.35	+0.29	1.4	0.8	B4	R
1433	13.56	+0.33	+1.26	-	-	-	-
1434	15.17	0	+0.98	3.6	-	4.8	B2
1435	9.97	-0.31	+0.06	0.5	-	0.9	B7
1436	13.64	+0.49	+0.65	1.9	-	1.7	A0
1437	11.94	-0.42	+0.58	2.6	-	3.3	B0
1438	10.57	-0.06	+0.19	0.8	-	0.8	B9
1439	13.28	+1.28	+0.03	-	-	-	?
1440	12.71	-0.03	+0.84	/3.2	1.6	B3/	-
1441	14.64	+0.09	+1.17	-	-	-	OB:
1442	14.75	+0.39	+0.84	-	-	-	-
1443	12.98	+0.12	+0.96	/3.5	1.6	B3/	-
1444	11.48	+0.17	+0.44	-	-	-	-
1445	12.14	+0.20	+0.75	-	-	-	-
1446	14.22	+0.17	+1.15	-	-	-	OB:
1447	11.90	+0.01	+0.74	2.7	-	1.2	B5
1448	14.12	+0.03	+0.95	/3.5	2.9	B3/	-
1449	14.55	-0.05	+0.79	3.0	-	4.1	B3
1450	13.01	+0.16	+0.75	-	-	-	-
1451	14.44	+0.12	+0.95	3.4	-	3.0	B4
1452	15.74	+0.41	+0.66	-	-	-	-
1453	14.19	+0.12	+1.05	-	-	-	-
1454	13.22	+0.41	+1.74	-	-	-	OB:
1445	14.61	+0.01	+1.11	-	-	-	OB:
1456	13.07	+0.02	+0.73	2.7	-	1.9	B5
1457	13.92	+0.23	+1.06	-	-	-	R
1458	13.60	+0.24	+0.94	-	-	-	-
1459	13.85	+0.25	+0.73	-	-	-	-
1460	14.22	+0.45	+0.90	-	-	-	-
1461	9.98	-	-	-	-	-	B8
1462	12.67	+0.12	+0.71	-	-	-	-
1463	10.56	-0.25	+0.48	/2.0	0.6	B3/	R
1464	11.24	+0.12	+0.48	1.7	0.9	B8	R
1465	14.00	+0.08	+0.85	3.1	-	2.9	B4
1466	13.21	+0.58	+0.96	-	-	-	-
1467	13.90	-0.02	+0.91	3.4	-	2.8	B2
1468	14.52	+0.07	+0.96	3.5	-	3.2	B3
1469	13.34	+0.10	+0.74	-	-	-	-
1470	13.82	+0.10	+0.95	/3.4	2.4	B3/	-
1471	14.72	+0.31	+0.96	-	-	-	-
1472	14.25	+0.09	+0.98	/3.6	2.7	B3/	-
1473	13.73	+0.09	+0.61	-	-	-	-
1474	13.92	+0.14	+0.89	/3.2	2.5	B5/	-
1475	12.20	-0.16	+0.82	3.2	-	1.8	B1
1476	14.10	-0.06	+0.77	2.9	-	3.4	B3
1477	13.99	-0.04	+0.95	/3.6	2.9	B2/	R
1478	14.82	0	+0.78	2.9	4.6	B4	-
1479	14.47	+0.58	+1.37	-	-	-	-

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1480	14.37	-0.02	+0.70	-	-	-	-	1543	12.88	+0.05	+0.78	2.8	1.8	B5	-
1481	14.22	-0.08	+0.80	3.0	3.8	B2	R	1544	14.36	+0.12	+1.28	-	-	OB:	R
1482	14.93	-0.01	+1.21	-	-	OB:	R	1545	13.77	+0.22	+0.60	-	-	-	-
1483	14.83	+0.23	+1.09	/3.8	3.2	B3/	-	1546	14.79	+0.43	+1.12	-	-	-	-
1484	15.43	+0.13	+1.43	-	-	OB:	R	1547	14.15	-0.05	+0.88	3.3	3.5	B2	R
1485	12.43.	+0.51	+1.33	-	-	-	-	1548	10.41	+0.03	+0.13	0.5	0.8	A0	R
1486	14.44	+0.01	+1.02	/3.8	3.2	B2/	-	1549	14.81	+0.04	+0.88	3.2	4.1	B3	-
1487	14.57	+0.23	+1.03	-	-	-	-	1550	14.27	-0.11	+0.92	3.6	4.8	B1	R
1488	9.47	-0.57	+0.53	2.5	1.9	08	R	1551	13.61	+0.23	+0.77	-	-	-	-
1489	9.32	-0.40	+0.72	3.1	1.1	09	-	1552	14.12	+0.26	+0.81	-	-	-	-
1490	14.17	+0.37	+0.75	-	-	-	-	1553	15.88	-0.17	+1.21	-	-	-	-
1491	10.56	-0.17	+0.09	0.5	1.1	B8	R	1554	14.38	+0.23	+1.13	-	-	-	-
1492	13.77	+0.25	+0.61	-	-	-	-	1555	14.39	+0.10	1.22	-	-	-	-
1493	13.44	+0.17	+0.89	-	-	-	-	1556	14.67	+0.01	+0.97	3.6	3.6	B3	-
1494	14.54	+0.21	+0.96	-	-	-	-	1557	15.09	+0.07	+0.88	3.2	4.5	B4	-
1495	14.93	+0.12	+0.92	3.3	4.1	B4	-	1558	14.50	-0.08	+0.94	3.6	4.4	B1	R
1496	12.47	+0.17	+0.76	-	-	-	-	1559	12.73	+0.17	+0.69	-	-	-	-
1497	13.36	+0.17	+0.84	-	-	-	-	1560	15.22	-0.03	+0.94	3.5	4.8	B2	R
1498	13.38	+0.16	+0.72	-	-	-	-	1561	14.10	-0.01	+0.96	3.6	2.8	B2	R
1499	13.58	+0.29	+0.58	-	-	-	-	1562	13.49	+0.25	+0.63	-	-	-	-
1500	13.55	+0.07	+0.76	-	-	-	-	1563	11.55	0	+1.04	-	-	-	R
1501	13.41	+0.28	+0.70	-	-	-	-	1564	14.22	+0.15	+0.86	3.0	2.7	B6	-
1502	14.08	+0.21	+0.95	-	-	-	-	1565	13.94	-0.04	+0.87	3.3	3.0	B2	R
1503	13.87	+0.33	+1.06	-	-	-	-	1566	8.43	-0.28	-0.10	0	0.4	B9	R
1504	13.93	0	+0.93	3.5	2.7	B2	R	1567	13.06	+0.12	+0.78	-	-	-	-
1505	13.30	+0.20	+0.83	-	-	-	-	1568	15.53	+0.21	+1.05	3.7	4.4	B4	-
1506	13.70	+0.21	+1.63	-	-	OB:	R	1569	15.15	+0.25	+0.90	-	-	-	-
1507	13.75	+0.12	+0.98	/3.5	2.3	B3/	-	1570	14.48	+0.19	+0.90	-	-	-	-
1508	13.70	+0.21	+1.63	/5.9	3.2	07/	-	1571	14.33	-0.07	+0.80	3.0	3.6	B3	-
1509	11.48	+0.17	+0.45	-	-	-	-	1572	12.15	+0.09	+0.66	-	-	-	-
1510	14.84	+0.52	+0.94	-	-	-	-	1573	15.11	+0.22	+1.04	3.7	3.7	B4	-
1511	14.89	-0.37	+0.84	-	-	OB:	R	1574	14.88	+0.26	+0.88	-	-	-	-
1512	13.54	+0.23	+0.66	-	-	-	-	1575	14.64	+0.01	+0.93	3.4	3.8	B2	R
1513	11.45	+0.24	+0.08	/0.1	1.5	A2/	R	1576	13.17	+0.07	+0.62	-	-	-	-
1514	14.42	+0.01	+0.87	3.2	3.4	B3	-	1577	14.09	+0.32	+1.02	-	-	-	-
1515	13.40	+0.19	+0.68	-	-	-	-	1578	13.51	+0.44	+1.33	-	-	-	-
1516	12.50	+0.21	+0.76	-	-	-	-	1579	14.25	+0.03	+0.84	3.1	3.4	B3	-
1517	12.19	-0.01	+0.71	2.6	1.4	B5	-	1580	14.97	+0.09	+0.82	-	-	-	-
1518	12.69	+0.02	+0.74	2.7	1.7	B5	-	1581	14.44	+0.44	+1.32	-	-	-	-
1519	12.49	+0.09	+0.75	-	-	-	-	1582	14.37	+0.13	+0.88	3.2	3.0	B5	-
1520	13.26	+0.17	+0.65	-	-	-	-	1583	13.89	+0.06	+0.79	2.9	2.8	B5	-
1521	13.87	-0.03	+0.71	2.6	3.0	B5	-	1584	13.26	+0.12	+0.76	-	-	-	-
1522	14.13	+0.25	+0.93	-	-	-	-	1585	12.94	+0.04	+0.67	-	-	-	-
1523	14.55	+0.18	+0.89	-	-	-	-	1586	12.63	+0.05	+0.68	-	-	-	-
1524	15.51	+0.16	+1.04	3.7	4.6	B3	-	1587	13.51	+0.18	+0.70	-	-	-	-
1525	13.52	+0.34	+0.78	-	-	-	-	1588	13.89	+0.22	+0.97	-	-	-	-
1526	13.43	+0.11	+0.68	-	-	-	-	1589	12.84	+0.18	+0.65	-	-	-	-
1527	7.88	-0.26	+0.10	0.7	0.3	B8	R	1590	14.26	+0.30	+0.97	-	-	-	-
1528	11.66	+0.03	+0.68	-	-	-	-	1591	12.97	+0.11	+0.74	-	-	-	-
1529	8.41	-	-	-	-	B9	-	1592	14.96	+0.44	+1.12	-	-	-	-
1530	13.97	+0.06	+0.79	2.9	2.9	B5	-	1593	11.05	-0.41	+0.28	1.5	1.7	B3	-
1531	14.89	-0.08	+0.96	3.6	6.1	B1	R	1594	12.87	-0.06	+0.67	2.6	2.2	B4	-
1532	12.76	+0.62	+0.92	-	-	-	-	1595	14.22	+0.22	+0.89	3.3	3.0	B3	-
1533	14.00	+0.08	+0.94	/3.4	2.6	B3/	-	1596	14.10	-0.14	+0.91	3.5	4.5	B1	R
1534	14.02	-0.09	+0.88	3.3	3.3	B2	R	1597	12.88	+0.04	+0.76	-	-	-	-
1535	11.24	-0.34	+0.38	1.8	1.6	B3	-	1598	13.24	+0.22	+0.64	-	-	-	-
1536	12.45	-0.14	+0.74	2.9	1.8	B2	R	1599	13.01	+0.33	+0.66	-	-	-	-
1537	13.33	+0.24	+0.81	-	-	-	-	1600	13.94	+0.08	+0.83	3.0	2.7	B5	-
1538	13.37	+0.09	+0.75	-	-	-	-	1601	14.58	-0.08	+0.92	3.5	4.7	B1	R
1539	14.88	+0.12	+0.90	3.2	3.7	B5	-	1602	14.55	+0.04	+0.81	3.0	3.9	B4	-
1540	14.62	-0.10	+0.74	2.8	4.6	B3	-	1603	14.46	+0.02	+0.94	3.5	3.5	B2	R
1541	13.91	+0.14	+1.10	-	-	-	R	1604	13.91	+0.20	+0.88	3.1	2.1	B6	-
1542	15.23	+0.13	+1.09	-	-	OB:	R	1605	12.90	0	+0.75	2.8	2.0	B4	-

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1606	12.66	+0.24	+0.89	–	–	–	–	1669	14.88	+0.28	+0.86	–	–	–	–
1607	14.46	+0.24	+0.99	–	–	–	–	1670	14.57	+0.21	+0.93	–	–	–	–
1608	14.95	+0.21	+1.03	3.6	3.5	B4	–	1671	13.23	+0.21	+0.83	–	–	–	–
1609	14.41	+0.52	+1.39	–	–	–	–	1672	14.94	+0.20	+0.78	–	–	–	–
1610	13.55	+0.26	+0.92	–	–	–	–	1673	12.31	+0.10	+0.70	–	–	–	–
1611	14.39	+0.18	+0.99	3.5	2.9	B4	–	1674	15.24	+0.46	+1.11	–	–	–	–
1612	14.64	+0.50	+1.07	–	–	–	–	1675	12.53	+0.18	+0.69	–	–	–	–
1613	13.36	+0.15	+0.75	–	–	–	–	1676	15.02	+1.00	+0.50	–	–	–	–
1614	11.84	-0.13	+0.58	2.3	1.6	B4	–	1677	14.79	+0.27	+1.19	–	–	–	R
1615	12.61	+0.07	+0.77	–	–	–	–	1678	11.84	+0.04	+0.45	–	–	–	–
1616	13.70	+0.26	+0.89	–	–	–	–	1679	11.61	+0.02	+0.69	–	–	–	–
1617	14.63	+0.09	+0.81	–	–	–	–	1680	13.26	+0.27	+0.70	–	–	–	–
1618	12.84	+0.12	+0.77	–	–	–	–	1681	11.53	-0.16	+0.62	2.5	1.3	B3	–
1619	13.74	+0.12	+1.09	–	–	OB:	R	1682	10.88	-0.13	+0.72	/2.8	0.8	B3/	–
1620	13.93	-0.17	+0.94	3.7	4.9	B0	R	1683	14.38	+0.29	+0.94	–	–	–	–
1621	14.77	-0.08	+1.01	/3.8	5.3	B1/	R	1684	14.54	+0.15	+0.96	3.4	2.9	B5	–
1622	13.37	+0.34	+0.74	–	–	–	–	1685	13.98	+0.56	+1.09	–	–	–	–
1623	14.54	+0.18	+0.93	3.3	3.1	B5	–	1686	9.72	-0.33	+0.11	0.7	0.9	B7	–
1624	13.92	+0.11	+0.80	2.9	2.8	B5	–	1687	13.59	+0.20	+0.79	–	–	–	–
1625	15.07	+0.03	+1.06	3.9	4.1	B2	R	1688	13.51	+0.44	+1.13	–	–	–	–
1626	14.17	+0.45	+1.03	–	–	–	–	1689	14.44	+0.26	+0.96	–	–	–	–
1627	14.58	-0.14	+0.86	3.3	5.1	B1	R	1690	13.78	+0.14	+0.65	–	–	–	–
1628	14.45	+0.15	+1.04	–	–	–	R	1691	13.47	+0.41	+0.81	–	–	–	–
1629	11.95	+0.10	+0.92	/3.3	1.0	B4/	–	1692	14.15	+0.08	+0.89	3.2	2.9	B4	–
1630	13.55	+0.40	+0.64	–	–	–	–	1693	11.16	+0.04	+0.67	2.4	0.8	B6	–
1631	12.61	+0.12	+0.74	–	–	–	–	1694	12.33	+0.07	+0.76	–	–	–	–
1632	14.52	+0.35	+1.02	–	–	–	–	1695	13.00	-0.05	+0.74	2.8	2.2	B3	–
1633	14.98	+0.10	+0.94	3.4	3.9	B4	–	1696	12.03	-0.05	+0.76	2.9	1.4	B3	–
1634	12.52	+0.02	+0.73	–	–	–	–	1697	13.40	+0.20	+0.83	–	–	–	–
1635	13.10	+0.37	+0.95	–	–	–	–	1698	13.90	+0.29	+1.15	–	–	–	R
1636	14.47	0	+0.77	2.9	4.0	B4	–	1699	13.85	+0.81	+1.30	–	–	–	–
1637	14.33	-0.01	+0.92	3.4	3.3	B2	R	1700	9.36	+0.03	+0.01	0.1	0.6	A0	–
1638	15.57	-0.22	+0.82	–	–	OB:	R	1701	13.80	+0.42	+0.58	–	–	–	–
1639	13.58	+0.18	+0.72	–	–	–	–	1702	14.90	+0.43	+0.90	–	–	–	–
1640	13.99	+0.14	+0.94	3.4	3.9	B4	–	1703	12.88	+0.17	+0.67	–	–	–	–
1641	12.32	+0.18	+1.43	–	–	OB:	R	1704	12.82	+0.52	+0.77	–	–	–	–
1642	13.88	+0.05	+0.95	/3.5	2.4	B3/	–	1705	13.76	+0.25	+0.51	–	–	–	–
1643	12.93	+0.05	+0.75	–	–	–	–	1706	12.79	+0.26	+0.90	–	–	–	–
1644	13.89	+0.63	+1.28	–	–	–	–	1707	12.92	+0.10	+0.86	3.1	1.7	B4	–
1645	14.10	+0.21	+0.91	–	–	–	–	1708	14.36	+0.12	+1.28	–	–	OB:	R
1646	13.97	-0.06	+0.87	3.3	3.3	B2	R	1709	14.12	+0.64	+0.85	–	–	–	–
1647	13.68	+0.25	+0.56	–	–	–	–	1710	14.80	-0.06	+0.96	3.6	4.9	B1	R
1648	13.39	+0.16	+0.70	–	–	–	–	1711	13.44	+0.16	+0.74	–	–	–	–
1649	13.56	+0.24	+0.72	–	–	–	–	1712	13.85	+0.11	+1.07	–	–	OB:	R
1650	13.64	+0.25	+0.59	–	–	–	–	1713	13.86	-0.02	+0.84	3.1	2.8	B3	–
1651	7.58	-0.05	0	0	0.3	A0	R	1714	13.17	+0.42	+0.90	–	–	–	–
1652	14.04	+0.11	+0.96	3.5	2.5	B4	–	1715	14.33	+0.05	+0.90	3.3	3.2	B3	–
1653	13.78	+0.09	+0.55	–	–	–	–	1716	13.56	+0.36	+1.12	–	–	–	–
1654	14.38	+0.08	+0.91	3.3	3.1	B4	–	1717	15.19	+0.16	+0.98	3.5	4.1	B4	–
1655	13.68	+0.21	+0.67	–	–	–	–	1718	12.32	+0.16	+0.85	–	–	–	–
1656	14.85	+0.12	+0.96	3.5	3.6	B4	–	1719	15.15	+0.21	+1.00	3.5	3.7	B5	–
1657	14.49	+0.22	+0.94	–	–	–	–	1720	13.99	+0.21	+1.00	–	–	–	–
1658	13.84	+0.10	+1.03	/3.7	2.1	B3/	–	1721	13.34	+0.21	+0.76	–	–	–	–
1659	14.59	+0.04	+0.88	3.2	3.8	B3	–	1722	13.67	+0.29	+0.69	–	–	–	–
1660	14.65	+0.21	+1.10	/3.9	2.7	B4/	–	1723	15.00	+0.10	+0.77	–	–	–	–
1661	13.32	+0.30	+0.82	–	–	–	–	1724	14.63	+0.14	+0.77	–	–	–	–
1662	12.88	-0.12	+2.14	–	–	–	R	1725	12.99	+0.12	+0.60	–	–	–	–
1663	15.70	+0.19	+1.00	/3.5	5.2	B4/	–	1726	10.13	-0.02	+0.09	0.4	0.7	A0	–
1664	14.56	-0.05	+0.85	3.2	4.1	B2	R	1727	12.06	+0.07	+0.65	–	–	–	–
1665	14.71	-0.06	+0.69	/2.6	5.0	B4/	–	1728	11.88	-0.10	+0.73	2.8	0.7	B3	–
1666	12.78	+0.12	+0.75	–	–	–	–	1729	12.84	-0.01	+0.79	3.0	1.9	B3	–
1667	12.57	+0.06	+0.59	–	–	–	–	1730	13.03	+0.73	+1.10	–	–	–	–
1668	14.47	+0.37	+1.05	–	–	–	–	1731	15.44	+0.14	+0.82	–	–	–	–

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1732	14.22	+0.28	+0.88	—	—	—	—	1795	13.51	+0.30	+0.71	—	—	—	—
1733	13.93	+0.22	+1.03	/3.6	2.0	B5/	—	1796	13.64	+1.17	+2.09	—	—	—	—
1734	14.97	+0.30	+0.95	—	—	—	—	1797	9.88	+0.16	+1.06	—	—	—	R
1735	15.01	+0.21	+0.97	—	—	—	—	1798	14.63	+0.47	+1.29	—	—	—	—
1736	13.53	+0.42	+1.17	—	—	—	—	1799	14.24	+0.37	+1.17	—	—	—	—
1737	14.72	+0.07	+0.86	3.1	4.0	B4	—	1800	14.46	+0.11	+1.01	—	—	—	R
1738	14.44	+0.50	+1.01	—	—	—	—	1801	14.81	+0.53	+1.55	—	—	—	R
1739	13.45	+0.82	+1.11	—	—	—	—	1802	13.43	+0.36	+0.82	—	—	—	—
1740	13.15	+0.33	+0.72	—	—	—	—	1803	15.49	+0.08	+0.93	3.4	5.3	B3	—
1741	11.75	+0.03	+0.70	—	—	—	—	1804	13.67	+0.22	+1.01	—	—	—	R
1742	11.27	-0.13	+0.21	0.9	1.2	B8	R	1805	15.38	+0.07	+1.03	/3.8	4.6	B2/	R
1743	13.34	+0.06	+0.60	—	—	—	—	1806	13.70	+0.32	+0.55	—	—	—	—
1744	12.65	+0.23	+0.91	—	—	—	—	1807	14.37	+0.25	+0.66	—	—	—	—
1745	12.13	+0.09	+0.54	—	—	—	—	1808	14.18	+0.29	+0.89	—	—	—	—
1746	8.39	-0.49	+0.13	1.0	0.6	B3	—	1809	13.51	+0.29	+0.52	—	—	—	—
1747	13.51	+0.50	+0.73	—	—	—	—	1810	9.10	-0.02	+0.45	—	—	F4	—
1748	11.18	-0.06	+0.73	/2.8	1.0	B3/	—	1811	13.75	+0.43	+0.61	—	—	—	—
1749	10.63	-0.45	+0.30	/1.6	0.7	B3/	R	1812	11.91	+0.34	+0.89	—	—	—	—
1750	14.13	+0.35	+1.15	—	—	—	—	1813	13.70	+0.02	+1.03	—	—	OB:	R
1751	14.83	-0.08	+0.87	3.3	4.4	B2	R	1814	14.17	0	+0.82	3.1	3.3	B3	—
1752	10.29	-0.22	+0.25	1.1	0.9	B7	—	1815	14.55	+0.07	+0.98	3.6	3.1	B3	—
1753	12.55	+0.11	+0.49	—	—	—	—	1816	15.17	+0.20	+0.92	—	—	—	—
1754	12.46	-0.04	+0.69	2.6	1.8	B4	—	1817	15.13	+0.02	+0.90	3.3	4.6	B3	—
1755	11.29	-0.03	+0.71	2.7	1.0	B4	—	1818	11.43	+0.01	+0.75	2.8	1.0	B4	—
1756	14.84	-0.15	+0.74	—	—	OB:	R	1819	13.06	+0.31	+0.78	—	—	—	—
1757	13.62	+0.14	+0.90	—	—	—	—	1820	13.81	+0.18	+0.71	—	—	—	—
1758	13.97	-0.17	+0.88	3.5	4.4	B1	—	1821	14.71	+0.07	+0.78	—	—	—	—
1759	13.48	+0.17	+0.76	—	—	—	—	1822	14.47	+0.16	+0.89	—	—	—	—
1760	14.02	-0.05	+0.91	3.4	3.1	B2	R	1823	14.58	-0.05	+0.95	3.6	4.6	B1	R
1761	14.33	+0.04	+0.98	3.6	3.0	B2	R	1824	14.85	+0.21	+0.77	—	—	—	—
1762	10.49	-0.18	+0.16	0.8	0.9	B8	—	1825	13.02	+0.41	+0.85	—	—	—	—
1763	14.98	+0.34	+1.27	—	—	—	R	1826	12.57	+0.19	+0.65	—	—	—	—
1764	14.38	+0.14	+0.87	3.1	3.1	B5	—	1827	14.05	+0.08	+0.85	3.1	3.0	B4	—
1765	14.95	+0.22	+0.97	—	—	—	—	1828	13.94	+0.11	+0.72	—	—	—	—
1766	15.45	-0.03	+0.95	3.6	5.7	B2	R	1829	14.00	+0.07	+0.94	—	—	—	—
1767	11.65	+0.06	+0.51	—	—	—	—	1830	13.78	+0.22	+0.61	—	—	—	—
1768	14.80	+0.23	+1.43	—	—	OB:	R	1831	15.32	+0.05	+0.97	3.6	4.9	B2	R
1769	14.88	+0.45	+0.86	—	—	—	—	1832	13.04	+0.11	+0.54	—	—	—	—
1770	14.32	+0.12	+0.71	—	—	—	—	1833	15.23	+0.11	+0.95	3.4	4.4	B4	—
1771	14.24	+0.42	+0.89	—	—	—	—	1834	15.66	+0.29	+1.09	—	—	—	—
1772	13.52	+0.63	+1.11	—	—	—	—	1835	13.45	+0.51	+1.43	—	—	—	R
1773	14.17	+0.32	+1.09	—	—	—	R	1836	14.64	-0.66	+1.16	—	—	—	—
1774	14.69	+0.16	+0.72	—	—	—	—	1837	14.34	+0.68	+1.14	—	—	—	—
1775	9.78	+0.15	+0.09	0.2	0.5	A1	—	1838	14.00	+0.16	+0.83	—	—	—	—
1776	14.07	+0.23	+0.90	—	—	—	—	1839	14.56	+0.28	+0.88	—	—	—	—
1773	11.55	-0.07	+0.55	2.1	1.3	B5	—	1840	13.49	+0.78	+1.73	—	—	—	—
1778	13.10	+1.40	+1.20	—	—	—	—	1841	14.77	+0.19	+0.85	—	—	—	—
1779	13.97	+0.11	+0.96	/3.4	2.5	B3/	—	1842	12.11	-0.06	+0.49	1.9	1.6	B6	—
1780	11.31	-0.13	+0.64	2.4	1.0	B5	—	1843	11.43	-0.04	+0.38	1.5	1.0	B8	—
1781	13.75	+0.17	+0.66	—	—	—	—	1844	12.10	+0.11	+1.35	—	—	OB:	R
1782	14.30	+0.02	+0.90	3.3	3.1	B3	—	1845	9.75	-0.15	0	0.2	0.7	B9	—
1783	13.67	+0.21	+1.41	—	—	—	R	1846	13.15	-0.01	+0.85	3.2	2.0	B3	—
1784	14.23	+0.09	+1.00	3.6	2.6	B3	—	1847	11.51	-0.24	+0.25	/1.2	1.2	B6/	R
1785	12.25	+0.01	+0.59	—	—	—	—	1848	13.31	+0.37	+0.86	—	—	—	—
1786	14.36	-0.12	+0.91	3.5	5.2	B1	R	1849	12.34	+0.14	+0.71	—	—	—	—
1787	11.92	+0.11	+0.73	—	—	—	—	1850	14.26	0	+0.86	3.2	3.3	B3	—
1788	13.33	+0.14	+0.67	—	—	—	—	1851	13.79	-0.08	+0.71	2.6	3.0	B5	—
1789	13.32	-0.01	+0.68	2.5	2.5	B5	—	1852	11.86	-0.14	+0.55	2.2	1.6	B4	—
1790	12.19	-0.14	+0.78	3.0	1.6	B2	R	1853	14.06	+0.14	+0.91	3.2	2.8	B4	—
1791	14.14	+0.46	+1.11	—	—	—	—	1854	14.01	+0.42	+1.17	—	—	—	—
1792	14.63	+0.02	+0.85	3.1	4.0	B3	—	1855	14.59	+0.25	+1.00	—	—	—	—
1793	14.36	+0.07	+0.94	3.4	3.1	B3	—	1856	14.75	+0.60	+1.13	—	—	—	—
1794	10.71	+0.15	+0.70	—	—	—	—	1857	11.40	0	+0.26	1.0	1.1	B9	—

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1858	15.01	+0.21	+1.03	3.6	3.6	B4	–	1921	13.19	+0.36	+1.65	–	–	OB:	R
1859	15.69	-0.41	+1.10	–	–	–	R	1922	13.01	+0.19	+0.89	–	–	–	–
1860	15.52	+0.01	+0.97	3.6	5.3	B2	R	1923	14.01	+0.34	+0.94	–	–	–	–
1861	11.65	+0.16	+0.56	–	–	–	–	1924	14.95	0	+1.01	3.7	4.2	B2	R
1862	12.85	+0.27	+0.84	–	–	–	–	1925	12.98	-0.05	+0.77	2.9	2.1	B3	–
1863	14.04	+0.07	+0.91	3.3	3.0	B3	–	1926	15.21	+0.06	+1.13	–	–	OB:	R
1864	12.94	+0.01	+0.73	2.7	1.9	B5	–	1927	13.85	+0.09	+0.76	–	–	–	–
1865	15.12	+0.50	+1.06	–	–	–	–	1928	13.21	+0.06	+0.89 /3.3	2.0	B3/	–	–
1866	14.43	0	+0.80	3.0	3.9	B3	–	1929	8.83	-0.29	+0.71 /2.9	0.5	B1/	R	–
1867	10.98	-0.43	+0.35	1.7	1.5	B2	R	1930	13.99	+0.27	+1.22	–	–	–	R
1868	14.17	-0.07	+0.73	2.8	3.8	B3	–	1931	10.79	-0.01	+0.21	0.8	0.9	B9	R
1869	14.44	+0.05	+0.73	–	–	–	–	1932	14.41	+0.08	+0.86	3.1	3.5	B4	–
1870	14.81	+0.36	+0.91	–	–	–	–	1933	14.51	+0.21	+0.85	–	–	–	–
1871	15.01	+0.23	+0.75	–	–	–	–	1934	13.80	+0.18	+0.59	–	–	–	–
1872	14.62	+0.13	+0.90	3.2	3.3	B5	–	1935	13.71	+0.25	+0.63	–	–	–	–
1873	14.60	+0.33	+1.06	–	–	–	–	1936	14.02	+0.23	+0.85	–	–	–	–
1874	13.09	+0.20	+0.67	–	–	–	–	1937	14.97	+0.36	+0.93	–	–	–	–
1875	12.68	+0.16	+0.58	–	–	–	–	1938	13.91	0	+0.68	–	–	–	–
1876	12.87	+0.50	+0.98	–	–	–	–	1939	14.94	+0.34	+0.95	–	–	–	–
1877	13.16	+0.21	+1.41	–	–	–	R	1940	15.50	+0.11	+0.92	3.3	5.2	B4	–
1878	13.71	+0.57	+1.07	–	–	–	–	1941	15.70	+0.05	+1.04	3.8	5.8	B2	R
1879	12.53	+0.02	+0.59	–	–	–	–	1942	11.37	-0.25	+0.11	0.7	1.7	B8	R
1880	12.99	+0.53	+1.08	–	–	–	–	1943	13.93	+0.04	+0.76	2.8	3.0	B5	–
1881	13.01	+0.64	+1.23	–	–	–	–	1944	15.32	+0.21	+1.00	3.5	4.0	B5	–
1882	12.79	+0.07	+0.75	–	–	–	–	1945	15.43	+0.05	+0.89	3.3	5.4	B3	–
1883	14.36	-0.10	+0.86	3.3	3.9	B2	R	1946	15.28	+0.02	+0.90	3.3	4.9	B3	–
1884	14.39	+0.22	+0.92	–	–	–	–	1947	14.25	+0.16	+0.82	–	–	–	–
1885	12.53	+0.07	+0.54	–	–	–	–	1948	14.12	+0.51	+1.59	–	–	–	R
1886	15.23	-0.05	+0.99	3.7	5.7	B2	–	1949	14.88	+0.43	+1.68	–	–	OB:	R
1887	14.98	+0.13	+0.98	3.5	3.7	B4	–	1950	15.15	+0.70	+1.25	–	–	–	–
1888	13.85	-0.05	+0.92	3.5	2.9	B2	R	1951	13.65	+0.31	+0.64	–	–	–	–
1889	14.38	+0.43	+1.19	–	–	–	–	1952	7.70	+0.19	+0.33	–	–	–	–
1890	10.38	-0.19	+0.14	0.7	0.9	B8	–	1953	12.45	+0.51	+1.20	–	–	–	–
1891	12.30	+0.30	+0.62	–	–	–	–	1954	11.36	0	+0.26	1.0	0.9	B9	–
1892	14.41	+0.46	+0.99	–	–	–	–	1955	12.01	+0.13	+0.24	–	–	–	–
1893	13.85	+0.29	+0.76	–	–	–	–	1956	12.68	+0.10	+0.63	–	–	–	–
1894	13.38	+0.56	+0.92	–	–	–	–	1957	13.81	+0.24	+0.71	–	–	–	–
1895	14.02	+0.20	+0.92	–	–	–	–	1958	12.99	+0.31	+0.81	–	–	–	–
1896	15.29	+0.21	+1.20	–	–	OB:	R	1959	10.43	-0.42	+0.34 /1.7	1.1	B3/	R	–
1897	13.54	+0.29	+0.46	–	–	–	–	1960	13.98	-0.16	+0.75	2.8	3.3	B4	–
1898	12.86	+0.10	+0.66	–	–	–	–	1961	12.94	+0.42	+0.99	–	–	–	–
1899	13.36	+0.16	+0.66	–	–	–	–	1962	12.42	+0.09	+0.81	–	–	–	–
1900	13.85	+0.16	+0.98	–	–	–	R	1963	12.97	+0.36	+1.24	–	–	–	–
1901	14.88	+0.14	+0.86	–	–	–	–	1964	12.97	+0.47	+1.13	–	–	–	–
1902	14.65	+0.13	+0.90	3.2	3.4	B5	–	1965	12.90	+0.47	+1.22	–	–	–	–
1903	14.20	+0.18	+0.97	–	–	–	–	1966	12.37	-0.05	+0.71	2.7	1.6	B4	–
1904	12.96	+0.16	+0.75	–	–	–	–	1967	13.47	+0.13	+0.69	–	–	–	–
1905	14.36	-0.06	+0.87	3.2	3.5	B3	–	1968	14.18	+0.07	+0.72	–	–	–	–
1906	14.30	+0.04	+0.75	–	–	–	–	1969	14.44	+0.43	+1.26	–	–	–	–
1907	14.21	+0.27	+1.01	–	–	–	–	1970	12.70	+0.41	+0.95	–	–	–	–
1908	13.44	+0.78	+2.08	–	–	OB:	R	1971	13.85	+0.57	+1.33	–	–	–	–
1909	14.47	+0.57	+0.99	–	–	–	–	1972	12.16	+0.12	+0.56	–	–	–	–
1910	13.67	+0.12	+0.63	–	–	–	–	1973	14.52	+0.11	+0.92	3.3	3.3	B4	–
1911	15.08	+0.40	+1.12	–	–	–	R	1974	11.50	+0.02	+0.63	–	–	–	–
1912	15.34	+0.36	+1.19	–	–	–	–	1975	13.18	+0.13	+0.74	–	–	–	–
1913	12.00	-0.03	+0.47	–	–	–	–	1976	14.34	+0.20	+0.85	–	–	–	–
1914	12.11	+0.38	+0.79	–	–	–	–	1977	14.09	+0.18	+0.84	–	–	–	–
1915	13.73	+0.16	+0.84	–	–	–	–	1978	14.39	-0.04	+0.82	3.1	3.6	B3	–
1916	11.30	-0.27	+0.52	2.2	1.3	B3	–	1979	14.19	-0.03	+0.73	2.8	3.7	B4	–
1917	13.27	+0.44	+0.92	–	–	–	–	1980	12.13	+0.23	+0.49	–	–	–	–
1918	12.22	0	+0.52	–	–	–	–	1981	12.84	+0.14	+0.75	–	–	–	–
1919	13.89	+0.28	+0.50	–	–	–	–	1982	15.95	-0.01	+1.15	–	–	–	R
1920	11.06	-0.05	+0.42	–	–	–	–	1983	14.96	+0.12	+0.91	3.3	4.2	B4	–

Table 2 – continued

1	2	3	4	5	6	7	8
1984	15.25	+0.26	+0.92	–	–	–	–
1985	13.80	+0.19	+0.56	–	–	–	–
1986	15.27	+0.19	+1.02	3.6	4.2	B4	–
1987	15.10	+0.19	+0.95	–	–	–	–
1988	12.63	+0.20	+0.71	–	–	–	–
1989	13.74	+0.19	+0.59	–	–	–	–
1990	13.72	+0.27	+0.67	–	–	–	–
1991	13.25	+0.23	+0.55	–	–	–	–
1992	13.66	+0.29	+0.56	–	–	–	–
1993	13.13	+0.17	+0.63	–	–	–	–
1994	14.45	+0.06	+0.74	–	–	–	–
1995	13.16	+0.69	+0.66	–	–	–	–
1996	13.21	-0.05	+0.87	3.3	2.1	B2	R
1997	14.54	-0.05	+0.98	3.7	4.2	B1	R
1998	13.82	+0.04	+0.84	3.1	2.8	B3	–
1999	12.94	+0.18	+0.83	–	–	–	–
2000	12.15	+0.37	+1.15	–	–	–	–
2001	14.08	+0.42	+1.40	/4.8	1.4	B3/	–
2002	13.45	+0.17	+0.56	–	–	–	–
2003	14.07	+0.47	+1.33	–	–	–	–
2004	12.45	+0.48	+1.10	–	–	–	–
2005	13.89	+0.08	+0.54	–	–	–	–
2006	14.85	+0.47	+1.02	–	–	–	–
2007	13.20	+0.15	+0.77	–	–	–	–
2008	14.88	+0.20	+0.89	–	–	–	–
2009	15.19	+0.53	+1.03	–	–	–	–
2010	14.63	+0.30	+0.92	–	–	–	–
2011	13.51	+0.27	+0.64	–	–	–	–
2012	13.31	+0.40	+0.74	–	–	–	–
2013	12.59	+0.19	+0.69	–	–	–	–
2014	14.27	-0.14	+0.92	/3.6	7.0?	B1/	R
2015	14.49	+0.25	+1.03	–	–	–	–
2016	13.36	+0.19	+0.65	–	–	–	–
2017	14.32	+0.26	+0.87	–	–	–	–
2018	13.40	+0.22	+0.72	–	–	–	–
2019	14.04	+0.23	+1.05	–	–	–	–
2020	9.43	-0.06	0	0.1	0.6	B9	R
2021	14.17	+0.12	+0.76	–	–	–	–
2022	15.61	+0.11	+1.02	3.7	4.8	B3	–
2023	14.95	+0.37	+1.14	–	–	–	–
2024	14.35	-0.04	+0.74	2.8	4.1	B3	–
2025	14.85	+0.34	+1.07	–	–	–	–
2026	12.71	+0.28	+0.41	–	–	–	–
2027	12.06	+0.16	+0.52	–	–	–	–
2028	14.18	+0.04	+0.81	3.0	3.3	B4	–
2029	13.46	+0.11	+0.80	–	–	–	–
2030	13.24	+0.34	+0.75	–	–	–	–
2031	13.57	+0.46	+0.52	–	–	–	–
2032	14.00	+0.04	+0.88	3.2	2.8	B3	–
2033	14.71	+0.15	+0.77	–	–	–	–
2034	13.24	+0.29	+0.47	–	–	–	–
2035	12.72	+0.16	+0.68	–	–	–	–
2036	9.47	-0.57	+0.27	/1.6	1.1	B2/	R
2037	12.06	+0.51	+1.63	–	–	–	R
2038	12.52	-0.03	+0.77	2.9	0.8	B3	–
2039	13.72	+0.29	+0.74	–	–	–	–
2040	14.47	-0.08	+0.89	3.4	4.0	B2	R
2041	14.41	+0.06	+0.82	3.0	3.6	B4	–
2042	15.20	+0.15	+0.95	3.4	4.4	B4	–
2043	12.86	+0.14	+1.50	–	–	OB:	R
2044	14.79	+0.07	+0.97	3.5	3.5	B3	–
2045	12.50	+0.05	+0.69	–	–	–	–
2046	12.79	+0.15	+0.77	–	–	–	–
2047	14.10	+0.19	+1.03	/3.6	2.4	B4/	–
2048	10.21	0	+0.59	–	–	–	–
2049	12.39	+0.31	+0.49	–	–	–	–
2050	13.29	+0.23	+0.77	–	–	–	–
2051	14.41	+0.01	+0.99	/3.7	3.1	B2/	R
2052	14.49	+0.02	+0.77	2.8	4.1	B4	–
2053	13.54	+0.39	+0.59	–	–	–	–
2054	14.26	+0.04	+0.87	3.2	3.3	B3	–
2055	14.30	+0.05	+0.87	3.2	3.3	B3	–
2056	14.33	+0.11	+0.81	–	–	–	–
2057	13.67	+0.23	+0.63	–	–	–	–
2058	14.92	+0.05	+0.75	–	–	–	–
2059	14.36	+0.52	+0.94	–	–	–	–
2060	14.90	-0.11	+0.86	3.3	5.0	B2	R
2061	13.64	+0.24	+0.93	–	–	–	–
2062	14.49	+0.46	+0.93	–	–	–	–
2063	14.08	+0.13	+0.62	–	–	–	–
2064	15.05	+0.03	+0.68	–	–	–	–
2065	14.13	+0.04	+1.43	–	–	OB:	R
2066	13.32	+0.24	+0.80	–	–	–	–
2067	14.71	+0.01	+0.78	2.9	4.4	B4/	–
2068	13.58	+0.17	+0.72	–	–	–	–
2069	13.52	+0.13	+0.70	–	–	–	–
2070	13.30	+0.16	+0.70	–	–	–	–
2071	12.78	+0.17	+0.85	–	–	–	–
2072	13.47	+0.31	+0.65	–	–	–	–
2073	12.24	+0.63	+1.08	–	–	–	–
2074	12.69	+0.09	+0.60	–	–	–	–
2075	13.44	+0.07	+0.66	–	–	–	–
2076	14.39	-0.04	+0.82	3.1	3.6	B3	–
2077	13.95	+0.20	+0.88	–	–	–	–
2078	14.40	+0.63	+1.18	–	–	–	–
2079	13.59	+0.33	+0.70	–	–	–	–
2080	13.25	+0.38	+0.81	–	–	–	–
2081	15.48	+0.40	+0.83	–	–	–	–
2082	15.31	+0.18	+0.95	3.4	4.3	B5	–
2083	14.41	-0.04	+0.77	2.9	4.0	B3	–
2084	14.34	+0.72	+1.90	–	–	OB:	R
2085	14.08	+0.25	+0.93	–	–	–	–
2086	11.04	0	+0.23	0.9	1.0	B9	–
2087	13.63	+0.40	+0.46	–	–	–	–
2088	12.27	-0.01	+0.58	2.2	1.5	B6	–
2089	14.61	+0.19	+0.80	–	–	–	–
2090	14.77	+0.10	+0.95	3.4	3.7	B3	–
2091	14.17	+0.28	+0.77	–	–	–	–
2092	13.68	+0.39	+0.57	–	–	–	–
2093	14.14	+0.22	+0.54	–	–	–	–
2094	12.38	+0.20	+0.32	–	–	–	–
2095	12.87	+0.45	+0.94	–	–	–	–
2096	13.07	+0.17	+0.60	–	–	–	–
2097	8.98	+1.73	+1.71	–	–	–	–
2098	13.22	+0.60	+1.17	–	–	–	–
2099	12.37	+0.40	+0.74	–	–	–	–
2100	12.76	+0.38	+0.83	–	–	–	–
2101	13.74	+0.04	+0.75	2.8	2.7	B5	–
2102	15.21	+0.27	+0.90	–	–	–	–
2103	10.01	+0.05	+0.05	0.1	0.8	A0	R
2104	14.79	+0.33	+0.81	–	–	–	–
2105	14.60	+0.05	+0.83	3.0	3.9	B4	–
2106	15.14	-0.11	+0.87	3.4	5.5	B2	R
2107	9.83	+0.29	+0.33	–	–	–	–
2108	13.10	-0.04	+0.69	2.6	2.4	B4	–
2109	13.79	+0.24	+0.97	–	–	–	–

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8								
2110	14.29	-0.10	+0.73	/2.8	3.9	B3/	-	2161	13.99	-0.10	+1.45	/5.5	6.3	05/	38								
2111	13.30	+0.35	+0.83	-	-	-	-	2162	14.09	+0.11	+0.89	1.0	0.7	F8	39								
2112	14.02	-0.04	+0.89	3.3	3.3	B2	R	1561	14.10	-0.01	+0.96	3.6	2.8	B3	40								
2113	12.60	+0.15	+0.72	-	-	-	-	2163	14.17	+0.07	+0.94	1.0	0.7	F8	41								
2114	13.71	+0.07	+0.18	-	-	-	-	2164	14.18	+0.08	+0.86	1.0	0.7	F8	42								
2115	14.88	-0.05	+0.77	2.9	4.9	B3	-	2165	14.19	+0.04	+1.00	3.7	2.8	B3	43								
2116	14.81	+0.01	+0.84	3.1	4.4	B3	-	1564	14.22	+0.15	+0.86	3.0	2.7	B6	44								
2117	13.99	+0.15	+0.65	-	-	-	-	1564				1.0	0.6	G0	44								
2118	13.49	+0.30	+0.67	-	-	-	-	2166	14.28	-0.05	+0.89	3.4	3.7	B2	45								
2119	15.57	+0.02	+0.94	3.4	5.8	B2	R	2167	14.32	0	+1.50	-	-	-	46								
2120	12.64	+0.07	+0.52	-	-	-	-	2168	14.36	+0.13	+0.95	3.4	3.0	B4	47								
2121	13.65	+0.15	+0.52	-	-	-	-	2169	14.43	+0.15	+1.12	4.0	2.7	B3	48								
2122	14.65	+0.14	+0.94	3.4	3.5	B4	-	2170	11.45	+0.03	+0.91	3.3	3.3	B3	49								
2123	12.60	+0.44	+0.77	-	-	-	-	2171	14.46	+0.16	+1.12	-	-	-	50								
2124	12.91	+0.67	+0.99	-	-	-	-	2172	14.48	+0.15	+1.00	3.6	3.0	B3	51								
2125	9.70	-0.80	+0.22	-	-	-	R	2173	14.51	+0.03	+0.94	3.5	3.5	B3	52								
2126	9.12	-0.94	+0.06	-	-	-	R	2174	14.52	+0.04	+0.90	3.3	3.5	B3	53								
2127	14.02	+0.12	+0.87	3.1	2.7	B5	-	2175	14.55	+0.21	+0.83	0.6	0.9	G0	54								
2128	14.73	+0.07	+1.44	5.3	6.7	07	-	2176	14.60	-0.22	+1.10	4.1	4.5	B1	55								
2129	12.30	+0.47	+1.29	-	-	-	-	2177	14.64	-0.04	+1.02	3.8	5.0	B1	56								
Tr 28																							
2130	9.34	-0.80	+0.46	/2.3	3.2	05/	1	2178	14.66	+0.24	+0.92	1.0	0.8	G0	57								
2131	11.10	-0.77	+0.47	/2.3	7.1	05/	2	2179	14.73	-0.13	+1.00	3.8	6.6	B0	58								
1563	11.55	0	+1.04	-	-	-	3	2180	14.74	-0.06	+0.95	3.6	4.9	B1	59								
2132	11.59	-0.34	+0.62	2.6	2.1	B1	4	2181	14.74	+0.23	+1.02	1.2	0.8	F8	60								
2133	11.58	-0.13	+0.60	2.4	1.3	B4	5	2182	14.75	-0.01	+0.87	3.3	4.0	B3	61								
2134	11.65	-0.04	+0.47	1.8	1.4	B7	6	2183	14.75	-0.02	+0.99	3.7	3.9	B2	62								
2135	11.81	-0.13	+0.37	1.5	1.7	B6	7	2184	14.76	-0.05	+0.90	3.4	4.5	B2	63								
2136	11.83	-0.30	+0.61	2.6	1.7	B2	8	2185	14.88	+0.37	+1.58	-	-	OB:	64								
2137	11.93	-0.49	+0.58	2.6	3.8	B0	9	2186	14.96	+0.14	+0.90	1.0	1.0	F8	65								
1268	11.98	+0.01	+0.32	0	0.6	F0	10	2187	15.03	-0.02	+1.00	3.7	4.4	B2	66								
2138	12.06	-0.53	+0.52	/2.5	4.8	09/	11	2188	15.04	+0.02	+0.91	3.4	4.3	B3	67								
2139	12.66	+0.17	+0.97	1.0	0.3	G0	12	2189	15.04	-0.07	+0.92	3.5	4.9	B2	68								
2140	12.70	+0.04	+0.76	0.2	0.4	G0	13	2190	15.05	-0.02	+0.97	3.7	4.6	B2	69								
2140				1.0	0.5	F5	13	2191	15.11	+0.34	+1.07	1.2	0.8	G0	70								
2141				2.8	1.7	B5	13	2192	15.18	+0.19	+1.20	-	-	-	71								
2141	12.71	+0.08	+0.84	0.8	0.4	F8	14	2193	15.23	-0.07	+0.85	3.2	5.5	B3	72								
1559	12.73	+0.17	+0.69	0	0.4	G2	15	2194	15.25	+0.31	+1.06	1.2	0.9	G0	73								
2142	12.76	+0.19	+1.46	-	-	OB:	16	1560	15.22	-0.03	+0.94	3.5	4.8	B2	R								
2143	12.86	+0.02	+0.82	0.2	0.5	G0	17	2195	13.50	+0.07	+0.77	-	-	-	74								
2144	12.93	+0.42	+0.80	0	0.3	K0	18	2196	13.82	+0.13	+0.68	-	-	-	75								
2145	12.98	+0.92	+1.74	-	-	-	19	2197	13.95	+0.16	+0.68	-	-	-	76								
2146	13.02	+0.25	+0.90	1.0	0.3	G0	20	2198	13.43	+0.28	+1.70	/6.0	1.9	09/	77								
2147	13.18	+0.44	+0.77	0	0.3	K0	21	2199	12.77	+0.35	+1.02	-	-	-	78								
2148	13.22	+0.18	+0.77	0.2	0.5	G2	22	2200	13.95	+0.16	+0.68	-	-	-	79								
1562	13.49	+0.25	+0.63	0	0.4	G8	23	2201	13.80	+0.22	+0.61	-	-	-	80								
2149	13.59	+0.47	+1.33	1.5	0.4	G0	24	2202	13.07	+0.11	+0.71	-	-	-	81								
2150	13.63	+0.20	+0.65	0	0.6	G2	25	2203	11.89	-0.04	+0.68	2.6	2.2	B4	82								
2150				0.9	3.6	B8	25	2204	14.30	+0.11	+0.86	3.1	3.0	B5	83								
1341	13.70	+0.28	+0.67	0	0.4	G8	26	2205	15.29	+0.23	+1.08	3.8	3.8	B4	85								
2151	13.70	+0.29	+0.68	0	0.4	G8	27	2206	14.54	+0.18	+0.44	-	-	-	86								
2152	13.76	+0.70	+1.10	0.4	0.3	K1	28	2207	13.10	+0.36	+0.75	-	-	-	84								
2153	13.77	+0.20	+1.10	-	-	-	29	NGC 6405															
2154	13.79	+0.07	+0.80	1.0	0.7	E6	30	2208	9.47	+0.20	-0.02	-	-	B6	3								
2155	13.78	+0.24	+1.03	-	-	-	31	2209	11.59	+0.33	+0.55	1.0	0.4	A7	4								
2156	13.75	+0.54	+1.00	0.4	0.3	K0	32	2210	10.52	+0.16	+0.27	0.8	0.7	A0	5								
2157	13.80	+0.40	+1.12	1.2	0.4	G2	33	2211	12.78	+0.09	+0.64	0	0.5	G0	6								
2158	13.82	+0.23	+1.15	-	-	-	34	2212	11.01	+0.33	+0.33	1.0	0.5	A2	7								
2159	13.87	+0.43	+1.20	1.2	0.4	G2	35	2213	10.18	+0.18	+0.19	0.6	0.6	A0	8								
2160	13.83	+0.13	+0.78	0.6	0.7	F8	36	2214	7.93	-0.13	+0.05	0.3	0.3	B9	9								
1565	13.94	-0.04	+0.87	3.3	3.0	B3	37	2215	13.20	+1.30	+1.44	0	-	M1	10								
								2216	10.75	+0.28	+0.38	1.0	0.5	A2	11								

Table 2 – continued

1	2	3	4	5	6	7	8
2217	11.94	+0.18	+0.47	/1.4	1.0	A0/	12
2217				0.8	0.5	A7	12
2218	10.58	+0.15	+0.24	0.8	0.7	A0	13
2219	11.77	+0.14	+0.49	0.2	0.5	F2	14
2220	9.92	-0.04	+0.11	0.4	0.6	B9	15
2221	9.83	+1.51	+1.90	—	—	K3	16
2222	9.09	-0.03	0	0	0.5	A0	17
2223	12.23	+0.04	+0.57	0	0.4	G0	18
2224	9.76	-0.07	+0.04	0.2	0.7	B9	19
2225	8.16	-0.37	+0.02	0.5	0.5	B6	20
2226	9.07	0	+0.08	0.3	0.5	B9	21
2227	9.50	-0.13	+0.03	0.2	0.6	B9	22
2228	13.90	+0.25	+0.60	0	0.5	G8	23
2228				/2.0	2.2	B9/	23
2229	12.54	+0.36	+0.75	0	0.2	G8	24
2230	9.07	+0.07	+0.08	0.2	0.5	A0	25
2231	11.85	-0.05	+0.49	0	0.4	F6	26
2232	12.50	+0.18	+0.62	0	0.4	G2	27
2233	8.65	-0.27	+0.03	0.4	0.5	B8	28
2234	9.80	-0.12	+0.05	0.3	0.7	B9	29
2235	11.59	+0.42	+0.31	1.1	1.1	B9	31
2236	14.10	+0.32	+0.82	0.2	0.5	G8	31a
2237	14.19	+0.67	+1.01	0.2	0.4	K1	31c
2238	14.46	+0.48	+0.91	0.2	0.5	K0	31e
2239	11.66	+1.07	+1.97	—	—	—	32a
2240	13.25	+0.03	+0.68	0.2	0.7	F8	32b
2241	12.63	+0.11	+0.59	0	0.5	G0	32c
2242	11.83	+0.02	+0.50	0	0.4	E6	33
2243	10.74	+0.09	+0.23	0	0.4	A7	34
2244	11.44	+0.15	+0.39	0.4	0.5	A7	35
2245	12.60	+0.26	+0.65	0	0.3	G8	36
2246	8.77	-0.21	-0.04	0.1	0.5	B9	37
2247	13.23	+0.21	+0.87	0.4	0.4	G2	38
2247				/2.3	1.6	B8/	38
2248	13.96	+0.24	+0.90	1.0	0.6	F8	39
2249	12.87	+0.02	+0.65	0	0.6	G0	40
2249				/4.4	2.0	B6/	40
2250	8.96	-0.07	+0.07	0.3	0.4	B9	41
2251	10.58	+0.14	+0.22	0.7	0.8	A0	42
2252	11.51	+0.14	+0.44	0.8	0.4	A7	43
2253	10.55	+0.07	+0.29	1.0	0.7	B9	44
2254	14.01	+0.38	+0.81	0	0.4	K0	45
2255	14.96	+0.10	+0.92	3.3	4.2	B3	46
2255				1.0	1.0	F8	46
2256	10.46	+0.11	+0.21	0	0.5	A5	47
2256				0.7	0.7	A0/	47
2257	10.61	+0.12	+0.27	0	0.4	A7	48
2257				/0.9	0.7	B9/	48
2258	13.89	+0.01	+0.69	2.6	3.2	B5	50
2258				0.4	0.8	F8	50
2259	9.97	+0.13	+0.08	0.2	0.5	A1	51
2260	10.22	+0.06	+0.10	0.3	0.8	A0	52
2261	9.86	+0.27	+0.18	0.4	0.4	A2	53
2261				0.8	0.6	A1	53
2262	10.29	+0.14	+0.23	0.7	0.7	A0	54
2263	13.14	+0.35	+0.63	0	0.6	G0	55
2263				/2.0	1.5	A0/	55
2263				/1.2	0.8	A7/	55
2264	13.45	+0.02	+0.59	0	0.8	F8	56
2265	11.84	+0.03	+0.45	0.2	0.5	F2	57
2266	11.78	+0.08	+0.46	0.4	0.5	F0	58
2267	11.10	-0.10	+0.29	1.0	1.4	B8	59
2268	9.22	+0.20	+0.30	0.4	0.2	A5	60
2269	9.76	+0.19	+0.56	1.0	0.2	F0	61
2270	10.77	+0.26	+1.57	—	—	—	62
2271	10.12	+0.10	+0.14	0.4	0.7	A0	63
2271				0	0.4	A5	63
2272	10.18	+0.09	+0.09	0.2	0.8	A0	64
2273	12.62	+0.05	+0.55	0	0.5	F8	65
2273				0.2	0.6	F6	65
2274	12.19	+0.12	+0.51	0.6	0.6	F0	66
2274				/1.8	1.3	B8/	66
2275	11.29	+0.09	+0.36	0.2	0.4	F0	67
2276	11.94	+0.22	+0.49	0.8	0.5	A7	68
2277	12.03	-0.03	+0.53	0	0.4	F8	69
2277				/2.0	1.5	B6/	69
2278	8.32	-0.41	+0.10	0.8	0.5	B5	70
2279	10.15	+0.17	+0.11	0.2	0.6	A1	71
2280	10.08	+0.02	+0.13	0.5	0.7	B9	73
2281	9.69	-0.28	+0.14	0.8	0.8	B7	74
2282	9.88	-0.32	+0.09	0.7	0.9	B7	75
2283	11.24	+0.17	+0.30	0.4	0.6	A5	76
2283				/1.0	0.9	B9/	76
2284	9.33	-0.17	+0.06	0.4	0.6	B9	77
2285	13.31	+0.22	+0.72	0	0.4	G8	78
2286	13.85	+0.09	+0.83	0.4	0.7	G0	79
2286				/3.0	2.6	B5/	79
2287	12.62	-0.01	+0.63	/2.3	2.0	B5/	80
2287				0.2	0.5	F8	80
2288	13.21	+0.10	+0.65	0	0.6	G0	81
2288				/2.3	1.9	B7/	81
2289	13.48	+0.05	+0.59	0	0.7	G0	82
2289				/2.2	2.3	B7/	82
2290	13.12	+0.15	+0.70	0	0.5	G2	83
2290				/2.5	1.7	B7/	83
2291	14.24	+0.05	+0.70	2.6	3.8	B5	84
2291				0.2	1.0	F8	84
2292	12.87	+0.32	+0.68	0	0.3	G8	85
2293	13.90	+0.28	+0.72	0	0.5	G8	86
2294	12.91	+0.26	+0.64	0	0.3	G8	87
2295	13.99	+0.09	+0.61	0	0.9	G0	88
2296	11.38	+0.03	+0.36	0.2	0.5	F0	89
2297	13.79	+0.16	+0.57	0.6	1.1	F0	90
2298	11.99	+0.01	+0.49	0	0.5	F6	91
2299	10.37	+0.01	+0.22	0.8	0.7	B9	92
2300	9.97	+0.06	+0.13	0	0.8	A2	93
2301	8.73	-0.39	+0.01	0.4	0.7	B6	94
2302	10.15	+0.10	+0.10	0.3	0.8	A0	95
2303	8.95	-0.23	+0.05	0.4	0.5	B8	96
2304	8.49	-0.47	+0.08	0.8	0.7	B4	97
2305	12.29	-0.04	+0.55	2.1	1.6	B6	98
2306	9.37	-0.11	+0.05	0.3	0.6	B9	99
2307	13.78	+0.39	+0.73	0	0.4	K0	101
2308	13.55	+0.52	+0.96	0	0.4	K1	102
2309	9.01	+0.19	+0.15	0.4	0.3	A1	103
2310	13.55	+0.17	+0.70	0	0.6	G2	104
2310				/2.4	2.1	B7/	104
2311	13.24	+0.18	+0.63	0	0.5	G2	105
2312	11.43	+0.20	+0.36	/1.2	0.9	A0/	106
2312				0	0.5	G2	106
2313	14.08	+0.29	+0.76	0.2	0.5	G8	107
2314	12.88	+0.29	+0.41	0.8	1.0	A5	108
2315	11.72	+0.30	+0.25	0.6	1.0	A1	109
2316	14.33	+0.37	+0.94	0.4	0.5	G8	110
2317	12.10	-0.01	+0.61	0.4	0.4	F6	111
2318	10.90	+0.17	+0.28	0.4	0.8	A2	113

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
2319	9.85	+0.01	+0.10	0.4	0.6	B9	114	2371	14.54	+0.18	+0.93	0.4	0.8	G2	175
2320	8.57	-0.23	+0.06	0.4	0.4	B8	115	2372	14.61	+0.67	+1.43	1.5	0.2	K3	176
2321	12.39	+0.01	+0.55	0	0.6	F5	116	2373	14.62	+0.25	+0.89	0.8	0.8	G0	177
2322	10.55	-0.11	+0.24	1.0	0.9	B8	117	1774	14.68	+0.04	+0.74	0.4	1.1	F8	178
2323	10.99	+0.05	+0.47	0.4	0.3	F2	118	2374	14.69	+0.31	+0.91	0.4	0.6	G8	179
2324	12.14	-0.01	+0.51	/1.5	1.4	B8/	119	1677	14.79	+0.27	+1.19	4.2	2.7	B3	180
				0	0.5	F6	119	2375	14.95	-0.02	+0.86	3.2	2.8	B3	181
2325	11.22	+0.16	+0.30	0.6	1.0	A2	120	1676	15.02	+1.00	+0.50	—	—	—	182
2326	11.19	+0.01	+0.63	0.2	0.3	F8	121	2376	15.10	+0.35	+0.98	0.8	0.6	G8	183
2327	14.34	+0.29	+1.00	0.8	0.6	G2	122	2377	15.11	+0.10	+0.77	0.4	1.2	G0	184
2328	11.45	+0.05	+0.36	0.2	0.5	F0	123	2378	15.13	-0.04	+1.00	3.8	4.5	B2	185
2329	11.25	0	+0.36	0	0.4	F2	124	2379	15.46	+0.23	+0.93	0.4	1.3	G2	186
2330	12.60	+1.38	+1.09	—	—	—	125	2380	15.58	-0.03	+0.84	3.1	6.1	B3	187
2331	9.31	+0.49	+0.50	1.8	0.3	A1	126	2381	15.73	-0.13	+1.33	—	—	OB:	188
2332	10.22	+0.14	+0.21	0.6	0.7	A0	127	2382	12.25	+0.02	+0.49	0	0.5	F6	189
2333	8.03	-0.30	+0.09	0.6	0.4	B7	128	2383	12.79	+0.13	+0.73	0.4	0.4	G0	190
2334	10.19	+0.12	+0.15	0.4	0.7	A0	129	2384	13.53	+0.24	+0.58	0	0.4	G8	191
2334				0.2	0.4	A5	129	2385	13.44	+0.11	+0.74	0.2	0.6	G0	192
2335	10.96	+0.09	+1.26	—	—	—	130	2386	12.52	-0.03	+0.70	2.6	1.8	B4	193
2336	11.98	-0.01	+0.48	0	0.5	F6	131	2387	13.55	+0.28	+1.37	—	—	—	194
				/1.8	1.4	B7/	131	2388	13.65	+0.33	+0.56	1.0	1.1	A7	195
2337	12.29	-0.06	+0.59	0	0.5	F8	132	2389	13.81	-0.01	+0.78	2.9	3.0	B3	196
2338	9.44	-0.25	+0.09	0.6	0.6	B8	133	2390	13.89	+0.33	+0.48	1.0	2.4	A2	197
2339	10.33	-0.02	+0.38	0	0.3	F2	134	1702	14.90	+0.43	+0.90	0.2	0.5	K0	199
1742-	11.27	-0.13	+0.21	0.9	1.2	B8	135	2391	14.99	-0.24	+0.90	—	—	—	200
1741	11.75	+0.03	+0.70	0.2	0.3	G0	136	2392	15.00	+0.37	+1.09	0.6	0.6	G8	201
2340-	11.76	-0.14	+0.55	2.2	1.6	B4	137	2393	15.39	+0.15	+0.96	3.4	4.7	B4	202
1641	12.32	+0.18	+1.43	—	—	—	138								
2341	12.49	-0.07	+0.76	2.9	1.7	B3	139								
1675	12.53	+0.18	+0.69	0	0.4	G2	140								
2342	12.54	+0.10	+0.61	0	0.4	G0	141								
2343	12.78	+0.10	+0.69	0.2	0.5	G0	142								
1740	13.15	+0.33	+0.72	0	0.3	G8	143								
2344	13.39	+0.50	+0.85	0.2	0.3	K0	144								
2345	13.44	+0.38	+0.70	0	0.4	G8	145								
2346	13.45	+0.82	+1.11	0.4	0.2	K3	146								
2347	13.51	+0.19	+0.65	0	0.6	G2	147								
2348	13.55	+0.33	+0.68	0	0.4	G8	148								
2349	13.58	+0.19	+0.46	0.6	2.0	A7	149								
2350-	13.61	+0.23	+0.63	0	0.6	G2	150								
2351	13.61	+0.34	+0.69	0	0.4	G8	151								
2352	13.66	+0.25	+0.72	0	0.4	G8	152								
2353	13.69	+0.50	+1.31	1.8	0.3	G2	153								
1619	13.74	+0.12	+1.09	3.9	2.0	B2	154								
2354	13.76	+0.30	+0.85	0.4	0.4	G8	155								
2355	13.85	+0.29	+0.91	0.8	0.5	G2	156								
1642	13.88	+0.05	+0.95	3.5	2.4	B3	157								
2356	13.90	+0.29	+1.30	4.7	1.5	B3	158								
2357	13.92	+0.11	+0.80	0.6	0.8	F6	159								
1620	13.93	-0.17	+0.94	3.7	4.9	B0	160								
2358	14.05	-0.12	+1.04	4.0	4.5	B0	161								
2359	14.07	+0.05	+0.88	3.2	1.9	B3	162								
2360-	14.08	+0.18	+0.81	0.4	0.7	G2	163								
2361	14.13	+0.20	+0.83	0.4	0.7	G2	164								
2362	14.17	+0.02	+0.90	3.3	2.9	B3	165								
2363	14.19	-0.06	+0.80	3.0	3.4	B3	166								
2364	14.24	+0.22	+0.97	1.0	0.6	G0	167								
2365	14.35	+0.32	+1.03	0.8	0.6	G2	168								
2366	14.39	+0.19	+0.96	1.0	0.7	G0	170								
2367	14.41	-0.04	+0.85	3.2	3.5	B3	171								
2368	14.44	+0.36	+0.84	0.2	0.6	G8	172								
2369	14.48	+0.10	+0.84	0.6	0.8	G0	173								
2370	14.53	+0.21	+0.84	0.4	0.8	G2	174								

Table 2 – continued

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
2425	13.97	+0.25	+0.96	/3.3	2.1	B6/	34	2442			0.4	1.2	F6	53	
2425				0.6	0.6	G0	34	2443	14.88	+0.08	+0.83	3.0	4.3	B5	54
2425				1.2	1.0	F0	34	2443			0.4	1.3	F6	54	
2426	14.00	+0.14	+0.58	0.6	1.2	F0	35	2444	14.90	-0.11	+0.86	3.3	5.0	B2	55
2427	14.11	+0.05	+0.65	0.2	0.8	F8	36	2445	14.94	-0.10	+0.86	3.3	5.1	B2	56
2427				0.6	1.0	F5	36	2446	14.94	+0.33	+0.86	0.2	0.7	G8	57
2428	14.14	+0.17	+0.66	0.6	1.3	F0	37	2447	14.97	+0.18	+0.91	/3.2	3.9	B5/	58
2428				0.2	0.8	F8	37	2447			0.6	1.0	G0	58	
2429	14.18	+0.15	+0.85	0.6	0.8	F8	38	2448	14.97	-0.05	+0.78	3.0	5.1	B3	59
2430	14.23	-0.03	+0.79	3.0	3.6	B3	39	2449	14.98	-0.01	+0.76	2.8	5.1	B4	60
2431	14.29	+0.24	+0.64	1.2	1.1	F0	41	2450	15.07	+0.05	+0.91	3.3	4.5	B3	61
2431				/0	0.7	G5/	41	2451	15.09	+0.06	+0.78	/2.9	5.1	B5/	63
2432	14.33	-0.11	+0.73	—	—	—	42	2451			0.2	1.3	G0	63	
2433	14.34	-0.03	+0.70	2.6	4.2	B4	43	2452	15.10	+0.03	+0.77	/2.9	5.4	B4/	64
2434	14.43	+0.16	+0.73	0.2	0.8	G0	44	2452			0.2	1.3	G0	64	
2434				0.6	0.9	F8	44	2453	15.14	+0.15	+0.99	/3.6	4.1	B4/	65
2435	14.48	+0.13	+0.60	0.6	1.5	F0	46	2454	15.48	+0.03	+0.93	3.4	5.2	B3	67
2436	14.49	+0.46	+0.93	0.2	0.5	K0	47	2455	15.55	+0.02	+0.89	3.3	5.6	B3	68
2437	14.51	-0.07	+0.85	3.2	3.9	B3	48	2456	11.36	+0.09	+0.72	0.6	0.3	F5	69
2438	14.56	+0.11	+0.91	3.3	3.4	B4	49	2457	11.56	-0.32	+0.17	0.9	2.1	B6	70
2439	14.64	+0.29	+1.07	1.2	0.7	G0	50	2458	13.07	+0.10	+0.50	0.6	0.8	F0	71
2440	14.69	+0.06	+0.92	3.4	3.7	B3	51	2459	13.19	+0.08	+0.71	0.2	0.6	F8	72
2441	14.70	+0.09	+0.77	0.2	1.1	F8	52	2460	15.52	+0.11	+0.87	/4.1	3.4	B5/	73
2441				0.6	1.4	F5	52	2460			0.6	1.3	G0	73	
2442	14.75	+0.05	+0.84	3.1	4.1	B4	53								

## 5. Catalogue Notes

- 1 Identical with star OB 1 Antalová (1970). Its equatorial and galactic coordinates have been computed, like those of all the other OB stars mentioned. Independently determined as an OB star in the spectral review of Stephenson and Sanduleak (1971) and included in their catalogue Luminous Stars (LS) under number 3923, type OB<sup>-</sup>,  $m_{pg} = 11.4$ . All OB stars in identification map 5 belong to the region denoted as the O association by The (1961). Roslund (1966) assigned the OB stars in this region to the 1st inner galactic arm. The natural continuation of the region indicated by The, is the southern part of identification map 6 from star 101μ through 164 up to 210.
- 5 The star is identical with star OB 2; the interstellar absorption, computed in our photometric system, is more probable; in the direction of star 5 one can observe a large number of faint stars.
- 18 Identical with OB 3; together with stars 19, 20, 21 little affected by interstellar absorption.
- 19 Identical with OB 4.
- 21 Identical with OB 5.
- 26 Identical with Ro 102 (Roslund, 1964).
- 33 Identical with Ro 104, spectral type according to HDE B9.
- 34 Identical with OB 6; spectral type according to HDE B5.
- 36 Identical with OB7; in a direction close to the star there is strong interstellar absorption.
- 37 Identical with Ro 107.
- 38 Identical with Ro 109.
- 39 Identical with OB 8.
- 43 Identical with OB 9, Ro 120, LS 3961, CD -32°12444,  $m_{pg} = 9.9$ , spectral type OB<sup>-</sup>.
- 44 Identical with Ro 119.
- 45 Identical with Ro 126.
- 46 Identical with Ro 127, spectral type according to HDE A0.
- 48 Identical with Ro 131, spectral type according to HDE B8.
- 49 Identical with RP 134.
- 50 Identical with OB 10.
- 54 Identical with Ro 138.
- 55 Identical with Ro 139, LS 3975, CD -32°12460,  $m_{pg} = 6.1$ , spectral type OB<sup>-</sup>, HR 6383 B1 III.
- 56 Identical with Ro 141, spectral type according to HDE B9.
- 57 Identical with Ro 140, spectral type according to HDE A0.
- 60 Identical with Ro 145.
- 63 Identical with OB 11.

- 64 Identical with OB 12, stars 64, 71, 72, 75, 92 are in region of abundant stars. Star 92 is located at the edge of a little observed region and is affected by cloud DC 1699 with opacity 5 (Lynds 1962).  
 65 Identical with Ro 149, spectral type according to HDE B9.  
 67 Identical with Ro 151, spectral type according to HDE B8.  
 68 Identical with Ro 150, spectral type according to HDE A0.  
 69 Identical with Ro 152.  
 77 Identical with Ro 158, spectral type according to HDE B5.  
 80 Identical with OB 13, stars 70, 80, 85, 90 are in a region of abundant weak stars. These include stars 116 and 115 from map 6. Star 80 probably has a higher luminosity.  
 81 Identical with Ro 161.  
 87 Identical with OB 14.  
 88 Identical with OB 15, Ro 169, spectral type according to HDE B8.  
 89 Identical with Ro 170.  
 90 Identical with OB 16. See note on star 80.  
 91 Identical with Ro 171, spectral type according to HDE B9.  
 92 Identical with OB 17. See note on star 64.  
 93 Identical with Ro 175, spectral type according to HDE A0.  
 94 Identical with OB 18, Ro 176, LS 4003, CD  $-32^{\circ}12518$ ,  $m_{pg} = 8.0$ , spectral type OB $^{-}$ , according to HDE B0; in Gonzales (1955) this star is listed under number 90 and its spectral type was determined to be B0p.  
 95 Spectral type according to HDE B9.  
 96 Identical with Ro 179.  
 98 Identical with Ro 186.  
 100 Identical with 188.  
 101 Identical with OB 19, Ro 189, spectral type according to HDE B5.  
 102 Identical with Ro 191, spectral type according to HDE A0.  
 103 Identical with OB 20.  
 104 Identical with OB 21, Ro 195.  
 105 Identical with OB 22. A small cloud of weak stars with diameters of 1' can be observed in the red colour around star 105, to which the linear diameter  $d = 0.3$  pc is appropriate.  
 106 Identical with Ro 196.  
 107 Identical with Ro 198, spectral type K2.  
 108 Identical with Ro 201.  
 109 Identical with Ro 204.  
 110 Identical with Ro 209.  
 111 Identical with Ro 208.  
 112 Identical with OB 23, Ro 210. Like 18, 19 and 21, star 112 belongs to the 1st inner galactic arm. In the direction of star 112 a small stellar cloud can be observed with a diameter of 18', to which a linear diameter of 18 pc is appropriate.  
 113 Identical with Ro 213, spectral type according to HDE B9. Stars 112, 114, 118, 119, 127, 164, 169, 210 are located at the distance of the 1st inner spiral arm.  
 114 Identical with Ro 215, OB 24, spectral type according to HDE B8.  
 116 Identical with OB 25. In the direction of 116 and 115 a small stellar cloud can be observed with a diameter of 30'. If it were at the same distance as star 116, its linear diameter would be 44 pc.  
 117 Identical with Ro 216, spectral type according to HDE A0.  
 118 Identical with OB 26, Ro 218, spectral type according to HDE A0  
 119 Identical with OB 27, Ro 219, spectral type according to HDE A0.  
 120 Identical with IS 1 Antalová (1970). Stars 131, 139, 156 and 120 are located in a region with variable absorption. Dark clouds alternate with relatively well-transparent regions.  
 121 Identical with Ro 222, spectral type according to HDE B3.  
 122 Identical with Ro 223.  
 124 Identical with Ro 220.  
 125 Identical with Ro 225.  
 127 Identical with OB 28.  
 128 Identical with Ro 228.  
 129 Identical with Ro 229.  
 130 Identical with Ro 232.  
 131 Identical with OB 29. See note on 120.  
 132 Identical with Ro 234, spectral type according to HDE B5.  
 134 Identical with Ro 235.  
 135 Identical with Ro 239.  
 137 Identical with Ro 241.  
 138 Identical with Ro 243, spectral type according to HDE B3.  
 139 Identical with OB 30, this is a binary, LS 4058, CD  $-32^{\circ}12575$ ,  $m_{pg} = 8.7$ , spectral type OB $^{-}$ .  
 141 Identical with LS 4060, CD  $-32^{\circ}12576$ ,  $m_{pg} = 8.8$ , spectral type OB $^{+}$  ce.  
 142 Identical with Ro 248.  
 143 Identical with Ro 250.

- 144 Identical with Ro 251, spectral type according to HDE A0.  
 146 Identical with 254.  
 147 Identical with Ro 253.  
 148 Identical with Ro 257.  
 149 Identical with Ro 258, spectral type according to HDE B9.  
 150 Identical with Ro 259, spectral type according to HDE B5.  
 151 Identical with Ro 260.  
 152 Identical with Ro 261.  
 154 Identical with Ro 263.  
 155 Spectral type according to HDE A0.  
 156 Identical with OB 31, Ro 265. See note on 120.  
 157 Identical with Ro 267, spectral type according to HDE A0.  
 158 Identical with Ro 268, spectral type according to HDE A0.  
 159 Identical with Ro 269.  
 160 Identical with Ro 270, spectral type according to HDE EO.  
 161 Identical with Ro 271.  
 162 Identical with Ro 273.  
 163 Identical with IS 2.  
 164 Identical with OB 32, spectral type according to HDE B8. See note on star 113.  
 169 Identical with OB 33.  
 170 See note on 188 and 189.  
 183 Spectral type according to HDE B5.  
 187 Identical with IS 4.  
 188 Identical with OB 34. See note on 189.  
 189 Identical with OB 35; spectral type according to HDE B8. Stars 188 and 189 are in a region abundant in weak stars, in the neighbourhood of the diffuse nebula NGC 6360, denoted by Gum (1955) as an H-alpha emission region.  
 195 Identical with OB 36.  
 196 Planetary nebula.  
 203 Identical with OB 37.  
 210 Identical with OB 38. Located in a dark cloud. Close to star 210 there is an H-alpha emission region with a diameter of 18', to which the linear diameter 8.3 pc.  
 221 Stars 221 and 241 are in a region where H-alpha emission can be observed, as well as a relatively abundant occurrence of weak stars.  
 223 Identical with OB 39. Stars 203, 223, 241, 221, 244 do not display any distinct concentration.  
 229 Spectral type according to HDE A1.  
 230 Spectral type according to HDE B9.  
 241 Identical with OB 41. See note on 221. The emission region is a continuation of the region of star 210. Diameter 42', to which the linear diameter 61 pc is appropriate.  
 244 Identical with IS 6. Located in the direction of a very strong dark cloud, so that  $A_V = 4.^m0$  for  $d = 1.0$  kpc implied by our photometry may be correct.  
 246 Spectral type according to HDE B9.  
 250 Identical with OB 40.  
 251 Identical with OB 42, spectral type according to HDE A0.  
 253 Identical with OB 43. Stars 250, 251, 253, 196, 260 for a group at the boundaries of maps 2 and 3. 196 and 260 are well-known planetary nebulae. Star 253 is probably at the distance of the 1st inner galactic arm, like stars 250 and 251.  
 260 Well-known planetary nebula.  
 266 Spectral type according to HDE B8.  
 272 Spectral type according to HDE A0.  
 277 Identical with OB 44; a stellar cloud with a diameter of 6' can be observed in its vicinity; this corresponds to a linear diameter of 5–8 pc.  
 286 Identical with OB 45.  
 287 Spectral type according to HDE (G).  
 288 Spectral type according to HDE (A0).  
 292 Spectral type according to HDE (B9).  
 293 Identical with IS 8, LS 4162, CD  $-32^{\circ}12739$ ,  $m_{pg} = 8.8$ , spectral type according to HDE A1 1b.  
 297 Spectral type according to HDE B9.  
 299 Spectral type according to HDE (B8).  
 305 Identical with OB 47.  
 307 Identical with OB 46; there is a dark cloud in its direction, therefore, the photometric data may be realistic.  
 315 Identical with OB 48.  
 317 Identical with OB 49. Stars 277, 307, 317, 405, 335 are further away than the 1st galactic inner arm.  
 320 Spectral type according to HDE B5. Identical with LS 4169, CD  $-30^{\circ}14215$ ,  $m_{pg} = 11.0$ , spectral type OB-.  
 321 Identical with OB 50. Stars 321 and 293 are at the distance of the 1st inner galactic arm.  
 325 Spectral type according to HDE (B8). Our photometric data agrees with LS 4170, spectral type OB-:  $m_{pg} = 11.7$ .

- 329 Spectral type according to HDE B8.  
 347 Spectral type according to HDE B8.  
 338 Identical with Av 1 star 8 (Antalová, 1972).  
 352 Spectral type according to HDE B8.  
 355 Identical with IS 9.  
 358 Spectral type according to HDE B9.  
 375 Identical with Av 1 No. 7.  
 388 Spectral type according to HDE B9.  
 399 Identical with Av 1 No. 13.  
 400 Identical with Av No. 14.  
 401 Identical with Av 1 No. 11.  
 402 Identical with Av 1 No. 10.  
 403 Identical with Av 1 No. 9.  
 405 Identical with IS 10. See note on 137.  
 429 Identical with OB 51.  
 430 Identical with Av 1 No. A.  
 431 Identical with Av 1 No. C  
 432 Identical with Av 1 No. B.  
 433 Identical with Av 1 No. 6.  
 439 Identical with LS 4181, CD  $-32^{\circ}12786$ ,  $m_{pg} = 8.4$ , spectral type OB-.  
 449 Identical with OB 53.  
 451 Identical with OB 52, LS 4183,  $m_{pg} = 12.3$ , spectral type OB+ r.  
 453 Identical with OB 54, LS 4184,  $m_{pg} = 11.7$ , spectral type OB+. Stars 451 and 453 are in a region affected by dark cloud Lynds (1962) No. 1751. With a view to the LS data, star 453 has a realistic value of  $A_V$ , determined photometrically. 453 is a close binary.  
 455 Spectral type according to HDE B9.  
 458 Identical with Av 1 No. 22.  
 459 Identical with Av 1 No. 21.  
 460 Identical with Av 1 No. 12.  
 469 Spectral type according to HDE B8.  
 470 Identical with OB 56; very interesting star, possibly WR.  
 473 Spectral type according to HDE B2.  
 474 Identical with OB 55. Region Av 1 is identical with H II region Gum No. 68 (1955). The H II region is associated with star HD 158 186, spectral type B3,  $m_{pg} = 7.3$  (a bright star to the north of 431). Neckel (1967) included star HD 158 186 in his catalogue under number 4649 with the following data:  $l^{II} = 355^{\circ}90$ ,  $b^{II} = 1^{\circ}60$ , spectrum BO V,  $A_V = 170$  for  $r = 1.19$  kpc. G 68 is not uniformly bright, it has two brightenings. In the north there is 459 with a diameter of 5'. The second brightening contains stars 429, 474, 477. The star is identical with LS 4185, CD  $-31^{\circ}14099$ ,  $m_{pg} = 10.1$ , spectral type OB.  
 475 Identical with Av 1 No. 18.  
 476 Identical with Av 1 No. 19.  
 477 Identical with Av 1 No. 20.  
 492 Identical with Av 2 - C.  
 493 Identical with Av 2 - H.  
 494 Identical with Av 2 - A.  
 495 Identical with Av 2 - E.  
 496 Identical with Av 2 - D.  
 500 Spectral type according to HDE B8.  
 503 Spectral type according to HDE B9.  
 508 Spectral type according to HDE B5.  
 509 Identical with Av 1 No. 23.  
 510 Identical with Av 1 No. 15.  
 515 Identical with IS 14.  
 519 Identical with Av 2 No. F.  
 520 Identical with Av 2 No. G.  
 522 Identical with OB 57.  
 523 Spectral type according to HDE B5.  
 541 Identical with Av 3 - G.  
 542 Identical with OB 57.  
 549 Identical with Av 2 - B.  
 551 Spectral type according to HDE B8.  
 568 Identical with Av 3 - A.  
 582 Identical with OB 61.  
 600 Identical with OB 59.

- 611 Identical with Av 3 – D.  
 612 Identical with Av 3 – C.  
 615 Spectral type according to HDE B9.  
 616 Spectral type according to HDE B8.  
 617 Identical with OB 62.  
 618 Spectral type according to HDE B5. Identical with LS 4192,  $m_{pg} = 11.4$ , spectral type OB<sup>-</sup>.  
 619 Spectral type according to HDE B9. Identical with LS 4196,  $m_{pg} = 11.7$ , spectral type OB<sup>-</sup>.  
 626 Identical with OB 63.  
 627 Identical with OB 60.  
 630 Spectral type according to HDE B8.  
 632 Identical with IS 18.  
 641 Identical with IS 17. Region H II, denoted in Gum (1955) by number 67, is associated with NGC 6383 and has two brightenings at the edges. In region Av 3 70 stars were measured, of which 14 probably form a new O association. They are the following stars: 515, 541, 641, 644, 646, 684, 685, 711, 717, 718, 761, 788, 867. Star 644 is located in the brighter part of the emission region.  
 642 Identical with Av 3 – B.  
 643 Identical with Av 3 – F.  
 644 Identical with IS 16.  
 646 Identical with IS 15.  
 648 Identical with Av 3 – E.  
 650 Spectral type according to HDE B8.  
 656 Identical with OB 66.  
 677 Spectral type according to HDE B9.  
 680 Identical with OB 65. The interstellar absorption pattern in the neighbourhood of Av 3 as a function of the photometric distance can be investigated with the help of the following stars: 514, 543, 568, 677, 680, 684, 715, 915. The following stars are closer to us: 568, 611, 612, 642, 643 and 648, which are projected onto Av 3.  
 685 Identical with OB 64.  
 698 Spectral type according to HDE B3. Identical with LS 4199, CD  $-29^{\circ}13662$ ,  $m_{pg} = 11.0$ , spectral type OB<sup>-</sup>  
 711 Identical with IS 19.  
 716 Identical with OB 67. Stars 680 and 716 are located in region Av 3. The interstellar absorption pattern implies (see note on 680) that 716 has a higher luminosity than V.  
 720 Spectral type according to HDE B5.  
 724 Identical with OB 74.  
 725 Identical with OB 69, LS 4200, CD  $-29^{\circ}13666f$ ,  $m_{pg} = 11.7$ , spectral type OB<sup>+</sup> r. Stars 582, 617 and 725 are located in a direction little affected by dark clouds and the region has an abundant occurrence of weak stars. They belong to the 1st inner galactic arm.  
 726 Identical with OB 70.  
 731 Identical with OB 71.  
 735 Spectral type according to HDE B8.  
 736 Identical with OB 68.  
 750 Identical with OB 72. Spectral type according to HD BO. Identical with LS 4201, CD  $-31^{\circ}14178$ ,  $m_{pg} = 8.6$ , spectral type OB. Star 750 is identical with 122 of Gonzales (1955),  $m_v = 7\frac{m}{5}$ ,  $m_{CPD} = 8\frac{m}{4}$ .  
 761 Identical with OB 73. The H-alpha emission region, which is projected between NGC 6383 and Av 3, is strongly affected by a dark cloud. In this region stars 761, 787, 788, 824 are observed.  
 765 Identical with OB 76. Stars 626, 656, 731 and 765 are projected onto stellar cloud B and are further than 4 kpc.  
 772 Identical with OB 77.  
 776 Identical with OB 75.  
 787 Identical with OB 78.  
 788 Identical with IS 20.  
 791 Spectral type according to HDE BO.  
 794 Spectral type according to HDE B9.  
 815 Identical with OB 90. North of Gum 67 there is a region of very weak H-alpha emission. The following stars are observed in this region: 750, 632, 815, 862, 864, 997, 999, 1046, 1052, 956, 1107, 1145, 1150, 1189. Star 632 is located in a direction with an abundant occurrence of weak stars. Stars 956 and 1189 are located in a stellar cloud. There is a strong dark cloud in the direction of stars 997, 999, 1107 and 1150.  
 818 Identical with OB 79.  
 824 Identical with IS 21.  
 826 Spectral type according to HDE B9.  
 832 Identical with star F of NGC 6374, Antalová (1972).  
 833 Identical with star E of NGC 6374, spectral type according to HDE B8.  
 834 Identical with star B of NGC 6374.  
 836 Identical with D of NGC 6374, spectral type according to HDE A2.  
 837 Identical with C of NGC 6374.

- 838 Identical with star A of NGC 6374, spectral type according to HDE A0.  
 839 Spectral type according to HDE B9.  
 847 Spectral type according to HDE B9.  
 852 Identical with IS 26.  
 857 Identical with IS 27.  
 862 Identical with IS 22.  
 864 Identical with OB 81.  
 865 Spectral type according to HDE B2.  
 867 Identical with IS 23.  
 881 Identical with OB 82.  
 884 Spectral type according to HDE B9.  
 905 Identical with OB 106.  
 918 Spectral type according to HDE B9.  
 922 Identical with OB 84. Spectral type according to HDE B5.  
 923 Identical with OB 85.  
 933 Spectral type according to HDE B9.  
 939 Identical with OB 83.  
 947 Identical with LS 4213, CD  $-30^{\circ}14384$ ,  $m_{pg} = 9.4$ , spectral type F2 II.  
 956 Identical with OB 86.  
 969 Spectral type according to HDE B9.  
 973 Spectral type according to HDE B8.  
 984 Identical with OB 87. Of the stars projected onto stellar cloud B the following are further away from us than 2 kpc: 627, 726, 736, 776, 857, 934, 939, 984, 1095, 1172, 1176, 1182.  
 985 Identical with IS 30.  
 997 Identical with IS 24. See note on 815.  
 999 Identical with OB 89. See note on 815.  
 1031 Identical with IS 31. Of the stars projected on stellar cloud B the following stars are at the distance of the 1st inner galactic arm: 600, 852, 985, 1031, 1038, 1141, 1183 and 1208.  
 1032 Spectral type according to HDE (B8).  
 1037 Identical with OB 90.  
 1038 Identical with OB 88.  
 1046 Identical with OB 91. See note on 815.  
 1049 Spectral type according to HDE B5.  
 1052 Identical with IS 25. See note on 815.  
 1065 Spectral type according to HDE B5.  
 1068 Identical with star No. 33 of NGC 6383 (Antalová, 1972). Spectral type according to HDE B3.  
 1069 Identical with star No. 31 of NGC 6383, spectral type Be.  
 1076 Spectral type according to HDE B8.  
 1080 Too large a value in the negative sense for  $U-B$ ; the star was probably incorrectly identified in the  $U$  and  $B$  colour measurements.  
 1083 Spectral type according to HDE B9.  
 1095 Identical with OB 92. See note on 984.  
 1107 Identical with OB 93. Binary. See note on 815.  
 1109 Spectral type according to HDE B8.  
 1116 Spectral type according to HDE B5.  
 1139 Spectral type according to HDE B8.  
 1141 Identical with OB 95. See note on 1031.  
 1144 Spectral type according to HDE B8.  
 1145 Identical with OB 97. See note on 815.  
 1150 Identical with OB 96. See note on 815.  
 1152 Identical with OB 99. In region NGC 6383 there is a large scatter of interstellar absorption from  $0.^m6$  to  $1.^m3$ . The following stars are located here: 1152, 1273, 1280, 1282, 1298, 1342, 1343. The colour diagram of 32 stars of our photometry substantiates the data of Eggen (1963) and The (1966), concerning the age of NGC 6383.  
 1154 Spectral type according to HDE B5.  
 1157 In region NGC 6383.  
 1158 The star is located in region NGC 6383.  
 1164 Identical with OB 101.  
 1165 Spectral type according to HDE B9.  
 1170 Spectral type according to HDE B3.  
 1172 Identical with OB 102. See note on 984.  
 1176 Identical with IS 33.  
 1178 Identical with LS 4232,  $m_{pg} = 12.0$ , spectral type OB.  
 1182 Identical with OB 98.

- 1183 See note on 1031.  
 1189 Identical with OB 105. See note on 815.  
 1190 Identical with OB 100.  
 1192 Identical with OB 103.  
 1200 Spectral type according to HDE A0.  
 1201 Spectral type according to HDE B8.  
 1204 Spectral type according to HDE B8.  
 1208 Identical with IS 28. See note on 1031.  
 1225 Identical with OB 104.  
 1226 Spectral type according to HDE B9.  
 1231 Identical with OB 110. In the neighbourhood of stars in the red colour one can observe a cloud of weak stars and also an emission region which has not been marked more specifically; it may belong to NGC 6360. The dimension of the region is about 5', which corresponds to a linear diameter of 7 pc.  
 1232 Well-known planetary nebula.  
 1233 Identical with OB 107. Of the stars in map 4, projected onto cloud B, the following early-type stars are further away than the 1st inner galactic arm: 1231, 1233, 1286, 1303, 1306, 1362, 1386, 1418, 1477, 1541.  
 1238 Identical with OB 108.  
 1241 Spectral type according to HDE B8.  
 1247 Spectral type according to HDE B9.  
 1251 Identical with OB 109.  
 1264 Identical with OB 113.  
 1267 Identical with LS 4244,  $m_{pg} = 11.7$ , spectral type OB-.  
 1269 Identical with OB 111.  
 1273 Identical with OB 114. A star from the broader neighbourhood of Tr 28 (Antalová, 1971).  
 1274 Spectral type according to HDE B9.  
 1280 Identical with IS 50.  
 1282 Identical with IS 49. See note on 1152.  
 1286 Identical with OB 112. See note on 1233.  
 1287 Identical with IS 53.  
 1288 Identical with OB 115.  
 1290 Identical with OB 117.  
 1292 Identical with OB 116. Broader neighbourhood of Tr 28.  
 1295 Spectral type according to HDE B3.  
 1297 Identical with OB 118.  
 1298 Identical with OB 119. Broader neighbourhood of Tr 28 and NGC 6383.  
 1301 Identical with LS 4258, CD  $-33^{\circ}12246$ ,  $m_{pg} = 8.8$ , spectral type OB<sup>+</sup>(r).  
 1303 Identical with OB 121. See note on 1233.  
 1306 Identical with IS 34. See note on 1233.  
 1307 Spectral type according to HDE B8.  
 1311 Identical with IS 36. The following stars belong in front of the 1st inner galactic arm (region between cloud A and cloud B in Sagittarius): 1311, 1313, 1352, 1358, 1441, 1511, 1662, 1734, 1735, 1756, 1790, 1817, 1857, 1860, 1886, 1887, 1890, 1893, 1894, 1924, 1926, 1929, 1963, 1964, 1965, 1966, 2000, 2001, 2002, 2037, 2040, 2043.  
 1313 Identical with OB 122. See note on 1311.  
 1319 Spectral type according to HDE B5.  
 1323 Identical with IS 35. Of the stars in map 4, projected onto cloud B in Sagittarius, the following stars belong to the 1st inner arm: 1323, 1361, 1475, 1542.  
 1326 Identical with OB 124; located beyond the 2nd inner galactic arm.  
 1327 Spectral type according to HDE B5.  
 1335 Identical with IS 58.  
 1336 Identical with OB 128.  
 1337 Identical with IS 57.  
 1338 Identical with IS 59.  
 1339 Identical with OB 125.  
 1342 Identical with IS 55: located in the broader neighbourhood of Tr 28.  
 1343 Identical with IS 54.  
 1345 Identical with LS 4268,  $m_{pg} = 11.4$ , spectral type OB.  
 1346 Identical with LS 4265,  $m_{pg} > 13.6$ , spectral type WRh, new star of the WR type.  
 1349 Spectral type according to HDE B9.  
 1352 Identical with OB 136. See note on 1311.  
 1354 Spectral type according to HDE B8.  
 1355 See note on 1311. Identical with LS 4279,  $m_{pg} = 11.5$ , spectral type OB-.  
 1358 Identical with IS 37. See note on 1311.  
 1361 Identical with IS 38. See note on 1233.

- 1362 Identical with OB 137. See note on 1233.  
 1363 Identical with OB 134. See note on 1233.  
 1364 Spectral type according to HDE B8.  
 1365 Identical with IS 60.  
 1366 Identical with IS 63.  
 1367 Identical with IS 64.  
 1368 Identical with IS 61.  
 1369 Identical with OB 135.  
 1370 Identical with OB 139.  
 1371 Spectral type according to HDE B8.  
 1375 Identical with OB 133.  
 1376 Identical with OB 138.  
 1377 Identical with LS 4276,  $m_{pg} = 11.4$ , spectral type OB.  
 1381 Identical with IS 39. The following stars are projected onto region C(between clouds A and B in Sagittarius) and are located at the distance of the 2nd inner galactic arm: 1381, 1446, 1467, 1504, 1506, 1601, 1603, 1627, 1628, 1664, 1698, 1710, 1712, 1733, 1751, 1760, 1761, 1783, 1854, 1860, 1883, 1888, 1889, 1930, 1996, 2043, 2112.  
 1386 Identical with OB 145. See note on 1233.  
 1392 Physical association with 1393 and 1395.  
 1393 Identical with OB 140.  
 1395 Identical with OB 141.  
 1396 Identical with IS 66.  
 1399 Identical with IS 67.  
 1402 Identical with OB 143.  
 1406 Identical with IS 62.  
 1407 Spectral type according to HDE F8.  
 1408 Spectral type according to HDE B9.  
 1418 Identical with OB 148. See note on 1233.  
 1424 Identical with OB 149.  
 1425 Identical with OB 150. Star 1425 is located in the centre of a condensation of weak stars; the region is severely affected by absorption.  
 1426 Identical with OB 146.  
 1429 Identical with OB 151.  
 1432 Spectral type according to HDE B5.  
 1433 Identical with IS 68.  
 1434 Identical with OB 147.  
 1435 Spectral type according to HDE B9.  
 1437 Identical with OB 160, LS 4301, spectral type OB:.  
 1438 Spectral type according to HDE B9. The star is located in a region projected onto stellar cloud B in Sagittarius, however, more to the north of the region discussed in note on star 1323. This more northern region is probably associated with the emission region given as NGC 6360. It includes the following stars: 1299, 1407, 1437, 1438, 1463, 1488, 1489, 1490, 1513, 1531, 1532, 1533, 1534. Stars 1437, 1531 and 1534 are further away than the 1st inner arm and probably form a 0 association together with stars 1286, 1303, 1233, 1231.  
 1441 Identical with OB 158. See note on 1311.  
 1446 Identical with OB 156. See note on 1381.  
 1453 Identical with IS 72.  
 1454 Identical with OB 163.  
 1455 Identical with OB 159.  
 1457 Identical with IS 69. Region Tr 28.  
 1463 Spectral type according to HDE B8.  
 1464 Spectral type according to HDE B9.  
 1467 Identical with OB 169. See note on 1381.  
 1475 Identical with OB 167. At the distance of the 1st inner galactic arm: see note on 1031.  
 1477 Identical with OB 162. See note on 1233.  
 1481 Identical with OB 170.  
 1482 Identical with OB 165.  
 1484 Identical with OB 168.  
 1487 Identical with IS 70. Region Tr 28.  
 1488 Identical with OB 171, LS 4306, CD  $-29^{\circ}13809$ ,  $m_{pg} = 10.1$ , spectral type OB<sup>+</sup>. See note on 1438.  
 1491 Spectral type according to HDE B8.  
 1504 Identical with OB 175. See note on 1381.  
 1506 Identical with OB 173. See note on 1381.  
 1511 Identical with OB 172. See note on 1311.  
 1513 Spectral type according to HDE B9.  
 1527 Spectral type according to HDE B9.  
 1531 Identical with OB 177. See note 1438.

- 1534 Identical with OB 181. See note on 1438.  
 1536 Identical with OB 221.  
 1541 Identical with IS 40. Belongs to the group in note on 1381.  
 1542 Identical with OB 184.  
 1544 Identical with OB 238.  
 1547 Identical with OB 176.  
 1548 Spectral type according to HDE B9.  
 1550 Identical with OB 179. A small cloud of weak stars in the vicinity.  
 1558 Identical with OB 182.  
 1560 Identical with OB 183.  
 1561 Identical with OB 178. Region Tr 28.  
 1563 Identical with IS 76, Region Tr 28.  
 1565 Identical with OB 180.  
 1566 Spectral type according to HDE B9.  
 1575 Identical with OB 201.  
 1596 Identical with OB 185.  
 1581 Identical with IS 81.  
 1601 Identical with OB 188. See note on 1381.  
 1603 Identical with OB 191. See note on 1381.  
 1619 Identical with OB 189. In region of NGC 6405.  
 1620 Identical with OB 190. Stars beyond NGC 6405: 1620, OB 199, and OB 215 in NGC 6405.  
 1621 Identical with 186.  
 1625 Identical with OB 187.  
 1627 Identical with OB 194. See note on 1381.  
 1628 Identical with IS 41. See note on 1381.  
 1637 Identical with OB 193.  
 1638 Identical with OB 196.  
 1641 Identical with OB 192. Region NGC 6405.  
 1646 Identical with OB 195.  
 1651 Spectral type according to HDE B8.  
 1662 Identical with IS 42. See note on 1311.  
 1664 Identical with OB 197. See note on 1381.  
 1677 Identical with IS 82, NGC 6405.  
 1698 Identical with IS 43. See note on 1381.  
 1708 Identical with OB 238.  
 1710 Identical with OB 202. See note on 1381.  
 1712 Identical with OB 200. See note on 1381.  
 1742 Spectral type according to HDE (B8).  
 1749 Spectral type according to HDE B9.  
 1751 Identical with OB 207. See note on 1381.  
 1756 Identical with OB 204. See note on 1311.  
 1760 Identical with OB 203. See note on 1381.  
 1761 Identical with OB 205. See note on 1381.  
 1763 Identical with IS 84. Belongs to an interesting group of stars to the north of NGC 6405: 1763, 1766, 1768, 1797, 1800, 1801, 1823, 1829, 1831, 1896, 1900, 2014.  
 1766 Identical with OB 206.  
 1768 Identical with OB 208.  
 1773 Identical with IS 85. NGC 6405.  
 1783 Identical with IS 44. See note on 1381.  
 1786 Identical with OB 209.  
 1790 Identical with OB 211. See note on 1311.  
 1797 Identical with IS 89. See note on 1763.  
 1800 Identical with IS 88. See note on 1763.  
 1801 Identical with IS 87. See note on 1763.  
 1804 Identical with IS 86.  
 1805 Identical with OB 210.  
 1813 Identical with OB 212. Binary.  
 1823 Identical with OB 216. See note on 1763.  
 1829 Identical with IS 91. See note on 1763.  
 1831 Identical with OB 213. See note on 1763.  
 1835 Identical with IS 90.  
 1844 Identical with OB 217. This star was additionally identified with star No. 77 of Roberts (1962) where it is given as a really WR star.  
 1847 Spectral type according to HDE B9.

- 1859 Identical with IS 45, possibly PN.  
1860 Identical with OB 218. See note on 1831.  
1867 Identical with OB 219.  
1877 Identical with IS 95.  
1883 Identical with OB 224. See note on 1381.  
1888 Identical with OB 222. See note on 1381.  
1896 Identical with 223. See note on 1763.  
1900 Identical with IS 93. See note on 1763.  
1908 Identical with OB 226.  
1911 Identical with IS 96. Region of NGC 6405.  
1912 Identical with IS 97. Region of NGC 6405.  
1921 Identical with OB 228.  
1924 Identical with OB 230. See note on 1311.  
1926 Identical with OB 227. See note on 1311.  
1929 Identical with OB 225. See note on 1311.  
1930 Identical with IS 46. See note on 1381.  
1931 Spectral type according to HDE B9.  
1941 Identical with OB 229.  
1942 Spectral type according to HDE (B8).  
1948 Identical with IS 98.  
1949 Identical with OB 231.  
1959 Spectral type according to HDE B8.  
1982 Identical with IS 99.  
1996 Identical with OB 232. See note on 1381.  
1997 Identical with OB 233.  
2014 Identical with OB 234. See note on 1763.  
2020 Spectral type according to HDE B8.  
2036 Spectral type according to HDE B8.  
2037 Identical with IS 47. See note on 1311.  
2040 Identical with OB 236. See note on 1311.  
2043 Identical with OB 235. See note on 1311.  
2051 Identical with OB 240.  
2060 Identical with OB 237.  
2065 Identical with OB 242.  
2084 Identical with OB 241.  
2103 Spectral type according to HDE B8.  
2106 Identical with OB 246.  
2112 Identical with OB 243. See note on 1381.  
2119 Identical with OB 249.  
2125 Spectral type according to HDE B8.  
2126 Spectral type according to HDE B9.  
Tr 28 Stars 2130 – 2207 are shown in the detailed map 9.  
NGC 6405. Stars 2208–2393 are shown in the detailed map No. 10.  
NGC 6416. Stars 2394–2460 are shown in the detailed map No. 11.

Table 3

No. Tab.2	OB	AR <sub>1950.0</sub>	Decl <sub>1950.0</sub>	l <sup>II</sup>	b <sup>II</sup>	Map
1	1	17 <sup>h</sup> 03 <sup>m</sup> 23 <sup>s</sup> .08	-33°14'31".1	351°7	+4°5	5
5	2	17 04 17.88	-29 30 21.2	354.8	+6.6	1
18	3	17 06 49.23	-32 48 32.8	352.7	+4.2	5
19	4	17 06 57.71	-32 55 08.3	352.4	+4.1	5
21	5	17 07 09.31	-32 53 01.8	352.5	+4.1	5
34	6	17 08 21.85	-32 09 21.2	353.2	+4.3	5
36	7	17 08 25.30	-33 00 42.3	352.5	+3.8	5
39	8	17 08 31.31	-33 17 54.4	352.3	+3.6	5
43	9	17 09 02.04	-33 02 29.3	352.6	+3.8	5
50	10	17 09 45.11	-29 40 14.7	355.4	+5.5	1
62	11	17 10 19.59	-33 04 02.0	352.7	+3.5	5
64	12	-	-	-	-	5
80	13	17 11 14.93	-31 14 36.1	354.3	+4.3	5
87	14	17 11 43.45	-33 11 10.6	352.8	+3.1	5
88	15	17 11 46.76	-32 45 35.4	353.2	+3.3	5
90	16	17 11 59.82	-31 30 58.8	354.2	+4.0	5
92	17	17 12 12.58	-31 53 49.1	353.9	+3.8	5
94	18	17 12 17.94	-32 38 03.9	353.3	+3.3	5
101	19	17 12 38.02	-32 31 45.8	353.4	+3.3	5
103	20	17 12 50.40	-33.05 24.2	353.0	+3.0	5
104	21	17 12 53.86	-32 34 37.1	353.4	+3.3	5
105	22	17 13 06.75	-29 45 01.8	355.8	+4.9	1
112	23	17 13 44.82	-33 16 27.6	353.0	+2.7	6
114	24	17 13 54.26	-32 44 20.0	353.4	+3.0	6
116	25	17 13 59.03	-31 37 37.7	354.3	+3.6	6
118	26	17 14 08.52	-33 07 44.3	353.1	+2.7	6
119	27	17 14 09.33	-32 53 17.5	353.3	+2.9	6
127	28	17 14 24.17	-33 17 29.5	353.0	+2.6	6
131	29	17 14 38.22	-31 54 39.4	354.2	+3.4	6
139	30	17 15 06.88	-32 19 41.2	353.9	+3.0	6
156	31	17 15 49.90	-32 07 18.1	354.2	+3.0	6
164	32	17 18 55.79	-32 29 03.3	354.3	+2.3	6
169	33	17 20 15.78	-31 57 06.3	354.9	+2.3	6
188	34	17 21 15.86	-29 46 55.9	356.8	+3.4	2
189	35	17 21 16.17	-30 05 14.1	356.5	+3.2	2
195	36	17 21 34.99	-32 19 48.5	354.7	+1.9	6
203	37	17 21 35.08	-31 28 59.1	355.4	+2.4	6
210	38	17 21 46.63	-32 29 16.5	354.6	+1.8	6
223	39	17 21 58.06	-31 42 16.4	355.2	+2.2	6
250	40	17 22 15.32	-29 11 42.6	357.4	+3.6	2
241	41	17 22 17.86	-32 07 13.4	355.0	+1.9	6
251	42	17 22 23.05	-29 41 50.6	357.0	+3.2	2
253	43	17 22 23.81	-29 11 00.3	357.4	+3.5	2
277	44	17 23 2x.xx	-32 47 xx.x	354.5	+1.4	7
286	45	17 23 25.99	-30 26 02.0	356.5	+2.6	3
307	46	17 23 46.32	-32 28 38.5	354.8	+1.4	7
305	47	17 23 47.54	-32 04 48.1	355.2	+1.7	7
315	48	17 23 55.10	-30 33 58.5	356.4	+2.5	3
317	49	17 23 55.91	-32 17 47.6	355.0	+1.6	7
321	50	17 24 04.74	-32 29 17.2	354.9	+1.4	7
429	51	17 25 34.80	-31 34 14.8	355.8	+1.6	7
451	52	17 26 00.40	-29 51 45.0	357.3	+2.5	3
449	53	17 26 02.60	-29 27 44.4	357.6	+2.7	3
453	54	17 26 06.89	-29 55 15.8	357.2	+2.5	3
474	55	17 26 21.81	-31 43 16.7	355.8	+1.4	7
470	56	17 26 26.75	-30 16 56.7	357.0	+2.2	3
522	57	17 26 45.18	-32 49 15.9	354.9	+0.7	7
542	58	17 27 00.52	-32 13 09.7	355.4	+1.0	7
601	59	17 27 27.14	-30 52 36.3	356.6	+1.7	3
627	60	17 27 42.21	-30 35 38.2	356.9	+1.8	3
582	61	17 27 42.77	-29 51 06.5	357.5	+2.2	3

Table 3 – continued

No. Tab. 2	OB	AR 1950.0	Decl. 1950.0	$\ell^{\text{II}}$	$b^{\text{II}}$	Map
617	62	17 <sup>h</sup> 27 <sup>m</sup> 49 <sup>s</sup> .49	-29 44 56.0	357.6	+2.2	3
626	63	17 27 54.80	-30 28 06.0	357.0	+1.8	3
685	64	17 28 06.76	-32 18 43.7	355.5	+0.8	7
680	65	17 28 08.30	-32 06 07.8	355.7	+0.9	7
656	66	17 28 12.77	-30 21 43.5	357.1	+1.8	3
716	67	17 28 23.55	-32 22 37.3	355.5	+0.7	7
736	68	17 28 42.41	-30 32 21.3	357.0	+1.6	3
725	69	17 28 45.88	-29 36 27.4	357.8	+2.1	3
726	70	17 28 50.94	-30 01 34.8	357.5	+1.9	3
731	71	17 28 51.32	-30 14 25.6	357.3	+1.8	3
750	72	17 28 52.59	-31 30 47.5	356.2	+1.1	7
761	73	17 28 54.59	-32 23 30.4	355.5	+0.6	7
724	74	17 28 56.18	-29 11 24.9	358.2	+2.3	3
776	75	17 28 58.94	-30 45 28.9	356.9	+1.5	3
765	76	17 28 59.02	-30 03 14.2	357.5	+1.9	3
772	77	17 28 59.55	-30 22 18.8	357.2	+1.7	3
787	78	17 29 12.54	-32 18 34.6	355.7	+0.6	7
818	79	17 29 30.50	-31 40 58.8	356.2	+0.9	7
815	80	17 29 32.20	-31 38 11.1	356.3	+0.9	7
864	81	17 29 38.53	-31 29 12.5	356.4	+1.0	7
881	82	17 29 56.04	-29 18 06.4	358.2	+2.1	3
939	83	17 30 02.82	-30 29 07.9	357.2	+1.4	3
922	84	17 30 09.21	-29 15 06.0	358.3	+2.1	3
923	85	17 30 23.09	-29 17 20.6	358.3	+2.0	3
956	86	17 30 25.06	-31 08 26.4	356.7	+1.0	7
984	87	17 30 33.12	-30 49 35.8	357.0	+1.2	3
1038	88	17 30 34.84	-31 03 47.0	356.8	+1.0	3
999	89	17 30 37.06	-31 58 41.3	356.0	+0.5	7
1037	90	17 30 38.69	-31 02 32.6	356.8	+1.0	3
1046	91	17 30 50.12	-31 48 36.8	356.2	+0.6	7
1095	92	17 31 05.15	-30 54 51.4	357.0	+1.0	3
1107	93	17 31 15.53	-32 01 26.7	356.1	+0.4	7
1109a	94	17 31 16.32	-32 06 38.5	356.0	+0.3	7
1141	95	17 31 21.46	-30 55 31.8	357.0	+0.9	3
1150	96	17 31 23.84	-32 13 03.2	355.9	+0.2	7
1145	97	17 31 26.26	-31 35 04.9	356.5	+0.6	7
1182	98	17 31 28.38	-30 48 40.6	357.1	+1.0	3
1152	99	17 31 30.50	-32 16 27.7	355.9	+0.2	7
1190	100	17 31 37.97	-32 05 16.2	356.1	+0.3	7
1164	101	17 31 39.24	-29 15 16.1	358.5	+1.8	3
1172	102	17 31 41.56	-30 02 27.2	357.8	+1.4	4
1192	103	17 31 45.07	-32 10 09.7	356.0	+0.2	8
1225	104	17 31 53.58	-30 59 43.7	357.0	+0.8	4
1189	105	17 31 53.88	-31 32 38.9	356.6	+0.5	8
905	106	17 32 00.96	-31 35 42.0	356.5	+0.5	8
1233	107	17 32 01.38	-29 41 12.8	358.1	+1.5	4
1238	108	17 32 03.78	-31 09 10.6	356.9	+0.7	8
1251	109	17 32 07.90	-32 18 57.2	355.9	+0.1	8
1231	110	17 32 08.56	-29 46 05.6	358.1	+1.4	4
1269	111	17 32 15.14	-32 22 17.5	355.9	0	8
1286	112	17 32 15.56	-29 46 23.3	358.1	+1.4	4
1264	113	17 32 25.29	-32 02 36.4	356.2	+0.2	8
1273	114	17 32 27.26	-32 35 50.0	355.7	-0.2	8
1288	115	17 32 34.24	-31 13 19.2	356.9	+0.6	8
1292	116	17 32 43.61	-32 38 05.2	355.7	-0.2	8
1290	117	17 32 44.78	-32 09 25.4	356.2	0	8
1297	118	17 32 50.92	-31 40 31.1	356.6	+0.3	8
1298	119	17 32 51.17	-32 38 23.1	355.8	-0.3	8
2180 = 59	Tr 120	17 33 02.86	-32 24 57.4	356.0	-0.2	9

Table 3 – continued

No. Tab.2	OB	AR <sub>1950.0</sub>	Decl <sub>1950.0</sub>	l <sup>II</sup>	b <sup>II</sup>	Map
1303	121	17 33 03.54	-29 38 51.2	358.3	+1.3	4
1313	122	17 33 03.64	-30 25 20.8	357.6	+0.9	4
2183=62	123	17 33 06.06	-32 17 50.0	356.1	-0.1	9
1326	124	17 33 09.35	-30 53 52.7	357.3	+0.6	4
1339	125	17 33 12.78	-31 59 19.9	356.3	0	8
2184=63	126	17 33 14.68	-32 29 55.7	355.9	-0.2	9
2176=55	127	17 33 17.83	-32 14 01.4	356.1	-0.1	9
1336	128	17 33 17.85	-31 17 16.8	356.9	+0.4	8
2169=48	129	17 33 19.29	-32 14 05.0	356.2	-0.1	9
2166=45	130	17 33 20.15	-32 18 33.6	356.1	-0.2	9
2136=8	131	17 33 21.88	-32 32 26.3	355.9	-0.3	9
2190=69	132	17 33 24.31	-32 36 42.1	355.8	-0.3	9
1375	133	17 33 24.41	-32 10 40.7	356.2	-0.1	8
1363	134	17 33 27.96	-30 48 28.3	357.4	+0.6	4
1369	135	17 33 28.58	-31 34 13.6	356.7	+0.2	8
1352	136	17 33 35.59	-30 01 24.6	358.0	+1.0	4
1362	137	17 33 37.21	-30 43 44.9	357.5	+0.6	4
1376	138	17 33 38.70	-32 45 19.7	355.8	-0.4	8
1370	139	17 33 40.11	-31 41 40.2	356.6	+0.1	8
1393	140	17 33 42.94	-31 07 59.2	357.1	+0.4	8
1395	141	17 33 44.24	-31 08 53.7	357.1	+0.6	8
2138=11	142	17 33 44.31	-32 28 08.8	356.0	-0.3	9
1402	143	17 33 46.59	-32 10 25.2	356.2	-0.2	8
2142=16	144	17 33 48.97	-32 24 25.0	356.1	-0.3	9
1386	145	17 33 53.11	-30 47 19.1	357.4	+0.6	4
1426	146	17 33 58.60	-31 15 22.1	357.0	+0.3	8
1434	147	17 34 03.02	-31 46 57.9	356.6	0	8
1418	148	17 34 07.65	-30 43 13.6	357.5	+0.6	4
1424	149	17 34 08.68	-31 12 33.0	357.1	+0.3	8
1425	150	17 34 08.84	-31 14 18.1	357.1	+0.3	8
1429	151	17 34 15.90	-31 18 30.7	357.0	+0.2	8
2189=68Tr	152	17 34 18.20	-32 16 08.9	356.2	-0.3	9
2161=38Tr	153	17 34 21.28	-32 26 45.6	356.1	-0.4	9
2185=64Tr	154	17 34 24.10	-32 17 23.4	356.2	-0.3	9
2177=56Tr	155	17 34 25.29	-32 16 07.0	356.2	-0.3	9
1446	156	17 34 25.99	-30 28 01.7	357.8	+0.6	4
2187=66Tr	157	17 34 26.23	-32 27 13.6	356.1	-0.4	9
1441	158	17 34 27.42	-30 01 01.6	358.1	+0.9	4
1455	159	17 34 29.35	-32 04 51.1	356.4	-0.2	8
1437	160	17 34 30.35	-29 04 58.9	358.9	+1.4	4
2173=52Tr	161	17 34 32.77	-32 17 41.3	356.2	-0.4	9
1477	162	17 34 32.95	-31 00 47.5	357.3	+0.3	4
1454	163	17 34 35.15	-31 42 25.6	356.7	-0.1	8
2165=43Tr	164	17 34 36.40	-32 17 20.7	356.2	-0.4	9
1482	165	17 34 36.49	-31 40 36.3	356.8	0	8
2192=71Tr	166	17 34 38.71	-32 33 21.7	356.0	-0.5	9
1475	167	17 34 39.78	-30 46 42.0	357.5	+0.4	4
1484	168	17 34 44.22	-32 05 42.2	356.4	-0.3	8
1467	169	17 34 48.41	-30 03 07.1	358.2	+0.8	4
1481	170	17 34 50.75	-31 25 00.2	357.0	+0.1	8
1488	171	17 34 52.87	-29 04 57.6	359.0	+1.3	4
1511	172	17 34 54.24	-30 36 02.9	357.7	+0.5	4
1506	173	17 34 56.47	-30 27 49.1	357.8	+0.6	4
2193=72	174	17 35 09.14	-32 29 42.7	356.1	-0.6	8
1504	175	17 35 09.84	-30 14 05.8	358.0	+0.6	4
1547	176	17 35 11.51	-31 24 44.5	357.1	0	8
1531	177	17 35 11.58	-29 08 58.3	359.0	+1.2	4
1561	178	17 35 12.38	-32 29 55.4	356.1	-0.6	8
1550	179	17 35 14.70	-31 41 14.7	356.8	-0.2	8
1565	180	17 35 15.20	-32 35 09.7	356.1	-0.6	8
1534	181	17 35 20.37	-29 17 47.5	358.9	+1.1	4

Table 3 – continued

No. Tab.2	OB	AR <sub>1950.0</sub>	Decl <sub>1950.0</sub>	I <sup>II</sup>	b <sup>II</sup>	Map
1558	182	17 35 20.56	-32 24 56.0	356.2	-0.6	8
1560	183	—	—	—	—	8
1542	184	17 35 22.83	-31 05 35.3	357.3	+0.1	4
1596	185	17 35 30.71	-32 44 10.5	356.0	-0.8	8
1621	186	17 35 45.31	-32 13 09.7	356.4	-0.5	8
1625	187	17 35 47.11	-32 23 46.9	356.3	-0.6	8
1601	188	17 35 51.15	-30 01 49.7	358.3	+0.6	4
1619	189	17 35 53.40	-32 10 08.5	356.5	-0.5	8
1620	190	17 35 54.72	-32 10 22.7	356.5	-0.5	8
1603	191	17 35 56.59	-30 05 26.8	358.2	+0.6	4
1641	192	17 36 00.68	-32 23 57.6	356.3	-0.7	8
1637	193	17 36 07.61	-31 37 41.0	357.0	-0.3	8
1627	194	17 36 09.15	-30 02 38.9	358.3	+0.6	4
1646	195	17 36 09.98	-32 36 42.8	356.2	-0.8	8
1638	196	17 36 12.68	-31 51 36.7	356.8	-0.4	8
1664	197	17 36 21.47	-30 45 00.3	357.8	+0.1	4
2356 = 158	198	17 36 35.18	-32 07 17.0	356.6	-0.6	10
2378 = 199	199	17 36 46.94	-32 16 15.6	356.5	-0.8	10
1712	200	17 36 50.12	-30 28 51.2	358.0	+0.2	4
1575	201	17 37 07.39	-31 56 35.7	356.8	-0.6	8
1710	202	17 37 09.46	-30 12 09.5	358.3	+0.3	4
1760	203	17 37 21.10	-30 47 25.7	357.8	-0.1	4
1756	204	17 37 23.65	-30 28 53.4	358.1	+0.1	4
1761	205	17 37 23.95	-30 47 59.4	357.8	-0.1	4
1766	206	17 37 28.08	-31 29 55.6	357.2	-0.5	8
1751	207	17 37 36.59	-30 05 54.1	358.4	+0.3	4
1768	208	17 37 46.11	-31 34 51.3	357.2	-0.6	8
1786	209	17 37 48.06	-30 24 56.1	358.2	+0.1	4
1805	210	17 37 49.12	-31 59 06.7	356.9	-0.8	8
1790	211	17 37 55.30	-30 40 54.8	358.0	-0.1	4
1813	212	17 37 59.06	-29 38 21.7	358.9	+0.4	4
1831	213	17 38 03.17	-31 28 12.5	357.3	-0.6	8
2387 = 194	214	17 38 10.74	-32 14 44.1	356.7	-1.0	10
2358	215	17 38 11.24	-32 04 16.2	356.8	-0.9	8
1823	216	17 38 20.08	-31 23 35.8	357.4	-0.6	8
1844	217	17 38 20.91	-32 32 27.3	356.5	-1.2	8
1860	218	17 38 24.38	-30 58 13.9	357.8	-0.4	4
1867	219	17 38 34.95	-31 46 32.2	357.1	-0.8	8
2381 = 188	220	17 38 35.73	-32 16 51.1	356.7	-1.1	10
1536	221	17 38 37.96	-29 25 29.7	359.1	+0.4	4
1854	222	17 38 40.47	-30 38 01.3	358.1	-0.2	4
1896	223	17 38 43.70	-31 15 15.6	357.6	-0.6	8
1883	224	17 38 44.22	-30 21 53.5	358.4	-0.1	4
1929	225	17 38 50.61	-30 28 06.9	358.3	-0.2	4
1908	226	17 38 53.26	-32 01 13.2	357.0	-1.0	8
1926	227	17 38 54.00	-30 09 52.6	358.5	0	4
1921	228	17 38 57.20	-32 43 03.4	356.4	-1.4	8
1941	229	17 39 01.31	-32 12 12.1	356.8	-1.1	8
1924	230	17 39 03.72	-30 01 35.2	358.7	0	4
1949	231	17 39 07.31	-32 19 11.7	356.7	-1.2	8
1996	232	17 39 30.30	-30 08 50.7	358.6	-0.1	4
1997	233	17 39 32.23	-30 09 48.5	358.6	-0.1	4
2014	234	17 39 34.81	-31 27 40.3	357.5	-0.8	8
2043	235	17 39 40.99	-30 41 29.2	358.2	-0.4	4
2040	236	17 39 42.17	-30 26 30.5	358.4	-0.3	4
2060	237	17 39 52.10	-32 22 27.1	356.8	-1.4	8
1544	238	17 39 55.45	-29 20 30.5	359.4	+0.2	4
2445	239	17 40 10.33	-32 16 54.4	356.9	-1.4	8
2051	240	17 40 15.46	-30 25 39.7	358.5	-0.4	4
2084	241	17 40 19.95	-31 48 12.8	357.3	-1.1	8
2065	242	17 40 27.05	-29 03 49.3	359.6	+0.3	4

Table 3 – continued

No. Tab.2	OB	AR <sub>1950.0</sub>	Decl <sub>1950.0</sub>	l <sup>II</sup>	b <sup>II</sup>	Map
2112	243	17 40 30.33	-30 43 46.3	358.2	-0.6	4
66	244	17 40 36.27	-32 17 16.8	356.9	-1.4	11
2106	245	17 40 37.50	-31 58 38.6	357.2	-1.3	8
	246	17 40 37.61	-32 07 17.4	357.1	-1.4	11
2395=2	247	17 40 49.54	-32 35 25.8	356.7	-1.6	11
2403	248	17 40 50.64	-32 24 44.9	356.8	-1.5	11
2119	249	17 41 07.59	-32 05 14.6	357.2	-1.4	8
2402	250	17 41 12.19	-32 27 12.9	356.8	-1.6	11

\*This region was investigated in more detail by Antalová (1971). NGC 6405. Stars 2208–2393 are shown in the detailed map 10. The spatial distribution of the stars was investigated by Antalová (1972).

NGC 6416. Stars 2394–2460 are shown in the detailed map 11. The distribution of the stars and the interstellar absorption pattern were investigated in more detail by Antalová (1972).

*Computation of the Interstellar Absorption:  
A<sub>V</sub> as a Function of Direction and Distance*

Using the formulae in Section 3, the interstellar absorption A<sub>V</sub> was computed for the individual stars. The results are given in Table 2, column 5. The plate from the Palomar Big Schmidt was divided into 10° × 1° areas, 12 in all. The centres of the individual areas are given in Table 4. The interstellar absorption as a function of distance for the individual areas is illustrated in Figures 2, 3, 4. In the whole of area PP12 the total visual absorption increases sharply at a distance of 1–2 kpc. A very sharp increase of interstellar absorption occurs in particular in areas PP 12–1, PP 12–4, and PP 12–5. This agrees well with the occurrence of the spiral arm at a distance of 1.4 kpc. The interstellar absorption pattern in PP 11 is determined by the individual OB stars and given in Table 5.

These values of interstellar absorption agree well with observations of other authors. Westerlund (1959) gives measurements of 3 stars, belonging to the region investigated by us:

HR	l <sup>II</sup>	b <sup>II</sup>	Sp	V	d	A <sub>V</sub>
6347	350°	+3.0	09.5 I ab	6.18	1.26	1.9
6450	350	-1.0	B4 Ia	6.41	1.82	2.1
i Sco	350	-6.0	F2 Ia	3.02	1.05	0.5

HR is the number of the star according to the Revised Harvard Photometry (1908). HR 6347 is located in the direction of PP 12–9, or PP 12–12. The given value A<sub>V</sub> = 1.9 for d = 1.3 agrees with our result. HR 6450 is located in the direction of PP 12–11; A<sub>V</sub> = 2.1 for d = 1.8 agrees with our result.

For regions l<sup>II</sup> = 351° and b<sup>II</sup> = -2° Neckel (1966) determined the value A<sub>V</sub> = 4<sup>m</sup> for d = 2 kpc. The determination of the interstellar absorption is based on 3077 OB stars, 204 delta Cephei stars and 129 opened star clusters. The direction of Neckel's region is identical with the direction of PP12–10 and the result given is the maximum value of A<sub>V</sub> for 2 kpc.

Wehiger (1967) gives the following values of the total visual absorption in dependence on direction and distance for the direction towards the galactic centre (l<sup>II</sup> = 0°):

d kpc	0.5	1.0	2.0	3.0	5.0	7.0
+1.5	2.6	2.6	2.6	2.6	2.6	2.6
-0.3	1.5	1.6	2.4	2.9	3.2	3.2
-1.8	0.9	1.9	1.9	1.9	2.0	2.2

As opposed to Wehiger, who maintains that the absorption does not change with distance in the direction l<sup>II</sup> = 0°, b<sup>II</sup> = +1.5, our results for this direction show A<sub>V</sub> as a function of d in PP12–1, PP12–2 (Fig.2). Our value agrees well with the value given by McGuskey (1963), who gives a sharp increase of A<sub>V</sub> in the direction to the galactic centre from 0<sup>m</sup>.6 to 2<sup>m</sup>.2 at distances of 0.7–1.0 kpc from the Sun.

As regards the interval of galactic longitude 352–359° we observed in general a sharp increase of interstellar absorption at distances of 1–2 kpc. The value of the absorption continues to increase to 3<sup>m</sup>–4<sup>m</sup> at a distance of 3 kpc. In some directions a large scatter in A<sub>V</sub> was observed due to the cloud structure of the interstellar matter. Apart from the dark clouds, described by Lynds (1962), other dark clouds can be identified in the investigated region.

DC1: Shown in identification map 1 to the north of DC 1716, in the interval RA<sub>1950.0</sub> 17<sup>h</sup>05<sup>m</sup>10<sup>s</sup> – 17<sup>h</sup>07<sup>m</sup>52<sup>s</sup>, Decl<sub>1950.0</sub> –29°09' to –29°50'. It is projected onto stars

No.	$A_V$	$d$	l <sup>II</sup>	b <sup>II</sup>
12	1.7	0.8		
7	1.6	1.0		
5	1.7	1.3	354°.8	+6°.6

DC 2: Shown in identification map 3 in the vicinity of star 253, dimensions 5' × 5'. Projected onto stars

No.	$A_V$	$d$	l <sup>II</sup>	+b <sup>II</sup>
253	3.7	4.5	357°.4	+3°.5
250	2.4	2.0	357.4	+3.6

outside DC 2 there are the following stars:

288	1.2	1.3
174	2.9	3.7
267	3.3	4.2

DC 3: Shown in identification map 4 in the region of stars 1488, 1531, 1534. This region, larger in area, was denoted by Lynds as DC 1776 with opacity 2, but the small region between stars SAO 3 (1966)

No.	AR <sub>1950.0</sub>	DC <sub>1950.0</sub>
185570	17 <sup>h</sup> 34 <sup>m</sup> 52.879	–29°04'57".21
185567	17 34 45.517	–29 26 50.44

certainly has an opacity in excess of 2.

Cloud DC 3 is projected onto stars

No.	$A_V$	$d$	l <sup>II</sup>	b <sup>II</sup>
1534	3.3	3.3	358°.8	+1°.1
1533	3.4	2.6		
1532	2.8	0.8		
1599	2.1	1.4		
1488	2.5	1.9	359.0	+1.3
1530	2.9	2.9		
1531	3.7	6.7	359.0	+1.2
1489	3.1	1.1		

Stars 1534 and 1533 are in the centre of DC 3.

Outside DC 3 are stars

1295	1.5	1.0	SAO 185537
1437	2.6	3.3	358.9
1349	0	0.5	+1.4

For  $d = 1$  kpc in the direction of DC 3 the value of the absorption is higher than 1<sup>m</sup>.3 (cf. PP 12–1, Fig. 2).

DC 4: Also shown in identification map 4 in the interval RA<sub>1950.0</sub> 17<sup>h</sup>37<sup>m</sup>59<sup>s</sup> – 17<sup>h</sup>40<sup>m</sup>17<sup>s</sup> and Decl<sub>1950.0</sub> –29°55' – –30°09'. It differs from DC 1769 in opacity and is smaller in area. It is projected onto stars

No.	$A_V$	$d$	l <sup>II</sup>	b <sup>II</sup>
1924	3.7	4.2	358.7	0
1959	1.7	1.1		
1996	3.3	2.1	358.6	-0.1
1997	3.7	4.2	358.6	-0.1
1926	4.1	4.7	358.5	0
1925	2.9	2.1		
1850	3.2	3.3		
1851	2.6	3.0		
2036	1.6	1.1		
1960	2.8	3.3		

Dc 5: Shown in identification map 6; projected onto the following stars:

103	1.7	1.7	353.0	+3.0
104	1.0	1.4		
102	1.2	0.8		
114	1.9	0.9	353.4	+3.0
11	0.6	1.8		

DC 6: Shown in identification map 6.; Projected on to the following stars:

164	2.2	1.1	354.3	+2.3
169	1.9	1.0	354.9	+2.3
195	3.5	3.7	354.7	+1.9
210	2.6	1.4	354.6	+1.8
198	0.7	1.0		
167	3.1	4.4		

DC 7: Shown in identification map 7; projected onto the following stars:

307	3.9	4.8	354.8	+1.4
321	2.0	1.5	354.9	+1.4
284	1.9	0.7		

A detailed investigation of the interstellar absorption in the neighbourhood of the opened star clusters Tr 28, NGC 6405, NGC 6416, NGC 6383 was made in earlier papers (Antalová, 1971, 1972).

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Table 4

Area	$l^{\text{II}}$	$b^{\text{II}}$	$A_V$ (max)	$d$ ( $A_V$ max)
PP 12-1	358°9	+0.5	4°0	3-5 kpc
PP 12-2	357.8	+2.1	4.0	3-5
PP 12-3	357.6	+2.7	4.0	3-5
PP 12-4	358.0	+0.2	4.0	3-5
PP 12-5	357.0	+1.6	4.0	3-5
PP 12-6	356.5	+2.6	3-4	3-6
PP 12-7	356.8	-0.2	4-5	5-6
PP 12-8	356.0	+1.1	3	3-5
PP 12-9	355.3	+2.1	3	3-5
PP 12-10	356.5	-1.1	4	3-5
PP 12-11	355.7	-0.2	3.5	3-5
PP 12-12	354.8	+1.4	3	3-5

Table 5

No	$l^{\text{II}}$	$b^{\text{II}}$	$A_V$	$d$
321	354.9	$b^{\text{II}}$ (+1°0 - +2°0) $b^{\text{II}}$ (+2°0 - +3°0)	+1.4 2.0	1.5
112	352.9	+2.7	(0.9	3.6)
103	353.0	+3.0	1.7	1.7
127	353.0	+2.6	1.4	1.9
118	353.1	+2.7	0.8	1.8
119	353.3	+2.9	(0.1	3.1)
164	354.3	+2.3	2.2	1.1
169	354.9	+2.3	1.9	1.0
315	356.4	+2.5	1.4	4.3
		$b^{\text{II}}$ (+3°0 - +4°0)		
39	352.3	+3.6	1.0	3.0
62	352.7	+3.5	0.8	1.7
87	352.8	+3.1	1.6	1.4
88	353.2	+3.3	0.8	1.3
104	353.4	+3.3	1.0	1.4
101	353.4	+3.3	1.6	1.4
92	353.9	+3.8	1.4	1.0
139	353.9	+3.0	1.3	1.4
156	354.2	+3.0	1.9	1.5
131	354.2	+3.4	1.9	0.7
116	354.3	+3.6	3.3	5.5
189	356.5	+3.2	1.3	1.7
188	356.8	+3.4	1.7	2.9
251	356.9	+3.2	1.2	1.2
250	357.4	+3.6	1.8	2.2
		$b^{\text{II}}$ (+4°0 - +5°0)		
1	351.7	+4.5	1.1	3.5
21	352.5	+4.1	0.5	2.8
18	352.7	+4.2	1.3	3.2
90	354.2	+4.0	2.0	4.3
80	354.3	+4.3	2.2	1.2
105	355.8	+4.9	1.3	1.1
		$b^{\text{II}}$ +5°0		
5	354.8	+6.6	1.7	1.3
50	355.4	+5.5	2.3	1.6

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**UBV FOTOGRAFICKÁ FOTOMETRIA HVIEZD V OBLĀSTI**  
**AR<sub>1950</sub> : 17<sup>h</sup>03<sup>m</sup> - 17<sup>h</sup>41<sup>m</sup> DECL<sub>1950</sub> : -28.8° - -33.4°**

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Súhrn

*UBV* fotografická fotometria 2460 hviezd z vnútornej časti Galaxie skúma prevažne hviezdy spektrálnych tried B3 až A0. 250 hviezd má spektrálny typ 0 – B3. Pozorovací materiál pre fotografickú fotometriu získal Big Schmidt na Mt. Palomare (tab. 1, obr. 1). Metóda výberu hviezd pre fotometriu je založená na porovnaní priemerov kotúčkov hviezd vo farbách *ubr* na blinkovom komparátore. Fotografické jasnosti hviezd sa merali na irisovom fotometri Beckerovo typu na Konkoly Observatory v Budapešti.

Fotometrický systém tejto práce vznikol nadviazaním na fotoelektrické merania hviezd v NGC 6405 (Rohlf s a i., 1959). Transformačné rovnice z *ubr* na *UBV* sa vypočítali minimálne zo 40 hviezd a sú označené číslom (1). Presnosť merania uvádza vzťah (2).

Katalóg 2460 hviezd obsahuje merané veličiny: *V*, *U-B* a *B-V* i vypočítané veličiny podľa rovníc (3): medzihviednu absorpciu  $A_V$ , fotometrickú vzdialenosť  $d$  a spektrálny typ. Všetky výpočty predpokladajú *V*. triedu luminosity hviezd.

Skúmaná oblasť v Mliečnej ceste je obdĺžnikového tvaru o ploche 34 stupňov štvorcových. Oblasť je rozdelená na osiem častí podľa schémy na obr. 1. Čísla jednotlivých častí na schéme zodpovedajú číslam identifikačných mapiek 1 až 8. Katalógovým číslom je hvieza označená aj na identifikačných mapkách. Čísluvanie hviezd na mapkách prebieha v smere rastúcej rektascencie pre celú obdĺžnikovú oblasť; začína sa pri rektascencii 17<sup>h</sup>03<sup>m</sup> postupujúc od severu na juh a pre hodnotu rektascencie o 20<sup>s</sup> vyššiu znova zo severu na juh. Pri hviezde na identifikačnej mapke sa vzhľadom na hustotu meraných hviezd uvádzajú desiatky a jednotky čísla hviezdy, na okraji mapy sú kolmou čiarou vyznačené intervaly stoviek a tisícok.

Presné equatoriálne a galaktické súradnice 250 OB hviezd sú v tabuľke 3.

Detailný opis oblasti, výskyt temných oblakov, súvislosť hviezdy s inými rannými hviezdami, vytváranie fyzikálnych skupín meraných hviezd sa diskutujú v Poznámkach ku katalógu, odsek 5.

Závislosť medzihviednej absorpcie od dvoch premenných: smeru a vzdialenosťi sa skúma na podklade Katalógu 2460 hviezd (tab. 2). Nameranú závislosť znázorňujú obr. 2, 3 a 4. Stredy jednotlivých smerov sa uvádzajú v tabuľke 4. Pre galaktické dĺžky od 357 do 359° sa pozoruje prudký vzrast  $A_V$  vo vzdialenosťi 1–2 kpc. Rozptyl  $A_V$ , spôsobený oblakovou štruktúrou medzihviednej hmoty, bližšie sa skúma v odseku 6. Pre pozorovaný interval galaktickej dĺžky 352–359°, teda vo vnútornej časti Galaxie, nastáva vzrast  $A_V$  vo vzdialenosťi 1–2 kpc, ďalej sa hodnota  $A_V$  ustaľuje a podľa smeru nadobúda hodnotu 3<sup>m</sup>–4<sup>m</sup> pre vzdialenosť väčšie ako 3 kpc.

**UBV ФОТОГРАФИЧЕСКАЯ ФОТОМЕТРИЯ ЗВЕЗД В ОБЛАСТИ**  
**AR<sub>1950</sub> : 17<sup>h</sup>03<sup>m</sup> – 17<sup>h</sup>41<sup>m</sup> Decl<sub>1950</sub> : -28.8° – -33.4°**

A. АНТАЛОВА

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Резюме

*UBV* фотографическая фотометрия 2 460 звезд из внутренней части Галактики изучает преимущественно звезды спектральных классов В3 – А0. 250 звезд имеют спектральный тип 0 – В3. Материал наблюдений для фотографической фотометрии получен большой камерой Шмидта на Монт Паломаре (табл. 1, фиг. 1). Метод подбора звезд для фотометрии основан на сравнении диаметров дисков звезд в цветах *ubv* с помощью блинккомпаратора. Фотографические магнитуды звезд были измерены с помощью ирис-фотометра типа Беккера в обсерватории имени Конколы в Будапеште.

Фотометрическая система этой работы основана на базе фотоэлектрических измерений звезд в NGC 6405 (Rohlfss и др. 1959). Уравнения для трансформации из *ubv* системы в *UBV* вычислены по 40 звездам минимально и обозначены номером (1). Точность измерения дана отношением (2).

Каталог 2 460 звезд содержит измеренные величины *V*, *U-B*, *B-V* и рассчитанные величины по уравнениям (3): межзвездное поглощение  $A_V$ , фотометрическое расстояние *d* и спектральный тип. Во всех расчетах предполагается класс светимости V.

Изучаемая область Млечного Пути прямоугольной формы с площадью 34 квадратных градусов. Область разделена на 8 частей, как показано на рис. 1. Номера отдельных частей на схеме соответствуют номерам идентификационных карт 1–8. Номером каталога звезда обозначена и на картах идентификации. Нумерация звезд на картах идет в направлении увеличения прямого восхождения для всей прямоугольной области, начинается прямым восхождением 17<sup>h</sup>03<sup>m</sup>, продолжаясь от севера к югу, и для величины прямого восхождения на 20<sup>c</sup> больше предыдущей, снова от севера к югу. Ввиду плотности измеряемых звезд, для звезды на карте идентификации приведены десятки и единицы номера звезды, на краю карты перпендикулярной линией обозначены интервалы сотен и тысяч.

Точные экваториальные и галактические координаты 250 ОВ звезд находятся в таблице 3.

Детальное описание области звезды, наличие темных облаков, связь звезды с другими молодыми звездами создание физических групп измеренных звезд обсуждаются в "Примечаниях к каталогу", абзац 5.

Зависимость межзвездного поглощения от двух переменных – направления и расстояния изучена на основе Каталога 2 460 звезд (табл. 2). Измеренная зависимость приведена на рис. 2, 3, 4. Центры отдельных направлений приведены в табл. 4. Для галактической долготы от 357° до 359° наблюдается резкое возрастание  $A_V$  на расстоянии 1–2 кпс. Рассеяние  $A_V$ , вызванное облаковой структурой межзвездной материи, более подробно рассмотрено в абзаце 6. Для наблюданного промежутка галактической длины 352°–359°, т. е. во внутренней части галактики, происходит нарастание  $A_V$  на расстоянии 1–2 кпс, потом величина  $A_V$  стабилизируется и в зависимости от направления приобретает величину 3<sup>M</sup>–4<sup>M</sup> для расстояний больших, чем 3 кпс.

100

—63

—5

—05

—52—

—50

—51

—42

—30—

—22

—23

—15

—11

—14

—9

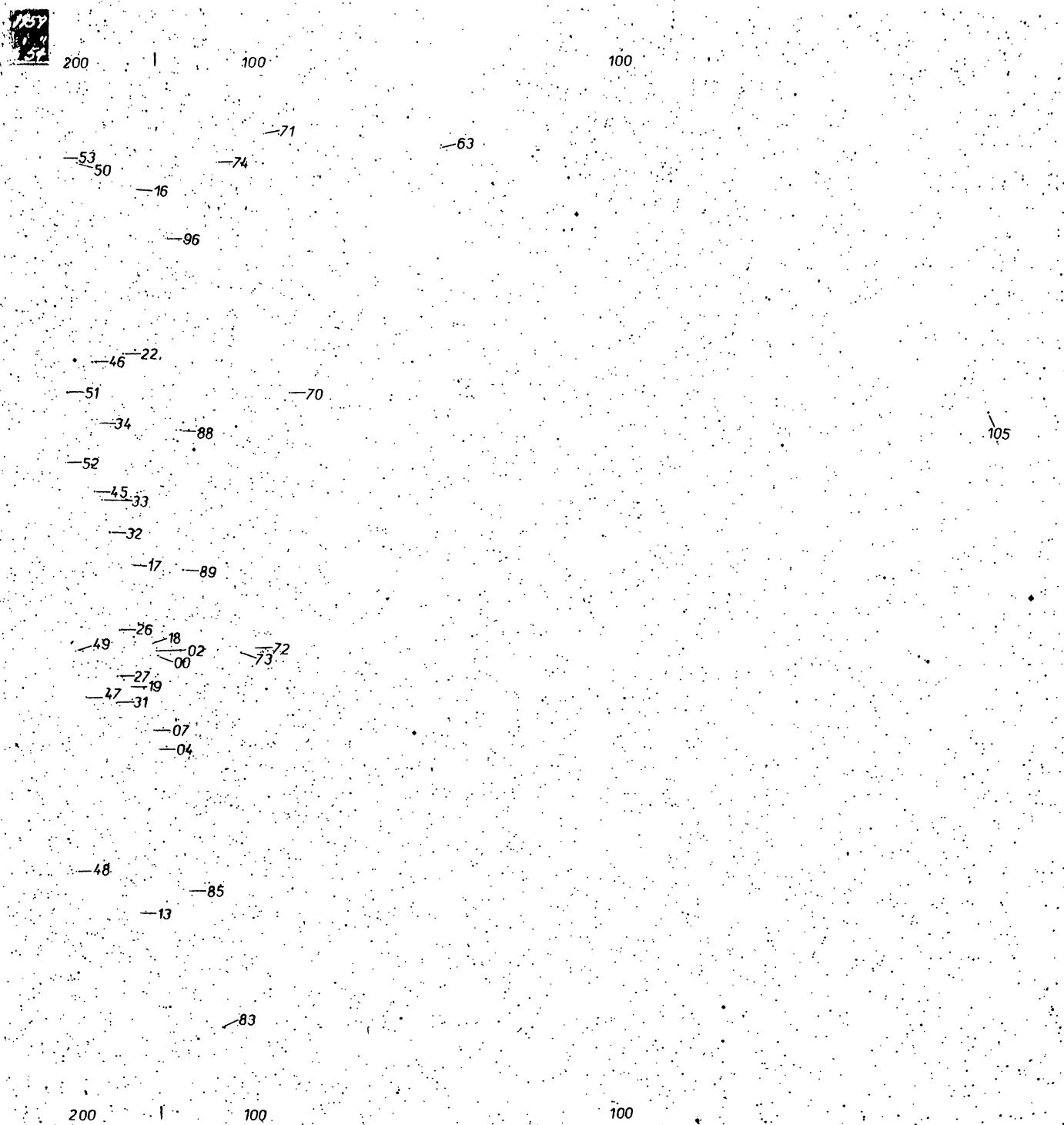
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—40.

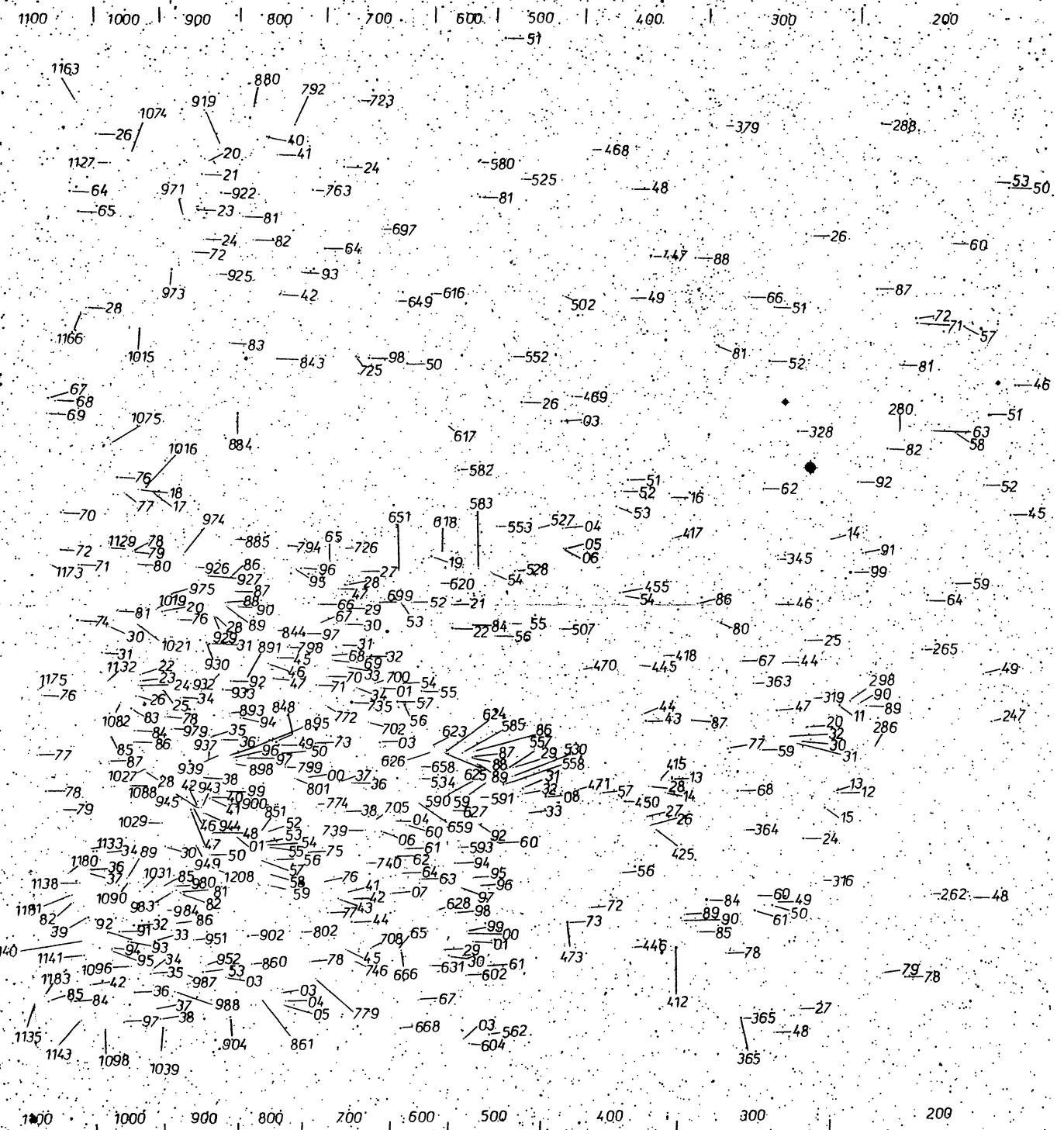
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100

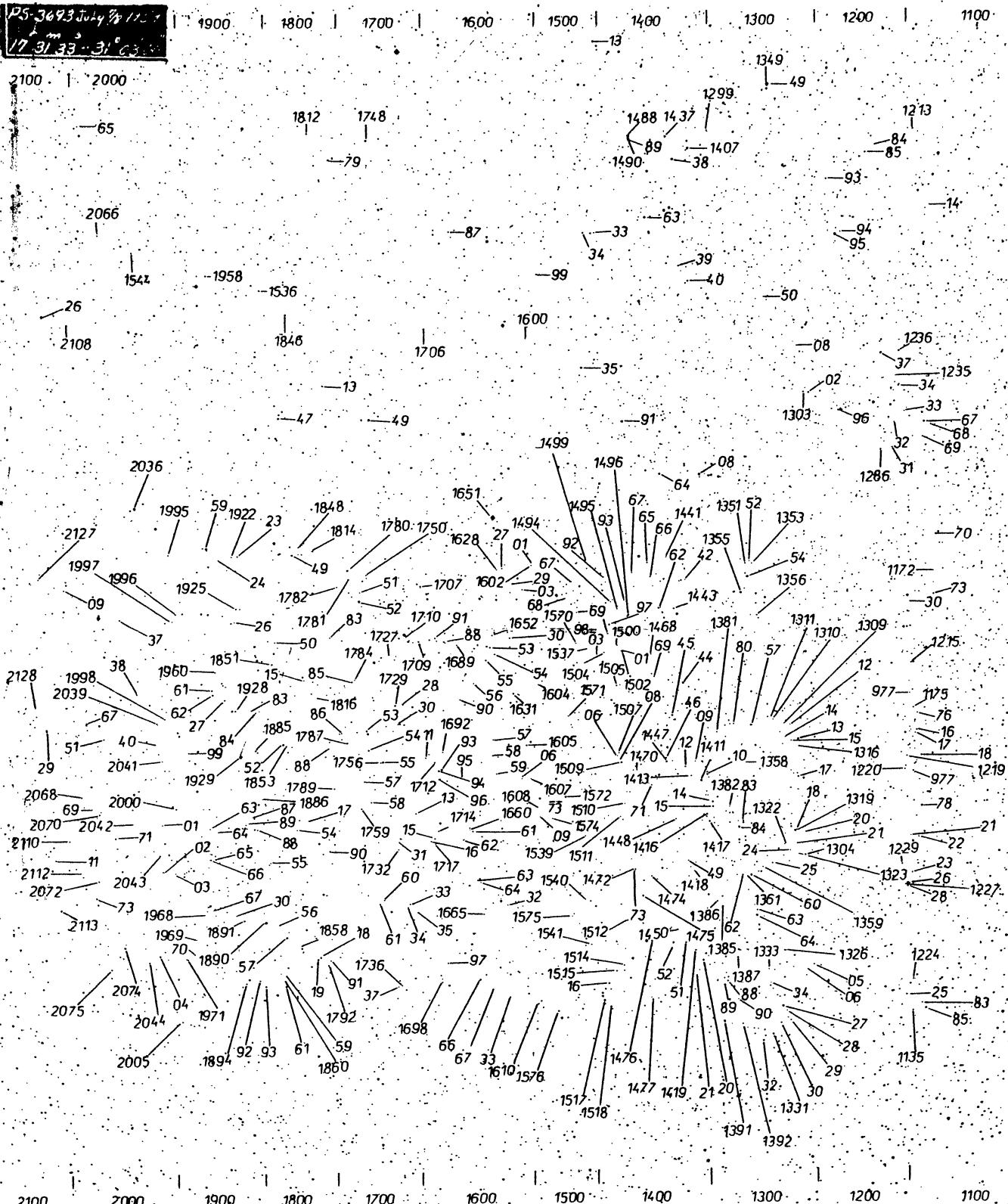
MAP 1.



MAP 2.



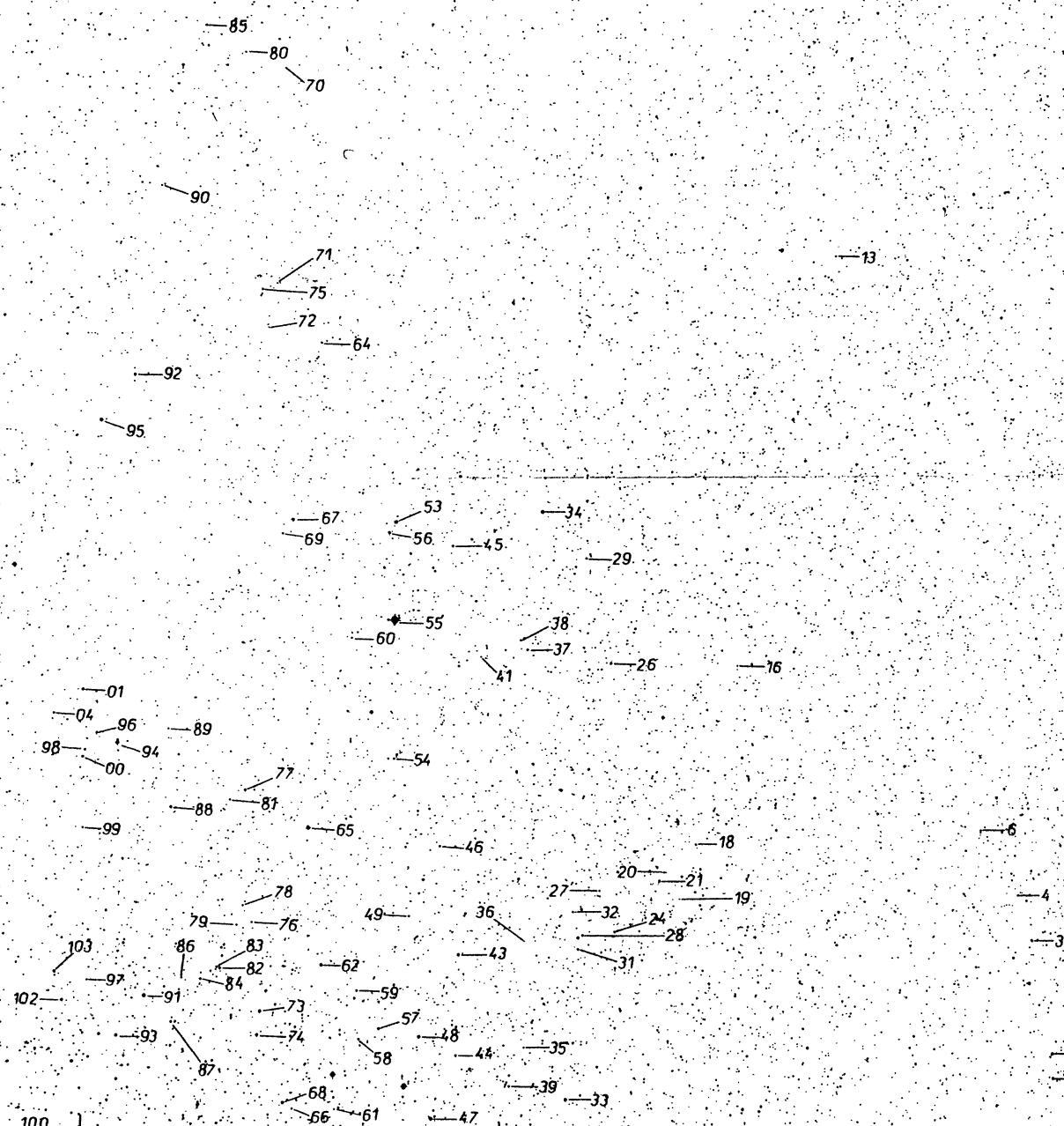
P.S. - 369.3 July 9<sup>th</sup> 1957  
17 31 33 - 31° 03' 45"



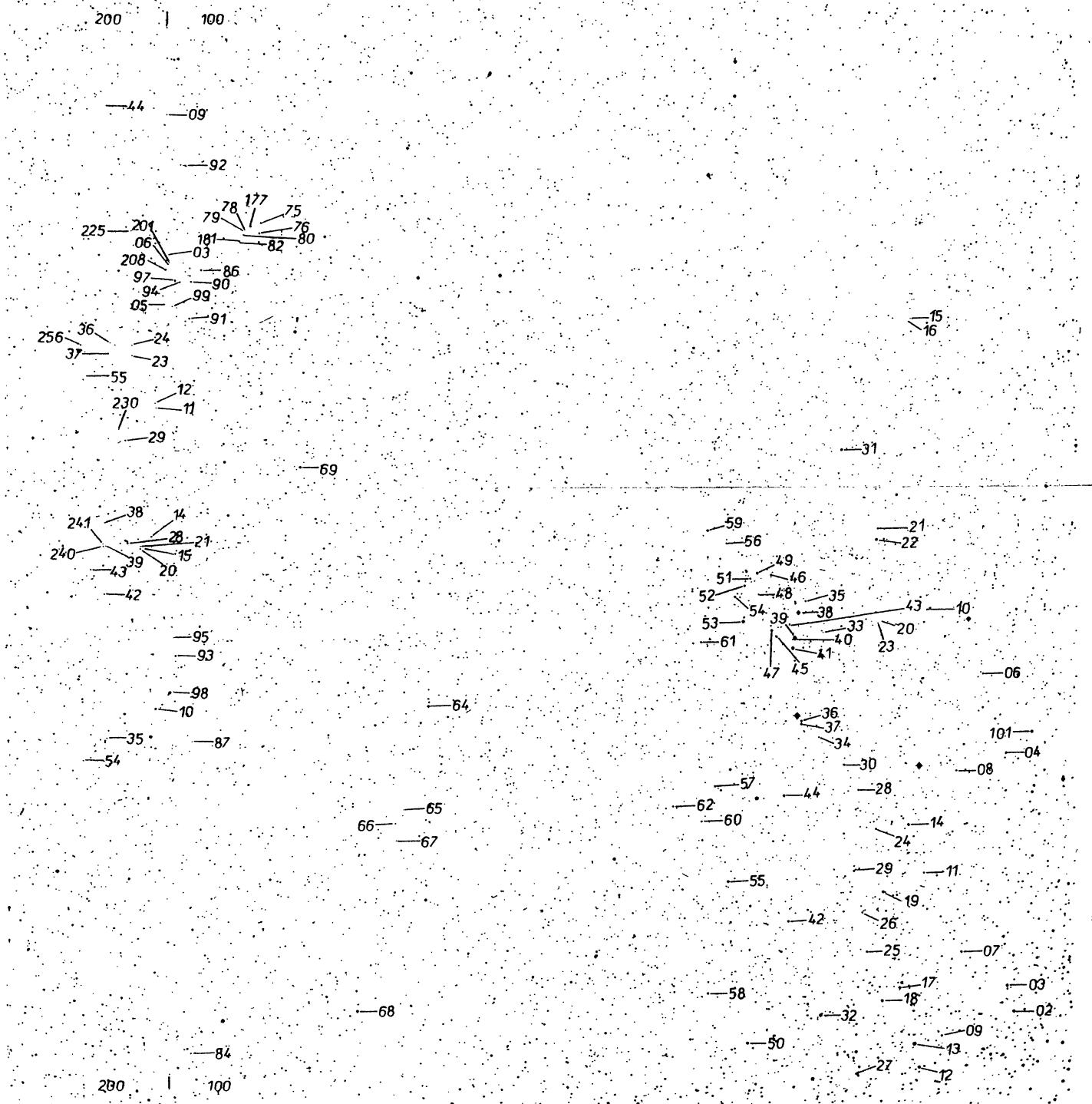
MAP 4.

100 1

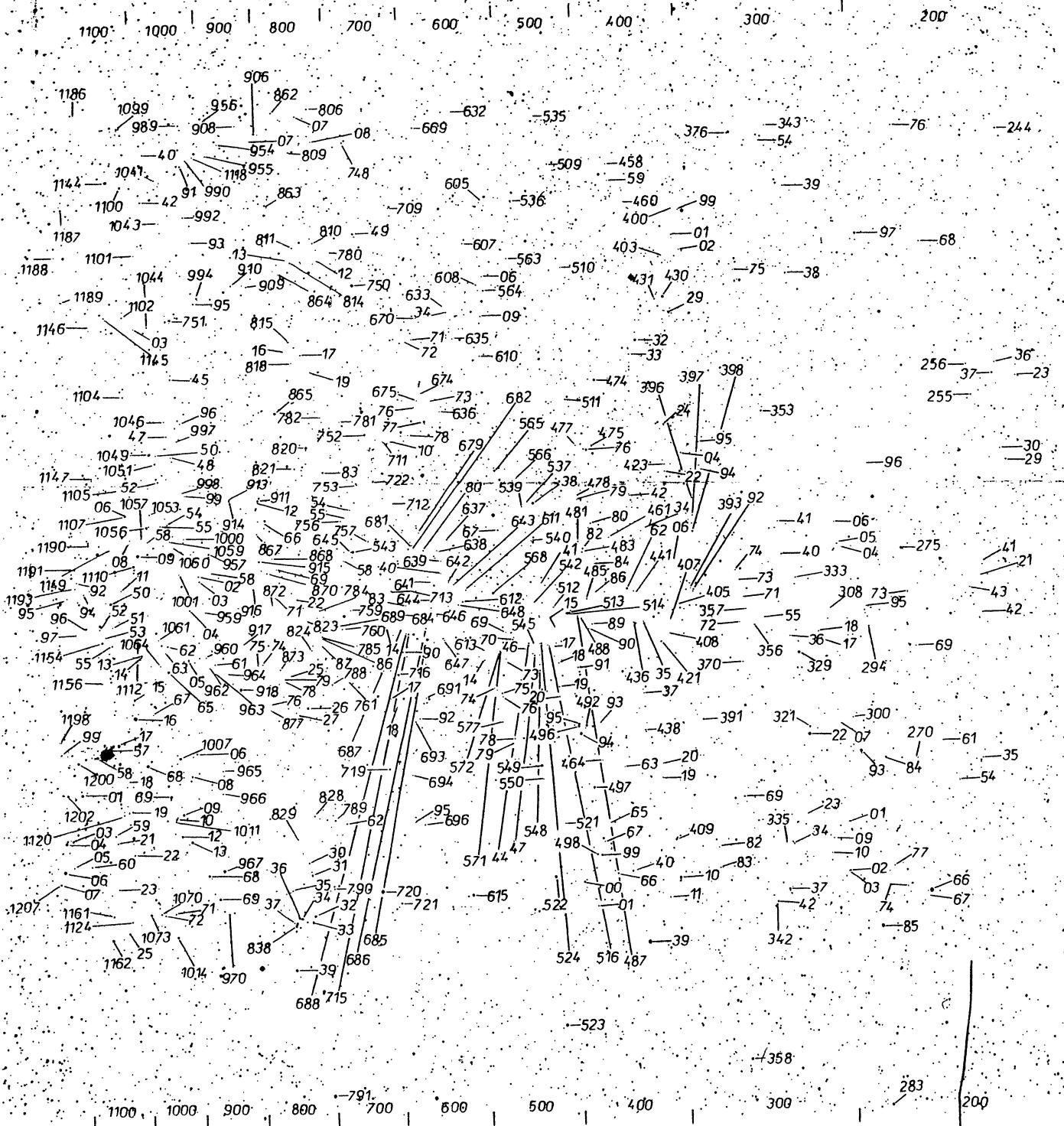
MAP 5.



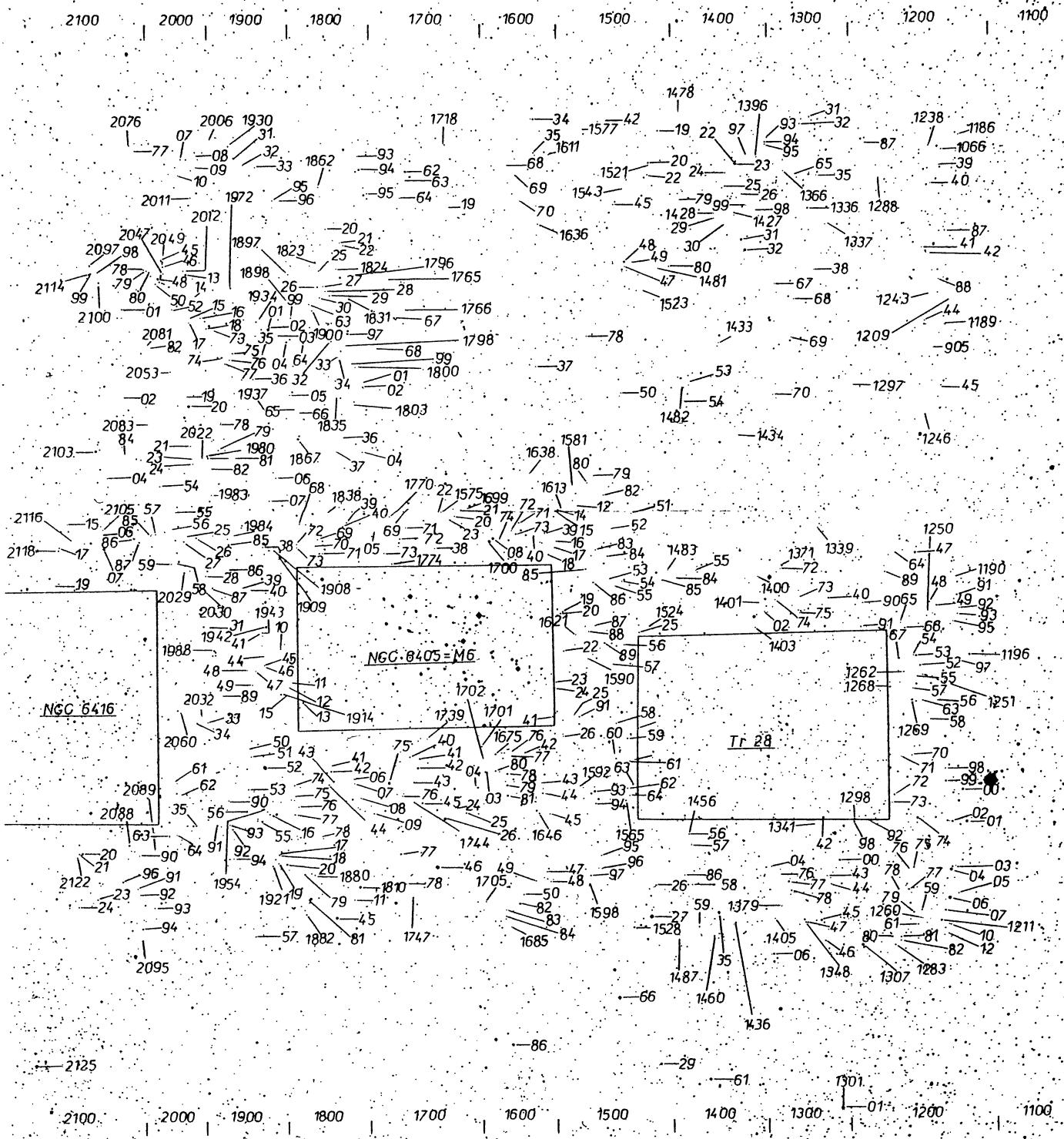
**MAP 6:**

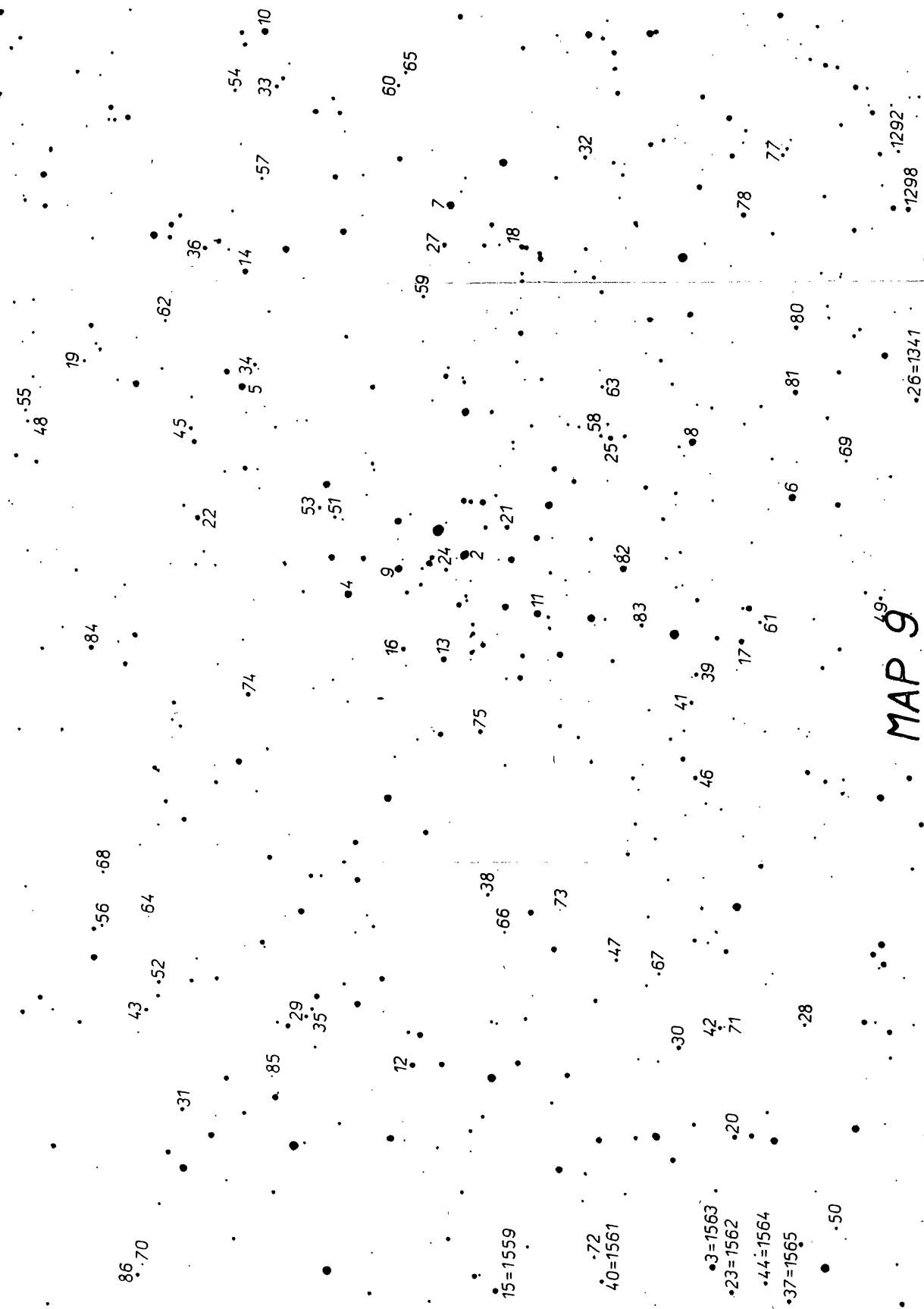


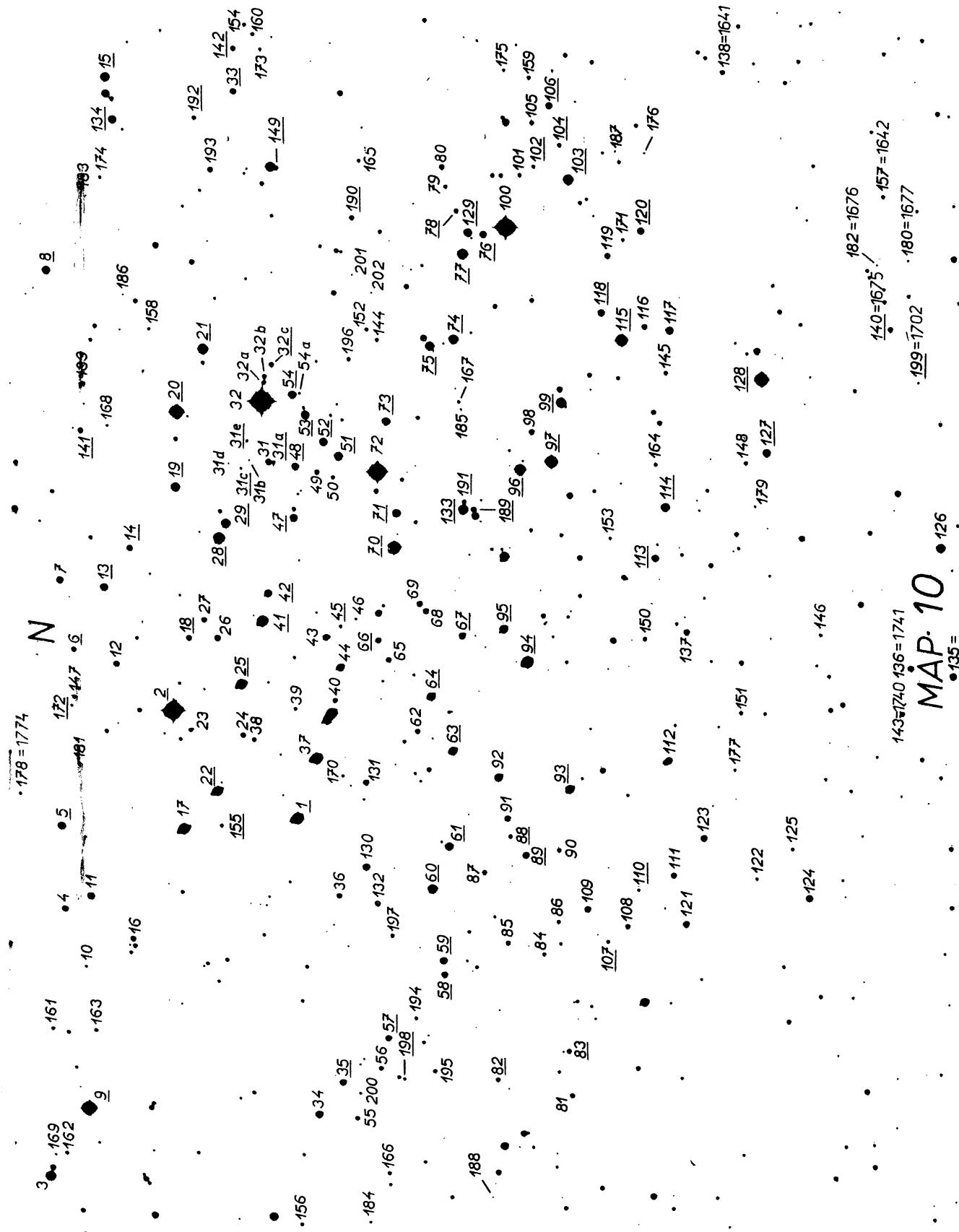
MAP 7.



MAP 8







N .<sub>29</sub>

