

INTERSTELLAR EXTINCTION IN THE VICINITY OF THE NORTH AMERICA AND PELICAN NEBULAE. II.

V. Straizys¹, A. Kazlauskas¹, V. Vansevicius² and K. Černis¹

¹ *Institute of Theoretical Physics and Astronomy,
Goštauto 12, Vilnius 2600, Lithuania*

² *National Astronomical Observatory, Mitaka, Tokyo 181, Japan* *

Received October 5, 1993.

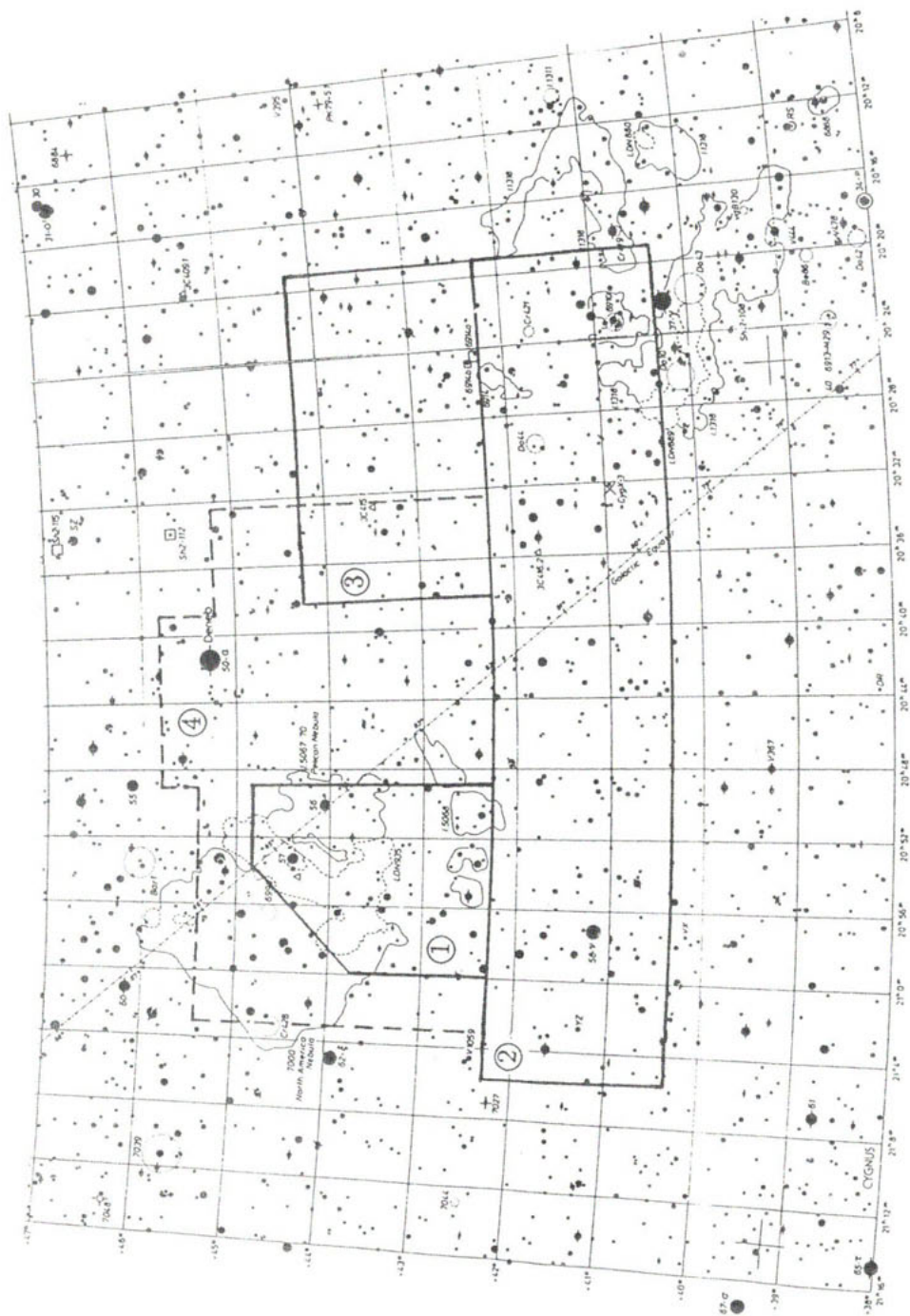
Abstract. The results of photoelectric photometry of 564 stars in the Vilnius seven-colour system in three areas near the North America and Pelican Nebulae are given. Photometric spectral types, absolute magnitudes, colour excesses, interstellar extinctions and distances of the stars are determined. We find that the dark cloud separating both nebulae is at 580 pc distance. A number of stars immersed into the dark cloud have been found. It seems that the dark cloud extends to south down to 40° declination. The area southwest of α Cygni in the declination zones 42° and 43° is comparatively transparent at least up to 1 kpc.

Key words: North America Nebula - Pelican Nebula - interstellar extinction - dark clouds - Vilnius photometric system - classification of stars

1. Introduction

In our previous papers (Straizys et al., 1989a, b) we have started to investigate interstellar extinction in the vicinity of the North America and Pelican Nebulae using the photometry of stars in the Vilnius photometric system and their photometric two-dimensional classification. In the first paper (Straizys et al., 1989a, Paper I).

* *Visiting astronomer from the Institute of Physics, Goštauto 12, Vilnius-2600, Lithuania*



the results of photoelectric photometry of 249 stars, their two-dimensional classification, colour excesses, interstellar extinctions and distances have been given. In the second paper (Straizys et al., 1989b, Paper II) we have investigated interstellar extinction in the area including the North America Nebula, the Pelican Nebula, the dark cloud separating both the nebulae (Lynds 935) and the nearby area south of α Cygni. The distance of the dark cloud was found to be 550 pc and the area west of the Pelican Nebula and south of α Cygni was found to be comparatively transparent at least up to 700 pc.

Trying to find more stars embedded into the dark cloud and to investigate the interstellar extinction in the wider area south and west of α Cygni, observations of new stars have been made. They include 212 stars in the area of the dark cloud and 352 stars in two rectangular areas extending west and south the area investigated in Papers I and II. Coordinate limits of all three areas are given in Table 1. Their positions are shown in Fig. 1. The broken lines limit the area investigated in Papers I and II.

The BD 40°–41° area contains the open cluster NGC 6910. The results of photometry of 17 stars in the cluster area were published earlier (Vansevičius, 1992).

Table 1. Coordinates of the investigated areas

No.	Area	$\alpha(1950)$	$\delta(1950)$	V_{lim}	N
1.	Dark cloud	20 ^h 47 ^m 7 – 20 ^h 58 ^m 3	+42°27' – +44°39'	12.5	212
2.	BD 40°– 41°	20 ^h 15 ^m 2 – 21 ^h 03 ^m 6	+40°24' – +42°19'	10.0	255
3.	BD 42°– 43°	20 ^h 14 ^m 8 – 20 ^h 35 ^m 0	+42°22' – +44°14'	10.0	97

2. Observations and results

The observations have been obtained in 1989–1991 with the 1-meter telescope of the Institute of Theoretical Physics and Astronomy at the Maidanak Observatory in Uzbekistan. The standard set of filters of the Vilnius photometric system has been used. The observed magnitudes and colour indices were transformed outside the atmosphere by the Nikonov's method modified by Zdanavičius

Fig. 1. Boundaries of the investigated areas: (1) the dark cloud area, (2) the BD 40°– 41° area, (3) the BD 42°– 43° area, (4) the area investigated in Papers I and II. The map is from Tirion et al. (1987). The coordinates are for 2000.0.

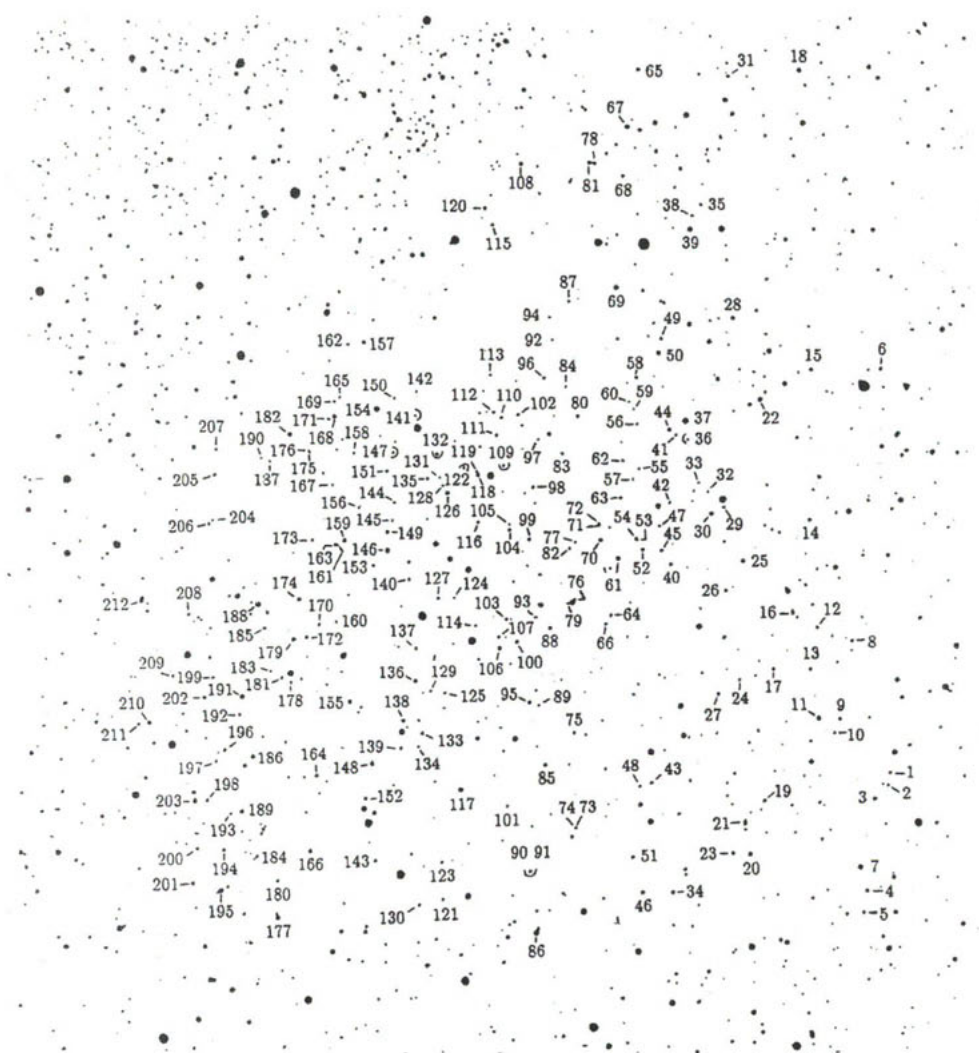


Fig. 2. The map of the dark cloud area.

(1975). The standard star HD 197037 = BD+41°3845 (F8 V, $V = 6.79$), situated in the same area, has been used. Its $\alpha(1950) = 20^{\text{h}}37^{\text{m}}45^{\text{s}}$ and $\delta(1950) = +42^{\circ}04'.3$. Magnitude V and colour indices of this star in the Vilnius system are published in Paper I. Transformation equations from the instrumental to the standard system were based on observations of 15 stars of luminosity classes V

and III of different spectral types from the Cygnus Standard Region (Zdanavičius and Černienė, 1985).

The results of photometry of 564 stars are presented in Tables 2, 3 and 4. Table 2 gives BD numbers, numbers from Metik (1960), equatorial coordinates, spectral types from literature and those obtained in this paper, V magnitudes* and colour indices $U-P$, $P-X$, $X-Y$, $Y-Z$, $Z-V$ and $V-S$ in the Vilnius system, n is the number of independent observations. Tables 3 and 4 give BD and HD numbers, other columns are the same as in Table 2. Coordinates of the stars were taken from the SAO or AGK3 catalogues or have been measured from copies of the Papadopoulos and Scovil (1980) atlas with the accuracy of $1''$ in α and $0.1''$ in δ . Mean square error σ of one photometric observation is of the order of ± 0.01 mag. Stars of the dark cloud are identified in Fig. 2. In the chart, the stars investigated in Paper I are not numerated.

The remarks at the end of the tables give information on duplicity, variability and the classification difficulties. For the binaries with separation of their components $< 5''$, both components were measured together. For the wider binaries, the information is given, how they are measured, separately or together.

3. Photometric classification of stars and their interstellar extinction

Spectral classes, luminosity classes and absolute magnitudes of the stars, given in Tables 5–7, have been determined from the photometric data by three different methods:

(1) the reddening-free diagrams Q_{UPY} , Q_{PYV} ; Q_{UPY} , Q_{XYV} ; Q_{UXY} , Q_{UPYV} ; Q_{UPY} , Q_{XZS} and Q_{XZS} , Q_{XYZ} calibrated in terms of spectral class and absolute magnitude by Straizys et al. (1982);

(2) the σ_Q method based on matching of ten different reddening-free Q -parameters of a program star to those of about 7000 standard stars of different spectral and luminosity classes.

(3) the semi-automatic classification with a program CLASS (Vansevičius and Bridžius, 1993).

* The V magnitude of the Vilnius system is a medium band analogue of the V magnitude of the UBV system (see Straizys, 1992). Both V magnitudes coincide within 0.01 mag for normal O–B–A–F–G–K stars. For M, S, R and N-type stars, as well as for stars with emission spectra differences of both magnitudes can be significant.

Table 2. Results of photometry in the dark cloud area

No.	BD	Metik No.	α (1950)	δ (1950)	Sp. lit.	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
1.		42-237	20 ^h 47 ^m 44 ^s	+42°53'4	F5	F5 V	11.24	0.55	0.62	0.66	0.31	0.20	0.46	2
2*			20 47 45	+42 51.6		K4 IV-V?	11.77	0.44	1.06	1.56	0.33	0.40	0.78	2
3.	+42°	3879	20 47 56	+42 49.4	F8	F6 V	10.36	0.52	0.60	0.68	0.33	0.18	0.49	2
4.		42-242	20 47 59	+42 35.6	F2	F5 V	11.12	0.55	0.63	0.67	0.31	0.19	0.46	2
5.		42-243	20 48 01	+42 32.4	G8	G0 IV	11.28	0.56	0.63	0.85	0.40	0.24	0.61	2
6.		43-222	20 48 05	+43 55.0	G5	K0 III	10.93	0.58	1.01	1.29	0.47	0.33	0.75	2
7.	+42°	3880	20 48 08	+42 45.0	A2	A6 V	9.79	0.69	0.84	0.57	0.28	0.15	0.37	2
8.		43-223	20 48 20	+43 13.3	F5	F9 V	11.04	0.46	0.60	0.75	0.32	0.20	0.54	2
9.		43-225	20 48 27	+43 01.5	A5	A7 V	10.91	0.61	0.71	0.56	0.27	0.16	0.39	2
10.		42-247	20 48 31	+42 59.2	F0	F0 V	11.66	0.57	0.66	0.58	0.28	0.14	0.41	2
11.	+42°	3881	20 48 44	+43 01.4	G5	K1 III	10.11	0.59	1.07	1.45	0.47	0.32	0.74	3
12*		43-228	20 48 49	+43 15.1	G2	K2 IV:	11.25	0.44	0.98	1.34	0.34	0.31	0.70	2
13.		43-230	20 48 52	+43 08.8	F5	F5 V	11.45	0.52	0.61	0.62	0.29	0.18	0.45	2
14*		43-233	20 48 59	+43 31.6	F5	F8 V	11.34	0.50	0.62	0.75	0.33	0.20	0.55	2
15.		43-235	20 49 03	+43 54.5	G5	K0 IV	10.82	0.50	0.94	1.18	0.41	0.30	0.70	2
16.		43-236	20 49 09	+43 17.1	F5	F9 V	11.80	0.47	0.57	0.75	0.33	0.21	0.53	2
17.		43-239	20 49 23	+43 08.5	A5	A7 V	11.59	0.64	0.81	0.60	0.29	0.16	0.37	2
18.	+44°	3601	20 49 24	+44 39.2	gG8	K1 III	9.53	0.61	1.14	1.45	0.50	0.36	0.80	2
19.		42-265	20 49 26	+42 48.4	G0	G0 IV-V	10.89	0.47	0.57	0.77	0.34	0.21	0.52	2
20.		42-268	20 49 36	+42 40.3	A5	A9 V	10.29	0.58	0.70	0.54	0.23	0.13	0.34	2
21.		42-269	20 49 41	+42 44.9	A5	A5 V	10.41	0.68	0.84	0.54	0.26	0.14	0.33	2
22.	+43°	3745	20 49 44	+43 49.6	G5	K0.5 III	10.00	0.60	1.05	1.38	0.48	0.35	0.80	2
23.		42-272	20 49 50	+42 40.3	F8	F6 V	11.01	0.52	0.60	0.69	0.34	0.20	0.50	2
24.		43-244	20 49 51	+43 06.7	F2	F5 V	11.81	0.55	0.63	0.67	0.33	0.21	0.50	2
25.		43-245	20 49 53	+43 24.8	A2	A6 V	10.83	0.65	0.85	0.55	0.25	0.13	0.34	2
26.		43-248	20 50 06	+43 20.2	F8	F8 IV-V	11.33	0.55	0.70	0.80	0.36	0.22	0.56	2
27.		43-249	20 50 08	+43 04.4	F8	G0 V	11.18	0.45	0.59	0.77	0.34	0.20	0.53	2
28.		44-276	20 50 10	+44 01.6	G8	K1.5 III	10.45	0.68	1.20	1.55	0.55	0.42	0.90	2
29.		43-250	20 50 11	+43 32.9	F:	G9 V	11.94:	0.46	0.71	1.05	0.37	0.31	0.69	3
30.		43-253	20 50 21	+43 31.8	G5	K0 III-IV	10.55	0.67	1.02	1.35	0.52	0.36	0.83	2

Table 2 (continued)

No.	BD	Metik No.	α (1950)	δ (1950)	Sp. lit.	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
31.		44-280	20 ^h 50 ^m 24 ^s	+44° 37.7	F8	F5 V	10.74	0.54	0.60	0.63	0.29	0.19	0.45	2
32.			20 50 25	+43 35.2		F7 V	12.40	0.53	0.59	0.71	0.35	0.23	0.51	2
33.			20 50 33	+43 36.5		G0 IV-V	12.66	0.54	0.65	0.81	0.34	0.25	0.54	2
34.		42-284	20 50 38	+42 34.1	A8	F0 V	10.85	0.62	0.73	0.65	0.30	0.18	0.41	2
35*		44-283	20 50 42	+44 18.3	F8	G2 V	11.39	0.45	0.61	0.81	0.32	0.21	0.56	2
36.			20 50 44	+43 43.0		G0 V	12.66	0.48	0.60	0.81	0.34	0.24	0.56	2
37.	+43°	3750	20 50 46	+43 45.8	M	K5: III	8.78	0.92	1.46	2.15	0.67	0.60	1.19	2
38.		44-286	20 50 49	+44 16.5	A5	A7 V	11.76	0.58	0.75	0.55	0.23	0.14	0.34	4
39.	+43°	3752	20 50 50	+44 14.5	G8	K0 III	9.42	0.59	0.99	1.30	0.48	0.32	0.75	4
40.		43-258	20 50 53	+43 23.8	F5	F5 V	11.42	0.51	0.59	0.64	0.31	0.20	0.48	2
41.			20 50 54	+43 43.6		F7 V	12.43	0.50	0.57	0.69	0.31	0.21	0.53	2
42.			20 50 56	+43 33.2		K2.5 V	12.58	0.42	1.00	1.26	0.33	0.39	0.75	2
43.		42-287	20 51 00	+42 50.4	G0	F4 V	11.45	0.59	0.62	0.65	0.33	0.18	0.49	3
44.		43-259	20 51 00	+43 44.4	A0	B6: V	11.02	0.53	0.64	0.59	0.41	0.24	0.57	2
45.		43-260	20 51 01	+43 25.9	F5	F0 V	11.78	0.55	0.65	0.57	0.29	0.17	0.42	2
46.		42-289	20 51 03	+42 33.9	A0	A1 V	10.81	0.63	0.88	0.41	0.22	0.11	0.20	2
47.			20 51 04	+43 29.6		F8 V	12.05	0.48	0.58	0.76	0.34	0.21	0.54	2
48.		42-293	20 51 09	+42 49.8	F2	F8 V	11.21	0.55	0.64	0.74	0.34	0.21	0.49	2
49.		43-262	20 51 10	+43 58.1	F5	F2 V	11.05	0.59	0.67	0.65	0.32	0.18	0.49	2
50.	+43°	3751	20 51 11	+43 55.9	G5	G5 V	10.42	0.48	0.73	0.94	0.37	0.30	0.67	2
51.	+42°	3896	20 51 12	+42 39.1	F8	G2 IV	10.80	0.50	0.66	0.85	0.33	0.23	0.56	2
52.		43-264	20 51 18	+43 25.9	G0	B2 V	11.18	0.49	0.51	0.75	0.57	0.32	0.81	2
53*			20 51 22	+43 27.3		G2-G5 V	12.96	0.47	0.69	0.88	0.38	0.27	0.69	2
54.		43-265	20 51 23	+43 27.5	G0	F5 V	11.68	0.54	0.63	0.72	0.35	0.22	0.54	2
55.			20 51 24	+43 38.3		K2 IV	12.25	0.56	1.09	1.39	0.43	0.41	0.78	2
56*			20 51 27	+43 44.9		Late F	14.33	0.58	0.72	0.84	0.56	0.20	0.70	2
57.			20 51 28	+43 36.6		B2 V	12.49	0.69	0.55	0.94	0.76	0.38	1.01	2
58.		43-271	20 51 30	+43 52.1	B5	F8 V	11.29	0.48	0.62	0.78	0.34	0.24	0.54	2
59.			20 51 30	+43 47.2		F8 V	12.62	0.48	0.57	0.72	0.36	0.22	0.57	3
60.			20 51 35	+43 48.3		G5 V	12.66	0.47	0.67	0.93	0.38	0.24	0.71	2

Table 2 (continued)

No.	BD	Metik No.	α (1950)	δ (1950)	Sp. lit.	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
61.	+43° 3756	43-267	20 ^b 51 ^m 37 ^s	+43° 24'4	A2	A6 V	10.13	0.65	0.83	0.52	0.20	0.13	0.27	2
62.		43-268	20 51 37	+43 39.4	F5	F6 V	11.56	0.54	0.60	0.72	0.35	0.21	0.54	2
63.		43-269	20 51 38	+43 33.6	F8	F8 V	11.68	0.49	0.60	0.75	0.34	0.22	0.56	2
64.		43-270	20 51 41	+43 15.6	F5	F7 V	11.32	0.49	0.58	0.69	0.32	0.17	0.49	2
65.	+44° 3619	44-300	20 51 41	+44 38.0	F2	F2 V	10.51	0.53	0.64	0.60	0.27	0.17	0.41	2
66.			20 51 45	+43 14.2		G1 III-IV	11.91	0.52	0.62	0.82	0.35	0.20	0.54	2
67.	+44° 3620	44-301	20 51 48	+44 29.2	G5	K0 III	9.49	0.60	1.02	1.31	0.49	0.32	0.77	2
68.		44-304	20 51 50	+44 21.9	F8	F7 V	10.94	0.48	0.62	0.69	0.30	0.20	0.47	2
69.	+43° 3758	44-303	20 51 50	+44 05.3	G8	K1 III	9.58	0.76	1.20	1.62	0.62	0.41	0.95	4
70.	+43° 3757	43-272	20 51 53	+43 27.0	G8	K0 III	10.34	0.62	1.03	1.34	0.50	0.33	0.78	2
71.			20 51 54	+43 29.4		F5 V	12.48	0.51	0.57	0.68	0.33	0.23	0.49	3
72.			20 51 55	+43 29.6		K0 III-IV	12.21	0.69	1.08	1.43	0.58	0.42	0.90	3
73.			20 52 00	+42 43.1		F6 V	12.27	0.52	0.57	0.68	0.33	0.17	0.49	2
74.		42-300	20 52 01	+42 43.1	F0	F5 V	12.04	0.52	0.59	0.66	0.31	0.19	0.47	2
75.		42-303	20 52 06	+42 57.5	F2	F5 IV	11.46	0.59	0.63	0.71	0.34	0.20	0.53	2
76.			20 52 11	+43 17.7		F5 V	11.96	0.55	0.60	0.66	0.33	0.19	0.52	2
77.			20 52 13	+43 26.5		F7 V	12.09	0.52	0.57	0.67	0.33	0.18	0.49	2
78.	+44° 3623	44-309	20 52 14	+44 23.6	F8	F5 V	11.07	0.50	0.61	0.67	0.30	0.19	0.46	2
79.			20 52 16	+43 17.1		G0 IV-V	12.63	0.57	0.68	0.87	0.42	0.25	0.63	2
80.		43-275	20 52 17	+43 45.7	A5	A7 V	11.40	0.58	0.73	0.53	0.24	0.14	0.38	2
81.		44-310	20 52 18	+44 23.7	G5	G8 IV-V	10.61	0.53	0.83	1.08	0.42	0.29	0.70	2
82.		42-274	20 52 18	+43 25.5	F8	F8 V	11.86	0.47	0.56	0.70	0.32	0.21	0.50	2
83*		43-276	20 52 28	+43 39.9	F8	F8 V MD	11.69	0.46	0.56	0.66	0.34	0.20	0.51	2
84*			20 52 28	+43 50.1		F6 V	13.18	0.50	0.57	0.66	0.36	0.22	0.50	2
85.		42-308	20 52 29	+42 52.3	F2	F5:V	10.66	0.51	0.59	0.65	0.27	0.19	0.44	2
86.	+42° 3899	42-306	20 52 29	+42 27.0	K5	M4 III	9.20	1.18	1.42	1.73	0.89	0.50	1.34	2
87.		44-313	20 52 29	+44 02.9	G0	F5 V	11.67	0.54	0.63	0.69	0.32	0.20	0.50	3
88.		43-277	20 52 31	+43 13.1	G2	G3 IV	10.68	0.52	0.73	0.87	0.34	0.22	0.55	2
89*			20 52 37	+43 01.3		Late A	12.73	0.93	0.97	0.86	0.47	0.26	0.63	1
90.			20 52 36	+42 36.1		F5 V	11.93	0.52	0.59	0.64	0.33	0.21	0.48	2

Table 2 (continued)

No.	BD	Metik No.	α (1950)	δ (1950)	Sp. lit.	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
91.			20 52 37	+42 36.0		F7 V;	12.09	0.53	0.57	0.68	0.30	0.21	0.46	2
92.			20 52 42	+43 57.1		G0 V	13.24	0.49:	0.67:	0.82:	0.37:	0.24:	0.51:	3
93.			20 52 44	+43 14.7		G0 IV-V	12.11	0.52	0.60	0.82	0.35	0.25	0.59	2
94.			20 52 44	+44 00.3		F7:	13.01:	0.52:	0.57:	0.70:	0.31:	0.21:	0.50:	3
95.*		43-281	20 52 45	+43 01.7	F2	F3-F5	11.11	0.54	0.61	0.62	0.32	0.17	0.43	2
96.*			20 52 47	+43 51.3			11.29	0.74:	0.66:	1.15	0.85	0.45	1.15	2
97.			20 52 50	+43 41.9		F6: V	12.87	0.54:	0.56:	0.69:	0.36:	0.20:	0.52:	2
98.		43-282	20 52 52	+43 34.6	G2	G1 V	11.08	0.47	0.62	0.81	0.35	0.23	0.55	2
99.		43-283	20 52 53	+43 26.6	A8	A9 V	11.02	0.58	0.69	0.55	0.24	0.15	0.34	2
100.		43-284	20 52 59	+43 10.7	G2	G9.5 III-IV	11.21	0.49:	0.89:	1.14:	0.39	0.26	0.65	2
101.		42-316	20 52 59	+42 45.7	F2	F5 V	11.50	0.48	0.61	0.63	0.32	0.20	0.49	2
102.		43-285	20 53 08	+43 45.4	F5	G2 V	11.64	0.46	0.64	0.82	0.34	0.22	0.57	3
103.			20 53 09	+43 14.1	F0	G8 II-III	11.43	0.93	1.19	1.78	0.83	0.49	1.21	2
104.		43-286	20 53 10	+43 27.8		A9 V	11.53	0.63	0.70	0.61	0.30	0.19	0.42	2
105.			20 53 10	+43 28.6		F5 V	13.09	0.58:	0.65:	0.75:	0.39:	0.23:	0.59:	2
106.	+42°	3904	20 53 13	+43 09.6	G8	K0 IV-V	9.92	0.49	0.89	1.14	0.40	0.31	0.71	2
107.			20 53 14	+43 10.9		G0 V	13.28	0.48	0.66	0.81	0.35	0.22	0.58	2
108.		44-322	20 53 17	+44 22.9	F8	F8 V	10.60	0.45	0.56	0.68	0.31	0.19	0.49	2
109.		43-288	20 53 18	+43 37.7	F5	F2 V	11.60	0.54	0.63	0.60	0.29	0.16	0.43	3
110.	+43°	3761	20 53 23	+43 44.9	F5	A7 V	11.36	0.59	0.75	0.58	0.24	0.15	0.34	3
111.		43-290	20 53 26	+43 42.1	F8	F5 IV-V	11.46	0.54	0.61	0.65	0.30	0.18	0.47	3
112.		43-292	20 53 30	+43 45.6	F5	F5 V	11.31	0.49	0.59	0.60	0.29	0.16	0.44	3
113.			20 53 34	+43 51.2		G0 V	12.26	0.47:	0.61:	0.81	0.37	0.24	0.56	2
114.		43-293	20 53 36	+43 12.9	F2	F5 V	11.80	0.51	0.61	0.65	0.28	0.18	0.45	2
115.		44-331	20 53 39	+44 13.5	F2	F0 V	10.88	0.51	0.66	0.55	0.27	0.14	0.39	2
116.			20 53 39	+43 28.7		F2 V	12.34	0.62:	0.65:	0.71	0.38	0.23	0.57	2
117.	+42°	3908	20 53 41	+42 47.8	A0	A0 V	9.76	0.57	0.82	0.34	0.15	0.10	0.15	3
118.		43-295	20 53 41	+43 35.9	G8	K0 III	10.37	0.62	1.00	1.37	0.53	0.35	0.83	2
119.			20 53 42	+43 36.5		G9 IV-V	12.28	0.51:	0.89:	1.13	0.40	0.31	0.71	2
120.		44-336	20 53 47	+44 16.0	G8	K0 III-IV	10.54	0.60	0.97	1.28	0.47	0.33	0.77	2

Table 2 (continued)

No.	BD	Metik No.	$\alpha(1950)$	$\delta(1950)$	Sp. lit.	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
121*		42-328	20 ^h 53 ^m 52 ^s	+42°31'3	G0	G2 V	11.66	0.47	0.65	0.84	0.36	0.22	0.57	2
122*			20 53 54	+43 36.9		G, MDG?	11.88	0.62:	0.64	0.78	0.37	0.22	0.57	2
123*		42-329	20 53 55	+42 36.7	B5:	sdF5?	11.28	0.68	0.68	0.82	0.58	0.30	0.78	3
124.			20 53 56	+43 17.0		F6 III	12.56	0.70	0.70	0.75	0.39	0.21	0.56	2
125.		43-297	20 54 00	+43 02.4	A0	A5 V	11.69	0.68	0.83	0.53	0.25	0.14	0.32	2
126*	+43°	3764	20 54 07	+43 32.9	B9	A0.5 V	10.19	0.59	0.81	0.39	0.18	0.11	0.20	2
127.		43-300	20 54 10	+43 16.8	F0	G0 V	12.00	0.49	0.60	0.78	0.32	0.23	0.53	2
128*			20 54 11	+43 34.0		G1 V	12.64	0.47:	0.63:	0.82:	0.34:	0.25:	0.56:	2
129.		43-301	20 54 12	+43 02.6	F0	G0 IV	11.77	0.55	0.66	0.80	0.36	0.22	0.55	2
130.		42-332	20 54 12	+42 30.3	F5	F0 V	11.61	0.65	0.70	0.69	0.35	0.22	0.49	2
131.			20 54 15	+43 35.2		F8 V	12.15	0.49	0.57	0.74	0.32	0.20	0.53	2
132.		43-303	20 54 18	+43 38.8	F8	F7 V	10.79	0.47	0.57	0.66	0.29	0.19	0.46	4
133.	+42°	3910	20 54 18	+42 56.2	F2	F2 V	10.97	0.50	0.62	0.59	0.27	0.18	0.41	2
134.		42-335	20 54 20	+42 54.1	F8	G5 V	11.66	0.50	0.75	0.94	0.39	0.26	0.64	2
135.		43-305	20 54 25	+43 34.9	A5	A6 V	11.33	0.61	0.85	0.56	0.22	0.12	0.27	4
136.	+42°	3912	20 54 26	+43 03.9	F8	F5 V	10.60	0.52	0.63	0.65	0.30	0.18	0.46	2
137*			20 54 27	+43 08.9		K0.5 III	11.01	0.68	1.07	1.52	0.60	0.41	0.94	1
138.		42-339	20 54 34	+42 57.9	F5	F5 V	10.72	0.50	0.61	0.65	0.29	0.19	0.46	2
139.		42-341	20 54 35	+42 53.7	F5	F8 V	11.39	0.46	0.60	0.69	0.30	0.18	0.47	2
140.		43-308	20 54 37	+43 19.3	G2	G7 V	11.24	0.47	0.79	0.98	0.38	0.28	0.62	2
141.			20 54 39	+43 44.3		F8: V	12.81	0.50:	0.66:	0.79:	0.38:	0.26:	0.64:	2
142.		43-311	20 54 40	+43 48.0	F5	F2 V	11.93	0.55	0.61	0.62	0.32	0.20	0.46	2
143.		42-343	20 54 51	+42 36.4	F8	F8 IV	11.23	0.53	0.63	0.75	0.34	0.20	0.51	2
144*		43-312	20 54 53	+43 30.9	F8	G0 V	11.79	0.42	0.57	0.79	0.38	0.23	0.59	2
145.			20 54 54	+43 28.2		F9 V	12.34	0.48:	0.62:	0.80	0.36	0.24	0.55	2
146*	+43°	3769	20 54 56	+43 23.5	A5	A7 V	9.87	0.61	0.78	0.59	0.25	0.15	0.35	1
147.			20 54 57	+43 38.6		F8 V	12.17	0.46	0.59	0.73	0.33	0.21	0.54	2
148*	+42°	3916	20 54 58	+42 51.0	F2	K0 III	10.69	0.62	1.06	1.40	0.55	0.37	0.86	2
149.		43-314	20 54 58	+43 26.4	A0	A0 V	10.87	0.60	0.78	0.39	0.21	0.11	0.24	4
150.			20 54 58	+43 46.9		F8 V	13.03	0.52:	0.61:	0.77:	0.37:	0.22:	0.59:	2

Table 2 (continued)

No.	BD	Metik No.	$\alpha(1950)$	$\delta(1950)$	Sp. lit.	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
151.		43-315	20 ^h 55 ^m 01 ^s	+43°35'7"	G5	G5 V	11.29	0.50	0.71	0.92	0.38	0.27	0.62	2
152.		42-350	20 55 02	+42 45.7	G5	G0 IV	11.14	0.57	0.69	0.88	0.41	0.24	0.64	2
153.		43-316	20 55 08	+43 21.1	F8	F8 V	11.63	0.49	0.58	0.70	0.31	0.19	0.49	2
154.	+43° 3770	43-317	20 55 13	+43 45.0	G8	K0 III	9.12	0.58	0.98	1.29	0.47	0.31	0.75	2
155.		43-318	20 55 20	+43 00.2	F2	F9 V	10.71	0.47	0.60	0.75	0.32	0.20	0.51	2
156.			20 55 23	+43 29.8		G1 IV-V	12.69	0.50:	0.60:	0.80:	0.37:	0.22	0.53	3
157.		43-320	20 55 27	+43 55.0	A8	F0 V	10.72	0.67	0.70	0.61	0.30	0.17	0.45	3
158.			20 55 30	+43 38.2		F5 IV-V	12.23	0.53	0.56	0.67	0.32	0.19	0.53	2
159.		43-321	20 55 33	+43 24.7	A2	A4 V	10.76	0.71	0.89	0.54	0.26	0.14	0.34	4
160.		43-322	20 55 35	+43 12.2	A5	A9 V	12.02	0.60	0.69	0.60	0.32	0.16	0.40	2
161.			20 55 39	+43 24.0		G0 V	12.64	0.47:	0.61:	0.81:	0.36:	0.25	0.62	2
162.		43-323	20 55 40	+43 54.6	F2	F6 V	11.94	0.47	0.56	0.65	0.31	0.19	0.44	2
163.			20 55 41	+43 23.9		G6 V	11.72	0.39	0.60	0.88	0.34	0.25	0.59	4
164.		42-356	20 55 43	+42 48.7	A2	A4 V	11.08	0.65	0.87	0.51	0.22	0.14	0.28	2
165.*			20 55 44	+43 46.5		F8 IV	12.43	0.58:	0.64:	0.82:	0.39	0.24	0.64	2
166.	+42° 3920	42-357	20 55 45	+42 37.3	F2	F2 III	10.50	0.78	0.78	0.70	0.37	0.20	0.52	2
167.		43-324	20 55 46	+43 33.1	F5	F3 V	11.86	0.52	0.58	0.61	0.30	0.18	0.45	4
168.	+43° 3773	43-325	20 55 48	+43 43.5	K2	K0.5 IV	10.39	0.52	0.99	1.26	0.42	0.32	0.74	2
169.		43-327	20 55 48	+43 45.8	F2	F3 V	11.84	0.55	0.60	0.60	0.31	0.18	0.47	2
170.		43-326	20 55 49	+43 11.7	A5	A7 V	11.63	0.60	0.82	0.59	0.24	0.15	0.33	2
171.		43-328	20 55 53	+43 43.0	G0	F8 IV	11.77	0.61	0.67	0.81	0.40	0.26	0.57	2
172.	+42° 3922	43-329	20 55 59	+43 09.6	F5	F5 V	11.39	0.53	0.62	0.66	0.34	0.18	0.50	3
173.		43-331	20 56 00	+43 24.4	F2	G0 V MD?	11.80	0.44:	0.55	0.72	0.33	0.21	0.56	2
174.		43-332	20 56 07	+43 15.3	A0	A8 II	10.92	1.46	1.06	0.89	0.60	0.36	0.85	3
175.			20 56 07	+43 37.9		G5 V	12.70	0.46:	0.66:	0.89:	0.35:	0.25:	0.60:	2
176.			20 56 07	+43 38.2		G1 V	13.17	0.47:	0.65:	0.83:	0.33:	0.22:	0.60:	2
177.	+42° 3921	42-359	20 56 08	+42 27.1	F8	F5 V	10.13	0.47	0.55	0.64	0.30	0.18	0.46	2
178.			20 56 09	+43 02.6		A0 V	12.28	0.69	0.82	0.68	0.42	0.26	0.62	2
179.		43-333	20 56 09	+43 09.2	G:	K4 III	10.21	0.82:	1.47:	2.10	0.69	0.58	1.18	3
180.		42-360	20 56 10	+42 32.6	F2	K0.5 III	11.23	0.57:	1.01:	1.37:	0.49	0.35	0.76	2

Table 2 (continued)

No.	BD	Metik No.	$\alpha(1950)$	$\delta(1950)$	Sp. lit.	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
181.			20 56 ^m 16 ^s	+43°03.1		G5 V	13.18	0.47	0.73	0.93	0.38	0.27	0.63	2
182.	+43°	3776	20 56 24	+43 40.4	A1	A5 V	10.55	0.61	0.84	0.49	0.19	0.11	0.21	2
183.			20 56 26	+43 04.5		G1 V	12.16	0.47	0.61	0.83	0.34	0.23	0.58	2
184.*			20 56 28	+42 36.0		Carbon?	11.60	0.66:	1.89:	2.73:	1.30	0.73	1.80	2
185.		43-336	20 56 34	+43 10.6	F8	F5 V	11.85	0.61	0.67	0.72	0.39	0.23	0.56	2
186.*	+42°	3924	20 56 36	+42 51.1	F2	A9 V	10.47	0.67	0.78	0.65	0.30	0.19	0.45	2
187.			20 56 39	+43 36.1		F5 V	12.79	0.58:	0.61:	0.72:	0.37:	0.22:	0.58:	2
188.*	+42°	3925	20 56 40	+43 14.2	g.F5	F3 V	9.85	0.54	0.62	0.63	0.29	0.18	0.47	2
189.		42-365	20 56 42	+42 42.6	F8	F7 V	10.58	0.62	0.66	0.77	0.37	0.22	0.56	2
190.			20 56 46	+43 36.5		A6 V	12.81	0.66:	0.78:	0.64:	0.37:	0.19:	0.46:	2
191.		43-338	20 56 48	+43 00.0	A0	B9 IV	10.04	0.71	0.83	0.41	0.25	0.14	0.27	3
192.		42-367	20 56 49	+42 57.3	F5	F5 V	11.65	0.55	0.63	0.71	0.35	0.22	0.55	2
193.			20 56 52	+42 42.1		G3 IV	11.98	0.53	0.73	0.92	0.38	0.27	0.59	2
194.		42-370	20 56 55	+42 36.6	A0	A3 V	11.37	0.69	0.90	0.52	0.25	0.14	0.31	2
195.	+42°	3926	20 56 56	+42 30.6	G2	G0 V	9.87	0.48	0.63	0.81	0.36	0.22	0.58	2
196.		42-372	20 57 00	+42 51.8	A2	A2 V	11.31	0.75	0.91	0.54	0.30	0.17	0.34	2
197.			20 57 06	+42 50.0		K0 II	11.87	0.82:	1.18:	1.84:	0.77:	0.47	1.15	2
198.		42-377	20 57 12	+42 44.0	A0	B9 III	11.34	0.89	0.90	0.63	0.52	0.25	0.59	2
199.		43-345	20 57 13	+43 02.6	A8	A8 V	11.52	0.57	0.68	0.57	0.27	0.16	0.40	3
200.		42-378	20 57 17	+42 36.6	F0	F0 V	11.68	0.61	0.75	0.71	0.31	0.20	0.46	2
201.		42-379	20 57 19	+42 31.4	F8	F5 V	11.39	0.55	0.61	0.69	0.34	0.22	0.54	2
202.		42-380	20 57 20	+42 59.5	F8	F8 V	11.36	0.49	0.58	0.71	0.30	0.22	0.50	3
203.	+42°	3929	20 57 21	+42 43.7	A2	A4 V	10.58	0.79	0.94	0.57	0.26	0.17	0.36	2
204.			20 57 23	+43 26.5		F8 V	12.50	0.50:	0.56:	0.74	0.34	0.22	0.57	2
205.			20 57 24	+43 33.5		A7 V	11.90	0.73	0.83	0.70	0.37	0.21	0.48	2
206.*			20 57 26	+43 25.9			12.36	1.46:	0.32:	2.29:	1.11:	0.72:	1.66:	2
207.			20 57 34	+43 40.8		F5 III	12.42	0.86:	0.82:	0.92:	0.54	0.31	0.81	2
208.			20 57 37	+43 12.0		G3 V	11.96	0.48	0.69	0.89	0.38	0.25	0.62	2
209.		43-351	20 57 46	+43 02.4	A0	A5 V	12.02	0.77	0.92	0.63	0.33	0.18	0.42	2
210.	+42°	3933	20 58 03	+42 55.2	F8	G0 V	10.82	0.45	0.57	0.78	0.33	0.21	0.55	2
211.		42-392	20 58 12	+42 55.0	F2	F7 V	11.74	0.50	0.61	0.72	0.33	0.21	0.52	2
212.		43-355	20 58 17	+43 13.6	F8	F6 V	10.29	0.52	0.61	0.69	0.32	0.19	0.50	2

Remarks to Table 2.

- 2. Photometrically peculiar.
- 12. Classification uncertain.
- 14. Visual binary, measured together.
- 35. Visual binary.
- 53. Classification uncertain.
- 56. Classification impossible.
- 83. Mild subdwarf?
- 84. Classification uncertain.
- 89. Classification impossible.
- 95. Classification uncertain.
- 96. Classification impossible.
- 121. Visual binary, measured together.
- 122. Classification impossible, binary?
- 123. Photometric classification gives sdF5. The star cannot be of B-type since in that case it shows too large reddening for its distance.
- 126. +43°3764, visual binary.
- 128. Classification uncertain.
- 137. Visual binary.
- 144. Visual binary.
- 146. +43°3769, visual binary, sep=1''0, measured together.
- 148. +42°3916, visual binary?
- 165. Classification uncertain.
- 184. Very red, classification uncertain, probably a carbon star.
- 186. +42°3924, visual binary ADS 14498 AB, sep=5''4, $\Delta m \approx 4.0$, measured together.
- 188. +42°3925, visual binary ADS 14497 AB, sep=8''6, $\Delta m \approx 1.0$, measured together.
- 206. Very red, classification impossible.

Table 3. Results of photometry in the area BD 40° – 41°

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-PP	XX	YY	ZZ	V	V-S	n
1.	+40° 4103	193322	20 ^h 16 ^m 21 ^s	+40°34'5"	O9 V, O9.5 III		5.80	0.18	0.17	0.26	0.20	0.10	0.27	2
2.	+40° 4115	228911	20 17 35	+40 43.8	B3, B5	B1.5 V	8.42	0.28	0.31	0.41	0.29	0.17	0.38	2
3.	+40° 4116	193594	20 17 35	+41 14.0	B9	B9 IV	7.76	0.61	0.74	0.26	0.13	0.08	0.15	2
4.	+40° 4119	228941	20 17 54	+40 43.8	B5, B2	B2 V	8.85	0.33	0.35	0.43	0.30	0.18	0.41	2
5.	+40° 4120	228948	20 17 56	+40 59.4	A2, A5	A8.5 V	8.91	0.65	0.79	0.59	0.23	0.14	0.33	2
6.	+40° 4121	193633	20 18 00	+40 58.8	B9	A1 V	7.15	0.60	0.83	0.33	0.13	0.07	0.13	2
7.	+40° 4124	20 18 43	+41 12.2	B2e, Ae/Be	Be		10.68	0.40	0.35	0.64	0.50	0.30	1.24	2
8.	+40° 4129	193908	20 19 31	+40 38.4	B8, A2	B9.5 II-III	7.96	0.70	0.64	0.30	0.18	0.10	0.24	2
9.	+40° 4132	193945	20 19 40	+41 02.0	B0 Vn		8.51	0.36	0.31	0.54	0.45	0.24	0.60	2
10.	+40° 4135	229118	20 20 16	+40 34.8	K5, gK5	K4 III	8.93	0.77	1.37	1.98	0.60	0.52	1.06	2
11.	+40° 4136	194069	20 20 17	+40 58.3	G5 III+A, G2 II	G5:III	6.38	0.72	0.96	1.23	0.51	0.32	0.76	2
12.	+40° 4137	194092	20 20 19	+40 49.5	B0.5 V, B0.5 III		8.24	0.18	0.19	0.26	0.22	0.12	0.27	2
13.	+40° 4139	194194	20 21 00	+40 33.2	B1.5 IV, B2 III		8.10	0.19	0.22	0.24	0.18	0.10	0.21	2
14.	+40° 4141	194193	20 21 00	+40 51.9	K7 III, gM0	K5 III:	5.94	0.84	1.37	2.10	0.62	0.54	1.11	2
15.	+40° 4144	194241	20 21 20	+40 38.3	K1 III-IV	K1.5 III	7.38	0.63	1.10	1.44	0.54	0.35	0.81	3
16.	+40° 4147	229196	20 21 24	+40 42.8	O6 III, O9.5 III		8.51	0.44	0.37	0.71	0.54	0.32	0.84	2
17.	+40° 4150	194279	20 21 31	+40 35.8	B1.5 Ia, B3 Ia	B2 Ia	7.03	0.53	0.42	0.78	0.61	0.35	0.89	3
18.	+40° 4151	229219	20 21 53	+40 47.3	K0	K0.5 III	9.42	0.59	1.04	1.36	0.48	0.34	0.78	2
19.	+40° 4152	229243	20 22 17	+41 13.3	A0	A0 V	9.60	0.55	0.77	0.34	0.13	0.08	0.13	2
20.	+40° 4155	229256	20 22 31	+40 51.6	gK0	K2 III	8.28	0.65	1.12	1.59	0.52	0.39	0.84	2
21.	+40° 4157	229268	20 22 40	+40 40.3	A2, A0	A0.5 V	9.30	0.58	0.81	0.34	0.14	0.08	0.16	2
22.	+40° 4160	229285	20 23 29	+40 50.1	A2, A3	A7 V	8.53	0.59	0.75	0.54	0.22	0.14	0.32	2
23.	+40° 4163	20 24 03	+40 26.0	A0	B7.5 IV		8.70	0.50	0.56	0.26	0.15	0.09	0.19	2
24.	+40° 4164	194779	20 24 09	+41 10.3	B3 II, B2 II	B2 II	7.69	0.30	0.30	0.35	0.26	0.15	0.36	4
25.	+40° 4165	194839	20 24 35	+41 12.9	B0.5 Ia, B0 Ia		7.49	0.47	0.39	0.76	0.60	0.33	0.84	4
26.	+40° 4171	20 25 04	+40 49.9	gG8	G7 IV		8.91	0.52	0.83	1.09	0.43	0.28	0.70	2
27.	+40° 4176	20 25 45	+40 36.4	A2	A2 V		9.13	0.63	0.86	0.39	0.16	0.08	0.18	2
28.	+40° 4177	20 25 44	+41 18.2		G7 V		8.95	0.40	0.66	0.89	0.35	0.23	0.59	2
29.	+40° 4178	20 25 44	+41 16.0	A3:	A2 V		8.73	0.70	0.85	0.44	0.18	0.11	0.24	3
30.	+40° 4181	20 26 10	+40 33.8	A2	A3 V		9.10	0.66	0.85	0.41	0.16	0.08	0.19	2

Table 3 (continued)

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
31.	+40° 4183	195150	20 ^h 26 ^m 18 ^s	+40°26'6"	B9 IV-V	B9.5 III	7.97	0.63	0.75	0.25	0.12	0.07	0.14	2
32.	+40° 4186	20 26 33	+41 09.6	A2	A1 V	A1 V	9.01	0.54	0.79	0.36	0.14	0.09	0.18	2
33.	+40° 4187	195213	20 26 44	+40 39.0	O7		8.76	0.40	0.33	0.67	0.53	0.31	0.77	2
34.	+40° 4188	195230	20 26 46	+40 44.1	A2 V	A1.5 V	7.92	0.68	0.83	0.35	0.15	0.08	0.18	2
35.	+40° 4194	195339	20 27 27	+40 37.7	A1-A2 V	A0 V	8.84	0.59	0.78	0.30	0.12	0.07	0.12	3
36.	+40° 4195	20 27 32	+40 58.4			G1 V	10.02	0.47	0.64	0.81	0.34	0.23	0.55	2
37.*	+40° 4197A	20 27 41	+40 50.1	A5	A7 V	A7 V	9.17	0.57	0.75	0.54	0.22	0.13	0.32	3
38.*	+40° 4197B	20 27 41	+40 50.3		G9 III-IV		9.96	0.57	0.93	1.21	0.48	0.30	0.74	2
39.	+40° 4199	20 28 00	+40 52.4	A2	A2 V	A2 V	9.41	0.58	0.86	0.40	0.15	0.09	0.18	2
40.	+40° 4200	20 28 09	+40 54.9	A8	A7 V	A7 V	9.45	0.54	0.74	0.53	0.22	0.12	0.32	2
41.	+40° 4201	20 28 10	+41 15.2	A3	A4 V	A4 V	9.63	0.56	0.85	0.42	0.15	0.08	0.18	2
42.	+40° 4204	20 28 30	+41 07.6		F0 IV, Am?		9.72	0.70	0.79	0.60	0.24	0.15	0.35	2
43.	+40° 4205	195529	20 28 35	+40 29.7	B9.5 IV	B7.5 V	7.97	0.43	0.55	0.21	0.09	0.06	0.11	3
44.	+40° 4209	20 29 05	+41 09.6	B9	B8.5 V	B8.5 V	8.76	0.49	0.64	0.24	0.10	0.06	0.12	3
45.	+40° 4211	195647	20 29 19	+40 41.3	K0 III	G9 III	7.44	0.59	0.96	1.26	0.47	0.30	0.74	3
46.	+40° 4213	20 29 59	+41 07.3	F0	F5 V	F5 V	9.11	0.48	0.59	0.61	0.30	0.16	0.45	2
47.	+40° 4214	20 30 00	+40 56.4	F5	F4 V	F4 V	8.56	0.57	0.65	0.66	0.30	0.18	0.47	2
48.	+40° 4218	20 30 19	+40 47.2	A0, A2	B8 V	B8 V	9.64	0.52	0.67	0.27	0.13	0.07	0.15	2
49.*	+40° 4220	20 30 35	+41 08.1	O7f Ia+O8, Oe			9.31	0.74	0.66	1.23	0.88	0.50	1.40	2
50.	+40° 4225	195988	20 31 14	+41 18.1	dG0	F8 V	7.24	0.46	0.60	0.76	0.28	0.21	0.53	5
51.	+40° 4226	196020	20 31 26	+40 26.5	A0	B9 V	8.22	0.53	0.68	0.24	0.11	0.06	0.12	4
52.*	+40° 4227	20 31 27	+41 08.5	O5 IIIf, O6 Ib			9.06	0.58:	0.49	0.94	0.70	0.42	1.02	2
53.	+40° 4228	20 31 29	+40 51.5		K0 III	K0 III	9.24	0.58	0.99	1.30	0.48	0.32	0.76	2
54.	+40° 4229	20 31 30	+40 45.9		F2 V	F2 V	9.44	0.52	0.65	0.62	0.28	0.18	0.43	2
55.	+40° 4230	20 31 30	+40 48.6		K0 IV	K0 IV	8.63	0.51	0.90	1.17	0.42	0.30	0.71	2
56.	+40° 4231	20 31 38	+40 39.7		G8 III-IV	G8 III-IV	9.51	0.58:	0.91	1.17	0.47	0.29	0.72	2
57.	+40° 4236	20 32 35	+40 27.0		B8 V	B8 V	8.71	0.40	0.50	0.21	0.07	0.06	0.13	4
58.	+40° 4239	20 32 41	+40 30.4	A2	A1 V	A1 V	8.94	0.56	0.81	0.36	0.15	0.08	0.18	2
59.	+40° 4240	196241	20 32 48	+40 55.5	gK5	K4 III	6.66	0.75	1.35	1.94	0.55	0.49	1.01	5
60.	+40° 4246	196503	20 34 39	+40 52.2	A0, A2	A4 V	7.87	0.58	0.84	0.43	0.16	0.09	0.19	4

Table 3 (continued)

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
61.	+40° 4247		20 ^h 35 ^m 04 ^s	+40° 48' 3		K0.5 III	9.77	0.60	1.05	1.35	0.50	0.32	0.78	3
62.	+40° 4248		20 35 04	+41 15.6		K0 III	9.30	0.60	1.01	1.34	0.48	0.32	0.77	3
63.	+40° 4250		20 35 29	+41 02.8	A2	A1 V	9.28	0.56	0.80	0.33	0.12	0.05	0.14	2
64.	+40° 4251	196672	20 35 37	+41 13.0	F8, F5	F6 V	7.79	0.48	0.59	0.64	0.29	0.17	0.46	3
65.	+40° 4255		20 36 02	+41 02.7	A2	A5 V	9.13	0.59	0.82	0.46	0.18	0.10	0.24	2
66.	+40° 4257		20 36 10	+40 58.8	dK0	G7 IV	8.98	0.54	0.84	1.10	0.43	0.27	0.69	2
67.	+40° 4260		20 36 19	+41 09.2		F9 V	9.70	0.47	0.57	0.78	0.36	0.21	0.59	2
68.	+40° 4261		20 36 45	+40 59.0	F0	F5 V	9.38	0.54	0.63	0.65	0.30	0.16	0.47	2
69.*	+40° 4266	197018	20 37 43	+40 24.1	B6 IIIp, B8	B5 V	6.06	0.30	0.40	0.16	0.07	0.05	0.12	4
70.	+40° 4267		20 37 49	+40 24.5	B9.5 V	B9.5 V	8.74	0.53	0.74	0.27	0.11	0.06	0.12	3
71.	+40° 4274		20 38 54	+41 10.9	A2	A5 V	9.74	0.58	0.79	0.49	0.20	0.12	0.26	2
72.	+40° 4275		20 38 56	+40 47.9		G9 IV	9.63	0.56	0.94	1.20	0.46	0.30	0.75	2
73.	+40° 4276	197204	20 39 04	+41 01.4	B9	B9 V	6.98	0.53	0.67	0.23	0.10	0.06	0.12	2
74.	+40° 4277		20 39 19	+40 44.9	A2	A4 V	9.83	0.61	0.85	0.44	0.16	0.09	0.20	2
75.	+40° 4279		20 39 34	+40 43.9	A2	A0 V	9.24	0.65	0.81	0.32	0.15	0.08	0.19	2
76.	+40° 4282		20 40 11	+41 16.2		A7 V	9.58	0.65	0.75	0.53	0.24	0.14	0.36	2
77.	+40° 4283		20 40 15	+41 14.0		A0 IV	9.28	0.51	0.69	0.32	0.11	0.09	0.15	2
78.	+40° 4286		20 40 43	+41 14.6	gG8:	G7 III	9.10	0.65	0.94	1.23	0.52	0.31	0.75	2
79.	+40° 4289	197571	20 41 17	+40 36.5	A2	A9 IIIIn	8.12	0.65	0.75	0.52	0.23	0.12	0.34	2
80.	+40° 4290	197589	20 41 21	+40 26.9	A0	B9 V	8.52	0.48	0.66	0.22	0.12	0.06	0.13	2
81.	+40° 4291		20 41 18	+41 04.8	F0	F3 III, Am?	8.80	0.69	0.76	0.68	0.27	0.16	0.40	2
82.	+40° 4297		20 42 37	+40 52.6		F8 IV-V	9.93	0.50	0.60	0.69	0.30	0.18	0.50	2
83.	+40° 4300		20 43 04	+41 08.6		A4 V	9.97	0.59	0.81	0.46	0.17	0.11	0.22	2
84.	+40° 4301		20 43 05	+41 07.9		A0.5 V	9.40	0.64	0.80	0.30	0.16	0.07	0.17	2
85.	+40° 4305		20 43 31	+41 09.0	F2	A7 V	9.61	0.59	0.70	0.53	0.24	0.16	0.36	2
86.	+40° 4310A		20 44 15	+41 03.8		K2 III	9.59	0.70	1.24	1.64	0.54	0.42	0.90	2
87.	+40° 4310B		20 44 11	+41 04.4		G3 V	11.80	0.42	0.67	0.86	0.37	0.21	0.58	2
88.	+40° 4313		20 45 21	+41 15.6		K1 III	9.76	0.64	1.07	1.43	0.50	0.37	0.80	2
89.	+40° 4322		20 46 40	+40 48.4		B8 V	9.77	0.54	0.63	0.28	0.16	0.08	0.20	2
90.	+40° 4324		20 46 53	+40 58.8	gK0	K1 III	8.94	0.62	1.08	1.40	0.47	0.34	0.78	2

Table 3 (continued)

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
91.	+40° 4325		20 ^b 46 ^m 57 ^s	+40° 47'1	A2:	A5 V	10.38	0.60	0.83	0.46	0.16	0.11	0.23	2
92.	+40° 4328	198481	20 47 18	+40 43.8	dG0	F8 IV	7.72	0.55	0.64	0.75	0.34	0.21	0.52	2
93.	+40° 4329	198495	20 47 26	+40 57.3	F8, F2	F5 V	8.41	0.51	0.64	0.65	0.29	0.17	0.44	2
94.	+40° 4331	198525	20 47 35	+40 32.1	A3	A4 III-IV	8.90	0.70	0.82	0.43	0.20	0.10	0.27	2
95.	+40° 4333		20 47 48	+40 54.6	A3	A8 V	9.42	0.58	0.72	0.55	0.24	0.15	0.36	2
96.	+40° 4335		20 48 43	+40 50.0		G8 V	9.96	0.47	0.76	0.97	0.38	0.28	0.64	2
97.	+40° 4336		20 49 02	+41 02.1	gK0	K0 III	8.89	0.61	1.04	1.34	0.48	0.33	0.76	2
98.	+40° 4337		20 49 06	+41 11.7		A9m	9.48	0.56	0.73	0.60	0.23	0.14	0.36	2
99.	+40° 4343		20 50 34	+40 48.5		A1.5 V	9.38	0.59	0.83	0.39	0.15	0.10	0.19	2
100.	+40° 4345		20 51 45	+41 09.5		A1 V	10.00	0.64	0.85	0.40	0.18	0.11	0.21	2
101.	+40° 4346	199122	20 51 48	+40 51.5	A2	B5.5 V	7.56	0.32	0.46	0.18	0.09	0.05	0.11	2
102.	+40° 4347		20 51 52	+40 29.5		A3 V	9.59	0.58	0.83	0.43	0.18	0.08	0.20	2
103.	+40° 4349		20 52 10	+41 08.0	dK0	K0 III	8.61	0.60	0.98	1.31	0.48	0.33	0.77	2
104.	+40° 4348		20 52 11	+40 30.9		A7 IV	8.75	0.68	0.81	0.54	0.22	0.12	0.31	2
105.	+40° 4350	199179	20 52 13	+40 42.7	A0	A2 V	8.38	0.58	0.82	0.45	0.19	0.10	0.22	2
106.	+40° 4352		20 52 20	+40 35.6		K1.5 III	9.44	0.62	1.10	1.46	0.49	0.36	0.92	1
107.	+40° 4353		20 52 24	+40 38.8	B2 Ve		8.77	0.53	0.50	0.52	0.52	0.56	0.60	1
108.*	+40° 4354	199218	20 52 30	+40 30.7	B8 Vn, B5ne	B6 III:	6.66	0.42	0.48	0.18	0.11	0.06	0.24	2
109.	+40° 4356	199315	20 53 06	+41 09.0	A0	A1.5 V	8.86	0.61	0.85	0.40	0.17	0.09	0.19	2
110.	+40° 4357		20 53 15	+40 42.0		F5 V	9.25:	0.49	0.59	0.62	0.29	0.17	0.42	2
111.*	+40° 4358		20 53 37	+41 00.4		F5 III	9.77	0.66	0.65	0.70	0.36	0.21	0.53	2
112.	+40° 4362	199513	20 54 25	+40 27.9	A0	A0.5 V	8.96	0.53	0.78	0.30	0.15	0.06	0.14	2
113.	+40° 4363		20 55 14	+41 04.6		A6 IV	8.63	0.71	0.86	0.52	0.21	0.14	0.32	2
114.	+40° 4369	199782	20 56 09	+40 42.4	A2	A3 V	8.48	0.63	0.84	0.42	0.17	0.08	0.21	2
115.*	+40° 4372		20 56 18	+41 17.7		M2.5 III	9.65	1.12:	1.54	2.20	0.86	0.62	1.41	4
116.	+40° 4373	199871	20 56 35	+41 09.8	K5, M0 III	K5:III:	7.11	0.74	1.28	1.97	0.56	0.55	1.08	2
117.	+40° 4374	199872	20 56 38	+40 30.2	F0	F2 V	7.97	0.55	0.66	0.56	0.26	0.14	0.38	2
118.	+40° 4378	200021	20 57 35	+40 45.9	K0, G9	K0 III	6.99	0.60	1.03	1.35	0.48	0.33	0.75	2
119.	+40° 4380		20 57 57	+40 51.6		G0 V	8.90	0.44	0.58	0.74	0.32	0.20	0.51	2
120.	+40° 4381		20 58 01	+41 04.4		A8m	9.70	0.62	0.76	0.59	0.24	0.14	0.34	4

Table 3 (continued)

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
121.	+40° 4382	200193	20 ^h 58 ^m 47 ^s	+40°29'4	A0	A3 V	8.70	0.56	0.85	0.39	0.16	0.08	0.18	2
122.	+40° 4385		20 59 13	+40 28.3		G8 III	9.03	0.57	0.93	1.25	0.49	0.30	0.74	2
123.	+40° 4389		20 59 32	+40 25.3		F6 V	7.15	0.48	0.56	0.66	0.30	0.17	0.48	2
124.	+40° 4391		21 00 37	+41 13.0		G9 III	9.14	0.59	0.97	1.25	0.47	0.30	0.75	2
125.*	+40° 4393	200528	21 00 47	+41 05.3	A0	B8 V	8.55	0.55	0.65	0.24	0.12	0.07	0.14	2
126.	+40° 4397		21 01 46	+40 28.6		G8 III	9.31	0.60	0.93	1.28	0.49	0.30	0.74	1
127.*	+40° 4399		21 02 33	+40 45.0		A4 V	9.97	0.60	0.82	0.50	0.22	0.13	0.29	1
128.	+40° 4401	200841	21 02 49	+40 45.0	A	A0 III	8.24	0.67	0.76	0.31	0.16	0.09	0.20	2
129.	+40° 4402		21 03 07	+40 28.8		K3 III	8.89	0.80:	1.26	1.70	0.54	0.43	0.92	1
130.	+40° 4403		21 03 04	+41 15.6		F8 V	10.78	0.48	0.54	0.68	0.32	0.17	0.50	2
131.	+40° 4404		21 03 08	+41 12.8		A6 V	9.80	0.68	0.82	0.52	0.26	0.10	0.35	1
132.	+40° 4405		21 03 20	+40 34.3		K0 III	10.28	0.64	1.04	1.31	0.48	0.33	0.77	1
133.	+40° 4406		21 03 24	+41 12.7		A8 V	10.08	0.57	0.74	0.55	0.23	0.11	0.32	1
134.	+40° 4407	201004	21 03 38	+40 57.7	A	A1 V	8.89	0.61	0.84	0.35	0.15	0.08	0.16	2
135.	+41° 3687	193116	20 15 13	+41 39.9	K2	K2 IV	7.93	0.59	1.10	1.42	0.46	0.37	0.79	2
136.	+41° 3689	228759	20 15 23	+41 48.1	O6, B		9.51	0.29	0.25	0.56	0.46	0.26	0.71	2
137.	+41° 3691	228786	20 15 51	+41 52.8	K2	K0 III	9.52	0.59	1.09	1.41	0.52	0.35	0.78	2
138.	+41° 3693	228833	20 16 22	+41 50.9	A0	B9 IV	9.06	0.58	0.67	0.27	0.15	0.08	0.18	2
139.	+41° 3700	228926	20 17 43	+41 22.8	A0, A2	A1.5 V	9.83	0.57	0.82	0.41	0.18	0.10	0.23	2
140.	+41° 3703	193666	20 18 09	+41 26.6	B8, B9	B7.5 III	8.09	0.58	0.62	0.25	0.14	0.08	0.17	2
141.	+41° 3705	229019	20 18 50	+41 43.8	K	G9 V	9.91	0.42	0.78	0.99	0.36	0.26	0.63	2
142.	+41° 3707	229024	20 18 56	+41 18.9	K0	G8.5 III	9.24	0.60	0.93	1.21	0.47	0.31	0.73	2
143.	+41° 3709	229027	20 19 27	+41 30.8	A3	A7 V	9.73	0.61	0.76	0.54	0.23	0.14	0.33	2
144.	+41° 3711	229083	20 19 36	+41 41.3	A0	A0 V	9.72	0.51	0.78	0.31	0.15	0.07	0.14	2
145.	+41° 3712	194007	20 19 56	+42 04.5	A0	B9 V	8.28	0.48	0.67	0.27	0.13	0.07	0.16	2
146.	+41° 3715		20 20 42	+42 11.9	F0:	A7 V	9.15	0.59	0.72	0.55	0.25	0.15	0.37	2
147.	+41° 3716		20 20 46	+42 00.1	A8:	B5 V	9.21	0.43	0.51	0.35	0.25	0.15	0.32	2
148.	+41° 3718		20 21 04	+41 56.8		K2 III	9.40	0.70	1.20	1.66	0.55	0.41	0.90	2
149.	+41° 3720		20 21 33	+42 05.8	A2	A1 V	9.35	0.56	0.83	0.36	0.14	0.09	0.14	2
150.	+41° 3721	194302	20 21 36	+41 20.9	A2	A2.5 V	8.49	0.54	0.82	0.41	0.15	0.10	0.18	2

Table 3 (continued)

No.	BD	HD	α (1950)	δ (1950)	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
151.	+41° 3725	229210	20 ^h 21 ^m 42 ^s	+41° 54'6	A0	B8.5 V	9.19	0.54	0.66	0.28	0.13	0.08	0.17	2
152.*	+41° 3728	229230	20 22 05	+41 36.8	K0	G-K	9.30	0.44	0.58	0.74	0.33	0.20	0.53	1
153.	+41° 3729	229246	20 22 20	+41 39.2	K2	K0 IV	9.32	0.54	0.95	1.22	0.43	0.31	0.74	2
154.*	+41° 3731	20 22 31	+42 08.3	Ae/Be, B3n	B3 V	B3 V	9.84	0.31	0.40	0.28	0.19	0.09	0.23	3
155.	+41° 3732	20 22 34	+42 06.5	A0	B9 V	B9 V	9.35	0.49	0.68	0.27	0.13	0.07	0.14	2
156.	+41° 3734	229273	20 22 48	+41 53.0	K8	K3 III	8.96	0.69	1.18	1.77	0.56	0.48	0.99	2
157.	+41° 3735	229274	20 22 51	+41 20.4	G5 Vwl	B3 V	9.03	0.64	0.58	0.72	0.38	0.22	0.60	2
158.*	+41° 3737	20 23 02	+42 13.3	B3 Vn, B8	B3 V	B3 V	9.22	0.30	0.41	0.30	0.19	0.12	0.24	2
159.	+41° 3739	194669	20 23 30	+42 00.9	F2, F5	A9 V	7.81	0.63	0.69	0.56	0.26	0.16	0.41	4
160.	+41° 3742	194684	20 23 41	+41 44.8	A2, A5, A8:	A6 V	7.09	0.63	0.78	0.47	0.21	0.12	0.29	4
161.	+41° 3748b	20 24 17	+42 01.4			F7 V	10.73	0.46	0.57	0.68	0.31	0.19	0.48	2
162.	+41° 3748a	20 24 18	+42 01.0	A2		B8 V	10.56	0.48	0.62	0.31	0.18	0.10	0.21	2
163.	+41° 3749	229300	20 24 42	+41 39.3	A0, A2	A2 V	9.61	0.58	0.85	0.39	0.15	0.09	0.18	2
164.	+41° 3751	20 25 02	+42 16.9	F5		F5 V	9.22	0.50	0.60	0.63	0.29	0.17	0.46	2
165.*	+41° 3752	20 25 05	+41 41.6	F5		F7 III	8.84	0.60	0.62	0.69	0.32	0.16	0.48	2
166.	+41° 3754	20 25 18	+42 08.0	B9		B6 IV-V	8.67	0.43	0.49	0.30	0.18	0.11	0.24	2
167.	+41° 3756	20 25 32	+42 14.4	A0		B9 IV	9.32	0.57	0.67	0.26	0.14	0.08	0.16	2
168.	+41° 3757	20 25 45	+41 44.1	A2		A4 V	9.04	0.56	0.84	0.42	0.15	0.08	0.16	4
169.	+41° 3758	195089	20 25 51	+41 52.2	B3, B2 IV	B2.5 IV-V	7.30	0.26	0.31	0.22	0.14	0.08	0.17	4
170.	+41° 3761	20 26 15	+41 58.7	A0		B7 V	9.19	0.41	0.52	0.24	0.12	0.06	0.15	4
171.	+41° 3764	20 26 42	+41 47.4	gK:		G5 V	8.56	0.48	0.73	0.92	0.36	0.25	0.60	4
172.	+41° 3765	195229	20 26 44	+41 50.6	B0.5 III, B0 III		7.64	0.20	0.19	0.29	0.23	0.13	0.29	4
173.	+41° 3769	195376	20 27 30	+42 06.7	A0	B9.5 V	8.81	0.53	0.73	0.27	0.12	0.06	0.10	4
174.	+41° 3770	195405	20 27 43	+42 09.0	G0 I, G2 IV	G3 IV	8.00	0.51	0.71	0.86	0.35	0.22	0.55	5
175.	+41° 3773	20 28 01	+41 33.2	F5		F5 V	9.00	0.48	0.59	0.63	0.29	0.17	0.44	4
176.	+41° 3775	20 28 09	+41 27.8	gK0, K0 II		K0 III	8.24	0.61	0.99	1.29	0.45	0.31	0.73	4
177.	+41° 3776	20 28 08	+42 11.4			F5:V	9.73	0.45	0.53	0.59	0.29	0.17	0.47	4
178.	+41° 3782	20 28 53	+42 01.9			K5 III	9.29	0.87	1.49	2.16	0.67	0.59	1.18	2
179.	+41° 3783	20 28 58	+41 33.2			G5 IV-V	9.64	0.45	0.66	0.85	0.34	0.22	0.56	2
180.	+41° 3789	195746	20 29 48	+42 02.0	A, B9	B9 V	8.54	0.51	0.72	0.25	0.12	0.06	0.11	4

Table 3 (continued)

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
181.	+41° 3790		20 ^b 29 ^m 51 ^s	+41° 33'6		B6.5 V	9.81	0.42	0.56	0.38	0.25	0.14	0.30	2
182.	+41° 3791		20 29 59	+41 39.0	A0	B8 V	8.89	0.46	0.63	0.24	0.12	0.06	0.14	2
183.	+41° 3792	195821	20 30 13	+41 53.4	B8	B8.5 III	8.67	0.65	0.62	0.30	0.20	0.11	0.26	2
184.*	+41° 3796	195873	20 30 34	+41 41.8	A0	B8.5 V	8.70	0.47	0.65	0.27	0.14	0.08	0.14	2
185.*	+41° 3799	195987	20 31 06	+41 43.1	G9 V, K0 IV	G8 V:	7.06	0.42	0.77	1.01	0.34	0.30	0.68	2
186.	+41° 3800		20 31 10	+42 13.2	A2	A0.5 V	9.46	0.59	0.81	0.34	0.15	0.08	0.17	2
187.	+41° 3805	196134	20 32 02	+41 36.1	K0 III-IV	K0 III-IV	6.51	0.57	0.98	1.25	0.46	0.31	0.74	4
188.	+41° 3809		20 32 35	+41 52.9		A9 V	9.32	0.60	0.68	0.55	0.26	0.15	0.39	2
189.	+41° 3810		20 32 39	+41 52.1		A1 III	10.14	0.90	0.88	0.47	0.30	0.16	0.37	2
190.	+41° 3811	196240	20 32 46	+41 49.4	A0, A2, Am	A4 III-IV	7.96	0.73	0.86	0.46	0.18	0.11	0.24	5
191.	+41° 3813		20 33 08	+41 32.2		A3 V	10.21	0.56	0.76	0.46	0.21	0.12	0.28	2
192.	+41° 3814	196305	20 33 09	+41 32.7	B9	B6 V	7.57	0.33	0.47	0.18	0.10	0.06	0.12	5
193.*	+41° 3815		20 33 18	+42 12.0	G8	G8 IIIp	9.58	0.85	1.18	1.63	0.77	0.46	1.09	3
194.	+41° 3818	196360	20 33 31	+41 43.0	G8 III, K0 III	G8 III	6.64	0.59	0.91	1.20	0.45	0.29	0.71	5
195.	+41° 3820		20 34 01	+42 01.9	B8	B7 V	9.27	0.47	0.57	0.25	0.14	0.09	0.18	4
196.	+41° 3823		20 34 42	+41 56.0		K2 III	9.45	0.65	1.18	1.50	0.49	0.39	0.82	3
197.	+41° 3824		20 34 41	+41 57.9	A0	A1 V	10.10	0.68	0.88	0.39	0.19	0.10	0.22	3
198.	+41° 3825		20 34 47	+41 37.6	A2	A9 m	9.61	0.59	0.74	0.60	0.24	0.16	0.37	3
199.	+41° 3836	196819	20 36 30	+41 53.8	K3 II, K2.5 II	K4 II-III	7.58	0.88	1.42	2.14	0.78	0.57	1.20	3
200.	+41° 3841		20 37 23	+41 44.0		B9.5 V	9.09	0.57	0.77	0.29	0.13	0.07	0.14	2
201.*	+41° 3844		20 37 46	+41 50.8	F5	F2 V	8.60	0.60	0.69	0.65	0.27	0.17	0.41	2
202.	+41° 3845	197037	20 37 46	+42 04.5	G0, F5	F7:V	6.82	0.46	0.54	0.67	0.32	0.19	0.48	2
203.	+41° 3846		20 38 08	+41 54.2		G9 III	9.36	0.59	0.95	1.20	0.44	0.29	0.72	2
204.	+41° 3853		20 39 55	+41 57.4		F9 IV-V	9.07	0.54	0.66	0.78	0.35	0.21	0.55	2
205.	+41° 3855	197376	20 39 59	+41 49.7	F5 II, F7 IV-V	F8 III	7.94	0.62	0.76	0.79	0.35	0.22	0.57	2
206.	+41° 3856	197392	20 40 08	+41 32.2	B8 II-III	B6 IV	5.63	0.40	0.46	0.17	0.09	0.06	0.12	2
207.	+41° 3858		20 40 29	+41 45.4	gK0	K1 III	8.72	0.63	1.11	1.42	0.48	0.36	0.79	2
208.	+41° 3859		20 40 32	+41 50.7		G0.5 V	9.66	0.44	0.59	0.75	0.34	0.19	0.54	2
209.	+41° 3865		20 41 35	+42 05.1	K2	K3 III	9.43	0.68	1.27	1.68	0.50	0.43	0.89	2
210.	+41° 3868	197679	20 42 01	+41 39.6	A	B7 IV-V	8.44	0.44	0.50	0.22	0.09	0.09	0.16	2

Table 3 (continued)

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
211.	+41° 3872		20 ^h 42 ^m 48 ^s	+41°56'2	gK2	K0.5 IV	8.46	0.56	0.99	1.26	0.43	0.33	0.75	2
212.	+41° 3878		20 44 12	+41 32.4	A5	A2 V	9.59	0.62	0.82	0.46	0.19	0.12	0.24	2
213.	+41° 3879		20 44 18	+41 33.9		A5 IV	9.91	0.69	0.82	0.46	0.20	0.11	0.28	2
214.	+41° 3881		20 44 25	+42 04.4		K5 III	8.60	0.73	1.35	1.84	0.49	0.51	0.94	2
215.	+41° 3884A	198195	20 45 22	+42 13.5	B9 III	B6 V	7.44	0.34	0.47	0.20	0.11	0.06	0.14	2
216.	+41° 3884B	198195	20 45 23	+42 13.5	A1 Vn	A1 V	8.97	0.52:	0.79	0.32	0.16	0.08	0.15	2
217.	+41° 3889	198253	20 45 52	+41 53.0	A0	A0 IV-V	7.52	0.68	0.79	0.30	0.15	0.08	0.17	4
218.	+41° 3890		20 46 02	+41 53.0		F5 V:	9.44	0.50	0.58	0.61	0.30	0.17	0.45	2
219.	+41° 3893	198364	20 46 35	+41 31.8	K2, gK0	G8.5 III	8.07	0.58	0.90	1.21	0.46	0.30	0.72	2
220.	+41° 3894		20 46 41	+41 21.1	F5	F4 V	9.18	0.52	0.62	0.64	0.30	0.18	0.46	2
221.	+41° 3895	198388	20 46 43	+42 04.3	F8, dG0	G0 V	8.15	0.48	0.62	0.81	0.36	0.22	0.58	2
222.	+41° 3896		20 46 48	+41 55.2	A2	B5 III	9.47	0.54	0.57	0.57	0.42	0.22	0.56	4
223.	+41° 3897	198401	20 46 53	+41 34.6	gG5	G6 III	7.40	0.61	0.87	1.14	0.45	0.27	0.68	2
224.	+41° 3901	198538	20 47 44	+41 25.8	A0	B8 V	8.83	0.43	0.59	0.22	0.08	0.07	0.12	2
225.	+41° 3904		20 48 25	+41 49.6	A2	A6 V	9.12	0.61	0.78	0.50	0.21	0.12	0.31	2
226.	+41° 3906		20 48 36	+42 06.0	A0, A2	A0 V	9.54	0.59	0.82	0.33	0.14	0.08	0.17	2
227.	+41° 3913		20 50 02	+41 34.8		A0 V	9.85	0.51:	0.78	0.30	0.14	0.04	0.15	2
228.	+41° 3916	198974	20 50 44	+41 47.4	A0	A1 V	7.84	0.60	0.82	0.33	0.13	0.07	0.14	2
229.	+41° 3918		20 51 05	+41 54.0	A2:	A2 V	9.86	0.74	0.90	0.46	0.22	0.13	0.27	2
230.	+41° 3928	199313	20 53 02	+41 36.8	A0	B8 V	9.00	0.48	0.62	0.28	0.16	0.09	0.18	2
231.	+41° 3929	199314	20 53 03	+41 23.1	gK2	K1.5 III	7.48	0.64	1.12	1.50	0.49	0.36	0.80	2
232.	+41° 3932	199355	20 53 28	+42 19.3	B9	B5 V	7.04	0.29	0.42	0.17	0.10	0.05	0.12	2
233.	+41° 3933		20 53 38	+42 02.9	A3, A5	A6 V	9.45	0.56	0.76	0.49	0.22	0.12	0.29	2
234.	+41° 3935		20 54 07	+41 22.5		A1 V	9.73	0.60	0.82	0.34	0.14	0.08	0.16	2
235.	+41° 3937		20 54 23	+42 00.3	G8	K1 III	8.96	0.71	1.17	1.60	0.61	0.40	0.92	2
236.	+41° 3940		20 55 06	+41 27.2		G0 V	9.81	0.46	0.61	0.77	0.33	0.21	0.54	2
237.	+41° 3941		20 55 19	+41 56.1	dG0	G0 V	9.20	0.49	0.63	0.78	0.34	0.20	0.54	2
238.	+41° 3943	199679	20 55 34	+41 29.7	A2	A3 V	7.32	0.72	0.88	0.41	0.15	0.10	0.20	2
239.	+41° 3946		20 56 04	+41 40.9	A3	A6 V	9.09	0.56	0.79	0.49	0.19	0.10	0.26	2
240.	+41° 3949	199892	20 56 40	+41 44.7	B8 V, B7 III	B6 V	6.12	0.33	0.49	0.21	0.10	0.05	0.12	2

Table 3 (continued)

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
241.	+41° 3951		20 ^h 56 ^m 52 ^s	+41 27.3		F5 Ib	8.40	1.30	1.06	1.16	0.70	0.39	0.99	4
242.	+41° 3955		20 57 26	+41 52.2		A2.5 V	9.93	0.64	0.85	0.45	0.20	0.10	0.24	2
243.	+41° 3961		20 58 37	+41 23.3		A3 V	10.03	0.67	0.82	0.45	0.21	0.11	0.28	2
244.	+41° 3962		20 58 38	+41 26.9		B5:II-III:	8.86	0.55	0.52	0.55	0.40	0.18	0.50	4
245.	+41° 3962a		20 58 38	+41 27.4		B3:V	10.75	0.48:	0.56:	0.60	0.44	0.18	0.52	2
246.	+41° 3963	200179	20 58 39	+41 59.5	A0, A2	A2 V	9.15	0.59	0.86	0.39	0.15	0.09	0.18	2
247.	+41° 3972		21 00 48	+41 33.3		A6 V	9.02	0.63	0.77	0.52	0.24	0.14	0.34	2
248.	+41° 3973		21 01 16	+41 23.7		F5 V	9.46	0.50	0.62	0.66	0.30	0.18	0.47	2
249.	+41° 3976	200628	21 01 21	+41 28.7	G0	F6 V	8.75	0.52	0.61	0.68	0.30	0.18	0.46	2
250.	+41° 3985		21 01 54	+42 04.7		B2 V	9.07	0.35	0.38	0.43	0.32	0.16	0.39	2
251.	+41° 3986		21 01 59	+41 24.8		F6 V	8.79	0.48	0.59	0.66	0.30	0.18	0.46	2
252.	+41° 3987	200723	21 02 00	+41 25.8	gF1, F3 IV	F0 IV	6.32	0.65	0.72	0.60	0.26	0.15	0.40	2
253.	+41° 3991	200840	21 02 44	+42 14.5	Ma, M4 II	M3 III	7.71	1.09	1.43	2.01	0.80	0.56	1.28	2
254.	+41° 3993		21 02 56	+42 17.4		K1.5 III	8.35	0.65	1.12	1.49	0.51	0.37	0.83	2
255.	+41° 3995		21 03 20	+42 13.9		K3.5 III	9.23	0.73	1.35	1.85	0.55	0.49	0.95	3

* Spectral types from literature are taken from HD, HDE, AGK3, compilations by Jaschek et al. (1964), Jaschek (1978), Goy (1973) and from the catalogues by Wilson (1953), Ikhsanov (1959), Malmquist et al. (1960).

Remarks to Table 3.

1. +40°4103, visual binary, ADS 13672 AB, sep=2''7, $\Delta m \approx 2.5$, O9+B2.
2. +40°4115, elliptical variable V470 Cyg, SB, B2+B2. If both components are of the same absolute magnitude their apparent magnitudes are 7.66 and the distance 432 pc.
7. +40°4124, Herbig Ae/Be star.
11. +40°4136, SB, G5 III+A.
- 37-38. +40°4197, visual binary, BDS 10274, sep=14''0, measured separately.
49. +40°4220, V729 Cyg, eclipsing binary, sep=1''5, $\Delta m \approx 4.0$.
52. +40°4227, visual binary ADS 14000 AB, sep=9''6, $\Delta m \approx 1.0$.
69. +40°4266, visual binary ADS 14126 AB, sep=0''6, Bp (Jaschek and Egret, 1982).
108. +40°4354, visual binary ADS 14413 AB, sep=5''8, $\Delta m \approx 4.0$.
111. +40°4358, visual binary ADS 14435 AB, sep=6''0, $\Delta m \approx 3.5$.
115. +40°4372, determination of M_V uncertain, $A_V \approx 1.3$ mag.
125. +40°4393, suspected variable YZ Cyg.
127. +40°4399, visual binary ADS 14605 AB, sep=6''8, $\Delta m \approx 3.5$.
152. +41°3728, visual binary.
154. +41°3731, Herbig Ae/Be star.
158. +41°3737, visual binary ADS 13832 AB, sep=7''3, $\Delta m \approx 5.0$, measured together.
165. +41°3752, visual binary ADS 13869 AB, sep=1''4, $\Delta m \approx 0.2$.
184. +41°3796, visual binary ADS 13985 AB, sep=1''5, $\Delta m \approx 0.8$.
185. +41°3799, SB.
193. +41°3815, photometrically peculiar, $A_V \approx 2.2$ mag.
201. +41°3844, visual binary ADS 14130 AB, sep=0''8, $\Delta m \approx 2.0$.
215. +41°3884A, visual binary ADS 14295 AC, sep=5''6, $\Delta m \approx 3.5$.
216. +41°3884B, visual binary ADS 14295 B, about 10'' from component A.
217. +41°3889, visual binary ADS 14306 AB, sep=0''4, $\Delta m \approx 1.0$.
218. +41°3890, visual binary ADS 14308 AB, sep=4''5, $\Delta m \approx 3.5$.
232. +41°3932, visual binary ADS 14432 AB, sep=2''9, $\Delta m \approx 2.5$.
244. +41°3962, also possible classification as sdF5.
245. +41°3962a, a star $\sim 30''$ from the BD+41°3962 star.
251. +41°3986, visual binary BDS 10719 BC, sep=7''3, $\Delta m \approx 4.0$.
252. +41°3987, visual binary component BDS 10719 A.

Table 4. Results of photometry in the area $42^{\circ} - 43^{\circ}$

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
1.	+42° 3665		20 ^h 15 ^m 08 ^s	+43°10'3	K0	K0 III	8.51	0.57	0.97	1.30	0.47	0.33	0.77	2
2.	+42° 3666	193091	20 15 10	+42 42.9	A0, B9	B9.5 V	8.68	0.53	0.73	0.25	0.12	0.06	0.12	2
3.	+42° 3670	193217	20 15 46	+42 33.9	K4 II., K	K4 II	6.31	0.82	1.32	2.08	0.66	0.52	1.05	2
4.	+42° 3671		20 15 51	+42 58.4		G9 III	9.84	0.60	0.95	1.28	0.47	0.29	0.72	2
5.	+42° 3672	193236	20 15 51	+43 01.6	A2	A5 V	8.77	0.60	0.84	0.41	0.17	0.08	0.19	2
6.	+42° 3677		20 16 17	+42 48.2		K0 III	9.30	0.60	1.02	1.34	0.46	0.32	0.74	2
7.	+42° 3683		20 17 00	+42 26.3		F2 III	9.21	0.67	0.71	0.63	0.29	0.17	0.44	2
8.	+42° 3684		20 17 05	+42 27.2	M0	C-rich?	9.59	0.90	1.34	2.43	1.06	0.75	1.61	2
9.	+42° 3685	193486	20 17 08	+42 34.4	B8, A0	B9 V	8.65	0.49	0.70	0.26	0.13	0.07	0.15	2
10.	+42° 3692	193610	20 17 42	+42 50.4	A0: Ib:	B8.5 Ib-II	8.06	0.92	0.64	0.73	0.55	0.32	0.80	2
11.	+42° 3695		20 18 07	+43 07.4	F2	F5 V	9.37	0.48	0.58	0.60	0.28	0.18	0.45	2
12.	+42° 3699		20 18 32	+42 27.4	A2, A0	A0 V	9.16	0.59	0.79	0.29	0.14	0.08	0.13	2
13.	+42° 3700		20 18 39	+42 24.9	A0	A0 V	9.19	0.55	0.74	0.29	0.12	0.08	0.13	2
14.	+42° 3702	193838	20 18 59	+42 24.7	A2, A0	B9 V	8.65	0.51	0.68	0.25	0.13	0.06	0.15	2
15.	+42° 3703	193837	20 18 57	+42 58.1	B2	B2 V	8.92	0.37	0.38	0.42	0.32	0.18	0.42	2
16.	+42° 3704	193888	20 19 18	+43 13.0	A0, B9	B8 V	8.54	0.47	0.61	0.23	0.12	0.07	0.13	2
17.	+42° 3705		20 19 27	+43 31.6	F2	F0 III-IV	8.77	0.69	0.75	0.57	0.24	0.14	0.38	2
18.	+42° 3706		20 19 38	+43 01.1	A0	B9.5 V	9.67	0.58	0.74	0.30	0.15	0.08	0.18	2
19.	+42° 3714		20 20 36	+42 40.3	F2, A8	A8 V	9.23	0.63	0.71	0.53	0.25	0.13	0.33	2
20.	+42° 3716		20 20 57	+42 23.3	K2	K1 III	8.76	0.66	1.12	1.50	0.53	0.38	0.84	2
21.	+42° 3718	194240	20 21 08	+42 33.6	A, B9	B8 V	8.73	0.43	0.59	0.20	0.12	0.05	0.12	2
22.	+42° 3719		20 21 12	+42 21.6		G7 IV	9.91	0.56	0.84	1.08	0.45	0.27	0.69	2
23.	+42° 3721	194220	20 21 12	+42 49.3	K0 III	G9 III	6.23	0.56	0.94	1.23	0.45	0.30	0.70	2
24.	+42° 3723		20 21 20	+42 22.1	F8	F6 V	9.51	0.48	0.59	0.67	0.33	0.19	0.49	2
25.	+42° 3724	194260	20 21 19	+42 49.9	A0	A2 III	8.02	0.78	0.86	0.36	0.17	0.09	0.20	2
26.	+42° 3725		20 21 20	+42 55.1	K2	K3 III	8.81	0.73	1.29	1.82	0.53	0.46	0.92	2
27.	+42° 3736		20 23 04	+42 47.6		M3 III	9.34	1.14	1.47	1.92	0.83	0.55	1.30	2
28.	+42° 3737		20 23 02	+42 13.3	K0	G8 III	8.18	0.59	0.94	1.25	0.48	0.30	0.73	2
29.	+42° 3740	194708	20 23 41	+42 26.4	F6 III, F5	F6 III	6.90	0.59	0.64	0.66	0.30	0.17	0.45	2
30.	+42° 3741		20 23 56	+42 28.8	B5	B2 IV	9.52	0.39	0.38	0.48	0.36	0.22	0.50	2

Table 4 (continued)

No.	BD	HD	α (1950)	δ (1950)	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
31.	+42° 3743		20 ^b 24 ^m 12 ^s	+42° 31.3	A2	A3:II	8.39	1.16	0.92	0.50	0.33	0.18	0.42	2
32.	+42° 3747		20 25 03	+42 41.9	A2, A3	A3 V	9.31	0.68	0.83	0.41	0.18	0.10	0.23	2
33.	+42° 3748		20 25 01	+43 03.7	F0	F III: Am	9.17	0.65	0.75	0.64	0.23	0.14	0.34	2
34.	+42° 3749		20 25 06	+42 44.4	A0	A1 V	8.95	0.58	0.82	0.32	0.14	0.07	0.13	2
35.	+42° 3750		20 25 29	+42 27.8	F0, A8	A7 V	8.98	0.61	0.78	0.52	0.20	0.12	0.28	2
36.	+42° 3752	195033	20 25 31	+42 58.9	B9	B7 V	7.66	0.45	0.56	0.22	0.12	0.06	0.14	2
37.	+42° 3753		20 25 36	+42 45.0	K0	K1 III	7.92	0.67	1.11	1.52	0.51	0.38	0.82	2
38.	+42° 3754	195100	20 25 51	+42 53.4	G5 III, K0	G8 III-IV	7.59	0.57	0.87	1.12	0.44	0.27	0.68	2
39.	+42° 3757		20 26 30	+43 14.4	A0	A2 V	9.40	0.55	0.82	0.34	0.16	0.06	0.15	2
40.	+42° 3761		20 27 11	+43 07.3		G0 V	9.53	0.48	0.64	0.81	0.36	0.22	0.55	2
41.	+42° 3762		20 27 23	+42 33.6	A0	B9 V	9.54	0.55	0.67	0.25	0.12	0.06	0.16	2
42.	+42° 3763		20 27 34	+42 47.5	G5	G8 V	8.86	0.43	0.78	0.98	0.35	0.26	0.61	2
43.	+42° 3764		20 28 13	+43 15.9	F8	F7 V	9.04	0.53	0.59	0.70	0.33	0.20	0.51	2
44.	+42° 3767		20 28 48	+42 34.7		G9 III	9.00	0.63	0.99	1.37	0.52	0.33	0.79	2
45.	+42° 3768	195574	20 28 48	+43 17.7	A3	A4 V	7.62	0.71	0.84	0.44	0.19	0.10	0.25	2
46.	+42° 3769		20 29 02	+42 28.7	A3	A3 V	9.70	0.57	0.85	0.40	0.18	0.08	0.18	2
47.	+42° 3775		20 30 28	+42 53.7	B8, Ap, A0	B7 V	9.15	0.40	0.54	0.24	0.09	0.07	0.15	2
48.	+42° 3779		20 31 22	+42 38.8	A2	A2 V	10.46	0.54	0.83	0.40	0.16	0.09	0.16	2
49.	+42° 3782		20 31 54	+43 17.2	A0	B8 V	9.79	0.57	0.67	0.32	0.21	0.10	0.26	2
50.	+42° 3783		20 31 56	+42 51.1	K0	G8 III	8.85	0.61	0.93	1.27	0.48	0.31	0.75	2
51.	+42° 3784		20 32 07	+42 25.9		G8 IV	9.45	0.53	0.87	1.14	0.44	0.29	0.70	2
52.	+42° 3790		20 33 14	+43 02.6		F1 IV	10.01	0.67	0.73	0.62	0.28	0.17	0.41	2
53.	+43° 3549	193602	20 14 50	+43 26.9	G0	F7 IV	7.85	0.54	0.59	0.70	0.32	0.19	0.49	2
54.	+43° 3550		20 14 50	+43 42.5		G9 III	8.86	0.60	0.97	1.30	0.49	0.32	0.75	2
55.	+43° 3552	193115	20 15 11	+43 31.7	A0, A5	A3 III	7.95	0.79	0.85	0.46	0.20	0.12	0.28	2
56.	+43° 3553		20 15 15	+43 27.2	F8	G3 III-IV	8.69	0.69	0.93	1.13	0.52	0.33	0.81	2
57.	+43° 3561		20 16 45	+43 49.4	F0	F3 V	9.70	0.51	0.60	0.57	0.26	0.16	0.42	2
58.	+43° 3562		20 16 48	+43 44.8		G8 IV	9.92	0.54	0.86	1.17	0.44	0.30	0.72	2
59.	+43° 3566	193632	20 17 52	+43 20.1	F8	F5 V	7.57	0.50	0.53	0.62	0.30	0.17	0.47	2
60.	+43° 3568		20 18 15	+43 48.4	M0	K7 III?	9.11	0.91	1.43	2.13	0.64	0.57	1.13	2

Table 4 (continued)

No.	BD	HD	$\alpha(1950)$	$\delta(1950)$	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
61.*	+43° 3571	193793	20 ^h 18 ^m 47 ^s	+43°41'7"	WC7p+O5		6.95	0.31	0.25	0.93	-0.18	0.28	0.65	2
62.*	+43° 3573		20 19 23	+43 30.9	A2		9.06	0.59	0.80	0.43	0.19	0.11	0.25	2
63.*	+43° 3576	193926	20 19 32	+43 25.7	A0	A0 V	7.86	0.54	0.72	0.27	0.12	0.06	0.13	2
64.	+43° 3579		20 19 53	+43 58.3		G8 III	9.35	0.59	0.91	1.20	0.49	0.29	0.74	2
65.	+43° 3580		20 20 25	+43 37.1	A5, A3	A5 V	9.77	0.62	0.84	0.47	0.18	0.10	0.24	2
66.	+43° 3581	194133	20 20 28	+44 01.8	A, A2	A3 V	9.05	0.58	0.84	0.38	0.16	0.09	0.17	2
67.	+43° 3584		20 20 37	+43 26.7	K0	K0 III	9.72	0.59	0.95	1.24	0.47	0.31	0.72	2
68.	+43° 3585		20 20 42	+43 29.2		K1 III	9.94	0.65	1.12	1.43	0.49	0.35	0.79	2
69.	+43° 3586		20 20 51	+43 26.6	K0	K0 III	9.48	0.61	1.01	1.32	0.48	0.32	0.75	2
70.	+43° 3587A		20 20 56	+43 34.1		G5 V	9.77	0.43	0.65	0.86	0.35	0.23	0.60	2
71.	+43° 3587B		20 20 51	+43 33.9		G9 III	10.48	0.63	1.01	1.31	0.50	0.31	0.77	2
72.*	+43° 3598		20 23 34	+43 45.4	F0, A5	A7 IV	9.36	0.71	0.81	0.53	0.23	0.14	0.32	2
73.	+43° 3599		20 23 54	+43 30.8	B8, A0	B7 V	9.43	0.48	0.57	0.23	0.14	0.07	0.17	2
74.	+43° 3600		20 23 58	+43 48.2	B8, A0	B8 III	9.58	0.54	0.59	0.27	0.16	0.09	0.20	2
75.	+43° 3601	194788	20 24 16	+43 48.1	F0, A5	A3 V	8.81	0.70	0.87	0.45	0.21	0.12	0.26	2
76.	+43° 3602		20 24 27	+43 18.7	K2	K3 III	9.16	0.79	1.36	1.94	0.62	0.52	1.06	2
77.	+43° 3606		20 25 03	+43 42.7	A3	A5 V	9.29	0.62	0.82	0.48	0.21	0.10	0.28	2
78.	+43° 3608		20 25 18	+43 59.1	K0	G9 III	9.22	0.56	0.87	1.28	0.50	0.31	0.77	2
79.	+43° 3609	195015	20 25 25	+43 54.8	A0, B9	B6 V	8.30	0.36	0.51	0.21	0.13	0.07	0.15	2
80.	+43° 3613		20 25 58	+43 27.1		G9 III	9.70	0.64	0.93	1.32	0.50	0.32	0.76	2
81.	+43° 3617		20 26 16	+43 48.8	K5	K5 III	9.35	1.00	1.41	2.04	0.65	0.58	1.14	2
82.	+43° 3620	195254	20 26 47	+43 21.4	B9, A0	A0 V	7.70	0.56	0.76	0.29	0.12	0.06	0.14	2
83.	+43° 3626		20 28 29	+44 00.2	G0	F8 IV	9.15	0.60	0.63	0.84	0.42	0.25	0.61	2
84.*	+43° 3627A		20 28 31	+43 32.9	A2	A2 V	9.91	0.57	0.84	0.38	0.17	0.09	0.18	2
85.*	+43° 3627B		20 28 31	+43 33.0		F0 V	10.13	0.54	0.67	0.57	0.28	0.17	0.39	2
86.	+43° 3630	195592	20 28 53	+44 08.8	B0, O9.5 Ia		7.11	0.43	0.34	0.69	0.53	0.30	0.80	2
87.*	+43° 3634		20 29 44	+43 53.3	G0	G8 IV	9.31	0.58	0.89	1.19	0.47	0.31	0.75	2
88.	+43° 3638		20 30 09	+43 56.5	G5	G8 III	8.59	0.61	0.94	1.27	0.51	0.31	0.76	2
89.	+43° 3648		20 31 10	+43 57.4	A0	B7 V	9.63	0.40	0.51	0.27	0.09	0.11	0.21	2
90.	+43° 3650		20 31 27	+43 58.3	A5	A6 V	9.74	0.74	0.82	0.52	0.23	0.15	0.33	2

Table 4 (continued)

No.	BD	HD	α (1950)	δ (1950)	Sp. lit.*	Sp. phot.	V	U-P	P-X	X-Y	Y-Z	Z-V	V-S	n
91.	+43 ⁰ 3655		20 ^h 31 ^m 55 ^s	+43°38'3	F5	F1 V	9.44	0.60	0.65	0.61	0.29	0.17	0.44	2
92.	+43 ⁰ 3656		20 32 08	+43 20.9	K0	G8 II	8.99	0.79	1.19	1.68	0.74	0.44	1.04	2
93.	+43 ⁰ 3660		20 32 24	+44 04.0	K0	K1 III	9.46	0.62	1.08	1.42	0.52	0.37	0.82	2
94.	+43 ⁰ 3662		20 33 32	+44 14.2		A7 V	7.32	0.61	0.72	0.51	0.23	0.13	0.34	2
95.	+43 ⁰ 3663		20 34 25	+43 51.1	G0, F8	F8 V	9.71	0.49	0.61	0.72	0.32	0.20	0.51	2
96.	+43 ⁰ 3664		20 34 45	+43 53.0	F5	F5 V	8.83	0.49	0.57	0.60	0.29	0.17	0.45	2
97.	+43 ⁰ 3666		20 34 58	+44 06.8		G2 II	9.91	0.73	0.97	1.37	0.62	0.37	0.89	2

* Spectral types from literature are taken from HD, AGK3, Jaschek (1978), Metik (1960), Ikhsanov (1959).

Remarks to Table 4.

- 8. +42⁰3684, photometric classification indicates a carbon star.
- 9. +42⁰3685, visual binary ADS 13689 AB, sep=0''9, $\Delta m \approx 3.0$.
- 21. +42⁰3718, visual binary ADS 13782 AB, sep=3''7, $\Delta m \approx 3.0$.
- 23. +42⁰3721, visual binary ADS 13786 AB, sep=1''0, $\Delta m \approx 5.0$.
- 25. +42⁰3724, visual triple component ADS 13786 C.
- 61. +43⁰3571, visual binary ADS 13736 AB, sep=5''8, $\Delta m \approx 8.0$, measured together.
- 62. +43⁰3573, visual triple ADS 13748 ABC. AB sep=0''2, $\Delta m \approx 0.2$.
- 63. +43⁰3576, visual binary component ADS 13753 A.
- 72. +43⁰3598, visual binary ADS 13845 AB, sep=0''8, $\Delta m \approx 2.0$.
- 84-85. +43⁰3627, visual binary components ADS 13933 A and B, sep $\approx 10''$, measured separately.
- 87. +43⁰3634, visual binary ADS 13959 AB, sep=2''8, $\Delta m \approx 1.5$.

Table 5. Results of quantification, extinction and distance determination in the dark cloud area.

No.	Sp.	M_V	V	A_V	r
1.	F5 V	+3.6:	11.24	0.23	300
3.	F6 V	+3.7:	10.36	0.15	200
4.	F5 V	+3.6:	11.12	0.18	290
5.	G0 IV	+3.0	11.28	0.50	360
6.	K0 III	+1.2	10.93	0.14	830
7.	A6 V	+2.2	9.79	0.74	230
8.	F9 V	+4.3:	11.04	0.00	220
9.	A7 V	+3.0	10.91	0.72	270
10.	F0 V	+2.8:	11.66	0.36	500
11.	K1 III	-0.6	10.11	0.00	1390
13.	F5 V	+3.6:	11.45	0.05	360
15.	K0 IV	+2.8	10.82	0.04	390
16.	F9 V	+4.3:	11.80	0.09	300
17.	A7 V	+2.8	11.59	0.81	390
18.	K1 III	+0.7	9.53	0.23	530
19.	G0 IV-V	+3.7	10.89	0.09	260
20.	A9 V	+3.0	10.29	0.20	260
21.	A5 V	+2.1	10.41	0.63	340
22.	K0.5 III	+1.4	10.00	0.18	480
23.	F6 V	+3.7:	11.01	0.29	250
24.	F5 V	+3.6:	11.81	0.36	370
25.	A6 V	+2.3	10.83	0.52	400
26.	F8 IV-V	+3.5:	11.33	0.34	320
27.	G0 V	+4.4:	11.18	0.04	220
28.	K1.5 III	+1.7	10.45	0.63	420
29.	G9 V	+5.8	11.94:	0.25	151
30.	K0 III-IV	+1.5	10.55	0.65	480
31.	F5 V	+3.6:	10.74	0.09	260
32.	F7 V	+4.0	12.40	0.39	400
33.	G0 IV-V	+3.5	12.66	0.27	600
34.	F0 V	+3.0	10.85	0.63	280
36.	G0 V	+4.4	12.66	0.22	400
38.	A7 V	+3.0	11.76	0.45	460
39.	K0 III	+0.9	9.42	0.13	480
40.	F5 V	+3.6	11.42	0.23	330
41.	F7 V	+4.0	12.43	0.12	460
42.	K2.5 V	+6.5	12.58	0.14	154
43.	F4 V	+3.5:	11.45	0.31	340
44.	B6:V	+0.3:	11.02	2.47	450
45.	F0 V	+2.8	11.78	0.54	490
46.	A1 V	+1.1:	10.81	0.63	650
47.	F8 V	+4.1	12.05	0.18	360
48.	F8 V	+3.8	11.21	0.18	280
49.	F2 V	+3.1	11.05	0.45	320
50.	G5 V	+5.1:	10.42	0.45	94

Table 5 (continued)

No.	Sp.	M_V	V	A_V	r
51.	G2 IV	+3.5:	10.80	0.04	280
52.	B2 V	-1.6:	11.18	3.82	620
54.	F5 V	+3.6:	11.68	0.50	330
55.	K2 IV	+3.6	12.25	0.72	390
57.	B2 V	-2.0:	12.49	4.95	810:
58.	F8 V	+3.8	11.29	0.31	270
59.	F8 V	+3.8	12.62	0.32	500
60.	G5 V	+5.1:	12.66	0.23	290
61.	A6 V	+2.1	10.13	0.29	350
62.	F6 V	+3.7:	11.56	0.38	310
63.	F8 V	+4.1	11.68	0.23	300
64.	F7 V	+4.0	11.32	0.00	290
65.	F2 V	+3.1	10.51	0.18	280
66.	G1 III-IV	+2.0	11.91	0.00	960
67.	K0 III	+0.9	9.49	0.18	480
68.	F7 V	+4.0	10.94	0.03	240
69.	K1 III	-0.3	9.58	0.99	600
70.	K0 III	+0.7	10.34	0.27	750
71.	F5 V	+3.6:	12.48	0.45	490
72.	K0 III-IV	+2.0	12.21	1.19	640
73.	F6 V:	+3.7:	12.27	0.11	490
74.	F5 V	+3.6:	12.04	0.18	450
75.	F5 IV	+2.5:	11.46	0.36	520
76.	F5 V	+3.6:	11.96	0.27	410
77.	F7 V	+4.0	12.09	0.08	400
78.	F5 V	+3.6:	11.07	0.14	290
79.	G0 IV-V	+3.5	12.63	0.63	500
80.	A7 V	+3.0	11.40	0.49	380
81.	G8 IV-V	+4.0	10.61	0.36	178
82.	F8 V	+4.1	11.86	0.09	340
85.	F5:V	+3.5:	10.66	0.00	270
87.	F5 V	+3.6:	11.67	0.27	360
88.	G3 IV	+3.0	10.68	0.00	340
90.	F5 V	+3.6:	11.93	0.36	390
92.	G0 V	+4.4	13.24	0.36	500
93.	G0 IV-V	+3.3:	12.11	0.31	500
97.	F6:V	+3.7:	12.87	0.38:	570:
98.	G1 V	+4.6	11.08	0.16	184
99.	A9 V	+3.0	11.02	0.33	350
100.	G9.5 III-IV	+2.0	11.21	0.00	700
101.	F5 V	+3.6:	11.50	0.27	340
102.	G2 V	+4.7	11.64	0.00	240
104.	A9 V	+3.0	11.53	0.78	350
105.	F5 V	+3.6:	13.09	0.72	570
106.	K0 IV-V	+4.1	9.92	0.18	134

Table 5 (continued)

No.	Sp.	M_V	V	A_V	r
107.	G0 V	+4.5:	13.28	0.18	520
108.	F8 V	+4.1	10.60	0.00	200
109.	F2 V	+3.1	11.60	0.22	450
110.	A7 V	+3.0	11.36	0.54	370
111.	F5 IV-V	+3.1	11.46	0.09	450
112.	F5 V	+3.6:	11.31	0.00	350
113.	G0 V	+4.4	12.26	0.36	320
114.	F5 V	+3.6:	11.80	0.00	440
115.	F0 V	+2.8	10.88	0.32	360
116.	F2 V	+3.1	12.34	0.95	460
117.	A0 V	+0.8:	9.76	0.36	520
118.	K0 III	+0.8	10.37	0.50	650
119.	G9 IV-V	+4.2	12.28	0.38	350
120.	K0 III-IV	+2.0	10.54	0.29	450
124.	F6 III	+0.8:	12.56	0.57	1730
125.	A5 V	+2.2	11.69	0.58	600
127.	G0 V	+4.0	12.00	0.09	380
129.	G0 IV	+3.2	11.77	0.23	470
130.	F0 V	+2.9	11.61	1.04	340
131.	F8 V	+4.0	12.15	0.04	420
132.	F7 V	+3.8:	10.79	0.00	250
133.	F2 V	+3.1:	10.97	0.23	340
134.	G5 V	+5.1:	11.66	0.36	174
135.	A6 V	+2.5	11.33	0.34	500
136.	F5 V	+3.6:	10.60	0.09	240
138.	F5 V	+3.6:	10.72	0.09	250
139.	F8 V	+4.1:	11.39	0.00	290
140.	G7 V	+5.5:	11.24	0.28	124
142.	F2 V	+3.1:	11.93	0.54	450
143.	F8 IV	+3.3	11.23	0.18	350
145.	F9 V	+4.2:	12.34	0.36	360
146.	A7 V	+2.9	9.87	0.58	190
147.	F8 V	+4.1:	12.17	0.14	390
149.	A0 V	+1.5:	10.87	0.67	550
151.	G5 V	+5.1:	11.29	0.36	146
152.	G0 IV	+3.2	11.14	0.54	300
153.	F8 V	+4.1:	11.63	0.00	320
154.	K0 III	+0.8	9.12	0.04	450
155.	F9 V	+4.3:	10.71	0.00	191
156.	G1 IV-V	+3.5:	12.69	0.20	630
157.	F0 V	+2.8:	10.72	0.59	290
158.	F5 IV-V	+3.0:	12.23	0.23	630
159.	A4 V	+1.7:	10.76	0.72	470
160.	A9 V	+2.7:	12.02	0.73	520
161.	G0 V	+4.4:	12.64	0.36	380

Table 5 (continued)

No.	Sp.	M_V	V	A_V	r
162.	F6 V	+3.7:	11.94	0.11	420
164.	A4 V	+1.7:	11.08	0.54	590
166.	F2 III	+1.8	10.50	0.76	390
167.	F3 V	+3.2:	11.86	0.27	480
168.	K0.5 IV	+2.7	10.39	0.00	350
169.	F3 V	+3.2:	11.84	0.31	460
170.	A7 V	+2.9	11.63	0.54	430
171.	F8 IV	+3.0:	11.77	0.72	410
172.	F5 V	+3.6:	11.39	0.27	320
174.	A8 II	-3.0	10.92	3.22	1380
175.	G5 V	+5.1:	12.70	0.14	310
176.	G1 V	+4.5:	13.17	0.02	540
177.	F5 V	+3.6:	10.13	0.09	194
178.	A0 V	+1.6:	12.28	2.29	480
179.	K4 III	+0.8	10.21	1.26	430
180.	K0.5 III	+0.8	11.23	0.23	1100
181.	G5 V	+5.1:	13.18	0.36	350
182.	A5 V	+2.2	10.55	0.18	430
183.	G1 V	+4.5:	12.16	0.11	320
185.	F5 V	+3.6:	11.85	0.72	320
186.	A9 V	+2.7	10.47	0.78	250
187.	F5 V	+3.6:	12.79	0.59	530
189.	F7 V	+3.9	10.58	0.44	177
190.	A6 V	+2.1:	12.81	1.15	820
191.	B9 IV	+0.2	10.04	1.08	560
192.	F5 V	+3.6:	11.65	0.50	320
193.	G3 IV	+3.6	11.98	0.39	400
194.	A3 V	+1.9	11.37	0.76	550
195.	G0 V	+4.4:	9.87	0.23	112
196.	A2 V	+1.5	11.31	1.22	520
198.	B9 III	-0.5	11.34	2.79	650
199.	A8 V	+2.5	11.52	0.61	480
200.	F0 V	+2.8:	11.68	0.77	420
201.	F5 V	+3.6:	11.39	0.45	290
202.	F8 V	+4.1:	11.36	0.04	280
203.	A4 V	+1.7:	10.58	0.86	400
204.	F8 V	+4.1:	12.50	0.23	430
205.	A7 V	+2.5	11.90	1.08	460
207.	F5 III	+1.2:	12.42	1.76	780
208.	G3 V	+4.8:	11.96	0.30	240
209.	A5 V	+1.7	12.02	1.13	690
210.	G0 V	+4.4:	10.82	0.04	189
211.	F7 V	+3.9:	11.74	0.21	340
212.	F6 V	+3.7:	10.29	0.15	194

Table 6. Results of quantification, extinction and distance determination in the BD 40⁰ – 41⁰ area.

No.	BD	Sp.	M_V	V	A_V	r
3.	+40 ⁰ 4116	B9 IV	0.0	7.76	0.31	310
4.	+40 ⁰ 4119	B2 V	-1.7:	8.85	1.98	520:
5.	+40 ⁰ 4120	A8.5 V	+2.4	8.91	0.22	180
6.	+40 ⁰ 4121	A1 V	+1.1:	7.15	0.09	160
8.	+40 ⁰ 4129	B9.5 II-III	-2.1	7.96	0.58:	790
9.	+40 ⁰ 4132	B0 V	-4.0:	8.51	3.10	760
10.	+40 ⁰ 4135	K4 III	+0.6	8.93	0.58	350
12.	+40 ⁰ 4137	B0.5 III	-4.2:	8.24	1.48	1560
13.	+40 ⁰ 4139	B1.5 IV	-3.5:	8.10	1.12	1250
14.	+40 ⁰ 4141	K5 III	+0.3	5.94	0.45	110
15.	+40 ⁰ 4144	K1.5 III	+0.6	7.38	0.27	200
16.	+40 ⁰ 4147	O6 III	-5.9:	8.51	3.87	1280:
17.	+40 ⁰ 4150	B2 Ia	-7.2:	7.03	3.78	1230:
18.	+40 ⁰ 4151	K0.5 III	+1.2	9.42	0.14	410
19.	+40 ⁰ 4152	A0 V	+0.8:	9.60	0.22	520
20.	+40 ⁰ 4155	K2 III	+0.2	8.28	0.22	370
21.	+40 ⁰ 4157	A0.5 V	+1.0:	9.30	0.18	420
22.	+40 ⁰ 4160	A7 V	+2.9	8.53	0.36	115
23.	+40 ⁰ 4163	B7.5 IV	-0.5	8.70	0.54	540
24.	+40 ⁰ 4164	B2 II	-4.8:	7.69	1.58	1520
25.	+40 ⁰ 4165	B0.5 Ia	-7.2:	7.49	3.78	1520
26.	+40 ⁰ 4171	G7 IV	+3.2	8.91	0.32	120
27.	+40 ⁰ 4176	A2 V	+1.3:	9.13	0.18	340
28.	+40 ⁰ 4177	G7 V	+5.3	8.95	0.00	54
29.	+40 ⁰ 4178	A2 V	+1.8	8.73	0.40	200
30.	+40 ⁰ 4181	A3 V	+1.5:	9.10	0.09	320
31.	+40 ⁰ 4183	B9.5 III	-0.2	7.97	0.18	400
32.	+40 ⁰ 4186	A1 V	+1.7:	9.01	0.22	260
33.	+40 ⁰ 4187	O7	-5.2:	8.76	3.78	1090:
34.	+40 ⁰ 4188	A1.5 V	+1.3	7.92	0.14	200
35.	+40 ⁰ 4194	A0 V	+1.3	8.84	0.18	300
36.	+40 ⁰ 4195	G1 V	+4.5:	10.02	0.09	120
37.	+40 ⁰ 4197A	A7 V	+3.0	9.17	0.32	150
38.	+40 ⁰ 4197B	G9 III-IV	+2.0	9.96	0.32:	340
39.	+40 ⁰ 4199	A2 V	+1.3:	9.41	0.18	380
40.	+40 ⁰ 4200	A7 V	+2.3:	9.45	0.32	230
41.	+40 ⁰ 4201	A4 V	+2.1:	9.63	0.00	320
43.	+40 ⁰ 4205	B7.5 V	+0.4	7.97	0.18	300
44.	+40 ⁰ 4209	B8.5 V	+1.0	8.76	0.18	330
45.	+40 ⁰ 4211	G9 III	+1.0	7.44	0.18	180
46.	+40 ⁰ 4213	F5 V	+3.6:	9.11	0.00	125
47.	+40 ⁰ 4214	F4 V	+3.2	8.56	0.18	110
48.	+40 ⁰ 4218	B8 V	+0.7	9.64	0.36	520
50.	+40 ⁰ 4225	F8 V	+4.1:	7.24	0.00	42
51.	+40 ⁰ 4226	B9 V	+0.7	8.22	0.14	300
53.	+40 ⁰ 4228	K0 III	+1.3	9.24	0.14	360

Table 6 (continued)

No.	BD	Sp	M_V	V	A_V	r
54.	+40 ⁰ 4229	F2 V	+3.2	9.44	0.28	155
55.	+40 ⁰ 4230	K0 IV	+3.1	8.63	0.09	120
56.	+40 ⁰ 4231	G8 III-IV	+1.9	9.51	0.32	290
57.	+40 ⁰ 4236	B8 V	+0.8	8.71	0.09	370
58.	+40 ⁰ 4239	A1 V	+1.7:	8.94	0.22	250
59.	+40 ⁰ 4240	K4 III	+0.5	6.66	0.22	155
60.	+40 ⁰ 4246	A4 V	+1.8:	7.87	0.09	155
61.	+40 ⁰ 4247	K0.5 III	+0.6	9.77	0.14	640
62.	+40 ⁰ 4248	K0 III	+0.6	9.30	0.14	520
63.	+40 ⁰ 4250	A1 V	+1.7:	9.28	0.00	330
64.	+40 ⁰ 4251	F6 V	+3.9:	7.79	0.00	60
65.	+40 ⁰ 4255	A5 V	+2.4	9.13	0.14	210
66.	+40 ⁰ 4257	G7 IV	+2.7	8.98	0.32	155
67.	+40 ⁰ 4260	F9 V	+4.3:	9.70	0.22	110
68.	+40 ⁰ 4261	F5 V	+3.6:	9.38	0.00	145
70.	+40 ⁰ 4267	B9.5 V	+1.3	8.74	0.09	300
71.	+40 ⁰ 4274	A5 V	+2.7	9.74	0.32	220
72.	+40 ⁰ 4275	G9 IV	+2.5	9.63	0.40	220
73.	+40 ⁰ 4276	B9 V	+0.6	6.98	0.09	145
74.	+40 ⁰ 4277	A4 V	+2.1	9.83	0.09	340
75.	+40 ⁰ 4279	A0 V	+1.0	9.24	0.32	380
76.	+40 ⁰ 4282	A7 V	+2.4	9.58	0.45	220
77.	+40 ⁰ 4283	A0 IV	+0.2	9.28	0.18	600
78.	+40 ⁰ 4286	G7 III	+0.3	9.10	0.54	450
79.	+40 ⁰ 4289	A9 III	+1.6	8.12	0.09	195
80.	+40 ⁰ 4290	B9 V	+0.8	8.52	0.12	330
82.	+40 ⁰ 4297	F8 IV-V	+3.6:	9.93	0.00	185
83.	+40 ⁰ 4300	A4 V	+2.3	9.97	0.08	330
84.	+40 ⁰ 4301	A0.5 V	+0.7	9.40	0.16	510
85.	+40 ⁰ 4305	A7 V	+3.0	9.61	0.54	165
86.	+40 ⁰ 4310A	K2 III	+0.7	9.59	0.50	480
87.	+40 ⁰ 4310B	G3 V	+5.0	11.80	0.04	225
88.	+40 ⁰ 4313	K1 III	+1.0	9.76	0.27	500
89.	+40 ⁰ 4322	B8 V	0.0	9.77	0.54	700
90.	+40 ⁰ 4324	K1 III	+1.2	8.94	0.00	350
91.	+40 ⁰ 4325	A5 V	+2.3	10.38	0.09	400
92.	+40 ⁰ 4328	F8 IV	+3.0	7.72	0.18	81
93.	+40 ⁰ 4329	F5 V	+3.6:	8.41	0.00	92
94.	+40 ⁰ 4331	A4 III-IV	+1.1	8.90	0.24	325
95.	+40 ⁰ 4333	A8 V	+3.0	9.42	0.40	160
96.	+40 ⁰ 4335	G8 V	+5.5	9.96	0.14	73
97.	+40 ⁰ 4336	K0 III	+0.8	8.89	0.18	380
99.	+40 ⁰ 4343	A1.5 V	+1.7:	9.38	0.27	300
100.	+40 ⁰ 4345	A1 V	+1.7:	10.00	0.50	360
101.	+40 ⁰ 4346	B5.5 V	0.0	7.56	0.18	300
102.	+40 ⁰ 4347	A3 V	+2.2	9.59	0.13	280

Table 6 (continued)

No.	BD	Sp	M_V	V	A_V	r
103.	+40 ⁰ 4349	K0 III	+1.1	8.61	0.18	290
104.	+40 ⁰ 4348	A7 IV	+1.5	8.75	0.31	245
105.	+40 ⁰ 4350	A2 V	+1.8:	8.38	0.40	170
106.	+40 ⁰ 4352	K1.5 III	+1.3	9.44	0.09	410
108.	+40 ⁰ 4354	B7 III	-1.5	6.66	0.18	400
109.	+40 ⁰ 4356	A1.5 V	+1.7:	8.86	0.32	230
110.	+40 ⁰ 4357	F5 V	+3.6:	9.25:	0.00	135
111.	+40 ⁰ 4358	F5 III	+2.1	9.77	0.45	280
112.	+40 ⁰ 4362	A0.5 V	+2.0	8.96	0.05	240
113.	+40 ⁰ 4363	A6 IV	+1.7	8.63	0.36	210
114.	+40 ⁰ 4369	A3 V	+1.5:	8.48	0.14	230
116.	+40 ⁰ 4373	K5:III:	+0.1	7.11	0.37	210
117.	+40 ⁰ 4374	F2 V	+3.1	7.97	0.00	95
118.	+40 ⁰ 4378	K0 III	+0.3	6.99	0.18	200
119.	+40 ⁰ 4380	G0 V	+4.4:	8.90	0.00	79
121.	+40 ⁰ 4382	A3 V	+2.0	8.70	0.04	215
122.	+40 ⁰ 4385	G8 III	+1.0	9.03	0.28	355
123.	+40 ⁰ 4389	F6 V	+3.8:	7.15	0.00	47
124.	+40 ⁰ 4391	G9 III	+1.4	9.14	0.14	330
125.	+40 ⁰ 4393	B8 V	+0.1:	8.55	0.32	420
126.	+40 ⁰ 4397	G8 III	-0.4	9.31	0.27	770
128.	+40 ⁰ 4401	A0 III	-0.1	8.24	0.40	390
129.	+40 ⁰ 4402	K3 III	+1.0	8.89	0.40	315
130.	+40 ⁰ 4403	F8 V	+4.1:	10.78	0.06	210
131.	+40 ⁰ 4404	A6 V	+1.8	9.80	0.49	320
132.	+40 ⁰ 4405	K0 III	+1.1	10.28	0.26	610
133.	+40 ⁰ 4406	A8 V	+3.0	10.08	0.18	240
134.	+40 ⁰ 4407	A1 V	+1.1:	8.89	0.22	330
135.	+41 ⁰ 3687	K2 IV	+2.9	7.93	0.28	89
137.	+41 ⁰ 3691	K0 III	0.0	9.52	0.25	710
138.	+41 ⁰ 3693	B9 IV	0.0	9.06	0.31	560
139.	+41 ⁰ 3700	A1.5 V	+1.2:	9.83	0.40	440
140.	+41 ⁰ 3703	B7.5 III	-1.4	8.09	0.45	640
141.	+41 ⁰ 3705	G9 V	+5.3	9.91	0.00	84
142.	+41 ⁰ 3707	G8.5 III	+1.8	9.24	0.22	280
143.	+41 ⁰ 3709	A7 V	+2.8	9.73	0.40	200
144.	+41 ⁰ 3711	A0 V	+1.6:	9.72	0.27	370
145.	+41 ⁰ 3712	B9 V	+1.4	8.28	0.27	210
146.	+41 ⁰ 3715	A7 V	+3.0	9.15	0.54	130
147.	+41 ⁰ 3716	B5 V	-0.7	9.21	1.35	515
148.	+41 ⁰ 3718	K2 III	0.0	9.40	0.50	600
149.	+41 ⁰ 3720	A1 V	+1.7	9.35	0.22	310
150.	+41 ⁰ 3721	A2.5 V	+1.8:	8.49	0.18	200
151.	+41 ⁰ 3725	B8.5 V	+0.6	9.19	0.36	440
153.	+41 ⁰ 3729	K0 IV	+2.7	9.32	0.09	200
154.	+41 ⁰ 3731	B3 V	-1.0:	9.84	0.94	950:

Table 6 (continued)

No.	BD	Sp	M_V	V	A_V	r
155.	+41 ⁰ 3732	B9 V	+1.2	9.35	0.27	380
156.	+41 ⁰ 3734	K3 III	+1.5	8.96	0.58	240
158.	+41 ⁰ 3737	B3 V	-1.0:	9.22	1.08	670
159.	+41 ⁰ 3739	A9 V	+2.8	7.81	0.40	84
160.	+41 ⁰ 3742	A6 V	+2.3	7.09	0.27	80
161.	+41 ⁰ 3748b	F7 V	+4.0:	10.73	0.00	220
162.	+41 ⁰ 3748a	B8 V	+0.7	10.56	0.72	670
163.	+41 ⁰ 3749	A2 V	+1.8:	9.61	0.18	335
164.	+41 ⁰ 3751	F5 V	+3.6:	9.22	0.00	135
166.	+41 ⁰ 3754	B6 IV-V	-0.7	8.67	0.86	500
167.	+41 ⁰ 3756	B9 IV	+0.2	9.32	0.36	560
168.	+41 ⁰ 3757	A4 V	+1.7:	9.04	0.00	290
169.	+41 ⁰ 3758	B2 IV	-2.1	7.30	0.76	530
170.	+41 ⁰ 3761	B7 V	+0.3	9.19	0.32	520
171.	+41 ⁰ 3764	G5 V	+4.9	8.56	0.18	50
172.	+41 ⁰ 3765	B0.5 III	-4.7	7.64	1.58	1420
173.	+41 ⁰ 3769	B9.5 V	+1.3	8.81	0.14	300
174.	+41 ⁰ 3770	G3 IV	+3.2:	8.00	0.00	91
175.	+41 ⁰ 3773	F5 V	+3.6	9.00	0.00	120
176.	+41 ⁰ 3775	K0 III	+0.7	8.24	0.00	320
177.	+41 ⁰ 3776	F5:V	+3.7:	9.73	0.00	160
178.	+41 ⁰ 3782	K5 III	+0.4	9.29	0.90	400
179.	+41 ⁰ 3783	G5 IV-V	+4.5	9.64	0.00	105
180.	+41 ⁰ 3789	B9 V	+1.3	8.54	0.18	260
181.	+41 ⁰ 3790	B6.5 V	-0.4:	9.81	1.26	620
182.	+41 ⁰ 3791	B8 V	+0.9	8.89	0.27	350
183.	+41 ⁰ 3792	B8.5 III	-1.9	8.67	0.81	890
186.	+41 ⁰ 3800	A0.5 V	+0.9:	9.46	0.27	455
187.	+41 ⁰ 3805	K0 III-IV	+1.7	6.51	0.18	84
188.	+41 ⁰ 3809	A9 V	+3.0	9.32	0.36	155
189.	+41 ⁰ 3810	A1 III	-1.2:	10.14	1.26	1040
190.	+41 ⁰ 3811	A4 III-IV	+1.0	7.96	0.32	210
191.	+41 ⁰ 3813	A3 V	+1.9:	10.21	0.50	360
192.	+41 ⁰ 3814	B6 V	0.0	7.57	0.27	290
194.	+41 ⁰ 3818	G8 III	+1.6	6.64	0.09	98
195.	+41 ⁰ 3820	B7 V	0.0	9.27	0.54	560
196.	+41 ⁰ 3823	K2 III	+1.5	9.45	0.14	360
197.	+41 ⁰ 3824	A1 V	+1.5	10.10	0.50	420
199.	+41 ⁰ 3836	K4 II-III	-2.0	7.58	1.55	580
200.	+41 ⁰ 3841	B9.5 V	+1.2	9.09	0.22	340
202.	+41 ⁰ 3845	F7:V	+4.1	6.82	0.00	35
203.	+41 ⁰ 3846	G9 III	+1.9	9.36	0.00	310
204.	+41 ⁰ 3853	F9 IV-V	+3.5	9.07	0.18	120
205.	+41 ⁰ 3855	F8 III	+2.0	7.94	0.22	140
206.	+41 ⁰ 3856	B6 IV	-0.9	5.63	0.22	185
207.	+41 ⁰ 3858	K1 III	+1.2	8.72	0.14	300

Table 6 (continued)

No.	BD	Sp	M_V	V	A_V	r
208.	+41 ⁰ 3859	G0.5 V	+4.5:	9.66	0.00	110
209.	+41 ⁰ 3865	K3 III	+1.2	9.43	0.09	425
210.	+41 ⁰ 3868	B7 IV-V	-0.4	8.44	0.32	510
211.	+41 ⁰ 3872	K0.5 IV	+3.0	8.46	0.09	120
212.	+41 ⁰ 3878	A2 V	+1.8:	9.59	0.45	290
213.	+41 ⁰ 3879	A5 IV	+1.5	9.91	0.27	420
214.	+41 ⁰ 3881	K5 III	+0.1	8.60	0.02	490
215.	+41 ⁰ 3884A	B6 V	-0.5	7.44	0.32	335
216.	+41 ⁰ 3884B	A1 V	+1.8	8.97	0.08	245
217.	+41 ⁰ 3889	A0 IV-V	+0.2	7.52	0.12	275
218.	+41 ⁰ 3890	F5 V:	+3.6:	9.44	0.00	145
219.	+41 ⁰ 3893	G8.5 III	+1.6	8.07	0.14	185
220.	+41 ⁰ 3894	F4 V	+3.5:	9.18	0.18	125
221.	+41 ⁰ 3895	G0 V	+4.5:	8.15	0.18	49
222.	+41 ⁰ 3896	B5 III	-2.0	9.47	2.55	610
223.	+41 ⁰ 3897	G6 III	+0.5	7.40	0.14	225
224.	+41 ⁰ 3901	B8 V	+0.4	8.83	0.14	450
225.	+41 ⁰ 3904	A6 V	+2.5	9.12	0.28	185
226.	+41 ⁰ 3906	A0 V	+1.6:	9.54	0.28	340
227.	+41 ⁰ 3913	A0 V	+1.6:	9.85	0.09	430
228.	+41 ⁰ 3916	A1 V	+1.1:	7.84	0.09	210
229.	+41 ⁰ 3918	A2 V	+1.7	9.86	0.68	310
230.	+41 ⁰ 3928	B8 V	+0.6	9.00	0.58	370
231.	+41 ⁰ 3929	K1.5 III	+0.5	7.48	0.09	240
233.	+41 ⁰ 3933	A6 V	+3.0	9.45	0.32	170
234.	+41 ⁰ 3935	A1 V	+1.1:	9.73	0.18	490
235.	+41 ⁰ 3937	K1 III	-0.5:	8.96	0.90	520
236.	+41 ⁰ 3940	G0 V	+4.4:	9.81	0.00	120
237.	+41 ⁰ 3941	G0 V	+4.4:	9.20	0.00	91
238.	+41 ⁰ 3943	A3 V	+1.7	7.32	0.14	125
239.	+41 ⁰ 3946	A6 V	+2.7	9.09	0.09	180
240.	+41 ⁰ 3949	B6 V	+0.4:	6.12	0.22	125
241.	+41 ⁰ 3951	F5 Ia	-5.0	8.40	3.20	1100
242.	+41 ⁰ 3955	A2.5 V	+1.4:	9.93	0.40	420
243.	+41 ⁰ 3961	A3 V	+1.9	10.03	0.45	340
246.	+41 ⁰ 3963	A2 V	+1.8:	9.15	0.18	270
247.	+41 ⁰ 3972	A6 V	+2.6	9.02	0.50	155
248.	+41 ⁰ 3973	F5 V	+3.6:	9.46	0.09	140
249.	+41 ⁰ 3976	F6 V	+3.8:	8.75	0.00	98
250.	+41 ⁰ 3985	B2 V	-1.6:	9.07	1.98	550
251.	+41 ⁰ 3986	F6 V	+3.7:	8.79	0.00	105
252.	+41 ⁰ 3987	F0 IV	+2.5	6.32	0.22	52
253.	+41 ⁰ 3991	M3 III	+0.5	7.71	0.58:	210:
254.	+41 ⁰ 3993	K1.5 III	+0.8	8.35	0.22	290
255.	+41 ⁰ 3995	K3.5 III	+0.6	9.23	0.40	440

Table 7. Results of quantification, extinction and distance determination in the BD 42° – 43° area.

No.	BD	Sp	M_V	V	A_V	r
1.	+42° 3665	K0 III	+1.5	8.51	0.14	240
2.	+42° 3666	B9.5 V	+1.0:	8.68	0.11	325
3.	+42° 3670	K4 II	-2.5:	6.31	0.45	470
4.	+42° 3671	G9 III	+0.1	9.84	0.07	860
5.	+42° 3672	A5 V	+1.9	8.77	0.00	240
6.	+42° 3677	K0 III	+0.5	9.30	0.04	565
7.	+42° 3683	F2 III	+2.0:	9.21	0.27	245
9.	+42° 3685	B9 V	+1.4:	8.65	0.27	250
10.	+42° 3692	B8.5 Ib-II	-4.8	8.06	3.33	800
11.	+42° 3695	F5 V	+3.6:	9.37	0.00	143
12.	+42° 3699	A0 V	+1.2:	9.16	0.22	350
13.	+42° 3700	A0 V	+1.3	9.19	0.13	355
14.	+42° 3702	B9 V	+0.7	8.65	0.22	350
15.	+42° 3703	B2 V	-2.5	8.92	2.07	740
16.	+42° 3704	B8 V	+0.4	8.54	0.31	370
17.	+42° 3705	F0 III-IV	+2.0	8.77	0.18	210
18.	+42° 3706	B9.5 V	+1.0	9.67	0.34	460
19.	+42° 3714	A8 V	+2.5	9.23	0.39	185
20.	+42° 3716	K1 III	+0.2	8.76	0.45	420
21.	+42° 3718	B8 V	+0.4	8.73	0.22	420
22.	+42° 3719	G7 IV	+2.4	9.91	0.41	265
23.	+42° 3721	G9 III	+1.0	6.23	0.02	110
24.	+42° 3723	F6 V	+3.7:	9.51	0.19	133
25.	+42° 3724	A2 III	0.0	8.02	0.27	355
26.	+42° 3725	K3 III	+0.1	8.81	0.36	460
27.	+42° 3736	M3 III	-1.0	9.34	0.81	800
28.	+42° 3737	G8 III	+1.0	8.18	0.27	240
29.	+42° 3740	F6 III	+2.0	6.90	0.00	95
30.	+42° 3741	B2 IV	-3.0	9.52	2.43	1040
31.	+42° 3743	A5 II	-2.8	8.39	1.17	1010
32.	+42° 3747	A3 V	+1.5	9.31	0.27	320
34.	+42° 3749	A1 V	+1.5:	8.95	0.09	295
35.	+42° 3750	A7 V	+2.5	8.98	0.22	178
36.	+42° 3752	B7 V	+0.2	7.66	0.36	260
37.	+42° 3753	K1 III	+0.1	7.92	0.36	310
38.	+42° 3754	G8 III-IV	+1.9	7.59	0.00	137
39.	+42° 3757	A2 V	+1.5	9.40	0.09	365
40.	+42° 3761	G0 V	+4.4:	9.53	0.23	96
41.	+42° 3762	B9 V	+0.5	9.54	0.18	590
42.	+42° 3763	G8 V	+4.9	8.86	0.00	62
43.	+42° 3764	F7 V	+3.6:	9.04	0.17	114
44.	+42° 3767	G9 III	-0.1	9.00	0.47	530
45.	+42° 3768	A4 V	+1.5	7.62	0.22	151
46.	+42° 3769	A3 V	+1.5:	9.70	0.18	400
47.	+42° 3775	B7 V	+0.8	9.15	0.18	430

Table 7 (continued)

No.	BD	Sp	M_V	V	A_V	r
48.	+42 ⁰ 3779	A2 V	+1.3:	10.46	0.23	610
49.	+42 ⁰ 3782	B8 V	+0.2	9.79	0.86	560
50.	+42 ⁰ 3783	G8 III	+0.9	8.85	0.31	340
51.	+42 ⁰ 3784	G8 IV	+2.6	9.45	0.36	200
52.	+42 ⁰ 3790	F1 IV	+2.5	10.01	0.38	265
53.	+43 ⁰ 3549	F7 IV	+3.0	7.85	0.11	89
54.	+43 ⁰ 3550	G9 III	+0.7	8.86	0.29	375
55.	+43 ⁰ 3552	A3 III	+0.7	7.95	0.50	225
56.	+43 ⁰ 3553	G3 III-IV	+2.4	8.69	1.08	110
57.	+43 ⁰ 3561	F3 V	+3.5:	9.70	0.00	174
58.	+43 ⁰ 3562	G8 IV	+2.8	9.92	0.41	220
59.	+43 ⁰ 3566	F5 V	+3.6:	7.57	0.05	61
60.	+43 ⁰ 3568	K7 III?	+0.7:	9.11	0.57	370
63.	+43 ⁰ 3576	A0 V	+1.0:	7.86	0.04	230
64.	+43 ⁰ 3579	G8 III	+1.4	9.35	0.27	345
65.	+43 ⁰ 3580	A5 V	+2.0	9.77	0.09	345
66.	+43 ⁰ 3581	A3 V	+1.9	9.05	0.14	255
67.	+43 ⁰ 3584	K0 III	+0.9	9.72	0.04	570
68.	+43 ⁰ 3585	K1 III	+0.7	9.94	0.14	660
69.	+43 ⁰ 3586	K0 III	+0.6	9.48	0.13	560
70.	+43 ⁰ 3587A	G5 V	+5.0	9.77	0.04	88
71.	+43 ⁰ 3587B	G9 III	+0.4	10.48	0.29	910
73.	+43 ⁰ 3599	B7 V	-0.2	9.43	0.50	670
74.	+43 ⁰ 3600	B8 III	-0.5	9.58	0.54	810
75.	+43 ⁰ 3601	A3 V	+1.7:	8.81	0.49	210
76.	+43 ⁰ 3602	K3.5 III	-0.2	9.16	0.81	510
77.	+43 ⁰ 3606	A5 V	+2.3	9.29	0.23	225
78.	+43 ⁰ 3608	G9 III	+0.1	9.22	0.29	580
79.	+43 ⁰ 3609	B6 V	0.0	8.30	0.45	370
80.	+43 ⁰ 3613	G9 III	+0.1	9.70	0.34	710
81.	+43 ⁰ 3617	K5 III:	+0.3:	9.35	0.72	460
82.	+43 ⁰ 3620	A0 V	+1.5	7.70	0.04	170
83.	+43 ⁰ 3626	F8 IV	+2.7:	9.15	0.72	140
84.	+43 ⁰ 3627A	A2 V	+1.5:	9.91	0.27	420
85.	+43 ⁰ 3627B	F0 V	+3.1	10.13	0.50	203
86.	+43 ⁰ 3630	O9.5 Ia	-7.1	7.11	3.46	1410
88.	+43 ⁰ 3638	G8 III	+0.6	8.59	0.45	320
89.	+43 ⁰ 3648	B7 V	+0.3	9.63	0.45	600
90.	+43 ⁰ 3650	A6 V	+2.0	9.74	0.52	280
91.	+43 ⁰ 3655	F1 V	+3.0	9.44	0.40	161
92.	+43 ⁰ 3656	G8 II	-2.0	8.99	1.76	700
93.	+43 ⁰ 3660	K1 III	+0.8	9.46	0.36	460
94.	+43 ⁰ 3662	A7 V	+2.5	7.32	0.41	76
95.	+43 ⁰ 3663	F8 V	+4.0	9.71	0.04	136
96.	+43 ⁰ 3664	F5 V	+3.6	8.83	0.00	111
97.	+43 ⁰ 3666	G2 II	-3.0	9.91	1.53	1890

All the three methods give similar spectral and luminosity classes and absolute magnitudes: the differences usually do not exceed 1 or 2 subclasses and ± 0.5 mag. In this paper, we decided to use the quantification results for normal stars obtained by the Q, Q diagrams (as it was done in Paper I). Intercomparison and critical evaluation of different quantification methods will be given elsewhere.

For a part of A–F–G stars of luminosity class V, the Q, Q diagrams cannot give sufficiently precise value of M_V due to necessity of extrapolation of the M_V isolines. For these stars, the average M_V for a given MK type is ascribed. Such M_V values in Tables 5–7 are marked by a colon. Colons are also placed to the uncertain spectral types and absolute magnitudes. If the colon stands in front of spectral class, this means uncertainty both in spectral and luminosity class.

For recognition of peculiar stars of different types we have used the following diagrams: Q_{XYV} , $Y-V$ for Am-type stars, Q_{YZS} , $Y-S$ for Ap-type stars, Q_{UPYV} , Q_{XZS} for carbon-rich stars and the parameter Q_{YSYV} for M-type stars ($Q_{YSYV} < 0.12$ for K-type stars and ≥ 0.12 for M-type stars). The stars with different peculiarities or with a low accuracy of classification are not included into Tables 5–7.

Colour excesses E_{Y-V} , interstellar extinctions A_V and distances of stars r , given in Tables 5–7, have been determined as described in Paper I. The normal interstellar extinction law with $R = A_V/E_{Y-V} = 4.5$ or $A_V/E_{B-V} = 3.15$ has been used. The decision to use the normal value of R is based on investigation of $\lambda_{\max}$ of interstellar polarization for some stars in the area of the North America and Pelican Nebulae (Straizys and Goldberg, 1991). The probable errors are ± 0.03 mag for E_{Y-V} , ± 0.1 mag for A_V and $\pm 25\%$ for distance. The distances $r > 200$ pc are rounded to the nearest number multiple to 10.

4. Interstellar extinction in the dark cloud

Fig. 3 shows the plot of extinction versus distance for the dark cloud between the North America and Pelican Nebulae. The stars from Table 5 and the heavily reddened ($A_V > 1$ mag) stars from Paper I which are projected on the dark cloud have been plotted. Fig. 3 is similar to Fig. 2 of Paper II but shows more numerous reddened stars which start to appear at the distance of 430 pc. These stars are probably embedded into the dust cloud and they are important

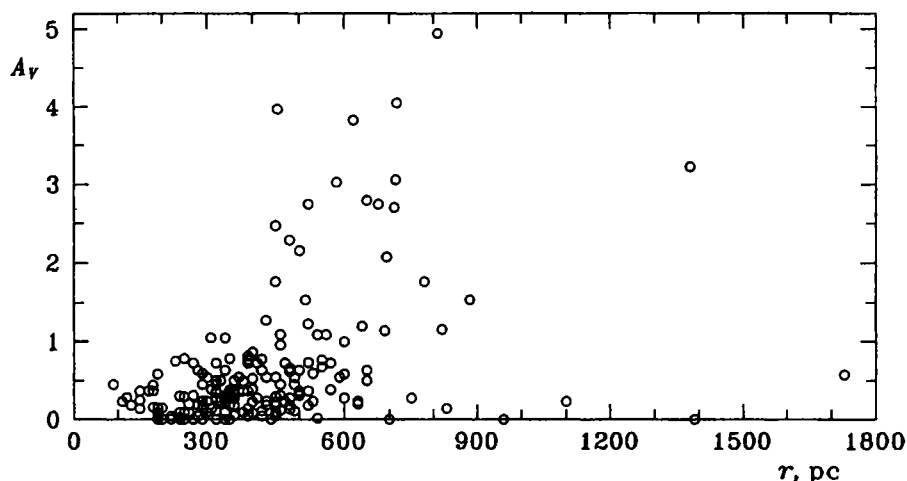


Fig. 3. Dependence of interstellar extinction on distance in the dark cloud area. In addition to the stars from Table 5, stars Nos. 112, 131, 140, 141, 148, 153, 163, 176, 177, 185, 195, 224, 238 and 245 with $A_V > 1$ mag from Paper I are also plotted.

for distance determination of the cloud. The distance error of 25% at 550 pc, the expected distance of the cloud, corresponds to ± 140 pc. Due to this error it is not possible to estimate which stars are at the front edge of the cloud and which are behind the cloud. However, the cloud seems to be very dense, and it is safe to assume that all heavily reddened stars are inside it; the stars of the dark cloud background probably are too faint to be measured with our limiting magnitude. If the depth of the cloud is of the same order as the linear extent on the sky plane of the star forming complex (~ 2.5 or 25 pc), the thickness of the dust layer must not exceed 25 pc. This allows us to consider that all stars within 430 pc and 800 pc can be the cloud objects scattered by the distance determination errors. The average distance of 24 stars with $A_V \geq 1$ mag is 580 ± 100 pc. This value within the error bar coincides with that determined in Paper II, being larger by only 30 pc.

The stars of foreground closer than 400 pc, projected on the dust cloud, seem to behave in the same way as the stars in the surrounding fields: in general, extinction values of these stars are scattered between zero and 1.0 mag with slight increase with increasing distance.

Special attention must be paid to the stars which exhibit too small interstellar extinction for their distances. Such stars are: No. 66 ($V = 11.91$, G1 III-IV, $A_V = 0.00$, $r = 0.96$ kpc), No. 180 ($V = 11.23$, K0 III, $A_V = 0.23$, $r = 1.1$ kpc), No. 11 ($V = 10.11$, K1 III, $A_V = 0.00$, $r = 1.4$ kpc) and No. 124 ($V = 12.56$, F6 III, $A_V = 0.57$, $r = 1.7$ kpc). These stars are either observed in the transparent windows in the dust cloud or are of peculiar types, not recognized photometrically. Spectroscopic investigation of these stars would be recommended.

5. Interstellar extinction in other areas

Figs. 4 and 5 show the plot of extinction versus distance for the other two areas listed in Table 1. Both these areas up to 500 pc distance show similar run of extinction with distance: the stars are scattered between A_V values from 0.0 to ~ 0.5 mag. The slight increase of maximum extinction with distance is observed. Many stars show very small or no interstellar reddening up to 600 pc: this means that numerous transparent windows are present between dust clouds. Some stars, such as $+43^\circ 3553$ and $+43^\circ 3626$ exhibit too large extinction for their distance. Probably, these stars are either unresolved binaries of close spectral types or peculiar objects.

In the BD $40^\circ - 41^\circ$ area, a number of heavily reddened stars start to appear at $r > 500$ pc. In this respect the area seems to be similar to the area of the dark cloud (Fig. 3). This probably means that the dark cloud extends far to south. This conclusion seems to be confirmed by a glance to long exposure photographs of the area: the extension of the dark cloud is observable south of the North America Nebula, the Pelican Nebula and α Cygni down to the 40° declination.

It is an impression that the BD $40^\circ - 41^\circ$ area shows a dichotomy in the A_V, r dependence at $r > 600$ pc: a part of stars extend the low extinction sequence up to 1.5 kpc and the other part of stars exhibit extinctions of the order of 3 to 4 mag. If this dichotomy is real, then it would be a reason to suggest the presence of a dust cloud system which shades the upper group of stars while the stars of lower group are seen in the windows. Both strongly reddened and mildly reddened stars are scattered in the whole field.

On the other hand, this conclusion seems to contradict with our result of Paper II where the area south of α Cygni has been found to be transparent up to 700 pc distance. However, in that area the stars between 500 and 700 pc were not sufficiently represented. To solve

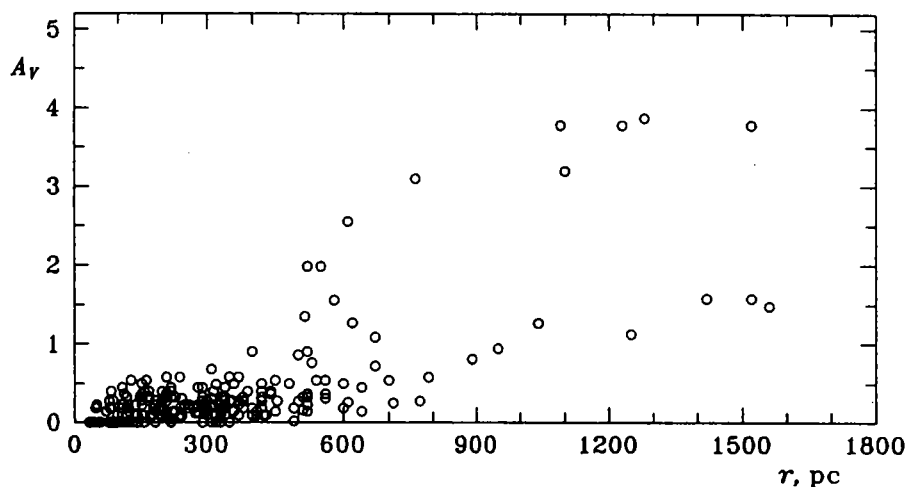


Fig. 4. Dependence of interstellar extinction on distance in the BD 40°–41° area.

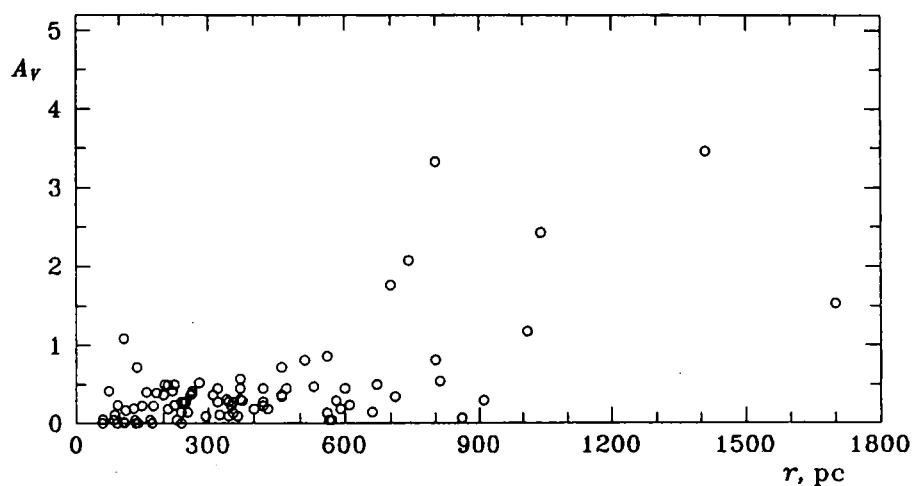


Fig. 5. Dependence of interstellar extinction on distance in the BD 42°–43° area.

this problem, more observations with fainter limiting magnitude in the area south of α Cygni would be important.

In the BD 42°–43° area (Fig. 5) the jump of extinction at ≈ 700 pc also takes place but here the reddened stars are less numerous and the conclusions are not so definite.

Acknowledgments. The authors are indebted to Miss S. Bartaškaitė for her help in observations. One of us (V.V.) acknowledges the support by the Japan Society for Promotion of Science.

References

- Goy, G. 1973, *A&AS*, 12, 277.
- Ikhsanov, R. N. 1959, *Izvestia Crimean Obs.*, 21, 229.
- Jaschek, C., Conde, H. and de Sierra, A.C. 1964. *Catalogue of Stellar Spectra Classified in the MK System*, Publ. La Plata Obs., 28, No. 2.
- Jaschek, M. 1978. *Catalogue of Selected Spectral Types in the MK System*, Strasbourg Stellar Data Center.
- Jaschek, M. and Egret, D. 1982, *Catalog of Stellar Groups*, Obs. de Strasbourg, Publ. Speciale du CDS, No. 4.
- Malmquist, K.G., Ljunggren, B. and Oja, T. 1960, *Annaler Uppsala Obs.*, Bd. 4 No. 8.
- Metik, L. P. 1960, *Izvestia Crimean Obs.*, 23, 60.
- Papadopoulos, Ch. and Scovil, Ch. 1980, *True Visual Magnitude Photographic Star Atlas*, vol. 3 (Northern Stars), Pergamon Press.
- Straizys, V. 1992, *Multicolor Stellar Photometry*, Pachart Publ. House, Tucson, Arizona.
- Straizys, V. and Goldberg, E. P. 1991 (unpublished).
- Straizys, V., Goldberg, E. P., Meištas, E. and Vansevičius, V. 1989b. *A&A*, 222, 82 (Paper II).
- Straizys, V., Kurilienė, G. and Jodinskienė, E. 1982, *Bull. Vilnius Obs.*, No. 60, 3.
- Straizys, V., Meištas, E., Vansevičius, V. and Goldberg, E. P. 1989a. *Bull. Vilnius Obs.*, No. 83, 3 (Paper I).
- Tirion, W., Rappaport, B. and Lovi, G. 1987. *Uranometria 2000.0*, Vol. 1. The Northern Hemisphere to -6° , Willmann-Bell, Inc., Richmond, Virginia.
- Vansevičius, V. 1992, *Baltic Astronomy*, 1, 31.
- Vansevičius, V. and Bridžius, A. 1994, *Baltic Astronomy*, Vol 3, No. 1 (in press).
- Wilson, R.E. 1953, *General Catalogue of Stellar Radial Velocities*, Mt Wilson Observatory.
- Zdanavičius, K. 1975, *Bull. Vilnius Obs.*, No. 41, 3.
- Zdanavičius, K. and Černienė, E. 1985, *Bull. Vilnius Obs.*, No. 69, 3.