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Determination of Colour Equivalents of Stars According to Tikhoff's Method

Second paper:

Violet-Blue Colour Indices of 428 Stars, and Photographic Magnitudes of 819 Stars

By

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TARTU 1935

K. Mattieseni trükikoda o-ü., Tartu, 1935.

The methods of investigation are practically identical with those of the first paper [1]). The only difference is that in the present investigation the colour equivalents were determined over a field of five degrees diameter (maximum permissible with the Petzval camera of the Tartu Observatory), and photographic magnitudes over a somewhat wider field; whereas in the first paper individual stars were observed only near the centre of the field. As a consequence, in the present investigation empirically determined corrections of the colours and magnitudes for distance from the centre of the field had to be applied.

Each field was photographed on four plates: two Hauff Ultra Rapid plates (ordinary sensitivity), and two Hauff Flavin plates (ortochromatic). As a rule, a photographic magnitude depends upon the mean of four plates. The *UR*, or violet — photographic colour equivalent, determined by Tikhoff's method, is mostly the mean of two plates. As to the Flavin colour equivalents determined by Tikhoff's method, they had to be rejected on account of non-homogeneity of the set of Flavin plates; this was quite a disappointment, after the excellent results obtained from Flavin plates in the first paper.

The photographic magnitudes are relative magnitudes, as in the first paper: the zero point of magnitudes for each area was determined from "standard" stars of spectra F8 and earlier with accurate Harvard photometric magnitudes [2]), by assuming for these stars the mean colour indices as quoted in the Henry Draper catalogue. The probable error of the zero point of magnitudes may be estimated at $\pm$ 0,04 for one field. The scale

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[1]) E. Öpik and R. Livländer, Determination of Colour Equivalents of Stars According to Tikhoff's Method etc., *Tartu Observatory Pub.* **26.** 3, 1925.

[2]) *Harvard Annals*, **50** and **54.**

of magnitudes was calibrated for each field with the aid of two or more exposures with variable exposure time. Schwarzschild's exponent p was determined from the scope of the "standard" stars of all fields together.

The catalogue arranged in the order of fields, contains: the Bonner Durchmusterung number (B. D.); the right ascen-

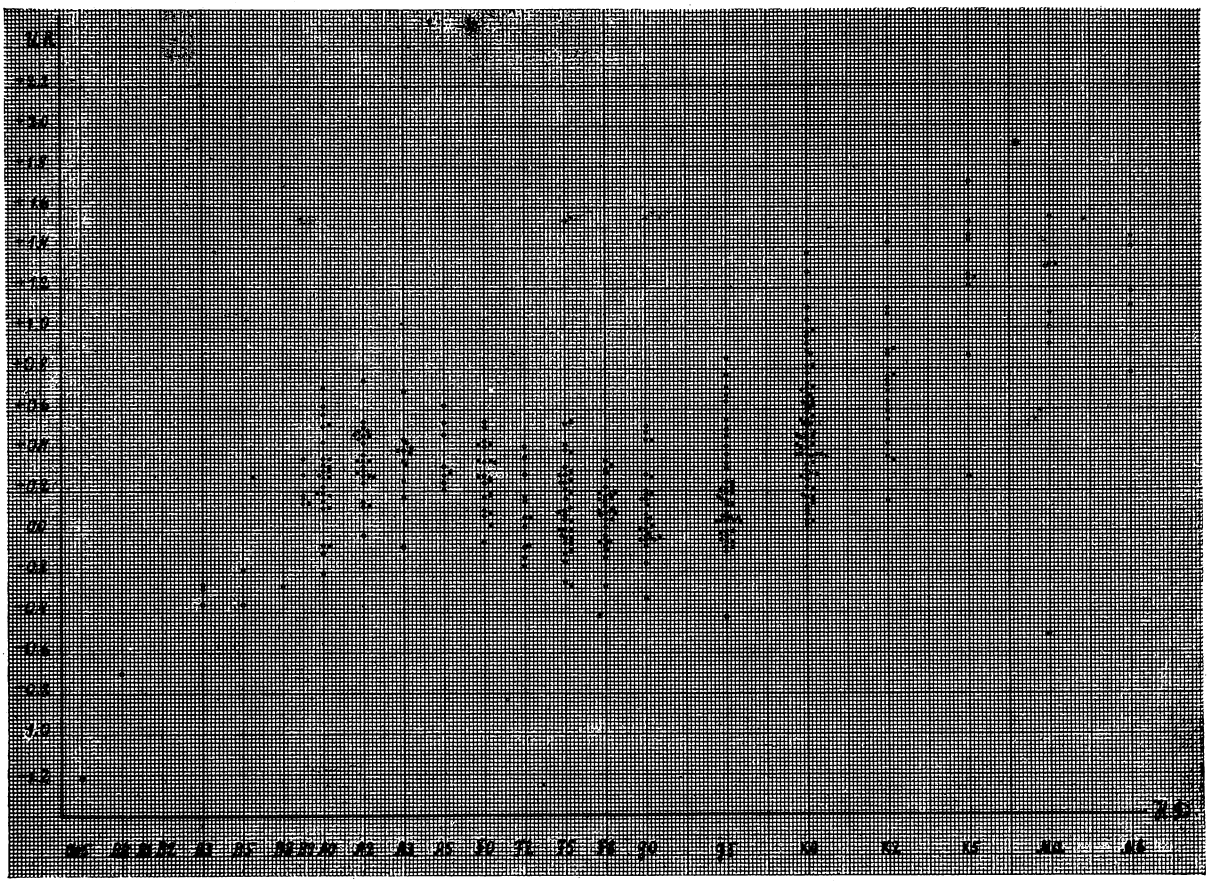

Fig. 1.
Correlation of violet — blue colour index (UR) and Henry Draper spectrum.

sion (α) and the declination (δ) for 1900; the photographic magnitude (m_p); the violet — blue colour equivalent (UR; effective wave lengths approximately 3650 and 4300 Å); the photographic — visual colour index (C), in a special system; the Henry Draper spectrum (H. D.). The colour index, C, is defined as the difference between m_p and the mean of Harvard and Potsdam visual magnitudes; the system is thus practically the same as in Tartu Obs. Publ. 27.1, 1929; when only the Harvard magnitude was available, a systematic correction (Table 1, T. P. 27.1) was applied, in which case the reduced value of C is

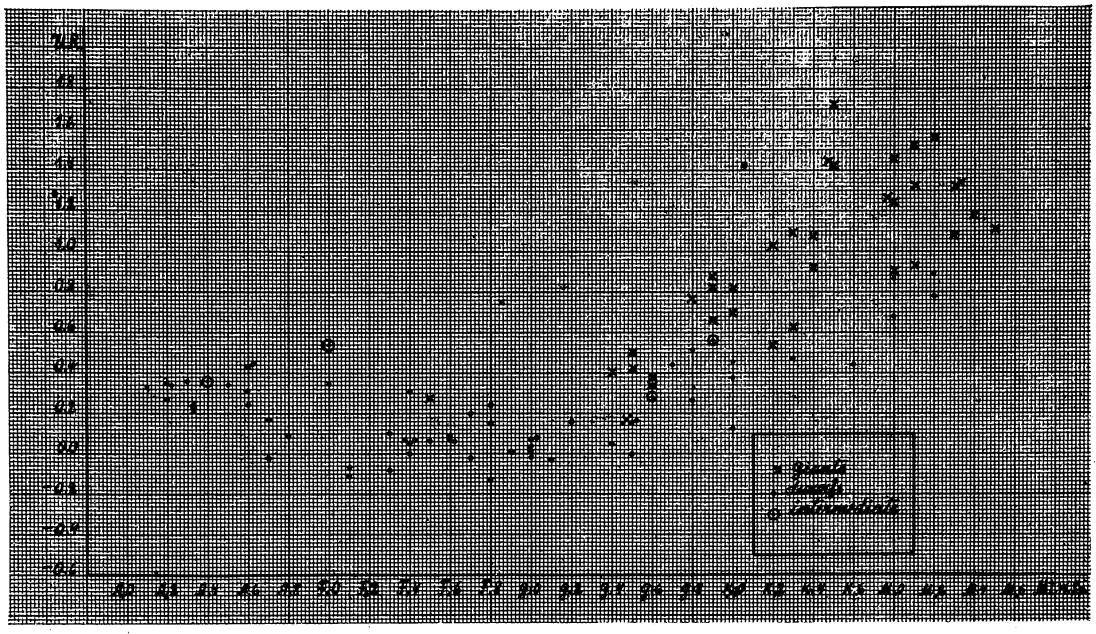

Fig. 2.
Correlation of violet — blue colour index (UR) and Mount Wilson spectrum.

marked with an asterisk. In the remarks, μ denotes the centennial proper motion; Mt. W. refers to Mount Wilson Contribution, **511**, 1935, whence the spectrum and absolute magnitude are quoted.

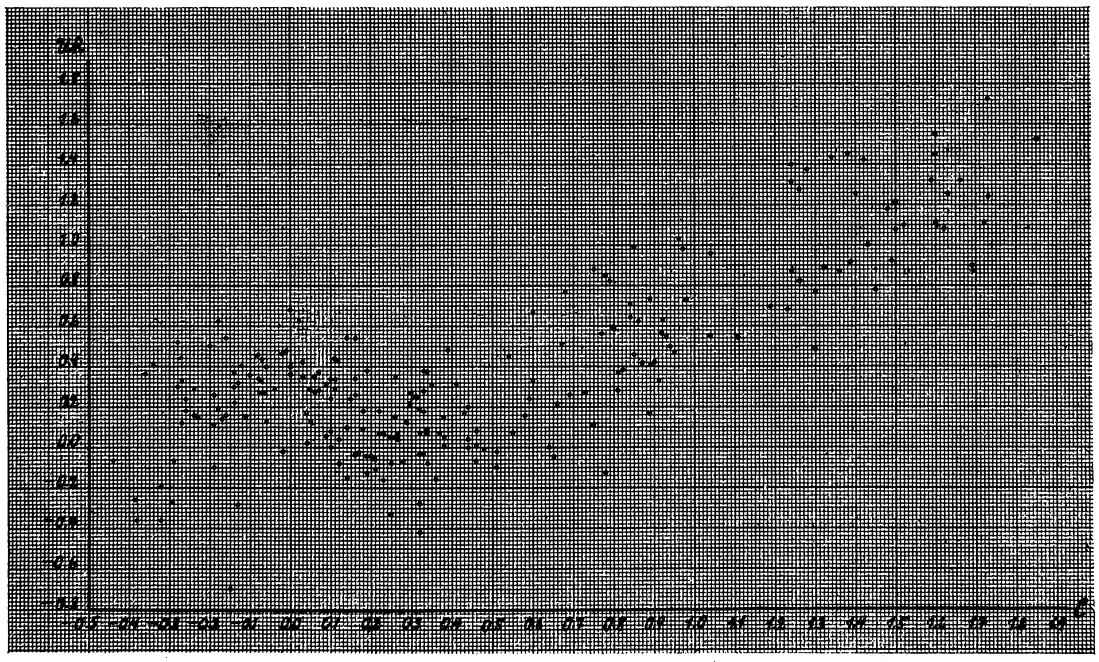

Fig. 3.
Correlation of violet — blue (UR) and photographic — visual (C) colour indices.

Figures 1—3 represent graphically some of the results; all data of the first paper are also included. In all three diagrams the strong relapse of the *UR* colour equivalent around spectrum A is conspicuous; the phenomenon is accounted for by absorption near the limit of the Balmer series of hydrogen. The smallest spread shows the correlation of *UR* with Mt. W. spectrum (Fig. 2); giants and dwarfs are clearly separated in this case.

Tartu, May 8, 1935.

The Catalogue.

Field 1.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
6 123	0 49.5	7 1	9.32	0.15	...	F_2	
6 124	50.1	6 19	8.42	0.69	...	K_0	$\mu = 3''$.
4 138	50.2	4 50	10.20	...	...	..	
7 135	51.2	7 47	10.11	...	...	..	
6 126	51.7	6 51	9.96	...	...	K_5	
6 127	51.7	7 1	10.06	...	...	K_5	
8 133	51.9	8 26	9.82	...	...	..	
5 126	52.0	5 43	10.14	0.02	...	..	
6 129	52.3	6 55	10.12	0.32	...	..	
7 138	52.5	7 41	10.06	...	...	..	
...	52.6	6 41	10.56	...	...	..	
7 139	52.6	7 41	10.36	...	...	..	
5 129	52.7	5 19	9.93	...	...	K_5	
5 130	52.7	5 53	10.41	—0.40	...	..	
6 131	52.7	7 5	8.98	0.78	...	K_0	
6 132	52.9	6 41	10.42	...	...	..	
6 133	53.0	6 46	10.20	...	...	..	
6 135	53.1	6 18	7.83	0.55	0.93	G_5	$\mu = 4''$.
3 132	53.2	4 0	9.61	...	...	..	
4 145	53.3	4 23	9.90	0.25	...	..	
4 146	53.6	5 7	8.62	0.18	0.22*	G_0	
4 147	53.7	4 58	10.08	0.23	...	..	
6 136	53.8	7 11	8.88	0.21	...	F_5	
4 148	53.9	4 51	9.70	0.19	...	..	
6 138	54.4	6 30	10.74	...	...	..	
7 142	54.5	7 57	10.89	...	...	..	
5 131	54.7	5 56	7.88	1.55	1.60	Ma	Mt. W.: M_2; — 0.9.
8 143	54.7	8 18	10.13	...	...	..	
4 150	54.9	4 21	9.40	0.58	...	A_0	
5 132	54.9	5 45	9.89	0.48	...	..	
5 133	55.0	5 40	9.42	0.19	...	F_8	
4 151	55.1	4 31	10.23	...	...	..	
6 141	55.3	6 46	10.22	0.34	...	..	
6 142	55.3	6 49	8.40	0.28	...	F_5	
4 154	55.5	5 0	10.72	...	...	..	
7 144	55.5	8 10	9.48	0.21	...	G_5	
6 143	55.6	6 56	9.82	0.18	...	..	
4 155	55.7	4 17	8.17	0.20	...	F_5	
7 145	55.8	8 15	9.42	0.16	...	G_5	
5 135	56.0	6 10	10.29	...	...	..	
7 146	56.0	7 30	8.93	0.42	...	G_5	
4 156	56.1	5 3	10.05	0.22	0.30*	..	
7 147	56.1	7 55	9.10	...	...	K_0	
4 157	56.3	4 36	9.69	0.59	...	..	
8 152	56.3	8 22	10.61	...	...	..	

Field 1. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
6 144	0 56.4	6 48	8.60	0.45	...	G_0	
7 148	56.4	7 57	10.55	...	...	..	
3 141	56.5	4 11	10.58	...	...	..	
5 136	56.5	6 13	9.57	0.35	...	..	
7 151	56.9	7 24	8.56	0.67	0.60*	G_5	Mt. W.: G_9; 1.0.
5 138	57.1	5 20	9.10	—0.04	0.19*	G_0	
4 158	57.2	4 31	8.97	0.44	...	K_2	Mt. W.: K_6; 6.9.
6 146	57.2	6 28	10.14	0.03	...	..	
4 159	57.3	5 13	8.55	0.32	—0.13*	A_5	
8 158	57.3	8 17	7.24	0.34	0.16	F_0	$\mu = 6''$.
7 152	57.4	7 18	10.10	0.13	...	..	
8 159	57.5	8 36	7.39	...	0.53	F_5	$\mu = 3''$.
4 160	57.6	4 31	9.38	0.75	...	A_2	
6 147	57.6	6 58	7.69	0.18	...	A_0p	
4 162	57.8	4 15	10.36	...	...	..	
7 153	57.8	7 21	5.43	0.42	0.87	K_0	Mt. W.: G_5; 1.0.
4 163	57.9	5 11	9.72	0.41	—0.34*	..	
5 139	57.9	6 4	10.32	...	...	..	
6 149	57.9	6 47	9.82	0.03	...	..	
7 154	58.1	8 4	9.19	0.72	...	K_2	
4 164	58.2	4 24	9.58	0.25	...	..	
...	58.2	5 25	10.40	...	...	..	
8 161	58.2	8 15	9.14	0.51	...	A_2	
5 140	58.4	5 15	10.04	0.05	0.12*	..	
...	58.4	6 19	10.32	...	...	..	
6 150	58.4	7 7	10.49	...	...	..	
4 165	58.5	4 36	10.15	0.30	...	..	
4 166	58.5	4 42	7.82	0.62	0.02	A_5	
...	58.5	6 51	10.75	...	...	..	
5 141	58.6	6 14	7.08	0.36	0.00	A_0	
6 152	58.6	6 43	9.84	0.40	...	..	
7 156	58.7	7 25	10.36	...	...	..	
7 157	58.7	7 57	9.70	0.02	...	..	
4 167	58.8	5 8	10.74	...	...	..	
6 153	58.9	6 41	9.49	0.59	...	K_2	
3 152	59.1	3 54	10.01	...	...	..	
4 168	59.1	4 41	10.33	...	...	..	
6 154	59.2	6 56	10.53	...	...	..	
4 169	59.3	4 25	9.61	0.20	...	..	
5 142	59.3	5 41	10.32	...	...	..	
7 160	59.3	8 2	10.76	...	...	..	
5 143	59.4	5 43	10.19	0.07	...	..	
4 171	59.5	4 34	10.29	...	...	..	
6 155	59.6	6 29	8.27	0.17	...	F_8	$\mu = 18''$.
4 172	59.7	5 7	7.54	1.42	1.42	K_2	Mt. W.: K_5; 0.7.

Field 1. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
7 161	0 59.7	7 22	9.49	0.64	...	K_2	
...	1 0.0	5 29	10.67	...	...	.	
7 162	0.0	7 21	9.61	0.38	...	K_0	
...	0.1	5 12	10.79	...	...	..	
7 164	0.1	7 48	8.89	0.24	...	G_5	
4 173	0.2	5 3	10.26	...	...	..	
5 144	0.3	5 31	9.66	...	...	..	
...	0.4	5 48	10.63	...	...	..	
...	0.6	6 2	10.29	...	...	..	
4 175	0.7	4 22	6.82	...	0.14	F_2	Mt. W.: F_5; 3. 1.
4 176	0.7	4 22	8.17	...	0.63	F_2	Mt. W.: F_4; 3. 4.
4 178	0.9	5 7	9.70	0.29	−0.24*	..	
...	0.9	6 5	10.61	...	...	..	
...	0.9	7 15	10.38	...	...	..	
...	1.1	4 12	10.72	...	...	..	
7 166	1.1	7 56	10.22	0.04	...	..	
4 179	1.2	4 29	9.72	0.18	...	..	
...	1.2	5 44	10.34	...	...	..	
6 159	1.2	7 9	10.67	...	...	..	
...	1.4	7 5	10.84	...	...	..	
7 167	1.4	7 50	7.16	0.26	0.16	F_0	$\mu = 8''$.
8 173	1.4	8 21	7.84	0.69	0.00	A_3	
5 146	1.5	6 8	10.01	...	...	K_5	
7 168	1.5	7 45	10.32	−0.28	...	..	
7 169	1.6	8 7	8.04	0.39	0.19*	A_3	
...	1.7	5 32	10.41	...	...	..	
...	1.7	6 24	10.47	...	...	..	
7 170	1.7	7 19	10.02	0.01	...	..	
4 182	2.0	4 30	9.44	0.36	...	K_2	
4 181	2.0	5 5	9 82	0.10	...	..	
4 183	2.1	5 1	9.55	0.17	...	A_3	
4 185	2 2	4 24	8.92	0.29	..	F_5	
4 184	2.2	4 30	10.19	...	...	.	
4 186	2.3	4 39	9.06	0.31	...	F_5	
6 160	2.4	7 0	10.36	...	...	..	
6 161	2.5	6 28	10.38	...	...	.	
3 161	2.6	3 53	9.31	. .	...	F_5	
4 187	2.7	4 37	10.18	...	...	..	
4 188	2.9	4 34	9.20	0.27	...	G_0	
6 162	3.0	6 26	10.30	0.14	...	..	
...	3.1	4 14	10.69	...	...	..	
6 163	3.1	6 48	10.18	...	...	..	
7 172	3.1	8 10	9.98	−0.10	...	..	
4 190	3.2	5 7	5.86	0.09	0.18	F_0	Mt. W.: A_8; 1. 9.
4 191	3.3	4 38	10.12	−0.18	...	..	

Field 1. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
4 193	1 3.3	4 47	10.67	...	...	..	
7 174	3.3	7 16	10.30	...	...	..	
5 147	3.5	6 11	9.96	0.26	...	..	
6 165	3.6	6 19	10.22	0.16	...	..	
6 164	3.6	7 0	8.92	0.13	. .	F_8	
4 194	3.8	4 30	10.09	...	...	..	
7 175	3.8	7 34	10.00	— 0.21	...	..	
7 176	3.9	7 46	10.14	...	...	K_5	
5 148	4.0	5 33	10.11	— 0.09	...	..	
6 166	4.1	7 3	10.15	...	...	..	
7 177	4.1	8 4	9.50	0.25	...	A_3	$\mu = 3''$.
4 195	4.2	4 54	9.08	0.38	...	K_0	
7 178	4.2	7 33	10.64	...	...	..	
4 196	4.4	4 56	10.12	0.16	...	..	
4 197	4.9	5 4	10.45	...	...	..	
4 198	5.0	4 46	10.12	...	...	..	
5 149	5.0	5 41	10.18	...	...	..	
6 167	5.1	6 34	10.33	...	...	..	
5 150	5.3	6 13	9.64	0.76	...	K_2	
6 168	5.3	6 59	9.61	0.72	...	K_0	
3 165	5.5	3 59	9.03	...	...	A_3	
5 151	5.5	5 43	10.10	0.24	...	..	
5 152	5.7	5 20	9.72	0.06	...	..	
...	5.7	6 53	10.75	. .	...	..	
7 180	6.1	7 17	9.44	0.22	...	F_8	
3 166	6.3	3 53	8.72	...	...	F_0	
6 169	6.3	7 3	10.61	...	...	..	
7 181	6.4	8 2	9.45	...	...	G_5	
6 170	6.6	7 0	10.55	...	...	..	
4 204	6.7	4 21	9.31	...	...	G_5	$\mu = 24''$.
5 153	6.7	5 40	10.16	0.18	...	..	
6 171	6.7	6 34	10.16	...	...	..	
7 182	6.7	7 25	10.37	...	...	..	
4 205	6.9	4 22	9.50	...	...	..	
7 184	7.1	8 0	9.68	...	...	..	
5 155	7.3	5 15	9.96	...	...	..	
6 172	7.3	6 54	10.24	...	...	..	
5 156	7.4	6 2	9.30	0.54	...	F_5	
5 157	7.4	6 8	9.42	0.34	...	..	
5 158	7.5	6 14	9.24	0.33	...	F_8	
7 186	7.5	7 47	10.32	...	...	..	
...	7.7	7 55	10.26	...	...	..	
7 187	7.8	7 57	9.97	...	...	..	

Field 2.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
24 1328	6 31.4	24 40	6.44	0.54	—0.16	A_2	
24 1332	32.2	24 32	6.95	0.29	0.11	A_5	
24 1343	33.4	24 41	6.92	—0.03	0.33	F_5	$\mu = 9''$.
23 1446	34.0	23 46	7.74	—0.06	...	F_5	
24 1353	35.1	24 46	8.34	...	...	A_0	
25 1406	37.8	25 14	4.50	0.77	1.30	G_5	Mt. W. : cG_8; — 2.1.
24 1390	39.6	24 14	7.97	...	...	A_3	
26 1355	41.3	26 13	8.19	...	...	A_0	
24 1404	41.9	24 15	8.23	...	...	A_0	
25 1446	43.6	25 36	8.15	...	0.95	K_2	
25 1460	44.8	25 52	7.29	0.12	0.29	F_8	$\mu = 20''$.

Field 3.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
22 1645	7 14.2	22 10	3.90	0.27	0.30	F_0	Mt. W. : A_8n; 2.2.
20 1775	16.1	20 38	6.92	0.90	1.69	K_2	Mt. W. : M_0; 0.2.
20 1781	17.2	20 44	8.00	...	...	F_0	$\mu = 7''$.
23 1698	17.5	23 9	6.04	0.12	—0.27	A_0	$\mu = 5''$.
21 1589	18.2	21 39	7.24	0.36	...	B_9	
23 1700	18.2	23 1	8.54	...	...	..	
20 1795	18.9	20 12	7.36	...	—0.36	A_0	
20 1798	19.7	20 43	7.18	0.24	0.10	A_5	
21 1596	21.0	21 45	6.90	0.05	0.26	F_5	Mt. W : F_4; 3.7.
20 1805	21.1	20 27	6.19	0.43	0.11	F_0	Mt. W. : A_6n; 1.9.
21 1602	21.8	21 39	5.46	0.00	0.10	F_5	Mt. W. : F_4; 3.1.
21 1606	22.5	21 46	8.02	...	0.78	G_5	$\mu = 14''$.
21 1614	24.4	21 0	7.46	0.15	—0.11*	A_0	

Field 4.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
16 1490	7 23.8	16 23	8.24	0.49	...	A_2	
17 1586	23.8	17 5	8.88	...	...	G_5	
17 1587	24.0	17 35	8.30	0.29	...	A_2	
16 1499	25.8	16 31	9.12	...	...	..	
17 1596	26.0	17 18	6.61	1.03	0.96	K_0	Mt. W. : K_2; 0.5.

Field 4. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
...	7 26.3	18 1	9.20	...	...	..	
16 1502	26.4	16 26	8.86	...	...	F_2	
18 1653	26.6	18 35	8.29	0.40	...	F_5	
16 1505	27.1	16 34	9.11	...	...	Ma	
17 1598	27.2	17 17	9.51	...	...	G	
16 1506	27.4	16 12	7.68	0.53	...	A_0	
17 1601	27.4	17 22	9.04	...	...	F_8	
15 1598	27.8	15 51	7.62	0.65	0.84	K_0	$\mu = 1''$.
17 1604	27.8	17 48	9.69	...	...	G_5	
16 1510	27.9	16 3	5.06	0.50	— 0.20	A_2	$\mu = 3''$.
17 1610	28.7	17 9	8.65	0.38	...	G_5	
17 1611	28.7	17 36	9.04	...	...	A	
...	28.8	17 4	9.11	...	...	..	
15 1605	29.0	15 51	8.92	...	...	K_0	
18 1670	29.4	18 4	9.14	...	...	F_5	
17 1615	29.5	17 34	9.14	...	...	F_8	
18 1671	29.5	18 31	8.98	—0.02	...	F_5	
17 1617	29.6	17 36	8.78	...	...	G_5	
16 1518	29.9	15 59	8.70	0.16	...	F_8	
18 1673	30.0	18 32	9.31	...	...	G_5	
19 1772	30.3	18 57	9.16	...	...	A	
18 1678	30.4	18 27	8.75	...	...	A_0	
19 1774	30.5	19 9	9.86	...	...	..	
15 1609	30.6	15 49	8.90	...	...	A_3	
16 1522 / 16 1520	30.6	16 21	9.05	...	...	..	
18 1681	30.6	18 24	7.76	0.48	...	A_2	
18 1680	30.6	18 37	8.94	0.19	...	..	
19 1776	30.8	19 12	8.97	...	...	A_0	
18 1685	31.2	18 17	9.32	...	...	..	
17 1623	31.4	17 7	6.58	—1.21	...	Oe_5	
18 1688	31.4	18 19	9.02	...	...	..	
19 1784	31.7	19 8	7.15	0.18	0.18	F_0	$\mu = 7''$.
17 1627	32.3	17 18	8.58	0.39	...	F_5	
16 1529	32.7	16 48	9.20	..	...	..	
18 1695	32.7	18 17	8.70	0.27	...	A_2	
16 1532	33.3	16 24	9.08	...	...	A	
18 1699	33.5	18 37	9.27	...	...	G	
18 1701	33.7	17 55	6.58	1.45	1.38	K_5	Mt. W.: M_0; — 0.1.
...	35.6	18 15	9.42	...	...	.	
19 1710 / 11	35.7	18 28	8.62	0.19	...	A_0	
18 1713	35.9	18 17	8.86	—0.27	...	F_5	
18 1717	36.8	17 56	7.51	0.46	...	A_2	
...	36.8	18 13	9.23	...	...	..	
17 1646	37.1	17 39	8.90	...	...	..	

Field 5.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
18 1930	8 17.6	18 39	6.08	0.34	0.10	F_0	Mt. W.: F_0; 3. 1.
17 1836	19.1	17 32	7.64	—0.10	0.51	F_5	$\mu = 12''$.
17 1842	20.1	17 23	6.50	0.07	0.23	F_2	Mt. W.: F_4; 3. 0.
18 1947	22.2	18 23	8.40	...	0.42*	F_5	
19 2024	25.3	19 17	7.66	—0.08	0.12*	A_3	
18 1963	25.9	18 26	6.99	0.92	1.49	Ma	Mt. W.: M_1; —0. 2.
19 2027	26.0	19 19	7.93	0.49	1.30	K_0	$\mu = 3''$.

Field 6.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
28 1640	8 38.4	28 50	9.21	...	...	G_0	
30 1760	39.1	30 1	9.29	0.07	...	G_5	
29 1820	39.4	29 38	9.43	0.17	...	G_5	
28 1642	39.5	28 48	7.60	—0.13	0.19	F_2	
29 1821	39.8	29 22	9.66	...	...	..	
28 1644	39.9	28 43	8.55	0.14	...	G_0	
28 1646	40.5	28 33	9.50	—0.25	...	..	
29 1824	40.6	29 8	A 4.95	...	A 0.76*	G_5	Mt. W.: G_6; 0.3.
...	40.6	29 8	B 6.55	...	B —0.29*	..	
28 1647	41.1	28 32	6.96	—0.04	0.16	G_0	
29 1825	41.2	29 28	8.86	0.08	..	F_8	
31 1884	42.7	30 51	9.49	...	...	K_0	
28 1650	43.2	28 42	8.93	0.44	...	A_2	
29 1828	43.6	29 49	8.38	0.99	0.85	K_0	
28 1653	44.6	28 29	9.55	...	...	..	
30 1779	45.4	29 54	8.48	0.15	—0.23*	A_2	
30 1781	46.0	30 13	8.00	0.62	0.86	K_0	
29 1831	46.1	29 31	8.16	0.40	—0.06*	A_3	
29 1832	46.2	29 14	8.74	0.55	...	K_2	
28 1659	46.5	28 38	7.62	1.31	1.24	Ma	Mt. W.: M_3; —1.0.
29 1833	46.5	28 56	9.57	—0.05	...	..	
28 1660	46.6	28 43	6.46	0.38	0.34	K_0	Mt. W.: K_0; 5.0.
29 1836	46.7	28 50	9.26	...	...	..	
30 1784	46.9	30 20	8.35	0.77	0.68*	K_2	
31 1901	47.0	31 28	9.33	0.18	...	G_0	
29 1838	47.7	29 30	9.49	—0.05	...	..	
31 1906	48.0	30 54	10.06	...	...	..	
30 1789	48.1	30 30	8.87	0.01	...	F_5	
31 1907	48.1	30 57	6.38	0.82	0.79	K_0	Mt. W.: G_7; 0.5. K_1; 0.7.
30 1790	48.2	30 10	9.91	...	...	..	
30 1792	48.4	30 36	8.58	0.05	...	G_5	

Field 6. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D	Remarks
°	h m	° ′					
28 1665	8 49.4	28 30	8.96	...	...	..	
29 1844	50.2	29 19	9.53	—0.08	...	..	
29 1845	50.4	29 3	8.55	...	...	G_5	
31 1910	50.5	31 0	9.03	...	...	..	
29 1847	51.1	29 36	8.90	0.03	...	F_0	
30 1795	51.9	30 38	6.48	0.10	0.14	F_5	Mt. W.: F_3; 3.4.
30 1798	52.5	30 10	10.06	...	...	..	

Field 7.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
6 2036	8 41.5	6 47	4.30	—0.13	0.78	F_8	Mt. W.: F_8, 2.7; F_7. 3.5.
6 2040	43.1	6 13	4.35	—0.10	— 0.19	A_0	$\mu = 4''$.
7 2036	44.5	7 24	7.59	0.37	0.81	K_0	
6 2037	44.6	6 56	6.76	0.14	—0.17*	B_9	
8 2134	46.8	8 26	7.00	—0.03	0.32	G_0	Mt. W.: G_1; 4.2.
5 2074	47.1	5 42	6.26	0.41	—0.12	A_3	
6 2060	50.1	6 20	4.12	...	0.80	K_0	Mt. W.: G_5; 0.3.
6 2061	50.2	5 57	7.75	...	...	K_2	
7 2049	51.2	7 2	7.25	—0.21	...	A_0	

Field 8.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
44 2204	12 28.4	43 54	10.62	...	...	..	
46 1793	28.4	45 53	9.00	0.71	...	A_0	
44 2205	28.9	44 38	7.98	...	0.41	F_8	
44 2206	29.2	44 41	10.17	...	...	..	
45 2047	29.2	45 32	10.52	...	...	..	
47 1969	29.3	47 18	8.39	0.98	0.97	K_0	
47 1970	30.0	47 33	9.36	...	1.68	K_5	
45 2050	30.4	45 22	10.38	...	...	..	
46 1796	31.1	45 59	9.12	0.11	...	..	
46 1797	31.2	46 19	9.16	...	1.78	K_5	
46 1798	31.4	46 13	10.32	...	...	..	
45 2052	31.6	45 27	9.50	0.61	...	..	
47 1976	32.3	47 14	9.08	0.47	...	K_0	
47 1975	32.3	47 37	10.50	...	...	..	
45 2054	32.8	45 24	10.36	—0.08	...	..	

Field 8. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
46 1802	12 32.8	45 48	8.22	0.24	...	F_0	
48 2042	32.8	47 49	10.82	...	...	..	
46 1804	33.0	46 45	10.44	...	...	..	
44 2212	33.7	44 39	9.80	0.46	0.85*	K_0	$\mu = 7''$.
46 1805	33.9	45 46	7.54	−0.16	0.36	F_2	
46 1807	34.0	46 11	10.46	...	...	..	
47 1977	34.1	47 20	9.80	0.44	...	A_3	
45 2056	35.0	45 16	10.38	...	...	..	
45 2057	35.2	45 26	9.99	...	...	..	
46 1810	35.6	46 10	9.38	−0.05	...	..	
47 1979	35.9	47 20	9.10	0.06	...	G_5	
46 1811	36.0	45 45	10.48	...	...	..	
48 2047	36.1	47 49	10.69	...	...	..	
47 1980	36.3	47 10	10.18	0.22	...	..	
44 2215	36.5	44 31	9.92	−0.02	...	..	
47 1982	37.0	46 58	10.22	...	...	..	
44 2216	37.1	44 29	10.05	0.22	...	..	
46 1814	37.5	46 25	7.18	0.13	0.05	A_2	
46 1815	37.6	46 35	10.44	...	...	..	
44 2218	37.7	43 46	9.99	...	...	..	
44 2219	38.0	44 33	10.25	0.01	...	..	
45 2058	38.2	45 10	10.18	0.06	...	..	
44 2220	38.9	44 23	10.51	...	...	..	
45 2059	39.1	45 16	10.51	...	...	..	
45 2060	39.6	45 15	10.69	...	...	..	
43 2253	39.8	43 39	8.20	...	1.05	K_2	
44 2221	39.8	44 39	6.64	−0.03	0.16	F_5	$\mu = 3''$.
45 2061	40.1	45 27	9.50	0.03	...	G_0	
44 2222	40.3	44 43	9.78	0.15	0.26*	..	
44 2223	40.3	43 58	10.08	...	...	..	
46 1817	40.4	45 58	8.38	...	3.00	Nb	var. (1m.2)
44 2224	40.5	43 46	10.06	...	...	..	
47 1990	40.7	47 1	10.30	...	...	..	
47 1989	40.7	47 24	10.48	...	...	..	
46 1818	41.5	46 32	10.50	...	...	..	
46 1819	42.0	46 3	9.75	0.22	...	K_0	
48 2055	42.0	47 55	9.47	...	1.45	M_a	
46 1820	43.3	46 11	10.12	0.16	...	..	
44 2225	44.1	44 41	9.77	0.34	...	A_2	
46 1821	44.4	46 35	10.02	−0.02	...	..	
47 1994	44.4	47 0	10.14	0.12	...	..	
44 2226	44.5	43 54	10.17	...	...	..	
48 2058	44.7	47 48	10.88	...	...	..	
46 1823	44.9	45 58	10.58	...	...	..	
47 1995	45.2	47 3	10.68	...	...	..	

Field 8. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
45 2066	12 45.4	45 41	10.20	0.17	...	..	
47 1996	45.6	47 40	10.34	—0.28	...	..	
46 1824	46.0	46 37	9.00	0.37	...	K_0	
44 2230	47.1	44 33	9.14	0.11	...	F_5	
47 1997	47.8	47 19	9 06	- 0.03	...	G_0	
44 2231	47.9	44 18	9.98	...	...	K_5	
46 1826	48.1	46 7	10.04	0.05	...	..	
46 1828	48.4	46 22	10.16	0.15	...	K_2	
48 2062	48.5	48 3	10.39	...	...	..	
48 2061	48.5	48 12	9.28	...	...	F_5	
47 1998	48.8	47 12	8.94	1.00	1.43	Ma	
47 1999	49.7	47 22	10.20	—0.08	..	..	
47 2001	49.8	46 56	9.88	0.05	...	.	
47 2000	49.9	47 19	8.52	0.66	...	K_0	
46 1829	50.3	46 1	10.66	...	...	..	
47 2003	50.4	47 45	7.60	1.45	1.60	Mb	$\mu = 2''$.
45 2070	50.6	44 50	9.38	—0.27	0.32*	F_8	
45 2071	50.8	45 7	10.48	...	...	..	
46 1831	50.9	45 59	10.04	—0.01	...	..	
45 2074	51.4	44 49	10.23	...	...	..	
48 2066	51.6	47 55	10.12	...	...	..	
44 2234	52.1	44 6	6.88	...	—0.14	A_0	
46 1832	52.2	46 9	8.64	0.42	...	F_{2p}	
46 1833	52.6	46 44	7.26	0.55	1.04	K_0	$\mu = 5''$.
44 2238	52.9	44 21	8.44	...	0.30	F_5	Mt. W.: F_4; 3.3.
48 2069	53.0	48 1	10.08	..	...	..	
45 2077	53.6	45 30	10.46	..	...	..	
47 2007	54.6	47 41	9.01	...	...	K_0	

Field 9. (Sel. Area 57.)

B. D	1900 α	1900 δ	m_p	UR	C	H D.	Remarks
°	h m	° ′					
30 2349	12 53.7	30 34	10.62	...	...	..	
29 2348	53.8	28 52	6.91	0.48	—0.01	A_5	
30 2351	54.7	30 35	10.02	...	...	G_0	
31 2431	54.7	30 58	10.32	...	...	G	
28 2171	54.8	28 37	7.50	0.25	0.31	F_5	
29 2350	54.8	28 46	8.54	0.24	...	F_5	
29 2351	55.1	29 12	10.06	...	...	..	
31 2434	55.5	31 20	5.83	0.88	0.75	K_0	Mt. W.: G_9; 0.1
29 2353	55.6	29 0	10.64	...	...	..	
32 2311	55.7	32 18	7.59	...	0.82	G_5	

Field 9. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
29 2354	12 55.9	29 4	10.24	0.07	...	..	
31 2436	56.1	31 3	9.55	0.33	...	G_5	
32 2312	56.2	32 8	9.84	...	...	G_5	
32 2313	56.7	31 54	10.02	...	...	G_5	
30 2355	57.1	30 8	10.30	—0.20	...	..	
29 2357	57.3	29 32	9.41	0.28	...	G_0	
31 2442	57.6	30 53	8.11	—0.05	...	F_0	
29 2358	57.7	29 30	10.56	...	...	..	
31 2443	57.9	30 50	9.62	0.06	...	..	
31 2444	57.9	31 37	10.13	0.09	...	G_5	
29 2359	58.5	29 9	10.68	...	...	..	
28 2176	58.8	28 7	10.48	...	...	..	$\mu = 9''$.
29 2360	58.9	28 59	9.58	—0.05	...	F_8	
31 2446	59.1	31 19	8.84	0.12	...	F_5	
31 2445	59.1	31 33	8.22	0.85	0.78	G_5	
31 2448	59.2	30 59	10.29	...	...	G_5	
31 2447	59.2	31 12	10.59	...	...	..	
28 2178	59.4	28 15	10.46	...	...	..	
28 2179	59.5	28 38	9.60	0.09	...	F_8	
31 2360	59.5	30 45	10.02	0.20	...	G_5	
29 2362	13 0.4	28 56	10.24	—0.02	...	..	
29 2363	1.1	29 29	10.32	—0.01	...	..	
29 2364	1.2	28 48	9.88	0.07	...		
29 2365	1.5	29 34	6.27	0.36	—0.36	A_2	Mt. W.: A_{3n}; 1.9.
28 2182	1.7	28 37	9.55	0.17	...	..	
27 2216	2.0	27 43	9.66	0.47	...	G_5	
29 2368	2.0	29 9	10.69	...	...	..	
28 2184	2.1	28 45	9.42	—0.05	...	F_8	
28 2186	2.3	27 52	10.86	...	...	..	
28 2185	2.4	28 10	6.26	1.43	1.34	K_5	Mt. W.: K_5; 0.2.
29 2369	2.4	29 14	9 69	...	...	K_2	
31 2452	2.8	31 12	10.19	...	...	..	
30 2367	2.9	29 57	9.93	0.10	...	G_5	
30 2368	3.0	29 59	9.94	0.06	...	G_0	
28 2187	3.2	28 4	7.47	...	1.09	K_5	
28 2188	3.3	28 46	10.53	...	...	..	
29 2372	3.3	29 19	10.90	...	...	..	
30 2371	3.8	29 55	9.01	—0.33	0.25*	G_0	
28 2189	3.9	28 10	9.66	...	...	..	
31 2456	4.3	30 47	8.41	—0.26	...	F_5	
29 2373	4.5	29 13	9.60	—0.01	...	G_5	
31 2458	4.7	30 59	9.44	0.02	...	F_8	
29 2374	5.2	29 22	9.69	0.47	...	K_0	
30 2372	5.5	29 59	9.40	0.64	...	G_5	
31 2460	5.5	31 16	10.57	...	...	..	

Field 9. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
31 2461	13 5.9	31 21	10.42	...	...	..	
29 2375	6.0	29 5	9.94	0.19	...	..	
29 2376	6.0	29 12	10.14	—0.07	...	..	
29 2378	6.2	28 54	8.85	0.21	...	A_5	
30 2375	6.5	30 20	10.33	...	...	..	
31 2462	6.5	31 24	9.91	0.06	...	G_5	
28 2192	6.6	28 7	10.18	...	...	..	
29 2379	6.7	29 24	9.14	—0.07	...	F_8	
30 2378	7.5	30 32	9.98	...	...	K_0	
28 2195	7.7	28 14	10.81	...	...	..	
29 2380	8.1	29 29	10.05	0.33	...	..	
29 2381	8.3	29 10	10.89	...	...	..	
28 2198	8.6	28 2	9.88	...	...	..	
29 2382	8.6	28 51	9.70	0.01	...	G	
30 2382	8.9	30 18	9.25	...	...	K_0	
30 2383	9.0	30 20	8.30	0.64	...	K_0	
31 2463	9.0	30 55	10.22	0.19	...	..	
28 2199	9.1	28 22	10.13	0.18	...	..	
31 2464	9.5	31 36	9.40	0.28	...	B_9	
30 2384	9.9	29 55	8.94	—0.16	0.23*	G_0	
30 2386	10.4	30 17	10.35	...	...	K	
29 2385	10.9	29 17	8.48	0.96	1.04	K_0	
30 2387	10.9	29 53	9.88	0.00	0.44*	..	
28 2205	11.5	28 17	8.77	0.13	...	K_0	$\mu = 39''$. Dwarf.
31 2466	11.5	31 26	9.74	...	...	G_5	
32 2325	11.8	32 4	9.80	...	...	G_0	
29 2386	12.2	29 35	9.67	...	...	K_0	
31 2467	12.4	31 37	10.04	...	...	G_5	
31 2468	12.6	31 9	8.52	0.42	0.03	F_0	
28 2206	13.1	28 12	10.61	...	...	..	
28 2207	13.2	27 58	8.84	...	...	G_5	
28 2209	13.3	28 40	9.33	0.08	...	..	
32 2337	13.5	32 10	8.24	...	0.17	F_2	
29 2389	13.7	28 59	9.96	...	...	..	
28 2212	14.3	28 9	9.33	...	...	G_5	
29 2391	14.3	29 7	7.52	0.19	0.32	F_8	$\mu = 10''$.

Field 10.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
22 2531	12 53.8	22 35	7.78	0.49	0.39	G_0	$\mu = 26''$.
23 2516	53.9	22 46	8.97	0.03	...	K_0	
24 2518	55.3	24 15	9.47	...	...	K_0	
22 2532	55.4	22 6	7.92	0.35	0.26	F_8	
24 2522	55.8	24 11	8.45	0.24	0.15	F_5	

Field 10. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
25 2583	12 56.2	24 51	8.77	...	0.80	K_0	$\mu = 17''$.
22 2537	56.7	21 48	8.59	...	1.43	K_5	
24 2528	57.7	24 2	8.02	—0.07	0.28	F_2	$\mu = 5''$.
23 2528	57.8	23 30	8.92	...	0.77	K_0	
23 2530	58.1	23 10	6.89	0.44	—0.07	A_0	
23 2531	58.2	23 44	8.48	0.57	0.92	K_0	$\mu = 6''$.
24 2530	58.3	24 41	9.09	...	...	G_5	
24 2531	58.4	24 21	8.71	..	1.57	Ma	
24 2532	58.8	24 11	9.42	...	...	..	
22 2540	59.2	22 25	8.35	0.31	0.35	G_5	
22 2541	13 0.2	22 1	8.91	...	...	F_8	
24 2535	0.2	24 21	9.66	...	...	..	
24 2537	0.9	24 23	9.54	...	...	..	
21 2487	1.4	21 42	6.35	—0.06	0.21	F_5	Mt. W.: F1; 3.1.
23 2537	1.5	22 48	6.98	0.04	0.13	F_0	See 1-st paper.
23 2538	1.5	23 9	7.28	1.11	1.40	Mb	Mt. W.: M_5; —0.4. See
25 2597	2.0	25 18	9.50	...	...	..	[1-st paper
24 2539	2.9	24 32	8.66	0.15	...	G_5	Mt. W.: G_5; 5.1.
25 2599	3.2	25 21	7.70	0.56	0.77	K_0	
22 2545	4.3	22 0	8.72	— 0.04	...	G_5	
24 2546	4.5	24 27	8.52	0.13	...	G_5	$\mu = ''22$
21 2494	5.0	21 12	8.68	...	...	G_5	
22 2550	6.0	21 46	7.11	0.07	0.22	F_2	
22 2552	6.7	22 28	7.56	0.21	0.66	G_5	
21 2495	7.1	21 23	8.93	0.07	...	..	
25 2610	7.3	24 48	7.32	0.59	0.80	K_0	
21 2500	8.3	21 31	9.42	...	...	..	
22 2564	11.2	21 55	7.24	...	—0.09	B_9	

Field 11. (Sel. Area 58)

H. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
30 2461	13 49.9	30 25	7.67	0.37	0.07	F_2	
30 2462	50.1	30 43	8.84	0.44	...	F_0	
28 2277	51.5	28 42	10.30	...	...	..	
29 2473	51.5	29 10	6.98	0.62	—0.18	A_0	
29 2472	51.6	29 39	10 03	...	...	..	
31 2560	51.7	30 51	9.84	0.03	...	..	
28 2278	52.0	27 59	6.49	1.37	1.28	K_0	
29 2475	52.1	28 49	9.62	0.52	...	K_0	
30 2464	52.1	30 40	9.76	0.04	...	..	$\mu = 11''$.
30 2465	52.2	30 35	10.86	...	...	..	

Field 11. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
30 2466	13 52.2	30 46	9.42	0.26	...	..	
30 2468	52.8	30 11	10.03	...	...	..	
29 2477	52.9	29 16	10.82	...	...	..	
30 2470	53.7	30 12	10.64	...	...	..	
28 2280	53.8	28 42	10.02	...	...	..	
29 2478	53.8	28 49	10.69	...	...	..	
28 2281	54.1	28 43	10.78	...	...	..	
27 2315	54.4	27 30	9.88	...	...	..	
29 2282	54.5	28 46	10.10	0.17	...	..	
31 2569	55.1	30 52	10.59	...	...	..	
27 2317	55.2	27 46	9.57	0.11	...	..	
28 2284	55.4	28 38	9.62	—0.02	...	..	
27 2318	55.6	27 37	8.80	0.10	...	F_8	
28 2286	55.6	28 34	10.29	...	...	..	
29 2482	55.7	28 56	9.99	...	...	..	
28 2287	56.6	27 52	6.28	0.40	0.00	A_3	
31 2574	56.6	31 10	9.75	...	...	K_0	
29 2483	56.8	28 53	8.15	—0.02	—0.02	A_2	Mt. W.: A_{7s}; 1.9.
31 2575	56.9	30 56	10.38	...	...	..	
32 2419	56.9	32 2	8.32	1.28	1.26	K_0	
30 2475	57.2	30 35	10.02	...	...	..	
31 2576	57.2	31 41	9.66	0.20	...	..	
32 2423	57.9	31 50	10.00	...	...	..	
31 2578	58.4	30 48	9.80	0.18	...	K_0	
28 2290	58.7	28 16	9.92	0.17	...	..	
28 2289	58.7	28 28	10.07	0.14	...	..	
28 2291	58.9	27 58	8.16	0.71	0.84	G_5	
29 2486	14 0.0	29 37	9.43	...	...	Ma	Mt. W.: M_4; —0.2.
29 2487	0.3	29 44	10.02	...	0.21*	..	
29 2488	0.4	29 31	10.04	0.08	...	..	
30 2479	1.0	30 2	10.18	—0.13	....	..	
28 2292	1.9	28 13	8.18	0.17	...	F_2	
31 2582	2.0	31 20	8.12	0.38	0.33	K_0	$\mu = 11''$.
27 2332	2.1	27 35	10.13	...	...	..	
30 2483	2.2	30 45	9.76	—0.07	...	..	
29 2493	2.4	28 54	7.84	0.28	0.81	K_0	Mt. W.: G_6; 2.5.
29 2494	2.4	29 19	11.09	...	...	..	
29 2495	2.6	29 45	9.82	0.04	0.26*	..	
31 2584	3.2	31 27	9.46	0.62	...	K_2	
30 2485	3.3	30 29	10.07	—0.01	...	..	
...	3.5	28 33	10.69	...	...	..	
29 2499	4.0	29 27	9.56	0.05	...	K_0	
29 2498	4.0	29 38	9.66	0.05	0.25*	..	
30 2486	4.0	30 20	9.55	0.08	...	K_0	
29 2500	4.6	29 40	10.10	—0.06	0.46*	..	

Field 11. Continued

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
31 2586	14 4.7	31 5	9.98	—0.09	...	..	
29 2501	4.8	29 28	10.31	—0.05	...	..	
...	5.0	29 7	10.61	...	...	..	
31 2588	5.4	31 43	8.01	0.34	0.60	K_0	$\mu = 7''$.
29 2502	5.6	28 52	10.21	0.15	...	..	
29 2503	5.8	29 38	10.06	0.06	0.09*	..	
28 2294	5.9	28 5	8.86	—0.07	...	G_5	
31 2590	5.9	31 25	10.17	...	...	..	
28 2295	6.2	27 56	10.47	...	...	..	
28 2296	6.7	28 27	10.16	0.13	...	..	
30 2488	6.9	30 42	9.88	0.10	...	..	
28 2297	7.1	28 29	8.74	—0.07	...	G_0	
31 2592	7.4	31 47	9.89	...	...	..	
28 2299	7.6	27 49	9.85	...	...	..	
29 2505	8.0	29 12	7.98	0.28	0.33	F_2	
30 2493	8.5	30 35	9.15	0.14	...	G_5	
28 2302	8.8	28 10	9.68	...	...	.,	
29 2506	9.1	29 27	10.25	...	...	..	
29 2508	9.4	29 35	7.04	0.54	0.14	F_0 / A_2	
31 2595	9.4	31 40	7.29	...	—0.27	A_0	
28 2304	9.6	28 3	9.60	...	...	..	
28 2305	9.6	28 23	10.00	...	...	..	
30 2494	9.7	30 41	9.00	...	0.82	K_5	$\mu = 43''$. Dwarf.
28 2306	9.8	28 31	10.64	...	...	..	
29 2509	10.1	29 33	8.70	0.53	...	F_5	
28 2307	10.3	27 57	9.90	...	...	..	
30 2497	10.3	30 14	10.65	...	...	..	
29 2510	10.4	29 29	9.95	...	...	..	
30 2498	10.9	30 38	9.84	...	...	..	
29 2511	11.0	29 4	9.74	...	...	..	

Field 12. (Sel. Area 59.)

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
30 2586	14 51.9	30 17	9.62	0.52	...	F_0	
30 2587	52.0	29 52	9.77	0.09	...	F_8	
31 2676	52.0	31 32	9.80	...	...	G_5	
30 2589	52.2	30 15	9.50	0.16	...	F_5	
30 2591	53.6	29 52	8.61	—0.08	0.25*	F_2	
29 2602	53.7	29 37	10.69	...	...	..	
30 2594	54.7	30 32	9.88	0.04	...	G	
30 2596	55.3	30 16	9.78	...	1.45*	K_0	
31 2681	56.1	31 21	10.67	...	...	..	
32 2536	56.3	32 0	7.98	...	0.26	F_8	$\mu = 22''$.

Field 12. Continued.

B. D	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
29 2609	14 56.5	28 58	9.00	—0.09	...	F_8	
30 2601	57.2	29 54	9.19	...	...	..	
30 2602	57.8	30 47	9.62	0 54	...	F	
29 2612	57.9	29 28	10.02	0.49	...	..	
31 2685	58.2	31 44	9.70	0.05	...	..	
27 2445	58.3	27 49	9.66	0.04	...	G	
32 2537	58.4	32 4	8.06	1.40	1.24	Mb	
31 2687	58.5	31 34	10.20	...	...	..	
28 2391	58.8	28 40	6.97	0.19	—0.18	A_0	
29 2614	59.0	29 43	10.02	...	...	..	
29 2616	59.5	29 8	10.96	...	...	..	
28 2392	59.6	28 35	9.84	—0.03	...	..	
29 2617	59.9	29 45	10.33	...	...	..	
29 2618	15 0.0	29 26	7.90	0.27	—0.08*	A_2	Mt W.: A_2n; 1.9
32 2541	0.3	32 5	10.67	...	...	..	
30 2609	1.1	30 38	10 41	...	...	..	
31 2690	1.1	31 13	10.17	...	...	..	
31 2694	1.6	31 31	8.96	—0.01	...	..	
31 2695	1.7	31 26	9.35	...	...	K_5	
29 2621	1.9	29 22	10.09	0 37	...	..	Mt. W.: G_6; 1.0
29 2622	1.9	29 48	9.40	0.33	...	..	
29 2625	2.2	28 59	10.44	...	...	..	
29 2626	2.2	29 22	8 92	...	...	A	
29 2624	2.2	29 35	9.38	0 10	...	K_0	
31 2697	2.3	31 39	9.98	—0.09	...	..	
32 2546	2.6	32 13	10.14	...	...	..	
29 2627	2.8	29 1	8.91	—0.02	...	F_8	
30 2611	2.8	30 25	10.23	...	...	..	Mt. W.: F_0; 2.2.
31 2698	3.0	31 29	10.52	...	...	..	
31 2701	3.4	31 10	10.04	0.05	...	..	
27 2456	3.6	27 37	9.93	...	...	..	
29 2628	3.6	28 57	10.15	0.36	...	..	
29 2629	3.7	28 53	8.03	—0.05	0.65	G_5	$\mu = 14''$.
29 2630	3.8	29 32	10.72	...	...	..	
30 2613	4.3	29 53	10.50	...	...	..	
31 2702	4.4	31 19	9.82	0.22	...	K_0	
28 2402	4.7	28 3	10.07	—0.08	...	..	
28 2401	4.7	28 37	9.93	0.08	...	..	
28 2403	5.0	28 30	10.04	0.02	...	..	
30 2615	5.0	30 21	10.53	...	...	..	
30 2616	5.0	30 43	8.98	0.10	...	F_8	
28 2406	5.3	28 37	10.71	...	...	..	
32 2550	5.5	31 50	10.38	...	...	..	
28 2407	5.8	28 13	9.84	0.00	...	..	
28 2408	5.8	28 29	9.87	—0.03	...	..	

Field 12. Continued.

H D.	1900 α	1900 δ	mp	UR	C	H. D.	Remarks
°	h m	° ′					
27 2461	15 6.1	27 48	9.15	0.89	...	K_0	
30 2618	6.3	30 7	9.87	—0.10	...	..	$\mu = 11''$.
29 2632	6.5	29 28	10.73	...	...	..	
29 2633	6.7	29 37	7.44	—0.15	0.14	F_5	
31 2707	6.8	31 3	7.92	0.47	...	A_2	
31 2705	6.8	31 13	9.80	0.04	...	..	
31 2708	6.9	31 48	9.97	0.18	...	..	
30 2620	7.3	29 55	10.12	0.10	...	..	
30 2621	7.3	30 20	10.05	0.04	...	..	
30 2619	7.3	30 21	9.88	—0.07	...	..	
30 2622	7.5	30 40	10.28	...	...	..	
30 2623	7.7	30 48	10.33	...	...	..	
28 2409	7.8	28 34	10.37	...	...	..	
28 2410	7.9	28 26	10.41	...	...	..	
30 2624	8.2	30 0	10.43	...	...	..	
32 2558	8.2	31 51	9.48	0.61	...	K_0	
28 2412	8.5	28 19	8.71	...	...	G_5	
31 2711	8.8	31 41	9.93	...	...	..	
32 2559	8.9	31 49	10.59	...	...	..	
29 2638	9.3	29 5	10.79	...	...	..	
28 2413	9.7	28 44	10.44	...	...	..	
30 2628	9.8	30 21	10.03	...	...	..	
32 2561	10.0	32 9	7.52	...	1.29	K_5	
29 2640	10.3	29 32	4.94	—0.07	—0.44	A_0	$\mu = 8''$.
30 2629	11.0	30 18	10.04	...	...	..	
30 2630	11.0	30 22	9.94	...	...	G_5	
29 2641	11.1	29 17	9.86	0.41	...	K_0	
29 2642	11.2	29 47	10.69	...	...	..	
30 2631	11.3	30 44	9.66	0.07	...	G_5	
27 2468	11.5	27 44	8.94	...	...	F_8	
31 2712	11.5	31 13	9.00	—0.06	...	..	
29 2643	11.7	29 40	9.96	0.15	...	..	
31 2713	12.2	31 17	9.50	...	...	K_0	
30 2634	12.4	30 40	10.27	...	...	..	
31 2714	12.4	31 27	10.27	...	...	..	
29 2646	12.8	28 51	8.82	...	...	A_2	
...	12.8	31 15	10.40	...	...	..	
29 2648	12.9	29 12	9.68	0.05	...	K_0	$\mu = 17''$.
30 2635	13.3	30 42	9.79	0.06	...	G_5	
29 2649	13.4	29 19	9.22	0.00	...	G_5	

Field 13.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
6 3069	15 31.1	6 31	7.37	...	—0.06	A_2	
8 3066	37.7	8 8	7.63	—0.04	0.20	G_1	
7 3011	38.0	7 14	7.95	...	...	G_5	
6 3088	39.3	6 44	3.93	0.54	1.11	K_0	Mt. W.: K_2; 0.5.
5 3072	40.4	5 45	5.48	0.52	—0.28	A_0	$\mu = 3''$.
7 3023	41.6	7 40	5.07	0.07	0.55	G_0	Mt. W.: G_0; 4.1.
6 3103	45.3	6 16	7.02	...	...	A_0	
9 3116	49.8	8 52	6.36	...	—0.08	A_2	

Field 14. (Sel. Area 60).

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
32 2637	15 47.2	32 2	9.78	...	...	K_0	
31 2790	47.3	31 16	9.84	—0.09	...	G_5	$\mu = 14''$.
29 2725	47.4	29 30	9.52	0.19	...	G_5	
29 2724	47.4	29 40	9.71	0.18	...	F_8	
29 2727	47.9	28 57	10.34	...	...	K_5	
31 2792	47.9	31 16	9.54	0.08	...	G_5	
29 2728	48.0	29 22	9.89	—0.02	...	G_5	
30 2718	48.0	30 11	8.97	1.21	1.50	K_5	
31 2793	48.0	31 1	9.99	...	...	K_0	
32 2638	48.0	32 10	10.13	...	...	..	
28 2486	48.2	28 24	9.99	...	...	G_0	
29 2729	48.2	28 54	8.98	...	...	K_2	
31 2794	48.2	31 29	10.35	...	...	..	
29 2730	48.4	29 13	9.05	0.87	1.24*	K_2	
28 2487	49.1	28 6	9.44	...	...	K_2	
31 2795	49.3	31 33	9.30	...	...	K_5	
29 2734	49.4	29 46	9.22	0.48	...	K_0	
28 2490	49.9	28 12	10.14	...	...	G_0	
30 2722	49.9	30 42	10.88	...	...	..	
29 2736	50.1	29 44	10.43	...	...	K_0	
28 2492	50.2	28 11	10.86	...	...	G_0	
29 2739	51.4	29 49	7.56	0.30	—0.28	A_0	
28 2494	51.5	28 43	8.60	0.01	...	F_5	
31 2799	52.3	31 30	9.54	...	...	Ma	
32 2645	52.3	31 54	10.79	...	...	..	
29 2741	52.7	28 59	11.01	...	...	..	
28 2497	53.3	28 36	10.53	...	...	G_0	
30 2727	53.3	30 21	10.24	...	...	G_5	
28 2499	53.6	28 50	10.34	...	...	G_0	
28 2500	53.7	28 18	10.61	...	...	..	

Field 14. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
28 2501	15 53.8	27 53	10.34	...	...	G_0	
29 2744	53.9	29 35	11.03	...	...	..	
32 2649	54.0	32 10	9.56	...	...	K_0	
29 2745	54.3	29 51	10.36	...	...	K_0	
29 2746	54.4	29 39	10.30	...	...	G_0	
28 2503	54.5	28 1	8.68	0.44	...	K_0	Mt. W.: G_7; 5.0.
31 2802	54.6	31 27	10.30	—0.21	...	..	
30 2731	54.8	30 4	10.10	—0.07	...	G_5	
30 2730	54.8	30 17	8.95	1.25	1.40	K_5	
29 2748	55.0	29 44	8.20	0.63	0.92	K_0	Mt. W.: K_3; 0.4.
32 2654	55.1	32 3	9.28	0.28	...	F_5	
30 2732	55.2	30 36	9.94	—0.01	...	..	
30 2733	55.3	30 40	9.00	0.10	...	F_0	
31 2804	55.9	31 38	9.08	—0.04	...	F_8	
30 2735	56.2	29 55	9.53	0.56	...	K_0	Mt. W.: G_9; 2.0.
30 2736	56.2	30 23	9.92	0.29	...	K_0	
30 2737	56.3	30 28	10.73	—0.61	...	..	
29 2751	56.7	29 50	9.98	0.05	...	..	
31 2805	56.8	31 51	7.70	0.73	0.98	K_0	
28 2506	56.9	28 25	9.60	0.30	...	F_8	
29 2752	56.9	29 13	8.52	—0.05	...	G_5	
32 2660	56.9	32 19	8.11	...	0.87	K_0	
29 2753	57.0	28 59	10.02	0.40	...	..	
29 2754	57.3	28 53	9.48	0.16	...	K_0	
29 2755	57.3	29 3	9.88	0.11	...	..	
32 2662	57.3	31 57	10.31	...	...	..	
30 2738	57.4	30 7	5.05	...	—0.03	A_0	$\mu = 4''$.
30 2740	57.7	30 19	10.37	...	...	..	
32 2663	57.9	32 10	8.03	0.45	...	G_0	
32 2665	58.2	32 20	9.44	...	...	K_0	
28 2508	58.3	28 34	9.72	0.19	...	G_5	
30 2742	58.8	30 27	9.96	0.27	...	K_5	
29 2758	58.9	29 14	9.37	0.43	...	K_0	
29 2760	59.1	29 6	9.80	0.69	...	K_2	
29 2762	59.4	28 54	10.21	...	...	..	
30 2744	59.5	30 14	10.76	...	...	..	
31 2808	59.7	31 27	9.88	0.37	...	K_2	
28 2511	59.9	28 16	10.58	...	...	..	
31 2809	16 0.0	31 18	9.94	0 28	...	K_0	
30 2745	0.4	30 7	10.67	...	...	..	
31 2812	1.3	31 30	10.19	—0.23	...	..	
30 2747	1.4	30 28	10.43	...	...	..	
30 2748	1.4	30 41	10.92	...	...	..	
31 2814	1.6	31 50	7.83	0.27	—0.07	A_2	
29 2768	1.8	28 55	10.24	...	...	..	

Field 14. Continued.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
29 2767	16 1.8	29 16	10.23	—0.14	...	..	
30 2749	2.5	30 11	8.78	0.74	0.89	K_2	
29 2770	2.7	29 29	10.33	...	...	..	
30 2753	3.0	29 58	10.55	—0.48	...	..	
30 2751	3.0	30 44	9.88	—0.02	...	..	
29 2771	3.1	29 24	10.65	...	...	..	
29 2774	3.6	29 16	7.82	0.46	—0.08	A_3	
29 2775	3.7	29 25	9.74	...	...	..	
30 2755	3.7	30 7	9.56	0.34	...	A_3	
30 2754	3.7	30 40	10.75	...	...	..	
29 2776	3.9	29 38	10.27	...	...	..	
...	4.0	28 45	10.52	...	...	..	
29 2777	4.1	29 51	10.33	...	...	..	
30 2758	4.7	30 40	8.90	0.68	. .	K_0	
29 2780	5.0	29 43	10.30	...	...	..	
28 2524	5.1	28 18	9.91	...	...	..	
28 2526	5.3	28 25	9.81	...	...	..	
29 2781	5.5	29 18	10.07	—0.01	...	..	
30 2760	5.7	30 7	9.64	...	...	K_0	
30 2761	6.0	30 27	9.77	0.28	...	K_0	
30 2762	6.4	29 58	9.70	0.13	...	..	
30 2764	6.7	30 5	9.71	0.14	...	..	
31 2825	6.7	31 14	9.80	...	...	K_5	
31 2826	7.0	31 13	8.00	...	...	G_5	$\mu = 20''$.
28 2529	7.4	28 42	8.02	...	0.27	F_8	

Field 15.

B. D.	1900 α	1900 δ	m_p	UR	C	H. D.	Remarks
°	h m	° ′					
38 4677	22 0.9	39 0	7.83	...	...	F_2	
35 4703	1.2	35 55	7.69	...	—0.33	B_9	
35 4712	2.8	35 37	7.89	...	—0.10	A_3	$\mu = 3''$.
35 4725	6.9	35 46	7.87	...	0.49	K_0	$\mu = 25''$.
36 4785	7.6	37 10	8.39	. .	0.29	F_8	
38 4711	9.6	39 13	6.10	1.08	1.50	K_2	Mt. W.: K_4; 0.2.
36 4789	10.0	36 20	7.56	...	—0.19	A_0	
37 4526	11.6	37 15	5.66	0 92	1.39	K_0	Mt. W.: K_4; —0.6.
37 4537	14.6	37 15	6.36	0.35	0.06	F_0	$\mu = 9''$.
36 4811	16.1	36 48	8.02	...	1.00	K_0	
35 4785	18.4	36 10	7.46	0.38	0.81	K_0	$\mu = 8''$.
37 4560	19.5	38 4	6.61	0.18	0.32	F_8	
36 4834	22.2	36 16	8.25	...	0.05	F_8	$\mu = 22''$.
36 4835	22.4	36 57	6.19	—0.26	—0.39	B_3	
39 4841	23.1	39 19	6.15	...	—0.09	B_3	