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NO. 14

NEW PROPER MOTION STARS (SIXTH LIST),

By FRANK E. ROSS.

The following list of new proper motion stars is a continuation of that in A. J. No. 886.

Group	No.	Mag.	Eq. of 1875		Identifying Star			P.M.		
			α	δ	m	$\Delta\alpha \cos \delta$	$\Delta\delta$	p	s	
			^h ^m ^s	[°] [']		[']	[']	[°]	["]	
138	681 ¹	10	2 1 10	- 1 11.1	7.5	- 0.5	+1.3	214	0.45	
139	682	9.5	8 41 46	+ 6 56.1	....	....	....	158	0.53	BD+7°2031
	683	10	8 43 45	+ 8 5.8	10.5	- 0.9	+0.2	157	0.51	
	684	9.5	8 45 11	+ 5 24.7	8.5	+ 2.4	-1.7	159	0.14	
	685	9.3	8 54 13	+ 5 17.0	....	....	....	86	0.24	BD+5°2093
	686	11	8 54 14	+ 5 44.1	10	+ 2.5	-0.3	221	0.47	
	687	11.5	8 54 16	+ 5 33.9	11	+ 0.5	-0.2	221	0.47	
	688	13	9 1 5	+ 6 48.1	8.6	+ 3.1	-1.3	274	0.27	
140	689	14	11 59 18	+70 14.2	12	- 1.7	-2.6	258	0.59	
	690	11	12 17 13	+64 43.0	10.5	- 1.4	+4.6	314	0.68	
141	691	11	12 10 42	-16 56.2	11	+ 1.4	+3.0	261	0.24	
	692	8.5	12 14 21	-19 12.0	....	....	....	272	0.33	BD-19°3466
	693	10	12 16 32	-16 58.2	10.5	- 4.3	+2.3	186	0.29	
	694	14	12 16 43	-17 51.0	9	- 1.3	-1.1	270	0.31	
	695	12	12 18 17	-17 30.1	8.7	- 1.2	+3.4	155	2.60	
	696	12	12 19 38	-12 42.8	11	- 3.4	-0.6	278	0.55	
	697	9.3	12 21 52	-16 13.2	....	....	....	276	0.65	BD-16°3469
	698	12	12 30 44	-16 22.5	11	- 0.8	-1.1	276	0.27	
	699	11	12 30 47	-16 21.5	10	- 2.9	-1.6	276	0.27	
	700	9.0	12 33 26	-12 11.8	....	....	....	302	0.28	BD-12°3671
	701	13	12 34 28	-16 44.9	9	+ 9.1	-1.9	173	0.33	
	702 ²	9	12 34 43	-12 20.4	6	- 0.8	-0.7	265	0.12	
	703	9.1	12 36 6	-18 48.6	....	....	....	286	0.14	BD-18°3447
	704	11	12 38 12	-14 40.8	8.7	-11.4	+8.7	248	0.48	
	705	9.9	12 43 39	-16 41.9	....	....	....	319	0.44	BD-16°3543
142	706	9.0	18 12 46	+26 37.3	....	....	....	70	0.32	A. G. Camb. 8797
	707	13	18 18 11	+28 7.4	11	- 1.4	+0.6	135	0.27	
	708	12	18 18 33	+28 6.4	10	- 3.0	+0.8	194	0.33	
	709	10	18 19 57	+24 34.4	9	- 2.3	-9.5	198	0.43	
	710	11	18 19 59	+28 13.2	10	- 1.3	-4.3	278	0.22	

(117)

Group	No.	Mag.	Eq. of 1875		Identifying Star			P.M.		
			α	δ	m	$\Delta\alpha \cos \delta$	$\Delta\delta$	p	s	
			^h ^m ^s	[°] [']		[']	[']	[°]	["]	
142	711	11	18 30 26	+28 36.5	9.4	+ 3.9	-1.3	180	0.36	
	712	11	18 44 58	+27 57.6	10	- 1.7	-1.2	178	0.26	
143	713	11	18 26 44	- 6 58.7	10	+ 6.8	+2.0	201	0.63	
	714	10	18 37 54	- 7 18.7	8.0	+ 1.6	-4.6	170	0.23	
	715	8.3	18 38 25	- 5 37.8	....	....	....	262	0.28	A. G. Stras. 6298
	716	9.3	18 41 42	- 5 13.3	....	....	....	129	0.27	BD-5°4767
	717	9.2	18 49 44	- 4 33.9	....	....	....	195	0.42	A. G. Stras. 6388
	718	8.3	18 50 8	- 5 49.7	....	....	....	208	0.59	A. G. Stras. 6392
144	719	11	18 33 23	-10 34.1	8.3	-17.0	-3.2	185	0.52	
	720	9.7	18 33 54	-13 28.8	....	....	....	179	0.71	BD-13°5069
	721	9.5	18 52 4	-16 20.3	8.5	- 5.5	-3.5	218	0.28	
	722	12	18 56 54	-14 31.0	8.4	- 3.6	-0.1	145	0.12	
	723	9.1	19 1 39	-11 41.7	....	....	....	296	0.18	A. G. Camb. 6628
	724	9.6	19 2 59	-16 10.3	....	....	....	176	0.26	BD-16°5180
	725	9.1	19 4 46	- 9 45.3	....	....	....	254	0.37	BD-9°5030
145	726	9.1	18 56 8	-18 51.6	....	....	....	210	0.22	BD-18°5184
	727	14	19 2 14	-14 56.6	9.0	+ 3.9	-2.1	160	0.49	
	728	14	19 3 59	-14 48.7	12	+ 1.5	-1.1	266	0.50	
	729	13	19 5 37	-15 38.1	11	- 1.2	+3.9	203	0.23	
146	730	10	19 1 44	+20 42.1	9	+ 1.3	-1.9	233	0.56	
	731	10	19 1 51	+20 41.4	9	+ 3.2	-2.7	233	0.56	
	732	10.5	19 6 56	+23 55.3	11	+ 2.5	+1.1	196	0.26	
	733	11	19 9 13	+19 5.7	10	+ 1.9	+1.2	309	0.73	
	734	13	19 9 13	+19 5.0	10	+ 1.9	+0.5	309	0.73	
	735	9.5	19 10 7	+24 40.3	....	....	....	45	0.32	BD+24°3692
	736	11	19 19 45	+22 33.0	8.5	+ 4.2	+1.2	16	0.26	
	737	9.3	19 24 43	+21 25.6	....	....	....	227	0.24	BD+21°3804
147	738	9.5	19 13 52	- 4 43.8	....	....	....	180	0.50	BD-4°4778
	739	10.5	19 24 35	- 5 25.0	8.2	- 5.0	-2.3	186	0.28	
	740	11	19 29 2	- 4 26.2	10	- 2.0	-0.6	195	0.31	
	741	11	19 29 28	- 1 22.2	10	- 5.9	+1.4	349	0.27	
	742	12	19 30 37	- 4 42.6	11	- 3.8	-0.9	200	0.29	
	743	9.5	19 31 36	- 0 47.1	7.5	- 2.9	-1.0	177	0.22	
	744	10	19 32 57	- 2 33.2	10	- 0.5	-1.4	141	0.26	
	745	10	19 34 12	- 4 42.7	9	- 2.6	+2.3	201	0.14	
148	746	10	19 17 19	+35 48.3	9.4	+ 2.3	+1.2	243	0.25	
	787	9.5	19 17 42	+33 38.0	....	....	....	10	0.77	BD+33°3433
149	748	10	19 18 41	+ 8 18.7	9	- 0.5	-1.5	187	0.24	
	749	12	19 21 31	+ 9 52.3	9.5	+ 2.2	-1.5	217	0.24	
	750	8.7	19 28 13	+12 22.5	....	....	....	190	0.29	A. G. Leipz. 7312
150	751	9.5	19 35 45	-19 22.9	....	....	....	158	1.17	BD-19°5899

Group	No.	Mag.	Eq. of 1875		Identifying Star			P.M.		
			α	δ	m	$\Delta\alpha \cos \delta$	$\Delta\delta$	p	s	
			^h ^m ^s	[°] [']		[']	[']	[°]	["]	
151	752	10	20 1 51	+ 7 5.2	9.5	+ 1.3	+0.7	225	0.38	
	753	11	20 7 7	+10 3.7	9	- 0.3	-2.3	256	0.20	
	754	10	20 8 0	+13 0.9	8.5	-14.4	+9.0	102	0.40	
	755	12	20 12 10	+10 42.0	9	+ 4.8	-0.4	209	0.18	
	756	11	20 12 12	+12 35.7	8.6	- 7.2	+0.3	78	0.38	
	757	9.0	20 15 54	+13 26.0	....	....	....	90	0.32	A. G. Leipz. 7876
	758	9.1	20 16 18	+11 17.7	....	....	....	219	0.34	A. G. Leipz. 7880
	759	10.5	20 17 58	+14 13.7	10.0	0.0	+2.5	90	0.27	
	760	9.5	20 21 2	+12 42.1	....	....	....	106	0.29	BD+12°4332
152	761	9.5	20 28 59	- 7 39.2	9.3	+ 4.6	-1.4	192	0.14	
	762	11	20 30 11	- 3 7.3	5	- 0.5	-8.4	85	0.38	
	763	10	20 32 16	- 6 53.7	9	+ 5.0	-0.5	203	0.23	
153	764	9	20 38 20	+51 49.6	9	+ 1.7	-0.6	6	0.20	
	765	9.2	20 46 49	+52 25.5	....	....	....	63	0.54	BD+52°2815
154	766	11	20 38 8	+35 3.5	9	+ 3.0	0.0	208	0.67	
	767	10.5	20 51 36	+34 30.2	9.5	+ 3.2	-2.2	87	0.42	
155	768	11	20 55 36	-19 0.9	9.1	- 4.6	-6.7	103	0.35	
	769	11	20 59 21	-17 18.9	9	- 8.8	+6.7	205	2.31	
	770	10.5	21 6 30	-19 50.0	10	+ 1.6	+1.4	194	1.12	
	771	9.2	21 15 35	-18 2.4	....	....	....	180	0.27	BD-18°5918
156	772	13	21 8 2	+17 35.1	9	+ 1.4	-0.8	102	0.61	
	773	13	21 11 38	+20 22.2	8.3	- 3.4	+3.4	52	0.55	
	774	10	21 11 58	+21 33.6	9	+ 2.1	-0.8	42	0.26	
	775	9.5	21 23 40	+17 5.4	9	- 3.4	+2.6	65	1.08	
157	776	13	21 10 43	+29 20.6	10	- 1.3	+4.1	66	0.22	
	777	9	21 16 39	+30 34.1	9	- 1.0	+3.6	63	0.37	
158	778	13	21 21 36	+ 6 46.1	9.1	- 4.7	-0.5	207	0.76	
	779	11	21 41 41	+ 5 15.1	8.5	+ 1.2	+1.6	105	0.31	
159	780	9.5	22 46 32	-14 54.6	....	....	....	120	1.12	BD-15°6290
	781	11	22 54 29	-19 17.0	8.9	-14.0	-8.7	99	0.68	
	782	11	22 54 59	-19 49.8	9.1	+ 6.4	+1.9	187	0.32	
160	783	9.5	23 2 8	+41 10.7	9.0	+ 9.2	-4.1	98	0.28	
	784	12	23 4 4	+39 20.0	8.4	+ 8.1	-7.3	208	0.34	
	785	9.5	23 7 43	+38 44.7	....	....	....	129	0.57	BD+38°4955
161	786	9.4	23 3 9	+ 0 3.7	....	....	....	191	1.37	BD-0°4470
	787	12	23 14 46	- 2 16.5	8.5	- 4.9	+2.3	209	0.47	

(1) Shares common p. m. with its identifying star A. G. Nic. 430.

(2) Shares common p. m. with B. G. C. 6239.

TABLE 2. DATA ON PLATES

Group	Plate Center 1925.0			Epochs of Plates	
	α		δ		
	h	m	°		
138	2	14	- 2	1913 Oct. 3	1927 Nov. 25
139	8	57	+ 6	1915 Mar. 19	1927 Feb. 6
140	12	2	+69	1913 Apr. 30	1927 Mar. 30
141	12	26	-16	1905 Apr. 27	1927 Apr. 23
142	18	24	+26	1907 June 5	1927 Oct. 18
143	18	45	- 6	1904 Apr. 15	1927 Sept. 23
144	18	54	-13	1909 Aug. 6	1927 Sept. 18
145	19	14	-15	1913 July 31	1927 Sept. 3
146	19	18	+22	1904 July 14	1927 Sept. 1
147	19	26	- 3	1908 June 26	1927 Oct. 19
148	19	12	+36	1907 May 12	1927 Oct. 15
149	19	23	+12	1905 July 11	1927 Oct. 20
150	20	26	-19	1915 Sept. 9	1927 Oct. 17
151	20	16	+11	1907 July 31	1927 Sept. 18
152	20	34	- 5	1910 Aug. 3	1927 Oct. 21
153	20	28	+50	1911 June 29	1927 Oct. 23
154	20	54	+35	1914 Sept. 11	1927 Oct. 22
155	21	10	-18	1904 Nov. 1	1927 Nov. 12

Group	Plate Center 1925.0			Epochs of Plates	
	α		δ		
	h	m	°		
156	21	18	+19	1912 Aug. 2	1927 Sept. 4
157	21	5	+30	1909 July 14	1927 Oct. 24
158	21	37	+ 3	1915 Aug. 14	1927 Oct. 25
159	23	1	-17	1910 July 18	1927 Nov. 30
160	23	9	+40	1911 July 20	1927 Oct. 27
161	23	19	0	1913 Aug. 28	1927 Oct. 26
162*	20	7	- 1	1912 Sept. 12	1927 Sept. 3
163*	20	4	-10	1914 Oct. 21	1927 Sept. 14
164*	21	57	+31	1912 Nov. 6	1927 Sept. 4
165*	23	27	- 5	1915 Oct. 11	1927 Nov. 25
166*	19	44	-29	1910 Sept. 28	1927 Oct. 14
167*	22	13	+22	1915 Aug. 9	1927 Oct. 14
168*	1	58	+42	1911 Aug. 28	1927 Dec. 18
169*	2	39	+17	1913 Nov. 3	1927 Dec. 19

* No new proper motions on these plates.

Yerkes Observatory,
Williams Bay, Wis.
Feb. 1, 1928.

REDUCTIONS OF OCCULTATIONS OBSERVED IN 1926,

COMPILED BY ERNEST W. BROWN

The cooperative effort to obtain observations and reductions of occultations did not get into full working order until somewhat late in the year 1927, and in consequence, the number of occultations which have been reduced is less than that hoped for in succeeding years. The present collection is for the year 1926 only and does not contain all the published observations for that year. It seemed better to keep the work up to date and to be content with a limited number rather than to further delay the determination of the mean value for the year. This decision was justified by the publication of a long list by INNES (*UOC* No. 72) and of a shorter list by ILJINSKY (*AN* 5525) which brought the whole available number of immersions to over 160. In pursuance of this policy, selection has, in general, been made of immersions only and of occultations of almanac stars, the apparent coordinates of which are immediately obtainable. If circumstances permit, reductions of other occultations observed during 1926 may be undertaken, but under the present plan, the occultations of 1927 only are now being cared for. A further account of this work will be found in a current number of *Popular Astronomy*.

It is convenient to refer at this point to certain results deduced from the observations of the *Moon* for 1923, 4, 5, 6 which will form the subject of another paper. First that a periodic error with a period of over a year and a coefficient of $0''.3$ has been discovered, affecting both occultations and meridian observations. Second, a marked "limb effect" depending on the inclination to the ecliptic of the line joining the center of mass of the *Moon* to the star has been noted; this is interpreted as due to the shape of the *Moon's* occulting limb. The former has been found to account for the apparent inequality depending on right ascension noted by INNES in the occultations of the year 1923 (*UOC* No. 63). In forming the mean for the year, these have only to be taken into account when the distribution of the material in time or with respect to the limb is not sufficiently uniform. The adopted mean value of the tabular correction for 1926 is $7''.25 \pm 0''.09$, exclusive of a constant correction, the same for every year, depending on the mean radius of the limb.

The unreduced observations have been gathered from the following sources, the bracketed letters showing the abbreviations used in Table I.