
MEAN POSITIONS OF STARS

OBSERVED WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1870

REDUCED TO JANUARY 1 OF THAT YEAR.

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				<i>h.</i>	<i>m.</i>	<i>s.</i>	<i>°</i>	<i>'</i>	<i>"</i>		
1	21 Andromæ (<i>Alpherat</i>) ...	2.1	...	0	1	40.22	61	37	39.6	6	0.83
2	Lacaille 9746 ...	8.0	1	0	3	6.54	146	54	55.2	1	0.82
3	... ..	9.5	2	0	5	16.74	126	16	5.3	2	0.84
4	88 Pegasi γ (<i>Algenib</i>) ...	3.0	...	0	6	32.56	75	32	22.5	4	0.87
5	Lalande 421 ...	7.2	1	0	16	5.91	51	58	2.4	1	0.82
6	... ..	9.7	1	0	19	18.19	26	34	37.7	1	0.78
7	Lacaille 88 ...	7.7	2	0	19	48.93	130	22	3.6	2	0.86
8	12 Ceti ...	6.2	...	0	23	24.24	94	40	34.9	11	0.84
9	Taylor 148 ...	5.9	2	0	23	10.23	143	5	31.7	2	0.82
10	13 Ceti ...	5.3	...	0	23	33.41	94	18	32.7	2	0.73
11	Taylor 184 ...	6.3	...	0	34	5.34	95	3	53.4	2	0.87
12	16 Ceti β ...	2.1	...	0	37	3.71	108	42	3.6	6	0.85
13	... ..	9.1	1	0	40	10.03	150	42	57.7	1	0.90
14	58 Piscium ...	5.7	...	0	40	14.32	78	44	8.9	1	0.78
15	Lacaille 234 ...	7.0	1	0	45	11.80	129	14	10.0	1	0.88
16	... ..	9.0	1	0	45	26.64	129	11	53.8	1	0.90
17	20 Ceti ...	5.0	...	0	46	21.89	91	51	6.7	1	0.84
18	2 Ursæ Minoris ...	4.5	...	0	51	25.76	4	26	32.4	1	0.91
19	70 Piscium ...	6.1	2	0	55	21.31	82	45	40.6	2	0.89
20	71 Piscium ϵ ...	4.5	...	0	56	11.87	82	48	36.8	4	0.84
21	... ..	7.9	1	1	3	23.35	150	14	21.9	1	0.90
22	... ..	9.1	1	1	5	3.36	127	19	49.9	1	0.88
23	... ..	7.9	1	1	7	39.95	152	58	8.8	1	0.90
24	... ..	7.9	1	1	10	32.96	153	50	11.1	1	0.89
25	1 Ursæ Minoris α (<i>Polaris</i>)	2.2	...	1	11	10.85	1	23	2.9	9	0.54
26	... ..	9.0	1	1	12	3.82	152	20	39.6	1	0.90
27	... ..	7.0	1	1	16	14.16	150	45	26.4	1	0.90
28	45 Ceti θ^1 ...	3.8	...	1	17	31.50	98	51	19.1	9	0.87
29	98 Piscium μ ...	5.2	...	1	23	22.57	84	31	38.2	1	0.92
30	... ..	8.0	1	1	23	46.62	87	42	6.1	1	0.89
31	... ..	10.5	1	1	24	18.47	90	4	36.3	1	0.93
32	99 Piscium η ...	3.7	...	1	24	31.73	75	19	32.1	7	0.89
33	... ..	8.0	1	1	31	5.62	130	48	45.1	1	0.96
34	Taylor 539 ...	5.6	1	1	31	59.25	148	56	5.7	1	0.96
35	α Eridani (<i>Achernar</i>) ...	1.0	...	1	32	52.26	147	53	54.9	3	0.85

5.—Observed for map of R. Andromedæ Var. 1.

6.—Observed for map of Gemma's Nova of 1572.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in R. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
		<i>s</i>	<i>s</i>	<i>s</i>	"	"	"	
1	21 Andromedæ <i>a</i> ...	+ 3·0774	+ 0·0182	+ 0·009	- 20·055	+ 0·018	+ 0·15	4
2	Lacaille 9746 ...	+ 3·0448	- 0·0429	...	- 20·053	+ 0·015	...	...
3	... ..	+ 3·0495	- 0·0194	...	- 20·050	+ 0·019	...	...
4	88 Pegasi γ (<i>Algenib</i>)...	+ 3·0819	+ 0·0100	0·000	- 20·047	+ 0·022	+ 0·02	88
5	Lalande 421 ...	+ 3·1455	+ 0·0271	...	- 20·005	+ 0·041	...	...
6	... ..	+ 3·2970	+ 0·0710	...	- 19·983	+ 0·049	...	...
7	Lacaille 88 ...	+ 2·9741	- 0·0207	...	- 19·980	+ 0·046	...	...
8	12 Ceti ...	+ 3·0610	+ 0·0008	- 0·002	- 19·961	+ 0·055	+ 0·01	112
9	Taylor 148 ...	+ 2·8531	- 0·0803	...	- 19·902	+ 0·060	...	148
10	13 Ceti ...	+ 3·0596	+ 0·0014	+ 0·017	- 19·899	+ 0·064	+ 0·04	145
11	Taylor 184 ...	+ 3·0546	+ 0·0012	...	- 19·834	+ 0·075	...	174
12	16 Ceti β ...	+ 2·9993	- 0·0055	+ 0·013	- 19·793	+ 0·080	- 0·02	196
13	... ..	+ 2·6566	- 0·0840	...	- 19·748	+ 0·075	...	...
14	58 Piscium ...	+ 3·1187	+ 0·0101	0·000	- 19·747	+ 0·087	0·00	213
15	Lacaille 234 ...	+ 2·8582	- 0·0161	...	- 19·665	+ 0·090	...	...
16	... ..	+ 2·8573	- 0·0160	...	- 19·661	+ 0·090	...	...
17	20 Ceti ...	+ 3·0634	+ 0·0036	- 0·004	- 19·646	+ 0·098	+ 0·01	242
18	2 Ursæ Minoris ...	+ 6·9021	+ 1·3129	+ 0·065	- 19·552	+ 0·232	+ 0·01	262
19	70 Piscium ...	+ 3·1128	+ 0·0086	- 0·008	- 19·472	+ 0·116	+ 0·17	251
20	71 Piscium ϵ ...	+ 3·1131	+ 0·0087	- 0·002	- 19·455	+ 0·119	0·00	288
21	... ..	+ 2·4338	- 0·0237	...	- 19·293	+ 0·105	...	...
22	... ..	+ 2·7865	- 0·0128	...	- 19·252	+ 0·122	...	...
23	... ..	+ 2·8097	- 0·0225	...	- 19·187	+ 0·106	...	...
24	... ..	+ 2·2477	- 0·0209	...	- 19·112	+ 0·107	...	...
25	1 Urs. Min. <i>a</i> (<i>Polaris</i>)	+ 20·0117	+ 14·1558	+ 0·065	- 19·093	+ 0·901	0·00	360
26	... ..	+ 2·2830	- 0·0202	...	- 19·072	+ 0·111	...	...
27	... ..	+ 2·3022	- 0·0100	...	- 18·984	+ 0·116	...	...
28	45 Ceti θ^1 ...	+ 3·0080	+ 0·0018	- 0·007	- 18·919	+ 0·154	+ 0·22	420
29	98 Piscium μ ...	+ 3·1177	+ 0·0089	+ 0·019	- 18·743	+ 0·169	+ 0·18	448
30	<i>Etan.</i> + γ^2 214 ...	+ 3·0914	+ 0·0073	...	- 18·730	+ 0·169	...	...
31	... ..	+ 3·0708	+ 0·0063	...	- 18·713	+ 0·170	...	...
32	99 Piscium η ...	+ 3·1083	+ 0·0141	0·000	- 18·706	+ 0·177	0·00	453
33	... ..	+ 2·6252	- 0·0101	...	- 18·491	+ 0·156	...	...
34	Taylor 539 ...	+ 2·2052	- 0·0129	...	- 18·461	+ 0·183	...	497
35	α Eridani (<i>Achernar</i>)...	+ 2·2320	- 0·0128	+ 0·008	- 18·431	+ 0·137	+ 0·07	507

8—10.—Proper motions from "Greenwich Catalogue, 1872."

19.—Proper motion in Polar Distance from "Greenwich Catalogue, 1872."

35.—Proper motions from "Stone's Cape Catalogue."

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				<i>h</i>	<i>m</i>	<i>s</i>	<i>°</i>	<i>'</i>	<i>"</i>		
36	106 Piscium ν ...	4.7	...	1	34	40.01	85	10	17.2	9	0.89
37	110 Piscium \circ ...	4.4	...	1	38	32.15	81	29	53.6	1	0.77
38	... ..	8.9	1	1	38	45.70	152	1	5.2	1	0.86
39	6 Arietis β ...	2.8	...	1	47	27.67	69	49	44.6	12	0.88
40	... ..	9.9	2	1	49	48.07	86	44	33.8	2	0.46
41	W. B. H. 1.892 ...	9.3	1	1	51	15.24	86	57	54.6	2	0.89
42	... ..	9.0	...	1	52	30.50	145	46	37.2	1	0.85
43	... ..	9.0	1	1	53	9.39	151	21	9.6	1	0.86
44	W. B. H. 1.940 ...	7.6	1	1	53	36.29	86	14	34.5	1	0.01
45	... ..	9.1	1	1	56	23.85	87	27	48.1	1	0.90
46	... ..	9.0	1	1	57	46.70	87	33	48.5	1	0.95
47	13 Arietis α ...	2.0	...	1	59	50.87	67	9	14.5	8	0.88
48	... ..	9.6	1	2	1	10.03	87	16	50.1	1	0.90
49	... ..	9.3	1	2	1	14.61	148	45	56.4	1	0.01
50	... ..	9.5	1	2	7	9.03	87	5	11.4	1	0.96
51	67 Ceti ...	5.5	...	2	10	29.93	97	1	22.7	10	0.92
52	22 Arietis θ ...	5.6	...	2	10	53.85	70	42	7.7	2	0.01
53	24 Arietis ξ ...	5.4	...	2	17	51.05	79	58	45.9	1	0.92
54	78 Ceti ξ^a ...	4.4	...	2	21	14.93	82	7	27.0	15	0.74
55	... ..	9.5	1	2	29	22.15	147	35	56.3	1	0.02
56	... ..	10.2	1	2	29	30.97	84	58	59.1	1	0.01
57	31 Arietis ...	5.6	...	2	29	32.68	78	7	4.5	1	0.77
58	... ..	9.3	1	2	31	22.82	148	29	45.0	1	0.96
59	... ..	8.5	1	2	34	18.80	74	55	1.5	1	0.97
60	86 Ceti γ ...	3.6	...	2	36	33.92	87	18	48.7	10	0.84
61	87 Ceti μ ...	4.4	...	2	37	55.01	80	26	11.8	2	0.85
62	Taylor 940 ...	7.0	1	2	40	29.57	128	43	0.0	1	0.01
63	... ..	9.2	...	2	45	35.47	76	26	21.3	1	0.01
64	43 Arietis ϵ ...	4.6	...	2	51	46.91	69	10	53.9	1	0.02
65	91 Ceti λ ...	4.6	...	2	52	44.98	81	36	46.2	1	0.93
66	... ..	8.6	1	2	53	25.57	146	43	1.4	1	0.96
67	Lacaille 969 ...	7.8	1	2	55	4.15	144	12	31.2	1	0.97
68	92 Ceti α (<i>Menkar</i>) ...	2.7	...	2	55	29.11	86	25	20.2	5	0.73
69	Taylor 1047 ...	7.0	1	2	59	59.73	151	18	27.3	1	0.02
70	R. P. L. 33 ...	5.9	...	3	1	59.40	5	33	26.1	1	0.96

40.—41—44—Comparison stars for Sylvia in 1868.

45.—46—48—50—Comparison stars for Camilla in 1868.

59.—Comparison star for Victoria in 1861.

70.—Groombridge 595.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
36	106 Piscium ν	+ 3.1174	+ 0.0091	- 0.004	- 18.369	+ 0.191	- 0.04	518
37	110 Piscium σ	+ 3.1554	+ 0.0111	+ 0.006	- 18.229	+ 0.199	- 0.01	537
38	...	+ 2.0211	- 0.0089	...	- 18.221	+ 0.131	...	...
39	8 Arietis β	+ 3.2941	+ 0.0193	+ 0.002	- 17.890	+ 0.226	+ 0.11	577
40	...	+ 3.1072	+ 0.0087	...	- 17.801	+ 0.217	...	...
41	W. B. E. 1.892	+ 3.1052	+ 0.0087	...	- 17.738	+ 0.219	...	...
42	...	+ 2.1454	- 0.0077	...	- 17.686	+ 0.156	...	...
43	...	+ 1.9123	- 0.0040	...	- 17.660	+ 0.140	...	...
44	W. B. E. 1.940	+ 3.1139	+ 0.0092	...	- 17.641	+ 0.224	...	...
45	...	+ 3.1009	+ 0.0086	...	- 17.523	+ 0.228	...	...
46	...	+ 3.1001	+ 0.0086	...	- 17.464	+ 0.230	...	...
47	13 Arietis α	+ 3.3535	+ 0.0203	+ 0.012	- 17.375	+ 0.252	+ 0.15	648
48	...	+ 3.1041	+ 0.0089	...	- 17.316	+ 0.235	...	...
49	...	+ 1.9594	- 0.0036	...	- 17.314	+ 0.151	...	...
50	...	+ 3.1079	+ 0.0090	...	- 17.047	+ 0.246	...	...
51	67 Ceti	+ 2.9834	+ 0.0049	+ 0.003	- 16.800	+ 0.242	+ 0.14	704
52	22 Arietis θ	+ 3.3253	+ 0.0179	- 0.002	- 16.872	+ 0.269	+ 0.01	707
53	24 Arietis ξ	+ 3.2058	+ 0.0126	0.000	- 16.585	+ 0.272	+ 0.05	745
54	73 Ceti ζ^2	+ 3.1790	+ 0.0117	+ 0.001	- 16.366	+ 0.276	+ 0.02	760
55	...	+ 1.7044	+ 0.0024	...	- 15.944	+ 0.166	...	...
56	...	+ 3.1434	+ 0.0103	...	- 15.936	+ 0.285	...	...
57	31 Arietis	+ 3.3430	+ 0.0137	+ 0.017	- 15.934	+ 0.294	+ 0.09	798
58	...	+ 1.7338	+ 0.0039	...	- 15.836	+ 0.162	...	...
59	...	+ 3.2069	+ 0.0154	...	- 15.678	+ 0.306	...	...
60	86 Ceti γ	+ 3.1117	+ 0.0094	- 0.011	- 15.555	+ 0.294	+ 0.00	837
61	87 Ceti μ	+ 3.2154	+ 0.0120	+ 0.017	- 15.480	+ 0.305	+ 0.07	845
62	Taylor 940	+ 2.3814	- 0.0015	...	- 15.335	+ 0.231	...	...
63	...	+ 3.2854	+ 0.0144	...	- 15.044	+ 0.322	...	...
64	48 Arietis ϵ	+ 3.4185	+ 0.0185	- 0.001	- 14.680	+ 0.345	+ 0.02	921
65	91 Ceti λ	+ 3.2071	+ 0.0117	+ 0.006	- 14.622	+ 0.326	+ 0.03	929
66	...	+ 1.6740	+ 0.0060	...	- 14.582	+ 0.174	...	...
67	Lacaille 969	+ 1.7895	+ 0.0040	...	- 14.483	+ 0.186	...	...
68	92 Ceti α (Menkar)	+ 3.1300	+ 0.0098	- 0.002	- 14.457	+ 0.323	+ 0.11	949
69	Taylor 1047	+ 1.3450	+ 0.0139	...	- 14.181	+ 0.145	...	968
70	R. P. L. 33	+ 12.8729	+ 1.5925	...	- 14.058	+ 1.345	+ 0.12	960

54.—61—70—Proper motions from "Greenwich Catalogue 1872."

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
71	... ..	8.5	1	3	2	23.23	130	37	33.8	1	0.86
72	57 Arietis δ ...	4.5	...	3	4	11.88	70	46	1.9	5	0.74
73	Lacaille 1007 ...	7.0	1	3	4	55.55	152	13	6.2	1	0.88
74	... ..	8.4	...	3	12	47.42	129	26	22.3	1	0.95
75	... ..	8.0	1	3	13	34.28	125	38	32.3	1	0.97
76	33 Persei α ...	1.9	...	3	15	3.15	40	36	15.8	6	0.96
77	... ..	9.7	1	3	15	37.01	125	40	5.9	1	0.78
78	... ..	8.5	1	3	17	4.56	127	5	45.5	1	0.86
79	... ..	8.0	1	3	17	33.18	130	44	21.0	1	0.86
80	1 Tauri σ , Var. 5 ...	3.8	...	3	17	49.13	81	25	51.0	1	0.85
81	2 Tauri ξ ...	3.8	...	3	20	7.51	80	43	20.1	1	0.02
82	5 Tauri f ...	4.3	...	3	23	41.85	77	30	40.8	2	0.85
83	... ..	9.0	1	3	23	52.93	126	21	22.9	1	0.01
84	R. P. L. 34 ...	5.8	...	3	24	9.17	3	46	13.2	1	0.51
85	... ..	9.0	1	3	25	3.30	129	0	27.8	1	0.78
86	... ..	6.0	1	3	32	26.53	131	19	33.8	1	0.01
87	Lacaille 1166 ...	8.9	...	3	33	15.12	129	11	59.8	1	0.02
88	... ..	10.2	1	3	33	50.79	128	23	57.7	1	0.02
89	... ..	10.0	1	3	36	0.04	129	9	25.1	1	0.93
90	25 Tauri η (Alyone) ...	3.0	...	3	39	45.54	66	17	57.5	10	0.39
91	... ..	8.2	1	3	41	3.55	147	2	0.8	1	0.01
92	30 Tauri e ...	5.1	...	3	41	8.65	79	15	32.1	1	0.78
93	34 Eridani γ^1 ...	3.0	...	3	51	57.86	103	52	48.9	4	0.03
94	35 Tauri λ , Var. 1 ...	3.6	...	3	53	23.80	77	52	46.4	4	0.46
95	... ..	7.5	1	3	55	46.71	129	13	35.0	1	0.02
96	R. P. L. 35 ...	6.7	...	3	56	34.66	4	47	32.7	2	0.49
97	38 Eridani σ^1 ...	4.1	...	4	5	31.19	97	10	44.1	10	0.30
98	54 Tauri γ ...	3.9	...	4	12	23.81	74	41	20.6	5	0.36
99	61 Tauri δ^1 ...	4.0	...	4	15	26.25	72	45	54.7	2	0.93
100	... ..	10.0	1	4	15	27.46	129	6	56.4	1	0.01
101	62 Tauri ...	6.2	...	4	16	9.62	66	0	18.2	2	0.01
102	74 Tauri e ...	3.7	...	4	21	1.64	71	6	39.0	10	0.45
103	... ..	10.2	2	4	22	22.03	80	27	14.4	2	0.49
104	Taylor 1582 ...	6.2	1	4	23	17.43	151	32	0.6	1	0.06
105	87 Tauri α (Aldebaran) ...	1.0	...	4	28	27.77	73	45	17.6	10	0.27

80.— σ Tauri Var. 5.—Supposed to vary in a period of 7.5 days, by Prof. Auwers.

84.—Groombridge 642.

94.— λ Tauri Var. 1.—Period 3.95 days. Range, 3.5 to 4.3 magnitude.

96.—Groombridge 750.

103.—Observed for map of R Tauri Var. 2.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
71	... ..	+ 2.2527	+ 0.0004	...	- 14.032	+ 0.241	...	...
72	57 Arietis δ ...	+ 3.4079	+ 0.0171	+ 0.010	- 13.918	+ 0.364	0.00	986
73	Lacaille 1007 ...	+ 1.2396	+ 0.0169	...	- 13.872	+ 0.136	...	...
74	... ..	+ 2.2523	+ 0.0011	...	- 13.868	+ 0.251	...	...
75	... ..	+ 2.8553	+ 0.0011	...	- 13.817	+ 0.263	...	...
76	33 Persei α ...	+ 4.2449	+ 0.0483	+ 0.002	- 13.220	+ 0.472	+ 0.05	1043
77	... ..	+ 2.3489	+ 0.0012	...	- 13.182	+ 0.264	...	...
78	... ..	+ 2.3060	+ 0.0013	...	- 13.086	+ 0.261	...	...
79	... ..	+ 2.1979	+ 0.0015	...	- 13.054	+ 0.249	...	...
80	1 Tauri σ , Var 5 ...	+ 3.2252	+ 0.0115	0.000	- 13.036	+ 0.364	+ 0.10	1057
81	2 Tauri ξ ...	+ 3.2395	+ 0.0117	+ 0.002	- 12.883	+ 0.368	+ 0.05	1068
82	5 Tauri f ...	+ 3.3021	+ 0.0130	+ 0.002	- 12.641	+ 0.379	+ 0.03	1087
83	... ..	+ 2.3076	+ 0.0016	...	- 12.629	+ 0.266	...	...
84	R. P. L. 34 ...	+ 18.8533	+ 3.2159	+ 0.136	- 12.611	+ 2.143	+ 0.06	1061
85	... ..	+ 2.2273	+ 0.0018	...	- 12.549	+ 0.258	...	...
86	... ..	+ 2.1319	+ 0.0025	...	- 12.030	+ 0.250	...	...
87	Lacaille 1166 ...	+ 2.1977	+ 0.0023	...	- 11.981	+ 0.262	...	...
88	... ..	+ 2.2182	+ 0.0022	...	- 11.940	+ 0.265	...	...
89	... ..	+ 2.1913	+ 0.0024	...	- 11.788	+ 0.264	...	...
90	25 Tauri η (<i>Alcyone</i>). ...	+ 3.5525	+ 0.0177	- 0.001	- 11.520	+ 0.430	+ 0.06	1186
91	... ..	+ 1.3781	+ 0.0114	...	- 11.427	+ 0.170	...	...
92	30 Tauri σ ...	+ 3.2806	+ 0.0115	0.000	- 11.421	+ 0.398	+ 0.05	1174
93	34 Eridani γ^1 ...	+ 2.7920	+ 0.0047	+ 0.002	- 10.631	+ 0.351	+ 0.12	1234
94	35 Tauri λ , Var. 1 ...	+ 3.3167	+ 0.0115	- 0.002	- 10.517	+ 0.416	+ 0.02	1241
95	... ..	+ 2.1344	+ 0.0031	...	- 10.346	+ 0.271	...	...
96	R. P. L. 35 ...	+ 10.7636	+ 1.8132	+ 0.057	- 10.285	+ 2.103	- 0.05	1235
97	38 Eridani σ^1 ...	+ 2.9243	+ 0.0058	- 0.002	- 9.606	+ 0.379	- 0.07	1290
98	54 Tauri γ ...	+ 3.3985	+ 0.0115	+ 0.009	- 9.073	+ 0.446	+ 0.03	1328
99	61 Tauri δ^1 ...	+ 3.4445	+ 0.0119	+ 0.004	- 8.886	+ 0.455	+ 0.03	1346
100	... ..	+ 2.0961	+ 0.0035	...	- 8.834	+ 0.279	...	...
101	62 Tauri ...	+ 3.6073	+ 0.0146	+ 0.004	- 8.778	+ 0.477	+ 0.01	1353
102	74 Tauri ϵ ...	+ 3.4876	+ 0.0120	+ 0.005	- 8.394	+ 0.466	+ 0.03	1376
103	... ..	+ 3.2768	+ 0.0090	...	- 8.288	+ 0.439	...	..
104	Taylor 1582 ...	+ 0.8211	+ 0.0183	...	- 8.213	+ 0.113	...	1400
105	87 Tauri α (<i>Aldebaran</i>) ...	+ 3.4310	+ 0.0105	+ 0.004	- 7.799	+ 0.464	+ 0.17	1420

80.—82—84—94—96—101—Proper motions from "Greenwich Catalogue 1872."

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				<i>h.</i>	<i>m.</i>	<i>s.</i>	<i>°</i>	<i>'</i>	<i>"</i>			
106	R Reticuli Var. 1...	8.0	1	4	32	12.30	153	17	59.5	1	0.95	
107	Lacaille 1551 ...	5.9	2	4	32	13.09	153	5	31.5	2	0.51	
108	Lacaille 1551 ... 2nd...	9.8	1	4	32	17.71	153	5	37.0	2	0.95	
109	... ..	8.3	1	4	33	56.19	67	31	19.7	1	0.01
110	94 Tauri <i>r</i> ...	4.4	...	4	34	26.66	67	17	43.6	1	0.86	
[38.02]	111	... ..	8.9	1	4	34 ^{0.1} 38.30	144	55	6.0	1	0.07
112	... ..	9.6	1	4	34	41.53	153	26	10.0	1	0.06
113	... ..	9.0	1	4	39	28.89	153	2	59.1	1	0.07
114	97 Tauri <i>δ</i> ...	5.1	...	4	43	46.37	71	23	2.9	3	0.05	
115	... ..	8.1	1	4	44	3.93	127	39	45.7	1	0.06
116	3 Aurigæ <i>α</i> ...	2.7	...	4	48	31.84	57	2	33.6	2	0.05	
117	R Orionis Var. 3 ...	9.3	4	4	51	57.47	32	4	14.4	4	0.06	
118	Taylor 1780 ...	7.0	1	4	52	23.03	144	38	15.7	1	0.96	
119	11 Orionis ...	4.7	...	4	57	8.62	74	46	47.1	1	0.07	
120	104 Tauri <i>m</i> ...	5.1	...	4	59	46.23	71	31	56.0	2	0.51	
121	2 Leporis <i>ε</i> ...	3.3	...	4	59	57.46	112	32	52.9	3	0.95	
122	Lacaille 1757 ...	7.6	2	5	4	57.49	150	2	55.3	2	0.06	
123	... ..	8.6	3	5	6	13.73	131	45	10.2	3	0.06
17.43	124	19 Orionis <i>β</i> (Rigel) ...	0.3	...	5	8	17.44 ⁰	98	21	15.1	3	0.36
125	109 Tauri <i>n</i> ...	5.2	...	5	11	28.08	63	2	27.4	1	0.07	
126	... ..	9.3	1	5	13	10.60	75	4	34.9	1	0.09
127	... ..	9.7	...	5	13	56.69	75	11	21.3	1	0.09
128	... ..	8.9	1	5	16	18.19	131	47	58.0	1	0.07
129	112 Tauri <i>β</i> ...	1.9	...	5	18	4.50	61	30	20.1	7	0.31	
31.85	130	8.7	1	5	18	31.96 ⁰⁵	121	28	36.2	1	0.08
131	... ..	9.5	1	5	18	54.89	129	57	41.7	1	0.01
132	Taylor 1973 ...	6.3	1	5	19	6.58	129	43	1.6	1	0.37	
133	R. P. L. 40 ...	6.4	...	5	20	36.27	4	52	42.4	1	0.02	
134	Lacaille 1854 ...	7.9	1	5	21	48.68	137	12	34.5	1	0.07	
135	119 Tauri ...	4.6	...	5	24	35.61	71	30	19.8	1	0.11	
136	34 Orionis <i>δ</i> , Var. 1 ...	2.4	4	5	25	22.00	90	23	52.9	4	0.08	
137	46 Orionis <i>ε</i> ...	1.8	...	5	29	37.03	91	17	14.3	6	0.07	
138	123 Tauri 3 ...	3.0	...	5	29	52.55	68	56	23.1	3	0.63	
32.65	139	Lalande 10607 ...	7.5	1	5	31	33.64 ⁶⁵	68	18	48.8	1	0.08
140	... ..	9.0	1	5	32	11.67	123	55	12.0	1	0.09

106.—R Reticuli Var. 1.—Period 281 days. Range, 7th to below 13th magnitude.

107.—108—112—113—Observed for map of R Reticuli Var. 1.

117.—R Orionis Var. 3.—Period 379 days. Range, 8.5 to below 13th magnitude.

126.—127.—Comparison stars for Asia in 1866.

133.—Groombridge 944.

136.—3 Orionis Var. 1.—Suppose to vary irregularly from 2.3 to 2.7 magnitude.

139.—Comparison star for Harmonia in 1861.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
106	R Reticuli Var. 1 ...	+ 0.6068	+ 0.0210	...	- 7.497	+ 0.085	...	...
107	Lacaille 1551 ...	+ 0.6286	+ 0.0205	...	- 7.494	+ 0.088	...	...
108	Lacaille 1551... 2nd... ..	+ 0.6280	+ 0.0205	...	- 7.489	+ 0.088	...	...
109	... ..	+ 3.5868	+ 0.0122	...	- 7.355	+ 0.489	...	...
110	94 Tauri τ	+ 3.5931	+ 0.0122	0.000	- 7.313	+ 0.491	+ 0.02	1449
111	... ..	+ 1.2991	+ 0.0095	...	- 7.299	+ 0.180	...	...
112	... ..	+ 0.5809	+ 0.0209	...	- 7.294	+ 0.082	...	...
113	... ..	+ 0.6032	+ 0.0195	...	- 6.901	+ 0.085	...	...
114	97 Tauri δ	+ 3.4979	+ 0.0100	+ 0.003	- 6.548	+ 0.485	+ 0.07	1493
115	... ..	+ 2.0963	+ 0.0086	...	- 6.524	+ 0.292	...	...
116	3 Aurigæ ϵ	+ 3.8971	+ 0.0144	- 0.003	- 6.153	+ 0.544	+ 0.02	1520
117	R Orionis Var. 3	+ 3.2502	+ 0.0068	...	- 5.867	+ 0.456	...	...
118	Taylor 1780	+ 1.2697	+ 0.0084	...	- 5.831	+ 0.180	...	...
119	11 Orionis	+ 3.4223	+ 0.0079	0.000	- 5.432	+ 0.482	+ 0.03	1557
120	104 Tauri m	+ 3.5033	+ 0.0083	+ 0.040	- 5.210	+ 0.495	- 0.02	1568
121	2 Leporis	+ 2.5359	+ 0.0033	+ 0.001	- 5.194	+ 0.359	+ 0.08	1575
122	Lacaille 1757	+ 0.8185	+ 0.0117	...	- 4.770	+ 0.118	...	...
123	... ..	+ 1.0115	+ 0.0038	...	- 4.062	+ 0.273	...	...
124	19 Orionis β (<i>Rigel</i>)... ..	+ 2.8807	+ 0.0040	- 0.001	- 4.487	+ 0.412	+ 0.02	1623
125	109 Tauri n	+ 3.5992	+ 0.0078	+ 0.001	- 4.215	+ 0.515	- 0.03	1637
126	... ..	+ 3.4210	+ 0.0063	...	- 4.069	+ 0.491	...	...
127	... ..	+ 3.4186	+ 0.0063	...	- 4.003	+ 0.490	...	...
128	... ..	+ 1.8085	+ 0.0037	...	- 3.801	+ 0.274	...	...
129	112 Tauri β	+ 3.7858	+ 0.0082	+ 0.003	- 3.648	+ 0.545	+ 0.20	1681
130	... ..	+ 2.2669	+ 0.0030	...	- 3.609	+ 0.327	...	...
131	... ..	+ 1.9698	+ 0.0034	...	- 3.576	+ 0.285	...	...
132	Taylor 1973	+ 1.9758	+ 0.0034	...	- 3.559	+ 0.286	...	1693
133	R. P. L. 40	+ 18.5058	+ 0.6591	...	- 3.430	+ 2.661	...	1662
134	Lacaille 1854	+ 1.6479	+ 0.0042	...	- 3.326	+ 0.238	...	...
135	119 Tauri	+ 3.5140	+ 0.0057	0.000	- 3.086	+ 0.507	+ 0.01	1726
136	34 Orionis δ , Var. 1... ..	+ 3.0629	+ 0.0038	+ 0.001	- 3.019	+ 0.443	+ 0.04	1730
137	46 Orionis ϵ	+ 3.0423	+ 0.0035	- 0.002	- 2.651	+ 0.441	+ 0.01	1765
138	123 Tauri 3	+ 3.5826	+ 0.0055	0.000	- 2.629	+ 0.519	+ 0.05	1767
139	Lalande 10607	+ 3.5998	+ 0.0053	...	- 2.475	+ 0.522	...	...
140	... ..	+ 2.1797	+ 0.0029	...	- 2.427	+ 0.317	...	...

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				h.	m.	s.	°	'	"			
17-45	141	Lacaille 1949	5.0	1	5	32	17 ⁵⁶ .46	154	18	50.1	1	0.11
	142	... ..	9.2	...	5	32	53.97	123	41	0.6	1	0.09
	143	Taylor 2107	7.0	2	5	34	33.23	130	46	53.7	2	0.06
	144	α Columbae	2.7	...	5	34	56.65	124	8	41.3	1	0.07
	145	Lacaille 1971	7.5	1	5	36	26.40	149	11	18.2	1	0.09
[47-90]	146	... ..	8.9	1	5	36	44 ²¹	135	43	28.0	1	0.09
	147	Taylor 2145	6.7	1	5	39	59.99	135	53	38.3	1	0.06
	148	... ..	9.3	1	5	40	43.96	120	57	48.0	1	0.10
	149	Lacaille 1984	7.0	1	5	40	53.54	130	15	11.6	1	0.07
11-91	150	... ..	10.0	3	5	42	11.93 1	136	4	5.4	3	0.10
16-53	151	... ..	7.3	1	5	42	16.54 3	137	3	24.2	1	0.12
36-42	152	... ..	8.9	1	5	43	36.42 2	130	6	48.9	1	0.08
	153	... ..	9.0	1	5	44	53.34	137	10	10.1	1	0.09
	154	54 Orionis χ^1	4.6	...	5	46	40.93	69	45	5.2	1	0.86
	155	58 Orionis α , Var. 2	0.9	...	5	48	8.02	82	37	10.9	6	0.06
	156	... ..	9.0	1	5	50	3.94	135	43	3.3	1	0.09
	157	... ..	9.6	...	5	51	53.32	140	36	34.3	1	0.09
35-28	158	... ..	8.0	2	5	53	35.23 3	141	40	6.3	2	0.13
52-03	159	... ..	9.7	1	5	53	52.07 3	121	32	34.1	1	0.11
	160	R. P. L. 43	6.6	...	5	54	41.59	3	14	15.2	1	0.07
	161	... ..	9.5	...	5	55	0.63	121	30	58.1	1	0.10
	162	64 Orionis χ^3	5.1	...	5	55	45.53	70	18	35.1	1	0.06
	163	67 Orionis ν	4.4	...	6	0	9.00	75	13	7.5	10	0.08
55-89	164	Taylor 2321	7.3	2	6	0	55.93 39	141	5	26.6	2	0.12
	165	... ..	7.5	1	6	4	34.41	128	2	36.0	1	0.09
	166	... ..	9.4	1	6	7	31.49	151	18	30.9	1	0.07
	167	... ..	8.0	1	6	11	56.96	121	31	34.5	1	0.12
	168	13 Geminorum μ	3.2	...	6	15	5.70	67	25	22.1	7	0.10
	169	Taylor 2474	6.0	1	6	18	22.59	121	43	30.7	1	0.14
	170	Taylor 2485	8.5	1	6	18	36.33	151	16	17.4	1	0.12
14-70	171	18 Geminorum ν	4.0	...	6	21	14.69 70	69	42	31.4	2	0.10
	172	Lacaille 2312	7.3	1	6	22	11.62	153	36	46.3	1	0.10
	173	... ..	9.0	1	6	22	18.33	123	46	53.4	1	0.10
	174	Lacaille 2329	6.7	1	6	24	7.43	153	45	6.0	1	0.09
	175	Taylor 2529	6.9	1	6	24	32.73	130	59	29.2	1	0.05

155.— α Orionis Var. 2 (*Betelgeuse*). Irregularly variable from 0.9 to 1.5 magnitude.

160.—Groombridge 1004.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
141	Lacaille 1949 ...	+ 0'3127	+ 0'0106	...	- 2'418	+ 0'046	...	1790
142	... ..	+ 2'0091	+ 0'0030	...	- 2'366	+ 0'292	...	...
143	Taylor 2107 ...	+ 1'9259	+ 0'0031	...	- 2'222	+ 0'280	...	1798
144	α Columbae ...	+ 2'1708	+ 0'0027	+ 0'008	- 2'189	+ 0'316	0'00	1802
145	Lacaille 1971 ...	+ 0'8422	+ 0'0066	...	- 2'058	+ 0'123	...	...
146	... ..	+ 1'7040	+ 0'0035	...	- 2'027	+ 0'243	...	...
147	Taylor 2145 ...	+ 1'6981	+ 0'0033	...	- 1'748	+ 0'243	...	1886
148	... ..	+ 2'2728	+ 0'0026	...	- 1'684	+ 0'331	...	...
149	Lacaille 1984 ...	+ 1'9442	+ 0'0030	...	- 1'670	+ 0'284	...	...
150	... ..	+ 1'6885 ¹	+ 0'0033	...	- 1'556	+ 0'247	...	...
151	... ..	+ 1'6399	+ 0'0034	...	- 1'551	+ 0'239	...	...
152	... ..	+ 1'9487	+ 0'0028	...	- 1'433	+ 0'235	...	...
153	... ..	+ 1'6331	+ 0'0032	...	- 1'320	+ 0'239	...	...
154	54 Orionis χ^1 ...	+ 3'5646	+ 0'0034	- 0'016	- 1'165	+ 0'520	+ 0'10	1876
155	58 Orionis α , Var. 2... ...	+ 3'2451	+ 0'0027	+ 0'001	- 1'038	+ 0'473	0'00	1883
156	... ..	+ 1'7027	+ 0'0030	...	- 0'869	+ 0'248	...	...
157	... ..	+ 1'4448	+ 0'0031	...	- 0'699	+ 0'211	...	...
158	... ..	+ 1'3819	+ 0'0031	...	- 0'561	+ 0'201	...	...
159	... ..	+ 2'2517	+ 0'0024	...	- 0'536	+ 0'323	...	...
160	R. P. L. 43... ..	+ 26'7019	+ 0'1926	...	- 0'465	+ 3'898	...	1879
161	... ..	+ 2'2524	+ 0'0024	...	- 0'437	+ 0'329	...	...
162	64 Orionis χ^2 ...	+ 3'5504	+ 0'0022	+ 0'010	- 0'371	+ 0'518	+ 0'03	1834
163	67 Orionis ν ...	+ 3'4249	+ 0'0017	+ 0'010	+ 0'013	+ 0'500	+ 0'02	1958
164	Taylor 2321 ...	+ 1'4157	+ 0'0026	...	+ 0'082	+ 0'207	...	...
165	... ..	+ 2'0263	+ 0'0023	...	+ 0'400	+ 0'295	...	...
166	... ..	+ 0'6306	+ 0'0016	...	+ 0'659	+ 0'092	...	...
167	... ..	+ 2'2531	+ 0'0021	...	+ 1'045	+ 0'323	...	...
168	13 Geminorum μ ...	+ 3'6268	- 0'0003	+ 0'005	+ 1'320	+ 0'527	+ 0'14	2047
169	Taylor 2474 ...	+ 2'2482	+ 0'0020	...	+ 1'606	+ 0'326	...	2073
170	Taylor 2435 ...	+ 0'6410	- 0'0027	...	+ 1'628	+ 0'092	...	...
171	18 Geminorum ν ...	+ 3'5644	- 0'0008	- 0'002	+ 1'853	+ 0'517	+ 0'01	2090
172	Lacaille 2312 ...	+ 0'3901	- 0'0025	...	+ 1'939	+ 0'056	...	...
173	... ..	+ 2'0018	+ 0'0018	...	+ 1'949	+ 0'290	...	...
174	Lacaille 2329 ...	+ 0'3759	- 0'0031	...	+ 2'107	+ 0'054	...	2121
175	Taylor 2529 ...	+ 1'9169	+ 0'0017	...	+ 2'144	+ 0'277	...	2117

0.702

5/
3/

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				h.	m.	s.	°	'	"			
176	... ..	8.9	1	6	28	50.13	130	32	24.6	1	0.15
177	24 Geminorum γ ...	2.0	...	6	30	12.10	73	29	34.0	14	0.10	
178	... ..	8.9	1	6	31	34.88	140	0	27.5	1	0.15
179	... ..	9.0	1	6	36	24.71	130	21	21.8	1	0.14
180	Taylor 2667 ...	8.7	1	6	38	28.07	149	0	0.2	1	0.10	
181	51 Cephei (<i>Hev.</i>) ...	5.3	...	6	38	40.88	2	45	38.6	7	0.29	
182	... ..	9.5	1	6	39	19.25	131	3	42.7	1	0.09
183	... ..	9.0	1	6	40	35.98	151	59	14.0	1	0.05
184	... ..	8.0	1	6	42	48.77	130	36	44.8	1	0.15
185	... ..	9.4	2	6	45	1.76	128	30	51.6	2	0.13
13-49	186	9.7	1	6	45	18.51 49	106	33	7.9	1	0.11
187	... ..	9.1	...	6	49	6.08	128	46	28.0	1	0.09
188	... ..	9.3	1	6	49	54.98	129	8	49.0	1	0.14
189	... ..	9.0	1	6	51	39.57	131	9	7.7	1	0.10
190	21 Canis Majoris ϵ ...	1.5	...	6	53	31.08	118	47	49.4	10	0.10	
191	43 Geminorum 3, Var. 1 ...	4.0	...	6	56	23.85	69	14	30.9	1	0.94	
32-47	192	23 Canis Majoris γ ...	4.1	...	6	57	52.64	105	26	36.0	8	0.09
193	... ..	9.3	1	6	59	33.48 7	67	0	23.3	1	0.17
194	... ..	9.3	2	7	1	33.97	61	4	39.8	2	0.14
195	Lacaille 2639 ...	6.9	1	7	1	53.39	140	9	43.1	1	0.15	
196	... ..	9.1	1	7	5	9.69	130	43	5.9	1	0.15
4-12	197	8.3	1	7	6	4.13 2	129	23	50.1	1	0.10
198	Lacaille 2678 ...	8.9	1	7	6	16.83	148	9	50.3	1	0.14	
50-54	199	7.5	...	7	6	50.85 4	129	3	21.9	1	0.08
200	... ..	8.2	1	7	9	5.58	130	17	54.4	1	0.05
201	Lalande 14177 ...	6.3	2	7	11	37.55	67	44	29.0	3	0.15	
202	55 Geminorum δ ...	3.6	...	7	12	21.41	67	46	52.2	12	0.18	
34-62	203	Taylor 3005 ...	7.3	1	7	15	34.39 42	149	1	33.7	1	0.18
204	6 Canis Minoris ...	5.0	1	7	22	33.61	77	43	27.3	1	0.15	
54-12	205	R. P. L. 45 ...	7.1	...	7	22	51.30	0	59	45.0	2	0.09
59-41	206	10.2	1	7	23	59.44 1	42	1	29.1	1	0.17
207	... ..	9.2	1	7	25	0.39	121	1	5.5	1	0.14
29-15	208	8.0	1	7	25	39.65 16	129	18	48.4	1	0.18
209	66 Geminorum α^2 (<i>Castor</i>)	1.6	...	7	26	18.10	57	49	45.3	8	0.10	
210	... ..	9.0	1	7	27	17.19	153	11	23.1	1	0.17

191.—3 Geminorum Var. 1.—Period 10.16 days.—Range, 8.7 to 4.5 magnitude.

193.—Observed for map of R Geminorum Var. 2.

195.—Comparison star for Isis in 1866.

205.—Groombridge 1119.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
176	... ..	+ 1.9878	+ 0.0016	...	+ 2.517	+ 0.280	...	...
177	24 Geminorum γ	+ 3.4649	- 0.0015	+ 0.001	+ 2.635	+ 0.500	+ 0.04	2163
178	... ..	+ 1.4935	+ 0.0007	...	+ 2.755	+ 0.215	...	...
179	... ..	+ 1.9504	+ 0.0014	...	+ 3.173	+ 0.280	...	...
180	Taylor 2667	+ 0.8784	- 0.0029	...	+ 3.350	+ 0.125	...	...
181	51 Cephei (<i>Hev.</i>)	+ 30.4047	- 1.9875	- 0.027	+ 3.369	+ 4.370	+ 0.08	2157
182	... ..	+ 1.9245	+ 0.0014	...	+ 3.424	+ 0.276	...	...
183	... ..	+ 0.5984	- 0.0053	...	+ 3.532	+ 0.084	...	...
184	... ..	+ 1.9458	+ 0.0013	...	+ 3.725	+ 0.277	...	...
185	... ..	+ 2.0287	+ 0.0014	...	+ 3.914	+ 0.283	...	...
186	... ..	+ 2.6825	+ 0.0009	...	+ 3.932	+ 0.382	...	...
187	... ..	+ 2.0228	+ 0.0013	...	+ 4.264	+ 0.286	...	...
188	... ..	+ 2.0096	+ 0.0013	...	+ 4.333	+ 0.284	...	...
189	... ..	+ 1.9332	+ 0.0011	...	+ 4.482	+ 0.273	...	...
190	21 Canis Majoris ϵ	+ 2.3571	+ 0.0013	0.000	+ 4.640	+ 0.332	+ 0.02	2293
191	43 Geminorum δ Var. 1	+ 3.5637	- 0.0050	- 0.001	+ 4.885	+ 0.503	+ 0.01	2305
192	23 Canis Majoris γ	+ 2.7145	+ 0.0005	+ 0.002	+ 5.011	+ 0.381	- 0.01	2319
193	... ..	+ 3.6205	- 0.0059	...	+ 5.153	+ 0.509	...	...
194	... ..	+ 3.7844	- 0.0081	...	+ 5.323	+ 0.531	...	...
195	Lacaille 2639	+ 1.5277	- 0.0008	...	+ 5.357	+ 0.213	...	...
196	... ..	+ 1.9676	+ 0.0009	...	+ 5.626	+ 0.274	...	...
197	... ..	+ 2.0194	+ 0.0011	...	+ 5.701	+ 0.280	...	...
198	Lacaille 2678	+ 1.0083	- 0.0055	...	+ 5.719	+ 0.139	...	...
199	... ..	+ 2.0332	+ 0.0011	...	+ 5.767	+ 0.282	...	...
200	... ..	+ 1.9896	+ 0.0010	...	+ 5.955	+ 0.274	...	...
201	Lalande 14177	+ 3.5928	- 0.0071	...	+ 6.166	+ 0.496	...	...
202	55 Geminorum δ	+ 3.5913	- 0.0072	0.000	+ 6.227	+ 0.495	+ 0.02	2410
203	Taylor 3005	+ 0.9648	- 0.0071	...	+ 6.405	+ 0.130	...	...
204	6 Canis Majoris	+ 3.3443	- 0.0052	+ 0.004	+ 7.069	+ 0.453	0.00	2473
205	R. P. L. 45	+ 75.0186	- 29.1050	- 0.323	+ 7.093	+ 10.231	- 0.01	2320
206	... ..	+ 4.4572	- 0.0256	...	+ 7.186	+ 0.605	...	...
207	... ..	+ 2.3229	+ 0.0011	...	+ 7.269	+ 0.313	...	...
208	... ..	+ 2.0529	+ 0.0009	...	+ 7.322	+ 0.276	...	...
209	66 Gem. α^3 (<i>Castor</i>)	+ 3.8542	- 0.0133	- 0.013	+ 7.375	+ 0.510	+ 0.08	2485
210	... ..	+ 0.6160	- 0.0146	...	+ 7.454	+ 0.081	...	...

181.-205.—Proper motions from "Greenwich Catalogue 1872."

204.—Proper motions from "Greenwich Catalogue 1864."

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				<i>h.</i>	<i>m.</i>	<i>s.</i>	<i>°</i>	<i>'</i>	<i>"</i>		
211	...	8.7	1	7	30	48.49	121	55	13.6	1	0.12
212	74 Geminorum <i>f</i> ...	5.2	...	7	31	58.06	72	1	55.3	1	0.15
213	10 Canis Min. <i>a</i> (<i>Procyon</i>).	0.5	...	7	32	29.69	84	26	40.5	5	0.09
214	77 Geminorum <i>κ</i> ...	3.6	...	7	36	35.65	65	17	34.7	2	0.08
215	...	8.0	1	7	36	43.11	128	56	3.2	1	0.07
216	78 Geminorum <i>β</i> (<i>Pollux</i>)..	1.1	...	7	37	21.46	61	39	45.2	11	0.12
0.39	217	...	1	7	41	0.68.39	153	10	32.4	1	0.18
218	...	9.0	1	7	41	49.10	148	9	10.5	1	0.09
14.87	219	...	2	7	42	14.33.57	152	58	48.3	2	0.18
220	...	8.0	1	7	45	32.85	129	27	46.5	2	0.17
221	...	8.9	1	7	46	37.94	144	23	22.9	1	0.15
222	U Geminorum Var. 5 ...	9.4	3	7	47	23.20	67	39	35.1	3	0.05
54.34	223	Taylor 3323 ...	1	7	49	54.28.34	149	16	37.1	1	0.17
224	...	9.5	1	7	49	56.26	180	22	58.7	1	0.09
225	Lacaille 3082 ...	7.8	1	7	51	55.49	180	23	28.0	1	0.15
14.80	226	...	1	7	52	14.50.30	151	41	26.7	1	0.18
33.22	227	...	1	7	52	32.96	151	31	39.5	1	0.18
2.76	228	...	1	7	53	2.52.76	144	42	39.3	1	0.19
31.98	229	6 Cancri ...	...	7	55	31.87.8	61	50	38.6	2	0.12
230	...	9.3	1	7	56	44.29	129	22	19.1	1	0.09
231	...	9.5	1	7	57	42.65	156	25	6.3	1	0.17
232	...	9.7	2	8	1	5.27	69	20	24.8	3	0.13
19.21	233	...	2	8	1	19.24.1	69	20	46.7	2	0.19
234	W. B. N. VII. 1684 ...	8.7	3	8	1	45.04	69	30	15.1	3	0.09
235	...	9.7	3	8	1	45.68	69	14	7.6	3	0.15
236	15 Argus ...	2.9	...	8	2	0.45	113	55	53.2	7	0.10
56.10	237	...	1	8	5	50.66.70	128	39	47.5	1	0.20
238	...	10.0	1	8	8	39.77	77	27	35.2	1	0.17
239	...	9.4	1	8	10	12.80	150	47	47.0	1	0.09
25.44	240	...	1	8	10	25.13.44	150	33	42.5	1	0.18
241	Bonn + 2.6° 1585 ...	9.4	2	8	12	6.32	61	9	12.2	3	0.17
242	19 Cancri <i>λ</i> ...	5.7	...	8	12	48.17	65	34	14.8	1	0.94
54.68	243	...	2	8	12	54.68.8	180	36	21.4	2	0.14
244	...	8.7	1	8	12	54.79	180	29	26.1	1	0.10
56.14	245	...	1	8	18	56.14.4	70	3	3.5	1	0.19

222.—U Geminorum Var. 5.—Period 99 days but irregular. Range, 9th to below 14th magnitude.

238.—Observed for map of R Cancri Var. 1.

241.—Comparison star for Isis in 1870.

245.—Comparison star Angelina in 1865.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
211	... ..	+ 2.3038	+ 0.0012	...	+ 7.740	+ 0.307	...	...
212	74 Geminorum <i>f</i> ...	+ 3.4713	- 0.0078	0.000	+ 7.884	+ 0.463	- 0.01	2519
213	10 Can Min <i>a</i> (<i>Procyon</i>)	+ 3.1917	- 0.0041	- 0.048	+ 7.876	+ 0.425	+ 1.08	2522
214	77 Geminorum <i>κ</i> ...	+ 3.6385	- 0.0109	- 0.005	+ 8.205	+ 0.480	+ 0.05	2551
215	... ..	+ 2.0863	+ 0.0010	...	+ 8.215	+ 0.274	...	...
216	78 Gem. <i>β</i> (<i>Pollux</i>) ...	+ 3.7290	- 0.0128	- 0.049	+ 8.265	+ 0.491	+ 0.06	2555
217	... ..	+ 0.6809	- 0.0161	...	+ 8.554	+ 0.086	...	...
218	... ..	+ 1.1286	- 0.0078	...	+ 8.620	+ 0.145	...	...
219	... ..	+ 0.7070	- 0.0158	...	+ 8.653	+ 0.089	...	...
220	... ..	+ 2.0861	+ 0.0010	...	+ 8.913	+ 0.269	...	...
221	... ..	+ 1.4039	- 0.0042	...	+ 8.998	+ 0.179	...	...
222	U Geminorum Var. 5.	+ 3.5624	- 0.0103	...	+ 9.057	+ 0.460	...	...
223	Taylor 3323 ...	+ 1.0762	- 0.0095	...	+ 9.253	+ 0.135	...	...
224	... ..	+ 2.0632	+ 0.0010	...	+ 9.256	+ 0.263	...	...
225	Lacaille 3032 ...	+ 2.0676	+ 0.0010	...	+ 9.410	+ 0.262	...	...
226	... ..	+ 0.8918	- 0.0137	...	+ 9.434	+ 0.109	...	...
227	... ..	+ 0.8981	- 0.0134	...	+ 9.458	+ 0.112	...	...
228	... ..	+ 1.4093	- 0.0044	...	+ 9.496	+ 0.177	...	...
229	6 Cancri ...	+ 3.6986	- 0.0148	- 0.005	+ 9.687	+ 0.468	+ 0.07	2672
230	... ..	+ 2.1144	+ 0.0013	...	+ 9.779	+ 0.265	...	...
231	... ..	+ 0.4044	- 0.0273	...	+ 9.853	+ 0.048	...	...
232	... ..	+ 3.5075	- 0.0113	...	+ 10.110	+ 0.488	...	...
233	... ..	+ 3.5071	- 0.0113	...	+ 10.127	+ 0.437	...	...
234	W. B. N. VII. 1684	+ 3.5030	- 0.0113	...	+ 10.160	+ 0.437	...	...
235	... ..	+ 3.5032	- 0.0114	...	+ 10.160	+ 0.437	...	...
236	15 Argūs ...	+ 2.5609	+ 0.0009	- 0.007	+ 10.179	+ 0.313	- 0.05	2728
237	... ..	+ 2.1597	+ 0.0016	...	+ 10.466	+ 0.265	...	...
238	... ..	+ 3.3239	- 0.0081	...	+ 10.676	+ 0.406	...	...
239	... ..	+ 1.0560	- 0.0120	...	+ 10.791	+ 0.125	...	...
240	... ..	+ 1.0765	- 0.0116	...	+ 10.806	+ 0.127	...	...
241	... ..	+ 3.6895	- 0.0169	...	+ 10.929	+ 0.446	...	...
242	19 Cancri <i>λ</i> ...	+ 3.5803	- 0.0142	- 0.004	+ 10.931	+ 0.431	+ 0.04	2789
243	... ..	+ 2.1133	+ 0.0016	...	+ 10.980	+ 0.253	...	...
244	... ..	+ 2.1173	+ 0.0016	...	+ 10.990	+ 0.253	...	...
245	... ..	+ 3.4710	- 0.0122	...	+ 11.427	+ 0.412	...	...

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				h	m	s	°	'	"			
9.66	246	...	8.8	1	8	21	9 ⁷⁶ .66	153	19	18.1	1	0.08
44.43	247	...	8.6	1	8	21	44 ¹⁵ .43	153	18	40.4	1	0.18
	248	33 Cancrī η	5.5	...	8	25	11.27	69	7	10.0	15	0.14
36.85	249	...	10.2	2	8	25	56 ⁸⁸ .4	61	48	55.3	2	0.11
	250	...	9.5	1	8	28	58.99	75	20	19.7	1	0.20
	251	Lacaille 3480	7.9	1	8	29	19.69	151	53	51.2	1	0.28
51.71	252	W. B. N. VIII. 699	8.5	1	8	29	51 ⁷² .1	70	40	50.4	1	0.18
	253	...	9.0	1	8	30	27.15	128	48	24.0	1	0.17
25.64	254	...	9.3	1	8	31	25 ⁵¹ .64	129	46	38.2	1	0.18
	255	Lacaille 3475	6.7	1	8	35	0.52	152	23	50.0	1	0.14
	256	43 Cancrī γ	4.8	...	8	35	45.59	68	3	57.5	1	0.12
	257	...	9.0	1	8	37	1.90	81	35	25.0	1	0.22
	258	47 Cancrī δ	4.3	...	8	37	17.62	71	22	11.6	8	0.10
26.21	259	...	9.3	1	8	37	28 ⁰⁴ .21	136	9	48.6	1	0.18
	260	...	8.0	1	8	37	31.12	81	27	10.6	1	0.15
10.72	261	W. B. E. VIII. 991	9.9	1	8	39	10 ⁶⁸ .72	81	43	26.0	1	0.18
	262	11 Hydræ ε	3.6	...	8	39	53.88	88	6	22.1	17	0.18
	263	...	8.4	1	8	41	10.59	147	18	2.2	1	0.14
	264	f Velorum	7.3	2	8	46	8.90	136	2	39.0	2	0.24
41.47	265	...	9.0	2	8	47	42 ⁹⁸ .7	69	38	31.4	2	0.18
	266	R. P. L. 60	6.5	...	8	47	46.26	5	18	13.1	2	0.23
21.67	267	...	10.0	2	8	48	21 ⁵⁹ .67	133	26	31.6	2	0.19
21.37	268	...	8.7	1	8	49	21 ²⁰ .37	133	23	48.8	1	0.19
	269	...	7.5	1	8	49	38.07	133	0	22.4	1	0.23
	270	9 Ursæ Majoris :	3.2	...	8	50	17.74	41	26	59.3	1	0.13
[16.24] 16.03	271	...	9.7	1	8	51	16 ²⁴ .03	98	36	34 ¹⁷ .6	1	0.19
	272	...	8.6	1	8	52	32.22	77	33	53.4	1	0.24
	273	...	8.6	1	8	55	0.39	130	36	51.5	1	0.25
10.10	274	Taylor 3941	8.8	1	8	55	10 ⁰⁷ .10	144	7	46.2	1	0.20
	275	...	8.0	1	8	55	18.97	146	58	3.8	2	0.18
29.14	276	...	9.7	1	8	56	29 ¹⁴ .14	146	52	22.7	1	0.19
48.93	277	...	8.6	1	8	56	48 ⁹³ .93	146	57	7.7	1	0.18
57.01	278	...	9.3	1	8	56	57 ⁰¹ .01	129	19	34.5	1	0.19
	279	...	8.0	1	8	57	4.47	146	35	59.4	1	0.25
	280	...	9.1	1	8	58	15.26	146	51	7.3	1	0.24

257.—260—261—Comparison stars for Melete in 1868.
266.—Carrington 1286.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. O.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
246	... ..	+ 0·9003	- 0·0175	...	+ 11·586	+ 0·102	...	...
247	... ..	+ 0·9051	- 0·0174	...	+ 11·627	+ 0·103	...	...
248	38 Cancri γ ...	+ 3·4881	- 0·0129	- 0·005	+ 11·872	+ 0·404	+ 0·06	2882
249	... ..	+ 3·6481	- 0·0176	...	+ 11·926	+ 0·423	...	...
250	... ..	+ 3·3506	- 0·0092	...	+ 12·138	+ 0·384	...	...
251	Lacaille 3430 ...	+ 1·0813	- 0·0135	...	+ 12·161	+ 0·121	...	...
252	W. B. N. VIII. 699.	+ 3·4442	- 0·0124	...	+ 12·199	+ 0·394	...	...
253	... ..	+ 2·2205	+ 0·0026	...	+ 12·240	+ 0·252	...	...
254	... ..	+ 2·1934	+ 0·0014	...	+ 12·306	+ 0·222	...	...
255	Lacaille 3475 ...	+ 1·0780	- 0·0142	...	+ 12·553	+ 0·118	...	2989
256	43 Cancri γ ...	+ 3·4009	- 0·0143	- 0·011	+ 12·605	+ 0·391	- 0·01	2987
257	... ..	+ 3·2251	- 0·0076	...	+ 12·691	+ 0·359	...	...
258	47 Cancri δ ...	+ 3·4208	- 0·0125	- 0·002	+ 12·709	+ 0·382	+ 0·24	2953
259	... ..	+ 1·9962	+ 0·0019	...	+ 12·720	+ 0·220	...	...
260	... ..	+ 3·2274	- 0·0077	...	+ 12·724	+ 0·359	...	...
261	W. B. E. VIII. 991..	+ 3·2215	- 0·0076	...	+ 12·836	+ 0·355	...	...
262	11 Hydræ ϵ ...	+ 3·1960	- 0·0071	- 0·013	+ 12·883	+ 0·351	+ 0·04	2971
263	... ..	+ 1·4838	- 0·0049	...	+ 12·970	+ 0·159	...	...
264	f Velorum ...	+ 2·0342	+ 0·0025	...	+ 13·298	+ 0·216	...	3020
265	... ..	+ 3·4413	- 0·0140	...	+ 13·400	+ 0·368	...	...
266	R. P. L. 60 ...	+ 13·7848	- 1·7237	...	+ 13·404	+ 1·490	...	...
267	... ..	+ 2·1325	+ 0·0033	...	+ 13·443	+ 0·225	...	...
268	... ..	+ 2·1349	+ 0·0033	...	+ 13·507	+ 0·224	...	...
269	... ..	+ 2·1512	+ 0·0033	...	+ 13·519	+ 0·226	...	...
270	9 Ursæ Majoris ι ...	+ 4·1860	- 0·0446	- 0·047	+ 13·568	+ 0·443	+ 0·28	3048
271	... ..	+ 2·9237	- 0·0017	...	+ 13·630	+ 0·307	...	...
272	... ..	+ 3·2873	- 0·0098	...	+ 13·711	+ 0·344	...	...
273	... ..	+ 2·2441	+ 0·0039	...	+ 13·869	+ 0·231	...	...
274	Taylor 3941 ...	+ 1·7375	- 0·0003	...	+ 13·879	+ 0·177	...	...
275	... ..	+ 1·5888	- 0·0030	...	+ 13·888	+ 0·161	...	...
276	... ..	+ 1·6014	- 0·0026	...	+ 13·961	+ 0·162	...	...
277	... ..	+ 1·5991	- 0·0027	...	+ 13·982	+ 0·161	...	...
278	... ..	+ 2·2875	+ 0·0040	...	+ 13·990	+ 0·233	...	...
279	... ..	+ 1·6203	- 0·0023	...	+ 13·998	+ 0·163	...	...
280	... ..	+ 1·6137	- 0·0024	...	+ 14·072	+ 0·162	...	...

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
52.82	281 77 Cancri ξ	5.2	...	9	1	52.83 ²	67	25	50.0	1	0.20
	282	7.8	2	9	6	38.26	142	30	55.6	2	0.24
	283	8.6	1	9	6	58.77	142	25	46.7	1	0.26
18.20	284	10.2	1	9	7	18.05 ²⁰	124	52	37.2	1	0.19
	285 Lacaille 3747	8.0	1	9	7	54.13	150	25	15.5	1	0.22
	286 82 Cancri π^3	5.6	...	9	8	3.08	74	31	16.0	2	0.12
	287 Lalande 18251	7.7	3	9	8	42.17	74	27	8.1	3	0.24
	288	8.6	1	9	9	27.27	150	33	15.9	1	0.23
38.94	289 Lacaille 3761	6.5	1	9	9	38.64 ⁹⁴	150	22	51.1	1	0.19
23.40	290	9.5	1	9	10	23.13 ⁴⁰	150	26	52.7	1	0.19
	291 83 Cancri	6.6	...	9	11	43.36	71	44	43.5	13	0.17
	292 ϵ Argus	2.5	...	9	13	36.68	148	43	51.5	2	0.13
	293	8.0	1	9	15	13.48	150	30	14.5	1	0.24
25.32	294	8.4	2	9	15	25.23 ³²	150	25	49.3	2	0.22
	295	7.8	1	9	15	26.73	143	50	14.6	1	0.26
50.49	296	8.0	1	9	15	50.44 ⁹	124	48	21.5	1	0.20
	297	9.2	1	9	16	40.56	70	28	13.4	1	0.24
	298 Taylor 4128	7.0	1	9	18	20.37	72	51	19.2	1	0.26
11.87	299 30 Hydræ α , Var. 2	2.0	...	9	21	11.85 ⁷	98	5	48.0	11	0.19
	300 Lalande 18686	8.3	1	9	22	1.57	68	31	9.4	1	0.22
	301 Lalande 18659	8.0	1	9	22	58.09	67	51	0.9	1	0.26
	302	7.0	1	9	23	0.82	67	37	8.8	1	0.20
	303 25 Ursæ Majoris θ	3.2	...	9	24	8.89	37	43	55.3	1	0.13
	304 Lacaille 3886	7.9	1	9	24	55.56	141	51	22.6	1	0.29
	305 Taylor 4226	7.1	1	9	28	48.44	146	31	9.2	1	0.25
	306	8.3	1	9	29	15.75	123	51	9.6	1	0.24
43.73	307	9.3	...	9	29	43.55 ⁷³	146	35	9.7	1	0.18
	308	8.0	2	9	32	26.87	129	41	27.0	2	0.24
	309	7.9	1	9	33	8.54	129	49	9.5	1	0.24
46.97	310 R. P. L. 69	7.9	...	9	34	46.97 ⁹⁷	2	48	24.5	4	0.18
	311 Taylor 4280	7.7	3	9	34	56.79	142	21	20.8	3	0.24
41.84	312	9.2	2	9	35	41.06 ⁸⁴	143	31	10.3	2	0.22
	313 16 Leonis ψ	5.7	...	9	36	39.12	75	23	0.2	1	0.13
28.05	314 17 Leonis ϵ	3.1	...	9	38	28.06 ⁵	65	37	43.0	7	0.21
	315	8.0	1	9	41	44.14	130	47	30.5	1	0.24

297.—Comparison star for Diana in 1867.

299.— α Hydræ Var. 2. Supposed to vary irregularly from 2.0 to 2.5 magnitude.

300.—301.—Comparison stars for Metis in 1861.

310.—Carrington 1413.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
281	77 Cancri ξ ...	+ 3.4618	- 0.0159	- 0.002	+ 14.297	+ 0.348	- 0.01	3117
282	... ..	+ 1.8757	+ 0.0022	...	+ 14.585	+ 0.182	...	...
283	... ..	+ 1.8812	+ 0.0022	...	+ 14.606	+ 0.182	...	...
284	... ..	+ 2.4845	+ 0.0046	...	+ 14.625	+ 0.237	...	...
285	Lacaille 3747 ...	+ 1.4650	- 0.0057	...	+ 14.661	+ 0.140	...	...
286	82 Cancri π^3 ...	+ 3.3246	- 0.0117	- 0.004	+ 14.670	+ 0.325	- 0.02	3147
287	Lalande 18251 ...	+ 3.3250	- 0.0118	...	+ 14.709	+ 0.323	...	...
288	... ..	+ 1.4879	- 0.0057	...	+ 14.753	+ 0.138	...	...
289	Lacaille 3761 ...	+ 1.4806	- 0.0052	...	+ 14.765	+ 0.140	...	...
290	... ..	+ 1.4820	- 0.0052	...	+ 14.808	+ 0.140	...	...
291	83 Cancri... ..	+ 3.3676	- 0.0134	- 0.012	+ 14.887	+ 0.323	+ 0.16	3171
292	Argús	+ 1.6105	- 0.0022	...	+ 14.997	+ 0.150	...	3186
293	... ..	+ 1.5156	- 0.0044	...	+ 15.091	+ 0.140	...	...
294	... ..	+ 1.5219	- 0.0042	...	+ 15.102	+ 0.140	...	...
295	... ..	+ 1.8687	+ 0.0026	...	+ 15.104	+ 0.174	...	...
296	... ..	+ 2.4619	+ 0.0053	...	+ 15.126	+ 0.229	...	...
297	... ..	+ 3.3823	- 0.0142	...	+ 15.174	+ 0.316	...	...
298	Taylor 4128 ...	+ 3.3395	- 0.0128	...	+ 15.269	+ 0.309	...	3209
299	30 Hydro α , Var. 2...	+ 2.9506	- 0.0013	- 0.004	+ 15.431	+ 0.268	- 0.08	3223
300	Lalande 18636 ...	+ 3.4037	- 0.0158	...	+ 15.476	+ 0.310	...	...
301	Lalande 18659 ...	+ 3.4165	- 0.0161	...	+ 15.528	+ 0.309	...	...
302	... ..	+ 3.4205	- 0.0162	...	+ 15.530	+ 0.309	...	...
303	25 Ursæ Majoris θ ...	+ 4.1586	- 0.0561	- 0.111	+ 15.593	+ 0.374	+ 0.57	3242
304	Lacaille 3886 ...	+ 2.0061	+ 0.0052	...	+ 15.636	+ 0.176	...	...
305	Taylor 4226 ...	+ 1.8334	+ 0.0030	...	+ 15.847	+ 0.157	...	...
306	... ..	+ 2.4139	+ 0.0068	...	+ 15.870	+ 0.208	...	...
307	... ..	+ 1.8368	+ 0.0031	...	+ 15.906	+ 0.156	...	...
308	... ..	+ 2.4061	+ 0.0072	...	+ 16.040	+ 0.204	...	...
309	... ..	+ 2.4058	+ 0.0072	...	+ 16.076	+ 0.208	...	...
310	R. P. L. 69 ...	+ 19.2168	- 5.6638	...	+ 16.164	+ 1.652	...	...
311	Taylor 4280 ...	+ 2.0470	+ 0.0065	...	+ 16.170	+ 0.170	...	...
312	... ..	+ 1.7866	+ 0.0027	...	+ 16.209	+ 0.147	...	...
313	16 Leonis ψ ...	+ 3.2762	- 0.0115	- 0.002	+ 16.258	+ 0.273	+ 0.02	3321
314	17 Leonis ϵ ...	+ 3.4228	- 0.0180	- 0.004	+ 16.351	+ 0.282	+ 0.02	3331
315	... ..	+ 2.4176	+ 0.0083	...	+ 16.515	+ 0.193	...	...

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				h.	m.	s.	°	'	"			
	816	Lalande 19286 ...	7.4	3	9	43	33.51	89	17	29.1	3	0.17
	817	... ..	8.1	1	9	44	16.96	147	3	16.3	1	0.24
26-94	818	... ..	10.1	1	9	47	26.93 ⁴	75	35	9.8	1	0.19
	819	W. B. N. IX. 1020 ...	8.9	1	9	48	46.90	71	50	32.8	1	0.22
	820	W. B. N. IX. 1047 ...	8.7	1	9	49	52.35	72	19	35.7	1	0.26
	821	27 Leonis ν ...	5.3	...	9	51	13.73	76	56	10.7	1	0.05
	822	29 Leonis π ...	5.0	...	9	53	20.53	81	19	59.8	14	0.21
	823	... ..	9.6	...	9	55	2.11	125	19	7.4	2	0.18
47-33	824	W. B. N. IX. 1189 ...	9.8	1	9	56	47.84 ³	73	9	24.0	1	0.19
	825	... ..	9.3	1	9	59	41.52	86	32	5.3	1	0.21
	826	14 Sextantis ...	6.0	1	9	59	59.36	83	45	21.7	1	0.29
	827	W. B. N. IX. 1282 ...	8.0	1	10	0	38.07	73	5	21.0	1	0.25
	828	32 Leonis α (<i>Regulus</i>) ...	1.4	...	10	1	26.77	77	23	55.2	19	0.21
	829	... ..	8.7	1	10	1	36.39	130	3	41.7	1	0.26
	830	... ..	9.3	...	10	2	16.64	129	58	8.9	1	0.27
15-35	831	... ..	9.5	2	10	2	35.33 ⁵	123	29	8.4	2	0.19
	832	33 Leonis ...	8.5	1	10	3	40.94	73	39	23.3	1	0.14
	833	... ..	9.7	1	10	4	49.34	123	30	34.4	1	0.20
	834	Taylor 4652 ...	6.9	2	10	7	14.79	147	25	9.9	2	0.18
	835	... ..	7.2	1	10	8	13.73	139	58	2.9	1	0.21
15-71	836	... ..	9.0	1	10	9	15.47 ⁷¹	139	53	26.8	1	0.18
	837	B. P. L. 72 ...	5.6	...	10	10	20.64	5	5	24.4	2	0.19
	838	41 Leonis γ^1 ...	2.2	...	10	12	48.11	69	30	7.9	8	0.26
	839	... ..	9.2	1	10	13	6.98	123	38	43.4	1	0.26
	840	... ..	8.8	1	10	14	50.65	150	27	23.1	1	0.24
	841	... ..	8.0	1	10	16	14.70	125	34	9.0	1	0.24
	842	Taylor 4682 ...	7.8	2	10	21	51.37	74	59	36.1	2	0.25
	843	30 Sextantis ...	4.9	...	10	23	38.76	89	58	16.3	2	0.23
	844	... ..	8.0	1	10	25	1.10	125	35	44.3	1	0.31
	845	... ..	7.9	1	10	25	33.23	146	52	31.9	1	0.24
	846	47 Leonis ρ ...	4.0	...	10	25	57.85	80	1	31.2	13	0.24
	847	ρ Carinae ...	3.6	...	10	27	24.30	151	1	0.9	1	0.13
	848	... ..	8.3	2	10	35	54.86	146	55	21.4	2	0.30
	849	... ..	9.5	1	10	36	45.13	150	49	5.6	1	0.21
	850	36 Sextantis ...	6.0	1	10	38	27.61	86	49	45.6	1	0.32

816.—Comparison star for Sappho in 1870.

819.—820—824—827.—Comparison stars for Mars in 1869.

828.—Comparison star for Ariadne in 1873.

837.—Groombridge 1620.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
316	Lalande 19286 ...	+ 3.0814	- 0.0044	...	+ 16.605	+ 0.247	...	...
317	... ..	- 1.9207	+ 0.0060	...	+ 16.641	+ 0.150	...	...
318	... ..	+ 3.2600	- 0.0113	...	+ 16.793	+ 0.253	...	...
319	W. B. N. IX. 1020...	+ 3.3097	- 0.0137	...	+ 16.857	+ 0.255	...	...
320	W. B. N. IX. 1047...	+ 3.3012	- 0.0133	...	+ 16.908	+ 0.251	...	...
321	37 Leonis ν ...	+ 3.2374	- 0.0106	- 0.004	+ 16.972	+ 0.245	+ 0.01	3406
322	29 Leonis π ...	+ 3.1791	- 0.0080	- 0.003	+ 17.069	+ 0.236	+ 0.03	3415
323	... ..	+ 2.5809	+ 0.0086	...	+ 17.147	+ 0.183	...	...
324	W. B. N. IX. 1189...	+ 3.2794	- 0.0127	...	+ 17.225	+ 0.238	...	...
325	... ..	+ 3.1127	- 0.0054	...	+ 17.354	+ 0.221	...	...
326	14 Sextantis ...	+ 3.1452	- 0.0066	- 0.005	+ 17.368	+ 0.222	+ 0.01	3449
327	W. B. N. IX. 1282...	+ 3.2744	- 0.0127	...	+ 17.396	+ 0.231	...	...
328	32 Leonis α (<i>Regulus</i>)	+ 3.2199	- 0.0102	- 0.019	+ 17.431	+ 0.225	- 0.01	3459
329	... ..	+ 2.5168	+ 0.0105	...	+ 17.438	+ 0.175	...	...
330	... ..	+ 2.5215	+ 0.0105	...	+ 17.436	+ 0.173	...	...
331	... ..	+ 2.6386	+ 0.0084	...	+ 17.480	+ 0.182	...	...
332	33 Leonis ...	+ 3.2627	- 0.0123	+ 0.005	+ 17.527	+ 0.223	+ 0.01	3469
333	... ..	+ 2.6458	+ 0.0091	...	+ 17.575	+ 0.173	...	...
334	Taylor 4552 ..	+ 2.0839	+ 0.0116	...	+ 17.676	+ 0.136	...	3491
335	... ..	+ 2.3264	+ 0.0130	...	+ 17.717	+ 0.151	...	...
336	... ..	+ 2.3348	+ 0.0131	...	+ 17.759	+ 0.150	...	...
337	R. P. L. 72 ...	+ 9.9826	- 1.6433	- 0.079	+ 17.803	+ 0.662	+ 0.05	3495
338	41 Leonis γ^1 ...	+ 3.2974	- 0.0143	+ 0.019	+ 17.901	+ 0.208	+ 0.15	3523
339	... ..	+ 2.5916	+ 0.0115	...	+ 17.913	+ 0.162	...	...
340	... ..	+ 2.0274	+ 0.0122	...	+ 17.980	+ 0.123	...	...
341	... ..	+ 2.6539	+ 0.0110	...	+ 18.034	+ 0.161	...	...
342	Taylor 4682 ...	+ 3.2209	- 0.0111	...	+ 18.244	+ 0.187	...	3579
343	30 Sextantis ...	+ 3.0724	- 0.0030	- 0.004	+ 18.308	+ 0.175	+ 0.03	3597
344	... ..	+ 2.6869	+ 0.0120	...	+ 18.353	+ 0.150	...	...
345	... ..	+ 2.2514	+ 0.0170	...	+ 18.376	+ 0.124	...	...
346	47 Leonis ρ ...	+ 3.1659	- 0.0080	0.000	+ 18.390	+ 0.176	+ 0.03	3609
347	ρ Carinæ ...	+ 2.1233	+ 0.0165	...	+ 18.440	+ 0.114	...	3619
348	... ..	+ 2.3353	+ 0.0202	...	+ 18.720	+ 0.114	...	...
349	... ..	+ 2.2216	+ 0.0202	...	+ 18.746	+ 0.107	...	...
350	36 Sextantis ...	+ 3.0980	- 0.0040	- 0.006	+ 18.799	+ 0.150	+ 0.01	3634

326.—343.—Proper motions from "Greenwich Catalogue 1864."

332.—Proper motions from "Greenwich Catalogue 1872."

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
351	Taylor 4850 ... 2nd...	8.2	1	10	38	56.14	148	51	59.4	1	0.27
352	Taylor 4852 ... 1st ...	7.9	2	10	39	5.85	148	53	38.2	2	0.30
353	... ..	9.0	1	10	39	16.75	148	36	4.0	1	0.26
354	Brisbane 3194 ... 2nd...	8.0	2	10	39	32.46	149	3	21.2	2	0.28
355	... ..	9.3	1	10	41	12.32	137	2	54.6	1	0.32
356	53 Leonis l	5.3	...	10	42	25.32	78	46	3.4	15	0.25
357	... ..	8.3	1	10	42	51.68	141	6	23.3	1	0.13
358	Lacaille 4502	8.2	1	10	46	45.39	141	6	39.1	1	0.27
359	... ..	8.9	1	10	47	52.11	143	48	57.6	1	0.30
360	... ..	8.8	1	10	48	6.92	150	7	27.4	1	0.21
361	... ..	9.7	1	10	48	10.98	147	43	59.6	1	0.21
362	... ..	9.5	1	10	48	41.14	143	53	30.2	1	0.26
363	55 Leonis	6.0	...	10	49	1.14	88	34	14.0	1	0.30
364	Taylor 4945	7.3	1	10	49	10.79	144	55	37.5	1	0.29
365	... ..	8.9	1	10	50	47.08	148	49	59.1	1	0.31
366	Taylor 4955	7.1	1	10	50	55.37	147	21	32.5	1	0.30
367	... ..	9.0	1	10	53	47.34	149	16	41.3	2	0.30
368	58 Leonis d	5.0	...	10	53	50.74	82	41	5.3	3	0.26
19-42 369	... ..	9.5	2	10	54	19.37.72	107	40	13.0	2	0.26
370	... ..	9.3	1	10	55	43.05	88	27	16.5	1	0.13
371	63 Leonis x	4.7	...	10	58	18.61	81	57	41.3	10	0.23
372	... ..	9.3	1	11	0	51.48	147	15	40.4	1	0.21
373	67 Leonis	5.6	...	11	1	50.42	64	38	18.4	1	0.32
374	... ..	9.3	1	11	2	4.02	149	15	39.4	1	0.33
375	Lalande 21367	7.7	...	11	3	37.55	73	7	43.2	1	0.31
376	Lalande 21366	8.0	2	11	3	40.04	64	9	42.0	2	0.32
377	Taylor 5088	7.1	1	11	5	10.34	149	40	45.4	1	0.24
378	Lalande 21416	8.0	3	11	5	17.82	67	14	19.7	3	0.31
379	68 Leonis δ	2.8	...	11	7	11.48	68	45	52.7	11	0.25
380	12 Crateris δ	3.9	...	11	12	50.49	104	4	31.8	6	0.29
381	77 Leonis σ	4.1	...	11	14	25.90	83	15	31.2	3	0.18
382	79 Leonis	5.5	...	11	17	22.01	87	52	46.8	1	0.31
383	... ..	9.0	2	11	21	8.86	145	53	44.0	2	0.29
384	84 Leonis τ	5.1	...	11	21	15.08	86	25	40.6	3	0.32
385	Lalande 21819	8.0	1	11	21	15.96	86	27	12.9	1	0.34

354.—359—362—Observed for map of η Argus Var. 1.

369.—Observed for map of R Crateris Var. 1.

370.—Comparison stars for Asia in 1868.

373.—374—Comparison stars for Thalia in 1862.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
		s	s	s	"	"	"	
351	Taylor 4850 ... 2nd...	+ 2'3055	+ 0'0211	...	+ 18'812	+ 0'109	...	...
352	Taylor 4852 ... 1st ...	+ 2'3061	+ 0'0213	...	+ 18'818	+ 0'108	...	...
353	... ..	+ 2'3166	+ 0'0213	...	+ 18'823	+ 0'109	...	...
354	Brisbane 3194 2nd...	+ 2'3052	+ 0'0214	...	+ 18'832	+ 0'108	...	...
355	... ..	+ 2'5881	+ 0'0186	...	+ 18'881	+ 0'120	...	...
356	53 Leonis ι	+ 3'1603	- 0'0080	- 0'003	+ 18'917	+ 0'145	+ 0'02	3708
357	... ..	+ 2'5249	+ 0'0205	...	+ 18'930	+ 0'114	...	...
358	Lacaille 4502	+ 2'5515	+ 0'0215	...	+ 19'088	+ 0'109	...	...
359	... ..	+ 2'3883	+ 0'0244	...	+ 19'070	+ 0'100	...	...
360	... ..	+ 2'3541	+ 0'0246	...	+ 19'077	+ 0'098	...	...
361	... ..	+ 2'4194	+ 0'0242	...	+ 19'078	+ 0'101	...	...
362	... ..	+ 2'3938	+ 0'0247	...	+ 19'091	+ 0'099	...	...
363	55 Leonis	+ 3'0824	- 0'0026	+ 0'007	+ 19'101	+ 0'130	0'00	3749
364	Taylor 4945	+ 2'4930	+ 0'0236	...	+ 19'105	+ 0'103	...	...
365	... ..	+ 2'4147	+ 0'0254	...	+ 19'147	+ 0'097	...	...
366	Taylor 4955	+ 2'4525	+ 0'0250	...	+ 19'151	+ 0'097	...	...
367	... ..	+ 2'4312	+ 0'0267	...	+ 19'224	+ 0'093	...	...
368	58 Leonis δ	+ 3'1003	- 0'0039	- 0'002	+ 19'225	+ 0'120	+ 0'03	3768
369	... ..	+ 2'9518	+ 0'0069	...	+ 19'237	+ 0'114	...	...
370	... ..	+ 3'0821	- 0'0024	...	+ 19'271	+ 0'117	...	...
371	63 Leonis χ	+ 3'1223	- 0'0056	- 0'024	+ 19'332	+ 0'113	+ 0'08	3788
372	... ..	+ 2'5415	+ 0'0282	...	+ 19'390	+ 0'087	...	...
373	67 Leonis	+ 3'2314	- 0'0164	+ 0'003	+ 19'413	+ 0'111	+ 0'01	3809
374	... ..	+ 2'5099	+ 0'0297	...	+ 19'417	+ 0'084	...	...
375	Lalande 21367	+ 3'1406	- 0'0075	...	+ 19'451	+ 0'104	...	...
376	Lalande 21366	+ 3'2207	- 0'0168	...	+ 19'452	+ 0'107	...	...
377	Taylor 5088	+ 2'5305	+ 0'0312	...	+ 19'484	+ 0'080	...	...
378	Lalande 21416	+ 3'2048	- 0'0144	...	+ 19'486	+ 0'103	...	...
379	68 Leonis δ	+ 3'1908	- 0'0132	+ 0'011	+ 19'525	+ 0'098	+ 0'14	3834
380	12 Crateris δ	+ 3'0036	+ 0'0064	- 0'009	+ 19'632	+ 0'081	- 0'18	3859
381	77 Leonis σ	+ 3'1034	- 0'0042	- 0'009	+ 19'659	+ 0'081	+ 0'03	3862
382	79 Leonis	+ 3'0813	- 0'0016	- 0'002	+ 19'709	+ 0'076	+ 0'02	3879
383	... ..	+ 2'7390	+ 0'0339	...	+ 19'767	+ 0'059	...	...
384	84 Leonis τ	+ 3'0862	- 0'0020	- 0'001	+ 19'768	+ 0'072	+ 0'02	3900
385	Lalande 21819	+ 3'0860	- 0'0021	...	+ 19'769	+ 0'068	...	...

373.—Proper motions from "Greenwich Catalogue 1872."

382.—Proper motions from "Greenwich Catalogue 1864."

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
386	Lalande 21888 ...	7.0	1	11	21	45.85	88	27	15.4	1	0.80
387	87 Leonis ϵ ...	5.0	...	11	23	40.89	92	17	11.8	1	0.85
388	... ..	9.4	2	11	24	59.28	84	44	19.9	2	0.82
389	... ..	9.4	1	11	25	24.09	151	38	29.1	1	0.81
390	... ..	8.0	1	11	26	31.79	143	53	15.8	1	0.82
391	91 Leonis ν ...	4.5	...	11	30	17.54	90	6	22.9	8	0.29
392	Lacaille 4850 ...	6.0	1	11	34	43.57	144	51	12.9	1	0.80
393	8 Virginis ν ...	4.2	...	11	39	10.57	82	44	32.3	4	0.22
394	94 Leonis β (Deneb) ...	2.2	...	11	42	25.58	74	42	5.2	21	0.81
395	5 Virginis β ...	3.7	...	11	43	55.43	87	30	10.7	2	0.20
396	... ..	8.9	1	11	46	9.32	142	32	3.1	1	0.24
397	Lacaille 4956 ...	8.0	1	11	51	27.47	154	35	57.3	1	0.80
398	... ..	8.5	1	11	53	31.84	151	50	14.9	1	0.21
399	8 Virginis π ...	4.4	...	11	54	12.64	82	39	38.0	2	0.84
400	R. P. L. 89 ...	6.3	...	11	58	10.58	3	41	31.5	4	0.47
401	2 Corvi ϵ ...	3.1	...	12	3	26.42	111	53	47.4	9	0.82
402	... ..	9.0	1	12	3	57.06	145	59	4.5	1	0.84
403	... ..	9.0	1	12	4	8.95	145	57 52.8		1	0.84
404	... ..	8.5	...	12	6	14.88	150	21	4.4	1	0.84
405	... ..	9.6	1	12	6	47.52	150	28	21.3	1	0.26
406	... ..	9.7	1	12	9	13.18	97	15	24.6	2	0.33
407	Lalande 22983 ...	8.8	2	12	9	25.21	96	44	36.9	2	0.85
408	Lalande 22998 ...	8.1	2	12	9	40.90	96	48	33.0	3	0.33
409	15 Virginis η ...	4.0	...	12	13	15.26	89	56	39.4	7	0.28
410	R. P. L. 93 ...	6.3	...	12	14	19.04	1	34	44.9	1	0.81
411	... ..	9.0	1	12	17	41.23	24	45	9.9	1	0.21
412	... ..	10.0	1	12	18	58.34	143	32	8.4	1	0.84
413	... ..	10.0	1	12	19	19.66	129	45	52.9	1	0.35
414	Taylor 5710 ...	6.5	2	12	20	20.36	147	35	49.5	3	0.81
415	... ..	7.6	1	12	26	13.13	28	4	2.0	1	0.25
416	9 Corvi β ..	2.8	...	12	27	33.62	112	40	39.5	12	0.34
417	Taylor 5785 ...	8.0	1	12	28	6.30	151	1	24.7	1	0.38
418	25 Virginis f ...	5.9	...	12	30	5.70	95	6	54.8	2	0.82
419	R. Virginis Var. 2 ...	6.7	2	12	31	54.18	82	17	45.7	2	0.40
420	.. ..	9.0	1	12	33	9.17	143	9	20.9	1	0.21

388.—Comparison star for Amphitrite in 1866.

400.—Groombridge 1850.

406.—407—408.—Comparison stars for Ariadne in 1870.

410.—Groombridge 1834.

411.—Comparison star for Comet 2 in 1861.

419.—R. Virginis Var. 2.—Period 146 days. Range, 6.5 to 11.5 magnitude.

[33 3.1]

58 19.5

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
386	Lalande 21833 ...	+ 3·0859	- 0·0020	...	+ 19·777	+ 0·067	...	...
387	87 Leonis ϵ ...	+ 3·0638	+ 0·0011	- 0·001	+ 19·803	+ 0·062	+ 0·03	3916
388	... ..	+ 3·0909	- 0·0028	...	+ 19·820	+ 0·060	...	...
389	... ..	+ 2·7010	+ 0·0415	...	+ 19·827	+ 0·050	...	...
390	... ..	+ 2·8055	+ 0·0335	...	+ 19·842	+ 0·051	...	...
391	91 Leonis ν ...	+ 3·0718	+ 0·0003	- 0·003	+ 19·887	+ 0·049	- 0·03	3946
392	Lacaille 4850 ...	+ 2·8631	+ 0·0370	...	+ 19·933	+ 0·037	...	...
393	3 Virginis ν ...	+ 3·0876	- 0·0031	+ 0·001	+ 19·972	+ 0·032	+ 0·21	3982
394	94 Leonis β (<i>Deneb</i>)...	+ 3·1002	- 0·0074	- 0·036	+ 19·996	+ 0·025	+ 0·10	3995
395	5 Virginis β ...	+ 3·0763	- 0·0003	+ 0·048	+ 20·005	+ 0·023	+ 0·28	4002
396	... ..	+ 2·9668	+ 0·0374	...	+ 20·018	+ 0·017	...	...
397	Lacaille 4956 ...	+ 2·9673	+ 0·0598	...	+ 20·040	+ 0·008	...	...
398	... ..	+ 3·0016	+ 0·0543	...	+ 20·047	+ 0·003	...	...
399	8 Virginis π ...	+ 3·0764	- 0·0023	0·000	+ 20·048	+ 0·002	+ 0·04	4052
400	R. P. L. 89... ..	+ 3·2365	- 0·5107	...	+ 20·055	- 0·005	...	4070
401	2 Corvi ϵ ...	+ 3·0802	+ 0·0142	- 0·005	+ 20·053	- 0·016	- 0·01	4097
402	... ..	+ 3·1063	+ 0·0473	...	+ 20·052	- 0·016	...	...
403	... ..	+ 3·1079	+ 0·0474	...	+ 20·052	- 0·017	...	...
404	... ..	+ 3·1362	+ 0·0568	...	+ 20·047	- 0·021	...	...
405	... ..	+ 3·1421	+ 0·0574	...	+ 20·047	- 0·022	...	...
406	... ..	+ 3·0789	+ 0·0062	...	+ 20·039	- 0·027	...	...
407	Lalande 22983 ...	+ 3·0786	+ 0·0059	...	+ 20·038	- 0·027	...	...
408	Lalande 22993 ...	+ 3·0788	+ 0·0061	...	+ 20·037	- 0·028	...	...
409	15 Virginis η ...	+ 3·0721	+ 0·0027	- 0·007	+ 20·021	- 0·035	+ 0·03	4145
410	R. P. L. 93... ..	+ 0·0443	+ 1·0537	- 0·152	+ 20·016	- 0·009	- 0·07	4165
411	... ..	+ 2·8486	- 0·0523	...	+ 19·995	- 0·041	...	...
412	... ..	+ 3·2218	+ 0·0404	...	+ 19·986	- 0·047	...	...
413	... ..	+ 3·1659	+ 0·0202	...	+ 19·984	- 0·047	...	...
414	Taylor 5710 ...	+ 3·2589	+ 0·0555	...	+ 19·976	- 0·051	...	...
415	... ..	+ 2·7860	- 0·0420	...	+ 19·923	- 0·055	...	...
416	9 Corvi β ...	+ 3·1391	+ 0·0164	- 0·008	+ 19·910	- 0·064	+ 0·07	4234
417	Taylor 5785 ...	+ 3·3677	+ 0·0670	...	+ 19·904	- 0·068	...	...
418	25 Virginis f ...	+ 3·0878	+ 0·0063	- 0·004	+ 19·882	- 0·068	+ 0·03	4247
419	R Virginis Var. 2 ...	+ 3·0471	- 0·0003	...	+ 19·861	- 0·070	...	...
420	... ..	+ 3·3294	+ 0·0496	...	+ 19·845	- 0·079	...	...

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
421	... ..	8.0	2	12	34	7.27	145	35	27.7	2	0.41
422	29 Virginis γ^1	2.8	...	12	35	4.84	90	44	8.5	3	0.26
423	... ..	8.6	1	12	42	0.33	141	51	33.2	1	0.39
424	... ..	9.3	4	12	43	27.52	80	43	18.3	4	0.34
425	37 Virginis	6.0	...	12	44	59.85	86	14	9.6	3	0.23
426	38 Virginis	6.3	...	12	46	32.17	92	50	47.7	1	0.35
427	W. B. E. XII. 799	9.0	1	12	47	55.73	80	47	24.1	1	0.38
428	R. P. L. 99	5.5	...	12	48	12.18	5	52	40.3	6	0.58
429	12 Canum Venaticorum... ..	3.0	...	12	49	56.56	50	58	45.0	9	0.32
430	O. A. S. 12539	6.8	1	12	50	18.95	118	9	40.0	1	0.38
431	O. A. S. 12542	9.7	1	12	50	39.65	118	12	57.2	1	0.39
432	... ..	8.8	1	12	56	7.67	140	29	27.5	1	0.41
433	48 Virginis	6.6	...	12	57	12.60	92	57	48.8	2	0.21
434	51 Virginis θ	4.4	...	13	3	13.22	94	50	40.6	16	0.34
435	Taylor 6057	6.0	1	13	4	12.11	140	13	42.4	1	0.40
436	... ..	9.0	2	13	4	52.84	138	12	29.5	2	0.42
437	Lacaille 5434	8.0	1	13	6	20.54	152	53	30.9	1	0.42
438	65 Virginis	6.1	...	13	16	34.77	94	14	38.7	2	0.21
439	... ..	9.3	1	13	17	27.31	128	11	19.6	1	0.41
450	67 Virginis α (<i>Spica</i>)	1.2	...	13	18	20.71	100	28	54.7	12	0.36
441	79 Urs. Maj. 3 (<i>Mizar</i>) 1st.	2.6	...	13	18	41.28	34	23	42.4	1	0.32
442	79 Urs. Maj. 3 (<i>Mizar</i>) 2nd.	4.2	...	13	18	42.23	34	23	54.3	1	0.42
443	O. A. S. 12872	9.2	1	13	19	40.78	116	58	19.1	1	0.34
444	... ..	8.2	1	13	25	8.12	128	10	34.1	1	0.42
445	79 Virginis ζ	3.5	...	13	28	4.19	89	55	49.6	13	0.36
446	... ..	8.2	2	13	29	53.36	151	4	36.1	2	0.37
447	... ..	7.9	2	13	33	19.20	129	3	28.4	2	0.41
448	82 Virginis m	5.3	...	13	34	47.34	98	2	45.9	1	0.21
449	... ..	8.0	1	13	36	4.18	128	5	17.9	1	0.42
450	Taylor 6874	7.0	1	13	38	8.39	151	56	15.9	1	0.34
451	... ..	9.1	1	13	40	51.53	129	25	50.9	1	0.42
452	85 Urs. Maj. η (<i>Benetnasch</i>)	2.0	...	13	42	24.87	40	2	12.8	2	0.40
453	8 Bootis η	2.9	...	13	48	29.65	70	56	59.2	9	0.37
454	... ..	10.0	4	13	51	48.13	108	32	27.4	4	0.40
455	98 Virginis τ	4.4	...	13	55	1.90	87	49	30.3	9	0.39

424.—427—Comparison stars for Isis in 1867.

428.—Groombridge 1940.

430.—431—Comparison stars for Danæ in 1869.

443.—Comparison star for Eunomia in 1863.

454.—Comparison star for Thisbe in 1870.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
421	... ..	+ 3.3617	+ 0.0548	...	+ 19.833	- 0.081	...	...
422	29 Virginis γ^1	+ 3.0747	+ 0.0043	- 0.037	+ 19.821	- 0.078	+ 0.05	4268
423	... ..	+ 3.3825	+ 0.0490	...	+ 19.719	- 0.097	...	...
424	... ..	+ 3.0310	- 0.0003	...	+ 19.695	- 0.001	...	...
425	37 Virginis ...	+ 3.0549	+ 0.0025	- 0.002	+ 19.669	- 0.095	- 0.02	4314
426	38 Virginis ...	+ 3.0856	+ 0.0060	- 0.016	+ 19.643	- 0.009	+ 0.03	4323
427	W. B. E. XII. 799..	+ 3.0272	- 0.0001	...	+ 19.618	- 0.100	...	...
428	R. P. L. 99 ..	+ 3.0320	+ 0.2226	- 0.017	+ 19.613	- 0.019	- 0.04	4342
429	12 Canum Venaticorum	+ 2.8379	- 0.0152	- 0.023	+ 19.581	- 0.098	- 0.06	4346
430	O. A. S. 12539 ..	+ 3.2280	+ 0.0217	...	+ 19.574	- 0.110	...	...
431	O. A. S. 12542 ...	+ 3.2294	+ 0.0218	...	+ 19.567	- 0.111	...	...
432	... ..	+ 3.0223	+ 0.0716	...	+ 19.456	- 0.136	...	...
433	48 Virginis ...	+ 3.0893	+ 0.0065	- 0.004	+ 19.433	- 0.119	+ 0.03	4373
434	51 Virginis θ ...	+ 3.1030	+ 0.0078	- 0.004	+ 19.297	- 0.132	+ 0.04	4401
435	Taylor 6057 ..	+ 3.6962	+ 0.0729	...	+ 19.273	- 0.158	...	4412
436	... ..	+ 3.4900	+ 0.0459	...	+ 19.256	- 0.150	...	...
437	Lacaille 5434 ...	+ 3.8177	+ 0.0880	...	+ 19.220	- 0.166	...	...
438	65 Virginis ...	+ 3.1046	+ 0.0080	- 0.005	+ 18.916	- 0.157	+ 0.03	4477
439	... ..	+ 3.4210	+ 0.0331	...	+ 18.920	- 0.173	...	...
440	67 Virginis α (<i>Spica</i>)	+ 3.1550	+ 0.0116	- 0.005	+ 18.894	- 0.163	+ 0.04	4480
441	79 Urs. Maj. 3 (<i>Mizar</i>) 1st	+ 2.4148	- 0.0172	+ 0.017	+ 18.884	- 0.127	+ 0.04	4484
442	79 Urs. Maj. 5 (<i>Mizar</i>) 2d	+ 2.4146	- 0.0172	+ 0.014	+ 18.884	- 0.127	+ 0.05	4486
443	O. A. S. 12872 ...	+ 3.3040	+ 0.0224	...	+ 18.855	- 0.172	...	...
444	... ..	+ 3.4538	+ 0.0334	...	+ 18.687	- 0.190	...	...
445	79 Virginis 3...	+ 3.0715	+ 0.0064	- 0.019	+ 18.593	- 0.176	- 0.06	4532
446	... ..	+ 3.0968	+ 0.0861	...	+ 18.532	- 0.231	...	...
447	... ..	+ 3.5018	+ 0.0349	...	+ 18.415	- 0.210	...	...
448	82 Virginis m ...	+ 3.1481	+ 0.0108	- 0.010	+ 18.363	- 0.192	0.00	4565
449	... ..	+ 3.4987	+ 0.0338	...	+ 18.318	- 0.215	...	...
450	Taylor 6374 ...	+ 4.1136	+ 0.0920	...	+ 18.244	- 0.257	...	...
451	... ..	+ 3.5405	+ 0.0356	...	+ 18.144	- 0.228	...	...
452	85 Ursae Majoris η ...	+ 2.3844	- 0.0103	- 0.012	+ 18.086	- 0.159	+ 0.03	4607
453	8 Bootis η ...	+ 2.8616	- 0.0006	- 0.004	+ 17.849	- 0.199	+ 0.36	4648
454	... ..	+ 3.2823	+ 0.0173	...	+ 17.715	- 0.232	...	...
455	93 Virginis τ ...	+ 3.0477	+ 0.0064	+ 0.001	+ 17.581	- 0.222	+ 0.07	4672

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitnde.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				<i>h</i>	<i>m</i>	<i>s</i>	<i>°</i>	<i>'</i>	<i>"</i>		
456	95 Virginis	5.7	...	13	59	50.38	98	41	31.6	2	0.21
457	Taylor 6570	8.8	1	14	0	26.75	149	57	45.1	1	0.42
458	... ..	9.0	1	14	5	25.77	129	22	0.7	1	0.34
459	98 Virginis κ	4.3	...	14	5	57.77	99	40	2.6	3	0.39
460	Taylor 6683	7.0	...	14	8	35.27	95	20	30.7	1	0.36
461	16 Bootis α (<i>Arcturus</i>) ...	0.0	...	14	9	43.94	70	8	22.8	11	0.42
462	... ..	9.3	1	14	11	50.96	124	29	15.4	1	0.42
463	100 Virginis λ	4.6	...	14	12	4.66	102	46	17.6	1	0.44
464	Lacaille 5926	8.3	...	14	17	1.10	119	1	38.3	1	0.35
465	Taylor 6721	7.2	1	14	17	41.71	101	4	41.8	1	0.32
466	... ..	8.5	1	14	20	19.37	127	10	32.0	1	0.32
467	... ..	8.7	1	14	23	18.16	120	47	38.9	1	0.42
468	25 Bootis ρ	3.6	...	14	26	13.62	59	3	23.9	13	0.43
469	36 Bootis ϵ (<i>Mirac</i>)	2.6	...	14	39	18.53	62	22	35.0	11	0.43
470	Brisbane 5069	7.9	1	14	41	46.87	131	18	15.6	1	0.39
471	9 Libræ α^2	3.0	...	14	43	41.30	105	29	59.8	6	0.40
472	13 Libræ ξ^1	5.9	...	14	47	19.53	101	21	58.6	2	0.36
473	7 Urs, Min. β , Var. 1. (<i>Kochab</i>)	2.1	...	14	51	7.10	15	18	47.0	3	0.43
474	19 Libræ δ , Var. 4	4.9	...	14	54	1.59	98	0	6.3	1	0.36
475	O. A. N. 15023	7.4	1	14	55	47.77	27	48	55.0	1	0.47
476	43 Bootis ψ	4.5	...	14	58	52.50	62	32	38.6	9	0.44
477	W. B. E. XV. 32	8.0	1	15	3	46.06	97	2	58.6	1	0.41
478	27 Libræ β	2.7	...	15	10	0.73	98	54	4.5	4	0.47
479	R. P. L. 114	7.1	...	15	20	11.01	2	16	18.0	2	0.41
480	W. B. E. XV. 395	8.0	1	15	22	18.31	101	16	45.2	1	0.42
481	Taylor 7240	7.0	1	15	24	47.78	130	2	45.0	1	0.47
482	38 Libræ γ	4.0	...	15	28	15.34	104	21	14.0	1	0.44
483	... ..	7.9	1	15	29	4.57	126	36	36.1	1	0.43
484	5 Cor. Bor. α (<i>Alpheta</i>) ...	2.4	...	15	29	10.99	62	50	47.1	6	0.46
485	Taylor 7300	7.8	2	15	32	34.99	103	37	47.1	2	0.41
486	24 Serpentis α	2.7	...	15	37	51.87	83	9	48.6	8	0.45
487	46 Libræ θ	4.3	...	15	46	25.54	106	20	44.8	1	0.52
488	Lalande 28980	6.2	1	15	49	14.56	104	26	40.1	1	0.41
489	O. A. S. 15053	7.9	1	15	49	22.54	105	27	2.0	1	0.51
490	48 Libræ	4.8	...	15	50	54.82	103	54	9.4	1	0.36

473.— β Ursæ Minoris Var 1.—(*Kochab*).—Supposed to vary irregularly from 2.0 to 2.5 magnitude.

474.— δ Libræ Var. 4.—Period 2.32 days.—Range 5th to 6th magnitude.

475.—Comparison star for Comet 2, 1862.

477.—482.—Comparison stars for Comet 2, 1867.

479.—Groombridge 2283.

480.—488.—Comparison stars for Sappho in 1864.

489.—Comparison star for Asia in 1861.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in E. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
456	95 Virginis ...	+ 3.1748	+ 0.0118	- 0.010	+ 17.375	- 0.238	- 0.01	4690
457	Taylor 6570 ...	+ 4.2322	+ 0.0853	...	+ 17.348	- 0.315	...	...
458	... ..	+ 3.6430	+ 0.0362	...	+ 17.125	- 0.234	...	...
459	98 Virginis κ ...	+ 3.1912	+ 0.0122	+ 0.001	+ 17.102	- 0.250	- 0.02	4716
460	Taylor 6633 ...	+ 3.1356	+ 0.0102	...	+ 16.980	- 0.251	...	4720
461	16 Bootis α (<i>Arcturus</i>)	+ 2.8132	+ 0.0004	- 0.079	+ 16.927	- 0.227	+ 1.93	4729
462	... ..	+ 3.5719	+ 0.0304	...	+ 16.826	- 0.290	...	...
463	100 Virginis λ ...	+ 3.2373	+ 0.0140	- 0.002	+ 16.816	- 0.264	- 0.02	4743
464	Lacaille 5926 ...	+ 3.4898	+ 0.0252	...	+ 16.576	- 0.293	...	...
465	Taylor 6721 ...	+ 3.2202	+ 0.0132	...	+ 16.542	- 0.272	...	4772
466	... ..	+ 3.6350	+ 0.0334	...	+ 16.411	- 0.313	...	...
467	... ..	+ 3.7241	+ 0.0364	...	+ 16.260	- 0.324	...	...
468	25 Bootis ρ ...	+ 2.5947	- 0.0015	- 0.008	+ 16.110	- 0.233	- 0.14	4803
469	36 Bootis ϵ (<i>Mirac</i>)...	+ 2.6240	- 0.0001	- 0.005	+ 15.402	- 0.252	- 0.01	4876
470	Brisbane 5069 ...	+ 3.8343	+ 0.0379	...	+ 15.262	- 0.369	...	...
471	9 Libræ α^2 ...	+ 3.3149	+ 0.0154	- 0.007	+ 15.153	- 0.324	+ 0.06	4895
472	13 Libræ ξ^1 ...	+ 3.2514	+ 0.0132	- 0.003	+ 14.943	- 0.322	+ 0.05	4915
473	7 Urs. Min. β , Var. 1.	- 0.2439	+ 0.1022	- 0.005	+ 14.720	+ 0.018	+ 0.03	4936
474	19 Libræ δ , Var. 4 ...	+ 3.2015	+ 0.0116	- 0.006	+ 14.546	- 0.328	+ 0.02	4939
475	O. A. N. 15023 ...	+ 1.3135	+ 0.0151	...	+ 14.439	- 0.139	...	...
476	43 Bootis ψ ...	+ 2.5834	+ 0.0010	- 0.013	+ 14.251	- 0.271	0.00	4969
477	W. B. E. XV. 32 ...	+ 3.1909	+ 0.0112	...	+ 13.946	- 0.340	...	...
478	27 Libræ β ...	+ 3.2265	+ 0.0117	- 0.009	+ 13.543	- 0.352	+ 0.01	5034
479	R. P. L. 114 ...	+ 22.7612	+ 7.6569	...	+ 12.879	+ 2.539	...	5140
480	W. B. E. XV. 395...	+ 3.2732	+ 0.0124	...	+ 12.735	- 0.374	...	...
481	Taylor 7240 ...	+ 3.9479	+ 0.0325	...	+ 12.566	- 0.453	...	...
482	38 Libræ γ ...	+ 3.3421	+ 0.0136	+ 0.002	+ 12.329	- 0.389	- 0.02	5134
483	... ..	+ 3.8578	+ 0.0285	...	+ 12.273	- 0.449	...	...
484	5 Cor. Bor. α (<i>Alpha</i>)	+ 2.5396	+ 0.0023	+ 0.009	+ 12.265	- 0.297	+ 0.07	5143
485	Taylor 7300 ...	+ 3.3316	+ 0.0131	...	+ 12.023	- 0.393	...	...
486	24 Serpentis α ...	+ 2.9417	+ 0.0062	+ 0.009	+ 11.656	- 0.354	- 0.05	5196
487	46 Libræ θ ...	+ 3.3997	+ 0.0136	+ 0.009	+ 11.033	- 0.413	- 0.12	5237
488	Lalande 23980 ...	+ 3.3621	+ 0.0127	...	+ 10.831	- 0.417	...	...
489	O. A. S. 15053 ...	+ 3.3833	+ 0.0131	...	+ 10.821	- 0.420	...	...
490	43 Libræ ...	+ 3.3519	+ 0.0124	- 0.002	+ 10.703	- 0.413	+ 0.10	5290

472.—474—487—490—Proper motions from "Greenwich Catalogue 1872."

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
491	4 Hercules	5.7	...	15	51	8.07	47	3	15.0	1	0.48
492	Lalande 29198	7.1	1	15	56	3.67	86	58	38.4	1	0.45
493	8 Scorpii β ¹	2.9	...	15	57	52.81	109	26	50.4	5	0.44
494	R. P. L. 116	6.9	...	16	3	27.81	4	19	42.4	1	0.01
495	... ..	7.7	1	16	4	32.42	107	53	32.5	1	0.41
496	1 Ophiuchi δ	^	...	16	7	31.99	93	21	28.0	3	0.52
497	O. A. S. 15544	8.0	1	16	13	7.27	106	46	0.5	1	0.41
498	O. A. S. 15552	8.7	1	16	13	34.72	107	22	55.6	1	0.43
499	21 Scorpii α (<i>Antares</i>)	1.1	...	16	21	26.35	116	8	27.3	4	0.50
500	40 Hercules γ	3.1	...	16	36	23.08	58	9	38.1	4	0.52
501	27 Ophiuchi κ	3.4	...	16	51	30.90	80	25	14.7	1	0.57
502	29 Ophiuchi	6.8	...	16	54	15.05	108	41	31.0	1	0.37
503	22 Ursæ Minoris ε	4.5	...	16	59	23.27	7	45	13.4	5	0.48
504	64 Hercules α, Var. 1	3.2	...	17	8	43.12	75	27	34.2	3	0.57
505	42 Ophiuchi θ	3.4	...	17	14	1.61	114	52	1.9	5	0.57
506	... ..	8.0	...	17	21	15.80	130	29	23.9	1	0.59
507	55 Ophiuchi α	2.2	...	17	28	53.94	77	20	36.0	4	0.58
508	58 Ophiuchi	5.0	...	17	35	38.43	111	37	2.0	2	0.37
509	... ..	10.2	1	17	39	41.27	127	17	35.7	1	0.61
510	86 Hercules μ	3.5	...	17	41	22.16	62	12	6.6	6	0.42
511	Radcliffe 3765	8.0	1	17	43	38.00	17	32	6.2	1	0.60
512	Lacaille 7517	7.0	1	17	52	55.92	149	10	28.3	1	0.58
513	... ..	10.0	1	18	4	10.99	59	9	50.3	1	0.61
514	13 Sagittarii μ ¹	4.1	...	18	5	59.35	111	5	24.4	2	0.32
515	15 Sagittarii	5.6	...	18	7	27.53	110	45	50.6	1	0.59
516	... ..	8.8	...	18	13	19.37	127	48	54.5	1	0.59
517	23 Ursæ Minoris δ	4.3	...	18	14	17.07	3	23	38.8	7	0.24
518	24 Ursæ Minoris	5.9	...	18	18	55.38	3	0	58.7	1	0.07
519	O. A. S. 18326	8.2	1	18	23	44.09	109	14	45.9	1	0.64
520	Taylor 8527	6.0	1	18	23	49.21	108	29	20.5	1	0.58
521	O. A. S. 18346	7.0	...	18	24	33.68	109	12	49.0	1	0.59
522	... ..	7.5	1	18	28	43.81	135	34	16.9	2	0.63
523	8 Lyræ α (<i>Vega</i>)	0.2	...	18	32	32.07	51	20	9.9	8	0.22
524	... ..	8.7	1	18	35	5.39	136	44	38.6	1	0.61
525	10 Lyræ β, Var. 1	3.6	...	18	45	16.73	56	47	12.5	10	0.40

2.5

16.83

492.— Comparison star for Comet 2, 1862.
 494.— Carrington 2423.
 495.—498.— Comparison stars for Sylvia in 1866.
 497.— Comparison star for Sappho in 1864.
 504.— α Hercules Var. 7—Changes irregularly between 3rd and 4th magnitude.
 519.—520—521—Observed for map of U Sagittarii Var. 5.
 522.—524.— Comparison stars for Donati's Comet of 1858.
 525.— β Lyræ Var. 1—Period 12.91 days.—Range, 3.5 to 4.5 magnitude.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
491	4 Hercules ...	+ 2.0193	+ 0.0035	+ 0.007	+ 10.692	- 0.254	0.00	5298
492	Lalande 29193 ...	+ 3.0116	+ 0.0069	...	+ 10.324	- 0.380	...	...
493	8 Scorpii β^1 ...	+ 3.4787	+ 0.0142	- 0.002	+ 10.187	- 0.441	+ 0.02	5329
494	R. P. L. 116 ...	- 12.3559	+ 1.7515	...	+ 9.768	+ 1.570	...	...
495	... ..	+ 3.4502	+ 0.0130	...	+ 9.681	- 0.444	...	...
496	1 Ophiuchi δ	+ 3.1413	+ 0.0081	- 0.006	+ 9.451	- 0.408	+ 0.13	5414
497	O. A. S. 15554 ...	+ 3.4320	+ 0.0119	...	+ 9.016	- 0.451	...	...
498	O. A. S. 15552 ...	+ 3.4404	+ 0.0121	...	+ 8.981	- 0.453	...	...
499	21 Scorpii α (Antares)	+ 3.6686	+ 0.0150	- 0.001	+ 8.362	- 0.491	+ 0.03	5498
500	40 Hercules ζ ...	+ 2.2965	+ 0.0033	- 0.034	+ 7.156	- 0.316	- 0.45	5604
501	27 Ophiuchi κ ...	+ 2.8565	+ 0.0044	- 0.023	+ 5.904	- 0.402	- 0.02	5708
502	29 Ophiuchi ...	+ 3.5060	+ 0.0089	- 0.001	+ 5.675	- 0.492	- 0.01	5728
503	22 Ursæ Minoris ϵ ...	- 6.4066	+ 0.2978	+ 0.000	+ 5.242	+ 0.900	+ 0.01	5780
504	64 Hercules α , Var. 1.	+ 2.7340	+ 0.0035	- 0.003	+ 4.450	- 0.391	- 0.04	5821
505	42 Ophiuchi θ ...	+ 3.6793	+ 0.0080	- 0.003	+ 3.906	- 0.528	- 0.02	5851
506	... ..	+ 4.1973	+ 0.0106	...	+ 3.374	- 0.605	...	...
507	55 Ophiuchi α ...	+ 2.7746	+ 0.0030	+ 0.004	+ 2.713	- 0.402	+ 0.20	5941
508	58 Ophiuchi ...	+ 3.5091	+ 0.0050	- 0.010	+ 2.127	- 0.523	- 0.04	5987
509	... ..	+ 4.0804	+ 0.0061	...	+ 1.775	- 0.594	...	...
510	86 Hercules μ ...	+ 2.3696	+ 0.0025	- 0.026	+ 1.628	- 0.346	+ 0.74	6021
511	Radcliffe 3765 ...	- 1.1487	+ 0.0164	...	+ 1.430	+ 0.166	...	...
512	Lacaille 7517 ...	+ 5.3117	+ 0.0053	...	+ 0.618	- 0.774	...	...
513	... ..	+ 2.2742	+ 0.0021	...	- 0.365	- 0.332	...	...
514	13 Sagittarii μ^1 ...	+ 3.5876	+ 0.0009	- 0.004	- 0.524	- 0.523	+ 0.01	6168
515	15 Sagittarii ...	+ 3.5788	+ 0.0008	- 0.006	- 0.652	- 0.522	+ 0.02	6179
516	... ..	+ 4.1081	- 0.0015	...	- 1.165	- 0.598	...	...
517	23 Ursæ Minoris δ ...	- 19.4273	- 0.4172	+ 0.048	- 1.240	+ 2.829	- 0.03	6281
518	24 Ursæ Minoris ...	- 22.2162	- 0.0711	+ 0.085	- 1.654	+ 3.230	- 0.01	6320
519	O. A. S. 18326 ...	+ 3.5364	- 0.0010	...	- 2.074	- 0.512	...	...
520	Taylor 8527 ...	+ 3.5167	- 0.0010	...	- 2.077	- 0.509	...	6309
521	O. A. S. 18346 ...	+ 3.5354	- 0.0011	...	- 2.145	- 0.512	...	...
522	... ..	+ 4.4254	- 0.0073	...	- 2.507	- 0.640	...	...
523	3 Lyrae α (Vega) ...	+ 2.0131	+ 0.0016	+ 0.017	- 2.837	- 0.200	- 0.28	6355
524	... ..	+ 4.4765	- 0.0098	...	- 3.058	- 0.644	...	...
525	10 Lyrae β , Var. 1 ...	+ 2.2138	+ 0.0015	- 0.002	- 3.936	- 0.315	+ 0.03	6429

491.—Proper motions from "Greenwich Catalogue 1845."

501.—Proper motions from "Greenwich Catalogue 1872."

502.—515—Proper motions from "Greenwich Catalogue 1864."

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
[49] 526	82 Sagittarii ν' ...	5.0	...	18	46	14.14	112	54	7.0	1	0.59
527	87 Sagittarii ξ^a ...	3.5	...	18	48	58.30	111	16 ⁶	29.7	1	0.37
528	O. A. S. 19032 ...	9.3	1	18	57	27.07	111	16	27.8	1	0.64
529	17 Aquilæ 3 ...	3.1	...	18	59	26.00	76	19	41.2	5	0.41
530	41 Sagittarii τ ...	3.1	...	19	2	1.80	111	13	39.4	2	0.45
531	... ..	9.6	1	19	5	1.45	126	29	10.8	1	0.64
532	... ..	9.7	1	19	9	27.44	109	32	11.8	1	0.60
533	25 Aquilæ ω ...	5.1	...	19	11	42.78	78	38	13.8	4	0.59
534	30 Aquilæ δ ...	3.5	...	19	18	56.50	87	8	31.4	9	0.57
535	... ..	9.5	1	19	19	33.90	128	37	47.6	1	0.64
536	... ..	9.2	1	19	25	34.19	127	48	37.9	1	0.64
537	52 Sagittarii h^a ...	4.6	...	19	28	47.56	115	10	5.3	2	0.62
538	... ..	8.0	1	19	31	23.24	127	41	42.0	1	0.68
539	56 Sagittarii f ...	5.1	...	19	33	46.46	110	4	16.4	2	0.60
540	50 Aquilæ γ ...	2.8	...	19	40	4.65	79	42	6.4	6	0.66
541	O. A. S. 19996 ...	9.3	1	19	42	38.11	108	11	10.4	1	0.64
542	53 Aquilæ α (<i>Altair</i>) ...	1.0	...	19	44	26.30	81	28	22.6	5	0.32
543	Lacaille 8249 ...	7.0	1	19	44	27.46	122	18	24.6	1	0.68
544	O. A. S. 20055 ...	9.3	1	19	46	37.97	107	44	54.3	1	0.61
545	60 Aquilæ β ...	4.0	...	19	48	55.56	83	54	58.5	8	0.64
546	... ..	10.0	1	19	54	9.85	107	11	27.0	1	0.64
547	λ Ursæ Minoris ...	6.5	...	19	54	16.75	1	4	55.7	3	0.16
548	... ..	8.3	1	19	56	7.30	151	50	40.0	1	0.68
549	... ..	8.8	...	19	59	39.91	129	10	24.7	1	0.68
550	Lacaille 8870 ...	7.6	...	20	7	29.91	152	18	13.2	1	0.64
551	6 Capricorni α^a ...	3.8	...	20	10	50.27	102	56	45.5	4	0.66
552	7 Capricorni σ ...	5.6	...	20	11	53.32	109	31	20.3	2	0.68
553	Lalande 39125 ...	8.0	1	20	15	51.54	106	12	12.5	1	0.72
554	... ..	9.8	...	20	17	13.42	121	10	41.8	1	0.76
555	11 Capricorni ρ ...	5.0	...	20	21	26.50	108	14	28.4	11	0.68
4.0.3 556	24 Cephei (<i>Hes.</i>) Var. 1 ...	8.8	...	20	23	^{42.03} 34.97	1	51	56.8	2	0.19
557	... ..	8.2	1	20	25	49.32	150	25	22.5	1	0.68
558	... ..	9.5	...	20	29	5.40	121	5	18.2	1	0.67
559	14 Capricorni τ^a ...	5.3	...	20	32	0.05	105	24	32.1	1	0.72
560	Taylor 9513 ...	7.7	1	20	32	16.62	105	25	50.3	1	0.73

544.—546.—Comparison stars for Hestia in 1869.

553.—Comparison star for Hestia in 1865.

556.—24 Cephei (*Hes.*) Var. 1.—Variable from 5th to 11th magnitude in many years.[19.14]
[16]

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			* In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
526	32 Sagittarii ν^1 ...	+ 3.6255	- 0.0043	- 0.004	- 4.026	- 0.516	+ 0.01	6484
527	37 Sagittarii ξ^2 ...	+ 3.5804	- 0.0043	- 0.001	- 4.253	- 0.508	+ 0.03	6461
528	O. A. S. 19032 ...	+ 3.5764	- 0.0053	...	- 4.975	- 0.503	...	...
529	17 Aquilæ ζ ...	+ 2.7578	+ 0.0008	- 0.006	- 5.143	- 0.387	+ 0.07	6528
530	41 Sagittarii π ...	+ 3.5726	- 0.0057	- 0.004	- 5.362	- 0.500	+ 0.03	6548
531	... ..	+ 4.0214	- 0.0121	...	- 5.614	- 0.561	...	...
532	... ..	+ 3.5250	- 0.0061	...	- 5.985	- 0.488	...	...
533	25 Aquilæ ω ...	+ 2.8365	- 0.0003	- 0.003	- 6.174	- 0.388	- 0.02	6595
534	30 Aquilæ δ ...	+ 3.0093	- 0.0018	+ 0.014	- 6.773	- 0.410	- 0.10	6646
535	... ..	+ 4.0768	- 0.0161	...	- 6.823	- 0.556	...	...
536	... ..	+ 4.0331	- 0.0167	...	- 7.323	- 0.545	...	...
537	52 Sagittarii λ^3 ...	+ 3.6537	- 0.0102	+ 0.002	- 7.578	- 0.490	- 0.02	6706
538	... ..	+ 4.0243	- 0.0176	...	- 7.787	- 0.538	...	...
539	56 Sagittarii f ...	+ 3.5161	- 0.0091	- 0.013	- 8.378	- 0.462	+ 0.07	6760
540	50 Aquilæ γ ...	+ 2.8520	- 0.0011	+ 0.001	- 8.431	- 0.373	0.00	6772
541	O. A. S. 19996 ...	+ 3.4630	- 0.0037	...	- 8.684	- 0.452	...	...
542	53 Aquilæ (<i>Altair</i>) ...	+ 2.8921	- 0.0014	+ 0.036	- 8.626	- 0.374	- 0.38	6802
543	Lacaille 8249 ...	+ 3.8314	- 0.0160	...	- 8.827	- 0.498	...	...
544	O. A. S. 20055 ...	+ 3.4545	- 0.0088	...	- 9.000	- 0.446	...	...
545	60 Aquilæ β ...	+ 2.9454	- 0.0020	+ 0.002	- 9.177	- 0.373	+ 0.47	6833
546	... ..	+ 3.4355	- 0.0092	...	- 9.532	- 0.437	...	...
547	λ Ursæ Minoris ...	- 59.0392	- 29.8285	- 0.035	- 9.592	+ 7.572	- 0.01	6999
548	... ..	+ 5.2565	- 0.0700	...	- 9.731	- 0.668	...	...
549	... ..	+ 4.0164	- 0.0238	...	- 10.002	- 0.504	...	...
550	Lacaille 8370 ...	+ 5.2349	- 0.0772	...	- 10.590	- 0.643	...	6946
551	6 Capricorni α^2 ...	+ 3.3307	- 0.0084	+ 0.001	- 10.838	- 0.403	0.00	6974
552	7 Capricorni σ ...	+ 3.4693	- 0.0115	0.000	- 10.915	- 0.420	- 0.02	6981
553	Lalande 39125 ...	+ 3.3944	- 0.0101	...	- 11.204	- 0.406	...	...
554	... ..	+ 3.7405	- 0.0191	...	- 11.303	- 0.447	...	...
555	11 Capricorni ρ ...	+ 3.4315	- 0.0115	- 0.006	- 11.606	- 0.403	+ 0.01	7042
556	24 Cephei (<i>Hec.</i>) Var. 1 ...	- 45.9885	- 24.4590	...	- 11.753	+ 5.434	...	7134
557	... ..	+ 4.9669	- 0.0750	...	- 11.916	- 0.575	...	...
558	... ..	+ 3.7137	- 0.0201	...	- 12.145	- 0.427	...	...
559	14 Capricorni τ^2 ...	+ 3.3625	- 0.0105	- 0.002	- 12.347	- 0.382	+ 0.03	7127
560	Taylor 9518 ...	+ 3.3627	- 0.0106	...	- 12.365	- 0.381	...	...

2.8165

-7.315

8

539.—Proper motions from "Greenwich Catalogue 1872."

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
561	... ..	8.9	1	20	35	3.62	128	12	29.9	1	0.73
562	50 Cygni α (<i>Deneb</i>)	1.5	...	20	36	59.89	45	10	59.6	5	0.70
563	... ..	8.0	1	20	37	0.64	148	22	19.0	1	0.68
564	W. B. N. XX. 935	8.6	1	20	37	4.00	73	21	49.1	1	0.74
565	... ..	8.9	1	20	48	4.72	148	59	56.8	1	0.73
566	32 Vulpeculæ	5.1	...	20	49	1.14	62	26	8.8	6	0.71
567	Lacaille 8680	7.1	1	20	51	46.91	126	37	50.2	1	0.72
568	23 Capricorni θ	4.3	...	20	58	38.17	107	44	51.8	2	0.68
569	... ..	8.8	1	21	0	55.03	120	3	20.4	1	0.61
570	61 Cygni ... 1st...	5.5	...	21	1	4.24	51	53	20.6	1	0.64
571	61 Cygni ... 2nd...	6.3	...	21	1	5.68	51	53	27.8	1	0.64
572	... ..	9.6	1	21	1	34.16	120	1	12.5	1	0.60
573	64 Cygni 5	3.5	...	21	7	24.11	60	18	18.3	8	0.71
574	Lacaille 8748	8.3	...	21	10	14.09	145	6	10.6	1	0.61
575	32 Capricorni	4.4	...	21	15	0.13	107	23	10.8	2	0.68
576	... ..	8.0	1	21	21	33.02	128	54	43.6	1	0.74
577	22 Aquarii β	3.1	...	21	24	42.76	96	8	30.7	10	0.71
578	... ..	7.7	1	21	30	5.89	127	44	48.2	2	0.68
579	40 Capricorni γ	3.8	...	21	32	53.10	107	14	54.4	1	0.61
580	... ..	8.9	1	21	35	4.73	133	53	51.6	1	0.74
581	8 Pegasi ϵ ...	2.4	...	21	37	47.98	80	43	11.9	7	0.71
582	49 Capricorni δ	3.0	...	21	39	51.78	106	42	57.8	3	0.71
583	16 Pegasi	5.0	...	21	47	8.83	64	41	9.5	8	0.72
584	Lalande 42883	7.5	5	21	52	55.53	60	47	38.1	5	0.73
585	34 Aquarii α	3.2	...	21	59	6.30	90	57	2.7	8	0.76
586	33 Aquarii ϵ^2	5.4	...	22	3	40.42	102	12	13.3	1	0.68
587	43 Aquarii θ	4.3	...	22	9	58.32	98	25	48.4	5	0.77
588	... ..	7.9	1	22	12	24.94	129	24	56.5	1	0.82
589	... ..	9.5	2	22	13	33.04	146	26	49.0	2	0.75
590	... ..	10.0	1	22	14	37.02	146	32	38.5	1	0.61
591	... ..	9.8	...	22	16	17.58	82	40	49.2	1	0.79
592	55 Aquarii 3 ¹ ... 1st...	4.7	...	22	22	8.16	90	41	1.6	1	0.68
593	R. P. L. 150	5.4	...	22	23	16.47	4	32	52.8	5	0.21
594	57 Aquarii σ	4.8	...	22	23	45.85	101	20	33.2	1	0.61
595	... ..	8.0	1	22	24	3.43	130	38	41.9	1	0.76

569.—572.—Comparison stars for Sylvia in 1867.

593.—Groombridge 3320.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
		<i>s</i>	<i>s</i>	<i>s</i>	"	"	"	
561	... ..	+ 3·8928	- 0·0275	...	- 12·557	- 0·438	...	...
562	50 Cygni α (<i>Deneb</i>) ...	+ 2·0434	+ 0·0021	- 0·002	- 12·689	- 0·226	0·00	7171
563	... ..	+ 4·7531	- 0·0695	...	- 12·689	- 0·532	...	...
564	W. B. N. XX. 935 ...	+ 2·7629	+ 0·0002	...	- 12·693	- 0·307	...	...
565	... ..	+ 4·7252	- 0·0744	...	- 13·424	- 0·507	...	...
566	32 Vulpeculæ ...	+ 2·5556	+ 0·0026	- 0·002	- 13·486	- 0·270	0·00	7256
567	Lacaille 8630 ...	+ 3·7998	- 0·0272	...	- 13·663	- 0·400	...	...
568	23 Capricorni θ ...	+ 3·3764	- 0·0128	+ 0·004	- 14·096	- 0·344	+ 0·05	7322
569	... ..	+ 3·6170	- 0·0215	...	- 14·237	- 0·366	...	...
570	61 Cygni ... 1st ...	+ 2·3340	+ 0·0044	+ 0·339	- 14·243	- 0·233	- 3·22	7336
571	61 Cygni ... 2nd ...	+ 2·3342	+ 0·0044	+ 0·339	- 14·251	- 0·233	- 3·22	7337
572	... ..	+ 3·6147	- 0·0215	...	- 14·273	- 0·364	...	...
573	64 Cygni 3 ...	+ 2·5507	+ 0·0038	- 0·003	- 14·632	- 0·248	+ 0·07	7368
574	Lacaille 8748 ...	+ 4·3657	- 0·0634	...	- 14·800	- 0·425	...	...
575	32 Capricorni ι ...	+ 3·3432	- 0·0130	0·000	- 15·073	- 0·316	- 0·02	7407
576	... ..	+ 3·7604	- 0·0816	...	- 15·449	- 0·343	...	...
577	22 Aquarii β ...	+ 3·1623	- 0·0071	- 0·001	- 15·625	- 0·232	0·00	7473
578	... ..	+ 3·7019	- 0·0305	...	- 15·916	- 0·322	...	...
579	40 Capricorni γ ...	+ 3·3207	- 0·0130	+ 0·013	- 16·062	- 0·233	+ 0·03	7525
580	... ..	+ 3·3343	- 0·0394	...	- 16·177	- 0·324	...	...
581	8 Pegasi ϵ ...	+ 2·9451	- 0·0005	+ 0·003	- 16·317	- 0·242	0·00	7561
582	49 Capricorni δ ...	+ 3·3026	- 0·0123	+ 0·014	- 16·413	- 0·270	+ 0·23	7580
583	16 Pegasi ...	+ 2·7257	+ 0·0052	+ 0·001	- 16·779	- 0·210	+ 0·01	7627
584	Lalande 42883 ...	+ 2·6786	+ 0·0069	...	- 17·050	- 0·199	...	...
585	34 Aquarii α ...	+ 3·0333	- 0·0041	- 0·003	- 17·329	- 0·219	+ 0·02	7688
586	33 Aquarii ϵ^2 ...	+ 3·2126	- 0·0099	+ 0·003	- 17·527	- 0·220	0·00	7722
587	43 Aquarii θ ...	+ 3·1636	- 0·0075	+ 0·006	- 17·733	- 0·205	+ 0·03	7773
588	... ..	+ 3·5692	- 0·0325	...	- 17·835	- 0·223	...	...
589	... ..	+ 3·9752	- 0·0677	...	- 17·930	- 0·253	...	...
590	... ..	+ 3·9700	- 0·0679	...	- 17·972	- 0·249	...	...
591	... ..	+ 2·9971	+ 0·0001	...	- 18·036	- 0·184	...	...
592	55 Aquarii 3 ¹ 1st ...	+ 3·0733	- 0·0033	+ 0·009	- 18·254	- 0·173	- 0·03	7332
593	R. P. L. 150 ...	- 3·8135	- 1·1930	+ 0·043	- 18·295	+ 0·236	- 0·05	7351
594	57 Aquarii σ ...	+ 3·1816	- 0·0033	- 0·004	- 18·312	- 0·132	- 0·05	7340
595	... ..	+ 3·5337	- 0·0337	...	- 18·323	- 0·202	...	...

Mean Positions of Stars for 1870 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
596	Taylor 10435	7.8	1	22	24	19.61	32	15	40.4	1	0.78
597	27 Cephei δ , Var. 1.	4.0	...	22	24	20.71	32	14	59.7	2	0.76
598	... ..	9.0	1	22	24	39.44	135	40	20.7	1	0.79
599	62 Aquarii η	4.2	...	33	28	40.48	90	47	14.1	7	0.77
600	42 Pegasi 3	3.6	...	22	34	58.63	79	50	48.5	7	0.79
601	... ..	7.9	1	22	41	37.79	130	33	31.0	1	0.72
602	71 Aquarii τ^2	4.1	...	22	42	42.35	104	16	42.0	2	0.68
603	... ..	8.1	3	22	44	5.63	135	41	9.8	3	0.78
604	... ..	9.8	1	22	44	27.88	135	35	19.9	1	0.75
605	74 Aquarii	5.8	...	22	46	37.90	102	18	26.3	2	0.76
606	24 Pis. Aus. α (<i>Fomalhaut</i>)	1.3	...	22	50	27.70	120	18	39.1	3	0.77
607	... ..	7.9	1	22	52	7.04	85	21	14.6	2	0.67
608	Lacaille 9853	6.0	1	22	56	57.58	144	39	40.4	1	0.83
609	54 Pegasi α (<i>Markab</i>)	2.6	...	22	58	17.12	75	29	39.1	9	0.80
610	R Pegasi Var. 2	9.0	1	23	0	7.17	80	9	31.1	1	0.69
611	... ..	8.0	1	23	7	45.72	129	53	8.9	1	0.73
612	91 Aquarii ψ^1	4.5	...	23	9	4.87	99	47	44.4	2	0.72
613	Lacaille 9423 ... 1st...	8.6	1	23	10	11.70	151	42	31.1	1	0.82
614	Lacaille 9423 ... 2nd...	7.1	1	23	10	17.37	151	42	39.6	1	0.82
615	6 Piscium γ	3.8	...	23	10	25.59	87	25	40.6	5	0.82
616	98 Aquarii ψ^2	4.5	...	23	11	8.86	99	53	34.8	1	0.84
617	T Cephei Var. 5	8.8	1	23	14	43.70	34	35	53.0	1	0.69
618	... ..	9.8	1	23	18	34.31	131	6	32.8	1	0.87
619	8 Piscium κ	5.0	...	23	20	16.05	89	27	22.4	9	0.82
620	R. P. L. 158	5.6	...	23	27	50.07	3	24	36.5	4	0.29
621	... ..	8.5	1	23	30	1.53	127	31	10.8	1	0.82
622	17 Piscium ϵ	4.3	...	23	33	15.79	85	4	41.6	7	0.83
623	Taylor 10848	6.2	2	23	34	25.02	102	24	5.5	5	0.76
624	18 Piscium λ	4.7	...	23	35	24.61	88	56	7.1	1	0.72
625	δ Sculptoris	4.6	...	23	42	9.04	118	50	58.7	6	0.83
626	... ..	9.8	1	23	43	15.92	150	41	40.2	1	0.75
627	28 Piscium ϵ	4.6	...	23	52	38.15	83	51	23.7	10	0.82
628	30 Piscium	4.6	...	23	55	17.57	96	44	12.7	1	0.84

597.— δ Cephei Var. 1.—Period 5366 days. Range, 3.7 to 4.8 magnitude.

605.—Comparison star for Mars in 1877.

610.—R Pegasi Var. 2.—Period 382 days. Range, 7th to below 13th magnitude.

617.—T Cephei Var. 5.—Period about 5.4 days. Range, 8.2 to 8.8 magnitude.

620.—Groombridge 4101.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in B. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
596	Taylor 10435 ...	+ 2.2134	+ 0.0166	+ 0.004	- 18.332	- 0.123	- 0.01	7847
597	27 Cephei δ , Var. 1...	+ 2.2133	+ 0.0165	+ 0.002	- 18.333	- 0.123	+ 0.02	7848
598	... ..	+ 3.6253	- 0.0412	...	- 18.344	- 0.206	...	...
599	62 Aquarii η ...	+ 3.0793	- 0.0081	+ 0.003	- 18.434	- 0.166	+ 0.06	7868
600	42 Pegasi ζ ...	+ 2.9853	+ 0.0023	+ 0.001	- 18.691	- 0.149	0.00	7908
601	... ..	+ 3.4553	- 0.0325	...	- 18.893	- 0.161	...	...
602	71 Aquarii τ^2 ...	+ 3.1850	- 0.0093	- 0.004	- 18.925	- 0.146	+ 0.02	7954
603	... ..	+ 3.5174	- 0.0396	...	- 18.965	- 0.159	...	...
604	... ..	+ 3.5138	- 0.0394	...	- 18.975	- 0.158	...	...
605	74 Aquarii ...	+ 3.1639	- 0.0085	0.000	- 19.036	- 0.137	+ 0.02	7974
606	20 Piscis Australis α ...	+ 3.3057	- 0.0210	+ 0.022	- 19.139	- 0.135	+ 0.18	7992
607	... ..	+ 3.0404	+ 0.0005	...	- 19.182	- 0.122	...	...
608	Lacaille 9353 ...	+ 3.5844	- 0.0559	...	- 19.301	- 0.135	...	8029
609	54 Pegasi α (Markab).	+ 2.9801	+ 0.0056	+ 0.003	- 19.332	- 0.107	+ 0.02	8034
610	R Pegasi Var. 2 ...	+ 3.0123	+ 0.0034	...	- 19.374	- 0.106	...	...
611	... ..	+ 3.3246	- 0.0294	...	- 19.536	- 0.102	...	...
612	91 Aquarii ψ^1 ...	+ 3.1230	- 0.0061	+ 0.023	- 19.562	- 0.092	+ 0.02	8095
613	Lacaille 9423... 1st...	+ 3.6078	- 0.0742	...	- 19.533	- 0.105	...	8101
614	Lacaille 9423... 2nd...	+ 3.6069	- 0.0743	...	- 19.534	- 0.106	...	8101
615	6 Piscium γ ...	+ 3.0592	+ 0.0005	+ 0.047	- 19.538	- 0.087	+ 0.01	8105
616	93 Aquarii ψ^2 ...	+ 3.1215	- 0.0061	- 0.002	- 19.601	- 0.088	- 0.01	8109
617	T Cephei Var. 4 ...	+ 2.6917	+ 0.0316	...	- 19.665	- 0.069	...	...
618	... ..	+ 3.2819	- 0.0304	...	- 19.728	- 0.078	...	...
619	8 Piscium κ ...	+ 3.0699	0.0000	+ 0.005	- 19.755	- 0.069	+ 0.12	8169
620	R. P. L. 153 ...	+ 0.0666	- 0.5165	+ 0.084	- 19.858	+ 0.010	- 0.01	8213
621	... ..	+ 3.2061	- 0.0246	...	- 19.884	- 0.052	...	...
622	17 Piscium ϵ ...	+ 3.0586	+ 0.0030	+ 0.025	- 19.919	- 0.042	+ 0.45	8233
623	Taylor 10848 ...	+ 3.1043	- 0.0062	...	- 19.930	- 0.041	...	8239
624	18 Piscium λ ...	+ 3.0696	+ 0.0011	- 0.011	- 19.939	- 0.039	+ 0.17	8243
625	δ Sculptoris ...	+ 3.1294	- 0.0161	+ 0.009	- 19.994	- 0.026	+ 0.10	8275
626	... ..	+ 3.1940	- 0.0561	...	- 20.029	- 0.015	...	...
627	28 Piscium ω ...	+ 3.0675	+ 0.0047	+ 0.010	- 20.045	- 0.005	+ 0.13	8331
628	30 Piscium ...	+ 3.0753	- 0.0019	+ 0.002	- 20.051	0.000	+ 0.14	8349

596.—Proper motions from "Greenwich Catalogue 1864."

625.—Proper motions from "Stone's Cape Catalogue."