
MEAN POSITIONS OF STARS

OBSERVED WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1877

REDUCED TO JANUARY 1 OF THAT YEAR

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
	1 21 Androm. α (<i>Alpheratz</i>) ..	2.1	...	0	2	2.00	61	35	19.9	2	0.89
37.12	2 11 Cassiopeiae β	2.4	...	0	2	37.28 ¹²	31	31	44.4	3	0.79
	3 ϵ Phoenicis	4.0	3	0	3	9.63	136	25	35.4	3	0.75
54.18	4 88 Pegasi γ (<i>Algenib</i>) ...	3.0	...	0	6	54.15 ⁸	75	30	2.3	4	0.92
	5 8 Ceti ι	3.6	...	0	13	9.63	99	30	21.3	1	0.75
	6 κ Phoenicis	4.0	2	0	20	8.96	134	21	44.3	2	0.75
12.01	7 α Phoenicis	2.0	2	0	20	11.86 ^{12.01}	132	53	28.2	2	0.78
	8 12 Ceti	6.2	...	0	23	45.63	94	38	13.7	5	0.92
53.71	9 β Tucanæ—1st	4.0	3	0	25	53.97 ⁷¹	153	33	11.0	3	0.81
54.42	10 β Tucanæ—2nd	4.0	2	0	25	54.67 ⁴²	153	33	36.5	2	0.84
	11 31 Andromedæ δ	3.4	...	0	32	45.40 ³³	59	48	43.9	2	0.77
48.38	12 16 Ceti β	2.1	...	0	37	24.53 ⁴	108	39	43.4	4	0.92
24.84	13 24 Cassiopeiae η —1st ...	4.0	1	0	41	40.30	32	50	14.4	1	0.84
39.83	14 24 Cassiopeiae η —2nd ...	8.2	1	0	41	40.55 ⁷⁷	32	50	19.0	1	0.83
40.71	15 27 Cassiopeiae γ	2.3	...	0	49	18.03 ⁷	29	56	53.3	2	0.84
15.73	16 2 Ursæ Minoris	4.5	...	0	52	14.66 ^{5.73}	4	24	15.3	4	0.79
47.36	17 R. P. L. 14	6.2	...	0	55	43.35 ^{47.36}	3	30	37.2	4	0.74
33.65	18 71 Piscium ϵ	4.5	...	0	56	33.64 ⁵	32	46	21.2	5	0.93
	19 β Phoenicis	3.5	1	1	0	35.44 ¹	137	22	39.2	1	0.83
10.51	20 ν Phoenicis	5.7	5	1	2	10.53 ¹	132	8	42.7	5	0.91
	21 31 Ceti η	3.6	...	1	2	24.02 ^{3.67}	100	50	4.2	3	0.86
23.97	22 ι Tucanæ	5.1	5	1	2	23.01 ^{3.95}	152	25	50.2	5	0.92
25.86	23 43 Andromedæ β (<i>Mirach</i>)	2.2	...	1	2	50.89 ⁹¹	55	1	57.1	3	0.89
50.91	24 33 Cassiopeiae θ	4.4	...	1	3	37.12 ²³	35	30	17.6	5	0.93
37.23	25 Lalande 2186	9.1	5	1	7	15.98 ^{4.10}	81	40	41.6	5	0.84
16.00	26 1 Ursæ Minoris α (<i>Polaris</i>)	2.2	...	1	13	41.02	1	20	50.8	9	0.51
	27 37 Cassiopeiae δ	2.8	...	1	17	47.18 ^{4.62}	30	24	18.0	2	0.84
46.12	28 45 Ceti θ	3.8	...	1	17	52.46 ⁴	98	49	6.3	4	0.93
52.44	29 R. Sculptoris, Var. I ...	7.2	5	1	21	18.11 ^{0.8}	123	10	54.8	5	0.91
18.08	30 γ Phoenicis	3.0	2	1	23	1.20 ^{0.17}	133	56	55.4	2	0.84
0.97	31 99 Piscium η	3.7	...	1	24	54.19 ²¹	75	17	20.1	4	0.94
54.21	32 δ Phoenicis	4.0	2	1	26	7.49 ⁹³	139	42	45.7	2	0.85
7.83	33 106 Piscium ν	4.7	...	1	35	1.80 ⁷⁷	85	8	8.0	4	0.98
1.79	34 52 Ceti τ	3.6	...	1	38	20.98 ¹	106	35	7.7	1	0.84
2.54	35 55 Ceti ξ	3.9	...	1	45	23.53 ⁴⁷	100	56	35.5	2	0.86

16.—12 R. P. L.

17.—Groombridge 195.

25.—Comparison star for Clytie in 1877.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.*
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
1	21 Andromedæ α ...	+ 3·0787	+ 0·0182	+ 0·010	- 20·054	+ 0·018	+ 0·16	3215
2	11 Cassiopeiæ β ...	+ 3·0971	+ 0·0514	+ 0·066	- 20·053	+ 0·014	+ 0·19	3215
3	ϵ Phœnicis ...	+ 3·0528	- 0·0289	+ 0·008	- 20·053	+ 0·015	+ 0·19	Stone
4	88 Pegasi γ ...	+ 3·0826	+ 0·0100	- 0·001	- 20·046	+ 0·022	+ 0·01	1
5	8 Ceti ι ...	+ 3·0595	- 0·0023	- 0·008	- 20·021	+ 0·034	+ 0·03	14
6	κ Phœnicis ...	+ 2·9575	- 0·0239	...	- 19·977	+ 0·047	...	...
7	α Phœnicis ...	+ 2·9626	- 0·0227	+ 0·022	- 19·977	+ 0·047	+ 0·40	Stone
8	12 Ceti ...	+ 3·0610	+ 0·0008	- 0·000	- 19·947	+ 0·055	+ 0·01	38
9	β Tucanæ—1st ...	+ 2·7681	- 0·0446	+ 0·008	- 19·926	+ 0·054	+ 0·03	Stone
10	β Tucanæ—2nd ...	+ 2·7678	- 0·0446	+ 0·008	- 19·926	+ 0·054	+ 0·03	Stone
11	31 Andromedæ δ ...	+ 3·1830	+ 0·0221	+ 0·010	- 19·849	+ 0·075	+ 0·03	57
12	16 Ceti β ...	+ 2·9980	- 0·0055	+ 0·015	- 19·788	+ 0·080	- 0·03	70
13	24 Cassiopeiæ η —1st. ...	+ 3·4468	+ 0·0606	+ 0·135	- 19·723	+ 0·099	+ 0·48	79
14	24 Cassiopeiæ η —2nd. ...							
15	27 Cassiopeiæ γ ...	+ 3·5675	+ 0·0714	+ 0·001	- 19·593	+ 0·119	+ 0·02	99
16	2 Ursæ Minoris ...	+ 6·9054	+ 1·3457	+ 0·068	- 19·536	+ 0·239	+ 0·01	92
17	R. P. L. 14. ...	+ 8·3191	+ 2·0897	+ 0·054	- 19·464	+ 0·300	+ 0·02	95
18	71 Piscium ϵ ...	+ 3·1137	+ 0·0087	- 0·007	- 19·447	+ 0·119	- 0·04	113
19	β Phœnicis ...	+ 2·6926	- 0·0133	- 0·006	- 19·353	+ 0·111	+ 0·04	Stone
20	ν Phœnicis ...	+ 2·7480	- 0·0151	...	- 19·322	+ 0·115	...	...
21	31 Ceti η ...	+ 3·0034	+ 0·0000	+ 0·013	- 19·316	+ 0·126	+ 0·12	141
22	ι Tucanæ ...	+ 2·3832	- 0·0240	+ 0·003	- 19·316	+ 0·102	- 0·01	Stone
23	43 Andromedæ β ...	+ 3·3255	+ 0·0236	+ 0·014	- 19·305	+ 0·139	+ 0·08	140
24	33 Cassiopeiæ θ ...	+ 3·5353	+ 0·0533	+ 0·023	- 19·287	+ 0·151	+ 0·02	142
25	Lalande 2186 ...	+ 3·1238	+ 0·0099	...	- 19·197	+ 0·140	...	...
26	1 Ursæ Minoris α ...	+ 21·0330	- 15·2933	+ 0·108	- 19·027	+ 0·977	+ 0·00	102
27	37 Cassiopeiæ δ ...	+ 3·8308	+ 0·0773	+ 0·038	- 18·910	+ 0·194	+ 0·04	130
28	45 Ceti θ ...	+ 3·0031	+ 0·0013	- 0·007	- 18·903	+ 0·154	+ 0·20	134
29	R. Sculptoris ...	+ 2·7635	- 0·0035	...	- 18·806	+ 0·143	...	...
30	γ Phœnicis ...	+ 2·6155	- 0·0125	- 0·004	- 18·752	+ 0·143	+ 0·24	Stone
31	99 Piscium η ...	+ 3·1993	+ 0·0141	- 0·000	- 18·694	+ 0·177	+ 0·00	203
32	δ Phœnicis ...	+ 2·4935	- 0·0139	+ 0·009	- 18·656	+ 0·141	- 0·14	Stone
33	106 Piscium ν ...	+ 3·1181	+ 0·0001	- 0·003	- 18·355	+ 0·191	- 0·01	228
34	52 Ceti τ ...	+ 2·9035	- 0·0004	- 0·122	- 18·236	+ 0·134	- 0·36	233
35	55 Ceti ζ ...	+ 2·9575	+ 0·0023	+ 0·000	- 17·971	+ 0·199	+ 0·03	247

* Where only a number is given the authority is Auwers-Bradley.

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Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
	36 45 Cassiopeiae ε	3.6	...	1	45	33.80	26	56	12.0	3	0.84
	37 6 Arietis β	2.8	...	1	47	50.77	69	47	39.4	3	0.98
56.79 10.05	38 χ Eridani	4.0	1	1	51	10.09	142	13	18.6	1	0.01
53.29	39 α Hydri	3.0	2	1	54	53.73	152	10	9.5	2	0.84
21.28	40 57 Andromedæ γ—1st	2.2	...	1	56	21.17	48	15	40.0	2	0.43
22.10	41 57 Andromedæ γ—2nd	5.0	3	1	56	22.07	48	15	36.6	2	0.03
14.44	42 13 Arietis α	2.0	...	2	0	14.43	67	7	13.7	3	0.97
13.72	43 4 Trianguli β	3.1	...	2	2	13.60	55	35	44.2	5	0.92
17.53	44 μ Fornacis	5.2	5	2	7	29.62	121	18	5.8	5	0.91
31.88	45 8 Trianguli δ	5.0	...	2	9	32.81	56	20	24.6	3	0.95
6.22	46 9 Trianguli γ	5.5	5	2	10	0.20	56	43	21.6	5	0.93
40.44	47 π ¹ Hydri	5.7	2	2	11	40.80	158	25	1.5	2	0.98
5.58	48 φ Eridani	4.0	3	2	12	6.64	142	4	56.7	3	0.03
	49 π ² Hydri	5.9	1	2	12	55.11	158	18	59.2	1	0.97
2.46	50 S Persei, Var. 4	10.6	2	2	14	2.44	31	58	37.4	2	0.01
27.49	51	8.9	1	2	14	27.36	31	43	42.9	1	0.03
54.87	52 κ Fornacis	5.4	5	2	16	54.94	114	22	33.7	5	0.91
22.51	53 Taylor 798	5.5	2	2	17	22.52	133	45	47.0	2	0.93
13.62	54 24 Arietis ξ	5.4	...	2	18	13.58	79	56	50.6	5	0.96
57.52	55 Radcliffe 706	4.5	2	2	18	57.30	23	9	7.7	2	0.95
34.00	56 δ Hydri	4.0	3	2	19	34.20	159	13	12.9	3	0.02
	57 73 Ceti ζ ²	4.4	...	2	21	37.09	82	5	30.9	1	0.00
34.45	58 R. P. L. 26	8.0	...	2	25	52.47	3	20	24.6	1	0.92
10.82	59 82 Ceti δ	4.1	...	2	33	10.84	90	12	12.5	1	0.02
42.62	60 ε Eridani	4.0	2	2	35	48.63	130	22	59.3	2	0.02
	61 86 Ceti γ—2nd	3.6	...	2	36	55.73	87	17	1.1	4	0.50
16.07	62 89 Ceti π	4.3	...	2	38	16.10	104	22	50.1	3	0.02
44.58	63 41 Arietis	3.8	...	2	42	44.56	63	14	51.2	3	0.02
	64 3 Eridani η	4.0	...	2	50	25.01	99	23	17.3	2	0.01
35.65	65 θ Eridani—1st	3.5	2	2	53	35.70	130	47	55.7	2	0.02
34.44	66 θ Eridani 2nd	5.5	2	2	53	36.73	130	47	54.6	2	0.03
	67 92 Ceti α (Menkar)	2.7	...	2	55	51.04	86	23	36.3	4	0.74
58.07	68 11 Eridani τ ³	4.1	...	2	56	58.07	114	6	28.0	2	0.03
31.43	69 R. P. L. 33	5.8	...	3	3	29.86	5	31	46.8	4	0.58
	70 57 Arietis δ	4.5	...	3	4	35.86	70	44	24.0	5	0.02

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
		<i>s</i>	<i>s</i>	<i>s</i>	"	"	"	
36	45 Cassiopeia ε ...	+ 4.2422	+ 0.0993	+ 0.004	- 17.964	+ 0.283	+ 0.02	239
37	6 Arietis β ...	+ 3.2954	+ 0.0183	+ 0.005	- 17.874	+ 0.226	+ 0.10	252
38	χ Eridani ...	+ 2.2677	- 0.0087	+ 0.067	- 17.739	+ 0.162	- 0.25	Stone
39	α Hydri ...	+ 1.8552	- 0.0027	+ 0.034	- 17.587	+ 0.138	- 0.01	Stone
40	57 Androm. γ—1st ...	+ 3.6521	+ 0.0393	+ 0.002	- 17.525	+ 0.266	+ 0.05	276
41	57 Androm. γ—2nd ...	+ 3.6522	+ 0.0393	+ 0.002	- 17.525	+ 0.266	+ 0.05	276
42	13 Arietis α ...	+ 3.3549	+ 0.0203	+ 0.013	- 17.357	+ 0.252	+ 0.13	287
43	4 Trianguli β ...	+ 3.5377	+ 0.0804	+ 0.012	- 17.269	+ 0.269	+ 0.03	290
44	μ Fornacis ...	+ 2.6429	- 0.0082	- 0.003	- 17.031	+ 0.210	- 0.03	Stone
45	8 Trianguli δ ...	+ 3.5491	+ 0.0296	+ 0.030	- 16.935	+ 0.234	+ 0.22	317
46	9 Trianguli γ ...	+ 3.5437	+ 0.0292	...	- 16.913	+ 0.234	...	...
47	π ¹ Hydri ...	+ 1.2355	+ 0.0211	...	- 16.834	+ 0.105	...	...
48	φ Eridani ...	+ 2.1398	- 0.0044	+ 0.005	- 16.815	+ 0.177	+ 0.05	Stone
49	π ² Hydri ...	+ 1.2295	+ 0.0213	...	- 16.775	+ 0.105	...	...
50	8 Persei ...	+ 4.2545	+ 0.0782	...	- 16.722	+ 0.343	...	...
51	... ..	+ 4.2698	+ 0.0791	...	- 16.700	+ 0.350	...	...
52	κ Fornacis ...	+ 2.7315	- 0.0007	...	- 16.581	+ 0.231	...	...
53	Taylor 798 ...	+ 2.3493	- 0.0043	...	- 16.553	+ 0.200	...	...
54	24 Arietis ξ ...	+ 3.2087	+ 0.0126	- 0.001	- 16.516	+ 0.272	+ 0.01	388
55	Radcliffe 706 ...	+ 4.3533	+ 0.1810	...	- 16.430	+ 0.410	...	...
56	δ Hydri ...	+ 1.0569	+ 0.0292	- 0.010	- 16.449	+ 0.095	- 0.01	Stone
57	73 Ceti ξ ³ ...	+ 3.1793	+ 0.0117	+ 0.001	- 16.346	+ 0.276	+ 0.00	347
58	R. P. L. 26 ...	+ 16.1022	+ 3.7372	...	- 16.127	+ 1.403	...	...
59	82 Ceti δ ...	+ 3.0692	+ 0.0081	+ 0.000	- 15.740	+ 0.284	+ 0.01	372
60	ι Eridani ...	+ 2.3573	- 0.0020	+ 0.003	- 15.533	+ 0.223	+ 0.06	Stone
61	86 Ceti γ—2nd ...	+ 3.1124	+ 0.0094	- 0.011	- 15.534	+ 0.294	+ 0.16	383
62	89 Ceti π ...	+ 2.8533	+ 0.0033	- 0.003	- 15.459	+ 0.272	+ 0.01	388
63	41 Arietis ...	+ 3.5116	+ 0.0229	+ 0.003	- 15.208	+ 0.340	+ 0.12	395
64	3 Eridani η ...	+ 2.9229	+ 0.0052	+ 0.004	- 14.761	+ 0.294	+ 0.22	413
65	θ Eridani—1st ...	+ 2.2793	- 0.0004	...	- 14.571	+ 0.234	...	...
66	θ Eridani—2nd ...	+ 2.2793	- 0.0004	...	- 14.571	+ 0.234	...	...
67	92 Ceti α ...	+ 3.1307	+ 0.0098	- 0.003	- 14.435	+ 0.323	+ 0.07	423
68	11 Eridani τ ³ ...	+ 2.6548	+ 0.0018	- 0.012	- 14.366	+ 0.276	+ 0.04	434
69	R. P. L. 33 ...	+ 12.9350	+ 1.6053	+ 0.045	- 13.963	+ 1.365	+ 0.12	402
70	57 Arietis δ ...	+ 3.4091	+ 0.0171	+ 0.010	- 13.893	+ 0.364	- 0.01	446

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				h.	m.	s.	°	'	"		
50.63	71 12 Eridani	3.8	...	3	6	50.68 ³	119	28	24.0	1	0.03
	72 13 Eridani ζ	4.8	...	3	9	51.39	99	16	39.1	2	0.01
2.52	73 16 Eridani τ ⁴	3.8	...	3	14	2.54 ²	112	12	25.6	4	0.01
7.93	74 18 Eridani ε	3.7	...	3	27	7.95 ³	99	52	32.9	4	0.02
27.33	75 19 Eridani τ ⁵	4.2	...	3	28	21.36 ³	112	2	47.5	4	0.02
10.21	76 39 Persei δ	3.2	...	3	34	10.23 ¹	42	36	27.4	5	0.18
21.26	77 23 Eridani δ	3.7	...	3	37	21.31 ²	100	10	52.1	4	0.03
	78 25 Tauri η (<i>Alcyone</i>)	3.0	...	3	40	10.47	66	16	37.2	6	0.03
19.59	79 26 Eridani π	4.4	...	3	40	19.62 ⁵	102	29	18.8	5	0.93
33.28	80 27 Eridani τ ⁶	4.3	...	3	41	33.31 ²⁸	113	36	52.5 ³	5	0.93
50.84	81 υ ² Eridani... ..	4.0	3	3	44	50.91 ⁸⁴	126	34	25.3	3	0.02
	82 Lalande 7198	7.4	5	3	47	26.62	73	44	38.0	5	0.92
	83 34 Eridani γ ¹	3.0	...	3	52	17.41	103	51	35.5	7	0.03
31.65	84 R. P. L. 35	6.7	...	3	58	32.56 ^{1.45}	4	46	18.3	2	0.03
	85 T Tauri, Var. 4	11.0	2	4	4	34.57	68	30	36.0	2	0.06
51.60	86 38 Eridani ο ¹	4.1	...	4	5	51.62 ⁰	97	9	34.3	5	0.02
48.06	87 γ Doradus... ..	4.0	4	4	12	48.04 ⁶	141	47	51.7	4	0.03
56.57	88 α Retiuli	3.5	5	4	12	50.64 ⁵	152	46	57.5	5	0.04
14.24	89 41 Eridani υ ⁴	3.3	...	4	13	14.24 ¹⁴	124	6	1.8	4	0.03
24.77	90 43 Eridani υ ⁵	4.0	...	4	19	24.77 ⁷	124	18	13.4	4	0.02
	91 74 Tauri ε	3.7	...	4	21	26.09	71	5	39.6	10	0.06
	92 87 Tauri α (<i>Aldebaran</i>)	1.0	...	4	28	51.85	73	44	22.8	4	0.06
	93 48 Eridani υ	4.1	...	4	30	10.47	93	36	21.1	5	0.07
	94 52 Eridani υ ⁷	3.8	...	4	30	46.22	120	48	54.4	5	0.07
	95 α Doradus... ..	3.0	3	4	31	20.19	145	17	59.2	3	0.02
	96 53 Eridani... ..	3.9	...	4	32	32.73	104	32	44.4	5	0.09
	97 54 Eridani... ..	4.5	...	4	35	3.70	109	54	32.0	5	0.07
	98 3 Aurigæ ι	2.7	...	4	48	59.05	57	1	50.6	12	0.09
	99 2 Leporis ε	3.3	...	5	0	15.23	112	32	15.6	7	0.10
	100 67 Eridani β	2.9	...	5	1	48.16	95	14	49.4	5	0.07
	101 69 Eridani λ	4.4	...	5	3	15.50	98	54	48.1	5	0.07
54.40	102 μ Doradus, Var. 1	9.7	7	5	5	54.41 ⁰	151	57	50.0	7	0.02
	103 19 Orionis β (<i>Rigel</i>)	0.3	...	5	8	37.62	98	20	43.7	3	0.09
53.72	104	9.2	5	5	10	53.72 ¹	152	11	6.5	5	0.06
	105 20 Orionis τ	3.6	...	5	11	38.13	96	58	42.8	5	0.07

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Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
71	12 Eridani ...	+ 2'5223	+ 0'0012	+ 0'025	- 13'751	+ 0'273	- 0'66	454
72	18 Eridani ζ ...	+ 2'9113	+ 0'0056	- 0'002	- 13'557	+ 0'318	- 0'04	457
73	16 Eridani τ* ...	+ 2'6634	+ 0'0026	+ 0'001	- 13'285	+ 0'297	- 0'04	469
74	18 Eridani ε ...	+ 2'8394	+ 0'0055	- 0'068	- 12'407	+ 0'336	- 0'01	493
75	19 Eridani τ ^e ...	+ 2'6451	+ 0'0030	+ 0'001	- 12'321	+ 0'309	+ 0'04	495
76	39 Persei δ ...	+ 4'2419	+ 0'0417	+ 0'001	- 11'917	+ 0'502	+ 0'04	499
77	23 Eridani δ ...	+ 2'8772	+ 0'0055	- 0'008	- 11'692	+ 0'346	- 0'74	515
78	25 Tauri η ...	+ 3'5538	+ 0'0177	- 0'000	- 11'490	+ 0'430	+ 0'04	521
79	26 Eridani π ...	+ 2'8234	+ 0'0049	+ 0'000	- 11'475	+ 0'343	- 0'07	526
80	27 Eridani τ ^e ...	+ 2'5912	+ 0'0030	- 0'013	- 11'391	+ 0'316	+ 0'53	530
81	ν ^a Eridani ...	+ 2'2477	+ 0'0026	- 0'008	- 11'152	+ 0'277	+ 0'07	Stone
82	Lalande 7193 ...	+ 3'3987	+ 0'0142	...	- 10'964	+ 0'437	...	...
83	34 Eridani γ ¹ ...	+ 2'7923	+ 0'0047	+ 0'003	- 10'606	+ 0'351	+ 0'11	546
84	R. P. L. 35 ...	+ 10'8909	+ 1'8099	+ 0'057	- 10'137	+ 2'125	- 0'05	Gr.
85	T. Tauri, Var. 4 ...	+ 3'5335	+ 0'0146	...	- 9'678	+ 0'455	...	...
86	33 Eridani ο ¹ ...	+ 2'9247	+ 0'0058	- 0'001	- 9'578	+ 0'379	- 0'09	563
87	γ Doradus ...	+ 1'5558	+ 0'0076	+ 0'004	- 9'042	+ 0'206	- 0'10	Stone
88	α Reticuli ...	+ 0'7518	+ 0'0216	+ 0'005	- 9'039	+ 0'102	- 0'07	Stone
89	41 Eridani υ ⁴ ...	+ 2'2634	+ 0'0081	- 0'001	- 9'008	+ 0'299	- 0'01	590
90	43 Eridani υ ⁶ ...	+ 2'2466	+ 0'0033	+ 0'005	- 8'522	+ 0'300	- 0'03	Stone
91	74 Tauri ε ...	+ 3'4834	+ 0'0120	+ 0'007	- 8'362	+ 0'466	+ 0'03	609
92	37 Tauri α ...	+ 3'4317	+ 0'0105	+ 0'004	- 7'787	+ 0'404	+ 0'13	630
93	48 Eridani υ ...	+ 2'9944	+ 0'0058	- 0'002	- 7'659	+ 0'403	- 0'01	637
94	52 Eridani υ ⁷ ...	+ 2'3344	+ 0'0033	- 0'005	- 7'613	+ 0'318	- 0'01	645
95	α Doradus ...	+ 1'2842	+ 0'0099	+ 0'011	- 7'566	+ 0'176	+ 0'04	Stone
96	53 Eridani ...	+ 2'7503	+ 0'0042	- 0'003	- 7'469	+ 0'375	+ 0'16	647
97	54 Eridani ...	+ 2'6209	+ 0'0037	0'000	- 7'265	+ 0'359	+ 0'09	653
98	3 Aurigæ ε ...	+ 3'8981	+ 0'0144	+ 0'001	- 6'115	+ 0'544	+ 0'00	677
99	2 Leporis ε ...	+ 2'5362	+ 0'0033	+ 0'000	- 5'169	+ 0'359	+ 0'07	713
100	67 Eridani β ...	+ 2'9534	+ 0'0045	- 0'007	- 5'033	+ 0'419	+ 0'07	715
101	69 Eridani λ ...	+ 2'3689	+ 0'0041	- 0'000	- 4'914	+ 0'403	- 0'00	720
102	μ Doradus, Var. 1 ...	+ 0'6311	+ 0'0136	...	- 4'690	+ 0'091	...	...
103	19 Orionis β ...	+ 2'8810	+ 0'0040	- 0'001	- 4'453	+ 0'412	- 0'01	736
104	... ..	+ 0'5961	+ 0'0131	...	- 4'264	+ 0'087	...	...
105	20 Orionis τ ...	+ 2'9122	+ 0'0040	- 0'002	- 4'201	+ 0'417	+ 0'00	742

84.—Proper motions from Greenwich Catalogue of 1872.

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
	106 112 Tauri β	1.9	...	5	18	31.08	61	29	55.0	6	0.07
	107 24 Orionis γ	1.9	...	5	18	32.14	83	45	45.0	2	0.01
608	108 R. P. L. 40	6.0	...	5	22	45.95	4	52	17.9	8	0.20
	109 9 Leporis β	3.0	...	5	22	58.42 ¹	110	51	32.6	3	0.01
5841	110 34 Orionis δ , Var. 1	2.4	...	5	25	43.39	90	23	29.3	3	0.10
	111 ϵ Columbæ	4.0	4	5	26	50.52.46	125	33	42.7	4	0.02
50.46	112 11 Leporis α	2.7	...	5	27	13.37	107	54	42.8	2	0.07
	113 44 Orionis ϵ —1st	3.0	...	5	29	24.82	95	59	31.8	4	0.03
	114 46 Orionis ϵ	1.8	...	5	29	53.31	91	16	56.6	3	0.08
	115 β Doradus	4.0	5	5	32	33.29	152	34	15.8	5	0.06
	116 48 Orionis σ —1st	3.7	...	5	32	34.25 ³	92	40	22.9	4	0.04
34.23	117 50 Orionis ζ	1.9	...	5	34	33.01	92	0	34.2	5	0.04
	118 13 Leporis γ	3.8	...	5	39	19.96	112	29	23.9	5	0.04
	119 53 Orionis κ	2.2	...	5	41	55.27	99	42	53.4	4	0.03
37.2}	120 β Columbæ	2.9	...	5	46	37.31.27	125	48	57.2	3	0.02
	121 58 Orionis α (<i>Betelgeuse</i>) ... Var.	...	...	5	48	30.78	82	37	2.4	4	0.08
	122 34 Aurigæ β	2.1	...	5	50	30.11	45	4	3.3	4	0.04
	123 16 Leporis η	3.7	...	5	50	43.04	104	11	30.3	5	0.06
10.25	124 γ Columbæ	4.1	5	5	53	10.27.5	125	17	51.5	5	0.04
48.57	125 R. P. L. 43	6.6	...	5	57	48.27	3	14	14.8	4	0.22
	126 67 Orionis ν	4.4	...	6	0	32.94	75	13	7.0	6	0.08
	127 13 Geminorum μ	3.2	...	6	15	31.17	67	25	31.8	2	0.10
35.42	128 1 Canis Majoris ζ	3.0	...	6	15	35.43 ²	120	0	36.0	5	0.07
	129 2 Canis Majoris β	2.0	...	6	17	16.77	107	53	45.8	5	0.07
	130 3 Canis Majoris	4.1	5	6	17	36.37	123	22	31.2	5	0.06
	131 24 Geminorum γ	2.0	...	6	30	36.31	73	29	52.0	9	0.10
	132 ν Argus	3.1	5	6	33	59.75	133	5	22.0	5	0.06
52.87	133 Lalande 12863	7.0	1	6	35	22.80 ²	83	32	20.5	3	0.21
	134 51 Cephei (<i>Hev.</i>)	5.0	...	6	42	16.01	2	46	3.7	5	0.40
14.62	135 13 Canis Majoris κ	3.9	...	6	45	14.63.4	122	22	4.6	5	0.07
	136 τ Argus	4.0	5	6	46	53.01	140	28	8.1	5	0.07
	137 16 Canis Majoris α^1	4.1	5	6	49	1.73	114	1	53.8	5	0.08
	138 21 Canis Majoris ϵ	1.5	...	6	53	47.48	118	48	21.4	4	0.12
	139 22 Canis Majoris	3.5	5	6	56	49.11	117	45	36.7	5	0.08
	140 Taylor 2813	8.4	5	6	57	20.34	94	5	16.1	5	0.07

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
		<i>s</i>	<i>s</i>	<i>s</i>	"	"	"	
106	112 Tauri β ...	+ 3.7864	+ 0.0082	+ 0.001	- 3.610	+ 0.545	+ 0.18	756
107	24 Orionis γ ...	+ 3.2159	+ 0.0048	- 0.002	- 3.609	+ 0.468	+ 0.02	761
108	R. P. L. 40 ...	+ 18.5511	+ 0.6252	...	- 3.243	+ 2.671	...	...
109	9 Leporis β ...	+ 2.5694	+ 0.0030	- 0.002	- 3.226	+ 0.371	+ 0.03	781
110	34 Orionis δ , Var. 1...	+ 3.0632	+ 0.0038	- 0.001	- 2.988	+ 0.443	+ 0.01	787
111	ϵ Columbæ ...	+ 2.1265	+ 0.0030	+ 0.002	- 2.892	+ 0.308	+ 0.07	Stone
112	11 Leporis α ...	+ 2.6445	+ 0.0029	- 0.001	- 2.851	+ 0.383	- 0.01	796
113	44 Orionis ι -1st ...	+ 2.9332	+ 0.0034	- 0.001	- 2.669	+ 0.425	- 0.01	806
114	46 Orionis ϵ ...	+ 3.0423	+ 0.0035	- 0.002	- 2.620	+ 0.441	- 0.01	809
115	β Doradus ...	+ 0.5145	+ 0.0091	- 0.003	- 2.396	+ 0.075	- 0.05	Stone
116	43 Orionis σ -1st ...	+ 3.0102	+ 0.0033	- 0.002	- 2.400	+ 0.352	- 0.01	814
117	50 Orionis ζ ...	+ 3.0256	+ 0.0033	- 0.001	- 2.222	+ 0.439	- 0.01	819
118	13 Leporis γ ...	+ 2.5210	+ 0.0026	- 0.023	- 1.806	+ 0.367	+ 0.37	837
119	53 Orionis κ ...	+ 2.8440	+ 0.0027	- 0.002	- 1.550	+ 0.414	- 0.00	844
120	β Columbæ ...	+ 2.1092	+ 0.0023	+ 0.002	- 1.170	+ 0.303	- 0.39	Stone
121	53 Orionis α ...	+ 3.2453	+ 0.0027	+ 0.001	- 1.005	+ 0.473	- 0.02	860
122	34 Aurigæ β ...	+ 4.4043	+ 0.0043	- 0.007	- 0.832	+ 0.642	+ 0.01	859
123	16 Leporis η ...	+ 2.7845	+ 0.0023	- 0.004	- 0.805	+ 0.398	- 0.15	866
124	γ Columbæ ...	+ 2.1261	+ 0.0024	- 0.005	- 0.593	+ 0.310	+ 0.01	Stone
125	R. P. L. 43 ...	+ 26.7064	+ 0.0740	...	- 0.192	+ 3.895	...	...
126	67 Orionis ν ...	+ 3.4250	+ 0.0017	- 0.000	+ 0.048	+ 0.500	+ 0.01	887
127	13 Geminorum μ ...	+ 3.6268	- 0.0003	+ 0.004	+ 1.357	+ 0.527	+ 0.10	929
128	1 Canis Majoris ζ ...	+ 2.3018	+ 0.0019	+ 0.000	+ 1.363	+ 0.334	- 0.01	933
129	2 Canis Majoris β ...	+ 2.6417	+ 0.0016	- 0.002	+ 1.511	+ 0.333	- 0.00	936
130	3 Canis Majoris ...	+ 2.1941	+ 0.0020	- 0.005	+ 1.542	+ 0.313	+ 0.03	939
131	24 Geminorum γ ...	+ 3.4643	- 0.0015	+ 0.002	+ 2.370	+ 0.500	+ 0.04	969
132	ν Argus ...	+ 1.8353	+ 0.0014	- 0.004	+ 2.954	+ 0.264	+ 0.01	Stone
133	Lalande 12363 ...	+ 3.2226	- 0.0007	...	+ 3.033	+ 0.463	..	...
134	51 Cephei ...	+ 30.2553	- 2.1200	- 0.040	+ 3.673	+ 4.336	+ 0.05	Gr.
135	13 Canis Majoris κ ...	+ 2.2413	+ 0.0015	- 0.003	+ 3.933	+ 0.319	- 0.05	1008
136	τ Argus ...	+ 1.4860	- 0.0003	...	+ 4.074	+ 0.210	...	...
137	16 Canis Majoris σ 1...	+ 2.4897	+ 0.0013	- 0.003	+ 4.257	+ 0.353	- 0.01	1014
138	21 Canis Majoris ϵ ...	+ 2.3572	+ 0.0013	- 0.001	+ 4.664	+ 0.332	- 0.02	1023
139	22 Canis Majoris ...	+ 2.3900	+ 0.0013	- 0.002	+ 4.921	+ 0.336	+ 0.01	1027
140	Taylor 2813 ...	+ 2.9796	- 0.0007	...	+ 4.965	+ 0.419	...	...

Mean Positions of Stars for 1877, January 1st.

Number	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
141	24 Canis Majoris α^2 ...	3.0	...	6	57	53.23	113	39	16.8	5	0.09
142	25 Canis Majoris δ ...	1.8	...	7	3	23.32	116	11	57.8	5	0.07
143	π Argús ...	3.1	5	7	12	47.79	126	52	39.3	5	0.07
144	31 Canis Majoris η ...	2.4	...	7	19	13.65	119	3	51.1	5	0.12
145	3 Canis Minoris β ...	3.1	...	7	20	23.70	81	27	43.1	5	0.07
146	σ Argús ...	4.1	5	7	25	19.65	133	3	12.8	5	0.08
147	66 Gemin. α^2 (<i>Castor</i>) ...	2.0	...	7	26	45.01	57	50	36.5	2	0.14
148	10 Can. Min. α (<i>Procyon</i>) ..	0.5	...	7	32	51.73	84	27	39.3	11	0.15
149	S. Geminorum, Var. 3 ...	10.5	4	7	35	20.82	66	14	2.7	4	0.07
47-23	150 78 Geminor. β (<i>Pollux</i>) ...	1.1	...	7	37	47.24	61	40	43.3	7	0.16
151	7 Argús ξ ...	3.4	...	7	44	7.23	114	33	7.7	5	0.08
152	R. P. L. 49 ...	6.7	...	7	47	14.01	5	35	36.2	3	0.12
153	Taylor 3318 ...	4.2	5	7	49	41.13	137	47	0.1	5	0.07
154	χ Argús ...	4.1	5	7	53	38.96	142	39	10.1	5	0.09
57-7	155 6 Cancri ...	5.0	...	7	55	57.68	61	51	44.6	3	0.21
156	ζ Argús ...	2.5	5	7	59	15.68	129	39	24.5	5	0.09
157	15 Argús ϵ ...	2.9	...	8	2	18.39	113	57	3.5	7	0.17
158	γ Argús—2nd ...	2.1	5	8	5	44.42	136	58	30.3	5	0.08
159	ϵ Argús ...	2.3	5	8	19	59.28	140	6	52.4	5	0.09
160	33 Cancri η ...	5.5	...	8	25	35.65	69	8	32.3	5	0.16
28-11	161 ...	9.9	3	8	36	28.12	81	30	27.8	3	0.23
162	α Argús ...	4.2	5	8	36	48.10	142	29	9.8	5	0.12
24-65	163 ...	9.5	1	8	37	24.63	81	36	52.3	1	0.21
164	11 Hydræ ϵ ...	3.6	...	8	40	15.66	83	7	52.7	4	0.21
18-63	165 δ Argús ...	3.1	5	8	41	18.62	144	15	29.7	5	0.14
22-08	166 R. P. L. 60 ...	7.0	...	8	49	21.37	5	19	48.5	5	0.56
27-02	167 W. B. E. VIII. 1302 ...	8.5	1	8	51	27.03	98	56	43.9	1	0.28
168	b^1 Carinæ ...	4.3	5	8	53	57.75	148	45	19.5	5	0.12
169	b^2 Carinæ ...	4.6	5	8	56	23.00	148	36	49.4	5	0.14
170	λ Argús ...	3.4	5	9	3	28.41	132	56	13.3	5	0.10
171	Taylor 4028 ...	8.2	1	9	6	34.04	132	46	6.2	1	0.13
50-68	172 β Argús ...	1.5	4	9	11	50.72	159	12	41.8	5	0.13
173	33 Cancri ...	6.6	...	9	12	6.35	71	46	28.6	11	0.18
174	κ Argús ...	3.3	5	9	18	18.43	144	29	9.6	5	0.14
175	30 Hydræ α , Var. 2 ...	Var.	...	9	21	32.56	98	7	34.8	10	0.25

152.—Groombridge 1359.

161—163.—Comparison stars for Melete in 1868.

166.—Carrington 1286.

167.—Observed for map of T Hydræ.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
141	24 Canis Majoris α^2 ...	+ 2'5052	+ 0'0011	- 0'002	+ 5'012	+ 0'352	- 0'02	1029
142	25 Canis Majoris δ ...	+ 2'4394	+ 0'0012	- 0'002	+ 5'476	+ 0'340	- 0'01	1042
143	π Argûs ...	+ 2'1194	+ 0'0011	- 0'004	+ 6'263	+ 0'291	+ 0'02	Stone
144	31 Canis Majoris η ...	+ 2'3732	+ 0'0011	- 0'002	+ 6'796	+ 0'323	+ 0'01	1081
145	3 Canis Minoris β ...	+ 3'2807	- 0'0041	- 0'004	+ 6'898	+ 0'444	+ 0'03	1079
146	σ Argûs ...	+ 1'9087	+ 0'0005	+ 0'005	+ 7'295	+ 0'256	- 0'09	Stone
147	86 Geminorum α^2 ...	+ 3'8532	- 0'0133	- 0'015	+ 7'411	+ 0'519	+ 0'08	1087
148	10 Canis Minoris α ...	+ 3'1914	- 0'0041	- 0'047	+ 7'905	+ 0'425	+ 1'03	1106
149	S Geminorum ...	+ 3'6108	- 0'0102	...	+ 8'105	+ 0'430	...	...
150	78 Geminorum β ...	+ 3'7281	- 0'0128	- 0'048	+ 8'300	+ 0'431	+ 0'05	1112
151	7 Argûs ξ ...	+ 2'5234	+ 0'0008	- 0'001	+ 8'300	+ 0'327	- 0'02	1132
152	R. P. L. 49 ...	+ 15'2565	- 1'2372	...	+ 9'044	+ 1'982	...	...
153	Taylor 3318 ...	+ 1'7642	- 0'0006	- 0'002	+ 9'236	+ 0'224	- 0'07	Stone
154	χ Argûs ...	+ 1'5312	- 0'0029	+ 0'001	+ 9'542	+ 0'192	+ 0'02	Stone
155	6 Cancri ...	+ 3'6976	- 0'0148	- 0'003	+ 9'719	+ 0'468	+ 0'04	1149
156	ζ Argûs ...	+ 2'1106	+ 0'0013	- 0'004	+ 9'971	+ 0'233	- 0'03	Stone
157	15 Argûs ϵ ...	+ 2'5609	+ 0'0009	- 0'008	+ 10'201	+ 0'318	- 0'06	1170
158	γ Argûs—2nd ...	+ 1'8500	+ 0'0001	+ 0'002	+ 10'459	+ 0'226	+ 0'04	Stone
159	ϵ Argûs ...	+ 1'2413	- 0'0089	- 0'005	+ 11'502	+ 0'143	- 0'03	Stone
160	33 Cancri η ...	+ 3'4822	- 0'0129	- 0'004	+ 11'900	+ 0'404	+ 0'05	1207
161	... ..	+ 3'2271	- 0'0077	...	+ 12'652	+ 0'360	...	...
162	\circ Argûs ...	+ 1'7225	- 0'0009	+ 0'001	+ 12'673	+ 0'190	+ 0'02	Stone
163	... ..	+ 3'2246	- 0'0076	...	+ 12'716	+ 0'359	...	...
164	11 Hydræ ...	+ 3'1955	- 0'0071	- 0'014	+ 12'908	+ 0'351	+ 0'02	1243
165	δ Argûs ...	+ 1'6560	- 0'0018	0'000	+ 12'978	+ 0'178	+ 0'10	Stone
166	R. P. L. 60 ...	+ 13'6647	- 1'7118	...	+ 13'507	+ 1'437	...	...
167	W. B. E. VIII. 1302 ...	+ 2'9180	- 0'0016	...	+ 13'642	+ 0'306	...	...
168	b^2 Carinæ ...	+ 1'4736	- 0'0052	- 0'002	+ 13'802	+ 0'150	- 0'04	Stone
169	b^3 Carinæ ...	+ 1'4984	- 0'0048	- 0'020	+ 13'955	+ 0'151	- 0'24	Stone
170	λ Argûs ...	+ 2'2080	+ 0'0045	- 0'006	+ 14'394	+ 0'218	0'00	Stone
171	Taylor 4028 ...	+ 2'2233	+ 0'0048	...	+ 14'531	+ 0'217	...	...
172	β Argûs ...	+ 0'7140	- 0'0348	- 0'032	+ 14'894	+ 0'064	- 0'09	Stone
173	33 Cancri ...	+ 3'3666	- 0'0134	* 0'009	+ 14'909	+ 0'323	+ 0'14	1309
174	κ Argûs ...	+ 1'8575	+ 0'0027	- 0'007	+ 15'236	+ 0'189	- 0'01	Stone
175	30 Hydræ α ...	+ 2'9505	- 0'0013	- 0'002	+ 15'449	+ 0'268	- 0'05	1330

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
176	ψ Argús	4.1	5	9	25	51.39	129	55	44.7	5	0.14
177	W. B. E. IX. 708	8.8	5	9	33	15.77	86	14	56.0	5	0.28
178	... ..	10.0	5	9	37	3.72	79	51	50.0	5	0.29
179	... ..	10.0	5	9	37	47.89	79	46	17.0	5	0.29
180	17 Leonis ϵ	3.1	...	9	38	52.02	65	39	38.4	7	0.25
181	... ..	8.2	5	9	41	11.50	79	21	19.9	5	0.30
182	ν Argús	3.3	5	9	44	1.75	154	30	7.5	5	0.14
45.91 37.65	183 24 Leonis μ	4.1	...	9	45	45.90 ¹	63	24	53.0	5	0.16
32.79	184 R. P. L. 70	5.0	...	9	48	37.84 ⁶⁵	5	29	26.7	4	0.51
	185 ϕ Argús	4.4	5	9	52	32.78 ⁶⁵	143	58	58.2	5	0.15
	186 29 Leonis π	5.0	...	9	53	42.76	81	21	59.2	10	0.26
	187 32 Leonis α (<i>Regulus</i>)	1.4	...	10	1	49.17	77	25	56.3	7	0.28
34.58	188 η Velorum	4.5	5	10	9	34.60 ⁵⁸	131	30	47.8	5	0.15
48.82	189 ω Argús	4.1	5	10	10	48.85 ²	159	25	41.3	5	0.18
29.40	190 R. P. L. 72	6.0	...	10	11	29.76 ⁴⁰	5	7	31.8	9	0.59
11.31	191 41 Leonis γ^1	2.5	...	10	13	11.32 ¹	69	32	11.8	6	0.28
	192 34 Ursæ Majoris μ	3.1	...	10	14	59.60	47	52	55.6	5	0.20
	193 42 Hydræ μ	4.1	...	10	20	8.46	106	12	32.1	5	0.16
	194 47 Leonis ρ	4.0	...	10	26	20.02	80	3	40.2	7	0.28
	195 θ Argús	3.0	5	10	38	34.17 ⁵	153	45	1.5	5	0.24
28.98	196 μ Argús	3.1	4	10	41	28.97 ⁸	138	46	14.1	5	0.19
	197 53 Leonis l	5.3	...	10	42	47.45	78	43	15.8	7	0.29
23.45	198 ν Hydræ	3.3	...	10	43	33.46 ⁵	105	32	58.1	5	0.23
	199	10.5	5	10	43	50.76	81	48	21.4	5	0.23
6.71	200 Taylor 4915	8.5	1	10	47	6.97 ⁷¹	135	33	51.1	1	0.21
4.1	201 48 Ursæ Majoris β	2.6	...	10	54	24.28 ¹	32	57	31.5	5	0.21
	202 63 Leonis χ	4.7	...	10	58	40.29	81	59	58.8	9	0.30
36.50	203 11 Crateris β	4.4	...	11	5	36.52 ⁰	112	9	15.7	5	0.22
	204 68 Leonis δ	2.8	...	11	7	33.92	68	48	9.3	7	0.31
	205 70 Leonis θ	3.5	...	11	7	46.94	73	53	54.9	5	0.23
11.51	206 12 Crateris δ	3.9	...	11	13	11.49 ⁵¹	104	6	46.4	5	0.30
23.93	207 π Centauri	4.0	5	11	15	23.93 ³	143	48	59.4	5	0.23
	208 15 Crateris γ	4.2	...	11	18	44.08	107	0	29.6	5	0.24
57.50	209 19 Hydræ ξ	3.8	...	11	26	57.33 ⁰	121	10	37.0	5	0.23
	210 21 Crateris θ	4.7	...	11	30	26.50	99	7	17.6	5	0.23

177.—Comparison star for Sappho in 1877.

178—179—181.—Comparison stars for Camilla in 1877.

184.—Carrington 1451.

190.—Groombridge 1620.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
176	ψ Argûs	+ 2·3752	+ 0·0065	- 0·027	+ 15·687	+ 0·209	- 0·07	Stone
177	W. B. E. IX. 708	+ 3·1246	- 0·0060	...	+ 16·083	+ 0·265	...	...
178	...	+ 3·2118	- 0·0091	...	+ 16·279	+ 0·267	...	...
179	...	+ 3·2125	- 0·0092	...	+ 16·316	+ 0·265	...	...
180	17 Leonis ϵ	+ 3·4215	- 0·0180	- 0·004	+ 16·371	+ 0·282	+ 0·01	1368
181	...	+ 2·2153	- 0·0093	...	+ 16·487	+ 0·260	...	...
182	ν Argûs	+ 1·5049	- 0·0045	0·000	+ 16·627	+ 0·116	+ 0·01	Stone
183	24 Leonis μ	+ 3·4421	- 0·0198	- 0·019	+ 16·711	+ 0·271	+ 0·05	1384
184	R. P. L. 70	+ 10·6148	- 1·5506	...	+ 16·849	+ 0·333	...	...
185	ϕ Argûs	+ 2·1014	+ 0·0093	- 0·007	+ 17·033	+ 0·155	+ 0·01	Stone
186	29 Leonis π	+ 3·1785	- 0·0080	- 0·004	+ 17·086	+ 0·236	+ 0·01	1398
187	32 Leonis α	+ 3·2192	- 0·0102	- 0·018	+ 17·447	+ 0·225	- 0·02	1406
188	η Velorum	+ 2·5238	+ 0·0118	- 0·017	+ 17·771	+ 0·332	- 0·05	Stone
189	ω Argûs	+ 1·4377	- 0·0072	- 0·026	+ 17·821	+ 0·088	+ 0·01	Stone
190	R. P. L. 72	+ 9·8682	- 1·6141	- 0·096	+ 17·848	+ 0·648	- 0·04	1399
191	41 Leonis γ^1	+ 3·2904	- 0·0148	+ 0·021	+ 17·915	+ 0·208	+ 0·14	1432
192	34 Ursæ Majoris μ	+ 3·0069	- 0·0361	- 0·008	+ 17·936	+ 0·225	- 0·03	1434
193	42 Hydræ μ	+ 2·9082	+ 0·0040	- 0·010	+ 18·181	+ 0·171	+ 0·06	1451
194	47 Leonis ρ	+ 3·1653	- 0·0080	- 0·001	+ 18·403	+ 0·176	- 0·01	1467
195	θ Argûs	+ 2·1291	+ 0·0199	0·000	+ 18·802	+ 0·100	+ 0·02	Stone
196	μ Argûs	+ 2·5597	+ 1·0194	+ 0·002	+ 18·888	+ 0·117	+ 0·08	Stone
197	53 Leonis l	+ 3·1597	- 0·0080	- 0·002	+ 18·927	+ 0·145	+ 0·02	1500
198	ν Hydræ	+ 2·9504	+ 0·0052	+ 0·005	+ 18·949	+ 0·133	- 0·22	1504
199	...	+ 3·1350	- 0·0063	...	+ 18·958	+ 0·141	...	...
200	Taylor 4015	+ 2·6480	+ 0·0190	...	+ 19·048	+ 0·113	...	...
201	48 Ursæ Majoris β	+ 3·6543	- 0·0629	+ 0·009	+ 19·239	+ 0·142	- 0·05	1523
202	63 Leonis χ	+ 3·1219	- 0·0056	- 0·026	+ 19·340	+ 0·113	+ 0·02	1535
203	11 Crateris β	+ 2·9442	+ 0·0098	- 0·002	+ 19·492	+ 0·093	+ 0·09	1545
204	68 Leonis δ	+ 3·1898	- 0·0132	+ 0·010	+ 19·532	+ 0·098	+ 0·12	1546
205	70 Leonis θ	+ 3·1594	- 0·0098	- 0·006	+ 19·537	+ 0·096	+ 0·06	1548
206	12 Crateris δ	+ 3·0040	+ 0·0064	- 0·011	+ 19·638	+ 0·081	- 0·21	1557
207	π Centauri	+ 2·7188	+ 0·0305	- 0·001	+ 19·675	+ 0·069	+ 0·02	Stone
208	15 Crateris γ	+ 2·9990	+ 0·0082	- 0·009	+ 19·730	+ 0·070	- 0·03	1564
209	19 Hydræ ξ	+ 2·9560	+ 0·0167	- 0·017	+ 19·846	+ 0·053	+ 0·03	1580
210	21 Crateris θ	+ 3·0446	+ 0·0049	- 0·006	+ 19·888	+ 0·043	- 0·03	1585

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				h.	m.	s.	°	'	"			
	211	91 Leonis ν	4.5	...	11	30	39.06	90	8	41.4	5	0.32
	212	27 Crateris ζ	4.9	...	11	38	31.40	107	39	58.8	5	0.24
	213	... ..	8.4	1	11	38	45.97	149	43	8.1	1	0.40
	214	... ..	8.9	4	11	38	51.08	148	40	12.8	4	0.39
	215	94 Leonis β (<i>Deneb</i>)	2.2	...	11	42	47.09	74	44	25.7	4	0.33
42.00	216	28 Hydræ β	4.2	...	11	46	42.01 ⁰	123	14	25.1	5	0.24
	217	X Virginis, Var. 10	10.6	10	11	55	34.06	80	14	29.7	10	0.26
32.03 54.34	218	R. P. L. 89	6.3	...	11	58	39.42 ^{2.00}	3	43	50.9	5	0.68
	219	δ Centauri	3.0	5	12	1	59.38 ⁵	140	2	12.8	5	0.26
4.74	220	1 Corvi α	4.3	...	12	2	40.24	114	2	32.2	5	0.29
22.82	221	Taylor 5574	7.5	3	12	3	22.30 ²	141	5	58.0	3	0.39
	222	2 Corvi ϵ	3.1	...	12	3	47.99	111	56	7.2	6	0.37
13.67	223	ρ Centauri	4.1	5	12	5	18.64 ⁷	141	41	1.3	5	0.29
37.46	224	δ Crucis	3.2	5	12	8	37.43 ⁶	148	3	51.0	5	0.29
23.94	225	4 Corvi γ	2.8	...	12	9	28.34	106	51	30.7	5	0.29
	226	15 Virginis γ	4.0	...	12	13	36.76	89	53	58.5	10	0.38
43.50	227	ϵ Crucis	4.0	5	12	14	43.48 ⁵⁰	149	43	14.8	5	0.27
30.03	228	γ Corvi δ	3.1	...	12	23	30.01 ⁰³	105	49	48.5	5	0.29
20.83	229	γ Crucis	2.1	5	12	24	20.77 ⁹³	146	25	27.1	5	0.31
8.26	230	γ Muscæ	4.2	5	12	25	8.14 ²⁶	161	27	15.8	5	0.30
	231	9 Corvi β	2.8	...	12	27	55.63	112	42	58.5	8	0.39
57.66	232	α Muscæ	4.1	5	12	29	51.66 ⁶⁶	158	27	29.2	5	0.31
31.73	233	... ..	9.5	1	12	32	31.73 ³	84	34	48.7	1	0.42
44.17	234	γ Centauri	3.1	5	12	34	44.17 ⁷	138	17	0.6	5	0.29
44.88	235	β Muscæ	4.0	5	12	38	44.88 ⁸	157	26	5.0	5	0.30
32.16	236	β Crucis	2.0	5	12	40	32.16 ⁶	149	0	57.0	5	0.30
	237	... ..	10.9	3	12	44	10.46	80	44	50.7	3	0.42
	238	R. P. L. 98	6.6	...	12	48	9.65	5	54	48.5	1	0.94
14.57	239	R. P. L. 99	5.6	...	12	48	14.96 ⁵⁷	5	55	4.6	8	0.50
36.51	240	77 Ursæ Majoris ϵ (<i>Alioth</i>)	1.8	...	12	48	36.54 ¹	33	22	17.9	5	0.30
	241	12 Canum Venaticorum α	3.1	...	12	50	16.26	51	0	59.4	4	0.39
44.84	242	δ Muscæ	4.0	5	12	53	49.88 ⁸⁴	160	53	9.0	5	0.33
	243	47 Virg. ϵ (<i>Vindemiatrix</i>).	3.0	...	12	56	3.11	78	22	42.6	5	0.31
	244	51 Virginis θ	4.4	...	13	3	34.89	94	52	54.5	3	0.40
14.74	245	46 Hydræ γ	3.4	...	13	12	14.13 ⁷	112	31	18.6	5	0.32

218.—Groombridge 1850.

237.—Comparison star for Isis in 1867.

239.—Groombridge 1940.

[13]

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
211	91 Leonis ν ...	+ 3'0718	+ 0'0008	- 0'002	+ 19'890	+ 0'049	- 0'05	1586
212	27 Crateris ζ ...	+ 3'0324	+ 0'0099	+ 0'001	+ 19'966	+ 0'032	+ 0'01	1598
213	... ..	+ 2'2861	+ 0'0444	...	+ 19'969	+ 0'030	...	...
214	... ..	+ 2'8699	+ 0'0430	...	+ 19'969	+ 0'030	...	...
215	94 Leonis β ...	+ 3'0997	- 0'0074	- 0'036	+ 19'998	+ 0'025	+ 0'10	1605
316	28 Hydræ β ...	+ 3'0214	+ 0'0200	- 0'005	+ 20'021	+ 0'016	- 0'01	1607
217	X Virginis ...	+ 3'0766	- 0'0085	...	+ 20'051	+ 0'000	...	...
218	R. P. L. 89 ...	+ 3'2017	- 0'4950	...	+ 20'054	- 0'006	...	...
219	δ Centauri ...	+ 3'0861	+ 0'0380	0'000	+ 20'054	- 0'013	+ 0'01	Stone
220	1 Corvi α ...	+ 3'0776	+ 0'0153	+ 0'005	+ 20'054	- 0'013	+ 0'03	1624
221	Taylor 5574 ...	+ 3'0967	+ 0'0395	...	+ 20'052	- 0'015	...	...
222	2 Corvi ϵ ...	+ 3'0812	+ 0'0142	- 0'006	+ 20'052	- 0'016	- 0'02	1626
223	ρ Centauri ...	+ 3'1108	+ 0'0410	...	+ 20'049	- 0'019	...	...
224	δ Crucis ...	+ 3'1531	+ 0'0526	0'000	+ 20'040	- 0'026	+ 0'05	Stone
225	4 Corvi γ ...	+ 3'0890	+ 0'0116	- 0'012	+ 20'037	- 0'023	- 0'03	1638
226	15 Virginis η ...	+ 3'0722	+ 0'0027	- 0'006	+ 20'013	- 0'035	+ 0'02	1647
227	ϵ Crucis ...	+ 3'2192	+ 0'0586	...	+ 20'013	- 0'039	...	...
228	7 Corvi δ ...	+ 3'1110	+ 0'0118	- 0'014	+ 19'949	- 0'055	+ 0'15	1675
229	γ Crucis ...	+ 3'2359	+ 0'0542	0'000	+ 19'941	- 0'060	+ 0'30	Stone
230	γ Muscæ ...	+ 3'5084	+ 0'1167	...	+ 19'934	- 0'065	...	...
231	9 Corvi β ...	+ 3'1402	+ 0'0164	- 0'008	+ 19'906	- 0'064	+ 0'05	1685
232	α Muscæ ...	+ 3'5122	+ 0'0996	...	+ 19'885	- 0'075	...	...
233	... ..	+ 3'0544	+ 0'0009	...	+ 19'852	- 0'071	...	...
234	γ Centauri ...	+ 3'2986	+ 0'0418	...	+ 19'825	- 0'082	...	...
235	β Muscæ ...	+ 3'6135	+ 0'0997	- 0'014	+ 19'769	- 0'097	+ 0'04	Stone
236	β Crucis ...	+ 3'4639	+ 0'0654	- 0'009	+ 19'742	- 0'097	+ 0'03	Stone
237	... ..	+ 3'0306	- 0'0003	...	+ 19'683	- 0'092	...	...
238	R. P. L. 98 ...	+ 0'3797	+ 0'2182	- 0'017	+ 19'613	- 0'020	- 0'02	1730
239	R. P. L. 99 ...	+ 0'3769	+ 0'2174	- 0'020	+ 19'612	- 0'019	- 0'02	1731
240	77 Ursæ Majoris ϵ ...	+ 2'6449	- 0'0273	+ 0'012	+ 19'605	- 0'089	+ 0'02	1722
241	12 Canum Venat. α ...	+ 2'8368	- 0'0152	- 0'022	+ 19'574	- 0'098	- 0'07	1725
242	δ Muscæ ...	+ 3'9699	+ 0'1372	+ 0'042	+ 19'504	- 0'143	0'00	Stone
243	47 Virginis ϵ ...	+ 3'0057	- 0'0007	- 0'019	+ 19'457	- 0'114	- 0'03	1735
244	51 Virginis θ ...	+ 3'1036	+ 0'0078	- 0'004	+ 19'287	- 0'132	+ 0'04	1747
245	46 Hydræ γ ...	+ 3'2441	+ 0'0187	+ 0'002	+ 19'086	- 0'155	+ 0'03	1764

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				h.	m.	s.	°	'	"			
41.05	246	Centauri	3.3	5	13	13	41 ⁰⁰ 5	126	3	45.1	5	0.33
	247	87 Virginis α (<i>Spica</i>) ...	1.2	...	13	18	42.32	100	31	6.7	4	0.38
	248	R. P. L. 103	7.0	...	13	19	40.95	4	36	10.1	3	0.71
	249	79 Virginis ζ	3.5	...	13	28	25.54	89	57	57.1	4	0.38
6.00	250	ϵ Centauri	3.1	5	13	32	5 ⁰⁰ 54	142	50	23.2	5	0.32
8.01	251	ν Centauri	3.8	5	13	42	8 ⁰¹ 7.06	181	4	24.7	5	0.37
12.73	252	μ Centauri	3.7	5	13	42	12 ⁷⁰ 3	181	51	36.8	5	0.35
52.52	253	ζ Centauri	3.1	5	13	47	52 ⁵³ 4	186	40	54.0	5	0.39
49.71	254	8 Bootis η	2.9	...	13	48	40 ⁶⁸ 71	70	59	6.5	5	0.41
48.00	255	ϕ Centauri	4.7	4	13	50	4 ⁰⁰ 06	181	29	55.9	5	0.37
	256	Stone 7666	3.5	1	13	51	25.75	123	47	45.6	1	0.36
	257	98 Virginis τ	4.3	...	13	55	23.18	87	51	34.1	6	0.41
26.42	258	5 Centauri θ	1.7	...	13	59	26 ⁰⁶ 92	125	45	50.1	5	0.36
14.42	259	R. P. L. 108	7.8	...	14	2	14 ⁴² 34	3	39	10.1	1	0.42
	260	16 Bootis α (<i>Arcturus</i>) ...	0.0	...	14	10	3.12	70	10	35.7	5	0.37
34.15	261	W. B. E. XIV. 192	7.8	3	14	12	34 ¹² 5	108	50	19.9	3	0.41
	262	25 Bootis ρ	3.6	...	14	26	31.76	59	5	16.3	4	0.38
26 59.98	263	R. Camelopardi, Var. 1 ...	10.0	7	14	27	0.12	5	36	42.4	7	0.03
42.15	264	η Centauri	3.3	5	14	27	42 ¹⁰ 5	131	36	59.4	5	0.37
35.37	265	α Circini	4.2	5	14	32	35 ²⁴ 37	154	26	18.0	5	0.37
27.00	266	36 Bootis ϵ (<i>Mirac</i>)	2.6	...	14	39	7 ⁰⁰ 36.98	62	24	22.7	2	0.43
4.59	267	9 Libræ α^2	3.0	...	14	44	4 ⁵⁸ 9	105	31	45.4	3	0.45
28.97	268	β Lupi	3.2	5	14	50	28 ⁹² 7	132	38	12 ⁵⁷ 5.5	5	0.40
10.00	269	κ Centauri	3.1	5	14	51	10 ⁰⁰ 04	131	36	31.0	5	0.42
16.77	270	42 Bootis β	3.6	...	14	57	18 ⁷⁶ 7	49	7	21.5	5	0.40
	271	43 Bootis ψ	4.5	...	14	59	10.49	62	34	18.4	3	0.45
27.51	272	ζ Lupi	4.0	...	15	3	27 ⁵⁶ 1	141	37	45.3	5	0.40
14.08	273	R. P. L. 111	7.0	...	15	4	14 ⁷⁴ 08	5	34	24.8	2	0.51
2.22	274	γ Trianguli Australis ...	3.2	5	15	7	26 ⁷¹ 2	158	13	22.4	5	0.42
	275	27 Libræ β	2.7	...	15	10	23.32	98	55	39.8	2	0.44
	276	U Coronæ, Var. 4	3.6	10	15	13	10.69	57	54	8.5	10	0.37
13.01	277	δ Lupi	4.1	5	15	13	17 ⁰⁷ 01	130	12	4 ²⁷	5	0.43
14.76	278	ϵ Lupi	4.5	5	15	14	14 ⁴⁷ 3	134	14	42.0	5	0.46
[20.03]	279	S Libræ, Var. 5	9.1	3	15	14	20.35	109	56	35.4	3	0.52
32.50	280	R. P. L. 114	6.9	...	15	17	2 ⁵⁵ 34.07	2	17	49.0	1	0.90

248.—Groombridge 2007.
259.—Groombridge 2099.

273.—Groombridge 2213.
280.—Groombridge 2253.

[12.5]

[5.2]

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
		s	s	s	"	"	"	
246	ι Centauri ...	+ 3.8898	+ 0.0305	...	+ 19.027	- 0.164	...	...
247	δ Virginis α ...	+ 3.1558	+ 0.0116	- 0.004	+ 18.883	- 0.163	+ 0.02	1774
248	R. P. L. 108 ...	- 2.5861	+ 0.9398	...	+ 18.855	+ 0.121	...	...
249	η Virginis ζ ...	+ 3.0719	+ 0.0064	- 0.021	+ 18.580	- 0.176	- 0.06	1789
250	ϵ Centauri ...	+ 3.7621	+ 0.0588	- 0.018	+ 18.459	- 0.223	+ 0.02	Stone
251	ν Centauri ...	+ 3.5744	+ 0.0379	...	+ 18.096	- 0.233	...	...
252	μ Centauri ...	+ 3.5889	+ 0.0390	+ 0.001	+ 18.093	- 0.234	- 0.02	Stone
253	ζ Centauri ...	+ 3.7151	+ 0.0469	- 0.012	+ 17.874	- 0.254	+ 0.05	Stone
254	δ Bootis η ...	+ 2.8616	- 0.0006	- 0.005	+ 17.835	- 0.199	+ 0.34	1821
255	ϕ Centauri ...	+ 3.6220	+ 0.0388	...	+ 17.756	- 0.254	...	...
256	Stone 7666 ...	+ 3.4004	+ 0.0295	...	+ 17.731	- 0.244	...	...
257	θ Virginis τ ...	+ 3.0481	+ 0.0064	- 0.001	+ 17.566	- 0.222	+ 0.03	1829
258	δ Centauri θ ...	+ 3.5517	+ 0.0318	- 0.043	+ 17.392	+ 0.265	- 0.56	Stone
259	R. P. L. 108 ...	- 7.5776	+ 2.4080	...	+ 17.268	+ 0.555	...	...
260	λ Bootis α ...	+ 2.8131	+ 0.0004	- 0.080	+ 16.910	- 0.227	+ 1.98	1847
261	W. B. E. XIV. 192 ...	+ 3.2524	+ 0.0146	...	+ 16.791	- 0.266	...	...
262	δ Bootis ρ ...	+ 2.5946	- 0.0015	- 0.009	+ 16.098	- 0.233	- 0.13	1869
263	R. Camelopardi ...	- 5.0692	+ 1.0892	...	+ 16.069	+ 0.436	...	...
264	η Centauri ...	+ 3.7857	+ 0.0389	- 0.009	+ 16.031	- 0.339	- 0.01	Stone
265	α Circini ...	+ 4.7987	+ 0.1116	...	+ 15.771	- 0.439	...	...
266	δ Bootis ϵ ...	+ 2.6240	- 0.0001	- 0.004	+ 15.384	- 0.252	- 0.00	1890
267	θ Libræ α^2 ...	+ 3.3160	+ 0.0154	- 0.009	+ 15.131	- 0.324	+ 0.07	1894
268	β Lupi ...	+ 3.9057	+ 0.0392	- 0.014	+ 14.757	- 0.392	+ 0.03	Stone
269	κ Centauri ...	+ 3.8788	+ 0.0378	...	+ 14.717	- 0.390	...	...
270	δ Bootis β ...	+ 2.2636	+ 0.0000	- 0.005	+ 14.346	- 0.237	+ 0.04	1918
271	δ Bootis ψ ...	+ 2.5834	+ 0.0010	- 0.015	+ 14.232	- 0.271	+ 0.01	1922
272	ζ Lupi ...	+ 4.2841	+ 0.0549	...	+ 13.065	- 0.454	...	...
273	R. P. L. 111 ...	- 6.7930	+ 1.1646	...	+ 13.916	+ 0.708	...	...
274	γ Trianguli Australis.	+ 5.5140	+ 0.1397	- 0.018	+ 13.712	- 0.593	+ 0.03	Stone
275	δ Libræ β ...	+ 3.2273	+ 0.0117	- 0.008	+ 13.523	- 0.353	+ 0.02	1984
276	U Coronæ ...	+ 2.4461	+ 0.0013	...	+ 13.342	- 0.272	...	...
277	δ Lupi ...	+ 3.9162	+ 0.0340	+ 0.001	+ 13.334	- 0.433	- 0.03	Stone
278	ϵ Lupi ...	+ 4.0487	+ 0.0395	...	+ 13.267	- 0.449	...	...
279	δ Libræ ...	+ 3.4360	+ 0.0170	...	+ 13.270	- 0.382	...	...
280	R. P. L. 114 ...	- 22.2337	+ 7.5198	...	+ 13.052	+ 2.456	...	...

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
56.22	281 13 Ursæ Minoris γ ...	3.2	...	15	20	56.29 ^{11.88} 22	17	43	40.5	5	0.42
11.98	282 12 Draconis ϵ ...	3.4	...	15	22	12.08	30	36	9.5	5	0.45
	283 γ Lupi ...	3.2	4	15	26	56.33	130	45	5.3	5	0.43
	284 37 Libræ ...	4.9	...	15	27	27.53	99	38	27.9	5	0.42
55.60	285 13 Serpentis δ -2nd ...	5.3	...	15	28	55.53	79	2	52.4	5	0.45
	286 5 Cor. Bor. α (<i>Alpha</i>) ...	2.4	...	15	29	28.84	62	52	12.3	7	0.49
33.56	287 39 Libræ ...	3.9	...	15	29	33.51 ⁶	117	43	32.7	5	0.44
	288 24 Serpentis α ...	2.7	...	15	38	12.62	83	11	9.0	10	0.48
30.65	289 28 Serpentis β ...	3.8	...	15	40	30.61 ⁵	74	11	31.4	5	0.42
3.68	290 5 Lupi χ ...	4.0	...	15	43	8.01 ⁸	123	15	3.5	5	0.44
	291 32 Serpentis μ ...	3.5	...	15	43	12.08	93	3	8.3	5	0.44
	292 β Trianguli Australis ...	3.3	5	15	44	19.13	153	2	56.0	5	0.40
41.07	293 37 Serpentis ϵ ...	3.7	...	15	44	41.05 ⁷	85	9	0.2	5	0.50
11.82	294 45 Libræ λ ...	5.0	...	15	46	11.81 ⁵	109	47	50.5	5	0.49
24.34	295 R. P. L. 115 ...	7.0	...	15	46	24.75 ³⁴	4	46	19.4	3	0.03
	296 5 Scorpii ρ ...	4.0	...	15	49	17.49	118	51	11.1	5	0.47
	297 41 Serpentis γ ...	4.0	...	15	50	46.29	73	56	10.1	5	0.42
24.58	298 6 Scorpii π ...	3.1	...	15	51	24.53 ⁸	115	45	28.7	5	0.47
	299 8 Scorpii β^1 ...	3.0	...	15	53	17.18	109	28	0.3	16	0.40
35.25	300 13 Draconis θ ...	4.2	...	15	59	35.33 ²⁵	31	6	19.2	5	0.41
1.22	301 R. P. L. 116 ...	7.0	...	16	2	1.22 ²²	4	20	52.1	5	0.66
	302 1 Ophiuchi δ ...	2.8	...	16	7	53.97	93	22	33.9	15	0.49
	303 2 Ophiuchi ϵ ...	3.4	...	16	11	48.79	94	23	23.1	5	0.41
25.83	304 20 Herculis γ ...	3.8	...	16	16	29.82 ³	70	33	26.0	5	0.42
	305 21 Scorpii α (<i>Antares</i>) ...	1.1	...	16	21	52.05	116	9	24.7	11	0.53
	306 α Normæ ...	4.1	5	16	23	20.75	124	26	3.5	5	0.46
	307 27 Herculis β ...	2.8	...	16	24	56.02	68	14	28.5 ⁷	5	0.48
10.51	308 8 Ophiuchi, Var. 3 ...	10.9	9	16	27	10.47 ⁵¹	106	54	1.9	9	0.43
39.01	309 40 Herculis ζ ...	3.1	...	16	36	39.02 ¹	58	10	24.7	11	0.53
	310 44 Herculis η ...	3.7	...	16	38	40.72	50	50	33.7	5	0.48
	311 η Aræ ...	4.6	5	16	39	10.48	148	40	9.1	5	0.50
11.97	312 26 Scorpii ϵ ...	2.2	...	16	42	11.94 ⁷	124	4	3.8	5	0.57
	313 μ^1 Scorpii ...	3.5	2	16	43	32.44	127	50	2.8	2	0.54
	314 μ^2 Scorpii ...	4.2	5	16	44	0.33	127	48	20.2	5	0.50
	315 ζ^1 Scorpii ...	4.6	5	16	45	19.14	132	9	17.2	5	0.53

295.—Carrington 2380.

301.—Carrington 2423.

3

24.9
[25.8]

25.5

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
281	13 Ursæ Minoris γ ...	- 0.1426	+ 0.0750	+ 0.004	+ 12.828	+ 0.010	- 0.02	1962
282	12 Draconis ι ...	+ 1.3267	+ 0.0138	- 0.002	+ 12.748	- 0.155	- 0.02	1957
283	γ Lupi ...	+ 3.9767	+ 0.0331	- 0.005	+ 12.420	- 0.460	+ 0.02	Stone
284	37 Libræ ...	+ 3.2508	+ 0.0116	+ 0.018	+ 12.884	- 0.378	+ 0.24	1960
285	13 Serpentis δ -2nd... ..	+ 2.8677	+ 0.0052	- 0.006	+ 12.283	- 0.336	- 0.02	1969
286	5 Coronæ Borealis α	+ 2.6297	+ 0.0023	+ 0.009	+ 12.246	- 0.297	+ 0.09	1973
287	39 Libræ ...	+ 3.6288	+ 0.0210	- 0.004	+ 12.289	- 0.424	- 0.00	1966
288	24 Serpentis α ...	+ 2.9421	+ 0.0062	+ 0.008	+ 11.631	- 0.354	- 0.06	1990
289	28 Serpentis β ...	+ 2.7617	+ 0.0043	+ 0.003	+ 11.466	- 0.336	+ 0.04	1996
290	5 Lupi χ ...	+ 3.7971	+ 0.0238	- 0.002	+ 11.276	- 0.463	- 0.01	1988
291	32 Serpentis μ ...	+ 3.1312	+ 0.0089	- 0.008	+ 11.272	- 0.388	+ 0.01	2001
292	β Trianguli Australis ...	+ 5.2542	+ 0.0364	- 0.027	+ 11.191	- 0.640	+ 0.48	Stone
293	37 Serpentis ϵ ...	+ 2.9780	+ 0.0066	+ 0.007	+ 11.165	- 0.365	- 0.06	2005
294	45 Libræ λ ...	+ 3.4738	+ 0.0152	- 0.003	+ 11.054	- 0.428	+ 0.01	2007
295	R. P. L. 115 ...	- 10.2937	+ 1.5309	...	+ 11.038	+ 1.249	...	...
296	5 Scorpii ρ ...	+ 3.6922	+ 0.0200	- 0.003	+ 10.827	- 0.458	+ 0.02	2017
297	41 Serpentis γ ...	+ 2.7468	+ 0.0043	+ 0.019	+ 10.718	- 0.344	+ 1.29	2023
298	6 Scorpii π ...	+ 3.6134	+ 0.0179	- 0.003	+ 10.671	- 0.452	+ 0.03	2020
299	8 Scorpii β^1 ...	+ 3.4797	+ 0.0142	- 0.008	+ 10.156	- 0.441	+ 0.03	2034
300	13 Draconis θ ...	+ 1.1552	+ 0.0145	...	+ 10.087	- 0.150	- 0.33	...
301	R. P. L. 116 ...	- 12.2337	+ 1.7482	...	+ 9.875	+ 1.549	...	...
302	1 Ophiuchi δ	+ 3.1419	+ 0.0081	- 0.005	+ 9.423	- 0.408	+ 0.14	2065
303	2 Ophiuchi ϵ	+ 3.1636	+ 0.0083	+ 0.004	+ 9.119	- 0.415	- 0.03	2073
304	20 Herculis γ ...	+ 2.6477	+ 0.0088	- 0.005	+ 8.753	- 0.351	- 0.05	2084
305	21 Scorpii α ...	+ 3.6696	+ 0.0150	- 0.002	+ 8.327	- 0.491	+ 0.03	2091
306	α Normæ ...	+ 3.9085	+ 0.0193	...	+ 8.209	- 0.524	...	...
307	27 Herculis β ...	+ 2.5838	+ 0.0037	- 0.009	+ 8.082	- 0.348	+ 0.02	2100
308	S Ophiuchi, Var. 3 ...	+ 3.4456	+ 0.0109	...	+ 7.902	- 0.465	...	...
309	40 Herculis ζ ...	+ 2.2968	+ 0.0033	- 0.036	+ 7.134	- 0.316	- 0.41	2127
310	44 Herculis η ...	+ 2.0513	+ 0.0087	+ 0.003	+ 6.968	- 0.284	+ 0.03	2133
311	η Aræ... ..	+ 5.1454	+ 0.0453	0.000	+ 6.927	- 0.707	+ 0.02	Stone
312	26 Scorpii ϵ ...	+ 3.9247	+ 0.0165	- 0.050	+ 6.678	- 0.543	+ 0.27	2132
313	μ^1 Scorpii ...	+ 4.0533	+ 0.0180	- 0.007	+ 6.567	- 0.562	0.00	Stone
314	μ^2 Scorpii ...	+ 4.0529	+ 0.0179	...	+ 6.529	- 0.562	...	...
315	ζ^1 Scorpii ...	+ 4.2188	+ 0.0205	+ 0.008	+ 6.420	- 0.536	+ 0.04	Stone

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				h.	m.	s.	°	'	"			
58-89	316	♄ Scorpii ...	3.5	5	16	45	55.79 ⁸²	132	8	52.8	5	0.53
	317	ζ Aræ ...	3.7	5	16	48	26.92	145	47	35.9	5	0.50
	318	ε ¹ Aræ ...	4.2	5	16	49	47.09	142	58	6.3	5	0.50
	319	27 Ophiuchi κ ...	3.4	...	16	51	50.73	80	25	55.3	7	0.54
	320	58 Herculis ε ...	4.0	...	16	55	34.87	58	53	28.7	5	0.47
	321	22 Ursæ Minoris ε ...	4.5	...	16	58	38.57	7	45	47.4	4	0.10
	322	η Scorpii ...	3.7	5	17	3	20.73	133	4	26.6	5	0.48
40-77	323	U Ophiuchi, Var. 5 ...	9.5	10	17	3	40.74 ⁷	106	11	52.3	10	0.43
	324	22 Draconis ζ ...	3.3	...	17	8	26.12	24	8	1.1	5	0.49
	325	64 Herculis α ¹ , Var. 1 ...	Var.	...	17	9	2.35	75	28	3.8	7	0.55
4-29	326	ζ Apodis ...	4.3	4	17	9	9.26 ⁹	157	38	19.1	5	0.57
45-93	327	67 Herculis π ...	3.4	...	17	10	45.84 ³	53	3	3.5	5	0.53
38-02	328	68 Herculis ω, Var. 7 ...	5.8	10	17	12	47.21	56	46	3.4	10	0.43
	329	40 Ophiuchi ξ ...	4.5	...	17	13	38.00 ²	110	58	42.7	5	0.53
	330	42 Ophiuchi θ ...	3.4	...	17	14	27.43	114	52	27.3	2	0.56
	331	γ Aræ ...	3.1	3	17	15	2.47	146	15	32.6	3	0.59
	332	β Aræ ...	3.0	1	17	15	4.46	145	24	36.7	1	0.63
	333	δ Aræ ...	4.0	5	17	19	59.86	150	34	39.5	5	0.50
	334	α Aræ ...	3.2	5	17	22	19.95	139	46	33.8	5	0.47
	335	34 Scorpii υ ...	2.8	...	17	22	23.96	127	11	43.3	5	0.50
15-30	336	35 Scorpii λ ...	1.7	...	17	25	15.28 ³⁰	127	0	42.7	5	0.54
	337	θ Scorpii ...	3.1	5	17	28	28.75	132	55	1.6	5	0.48
	338	55 Ophiuchi α ...	2.2	...	17	29	13.47	77	20	55.8	7	0.61
	339	η Pavonis ...	4.6	5	17	33	39.57	154	39	42.4	5	0.48
	340	Taylor 8199 ...	9.5	1	17	36	41.05	65	21	50.8	1	0.47
	341	69 Ophiuchi β ...	2.9	...	17	37	23.75	85	22	44.7	5	0.48
	342	ε ¹ Scorpii ...	3.7	5	17	38	58.90	130	4	35.8	5	0.52
49-10	343	3 Sagittarii, Var. 7 ...	4.6	8	17	39	49.06 ¹⁰	117	46	54.3	10	0.51
28-99	344	Taylor 8229 ...	4.0	5	17	41	28.91 ⁹	127	0	6.0	5	0.55
	345	86 Herculis μ ...	3.5	...	17	41	38.67	62	12	21.5	8	0.56
13-34	346	Lacaille 7494 ...	7.0	3	17	48	13.28 ³⁴	122	27	7.2	3	0.61
	347	Lacaille 7506 ...	7.0	3	17	48	43.89	116	44	55.1	3	0.63
45-33	348	Lacaille 7502 ...	7.0	2	17	48	46.50 ³	122	40	2.6	3	0.62
	349	64 Ophiuchi υ ...	3.5	...	17	52	15.29	99	45	22.7	5	0.47
	350	θ Aræ ...	4.1	5	17	57	3.33	140	5	47.6	5	0.50

[58-6]

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
316	ζ ² Scorpii ...	+ 4.2196	+ 0.0203	- 0.021	+ 6.369	- 0.587	+ 0.20	Stone
317	ζ Aræ ...	+ 4.9439	+ 0.0348	- 0.013	+ 6.160	- 0.689	+ 0.08	Stone
318	ε ¹ Aræ ...	+ 4.7619	+ 0.0300	- 0.008	+ 6.048	- 0.665	0.00	Stone
319	27 Ophiuchi κ ...	+ 2.8568	+ 0.0044	- 0.021	+ 5.876	- 0.402	- 0.02	2156
320	58 Herculis ε ...	+ 2.2971	+ 0.0032	- 0.005	+ 5.568	- 0.324	+ 0.03	2161
321	22 Ursæ Minoris ε ...	- 6.3854	+ 0.3082	+ 0.009	+ 5.306	+ 0.896	+ 0.00	2201
322	η Scorpii ...	+ 4.2842	+ 0.0187	- 0.003	+ 4.907	- 0.608	+ 0.26	Stone
323	U Ophiuchi, Var. 5 ...	+ 3.4489	+ 0.0074	...	+ 4.879	- 0.490	...	...
324	22 Draconis ζ ...	+ 0.1633	+ 0.0193	- 0.003	+ 4.474	- 0.025	- 0.02	2193
325	64 Herculis α ¹ ...	+ 2.7343	+ 0.0035	- 0.002	+ 4.422	- 0.391	- 0.03	2183
326	ζ Apodis ...	+ 6.2424	+ 0.0522	...	+ 4.413	- 0.890	...	...
327	67 Herculis π ...	+ 2.0807	+ 0.0032	- 0.004	+ 4.275	- 0.300	- 0.01	2187
328	68 Herculis α ...	+ 2.2143	+ 0.0081	- 0.004	+ 4.102	- 0.313	- 0.01	2194
329	40 Ophiuchi ξ ...	+ 3.5744	+ 0.0073	+ 0.617	+ 4.030	- 0.613	+ 0.20	2183
330	42 Ophiuchi θ ...	+ 3.6799	+ 0.0080	- 0.002	+ 3.959	- 0.523	+ 0.04	2189
331	γ Aræ ...	+ 5.0354	+ 0.0235	- 0.004	+ 3.909	- 0.722	+ 0.01	Stone
332	β Aræ ...	+ 4.9733	+ 0.0225	+ 0.002	+ 3.906	- 0.713	+ 0.03	Stone
333	δ Aræ ...	+ 5.4063	+ 0.0263	- 0.009	+ 3.483	- 0.777	+ 0.09	Stone
334	α Aræ ...	+ 4.6316	+ 0.0149	- 0.005	+ 3.281	- 0.667	+ 0.10	Stone
335	34 Scorpii υ ...	+ 4.0732	+ 0.0097	- 0.004	+ 3.275	- 0.587	+ 0.03	2205
336	35 Scorpii λ ...	+ 4.0685	+ 0.0090	- 0.001	+ 3.029	- 0.583	+ 0.05	2210
337	θ Scorpii ...	+ 4.3036	+ 0.0100	+ 0.001	+ 2.750	- 0.623	+ 0.02	Stone
338	55 Ophiuchi α ...	+ 2.7749	+ 0.0030	+ 0.007	+ 2.635	- 0.402	+ 0.22	2213
339	η Pavonis ...	+ 5.8771	+ 0.0226	...	+ 2.300	- 0.853	...	...
340	Taylor 8199 ...	+ 2.4623	+ 0.0027	...	+ 2.037	- 0.353	...	...
341	60 Ophiuchi β ...	+ 2.9643	+ 0.0030	- 0.004	+ 1.974	- 0.481	- 0.17	2229
342	ι ¹ Scorpii ...	+ 4.1923	+ 0.0065	- 0.003	+ 1.837	- 0.610	- 0.03	Stone
343	3 Sagittarii, Var. 7 ...	+ 3.7738	+ 0.0043	...	+ 1.764	- 0.549	...	...
344	Taylor 8229 ...	+ 4.0764	+ 0.0055	...	+ 1.618	- 0.594	...	...
345	36 Herculis μ ...	+ 2.3693	+ 0.0025	- 0.024	+ 1.604	- 0.346	+ 0.75	2237
346	Lacaille 7494 ...	+ 3.9213	+ 0.0037	...	+ 1.031	- 0.571	...	...
347	Lacaille 7506 ...	+ 3.7453	+ 0.0033	...	+ 0.986	- 0.546	...	...
348	Lacaille 7502 ...	+ 3.9235	+ 0.0036	...	+ 0.932	- 0.572	...	...
349	64 Ophiuchi υ ...	+ 3.3019	+ 0.0024	- 0.002	+ 0.673	- 0.481	+ 0.11	2250
350	θ Aræ ...	+ 4.6709	+ 0.0023	- 0.007	+ 0.253	- 0.681	+ 0.04	Stone

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitnde.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				h.	m.	s.	°	'	"			
	351	10 Sagittarii γ^2 ...	3.0	...	17	57	54.28	120	25	24.1	5	0.48
	352	Radcliffe 8828 ...	5.7	3	17	59	56.23	41	32	25.3	5	0.66
17-35	353	Taylor 8876 ...	5.3	5	18	0	17.32.5	118	28	6.7	5	0.66
	354	η^2 Ophiuchi ...	3.8	...	18	1	31.20	80	27	6.8	5	0.68
	355	ϵ Telescopii ...	4.5	1	18	2	5.89	135	58	22.9	1	0.64
	356	Lacaille 7577 ...	5.0	2	18	3	59.69	153	5	4.7	2	0.64
	357	13 Sagittarii μ^1 ...	4.1	...	18	6	24.39	111	5	20.0	12	0.57
	358	η Sagittarii ...	3.0	...	18	9	18.21	126	47	47.9	5	0.48
	359	23 Ursæ Minoris δ ...	4.5	...	18	12	0.78	3	23	30.7	8	0.23
	360	19 Sagittarii δ ...	2.8	...	18	18	7.14	119	52	41.7	5	0.49
	361	58 Serpentis η ...	3.4	...	18	14	56.64	92	55	46.0	5	0.52
0-22	362	20 Sagittarii ϵ ...	2.1	...	18	16	0.15.7	124	26	25.4	5	0.55
51-63	363	α Telescopii ...	4.0	4	18	17	51.00.3	136	2	1.3	5	0.53
	364	... ..	8.8	5	18	17	55.29	121	49	11.2	5	0.67
	365	... ..	7.7	3	18	19	6.00	121	26	28.6	3	0.64
21-35	366	ζ Telescopii ...	4.8	5	18	19	21.32.5	139	8	4.4	5	0.63
	367	ν Pavonis ...	5.5	2	18	19	53.07	152	21	11.2	2	0.68
	368	β^1 Telescopii ...	5.2	5	18	22	38.69	135	50	41.2	5	0.69
	369	β^2 Telescopii ...	5.5	5	18	22	56.09	135	50	20.9	5	0.69
	370	ζ Pavonis ...	4.5	4	18	28	39.22	161	31	50.0	5	0.61
	371	3 Lyræ α (Vega) ...	0.2	...	18	32	46.41	51	19	47.4	12	0.62
22-15	372	Taylor 8577 ...	5.0	5	18	33	22.05.5	154	59	3.6	5	0.65
	373	λ Coronæ Australis ...	5.9	4	18	35	20.56	128	26	22.5	5	0.66
	374	θ Pavonis ...	5.3	4	18	36	31.90	155	12	5.3	4	0.67
	375	27 Sagittarii ϕ ...	3.3	...	18	37	58.24	117	6	54.1	5	0.51
	376	T Aquila, Var. 3 ...	9.7	9	18	39	50.57	81	23	8.3	10	0.54
	377	λ Pavonis ...	5.2	5	18	40	49.08	152	19	32.6	5	0.70
	378	κ Telescopii ...	5.8	4	18	42	54.02	142	14	44.3	4	0.70
15-34	379	κ Pavonis ...	5.0	2	18	44	15.14.34	157	23	2.4	2	0.61
	380	10 Lyræ β^1 , Var. 1 ...	Var.	...	18	45	32.29	56	46	44.7	11	0.65
	381	34 Sagittarii σ ...	2.3	...	18	47	38.24	116	26	50.0	5	0.49
	382	ϵ Coronæ Anstl., Var. 1 ...	5.5	3	18	50	25.46	127	15	57.1	5	0.65
	383	13 Aquilæ ϵ ...	4.1	...	18	54	2.37	75	5	50.8	5	0.50
20-64	384	14 Lyræ γ ...	3.3	...	18	54	20.70.64	57	23	41.4	5	0.54
	385	38 Sagittarii ζ ...	2.9	...	18	54	47.10	120	3	14.1	5	0.53

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
351	10 Sagittarii γ^2 ...	+ 3.8573	+ 0.0020	- 0.005	+ 0.183	- 0.568	+ 0.21	2266
352	Radcliffe 3828 ...	+ 1.5633	+ 0.0025	...	+ 0.006	- 0.228	...	...
353	Taylor 8376 ...	+ 3.7972	+ 0.0016	...	- 0.025	- 0.554	...	...
354	72 Ophiuchi ...	+ 2.8473	+ 0.0019	- 0.006	- 0.132	- 0.415	- 0.09	2275
355	ϵ Telescopii ...	+ 4.4553	+ 0.0007	...	- 0.184	- 0.650	...	...
356	Lacaille 7577 ...	+ 5.7054	- 0.0021	...	- 0.350	- 0.832	...	...
357	13 Sagittarii μ^1 ...	+ 3.5876	+ 0.0009	- 0.001	- 0.560	- 0.523	- 0.00	2284
358	η Sagittarii ...	+ 4.0714	- 0.0005	- 0.016	- 0.814	- 0.593	+ 0.13	Stone
359	23 Ursæ Minoris δ ...	- 19.4531	- 0.9499	+ 0.026	- 1.051	+ 2.838	- 0.04	2395
360	19 Sagittarii δ ...	+ 3.8390	- 0.0006	+ 0.001	- 1.147	- 0.559	+ 0.03	2294
361	58 Serpentis η ...	+ 3.1405	+ 0.0010	- 0.040	- 1.307	- 0.456	+ 0.68	2298
362	20 Sagittarii ϵ ...	+ 3.9868	- 0.0016	- 0.004	- 1.400	- 0.579	+ 0.15	2297
363	α Telescopii ...	+ 4.4541	- 0.0043	- 0.014	- 1.560	- 0.647	+ 0.07	Stone
364	... ..	+ 3.8993	- 0.0017	...	- 1.566	- 0.566	...	...
365	... ..	+ 3.8863	- 0.0019	...	- 1.634	- 0.564	...	...
366	ζ Telescopii ...	+ 4.6120	- 0.0057	- 0.015	- 1.692	- 0.669	+ 0.23	Stone
367	ν Pavonis ...	+ 5.6143	- 0.0133	...	- 1.738	- 0.815	...	...
368	δ^1 Telescopii ...	+ 4.4497	- 0.0057	- 0.002	- 1.981	- 0.645	+ 0.00	Stone
369	δ^2 Telescopii ...	+ 4.4420	- 0.0057	- 0.003	- 2.003	- 0.642	+ 0.05	Stone
370	ζ Pavonis ...	+ 7.0437	- 0.0415	- 0.004	- 2.501	- 1.019	+ 0.13	Stone
371	3 Lyræ α ...	+ 2.0132	+ 0.0016	+ 0.017	- 2.858	- 0.290	- 0.30	2341
372	Taylor 8577 ...	+ 5.9070	- 0.0275	...	- 2.909	- 0.856	...	...
373	λ Coronæ Australis... ..	+ 4.1208	- 0.0067	...	- 3.081	- 0.593	...	...
374	θ Pavonis ...	+ 5.9292	- 0.0305	- 0.007	- 3.183	- 0.853	+ 0.04	Stone
375	27 Sagittarii ϕ ...	+ 3.7474	- 0.0042	+ 0.001	- 3.307	- 0.538	+ 0.02	2344
376	T Aquilæ, Var. 3 ...	+ 2.3727	+ 0.0004	...	- 3.469	- 0.414	...	...
377	Δ Pavonis ...	+ 5.6812	- 0.0280	- 0.008	- 3.553	- 0.800	+ 0.04	Stone
378	κ Telescopii ...	+ 4.7685	- 0.0162	...	- 3.732	- 0.680	...	...
379	κ Pavonis ...	+ 6.2218	- 0.0437	- 0.011	- 3.843	- 0.839	- 0.10	Stone
380	10 Lyræ β^1 ...	+ 2.2139	+ 0.0015	- 0.001	- 3.953	- 0.315	- 0.02	2369
381	34 Sagittarii σ ...	+ 3.7229	- 0.0054	- 0.001	- 4.133	- 0.529	+ 0.07	2365
382	ϵ Coronæ Australis... ..	+ 4.0649	- 0.0094	...	- 4.377	- 0.577	...	...
383	13 Aquilæ ϵ ...	+ 2.7293	+ 0.0004	- 0.005	- 4.685	- 0.335	+ 0.08	2390
384	14 Lyræ γ ...	+ 2.2436	+ 0.0014	- 0.002	- 4.711	- 0.316	- 0.01	2392
385	38 Sagittarii ζ ...	+ 3.3237	- 0.0075	- 0.004	- 4.743	- 0.540	- 0.01	2384

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
	386 R. P. L. 131	6.5	...	18	54	54.44	3	26	56.3	2	0.38
	387 γ Coronæ Australis	5.0	5	18	58	6.02	127	14	15.5	5	0.65
15.46	40 Sagittarii τ	3.5	...	18	59	15.45 ⁶	117	50	53.5	5	0.55
43.18	389 16 Aquilæ λ	3.6	...	18	59	43.17 ⁸	95	3	55.0	5	0.65
	390 17 Aquilæ ζ	3.1	...	18	59	45.96	76	19	4.9	5	0.65
	391 δ Coronæ Australis	5.1	5	18	59	46.97	130	41	7.3	5	0.71
6.01	392 α Coronæ Australis	4.6	5	19	1	6.02 ¹	128	5	37.7	5	0.55
	393 20 Aquilæ	5.3	...	19	6	0.43	98	8	35.0	5	0.65
	394 25 Aquilæ ω	5.1	...	19	12	2.51	78	37	29.4	7	0.68
	395 S Sagittarii, Var. 2	10.3	2	19	12	14.19	109	14	46.8	2	0.43
31.78	396 57 Draconis δ	3.2	...	19	12	31.82 ⁷⁸	22	33	16.0	5	0.53
47.41	397 β^1 Sagittarii	3.5	5	19	13	47.33 ⁴¹	134	41	16.3	5	0.57
	398 1 Cygni κ	3.9	...	19	14	15.44	36	51	27.2	2	0.72
	399 β^2 Sagittarii	4.3	5	19	14	19.79	135	1	44.8	5	0.66
	400 46 Sagittarii ν	4.7	...	19	14	41.11	106	11	2.6	5	0.66
	401 α Sagittarii	4.0	4	19	15	21.69	130	50	43.0	4	0.69
	402 Taylor 8907—2nd	6.0	4	19	17	54.84	144	34	5.0	4	0.67
	403 30 Aquilæ δ	3.5	...	19	19	17.72	87	7	44.1	6	0.67
	404 μ Telescopii	4.8	4	19	20	35.39	145	21	34.5	5	0.70
35.35	405 6 Vulpeculæ α	4.7	...	19	23	35.37 ⁵	65	34	59.3	5	0.66
45.92	406 6 Cygni β —1st	3.1	...	19	25	45.93 ²	62	17	40.8	5	0.57
	407 6 Cygni β —2nd	5.2	...	19	25	47.78	62	17	32.0	6	0.61
4.64	408 38 Aquilæ μ	4.7	...	19	28	4.66 ⁴	82	52	49.6	5	0.64
	409 52 Sagittarii h^*	4.6	...	19	29	13.23	115	9	11.6	3	0.65
	410 39 Aquilæ κ	4.0	...	19	30	16.38	97	17	57.0	5	0.65
	411 41 Aquilæ ϵ	4.3	...	19	30	21.31	91	33	26.5	5	0.70
33.41	412 Radcliffe 4400	10.0	5	19	33	33.43 ¹	40	3	5.5	5	0.66
31.03	413 12 Cygni ϕ	4.6	...	19	34	31.04 ³	60	7	45.3	5	0.76
	414 5 Sagittæ α	4.3	...	19	34	35.91	72	16	4.1	5	0.66
58.67	415 ν Telescopii	5.7	5	19	37	58.67 ⁷	146	39	21.4	5	0.67
14.29	416 Lacaille 8195	5.5	3	19	39	14.29 ⁹	155	54	12.3	3	0.76
	417 50 Aquilæ γ	2.8	...	19	40	24.68	79	41	5.8	4	0.65
7.72	418 18 Cygni δ	3.0	...	19	41	7.56 ⁶	45	10	6.5	5	0.59
	419	8.1	5	19	41	49.88	123	3	59.7	5	0.70
	420 7 Sagittæ δ	3.7	...	19	41	54.17	71	46	5.1	5	0.67

386.—Carrington 2882.

419.—Comparison star for Pandora in 1862.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
386	R. P. L. 131 ...	- 18'4778	- 1'5229	...	- 4'756	+ 2'619	...	...
387	γ Coronæ Australis...	+ 4'0559	- 0'0112	+ 0'004	- 5'029	- 0'571	+ 0'29	Stone
388	40 Sagittarii τ ...	+ 3'7550	- 0'0074	- 0'007	- 5'128	- 0'527	+ 0'23	2397
389	16 Aquilæ λ ...	+ 3'1868	- 0'0021	- 0'004	- 5'187	- 0'447	+ 0'08	2401
390	17 Aquilæ ζ ...	+ 2'7578	+ 0'0003	- 0'008	- 5'170	- 0'387	+ 0'09	2405
391	δ Coronæ Australis...	+ 4'1826	- 0'0132	+ 0'002	- 5'172	- 0'588	+ 0'07	Stone
392	α Coronæ Australis...	+ 4'0832	- 0'0120	+ 0'007	- 5'283	- 0'573	+ 0'11	Stone
393	20 Aquilæ ...	+ 3'2556	- 0'0031	- 0'002	- 5'696	- 0'453	- 0'01	2415
394	25 Aquilæ ω ...	+ 2'8165	- 0'0003	- 0'001	- 6'201	- 0'388	- 0'08	2432
395	S Sagittarii ...	+ 3'5160	- 0'0064	...	- 6'217	- 0'485	...	...
396	57 Draconis δ ...	+ 0'0130	- 0'0225	+ 0'016	- 6'241	+ 0'001	- 0'08	2449
397	β^1 Sagittarii ...	+ 4'3267	- 0'0195	- 0'008	- 6'346	+ 0'596	+ 0'02	Stone
398	1 Cygni κ ...	+ 1'3806	- 0'0026	+ 0'007	- 6'385	- 0'188	- 0'11	2447
399	β^2 Sagittarii ...	+ 4'3408	- 0'0198	...	- 6'391	+ 0'597	...	...
400	46 Sagittarii ν ...	+ 3'4399	- 0'0057	- 0'001	- 6'420	- 0'472	+ 0'01	2437
401	α Sagittarii ...	+ 4'1663	- 0'0168	- 0'011	- 6'476	- 0'572	+ 0'07	Stone
402	Taylor 8907—2nd ...	+ 4'8437	- 0'0330	...	- 6'637	- 0'663	...	...
403	30 Aquilæ δ ...	+ 3'0092	- 0'0018	+ 0'015	- 6'801	- 0'410	- 0'09	2451
404	μ Telescopii ...	+ 4'8391	- 0'0356	- 0'009	- 6'907	- 0'637	0'00	Stone
405	6 Vulpeculæ α ...	+ 2'5052	+ 0'0008	- 0'011	- 7'154	- 0'338	+ 0'10	2467
406	6 Cygni β —1st ...	+ 2'4188	{ +0'0011	- 0'002	- 7'330	{ - 0'325	+ 0'01	2473
407	6 Cygni β —2nd ...	+ 2'4187		- 0'002	- 7'334		+ 0'01	
408	38 Aquilæ μ ...	+ 2'9175	- 0'0012	+ 0'013	- 7'519	- 0'392	+ 0'13	2479
409	52 Sagittarii h^2 ...	+ 3'6530	- 0'0102	+ 0'002	- 7'612	- 0'490	+ 0'01	2478
410	39 Aquilæ κ ...	+ 3'2304	- 0'0044	- 0'001	- 7'697	- 0'432	- 0'01	2482
411	41 Aquilæ ι ...	+ 3'1058	- 0'0030	- 0'001	- 7'708	- 0'415	+ 0'01	2484
412	Radcliffe 4400 ...	+ 1'6125	- 0'0015	...	- 7'961	- 0'212	...	...
413	12 Cygni ϕ ...	+ 2'3687	+ 0'0012	- 0'001	- 8'038	- 0'314	- 0'05	2497
414	5 Sagittæ α ...	+ 2'6806	+ 0'0001	0'000	- 8'045	- 0'355	+ 0'01	2495
415	ν Telescopii ...	+ 4'9214	- 0'0452	...	- 8'314	- 0'650	...	...
416	Lacaille 8195 ...	+ 5'7857	- 0'0817	...	- 8'414	- 0'762	...	...
417	50 Aquilæ γ ...	+ 2'8519	- 0'0011	- 0'001	- 8'507	- 0'373	- 0'01	2511
418	13 Cygni δ ...	+ 1'8705	+ 0'0001	+ 0'005	- 8'565	- 0'241	- 0'04	2520
419	... ..	+ 3'8582	- 0'0161	...	- 8'620	- 0'504	...	...
420	7 Sagittæ δ ...	+ 2'6745	+ 0'0002	- 0'001	- 8'625	- 0'347	- 0'03	2516

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
49.01	421 Taylor 9099	6.0	5	19	42	48.00	145	16	54.0	5	0.71
9.43	422 Taylor 9125	7.9	5	19	44	9.44 ⁵	56	52	9.7	5	0.59
	423 53 Aquilæ α (<i>Altair</i>)	1.0	...	19	44	46.83	81	27	17.7	4	0.69
57.11	424 Lacaille 8224	5.5	2	19	45	57.02 ¹¹	159	29	1.0	2	0.76
	425 ϵ Sagittarii	4.5	2	19	46	46.13	132	11	24.4	2	0.76
23.43	426 μ^1 Pavonis	5.5	3	19	48	23.41 ³	157	16	15.2	3	0.76
	427 60 Aquilæ β	4.0	...	19	49	16.23	83	53	57.3	3	0.64
23.66	428 59 Sagittarii b	4.7	...	19	49	23.63 ⁶	117	29	39.8	5	0.66
53.09	429 μ^2 Pavonis	5.6	5	19	49	52.95 ^{3.05}	157	16	24.9	5	0.78
	430 61 Sagittarii g	5.0	...	19	50	58.31	105	48	57.6	5	0.71
27.32	431 60 Sagittarii A	5.0	...	19	51	27.30 ²	116	31	37.1	5	0.69
41.61	432 21 Cygni η	4.0	...	19	51	41.52 ¹	55	14	33.4	5	0.59
	433 12 Sagittæ γ	3.6	...	19	53	16.93	70	50	27.5	5	0.73
	434 62 Sagittarii c	4.7	...	19	55	5.53	118	3	1.2	5	0.67
	435 δ Pavonis	4.0	3	19	56	38.13	156	29	35.9	3	0.76
	436 O. A. S. 20266	6.5	5	20	1	32.70	105	22	58.7	5	0.74
52.28	437 O. A. S. 20269	9.9	3	20	1	52.22 ³	105	46	7.0	3	0.76
55.62	438 O. A. N. 20046 <i>S. Cygni</i> δ	10.3	10	20	2	55.79 ^{6.2}	32	22	0.0	10	0.79
	439 65 Aquilæ θ	3.4	...	20	4	57.50	91	11	5.7	5	0.58
2.77	440 Lacaille 8363—1st	9.1	4	20	5	2.74 ⁷	147	20	27.6	4	0.65
	441 Cordoba XX. 180	8.8	1	20	5	15.08	147	12	18.8	1	0.71
	442 6 Capricorni α^3	3.8	...	20	11	13.70	102	55	28.8	8	0.72
	443 8 Capricorni ν	4.7	...	20	13	50.37	103	8	39.6	5	0.69
47.65	444 U Cygni, Var. G	9.2	5	20	15	47.79 ^{4.5}	42	29	37.1	5	0.59
52.41	445 O. A. N. 20387—2nd	8.1	5	20	15	52.43 ¹	42	28	55.6	5	0.66
	446 37 Cygni γ	2.3	...	20	17	49.00	50	8	8.3	5	0.73
16.78	447 10 Capricorni π	5.2	...	20	20	16.78 ³	108	36	48.4	5	0.66
	448 11 Capricorni ρ	5.0	...	20	21	50.60	108	13	7.8	7	0.73
27.83	449 ν Indi	5.6	5	20	25	27.49 ^{5.3}	134	55	52.8	5	0.65
51.46	450 R. P. L. 143	6.7	...	20	27	51.42 ^{4.6}	5	15	51.5	8	0.40
54.36	451 α Indi	3.0	4	20	28	54.34 ⁶	137	43	7.4	5	0.64
	452 β Pavonis	3.0	5	20	33	51.21	156	38	35.0	5	0.74
0.22	453 η Indi	5.6	5	20	35	0.18 ^{2.2}	142	21	30.7	5	0.64
14.31	454 50 Cygni α (<i>Deneb</i>)	1.5	...	20	37	14.32 ¹	45	9	30.7	12	0.70
	455 σ Pavonis—2nd	4.6	5	20	37	37.68	159	13	24.8	5	0.73

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
421	Taylor 9099 ...	+ 4.8107	- 0.0487	...	- 8.698	- 0.629	...	...
422	Taylor 9125 ...	+ 2.2882	+ 0.0018	...	- 8.804	- 0.296	...	...
423	53 Aquilæ α ...	+ 2.8920	- 0.0014	+ 0.035	- 8.852	- 0.874	- 0.38	2524
424	Lacaille 8224 ...	+ 6.2699	- 0.1148	...	- 8.944	- 0.815	...	...
425	δ Sagittarii ...	+ 4.1549	- 0.0245	- 0.003	- 9.009	- 0.587	- 0.08	Stone
426	μ^1 Pavonis ...	+ 5.9135	- 0.0971	...	- 9.135	- 0.764	...	...
427	60 Aquilæ β ...	+ 2.9453	- 0.0020	+ 0.001	- 9.204	- 0.878	+ 0.47	2538
428	59 Sagittarii b ...	+ 3.6902	- 0.0137	- 0.002	- 9.212	- 0.474	+ 0.02	2538
429	μ^2 Pavonis ...	+ 5.9042	- 0.0981	...	- 9.251	- 0.761	...	...
430	61 Sagittarii g ...	+ 3.4074	- 0.0084	- 0.001	- 9.336	- 0.436	+ 0.08	2540
431	60 Sagittarii A ...	+ 3.6622	- 0.0134	0.000	- 9.372	- 0.468	- 0.08	2539
432	21 Cygni η ...	+ 2.2525	+ 0.0014	- 0.003	- 9.397	- 0.286	+ 0.08	2548
433	12 Sagittæ γ ...	+ 2.6633	+ 0.0008	+ 0.003	- 9.514	- 0.388	- 0.04	2550
434	62 Sagittarii c ...	+ 3.6966	- 0.0146	+ 0.000	- 9.653	- 0.469	- 0.02	2549
435	δ Pavonis ...	+ 5.7565	- 0.0967	+ 0.180	- 9.772	- 0.730	+ 1.15	Stone
436	O. A. S. 20266 ...	+ 3.3895	- 0.0089	...	- 10.144	- 0.423	...	...
437	O. A. S. 20209 ...	+ 3.3976	- 0.0090	...	- 10.168	- 0.423	...	...
438	O. A. N. 20046 ...	+ 1.2584	- 0.0074	...	- 10.243	- 0.154	...	...
439	65 Aquilæ θ ...	+ 3.0059	- 0.0042	- 0.000	- 10.400	- 0.382	- 0.01	2576
440	Lacaille 8363—1st ...	+ 4.8563	- 0.0568	...	- 10.404	- 0.603	...	...
441	Cordoba XX. 180 ...	+ 4.8450	- 0.0563	...	- 10.422	- 0.602	...	...
442	8 Capricorni α^2 ...	+ 3.3301	- 0.0084	+ 0.002	- 10.866	- 0.403	- 0.02	2595
443	8 Capricorni ν ...	+ 3.3327	- 0.0087	- 0.002	- 11.057	- 0.401	+ 0.01	2608
444	U Cygni ...	+ 1.8615	+ 0.0002	...	- 11.199	- 0.220	...	...
445	O. A. N. 20387—2nd... ..	+ 1.8617	+ 0.0002	...	- 11.205	- 0.220	...	...
446	37 Cygni γ ...	+ 2.1516	+ 0.0019	- 0.000	- 11.346	- 0.254	- 0.02	2624
447	10 Capricorni π ...	+ 3.4408	- 0.0116	- 0.001	- 11.522	- 0.406	- 0.01	2623
448	11 Capricorni ρ ...	+ 3.4307	- 0.0115	- 0.003	- 11.634	- 0.403	+ 0.01	2626
449	ν Indi ...	+ 4.1462	- 0.0348	...	- 11.891	- 0.482	...	...
450	R. P. L. 143 ...	- 8.5212	- 1.2757	...	- 12.060	+ 0.998	...	...
451	α Indi ...	+ 4.2429	- 0.0398	0.000	- 12.133	- 0.438	- 0.08	Stone
452	β Pavonis ...	+ 5.4963	- 0.1163	- 0.009	- 12.473	- 0.623	- 0.00	Stone
453	η Indi ...	+ 4.4241	- 0.0506	...	- 12.553	- 0.499	...	...
454	50 Cygni α ...	+ 2.0435	+ 0.0021	- 0.000	- 12.705	- 0.226	- 0.00	2679
455	σ Pavonis—2nd ...	+ 5.7948	- 0.1443	...	- 12.733	- 0.649	...	...

Mean Positions of Stars for 1877, 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>		
456	12 Delphini γ —1st ...	5.6	...	20	40	56.28	74	19	4.2	5	0.66
457	12 Delphini γ —2nd ...	4.6	...	20	40	57.06	74	19	3.4	5	0.71
13.83 458	53 Cygni ϵ ...	2.7	...	20	41	13.88 ³	56	29	21.1	1	0.79
459	3 Aquarii ...	4.6	...	20	41	14.75	95	23	35.2	5	0.73
16.10 460	54 Cygni λ^1 , Var. 5 ...	6.3	7	20	42	16.13 ⁰	53	4	37.4	7	0.71
16.74 461	α Microscopii ...	4.5	5	20	42	16.69 ⁷⁴	124	13	59.0	5	0.74
462	ι Indi ...	5.5	2	20	42	35.84	142	3	52.4	2	0.75
463	β Indi ...	4.0	4	20	45	11.14	148	54	59.4	4	0.70
19.06 464	32 Vulpeculae ...	5.1	...	20	49	19.07 ⁶	62	24	33.5	9	0.75
6.03 465	ζ Microscopii ...	5.6	5	20	55	6.00 ³	129	6	37.1	5	0.64
466	μ Indi ...	5.6	5	20	56	10.60	145	12	42.1	5	0.67
42.08 467	64 Cygni ζ ...	3.5	...	21	7	42.06 ⁵	60	16	36.6	16	0.76
56.17 468	29 Capricorni ...	5.5	...	21	8	56.13 ⁷	105	40	53.4	5	0.64
5.06 469	θ Indi ...	5.5	5	21	11	5.04 ⁶	143	57	47.8	5	0.72
53.22 470	θ^1 Microscopii ...	5.5	5	21	12	53.22 ²	131	19	41.4	5	0.66
471	γ Pavonis ...	3.0	5	21	16	15.07	155	55	16.0	5	0.72
472	1 Pegasi ...	4.3	...	21	16	23.76	70	43	15.1	5	0.65
33.63 473	θ^2 Microscopii ...	6.0	5	21	16	33.78 ⁶³	131	31	57.7	5	0.72
28.07 474	γ Indi ...	5.2	5	21	17	28.03 ⁷	145	11	24.9	5	0.75
475	34 Capricorni ζ ...	3.8	...	21	19	38.51	112	56	35.0	5	0.68
476	22 Aquarii β ...	3.1	...	21	25	4.89	96	6	40.7	16	0.77
477	39 Capricorni ϵ ...	4.5	...	21	30	11.38	110	0	58.3	5	0.65
19.37 478	... ..	9.0	1	21	30	19.37	133	59	2.9	1	0.79
479	41 Capricorni ...	5.2	...	21	35	0.21	113	49	4.9	5	0.71
480	43 Capricorni κ ...	4.7	...	21	35	47.42	109	25	33.3	5	0.73
53.06 481	V Cygni, Var. 7 ...	10.4	10	21	36	53.04 ⁶	47	43	10.9	10	0.81
17.38 482	... ..	9.3	5	21	37	17.38 ⁹	47	44	21.9	5	0.77
2.05 483	9 Piscis Australis ι ...	4.2	...	21	37	36.90	123	35	9.3	5	0.78
484	8 Pegasi ϵ ...	2.4	...	21	38	8.68	80	41	15.0	2	0.74
485	σ Indi ...	5.5	1	21	40	20.96	160	12	5.4	1	0.75
30.88 486	10 Piscis Australis θ ...	5.1	...	21	40	30.87 ⁸	121	28	0.4	5	0.75
487	γ Gruis ...	3.2	5	21	46	28.42	127	56	33.2	5	0.70
27.94 488	16 Pegasi ...	5.0	...	21	47	27.92 ⁴	64	39	10.7	6	0.78
35.15 489	π Indi ...	5.5	5	21	47	35.00 ¹⁵	143	23	51.6	5	0.76
32.09 490	δ Indi ...	5.1	5	21	49	32.08 ⁹	145	34	34.6	5	0.79

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
456	12 Delphini γ —1st ...							
457	12 Delphini γ —2nd...	+ 2.7857	- 0.0000	- 0.008	- 12.953	- 0.304	+ 0.20	2686
458	53 Cygni ϵ ...	+ 2.3972	+ 0.0030	+ 0.028	- 12.973	- 0.261	- 0.34	2689
459	3 Aquarii ...	+ 3.1700	- 0.0065	- 0.002	- 12.974	- 0.347	+ 0.03	2684
460	54 Cygni λ^1 ...	+ 2.3892	+ 0.0030	- 0.001	- 13.042	- 0.259	- 0.02	2692
461	α Microscopii ...	+ 3.7633	- 0.0240	...	- 13.043	- 0.411	...	...
462	ι Indi ...	+ 4.3737	- 0.0512	- 0.002	- 13.063	- 0.478	+ 0.06	Stone
463	β Indi ...	+ 4.7384	- 0.0734	- 0.008	- 13.235	- 0.514	- 0.01	Stone
464	32 Vulpeculæ ...	+ 2.5558	+ 0.0026	- 0.002	- 13.504	- 0.270	+ 0.00	2709
465	ζ Microscopii ...	+ 3.8571	- 0.0303	- 0.008	- 13.874	- 0.400	+ 0.06	Stone
466	μ Indi... ...	+ 4.4556	- 0.0620	...	- 13.942	- 0.462	...	...
467	64 Cygni ζ ...	+ 2.5510	+ 0.0038	- 0.002	- 14.649	- 0.243	+ 0.07	2760
468	29 Capricorni ...	+ 3.3271	- 0.0119	+ 0.000	- 14.723	- 0.324	- 0.01	2759
469	θ Indi ...	+ 4.3073	- 0.0599	...	- 14.849	- 0.417	...	...
470	θ^1 Microscopii ...	+ 3.8556	- 0.0345	...	- 14.954	- 0.369	...	...
471	γ Pavonis ...	+ 5.0325	- 0.1203	+ 0.019	- 15.150	- 0.475	- 0.83	Stone
472	1 Pegasi ...	+ 2.7650	+ 0.0019	+ 0.006	- 15.158	- 0.257	- 0.08	2780
473	θ^2 Microscopii ...	+ 3.8439	- 0.0350	...	- 15.167	- 0.360	...	...
474	γ Indi ...	+ 4.3252	- 0.0642	- 0.005	- 15.219	- 0.404	- 0.04	Stone
475	34 Capricorni ζ ...	+ 3.4307	- 0.0107	- 0.001	- 15.342	- 0.316	- 0.01	2785
476	22 Aquarii β	+ 3.1618	- 0.0071	- 0.001	- 15.645	- 0.232	+ 0.00	2797
477	39 Capricorni ϵ ...	+ 3.3684	- 0.0148	- 0.001	- 15.921	- 0.292	+ 0.00	2806
478	... ...	+ 3.8505	- 0.0394	...	- 15.927	- 0.337	...	...
479	41 Capricorni ...	+ 3.4211	- 0.0175	+ 0.006	- 16.173	- 0.288	+ 0.11	2819
480	43 Capricorni κ ...	+ 3.3497	- 0.0145	+ 0.007	- 16.214	- 0.281	+ 0.00	2821
481	V Cygni, Var. 7 ...	+ 2.3615	+ 0.0078	...	- 16.270	- 0.195	...	...
482	... ...	+ 2.3637	+ 0.0080	...	- 16.291	- 0.194	...	...
483	9 Piscis Australis ι ...	+ 3.5890	- 0.0280	- 0.003	- 16.307	- 0.298	+ 0.10	2825
484	8 Pegasi ϵ ...	+ 2.9451	- 0.0005	+ 0.001	- 16.334	- 0.242	- 0.01	2835
485	σ Indi... ...	+ 5.1977	- 0.1671	...	- 16.445	- 0.427	...	...
486	10 Piscis Australis θ ..	+ 3.5400	- 0.0240	- 0.006	- 16.454	- 0.238	- 0.04	2842
487	γ Gruis ...	+ 3.6458	- 0.0310	+ 0.002	- 16.746	- 0.236	+ 0.02	Stone
488	16 Pegasi ...	+ 2.7261	+ 0.0052	- 0.001	- 16.793	- 0.210	+ 0.00	2864
489	π Indi... ...	+ 4.2629	- 0.0770	...	- 16.800	- 0.333	...	...
490	δ Indi... ...	+ 4.1238	- 0.0664	- 0.005	- 16.891	- 0.313	+ 0.01	Stone

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
47-27	491 κ^1 Indi	5.1	5	21	49	47.227	149	35	51.3	5	0.76
	492 12 Piscis Australis η ...	5.5	...	21	53	45.94	119	2	35.2	6	0.71
11-70	493 κ^2 Indi	5.5	5	21	57	11.85.70	150	13	48.5	5	0.80
41.70	494 λ Gruis	5.0	5	21	58	41.67.70	130	8	10.7	5	0.77
	495 34 Aquarii α	3.2	...	21	59	27.85	90	54	59.9	8	0.78
	496 22 Pegasi ν	4.8	...	21	59	28.66	85	32	30.8	5	0.75
	497 α Tucanæ	2.4	5	22	10	3.60	150	52	19.5	5	0.72
20-46	498 43 Aquarii θ	4.3	...	22	10	20.47.6	98	23	41.1	13	0.79
54-75	499 δ^2 Gruis	4.2	5	22	21	54.74.5	134	7	24.8	5	0.74
23-98	500 δ^1 Gruis	5.0	5	22	22	23.98.8	134	22	40.0	5	0.79
	501 R. P. L. 150	5.5	...	22	22	49.46	4	30	43.6	9	0.52
16-44	502 R. P. L. 151	6.9	...	22	23	16.48.44	4	23	52.2	6	0.53
30-45	503 17 Piscis Australis β ...	4.3	...	22	24	30.43.6	122	58	34.1	5	0.81
	504 62 Aquarii η	4.2	...	22	29	2.07	90	45	3.6	15	0.82
	505 18 Piscis Australis ϵ ...	4.1	...	22	33	50.98	117	41	5.0	5	0.72
18-71	506 β Gruis	3.0	5	22	35	18.73.1	137	31	37.8	5	0.78
	507 42 Pegasi ζ	3.6	...	22	35	10.55	79	48	36.3	9	0.82
11-11	508 44 Pegasi η	3.1	...	22	37	14.04.4	60	25	19.4	5	0.75
	509 ϵ Gruis	4.0	5	22	41	6.85	141	57	47.4	5	0.72
17-21	510	9.8	10	22	42	17.23.1	102	28	36.9	10	0.83
57-48	511 Lalande 44635	8.4	10	22	42	57.50.48	101	59	57.1	10	0.81
	512 W. B. E. XXII. 918	9.2	10	22	45	6.66	102	41	9.6	10	0.85
	513 73 Aquarii λ	3.8	...	22	46	11.52	98	14	0.3	1	0.87
0-31	514 74 Aquarii... ..	6.8	5	22	47	0.30.1	102	16	11.4	5	0.80
	515 75 Aquarii... ..	7.9	...	22	47	37.80	102	50	34.8	10	0.77
6-99	516 76 Aquarii δ	3.4	...	22	48	6.19 7.02	106	28	27.1	5	0.77
51-71	517 24 Pis. Aust. α (Pomalhaut)	1.3	...	22	50	51.07.4	120	16	26.9	1	0.91
	518 W. B. E. XXII. 1129	9.3	10	22	55	1.91	102	44	31.1	10	0.78
14-17	519 O. A. S. 22673	9.3	6	22	56	14.16.7	110	2	35.4	6	0.81
	520 1 Andromedæ σ	3.8	...	22	56	15.58	48	20	4.6	5	0.77
	521 W. B. E. XXII. 1204	8.3	10	22	58	2.95	102	50	29.4	10	0.75
	522 54 Pegasi α (Markab) ...	2.6	...	22	58	38.04	75	27	23.4	11	0.89
	523 Lalande 45213	8.2	10	23	0	57.92	102	28	14.7	10	0.77
	524 O. A. S. 22620	9.3	6	23	1	30.91	109	52	14.2	6	0.81
	525 Lalande 45504	8.0	10	23	8	55.92	102	14	4.1	10	0.74

501.—Groombridge 3830. 510—511—512—514—515—518—521—523—525.—Comparison stars for Mars in 1877.

502.—Groombridge 3824.

519—524.—Comparison stars for Irene in 1877.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
		<i>s</i>	<i>s</i>	<i>s</i>	"	"	"	
491	κ^1 Indi	+ 4.2983	- 0.0817	+ 0.009	- 16.904	- 0.331	- 0.09	Stone
492	12 Piscis Australis η	+ 3.4608	- 0.0218	- 0.001	- 17.088	- 0.257	- 0.02	2873
493	κ^2 Indi	+ 4.2655	- 0.0842	...	- 17.243	- 0.311	...	...
494	λ Gruis	+ 3.6414	- 0.0388	...	- 17.310	- 0.261	...	...
495	34 Aquarii α	+ 3.0830	- 0.0041	- 0.001	- 17.344	- 0.219	- 0.00	2890
496	22 Pegasi ν	+ 3.0200	- 0.0018	+ 0.005	- 17.344	- 0.214	- 0.11	2891
497	α Tucanæ	+ 4.1808	- 0.0858	- 0.007	- 17.789	- 0.274	+ 0.04	Stone
498	43 Aquarii θ	+ 3.1630	- 0.0075	+ 0.006	- 17.802	- 0.205	+ 0.02	2929
499	δ^1 Gruis	+ 3.6104	- 0.0388	- 0.007	- 18.245	- 0.211	+ 0.01	Stone
500	δ^2 Gruis	+ 3.6128	- 0.0392	- 0.006	- 18.263	- 0.210	+ 0.07	Stone
501	R. P. L. 150	- 3.8976	- 1.2201	+ 0.052	- 18.278	+ 0.242	- 0.04	2993
502	R. P. L. 151	- 4.0491	- 1.2853	+ 0.025	- 18.295	+ 0.250	- 0.01	2997
503	17 Piscis Australis β	+ 3.4233	- 0.0249	+ 0.001	- 18.339	- 0.194	+ 0.04	2964
504	62 Aquarii η	+ 3.0790	- 0.0031	+ 0.006	- 18.495	- 0.166	+ 0.11	2979
505	18 Piscis Australis ϵ	+ 3.3297	- 0.0197	- 0.000	- 18.654	- 0.171	+ 0.01	2986
506	β Gruis	+ 3.5997	- 0.0436	+ 0.012	- 18.701	- 0.181	+ 0.04	Stone
507	42 Pegasi ζ	+ 2.9854	+ 0.0023	+ 0.004	- 18.701	- 0.149	+ 0.02	2992
508	44 Pegasi η	+ 2.8041	+ 0.0109	+ 0.000	- 18.761	- 0.137	+ 0.03	3003
509	ϵ Gruis	+ 3.6490	- 0.0519	+ 0.003	- 18.878	- 0.172	+ 0.11	Stone
510	... ..	+ 3.1706	- 0.0088	...	- 18.911	- 0.145	...	...
511	Lalande 44335	+ 3.1659	- 0.0085	...	- 18.932	- 0.145	...	...
512	W. B. E. XXII. 918...	+ 3.1688	- 0.0089	...	- 18.938	- 0.141	...	...
513	73 Aquarii λ	+ 3.1335	- 0.0063	- 0.002	- 19.023	- 0.137	- 0.04	3019
514	74 Aquarii	+ 3.1633	- 0.0035	+ 0.000	- 19.046	- 0.137	+ 0.01	3021
515	75 Aquarii	+ 3.1669	- 0.0038	+ 0.001	- 19.063	- 0.136	+ 0.04	3024
516	76 Aquarii δ	+ 3.1942	- 0.0111	- 0.005	- 19.077	- 0.136	+ 0.01	3025
517	24 Piscis Australis α	+ 3.3042	- 0.0210	+ 0.023	- 19.149	- 0.135	+ 0.16	3032
518	W. B. E. XXII. 1129..	+ 3.1568	- 0.0085	...	- 19.254	- 0.119	...	...
519	O. A. S. 22573	+ 3.2032	- 0.0130	...	- 19.283	- 0.121	...	...
520	1 Andromedæ σ	+ 2.7456	+ 0.0136	+ 0.001	- 19.285	- 0.102	0.00	3043
521	W. B. E. XXII. 1204	+ 3.1536	- 0.0033	...	- 19.326	- 0.115	...	...
522	54 Pegasi α	+ 2.9805	+ 0.0056	+ 0.003	- 19.339	- 0.107	+ 0.03	3050
523	Lalande 45213	+ 3.1475	- 0.0086	...	- 19.392	- 0.109	...	...
524	O. A. S. 22620	+ 3.1942	- 0.0127	...	- 19.405	- 0.110	...	...
525	Lalande 45504	+ 3.1364	- 0.0074	...	- 19.559	- 0.093	...	...

Mean Positions of Stars for 1877, January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
21.01	526 W. B. E. XXIII. 143 ...	9.2	10	23	9	21.00 ¹	101	42	49.6	10	0.77
14.15	527 γ Tucanæ ...	4.0	3	23	10	14.28 ¹⁵	148	54	35.5	3	0.95
	528 6 Piscium γ ...	3.8	...	23	10	47.27	87	23	22.1	1	0.87
14.76	529 Lalande 45582 ...	8.1	10	23	11	14.77 ⁶	102	23	4.4	10	0.83
27.73	530 W. B. E. XXIII. 193 ...	9.2	10	23	11	27.75 ³	101	56	10.3	10	0.89
	531 δ Pegasi, Var. 5 ...	10.1	10	23	14	19.09	81	45	11.5	10	0.81
	532 Lalande 45708 ...	8.2	9	23	14	28.52	101	12	19.8	10	0.82
37.57	533 Lalande 45777 ...	8.2	10	23	16	37.53 ⁷	101	26	51.8	10	0.83
22.18	534 Lalande 45885 ...	9.0	10	23	20	22.19 ⁸	101	42	31.2	10	0.79
37.60	535 δ Piscium κ ...	5.0	...	23	20	37.61 ⁰	89	25	2.8	2	0.94
	536 W. B. E. XXIII. 423 ...	9.5	8	23	22	29.65	100	46	41.0	8	0.87
	537 Lalande 45965 ...	7.8	10	23	22	38.61	99	56	34.3	10	0.74
52.26	538 W. B. E. XXIII. 453 ...	9.3	10	23	23	52.21 ⁰	101	7	38.6	10	0.87
29.10	539 W. B. E. XXIII. 463 ...	9.3	10	23	24	29.12 ⁰	100	50	1.8	10	0.84
42.87	540 Lalande 46123 ...	9.3	10	23	26	42.86 ⁷	100	2	47.8	10	0.78
50.43	541 R. P. L. 158 ...	5.7	...	23	27	46.26 ^{50.43}	3	22	19.8	1	0.30
	542 17 Piscium ι ...	4.3	...	23	33	37.40	85	2	24.6	15	0.86
20.94	543 δ Sculptoris ...	4.6	...	23	42	30.07 ⁴	118	48	38.0	8	0.80
	544 28 Piscium ω ...	4.2	...	23	52	59.67	83	49	2.0	10	0.90
	545 2 Ceti ...	4.6	...	23	57	26.36	108	1	15.2	2	0.72

526—529—530—532—533—534—536—537—538—539—540.—Comparison stars for Mars in 1877.

541.—Groombridge 4101.

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Authority.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
526	W. B. E. XXIII. 143..	+ 3'1331	- 0'0072	...	- 19'567	- 0'092	...	...
527	γ Tucunæ	+ 3'5498	- 0'0645	- 0'012	- 19'583	- 0'104	- 0'04	Stone
528	δ Piscium γ	+ 3'0592	+ 0'0005	+ 0'049	- 19'594	- 0'087	- 0'02	3082
529	Lalande 45582	+ 3'1343	- 0'0074	...	- 19'604	- 0'089	...	...
530	W. B. E. XXIII. 193..	+ 3'1317	- 0'0072	...	- 19'606	- 0'088	...	...
531	S Pegasi, Var. 5	+ 3'0339	+ 0'0035	...	- 19'658	- 0'080	...	...
532	Lalande 45708	+ 3'1245	- 0'0066	...	- 19'661	- 0'082	...	...
533	Lalande 45777	+ 3'1233	- 0'0066	...	- 19'697	- 0'078	...	...
534	Lalande 45885	+ 3'1199	- 0'0066	...	- 19'755	- 0'069	...	...
535	δ Piscium κ	+ 3'0699	- 0'0000	+ 0'004	- 19'759	- 0'069	+ 0'10	3116
536	W. B. E. XXIII. 423..	+ 3'1137	- 0'0060	...	- 19'786	- 0'066	...	...
537	Lalande 45965	+ 3'1103	- 0'0055	...	- 19'788	- 0'066	...	...
538	W. B. E. XXIII. 453..	+ 3'1135	- 0'0061	...	- 19'805	- 0'062	...	...
539	W. B. E. XXIII. 463..	+ 3'1117	- 0'0059	...	- 19'814	- 0'061	...	...
540	Lalande 46123	+ 3'1065	- 0'0053	...	- 19'843	- 0'067	...	...
541	R. P. L. 158	- 0'1030	- 0'5342	+ 0'084	- 19'857	+ 0'011	- 0'00	3147
542	δ Piscium ι	+ 3'0589	+ 0'0030	+ 0'023	- 19'922	- 0'042	+ 0'44	3148
543	δ Sculptoris	+ 3'1283	- 0'0161	+ 0'009	- 19'996	- 0'026	+ 0'10	Stone
544	δ Piscium ω	+ 3'0678	+ 0'0047	+ 0'009	- 20'045	- 0'005	+ 0'11	3191
545	δ Ceti	+ 3'0770	- 0'0080	- 0'000	- 20'053	+ 0'004	+ 0'01	3204