
MEAN POSITIONS OF STARS

OBSERVED WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1869

REDUCED TO JANUARY 1 OF THAT YEAR.

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h	m	s	°	'	"		
1	21 Androm. α (<i>Alpherat</i>)...	2.0	...	0	1	37.14	61	37	58.7	5	0.84
2	Lacaille 9746	9.3	1	0	3	3.28	146	55	15.2	1	0.76
3	... ..	9.0	1	0	6	26.28	131	6	37.2	1	0.82
4	88 Pegasi γ (<i>Algenib</i>)	3.0	...	0	6	29.54	75	32	42.2	3	0.88
5	Taylor 64	7.7	1	0	14	22.86	129	57	59.4	1	0.83
2.63	6	9.0	1	0	17	2.52.63	26	25	35.1	2	0.83
7	... ..	9.0	1	0	19	15.21	26	34	57.9	1	0.84
8	10 Ceti	6.7	...	0	19	54.32	90	46	33.2	1	0.72
9	12 Ceti	6.2	...	0	23	21.22	94	40	54.9	5	0.82
10	18 Cassiopeæ α , Var. 2	2.2	...	0	33	5.35	34	10	53.0	1	0.83
11	16 Ceti β	2.1	...	0	37	0.71	108	42	22.9	6	0.87
12	W. B. E. O-716	8.9	1	0	41	56.90	94	35	10.4	1	0.84
13	R. P. L. 10	6.8	...	0	48	20.94	1	40	50.9	1	0.24
34.48	14	8.7	1	0	50	34.53.48	129	38	31.8	1	0.88
15	... ..	8.9	2	0	51	17.75	130	39	19.0	2	0.91
16	71 Piscium ϵ	4.5	...	0	56	8.72	82	48	56.8	5	0.86
17	80 Piscium e	5.7	...	1	1	37.36	85	2	38.7	2	0.72
18	... ..	7.9	1	1	3	20.71	150	14	48.4	1	0.91
19	83 Ceti	6.3	...	1	3	49.12	88	15	8.8	1	0.79
20	86 Piscium ζ ... 1st...	5.4	...	1	6	53.30	83	7	5.6	1	0.86
56.66	21 1 Urs. Min. α (<i>Polaris</i>)	2.2	...	1	10	56.66	1	23	21.6	5	0.55
22	89 Piscium f	5.1	...	1	11	2.55	87	4	34.9	3	0.75
23	... ..	6.9	1	1	15	11.68	150	45	48.7	1	0.91
24	46 Ceti θ^1	3.8	...	1	17	28.60	98	51	37.9	6	0.91
25	98 Piscium μ	5.2	...	1	23	19.35	84	31	57.5	1	0.65
26	99 Piscium η	4.5	...	1	24	28.47	75	19	50.9	5	0.87
27	... ..	8.1	2	1	25	55.91	150	20	8.1	2	0.95
28	... ..	8.0	1	1	31	2.77	130	49	4.9	1	0.91
29	α Eridani (<i>Achernar</i>)	1.0	...	1	32	50.03	147	54	14.0	1	0.92
30	106 Piscium ν	4.7	...	1	34	36.91	85	10	35.0	5	0.82
31	Lacaille 503	7.5	1	1	35	53.60	151	39	47.8	1	0.90
32	... ..	9.5	1	1	40	35.56	128	35	32.6	1	0.92
33	6 Arietis β	2.8	...	1	47	24.38	60	50	2.7	5	0.90
34	... ..	8.8	1	1	49	27.72	126	6	4.8	1	0.90
35	... ..	9.0	1	1	56	19.53	129	57	5.3	1	0.93

6-7—Observed for map of "Gemma's Nova of 1572."

10— α Cassiopeæ Var. 2 (*Shedir*) changes irregularly between 2.2 and 2.8 magnitude.

12—Comparison star for Europa in 1861.

13—Groombridge 144.

12—Comparison star for Mars 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.	
		<i>s</i>	<i>s</i>	<i>s</i>	"	"	"	
1	21 Andromedæ α ...	+ 3.0772	+ 0.0182	+ 0.009	- 20.055	+ 0.018	+ 0.15	4
2	Lacaille 9746 ...	+ 3.0447	- 0.0429	...	- 20.058	+ 0.015	...	...
3	... ..	+ 3.0394	- 0.0233	...	- 20.047	+ 0.021	...	...
4	88 Pegasi γ (<i>Algenib</i>). ...	+ 3.0818	+ 0.0100	0.000	- 20.047	+ 0.022	+ 0.02	26
5	Taylor 64	+ 3.0019	- 0.0211	...	- 20.015	+ 0.087	...	69
6	... ..	+ 3.2720	+ 0.0704	...	- 20.000	+ 0.044	...	...
7	... ..	+ 3.2963	+ 0.0710	...	- 19.984	+ 0.049	...	...
8	10 Ceti	+ 3.0706	+ 0.0026	+ 0.005	- 19.979	+ 0.047	+ 0.03	95
9	12 Ceti	+ 3.0610	+ 0.0008	- 0.002	- 19.961	+ 0.055	+ 0.01	112
10	18 Cassiopeiæ α Var. 2. ...	+ 3.3553	+ 0.0553	+ 0.006	- 19.846	+ 0.080	+ 0.04	169
11	16 Ceti β	+ 2.9993	- 0.0055	+ 0.013	- 19.794	+ 0.080	- 0.02	196
12	W. B. E. 0.716	+ 3.0572	+ 0.0018	...	- 19.719	+ 0.088	...	...
13	R. P. L. 10... ..	+ 12.6141	+ 7.1799	+ 0.061	- 19.610	+ 0.393	+ 0.03	240
14	... ..	+ 2.8207	- 0.0155	...	- 19.568	+ 0.098	...	...
15	... ..	+ 2.8073	- 0.0160	...	- 19.554	+ 0.099	...	...
16	71 Piscium ϵ	+ 3.1130	+ 0.0087	- 0.002	- 19.456	+ 0.119	0.00	288
17	80 Piscium e	+ 3.1033	+ 0.0077	- 0.021	- 19.334	+ 0.128	+ 0.19	328
18	... ..	+ 2.4340	- 0.0237	...	- 19.294	+ 0.105	...	...
19	33 Ceti	+ 3.0833	+ 0.0062	- 0.003	- 19.282	+ 0.181	+ 0.02	344
20	36 Piscium 3—1st ...	+ 3.1186	+ 0.0090	+ 0.008	- 19.206	+ 0.139	+ 0.07	363
21	1 Urs. Min. α (<i>Polaris</i>) ...	+ 19.8712	+ 14.0041	+ 0.065	- 19.102	+ 0.891	0.00	360
22	89 Piscium f	+ 3.0929	+ 0.0072	- 0.005	- 19.099	+ 0.146	+ 0.02	368
23	... ..	+ 2.8024	- 0.0190	...	- 18.985	+ 0.116	...	...
24	45 Ceti θ^1	+ 3.0030	+ 0.0018	- 0.007	- 18.920	+ 0.154	+ 0.22	420
25	98 Piscium μ	+ 3.1176	+ 0.0089	+ 0.019	- 18.744	+ 0.169	+ 0.18	443
26	99 Piscium η	+ 3.1982	+ 0.0141	0.000	- 18.708	+ 0.177	0.00	453
27	... ..	+ 2.2126	- 0.0148	...	- 18.622	+ 0.126	...	...
28	... ..	+ 2.6253	- 0.0101	...	- 18.492	+ 0.156	...	...
29	α Eridani (<i>Achernar</i>). ...	+ 2.2322	- 0.0128	+ 0.008	- 18.432	+ 0.137	+ 0.07	507
30	106 Piscium ν	+ 3.1174	+ 0.0091	- 0.004	- 18.370	+ 0.191	- 0.04	518
31	Lacaille 508	+ 2.0049	- 0.0104	...	- 18.325	+ 0.130	...	...
32	... ..	+ 2.6187	- 0.0081	...	- 18.153	+ 0.171	...	...
33	6 Arietis β	+ 3.2039	+ 0.0183	+ 0.002	- 17.893	+ 0.226	+ 0.11	577
34	... ..	+ 2.6240	- 0.0063	...	- 17.811	+ 0.184	...	...
35	... ..	+ 2.5278	- 0.0065	...	- 17.527	+ 0.187	...	...

9.—20.—Proper motions from "Greenwich Catalogue 1872."

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

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
36	... ..	9.3	1	1	56	19.78	129	25	49.4	1	0.92
37	... ..	9.1	1	1	56	20.47	87	28	5.3	1	0.96
38	13 Arietis α	2.0	...	1	59	47.50	87	9	31.3	3	0.88
39	... ..	9.5	2	2	1	6.95	87	17	6.0	2	0.93
40	... ..	9.4	1	2	2	7.65	130	0	58.8	1	0.92
41	Lalande 4053	7.2	2	2	4	55.49	87	9	55.9	2	0.93
42	65 Ceti ξ^1	4.4	...	2	6	3.47	81	46	9.4	2	0.91
43	... ..	9.3	...	2	7	5.93	87	5	30.9	1	0.93
44	67 Ceti	5.5	...	2	10	26.95	97	1	38.8	6	0.90
45	68 Ceti σ Var. (<i>Mira</i>)	Var.	...	2	12	43.70	98	34	26.3	1	0.84
46	... ..	7.9	1	2	16	32.19	151	17	6.3	1	0.96
47	... ..	8.3	3	2	17	52.57	151	1	47.1	3	0.95
48	73 Ceti ξ^2	4.4	...	2	21	11.73	82	7	43.0	9	0.88
49	... ..	9.7	1	2	23	20.45	129	45	9.7	1	0.92
50	... ..	9.2	1	2	31	20.57	148	30	1.5	1	0.86
51	32 Arietis ν	5.4	...	2	31	25 92	68	36	19.6	1	0.96
52	... ..	8.8	1	2	34	15.66	74	55	16.1	1	0.81
53	86 Ceti γ	3.6	...	2	36	30.32	87	19	4.8	9	0.84
54	87 Ceti μ	4.4	...	2	37	51.70	80	26	25.9	1	0.95
55	Taylor 940...	7.8	1	2	40	27.12	128	43	14.8	1	0.84
56	Taylor 973...	7.0	1	2	47	29.74	147	43	57.9	1	0.90
57	91 Ceti λ	4.6	...	2	52	41.74	81	36	59.9	1	0.88
58	... ..	9.3	1	2	53	23.64	146	43	15.4	1	0.86
59	92 Ceti α (<i>Menkar</i>)	2.7	...	2	55	25.93	86	25	34.3	10	0.93
60	25 Persei ρ Var. 2	3.7	...	2	56	47.22	51	40	10.9	1	0.90
61	... ..	9.0	1	2	59	2.36	130	37	12.9	1	0.86
62	26 Persei β Var. 1 (<i>Algol</i>)	2.3	...	2	59	39.21	49	33	4.2	1	0.86
63	R. P. L. 33	5.9	...	3	1	46.70	5	33	39.0	1	0.96
64	57 Arietis δ	4.5	...	3	4	8.42	70	46	15.9	5	0.95
65	Lacaille 1007	6.9	1	3	4	54.38	152	13	13.5	1	0.96
66	Taylor 1112	7.5	1	3	10	27.91	129	29	12.9	1	0.86
67	Taylor 1113	8.0	1	3	10	29.21	131	43	4.2	1	0.91
68	... ..	9.3	1	3	15	34.65	125	40	19.6	1	0.91
69	... ..	9.0	1	3	17	31.06	130	44	33.6	1	0.93
70	... ..	9.9	1	3	17	47 15	127	4	42 7	1	0.92

[2.60]

[130 1.12]

[1.8]

[22.92]

[5 57.3]

37-39-41-43-Comparison stars for Camilla in 1868.
 45- σ Ceti Var. 1 (*Mira*)-Period 331 days-Range, 2nd to 10th magnitude.
 60- ρ Persei Var. 2-Changes irregularly from 3.5 to 4.3 magnitude.
 62- β Persei Var. 1 (*Algol*)-Period 2 867 days. Range, 2.3 to 4th magnitude.
 63-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	... ..	+ 2.5378	- 0.0064	...	- 17.526	+ 0.188	...	...
37	... ..	+ 3.1008	+ 0.0086	...	- 17.525	+ 0.228	...	...
38	13 Arietis α ...	+ 3.3533	+ 0.0203	+ 0.012	- 17.377	+ 0.252	+ 0.15	648
39	... ..	+ 3.1040	+ 0.0089	...	- 17.818	+ 0.235	...	...
40	... ..	+ 2.5019	- 0.0058	...	- 17.273	+ 0.192	..	...
41	Lalande 4053 ...	+ 3.1064	+ 0.0090	...	- 17.148	+ 0.241	...	...
42	65 Ceti ξ^1 ...	+ 3.1733	+ 0.0116	- 0.004	- 17.096	+ 0.249	+ 0.04	684
43	... ..	+ 3.1078	+ 0.0090	...	- 17.040	+ 0.246	...	...
44	67 Ceti ...	+ 2.9833	+ 0.0049	+ 0.003	- 16.893	+ 0.242	+ 0.14	704
45	63 Ceti σ Var. 1 (<i>Mira</i>)	+ 3.0265	+ 0.0064	- 0.001	- 16.784	+ 0.248	+ 0.23	720
46	... ..	+ 1.7028	+ 0.0036	...	- 16.600	+ 0.146	...	...
47	... ..	+ 1.7053	+ 0.0037	...	- 16.533	+ 0.148	...	...
48	73 Ceti ξ^2 ...	+ 3.1780	+ 0.0117	+ 0.001	- 16.369	+ 0.276	+ 0.02	760
49	... ..	+ 2.4015	- 0.0027	...	- 15.998	+ 0.218	...	...
50	... ..	+ 1.7338	+ 0.0030	...	- 15.838	+ 0.162	...	...
51	32 Arietis ν ...	+ 3.3936	+ 0.0193	- 0.002	- 15.836	+ 0.310	+ 0.02	808
52	... ..	+ 3.2968	+ 0.0154	...	- 15.681	+ 0.306	...	...
53	86 Ceti γ ...	+ 3.1116	+ 0.0094	- 0.011	- 15.558	+ 0.294	+ 0.19	837
54	87 Ceti μ ...	+ 3.2153	+ 0.0120	+ 0.017	- 15.483	+ 0.305	+ 0.07	845
55	Taylor 940 ...	+ 2.3814	- 0.0015	...	- 15.337	+ 0.231	...	...
56	Taylor 978 ...	+ 1.6586	+ 0.0062	...	- 14.933	+ 0.168	...	899
57	91 Ceti λ ...	+ 3.2070	+ 0.0117	+ 0.006	- 14.625	+ 0.326	+ 0.03	929
58	... ..	+ 1.6739	+ 0.0060	...	- 14.583	+ 0.174	...	...
59	92 Ceti α (<i>Menkar</i>) ...	+ 3.1299	+ 0.0098	- 0.002	- 14.460	+ 0.323	+ 0.11	949
60	25 Persei ρ Var. 2 ...	+ 3.8090	+ 0.0332	+ 0.010	- 14.378	+ 0.393	+ 0.11	953
61	... ..	+ 2.2646	+ 0.0003	...	- 14.240	+ 0.239	...	...
62	26 Persei β Var. 1 ...	+ 3.8769	+ 0.0356	- 0.002	- 14.202	+ 0.405	- 0.01	963
63	R. P. L. 33 ...	+ 12.8573	+ 1.5888	...	- 14.071	+ 1.339	+ 0.12	960
64	57 Arietis δ ...	+ 3.4078	+ 0.0171	+ 0.010	- 13.922	+ 0.364	0.00	986
65	Lacaille 1007 ...	+ 1.2394	+ 0.0169	...	- 13.874	+ 0.136	...	...
66	Taylor 1112 ...	+ 2.2584	+ 0.0009	...	- 13.518	+ 0.249	...	...
67	Taylor 1113 ...	+ 2.1916	+ 0.0011	...	- 13.517	+ 0.242	...	...
68	... ..	+ 2.3489	+ 0.0012	...	- 13.185	+ 0.264	...	...
69	... ..	+ 2.1979	+ 0.0015	...	- 13.057	+ 0.249	...	...
70	... ..	+ 2.3035	+ 0.0013	...	- 13.039	+ 0.261	...	...

Mean Positions of Stars for 1869 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>		
71	2 Tauri ξ ...	3.8	...	3	20	4.26	80	48	34.3	2	0.84
72	... ..	9.6	...	3	20	58.33	54	46	44.8	1	0.92
73	... ..	8.0	1	3	22	15.31	88	11	23.3	1	0.01
74	... ..	9.5	1	3	23	26.06	130	9	13.0	1	0.01
75	5 Tauri f ...	4.3	...	3	23	38.49	77	30	51.9	2	0.95
76	... ..	9.0	1	3	25	0.84	129	0	40.6	1	0.02
77	... ..	8.6	1	3	28	56.45	128	28	31.1	1	0.04
78	... ..	8.6	2	3	32	24.42	181	19	45.6	2	0.02
79	Lacaille 1166 ...	9.0	1	3	33	13.08	129	12	13.0	1	0.01
80	... ..	8.3	1	3	33	30.07	127	42	9.5	2	0.50
81	... ..	9.5	1	3	35	56.28	152	25	30.7	1	0.02
82	... ..	10.0	1	3	35	58.01	129	9	33.1	1	0.01
83	... ..	9.3	1	3	37	5.69	148	26	31.6	1	0.01
84	25 Tauri η (<i>Alcyone</i>) ...	3.0	...	3	39	41.94	66	18	9.1	7	0.68
85	30 Tauri ϵ ...	5.1	...	3	41	5.30	79	15	41.6	1	0.95
86	Lacaille 1242 ...	7.5	1	3	41	51.95	147	4	16.9	1	0.02
87	W. B. E. III 360 ...	8.1	1	3	45	35.71	76	0	42.8	1	0.81
88	... ..	8.8	1	3	49	59.80	129	11	18.7	1	0.02
89	... ..	8.9	3	3	50	57.14	147	23	19.8	3	0.02
90	34 Eridani γ^1 ...	3.0	...	3	51	55.05	103	53	0.1	6	0.31
91	... ..	9.0	1	3	54	52.39	129	10	0.5	1	0.02
92	... ..	8.0	2	3	55	44.45	129	18	46.0	2	0.02
93	Taylor 1392 ...	6.8	2	3	55	54.75	147	28	31.0	2	0.04
94	R. P. L. 35 ...	6.7	...	3	56	17.09	4	47	41.0	1	0.92
95	37 Eridani ...	5.8	...	4	3	59.16	97	16	8.4	1	0.99
96	38 Eridani σ^1 ...	4.1	...	4	5	28.28	97	10	53.9	8	0.45
97	... ..	7.2	2	4	11	53.87	129	12	31.4	2	0.03
98	54 Tauri γ ...	3.9	...	4	12	20.69	74	41	29.5	1	0.07
99	... ..	9.1	2	4	12	39.86	129	10	2.5	2	0.47
100	Taylor 1513 ...	6.8	1	4	14	22.92	151	16	16.3	1	0.03
101	... ..	8.0	1	4	16	51.18	149	3	41.9	1	0.96
102	74 Tauri ϵ ...	3.7	...	4	20	58.13	71	6	47.2	19	0.45
103	... ..	10.0	1	4	22	18.69	80	27	22.5	1	0.01
104	... ..	9.7	3	4	27	17.59	150	33	20.7	3	0.33
105	87 Tauri α (<i>Aldebaran</i>) ...	1.0	...	4	28	24.34	73	45	25.1	13	0.58

72—Observed for map of R Persei Var. 3.

87—Comparison star for Asia in 1862.

94—Groombridge 750.

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 Tauri ξ	+ 3.2394	+ 0.0117	+ 0.002	- 12.887	+ 0.368	+ 0.05	1068
72	... ..	+ 3.7978	+ 0.0279	...	- 12.826	+ 0.431	...	...
73	... ..	+ 3.1048	+ 0.0089	...	- 12.739	+ 0.355	...	...
74	... ..	+ 2.1973	+ 0.0018	...	- 12.660	+ 0.254	...	...
75	5 Tauri f	+ 3.3019	+ 0.0130	+ 0.002	- 12.645	+ 0.379	+ 0.03	1087
76	... ..	+ 2.2273	+ 0.0018	...	- 12.552	+ 0.253	...	...
77	... ..	+ 2.2321	+ 0.0020	...	- 12.282	+ 0.262	...	...
78	... ..	+ 2.1319	+ 0.0025	...	- 12.042	+ 0.250	...	...
79	Lacaille 1166	+ 2.1977	+ 0.0023	...	- 11.984	+ 0.262	...	...
80	... ..	+ 2.2427	+ 0.0021	...	- 11.965	+ 0.268	...	...
81	... ..	+ 1.0014	+ 0.0207	...	- 11.792	+ 0.123	...	...
82	... ..	+ 2.1913	+ 0.0024	...	- 11.791	+ 0.264	...	...
83	... ..	+ 1.3051	+ 0.0131	...	- 11.711	+ 0.160	...	...
84	25 Tauri η (<i>Alcyone</i>).	+ 3.5523	+ 0.0177	- 0.001	- 11.525	+ 0.430	+ 0.06	1166
85	30 Tauri ϵ	+ 3.2805	+ 0.0115	0.000	- 11.425	+ 0.398	+ 0.05	1174
86	Lacaille 1242	+ 1.3714	+ 0.0114	...	- 11.369	+ 0.170	...	...
87	W. B. E. III. 860	+ 3.3405	+ 0.0127	...	- 11.096	+ 0.412	...	...
88	... ..	+ 2.1529	+ 0.0029	...	- 10.776	+ 0.270	...	...
89	... ..	+ 1.2993	+ 0.0124	...	- 10.705	+ 0.165	...	...
90	34 Eridani γ^1	+ 2.7919	+ 0.0047	+ 0.002	- 10.634	+ 0.351	+ 0.12	1234
91	... ..	+ 2.1414	+ 0.0031	...	- 10.414	+ 0.271	...	...
92	... ..	+ 2.1343	+ 0.0031	...	- 10.348	+ 0.271	...	...
93	Taylor 1392	+ 1.2754	+ 0.0126	...	- 10.337	+ 0.164	...	1255
94	R. P. L. 35	- 16.7453	+ 1.8160	+ 0.057	- 10.307	+ 2.144	- 0.05	1235
95	37 Eridani	+ 2.9231	+ 0.0058	- 0.002	- 9.724	+ 0.377	+ 0.04	1284
96	33 Eridani ϵ^1	+ 2.9243	+ 0.0058	- 0.002	- 9.610	+ 0.379	- 0.07	1290
97	... ..	+ 2.1005	+ 0.0035	...	- 9.113	+ 0.277	...	...
98	54 Tauri γ	+ 3.3984	+ 0.0115	+ 0.009	- 9.078	+ 0.446	+ 0.03	1328
99	... ..	+ 2.1003	+ 0.0035	...	- 9.054	+ 0.277	...	...
100	Taylor 1513	+ 0.8875	+ 0.0182	...	- 8.919	+ 0.120	...	1345
101	... ..	+ 1.0637	+ 0.0146	...	- 8.724	+ 0.144	...	...
102	74 Tauri ϵ	+ 3.4875	+ 0.0120	+ 0.005	- 8.399	+ 0.466	+ 0.03	1376
103	... ..	+ 3.2767	+ 0.0090	...	- 8.292	+ 0.439	...	...
104	... ..	+ 0.8948	+ 0.0162	...	- 7.892	+ 0.123	...	...
105	87 Tauri α (<i>Aldebaran</i>)	+ 3.4309	+ 0.0105	+ 0.004	- 7.804	+ 0.464	+ 0.17	1420

75—Proper motions from "Greenwich Catalogue 1872."

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
106	Lacaille 1551	6.3	1	4	32	12.43	153	5	38.9	1	0.02
107	... ..	9.3	2	4	33	6.90	130	47	39.3	2	0.08
108	... ..	8.5	...	4	33	39.02	144	53	13.6	1	0.92
109	94 Tauri γ	4.4	...	4	34	23.07	67	17	50.5	1	0.81
110	... ..	9.2	1	4	34	36.41	144	55	14.2	1	0.02
111	... ..	9.1	2	4	39	28.41	153	3	4.9	2	0.04
112	... ..	8.2	3	4	39	28.69	142	24	38.8	3	0.04
113	... ..	9.0	2	4	40	56.83	127	43	47.5	2	0.48
114	3 Anrigæ	2.7	...	4	48	27.89	57	2	40.0	8	0.37
115	Taylor 1764	6.6	2	4	50	31.69	129	50	27.3	2	0.04
116	R Orionis Var. 3	Var.	...	4	51	54.27	82	4	19.3	1	0.89
117	... ..	9.0	1	4	52	29.11	129	39	22.8	1	0.03
118	... ..	8.0	1	4	53	52.74	153	0	15.3	1	0.07
119	11 Orionis	4.7	...	4	57	5.43	74	46	53.3	1	0.06
120	104 Tauri m	5.1	...	4	59	42.55	71	32	2.2	1	0.88
121	2 Leporis e	3.3	...	4	59	54.92	112	32	57.4	7	0.30
122	15 Orionis	4.8	...	5	2	12.28	74	34	23.0	1	0.06
123	Taylor 1852	6.5	1	5	2	16.23	144	35	7.8	1	0.02
124	Lacaille 1739	7.6	1	5	2	58.85	146	57	29.5	1	0.96
125	... ..	8.3	2	5	6	11.85	131	45	19.8	2	0.06
126	19 Orionis β (Rigel)	0.3	...	5	8	14.55	98	21	20.1	7	0.28
127	Lacaille 1824	7.8	1	5	17	7.90	129	37	44.8	1	0.04
128	... ..	7.9	1	5	17	40.57	153	7	3.8	1	0.07
129	112 Tauri β	1.9	...	5	18	0.65	61	30	23.4	8	0.15
130	Taylor 1973	6.5	2	5	19	4.80	129	48	5.9	2	0.08
131	115 Tauri	5.4	...	5	19	31.75	72	9	13.2	1	0.31
132	114 Tauri e	4.8	...	5	19	46.00	68	10	42.4	2	0.96
133	... ..	9.7	2	5	19	54.47	129	43	52.9	2	0.05
134	R. P. L. 40	6.4	...	5	20	17.56	4	52	44.6	1	0.07
135	34 Orionis δ Var. 1	2.4	...	5	25	18.89	90	23	56.6	4	0.03
136	Taylor 2057	8.0	1	5	28	4.53	151	55	21.9	1	0.10
137	46 Orionis e	1.8	...	5	29	33.97	91	17	13.1	9	0.05
138	123 Tauri 3	3.0	...	5	29	48.85	68	56	26.2	2	0.92
139	... ..	9.0	1	5	32	9.51	129	55	13.3	1	0.09
140	Lacaille 1916	8.8	1	5	32	33.80	121	8	29.2	1	0.03

106.—111.—Observed for map of R Reticuli Var. 1.

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

134.—Groombridge 944

135.—3 Orionis Var. 1.—Supposed to vary irregularly from 2.3 to 2.7 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.	
106	Lacaille 1551 ...	+ 0.6284	+ 0.0205	...	- 7.495	+ 0.088	...	...
107	... ..	+ 2.0003	+ 0.0040	...	- 7.422	+ 0.274	...	...
108	... ..	+ 1.3042	+ 0.0096	...	- 7.379	+ 0.180	...	...
109	94 Tauri τ ...	+ 3.5930	+ 0.0122	0.000	- 7.318	+ 0.491	+ 0.02	1449
110	... ..	+ 1.2990	+ 0.0095	...	- 7.301	+ 0.180	...	...
111	... ..	+ 0.6030	+ 0.0195	...	- 6.902	+ 0.085	...	...
112	... ..	+ 1.4414	+ 0.0076	...	- 6.902	+ 0.200	...	...
113	... ..	+ 2.0986	+ 0.0036	...	- 6.781	+ 0.291	...	...
114	3 Aurigæ ϵ ...	+ 3.8069	+ 0.0144	- 0.003	- 6.159	+ 0.544	+ 0.02	1520
115	Taylor 1764 ...	+ 2.0075	+ 0.0038	...	- 5.987	+ 0.282	...	1538
116	R. Orionis Var. 3 ...	+ 3.2501	+ 0.0063	...	- 5.872	+ 0.456	...	...
117	... ..	+ 2.0117	+ 0.0038	...	- 5.823	+ 0.284	...	...
118	... ..	+ 0.5561	+ 0.0172	...	- 5.707	+ 0.080	...	...
119	11 Orionis ...	+ 3.4223	+ 0.0079	0.000	- 5.436	+ 0.482	+ 0.03	1557
120	104 Tauri m ...	+ 3.5032	+ 0.0083	+ 0.040	- 5.215	+ 0.405	- 0.02	1568
121	2 Leporis ϵ ...	+ 2.5359	+ 0.0033	+ 0.001	- 5.198	+ 0.359	+ 0.03	1575
122	15 Orionis ...	+ 3.4294	+ 0.0074	- 0.001	- 5.004	+ 0.486	- 0.03	1591
123	Taylor 1852 ...	+ 1.2511	+ 0.0077	...	- 4.990	+ 0.179	...	1595
124	Lacaille 1739 ...	+ 1.0800	+ 0.0093	...	- 4.941	+ 0.155	...	...
125	... ..	+ 1.9114	+ 0.0038	...	- 4.665	+ 0.273	...	...
126	19 Orionis β (<i>Rigel</i>) ...	+ 2.8807	+ 0.0040	- 0.001	- 4.401	+ 0.412	+ 0.02	1623
127	Lacaille 1824 ...	+ 1.9843	+ 0.0034	...	- 3.730	+ 0.286	...	...
128	... ..	+ 0.4797	+ 0.0128	...	- 3.683	+ 0.070	...	...
129	112 Tauri β ...	+ 3.7857	+ 0.0082	+ 0.003	- 3.654	+ 0.545	+ 0.20	1681
130	Taylor 1973 ...	+ 1.9758	+ 0.0034	...	- 3.562	+ 0.286	...	1693
131	115 Tauri ...	+ 3.4959	+ 0.0061	- 0.002	- 3.523	+ 0.504	+ 0.02	1692
132	114 Tauri σ ...	+ 3.5993	+ 0.0068	- 0.001	- 3.502	+ 0.510	+ 0.01	1695
133	... ..	+ 1.9778	+ 0.0034	...	- 3.490	+ 0.285	...	...
134	R. P. L. 40 ...	+ 18.5008	+ 0.6637	...	- 3.457	+ 2.650	...	1662
135	34 Orionis δ Var. 1 ...	+ 3.0629	+ 0.0038	+ 0.001	- 3.024	+ 0.443	+ 0.04	1730
136	Taylor 2057 ...	+ 0.5900	+ 0.0096	...	- 2.788	+ 0.086	...	...
137	46 Orionis ϵ ...	+ 3.0423	+ 0.0035	- 0.002	- 2.655	+ 0.441	+ 0.01	1765
138	123 Tauri 3 ...	+ 3.5825	+ 0.0055	0.000	- 2.634	+ 0.519	+ 0.05	1767
139	... ..	+ 2.1797	+ 0.0029	...	- 2.430	+ 0.317	...	...
140	Lacaille 1916... ..	+ 2.2700	+ 0.0027	...	- 2.395	+ 0.330	...	...

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
141	126 Tauri ...	4.9	...	5	32	43.46	73	32	13.7	1	0.07
142	α Columbae ...	2.7	...	5	34	54.47	124	8	44.1	5	0.06
[53.28] 143	... ..	9.3	1	5	36	53.69	129	57	44.7	1	0.10
144	... ..	8.9	2	5	38	33.68	130	5	15.9	2	0.12
145	... ..	8.0	1	5	39	27.45	79	0	6.7	1	0.96
146	... ..	9.5	1	5	40	2.01	135	47	59.5	1	0.09
147	... ..	9.2	1	5	40	41.85	120	57	49.3	1	0.01
148	W. B. E. V. 1011 ...	8.0	1	5	40	45.63	78	57	33.9	1	0.13
149	... ..	9.9	1	5	42	10.14	136	4	8.8	1	0.11
150	... ..	9.0	1	5	44	12.30	152	57	55.6	1	0.14
151	... ..	9.0	1	5	44	52.17	137	10	15.1	1	0.10
25.89 152	Lalande 11098 ...	7.9	1	5	45	25.13	68	29	34.3	1	0.07
153	54 Orionis χ^1 ...	4.6	...	5	46	37.55	69	45	4.8	1	0.89
154	58 Orionis α Var. 2 ...	0.9	...	5	48	4.83	82	37	12.2	2	0.08
155	... ..	9.2	2	5	49	26.90	121	9	45.6	2	0.06
156	... ..	9.0	1	5	49	46.66	130	1	15.0	1	0.09
157	... ..	9.9	1	5	50	22.14	137	10	17.3	1	0.10
158	... ..	9.8	1	5	52	22.26	141	46	1.8	1	0.09
159	... ..	7.9	1	5	53	34.14	141	40	6.9	2	0.10
160	... ..	9.3	1	5	53	50.07	121	32	32.8	1	0.12
161	R. P. L. 43 ...	6.6	...	5	54	13.99	8	14	18.4	2	0.57
162	Lacaille 2104 ...	6.9	1	5	54	27.67	143	26	19.3	1	0.96
163	... ..	9.4	1	5	54	31.71	121	28	10.2	1	0.03
164	... ..	9.7	1	5	54	53.42	121	30	55.1	1	0.01
165	Taylor 2301 ...	6.6	1	5	58	34.74	148	6	17.1	1	0.15
166	67 Orionis ν ...	4.4	...	6	0	5.54	75	13	7.1	11	0.15
167	... ..	10.3	1	6	0	10.16	121	30	54.6	1	0.10
168	... ..	9.5	1	6	2	23.24	153	44	42.1	1	0.09
169	... ..	9.0	1	6	4	4.19	150	5	28.5	1	0.11
170	... ..	8.0	1	6	4	42.14	136	49	41.5	1	0.09
171	... ..	9.1	1	6	6	37.72	121	29	27.9	1	0.10
172	7 Geminorum η Var. 1 ...	3.5	...	6	6	53.15	67	27	30.9	1	0.96
173	... ..	7.4	1	6	11	6.79	149	53	55.2	1	0.13
174	... ..	9.0	1	6	11	54.61	121	31	34.2	1	0.03
175	... ..	9.0	1	6	12	10.15	136	50	54.6	1	0.10

145.—148.—Comparison stars for Sappho in 1866.

152.—Comparison star for Harmonia in 1861.

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

161.—Groombridge 1004.

872.— η Geminorum Var. 1. Period 229 days. Range, 3rd to 4th 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.	
141	126 Tauri ...	+ 3.464	+ 0.0046	+ 0.005	- 2.931	+ 0.503	- 0.02	1792
142	α Columbae ...	+ 2.1707	+ 0.0027	+ 0.008	- 2.192	+ 0.316	0.00	1802
143	... ..	+ 1.9575	+ 0.0030	...	- 2.018	+ 0.285	...	...
144	... ..	+ 1.9517	+ 0.0030	...	- 1.873	+ 0.284	...	...
145	... ..	+ 3.3310	+ 0.0036	...	- 1.795	+ 0.435	...	...
146	... ..	+ 1.7025	+ 0.0033	...	- 1.745	+ 0.248	...	...
147	... ..	+ 2.2728	+ 0.0026	...	- 1.687	+ 0.331	...	...
148	W. B. E. V. 1011 ...	+ 3.3331	+ 0.0034	...	- 1.681	+ 0.435	...	...
149	... ..	+ 1.6885	+ 0.0033	...	- 1.553	+ 0.247	...	...
150	... ..	+ 0.4582	+ 0.0067	...	- 1.381	+ 0.068	...	...
151	... ..	+ 1.6330	+ 0.0033	...	- 1.323	+ 0.239	...	...
152	Lalande 11098 ...	+ 3.5979	+ 0.0036	...	- 1.276	+ 0.525	...	...
153	54 Orionis χ^1 ...	+ 3.5848	+ 0.0034	- 0.016	- 1.170	+ 0.520	+ 0.10	1876
154	58 Orionis α Var 2 ...	+ 3.2450	+ 0.0027	+ 0.001	- 1.042	+ 0.473	0.00	1888
155	... ..	+ 3.2644	+ 0.0024	...	- 0.923	+ 0.330	...	...
156	... ..	+ 1.9506	+ 0.0027	...	- 0.894	+ 0.284	...	...
157	... ..	+ 1.6311	+ 0.0030	...	- 0.843	+ 0.238	...	...
158	... ..	+ 1.3759	+ 0.0031	...	- 0.667	+ 0.201	...	...
159	... ..	+ 1.3818	+ 0.0031	...	- 0.563	+ 0.201	...	...
160	... ..	+ 2.2517	+ 0.0024	...	- 0.539	+ 0.328	...	...
161	R. P. L. 43 ...	+ 26.6970	+ 0.2095	...	- 0.504	+ 3.898	...	1879
162	Lacaille 2104 ...	+ 1.2698	+ 0.0030	...	- 0.484	+ 0.199	...	...
163	... ..	+ 2.2540	+ 0.0024	...	- 0.478	+ 0.329	...	...
164	... ..	+ 2.2524	+ 0.0024	...	- 0.440	+ 0.329	...	...
165	Taylor 2301 ...	+ 0.9237	+ 0.0030	...	- 0.124	+ 0.135	...	1954
166	67 Orionis ν ...	+ 3.4240	+ 0.0017	+ 0.001	+ 0.008	+ 0.500	+ 0.02	1958
167	... ..	+ 2.2523	+ 0.0023	...	+ 0.015	+ 0.329	...	...
168	... ..	+ 0.3616	+ 0.0025	...	+ 0.208	+ 0.053	...	...
169	... ..	+ 0.7483	+ 0.0022	...	+ 0.356	+ 0.109	...	...
170	... ..	+ 1.6472	+ 0.0004	...	+ 0.411	+ 0.240	...	...
171	... ..	+ 2.2534	+ 0.0022	...	+ 0.580	+ 0.329	...	...
172	7 Geminorum η Var. 1 ...	+ 3.6263	+ 0.0007	- 0.067	+ 0.610	+ 0.529	+ 0.02	2002
173	... ..	+ 0.7686	+ 0.0010	...	+ 0.971	+ 0.112	...	...
174	... ..	+ 2.2531	+ 0.0021	...	+ 1.042	+ 0.328	...	...
175	... ..	+ 1.6480	+ 0.0019	...	+ 1.065	+ 0.240	...	...

2.255/

141.—142—153—166—Proper motions from "Greenwich Catalogue 1872."

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
176	Lalande 12075 ...	8.8	1	6	18	31.82	68	44	41.2	1	0.10
177	13 Geminorum μ ...	3.2	...	6	15	2.08	67	25	20.3	7	0.34
178	Lacaille 2273 ...	8.0	1	6	17	5.61	153	58	34.0	1	0.14
179	α Argus (<i>Canopus</i>) ...	0.4	...	6	21	2.74	152 37		31.7	1	0.11
180	18 Geminorum ν ...	4.0	...	6	21	11.12	69	42	29.3	1	0.89
181	Lacaille 2312 ...	7.0	1	6	22	11.16	153	36	47.9	1	0.10
182	... ..	8.2	1	6	22	16.54	128	48	53.9	1	0.03
183	Lacaille 2321 ...	7.0	1	6	23	31.80	153	20	53.4 5.4	1	0.14
184	Taylor 2524 ...	9.0	1	6	23	36.96	131	3	14.8	1	0.03
185	Taylor 2529 ...	7.1	2	6	24	30.99	130	59	28.3	2	0.12
186	Lacaille 2348 ...	7.7	2	6	26	34.71	152	3	54.8	2	0.13
187	... ..	8.9	1	6	27	33.07	152	28	5.2	1	0.97
188	... ..	9.0	1	6	27	55.24	131	5	31.1	1	0.15
189	... ..	6.7	1	6	28	33.77	122	7	43.3	1	0.14
190	... ..	9.1	...	6	28	43.21	130	32	21.5	1	0.10
191	24 Geminorum γ ...	2.0	...	6	30	8.65	73	29	30.6	9	0.08
192	... ..	9.2	1	6	30	51.78	130	55	26.4	1	0.04
193	... ..	9.3	1	6	31	12.08	122	6	57.8	1	0.03
194	... ..	9.0	1	6	33	36.07	152	27	19.1	1	0.10
195	... ..	10.3	1	6	36	15.42	62	6	4.3	1	0.09
196	... ..	9.7	2	6	37	40.68	153	25	48.9	2	0.02
197	51 (<i>Hav.</i>) Cephei ...	5.3	...	6	38	10.60	2	45	34.7	7	0.22
198	... ..	8.3	2	6	42	46.33	130	46	41.0	2	0.07
199	... ..	10.2	3	6	43	15.63	130	38	32.5	3	0.10
200	... ..	8.0	1	6	43	50.37	128	30	44.4	1	0.04
201	... ..	9.0	3	6	44	36.31	148	30	43.1	3	0.13
202	... ..	9.5	1	6	45	10.33	106	33	3.1	1	0.10
203	Lalande 13279 ...	7.4	1	6	46	43.52	65	35	27.8	1	0.13
204	Lacaille 2500 ...	7.5	1	6	47	9.60	130	23	42.5	1	0.97
205	Lacaille 2516 ..	8.0	1	6	48	33.21	130	32	1.1	1	0.05
206	... ..	9.0	1	6	49	4.10	128	46	24.0	1	0.97
207	... ..	8.0	1	6	51	37.81	131	9	4.4	1	0.14
208	21 Canis Majoris ϵ ...	1.5	...	6	53	28.66	118	47	44.6	10	0.10
209	Taylor 2805 ...	7.9	1	6	56	19.46	69	12	52.2	1	0.14
210	43 Geminorum 3 Var. 1 ...	4.0	...	6	56	20.31	69	14	26.4	3	0.11

176.—Comparison star for Ariadne in 1866.

203.—Comparison stars for Isis in 1861.

210.—3 Geminorum Var. 1. Period 10.16 days. Range, 3.7 to 4.5 magnitude.

142

[58.6]

36

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	Lalande 12075 ...	+ 3.5912	0.0000	...	+ 1.184	+ 0.522	...	...
177	13 Geminorum μ ...	+ 3.6268	- 0.0008	+ 0.005	+ 1.814	+ 0.527	+ 0.14	2047
178	Lacaille 2273 ...	+ 0.3415	- 0.0014	...	+ 1.494	+ 0.049	...	...
179	α Argus (<i>Canopus</i>) ...	+ 1.3292	+ 0.0010	0.000	+ 1.839	+ 0.192	0.00	2096
180	18 Geminorum ν ...	+ 3.5644	- 0.0008	- 0.002	+ 1.853	+ 0.517	+ 0.01	2090
181	Lacaille 2312 ...	+ 0.3901	- 0.0025	...	+ 1.938	+ 0.056	...	...
182	... ..	+ 2.0018	+ 0.0018	...	+ 1.946	+ 0.290	...	...
183	Lacaille 2321 ...	+ 0.4222	- 0.0028	...	+ 2.055	+ 0.060	...	...
184	Taylor 2524 ...	+ 1.9140	+ 0.0018	...	+ 2.063	+ 0.277	...	...
185	Taylor 2529 ...	+ 1.9169	+ 0.0017	...	+ 2.141	+ 0.277	...	2117
186	Lacaille 2318 ...	+ 0.5677	- 0.0026	...	+ 2.320	+ 0.081	...	2142
187	... ..	+ 0.5258	- 0.0030	...	+ 2.405	+ 0.075	...	...
188	... ..	+ 1.9148	+ 0.0016	...	+ 2.438	+ 0.276	...	...
189	... ..	+ 2.2390	+ 0.0018	...	+ 2.493	+ 0.323	...	...
190	... ..	+ 1.9378	+ 0.0016	...	+ 2.514	+ 0.280	...	...
191	24 Geminorum γ ...	+ 3.4649	- 0.0015	+ 0.001	+ 2.630	+ 0.500	+ 0.04	2163
192	... ..	+ 1.9236	+ 0.0016	...	+ 2.692	+ 0.277	...	...
193	... ..	+ 2.2407	+ 0.0018	...	+ 2.722	+ 0.323	...	...
194	... ..	+ 0.5362	- 0.0043	...	+ 2.929	+ 0.076	...	...
195	... ..	+ 3.7712	- 0.0040	...	+ 3.160	+ 0.542	...	...
196	... ..	+ 0.4348	- 0.0061	...	+ 3.282	+ 0.061	...	...
197	51 (<i>Hec.</i>) Cophoi ...	+ 30.4235	- 1.9442	- 0.027	+ 3.325	+ 4.375	+ 0.08	2157
198	... ..	+ 1.9458	+ 0.0018	...	+ 3.722	+ 0.277	...	...
199	... ..	+ 1.9448	+ 0.0012	...	+ 3.763	+ 0.277	...	...
200	... ..	+ 2.0277	+ 0.0013	...	+ 3.813	+ 0.288	...	...
201	... ..	+ 0.9306	- 0.0033	...	+ 3.879	+ 0.131	...	...
202	... ..	+ 2.6325	+ 0.0009	...	+ 3.928	+ 0.332	...	...
203	Lalande 13279 ...	+ 3.6602	- 0.0043	...	+ 4.061	+ 0.522	...	...
204	Lacaille 2500 ...	+ 1.9535	+ 0.0012	...	+ 4.098	+ 0.276	...	...
205	Lacaille 2516 ...	+ 1.9545	+ 0.0012	...	+ 4.217	+ 0.277	...	...
206	... ..	+ 2.0228	+ 0.0013	...	+ 4.261	+ 0.286	...	...
207	... ..	+ 1.0332	+ 0.0011	...	+ 4.479	+ 0.273	...	...
208	21 Canis Majoris ϵ ...	+ 2.3571	+ 0.0013	0.000	+ 4.637	+ 0.332	+ 0.02	2298
209	Taylor 2805 ...	+ 3.5644	- 0.0050	...	+ 4.879	+ 0.502	...	...
210	43 Gem. 3 Var. 1 ...	+ 3.5638	- 0.0050	- 0.001	+ 4.880	+ 0.503	+ 0.01	2305

Mean Positions of Stars for 1869 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>o</i>	<i>'</i>	<i>"</i>		
211	... ..	9.0	1	6	57	21.51	69	5	17.6	1	0.10
212	23 Canis Majoris γ ...	4.1	...	6	57	50.00	105	26	31.1	6	0.12
213	Taylor 2840	8.8	1	6	59	6.54	150	57	16.4	1	0.11
214	R Geminorum Var. 2 ...	7.0	1	6	59	28.18	67	5	51.4	1	0.13
215	... ..	9.2	1	7	5	7.76	130	43	2.4	1	0.15
216	... ..	9.0	1	7	6	2.11	129	23	43.8	1	0.11
217	Lacaille 2678	8.0	1	7	6	15.89	143	9	43.2	1	0.14
218	54 Geminorum λ	3.6	...	7	10	33.87	73	13	33.1	1	0.07
219	55 Geminorum δ	3.6	...	7	12	17.89	67	46	45.5	19	0.22
220	... ..	9.2	1	7	19	52.65	152	36	11.1	1	0.14
221	63 Geminorum	5.3	...	7	19	57.77	68	17	22.8	4	0.54
222	... ..	10.2	1	7	23	55.04	42	1	21.2	1	0.09
223	... ..	9.0	1	7	24	58.03	121	0	57.6	1	0.08
224	... ..	8.0	1	7	26	12.43	142	6	31.2	1	0.17
225	66 Geminorum α^2 (<i>Castor</i>)	1.6	...	7	26	14.30	57	49	38.8	13	0.20
226	... ..	10.3	1	7	30	42.45	153	42	59.1	1	0.17
227	... ..	8.1	1	7	30	45.96	121	55	6.5	1	0.05
228	10 Can. Min. α (<i>Procyon</i>)...	0.5	...	7	32	26.54	84	26	30.2	14	0.13
229	... ..	10.2	1	7	34	59.55	68	10	28.2	1	0.16
230	... ..	7.4	1	7	36	40.99	128	55	54.5	1	0.05
231	73 Geminorum β (<i>Pollux</i>)..	1.1	...	7	37	17.75	61	39	37.3	15	0.14
232	81 Geminorum g	5.1	...	7	38	32.32	71	10	24.5	1	0.89
233	... ..	8.7	2	7	40	59.81	153	10	23.0	2	0.13
234	... ..	9.2	1	7	41	47.90	148	9	2.2	1	0.17
235	... ..	8.4	1	7	45	30.83	129	27	37.1	1	0.21
236	... ..	8.2	1	7	46	13.66	132	30	43.6	1	0.09
237	Taylor 3293	7.8	1	7	46	38.29	144	44	50.3	1	0.06
238	... ..	8.3	1	7	49	9.46	130	26	49.6	1	0.09
239	... ..	9.0	1	7	49	52.39	130	30	54.6	1	0.17
240	... ..	8.0	1	7	50	1.03	149	9	12.9	1	0.17
241	... ..	8.6	1	7	50	36.66	129	23	29.1	1	0.22
242	... ..	8.8	2	7	53	49.23	149	53	36.0	2	0.17
243	Taylor 3373	7.3	2	7	55	21.11	144	12	42.1	2	0.57
244	6 Cancri	5.0	...	7	55	28.15	61	50	27.9	6	0.13
245	... ..	8.0	1	7	55	30.40	123	31	0.3	1	0.05

214.—R Geminorum Var. 2. Period 371 days. Range, 7th to below 13th 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.	
211	... ..	+ 3.5671	- 0.0052	...	+ 4.967	+ 0.502	...	...
212	28 Canis Majoris γ ...	+ 2.7145	+ 0.0005	+ 0.002	+ 5.007	+ 0.381	+ 0.01	2319
213	Taylor 2840 ...	+ 0.7444	- 0.0074	...	+ 5.115	+ 0.108	...	...
214	R Geminorum Var. 2.	+ 3.6181	- 0.0059	...	+ 5.145	+ 0.508	...	...
215	... ..	+ 1.9676	+ 0.0009	...	+ 5.623	+ 0.274	...	...
216	... ..	+ 2.0194	+ 0.0011	...	+ 5.699	+ 0.280	...	...
217	Lacaille 2678 ...	+ 1.0084	- 0.0055	...	+ 5.718	+ 0.139	...	...
218	54 Geminorum λ ...	+ 3.4563	- 0.0055	- 0.002	+ 6.078	+ 0.478	+ 0.04	2398
219	55 Geminorum δ ...	+ 3.5913	- 0.0072	0.000	+ 6.222	+ 0.495	+ 0.02	2410
220	... ..	+ 0.6476	- 0.0127	...	+ 6.849	+ 0.086	...	...
221	63 Geminorum ...	+ 3.5724	- 0.0078	- 0.004	+ 6.856	+ 0.487	+ 0.10	2460
222	... ..	+ 4.4575	- 0.0256	...	+ 7.180	+ 0.605	...	...
223	... ..	+ 2.3229	+ 0.0011	...	+ 7.266	+ 0.813	...	...
224	... ..	+ 1.4743	- 0.0024	...	+ 7.367	+ 0.197	...	...
225	66 Gem α^3 (Castor) ...	+ 3.8543	- 0.0133	- 0.013	+ 7.370	+ 0.519	+ 0.08	2485
226	... ..	- 0.0945	- 0.0309	...	+ 7.731	- 0.016	...	...
227	... ..	+ 2.3038	+ 0.0012	...	+ 7.737	+ 0.307	...	...
228	10 Can. Min. α (Procyon)	+ 3.1917	- 0.0041	- 0.048	+ 7.871	+ 0.425	+ 1.08	2522
229	... ..	+ 3.5622	- 0.0095	...	+ 8.076	+ 0.472	...	...
230	... ..	+ 2.0863	+ 0.0010	...	+ 8.212	+ 0.274	...	...
231	73 Gem. β (Pollux) ...	+ 3.7292	- 0.0128	- 0.049	+ 8.261	+ 0.491	+ 0.06	2555
232	81 Geminorum g ...	+ 3.4866	- 0.0086	- 0.008	+ 8.360	+ 0.459	+ 0.05	2558
233	... ..	+ 0.6810	- 0.0161	...	+ 8.554	+ 0.086	...	...
234	... ..	+ 1.1287	- 0.0078	...	+ 8.618	+ 0.145	...	...
235	... ..	+ 2.0861	+ 0.0010	...	+ 8.910	+ 0.269	...	...
236	... ..	+ 1.9757	+ 0.0007	...	+ 8.966	+ 0.254	...	...
237	Taylor 3293 ...	+ 1.3817	- 0.0045	...	+ 8.999	+ 0.176	...	...
238	... ..	+ 2.0594	+ 0.0010	...	+ 9.194	+ 0.263	...	...
239	... ..	+ 2.0584	+ 0.0010	...	+ 9.250	+ 0.262	...	...
240	... ..	+ 1.0865	- 0.0092	...	+ 9.261	+ 0.137	...	...
241	... ..	+ 2.0996	+ 0.0011	...	+ 9.307	+ 0.267	...	...
242	... ..	+ 1.0449	- 0.0104	...	+ 9.556	+ 0.130	...	...
243	Taylor 3373 ...	+ 1.4476	- 0.0041	...	+ 9.673	+ 0.181	...	...
244	6 Cancri ...	+ 3.6988	- 0.0148	- 0.005	+ 9.682	+ 0.468	+ 0.07	2672
245	... ..	+ 2.1405	+ 0.0013	...	+ 9.635	+ 0.270	...	...

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

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
246	Taylor 3380	8.4	3	7	55	55.33	144	11	22.4	3	0.11
247	... ..	9.8	2	8	1	22.72	69	4	54.6	2	0.13
248	15 Argus	2.9	...	8	1	57.92	113	55	42.6	14	0.17
249	16 Canori 3	4.7	...	8	4	41.79	71	57	35.1	2	0.07
250	... ..	9.2	1	8	5	47.93	128	39	39.2	1	0.17
251	... ..	8.0	1	8	6	14.65	123	41	24.4	1	0.11
252	... ..	9.3	1	8	8	39.91	123	39	51.8	1	0.17
253	... ..	9.2	1	8	9	41.09	74	16	56.5	1	0.97
254	... ..	9.5	1	8	13	23.93	131	43	50.6	1	0.19
255	... ..	9.5	1	8	13	37.91	131	43	55.0	1	0.19
256	... ..	9.0	1	8	13	52.54	133	18	14.9	1	0.08
257	20 Canori δ^1	5.9	...	8	15	51.47	71	14	59.0	1	0.07
258	Taylor 3599	7.1	1	8	20	24.39	144	53	44.3	1	0.13
259	... ..	9.4	2	8	21	43.73	153	18	29.9	2	0.09
260	... ..	7.5	1	8	23	27.36	144	55	52.5	1	0.21
261	33 Canori η	5.5	...	8	25	7.82	63 6	57.9	17	0.21	
262	... ..	7.8	1	8	26	14.29	144	53	44.1	1	0.13
263	U Canori Var. 4	9.7	1	8	23	16.13	70	39	18.9	1	0.19
264	Lacaille 3475	6.7	1	8	34	59.33	152	23	39.4	1	0.13
265	43 Canori γ	4.8	...	8	35	42.07	68	3	44.9	1	0.17
266	... ..	9.3	1	8	36	2.22	81	23	46.3	1	0.12
267	Taylor 3767	7.0	1	8	36	26.45	149	51	17.0	1	0.14
268	... ..	9.4	1	8	36	53.57	81	29	37.5	1	0.10
269	47 Canori δ	4.3	...	8	37	14.28	71	21	59.3	3	0.42
270	W. B. E. VIII. 991	9.1	1	8	39	7.45	81	43	16.4	1	0.08
271	11 Hydræ ϵ	3.6	...	8	39	50.22	83	6	8.7	16	0.18
272	W. B. E. VIII. 1023	7.7	2	8	40	14.44	81	54	42.3	2	0.16
273	... ..	8.6	...	8	41	9.34	147	17	47.2	1	0.11
274	... ..	8.0	1	8	46	54.70	132	54	21.2	1	0.17
275	... ..	9.7	1	8	48	19.53	133	26	18.7	1	0.20
276	... ..	8.9	1	8	49	19.45	133	28	35.4	1	0.10
277	... ..	7.1	1	8	49	30.76	133	0	8.4	1	0.21
278	9 Urse Majoris	3.2	...	8	50	13.62	41	26	46.7	1	0.24
279	... ..	9.3	1	8	51	13.62	98	36	16.2	1	0.11
280	... ..	8.0	1	8	52	23.78	77	33	39.2	2	0.23

253.—Comparison star for Ariadne in 1863.

263.—U Canori Var. 4.—Period 306 days. Range, 8.5 to below 14th magnitude.

266.—268—270—272—Comparison stars for Melete in 1863.

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.	
246	Taylor 3880 ...	+ 1.4511	- 0.0040	...	+ 9.713	+ 0.181	...	...
247	... ..	+ 3.5131	- 0.0114	...	+ 10.132	+ 0.438	...	...
248	15 Argus ...	+ 2.5808	+ 0.0009	- 0.007	+ 10.176	+ 0.318	- 0.06	2728
249	16 Cancri 3 ...	+ 3.4448	- 0.0108	+ 0.004	+ 10.381	+ 0.426	+ 0.11	2744
250	... ..	+ 2.1597	+ 0.0016	...	+ 10.464	+ 0.265	..	...
251	... ..	+ 2.1598	+ 0.0016	...	+ 10.497	+ 0.264	...	...
252	... ..	+ 2.1663	+ 0.0017	...	+ 10.669	+ 0.262	...	...
253	... ..	+ 3.3898	- 0.0095	...	+ 10.753	+ 0.413	...	...
254	... ..	+ 2.0760	+ 0.0015	...	+ 11.025	+ 0.248	...	...
255	... ..	+ 2.0766	+ 0.0015	..	+ 11.043	+ 0.248	...	...
256	... ..	+ 2.0209	+ 0.0013	...	+ 11.059	+ 0.241	...	...
257	20 Cancri δ^1 ...	+ 3.4436	- 0.0114	- 0.005	+ 11.204	+ 0.413	+ 0.02	2799
258	Taylor 3599 ...	+ 1.5160	- 0.0039	...	+ 11.532	+ 0.176	...	...
259	... ..	+ 0.9053	- 0.0174	...	+ 11.626	+ 0.103	...	...
260	... ..	+ 1.5236	- 0.0037	...	+ 11.750	+ 0.176	...	...
261	33 Cancri η ...	+ 3.4833	- 0.0129	- 0.005	+ 11.868	+ 0.404	+ 0.06	2862
262	... ..	+ 1.5395	- 0.0036	...	+ 11.946	+ 0.175	...	...
263	U Cancri Var. 4 ...	+ 3.4467	- 0.0124	...	+ 12.088	+ 0.397	...	...
264	Lacaille 3475 ...	+ 1.0731	- 0.0142	...	+ 12.551	+ 0.118	...	2989
265	43 Cancri γ ...	+ 3.4910	- 0.0143	- 0.011	+ 12.601	+ 0.390	- 0.01	2987
266	... ..	+ 3.2278	- 0.0077	...	+ 12.623	+ 0.360	...	...
267	Taylor 3767 ...	+ 1.2857	- 0.0089	...	+ 12.650	+ 0.141	...	...
268	... ..	+ 3.2270	- 0.0077	...	+ 12.687	+ 0.359	...	...
269	47 Cancri δ ...	+ 3.4209	- 0.0125	- 0.002	+ 12.705	+ 0.382	+ 0.24	2953
270	W. B. E. VIII 991...	+ 3.2216	- 0.0076	...	+ 12.832	+ 0.355	...	...
271	11 Hydræ ϵ ...	+ 3.1960	- 0.0071	- 0.013	+ 12.880	+ 0.351	+ 0.04	2971
272	W. B. E. VIII. 1023.	+ 3.2175	- 0.0076	...	+ 12.907	+ 0.353	...	...
273	... ..	+ 1.4838	- 0.0049	...	+ 12.968	+ 0.159	...	..
274	... ..	+ 2.1448	+ 0.0032	...	+ 13.348	+ 0.228	...	...
275	... ..	+ 2.1325	+ 0.0033	...	+ 13.441	+ 0.225	...	...
276	... ..	+ 2.1340	+ 0.0033	...	+ 13.505	+ 0.224	...	...
277	... ..	+ 2.1511	+ 0.0033	...	+ 13.517	+ 0.226	...	...
278	9 Ursæ Majoris ...	+ 4.1874	- 0.0446	- 0.047	+ 13.563	+ 0.443	+ 0.28	3048
279	... ..	+ 2.9237	- 0.0017	...	+ 13.627	+ 0.307	...	...
280	... ..	+ 3.2874	- 0.0098	...	+ 13.708	+ 0.344	...	...

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

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
281	... ..	8.6	1	8	54	31.64	180	36	1.9	1	0.21
282	... ..	8.0	1	8	55	17.57	146	57	50.7	1	0.12
283	... ..	7.9	1	8	56	47.60	146	56	53.6	1	0.08
284	80 Cancri ...	6.9	8	9	4	35.27	71	25	16.8	12	0.21
285	... ..	8.0	2	9	6	36.47	142	30	40.7	2	0.13
286	82 Cancri π^2 ...	5.6	...	9	7	59.87	74	31	1.1	2	0.15
287	Lalande 18251 ...	7.0	1	9	8	38.80	74	26	51.1	1	0.07
288	... ..	8.0	1	9	10	52.21	150	22	4.5	1	0.17
289	83 Cancri ...	6.6	...	9	11	39.99	71	44	28.3	11	0.25
290	Taylor 4088 ..	7.0	5	9	13	15.45	70	21	24.3	9	0.20
291	... ..	8.0	3	9	15	48.13	124	48	7.3	3	0.11
292	Taylor 4128 ...	7.0	4	9	18	16.94	72	51	4.1	4	0.15
293	... ..	7.5	1	9	19	12.77	70	22	35.0	1	0.11
294	... ..	8.9	2	9	20	39.73	125	24	13.0	2	0.14
295	Lalande 18686 ...	8.9	1	9	21	58.27	68	30	54.5	1	0.17
296	Lalande 18659 ...	9.0	2	9	22	54.69	67	50	45.5	2	0.61
297	... ..	7.5	3	9	22	57.37	67	36	52.6	3	0.18
298	8 Leonis ...	6.5	3	9	29	48.79	72	58	37.1	5	0.15
299	R. P. L. 69 ...	7.9	...	9	34	29.25	2	48	6.9	1	0.21
300	Taylor 4284 ...	7.0	1	9	36	2.18	69	12	34.9	5	0.17
301	16 Leonis ψ ...	5.7	...	9	36	35.80	75	22	49.7	1	0.97
302	... ..	7.0	1	9	37	4.03	148	26	42.0	1	0.12
303	17 Leonis ϵ ...	8.1	...	9	38	24.66	65	37	27.1	8	0.24
304	Taylor 4397 ...	7.4	1	9	42	0.75	148	26	38.6	1	0.30
305	... ..	9.1	5	9	43	28.69	71	39	18.7	5	0.20
306	... ..	8.5	5	9	44	25.97	71	54	21.2	5	0.22
307	... ..	9.0	6	9	44	34.97	72	2	5.4	8	0.22
308	W. B. N. IX. 1020 ...	9.0	5	9	48	43.74	71	50	17.5	5	0.21
309	W. B. N. IX. 1047 ...	9.4	4	9	49	49.11	72	19	19.2	4	0.25
310	... ..	10.1	3	9	50	51.36	72	32	6.5	3	0.21
311	27 Leonis ν ...	5.3	...	9	51	10.18	76	55	55.3	1	0.15
312	... ..	10.3	4	9	52	32.33	72	3	2.2	4	0.24
313	29 Leonis π ...	5.0	...	9	53	17.34	81	19	42.2	6	0.23
314	W. B. N. IX. 1160 ...	9.3	5	9	55	22.96	73	19	6.2	5	0.19
315	... ..	10.2	5	9	55	24.88	72	19	25.2	5	0.25

5176

295.—297—Comparison stars for Metis in 1861;

299.—Carrington 1418.

305.—306—307—308—309—310—312—314—315—Comparison stars for Mars in 1869.

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	... ..	+ 2.2428	+ 0.0039	...	+ 13.838	+ 0.231	...	...
282	... ..	+ 1.5888	- 0.0030	...	+ 13.886	+ 0.161	...	...
283	... ..	+ 1.5991	- 0.0027	...	+ 13.980	+ 0.161	...	...
284	80 Cancri ...	+ 3.3834	- 0.0134	- 0.005	+ 14.462	+ 0.336	0.00	3129
285	... ..	+ 1.8756	+ 0.0022	...	+ 14.584	+ 0.182	...	...
286	82 Cancri π^3 ...	+ 3.3247	- 0.0117	- 0.004	+ 14.667	+ 0.325	- 0.02	3147
287	Lalande 18251 ...	+ 3.3251	- 0.0118	...	+ 14.706	+ 0.323	...	...
288	... ..	+ 1.4908	- 0.0050	...	+ 14.837	+ 0.140	...	...
289	83 Cancri ...	+ 3.3677	- 0.0134	- 0.012	+ 14.884	+ 0.323	+ 0.16	3171
290	Taylor 4088 ...	+ 3.3894	- 0.0143	...	+ 14.977	+ 0.323	...	3181
291	... ..	+ 2.4618	+ 0.0053	...	+ 15.124	+ 0.229	...	...
292	Taylor 4123 ...	+ 3.3396	- 0.0123	...	+ 15.266	+ 0.309	...	3209
293	... ..	+ 3.3798	- 0.0144	...	+ 15.318	+ 0.311	...	...
294	... ..	+ 2.4634	+ 0.0057	...	+ 15.400	+ 0.223	...	...
295	Lalande 18636 ...	+ 3.4069	- 0.0158	...	+ 15.473	+ 0.310	...	...
296	Lalande 18659 ...	+ 3.4167	- 0.0161	...	+ 15.525	+ 0.309	...	...
297	... ..	+ 3.4207	- 0.0162	...	+ 15.527	+ 0.309	...	...
298	8 Leonis ...	+ 3.3215	- 0.0129	0.000	+ 15.900	+ 0.288	- 0.07	3278
299	R. P. L. 69 ...	+ 10.2749	- 5.6930	...	+ 16.147	+ 1.664	...	...
300	Taylor 4284 ...	+ 3.3704	- 0.0154	...	+ 16.227	+ 0.282	...	3318
301	16 Leonis ψ ...	+ 3.2763	- 0.0115	- 0.002	+ 16.255	+ 0.273	+ 0.02	3321
302	... ..	+ 1.8007	+ 0.0031	...	+ 16.279	+ 0.146	...	...
303	17 Leonis ϵ ...	+ 3.4230	- 0.0180	- 0.004	+ 16.348	+ 0.282	+ 0.02	3331
304	Taylor 4337 ...	+ 1.8391	+ 0.0042	...	+ 16.528	+ 0.145	...	...
305	... ..	+ 3.3208	- 0.0138	...	+ 16.601	+ 0.205	...	...
306	... ..	+ 3.3156	- 0.0136	...	+ 16.647	+ 0.203	...	...
307	... ..	+ 3.3135	- 0.0135	...	+ 16.654	+ 0.202	...	...
308	W. B. N. IX. 1020...	+ 3.3098	- 0.0137	...	+ 16.854	+ 0.255	...	...
309	W. B. N. IX. 1047...	+ 3.3013	- 0.0133	...	+ 16.905	+ 0.251	...	...
310	... ..	+ 3.2967	- 0.0131	...	+ 16.954	+ 0.250	...	...
311	27 Leonis ν ...	+ 3.2375	- 0.0106	- 0.004	+ 16.970	+ 0.245	+ 0.01	3406
312	... ..	+ 3.3007	- 0.0134	...	+ 17.033	+ 0.247	...	...
313	29 Leonis π ...	+ 3.1792	- 0.0080	- 0.003	+ 17.067	+ 0.236	+ 0.03	3415
314	W. B. N. IX. 1160...	+ 3.2793	- 0.0127	...	+ 17.163	+ 0.240	...	...
315	... ..	+ 3.2924	- 0.0132	...	+ 17.164	+ 0.241	...	...

284.—298—Proper motions from "Greenwich Catalogue 1872."

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.	
				h.	m.	s.	°	'	"			
316	W. B. N. IX. 1189	...	9.4	3	9	56	43.83	73	9	6.0	3	0.21
317	W. B. N. IX. 1280	...	9.0	4	9	58	9.10	72	53	56.8	4	0.23
318	30 Leonis η	...	8.6	...	10	0	11.32	72	36	0.1	5	0.18
319	W. B. N. IX. 1282	...	9.1	4	10	0	34.71	73	5	5.4	4	0.21
320	32 Leonis α (<i>Regulus</i>)	...	1.4	...	10	1	23.55	77	23	37.5	8	0.20
321	Lalande 19766	...	7.0	6	10	1	56.85	70	49	37.7	6	0.13
322	33 Leonis	...	8.5	2	10	3	37.66	73	39	3.0	2	0.14
323	Taylor 4563	...	6.4	7	10	9	7.85	71	36	33.2	11	0.12
324	R. P. L. 72	...	5.6	...	10	10	10.28	5	5	5.4	3	0.23
325	...	...	9.0	1	10	10	27.80	139	52	39.3	1	0.26
326	41 Leonis γ^1	...	2.2	...	10	12	44.79	69	29	50.8	6	0.25
327	Lalande 20189	...	8.3	1	10	16	24.26	75	25	58.8	1	0.30
328	Taylor 4682	...	7.7	...	10	21	48.18	74	59	18.3	2	0.11
329	Lalande 20402	...	8.2	1	10	25	14.43	79	54	18.0	1	0.27
330	47 Leonis ρ	...	4.0	...	10	25	54.72	80	1	12.7	13	0.23
331	...	...	8.9	2	10	28	12.30	131	43	9.7	2	0.23
332	...	...	8.2	1	10	35	14.22	149	7	13.9	1	0.22
333	...	...	8.4	1	10	35	33.12	149	5	45.5	1	0.23
334	Taylor 4824	...	7.3	1	10	36	17.48	148	59	36.5	1	0.30
335	...	...	9.0	1	10	36	43.09	150	48	47.4	1	0.28
336	Taylor 4852	.. 1st...	8.2	2	10	39	3.51	148	53	18.7	2	0.22
337	Brisbane 3194	... 2nd...	8.2	1	10	39	30.10	149	3	1.7	1	0.27
338	...	...	9.3	1	10	39	37.27	139	3	43.1	1	0.28
339	...	...	8.8	1	10	39	40.57	148	52	40.9	1	0.27
340	53 Leonis l	...	5.3	...	10	42	22.18	78	45	45.1	17	0.24
341	Taylor 4886	...	7.0	1	10	43	0.30	137	3	34.8	1	0.20
342	...	...	7.6	1	10	46	15.18	141	41	26.5	1	0.23
343	...	...	9.5	2	10	47	10.78	141	46	24.6	2	0.28
344	...	...	9.0	1	10	52	8.42	143	47	3.1	1	0.28
345	7 Crateris α	...	4.1	...	10	53	23.61	107	36	7.3	1	0.30
346	...	...	8.7	...	10	53	44.97	149	16	19.6	1	0.26
347	58 Ursæ Majoris α (<i>Dubhe</i>)	...	2.0	...	10	55	37.33	27	32	32.1	1	0.30
348	...	...	9.0	1	10	55	39.83	88	26	56.1	1	0.29
349	R. P. L. 79	...	7.7	...	10	56	47.34	1	33	59.5	1	0.76
350	63 Leonis χ	...	4.7	...	10	58	15.50	81	57	22.6	14	0.25

316.—317—318—319—Comparison stars for Mars in 1869.

324.—Groombridge 1620.

332.—333—334—336—337—339—Observed for map of η Argus Var. 1.

337.—Double:—the comparison 18' s.p. 1 s was observed in 1867.

348.—Comparison star for Asia in 1868.

349.—Carrington 1639.

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	W. B. N. IX. 1199...	+ 3.2795	- 0.0127	...	+ 17.223	+ 0.233	...	...
317	W. B. N. IX. 1280...	+ 3.2806	- 0.0129	...	+ 17.287	+ 0.235	...	...
318	30 Leonis η ...	+ 3.2813	- 0.0131	- 0.004	+ 17.376	+ 0.232	0.00	3453
319	W. B. N. IX. 1282...	+ 3.2745	- 0.0127	...	+ 17.394	+ 0.231	...	...
320	32 Leonis α (<i>Regulus</i>)	+ 3.2200	- 0.0102	- 0.019	+ 17.428	+ 0.225	- 0.01	3459
321	Lalande 19766 ...	+ 3.3010	- 0.0141	...	+ 17.453	+ 0.230	...	3460
322	33 Leonis ...	+ 3.2628	- 0.0123	+ 0.005	+ 17.525	+ 0.223	+ 0.01	3469
323	Taylor 4563 ...	+ 3.2738	- 0.0135	+ 0.005	+ 17.754	+ 0.214	0.00	3506
324	R. P. L. 72 ...	+ 0.9997	- 1.6477	- 0.079	+ 17.796	+ 0.665	+ 0.05	3495
325	... ..	+ 2.3424	+ 0.0134	...	+ 17.807	+ 0.149	...	...
326	41 Leonis γ^1 ...	+ 3.2976	- 0.0143	+ 0.019	+ 17.899	+ 0.208	+ 0.15	3523
327	Lalande 20139 ...	+ 3.2240	- 0.0110	...	+ 18.040	+ 0.198	...	...
328	Taylor 4682 ...	+ 3.2210	- 0.0111	...	+ 18.242	+ 0.187	...	3579
329	Lalande 20402 ...	+ 3.1677	- 0.0084	...	+ 18.365	+ 0.178	...	...
330	47 Leonis ρ ...	+ 3.1600	- 0.0080	0.000	+ 18.388	+ 0.176	+ 0.03	3609
331	... ..	+ 2.6073	+ 0.0145	...	+ 18.468	+ 0.140	...	...
332	... ..	+ 2.2628	+ 0.0199	...	+ 18.699	+ 0.111	...	...
333	... ..	+ 2.2676	+ 0.0200	...	+ 18.709	+ 0.111	...	...
334	Taylor 4824 ...	+ 2.2777	+ 0.0203	...	+ 18.732	+ 0.111	...	3673
335	... ..	+ 2.2214	+ 0.0202	...	+ 18.745	+ 0.107	...	...
336	Taylor 4852 1st...	+ 2.3059	+ 0.0213	...	+ 18.817	+ 0.108	...	...
337	Brisbane 3194 2nd...	+ 2.3050	+ 0.0214	...	+ 18.831	+ 0.108	...	...
338	... ..	+ 2.5425	+ 0.0191	...	+ 18.833	+ 0.119	...	...
339	... ..	+ 3.3119	+ 0.0214	...	+ 18.835	+ 0.108	...	...
340	53 Leonis l ...	+ 3.1604	- 0.0080	- 0.003	+ 18.915	+ 0.145	+ 0.02	3708
341	Taylor 4886 ...	+ 2.3986	+ 0.0190	...	+ 18.934	+ 0.117	...	...
342	... ..	+ 2.5369	+ 0.0215	...	+ 19.025	+ 0.109	...	...
343	... ..	+ 2.5418	+ 0.0218	...	+ 19.051	+ 0.108	...	...
344	... ..	+ 2.5395	+ 0.0239	...	+ 19.182	+ 0.100	...	...
345	7 Crateris α ...	+ 2.9506	+ 0.0072	- 0.033	+ 19.213	+ 0.115	- 0.14	3766
346	... ..	+ 2.4310	+ 0.0267	...	+ 19.223	+ 0.093	...	...
347	58 Urs. Maj. α (<i>Dubhe</i>)	+ 3.7823	- 0.0821	- 0.017	+ 19.263	+ 0.144	+ 0.09	3777
348	... ..	+ 3.0821	- 0.0024	...	+ 19.270	+ 0.117	...	...
349	R. P. L. 79...	+ 15.7151	- 9.2132	...	+ 19.297	+ 0.612	...	...
350	63 Leonis χ ...	+ 3.1223	- 0.0056	- 0.024	+ 19.331	+ 0.113	+ 0.03	3738

322.—323.—Proper motions from "Greenwich Catalogue 1872."

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
351	67 Leonis ...	5.6	...	11	1	47.22	64	37	59.6	1	0.24
352	... ..	8.0	1	11	2	10.97	148	57	47.3	1	0.28
353	Taylor 5092 ...	8.3	1	11	5	32.12	148	50	46.9	1	0.34
354	Taylor 5108 ...	5.6	2	11	6	59.36	149	36	22.1	2	0.28
355	68 Leonis δ ...	2.8	...	11	7	8.26	68	45	38.5	11	0.27
356	12 Crateris δ ...	3.9	...	11	12	47.60	104	4	12.9	3	0.26
357	77 Leonis σ ...	4.1	...	11	14	22.81	88	15	12.2	2	0.08
358	... ..	8.0	1	11	16	4.24	128	23	14.9	1	0.33
359	... ..	9.1	1	11	16	41.36	125	40	40.1	1	0.34
360	79 Leonis ...	5.5	...	11	17	18.89	87	52	24.4	1	0.30
361	... ..	9.1	1	11	18	18.61	125	40	43.5	1	0.34
362	... ..	9.3	2	11	19	56.16	91	40	52.4	2	0.34
363	W. B. E. XI. 359 ...	8.6	2	11	21	22.34	91	45	5.4	2	0.27
364	... ..	10.2	1	11	22	33.82	91	57	45.8	1	0.28
365	... ..	8.6	1	11	24	47.98	22	57	33.5	1	0.29
366	... ..	9.2	1	11	25	21.85	151	33	8.6	1	0.33
367	... ..	9.3	1	11	25	35.41	128	28	26.9	1	0.25
368	... ..	9.3	1	11	25	40.09	22	57	38.8	1	0.34
369	... ..	10.0	2	11	26	57.14	151	43	14.5	2	0.34
370	... ..	9.9	1	11	27	5.24	151	32	36.1	1	0.33
371	91 Leonis ν ...	4.5	...	11	30	14.49	90	6	4.0	8	0.28
372	Lacaille 4850 ...	6.7	1	11	34	40.64	144	50	51.2	1	0.34
373	8 Virginis ν ...	4.2	...	11	39	7.57	82	44	12.3	1	0.16
374	94 Leonis β (<i>Deneb</i>) ...	2.2	...	11	42	22.49	74	41	45.7	9	0.32
375	... ..	9.2	1	11	51	51.88	144	14	32.8	1	0.34
376	... ..	9.0	1	11	52	35.83	154	34	13.1	1	0.33
377	... ..	10.2	1	11	52	54.28	154	40	1.8	1	0.34
378	... ..	9.0	1	11	53	28.94	151	49	55.8	1	0.33
379	8 Virginis π ...	4.4	...	11	54	9.76	82	39	19.2	1	0.15
380	9 ^a Crucis ...	4.7	...	11	56	22.43	152	35	4.1	2	0.31
381	Taylor 5535 ...	7.5	1	11	57	19.02	70	27	10.4	1	0.36
382	... ..	8.4	3	12	2	52.78	141	7	20.8	3	0.32
383	Taylor 5574 ...	7.4	3	12	2	58.02	141	3	17.8	3	0.32
384	10 Virginis ...	6.1	...	12	2	58.48	87	21	58.5	1	0.23
385	2 Corvi ε ...	3.1	...	12	3	23.39	111	53	27.2	2	0.31

351.—Comparison star for Thalia in 1862.

362.—363—364.—Comparison stars for Asia in 1868.

365.—368.—Comparison stars for Comet 2, 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.	
351	67 Leonis ...	+ 3.2316	- 0.0164	+ 0.003	+ 19.412	+ 0.111	+ 0.01	3809
352	... ..	+ 2.5176	+ 0.0296	...	+ 19.419	+ 0.084	...	...
353	Taylor 5092 ...	+ 2.6414	+ 0.0276	...	+ 19.491	+ 0.088	...	...
354	Taylor 5108 ...	+ 2.5497	+ 0.0819	...	+ 19.520	+ 0.077	...	3835
355	68 Leonis δ ...	+ 3.1909	- 0.0182	+ 0.011	+ 19.524	+ 0.098	+ 0.14	3834
356	12 Crateris δ ...	+ 3.0085	+ 0.0064	- 0.009	+ 19.631	+ 0.081	- 0.18	3859
357	77 Leonis σ ...	+ 3.1034	- 0.0042	- 0.009	+ 19.659	+ 0.081	+ 0.03	3862
358	... ..	+ 2.8704	+ 0.0197	...	+ 19.687	+ 0.072	...	...
359	... ..	+ 2.8918	+ 0.0182	...	+ 19.698	+ 0.071	...	...
360	79 Leonis ...	+ 3.0813	- 0.0016	- 0.002	+ 19.708	+ 0.076	+ 0.02	3879
361	... ..	+ 2.8982	+ 0.0184	...	+ 19.722	+ 0.069	...	...
362	... ..	+ 3.0653	+ 0.0006	...	+ 19.749	+ 0.070	...	...
363	W. B. E. XI. 359 ...	+ 3.0652	+ 0.0006	...	+ 19.771	+ 0.067	...	...
364	... ..	+ 3.0646	+ 0.0008	...	+ 19.787	+ 0.064	...	...
365	... ..	+ 3.5550	- 0.0923	...	+ 19.819	+ 0.071	...	...
366	... ..	+ 2.7006	+ 0.0415	...	+ 19.826	+ 0.050	...	...
367	... ..	+ 2.9132	+ 0.0210	...	+ 19.829	+ 0.055	...	...
368	... ..	+ 3.5432	- 0.0913	...	+ 19.830	+ 0.068	...	...
369	... ..	+ 2.7150	+ 0.0425	...	+ 19.847	+ 0.048	...	...
370	... ..	+ 2.7190	+ 0.0423	...	+ 19.848	+ 0.048	...	...
371	91 Leonis ν ...	+ 3.0718	+ 0.0003	- 0.003	+ 19.886	+ 0.049	- 0.03	3946
372	Lacaille 4850 ...	+ 2.8627	+ 0.0370	...	+ 19.933	+ 0.087	...	...
373	3 Virginis ν ...	+ 3.0876	- 0.0031	+ 0.001	+ 19.972	+ 0.082	+ 0.21	3982
374	94 Leonis β (<i>Demob</i>)..	+ 3.1002	- 0.0074	- 0.036	+ 19.995	+ 0.025	+ 0.10	3995
375	... ..	+ 3.0062	+ 0.0410	...	+ 20.042	+ 0.007	...	...
376	... ..	+ 2.9813	+ 0.0604	...	+ 20.044	+ 0.005	...	...
377	... ..	+ 2.9847	+ 0.0009	...	+ 20.045	+ 0.005	...	...
378	... ..	+ 3.0011	+ 0.0543	...	+ 20.047	+ 0.003	...	...
379	8 Virginis π ...	+ 3.0764	- 0.0023	0.000	+ 20.048	+ 0.002	+ 0.04	4052
380	θ^1 Crucis ...	+ 3.0312	+ 0.0577	- 0.025	+ 20.052	- 0.002	0.00	4061
381	Taylor 5535 ...	+ 3.0777	- 0.0089	...	+ 20.054	- 0.003	...	...
382	... ..	+ 3.0930	+ 0.0396	...	+ 20.053	- 0.015	...	...
383	Taylor 5574 ...	+ 3.0935	+ 0.0395	...	+ 20.053	- 0.015	...	4098
384	10 Virginis ...	+ 3.0714	+ 0.0007	- 0.001	+ 20.053	- 0.018	+ 0.21	4094
385	2 Corvi ϵ ...	+ 3.0800	+ 0.0142	- 0.005	+ 20.053	- 0.016	- 0.01	4097

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

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

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

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
386	... ..	9.7	1	12	6	18.50	130	12	47.5	1	0.36
387	... ..	9.0	1	12	6	28.00	138	29	13.2	1	0.26
388	... ..	9.3	1	12	10	12.33	188	27	44.7	1	0.27
389	... ..	9.0	2	12	11	6.65	138	23	35.4	2	0.30
390	R. Corvi Var. 1 ...	8.1	7	12	12	51.08	108	31	42.2	7	0.36
391	Lalande 23079 ...	8.4	2	12	12	56.03	108	28	19.3	2	0.26
392	R. P. L. 92 ...	6.3	...	12	13	2.04	2	50	10.2	3	0.49
393	15 Virginis η ...	4.0	...	12	13	12.22	89	56	19.5	4	0.26
394	16 Virginis c ...	5.2	...	12	13	41.72	85	57	28.1	1	0.23
395	... ..	8.0	1	12	17	38.48	24	44	36.5	1	0.28
396	... ..	9.0	1	12	19	19.25	147	22	57.2	1	0.33
397	... ..	8.0	1	12	19	33.71	144	5	51.0	1	0.26
398	... ..	9.0	1	12	20	8.71	124	14	49.2	1	0.34
399	Taylor 5710 ...	6.9	1	12	20	17.54	147	35	29.2	1	0.38
400	Taylor 5725 ...	7.0	1	12	21	26.57	145	40	23.2	1	0.38
401	... ..	9.0	1	12	21	26.75	147	27	30.6	1	0.25
402	... ..	9.8	3	12	23	29.30	87	2	38.4	3	0.30
403	... ..	8.8	1	12	27	18.72	38	2	5.7	1	0.33
404	... ..	9.3	1	12	27	30.18	38	2	0.3	1	0.33
405	9 Corvi β ...	2.8	...	12	27	30.53	112	40	19.6	8	0.34
406	... ..	9.8	1	12	27	44.55	99	39	19.9	1	0.34
407	Lalande 23532 ...	8.0	1	12	28	43.97	92	40	26.2	1	0.30
408	... ..	9.6	1	12	32	7.25	84	32	11.4	1	0.35
409	... ..	9.8	1	12	32	22.08	29	15	57.9	1	0.35
410	... ..	7.7	1	12	33	5.23	28	15	2.9	1	0.35
411	29 Virginis γ^1 ...	3.1	...	12	35	1.33	90	43	48.7	2	0.12
412	... ..	8.7	2	12	39	42.71	143	51	59.0	2	0.36
413	... ..	8.0	2	12	41	6.05	141	54	32.1	2	0.36
414	... ..	10.0	1	12	42	20.83	147	18	12.8	1	0.35
415	... ..	9.0	1	12	42	51.29	94	24	56.5	1	0.33
416	... ..	9.2	1	12	43	24.80	80	42	58.7	1	0.34
417	... ..	8.9	1	12	43	41.27	83	20	52.5	1	0.38
418	... ..	9.5	1	12	45	25.44	83	20	44.4	1	0.28
419	38 Virginis ...	6.3	...	12	46	23.32	92	50	26.6	1	0.16
420	W. B. E. XII. 799 ...	9.0	1	12	47	52.74	80	47	5.9	1	0.26

[45.9]

390.—R. Corvi Var. 1. Period 319 days. Range, 7th to below 12th magnitude.

392.—Groombridge 1871.

395.—Comparison star for Comet 2, 1861.

408.—Comparison star for Sappho in 1867.

407.—Comparison star for Polyhymnia in 1867.

415.—Comparison star for Hestia in 1868.

416.—420.—Comparison stars for Isis in 1867.

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	... ..	+ 3·1033	+ 0·0280	...	+ 20·047	— 0·021	...	...
387	... ..	+ 3·1148	+ 0·0369	...	+ 20·047	— 0·022	...	...
388	... ..	+ 3·1393	+ 0·0378	...	+ 20·035	— 0·030	...	...
389	... ..	+ 3·1450	+ 0·0379	...	+ 20·032	— 0·032	...	...
390	R Corvi Var. 1	+ 3·0972	+ 0·0128	...	+ 20·023	— 0·034	...	...
391	Lalande 23079	+ 3·0973	+ 0·0128	...	+ 20·023	— 0·035	...	...
392	R. P. L. 92	+ 1·5366	+ 0·0031	+ 0·415	+ 20·022	— 0·022	+ 0·08	4150
393	15 Virginis η	+ 3·0720	+ 0·0027	— 0·007	+ 20·021	— 0·035	+ 0·03	4145
394	16 Virginis c...	+ 3·0665	+ 0·0006	— 0·019	+ 20·018	— 0·036	+ 0·03	4151
395	... ..	+ 2·8491	— 0·0523	...	+ 19·995	— 0·041	...	...
396	... ..	+ 3·2482	+ 0·0546	...	+ 19·984	— 0·040	...	...
397	... ..	+ 3·2296	+ 0·0482	...	+ 19·981	— 0·040	...	...
398	... ..	+ 3·1520	+ 0·0244	...	+ 19·977	— 0·040	...	...
399	Taylor 5710	+ 3·2533	+ 0·0555	...	+ 19·977	— 00·51	...	...
400	Taylor 5725	+ 3·2551	+ 0·0517	...	+ 19·967	— 0·053	...	...
401	... ..	+ 3·2680	+ 0·0556	...	+ 19·966	— 0·053	...	...
402	... ..	+ 3·0650	+ 0·0017	...	+ 19·950	— 0·055	...	...
403	... ..	+ 2·8690	— 0·0294	...	+ 19·913	— 0·058	...	...
404	... ..	+ 2·8675	— 0·0293	...	+ 19·911	— 0·059	...	...
405	9 Corvi β	+ 3·1389	+ 0·0164	— 0·008.	+ 19·911	— 0·064	+ 0·07	4234
406	... ..	+ 3·0996	+ 0·0086	...	+ 19·908	— 0·064	...	...
407	Lalande 23532	+ 3·0804	+ 0·0050	...	+ 19·898	— 0·065	...	...
408	... ..	+ 3·0543	+ 0·0009	...	+ 19·858	— 0·071	...	...
409	... ..	+ 2·7363	— 0·0376	...	+ 19·854	— 0·065	...	...
410	... ..	+ 2·7142	— 0·0384	...	+ 19·846	— 0·066	...	...
411	29 Virginis γ^1	+ 3·0746	+ 0·0043	— 0·037	+ 19·822	— 0·078	+ 0·05	4268
412	... ..	+ 3·0879	+ 0·0525	...	+ 19·754	— 0·093	...	...
413	... ..	+ 3·3765	+ 0·0490	...	+ 19·733	— 0·095	...	...
414	... ..	+ 3·4547	+ 0·0611	...	+ 19·713	— 0·100	...	...
415	... ..	+ 3·0912	+ 0·0066	...	+ 19·706	— 0·092	...	...
416	... ..	+ 3·0310	— 0·0003	...	+ 19·696	— 0·091	...	...
417	... ..	+ 3·0426	+ 0·0009	...	+ 19·691	— 0·090	...	...
418	... ..	+ 3·0415	+ 0·0010	...	+ 19·662	— 0·095	...	...
419	38 Virginis	+ 3·0855	+ 0·0060	— 0·016	+ 19·644	— 0·099	+ 0·03	4323
420	W. B. E. XII. 799	+ 3·0272	— 0·0001	...	+ 19·619	— 0·100	...	...

392.—Proper motion in Polar Distance from "Greenwich Catalogue 1850."

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

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h	m	s	°	'	"		
421	R. P. L. 99 ...	5.5	...	12	48	12.02	5	52	31.1	4	0.74
422	... ..	8.3	1	12	49	41.04	145	35	49.4	1	0.85
423	12 Canum Venaticorum ...	3.2	...	12	49	53.69	50	58	27.7	2	0.37
424	O. A. S. 12539 ...	7.5	3	12	50	15.86	118	9	29.3	3	0.36
425	O. A. S. 12542 ...	9.6	2	12	50	36.69	118	12	36.7	2	0.36
426	... ..	9.7	1	12	51	26.62	127	6	43.6	1	0.35
427	44 Virginis k ...	5.9	...	12	52	54.60	93	6	17.7	1	0.23
428	... ..	8.3	1	12	53	25.20	142	25	41.7	1	0.34
429	... ..	9.0	1	12	53	34.18	143	42	0.0	1	0.29
430	... ..	9.2	1	12	54	55.24	139	20	0.3	1	0.38
431	... ..	9.5	1	12	56	4.43	149	29	9.2	1	0.26
432	... ..	10.3	1	12	56	27.41	113	14	10.9	1	0.28
433	48 Virginis ...	6.6	1	12	57	9.35	92	57	28.2	1	0.23
434	51 Virginis θ ...	4.4	...	13	3	10.08	94	50	29.7	12	0.36
435	Lacaille 5434 ...	9.9	1	13	6	16.87	152	53	10.3	1	0.27
436	... ..	9.0	1	13	7	56.98	139	47	43.4	1	0.28
437	R. P. L. 101 ...	7.5	...	13	9	31.88	1	38	54.7	1	0.35
438	Taylor 6180 ...	7.9	2	13	15	52.26	123	56	32.1	2	0.34
439	... ..	8.4	2	13	16	6.42	145	14	26.3	2	0.36
440	65 Virginis ...	6.1	...	13	16	31.66	94	14	17.8	1	0.38
441	67 Virginis α (<i>Spica</i>) * ...	1.2	...	13	18	17.60	100	23	36.3	6	0.35
442	79 Ursæ Majoris 3 (<i>Mizar</i>)	2.4	...	13	18	39.62	34	23	34.9	1	0.37
443	80 Ursæ Majoris γ (<i>Alcor</i>)	4.2	...	13	19	53.60	34	19	41.8	1	0.30
444	R. P. L. 103 ...	7.3	...	13	20	1.62	4	33	43.3	1	0.38
445	... ..	9.4	2	13	22	5.86	112	29	29.6	2	0.31
446	74 Virginis 1 ^a ...	4.9	...	13	25	9.36	95	34	44.1	1	0.31
447	79 Virginis 3 ...	3.5	...	13	28	1.15	89	55	31.5	11	0.38
448	Taylor 6280 ...	6.7	2	13	28	20.92	151	1	2.2	2	0.36
449	... ..	7.5	1	13	29	49.41	151	4	19.2	1	0.30
450	Lacaille 5639 ...	7.4	2	13	33	30.50	123	47	35.1	2	0.36
451	... ..	9.7	1	13	34	20.46	129	11	30.0	1	0.35
452	O. A. S. 13079 ...	8.9	1	13	36	8.16	116	50	10.0	1	0.32
453	... ..	9.9	1	13	36	50.52	144	39	51.5	1	0.34
454	Taylor 6374 ...	7.5	2	13	38	4.24	151	55	57.0	2	0.33
455	... ..	8.3	1	13	40	48.13	129	25	32.3	1	0.34

0.40

- 421.—Groombridge 1940.
 424.—425.—Comparison stars for Danes in 1869.
 437.—Groombridge 2006.
 444.—Groombridge 2007.
 445.—Observed for map of E Hydreæ Var. 1.
 452.—Comparison star for Atalanta in 1867.

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	R. P. L. 99 ...	+ 0.3597	+ 0.2231	- 0.017	+ 19.613	- 0.019	- 0.04	4342
422	... ..	+ 3.4922	+ 0.0586	...	+ 19.585	- 0.117	...	...
423	12 Canum Venaticorum	+ 2.8380	- 0.0152	- 0.023	+ 19.582	- 0.098	- 0.06	4346
424	O. A. S. 12539	+ 3.2278	+ 0.0217	...	+ 19.575	- 0.110	...	...
425	O. A. S. 12542	+ 3.2292	+ 0.0218	...	+ 19.568	- 0.111	...	...
426	... ..	+ 3.2973	+ 0.0298	...	+ 19.551	- 0.115	...	...
427	44 Virginis <i>k</i>	+ 3.0886	+ 0.0064	- 0.002	+ 19.523	- 0.111	0.00	4352
428	... ..	+ 3.4736	+ 0.0522	...	+ 19.512	- 0.125	...	...
429	... ..	+ 3.4937	+ 0.0549	...	+ 19.509	- 0.124	...	...
430	... ..	+ 3.4415	+ 0.0465	...	+ 19.481	- 0.127	...	...
431	... ..	+ 3.6216	+ 0.0716	...	+ 19.458	- 0.136	...	...
432	... ..	+ 3.2121	+ 0.0184	...	+ 19.449	- 0.122	...	...
433	48 Virginis ...	+ 3.0892	+ 0.0065	- 0.004	+ 19.434	- 0.119	+ 0.03	4373
434	51 Virginis θ ...	+ 3.1029	+ 0.0078	- 0.004	+ 19.298	- 0.132	+ 0.04	4401
435	Lacaille 5434	+ 3.8168	+ 0.0880	...	+ 19.221	- 0.166	...	...
436	... ..	+ 3.5344	+ 0.0493	...	+ 19.179	- 0.158	...	...
437	R. P. L. 101	- 10.8060	+ 7.9678	...	+ 19.139	+ 0.463	...	...
438	Taylor 6160	+ 3.4233	+ 0.0338	...	+ 18.966	- 0.170	...	...
439	... ..	+ 3.7002	+ 0.0629	...	+ 18.959	- 0.183	...	...
440	65 Virginis ...	+ 3.1045	+ 0.0080	- 0.005	+ 18.943	- 0.157	+ 0.03	4477
441	67 Virginis α (<i>Spica</i>)..	+ 3.1540	+ 0.0116	- 0.005	+ 18.896	- 0.163	+ 0.04	4480
442	79 Urs. Maj. 5 (<i>Mizar</i>) 2d	+ 2.4148	- 0.0172	+ 0.014	+ 18.885	- 0.127	+ 0.05	4486
443	80 Urs. Maj. <i>y</i> (<i>Alcor</i>)	+ 2.4026	- 0.0169	+ 0.016	+ 18.846	- 0.128	+ 0.03	4493
444	R. P. L. 103	- 2.6621	+ 0.9701	...	+ 18.844	+ 0.125	...	4498
445	... ..	+ 3.2662	+ 0.0191	...	+ 18.782	- 0.175	...	...
446	74 Virginis <i>l</i> ^a	+ 3.1195	+ 0.0091	- 0.006	+ 18.687	- 0.174	+ 0.04	4516
447	79 Virginis 5...	+ 3.0714	+ 0.0064	- 0.019	+ 18.595	- 0.176	- 0.06	4532
448	Taylor 6280	+ 3.9798	+ 0.0855	...	+ 18.583	- 0.226	...	4533
449	... ..	+ 3.9959	+ 0.0861	...	+ 18.534	- 0.231	...	...
450	Lacaille 5639	+ 3.4272	+ 0.0291	...	+ 18.408	- 0.207	...	...
451	... ..	+ 3.5083	+ 0.0351	...	+ 18.380	- 0.212	...	...
452	O. A. S. 13079	+ 3.3477	+ 0.0229	...	+ 18.316	- 0.207	...	...
453	... ..	+ 3.8456	+ 0.0642	...	+ 18.291	- 0.237	...	...
454	Taylor 6374	+ 4.1127	+ 0.0920	...	+ 18.247	- 0.257	...	...
455	... ..	+ 3.5402	+ 0.0356	...	+ 18.146	- 0.228	...	...

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
456	85 Urs. Maj. η (<i>Benetnasch</i>)	2.0	...	13	42	22.57	40	1	57.1	1	0.46
457	O. A. S. 18198 ...	9.2	1	13	45	4.51	117	12	1.9	1	0.29
458	Lacaille 5734 ...	7.0	2	13	48	4.45	151	50	38.9	2	0.31
459	8 Bootis η ...	2.9	...	13	48	26.77	70	56	40.3	17	0.37
460	... ..	8.6	1	13	50	20.15	149	55	37.9	1	0.33
461	98 Virginis τ ..	4.4	...	13	54	58.85	87	49	18.6	15	0.37
462	... ..	8.7	1	13	58	32.56	129	21	31.9	1	0.34
463	95 Virginis ...	5.7	...	13	59	47.28	98	41	16.1	1	0.39
464	Taylor 6570 ...	9.3	1	14	0	22.54	149	57	28.3	1	0.35
465	... ..	10.2	1	14	0	42.96	150	52	31.8	1	0.34
466	Taylor 6585 ...	8.0	1	14	1	40.14	124	15	31.5	1	0.33
467	Bootis Var. 4 ...	9.8	1	14	4	36.41	79	33	55.6	1	0.41
468	16 Bootis α (<i>Arcturus</i>) ...	0.0	...	14	9	41.16	70	8	4.1	7	0.33
469	... ..	9.9	1	14	11	43.70	124	17	55.9	1	0.34
470	... ..	9.0	1	14	11	47.47	124	28	57.2	1	0.35
471	S Bootis Var. 2 ...	9.3	4	14	18	29.52	35	35	34.2	4	0.38
472	... ..	8.3	1	14	24	30.80	123	49	55.9	1	0.35
473	25 Bootis ρ ...	3.6	...	14	26	10.96	59	3	8.8	7	0.41
474	O. A. N. 14652 ...	9.0	1	14	27	5.30	20	8	17.4	1	0.44
475	R Bootis Var. 1 ...	8.1	4	14	31	24.90	62	41	37.1	4	0.37
476	... ..	8.7	1	14	33	14.04	126	19	4.5	1	0.35
477	... ..	9.7	1	14	35	4.81	61	57	19.3	1	0.44
478	36 Bootis ϵ (<i>Mirac</i>) ...	2.6	...	14	39	15.89	62	22	20.1	4	0.39
479	9 Libræ α^2 ...	3.0	...	14	43	38.01	105	29	45.4	2	0.38
480	... ..	8.0	5	14	45	45.56	101	50	38.0	6	0.37
481	O. A. N. 15023 ..	7.5	2	14	55	46.27	27	48	40.7	2	0.36
482	Radcliffe 3306 ...	7.7	1	14	56	10.50	42	12	13.6	1	0.36
483	Taylor 7017 ...	7.9	1	14	57	28.70	150	27	9.1	1	0.38
484	Taylor 7036 ...	6.7	1	14	58	11.25	62	24	19.5	1	0.38
485	43 Bootis ψ ...	4.5	...	14	58	49.90	62	32	24.8	7	0.43
486	W. B. E. XV. 7 ...	9.2	1	15	2	36.65	97	22	8.0	1	0.36
487	W. B. E. XV. 32 ...	8.5	1	15	3	42.96	97	2	45.0	1	0.36
488	W. B. E. XV. 86 ...	9.0	1	15	6	47.53	98	3	1.1	1	0.36
489	27 Libræ β ...	2.7	...	15	9	57.63	98	53	51.5	8	0.43
490	... ..	8.6	1	15	12	10.79	130	25	8.0	1	0.41

457.—Comparison star for Atalanta in 1867.

467.—Bootis Var. 4. Period unknown. Supposed to vary from 8.7 to below 13th magnitude.

471.—S Bootis Var. 2. Period 272 days. Range, 8th to 13th magnitude.

474.—481.—Comparison stars for Comet 2, 1862.

475.—R Bootis Var. 1. Period 270 days. Range, 6th to 12th magnitude.

480.—Supposed variable by Prof. Schumacher, in "Astronomisches Nachrichten No. 641."

482.—Comparison star for Comet 2, 1861.

486.—487—488.—Comparison stars for Comet 2, 1867.

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>	"	"	"	
456	85 Ursæ Majoris η ...	+ 2.3845	- 0.0103	- 0.012	+ 18.088	- 0.159	+ 0.03	4607
457	O. A. S. 13198 ...	+ 3.3763	+ 0.0234	...	+ 17.983	- 0.226	...	...
458	Lacaille 5734 ...	+ 4.2070	+ 0.0930	...	+ 17.866	- 0.286	...	...
459	8 Bootis η ...	+ 2.8616	- 0.0006	- 0.004	+ 17.851	- 0.199	+ 0.36	4648
460	... ..	+ 4.1412	+ 0.0844	...	+ 17.775	- 0.289	...	...
461	93 Virginis τ ...	+ 3.0478	+ 0.0664	+ 0.001	+ 17.583	- 0.222	+ 0.07	4672
462	... ..	+ 3.6144	+ 0.0361	...	+ 17.432	- 0.268	...	...
463	95 Virginis ...	+ 3.1741	+ 0.0118	- 0.010	+ 17.377	- 0.238	- 0.01	4690
464	Taylor 6570 ...	+ 4.2313	+ 0.0853	...	+ 17.351	- 0.315	...	...
465	... ..	+ 4.2785	+ 0.0897	...	+ 17.336	- 0.320	...	...
466	Taylor 6585 ...	+ 3.5332	+ 0.0302	...	+ 17.294	- 0.268	...	...
467	Bootis Var. 4 ...	+ 2.9448	+ 0.0035	...	+ 17.163	- 0.229	...	...
468	16 Bootis α (<i>Arcturus</i>)	+ 2.8132	+ 0.0004	- 0.079	+ 16.980	- 0.227	+ 1.93	4729
469	... ..	+ 3.5679	+ 0.0303	...	+ 16.832	- 0.290	...	...
470	... ..	+ 3.5716	+ 0.0304	...	+ 16.829	- 0.290	...	...
471	S Bootis Var. 2 ...	+ 2.0107	- 0.0022	...	+ 16.503	- 0.174	...	...
472	... ..	+ 3.6005	+ 0.0297	...	+ 16.199	- 0.316	...	...
473	25 Bootis ρ ...	+ 2.9547	- 0.0015	- 0.008	+ 16.112	- 0.233	- 0.14	4808
474	O. A. N. 14652 ...	+ 0.8805	+ 0.0366	...	+ 16.064	- 0.084	...	...
475	R Bootis Var.1 ...	+ 2.6486	- 0.0004	...	+ 15.834	- 0.244	...	...
476	... ..	+ 3.6814	+ 0.0319	...	+ 15.736	- 0.339	...	...
477	... ..	+ 2.6262	- 0.0004	...	+ 15.636	- 0.247	...	...
478	36 Bootis ϵ (<i>Mirac</i>) ...	+ 2.6240	- 0.0001	- 0.005	+ 15.404	- 0.252	- 0.01	4876
479	9 Libræ α^2 ...	+ 3.3148	+ 0.0154	- 0.007	+ 15.156	- 0.324	+ 0.06	4895
480	... ..	+ 3.2577	+ 0.0135	...	+ 15.034	- 0.321	...	...
481	O. A. N. 15023 ...	+ 1.3134	+ 0.0151	...	+ 14.440	- 0.139	...	...
482	Radcliffe 3306 ...	+ 2.0474	+ 0.0009	...	+ 14.414	- 0.213	...	...
483	Taylor 7017 ...	+ 4.7327	+ 0.0866	...	+ 14.335	- 0.488	...	...
484	Taylor 7036 ...	+ 2.5819	+ 0.0011	...	+ 14.293	- 0.270	...	...
485	43 Bootis ψ ...	+ 2.5833	+ 0.0010	- 0.013	+ 14.253	- 0.271	0.00	4969
486	W. B. E. XV. 7 ...	+ 3.1958	+ 0.0112	...	+ 14.018	- 0.339	...	...
487	W. B. E. XV. 32 ...	+ 3.1908	+ 0.0112	...	+ 13.949	- 0.340	...	...
488	W. B. E. XV. 86 ...	+ 3.2097	+ 0.0114	...	+ 13.755	- 0.347	...	...
489	27 Libræ β ...	+ 3.2264	+ 0.0117	- 0.009	+ 13.551	- 0.353	+ 0.01	5034
490	... ..	+ 3.9189	+ 0.0343	...	+ 13.407	- 0.431	...	...

Mean Positions of Stars for 1869 January 1st.

Number.	Star.	Magnitude.	Estimations.	Mean Right Ascension.			Mean Polar Distance.			Observations.	Fraction of Year.
				h.	m.	s.	°	'	"		
491	R. P. L. 114	6.9	...	15	20	33.91	2	16	8.1	2	0.94
492	32 Libræ 5 ¹	6.2	...	15	20	52.13	106	15	27.8	1	0.32
493	... ..	8.8	1	15	21	59.53	129	27	4.2	1	0.52
494	Radcliffe 3394	6.7	1	15	25	13.08	41	50	8.5	1	0.86
495	... ..	8.0	1	15	25	19.37	122	14	40.9	1	0.41
496	Lacaille 6421	7.0	1	15	25	57.94	122	43	35.5	1	0.41
497	38 Libræ γ	4.0	...	15	28	12.02	104	21	2.4	1	0.32
498	... ..	8.2	1	15	29	0.83	126	36	24.4	1	0.36
499	5 Cor. Bor. α (<i>Alpheta</i>)	2.4	...	15	29	8.46	62	50	35.5	6	0.44
500	Lalande 28530	9.7	1	15	32	0.96	47	26	20.9	1	0.52
501	W. B. E. XV. 587	8.5	1	15	32	9.96	103	28	35.1	1	0.35
502	W. B. E. XV. 704	9.3	1	15	37	31.17	92	35	43.2	1	0.36
503	24 Serpentis α	2.7	...	15	37	48.97	83	9	37.2	4	0.47
504	... ..	9.3	1	15	41	39.07	62	4	11.8	1	0.52
505	O. A. S. 14996	9.3	1	15	46	46.91	105	16	21.5	1	0.41
506	1 Herculis χ	4.5	...	15	48	8.78	47	10	49.0	1	0.39
507	O. A. S. 15053	8.2	1	15	49	19.21	105	26	52.1	1	0.36
508	O. A. S. 15055	7.0	1	15	49	40.17	105	39	1.9	1	0.52
509	W. B. E. XV. 1044	8.3	1	15	56	5.91	95	28	4.9	1	0.50
510	8 Scorpii β ¹	3.0	...	15	57	49.36	109	26	40.9	5	0.43
511	O. A. S. 15237	8.3	1	15	59	36.12	106	35	12.1	1	0.52
512	14 Scorpii ν	4.2	...	16	4	23.08	109	7	4.7	1	0.40
513	... ..	7.5	1	16	4	29.03	107	53	24.7	1	0.43
514	1 Ophiuchi δ	2.8	...	16	7	23.86	93	21	18.7	4	0.48
515	O. A. S. 15470	8.8	1	16	9	26.61	112	35	30.5	1	0.41
516	R Scorpii Var. 1	10.4	1	16	9	51.16	112	37	5.3	1	0.36
517	S Scorpii Var. 2	10.5	1	16	9	52.46	112	34	0.8	1	0.36
518	... ..	10.0	1	16	10	1.33	112	34	24.4	1	0.41
519	O. A. S. 15504	8.9	...	16	11	38.99	106	42	11.2	1	0.44
520	... ..	9.0	1	16	14	36.88	146	11	50.4	1	0.52
521	O. A. S. 15613	8.5	1	16	17	33.17	113	9	19.8	1	0.44
522	5 Ophiuchi ρ	4.8	...	16	17	44.13	113	8	34.9	1	0.50
523	21 Scorpii α (<i>Antares</i>)	1.1	...	16	21	22.67	116	8	18.9	4	0.46
524	14 Draconis	2.8	...	16	22	13.09	28	11	18.8	2	0.47
525	8 Ophiuchi φ	4.4	...	16	23	38.53	106	19	26.3	1	0.32

491.—Groombridge 2283.

494.—509—Comparison stars for Comet 2, 1862.

497.—Comparison star for Comet 2, 1867.

501.—505—507—508—Comparison stars for Asia in 1861.

511.—513—Comparison stars for Sylvia in 1866.

516.—R Scorpii Var. 1. Period 225 days. Range, 9th to below 14th magnitude.

517.—S Scorpii Var. 2. Period 177 days. Range, 9th to below 14th magnitude.

519.—Comparison star for Sappho in 1864.

521.—522.—Comparison stars for Angelina in 1866.

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	R. P. L. 114 ...	+ 22·8357	+ 7·6864	...	+ 12·853	+ 2·551	...	5140
492	32 Libræ δ^1 ...	+ 3·3718	+ 0·0148	+ 0·002	+ 12·838	- 0·384	+ 0·05	5089
493	... ..	+ 3·9211	+ 0·0322	...	+ 12·757	- 0·445	...	...
494	Radcliffe 3394 ...	+ 1·9066	+ 0·0037	...	+ 12·538	- 0·222	...	...
495	... ..	+ 3·7435	+ 0·0252	...	+ 12·581	- 0·431	...	...
496	Lacaille 6421 ...	+ 3·7445	+ 0·0252	...	+ 12·487	- 0·433	...	...
497	38 Libræ γ ...	+ 3·3419	+ 0·0136	+ 0·002	+ 12·332	- 0·389	- 0·02	5134
498	... ..	+ 3·8575	+ 0·0285	...	+ 12·277	- 0·449	...	...
499	5 Cor. Bor. α (<i>Alpha</i>)	+ 2·5296	+ 0·0023	+ 0·009	+ 12·268	- 0·297	+ 0·07	5143
500	Lalande 28530 ...	+ 2·0916	+ 0·0025	...	+ 12·068	- 0·249	...	...
501	W. B. E. XV. 587 ...	+ 3·3283	+ 0·0131	...	+ 12·058	- 0·393	...	...
502	W. B. E. XV. 704 ...	+ 3·1226	+ 0·0089	...	+ 11·679	- 0·375	...	...
503	24 Serpionis α ...	+ 2·9416	+ 0·0062	+ 0·009	+ 11·659	- 0·354	- 0·05	5196
504	... ..	+ 2·4887	+ 0·0027	...	+ 11·384	- 0·304	...	...
505	O. A. S. 14996 ...	+ 3·3773	+ 0·0131	...	+ 11·012	- 0·416	...	...
506	1 Hercules χ ...	+ 2·0326	+ 0·0034	+ 0·040	+ 10·912	- 0·254	- 0·58	5271
507	O. A. S. 15053 ...	+ 3·8332	+ 0·0131	...	+ 10·826	- 0·420	...	...
508	O. A. S. 15055 ...	+ 3·3877	+ 0·0132	...	+ 10·800	- 0·421	...	...
509	W. B. E. XV. 1044 ...	+ 2·1819	+ 0·0092	...	+ 10·322	- 0·402	...	...
510	8 Scorpion β^1 ...	+ 3·4785	+ 0·0142	- 0·002	+ 10·191	- 0·441	+ 0·02	5329
511	O. A. S. 15237 ...	+ 3·4167	+ 0·0129	...	+ 10·057	- 0·435	...	...
512	14 Scorpion ν ...	+ 3·4778	+ 0·0136	- 0·002	+ 9·693	- 0·448	+ 0·03	5382
513	... ..	+ 3·4501	+ 0·0130	...	+ 9·686	- 0·444	...	...
514	1 Ophiuchi δ ...	+ 3·1412	+ 0·0081	- 0·006	+ 9·455	- 0·408	+ 0·13	5414
515	O. A. S. 15470 ...	+ 3·5651	+ 0·0147	...	+ 9·303	- 0·464	...	...
516	1 Scorpion Var. 1 ...	+ 3·5661	+ 0·0147	...	+ 9·272	- 0·465	...	...
517	8 Scorpion Var. 2 ...	+ 3·5649	+ 0·0146	...	+ 9·271	- 0·465	...	...
518	... ..	+ 3·5652	+ 0·0147	...	+ 9·258	- 0·465	...	...
519	O. A. S. 15504 ...	+ 3·4294	+ 0·0121	...	+ 9·132	- 0·449	...	...
520	... ..	+ 4·8618	+ 0·0402	...	+ 8·900	- 0·638	...	...
521	O. A. S. 15613 ...	+ 3·5878	+ 0·0141	...	+ 8·669	- 0·476	...	...
522	5 Ophiuchi ρ ...	+ 3·5877	+ 0·0141	- 0·002	+ 8·655	- 0·476	+ 0·01	5477
523	21 Scorpion α (<i>Antares</i>)	+ 3·6684	+ 0·0150	- 0·001	+ 8·366	- 0·491	+ 0·03	5498
524	14 Draconis η ...	+ 0·8011	+ 0·0188	+ 0·005	+ 8·299	- 0·111	- 0·07	5511
525	8 Ophiuchi ϕ ...	+ 3·4296	+ 0·0110	- 0·001	+ 8·135	- 0·461	+ 0·03	5516

Mean Positions of Stars for 1869 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>		
526	... ..	8.3	1	16	24	10.34	152	15	42.9	1	0.52
527	... ..	9.0	1	16	34	58.67	134	7	41.5	1	0.43
528	40 Heroulis 3	3.1	...	16	36	20.79	58	9	30.1	5	0.48
529	Lacaille 6984	8.0	1	16	40	2.82	120	58	0.4	2	0.50
530	... ..	8.7	1	16	44	55.92	130	18	42.8	1	0.43
531	... ..	10.3	1	16	45	7.25	75	17	16.5	1	0.52
532	... ..	8.5	1	16	47	11.99	180	16	55.3	1	0.58
533	27 Ophiuchi κ	3.4	...	16	51	28.07	80	25	9.8	6	0.52
534	... ..	8.8	1	16	51	59.01	122	54	12.0	1	0.57
535	... ..	9.2	1	16	52	24.82	122	49	19.7	1	0.43
536	29 Ophiuchi	6.3	...	16	54	11.43	108	41	23.5	1	0.40
537	Taylor 7926	7.9	1	17	0	8.49	136	51	30.2	1	0.58
538	... ..	8.0	1	17	4	31.61	59	7	38.1	1	0.58
539	O. A. S. 16432	8.2	1	17	6	6.97	105	24	5.2	1	0.57
540	64 Herculis α Var. 1	3.2	...	17	8	40.44	75	27	30.1	5	0.51
541	... ..	8.2	1	17	9	21.10	124	4	38.2	1	0.53
542	42 Ophiuchi θ	3.4	...	17	13	57.91	114	51	58.3	6	0.56
543	... ..	8.3	3	17	21	25.19	180	43	53.0	3	0.55
544	... ..	8.5	1	17	21	34.20	180	45	56.8	1	0.59
545	... ..	8.0	1	17	22	16.79	128	54	48.0	2	0.55
546	23 Draconis β	3.0	...	17	27	28.44	97	36	2.4	1	0.46
547	Taylor 8129	8.2	1	17	27	57.39	77	23	39.3	1	0.59
548	... ..	7.7	1	17	28	24.96	130	43	42.1	1	0.58
549	55 Ophiuchi α	2.2	...	17	28	51.16	77	20	33.6	6	0.53
550	... ..	8.8	1	17	29	44.08	130	56	38.5	1	0.59
551	... ..	10.2	1	17	34	54.58	128	35	34.1	1	0.59
552	Lacaille 7406	7.2	2	17	35	3.15	128	44	22.2	2	0.40
553	58 Ophiuchi	5.0	...	17	35	34.81	111	36	59.4	1	0.63
554	... ..	9.2	1	17	36	50.21	150	37	19.6	1	0.59
555	... ..	8.4	1	17	38	0.11	126	29	28.9	1	0.58
556	... ..	8.1	1	17	39	53.75	127	21	46.4	1	0.57
557	86 Heroulis μ	3.5	...	17	41	19.86	62	12	3.9	7	0.53
558	... ..	9.2	2	17	48	28.59	152	8	36.7	2	0.55
559	Taylor 8288	7.0	1	17	48	46.87	105	47	12.5	1	0.52
560	... ..	8.9	2	17	51	8.89	152	7	37.0	2	0.49

540— α Herculis Var. 1. Changes irregularly between 3rd and 4th magnitude.

555.—556—Comparison stars for Donati's Comet of 1858.

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	... ..	+ 5.3956	+ 0.0638	...	+ 8.143	- 0.722	...	...
527	... ..	+ 4.2809	+ 0.0247	...	+ 7.271	- 0.584	...	...
528	40 Hercules ζ	+ 2.2965	+ 0.0033	- 0.034	+ 7.159	- 0.316	- 0.45	5604
529	Lacaille 6984	+ 3.8261	+ 0.0149	...	+ 6.856	- 0.528	...	5622
530	... ..	+ 4.1462	+ 0.0192	...	+ 6.452	- 0.575	...	...
531	... ..	+ 2.7397	+ 0.0039	...	+ 6.436	- 0.381	...	...
532	... ..	+ 4.1486	+ 0.0186	...	+ 6.264	- 0.578	...	...
533	27 Ophiuchi κ	+ 2.8564	+ 0.0044	- 0.023	+ 5.908	- 0.402	- 0.02	5708
534	... ..	+ 3.8995	+ 0.0139	...	+ 5.864	- 0.547	...	...
535	... ..	+ 3.8973	+ 0.0137	...	+ 5.829	- 0.547	...	...
536	29 Ophiuchi ...	+ 3.5059	+ 0.0089	- 0.001	+ 5.680	- 0.492	- 0.01	5728
537	Taylor 7926 ...	+ 4.4504	+ 0.0203	...	+ 5.179	- 0.629	...	...
538	... ..	+ 2.2961	+ 0.0031	...	+ 4.807	- 0.327	...	...
539	O. A. S. 16432	+ 3.4302	+ 0.0070	...	+ 4.672	- 0.489	...	...
540	64 Hercules α Var. 1.	+ 2.7340	+ 0.0035	- 0.003	+ 4.453	- 0.391	- 0.04	5821
541	... ..	+ 3.9545	+ 0.0113	...	+ 4.396	- 0.565	...	...
542	42 Ophiuchi θ	+ 3.6792	+ 0.0080	- 0.003	+ 4.002	- 0.528	- 0.02	5851
543	... ..	+ 4.2071	+ 0.0111	...	+ 3.360	- 0.605	...	...
544	... ..	+ 4.2086	+ 0.0111	...	+ 3.347	- 0.606	...	...
545	... ..	+ 4.1369	+ 0.0102	...	+ 3.286	- 0.596	...	...
546	23 Draconis β	+ 1.3535	+ 0.0052	- 0.003	+ 2.837	- 0.197	0.00	5937
547	Taylor 8129 ...	+ 2.7760	+ 0.0031	...	+ 2.795	- 0.402	...	...
548	... ..	+ 4.2124	+ 0.0094	...	+ 2.755	- 0.609	...	...
549	55 Ophiuchi α	+ 2.7746	+ 0.0030	+ 0.004	+ 2.717	- 0.402	+ 0.20	5941
550	... ..	+ 4.2220	+ 0.0091	...	+ 2.641	- 0.611	...	...
551	... ..	+ 4.1327	+ 0.0072	...	+ 2.191	- 0.600	...	...
552	Lacaille 7406	+ 4.1385	+ 0.0072	...	+ 2.179	- 0.601	...	...
553	58 Ophiuchi ...	+ 3.6990	+ 0.0050	- 0.010	+ 2.133	- 0.523	- 0.04	5987
554	... ..	+ 5.1349	+ 0.0155	...	+ 2.023	- 0.790	...	...
555	... ..	+ 4.0566	+ 0.0022	...	+ 1.926	- 0.590	...	...
556	... ..	+ 4.0890	+ 0.0060	...	+ 1.756	- 0.595	...	...
557	86 Hercules μ	+ 2.3695	+ 0.0025	- 0.026	+ 1.632	- 0.346	+ 0.74	6021
558	... ..	+ 3.5988	+ 0.0090	...	+ 1.008	- 0.815	...	...
559	Taylor 8288 ...	+ 3.4497	+ 0.0029	...	+ 0.981	- 0.503	...	6065
560	... ..	+ 5.5983	+ 0.0073	...	+ 0.774	- 0.816	...	...

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

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

Mean Positions of Stars for 1869 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>		
561	Lacaille 7517	7.0	1	17	52	50.36	149	10	32.6	1	0.52
562	... ..	8.0	1	17	59	47.65	150	26	8.9	1	0.61
563	... ..	8.6	1	18	3	14.88	59	1	11.7	1	0.52
564	T Herculis Var. 4	8.7	4	18	4	8.68	59	0	2.2	4	0.57
565	... ..	9.5	1	18	5	8.06	120	43	31.6	1	0.59
566	13 Sagittarii μ^1	4.1	...	18	5	55.69	111	5	25.4	8	0.52
567	Lacaille 7622	7.3	3	18	6	23.58	133	12	15.0	3	0.60
568	Lacaille 7644	7.0	1	18	9	18.52	132	19	57.6	1	0.51
569	23 Ursæ Minoris δ	4.3	...	18	14	36.06	3	23	39.6	7	0.28
570	Lalande 33818	10.0	1	18	15	18.43	101	55	17.0	1	0.60
571	21 Sagittarii	4.9	...	18	17	32.80	110	36	41.4 ^{33.2}	1	0.40
572	24 Ursæ Minoris	5.9	...	18	19	16.42	3	0	59.0	1	0.09
573	O. A. S. 18326	8.0	1	18	23	40.96	109	14	45.1	1	0.60
574	V Sagittarii Var. 5	7.7	2	18	23	43.22	108	21	1.0	3	0.61
575	Taylor 8527	7.0	1	18	23	45.69	108	29	21.4	1	0.61
576	U Sagittarii Var. 4	7.0	2	18	24	10.25	109	12	49.3	2	0.59
577	O. A. S. 18846	7.0	1	18	24	30.24	109	12	51.7	1	0.59
578	Taylor 8551	7.8	1	18	27	44.27	149	13	31.6	1	0.58
579	3 Lyræ α (<i>Vega</i>)	0.2	...	18	32	30.13	51	20	12.9	3	0.53
580	... ..	9.0	1	18	35	0.98	136	44	41.3	1	0.60
581	... ..	9.2	3	18	35	3.22	118	34	23.6	3	0.60
582	... ..	9.0	1	18	35	22.14	137	16	2.4	1	0.62
583	... ..	8.2	1	18	40	45.25	127	27	18.2	1	0.60
584	10 Lyræ β Var. 1... ..	3.6	...	18	45	14.49	56	47	17.1	9	0.57
585	... ..	9.0	1	18	46	9.94	125	53	23.4	1	0.59
586	Lacaille 7919	8.2	1	18	48	3.48	129	4	48.2	1	0.59
587	... ..	9.1	2	18	52	30.86	149	55	28.4	2	0.56
588	O. A. S. 18960	7.7	1	18	53	58.00	121	7	14.9	1	0.40
589	B. P. L. 131	6.6	...	18	57	21.38	3	27	32.4	2	0.77
590	O. A. S. 19032	9.5	1	18	57	28.52	111	16	33.1	1	0.60
591	17 Aquilæ 3	3.1	...	18	59	23.19	76	19	46.2	8	0.59
592	... ..	7.3	1	19	8	14.13	122	6	42.9	1	0.58
593	R Sagittarii Var. 1	8.7	1	19	9	0.37	109	32	8.2	2	0.61
594	43 Sagittarii α	4.9	...	19	9	58.03	109	11	0.7	1	0.40
595	... ..	7.6	1	19	10	27.21	123	30	26.9	1	0.62

564.—T Herculis Var. 4. Period 165 days. Range, 7th to 12th magnitude.

567.—580—582—Comparison stars for Donati's Comet of 1858.

570.—Comparison star for Asia in 1865.

574.—V Sagittarii Var. 5. Varies irregularly between 7.5 and 9th magnitude.

576.—U Sagittarii Var. 4. Period 6.745 days. Range, 7th to 8.3 magnitude.

581.—Comparison star for Amphitrite in 1863.

584.— β Lyræ Var. 1. Period 12.91 days. Range, 3.5 to 4.5 magnitude.

588.—592—Comparison stars for Eurydice in 1866.

589.—Carrington 2882.

593.—R Sagittarii Var. 1. Period 270 days. Range, 7th to below 13th magnitude.

595.—Comparison star for Pandora in 1862.

3.1

[3.2]

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.	
561	Lacaille 7517 ...	+ 5.3116	+ 0.0053	...	+ 0.626	- 0.774	...	...
562	... ..	+ 5.4292	+ 0.0012	...	+ 0.018	- 0.792	...	...
563	... ..	+ 2.2696	+ 0.0022	...	- 0.284	- 0.331	...	...
564	T Herculis Var. 4 ...	+ 2.2690	+ 0.0021	...	- 0.362	- 0.331	...	...
565	... ..	+ 3.8666	+ 0.0007	...	- 0.450	- 0.564	...	...
566	13 Sagittarii μ^1 ...	+ 3.5875	+ 0.0009	- 0.004	- 0.519	- 0.523	+ 0.01	6168
567	Lacaille 7622 ...	+ 4.3274	- 0.0002	...	- 0.560	- 0.631	...	...
568	Lacaille 7644 ...	+ 4.2892	- 0.0010	...	- 0.814	- 0.625	...	...
569	23 Ursæ Minoris δ ...	- 19.4231	- 0.4267	+ 0.048	- 1.277	+ 2.828	- 0.03	6281
570	Lalande 33318 ...	+ 3.3538	+ 0.0004	...	- 1.338	- 0.487	...	...
571	21 Sagittarii... ..	+ 3.5735	- 0.0004	- 0.003	- 1.534	- 0.519	+ 0.02	6247
572	24 Ursæ Minoris ...	- 22.2110	- 0.7247	+ 0.085	- 1.685	+ 3.230	- 0.01	6320
573	O. A. S. 18326 ...	+ 3.5364	- 0.0010	...	- 2.069	- 0.512	...	...
574	V Sagittarii Var. 5 ...	+ 3.5132	- 0.0010	...	- 2.072	- 0.509	...	...
575	Taylor 8527	+ 3.5167	- 0.0010	...	- 2.072	- 0.509	...	6309
576	U Sagittarii Var. 4 ...	+ 3.5354	- 0.0011	...	- 2.111	- 0.512	...	...
577	O. A. S. 18346 ...	+ 3.5354	- 0.0011	...	- 2.140	- 0.512	...	...
578	Taylor 8551	+ 5.3008	- 0.0153	...	- 2.422	- 0.767	...	...
579	3 Lyræ α (Vega) ...	+ 2.0131	+ 0.0016	+ 0.017	- 2.835	- 0.290	- 0.28	6355
580	... ..	+ 4.4766	- 0.0098	...	- 3.052	- 0.644	...	...
581	... ..	+ 3.7917	- 0.0040	...	- 3.056	- 0.546	...	...
582	... ..	+ 4.5022	- 0.0103	...	- 3.032	- 0.643	...	...
583	... ..	+ 4.0802	- 0.0075	...	- 3.548	- 0.584	...	...
584	10 Lyræ β Var. 1 ...	+ 2.2138	+ 0.0015	- 0.002	- 3.933	- 0.315	+ 0.03	6429
585	... ..	+ 4.0200	- 0.0031	...	- 4.012	- 0.572	...	...
586	Lacaille 7910	+ 4.1341	- 0.0098	...	- 4.175	- 0.588	...	...
587	... ..	+ 5.3205	- 0.0307	...	- 4.555	- 0.754	...	...
588	O. A. S. 18900 ...	+ 3.8571	- 0.0077	...	- 4.078	- 0.545	...	...
589	R. P. L. 131	- 18.3560	- 1.5766	...	- 4.966	+ 2.596	...	...
590	O. A. S. 19032 ...	+ 3.5765	- 0.0053	...	- 4.970	- 0.503	...	...
591	17 Aquilæ 3... ..	+ 2.7578	+ 0.0003	- 0.006	- 5.139	- 0.387	+ 0.07	6528
592	... ..	+ 3.8744	- 0.0104	...	- 5.833	- 0.533	...	...
593	R Sagittarii Var. 1 ...	+ 3.5253	- 0.0060	...	- 5.948	- 0.488	...	...
594	43 Sagittarii d ...	+ 3.5158	- 0.0061	- 0.004	- 6.028	- 0.486	- 0.01	6584
595	... ..	+ 3.9159	- 0.0115	...	- 6.068	- 0.542	...	...

Mean Positions of Stars for 1869 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>		
596	25 Aquilæ ω	5.1	...	19	11	39.92	78	38	19.7	2	0.57
597	Lacaille 8074	6.7	1	19	12	57.98	132	15	30.7	1	0.61
598	44 Sagittarii ρ^1	3.9	...	19	14	4.40	108	5	29.2	2	0.55
599	80 Aquilæ δ	3.5	...	19	18	53.45	87	8	39.3	9	0.62
600	... ..	6.9	3	19	26	27.42	131	24	11.6	3	0.62
601	52 Sagittarii h^3	4.6	...	19	28	43.91	115	10	13.0	2	0.65
602	... ..	8.7	2	19	34	10.10	127	44	37.3	2	0.63
603	56 Sagittarii f	5.1	...	19	38	43.03	110	4	25.7	1	0.70
604	50 Aquilæ γ	2.8	...	19	40	1.83	79	42	15.3	7	0.62
605	53 Aquilæ α (<i>Altair</i>)	1.0	...	19	44	23.33	81	28	32.3	6	0.63
606	57 Sagittarii	6.2	...	19	44	35.10	109	22	32.1	1	0.40
607	O. A. S. 20055	9.0	2	19	46	36.55	107	45	4.4	2	0.62
608	60 Aquilæ β	4.0	...	19	48	52.59	83	55	6.7	5	0.64
609	... ..	9.7	3	19	54	6.25	107	11	33.5	3	0.60
610	λ Ursæ Minoris	6.5	...	19	55	17.03	1	5	6.0	3	0.31
611	... ..	8.8	1	19	59	35.77	129	10	35.6	1	0.67
612	... ..	8.0	1	20	4	36.02	147	13	41.6	1	0.71
613	6 Capricorni α^2	3.8	...	20	10	46.96	102	56	56.3	10	0.63
614	7 Capricorni σ	5.6	...	20	11	50.03	109	31	31.7	1	0.40
615	X Capricorni Var. 7	10.3	1	20	15	15.17	106	25	34.1	1	0.59
616	... ..	10.0	1	20	16	0.72	106	16	44.9	1	0.59
617	11 Capricorni ρ	5.0	...	20	21	23.04	108	14	41.0	12	0.63
618	R. P. L. 143	6.7	...	20	28	59.59	5	17	27.9	1	0.64
619	... ..	9.3	1	20	31	21.31	125	42	37.5	1	0.59
620	Taylor 9518	7.1	...	20	32	13.01	105	26	3.6	1	0.67
621	15 Capricorni ν	5.3	...	20	32	35.17	108	35	53.4	3	0.63
622	... ..	9.5	1	20	34	59.53	128	12	42.3	1	0.67
623	50 Cygni α (<i>Deneb</i>)	1.5	...	20	36	57.94	45	11	11.7	3	0.70
624	32 Vulpeculæ	5.1	...	20	48	58.57	62	26	22.2	6	0.69
625	Taylor 9772 ... 2nd... ..	7.9	...	21	0	49.50	145	6	6.4	1	0.71
626	64 Cygni 3	3.5	...	21	7	21.64	60	18	33.5	9	0.69
627	32 Capricorni ι	4.4	...	21	14	56.84	107	23	27.4	3	0.63
628	5 Cephei α (<i>Alderamin</i>)	2.6	...	21	15	28.44	27	58	8.2	1	0.61
629	22 Aquarii β	3.1	...	21	24	39.57	96	8	46.4	7	0.73
630	... ..	9.5	1	21	27	23.54	132	36	59.3	1	0.77

24.86

607.—609.—Comparison stars for Hestia in 1869.

615.—X Capricorni Var. 7. Supposed to vary between 10.5 magnitude and invisibility.

616.—Comparison star for Hestia in 1865.

618.—Carrington 3128.

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	25 Aquilæ ω ...	+ 2'8165	- 0'0008	- 0'008	- 6'170	- 0'388	- 0'02	6595
597	Lacaille 8074 ...	+ 4'2258	- 0'0174	...	- 6'277	- 0'582	...	...
598	44 Sagittarii ρ^1 ...	+ 3'4864	- 0'0061	- 0'008	- 6'369	- 0'480	- 0'08	6619
599	30 Aquilæ δ ...	+ 3'0093	- 0'0018	+ 0'014	- 6'768	- 0'410	- 0'10	6646
600	... ..	+ 4'1680	- 0'0197	...	- 7'387	- 0'562	...	...
601	52 Sagittarii λ^2 ...	+ 3'6538	- 0'0102	+ 0'002	- 7'573	- 0'490	- 0'02	6706
602	... ..	+ 4'0209	- 0'0182	...	- 8'011	- 0'585	...	...
603	56 Sagittarii f ...	+ 3'5162	- 0'0091	- 0'013	- 8'374	- 0'462	+ 0'07	6760
604	52 Aquilæ γ ...	+ 2'8520	- 0'0011	+ 0'001	- 8'478	- 0'373	0'00	6772
605	53 Aquilæ α (<i>Altair</i>). ...	+ 2'8921	- 0'0014	+ 0'036	- 8'323	- 0'374	- 0'38	6802
606	57 Sagittarii... ..	+ 3'4942	- 0'0094	- 0'003	- 8'338	- 0'454	+ 0'06	6803
607	O. A. S. 20055 ...	+ 3'4546	- 0'0088	...	- 8'996	- 0'446	...	...
608	60 Aquilæ β ...	+ 2'9454	- 0'0020	+ 0'002	- 9'173	- 0'378	+ 0'47	6833
609	... ..	+ 3'4356	- 0'0092	...	- 9'577	- 0'437	...	...
610	λ Ursæ Minoris ...	+ 58'7908	- 29'8413	- 0'035	- 9'668	+ 7'517	- 0'01	6999
611	... ..	+ 4'0166	- 0'0238	...	- 9'997	- 0'504	...	...
612	... ..	+ 4'8495	- 0'0563	...	- 10'374	- 0'602	...	...
613	6 Capricorni α^2 ...	+ 3'3308	- 0'0084	+ 0'001	- 10'834	- 0'403	0'00	6974
614	7 Capricorni σ ...	+ 3'4699	- 0'0115	0'000	- 10'911	- 0'420	- 0'02	6981
615	X Capricorni Var. 7. ...	+ 3'3977	- 0'0101	...	- 11'160	- 0'407	...	...
616	... ..	+ 3'3958	- 0'0101	...	- 11'215	- 0'406	...	...
617	11 Capricorni ρ ...	+ 3'4316	- 0'0115	- 0'006	- 11'602	- 0'403	+ 0'01	7042
618	R. P. L. 143 ...	+ 8'4192	- 1'2849	...	- 12'189	+ 0'982	...	...
619	... ..	+ 3'8312	- 0'0243	...	- 12'302	- 0'436	...	...
620	Taylor 9518 ...	+ 3'3628	- 0'0106	...	- 12'362	- 0'381	...	...
621	15 Capricorni ν ...	+ 3'4259	- 0'0122	0'000	- 12'387	- 0'388	- 0'02	7134
622	... ..	+ 3'8930	- 0'0275	...	- 12'553	- 0'438	...	...
623	50 Cygni α (<i>Deneb</i>) ...	+ 2'0484	+ 0'0021	- 0'002	- 12'686	- 0'226	0'00	7171
624	32 Vulpeculæ ...	+ 2'5555	+ 0'0026	- 0'002	- 13'483	- 0'270	0'00	7256
625	Taylor 9772... 2nd... ..	+ 4'4225	- 0'0624	...	- 14'281	- 0'449	...	...
626	64 Cygni 3 ...	+ 2'5507	+ 0'0038	- 0'003	- 14'629	- 0'248	+ 0'07	7368
627	32 Capricorni ι ...	+ 3'3483	- 0'0130	0'000	- 15'075	- 0'316	- 0'02	7407
628	5 Cepheia (<i>Alderamin</i>) ...	+ 1'4158	- 0'0071	+ 0'021	- 15'104	- 0'130	- 0'01	7416
629	22 Aquarii β	+ 3'1623	- 0'0071	- 0'001	- 15'622	- 0'282	0'00	7478
630	... ..	+ 3'8321	- 0'0371	...	- 15'771	- 0'389	...	...

Mean Positions of Stars for 1869. 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>		
631	40 Capricorni γ ...	3.8	...	21	32	49.57	107	15	9.9	2	0.59
632	... ..	10.3	2	21	34	9.32	102	59	1.7	2	0.77
633	8 Pegasi ϵ ...	2.4	...	21	37	45.09	80	48	27.9	6	0.75
634	49 Capricorni δ ...	3.0	...	21	39	48.32	106	43	14.1	1	0.63
635	Lacaille 8948 ...	8.0	1	21	45	20.42	127	30	33.2	1	0.77
636	16 Pegasi ...	5.0	...	21	47	6.05	64	41	26.5	4	0.75
637	... ..	9.3	1	21	51	0.24	127	28	0.7	1	0.77
638	... ..	9.4	1	21	53	4.08	127	29	13.9	1	0.77
639	... ..	9.8	1	21	53	5.84	136	36	48.3	1	0.77
640	... ..	8.0	1	21	54	11.72	150	47	50.7	1	0.78
641	34 Aquarii α ...	3.2	...	21	59	3.21	90	57	19.9	9	0.74
642	... ..	10.0	1	22	3	35.50	101	7	27.3	1	0.78
643	Lacaille 9047 ... 1st...	7.6	2	22	4	14.40	128	56	52.9	2	0.76
644	43 Aquarii θ ...	4.8	...	22	9	55.13	98	26	5.3	7	0.77
645	... ..	8.5	...	22	12	21.00	129	25	14.7	1	0.67
646	... ..	8.0	1	22	15	1.39	129	24	52.0	1	0.67
647	W. B. E. XXII. 380 ...	9.0	1	22	18	40.16	88	16	8.0	1	0.82
648	55 Aquarii ζ ... 1st...	3.8	...	22	22	5.08	90	41	21.4	1	0.77
649	H. P. L. 150 ...	5.4	...	22	23	19.91	4	33	11.9	4	0.37
650	57 Aquarii σ ...	4.8	...	22	23	42.74	101	20	51.7	1	0.79
651	... ..	8.9	1	22	26	14.71	84	5	2.4	1	0.79
652	62 Aquarii η ...	4.2	...	22	28	37.38	90	47	32.6	1	0.77
653	42 Pegasi ζ ...	3.6	...	22	34	55.68	79	51	6.4	4	0.79
654	67 Aquarii ...	6.2	...	22	36	23.78	97	38	52.4	1	0.77
655	... ..	8.6	1	22	36	47.96	130	25	24.7	1	0.84
656	... ..	8.5	3	22	41	34.46	130	33	50.9	3	0.77
657	... ..	8.0	1	22	44	2.11	135	41	27.9	1	0.82
658	... ..	10.0	1	22	44	24.60	135	35	37.7	1	0.78
659	... ..	9.0	1	22	49	30.54	135	26	19.6	1	0.81
660	24 Pis. Aus. α (Fomalhaut)	1.3	...	22	50	24.45	120	18	57.5	2	0.79
661	... ..	7.9	1	22	52	3.85	85	21	33.4	1	0.82
662	... ..	9.1	2	22	52	5.70	85	24	56.0	2	0.81
663	... ..	10.3	1	22	57	26.50	57	10	28.4	1	0.77
664	54 Pegasi α (Markab)	2.6	...	22	58	14.12	75	29	57.9	5	0.81
665	Lacaille 9372 ...	8.2	1	23	0	41.47	150	26	35.9	1	0.77

647.—651.—Comparison stars for Sappho in 1868.

649.—Groombridge 3820.

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.	
631	40 Capricorni γ ...	+ 3.3208	- 0.0130	+ 0.013	- 16.060	- 0.283	+ 0.03	7525
632	... ..	+ 3.2554	- 0.0106	...	- 16.129	- 0.276	...	...
633	8 Pegasi ϵ ...	+ 2.9451	- 0.0005	+ 0.003	- 16.314	- 0.242	0.00	7561
634	49 Capricorni δ ...	+ 3.3027	- 0.0128	+ 0.014	- 16.415	- 0.270	+ 0.28	7580
635	Lacaille 8948 ...	+ 3.6410	- 0.0304	...	- 16.692	- 0.287	...	..
636	16 Pegasi	+ 2.7257	+ 0.0052	+ 0.001	- 16.776	- 0.210	+ 0.01	7627
637	... ..	+ 3.6189	- 0.0304	...	- 16.961	- 0.275	...	...
638	... ..	+ 3.6115	- 0.0304	...	- 17.054	- 0.270	...	...
639	... ..	+ 3.8159	- 0.0441	...	- 17.057	- 0.286	...	...
640	... ..	+ 4.3202	- 0.0872	...	- 17.109	- 0.323	...	...
641	34 Aquarii α	+ 3.0833	- 0.0041	- 0.003	- 17.327	- 0.219	+ 0.02	7688
642	... ..	+ 3.2000	- 0.0093	...	- 17.523	- 0.219	...	...
643	Lacaille 9047 1st..	+ 3.5951	- 0.0321	...	- 17.550	- 0.246	...	...
644	43 Aquarii θ	+ 3.1637	- 0.0075	+ 0.006	- 17.786	- 0.205	+ 0.03	7773
645	... ..	+ 3.5695	- 0.0325	...	- 17.883	- 0.228	...	...
646	... ..	+ 3.5590	- 0.0324	...	- 17.987	- 0.222	...	...
647	W. B. E. XXII. 380.	+ 3.0548	- 0.0023	...	- 18.127	- 0.183	...	...
648	55 Aquarii ζ 1st...	+ 3.0788	- 0.0033	+ 0.009	- 18.252	- 0.178	- 0.03	7832
649	R. P. L. 150	- 3.8011	- 1.1892	+ 0.048	- 18.297	+ 0.235	- 0.05	7851
650	57 Aquarii σ	+ 3.1816	- 0.0088	- 0.004	- 18.310	- 0.182	- 0.05	7840
651	... ..	+ 3.1272	- 0.0001	...	- 18.400	- 0.167	...	...
652	62 Aquarii η	+ 3.0793	- 0.0031	+ 0.003	- 18.482	- 0.166	+ 0.06	7868
653	42 Pegasi ζ	+ 2.9853	+ 0.0023	+ 0.001	- 18.689	- 0.149	0.00	7908
654	67 Aquarii	+ 3.1362	- 0.0063	- 0.003	- 18.735	- 0.155	- 0.02	7921
655	... ..	+ 3.4766	- 0.0327	...	- 18.748	- 0.173	...	...
656	... ..	+ 3.4502	- 0.0325	...	- 18.892	- 0.161	...	...
657	... ..	+ 3.5178	- 0.0396	...	- 18.963	- 0.159	...	...
658	... ..	+ 3.5142	- 0.0394	...	- 18.973	- 0.158	...	...
659	... ..	+ 3.4332	- 0.0388	...	- 19.113	- 0.147	...	...
660	24 Piscis Australis α .	+ 3.3059	- 0.0210	+ 0.022	- 19.133	- 0.135	+ 0.18	7992
661	... ..	+ 3.0404	+ 0.0005	...	- 19.181	- 0.122	...	...
662	... ..	+ 3.0409	+ 0.0005	...	- 19.181	- 0.122	...	...
663	... ..	+ 2.8396	+ 0.0144	...	- 19.312	- 0.104	...	...
664	54 Pegasi α (Markab).	+ 2.9801	+ 0.0056	+ 0.003	- 19.331	- 0.107	+ 0.02	8084
665	Lacaille 9372	+ 3.6756	- 0.0727	...	- 19.387	- 0.130	...	...

Mean Positions of Stars for 1869 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>		
666	... ..	9.0	1	23	3	23.06	127	28	26.8	1	0.82
667	... ..	9.0	1	23	10	8.05	151	42	49.4	1	0.81
668	Lacaille 9423	7.3	1	23	10	13.67	151	42	58.1	1	0.79
669	6 Piscium γ	3.8	...	23	10	22.48	87	26	0.1	6	0.83
670	... ..	8.0	1	23	10	52.66	150	42	58.4	1	0.78
671	93 Aquarii ψ^2	4.5	...	23	11	5.59	99	53	51.3	1	0.79
672	Groombridge 4040	6.2	1	23	13	9.17	17	1	34.0	1	0.84
673	... ..	10.0	1	23	17	11.03	127	25	50.3	1	0.76
674	... ..	9.0	2	23	18	46.24	127	16	7.7	2	0.83
675	8 Piscium κ	5.0	...	23	20	12.98	89	27	41.2	7	0.81
676	Lacaille 9496	8.7	1	23	23	32.31	127	40	40.1	1	0.82
677	Lacaille 9514	9.0	1	23	26	8.85	131	34	8.3	1	0.85
678	R. P. L. 158	5.6	...	23	27	49.69	3	24	54.8	2	0.82
679	... ..	9.5	...	23	29	56.70	130	5	28.8	1	0.76
680	... ..	7.9	1	23	29	58.42	127	31	29.6	1	0.81
681	17 Piscium ι	4.3	...	23	33	12.75	85	5	1.0	9	0.79
682	... ..	9.5	...	23	36	14.50	128	8	1.3	1	0.85
683	δ Sculptoris	4.6	...	23	42	5.94	118	51	17.7	9	0.79
684	Lacaille 9650	8.3	...	23	49	21.33	129	46	30.8	1	0.76
685	... ..	10.2	1	23	52	15.24	143	14	24.6	1	0.76
686	33 Piscium ω	4.2	...	23	52	35.03	83	51	42.9	8	0.83
687	... ..	9.2	1	23	56	41.67	126	41	44.9	1	0.85
688	Taylor 10997	7.8	1	23	58	18.55	126	44	50.5	1	0.86

678—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.	
666	... ..	+ 3.3228	- 0.0271	...	- 19.446	- 0.110	...	...
667	... ..	+ 3.6085	- 0.0742	...	- 19.582	- 0.105	...	...
668	Lacaille 9423 ...	+ 3.6076	- 0.0743	...	- 19.583	- 0.106	...	8101
669	6 Piscium γ ...	+ 3.0592	+ 0.0005	+ 0.047	- 19.587	- 0.087	+ 0.01	8105
670	... ..	+ 3.5792	- 0.0704	...	- 19.596	- 0.104	...	...
671	93 Aquarii ψ^3 ...	+ 3.1216	- 0.0061	- 0.002	- 19.600	- 0.088	- 0.01	8109
672	Groombridge 4040 ...	+ 2.1859	+ 0.0392	...	- 19.637	- 0.057	...	8122
673	... ..	+ 3.1622	- 0.0259	...	- 19.706	- 0.081	...	...
674	... ..	+ 3.2542	- 0.0255	...	- 19.732	- 0.077	...	...
675	8 Piscium κ ...	+ 3.0699	0.0000	+ 0.005	- 19.754	- 0.069	+ 0.12	8169
676	Lacaille 9496 ...	+ 3.2347	- 0.0254	...	- 19.801	- 0.066	...	...
677	Lacaille 9514 ...	+ 3.2466	- 0.0293	...	- 19.836	- 0.061	...	...
678	R. P. L. 158 ...	- 0.0621	- 0.5141	+ 0.084	- 19.858	+ 0.010	- 0.01	8213
679	... ..	+ 3.2194	- 0.0272	...	- 19.883	- 0.052	...	...
680	... ..	+ 3.2063	- 0.0246	...	- 19.883	- 0.052	...	...
681	17 Piscium ϵ ...	+ 3.0586	+ 0.0030	+ 0.025	- 19.918	- 0.042	+ 0.45	8233
682	... ..	+ 3.1805	- 0.0244	...	- 19.947	- 0.039	...	...
683	8 Sculptoris ...	+ 3.1296	- 0.0161	+ 0.009	- 19.993	- 0.026	+ 0.10	8275
684	Lacaille 9650 ...	+ 3.1238	- 0.0244	...	- 20.033	- 0.012	...	...
685	... ..	+ 3.1327	- 0.0402	...	- 20.042	- 0.007	...	...
686	28 Piscium ω ...	+ 3.0674	+ 0.0047	+ 0.010	- 20.045	- 0.005	+ 0.13	8331
687	.. ...	+ 3.0865	- 0.0208	...	- 20.053	+ 0.003	...	...
688	Taylor 10997 ..	+ 3.0793	- 0.0206	...	- 20.054	+ 0.006	...	...

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