
MEAN POSITIONS OF STARS

OBSERVED WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1870

REDUCED TO JANUARY 1 OF THAT YEAR.

Mean Positions of Stars for 1870 January 1st.

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

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

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

Observed with the Madras Meridian Circle in that Year.

Number.	Star.	In Right Ascension.			In Polar Distance.			Number in R. A. C.
		Annual Precession.	Secular Variation.	Proper Motion.	Annual Precession.	Secular Variation.	Proper Motion.	
		<i>s</i>	<i>s</i>	<i>s</i>	"	"	"	
1	21 Andromedæ <i>a</i> ...	+ 3.0774	+ 0.0182	+ 0.009	- 20.055	+ 0.018	+ 0.15	4
2	Lacaille 9746 ...	+ 3.0448	- 0.0429	...	- 20.053	+ 0.015	...	...
3	... ..	+ 3.0495	- 0.0194	...	- 20.050	+ 0.019	...	...
4	88 Pegasi γ (<i>Algenib</i>)...	+ 3.0819	+ 0.0100	0.000	- 20.047	+ 0.022	+ 0.02	88
5	Lalande 421 ...	+ 3.1455	+ 0.0271	...	- 20.005	+ 0.041	...	...
6	... ..	+ 3.2970	+ 0.0710	...	- 19.983	+ 0.049	...	...
7	Lacaille 88 ...	+ 2.9741	- 0.0207	...	- 19.980	+ 0.046	...	...
8	12 Ceti ...	+ 3.0610	+ 0.0008	- 0.002	- 19.961	+ 0.055	+ 0.01	112
9	Taylor 148 ...	+ 2.8531	- 0.0803	...	- 19.902	+ 0.060	...	148
10	13 Ceti ...	+ 3.0596	+ 0.0014	+ 0.017	- 19.899	+ 0.064	+ 0.04	145
11	Taylor 184 ...	+ 3.0546	+ 0.0012	...	- 19.834	+ 0.075	...	174
12	16 Ceti β ...	+ 2.9993	- 0.0055	+ 0.013	- 19.793	+ 0.080	- 0.02	196
13	... ..	+ 2.6566	- 0.0840	...	- 19.748	+ 0.075	...	...
14	58 Piscium ...	+ 3.1187	+ 0.0101	0.000	- 19.747	+ 0.087	0.00	213
15	Lacaille 234 ...	+ 2.8582	- 0.0161	...	- 19.665	+ 0.090	...	...
16	... ..	+ 2.8573	- 0.0160	...	- 19.661	+ 0.090	...	...
17	20 Ceti ...	+ 3.0634	+ 0.0036	- 0.004	- 19.646	+ 0.098	+ 0.01	242
18	2 Ursæ Minoris ...	+ 6.9021	+ 1.3129	+ 0.065	- 19.552	+ 0.232	+ 0.01	262
19	70 Piscium ...	+ 3.1128	+ 0.0086	- 0.008	- 19.472	+ 0.116	+ 0.17	251
20	71 Piscium ϵ ...	+ 3.1131	+ 0.0087	- 0.002	- 19.455	+ 0.119	0.00	288
21	... ..	+ 2.4338	- 0.0237	...	- 19.293	+ 0.105	...	...
22	... ..	+ 2.7865	- 0.0128	...	- 19.252	+ 0.122	...	...
23	... ..	+ 2.8097	- 0.0225	...	- 19.187	+ 0.106	...	...
24	... ..	+ 2.2477	- 0.0209	...	- 19.112	+ 0.107	...	...
25	1 Urs. Min. <i>a</i> (<i>Polaris</i>)	+ 20.0117	+ 14.1558	+ 0.065	- 19.093	+ 0.901	0.00	360
26	... ..	+ 2.2830	- 0.0202	...	- 19.072	+ 0.111	...	...
27	... ..	+ 2.3022	- 0.0100	...	- 18.984	+ 0.116	...	...
28	45 Ceti θ^1 ...	+ 3.0080	+ 0.0018	- 0.007	- 18.919	+ 0.154	+ 0.22	420
29	98 Piscium μ ...	+ 3.1177	+ 0.0089	+ 0.019	- 18.743	+ 0.169	+ 0.18	448
30	<i>Etan. + 2. 214</i> ...	+ 3.0914	+ 0.0073	...	- 18.730	+ 0.169	...	...
31	... ..	+ 3.0708	+ 0.0063	...	- 18.713	+ 0.170	...	...
32	99 Piscium η ...	+ 3.1083	+ 0.0141	0.000	- 18.706	+ 0.177	0.00	453
33	... ..	+ 2.6252	- 0.0101	...	- 18.491	+ 0.156	...	...
34	Taylor 539 ...	+ 2.2052	- 0.0129	...	- 18.461	+ 0.183	...	497
35	<i>a</i> Eridani (<i>Achernar</i>)...	+ 2.2320	- 0.0128	+ 0.008	- 18.431	+ 0.137	+ 0.07	507

8—10.—Proper motions from "Greenwich Catalogue, 1872."
 19.—Proper motion in Polar Distance from "Greenwich Catalogue, 1872."
 35.—Proper motions from "Stone's Cape Catalogue."

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

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

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

59.—Comparison star for Victoria in 1861.

70.—Groombridge 595.