RESULTS

OF

OBSERVATIONS OF THE FIXED STARS

MADE WITH THE

MERIDIAN CIRCLE

AT THE

GOVERNMENT OBSERVATORY MADRAS

IN THE YEARS 1883, 1884, 1885, 1886, AND 1887

UNDER THE DIRECTION OF THE LATE

NORMAN ROBERT POGSON, C.I.E., F.R.A.S.

BY

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OFFICIATING GOVERNMENT ASTRONOMER AT MADRAS

VOL. VIII.

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CONTENTS

INTRODUCTION.

This volume contains the results of the observations made with the Madras Meridian Circle in the years 1883–87 and completes the series of volumes preliminary to the general catalogue. The number of observations made during this period was only 4052, since after 1883 few observations were made except those required to complete the full number for each star in the list. The observers were the same as in the previous three years and no change has been made in the method of reduction.

The reductions have been revised throughout using corrected values for the meridian errors.

With this volume are also issued lists of the corrections that have to to be applied to the results in volume I. to VI. on account of erroneous determinations of meridian error. The most serious errors were due to the use of the stars R. P. L. 14 (Groombridge 195), referred to in last volume, and 24 Cephei (Hev.). The position of this latter star was apparently taken from the *Radcliffe Polar List* and was brought up without the application of any proper motion. No proper motion is ascribed to this star either in the *Greenwich nine-year Catalogue* or in the *Williams College Catalogue*, but Carrington notes it is a proper motion star and there can be little doubt that it has a considerable proper motion. The positions given for 1885 in the *Redhill* and *Radcliffe* catalogues agree fairly well with each other but differ by about 12″ from the place given by Safford's observations in 1883. As this star was in certain years frequently used for the determination of the azimuth it is evident that very serious errors were introduced. These errors ought certainly to have been discovered at an early date, but several circumstances conspired to conceal them. Into these it is not necessay to enter in detail here, but I may point out that when I took up the work in 1891, I had no experience either of the accuracy of the observations or of the steadiness of the instrument, and I underestimated

both. The corrections that have now been applied show that the older observations especially were very good and that the instrument was remarkably stable. After heavy rain there is usually a considerable and rapid change in the meridian error, but at other times changes are slow and progressive. Heavy rains are, I believe, responsible for a few outstanding cases of uncertain meridian error, for on a small number of days the error has had to be obtained by interpolation between days before and after such rain, but the number of observations affected is not great and the uncertainty lies between moderate limits.

One point that comes out clearly as a result of the investigation of the meridian errors is that for satisfactory work in low latitudes it is necessary to have either a much larger list of polar stars whose positions are accurately determined, or to have a good meridian mark. There are many nights here when good observations can be got of stars at a considerable altitude though it is quite impossible to get any observations of stars below the pole or even within 10° above the pole, and on a good many other nights stars below the pole are so unsteady that they, at times, appear to dance backwards and forwards across the wires. In the great majority of observations of polar stars the transits were taken over only three wires, and in many cases there was a considerable divergence between the times given by the different wires; passing clouds frequently prevented even three consecutive wires from being observed. With highly trained observers it is probable that better results would have been obtained by using the R.A. micrometer and observing a number of transits over the middle wire, but with the observers available for the work here this would have only led to increased errors, for it was found necessary even to give up the use of the P. D. micrometer. So long as the work was simple and purely routine good results were obtained, but the least complexity or interference with the routine was fatal.

It has not been considered necessary to print all the corrections that have been made. In most cases corrections have been entered in the *errata* only when they affected the mean place of the star for any year by more than $0^s{\cdot}02$, but all corrections affecting the separate results to the extent of $0^s{\cdot}01$ have been entered in the working copies and will be taken into account in forming the catalogue places.

Instrumental Corrections adopted in 1883.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining Stars.
		s	s	s	s	s	s	
Jan. 1	R	− 4·6	0·0	+ 0·25	+ 0·32	+ 0·03	+ 0·33	35 and 117 R. P. L.
2	,,	− 4·7	0·0	+ 0·27	+ 0·33	+ 0·04	+ 0·27	34, 35 & 100, 118 R. P. L.
3	,,	− 4·8	0·0	+ 0·38	+ 0·35	+ 0·03	+ 0·26	34 and 118 R. P. L.
4	,,	− 6·8	0·0	+ 0·45	+ 0·33	+ 0·02	+ 0·31	37 and 117 R. P. L.
5	,,	− 7·2	0·0	+ 0·45	+ 0·33	+ 0·04	+ 0·33	2 Ursæ Minoris and 117 R. P. L.
8	M	− 5·9	0·0	+ 0·45	+ 0·32	+ 0·03	+ 0·29	37 and 118 R. P. L.
9	,,	− 6·8	0·0	+ 0·45	+ 0·32	+ 0·04	+ 0·30	37 and 118 R. P. L.
11	,,	− 6·7	0·0	+ 0·57	+ 0·32	+ 0·04	+ 0·30	
12	,,	− 7·6	0·0	+ 0·56	+ 0·34	+ 0·04	+ 0·30	37 and 110, 117 R. P. L.
15	,,	− 8·0	0·0	+ 0·33	+ 0·34	+ 0·04	+ 0·29	37, 39, 40, and 114, 117 R. P. L.
16	,,	− 7·7	0·0	+ 0·32	+ 0·32	+ 0·03	+ 0·25	37, 39, 40, and 110, 114, 117 R. P. L.
17	,,	− 7·7	0·0	+ 0·34	+ 0·34	+ 0·04	+ 0·30	37, 39 and 110, 114, 117 R. P. L.
18	,,	− 7·5	0·0	+ 0·40	+ 0·32	+ 0·05	+ 0·30	37, 39, 40, 43, and 116, 120 R. P L.
19	,,	− 7·8	0·0	+ 0·43	+ 0·33	+ 0·04	+ 0·31	37, 41, 43 and 117, 118, 120 R. P. L.
20	,,	− 7·0	0·0	+ 0·45	+ 0·34	+ 0·04	+ 0·32	37, 39, 43 and 116 R. P. L.
22	,,	− 6·8	0·0	+ 0·45	+ 0·35	+ 0·04	+ 0·34	39 and 116 R. P. L.
24	,,	− 7·3	0·0	+ 0·46	+ 0·36	+ 0·04	+ 0·32	43, 117 and 118 R. P. L.
25	,,	− 6·7	0·0	+ 0·52	+ 0·36	+ 0·04	+ 0·34	39, 43 and 117 R. P. L.
26	,,	− 6·9	0·0	+ 0·56	+ 0·34	+ 0·04	+ 0·32	
27	,,	− 6·8	0·0	+ 0·56	+ 0·36	+ 0·04	+ 0·30	39 and 116, 120, 133 R.P.L.
29	,,	− 7·4	0·0	+ 0·64	+ 0·37	+ 0·04	+ 0·32	
30	,,	− 7·5	0·0	+ 0·58	+ 0·37	+ 0·04	+ 0·32	39 and 116, 120, 133 R.P.L.
31	,,	− 7·1	0·0	+ 0·49	+ 0·40	+ 0·03	+ 0·30	39 and 120, R. P. L.
Feb. 1	R	− 10·1	0·0	+ 0·55	+ 0·41	+ 0·04	+ 0·30	118 and 133 R. P. L.
2	,,	− 8·9	0·0	+ 0·55	+ 0·42	+ 0·04	+ 0·30	118 and 133 R. P. L.
3	,,	− 9·0	0·0	+ 0·54	+ 0·42	+ 0·04	+ 0·31	
5	,,	− 9·1	0·0	+ 0·69	+ 0·40	+ 0·04	+ 0·31	
6	M	− 9·3	0·0	+ 0·66	+ 0·38	+ 0·04	+ 0·32	
7	,,	− 7·7	0·0	+ 0·60	+ 0·39	+ 0·04	+ 0·32	118 and 134 R. P. L.
8	R	− 8·0	0·0	+ 0·53	+ 0·40	+ 0·04	+ 0·33	51 Cephei and 120, 133 R. P. L.
9	,,	− 8·2	0·0	+ 0·55	+ 0·39	+ 0·04	+ 0·34	51 Cephei and 120 R. P. L.
10	,,	− 9·5	0·0	+ 0·57	+ 0·42	+ 0·02	+ 0·37	51 Cephei and 120, 134 R. P. L.
12	,,	− 9·9	0·0	+ 0·55	+ 0·38	+ 0·04	+ 0·35	51 Cephei and 120 R. P. L.
13	,,	− 10·0	0·0	+ 0·59	+ 0·39	+ 0·03	+ 0·28	51 Cephei and 134 R. P. L.
14	,,	− 9·4	0·0	+ 0·58	+ 0·41	+ 0·04	+ 0·33	51 Cephei and 120, 134 R. P. L.
15	,,	− 9·1	0·0	+ 0·55	+ 0·38	+ 0·04	+ 0·32	51 Cephei and 134 R. P. L.
16	,,	− 9·5	0·0	+ 0·54	+ 0·39	+ 0·03	+ 0·33	
17	,,	− 8·5	0·0	+ 0·54	+ 0·42	+ 0·04	+ 0·44	
19	,,	− 9·3	0·0	+ 0·61	+ 0·41	+ 0·03	+ 0·35	51 Cephei and 134 R. P. L.
20	,,	− 9·3	0·0	+ 0·63	+ 0·40	+ 0·03	+ 0·37	51 Cephei and 134 R. P. L.
21	,,	− 8·6	0·0	+ 0·61	+ 0·38	+ 0·02	+ 0·36	
22	,,	− 9·0	0·0	+ 0·62	+ 0·39	+ 0 03	+ 0·35	
23	,,	− 8·5	0·0	+ 0·66	+ 0·38	+ 0·04	+ 0·35	
24	,,	− 9·5	0·0	+ 0·67	+ 0·37	+ 0·03	+ 0·34	51 Cephei and 134 R. P. L.
26	,,	− 9·5	0·0	+ 0·60	+ 0·42	+ 0·04	+ 0·31	
27	,,	− 9·3	0·0	+ 0·60	+ 0·43	+ 0·04	+ 0·30	
28	,,	− 9·7	0·0	+ 0·65	+ 0·48	+ 0·04	+ 0·29	82 and 134 R. P. L.
Mar. 1	,,	− 10·8	0·0	+ 0·66	+ 0·46	+ 0·02	+ 0·30	

Instrumental Corrections adopted in 1883.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining stars.
		″	″	s	s	s	s	
Apl. 3	M	− 7·6	0·0	+0·48	+0·56	+0·04	+0·48	82 R. P. L. and Polaris.
4	,,	− 6·2	0·0	+0·49	+0·58	+0·04	+0·50	82 R. P. L. and Polaris.
5	,,	− 7·0	0·0	+0·56	+0·59	+0·04	+0·51	82 R. P. L. and Polaris.
6	,,	− 5·9	0·0	+0·40	+0·59	+0·03	+0·50	72, 82, R. P. L. & Polaris.
7	,,	− 5·8	0·0	+0·29	+0·60	+0·03	+0·51	82 R. P. L. and Polaris.
9	,,	− 6·8	0·0	+0·42	+0·58	+0·03	+0·52	82 R. P. L. and Polaris.
10	,,	− 6·0	0·0	+0·46	+0·58	+0·03	+0·52	
11	,,	− 6·7	0·0	+0·49	+0·58	+0·03	+0·52	
12	,,	− 6·8	0·0	+0·51	+0·58	+0·03	+0·52	
13	,,	− 5·9	0·0	+0·55	+0·58	+0·03	+0·53	
14	,,	− 6·5	0·0	+0·49	+0·60	+0·03	+0·53	
16	,,	− 5·7	0·0	+0·55	+0·58	+0·03	+0·53	82 R. P. L. and Polaris.
17	,,	− 6·6	0·0	+0·59	+0·58	+0·03	+0·52	82 R. P. L. and Polaris.
18	,,	− 5·8	0·0	+0·53	+0·59	+0·03	+0·55	
19	,,	− 5·7	0·0	+0·53	+0·61	+0·03	+0·57	
20	,,	− 5·7	0·0	+0·57	+0·62	+0·03	+0·60	
21	,,	− 4·9	0·0	+0·56	+0·63	+0·04	+0·62	82 R. P. L. and Polaris.
23	,,	− 6·8	0·0	+0·42	+0·60	+0·03	+0·60	
24	,,	− 6·7	0·0	+0·41	+0·62	+0·03	+0·59	
25	,,	− 5·5	0·0	+0·49	+0·65	+0 04	+0·59	
26	,,	− 5·6	0·0	+0·51	+0·65	+0·02	+0·58	
28	,,	− 4·8	0·0	+0·44	+0·66	+0·03	+0·56	
30	,,	− 5·0	0·0	+0·37	+0·65	+0·03	+0·55	
May 1	R	− 5·8	− 0·1	+0·06	+0·70	+0·03	+0·54	
2	,,	− 5·4	− 0·1	− 0·26	+0·66	+0·03	+0·53	
3	,,	− 5·5	− 0·1	− 0·28	+0·65	+0·03	+0·52	111 R. P. L. and Polaris.
4	,,	− 6·4	− 0·1	− 0·26	+0·64	+0·03	+0·55	
5	,,	− 6·3	− 0·1	− 0·26	+0·67	+0·03	+0·57	110, 116 and 26 R. P. L. Polaris.
7	,,	− 6·6	− 0·1	− 0·26	+0·70	+0·03	+0·58	116, & 37 R. P. L., Polaris.
8	,,	− 6·6	− 0·1	− 0·26	+0·66	+0·02	+0·53	116 R. P. L. and Polaris.
9	,,	− 6·5	− 0·1	− 0·23	+0·69	+0·03	+0·56	116 R. P. L. and Polaris.
10	,,	− 6·6	− 0·1	− 0·22	+0·67	+0·02	+0·56	
11	,,	− 6·6	− 0·1	− 0·21	+0·69	+0·04	+0·57	
12	,,	− 5·9	− 0·1	− 0·16	+0·71	+0·03	+0·57	116 R. P. L., ε Urs. Min. and 37 R. P. L.
14	,,	− 5·6	− 0·1	− 0·21	+0·70	+0·04	+0·58	
15	,,	− 5·4	− 0·1	− 0·19	+0·69	+0·03	+0·59	
18	,,	− 5·0	− 0·1	+0·01	+0·76	+0·04	+0·61	117, 120, and 39, 40 R.P.L.
19	,,	− 5·0	− 0·1	− 0·03	+0 71	+0·02	+0·59	117, 120, and 39, 40 R.P.L.
21	,,	− 4·5	− 0·1	− 0·24	+0·73	+0·03	+0·59	
22	,,	− 4·7	− 0·1	− 0·22	+0·76	+0·02	+0·58	
23	,,	− 4·9	− 0·1	− 0·25	+0·73	+0·02	+0·58	117 and 39, 40 R. P. L.
24	,,	− 4·5	− 0·1	− 0·27	+0·75	+0·02	+0·59	
25	,,	− 4·8	− 0·1	− 0·24	+0·73	+00.2	+0·61	
28	,,	− 4·4	− 0·1	− 0·29	+0·77	+0·03	+0·65	120 and 39 R. P. L.
29	,,	− 4·8	− 0·1	− 0·24	+0·72	+0·01	+0·64	
30	,,	− 4·8	− 0·1	− 0·13	+0·73	+0·02	+0·62	
31	,,	− 5·0	− 0·1	+0·01	+0·70	+0·02	+0·61	
June 1	,,	− 4·9	+ 0·3	+0·04	+0·70	+0·01	+0·60	120 and 41 R. P. L.
2	,,	− 5·7	+ 0·3	− 0·01	+0·73	+0·01	+0·59	
7	,,	− 4·3	+ 0·3	− 0·20	+0·72	+0·03	+0·57	
8	M	− 4·5	+ 0·1	− 0·23	+0·74	+0·03	+0·60	
9	,,	− 5·0	+ 0·1	− 0·27	+0·75	+0·03	+0·62	
11	,,	− 4·0	+ 0·1	− 0·29	+0·74	+0·03	+0·67	
14	,,	− 3·0	+ 0·1	− 0·19	+0·74	+0·03	+0·75	
15	,,	− 4·2	+ 0·1	− 0·14	+0·74	+0·03	+0·77	ε Urs. Min. and 39 R.P.L.

May 1.—Transit clock put forward 1*m*.

Instrumental Corrections adopted in 1883.

Date.	Observer.	Index.	Run in 5′	Clock Rate.	Inclination.	Collimation.	Meridian	Determining Stars.
		″	″	s	s	s	s	
June 19	M	− 3·7	+ 0·1	− 0·06	+ 0·75	+ 0·03	+ 0·76	
20	,,	− 4·4	+ 0·1	− 0·07	+ 0·68	+ 0·05	+ 0·76	
22	,,	− 3·9	+ 0·1	− 0·11	+ 0·63	+ 0·03	+ 0·76	
26	,,	− 3·3	+ 0·1	− 0·15	+ 0·60	+ 0·03	+ 0·75	
July 3	R	− 4·0	+ 0·1	− 0·27	+ 0·59	+ 0·04	+ 0·74	
4	,,	− 3·1	+ 0·1	− 0·26	+ 0·60	+ 0·02	+ 0·73	
17	,,	− 2·6	+ 0·1	− 0·38	+ 0·55	+ 0·02	+ 0·71	
18	,,	− 1·6	+ 0·1	− 0·49	+ 0·56	+ 0·02	+ 0·71	
20	,,	− 1·9	+ 0·1	− 0·43	+ 0·55	+ 0·03	+ 0·70	
24	,,	− 2·0	+ 0·1	− 0·36	+ 0·54	+ 0·03	+ 0·70	
28	,,	− 0·7	+ 0·1	− 0·36	+ 0·51	+ 0·04	+ 0·69	143, and 53 R. P. L.
30	,,	+ 0·5	+ 0·1	− 0·38	+ 0·48	+ 0·02	+ 0·67	
31	,,	+ 0·5	+ 0·1	− 0·39	+ 0·47	+ 0·03	+ 0·66	
Aug. 2	,,	− 0·4	0·0	− 0·35	+ 0·50	+ 0·02	+ 0·63	
3	,,	− 0·2	0·0	− 0·32	+ 0·49	+ 0·02	+ 0·62	
4	,,	0·0	0·0	− 0·30	+ 0·46	+ 0·02	+ 0·61	133, 138, and 48 R. P. L.
8	,,	− 0·1	0·0	− 0·36	+ 0·49	+ 0·02	+ 0·65	133, 134, and 39, 41 R.P.L.
9	,,	− 3·6	0·0	− 0·37	+ 0·46	+ 0·01	+ 0·67	133, 134, and 39 R. P. L.
10	,,	− 3·7	0·0	− 0·31	+ 0·46	+ 0·03	+ 0·67	133, and 43 R. P. L.
11	,,	− 4·2	0·0	− 0·26	+ 0·46	+ 0·03	+ 0·67	118, 133, 134, & 41, 53 R.P.L.
13	,,	− 4·9	0·0	− 0·21	+ 0·49	+ 0·03	+ 0·68	118, 133, 134, & 41, 48, 53 R. P. L.
14	,,	− 5·0	0·0	− 0·23	+ 0·48	+ 0·03	+ 0·60	δ Urs. Min., 118, and 41, 48 R. P. L.
16	,,	− 4·8	0·0	− 0·30	+ 0·49	+ 0·03	+ 0·69	118, 133 and 41, 43 R. P. L.
18	,,	− 4·5	0·0	− 0·30	+ 0·48	+ 0·03	+ 0·67	118 and 41, 43 R. P. L.
25	,,	− 4·9	0·0	− 0·41	+ 0·43	+ 0·03	+ 0·70	120 and 43 R. P. L.
28	,,	− 4·6	0·0	− 0·41	+ 0·44	+ 0·03	+ 0·70	
Sep. 3	M	− 5·4	0·0	− 0·22	+ 0·44	+ 0·02	+ 0·70	
4	,,	− 4·7	0·0	− 0·28	+ 0·39	+ 0·02	+ 0·70	133, 138, 149 & 48 R. P. L.
5	,,	− 4·8	0·0	− 0·36	+ 0·44	+ 0·02	+ 0·71	
10	,,	− 6·4	0·0	− 0·36	+ 0·40	+ 0·02	+ 0·76	
11	,,	− 4·4	0·0	− 0·34	+ 0·41	+ 0·02	+ 0·77	
12	,,	− 4·6	0·0	− 0·31	+ 0·38	+ 0·02	+ 0·78	
13	,,	− 4·5	0·0	− 0·32	+ 0·38	+ 0·02	+ 0·79	
14	,,	− 4·8	0·0	− 0·25	+ 0·37	+ 0·02	+ 0·80	134, 138, 149 and 48, 55, 62 R. P. L.
15	,,	− 4·7	0·0	− 0·23	+ 0·37	+ 0·03	+ 0·82	138 and 62 R. P. L.
17	,,	− 5·3	0·0	− 0·24	+ 0·34	+ 0·02	+ 0·84	
19	,,	− 5·2	0·0	− 0·31	+ 0·34	+ 0·02	+ 0·87	
20	,,	− 8·1	0·0	− 0·34	+ 0·38	+ 0·03	+ 0·88	
21	,,	− 4·8	0·0	− 0·26	+ 0·35	+ 0·03	+ 0·89	
22	,,	− 4·4	0·0	− 0·20	+ 0·34	+ 0·03	+ 0·91	
24	,,	− 3·4	0·0	− 0·30	+ 0·34	+ 0·03	+ 0·93	
25	,,	− 4·1	0·0	− 0·25	+ 0·33	+ 0·03	+ 0·94	
26	,,	− 3·6	0·0	− 0·23	+ 0·32	+ 0·03	+ 0·96	
27	,,	− 3·4	0·0	− 0·30	+ 0·33	+ 0·03	+ 0·97	
28	,,	− 3·1	0·0	− 0·26	+ 0·32	+ 0·03	+ 0·98	134, 138 and 60 R. P. L.
29	,,	− 3·6	0·0	− 0·23	+ 0·31	+ 0·03	+ 0·96	
Oct. 1	R	− 2·9	0·0	− 0·29	+ 0·29	+ 0·04	+ 0·92	
3	,,	− 4·7	0·0	− 0·30	+ 0·28	+ 0·04	+ 0·88	
4	,,	− 4·4	0·0	− 0·32	+ 0·25	+ 0·04	+ 0·86	
5	,,	− 2·9	0·0	− 0·34	+ 0·29	+ 0·05	+ 0·84	
6	,,	− 1·6	0·0	− 0·35	+ 0·23	+ 0·03	+ 0·82	
8	,,	− 0·2	0·0	− 0·05	+ 0·22	+ 0·06	+ 0·77	

Oct. 6.—Line of transit clock broken: clock stopped and restarted.

Instrumental Corrections adopted in 1883.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining Stars
		″	″	s	s	s	s	
Oct. 9	R	− 0·9	0·0	+ 0·23	+ 0·22	+ 0·05	+ 0·75	
10	,,	− 0·1	0·0	+ 0·22	+ 0·25	+ 0·05	+ 0·73	
11	,,	− 0·8	0·0	+ 0·68	+ 0·25	+ 0·06	+ 0·71	
13	,,	+ 0·7	0·0	+ 0·69	+ 0·26	+ 0·04	+ 0·67	
17	,,	− 4·8	0·0	+ 0·89	− 0·04	+ 0·04	+ 0·59	
18	,,	+ 4·8	0·0	+ 0·96	+ 0·03	+ 0·03	+ 0·57	158 and 55 R. P. L.
19	,,	+ 5·7	0·0	− 0·98	+ 0·10	+ 0·04	+ 0·56	158 and 82 R. P. L.
20	M	+ 5·3	0·0	+ 0·92	+ 0·12	+ 0·03	+ 0·56	
22	R	+ 4·8	0·0	+ 0·65	+ 0·17	+ 0·04	+ 0·56	158 and 55 R. P. L.
23	,,	+ 4·8	0·0	+ 0·56	+ 0·22	+ 0·03	+ 0·58	158 and 82 R. P. L.
24	,,	+ 4·2	0·0	+ 0·58	+ 0·28	+ 0·02	+ 0·59	158 and 53 R. P. L.
25	,,	+ 5·1	0·0	+ 0·61	+ 0·29	+ 0·01	+ 0·60	158 and 53, 82 R. P. L.
Nov. 5	M	+ 6·0	0·0	+ 0·63	+ 0·42	+ 0·03	+ 0·55	
6	R	+ 5·4	0·0	+ 0·62	+ 0·43	+ 0·03	+ 0·54	
7	M	+ 5·6	0·0	+ 0·53	+ 0·43	+ 0·03	+ 0·54	
9	,,	+ 3·8	0·0	+ 0·53	+ 0·40	+ 0·03	+ 0·53	158 and 82, 98 R. P. L.
10	,,	+ 4·9	0·0	+ 0·52	+ 0·38	+ 0·03	+ 0·53	
12	,,	+ 3·8	0·0	+ 0·41	+ 0·37	+ 0·03	+ 0·54	10, 158 and 82, 97, 101 R. P. L.
13	,,	+ 3·3	0·0	+ 0·32	+ 0·37	+ 0·03	+ 0·60	10, 158 and 87, 100 R. P. L.
14	,,	+ 2·4	0·0	+ 0·29	+ 0·35	+ 0·03	+ 0·65	158 and 87 R. P. L.
15	,,	+ 1·9	0·0	+ 0·34	+ 0·34	+ 0·02	+ 0·64	
16	,,	+ 2·2	0·0	+ 0·36	+ 0·35	+ 0·03	+ 0·64	
20	,,	+ 1·3	0·0	+ 0·33	+ 0·33	+ 0·03	+ 0·62	
21	,,	+ 2·3	0·0	+ 0·45	+ 0·34	+ 0·03	+ 0·61	α Pegasi and 87 R. P. L.
23	,,	+ 3·1	0·0	+ 0·41	+ 0·34	+ 0·03	+ 0·60	
26	,,	+ 2·1	0·0	+ 0·50	+ 0·32	+ 0·03	+ 0·60	
27	,,	+ 0·6	0·0	+ 0·39	+ 0·32	+ 0·02	+ 0·59	
29	,,	− 1·2	0·0	+ 0·28	+ 0·33	+ 0·03	+ 0·59	
30	,,	+ 0·8	0·0	+ 0·36	+ 0·33	+ 0·03	+ 0·59	
Dec. 4	R	− 0·6	0·0	+ 0·33	+ 0·36	+ 0·04	+ 0·58	
5	,,	− 0·6	0·0	+ 0·30	+ 0·36	+ 0·04	+ 0·57	
6	,,	− 0·6	0·0	+ 0·28	+ 0·36	+ 0·04	+ 0·57	158 and 87, 97 R. P. L.
7	,,	− 2·0	0·0	+ 0·33	+ 0·35	+ 0·04	+ 0·61	
8	,,	− 2·7	0·0	+ 0·35	+ 0·33	+ 0·03	+ 0·60	33 and 97 R. P. L.
11	,,	− 1·4	0·0	+ 0·40	+ 0·35	+ 0·02	+ 0·57	
17	,,	+ 3·3	0·0	+ 0·41	+ 0·72	+ 0·05	+ 0·50	
18	,,	+ 3·9	0·0	+ 0·39	+ 0·74	+ 0·05	+ 0·49	
19	,,	+ 4·4	0·0	+ 0·39	+ 0·75	+ 0·03	+ 0·48	
20	,,	+ 4·1	0·0	+ 0·44	+ 0·78	+ 0·04	+ 0·47	33 and 99, 100 R. P. L.
21	,,	+ 4·0	0·0	+ 0·49	+ 0·59	+ 0·04	+ 0·44	33 and 99 R. P. L.
25	,,	+ 3·4	0·0	+ 0·50	+ 0·57	+ 0·04	+ 0·45	
26	,,	+ 3·1	0·0	+ 0·56	+ 0·52	+ 0·04	+ 0·45	
27	,,	+ 3·3	0·0	+ 0·53	+ 0·49	+ 0·05	+ 0·45	
28	,,	+ 3·2	0·0	+ 0·41	+ 0·45	+ 0·04	+ 0·45	18, 34 and 100, 108 R. P. L.
29	,,	+ 3·2	0·0	+ 0·38	+ 0·43	+ 0·04	+ 0·47	14, 26, 34 and 98 R. P. L.
31	M	+ 1·8	0·0	+ 0·38	+ 0·44	+ 0·03	+ 0·47	

Oct. 11.—New line put in clock.

Instrumental Corrections adopted in 1884.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining Stars.
		″	″	s	s	s	s	
Jan. 1	M	+ 1·6	0·0	+ 0·34	+ 0·45	+ 0·04	+ 0·38	β Ceti & 2 Ursæ Minoris.
2	,,	+ 0·8	0·0	+ 0·37	+ 0·47	+ 0·04	+ 0·38	
3	,,	+ 0·9	0·0	+ 0·42	+ 0·46	+ 0·03	+ 0·38	
5	,,	+ 0·7	0·0	+ 0·42	+ 0·47	+ 0·03	+ 0·38	
7	,,	+ 0·7	0·0	+ 0·37	+ 0·50	+ 0·03	+ 0·38	
8	,,	+ 0·2	0·0	+ 0·37	+ 0·47	+ 0·03	+ 0·38	111, 116 R. P. L., & Polaris.
9	,,	+ 0·2	0·0	+ 0·40	+ 0·46	+ 0·03	+ 0·34	111 R. P. L. & Polaris, 35, 40, R. P. L.
10	,,	− 0·2	0·0	+ 0·40	+ 0·44	+ 0·04	+ 0·33	
21	,,	− 1·4	0·0	+ 0·43	+ 0·50	+ 0·03	+ 0·27	δ Urs. Min. & 35, 40, 43 R. P. L., 51 Cephei.
22	,,	− 2·0	0·0	+ 0·33	+ 0·51	+ 0·04	+ 0·36	δ Urs. Min. & 35, 40 R.P.L.
23	,,	− 2·1	0·0	+ 0·33	+ 0·51	+ 0·04	+ 0·36	δ Urs. Min. & 41 R. P. L., 51 Cephei.
24	,,	− 2·0	0·0	+ 0·31	+ 0·50	+ 0·03	+ 0·33	δ Urs. Min. and 51 Cephei.
28	,,	− 1·9	0·0	+ 0·37	+ 0·50	+ 0·03	+ 0·32	δ Urs. Min. & 51 Cephei.
30	,,	− 2·3	0·0	+ 0·45	+ 0·46	+ 0·04	+ 0·29	δ Urs. Min. and 49 R. P. L.
31	,,	− 3·2	0·0	+ 0·47	+ 0·44	+ 0·03	+ 0·30	δ Urs. Min., 24 Urs. Min. & 49 R. P. L.
Feb. 2	R	− 3·3	0·0	+ 0·35	+ 0·45	+ 0·04	+ 0·26	δ Urs. Min., 24 Urs. Min. & 60 R. P. L
5	,,	− 3·5	0·0	+ 0·36	+ 0·43	+ 0·04	+ 0·36	δ Urs. Min. & 60 R. P. L.
7	,,	− 5·3	0·0	+ 0·42	+ 0·41	+ 0·02	+ 0·23	24 Urs. Min. & 70 R.P.L.
9	,,	− 5·3	0·0	+ 0·41	+ 0·43	+ 0·02	+ 0·26	λ Urs. Min. & 70 R.P.L.
13	,,	− 5·9	0·0	+ 0·42	+ 0·49	+ 0·04	+ 0·29	λ Urs. Min. & 70 R. P. L.
16	,,	− 5·9	0·0	+ 0·39	+ 0·59	+ 0·03	+ 0·28	λ Urs. Min. & 70 R. P. L.
19	,,	− 6·9	0·0	+ 0·32	+ 0·56	+ 0·04	+ 0·24	
22	,,	− 7·0	0·0	+ 0·33	+ 0·52	+ 0·02	+ 0·21	
26	,,	− 7·0	0·0	+ 0·37	+ 0·56	+ 0·04	+ 0·17	ζ Argus & 70 R. P. L.
29	,,	− 7·7	0·0	+ 0·43	+ 0·50	+ 0·02	+ 0·15	
Apl. 16	,,	− 7·0	0·0	+ 0·40	+ 0·75	+ 0·04	+ 0·34	153 and 70, 89 R. P. L.
17	,,	− 7·6	0·0	+ 0·34	+ 0·76	+ 0·04	+ 0·24	14 & 72, 89, 92, 99 R. P. L.
18	,,	− 7·4	0·0	+ 0·40	+ 0·75	+ 0·03	+ 0·24	155 & 72, 89, 99 R.P.L.
19	,,	− 7·4	0·0	+ 0·38	+ 0·76	+ 0·04	+ 0·27	155 & 89 R. P. L.
21	,,	− 8·4	0·0	+ 0·39	+ 0·78	+ 0·03	+ 0·23	155 & 72 R. P. L.
22	,,	− 7·5	0·0	+ 0·43	+ 0·73	+ 0·02	+ 0·19	Polaris & 72, 93 R. P. L.
23	,,	− 8·5	0·0	+ 0·43	+ 0·72	+ 0·02	+ 0·22	
24	,,	− 8·9	0·0	+ 0·49	+ 0·72	+ 0·02	+ 0·24	10 R. P. L., Polaris & 93 R. P. L.
25	,,	− 8·4	0·0	+ 0·50	+ 0·74	+ 0·04	+ 0·24	Polaris & 97 R. P. L.
26	,,	− 8·5	0·0	+ 0·45	+ 0·73	+ 0·01	+ 0·23	
28	,,	− 7·1	0·0	+ 0·51	+ 0·75	+ 0·04	+ 0·20	158 & 103 R. P. L.
29	,,	− 7·8	0·0	+ 0·51	+ 0·74	+ 0·02	+ 0·20	
30	,,	− 7·5	0·0	+ 0·54	+ 0·73	+ 0·03	+ 0·21	
May 1	M	− 7·0	0·0	+ 0·58	+ 0·75	+ 0·04	+ 0·21	
2	,,	− 6·3	0·0	+ 0·56	+ 0·75	+ 0·03	+ 0·21	
June 20	M	− 7·0	0·0	+ 0·63	+ 0·79	+ 0·03	+ 0·37	34 & 115 R. P. L.
21	,,	− 5·7	0·0	+ 0·61	+ 0·78	+ 0·04	+ 0·46	33, 43 & 108, 120 R. P. L.
23	R	− 5·6	0·0	+ 0·57	+ 0·77	+ 0·04	+ 0·42	
24	,,	− 5·7	0·0	+ 0·46	+ 0·79	+ 0·03	+ 0·41	34 & 111, 116 R. P. L.
25	,,	− 5·2	0·0	+ 0·42	+ 0·82	+ 0·03	+ 0·42	
26	,,	− 6·9	0·0	+ 0·54	+ 0·79	+ 0·02	+ 0·44	
28	,,	− 5·6	0·0	+ 0·55	+ 0·80	+ 0·03	+ 0·35	34 & 108, 111 R. P. L.
July 14	M	− 4·9	0·0	− 0·34	+ 0·78	+ 0·03	+ 0·48	37 & 111, 114, 118 R.P.L.
17	,,	− 5·1	0·0	− 0·17	+ 0·79	+ 0·03	+ 0·42	34 & 111, 114 R. P. L.
18	,,	− 5·5	0·0	− 0·17	+ 0·81	+ 0·04	+ 0·52	43 & 111, 120 R. P. L.

Instrumental Corrections adopted in 1884.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining Stars.
		″	″	s	s	s	s	
July 19	,,	− 5·1	0·0	− 0·21	+ 0·80	+ 0·03	+ 0·52	
22	,,	− 5·2	0·0	− 0·20	+ 0·80	+ 0·04	+ 0·53	
23	,,	− 5·5	0·0	− 0·17	+ 0·80	+ 0·03	+ 0·54	
24	,,	− 5·3	0·0	− 0·15	+ 0·78	+ 0·03	+ 0·54	
25	,,	− 4·9	0·0	− 0·09	+ 0·77	+ 0·04	+ 0·54	
26	,,	− 6·1	0·0	− 0·06	+ 0·77	+ 0·04	+ 0·55	
Aug. 2	R	− 4·6	0·0	− 0·08	+ 0·72	+ 0·04	+ 0·57	
4	,,	− 5·0	0·0	− 0·11	+ 0·74	+ 0·04	+ 0·58	
5	,,	− 4·4	0·0	− 0·15	+ 0·75	+ 0·04	+ 0·58	λ Sagittarii & 24 Urs. Min
7	,,	− 4·9	0·0	− 0·21	+ 0·75	+ 0·02	+ 0·65	51 Cephei & 143 R. P. L.
8	,,	− 4·6	0·0	− 0·22	+ 0·76	+ 0·03	+ 0·66	
11	,,	− 4·6	0·0	− 0·18	+ 0·75	+ 0·02	+ 0·65	
12	,,	− 5·0	0·0	− 0·20	+ 0·75	+ 0·03	+ 0·68	
13	,,	− 4·2	0·0	− 0·13	+ 0·75	+ 0·04	+ 0·69	51 Cephei 131 R. P. L.
14	,,	− 4·7	0·0	− 0·17	+ 0·72	+ 0·02	+ 0·68	
15	,,	− 5·1	0·0	− 0·10	+ 0·71	+ 0·04	+ 0·67	
16	,,	− 3·9	0·0	0·00	+ 0·73	+ 0·04	+ 0·67	
18	,,	− 4·5	0·0	− 0·22	+ 0·73	+ 0·03	+ 0·65	49 R.P.L. & 24 Urs. Min.
19	,,	− 4·6	0·0	− 0·25	+ 0·75	+ 0·02	+ 0·61	51 Cephei & 24 Urs. Min.
20	,,	− 4·5	0·0	− 0·33	+ 0·74	+ 0·03	+ 0·68	51 Cephei & 24 Urs Min., 143 R. P. L.
21	,,	− 4·4	0·0	− 0·30	+ 0·74	+ 0·03	+ 0·69	θ Capricorni & 24 Urs.Min.
23	,,	− 4·3	0·0	− 0·30	+ 0·75	+ 0·04	+ 0·68	
25	,,	− 3·0	0·0	− 0·29	+ 0·75	+ 0·03	+ 0·69	
26	,,	− 4·3	0·0	− 0·29	+ 0·73	+ 0·03	+ 0·70	
28	,,	− 3·1	0·0	− 0·34	+ 0·75	+ 0·02	+ 0·71	
Sep. 1	,,	− 4·7	− 0·1	− 0·35	+ 0·73	+ 0·04	+ 0·72	
8	,,	− 4·1	− 0·1	− 0·34	+ 0·68	+ 0·03	+ 0·76	
10	,,	− 4·1	− 0·1	− 0·32	+ 0·66	+ 0·03	+ 0·78	48, 53, 60 & 131, 143 R.P.L.
11	,,	− 3·9	− 0·1	− 0·30	+ 0·64	+ 0·03	+ 0·76	48 & 24 Urs. Min., 131 R. P. L.
13	,,	− 3·4	− 0·1	− 0·34	+ 0·63	+ 0·03	+ 0·70	45 R. P. L. & 24 Urs.Min., 131 R. P. L.
16	M	− 4·4	− 0·1	− 0·37	+ 0·60	+ 0·03	+ 0·65	45 R. P. L. & 24 Urs.Min., 131 R. P. L.
24	M	− 1·0	− 0·1	− 0·39	+ 0·55	+ 0·03	+ 0·63	48, 53, 60, 70, 72 R. P.L. & 24 Ursæ Minoris, 131 R. P. L.
25	,,	− 1·1	− 0·1	− 0·34	+ 0·55	+ 0·03	+ 0·69	β Aquarii & λ Urs. Minoris.
26	,,	− 1·3	− 0·1	− 0·36	+ 0·55	+ 0·03	+ 0·67	
Oct. 1	,,	− 1·3	− 0·1	− 0·41	+ 0·53	+ 0·04	+ 0·58	62, 69, 72; 79 & 150 R.P.L.
2	,,	− 0·9	− 0·1	− 0·38	+ 0·52	+ 0·03	+ 0·55	55, 79, & 151 R. P. L.
3	,,	− 1·2	− 0·1	− 0·37	+ 0·52	+ 0·04	+ 0·58	45, 55, 60 & 62 R. P. L., 24 Cephei 151 R. P. L.
4	,,	− 1·7	− 0·1	− 0·34	+ 0·52	+ 0·03	+ 0·57	48, 62, 79 & 153 R. P. L.
6	,,	− 1·4	− 0·1	− 0·54	+ 0·51	+ 0·03	+ 0·59	45, 69, 79 & 153 R. P. L.
7	,,	− 1·2	− 0·1	− 0·54	+ 0·52	+ 0·04	+ 0·63	45 & 153 R.P.L.
8	,,	− 2·5	− 0·1	− 0·46	+ 0·50	+ 0·03	+ 0·57	45, 62, 79 & 153 R. P. L.
9	,,	− 2·3	− 0·1	− 0·45	+ 0·52	+ 0·04	+ 0·60	45, 79 & 153 R. P. L.
10	,,	− 2·0	− 0·1	− 0·43	+ 0·50	+ 0·03	+ 0·59	45, 79 & 153 R. P. L.
11	,,	− 2·4	− 0·1	− 0·43	+ 0·49	+ 0·03	+ 0·58	49 R. P. L. & λ Urs. Min.
13	,,	− 2·1	− 0·1	− 0·47	+ 0·49	+ 0 04	+ 0·62	49 R. P. L. & λ Urs. Min.
21	,,	+ 5·7	− 0·1	− 0·52	+ 0·15	+ 0·03	+ 0·50	
22	,,	+ 6·4	− 0·1	− 0·51	+ 0·18	+ 0·03	+ 0·48	ε Aquarii & 153 R. P. L.
27	,,	+ 7·8	− 0·1	− 0·69	+ 0·26	+ 0·03	+ 0·50	

Instrumental Corrections adopted in 1884.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining Stars.
		″	″	s	s	s	s	
28	,,	+ 7·3	− 0·1	− 0·72	+ 0·27	+ 0·04	+ 0·50	87, 92, 97 & 10 R.P.L.
Nov. 12	R	+ 6·2	+ 0·1	− 0·89	+ 1·01	+ 0·03	+ 0·53	
14	,,	+ 7·6	+ 0·1	− 1·01	+ 1·10	+ 0·03	+ 0·54	
15	,,	+ 7·6	+ 0·1	− 0·96	+ 1·03	+ 0·02	+ 0·54	
17	,,	+ 7·7	+ 0·1	− 0·94	+ 0·97	+ 0·04	+ 0·55	
18	,,	+ 8·3	+ 0·1	− 1·03	+ 0·98	+ 0·03	+ 0·55	93, 10, & 18 R. P. L.
22	,,	+ 7·6	+ 0·1	− 0·98	+ 0·94	+ 0·03	+ 0·55	
26	,,	+ 8·4	+ 0·1	− 0·92	+ 0·93	+ 0·02	+ 0·55	87,92 & 10 R.P.L., Polaris.
29	,,	+ 9·1	+ 0·1	− 0·93	+ 0·95	+ 0·03	+ 0·52	87, 103 R. P. L. & 2993 Radcliffe & 10 R. P. L.
Dec. 1	,,	+ 8·3	0·0	− 1·04	+ 0·94	+ 0·05	+ 0·57	87, 103 R. P. L. & 2 Ursæ Minoris.
3	M	+ 8·4	0·0	− 1·07	+ 0·91	+ 0·04	+ 0·50	100, 103 & 10 R. P. L.
4	,,	+ 8·5	0·0	− 1·04	+ 0·89	+ 0·04	+ 0·49	100, 103 & 10 R. P. L.
11	,,	+ 6·8	0·0	− 0·99	+ 0·78	+ 0·04	+ 0·43	100, 103 & 10 R. P. L.
12	,,	+ 6·3	0·0	− 1·10	+ 0·76	+ 0·04	+ 0·46	100, & 10 R. P. L.
23	R	+ 12·6	0·0	− 1·03	+ 1·17	+ 0·03	+ 0·47	100, & 10 R. P. L.
24	,,	+ 13·9	0·0	− 1·02	+ 1·32	+ 0·03	+ 0·52	
26	,,	+ 13·3	0·0	− 0·97	+ 1·32	+ 0·02	+ 0·54	101 & 10 R. P. L.
27	,,	+ 13·6	0·0	− 0·99	+ 1·32	+ 0·02	+ 0·55	101 & 10 R. P. L.
29	M	+ 13·8	0·0	− 1·00	+ 1·35	+ 0·03	+ 0·45	103 & 10 R. P. L.
30	,,	+ 12·0	0·0	− 0·89	+ 1·34	+ 0·04	+ 0·56	
31	,,	+ 11·8	0·0	− 0·80	+ 1·33	+ 0·04	+ 0·45	103 & 10 R. P. L.

Instrumental Corrections adopted in 1885.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining Stars.
		″	″	s	s	s	s	
Jan. 1	M	+10·6	−0·5	+0·22	+1·32	+0·03	+0·42	10 and 110 R. P. L.
2	,,	+12·0	−0·5	+0·24	+1·31	+0·03	+0·41	
5	R	+11·0	−0·5	+0·20	+1·16	+0·02	+0·39	
8	,,	+9·9	−0·5	+0·01	+1·06	+0·03	+0·36	37 and 110 R. P. L.
10	,,	+9·1	−0·5	−0·02	+1·02	+0·03	+0·35	
14	,,	+8·4	−0·5	+0·09	+0·90	+0·04	+0·34	37 and 110 R. P. L.
17	,,	+6·8	−0·5	+0·12	+0·87	+0·05	+0·35	37 and 110 R. P. L.
20	,,	+6·0	−0·5	+0·15	+0·84	+0·02	+0·30	37 and 110 R. P. L.
23	,,	+5·8	−0·5	+0·13	+0·81	+0·03	+0·26	37 R. P. L. and μ Eridani.
26	,,	+4·2	−0·5	+0·14	+0·74	+0·03	+0·32	37 R. P. L. and δ Urs. Min.
29	,,	+3·7	−0·5	+0·17	+0·78	+0·04	+0·32	37 R. P. L. and δ Urs. Min.
31	,,	+4·2	−0·5	+0·15	+0·77	+0·02	+0·30	
Feb. 3	M	+1·3	+0·3	+0·11	+0·82	+0·03	+0·26	
6	,,	+0·5	+0·3	+0·15	+0·80	+0·03	+0·23	37 R. P. L. and δ Urs. Min.
9	,,	−0·8	+0·3	+0·12	+0·80	+0·03	+0·20	
10	,,	−1·3	+0·3	+0·14	+0·78	+0·02	+0·19	37 R. P. L. and δ Urs. Min.
11	,,	−1·2	+0·3	+0·20	+0·80	+0·03	+0·20	
12	,,	−0·6	+0·3	+0·12	+0·81	+0·02	+0·22	
13	,,	−0·9	+0·3	+0·12	+0·82	+0·03	+0·23	
14	,,	−1·9	+0·3	+0·18	+0·83	+0·02	+0·24	37 R. P. L. and δ Urs. Min.
16	,,	−2·0	+0·3	+0·17	+0·80	+0·02	+0·23	
17	,,	−1·8	+0·3	+0·19	+0·81	+0·02	+0·22	
18	R	−1·4	+0·3	+0·07	+0·80	+0·03	+0·21	
19	M	−2·1	+0·3	+0·07	+0·82	+0·02	+0·20	
20	,,	−1·9	+0·3	+0·18	+0·86	+0·02	+0·20	37 R. P. L. and δ Urs. Min.
23	,,	−2·9	+0·3	+0·16	+0·87	+0·03	+0·18	
26	,,	−3·0	+0·3	+0·14	+0·84	+0·02	+0·17	51 Cephei & δ Urs. Min.
28	,,	−3·0	+0·3	+0·19	+0·83	+0·02	+0·19	
Mar. 3	R	−3·2	+0·1	+0·18	+0·81	+0·04	+0·21	51 Cephei & δ Urs. Min.
6	,,	−2·0	+0·1	+0·13	+0·89	+0·04	+0·24	51 Cephei & δ Urs. Min.
9	,,	−3·3	+0·1	+0·14	+0·83	+0·03	+0·22	
12	,,	−3·6	+0·1	+0·15	+0·85	+0·03	+0·20	51 Cephei & δ Urs. Min.
14	,,	−4·0	+0·1	+0·16	+0·84	+0·03	+0·20	
17	M	−4·6	+0·1	+0·12	+0·88	+0·03	+0·19	
20	,,	−4·3	+0·1	+0·12	+0·89	+0·03	+0·19	51 Cephei & λ Urs. Min.
23	R	−3·5	+0·1	+0·17	+0·85	+0·03	+0·19	51 Cephei & λ Urs. Min.
26	,,	−3·3	+0·1	+0·20	+0·87	+0·02	+0·18	51 Cephei & λ Urs. Min.
28	,,	−3·3	+0·1	+0·18	+0·86	+0·02	+0·19	51 Cephei & λ Urs. Min.
30	,,	−3·8	+0·1	+0·13	+0·88	+0·03	+0·21	51 Cephei & λ Urs. Min.
Apl. 1	,,	−3·4	+0·3	+0·10	+0·88	+0·03	+0·20	51 Cephei & λ Urs. Min.
3	,,	−3·1	+0·3	+0·06	+0·88	+0·02	+0·19	
8	M	−3·7	+0·3	+0·07	+0·91	+0·02	+0·17	
11	,,	−3·6	+0·3	+0·08	+0·96	+0·03	+0·16	
14	,,	−3·4	+0·3	+0·08	+0·97	+0·02	+0·15	72 and 155 R. P. L.
17	,,	−3·4	+0·3	+0·08	+0·96	+0·02	+0·12	72 and 155 R. P. L.
Apl. 21	M	−3·8	+0·3	+0·09	+0·96	+0·02	+0·14	72 and 155 R. P. L.
24	,,	−3·5	+0·3	+0·10	+0·96	+0·03	+0·13	72 and 155 R. P. L.
28	,,	−3·3	+0·3	+0·13	+0·97	+0·02	+0·11	72 and 155 R. P. L.
May 1	R	−3·1	−0·1	+0·11	+0·98	+0·03	+0·13	72 and 155 R. P. L.
5	,,	−3·5	−0·1	+0·08	+1·02	+0·03	+0·16	
7	,,	−3·0	−0·1	+0·08	+1·03	+0·02	+0·18	
9	,,	−3·2	−0·1	+0·10	+1·03	+0·03	+0·19	72 and 155 R. P. L.
11	,,	−3·5	−0·1	+0·08	+1·05	+0·02	+0·22	
13	,,	−2·9	−0·1	+0·07	+1·12	+0·04	+0·25	72 and 155 R. P. L.

Instrumental Corrections adopted in 1885.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining Stars
		″	″	s	s	s	s	
May 15	R	− 2·8	− 0·1	+ 0·07	+ 1·11	+ 0·03	+ 0·25	
18	,,	− 3·0	− 0·1	+ 0·04	+ 1·13	+ 0·03	+ 0·25	
20	,,	− 3·1	− 0·1	+ 0·02	+ 1·12	+ 0·02	+ 0·25	
22	,,	− 2·8	− 0·1	+ 0·03	+ 1·12	+ 0·03	+ 0·25	92 and 155 R. P. L.
25	,,	− 3·4	− 0·1	+ 0·04	+ 1·10	+ 0·03	+ 0·24	92 and 155 R. P. L.
28	,,	− 2·4	− 0·1	0·00	+ 1·12	+ 0·03	+ 0·23	
30	,,	− 3·2	− 0·1	− 0·01	+ 1·11	+ 0·01	+ 0·23	
June 2	M	− 1·3	+ 0·2	− 0·05	+ 1·16	+ 0·03	+ 0·22	
5	,,	− 2·7	+ 0·2	− 0·08	+ 1·11	+ 0·02	+ 0·21	
Aug. 5	R	− 2·8	0·0	+ 0·13	+ 1·11	+ 0·04	+ 0·46	
7	,,	− 3·2	0·0	+ 0·12	+ 1·17	+ 0·02	+ 0·47	51 Cephei & 72 Ophiuchi.
15	,,	− 2·2	0·0	+ 0·11	+ 1·15	+ 0·06	+ 0·50	
17	,,	− 3·5	0·0	+ 0·04	+ 1·11	+ 0·02	+ 0·51	51 Cephei & δ Urs. Min.
20	,,	− 2·4	0·0	− 0·02	+ 1·08	+ 0·02	+ 0·51	
Sep. 7	,,	− 2·1	+ 0·2	+ 0·18	+ 1·04	+ 0·03	+ 0·53	51 Cephei & δ Urs. Min.
12	,,	− 2·8	+ 0·2	+ 0·15	+ 1·06	+ 0·02	+ 0·54	
15	,,	− 2·4	+ 0·2	+ 0·07	+ 1·00	+ 0·02	+ 0·54	
18	,,	− 2·1	+ 0·2	− 0·01	+ 0·95	+ 0·03	+ 0·55	
25	,,	+ 0·5	+ 0·2	− 0·11	+ 0·92	+ 0·02	+ 0·55	72 R. P. L. & λ Urs. Min.
29	,,	− 0·3	+ 0·2	− 0·21	+ 0·95	+ 0·02	+ 0·57	
Oct. 1	M	+ 0·9	0·0	− 0·22	+ 0·98	+ 0·03	+ 0·57	
3	,,	+ 1·6	0·0	− 0·17	+ 0·95	+ 0·03	+ 0·57	
5	,,	+ 0·7	0·0	− 0·13	+ 0·94	+ 0·03	+ 0·58	
7	,,	+ 0·3	0·0	− 0·13	+ 0·93	+ 0·03	+ 0·58	72 and 155 R. P. L.
9	,,	+ 2·6	0·0	− 0·37	+ 0·90	+ 0·02	+ 0·55	
14	,,	+ 2·9	0·0	− 0·48	+ 0·86	+ 0·03	+ 0·47	72 R. P. L. and λ Aquarii.
16	,,	+ 3·1	0·0	− 0·39	+ 0·86	+ 0·03	+ 0·55	
19	,,	+ 1·9	0·0	− 0·37	+ 0·89	+ 0·03	+ 0·55	
21	,,	+ 2·3	0·0	− 0·37	+ 0·88	+ 0·03	+ 0·55	
23	,,	+ 2·8	0·0	− 0·35	+ 0·89	+ 0·03	+ 0·55	
Dec. 28	R	+ 7·0	0·0	− 1·33	+ 0·89	+ 0·03	+ 0·52	

Instrumental Corrections adopted in 1886.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining Stars.
		″	″	s	s	s	s	
Jan. 1	M	+ 5·5	0·0	− 1·30	+ 0·85	+ 0·03	+ 0·49	37 and 110 R. P. L.
7	R	+ 4·6	0·0	− 1·29	+ 0·92	+ 0·08	+ 0·43	
15	,,	+ 3·6	0·0	− 1·43	+ 0·84	+ 0·04	+ 0·36	51 Cephei & δ Urs. Min.
19	,,	+ 1·9	0·0	− 1·33	+ 0·84	+ 0·04	+ 0·36	
24	,,	− 0·2	0·0	− 0·20	− 0·03	+ 0·06	+ 0·35	51 Cephei & δ Urs. Min.
26	,,	− 0·2	0·0	+ 0·19	− 0·04	+ 0·28	+ 0·25	
27	,,	− 0·2	0·0	+ 0·28	− 0·05	+ 0·40	+ 0·39	
29	,,	− 0·2	0·0	+ 0·68	− 0·06	+ 0·62	+ 0·51	37 and 40 R. P. L. 51 Cephei & δ Urs. Min.
30	,,	− 0·8	0·0	+ 0·65	+ 0·07	+ 0·02	+ 0·49	37 and 40 R. P. L. 51 Cephei & δ Urs. Min.
Feb. 1	,,	− 2·4	− 0·3	+ 0·65	+ 0·11	+ 0·03	+ 0·64	37 and 40 R. P. L., λ Ursæ Minoris.
3	,,	+ 0·1	− 0·3	+ 0·70	+ 0·09	+ 0·04	+ 0·69	
6	,,	− 2·2	− 0·3	+ 0·70	+ 0·07	+ 0·08	+ 0·76	
13	M	− 7·1	− 0·3	+ 0·85	+ 0·05	+ 0·10	+ 0·53	51 Cephei & λ Urs. Min.
15	,,	− 7·7	− 0·3	+ 0·76	+ 0·02	+ 0·07	+ 0·52	51 Cephei & λ Urs. Min.
17	,,	− 7·3	− 0·3	+ 0·76	+ 0·03	+ 0·07	+ 0·54	51 Cephei & λ Urs. Min.
20	,,	− 7·5	− 0·3	+ 0·84	+ 0·03	+ 0·06	+ 0·53	
22	,,	− 7·5	− 0·3	+ 0·89	+ 0·05	+ 0·04	+ 0·49	51 Cephei & λ Urs. Min.
25	,,	− 7·4	− 0·3	+ 0·93	+ 0·06	+ 0·05	+ 0·49	
Apl. 2	R	− 7·5	0·0	+ 0·91	+ 0·28	+ 0·07	+ 0·53	72 and 155 R. P. L.
5	,,	− 6·4	0·0	+ 0·84	+ 0·30	+ 0·06	+ 0·47	
7	,,	− 6·6	0·0	+ 0·91	+ 0·26	+ 0·07	+ 0·43	
9	,,	− 7·4	0·0	+ 0·90	+ 0·22	+ 0·05	+ 0·39	72 and 155 R. P. L.
12	,,	− 7·0	0·0	+ 0·85	+ 0·23	+ 0·06	+ 0·40	
14	,,	− 6·8	0·0	+ 0·86	+ 0·23	+ 0·06	+ 0·41	
16	,,	− 7·1	0·0	+ 0·81	+ 0·24	+ 0·05	+ 0·41	
19	,,	− 7·2	0·0	+ 0·83	+ 0·28	+ 0·06	+ 0·42	92 and 155 R. P. L.
21	,,	− 6·2	0·0	+ 0·81	+ 0·31	+ 0·13	+ 0·42	
24	,,	− 6·5	0·0	+ 0·81	+ 0·33	+ 0·13	+ 0·42	
27	,,	− 6·6	0·0	+ 0·91	+ 0·33	+ 0·10	+ 0·41	
29	,,	− 6·2	0·0	+ 0·95	+ 0·27	+ 0·08	+ 0·41	92 and 155 R. P. L.
May 1	,,	− 6·9	0·0	+ 0·92	+ 0·26	+ 0·07	+ 0·42	
4	,,	− 7·2	0·0	+ 0·91	+ 0·28	+ 0·07	+ 0·44	
6	,,	− 6·1	0·0	+ 0·91	+ 0·29	+ 0·07	+ 0·45	
8	,,	− 6·8	0·0	+ 0·92	+ 0·34	+ 0·05	+ 0·46	
10	,,	− 5·9	0·0	+ 1·00	+ 0·36	+ 0·04	+ 0·47	92 and 155 R. P. L.
June 7	M	− 0·2	− 0·1	+ 0·75	+ 0·23	+ 0·04	+ 0·49	
11	,,	+ 0·8	− 0·1	+ 0·72	+ 0·16	+ 0·05	+ 0·49	Polaris and 92 R. P. L.
18	,,	+ 2·0	− 0·1	+ 0·75	+ 0·18	+ 0·07	+ 0·47	
22	,,	+ 0·3	− 0·1	+ 0·88	+ 0·14	+ 0·07	+ 0·43	Polaris and ρ Bootis.
25	,,	+ 1·3	− 0·1	+ 0·92	+ 0·12	+ 0·07	+ 0·43	
Aug. 4	R	+ 6·6	0·0	+ 0·71	+ 0·06	+ 0·07	+ 0·50	51 Cephei & δ Urs. Min.
Sep. 1	M	− 0·1	0·0	+ 0·47	+ 0·13	+ 0·12	+ 0·46	
4	,,	− 1·0	0·0	+ 0·52	+ 0·15	+ 0·11	+ 0·44	51 Cephei & λ Urs. Min.
11	,,	− 2·2	0·0	+ 0·62	+ 0·12	+ 0·11	+ 0·49	
15	,,	− 2·3	0·0	+ 0·59	+ 0·16	+ 0·12	+ 0·51	
18	,,	− 2·3	0·0	+ 0·64	+ 0·18	+ 0·12	+ 0·52	
22	,,	− 3·0	0·0	+ 0·71	+ 0·18	+ 0·11	+ 0·54	
25	,,	− 1·9	0·0	+ 0·76	+ 0·17	+ 0·11	+ 0·56	51 Cephei & λ Urs Min.
Dec. 11	R	+ 4·4	0·0	+ 0·15	− 0·06	+ 0·06	+ 0·41	110 R. P. L. and Polaris.
24	,,	− 0·3	0·0	+ 0·12	+ 0·01	+ 0·07	+ 0·56	110 R. P. L. and Polaris.
28	M	− 2·4	0·0	+ 0·23	+ 0·03	+ 0·07	+ 0·44	37 and 110 R. P. L.

Instrumental Corrections adopted in 1887.

Date.	Observer.	Index.	Run in 5′.	Clock Rate.	Inclination.	Collimation.	Meridian.	Determining Stars.
		″	″	s	s	s	s	
Jan. 7	M	− 4·9	0·0	+ 0·15	+ 0·06	+ 0·09	+ 0·38	110 and 37 R. P. L.
11	,,	− 5·4	0·0	+ 0·20	+ 0·07	+ 0·11	+ 0·39	
14	R	− 6·6	0·0	+ 0·22	+ 0·10	+ 0·11	+ 0·40	
18	M	− 6·8	0·0	+ 0·24	+ 0·10	+ 0·12	+ 0·41	
21	,,	− 7·0	0·0	+ 0·26	+ 0·10	+ 0·12	+ 0·42	
25	R	− 7·7	0·0	+ 0·26	+ 0·09	+ 0·10	+ 0·44	
28	M	− 8·0	0·0	+ 0·29	+ 0·12	+ 0·11	+ 0·45	δ Urs. Min. and 37 R. P. L.
Feb. 18	R	− 7·9	0·0	+ 0·41	+ 0·15	+ 0·12	+ 0·40	δ Urs. Min. and 40 R. P. L.
22	M	− 9·0	0·0	+ 0·43	+ 0·12	+ 0·12	+ 0·39	
25	R	− 8·9	0·0	+ 0·46	+ 0·14	+ 0·12	+ 0·37	δ Urs. Min. and 51 Cephei
Mar. 1	R	− 9·2	+ 0·2	− 0·05	+ 0·20	+ 0·09	+ 0·38	
4	M	− 9·2	+ 0·2	− 0·15	+ 0·22	+ 0·10	+ 0·38	δ Urs. Min. and 51 Cephei
Apl. 1	M	− 6·9	− 0·1	− 0·22	+ 0·33	+ 0·12	+ 0·35	λ Urs. Min. and 51 Cephei
8	,,	− 7·0	− 0·1	− 0·13	+ 0·36	+ 0·09	+ 0·38	
26	R	− 6·5	− 0·1	− 0·14	+ 0·31	+ 0·07	+ 0·27	155 and 72 R. P. L.
29	M	− 5·2	− 0·1	− 0·10	+ 0·32	+ 0 06	+ 0·29	
May 3	R	− 5·0	0·0	− 0·07	+ 0·37	0·00	+ 0·31	
6	,,	− 6·4	0·0	− 0·08	+ 0·36	+ 0·04	+ 0·38	
10	,,	− 5·1	0·0	− 0·06	+ 0·37	+ 0·08	+ 0·35	
16	,,	− 3·6	0·0	− 0·05	+ 0·48	+ 0·05	+ 0·39	155 and 92 R. P. L.
20	,,	− 6·4	0·0	− 0·04	+ 0·44	+ 0·09	+ 0·44	
24	,,	− 3·9	0·0	+ 0·01	+ 0·50	+ 0·05	+ 0·50	
27	,,	− 4·0	0·0	+ 0·08	+ 0·47	+ 0·04	+ 0·54	
31	,,	− 3·1	0·0	+ 0·15	+ 0·41	+ 0·04	+ 0·59	Polaris and 92 R. P. L.
June 3	M	− 3·6	0·0	+ 0·18	+ 0·43	+ 0·04	+ 0·55	
7	,,	− 3·0	0·0	+ 0·01	+ 0·45	+ 0·04	+ 0·51	
10	,,	− 4·8	0·0	− 0·04	+ 0·46	+ 0·04	+ 0·47	
14	,,	− 3·1	0·0	+ 0·06	+ 0·41	+ 0·06	+ 0·42	Polaris and 110 R. P. L.
28	,,	− 1·6	0·0	+ 0·12	+ 0·36	+ 0·05	+ 0·71	Polaris and 110 R. P. L.
July 1	,,	− 0·2	0·0	+ 0·05	+ 0·34	+ 0·10	+ 0·67	
12	,,	− 1·0	0·0	− 0·47	+ 0·34	+ 0·10	+ 0·51	
22	,,	− 0·2	0·0	− 0·19	+ 0·28	+ 0·08	+ 0·36	ζ Ophiuchi and 110 R.P.L.
29	,,	− 0·1	0·0	− 0·08	+ 0·27	+ 0·09	+ 0·61	51 Cephei & δ Urs. Min.
Aug. 27	,,	+ 4·7	0·0	− 0·78	+ 0·02	+ 0·03	+ 0·51	θ Ophiuchi and δ Urs.Min.
Oct. 1	R	+ 6·2	0·0	− 0·24	− 0·02	+ 0·09	+ 0·47	
5	,,	+ 5·4	0·0	− 0·46	+ 0·05	+ 0·10	+ 0·47	
10	,,	+ 8·0	0·0	− 0·42	+ 0·13	+ 0·10	+ 0·46	72 and 155 R. P. L.
Nov. 3	,,	+ 9·5	0·0	− 0·82	+ 0·18	+ 0·11	+ 0·44	92 and 155 R. P. L.
7	,,	+ 9·5	0·0	− 0·81	+ 0·19	+ 0 11	+ 0·44	
17	,,	+ 10·9	0·0	− 1·06	+ 0·33	+ 0·13	+ 0·43	
21	,,	+ 10·5	0·0	− 1·05	+ 0·32	+ 0·14	+ 0·43	92 and 155 R. P. L.
26	,,	+ 11·7	0·0	− 1·09	+ 0·26	+ 0·16	+ 0·43	

Corrections to the Nautical Almanac Stars as given by the Madras Mean Positions.

Stars.	Approximate Place 1884.			1883.			1884.			1885.		
				Obs.	R. A.	P. D.	Obs.	R. A.	P. D.	Obs.	R. A.	P. D.
	h.	*m.*	° ′		*s*	″		*s*	″		*s*	″
ι Ceti	0	14	99 28	7	− 0·06	− 2·7	13	+ 0·04	+ 0·2	...	.....	.....
12 Ceti	0	24	94 36	...	.....	.....	2	+ 0·06	+ 1·1	...	.....	.....
β Ceti...	0	38	108 37	...	.....	.....	2	+ 0·05	+ 1·6	...	.....	.....
δ Piscium	0	43	83 3	7	+ 0·04	− 0·7	3	− 0·04	0·0	...	.....	.....
β Andromedæ ...	1	3	55 0	2	− 0·07	− 1·0	11	− 0·06	+ 0·1	1	0·0	− 0·7
α Urs. Min. (*Polaris*)..	1	16	1 19	14	+ 0·23	+ 0·3	6	+ 0·62	+ 0·7	...	.....	.....
θ Ceti...	1	18	98 47	2	− 0·04	+ 1·1	...	.....	.....	...	.....	.....
η Piscium	1	25	75 15	4	0·00	+ 0·1	1	− 0·12	− 0·7	...	.....	.....
α Eridani (*Achernar*).	1	33	147 50	1	+ 0·27	+ 0·9	...	.....	.....	...	.....	.....
ν Piscium	1	35	85 6	1	+ 0·04	− 0·7	...	.....	.....	...	.....	.....
ο Piscium	1	39	81 26	10	− 0·03	+ 0·8	10	0·00	− 0·8	...	.....	.....
β Arietis	1	48	69 46	13	+ 0·07	− 0·6	...	.....	.....	...	.....	.....
α Arietis	2	1	67 5	17	+ 0·01	+ 0·4	2	− 0·04	+ 0·1	...	.....	.....
67 Ceti	2	11	96 57	3	− 0·04	− 0·1	4	+ 0·05	+ 0·4	...	.....	.....
ξ^2 Ceti	2	22	82 4	1	+ 0·01	− 2·5	...	.....	.....	...	.....	.....
γ^2 Ceti	2	37	87 15	2	0·00	− 1·2	...	.....	.....	...	.....	.....
σ Arietis	2	45	75 24	7	+ 0·03	− 1·1	13	+ 0·02	− 2·2	...	.....	.....
α Ceti	2	56	86 22	7	− 0·04	− 1·0	2	+ 0·07	+ 1·0	...	.....	.....
δ Arietis	3	5	70 43	7	− 0·04	− 1·0	8	− 0·04	+ 0·3	...	.....	.....
α Persei	3	16	40 33	3	− 0·13	− 0·4	...	.....	.....	...	.....	.....
ο Tauri	3	19	81 23	6	− 0·05	− 1·3	6	− 0·04	− 0·3	8	+ 0·01	− 0·7
ϵ Eridani	3	27	99 51	6	+ 0·07	+ 0·1	...	.....	...	9	− 0·01	− 0·5
η Tauri	3	41	66 15	4	+ 0·03	− 0·7	2	− 0·02	+ 2·1	...	.....	.....
γ^1 Eridani	3	53	103 50	...	.....	.....	6	+ 0·02	+ 0·8	...	.....	.....
A Tauri	3	58	68 14	16	+ 0·01	− 0·7	...	.....	.....	9	+ 0·02	− 1·0
o^1 Eridani	4	6	97 8	1	+ 0·07	− 2·3	...	.....	.....	...	.....	.....
γ Tauri	4	13	74 39	13	− 0·01	0·0	...	.....	.....	...	.....	.....
ϵ Tauri	4	22	71 5	2	+ 0·05	+ 0·1	3	− 0·06	− 0·1	...	.....	.....
α Tauri (*Aldebaran*)...	4	29	73 44	8	+ 0·02	− 0·2	3	− 0·08	− 0·4	...	.....	.....
μ Eridani	4	40	93 28	...	.....	.....	...	.....	.....	10	+ 0·02	+ 0·5
ι Aurigæ	4	49	57 1	9	− 0·01	+ 1·6	...	.....	.....	...	.....	.....
α Aurigæ (*Capella*)...	5	8	44 7	9	− 0·17	− 2·3	...	.....	.....	...	.....	.....
β Orionis (*Rigel*) ...	5	9	98 20	8	− 0·02	− 1·1	1	+ 0·05	+ 1·8	...	.....	.....
β Tauri	5	19	61 30	4	− 0·03	− 0·1	1	− 0·10	+ 3·1	...	.....	.....
δ Orionis	5	26	90 23	1	+ 0·11	− 0·7	2	+ 0·05	− 2·5	10	+ 0·02	− 2·0

Corrections to the Nautical Almanac Stars as given by the Madras Mean Positions.

Star.	Approximate Place 1884.			1883.			1884.			1885.		
				Obs.	R. A.	P. D.	Obs.	R. A.	P. D.	Obs.	R. A.	P. D.
	h.	*m.*	° ′		*s*	″		*s*	″		*s*	″
α Leporis	5	28	107 54	2	+ 0·02	+ 0·2	...	.....	.....	...	.....	.....
ε Orionis	5	30	91 17	...	.....	.....	1	+ 0·17	+ 1·5	10	− 0·01	+ 1·6
κ Orionis	5	42	99 43	4	+ 0·04	+ 1·5	...	.....	...	10	− 0·06	+ 1·4
α Orionis (*Var.*) ...	5	49	82 37	...	.....	.....	9	0·00	+ 0·7	...	.....	.....
η Geminorum ...	6	8	67 28	10	− 0·01	− 1·3	...	.....	.....	10	+ 0·02	− 1·4
μ Geminorum ...	6	16	67 26	...	.....	.....	1	− 0·06	+ 1·2	...	.....	.....
ξ Geminorum ...	6	30	76 59	10	− 0·01	− 0·9	...	.....	.....	10	+ 0·01	− 0·3
Cephei 51 (*Hev.*) ...	6	46	2 47	10	+ 0·18	− 0·7	8	+ 0·23	− 0·6	12	− 0·30	− 1·2
θ Canis Majoris ...	6	49	101 54	...	.....	.....	...	.....	.....	10	− 0·01	− 0·8
ε Canis Majoris ..	6	54	118 49	...	.....	.....	1	0·00	− 0·7	...	.....	.....
γ Canis Majoris ...	6	59	105 28	...	.....	.....	1	+ 0·06	− 2·4	...	.....	.....
β Canis Minoris ...	7	21	81 29	10	+ 0·02	− 1·6	...	.....	.....	10	+ 0·02	− 1·0
α Can. Min. (*Procyon*)	7	33	84 29	1	.....	.....	1	+ 0·05	− 1·4	...	.....	.....
ξ Argus	7	44	114 34	10	+ 0·04	− 1·2	10	− 0·10	+ 1·9	10	− 0·01	+ 2·6
15 Argûs	8	3	113 58	...	.....	.....	9	− 0·09	− 0·3	...	.....	.....
β Cancri	8	10	80 27	...	.....	.....	...	.....	.....	10	0·00	− 1·5
η Cancri	8	26	69 10	...	.....	.....	2	+ 0·13	− 1·2	...	.....	.....
γ Cancri	8	37	68 7	10	− 0·03	+ 1·1	...	.....	.....	8	− 0·04	0·0
ε Hydræ	8	41	83 9	...	.....	.....	2	+ 0·03	− 1·1	...	.....	.....
α Cancri	8	52	77 42	...	.....	.....	1	+ 0·04	− 0·6	6	+ 0·01	− 0·2
κ Cancri	9	1	78 52	...	.....	.....	1	0·00	+ 0·5	...	.....	.....
83 Cancri	9	13	71 48	...	.....	.....	2	+ 0·16	− 2·5	...	.....	.....
ι Argus	9	14	148 47	10	+ 0·02	+ 2·5	...	.....	.....	...	.....	.....
α Hydræ	9	22	98 9	...	.....	.....	2	+ 0·07	− 0·6	...	.....	.....
ο Leonis	9	35	79 35	...	.....	.....		.....	.....	4	+ 0·02	+ 0·8
ε Leonis	9	39	65 42	...	.....	.....	2	+ 0·22	− 0·2	...	.....	.....
α Leonis (*Regulus.*) ...	10	2	77 28	...	.....	.....	3	+ 0·03	− 3·2	...	.....	.....
γ^1 Leonis	10	14	69 34	...	.....	.....	3	+ 0·02	− 1·0	...	.....	.....
μ Hydræ	10	20	106 15	...	.....	.....	...	.....	.....	10	− 0·04	− 1·1
ρ Leonis	10	27	80 6	...	.....	.....	1	− 0·04	− 1·8	...	.....	.....
l Leonis	10	43	78 50	...	.....	.....	1	+ 0·02	− 1·9	...	.....	.....
d Leonis	10	55	85 46	10	+ 0·02	− 1·0	...	.....	.....	10	+ 0·03	− 1·1
χ Leonis	10	59	82 2	...	.....	.....	2	+ 0·01	− 1·8	...	.....	.....
δ Leonis	11	8	68 50	...	.....	.....	2	+ 0·03	− 0·2	...	.....	.....
τ Leonis	11	22	86 30	10	+ 0·05	+ 0·7	10	− 0·01	− 0·9	8	+ 0·02	− 0·6

Corrections to the Nautical Almanac Stars as given by the Madras Mean Positions.

Stars.	Approximate Place 1884.			1883.			1884.			1885.		
				Obs.	R. A.	P. D.	Obs.	R. A.	P. D.	Obs.	R. A.	P. D.
	h.	*m.*	° ′		*s*	″		*s*	″		*s*	″
β Leonis	11	43	74 47	...	.....	.....	1	+ 0·07	− 0·8	...	.....	.....
π Virginis	11	55	82 44	10	− 0·05	− 1·1	10	0·00	− 2·2	10	+ 0·02	− 1·8
ε Corvi	12	4	111 58	...	.....	.....	1	− 0·15	− 1·7	...	.....	.....
η Virginis	12	14	90 1	...	.....	.....	3	− 0·03	+ 0·7	...	.....	.....
δ^2 Corvi	12	24	105 52	...	.....	.....	...	.....	.....	5	− 0·07	+ 0·7
δ Virginis ...	12	50	85 58	20	+ 0·02	− 3·2	...	.....	.....	2	+ 0·03	− 2·3
ε Virginis	12	56	78 25	30	− 0·01	+ 0·1	10	+ 0·02	− 1·6	...	.....	.....
θ Virginis	13	4	94 55	11	+ 0·01	− 2·0	...	.....	.....	...	.....	.....
α Virginis (*Spica*) ...	13	19	100 33	...	.....	.....	1	− 0·08	− 1·4	...	.....	.....
ζ Virginis	13	29	90 0	10	+ 0·17	+ 2·4	...	.....	.....	...	.....	.....
τ Bootis	13	42	71 58	10	− 0·03	− 3·2	...	.....	.....	...	.....	.....
η Ursæ Majoris ...	13	43	40 6	10	− 0·14	− 3·0	...	.....	.....	...	.....	.....
η Bootis	13	49	71 1	10	− 0·13	+ 1·8	1	+ 0·12	− 1·0	...	.....	.....
τ Virginis	13	56	87 54	...	.....	.....	2	+ 0·11	− 2·8	...	.....	.....
α Bootis (*Arcturus*)...	14	10	70 13	...	.....	.....	3	+ 0·01	− 1·2	...	.....	.....
ρ Bootis	14	27	59 7	...	.....	.....	1	− 0·04	− 2·5	...	.....	.....
ϵ^2 Bootis	14	40	62 26	...	.....	.....	4	− 0·06	− 1·1	...	.....	.....
α Libræ	14	44	105 34	...	.....	.....	3	+ 0·09	− 4·0	...	.....	.....
β Ursæ Minoris ...	14	51	15 22	5	− 0·06	− 2·0	...	.....	.....	...	.....	.....
β Libræ	15	11	98 57	10	+ 0·05	− 0·5	3	− 0·02	+ 0·2	...	.....	.....
α Coronæ ...	15	30	62 54	...	.....	.....	7	− 0·05	− 0·4	...	.....	.....
α Serpentis	15	39	83 13	14	+ 0·01	− 0·9	10	+ 0·05	+ 0·3	...	.....	.....
ε Serpentis	15	45	85 10	10	0·00	− 1·9	...	.....	.....	...	.....	.....
ζ Ursæ Minoris ...	15	48	11 51	...	.....	.....	1	− 0·03	− 2·7	...	.....	.....
β^1 Scorpii	15	59	109 29	...	.....	.....	5	+ 0·05	− 0·6	...	.....	.....
δ Ophiuchi	16	8	93 24	...	.....	.....	2	− 0·03	− 0·8	...	.....	.....
γ Herculis	16	17	70 34	10	− 0·02	− 0·7	...	.....	.....	...	.....	.....
α Scorpii (*Antares*) ...	16	22	116 10	...	.....	.....	2	+ 0·02	+ 0·4	...	.....	.....
ζ Ophiuchi	16	31	100 20	20	+ 0·02	− 0·8	...	.....	.....	...	.....	.....
ζ Herculis	16	37	58 11	...	.....	.....	3	− 0·13	+ 0·8	...	.....	.....
ε Ursæ Minoris ..	16	58	7 46	2	+ 0·11	− 2·9	1	− 0·30	+ 4·9	...	.....	.....
η Ophiuchi	17	4	105 35	20	+ 0·02	+ 0·1	...	.....	.....	5	+ 0·07	− 0·7
α^1 Herculis	17	9	75 29	...	.....	.....	3	+ 0·01	− 1·7	...	.....	.....
σ Ophiuchi	17	21	85 45	10	+ 0·02	+ 0·7	...	.....	.....	...	.....	.....
α Ophiuchi	17	30	77 21	...	.....	.....	1	+ 0·07	+ 1·1	...	.....	.....

Corrections to the Nautical Almanac Stars as given by the Madras Mean Positions.

Stars.	Approximate Place 1884.			1883.			1884.			1885.		
				Obs.	R. A.	P. D.	Obs.	R. A.	P. D.	Obs.	R. A.	P. D.
	h.	*m.*	° ′		*s*	″		*s*	″		*s*	″
β Ophiuchi	17	38	85 23	20	− 0·03	− 0·6	10	+ 0·01	− 0·9	5	− 0·06	+ 0·1
μ Herculis	17	42	62 13	...	.....	.....	4	− 0·02	− 0·4	...	.....	.....
72 Ophiuchi	18	2	80 27	...	.....	.....	10	− 0·01	− 1·5	4	− 0·01	− 1·9
μ Sagittarii	18	7	111 5	...	.....	.....	1	− 0·05	− 0·4	...	.....	.....
δ Ursæ Minoris ...	18	10	3 23	2	− 1·21	− 1·3	9	+ 0·14	+ 1·4	12	− 0·11	− 0·5
η Serpentis	18	15	92 56	20	+ 0·01	+ 1·5	...	.....	.....	1	− 0·01	+ 1·1
λ Sagittarii	18	21	115 29	20	+ 0·02	− 2·2	2	+ 0·18	− 2·1	1	− 0·05	− 1·3
α Lyræ (*Vega*) ...	18	33	51 19	...	.....	.....	6	− 0·14	− 1·8	...	.....	.....
β¹ Lyræ (*Var.*) ...	18	46	56 46	...	.....	.....	4	− 0·08	+ 0·1	...	.....	.....
ε Aquilæ	18	54	75 5	20	− 0·01	− 0·9	...	.....	.....	1	+ 0·05	− 1·7
ω Aquilæ	19	12	78 37	...	.....	.....	1	+ 0·05	− 0·8	...	.....	.....
δ Aquilæ	19	20	87 7	...	.....	.....	2	+ 0·02	− 0·5	...	.....	.....
λ Ursæ Minoris ...	19	40	1 3	...	.....	.....	5	− 0·63	+ 0·2	6	− 0·77	+ 0·6
γ Aquilæ	19	41	79 40	...	.....	.....	4	− 0·07	− 1·2	...	.....	.....
α Aquilæ (*Altair*) ...	19	45	81 26	...	.....	.....	3	+ 0·02	− 1·0	2	− 0·02	− 1·0
β Aquilæ	19	50	83 53	...	.....	.....	1	0·00	− 1·1	...	.....	.....
θ Aquilæ	20	5	91 10	20	− 0·01	− 0·4	20	+ 0·04	+ 0·2	10	+ 0·03	− 1·1
α² Capricorni ...	20	12	102 54	...	.....	.....	2	+ 0·12	− 2·9	...	...	.....
ε Delphini	20	28	79 5	25	− 0·02	+ 0·6	10	− 0·03	+ 0·6	10	− 0·02	− 1·2
α Cygni	20	37	45 8	...	.....	.....	5	− 0·11	− 2·6	...	.....	.....
ε Aquarii	20	41	99 55	21	+ 0·02	0·0	10	− 0·06	+ 1·4	10	+ 0·04	− 0·5
32 Vulpeculæ ...	20	50	62 23	...	.....	.....	1	− 0·14	+ 2·1	...	.....	.....
θ Capricorni... ...	20	59	107 42	20	− 0·01	+ 1·7	1	+ 0·05	− 0·9	6	− 0·06	+ 0·3
61¹ Cygni	21	2	51 49	...	.....	.....	2	+ 0·09	− 2·1	...	.....	.....
ζ Cygni	21	8	60 15	...	.....	.....	1	− 0·02	− 2·7	...	.....	.....
α Cephei	21	16	27 54	...	.....	.....	8	− 0·10	− 0·2	...	.....	.....
β Aquarii	21	25	96 5	...	.....	.....	2	+ 0·05	− 0·3	...	.....	.....
ε Pegasi	21	38	80 39	20	− 0·05	− 1·0	...	.....	.....	...	.....	.....
α Aquarii	22	0	90 53	21	+ 0·05	+ 0·7	1	+ 0·09	+ 1·4	...	.....	.....
θ Aquarii	22	11	98 22	23	+ 0·01	+ 0·3	...	.....	.....	...	.....	.....
γ Aquarii	22	16	91 58	10	0·00	− 0·4	10	+ 0·03	+ 1·7	4	0·00	+ 1·6
ζ Pegasi	22	36	79 46	...	.....	.....	2	− 0·02	+ 1·0	...	.....	.....
λ Aquarii	22	47	98 12	15	+ 0·02	+ 0·3	14	+ 0·05	+ 1·5	3	+ 0·02	+ 0·4
α Pis. Aus. *Fomalhaut.*	22	51	120 14	...	.....	.....	2	− 0·01	− 0·1	...	.....	.....
α Pegasi (*Markab*) ...	22	59	75 25	11	− 0·03	+ 1·6	..	.....	.....	...	.....	.....

Corrections to the Nautical Almanac Stars as given by the Madras Mean Positions.

Stars.	Approximate Place 1884.		1883.			1884.			1885.		
			Obs.	R. A.	P. D.	Obs.	R. A.	P. D.	Obs.	R. A.	P. D.
	h.	*m.* ° ′		*s*	″		*s*	″		*s*	″
γ Piscium	23	11 87 21	8	0·00	− 1·3	2	+ 0·04	+ 0·4	...	.....	.....
κ Piscium	23	21 89 23	...	.....	.....	1	− 0·04	+ 3·6	...	.....	.....
ι Piscium	23	34 85 0	...	.....	.....	1	− 0·09	+ 1·7	...	.....	.....
ω Piscium	23	53 83 47	...	.....	.....	1	+ 0·03	+ 0·7	...	.....	.....

ERRATA.

Page	No.	Subject	For	Read
		Errata in Vol. VII.		
255	9	Precession in R. A.	2·8712	2·8702
257	69	,, ...	2·7103	1·7103
287	566	,, ...	3·9943	3·9936
		Errata in Vol. VIII.		
80	62	Date	Sep.	Feb.
53	120	Sign of Precession in R. A.	−	+

SEPARATE RESULTS

OF

OBSERVATIONS

OF THE FIXED STARS

MADE WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1883

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
1		*Stone* 8.			
Nov. 14	7·0	0 1 22·53	...	116 0 14·0	M
16	7·0	1 22·46	...	0 12·8	M
20	...	1 22·65	4	0 13·6	M
26	7·0	1 22·33	...	0 15·6	M
27	7·0	1 22·51	...	0 12·7	M
2		6 *Ceti.*			
Nov. 15	...	0 5 18·51	...	106 6 38·5	M
29	...	5 18·40	...	6 35·4	M
Dec. 4	...	5 18·41	...	6 37·4	R
5	...	5 18·31	...	6 37·3	R
6	...	5 18·43	...	6 38·9	R
3		*Stone* 63.			
Nov. 16	...	0 7 48·55	...	116 56 13·1	M
21	...	7 48·51	...	56 10·6	M
26	...	7 48·24	...	56 12·4	M
27	...	7 48·39	...	56 9·6	M
30	...	7 48·51	...	56 14·1	M
4		*Taylor* 37.			
Nov. 14	...	0 10 13·79	...	122 5 41·5	M
29	...	10 13·51	...	5 43·0	M
Dec. 4	...	10 13·68	...	5 45·9	R
5	...	10 13·73	...	5 46·2	R
6	...	10 13·68	...	5 45·7	R
5		8 *Ceti* ι			
Dec. 7	...	0 13 27·88	...	99 28 19·5	R
8	...	13 27·84	...	28 20·0	R
17	...	13 27·85	...	28 20·2	R
18	...	13 27·79	...	28 20·4	R
19	...	13 27·72	...	28 20·8	R
20	...	13 27·81	...	28 19·9	R
22	...	13 27·80	...	28 19·1	R
6		*Stone* 109.			
Nov. 15	7·3	0 14 18·79	...	126 33 8·4	M
16	7·0	14 18·72	...	33 10·2	M
21	7·0	14 18·75	...	33 11·3	M
26	7·0	14 18·72	...	33 9·8	M
30	7·0	14 18·88	...	33 12·2	M
7		*Taylor* 78.			
Nov. 14	7·0	0 18 31·02	...	92 52 1·6	M
20	6·7	18 30·94	...	52 1·2	M
Dec. 4	6·7	18 31·00	...	51 59·1	R
5	6·7	18 31·06	...	51 59·0	R
6	6·7	18 30·99	...	51 59·1	R
8		*Stone* 158.			
Nov. 15	...	0 21 22·93	...	116 11 42·3	M
16	...	21 22·83	...	11 42·1	M
21	...	21 22·87	...	11 41·8	M
29	...	21 22·65	4	11 38·9	M
Dec. 7	...	21 22·67	...	11 40·1	R
9		*Taylor* 101.			
Nov. 30	...	0 22 40·16	...	130 33 47·1	M
Dec. 4	...	22 40·20	...	33 43·5	R
5	...	22 40·24	...	33 43·9	R
6	...	22 40·06	...	33 45·3	R
8	...	22 40·09	...	33 43·4	R
10		*Taylor* 115.			
Nov. 14	...	0 24 31·62	5	114 26 8·4	M
16	...	24 31·82	3	26 7·8	M
20	...	24 31·52	...	26 7·3	M
21	...	24 31·65	4	26 7·7	M
26	...	24 31·79	3	26 7·1	M
11		*Stone* 237.			
Nov. 14	7·0	0 32 53·34	...	136 32 50·0	M
15	7·0	32 53·46	...	32 47·3	M
16	7·0	32 53·44	...	32 49·6	M
20	...	32 53·45	8	32 50·7	M
21	7·0	32 53·30	4	32 50·4	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
12		*Stone* 240.			
Dec. 17	7·0	0 33 16·88	...	133 56 18·4	R
18	7·0	33 16·97	...	56 19·6	R
19	7·0	33 16·87	...	56 19·6	R
20	7·0	33 16·90	...	56 19·6	R
22	7·0	33 16·91	...	56 19·6	R
13		*Taylor* 181.			
Nov. 5	...	0 34 16·83	...	135 26 24·7	M
14		*Taylor* 215.			
Nov. 14	...	0 39 25·06	...	133 18 51·6	M
15	...	39 25·09	...	18 51·8	M
16	...	39 25·01	...	18 51·5	M
21	...	39 24·99	...	18 52·8	M
23	...	39 25·15	...	18 53·4	M
15		*W. B. E.* O. 658.			
Dec. 4	9·1	0 39 36·26	...	88 55 54·4	R
16		63 *Piscium* δ			
Nov. 26	...	0 42 36·66	...	88 3 8·9	M
27	...	42 36·60	...	3 7·1	M
29	...	42 36·69	...	3 5·1	M
Dec. 11	...	42 36·66	...	3 6·8	R
20	...	42 36·68	...	3 5·8	R
22	...	42 36·72	...	3 6·8	R
31	...	42 36·82	...	3 5·8	M
17		*Anon.*			
Nov. 30	9·0	0 42 38·72	...	89 0 20·4	M
18		*Anon.*			
Dec. 6	9·0	0 43 53·51	...	88 58 5·9	R
19		*Taylor* 252.			
Dec. 7	...	0 44 34·58	...	134 1 58·4	R
8	...	44 34·43	4	1 57·3	R
17	...	44 34·28	...	1 59·6	R
18	...	44 34·33	...	1 59·2	R
19	...	44 34·46	...	1 58·9	R
20		*Stone* 342.			
Nov. 14	...	0 46 55·96	...	114 38 36·9	M
15	...	46 55·90	...	38 37·5	M
16	...	46 55·96	...	38 38·1	M
20	...	46 55·91	...	38 37·6	M
21	...	46 55·75	...	38 36·3	M
21		*Stone* 365.			
Nov. 23	...	0 50 15·01	...	118 24 35·5	M
26	...	50 14·73	...	24 34·7	M
27	...	50 14·96	...	24 34·8	M
29	...	50 14·76	...	24 32·1	M
30	...	50 15·08	...	24 35·0	M
22		*R. P. L.* 10.			
Nov. 12	...	0 51 28·43	3	1 36 16·7	M
13	...	51 27·48	3	16·7	M
23		*Anon.*			
Nov. 10	7·0	0 52 8·16	...	131 53 18·5	M
24		2 *Ursæ Minoris.*			
Jan. 5	...	0 52 57·38	3	4 22 15·0	R
25		*Stone* 392.			
Nov. 14	...	0 55 50·27	...	129 32 54·9	M
16	...	55 50·22	...	32 57·4	M
20	...	55 50·28	...	32 56·9	M
21	...	55 50·22	...	32 56·9	M
26	...	55 50·03	...	32 56·5	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
26		*R. P. L.* 14.			
Dec. 29	...	0 56 36·82	3	3 28 41·6	R
27		*Stone* 407.			
Nov. 15	...	0 57 32·77	5	137 1 35·8	M
23	...	57 32·71	...	1 40·2	M
27	...	57 32·55	...	1 36·7	M
30	...	57 32·82	...	1 36·9	M
Dec. 7	...	57 32·46	...	1 37·5	R
28		30 *Ceti.*			
Nov. 14	...	1 1 53·21	...	100 24 42·8	M
16	...	1 52·99	...	24 40·5	M
20	...	1 53·04	5	24 42·6	M
26	...	1 53·04	...	24 44·3	M
29	...	1 53·21	6	24 43·4	M
29		43 *Andromedæ* β			
Jan. 1	...	1 3 10·83	...	54 59 59·5	R
5	...	3 11·00	...	59 57·9	R
30		*Taylor* 391.			
Nov. 15	...	1 6 51·54	...	121 25 18·7	M
16	...	6 51·57	...	25 19·5	M
23	...	6 51·42	...	25 20·9	M
26	...	6 51·34	...	25 18·7	M
27	...	6 51·46	...	25 17·8	M
31		*Anon.*			
Nov. 9	9·0	1 9 4·03	5	145 51 44·7	M
32		*Anon.*			
Jan. 2	8·0	1 10 7·77	...	124 38 59·1	R
3	8·0	10 7·72	...	38 59·8	R
33		*Stone* 489.			
Dec. 11	6·7	1 10 57·89	...	132 37 39·5	R
17	6·7	10 57·79	...	37 39·3	R
18	6·7	10 57·65	...	37 39·4	R
19	7·0	10 57·74	...	37 39·2	R
20	6·7	10 57·84	...	37 39·0	R
34		*Anon.*			
Jan. 5	7·0	1 13 7·84	...	130 43 13·0	R
Nov. 10	7·0	13 7·66	...	43 14·7	M
13	7·0	13 7·70	...	43 13·0	M
14	7·0	13 7·71	6	43 14·6	M
35		*Taylor* 428.			
Nov. 15	6·7	1 13 33·26	...	133 56 57·9	M
16	...	13 33·21	...	56 58·0	M
20	6·7	13 33·18	...	56 59·7	M
21	...	13 33·05	3	56 58·9	M
Dec. 22	6·7	13 33·12	...	56 57·5	R
36		*R. P. L.* 18.			
Dec. 28	...	1 13 38·26	3	2 2 52·1	R
37		1 *Ursæ Minoris* α, *Polaris—s.p.*			
Apl. 3	...	1 15 49·92	3	1 18 55·7	M
4	...	15 49·81	3	18 54·8	M
5	...	15 49·63	3	18 54·5	M
6	...	15 49·95	3	18 53·7	M
7	...	15 49·98	3	18 54·3	M
9	...	15 50·55	3	18 55·4	M
16	...	15 50·03	3	18 54·1	M
17	...	15 49·75	3	18 53·2	M
21	...	15 49·25	3	18 51·8	M
May 3	...	15 50·46	3	18 56·1	R
5	...	15 52·99	3	18 54·3	R
7	...	15 52·20	3	18 54·8	R
8	...	15 51·12	3	18 54·5	R
9	...	15 50·58	3	18 54·5	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
38		*45 Ceti* θ^1			
Jan. 2	...	1 18 10·33	...	98 47 15·7	R
3	...	18 10·46	...	47 15·9	R
39		*93 Piscium* ρ			
Dec. 18	...	1 19 57·00	...	71 26 ~~13·3~~ 7·9	R
40		*Anon.*			
Dec. 5	9·7	1 20 7·18	3	122 56 18·0	R
6	9·7	20 7·27	4	56 19·3	R
41		*Taylor* 487.			
Nov. 14	...	1 24 51·92	...	116 48 45·2	M
16	...	24 51·92	...	48 45·8	M
20	...	24 51·87	5	48 47·4	M
21	...	24 51·83	5	48 46·1	M
23	...	24 52·03	...	48 47·5	M
42		*99 Piscium* η			
Dec. 27	...	1 25 13·33	...	75 15 28·0	R
28	...	25 13·31	...	15 27·9	R
29	...	25 13·43	...	15 27·1	R
31	...	25 13·34	...	15 28·4	M
43		*Stone* 596.			
Jan. 5	7·0	1 25 30·74	...	128 23 39·4	R
9	...	25 30·59	6	23 39·7	M
Nov. 15	7·0	25 30·65	...	23 40·2	M
Dec. 4	7·0	25 30·43	...	23 38·9	R
5	7·0	25 30·41	...	23 39·5	R
44		*Taylor* 524.			
Nov. 16	...	1 29 48·62	4	147 36 1·8	M
30	...	29 48·54	...	36 1·2	M
Dec. 4	...	29 48·47	...	36 2·8	R
5	...	29 48·52	...	36 3·5	R
6	...	29 48·28	...	35 59·5	R
45		*a Eridani, Achernar.*			
Dec. 28	...	1 33 21·53	...	147 49 54·4	R
46		*Anon.*			
Jan. 1	7·0	1 33 27·38	...	138 31 50·8	R
2	7·0	33 27·47	...	31 50·3	R
3	7·0	33 27·34	...	31 50·5	R
4	7·0	33 27·37	...	31 51·1	R
47		*106 Piscium* ν			
Dec. 27	...	1 35 20·52	...	85 6 18·0	R
48		*Anon.*			
Jan. 5	8·0	1 36 20·23	...	140 14 24·3	R
Dec. 5	8·0	36 20·07	...	14 24·6	R
6	8·0	36 19·97	...	14 24·3	R
20	8·0	36 20·02	...	14 25·8	R
49		*110 Piscium o*			
Nov. 12	...	1 39 12·86	...	81 25 55·9	M
13	...	39 12·98	...	25 55·0	M
16	...	39 12·94	...	25 54·6	M
20	...	39 12·79	...	25 55·5	M
21	...	39 12·92	...	25 55·1	M
23	...	39 12·86	...	25 56·6	M
27	...	39 12·84	...	25 53·9	M
30	...	39 12·90	...	25 54·8	M
Dec. 28	...	39 12·89	...	25 54·6	R
29	...	39 12·90	...	25 54·7	R
50		*Taylor* 578.			
Nov. 14	...	1 40 6·98	...	96 19 7·3	M
15	...	40 6·86	4	19 8·3	M
Dec. 4	...	40 6·71	...	19 4·9	R
8	...	40 6·74	...	19 5·4	R
17	...	40 6·76	...	19 6·2	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883 h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer
51		*Stone* 704.			
Jan. 1	8·0	1 41 46·30	...	133 54 17·9	R
2	8·0	41 46·19	...	54 17·2	R
3	7·0	41 45·95	...	54 17·9	R
4	7·0	41 46·02	...	54 15·9	R
5	7·0	41 46·15	...	54 15·8	R
52		*Taylor* 616.			
Nov. 14	...	1 46 22·11	5	140 47 8·7	M
15	...	46 22·09	5	47 8·2	M
20	...	46 22·04	...	47 10·0	M
27	...	46 22·09	...	47 7·3	M
30	...	46 22·03	5	47 8·0	M
53		6 *Arietis* β			
Dec. 4	...	1 48 10·64	...	69 45 51·5	R
5	...	48 10·60	...	45 51·7	R
6	...	48 10·57	...	45 52·9	R
7	...	48 10·60	...	45 49·9	R
8	...	48 10·63	...	45 50·3	R
11	...	48 10·55	...	45 52·3	R
17	...	48 10·62	...	45 51·8	R
18	...	48 10·61	...	45 52·4	R
19	...	48 10·68	...	45 52·8	R
20	...	48 10·57	...	45 51·2	R
22	...	48 10·64	...	45 52·1	R
25	...	48 10·61	...	45 51·6	R
26	...	48 10·58	...	45 51·2	R
54		*Taylor* 626.			
Jan. 2	...	1 48 20·95	...	129 10 21·5	R
3	...	48 20·89	...	10 21·6	R
4	...	48 20·98	...	10 19·9	R
5	...	48 21·11	...	10 19·6	R
8	...	48 20·78	...	10 23·0	M
55		*Anon.*			
Jan. 4	8·0	1 53 53·49	...	127 35 3·2	R
5	8·0	53 53·47	...	35 2·8	R
9	...	53 53·43	...	35 5·5	M
12	...	53 53·53	...	35 4·6	M
Nov. 13	8·0	53 53·27	...	35 2·6	M

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
56		*Stone* 812.			
Nov. 14	...	1 57 20·60	...	105 52 13·6	M
15	...	57 20·47	...	52 13·6	M
16	...	57 20·44	...	52 13·8	M
23	...	57 20·48	...	52 13·8	M
57		*Stone* 824.			
Jan. 4	7·0	1 59 40·37	...	184 4 6·7	R
5	7·0	59 40·57	...	4 6·2	R
9	...	59 40·48	...	4 4·8	M
58		13 *Arietis* α			
Jan. 1	...	2 0 34·75	...	67 5 28·2	R
2	...	0 34·79	..	5 28·0	R
3	...	0 34·72	...	5 28·3	R
8	...	0 34·60	...	5 31·6	M
11	...	0 34·59	...	5 31·4	M
12	...	0 34·75	...	5 30·3	M
15	...	0 34·58	...	5 28·7	M
16	...	0 34·64	...	5 30·5	M
18	...	0 34·59	...	5 30·7	M
19	...	0 34·77	...	5 32·0	M
20	...	0 34·78	...	5 31·2	M
22	...	0 34·80	...	5 30·4	M
24	...	0 34·72	...	5 29·6	M
Dec. 25	...	0 34·66	...	5 29·4	R
26	...	0 34·69	...	5 28·7	R
29	...	0 34·70	...	5 30·0	R
31	...	0 34·69	...	5 29·5	M
59		*Stone* 834.			
Nov. 20	7·0	2 1 19·24	...	142 33 5·4	M
Dec. 4	6·7	1 18·88	...	33 3·5	R
5	6·7	1 18·90	...	33 4·8	R
6	6·7	1 18·80	...	33 3·9	R
7	6·7	1 19·06	...	33 5·0	R
60		*Stone* 850.			
Nov. 15	7·0	2 3 48·66	...	126 22 45·6	M
16	...	3 48·62	6	22 44·5	M
Dec. 18	7·0	3 48·31	...	22 46·2	R
20	7·0	3 48·29	...	22 45·0	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
61		*Stone* 870.			
Nov. 14	7·0	2 5 46·73	...	128 55 5·2	M
21	...	5 46·75	...	55 5·2	M
Dec. 4	7·0	5 46·83	...	55 5·4	R
5	7·0	5 46·75	...	55 5·8	R
6	7·0	5 46·58	...	55 5·8	R
62		*Anon.*			
Jan. 1	7·7	2 8 5·62	...	131 48 51·0	R
2	7·7	8 5·48	4	48 51·5	R
63		*Anon.*			
Jan. 5	8·5	2 9 23·47	...	124 51 42·5	R
12	8·5	9 23·67	...	51 43·2	M
16	...	9 23·71	...	51 43·0	M
Nov. 13	8·5	9 23·52	...	51 42·8	M
16	8·5	9 23·83	4	51 44·0	M
64		*Taylor* 750.			
Jan. 4	6·5	2 9 47·80	...	131 42 43·9	R
65		67 *Ceti*.			
Dec. 28	...	2 11 8·73	...	96 57 42·9	R
29	...	11 8·68	...	57 43·9	R
31	...	11 8·83	...	57 44·0	M
66		*Stone* 911.			
Nov. 20	7·0	2 11 58·70	...	143 25 53·9	M
Dec. 4	6·7	11 58·80	...	25 54·0	R
5	6·7	11 58·77	...	25 54·6	R
6	6·7	11 58·78	...	25 54·6	R
7	6·7	11 58·73	...	25 55·1	R
67		*Anon.*			
Jan. 3	7·0	2 14 28·54	...	132 33 31·6	R
4	7·0	14 28·68	...	33 29·9	R
68		*Stone* 935.			
Nov. 21	...	2 16 3·51	...	140 50 20·3	M
27	...	16 3·78	...	50 17·8	M
Dec. 17	6·7	16 3·37	...	50 22·5	R
18	6·7	16 3·37	...	50 28·5	R
20	6·7	16 3·44	...	50 21·7	R
69		*Anon.*			
Jan. 5	8·0	2 18 16·50	...	150 57 53·2	R
70		*Stone* 955.			
Nov. 20	7·0	2 18 48·68	...	150 17 34·1	M
Dec. 4	6·7	18 48·68	...	17 33·0	R
5	6·7	18 48·65	...	17 35·5	R
6	6·7	18 48·63	...	17 34·0	R
7	6·7	18 48·69	...	17 34·0	R
71		*Anon.*			
Jan. 1	7·5	2 19 52·34	...	134 51 28·1	R
2	7·5	19 52·19	...	51 27·6	R
72		73 *Ceti* ζ^2			
Dec. 31	...	2 21 56·29	...	82 3 52·4	R
73		*Anon.*			
Jan. 17	7·0	2 22 8·53	...	131 53 37·3	M
20	...	22 8·64	...	53 38·9	M
Nov. 27	7·0	22 8·55	...	53 35·9	M
Dec. 17	7·0	22 8·25	..	53 37·2	R
74		*Anon.*			
Jan. 4	7·0	2 23 18·01	...	135 34 15·8	R
75		*Stone* 994.			
Jan. 2	7·0	2 24 31·01	...	126 27 49·7	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
76		*Stone* 1000.			
Nov. 21	...	2 25 20·70	5	154 49 23·8	M
Dec. 4	...	25 20·80	...	49 23·4	R
5	...	25 20·80	...	49 25·3	R
6	...	25 20·70	...	49 24·6	R
7	...	25 20·57	...	49 23·5	R
77		*Lacaille* 782.			
Jan. 5	6·5	2 26 46·94	...	148 19 46·3	R
78		*R. P. L.* 26.			
Dec. 29	...	2 27 32·42	3	3 27 48·1	R
		R. P. L. 26.—*s.p.*			
May 5	...	2 27 29·81	2	3 27 49·3	R
79		*Anon.*			
Jan. 1	7·7	2 28 16·93	...	149 23 21·0	R
3	7·7	28 16·87	...	23 21·2	R
4	7·7	28 16·58	...	23 19·8	R
80		77 *Ceti.*			
Nov. 23	...	2 28 56·44	...	98 22 16·8	M
27	...	28 56·28	...	22 16·7	M
Dec. 17	...	28 55·99	...	22 15·7	R
18	...	28 56·02	...	22 15·9	R
20	...	28 56·08	...	22 15·3	R
81		*Anon.*			
Jan. 17	7·0	2 33 12·18	...	137 9 14·7	M
18	...	33 12·02	6	9 12·7	M
19	...	33 12·21	...	9 14·5	M
20	...	33 11·98	...	9 15·1	M
22	...	33 12·43	...	9 15·7	M
82		86 *Ceti* γ—*2nd.*			
Dec. 27	...	2 37 14·25	...	87 15 29·2	R
28	...	37 14·28	...	15 28·8	R
83		*Taylor* 916.			
Jan. 3	...	2 37 26·80	...	128 53 2·0	R
4	...	37 27·02	...	53 0·6	R
5	...	37 27·20	...	53 0·3	R
8	...	37 27·13	6	53 4·2	M
9	...	37 27·09	6	53 1·8	M
84		*Anon.*			
Jan. 2	7·7	2 37 31·16	...	136 6 9·6	R
85		*Taylor* 926.			
Nov. 27	6·7	2 39 2·48	...	115 59 34·0	M
Dec. 4	6·7	39 2·41	...	59 32·9	R
5	6·7	39 2·39	...	59 33·2	R
6	6·7	39 2·28	...	59 32·7	R
7	6·7	39 2·29	...	59 30·5	R
86		*Stone* 1144.			
Dec. 17	7·0	2 42 14·98	...	131 27 2·4	R
18	7·0	42 14·99	...	27 2·6	R
20	7·0	42 15·11	...	27 1·3	R
22	7·0	42 15·14	...	27 0·7	R
25	7·0	42 14·97	...	27 2·9	R
87		*Anon.*			
Jan. 2	7·7	2 42 49·02	...	149 53 8·7	R
88		*Anon.*			
Jan. 17	7·5	2 43 47·31	...	138 24 5·4	M
19	...	43 47·60	...	24 5·7	M
20	7·5	43 47·66	...	24 2·3	M
22	...	43 47·31	5	24 6·8	M
24	...	43 47·99	4	24 7·3	M
89		43 *Arietis* σ			
Dec. 6	...	2 45 2·04	...	75 24 3·1	R
7	...	45 1·90	...	24 2·8	R
8	...	45 1·87	4	24 1·4	R
11	...	45 1·92	...	24 1·5	R
28	...	45 2·06	...	24 2·2	R
29	...	45 2·01	...	24 2·1	R
31	...	45 1·89	...	24 0·8	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
90		*Anon.*			
Jan. 5	7·5	2 46 1·11	...	132 42 36·0	R
9	...	46 1·20	5	42 37·5	M
11	...	46 1·37	5	42 37·4	M
15	...	46 1·16	...	42 38·2	M
16	...	46 1·28	...	42 37·7	M
91		*Stone* 1170.			
Nov. 27	6·7	2 46 38·45	...	131 26 45·2	M
Dec. 5	6·7	46 38·60	...	26 45·3	R
17	6·7	46 38·46	...	26 45·9	R
18	6·7	46 38·46	...	26 46·1	R
20	6·7	46 38·29	...	26 41·7	R
92		*Anon.*			
Jan. 3	7·5	2 47 2·20	...	133 18 51·6	R
4	7·5	47 2·41	...	18 49·9	R
93		*Stone* 1192.			
Dec. 7	7·0	2 49 36·26	...	135 5 3·4	R
11	7·0	49 36·30	...	5 3·0	R
25	7·0	49 36·29	5	5 2·3	R
26	7·0	49 36·40	4	5 2·5	R
28	7·0	49 36·58	...	5 2·6	R
94		*Stone* 1208.			
Jan. 15	...	2 50 58·96	...	146 21 22·1	M
18	...	50 59·06	...	21 25·4	M
19	...	50 58·88	...	21 22·0	M
20	...	50 59·08	...	21 24·4	M
95		*Stone* 1212.			
Dec. 5	7·0	2 51 42·09	...	141 44 1·9	R
6	7·0	51 42·00	...	44 2·4	R
22	7·0	51 42·23	...	44 2·6	R
31	7·0	51 42·25	...	44 3·0	M
96		*Stone* 1223.			
Dec. 29	...	2 52 28·65	5	154 28 45·5	R

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
97		*Taylor* 1024.			
Jan. 1	7·0	2 55 47·36	...	132 20 19·0	R
2	7·0	55 47·20	...	20 18·7	R
5	7·0	55 46·96	4	20 17·9	R
98		*Taylor* 1027.			
Nov. 27	...	2 56 34·86	...	118 32 29·1	M
30	...	56 34·79	...	32 26·6	M
Dec. 7	...	56 34·77	...	32 25·5	R
18	...	56 34·57	...	32 24·6	R
20	...	56 34·71	...	32 24·7	R
99		*Anon.*			
Jan. 18	...	2 57 42·21	6	132 17 53·9	M
19	7·5	57 42·02	...	17 54·1	M
20	7·5	57 41·95	...	17 53·7	M
22	...	57 42·43	...	17 54·9	M
100		*Stone* 1263.			
Dec. 11	6·7	2 58 55·53	...	137 26 3·0	R
17	6·7	58 55·50	6	26 4·2	R
22	6·7	58 55·84	...	26 2·6	R
25	6·7	58 55·67	...	26 2·5	R
26	6·7	58 55·66	...	26 2·1	R
101		*Stone* 1264.			
Jan. 1	7·0	2 59 13·98	6	134 30 42·3	R
3	7·0	59 13·84	...	30 41·8	R
15	7·0	59 13·67	...	30 42·7	M
16	7·0	59 13·98	4	30 42·1	M
102		*Taylor* 1042.			
Jan. 2	...	2 59 43·54	...	134 21 22·2	R
4	...	59 43·56	...	21 20·2	R
9	...	59 43·59	5	21 21·3	M
11	...	59 43·51	...	21 21·7	M
12	...	59 43·49	...	21 21·8	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
103		*R. P. L.* 33.			
Dec. 7	...	3 4 48·33	3	5 30 25·0	R
20	...	4 49·43	3	30 24·0	R
104		57 *Arietis* δ			
Dec. 4	...	3 4 56·31	...	70 42 59·2	R
5	...	4 56·30	...	42 59·5	R
17	...	4 56·29	...	42 59·4	R
18	...	4 56·35	...	42 59·5	R
25	...	4 56·33	...	42 59·4	R
26	...	4 56·31	...	42 59·2	R
31	...	4 56·32	...	42 58·8	M
105		*Stone* 1342.			
Jan. 1	7·0	3 9 50·85	...	130 41 31·9	R
2	7·0	9 50·72	...	41 31·5	R
106		*Anon.*			
Jan. 3	8·0	3 12 16·99	...	126 8 38·7	R
4	8·0	12 17·30	...	8 37·0	R
12	8·0	12 17·40	...	8 37·7	M
107		33 *Persei a*			
Jan. 19	...	3 15 58·29	...	40 33 23·8	M
20	...	15 58·22	...	33 24·1	M
22	...	15 58·35	...	33 22·7	M
108		1 *Tauri o, Var.* 5.			
Jan. 5	...	3 18 31·09	...	81 22 59·6	R
24	...	18 31·07	...	22 59·9	M
31	...	18 30·92	...	23 0·8	M
Feb. 1	...	18 31·07	...	23 0·0	R
Dec. 28	...	18 31·13	...	23 1·9	R
29	...	18 31·07	...	23 2·1	R
109		*Anon.*			
Jan. 4	8·0	3 18 35·56	...	134 32 53·5	R
8	...	18 35·50	...	32 57·3	M
Jan. 11	...	3 18 35·91	3	134 32 55·9	M
12	8·0	18 35·73	...	32 54·0	M
18	8·0	18 35·57	6	32 56·0	M
110		*Stone* 1414.			
Jan. 1	7·0	3 19 17·21	...	130 29 29·7	R
2	7·0	19 17·12	...	29 29·4	R
3	7·0	19 17·02	...	29 28·8	R
111		*Anon.*			
Jan. 12	...	3 26 30·32	...	135 8 1·7	M
15	7·7	26 30·25	...	8 3·9	M
16	7·7	26 30·19	...	8 1·1	M
112		18 *Eridani* ε			
Jan. 4	...	3 27 25·09	...	99 51 19·1	R
5	...	27 25·10	...	51 19·3	R
8	...	27 25·14	...	51 20·9	M
9	...	27 25·12	..	51 19·4	M
17	...	27 25·24	...	51 20·6	M
18	...	27 25·20	...	51 20·9	M
113		*R. P. L.* 34.			
Jan. 2	...	3 28 19·86	3	3 43 28·7	R
3	...	28 20·11	3	43 27·5	R
Dec. 28	...	28 19·15	3	43 28·9	R
29	...	28 18·63	3	43 30·7	R
114		*Stone* 1522.			
Jan. 1	7·0	3 34 39·77	...	136 37 23·0	R
2	7·0	34 39·65	...	37 22·1	R
115		*Stone* 1526.			
Jan. 3	8·0	3 35 9·17	...	126 19 10·3	R
4	8·0	35 9·28	...	19 8·7	R
5	9·0	35 9·38	...	19 8·3	R
8	...	35 9·42	5	19 12·7	M
9	...	35 9·08	5	19 11·7	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
116		25 *Tauri* η, *Alcyone*.			
Jan. 1	...	3 40 31·86	...	66 15 28·1	R
2	...	40 31·82	...	15 28·3	R
4	...	40 31·79	...	15 27·1	R
Dec. 31	...	40 31·75	...	15 27·5	M
117		*Anon.*			
Jan. 12	...	3 44 17·82	...	136 26 45·3	M
18	8·5	44 17·93	...	26 43·2	M
19	...	44 17·83	...	26 45·4	M
20	8·0	44 18·08	...	26 49·2	M
118		*Anon.*			
Jan. 3	9·0	3 49 49·24	...	126 22 57·5	R
4	...	49 49·29	...	22 55·7	R
5	9·0	49 49·41	...	22 55·6	R
12	9·0	49 49·62	...	22 57·5	M
15	9·0	49 49·45	...	22 54·0	M
119		37 *Tauri* A[1].			
Jan. 3	...	3 57 46·64	...	68 14 19·9	R
4	...	57 46·68	...	14 18·1	R
8	...	57 46·69	...	14 21·5	M
9	...	57 46·70	...	14 20·7	M
11	...	57 46·73	...	14 20·7	M
12	...	57 46·69	...	14 19·4	M
15	...	57 46·83	...	14 19·5	M
16	...	57 46·72	...	14 21·0	M
17	...	57 46·65	...	14 22·3	M
25	...	57 46·67	...	14 22·7	M
26	...	57 46·74	...	14 21·8	M
27	...	57 46·64	...	14 22·2	M
29	...	57 46·71	...	14 20·4	M
30	...	57 46·65	...	14 21·1	M
31	...	57 46·86	...	14 21·2	M
Feb. 1	...	57 46·70	...	14 18·4	R
120		*R. P. L.* 35.			
Jan. 1	...	4 0 13·27	3	4 45 17·4	R
2	...	0 13·82	3	45 18·1	R

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
121		38 *Eridani* o^1			
Jan. 11	...	4 6 9·25	...	97 8 35·3	M
122		*a Reticuli*.			
Feb. 8	...	4 12 55·22	4	152 46 1·5	R
9	...	12 55·32	5	46 1·4	R
12	...	12 55·36	...	46 0·4	R
13	...	12 55·20	...	46 1·4	R
123		54 *Tauri* γ			
Jan. 2	...	4 13 8·11	...	74 39 22·6	R
3	...	13 8·14	...	39 21·6	R
4	...	13 8·15	...	39 20·7	R
5	...	13 8·15	...	39 20·5	R
8	...	13 8·16	...	39 22·1	M
9	...	13 8·08	...	39 22·0	M
12	...	13 8·14	...	39 21·1	M
15	...	13 8·17	...	39 22·3	M
16	...	13 8·15	...	39 21·4	M
17	...	13 8·04	...	39 22·9	M
18	...	13 8·04	...	39 23·2	M
19	...	13 8·02	...	39 23·1	M
20	...	13 8·14	...	39 22·6	M
124		*Taylor* 1553.			
Jan. 8	...	4 20 49·41	...	134 17 23·2	M
12	7·7	20 49·56	...	17 24·0	M
15	...	20 49·54	...	17 21·7	M
16	7·0	20 49·43	...	17 22·9	M
125		74 *Tauri* ϵ			
Jan. 1	...	4 21 47·08	...	71 4 48·7	R
18	...	21 47·10	...	4 50·1	M
126		*Taylor* 1595.			
Jan. 1	7·5	4 27 0·43	...	131 25 33·1	R
3	6·7	27 0·21	...	25 34·0	R
4	6·7	27 0·32	...	25 32·8	R
8	...	27 0·15	...	25 33·9	M

Separate Results of Madras Meridian Circle Observations in 1883.

127 87 *Tauri a, Aldebaran.*

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
Jan. 31	...	4 29 12·48	...	73 43 40·4	M
Feb. 1	...	29 12·47	...	43 35·6	R
2	...	29 12·48	...	43 37·3	R
3	...	29 12·49	...	43 37·9	R
5	...	29 12·48	...	43 37·6	R
6	...	29 12·55	...	43 36·4	M
7	...	29 12·31	...	43 38·2	M
8	...	29 12·45	...	43 36·4	R

128 *a Doradûs.*

Feb. 9	...	4 31 28·17	...	145 17 13·6	R
10	...	31 28·27	...	17 14·1	R
12	...	31 28·24	...	17 12·8	R
13	...	31 28·06	...	17 12·0	R
14	...	31 28·32	...	17 13·4	R

129 *Stone* 1991.

Jan. 2	...	4 32 31·04	...	135 22 29·8	R
3	...	32 30·97	...	22 29·5	R
4	...	32 31·07	...	22 30·2	R
8	...	32 30·99	...	22 30·8	M

130 *Anon.*

Jan. 11	7·0	4 45 26·36	...	131 47 23·9	M
31	7·0	45 26·50	...	47 24·0	M
Feb. 2	7·0	45 26·50	...	47 22·7	R
3	7·0	45 26·53	...	47 21·9	R
5	7·0	45 26·56	...	47 22·2	R

131 3 *Aurigæ ι*

Jan. 22	...	4 49 22·41	...	57 1 15·5	M
24	...	49 22·41	...	1 16·6	M
25	...	49 22·42	...	1 15·3	M
26	...	49 22·41	...	1 15·8	M
27	...	49 22·46	...	1 17·6	M
29	...	49 22·44	...	1 16·5	M
30	...	49 22·52	...	1 16·7	M
Feb. 7	...	49 22·37	...	1 14·3	M
8	...	49 22·43	...	1 14·5	R

132 *R. P. L.* 37.

Jan. 4	...	4 50 27·77	3	4 11 50·6	R
8	...	50 27·55	3	11 49·6	M
9	...	50 27·83	3	11 49·1	M
12	...	50 27·80	3	11 47·9	M
15	...	50 27·83	3	11 49·5	M
16	...	50 28·03	3	11 50·6	M
17	...	50 27·79	3	11 52·0	M
18	...	50 27·85	3	11 48·5	M
19	...	50 27·39	3	11 47·5	M
20	...	50 27·75	3	11 50·6	M

R. P. L. 37—*s. p.*

May 7	...	4 50 27·22	3	4 11 50·0	R
12	...	50 27·69	3	11 47·5	R

133 7 *Aurigæ ε, Var.* 1.

Feb. 9	...	4 53 34·14	...	46 21 4·6	R
10	...	53 34·34	...	21 4·0	R
12	...	53 34·55	...	21 3·4	R
13	...	53 34·43	...	21 4·0	R
14	...	53 34·44	...	21 2·6	R

134 *Stone* 2191.

Jan. 11	7·5	4 56 19·66	6	131 13 20·1	M
25	...	56 19·69	5	13 17·3	M
26	...	56 19·78	...	13 19·7	M
27	7·0	56 19·77	...	13 20·9	M
29	...	56 19·75	...	13 20·8	M

135 *R. P. L.* 39.

Jan. 15	...	5 4 14·46	3	4 26 1·0	M
16	...	4 13·60	3	26 1·4	M
17	...	4 14·03	3	26 0·5	M
18	...	4 14·13	3	26 0·1	M
20	...	4 14·11	3	26 2·5	M
22	...	4 14·27	3	26 0·3	M
25	...	4 13·76	3	26 5·2	M
27	...	4 13·92	3	26 1·9	M
30	...	4 13·93	3	26 0·7	M
31	...	4 13·90	3	26 4·0	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
		R. P. L.* 39.—*s.p.			
May 18	...	5 4 13·83	3	4 26 3·8	R
19	...	4 13·82	3	26 3·9	R
23	...	4 13·49	3	26 6·1	R
28	...	4 13·95	3	26 5·1	R
June 15	...	4 14·19	3	26 8·5	M
Aug. 8	...	4 14·45	3	26 1·6	R
9	...	4 14·23	3	26 5·1	R
136		**13 *Aurigæ α, Capella.***			
Jan. 12	...	5 8 2·75	...	44 7 19·9	M
19	...	8 2·68	...	7 19·5	M
24	..	8 2·66	...	7 19·6	M
26	...	8 2·75	...	7 18·2	M
29	...	8 2·57	...	7 20·2	M
Feb. 14	...	8 2·63	...	7 19·3	R
15	...	8 2·64	...	7 19·8	R
16	...	8 2·52	...	7 19·2	R
17	...	8 2·65	...	7 20·4	R
137		**19 *Orionis β, Rigel.***			
Feb. 2	...	5 8 54·83	...	98 20 16·0	R
3	...	8 54·85	...	20 14·9	R
5	...	8 54·85	...	20 15·9	R
8	...	8 54·88	...	20 16·5	R
9	...	8 54·80	...	20 17·8	R
10	...	8 54·83	..	20 15·3	R
12	...	8 54·89	...	20 16·6	R
13	...	8 54·85	...	20 16·8	R
138		**112 *Tauri β***			
Jan. 12	...	5 18 53·74	..	61 29 33·5	M
15	...	18 53·76	...	29 35·5	M
16	...	18 53·82	...	29 35·7	M
17	...	18 53·82	...	29 34·8	M
139		***R. P. L.* 40.**			
Jan. 15	...	5 24 38·64	3	4 51 56·5	M
16	...	24 38·05	3	51 59·6	M
18	...	24 37·47	3	51 56·7	M

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
		R. P. L.* 40.—*s.p.			
May 18	...	5 24 37·36	3	4 51 57·5	R
19	...	24 37·68	3	51 58·0	R
23	...	24 37·44	3	51 59·3	R
140		**34 *Orionis δ, Var.* 1.**			
Jan. 20	...	5 26 1·88	...	90 23 12·9	M
141		**11 *Leporis α***			
Jan. 25	...	5 27 31·25	...	107 54 25·2	M
26	...	27 31·21	...	54 26·1	M
142		***R. P. L* 41.—*s.p.***			
June 1	...	5 29 13·81	3	4 44 57·1	R
7	...	29 13·96	3	44 59·2	R
Aug. 8	...	29 14·25	3	44 56·8	R
11	...	29 14·85	3	44 59·3	R
13	...	29 14·19	3	45 0·4	R
14	...	29 13·01	3	45 0·6	R
16	...	29 13·59	3	45 1·0	R
18	...	29 12·54	3	44 59·5	R
143		***R. P. L.* 42.**			
Jan. 15	...	5 36 38·91	3	2 40 52·2	M
16	...	36 37·79	3	40 51·1	M
20	...	36 37·11	3	40 55·0	M
24	...	36 37·01	3	40 54·3	M
25	...	36 36·69	3	40 56·7	M
29	...	36 37·54	2	40 52·1	M
Feb. 1	...	36 39·27	3	40 50·0	R
2	...	36 39·21	3	40 51·0	R
7	...	36 38·35	3	40 52·7	M
144		**53 *Orionis κ***			
Jan. 19	...	5 42 12·56	...	99 42 45·4	M
27	...	42 12·44	...	42 47·0	M
29	...	42 12·39	...	42 45·3	M
30	...	42 12·39	...	42 47·3	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
145		33 *Aurigæ* δ			
Feb. 8	...	5 49 53·50	..	35 43 34·6	R
9	...	49 53·47	...	43 34·3	R
10	...	49 53·51	...	43 34·2	R
12	...	49 53·71	...	43 32·6	R
13	...	49 53·55	...	43 32·0	R
146		*R. P. L.* 43.			
Jan. 18	...	6 0 28·63	3	3 14 15·6	M
19	...	0 28·64	3	14 15·5	M
20	...	0 28·48	3	14 17·0	M
24	...	0 28·53	3	14 15·5	M
25	...	0 28·05	3	14 18·9	M
		R. P. L. 43.—*s.p.*			
Aug. 10	...	6 0 28·06	3	3 14 15·2	R
16	...	0 27·29	3	14 13·5	R
18	...	0 27·58	3	14 13·6	R
25	...	0 28·63	3	14 13·4	R
147		7 *Geminorum* η			
Feb. 2	...	6 7 48·90	...	67 27 36·4	R
3	...	7 48·88	...	27 36·9	R
5	...	7 48·91	...	27 36·8	R
6	...	7 48·85	...	27 35·4	M
7	...	7 48·76	...	27 37·5	M
9	...	7 48·93	...	27 37·7	R
10	...	7 48·88	...	27 36·6	R
12	...	7 48·86	...	27 38·1	R
13	...	7 48·89	...	27 37·8	R
14	...	7 48·85	...	27 38·0	R
148		31 *Geminorum* ξ			
Feb. 6	...	6 38 43·28	...	76 58 45·4	M
7	...	38 43·42	...	58 48·8	M
15	...	38 43·37	...	58 45·0	R
16	...	38 43·37	...	58 46·3	R
17	...	38 43·39	...	58 45·2	R
19	...	38 43·34	...	58 45·0	R
20	...	38 43·37	...	58 47·2	R
21	...	38 43·30	...	58 46·9	R
22	...	38 43·31	...	58 46·5	R
23	...	38 43·32	...	58 44·8	R

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
149		51 *Cephei* (*Hev.*).			
Feb. 8	...	6 45 16·50	3	2 46 27·1	R
9	...	45 16·62	3	46 26·8	R
10	...	45 17·40	3	46 26·2	R
12	...	45 16·94	3	46 26·1	R
13	...	45 17·78	3	46 27·5	R
14	...	45 17·27	3	46 26·1	R
15	...	45 17·64	3	46 24·6	R
19	...	45 17·09	3	46 25·3	R
20	...	45 17·58	3	46 26·4	R
24	...	45 18·38	3	46 25·9	R
150		*Anon.*—*2nd Star.*			
Feb. 7	9·5	6 48 35·48	...	70 33 39·0	M
9	9·5	48 35·55	...	33 38·0	R
12	9·5	48 35·30	...	33 37·9	R
13	9·5	48 35·54	...	33 37·0	R
151		*W. B. N.* VI. 1448.			
Feb. 5	9·0	6 49 45·87	...	62 3 38·8	R
6	9·0	49 45·85	...	3 36·7	M
8	9·0	49 45·65	...	3 41·3	R
10	9·0	49 45·72	...	3 40·2	R
14	9·0	49 45·95	...	3 39·4	R
152		22 *Canis Majoris.*			
Feb. 9	...	6 57 3·52	...	117 46 6·6	R
10	...	57 3·57	...	46 5·7	R
12	...	57 3·58	...	46 4·3	R
13	...	57 3·55	...	46 4·7	R
14	...	57 3·59	...	46 5·4	R
153		3 *Canis Minoris* β			
Feb. 9	...	7 20 48·35	...	81 28 33·3	R
10	...	20 48·42	...	28 31·6	R
12	...	20 48·33	...	28 30·7	R
13	...	20 48·35	..	28 30·9	R
14	...	20 48·35	...	28 31·2	R
15	...	20 48·32	...	28 32·8	R
16	...	20 48·29	...	28 31·0	R
17	...	20 48·36	...	28 33·7	R
19	...	20 48·34	...	28 31·5	R
20	...	20 48·36	...	28 32·7	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
154		*77 Geminorum κ*			
Feb. 21	..	7 37 22·78	...	65 19 22·2	R
22	...	37 22·81	...	19 21·5	R
23	...	37 22·95	...	19 21·6	R
26	...	37 22·93	...	19 21·0	R
27	...	37 22·99	...	19 20·3	R
155		*W. B. E.* VII. 1127.			
Feb. 6	9·0	7 38 32·46	...	81 9 24·5	M
9	9·0	38 32·63	...	9 26·0	R
12	9·0	38 32·58	...	9 23·8	R
16	9·0	38 32·64	...	9 22·6	R
17	9·0	38 32·70	...	9 26·3	R
156		*ξ Argûs.*			
Feb. 14	...	7 44 22·48	...	114 33 57·6	R
15	...	44 22·45	...	33 57·6	R
16	...	44 22·49	...	33 57·9	R
17	...	44 22·49	...	33 59·6	R
19	...	44 22·55	...	33 59·3	R
20	...	44 22·47	...	33 59·8	R
21	...	44 22·51	...	33 59·2	R
22	..	44 22·49	...	33 59·2	R
23	...	44 22·47	...	34 1·3	R
24	...	44 22·51	...	33 59·1	R
157		*R. P. L.* 48—*s.p.*			
Aug. 4	...	7 46 45·38	3	8 58 4·3	R
13	...	46 45·11	3	58 3·5	R
14	...	46 44·28	3	58 3·2	R
Sep. 4	...	46 44·31	3	58 3·5	M
14	...	46 45·19	3	58 4·2	M
158		*Lalande* 16364.			
Feb. 6	8·0	8 15 22·51	...	76 0 16·9	M
7	8·0	15 22·48	...	0 18·8	M
8	8·0	15 22·58	..	0 18·7	R
9	8·0	15 22·46	...	0 19·4	R
10	8·0	15 22·36	...	0 17·2	R

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
159		*R. P. L.* 53.—*s.p.*			
July 28	...	8 20 38·26	3	4 32 8·5	R
Aug. 11	...	20 38·49	3	32 7·7	R
13	...	20 38·26	3	32 9·4	R
Oct. 24	...	20 38·04	3	32 8·7	R
25	...	20 38·06	3	32 9·8	R
160		*Lalande* 16797.			
Feb. 7	8·0	8 27 6·59	...	76 8 5·7	M
8	8·0	27 6·60	...	8 3·8	R
9	8·0	27 6·52	...	8 2·9	R
10	8·0	27 6·63	...	3 2·8	R
12	8·0	27 6·73	...	3 2·4	R
161		*R. P. L.* 55—*s.p.*			
Sep. 14	...	8 31 32·19	3	5 40 55·5	M
Oct. 18	...	31 31·69	3	40 55·3	R
22	...	31 31·87	3	40 56·3	R
162		*43 Cancri γ*			
Feb. 17	...	8 36 30·78	...	68 6 42·7	R
19	...	36 30·73	...	6 42·2	R
20	...	36 30·73	...	6 42·9	R
21	...	36 30·77	...	6 42·2	R
22	...	36 30·79	...	6 41·7	R
23	...	36 30·79	...	6 43·3	R
24	...	36 30·74	...	6 41·9	R
26	...	36 30·77	...	6 43·5	R
27	...	36 30·77	...	6 42·0	R
28	...	36 30·85	...	6 41·0	R
163		*R. P. L.* 60—*s.p.*			
Sep. 28	...	8 50 44·02	3	5 21 10·9	M
164		*W. B. E.* IX. 78.			
Feb. 13	9·0	9 6 31·24	...	77 16 15·2	R
14	9·0	6 31·23	...	16 15·8	R
15	9·0	6 31·16	...	16 16·3	R
16	9·0	6 31·32	...	16 15·4	R
17	9·0	6 31·37	...	16 16·2	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
165		*ι Argûs.*			
Feb. 23	...	9 13 57·46	...	148 47 4·1	R
26	...	13 57·37	...	47 6·3	R
27	...	13 57·34	...	47 6·5	R
28	...	13 57·32	...	47 4·7	R
Mar. 1	...	13 57·42	...	47 5·3	R
Apl. 3	...	13 57·62	...	47 6·9	M
4	...	13 57·54	...	47 8·9	M
5	...	13 57·43	...	47 7·7	M
6	...	13 57·64	...	47 8·1	M
7	...	13 57·48	...	47 7·2	M
166		*Lalande* 18405.			
Feb. 13	8·0	9 14 35·45	...	77 32 42·6	R
15	8·0	14 35·33	...	32 43·5	R
17	8·0	14 35·56	...	32 44·5	R
19	8·0	14 35·47	...	32 44·9	R
21	8·0	14 35·49	...	32 44·3	R
167		*W. B. E.* IX. 270.			
Feb. 14	9·0	9 14 55·62	...	77 15 40·4	R
16	9·0	14 55·44	...	15 40·3	R
20	9·0	14 55·34	...	15 40·5	R
22	9·0	14 55·29	...	15 40·8	R
24	9·0	14 55·41	...	15 39·4	R
168		*κ Argûs.*			
Feb. 19	...	9 18 29·18	...	144 30 40·4	R
20	...	18 29·18	...	30 41·6	R
21	...	18 29·18	...	30 41·5	R
22	...	18 29·19	...	30 41·4	R
23	...	18 29·23	..	30 39·8	R
169		*R. P. L.* 62.—*s.p.*			
Sep. 14	...	9 21 24·92	3	2 21 31·7	M
15	...	21 23·97	3	21 32·7	M
170		*Lalande* 19559.			
Feb. 19	7·0	9 53 48·59	...	109 47 50·6	R
20	7·0	53 48·61	...	47 50·7	R
21	7·0	53 48·60	...	47 51·3	R
22	7·0	53 48·58	...	47 51·1	R
23	7·0	53 48·61	...	47 51·0	R
171		*Lalande* 19846.			
Feb. 19	8·0	10 5 40·75	...	107 3 28·3	R
20	8·0	5 40·87	...	3 29·4	R
21	8·0	5 40·86	...	3 30·3	R
22	8·0	5 40·84	...	3 29·9	R
23	8·0	5 40·92	...	3 32·6	R
172		33 *Ursæ Majoris* λ			
Feb. 24	...	10 10 1·86	...	46 30 6·0	R
173		*W. B. E.* X. 228.			
Feb. 19	9·0	10 15 3·04	...	104 0 29·3	R
21	9·0	15 2·99	...	0 30·1	R
23	9·0	15 2·97	...	0 29·8	R
26	9·0	15 3·12	...	0 29·2	R
28	9·0	15 3·02	...	0 28·4	R
174		*Lalande* 20089.			
Feb. 20	7·5	10 15 10·63	...	104 54 4·6	R
22	7·5	15 10·54	...	54 4·6	R
24	7·5	15 10·54	...	54 4·0	R
27	7·5	15 10·45	...	54 3·2	R
Mar. 1	7·5	15 10·52	...	54 4·8	R
175		*Anon.*			
Apl. 10	9·7	10 16 1·97	...	84 34 4·8	M
11	9·7	16 1·94	...	34 3·1	M
12	9·7	16 1·95	...	34 1·6	M
13	9·7	16 2·03	...	34 1·4	M
14	9·7	16 2·14	...	34 1·9	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
176		*Lalande* 20205.			
Apl. 6	8·0	10 19 29·37	...	84 50 7·3	M
7	...	19 29·29	...	50 9·2	M
9	8·0	19 29·48	...	50 6·8	M
16	8·0	19 29·28	...	50 8·7	M
18	...	19 29·43	...	50 7·1	M
177		*Lalande* 20521.			
Feb. 19	6·7	10 30 28·02	...	99 58 33·4	R
21	6·7	30 28·07	...	58 34·1	R
23	6·7	30 28·05	...	58 34·2	R
26	6·7	30 28·07	...	58 34·1	R
28	6·7	30 28·08	...	58 33·8	R
178		*Yarnall* 4420.			
Feb. 20	7·0	10 30 42·68	...	101 36 8·5	R
22	7·0	30 42·55	...	36 9·3	R
24	7·0	30 42·55	...	36 8·4	R
27	7·0	30 42·84	...	36 8·4	R
Mar. 1	7·0	30 42·90	...	36 8·4	R
179		58 *Leonis d.*			
Feb. 21	...	10 54 31·03	...	85 45 17·1	R
22	...	54 31·03	...	45 17·1	R
24	...	54 31·01	...	45 16·4	R
26	...	54 31·05	...	45 15·9	R
27	..	54 31·06	...	45 15·2	R
28	...	54 31·00	...	45 15·0	R
Mar. 1	...	54 31·02	...	45 15·5	R
Apl. 3	...	54 31·00	...	45 16·5	M
4	...	54 31·12	...	45 17·3	M
5	...	54 31·11	...	45 16·5	M
180		70 *Leonis θ*			
Feb. 26	...	11 8 5·91	...	73 55 52·2	R
27	...	8 5·97	...	55 52·6	R
28	...	8 6·02	...	55 52·0	R
Mar. 1	...	8 5·97	...	55 50·8	R
Apl. 3	...	8 5·99	...	55 52·4	M

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
181		84 *Leonis τ*			
Feb. 26	...	11 21 55·23	...	86 29 57·7	R
27	...	21 55·26	..	29 57·7	R
28	...	21 55·27	...	29 57·3	R
Mar. 1	...	21 55·18	...	29 57·7	R
Apl. 3	...	21 55·16	...	29 58·3	M
4	...	21 55·20	...	29 58·7	M
5	...	21 55·21	...	29 58·0	M
6	...	21 55·17	...	30 0·0	M
7	...	21 55·18	...	29 59·8	M
14	...	21 55·26	.	29 59·8	M
182		*Anon.*			
Apl. 9	9·5	11 22 33·40	...	92 38 7·3	M
10	9·5	22 33·32	...	38 7·9	M
11	9·5	22 33·44	...	38 6·4	M
12	9·5	22 33·37	...	38 7·2	M
13	9·5	22 33·36	...	38 8·2	M
183		*R. P. L.* 82.			
Feb. 28	...	11 26 39·66	3	3 44 15·9	R
Apl. 3	...	26 39·09	3	44 13·1	M
4	...	26 39·01	3	44 15·5	M
5	...	26 39·21	3	44 14·3	M
6	...	26 39·15	3	44 15·8	M
7	...	26 38·88	3	44 16·3	M
9	..	26 39·83	3	44 15·7	M
16	...	26 38·84	3	44 16·7	M
17	...	26 38·96	3	44 15·3	M
21	...	26 38·08	3	44 15·6	M
		R. P. L. 82.—*s.p.*			
Oct. 19	...	11 26 38·71	3	3 44 18·0	R
23	...	26 38·71	3	44 16·7	R
25	...	26 38·39	3	44 15·6	R
Nov. 9	...	26 39·39	3	44 15·7	M
12	...	26 38·20	3	44 15·1	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
184		*R. P. L.* 87.—*s.p.*			
Nov. 13	...	11 53 32·11	3	2 21 15·2	M
14	...	53 32·22	2	21 16·6	M
Dec. 6	...	53 29·48	3	21 14·1	R
7	...	53 29·93	3	21 14·6	R
185		8 *Virginis* π			
Apl. 3	...	11 54 52·47	...	82 43 58·5	M
4	...	54 52·41	...	44 0·7	M
5	...	54 52·49	...	43 59·8	M
6	...	54 52·53	...	44 1·8	M
7	...	54 52·59	...	43 59·9	M
9	...	54 52·69	...	43 59·6	M
10	...	54 52·72	...	43 59·6	M
11	...	54 52·68	...	43 59·5	M
12	...	54 52·65	...	43 59·8	M
13	...	54 52·66	...	44 1·3	M
186		*R. P. L.* 97.—*s.p.*			
Nov. 12	...	12 37 35·28	3	5 42 53·3	M
Dec. 6	...	37 33·56	3	42 51·8	R
7	...	37 34·10	3	42 51·0	R
187		*R. P. L.* 98.—*s.p.*			
Nov. 9	...	12 48 8·00	3	5 56 45·3	M
Dec. 29	...	48 7·96	3	56 44·8	R
188		*R. P. L.* 99.—*s.p.*			
Dec. 20	...	12 48 16·16	3	5 57 4·4	R
22	...	48 16·23	3	57 4·8	R
189		77 *Ursæ Majoris* ϵ			
Apl. 3	...	12 48 52·48	...	33 24 17·1	M
4	...	48 52·51	...	24 17·3	M
5	...	48 52·52	...	24 18·5	M
6	...	48 52·86	...	24 17·0	M
7	...	48 52·57	...	24 18·7	M

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
190		43 *Virginis* δ			
Apl. 9	...	12 49 42·57	...	85 57 56·7	M
10	...	49 42·68	...	57 57·6	M
11	...	49 42·66	...	57 58·4	M
12	...	49 42·71	...	57 57·6	M
13	...	49 42·66	...	57 57·5	M
14	...	49 42·69	...	57 56·9	M
16	...	49 42·62	...	57 57·3	M
17	...	49 42·60	...	57 57·8	M
18	...	49 42·64	...	57 58·7	M
19	...	49 42·64	...	57 57·7	M
20	...	49 42·68	...	57 56·4	M
21	...	49 42·66	...	57 57·6	M
23	...	49 42·65	...	57 56·0	M
24	...	49 42·58	...	57 55·2	M
25	...	49 42·67	...	57 56·9	M
26	...	49 42·58	...	57 55·1	M
28	...	49 42·55	...	57 58·3	M
30	...	49 42·64	...	57 57·6	M
May 1	...	49 42·64	...	57 57·0	R
2	...	49 42·63	...	57 58·1	R
191		47 *Virginis* ϵ			
Apl. 9	...	12 56 21·11	...	78 24 42·1	M
10	...	56 21·05	...	24 45·2	M
11	...	56 21·14	...	24 43·8	M
12	...	56 21·12	...	24 42·4	M
13	...	56 21·15	...	24 43·8	M
14	...	56 21·05	...	24 42·8	M
16	...	56 21·13	...	24 43·3	M
17	...	56 21·07	...	24 43·4	M
18	...	56 21·11	...	24 44·0	M
19	...	56 21·01	...	24 43·9	M
21	...	56 21·13	...	24 45·0	M
23	...	56 21·15	...	24 41·6	M
24	...	56 21·16	...	24 41·9	M
25	...	56 21·08	...	24 43·6	M
26	...	56 21·13	...	24 44·2	M
28	...	56 21·29	...	24 43·8	M
30	...	56 21·22	...	24 43·2	M
May 1	...	56 21·17	...	24 40·6	R
2	...	56 21·16	...	24 41·3	R
3	...	56 21·25	...	24 40·9	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
May 4	...	12 56 21·20	...	78 24 41·0	R
5	...	56 21·21	...	24 41·2	R
7	...	56 21·28	...	24 41·5	R
8	...	56 21·26	...	24 41·7	R
9	...	56 21·28	...	24 42·1	R
10	...	56 21·22	...	24 38·7	R
11	...	56 21·22	...	24 38·6	R
12	...	56 21·23	...	24 39·5	R
14	...	56 21·19	...	24 40·7	R
15	...	56 21·08	...	24 40·0	R
192		*R. P. L.* 100—*s.p.*			
Jan. 2	...	13 0 26·39	3	3 29 7·4	R
Nov. 13	...	0 26·89	3	29 5·8	M
Dec. 20	...	0 26·43	3	29 9·2	R
28	...	0 27·35	3	29 7·0	R
193		51 *Virginis* θ			
May 3	...	13 3 53·52	...	94 54 50·3	R
4	...	3 53·50	...	54 48·1	R
5	...	3 53·57	...	54 47·9	R
7	...	3 53·55	...	54 48·9	R
8	...	3 53·52	...	54 49·0	R
9	...	3 53·47	...	54 49·5	R
10	...	3 53·51	...	54 48·2	R
11	...	3 53·63	...	54 48·7	R
12	...	3 53·55	...	54 48·8	R
14	...	3 53·55	...	54 48·8	R
15	...	3 53·40	...	54 48·9	R
194		*R. P. L.* 101.—*s.p.*			
Nov. 12	...	13 7 6·31	3	1 43 20·6	M
195		79 *Virginis* ζ			
Apl. 16	...	13 28 44·04	...	89 59 53·4	M
17	...	28 44·06	...	59 51·3	M
18	...	28 44·04	...	59 53·1	M
19	...	28 44·03	..	59 53·0	M
20	...	28 44·04	...	59 51·8	M
21	...	28 44·11	...	59 53·4	M
23	...	28 44·08	..	59 50·8	M
24	...	28 44·07	...	59 51·1	M
25	...	28 44·15	...	59 52·4	M
26	...	28 44·14	...	59 52·0	M

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
196		4 *Bootis* τ			
Apl. 9	...	13 41 42·20	...	71 57 31·6	M
11	...	41 42·08	...	57 32·2	M
12	...	41 42·08	...	57 32·2	M
13	...	41 42·11	...	57 31·5	M
14	...	41 42·08	...	57 30·3	M
16	...	41 42·04	...	57 32·2	M
17	...	41 42·12	...	57 31·0	M
18	...	41 42·08	...	57 30·6	M
19	...	41 42·14	...	57 30·5	M
20	..	41 42·12	...	57 30·3	M
197		85 *Ursæ Majoris* η			
May 3	...	13 42 55·78	...	40 6 7·1	R
4	...	42 55·79	...	6 7·4	R
5	...	42 55·68	...	6 5·9	R
7	...	42 55·62	...	6 7·0	R
8	...	42 55·70	...	6 6·3	R
9	...	42 55·71	...	6 6·5	R
10	...	42 55·71	...	6 4·6	R
11	...	42 55·61	...	6 6·2	R
12	...	42 55·65	...	6 6·2	R
14	...	42 55·66	...	6 6·9	R
198		8 *Bootis* η			
Apl. 20	...	13 49 6·70	...	71 0 57·2	M
21	...	49 6·66	...	0 57·1	M
23	...	49 6·69	...	0 55·4	M
24	...	49 6·76	...	0 56·3	M
25	...	49 6·68	...	0 57·1	M
26	...	49 6·70	...	0 58·7	M
28	...	49 6·81	...	0 58·8	M
30	...	49 6·69	...	0 56·2	M
May 1	...	49 6·82	...	0 55·9	R
2	...	49 6·83	...	0 56·1	R
199		*Anon.*			
Apl. 11	8·5	13 50 24·49	...	142 5 16·9	M
12	8·5	50 24·52	...	5 19·9	M
13	8·5	50 24·54	...	5 20·4	M
14	8·5	50 24·56	...	5 20·3	M
16	8·5	50 24·46	...	5 20·6	M

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
200		*R. P. L.* 108.—*s.p.*			
Dec. 28	...	14 1 29·77	3	3 40 55·6	R
201		*Taylor* 6609.			
Apl. 25	...	14 5 40·88	...	131 5 32·9	M
26	...	5 40·72	...	5 34·2	M
30	...	5 40·71	...	5 32·9	M
May 1	...	5 40·98	...	5 31·5	R
2	...	5 40·93	...	5 32·0	R
202		*Stone* 7816.—*2nd.*			
Apl. 26	...	14 12 49·00	...	132 31 12·4	M
30	...	12 48·77	...	31 13·7	M
May 1	...	12 48·99	...	31 12·9	R
2	...	12 49·00	...	31 13·5	R
3	...	12 49·02	...	31 13·3	R
203		*Anon.*			
Apl. 23	...	14 13 8·18	...	151 0 41·2	M
204		*Stone* 7826.			
Apl. 20	...	14 14 9·26	...	156 6 31·2	M
21	7·0	14 9·45	...	6 32·4	M
205		*Anon.*			
May 2	7·0	14 21 19·48	...	150 19 33·0	R
4	7·0	21 19·59	...	19 32·5	R
7	7·0	21 19·75	...	19 32·0	R
206		*Anon.*			
Apl. 21	8·7	14 21 30·59	...	150 17 36·0	M
24	8·7	21 30·46	...	17 33·6	M
May 3	9·0	21 30·34	...	17 32·5	R
5	9·0	21 30·44	...	17 31·3	R
9	9·0	21 30·40	...	17 32·8	R
207		*Stone* 7897.			
Apl. 19	...	14 23 7·93	...	129 57 14·7	M
20	...	23 7·93	...	57 14·3	M
208		*Stone* 7947.			
Apl. 20	...	14 29 31·34	...	157 41 41·2	M
21	7·0	29 31·29	...	41 42·0	M
209		*Taylor* 6811.			
Apl. 25	7·0	14 30 6·62	...	132 36 6·2	M
26	7·0	30 6·65	...	36 6·9	M
30	...	30 6·60	...	36 5·1	M
May 1	7·0	30 6·56	...	36 5·0	R
2	7·0	30 6·55	...	36 4·0	R
210		*Stone* 7969.			
May 4	7·5	14 32 17·08	...	129 3 27·4	R
10	7·5	32 17·11	...	3 26·8	R
211		*Anon.*			
May 5	7·0	14 35 28·51	...	151 25 42·9	R
212		*Anon.*			
Apl. 19	...	14 38 46·84	...	128 6 32·4	M
213		*Taylor* 6891.			
Apl. 25	7·0	14 39 56·14	...	133 3 53·0	M
26	7·0	39 56·22	...	3 49·7	M
30	...	39 55·92	...	3 50·6	M
May 1	7·0	39 56·07	...	3 49·6	R
2	7·0	39 56·03	...	3 51·0	R
214		*Anon.*			
May 8	7·5	14 42 47·95	...	126 54 24·0	R
9	7·5	42 47·95	...	54 24·2	R
10	7·5	42 48·05	...	54 24·5	R
11	7·5	42 48·05	...	54 24·2	R
12	7·5	42 48·20	...	54 24·9	R
215		*Taylor* 6925.			
Apl. 28	...	14 45 30·81	...	127 19 12·8	M
30	...	45 30·66	...	19 14·3	M
May 1	...	45 30·67	...	19 13·8	R
2	...	45 30·66	...	19 14·8	R
3	...	45 30·80	...	19 14·4	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
216		*Anon.*			
Apl. 19	...	14 47 5·45	...	131 33 52·9	M
21	7·5	47 5·53	...	33 53·3	M
24	7·5	47 5·47	...	33 52·6	M
217		*Anon.*			
Apl. 20	...	14 48 10·24	...	126 41 5·0	M
25	7·5	48 10·31	...	41 5·8	M
26	7·5	48 10·13	...	41 6·2	M
May 4	7·5	48 10·34	...	41 2·7	R
218		7 *Ursæ Minoris β, Var.* 1.			
May 9	...	14 51 3·44	...	15 21 58·7	R
10	...	51 3·42	...	21 58·6	R
11	...	51 3·50	...	21 58·7	R
12	...	51 3·29	...	21 56·7	R
14	...	51 3·42	...	21 56·2	R
219		*Stone* 8165.			
May 2	7·0	14 52 35·28	...	129 19 46·8	R
3	7·0	52 35·24	...	19 45·8	R
4	7·0	52 35·16	...	19 45·7	R
7	7·0	52 35·26	...	19 44·8	R
8	7·0	52 35·15	...	19 44·7	R
220		*R. P. L.* 110.			
May 5	...	14 52 52·85	3	3 34 3·5	R
		R. P. L. 110 —*s.p.*			
Jan. 12	..	14 52 52·78	3	3 34 7·9	M
16	...	52 54·46	4	34 7·1	M
17	...	52 54·27	3	34 4·5	M
221		*Anon.*			
Apl. 19	...	14 53 29·66	...	131 49 19·8	M
20	...	53 29·61	...	49 18·0	M
21	8·0	53 29·58	...	49 19·5	M

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
222		*Taylor* 7001.			
Apl. 25	...	14 56 15·36	...	125 28 53·9	M
26	...	56 15·55	...	28 54·9	M
28	...	56 15·60	...	28 53·3	M
30	...	56 15·44	...	28 54·0	M
May 1	...	56 15·66	...	28 55·1	R
223		*Taylor* 7027.			
Apl. 19	...	14 58 53·17	...	125 48 33·1	M
224		27 *Libræ β*			
Apl. 30	...	15 10 42·72	...	98 57 4·0	M
May 1	...	10 42·67	...	57 0·8	R
2	...	10 42·65	...	57 1·5	R
3	...	10 42·60	...	57 1·5	R
5	...	10 42·69	...	56 59·8	R
7	...	10 42·69	...	56 58·0	R
8	...	10 42·69	...	57 0·3	R
9	...	10 42·67	...	57 0·7	R
10	...	10 42·75	...	57 0·5	R
11	...	10 42·67	...	56 58·7	R
225		*R. P. L.* 114—*s.p.*			
Jan. 15	...	15 15 21·11	3	2 19 12·0	M
16	...	15 18·75	3	19 6·9	M
17	...	15 19·82	3	19 7·2	M
226		*Anon.*			
May 23	9·0	15 37 31·17	...	155 8 44·9	R
29	9·0	37 31·02	...	8 46·4	R
227		24 *Serpentis α*			
May 12	...	15 38 30·39	...	83 12 17·9	R
14	...	38 30·41	...	12 18·5	R
15	...	38 30·39	...	12 18·8	R
18	...	38 30·26	...	12 19·2	R
19	...	38 30·34	...	12 18·1	R
21	...	38 30·37	...	12 18·8	R
22	...	38 30·28	...	12 19·4	R
24	...	38 30·28	...	12 19·5	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
May 25	...	15 38 30·29	...	83 12 19·7	R
28	...	38 30·28	...	12 18·8	R
31	...	38 30·31	...	12 18·7	R
June 1	...	38 30·34	...	12 18·9	R
2	...	38 30·30	...	12 17·5	R
8	...	38 30·29	...	12 18·7	M
228	*37 Serpentis* ϵ				
May 15	...	15 44 59·17	...	85 10 6·7	R
18	...	44 59·02	...	10 8·2	R
19	...	44 59·01	...	10 7·9	R
21	...	44 59·04	...	10 8·1	R
22	...	44 59·00	...	10 7·6	R
23	...	44 59·01	...	10 7·6	R
24	...	44 59·01	...	10 8·0	R
25	...	44 59·04	...	10 8·8	R
28	...	44 59·05	...	10 7·9	R
29	...	44 58·99	...	10 6·6	R
229	*Anon.*				
June 2	...	15 46 27·92	...	130 46 29·0	R
8	...	46 27·85	4	46 30·0	M
20	...	46 27·79	...	46 29·3	M
26	...	46 28·05	...	46 31·6	M
230	*R. P. L.* 116.				
May 5	...	16 0 47·61	3	4 21 53·3	R
7	...	0 48·26	3	21 53·6	R
8	...	0 47·97	3	21 53·2	R
9	...	0 47·70	3	21 53·2	R
12	...	0 47·35	3	21 53·9	R
	R. P. L. 116—*s.p.*				
Jan. 18	...	16 0 47·16	3	4 21 53·3	M
20	...	0 47·07	3	21 54·9	M
22	...	0 47·40	3	21 56·9	M
27	...	0 47·08	3	21 53·4	M
29	...	0 47·32	3	21 55·8	M
30	...	0 47·26	3	21 54·0	M

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
231	*R. P. L.* 117.				
May 18	...	16 3 14·67	3	6 2 43·2	R
19	...	3 14·88	3	2 43·0	R
23	...	3 14·73	3	2 44·4	R
	R. P. L. 117—*s.p.*				
Jan. 1	...	16 3 13·67	3	6 2 44·5	R
4	...	3 15·31	3	2 44·1	R
5	...	3 15·30	3	2 42·2	R
12	...	3 15·27	3	2 41·2	M
15	...	3 14·60	3	2 46·0	M
16	...	3 14·24	3	2 43·2	M
17	...	3 14·56	3	2 37·1	M
19	...	3 14·48	3	2 43·8	M
24	...	3 14·83	3	2 40·1	M
25	...	3 14·42	3	2 41·6	M
232	*Anon.*				
May 10	7·0	16 5 1·46	...	133 46 12·6	R
14	7·0	5 1·63	...	46 11·9	R
233	*Anon.*				
May 11	8·5	16 6 5·40	...	125 29 44·8	R
12	8·5	6 5·47	...	29 45·2	R
234	*Stone* 8832.				
May 5	...	16 7 57·02	...	135 5 30·8	R
7	...	7 57·01	4	5 30·6	R
235	*Anon.*				
May 18	8·0	16 8 14·40	...	135 14 55·5	R
19	8·0	8 14·38	...	14 55·7	R
21	8·0	8 14·32	...	14 55·4	R
22	8·0	8 14·23	4	14 55·7	R
236	*Stone* 8853.				
May 8	7·0	16 10 37·37	...	124 37 29·3	R
9	7·0	10 37·48	...	37 29·4	R
10	7·0	10 37·61	...	37 29·3	R

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
237		19 *Ursæ Minoris.*			
May 15	...	16 14 9·98	...	13 49 41·2	R
18	...	14 10·05	...	49 43·3	R
238		*Stone* 8892.			
May 5	6·5	16 14 44·75	...	152 51 1·7	R
9	6·3	14 44·48	5	51 2·1	R
10	6·3	14 44·57	..	51 1·2	R
11	6·3	14 44·61	..	51 0·5	R
239		20 *Herculis* γ			
May 23	..	16 16 45·47	..	70 34 14·4	R
25	...	16 45·48	...	34 16·0	R
28	...	16 45·48	...	34 15·6	R
29	..	16 45·53	...	34 15·0	R
30	..	16 45·46	...	34 14·7	R
31	...	16 45·45	...	34 15·4	R
June 1	...	16 45·48	...	34 15·7	R
2	...	16 45·50	...	34 14·2	R
8	...	16 45·60	..	34 16·1	M
11	.	16 45·48	...	34 16·2	M
240		*Anon.*			
May 12	8·5	16 18 6·06	...	130 57 19·0	R
14	8·5	18 6·13	...	57 18·6	R
19	8·5	18 6·20	...	57 20·0	R
24	8·5	18 6·16	.	57 19·8	R
241		21 *Ursæ Minoris* η			
May 7	..	16 20 56·06	...	13 58 29·0	R
8	...	20 56·08	...	58 29·5	R
21	...	20 56·04	...	58 32·2	R
23	..	20 56·21	...	58 32·7	R
242		*Anon.*			
May 11	8·0	16 23 32·65	...	136 25 16·1	R
12	8·0	23 32·60	...	25 17·0	R
14	8·0	23 32·67	...	25 17·1	R

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	
243		*Anon.*			
May 5	7·5	16 23 38·69	...	128 44 44·1	
244		27 *Herculis* β			
May 24	...	16 25 11·32	...	68 15 19·0	
245		*Stone* 8976.			
May 10	7·0	16 25 25·41	...	123 16 48·1	
18	7·0	25 25·31	...	16 50·5	
19	7·0	25 25·24	...	16 50·3	
246		*Anon.*			
May 14	9·5	16 29 2·64	...	125 32 35·8	
15	9·5	29 2·62	...	32 36·2	
25	9·5	29 2·64	...	32 35·9	
247		η^1 *Trianguli Australis.*			
May 11	...	16 29 19·55	...	158 3 35·1	
12	...	29 19·57	...	3 37·0	
248		*Stone* 9014.			
May 5	7·0	16 30 33·44	...	128 54 48·0	
249		13 *Ophiuchi* ζ			
May 18	...	16 30 42·98	...	100 19 43·6	
19	...	30 42·95	...	19 44·0	
21	...	30 42·96	...	19 44·0	
22	...	30 43·03	...	19 44·2	
23	...	30 43·07	...	19 44·4	
24	...	30 43·00	...	19 44·2	
28	...	30 43·02	...	19 43·9	
29	...	30 43·00	...	19 44·1	
30	...	30 42·98	...	19 44·2	
31	...	30 42·98	...	19 44·6	
June 2	...	30 43·03	...	19 43·3	
7	...	30 42·99	...	19 44·0	
8	...	30 43·00	...	19 44·4	
11	...	30 43·05	...	19 43·8	
14	...	30 42·94	...	19 43·5	

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
June 15	...	16 30 43·03	...	100 19 42·6	M
19	...	30 43·02	...	19 44·9	M
20	...	30 43·02	...	19 44·5	M
22	...	30 42·90	...	19 44·4	M
26	...	30 42·98	...	19 44·6	M
250	*Lacaille* 6881.				
May 9	...	16 31 31·80	...	157 12 5·6	R
10	...	31 31·80	...	12 4·3	R
251	*Anon.*				
May 14	7·5	16 36 1·19	...	128 6 36·2	R
15	7·5	36 1·11	...	6 36·4	R
18	7·5	36 1·18	...	6 36·2	R
19	7·5	36 1·17	...	6 36·2	R
21	7·5	36 1·10	...	6 36·5	R
252	*Anon.*				
May 8	8·0	16 38 51·76	...	125 34 31·5	R
9	8·0	38 51·78	...	34 35·8	R
253	*Anon.*				
May 25	9·5	16 41 15·36	...	126 18 19·8	R
28	9·5	41 15·35	...	18 21·5	R
29	9·5	41 15·33	...	18 21·1	R
30	9·5	41 15·31	...	18 22·2	R
254	*Anon.*				
May 10	7·0	16 41 37·68	...	132 53 52·9	R
255	*Anon.*				
May 11	8·0	16 42 29·39	...	127 50 30·5	R
12	8·0	42 29·48	...	50 30·8	R
14	8·0	42 29·61	...	50 31·5	R
256	*Anon.*				
May 19	7·5	16 44 2·03	...	129 2 39·3	R
21	7·5	44 1·92	...	2 39·8	R
22	7·5	44 1·88	...	2 39·4	R
23	7·5	44 2·13	...	2 39·9	R
24	7·5	44 2·14	...	2 38·8	R
257	*Taylor* 7793.				
May 8	7·0	16 44 42·16	...	127 23 47·9	R
258	*Anon.*				
May 15	9·5	16 49 0·75	...	132 12 58·1	R
18	9·5	49 0·76	...	12 58·0	R
259	*Anon.*				
May 5	8·5	16 50 20·26	...	128 26 15·6	R
9	8·5	50 20·15	...	26 18·3	R
11	8·5	50 20·12	...	26 17·6	R
14	8·5	50 20·17	...	26 19·0	R
260	*Anon.*				
May 14	8·0	16 56 52·99	...	129 52 39·5	R
15	8·0	56 52·92	...	52 39·7	R
18	8·0	56 52·88	...	52 39·8	R
19	8·0	56 52·87	...	52 39·1	R
21	8·0	56 52·92	...	52 40·8	R
261	22 *Ursæ Minoris e*				
May 12	...	16 58 0·05	4	7 46 16·6	R
June 15	...	57 59·69	3	46 17·1	M
262	*Anon.*				
May 5	9·0	16 59 23·33	...	132 35 35·5	R
263	*R. P. L.* 118.				
Aug. 11	...	17 1 59·60	3	5 8 35·5	R
13	...	1 59·25	3	8 33·9	R
14	...	1 59·65	3	8 34·6	R
16	...	1 58·47	3	8 35·3	R
18	...	1 58·52	3	8 36·1	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
		R. P. L. 118—*s.p.*			
Jan. 2	...	17 2 0·00	3	5 8 34·8	R
3	...	2 0·22	3	8 34·1	R
8	...	1 59·89	3	8 34·0	M
9	...	2 0·23	3	8 34·4	M
19	...	1 59·48	3	8 36·5	M
24	...	1 59·71	3	8 32·3	M
29	...	1 59·94	3	8 37·9	M
Feb. 1	...	1 59·39	3	8 36·0	R
2	...	1 59·13	3	8 37·8	R
7	...	2 0·03	3	8 35·9	M
264		*Stone* 9338.			
May 21	7·0	17 2 48·40	...	131 17 23·9	R
22	7·0	2 48·33	...	17 24·2	R
24	7·0	2 48·34	...	17 24·5	R
25	7·0	2 48·36	...	17 24·2	R
29	7·0	2 48·14	...	17 22·4	R
265		*Anon.*			
May 15	7·5	17 2 51·11	...	131 32 55·1	R
30	7·5	2 50·91	...	32 56·9	R
31	7·5	2 50·87	...	32 57·4	R
June 1	7·5	2 50·85	...	32 57·0	R
2	7·5	2 50·85	...	32 53·9	R
266		35 *Ophiuchi* η			
June 7	...	17 3 40·08	...	105 34 41·0	R
9	...	3 40·05	..	34 42·6	M
11	...	3 39·95	...	34 45·2	M
14	...	3 40·13	..	34 45·9	M
19	...	3 40·03	...	34 45·0	M
20	..	3 40·02	...	34 43·7	M
22	...	3 39·95	...	34 44·8	M
26	...	3 40·09	...	34 43·9	M
July 3	...	3 40·11	...	34 42·4	R
4	...	3 40·10	...	34 43·1	R
17	...	3 40·08	...	34 44·2	R
18	...	3 40·02	...	34 43·0	R
20	...	3 40·02	...	34 42·6	R
24	...	3 40·06	...	34 42·6	R
July 28	...	17 3 40·09	...	105 34 42·5	R
30	...	3 40·18	...	34 43·5	R
31	...	3 40·12	...	34 43·3	R
Aug. 2	...	3 40·11	...	34 42·9	R
3	...	3 40·09	...	34 43·4	R
4	...	3 40·11	...	34 43·6	R
267		*Anon.*			
May 12	...	17 6 15·90	...	131 19 56·9	R
268		*Stone* 9389.			
May 14	...	17 8 59·79	...	129 17 47·7	R
15	...	8 59·80	...	17 48·2	R
269		*Anon.*			
Aug. 9	8·0	17 9 34·38	...	128 31 56·1	R
10	8·0	9 34·35	...	31 56·1	R
11	8·0	9 34·20	...	31 54·7	R
14	8·0	9 34·20	...	31 55·3	R
16	9·0	9 34·22	...	31 52·5	R
270		*Anon.*			
June 19	9·0	17 10 16·79	...	128 20 56·4	M
20	9·0	10 16·72	...	20 55·8	M
July 3	9·0	10 16·60	...	20 55·0	R
4	9·0	10 16·58	...	20 55·9	R
17	9·0	10 16·73	...	20 53·5	R
271		*Anon.*			
July 28	8·0	17 10 47·27	...	125 57 30·9	R
30	8·0	10 47·21	...	57 33·7	R
31	8·0	10 47·14	...	57 32·5	R
Aug. 2	8·0	10 47·13	...	57 31·5	R
272		*Stone* 9428.			
May 18	6·0	17 12 18·41	...	155 35 2·3	R

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
273		*Anon.*			
June 7	9·0	17 13 17·89	...	129 22 49·1	R
8	9·0	13 18·14	...	22 47·0	M
9	9·0	13 18·05	...	22 47·8	M
14	9·0	13 18·06	...	22 50·9	M
274		*Anon.*			
May 19	7·0	17 14 38·81	...	131 58 17·5	R
22	7·5	14 38·72	...	58 17·8	R
25	7·5	14 38·77	...	58 17·5	R
28	7·5	14 38·75	...	58 18·5	R
275		*Stone* 9448.—2*nd*.			
May 15	7·0	17 14 41·15	...	128 5 8·7	R
21	7·0	14 41·18	...	5 9·2	R
23	7·0	14 41·37	...	5 9·0	R
24	7·0	14 41·41	...	5 7·3	R
276		*Anon.*			
Aug. 4	8·5	17 15 31·06	...	145 52 52·0	R
8	8·5	15 30·97	...	52 54·8	R
10	8·5	15 31·09	...	52 51·5	R
11	8·5	15 31·05	...	52 51·4	R
14	8·5	15 30·96	...	52 50·6	R
277		*Anon.*			
June 14	9·0	17 17 18·91	5	138 28 58·3	M
15	9·5	17 18·64	...	28 54·3	M
20	9·0	17 18·61	...	28 54·5	M
July 3	9·0	17 18·89	...	28 53·8	R
4	9·0	17 18·79	...	28 55·1	R
278		*Stone* 9479.			
June 11	...	17 17 27·71	...	138 30 21·9	M
22	...	17 27·44	...	30 21·7	M
July 18	7·0	17 27·67	...	30 22·7	R
20	7·0	17 27·66	...	30 22·4	R
24	7·0	17 27·68	4	30 21·4	R

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
279		49 *Ophiuchi* σ			
May 22	...	17 20 42·60	...	85 45 24·8	R
24	...	20 42·60	...	45 24·9	R
25	...	20 42·63	...	45 24·7	R
29	...	20 42·55	...	45 24·6	R
30	...	20 42·60	...	45 25·2	R
31	...	20 42·62	...	45 24·9	R
June 1	...	20 42·55	...	45 25·5	R
2	...	20 42·52	...	45 24·8	R
9	...	20 42·54	...	45 25·1	M
19	...	20 42·55	...	45 26·5	M
280		*Anon.*			
July 28	8·0	17 21 46·30	...	127 10 44·1	R
30	8·0	21 46·19	...	10 44·9	R
31	8·0	21 46·12	...	10 47·0	R
Aug. 2	8·0	21 46·15	...	10 45·4	R
8	8·0	21 46·19	...	10 45·0	R
281		*α Arcæ.*			
June 20	...	17 22 47·85	5	139 46 53·4	M
July 20	...	22 47·83	...	46 53·4	R
Aug. 10	...	22 47·67	...	46 53·0	R
11	...	22 47·76	...	46 52·4	R
14	...	22 47·60	...	46 52·8	R
282		34 *Scorpii* υ			
Aug. 13	...	17 22 48·40	...	127 12 4·1	R
16	...	22 48·28	...	12 3·4	R
18	...	22 48·23	...	12 3·8	R
283		*Stone* 9566.			
June 22	7·0	17 26 10·80	...	130 26 48·9	M
July 3	7·0	26 10·89	...	26 46·9	R
4	7·0	26 10·68	...	26 47·6	R
17	7·0	26 10·85	...	26 47·4	R
18	7·0	26 10·89	...	26 48·9	R

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
284		*Anon.*			
May 28	7·0	17 28 7·56	...	134 29 10·4	R
285		*Stone* 9578.			
Aug. 9	7·0	17 28 9·84	...	146 44 38·7	R
10	7·0	28 9·86	...	44 38·5	R
Sep. 4	...	28 9·71	...	44 38·8	M
286		*Brisbane* 6132.			
May 21	8·0	17 28 38·23	...	135 4 47·9	R
287		*θ Scorpii.*			
June 2	...	17 28 54·64	...	132 55 14·3	R
8	...	28 54·63	...	55 17·7	M
9	...	28 54·56	...	55 17·8	M
11	...	28 54·75	5	55 18·1	M
15	...	28 54·55	...	55 16·7	M
288		*Anon.*			
July 28	8·0	17 29 9·13	...	128 42 30·9	R
30	8·0	29 8·89	...	42 31·9	R
31	8·0	29 8·83	...	42 31·6	R
Aug. 2	8·0	29 8·95	...	42 30·9	R
4	8·0	29 8·78	...	42 30·8	R
289		*Anon.*			
May 22	7·0	17 31 44·52	...	128 17 58·1	R
23	7·0	31 44·59	...	17 57·6	R
24	7·0	31 44·68	...	17 57·9	R
25	7·0	31 44·64	...	17 58·1	R
29	7·0	31 44·45	...	17 57·5	R
290		*R. P. L.* 120.			
May 18	...	17 31 46·58	3	5 17 27·0	R
19	...	31 46·69	3	17 24·7	R
28	...	31 46·67	3	17 24·6	R
June 1	...	31 46·33	3	17 26·1	R
Aug. 25	...	31 46·63	3	17 26·6	R
Jan. 18	...	17 31 46·53	3	5 17 27·0	M
19	...	31 47·29	3	17 25·6	M
27	...	31 46·77	3	17 24·2	M
30	...	31 46·41	3	17 27·9	M
31	...	31 46·51	3	17 26·1	M
Feb. 8	...	31 46·63	3	17 27·3	R
9	...	31 46·43	3	17 25·2	R
10	...	31 46·70	3	17 25·1	R
12	...	31 46·48	3	17 26·3	R
14	...	31 46·60	3	17 25·2	R
291		*Anon.*			
June 20	7·0	17 32 56·29	...	130 1 35·4	M
July 4	7·0	32 56·02	...	1 35·6	R
18	7·0	32 56·17	...	1 36·5	R
20	7·0	32 56·11	...	1 36·1	R
24	7·0	32 56·28	4	1 35·6	R
292		*Brisbane* 6160.			
May 21	8·0	17 33 20·24	...	134 43 12·5	R
293		*Anon.*			
Aug. 9	7·5	17 35 28·26	...	144 4 40·3	R
10	7·5	35 28·27	...	4 40·7	R
11	7·5	35 28·27	...	4 40·2	R
14	7·5	35 28·14	...	4 40·3	R
18	7·5	35 28·30	...	4 39·3	R
294		60 *Ophiuchi* β			
May 18	...	17 37 41·55	...	85 22 56·5	R
19	...	37 41·52	...	22 56·7	R
21	...	37 41·47	...	22 57·0	R
23	...	37 41·48	...	22 57·7	R
30	...	37 41·51	...	22 57·0	R
June 7	...	37 41·47	...	22 55·6	R
9	...	37 41·52	...	22 56·3	M
14	...	37 41·43	...	22 58·2	M
15	...	37 41·36	...	22 56·2	M
22	...	37 41·54	...	22 58·4	M
26	...	37 41·45	...	22 58·8	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
July 3	...	17 37 41·42	...	85 22 56·7	R
4	...	37 41·44	...	22 57·3	R
17	...	37 41·50	...	22 59·9	R
18	...	37 41·45	...	22 57·8	R
20	...	37 41·49	..	22 57·0	R
24	...	37 41·53	...	22 55·8	R
28	...	37 41·38	...	22 56·8	R
30	...	37 41·49	...	22 58·5	R
31	...	37 41·43	...	22 58·9	R
295		*Anon.*			
June 8	8·5	17 39 34·85	...	128 18 49·3	M
11	...	39 34·85	5	18 48·8	M
Aug. 2	8·5	39 34·58	...	18 47·9	R
4	8·5	39 34·61	...	18 48·0	R
296		*Anon.*			
June 20	8·5	17 40 23·50	4	128 18 52·4	M
Aug. 8	8·5	40 23·42	...	18 56·4	R
9	8·5	40 23·31	...	18 53·3	R
10	8·5	40 23·23	...	18 52·8	R
11	8·5	40 23·26	...	18 52·2	R
297		*Anon.*			
Aug. 18	8·0	17 42 51·21	...	143 28 18·3	R
Sep. 4	...	42 51·34	...	28 17·2	M
298		*Anon.*			
May 19	7·5	17 44 10·64	...	129 6 59·0	R
22	7·5	44 10·54	...	6 58·8	R
23	7·5	44 10·31	...	6 59·5	R
24	7·5	44 10·70	...	6 58·0	R
25	7·5	44 10·65	...	6 59·9	R
299		*Taylor* 8243.			
May 29	...	17 44 30·77	...	131 57 30·3	R
June 1	...	44 30·68	...	57 30·1	R
7	...	44 30·47	...	57 31·1	R
9	...	44 30·73	...	57 26·8	M
11	...	44 31·07	...	57 30·9	M

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
300		*Anon.*			
May 28	9·5	17 45 11·77	...	131 58 3·5	R
30	9·5	45 11·64	...	58 3·7	R
June 14	9·5	45 11·80	5	58 1·2	M
15	9·5	45 11·83	...	58 3·5	M
22	...	45 11·80	...	58 2·7	M
301		*Anon.*			
July 28	9·0	17 45 40·00	...	129 13 58·5	R
30	9·0	45 39·84	...	13 59·8	R
31	9 0	45 39·77	3	14 0·6	R
Aug. 11	9·0	45 40·01	...	13 59·1	R
13	9·0	45 39·93	...	13 58·7	R
302		*Anon.*			
May 18	8·0	17 50 28·62	...	151 21 14·1	R
19	8·0	50 28·57	...	21 14·2	R
23	8·0	50 28·62	...	21 13·5	R
303		*Anon.*			
June 14	8·0	17 51 51·27	...	129 3 3·9	M
15	8·0	51 51·29	...	3 3·1	M
22	7·0	51 51·14	...	3 4·0	M
July 3	8·0	51 51·37	...	3 2·9	R
4	8·0	51 51·28	...	3 4·1	R
304		*Anon.*			
May 22	7·0	17 52 15·64	...	127 23 50·8	R
24	7·0	52 15·87	...	23 50·9	R
25	7·0	52 15·86	...	23 51·0	R
28	7·0	52 15·74	...	23 50·9	R
29	7·0	52 15·64	...	23 51·3	R
305		*Anon.*			
May 30	9·0	17 52 34·35	...	137 2 29·2	R
June 1	9·0	52 34·27	...	2 29·0	R
7	9·0	52 34·02	...	2 27·6	R
8	9·0	52 34·27	...	2 30·6	M
11	...	52 34·56	...	2 29·6	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
306		*O. A. S.* 17446.			
Aug. 8	...	17 52 45·65	...	119 58 1·3	R
9	...	52 45·56	...	52 58·0	R
10	...	52 45·50	...	52 58·7	R
11	...	52 45·48	...	52 57·4	R
13	...	52 45·59	...	52 57·3	R
307		*O. A. S.* 17452.			
July 24	...	17 52 58·59	...	119 48 52·3	R
28	...	52 58·44	...	48 54·3	R
30	...	52 58·39	...	48 55·5	R
Aug. 2	...	52 58·42	..	48 53·0	R
3	...	52 58·45	4	48 54·1	R
308		*Anon.*			
May 19	8·9	17 56 36·54	...	128 56 59·8	R
309		*Stone* 9840.			
June 1	7·0	17 57 33·57	...	127 28 31·7	R
15	7·0	57 33·59	...	28 29·6	M
20	...	57 33·64	5	28 30·8	M
July 4	7·0	57 33·74	...	28 31·6	R
28	7·0	57 33·59	...	28 30·9	R
310		*Anon.*			
May 29	7·5	17 58 5·20	...	127 26 19·7	R
June 7	7·5	58 5·25	...	26 19·2	R
9	...	58 5·53	...	26 21·3	M
14	7·0	58 5·34	...	26 21·0	M
22	7·5	58 5·31	...	26 19·8	M
311		*Stone* 9849.			
May 30	7·0	17 58 13·11	...	127 30 7·1	R
June 11	...	58 13·37	5	30 7·4	M
July 30	7·0	58 13·28	...	30 7·5	R
31	7·0	58 13·26	...	30 7·3	R
Aug. 2	7·0	58 13·18	...	30 6·7	R

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
312		*Anon.*			
May 18	...	17 59 22·53	..	128 18 9·7	R
23	...	59 22·59	...	18 8·5	R
24	...	59 22·56	...	18 7·2	R
25	...	59 22·54	...	18 8·6	R
28	...	59 22·64	...	18 9·3	R
313		*Anon.*			
Aug. 8	8·0	17 59 31·89	...	129 31 45·5	R
9	8·0	59 31·73	...	31 42·1	R
11	8·0	59 31·50	...	31 42·3	R
13	8·0	59 31·65	...	31 42·6	R
14	8·0	59 31·66	...	31 42·2	R
314		*Anon.*			
Aug. 14	7·5	18 3 21·93	...	128 12 57·1	R
16	7·5	3 22·10	...	12 57·6	R
18	7·5	3 22·16	...	12 57·9	R
25	7·5	3 22·20	...	12 57·9	R
Sep. 15	...	3 22·23	...	12 58·7	M
315		*Anon.*			
June 15	9·7	18 5 50·73	...	133 7 10·8	M
316		*Stone* 9922.			
May 19	..	18 5 52·94	...	133 10 51·8	R
22	...	5 52·82	...	10 51·4	R
23	...	5 52·84	...	10 51·3	R
24	...	5 52·77	...	10 51·6	R
July 4	...	5 52·88	...	10 52·8	R
18	...	5 52·99	...	10 52·3	R
28	...	5 53·00	...	10 51·8	R
317		*Stone* 9924.			
May 25	7·5	18 6 0·83	...	131 56 15·1	R
28	7·0	6 0·80	...	56 16·1	R
29	7·0	6 0·81	...	56 15·7	R
30	7·0	6 0·82	...	56 16·7	R
June 1	7·0	6 0·76	...	56 16·2	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
318		*Anon.*			
July 30	7·5	18 6 41·76	...	126 55 48·9	R
Aug. 2	7·5	6 41·54	...	55 44·7	R
8	7·5	6 41·85	...	55 47·7	R
9	7·5	6 41·70	...	55 44·1	R
10	7·5	6 41·65	...	55 44·8	R
319		*Anon.*			
June 8	9·0	18 9 5·03	5	131 16 18·0	M
22	9·0	9 5·01	...	16 18·6	M
Aug. 11	8·5	9 4·78	...	16 17·3	R
13	8·5	9 4·98	...	16 15·9	R
320		23 *Ursæ Minoris* δ			
June 7	...	18 10 3·96	3	3 23 24·2	R
Aug. 14	...	10 2·43	3	23 22·8	R
321		*Anon.*			
May 23	8·0	18 10 21·14	...	126 23 38·6	R
322		*Anon.*			
May 28	8·0	18 13 25·60	...	136 5 3·5	R
29	8·0	13 25·67	...	5 3·8	R
30	8·0	13 25·60	...	5 4·1	R
June 1	8·0	13 25·52	...	5 3·1	R
9	...	13 25·72	...	5 0·6	M
323		*Anon.*			
May 25	8·0	18 14 12·57	...	127 48 38·4	R
324		*Taylor* 8452.			
Aug. 18	...	18 14 14·57	...	128 42 29·2	R
25	...	14 14·42	...	42 29·3	R
Sep. 4	...	14 14·50	...	42 28·4	M
11	...	14 14·43	...	42 29·5	M
13	...	14 14·73	3	42 29·0	M
325		58 *Serpentis* η			
June 11	...	18 15 15·38	...	92 55 42·6	M
15	...	15 15·36	...	55 41·4	M
20	...	15 15·48	...	55 40·5	M
22	...	15 15·46	...	55 42·5	M
July 3	...	15 15·32	...	55 40·5	R
4	...	15 15·18	...	55 41·6	R
17	...	15 15·28	4	55 40·4	R
18	...	15 15·28	...	55 41·9	R
20	...	15 15·29	...	55 41·7	R
24	...	15 15·32	...	55 41·2	R
28	...	15 15·31	...	55 42·5	R
30	...	15 15·28	...	55 40·2	R
31	...	15 15·31	...	55 40·0	R
Aug. 2	...	15 15·26	...	55 41·1	R
3	...	15 15·25	...	55 41·5	R
4	...	15 15·23	...	55 42·1	R
8	...	15 15·28	...	55 40·2	R
9	...	15 15·28	...	55 41·6	R
10	...	15 15·27	...	55 41·6	R
11	...	15 15·31	...	55 41·9	R
326		*Anon.*			
Aug. 16	7·0	18 15 22·20	...	128 47 32·3	R
Sep. 5	...	15 22·38	6	47 28·0	M
15	...	15 22·25	...	47 30·2	M
17	...	15 22·39	6	47 28·8	M
327		*Anon.*			
May 19	7·0	18 15 42·50	...	138 50 53·0	R
22	7·0	15 42·38	...	50 53·4	R
23	7·0	15 42·38	...	50 53·0	R
24	7·0	15 42·29	...	50 53·2	R
328		*Anon.*			
May 18	8·0	18 16 32·65	...	127 17 6·3	R
329		22 *Sagittarii* λ			
June 8	...	18 20 44·96	...	115 29 3·1	M
July 4	...	20 45·08	...	29 8·0	R
18	...	20 45·07	...	29 6·7	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
July 20	...	18 20 45·00	..	115 29 5·2	R
24	...	20 44·89	...	29 4·9	R
28	...	20 45·03	...	29 6·1	R
30	...	20 44·91	...	29 5·6	R
Aug. 2	...	20 44·94	...	29 6·9	R
3	...	20 44·97	...	29 6·5	R
4	...	20 44·93	...	29 5·2	R
8	...	20 44·95	...	29 7·8	R
9	...	20 45·00	...	29 4·5	R
10	...	20 45·02	...	29 4·6	R
11	...	20 44·98	...	29 6·1	R
13	...	20 44·98	...	29 4·8	R
14	...	20 44·97	...	29 7·2	R
16	...	20 45·00	...	29 6·5	R
18	...	20 45·00	...	29 7·3	R
25	...	20 44·90	...	29 7·1	R
28	...	20 44·95	...	29 6·1	R
330		*Anon.*			
May 23	9·5	18 22 46·09	...	129 38 49·7	R
28	9·5	22 46·28	...	38 50·8	R
29	9·5	22 45·98	...	38 50·7	R
30	9·5	22 45·97	...	38 51·3	R
June 1	9·5	22 45·89	...	38 51·0	R
331		*Anon.*			
June 7	7·0	18 23 24·78	...	127 40 10·1	R
9	...	23 24·77	...	40 12·1	M
11	...	23 24·90	...	40 10·2	M
15	7·0	23 24·73	...	40 10·4	M
22	7·0	23 24·84	...	40 11·8	M
332		*Stone* 10124			
May 24	7·0	18 29 26·83	...	131 42 30·5	R
28	7·0	29 26·80	...	42 31·5	R
29	7·0	29 26·82	...	42 32·4	R
30	7·0	29 26·78	...	42 33·6	R
June 1	7·0	29 26·63	...	42 34·4	R
333		*Anon.*			
June 22	8·5	18 30 45·26	..	127 5 56·9	M
Aug. 13	8·5	30 45·18	...	5 57·5	R
Aug. 14	8·5	18 30 45·30	...	127 5 57·3	R
16	8·5	30 45·48	...	5 57·2	R
18	8·5	30 45·43	...	5 57·5	R
25	8·5	30 45·38	...	5 57·1	R
334		*Anon.*			
July 4	9·0	18 30 55·10	...	127 58 16·9	R
Aug. 8	9·0	30 55·36	...	58 17·9	R
9	9·0	30 55·23	...	58 19·0	R
10	9·0	30 55·23	...	58 18·7	R
11	9·0	30 55·29	...	58 18·3	R
335		*Anon.*			
June 7	7·5	18 31 24·82	...	127 23 13·8	R
8	...	31 25·07	6	23 14·0	M
9	7·5	31 24·78	...	23 12·1	M
14	7·5	31 24·80	...	23 15·0	M
336		*Stone* 10154.			
May 18	...	18 32 12·34	...	134 16 33·9	R
19	...	32 12·16	...	16 33·8	R
23	...	32 12·17	...	16 32·1	R
337		*Anon.*			
May 25	8·0	18 34 2·21	...	125 42 3·8	R
28	8·0	34 2·13	...	42 4·9	R
29	8·0	34 2·38	...	42 6·3	R
30	8·0	34 2·36	...	42 6·5	R
June 1	8·0	34 2·29	..	42 6·1	R
338		*Anon.*			
Aug. 28	8·0	18 34 16·75	...	124 34 19·6	R
Sep. 4	...	34 16·61	...	34 18·0	M
13	...	34 16·56	...	34 17·0	M
15	7·8	34 16·56	...	34 17·8	M
17	...	34 16·85	3	34 16·6	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
339		*Stone* 10187.			
July 30	8·0	18 36 45·21	...	127 0 6·9	R
Aug. 10	7·5	36 45·06	...	0 8·3	R
13	7·5	36 45·12	...	0 7·2	R
16	7·5	36 45·11	...	0 7·7	R
18	7·5	36 45·07	...	0 8·3	R
340		*Taylor* 8599.			
June 11	...	18 36 49·54	...	129 48 6·8	M
15	...	36 49·30	...	48 5·2	M
July 18	...	36 49·52	...	48 7·2	R
20	...	36 49·48	...	48 6·8	R
Aug. 11	...	36 49·24	...	48 6·8	R
14	...	36 49·33	...	48 6·2	R
341		*Taylor* 8600.			
June 14	7·5	18 36 51·35	5	129 51 37·3	M
20	7·0	36 51·40	5	51 36·5	M
July 3	7·0	36 51·48	...	51 36·4	R
4	7·0	36 51·55	...	51 37·7	R
Aug. 9	7·0	36 51·59	...	51 37·4	R
342		*Anon.*			
May 18	7·5	18 38 45·46	...	131 16 59·7	R
19	7·5	38 45·43	...	16 59·6	R
24	7·5	38 45·57	..	17 1·3	R
25	7·5	38 45·56	...	17 1·7	R
28	7·5	38 45·55	...	17 0·5	R
343		*Anon.*			
May 29	9·0	18 39 14·20	...	128 56 33·9	R
30	9·0	39 14·16	...	56 34·3	R
June 1	9·0	39 14·17	...	56 34·3	R
7	9·0	39 13·90	...	56 33·7	R
8	9·0	39 14·43	...	56 33·7	M
344		*Stone* 10239.			
Aug. 8	...	18 42 49·64	...	134 36 22·9	R
9	...	42 49·50	...	36 20·6	R
10	...	42 49·55	...	36 20·3	R
11	..	42 49·39	...	36 19·7	R
13	...	42 49·36	...	36 19·6	R
14	...	42 49·36	...	36 19·4	R
345		*Anon.*			
June 15	8·0	18 43 30·96	...	134 49 12·8	M
Sep. 4	8·3	43 31·07	...	49 14·2	M
15	7·7	43 31·00	...	49 14·7	M
22	...	43 30·98	...	49 11·6	M
26	8·0	43 31·44	...	49 13·6	M
346		*Taylor* 8647.			
Sep. 13	...	18 43 38·53	...	134 40 15·5	M
20	...	43 38·66	...	40 15·8	M
27	7·0	43 38·48	6	40 13·8	M
29	7·5	43 38·59	...	40 15·3	M
347		*Anon.*			
Aug. 28	8·0	18 43 48·76	...	125 31 1·6	R
Sep. 14	7·8	43 48·70	6	31 1·6	M
28	...	43 48·89	...	31 2·8	M
348		*Anon.*			
May 29	9·5	18 45 24·16	...	129 28 13·2	R
30	9·0	45 24·12	...	28 13·7	R
June 1	9·0	45 24·04	...	28 13·5	R
14	9·0	45 24·31	...	28 14·3	M
349		*Anon.*			
Aug. 14	8·0	18 47 6·37	...	133 50 45·8	R
18	8·0	47 6·66	4	50 47·0	R
25	8·0	47 6·52	...	50 46·6	R
Sep. 17	...	47 6·61	...	50 45·4	M
24	8·0	47 6·56	...	50 47·7	M

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
350		*Taylor* 8685.			
Aug. 8	...	18 48 44·25	...	127 29 28·8	R
9	...	48 44·33	...	29 24·8	R
10	...	48 44·07	...	29 24·3	R
11	...	48 44·09	...	29 26·0	R
13	...	48 44·09	...	29 23·3	R
351		*Anon.*			
May 30	9·5	18 52 14·82	...	132 56 57·4	R
352		*Taylor* 8715.—1*st.*			
July 30	7·5	18 53 8·67	...	127 13 16·5	R
Sep. 15	7·0	53 8·66	...	13 16·0	M
25	...	53 8·53	5	13 14·8	M
27	7·3	53 8·68	...	13 15·7	M
28	...	53 8·66	...	13 16·3	M
353		*Taylor* 8715.—2*nd.*			
Sep. 17	7·5	18 53 9·90	...	127 13 19·1	M
20	...	53 9·67	...	13 19·3	M
22	...	53 9·78	...	13 18·1	M
24	...	53 9·74	...	13 19·2	M
26	7·3	53 9·80	...	13 18·2	M
354		*Anon.*			
July 28	8·5	18 53 54·82	...	128 6 55·2	R
Sep. 14	8·5	53 54·91	...	6 57·3	M
355		13 *Aquilæ* ε			
June 1	...	18 54 18·66	...	75 5 23·2	R
7	...	54 18·62	...	5 21·6	R
9	...	54 18·66	...	5 21·4	M
14	...	54 18·67	...	5 24·5	M
15	...	54 18·67	...	5 22·2	M
20	...	54 18·47	...	5 22·1	M
Aug. 8	...	54 18·67	...	5 23·5	R
9	...	54 18·62	...	5 22·1	R
10	...	54 18·66	...	5 22·9	R
11	...	54 18·58	...	5 22·2	R
13	...	54 18·62	...	5 22·7	R
Aug. 14	...	18 54 18·74	...	75 5 22·2	R
16	...	54 18·63	...	5 22·6	R
18	...	54 18·62	...	5 21·6	R
25	...	54 18·67	...	5 22·2	R
28	...	54 18·65	...	5 21·2	R
Sep. 4	...	54 18·55	...	5 23·3	M
5	...	54 18·57	...	5 22·8	M
10	...	54 18·64	...	5 21·3	M
11	...	54 18·60	...	5 22·3	M
356		*Stone* 10351.			
Sep. 29	6·0	18 55 18·37	...	128 25 13·5	M
Oct. 1	6·0	55 18·18	...	25 14·2	R
4	6·0	55 18·21	4	25 11·5	R
5	6·0	55 18·23	...	25 11·8	R
357		*Anon.*			
June 15	7·5	19 0 12·02	...	135 15 25·2	M
Sep. 4	7·5	0 11·69	...	15 26·8	M
13	...	0 11·79	...	15 25·5	M
14	...	0 11·69	5	15 26·3	M
15	7·5	0 11·72	...	15 26·9	M
358		*Stone* 10391.			
Sep. 26	7·3	19 0 33·03	...	132 36 21·5	M
27	7·3	0 33·01	...	36 21·9	M
359		*Stone* 10400.			
June 11	...	19 1 34·60	...	130 0 36·7	M
14	...	1 34·39	...	0 38·8	M
22	...	1 34·44	...	0 37·6	M
July 18	...	1 34·78	...	0 38·3	R
30	...	1 34·64	...	0 38·9	R
360		*Anon.*			
Aug. 11	8·0	19 4 10·15	...	135 27 42·0	R
13	9·0	4 9·97	...	27 41·4	R
14	8·5	4 10·01	...	27 41·5	R

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
361		*Stone* 10420.			
Sep. 28	...	19 4 14·46	..	127 46 29·6	M
29	...	4 14·58	...	46 27·6	M
Oct. 1	...	4 14·52	...	46 27·5	R
4	...	4 14·47	...	46 26·0	R
5	...	4 14·52	...	46 27·1	R
362		*Stone* 10432.			
Aug. 8	...	19 6 8·82	...	135 23 26·3	R
9	...	6 8·73	...	23 22·6	R
363		*Anon.*			
Aug. 25	7·5	19 7 41·64	...	129 24 5·0	R
28	7·5	7 41·62	...	24 5·5	R
364		*Taylor* 8823.			
June 15	...	19 7 50·29	...	135 40 3·9	M
Sep. 4	...	7 50 27	...	40 4·2	M
10	...	7 50·37	4	40 0·2	M
13	...	7 50·27	...	40 3·9	M
15	...	7 50·28	...	40 4·8	M
20	...	7 50·32	...	40 6·3	M
365		*Stone* 10451.			
Sep. 11	...	19 8 52·41	5	135 37 34·5	M
14	...	8 52·26	...	37 33·6	M
22	...	8 52·39	5	37 32·2	M
24	...	8 52·24	...	37 33·6	M
366		*Anon.*			
Aug. 13	9·5	19 10 13·33	...	130 46 34·5	R
14	9·5	10 13·37	...	46 34·1	R
367		*Anon*			
Aug. 11	7·5	19 10 40·16	...	129 45 12·3	R
368		*Stone* 10465.			
Oct. 1	6·0	19 11 54·50	...	125 37 58·8	R
4	6·0	11 54·47	4	37 59·0	R
5	6·0	11 54·76	...	37 59·8	R

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
369		*Stone* 10467.			
June 22	7·0	19 12 30·34	...	135 35 11·5	M
July 28	7·0	12 30·49	...	35 10·3	R
30	7·0	12 30·36	...	35 10·9	R
Aug. 9	7·0	12 30·46	...	35 13·0	R
10	7·0	12 30·47	...	35 12·5	R
370		*Stone* 10487.			
Sep. 26	7·0	19 14 14·69	...	119 49 18·6	M
27	7·0	14 14·61	...	49 17·8	M
28	7·0	14 14·37	...	49 19·1	M
Oct. 6	7·0	14 14·61	5	49 15·4	R
371		*Anon.*			
Aug. 25	...	19 14 18·73	...	127 26 18·0	R
28	...	14 18·71	...	26 18·4	R
Sep. 12	...	14 18·99	...	26 17·5	M
13	...	14 18·63	...	26 18·4	M
15	...	14 18·81	...	26 18·6	M
372		*Anon.*			
July 30	9·0	19 17 6·91	...	130 4 35·8	R
Aug. 11	9·0	17 6·72	...	4 37·5	R
373		49 *Sagittarii* χ^3			
Sep. 29	6·0	19 18 24·67	...	114 11 26·5	M
Oct. 9	6·0	18 24·62	...	11 22·9	R
374		*Anon.*			
Aug. 8	9·5	19 19 47·82	...	130 13 15·7	R
13	9·5	19 47·69	...	13 11·6	R
14	9·5	19 47·66	...	13 10·7	R
16	9·5	19 47·76	...	13 11·1	R
25	9·5	19 47·89	...	13 10·8	R
375		*Stone* 10534.			
Sep. 27	...	19 21 55·28	...	125 19 13·4	M
28	...	21 55·30	...	19 13·6	M
Oct. 5	...	21 55·21	...	19 12·8	R
9	...	21 55·09	...	19 14·7	R

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
376		*Anon.*			
July 28	8·0	19 22 5·66	4	132 34 15·8	R
30	8·0	22 5·78	...	34 17·4	R
Sep. 4	8·0	22 5·66	...	34 16·1	M
13	...	22 5·76	...	34 16·7	M
377		*Anon.*			
Aug. 8	9·0	19 25 49·63	...	133 42 50·9	R
378		*Anon*			
Sep. 14	....	19 25 58·47	...	146 55 2·1	M
15	...	25 58·58	...	55 2·5	M
379		*Taylor* 8982.			
Oct. 11	...	19 28 35·13	...	148 14 24·0	R
380		*Stone* 10583.			
July 30	7·5	19 29 32·25	...	131 42 59·3	R
Aug. 9	7·0	29 32·24	...	42 58·9	R
10	7·0	29 32·26	...	42 58·5	R
11	7·0	29 32·29	...	42 57·7	R
16	7·0	29 32·21	...	42 57·8	R
381		*Anon.*			
Aug. 25	8·0	19 29 45·56	...	125 29 57·6	R
28	8·0	29 45·56	...	29 57·5	R
Sep. 4	8·0	29 45·72	6	29 57·9	M
13	...	29 45·67	...	29 58·2	M
382		*Anon.*			
July 28	8·0	19 30 11·65	...	129 1 3·4	R
383		*Stone* 10594.			
Sep. 26	6·0	19 31 17·28	...	135 32 34·4	M
27	6·0	31 17·39	...	32 33·9	M
28	6·0	31 17·06	...	32 34·6	M
29	6·0	31 17·33	...	32 34·0	M
Oct. 1	6·0	31 17·06	...	32 34·2	R
384		*Stone* 10598.			
Oct. 9	6·7	19 31 57·21	...	129 41 45·9	R
13	6·7	31 57·31	...	41 48·3	R
385		*Anon.*			
Oct. 5	7·5	19 33 25·30	3	126 35 58·9	R
386		*Stone* 10622.			
Sep. 27	...	19 35 48·41	...	127 48 47·6	M
29	...	35 48·42	...	48 46·8	M
387		*Stone* 10624.			
Oct. 11	7·0	19 36 21·45	...	131 53 7·6	R
13	7·0	36 21·60	...	53 9·1	R
18	7·0	36 21·50	...	53 8·0	R
388		*R. P. L.* 133.			
Aug. 4	...	19 37 47·34	3	4 9 17·0	R
8	...	37 47·43	3	9 18·3	R
9	...	37 47·19	3	9 16·1	R
10	...	37 47·27	3	9 16·4	R
11	...	37 47·50	3	9 16·4	R
13	...	37 45·18	3	9 17·2	R
16	...	37 47·70	3	9 15·7	R
Sep. 4	...	37 45·61	3	9 16·4	M
		R. P. L. 133.—*s.p.*			
Jan. 27	...	19 37 47·14	3	4 9 18·0	M
29	...	37 46·94	3	9 17·2	M
30	...	37 48·00	3	9 16·6	M
Feb. 1	...	37 46·84	2	9 18·1	R
2	...	37 47·27	3	9 19·0	R
8	...	37 47·11	3	9 18·3	R
389		*R. P. L.* 134.			
Aug. 8	...	19 39 34·97	3	4 9 34·9	R
9	...	39 34·88	3	9 32·0	R
11	...	39 35·03	3	9 31·6	R
13	...	39 35·01	3	9 31·2	R
Sep. 14	...	39 34·91	3	9 32·5	M
28	...	39 35·15	3	9 31·8	M

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
		R. P. L.* 134.—*s.p.			
Jan. 31	...	19 39 36·11	3	4 9 31·1	M
Feb. 7	...	39 35·88	3	9 31·7	M
10	...	39 34·25	3	9 32·1	R
13	...	39 34·45	3	9 29·9	R
14	...	39 34·56	3	9 32·5	R
15	...	39 34·60	3	9 31·5	R
19	...	39 33·98	3	9 32·5	R
20	...	39 34·27	3	9 32·2	R
24	...	39 35·06	3	9 33·5	R
28	...	39 34·23	3	9 33·8	R
390		***Anon.***			
July 28	8·0	19 39 48·78	...	125 27 35·5	R
30	8·0	39 48·69	...	27 36·3	R
Aug. 14	8·0	39 48·77	...	27 35·9	R
391		***Anon.***			
Aug. 18	7·0	19 40 25·79	...	128 8 5·9	R
Sep. 12	...	40 25·68	...	8 5·6	M
20	...	40 25·76	5	8 7·8	M
22	...	40 25·75	...	8 5·5	M
26	7·3	40 25·73	...	8 5·6	M
392		***Stone* 10658.**			
Sep. 15	7·0	19 41 45·06	...	128 4 2·6	M
21	...	41 45·05	6	4 1·2	M
24	7·0	41 45·14	...	4 3·0	M
29	7·0	41 45·12	5	4 1·2	M
Oct. 1	7·0	41 44·91	8	4 2·2	R
5	7·0	41 44·80	...	3 59·6	R
393		***Stone* 10665.**			
Oct. 11	6·7	19 42 49·62	...	141 16 10·4	R
13	6·7	42 49·73	...	16 12·5	R
18	6·7	42 49·80	...	16 11·3	R
19	6·7	42 49·86	...	16 11·7	R
20	6·7	42 49·78	...	16 10·6	M
394		***Taylor* 9112.**			
July 28	...	19 43 53·70	...	130 10 9·2	R
30	...	43 53·59	...	10 9·8	R
395		***Stone* 10677.**			
Aug. 25	...	19 43 59·76	...	127 37 47·6	R
Sep. 11	...	43 59·66	...	37 48·3	M
17	...	43 59·75	...	37 46·1	M
25	...	43 59·78	...	37 48·5	M
27	...	43 59·94	...	37 48·6	M
396		***Taylor* 9131.**			
Sep. 26	...	19 47 16·69	3	148 13 53·3	M
Oct. 4	...	47 16·48	...	13 50·4	R
397		***Anon.***			
Aug. 9	8·5	19 48 9·48	...	131 59 53·2	R
Sep. 15	...	48 9·76	...	59 52·9	M
398		***Anon.***			
Sep. 20	...	19 50 19·15	6	132 59 35·1	M
399		***Stone* 10720.**			
Oct. 5	...	19 50 30·01	...	126 59 46·3	R
9	...	50 30·12	...	59 51·3	R
17	...	50 30·24	...	59 49·6	R
18	...	50 30·03	...	59 47·9	R
19	...	50 30·21	...	59 49·0	R
400		***Stone* 10727.**			
Sep. 27	7·0	19 51 34·65	...	120 51 1·9	M
28	6·0	51 34·64	5	51 2·5	M
29	7·0	51 34·41	...	51 2·2	M
Oct. 1	6·7	51 34·58	...	51 3·2	R
4	6·7	51 34·67	...	51 0·5	R
401		***Stone* 10739.**			
Oct. 11	6·5	19 52 18·13	...	133 21 38·5	R
13	6·5	52 18·13	...	21 40·3	R
20	6·5	52 17·98	...	21 38·5	M
22	6·5	52 18·07	...	21 38·0	R

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
402		*Stone* 10752.			
Aug. 28	8·5	19 53 51·52	...	126 59 56·0	R
Sep. 15	7·0	53 51·54	5	59 55·2	M
19	...	53 51·70	6	59 59·9	M
22	7·0	53 51·60	...	59 56·8	M
24	...	53 51·54	4	59 57·8	M
403		*Anon.*			
Aug. 16	8·0	19 54 25·56	...	130 18 18·3	R
404		*Taylor* 9195.			
Oct. 1	...	19 55 46·78	...	128 15 46·9	R
6	...	55 46·79	...	15 44·3	R
9	...	55 46·71	...	15 45·3	R
10	..	55 46·69	...	15 46·1	R
17	...	55 46·96	...	15 47·4	R
405		*Anon.*			
Aug. 13	9·0	19 56 54·59	...	131 48 51·0	R
14	9·0	56 54·60	...	48 50·7	R
18	9·0	56 54·87	...	48 50·5	R
Sep. 14	9·0	56 54·71	...	48 49·7	M
406		*Taylor* 9213.			
Oct. 11	...	19 58 21·94	..	145 20 58·5	R
13	...	58 21·79	...	21 1·3	R
18	...	58 21·72	...	21 0·0	R
19	...	58 21·90	...	20 59·7	R
22	...	58 21·96	...	21 0·7	R
407		*Anon.*			
Aug. 8	9·5	19 58 30·55	...	148 10 38·2	R
9	9·5	58 30·44	...	10 36·4	R
408		*Stone* 10792.			
Sep. 26	...	19 59 43·92	6	125 52 0·6	M
27	...	59 43·76	...	52 0·0	M
28	...	59 43·83	5	51 59·5	M
29	...	59 43·73	...	51 59·8	M
Oct. 5	...	59 43·78	...	51 58·6	R
409		*Stone* 10797.			
Oct. 9	...	20 0 38·85	...	137 24 11·2	R
10	...	0 38·82	...	24 11·4	R
20	...	0 38·94	...	24 13·5	M
410		*Stone* 10823.			
Oct. 11	6·7	20 5 6·49	...	138 3 38·5	R
13	6·7	5 6·55	...	3 39·6	R
18	6·7	5 6·55	...	3 37·2	R
19	6·7	5 6·59	...	3 38·4	R
22	6·7	5 6·74	...	3 38·8	R
411		65 *Aquilæ* θ			
Aug. 9	...	20 5 15·98	...	91 10 4·3	R
10	...	5 16·00	...	10 4·4	R
11	...	5 16·04	...	10 3·7	R
13	...	5 16·03	...	10 2·4	R
14	...	5 15·90	...	10 2·1	R
16	...	5 16·00	...	10 2·4	R
18	...	5 15·99	...	10 3·2	R
25	...	5 16·04	...	10 2·6	R
28	...	5 16·00	...	10 3·7	R
Sep. 3	...	5 16·09	...	10 3·3	M
25	...	5 16·03	...	10 2·8	M
26	...	5 16·02	...	10 4·9	M
27	...	5 16·10	...	10 5·6	M
28	...	5 16·02	...	10 5·9	M
29	...	5 16·12	...	10 3·4	M
Oct. 1	...	5 16·00	...	10 2·7	R
3	...	5 16·03	...	10 1·4	R
4	...	5 15·97	...	10 1·8	R
5	...	5 15·98	...	10 1·6	R
6	...	5 15·94	...	10 1·0	R
412		*Taylor* 9303.			
Oct. 10	...	20 7 59·36	...	117 22 51·7	R
17	...	7 59·45	...	22 52·9	R
413		*Stone* 10840.			
Oct. 5	...	20 8 46·85	...	126 48 33·1	R
9	...	8 46·88	...	48 33·2	R
20	...	8 46·54	...	48 35·2	M
23	...	8 46·50	...	48 35·6	R
25	...	8 46·68	...	48 35·4	R

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
414		*Stone* 10858.			
Aug. 8	7·0	20 10 48·27	...	134 53 16·2	R
11	7·0	10 48·19	...	53 14·5	R
Sep. 4	7·0	10 47·98	...	53 11·0	M
415		*Stone* 10859.			
Sep. 27	7·0	20 10 52·80	...	137 56 12·5	M
29	6·7	10 52·70	4	56 11·6	M
Oct. 1	6·7	10 52·63	3	56 11·9	R
6	6·7	10 52·73	...	56 9·0	R
11	6·7	10 52·57	...	56 12·4	R
416		*Taylor* 9343.			
Oct. 18	6·7	20 13 10·81	...	140 21 32·9	R
23	6·7	13 10·90	...	21 33·8	R
24	6·7	13 10·98	...	21 33·6	R
25	6·7	13 11·03	...	21 33·7	R
417		*Stone* 10884.			
Sep. 5	...	20 13 48·99	...	123 6 21·7	M
10	...	13 48·88	4	6 17·9	M
11	...	13 49·09	5	6 19·3	M
14	...	13 48·90	6	6 21·2	M
15	...	13 48·86	...	6 21·6	M
418		*Anon.*			
Aug. 16	8·0	20 14 42·91	...	133 19 33·0	R
Sep. 17	...	14 42·91	5	19 31·8	M
22	...	14 42·96	...	19 30·2	M
25	...	14 43·11	5	19 31·2	M
26	8·0	14 43·07	...	19 31·2	M
419		*Taylor* 9370.			
Oct. 8	...	20 15 55·43	5	132 47 51·8	R
9	...	15 55·57	...	47 49·0	R
10	...	15 55·55	...	47 49·3	R
17	...	15 55·68	...	47 50·2	R
19	...	15 55·64	...	47 51·2	R
420		*R. P. L.* 138.			
Aug. 4	...	20 16 18·81	3	5 40 32·0	R
Sep. 4	...	16 19·55	3	40 31·8	M
14	...	16 18·00	3	40 30·0	M
15	...	16 17·95	3	40 29·5	M
28	...	16 16·91	3	40 29·7	M
421		*Anon.*			
Sep. 17	...	20 20 6·49	...	130 23 42·1	M
27	8·0	20 6·53	4	23 43·5	M
29	7·5	20 6·65	...	23 43·6	M
422		*Taylor* 9415.			
Oct. 8	...	20 21 15·81	...	125 58 48·1	R
9	...	21 15·99	...	58 50·9	R
10	...	21 15·99	...	58 50·2	R
11	...	21 16·06	...	58 51·1	R
13	...	21 16·19	...	58 52·1	R
423		*Stone* 10939.			
Oct. 17	6·0	20 23 46·65	...	119 30 12·7	R
18	6·3	23 46·93	...	30 10·4	R
19	6·3	23 46·70	...	30 12·7	R
20	6·5	23 46·65	...	30 11·3	M
22	6·3	23 46·70	...	30 12·5	R
424		*Taylor* 9464.			
Oct. 10	7·0	20 26 40·72	...	112 37 36·1	R
11	7·0	26 40·77	...	37 37·1	R
23	7·0	26 40·93	...	37 37·2	R
25	7·0	26 40·64	...	37 37·6	R
425		*R. P. L.* 143.			
July 28	...	20 26 58·79	3	5 14 40·0	R

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
426		2 *Delphini* ϵ			
Sep. 4	...	20 27 37·43	...	79 5 37·6	M
5	...	27 37·33	...	5 34·1	M
10	...	27 37·39	...	5 36·4	M
11	...	27 37·40	...	5 37·5	M
12	..	27 37·32	...	5 37·5	M
13	...	27 37·22	...	5 37·8	M
14	...	27 37·26	...	5 37·7	M
15	...	27 37·37	...	5 37·5	M
17	.	27 37·41	...	5 36·7	M
19	...	27 37·37	...	5 37·3	M
20	...	27 37·30	...	5 38·5	M
21	...	27 37·25	...	5 37·0	M
22	...	27 37·18	.	5 35·8	M
24		27 37·38	...	5 39·1	M
25	...	27 37·26	.	5 37·0	M
26		27 37·29	...	5 38·6	M
27	...	27 37·27	...	5 39·0	M
28	..	27 37·33	...	5 38·4	M
29	...	27 37·33	...	5 37·4	M
Oct. 1	..	27 37·26	...	5 38·3	R
3	...	27 37·28	...	5 36·3	R
4	...	27 37·33	...	5 34·8	R
5	...	27 37·34	...	5 34·9	R
6	...	27 37·17	...	5 36·3	R
8	...	27 37·36	...	5 37·6	R
427		*Stone* 11003.			
Oct. 9	..	20 32 23·46	4	126 26 32·3	R
19	...	32 23·52	...	26 34·4	R
20	...	32 23·23	...	26 32·9	M
23	...	32 23·51	6	26 33·1	R
24	..	32 23·47	...	26 31·8	R
428		*Taylor* 9519.			
Sep. 4	...	20 33 34·17	5	132 32 46·5	M
15	..	33 34·17	...	32 47·9	M
429		*Taylor* 9544.			
Oct. 5	...	20 35 13·01	...	129 58 29·9	R
6	...	35 13·03	...	58 30·6	R
Oct. 11	...	20 35 12·87	...	129 58 32·8	
25	...	35 13·06	...	58 34·4	
Nov. 6	...	35 13·08	...	58 32·8	
430		*Taylor* 9561.			
Oct. 10	...	20 37 14·09	...	126 14 53·6	
19	...	37 14·27	...	14 54·1	
22	...	37 14·49	...	14 52·8	
24	...	37 14·34	...	14 55·5	
431		*Anon.*			
Sep. 25	...	20 37 38·58	4	126 31 44·9	
26	8·0	37 38·24	...	31 44·1	
27	...	37 38·32	...	31 44·2	
28	...	37 38·39	6	31 44·8	
432		*Taylor* 9573.			
Oct. 18	...	20 39 21·06	...	136 16 48·8	
23	...	39 21·14	...	16 49·7	
433		2 *Aquarii* ϵ			
Sep. 3	...	20 41 20·45	...	99 55 24·1	
4	...	41 20·43	...	55 23·8	
5	...	41 20·50	...	55 24·5	
10	...	41 20·38	...	55 23·7	
11	...	41 20·39	...	55 23·8	
12	...	41 20·51	...	55 23·6	
13	...	41 20·43	...	55 23·4	
14	...	41 20·48	...	55 24·2	
15	...	41 20·49	...	55 25·4	
17	...	41 20·44	...	55 23·1	
19	...	41 20·36	...	55 23·8	
20	...	41 20·37	...	55 25·3	
21	...	41 20·36	...	55 22·8	
22	...	41 20·59	...	55 23·9	
24	...	41 20·57	...	55 24·5	
Oct. 1	...	41 20·50	...	55 22·7	
3	...	41 20·44	...	55 21·6	
4	...	41 20·45	...	55 23·3	
5	...	41 20·40	...	55 24·1	
6	...	41 20·49	...	55 21·9	
8	...	41 20·43	...	55 23·0	

Separate Results of Madras Meridian Circle Observations in 1883.

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
434		*Anon.*			
Sep. 29	...	20 41 44·10	...	132 8 36·9	M
435		*Taylor* 9602.			
Oct. 9	6·3	20 42 20·49	...	116 12 42·5	R
10	6·3	42 20·43	...	12 44·0	R
11	6·3	42 20·61	...	12 42·6	R
19	6·3	42 20·61	...	12 44·4	R
22	6·3	42 20·66	...	12 42·7	R
436		*Stone* 11081.			
Sep. 25	...	20 43 59·40	...	131 20 28·7	M
437		*Stone* 11091.			
Oct. 23	...	20 44 40·91	...	142 9 10·9	R
438		*Anon.*			
Sep. 26	8·0	20 45 22·48	...	135 45 24·7	M
27	8·0	45 22·39	...	45 25·2	M
Oct. 4	8·0	45 22·37	...	45 22·4	R
439		*Stone* 11103.			
Aug. 28	...	20 46 13·44	...	141 10 4·7	R
Sep. 4	...	46 13·41	...	10 1·0	M
12	...	46 13·35	...	9 59·0	M
21	...	46 13·39	5	10 0·2	M
22	...	46 13·32	...	9 58·9	M
440		*Stone* 11115.			
Oct. 17	...	20 47 5·44	...	118 22 0·0	R
Nov. 5	...	47 5·59	3	21 58·4	M
441		*Stone* 11120.			
Oct. 11	...	20 47 24·35	...	145 39 54·7	R
18	...	47 24·38	...	39 54·4	R
19	...	47 24·40	...	39 55·9	R
24	...	47 24·48	...	39 54·6	R
25	...	47 24·39	...	39 57·5	R
442		*Anon.*			
Sep. 14	8·5	20 52 32·77	5	129 10 31·8	M
15	...	52 32·71	...	10 33·4	M
443		*Stone* 11150.			
Sep. 12	...	20 53 34·41	...	129 11 31·8	M
444		*Stone* 11156.			
Oct. 8	6·7	20 54 13·32	...	123 21 7·2	R
9	6·7	54 13·50	...	21 5·9	R
10	6·7	54 13·52	...	21 6·2	R
11	6·7	54 13·39	...	21 5·1	R
18	6·7	54 13·33	...	21 8·2	R
445		*Stone* 11175.			
Aug. 28	8·0	20 56 1·50	...	142 21 24·3	R
Oct. 6	7·0	56 1·31	...	21 20·5	R
17	7·0	56 1·35	...	21 22·2	R
20	7·0	56 1·46	...	21 21·1	M
22	7·0	56 1·64	...	21 22·4	R
446		*Stone* 11186.			
Oct. 5	7·0	20 57 44·20	...	127 41 29·1	R
23	7·0	57 44·27	...	41 32·2	R
447		*Stone* 11191.			
Oct. 24	7·0	20 58 12·54	..	138 59 25·9	R
25	7·0	58 12·45	...	59 27·3	R
Nov. 5	...	58 12·42	...	59 25·0	M
6	7·0	58 12·63	...	59 24·4	M
448		23 *Capricorni* θ			
Sep. 3	...	20 59 22·04	...	107 41 48·9	M
12	...	59 22·04	...	41 49·0	M
13	...	59 22·22	5	41 50·0	M
14	...	59 22·13	...	41 51·7	M
15	...	59 22·03	...	41 50·6	M
17	...	59 22·02	...	41 50·5	M
19	...	59 22·15	...	41 50·1	M

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
Sep. 20	...	20 59 22·21	...	107 41 52·5	M
21	...	59 22·28	...	41 50·8	M
22	...	59 22·10	...	41 50·4	M
24	...	59 23·01	...	41 50·6	M
25	...	59 21·97	...	41 49·9	M
26	...	59 22·16	...	41 50·6	M
27	...	59 22·12	...	41 50·0	M
28	...	59 22·01	...	41 49·7	M
29	...	59 22·13	...	41 51·5	M
Oct. 1	...	59 22·14	...	41 50·7	R
9	...	59 22·11	...	41 48·3	R
10	...	59 22·15	...	41 49·4	R
11	...	59 22·11	...	41 49·5	R
449		*Anon.*			
Oct. 18	8·0	21 0 13·05	...	150 59 40·0	R
450		*Stone* 11227.			
Oct. 4	6·7	21 1 58·59	...	134 40 54·3	R
5	6·7	1 58 60	...	40 54·4	R
20	6·7	1 58·60	...	40 55·1	M
22	6·7	1 58·88	...	40 56·8	R
23	6·7	1 58·78	...	40 55·3	R
451		*Taylor* 9809.			
Sep. 26	...	21 5 33·56	...	129 54 2·8	M
27	...	5 33·58	...	54 2·3	M
29	...	5 33·77	...	54 1·8	M
Oct. 1	...	5 33·64	...	54 1·9	R
9	...	5 33·70	...	54 1·0	R
452		*Taylor* 9843.			
Sep. 28	6·5	21 9 53·87	...	139 12 11·4	M
29	7·0	9 53·98	...	12 10·7	M
Oct. 4	6·7	9 53·99	...	12 9·7	R
5	6·7	9 53·98	...	12 10·6	R
11	6·7	9 53·87	...	12 13·1	R
453		*Taylor* 9889.			
Sep. 26	6·5	21 14 52·22	...	119 39 40·4	M
Oct. 3	6·7	14 52·10	...	39 41·4	R
4	6·7	14 52·12	...	39 41·0	R
5	6·7	14 52·09	...	39 41·7	R
18	6·7	14 52·00	...	39 39·4	R
454		33 *Capricorni.*			
Sep. 28	...	21 17 31·26	...	111 20 54·8	M
29	...	17 31·28	...	20 ~~49·7~~	M
Oct. 1	...	17 31·17	...	20 52·2	R
11	...	17 31·26	...	20 ~~49·3~~	R
19	...	17 31·45	...	20 50·1	R
455		*Stone* 11367.			
Sep. 26	7·0	21 21 39·61	5	152 40 33·3	M
27	...	21 39·54	5	40 34·1	M
Oct. 18	6·7	21 39·51	...	40 33·8	R
19	6·7	21 39·71	...	40 34·4	R
20	6·7	21 39·46	...	40 34·3	M
456		*R. P. L.* 149.			
Sep. 4	...	21 22 43·22	3	3 26 57·1	M
14	...	22 45·06	2	26 56·4	M
457		*Stone* 11390.			
Sep. 28	6·0	21 25 48·17	...	135 21 56·3	M
29	6·0	25 48·20	...	21 54·1	M
Oct. 4	6·0	25 48·35	...	21 51·8	R
5	6·0	25 48·33	...	21 52·9	R
6	6·0	25 48·32	...	21 54·3	R
458		*Stone* 11403.			
Sep. 26	6·0	21 28 41·66	5	155 20 47·2	M
27	...	28 41·41	...	20 49·2	M
Oct. 3	6·0	28 41·48	...	20 48·8	R
11	6·0	28 41·44	...	20 51·0	R
18	6·0	28 41·56	...	20 48·6	R

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
459		*Stone* 11428.			
Sep. 28	...	21 32 3·66	...	124 12 14·9	M
29	...	32 3·83	...	12 15·6	M
Oct. 1	...	32 3·71	4	12 16·0	R
4	...	32 3·75	...	12 13·2	R
5	...	32 3·68	...	12 14·5	R
460		*Stone* 11434.			
Sep. 10	...	21 32 25·98	...	133 39 29·6	M
12	...	32 25·73	...	39 34·4	M
461		*Taylor* 10073.			
Sep. 26	...	21 36 6·32	...	146 0 23·3	M
27	...	36 6·38	...	0 24·2	M
Oct. 3	...	36 6·49	...	0 23·4	R
4	...	36 6·46	...	0 23·4	R
5	...	36 6·44	...	0 24·4	R
462		*Stone* 11470.			
Sep. 10	...	21 37 46·88	5	128 58 33·2	M
17	...	37 46·29	...	58 37·8	M
22	...	37 46·44	...	58 34·9	M
463		8 *Pegasi* ϵ			
Oct. 9	...	21 38 26·37	...	80 39 36·8	R
10	...	38 26·35	...	39 37·9	R
11	...	38 26·43	...	39 38·0	R
13	...	38 26·44	..	39 39·0	R
17	...	38 26·45	...	39 39·0	R
18	...	38 26·39	...	39 37·9	R
19	...	38 26·45	...	39 38·6	R
20	...	38 26·27	...	39 38·1	M
22	...	38 26·33	...	39 38·6	R
23	...	38 26·40	...	39 38·1	R
24	...	38 26·39	...	39 38·3	R
25	...	38 26·39	...	39 36·5	R
Nov. 5	...	38 26·35	...	39 40·4	M
6	...	38 26·43	...	39 37·9	R
7	...	38 26·34	...	39 38·3	M
9	...	38 26·26	...	39 38·7	M
10	...	38 26·35	...	39 40·8	M
12	...	38 26·29	...	39 40·6	M
14	...	38 26·25	...	39 40·2	M
15	...	38 26·18	...	39 38·1	M
464		*Taylor* 10109.			
Sep. 28	...	21 40 38·58	...	137 50 3·9	M
29	...	40 38·73	...	50 2·9	M
Oct. 4	...	40 38·92	...	50 2·9	R
5	...	40 39·00	4	50 3·6	R
6	...	40 38·65	...	50 2·5	R
465		*Taylor* 10164.			
Sep. 26	...	21 48 14·51	...	143 0 51·4	M
27	...	48 14·52	3	0 55·5	M
Oct. 3	...	48 14·73	...	0 53·9	R
4	...	48 14·66	...	0 53·9	R
5	...	48 14·60	...	0 54·3	R
466		*Taylor* 10172.			
Sep. 28	...	21 49 19·97	...	127 48 27·3	M
29	...	49 20·04	...	48 28·4	M
Oct. 1	...	49 19·96	...	48 26·8	R
6	...	49 19·88	4	48 26·1	R
9	...	49 19·93	...	48 26·2	R
467		*Stone* 11555.			
Oct. 11	6·7	21 51 15·86	...	134 37 4·9	R
18	6·7	51 15·79	...	37 4·7	R
19	6·7	51 15·90	...	37 6·7	R
20	6·7	51 15·78	4	37 5·7	M
22	6·7	51 16·02	...	37 6·5	R
468		*Anon.*			
Sep. 12	...	21 52 5·66	5	132 36 2·7	M
15	8·0	52 5·89	...	36 1·9	M
17	8·5	52 5·54	...	36 2·4	M
469		*Taylor* 10192.			
Oct. 3	...	21 52 13·17	...	128 57 10·7	R
23	...	52 13·45	...	57 11·9	R
24	...	52 13·35	...	57 12·2	R
25	...	52 13·23	...	57 13·3	R
Nov. 6	...	52 13·13	...	57 12·1	R

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
470		*Stone* 11574.			
Sep. 29	6·0	21 53 59·64	...	127 6 58·2	M
Oct. 4	6·7	53 59·58	...	6 55·6	R
5	6·7	53 59·52	...	6 56·2	R
6	6·7	53 59·55	4	6 55·9	R
9	6·7	53 59·40	...	6 56·8	R
471		*Taylor* 10232.			
Sep. 26	6·0	21 57 57·35	...	117 23 18·9	M
28	6·0	57 57·36	...	23 19·3	M
Oct. 1	6·0	57 57·28	...	23 18·4	R
3	6·0	57 57·20	...	23 17·2	R
5	6·0	57 57·23	...	23 16·2	R
13	6·0	57 57·42	...	23 18·6	R
472		*Stone* 11601.			
Sep. 12	...	21 58 48·92	6	134 31 59·3	M
15	7·0	58 48·82	...	31 58·6	M
473		34 *Aquarii a*			
Oct. 18	...	21 59 46·37	..	90 53 15·2	R
19	...	59 46·33	...	53 16·6	R
20	...	59 46·31	...	53 16·3	M
22	...	59 46·33	...	53 16·4	R
23	...	59 46·42	...	53 14·3	R
24	...	59 46·34	...	53 15·7	R
25	...	59 46·35	...	53 16·8	R
Nov. 5	...	59 46·32	...	53 16·9	M
6	...	59 46·37	...	53 15·6	R
7	...	59 46·41	...	53 16·3	M
9	...	59 46·36	...	53 15·7	M
10	...	59 46·44	...	53 18·6	M
12	...	59 46·45	...	53 17·4	M
13	...	59 46·35	...	53 18·9	M
14	...	59 46·56	...	53 17·4	M
15	...	59 46·47	...	53 17·1	M
16	...	59 46·45	...	53 18·8	M
20	...	59 46·39	...	53 17·6	M
21	...	59 46·50	...	53 18·3	M
23	...	59 46·50	...	53 19·1	M
26	...	59 46·39	...	53 18·6	M

Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
474		*Stone* 11610.			
Sep. 29	...	22 0 9·13	...	120 11 11·6	M
Oct. 4	...	0 8·94	...	11 10·1	R
6	...	0 9·14	...	11 9·6	R
9	...	0 9·01	5	11 9·2	R
11	...	0 9·08	...	11 10·8	R
475		43 *Aquarii θ*			
Oct. 11	...	22 10 39·49	...	98 21 55·9	R
13	...	10 39·43	...	21 56·1	R
17	...	10 39·44	...	21 56·1	R
18	...	10 39·47	...	21 55·4	R
19	...	10 39·47	...	21 55·9	R
20	...	10 39·52	...	21 57·0	M
22	...	10 39·52	...	21 56·3	R
23	...	10 39·44	...	21 55·1	R
24	...	10 39·48	...	21 54·4	R
25	...	10 39·52	...	21 57·1	R
Nov. 5	...	10 39·57	...	21 56·7	M
6	...	10 39·45	...	21 55·0	R
7	...	10 39·50	...	21 56·5	M
9	...	10 39·62	...	21 55·3	M
10	...	10 39·45	...	21 57·8	M
12	...	10 39·58	...	21 59·6	M
13	...	10 39·53	...	21 58·0	M
14	...	10 39·46	...	21 57·0	M
15	...	10 39·51	...	21 56·6	M
16	...	10 39·46	...	21 56·9	M
20	...	10 39·65	...	21 54·5	M
21	...	10 39·45	...	21 56·0	M
23	...	10 39·51	...	21 56·2	M
476		48 *Aquarii γ*			
Sep. 26	...	22 15 36·73	...	91 58 35·0	M
27	...	15 36·70	...	58 36·3	M
28	...	15 36·83	...	58 34·9	M
29	...	15 36·59	...	58 35·5	M
Oct. 3	...	15 36·73	...	58 33·2	R
4	...	15 36·72	...	58 33·5	R
5	...	15 36·73	...	58 33·2	R
6	...	15 36·70	...	58 34·1	R
8	...	15 36·68	...	58 33·9	R
9	...	15 36·72	...	58 33·7	R

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Number and Date.	Magnitude.	Mean Right Ascension 1883. h. m. s.	No. of Wires.	Mean Polar Distance 1883. ° ′ ″	Observer.
477		73 *Aquarii* λ			
Sep. 24	...	22 46 30·40	...	98 12 7·8	M
25	...	46 30·66	...	12 5·3	M
Oct. 9	...	46 30·51	...	12 6·3	R
10	...	46 30·50	...	12 6·3	R
13	...	46 30·49	...	12 5·3	R
17	...	46 30·47	...	12 6·4	R
18	...	46 30·49	...	12 6·9	R
19	...	46 30·47	...	12 7·3	R
20	...	46 30·62	...	12 7·5	M
Nov. 26	...	46 30·51	...	12 10·0	M
29	...	46 30·47	...	12 4·0	M
30	...	46 30·47	...	12 7·7	M
Dec. 4	...	46 30·43	...	12 6·3	R
5	...	46 30·48	...	12 6·0	R
6	...	46 30·37	...	12 5·8	R
478		54 *Pegasi* a_2 *Markab.*			
Oct. 22	...	22 58 56·01	...	75 25 26·0	R
23	...	58 55·95	...	25 26·5	R
24	...	58 55·97	...	25 26·9	R
25	...	58 55·94	...	25 27·0	R
Nov. 13	...	58 55·84	...	25 29·6	M
14	...	58 55·90	...	25 29·1	M
15	...	58 56·03	...	25 28·1	M
16	...	58 55·85	...	25 31·2	M
Nov. 20	...	22 58 55·89	...	75 25 27·2	M
21	...	58 55·85	...	25 26·4	M
23	...	58 55·83	...	25 29·3	M
479		6 *Piscium* γ			
Nov. 26	...	23 11 5·82	...	87 21 26·5	M
27	...	11 6·05	...	21 25·0	M
29	...	11 5·88	...	21 22·3	M
30	...	11 5·94	...	21 24·9	M
Dec. 4	...	11 5·90	...	21 23·4	R
5	...	11 5·91	...	21 24·1	R
6	...	11 5·86	...	21 25·8	R
7	...	11 5·90	..	21 24·0	R
480		*R. P. L.* 158.			
Oct. 18	...	23 27 47·02	3	3 20 17·0	R
19	...	27 49·78	3	20 16·6	R
22	...	27 50·18	3	20 16·6	R
23	...	27 49·90	3	20 15·8	R
24	...	27 49·56	3	20 18·0	R
25	...	27 49·64	3	20 18·0	R
Nov. 9	...	27 50·12	3	20 16·8	M
12	...	27 51·09	3	20 15·5	M
13	...	27 50·42	3	20 17·0	M
14	...	27 49·10	3	20 17·6	M