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Vol 8

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

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## INTRODUCTION.

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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 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  
5 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 necessary 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  $10^\circ$  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  $0.02$ , but all corrections affecting the separate results to the extent of  $0.01$  have been entered in the working copies and will be taken into account in forming the catalogue places.

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*Instrumental Corrections adopted in 1883.*

| Date.  | Observer. | Index. | Run in 5'. | Clock Rate. | Inclination. | Collimation. | Meridian. | Determining Stars.                     |
|--------|-----------|--------|------------|-------------|--------------|--------------|-----------|--|
|        |           | "      | "          | 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.                        |
|--------|-----------|--------|------------|-------------|--------------|--------------|-----------|---|
| 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      | + 0.53       | + 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      | + 0.53       | + 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., e 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       | + 0.02       | + 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    | e Urs. Min. and 39 R.P.L.                 |

May 1.—Transit clock put forward 1m.

*Instrumental Corrections adopted in 1883.*

| Date.   | Observer. | Index. | Run in 5' | Clock Rate. | Inclination. | Collimation. | Meridian | Determining Stars.                    |
|---------|-----------|--------|-----------|-------------|--------------|--------------|----------|---------------------------------------|
|         |           | "      | "         | "           | "            | "            | "        |                                       |
| 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, 43, 53 R. P. L.  |
| 14      | "         | - 5.0  | 0.0       | - 0.23      | + 0.48       | + 0.03       | + 0.60   | 3 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.                   |
| 29      | "         | - 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      | "         | - 3.1  | 0.0       | - 0.34      | + 0.38       | + 0.03       | + 0.88   |                                       |
| 21      | "         | - 4.8  | 0.0       | - 0.28      | + 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.

INTRODUCTION.

*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       | + 0.06       | + 0.73    |                                  |
| 11     | "         | - 0.8  | 0.0        | + 0.63      | + 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.          |
| 22     | "         | + 4.0  | 0.0        | + 0.49      | + 0.59       | + 0.01       | + 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       | + 0.16    |   |
| 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    | 153 & 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        | - 0.84      | + 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.,<br>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<br>R. P. L.                                |
| 13      | "         | - 3.4  | - 0.1      | - 0.34      | + 0.63       | + 0.03       | + 0.70    | 45 R. P. L. & 24 Urs. Min.,<br>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.,<br>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. &<br>24 Ursæ Minoris, 131<br>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<br>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.   | Obser-<br>ver. | Index. | Run<br>in 5'. | Clock<br>Rate. | Inclina-<br>tion. | Collima-<br>tion. | 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    | 93, 10, & 18 R. P. L.  |
| 18      | "              | + 8.3  | + 0.1         | - 1.03         | + 0.98            | + 0.03            | + 0.55    |  |
| 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.<br>87, 103 R. P. L. & 2993          |
| 29      | "              | + 9.1  | + 0.1         | - 0.93         | + 0.95            | + 0.03            | + 0.52    |  |
| Dec. 1  | "              | + 8.3  | 0.0           | - 1.04         | + 0.94            | + 0.05            | + 0.57    | Radcliffe & 10 R. P. L.<br>87, 103 R. P. L. & 2 Ursæ<br>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      | "              | + 6.8  | 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.  |

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*Instrumental Corrections adopted in 1885.*

| Date.   | Observer. | Index. | Run in 5'. | Clock Rate. | Inclination. | Collimation. | Meridian. | Determining Stars.                 |
|---------|-----------|--------|------------|-------------|--------------|--------------|-----------|------------------------------------|
| 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       | E         | + 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 $\mu$ Eridani.     |
| 26      | "         | + 4.2  | - 0.5      | + 0.14      | + 0.74       | + 0.03       | + 0.32    | 37 R. P. L. and $\delta$ Urs. Min. |
| 29      | "         | + 3.7  | - 0.5      | + 0.17      | + 0.78       | + 0.04       | + 0.32    | 37 R. P. L. and $\delta$ 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 $\delta$ 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 $\delta$ 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 $\delta$ 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      | E         | - 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 $\delta$ 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 & $\delta$ Urs. Min.     |
| 28      | "         | - 3.0  | + 0.3      | + 0.19      | + 0.83       | + 0.02       | + 0.19    |                                    |
| Mar. 3  | E         | - 3.2  | + 0.1      | + 0.18      | + 0.81       | + 0.04       | + 0.21    | 51 Cephei & $\delta$ Urs. Min.     |
| 6       | "         | - 2.0  | + 0.1      | + 0.13      | + 0.89       | + 0.04       | + 0.24    | 51 Cephei & $\delta$ 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 & $\delta$ 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 & $\lambda$ Urs. Min.    |
| 23      | E         | - 3.5  | + 0.1      | + 0.17      | + 0.85       | + 0.03       | + 0.19    | 51 Cephei & $\lambda$ Urs. Min.    |
| 26      | "         | - 3.3  | + 0.1      | + 0.20      | + 0.87       | + 0.02       | + 0.18    | 51 Cephei & $\lambda$ Urs. Min.    |
| 28      | "         | - 3.3  | + 0.1      | + 0.13      | + 0.86       | + 0.02       | + 0.19    | 51 Cephei & $\lambda$ Urs. Min.    |
| 30      | "         | - 3.8  | + 0.1      | + 0.13      | + 0.88       | + 0.03       | + 0.21    | 51 Cephei & $\lambda$ Urs. Min.    |
| Apl. 1  | "         | - 3.4  | + 0.3      | + 0.10      | + 0.88       | + 0.03       | + 0.20    | 51 Cephei & $\lambda$ 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   | E         | - 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       | + 0.13    |                                    |
| 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.   | Obser-<br>ver. | Index. | Run<br>in 5'. | Clock<br>Rate. | Inclina-<br>tion. | Collima-<br>tion. | 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 & 3 Urs. Min.    |
| 20      | "              | - 2.4  | 0.0           | - 0.02         | + 1.08            | + 0.02            | + 0.51    |                            |
| Sep. 7  | "              | - 2.1  | + 0.2         | + 0.13         | + 1.04            | + 0.03            | + 0.53    | 51 Cephei & 3 Urs. Min.    |
| 12      | "              | - 2.3  | + 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. & 3 Urs. Min.  |
| 29      | "              | - 0.3  | + 0.2         | - 0.21         | + 0.95            | + 0.02            | + 0.57    |                            |
| Oct. 1  | M              | + 0.9  | 0.0           | - 0.23         | + 0.93            | + 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 3 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      | "              | + 2.3  | 0.0           | - 0.35         | + 0.89            | + 0.03            | + 0.55    |                            |
| Dec. 28 | R              | + 7.0  | 0.0           | - 1.33         | + 0.89            | + 0.03            | + 0.53    |                            |

*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 & 3 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 & 3 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<br>Cephei & 3 Urs. Min.   |
| 30      | "         | - 0.8 | 0.0        | + 0.65      | + 0.07       | + 0.02       | + 0.49    | 37 and 40 R. P. L. 51<br>Cephei & 3 Urs. Min.   |
| Feb. 1  | "         | - 2.4 | - 0.3      | + 0.65      | + 0.11       | + 0.03       | + 0.64    | 37 and 40 R. P. L., $\lambda$ Ursae<br>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 & $\lambda$ Urs. Min.                 |
| 15      | "         | - 7.7 | - 0.3      | + 0.76      | + 0.02       | + 0.07       | + 0.52    | 51 Cephei & $\lambda$ Urs. Min.                 |
| 17      | "         | - 7.3 | - 0.3      | + 0.76      | + 0.03       | + 0.07       | + 0.54    | 51 Cephei & $\lambda$ 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 & $\lambda$ 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 $\rho$ Bootis.                      |
| 25      | "         | + 1.3 | - 0.1      | + 0.93      | + 0.12       | + 0.07       | + 0.43    |   |
| Aug. 4  | R         | + 6.6 | 0.0        | + 0.71      | + 0.06       | + 0.07       | + 0.50    | 51 Cephei & 3 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 & $\lambda$ 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 & $\lambda$ 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       | + 0.33    |                             |
| 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       | + 0.33    |                             |
| 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    |                             |
| 6       | "         | + 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.        |
|   | <i>h.</i>               | <i>m.</i> | <i>o.</i> | <i>s.</i> | <i>"</i> | <i>s.</i> | <i>"</i> | <i>s.</i> | <i>"</i> | <i>s.</i> | <i>"</i>     |
| $\epsilon$ Ceti ... ..                  | 0                       | 14        | 99 28     | 7         | - 0.06   | - 2.7     | 13       | + 0.04    | + 0.2    | ...       | .....        |
| $\delta$ Ceti ... ..                    | 0                       | 24        | 94 36     | ...       | .....    | .....     | 2        | + 0.06    | + 1.1    | ...       | .....        |
| $\beta$ Ceti... ..                      | 0                       | 38        | 108 37    | ...       | .....    | .....     | 2        | + 0.05    | + 1.6    | ...       | .....        |
| $\delta$ Piscium ... ..                 | 0                       | 43        | 83 3      | 7         | + 0.04   | - 0.7     | 3        | - 0.04    | 0.0      | ...       | .....        |
| $\beta$ Andromedæ ... ..                | 1                       | 3         | 55 0      | 2         | - 0.07   | - 1.0     | 11       | - 0.06    | + 0.1    | 1         | 0.0 - 0.7    |
| $\alpha$ Urs. Min. ( <i>Polaris</i> ).. | 1                       | 16        | 1 19      | 14        | + 0.23   | + 0.3     | 6        | + 0.62    | + 0.7    | ...       | .....        |
| $\theta$ Ceti... ..                     | 1                       | 18        | 98 47     | 2         | - 0.04   | + 1.1     | ...      | .....     | .....    | ...       | .....        |
| $\eta$ Piscium ... ..                   | 1                       | 25        | 75 15     | 4         | 0.00     | + 0.1     | 1        | - 0.12    | - 0.7    | ...       | .....        |
| $\alpha$ Eridani ( <i>Achernar</i> )..  | 1                       | 33        | 147 50    | 1         | + 0.27   | + 0.9     | ...      | .....     | .....    | ...       | .....        |
| $\nu$ Piscium ... ..                    | 1                       | 35        | 85 6      | 1         | + 0.04   | - 0.7     | ...      | .....     | .....    | ...       | .....        |
| $\circ$ Piscium ... ..                  | 1                       | 39        | 81 26     | 10        | - 0.03   | + 0.8     | 10       | 0.00      | - 0.8    | ...       | .....        |
| $\beta$ Arietis ... ..                  | 1                       | 48        | 69 46     | 13        | + 0.07   | - 0.6     | ...      | .....     | .....    | ...       | .....        |
| $\alpha$ Arietis ... ..                 | 2                       | 1         | 67 5      | 17        | + 0.01   | + 0.4     | 2        | - 0.04    | + 0.1    | ...       | .....        |
| $\delta$ Ceti ... ..                    | 2                       | 11        | 96 57     | 3         | - 0.04   | - 0.1     | 4        | + 0.05    | + 0.4    | ...       | .....        |
| $\xi^2$ Ceti ... ..                     | 2                       | 22        | 82 4      | 1         | + 0.01   | - 2.5     | ...      | .....     | .....    | ...       | .....        |
| $\gamma^2$ Ceti ... ..                  | 2                       | 37        | 87 15     | 2         | 0.00     | - 1.2     | ...      | .....     | .....    | ...       | .....        |
| $\sigma$ Arietis ... ..                 | 2                       | 45        | 75 24     | 7         | + 0.03   | - 1.1     | 13       | + 0.02    | - 2.2    | ...       | .....        |
| $\alpha$ Ceti ... ..                    | 2                       | 56        | 86 22     | 7         | - 0.04   | - 1.0     | 2        | + 0.07    | + 1.0    | ...       | .....        |
| $\delta$ Arietis ... ..                 | 3                       | 5         | 70 43     | 7         | - 0.04   | - 1.0     | 8        | - 0.04    | + 0.3    | ...       | .....        |
| $\alpha$ Persei ... ..                  | 3                       | 16        | 40 33     | 3         | - 0.13   | - 0.4     | ...      | .....     | .....    | ...       | .....        |
| $\circ$ Tauri ... ..                    | 3                       | 19        | 81 23     | 6         | - 0.05   | - 1.3     | 6        | - 0.04    | - 0.3    | 8         | + 0.01 - 0.7 |
| $\epsilon$ Eridani ... ..               | 3                       | 27        | 99 51     | 6         | + 0.07   | + 0.1     | ...      | .....     | ...      | 9         | - 0.01 - 0.5 |
| $\eta$ Tauri ... ..                     | 3                       | 41        | 66 15     | 4         | + 0.03   | - 0.7     | 2        | - 0.02    | + 2.1    | ...       | .....        |
| $\gamma^1$ Eridani ... ..               | 3                       | 53        | 103 50    | ...       | .....    | .....     | 6        | + 0.02    | + 0.8    | ...       | .....        |
| $\Lambda$ Tauri ... ..                  | 3                       | 58        | 68 14     | 16        | + 0.01   | - 0.7     | ...      | .....     | .....    | 9         | + 0.02 - 1.0 |
| $\circ^1$ Eridani ... ..                | 4                       | 6         | 97 8      | 1         | + 0.07   | - 2.3     | ...      | .....     | .....    | ...       | .....        |
| $\gamma$ Tauri ... ..                   | 4                       | 13        | 74 39     | 13        | - 0.01   | 0.0       | ...      | .....     | .....    | ...       | .....        |
| $\epsilon$ Tauri ... ..                 | 4                       | 22        | 71 5      | 2         | + 0.05   | + 0.1     | 3        | - 0.06    | - 0.1    | ...       | .....        |
| $\alpha$ Tauri ( <i>Aldebaran</i> )...  | 4                       | 29        | 73 44     | 8         | + 0.02   | - 0.2     | 3        | - 0.06    | - 0.4    | ...       | .....        |
| $\mu$ Eridani ... ..                    | 4                       | 40        | 93 28     | ...       | .....    | .....     | ...      | .....     | .....    | 10        | + 0.02 + 0.5 |
| $\iota$ Aurigæ ... ..                   | 4                       | 49        | 57 1      | 9         | - 0.01   | + 1.6     | ...      | .....     | .....    | ...       | .....        |
| $\alpha$ Aurigæ ( <i>Capella</i> )...   | 5                       | 8         | 44 7      | 9         | - 0.17   | - 2.3     | ...      | .....     | .....    | ...       | .....        |
| $\beta$ Orionis ( <i>Rigel</i> ) ... .. | 5                       | 9         | 98 20     | 8         | - 0.02   | - 1.1     | 1        | + 0.05    | + 1.8    | ...       | .....        |
| $\beta$ Tauri ... ..                    | 5                       | 19        | 61 30     | 4         | - 0.03   | - 0.1     | 1        | - 0.10    | + 3.1    | ...       | .....        |
| $\delta$ 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     | "     | s      | "     |       |        |       |
| $\alpha$ Leporis ...                      | 5                       | 28 | 107 54 | 2     | + 0.02 | + 0.2 | ...   | .....  | ..... | ...   | .....  | ..... |
| $\epsilon$ Orionis ...                    | 5                       | 30 | 91 17  | ...   | .....  | ..... | 1     | + 0.17 | + 1.5 | 10    | - 0.01 | + 1.6 |
| $\kappa$ Orionis ...                      | 5                       | 42 | 99 43  | 4     | + 0.04 | + 1.5 | ...   | .....  | ...   | 10    | - 0.06 | + 1.4 |
| $\alpha$ Orionis ( <i>Var.</i> ) ...      | 5                       | 49 | 82 37  | ...   | .....  | ..... | 9     | 0.00   | + 0.7 | ...   | .....  | ..... |
| $\eta$ Geminorum ...                      | 6                       | 8  | 67 28  | 10    | - 0.01 | - 1.3 | ...   | .....  | ..... | 10    | + 0.02 | - 1.4 |
| $\mu$ Geminorum ...                       | 6                       | 16 | 67 26  | ...   | .....  | ..... | 1     | - 0.06 | + 1.2 | ...   | .....  | ..... |
| $\xi$ Geminorum ...                       | 6                       | 39 | 76 59  | 10    | - 0.01 | - 0.9 | ...   | .....  | ..... | 10    | + 0.01 | - 0.3 |
| Cephei 51 ( <i>Hev.</i> ) ...             | 6                       | 46 | 2 47   | 10    | + 0.18 | - 0.7 | 8     | + 0.23 | - 0.6 | 12    | - 0.30 | - 1.2 |
| $\theta$ Canis Majoris ...                | 6                       | 49 | 101 54 | ...   | .....  | ..... | ...   | .....  | ..... | 10    | - 0.01 | - 0.8 |
| $\epsilon$ Canis Majoris ...              | 6                       | 54 | 118 49 | ...   | .....  | ..... | 1     | 0.00   | - 0.7 | ...   | .....  | ..... |
| $\gamma$ Canis Majoris ...                | 6                       | 59 | 105 28 | ...   | .....  | ..... | 1     | + 0.06 | - 2.4 | ...   | .....  | ..... |
| $\beta$ Canis Minoris ...                 | 7                       | 21 | 81 29  | 10    | + 0.02 | - 1.6 | ...   | .....  | ..... | 10    | + 0.02 | - 1.0 |
| $\alpha$ Can. Min. ( <i>Procyon</i> ) ... | 7                       | 33 | 84 29  | 1     | .....  | ..... | 1     | + 0.05 | - 1.4 | ...   | .....  | ..... |
| $\xi$ Argus ...                           | 7                       | 44 | 114 34 | 10    | + 0.04 | - 1.2 | 10    | - 0.10 | + 1.9 | 10    | - 0.01 | + 2.6 |
| 15 Argus ...                              | 8                       | 3  | 113 58 | ...   | .....  | ..... | 9     | - 0.09 | - 0.3 | ...   | .....  | ..... |
| $\beta$ Cancri ...                        | 8                       | 10 | 80 27  | ...   | .....  | ..... | ...   | .....  | ..... | 10    | 0.00   | - 1.5 |
| $\eta$ Cancri ...                         | 8                       | 26 | 69 10  | ...   | .....  | ..... | 2     | + 0.13 | - 1.2 | ...   | .....  | ..... |
| $\gamma$ Cancri ...                       | 8                       | 37 | 68 7   | 10    | - 0.08 | + 1.1 | ...   | .....  | ..... | 8     | - 0.04 | 0.0   |
| $\epsilon$ Hydræ ...                      | 8                       | 41 | 83 9   | ...   | .....  | ..... | 2     | + 0.03 | - 1.1 | ...   | .....  | ..... |
| $\alpha$ Cancri ...                       | 8                       | 52 | 77 42  | ...   | .....  | ..... | 1     | + 0.04 | - 0.6 | 6     | + 0.01 | - 0.2 |
| $\kappa$ Cancri ...                       | 9                       | 1  | 78 52  | ...   | .....  | ..... | 1     | 0.00   | + 0.5 | ...   | .....  | ..... |
| 83 Cancri ...                             | 9                       | 13 | 71 48  | ...   | .....  | ..... | 2     | + 0.16 | - 2.5 | ...   | .....  | ..... |
| $\iota$ Argus ...                         | 9                       | 14 | 148 47 | 10    | + 0.02 | + 2.5 | ...   | .....  | ..... | ...   | .....  | ..... |
| $\alpha$ Hydræ ...                        | 9                       | 22 | 98 9   | ...   | .....  | ..... | 2     | + 0.07 | - 0.6 | ...   | .....  | ..... |
| $\sigma$ Leonis ...                       | 9                       | 35 | 79 35  | ...   | .....  | ..... | ...   | .....  | ..... | 4     | + 0.03 | + 0.8 |
| $\epsilon$ Leonis ...                     | 9                       | 39 | 65 42  | ...   | .....  | ..... | 2     | + 0.22 | - 0.2 | ...   | .....  | ..... |
| $\alpha$ Leonis ( <i>Regulus</i> ) ...    | 10                      | 2  | 77 28  | ...   | .....  | ..... | 3     | + 0.03 | - 3.2 | ...   | .....  | ..... |
| $\gamma^1$ Leonis ...                     | 10                      | 14 | 69 34  | ...   | .....  | ..... | 3     | + 0.02 | - 1.0 | ...   | .....  | ..... |
| $\mu$ Hydræ ...                           | 10                      | 20 | 106 15 | ...   | .....  | ..... | ...   | .....  | ..... | 10    | - 0.04 | - 1.1 |
| $\rho$ 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 |
| $\chi$ Leonis ...                         | 10                      | 59 | 82 2   | ...   | .....  | ..... | 2     | + 0.01 | - 1.8 | ...   | .....  | ..... |
| $\delta$ Leonis ...                       | 11                      | 8  | 68 50  | ...   | .....  | ..... | 2     | + 0.03 | - 0.2 | ...   | .....  | ..... |
| $\tau$ 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. |      |
|  | <i>h.</i>               | <i>m.</i> | <i>o.</i> | <i>s.</i> | <i>"</i> | <i>s.</i> | <i>"</i> | <i>s.</i> | <i>"</i> | <i>s.</i> | <i>"</i> |       |      |
| $\beta$ Leonis ... ..                      | 11                      | 43        | 74 47     | ...       | .....    | .....     | .....    | 1         | +0.07    | -0.8      | ...      | ..... |      |
| $\pi$ Virginis ... ..                      | 11                      | 55        | 82 44     | 10        | -0.05    | -1.1      | 10       | 0.00      | -2.2     | 10        | +0.02    | -1.8  |      |
| $\epsilon$ Corvi ... ..                    | 12                      | 4         | 111 58    | ...       | .....    | .....     | .....    | 1         | -0.15    | -1.7      | ...      | ..... |      |
| $\eta$ Virginis ... ..                     | 12                      | 14        | 90 1      | ...       | .....    | .....     | .....    | 3         | -0.03    | +0.7      | ...      | ..... |      |
| $\delta^1$ Corvi ... ..                    | 12                      | 24        | 105 52    | ...       | .....    | .....     | .....    | ...       | .....    | .....     | 5        | -0.07 | +0.7 |
| $\delta$ Virginis ... ..                   | 12                      | 50        | 85 58     | 20        | +0.02    | -3.2      | ...      | .....     | .....    | 2         | +0.03    | -2.3  |      |
| $\epsilon$ Virginis ... ..                 | 12                      | 56        | 78 25     | 30        | -0.01    | +0.1      | 10       | +0.02     | -1.6     | ...       | .....    | ..... |      |
| $\theta$ Virginis ... ..                   | 13                      | 4         | 94 55     | 11        | +0.01    | -2.0      | ...      | .....     | .....    | ...       | .....    | ..... |      |
| $\alpha$ Virginis ( <i>Spica</i> ) ... ..  | 13                      | 19        | 100 33    | ...       | .....    | .....     | .....    | 1         | -0.08    | -1.4      | ...      | ..... |      |
| $\zeta$ Virginis ... ..                    | 13                      | 29        | 90 0      | 10        | +0.17    | +2.4      | ...      | .....     | .....    | ...       | .....    | ..... |      |
| $\tau$ Bootis ... ..                       | 13                      | 42        | 71 58     | 10        | -0.03    | -3.2      | ...      | .....     | .....    | ...       | .....    | ..... |      |
| $\eta$ Ursæ Majoris ... ..                 | 13                      | 43        | 40 6      | 10        | -0.14    | -3.0      | ...      | .....     | .....    | ...       | .....    | ..... |      |
| $\eta$ Bootis ... ..                       | 13                      | 49        | 71 1      | 10        | -0.13    | +1.8      | 1        | +0.12     | -1.0     | ...       | .....    | ..... |      |
| $\tau$ Virginis ... ..                     | 13                      | 56        | 87 54     | ...       | .....    | .....     | .....    | 2         | +0.11    | -2.8      | ...      | ..... |      |
| $\alpha$ Bootis ( <i>Arcturus</i> ) ... .. | 14                      | 10        | 70 13     | ...       | .....    | .....     | .....    | 3         | +0.01    | -1.2      | ...      | ..... |      |
| $\rho$ Bootis ... ..                       | 14                      | 27        | 59 7      | ...       | .....    | .....     | .....    | 1         | -0.04    | -2.5      | ...      | ..... |      |
| $\epsilon^2$ Bootis ... ..                 | 14                      | 40        | 62 26     | ...       | .....    | .....     | .....    | 4         | -0.06    | -1.1      | ...      | ..... |      |
| $\alpha$ Libræ ... ..                      | 14                      | 44        | 105 34    | ...       | .....    | .....     | .....    | 3         | +0.09    | -4.0      | ...      | ..... |      |
| $\beta$ Ursæ Minoris ... ..                | 14                      | 51        | 15 22     | 5         | -0.06    | -2.0      | ...      | .....     | .....    | ...       | .....    | ..... |      |
| $\beta$ Libræ ... ..                       | 15                      | 11        | 98 57     | 10        | +0.05    | -0.5      | 3        | -0.02     | +0.2     | ...       | .....    | ..... |      |
| $\alpha$ Coronæ ... ..                     | 15                      | 30        | 62 54     | ...       | .....    | .....     | .....    | 7         | -0.05    | -0.4      | ...      | ..... |      |
| $\alpha$ Serpentis ... ..                  | 15                      | 39        | 83 13     | 14        | +0.01    | -0.9      | 10       | +0.05     | +0.3     | ...       | .....    | ..... |      |
| $\epsilon$ Serpentis ... ..                | 15                      | 45        | 85 10     | 10        | 0.00     | -1.9      | ...      | .....     | .....    | ...       | .....    | ..... |      |
| $\zeta$ Ursæ Minoris ... ..                | 15                      | 48        | 11 51     | ...       | .....    | .....     | .....    | 1         | -0.03    | -2.7      | ...      | ..... |      |
| $\beta^1$ Scorpii ... ..                   | 15                      | 59        | 109 29    | ...       | .....    | .....     | .....    | 5         | +0.05    | -0.6      | ...      | ..... |      |
| $\delta$ Ophiuchi ... ..                   | 16                      | 8         | 98 24     | ...       | .....    | .....     | .....    | 2         | -0.03    | -0.8      | ...      | ..... |      |
| $\gamma$ Herculis ... ..                   | 16                      | 17        | 70 34     | 10        | -0.02    | -0.7      | ...      | .....     | .....    | ...       | .....    | ..... |      |
| $\alpha$ Scorpii ( <i>Antares</i> ) ... .. | 16                      | 22        | 116 10    | ...       | .....    | .....     | .....    | 2         | +0.02    | +0.4      | ...      | ..... |      |
| $\zeta$ Ophiuchi ... ..                    | 16                      | 31        | 100 20    | 20        | +0.02    | -0.8      | ...      | .....     | .....    | ...       | .....    | ..... |      |
| $\zeta$ Herculis ... ..                    | 16                      | 37        | 58 11     | ...       | .....    | .....     | .....    | 3         | -0.13    | +0.8      | ...      | ..... |      |
| $\epsilon$ Ursæ Minoris ... ..             | 16                      | 58        | 7 46      | 2         | +0.11    | -2.9      | 1        | -0.30     | +4.9     | ...       | .....    | ..... |      |
| $\eta$ Ophiuchi ... ..                     | 17                      | 4         | 105 35    | 20        | +0.02    | +0.1      | ...      | .....     | .....    | 5         | +0.07    | -0.7  |      |
| $\alpha^1$ Herculis ... ..                 | 17                      | 9         | 75 29     | ...       | .....    | .....     | .....    | 3         | +0.01    | -1.7      | ...      | ..... |      |
| $\sigma$ Ophiuchi ... ..                   | 17                      | 21        | 85 45     | 10        | +0.02    | +0.7      | ...      | .....     | .....    | ...       | .....    | ..... |      |
| $\alpha$ 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.    |
|                                       | <i>h.</i>               | <i>m.</i> | <i>o.</i> |       | <i>s</i> | <i>"</i> |       | <i>s</i> | <i>"</i> |       | <i>s</i> | <i>"</i> |
| $\beta$ Ophiuchi ...                  | 17                      | 38        | 85 23     | 20    | - 0.03   | - 0.6    | 10    | + 0.01   | - 0.9    | 5     | - 0.06   | + 0.1    |
| $\mu$ Heroulis ...                    | 17                      | 42        | 62 13     | ...   | .....    | .....    | 4     | - 0.02   | - 0.4    | ...   | .....    | .....    |
| $\gamma$ Ophiuchi ...                 | 18                      | 2         | 80 27     | ...   | .....    | .....    | 10    | - 0.01   | - 1.5    | 4     | - 0.01   | - 1.9    |
| $\mu$ Sagittarii ...                  | 18                      | 7         | 111 5     | ...   | .....    | .....    | 1     | - 0.05   | - 0.4    | ...   | .....    | .....    |
| $\delta$ Ursæ Minoris                 | 18                      | 10        | 3 23      | 2     | - 1.21   | - 1.3    | 9     | + 0.14   | + 1.4    | 12    | - 0.11   | - 0.5    |
| $\eta$ Serpentis ...                  | 18                      | 15        | 92 56     | 20    | + 0.01   | + 1.5    | ...   | .....    | .....    | 1     | - 0.01   | + 1.1    |
| $\lambda$ Sagittarii ...              | 18                      | 21        | 115 29    | 20    | + 0.02   | - 2.2    | 2     | + 0.18   | - 2.1    | 1     | - 0.05   | - 1.3    |
| $\alpha$ Lyrae ( <i>Vega</i> ) ...    | 18                      | 33        | 51 19     | ...   | .....    | .....    | 6     | - 0.14   | - 1.8    | ...   | .....    | .....    |
| $\beta^1$ Lyrae ( <i>Var.</i> ) ...   | 18                      | 46        | 56 46     | ...   | .....    | .....    | 4     | - 0.08   | + 0.1    | ...   | .....    | .....    |
| $\epsilon$ Aquilæ ...                 | 18                      | 54        | 75 5      | 20    | - 0.01   | - 0.9    | ...   | .....    | .....    | 1     | + 0.05   | - 1.7    |
| $\omega$ Aquilæ ...                   | 19                      | 12        | 78 87     | ...   | .....    | .....    | 1     | + 0.05   | - 0.8    | ...   | .....    | .....    |
| $\delta$ Aquilæ ...                   | 19                      | 20        | 87 7      | ...   | .....    | .....    | 2     | + 0.02   | - 0.5    | ...   | .....    | .....    |
| $\lambda$ Ursæ Minoris                | 19                      | 40        | 1 3       | ...   | .....    | .....    | 5     | - 0.63   | + 0.2    | 6     | - 0.77   | + 0.6    |
| $\gamma$ Aquilæ ...                   | 19                      | 41        | 79 40     | ...   | .....    | .....    | 4     | - 0.07   | - 1.2    | ...   | .....    | .....    |
| $\alpha$ Aquilæ ( <i>Altair</i> ) ... | 19                      | 45        | 81 26     | ...   | .....    | .....    | 3     | + 0.02   | - 1.0    | 2     | - 0.02   | - 1.0    |
| $\beta$ Aquilæ ...                    | 19                      | 50        | 83 53     | ...   | .....    | .....    | 1     | 0.00     | - 1.1    | ...   | .....    | .....    |
| $\theta$ Aquilæ ...                   | 20                      | 5         | 91 10     | 20    | - 0.01   | - 0.4    | 20    | + 0.04   | + 0.2    | 10    | + 0.03   | - 1.1    |
| $\alpha^2$ Capricorni                 | 20                      | 12        | 102 54    | ...   | .....    | .....    | 2     | + 0.12   | - 2.9    | ...   | .....    | .....    |
| $\epsilon$ Delphini ...               | 20                      | 28        | 79 5      | 25    | - 0.02   | + 0.6    | 10    | - 0.03   | + 0.6    | 10    | - 0.02   | - 1.2    |
| $\alpha$ Cygni ...                    | 20                      | 37        | 45 8      | ...   | .....    | .....    | 5     | - 0.11   | - 2.6    | ...   | .....    | .....    |
| $\epsilon$ Aquarii ...                | 20                      | 41        | 99 55     | 21    | + 0.02   | 0.0      | 10    | - 0.06   | + 1.4    | 10    | + 0.04   | - 0.5    |
| $\beta$ Vulpeculæ ...                 | 20                      | 50        | 62 23     | ...   | .....    | .....    | 1     | - 0.14   | + 2.1    | ...   | .....    | .....    |
| $\theta$ Capricorni...                | 20                      | 59        | 107 42    | 20    | - 0.01   | + 1.7    | 1     | + 0.05   | - 0.9    | 6     | - 0.06   | + 0.3    |
| $\beta^1$ Cygni ...                   | 21                      | 2         | 51 49     | ...   | .....    | .....    | 2     | + 0.09   | - 2.1    | ...   | .....    | .....    |
| $\zeta$ Cygni ...                     | 21                      | 8         | 60 15     | ...   | .....    | .....    | 1     | - 0.02   | - 2.7    | ...   | .....    | .....    |
| $\alpha$ Cephei ...                   | 21                      | 16        | 27 54     | ...   | .....    | .....    | 8     | - 0.10   | - 0.2    | ...   | .....    | .....    |
| $\beta$ Aquarii ...                   | 21                      | 25        | 96 5      | ...   | .....    | .....    | 2     | + 0.05   | - 0.3    | ...   | .....    | .....    |
| $\epsilon$ Pegasi ...                 | 21                      | 38        | 80 39     | 20    | - 0.05   | - 1.0    | ...   | .....    | .....    | ...   | .....    | .....    |
| $\alpha$ Aquarii ...                  | 22                      | 0         | 90 53     | 21    | + 0.05   | + 0.7    | 1     | + 0.09   | + 1.4    | ...   | .....    | .....    |
| $\theta$ Aquarii ...                  | 22                      | 11        | 98 22     | 23    | + 0.01   | + 0.3    | ...   | .....    | .....    | ...   | .....    | .....    |
| $\gamma$ Aquarii ...                  | 22                      | 16        | 91 53     | 10    | 0.00     | - 0.4    | 10    | + 0.03   | + 1.7    | 4     | 0.00     | + 1.6    |
| $\zeta$ Pegasi ...                    | 22                      | 36        | 79 46     | ...   | .....    | .....    | 2     | - 0.02   | + 1.0    | ...   | .....    | .....    |
| $\lambda$ Aquarii ...                 | 22                      | 47        | 98 12     | 15    | + 0.02   | + 0.3    | 14    | + 0.05   | + 1.5    | 3     | + 0.02   | + 0.4    |
| $\alpha$ Pis. Aus. <i>Fomalhaut</i> . | 22                      | 51        | 120 14    | ...   | .....    | .....    | 2     | - 0.01   | - 0.1    | ...   | .....    | .....    |
| $\alpha$ Pegasi ( <i>Markab</i> ) ... | 22                      | 59        | 75 25     | 11    | - 0.03   | + 1.6    | ..    | .....    | .....    | ...   | .....    | .....    |



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SEPARATE RESULTS  
OF  
OBSERVATIONS  
OF THE FIXED STARS  
MADE WITH THE  
MADRAS MERIDIAN CIRCLE  
IN THE YEAR  
1883

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*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date. | Magnitude.         | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|------------------|--------------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                  |                    | h.                         | m. | s.    |               | o.                        | '  | "    |           |                  |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>1</b>         | <b>Stone 8.</b>    |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Nov. 14          | 7.0                | 0                          | 1  | 22.53 | ...           | 116                       | 0  | 14.0 | M         | Nov. 15          | 7.3        | 0                          | 14 | 18.79 | ...           | 126                       | 33 | 8.4  | M         |
| 16               | 7.0                |                            | 1  | 22.46 | ...           |                           | 0  | 12.8 | M         | 16               | 7.0        |                            | 14 | 18.72 | ...           |                           | 33 | 10.2 | M         |
| 20               | ...                |                            | 1  | 22.65 | 4             |                           | 0  | 13.6 | M         | 21               | 7.0        |                            | 14 | 18.75 | ...           |                           | 33 | 11.3 | M         |
| 26               | 7.0                |                            | 1  | 22.33 | ...           |                           | 0  | 15.6 | M         | 26               | 7.0        |                            | 14 | 18.72 | ...           |                           | 33 | 9.8  | M         |
| 27               | 7.0                |                            | 1  | 22.51 | ...           |                           | 0  | 12.7 | M         | 30               | 7.0        |                            | 14 | 18.88 | ...           |                           | 33 | 12.2 | M         |
| <b>2</b>         | <b>6 Ceti.</b>     |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Nov. 15          | ...                | 0                          | 5  | 18.51 | ...           | 106                       | 6  | 38.5 | M         | Nov. 14          | 7.0        | 0                          | 18 | 31.02 | ...           | 92                        | 52 | 1.6  | M         |
| 29               | ...                |                            | 5  | 18.40 | ...           |                           | 6  | 35.4 | M         | 20               | 6.7        |                            | 18 | 30.94 | ...           |                           | 52 | 1.2  | M         |
| Dec. 4           | ...                |                            | 5  | 18.41 | ...           |                           | 6  | 37.4 | R         | Dec. 4           | 6.7        |                            | 18 | 31.00 | ...           |                           | 51 | 59.1 | R         |
| 5                | ...                |                            | 5  | 18.31 | ...           |                           | 6  | 37.3 | R         | 5                | 6.7        |                            | 18 | 31.06 | ...           |                           | 51 | 59.0 | R         |
| 6                | ...                |                            | 5  | 18.43 | ...           |                           | 6  | 38.9 | R         | 6                | 6.7        |                            | 18 | 30.99 | ...           |                           | 51 | 59.1 | R         |
| <b>3</b>         | <b>Stone 63.</b>   |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Nov. 16          | ...                | 0                          | 7  | 48.55 | ...           | 116                       | 56 | 18.1 | M         | Nov. 15          | ...        | 0                          | 21 | 23.98 | ...           | 116                       | 11 | 42.3 | M         |
| 21               | ...                |                            | 7  | 48.51 | ...           |                           | 56 | 10.6 | M         | 16               | ...        |                            | 21 | 23.83 | ...           |                           | 11 | 42.1 | M         |
| 26               | ...                |                            | 7  | 48.24 | ...           |                           | 56 | 12.4 | M         | 21               | ...        |                            | 21 | 23.87 | ...           |                           | 11 | 41.8 | M         |
| 27               | ...                |                            | 7  | 48.39 | ...           |                           | 56 | 9.6  | M         | 29               | ...        |                            | 21 | 23.65 | 4             |                           | 11 | 38.9 | M         |
| 30               | ...                |                            | 7  | 48.51 | ...           |                           | 56 | 14.1 | M         | Dec. 7           | ...        |                            | 21 | 23.67 | ...           |                           | 11 | 40.1 | R         |
| <b>4</b>         | <b>Taylor 37.</b>  |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Nov. 14          | ...                | 0                          | 10 | 13.79 | ...           | 122                       | 5  | 41.5 | M         | Nov. 15          | ...        | 0                          | 22 | 40.16 | ...           | 180                       | 33 | 47.1 | M         |
| 29               | ...                |                            | 10 | 13.51 | ...           |                           | 5  | 43.0 | M         | Dec. 4           | ...        |                            | 22 | 40.20 | ...           |                           | 33 | 43.5 | R         |
| Dec. 4           | ...                |                            | 10 | 13.68 | ...           |                           | 5  | 45.9 | R         | 5                | ...        |                            | 22 | 40.24 | ...           |                           | 33 | 43.9 | R         |
| 5                | ...                |                            | 10 | 13.73 | ...           |                           | 5  | 46.2 | R         | 6                | ...        |                            | 22 | 40.06 | ...           |                           | 33 | 45.3 | R         |
| 6                | ...                |                            | 10 | 13.68 | ...           |                           | 5  | 45.7 | R         | 8                | ...        |                            | 22 | 40.09 | ...           |                           | 33 | 43.4 | R         |
| <b>5</b>         | <b>8 Ceti.</b>     |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Dec. 7           | ...                | 0                          | 13 | 27.88 | ...           | 99                        | 28 | 19.5 | R         | Nov. 14          | ...        | 0                          | 24 | 31.62 | 5             | 114                       | 26 | 8.4  | M         |
| 8                | ...                |                            | 13 | 27.84 | ...           |                           | 28 | 20.0 | R         | 16               | ...        |                            | 24 | 31.82 | 3             |                           | 26 | 7.8  | M         |
| 17               | ...                |                            | 13 | 27.85 | ...           |                           | 28 | 20.2 | R         | 20               | ...        |                            | 24 | 31.52 | ...           |                           | 26 | 7.8  | M         |
| 18               | ...                |                            | 13 | 27.79 | ...           |                           | 28 | 20.4 | R         | 21               | ...        |                            | 24 | 31.65 | 4             |                           | 26 | 7.7  | M         |
| 19               | ...                |                            | 13 | 27.72 | ...           |                           | 28 | 20.8 | R         | 26               | ...        |                            | 24 | 31.79 | 3             |                           | 26 | 7.1  | M         |
| 20               | ...                |                            | 13 | 27.81 | ...           |                           | 28 | 19.9 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 22               | ...                |                            | 13 | 27.80 | ...           |                           | 28 | 19.1 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>6</b>         | <b>Stone 109.</b>  |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| <b>7</b>         | <b>Taylor 78.</b>  |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| <b>8</b>         | <b>Stone 158.</b>  |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| <b>9</b>         | <b>Taylor 101.</b> |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| <b>10</b>        | <b>Taylor 115.</b> |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| <b>11</b>        | <b>Stone 237.</b>  |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.                  | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.                 | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|-----------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|----------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                   |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                                  |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>12</b> <i>Stone 240.</i>       |            |                            |    |       |               |                           |    |      |           | <b>19</b> <i>Taylor 252.</i>     |            |                            |    |       |               |                           |    |      |           |
| Dec. 17                           | 7.0        | 0                          | 33 | 16.88 | ...           | 133                       | 56 | 18.4 | R         | Decr. 7                          | ...        | 0                          | 44 | 34.58 | ...           | 134                       | 1  | 58.4 | R         |
| 18                                | 7.0        |                            | 33 | 16.97 | ...           |                           | 56 | 19.6 | R         | 8                                | ...        |                            | 44 | 34.48 | 4             |                           | 1  | 57.8 | R         |
| 19                                | 7.0        |                            | 33 | 16.87 | ...           |                           | 56 | 19.6 | R         | 17                               | ...        |                            | 44 | 34.28 | ...           |                           | 1  | 59.6 | R         |
| 20                                | 7.0        |                            | 33 | 16.90 | ...           |                           | 56 | 19.6 | R         | 18                               | ...        |                            | 44 | 34.33 | ...           |                           | 1  | 59.2 | R         |
| 22                                | 7.0        |                            | 33 | 16.91 | ...           |                           | 56 | 19.6 | R         | 19                               | ...        |                            | 44 | 34.46 | ...           |                           | 1  | 58.9 | R         |
| <b>13</b> <i>Taylor 181.</i>      |            |                            |    |       |               |                           |    |      |           | <b>20</b> <i>Stone 342.</i>      |            |                            |    |       |               |                           |    |      |           |
| Nov. 5                            | ...        | 0                          | 34 | 16.83 | ...           | 135                       | 26 | 24.7 | M         | 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 | 36.8 | M         |
| <b>14</b> <i>Taylor 215.</i>      |            |                            |    |       |               |                           |    |      |           | <b>21</b> <i>Stone 365.</i>      |            |                            |    |       |               |                           |    |      |           |
| Nov. 14                           | ...        | 0                          | 39 | 25.06 | ...           | 133                       | 18 | 51.6 | M         | Nov. 23                          | ...        | 0                          | 50 | 15.01 | ...           | 118                       | 24 | 35.5 | M         |
| 15                                | ...        |                            | 39 | 25.09 | ...           |                           | 18 | 51.8 | M         | 26                               | ...        |                            | 50 | 14.73 | ...           |                           | 24 | 34.7 | M         |
| 16                                | ...        |                            | 39 | 25.01 | ...           |                           | 18 | 51.5 | M         | 27                               | ...        |                            | 50 | 14.96 | ...           |                           | 24 | 34.8 | M         |
| 21                                | ...        |                            | 39 | 24.99 | ...           |                           | 18 | 52.8 | M         | 29                               | ...        |                            | 50 | 14.76 | ...           |                           | 24 | 32.1 | M         |
| 23                                | ...        |                            | 39 | 25.15 | ...           |                           | 18 | 53.4 | M         | 30                               | ...        |                            | 50 | 15.08 | ...           |                           | 24 | 35.0 | M         |
| <b>15</b> <i>W. B. E. O. 658.</i> |            |                            |    |       |               |                           |    |      |           | <b>22</b> <i>R. P. L. 10.</i>    |            |                            |    |       |               |                           |    |      |           |
| Dec. 4                            | 9.1        | 0                          | 39 | 36.26 | ...           | 88                        | 55 | 54.4 | R         | Nov. 12                          | ...        | 0                          | 51 | 28.43 | 3             | 1                         | 36 | 16.7 | M         |
|                                   |            |                            |    |       |               |                           |    |      |           | 13                               | ...        |                            | 51 | 27.48 | 3             |                           |    | 16.7 | M         |
| <b>16</b> <i>63 Piscium δ</i>     |            |                            |    |       |               |                           |    |      |           | <b>23</b> <i>Anon.</i>           |            |                            |    |       |               |                           |    |      |           |
| Nov. 26                           | ...        | 0                          | 42 | 36.66 | ...           | 83                        | 3  | 8.9  | M         | Nov. 10                          | 7.0        | 0                          | 52 | 8.16  | ...           | 131                       | 53 | 18.5 | 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         |                                  |            |                            |    |       |               |                           |    |      |           |
| <b>17</b> <i>Anon.</i>            |            |                            |    |       |               |                           |    |      |           | <b>24</b> <i>2 Ursæ Minoris.</i> |            |                            |    |       |               |                           |    |      |           |
| Nov. 30                           | 9.0        | 0                          | 42 | 38.72 | ...           | 89                        | 0  | 20.4 | M         | Jan. 5                           | ...        | 0                          | 52 | 57.38 | 3             | 4                         | 22 | 15.0 | R         |
| <b>18</b> <i>Anon.</i>            |            |                            |    |       |               |                           |    |      |           | <b>25</b> <i>Stone 392.</i>      |            |                            |    |       |               |                           |    |      |           |
| Dec. 6                            | 9.0        | 0                          | 43 | 53.51 | ...           | 88                        | 58 | 5.9  | R         | 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 | 50.08 | ...           |                           | 32 | 56.5 | M         |

*Separate Results of Madras Meridian Circle Observations in 1883.*

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|---------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                 |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |   |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>26</b> <i>R. P. L. 14.</i>   |            |                            |    |       |               |                           |    |      |           | <b>33</b> <i>Stene 489.</i>                     |            |                            |    |       |               |                           |    |      |           |
| Dec. 29                         | ...        | 0                          | 56 | 36.83 | 3             | 3                         | 28 | 41.6 | R         | Dec. 11   | 6.7        | 1                          | 10 | 57.89 | ...           | 182                       | 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         |
| <b>27</b> <i>Stone 407.</i>     |            |                            |    |       |               |                           |    |      |           | <b>34</b> <i>Anon.</i>                          |            |                            |    |       |               |                           |    |      |           |
| Nov. 15                         | ...        | 0                          | 57 | 32.77 | 5             | 187                       | 1  | 35.8 | M         | Jan. 5  | 7.0        | 1                          | 13 | 7.84  | ...           | 180                       | 48 | 13.0 | R         |
| 23                              | ...        |                            | 57 | 32.71 | ...           |                           | 1  | 40.2 | M         | Nov. 10   | 7.0        |                            | 13 | 7.66  | ...           |                           | 48 | 14.7 | M         |
| 27                              | ...        |                            | 57 | 32.55 | ...           |                           | 1  | 36.7 | M         | 13  | 7.0        |                            | 13 | 7.70  | ...           |                           | 48 | 13.0 | M         |
| 30                              | ...        |                            | 57 | 32.82 | ...           |                           | 1  | 36.9 | M         | 14  | 7.0        |                            | 13 | 7.71  | 6             |                           | 48 | 14.6 | M         |
| Dec. 7                          | ...        |                            | 57 | 32.46 | ...           |                           | 1  | 37.5 | R         | <b>35</b> <i>Taylor 423.</i>                    |            |                            |    |       |               |                           |    |      |           |
| <b>28</b> <i>30 Ceti.</i>       |            |                            |    |       |               |                           |    |      |           | Nov. 15   | 6.7        | 1                          | 18 | 33.26 | ...           | 188                       | 56 | 57.9 | M         |
| Nov. 14                         | ...        | 1                          | 1  | 53.21 | ...           | 100                       | 24 | 42.8 | M         | 16  | ...        |                            | 18 | 33.21 | ...           |                           | 56 | 58.0 | M         |
| 16                              | ...        |                            | 1  | 53.99 | ...           |                           | 24 | 40.5 | M         | 20  | 6.7        |                            | 18 | 33.18 | ...           |                           | 56 | 59.7 | M         |
| 20                              | ...        |                            | 1  | 53.04 | 5             |                           | 24 | 42.6 | M         | 21  | ...        |                            | 18 | 33.05 | 3             |                           | 56 | 58.9 | M         |
| 26                              | ...        |                            | 1  | 53.04 | ...           |                           | 24 | 44.3 | M         | Dec. 22   | 6.7        |                            | 18 | 33.12 | ...           |                           | 56 | 57.5 | R         |
| 29                              | ...        |                            | 1  | 53.21 | 6             |                           | 24 | 48.4 | M         | <b>36</b> <i>R. P. L. 18.</i>                   |            |                            |    |       |               |                           |    |      |           |
| <b>29</b> <i>43 Andromedæ β</i> |            |                            |    |       |               |                           |    |      |           | Dec. 28   | ...        | 1                          | 13 | 38.26 | 3             | 2                         | 2  | 52.1 | R         |
| Jan. 1                          | ...        | 1                          | 3  | 10.88 | ...           | 54                        | 59 | 59.5 | R         | <b>37</b> <i>1 Ursæ Minoris α, Polaris—s.p.</i> |            |                            |    |       |               |                           |    |      |           |
| 5                               | ...        |                            | 3  | 11.00 | ...           |                           | 59 | 57.9 | R         | Apl. 3  | ...        | 1                          | 15 | 49.92 | 3             | 1                         | 18 | 55.7 | M         |
| <b>30</b> <i>Taylor 391.</i>    |            |                            |    |       |               |                           |    |      |           | 4   | ...        |                            | 15 | 49.81 | 3             |                           | 18 | 54.8 | M         |
| Nov. 15                         | ...        | 1                          | 6  | 51.54 | ...           | 121                       | 25 | 18.7 | M         | 5   | ...        |                            | 15 | 49.63 | 3             |                           | 18 | 54.5 | M         |
| 16                              | ...        |                            | 6  | 51.57 | ...           |                           | 25 | 19.5 | M         | 6   | ...        |                            | 15 | 49.95 | 3             |                           | 18 | 53.7 | M         |
| 23                              | ...        |                            | 6  | 51.42 | ...           |                           | 25 | 20.9 | M         | 7   | ...        |                            | 15 | 49.98 | 3             |                           | 18 | 54.3 | M         |
| 26                              | ...        |                            | 6  | 51.34 | ...           |                           | 25 | 18.7 | M         | 9   | ...        |                            | 15 | 50.55 | 3             |                           | 18 | 55.4 | M         |
| 27                              | ...        |                            | 6  | 51.46 | ...           |                           | 25 | 17.8 | M         | 16  | ...        |                            | 15 | 50.03 | 3             |                           | 18 | 54.1 | M         |
| <b>31</b> <i>Anon.</i>          |            |                            |    |       |               |                           |    |      |           | 17  | ...        |                            | 15 | 49.75 | 3             |                           | 18 | 53.2 | M         |
| Nov. 9                          | 9.0        | 1                          | 9  | 4.03  | 5             | 145                       | 51 | 44.7 | M         | 21  | ...        |                            | 15 | 49.25 | 3             |                           | 18 | 51.8 | M         |
| <b>32</b> <i>Anon.</i>          |            |                            |    |       |               |                           |    |      |           | May 3   | ...        |                            | 15 | 50.46 | 3             |                           | 18 | 56.1 | R         |
| Jan. 2                          | 8.0        | 1                          | 10 | 7.77  | ...           | 124                       | 38 | 59.1 | R         | 5   | ...        |                            | 15 | 52.99 | 3             |                           | 18 | 54.3 | R         |
| 3                               | 8.0        |                            | 10 | 7.72  | ...           |                           | 38 | 59.8 | 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         |



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| Number and Date. | Magnitude.                   | Mean Right Ascension 1883. |                  |                  | No. of Wires. | Mean Polar Distance 1883. |     |                 | Observer. |
|------------------|------------------------------|----------------------------|------------------|------------------|---------------|---------------------------|-----|-----------------|-----------|
|                  |                              | h.                         | m.               | s.               |               | o.                        | '   | "               |           |
| <b>38</b>        | <i>45 Ceti θ<sup>1</sup></i> |                            |                  |                  |               |                           |     |                 |           |
| Jan. 2           | ...                          | 1                          | 18               | 10 <sup>33</sup> | ...           | 98                        | 47  | 15 <sup>7</sup> | R         |
| 3                | ...                          | 18                         | 10 <sup>46</sup> | ...              | 47            | 15 <sup>9</sup>           | ... | ...             | R         |
| <b>39</b>        | <i>93 Piscium ρ</i>          |                            |                  |                  |               |                           |     |                 |           |
| Dec. 18          | ...                          | 1                          | 19               | 57 <sup>00</sup> | ...           | 71                        | 26  | 7 <sup>9</sup>  | R         |
| <b>40</b>        | <i>Anon.</i>                 |                            |                  |                  |               |                           |     |                 |           |
| Dec. 5           | 9 <sup>7</sup>               | 1                          | 20               | 7 <sup>18</sup>  | 3             | 122                       | 56  | 18 <sup>0</sup> | R         |
| 6                | 9 <sup>7</sup>               | 20                         | 7 <sup>27</sup>  | 4                | 56            | 19 <sup>3</sup>           | ... | ...             | R         |
| <b>41</b>        | <i>Taylor 487.</i>           |                            |                  |                  |               |                           |     |                 |           |
| Nov. 14          | ...                          | 1                          | 24               | 51 <sup>92</sup> | ...           | 116                       | 48  | 45 <sup>2</sup> | M         |
| 16               | ...                          | 24                         | 51 <sup>92</sup> | ...              | 48            | 45 <sup>8</sup>           | ... | ...             | M         |
| 20               | ...                          | 24                         | 51 <sup>87</sup> | 5                | 48            | 47 <sup>4</sup>           | ... | ...             | M         |
| 21               | ...                          | 24                         | 51 <sup>83</sup> | 5                | 48            | 46 <sup>1</sup>           | ... | ...             | M         |
| 23               | ...                          | 24                         | 52 <sup>08</sup> | ...              | 48            | 47 <sup>5</sup>           | ... | ...             | M         |
| <b>42</b>        | <i>99 Piscium η</i>          |                            |                  |                  |               |                           |     |                 |           |
| Dec. 27          | ...                          | 1                          | 25               | 13 <sup>33</sup> | ...           | 75                        | 15  | 28 <sup>0</sup> | R         |
| 28               | ...                          | 25                         | 13 <sup>31</sup> | ...              | 15            | 27 <sup>9</sup>           | ... | ...             | R         |
| 29               | ...                          | 25                         | 13 <sup>43</sup> | ...              | 15            | 27 <sup>1</sup>           | ... | ...             | R         |
| 31               | ...                          | 25                         | 13 <sup>34</sup> | ...              | 15            | 28 <sup>4</sup>           | ... | ...             | M         |
| <b>43</b>        | <i>Stone 596.</i>            |                            |                  |                  |               |                           |     |                 |           |
| Jan. 5           | 7 <sup>0</sup>               | 1                          | 25               | 30 <sup>74</sup> | ...           | 128                       | 23  | 39 <sup>4</sup> | R         |
| 9                | ...                          | 25                         | 30 <sup>59</sup> | 6                | 23            | 39 <sup>7</sup>           | ... | ...             | M         |
| Nov. 15          | 7 <sup>0</sup>               | 25                         | 30 <sup>65</sup> | ...              | 23            | 40 <sup>2</sup>           | ... | ...             | M         |
| Dec. 4           | 7 <sup>0</sup>               | 25                         | 30 <sup>43</sup> | ...              | 23            | 38 <sup>9</sup>           | ... | ...             | R         |
| 5                | 7 <sup>0</sup>               | 25                         | 30 <sup>41</sup> | ...              | 23            | 39 <sup>5</sup>           | ... | ...             | R         |
| <b>44</b>        | <i>Taylor 524.</i>           |                            |                  |                  |               |                           |     |                 |           |
| Nov. 16          | ...                          | 1                          | 29               | 48 <sup>62</sup> | 4             | 147                       | 36  | 1 <sup>8</sup>  | M         |
| 30               | ...                          | 29                         | 48 <sup>54</sup> | ...              | 36            | 1 <sup>2</sup>            | ... | ...             | M         |
| Dec. 4           | ...                          | 29                         | 48 <sup>47</sup> | ...              | 36            | 2 <sup>8</sup>            | ... | ...             | R         |
| 5                | ...                          | 29                         | 48 <sup>52</sup> | ...              | 36            | 3 <sup>5</sup>            | ... | ...             | R         |
| 6                | ...                          | 29                         | 48 <sup>28</sup> | ...              | 35            | 59 <sup>5</sup>           | ... | ...             | R         |
| <b>45</b>        | <i>α Eridani, Achernar.</i>  |                            |                  |                  |               |                           |     |                 |           |
| Dec. 28          | ...                          | 1                          | 33               | 21 <sup>53</sup> | ...           | 147                       | 49  | 54 <sup>4</sup> | R         |
| <b>46</b>        | <i>Anon.</i>                 |                            |                  |                  |               |                           |     |                 |           |
| Jan. 1           | 7 <sup>0</sup>               | 1                          | 33               | 27 <sup>38</sup> | ...           | 188                       | 31  | 50 <sup>8</sup> | R         |
| 2                | 7 <sup>0</sup>               | 33                         | 27 <sup>47</sup> | ...              | 31            | 50 <sup>3</sup>           | ... | ...             | R         |
| 3                | 7 <sup>0</sup>               | 33                         | 27 <sup>34</sup> | ...              | 31            | 50 <sup>5</sup>           | ... | ...             | R         |
| 4                | 7 <sup>0</sup>               | 33                         | 27 <sup>37</sup> | ...              | 31            | 51 <sup>1</sup>           | ... | ...             | R         |
| <b>47</b>        | <i>106 Piscium ν</i>         |                            |                  |                  |               |                           |     |                 |           |
| Dec. 27          | ...                          | 1                          | 35               | 20 <sup>52</sup> | ...           | 85                        | 6   | 18 <sup>0</sup> | R         |
| <b>48</b>        | <i>Anon.</i>                 |                            |                  |                  |               |                           |     |                 |           |
| Jan. 5           | 8 <sup>0</sup>               | 1                          | 36               | 20 <sup>23</sup> | ...           | 149                       | 14  | 24 <sup>3</sup> | R         |
| Dec. 5           | 8 <sup>0</sup>               | 36                         | 20 <sup>07</sup> | ...              | 14            | 24 <sup>6</sup>           | ... | ...             | R         |
| 6                | 8 <sup>0</sup>               | 36                         | 19 <sup>97</sup> | ...              | 14            | 24 <sup>3</sup>           | ... | ...             | R         |
| 20               | 8 <sup>0</sup>               | 36                         | 20 <sup>02</sup> | ...              | 14            | 25 <sup>8</sup>           | ... | ...             | R         |
| <b>49</b>        | <i>110 Piscium ο</i>         |                            |                  |                  |               |                           |     |                 |           |
| Nov. 12          | ...                          | 1                          | 39               | 12 <sup>86</sup> | ...           | 81                        | 25  | 55 <sup>9</sup> | M         |
| 13               | ...                          | 39                         | 12 <sup>93</sup> | ...              | 25            | 55 <sup>0</sup>           | ... | ...             | M         |
| 16               | ...                          | 39                         | 12 <sup>94</sup> | ...              | 25            | 54 <sup>6</sup>           | ... | ...             | M         |
| 20               | ...                          | 39                         | 12 <sup>79</sup> | ...              | 25            | 55 <sup>5</sup>           | ... | ...             | M         |
| 21               | ...                          | 39                         | 12 <sup>92</sup> | ...              | 25            | 55 <sup>1</sup>           | ... | ...             | M         |
| 23               | ...                          | 39                         | 12 <sup>86</sup> | ...              | 25            | 56 <sup>6</sup>           | ... | ...             | M         |
| 27               | ...                          | 39                         | 12 <sup>84</sup> | ...              | 25            | 53 <sup>9</sup>           | ... | ...             | M         |
| 30               | ...                          | 39                         | 12 <sup>90</sup> | ...              | 25            | 54 <sup>8</sup>           | ... | ...             | M         |
| Dec. 28          | ...                          | 39                         | 12 <sup>89</sup> | ...              | 25            | 54 <sup>6</sup>           | ... | ...             | R         |
| 29               | ...                          | 39                         | 12 <sup>90</sup> | ...              | 25            | 54 <sup>7</sup>           | ... | ...             | R         |
| <b>50</b>        | <i>Taylor 578.</i>           |                            |                  |                  |               |                           |     |                 |           |
| Nov. 14          | ...                          | 1                          | 40               | 6 <sup>98</sup>  | ...           | 96                        | 19  | 7 <sup>3</sup>  | M         |
| 15               | ...                          | 40                         | 6 <sup>86</sup>  | 4                | 19            | 8 <sup>3</sup>            | ... | ...             | M         |
| Dec. 4           | ...                          | 40                         | 6 <sup>71</sup>  | ...              | 19            | 4 <sup>9</sup>            | ... | ...             | R         |
| 8                | ...                          | 40                         | 6 <sup>74</sup>  | ...              | 19            | 5 <sup>4</sup>            | ... | ...             | R         |
| 17               | ...                          | 40                         | 6 <sup>76</sup>  | ...              | 19            | 6 <sup>2</sup>            | ... | ...             | R         |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.             | Magnitude. | Mean Right Ascension 1883 |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.              | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|------------------------------|------------|---------------------------|----|-------|---------------|---------------------------|----|------|-----------|-------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                              |            | h.                        | m. | s.    |               | o.                        | '  | "    |           |                               |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>51</b> <i>Stone 704.</i>  |            |                           |    |       |               |                           |    |      |           | <b>56</b> <i>Stone 812.</i>   |            |                            |    |       |               |                           |    |      |           |
| Jan. 1                       | 8.0        | 1                         | 41 | 46.30 | ...           | 133                       | 54 | 17.9 | R         | Nov. 14                       | ...        | 1                          | 57 | 20.60 | ...           | 105                       | 52 | 13.6 | M         |
| 2                            | 8.0        |                           | 41 | 46.19 | ...           |                           | 54 | 17.2 | R         | 15                            | ...        |                            | 57 | 20.47 | ...           |                           | 52 | 13.6 | M         |
| 3                            | 7.0        |                           | 41 | 45.95 | ...           |                           | 54 | 17.9 | R         | 16                            | ...        |                            | 57 | 20.44 | ...           |                           | 52 | 13.8 | M         |
| 4                            | 7.0        |                           | 41 | 46.02 | ...           |                           | 54 | 15.9 | R         | 23                            | ...        |                            | 57 | 20.48 | ...           |                           | 52 | 13.8 | M         |
| 5                            | 7.0        |                           | 41 | 46.15 | ...           |                           | 54 | 15.8 | R         |                               |            |                            |    |       |               |                           |    |      |           |
| <b>52</b> <i>Taylor 616.</i> |            |                           |    |       |               |                           |    |      |           | <b>57</b> <i>Stone 824.</i>   |            |                            |    |       |               |                           |    |      |           |
| Nov. 14                      | ...        | 1                         | 46 | 22.11 | 5             | 140                       | 47 | 8.7  | M         | Jan. 4                        | 7.0        | 1                          | 59 | 40.37 | ...           | 134                       | 4  | 6.7  | R         |
| 15                           | ...        |                           | 46 | 22.09 | 5             |                           | 47 | 8.2  | M         | 5                             | 7.0        |                            | 59 | 40.57 | ...           |                           | 4  | 6.2  | R         |
| 20                           | ...        |                           | 46 | 22.04 | ...           |                           | 47 | 10.0 | M         | 9                             | ...        |                            | 59 | 40.48 | ...           |                           | 4  | 4.8  | M         |
| 27                           | ...        |                           | 46 | 22.09 | ...           |                           | 47 | 7.8  | M         |                               |            |                            |    |       |               |                           |    |      |           |
| 30                           | ...        |                           | 46 | 22.03 | 5             |                           | 47 | 8.0  | M         |                               |            |                            |    |       |               |                           |    |      |           |
| <b>53</b> <i>6 Arietis β</i> |            |                           |    |       |               |                           |    |      |           | <b>58</b> <i>13 Arietis α</i> |            |                            |    |       |               |                           |    |      |           |
| Dec. 4                       | ...        | 1                         | 48 | 10.64 | ...           | 69                        | 45 | 51.5 | R         | Jan. 1                        | ...        | 2                          | 0  | 34.75 | ...           | 67                        | 5  | 28.2 | R         |
| 5                            | ...        |                           | 48 | 10.60 | ...           |                           | 45 | 51.7 | R         | 2                             | ...        |                            | 0  | 34.79 | ...           |                           | 5  | 28.0 | R         |
| 6                            | ...        |                           | 48 | 10.57 | ...           |                           | 45 | 52.9 | R         | 3                             | ...        |                            | 0  | 34.72 | ...           |                           | 5  | 28.3 | R         |
| 7                            | ...        |                           | 48 | 10.60 | ...           |                           | 45 | 49.9 | R         | 8                             | ...        |                            | 0  | 34.60 | ...           |                           | 5  | 31.6 | M         |
| 8                            | ...        |                           | 48 | 10.63 | ...           |                           | 45 | 50.3 | R         | 11                            | ...        |                            | 0  | 34.59 | ...           |                           | 5  | 31.4 | M         |
| 11                           | ...        |                           | 48 | 10.55 | ...           |                           | 45 | 52.3 | R         | 12                            | ...        |                            | 0  | 34.75 | ...           |                           | 5  | 30.3 | M         |
| 17                           | ...        |                           | 48 | 10.62 | ...           |                           | 45 | 51.8 | R         | 15                            | ...        |                            | 0  | 34.58 | ...           |                           | 5  | 28.7 | M         |
| 18                           | ...        |                           | 48 | 10.61 | ...           |                           | 45 | 52.4 | R         | 16                            | ...        |                            | 0  | 34.64 | ...           |                           | 5  | 30.5 | M         |
| 19                           | ...        |                           | 48 | 10.68 | ...           |                           | 45 | 52.8 | R         | 18                            | ...        |                            | 0  | 34.59 | ...           |                           | 5  | 30.7 | M         |
| 20                           | ...        |                           | 48 | 10.57 | ...           |                           | 45 | 51.2 | R         | 19                            | ...        |                            | 0  | 34.77 | ...           |                           | 5  | 32.0 | M         |
| 22                           | ...        |                           | 48 | 10.64 | ...           |                           | 45 | 52.1 | R         | 20                            | ...        |                            | 0  | 34.78 | ...           |                           | 5  | 31.2 | M         |
| 25                           | ...        |                           | 48 | 10.61 | ...           |                           | 45 | 51.6 | R         | 22                            | ...        |                            | 0  | 34.80 | ...           |                           | 5  | 30.4 | M         |
| 26                           | ...        |                           | 48 | 10.58 | ...           |                           | 45 | 51.2 | R         | 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         |
| <b>54</b> <i>Taylor 626.</i> |            |                           |    |       |               |                           |    |      |           | <b>59</b> <i>Stone 834.</i>   |            |                            |    |       |               |                           |    |      |           |
| Jan. 2                       | ...        | 1                         | 48 | 20.95 | ...           | 139                       | 10 | 21.5 | R         | Nov. 20                       | 7.0        | 2                          | 1  | 19.24 | ...           | 142                       | 33 | 5.4  | M         |
| 3                            | ...        |                           | 48 | 20.89 | ...           |                           | 10 | 21.6 | R         | Dec. 4                        | 6.7        |                            | 1  | 18.88 | ...           |                           | 33 | 3.5  | R         |
| 4                            | ...        |                           | 48 | 20.98 | ...           |                           | 10 | 19.9 | R         | 5                             | 6.7        |                            | 1  | 18.90 | ...           |                           | 33 | 4.8  | R         |
| 5                            | ...        |                           | 48 | 21.11 | ...           |                           | 10 | 19.6 | R         | 6                             | 6.7        |                            | 1  | 18.80 | ...           |                           | 33 | 3.9  | R         |
| 8                            | ...        |                           | 48 | 20.78 | ...           |                           | 10 | 23.0 | M         | 7                             | 6.7        |                            | 1  | 19.06 | ...           |                           | 33 | 5.0  | R         |
| <b>55</b> <i>Anon.</i>       |            |                           |    |       |               |                           |    |      |           | <b>60</b> <i>Stone 850.</i>   |            |                            |    |       |               |                           |    |      |           |
| Jan. 4                       | 8.0        | 1                         | 53 | 53.49 | ...           | 127                       | 35 | 3.2  | R         | Nov. 15                       | 7.0        | 2                          | 3  | 48.66 | ...           | 126                       | 22 | 45.6 | M         |
| 5                            | 8.0        |                           | 53 | 53.47 | ...           |                           | 35 | 2.8  | R         | 16                            | ...        |                            | 3  | 48.62 | 6             |                           | 22 | 44.5 | M         |
| 9                            | ...        |                           | 53 | 53.43 | ...           |                           | 35 | 5.5  | M         | Dec. 18                       | 7.0        |                            | 3  | 48.31 | ...           |                           | 22 | 48.2 | R         |
| 12                           | ...        |                           | 53 | 53.53 | ...           |                           | 35 | 4.6  | M         | 20                            | 7.0        |                            | 3  | 48.29 | ...           |                           | 22 | 45.0 | R         |
| Nov. 13                      | 8.0        |                           | 53 | 53.27 | ...           |                           | 35 | 2.6  | M         |                               |            |                            |    |       |               |                           |    |      |           |

Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.      | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.                 | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|-----------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|----------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                       |            | h.                         | m. | s.    |               | °                         | '  | "    |           |                                  |            | h.                         | m. | s.    |               | °                         | '  | "    |           |
| <b>61</b> Stone 870.  |            |                            |    |       |               |                           |    |      |           | <b>68</b> Stone 935.             |            |                            |    |       |               |                           |    |      |           |
| Nov. 14               | 7.0        | 2                          | 5  | 46.78 | ...           | 128                       | 55 | 5.2  | M         | Nov. 21                          | ...        | 2                          | 16 | 3.51  | ...           | 140                       | 50 | 20.3 | M         |
| 21                    | ...        |                            | 5  | 46.75 | ...           |                           | 55 | 5.2  | M         | 27                               | ...        |                            | 16 | 3.78  | ...           |                           | 50 | 17.8 | M         |
| Dec. 4                | 7.0        |                            | 5  | 46.88 | ...           |                           | 55 | 5.4  | R         | Dec. 17                          | 6.7        |                            | 16 | 3.37  | ...           |                           | 50 | 22.5 | R         |
| 5                     | 7.0        |                            | 5  | 46.75 | ...           |                           | 55 | 5.8  | R         | 18                               | 6.7        |                            | 16 | 3.37  | ...           |                           | 50 | 28.5 | R         |
| 6                     | 7.0        |                            | 5  | 46.58 | ...           |                           | 55 | 5.8  | R         | 20                               | 6.7        |                            | 16 | 3.44  | ...           |                           | 50 | 21.7 | R         |
| <b>62</b> Anon.       |            |                            |    |       |               |                           |    |      |           | <b>69</b> Anon.                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 1                | 7.7        | 2                          | 8  | 5.62  | ...           | 181                       | 48 | 51.0 | R         | Jan. 5                           | 8.0        | 2                          | 18 | 16.50 | ...           | 150                       | 57 | 53.2 | R         |
| 2                     | 7.7        |                            | 8  | 5.48  | 4             |                           | 48 | 51.5 | R         |                                  |            |                            |    |       |               |                           |    |      |           |
| <b>63</b> Anon.       |            |                            |    |       |               |                           |    |      |           | <b>70</b> Stone 955.             |            |                            |    |       |               |                           |    |      |           |
| Jan. 5                | 8.5        | 2                          | 9  | 23.47 | ...           | 124                       | 51 | 42.5 | R         | Nov. 20                          | 7.0        | 2                          | 18 | 48.68 | ...           | 150                       | 17 | 34.1 | M         |
| 12                    | 8.5        |                            | 9  | 23.67 | ...           |                           | 51 | 42.2 | M         | Dec. 4                           | 6.7        |                            | 18 | 48.68 | ...           |                           | 17 | 33.0 | R         |
| 16                    | ...        |                            | 9  | 23.71 | ...           |                           | 51 | 43.0 | M         | 5                                | 6.7        |                            | 18 | 48.65 | ...           |                           | 17 | 35.5 | R         |
| Nov. 13               | 8.5        |                            | 9  | 23.52 | ...           |                           | 51 | 42.8 | M         | 6                                | 6.7        |                            | 18 | 48.63 | ...           |                           | 17 | 34.0 | R         |
| 16                    | 8.5        |                            | 9  | 23.83 | 4             |                           | 51 | 44.0 | M         | 7                                | 6.7        |                            | 18 | 48.69 | ...           |                           | 17 | 34.0 | R         |
| <b>64</b> Taylor 750. |            |                            |    |       |               |                           |    |      |           | <b>71</b> Anon.                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 4                | 6.5        | 2                          | 9  | 47.80 | ...           | 181                       | 42 | 43.9 | R         | Jan. 1                           | 7.5        | 2                          | 19 | 52.34 | ...           | 134                       | 51 | 28.1 | R         |
|                       |            |                            |    |       |               |                           |    |      |           | 2                                | 7.5        |                            | 19 | 52.19 | ...           |                           | 51 | 27.6 | R         |
| <b>65</b> 67 Ceti.    |            |                            |    |       |               |                           |    |      |           | <b>72</b> 73 Ceti ζ <sup>3</sup> |            |                            |    |       |               |                           |    |      |           |
| Dec. 28               | ...        | 2                          | 11 | 8.73  | ...           | 96                        | 57 | 42.9 | R         | Dec. 31                          | ...        | 2                          | 21 | 56.29 | ...           | 82                        | 3  | 52.4 | R         |
| 29                    | ...        |                            | 11 | 8.68  | ...           |                           | 57 | 43.9 | R         |                                  |            |                            |    |       |               |                           |    |      |           |
| 31                    | ...        |                            | 11 | 8.88  | ...           |                           | 57 | 44.0 | M         |                                  |            |                            |    |       |               |                           |    |      |           |
| <b>66</b> Stone 911.  |            |                            |    |       |               |                           |    |      |           | <b>73</b> Anon.                  |            |                            |    |       |               |                           |    |      |           |
| Nov. 20               | 7.0        | 2                          | 11 | 58.70 | ...           | 143                       | 25 | 53.9 | M         | Jan. 17                          | 7.0        | 2                          | 22 | 8.53  | ...           | 181                       | 53 | 37.3 | M         |
| Dec. 4                | 6.7        |                            | 11 | 58.80 | ...           |                           | 25 | 54.0 | R         | 20                               | ...        |                            | 22 | 8.64  | ...           |                           | 53 | 38.9 | M         |
| 5                     | 6.7        |                            | 11 | 58.77 | ...           |                           | 25 | 54.6 | R         | Nov. 27                          | 7.0        |                            | 22 | 8.55  | ...           |                           | 53 | 35.9 | M         |
| 6                     | 6.7        |                            | 11 | 58.78 | ...           |                           | 25 | 54.6 | R         | Dec. 17                          | 7.0        |                            | 22 | 8.25  | ..            |                           | 53 | 37.2 | R         |
| 7                     | 6.7        |                            | 11 | 58.73 | ...           |                           | 25 | 55.1 | R         |                                  |            |                            |    |       |               |                           |    |      |           |
| <b>67</b> Anon.       |            |                            |    |       |               |                           |    |      |           | <b>74</b> Anon.                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 3                | 7.0        | 2                          | 14 | 28.54 | ...           | 182                       | 33 | 31.6 | R         | Jan. 4                           | 7.0        | 2                          | 23 | 18.01 | ...           | 135                       | 34 | 15.8 | R         |
| 4                     | 7.0        |                            | 14 | 28.68 | ...           |                           | 33 | 29.9 | R         |                                  |            |                            |    |       |               |                           |    |      |           |
| <b>75</b> 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. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.              | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|----------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|-------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                  |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                               |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>76</b> Stone 1000.            |            |                            |    |       |               |                           |    |      |           | <b>83</b> Taylor 916.         |            |                            |    |       |               |                           |    |      |           |
| Nov. 21                          | ...        | 2                          | 25 | 20.70 | 5             | 154                       | 49 | 23.8 | M         | Jan. 3                        | ...        | 2                          | 37 | 26.80 | ...           | 128                       | 53 | 2.0  | R         |
| Dec. 4                           | ...        |                            | 25 | 20.90 | ...           |                           | 49 | 23.4 | R         | 4                             | ...        |                            | 37 | 27.02 | ...           |                           | 53 | 0.6  | R         |
| 5                                | ...        |                            | 25 | 20.80 | ...           |                           | 49 | 25.3 | R         | 5                             | ...        |                            | 37 | 27.20 | ...           |                           | 53 | 0.3  | R         |
| 6                                | ...        |                            | 25 | 20.70 | ...           |                           | 49 | 24.6 | R         | 8                             | ...        |                            | 37 | 27.18 | 6             |                           | 53 | 4.2  | M         |
| 7                                | ...        |                            | 25 | 20.57 | ...           |                           | 49 | 23.5 | R         | 9                             | ...        |                            | 37 | 27.09 | 6             |                           | 53 | 1.8  | M         |
| <b>77</b> Lacaille 782.          |            |                            |    |       |               |                           |    |      |           | <b>84</b> Anon.               |            |                            |    |       |               |                           |    |      |           |
| Jan. 5                           | 6.5        | 2                          | 26 | 46.94 | ...           | 148                       | 19 | 46.3 | R         | Jan. 2                        | 7.7        | 2                          | 37 | 31.16 | ...           | 136                       | 6  | 9.6  | R         |
| <b>78</b> R. P. L. 26.           |            |                            |    |       |               |                           |    |      |           | <b>85</b> Taylor 926.         |            |                            |    |       |               |                           |    |      |           |
| Dec. 29                          | ...        | 2                          | 27 | 32.42 | 3             | 3                         | 27 | 48.1 | R         | Nov. 27                       | 6.7        | 2                          | 39 | 2.48  | ...           | 115                       | 59 | 34.0 | M         |
| <b>R. P. L. 26.—s.p.</b>         |            |                            |    |       |               |                           |    |      |           | Dec. 4                        | 6.7        |                            | 39 | 2.41  | ...           |                           | 59 | 33.9 | R         |
| May 5                            | ...        | 2                          | 27 | 29.81 | 3             | 3                         | 27 | 49.3 | R         | 5                             | 6.7        |                            | 39 | 2.39  | ...           |                           | 59 | 33.2 | R         |
| <b>79</b> Anon.                  |            |                            |    |       |               |                           |    |      |           | 6                             | 6.7        |                            | 39 | 2.28  | ...           |                           | 59 | 32.7 | R         |
| Jan. 1                           | 7.7        | 2                          | 28 | 16.98 | ...           | 149                       | 23 | 21.0 | R         | 7                             | 6.7        |                            | 39 | 2.29  | ...           |                           | 59 | 30.5 | R         |
| 3                                | 7.7        |                            | 28 | 16.37 | ...           |                           | 23 | 21.2 | R         | <b>86</b> Stone 1144.         |            |                            |    |       |               |                           |    |      |           |
| 4                                | 7.7        |                            | 28 | 16.58 | ...           |                           | 23 | 19.3 | R         | Dec. 17                       | 7.0        | 2                          | 42 | 14.98 | ...           | 131                       | 27 | 2.4  | R         |
| <b>80</b> 77 Ceti.               |            |                            |    |       |               |                           |    |      |           | 18                            | 7.0        |                            | 42 | 14.99 | ...           |                           | 27 | 2.6  | R         |
| Nov. 23                          | ...        | 2                          | 28 | 56.44 | ...           | 98                        | 22 | 16.8 | M         | 20                            | 7.0        |                            | 42 | 15.11 | ...           |                           | 27 | 1.3  | R         |
| 27                               | ...        |                            | 28 | 56.28 | ...           |                           | 22 | 16.7 | M         | 22                            | 7.0        |                            | 42 | 15.14 | ...           |                           | 27 | 0.7  | R         |
| Dec. 17                          | ...        |                            | 28 | 55.99 | ...           |                           | 22 | 15.7 | R         | 25                            | 7.0        |                            | 42 | 14.97 | ...           |                           | 27 | 2.9  | R         |
| 18                               | ...        |                            | 28 | 56.02 | ...           |                           | 22 | 15.9 | R         | <b>87</b> Anon.               |            |                            |    |       |               |                           |    |      |           |
| 20                               | ...        |                            | 28 | 56.08 | ...           |                           | 22 | 15.3 | R         | Jan. 2                        | 7.7        | 2                          | 42 | 49.02 | ...           | 149                       | 53 | 8.7  | R         |
| <b>81</b> Anon.                  |            |                            |    |       |               |                           |    |      |           | <b>88</b> Anon.               |            |                            |    |       |               |                           |    |      |           |
| Jan. 17                          | 7.0        | 2                          | 33 | 12.18 | ...           | 137                       | 9  | 14.7 | M         | Jan. 17                       | 7.5        | 2                          | 43 | 47.91 | ...           | 138                       | 24 | 5.4  | M         |
| 18                               | ...        |                            | 33 | 12.02 | 6             |                           | 9  | 13.7 | M         | 19                            | ...        |                            | 43 | 47.60 | ...           |                           | 24 | 5.7  | M         |
| 19                               | ...        |                            | 33 | 12.21 | ...           |                           | 9  | 14.5 | M         | 20                            | 7.5        |                            | 43 | 47.66 | ...           |                           | 24 | 2.3  | M         |
| 20                               | ...        |                            | 33 | 11.98 | ...           |                           | 9  | 15.1 | M         | 22                            | ...        |                            | 43 | 47.31 | 5             |                           | 24 | 6.8  | M         |
| 22                               | ...        |                            | 33 | 12.43 | ...           |                           | 9  | 15.7 | M         | 24                            | ...        |                            | 43 | 47.99 | 4             |                           | 24 | 7.3  | M         |
| <b>82</b> 86 Ceti $\gamma$ —2nd. |            |                            |    |       |               |                           |    |      |           | <b>89</b> 43 Arietis $\sigma$ |            |                            |    |       |               |                           |    |      |           |
| Dec. 27                          | ...        | 2                          | 37 | 14.25 | ...           | 87                        | 15 | 29.2 | R         | Dec. 6                        | ...        | 2                          | 45 | 2.04  | ...           | 75                        | 24 | 3.1  | R         |
| 28                               | ...        |                            | 37 | 14.28 | ...           |                           | 15 | 23.8 | 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         |
|                                  |            |                            |    |       |               |                           |    |      |           | 23                            | ...        |                            | 45 | 2.06  | ...           |                           | 24 | 2.2  | R         |
|                                  |            |                            |    |       |               |                           |    |      |           | 29                            | ...        |                            | 45 | 2.01  | ...           |                           | 24 | 2.1  | R         |
|                                  |            |                            |    |       |               |                           |    |      |           | 31                            | ...        |                            | 45 | 1.89  | ...           |                           | 24 | 0.6  | M         |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.             | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.               | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|--------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                              |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                                |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>90</b> <i>Anon.</i>       |            |                            |    |       |               |                           |    |      |           | <b>97</b> <i>Taylor 1024.</i>  |            |                            |    |       |               |                           |    |      |           |
| Jan. 5                       | 7.5        | 2                          | 46 | 1.11  | ...           | 182                       | 42 | 36.0 | R         | Jan. 1                         | 7.0        | 2                          | 55 | 47.36 | ...           | 182                       | 20 | 19.0 | R         |
| 9                            | ...        |                            | 46 | 1.20  | 5             |                           | 42 | 37.5 | M         | 2                              | 7.0        |                            | 55 | 47.20 | ...           |                           | 20 | 18.7 | R         |
| 11                           | ...        |                            | 46 | 1.37  | 5             |                           | 42 | 37.4 | M         | 5                              | 7.0        |                            | 55 | 46.96 | 4             |                           | 30 | 17.9 | R         |
| 15                           | ...        |                            | 46 | 1.16  | ...           |                           | 42 | 38.2 | M         |                                |            |                            |    |       |               |                           |    |      |           |
| 16                           | ...        |                            | 46 | 1.28  | ...           |                           | 42 | 37.7 | M         |                                |            |                            |    |       |               |                           |    |      |           |
| <b>91</b> <i>Stone 1170.</i> |            |                            |    |       |               |                           |    |      |           | <b>98</b> <i>Taylor 1027.</i>  |            |                            |    |       |               |                           |    |      |           |
| Nov. 27                      | 6.7        | 2                          | 46 | 38.45 | ...           | 131                       | 26 | 45.2 | M         | Nov. 27                        | ...        | 2                          | 56 | 34.86 | ...           | 118                       | 32 | 29.1 | M         |
| Dec. 5                       | 6.7        |                            | 46 | 38.60 | ...           |                           | 26 | 45.3 | R         | 30                             | ...        |                            | 56 | 34.79 | ...           |                           | 32 | 26.6 | M         |
| 17                           | 6.7        |                            | 46 | 38.46 | ...           |                           | 26 | 45.9 | R         | Dec. 7                         | ...        |                            | 56 | 34.77 | ...           |                           | 32 | 25.5 | R         |
| 18                           | 6.7        |                            | 46 | 38.46 | ...           |                           | 26 | 46.1 | R         | 18                             | ...        |                            | 56 | 34.57 | ...           |                           | 32 | 24.6 | R         |
| 20                           | 6.7        |                            | 46 | 38.29 | ...           |                           | 26 | 41.7 | R         | 20                             | ...        |                            | 56 | 34.71 | ...           |                           | 32 | 24.7 | R         |
| <b>92</b> <i>Anon.</i>       |            |                            |    |       |               |                           |    |      |           | <b>99</b> <i>Anon.</i>         |            |                            |    |       |               |                           |    |      |           |
| Jan. 3                       | 7.5        | 2                          | 47 | 2.20  | ...           | 133                       | 18 | 51.6 | R         | Jan. 18                        | ...        | 2                          | 57 | 42.21 | 6             | 132                       | 17 | 53.9 | M         |
| 4                            | 7.5        |                            | 47 | 2.41  | ...           |                           | 18 | 49.9 | R         | 19                             | 7.5        |                            | 57 | 42.02 | ...           |                           | 17 | 54.1 | M         |
| <b>93</b> <i>Stone 1192.</i> |            |                            |    |       |               |                           |    |      |           | <b>100</b> <i>Stone 1263.</i>  |            |                            |    |       |               |                           |    |      |           |
| Dec. 7                       | 7.0        | 2                          | 49 | 36.26 | ...           | 135                       | 5  | 3.4  | R         | Dec. 11                        | 6.7        | 2                          | 58 | 55.53 | ...           | 137                       | 26 | 3.0  | R         |
| 11                           | 7.0        |                            | 49 | 36.30 | ...           |                           | 5  | 3.0  | R         | 17                             | 6.7        |                            | 58 | 55.50 | 6             |                           | 26 | 4.2  | R         |
| 25                           | 7.0        |                            | 49 | 36.29 | 5             |                           | 5  | 2.3  | R         | 22                             | 6.7        |                            | 58 | 55.84 | ...           |                           | 26 | 2.6  | R         |
| 26                           | 7.0        |                            | 49 | 36.40 | 4             |                           | 5  | 2.5  | R         | 25                             | 6.7        |                            | 58 | 55.67 | ...           |                           | 26 | 2.5  | R         |
| 28                           | 7.0        |                            | 49 | 36.58 | ...           |                           | 5  | 2.6  | R         | 26                             | 6.7        |                            | 58 | 55.66 | ...           |                           | 26 | 2.1  | R         |
| <b>94</b> <i>Stone 1208.</i> |            |                            |    |       |               |                           |    |      |           | <b>101</b> <i>Stone 1264.</i>  |            |                            |    |       |               |                           |    |      |           |
| Jan. 15                      | ...        | 2                          | 50 | 58.96 | ...           | 146                       | 21 | 22.1 | M         | Jan. 1                         | 7.0        | 2                          | 59 | 13.98 | 6             | 134                       | 30 | 42.3 | R         |
| 18                           | ...        |                            | 50 | 59.06 | ...           |                           | 21 | 25.4 | M         | 3                              | 7.0        |                            | 59 | 13.84 | ...           |                           | 30 | 41.8 | R         |
| 19                           | ...        |                            | 50 | 58.88 | ...           |                           | 21 | 23.0 | M         | 15                             | 7.0        |                            | 59 | 13.67 | ...           |                           | 30 | 42.7 | M         |
| 20                           | ...        |                            | 50 | 59.08 | ...           |                           | 21 | 24.4 | M         | 16                             | 7.0        |                            | 59 | 13.98 | 4             |                           | 30 | 42.1 | M         |
| <b>95</b> <i>Stone 1212.</i> |            |                            |    |       |               |                           |    |      |           | <b>102</b> <i>Taylor 1042.</i> |            |                            |    |       |               |                           |    |      |           |
| Dec. 5                       | 7.0        | 2                          | 51 | 42.09 | ...           | 141                       | 44 | 1.0  | R         | Jan. 2                         | ...        | 2                          | 59 | 43.54 | ...           | 134                       | 21 | 22.2 | R         |
| 6                            | 7.0        |                            | 51 | 42.00 | ...           |                           | 44 | 2.4  | R         | 4                              | ...        |                            | 59 | 43.56 | ...           |                           | 21 | 20.2 | R         |
| 22                           | 7.0        |                            | 51 | 42.28 | ...           |                           | 44 | 2.6  | R         | 9                              | ...        |                            | 59 | 43.59 | 5             |                           | 21 | 21.3 | M         |
| 31                           | 7.0        |                            | 51 | 42.25 | ...           |                           | 44 | 3.0  | M         | 11                             | ...        |                            | 59 | 43.51 | ...           |                           | 21 | 21.7 | M         |
| <b>96</b> <i>Stone 1223.</i> |            |                            |    |       |               |                           |    |      |           | <b>102</b> <i>Taylor 1042.</i> |            |                            |    |       |               |                           |    |      |           |
| Dec. 29                      | ...        | 2                          | 52 | 28.65 | 5             | 164                       | 23 | 45.5 | R         | 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. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|--------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|
|                                      |            | h.                         | m. | s.    |               | °                         | '  | "    |           |                  |            | h.                         | m.    | s.    |               | °                         | '  | "    |           |
| <b>103</b> <i>R. P. L. 33.</i>       |            |                            |    |       |               |                           |    |      |           | Jan. 11          | ...        | 8                          | 18    | 35.91 | 3             | 134                       | 32 | 55.9 | M         |
| Dec. 7                               | ...        | 3                          | 4  | 48.33 | 3             | 5                         | 30 | 26.0 | R         | 12               | 8.0        | 18                         | 35.73 | ...   | 33            | 54.0                      | M  |      |           |
| 20                                   | ...        |                            | 4  | 49.43 | 3             |                           | 30 | 24.0 | R         | 18               | 8.0        | 18                         | 35.57 | 6     | 33            | 56.0                      | M  |      |           |
| <b>104</b> <i>57 Arietis δ</i>       |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Dec. 4                               | ...        | 8                          | 4  | 56.31 | ...           | 70                        | 42 | 59.2 | R         | Jan. 1           | 7.0        | 8                          | 19    | 17.21 | ...           | 130                       | 29 | 29.7 | R         |
| 5                                    | ...        |                            | 4  | 56.30 | ...           |                           | 42 | 59.5 | R         | 2                | 7.0        |                            | 19    | 17.13 | ...           |                           | 29 | 29.4 | R         |
| 17                                   | ...        |                            | 4  | 56.29 | ...           |                           | 42 | 59.4 | R         | 3                | 7.0        |                            | 19    | 17.03 | ...           |                           | 29 | 28.8 | 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         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>105</b> <i>Stone 1342.</i>        |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Jan. 1                               | 7.0        | 3                          | 9  | 50.85 | ...           | 130                       | 41 | 31.9 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 2                                    | 7.0        |                            | 9  | 50.72 | ...           |                           | 41 | 31.5 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>106</b> <i>Anon.</i>              |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Jan. 3                               | 8.0        | 3                          | 12 | 16.99 | ...           | 126                       | 8  | 33.7 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 4                                    | 8.0        |                            | 12 | 17.30 | ...           |                           | 8  | 37.0 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 12                                   | 8.0        |                            | 12 | 17.40 | ...           |                           | 8  | 37.7 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>107</b> <i>33 Persei α</i>        |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Jan. 19                              | ...        | 3                          | 15 | 58.29 | ...           | 40                        | 33 | 33.8 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| 20                                   | ...        |                            | 15 | 58.22 | ...           |                           | 33 | 24.1 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| 23                                   | ...        |                            | 15 | 58.35 | ...           |                           | 33 | 23.7 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>108</b> <i>1 Tauri α, Var. 5.</i> |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 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                               | ...        |                            | 19 | 31.07 | ...           |                           | 23 | 0.0  | R         |                  |            |                            |       |       |               |                           |    |      |           |
| Dec. 28                              | ...        |                            | 18 | 31.18 | ...           |                           | 23 | 1.9  | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 29                                   | ...        |                            | 18 | 31.07 | ...           |                           | 23 | 2.1  | R         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>109</b> <i>Anon.</i>              |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Jan. 4                               | 8.0        | 3                          | 18 | 35.56 | ...           | 134                       | 32 | 53.5 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 8                                    | ...        |                            | 18 | 35.50 | ...           |                           | 32 | 57.3 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>110</b> <i>Stone 1414.</i>        |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Jan. 1                               | 7.0        | 3                          | 19 | 17.21 | ...           | 130                       | 29 | 29.7 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 2                                    | 7.0        |                            | 19 | 17.13 | ...           |                           | 29 | 29.4 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 3                                    | 7.0        |                            | 19 | 17.03 | ...           |                           | 29 | 28.8 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>111</b> <i>Anon.</i>              |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 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         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>112</b> <i>18 Eridani ε</i>       |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Jan. 4                               | ...        | 3                          | 27 | 25.09 | ...           | 99                        | 51 | 19.1 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 5                                    | ...        |                            | 27 | 25.10 | ...           |                           | 51 | 19.8 | 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         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>113</b> <i>R. P. L. 34.</i>       |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Jan. 2                               | ...        | 3                          | 28 | 19.86 | ...           | 3                         | 43 | 28.7 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 3                                    | ...        |                            | 28 | 20.11 | ...           |                           | 43 | 27.5 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| Dec. 28                              | ...        |                            | 28 | 19.15 | ...           |                           | 43 | 28.9 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 29                                   | ...        |                            | 28 | 18.63 | ...           |                           | 43 | 30.7 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>114</b> <i>Stone 1522.</i>        |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Jan. 1                               | 7.0        | 3                          | 34 | 39.77 | ...           | 136                       | 37 | 28.0 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 2                                    | 7.0        |                            | 34 | 39.65 | ...           |                           | 37 | 22.1 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>115</b> <i>Stone 1526.</i>        |            |                            |    |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Jan. 3                               | 8.0        | 3                          | 35 | 9.17  | ...           | 136                       | 19 | 10.3 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 4                                    | 8.0        |                            | 35 | 9.23  | ...           |                           | 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. |       | No. of Wires. | Mean Polar Distance 1883. |     | Observer. | Number and Date.                           | Magnitude.                     | Mean Right Ascension 1883. |       | No. of Wires. | Mean Polar Distance 1883. |      | Observer. |      |      |      |   |
|---|------------|----------------------------|-------|---------------|---------------------------|-----|-----------|--|--------------------------------|----------------------------|-------|---------------|---------------------------|------|-----------|------|------|------|---|
|   |            | h.                         | m.    |               | s.                        | °   |           |  |                                | '                          | "     |               | h.                        | m.   |           | s.   | °    | '    | " |
| <b>116</b> <i>25 Tauri η, Aleyone.</i>    |            |                            |       |               |                           |     |           | <b>121</b> <i>38 Eridani o<sup>1</sup></i> |                                |                            |       |               |                           |      |           |      |      |      |   |
| Jan. 1                                    | ...        | 3                          | 40    | 31.86         | ...                       | 66  | 15        | 28.1                                       | R                              | Jan. 11                    | ...   | 4             | 6                         | 9.25 | ...       | 97   | 8    | 35.3 | M |
| 2   | ...        | 40                         | 31.82 | ...           | ...                       | 15  | 28.3      | R  | <b>122</b> <i>α Reticuli.</i>  |                            |       |               |                           |      |           |      |      |      |   |
| 4   | ...        | 40                         | 31.79 | ...           | ...                       | 15  | 27.1      | R  | Feb. 8                         | ...                        | 4     | 12            | 55.22                     | 4    | 152       | 46   | 1.5  | R    |   |
| Dec. 31                                   | ...        | 40                         | 31.76 | ...           | ...                       | 15  | 27.5      | M  | 9                              | ...                        | 12    | 55.32         | 5                         | 46   | 1.4       | R    |      |      |   |
| <b>117</b> <i>Anon.</i>                   |            |                            |       |               |                           |     |           | 12   | ...                            | 12                         | 55.36 | ...           | 46                        | 0.4  | R         |      |      |      |   |
| Jan. 12                                   | ...        | 3                          | 44    | 17.82         | ...                       | 136 | 26        | 45.3                                       | M                              | 13                         | ...   | 12            | 55.20                     | ...  | 46        | 1.4  | R    |      |   |
| 18  | 8.5        | 44                         | 17.98 | ...           | ...                       | 26  | 48.2      | M  | <b>123</b> <i>54 Tauri γ</i>   |                            |       |               |                           |      |           |      |      |      |   |
| 19  | ...        | 44                         | 17.88 | ...           | ...                       | 26  | 45.4      | M  | Jan. 2                         | ...                        | 4     | 13            | 8.11                      | ...  | 74        | 39   | 22.6 | R    |   |
| 20  | 8.0        | 44                         | 18.08 | ...           | ...                       | 26  | 49.2      | M  | 3                              | ...                        | 13    | 8.14          | ...                       | 39   | 21.6      | R    |      |      |   |
| <b>118</b> <i>Anon.</i>                   |            |                            |       |               |                           |     |           | 4  | ...                            | 13                         | 8.15  | ...           | 39                        | 20.7 | R         |      |      |      |   |
| Jan. 3                                    | 9.0        | 3                          | 49    | 49.24         | ...                       | 126 | 22        | 57.5                                       | R                              | 5                          | ...   | 13            | 8.15                      | ...  | 39        | 20.5 | R    |      |   |
| 4   | ...        | 49                         | 49.29 | ...           | ...                       | 22  | 55.7      | R  | 6                              | ...                        | 13    | 8.16          | ...                       | 39   | 22.1      | M    |      |      |   |
| 5   | 9.0        | 49                         | 49.41 | ...           | ...                       | 22  | 55.6      | R  | 9                              | ...                        | 13    | 8.08          | ...                       | 39   | 22.0      | M    |      |      |   |
| 12  | 9.0        | 49                         | 49.62 | ...           | ...                       | 22  | 57.5      | M  | 12                             | ...                        | 13    | 8.14          | ...                       | 39   | 21.1      | M    |      |      |   |
| 15  | 9.0        | 49                         | 49.45 | ...           | ...                       | 22  | 54.0      | M  | 15                             | ...                        | 13    | 8.17          | ...                       | 39   | 22.3      | M    |      |      |   |
| <b>119</b> <i>37 Tauri A<sup>1</sup>.</i> |            |                            |       |               |                           |     |           | 16   | ...                            | 13                         | 8.15  | ...           | 39                        | 21.4 | M         |      |      |      |   |
| Jan. 3                                    | ...        | 3                          | 57    | 46.64         | ...                       | 68  | 14        | 19.9                                       | R                              | 17                         | ...   | 13            | 8.04                      | ...  | 39        | 22.9 | M    |      |   |
| 4   | ...        | 57                         | 46.68 | ...           | ...                       | 14  | 18.1      | R  | 18                             | ...                        | 13    | 8.04          | ...                       | 39   | 23.2      | M    |      |      |   |
| 8   | ...        | 57                         | 46.69 | ...           | ...                       | 14  | 21.5      | M  | 19                             | ...                        | 13    | 8.02          | ...                       | 39   | 23.1      | M    |      |      |   |
| 9   | ...        | 57                         | 46.70 | ...           | ...                       | 14  | 20.7      | M  | 20                             | ...                        | 13    | 8.14          | ...                       | 39   | 22.6      | M    |      |      |   |
| 11  | ...        | 57                         | 46.73 | ...           | ...                       | 14  | 20.7      | M  | <b>124</b> <i>Taylor 1553.</i> |                            |       |               |                           |      |           |      |      |      |   |
| 12  | ...        | 57                         | 46.69 | ...           | ...                       | 14  | 19.4      | M  | Jan. 8                         | ...                        | 4     | 20            | 49.41                     | ...  | 134       | 17   | 23.2 | M    |   |
| 15  | ...        | 57                         | 46.88 | ...           | ...                       | 14  | 19.5      | M  | 12                             | 7.7                        | 20    | 49.56         | ...                       | 17   | 24.0      | M    |      |      |   |
| 16  | ...        | 57                         | 46.72 | ...           | ...                       | 14  | 21.0      | M  | 15                             | ...                        | 20    | 49.54         | ...                       | 17   | 21.7      | M    |      |      |   |
| 17  | ...        | 57                         | 46.65 | ...           | ...                       | 14  | 22.3      | M  | 16                             | 7.0                        | 20    | 49.48         | ...                       | 17   | 22.9      | M    |      |      |   |
| 25  | ...        | 57                         | 46.67 | ...           | ...                       | 14  | 22.7      | M  | <b>125</b> <i>74 Tauri ε</i>   |                            |       |               |                           |      |           |      |      |      |   |
| 26  | ...        | 57                         | 46.74 | ...           | ...                       | 14  | 21.8      | M  | Jan. 1                         | ...                        | 4     | 21            | 47.08                     | ...  | 71        | 4    | 48.7 | R    |   |
| 27  | ...        | 57                         | 46.64 | ...           | ...                       | 14  | 22.2      | M  | 18                             | ...                        | 21    | 47.10         | ...                       | 4    | 50.1      | M    |      |      |   |
| 29  | ...        | 57                         | 46.71 | ...           | ...                       | 14  | 20.4      | M  | <b>126</b> <i>Taylor 1595.</i> |                            |       |               |                           |      |           |      |      |      |   |
| 30  | ...        | 57                         | 46.65 | ...           | ...                       | 14  | 21.1      | M  | Jan. 1                         | 7.5                        | 4     | 27            | 0.48                      | ...  | 131       | 25   | 33.1 | R    |   |
| 31  | ...        | 57                         | 46.85 | ...           | ...                       | 14  | 21.2      | M  | 3                              | 6.7                        | 27    | 0.21          | ...                       | 25   | 24.0      | R    |      |      |   |
| Feb. 1                                    | ...        | 57                         | 46.70 | ...           | ...                       | 14  | 18.4      | R  | 4                              | 6.7                        | 27    | 0.33          | ...                       | 25   | 32.3      | R    |      |      |   |
| <b>120</b> <i>R. P. L. 35.</i>            |            |                            |       |               |                           |     |           | 8  | ...                            | 27                         | 0.15  | ...           | 25                        | 33.9 | M         |      |      |      |   |
| Jan. 1                                    | ...        | 4                          | 0     | 13.27         | 3                         | 4   | 45        | 17.4                                       | R                              |                            |       |               |                           |      |           |      |      |      |   |
| 2   | ...        | 0                          | 13.32 | 3             | 4                         | 45  | 18.1      | R  |                                |                            |       |               |                           |      |           |      |      |      |   |

## Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.                         | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.                      | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|--|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|---------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|  |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                                       |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>127</b> <i>87 Tauri a, Aldebaran.</i> |            |                            |    |       |               |                           |    |      |           | <b>132</b> <i>R. P. L. 37.</i>        |            |                            |    |       |               |                           |    |      |           |
| Jan. 31                                  | ...        | 4                          | 39 | 12.48 | ...           | 73                        | 43 | 40.4 | M         | Jan. 4                                | ...        | 4                          | 50 | 27.77 | 3             | 4                         | 11 | 50.6 | R         |
| Feb. 1                                   | ...        |                            | 39 | 12.47 | ...           |                           | 43 | 35.6 | R         | 8                                     | ...        |                            | 50 | 27.55 | 3             |                           | 11 | 49.6 | M         |
| 2  | ...        |                            | 29 | 12.48 | ...           |                           | 43 | 37.3 | R         | 9                                     | ...        |                            | 50 | 27.83 | 3             |                           | 11 | 49.1 | M         |
| 3  | ...        |                            | 39 | 12.49 | ...           |                           | 43 | 37.9 | R         | 12                                    | ...        |                            | 50 | 27.80 | 3             |                           | 11 | 47.9 | M         |
| 5  | ...        |                            | 29 | 12.48 | ...           |                           | 43 | 37.6 | R         | 15                                    | ...        |                            | 50 | 27.83 | 3             |                           | 11 | 49.5 | M         |
| 6  | ...        |                            | 29 | 12.55 | ...           |                           | 43 | 36.4 | M         | 16                                    | ...        |                            | 50 | 28.03 | 3             |                           | 11 | 50.6 | M         |
| 7  | ...        |                            | 29 | 12.31 | ...           |                           | 43 | 38.2 | M         | 17                                    | ...        |                            | 50 | 27.79 | 3             |                           | 11 | 52.0 | M         |
| 8  | ...        |                            | 29 | 12.45 | ...           |                           | 43 | 36.4 | R         | 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         |
| <b>128</b> <i>a Doradus.</i>             |            |                            |    |       |               |                           |    |      |           | <i>R. P. L. 37—s. p.</i>              |            |                            |    |       |               |                           |    |      |           |
| Feb. 9                                   | ...        | 4                          | 31 | 23.17 | ...           | 145                       | 17 | 13.6 | R         | May 7                                 | ...        | 4                          | 50 | 27.22 | 3             | 4                         | 11 | 50.0 | R         |
| 10                                       | ...        |                            | 31 | 23.27 | ...           |                           | 17 | 14.1 | R         | 12                                    | ...        |                            | 50 | 27.69 | 3             |                           | 11 | 47.5 | R         |
| 12                                       | ...        |                            | 31 | 23.24 | ...           |                           | 17 | 12.8 | R         |                                       |            |                            |    |       |               |                           |    |      |           |
| 13                                       | ...        |                            | 31 | 23.06 | ...           |                           | 17 | 12.0 | R         |                                       |            |                            |    |       |               |                           |    |      |           |
| 14                                       | ...        |                            | 31 | 23.32 | ...           |                           | 17 | 13.4 | R         |                                       |            |                            |    |       |               |                           |    |      |           |
| <b>129</b> <i>Stone 1991.</i>            |            |                            |    |       |               |                           |    |      |           | <b>133</b> <i>7 Aurigæ e, Var. 1.</i> |            |                            |    |       |               |                           |    |      |           |
| Jan. 2                                   | ...        | 4                          | 32 | 31.04 | ...           | 185                       | 22 | 29.8 | R         | Feb. 9                                | ...        | 4                          | 53 | 34.14 | ...           | 46                        | 21 | 4.6  | R         |
| 3  | ...        |                            | 32 | 30.97 | ...           |                           | 22 | 29.5 | R         | 10                                    | ...        |                            | 53 | 34.34 | ...           |                           | 21 | 4.0  | R         |
| 4  | ...        |                            | 32 | 31.07 | ...           |                           | 22 | 30.2 | R         | 12                                    | ...        |                            | 53 | 34.55 | ...           |                           | 21 | 3.4  | R         |
| 8  | ...        |                            | 32 | 30.99 | ...           |                           | 22 | 30.8 | M         | 13                                    | ...        |                            | 53 | 34.43 | ...           |                           | 21 | 4.0  | R         |
|  |            |                            |    |       |               |                           |    |      |           | 14                                    | ...        |                            | 53 | 34.44 | ...           |                           | 21 | 2.6  | R         |
| <b>130</b> <i>Anon.</i>                  |            |                            |    |       |               |                           |    |      |           | <b>134</b> <i>Stone 2191.</i>         |            |                            |    |       |               |                           |    |      |           |
| Jan. 11                                  | 7.0        | 4                          | 45 | 26.36 | ...           | 181                       | 47 | 23.9 | M         | Jan. 11                               | 7.5        | 4                          | 56 | 19.66 | 6             | 181                       | 13 | 20.1 | M         |
| 31                                       | 7.0        |                            | 45 | 26.50 | ...           |                           | 47 | 24.0 | M         | 25                                    | ...        |                            | 56 | 19.69 | 5             |                           | 13 | 17.3 | M         |
| Feb. 2                                   | 7.0        |                            | 45 | 26.50 | ...           |                           | 47 | 22.7 | R         | 26                                    | ...        |                            | 56 | 19.78 | ...           |                           | 13 | 19.7 | M         |
| 3  | 7.0        |                            | 45 | 26.53 | ...           |                           | 47 | 21.9 | R         | 27                                    | 7.0        |                            | 56 | 19.77 | ...           |                           | 13 | 20.9 | M         |
| 5  | 7.0        |                            | 45 | 26.56 | ...           |                           | 47 | 22.2 | R         | 29                                    | ...        |                            | 56 | 19.75 | ...           |                           | 13 | 20.8 | M         |
| <b>131</b> <i>3 Aurigæ e</i>             |            |                            |    |       |               |                           |    |      |           | <b>135</b> <i>R. P. L. 39.</i>        |            |                            |    |       |               |                           |    |      |           |
| Jan. 22                                  | ...        | 4                          | 49 | 22.41 | ...           | 57                        | 1  | 15.5 | M         | Jan. 15                               | ...        | 5                          | 4  | 14.46 | 3             | 4                         | 26 | 1.0  | M         |
| 24                                       | ...        |                            | 49 | 22.41 | ...           |                           | 1  | 16.6 | M         | 16                                    | ...        |                            | 4  | 13.60 | 3             |                           | 26 | 1.4  | M         |
| 25                                       | ...        |                            | 49 | 22.42 | ...           |                           | 1  | 15.3 | M         | 17                                    | ...        |                            | 4  | 14.03 | 3             |                           | 26 | 0.5  | M         |
| 26                                       | ...        |                            | 49 | 22.41 | ...           |                           | 1  | 15.8 | M         | 18                                    | ...        |                            | 4  | 14.13 | 3             |                           | 26 | 0.1  | M         |
| 27                                       | ...        |                            | 49 | 22.46 | ...           |                           | 1  | 17.6 | M         | 20                                    | ...        |                            | 4  | 14.11 | 3             |                           | 26 | 2.5  | M         |
| 29                                       | ...        |                            | 49 | 22.44 | ...           |                           | 1  | 16.5 | M         | 22                                    | ...        |                            | 4  | 14.27 | 3             |                           | 26 | 0.3  | M         |
| 30                                       | ...        |                            | 49 | 22.52 | ...           |                           | 1  | 16.7 | M         | 25                                    | ...        |                            | 4  | 13.76 | 3             |                           | 26 | 5.2  | M         |
| Feb. 7                                   | ...        |                            | 49 | 22.37 | ...           |                           | 1  | 14.3 | M         | 27                                    | ...        |                            | 4  | 13.92 | 3             |                           | 26 | 1.9  | M         |
| 8  | ...        |                            | 49 | 22.43 | ...           |                           | 1  | 14.5 | R         | 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. |    |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer.                        | Number and Date.             | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|----------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|------|------|----------------------------------|------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                                  |            | h.                         | m. | s.    |               | o.                        | '    | "    |                                  |                              |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |
| <b>R. P. L. 39.—s.p.</b>         |            |                            |    |       |               |                           |      |      | <b>R. P. L. 40.—s.p.</b>         |                              |            |                            |       |       |               |                           |      |      |           |
| May 18                           | ...        | 5                          | 4  | 13.83 | 8             | 4                         | 26   | 3.8  | R                                | May 18                       | ...        | 5                          | 24    | 37.86 | 3             | 4                         | 51   | 57.5 | R         |
| 19                               | ...        | 4                          | 13 | 82    | 3             | 26                        | 3.9  | R    | 19                               | ...                          | 24         | 37                         | 68    | 3     | 51            | 58.0                      | R    |      |           |
| 23                               | ...        | 4                          | 18 | 49    | 3             | 26                        | 6.1  | R    | 23                               | ...                          | 24         | 37                         | 44    | 3     | 51            | 59.8                      | R    |      |           |
| 28                               | ...        | 4                          | 18 | 95    | 3             | 26                        | 5.1  | R    | <b>140 34 Orionis δ, Var. 1.</b> |                              |            |                            |       |       |               |                           |      |      |           |
| June 15                          | ...        | 4                          | 14 | 19    | 3             | 26                        | 8.5  | M    | Jan. 20                          | ...                          | 5          | 26                         | 1.88  | ...   | 90            | 23                        | 12.9 | M    |           |
| Aug. 8                           | ...        | 4                          | 14 | 45    | 3             | 26                        | 1.6  | R    | <b>141 11 Leporis α</b>          |                              |            |                            |       |       |               |                           |      |      |           |
| 9                                | ...        | 4                          | 14 | 23    | 3             | 26                        | 5.1  | R    | Jan. 25                          | ...                          | 5          | 27                         | 34.25 | ...   | 107           | 54                        | 25.2 | M    |           |
| <b>136 13 Aurigæ α, Capella.</b> |            |                            |    |       |               |                           |      |      | 26                               | ...                          | 27         | 34                         | 21    | ...   | 54            | 26.1                      | M    |      |           |
| Jan. 12                          | ...        | 5                          | 8  | 2.75  | ...           | 44                        | 7    | 19.9 | M                                | <b>142 R. P. L. 41.—s.p.</b> |            |                            |       |       |               |                           |      |      |           |
| 19                               | ...        | 8                          | 2  | 63    | ...           | 7                         | 19.5 | M    | June 1                           | ...                          | 5          | 29                         | 13.81 | 3     | 4             | 44                        | 57.1 | R    |           |
| 24                               | ...        | 8                          | 2  | 66    | ...           | 7                         | 19.6 | M    | 7                                | ...                          | 29         | 13                         | 96    | 3     | 44            | 59.2                      | R    |      |           |
| 26                               | ...        | 8                          | 2  | 75    | ...           | 7                         | 18.2 | M    | Aug. 8                           | ...                          | 29         | 14                         | 25    | 3     | 44            | 56.8                      | R    |      |           |
| 29                               | ...        | 8                          | 2  | 57    | ...           | 7                         | 20.2 | M    | 11                               | ...                          | 29         | 14                         | 85    | 3     | 44            | 59.3                      | R    |      |           |
| Feb. 14                          | ...        | 8                          | 2  | 63    | ...           | 7                         | 19.3 | R    | 18                               | ...                          | 29         | 14                         | 19    | 3     | 45            | 0.4                       | R    |      |           |
| 15                               | ...        | 8                          | 2  | 64    | ...           | 7                         | 19.8 | R    | 14                               | ...                          | 29         | 13                         | 01    | 3     | 45            | 0.6                       | R    |      |           |
| 16                               | ...        | 8                          | 2  | 52    | ...           | 7                         | 19.2 | R    | 16                               | ...                          | 29         | 13                         | 59    | 3     | 45            | 1.0                       | R    |      |           |
| 17                               | ...        | 8                          | 2  | 65    | ...           | 7                         | 20.4 | R    | 18                               | ...                          | 29         | 12                         | 54    | 3     | 44            | 59.5                      | R    |      |           |
| <b>137 19 Orionis β, Rigel.</b>  |            |                            |    |       |               |                           |      |      | <b>143 R. P. L. 42.</b>          |                              |            |                            |       |       |               |                           |      |      |           |
| Feb. 2                           | ...        | 5                          | 8  | 54.88 | ...           | 98                        | 20   | 16.0 | R                                | Jan. 15                      | ...        | 5                          | 36    | 38.91 | 3             | 2                         | 40   | 52.2 | M         |
| 3                                | ...        | 8                          | 54 | 85    | ...           | 90                        | 14.9 | R    | 16                               | ...                          | 36         | 37                         | 79    | 3     | 40            | 51.1                      | M    |      |           |
| 5                                | ...        | 8                          | 54 | 85    | ...           | 20                        | 15.9 | R    | 20                               | ...                          | 36         | 37                         | 11    | 3     | 40            | 55.0                      | M    |      |           |
| 8                                | ...        | 8                          | 54 | 38    | ...           | 20                        | 16.5 | R    | 24                               | ...                          | 36         | 37                         | 01    | 3     | 40            | 54.3                      | M    |      |           |
| 9                                | ...        | 8                          | 54 | 80    | ...           | 20                        | 17.8 | R    | 25                               | ...                          | 36         | 36                         | 69    | 3     | 40            | 56.7                      | M    |      |           |
| 10                               | ...        | 8                          | 54 | 83    | ...           | 20                        | 15.3 | R    | 29                               | ...                          | 36         | 37                         | 54    | 3     | 40            | 52.1                      | M    |      |           |
| 12                               | ...        | 8                          | 54 | 89    | ...           | 20                        | 16.6 | R    | Feb. 1                           | ...                          | 36         | 39                         | 27    | 3     | 40            | 50.0                      | R    |      |           |
| 13                               | ...        | 8                          | 54 | 89    | ...           | 20                        | 16.6 | R    | 2                                | ...                          | 36         | 39                         | 21    | 3     | 40            | 51.0                      | R    |      |           |
| 18                               | ...        | 8                          | 54 | 85    | ...           | 20                        | 16.8 | R    | 7                                | ...                          | 36         | 38                         | 35    | 3     | 40            | 52.7                      | M    |      |           |
| <b>138 112 Tauri β</b>           |            |                            |    |       |               |                           |      |      | <b>144 53 Orionis κ</b>          |                              |            |                            |       |       |               |                           |      |      |           |
| Jan. 12                          | ...        | 5                          | 18 | 53.74 | ...           | 61                        | 29   | 33.5 | M                                | Jan. 19                      | ...        | 5                          | 42    | 12.56 | ...           | 99                        | 42   | 45.4 | M         |
| 15                               | ...        | 18                         | 53 | 76    | ...           | 29                        | 35.5 | M    | 27                               | ...                          | 42         | 12                         | 44    | ...   | 42            | 47.0                      | M    |      |           |
| 16                               | ...        | 18                         | 53 | 82    | ...           | 29                        | 35.7 | M    | 29                               | ...                          | 42         | 12                         | 39    | ...   | 42            | 46.3                      | M    |      |           |
| 17                               | ...        | 18                         | 53 | 82    | ...           | 29                        | 34.8 | M    | 30                               | ...                          | 42         | 12                         | 39    | ...   | 42            | 47.8                      | M    |      |           |
| <b>139 R. P. L. 40.</b>          |            |                            |    |       |               |                           |      |      | <b>144 53 Orionis κ</b>          |                              |            |                            |       |       |               |                           |      |      |           |
| Jan. 15                          | ...        | 5                          | 24 | 38.64 | 3             | 4                         | 51   | 36.5 | M                                | Jan. 19                      | ...        | 5                          | 42    | 12.56 | ...           | 99                        | 42   | 45.4 | M         |
| 16                               | ...        | 24                         | 38 | 05    | 3             | 51                        | 59.6 | M    | 27                               | ...                          | 42         | 12                         | 44    | ...   | 42            | 47.0                      | M    |      |           |
| 18                               | ...        | 24                         | 37 | 47    | 3             | 51                        | 56.7 | M    | 29                               | ...                          | 42         | 12                         | 39    | ...   | 42            | 46.3                      | M    |      |           |
|                                  |            |                            |    |       |               |                           |      |      |                                  | 30                           | ...        | 42                         | 12    | 39    | ...           | 42                        | 47.8 | M    |           |

Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.                 | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.                     | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|----------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|--------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                  |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                                      |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>145</b> <b>33 Aurigæ δ</b>    |            |                            |    |       |               |                           |    |      |           | <b>149</b> <b>51 Cephei (Hcv.).</b>  |            |                            |    |       |               |                           |    |      |           |
| Feb. 8                           | ...        | 5                          | 49 | 53.50 | ...           | 35                        | 43 | 34.6 | R         | Feb. 8                               | ...        | 6                          | 45 | 16.50 | 3             | 2                         | 46 | 27.1 | R         |
| 9                                | ...        |                            | 49 | 53.47 | ...           |                           | 43 | 34.3 | R         | 9                                    | ...        |                            | 45 | 16.62 | 3             |                           | 46 | 26.8 | R         |
| 10                               | ...        |                            | 49 | 53.51 | ...           |                           | 43 | 34.2 | R         | 10                                   | ...        |                            | 45 | 17.40 | 3             |                           | 46 | 26.2 | R         |
| 12                               | ...        |                            | 49 | 53.71 | ...           |                           | 43 | 32.6 | R         | 12                                   | ...        |                            | 45 | 16.94 | 3             |                           | 46 | 26.1 | R         |
| 13                               | ...        |                            | 49 | 53.55 | ...           |                           | 43 | 32.0 | R         | 13                                   | ...        |                            | 45 | 17.73 | 3             |                           | 46 | 27.5 | R         |
|                                  |            |                            |    |       |               |                           |    |      |           | 14                                   | ...        |                            | 45 | 17.27 | 3             |                           | 46 | 26.1 | R         |
|                                  |            |                            |    |       |               |                           |    |      |           | 15                                   | ...        |                            | 45 | 17.84 | 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 | 18.33 | 3             |                           | 46 | 25.9 | R         |
| <b>146</b> <b>R. P. L. 43.</b>   |            |                            |    |       |               |                           |    |      |           | <b>150</b> <b>Anon.—2nd Star.</b>    |            |                            |    |       |               |                           |    |      |           |
| Jan. 18                          | ...        | 6                          | 0  | 28.63 | 3             | 3                         | 14 | 15.6 | M         | Feb. 7                               | 9.5        | 6                          | 48 | 35.48 | ...           | 70                        | 33 | 39.0 | M         |
| 19                               | ...        |                            | 0  | 28.64 | 3             |                           | 14 | 15.5 | M         | 9                                    | 9.5        |                            | 48 | 35.55 | ...           |                           | 33 | 38.0 | R         |
| 20                               | ...        |                            | 0  | 28.48 | 3             |                           | 14 | 17.0 | M         | 12                                   | 9.5        |                            | 48 | 35.30 | ...           |                           | 33 | 37.9 | R         |
| 24                               | ...        |                            | 0  | 28.53 | 3             |                           | 14 | 15.5 | M         | 13                                   | 9.5        |                            | 48 | 35.54 | ...           |                           | 33 | 37.0 | R         |
| 25                               | ...        |                            | 0  | 28.05 | 3             |                           | 14 | 18.9 | M         |                                      |            |                            |    |       |               |                           |    |      |           |
| <b>R. P. L. 43.—s.p.</b>         |            |                            |    |       |               |                           |    |      |           | <b>151</b> <b>W. B. N. VI. 1448.</b> |            |                            |    |       |               |                           |    |      |           |
| Aug. 10                          | ...        | 6                          | 0  | 28.06 | 3             | 3                         | 14 | 15.2 | R         | Feb. 5                               | 9.0        | 6                          | 49 | 45.87 | ...           | 62                        | 3  | 33.8 | R         |
| 16                               | ...        |                            | 0  | 27.29 | 3             |                           | 14 | 13.5 | R         | 6                                    | 9.0        |                            | 49 | 45.85 | ...           |                           | 3  | 36.7 | M         |
| 18                               | ...        |                            | 0  | 27.53 | 3             |                           | 14 | 13.6 | R         | 8                                    | 9.0        |                            | 49 | 45.65 | ...           |                           | 3  | 41.3 | R         |
| 25                               | ...        |                            | 0  | 28.63 | 3             |                           | 14 | 13.4 | R         | 10                                   | 9.0        |                            | 49 | 45.72 | ...           |                           | 3  | 40.2 | R         |
|                                  |            |                            |    |       |               |                           |    |      |           | 14                                   | 9.0        |                            | 49 | 45.95 | ...           |                           | 3  | 39.4 | R         |
| <b>147</b> <b>7 Geminorum η</b>  |            |                            |    |       |               |                           |    |      |           | <b>152</b> <b>22 Canis Majoris.</b>  |            |                            |    |       |               |                           |    |      |           |
| Feb. 2                           | ...        | 6                          | 7  | 48.90 | ...           | 67                        | 27 | 36.4 | R         | Feb. 9                               | ...        | 6                          | 57 | 3.52  | ...           | 117                       | 46 | 6.6  | R         |
| 3                                | ...        |                            | 7  | 48.88 | ...           |                           | 27 | 36.9 | R         | 10                                   | ...        |                            | 57 | 3.57  | ...           |                           | 46 | 5.7  | R         |
| 5                                | ...        |                            | 7  | 48.91 | ...           |                           | 27 | 36.8 | R         | 12                                   | ...        |                            | 57 | 3.58  | ...           |                           | 46 | 4.3  | R         |
| 6                                | ...        |                            | 7  | 48.85 | ...           |                           | 27 | 35.4 | M         | 13                                   | ...        |                            | 57 | 3.55  | ...           |                           | 46 | 4.7  | R         |
| 7                                | ...        |                            | 7  | 48.76 | ...           |                           | 27 | 37.5 | M         | 14                                   | ...        |                            | 57 | 3.59  | ...           |                           | 46 | 5.4  | R         |
| 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         |                                      |            |                            |    |       |               |                           |    |      |           |
| <b>148</b> <b>31 Geminorum ξ</b> |            |                            |    |       |               |                           |    |      |           | <b>153</b> <b>3 Canis Minoris β</b>  |            |                            |    |       |               |                           |    |      |           |
| Feb. 6                           | ...        | 6                          | 38 | 43.28 | ...           | 76                        | 58 | 45.4 | M         | Feb. 9                               | ...        | 7                          | 20 | 48.35 | ...           | 81                        | 28 | 33.3 | R         |
| 7                                | ...        |                            | 38 | 43.42 | ...           |                           | 58 | 48.8 | M         | 10                                   | ...        |                            | 20 | 48.42 | ...           |                           | 28 | 31.6 | R         |
| 15                               | ...        |                            | 38 | 43.37 | ...           |                           | 58 | 45.0 | R         | 12                                   | ...        |                            | 20 | 48.33 | ...           |                           | 28 | 30.7 | R         |
| 16                               | ...        |                            | 38 | 43.37 | ...           |                           | 58 | 46.3 | R         | 13                                   | ...        |                            | 20 | 48.35 | ...           |                           | 28 | 30.9 | R         |
| 17                               | ...        |                            | 38 | 43.39 | ...           |                           | 58 | 45.2 | R         | 14                                   | ...        |                            | 20 | 48.35 | ...           |                           | 28 | 31.2 | R         |
| 19                               | ...        |                            | 38 | 43.34 | ...           |                           | 58 | 45.0 | R         | 15                                   | ...        |                            | 20 | 48.32 | ...           |                           | 28 | 32.8 | R         |
| 20                               | ...        |                            | 38 | 43.37 | ...           |                           | 58 | 47.2 | R         | 16                                   | ...        |                            | 20 | 48.29 | ...           |                           | 28 | 31.0 | R         |
| 21                               | ...        |                            | 38 | 43.30 | ...           |                           | 58 | 46.9 | R         | 17                                   | ...        |                            | 20 | 48.36 | ...           |                           | 28 | 33.7 | R         |
| 22                               | ...        |                            | 38 | 43.31 | ...           |                           | 58 | 46.5 | R         | 19                                   | ...        |                            | 20 | 48.34 | ...           |                           | 28 | 31.5 | R         |
| 23                               | ...        |                            | 38 | 43.32 | ...           |                           | 58 | 44.8 | 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. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.                    | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|---------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|-------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                       |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                                     |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>154</b> <i>77 Geminorum κ</i>      |            |                            |    |       |               |                           |    |      |           | <b>159</b> <i>R. P. L. 53.—s.p.</i> |            |                            |    |       |               |                           |    |      |           |
| Feb. 21                               | ...        | 7                          | 37 | 22.78 | ...           | 65                        | 19 | 23.2 | R         | July 28                             | ...        | 8                          | 30 | 38.26 | 3             | 4                         | 32 | 8.5  | R         |
| 22                                    | ...        |                            | 37 | 22.81 | ...           |                           | 19 | 21.5 | R         | Aug. 11                             | ...        |                            | 20 | 38.49 | 3             |                           | 32 | 7.7  | R         |
| 23                                    | ...        |                            | 37 | 22.95 | ...           |                           | 19 | 21.6 | R         | 13                                  | ...        |                            | 20 | 38.26 | 3             |                           | 32 | 9.4  | R         |
| 26                                    | ...        |                            | 37 | 22.98 | ...           |                           | 19 | 21.0 | R         | Oct. 24                             | ...        |                            | 20 | 38.04 | 3             |                           | 32 | 8.7  | R         |
| 27                                    | ...        |                            | 37 | 22.99 | ...           |                           | 19 | 20.3 | R         | 25                                  | ...        |                            | 20 | 38.06 | 3             |                           | 32 | 9.3  | R         |
| <b>155</b> <i>W. B. E. VII. 1127.</i> |            |                            |    |       |               |                           |    |      |           | <b>160</b> <i>Lalande 16797.</i>    |            |                            |    |       |               |                           |    |      |           |
| Feb. 6                                | 9.0        | 7                          | 38 | 32.46 | ...           | 81                        | 9  | 24.5 | M         | Feb. 7                              | 8.0        | 8                          | 27 | 6.59  | ...           | 76                        | 3  | 5.7  | M         |
| 9                                     | 9.0        |                            | 38 | 32.63 | ...           |                           | 9  | 26.0 | R         | 8                                   | 8.0        |                            | 27 | 6.60  | ...           |                           | 3  | 3.8  | R         |
| 12                                    | 9.0        |                            | 38 | 32.58 | ...           |                           | 9  | 23.8 | R         | 9                                   | 8.0        |                            | 27 | 6.52  | ...           |                           | 3  | 2.9  | R         |
| 16                                    | 9.0        |                            | 38 | 32.64 | ...           |                           | 9  | 22.6 | R         | 10                                  | 8.0        |                            | 27 | 6.63  | ...           |                           | 3  | 2.8  | R         |
| 17                                    | 9.0        |                            | 38 | 32.70 | ...           |                           | 9  | 26.3 | R         | 12                                  | 8.0        |                            | 27 | 6.73  | ...           |                           | 3  | 2.4  | R         |
| <b>156</b> <i>ξ Argús.</i>            |            |                            |    |       |               |                           |    |      |           | <b>161</b> <i>R. P. L. 55.—s.p.</i> |            |                            |    |       |               |                           |    |      |           |
| Feb. 14                               | ...        | 7                          | 44 | 22.48 | ...           | 114                       | 33 | 57.6 | R         | Sep. 14                             | ...        | 8                          | 31 | 32.19 | 3             | 5                         | 40 | 55.5 | M         |
| 15                                    | ...        |                            | 44 | 22.45 | ...           |                           | 33 | 57.6 | R         | Oct. 18                             | ...        |                            | 31 | 31.69 | 3             |                           | 40 | 55.3 | R         |
| 16                                    | ...        |                            | 44 | 22.49 | ...           |                           | 33 | 57.9 | R         | 22                                  | ...        |                            | 31 | 31.97 | 3             |                           | 40 | 56.3 | R         |
| 17                                    | ...        |                            | 44 | 22.49 | ...           |                           | 33 | 59.6 | R         | <b>162</b> <i>43 Cancri γ</i>       |            |                            |    |       |               |                           |    |      |           |
| 19                                    | ...        |                            | 44 | 22.55 | ...           |                           | 33 | 59.3 | R         | Feb. 17                             | ...        | 8                          | 36 | 30.78 | ...           | 68                        | 6  | 42.7 | R         |
| 20                                    | ...        |                            | 44 | 22.47 | ...           |                           | 33 | 59.8 | R         | 19                                  | ...        |                            | 36 | 30.73 | ...           |                           | 6  | 42.2 | R         |
| 21                                    | ...        |                            | 44 | 22.51 | ...           |                           | 33 | 59.2 | R         | 20                                  | ...        |                            | 36 | 30.73 | ...           |                           | 6  | 42.9 | R         |
| 22                                    | ...        |                            | 44 | 22.49 | ...           |                           | 33 | 59.2 | R         | 21                                  | ...        |                            | 36 | 30.77 | ...           |                           | 6  | 42.2 | R         |
| 23                                    | ...        |                            | 44 | 22.47 | ...           |                           | 34 | 1.3  | R         | 22                                  | ...        |                            | 36 | 30.79 | ...           |                           | 6  | 41.7 | R         |
| 24                                    | ...        |                            | 44 | 22.51 | ...           |                           | 33 | 59.1 | R         | 23                                  | ...        |                            | 36 | 30.79 | ...           |                           | 6  | 43.3 | R         |
| <b>157</b> <i>R. P. L. 48.—s.p.</i>   |            |                            |    |       |               |                           |    |      |           | <b>163</b> <i>R. P. L. 60.—s.p.</i> |            |                            |    |       |               |                           |    |      |           |
| Aug. 4                                | ...        | 7                          | 46 | 45.38 | 3             | 3                         | 58 | 4.3  | R         | Sep. 28                             | ...        | 8                          | 50 | 44.02 | 3             | 5                         | 21 | 10.9 | M         |
| 13                                    | ...        |                            | 46 | 45.11 | 3             |                           | 58 | 3.5  | R         | <b>164</b> <i>W. B. E. IX. 78.</i>  |            |                            |    |       |               |                           |    |      |           |
| 14                                    | ...        |                            | 46 | 44.28 | 3             |                           | 58 | 3.2  | R         | Feb. 13                             | 9.0        | 9                          | 6  | 31.24 | ...           | 77                        | 16 | 15.2 | R         |
| Sep. 4                                | ...        |                            | 46 | 44.31 | 3             |                           | 58 | 3.5  | M         | 14                                  | 9.0        |                            | 6  | 31.23 | ...           |                           | 16 | 15.8 | R         |
| 14                                    | ...        |                            | 46 | 45.19 | 3             |                           | 58 | 4.2  | M         | 15                                  | 9.0        |                            | 6  | 31.16 | ...           |                           | 16 | 16.3 | R         |
| <b>158</b> <i>Lalande 16364.</i>      |            |                            |    |       |               |                           |    |      |           | <b>164</b> <i>W. B. E. IX. 78.</i>  |            |                            |    |       |               |                           |    |      |           |
| Feb. 6                                | 8.0        | 8                          | 15 | 22.51 | ...           | 76                        | 0  | 16.9 | M         | 16                                  | 9.0        |                            | 6  | 31.32 | ...           |                           | 16 | 15.4 | R         |
| 7                                     | 8.0        |                            | 15 | 22.48 | ...           |                           | 0  | 18.8 | M         | 17                                  | 9.0        |                            | 6  | 31.37 | ...           |                           | 16 | 16.2 | R         |
| 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         |                                     |            |                            |    |       |               |                           |    |      |           |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.                    | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |   | Observer. | Number and Date.                                      | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|-------------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|---|-----------|---|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|
|                                     |            | h.                         | m.    | s.    |               | °                         | '  | "   |           |   |            | h.                         | m.    | s.    |               | °                         | '  | "    |           |
| <b>165</b> <i>ε Argus.</i>          |            |                            |       |       |               |                           |    |   |           | <b>170</b> <i>Lalande 19559.</i>                      |            |                            |       |       |               |                           |    |      |           |
| Feb. 23                             | ...        | 9                          | 13    | 57.46 | ...           | 148                       | 47 | 4.1   | R         | Feb. 19   | 7.0        | 9                          | 53    | 48.59 | ...           | 109                       | 47 | 56.6 | R         |
| 26                                  | ...        | 13                         | 57.37 | ...   | 47            | 6.3                       | R  | 20  | 7.0       | 53  | 48.61      | ...                        | 47    | 50.7  | R             |                           |    |      |           |
| 27                                  | ...        | 13                         | 57.34 | ...   | 47            | 6.5                       | R  | 21  | 7.0       | 53  | 48.60      | ...                        | 47    | 51.3  | R             |                           |    |      |           |
| 28                                  | ...        | 13                         | 57.32 | ...   | 47            | 4.7                       | R  | 22  | 7.0       | 53  | 48.58      | ...                        | 47    | 51.1  | R             |                           |    |      |           |
| Mar. 1                              | ...        | 13                         | 57.42 | ...   | 47            | 5.3                       | R  | 23  | 7.0       | 53  | 48.61      | ...                        | 47    | 51.0  | R             |                           |    |      |           |
| Apl. 3                              | ...        | 13                         | 57.62 | ...   | 47            | 6.9                       | M  | <b>171</b> <i>Lalande 19846.</i>                      |           |   |            |                            |       |       |               |                           |    |      |           |
| 4                                   | ...        | 13                         | 57.54 | ...   | 47            | 8.9                       | M  | Feb. 19   | 8.0       | 10  | 5          | 40.75                      | ...   | 107   | 3             | 28.3                      | R  |      |           |
| 5                                   | ...        | 13                         | 57.43 | ...   | 47            | 7.7                       | M  | 20  | 8.0       | 5   | 40.87      | ...                        | 3     | 29.4  | R             |                           |    |      |           |
| 6                                   | ...        | 13                         | 57.64 | ...   | 47            | 8.1                       | M  | 21  | 8.0       | 5   | 40.86      | ...                        | 3     | 30.3  | R             |                           |    |      |           |
| 7                                   | ...        | 13                         | 57.48 | ...   | 47            | 7.2                       | M  | 22  | 8.0       | 5   | 40.84      | ...                        | 3     | 29.9  | R             |                           |    |      |           |
| <b>166</b> <i>Lalande 18405.</i>    |            |                            |       |       |               |                           |    |   |           | Feb. 23    8.0    5    40.92    ...    3    32.6    R |            |                            |       |       |               |                           |    |      |           |
| Feb. 13                             | 8.0        | 9                          | 14    | 35.45 | ...           | 77                        | 32 | 42.6  | R         | <b>172</b> <i>33 Ursæ Majoris λ</i>                   |            |                            |       |       |               |                           |    |      |           |
| 15                                  | 8.0        | 14                         | 35.33 | ...   | 32            | 43.5                      | R  | Feb. 24    ...    10 10 1.86    ...    46 30 6.0    R |           |   |            |                            |       |       |               |                           |    |      |           |
| 17                                  | 8.0        | 14                         | 35.56 | ...   | 32            | 44.5                      | R  | <b>173</b> <i>W. B. E. X. 228.</i>                    |           |   |            |                            |       |       |               |                           |    |      |           |
| 19                                  | 8.0        | 14                         | 35.47 | ...   | 32            | 44.9                      | R  | Feb. 19   | 9.0       | 10  | 15         | 3.04                       | ...   | 104   | 0             | 29.3                      | R  |      |           |
| 21                                  | 8.0        | 14                         | 35.49 | ...   | 32            | 44.3                      | R  | 21  | 9.0       | 15  | 2.99       | ...                        | 0     | 30.1  | R             |                           |    |      |           |
| <b>167</b> <i>W. B. E. IX. 270.</i> |            |                            |       |       |               |                           |    |   |           | 23  | 9.0        | 15                         | 2.97  | ...   | 0             | 29.8                      | R  |      |           |
| Feb. 14                             | 9.0        | 9                          | 14    | 55.62 | ...           | 77                        | 15 | 40.4  | R         | 26  | 9.0        | 15                         | 3.12  | ...   | 0             | 29.2                      | R  |      |           |
| 16                                  | 9.0        | 14                         | 55.44 | ...   | 15            | 40.3                      | R  | 28  | 9.0       | 15  | 3.02       | ...                        | 0     | 28.4  | R             |                           |    |      |           |
| 20                                  | 9.0        | 14                         | 55.34 | ...   | 15            | 40.5                      | R  | <b>174</b> <i>Lalande 20089.</i>                      |           |   |            |                            |       |       |               |                           |    |      |           |
| 22                                  | 9.0        | 14                         | 55.29 | ...   | 15            | 40.8                      | R  | Feb. 20   | 7.5       | 10  | 15         | 10.63                      | ...   | 104   | 54            | 4.6                       | R  |      |           |
| 24                                  | 9.0        | 14                         | 55.41 | ...   | 15            | 39.4                      | R  | 22  | 7.5       | 15  | 10.54      | ...                        | 54    | 4.6   | R             |                           |    |      |           |
| <b>168</b> <i>κ Argus.</i>          |            |                            |       |       |               |                           |    |   |           | 24  | 7.5        | 15                         | 10.54 | ...   | 54            | 4.0                       | R  |      |           |
| Feb. 19                             | ...        | 9                          | 18    | 29.18 | ...           | 144                       | 30 | 40.4  | R         | 27  | 7.5        | 15                         | 10.45 | ...   | 54            | 3.2                       | R  |      |           |
| 20                                  | ...        | 18                         | 29.18 | ...   | 30            | 41.6                      | R  | Mar. 1  | 7.5       | 15  | 10.52      | ...                        | 54    | 4.8   | R             |                           |    |      |           |
| 21                                  | ...        | 18                         | 29.18 | ...   | 30            | 41.5                      | R  | <b>175</b> <i>Anon.</i>                               |           |   |            |                            |       |       |               |                           |    |      |           |
| 22                                  | ...        | 18                         | 29.19 | ...   | 30            | 41.4                      | R  | Apl. 10   | 9.7       | 10  | 16         | 1.97                       | ...   | 84    | 34            | 4.8                       | M  |      |           |
| 23                                  | ...        | 18                         | 29.23 | ...   | 30            | 39.8                      | R  | 11  | 9.7       | 16  | 1.94       | ...                        | 34    | 3.1   | M             |                           |    |      |           |
| <b>169</b> <i>R. P. L. 62.—s.p.</i> |            |                            |       |       |               |                           |    |   |           | 12  | 9.7        | 16                         | 1.95  | ...   | 34            | 1.6                       | M  |      |           |
| Sep. 14                             | ...        | 9                          | 21    | 24.92 | 3             | 2                         | 21 | 31.7  | M         | 13  | 9.7        | 16                         | 1.95  | ...   | 34            | 1.4                       | M  |      |           |
| 15                                  | ...        | 21                         | 23.97 | 3     | 21            | 32.7                      | 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. |     | No. of Wires. | Mean Polar Distance 1883. |       | Observer. | Number and Date.                    | Magnitude.  | Mean Right Ascension 1883. |    | No. of Wires. | Mean Polar Distance 1883. |       | Observer. |
|----------------------------------|------------|----------------------------|-----|---------------|---------------------------|-------|-----------|-------------------------------------|-------------|----------------------------|----|---------------|---------------------------|-------|-----------|
|                                  |            | h. m. s.                   |     |               | ° ' "                     | ° ' " |           |                                     |             | h. m. s.                   |    |               | ° ' "                     | ° ' " |           |
| <b>176</b> <i>Lalande 20205.</i> |            |                            |     |               |                           |       |           | <b>181</b> <i>84 Leonis τ</i>       |             |                            |    |               |                           |       |           |
| Apl. 6                           | 8.0        | 10 19 29.37                | ... | 8             | 50 7.3                    | M     | Feb. 26   | ...                                 | 11 21 55.23 | ...                        | 86 | 29 57.7       | R                         |       |           |
| 7                                | ...        | 19 29.29                   | ... |               | 50 9.2                    | M     | 27        | ...                                 | 21 55.26    | ...                        |    | 29 57.7       | R                         |       |           |
| 9                                | 8.0        | 19 29.48                   | ... |               | 50 6.8                    | M     | 28        | ...                                 | 21 55.27    | ...                        |    | 29 57.3       | R                         |       |           |
| 16                               | 8.0        | 19 29.28                   | ... |               | 50 8.7                    | M     | Mar. 1    | ...                                 | 21 55.18    | ...                        |    | 29 57.7       | R                         |       |           |
| 18                               | ...        | 19 29.48                   | ... |               | 50 7.1                    | M     | Apl. 3    | ...                                 | 21 55.16    | ...                        |    | 29 58.3       | M                         |       |           |
| <b>177</b> <i>Lalande 20521.</i> |            |                            |     |               |                           |       |           | <b>182</b> <i>Anon.</i>             |             |                            |    |               |                           |       |           |
| Feb. 19                          | 6.7        | 10 30 28.02                | ... | 99            | 58 33.4                   | R     | Apl. 9    | 9.5                                 | 11 22 33.40 | ...                        | 92 | 38 7.3        | M                         |       |           |
| 21                               | 6.7        | 30 28.07                   | ... |               | 58 34.1                   | R     | 10        | 9.5                                 | 22 33.32    | ...                        |    | 38 7.9        | M                         |       |           |
| 23                               | 6.7        | 30 28.05                   | ... |               | 58 34.2                   | R     | 11        | 9.5                                 | 22 33.44    | ...                        |    | 36 6.4        | M                         |       |           |
| 26                               | 6.7        | 30 28.07                   | ... |               | 58 34.1                   | R     | 12        | 9.5                                 | 22 33.37    | ...                        |    | 38 7.2        | M                         |       |           |
| 28                               | 6.7        | 30 28.08                   | ... |               | 58 33.8                   | R     | 13        | 9.5                                 | 22 33.36    | ...                        |    | 38 8.2        | M                         |       |           |
| <b>178</b> <i>Yarnall 4420.</i>  |            |                            |     |               |                           |       |           | <b>183</b> <i>R. P. L. 82.</i>      |             |                            |    |               |                           |       |           |
| Feb. 20                          | 7.0        | 10 30 42.68                | ... | 101           | 36 8.5                    | R     | Feb. 28   | ...                                 | 11 26 39.66 | 3                          | 3  | 44 15.9       | R                         |       |           |
| 22                               | 7.0        | 30 42.55                   | ... |               | 36 9.3                    | R     | Apl. 3    | ...                                 | 26 39.09    | 3                          |    | 44 13.1       | M                         |       |           |
| 24                               | 7.0        | 30 42.55                   | ... |               | 36 8.4                    | R     | 4         | ...                                 | 26 39.01    | 3                          |    | 44 15.5       | M                         |       |           |
| 27                               | 7.0        | 30 42.84                   | ... |               | 36 8.4                    | R     | 5         | ...                                 | 26 39.21    | 3                          |    | 44 14.3       | M                         |       |           |
| Mar. 1                           | 7.0        | 30 42.90                   | ... |               | 36 8.4                    | R     | 6         | ...                                 | 26 39.15    | 3                          |    | 44 15.8       | M                         |       |           |
| <b>179</b> <i>58 Leonis δ.</i>   |            |                            |     |               |                           |       |           | <b>183</b> <i>R. P. L. 82.—s.p.</i> |             |                            |    |               |                           |       |           |
| Feb. 21                          | ...        | 10 54 31.03                | ... | 85            | 45 17.1                   | R     | Feb. 28   | ...                                 | 11 26 38.71 | 3                          | 3  | 44 18.0       | R                         |       |           |
| 22                               | ...        | 54 31.03                   | ... |               | 45 17.1                   | R     | Apl. 23   | ...                                 | 26 38.71    | 3                          |    | 44 16.7       | R                         |       |           |
| 24                               | ...        | 54 31.01                   | ... |               | 45 16.4                   | R     | 25        | ...                                 | 26 38.39    | 3                          |    | 44 15.6       | R                         |       |           |
| 26                               | ...        | 54 31.05                   | ... |               | 45 15.9                   | R     | Nov. 9    | ...                                 | 26 39.39    | 3                          |    | 44 15.7       | M                         |       |           |
| 27                               | ...        | 54 31.06                   | ... |               | 45 15.2                   | R     | 12        | ...                                 | 26 38.20    | 3                          |    | 44 15.1       | M                         |       |           |
| 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     |           |                                     |             |                            |    |               |                           |       |           |
| <b>180</b> <i>70 Leonis θ</i>    |            |                            |     |               |                           |       |           |                                     |             |                            |    |               |                           |       |           |
| Feb. 26                          | ...        | 11 8 5.91                  | ... | 73            | 55 52.2                   | R     | Oct. 19   | ...                                 | 11 26 38.71 | 3                          | 3  | 44 18.0       | R                         |       |           |
| 27                               | ...        | 8 5.97                     | ... |               | 55 52.6                   | R     | 23        | ...                                 | 26 38.71    | 3                          |    | 44 16.7       | R                         |       |           |
| 28                               | ...        | 8 6.02                     | ... |               | 55 52.0                   | R     | 25        | ...                                 | 26 38.39    | 3                          |    | 44 15.6       | R                         |       |           |
| Mar. 1                           | ...        | 8 5.97                     | ... |               | 55 50.8                   | R     | Nov. 9    | ...                                 | 26 39.39    | 3                          |    | 44 15.7       | M                         |       |           |
| Apl. 3                           | ...        | 8 5.99                     | ... |               | 55 52.4                   | M     | 12        | ...                                 | 26 38.20    | 3                          |    | 44 15.1       | M                         |       |           |

Separate Results of Meridian Circle Observations in 1883.

| Number and Date.                    | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer.                       | Number and Date. | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|-------------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|---------------------------------|------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|
|                                     |            | h.                         | m.    | s.    |               | o.                        | '  | "    |                                 |                  |            | h.                         | m.    | s.    |               | o.                        | '  | "    |           |
| <b>184</b> <i>R. P. L. 87.—s.p.</i> |            |                            |       |       |               |                           |    |      | <b>190</b> <i>43 Virginis δ</i> |                  |            |                            |       |       |               |                           |    |      |           |
| Nov. 13                             | ...        | 11                         | 53    | 32.11 | 3             | 2                         | 21 | 15.2 | M                               | Apl. 9           | ...        | 12                         | 49    | 42.57 | ...           | 85                        | 57 | 56.7 | M         |
| 14                                  | ...        | 53                         | 32.22 | 2     | 21            | 16.6                      | M  |      | 10                              | ...              | 49         | 42.69                      | ...   | 57    | 57.6          | M                         |    |      |           |
| Dec. 6                              | ...        | 53                         | 29.48 | 3     | 21            | 14.1                      | R  |      | 11                              | ...              | 49         | 42.66                      | ...   | 57    | 58.4          | M                         |    |      |           |
| 7                                   | ...        | 53                         | 29.93 | 3     | 21            | 14.6                      | R  |      | 12                              | ...              | 49         | 42.71                      | ...   | 57    | 57.6          | M                         |    |      |           |
| <b>185</b> <i>8 Virginis π</i>      |            |                            |       |       |               |                           |    |      |                                 |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 3                              | ...        | 11                         | 54    | 52.47 | ...           | 82                        | 43 | 58.5 | M                               | 13               | ...        | 49                         | 42.69 | ...   | 57            | 56.9                      | M  |      |           |
| 4                                   | ...        | 54                         | 52.41 | ...   | 44            | 0.7                       | M  |      | 14                              | ...              | 49         | 42.62                      | ...   | 57    | 57.3          | M                         |    |      |           |
| 5                                   | ...        | 54                         | 52.49 | ...   | 43            | 59.8                      | M  |      | 15                              | ...              | 49         | 42.60                      | ...   | 57    | 57.8          | M                         |    |      |           |
| 6                                   | ...        | 54                         | 52.53 | ...   | 44            | 1.8                       | M  |      | 16                              | ...              | 49         | 42.64                      | ...   | 57    | 58.7          | M                         |    |      |           |
| 7                                   | ...        | 54                         | 52.59 | ...   | 43            | 59.9                      | M  |      | 17                              | ...              | 49         | 42.68                      | ...   | 57    | 56.4          | M                         |    |      |           |
| 9                                   | ...        | 54                         | 52.69 | ...   | 43            | 59.6                      | M  |      | 18                              | ...              | 49         | 42.66                      | ...   | 57    | 57.6          | M                         |    |      |           |
| 10                                  | ...        | 54                         | 52.72 | ...   | 43            | 59.6                      | M  |      | 19                              | ...              | 49         | 42.65                      | ...   | 57    | 56.0          | M                         |    |      |           |
| 11                                  | ...        | 54                         | 52.68 | ...   | 43            | 59.5                      | M  |      | 20                              | ...              | 49         | 42.58                      | ...   | 57    | 55.2          | M                         |    |      |           |
| 12                                  | ...        | 54                         | 52.65 | ...   | 43            | 59.8                      | M  |      | 21                              | ...              | 49         | 42.67                      | ...   | 57    | 56.9          | M                         |    |      |           |
| 13                                  | ...        | 54                         | 52.66 | ...   | 44            | 1.3                       | M  |      | 22                              | ...              | 49         | 42.58                      | ...   | 57    | 55.1          | M                         |    |      |           |
| <b>186</b> <i>R. P. L. 97.—s.p.</i> |            |                            |       |       |               |                           |    |      |                                 |                  |            |                            |       |       |               |                           |    |      |           |
| Nov. 12                             | ...        | 12                         | 37    | 35.28 | 3             | 5                         | 42 | 53.3 | M                               | 23               | ...        | 49                         | 42.55 | ...   | 57            | 58.3                      | M  |      |           |
| Dec. 6                              | ...        | 37                         | 33.56 | 3     | 42            | 51.8                      | R  |      | 24                              | ...              | 49         | 42.64                      | ...   | 57    | 57.6          | R                         |    |      |           |
| 7                                   | ...        | 37                         | 34.10 | 3     | 42            | 51.0                      | R  |      | 25                              | ...              | 49         | 42.63                      | ...   | 57    | 58.1          | R                         |    |      |           |
| <b>187</b> <i>R. P. L. 98.—s.p.</i> |            |                            |       |       |               |                           |    |      | <b>191</b> <i>47 Virginis ε</i> |                  |            |                            |       |       |               |                           |    |      |           |
| Nov. 9                              | ...        | 12                         | 48    | 8.00  | 3             | 5                         | 56 | 45.3 | M                               | Apl. 9           | ...        | 12                         | 56    | 21.11 | ...           | 78                        | 24 | 42.1 | M         |
| Dec. 29                             | ...        | 48                         | 7.96  | 3     | 56            | 44.8                      | R  |      | 10                              | ...              | 56         | 21.05                      | ...   | 24    | 45.2          | M                         |    |      |           |
| <b>188</b> <i>R. P. L. 99.—s.p.</i> |            |                            |       |       |               |                           |    |      |                                 |                  |            |                            |       |       |               |                           |    |      |           |
| Dec. 20                             | ...        | 12                         | 48    | 16.16 | 3             | 5                         | 57 | 4.4  | R                               | 11               | ...        | 56                         | 21.14 | ...   | 24            | 43.8                      | M  |      |           |
| 22                                  | ...        | 48                         | 16.23 | 3     | 57            | 4.8                       | R  |      | 12                              | ...              | 56         | 21.12                      | ...   | 24    | 42.4          | M                         |    |      |           |
| <b>189</b> <i>77 Ursæ Majoris ε</i> |            |                            |       |       |               |                           |    |      |                                 |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 3                              | ...        | 12                         | 48    | 52.48 | ...           | 33                        | 24 | 17.1 | M                               | 13               | ...        | 56                         | 21.15 | ...   | 24            | 43.8                      | M  |      |           |
| 4                                   | ...        | 48                         | 52.51 | ...   | 24            | 17.3                      | M  |      | 14                              | ...              | 56         | 21.05                      | ...   | 24    | 42.8          | M                         |    |      |           |
| 5                                   | ...        | 48                         | 52.52 | ...   | 24            | 18.5                      | M  |      | 15                              | ...              | 56         | 21.13                      | ...   | 24    | 43.3          | M                         |    |      |           |
| 6                                   | ...        | 48                         | 52.86 | ...   | 24            | 17.0                      | M  |      | 16                              | ...              | 56         | 21.13                      | ...   | 24    | 43.3          | M                         |    |      |           |
| 7                                   | ...        | 48                         | 52.57 | ...   | 24            | 18.7                      | 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                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 20                              | ...              | 56         | 21.13                      | ...   | 24    | 45.0          | M                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 21                              | ...              | 56         | 21.15                      | ...   | 24    | 41.6          | M                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 22                              | ...              | 56         | 21.16                      | ...   | 24    | 41.9          | M                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 23                              | ...              | 56         | 21.08                      | ...   | 24    | 43.6          | M                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 24                              | ...              | 56         | 21.18                      | ...   | 24    | 44.2          | M                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 25                              | ...              | 56         | 21.08                      | ...   | 24    | 43.6          | M                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 26                              | ...              | 56         | 21.18                      | ...   | 24    | 44.2          | M                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 27                              | ...              | 56         | 21.29                      | ...   | 24    | 43.8          | M                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 28                              | ...              | 56         | 21.29                      | ...   | 24    | 43.8          | M                         |    |      |           |
|                                     |            |                            |       |       |               |                           |    |      | 29                              | ...              | 56         | 21.22                      | ...   | 24    | 43.2          | 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.             |       |       | No. of Wires. | Mean Polar Distance 1883. |    |                                   | Observer. | Number and Date.              | Magnitude.                           | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |     |      | Observer. |      |   |
|------------------|------------|--|-------|-------|---------------|---------------------------|----|-----------------------------------|-----------|-------------------------------|--------------------------------------|----------------------------|-------|-------|---------------|---------------------------|-----|------|-----------|------|---|
|                  |            | h.                                     | m.    | s.    |               | o.                        | '  | "                                 |           |                               |                                      | h.                         | m.    | s.    |               | o.                        | '   | "    |           |      |   |
| May 4            | ...        | 12                                     | 56    | 21.20 | ...           | 78                        | 24 | 41.0                              | R         | <b>196</b><br>4 Bootis $\tau$ | ...                                  | 18                         | 41    | 42.20 | ...           | 71                        | 57  | 31.6 | M         |      |   |
| 5                | ...        | 56                                     | 21.21 | ...   | 24            | 41.2                      | R  | Apl. 9                            | ...       |                               | 41                                   | 42.08                      | ...   | 57    | 32.2          | M                         |     |      |           |      |   |
| 7                | ...        | 56                                     | 21.28 | ...   | 24            | 41.5                      | R  | 11                                | ...       |                               | 41                                   | 42.08                      | ...   | 57    | 32.2          | M                         |     |      |           |      |   |
| 8                | ...        | 56                                     | 21.26 | ...   | 24            | 41.7                      | R  | 12                                | ...       |                               | 41                                   | 42.08                      | ...   | 57    | 32.2          | M                         |     |      |           |      |   |
| 9                | ...        | 56                                     | 21.28 | ...   | 24            | 42.1                      | R  | 13                                | ...       |                               | 41                                   | 42.11                      | ...   | 57    | 31.5          | M                         |     |      |           |      |   |
| 10               | ...        | 56                                     | 21.22 | ...   | 24            | 38.7                      | R  | 14                                | ...       |                               | 41                                   | 42.08                      | ...   | 57    | 30.3          | M                         |     |      |           |      |   |
| 11               | ...        | 56                                     | 21.22 | ...   | 24            | 38.6                      | R  | 16                                | ...       |                               | 41                                   | 42.04                      | ...   | 57    | 32.2          | M                         |     |      |           |      |   |
| 12               | ...        | 56                                     | 21.23 | ...   | 24            | 39.5                      | R  | 17                                | ...       |                               | 41                                   | 42.12                      | ...   | 57    | 31.0          | M                         |     |      |           |      |   |
| 14               | ...        | 56                                     | 21.19 | ...   | 24            | 40.7                      | R  | 18                                | ...       |                               | 41                                   | 42.08                      | ...   | 57    | 30.6          | M                         |     |      |           |      |   |
| 15               | ...        | 56                                     | 21.08 | ...   | 24            | 40.0                      | R  | 19                                | ...       |                               | 41                                   | 42.14                      | ...   | 57    | 30.5          | M                         |     |      |           |      |   |
|                  |            |  |       |       |               |                           |    |                                   | 20        |                               | ...                                  | 41                         | 42.12 | ...   | 57            | 30.3                      | M   |      |           |      |   |
| <b>192</b>       |            | <i>R. P. L. 100—s.p.</i>               |       |       |               |                           |    |                                   |           |                               |                                      |                            |       |       |               |                           |     |      |           |      |   |
| Jan. 2           | ...        | 13                                     | 0     | 26.39 | 3             | 3                         | 29 | 7.4                               | R         |                               | <b>197</b><br>85 Ursa Majoris $\eta$ | May 3                      | ...   | 18    | 42            | 55.78                     | ... | 40   | 6         | 7.1  | R |
| Nov. 13          | ...        | 0                                      | 26.89 | 3     | 29            | 5.8                       | M  | 4                                 | ...       |                               |                                      | 42                         | 55.79 | ...   | 6             | 7.4                       | R   |      |           |      |   |
| Dec. 20          | ...        | 0                                      | 26.43 | 3     | 29            | 9.2                       | R  | 5                                 | ...       |                               |                                      | 42                         | 55.68 | ...   | 6             | 5.9                       | R   |      |           |      |   |
| 28               | ...        | 0                                      | 27.35 | 3     | 29            | 7.0                       | R  | 7                                 | ...       | 42                            |                                      | 55.62                      | ...   | 6     | 7.0           | R                         |     |      |           |      |   |
|                  |            |  |       |       |               |                           |    | 8                                 | ...       | 42                            |                                      | 55.70                      | ...   | 6     | 6.8           | R                         |     |      |           |      |   |
| <b>193</b>       |            | <i>51 Virginis <math>\theta</math></i> |       |       |               |                           |    |                                   | 9         | ...                           |                                      | 42                         | 55.71 | ...   | 6             | 6.5                       | R   |      |           |      |   |
| May 8            | ...        | 13                                     | 3     | 53.52 | ...           | 94                        | 54 | 50.3                              | R         | 10                            |                                      | ...                        | 42    | 55.71 | ...           | 6                         | 4.6 | R    |           |      |   |
| 4                | ...        | 3                                      | 53.50 | ...   | 54            | 48.1                      | R  | 11                                | ...       | 42                            |                                      | 55.61                      | ...   | 6     | 6.2           | R                         |     |      |           |      |   |
| 5                | ...        | 3                                      | 53.57 | ...   | 54            | 47.9                      | R  | 12                                | ...       | 42                            |                                      | 55.65                      | ...   | 6     | 6.2           | R                         |     |      |           |      |   |
| 7                | ...        | 3                                      | 53.55 | ...   | 54            | 48.9                      | R  | 14                                | ...       | 42                            |                                      | 55.66                      | ...   | 6     | 6.9           | R                         |     |      |           |      |   |
| 8                | ...        | 3                                      | 53.52 | ...   | 54            | 49.0                      | R  |                                   |           |                               |                                      |                            |       |       |               |                           |     |      |           |      |   |
| 9                | ...        | 3                                      | 53.47 | ...   | 54            | 49.5                      | R  | <b>198</b>                        |           |                               |                                      |                            |       |       |               |                           |     |      |           |      |   |
| 10               | ...        | 3                                      | 53.51 | ...   | 54            | 48.2                      | R  | <i>8 Bootis <math>\eta</math></i> |           |                               |                                      | Apl. 20                    | ...   | 13    | 49            | 6.70                      | ... | 71   | 0         | 57.2 | M |
| 11               | ...        | 3                                      | 53.63 | ...   | 54            | 48.7                      | R  | 21                                | ...       | 49                            |                                      | 6.66                       | ...   | 0     | 57.1          | M                         |     |      |           |      |   |
| 12               | ...        | 3                                      | 53.55 | ...   | 54            | 48.8                      | R  | 23                                | ...       | 49                            |                                      | 6.69                       | ...   | 0     | 55.4          | M                         |     |      |           |      |   |
| 14               | ...        | 3                                      | 53.55 | ...   | 54            | 48.8                      | R  | 24                                | ...       | 49                            | 6.76                                 | ...                        | 0     | 56.3  | M             |                           |     |      |           |      |   |
| 15               | ...        | 3                                      | 53.40 | ...   | 54            | 48.9                      | R  | 25                                | ...       | 49                            | 6.68                                 | ...                        | 0     | 57.1  | M             |                           |     |      |           |      |   |
|                  |            |  |       |       |               |                           |    | 26                                | ...       | 49                            | 6.70                                 | ...                        | 0     | 58.7  | M             |                           |     |      |           |      |   |
| <b>194</b>       |            | <i>R. P. L. 101.—s.p.</i>              |       |       |               |                           |    |                                   | 28        | ...                           | 49                                   | 6.81                       | ...   | 0     | 58.8          | M                         |     |      |           |      |   |
| Nov. 12          | ...        | 13                                     | 7     | 6.31  | 3             | 1                         | 43 | 20.6                              | M         | 30                            | ...                                  | 49                         | 6.69  | ...   | 0             | 56.2                      | M   |      |           |      |   |
|                  |            |  |       |       |               |                           |    |                                   | May 1     | ...                           | 49                                   | 6.82                       | ...   | 0     | 55.9          | R                         |     |      |           |      |   |
| <b>195</b>       |            | <i>79 Virginis <math>\zeta</math></i>  |       |       |               |                           |    |                                   | 2         | ...                           | 49                                   | 6.83                       | ...   | 0     | 56.1          | R                         |     |      |           |      |   |
| Apl. 16          | ...        | 13                                     | 28    | 44.04 | ...           | 89                        | 59 | 53.4                              | M         | <b>199</b>                    |                                      | <i>Anon.</i>               |       |       |               |                           |     |      |           |      |   |
| 17               | ...        | 28                                     | 44.06 | ...   | 59            | 51.3                      | M  | Apl. 11                           | 8.5       | 13                            | 50                                   | 24.49                      | ...   | 142   | 5             | 16.9                      | M   |      |           |      |   |
| 18               | ...        | 28                                     | 44.04 | ...   | 59            | 53.1                      | M  | 12                                | 8.5       | 50                            | 24.52                                | ...                        | 5     | 19.9  | M             |                           |     |      |           |      |   |
| 19               | ...        | 28                                     | 44.03 | ...   | 59            | 53.0                      | M  | 13                                | 8.5       | 50                            | 24.54                                | ...                        | 5     | 20.4  | M             |                           |     |      |           |      |   |
| 20               | ...        | 28                                     | 44.04 | ...   | 59            | 51.8                      | M  | 14                                | 8.5       | 50                            | 24.56                                | ...                        | 5     | 20.3  | M             |                           |     |      |           |      |   |
| 21               | ...        | 28                                     | 44.11 | ...   | 59            | 53.4                      | M  | 16                                | 8.5       | 50                            | 24.46                                | ...                        | 5     | 20.6  | 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  |                                   |           |                               |                                      |                            |       |       |               |                           |     |      |           |      |   |

Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.         | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.         | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|--------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|--------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                          |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                          |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>184</b>               |            |                            |    |       |               |                           |    |      |           | <b>190</b>               |            |                            |    |       |               |                           |    |      |           |
| <i>R. P. L. 87.—s.p.</i> |            |                            |    |       |               |                           |    |      |           | <i>43 Virginis δ</i>     |            |                            |    |       |               |                           |    |      |           |
| Nov. 13                  | ...        | 11                         | 53 | 32.11 | 3             | 2                         | 21 | 15.2 | M         | Apl. 9                   | ...        | 12                         | 49 | 42.57 | ...           | 85                        | 57 | 56.7 | M         |
| 14                       | ...        |                            | 53 | 32.22 | 2             |                           | 21 | 16.6 | M         | 10                       | ...        |                            | 49 | 42.68 | ...           |                           | 57 | 57.6 | M         |
| Dec. 6                   | ...        |                            | 53 | 29.48 | 3             |                           | 21 | 14.1 | R         | 11                       | ...        |                            | 49 | 42.66 | ...           |                           | 57 | 58.4 | M         |
| 7                        | ...        |                            | 53 | 29.93 | 3             |                           | 21 | 14.6 | R         | 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 | 58.4 | M         |
|                          |            |                            |    |       |               |                           |    |      |           | 21                       | ...        |                            | 49 | 42.66 | ...           |                           | 57 | 57.6 | M         |
|                          |            |                            |    |       |               |                           |    |      |           | 23                       | ...        |                            | 49 | 42.65 | ...           |                           | 57 | 58.0 | 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         |
| <b>185</b>               |            |                            |    |       |               |                           |    |      |           | <b>191</b>               |            |                            |    |       |               |                           |    |      |           |
| <i>8 Virginis π</i>      |            |                            |    |       |               |                           |    |      |           | <i>47 Virginis ε</i>     |            |                            |    |       |               |                           |    |      |           |
| Apl. 3                   | ...        | 11                         | 54 | 52.47 | ...           | 82                        | 43 | 58.5 | M         | Apl. 9                   | ...        | 12                         | 56 | 21.11 | ...           | 78                        | 24 | 42.1 | M         |
| 4                        | ...        |                            | 54 | 52.41 | ...           |                           | 44 | 0.7  | M         | 10                       | ...        |                            | 56 | 21.05 | ...           |                           | 24 | 45.2 | M         |
| 5                        | ...        |                            | 54 | 52.49 | ...           |                           | 43 | 59.8 | M         | 11                       | ...        |                            | 56 | 21.14 | ...           |                           | 24 | 43.8 | M         |
| 6                        | ...        |                            | 54 | 52.53 | ...           |                           | 44 | 1.8  | M         | 12                       | ...        |                            | 56 | 21.12 | ...           |                           | 24 | 42.4 | M         |
| 7                        | ...        |                            | 54 | 52.59 | ...           |                           | 43 | 59.9 | M         | 13                       | ...        |                            | 56 | 21.15 | ...           |                           | 24 | 43.8 | M         |
| 9                        | ...        |                            | 54 | 52.69 | ...           |                           | 43 | 59.6 | M         | 14                       | ...        |                            | 56 | 21.05 | ...           |                           | 24 | 42.8 | M         |
| 10                       | ...        |                            | 54 | 52.72 | ...           |                           | 43 | 59.6 | M         | 16                       | ...        |                            | 56 | 21.13 | ...           |                           | 24 | 43.3 | M         |
| 11                       | ...        |                            | 54 | 52.68 | ...           |                           | 43 | 59.5 | M         | 17                       | ...        |                            | 56 | 21.07 | ...           |                           | 24 | 43.4 | M         |
| 12                       | ...        |                            | 54 | 52.65 | ...           |                           | 43 | 59.8 | M         | 18                       | ...        |                            | 56 | 21.11 | ...           |                           | 24 | 44.0 | M         |
| 13                       | ...        |                            | 54 | 52.66 | ...           |                           | 44 | 1.3  | 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         |
| <b>186</b>               |            |                            |    |       |               |                           |    |      |           | <b>187</b>               |            |                            |    |       |               |                           |    |      |           |
| <i>R. P. L. 97.—s.p.</i> |            |                            |    |       |               |                           |    |      |           | <i>R. P. L. 98.—s.p.</i> |            |                            |    |       |               |                           |    |      |           |
| Nov. 12                  | ...        | 12                         | 37 | 35.28 | 3             | 5                         | 42 | 53.3 | M         | Nov. 9                   | ...        | 12                         | 48 | 8.00  | 3             | 5                         | 56 | 45.3 | M         |
| Dec. 6                   | ...        |                            | 37 | 33.56 | 3             |                           | 42 | 51.8 | R         | Dec. 29                  | ...        |                            | 48 | 7.96  | 3             |                           | 56 | 44.8 | R         |
| 7                        | ...        |                            | 37 | 34.10 | 3             |                           | 42 | 51.0 | R         |                          |            |                            |    |       |               |                           |    |      |           |
| <b>187</b>               |            |                            |    |       |               |                           |    |      |           | <b>188</b>               |            |                            |    |       |               |                           |    |      |           |
| <i>R. P. L. 98.—s.p.</i> |            |                            |    |       |               |                           |    |      |           | <i>R. P. L. 99.—s.p.</i> |            |                            |    |       |               |                           |    |      |           |
| Nov. 9                   | ...        | 12                         | 48 | 8.00  | 3             | 5                         | 56 | 45.3 | M         | Dec. 20                  | ...        | 12                         | 48 | 16.16 | 3             | 5                         | 57 | 4.4  | R         |
| Dec. 29                  | ...        |                            | 48 | 7.96  | 3             |                           | 56 | 44.8 | R         | 22                       | ...        |                            | 48 | 16.23 | 3             |                           | 57 | 4.8  | R         |
| <b>188</b>               |            |                            |    |       |               |                           |    |      |           | <b>189</b>               |            |                            |    |       |               |                           |    |      |           |
| <i>R. P. L. 99.—s.p.</i> |            |                            |    |       |               |                           |    |      |           | <i>77 Ursæ Majoris ε</i> |            |                            |    |       |               |                           |    |      |           |
| Dec. 20                  | ...        | 12                         | 48 | 16.16 | 3             | 5                         | 57 | 4.4  | R         | Apl. 3                   | ...        | 12                         | 48 | 52.48 | ...           | 33                        | 24 | 17.1 | M         |
| 22                       | ...        |                            | 48 | 16.23 | 3             |                           | 57 | 4.8  | R         | 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         |



## Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date. | Magnitude.                | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |            | Observer.         | Number and Date.                | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
|------------------|---------------------------|----------------------------|-------|-------|---------------|---------------------------|----|------------|-------------------|---------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|--|-------|-----|----|-------|-----|----|---|-----|---|----|-------|-----|---|-----|---|
|                  |                           | h.                         | m.    | s.    |               | o.                        | '  | "          |                   |                                 |            | h.                         | m.    | s.    |               | o.                        | '  | "    |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| May 4            | ...                       | 12                         | 56    | 21.20 | ...           | 78                        | 24 | 41.0       | R                 | <b>196</b><br><i>4 Bootis τ</i> | ...        | 18                         | 41    | 42.20 | ...           | 71                        | 57 | 31.6 | M         |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 5                | ...                       | 56                         | 21.21 | ...   | 24            | 41.2                      | R  | 11         | ...               |                                 |            |                            |       |       |               |                           |    |      |           | 41                                     | 42.08 | ... | 57 | 32.2  | M   |    |   |     |   |    |       |     |   |     |   |
| 7                | ...                       | 56                         | 21.28 | ...   | 24            | 41.5                      | R  | 12         | ...               |                                 |            |                            |       |       |               |                           |    |      |           | 41                                     | 42.08 | ... | 57 | 32.2  | M   |    |   |     |   |    |       |     |   |     |   |
| 8                | ...                       | 56                         | 21.26 | ...   | 24            | 41.7                      | R  | 13         | ...               |                                 |            |                            |       |       |               |                           |    |      |           | 41                                     | 42.11 | ... | 57 | 31.5  | M   |    |   |     |   |    |       |     |   |     |   |
| 9                | ...                       | 56                         | 21.28 | ...   | 24            | 42.1                      | R  | 14         | ...               |                                 |            |                            |       |       |               |                           |    |      |           | 41                                     | 42.08 | ... | 57 | 30.3  | M   |    |   |     |   |    |       |     |   |     |   |
| 10               | ...                       | 56                         | 21.22 | ...   | 24            | 38.7                      | R  | 16         | ...               |                                 |            |                            |       |       |               |                           |    |      |           | 41                                     | 42.04 | ... | 57 | 32.2  | M   |    |   |     |   |    |       |     |   |     |   |
| 11               | ...                       | 56                         | 21.22 | ...   | 24            | 38.6                      | R  | 17         | ...               |                                 |            |                            |       |       |               |                           |    |      |           | 41                                     | 42.12 | ... | 57 | 31.0  | M   |    |   |     |   |    |       |     |   |     |   |
| 12               | ...                       | 56                         | 21.23 | ...   | 24            | 39.5                      | R  | 18         | ...               |                                 |            |                            |       |       |               |                           |    |      |           | 41                                     | 42.03 | ... | 57 | 30.6  | M   |    |   |     |   |    |       |     |   |     |   |
| 14               | ...                       | 56                         | 21.19 | ...   | 24            | 40.7                      | R  | 19         | ...               |                                 |            |                            |       |       |               |                           |    |      |           | 41                                     | 42.14 | ... | 57 | 30.5  | M   |    |   |     |   |    |       |     |   |     |   |
| 15               | ...                       | 56                         | 21.08 | ...   | 24            | 40.0                      | R  | 20         | ...               |                                 |            |                            |       |       |               |                           |    |      |           | 41                                     | 42.12 | ... | 57 | 30.3  | M   |    |   |     |   |    |       |     |   |     |   |
| <b>192</b>       | <i>R. P. L. 100—s.p.</i>  |                            |       |       |               |                           |    |            |                   |                                 |            |                            |       |       |               |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| Jan. 2           | ...                       | 13                         | 0     | 26.39 | 3             | 3                         | 29 | 7.4        | R                 |                                 |            |                            |       |       |               |                           |    |      |           | <b>197</b><br><i>85 Ursæ Majoris η</i> | ...   | 18  | 42 | 55.78 | ... | 40 | 6 | 7.1 | R |    |       |     |   |     |   |
| Nov. 18          | ...                       | 0                          | 26.89 | 3     | 29            | 5.8                       | M  | 4          | ...               |                                 |            |                            |       |       |               |                           |    |      |           |  |       |     |    |       |     |    |   |     |   | 42 | 55.79 | ... | 6 | 7.4 | R |
| Dec. 20          | ...                       | 0                          | 26.43 | 3     | 29            | 9.2                       | R  | 5          | ...               |                                 |            |                            |       |       |               |                           |    |      |           |  |       |     |    |       |     |    |   |     |   | 42 | 55.68 | ... | 6 | 5.9 | R |
| 28               | ...                       | 0                          | 27.35 | 3     | 29            | 7.0                       | R  | 7          | ...               |                                 |            |                            |       |       |               |                           |    |      |           |  |       |     |    |       |     |    |   |     |   | 42 | 55.62 | ... | 6 | 7.0 | R |
| <b>193</b>       | <i>51 Virginis θ</i>      |                            |       |       |               |                           |    |            |                   |                                 |            |                            |       |       |               |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| May 3            | ...                       | 18                         | 3     | 53.52 | ...           | 94                        | 54 | 50.3       | R                 | 8                               | ...        | 42                         | 55.70 | ...   | 6             | 6.3                       | R  |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 4                | ...                       | 3                          | 53.50 | ...   | 54            | 48.1                      | R  | 9          | ...               | 42                              | 55.71      | ...                        | 6     | 6.5   | R             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 5                | ...                       | 3                          | 53.57 | ...   | 54            | 47.9                      | R  | 10         | ...               | 42                              | 55.71      | ...                        | 6     | 4.6   | R             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 7                | ...                       | 3                          | 53.55 | ...   | 54            | 48.9                      | R  | 11         | ...               | 42                              | 55.61      | ...                        | 6     | 6.2   | R             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 8                | ...                       | 3                          | 53.52 | ...   | 54            | 49.0                      | R  | 12         | ...               | 42                              | 55.65      | ...                        | 6     | 6.2   | R             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 9                | ...                       | 3                          | 53.47 | ...   | 54            | 49.5                      | R  | 14         | ...               | 42                              | 55.66      | ...                        | 6     | 6.9   | R             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 10               | ...                       | 3                          | 53.51 | ...   | 54            | 48.2                      | R  | <b>198</b> | <i>8 Bootis η</i> |                                 |            |                            |       |       |               |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 11               | ...                       | 3                          | 53.63 | ...   | 54            | 48.7                      | R  | Apl. 20    | ...               | 18                              | 49         | 6.70                       | ...   | 71    | 0             | 57.2                      | M  |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 12               | ...                       | 3                          | 53.55 | ...   | 54            | 48.8                      | R  | 21         | ...               | 49                              | 6.66       | ...                        | 0     | 57.1  | M             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 14               | ...                       | 3                          | 53.55 | ...   | 54            | 48.8                      | R  | 22         | ...               | 49                              | 6.69       | ...                        | 0     | 55.4  | M             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 15               | ...                       | 3                          | 53.40 | ...   | 54            | 48.9                      | R  | 24         | ...               | 49                              | 6.76       | ...                        | 0     | 56.3  | M             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| <b>194</b>       | <i>R. P. L. 101.—s.p.</i> |                            |       |       |               |                           |    |            |                   |                                 |            |                            |       |       |               |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| Nov. 12          | ...                       | 13                         | 7     | 6.31  | 3             | 1                         | 48 | 20.6       | M                 | 25                              | ...        | 49                         | 6.68  | ...   | 0             | 57.1                      | M  |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| <b>195</b>       | <i>79 Virginis ζ</i>      |                            |       |       |               |                           |    |            |                   | 26                              | ...        | 49                         | 6.70  | ...   | 0             | 58.7                      | M  |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| Apl. 16          | ...                       | 18                         | 28    | 44.04 | ...           | 89                        | 59 | 53.4       | M                 | 28                              | ...        | 49                         | 6.81  | ...   | 0             | 58.8                      | M  |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 17               | ...                       | 28                         | 44.06 | ...   | 59            | 51.3                      | M  | 30         | ...               | 49                              | 6.69       | ...                        | 0     | 56.2  | M             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 18               | ...                       | 28                         | 44.04 | ...   | 59            | 53.1                      | M  | May 1      | ...               | 49                              | 6.82       | ...                        | 0     | 55.9  | R             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 19               | ...                       | 28                         | 44.03 | ...   | 59            | 53.0                      | M  | 2          | ...               | 49                              | 6.83       | ...                        | 0     | 56.1  | R             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 20               | ...                       | 28                         | 44.04 | ...   | 59            | 51.8                      | M  | <b>199</b> | <i>Anon.</i>      |                                 |            |                            |       |       |               |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 21               | ...                       | 28                         | 44.11 | ...   | 59            | 53.4                      | M  | Apl. 11    | 8.5               | 18                              | 50         | 24.49                      | ...   | 142   | 5             | 16.9                      | M  |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 23               | ...                       | 28                         | 44.08 | ...   | 59            | 50.8                      | M  | 12         | 8.5               | 50                              | 24.52      | ...                        | 5     | 19.9  | M             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 24               | ...                       | 28                         | 44.07 | ...   | 59            | 51.1                      | M  | 13         | 8.5               | 50                              | 24.54      | ...                        | 5     | 20.4  | M             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 25               | ...                       | 28                         | 44.15 | ...   | 59            | 52.4                      | M  | 14         | 8.5               | 50                              | 24.56      | ...                        | 5     | 20.3  | M             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |
| 26               | ...                       | 28                         | 44.14 | ...   | 59            | 52.0                      | M  | 16         | 8.5               | 50                              | 24.46      | ...                        | 5     | 20.6  | M             |                           |    |      |           |  |       |     |    |       |     |    |   |     |   |    |       |     |   |     |   |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.                     | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.               | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|--------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|--------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                      |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                                |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>200</b> <i>R. P. L. 108.—s.p.</i> |            |                            |    |       |               |                           |    |      |           | <b>208</b> <i>Stone 7947.</i>  |            |                            |    |       |               |                           |    |      |           |
| Dec. 28                              | ...        | 14                         | 1  | 29.77 | 3             | 3                         | 40 | 55.6 | R         | Apl. 20                        | ...        | 14                         | 29 | 31.34 | ...           | 157                       | 41 | 41.2 | M         |
|                                      |            |                            |    |       |               |                           |    |      |           | 21                             | 7.0        |                            | 29 | 31.29 | ...           |                           | 41 | 42.0 | M         |
| <b>201</b> <i>Taylor 6609.</i>       |            |                            |    |       |               |                           |    |      |           | <b>209</b> <i>Taylor 6811.</i> |            |                            |    |       |               |                           |    |      |           |
| Apl. 25                              | ...        | 14                         | 5  | 40.88 | ...           | 131                       | 5  | 32.9 | M         | Apl. 25                        | 7.0        | 14                         | 30 | 6.62  | ...           | 132                       | 36 | 6.2  | M         |
| 26                                   | ...        |                            | 5  | 40.72 | ...           |                           | 5  | 34.2 | M         | 26                             | 7.0        |                            | 30 | 6.65  | ...           |                           | 36 | 6.9  | M         |
| 30                                   | ...        |                            | 5  | 40.71 | ...           |                           | 5  | 32.9 | M         | 30                             | ...        |                            | 30 | 6.60  | ...           |                           | 36 | 5.1  | M         |
| May 1                                | ...        |                            | 5  | 40.98 | ...           |                           | 5  | 31.5 | R         | May 1                          | 7.0        |                            | 30 | 6.56  | ...           |                           | 36 | 5.0  | R         |
| 2                                    | ...        |                            | 5  | 40.93 | ...           |                           | 5  | 32.0 | R         | 2                              | 7.0        |                            | 30 | 6.55  | ...           |                           | 36 | 4.0  | R         |
| <b>202</b> <i>Stone 7816.—2nd.</i>   |            |                            |    |       |               |                           |    |      |           | <b>210</b> <i>Stone 7969.</i>  |            |                            |    |       |               |                           |    |      |           |
| Apl. 26                              | ...        | 14                         | 12 | 49.00 | ...           | 132                       | 31 | 12.4 | M         | May 4                          | 7.5        | 14                         | 32 | 17.08 | ...           | 129                       | 3  | 27.4 | R         |
| 30                                   | ...        |                            | 12 | 48.77 | ...           |                           | 31 | 13.7 | M         | 10                             | 7.5        |                            | 32 | 17.11 | ...           |                           | 3  | 26.8 | R         |
| May 1                                | ...        |                            | 12 | 48.99 | ...           |                           | 31 | 13.9 | R         | <b>211</b> <i>Anon.</i>        |            |                            |    |       |               |                           |    |      |           |
| 2                                    | ...        |                            | 12 | 49.00 | ...           |                           | 31 | 13.5 | R         | May 5                          | 7.0        | 14                         | 35 | 28.51 | ...           | 151                       | 25 | 42.9 | R         |
| 3                                    | ...        |                            | 12 | 49.02 | ...           |                           | 31 | 13.3 | R         | <b>212</b> <i>Anon.</i>        |            |                            |    |       |               |                           |    |      |           |
| <b>203</b> <i>Anon.</i>              |            |                            |    |       |               |                           |    |      |           | Apl. 19                        | ...        | 14                         | 33 | 46.84 | ...           | 138                       | 6  | 32.4 | M         |
| Apl. 23                              | ...        | 14                         | 13 | 8.18  | ...           | 151                       | 0  | 41.2 | M         | <b>213</b> <i>Taylor 6891.</i> |            |                            |    |       |               |                           |    |      |           |
| <b>204</b> <i>Stone 7826.</i>        |            |                            |    |       |               |                           |    |      |           | Apl. 25                        | 7.0        | 14                         | 39 | 56.14 | ...           | 133                       | 3  | 53.0 | M         |
| Apl. 20                              | ...        | 14                         | 14 | 9.26  | ...           | 156                       | 6  | 31.2 | M         | 26                             | 7.0        |                            | 39 | 56.22 | ...           |                           | 3  | 49.7 | M         |
| 21                                   | 7.0        |                            | 14 | 9.45  | ...           |                           | 6  | 32.4 | M         | 30                             | ...        |                            | 39 | 55.92 | ...           |                           | 3  | 50.6 | M         |
| <b>205</b> <i>Anon.</i>              |            |                            |    |       |               |                           |    |      |           | May 1                          | 7.0        |                            | 39 | 56.07 | ...           |                           | 3  | 49.6 | R         |
| May 2                                | 7.0        | 14                         | 21 | 19.48 | ...           | 150                       | 19 | 33.0 | R         | 2                              | 7.0        |                            | 39 | 56.03 | ...           |                           | 3  | 51.0 | R         |
| 4                                    | 7.0        |                            | 21 | 19.59 | ...           |                           | 19 | 32.5 | R         | <b>214</b> <i>Anon.</i>        |            |                            |    |       |               |                           |    |      |           |
| 7                                    | 7.0        |                            | 21 | 19.75 | ...           |                           | 19 | 32.0 | R         | May 8                          | 7.5        | 14                         | 42 | 47.95 | ...           | 126                       | 54 | 24.0 | R         |
| <b>206</b> <i>Anon.</i>              |            |                            |    |       |               |                           |    |      |           | 9                              | 7.5        |                            | 42 | 47.95 | ...           |                           | 54 | 24.2 | R         |
| Apl. 21                              | 8.7        | 14                         | 21 | 30.59 | ...           | 150                       | 17 | 36.0 | M         | 10                             | 7.5        |                            | 42 | 48.05 | ...           |                           | 54 | 24.5 | R         |
| 24                                   | 8.7        |                            | 21 | 30.46 | ...           |                           | 17 | 33.6 | M         | 11                             | 7.5        |                            | 42 | 48.05 | ...           |                           | 54 | 24.2 | R         |
| May 3                                | 9.0        |                            | 21 | 30.34 | ...           |                           | 17 | 32.5 | R         | 12                             | 7.5        |                            | 42 | 48.20 | ...           |                           | 54 | 24.9 | R         |
| 5                                    | 9.0        |                            | 21 | 30.44 | ...           |                           | 17 | 31.3 | R         | <b>215</b> <i>Taylor 6925.</i> |            |                            |    |       |               |                           |    |      |           |
| 9                                    | 9.0        |                            | 21 | 30.40 | ...           |                           | 17 | 32.8 | R         | Apl. 28                        | ...        | 14                         | 45 | 30.81 | ...           | 127                       | 19 | 12.8 | M         |
| <b>207</b> <i>Stone 7897.</i>        |            |                            |    |       |               |                           |    |      |           | 30                             | ...        |                            | 45 | 30.66 | ...           |                           | 19 | 14.3 | M         |
| Apl. 19                              | ...        | 14                         | 23 | 7.93  | ...           | 129                       | 57 | 14.7 | M         | May 1                          | ...        |                            | 45 | 30.67 | ...           |                           | 19 | 13.8 | R         |
| 20                                   | ...        |                            | 23 | 7.98  | ...           |                           | 57 | 14.3 | M         | 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. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer.               | Number and Date.                    | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|---|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-------------------------|-------------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|   |            | h.                         | m.    | s.    |               | o.                        | '    | "    |                         |                                     |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |
| <b>216</b> <i>Anon.</i>                     |            |                            |       |       |               |                           |      |      |                         | <b>222</b> <i>Taylor 7001.</i>      |            |                            |       |       |               |                           |      |      |           |
| Apl. 19                                     | ...        | 14                         | 47    | 5.45  | ...           | 181                       | 33   | 52.9 | M                       | Apl. 25                             | ...        | 14                         | 56    | 15.36 | ...           | 125                       | 28   | 53.9 | M         |
| 21  | 7.5        | 47                         | 5.53  | ...   |               | 33                        | 53.3 | M    | 26                      | ...                                 | 56         | 15.55                      | ...   |       | 28            | 54.9                      | M    |      |           |
| 24  | 7.5        | 47                         | 5.47  | ...   |               | 33                        | 52.6 | M    | 28                      | ...                                 | 56         | 15.60                      | ...   |       | 28            | 53.3                      | M    |      |           |
| <b>217</b> <i>Anon.</i>                     |            |                            |       |       |               |                           |      |      |                         | <b>223</b> <i>Taylor 7027.</i>      |            |                            |       |       |               |                           |      |      |           |
| Apl. 20                                     | ...        | 14                         | 48    | 10.24 | ...           | 126                       | 41   | 5.0  | M                       | Apl. 19                             | ...        | 14                         | 58    | 53.17 | ...           | 126                       | 48   | 33.1 | 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    |                         |                                     |            |                            |       |       |               |                           |      |      |           |
| <b>218</b> <i>7 Ursæ Minoris β, Var. 1.</i> |            |                            |       |       |               |                           |      |      |                         | <b>224</b> <i>27 Libræ β</i>        |            |                            |       |       |               |                           |      |      |           |
| May 9                                       | ...        | 14                         | 51    | 3.44  | ...           | 15                        | 21   | 58.7 | R                       | Apl. 30                             | ...        | 15                         | 10    | 42.72 | ...           | 98                        | 57   | 4.0  | M         |
| 10  | ...        | 51                         | 3.42  | ...   |               | 21                        | 58.6 | R    | May 1                   | ...                                 | 10         | 42.67                      | ...   |       | 57            | 0.8                       | R    |      |           |
| 11  | ...        | 51                         | 3.50  | ...   |               | 21                        | 58.7 | R    | 2                       | ...                                 | 10         | 42.65                      | ...   |       | 57            | 1.5                       | R    |      |           |
| 12  | ...        | 51                         | 3.29  | ...   |               | 21                        | 56.7 | R    | 3                       | ...                                 | 10         | 42.60                      | ...   |       | 57            | 1.5                       | R    |      |           |
| 14  | ...        | 51                         | 3.42  | ...   |               | 21                        | 56.2 | R    | 5                       | ...                                 | 10         | 42.69                      | ...   |       | 56            | 59.8                      | R    |      |           |
| <b>219</b> <i>Stone 8165.</i>               |            |                            |       |       |               |                           |      |      |                         | <b>225</b> <i>R. P. L. 114—s.p.</i> |            |                            |       |       |               |                           |      |      |           |
| May 2                                       | 7.0        | 14                         | 52    | 35.28 | ...           | 129                       | 19   | 46.8 | R                       | Jan. 15                             | ...        | 15                         | 15    | 21.11 | 3             | 2                         | 19   | 12.0 | M         |
| 3   | 7.0        | 52                         | 35.24 | ...   |               | 19                        | 45.8 | R    | 16                      | ...                                 | 15         | 18.75                      | 3     |       | 19            | 6.9                       | M    |      |           |
| 4   | 7.0        | 52                         | 35.16 | ...   |               | 19                        | 45.7 | R    | 17                      | ...                                 | 15         | 19.82                      | 3     |       | 19            | 7.2                       | M    |      |           |
| 7   | 7.0        | 52                         | 35.26 | ...   |               | 19                        | 44.8 | R    | <b>226</b> <i>Anon.</i> |                                     |            |                            |       |       |               |                           |      |      |           |
| 8   | 7.0        | 52                         | 35.15 | ...   |               | 19                        | 44.7 | R    | May 28                  | 9.0                                 | 15         | 37                         | 31.17 | ...   | 155           | 8                         | 44.9 | R    |           |
| <b>220</b> <i>R. P. L. 110.</i>             |            |                            |       |       |               |                           |      |      |                         | <b>227</b> <i>24 Serpentis α</i>    |            |                            |       |       |               |                           |      |      |           |
| May 5                                       | ...        | 14                         | 52    | 52.85 | 3             | 3                         | 34   | 3.5  | R                       | May 12                              | ...        | 15                         | 38    | 30.39 | ...           | 83                        | 12   | 17.9 | R         |
| <b>221</b> <i>Anon.</i>                     |            |                            |       |       |               |                           |      |      |                         | <b>228</b> <i>R. P. L. 110—s.p.</i> |            |                            |       |       |               |                           |      |      |           |
| Apl. 19                                     | ...        | 14                         | 53    | 29.66 | ...           | 131                       | 49   | 19.8 | M                       | Jan. 12                             | ...        | 14                         | 52    | 52.78 | 8             | 3                         | 34   | 7.9  | M         |
| 20  | ...        | 53                         | 29.61 | ...   |               | 49                        | 18.0 | M    | 16                      | ...                                 | 52         | 54.46                      | 4     |       | 34            | 7.1                       | M    |      |           |
| 21  | 8.0        | 53                         | 29.58 | ...   |               | 49                        | 19.5 | M    | 17                      | ...                                 | 52         | 54.27                      | 3     |       | 34            | 4.5                       | M    |      |           |
| <b>222</b> <i>Taylor 7001.</i>              |            |                            |       |       |               |                           |      |      |                         | <b>229</b> <i>Anon.</i>             |            |                            |       |       |               |                           |      |      |           |
| Apl. 25                                     | ...        | 14                         | 56    | 15.36 | ...           | 125                       | 28   | 53.9 | M                       | May 28                              | 9.0        | 15                         | 37    | 31.17 | ...           | 155                       | 8    | 44.9 | R         |
| 26  | ...        | 56                         | 15.55 | ...   |               | 28                        | 54.9 | M    | 29                      | 9.0                                 | 37         | 31.02                      | ...   |       | 8             | 46.4                      | R    |      |           |
| 28  | ...        | 56                         | 15.60 | ...   |               | 28                        | 53.3 | M    | <b>230</b> <i>Anon.</i> |                                     |            |                            |       |       |               |                           |      |      |           |
| 30  | ...        | 56                         | 15.44 | ...   |               | 28                        | 54.0 | M    | May 12                  | ...                                 | 15         | 38                         | 30.39 | ...   | 83            | 12                        | 17.9 | R    |           |
| May 1                                       | ...        | 56                         | 15.66 | ...   |               | 28                        | 55.1 | R    | 14                      | ...                                 | 38         | 30.41                      | ...   |       | 12            | 18.5                      | R    |      |           |
| <b>223</b> <i>Taylor 7027.</i>              |            |                            |       |       |               |                           |      |      |                         | <b>231</b> <i>24 Serpentis α</i>    |            |                            |       |       |               |                           |      |      |           |
| Apl. 19                                     | ...        | 14                         | 58    | 53.17 | ...           | 126                       | 48   | 33.1 | M                       | 15                                  | ...        | 38                         | 30.39 | ...   |               | 12                        | 18.8 | R    |           |
| <b>224</b> <i>27 Libræ β</i>                |            |                            |       |       |               |                           |      |      |                         | <b>232</b> <i>Anon.</i>             |            |                            |       |       |               |                           |      |      |           |
| Apl. 30                                     | ...        | 15                         | 10    | 42.72 | ...           | 98                        | 57   | 4.0  | M                       | May 12                              | ...        | 15                         | 38    | 30.39 | ...           | 83                        | 12   | 17.9 | R         |
| May 1                                       | ...        | 10                         | 42.67 | ...   |               | 57                        | 0.8  | R    | 14                      | ...                                 | 38         | 30.41                      | ...   |       | 12            | 18.5                      | R    |      |           |
| 2   | ...        | 10                         | 42.65 | ...   |               | 57                        | 1.5  | R    | 15                      | ...                                 | 38         | 30.39                      | ...   |       | 12            | 18.8                      | R    |      |           |
| 3   | ...        | 10                         | 42.60 | ...   |               | 57                        | 1.5  | R    | 18                      | ...                                 | 38         | 30.26                      | ...   |       | 12            | 19.2                      | R    |      |           |
| 5   | ...        | 10                         | 42.69 | ...   |               | 56                        | 59.8 | R    | 19                      | ...                                 | 38         | 30.34                      | ...   |       | 12            | 18.1                      | R    |      |           |
| 7   | ...        | 10                         | 42.69 | ...   |               | 56                        | 58.0 | R    | 21                      | ...                                 | 38         | 30.37                      | ...   |       | 12            | 18.6                      | R    |      |           |
| 8   | ...        | 10                         | 42.69 | ...   |               | 57                        | 0.3  | R    | 22                      | ...                                 | 38         | 30.28                      | ...   |       | 12            | 19.4                      | R    |      |           |
| 9   | ...        | 10                         | 42.67 | ...   |               | 57                        | 0.7  | R    | 24                      | ...                                 | 38         | 30.28                      | ...   |       | 12            | 19.5                      | R    |      |           |
| 10  | ...        | 10                         | 42.75 | ...   |               | 57                        | 0.5  | R    | <b>233</b> <i>Anon.</i> |                                     |            |                            |       |       |               |                           |      |      |           |
| 11  | ...        | 10                         | 42.67 | ...   |               | 56                        | 58.7 | R    | May 12                  | ...                                 | 15         | 38                         | 30.39 | ...   | 83            | 12                        | 17.9 | R    |           |
| <b>225</b> <i>R. P. L. 114—s.p.</i>         |            |                            |       |       |               |                           |      |      |                         | <b>234</b> <i>Anon.</i>             |            |                            |       |       |               |                           |      |      |           |
| Jan. 15                                     | ...        | 15                         | 15    | 21.11 | 3             | 2                         | 19   | 12.0 | M                       | May 28                              | 9.0        | 15                         | 37    | 31.17 | ...           | 155                       | 8    | 44.9 | R         |
| 16  | ...        | 15                         | 18.75 | 3     |               | 19                        | 6.9  | M    | 29                      | 9.0                                 | 37         | 31.02                      | ...   |       | 8             | 46.4                      | R    |      |           |
| 17  | ...        | 15                         | 19.82 | 3     |               | 19                        | 7.2  | M    | <b>235</b> <i>Anon.</i> |                                     |            |                            |       |       |               |                           |      |      |           |
| <b>226</b> <i>Anon.</i>                     |            |                            |       |       |               |                           |      |      |                         | <b>236</b> <i>Anon.</i>             |            |                            |       |       |               |                           |      |      |           |
| May 28                                      | 9.0        | 15                         | 37    | 31.17 | ...           | 155                       | 8    | 44.9 | R                       | May 12                              | ...        | 15                         | 38    | 30.39 | ...           | 83                        | 12   | 17.9 | R         |
| 29  | 9.0        | 37                         | 31.02 | ...   |               | 8                         | 46.4 | R    | 14                      | ...                                 | 38         | 30.41                      | ...   |       | 12            | 18.5                      | R    |      |           |
| <b>227</b> <i>24 Serpentis α</i>            |            |                            |       |       |               |                           |      |      |                         | <b>237</b> <i>Anon.</i>             |            |                            |       |       |               |                           |      |      |           |
| May 12                                      | ...        | 15                         | 38    | 30.39 | ...           | 83                        | 12   | 17.9 | R                       | May 12                              | ...        | 15                         | 38    | 30.39 | ...           | 83                        | 12   | 17.9 | R         |
| 14  | ...        | 38                         | 30.41 | ...   |               | 12                        | 18.5 | R    | 14                      | ...                                 | 38         | 30.41                      | ...   |       | 12            | 18.5                      | R    |      |           |
| 15  | ...        | 38                         | 30.39 | ...   |               | 12                        | 18.8 | R    | 15                      | ...                                 | 38         | 30.39                      | ...   |       | 12            | 18.8                      | R    |      |           |
| 18  | ...        | 38                         | 30.26 | ...   |               | 12                        | 19.2 | R    | 18                      | ...                                 | 38         | 30.26                      | ...   |       | 12            | 19.2                      | R    |      |           |
| 19  | ...        | 38                         | 30.34 | ...   |               | 12                        | 18.1 | R    | 19                      | ...                                 | 38         | 30.34                      | ...   |       | 12            | 18.1                      | R    |      |           |
| 21  | ...        | 38                         | 30.37 | ...   |               | 12                        | 18.6 | R    | 21                      | ...                                 | 38         | 30.37                      | ...   |       | 12            | 18.6                      | R    |      |           |
| 22  | ...        | 38                         | 30.28 | ...   |               | 12                        | 19.4 | R    | 22                      | ...                                 | 38         | 30.28                      | ...   |       | 12            | 19.4                      | R    |      |           |
| 24  | ...        | 38                         | 30.28 | ...   |               | 12                        | 19.5 | 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. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |        | Observer.                | Number and Date. | Magnitude. | Mean Right Ascension 1883. |       |     | No. of Wires. | Mean Polar Distance 1883. |      |     | Observer. |
|------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|--------|--------------------------|------------------|------------|----------------------------|-------|-----|---------------|---------------------------|------|-----|-----------|
|                  |            | h.                         | m.    | s.    |               | °                         | '  | "      |                          |                  |            | h.                         | m.    | s.  |               | °                         | '    | "   |           |
| May 25           | ...        | 15                         | 38    | 30.29 | ...           | 83                        | 12 | 19.7   | R                        | <b>231</b>       | ...        | <i>R. P. L. 117.</i>       |       |     | ...           | ...                       | ...  | ... | ...       |
| 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  | 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                         |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <i>R. P. L. 117—s.p.</i> |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | 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   | 43.2          | 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                         |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <b>232</b>               |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <i>Anon.</i>             |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | May 10                   | 7.0              | 16         | 5                          | 1.46  | ... | 133           | 46                        | 12.6 | R   |           |
|                  |            |                            |       |       |               |                           |    |        | 14                       | 7.0              | 5          | 1.63                       | ...   | 46  | 11.9          | R                         |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <b>233</b>               |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <i>Anon.</i>             |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | May 11                   | 8.5              | 16         | 6                          | 5.40  | ... | 125           | 29                        | 44.8 | R   |           |
|                  |            |                            |       |       |               |                           |    |        | 12                       | 8.5              | 6          | 5.47                       | ...   | 29  | 45.2          | R                         |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <b>234</b>               |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <i>Stone 8832.</i>       |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | May 5                    | ...              | 16         | 7                          | 57.02 | ... | 135           | .5                        | 30.8 | R   |           |
|                  |            |                            |       |       |               |                           |    |        | 7                        | ...              | 7          | 57.01                      | 4     | 5   | 30.6          | R                         |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <b>235</b>               |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <i>Anon.</i>             |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | 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          | 14.28                      | 4     | 14  | 55.7          | R                         |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <b>236</b>               |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | <i>Stone 8853.</i>       |                  |            |                            |       |     |               |                           |      |     |           |
|                  |            |                            |       |       |               |                           |    |        | 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                         |      |     |           |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.                    | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer.  | Number and Date.                                       | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|-------------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|--|--|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                                     |            | h.                         | m.    | s.    |               | °                         | '    | "    |  |  |            | h.                         | m.    | s.    |               | °                         | '    | "    |           |
| <b>237</b> <i>19 Ursæ Minoris.</i>  |            |                            |       |       |               |                           |      |      |  | <b>243</b> <i>Anon.</i>                                |            |                            |       |       |               |                           |      |      |           |
| May 15                              | ...        | 16                         | 14    | 9.98  | ...           | 18                        | 49   | 41.2 | R  | May 5  | 7.5        | 16                         | 23    | 38.69 | ...           | 128                       | 44   | 44.1 | R         |
| 18                                  | ...        | 14                         | 10.05 | ...   |               | 49                        | 43.3 | R    | <b>244</b> <i>27 Herculis β</i>                      |  |            |                            |       |       |               |                           |      |      |           |
| <b>238</b> <i>Stone 8892.</i>       |            |                            |       |       |               |                           |      |      |  | May 24    ...    16 25 11.32    ...    68 15 19.0    R |            |                            |       |       |               |                           |      |      |           |
| May 5                               | 6.5        | 16                         | 14    | 44.75 | ...           | 152                       | 51   | 1.7  | R  | <b>245</b> <i>Stone 8976.</i>                          |            |                            |       |       |               |                           |      |      |           |
| 9                                   | 6.3        | 14                         | 44.48 | ...   | 5             | 51                        | 2.1  | R    | May 10   | 7.0  | 16         | 25                         | 25.41 | ...   | 128           | 16                        | 48.1 | R    |           |
| 10                                  | 6.3        | 14                         | 44.57 | ...   |               | 51                        | 1.2  | R    | 18   | 7.0  | 25         | 25.81                      | ...   | 16    | 50.5          | R                         |      |      |           |
| 11                                  | 6.3        | 14                         | 44.61 | ...   |               | 51                        | 0.5  | R    | 19   | 7.0  | 25         | 25.24                      | ...   | 16    | 50.8          | R                         |      |      |           |
| <b>239</b> <i>20 Herculis γ</i>     |            |                            |       |       |               |                           |      |      |  | <b>246</b> <i>Anon.</i>                                |            |                            |       |       |               |                           |      |      |           |
| May 23                              | ...        | 16                         | 16    | 45.47 | ...           | 70                        | 34   | 14.4 | R  | May 14   | 9.5        | 16                         | 29    | 2.64  | ...           | 125                       | 32   | 35.8 | R         |
| 25                                  | ...        | 16                         | 45.48 | ...   |               | 34                        | 16.0 | R    | 15   | 9.5  | 29         | 2.62                       | ...   | 32    | 36.2          | R                         |      |      |           |
| 28                                  | ...        | 16                         | 45.48 | ...   |               | 34                        | 15.6 | R    | 25   | 9.5  | 29         | 2.64                       | ...   | 32    | 35.9          | R                         |      |      |           |
| 29                                  | ...        | 16                         | 45.53 | ...   |               | 34                        | 15.0 | R    | <b>247</b> <i>η<sup>1</sup> Trianguli Australis.</i> |  |            |                            |       |       |               |                           |      |      |           |
| 30                                  | ...        | 16                         | 45.48 | ...   |               | 34                        | 14.7 | R    | May 11   | ...  | 16         | 29                         | 19.55 | ...   | 158           | 3                         | 35.1 | R    |           |
| 31                                  | ...        | 16                         | 45.45 | ...   |               | 34                        | 15.4 | R    | 12   | ...  | 29         | 19.57                      | ...   | 3     | 37.0          | R                         |      |      |           |
| June 1                              | ...        | 16                         | 45.48 | ...   |               | 34                        | 15.7 | R    | <b>248</b> <i>Stone 9014.</i>                        |  |            |                            |       |       |               |                           |      |      |           |
| 2                                   | ...        | 16                         | 45.50 | ...   |               | 34                        | 14.2 | R    | May 5  | 7.0  | 16         | 30                         | 33.44 | ...   | 128           | 54                        | 48.0 | R    |           |
| 8                                   | ...        | 16                         | 45.60 | ...   |               | 34                        | 16.1 | M    | <b>249</b> <i>13 Ophiuchi ζ</i>                      |  |            |                            |       |       |               |                           |      |      |           |
| 11                                  | ...        | 16                         | 45.48 | ...   |               | 34                        | 16.2 | M    | May 18   | ...  | 16         | 30                         | 42.98 | ...   | 100           | 19                        | 43.6 | R    |           |
| <b>240</b> <i>Anon.</i>             |            |                            |       |       |               |                           |      |      |  | 19   | ...        | 30                         | 42.95 | ...   | 19            | 44.0                      | R    |      |           |
| May 12                              | 8.5        | 16                         | 18    | 6.06  | ...           | 130                       | 57   | 19.0 | R  | 21   | ...        | 30                         | 42.96 | ...   | 19            | 44.0                      | R    |      |           |
| 14                                  | 8.5        | 18                         | 6.13  | ...   |               | 57                        | 18.6 | R    | 22   | ...  | 30         | 43.03                      | ...   | 19    | 44.2          | R                         |      |      |           |
| 19                                  | 8.5        | 18                         | 6.20  | ...   |               | 57                        | 20.0 | R    | 23   | ...  | 30         | 43.07                      | ...   | 19    | 44.4          | R                         |      |      |           |
| 24                                  | 8.5        | 18                         | 6.16  | ...   |               | 57                        | 19.8 | R    | 24   | ...  | 30         | 43.00                      | ...   | 19    | 44.2          | R                         |      |      |           |
| <b>241</b> <i>21 Ursæ Minoris η</i> |            |                            |       |       |               |                           |      |      |  | 26   | ...        | 30                         | 43.02 | ...   | 19            | 43.9                      | R    |      |           |
| May 7                               | ...        | 16                         | 20    | 56.06 | ...           | 13                        | 58   | 29.0 | R  | 29   | ...        | 30                         | 43.00 | ...   | 19            | 44.1                      | R    |      |           |
| 8                                   | ...        | 20                         | 56.08 | ...   |               | 58                        | 29.5 | R    | 30   | ...  | 30         | 42.98                      | ...   | 19    | 44.2          | R                         |      |      |           |
| 21                                  | ...        | 20                         | 56.04 | ...   |               | 58                        | 32.2 | R    | 31   | ...  | 30         | 42.98                      | ...   | 19    | 44.6          | R                         |      |      |           |
| 23                                  | ...        | 20                         | 56.21 | ...   |               | 58                        | 32.7 | R    | June 2   | ...  | 30         | 43.03                      | ...   | 19    | 42.3          | R                         |      |      |           |
| <b>242</b> <i>Anon.</i>             |            |                            |       |       |               |                           |      |      |  | 7  | ...        | 30                         | 42.99 | ...   | 19            | 44.0                      | R    |      |           |
| May 11                              | 8.0        | 16                         | 23    | 32.65 | ...           | 136                       | 25   | 16.1 | R  | 8  | ...        | 30                         | 43.00 | ...   | 19            | 44.4                      | M    |      |           |
| 12                                  | 8.0        | 23                         | 32.69 | ...   |               | 25                        | 17.0 | R    | 11   | ...  | 30         | 43.05                      | ...   | 19    | 43.8          | M                         |      |      |           |
| 14                                  | 8.0        | 23                         | 32.67 | ...   |               | 25                        | 17.1 | R    | 14   | ...  | 30         | 42.94                      | ...   | 19    | 43.5          | M                         |      |      |           |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.          | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.             | Magnitude.   | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |     |      | Observer. |      |   |
|---------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|------------------------------|--------------|----------------------------|-------|-------|---------------|---------------------------|-----|------|-----------|------|---|
|                           |            | h.                         | m.    | s.    |               | °                         | '  | "    |           |                              |              | h.                         | m.    | s.    |               | °                         | '   | "    |           |      |   |
| June 15                   | ...        | 16                         | 30    | 43.03 | ...           | 100                       | 19 | 42.6 | M         | <b>257</b>                   | Taylor 7793. | May 8                      | 7.0   | 16    | 44            | 42.16                     | ... | 127  | 23        | 47.9 | R |
| 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  |      |           |                              |              |                            |       |       |               |                           |     |      |           |      |   |
| <b>250</b> Lacaille 6881. |            |                            |       |       |               |                           |    |      |           | <b>258</b> Anon.             |              |                            |       |       |               |                           |     |      |           |      |   |
| May 9                     | ...        | 16                         | 31    | 31.80 | ...           | 157                       | 12 | 5.6  | R         | May 15                       | 9.5          | 16                         | 49    | 0.75  | ...           | 132                       | 12  | 58.1 | R         |      |   |
| 10                        | ...        | 31                         | 31.80 | ...   | 12            | 4.3                       | R  |      | 18        | 9.5                          | 49           | 0.76                       | ...   | 12    | 58.0          | R                         |     |      |           |      |   |
| <b>251</b> Anon.          |            |                            |       |       |               |                           |    |      |           | <b>259</b> Anon.             |              |                            |       |       |               |                           |     |      |           |      |   |
| May 14                    | 7.5        | 16                         | 36    | 1.19  | ...           | 128                       | 6  | 36.2 | R         | May 5                        | 8.5          | 16                         | 50    | 20.26 | ...           | 128                       | 26  | 15.6 | R         |      |   |
| 15                        | 7.5        | 36                         | 1.11  | ...   | 6             | 36.4                      | R  |      | 9         | 8.5                          | 50           | 20.15                      | ...   | 26    | 18.3          | R                         |     |      |           |      |   |
| 18                        | 7.5        | 36                         | 1.18  | ...   | 6             | 36.2                      | R  |      | 11        | 8.5                          | 50           | 20.12                      | ...   | 26    | 17.6          | R                         |     |      |           |      |   |
| 19                        | 7.5        | 36                         | 1.17  | ...   | 6             | 36.2                      | R  |      | 14        | 8.5                          | 50           | 20.17                      | ...   | 26    | 19.0          | R                         |     |      |           |      |   |
| 21                        | 7.5        | 36                         | 1.10  | ...   | 6             | 36.5                      | R  |      |           |                              |              |                            |       |       |               |                           |     |      |           |      |   |
| <b>252</b> Anon.          |            |                            |       |       |               |                           |    |      |           | <b>260</b> Anon.             |              |                            |       |       |               |                           |     |      |           |      |   |
| May 8                     | 8.0        | 16                         | 38    | 51.76 | ...           | 125                       | 34 | 31.5 | R         | May 14                       | 8.0          | 16                         | 56    | 52.99 | ...           | 129                       | 52  | 39.5 | R         |      |   |
| 9                         | 8.0        | 38                         | 51.78 | ...   | 34            | 35.8                      | R  |      | 15        | 8.0                          | 56           | 52.92                      | ...   | 52    | 39.7          | R                         |     |      |           |      |   |
| <b>253</b> Anon.          |            |                            |       |       |               |                           |    |      |           | <b>261</b> 22 Ursæ Minoris ε |              |                            |       |       |               |                           |     |      |           |      |   |
| May 25                    | 9.5        | 16                         | 41    | 15.36 | ...           | 126                       | 18 | 19.8 | R         | May 12                       | ...          | 16                         | 58    | 0.05  | 4             | 7                         | 46  | 16.6 | R         |      |   |
| 28                        | 9.5        | 41                         | 15.35 | ...   | 13            | 21.5                      | R  |      | June 15   | ...                          | 57           | 59.69                      | 3     | 46    | 17.1          | M                         |     |      |           |      |   |
| 29                        | 9.5        | 41                         | 15.33 | ...   | 18            | 21.1                      | R  |      |           |                              |              |                            |       |       |               |                           |     |      |           |      |   |
| 30                        | 9.5        | 41                         | 15.31 | ...   | 18            | 22.2                      | R  |      |           |                              |              |                            |       |       |               |                           |     |      |           |      |   |
| <b>254</b> Anon.          |            |                            |       |       |               |                           |    |      |           | <b>262</b> Anon.             |              |                            |       |       |               |                           |     |      |           |      |   |
| May 10                    | 7.0        | 16                         | 41    | 37.68 | ...           | 132                       | 53 | 52.9 | R         | May 5                        | 9.0          | 16                         | 59    | 23.33 | ...           | 132                       | 35  | 35.5 | R         |      |   |
| <b>255</b> Anon.          |            |                            |       |       |               |                           |    |      |           | <b>263</b> R. P. L. 118.     |              |                            |       |       |               |                           |     |      |           |      |   |
| May 11                    | 8.0        | 16                         | 42    | 29.39 | ...           | 127                       | 50 | 30.5 | R         | Aug. 11                      | ...          | 17                         | 1     | 59.60 | 3             | 5                         | 8   | 35.5 | R         |      |   |
| 12                        | 8.0        | 42                         | 29.48 | ...   | 50            | 30.8                      | R  |      | 13        | ...                          | 1            | 59.25                      | 3     | 8     | 33.9          | R                         |     |      |           |      |   |
| 14                        | 8.0        | 42                         | 29.61 | ...   | 50            | 31.5                      | R  |      | 14        | ...                          | 1            | 59.65                      | 3     | 8     | 34.6          | R                         |     |      |           |      |   |
| <b>256</b> Anon.          |            |                            |       |       |               |                           |    |      |           | 16                           | ...          | 1                          | 58.47 | 3     | 8             | 35.3                      | R   |      |           |      |   |
| May 19                    | 7.5        | 16                         | 44    | 2.03  | ...           | 129                       | 2  | 39.3 | R         | 18                           | ...          | 1                          | 58.52 | 3     | 8             | 36.1                      | 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  |      |           |                              |              |                            |       |       |               |                           |     |      |           |      |   |

Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.         | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |                        | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|--------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------------------------|-----------|------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|
|                          |            | h.                         | m.    | s.    |               | o.                        | '  | "                      |           |                  |            | h.                         | m.    | s.    |               | o.                        | '  | "    |           |
| <b>R. P. L. 118—s.p.</b> |            |                            |       |       |               |                           |    |                        |           | July 28          | ...        | 17                         | 3     | 40.09 | ...           | 105                       | 34 | 42.5 | R         |
| Jan. 2                   | ...        | 17                         | 2     | 0.00  | 3             | 5                         | 8  | 34.8                   | R         | 30               | ...        | 3                          | 40.18 | ...   | 84            | 43.5                      | R  |      |           |
| 3                        | ...        | 2                          | 0.22  | 3     | 8             | 34.1                      | R  | 31                     | ...       | 3                | 40.12      | ...                        | 34    | 43.8  | R             |                           |    |      |           |
| 8                        | ...        | 1                          | 59.89 | 3     | 8             | 34.0                      | M  | Aug. 2                 | ...       | 3                | 40.11      | ...                        | 34    | 42.9  | R             |                           |    |      |           |
| 9                        | ...        | 2                          | 0.23  | 3     | 8             | 34.4                      | M  | 3                      | ...       | 3                | 40.09      | ...                        | 34    | 43.4  | R             |                           |    |      |           |
| 19                       | ...        | 1                          | 59.48 | 3     | 8             | 36.5                      | M  | 4                      | ...       | 3                | 40.11      | ...                        | 34    | 43.6  | R             |                           |    |      |           |
| 24                       | ...        | 1                          | 59.71 | 3     | 8             | 32.3                      | M  | <b>267 Anon.</b>       |           |                  |            |                            |       |       |               |                           |    |      |           |
| 29                       | ...        | 1                          | 59.94 | 3     | 8             | 37.9                      | M  | May 12                 | ...       | 17               | 6          | 15.90                      | ...   | 131   | 19            | 56.9                      | R  |      |           |
| Feb. 1                   | ...        | 1                          | 59.39 | 3     | 8             | 36.0                      | R  | <b>268 Stone 9389.</b> |           |                  |            |                            |       |       |               |                           |    |      |           |
| 2                        | ...        | 1                          | 59.18 | 3     | 8             | 37.8                      | R  | May 14                 | ...       | 17               | 8          | 59.79                      | ...   | 129   | 17            | 47.7                      | R  |      |           |
| 7                        | ...        | 2                          | 0.08  | 3     | 8             | 35.9                      | M  | 15                     | ...       | 8                | 59.80      | ...                        | 17    | 48.2  | R             |                           |    |      |           |
| <b>264 Stone 9338.</b>   |            |                            |       |       |               |                           |    |                        |           | <b>269 Anon.</b> |            |                            |       |       |               |                           |    |      |           |
| May 21                   | 7.0        | 17                         | 2     | 48.40 | ...           | 181                       | 17 | 23.9                   | R         | Aug. 9           | 8.0        | 17                         | 9     | 34.36 | ...           | 128                       | 31 | 56.1 | R         |
| 22                       | 7.0        | 2                          | 48.33 | ...   | 17            | 24.2                      | R  | 10                     | 8.0       | 9                | 34.35      | ...                        | 31    | 56.1  | R             |                           |    |      |           |
| 24                       | 7.0        | 2                          | 48.34 | ...   | 17            | 24.5                      | R  | 11                     | 8.0       | 9                | 34.20      | ...                        | 31    | 54.7  | R             |                           |    |      |           |
| 25                       | 7.0        | 2                          | 48.36 | ...   | 17            | 24.2                      | R  | 14                     | 8.0       | 9                | 34.20      | ...                        | 31    | 55.3  | R             |                           |    |      |           |
| 29                       | 7.0        | 2                          | 48.14 | ...   | 17            | 22.4                      | R  | 16                     | 9.0       | 9                | 34.22      | ...                        | 31    | 52.5  | R             |                           |    |      |           |
| <b>265 Anon.</b>         |            |                            |       |       |               |                           |    |                        |           | <b>270 Anon.</b> |            |                            |       |       |               |                           |    |      |           |
| May 15                   | 7.5        | 17                         | 2     | 51.11 | ...           | 181                       | 32 | 55.1                   | R         | June 19          | 9.0        | 17                         | 10    | 16.79 | ...           | 128                       | 20 | 56.4 | M         |
| 30                       | 7.5        | 2                          | 50.91 | ...   | 32            | 56.9                      | R  | 20                     | 9.0       | 10               | 16.72      | ...                        | 20    | 55.8  | M             |                           |    |      |           |
| 31                       | 7.5        | 2                          | 50.87 | ...   | 32            | 57.4                      | R  | July 3                 | 9.0       | 10               | 16.60      | ...                        | 20    | 55.0  | R             |                           |    |      |           |
| June 1                   | 7.5        | 2                          | 50.85 | ...   | 32            | 57.0                      | R  | 4                      | 9.0       | 10               | 16.58      | ...                        | 20    | 55.9  | R             |                           |    |      |           |
| 2                        | 7.5        | 2                          | 50.85 | ...   | 32            | 58.9                      | R  | 17                     | 9.0       | 10               | 16.73      | ...                        | 20    | 53.5  | R             |                           |    |      |           |
| <b>266 35 Ophiuchi η</b> |            |                            |       |       |               |                           |    |                        |           | <b>271 Anon.</b> |            |                            |       |       |               |                           |    |      |           |
| June 7                   | ...        | 17                         | 3     | 40.08 | ...           | 105                       | 34 | 41.0                   | R         | July 28          | 8.0        | 17                         | 10    | 47.27 | ...           | 135                       | 57 | 30.9 | R         |
| 9                        | ...        | 3                          | 40.05 | ...   | 34            | 42.6                      | M  | 30                     | 8.0       | 10               | 47.21      | ...                        | 57    | 33.7  | R             |                           |    |      |           |
| 11                       | ...        | 3                          | 39.95 | ...   | 34            | 45.2                      | M  | 31                     | 8.0       | 10               | 47.14      | ...                        | 57    | 32.5  | R             |                           |    |      |           |
| 14                       | ...        | 3                          | 40.18 | ...   | 34            | 45.9                      | M  | Aug. 2                 | 8.0       | 10               | 47.13      | ...                        | 57    | 31.5  | R             |                           |    |      |           |
| 19                       | ...        | 3                          | 40.03 | ...   | 34            | 45.0                      | M  | <b>272 Stone 9428.</b> |           |                  |            |                            |       |       |               |                           |    |      |           |
| 20                       | ...        | 3                          | 40.02 | ...   | 34            | 43.7                      | M  | May 18                 | 6.0       | 17               | 12         | 18.41                      | ...   | 135   | 35            | 2.3                       | R  |      |           |
| 22                       | ...        | 3                          | 39.95 | ...   | 34            | 44.3                      | 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  |                        |           |                  |            |                            |       |       |               |                           |    |      |           |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.                   | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.                                  | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                    |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |   |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>273</b> <i>Anon.</i>            |            |                            |    |       |               |                           |    |      |           | <b>279</b> <i>49 Ophiuchi <math>\sigma</math></i> |            |                            |    |       |               |                           |    |      |           |
| June 7                             | 9.0        | 17                         | 18 | 17.89 | ...           | 129                       | 23 | 49.1 | R         | May 23  | ...        | 17                         | 20 | 43.00 | ...           | 85                        | 45 | 24.8 | R         |
| 8                                  | 9.0        |                            | 18 | 18.14 | ...           |                           | 22 | 47.0 | M         | 24  | ...        |                            | 20 | 43.00 | ...           |                           | 45 | 24.9 | R         |
| 9                                  | 9.0        |                            | 18 | 18.05 | ...           |                           | 22 | 47.8 | M         | 25  | ...        |                            | 20 | 43.03 | ...           |                           | 45 | 24.7 | R         |
| 14                                 | 9.0        |                            | 18 | 18.06 | ...           |                           | 22 | 50.9 | M         | 29  | ...        |                            | 20 | 42.55 | ...           |                           | 45 | 24.6 | R         |
| <b>274</b> <i>Anon.</i>            |            |                            |    |       |               |                           |    |      |           | <b>280</b> <i>Anon.</i>                           |            |                            |    |       |               |                           |    |      |           |
| May 19                             | 7.0        | 17                         | 14 | 38.81 | ...           | 131                       | 58 | 17.5 | R         | July 28   | 8.0        | 17                         | 21 | 46.30 | ...           | 127                       | 10 | 44.1 | R         |
| 22                                 | 7.5        |                            | 14 | 38.72 | ...           |                           | 58 | 17.8 | R         | 30  | 8.0        |                            | 21 | 46.19 | ...           |                           | 10 | 44.9 | R         |
| 25                                 | 7.5        |                            | 14 | 38.77 | ...           |                           | 58 | 17.5 | R         | 31  | 8.0        |                            | 21 | 46.12 | ...           |                           | 10 | 47.0 | R         |
| 28                                 | 7.5        |                            | 14 | 38.75 | ...           |                           | 58 | 18.5 | R         | Aug. 2  | 8.0        |                            | 21 | 46.15 | ...           |                           | 10 | 45.4 | R         |
| <b>275</b> <i>Stone 9448.—2nd.</i> |            |                            |    |       |               |                           |    |      |           | <b>281</b> <i><math>\alpha</math> Aræ.</i>        |            |                            |    |       |               |                           |    |      |           |
| May 15                             | 7.0        | 17                         | 14 | 41.15 | ...           | 128                       | 5  | 8.7  | R         | June 20   | ...        | 17                         | 22 | 47.85 | 5             | 139                       | 46 | 53.4 | M         |
| 21                                 | 7.0        |                            | 14 | 41.18 | ...           |                           | 5  | 9.2  | R         | July 20   | ...        |                            | 22 | 47.83 | ...           |                           | 46 | 53.4 | R         |
| 23                                 | 7.0        |                            | 14 | 41.37 | ...           |                           | 5  | 9.0  | R         | Aug. 10   | ...        |                            | 22 | 47.87 | ...           |                           | 46 | 53.0 | R         |
| 24                                 | 7.0        |                            | 14 | 41.41 | ...           |                           | 5  | 7.3  | R         | 11  | ...        |                            | 22 | 47.76 | ...           |                           | 46 | 52.4 | R         |
| <b>276</b> <i>Anon.</i>            |            |                            |    |       |               |                           |    |      |           | <b>282</b> <i>34 Scorpii <math>\nu</math></i>     |            |                            |    |       |               |                           |    |      |           |
| Aug. 4                             | 8.5        | 17                         | 15 | 31.06 | ...           | 145                       | 52 | 52.0 | R         | June 20   | ...        | 17                         | 22 | 47.85 | 5             | 139                       | 46 | 53.4 | M         |
| 8                                  | 8.5        |                            | 15 | 30.97 | ...           |                           | 52 | 54.8 | R         | July 20   | ...        |                            | 22 | 47.83 | ...           |                           | 46 | 53.4 | R         |
| 10                                 | 8.5        |                            | 15 | 31.09 | ...           |                           | 52 | 51.5 | R         | Aug. 10   | ...        |                            | 22 | 47.87 | ...           |                           | 46 | 53.0 | R         |
| 11                                 | 8.5        |                            | 15 | 31.05 | ...           |                           | 52 | 51.4 | R         | 11  | ...        |                            | 22 | 47.76 | ...           |                           | 46 | 52.4 | R         |
| 14                                 | 8.5        |                            | 15 | 30.96 | ...           |                           | 52 | 50.6 | R         | 14  | ...        |                            | 22 | 47.60 | ...           |                           | 46 | 52.8 | R         |
| <b>277</b> <i>Anon.</i>            |            |                            |    |       |               |                           |    |      |           | <b>283</b> <i>Stone 9566.</i>                     |            |                            |    |       |               |                           |    |      |           |
| June 14                            | 9.0        | 17                         | 17 | 18.91 | 5             | 138                       | 28 | 58.3 | M         | June 22   | 7.0        | 17                         | 26 | 10.80 | ...           | 180                       | 26 | 48.9 | M         |
| 15                                 | 9.5        |                            | 17 | 18.64 | ...           |                           | 28 | 54.3 | M         | July 3  | 7.0        |                            | 26 | 10.89 | ...           |                           | 26 | 48.9 | R         |
| 20                                 | 9.0        |                            | 17 | 18.61 | ...           |                           | 28 | 54.5 | M         | 4   | 7.0        |                            | 26 | 10.68 | ...           |                           | 26 | 47.6 | R         |
| July 3                             | 9.0        |                            | 17 | 18.89 | ...           |                           | 28 | 53.8 | R         | 17  | 7.0        |                            | 26 | 10.85 | ...           |                           | 26 | 47.4 | R         |
| 4                                  | 9.0        |                            | 17 | 18.79 | ...           |                           | 28 | 55.1 | R         | 18  | 7.0        |                            | 26 | 10.89 | ...           |                           | 26 | 48.9 | R         |
| <b>278</b> <i>Stone 9479.</i>      |            |                            |    |       |               |                           |    |      |           |   |            |                            |    |       |               |                           |    |      |           |
| June 11                            | ...        | 17                         | 17 | 27.71 | ...           | 138                       | 30 | 21.9 | M         | June 22   | 7.0        | 17                         | 26 | 10.80 | ...           | 180                       | 26 | 48.9 | M         |
| 22                                 | ...        |                            | 17 | 27.44 | ...           |                           | 30 | 21.7 | M         | July 3  | 7.0        |                            | 26 | 10.89 | ...           |                           | 26 | 48.9 | R         |
| July 18                            | 7.0        |                            | 17 | 27.67 | ...           |                           | 30 | 22.7 | R         | 4   | 7.0        |                            | 26 | 10.68 | ...           |                           | 26 | 47.6 | R         |
| 20                                 | 7.0        |                            | 17 | 27.66 | ...           |                           | 30 | 22.4 | R         | 17  | 7.0        |                            | 26 | 10.85 | ...           |                           | 26 | 47.4 | R         |
| 24                                 | 7.0        |                            | 17 | 27.68 | 4             |                           | 30 | 21.4 | R         | 18  | 7.0        |                            | 26 | 10.89 | ...           |                           | 26 | 48.9 | R         |



## Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.             | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |                                | Observer.                | Number and Date. | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|--------------------------------|--------------------------|------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                              |            | h.                         | m.    | s.    |               | °                         | '  | "                              |                          |                  |            | h.                         | m.    | s.    |               | °                         | '    | "    |           |
| <b>284</b> Anon.             |            |                            |       |       |               |                           |    |                                | <b>R. P. L. 120—s.p.</b> |                  |            |                            |       |       |               |                           |      |      |           |
| May 28                       | 7.0        | 17                         | 28    | 7.56  | ...           | 134                       | 29 | 10.4                           | R                        | Jan. 18          | ...        | 17                         | 31    | 46.53 | 3             | 5                         | 17   | 27.0 | M         |
| <b>285</b> Stone 9578.       |            |                            |       |       |               |                           |    |                                | Jan. 19                  | ...              | 31         | 47.29                      | 3     | 17    | 25.6          | M                         |      |      |           |
| Aug. 9                       | 7.0        | 17                         | 28    | 9.84  | ...           | 146                       | 44 | 38.7                           | R                        | 27               | ...        | 31                         | 46.77 | 3     | 17            | 24.2                      | M    |      |           |
| 10                           | 7.0        | 28                         | 9.86  | ...   | 44            | 38.5                      | R  | 30                             | ...                      | 31               | 46.41      | 3                          | 17    | 27.9  | M             |                           |      |      |           |
| Sep. 4                       | ...        | 28                         | 9.71  | ...   | 44            | 38.8                      | M  | 31                             | ...                      | 31               | 46.51      | 3                          | 17    | 26.1  | M             |                           |      |      |           |
| <b>286</b> Brisbane 6132.    |            |                            |       |       |               |                           |    |                                | Feb. 8                   | ...              | 31         | 46.63                      | 3     | 17    | 27.3          | R                         |      |      |           |
| May 31                       | 8.0        | 17                         | 28    | 38.23 | ...           | 135                       | 4  | 47.9                           | R                        | 9                | ...        | 31                         | 46.43 | 3     | 17            | 25.2                      | R    |      |           |
| <b>287</b> $\theta$ Scorpii. |            |                            |       |       |               |                           |    |                                | 10                       | ...              | 31         | 46.70                      | 3     | 17    | 25.1          | R                         |      |      |           |
| June 2                       | ...        | 17                         | 28    | 54.64 | ...           | 132                       | 55 | 14.3                           | R                        | 12               | ...        | 31                         | 46.48 | 3     | 17            | 26.3                      | R    |      |           |
| 8                            | ...        | 28                         | 54.63 | ...   | 55            | 17.7                      | M  | 14                             | ...                      | 31               | 46.60      | 3                          | 17    | 25.2  | R             |                           |      |      |           |
| 9                            | ...        | 28                         | 54.56 | ...   | 55            | 17.8                      | M  | <b>291</b> Anon.               |                          |                  |            |                            |       |       |               |                           |      |      |           |
| 11                           | ...        | 28                         | 54.75 | 5     | 55            | 18.1                      | M  | June 20                        | 7.0                      | 17               | 32         | 56.29                      | ...   | 130   | 1             | 35.4                      | M    |      |           |
| 15                           | ...        | 28                         | 54.55 | ...   | 55            | 16.7                      | M  | July 4                         | 7.0                      | 32               | 56.02      | ...                        | 1     | 35.6  | R             |                           |      |      |           |
| <b>288</b> Anon.             |            |                            |       |       |               |                           |    |                                | 18                       | 7.0              | 32         | 56.17                      | ...   | 1     | 36.5          | R                         |      |      |           |
| July 28                      | 8.0        | 17                         | 29    | 9.13  | ...           | 138                       | 42 | 30.9                           | R                        | 20               | 7.0        | 32                         | 56.11 | ...   | 1             | 36.1                      | R    |      |           |
| 30                           | 8.0        | 29                         | 8.89  | ...   | 42            | 31.9                      | R  | 24                             | 7.0                      | 32               | 56.28      | 4                          | 1     | 35.6  | R             |                           |      |      |           |
| 31                           | 8.0        | 29                         | 8.83  | ...   | 42            | 31.6                      | R  | <b>292</b> Brisbane 6160.      |                          |                  |            |                            |       |       |               |                           |      |      |           |
| Aug. 2                       | 8.0        | 29                         | 8.95  | ...   | 42            | 30.9                      | R  | May 21                         | 8.0                      | 17               | 33         | 20.24                      | ...   | 134   | 43            | 12.5                      | R    |      |           |
| 4                            | 8.0        | 29                         | 8.78  | ...   | 42            | 30.8                      | R  | <b>293</b> Anon.               |                          |                  |            |                            |       |       |               |                           |      |      |           |
| <b>289</b> Anon.             |            |                            |       |       |               |                           |    |                                | Aug. 9                   | 7.5              | 17         | 35                         | 28.26 | ...   | 144           | 4                         | 40.3 | R    |           |
| May 22                       | 7.0        | 17                         | 31    | 44.52 | ...           | 128                       | 17 | 58.1                           | R                        | 10               | 7.5        | 35                         | 28.27 | ...   | 4             | 40.7                      | R    |      |           |
| 23                           | 7.0        | 31                         | 44.59 | ...   | 17            | 57.6                      | R  | 11                             | 7.5                      | 35               | 28.27      | ...                        | 4     | 40.2  | R             |                           |      |      |           |
| 24                           | 7.0        | 31                         | 44.68 | ...   | 17            | 57.9                      | R  | 14                             | 7.5                      | 35               | 28.14      | ...                        | 4     | 40.3  | R             |                           |      |      |           |
| 25                           | 7.0        | 31                         | 44.64 | ...   | 17            | 58.1                      | R  | 18                             | 7.5                      | 35               | 28.30      | ...                        | 4     | 39.3  | R             |                           |      |      |           |
| 29                           | 7.0        | 31                         | 44.45 | ...   | 17            | 57.5                      | R  | <b>294</b> 60 Ophiuchi $\beta$ |                          |                  |            |                            |       |       |               |                           |      |      |           |
| <b>290</b> R. P. L. 120.     |            |                            |       |       |               |                           |    |                                | May 13                   | ...              | 17         | 37                         | 41.55 | ...   | 85            | 22                        | 56.5 | R    |           |
| May 18                       | ...        | 17                         | 31    | 46.58 | 3             | 5                         | 17 | 27.0                           | R                        | 19               | ...        | 37                         | 41.52 | ...   | 22            | 56.7                      | R    |      |           |
| 19                           | ...        | 31                         | 46.69 | 3     | 17            | 24.7                      | R  | 21                             | ...                      | 37               | 41.47      | ...                        | 22    | 57.0  | R             |                           |      |      |           |
| 28                           | ...        | 31                         | 46.67 | 3     | 17            | 24.6                      | R  | 23                             | ...                      | 37               | 41.48      | ...                        | 22    | 57.7  | R             |                           |      |      |           |
| June 1                       | ...        | 31                         | 46.33 | 3     | 17            | 26.1                      | R  | 30                             | ...                      | 37               | 41.51      | ...                        | 22    | 57.0  | R             |                           |      |      |           |
| Aug. 25                      | ...        | 31                         | 46.63 | 3     | 17            | 26.6                      | 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. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer.               | Number and Date.        | Magnitude. | Mean Right Ascension 1883. |       |     | No. of Wires. | Mean Polar Distance 1883. |      |   | Observer. |
|--------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-------------------------|-------------------------|------------|----------------------------|-------|-----|---------------|---------------------------|------|---|-----------|
|                                |            | h.                         | m.    | s.    |               | o.                        | '    | "    |                         |                         |            | h.                         | m.    | s.  |               | o.                        | '    | " |           |
| July 8                         | ...        | 17                         | 37    | 41.42 | ...           | 85                        | 22   | 56.7 | R                       | <b>300</b> <i>Anon.</i> |            |                            |       |     |               |                           |      |   |           |
| 4                              | ...        | 37                         | 41.44 | ...   | ...           | 22                        | 57.3 | R    | May 28                  | 9.5                     | 17         | 45                         | 11.77 | ... | 181           | 58                        | 3.5  | R |           |
| 17                             | ...        | 37                         | 41.50 | ...   | ...           | 22                        | 59.9 | R    | 30                      | 9.5                     | 45         | 11.64                      | ...   | 58  | 58            | 3.7                       | R    |   |           |
| 18                             | ...        | 37                         | 41.45 | ...   | ...           | 22                        | 57.8 | R    | June 14                 | 9.5                     | 45         | 11.80                      | 5     | 58  | 1.2           | M                         |      |   |           |
| 20                             | ...        | 37                         | 41.49 | ...   | ...           | 22                        | 57.0 | R    | 15                      | 9.5                     | 45         | 11.88                      | ...   | 58  | 3.5           | M                         |      |   |           |
| 24                             | ...        | 37                         | 41.53 | ...   | ...           | 22                        | 55.8 | R    | 22                      | ...                     | 45         | 11.80                      | ...   | 58  | 2.7           | M                         |      |   |           |
| 28                             | ...        | 37                         | 41.38 | ...   | ...           | 22                        | 56.8 | R    | <b>301</b> <i>Anon.</i> |                         |            |                            |       |     |               |                           |      |   |           |
| 30                             | ...        | 37                         | 41.49 | ...   | ...           | 22                        | 58.5 | R    | July 28                 | 9.0                     | 17         | 45                         | 40.00 | ... | 139           | 18                        | 58.5 | R |           |
| 31                             | ...        | 37                         | 41.43 | ...   | ...           | 22                        | 58.9 | R    | 30                      | 9.0                     | 45         | 39.84                      | ...   | 13  | 59.8          | R                         |      |   |           |
| <b>295</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      | 31                      | 9.0                     | 45         | 39.77                      | 3     | 14  | 0.6           | R                         |      |   |           |
| June 8                         | 8.5        | 17                         | 39    | 34.85 | ...           | 128                       | 18   | 49.3 | M                       | Aug. 11                 | 9.0        | 45                         | 40.01 | ... | 13            | 59.1                      | R    |   |           |
| 11                             | ...        | 39                         | 34.85 | 5     | ...           | 18                        | 48.8 | M    | 13                      | 9.0                     | 45         | 39.98                      | ...   | 18  | 58.7          | R                         |      |   |           |
| Aug. 2                         | 8.5        | 39                         | 34.58 | ...   | ...           | 18                        | 47.9 | R    | <b>302</b> <i>Anon.</i> |                         |            |                            |       |     |               |                           |      |   |           |
| 4                              | 8.5        | 39                         | 34.61 | ...   | ...           | 18                        | 48.0 | R    | May 18                  | 8.0                     | 17         | 50                         | 28.62 | ... | 151           | 21                        | 14.1 | R |           |
| <b>296</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      | 19                      | 8.0                     | 50         | 28.57                      | ...   | 21  | 14.2          | R                         |      |   |           |
| June 20                        | 8.5        | 17                         | 40    | 23.50 | 4             | 128                       | 18   | 52.4 | M                       | 23                      | 8.0        | 50                         | 28.62 | ... | 21            | 13.5                      | R    |   |           |
| Aug. 8                         | 8.5        | 40                         | 23.42 | ...   | ...           | 18                        | 56.4 | R    | <b>303</b> <i>Anon.</i> |                         |            |                            |       |     |               |                           |      |   |           |
| 9                              | 8.5        | 40                         | 23.31 | ...   | ...           | 18                        | 53.3 | R    | June 14                 | 8.0                     | 17         | 51                         | 51.27 | ... | 129           | 3                         | 3.9  | M |           |
| 10                             | 8.5        | 40                         | 23.23 | ...   | ...           | 18                        | 52.8 | R    | 15                      | 8.0                     | 51         | 51.29                      | ...   | 3   | 3.1           | M                         |      |   |           |
| 11                             | 8.5        | 40                         | 23.26 | ...   | ...           | 18                        | 52.2 | R    | 22                      | 7.0                     | 51         | 51.14                      | ...   | 3   | 4.0           | M                         |      |   |           |
| <b>297</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      | July 3                  | 8.0                     | 51         | 51.37                      | ...   | 3   | 2.9           | R                         |      |   |           |
| Aug. 18                        | 8.0        | 17                         | 42    | 51.21 | ...           | 143                       | 28   | 18.3 | R                       | 4                       | 8.0        | 51                         | 51.28 | ... | 3             | 4.1                       | R    |   |           |
| Sep. 4                         | ...        | 42                         | 51.34 | ...   | ...           | 28                        | 17.2 | M    | <b>304</b> <i>Anon.</i> |                         |            |                            |       |     |               |                           |      |   |           |
| <b>298</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      | May 22                  | 7.0                     | 17         | 52                         | 15.64 | ... | 127           | 28                        | 50.2 | R |           |
| May 19                         | 7.5        | 17                         | 44    | 10.64 | ...           | 129                       | 6    | 59.0 | R                       | 24                      | 7.0        | 52                         | 15.87 | ... | 23            | 50.9                      | R    |   |           |
| 22                             | 7.5        | 44                         | 10.54 | ...   | ...           | 6                         | 58.8 | R    | 25                      | 7.0                     | 52         | 15.86                      | ...   | 23  | 51.0          | R                         |      |   |           |
| 23                             | 7.5        | 44                         | 10.81 | ...   | ...           | 6                         | 59.5 | R    | 28                      | 7.0                     | 52         | 15.74                      | ...   | 23  | 50.9          | R                         |      |   |           |
| 24                             | 7.5        | 44                         | 10.70 | ...   | ...           | 6                         | 58.0 | R    | 29                      | 7.0                     | 52         | 15.64                      | ...   | 23  | 51.3          | R                         |      |   |           |
| 25                             | 7.5        | 44                         | 10.65 | ...   | ...           | 6                         | 59.9 | R    | <b>305</b> <i>Anon.</i> |                         |            |                            |       |     |               |                           |      |   |           |
| <b>299</b> <i>Taylor 8243.</i> |            |                            |       |       |               |                           |      |      | May 30                  | 9.0                     | 17         | 52                         | 34.85 | ... | 137           | 2                         | 29.2 | R |           |
| May 29                         | ...        | 17                         | 44    | 30.77 | ...           | 131                       | 57   | 30.3 | R                       | June 1                  | 9.0        | 52                         | 34.27 | ... | 2             | 29.0                      | R    |   |           |
| June 1                         | ...        | 44                         | 30.68 | ...   | ...           | 57                        | 30.1 | R    | 7                       | 9.0                     | 52         | 34.02                      | ...   | 2   | 27.6          | R                         |      |   |           |
| 7                              | ...        | 44                         | 30.47 | ...   | ...           | 57                        | 31.1 | R    | 8                       | 9.0                     | 52         | 34.27                      | ...   | 2   | 30.6          | M                         |      |   |           |
| 9                              | ...        | 44                         | 30.73 | ...   | ...           | 57                        | 26.8 | M    | 11                      | ...                     | 52         | 34.56                      | ...   | 2   | 29.6          | M                         |      |   |           |
| 11                             | ...        | 44                         | 31.07 | ...   | ...           | 57                        | 30.9 | M    |                         |                         |            |                            |       |     |               |                           |      |   |           |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.                  | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. | Number and Date.              | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|-----------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|-------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                                   |            | h.                         | m.    | s.    |               | °                         | '    | "    |           |                               |            | h.                         | m.    | s.    |               | °                         | '    | "    |           |
| <b>306</b> <i>O. A. S. 17446.</i> |            |                            |       |       |               |                           |      |      |           | <b>312</b> <i>Anon.</i>       |            |                            |       |       |               |                           |      |      |           |
| Aug. 8                            | ...        | 17                         | 52    | 45.65 | ...           | 119                       | 58   | 1.3  | R         | May 18                        | ...        | 17                         | 59    | 22.53 | ...           | 129                       | 13   | 9.7  | R         |
| 9                                 | ...        | 52                         | 45.56 | ...   |               | 52                        | 58.0 |      | R         | 23                            | ...        | 59                         | 22.59 | ...   |               | 13                        | 8.5  |      | R         |
| 10                                | ...        | 52                         | 45.50 | ...   |               | 52                        | 58.7 |      | R         | 24                            | ...        | 59                         | 22.56 | ...   |               | 13                        | 7.2  |      | R         |
| 11                                | ...        | 52                         | 45.48 | ...   |               | 52                        | 57.4 |      | R         | 25                            | ...        | 59                         | 22.54 | ...   |               | 13                        | 8.6  |      | R         |
| 13                                | ...        | 52                         | 45.59 | ...   |               | 52                        | 57.3 |      | R         | 28                            | ...        | 59                         | 22.64 | ...   |               | 13                        | 9.3  |      | R         |
| <b>307</b> <i>O. A. S. 17452.</i> |            |                            |       |       |               |                           |      |      |           | <b>313</b> <i>Anon.</i>       |            |                            |       |       |               |                           |      |      |           |
| July 24                           | ...        | 17                         | 52    | 58.59 | ...           | 119                       | 48   | 52.3 | R         | Aug. 8                        | 8.0        | 17                         | 59    | 31.89 | ...           | 129                       | 31   | 45.5 | R         |
| 28                                | ...        | 52                         | 58.44 | ...   |               | 48                        | 54.3 |      | R         | 9                             | 8.0        | 59                         | 31.73 | ...   |               | 31                        | 42.1 |      | R         |
| 30                                | ...        | 52                         | 58.39 | ...   |               | 48                        | 55.5 |      | R         | 11                            | 8.0        | 59                         | 31.50 | ...   |               | 31                        | 42.3 |      | R         |
| Aug. 2                            | ...        | 52                         | 58.42 | ...   |               | 48                        | 53.0 |      | R         | 13                            | 8.0        | 59                         | 31.65 | ...   |               | 31                        | 42.6 |      | R         |
| 3                                 | ...        | 52                         | 58.45 | 4     |               | 48                        | 54.1 |      | R         | 14                            | 8.0        | 59                         | 31.66 | ...   |               | 31                        | 42.2 |      | R         |
| <b>308</b> <i>Anon.</i>           |            |                            |       |       |               |                           |      |      |           | <b>314</b> <i>Anon.</i>       |            |                            |       |       |               |                           |      |      |           |
| May 19                            | 8.9        | 17                         | 56    | 36.54 | ...           | 128                       | 56   | 59.8 | R         | Aug. 14                       | 7.5        | 18                         | 3     | 21.98 | ...           | 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         |
| <b>309</b> <i>Stone 9840.</i>     |            |                            |       |       |               |                           |      |      |           | <b>315</b> <i>Anon.</i>       |            |                            |       |       |               |                           |      |      |           |
| June 1                            | 7.0        | 17                         | 57    | 33.57 | ...           | 127                       | 28   | 31.7 | R         | June 15                       | 9.7        | 18                         | 5     | 50.73 | ...           | 133                       | 7    | 10.8 | M         |
| 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         |                               |            |                            |       |       |               |                           |      |      |           |
| <b>310</b> <i>Anon.</i>           |            |                            |       |       |               |                           |      |      |           | <b>316</b> <i>Stone 9922.</i> |            |                            |       |       |               |                           |      |      |           |
| May 29                            | 7.5        | 17                         | 58    | 5.20  | ...           | 127                       | 26   | 19.7 | R         | May 19                        | ...        | 18                         | 5     | 52.94 | ...           | 133                       | 10   | 51.8 | R         |
| June 7                            | 7.5        | 58                         | 5.25  | ...   |               | 26                        | 19.2 |      | R         | 22                            | ...        | 5                          | 52.82 | ...   |               | 10                        | 51.4 |      | R         |
| 9                                 | ...        | 58                         | 5.53  | ...   |               | 26                        | 21.3 |      | M         | 23                            | ...        | 5                          | 52.84 | ...   |               | 10                        | 51.3 |      | R         |
| 14                                | 7.0        | 58                         | 5.34  | ...   |               | 26                        | 21.0 |      | M         | 24                            | ...        | 5                          | 52.77 | ...   |               | 10                        | 51.6 |      | R         |
| 22                                | 7.5        | 58                         | 5.81  | ...   |               | 26                        | 19.8 |      | M         | 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         |
| <b>311</b> <i>Stone 9849.</i>     |            |                            |       |       |               |                           |      |      |           | <b>317</b> <i>Stone 9924.</i> |            |                            |       |       |               |                           |      |      |           |
| May 30                            | 7.0        | 17                         | 58    | 13.11 | ...           | 127                       | 30   | 7.1  | R         | May 25                        | 7.5        | 18                         | 6     | 0.83  | ...           | 131                       | 56   | 15.1 | R         |
| June 11                           | ...        | 58                         | 13.37 | 5     |               | 30                        | 7.4  |      | M         | 26                            | 7.0        | 6                          | 0.80  | ...   |               | 56                        | 16.1 |      | R         |
| July 30                           | 7.0        | 58                         | 13.28 | ...   |               | 30                        | 7.5  |      | R         | 29                            | 7.0        | 6                          | 0.81  | ...   |               | 56                        | 15.7 |      | R         |
| 31                                | 7.0        | 58                         | 13.26 | ...   |               | 30                        | 7.3  |      | R         | 30                            | 7.0        | 6                          | 0.82  | ...   |               | 56                        | 16.7 |      | R         |
| Aug. 2                            | 7.0        | 58                         | 13.18 | ...   |               | 30                        | 6.7  |      | 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. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.                  | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |     |  |    |       |     |  |    |      |   |
|-------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|-----------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|-----|--|----|-------|-----|--|----|------|---|
|                                     |            | h.                         | m. | s.    |               | °                         | '  | "    |           |                                   |            | h.                         | m. | s.    |               | °                         | '  | "    |           |     |  |    |       |     |  |    |      |   |
| <b>318</b> <i>Anon.</i>             |            |                            |    |       |               |                           |    |      |           | <b>325</b> <i>58 Serpentis η</i>  |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| July 30                             | 7.5        | 18                         | 6  | 41.76 | ...           | 126                       | 55 | 43.9 | R         | June 11                           | ...        | 18                         | 15 | 15.38 | ...           | 92                        | 55 | 42.6 | M         |     |  |    |       |     |  |    |      |   |
| Aug. 2                              | 7.5        |                            | 6  | 41.54 | ...           |                           | 55 | 44.7 | R         | 15                                | ...        |                            | 15 | 15.36 | ...           |                           | 55 | 41.4 | M         |     |  |    |       |     |  |    |      |   |
| 8                                   | 7.5        |                            | 6  | 41.85 | ...           |                           | 55 | 47.7 | R         | 20                                | ...        |                            | 15 | 15.43 | ...           |                           | 55 | 40.5 | M         |     |  |    |       |     |  |    |      |   |
| 9                                   | 7.5        |                            | 6  | 41.70 | ...           |                           | 55 | 44.1 | R         | 22                                | ...        |                            | 15 | 15.46 | ...           |                           | 55 | 42.5 | M         |     |  |    |       |     |  |    |      |   |
| 10                                  | 7.5        |                            | 6  | 41.65 | ...           |                           | 55 | 44.8 | R         | July 3                            | ...        |                            | 15 | 15.32 | ...           |                           | 55 | 40.5 | R         |     |  |    |       |     |  |    |      |   |
| <b>319</b> <i>Anon.</i>             |            |                            |    |       |               |                           |    |      |           | 17                                |            |                            |    |       |               |                           |    |      |           | ... |  | 15 | 15.18 | ... |  | 55 | 41.6 | R |
| June 8                              | 9.0        | 18                         | 9  | 5.03  | 5             | 131                       | 16 | 18.0 | M         | 18                                | ...        |                            | 15 | 15.23 | ...           | 4                         | 55 | 40.4 | R         |     |  |    |       |     |  |    |      |   |
| 22                                  | 9.0        |                            | 9  | 5.01  | ...           |                           | 16 | 18.6 | M         | 20                                | ...        |                            | 15 | 15.29 | ...           |                           | 55 | 41.7 | R         |     |  |    |       |     |  |    |      |   |
| Aug. 11                             | 8.5        |                            | 9  | 4.78  | ...           |                           | 16 | 17.3 | R         | 24                                | ...        |                            | 15 | 15.32 | ...           |                           | 55 | 41.2 | R         |     |  |    |       |     |  |    |      |   |
| 13                                  | 8.5        |                            | 9  | 4.98  | ...           |                           | 16 | 15.9 | R         | 28                                | ...        |                            | 15 | 15.31 | ...           |                           | 55 | 42.5 | R         |     |  |    |       |     |  |    |      |   |
| <b>320</b> <i>23 Ursæ Minoris δ</i> |            |                            |    |       |               |                           |    |      |           | 30                                |            |                            |    |       |               |                           |    |      |           | ... |  | 15 | 15.28 | ... |  | 55 | 40.2 | R |
| June 7                              | ...        | 18                         | 10 | 3.96  | 3             | 3                         | 23 | 24.2 | R         | 31                                | ...        |                            | 15 | 15.31 | ...           |                           | 55 | 40.0 | R         |     |  |    |       |     |  |    |      |   |
| Aug. 14                             | ...        |                            | 10 | 2.43  | 3             |                           | 23 | 22.8 | R         | Aug. 2                            | ...        |                            | 15 | 15.26 | ...           |                           | 55 | 41.1 | R         |     |  |    |       |     |  |    |      |   |
| <b>321</b> <i>Anon.</i>             |            |                            |    |       |               |                           |    |      |           | 3                                 |            |                            |    |       |               |                           |    |      |           | ... |  | 15 | 15.25 | ... |  | 55 | 41.5 | R |
| May 23                              | 8.0        | 18                         | 10 | 21.14 | ...           | 126                       | 23 | 33.6 | R         | 4                                 | ...        |                            | 15 | 15.23 | ...           |                           | 55 | 42.1 | R         |     |  |    |       |     |  |    |      |   |
| <b>322</b> <i>Anon.</i>             |            |                            |    |       |               |                           |    |      |           | 8                                 |            |                            |    |       |               |                           |    |      |           | ... |  | 15 | 15.23 | ... |  | 55 | 40.2 | R |
| May 28                              | 8.0        | 18                         | 13 | 25.60 | ...           | 136                       | 5  | 3.5  | R         | 9                                 | ...        |                            | 15 | 15.28 | ...           |                           | 55 | 41.6 | R         |     |  |    |       |     |  |    |      |   |
| 29                                  | 8.0        |                            | 13 | 25.67 | ...           |                           | 5  | 3.8  | R         | 10                                | ...        |                            | 15 | 15.27 | ...           |                           | 55 | 41.6 | R         |     |  |    |       |     |  |    |      |   |
| 30                                  | 8.0        |                            | 13 | 25.60 | ...           |                           | 5  | 4.1  | R         | 11                                | ...        |                            | 15 | 15.31 | ...           |                           | 55 | 41.9 | R         |     |  |    |       |     |  |    |      |   |
| June 1                              | 8.0        |                            | 13 | 25.52 | ...           |                           | 5  | 3.1  | R         | <b>326</b> <i>Anon.</i>           |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| 9                                   | ...        |                            | 13 | 25.72 | ...           |                           | 5  | 0.6  | M         | Aug. 16                           | 7.0        | 18                         | 15 | 22.20 | ...           | 123                       | 47 | 32.3 | R         |     |  |    |       |     |  |    |      |   |
| <b>323</b> <i>Anon.</i>             |            |                            |    |       |               |                           |    |      |           | 6                                 |            |                            |    |       |               |                           |    |      |           | ... |  | 15 | 22.33 | ... |  | 47 | 28.0 | M |
| May 25                              | 8.0        | 18                         | 14 | 12.57 | ...           | 127                       | 43 | 33.4 | R         | 15                                | ...        |                            | 15 | 22.25 | ...           |                           | 47 | 30.2 | M         |     |  |    |       |     |  |    |      |   |
| <b>324</b> <i>Taylor 8452.</i>      |            |                            |    |       |               |                           |    |      |           | 6                                 |            |                            |    |       |               |                           |    |      |           | ... |  | 15 | 22.39 | ... |  | 47 | 28.8 | M |
| Aug. 18                             | ...        | 18                         | 14 | 14.57 | ...           | 128                       | 42 | 29.2 | R         | <b>327</b> <i>Anon.</i>           |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| 25                                  | ...        |                            | 14 | 14.42 | ...           |                           | 42 | 29.3 | R         | May 19                            | 7.0        | 18                         | 15 | 42.50 | ...           | 133                       | 50 | 53.0 | R         |     |  |    |       |     |  |    |      |   |
| Sep. 4                              | ...        |                            | 14 | 14.50 | ...           |                           | 42 | 28.4 | M         | 22                                | 7.0        |                            | 15 | 42.38 | ...           |                           | 50 | 53.4 | R         |     |  |    |       |     |  |    |      |   |
| 11                                  | ...        |                            | 14 | 14.43 | ...           |                           | 42 | 29.5 | M         | 23                                | 7.0        |                            | 15 | 42.38 | ...           |                           | 50 | 53.0 | R         |     |  |    |       |     |  |    |      |   |
| 13                                  | ...        |                            | 14 | 14.73 | 3             |                           | 42 | 29.0 | M         | 24                                | 7.0        |                            | 15 | 42.29 | ...           |                           | 50 | 53.2 | R         |     |  |    |       |     |  |    |      |   |
| <b>325</b> <i>58 Serpentis η</i>    |            |                            |    |       |               |                           |    |      |           | <b>328</b> <i>Anon.</i>           |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| June 11                             | ...        | 18                         | 15 | 15.38 | ...           | 92                        | 55 | 42.6 | M         | May 18                            | 8.0        | 18                         | 16 | 32.65 | ...           | 127                       | 17 | 6.3  | R         |     |  |    |       |     |  |    |      |   |
| 15                                  | ...        |                            | 15 | 15.36 | ...           |                           | 55 | 41.4 | M         | <b>329</b> <i>22 Sagittarii λ</i> |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| 20                                  | ...        |                            | 15 | 15.43 | ...           |                           | 55 | 40.5 | M         | June 8                            | ...        | 18                         | 20 | 44.96 | ...           | 115                       | 29 | 3.1  | M         |     |  |    |       |     |  |    |      |   |
| 22                                  | ...        |                            | 15 | 15.46 | ...           |                           | 55 | 42.5 | M         | July 4                            | ...        |                            | 20 | 45.08 | ...           |                           | 29 | 8.0  | R         |     |  |    |       |     |  |    |      |   |
| July 3                              | ...        |                            | 15 | 15.32 | ...           |                           | 55 | 40.5 | R         | 18                                | ...        |                            | 20 | 45.07 | ...           |                           | 29 | 6.7  | R         |     |  |    |       |     |  |    |      |   |
| 4                                   | ...        |                            | 15 | 15.18 | ...           |                           | 55 | 41.6 | R         |                                   |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| 17                                  | ...        |                            | 15 | 15.23 | 4             |                           | 55 | 40.4 | R         |                                   |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| 18                                  | ...        |                            | 15 | 15.23 | ...           |                           | 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 | 15.23 | ...           |                           | 55 | 40.2 | R         |                                   |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| 9                                   | ...        |                            | 15 | 15.23 | ...           |                           | 55 | 41.6 | R         |                                   |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| 10                                  | ...        |                            | 15 | 15.27 | ...           |                           | 55 | 41.6 | R         |                                   |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |
| 11                                  | ...        |                            | 15 | 15.31 | ...           |                           | 55 | 41.9 | R         |                                   |            |                            |    |       |               |                           |    |      |           |     |  |    |       |     |  |    |      |   |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.               | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer.                      | Number and Date. | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |  |
|--------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|--------------------------------|------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|--|
|                                |            | h.                         | m.    | s.    |               | °                         | '    | "    |                                |                  |            | °                          | '     | "     |               | °                         | '    | "    |           |  |
| July 20                        | ...        | 18                         | 20    | 45.00 | ...           | 115                       | 29   | 5.2  | R                              | Aug. 14          | 8.5        | 18                         | 30    | 45.30 | ...           | 127                       | 5    | 57.3 | R         |  |
| 24                             | ...        | 20                         | 44.89 | ...   | ...           | 29                        | 4.9  | R    | 16                             | 8.5              | 30         | 45.48                      | ...   | ...   | 5             | 57.2                      | R    |      |           |  |
| 28                             | ...        | 20                         | 45.08 | ...   | ...           | 29                        | 6.1  | R    | 18                             | 8.5              | 30         | 45.43                      | ...   | ...   | 5             | 57.5                      | R    |      |           |  |
| 30                             | ...        | 20                         | 44.91 | ...   | ...           | 29                        | 5.6  | R    | 25                             | 8.5              | 30         | 45.38                      | ...   | ...   | 5             | 57.1                      | R    |      |           |  |
| Aug. 2                         | ...        | 20                         | 44.94 | ...   | ...           | 29                        | 6.9  | R    | <b>334</b> <i>Anon.</i>        |                  |            |                            |       |       |               |                           |      |      |           |  |
| 3                              | ...        | 20                         | 44.97 | ...   | ...           | 29                        | 6.5  | R    | July 4                         | 9.0              | 18         | 30                         | 55.10 | ...   | 127           | 58                        | 16.9 | R    |           |  |
| 4                              | ...        | 20                         | 44.93 | ...   | ...           | 29                        | 5.2  | R    | Aug. 8                         | 9.0              | 30         | 55.36                      | ...   | ...   | 58            | 17.9                      | R    |      |           |  |
| 8                              | ...        | 20                         | 44.95 | ...   | ...           | 29                        | 7.8  | R    | 9                              | 9.0              | 30         | 55.23                      | ...   | ...   | 58            | 19.0                      | R    |      |           |  |
| 9                              | ...        | 20                         | 45.00 | ...   | ...           | 29                        | 4.5  | R    | 10                             | 9.0              | 30         | 55.23                      | ...   | ...   | 58            | 18.7                      | R    |      |           |  |
| 10                             | ...        | 20                         | 45.02 | ...   | ...           | 29                        | 4.6  | R    | 11                             | 9.0              | 30         | 55.29                      | ...   | ...   | 58            | 18.3                      | R    |      |           |  |
| 11                             | ...        | 20                         | 44.98 | ...   | ...           | 29                        | 6.1  | R    | <b>335</b> <i>Anon.</i>        |                  |            |                            |       |       |               |                           |      |      |           |  |
| 13                             | ...        | 20                         | 44.98 | ...   | ...           | 29                        | 4.8  | R    | June 7                         | 7.5              | 18         | 31                         | 24.82 | ...   | 127           | 23                        | 13.8 | R    |           |  |
| 14                             | ...        | 20                         | 44.97 | ...   | ...           | 29                        | 7.2  | R    | 8                              | ...              | 31         | 25.07                      | 6     | ...   | 23            | 14.0                      | M    |      |           |  |
| 16                             | ...        | 20                         | 45.00 | ...   | ...           | 29                        | 6.5  | R    | 9                              | 7.5              | 31         | 24.78                      | ...   | ...   | 23            | 12.1                      | M    |      |           |  |
| 18                             | ...        | 20                         | 45.00 | ...   | ...           | 29                        | 7.8  | R    | 14                             | 7.5              | 31         | 24.80                      | ...   | ...   | 23            | 15.0                      | M    |      |           |  |
| 25                             | ...        | 20                         | 44.90 | ...   | ...           | 29                        | 7.1  | R    | <b>336</b> <i>Stone 10154.</i> |                  |            |                            |       |       |               |                           |      |      |           |  |
| 28                             | ...        | 20                         | 44.95 | ...   | ...           | 29                        | 6.1  | R    | May 18                         | ...              | 18         | 32                         | 12.34 | ...   | 134           | 16                        | 33.9 | R    |           |  |
| <b>330</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |                                | 19               | ...        | 32                         | 12.16 | ...   | ...           | 16                        | 33.8 | R    |           |  |
| May 23                         | 9.5        | 18                         | 22    | 46.09 | ...           | 129                       | 38   | 49.7 | R                              | 23               | ...        | 32                         | 12.17 | ...   | ...           | 16                        | 32.1 | R    |           |  |
| 28                             | 9.5        | 22                         | 46.28 | ...   | ...           | 38                        | 50.8 | R    | <b>337</b> <i>Anon.</i>        |                  |            |                            |       |       |               |                           |      |      |           |  |
| 29                             | 9.5        | 22                         | 45.98 | ...   | ...           | 38                        | 50.7 | R    | May 25                         | 8.0              | 18         | 34                         | 2.21  | ...   | 125           | 42                        | 3.8  | R    |           |  |
| 30                             | 9.5        | 22                         | 45.97 | ...   | ...           | 38                        | 51.3 | R    | 28                             | 8.0              | 34         | 2.13                       | ...   | ...   | 42            | 4.9                       | R    |      |           |  |
| June 1                         | 9.5        | 22                         | 45.89 | ...   | ...           | 38                        | 51.0 | R    | 29                             | 8.0              | 34         | 2.38                       | ...   | ...   | 42            | 6.3                       | R    |      |           |  |
| <b>331</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |                                | 30               | 8.0        | 34                         | 2.36  | ...   | ...           | 42                        | 6.5  | R    |           |  |
| June 7                         | 7.0        | 18                         | 28    | 24.78 | ...           | 127                       | 40   | 10.1 | R                              | June 1           | 8.0        | 34                         | 2.29  | ..    | ...           | 42                        | 6.1  | R    |           |  |
| 9                              | ...        | 23                         | 24.77 | ...   | ...           | 40                        | 12.1 | M    | <b>338</b> <i>Anon.</i>        |                  |            |                            |       |       |               |                           |      |      |           |  |
| 11                             | ...        | 23                         | 24.90 | ...   | ...           | 40                        | 10.2 | M    | Aug. 23                        | 8.0              | 18         | 34                         | 16.75 | ...   | 124           | 34                        | 19.6 | R    |           |  |
| 15                             | 7.0        | 23                         | 24.78 | ...   | ...           | 40                        | 10.4 | M    | Sep. 4                         | ...              | 34         | 16.61                      | ...   | ...   | 34            | 18.0                      | M    |      |           |  |
| 22                             | 7.0        | 23                         | 24.84 | ...   | ...           | 40                        | 11.3 | M    | 13                             | ...              | 34         | 16.56                      | ...   | ...   | 34            | 17.0                      | M    |      |           |  |
| <b>332</b> <i>Stone 10124.</i> |            |                            |       |       |               |                           |      |      |                                | 15               | 7.8        | 34                         | 16.56 | ...   | ...           | 34                        | 17.8 | M    |           |  |
| May 24                         | 7.0        | 18                         | 29    | 26.83 | ...           | 131                       | 42   | 30.5 | R                              | 17               | ...        | 34                         | 16.85 | 3     | ...           | 34                        | 16.6 | M    |           |  |
| 28                             | 7.0        | 29                         | 26.80 | ...   | ...           | 42                        | 31.5 | R    | <b>333</b> <i>Anon.</i>        |                  |            |                            |       |       |               |                           |      |      |           |  |
| 29                             | 7.0        | 29                         | 26.82 | ...   | ...           | 42                        | 32.4 | R    | June 22                        | 8.5              | 18         | 30                         | 45.26 | ...   | 127           | 5                         | 56.9 | M    |           |  |
| 30                             | 7.0        | 29                         | 26.78 | ...   | ...           | 42                        | 33.6 | R    | Aug. 13                        | 8.5              | 30         | 45.18                      | ...   | ...   | 5             | 57.5                      | R    |      |           |  |
| June 1                         | 7.0        | 29                         | 26.68 | ...   | ...           | 42                        | 34.4 | R    |                                |                  |            |                            |       |       |               |                           |      |      |           |  |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.               | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. | Number and Date.               | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|--------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|--------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                                |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |                                |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |
| <b>339</b> <i>Stone 10187.</i> |            |                            |       |       |               |                           |      |      |           | <b>344</b> <i>Stone 10239.</i> |            |                            |       |       |               |                           |      |      |           |
| July 30                        | 8.0        | 18                         | 36    | 45.21 | ...           | 127                       | 0    | 6.9  | R         | Aug. 8                         | ...        | 18                         | 42    | 49.64 | ...           | 134                       | 36   | 22.9 | R         |
| Aug. 10                        | 7.5        | 36                         | 45.06 | ...   |               | 0                         | 8.8  | R    | 9         | ...                            | 42         | 49.50                      | ...   |       | 36            | 20.6                      | R    |      |           |
| 13                             | 7.5        | 36                         | 45.12 | ...   |               | 0                         | 7.2  | R    | 10        | ...                            | 42         | 49.55                      | ...   |       | 36            | 20.3                      | R    |      |           |
| 16                             | 7.5        | 36                         | 45.11 | ...   |               | 0                         | 7.7  | R    | 11        | ...                            | 42         | 49.59                      | ...   |       | 36            | 19.7                      | R    |      |           |
| 18                             | 7.5        | 36                         | 45.07 | ...   |               | 0                         | 8.3  | R    | 13        | ...                            | 42         | 49.30                      | ...   |       | 36            | 19.6                      | R    |      |           |
|                                |            |                            |       |       |               |                           |      |      |           | 14                             | ...        | 42                         | 49.36 | ...   |               | 36                        | 19.4 | R    |           |
| <b>340</b> <i>Taylor 8599.</i> |            |                            |       |       |               |                           |      |      |           | <b>345</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |           |
| June 11                        | ...        | 18                         | 36    | 49.54 | ...           | 129                       | 48   | 6.8  | M         | June 15                        | 8.0        | 18                         | 43    | 30.96 | ...           | 134                       | 49   | 13.8 | M         |
| 15                             | ...        | 36                         | 49.30 | ...   |               | 48                        | 5.2  | M    | Sep. 4    | 8.3                            | 43         | 31.07                      | ...   |       | 49            | 14.2                      | M    |      |           |
| July 18                        | ...        | 36                         | 49.52 | ...   |               | 48                        | 7.2  | R    | 15        | 7.7                            | 43         | 31.00                      | ...   |       | 49            | 14.7                      | M    |      |           |
| 20                             | ...        | 36                         | 49.48 | ...   |               | 48                        | 6.8  | R    | 22        | ...                            | 43         | 30.98                      | ...   |       | 49            | 11.6                      | M    |      |           |
| Aug. 11                        | ...        | 36                         | 49.24 | ...   |               | 48                        | 6.8  | R    | 26        | 8.0                            | 43         | 31.44                      | ...   |       | 49            | 13.6                      | M    |      |           |
| 14                             | ...        | 36                         | 49.33 | ...   |               | 48                        | 6.2  | R    |           |                                |            |                            |       |       |               |                           |      |      |           |
| <b>341</b> <i>Taylor 8600.</i> |            |                            |       |       |               |                           |      |      |           | <b>346</b> <i>Taylor 8647.</i> |            |                            |       |       |               |                           |      |      |           |
| June 14                        | 7.5        | 18                         | 36    | 51.35 | 5             | 129                       | 51   | 37.3 | M         | Sep. 13                        | ...        | 18                         | 43    | 38.58 | ...           | 134                       | 40   | 15.5 | M         |
| 20                             | 7.0        | 36                         | 51.40 | ...   | 5             | 51                        | 36.5 | M    | 20        | ...                            | 43         | 38.66                      | ...   |       | 40            | 15.8                      | M    |      |           |
| July 3                         | 7.0        | 36                         | 51.48 | ...   |               | 51                        | 36.4 | R    | 27        | 7.0                            | 43         | 38.48                      | 6     | 40    | 13.8          | M                         |      |      |           |
| 4                              | 7.0        | 36                         | 51.55 | ...   |               | 51                        | 37.7 | R    | 29        | 7.5                            | 43         | 38.59                      | ...   |       | 40            | 15.3                      | M    |      |           |
| Aug. 9                         | 7.0        | 36                         | 51.59 | ...   |               | 51                        | 37.4 | R    |           |                                |            |                            |       |       |               |                           |      |      |           |
| <b>342</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |           | <b>347</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |           |
| May 18                         | 7.5        | 18                         | 38    | 45.46 | ...           | 131                       | 16   | 59.7 | R         | Aug. 28                        | 8.0        | 18                         | 43    | 48.76 | ...           | 125                       | 31   | 1.6  | R         |
| 19                             | 7.5        | 38                         | 45.43 | ...   |               | 16                        | 59.6 | R    | Sep. 14   | 7.8                            | 43         | 48.70                      | 6     | 31    | 1.6           | M                         |      |      |           |
| 24                             | 7.5        | 38                         | 45.57 | ...   |               | 17                        | 1.3  | R    | 28        | ...                            | 43         | 48.39                      | ...   |       | 31            | 2.8                       | M    |      |           |
| 25                             | 7.5        | 38                         | 45.56 | ...   |               | 17                        | 1.7  | R    |           |                                |            |                            |       |       |               |                           |      |      |           |
| 28                             | 7.5        | 38                         | 45.55 | ...   |               | 17                        | 0.5  | R    |           |                                |            |                            |       |       |               |                           |      |      |           |
| <b>343</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |           | <b>348</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |           |
| May 29                         | 9.0        | 18                         | 39    | 14.20 | ...           | 128                       | 36   | 33.9 | R         | May 29                         | 9.5        | 18                         | 45    | 24.16 | ...           | 129                       | 28   | 13.2 | R         |
| 30                             | 9.0        | 39                         | 14.16 | ...   |               | 36                        | 34.8 | R    | 30        | 9.0                            | 45         | 24.12                      | ...   |       | 28            | 13.7                      | R    |      |           |
| June 1                         | 9.0        | 39                         | 14.17 | ...   |               | 36                        | 34.3 | R    | June 1    | 9.0                            | 45         | 24.04                      | ...   |       | 28            | 13.5                      | R    |      |           |
| 7                              | 9.0        | 39                         | 18.90 | ...   |               | 36                        | 33.7 | R    | 14        | 9.0                            | 45         | 24.31                      | ...   |       | 28            | 14.3                      | M    |      |           |
| 8                              | 9.0        | 39                         | 14.43 | ...   |               | 36                        | 33.7 | M    |           |                                |            |                            |       |       |               |                           |      |      |           |
| <b>349</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |           | <b>349</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |           |
| Aug. 14                        | 8.0        | 18                         | 47    | 6.37  | ...           | 133                       | 50   | 45.8 | R         | Aug. 14                        | 8.0        | 18                         | 47    | 6.37  | ...           | 133                       | 50   | 45.8 | R         |
| 18                             | 8.0        | 47                         | 6.66  | 4     |               | 50                        | 47.0 | R    | 18        | 8.0                            | 47         | 6.66                       | 4     |       | 50            | 47.0                      | R    |      |           |
| 25                             | 8.0        | 47                         | 6.52  | ...   |               | 50                        | 46.6 | R    | 25        | 8.0                            | 47         | 6.52                       | ...   |       | 50            | 46.6                      | R    |      |           |
| Sep. 17                        | ...        | 47                         | 6.01  | ...   |               | 50                        | 45.4 | M    | Sep. 17   | ...                            | 47         | 6.01                       | ...   |       | 50            | 45.4                      | M    |      |           |
| 24                             | 8.0        | 47                         | 6.56  | ...   |               | 50                        | 47.7 | 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. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer.               | Number and Date.        | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-------------------------|-------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                              |            | h.                         | m.    | s.    |               | °                         | '    | "    |                         |                         |            | h.                         | m.    | s.    |               | °                         | '    | "    |           |
| <b>350 Taylor 8685.</b>      |            |                            |       |       |               |                           |      |      | Aug. 14                 | ...                     | 18         | 54                         | 18.74 | ...   | 75            | 5                         | 22.2 | R    |           |
| Aug. 8                       | ...        | 18                         | 48    | 44.25 | ...           | 127                       | 29   | 28.8 | R                       | 16                      | ...        | 54                         | 18.63 | ...   | 5             | 22.6                      | R    |      |           |
| 9                            | ...        | 48                         | 44.33 | ...   | ...           | 29                        | 24.8 | R    | 18                      | ...                     | 54         | 18.62                      | ...   | 5     | 21.6          | R                         |      |      |           |
| 10                           | ...        | 48                         | 44.07 | ...   | ...           | 29                        | 24.3 | R    | 25                      | ...                     | 54         | 18.67                      | ...   | 5     | 22.2          | R                         |      |      |           |
| 11                           | ...        | 48                         | 44.09 | ...   | ...           | 29                        | 26.0 | R    | 28                      | ...                     | 54         | 18.65                      | ...   | 5     | 21.2          | R                         |      |      |           |
| 13                           | ...        | 48                         | 44.09 | ...   | ...           | 29                        | 23.3 | R    | Sep. 4                  | ...                     | 54         | 18.55                      | ...   | 5     | 23.3          | M                         |      |      |           |
| <b>351 Anon.</b>             |            |                            |       |       |               |                           |      |      | 5                       | ...                     | 54         | 18.57                      | ...   | 5     | 22.8          | M                         |      |      |           |
| May 30                       | 9.5        | 18                         | 52    | 14.82 | ...           | 182                       | 56   | 57.4 | R                       | 10                      | ...        | 54                         | 18.64 | ...   | 5             | 21.3                      | M    |      |           |
| <b>352 Taylor 8715.—1st.</b> |            |                            |       |       |               |                           |      |      | 11                      | ...                     | 54         | 18.60                      | ...   | 5     | 22.3          | M                         |      |      |           |
| July 30                      | 7.5        | 18                         | 53    | 8.67  | ...           | 127                       | 13   | 16.5 | R                       | <b>356 Stone 10351.</b> |            |                            |       |       |               |                           |      |      |           |
| Sep. 15                      | 7.0        | 53                         | 9.66  | ...   | ...           | 13                        | 16.0 | M    | Sep. 29                 | 6.0                     | 18         | 55                         | 18.37 | ...   | 128           | 25                        | 13.5 | M    |           |
| 25                           | ...        | 53                         | 8.53  | 5     | ...           | 13                        | 14.8 | M    | Oct. 1                  | 6.0                     | 55         | 18.18                      | ...   | ...   | 25            | 14.2                      | R    |      |           |
| 27                           | 7.3        | 53                         | 8.68  | ...   | ...           | 13                        | 15.7 | M    | 4                       | 6.0                     | 55         | 18.21                      | 4     | ...   | 25            | 11.5                      | R    |      |           |
| 28                           | ...        | 53                         | 8.66  | ...   | ...           | 13                        | 16.3 | M    | 5                       | 6.0                     | 55         | 18.23                      | ...   | ...   | 25            | 11.8                      | R    |      |           |
| <b>353 Taylor 8715.—2nd.</b> |            |                            |       |       |               |                           |      |      | <b>357 Anon.</b>        |                         |            |                            |       |       |               |                           |      |      |           |
| Sep. 17                      | 7.5        | 18                         | 53    | 9.90  | ...           | 127                       | 13   | 19.1 | M                       | June 15                 | 7.5        | 19                         | 0     | 12.02 | ...           | 185                       | 15   | 25.2 | M         |
| 20                           | ...        | 53                         | 9.67  | ...   | ...           | 13                        | 19.3 | M    | Sep. 4                  | 7.5                     | 0          | 11.69                      | ...   | ...   | 15            | 26.8                      | M    |      |           |
| 22                           | ...        | 53                         | 9.78  | ...   | ...           | 13                        | 18.1 | M    | 13                      | ...                     | 0          | 11.79                      | ...   | ...   | 15            | 25.5                      | M    |      |           |
| 24                           | ...        | 53                         | 9.74  | ...   | ...           | 13                        | 19.2 | M    | 14                      | ...                     | 0          | 11.69                      | 5     | ...   | 15            | 26.3                      | M    |      |           |
| 26                           | 7.3        | 53                         | 9.80  | ...   | ...           | 13                        | 18.2 | M    | 15                      | 7.5                     | 0          | 11.72                      | ...   | ...   | 15            | 26.9                      | M    |      |           |
| <b>354 Anon.</b>             |            |                            |       |       |               |                           |      |      | <b>358 Stone 10391.</b> |                         |            |                            |       |       |               |                           |      |      |           |
| July 28                      | 8.5        | 18                         | 53    | 54.82 | ...           | 128                       | 6    | 55.2 | R                       | Sep. 26                 | 7.3        | 19                         | 0     | 33.03 | ...           | 182                       | 36   | 21.5 | M         |
| Sep. 14                      | 8.5        | 53                         | 54.91 | ...   | ...           | 6                         | 57.3 | M    | 27                      | 7.3                     | 0          | 33.01                      | ...   | ...   | 36            | 21.9                      | M    |      |           |
| <b>355 13 Aquilæ ε</b>       |            |                            |       |       |               |                           |      |      | <b>359 Stone 10400.</b> |                         |            |                            |       |       |               |                           |      |      |           |
| June 1                       | ...        | 18                         | 54    | 18.66 | ...           | 75                        | 5    | 23.2 | R                       | June 11                 | ...        | 19                         | 1     | 34.60 | ...           | 190                       | 0    | 36.7 | M         |
| 7                            | ...        | 54                         | 18.62 | ...   | ...           | 5                         | 21.6 | R    | 14                      | ...                     | 1          | 34.39                      | ...   | ...   | 0             | 38.8                      | M    |      |           |
| 9                            | ...        | 54                         | 18.66 | ...   | ...           | 5                         | 21.4 | M    | 22                      | ...                     | 1          | 34.44                      | ...   | ...   | 0             | 37.6                      | M    |      |           |
| 14                           | ...        | 54                         | 18.67 | ...   | ...           | 5                         | 24.5 | M    | July 18                 | ...                     | 1          | 34.78                      | ...   | ...   | 0             | 38.3                      | R    |      |           |
| 15                           | ...        | 54                         | 18.67 | ...   | ...           | 5                         | 22.2 | M    | 30                      | ...                     | 1          | 34.64                      | ...   | ...   | 0             | 38.9                      | R    |      |           |
| 20                           | ...        | 54                         | 18.47 | ...   | ...           | 5                         | 22.1 | M    | <b>360 Anon.</b>        |                         |            |                            |       |       |               |                           |      |      |           |
| Aug. 8                       | ...        | 54                         | 18.67 | ...   | ...           | 5                         | 23.5 | R    | Aug. 11                 | 8.0                     | 19         | 4                          | 10.15 | ...   | 185           | 27                        | 42.0 | R    |           |
| 9                            | ...        | 54                         | 18.62 | ...   | ...           | 5                         | 22.1 | R    | 13                      | 9.0                     | 4          | 9.97                       | ...   | ...   | 27            | 41.4                      | R    |      |           |
| 10                           | ...        | 54                         | 18.66 | ...   | ...           | 5                         | 22.9 | R    | 14                      | 8.5                     | 4          | 10.01                      | ...   | ...   | 27            | 41.5                      | R    |      |           |
| 11                           | ...        | 54                         | 18.58 | ...   | ...           | 5                         | 22.2 | R    |                         |                         |            |                            |       |       |               |                           |      |      |           |
| 13                           | ...        | 54                         | 18.63 | ...   | ...           | 5                         | 22.7 | R    |                         |                         |            |                            |       |       |               |                           |      |      |           |





Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.               | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer.               | Number and Date.               | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |        |                                      | Observer. |                                 |       |   |      |      |      |   |  |  |  |
|--------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-------------------------|--------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|--------|--------------------------------------|-----------|---------------------------------|-------|---|------|------|------|---|--|--|--|
|                                |            | h.                         | m.    | s.    |               | o.                        | '    | "    |                         |                                |            | h.                         | m.    | s.    |               | o.                        | '      | "                                    |           |                                 |       |   |      |      |      |   |  |  |  |
| <b>376</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |                         | <b>384</b> <i>Stone 10598.</i> |            |                            |       |       |               |                           |        |                                      |           |                                 |       |   |      |      |      |   |  |  |  |
| July 28                        | 8.0        | 19                         | 22    | 5.66  | 4             | 132                       | 34   | 15.8 | R                       | Oct. 9                         | 6.7        | 19                         | 31    | 57.21 | ...           | 129                       | 41     | 45.9                                 | R         |                                 |       |   |      |      |      |   |  |  |  |
| 30                             | 8.0        | 22                         | 5.78  | ...   |               | 34                        | 17.4 | R    | 13                      | 6.7                            | 31         | 57.31                      | ...   |       | 41            | 48.3                      | R      |                                      |           |                                 |       |   |      |      |      |   |  |  |  |
| Sep. 4                         | 8.0        | 22                         | 5.66  | ...   |               | 34                        | 16.1 | M    | <b>385</b> <i>Anon.</i> |                                |            |                            |       |       |               |                           |        |                                      |           |                                 |       |   |      |      |      |   |  |  |  |
| 13                             | ...        | 22                         | 5.76  | ...   |               | 34                        | 16.7 | M    | Oct. 5                  | 7.5                            | 19         | 33                         | 25.30 | 3     | 126           | 35                        | 58.9   | R                                    |           |                                 |       |   |      |      |      |   |  |  |  |
| <b>377</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |                         | <b>386</b> <i>Stone 10622.</i> |            |                            |       |       |               |                           |        |                                      |           |                                 |       |   |      |      |      |   |  |  |  |
| Aug. 8                         | 9.0        | 19                         | 25    | 49.63 | ...           | 133                       | 42   | 50.9 | R                       | Sep. 27                        | ...        | 19                         | 35    | 48.41 | ...           | 127                       | 48     | 47.6                                 | M         |                                 |       |   |      |      |      |   |  |  |  |
| <b>378</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |                         | Sep. 29                        | ...        | 35                         | 48.42 | ...   | 48            | 46.8                      | M      | <b>387</b> <i>Stone 10624.</i>       |           |                                 |       |   |      |      |      |   |  |  |  |
| Sep. 14                        | ...        | 19                         | 25    | 58.47 | ...           | 146                       | 55   | 2.1  | M                       | Oct. 11                        | 7.0        | 19                         | 36    | 21.45 | ...           | 131                       | 53     | 7.6                                  | R         |                                 |       |   |      |      |      |   |  |  |  |
| 15                             | ...        | 25                         | 58.58 | ...   |               | 55                        | 2.5  | M    | 13                      | 7.0                            | 36         | 21.60                      | ...   | 53    | 9.1           | R                         |        |                                      |           |                                 |       |   |      |      |      |   |  |  |  |
| <b>379</b> <i>Taylor 8982.</i> |            |                            |       |       |               |                           |      |      |                         | 18                             | 7.0        | 36                         | 21.50 | ...   | 53            | 8.0                       | R      | <b>388</b> <i>R. P. L. 133.</i>      |           |                                 |       |   |      |      |      |   |  |  |  |
| Oct. 11                        | ...        | 19                         | 28    | 35.18 | ...           | 148                       | 14   | 24.0 | R                       | Aug. 4                         | ...        | 19                         | 37    | 47.34 | 3             | 4                         | 9      | 17.0                                 | R         |                                 |       |   |      |      |      |   |  |  |  |
| <b>380</b> <i>Stone 10583.</i> |            |                            |       |       |               |                           |      |      |                         | 8                              | ...        | 37                         | 47.43 | 3     | 9             | 18.3                      | R      | <b>389</b> <i>R. P. L. 133.—s.p.</i> |           |                                 |       |   |      |      |      |   |  |  |  |
| July 30                        | 7.5        | 19                         | 29    | 33.25 | ...           | 131                       | 42   | 59.3 | R                       | 9                              | ...        | 37                         | 47.19 | 3     | 9             | 16.1                      | R      | <b>389</b> <i>R. P. L. 134.</i>      |           |                                 |       |   |      |      |      |   |  |  |  |
| Aug. 9                         | 7.0        | 29                         | 33.24 | ...   |               | 42                        | 58.9 | R    | 10                      | ...                            | 37         | 47.27                      | 3     | 9     | 16.4          | R                         | Aug. 8 | ...                                  | 19        | 39                              | 34.97 | 3 | 4    | 9    | 34.9 | R |  |  |  |
| 10                             | 7.0        | 29                         | 33.26 | ...   |               | 42                        | 58.5 | R    | 11                      | ...                            | 37         | 47.50                      | 3     | 9     | 16.4          | R                         | 9      | ...                                  | 39        | 34.88                           | 3     | 9 | 32.0 | R    |      |   |  |  |  |
| 11                             | 7.0        | 29                         | 33.29 | ...   |               | 42                        | 57.7 | R    | 13                      | ...                            | 37         | 45.18                      | 3     | 9     | 17.2          | R                         | 11     | ...                                  | 39        | 35.03                           | 3     | 9 | 31.6 | R    |      |   |  |  |  |
| 16                             | 7.0        | 29                         | 33.21 | ...   |               | 42                        | 57.8 | R    | 16                      | ...                            | 37         | 47.70                      | 3     | 9     | 15.7          | R                         | 18     | ...                                  | 39        | 35.01                           | 3     | 9 | 31.2 | R    |      |   |  |  |  |
| <b>381</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |                         | Sep. 4                         | ...        | 37                         | 45.61 | 3     | 9             | 16.4                      | M      | <b>389</b> <i>R. P. L. 133.—s.p.</i> |           |                                 |       |   |      |      |      |   |  |  |  |
| Aug. 25                        | 8.0        | 19                         | 29    | 45.56 | ...           | 125                       | 29   | 57.6 | R                       | Jan. 27                        | ...        | 19                         | 37    | 47.14 | 3             | 4                         | 9      | 18.0                                 | M         | <b>389</b> <i>R. P. L. 134.</i> |       |   |      |      |      |   |  |  |  |
| 28                             | 8.0        | 29                         | 45.56 | ...   |               | 29                        | 57.5 | R    | 29                      | ...                            | 37         | 46.94                      | 3     | 9     | 17.3          | M                         | Aug. 8 | ...                                  | 19        | 39                              | 34.97 | 3 | 4    | 9    | 34.9 | R |  |  |  |
| Sep. 4                         | 8.0        | 29                         | 45.72 | 6     |               | 29                        | 57.9 | M    | 30                      | ...                            | 37         | 48.00                      | 3     | 9     | 16.6          | M                         | 9      | ...                                  | 39        | 34.88                           | 3     | 9 | 32.0 | R    |      |   |  |  |  |
| 13                             | ...        | 29                         | 45.67 | ...   |               | 29                        | 58.3 | M    | Feb. 1                  | ...                            | 37         | 46.84                      | 2     | 9     | 18.1          | R                         | 11     | ...                                  | 39        | 35.03                           | 3     | 9 | 31.6 | R    |      |   |  |  |  |
| <b>382</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |                         | 2                              | ...        | 37                         | 47.27 | 3     | 9             | 19.0                      | R      | 18                                   | ...       | 39                              | 35.01 | 3 | 9    | 31.2 | R    |   |  |  |  |
| July 28                        | 8.0        | 19                         | 30    | 11.65 | ...           | 129                       | 1    | 3.4  | R                       | 8                              | ...        | 37                         | 47.11 | 3     | 9             | 18.3                      | R      | Sep. 14                              | ...       | 39                              | 34.91 | 3 | 9    | 32.5 | M    |   |  |  |  |
| <b>383</b> <i>Stone 10594.</i> |            |                            |       |       |               |                           |      |      |                         | Sep. 28                        | ...        | 39                         | 35.15 | 3     | 9             | 31.8                      | M      | <b>389</b> <i>R. P. L. 134.</i>      |           |                                 |       |   |      |      |      |   |  |  |  |
| Sep. 26                        | 6.0        | 19                         | 31    | 17.28 | ...           | 135                       | 32   | 34.4 | M                       | Aug. 8                         | ...        | 19                         | 39    | 34.97 | 3             | 4                         | 9      | 34.9                                 | R         | <b>389</b> <i>R. P. L. 134.</i> |       |   |      |      |      |   |  |  |  |
| 27                             | 6.0        | 31                         | 17.39 | ...   |               | 32                        | 33.9 | M    | 9                       | ...                            | 39         | 34.88                      | 3     | 9     | 32.0          | R                         | Aug. 8 | ...                                  | 19        | 39                              | 34.97 | 3 | 4    | 9    | 34.9 | R |  |  |  |
| 28                             | 6.0        | 31                         | 17.06 | ...   |               | 32                        | 34.6 | M    | 11                      | ...                            | 39         | 35.03                      | 3     | 9     | 31.6          | R                         | 9      | ...                                  | 39        | 34.88                           | 3     | 9 | 32.0 | R    |      |   |  |  |  |
| 29                             | 6.0        | 31                         | 17.33 | ...   |               | 32                        | 34.0 | M    | 18                      | ...                            | 39         | 35.01                      | 3     | 9     | 31.2          | R                         | 11     | ...                                  | 39        | 35.03                           | 3     | 9 | 31.6 | R    |      |   |  |  |  |
| Oct. 1                         | 6.0        | 31                         | 17.06 | ...   |               | 32                        | 34.2 | R    | Sep. 14                 | ...                            | 39         | 34.91                      | 3     | 9     | 32.5          | M                         | 18     | ...                                  | 39        | 35.01                           | 3     | 9 | 31.2 | R    |      |   |  |  |  |
|                                |            |                            |       |       |               |                           |      |      |                         | 28                             | ...        | 39                         | 35.15 | 3     | 9             | 31.8                      | M      | Sep. 14                              | ...       | 39                              | 34.91 | 3 | 9    | 32.5 | M    |   |  |  |  |

Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.          | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer.               | Number and Date. | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|---------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-------------------------|------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                           |            | h.                         | m.    | s.    |               | °                         | '    | "    |                         |                  |            | h.                         | m.    | s.    |               | °                         | '    | "    |           |
| <b>R. P. L. 134.—s.p.</b> |            |                            |       |       |               |                           |      |      |                         |                  |            |                            |       |       |               |                           |      |      |           |
| Jan. 31                   | ...        | 19                         | 39    | 36.11 | 3             | 4                         | 9    | 31.1 | M                       | July 28          | ...        | 19                         | 43    | 53.70 | ...           | 130                       | 10   | 9.2  | R         |
| Feb. 7                    | ...        | 39                         | 35.88 | 3     |               | 9                         | 31.7 | M    | 30                      | ...              | 43         | 53.59                      | ...   |       | 10            | 9.8                       | R    |      |           |
| 10                        | ...        | 39                         | 34.25 | 3     |               | 9                         | 32.1 | R    | <b>394 Taylor 9112.</b> |                  |            |                            |       |       |               |                           |      |      |           |
| 18                        | ...        | 39                         | 34.45 | 3     |               | 9                         | 29.9 | R    | <b>395 Stone 10677.</b> |                  |            |                            |       |       |               |                           |      |      |           |
| 14                        | ...        | 39                         | 34.56 | 3     |               | 9                         | 32.5 | R    | Aug. 25                 | ...              | 19         | 43                         | 59.76 | ...   | 127           | 37                        | 47.6 | R    |           |
| 15                        | ...        | 39                         | 34.60 | 3     |               | 9                         | 31.5 | R    | Sep. 11                 | ...              | 43         | 59.66                      | ...   |       | 37            | 48.3                      | M    |      |           |
| 19                        | ...        | 39                         | 33.98 | 3     |               | 9                         | 32.5 | R    | 17                      | ...              | 43         | 59.75                      | ...   |       | 37            | 46.1                      | M    |      |           |
| 20                        | ...        | 39                         | 34.27 | 3     |               | 9                         | 32.2 | R    | 25                      | ...              | 43         | 59.78                      | ...   |       | 37            | 48.5                      | M    |      |           |
| 24                        | ...        | 39                         | 35.06 | 3     |               | 9                         | 33.5 | R    | 27                      | ...              | 43         | 59.94                      | ...   |       | 37            | 48.6                      | M    |      |           |
| 28                        | ...        | 39                         | 34.23 | 3     |               | 9                         | 33.8 | R    | <b>396 Taylor 9131.</b> |                  |            |                            |       |       |               |                           |      |      |           |
| <b>390 Anon.</b>          |            |                            |       |       |               |                           |      |      |                         | Sep. 26          | ...        | 19                         | 47    | 16.69 | 3             | 148                       | 13   | 53.3 | M         |
| July 28                   | 8.0        | 19                         | 39    | 48.78 | ...           | 125                       | 27   | 35.5 | R                       | Oct. 4           | ...        | 47                         | 16.48 | ...   |               | 13                        | 50.4 | R    |           |
| 30                        | 8.0        | 39                         | 48.69 | ...   |               | 27                        | 36.3 | R    | <b>397 Anon.</b>        |                  |            |                            |       |       |               |                           |      |      |           |
| Aug. 14                   | 8.0        | 39                         | 48.77 | ...   |               | 27                        | 35.9 | R    | Aug. 9                  | 8.5              | 19         | 48                         | 9.48  | ...   | 131           | 59                        | 53.2 | R    |           |
| <b>391 Anon.</b>          |            |                            |       |       |               |                           |      |      |                         | Sep. 15          | ...        | 48                         | 9.76  | ...   |               | 59                        | 52.9 | M    |           |
| Aug. 18                   | 7.0        | 19                         | 40    | 25.79 | ...           | 128                       | 8    | 5.9  | R                       | <b>398 Anon.</b> |            |                            |       |       |               |                           |      |      |           |
| Sep. 12                   | ...        | 40                         | 25.68 | ...   |               | 8                         | 5.6  | M    | Sep. 20                 | ...              | 19         | 50                         | 19.15 | 6     | 132           | 59                        | 35.1 | M    |           |
| 20                        | ...        | 40                         | 25.76 | 5     |               | 8                         | 7.8  | M    | <b>399 Stone 10720.</b> |                  |            |                            |       |       |               |                           |      |      |           |
| 22                        | ...        | 40                         | 25.75 | ...   |               | 8                         | 5.5  | M    | Oct. 5                  | ...              | 19         | 50                         | 30.01 | ...   | 126           | 59                        | 46.3 | R    |           |
| 26                        | 7.3        | 40                         | 25.73 | ...   |               | 8                         | 5.6  | M    | 9                       | ...              | 50         | 30.12                      | ...   |       | 59            | 51.3                      | R    |      |           |
| <b>392 Stone 10658.</b>   |            |                            |       |       |               |                           |      |      |                         | 17               | ...        | 50                         | 30.24 | ...   |               | 59                        | 49.6 | R    |           |
| Sep. 15                   | 7.0        | 19                         | 41    | 45.06 | ...           | 128                       | 4    | 2.6  | M                       | 18               | ...        | 50                         | 30.03 | ...   |               | 59                        | 47.9 | R    |           |
| 21                        | ...        | 41                         | 45.05 | 6     |               | 4                         | 1.2  | M    | 19                      | ...              | 50         | 30.21                      | ...   |       | 59            | 49.0                      | R    |      |           |
| 24                        | 7.0        | 41                         | 45.14 | ...   |               | 4                         | 3.0  | M    | <b>400 Stone 10727.</b> |                  |            |                            |       |       |               |                           |      |      |           |
| 29                        | 7.0        | 41                         | 45.12 | 5     |               | 4                         | 1.2  | M    | Sep. 27                 | 7.0              | 19         | 51                         | 34.65 | ...   | 120           | 51                        | 1.9  | M    |           |
| Oct. 1                    | 7.0        | 41                         | 44.91 | 3     |               | 4                         | 2.2  | R    | 28                      | 6.0              | 51         | 34.64                      | 5     |       | 51            | 2.5                       | M    |      |           |
| 5                         | 7.0        | 41                         | 44.80 | ...   |               | 3                         | 59.6 | R    | 29                      | 7.0              | 51         | 34.41                      | ...   |       | 51            | 2.2                       | M    |      |           |
| <b>393 Stone 10665.</b>   |            |                            |       |       |               |                           |      |      |                         | Oct. 1           | 6.7        | 51                         | 34.58 | ...   |               | 51                        | 3.2  | R    |           |
| Oct. 11                   | 6.7        | 19                         | 42    | 49.62 | ...           | 141                       | 16   | 10.4 | R                       | 4                | 6.7        | 51                         | 34.67 | ...   |               | 51                        | 0.5  | R    |           |
| 18                        | 6.7        | 42                         | 49.73 | ...   |               | 16                        | 12.5 | R    | <b>401 Stone 10739.</b> |                  |            |                            |       |       |               |                           |      |      |           |
| 18                        | 6.7        | 42                         | 49.80 | ...   |               | 16                        | 11.3 | R    | Oct. 11                 | 6.5              | 19         | 52                         | 18.13 | ...   | 133           | 21                        | 38.5 | R    |           |
| 19                        | 6.7        | 42                         | 49.86 | ...   |               | 16                        | 11.7 | R    | 13                      | 6.5              | 52         | 18.18                      | ...   |       | 21            | 40.3                      | R    |      |           |
| 20                        | 6.7        | 42                         | 49.78 | ...   |               | 16                        | 10.6 | M    | 20                      | 6.5              | 52         | 17.98                      | ...   |       | 21            | 38.5                      | M    |      |           |
|                           |            |                            |       |       |               |                           |      |      | 22                      | 6.5              | 52         | 18.07                      | ...   |       | 21            | 38.0                      | R    |      |           |

## Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.        | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.              | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|-------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|-------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                         |            | h.                         | m. | s.    |               | °                         | '  | "    |           |                               |            | h.                         | m. | s.    |               | °                         | '  | "    |           |
| <b>402</b> Stone 10752. |            |                            |    |       |               |                           |    |      |           | <b>409</b> Stone 10797.       |            |                            |    |       |               |                           |    |      |           |
| Aug. 28                 | 8.5        | 19                         | 53 | 51.52 | ...           | 126                       | 59 | 56.9 | R         | Oct. 9                        | ...        | 20                         | 0  | 38.85 | ...           | 137                       | 24 | 11.2 | R         |
| Sep. 15                 | 7.0        |                            | 53 | 51.54 | 5             |                           | 59 | 55.2 | M         | 10                            | ...        |                            | 0  | 38.82 | ...           |                           | 24 | 11.4 | R         |
| 19                      | ...        |                            | 53 | 51.70 | 6             |                           | 59 | 53.9 | M         | 20                            | ...        |                            | 0  | 38.94 | ...           |                           | 24 | 13.5 | M         |
| 22                      | 7.0        |                            | 53 | 51.60 | ...           |                           | 59 | 56.8 | M         | <b>410</b> Stone 10823.       |            |                            |    |       |               |                           |    |      |           |
| 24                      | ...        |                            | 53 | 51.54 | 4             |                           | 59 | 57.8 | M         | Oct. 11                       | 6.7        | 20                         | 5  | 6.49  | ...           | 188                       | 3  | 38.5 | R         |
| <b>403</b> Anon.        |            |                            |    |       |               |                           |    |      |           | 13                            | 6.7        |                            | 5  | 6.55  | ...           |                           | 3  | 39.6 | R         |
| Aug. 16                 | 8.0        | 19                         | 54 | 29.56 | ...           | 130                       | 18 | 18.3 | R         | 18                            | 6.7        |                            | 5  | 6.55  | ...           |                           | 3  | 37.2 | R         |
| <b>404</b> Taylor 9195. |            |                            |    |       |               |                           |    |      |           | 19                            | 6.7        |                            | 5  | 6.59  | ...           |                           | 3  | 38.4 | R         |
| Oct. 1                  | ...        | 19                         | 55 | 46.78 | ...           | 128                       | 15 | 46.9 | R         | 22                            | 6.7        |                            | 5  | 6.74  | ...           |                           | 3  | 38.8 | R         |
| 6                       | ...        |                            | 55 | 46.79 | ...           |                           | 15 | 44.8 | R         | <b>411</b> 65 Aquilæ $\theta$ |            |                            |    |       |               |                           |    |      |           |
| 9                       | ...        |                            | 55 | 46.71 | ...           |                           | 15 | 45.3 | R         | Aug. 9                        | ...        | 20                         | 5  | 15.98 | ...           | 91                        | 10 | 4.3  | R         |
| 10                      | ...        |                            | 55 | 46.69 | ...           |                           | 15 | 46.1 | R         | 10                            | ...        |                            | 5  | 16.00 | ...           |                           | 10 | 4.4  | R         |
| 17                      | ...        |                            | 55 | 46.96 | ...           |                           | 15 | 47.4 | R         | 11                            | ...        |                            | 5  | 16.04 | ...           |                           | 10 | 3.7  | H         |
| <b>405</b> Anon.        |            |                            |    |       |               |                           |    |      |           | 13                            | ...        |                            | 5  | 16.03 | ...           |                           | 10 | 2.4  | R         |
| Aug. 13                 | 9.0        | 19                         | 56 | 54.59 | ...           | 131                       | 48 | 51.0 | R         | 14                            | ...        |                            | 5  | 15.90 | ...           |                           | 10 | 2.1  | R         |
| 14                      | 9.0        |                            | 56 | 54.60 | ...           |                           | 48 | 50.7 | R         | 16                            | ...        |                            | 5  | 16.00 | ...           |                           | 10 | 2.4  | R         |
| 18                      | 9.0        |                            | 56 | 54.87 | ...           |                           | 48 | 50.5 | R         | 18                            | ...        |                            | 5  | 15.99 | ...           |                           | 10 | 3.2  | R         |
| Sep. 14                 | 9.0        |                            | 56 | 54.71 | ...           |                           | 48 | 49.7 | M         | 25                            | ...        |                            | 5  | 16.04 | ...           |                           | 10 | 2.6  | R         |
| <b>406</b> Taylor 9213. |            |                            |    |       |               |                           |    |      |           | 28                            | ...        |                            | 5  | 16.00 | ...           |                           | 10 | 3.7  | R         |
| Oct. 11                 | ...        | 19                         | 58 | 21.94 | ...           | 145                       | 20 | 58.5 | R         | Sep. 3                        | ...        |                            | 5  | 16.09 | ...           |                           | 10 | 3.3  | M         |
| 13                      | ...        |                            | 58 | 21.79 | ...           |                           | 21 | 1.3  | R         | 25                            | ...        |                            | 5  | 16.03 | ...           |                           | 10 | 2.8  | M         |
| 18                      | ...        |                            | 58 | 21.72 | ...           |                           | 21 | 0.0  | R         | 26                            | ...        |                            | 5  | 16.02 | ...           |                           | 10 | 4.9  | M         |
| 19                      | ...        |                            | 58 | 21.90 | ...           |                           | 20 | 59.7 | R         | 27                            | ...        |                            | 5  | 16.10 | ...           |                           | 10 | 5.6  | M         |
| 22                      | ...        |                            | 58 | 21.96 | ...           |                           | 21 | 0.7  | R         | 28                            | ...        |                            | 5  | 16.02 | ...           |                           | 10 | 5.9  | M         |
| <b>407</b> Anon.        |            |                            |    |       |               |                           |    |      |           | 29                            | ...        |                            | 5  | 16.12 | ...           |                           | 10 | 3.4  | M         |
| Aug. 8                  | 9.5        | 19                         | 58 | 30.55 | ...           | 148                       | 10 | 38.2 | R         | Oct. 1                        | ...        |                            | 5  | 16.00 | ...           |                           | 10 | 2.7  | R         |
| 9                       | 9.5        |                            | 58 | 30.44 | ...           |                           | 10 | 36.4 | R         | 3                             | ...        |                            | 5  | 16.03 | ...           |                           | 10 | 1.4  | R         |
| <b>408</b> Stone 10792. |            |                            |    |       |               |                           |    |      |           | 4                             | ...        |                            | 5  | 15.97 | ...           |                           | 10 | 1.8  | R         |
| Sep. 26                 | ...        | 19                         | 59 | 43.92 | 6             | 125                       | 52 | 0.6  | M         | 5                             | ...        |                            | 5  | 15.98 | ...           |                           | 10 | 1.6  | R         |
| 27                      | ...        |                            | 59 | 43.76 | ...           |                           | 52 | 0.0  | M         | 6                             | ...        |                            | 5  | 15.94 | ...           |                           | 10 | 1.0  | R         |
| 28                      | ...        |                            | 59 | 43.83 | 5             |                           | 51 | 59.5 | M         | <b>412</b> Taylor 9303.       |            |                            |    |       |               |                           |    |      |           |
| 29                      | ...        |                            | 59 | 43.73 | ...           |                           | 51 | 59.8 | M         | Oct. 10                       | ...        | 20                         | 7  | 59.36 | ...           | 117                       | 22 | 51.7 | R         |
| Oct. 5                  | ...        |                            | 59 | 43.78 | ...           |                           | 51 | 58.6 | R         | 17                            | ...        |                            | 7  | 59.45 | ...           |                           | 22 | 52.9 | R         |
| <b>413</b> Stone 10840. |            |                            |    |       |               |                           |    |      |           | <b>413</b> Stone 10840.       |            |                            |    |       |               |                           |    |      |           |
| Sep. 26                 | ...        | 19                         | 59 | 43.92 | 6             | 125                       | 52 | 0.6  | M         | Oct. 5                        | ...        | 20                         | 8  | 46.35 | ...           | 126                       | 48 | 33.1 | R         |
| 27                      | ...        |                            | 59 | 43.76 | ...           |                           | 52 | 0.0  | M         | 9                             | ...        |                            | 8  | 46.38 | ...           |                           | 48 | 33.2 | R         |
| 28                      | ...        |                            | 59 | 43.83 | 5             |                           | 51 | 59.5 | M         | 20                            | ...        |                            | 8  | 46.54 | ...           |                           | 48 | 35.2 | M         |
| 29                      | ...        |                            | 59 | 43.73 | ...           |                           | 51 | 59.8 | M         | 23                            | ...        |                            | 8  | 46.50 | ...           |                           | 48 | 35.6 | R         |
| Oct. 5                  | ...        |                            | 59 | 43.78 | ...           |                           | 51 | 58.6 | R         | 25                            | ...        |                            | 8  | 46.68 | ...           |                           | 48 | 35.4 | R         |

Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.         | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1883. |    |    | No. of Wires. | Mean Polar Distance 1883. |   |   | Observer. |  |
|--------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|------------------|------------|----------------------------|----|----|---------------|---------------------------|---|---|-----------|--|
|                          |            | h.                         | m. | s.    |               | °                         | '  | "    |           |                  |            | h.                         | m. | s. |               | °                         | ' | " |           |  |
| <b>414</b> Stone 1' 858. |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |  |
| 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>415</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>416</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>417</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>418</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>419</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>420</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>421</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>422</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>423</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>424</b> 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         |                  |            |                            |    |    |               |                           |   |   |           |  |
| <b>425</b> R. P. L. 143. |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |  |
| July 23                  | ...        | 20                         | 26 | 58.79 | 3             |                           | 5  | 14   | 40.0      | R                |            |                            |    |    |               |                           |   |   |           |  |

## Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.               | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.               | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|--------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|--------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                                |            | h.                         | m.    | s.    |               | o.                        | '  | "    |           |                                |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |
| <b>426</b> <i>2 Delphini ε</i> |            |                            |       |       |               |                           |    |      | Oct. 11   | ...                            | 20         | 35                         | 12.87 | ...   | 129           | 58                        | 32.8 | R    |           |
| Sep. 4                         | ...        | 20                         | 27    | 37.43 | ...           | 79                        | 5  | 37.6 | M         | 25                             | ...        | 35                         | 13.06 | ...   | 58            | 34.4                      | R    |      |           |
| 5                              | ...        | 27                         | 37.33 | ...   |               |                           | 5  | 34.1 | M         | Nov. 6                         | ...        | 35                         | 13.08 | ...   | 58            | 32.8                      | R    |      |           |
| 10                             | ...        | 27                         | 37.39 | ...   |               |                           | 5  | 36.4 | M         | <b>430</b> <i>Taylor 9561.</i> |            |                            |       |       |               |                           |      |      |           |
| 11                             | ...        | 27                         | 37.40 | ...   |               |                           | 5  | 37.5 | M         | Oct. 10                        | ...        | 20                         | 37    | 14.09 | ...           | 126                       | 14   | 53.6 | R         |
| 12                             | ...        | 27                         | 37.32 | ...   |               |                           | 5  | 37.5 | M         | 19                             | ...        | 37                         | 14.27 | ...   | 14            | 54.1                      | R    |      |           |
| 13                             | ...        | 27                         | 37.22 | ...   |               |                           | 5  | 37.8 | M         | 22                             | ...        | 37                         | 14.49 | ...   | 14            | 52.8                      | R    |      |           |
| 14                             | ...        | 27                         | 37.26 | ...   |               |                           | 5  | 37.7 | M         | 24                             | ...        | 37                         | 14.34 | ...   | 14            | 55.5                      | R    |      |           |
| 15                             | ...        | 27                         | 37.37 | ...   |               |                           | 5  | 37.5 | M         | <b>431</b> <i>Anon.</i>        |            |                            |       |       |               |                           |      |      |           |
| 17                             | ...        | 27                         | 37.41 | ...   |               |                           | 5  | 36.7 | M         | Sep. 25                        | ...        | 20                         | 37    | 38.58 | 4             | 126                       | 31   | 44.9 | M         |
| 19                             | ...        | 27                         | 37.37 | ...   |               |                           | 5  | 37.8 | M         | 26                             | 8.0        | 37                         | 38.24 | ...   | 31            | 44.1                      | M    |      |           |
| 20                             | ...        | 27                         | 37.30 | ...   |               |                           | 5  | 38.5 | M         | 27                             | ...        | 37                         | 38.32 | ...   | 31            | 44.2                      | M    |      |           |
| 21                             | ...        | 27                         | 37.25 | ...   |               |                           | 5  | 37.0 | M         | 28                             | ...        | 37                         | 38.39 | 6     | 31            | 44.8                      | M    |      |           |
| 22                             | ...        | 27                         | 37.18 | ...   |               |                           | 5  | 35.8 | M         | <b>432</b> <i>Taylor 9573.</i> |            |                            |       |       |               |                           |      |      |           |
| 24                             | ...        | 27                         | 37.38 | ...   |               |                           | 5  | 39.1 | M         | Oct. 18                        | ...        | 20                         | 39    | 21.06 | ...           | 136                       | 16   | 48.8 | R         |
| 25                             | ...        | 27                         | 37.26 | ...   |               |                           | 5  | 37.0 | M         | 23                             | ...        | 39                         | 21.14 | ...   | 16            | 49.7                      | R    |      |           |
| 26                             | ...        | 27                         | 37.29 | ...   |               |                           | 5  | 38.6 | M         | <b>433</b> <i>2 Aquarii ε</i>  |            |                            |       |       |               |                           |      |      |           |
| 27                             | ...        | 27                         | 37.27 | ...   |               |                           | 5  | 39.0 | M         | Sep. 3                         | ...        | 20                         | 41    | 20.45 | ...           | 99                        | 55   | 24.1 | M         |
| 28                             | ...        | 27                         | 37.33 | ...   |               |                           | 5  | 38.4 | M         | 4                              | ...        | 41                         | 20.43 | ...   | 55            | 23.3                      | M    |      |           |
| 29                             | ...        | 27                         | 37.33 | ...   |               |                           | 5  | 37.4 | M         | 5                              | ...        | 41                         | 20.50 | ...   | 55            | 24.5                      | M    |      |           |
| Oct. 1                         | ...        | 27                         | 37.26 | ...   |               |                           | 5  | 38.3 | R         | 10                             | ...        | 41                         | 20.38 | ...   | 55            | 23.7                      | M    |      |           |
| 3                              | ...        | 27                         | 37.28 | ...   |               |                           | 5  | 36.3 | R         | 11                             | ...        | 41                         | 20.39 | ...   | 55            | 23.8                      | M    |      |           |
| 4                              | ...        | 27                         | 37.33 | ...   |               |                           | 5  | 34.8 | R         | 12                             | ...        | 41                         | 20.51 | ...   | 55            | 23.6                      | M    |      |           |
| 5                              | ...        | 27                         | 37.34 | ...   |               |                           | 5  | 34.9 | R         | 13                             | ...        | 41                         | 20.43 | ...   | 55            | 23.4                      | M    |      |           |
| 6                              | ...        | 27                         | 37.17 | ...   |               |                           | 5  | 36.3 | R         | 14                             | ...        | 41                         | 20.48 | ...   | 55            | 24.2                      | M    |      |           |
| 8                              | ...        | 27                         | 37.36 | ...   |               |                           | 5  | 37.6 | R         | 15                             | ...        | 41                         | 20.49 | ...   | 55            | 25.4                      | M    |      |           |
| <b>427</b> <i>Stone 11003.</i> |            |                            |       |       |               |                           |    |      | 17        | ...                            | 41         | 20.44                      | ...   | 55    | 23.1          | M                         |      |      |           |
| Oct. 9                         | ...        | 20                         | 32    | 23.46 | 4             | 126                       | 26 | 32.3 | R         | 19                             | ...        | 41                         | 20.36 | ...   | 55            | 23.3                      | M    |      |           |
| 19                             | ...        | 32                         | 23.52 | ...   |               |                           | 26 | 34.4 | R         | 20                             | ...        | 41                         | 20.37 | ...   | 55            | 25.3                      | M    |      |           |
| 20                             | ...        | 32                         | 23.23 | ...   |               |                           | 26 | 32.9 | M         | 21                             | ...        | 41                         | 20.36 | ...   | 55            | 22.8                      | M    |      |           |
| 23                             | ...        | 32                         | 23.51 | 6     | 26            | 33.1                      | R  |      |           | 22                             | ...        | 41                         | 20.59 | ...   | 55            | 23.9                      | M    |      |           |
| 24                             | ...        | 32                         | 23.47 | ...   |               |                           | 26 | 31.8 | R         | 24                             | ...        | 41                         | 20.57 | ...   | 55            | 24.5                      | M    |      |           |
| <b>428</b> <i>Taylor 9519.</i> |            |                            |       |       |               |                           |    |      | Oct. 1    | ...                            | 41         | 20.50                      | ...   | 55    | 22.7          | R                         |      |      |           |
| Sep. 4                         | ...        | 20                         | 33    | 34.17 | 5             | 132                       | 32 | 46.5 | M         | 3                              | ...        | 41                         | 20.44 | ...   | 55            | 21.6                      | R    |      |           |
| 15                             | ...        | 33                         | 34.17 | ...   |               |                           | 32 | 47.9 | M         | 4                              | ...        | 41                         | 20.45 | ...   | 55            | 23.3                      | R    |      |           |
| <b>429</b> <i>Taylor 9544.</i> |            |                            |       |       |               |                           |    |      | 5         | ...                            | 41         | 20.40                      | ...   | 55    | 24.1          | R                         |      |      |           |
| Oct. 5                         | ...        | 20                         | 35    | 13.01 | ...           | 129                       | 58 | 29.9 | R         | 6                              | ...        | 41                         | 20.49 | ...   | 55            | 21.9                      | R    |      |           |
| 6                              | ...        | 35                         | 13.03 | ...   |               |                           | 58 | 30.6 | R         | 8                              | ...        | 41                         | 20.43 | ...   | 55            | 23.0                      | R    |      |           |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date. | Magnitude.          | Mean Right Ascension 1883. |    |          | No. of Wires. | Mean Polar Distance 1883. |    |         | Observer. | Number and Date. | Magnitude.                               | Mean Right Ascension 1883. |    |          | No. of Wires. | Mean Polar Distance 1883. |    |         | Observer. |  |
|------------------|---------------------|----------------------------|----|----------|---------------|---------------------------|----|---------|-----------|------------------|--|----------------------------|----|----------|---------------|---------------------------|----|---------|-----------|--|
|                  |                     | h.                         | m. | s.       |               | o.                        | '  | "       |           |                  |  | h.                         | m. | s.       |               | o.                        | '  | "       |           |  |
| <b>434</b>       | <i>Anon.</i>        |                            |    |          |               |                           |    |         |           | <b>442</b>       | <i>Anon.</i>                             |                            |    |          |               |                           |    |         |           |  |
| Sep. 29          | ...                 | 20                         | 41 | 44.10    | ...           | 132                       | 8  | 36.9    | M         | Sep. 14          | 8.5                                      | 20                         | 52 | 32.77    | 5             | 129                       | 10 | 31.8    | M         |  |
|                  |                     |                            |    |          |               |                           |    |         |           | 15               | ...                                      |                            |    | 52 32.71 | ...           |                           |    | 10 33.4 | M         |  |
| <b>435</b>       | <i>Taylor 9602.</i> |                            |    |          |               |                           |    |         |           | <b>443</b>       | <i>Stone 11150.</i>                      |                            |    |          |               |                           |    |         |           |  |
| Oct. 9           | 6.3                 | 20                         | 42 | 20.49    | ...           | 116                       | 12 | 42.5    | R         | Sep. 12          | ...                                      | 20                         | 53 | 34.41    | ...           | 129                       | 11 | 31.8    | M         |  |
| 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         |                  |  |                            |    |          |               |                           |    |         |           |  |
| <b>436</b>       | <i>Stone 11081.</i> |                            |    |          |               |                           |    |         |           | <b>444</b>       | <i>Stone 11156.</i>                      |                            |    |          |               |                           |    |         |           |  |
| Sep. 25          | ...                 | 20                         | 43 | 59.40    | ...           | 131                       | 20 | 28.7    | M         | 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         |  |
| <b>437</b>       | <i>Stone 11091.</i> |                            |    |          |               |                           |    |         |           | <b>445</b>       | <i>Stone 11175.</i>                      |                            |    |          |               |                           |    |         |           |  |
| Oct. 23          | ...                 | 20                         | 44 | 40.91    | ...           | 142                       | 9  | 10.9    | R         | 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         |  |
| <b>438</b>       | <i>Anon.</i>        |                            |    |          |               |                           |    |         |           | <b>446</b>       | <i>Stone 11186.</i>                      |                            |    |          |               |                           |    |         |           |  |
| Sep. 26          | 8.0                 | 20                         | 45 | 22.48    | ...           | 135                       | 45 | 24.7    | M         | Oct. 5           | 7.0                                      | 20                         | 57 | 44.20    | ...           | 127                       | 41 | 29.1    | R         |  |
| 27               | 8.0                 |                            |    | 45 22.39 | ...           |                           |    | 45 25.2 | M         | 23               | 7.0                                      |                            |    | 57 44.27 | ...           |                           |    | 41 32.2 | R         |  |
| Oct. 4           | 8.0                 |                            |    | 45 22.37 | ...           |                           |    | 45 22.4 | R         |                  |  |                            |    |          |               |                           |    |         |           |  |
| <b>439</b>       | <i>Stone 11103.</i> |                            |    |          |               |                           |    |         |           | <b>447</b>       | <i>Stone 11191.</i>                      |                            |    |          |               |                           |    |         |           |  |
| Aug. 28          | ...                 | 20                         | 46 | 13.44    | ...           | 141                       | 10 | 4.7     | R         | Oct. 24          | 7.0                                      | 20                         | 58 | 12.54    | ...           | 138                       | 59 | 25.9    | R         |  |
| Sep. 4           | ...                 |                            |    | 46 13.41 | ...           |                           |    | 10 1.0  | M         | 25               | 7.0                                      |                            |    | 58 12.45 | ...           |                           |    | 59 27.3 | R         |  |
| 12               | ...                 |                            |    | 46 13.35 | ...           |                           |    | 9 59.0  | M         | Nov. 5           | ...                                      |                            |    | 58 12.42 | ...           |                           |    | 59 25.0 | M         |  |
| 21               | ...                 |                            |    | 46 13.39 | 5             |                           |    | 10 0.2  | M         | 6                | 7.0                                      |                            |    | 58 12.63 | ...           |                           |    | 59 24.4 | M         |  |
| 22               | ...                 |                            |    | 46 13.32 | ...           |                           |    | 9 58.9  | M         |                  |  |                            |    |          |               |                           |    |         |           |  |
| <b>440</b>       | <i>Stone 11115.</i> |                            |    |          |               |                           |    |         |           | <b>448</b>       | <i>23 Capricorni <math>\theta</math></i> |                            |    |          |               |                           |    |         |           |  |
| Oct. 17          | ...                 | 20                         | 47 | 5.44     | ...           | 118                       | 22 | 0.0     | R         | Sep. 3           | ...                                      | 20                         | 59 | 22.04    | ...           | 107                       | 41 | 48.9    | M         |  |
| Nov. 5           | ...                 |                            |    | 47 5.59  | 3             |                           |    | 21 58.4 | 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         |  |
| <b>441</b>       | <i>Stone 11120.</i> |                            |    |          |               |                           |    |         |           |                  |  |                            |    |          |               |                           |    |         |           |  |
| Oct. 11          | ...                 | 20                         | 47 | 24.35    | ...           | 145                       | 39 | 54.7    | R         |                  |  |                            |    |          |               |                           |    |         |           |  |
| 18               | ...                 |                            |    | 47 24.33 | ...           |                           |    | 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         |                  |  |                            |    |          |               |                           |    |         |           |  |

## Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date. | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |                       | Observer.           | Number and Date. | Magnitude.          | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|-----------------------|---------------------|------------------|---------------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                  |            | h.                         | m.    | s.    |               | °                         | '  | "                     |                     |                  |                     | h.                         | m.    | s.    |               | °                         | '    | "    |           |
| Sep. 20          | ...        | 20                         | 59    | 22.21 | ...           | 107                       | 41 | 52.5                  | M                   | <b>453</b>       | <i>Taylor 9889.</i> |                            |       |       |               |                           |      |      |           |
| 21               | ...        | 59                         | 22.28 | ...   | 41            | 50.8                      | M  | Sep. 26               | 6.5                 |                  | 21                  | 14                         | 52.22 | ...   | 119           | 39                        | 40.4 | M    |           |
| 22               | ...        | 59                         | 22.10 | ...   | 41            | 50.4                      | M  | Oct. 8                | 6.7                 |                  | 14                  | 52.10                      | ...   | 39    | 41.4          | R                         |      |      |           |
| 24               | ...        | 59                         | 22.01 | ...   | 41            | 50.6                      | M  | 4                     | 6.7                 |                  | 14                  | 52.12                      | ...   | 39    | 41.0          | R                         |      |      |           |
| 25               | ...        | 59                         | 21.97 | ...   | 41            | 49.9                      | M  | 5                     | 6.7                 |                  | 14                  | 52.09                      | ...   | 39    | 41.7          | R                         |      |      |           |
| 26               | ...        | 59                         | 22.16 | ...   | 41            | 50.6                      | M  | 18                    | 6.7                 |                  | 14                  | 52.00                      | ...   | 39    | 39.4          | R                         |      |      |           |
| 27               | ...        | 59                         | 22.12 | ...   | 41            | 50.0                      | M  | <b>454</b>            |                     |                  |                     |                            |       |       |               |                           |      |      |           |
| 28               | ...        | 59                         | 22.01 | ...   | 41            | 49.7                      | M  | <i>33 Capricorni.</i> |                     |                  |                     |                            |       |       |               |                           |      |      |           |
| 29               | ...        | 59                         | 22.13 | ...   | 41            | 51.5                      | M  | Sep. 28               | ...                 |                  | 21                  | 17                         | 31.26 | ...   | 111           | 20                        | 54.8 | M    |           |
| Oct. 1           | ...        | 59                         | 22.14 | ...   | 41            | 50.7                      | R  | 29                    | ...                 |                  | 17                  | 31.23                      | ...   | 20    | 48.7          | M                         |      |      |           |
| 9                | ...        | 59                         | 22.11 | ...   | 41            | 48.3                      | R  | Oct. 1                | ...                 |                  | 17                  | 31.17                      | ...   | 20    | 52.2          | R                         |      |      |           |
| 10               | ...        | 59                         | 22.15 | ...   | 41            | 49.4                      | R  | 11                    | ...                 | 17               | 31.26               | ...                        | 20    | 49.3  | R             |                           |      |      |           |
| 11               | ...        | 59                         | 22.11 | ...   | 41            | 49.5                      | R  | 19                    | ...                 | 17               | 31.45               | ...                        | 20    | 50.1  | R             |                           |      |      |           |
| <b>449</b>       |            |                            |       |       |               |                           |    |                       | <i>Anon.</i>        |                  |                     |                            |       |       |               |                           |      |      |           |
| Oct. 18          | 8.0        | 21                         | 0     | 13.05 | ...           | 150                       | 59 | 40.0                  | R                   | <b>455</b>       |                     |                            |       |       |               |                           |      |      |           |
| <b>450</b>       |            |                            |       |       |               |                           |    |                       | <i>Stone 11227.</i> |                  |                     |                            |       |       |               |                           |      |      |           |
| Oct. 4           | 6.7        | 21                         | 1     | 58.59 | ...           | 134                       | 40 | 54.3                  | R                   | Sep. 26          | 7.0                 | 21                         | 21    | 39.61 | 5             | 152                       | 40   | 33.3 | M         |
| 5                | 6.7        | 1                          | 58.60 | ...   | 40            | 54.4                      | R  | 27                    | ...                 | 21               | 39.54               | 5                          | 40    | 34.1  | M             |                           |      |      |           |
| 20               | 6.7        | 1                          | 58.60 | ...   | 40            | 55.1                      | M  | Oct. 18               | 6.7                 | 21               | 39.51               | ...                        | 40    | 33.8  | R             |                           |      |      |           |
| 22               | 6.7        | 1                          | 58.88 | ...   | 40            | 56.8                      | R  | 19                    | 6.7                 | 21               | 39.71               | ...                        | 40    | 34.4  | R             |                           |      |      |           |
| 23               | 6.7        | 1                          | 58.78 | ...   | 40            | 55.3                      | R  | 20                    | 6.7                 | 21               | 39.46               | ...                        | 40    | 34.3  | M             |                           |      |      |           |
| <b>451</b>       |            |                            |       |       |               |                           |    |                       | <i>Taylor 9809.</i> |                  |                     |                            |       |       |               |                           |      |      |           |
| Sep. 26          | ...        | 21                         | 5     | 33.56 | ...           | 129                       | 54 | 2.8                   | M                   | <b>456</b>       |                     |                            |       |       |               |                           |      |      |           |
| 27               | ...        | 5                          | 33.58 | ...   | 54            | 2.3                       | M  | <i>R. P. L. 149.</i>  |                     |                  |                     |                            |       |       |               |                           |      |      |           |
| 29               | ...        | 5                          | 33.77 | ...   | 54            | 1.8                       | M  | Sep. 4                | ...                 | 21               | 22                  | 43.22                      | 3     | 3     | 26            | 57.1                      | M    |      |           |
| Oct. 1           | ...        | 5                          | 33.64 | ...   | 54            | 1.9                       | R  | 14                    | ...                 | 22               | 45.06               | 2                          | 26    | 56.4  | M             |                           |      |      |           |
| 9                | ...        | 5                          | 33.70 | ...   | 54            | 1.0                       | R  | <b>457</b>            |                     |                  |                     |                            |       |       |               |                           |      |      |           |
| <b>452</b>       |            |                            |       |       |               |                           |    |                       | <i>Taylor 9843.</i> |                  |                     |                            |       |       |               |                           |      |      |           |
| Sep. 28          | 6.5        | 21                         | 9     | 53.87 | ...           | 139                       | 12 | 11.4                  | M                   | <b>458</b>       |                     |                            |       |       |               |                           |      |      |           |
| 29               | 7.0        | 9                          | 53.98 | ...   | 12            | 10.7                      | M  | <i>Stone 11390.</i>   |                     |                  |                     |                            |       |       |               |                           |      |      |           |
| Oct. 4           | 6.7        | 9                          | 53.99 | ...   | 12            | 9.7                       | R  | Sep. 28               | 6.0                 | 21               | 25                  | 48.17                      | ...   | 135   | 21            | 56.3                      | M    |      |           |
| 5                | 6.7        | 9                          | 53.98 | ...   | 12            | 10.6                      | R  | 29                    | 6.0                 | 25               | 48.20               | ...                        | 21    | 54.1  | M             |                           |      |      |           |
| 11               | 6.7        | 9                          | 53.87 | ...   | 12            | 13.1                      | R  | Oct. 4                | 6.0                 | 25               | 48.35               | ...                        | 21    | 51.8  | R             |                           |      |      |           |
| <b>453</b>       |            |                            |       |       |               |                           |    |                       | <i>Stone 11403.</i> |                  |                     |                            |       |       |               |                           |      |      |           |
| Sep. 26          | 6.0        | 21                         | 23    | 41.66 | 5             | 155                       | 20 | 47.2                  | M                   | Sep. 26          | 6.0                 | 21                         | 23    | 41.66 | 5             | 155                       | 20   | 47.2 | M         |
| 27               | ...        | 23                         | 41.41 | ...   | 20            | 49.2                      | M  | 27                    | ...                 | 23               | 41.41               | ...                        | 20    | 49.2  | M             |                           |      |      |           |
| Oct. 3           | 6.0        | 23                         | 41.48 | ...   | 20            | 48.8                      | R  | Oct. 3                | 6.0                 | 23               | 41.48               | ...                        | 20    | 48.8  | R             |                           |      |      |           |
| 11               | 6.0        | 23                         | 41.44 | ...   | 20            | 51.0                      | R  | 11                    | 6.0                 | 23               | 41.44               | ...                        | 20    | 51.0  | R             |                           |      |      |           |
| 18               | 6.0        | 23                         | 41.56 | ...   | 20            | 48.6                      | R  | 18                    | 6.0                 | 23               | 41.56               | ...                        | 20    | 48.6  | R             |                           |      |      |           |

*Separate Results of Madras Meridian Circle Observations in 1883.*

| Number and Date.                | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.                | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|---------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|---------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                 |            | h.                         | m. | s.    |               | °                         | '  | "    |           |                                 |            | h.                         | m. | s.    |               | °                         | '  | "    |           |
| <b>459</b> <i>Stone 11428.</i>  |            |                            |    |       |               |                           |    |      |           | <b>464</b> <i>Taylor 10109.</i> |            |                            |    |       |               |                           |    |      |           |
| Sep. 28                         | ...        | 21                         | 32 | 3.66  | ...           | 124                       | 12 | 14.9 | M         | Sep. 28                         | ...        | 21                         | 40 | 38.58 | ...           | 137                       | 50 | 8.9  | M         |
| 29                              | ...        |                            | 32 | 3.83  | ...           |                           | 12 | 15.6 | M         | 29                              | ...        |                            | 40 | 38.73 | ...           |                           | 50 | 2.9  | M         |
| Oct. 1                          | ...        |                            | 32 | 8.71  | 4             |                           | 12 | 16.0 | R         | Oct. 4                          | ...        |                            | 40 | 38.92 | ...           |                           | 50 | 2.9  | R         |
| 4                               | ...        |                            | 32 | 8.75  | ...           |                           | 12 | 18.2 | R         | 5                               | ...        |                            | 40 | 39.00 | 4             |                           | 50 | 3.6  | R         |
| 5                               | ...        |                            | 32 | 3.68  | ...           |                           | 12 | 14.5 | R         | 6                               | ...        |                            | 40 | 38.65 | ...           |                           | 50 | 2.5  | R         |
| <b>460</b> <i>Stone 11434.</i>  |            |                            |    |       |               |                           |    |      |           | <b>465</b> <i>Taylor 10164.</i> |            |                            |    |       |               |                           |    |      |           |
| Sep. 10                         | ...        | 21                         | 32 | 25.98 | ...           | 133                       | 39 | 29.6 | M         | Sep. 26                         | ...        | 21                         | 48 | 14.51 | ...           | 143                       | 0  | 51.4 | M         |
| 12                              | ...        |                            | 32 | 25.73 | ...           |                           | 39 | 31.4 | M         | 27                              | ...        |                            | 48 | 14.52 | 3             |                           | 0  | 55.5 | M         |
| <b>461</b> <i>Taylor 10073.</i> |            |                            |    |       |               |                           |    |      |           | <b>466</b> <i>Taylor 10172.</i> |            |                            |    |       |               |                           |    |      |           |
| Sep. 26                         | ...        | 21                         | 36 | 6.32  | ...           | 146                       | 0  | 23.3 | M         | Oct. 3                          | ...        |                            | 48 | 14.73 | ...           |                           | 0  | 53.9 | R         |
| 27                              | ...        |                            | 36 | 6.33  | ...           |                           | 0  | 24.2 | M         | 4                               | ...        |                            | 48 | 14.66 | ...           |                           | 0  | 58.9 | R         |
| Oct. 3                          | ...        |                            | 36 | 6.49  | ...           |                           | 0  | 23.4 | R         | 5                               | ...        |                            | 48 | 14.60 | ...           |                           | 0  | 54.3 | R         |
| 4                               | ...        |                            | 36 | 6.46  | ...           |                           | 0  | 28.4 | R         | <b>467</b> <i>Stone 11555.</i>  |            |                            |    |       |               |                           |    |      |           |
| 5                               | ...        |                            | 36 | 6.44  | ...           |                           | 0  | 24.4 | R         | Sep. 28                         | ...        | 21                         | 49 | 19.97 | ...           | 127                       | 48 | 27.3 | M         |
| <b>462</b> <i>Stone 11470.</i>  |            |                            |    |       |               |                           |    |      |           | Sep. 29                         | ...        |                            | 49 | 20.04 | ...           |                           | 48 | 28.4 | M         |
| Sep. 10                         | ...        | 21                         | 37 | 46.38 | 5             | 123                       | 58 | 33.2 | M         | Oct. 1                          | ...        |                            | 49 | 19.96 | ...           |                           | 48 | 26.8 | R         |
| 17                              | ...        |                            | 37 | 46.29 | ...           |                           | 58 | 37.8 | M         | 6                               | ...        |                            | 49 | 19.88 | 4             |                           | 48 | 26.1 | R         |
| 23                              | ...        |                            | 37 | 46.44 | ...           |                           | 58 | 34.9 | M         | 9                               | ...        |                            | 49 | 19.93 | ...           |                           | 48 | 26.2 | R         |
| <b>463</b> <i>8 Pegasi ε</i>    |            |                            |    |       |               |                           |    |      |           | <b>468</b> <i>Anon.</i>         |            |                            |    |       |               |                           |    |      |           |
| Oct. 9                          | ...        | 21                         | 38 | 26.37 | ...           | 80                        | 39 | 36.8 | R         | Sep. 12                         | ...        | 21                         | 52 | 5.66  | 5             | 132                       | 36 | 2.7  | M         |
| 10                              | ...        |                            | 38 | 26.35 | ...           |                           | 39 | 37.9 | R         | 15                              | 8.0        |                            | 52 | 5.39  | ...           |                           | 36 | 1.9  | M         |
| 11                              | ...        |                            | 38 | 26.43 | ...           |                           | 39 | 38.0 | R         | 17                              | 8.5        |                            | 52 | 5.54  | ...           |                           | 36 | 2.4  | M         |
| 13                              | ...        |                            | 38 | 26.44 | ...           |                           | 39 | 39.0 | R         | <b>469</b> <i>Taylor 10192.</i> |            |                            |    |       |               |                           |    |      |           |
| 17                              | ...        |                            | 38 | 26.45 | ...           |                           | 39 | 39.0 | R         | Oct. 3                          | ...        | 21                         | 52 | 13.17 | ...           | 128                       | 57 | 10.7 | R         |
| 18                              | ...        |                            | 38 | 26.39 | ...           |                           | 39 | 37.9 | R         | 23                              | ...        |                            | 52 | 13.45 | ...           |                           | 57 | 11.9 | R         |
| 19                              | ...        |                            | 38 | 26.45 | ...           |                           | 39 | 38.6 | R         | 24                              | ...        |                            | 52 | 13.35 | ...           |                           | 57 | 12.2 | R         |
| 20                              | ...        |                            | 38 | 26.27 | ...           |                           | 39 | 38.1 | M         | 25                              | ...        |                            | 52 | 13.23 | ...           |                           | 57 | 13.3 | R         |
| 22                              | ...        |                            | 38 | 26.33 | ...           |                           | 39 | 38.6 | R         | Nov. 6                          | ...        |                            | 52 | 13.13 | ...           |                           | 57 | 12.1 | 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         |                                 |            |                            |    |       |               |                           |    |      |           |



Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.         | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.        | Magnitude. | Mean Right Ascension 1883. |    |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. |
|--------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|-------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                          |            | h.                         | m. | s.    |               | °                         | '  | "    |           |                         |            | h.                         | m. | s.    |               | °                         | '  | "    |           |
| <b>470</b> Stone 11574.  |            |                            |    |       |               |                           |    |      |           | <b>474</b> Stone 11610. |            |                            |    |       |               |                           |    |      |           |
| Sep. 29                  | 6.0        | 21                         | 53 | 59.64 | ...           | 127                       | 6  | 58.2 | M         | Sep. 29                 | ...        | 22                         | 0  | 9.18  | ...           | 120                       | 11 | 11.6 | M         |
| Oct. 4                   | 6.7        |                            | 53 | 59.58 | ...           |                           | 6  | 55.6 | R         | Oct. 4                  | ...        |                            | 0  | 8.94  | ...           |                           | 11 | 10.1 | R         |
| 5                        | 6.7        |                            | 53 | 59.52 | ...           |                           | 6  | 56.2 | R         | 6                       | ...        |                            | 0  | 9.14  | ...           |                           | 11 | 9.6  | R         |
| 6                        | 6.7        |                            | 53 | 59.55 | 4             |                           | 6  | 55.9 | R         | 9                       | ...        |                            | 0  | 9.01  | 5             |                           | 11 | 9.2  | R         |
| 9                        | 6.7        |                            | 53 | 59.40 | ...           |                           | 6  | 56.8 | R         | 11                      | ...        |                            | 0  | 9.08  | ...           |                           | 11 | 10.8 | R         |
| <b>471</b> Taylor 10232. |            |                            |    |       |               |                           |    |      |           | <b>475</b> 43 Aquarii θ |            |                            |    |       |               |                           |    |      |           |
| Sep. 26                  | 6.0        | 21                         | 57 | 57.35 | ...           | 117                       | 23 | 18.9 | M         | Oct. 11                 | ...        | 22                         | 10 | 39.49 | ...           | 98                        | 21 | 55.9 | R         |
| 28                       | 6.0        |                            | 57 | 57.36 | ...           |                           | 23 | 19.3 | M         | 13                      | ...        |                            | 10 | 39.43 | ...           |                           | 21 | 56.1 | R         |
| Oct. 1                   | 6.0        |                            | 57 | 57.23 | ...           |                           | 23 | 18.4 | R         | 17                      | ...        |                            | 10 | 39.44 | ...           |                           | 21 | 56.1 | R         |
| 3                        | 6.0        |                            | 57 | 57.20 | ...           |                           | 23 | 17.2 | R         | 18                      | ...        |                            | 10 | 39.47 | ...           |                           | 21 | 55.4 | R         |
| 5                        | 6.0        |                            | 57 | 57.23 | ...           |                           | 23 | 16.2 | R         | 19                      | ...        |                            | 10 | 39.47 | ...           |                           | 21 | 55.9 | R         |
| 18                       | 6.0        |                            | 57 | 57.42 | ...           |                           | 23 | 18.6 | 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 | 39.43 | ...           |                           | 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         |
| <b>472</b> Stone 11601.  |            |                            |    |       |               |                           |    |      |           | <b>476</b> 48 Aquarii γ |            |                            |    |       |               |                           |    |      |           |
| Sep. 12                  | ...        | 21                         | 58 | 48.92 | 6             | 134                       | 81 | 59.3 | M         | Sep. 26                 | ...        | 22                         | 15 | 36.73 | ...           | 91                        | 58 | 35.0 | M         |
| 15                       | 7.0        |                            | 58 | 48.82 | ...           |                           | 31 | 58.6 | M         | 27                      | ...        |                            | 15 | 36.70 | ...           |                           | 58 | 36.3 | M         |
| <b>473</b> 34 Aquarii α  |            |                            |    |       |               |                           |    |      |           | <b>476</b> 48 Aquarii γ |            |                            |    |       |               |                           |    |      |           |
| Oct. 18                  | ...        | 21                         | 59 | 46.37 | ...           | 90                        | 53 | 15.2 | R         | 28                      | ...        |                            | 15 | 36.83 | ...           |                           | 58 | 34.9 | M         |
| 19                       | ...        |                            | 59 | 46.33 | ...           |                           | 53 | 16.6 | R         | 29                      | ...        |                            | 15 | 36.59 | ...           |                           | 58 | 35.5 | M         |
| 20                       | ...        |                            | 59 | 46.31 | ...           |                           | 53 | 16.3 | M         | Oct. 3                  | ...        |                            | 15 | 36.73 | ...           |                           | 58 | 33.2 | R         |
| 22                       | ...        |                            | 59 | 46.33 | ...           |                           | 53 | 16.4 | R         | 4                       | ...        |                            | 15 | 36.72 | ...           |                           | 58 | 33.5 | R         |
| 23                       | ...        |                            | 59 | 46.42 | ...           |                           | 53 | 14.3 | R         | 5                       | ...        |                            | 15 | 36.73 | ...           |                           | 58 | 33.2 | R         |
| 24                       | ...        |                            | 59 | 46.34 | ...           |                           | 53 | 15.7 | R         | 6                       | ...        |                            | 15 | 36.70 | ...           |                           | 58 | 34.1 | R         |
| 25                       | ...        |                            | 59 | 46.35 | ...           |                           | 53 | 16.8 | R         | 8                       | ...        |                            | 15 | 36.63 | ...           |                           | 58 | 33.9 | R         |
| Nov. 5                   | ...        |                            | 59 | 46.32 | ...           |                           | 53 | 16.9 | M         | 9                       | ...        |                            | 15 | 36.72 | ...           |                           | 58 | 33.7 | R         |
| 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         |                         |            |                            |    |       |               |                           |    |      |           |

Separate Results of Madras Meridian Circle Observations in 1883.

| Number and Date.                       | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |    |      | Observer. | Number and Date.                | Magnitude. | Mean Right Ascension 1883. |       |       | No. of Wires. | Mean Polar Distance 1883. |      |      | Observer. |
|--|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|---------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|  |            | h.                         | m.    | s.    |               | o.                        | '  | "    |           |                                 |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |
| <b>477</b> <i>73 Aquarii λ</i>         |            |                            |       |       |               |                           |    |      | Nov. 20   | ...                             | 22         | 58                         | 55.89 | ...   | 75            | 25                        | 27.2 | M    |           |
|  |            |                            |       |       |               |                           |    |      | 21        | ...                             | 58         | 55.85                      | ...   |       | 25            | 26.4                      | M    |      |           |
| Sep. 24                                | ...        | 22                         | 46    | 30.40 | ...           | 98                        | 12 | 7.8  | M         | 23                              | ...        | 58                         | 55.83 | ...   | 25            | 29.3                      | M    |      |           |
| 25                                     | ...        | 46                         | 30.66 | ...   |               |                           | 12 | 5.3  | M         | <b>479</b> <i>6 Piscium γ</i>   |            |                            |       |       |               |                           |      |      |           |
| Oct. 9                                 | ...        | 46                         | 30.51 | ...   |               |                           | 12 | 6.3  | R         | Nov. 26                         | ...        | 23                         | 11    | 5.82  | ...           | 87                        | 21   | 26.5 | M         |
| 10                                     | ...        | 46                         | 30.50 | ...   |               |                           | 12 | 6.3  | R         | 27                              | ...        | 11                         | 6.05  | ...   |               | 21                        | 25.0 | M    |           |
| 13                                     | ...        | 46                         | 30.49 | ...   |               |                           | 12 | 5.3  | R         | 29                              | ...        | 11                         | 5.88  | ...   |               | 21                        | 22.3 | M    |           |
| 17                                     | ...        | 46                         | 30.47 | ...   |               |                           | 12 | 6.4  | R         | 30                              | ...        | 11                         | 5.94  | ...   |               | 21                        | 24.9 | M    |           |
| 18                                     | ...        | 46                         | 30.49 | ...   |               |                           | 12 | 6.9  | R         | Dec. 4                          | ...        | 11                         | 5.90  | ...   |               | 21                        | 23.4 | R    |           |
| 19                                     | ...        | 46                         | 30.47 | ...   |               |                           | 12 | 7.3  | R         | 5                               | ...        | 11                         | 5.91  | ...   |               | 21                        | 24.1 | R    |           |
| 20                                     | ...        | 46                         | 30.62 | ...   |               |                           | 12 | 7.5  | M         | 6                               | ...        | 11                         | 5.86  | ...   |               | 21                        | 25.8 | R    |           |
| Nov. 26                                | ...        | 46                         | 30.51 | ...   |               |                           | 12 | 10.0 | M         | 7                               | ...        | 11                         | 5.90  | ...   |               | 21                        | 24.0 | R    |           |
| 29                                     | ...        | 46                         | 30.47 | ...   |               |                           | 12 | 4.0  | M         | <b>480</b> <i>R. P. L. 158.</i> |            |                            |       |       |               |                           |      |      |           |
| 30                                     | ...        | 46                         | 30.47 | ...   |               |                           | 12 | 7.7  | M         | Oct. 18                         | ...        | 23                         | 27    | 47.02 | 3             | 3                         | 20   | 17.0 | R         |
| Dec. 4                                 | ...        | 46                         | 30.43 | ...   |               |                           | 12 | 6.3  | R         | 19                              | ...        | 27                         | 49.73 | 3     |               | 20                        | 16.6 | R    |           |
| 5                                      | ...        | 46                         | 30.48 | ...   |               |                           | 12 | 6.0  | R         | 22                              | ...        | 27                         | 50.18 | 3     |               | 20                        | 16.6 | R    |           |
| 6                                      | ...        | 46                         | 30.37 | ...   |               |                           | 12 | 5.8  | R         | 23                              | ...        | 27                         | 49.90 | 3     |               | 20                        | 15.8 | R    |           |
| <b>478</b> <i>54 Pegasi α, Markab.</i> |            |                            |       |       |               |                           |    |      | 24        | ...                             | 27         | 49.56                      | 3     |       | 20            | 18.0                      | R    |      |           |
| Oct. 22                                | ...        | 22                         | 58    | 56.01 | ...           | 75                        | 25 | 26.0 | R         | 25                              | ...        | 27                         | 49.64 | 3     |               | 20                        | 18.0 | R    |           |
| 23                                     | ...        | 58                         | 55.95 | ...   |               |                           | 25 | 26.5 | R         | Nov. 9                          | ...        | 27                         | 50.12 | 3     |               | 20                        | 16.8 | M    |           |
| 24                                     | ...        | 58                         | 55.97 | ...   |               |                           | 25 | 26.9 | R         | 12                              | ...        | 27                         | 51.09 | 3     |               | 20                        | 15.5 | M    |           |
| 25                                     | ...        | 58                         | 55.94 | ...   |               |                           | 25 | 27.0 | R         | 13                              | ...        | 27                         | 50.42 | 3     |               | 20                        | 17.0 | M    |           |
| Nov. 13                                | ...        | 58                         | 55.84 | ...   |               |                           | 25 | 29.6 | M         | 14                              | ...        | 27                         | 49.10 | 3     |               | 20                        | 17.6 | M    |           |
| 14                                     | ...        | 58                         | 55.90 | ...   |               |                           | 25 | 29.1 | M         |                                 |            |                            |       |       |               |                           |      |      |           |
| 15                                     | ...        | 58                         | 55.03 | ...   |               |                           | 25 | 28.1 | M         |                                 |            |                            |       |       |               |                           |      |      |           |
| 16                                     | ...        | 58                         | 55.85 | ...   |               |                           | 25 | 31.2 | M         |                                 |            |                            |       |       |               |                           |      |      |           |

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MEAN POSITIONS OF STARS

OBSERVED WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1883

REDUCED TO JANUARY 1 OF THAT YEAR

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## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.                       | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|-----------------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                             |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 1       | Stone 8 ... ..              | 7.0        | 4            | 0                     | 1  | 22.50 | 116                  | 0  | 13.7 | 5             | 0.89              |
| 2       | 6 Ceti ... ..               | 4.9        | ...          | 0                     | 5  | 18.41 | 106                  | 6  | 37.5 | 5             | 0.91              |
| 3       | Stone 63 ... ..             | 6.3        | ...          | 0                     | 7  | 48.44 | 116                  | 56 | 12.0 | 5             | 0.90              |
| 4       | Taylor 37 ... ..            | 5.9        | ...          | 0                     | 10 | 13.68 | 122                  | 5  | 44.5 | 5             | 0.91              |
| 5       | 8 Ceti ... ..               | 3.6        | ...          | 0                     | 13 | 27.81 | 99                   | 28 | 20.0 | 7             | 0.96              |
| 6       | Stone 109 ... ..            | 7.1        | 5            | 0                     | 14 | 18.77 | 126                  | 33 | 10.4 | 5             | 0.89              |
| 7       | Taylor 78 ... ..            | 6.8        | 5            | 0                     | 18 | 31.00 | 92                   | 52 | 0.0  | 5             | 0.91              |
| 8       | Stone 158 ... ..            | 6.5        | ...          | 0                     | 21 | 22.79 | 116                  | 11 | 41.0 | 5             | 0.90              |
| 9       | Taylor 101 ... ..           | 5.9        | ...          | 0                     | 22 | 40.15 | 130                  | 33 | 44.6 | 5             | 0.93              |
| 10      | Taylor 115 ... ..           | 5.2        | ...          | 0                     | 24 | 31.68 | 114                  | 26 | 7.7  | 5             | 0.88              |
| 11      | Stone 237 ... ..            | 7.0        | 4            | 0                     | 32 | 53.40 | 136                  | 32 | 49.6 | 5             | 0.88              |
| 12      | Stone 240 ... ..            | 7.0        | 5            | 0                     | 33 | 16.91 | 133                  | 56 | 19.4 | 5             | 0.96              |
| 13      | Taylor 181 ... ..           | 6.4        | ...          | 0                     | 34 | 16.83 | 135                  | 26 | 24.7 | 1             | 0.84              |
| 14      | Taylor 215 ... ..           | 6.4        | ...          | 0                     | 39 | 25.06 | 133                  | 18 | 52.2 | 5             | 0.88              |
| 15      | W. B. E. O. 658 ... ..      | 9.1        | 1            | 0                     | 39 | 36.26 | 88                   | 55 | 54.4 | 1             | 0.92              |
| 16      | 63 Piscium $\delta$ ... ..  | 4.6        | ...          | 0                     | 42 | 36.69 | 83                   | 3  | 6.6  | 7             | 0.94              |
| 17      | ... ..                      | 9.0        | 1            | 0                     | 42 | 38.72 | 89                   | 0  | 20.4 | 1             | 0.91              |
| 18      | ... ..                      | 9.0        | 1            | 0                     | 43 | 53.51 | 88                   | 58 | 5.9  | 1             | 0.93              |
| 19      | Taylor 252 ... ..           | 6.7        | ...          | 0                     | 44 | 34.42 | 134                  | 1  | 58.7 | 5             | 0.95              |
| 20      | Stone 342 ... ..            | 5.8        | ...          | 0                     | 46 | 55.90 | 114                  | 38 | 37.3 | 5             | 0.88              |
| 21      | Stone 365 ... ..            | 6.3        | ...          | 0                     | 50 | 14.91 | 118                  | 24 | 34.4 | 5             | 0.90              |
| 22      | R. P. L. 10 ... ..          | 6.6        | ...          | 0                     | 51 | 27.96 | 1                    | 36 | 16.7 | 2             | 0.86              |
| 23      | ... ..                      | 7.0        | 1            | 0                     | 52 | 8.16  | 131                  | 53 | 18.5 | 1             | 0.86              |
| 24      | 2 Ursæ Minoris ... ..       | 4.5        | ...          | 0                     | 52 | 57.38 | 4                    | 22 | 15.0 | 1             | 0.01              |
| 25      | Stone 392 ... ..            | 5.6        | ...          | 0                     | 55 | 50.20 | 129                  | 32 | 56.5 | 5             | 0.88              |
| 26      | R. P. L. 14 ... ..          | 6.2        | ...          | 0                     | 56 | 36.82 | 3                    | 28 | 41.6 | 1             | 0.99              |
| 27      | Stone 407 ... ..            | 5.9        | ...          | 0                     | 57 | 32.66 | 137                  | 1  | 37.4 | 5             | 0.90              |
| 28      | 30 Ceti ... ..              | 5.8        | ...          | 1                     | 1  | 53.10 | 100                  | 24 | 42.7 | 5             | 0.89              |
| 29      | 43 Andromedæ $\beta$ ... .. | 2.2        | ...          | 1                     | 3  | 10.92 | 54                   | 59 | 58.7 | 2             | 0.01              |
| 30      | Taylor 391 ... ..           | 6.6        | ...          | 1                     | 6  | 51.47 | 121                  | 25 | 19.1 | 5             | 0.89              |
| 31      | ... ..                      | 8.5        | ...          | 1                     | 9  | 4.03  | 145                  | 51 | 44.7 | 1             | 0.86              |
| 32      | ... ..                      | 9.0        | ...          | 1                     | 10 | 7.75  | 124                  | 38 | 59.5 | 2             | 0.00              |
| 33      | Stone 489 ... ..            | 6.7        | ...          | 1                     | 10 | 57.78 | 132                  | 37 | 39.3 | 5             | 0.96              |
| 34      | ... ..                      | 8.5        | 4            | 1                     | 13 | 7.73  | 130                  | 43 | 13.8 | 4             | 0.71              |
| 35      | Taylor 428 ... ..           | 6.9        | ...          | 1                     | 13 | 33.16 | 133                  | 56 | 58.4 | 5             | 0.90              |

15—17—18.—Comparison stars for Mars in 1862.

22.—Groombridge 144.

26.—Groombridge 195.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                  | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                        | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 1       | Stone 8 ... ..         | + 3·0684            | - 0·0126           | ...            | - 20·054           | + 0·011            | ...            | ...        |
| 2       | 6 Ceti .. .            | + 3·0634            | - 0·0064           | - 0·008        | - 20·048           | + 0·019            | + 0·26         | 3222       |
| 3       | Stone 63 ... ..        | + 3·0492            | - 0·0127           | ...            | - 20·042           | + 0·023            | ...            | ...        |
| 4       | Taylor 37 ... ..       | + 3·0350            | - 0·0158           | ...            | - 20·034           | + 0·027            | ...            | ...        |
| 5       | 8 Ceti ... ..          | + 3·0593            | - 0·0023           | - 0·003        | - 20·019           | + 0·034            | + 0·03         | 14         |
| 6       | Stone 109 ... ..       | + 3·0105            | - 0·0186           | ...            | - 20·015           | + 0·035            | ...            | ...        |
| 7       | Taylor 78 ... ..       | + 3·0669            | + 0·0014           | ...            | - 19·989           | + 0·044            | ...            | ...        |
| 8       | Stone 158 ... ..       | + 3·0110            | - 0·0111           | ...            | - 19·966           | + 0·049            | ...            | ...        |
| 9       | Taylor 101 ... ..      | + 2·9594            | - 0·0205           | ...            | - 19·956           | + 0·051            | ...            | ...        |
| 10      | Taylor 115 ... ..      | + 3·0074            | - 0·0097           | ...            | - 19·939           | + 0·055            | ...            | ...        |
| 11      | Stone 237 ... ..       | + 2·8705            | - 0·0233           | ...            | - 19·848           | + 0·069            | ...            | ...        |
| 12      | Stone 240 ... ..       | + 2·8859            | - 0·0213           | ...            | - 19·843           | + 0·069            | ...            | ...        |
| 13      | Taylor 181 ... ..      | + 2·8700            | - 0·0223           | - 0·002        | - 19·829           | + 0·071            | + 0·05         | Stone.     |
| 14      | Taylor 215 ... ..      | + 2·8564            | - 0·0198           | ...            | - 19·757           | + 0·079            | ...            | ...        |
| 15      | W. B. E. O. 658 ... .. | + 3·0767            | + 0·0046           | ...            | - 19·753           | + 0·084            | ...            | ...        |
| 16      | 63 Piscium δ... ..     | + 3·1024            | + 0·0079           | + 0·004        | - 19·709           | + 0·091            | + 0·04         | 85         |
| 17      | ... ..                 | + 3·0767            | + 0·0047           | ...            | - 19·706           | + 0·089            | ...            | ...        |
| 18      | ... ..                 | + 3·0771            | + 0·0048           | ...            | - 19·687           | + 0·092            | ...            | ...        |
| 19      | Taylor 252 ... ..      | + 2·8225            | - 0·0194           | ...            | - 19·675           | + 0·087            | ...            | ...        |
| 20      | Stone 342 ... ..       | + 2·9477            | - 0·0078           | ...            | - 19·633           | + 0·095            | ...            | ...        |
| 21      | Stone 365 ... ..       | + 2·9150            | - 0·0095           | ...            | - 19·574           | + 0·100            | ...            | ...        |
| 22      | R. P. L. 10 ... ..     | + 13·6992           | + 8·2321           | + 0·153        | - 19·550           | + 0·453            | + 0·03         | 65         |
| 23      | ... ..                 | + 2·8019            | - 0·0167           | ...            | - 19·537           | + 0·099            | ...            | ...        |
| 24      | 2 Ursæ Minoris ... ..  | + 7·0783            | + 1·3756           | + 0·068        | - 19·521           | + 0·244            | + 0·01         | 92         |
| 25      | Stone 392 ... ..       | + 2·8060            | - 0·0148           | ...            | - 19·462           | + 0·106            | ...            | ...        |
| 26      | R. P. L. 14 ... ..     | + 8·4505            | + 2·1474           | + 0·054        | - 19·445           | + 0·308            | + 0·02         | 95         |
| 27      | Stone 407 ... ..       | + 2·7158            | - 0·0187           | ...            | - 19·425           | + 0·106            | ..             | ...        |
| 28      | 30 Ceti ... ..         | + 3·0068            | + 0·0001           | + 0·009        | - 19·327           | + 0·124            | - 0·01         | 135        |
| 29      | 43 Andromedæ β ... ..  | + 3·3272            | + 0·0286           | + 0·014        | - 19·297           | + 0·139            | + 0·08         | 140        |
| 30      | Taylor 391 ... ..      | + 2·8375            | - 0·0092           | ...            | - 19·206           | + 0·126            | ...            | ...        |
| 31      | ... ..                 | + 2·4871            | - 0·0203           | ...            | - 19·150           | + 0·115            | ...            | ...        |
| 32      | ... ..                 | + 2·7940            | - 0·0105           | ...            | - 19·123           | + 0·130            | ...            | ...        |
| 33      | Stone 489 ... ..       | + 2·6974            | - 0·0141           | ...            | - 19·100           | + 0·127            | ...            | ...        |
| 34      | ... ..                 | + 2·7114            | - 0·0128           | ...            | - 19·042           | + 0·131            | ...            | ...        |
| 35      | Taylor 428 ... ..      | + 2·6659            | - 0·0142           | ...            | - 19·030           | + 0·130            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.                                       | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|---|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |   |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 36      | R. P. L. 18 ... ..                          | 7.9        | ...          | 1                     | 13 | 38.26 | 2                    | 2  | 52.1 | 1             | 0.99              |
| 37      | 1 Urs. Min. $\alpha$ ( <i>Polaris</i> ) ... | 2.2        | ...          | 1                     | 15 | 50.44 | 1                    | 18 | 54.4 | 14            | 0.30              |
| 38      | 45 Ceti $\theta^1$ ... ..                   | 3.8        | ...          | 1                     | 18 | 10.40 | 98                   | 47 | 15.8 | 2             | 0.00              |
| 39      | 93 Piscium $\rho$ ... ..                    | 5.2        | ...          | 1                     | 19 | 57.00 | 71                   | 26 | 7.9  | 1             | 0.96              |
| 40      | ... ..                                      | 9.7        | 2            | 1                     | 20 | 7.23  | 122                  | 56 | 18.7 | 2             | 0.98              |
| 41      | Taylor 487 ... ..                           | 6.2        | ...          | 1                     | 24 | 51.91 | 116                  | 48 | 46.4 | 5             | 0.88              |
| 42      | 99 Piscium $\eta$ ... ..                    | 3.7        | ...          | 1                     | 25 | 13.35 | 75                   | 15 | 27.9 | 4             | 0.99              |
| 43      | Stone 596 ... ..                            | 7.8        | ...          | 1                     | 25 | 30.56 | 128                  | 23 | 39.5 | 5             | 0.55              |
| 44      | Taylor 524 ... ..                           | 6.3        | ...          | 1                     | 29 | 48.49 | 147                  | 36 | 1.8  | 5             | 0.91              |
| 45      | $\alpha$ Eridani ( <i>Achernar</i> ) ... .. | 1.0        | ...          | 1                     | 33 | 21.53 | 147                  | 49 | 54.4 | 1             | 0.99              |
| 46      | ... ..                                      | 7.0        | 4            | 1                     | 33 | 27.39 | 138                  | 31 | 50.6 | 4             | 0.00              |
| 47      | 106 Piscium $\nu$ ... ..                    | 4.7        | ...          | 1                     | 35 | 20.52 | 85                   | 6  | 18.0 | 1             | 0.99              |
| 48      | ... ..                                      | 8.0        | 4            | 1                     | 36 | 20.07 | 149                  | 14 | 24.8 | 4             | 0.71              |
| 49      | 110 Piscium $\sigma$ ... ..                 | 4.4        | ...          | 1                     | 39 | 12.89 | 81                   | 25 | 55.1 | 10            | 0.91              |
| 50      | Taylor 578 ... ..                           | 5.5        | ...          | 1                     | 40 | 6.81  | 96                   | 19 | 6.4  | 5             | 0.91              |
| 51      | Stone 704 ... ..                            | 8.0        | ...          | 1                     | 41 | 46.12 | 133                  | 54 | 16.9 | 5             | 0.01              |
| 52      | Taylor 616 ... ..                           | 6.1        | ...          | 1                     | 46 | 22.07 | 140                  | 47 | 8.4  | 5             | 0.89              |
| 53      | 6 Arietis $\beta$ ... ..                    | 2.8        | ...          | 1                     | 48 | 10.61 | 69                   | 45 | 51.7 | 13            | 0.95              |
| 54      | Taylor 626 ... ..                           | 6.3        | ...          | 1                     | 48 | 20.94 | 129                  | 10 | 21.1 | 5             | 0.01              |
| 55      | ... ..                                      | 8.0        | 3            | 1                     | 53 | 53.44 | 127                  | 35 | 3.7  | 5             | 0.19              |
| 56      | Stone 812 ... ..                            | 6.0        | ...          | 1                     | 57 | 20.50 | 106                  | 52 | 13.7 | 4             | 0.88              |
| 57      | Stone 824 ... ..                            | 7.0        | ...          | 1                     | 59 | 40.47 | 134                  | 4  | 5.9  | 3             | 0.01              |
| 58      | 13 Arietis $\alpha$ ... ..                  | 2.0        | ...          | 2                     | 0  | 34.70 | 67                   | 5  | 29.9 | 17            | 0.26              |
| 59      | Stone 834 ... ..                            | 7.3        | ...          | 2                     | 1  | 18.98 | 142                  | 33 | 4.5  | 5             | 0.92              |
| 60      | Stone 850 ... ..                            | 7.5        | ...          | 2                     | 3  | 48.47 | 126                  | 22 | 45.3 | 4             | 0.92              |
| 61      | Stone 870 ... ..                            | 7.5        | ...          | 2                     | 5  | 46.73 | 128                  | 55 | 5.5  | 5             | 0.91              |
| 62      | ... ..                                      | 7.7        | 2            | 2                     | 8  | 5.55  | 131                  | 48 | 51.3 | 2             | 0.00              |
| 63      | ... ..                                      | 8.5        | 4            | 2                     | 9  | 23.64 | 124                  | 51 | 43.1 | 5             | 0.36              |
| 64      | Taylor 750 ... ..                           | 6.1        | ...          | 2                     | 9  | 47.80 | 131                  | 42 | 43.9 | 1             | 0.01              |
| 65      | 67 Ceti ... ..                              | 5.5        | ...          | 2                     | 11 | 8.75  | 96                   | 57 | 43.6 | 3             | 0.93              |
| 66      | Stone 911 ... ..                            | 7.1        | ...          | 2                     | 11 | 58.76 | 143                  | 25 | 54.4 | 5             | 0.92              |
| 67      | ... ..                                      | 7.0        | 2            | 2                     | 14 | 28.61 | 132                  | 33 | 30.8 | 2             | 0.01              |
| 68      | Stone 935 ... ..                            | 7.3        | ...          | 2                     | 16 | 3.49  | 140                  | 50 | 21.2 | 5             | 0.94              |
| 69      | ... ..                                      | 8.0        | 1            | 2                     | 18 | 16.50 | 150                  | 57 | 53.2 | 1             | 0.01              |
| 70      | Stone 955 ... ..                            | 7.3        | ...          | 2                     | 18 | 48.67 | 150                  | 17 | 34.1 | 5             | 0.92              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                       | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|-----------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                             | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 36      | R. P. L. 18 ...             | + 14.8806           | + 6.8872           | ...            | - 19.028           | + 0.693            | ...            | ...        |
| 37      | 1 Ursæ Minoris $\alpha$ ... | + 21.9951           | + 16.3900          | + 0.108        | - 18.966           | + 1.050            | + 0.00         | 102        |
| 38      | 45 Ceti $\theta^1$ ...      | + 3.0032            | + 0.0018           | - 0.007        | - 18.899           | + 0.154            | + 0.20         | 184        |
| 39      | 93 Piscium $\rho$ ...       | + 3.2259            | + 0.0163           | - 0.006        | - 18.846           | + 0.168            | - 0.03         | 185        |
| 40      | ... ..                      | + 2.7757            | - 0.0086           | ...            | - 18.841           | + 0.146            | ...            | ...        |
| 41      | Taylor 487 ...              | + 2.8279            | - 0.0055           | ...            | - 18.695           | + 0.157            | ...            | ...        |
| 42      | 99 Piscium $\eta$ ...       | + 3.2001            | + 0.0141           | - 0.000        | - 18.683           | + 0.177            | + 0.00         | 203        |
| 43      | Stone 596 ...               | + 2.6862            | - 0.0100           | ...            | - 18.674           | + 0.150            | ...            | ...        |
| 44      | Taylor 524 ...              | + 2.2678            | - 0.0140           | ...            | - 18.583           | + 0.134            | ...            | ...        |
| 45      | $\alpha$ Eridani ...        | + 2.2303            | - 0.0128           | + 0.008        | - 18.413           | + 0.137            | + 0.07         | Stone      |
| 46      | ... ..                      | + 2.4724            | - 0.0120           | ...            | - 18.410           | + 0.151            | ...            | ...        |
| 47      | 106 Piscium $\nu$ ...       | + 3.1186            | + 0.0091           | - 0.003        | - 18.344           | + 0.191            | - 0.01         | 223        |
| 48      | ... ..                      | + 2.1558            | - 0.0114           | ...            | - 18.308           | + 0.136            | ...            | ...        |
| 49      | 110 Piscium $\sigma$ ...    | + 3.1569            | + 0.0111           | + 0.003        | - 18.204           | + 0.200            | - 0.06         | 232        |
| 50      | Taylor 578 ...              | + 3.0097            | + 0.0039           | ...            | - 18.171           | + 0.193            | ...            | ...        |
| 51      | Stone 704 ...               | + 2.5195            | - 0.0095           | ...            | - 18.109           | + 0.165            | ...            | ...        |
| 52      | Taylor 616 ...              | + 2.3390            | - 0.0098           | ...            | - 17.932           | + 0.160            | ...            | ...        |
| 53      | 6 Arietis $\beta$ ...       | + 3.2965            | + 0.0183           | + 0.005        | - 17.861           | + 0.226            | + 0.10         | 252        |
| 54      | Taylor 626 ...              | + 2.5764            | - 0.0073           | ...            | - 17.855           | + 0.179            | ...            | ...        |
| 55      | ... ..                      | + 2.5819            | - 0.0062           | ...            | - 17.628           | + 0.187            | ...            | ...        |
| 56      | Stone 812 ...               | + 2.8862            | + 0.0010           | ...            | - 17.432           | + 0.214            | ...            | ...        |
| 57      | Stone 824 ...               | + 2.4269            | - 0.0087           | ...            | - 17.381           | + 0.183            | ...            | ...        |
| 58      | 13 Arietis $\alpha$ ...     | + 3.3561            | + 0.0203           | + 0.013        | - 17.342           | + 0.252            | + 0.13         | 287        |
| 59      | Stone 834 ...               | + 2.1910            | - 0.0065           | ...            | - 17.310           | + 0.168            | ...            | ...        |
| 60      | Stone 850 ...               | + 2.5658            | - 0.0049           | ...            | - 17.198           | + 0.199            | ...            | ...        |
| 61      | Stone 870 ...               | + 2.5092            | - 0.0051           | ...            | - 17.108           | + 0.198            | ...            | ...        |
| 62      | ... ..                      | + 2.4383            | - 0.0053           | ...            | - 17.002           | + 0.195            | ...            | ...        |
| 63      | ... ..                      | + 2.5741            | - 0.0040           | ...            | - 16.943           | + 0.207            | ...            | ...        |
| 64      | Taylor 750 ...              | + 2.4330            | - 0.0051           | ...            | - 16.922           | + 0.197            | ...            | ...        |
| 65      | 67 Ceti ...                 | + 2.9840            | + 0.0049           | + 0.004        | - 16.859           | + 0.242            | + 0.11         | 321        |
| 66      | Stone 911 ...               | + 2.0909            | - 0.0040           | ...            | - 16.819           | + 0.173            | ...            | ...        |
| 67      | ... ..                      | + 2.3926            | - 0.0046           | ...            | - 16.699           | + 0.200            | ...            | ...        |
| 68      | Stone 935 ...               | + 2.1541            | - 0.0040           | ...            | - 16.622           | + 0.182            | ...            | ...        |
| 69      | ... ..                      | + 1.7058            | + 0.0087           | ...            | - 16.513           | + 0.148            | ...            | ...        |
| 70      | Stone 955 ...               | + 1.7383            | + 0.0029           | ...            | - 16.487           | + 0.151            | ...            | ...        |

## Mean Positions of Stars for 1888, January 1st.

| Number | Star.                  | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|--------|------------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|        |                        |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 71.    | ...                    | 7.5        | 2            | 2                     | 19 | 52.27 | 124                  | 51 | 27.9 | 2             | 0.00              |
| 72     | 73 Ceti ζ <sup>3</sup> | 4.4        | ...          | 2                     | 21 | 56.29 | 82                   | 3  | 52.4 | 1             | 1.00              |
| 73     | ...                    | 7.0        | 3            | 2                     | 22 | 8.49  | 131                  | 53 | 37.3 | 4             | 0.49              |
| 74     | ...                    | 8.0        | ...          | 2                     | 23 | 18.01 | 135                  | 34 | 15.8 | 1             | 0.01              |
| 75     | Stone 994              | 7.2        | ...          | 2                     | 24 | 81.01 | 126                  | 27 | 49.7 | 1             | 0.00              |
| 76     | Stone 1000             | 6.4        | ...          | 2                     | 25 | 20.71 | 154                  | 49 | 24.1 | 5             | 0.92              |
| 77     | Lacaille 782           | 6.7        | ...          | 2                     | 26 | 46.94 | 148                  | 19 | 46.3 | 1             | 0.01              |
| 78     | R. P. L. 26            | 8.0        | ...          | 2                     | 27 | 31.12 | 3                    | 27 | 48.7 | 2             | 0.67              |
| 79     | ...                    | 7.7        | 3            | 2                     | 28 | 16.63 | 149                  | 23 | 20.7 | 3             | 0.01              |
| 80     | 77 Ceti                | 5.6        | ...          | 2                     | 28 | 56.16 | 98                   | 22 | 16.1 | 5             | 0.94              |
| 81     | ...                    | 8.0        | ...          | 2                     | 33 | 12.16 | 137                  | 9  | 14.5 | 5             | 0.05              |
| 82     | 86 Ceti γ <sup>3</sup> | 3.6        | ...          | 2                     | 37 | 14.27 | 87                   | 15 | 29.0 | 2             | 0.99              |
| 83     | Taylor 916             | 6.1        | ...          | 2                     | 37 | 27.05 | 128                  | 53 | 1.8  | 5             | 0.01              |
| 84     | ...                    | 7.7        | 1            | 2                     | 37 | 31.16 | 136                  | 6  | 9.6  | 1             | 0.00              |
| 85     | Taylor 926             | 7.5        | ...          | 2                     | 39 | 2.37  | 115                  | 59 | 32.7 | 5             | 0.92              |
| 86     | Stone 1144             | 7.0        | ...          | 2                     | 42 | 15.04 | 131                  | 27 | 2.0  | 5             | 0.97              |
| 87     | ...                    | 7.7        | 1            | 2                     | 42 | 49.02 | 149                  | 53 | 8.7  | 1             | 0.00              |
| 88     | ...                    | 8.0        | ...          | 2                     | 43 | 47.79 | 138                  | 24 | 5.5  | 5             | 0.05              |
| 89     | 43 Arietis σ           | 5.5        | ...          | 2                     | 45 | 1.96  | 75                   | 24 | 2.0  | 7             | 0.96              |
| 90     | ...                    | 8.5        | ...          | 2                     | 46 | 1.22  | 132                  | 42 | 37.4 | 5             | 0.03              |
| 91     | Stone 1170             | 7.1        | ...          | 2                     | 46 | 38.45 | 131                  | 26 | 44.8 | 5             | 0.94              |
| 92     | ...                    | 8.5        | ...          | 2                     | 47 | 2.81  | 132                  | 18 | 50.8 | 2             | 0.01              |
| 93     | Stone 1192             | 8.0        | ...          | 2                     | 49 | 36.37 | 135                  | 5  | 2.8  | 5             | 0.97              |
| 94     | Stone 1208             | 6.6        | ...          | 2                     | 50 | 59.00 | 146                  | 21 | 23.5 | 4             | 0.05              |
| 95     | Stone 1212             | 8.0        | ...          | 2                     | 51 | 42.14 | 141                  | 44 | 2.3  | 4             | 0.96              |
| 96     | Stone 1223             | 7.0        | ...          | 2                     | 52 | 28.65 | 154                  | 28 | 45.5 | 1             | 0.99              |
| 97     | Taylor 1024            | 7.4        | ...          | 2                     | 55 | 47.17 | 132                  | 20 | 18.5 | 3             | 0.01              |
| 98     | Taylor 1027            | 6.1        | ...          | 2                     | 56 | 34.74 | 118                  | 32 | 26.1 | 5             | 0.94              |
| 99     | ...                    | 8.5        | ...          | 2                     | 57 | 42.15 | 132                  | 17 | 54.2 | 4             | 0.05              |
| 100    | Stone 1263             | 6.2        | ...          | 2                     | 58 | 55.64 | 137                  | 26 | 2.9  | 5             | 0.97              |
| 101    | Stone 1264             | 8.0        | ...          | 2                     | 59 | 13.87 | 134                  | 30 | 42.2 | 4             | 0.02              |
| 102    | Taylor 1042            | 6.9        | ...          | 2                     | 59 | 43.54 | 134                  | 21 | 21.4 | 5             | 0.02              |
| 103    | R. P. L. 33            | 5.3        | ...          | 3                     | 4  | 48.88 | 5                    | 30 | 24.5 | 2             | 0.95              |
| 104    | 57 Arietis δ           | 4.5        | ...          | 3                     | 4  | 56.22 | 70                   | 42 | 59.3 | 7             | 0.96              |
| 105    | Stone 1342             | 7.3        | ...          | 3                     | 9  | 50.79 | 130                  | 41 | 31.7 | 2             | 0.00              |

78.—Carrington 352.

103.—Groombridge 595.



## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.               | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|---------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                     | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 71      | ...                 | + 2.3100            | - 0.0040           | ...            | - 16.434           | + 0.200            | ...            | ...        |
| 72      | 73 Ceti $\zeta^a$   | + 3.1805            | + 0.0117           | + 0.001        | - 16.330           | + 0.276            | + 0.00         | 347        |
| 73      | ...                 | + 2.3753            | - 0.0083           | ...            | - 16.320           | + 0.208            | ...            | ...        |
| 74      | ...                 | + 2.2740            | - 0.0035           | ...            | - 16.260           | + 0.201            | ...            | ...        |
| 75      | Stone 994           | + 2.4899            | - 0.0023           | ...            | - 16.197           | + 0.222            | ...            | ...        |
| 76      | Stone 1000          | + 1.3873            | + 0.0133           | ...            | - 16.155           | + 0.127            | ...            | ...        |
| 77      | Lacaille 782        | + 1.7773            | + 0.0026           | ...            | - 16.079           | + 0.161            | ...            | ...        |
| 78      | R. P. L. 26         | + 16.3288           | + 3.7976           | ...            | - 16.038           | + 1.436            | ...            | ...        |
| 79      | ...                 | + 1.7104            | + 0.0047           | ...            | - 16.002           | + 0.157            | ...            | ...        |
| 80      | 77 Ceti             | + 2.9533            | + 0.0051           | ...            | - 15.966           | + 0.267            | ...            | ...        |
| 81      | ...                 | + 2.1790            | - 0.0020           | ...            | - 15.739           | + 0.204            | ...            | ...        |
| 82      | 86 Ceti $\gamma^3$  | + 3.1130            | + 0.0094           | - 0.011        | - 15.516           | + 0.294            | + 0.16         | 383        |
| 83      | Taylor 916          | + 2.3886            | - 0.0018           | ...            | - 15.505           | + 0.223            | ...            | ...        |
| 84      | ...                 | + 2.1908            | - 0.0014           | ...            | - 15.500           | + 0.209            | ...            | ...        |
| 85      | Taylor 926          | + 2.6554            | + 0.0003           | ...            | - 15.416           | + 0.254            | ...            | ...        |
| 86      | Stone 1144          | + 2.3045            | - 0.0015           | ...            | - 15.234           | + 0.225            | ...            | ...        |
| 87      | ...                 | + 1.5691            | + 0.0081           | ...            | - 15.203           | + 0.156            | ...            | ...        |
| 88      | ...                 | + 2.0855            | - 0.0004           | ...            | - 15.147           | + 0.206            | ...            | ...        |
| 89      | 43 Arietis $\sigma$ | + 3.3020            | + 0.0150           | - 0.000        | - 15.075           | + 0.323            | + 0.04         | 400        |
| 90      | ...                 | + 2.2545            | - 0.0009           | ...            | - 15.018           | + 0.224            | ...            | ...        |
| 91      | Stone 1170          | + 2.2876            | - 0.0010           | ...            | - 14.983           | + 0.227            | ...            | ...        |
| 92      | ...                 | + 2.2323            | - 0.0006           | ...            | - 14.959           | + 0.223            | ...            | ...        |
| 93      | Stone 1192          | + 2.1682            | - 0.0004           | ...            | - 14.809           | + 0.219            | ...            | ...        |
| 94      | Stone 1208          | + 1.7087            | + 0.0052           | ...            | - 14.727           | + 0.175            | ...            | ...        |
| 95      | Stone 1212          | + 1.9181            | + 0.0020           | ...            | - 14.684           | + 0.196            | ...            | ...        |
| 96      | Stone 1223          | + 1.1582            | + 0.0206           | ...            | - 14.633           | + 0.121            | ...            | ...        |
| 97      | Taylor 1024         | + 2.2270            | 0.0000             | ...            | - 14.433           | + 0.233            | ...            | ...        |
| 98      | Taylor 1027         | + 2.5659            | + 0.0007           | ...            | - 14.391           | + 0.266            | ...            | ...        |
| 99      | ...                 | + 2.2204            | + 0.0001           | ...            | - 14.322           | + 0.232            | ...            | ...        |
| 100     | Stone 1263          | + 2.0481            | + 0.0011           | ...            | - 14.247           | + 0.217            | ...            | ...        |
| 101     | Stone 1264          | + 2.1461            | + 0.0005           | ...            | - 14.223           | + 0.236            | ...            | ...        |
| 102     | Taylor 1042         | + 2.1491            | + 0.0005           | ...            | - 14.193           | + 0.227            | ...            | ...        |
| 103     | R. P. L. 33         | + 13.0815           | + 1.6154           | + 0.045        | - 13.879           | + 1.333            | + 0.12         | 402        |
| 104     | 57 Arietis $\delta$ | + 3.4102            | + 0.0171           | + 0.010        | - 13.871           | + 0.364            | - 0.01         | 446        |
| 105     | Stone 1342          | + 2.2253            | + 0.0010           | ...            | - 13.553           | + 0.245            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.                                      | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|--|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |  |            |              | h.                    | m. | s.    | '                    | "  | ...  |               |                   |
| 106     | ... ..                                     | 9.0        | ...          | 3                     | 12 | 17.23 | 126                  | 8  | 37.8 | 3             | 0.01              |
| 107     | 33 Persei $\alpha$ ...                     | 1.9        | ...          | 3                     | 15 | 58.29 | 40                   | 33 | 23.5 | 3             | 0.05              |
| 108     | 1 Tauri $\sigma$ , Var. 5 ...              | Var.       | ...          | 3                     | 18 | 31.06 | 81                   | 23 | 0.7  | 6             | 0.37              |
| 109     | ... ..                                     | 8.0        | 3            | 3                     | 18 | 35.65 | 134                  | 32 | 55.3 | 5             | 0.03              |
| 110     | Stone 1414 ...                             | 7.2        | ...          | 3                     | 19 | 17.12 | 130                  | 29 | 29.3 | 3             | 0.00              |
| 111     | ... ..                                     | 7.7        | 2            | 3                     | 26 | 30.25 | 135                  | 8  | 2.2  | 3             | 0.04              |
| 112     | 18 Eridani $\epsilon$ ...                  | 3.7        | ...          | 3                     | 27 | 25.15 | 99                   | 51 | 20.0 | 6             | 0.03              |
| 113     | R. P. L. 34 ...                            | 5.9        | ...          | 3                     | 28 | 19.44 | 3                    | 43 | 29.0 | 4             | 0.50              |
| 114     | Stone 1522 ...                             | 7.8        | ...          | 3                     | 34 | 39.71 | 136                  | 37 | 22.6 | 2             | 0.00              |
| 115     | Stone 1526 ...                             | 8.0        | ...          | 3                     | 35 | 9.27  | 126                  | 19 | 10.3 | 5             | 0.01              |
| 116     | 25 Tauri $\eta$ ( <i>Alcyone</i> ) ...     | 3.0        | ...          | 3                     | 40 | 31.81 | 66                   | 15 | 27.8 | 4             | 0.25              |
| 117     | ... ..                                     | 8.3        | 2            | 3                     | 44 | 17.92 | 136                  | 26 | 47.0 | 4             | 0.04              |
| 118     | ... ..                                     | 9.0        | 4            | 3                     | 49 | 49.40 | 126                  | 22 | 56.1 | 5             | 0.02              |
| 119     | 37 Tauri A <sup>1</sup> ...                | 4.4        | ...          | 3                     | 57 | 46.71 | 68                   | 14 | 20.7 | 16            | 0.05              |
| 120     | R. P. L. 35 ...                            | 6.7        | ...          | 4                     | 0  | 13.55 | 4                    | 45 | 17.8 | 2             | 0.00              |
| 121     | 38 Eridani $\sigma^1$ ...                  | 4.1        | ...          | 4                     | 6  | 9.25  | 97                   | 8  | 35.3 | 1             | 0.03              |
| 122     | $\alpha$ Reticuli ...                      | 3.3        | ...          | 4                     | 12 | 55.28 | 152                  | 46 | 1.2  | 5             | 0.11              |
| 123     | 54 Tauri $\gamma$ ...                      | 3.9        | ...          | 4                     | 13 | 8.11  | 74                   | 39 | 22.0 | 13            | 0.03              |
| 124     | Taylor 1553 ...                            | 8.3        | ...          | 4                     | 20 | 49.49 | 134                  | 17 | 23.0 | 4             | 0.03              |
| 125     | 74 Tauri $\epsilon$ ...                    | 3.7        | ...          | 4                     | 21 | 47.09 | 71                   | 4  | 49.4 | 2             | 0.02              |
| 126     | Taylor 1595 ...                            | 6.9        | ...          | 4                     | 27 | 0.28  | 131                  | 25 | 33.3 | 4             | 0.01              |
| 127     | 87 Tauri $\alpha$ ( <i>Aldebaran</i> ) ... | 1.0        | ...          | 4                     | 29 | 12.46 | 73                   | 43 | 37.5 | 8             | 0.09              |
| 128     | $\alpha$ Doradus ...                       | 3.1        | ...          | 4                     | 31 | 28.21 | 145                  | 17 | 13.2 | 5             | 0.11              |
| 129     | Stone 1991 ...                             | 7.3        | ...          | 4                     | 32 | 31.02 | 135                  | 22 | 30.1 | 4             | 0.01              |
| 130     | ... ..                                     | 7.0        | 5            | 4                     | 45 | 26.49 | 131                  | 47 | 22.9 | 5             | 0.08              |
| 131     | 3 Aurigæ $\epsilon$ ...                    | 2.7        | ...          | 4                     | 49 | 22.43 | 57                   | 1  | 15.9 | 9             | 0.08              |
| 132     | R. P. L. 37 ...                            | 7.0        | ...          | 4                     | 50 | 27.71 | 4                    | 11 | 49.5 | 12            | 0.09              |
| 133     | 7 Aurigæ $\epsilon$ , Var. 1 ...           | Var.       | ...          | 4                     | 53 | 34.88 | 46                   | 21 | 3.7  | 5             | 0.11              |
| 134     | Stone 2191 ...                             | 8.0        | ...          | 4                     | 56 | 19.73 | 131                  | 13 | 19.8 | 5             | 0.06              |
| 135     | R. P. L. 39 ...                            | 7.0        | ...          | 5                     | 4  | 14.00 | 4                    | 26 | 3.0  | 17            | 0.22              |
| 136     | 13 Aurigæ $\alpha$ ( <i>Capella</i> ) ...  | 0.2        | ...          | 5                     | 8  | 2.65  | 44                   | 7  | 19.6 | 9             | 0.09              |
| 137     | 19 Orionis $\beta$ ( <i>Rigel</i> ) ...    | 0.3        | ...          | 5                     | 8  | 54.85 | 98                   | 20 | 16.2 | 8             | 0.10              |
| 138     | 112 Tauri $\beta$ ...                      | 1.9        | ...          | 5                     | 18 | 53.79 | 61                   | 29 | 34.9 | 4             | 0.04              |
| 139     | R. P. L. 40 ...                            | 6.0        | ...          | 5                     | 24 | 37.77 | 4                    | 51 | 57.9 | 6             | 0.21              |
| 140     | 34 Orionis $\delta$ , Var. 1 ...           | Var.       | ...          | 5                     | 26 | 1.88  | 90                   | 23 | 12.9 | 1             | 0.05              |

113.—Groombridge 642.  
139.—Groombridge 944.

120.—Groombridge 750.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                                  | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |       |        |       |
|---------|--|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|-------|--------|-------|
|         |  | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |       |        |       |
| 106     | ...                                    | +                   | 0.3704             | +              | 0.0009             | ...                | - 13.400       | +          | 0.260 | ...    | ...   |
| 107     | 33 Persi $\alpha$ ...                  | +                   | 4.2512             | +              | 0.0483             | + 0.002            | - 13.158       | +          | 0.472 | + 0.03 | 464   |
| 108     | 1 Tauri $\epsilon$ ...                 | +                   | 3.2287             | +              | 0.0115             | - 0.005            | - 12.989       | +          | 0.364 | + 0.07 | 477   |
| 109     | ...                                    | +                   | 2.0695             | +              | 0.0021             | ...                | - 12.984       | +          | 0.236 | ...    | ...   |
| 110     | Stone 1414 ...                         | +                   | 2.2002             | +              | 0.0016             | ...                | - 12.988       | +          | 0.251 | ...    | ...   |
| 111     | ...                                    | +                   | 2.0193             | +              | 0.0023             | ...                | - 12.449       | +          | 0.236 | ...    | ...   |
| 112     | 18 Eridani $\epsilon$ ...              | +                   | 2.8897             | +              | 0.0055             | - 0.068            | - 12.386       | +          | 0.336 | - 0.01 | 493   |
| 113     | R. P. L. 34 ...                        | +                   | 19.2728            | +              | 3.2566             | + 0.136            | - 12.324       | +          | 2.222 | + 0.06 | Gr    |
| 114     | Stone 1522 ...                         | +                   | 1.9325             | +              | 0.0088             | ...                | - 11.981       | +          | 0.232 | ...    | ...   |
| 115     | Stone 1526 ...                         | +                   | 2.2795             | +              | 0.0022             | ...                | - 11.847       | +          | 0.273 | ...    | ...   |
| 116     | 25 Tauri $\eta$ ...                    | +                   | 3.5548             | +              | 0.0177             | - 0.000            | - 11.465       | +          | 0.430 | + 0.04 | 521   |
| 117     | ...                                    | +                   | 1.9053             | +              | 0.0042             | ...                | - 11.192       | +          | 0.235 | ...    | ...   |
| 118     | ...                                    | +                   | 2.2420             | +              | 0.0027             | ...                | - 10.788       | +          | 0.280 | ...    | ...   |
| 119     | 37 Tauri A <sup>1</sup> ...            | +                   | 3.5319             | +              | 0.0153             | + 0.005            | - 10.195       | +          | 0.447 | + 0.06 | 554   |
| 120     | R. P. L. 35 ...                        | -                   | 16.9992            | +              | 1.8057             | + 0.002            | - 10.009       | +          | 2.152 | - 0.02 | 750   |
| 121     | 38 Eridani $\epsilon$ <sup>1</sup> ... | +                   | 2.9250             | +              | 0.0058             | - 0.001            | - 9.557        | +          | 0.379 | - 0.09 | 568   |
| 122     | $\alpha$ Reticuli ...                  | +                   | 0.7520             | +              | 0.0216             | + 0.005            | - 9.083        | +          | 0.102 | - 0.07 | Stone |
| 123     | 54 Tauri $\gamma$ ...                  | +                   | 3.4000             | +              | 0.0115             | + 0.007            | - 9.015        | +          | 0.446 | + 0.03 | 583   |
| 124     | Taylor 1553 ...                        | +                   | 1.8883             | +              | 0.0043             | ...                | - 8.410        | +          | 0.254 | ...    | ...   |
| 125     | 74 Tauri $\epsilon$ ...                | +                   | 3.4892             | +              | 0.0120             | + 0.007            | - 8.384        | +          | 0.466 | + 0.03 | 609   |
| 126     | Taylor 1595 ...                        | +                   | 1.9884             | +              | 0.0041             | ...                | - 7.915        | +          | 0.269 | ...    | ...   |
| 127     | 87 Tauri $\alpha$ ...                  | +                   | 3.4323             | +              | 0.0105             | + 0.004            | - 7.789        | +          | 0.464 | + 0.18 | 630   |
| 128     | $\alpha$ Doradus ...                   | +                   | 1.2848             | +              | 0.0099             | ...                | - 7.556        | +          | 0.176 | ...    | ...   |
| 129     | Stone 1991 ...                         | +                   | 1.8153             | +              | 0.0043             | ...                | - 7.470        | +          | 0.249 | ...    | ...   |
| 130     | ...                                    | +                   | 1.9401             | +              | 0.0041             | ...                | - 6.409        | +          | 0.271 | ...    | ...   |
| 131     | 3 Aurigæ $\epsilon$ ...                | +                   | 3.8989             | +              | 0.0144             | + 0.001            | - 6.082        | +          | 0.544 | + 0.00 | 677   |
| 132     | R. P. L. 37 ...                        | +                   | 20.4576            | +              | 1.4960             | ...                | - 5.991        | +          | 2.851 | ...    | ...   |
| 133     | 7 Aurigæ $\epsilon$ ...                | +                   | 4.2945             | +              | 0.0197             | - 0.002            | - 5.731        | +          | 0.602 | + 0.01 | 690   |
| 134     | Stone 2191 ...                         | +                   | 1.9460             | +              | 0.0039             | ...                | - 5.500        | +          | 0.275 | ...    | ...   |
| 135     | R. P. L. 39 ...                        | +                   | 19.8047            | +              | 1.1015             | ...                | - 4.881        | +          | 2.805 | ...    | ...   |
| 136     | 13 Aurigæ $\alpha$ ...                 | +                   | 4.4156             | +              | 0.0173             | + 0.008            | - 4.508        | +          | 0.629 | + 0.42 | 722   |
| 137     | 19 Orionis $\beta$ ...                 | +                   | 2.8812             | +              | 0.0040             | - 0.001            | - 4.433        | +          | 0.413 | - 0.01 | 736   |
| 138     | 112 Tauri $\beta$ ...                  | +                   | 3.7869             | +              | 0.0082             | + 0.001            | - 3.577        | +          | 0.545 | + 0.18 | 756   |
| 139     | R. P. L. 40 ...                        | +                   | 18.5835            | +              | 0.5953             | ...                | - 3.083        | +          | 2.680 | ...    | ...   |
| 140     | 34 Orionis $\delta$ ...                | +                   | 3.0634             | +              | 0.0038             | - 0.001            | - 2.962        | +          | 0.443 | + 0.01 | 787   |

113.—Proper motions from *Greenwich Catalogue*, 1880.

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.                            | Magnitude. | Estimations. | Mean Right Ascension. |           |           | Mean Polar Distance. |          |          | Observations. | Fraction of Year. |
|---------|----------------------------------|------------|--------------|-----------------------|-----------|-----------|----------------------|----------|----------|---------------|-------------------|
|         |                                  |            |              | <i>h.</i>             | <i>m.</i> | <i>s.</i> | <i>°</i>             | <i>'</i> | <i>"</i> |               |                   |
| 141     | 11 Leporis $\alpha$ ... ..       | 2.7        | ...          | 5                     | 27        | 34.23     | 107                  | 54       | 25.7     | 2             | 0.07              |
| 142     | R. P. L. 41 ... ..               | 7.5        | ...          | 5                     | 29        | 13.78     | 4                    | 44       | 59.2     | 8             | 0.57              |
| 143     | R. P. L. 42... ..                | 7.9        | ...          | 5                     | 36        | 37.99     | 2                    | 40       | 52.8     | 9             | 0.07              |
| 144     | 53 Orionis $\kappa$ ... ..       | 2.2        | ...          | 5                     | 42        | 12.45     | 99                   | 42       | 46.3     | 4             | 0.07              |
| 145     | 33 Aurigæ $\delta$ ... ..        | 3.8        | ...          | 5                     | 49        | 53.55     | 35                   | 43       | 33.5     | 5             | 0.11              |
| 146     | R. P. L. 43 ... ..               | 6.6        | ...          | 6                     | 0         | 28.21     | 3                    | 14       | 15.4     | 9             | 0.31              |
| 147     | 7 Geminorum $\eta$ ... ..        | 3.5        | ...          | 6                     | 7         | 48.87     | 67                   | 27       | 37.1     | 10            | 0.10              |
| 148     | 31 Geminor $\xi$ ... ..          | 3.4        | ...          | 6                     | 38        | 43.35     | 76                   | 58       | 46.1     | 10            | 0.13              |
| 149     | 51 Cephei ( <i>Hev.</i> ) ... .. | 5.3        | ...          | 6                     | 45        | 17.33     | 2                    | 46       | 28.2     | 10            | 0.12              |
| 150     | ... .. (2nd Star)...             | 9.5        | 4            | 6                     | 48        | 35.47     | 70                   | 33       | 38.0     | 4             | 0.11              |
| 151     | W. B. N. VI. 1448 ... ..         | 9.0        | 5            | 6                     | 49        | 45.81     | 62                   | 3        | 39.3     | 5             | 0.11              |
| 152     | 22 Canis Majoris ... ..          | 3.5        | ...          | 6                     | 57        | 3.56      | 117                  | 46       | 5.3      | 5             | 0.11              |
| 153     | 3 Canis Minoris $\beta$ ... ..   | 3.1        | ...          | 7                     | 20        | 48.35     | 81                   | 28       | 31.9     | 10            | 0.12              |
| 154     | 77 Geminorum $\kappa$ ... ..     | 1.1        | ...          | 7                     | 37        | 22.89     | 65                   | 19       | 21.3     | 5             | 0.15              |
| 155     | W. B. E. VII. 1127 ... ..        | 9.0        | 5            | 7                     | 38        | 32.60     | 81                   | 9        | 24.6     | 5             | 0.12              |
| 156     | $\xi$ Argûs ... ..               | 3.4        | ...          | 7                     | 44        | 22.49     | 114                  | 33       | 59.1     | 10            | 0.14              |
| 157     | R. P. L. 48 ... ..               | 7.4        | ...          | 7                     | 46        | 44.85     | 3                    | 58       | 3.8      | 5             | 0.64              |
| 158     | Lalande 16364 ... ..             | 8.0        | 5            | 8                     | 15        | 22.48     | 76                   | 0        | 18.2     | 5             | 0.10              |
| 159     | R. P. L. 53 ... ..               | 7.7        | ...          | 8                     | 20        | 38.22     | 4                    | 32       | 8.7      | 5             | 0.68              |
| 160     | Lalande 16797 ... ..             | 8.0        | 5            | 8                     | 27        | 6.61      | 76                   | 3        | 3.5      | 5             | 0.11              |
| 161     | R. P. L. 55 ... ..               | 7.5        | ...          | 8                     | 31        | 31.92     | 5                    | 40       | 55.7     | 3             | 0.77              |
| 162     | 43 Cancrî $\gamma$ ... ..        | 4.8        | ...          | 8                     | 36        | 30.77     | 68                   | 6        | 42.3     | 10            | 0.14              |
| 163     | R. P. L. 60 ... ..               | 7.0        | ...          | 8                     | 50        | 44.02     | 5                    | 21       | 10.9     | 1             | 0.74              |
| 164     | W. B. E. IX. 78 ... ..           | 9.0        | 5            | 9                     | 6         | 31.26     | 77                   | 16       | 15.8     | 5             | 0.12              |
| 165     | $\iota$ Argûs ... ..             | 2.5        | ...          | 9                     | 13        | 57.46     | 148                  | 47       | 6.6      | 10            | 0.21              |
| 166     | Lalande 18405 ... ..             | 8.0        | 5            | 9                     | 14        | 35.46     | 77                   | 32       | 44.0     | 5             | 0.13              |
| 167     | W. B. E. IX. 270 ... ..          | 9.0        | 5            | 9                     | 14        | 55.42     | 77                   | 15       | 40.3     | 5             | 0.14              |
| 168     | $\kappa$ Argûs ... ..            | 2.7        | ...          | 9                     | 18        | 29.19     | 144                  | 30       | 40.9     | 5             | 0.14              |
| 169     | R. P. L. 62 ... ..               | 8.1        | ...          | 9                     | 21        | 24.45     | 2                    | 21       | 32.2     | 2             | 0.70              |
| 170     | Lalande 19559 ... ..             | 7.0        | 5            | 9                     | 53        | 48.60     | 109                  | 47       | 50.9     | 5             | 0.14              |
| 171     | Lalande 19846 ... ..             | 8.0        | 5            | 10                    | 5         | 40.85     | 107                  | 3        | 30.1     | 5             | 0.14              |
| 172     | 33 Ursæ Majoris $\lambda$ ... .. | 3.6        | ...          | 10                    | 10        | 1.86      | 46                   | 30       | 6.0      | 1             | 0.15              |
| 173     | W. B. E. X. 228 ... ..           | 9.0        | 5            | 10                    | 15        | 3.03      | 104                  | 0        | 29.4     | 5             | 0.15              |
| 174     | Lalande 20089 ... ..             | 7.5        | 5            | 10                    | 15        | 10.54     | 104                  | 54       | 4.2      | 5             | 0.15              |
| 175     | ... ..                           | 9.7        | 5            | 10                    | 16        | 2.01      | 84                   | 34       | 2.6      | 5             | 0.28              |

150.—Comparison star for Hestia in 1882.

151.—Comparison star for Sylvia in 1882.

155.—Comparison star for Camilla in 1882.

158—160—164—166—167—170—171—173—174.—Comparison stars for Comet 1882, A.

163.—Carrington 1286.

175.—Comparison star for Asia in 1883.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                         | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|-------------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                               | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 141     | 11 Leporis $\alpha$ ...       | + 2.6446            | + 0.0029           | - 0.001        | - 2.828            | + 0.383            | - 0.01         | 796        |
| 142     | R. P. L. 41 ...               | + 19.0176           | + 0.5444           | ...            | - 2.684            | + 2.750            | ...            | ...        |
| 143     | R. P. L. 42 ...               | + 31.4697           | + 1.2560           | ...            | - 2.041            | + 4.537            | ...            | ...        |
| 144     | 53 Orionis $\kappa$ ...       | + 2.8441            | + 0.0027           | - 0.002        | - 1.555            | + 0.414            | - 0.00         | 844        |
| 145     | 33 Aurigæ $\delta$ ...        | + 4.9293            | + 0.0061           | + 0.007        | - 0.885            | + 0.718            | + 0.12         | 852        |
| 146     | R. P. L. 43 ...               | + 26.7050           | - 0.0260           | ...            | + 0.041            | + 3.896            | ...            | ...        |
| 147     | 7 Geminorum $\eta$ ...        | + 3.6269            | + 0.0007           | - 0.005        | + 0.682            | + 0.529            | + 0.00         | 909        |
| 148     | 31 Geminorum $\xi$ ...        | + 3.3772            | - 0.0017           | - 0.009        | + 3.373            | + 0.485            | + 0.20         | 989        |
| 149     | 51 Cephei ( <i>Hev.</i> ) ... | + 30.1274           | - 2.2654           | - 0.040        | + 3.937            | + 4.307            | + 0.05         | Gr.        |
| 150     | ... .. (2nd Star) ...         | + 3.5336            | - 0.0038           | ...            | + 4.220            | + 0.502            | ...            | ...        |
| 151     | W. B. N. VI. 1448 ...         | + 3.7647            | - 0.0060           | ...            | + 4.320            | + 0.535            | ...            | ...        |
| 152     | 22 Canis Majoris ...          | + 2.3901            | + 0.0013           | - 0.002        | + 4.941            | + 0.336            | + 0.01         | 1027       |
| 153     | 3 Canis Minoris $\beta$ ...   | + 3.2605            | - 0.0041           | - 0.004        | + 6.924            | + 0.444            | + 0.03         | 1079       |
| 154     | 77 Geminorum $\kappa$ ...     | + 3.7274            | - 0.0128           | - 0.048        | + 8.329            | + 0.491            | + 0.05         | 1112       |
| 155     | W. B. E. VII. 1127 ...        | + 3.2614            | - 0.0053           | ...            | + 8.359            | + 0.429            | ...            | ...        |
| 156     | $\xi$ Argûs ...               | + 2.5235            | + 0.0008           | - 0.001        | + 8.820            | + 0.327            | - 0.02         | 1132       |
| 157     | R. P. L. 48 ...               | + 20.2936           | - 2.3725           | ...            | + 9.006            | + 2.640            | ...            | ...        |
| 158     | Lalande 16364 ...             | + 3.3491            | - 0.0091           | ...            | + 11.169           | + 0.401            | ...            | ...        |
| 159     | R. P. L. 53 ...               | + 16.8502           | - 2.1717           | ...            | + 11.548           | + 2.004            | ...            | ...        |
| 160     | Lalande 16797 ...             | + 3.3383            | - 0.0097           | ...            | + 12.007           | + 0.392            | ...            | ...        |
| 161     | R. P. L. 55 ...               | + 13.6770           | - 1.4659           | ...            | + 12.314           | + 1.569            | ...            | ...        |
| 162     | 43 Cancri $\gamma$ ...        | + 3.4890            | - 0.0143           | - 0.009        | + 12.655           | + 0.390            | + 0.03         | 1230       |
| 163     | R. P. L. 60 ...               | + 13.5605           | - 1.7011           | ...            | + 13.595           | + 1.448            | ...            | ...        |
| 164     | W. B. E. IX. 78 ...           | + 3.2798            | - 0.0102           | ...            | + 14.578           | + 0.323            | ...            | ...        |
| 165     | $\epsilon$ Argûs ...          | + 1.6102            | - 0.0022           | ...            | + 15.017           | + 0.150            | ...            | ...        |
| 166     | Lalande 18405 ...             | + 3.2674            | - 0.0103           | ...            | + 15.054           | + 0.310            | ...            | ...        |
| 167     | W. B. E. IX. 270 ...          | + 3.2717            | - 0.0104           | ...            | + 15.073           | + 0.310            | ...            | ...        |
| 168     | $\kappa$ Argûs ...            | + 1.8576            | + 0.0027           | ...            | + 15.277           | + 0.169            | ...            | ...        |
| 169     | R. P. L. 62 ...               | + 23.7805           | - 8.0997           | ...            | + 15.441           | + 2.206            | ...            | ...        |
| 170     | Lalande 19559 ...             | + 2.8205            | + 0.0039           | ...            | + 17.090           | + 0.209            | ...            | ...        |
| 171     | Lalande 19846 ...             | + 2.8761            | + 0.0035           | ...            | + 17.610           | + 0.193            | ...            | ...        |
| 172     | 33 Ursæ Majoris $\lambda$ ... | + 3.6579            | - 0.0386           | - 0.017        | + 17.789           | + 0.240            | + 0.06         | 1421       |
| 173     | W. B. E. X. 228 ...           | + 2.9249            | + 0.0028           | ...            | + 17.987           | + 0.181            | ...            | ...        |
| 174     | Lalande 20089 ...             | + 2.9152            | + 0.0031           | ...            | + 17.992           | + 0.180            | ...            | ...        |
| 175     | ... ..                        | + 3.1281            | - 0.0067           | ...            | + 18.025           | + 0.193            | ...            | ...        |

149.—Proper motions from *Greenwich Catalogue*, 1880.

*Mean Positions of Stars for 1883, January 1st.*

| Number. | Star.                    | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|--------------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                          |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 176     | Lalande 20205 ... ..     | 8.0        | 3            | 10                    | 19 | 29.37 | 84                   | 50 | 7.8  | 5             | 0.27              |
| 177     | Lalande 20521 ... ..     | 6.7        | 5            | 10                    | 30 | 28.06 | 99                   | 58 | 33.9 | 5             | 0.15              |
| 178     | Yarnall 4420 ... ..      | 7.0        | 5            | 10                    | 30 | 42.70 | 101                  | 36 | 8.6  | 5             | 0.15              |
| 179     | 58 Leonis δ ... ..       | 5.0        | ...          | 10                    | 54 | 31.04 | 85                   | 45 | 16.3 | 10            | 0.18              |
| 180     | 70 Leonis θ ... ..       | 3.5        | ...          | 11                    | 8  | 5.97  | 73                   | 55 | 52.0 | 5             | 0.18              |
| 181     | 84 Leonis τ ... ..       | 5.1        | ...          | 11                    | 21 | 55.21 | 86                   | 29 | 53.5 | 10            | 0.23              |
| 182     | ... ..                   | 9.5        | 5            | 11                    | 22 | 33.38 | 92                   | 38 | 7.4  | 5             | 0.27              |
| 183     | R. P. L. 82 ... ..       | 7.0        | ...          | 11                    | 26 | 38.94 | 3                    | 44 | 15.7 | 15            | 0.45              |
| 184     | R. P. L. 87 ... ..       | 8.0        | ...          | 11                    | 53 | 30.94 | 2                    | 21 | 15.1 | 4             | 0.90              |
| 185     | 8 Virginis π ... ..      | 4.4        | ...          | 11                    | 54 | 52.59 | 82                   | 44 | 0.1  | 10            | 0.27              |
| 186     | R. P. L. 97 ... ..       | 7.2        | ...          | 12                    | 37 | 34.31 | 5                    | 42 | 52.0 | 3             | 0.91              |
| 187     | R. P. L. 98 ... ..       | 6.6        | ...          | 12                    | 48 | 7.98  | 5                    | 56 | 45.1 | 2             | 0.92              |
| 188     | R. P. L. 99 ... ..       | 5.6        | ...          | 12                    | 48 | 16.20 | 5                    | 57 | 4.6  | 2             | 0.97              |
| 189     | 77 Ursæ Majoris ε ... .. | 1.8        | ...          | 12                    | 48 | 52.59 | 33                   | 24 | 17.7 | 5             | 0.26              |
| 190     | 43 Virginis δ ... ..     | 3.7        | ...          | 12                    | 49 | 42.64 | 85                   | 57 | 57.2 | 20            | 0.30              |
| 191     | 47 Virginis ε ... ..     | 3.0        | ...          | 12                    | 56 | 21.16 | 78                   | 24 | 42.2 | 30            | 0.32              |
| 192     | R. P. L. 100 ... ..      | 8.0        | ...          | 13                    | 0  | 26.77 | 3                    | 29 | 7.4  | 4             | 0.71              |
| 193     | 51 Virginis θ ... ..     | 4.4        | ...          | 13                    | 3  | 53.52 | 94                   | 54 | 43.8 | 11            | 0.35              |
| 194     | R. P. L. 101 ... ..      | 7.5        | ...          | 13                    | 7  | 6.31  | 1                    | 43 | 20.6 | 1             | 0.86              |
| 195     | 79 Virginis ζ ... ..     | 3.5        | ...          | 13                    | 28 | 44.08 | 89                   | 59 | 52.2 | 10            | 0.30              |
| 196     | 4 Bootis τ ... ..        | 4.5        | ...          | 13                    | 41 | 42.10 | 71                   | 57 | 31.2 | 10            | 0.28              |
| 197     | 85 Ursæ Majoris η ... .. | 2.0        | ...          | 13                    | 42 | 55.69 | 40                   | 6  | 6.4  | 10            | 0.35              |
| 198     | 8 Bootis η ... ..        | 2.9        | ...          | 13                    | 49 | 6.78  | 71                   | 0  | 56.9 | 10            | 0.32              |
| 199     | ... ..                   | 8.5        | 5            | 13                    | 50 | 24.51 | 142                  | 5  | 19.6 | 5             | 0.28              |
| 200     | R. P. L. 108 ... ..      | 7.8        | ...          | 14                    | 1  | 29.77 | 3                    | 40 | 55.6 | 1             | 0.99              |
| 201     | Taylor 6609 ... ..       | 7.2        | ...          | 14                    | 5  | 40.83 | 131                  | 5  | 32.7 | 5             | 0.33              |
| 202     | Stone 7816—2nd ... ..    | 6.5        | ...          | 14                    | 12 | 48.96 | 132                  | 31 | 13.2 | 5             | 0.33              |
| 203     | ... ..                   | 9.0        | ...          | 14                    | 13 | 8.18  | 151                  | 0  | 41.2 | 1             | 0.31              |
| 204     | Stone 7826 ... ..        | 6.9        | ...          | 14                    | 14 | 9.36  | 156                  | 6  | 31.8 | 2             | 0.30              |
| 205     | ... ..                   | 7.0        | 3            | 14                    | 21 | 19.61 | 150                  | 19 | 32.5 | 3             | 0.34              |
| 206     | ... ..                   | 8.9        | 5            | 14                    | 21 | 30.45 | 150                  | 17 | 33.2 | 5             | 0.33              |
| 207     | Stone 7897 ... ..        | 7.3        | ...          | 14                    | 23 | 7.93  | 129                  | 57 | 14.5 | 2             | 0.30              |
| 208     | Stone 7947 ... ..        | 7.1        | ...          | 14                    | 29 | 31.32 | 157                  | 41 | 41.6 | 2             | 0.30              |
| 209     | Taylor 6811 ... ..       | 7.8        | ...          | 14                    | 30 | 6.60  | 132                  | 36 | 5.4  | 5             | 0.32              |
| 210     | Stone 7969 ... ..        | 7.8        | ...          | 14                    | 32 | 17.10 | 129                  | 3  | 27.1 | 2             | 0.35              |

176.—Comparison star for Asia in 1883.  
 182.—Comparison star for Ariadne in 1883.  
 199.—Comparison star for Niobe in 1883.

177—178.—Comparison stars for Comet 1882, A.  
 188.—Groombridge 1940. 194.—Groombridge 2006.  
 200.—Groombridge 2099.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                          | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|--------------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                                | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 176     | Lalande 20205 ...              | + 3.1237            | - 0.0056           | ...            | + 18.155           | + 0.182            | ...            | ...        |
| 177     | Lalande 20521 ...              | + 2.9828            | + 0.0019           | ...            | + 18.542           | + 0.153            | ...            | ...        |
| 178     | Yarnall 4420 ...               | + 2.9681            | + 0.0027           | ...            | + 18.551           | + 0.157            | ...            | ...        |
| 179     | 58 Leonis $\delta$ ...         | + 3.1003            | - 0.0039           | - 0.002        | + 19.241           | + 0.120            | + 0.01         | 1526       |
| 180     | 70 Leonis $\theta$ ...         | + 3.1588            | - 0.0098           | - 0.006        | + 19.542           | + 0.096            | + 0.06         | 1548       |
| 181     | 84 Leonis $\tau$ ...           | + 3.0859            | - 0.0020           | - 0.001        | + 19.777           | + 0.066            | + 0.01         | 1570       |
| 182     | ... ..                         | + 3.0623            | + 0.0005           | ...            | + 19.786           | + 0.065            | ...            | ...        |
| 183     | R. P. L. 82 ...                | + 6.0399            | - 1.3276           | ...            | + 19.841           | + 0.119            | ...            | ...        |
| 184     | R. P. L. 87 ...                | + 3.9924            | - 1.1600           | ...            | + 20.046           | + 0.007            | ...            | ...        |
| 185     | 8 Virginis $\pi$ ...           | + 3.0761            | - 0.0023           | - 0.003        | + 20.048           | + 0.002            | + 0.02         | 1618       |
| 186     | R. P. L. 97 ...                | + 0.8920            | + 0.1284           | ...            | + 19.785           | - 0.030            | ...            | ...        |
| 187     | R. P. L. 98 ...                | + 0.3962            | + 0.2146           | - 0.017        | + 19.613           | - 0.020            | - 0.02         | 1730       |
| 188     | R. P. L. 99 ...                | + 0.3913            | + 0.2146           | - 0.020        | + 19.610           | - 0.020            | - 0.02         | 1731       |
| 189     | 77 Ursæ Majoris $\epsilon$ ... | + 2.6433            | - 0.0273           | + 0.012        | + 19.599           | - 0.089            | + 0.02         | 1722       |
| 190     | 43 Virginis $\delta$ ...       | + 3.0521            | + 0.0025           | - 0.034        | + 19.585           | - 0.103            | + 0.05         | 1723       |
| 191     | 47 Virginis $\epsilon$ ...     | + 3.0056            | - 0.0007           | - 0.019        | + 19.451           | - 0.114            | - 0.03         | 1735       |
| 192     | R. P. L. 100 ...               | - 2.6502            | + 1.2981           | ...            | + 19.360           | + 0.093            | ...            | ...        |
| 193     | 51 Virginis $\theta$ ...       | + 3.1040            | + 0.0078           | - 0.004        | + 19.279           | - 0.132            | + 0.04         | 1747       |
| 194     | R. P. L. 101 ...               | - 9.7598            | + 7.0045           | ...            | + 19.200           | + 0.403            | ...            | ...        |
| 195     | 99 Virginis $\zeta$ ...        | + 3.0723            | + 0.0064           | - 0.021        | + 18.570           | - 0.176            | - 0.06         | 1789       |
| 196     | 4 Bootis $\tau$ ...            | + 2.8854            | - 0.0007           | - 0.035        | + 18.111           | - 0.188            | - 0.04         | 1810       |
| 197     | 85 Ursæ Majoris $\eta$ ...     | + 2.3331            | - 0.0103           | - 0.012        | + 18.066           | - 0.159            | + 0.01         | 1815       |
| 198     | 8 Bootis $\eta$ ...            | + 2.8616            | - 0.0006           | - 0.005        | + 17.823           | - 0.199            | + 0.34         | 1821       |
| 199     | ... ..                         | + 3.8675            | + 0.0584           | ...            | + 17.773           | - 0.268            | ...            | ...        |
| 200     | R. P. L. 108 ...               | - 7.4318            | + 2.3498           | ...            | + 17.301           | + 0.541            | ...            | ...        |
| 201     | Taylor 6609 ...                | + 3.6801            | + 0.0383           | ...            | + 17.113           | - 0.285            | ...            | ...        |
| 202     | Stone 7816 ...                 | + 3.7437            | + 0.0404           | ...            | + 16.780           | - 0.305            | ...            | ...        |
| 203     | ... ..                         | + 4.3965            | + 0.0910           | ...            | + 16.765           | - 0.357            | ...            | ...        |
| 204     | Stone 7826 ...                 | + 4.7398            | + 0.1241           | ...            | + 16.715           | - 0.387            | ...            | ...        |
| 205     | ... ..                         | + 4.4292            | + 0.0878           | ...            | + 16.359           | - 0.379            | ...            | ...        |
| 206     | ... ..                         | + 4.4289            | + 0.0877           | ...            | + 16.351           | - 0.379            | ...            | ...        |
| 207     | Stone 7897 ...                 | + 3.7271            | + 0.0367           | ...            | + 16.268           | - 0.324            | ...            | ...        |
| 208     | Stone 7947 ...                 | + 5.0506            | + 0.1394           | ...            | + 15.936           | - 0.452            | ...            | ...        |
| 209     | Taylor 6811 ...                | + 3.8212            | + 0.0403           | ...            | + 15.903           | - 0.345            | ...            | ...        |
| 210     | Stone 7969 ..                  | + 3.7413            | + 0.0852           | ...            | + 15.788           | - 0.342            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.                            | Magnitude. | Estimations. | Mean Right Ascension. |           |           | Mean Polar Distance. |          |          | Observations. | Fraction of Year. |
|---------|----------------------------------|------------|--------------|-----------------------|-----------|-----------|----------------------|----------|----------|---------------|-------------------|
|         |                                  |            |              | <i>h.</i>             | <i>m.</i> | <i>s.</i> | <i>°</i>             | <i>'</i> | <i>"</i> |               |                   |
| 211     | ... ..                           | 8.5        | ...          | 14                    | 35        | 28.51     | 151                  | 25       | 42.9     | 1             | 0.34              |
| 212     | ... ..                           | 8.5        | ...          | 14                    | 38        | 46.84     | 128                  | 6        | 32.4     | 1             | 0.30              |
| 213     | Taylor 6891                      | 6.8        | ...          | 14                    | 39        | 56.08     | 133                  | 3        | 50.8     | 5             | 0.32              |
| 214     | ... ..                           | 7.5        | 5            | 14                    | 42        | 48.04     | 126                  | 54       | 24.4     | 5             | 0.35              |
| 215     | Taylor 6925                      | 5.7        | ...          | 14                    | 45        | 30.72     | 127                  | 19       | 14.0     | 5             | 0.33              |
| 216     | ... ..                           | 7.5        | 2            | 14                    | 47        | 5.48      | 131                  | 33       | 52.9     | 3             | 0.30              |
| 217     | ... ..                           | 7.5        | 3            | 14                    | 48        | 10.26     | 126                  | 41       | 4.9      | 4             | 0.32              |
| 218     | 7 Ursæ Minoris $\beta$ , Var. 1. | Var.       | ...          | 14                    | 51        | 3.41      | 15                   | 21       | 57.8     | 5             | 0.36              |
| 219     | Stone 8165                       | 7.8        | ...          | 14                    | 52        | 35.22     | 129                  | 19       | 45.5     | 5             | 0.34              |
| 220     | R. P. L. 110                     | 7.0        | ...          | 14                    | 52        | 53.59     | 3                    | 34       | 5.8      | 4             | 0.11              |
| 221     | ... ..                           | 8.0        | 1            | 14                    | 53        | 29.62     | 131                  | 49       | 19.1     | 3             | 0.30              |
| 222     | Taylor 7001                      | 6.7        | ...          | 14                    | 56        | 15.52     | 125                  | 28       | 54.2     | 5             | 0.32              |
| 223     | Taylor 7027                      | 6.8        | ...          | 14                    | 58        | 53.17     | 125                  | 48       | 33.1     | 1             | 0.30              |
| 224     | 27 Libræ $\beta$                 | 2.7        | ...          | 15                    | 10        | 42.68     | 98                   | 57       | 0.6      | 10            | 0.34              |
| 225     | R. P. L. 114                     | 6.9        | ...          | 15                    | 15        | 19.89     | 2                    | 19       | 8.7      | 3             | 0.04              |
| 226     | ... ..                           | 9.0        | 2            | 15                    | 37        | 31.10     | 155                  | 8        | 45.7     | 2             | 0.40              |
| 227     | 24 Serpentis $\alpha$            | 2.7        | ...          | 15                    | 38        | 30.32     | 83                   | 12       | 18.8     | 14            | 0.39              |
| 228     | 37 Serpentis $\epsilon$          | 3.7        | ...          | 15                    | 44        | 59.03     | 85                   | 10       | 7.7      | 10            | 0.39              |
| 229     | ... ..                           | 8.3        | ...          | 15                    | 46        | 27.90     | 130                  | 46       | 30.0     | 4             | 0.45              |
| 230     | R. P. L. 116                     | 7.0        | ...          | 16                    | 0         | 47.47     | 4                    | 21       | 54.1     | 11            | 0.19              |
| 231     | R. P. L. 117                     | 7.2        | ...          | 16                    | 3         | 14.69     | 6                    | 2        | 42.6     | 13            | 0.11              |
| 232     | ... ..                           | 7.8        | ...          | 16                    | 5         | 1.55      | 133                  | 46       | 12.3     | 2             | 0.36              |
| 233     | ... ..                           | 8.5        | 2            | 16                    | 6         | 5.44      | 125                  | 29       | 45.0     | 2             | 0.86              |
| 234     | Stone 8832                       | 8.0        | ...          | 16                    | 7         | 57.02     | 135                  | 5        | 30.7     | 2             | 0.34              |
| 235     | ... ..                           | 8.0        | 4            | 16                    | 8         | 14.33     | 135                  | 14       | 55.6     | 4             | 0.38              |
| 236     | Stone 8853                       | 7.6        | ...          | 16                    | 10        | 37.47     | 124                  | 37       | 29.3     | 3             | 0.35              |
| 237     | 19 Ursæ Minoris                  | 5.5        | ...          | 16                    | 14        | 10.02     | 13                   | 49       | 42.3     | 2             | 0.37              |
| 238     | Stone 8892                       | 6.6        | ...          | 16                    | 14        | 44.60     | 152                  | 51       | 1.4      | 4             | 0.35              |
| 239     | 20 Herculis $\gamma$             | 3.8        | ...          | 16                    | 16        | 45.49     | 70                   | 34       | 15.3     | 10            | 0.41              |
| 240     | ... ..                           | 8.5        | 4            | 16                    | 18        | 6.14      | 130                  | 57       | 19.4     | 4             | 0.37              |
| 241     | 21 Ursæ Minoris $\eta$           | 5.0        | ...          | 16                    | 20        | 56.10     | 13                   | 58       | 30.9     | 4             | 0.36              |
| 242     | ... ..                           | 8.0        | 3            | 16                    | 23        | 32.67     | 136                  | 25       | 16.7     | 3             | 0.36              |
| 243     | ... ..                           | 7.5        | 1            | 16                    | 23        | 38.69     | 128                  | 44       | 44.1     | 1             | 0.34              |
| 244     | 27 Herculis $\beta$              | 2.8        | ...          | 16                    | 25        | 11.32     | 68                   | 15       | 19.0     | 1             | 0.39              |
| 245     | Stone 8976                       | 7.3        | ...          | 16                    | 25        | 25.32     | 123                  | 16       | 49.6     | 3             | 0.37              |

225.—Groombridge 2283.  
230.—Carrington 2423.

229.—Comparison star for Phædra in 1881.  
231.—Carrington 2424.



## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                   | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|-------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                         | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 211     | ...                     | + 4.6129            | + 0.0930           | ...            | + 15.614           | - 0.427            | ...            | ...        |
| 212     | ...                     | + 3.7422            | + 0.0339           | ...            | + 15.431           | - 0.354            | ...            | ...        |
| 213     | Taylor 6391             | + 3.8752            | + 0.0406           | ...            | + 15.366           | - 0.369            | ...            | ...        |
| 214     | ...                     | + 3.7271            | + 0.0323           | ...            | + 15.203           | - 0.360            | ...            | ...        |
| 215     | Taylor 6925             | + 3.7461            | + 0.0326           | ...            | + 15.048           | - 0.366            | ...            | ...        |
| 216     | ...                     | + 3.8621            | + 0.0379           | ...            | + 14.957           | - 0.380            | ...            | ...        |
| 217     | ...                     | + 3.7393            | + 0.0319           | ...            | + 14.893           | - 0.370            | ...            | ...        |
| 218     | 7 Ursæ Minoris $\beta$  | - 0.2306            | + 0.1022           | - 0.008        | + 14.722           | + 0.018            | + 0.01         | 1917       |
| 219     | Stone 8165              | + 3.8214            | + 0.0346           | ...            | + 14.631           | - 0.386            | ...            | ...        |
| 220     | R. P. L. 110            | - 11.6097           | + 3.0017           | ...            | + 14.613           | + 1.154            | ...            | ...        |
| 221     | ...                     | + 3.8838            | + 0.0378           | ...            | + 14.576           | - 0.395            | ...            | ...        |
| 222     | Taylor 7001             | + 3.7351            | + 0.0300           | ...            | + 14.410           | - 0.384            | ...            | ...        |
| 223     | Taylor 7027             | + 3.7510            | + 0.0302           | ...            | + 14.249           | - 0.390            | ...            | ...        |
| 224     | 27 Libræ $\beta$        | + 3.2280            | + 0.0117           | - 0.008        | + 13.502           | - 0.353            | + 0.02         | 1984       |
| 225     | R. P. L. 114            | - 21.7776           | + 7.3882           | ...            | + 13.200           | + 2.385            | ...            | ...        |
| 226     | ...                     | + 5.4187            | + 0.1022           | ...            | + 11.679           | - 0.645            | ...            | ...        |
| 227     | 24 Serpentis $\alpha$   | + 2.9425            | + 0.0062           | + 0.008        | + 11.610           | - 0.354            | - 0.06         | 1990       |
| 228     | 37 Serpentis $\epsilon$ | + 2.9784            | + 0.0066           | + 0.007        | + 11.143           | - 0.365            | - 0.06         | 2005       |
| 229     | ...                     | + 4.0350            | + 0.0306           | ...            | + 11.084           | - 0.495            | ...            | ...        |
| 230     | R. P. L. 116            | - 12.1258           | + 1.7439           | ...            | + 9.967            | + 1.530            | ...            | ...        |
| 231     | R. P. L. 117            | - 7.9486            | + 0.8614           | ...            | + 9.780            | + 1.008            | ...            | ...        |
| 232     | ...                     | + 4.1953            | + 0.0307           | ...            | + 9.644            | - 0.539            | ...            | ...        |
| 233     | ...                     | + 3.9105            | + 0.0227           | ...            | + 9.562            | - 0.505            | ...            | ...        |
| 234     | Stone 8832              | + 4.2564            | + 0.0318           | ...            | + 9.419            | - 0.551            | ...            | ...        |
| 235     | ...                     | + 4.2637            | + 0.0319           | ...            | + 9.396            | - 0.552            | ...            | ...        |
| 236     | Stone 8853              | + 3.8924            | + 0.0214           | ...            | + 9.211            | - 0.507            | ...            | ...        |
| 237     | 19 Ursæ Minoris         | - 1.7925            | + 0.1266           | - 0.005        | + 8.934            | + 0.231            | - 0.00         | 2096       |
| 238     | Stone 8892              | + 5.4092            | + 0.0715           | ...            | + 8.888            | - 0.709            | ...            | ...        |
| 239     | 20 Herculis $\gamma$    | + 2.6479            | + 0.0038           | - 0.005        | + 8.732            | - 0.351            | - 0.05         | 2084       |
| 240     | ...                     | + 4.1198            | + 0.0254           | ...            | + 8.627            | - 0.545            | ...            | ...        |
| 241     | 21 Ursæ Minoris $\eta$  | - 1.8051            | + 0.1185           | - 0.019        | + 8.401            | + 0.237            | - 0.25         | 2111       |
| 242     | ...                     | + 4.3548            | + 0.0299           | ...            | + 8.192            | - 0.583            | ...            | ...        |
| 243     | ...                     | + 4.0517            | + 0.0225           | ...            | + 8.187            | - 0.543            | ...            | ...        |
| 244     | 27 Herculis $\beta$     | + 2.5841            | + 0.0037           | - 0.009        | + 8.061            | - 0.348            | + 0.02         | 2100       |
| 245     | Stone 8976              | + 3.8762            | + 0.0185           | ...            | + 8.041            | - 0.520            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.                            | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|----------------------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                                  |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 246     | ... ..                           | 9.5        | 3            | 16                    | 29 | 2.63  | 125                  | 32 | 36.0 | 3             | 0.38              |
| 247     | $\eta^1$ Trianguli Australis ... | 6.4        | ...          | 16                    | 29 | 19.56 | 158                  | 3  | 36.1 | 2             | 0.36              |
| 248     | Stone 9014 ...                   | 7.3        | ...          | 16                    | 30 | 33.44 | 128                  | 54 | 48.0 | 1             | 0.34              |
| 249     | 13 Ophiuchi $\zeta$ ...          | 2.8        | ...          | 16                    | 30 | 43.00 | 100                  | 19 | 44.0 | 20            | 0.42              |
| 250     | Lacaille 6881 ...                | 6.6        | ...          | 16                    | 31 | 31.80 | 157                  | 12 | 5.0  | 2             | 0.35              |
| 251     | ... ..                           | 7.5        | 5            | 16                    | 36 | 1.15  | 128                  | 6  | 36.3 | 5             | 0.37              |
| 252     | ... ..                           | 8.0        | 2            | 16                    | 38 | 51.77 | 125                  | 34 | 33.7 | 2             | 0.35              |
| 253     | ... ..                           | 9.5        | 4            | 16                    | 41 | 15.34 | 126                  | 18 | 21.3 | 4             | 0.40              |
| 254     | ... ..                           | 7.5        | ...          | 16                    | 41 | 37.68 | 132                  | 53 | 52.9 | 1             | 0.35              |
| 255     | ... ..                           | 8.0        | 3            | 16                    | 42 | 29.49 | 127                  | 50 | 30.9 | 3             | 0.36              |
| 256     | ... ..                           | 7.5        | 5            | 16                    | 44 | 2.02  | 129                  | 2  | 39.4 | 5             | 0.39              |
| 257     | Taylor 7793 ...                  | 7.0        | ...          | 16                    | 44 | 42.16 | 127                  | 23 | 47.9 | 1             | 0.35              |
| 258     | ... ..                           | 9.5        | 2            | 16                    | 49 | 0.76  | 132                  | 12 | 58.1 | 2             | 0.37              |
| 259     | ... ..                           | 8.5        | 4            | 16                    | 50 | 20.18 | 128                  | 26 | 17.6 | 4             | 0.35              |
| 260     | ... ..                           | 9.0        | ...          | 16                    | 56 | 52.92 | 129                  | 52 | 39.8 | 5             | 0.37              |
| 261     | 22 Ursæ Minoris $\epsilon$ ...   | 4.5        | ...          | 16                    | 57 | 59.87 | 7                    | 46 | 16.9 | 2             | 0.41              |
| 262     | ... ..                           | 9.0        | 1            | 16                    | 59 | 23.33 | 132                  | 35 | 35.5 | 1             | 0.34              |
| 263     | R. P. L. 118 ...                 | 8.0        | ...          | 17                    | 1  | 59.57 | 5                    | 8  | 35.3 | 15            | 0.24              |
| 264     | Stone 9338 ...                   | 7.3        | ...          | 17                    | 2  | 48.32 | 131                  | 17 | 23.8 | 5             | 0.39              |
| 265     | ... ..                           | 7.5        | 5            | 17                    | 2  | 50.92 | 131                  | 32 | 56.1 | 5             | 0.40              |
| 266     | 35 Ophiuchi $\eta$ ...           | 2.6        | ...          | 17                    | 3  | 40.07 | 105                  | 34 | 43.4 | 20            | 0.52              |
| 267     | ... ..                           | 8.5        | ...          | 17                    | 6  | 15.90 | 131                  | 19 | 56.9 | 1             | 0.36              |
| 268     | Stone 9389 ...                   | 8.0        | ...          | 17                    | 8  | 59.80 | 129                  | 17 | 48.0 | 2             | 0.37              |
| 269     | ... ..                           | 8.2        | 5            | 17                    | 9  | 34.27 | 128                  | 31 | 54.9 | 5             | 0.61              |
| 270     | ... ..                           | 9.0        | 5            | 17                    | 10 | 16.68 | 123                  | 20 | 55.3 | 5             | 0.50              |
| 271     | ... ..                           | 8.0        | 4            | 17                    | 10 | 47.19 | 125                  | 57 | 32.2 | 4             | 0.57              |
| 272     | Stone 9423 ...                   | 7.0        | ...          | 17                    | 12 | 18.41 | 155                  | 35 | 2.3  | 1             | 0.38              |
| 273     | ... ..                           | 9.0        | 4            | 17                    | 13 | 18.04 | 129                  | 22 | 49.0 | 4             | 0.44              |
| 274     | ... ..                           | 7.4        | 4            | 17                    | 14 | 38.76 | 131                  | 58 | 17.3 | 4             | 0.39              |
| 275     | Stone 9448—2nd ...               | 7.3        | ...          | 17                    | 14 | 41.28 | 128                  | 5  | 8.6  | 4             | 0.38              |
| 276     | ... ..                           | 9.3        | ...          | 17                    | 15 | 31.03 | 145                  | 52 | 52.1 | 5             | 0.60              |
| 277     | ... ..                           | 9.1        | 5            | 17                    | 17 | 18.77 | 138                  | 28 | 55.2 | 5             | 0.47              |
| 278     | Stone 9479 ...                   | 7.7        | ...          | 17                    | 17 | 27.63 | 138                  | 30 | 22.0 | 5             | 0.51              |
| 279     | 49 Ophiuchi $\sigma$ ...         | 4.4        | ...          | 17                    | 20 | 42.58 | 85                   | 45 | 25.1 | 10            | 0.41              |
| 280     | ... ..                           | 8.0        | 5            | 17                    | 21 | 46.19 | 127                  | 10 | 45.3 | 5             | 0.58              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                        | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|------------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                              | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 246     | ...                          | + 3.9532            | + 0.0192           | ...            | + 7.751            | - 0.534            | ...            | ...        |
| 247     | $\eta^1$ Trianguli Australis | + 6.1349            | + 0.0913           | ...            | + 7.729            | - 0.827            | ...            | ...        |
| 248     | Stone 9014                   | + 4.0705            | + 0.0213           | ...            | + 7.629            | - 0.551            | ...            | ...        |
| 249     | 13 Ophiuchi $\zeta$          | + 3.2977            | + 0.0087           | - 0.001        | + 7.616            | - 0.447            | - 0.04         | 2109       |
| 250     | Lacaille 6881                | + 6.0189            | + 0.0837           | ...            | + 7.550            | - 0.814            | ...            | ...        |
| 251     | ...                          | + 4.0514            | + 0.0196           | ...            | + 7.186            | - 0.554            | ...            | ...        |
| 252     | ...                          | + 3.9693            | + 0.0175           | ...            | + 6.952            | - 0.547            | ...            | ...        |
| 253     | ...                          | + 3.9972            | + 0.0176           | ...            | + 6.755            | - 0.551            | ...            | ...        |
| 254     | ...                          | + 4.2427            | + 0.0220           | ...            | + 6.724            | - 0.585            | ...            | ...        |
| 255     | ...                          | + 4.0521            | + 0.0182           | ...            | + 6.653            | - 0.560            | ...            | ...        |
| 256     | ...                          | + 4.0977            | + 0.0188           | ...            | + 6.527            | - 0.567            | ...            | ...        |
| 257     | Taylor 7793                  | + 4.0398            | + 0.0175           | ...            | + 6.470            | - 0.560            | ...            | ...        |
| 258     | ...                          | + 4.2275            | + 0.0197           | ...            | + 6.113            | - 0.590            | ...            | ...        |
| 259     | ...                          | + 4.0848            | + 0.0171           | ...            | + 6.002            | - 0.571            | ...            | ...        |
| 260     | ...                          | + 4.1472            | + 0.0164           | ...            | + 5.453            | - 0.583            | ...            | ...        |
| 261     | 22 Ursæ Minoris $\epsilon$   | - 6.3674            | + 0.3104           | + 0.009        | + 5.359            | + 0.893            | + 0.00         | 2201       |
| 262     | ...                          | + 4.2587            | + 0.0175           | ...            | + 5.242            | - 0.601            | ...            | ...        |
| 263     | R. P. L. 118                 | - 11.3079           | + 0.7060           | ...            | + 5.022            | + 1.594            | ...            | ...        |
| 264     | Stone 9338                   | + 4.2101            | + 0.0159           | ...            | + 4.952            | - 0.597            | ...            | ...        |
| 265     | ...                          | + 4.2205            | + 0.0160           | ...            | + 4.949            | - 0.598            | ...            | ...        |
| 266     | 35 Ophiuchi $\eta$           | + 3.4339            | + 0.0073           | ...            | + 4.880            | - 0.487            | ...            | ...        |
| 267     | ...                          | + 4.2160            | + 0.0160           | ...            | + 4.659            | - 0.600            | ...            | ...        |
| 268     | Stone 9389                   | + 4.1394            | + 0.0134           | ...            | + 4.426            | - 0.590            | ...            | ...        |
| 269     | ...                          | + 4.1112            | + 0.0131           | ...            | + 4.377            | - 0.587            | ...            | ...        |
| 270     | ...                          | + 3.9316            | + 0.0110           | ...            | + 4.317            | - 0.562            | ...            | ...        |
| 271     | ...                          | + 4.0200            | + 0.0123           | ...            | + 4.269            | - 0.623            | ...            | ...        |
| 272     | Stone 9428                   | + 5.9538            | + 0.0431           | ...            | + 4.143            | - 0.851            | ...            | ...        |
| 273     | ...                          | + 4.1470            | + 0.0126           | ...            | + 4.057            | - 0.594            | ...            | ...        |
| 274     | ...                          | + 4.2515            | + 0.0134           | ...            | + 3.942            | - 0.609            | ...            | ...        |
| 275     | Stone 9448                   | + 4.0996            | + 0.0118           | ...            | + 3.938            | - 0.588            | ...            | ...        |
| 276     | ...                          | + 5.0084            | + 0.0231           | ...            | + 3.868            | - 0.718            | ...            | ...        |
| 277     | ...                          | + 4.5563            | + 0.0162           | ...            | + 3.714            | - 0.654            | ...            | ...        |
| 278     | Stone 9479                   | + 4.5578            | + 0.0161           | ...            | + 3.701            | - 0.655            | ...            | ...        |
| 279     | 49 Ophiuchi $\sigma$         | + 2.9746            | + 0.0037           | - 0.002        | + 3.421            | - 0.428            | - 0.02         | 2206       |
| 280     | ...                          | + 4.0795            | + 0.0100           | ...            | + 3.330            | - 0.586            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.               | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|---------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                     |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 281     | $\alpha$ Aræ        | 2.9        | ...          | 17                    | 22 | 47.74 | 139                  | 46 | 53.0 | 5             | 0.57              |
| 282     | 34 Scorpil v        | 2.8        | ...          | 17                    | 22 | 48.30 | 127                  | 12 | 3.8  | 2             | 0.62              |
| 283     | Stone 9566          | 7.3        | ...          | 17                    | 26 | 10.82 | 130                  | 26 | 47.9 | 5             | 0.51              |
| 284     | ...                 | 9.0        | ...          | 17                    | 28 | 7.56  | 134                  | 29 | 10.4 | 1             | 0.40              |
| 285     | Stone 9578          | 7.8        | ...          | 17                    | 28 | 9.80  | 146                  | 44 | 38.7 | 3             | 0.63              |
| 286     | Brisbane 6132       | 9.0        | ...          | 17                    | 28 | 38.23 | 135                  | 4  | 47.9 | 1             | 0.38              |
| 287     | $\theta$ Scorpil    | 2.1        | ...          | 17                    | 28 | 54.63 | 132                  | 55 | 16.9 | 5             | 0.44              |
| 288     | ...                 | 8.0        | 5            | 17                    | 29 | 8.92  | 128                  | 42 | 31.2 | 5             | 0.58              |
| 289     | ...                 | 7.0        | 5            | 17                    | 31 | 44.58 | 128                  | 17 | 57.8 | 5             | 0.39              |
| 290     | R. P. L. 120        | 7.3        | ...          | 17                    | 31 | 46.62 | 5                    | 17 | 25.9 | 15            | 0.21              |
| 291     | ...                 | 7.0        | 5            | 17                    | 32 | 56.17 | 180                  | 1  | 35.8 | 5             | 0.52              |
| 292     | Brisbane 6160       | 8.0        | 1            | 17                    | 33 | 20.24 | 134                  | 43 | 12.5 | 1             | 0.38              |
| 293     | ...                 | 7.5        | 5            | 17                    | 35 | 28.25 | 144                  | 4  | 40.2 | 5             | 0.61              |
| 294     | 60 Ophiuchi $\beta$ | 2.9        | ...          | 17                    | 37 | 41.47 | 85                   | 22 | 57.4 | 20            | 0.48              |
| 295     | ...                 | 8.5        | 3            | 17                    | 39 | 34.72 | 128                  | 18 | 48.5 | 4             | 0.51              |
| 296     | ...                 | 8.5        | 5            | 17                    | 40 | 23.34 | 128                  | 18 | 53.4 | 5             | 0.58              |
| 297     | ...                 | 8.5        | ...          | 17                    | 42 | 51.28 | 143                  | 23 | 17.8 | 2             | 0.65              |
| 298     | ...                 | 7.5        | 5            | 17                    | 44 | 10.67 | 129                  | 6  | 59.0 | 5             | 0.39              |
| 299     | Taylor 8243         | 6.8        | ...          | 17                    | 44 | 30.74 | 131                  | 57 | 29.8 | 5             | 0.43              |
| 300     | ...                 | 9.5        | 4            | 17                    | 45 | 11.77 | 131                  | 58 | 2.9  | 5             | 0.44              |
| 301     | ...                 | 9.0        | 5            | 17                    | 45 | 39.91 | 129                  | 13 | 59.3 | 5             | 0.59              |
| 302     | ...                 | 8.0        | 3            | 17                    | 50 | 28.60 | 151                  | 21 | 13.9 | 3             | 0.38              |
| 303     | ...                 | 7.8        | 5            | 17                    | 51 | 51.27 | 129                  | 3  | 3.6  | 5             | 0.48              |
| 304     | ...                 | 7.0        | 5            | 17                    | 52 | 15.75 | 127                  | 23 | 51.0 | 5             | 0.40              |
| 305     | ...                 | 9.0        | 4            | 17                    | 52 | 34.29 | 137                  | 2  | 29.2 | 5             | 0.43              |
| 306     | O. A. S. 17446      | 8.0        | 5            | 17                    | 52 | 45.56 | 119                  | 52 | 58.5 | 5             | 0.61              |
| 307     | O. A. S. 17452      | 7.8        | ...          | 17                    | 52 | 58.46 | 119                  | 48 | 53.8 | 5             | 0.57              |
| 308     | ...                 | 8.9        | 1            | 17                    | 56 | 36.54 | 128                  | 56 | 59.8 | 1             | 0.38              |
| 309     | Stone 9840          | 7.5        | ...          | 17                    | 57 | 33.63 | 127                  | 28 | 30.9 | 5             | 0.47              |
| 310     | ...                 | 7.8        | ...          | 17                    | 58 | 5.33  | 127                  | 26 | 20.2 | 5             | 0.44              |
| 311     | Stone 9849          | 7.8        | ...          | 17                    | 58 | 13.24 | 127                  | 30 | 7.2  | 5             | 0.52              |
| 312     | ...                 | 8.5        | ...          | 17                    | 59 | 22.57 | 128                  | 13 | 8.7  | 5             | 0.39              |
| 313     | ...                 | 8.0        | 5            | 17                    | 59 | 31.69 | 129                  | 31 | 42.9 | 5             | 0.61              |
| 314     | ...                 | 7.5        | 4            | 18                    | 3  | 22.12 | 128                  | 12 | 57.8 | 5             | 0.64              |
| 315     | ...                 | 9.7        | 1            | 18                    | 5  | 50.73 | 133                  | 7  | 10.8 | 1             | 0.45              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                   | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|-------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                         | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 281     | $\alpha$ Aræ ...        | + 4.6325            | + 0.0149           | - 0.005        | + 3.241            | - 0.667            | + 0.09         | Stone      |
| 282     | 34 Scorpii $\nu$ ...    | + 4.0738            | + 0.0097           | - 0.004        | + 3.240            | - 0.587            | + 0.06         | 2205       |
| 283     | Stone 9566 ...          | + 4.1997            | + 0.0099           | ...            | + 2.949            | - 0.606            | ...            | ...        |
| 284     | ... ..                  | + 4.3729            | + 0.0108           | ...            | + 2.779            | - 0.632            | ...            | ...        |
| 285     | Stone 9578 ...          | + 5.0914            | + 0.0176           | ...            | + 2.777            | - 0.736            | ...            | ...        |
| 286     | Brisbane 6132 ...       | + 4.4005            | + 0.0113           | ...            | + 2.735            | - 0.650            | ...            | ...        |
| 287     | $\theta$ Scorpii ...    | + 4.3042            | + 0.0100           | + 0.001        | + 2.713            | - 0.623            | + 0.02         | Stone      |
| 288     | ... ..                  | + 4.1340            | + 0.0087           | ...            | + 2.691            | - 0.598            | ...            | ...        |
| 289     | ... ..                  | + 4.1201            | + 0.0081           | ...            | + 2.466            | - 0.597            | ...            | ...        |
| 290     | R. P. L. 120 ...        | - 11.2557           | + 0.3396           | ...            | + 2.463            | + 1.628            | ...            | ...        |
| 291     | ... ..                  | + 4.1874            | + 0.0081           | ...            | + 2.362            | - 0.607            | ...            | ...        |
| 292     | Brisbane 6160 ...       | + 4.3872            | + 0.0093           | ...            | + 2.327            | - 0.636            | ...            | ...        |
| 293     | ... ..                  | + 4.9072            | + 0.0124           | ...            | + 2.142            | - 0.712            | ...            | ...        |
| 294     | 60 Ophiuchi $\beta$ ... | + 2.9649            | + 0.0030           | - 0.005        | + 1.949            | - 0.431            | - 0.17         | 2229       |
| 295     | ... ..                  | + 4.1245            | + 0.0062           | ...            | + 1.785            | - 0.600            | ...            | ...        |
| 296     | ... ..                  | + 4.1250            | + 0.0060           | ...            | + 1.714            | - 0.597            | ...            | ...        |
| 297     | ... ..                  | + 4.8722            | + 0.0089           | ...            | + 1.499            | - 0.709            | ...            | ...        |
| 298     | ... ..                  | + 4.1569            | + 0.0062           | ...            | + 1.384            | - 0.605            | ...            | ...        |
| 299     | Taylor 8243 ...         | + 4.2715            | + 0.0066           | ...            | + 1.354            | - 0.622            | ...            | ...        |
| 300     | ... ..                  | + 4.2722            | + 0.0055           | ...            | + 1.294            | - 0.622            | ...            | ...        |
| 301     | ... ..                  | + 4.1619            | + 0.0049           | ...            | + 1.253            | - 0.607            | ...            | ...        |
| 302     | ... ..                  | + 5.5175            | + 0.0077           | ...            | + 0.833            | - 0.804            | ...            | ...        |
| 303     | ... ..                  | + 4.1563            | + 0.0034           | ...            | + 0.713            | - 0.606            | ...            | ...        |
| 304     | ... ..                  | + 4.0939            | + 0.0033           | ...            | + 0.677            | - 0.597            | ...            | ...        |
| 305     | ... ..                  | + 4.5073            | + 0.0039           | ...            | + 0.651            | - 0.657            | ...            | ...        |
| 306     | O. A. S. 17446 ...      | + 3.8401            | + 0.0029           | ...            | + 0.633            | - 0.560            | ...            | ...        |
| 307     | O. A. S. 17452 ...      | + 3.8381            | + 0.0029           | ...            | + 0.614            | - 0.559            | ...            | ...        |
| 308     | ... ..                  | + 4.1529            | + 0.0024           | ...            | + 0.297            | - 0.605            | ...            | ...        |
| 309     | Stone 9840 ...          | + 4.0973            | + 0.0022           | ...            | + 0.213            | - 0.598            | ...            | ...        |
| 310     | ... ..                  | + 4.0959            | + 0.0020           | ...            | + 0.167            | - 0.597            | ...            | ...        |
| 311     | Stone 9849 ...          | + 4.0983            | + 0.0020           | ...            | + 0.156            | - 0.597            | ...            | ...        |
| 312     | ... ..                  | + 4.1250            | + 0.0017           | ...            | + 0.054            | - 0.602            | ...            | ...        |
| 313     | ... ..                  | + 4.1754            | + 0.0017           | ...            | + 0.041            | - 0.609            | ...            | ...        |
| 314     | ... ..                  | + 4.1249            | + 0.0009           | ...            | - 0.295            | - 0.602            | ...            | ...        |
| 315     | ... ..                  | + 4.3239            | - 0.0001           | ...            | - 0.511            | - 0.630            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.                  | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of year. |
|---------|------------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                        |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 316     | Stone 9922 ... ..      | 8.5        | ...          | 18                    | 5  | 52.89 | 133                  | 10 | 51.9 | 7             | 0.45              |
| 317     | Stone 9924 ... ..      | 7.8        | ...          | 18                    | 6  | 0.80  | 131                  | 56 | 16.0 | 5             | 0.41              |
| 318     | ... ..                 | 7.8        | ...          | 18                    | 6  | 41.70 | 126                  | 55 | 45.0 | 5             | 0.59              |
| 319     | ... ..                 | 8.8        | 4            | 18                    | 9  | 4.95  | 131                  | 16 | 17.5 | 4             | 0.52              |
| 320     | 23 Ursæ Minoris δ ...  | 4.3        | ...          | 18                    | 10 | 3.20  | 3                    | 23 | 23.5 | 2             | 0.52              |
| 321     | ... ..                 | 8.0        | 1            | 18                    | 10 | 21.14 | 126                  | 23 | 38.6 | 1             | 0.39              |
| 322     | ... ..                 | 8.0        | 4            | 18                    | 13 | 25.62 | 136                  | 5  | 3.0  | 5             | 0.41              |
| 323     | ... ..                 | 8.8        | ...          | 18                    | 14 | 12.57 | 127                  | 48 | 38.4 | 1             | 0.40              |
| 324     | Taylor 8452 ... ..     | 5.6        | ...          | 18                    | 14 | 14.53 | 128                  | 42 | 29.1 | 5             | 0.67              |
| 325     | 58 Serpentis γ ... ..  | 3.4        | ...          | 18                    | 15 | 15.31 | 92                   | 55 | 41.4 | 20            | 0.55              |
| 326     | ... ..                 | 7.0        | 1            | 18                    | 15 | 22.31 | 128                  | 47 | 29.8 | 4             | 0.68              |
| 327     | ... ..                 | 8.0        | ...          | 18                    | 15 | 42.39 | 138                  | 50 | 53.2 | 4             | 0.39              |
| 328     | ... ..                 | 8.0        | 1            | 18                    | 16 | 32.65 | 127                  | 17 | 6.3  | 1             | 0.38              |
| 329     | 22 Sagittarii λ ... .. | 3.1        | ...          | 18                    | 20 | 44.98 | 115                  | 29 | 6.0  | 20            | 0.58              |
| 330     | ... ..                 | 8.5        | ...          | 18                    | 22 | 46.04 | 129                  | 33 | 50.7 | 5             | 0.40              |
| 331     | ... ..                 | 8.3        | 3            | 18                    | 23 | 24.80 | 127                  | 40 | 10.8 | 5             | 0.45              |
| 332     | Stone 10124 ... ..     | 7.8        | ...          | 18                    | 29 | 26.77 | 131                  | 42 | 32.5 | 5             | 0.40              |
| 333     | ... ..                 | 8.5        | 6            | 18                    | 30 | 45.34 | 127                  | 5  | 57.3 | 6             | 0.60              |
| 334     | ... ..                 | 9.0        | 5            | 18                    | 30 | 55.24 | 127                  | 58 | 18.2 | 5             | 0.58              |
| 335     | ... ..                 | 7.5        | 4            | 18                    | 31 | 24.86 | 127                  | 23 | 13.7 | 5             | 0.44              |
| 336     | Stone 10154 ... ..     | 8.0        | ...          | 18                    | 32 | 12.22 | 134                  | 16 | 33.3 | 3             | 0.38              |
| 337     | ... ..                 | 8.0        | 5            | 18                    | 34 | 2.27  | 125                  | 42 | 5.5  | 5             | 0.41              |
| 338     | ... ..                 | 8.0        | ...          | 18                    | 34 | 16.67 | 124                  | 34 | 17.8 | 5             | 0.69              |
| 339     | Stone 10187 ... ..     | 7.8        | ...          | 18                    | 36 | 45.11 | 127                  | 0  | 7.7  | 5             | 0.61              |
| 340     | Taylor 8599 ... ..     | 5.8        | ...          | 18                    | 36 | 49.40 | 129                  | 48 | 6.5  | 6             | 0.53              |
| 341     | Taylor 8600 ... ..     | 7.0        | ...          | 18                    | 36 | 51.47 | 129                  | 51 | 37.1 | 5             | 0.50              |
| 342     | ... ..                 | 7.5        | 5            | 18                    | 38 | 45.51 | 131                  | 17 | 0.6  | 5             | 0.39              |
| 343     | ... ..                 | 9.0        | 5            | 18                    | 39 | 14.18 | 128                  | 56 | 34.0 | 5             | 0.42              |
| 344     | Stone 10239 ... ..     | 8.0        | ...          | 18                    | 42 | 49.47 | 134                  | 36 | 20.4 | 6             | 0.61              |
| 345     | ... ..                 | 8.3        | ...          | 18                    | 43 | 31.09 | 134                  | 49 | 13.4 | 5             | 0.66              |
| 346     | Taylor 8647 ... ..     | 7.0        | ...          | 18                    | 43 | 38.57 | 134                  | 40 | 15.1 | 4             | 0.72              |
| 347     | ... ..                 | 7.9        | 2            | 18                    | 43 | 48.78 | 125                  | 31 | 2.0  | 3             | 0.70              |
| 348     | ... ..                 | 9.1        | 5            | 18                    | 45 | 24.16 | 129                  | 28 | 13.7 | 4             | 0.42              |
| 349     | ... ..                 | 8.5        | ...          | 18                    | 47 | 6.54  | 133                  | 50 | 46.5 | 5             | 0.67              |
| 350     | Taylor 8685 ... ..     | 5.7        | ...          | 18                    | 48 | 44.17 | 127                  | 29 | 25.4 | 5             | 0.61              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                        | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|------------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                              | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 316     | Stone 9922 ...               | + 4.3266            | - 0.0001           | ...            | - 0.515            | - 0.631            | ...            | ...        |
| 317     | Stone 9924 ...               | + 4.2731            | + 0.0001           | ...            | - 0.527            | - 0.623            | ...            | ...        |
| 318     | ... ..                       | + 4.0767            | + 0.0002           | ...            | - 0.586            | - 0.594            | ...            | ...        |
| 319     | ... ..                       | + 4.2447            | - 0.0008           | ...            | - 0.795            | - 0.619            | ...            | ...        |
| 320     | 23 Ursæ Minoris $\delta$ ... | - 19.4710           | - 0.2912           | + 0.026        | - 0.879            | + 2.837            | - 0.04         | 2395       |
| 321     | ... ..                       | + 4.0568            | - 0.0006           | ...            | - 0.905            | - 0.591            | ...            | ...        |
| 322     | ... ..                       | + 4.4585            | - 0.0028           | ...            | - 1.175            | - 0.649            | ...            | ...        |
| 323     | ... ..                       | + 4.1079            | - 0.0015           | ...            | - 1.243            | - 0.598            | ...            | ...        |
| 324     | Taylor 8452 ...              | + 4.1417            | - 0.0018           | ...            | - 1.246            | - 0.602            | ...            | ...        |
| 325     | 58 Serpentis $\eta$ ...      | + 3.1405            | + 0.0010           | - 0.040        | - 1.334            | - 0.456            | + 0.68         | 2398       |
| 326     | ... ..                       | + 4.1445            | - 0.0021           | ...            | - 1.344            | - 0.602            | ...            | ...        |
| 327     | ... ..                       | + 4.5965            | - 0.0042           | ...            | - 1.373            | - 0.668            | ...            | ...        |
| 328     | ... ..                       | + 4.0876            | - 0.0020           | ...            | - 1.447            | - 0.594            | ...            | ...        |
| 329     | 22 Sagittarii $\lambda$ ...  | + 3.7070            | - 0.0013           | - 0.005        | - 1.813            | - 0.537            | + 0.20         | 2310       |
| 330     | ... ..                       | + 4.1747            | - 0.0040           | ...            | - 1.988            | - 0.605            | ...            | ...        |
| 331     | ... ..                       | + 4.0991            | - 0.0037           | ...            | - 2.046            | - 0.594            | ...            | ...        |
| 332     | Stone 10124 ...              | + 4.2541            | - 0.0061           | ...            | - 2.569            | - 0.615            | ...            | ...        |
| 333     | ... ..                       | + 4.0744            | - 0.0051           | ...            | - 2.683            | - 0.588            | ...            | ...        |
| 334     | ... ..                       | + 4.1063            | - 0.0053           | ...            | - 2.698            | - 0.593            | ...            | ...        |
| 335     | ... ..                       | + 4.0845            | - 0.0053           | ...            | - 2.741            | - 0.589            | ...            | ...        |
| 336     | Stone 10154 ...              | + 4.3631            | - 0.0079           | ...            | - 2.809            | - 0.630            | ...            | ...        |
| 337     | ... ..                       | + 4.0225            | - 0.0064           | ...            | - 2.967            | - 0.580            | ...            | ...        |
| 338     | ... ..                       | + 3.9834            | - 0.0052           | ...            | - 2.969            | - 0.574            | ...            | ...        |
| 339     | Stone 10187 ...              | + 4.0669            | - 0.0064           | ...            | - 3.203            | - 0.585            | ...            | ...        |
| 340     | Taylor 8599 ...              | + 4.1719            | - 0.0078           | ...            | - 3.208            | - 0.600            | ...            | ...        |
| 341     | Taylor 8600 ...              | + 4.1742            | - 0.0073           | ...            | - 3.211            | - 0.600            | ...            | ...        |
| 342     | ... ..                       | + 4.2294            | - 0.0084           | ...            | - 3.376            | - 0.607            | ...            | ...        |
| 343     | ... ..                       | + 4.1369            | - 0.0077           | ...            | - 3.417            | - 0.594            | ...            | ...        |
| 344     | Stone 10239 ...              | + 4.3681            | - 0.0110           | ...            | - 3.726            | - 0.625            | ...            | ...        |
| 345     | ... ..                       | + 4.3770            | - 0.0113           | ...            | - 3.785            | - 0.625            | ...            | ...        |
| 346     | Taylor 8647 ...              | + 4.3701            | - 0.0113           | ...            | - 3.796            | - 0.624            | ...            | ...        |
| 347     | ... ..                       | + 4.0092            | - 0.0073           | ...            | - 3.811            | - 0.573            | ...            | ...        |
| 348     | ... ..                       | + 4.1518            | - 0.0083           | ...            | - 3.946            | - 0.591            | ...            | ...        |
| 349     | ... ..                       | + 4.3295            | - 0.0117           | ...            | - 4.083            | - 0.617            | ...            | ...        |
| 350     | Taylor 8685 ...              | + 4.0748            | - 0.0090           | ...            | - 4.233            | - 0.579            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.                            | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|----------------------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                                  |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 351     | ... ..                           | 9.5        | 1            | 18                    | 52 | 14.82 | 132                  | 56 | 57.4 | 1             | 0.41              |
| 352     | Taylor 8715—1st ...              | 7.0        | ...          | 18                    | 53 | 8.64  | 127                  | 13 | 15.9 | 5             | 0.70              |
| 353     | Taylor 8715—2nd ...              | 7.0        | ...          | 18                    | 53 | 9.78  | 127                  | 13 | 18.8 | 5             | 0.72              |
| 354     | ... ..                           | 8.5        | 2            | 18                    | 53 | 54.87 | 128                  | 6  | 56.3 | 2             | 0.64              |
| 355     | 18 Aquilæ ε ...                  | 4.1        | ...          | 18                    | 54 | 18.63 | 75                   | 5  | 22.4 | 20            | 0.58              |
| 356     | Stone 10351 ...                  | 6.1        | ...          | 18                    | 55 | 18.25 | 128                  | 25 | 12.8 | 4             | 0.75              |
| 357     | ... ..                           | 7.5        | ...          | 19                    | 0  | 11.78 | 135                  | 15 | 26.1 | 5             | 0.65              |
| 358     | Stone 10391 ...                  | 7.8        | ...          | 19                    | 0  | 33.02 | 132                  | 36 | 21.7 | 2             | 0.74              |
| 359     | Stone 10400 ...                  | 7.2        | ...          | 19                    | 1  | 34.57 | 130                  | 0  | 38.1 | 5             | 0.50              |
| 360     | ... ..                           | 8.5        | 3            | 19                    | 4  | 10.04 | 135                  | 27 | 41.6 | 3             | 0.61              |
| 361     | Stone 10420 ...                  | 7.0        | ...          | 19                    | 4  | 14.51 | 127                  | 46 | 27.6 | 5             | 0.75              |
| 362     | Stone 10432 ...                  | 6.3        | ...          | 19                    | 6  | 8.78  | 135                  | 23 | 24.5 | 2             | 0.60              |
| 363     | ... ..                           | 7.5        | 2            | 19                    | 7  | 41.63 | 129                  | 24 | 5.3  | 2             | 0.65              |
| 364     | Taylor 8823 ...                  | 5.9        | ...          | 19                    | 7  | 50.30 | 135                  | 40 | 3.9  | 6             | 0.66              |
| 365     | Stone 10451 ...                  | 7.3        | ...          | 19                    | 8  | 52.33 | 135                  | 37 | 33.5 | 4             | 0.71              |
| 366     | ... ..                           | 9.5        | 2            | 19                    | 10 | 13.35 | 130                  | 46 | 34.3 | 2             | 0.61              |
| 367     | ... ..                           | 7.5        | 1            | 19                    | 10 | 40.16 | 129                  | 45 | 12.3 | 1             | 0.61              |
| 368     | Stone 10465 ...                  | 5.9        | ...          | 19                    | 11 | 54.58 | 125                  | 37 | 59.2 | 3             | 0.75              |
| 369     | Stone 10467 ...                  | 7.5        | ...          | 19                    | 12 | 30.42 | 135                  | 35 | 11.6 | 5             | 0.56              |
| 370     | Stone 10487 ...                  | 7.0        | ...          | 19                    | 14 | 14.57 | 119                  | 49 | 17.6 | 4             | 0.74              |
| 371     | ... ..                           | 8.3        | ...          | 19                    | 14 | 18.77 | 127                  | 26 | 18.2 | 5             | 0.68              |
| 372     | ... ..                           | 8.5        | ...          | 19                    | 17 | 6.82  | 130                  | 4  | 36.7 | 2             | 0.59              |
| 373     | 49 Sagittarii χ <sup>3</sup> ... | 5.9        | ...          | 19                    | 18 | 24.65 | 114                  | 11 | 24.7 | 2             | 0.76              |
| 374     | ... ..                           | 9.5        | 5            | 19                    | 19 | 47.76 | 130                  | 13 | 12.0 | 5             | 0.62              |
| 375     | Stone 10534 ...                  | 8.0        | ...          | 19                    | 21 | 55.22 | 125                  | 19 | 13.6 | 4             | 0.75              |
| 376     | ... ..                           | 8.0        | 3            | 19                    | 22 | 5.72  | 132                  | 34 | 16.5 | 4             | 0.63              |
| 377     | ... ..                           | 9.0        | 1            | 19                    | 25 | 49.63 | 133                  | 42 | 50.9 | 1             | 0.60              |
| 378     | ... ..                           | 9.0        | ...          | 19                    | 25 | 58.53 | 146                  | 55 | 2.3  | 2             | 0.70              |
| 379     | Taylor 8982 ...                  | 6.3        | ...          | 19                    | 28 | 35.13 | 148                  | 14 | 24.0 | 1             | 0.78              |
| 380     | Stone 10533 ...                  | 7.5        | ...          | 19                    | 29 | 32.25 | 131                  | 42 | 58.4 | 5             | 0.60              |
| 381     | ... ..                           | 8.0        | 3            | 19                    | 29 | 45.63 | 125                  | 29 | 57.8 | 4             | 0.67              |
| 382     | ... ..                           | 8.0        | 1            | 19                    | 30 | 11.65 | 129                  | 1  | 8.4  | 1             | 0.57              |
| 383     | Stone 10594 ...                  | 6.7        | ...          | 19                    | 31 | 17.23 | 135                  | 32 | 34.2 | 5             | 0.74              |
| 384     | Stone 10598 ...                  | 6.8        | ...          | 19                    | 31 | 57.26 | 129                  | 41 | 47.1 | 2             | 0.78              |
| 385     | ... ..                           | 7.5        | 1            | 19                    | 38 | 25.30 | 126                  | 35 | 58.9 | 1             | 0.76              |



## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                  | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                        | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 351     | ...                    | + 4.2846            | - 0.0126           | ...            | - 4.533            | - 0.607            | ...            | ...        |
| 352     | Taylor 8715—1st.       | + 4.0607            | - 0.0098           | ...            | - 4.609            | - 0.575            | ...            | ...        |
| 353     | Taylor 8715—2nd.       | + 4.0607            | - 0.0098           | ...            | - 4.610            | - 0.575            | ...            | ...        |
| 354     | ...                    | + 4.0923            | - 0.0104           | ...            | - 4.676            | - 0.579            | ...            | ...        |
| 355     | 13 Aquilæ $\epsilon$   | + 2.7263            | + 0.0004           | - 0.005        | - 4.708            | - 0.385            | + 0.08         | 2390       |
| 356     | Stone 10351            | + 4.1020            | - 0.0109           | ...            | - 4.792            | - 0.579            | ...            | ...        |
| 357     | ...                    | + 4.3750            | - 0.0163           | ...            | - 5.207            | - 0.615            | ...            | ...        |
| 358     | Stone 10391            | + 4.2594            | - 0.0145           | ...            | - 5.237            | - 0.598            | ...            | ...        |
| 359     | Stone 10400            | + 4.1543            | - 0.0131           | ...            | - 5.323            | - 0.583            | ...            | ...        |
| 360     | ...                    | + 4.3780            | - 0.0176           | ...            | - 5.542            | - 0.612            | ...            | ...        |
| 361     | Stone 10420            | + 4.0679            | - 0.0124           | ...            | - 5.548            | - 0.569            | ...            | ...        |
| 362     | Stone 10432            | + 4.3715            | - 0.0179           | ...            | - 5.708            | - 0.610            | ...            | ...        |
| 363     | ...                    | + 4.1231            | - 0.0141           | ...            | - 5.837            | - 0.574            | ...            | ...        |
| 364     | Taylor 8823            | + 4.3813            | - 0.0187           | ...            | - 5.850            | - 0.610            | ...            | ...        |
| 365     | Stone 10451            | + 4.3775            | - 0.0190           | ...            | - 5.936            | - 0.608            | ...            | ...        |
| 366     | ...                    | + 4.1717            | - 0.0155           | ...            | - 6.049            | - 0.574            | ...            | ...        |
| 367     | ...                    | + 4.1320            | - 0.0149           | ...            | - 6.085            | - 0.573            | ...            | ...        |
| 368     | Stone 10465            | + 3.9839            | - 0.0127           | ...            | - 6.190            | - 0.550            | ...            | ...        |
| 369     | Stone 10467            | + 4.3892            | - 0.0199           | ...            | - 6.239            | - 0.603            | ...            | ...        |
| 370     | Stone 10487            | + 3.7989            | - 0.0103           | ...            | - 6.382            | - 0.523            | ...            | ...        |
| 371     | ...                    | + 4.0426            | - 0.0142           | ...            | - 6.388            | - 0.557            | ...            | ...        |
| 372     | ...                    | + 4.1342            | - 0.0166           | ...            | - 6.621            | - 0.567            | ...            | ...        |
| 373     | 49 Sagittarii $\chi^3$ | + 3.6381            | - 0.0085           | - 0.003        | - 6.729            | - 0.497            | + 0.01         | 2446       |
| 374     | ...                    | + 4.1351            | - 0.0167           | ...            | - 6.842            | - 0.565            | ...            | ...        |
| 375     | Stone 10534            | + 3.9597            | - 0.0144           | ...            | - 7.017            | - 0.539            | ...            | ...        |
| 376     | ...                    | + 4.2237            | - 0.0195           | ...            | - 7.031            | - 0.574            | ...            | ...        |
| 377     | ...                    | + 4.2619            | - 0.0214           | ...            | - 7.335            | - 0.576            | ...            | ...        |
| 378     | ...                    | + 4.9817            | - 0.0408           | ...            | - 7.348            | - 0.674            | ...            | ...        |
| 379     | Taylor 8982            | + 5.0736            | - 0.0452           | ...            | - 7.561            | - 0.682            | ...            | ...        |
| 380     | Stone 10583            | + 4.1744            | - 0.0205           | ...            | - 7.637            | - 0.561            | ...            | ...        |
| 381     | ...                    | + 3.9538            | - 0.0158           | ...            | - 7.655            | - 0.531            | ...            | ...        |
| 382     | ...                    | + 4.0729            | - 0.0184           | ...            | - 7.690            | - 0.546            | ...            | ...        |
| 383     | Stone 10594            | + 4.3281            | - 0.0246           | ...            | - 7.778            | - 0.580            | ...            | ...        |
| 384     | Stone 10598            | + 4.0941            | - 0.0192           | ...            | - 7.833            | - 0.548            | ...            | ...        |
| 385     | ...                    | + 3.9838            | - 0.0172           | ...            | - 7.950            | - 0.531            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.        | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|--------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |              |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 386     | Stone 10622  | 6.1        | ...          | 19                    | 35 | 48.42 | 127                  | 48 | 47.2 | 2             | 0.74              |
| 387     | Stone 10624  | 7.2        | ...          | 19                    | 36 | 21.52 | 131                  | 53 | 8.2  | 3             | 0.78              |
| 388     | R. P. L. 133 | 7.9        | ...          | 19                    | 37 | 46.97 | 4                    | 9  | 17.2 | 14            | 0.39              |
| 389     | R. P. L. 134 | 8.5        | ...          | 19                    | 39 | 34.83 | 4                    | 9  | 32.2 | 16            | 0.32              |
| 390     | ...          | 8.0        | 3            | 19                    | 39 | 48.75 | 125                  | 27 | 35.9 | 3             | 0.59              |
| 391     | ...          | 7.8        | ...          | 19                    | 40 | 25.74 | 128                  | 8  | 6.1  | 5             | 0.70              |
| 392     | Stone 10658  | 7.0        | ...          | 19                    | 41 | 45.01 | 128                  | 4  | 1.6  | 6             | 0.73              |
| 393     | Stone 10665  | 6.7        | ...          | 19                    | 42 | 49.76 | 141                  | 16 | 11.3 | 5             | 0.79              |
| 394     | Taylor 9112  | 5.6        | ...          | 19                    | 43 | 53.65 | 130                  | 10 | 9.5  | 2             | 0.57              |
| 395     | Stone 10677  | 6.9        | ...          | 19                    | 43 | 59.78 | 127                  | 37 | 47.8 | 5             | 0.70              |
| 396     | Taylor 9131  | 7.0        | ...          | 19                    | 47 | 16.59 | 148                  | 13 | 51.9 | 2             | 0.75              |
| 397     | ...          | 8.5        | 1            | 19                    | 48 | 9.62  | 131                  | 59 | 53.1 | 2             | 0.65              |
| 398     | ...          | 8.0        | ...          | 19                    | 50 | 19.15 | 132                  | 59 | 35.1 | 1             | 0.72              |
| 399     | Stone 10720  | 6.9        | ...          | 19                    | 50 | 30.12 | 126                  | 59 | 48.8 | 5             | 0.78              |
| 400     | Stone 10727  | 6.5        | ...          | 19                    | 51 | 34.59 | 120                  | 51 | 2.1  | 5             | 0.74              |
| 401     | Stone 10739  | 6.7        | ...          | 19                    | 52 | 18.06 | 133                  | 21 | 38.8 | 4             | 0.79              |
| 402     | Stone 10752  | 8.0        | ...          | 19                    | 53 | 51.58 | 126                  | 59 | 55.9 | 5             | 0.71              |
| 403     | ...          | 8.0        | 1            | 19                    | 54 | 25.56 | 130                  | 18 | 18.3 | 1             | 0.62              |
| 404     | Taylor 9195  | 5.0        | ...          | 19                    | 55 | 46.79 | 128                  | 15 | 46.0 | 5             | 0.77              |
| 405     | ...          | 9.0        | 4            | 19                    | 56 | 54.69 | 131                  | 48 | 50.5 | 4             | 0.64              |
| 406     | Taylor 9213  | 6.5        | ...          | 19                    | 58 | 21.86 | 145                  | 21 | 0.0  | 5             | 0.79              |
| 407     | ...          | 9.5        | 2            | 19                    | 58 | 30.50 | 143                  | 10 | 37.3 | 2             | 0.60              |
| 408     | Stone 10792  | 7.3        | ...          | 19                    | 59 | 43.80 | 125                  | 51 | 59.7 | 5             | 0.74              |
| 409     | Stone 10797  | 6.6        | ...          | 20                    | 0  | 33.87 | 137                  | 24 | 12.0 | 3             | 0.78              |
| 410     | Stone 10823  | 6.8        | ...          | 20                    | 5  | 6.58  | 138                  | 3  | 38.5 | 5             | 0.79              |
| 411     | 65 Aquilæ θ  | 3.4        | ...          | 20                    | 5  | 16.01 | 91                   | 10 | 3.2  | 20            | 0.69              |
| 412     | Taylor 9303  | 6.2        | ...          | 20                    | 7  | 59.41 | 117                  | 22 | 52.3 | 2             | 0.78              |
| 413     | Stone 10840  | 6.5        | ...          | 20                    | 8  | 46.49 | 126                  | 48 | 34.5 | 5             | 0.79              |
| 414     | Stone 10858  | 7.5        | ...          | 20                    | 10 | 48.15 | 134                  | 53 | 13.9 | 3             | 0.63              |
| 415     | Stone 10859  | 6.3        | ...          | 20                    | 10 | 52.69 | 137                  | 56 | 11.5 | 5             | 0.75              |
| 416     | Taylor 9343  | 6.5        | ...          | 20                    | 13 | 10.93 | 140                  | 21 | 33.5 | 4             | 0.81              |
| 417     | Stone 10884  | 7.3        | ...          | 20                    | 13 | 48.94 | 123                  | 6  | 20.3 | 5             | 0.69              |
| 418     | ...          | 8.5        | ...          | 20                    | 14 | 42.99 | 133                  | 19 | 31.5 | 5             | 0.70              |
| 419     | Taylor 9370  | 5.6        | ...          | 20                    | 15 | 55.57 | 132                  | 47 | 50.3 | 5             | 0.78              |
| 420     | R. P. L. 138 | 7.1        | ...          | 20                    | 16 | 18.24 | 5                    | 40 | 30.6 | 5             | 0.68              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.            | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                  | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 386     | Stone 10622 ...  | + 4.0192            | - 0.0184           | ...            | - 8.142            | - 0.534            | ...            | ...        |
| 387     | Stone 10624 ...  | + 4.1668            | - 0.0221           | ...            | - 8.184            | - 0.553            | ...            | ...        |
| 388     | R. P. L. 133 ... | - 13.6822           | - 1.6816           | ...            | - 8.299            | + 1.821            | ...            | ...        |
| 389     | R. P. L. 134 ... | - 13.6049           | - 1.7006           | ...            | - 8.442            | + 1.804            | ...            | ...        |
| 390     | ... ..           | + 3.9356            | - 0.0175           | ...            | - 8.460            | - 0.517            | ...            | ...        |
| 391     | ... ..           | + 4.0227            | - 0.0195           | ...            | - 8.509            | - 0.528            | ...            | ...        |
| 392     | Stone 10658 ...  | + 4.0178            | - 0.0197           | ...            | - 8.614            | - 0.526            | ...            | ...        |
| 393     | Stone 10665 ...  | + 4.5743            | - 0.0856           | ...            | - 8.699            | - 0.598            | ...            | ...        |
| 394     | Taylor 9112 ...  | + 4.0869            | - 0.0218           | ...            | - 8.783            | - 0.533            | ...            | ...        |
| 395     | Stone 10677 ...  | + 3.9987            | - 0.0197           | ...            | - 8.791            | - 0.521            | ...            | ...        |
| 396     | Taylor 9131 ...  | + 4.9989            | - 0.0530           | ...            | - 9.048            | - 0.648            | ...            | ...        |
| 397     | ... ..           | + 4.1444            | - 0.0245           | ...            | - 9.117            | - 0.535            | ...            | ...        |
| 398     | ... ..           | + 4.1772            | - 0.0256           | ...            | - 9.284            | - 0.537            | ...            | ...        |
| 399     | Stone 10720 ...  | + 3.9648            | - 0.0202           | ...            | - 9.299            | - 0.509            | ...            | ...        |
| 400     | Stone 10727 ...  | + 3.7781            | - 0.0159           | ...            | - 9.382            | - 0.484            | ...            | ...        |
| 401     | Stone 10739 ...  | + 4.1863            | - 0.0268           | ...            | - 9.439            | - 0.536            | ...            | ...        |
| 402     | Stone 10752 ...  | + 3.9579            | - 0.0208           | ...            | - 9.558            | - 0.505            | ...            | ...        |
| 403     | ... ..           | + 4.0678            | - 0.0239           | ...            | - 9.601            | - 0.518            | ...            | ...        |
| 404     | Taylor 9195 ...  | + 3.9950            | - 0.0222           | ...            | - 9.706            | - 0.507            | ...            | ...        |
| 405     | ... ..           | + 4.1161            | - 0.0259           | ...            | - 9.792            | - 0.521            | ...            | ...        |
| 406     | Taylor 9213 ...  | + 4.7543            | - 0.0488           | ...            | - 9.903            | - 0.600            | ...            | ...        |
| 407     | ... ..           | + 4.9444            | - 0.0572           | ...            | - 9.914            | - 0.623            | ...            | ...        |
| 408     | Stone 10792 ...  | + 3.9099            | - 0.0207           | ...            | - 10.006           | - 0.491            | ...            | ...        |
| 409     | Stone 10797 ...  | + 4.3295            | - 0.0338           | ...            | - 10.074           | - 0.543            | ...            | ...        |
| 410     | Stone 10823 ...  | + 4.3441            | - 0.0358           | ...            | - 10.412           | - 0.539            | ...            | ...        |
| 411     | 65 Aquilæ θ ...  | + 3.0957            | - 0.0042           | - 0.000        | - 10.423           | - 0.382            | - 0.01         | 2576       |
| 412     | Taylor 9303 ...  | + 3.6596            | - 0.0155           | ...            | - 10.626           | - 0.448            | ...            | ...        |
| 413     | Stone 10840 ...  | + 3.9190            | - 0.0228           | ...            | - 10.684           | - 0.480            | ...            | ...        |
| 414     | Stone 10858 ...  | + 4.1929            | - 0.0323           | ...            | - 10.835           | - 0.511            | ...            | ...        |
| 415     | Stone 10859 ...  | + 4.3188            | - 0.0368           | ...            | - 10.840           | - 0.526            | ...            | ...        |
| 416     | Taylor 9343 ...  | + 4.4211            | - 0.0417           | ...            | - 11.009           | - 0.535            | ...            | ...        |
| 417     | Stone 10884 ...  | + 3.7996            | - 0.0202           | ...            | - 11.065           | - 0.458            | ...            | ...        |
| 418     | ... ..           | + 4.1210            | - 0.0308           | ...            | - 11.121           | - 0.496            | ...            | ...        |
| 419     | Taylor 9370 ...  | + 4.0988            | - 0.0303           | ...            | - 11.208           | - 0.492            | ...            | ...        |
| 420     | R. P. L. 138 ... | - 8.0705            | - 1.0526           | ...            | - 11.236           | + 0.980            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.           | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|-----------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                 |            |              | h.                    | m. | s.    | '                    | "  | '''  |               |                   |
| 421     | ...             | 7.8        | 2            | 20                    | 20 | 6.56  | 130                  | 23 | 43.1 | 3             | 0.73              |
| 422     | Taylor 9415     | 6.3        | ...          | 20                    | 21 | 16.01 | 125                  | 58 | 50.5 | 5             | 0.77              |
| 423     | Stone 10939     | 6.5        | ...          | 20                    | 23 | 46.73 | 119                  | 30 | 11.9 | 5             | 0.80              |
| 424     | Taylor 9464     | 7.8        | ...          | 20                    | 26 | 40.77 | 112                  | 37 | 37.0 | 4             | 0.79              |
| 425     | E. P. L. 148    | 6.7        | ...          | 20                    | 26 | 58.79 | 5                    | 14 | 40.0 | 1             | 0.57              |
| 426     | 2 Delphini ε    | 4.1        | ...          | 20                    | 27 | 37.31 | 79                   | 5  | 37.2 | 25            | 0.72              |
| 427     | Stone 11003     | 7.3        | ...          | 20                    | 32 | 23.44 | 126                  | 26 | 32.9 | 5             | 0.80              |
| 428     | Taylor 9519     | 6.4        | ...          | 20                    | 33 | 34.17 | 132                  | 32 | 47.2 | 2             | 0.69              |
| 429     | Taylor 9544     | 6.7        | ...          | 20                    | 35 | 13.01 | 129                  | 58 | 32.0 | 5             | 0.79              |
| 430     | Taylor 9561     | 7.2        | ...          | 20                    | 37 | 14.30 | 126                  | 14 | 54.0 | 4             | 0.80              |
| 431     | ...             | 8.0        | 1            | 20                    | 37 | 38.38 | 126                  | 31 | 44.5 | 4             | 0.74              |
| 432     | Taylor 9573     | 7.0        | ...          | 20                    | 39 | 21.10 | 136                  | 16 | 49.3 | 2             | 0.80              |
| 433     | 2 Aquarii ε     | 3.8        | ...          | 20                    | 41 | 20.45 | 99                   | 55 | 23.6 | 21            | 0.72              |
| 434     | ...             | 8.0        | ...          | 20                    | 41 | 44.10 | 132                  | 8  | 36.9 | 1             | 0.74              |
| 435     | Taylor 9602     | 6.1        | ...          | 20                    | 42 | 20.56 | 116                  | 12 | 43.2 | 5             | 0.78              |
| 436     | Stone 11081     | 7.5        | ...          | 20                    | 43 | 59.40 | 181                  | 20 | 23.7 | 1             | 0.78              |
| 437     | Stone 11091     | 7.5        | ...          | 20                    | 44 | 40.91 | 142                  | 9  | 10.9 | 1             | 0.81              |
| 438     | ...             | 8.0        | 3            | 20                    | 45 | 22.41 | 135                  | 45 | 24.1 | 3             | 0.74              |
| 439     | Stone 11103     | 6.6        | ...          | 20                    | 46 | 13.38 | 141                  | 10 | 0.8  | 5             | 0.69              |
| 440     | Stone 11115     | 6.7        | ...          | 20                    | 47 | 5.52  | 118                  | 21 | 59.2 | 2             | 0.82              |
| 441     | Stone 11120     | 7.8        | ...          | 20                    | 47 | 24.40 | 145                  | 39 | 55.4 | 5             | 0.80              |
| 442     | ...             | 8.5        | 1            | 20                    | 52 | 32.74 | 129                  | 10 | 32.6 | 2             | 0.70              |
| 443     | Stone 11150     | 8.0        | ...          | 20                    | 53 | 34.41 | 129                  | 11 | 31.8 | 1             | 0.70              |
| 444     | Stone 11156     | 7.0        | ...          | 20                    | 54 | 13.41 | 123                  | 21 | 6.5  | 5             | 0.78              |
| 445     | Stone 11175     | 7.8        | ...          | 20                    | 56 | 1.45  | 142                  | 21 | 22.1 | 5             | 0.76              |
| 446     | Stone 11186     | 7.3        | ...          | 20                    | 57 | 44.24 | 127                  | 41 | 30.7 | 2             | 0.78              |
| 447     | Stone 11191     | 7.5        | ...          | 20                    | 58 | 12.51 | 138                  | 59 | 25.7 | 4             | 0.83              |
| 448     | 23 Capricorni θ | 4.3        | ...          | 20                    | 59 | 22.11 | 107                  | 41 | 50.2 | 20            | 0.73              |
| 449     | ...             | 8.0        | 1            | 21                    | 0  | 13.05 | 150                  | 59 | 40.0 | 1             | 0.79              |
| 450     | Stone 11227     | 6.8        | ...          | 21                    | 1  | 58.69 | 134                  | 40 | 55.2 | 5             | 0.79              |
| 451     | Taylor 9809     | 5.7        | ...          | 21                    | 5  | 33.65 | 129                  | 54 | 2.0  | 5             | 0.75              |
| 452     | Taylor 9843     | 6.6        | ...          | 21                    | 9  | 53.94 | 139                  | 12 | 11.1 | 5             | 0.75              |
| 453     | Taylor 9889     | 6.7        | ...          | 21                    | 14 | 52.11 | 119                  | 39 | 40.8 | 5             | 0.76              |
| 454     | 33 Capricorni   | 5.7        | ...          | 21                    | 17 | 31.27 | 111                  | 20 | 51.0 | 5             | 0.76              |
| 455     | Stone 11367     | 7.0        | ...          | 21                    | 21 | 39.57 | 152                  | 40 | 34.0 | 5             | 0.77              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                  | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                        | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 421     | ...                    | + 4.0039            | - 0.0280           | ...            | - 11.510           | - 0.474            | ...            | ...        |
| 422     | Taylor 9415            | + 3.8643            | - 0.0235           | ...            | - 11.593           | - 0.456            | ...            | ...        |
| 423     | Stone 10989            | + 3.6848            | - 0.0184           | ...            | - 11.771           | - 0.431            | ...            | ...        |
| 424     | Taylor 9464            | + 3.5193            | - 0.0141           | ...            | - 11.977           | - 0.408            | ...            | ...        |
| 425     | B. P. L. 143           | - 8.5987            | - 1.2839           | ...            | - 11.998           | + 1.010            | ...            | ...        |
| 426     | 2 Delphini $\epsilon$  | + 2.8664            | - 0.0013           | - 0.001        | - 12.042           | - 0.380            | + 0.02         | 2642       |
| 427     | Stone 11003            | + 3.8492            | - 0.0251           | ...            | - 12.374           | - 0.438            | ...            | ...        |
| 428     | Taylor 9519            | + 4.0340            | - 0.0324           | ...            | - 12.454           | - 0.457            | ...            | ...        |
| 429     | Taylor 9544            | + 3.9458            | - 0.0294           | ...            | - 12.566           | - 0.445            | ...            | ...        |
| 430     | Taylor 9561            | + 3.8308            | - 0.0255           | ...            | - 12.704           | - 0.428            | ...            | ...        |
| 431     | ...                    | + 3.8376            | - 0.0239           | ...            | - 12.732           | - 0.429            | ...            | ...        |
| 432     | Taylor 9573            | + 4.1458            | - 0.0390           | ...            | - 12.847           | - 0.460            | ...            | ...        |
| 433     | 2 Aquarii $\epsilon$   | + 3.2506            | - 0.0084           | - 0.000        | - 12.979           | - 0.356            | + 0.03         | 2681       |
| 434     | ...                    | + 3.9933            | - 0.0330           | ...            | - 13.008           | - 0.439            | ...            | ...        |
| 435     | Taylor 9602            | + 3.5722            | - 0.0174           | ...            | - 13.046           | - 0.391            | ...            | ...        |
| 436     | Stone 11081            | + 3.9600            | - 0.0321           | ...            | - 13.156           | - 0.431            | ...            | ...        |
| 437     | Stone 11091            | + 4.3675            | - 0.0517           | ...            | - 13.201           | - 0.475            | ...            | ...        |
| 438     | ...                    | + 4.1030            | - 0.0387           | ...            | - 13.247           | - 0.444            | ...            | ...        |
| 439     | Stone 11103            | + 4.3151            | - 0.0495           | ...            | - 13.303           | - 0.466            | ...            | ...        |
| 440     | Stone 11115            | + 3.6107            | - 0.0192           | ...            | - 13.360           | - 0.388            | ...            | ...        |
| 441     | Stone 11120            | + 4.5302            | - 0.0620           | ...            | - 13.380           | - 0.488            | ...            | ...        |
| 442     | ...                    | + 3.8673            | - 0.0301           | ...            | - 13.711           | - 0.407            | ...            | ...        |
| 443     | Stone 11150            | + 3.8646            | - 0.0302           | ...            | - 13.777           | - 0.405            | ...            | ...        |
| 444     | Stone 11156            | + 3.7100            | - 0.0240           | ...            | - 13.819           | - 0.387            | ...            | ...        |
| 445     | Stone 11175            | + 4.3183            | - 0.0533           | ...            | - 13.932           | - 0.448            | ...            | ...        |
| 446     | Stone 11186            | + 3.8100            | - 0.0288           | ...            | - 14.039           | - 0.392            | ...            | ...        |
| 447     | Stone 11191            | + 4.1679            | - 0.0464           | ...            | - 14.069           | - 0.429            | ...            | ...        |
| 448     | 23 Capricorni $\theta$ | + 3.3748            | - 0.0128           | + 0.004        | - 14.141           | - 0.344            | + 0.05         | 2733       |
| 449     | ...                    | + 4.7754            | - 0.0859           | ...            | - 14.194           | - 0.488            | ...            | ...        |
| 450     | Stone 11227            | + 3.9991            | - 0.0388           | ...            | - 14.302           | - 0.404            | ...            | ...        |
| 451     | Taylor 9809            | + 3.8433            | - 0.0320           | ...            | - 14.521           | - 0.382            | ...            | ...        |
| 452     | Taylor 9843            | + 4.1193            | - 0.0480           | ...            | - 14.779           | - 0.402            | ...            | ...        |
| 453     | Taylor 9889            | + 3.5747            | - 0.0217           | ...            | - 15.070           | - 0.339            | ...            | ...        |
| 454     | 33 Capricorni          | + 3.4126            | - 0.0154           | - 0.003        | - 15.221           | - 0.318            | + 0.12         | 2778       |
| 455     | Stone 11367            | + 4.7211            | - 0.0977           | ...            | - 15.456           | - 0.434            | ...            | ...        |

## Mean Positions of Stars for 1883, January 1st.

| Number. | Star.                | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|----------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                      |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 456     | R. P. L. 149         | 7.5        | ...          | 21                    | 22 | 44.14 | 3                    | 26 | 56.8 | 2             | 0.69              |
| 457     | Stone 11390          | 6.0        | ...          | 21                    | 25 | 48.27 | 135                  | 21 | 53.9 | 5             | 0.75              |
| 458     | Stone 11403          | 6.3        | ...          | 21                    | 28 | 41.51 | 155                  | 20 | 49.0 | 5             | 0.76              |
| 459     | Stone 11428          | 6.5        | ...          | 21                    | 32 | 3.73  | 124                  | 12 | 14.8 | 5             | 0.75              |
| 460     | Stone 11434          | 6.7        | ...          | 21                    | 32 | 25.86 | 133                  | 39 | 32.0 | 2             | 0.69              |
| 461     | Taylor 10073         | 7.0        | ...          | 21                    | 36 | 6.41  | 146                  | 0  | 23.7 | 5             | 0.75              |
| 462     | Stone 11470          | 7.3        | ..           | 21                    | 37 | 46.37 | 128                  | 58 | 35.3 | 3             | 0.71              |
| 463     | 8 Pegasi ε           | 2.4        | ...          | 21                    | 38 | 26.36 | 80                   | 39 | 38.6 | 20            | 0.82              |
| 464     | Taylor 10109         | 5.8        | ...          | 21                    | 40 | 38.78 | 137                  | 50 | 3.2  | 5             | 0.75              |
| 465     | Taylor 10164         | 6.5        | ...          | 21                    | 48 | 14.60 | 143                  | 0  | 53.8 | 5             | 0.75              |
| 466     | Taylor 10172         | 5.8        | ...          | 21                    | 49 | 19.96 | 127                  | 48 | 27.0 | 5             | 0.75              |
| 467     | Stone 11555          | 6.7        | ...          | 21                    | 51 | 15.87 | 134                  | 37 | 5.7  | 5             | 0.79              |
| 468     | ...                  | 8.3        | 2            | 21                    | 52 | 5.53  | 132                  | 36 | 2.3  | 3             | 0.70              |
| 469     | Taylor 10192         | 5.8        | ...          | 21                    | 52 | 13.27 | 128                  | 57 | 12.0 | 5             | 0.81              |
| 470     | Stone 11574          | 6.9        | ...          | 21                    | 53 | 59.54 | 127                  | 6  | 56.5 | 5             | 0.76              |
| 471     | Taylor 10232         | 6.1        | ...          | 21                    | 57 | 57.30 | 117                  | 23 | 18.1 | 6             | 0.75              |
| 472     | Stone 11601          | 6.9        | ...          | 21                    | 58 | 48.87 | 134                  | 31 | 59.0 | 2             | 0.70              |
| 473     | 34 Aquarii α         | 3.2        | ...          | 21                    | 59 | 46.40 | 90                   | 53 | 17.0 | 21            | 0.85              |
| 474     | Stone 11610          | 8.0        | ...          | 22                    | 0  | 9.06  | 120                  | 11 | 10.3 | 5             | 0.76              |
| 475     | 43 Aquarii θ         | 4.3        | ...          | 22                    | 10 | 39.50 | 98                   | 21 | 56.3 | 23            | 0.84              |
| 476     | 48 Aquarii γ         | 4.1        | ...          | 22                    | 15 | 36.71 | 91                   | 58 | 34.3 | 10            | 0.75              |
| 477     | 73 Aquarii λ         | 3.8        | ...          | 22                    | 46 | 30.49 | 98                   | 12 | 6.6  | 15            | 0.83              |
| 478     | 54 Pegasi α (Markab) | 2.6        | ...          | 22                    | 58 | 55.91 | 75                   | 25 | 27.9 | 11            | 0.85              |
| 479     | 6 Piscium γ          | 3.8        | ..           | 23                    | 11 | 5.91  | 87                   | 21 | 24.5 | 8             | 0.92              |
| 480     | R. P. L. 158         | 5.7        | ...          | 23                    | 27 | 49.68 | 3                    | 20 | 16.9 | 10            | 0.83              |

480.—Groombridge 4101.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                    | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|--------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                          | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 456     | R. P. L. 149 ...         | - 10·9818           | - 3·1234           | ...            | - 15·515           | + 1·022            | ...            | ...        |
| 457     | Stone 11390 ...          | + 3·9161            | - 0·0416           | ...            | - 15·684           | - 0·350            | ...            | ...        |
| 458     | Stone 11403 ...          | + 4·8588            | - 0·1166           | ...            | - 15·840           | - 0·430            | ...            | ...        |
| 459     | Stone 11428 ...          | + 3·6190            | - 0·0265           | ...            | - 16·019           | - 0·312            | ...            | ...        |
| 460     | Stone 11434 ...          | + 3·8382            | - 0·0389           | ...            | - 16·038           | - 0·330            | ...            | ...        |
| 461     | Taylor 10073 ...         | + 4·2368            | - 0·0679           | ...            | - 16·230           | - 0·357            | ..             | ...        |
| 462     | Stone 11470 ...          | + 3·7012            | - 0·0323           | ...            | - 16·315           | - 0·308            | ...            | ...        |
| 463     | 8 Pegasi $\epsilon$ ...  | + 2·9451            | - 0·0005           | + 0·001        | - 16·348           | - 0·242            | - 0·01         | 2835       |
| 464     | Taylor 10109 ...         | + 3·9157            | - 0·0466           | ...            | - 16·459           | - 0·320            | ...            | ...        |
| 465     | Taylor 10164 ...         | + 4·0375            | - 0·0588           | ...            | - 16·830           | - 0·315            | ...            | ...        |
| 466     | Taylor 10172 ...         | + 3·6322            | - 0·0309           | ...            | - 16·881           | - 0·280            | ...            | ...        |
| 467     | Stone 11555 ...          | + 3·7749            | - 0·0407           | ...            | - 16·973           | - 0·287            | ...            | ...        |
| 468     | ... ..                   | + 3·7234            | - 0·0375           | ...            | - 17·010           | - 0·282            | ...            | ...        |
| 469     | Taylor 10192 ...         | + 3·6442            | - 0·0323           | ...            | - 17·017           | - 0·275            | ...            | ...        |
| 470     | Stone 11574 ...          | + 3·6009            | - 0·0300           | ...            | - 17·099           | - 0·269            | ...            | ...        |
| 471     | Taylor 10232 ...         | + 3·4240            | - 0·0204           | ...            | - 17·277           | - 0·248            | ...            | ...        |
| 472     | Stone 11601 ...          | + 3·7359            | - 0·0405           | ...            | - 17·315           | - 0·269            | ...            | ..         |
| 473     | 34 Aquarii $\alpha$ ...  | + 3·0828            | - 0·0041           | - 0·001        | - 17·358           | - 0·219            | - 0·00         | 2890       |
| 474     | Stone 11610 ...          | + 3·4607            | - 0·0228           | ...            | - 17·375           | - 0·245            | ...            | ...        |
| 475     | 43 Aquarii $\theta$ ...  | + 3·1626            | - 0·0075           | + 0·006        | - 17·814           | - 0·205            | + 0·02         | 2929       |
| 476     | 48 Aquarii $\gamma$ ...  | + 3·0927            | - 0·0042           | + 0·007        | - 18·009           | - 0·191            | - 0·02         | 2943       |
| 477     | 73 Aquarii $\lambda$ ... | + 3·1331            | - 0·0063           | - 0·002        | - 19·032           | - 0·137            | - 0·04         | 3019       |
| 478     | 54 Pegasi $\alpha$ ...   | + 2·9808            | + 0·0056           | + 0·003        | - 19·346           | - 0·107            | + 0·08         | 3050       |
| 479     | 6 Piscium $\gamma$ ...   | + 3·0592            | + 0·0005           | + 0·049        | - 19·599           | - 0·087            | - 0·02         | 3082       |
| 480     | R. P. L. 158 ...         | - 0·1339            | - 0·5501           | + 0·084        | - 19·857           | + 0·011            | + 0·00         | 3147       |





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SEPARATE RESULTS  
OF  
OBSERVATIONS  
OF THE FIXED STARS  
MADE WITH THE  
MADRAS MERIDIAN CIRCLE  
IN THE YEAR  
1884

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Separate Results of Madras Meridian Circle Observations in 1884.

| Number and Date.             | Magnitude. | Mean Right Ascension 1884. |     |             | No. of Wires. | Mean Polar Distance 1884.                   |     |            | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1884. |     |            | No. of Wires. | Mean Polar Distance 1884. |   |   | Observer. |
|------------------------------|------------|----------------------------|-----|-------------|---------------|---|-----|------------|-----------|------------------|------------|----------------------------|-----|------------|---------------|---------------------------|---|---|-----------|
|                              |            | h.                         | m.  | s.          |               | o.  | '   | "          |           |                  |            | h.                         | m.  | s.         |               | o.                        | ' | " |           |
| <b>1</b> <i>8 Ceti α</i>     |            |                            |     |             |               |   |     |            |           | Dec. 11          | ...        | 0 51 42.18                 | 2   | 1 35 54.5  | M             |                           |   |   |           |
| Jan. 2                       | ...        | 0 13 31.07                 | ... | 99 28 1.1   | M             | 12  | ... | 51 41.56   | 3         | 35 55.1          | M          |                            |     |            |               |                           |   |   |           |
| Nov. 14                      | ...        | 13 30.93                   | ... | 28 1.6      | R             | 23  | ... | 51 41.40   | 3         | 35 54.5          | R          |                            |     |            |               |                           |   |   |           |
| 15                           | ...        | 13 30.98                   | ... | 28 1.9      | R             | 26  | ... | 51 42.05   | 3         | 35 52.7          | R          |                            |     |            |               |                           |   |   |           |
| 17                           | ...        | 13 30.96                   | ... | 28 2.0      | R             | 27  | ... | 51 41.33   | 3         | 35 54.3          | R          |                            |     |            |               |                           |   |   |           |
| 23                           | ...        | 13 30.94                   | ... | 28 0.4      | R             | 29  | ... | 51 42.22   | 3         | 35 54.5          | M          |                            |     |            |               |                           |   |   |           |
| 29                           | ...        | 13 31.05                   | ... | 28 1.7      | R             | 31  | ... | 51 41.98   | 3         | 35 54.4          | M          |                            |     |            |               |                           |   |   |           |
| Dec. 1                       | ...        | 13 31.04                   | ... | 28 1.5      | R             | <i>R. P. L. 10—s.p.</i>                     |     |            |           |                  |            |                            |     |            |               |                           |   |   |           |
| 3                            | ...        | 13 31.16                   | ... | 28 2.5      | M             | Apl. 24                                     | ... | 0 51 41.15 | 3         | 1 35 55.8        | R          |                            |     |            |               |                           |   |   |           |
| 4                            | ...        | 13 31.02                   | ... | 28 3.1      | M             | <b>7</b> <i>2 Ursæ Minoris.</i>             |     |            |           |                  |            |                            |     |            |               |                           |   |   |           |
| 11                           | ...        | 13 30.97                   | ... | 28 2.6      | M             | Jan. 2                                      | ... | 0 53 5.22  | 3         | 4 21 55.9        | M          |                            |     |            |               |                           |   |   |           |
| 13                           | ...        | 13 31.04                   | ... | 28 3.2      | M             | <b>8</b> <i>R. P. L. 14—s.p.</i>            |     |            |           |                  |            |                            |     |            |               |                           |   |   |           |
| 23                           | ...        | 13 30.99                   | ... | 28 0.1      | R             | Apl. 17                                     | ... | 0 56 46.76 | 3         | 3 28 23.5        | R          |                            |     |            |               |                           |   |   |           |
| 24                           | ...        | 13 31.05                   | ... | 28 1.3      | R             | <b>9</b> <i>43 Andromedæ β, Mirach.</i>     |     |            |           |                  |            |                            |     |            |               |                           |   |   |           |
| <b>2</b> <i>12 Ceti.</i>     |            |                            |     |             |               |   |     |            |           | Jan. 5           | ...        | 1 3 14.32                  | ... | 54 59 40.1 | M             |                           |   |   |           |
| Jan. 2                       | ...        | 0 24 7.14                  | ... | 94 35 54.4  | M             | 7   | ... | 3 14.39    | ...       | 59 40.6          | M          |                            |     |            |               |                           |   |   |           |
| 3                            | ...        | 24 7.16                    | ... | 35 55.5     | M             | Nov. 15                                     | ... | 3 14.28    | ...       | 59 41.1          | R          |                            |     |            |               |                           |   |   |           |
| <b>3</b> <i>16 Ceti β</i>    |            |                            |     |             |               |   |     |            |           | 17               | ...        | 3 14.22                    | ... | 59 41.5    | R             |                           |   |   |           |
| Jan. 1                       | ...        | 0 37 46.10                 | ... | 108 37 25.1 | M             | 18  | ... | 3 14.20    | ...       | 59 43.2          | R          |                            |     |            |               |                           |   |   |           |
| 2                            | ...        | 37 45.87                   | ... | 37 26.5     | M             | 26  | ... | 3 14.31    | ...       | 59 40.3          | R          |                            |     |            |               |                           |   |   |           |
| <b>4</b> <i>58 Piscium.</i>  |            |                            |     |             |               |   |     |            |           | 29               | ...        | 3 14.24                    | ... | 59 40.5    | R             |                           |   |   |           |
| Nov. 15                      | ...        | 0 40 58.25                 | ... | 78 39 32.8  | R             | Dec. 1                                      | ... | 3 14.27    | ...       | 59 39.9          | R          |                            |     |            |               |                           |   |   |           |
| <b>5</b> <i>63 Piscium δ</i> |            |                            |     |             |               |   |     |            |           | 29               | ...        | 3 14.33                    | ... | 59 42.2    | M             |                           |   |   |           |
| Jan. 2                       | ...        | 0 42 39.68                 | ... | 83 2 47.6   | M             | 30  | ... | 3 14.26    | ...       | 59 40.6          | M          |                            |     |            |               |                           |   |   |           |
| 3                            | ...        | 42 39.72                   | ... | 2 48.0      | M             | 31  | ... | 3 14.30    | ...       | 59 39.7          | M          |                            |     |            |               |                           |   |   |           |
| 5                            | ...        | 42 39.91                   | ... | 2 47.2      | M             | <b>10</b> <i>R. P. L. 18.</i>               |     |            |           |                  |            |                            |     |            |               |                           |   |   |           |
| <b>6</b> <i>R. P. L. 10.</i> |            |                            |     |             |               |   |     |            |           | Nov. 17          | ...        | 1 18 54.77                 | 3   | 2 2 32.0   | R             |                           |   |   |           |
| Jan. 3                       | ...        | 0 51 41.18                 | 2   | 1 35 54.6   | M             | 18  | ... | 18 54.15   | 3         | 2 35.8           | R          |                            |     |            |               |                           |   |   |           |
| Oct. 28                      | ...        | 51 42.08                   | 3   | 35 53.6     | M             | <b>11</b> <i>1 Ursæ Minoris α, Polaris.</i> |     |            |           |                  |            |                            |     |            |               |                           |   |   |           |
| Nov. 17                      | ...        | 51 44.22                   | 3   | 35 55.0     | R             | Jan. 8                                      | ... | 1 16 13.52 | 3         | 1 18 35.5        | M          |                            |     |            |               |                           |   |   |           |
| 18                           | ...        | 51 43.31                   | 3   | 35 56.6     | R             | 9   | ... | 16 13.39   | 3         | 18 33.6          | M          |                            |     |            |               |                           |   |   |           |
| 26                           | ...        | 51 40.13                   | 3   | 35 53.3     | R             | Nov. 26                                     | ... | 16 12.52   | 3         | 18 33.5          | R          |                            |     |            |               |                           |   |   |           |
| 29                           | ...        | 51 41.05                   | 3   | 35 55.2     | R             |   |     |            |           |                  |            |                            |     |            |               |                           |   |   |           |
| Dec. 3                       | ...        | 51 41.29                   | 3   | 35 54.4     | M             |   |     |            |           |                  |            |                            |     |            |               |                           |   |   |           |
| 4                            | ...        | 51 41.98                   | 3   | 35 54.4     | M             |   |     |            |           |                  |            |                            |     |            |               |                           |   |   |           |

*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date.  | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. |
|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|   |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                  |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>1 Ursæ Minoris <math>\alpha</math>, Polaris—s.p.</b> |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Apl. 23   | ...        | 1                          | 16 | 13.04 | 3             | 1                         | 18 | 36.2 | R         | Jan. 2           | ...        | 2                          | 27 | 44.64 | 3             | 3                         | 27 | 32.5 | M         |
| 24  | ...        |                            | 16 | 13.62 | 3             |                           | 18 | 38.6 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 25  | ...        |                            | 16 | 12.01 | 3             |                           | 18 | 37.6 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>12 99 Piscium <math>\eta</math></b>                  |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 1  | ...        | 1                          | 25 | 16.45 | ...           | 75                        | 15 | 8.9  | M         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>13 Lalande 2806.</b>                                 |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Dec. 23   | 8.5        | 1                          | 26 | 36.10 | ...           | 77                        | 26 | 5.7  | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 24  | 8.5        |                            | 26 | 36.27 | ...           |                           | 26 | 6.3  | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 26  | 8.5        |                            | 26 | 36.24 | ...           |                           | 26 | 6.6  | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 27  | 8.5        |                            | 26 | 36.24 | ...           |                           | 26 | 6.8  | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 29  | 8.5        |                            | 26 | 36.23 | ...           |                           | 26 | 9.3  | M         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>14 110 Piscium <math>\sigma</math></b>               |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Nov. 18   | ...        | 1                          | 39 | 16.23 | ...           | 81                        | 25 | 35.4 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 22  | ...        |                            | 39 | 16.05 | ...           |                           | 25 | 34.4 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 26  | ...        |                            | 39 | 16.08 | ...           |                           | 25 | 34.8 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 29  | ...        |                            | 39 | 16.12 | ...           |                           | 25 | 34.5 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| Dec. 1  | ...        |                            | 39 | 16.11 | ...           |                           | 25 | 33.7 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 3   | ...        |                            | 39 | 16.12 | ...           |                           | 25 | 35.7 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 4   | ...        |                            | 39 | 16.12 | ...           |                           | 25 | 36.3 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 11  | ...        |                            | 39 | 16.06 | ...           |                           | 25 | 36.7 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 12  | ...        |                            | 39 | 16.03 | ...           |                           | 25 | 36.2 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 23  | ...        |                            | 39 | 16.10 | ...           |                           | 25 | 33.7 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>15 8 Arietis <math>\epsilon</math></b>               |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 7  | ...        | 1                          | 51 | 0.69  | ...           | 72                        | 44 | 56.9 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 8   | ...        |                            | 51 | 0.71  | ...           |                           | 44 | 57.9 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>16 13 Arietis <math>\alpha</math></b>                |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 1  | ...        | 2                          | 0  | 37.93 | ...           | 67                        | 5  | 11.7 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 2   | ...        |                            | 0  | 38.10 | ...           |                           | 5  | 13.3 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>17 67 Ceti.</b>                                      |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 1  | ...        | 2                          | 11 | 11.88 | ...           | 96                        | 57 | 26.9 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 2   | ...        |                            | 11 | 11.86 | ...           |                           | 57 | 25.9 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 3   | ...        |                            | 11 | 11.83 | ...           |                           | 57 | 26.3 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 5   | ...        |                            | 11 | 11.81 | ...           |                           | 57 | 27.4 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>18 R. P. L. 26.</b>                                  |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 2  | ...        | 2                          | 27 | 44.64 | 3             | 3                         | 27 | 32.5 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>19 43 Arietis <math>\sigma</math></b>                |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 5  | ...        | 2                          | 45 | 5.34  | ...           | 75                        | 23 | 45.9 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 7   | ...        |                            | 45 | 5.29  | ...           |                           | 23 | 47.5 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 8   | ...        |                            | 45 | 5.41  | ...           |                           | 23 | 46.7 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| Nov. 18   | ...        |                            | 45 | 5.28  | ...           |                           | 23 | 46.8 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 22  | ...        |                            | 45 | 5.37  | ...           |                           | 23 | 45.7 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 26  | ...        |                            | 45 | 5.31  | ...           |                           | 23 | 45.7 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| Dec. 3  | ...        |                            | 45 | 5.21  | ...           |                           | 23 | 46.3 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 4   | ...        |                            | 45 | 5.26  | ...           |                           | 23 | 45.9 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 11  | ...        |                            | 45 | 5.32  | ...           |                           | 23 | 46.1 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 12  | ...        |                            | 45 | 5.26  | ...           |                           | 23 | 47.8 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 23  | ...        |                            | 45 | 5.27  | ...           |                           | 23 | 47.0 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 24  | ...        |                            | 45 | 5.26  | ...           |                           | 23 | 45.4 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| 26  | ...        |                            | 45 | 5.25  | ...           |                           | 23 | 47.1 | R         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>20 Stone 1223.</b>                                   |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 2  | ...        | 2                          | 52 | 29.74 | ...           | 154                       | 28 | 29.6 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 8   | ...        |                            | 52 | 29.79 | ...           |                           | 28 | 30.9 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>21 92 Ceti <math>\alpha</math>, Menkar.</b>          |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 9  | ...        | 2                          | 56 | 12.96 | ...           | 86                        | 21 | 59.3 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 10  | ...        |                            | 56 | 12.98 | ...           |                           | 21 | 59.6 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>22 57 Arietis <math>\delta</math></b>                |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| Jan. 5  | ...        | 3                          | 4  | 59.71 | ...           | 70                        | 42 | 45.8 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 10  | ...        |                            | 4  | 59.80 | ...           |                           | 42 | 45.6 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 21  | ...        |                            | 4  | 59.86 | ...           |                           | 42 | 46.9 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 22  | ...        |                            | 4  | 59.79 | ...           |                           | 42 | 46.7 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 23  | ...        |                            | 4  | 59.78 | ...           |                           | 42 | 46.5 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 24  | ...        |                            | 4  | 59.68 | ...           |                           | 42 | 46.5 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| Dec. 3  | ...        |                            | 4  | 59.64 | ...           |                           | 42 | 47.2 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| 4   | ...        |                            | 4  | 59.69 | ...           |                           | 42 | 48.3 | M         |                  |            |                            |    |       |               |                           |    |      |           |
| <b>23 R. P. L. 33.—s.p.</b>                             |            |                            |    |       |               |                           |    |      |           |                  |            |                            |    |       |               |                           |    |      |           |
| June 21   | ...        | 3                          | 5  | 1.34  | 2             | 5                         | 30 | 11.9 | M         |                  |            |                            |    |       |               |                           |    |      |           |

*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date.  | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |      |      | Observer.   | Number and Date.  | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |      |      | Observer. |
|---|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|---|---|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|   |            | h.                         | m.    | s.    |               | o.                        | '    | "    |   |   |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |
| <b>24</b> <i>1 Tauri <math>\alpha</math>, Var. 5.</i>     |            |                            |       |       |               |                           |      |      |   | <b>31</b> <i>19 Orionis <math>\beta</math>, Rigel.</i>              |            |                            |       |       |               |                           |      |      |           |
| Jan. 2  | ...        | 3                          | 18    | 34.23 | ...           | 81                        | 22   | 48.8 | M   | Jan. 9  | ...        | 5                          | 8     | 57.81 | ...           | 98                        | 20   | 18.8 | M         |
| 7   | ...        | 18                         | 34.33 | ...   |               | 22                        | 49.5 | M    | <b>32</b> <i>112 Tauri <math>\beta</math></i>     |   |            |                            |       |       |               |                           |      |      |           |
| 9   | ...        | 18                         | 34.28 | ...   |               | 22                        | 49.8 | M    | Jan. 8  | ...   | 5          | 18                         | 57.45 | ...   | 61            | 29                        | 34.1 | M    |           |
| 21  | ...        | 18                         | 34.13 | ...   |               | 22                        | 49.6 | M    | <b>33</b> <i>R. P. L. 40.</i>                     |   |            |                            |       |       |               |                           |      |      |           |
| 22  | ...        | 18                         | 34.29 | ...   | 5             | 22                        | 47.4 | M    | Jan. 9  | ...   | 5          | 24                         | 55.15 | 3     | 4             | 51                        | 57.1 | M    |           |
| 23  | ...        | 18                         | 34.36 | ...   | 1             | 22                        | 48.0 | M    | 21  | ...   | 24         | 56.66                      | 3     |       | 51            | 56.5                      | M    |      |           |
| <b>25</b> <i>R. P. L. 34—s.p.</i>                         |            |                            |       |       |               |                           |      |      |   | 22  | ...        | 24                         | 55.66 | 3     |               | 51                        | 55.9 | M    |           |
| June 20   | ...        | 3                          | 28    | 39.17 | 3             | 3                         | 43   | 19.7 | M   | <b>34</b> <i>34 Orionis <math>\delta</math>, Var. 1.</i>            |            |                            |       |       |               |                           |      |      |           |
| 24  | ...        | 28                         | 38.72 | ...   | 3             | 43                        | 18.0 | R    | Jan. 24   | ...   | 5          | 26                         | 4.84  | ...   | 90            | 23                        | 5.4  | M    |           |
| 28  | ...        | 28                         | 40.53 | ...   | 3             | 43                        | 17.3 | R    | 28  | ...   | 26         | 4.88                       | ...   | 23    | 8.9           | M                         |      |      |           |
| <b>26</b> <i>25 Tauri <math>\eta</math>, Alcyone.</i>     |            |                            |       |       |               |                           |      |      |   | <b>35</b> <i>R. P. L. 41.</i>                                       |            |                            |       |       |               |                           |      |      |           |
| Jan. 2  | ...        | 3                          | 40    | 35.36 | ...           | 66                        | 15   | 19.2 | M   | Jan. 23   | ...        | 5                          | 29    | 32.98 | 3             | 4                         | 44   | 55.9 | M         |
| 5   | ...        | 40                         | 35.29 | ...   |               | 15                        | 18.5 | M    | <b>36</b> <i>46 Orionis <math>\epsilon</math></i> |   |            |                            |       |       |               |                           |      |      |           |
| <b>27</b> <i>34 Eridani <math>\gamma^1</math></i>         |            |                            |       |       |               |                           |      |      |   | Jan. 24   | ...        | 5                          | 30    | 19.76 | ...           | 91                        | 16   | 38.9 | M         |
| Jan. 7  | ...        | 3                          | 52    | 36.98 | ...           | 108                       | 50   | 23.5 | M   | <b>37</b> <i>58 Orionis <math>\alpha</math>, Var. 2, Betelgeux.</i> |            |                            |       |       |               |                           |      |      |           |
| 8   | ...        | 52                         | 37.12 | ...   |               | 50                        | 23.3 | M    | Jan. 21   | ...   | 5          | 48                         | 53.49 | ...   | 82            | 36                        | 58.5 | M    |           |
| 9   | ...        | 52                         | 37.05 | ...   |               | 50                        | 24.1 | M    | 22  | ...   | 48         | 53.46                      | ...   | 36    | 57.3          | M                         |      |      |           |
| 10  | ...        | 52                         | 36.91 | ...   |               | 50                        | 23.5 | M    | 23  | ...   | 48         | 53.42                      | ...   | 36    | 57.2          | M                         |      |      |           |
| 21  | ...        | 52                         | 37.11 | ...   |               | 50                        | 21.3 | M    | 24  | ...   | 48         | 53.37                      | ...   | 36    | 57.2          | M                         |      |      |           |
| 22  | ...        | 52                         | 36.96 | ...   |               | 50                        | 23.0 | M    | 28  | ...   | 48         | 53.39                      | ...   | 36    | 58.4          | M                         |      |      |           |
| <b>28</b> <i>R. P. L. 35.</i>                             |            |                            |       |       |               |                           |      |      |   | 30  | ...        | 48                         | 53.47 | ...   | 36            | 56.7                      | M    |      |           |
| Jan. 7  | ...        | 4                          | 0     | 29.79 | 3             | 4                         | 45   | 6.5  | M   | 31  | ...        | 48                         | 53.42 | ...   | 36            | 56.8                      | M    |      |           |
| 9   | ...        | 0                          | 31.11 | ...   | 3             | 45                        | 10.1 | M    | Feb. 2  | ...   | 48         | 53.66                      | ...   | 36    | 56.5          | R                         |      |      |           |
| 21  | ...        | 0                          | 31.88 | ...   | 3             | 45                        | 6.6  | M    | 5   | ...   | 48         | 53.54                      | ...   | 36    | 56.5          | R                         |      |      |           |
| 22  | ...        | 0                          | 30.43 | ...   | 3             | 45                        | 8.6  | M    | <b>38</b> <i>R. P. L. 43.</i>                     |   |            |                            |       |       |               |                           |      |      |           |
| <b>29</b> <i>74 Tauri <math>\epsilon</math></i>           |            |                            |       |       |               |                           |      |      |   | Jan. 21   | ...        | 6                          | 0     | 56.40 | 3             | 3                         | 14   | 15.9 | M         |
| Jan. 7  | ...        | 4                          | 21    | 50.62 | ...           | 71                        | 4    | 39.7 | M   |   |            |                            |       |       |               |                           |      |      |           |
| 8   | ...        | 21                         | 50.42 | ...   |               | 4                         | 42.0 | M    |   |   |            |                            |       |       |               |                           |      |      |           |
| 9   | ...        | 21                         | 50.46 | ...   |               | 4                         | 41.0 | M    |   |   |            |                            |       |       |               |                           |      |      |           |
| <b>30</b> <i>87 Tauri <math>\alpha</math>, Aldebaran.</i> |            |                            |       |       |               |                           |      |      |   |   |            |                            |       |       |               |                           |      |      |           |
| Jan. 7  | ...        | 4                          | 29    | 15.73 | ...           | 73                        | 43   | 28.9 | M   |   |            |                            |       |       |               |                           |      |      |           |
| 9   | ...        | 29                         | 15.79 | ...   |               | 43                        | 29.3 | M    |   |   |            |                            |       |       |               |                           |      |      |           |
| 21  | ...        | 29                         | 15.83 | ...   |               | 43                        | 30.8 | M    |   |   |            |                            |       |       |               |                           |      |      |           |

## Separate Results of Madras Meridian Circle Observations in 1884.

| Number and Date.   | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. | Number and Date.                     | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. |
|--|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|--------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|  |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                                      |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>R. P. L. 43—s.p.</b>                                  |            |                            |    |       |               |                           |    |      |           | <b>47 R. P. L. 45—s.p.</b>           |            |                            |    |       |               |                           |    |      |           |
| June 21  | ...        | 6                          | 0  | 54.75 | 3             | 3                         | 14 | 16.9 | M         | Sep. 13                              | ...        | 7                          | 39 | 55.27 | 3             | 1                         | 1  | 32.9 | R         |
| July 18  | ...        |                            | 0  | 55.39 | 3             |                           | 14 | 19.9 | M         | 16                                   | ...        |                            | 39 | 54.36 | 3             |                           | 1  | 34.6 | M         |
| <b>39 13 Geminorum <math>\mu</math></b>                  |            |                            |    |       |               |                           |    |      |           | Oct. 3 ... 39 55.84 3 1 32.8 M       |            |                            |    |       |               |                           |    |      |           |
| Jan. 30  | ...        | 6                          | 15 | 56.51 | ...           | 67                        | 25 | 42.8 | M         | 6                                    | ...        |                            | 39 | 53.74 | 3             |                           | 1  | 31.8 | M         |
| <b>40 Anon.</b>  |            |                            |    |       |               |                           |    |      |           | 7 ... 39 52.74 2 1 32.0 M            |            |                            |    |       |               |                           |    |      |           |
| Jan. 22  | 8.0        | 6                          | 36 | 52.07 | 4             | 130                       | 22 | 0.1  | M         | 8                                    | ...        |                            | 39 | 53.74 | 3             |                           | 1  | 33.3 | M         |
| <b>41 51 Cephei (Hev.).</b>                              |            |                            |    |       |               |                           |    |      |           | 9 ... 39 54.11 3 1 33.7 M            |            |                            |    |       |               |                           |    |      |           |
| Jan. 21  | ...        | 6                          | 45 | 47.62 | 3             | 2                         | 46 | 28.6 | M         | 10                                   | ...        |                            | 39 | 54.63 | 3             |                           | 1  | 32.8 | M         |
| 23   | ...        |                            | 45 | 46.58 | 3             |                           | 46 | 28.8 | M         | <b>48 <math>\xi</math> Argús.</b>    |            |                            |    |       |               |                           |    |      |           |
| 24   | ...        |                            | 45 | 47.16 | 3             |                           | 46 | 28.5 | M         | Jan. 31                              | ...        | 7                          | 44 | 25.08 | ...           | 114                       | 34 | 8.3  | M         |
| 26   | ...        |                            | 45 | 46.91 | 3             |                           | 46 | 29.8 | M         | Feb. 2                               | ...        |                            | 44 | 24.89 | ...           |                           | 34 | 9.6  | R         |
| <b>51 Cephei (Hev.)—s.p.</b>                             |            |                            |    |       |               |                           |    |      |           | 5 ... 44 24.89 ... 34 8.7 R          |            |                            |    |       |               |                           |    |      |           |
| Aug. 7   | ...        | 6                          | 45 | 46.47 | 3             | 2                         | 46 | 33.4 | R         | 7                                    | ...        |                            | 44 | 24.82 | ...           |                           | 34 | 7.0  | R         |
| 18   | ...        |                            | 45 | 46.46 | 3             |                           | 46 | 32.5 | R         | 18                                   | ...        |                            | 44 | 24.89 | ...           |                           | 34 | 8.6  | R         |
| 19   | ...        |                            | 45 | 46.46 | 3             |                           | 46 | 27.0 | R         | 16                                   | ...        |                            | 44 | 24.82 | ...           |                           | 34 | 9.5  | R         |
| 20   | ...        |                            | 45 | 45.95 | 2             |                           | 46 | 31.4 | R         | 19                                   | ...        |                            | 44 | 24.92 | ...           |                           | 34 | 9.1  | R         |
| <b>42 Anon.</b>  |            |                            |    |       |               |                           |    |      |           | 22 ... 44 24.80 ... 34 8.8 R         |            |                            |    |       |               |                           |    |      |           |
| Jan. 30  | 10.0       | 6                          | 52 | 58.09 | 6             | 152                       | 55 | 52.5 | M         | 26                                   | ...        |                            | 44 | 24.70 | ...           |                           | 34 | 8.4  | R         |
| <b>43 21 Canis Majoris <math>\epsilon</math></b>         |            |                            |    |       |               |                           |    |      |           | 29 ... 44 24.72 ... 34 8.3 R         |            |                            |    |       |               |                           |    |      |           |
| Jan. 28  | ...        | 6                          | 54 | 4.01  | ...           | 118                       | 48 | 53.4 | M         | <b>49 R. P. L. 48—s.p.</b>           |            |                            |    |       |               |                           |    |      |           |
| <b>44 23 Canis Majoris <math>\gamma</math></b>           |            |                            |    |       |               |                           |    |      |           | Sep. 10 ... 7 47 5.92 3 3 58 16.4 R  |            |                            |    |       |               |                           |    |      |           |
| Jan. 22  | ...        | 6                          | 58 | 30.73 | ...           | 105                       | 27 | 44.5 | M         | 11                                   | ...        |                            | 47 | 5.41  | 3             |                           | 58 | 15.9 | R         |
| <b>45 Anon.</b>  |            |                            |    |       |               |                           |    |      |           | 24 ... 47 5.80 3 58 15.4 M           |            |                            |    |       |               |                           |    |      |           |
| Jan. 24  | 9.0        | 7                          | 1  | 47.71 | ...           | 60                        | 51 | 51.2 | M         | Oct. 4                               | ...        |                            | 47 | 5.94  | 3             |                           | 58 | 15.1 | M         |
| <b>46 10 Canis Minoris <math>\alpha</math>, Procyon.</b> |            |                            |    |       |               |                           |    |      |           | <b>50 R. P. L. 49.</b>               |            |                            |    |       |               |                           |    |      |           |
| Jan. 30  | ...        | 7                          | 38 | 18.74 | ...           | 84                        | 28 | 42.5 | M         | Jan. 30                              | ...        | 7                          | 49 | 0.68  | 3             | 5                         | 36 | 38.9 | M         |
| <b>47 R. P. L. 49—s.p.</b>                               |            |                            |    |       |               |                           |    |      |           | 31 ... 49 0.52 3 36 38.7 M           |            |                            |    |       |               |                           |    |      |           |
| Aug. 18  | ...        | 7                          | 48 | 59.77 | 3             | 5                         | 36 | 35.9 | R         | <b>51 15 Argús <math>\rho</math></b> |            |                            |    |       |               |                           |    |      |           |
| Oct. 11  | ...        |                            | 49 | 0.99  | 3             |                           | 36 | 41.7 | M         | Jan. 31                              | ...        | 8                          | 2  | 36.18 | ...           | 113                       | 58 | 14.3 | M         |
| 18   | ...        |                            | 49 | 0.91  | 3             |                           | 36 | 42.9 | M         | Feb. 2                               | ...        |                            | 2  | 36.08 | ...           |                           | 58 | 14.2 | R         |
| <b>48 R. P. L. 48—s.p.</b>                               |            |                            |    |       |               |                           |    |      |           | 5 ... 2 36.16 ... 58 13.4 R          |            |                            |    |       |               |                           |    |      |           |
| Sep. 10  | ...        | 7                          | 47 | 5.92  | 3             | 3                         | 58 | 16.4 | R         | <b>52</b>                            |            |                            |    |       |               |                           |    |      |           |
| 11   | ...        |                            | 47 | 5.41  | 3             |                           | 58 | 15.9 | R         | <b>53</b>                            |            |                            |    |       |               |                           |    |      |           |
| 24   | ...        |                            | 47 | 5.80  | 3             |                           | 58 | 15.4 | M         | <b>54</b>                            |            |                            |    |       |               |                           |    |      |           |
| Oct. 4   | ...        |                            | 47 | 5.94  | 3             |                           | 58 | 15.1 | M         | <b>55</b>                            |            |                            |    |       |               |                           |    |      |           |

*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date. | Magnitude.                 | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. | Number and Date. | Magnitude.                                | Mean Right Ascension 1884. |    |    | No. of Wires. | Mean Polar Distance 1884. |   |   | Observer. |
|------------------|----------------------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|------------------|---|----------------------------|----|----|---------------|---------------------------|---|---|-----------|
|                  |                            | h.                         | m.    | s.    |               | °                         | '  | "    |           |                  |   | h.                         | m. | s. |               | °                         | ' | " |           |
| Feb. 7           | ...                        | 8                          | 2     | 36.10 | ...           | 113                       | 58 | 12.7 | R         | <b>59</b>        | 76 <i>Cancri</i> $\kappa$                 |                            |    |    | ...           |                           |   |   | R         |
| 9                | ...                        | 2                          | 36.15 | ...   | 58            | 12.3                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| 13               | ...                        | 2                          | 36.15 | ...   | 58            | 13.7                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| 16               | ...                        | 2                          | 36.19 | ...   | 58            | 13.4                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| 19               | ...                        | 2                          | 36.11 | ...   | 58            | 13.8                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| 22               | ...                        | 2                          | 36.10 | ...   | 58            | 14.0                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| <b>52</b>        | <i>R. P. L. 53—s.p.</i>    |                            |       |       |               |                           |    |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Sep. 10          | ...                        | 8                          | 20    | 54.38 | 3             | 4                         | 32 | 26.5 | R         | <b>60</b>        | 83 <i>Cancri</i> .                        |                            |    |    | ...           |                           |   |   | R         |
| 24               | ...                        | 20                         | 55.95 | 3     | 32            | 25.6                      | M  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Feb. 13          | ...                        | 9                          | 12    | 30.47 | ...           | 71                        | 48 | 10.2 | R         |                  |   |                            |    |    |               |                           |   |   |           |
| 16               | ...                        | 12                         | 30.46 | ...   | 48            | 11.7                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| <b>53</b>        | <i>33 Cancri</i> $\eta$    |                            |       |       |               |                           |    |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Feb. 5           | ...                        | 8                          | 26    | 0.03  | ...           | 69                        | 9  | 55.5 | R         | <b>61</b>        | <i>R. P. L. 62—s.p.</i>                   |                            |    |    | ...           |                           |   |   | M         |
| 7                | ...                        | 26                         | 0.14  | ...   | 9             | 55.3                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Oct. 1           | ...                        | 9                          | 21    | 48.35 | 3             | 2                         | 21 | 41.0 | M         |                  |   |                            |    |    |               |                           |   |   |           |
| 3                | ...                        | 21                         | 49.26 | 3     | 21            | 47.1                      | M  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| 4                | ...                        | 21                         | 48.82 | 3     | 21            | 46.1                      | M  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| 8                | ...                        | 21                         | 48.19 | 3     | 21            | 47.0                      | M  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| <b>54</b>        | <i>R. P. L. 55—s.p.</i>    |                            |       |       |               |                           |    |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Oct. 2           | ...                        | 8                          | 31    | 44.57 | 3             | 5                         | 41 | 4.5  | M         | <b>62</b>        | 30 <i>Hydræ</i> $\alpha$ , <i>Var. 2.</i> |                            |    |    | ...           |                           |   |   | R         |
| 8                | ...                        | 31                         | 45.98 | 3     | 41            | 2.9                       | M  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Sep. 18          | ...                        | 9                          | 21    | 53.17 | ...           | 96                        | 9  | 22.7 | R         |                  |   |                            |    |    |               |                           |   |   |           |
| 19               | ...                        | 21                         | 53.33 | ...   | 9             | 22.0                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| <b>55</b>        | <i>11 Hydræ</i> $\epsilon$ |                            |       |       |               |                           |    |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Feb. 7           | ...                        | 8                          | 40    | 37.96 | ...           | 83                        | 9  | 31.2 | R         | <b>63</b>        | 2 <i>Leonis</i> $\omega$                  |                            |    |    | ...           |                           |   |   | R         |
| 9                | ...                        | 40                         | 37.95 | ...   | 9             | 22.4                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Feb. 9           | ...                        | 9                          | 23    | 14.70 | ...           | 80                        | 26 | 16.3 | R         |                  |   |                            |    |    |               |                           |   |   |           |
| <b>56</b>        | <i>R. P. L. 60.</i>        |                            |       |       |               |                           |    |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Feb. 2           | ...                        | 8                          | 50    | 57.75 | 3             | 5                         | 21 | 21.7 | R         | <b>64</b>        | <i>Lacaille 3980.</i>                     |                            |    |    | ...           |                           |   |   | R         |
| 5                | ...                        | 50                         | 57.72 | 3     | 21            | 23.2                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Feb. 7           | 9.0                        | 9                          | 35    | 5.72  | ...           | 148                       | 39 | 5.2  | R         |                  |   |                            |    |    |               |                           |   |   |           |
| <b>58</b>        | <i>R. P. L. 60—s.p.</i>    |                            |       |       |               |                           |    |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Sep. 10          | ...                        | 8                          | 50    | 57.40 | 3             | 5                         | 21 | 22.8 | R         | <b>65</b>        | <i>R. P. L. 69—s.p.</i>                   |                            |    |    | ...           |                           |   |   | M         |
| 24               | ...                        | 50                         | 57.17 | 3     | 21            | 24.4                      | M  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Oct. 3           | ...                        | 50                         | 57.70 | 3     | 21            | 20.6                      | M  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Oct. 1           | ...                        | 9                          | 39    | 8.47  | 3             | 2                         | 52 | 12.1 | M         |                  |   |                            |    |    |               |                           |   |   |           |
| 6                | ...                        | 39                         | 10.78 | 3     | 52            | 12.0                      | M  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| <b>57</b>        | <i>65 Cancri</i> $\alpha$  |                            |       |       |               |                           |    |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Feb. 9           | ...                        | 8                          | 52    | 8.54  | ...           | 77                        | 41 | 38.1 | R         | <b>66</b>        | 17 <i>Leonis</i> $\epsilon$               |                            |    |    | ...           |                           |   |   | R         |
| Feb. 22          | ...                        | 9                          | 39    | 16.20 | ...           | 65                        | 41 | 32.4 | R         |                  |   |                            |    |    |               |                           |   |   |           |
| 26               | ...                        | 39                         | 16.08 | ...   | 41            | 32.1                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| <b>58</b>        | <i>Anon.</i>               |                            |       |       |               |                           |    |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| Feb. 7           | 9.0                        | 8                          | 54    | 40.51 | ...           | 132                       | 59 | 53.3 | R         | <b>67</b>        | <i>R. P. L. 70.</i>                       |                            |    |    | ...           |                           |   |   | R         |
| Feb. 7           | ...                        | 9                          | 49    | 50.02 | 3             | 5                         | 31 | 24.3 | R         |                  |   |                            |    |    |               |                           |   |   |           |
| 9                | ...                        | 49                         | 49.98 | 3     | 31            | 25.2                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| 13               | ...                        | 49                         | 49.59 | 3     | 31            | 23.0                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |
| 16               | ...                        | 49                         | 49.76 | 3     | 31            | 23.2                      | R  |      |           |                  |   |                            |    |    |               |                           |   |   |           |

## Separate Results of Madras Meridian Circle Observations in 1884.

| Number and Date.                                  | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |    |                                     | Observer. | Number and Date.                        | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. |
|---|------------|----------------------------|-------|-------|---------------|---------------------------|----|-------------------------------------|-----------|---|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|
|   |            | h.                         | m.    | s.    |               | °                         | '  | "                                   |           |   |            | h.                         | m.    | s.    |               | °                         | '  | "    |           |
| <b>R. P. L. 70.—s.p.</b>                          |            |                            |       |       |               |                           |    |                                     |           | <b>74 Yarnall 4465.</b>                 |            |                            |       |       |               |                           |    |      |           |
| Sep. 24   | ...        | 9                          | 49    | 50.82 | 3             | 5                         | 31 | 27.2                                | M         | Apl. 28                                 | 5.6        | 10                         | 37    | 6.32  | ...           | 66                        | 12 | 16.4 | R         |
| <b>68 32 Leonis <math>\alpha</math>, Regulus.</b> |            |                            |       |       |               |                           |    |                                     |           | Apl. 29                                 | 5.6        | 37                         | 6.41  | ...   | 12            | 15.5                      | R  |      |           |
| Feb. 26   | ...        | 10                         | 2     | 11.67 | ...           | 77                        | 27 | 56.7                                | R         | 30                                      | 5.6        | 37                         | 6.43  | 4     | 12            | 16.0                      | R  |      |           |
| 29  | ...        | 2                          | 11.60 | ...   | 27            | 54.9                      | R  | May 1                               | 5.6       | 37                                      | 6.35       | ...                        | 12    | 17.5  | M             |                           |    |      |           |
| Apl. 16   | ...        | 2                          | 11.56 | ...   | 27            | 55.4                      | R  | 2                                   | 5.6       | 37                                      | 6.45       | ...                        | 12    | 17.7  | M             |                           |    |      |           |
| <b>69 R. P. L. 72.</b>                            |            |                            |       |       |               |                           |    |                                     |           | <b>75 Anon.</b>                         |            |                            |       |       |               |                           |    |      |           |
| Apl. 17   | ...        | 10                         | 12    | 36.53 | 3             | 5                         | 9  | 35.4                                | R         | Apl. 16                                 | 9.0        | 10                         | 39    | 7.37  | ...           | 65                        | 48 | 41.5 | R         |
| 18  | ...        | 12                         | 36.64 | 3     | 9             | 35.1                      | R  | 17                                  | 9.0       | 39                                      | 7.35       | ...                        | 48    | 41.3  | R             |                           |    |      |           |
| 21  | ...        | 12                         | 36.46 | 3     | 9             | 36.1                      | R  | 22                                  | 9.0       | 39                                      | 6.89       | ...                        | 48    | 41.2  | R             |                           |    |      |           |
| 22  | ...        | 12                         | 37.30 | 3     | 9             | 35.4                      | R  | 24                                  | 9.0       | 39                                      | 7.08       | ...                        | 48    | 39.4  | R             |                           |    |      |           |
| <b>R. P. L. 72.—s.p.</b>                          |            |                            |       |       |               |                           |    |                                     |           | <b>76 Anon.</b>                         |            |                            |       |       |               |                           |    |      |           |
| Sep. 24   | ...        | 10                         | 12    | 36.87 | 3             | 5                         | 9  | 36.9                                | M         | Apl. 18                                 | 9.0        | 10                         | 41    | 36.80 | ...           | 66                        | 3  | 1.2  | R         |
| Oct. 1  | ...        | 12                         | 36.66 | 3     | 9             | 37.1                      | M  | 21                                  | 9.0       | 41                                      | 37.02      | ...                        | 3     | 1.0   | R             |                           |    |      |           |
| <b>70 41 Leonis <math>\gamma^1</math></b>         |            |                            |       |       |               |                           |    |                                     |           | 23                                      | 9.0        | 41                         | 36.81 | ...   | 2             | 59.8                      | R  |      |           |
| Feb. 29   | ...        | 10                         | 13    | 34.54 | ...           | 69                        | 34 | 19.5                                | R         | 25                                      | 9.0        | 41                         | 36.86 | ...   | 2             | 59.7                      | R  |      |           |
| Apl. 16   | ...        | 13                         | 34.56 | ...   | 34            | 19.6                      | R  | 26                                  | 9.0       | 41                                      | 36.83      | ...                        | 2     | 59.7  | R             |                           |    |      |           |
| 19  | ...        | 13                         | 34.56 | ...   | 34            | 19.0                      | R  | <b>77 53 Leonis <math>l</math>.</b> |           |   |            |                            |       |       |               |                           |    |      |           |
| <b>71 W. B. E. X. 336.</b>                        |            |                            |       |       |               |                           |    |                                     |           | Apl. 17                                 | ...        | 10                         | 43    | 9.55  | ...           | 78                        | 50 | 26.9 | R         |
| Apl. 16   | 9.0        | 10                         | 21    | 7.84  | ...           | 92                        | 27 | 41.8                                | R         | <b>78 63 Leonis <math>\chi</math></b>   |            |                            |       |       |               |                           |    |      |           |
| 18  | 9.0        | 21                         | 7.69  | ...   | 27            | 40.8                      | R  | Apl. 16                             | ...       | 10                                      | 59         | 1.97                       | ...   | 82    | 2             | 12.4                      | R  |      |           |
| 19  | 9.0        | 21                         | 7.81  | ...   | 27            | 41.4                      | R  | 17                                  | ...       | 59                                      | 1.98       | ...                        | 2     | 12.5  | R             |                           |    |      |           |
| 22  | 9.0        | 21                         | 7.59  | ...   | 27            | 41.0                      | R  | <b>79 R. P. L. 79.—s.p.</b>         |           |   |            |                            |       |       |               |                           |    |      |           |
| 24  | 9.0        | 21                         | 7.60  | ...   | 27            | 41.2                      | R  | Oct. 1                              | ...       | 11                                      | 0          | 33.92                      | 3     | 1     | 43            | 49.0                      | M  |      |           |
| <b>72 Anon.</b>                                   |            |                            |       |       |               |                           |    |                                     |           | 2                                       | ...        | 0                          | 33.57 | 3     | 43            | 47.4                      | M  |      |           |
| Apl. 17   | 7.5        | 10                         | 21    | 42.27 | ...           | 92                        | 55 | 39.1                                | R         | 4                                       | ...        | 0                          | 33.08 | 2     | 43            | 49.1                      | M  |      |           |
| 21  | 7.5        | 21                         | 42.17 | ...   | 55            | 39.6                      | R  | 6                                   | ...       | 0                                       | 32.54      | 3                          | 43    | 46.6  | M             |                           |    |      |           |
| 23  | ...        | 21                         | 42.02 | ...   | 55            | 38.8                      | R  | 8                                   | ...       | 0                                       | 31.96      | 3                          | 43    | 48.6  | M             |                           |    |      |           |
| 25  | 7.5        | 21                         | 42.27 | ...   | 55            | 38.4                      | R  | 9                                   | ...       | 0                                       | 32.36      | 3                          | 43    | 48.6  | M             |                           |    |      |           |
| 26  | 7.5        | 21                         | 42.29 | ...   | 55            | 38.9                      | R  | 10                                  | ...       | 0                                       | 33.41      | 3                          | 43    | 47.0  | M             |                           |    |      |           |
| <b>73 47 Leonis <math>\rho</math></b>             |            |                            |       |       |               |                           |    |                                     |           | <b>80 68 Leonis <math>\delta</math></b> |            |                            |       |       |               |                           |    |      |           |
| Apl. 17   | ...        | 10                         | 26    | 42.18 | ...           | 80                        | 5  | 47.6                                | R         | Apl. 18                                 | ...        | 11                         | 7     | 56.37 | ...           | 68                        | 50 | 27.6 | R         |
| <b>74 Yarnall 4465.</b>                           |            |                            |       |       |               |                           |    |                                     |           | 19                                      | ...        | 7                          | 56.27 | ...   | 50            | 27.8                      | R  |      |           |

*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date.                   | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. | Number and Date.                    | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. |
|------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|-------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                    |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                                     |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>81</b> <i>84 Leonis</i> $\tau$  |            |                            |    |       |               |                           |    |      |           | <b>86</b> <i>R. P. L. 89.</i>       |            |                            |    |       |               |                           |    |      |           |
| Apl. 22                            | ...        | 11                         | 21 | 58.26 | ...           | 86                        | 30 | 17.4 | R         | Apl. 16                             | ...        | 11                         | 58 | 51.10 | 3             | 3                         | 46 | 10.4 | R         |
| 23                                 | ...        |                            | 21 | 58.25 | ...           |                           | 30 | 16.4 | R         | 17                                  | ...        |                            | 58 | 53.71 | 3             |                           | 46 | 9.7  | R         |
| 24                                 | ...        |                            | 21 | 58.25 | ...           |                           | 30 | 15.9 | R         | 18                                  | ...        |                            | 58 | 53.93 | 3             |                           | 46 | 10.2 | R         |
| 25                                 | ...        |                            | 21 | 58.24 | ...           |                           | 30 | 16.5 | R         | 19                                  | ...        |                            | 58 | 53.72 | 3             |                           | 46 | 11.6 | R         |
| 26                                 | ...        |                            | 21 | 58.27 | ...           |                           | 30 | 16.4 | R         | <i>R. P. L. 89—s.p.</i>             |            |                            |    |       |               |                           |    |      |           |
| 28                                 | ...        |                            | 21 | 58.26 | ...           |                           | 30 | 16.3 | R         | Nov. 17                             | ...        | 11                         | 58 | 48.49 | 3             | 3                         | 46 | 13.9 | R         |
| 29                                 | ...        |                            | 21 | 58.27 | ...           |                           | 30 | 16.3 | R         | 18                                  | ...        |                            | 58 | 48.12 | 2             |                           | 46 | 10.4 | R         |
| 30                                 | ...        |                            | 21 | 58.24 | ...           |                           | 30 | 17.8 | R         | <b>87</b> <i>2 Corvi</i> $\epsilon$ |            |                            |    |       |               |                           |    |      |           |
| May 1                              | ...        |                            | 21 | 58.32 | ...           |                           | 30 | 19.3 | M         | Apl. 18                             | ...        | 12                         | 4  | 9.43  | ...           | 111                       | 58 | 25.6 | R         |
| 2                                  | ...        |                            | 21 | 58.29 | ...           |                           | 30 | 18.8 | M         | <b>88</b> <i>R. P. L. 92.</i>       |            |                            |    |       |               |                           |    |      |           |
| <b>82</b> <i>94 Leonis</i> $\beta$ |            |                            |    |       |               |                           |    |      |           | Apl. 17                             | ...        | 12                         | 13 | 27.27 | 3             | 2                         | 55 | 6.8  | R         |
| Apl. 18                            | ...        | 11                         | 43 | 8.59  | ...           | 74                        | 46 | 45.7 | R         | <i>R. P. L. 92—s.p.</i>             |            |                            |    |       |               |                           |    |      |           |
| <b>83</b> <i>R. P. L. 87—s.p.</i>  |            |                            |    |       |               |                           |    |      |           | Oct. 28                             | ...        | 12                         | 13 | 27.27 | 3             | 2                         | 55 | 8.3  | M         |
| Oct. 27                            | ...        | 11                         | 53 | 36.88 | 3             | 2                         | 21 | 29.9 | M         | Nov. 26                             | ...        |                            | 13 | 27.98 | 3             |                           | 55 | 12.2 | R         |
| 28                                 | ...        |                            | 53 | 36.78 | 3             |                           | 21 | 31.2 | M         | <b>89</b> <i>15 Virginis</i> $\eta$ |            |                            |    |       |               |                           |    |      |           |
| Nov. 26                            | ...        |                            | 53 | 35.17 | 3             |                           | 21 | 35.3 | R         | Apl. 16                             | ...        | 12                         | 13 | 58.22 | ...           | 90                        | 1  | 20.0 | R         |
| 29                                 | ...        |                            | 53 | 34.33 | 3             |                           | 21 | 34.0 | R         | 19                                  | ...        |                            | 13 | 58.23 | ...           |                           | 1  | 20.4 | R         |
| Dec. 1                             | ...        |                            | 53 | 34.36 | 3             |                           | 21 | 35.1 | R         | 21                                  | ...        |                            | 13 | 58.19 | ...           |                           | 1  | 19.0 | R         |
| <b>84</b> <i>8 Virginis</i> $\pi$  |            |                            |    |       |               |                           |    |      |           | <b>90</b> <i>R. P. L. 93.</i>       |            |                            |    |       |               |                           |    |      |           |
| Apl. 22                            | ...        | 11                         | 54 | 55.73 | ...           | 82                        | 44 | 18.8 | R         | Apl. 23                             | ...        | 12                         | 14 | 20.80 | 3             | 1                         | 39 | 24.6 | R         |
| 23                                 | ...        |                            | 54 | 55.70 | ...           |                           | 44 | 17.8 | R         | <i>R. P. L. 93--s.p.</i>            |            |                            |    |       |               |                           |    |      |           |
| 24                                 | ...        |                            | 54 | 55.70 | ...           |                           | 44 | 16.7 | R         | Nov. 18                             | ...        | 12                         | 14 | 22.58 | 3             | 1                         | 39 | 28.1 | R         |
| 25                                 | ...        |                            | 54 | 55.77 | ...           |                           | 44 | 17.3 | R         | <b>91</b> <i>Lalande 23300.</i>     |            |                            |    |       |               |                           |    |      |           |
| 26                                 | ...        |                            | 54 | 55.72 | ...           |                           | 44 | 17.4 | R         | Apl. 16                             | 8.7        | 12                         | 21 | 50.01 | ...           | 91                        | 44 | 16.0 | R         |
| 28                                 | ...        |                            | 54 | 55.68 | ...           |                           | 44 | 18.8 | R         | 17                                  | 8.7        |                            | 21 | 49.98 | ...           |                           | 44 | 15.3 | R         |
| 29                                 | ...        |                            | 54 | 55.71 | ...           |                           | 44 | 17.8 | R         | 18                                  | 8.7        |                            | 21 | 49.82 | ...           |                           | 44 | 15.9 | R         |
| 30                                 | ...        |                            | 54 | 55.65 | ...           |                           | 44 | 18.2 | R         | 19                                  | 8.7        |                            | 21 | 49.75 | ...           |                           | 44 | 16.0 | R         |
| May 1                              | ...        |                            | 54 | 55.69 | ...           |                           | 44 | 19.9 | M         | 21                                  | 8.7        |                            | 21 | 49.74 | ...           |                           | 44 | 16.2 | R         |
| 2                                  | ...        |                            | 54 | 55.74 | ...           |                           | 44 | 18.5 | M         | <b>85</b> <i>Anon.</i>              |            |                            |    |       |               |                           |    |      |           |
| <b>85</b> <i>Anon.</i>             |            |                            |    |       |               |                           |    |      |           | Apl. 26                             | 9.0        | 11                         | 58 | 39.53 | ...           | 86                        | 44 | 0.8  | R         |
| Apl. 26                            | 9.0        |                            | 58 | 39.53 | ...           |                           | 44 | 3.1  | R         | 28                                  | 9.0        |                            | 58 | 39.53 | ...           |                           | 44 | 2.2  | R         |
| 28                                 | 9.0        |                            | 58 | 39.53 | ...           |                           | 44 | 2.2  | R         | 29                                  | 9.0        |                            | 58 | 39.66 | ...           |                           | 44 | 2.6  | R         |
| 29                                 | 9.0        |                            | 58 | 39.66 | ...           |                           | 44 | 2.6  | R         | 30                                  | 9.0        |                            | 58 | 39.71 | ...           |                           | 44 | 1.9  | M         |
| 30                                 | 9.0        |                            | 58 | 39.71 | ...           |                           | 44 | 1.9  | M         | May 1                               | 9.0        |                            | 58 | 39.67 | ...           |                           | 44 |      |           |
| May 1                              | 9.0        |                            | 58 | 39.67 | ...           |                           | 44 |      |           |                                     |            |                            |    |       |               |                           |    |      |           |



*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date.  | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. | Number and Date.  | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. |   |
|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|---|
|   |            | h.                         | m. | s.    |               | °                         | '  | "    |           |   |            | h.                         | m. | s.    |               | °                         | '  | "    |           |   |
| <b>92</b> <i>R. P. L. 97—s.p.</i>                                 |            |                            |    |       |               |                           |    |      |           | <b>R. P. L. 103—s.p.</b>                                    |            |                            |    |       |               |                           |    |      |           |   |
| Oct. 28   | ...        | 12                         | 37 | 34.07 | 3             | 5                         | 43 | 8.3  | M         | Jan. 2  | ...        | 13                         | 19 | 21.20 | 3             | 4                         | 38 | 24.8 | M         |   |
|   |            |                            |    |       |               |                           |    |      |           | 3   | ...        |                            |    | 19    | 20.55         | 3                         |    | 38   | 20.3      | M |
|   |            |                            |    |       |               |                           |    |      |           | Nov. 29   | ...        |                            |    | 19    | 19.65         | 3                         |    | 38   | 19.2      | R |
|   |            |                            |    |       |               |                           |    |      |           | Dec. 1  | ...        |                            |    | 19    | 21.47         | 3                         |    | 38   | 22.4      | R |
|   |            |                            |    |       |               |                           |    |      |           | 3   | ...        |                            |    | 19    | 18.61         | 3                         |    | 38   | 20.4      | M |
|   |            |                            |    |       |               |                           |    |      |           | 4   | ...        |                            |    | 19    | 20.96         | 3                         |    | 38   | 22.9      | M |
|   |            |                            |    |       |               |                           |    |      |           | 11  | ...        |                            |    | 19    | 20.28         | 3                         |    | 38   | 20.3      | M |
| <b>93</b> <i>R. P. L. 99.</i>                                     |            |                            |    |       |               |                           |    |      |           | <b>99</b> <i>8 Bootis <math>\eta</math></i>                 |            |                            |    |       |               |                           |    |      |           |   |
| Apl. 17   | ...        | 12                         | 48 | 16.79 | 3             | 5                         | 57 | 22.4 | R         | Apl. 21   | ...        | 13                         | 49 | 9.81  | ...           | 71                        | 1  | 13.0 | R         |   |
| 18  | ...        |                            | 48 | 16.62 | 3             |                           | 57 | 22.5 | R         | <b>100</b> <i>93 Virginis <math>\tau</math></i>             |            |                            |    |       |               |                           |    |      |           |   |
| <b>94</b> <i>47 Virginis <math>\epsilon</math>, Vindemiatrix.</i> |            |                            |    |       |               |                           |    |      |           | June 21   | ...        | 13                         | 55 | 44.66 | ...           | 87                        | 53 | 35.1 | M         |   |
| Apl. 22   | ...        | 12                         | 56 | 24.18 | ...           | 78                        | 25 | 0.7  | R         | 24  | ...        |                            | 55 | 44.78 | ...           |                           | 53 | 34.9 | R         |   |
| 23  | ...        |                            | 56 | 24.21 | ...           |                           | 24 | 59.9 | R         | <b>101</b> <i>R. P. L. 108.</i>                             |            |                            |    |       |               |                           |    |      |           |   |
| 24  | ...        |                            | 56 | 24.19 | ...           |                           | 24 | 58.7 | R         | June 21   | ...        | 14                         | 1  | 20.48 | 2             | 3                         | 41 | 9.6  | M         |   |
| 25  | ...        |                            | 56 | 24.15 | ...           |                           | 24 | 59.0 | R         | 28  | ...        |                            | 1  | 22.89 | 3             |                           | 41 | 10.7 | R         |   |
| 26  | ...        |                            | 56 | 24.16 | ...           |                           | 24 | 59.8 | R         | <b>102</b> <i>16 Bootis <math>\alpha</math>, Arcturus.</i>  |            |                            |    |       |               |                           |    |      |           |   |
| 28  | ...        |                            | 56 | 24.21 | ...           |                           | 24 | 59.6 | R         | June 20   | ...        | 14                         | 10 | 22.30 | ...           | 70                        | 12 | 44.0 | M         |   |
| 29  | ...        |                            | 56 | 24.17 | ...           |                           | 24 | 59.4 | R         | 24  | ...        |                            | 10 | 22.18 | ...           |                           | 12 | 46.1 | R         |   |
| 30  | ...        |                            | 56 | 24.26 | ...           |                           | 24 | 59.5 | R         | 25  | ...        |                            | 10 | 22.15 | ...           |                           | 12 | 46.6 | R         |   |
| May 1   | ...        |                            | 56 | 24.13 | ...           |                           | 25 | 1.5  | M         | <b>103</b> <i>25 Bootis <math>\rho</math></i>               |            |                            |    |       |               |                           |    |      |           |   |
| 2   | ...        |                            | 56 | 24.12 | ...           |                           | 25 | 1.7  | M         | June 20   | ...        | 14                         | 26 | 49.78 | ...           | 53                        | 7  | 5.7  | M         |   |
| <b>95</b> <i>R. P. L. 100—s.p.</i>                                |            |                            |    |       |               |                           |    |      |           | <b>104</b> <i>36 Bootis <math>\epsilon^2</math>, Mirac.</i> |            |                            |    |       |               |                           |    |      |           |   |
| Dec. 3  | ...        | 13                         | 0  | 23.49 | 3             | 3                         | 29 | 27.2 | M         | June 20   | ...        | 14                         | 39 | 55.23 | ...           | 62                        | 26 | 8.1  | M         |   |
| 4   | ...        |                            | 0  | 23.39 | 3             |                           | 29 | 28.6 | M         | 21  | ...        |                            | 39 | 55.13 | ...           |                           | 26 | 10.4 | M         |   |
| 11  | ...        |                            | 0  | 23.44 | 3             |                           | 29 | 31.3 | M         | 23  | ...        |                            | 39 | 55.18 | ...           |                           | 26 | 11.0 | R         |   |
| 12  | ...        |                            | 0  | 23.50 | 3             |                           | 29 | 33.4 | M         | 24  | ...        |                            | 39 | 55.13 | ...           |                           | 26 | 8.0  | R         |   |
| 23  | ...        |                            | 0  | 23.18 | 3             |                           | 29 | 29.2 | R         | <b>105</b> <i>9 Libræ <math>\alpha^2</math></i>             |            |                            |    |       |               |                           |    |      |           |   |
| <b>96</b> <i>R. P. L. 101—s.p.</i>                                |            |                            |    |       |               |                           |    |      |           | June 21   | ...        | 14                         | 44 | 27.86 | ...           | 105                       | 33 | 23.6 | M         |   |
| Jan. 2  | ...        | 13                         | 6  | 56.98 | 3             | 1                         | 43 | 41.7 | M         | 25  | ...        |                            | 44 | 27.79 | ...           |                           | 33 | 23.2 | R         |   |
| 3   | ...        |                            | 6  | 57.55 | 3             |                           | 43 | 39.9 | M         | 26  | ...        |                            | 44 | 27.78 | ...           |                           | 33 | 26.9 | M         |   |
| Dec. 26   | ...        |                            | 6  | 57.81 | 3             |                           | 43 | 42.8 | R         | <b>97</b> <i>67 Virginis <math>\alpha</math>, Spica.</i>    |            |                            |    |       |               |                           |    |      |           |   |
| 27  | ...        |                            | 6  | 56.80 | 3             |                           | 43 | 41.6 | R         | Apl. 21   | ...        | 13                         | 19 | 4.82  | ...           | 100                       | 33 | 18.2 | R         |   |
| <b>97</b> <i>67 Virginis <math>\alpha</math>, Spica.</i>          |            |                            |    |       |               |                           |    |      |           | <b>98</b> <i>R. P. L. 103.</i>                              |            |                            |    |       |               |                           |    |      |           |   |
| Apl. 21   | ...        | 13                         | 19 | 4.82  | ...           | 100                       | 33 | 18.2 | R         | Apl. 26   | ...        | 13                         | 19 | 18.47 | 3             | 4                         | 38 | 19.0 | R         |   |
| <b>98</b> <i>R. P. L. 103.</i>                                    |            |                            |    |       |               |                           |    |      |           | 28  | ...        |                            | 19 | 19.78 | 3             |                           | 38 | 18.8 | R         |   |

*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date.                              | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer.                                | Number and Date.                          | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. |
|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|--|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|   |            | h.                         | m. | s.    |               | o.                        | '  | "    |  |   |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>106</b> <i>T Trianguli Australis, Var.</i> |            |                            |    |       |               |                           |    |      | <b>112</b> <i>24 Serpentis a</i>         |   |            |                            |    |       |               |                           |    |      |           |
| June 24                                       | 7.0        | 14                         | 58 | 57.30 | ...           | 158                       | 16 | 20.3 | R  | June 21                                   | ...        | 15                         | 38 | 33.31 | ...           | 83                        | 12 | 30.4 | M         |
| 25  | ...        |                            | 58 | 57.22 | 3             |                           | 16 | 21.5 | R  | 28  | ...        |                            | 38 | 33.28 | ...           |                           | 12 | 31.2 | R         |
| <b>107</b> <i>R. P. L. 111.</i>               |            |                            |    |       |               |                           |    |      | <b>113</b> <i>R. P. L. 115.</i>          |   |            |                            |    |       |               |                           |    |      |           |
| June 24                                       | ...        | 15                         | 3  | 26.58 | 3             | 5                         | 35 | 58.8 | R  | June 20                                   | ...        | 15                         | 45 | 12.50 | 3             | 4                         | 47 | 32.4 | M         |
| 28  | ...        |                            | 3  | 27.89 | 3             |                           | 36 | 0.8  | R  | <b>114</b> <i>16 Ursæ Minoris ζ</i>       |            |                            |    |       |               |                           |    |      |           |
| July 14                                       | ...        |                            | 3  | 27.02 | 3             |                           | 35 | 58.9 | M  | June 21                                   | ...        | 15                         | 48 | 13.52 | ...           | 11                        | 50 | 55.6 | M         |
| 17  | ...        |                            | 3  | 27.48 | 3             |                           | 35 | 58.1 | M  | <b>115</b> <i>8 Scorpii β<sup>1</sup></i> |            |                            |    |       |               |                           |    |      |           |
| 18  | ...        |                            | 3  | 26.88 | 3             |                           | 35 | 58.5 | M  | June 21                                   | ...        | 15                         | 58 | 41.51 | ...           | 109                       | 29 | 10.9 | M         |
| <b>108</b> <i>27 Libræ β</i>                  |            |                            |    |       |               |                           |    |      | <b>116</b> <i>R. P. L. 116.</i>          |   |            |                            |    |       |               |                           |    |      |           |
| June 20                                       | ...        | 15                         | 10 | 45.85 | ...           | 98                        | 57 | 14.8 | M  | June 24                                   | ...        | 16                         | 0  | 34.48 | 3             | 4                         | 22 | 0.4  | R         |
| 25  | ...        |                            | 10 | 45.82 | ...           |                           | 57 | 14.3 | R  | <b>117</b> <i>1 Ophiuchi δ</i>            |            |                            |    |       |               |                           |    |      |           |
| 26  | ...        |                            | 10 | 45.89 | ...           |                           | 57 | 14.2 | R  | June 20                                   | ...        | 16                         | 8  | 15.91 | ...           | 93                        | 23 | 39.0 | M         |
| <b>109</b> <i>Redhill 2293.—s.p.</i>          |            |                            |    |       |               |                           |    |      | <b>118</b> <i>21 Scorpii a, Antares.</i> |   |            |                            |    |       |               |                           |    |      |           |
| Nov. 29                                       | ...        | 15                         | 11 | 46.31 | 3             | 4                         | 25 | 39.8 | R  | June 20                                   | ...        | 16                         | 23 | 17.68 | ...           | 116                       | 10 | 23.2 | M         |
| <b>110</b> <i>R. P. L. 114.</i>               |            |                            |    |       |               |                           |    |      | <b>119</b> <i>21 Scorpii a, Antares.</i> |   |            |                            |    |       |               |                           |    |      |           |
| July 14                                       | ...        | 15                         | 15 | 0.57  | 3             | 2                         | 19 | 22.1 | M  | 21  | ...        |                            | 22 | 17.82 | ...           |                           | 10 | 25.9 | M         |
| 17  | ...        |                            | 14 | 59.84 | 3             |                           | 19 | 20.8 | M  |   |            |                            |    |       |               |                           |    |      |           |
| <b>111</b> <i>5 Coronæ Borealis a, Alpha.</i> |            |                            |    |       |               |                           |    |      |  |   |            |                            |    |       |               |                           |    |      |           |
| June 26                                       | ...        | 15                         | 29 | 46.48 | ...           | 62                        | 53 | 34.7 | R  |   |            |                            |    |       |               |                           |    |      |           |
| July 14                                       | ...        |                            | 29 | 46.45 | ...           |                           | 53 | 40.0 | M  |   |            |                            |    |       |               |                           |    |      |           |
| 18  | ...        |                            | 29 | 46.43 | ...           |                           | 53 | 40.3 | M  |   |            |                            |    |       |               |                           |    |      |           |
| 19  | ...        |                            | 29 | 46.53 | ...           |                           | 53 | 40.7 | M  |   |            |                            |    |       |               |                           |    |      |           |
| 22  | ...        |                            | 29 | 46.63 | ...           |                           | 53 | 37.3 | M  |   |            |                            |    |       |               |                           |    |      |           |
| 23  | ...        |                            | 29 | 46.49 | ...           |                           | 53 | 38.7 | M  |   |            |                            |    |       |               |                           |    |      |           |
| 24  | ...        |                            | 29 | 46.62 | ...           |                           | 53 | 39.1 | M  |   |            |                            |    |       |               |                           |    |      |           |

*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date.                         | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |      |      | Observer.                       | Number and Date.                | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |      |      | Observer. |
|--|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|---------------------------------|---------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|  |            | h.                         | m.    | s.    |               | °                         | '    | "    |                                 |                                 |            | h.                         | m.    | s.    |               | °                         | '    | "    |           |
| <b>119</b> 40 <i>Herculis</i> ζ          |            |                            |       |       |               |                           |      |      |                                 | <b>127</b> Stone 9578.          |            |                            |       |       |               |                           |      |      |           |
| June 21                                  | ...        | 16                         | 36    | 54.62 | ...           | 58                        | 11   | 11.0 | M                               | Aug. 21                         | ...        | 17                         | 28    | 15.11 | ...           | 146                       | 44   | 40.0 | R         |
| 28                                       | ...        | 36                         | 54.73 | ...   |               | 11                        | 11.3 | R    | 23                              | ...                             | 28         | 14.88                      | ...   |       | 44            | 40.7                      | R    |      |           |
| July 14                                  | ...        | 36                         | 54.77 | ...   |               | 11                        | 11.9 | M    |                                 |                                 |            |                            |       |       |               |                           |      |      |           |
| <b>120</b> 22 <i>Ursæ Minoris</i> ε—s.p. |            |                            |       |       |               |                           |      |      |                                 | <b>128</b> 55 <i>Ophiuchi</i> α |            |                            |       |       |               |                           |      |      |           |
| Jan. 7                                   | ...        | 16                         | 57    | 53.10 | 5             | 7                         | 46   | 30.4 | M                               | June 20                         | ...        | 17                         | 29    | 32.99 | ...           | 77                        | 21   | 17.6 | M         |
| <b>121</b> R. P. L. 118.                 |            |                            |       |       |               |                           |      |      |                                 | <b>129</b> R. P. L. 120.        |            |                            |       |       |               |                           |      |      |           |
| July 14                                  | ...        | 17                         | 1     | 48.75 | 3             | 5                         | 8    | 39.2 | M                               | June 21                         | ...        | 17                         | 31    | 35.23 | 3             | 5                         | 17   | 25.2 | M         |
|  |            |                            |       |       |               |                           |      |      |                                 | July 18                         | ...        | 31                         | 35.79 | 3     |               | 17                        | 26.6 | M    |           |
| <b>122</b> G. Z. C. XVII. 421.           |            |                            |       |       |               |                           |      |      |                                 | <b>130</b> Anon.                |            |                            |       |       |               |                           |      |      |           |
| Aug. 23                                  | ...        | 17                         | 7     | 0.73  | ...           | 130                       | 55   | 11.6 | R                               | Sep. 1                          | 7.5        | 17                         | 34    | 30.23 | ...           | 125                       | 44   | 21.4 | R         |
| <b>123</b> 64 <i>Herculis</i> α, Var. 1. |            |                            |       |       |               |                           |      |      |                                 | 8                               | 7.5        | 34                         | 30.40 | ...   | 44            | 21.6                      | R    |      |           |
| July 14                                  | ...        | 17                         | 9     | 21.44 | ...           | 75                        | 28   | 34.5 | M                               | 10                              | 7.5        | 34                         | 30.35 | ...   | 44            | 22.1                      | R    |      |           |
| 17                                       | ...        | 9                          | 21.41 | ...   |               | 28                        | 33.7 | M    | 11                              | 7.5                             | 34         | 30.28                      | ...   | 44    | 22.4          | R                         |      |      |           |
| 18                                       | ...        | 9                          | 21.52 | ...   |               | 28                        | 33.6 | M    | 13                              | 7.5                             | 34         | 30.40                      | 4     | 44    | 24.4          | R                         |      |      |           |
| <b>124</b> Anon.                         |            |                            |       |       |               |                           |      |      |                                 | <b>131</b> 60 <i>Ophiuchi</i> β |            |                            |       |       |               |                           |      |      |           |
| Aug. 18                                  | 9.0        | 17                         | 14    | 42.41 | ...           | 126                       | 23   | 49.7 | R                               | Aug. 18                         | ...        | 17                         | 37    | 44.45 | ...           | 85                        | 23   | 58.2 | R         |
| 20                                       | 9.0        | 14                         | 42.56 | ...   |               | 23                        | 49.2 | R    | 19                              | ...                             | 37         | 44.44                      | ...   | 23    | 58.0          | R                         |      |      |           |
| 21                                       | 9.0        | 14                         | 42.42 | ...   |               | 23                        | 49.3 | R    | 20                              | ...                             | 37         | 44.52                      | ...   | 22    | 57.9          | R                         |      |      |           |
| 23                                       | 9.0        | 14                         | 42.36 | ...   |               | 23                        | 49.1 | R    | 21                              | ...                             | 37         | 44.45                      | ...   | 22    | 58.9          | R                         |      |      |           |
| 26                                       | 9.0        | 14                         | 42.35 | 4     |               | 23                        | 48.5 | R    | 23                              | ...                             | 37         | 44.50                      | ...   | 23    | 0.1           | R                         |      |      |           |
| <b>125</b> Taylor 8070.                  |            |                            |       |       |               |                           |      |      |                                 | 25                              | ...        | 37                         | 44.45 | ...   | 23            | 0.8                       | R    |      |           |
| Aug. 20                                  | 6.5        | 17                         | 21    | 5.37  | ...           | 126                       | 40   | 45.3 | R                               | 26                              | ...        | 37                         | 44.47 | ...   | 22            | 57.9                      | R    |      |           |
| 21                                       | 6.5        | 21                         | 5.36  | ...   |               | 40                        | 45.8 | R    | Sep. 10                         | ...                             | 37         | 44.49                      | ...   | 22    | 57.7          | R                         |      |      |           |
| 23                                       | 6.5        | 21                         | 5.18  | ...   |               | 40                        | 45.8 | R    | 11                              | ..                              | 37         | 44.48                      | ...   | 22    | 57.9          | R                         |      |      |           |
| 26                                       | 6.5        | 21                         | 5.16  | ...   |               | 40                        | 48.6 | R    | 13                              | ...                             | 37         | 44.58                      | ...   | 22    | 59.2          | R                         |      |      |           |
| Sep. 1                                   | 6.5        | 21                         | 5.07  | ...   |               | 40                        | 46.0 | R    | <b>132</b> 86 <i>Herculis</i> μ |                                 |            |                            |       |       |               |                           |      |      |           |
| <b>126</b> 35 <i>Scorpii</i> λ           |            |                            |       |       |               |                           |      |      |                                 | July 22                         | ...        | 17                         | 41    | 55.12 | ...           | 62                        | 12   | 41.3 | M         |
| Aug. 20                                  | ...        | 17                         | 25    | 44.15 | ...           | 127                       | 1    | 3.0  | R                               | 23                              | ...        | 41                         | 55.23 | ...   | 12            | 37.0                      | M    |      |           |
| 25                                       | ...        | 25                         | 44.06 | ...   |               | 1                         | 4.7  | R    | 24                              | ...                             | 41         | 55.00                      | ...   | 12    | 36.9          | M                         |      |      |           |
| 26                                       | ...        | 25                         | 44.13 | ...   |               | 1                         | 4.8  | R    | 25                              | ...                             | 41         | 54.95                      | ...   | 12    | 37.7          | M                         |      |      |           |
| Sep. 1                                   | ...        | 25                         | 43.86 | ...   |               | 1                         | 2.5  | R    | <b>133</b> Anon.                |                                 |            |                            |       |       |               |                           |      |      |           |
| <b>126</b> 35 <i>Scorpii</i> λ           |            |                            |       |       |               |                           |      |      |                                 | July 26                         | 8.5        | 17                         | 42    | 56.34 | ...           | 143                       | 28   | 18.1 | M         |
| Aug. 20                                  | ...        | 17                         | 25    | 44.15 | ...           | 127                       | 1    | 3.0  | R                               | Aug. 5                          | 8.0        | 42                         | 56.53 | 4     | 28            | 21.4                      | R    |      |           |
| 25                                       | ...        | 25                         | 44.06 | ...   |               | 1                         | 4.7  | R    |                                 |                                 |            |                            |       |       |               |                           |      |      |           |
| 26                                       | ...        | 25                         | 44.13 | ...   |               | 1                         | 4.8  | R    |                                 |                                 |            |                            |       |       |               |                           |      |      |           |
| Sep. 1                                   | ...        | 25                         | 43.86 | ...   |               | 1                         | 2.5  | R    |                                 |                                 |            |                            |       |       |               |                           |      |      |           |

## Separate Results of Madras Meridian Circle Observations in 1884.

| Number and Date.                          | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. | Number and Date.                   | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. |
|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|   |            | h.                         | m. | s.    |               | °                         | '  | "    |           |                                    |            | h.                         | m. | s.    |               | °                         | '  | "    |           |
| <b>134</b> 72 Ophiuchi.                   |            |                            |    |       |               |                           |    |      |           | <b>139</b> Taylor 8440.            |            |                            |    |       |               |                           |    |      |           |
| Aug. 18                                   | ...        | 18                         | 1  | 50.93 | ...           | 80                        | 27 | 5.3  | R         | July 23                            | ...        | 18                         | 12 | 31.91 | ...           | 151                       | 32 | 38.5 | M         |
| 19  | ...        |                            | 1  | 50.95 | ...           |                           | 27 | 5.1  | R         | Aug. 7                             | ...        |                            | 12 | 32.37 | 5             |                           | 32 | 40.2 | R         |
| 20  | ...        |                            | 1  | 50.95 | ...           |                           | 27 | 6.1  | R         | 8                                  | ...        |                            | 12 | 32.28 | ...           |                           | 32 | 40.6 | R         |
| 23  | ...        |                            | 1  | 50.99 | ...           |                           | 27 | 5.3  | R         | 11                                 | ...        |                            | 12 | 32.10 | ...           |                           | 32 | 41.1 | R         |
| 25  | ...        |                            | 1  | 50.97 | ...           |                           | 27 | 7.7  | R         | 19                                 | ...        |                            | 12 | 32.09 | ...           |                           | 32 | 40.8 | R         |
| 26  | ...        |                            | 1  | 50.97 | ...           |                           | 27 | 4.8  | R         | <b>140</b> 24 Ursæ Minoris.        |            |                            |    |       |               |                           |    |      |           |
| 28  | ...        |                            | 1  | 50.99 | ...           |                           | 27 | 7.7  | R         | Aug. 18                            | ...        | 18                         | 13 | 43.84 | 3             | 3                         | 0  | 33.2 | R         |
| Sep. 1                                    | ...        |                            | 1  | 51.05 | ...           |                           | 27 | 5.0  | R         | 19                                 | ...        |                            | 18 | 44.17 | 3             |                           | 0  | 34.2 | R         |
| 8   | ...        |                            | 1  | 50.97 | ...           |                           | 27 | 4.0  | R         | 20                                 | ...        |                            | 18 | 43.48 | 3             |                           | 0  | 34.6 | R         |
| 10  | ...        |                            | 1  | 50.99 | ...           |                           | 27 | 3.9  | R         | Sep. 11                            | ...        |                            | 13 | 43.59 | 3             |                           | 0  | 33.4 | R         |
| <b>135</b> Taylor 8410.                   |            |                            |    |       |               |                           |    |      |           | 13                                 | ...        |                            | 13 | 44.32 | 3             |                           | 0  | 36.2 | R         |
| July 22                                   | ...        | 18                         | 4  | 38.71 | ...           | 118                       | 43 | 25.9 | M         | 16                                 | ...        |                            | 13 | 44.78 | 3             |                           | 0  | 31.4 | M         |
| 23  | ...        |                            | 4  | 38.71 | ...           |                           | 43 | 24.7 | M         | 24                                 | ...        |                            | 18 | 43.55 | 3             |                           | 0  | 31.7 | M         |
| 26  | ...        |                            | 4  | 38.65 | 6             |                           | 43 | 19.9 | M         | <b>24 Ursæ Minoris —s.p.</b>       |            |                            |    |       |               |                           |    |      |           |
| Aug. 4                                    | ...        |                            | 4  | 38.63 | ...           |                           | 43 | 23.4 | R         | Jan. 31                            | ...        | 18                         | 13 | 42.81 | 3             | 3                         | 0  | 35.7 | M         |
| 5   | ...        |                            | 4  | 38.56 | ...           |                           | 43 | 24.0 | R         | Feb. 7                             | ...        |                            | 13 | 42.30 | 3             |                           | 0  | 37.0 | R         |
| <b>136</b> 13 Sagittarii $\mu^1$          |            |                            |    |       |               |                           |    |      |           | <b>141</b> Taylor 8454             |            |                            |    |       |               |                           |    |      |           |
| July 19                                   | ...        | 18                         | 6  | 49.47 | ...           | 111                       | 5  | 16.3 | M         | July 18                            | 6.0        | 18                         | 15 | 1.32  | ...           | 126                       | 43 | 21.1 | M         |
| <b>137</b> Stone 9951.                    |            |                            |    |       |               |                           |    |      |           | 23                                 | 6.0        |                            | 15 | 1.35  | ...           |                           | 43 | 19.4 | M         |
| Aug. 7                                    | 6.0        | 18                         | 8  | 27.43 | ...           | 153                       | 55 | 3.2  | R         | 25                                 | 6.0        |                            | 15 | 1.35  | 5             |                           | 43 | 19.0 | M         |
| 8   | 6.0        |                            | 8  | 27.43 | 5             |                           | 55 | 3.5  | R         | Aug. 2                             | 6.0        |                            | 15 | 1.27  | ...           |                           | 43 | 19.4 | R         |
| 12  | 6.0        |                            | 8  | 27.07 | ...           |                           | 55 | 5.2  | R         | 4                                  | 6.0        |                            | 15 | 1.39  | ...           |                           | 43 | 18.4 | R         |
| 13  | 6.0        |                            | 8  | 27.04 | ...           |                           | 55 | 3.7  | R         | <b>142</b> Stone 10042.            |            |                            |    |       |               |                           |    |      |           |
| 15  | 6.0        |                            | 8  | 27.27 | ...           |                           | 55 | 4.8  | R         | July 19                            | 6.5        | 18                         | 20 | 24.35 | ...           | 119                       | 53 | 9.4  | M         |
| <b>138</b> 23 Ursæ Minoris $\delta$ —s.p. |            |                            |    |       |               |                           |    |      |           | 22                                 | 7.0        |                            | 20 | 24.41 | ...           |                           | 53 | 8.7  | M         |
| Jan. 21                                   | ...        | 18                         | 9  | 45.04 | 3             | 3                         | 23 | 27.3 | M         | 23                                 | 7.0        |                            | 20 | 24.34 | ...           |                           | 53 | 7.6  | M         |
| 22  | ...        |                            | 9  | 43.73 | 3             |                           | 23 | 24.5 | M         | Aug. 4                             | 6.7        |                            | 20 | 24.57 | ...           |                           | 53 | 8.2  | R         |
| 23  | ...        |                            | 9  | 44.27 | 3             |                           | 23 | 26.9 | M         | 7                                  | 6.7        |                            | 20 | 24.47 | ...           |                           | 53 | 7.1  | R         |
| 24  | ...        |                            | 9  | 45.05 | 3             |                           | 23 | 24.7 | M         | <b>143</b> 22 Sagittarii $\lambda$ |            |                            |    |       |               |                           |    |      |           |
| 28  | ...        |                            | 9  | 44.54 | 3             |                           | 23 | 25.7 | M         | Aug. 2                             | ...        | 18                         | 20 | 48.30 | ...           | 115                       | 29 | 2.0  | R         |
| 30  | ...        |                            | 9  | 44.07 | 3             |                           | 23 | 23.1 | M         | 5                                  | ...        |                            | 20 | 48.39 | ...           |                           | 29 | 2.1  | R         |
| 31  | ...        |                            | 9  | 44.75 | 3             |                           | 23 | 22.8 | M         |                                    |            |                            |    |       |               |                           |    |      |           |
| Feb. 2                                    | ...        |                            | 9  | 44.26 | 3             |                           | 23 | 24.8 | R         |                                    |            |                            |    |       |               |                           |    |      |           |
| 5   | ...        |                            | 9  | 44.13 | 3             |                           | 23 | 23.1 | R         |                                    |            |                            |    |       |               |                           |    |      |           |

*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date.                                     | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. | Number and Date.                                       | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. |
|--|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|--|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|  |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |  |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>144</b> <i>Taylor 8520.</i>                       |            |                            |    |       |               |                           |    |      |           | <b>150</b> <i>Anon.</i>                                |            |                            |    |       |               |                           |    |      |           |
| July 18  | 6.0        | 18                         | 25 | 11.22 | ...           | 142                       | 58 | 27.5 | M         | Aug. 16  | 8.0        | 18                         | 43 | 52.73 | ...           | 125                       | 80 | 57.0 | R         |
| 22   | 6.0        |                            | 25 | 11.15 | 4             |                           | 58 | 26.7 | M         | 18   | 8.0        |                            | 43 | 52.98 | ...           |                           | 80 | 56.4 | R         |
| Aug. 7   | 6.0        |                            | 25 | 11.52 | ...           |                           | 58 | 26.9 | R         |  |            |                            |    |       |               |                           |    |      |           |
| 8  | 6.0        |                            | 25 | 11.49 | ...           |                           | 58 | 28.5 | R         |  |            |                            |    |       |               |                           |    |      |           |
| <b>145</b> <i>Stone 10137.</i>                       |            |                            |    |       |               |                           |    |      |           | <b>151</b> <i>10 Lyrae <math>\beta</math>, Var. 1.</i> |            |                            |    |       |               |                           |    |      |           |
| July 22  | 6.5        | 18                         | 31 | 2.46  | 5             | 154                       | 44 | 41.8 | M         | July 22  | ...        | 18                         | 45 | 47.76 | ...           | 56                        | 46 | 17.6 | M         |
| Aug. 12  | 6.0        |                            | 31 | 2.43  | ...           |                           | 44 | 45.5 | R         | Aug. 8   | ...        |                            | 45 | 47.82 | ...           |                           | 46 | 17.0 | R         |
| 13   | 6.0        |                            | 31 | 2.37  | ...           |                           | 44 | 45.6 | R         | 12   | ...        |                            | 45 | 47.60 | ...           |                           | 46 | 16.7 | R         |
| 16   | 6.0        |                            | 31 | 2.43  | ...           |                           | 44 | 45.5 | R         | 14   | ...        |                            | 45 | 47.64 | ...           |                           | 46 | 17.0 | R         |
| 18   | 6.0        |                            | 31 | 2.35  | ...           |                           | 44 | 45.0 | R         |  |            |                            |    |       |               |                           |    |      |           |
| <b>146</b> <i>3 Lyrae <math>\alpha</math>, Vega.</i> |            |                            |    |       |               |                           |    |      |           | <b>152</b> <i>Anon.</i>                                |            |                            |    |       |               |                           |    |      |           |
| July 23  | ...        | 18                         | 33 | 0.50  | ...           | 51                        | 19 | 24.8 | M         | July 22  | 9.5        | 18                         | 52 | 19.19 | 5             | 132                       | 56 | 54.3 | M         |
| 26   | ...        |                            | 33 | 0.61  | ...           |                           | 19 | 22.9 | M         | Aug. 18  | 9.5        |                            | 52 | 19.08 | ...           |                           | 56 | 52.9 | R         |
| Aug. 4   | ...        |                            | 33 | 0.39  | ...           |                           | 19 | 21.8 | R         | 19   | 9.5        |                            | 52 | 19.02 | ...           |                           | 56 | 50.5 | R         |
| 5  | ...        |                            | 33 | 0.34  | ...           |                           | 19 | 24.2 | R         | 28   | 9.5        |                            | 52 | 19.18 | ...           |                           | 56 | 53.3 | R         |
| 7  | ...        |                            | 33 | 0.50  | ...           |                           | 19 | 24.4 | R         |  |            |                            |    |       |               |                           |    |      |           |
| 8  | ...        |                            | 33 | 0.46  | ...           |                           | 19 | 23.9 | R         |  |            |                            |    |       |               |                           |    |      |           |
| <b>147</b> <i>Stone 10173.</i>                       |            |                            |    |       |               |                           |    |      |           | <b>153</b> <i>R. P. L. 131.</i>                        |            |                            |    |       |               |                           |    |      |           |
| Aug. 15  | 6.0        | 18                         | 34 | 36.91 | ...           | 151                       | 12 | 21.9 | R         | Aug. 18  | ...        | 18                         | 52 | 43.66 | 3             | 3                         | 26 | 20.0 | R         |
| 19   | 6.0        |                            | 34 | 37.00 | ...           |                           | 12 | 25.1 | R         | Sep. 10  | ...        |                            | 52 | 42.95 | 3             |                           | 26 | 19.5 | R         |
| 23   | 6.0        |                            | 34 | 37.20 | 5             |                           | 12 | 25.1 | R         | 11   | ...        |                            | 52 | 43.06 | 3             |                           | 26 | 19.5 | R         |
| 28   | 6.0        |                            | 34 | 37.27 | ...           |                           | 12 | 25.0 | R         | 13   | ...        |                            | 52 | 44.87 | 3             |                           | 26 | 20.0 | R         |
| Sep. 1   | 6.0        |                            | 34 | 37.30 | 5             |                           | 12 | 20.9 | R         | 16   | ...        |                            | 52 | 44.14 | 3             |                           | 26 | 19.1 | M         |
|  |            |                            |    |       |               |                           |    |      |           | 24   | ...        |                            | 52 | 43.64 | 3             |                           | 26 | 19.6 | M         |
| <b>148</b> <i>Taylor 8603.</i>                       |            |                            |    |       |               |                           |    |      |           | <b>154</b> <i>Anon.</i>                                |            |                            |    |       |               |                           |    |      |           |
| July 22  | 7.0        | 18                         | 37 | 59.75 | ...           | 140                       | 12 | 44.9 | M         | Aug. 2   | 8.9        | 18                         | 53 | 58.75 | ...           | 128                       | 6  | 51.9 | R         |
| 25   | ...        |                            | 37 | 59.66 | ...           |                           | 12 | 46.2 | M         | 4  | 8.9        |                            | 53 | 58.69 | 3             |                           | 6  | 50.5 | R         |
| Aug. 2   | 5.0        |                            | 37 | 59.59 | ...           |                           | 12 | 45.2 | R         | 12   | 8.0        |                            | 53 | 59.21 | 3             |                           | 6  | 49.8 | R         |
| 4  | 5.0        |                            | 37 | 59.64 | ...           |                           | 12 | 43.9 | R         |  |            |                            |    |       |               |                           |    |      |           |
| 8  | 5.0        |                            | 37 | 59.30 | ...           |                           | 12 | 44.8 | R         |  |            |                            |    |       |               |                           |    |      |           |
| <b>149</b> $\eta^1$ <i>Coronae Australis.</i>        |            |                            |    |       |               |                           |    |      |           | <b>155</b> <i>Stone 10351.</i>                         |            |                            |    |       |               |                           |    |      |           |
| July 23  | ...        | 18                         | 40 | 28.03 | ...           | 133                       | 48 | 16.8 | M         | July 25  | ...        | 18                         | 55 | 22.59 | ...           | 128                       | 25 | 7.7  | M         |
| Aug. 12  | ...        |                            | 40 | 28.18 | ...           |                           | 48 | 16.1 | R         |  |            |                            |    |       |               |                           |    |      |           |
| 14   | ...        |                            | 40 | 28.22 | ...           |                           | 48 | 15.5 | R         |  |            |                            |    |       |               |                           |    |      |           |
| 15   | ...        |                            | 40 | 28.05 | ...           |                           | 48 | 14.9 | R         |  |            |                            |    |       |               |                           |    |      |           |
| 16   | ...        |                            | 40 | 28.22 | ...           |                           | 48 | 16.2 | R         |  |            |                            |    |       |               |                           |    |      |           |
| <b>156</b> <i>Stone 10391.</i>                       |            |                            |    |       |               |                           |    |      |           |  |            |                            |    |       |               |                           |    |      |           |
| July 22  | ...        | 19                         | 0  | 37.17 | ...           | 132                       | 36 | 15.2 | M         | July 22  | ...        | 19                         | 0  | 37.17 | ...           | 132                       | 36 | 15.2 | M         |
| Aug. 7   | ...        |                            | 0  | 37.35 | ...           |                           | 36 | 15.1 | R         | Aug. 7   | ...        |                            | 0  | 37.35 | ...           |                           | 36 | 15.1 | R         |

## Separate Results of Madras Meridian Circle Observations in 1884.

| Number and Date.                  | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. | Number and Date.                   | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |    |      | Observer. |
|-----------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|                                   |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |                                    |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>157</b> Stone 10399.           |            |                            |    |       |               |                           |    |      |           | <b>165</b> 30 Aquilæ $\delta$      |            |                            |    |       |               |                           |    |      |           |
| Aug. 13                           | ...        | 19                         | 1  | 41.54 | ...           | 146                       | 29 | 31.6 | R         | July 26                            | ...        | 19                         | 19 | 38.91 | ...           | 87                        | 6  | 55.3 | M         |
| 15                                | ...        |                            | 1  | 41.39 | ...           |                           | 29 | 31.0 | R         | Aug. 5                             | ...        |                            | 19 | 38.95 | ...           |                           | 6  | 55.2 | R         |
| 19                                | ...        |                            | 1  | 41.43 | ...           |                           | 29 | 31.7 | R         | <b>166</b> Anon.                   |            |                            |    |       |               |                           |    |      |           |
| 21                                | ...        |                            | 1  | 41.63 | 4             |                           | 29 | 31.6 | R         | Sep. 10                            | 9.0        | 19                         | 26 | 3.06  | 4             | 146                       | 54 | 53.7 | R         |
| 23                                | ...        |                            | 1  | 41.78 | ...           |                           | 29 | 31.7 | R         | <b>167</b> Taylor 8982.            |            |                            |    |       |               |                           |    |      |           |
| <b>158</b> Stone 10404.           |            |                            |    |       |               |                           |    |      |           | July 25                            | ...        | 19                         | 28 | 40.11 | ...           | 143                       | 14 | 18.9 | M         |
| July 19                           | ...        | 19                         | 1  | 47.31 | ...           | 182                       | 4  | 27.2 | M         | Aug. 12                            | ...        |                            | 28 | 40.04 | ...           |                           | 14 | 17.1 | R         |
| 25                                | ...        |                            | 1  | 47.15 | ...           |                           | 4  | 28.5 | M         | 13                                 | ...        |                            | 28 | 40.09 | ...           |                           | 14 | 17.4 | R         |
| Aug. 14                           | ...        |                            | 1  | 47.11 | ...           |                           | 4  | 29.3 | R         | <b>168</b> Stone 10598.            |            |                            |    |       |               |                           |    |      |           |
| 16                                | ...        |                            | 1  | 47.90 | ...           |                           | 4  | 28.4 | R         | July 22                            | 6.7        | 19                         | 32 | 1.36  | ...           | 129                       | 41 | 38.2 | M         |
| 16                                | ...        |                            | 1  | 47.31 | ...           |                           | 4  | 28.2 | R         | 26                                 | ...        |                            | 32 | 1.34  | ...           |                           | 41 | 37.9 | M         |
| <b>159</b> Stone 10428.           |            |                            |    |       |               |                           |    |      |           | Aug. 4                             | 6.7        |                            | 32 | 1.58  | ...           |                           | 41 | 39.2 | R         |
| Aug. 8                            | ...        | 19                         | 5  | 43.15 | ...           | 155                       | 25 | 29.6 | R         | <b>169</b> Anon.                   |            |                            |    |       |               |                           |    |      |           |
| 12                                | ...        |                            | 5  | 43.76 | ...           |                           | 25 | 31.7 | R         | Aug. 12                            | 7.0        | 19                         | 33 | 29.46 | ...           | 126                       | 35 | 51.6 | R         |
| 28                                | ...        |                            | 5  | 42.94 | ...           |                           | 25 | 30.4 | R         | 13                                 | 7.0        |                            | 33 | 29.37 | ...           |                           | 35 | 52.2 | R         |
| Sep. 1                            | ...        |                            | 5  | 43.19 | 4             |                           | 25 | 31.7 | R         | 15                                 | 7.5        |                            | 33 | 29.47 | ...           |                           | 35 | 51.1 | R         |
| 8                                 | ...        |                            | 5  | 42.69 | ...           |                           | 25 | 29.3 | R         | 16                                 | 7.5        |                            | 33 | 29.51 | ...           |                           | 35 | 52.0 | R         |
| <b>160</b> Anon.                  |            |                            |    |       |               |                           |    |      |           | <b>170</b> Stone 10624.            |            |                            |    |       |               |                           |    |      |           |
| July 22                           | 9.5        | 19                         | 10 | 17.85 | ...           | 130                       | 46 | 28.3 | M         | Aug. 18                            | 7.0        | 19                         | 36 | 25.80 | ...           | 131                       | 52 | 59.1 | R         |
| Aug. 13                           | 9.5        |                            | 10 | 17.67 | ...           |                           | 46 | 27.9 | R         | 19                                 | 7.0        |                            | 36 | 25.78 | ...           |                           | 52 | 59.0 | R         |
| <b>161</b> Stone 10465.           |            |                            |    |       |               |                           |    |      |           | <b>171</b> Stone 10643.            |            |                            |    |       |               |                           |    |      |           |
| July 19                           | ...        | 19                         | 11 | 58.45 | 4             | 125                       | 37 | 52.3 | M         | Aug. 12                            | 6.7        | 19                         | 39 | 52.89 | ...           | 143                       | 10 | 12.8 | R         |
| 25                                | ...        |                            | 11 | 58.64 | ...           |                           | 37 | 52.6 | M         | 15                                 | 6.7        |                            | 39 | 53.16 | ...           |                           | 10 | 12.6 | R         |
| <b>162</b> 25 Aquilæ $\omega$     |            |                            |    |       |               |                           |    |      |           | 16                                 | 6.7        |                            | 39 | 53.25 | ...           |                           | 10 | 13.4 | R         |
| July 26                           | ...        | 19                         | 12 | 22.31 | ...           | 78                        | 36 | 45.5 | M         | 19                                 | 6.7        |                            | 39 | 53.17 | ...           |                           | 10 | 13.1 | R         |
| <b>163</b> Stone 10487.           |            |                            |    |       |               |                           |    |      |           | <b>172</b> $\lambda$ Ursæ Minoris. |            |                            |    |       |               |                           |    |      |           |
| Aug. 2                            | 7.0        | 19                         | 14 | 18.07 | ...           | 119                       | 49 | 16.5 | R         | Oct. 11                            | ...        | 19                         | 39 | 58.57 | 3             | 1                         | 2  | 48.4 | M         |
| <b>164</b> 49 Sagittarii $\chi^3$ |            |                            |    |       |               |                           |    |      |           | 13                                 | ...        |                            | 39 | 58.56 | 2             |                           | 2  | 48.4 | M         |
| July 22                           | ...        | 19                         | 18 | 28.27 | ...           | 114                       | 11 | 19.0 | M         |                                    |            |                            |    |       |               |                           |    |      |           |
| 25                                | ...        |                            | 18 | 28.28 | ...           |                           | 11 | 18.1 | M         |                                    |            |                            |    |       |               |                           |    |      |           |
| Aug. 8                            | ...        |                            | 18 | 28.34 | ...           |                           | 11 | 19.2 | R         |                                    |            |                            |    |       |               |                           |    |      |           |

## Separate Results of Madras Meridian Circle Observations in 1884.

| Number and Date.                       | Magnitude. | Mean Right Ascension 1884.<br>h. m. s. | No. of Wires. | Mean Polar Distance 1884.<br>° ' " | Observer. | Number and Date.  | Magnitude. | Mean Right Ascension 1884.<br>h. m. s. | No. of Wires. | Mean Polar Distance 1884.<br>° ' " | Observer. |
|--|------------|--|---------------|------------------------------------|-----------|---|------------|--|---------------|------------------------------------|-----------|
| <i>λ Ursæ Minoris—s.p.</i>             |            |  |               |                                    |           | <b>180</b> <i>65 Aquilæ θ</i>                                     |            |  |               |                                    |           |
| Feb. 9                                 | ...        | 19 39 57.07                            | 3             | 1 2 49.2                           | R         | Aug. 20   | ...        | 20 5 19.18                             | ...           | 91 9 52.4                          | R         |
| 13                                     | ...        | 39 57.18                               | 3             | 2 48.5                             | R         | 21  | ...        | 5 19.09                                | ...           | 9 51.3                             | R         |
| 16                                     | ...        | 39 57.19                               | 3             | 2 48.8                             | R         | 23  | ...        | 5 19.10                                | ...           | 9 51.9                             | R         |
| <b>173</b> <i>50 Aquilæ γ</i>          |            |  |               |                                    |           | 25      ...      5 19.18      ...      9 53.5      R              |            |  |               |                                    |           |
| July 25                                | ...        | 19 40 44.58                            | ...           | 79 40 7.4                          | M         | 26  | ...        | 5 19.15                                | ...           | 9 52.3                             | R         |
| Aug. 2                                 | ...        | 40 44.58                               | ...           | 40 5.5                             | R         | 28  | ...        | 5 19.25                                | ...           | 9 53.0                             | R         |
| 4                                      | ...        | 40 44.62                               | ...           | 40 5.6                             | R         | Sep. 1  | ...        | 5 19.11                                | ...           | 9 50.9                             | R         |
| 7                                      | ...        | 40 44.68                               | ...           | 40 6.3                             | R         | 8   | ...        | 5 19.13                                | ...           | 9 53.1                             | R         |
| <b>174</b> <i>53 Aquilæ α, Altair.</i> |            |  |               |                                    |           | 10      ...      5 19.10      ...      9 52.0      R              |            |  |               |                                    |           |
| July 26                                | ...        | 19 45 7.35                             | ...           | 81 26 12.9                         | M         | 11  | ...        | 5 19.16                                | ...           | 9 51.5                             | R         |
| Aug. 8                                 | ...        | 45 7.51                                | ...           | 26 13.7                            | R         | 18  | ...        | 5 19.12                                | ...           | 9 50.3                             | R         |
| 16                                     | ...        | 45 7.88                                | ...           | 26 12.7                            | R         | 16  | ...        | 5 19.18                                | ...           | 9 53.3                             | M         |
| <b>175</b> <i>60 Aquilæ β</i>          |            |  |               |                                    |           | 24      ...      5 19.17      ...      9 55.4      M              |            |  |               |                                    |           |
| Aug. 12                                | ...        | 19 49 36.90                            | ...           | 83 52 55.1                         | R         | 25  | ...        | 5 19.23                                | ...           | 9 55.4                             | M         |
| <b>176</b> <i>Stone 10739.</i>         |            |  |               |                                    |           | 26      ...      5 19.16      ...      9 54.4      M              |            |  |               |                                    |           |
| Aug. 4                                 | 6.7        | 19 52 23.35                            | ...           | 133 21 31.2                        | R         | Oct. 1  | ...        | 5 19.19                                | ...           | 9 53.1                             | M         |
| <b>177</b> <i>Anon.</i>                |            |  |               |                                    |           | 2      ...      5 19.21      ...      9 54.2      M               |            |  |               |                                    |           |
| Aug. 16                                | 8.0        | 19 54 29.70                            | ...           | 180 18 7.3                         | R         | 3   | ...        | 5 19.19                                | ...           | 9 55.5                             | M         |
| 19                                     | 8.0        | 54 29.90                               | ...           | 18 7.1                             | R         | 4   | ...        | 5 19.24                                | ...           | 9 53.7                             | M         |
| 20                                     | 8.0        | 54 29.98                               | ...           | 18 7.2                             | R         | 6   | ...        | 5 19.34                                | ...           | 9 55.4                             | M         |
| 23                                     | 8.0        | 54 30.06                               | ...           | 18 6.3                             | R         | <b>181</b> <i>Taylor 9303.</i>                                    |            |  |               |                                    |           |
| <b>178</b> <i>Stone 10797.</i>         |            |  |               |                                    |           | Aug. 15      ...      20 8 3.31      ...      117 22 40.0      R  |            |  |               |                                    |           |
| July 26                                | ...        | 20 0 43.49                             | ...           | 187 24 3.6                         | M         | 16  | ...        | 8 3.21                                 | ...           | 23 41.1                            | R         |
| Aug. 4                                 | ...        | 0 43.42                                | ...           | 24 3.4                             | R         | 18  | ...        | 8 3.09                                 | ...           | 23 40.2                            | R         |
| <b>179</b> <i>Stone 10803.</i>         |            |  |               |                                    |           | <b>182</b> <i>6 Capricorni α<sup>2</sup></i>                      |            |  |               |                                    |           |
| Aug. 5                                 | 6.7        | 20 2 1.27                              | ...           | 184 18 52.0                        | R         | Aug. 12   | ...        | 20 11 37.19                            | ...           | 102 54 10.3                        | R         |
| 12                                     | 6.7        | 2 1.18                                 | ...           | 13 53.3                            | R         | 18  | ...        | 11 37.13                               | ...           | 54 9.2                             | R         |
| 15                                     | 6.7        | 2 1.16                                 | ...           | 13 52.4                            | R         | <b>183</b> <i>24 Cephei (Hev.), Var. 2.</i>                       |            |  |               |                                    |           |
| 16                                     | 6.7        | 2 1.30                                 | ...           | 13 54.0                            | R         | Oct. 3  | ...        | 20 12 39.27                            | 3             | 1 18 17.0                          | M         |
| 18                                     | 6.7        | 2 1.18                                 | ...           | 13 53.0                            | R         | <b>184</b> <i>Taylor 9343.</i>                                    |            |  |               |                                    |           |
| <b>185</b> <i>Anon.</i>                |            |  |               |                                    |           | Aug. 5      6.7      20 13 15.40      ...      140 21 21.6      R |            |  |               |                                    |           |
| Sep. 13                                | 8.5        | 20 18 5.71                             | 5             | 121 8 2.9                          | R         | <b>185</b> <i>Anon.</i>   |            |  |               |                                    |           |

*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date.                     | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |    |                                  | Observer. | Number and Date.               | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884.      |     |        | Observer. |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
|--------------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|----------------------------------|-----------|--------------------------------|------------|----------------------------|-------|-------|---------------|--------------------------------|-----|--------|-----------|--------------------------------------|-------|------|-------|------|-----|------|-------|-----|-------|------|---|------|---|
|                                      |            | h.                         | m.    | s.    |               | °                         | '  | "                                |           |                                |            | h.                         | m.    | s.    |               | °                              | '   | "      |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| <b>186</b> <i>Anon.</i>              |            |                            |       |       |               |                           |    |                                  |           | <b>193</b> <i>2 Aquarii ε</i>  |            |                            |       |       |               |                                |     |        |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| Aug. 16                              | 8.5        | 20                         | 21    | 28.47 | 5             | 133                       | 19 | 21.9                             | R         | Oct. 6                         | ...        | 20                         | 41    | 23.55 | ...           | 99                             | 55  | 12.8   | M         |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| <b>187</b> <i>Taylor 9464.</i>       |            |                            |       |       |               |                           |    |                                  |           | 7                              | ...        | 41                         | 23.66 | ...   | 55            | 11.8                           | M   | 8      | ...       | 41                                   | 23.65 | ...  | 55    | 11.9 | M   |      |       |     |       |      |   |      |   |
| Aug. 19                              | ...        | 20                         | 26    | 44.31 | ...           | 112                       | 37 | 23.7                             | R         | 9                              | ...        | 41                         | 23.71 | ...   | 55            | 12.0                           | M   | 10     | ...       | 41                                   | 23.70 | ...  | 55    | 10.0 | M   |      |       |     |       |      |   |      |   |
| <b>188</b> <i>R. P. L. 143.</i>      |            |                            |       |       |               |                           |    |                                  |           | 11                             | ...        | 41                         | 23.65 | ...   | 55            | 11.8                           | M   | 13     | ...       | 41                                   | 23.70 | ...  | 55    | 12.8 | M   |      |       |     |       |      |   |      |   |
| Aug. 7                               | ...        | 20                         | 26    | 50.24 | 3             | 5                         | 14 | 28.1                             | R         | 22                             | ...        | 41                         | 23.62 | ...   | 55            | 10.7                           | M   | 27     | ...       | 41                                   | 23.73 | ...  | 55    | 12.6 | M   |      |       |     |       |      |   |      |   |
| 20                                   | ...        | 26                         | 50.55 | 3     | 14            | 27.1                      | R  | 28                               | ...       | 41                             | 23.63      | ...                        | 55    | 12.1  | M             | <b>194</b> <i>Stone 11091.</i> |     |        |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| Sep. 10                              | ...        | 26                         | 50.09 | 3     | 14            | 26.0                      | R  | <b>195</b> <i>Stone 11115.</i>   |           |                                |            |                            |       |       |               |                                |     |        |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| <b>189</b> <i>2 Delphini ε</i>       |            |                            |       |       |               |                           |    |                                  |           | Aug. 23                        | ...        | 20                         | 44    | 45.21 | 5             | 142                            | 8   | 54.4   | R         | 28                                   | ...   | 44   | 45.13 | ...  | 8   | 56.1 | R     |     |       |      |   |      |   |
| Oct. 6                               | ...        | 20                         | 27    | 40.17 | ...           | 79                        | 5  | 26.5                             | M         | Sep. 1                         | ...        | 44                         | 45.06 | ...   | 8             | 55.8                           | R   | 8      | ...       | 44                                   | 45.05 | 4    | 8     | 55.9 | R   |      |       |     |       |      |   |      |   |
| 7                                    | ...        | 27                         | 40.23 | ...   | 5             | 25.7                      | M  | <b>196</b> <i>32 Vulpeculae.</i> |           |                                |            |                            |       |       |               |                                |     |        |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| 8                                    | ...        | 27                         | 40.25 | ...   | 5             | 24.6                      | M  | Aug. 25                          | ...       | 20                             | 47         | 8.89                       | 4     | 118   | 21            | 48.0                           | R   | 26     | ...       | 47                                   | 8.94  | ...  | 21    | 44.6 | R   |      |       |     |       |      |   |      |   |
| 9                                    | ...        | 27                         | 40.16 | ...   | 5             | 24.6                      | M  | <b>197</b> <i>Lalande 40458.</i> |           |                                |            |                            |       |       |               |                                |     |        |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| 10                                   | ...        | 27                         | 40.13 | ...   | 5             | 26.1                      | M  | Sep. 26                          | ...       | 20                             | 50         | 37.90                      | ...   | 100   | 8             | 29.1                           | M   | Oct. 1 | ...       | 50                                   | 37.84 | ...  | 8     | 30.8 | M   |      |       |     |       |      |   |      |   |
| 11                                   | ...        | 27                         | 40.26 | ...   | 5             | 25.3                      | M  | 2                                | ...       | 50                             | 37.84      | ...                        | 8     | 31.0  | M             | 4                              | ... | 50     | 37.85     | ...                                  | 8     | 30.2 | M     | 6    | ... | 50   | 37.84 | ... | 8     | 29.2 | M |      |   |
| 13                                   | ...        | 27                         | 40.16 | ...   | 5             | 27.6                      | M  | <b>198</b> <i>76 Draconis.</i>   |           |                                |            |                            |       |       |               |                                |     |        |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| 21                                   | ...        | 27                         | 40.35 | ...   | 5             | 26.1                      | M  | Oct. 8                           | ...       | 20                             | 50         | 54.94                      | ...   | 7     | 53            | 59.1                           | M   | 9      | ...       | 50                                   | 54.09 | ...  | 53    | 59.2 | M   |      |       |     |       |      |   |      |   |
| 22                                   | ...        | 27                         | 40.19 | ...   | 5             | 26.0                      | M  | 10                               | ...       | 50                             | 55.06      | ...                        | 53    | 58.5  | M             | 11                             | ... | 50     | 55.07     | ...                                  | 53    | 59.5 | M     |      |     |      |       |     |       |      |   |      |   |
| 27                                   | ...        | 27                         | 40.18 | ...   | 5             | 28.4                      | M  | <b>190</b> <i>Taylor 9561.</i>   |           |                                |            |                            |       |       |               |                                |     |        |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| <b>190</b> <i>Taylor 9561.</i>       |            |                            |       |       |               |                           |    |                                  |           | Aug. 12                        | ...        | 20                         | 37    | 18.15 | ...           | 126                            | 14  | 39.1   | R         | <b>191</b> <i>50 Cygni α, Deneb.</i> |       |      |       |      |     |      |       |     |       |      |   |      |   |
| <b>191</b> <i>50 Cygni α, Deneb.</i> |            |                            |       |       |               |                           |    |                                  |           | Sep. 13                        | ...        | 20                         | 37    | 28.50 | ...           | 45                             | 7   | 59.9   | R         | 16                                   | ...   | 37   | 28.54 | ...  | 7   | 57.6 | M     |     |       |      |   |      |   |
| <b>192</b> <i>Taylor 9573.</i>       |            |                            |       |       |               |                           |    |                                  |           | 24                             | ...        | 37                         | 28.39 | ...   | 7             | 58.9                           | M   | 25     | ...       | 37                                   | 28.46 | ...  | 7     | 58.9 | M   | 26   | ...   | 37  | 28.49 | ...  | 7 | 58.1 | M |
| Aug. 20                              | ...        | 20                         | 39    | 25.54 | ...           | 136                       | 16 | 38.4                             | R         | <b>192</b> <i>Taylor 9573.</i> |            |                            |       |       |               |                                |     |        |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |
| 23                                   | ...        | 39                         | 25.62 | ...   | 16            | 37.6                      | R  | <b>193</b> <i>2 Aquarii ε</i>    |           |                                |            |                            |       |       |               |                                |     |        |           |                                      |       |      |       |      |     |      |       |     |       |      |   |      |   |



*Separate Results of Madras Meridian Circle Observations in 1884.*

| Number and Date.                   | Magnitude. | Mean Right Ascension 1884. |    |       | No. of Wires. | Mean Polar Distance 1884. |      |      | Observer.  | Number and Date.               | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |                         |         | Observer.                      |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
|------------------------------------|------------|----------------------------|----|-------|---------------|---------------------------|------|------|--|--------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|-------------------------|---------|--------------------------------|-------|-------|-------|------|------|----|---------|-----|-------|-------|-------|------|------|----|---------|-----|----|-------|-----|----|------|---|
|                                    |            | h.                         | m. | s.    |               | o.                        | '    | "    |  |                                |            | h.                         | m.    | s.    |               | o.                        | '                       | "       |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| <b>199</b> <i>Stone 11191.</i>     |            |                            |    |       |               |                           |      |      | <b>207</b> <i>5 Cephei α</i>   |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| Aug. 28                            | ...        | 20                         | 58 | 16.69 | ..            | 138                       | 59   | 11.8 | R  | Sep. 15                        | ...        | 21                         | 15    | 45.69 | ...           | 27                        | 54                      | 19.2    | R                              |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| <b>200</b> <i>23 Capricorni θ</i>  |            |                            |    |       |               |                           |      |      | <td>Sep. 24</td> <td>...</td> <td>15</td> <td>48.57</td> <td>...</td> <td>54</td> <td>22.7</td> <td>M</td> <td>Sep. 25</td> <td>...</td> <td>15</td> <td>48.26</td> <td>...</td> <td>54</td> <td>19.8</td> <td>M</td> <td>Sep. 26</td> <td>...</td> <td>15</td> <td>48.27</td> <td>...</td> <td>54</td> <td>20.5</td> <td>M</td> |                                |            |                            |       |       |               |                           |                         | Sep. 24 | ...                            | 15    | 48.57 | ...   | 54   | 22.7 | M  | Sep. 25 | ... | 15    | 48.26 | ...   | 54   | 19.8 | M  | Sep. 26 | ... | 15 | 48.27 | ... | 54 | 20.5 | M |
| Aug. 21                            | ...        | 20                         | 59 | 25.56 | ...           | 107                       | 41   | 33.7 | R  | Oct. 6                         | ...        | 15                         | 48.35 | ...   | 54            | 22.6                      | M                       | 11      | ...                            | 15    | 48.51 | ...   | 54   | 20.6 | M  | 21      | ... | 15    | 48.19 | ...   | 54   | 22.2 | M  | 22      | ... | 15 | 48.87 | ... | 54 | 18.9 | M |
| <b>201</b> <i>Anon.</i>            |            |                            |    |       |               |                           |      |      | <b>208</b> <i>22 Aquarii β</i>   |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| Sep. 10                            | 8.0        | 21                         | 0  | 18.10 | ...           | 150                       | 59   | 23.5 | R  | Sep. 18                        | ...        | 21                         | 25    | 27.08 | ...           | 96                        | 4                       | 50.0    | R                              |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 24                                 | 8.0        |                            | 0  | 18.01 | ...           | 59                        | 24.4 | M    | 24   | ...                            | 25         | 27.15                      | ...   | 4     | 51.9          | M                         | <b>209</b> <i>Anon.</i> |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 26                                 | 8.0        |                            | 0  | 18.48 | ...           | 59                        | 25.5 | M    | Sep. 24  | 9.0                            | 21         | 33                         | 43.75 | ...   | 119           | 45                        | 19.9                    | M       | <b>210</b> <i>ε Indi.</i>      |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| <b>202</b> <i>24 Capricorni A.</i> |            |                            |    |       |               |                           |      |      | <td>Oct. 2</td> <td>9.0</td> <td>33</td> <td>43.98</td> <td>...</td> <td>45</td> <td>19.1</td> <td>M</td> <td>Oct. 1</td> <td>...</td> <td>21</td> <td>54</td> <td>28.83</td> <td>...</td> <td>147</td> <td>15</td> <td>42.6</td> <td>M</td>   |                                |            |                            |       |       |               |                           |                         | Oct. 2  | 9.0                            | 33    | 43.98 | ...   | 45   | 19.1 | M  | Oct. 1  | ... | 21    | 54    | 28.83 | ...  | 147  | 15 | 42.6    | M   |    |       |     |    |      |   |
| Aug. 26                            | ...        | 21                         | 0  | 20.45 | ...           | 115                       | 28   | 6.3  | R  | 4                              | 9.0        | 33                         | 43.83 | ...   | 45            | 20.7                      | M                       | 3       | ...                            | 54    | 28.74 | ...   | 15   | 42.6 | M  | 4       | ... | 54    | 28.82 | ...   | 15   | 41.6 | M  |         |     |    |       |     |    |      |   |
| <b>203</b> <i>61 Cygni—1st.</i>    |            |                            |    |       |               |                           |      |      | <td>6</td> <td>...</td> <td>33</td> <td>43.85</td> <td>...</td> <td>45</td> <td>17.9</td> <td>M</td> <td>6</td> <td>...</td> <td>54</td> <td>28.86</td> <td>...</td> <td>15</td> <td>43.2</td> <td>M</td>  |                                |            |                            |       |       |               |                           |                         | 6       | ...                            | 33    | 43.85 | ...   | 45   | 17.9 | M  | 6       | ... | 54    | 28.86 | ...   | 15   | 43.2 | M  |         |     |    |       |     |    |      |   |
| Sep. 1                             | ...        | 21                         | 1  | 41.81 | ...           | 51                        | 49   | 11.4 | R  | 8                              | 9.0        | 33                         | 43.67 | ...   | 45            | 19.2                      | M                       | 7       | ...                            | 54    | 28.81 | ...   | 15   | 41.1 | M  | 8       | ... | 54    | 28.98 | ...   | 15   | 40.5 | M  |         |     |    |       |     |    |      |   |
| 18                                 | ...        |                            | 1  | 41.86 | ...           | 49                        | 12.2 | R    | 8  | ...                            | 33         | 43.85                      | ...   | 45    | 17.9          | M                         | 9                       | ...     | 54                             | 28.93 | ...   | 15    | 40.3 | M    | 10 | ...     | 54  | 28.74 | ...   | 15    | 41.2 | M    |    |         |     |    |       |     |    |      |   |
| <b>204</b> <i>61 Cygni—2nd.</i>    |            |                            |    |       |               |                           |      |      | <td>11</td> <td>...</td> <td>54</td> <td>29.03</td> <td>...</td> <td>15</td> <td>41.5</td> <td>M</td> <td>18</td> <td>...</td> <td>54</td> <td>29.04</td> <td>...</td> <td>15</td> <td>43.0</td> <td>M</td>  |                                |            |                            |       |       |               |                           |                         | 11      | ...                            | 54    | 29.03 | ...   | 15   | 41.5 | M  | 18      | ... | 54    | 29.04 | ...   | 15   | 43.0 | M  |         |     |    |       |     |    |      |   |
| Sep. 8                             | ...        | 21                         | 1  | 43.25 | ...           | 51                        | 49   | 22.0 | R  | <b>211</b> <i>34 Aquarii α</i> |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| Oct. 1                             | ...        |                            | 1  | 43.23 | ...           | 49                        | 22.8 | M    | Sep. 24  | ...                            | 21         | 59                         | 49.58 | ...   | 90            | 52                        | 59.6                    | M       | <b>212</b> <i>48 Aquarii γ</i> |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 3                                  | ...        |                            | 1  | 43.23 | ...           | 49                        | 25.4 | M    | <td>Oct. 11</td> <td>...</td> <td>22</td> <td>15</td> <td>39.77</td> <td>...</td> <td>91</td> <td>58</td> <td>14.4</td> <td>M</td>   |                                |            |                            |       |       |               |                           |                         | Oct. 11 | ...                            | 22    | 15    | 39.77 | ...  | 91   | 58 | 14.4    | M   |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 4                                  | ...        |                            | 1  | 43.13 | ...           | 49                        | 23.5 | M    | 13   | ...                            | 15         | 39.94                      | ...   | 58    | 19.8          | M                         | 21                      | ...     | 15                             | 39.76 | ...   | 58    | 19.0 | M    |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 7                                  | ...        |                            | 1  | 43.33 | ...           | 49                        | 23.3 | M    | <td>21</td> <td>...</td> <td>22</td> <td>15</td> <td>39.77</td> <td>...</td> <td>91</td> <td>58</td> <td>14.4</td> <td>M</td>  |                                |            |                            |       |       |               |                           |                         | 21      | ...                            | 22    | 15    | 39.77 | ...  | 91   | 58 | 14.4    | M   |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 8                                  | ...        |                            | 1  | 43.53 | ...           | 49                        | 23.5 | M    | <td>13</td> <td>...</td> <td>15</td> <td>39.94</td> <td>...</td> <td>58</td> <td>19.8</td> <td>M</td>  |                                |            |                            |       |       |               |                           |                         | 13      | ...                            | 15    | 39.94 | ...   | 58   | 19.8 | M  |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 9                                  | ...        |                            | 1  | 43.23 | ...           | 49                        | 24.9 | M    | <td>21</td> <td>...</td> <td>15</td> <td>39.76</td> <td>...</td> <td>58</td> <td>19.0</td> <td>M</td>  |                                |            |                            |       |       |               |                           |                         | 21      | ...                            | 15    | 39.76 | ...   | 58   | 19.0 | M  |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 28                                 | ...        |                            | 1  | 43.21 | ...           | 49                        | 23.1 | M    |  |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| <b>205</b> <i>Anon.</i>            |            |                            |    |       |               |                           |      |      |  |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| Oct. 10                            | 8.5        | 21                         | 4  | 28.16 | ...           | 100                       | 40   | 52.3 | M  |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 11                                 | 8.5        |                            | 4  | 28.29 | ...           | 40                        | 50.7 | M    |  |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 21                                 | ...        |                            | 4  | 28.03 | ...           | 40                        | 52.4 | M    |  |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 22                                 | 8.5        |                            | 4  | 28.07 | ...           | 40                        | 53.0 | M    |  |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| 27                                 | 8.5        |                            | 4  | 28.32 | ...           | 40                        | 53.3 | M    |  |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| <b>206</b> <i>64 Cygni ζ</i>       |            |                            |    |       |               |                           |      |      |  |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |
| Sep. 1                             | ...        | 21                         | 7  | 59.39 | ...           | 60                        | 14   | 51.9 | R  |                                |            |                            |       |       |               |                           |                         |         |                                |       |       |       |      |      |    |         |     |       |       |       |      |      |    |         |     |    |       |     |    |      |   |

Separate Results of Madras Meridian Circle Observations in 1884.

| Number and Date.                       | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |      |      | Observer.                            | Number and Date.  | Magnitude. | Mean Right Ascension 1884. |       |       | No. of Wires. | Mean Polar Distance 1884. |      |      | Observer. |
|--|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|--------------------------------------|---|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|  |            | h.                         | m.    | s.    |               | o.                        | '    | "    |                                      |   |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |
| Oct. 22                                | ...        | 22                         | 15    | 39.91 | ...           | 19                        | 58   | 20.6 | M                                    | Oct. 4  | ...        | 22                         | 46    | 33.67 | ...           | 98                        | 11   | 49.0 | M         |
| 27                                     | ...        | 15                         | 39.81 | ...   | ...           | 58                        | 19.0 | M    | 6                                    | ...   | 46         | 33.71                      | ...   | ...   | 11            | 48.4                      | M    | M    |           |
| 28                                     | ...        | 15                         | 39.91 | ...   | ...           | 58                        | 20.7 | M    | 7                                    | ...   | 46         | 33.68                      | ...   | ...   | 11            | 50.3                      | M    | M    |           |
| Nov. 12                                | ...        | 15                         | 39.82 | ...   | ...           | 58                        | 16.2 | R    | 8                                    | ...   | 46         | 33.76                      | ...   | ...   | 11            | 48.5                      | M    | M    |           |
| 14                                     | ...        | 15                         | 39.88 | ...   | ...           | 58                        | 17.2 | R    | 9                                    | ...   | 46         | 33.65                      | ...   | ...   | 11            | 49.5                      | M    | M    |           |
| 15                                     | ...        | 15                         | 39.94 | ...   | ...           | 58                        | 18.2 | R    | 10                                   | ...   | 46         | 33.70                      | ...   | ...   | 11            | 50.1                      | M    | M    |           |
| 17                                     | ...        | 15                         | 39.98 | ...   | ...           | 58                        | 17.0 | R    | 11                                   | ...   | 46         | 33.73                      | ...   | ...   | 11            | 49.5                      | M    | M    |           |
| <b>213</b> R. P. L. 150.               |            |                            |       |       |               |                           |      |      |                                      | 22  | ...        | 46                         | 33.59 | ...   | ...           | 11                        | 47.7 | M    | M         |
| Oct. 1                                 | ...        | 22                         | 22    | 23.00 | 3             | 4                         | 28   | 35.8 | M                                    | 27  | ...        | 46                         | 33.72 | ...   | ...           | 11                        | 49.3 | M    | M         |
| <b>214</b> R. P. L. 151.               |            |                            |       |       |               |                           |      |      |                                      | 28  | ...        | 46                         | 33.64 | ...   | ...           | 11                        | 50.8 | M    | M         |
| Oct. 2                                 | ...        | 22                         | 22    | 43.59 | 3             | 4                         | 21   | 43.5 | M                                    | Nov. 12   | ...        | 22                         | 51    | 14.28 | ...           | 120                       | 14   | 11.8 | M         |
| 3                                      | ...        | 22                         | 49.03 | 3     | ...           | 21                        | 42.2 | M    | 14                                   | ...   | 51         | 14.28                      | ...   | ...   | 14            | 12.7                      | M    | M    |           |
| <b>215</b> R. P. L. 153.               |            |                            |       |       |               |                           |      |      |                                      | <b>218</b> 24 <i>Piscis Australis</i> $\alpha$ , <i>Fomalhaut</i> . |            |                            |       |       |               |                           |      |      |           |
| Oct. 4                                 | ...        | 22                         | 26    | 44.31 | 3             | 2                         | 30   | 25.0 | M                                    | <b>219</b> 6 <i>Piscium</i> $\gamma$                                |            |                            |       |       |               |                           |      |      |           |
| <b>R. P. L. 153—s.p.</b>               |            |                            |       |       |               |                           |      |      |                                      | Oct. 3  | ...        | 23                         | 11    | 9.07  | ...           | 87                        | 21   | 4.7  | M         |
| Apl. 16                                | ...        | 22                         | 26    | 40.85 | 3             | 2                         | 30   | 30.4 | R                                    | 9   | ...        | 11                         | 9.11  | ...   | 21            | 6.7                       | M    |      |           |
| <b>216</b> 42 <i>Pegasi</i> $\zeta$    |            |                            |       |       |               |                           |      |      |                                      | <b>220</b> 8 <i>Piscium</i> $\kappa$                                |            |                            |       |       |               |                           |      |      |           |
| Oct. 1                                 | ...        | 22                         | 35    | 40.42 | ...           | 79                        | 46   | 27.0 | M                                    | Oct. 6  | ...        | 23                         | 20    | 50.09 | ...           | 89                        | 22   | 48.9 | M         |
| 2                                      | ...        | 35                         | 40.63 | ...   | ...           | 46                        | 26.7 | M    | <b>221</b> 17 <i>Piscium</i> $\iota$ |   |            |                            |       |       |               |                           |      |      |           |
| <b>217</b> 73 <i>Aquarii</i> $\lambda$ |            |                            |       |       |               |                           |      |      |                                      | Oct. 8  | ...        | 23                         | 33    | 58.95 | ...           | 85                        | 0    | 10.3 | M         |
| Oct. 1                                 | ...        | 22                         | 46    | 33.71 | ...           | 98                        | 11   | 48.8 | M                                    | <b>222</b> 28 <i>Piscium</i> $\omega$                               |            |                            |       |       |               |                           |      |      |           |
| 2                                      | ...        | 46                         | 33.58 | ...   | ...           | 11                        | 48.7 | M    | Oct. 10                              | ...   | 23         | 53                         | 21.80 | ...   | 83            | 46                        | 44.9 | M    |           |
| 3                                      | ...        | 46                         | 33.68 | ...   | ...           | 11                        | 48.6 | M    |                                      |   |            |                            |       |       |               |                           |      |      |           |

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MEAN POSITIONS OF STARS

OBSERVED WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1884

REDUCED TO JANUARY 1 OF THAT YEAR

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## Mean Positions of Stars for 1884, January 1st.

| Number. | Star.   | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|---|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |   |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 1       | 8 Ceti $\epsilon$ ... ..                          | 3.6        | ...          | 0                     | 13 | 31.01 | 99                   | 28 | 1.8  | 13            | 0.85              |
| 2       | 12 Ceti ... ..                                    | 6.2        | ...          | 0                     | 24 | 7.15  | 94                   | 35 | 55.0 | 2             | 0.00              |
| 3       | 16 Ceti $\beta$ ... ..                            | 2.1        | ...          | 0                     | 37 | 45.99 | 108                  | 37 | 25.8 | 2             | 0.00              |
| 4       | 58 Piscium ... ..                                 | 5.7        | ...          | 0                     | 40 | 58.25 | 78                   | 39 | 32.8 | 1             | 0.87              |
| 5       | 63 Piscium $\delta$ ... ..                        | 4.6        | ...          | 0                     | 42 | 39.77 | 83                   | 2  | 47.6 | 3             | 0.01              |
| 6       | R. P. L. 10 ... ..                                | 6.6        | ...          | 0                     | 51 | 41.82 | 1                    | 35 | 54.6 | 16            | 0.83              |
| 7       | 2 Ursæ Minoris ... ..                             | 4.5        | ...          | 0                     | 58 | 5.22  | 4                    | 21 | 55.9 | 1             | 0.00              |
| 8       | R. P. L. 14 ... ..                                | 6.2        | ...          | 0                     | 56 | 46.76 | 3                    | 28 | 23.5 | 1             | 0.29              |
| 9       | 43 Androm. $\beta$ ( <i>Mirach</i> ) ... ..       | 2.2        | ...          | 1                     | 3  | 14.28 | 54                   | 59 | 40.9 | 11            | 0.76              |
| 10      | R. P. L. 18 ... ..                                | 7.9        | ...          | 1                     | 13 | 54.46 | 2                    | 2  | 33.9 | 2             | 0.88              |
| 11      | 1 Ursæ Minoris $\alpha$ ( <i>Polaris</i> ) ... .. | 2.2        | ...          | 1                     | 16 | 13.01 | 1                    | 18 | 35.8 | 6             | 0.31              |
| 12      | 99 Piscium $\eta$ ... ..                          | 3.7        | ...          | 1                     | 25 | 16.45 | 75                   | 15 | 8.9  | 1             | 0.00              |
| 13      | Lalande 2806 ... ..                               | 8.5        | ...          | 1                     | 26 | 36.22 | 77                   | 26 | 6.9  | 5             | 0.98              |
| 14      | 110 Piscium $\epsilon$ ... ..                     | 4.4        | ...          | 1                     | 39 | 16.10 | 81                   | 25 | 35.1 | 10            | 0.92              |
| 15      | 8 Arietis $\epsilon$ ... ..                       | 5.2        | ...          | 1                     | 51 | 0.70  | 72                   | 44 | 57.4 | 2             | 0.02              |
| 16      | 13 Arietis $\alpha$ ... ..                        | 2.0        | ...          | 2                     | 0  | 38.02 | 67                   | 5  | 12.5 | 2             | 0.00              |
| 17      | 67 Ceti ... ..                                    | 5.5        | ...          | 2                     | 11 | 11.85 | 96                   | 57 | 26.6 | 4             | 0.01              |
| 18      | R. P. L. 26 ... ..                                | 8.0        | ...          | 2                     | 27 | 44.64 | 3                    | 27 | 32.5 | 1             | 0.00              |
| 19      | 43 Arietis $\sigma$ ... ..                        | 5.5        | ...          | 2                     | 45 | 5.29  | 75                   | 23 | 46.4 | 13            | 0.72              |
| 20      | Stone 1223 ... ..                                 | 7.0        | ...          | 2                     | 52 | 29.77 | 154                  | 28 | 30.3 | 2             | 0.01              |
| 21      | 92 Ceti $\alpha$ ( <i>Menkar</i> ) ... ..         | 2.7        | ...          | 2                     | 56 | 12.98 | 86                   | 21 | 59.5 | 2             | 0.02              |
| 22      | 57 Arietis $\delta$ ... ..                        | 4.5        | ...          | 3                     | 4  | 59.74 | 70                   | 42 | 46.7 | 8             | 0.26              |
| 23      | R. P. L. 33 ... ..                                | 5.8        | ...          | 3                     | 5  | 1.34  | 5                    | 30 | 11.9 | 1             | 0.47              |
| 24      | 1 Tauri $\epsilon$ , Var. 5 ... ..                | Var.       | ...          | 3                     | 18 | 34.27 | 81                   | 22 | 48.9 | 6             | 0.04              |
| 25      | R. P. L. 34 ... ..                                | 5.9        | ...          | 3                     | 28 | 39.47 | 3                    | 43 | 18.3 | 3             | 0.48              |
| 26      | 25 Tauri $\eta$ ( <i>Alcyone</i> ) ... ..         | 3.0        | ...          | 3                     | 40 | 35.33 | 66                   | 15 | 18.9 | 2             | 0.01              |
| 27      | 34 Eridani $\gamma^1$ ... ..                      | 3.0        | ...          | 3                     | 52 | 37.02 | 103                  | 50 | 23.1 | 6             | 0.03              |
| 28      | R. P. L. 35 ... ..                                | 6.7        | ...          | 4                     | 0  | 30.80 | 4                    | 45 | 8.0  | 4             | 0.04              |
| 29      | 74 Tauri $\epsilon$ ... ..                        | 3.7        | ...          | 4                     | 21 | 50.50 | 71                   | 4  | 40.9 | 3             | 0.02              |
| 30      | 87 Tauri $\alpha$ ( <i>Aldebaran</i> ) ... ..     | 1.0        | ...          | 4                     | 29 | 15.78 | 73                   | 43 | 29.7 | 3             | 0.03              |
| 31      | 19 Orionis $\beta$ ( <i>Rigel</i> ) ... ..        | 0.3        | ...          | 5                     | 8  | 57.81 | 98                   | 20 | 13.8 | 1             | 0.02              |
| 32      | 112 Tauri $\beta$ ... ..                          | 1.9        | ...          | 5                     | 18 | 57.45 | 61                   | 29 | 34.1 | 1             | 0.02              |
| 33      | R. P. L. 40 ... ..                                | 6.0        | ...          | 5                     | 24 | 55.82 | 4                    | 51 | 56.5 | 3             | 0.05              |
| 34      | 34 Orionis $\delta$ , Var. 1 ... ..               | Var.       | ...          | 5                     | 26 | 4.86  | 90                   | 23 | 7.7  | 2             | 0.07              |
| 35      | R. P. L. 41 ... ..                                | 7.5        | ...          | 5                     | 29 | 32.98 | 4                    | 44 | 55.9 | 1             | 0.06              |

6.—Groombridge 144.  
18.—Carrington 352.  
28.—Groombridge 750.

8.—Groombridge 195.  
23.—Groombridge 595.  
33.—Groombridge 944.

10.—Carrington 183  
25.—Groombridge 642.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                       | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|-----------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                             | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 1       | 8 Ceti $\iota$ ...          | + 3.0593            | - 0.0023           | - 0.003        | - 20.019           | + 0.034            | + 0.03         | 14         |
| 2       | 12 Ceti ...                 | + 3.0611            | + 0.0008           | - 0.000        | - 19.943           | + 0.055            | + 0.01         | 38         |
| 3       | 16 Ceti $\beta$ ...         | + 2.9985            | - 0.0053           | + 0.015        | - 19.783           | + 0.080            | - 0.03         | 70         |
| 4       | 58 Piscium ...              | + 3.1201            | + 0.0101           | + 0.002        | - 19.734           | + 0.087            | + 0.01         | 76         |
| 5       | 63 Piscium $\delta$ ...     | + 3.1025            | + 0.0079           | + 0.004        | - 19.708           | + 0.091            | + 0.04         | 85         |
| 6       | R. P. L. 10 ...             | + 13.7867           | + 3.3218           | + 0.153        | - 19.546           | + 0.458            | + 0.03         | 65         |
| 7       | 2 Ursæ Minoris ...          | + 7.0926            | + 1.3804           | + 0.068        | - 19.518           | + 0.245            | + 0.01         | 92         |
| 8       | R. P. L. 14 ...             | + 8.4754            | + 2.1579           | + 0.054        | - 19.440           | + 0.311            | + 0.02         | 95         |
| 9       | 43 Andromedæ $\beta$ ...    | + 3.3275            | + 0.0286           | + 0.014        | - 19.295           | + 0.139            | + 0.08         | 140        |
| 10      | R. P. L. 18 ...             | + 14.9492           | + 6.9011           | ...            | - 19.020           | + 0.697            | ...            | ...        |
| 11      | 1 Ursæ Minoris $\alpha$ ... | + 22.1581           | + 16.5716          | + 0.108        | - 18.955           | + 1.063            | + 0.00         | 102        |
| 12      | 99 Piscium $\eta$ ...       | + 3.2003            | + 0.0141           | - 0.000        | - 18.681           | + 0.177            | + 0.00         | 203        |
| 13      | Lalande 2806 ...            | + 3.1822            | + 0.0129           | ...            | - 18.639           | + 0.178            | ...            | ...        |
| 14      | 110 Piscium $\epsilon$ ...  | + 3.1570            | + 0.0111           | + 0.003        | - 18.202           | + 0.200            | - 0.06         | 232        |
| 15      | 8 Arietis $\iota$ ...       | + 3.2656            | + 0.0163           | + 0.001        | - 17.747           | + 0.228            | + 0.02         | 262        |
| 16      | 13 Arietis $\alpha$ ...     | + 3.3563            | + 0.0203           | + 0.013        | - 17.339           | + 0.252            | + 0.13         | 287        |
| 17      | 67 Ceti ...                 | + 2.9840            | + 0.0049           | + 0.004        | - 16.856           | + 0.242            | + 0.11         | 321        |
| 18      | R. P. L. 26 ...             | + 16.3633           | + 3.8148           | ...            | - 16.029           | + 1.441            | ...            | ...        |
| 19      | 43 Arietis $\sigma$ ...     | + 3.3022            | + 0.0150           | - 0.000        | - 15.072           | + 0.323            | + 0.04         | 400        |
| 20      | Stone 1223 ...              | + 1.1585            | + 0.0206           | ...            | - 14.637           | + 0.121            | ..             | ...        |
| 21      | 92 Ceti $\alpha$ ...        | + 3.1313            | + 0.0098           | - 0.008        | - 14.415           | + 0.323            | + 0.07         | 428        |
| 22      | 57 Arietis $\delta$ ...     | + 3.4103            | + 0.0171           | + 0.010        | - 13.867           | + 0.364            | - 0.01         | 446        |
| 23      | R. P. L. 33 ...             | + 13.0968           | + 1.6177           | + 0.044        | - 13.866           | + 1.386            | + 0.12         | 402        |
| 24      | 1 Tauri $\epsilon$ ...      | + 3.2266            | + 0.0115           | - 0.005        | - 12.986           | + 0.364            | + 0.07         | 477        |
| 25      | R. P. L. 34 ...             | + 19.3046           | + 3.2595           | + 0.136        | - 12.301           | + 2.228            | + 0.06         | Gr.        |
| 26      | 25 Tauri $\eta$ ...         | + 3.5550            | + 0.0177           | - 0.000        | - 11.460           | + 0.430            | + 0.04         | 521        |
| 27      | 34 Eridani $\gamma^1$ ...   | + 2.7926            | + 0.0047           | + 0.003        | - 10.581           | + 0.351            | + 0.11         | 546        |
| 28      | R. P. L. 35 ...             | + 17.0176           | + 1.8051           | + 0.002        | - 9.988            | + 2.156            | - 0.02         | 750        |
| 29      | 74 Tauri $\epsilon$ ...     | + 3.4893            | + 0.0120           | + 0.007        | - 8.329            | + 0.446            | + 0.03         | 609        |
| 30      | 87 Tauri $\alpha$ ...       | + 3.4324            | + 0.0105           | + 0.004        | - 7.734            | + 0.464            | + 0.18         | 630        |
| 31      | 19 Orionis $\beta$ ...      | + 2.8813            | + 0.0040           | - 0.001        | - 4.429            | + 0.412            | - 0.01         | 736        |
| 32      | 112 Tauri $\beta$ ...       | + 3.7869            | + 0.0082           | + 0.001        | - 3.572            | + 0.545            | + 0.18         | 756        |
| 33      | R. P. L. 40 ...             | + 18.5985           | + 0.5911           | ...            | - 3.057            | + 2.681            | ...            | ...        |
| 34      | 34 Orionis $\delta$ ...     | + 3.0634            | + 0.0038           | - 0.001        | - 2.957            | + 0.443            | + 0.01         | 787        |
| 35      | R. P. L. 41 ...             | + 19.0231           | + 0.5390           | ...            | - 2.657            | + 2.751            | ...            | ...        |

25.—Proper motions from Greenwich Catalogue 1880.

## Mean Positions of Stars for 1884, January 1st.

| Number. | Star.   | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|---|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |   |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 36      | 46 Orionis $\epsilon$ ...                     | 1.8        | ...          | 5                     | 30 | 19.76 | 91                   | 16 | 38.9 | 1             | 0.06              |
| 37      | 58 Orionis $\alpha$ , Var. 2 ...              | var.       | ...          | 5                     | 48 | 53.47 | 82                   | 36 | 57.2 | 9             | 0.07              |
| 38      | R. P. L. 43 ...                               | 6.6        | ...          | 6                     | 0  | 55.51 | 3                    | 14 | 17.6 | 3             | 0.35              |
| 39      | 13 Geminorum $\mu$ ...                        | 3.2        | ...          | 6                     | 15 | 56.51 | 67                   | 25 | 42.8 | 1             | 0.08              |
| 40      | ... ..  | 8.0        | 1            | 6                     | 36 | 52.07 | 130                  | 22 | 0.1  | 1             | 0.06              |
| 41      | 51 Cephei ( <i>Hec.</i> ) ...                 | 5.3        | ...          | 6                     | 45 | 46.70 | 2                    | 46 | 29.9 | 8             | 0.34              |
| 42      | ... ..  | 10.0       | 1            | 6                     | 52 | 58.09 | 152                  | 55 | 52.5 | 1             | 0.08              |
| 43      | 21 Canis Majoris $\epsilon$ ...               | 1.5        | ...          | 6                     | 54 | 4.01  | 118                  | 48 | 53.4 | 1             | 0.07              |
| 44      | 23 Canis Majoris $\gamma$ ...                 | 4.1        | ...          | 6                     | 58 | 30.73 | 105                  | 27 | 44.5 | 1             | 0.06              |
| 45      | ... ..  | 9.0        | 1            | 7                     | 1  | 47.71 | 60                   | 51 | 51.2 | 1             | 0.06              |
| 46      | 10 Canis Min. $\alpha$ ( <i>Procyon</i> ) ... | 0.5        | ...          | 7                     | 33 | 13.74 | 84                   | 28 | 42.5 | 1             | 0.08              |
| 47      | R. P. L. 45 ...                               | 7.2        | ...          | 7                     | 39 | 54.30 | 1                    | 1  | 33.0 | 8             | 0.75              |
| 48      | $\xi$ Argus ...                               | 3.4        | ...          | 7                     | 44 | 24.85 | 114                  | 34 | 8.6  | 10            | 0.12              |
| 49      | R. P. L. 48 ...                               | 7.4        | ...          | 7                     | 47 | 5.77  | 3                    | 58 | 15.7 | 4             | 0.72              |
| 50      | R. P. L. 49 ...                               | 6.7        | ...          | 7                     | 49 | 0.57  | 5                    | 36 | 39.6 | 5             | 0.47              |
| 51      | 15 Argus $\rho$ ...                           | 2.9        | ...          | 8                     | 2  | 36.13 | 113                  | 58 | 13.5 | 9             | 0.11              |
| 52      | R. P. L. 53 ...                               | 7.7        | ...          | 8                     | 20 | 55.17 | 4                    | 32 | 26.1 | 2             | 0.71              |
| 53      | 33 Cancri $\eta$ ...                          | 5.5        | ...          | 8                     | 26 | 0.09  | 69                   | 9  | 55.4 | 2             | 0.10              |
| 54      | R. P. L. 55 ...                               | 7.5        | ...          | 8                     | 31 | 45.28 | 5                    | 41 | 3.7  | 2             | 0.75              |
| 55      | 11 Hydræ $\epsilon$ ...                       | 3.6        | ...          | 8                     | 40 | 37.96 | 83                   | 9  | 21.8 | 2             | 0.10              |
| 56      | R. P. L. 60 ...                               | 7.0        | ...          | 8                     | 50 | 57.55 | 5                    | 21 | 22.5 | 5             | 0.47              |
| 57      | 65 Cancri $\alpha$ ...                        | 4.3        | ...          | 8                     | 52 | 8.54  | 77                   | 41 | 38.1 | 1             | 0.11              |
| 58      | ... ..  | 9.0        | 1            | 8                     | 54 | 40.51 | 133                  | 59 | 56.3 | 1             | 0.10              |
| 59      | 76 Cancri $\kappa$ ...                        | 5.0        | ...          | 9                     | 1  | 27.81 | 78                   | 51 | 57.0 | 1             | 0.11              |
| 60      | 83 Cancri ...                                 | 6.6        | ...          | 9                     | 12 | 30.47 | 71                   | 48 | 11.0 | 2             | 0.12              |
| 61      | R. P. L. 62 ...                               | 8.1        | ...          | 9                     | 21 | 43.66 | 2                    | 21 | 45.3 | 4             | 0.76              |
| 62      | 30 Hydræ $\alpha$ , Var. 2 ...                | var.       | ...          | 9                     | 21 | 53.25 | 98                   | 9  | 22.4 | 2             | 0.13              |
| 63      | 2 Leonis $\omega$ ...                         | 5.6        | ...          | 9                     | 22 | 14.70 | 80                   | 26 | 16.3 | 1             | 0.11              |
| 64      | Lacaille 3980 ...                             | 8.8        | ...          | 9                     | 35 | 5.72  | 148                  | 39 | 5.2  | 1             | 0.10              |
| 65      | R. P. L. 69 ...                               | 7.9        | ...          | 9                     | 39 | 9.63  | 2                    | 52 | 12.1 | 2             | 0.75              |
| 66      | 17 Leonis $\epsilon$ ...                      | 3.1        | ...          | 9                     | 39 | 16.14 | 65                   | 41 | 32.3 | 2             | 0.15              |
| 67      | R. P. L. 70 ...                               | 5.0        | ...          | 9                     | 49 | 50.03 | 5                    | 31 | 24.6 | 5             | 0.24              |
| 68      | 32 Leonis $\alpha$ ( <i>Regulus</i> ) ...     | 1.4        | ...          | 10                    | 2  | 11.61 | 77                   | 27 | 55.7 | 3             | 0.20              |
| 69      | R. P. L. 72 ...                               | 6.0        | ...          | 10                    | 12 | 36.74 | 5                    | 9  | 36.0 | 6             | 0.44              |
| 70      | 41 Leonis $\gamma^1$ ...                      | 2.5        | ...          | 10                    | 13 | 34.55 | 69                   | 34 | 19.4 | 3             | 0.25              |

38.—Groombridge 1004.  
49.—Groombridge 1359.  
67.—Carrington 1451.

45.—Comparison star for Isis in 1866.  
56.—Carrington 1236.  
69.—Groombridge 1620.

47.—Groombridge 1119.  
65.—Carrington 1413.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                           | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|---------------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                                 | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 36      | 46 Orionis $\epsilon$ ...       | + 3.0428            | + 0.0035           | - 0.002        | - 2.589            | + 0.441            | - 0.01         | 809        |
| 37      | 58 Orionis $\alpha$ ...         | + 3.2454            | + 0.0027           | + 0.001        | - 0.971            | + 0.473            | - 0.02         | 860        |
| 38      | R. P. L. 43 ...                 | + 26.7013           | - 0.0432           | ...            | + 0.081            | + 3.894            | ...            | ...        |
| 39      | 13 Geminorum $\mu$ ...          | + 3.6268            | - 0.0003           | + 0.004        | + 1.393            | + 0.527            | + 0.10         | 929        |
| 40      | ... ..                          | + 1.9505            | + 0.0014           | ...            | + 3.213            | + 0.280            | ...            | ...        |
| 41      | 51 Cephei (Hev.) ...            | + 30.1062           | - 2.2868           | - 0.040        | + 3.979            | + 4.301            | + 0.05         | Gr.        |
| 42      | ... ..                          | + 0.5261            | - 0.0086           | ...            | + 4.594            | + 0.073            | ...            | ...        |
| 43      | 21 Canis Majoris $\epsilon$ ... | + 2.3573            | + 0.0013           | - 0.001        | + 4.687            | + 0.332            | - 0.02         | 1023       |
| 44      | 23 Canis Majoris $\gamma$ ...   | + 2.7145            | + 0.0005           | - 0.002        | + 5.064            | + 0.381            | + 0.00         | 1028       |
| 45      | ... ..                          | + 3.7907            | - 0.0081           | ...            | + 5.342            | + 0.532            | ...            | ...        |
| 46      | 10 Canis Minoris $\alpha$ ...   | + 3.1911            | - 0.0041           | - 0.047        | + 7.935            | + 0.425            | + 1.03         | 1106       |
| 47      | R. P. L. 45 ...                 | + 70.7557           | - 31.7803          | ...            | + 8.468            | + 9.350            | ...            | ...        |
| 48      | $\xi$ Argûs ...                 | + 2.5235            | + 0.0008           | - 0.001        | + 8.623            | + 0.327            | - 0.02         | 1132       |
| 49      | R. P. L. 48 ...                 | + 20.2656           | - 2.3745           | ...            | + 9.034            | + 2.635            | ...            | ...        |
| 50      | R. P. L. 49 ...                 | + 15.1693           | - 1.2443           | ...            | + 9.183            | + 1.963            | ...            | ...        |
| 51      | 15 Argûs $\rho$ ...             | + 2.5610            | + 0.0009           | - 0.008        | + 10.223           | + 0.318            | - 0.06         | 1170       |
| 52      | R. P. L. 53 ...                 | + 16.8237           | - 2.1694           | ...            | + 11.563           | + 1.999            | ...            | ...        |
| 53      | 33 Cancri $\eta$ ...            | + 3.4814            | - 0.0129           | - 0.004        | + 11.928           | + 0.404            | + 0.05         | 1207       |
| 54      | R. P. L. 55 ...                 | + 13.6624           | - 1.4650           | ...            | + 12.329           | + 1.566            | ...            | ...        |
| 55      | 11 Hydræ $\epsilon$ ...         | + 3.1950            | - 0.0071           | - 0.014        | + 12.933           | + 0.351            | + 0.02         | 1245       |
| 56      | R. P. L. 60 ...                 | + 13.5446           | - 1.6998           | ...            | + 13.610           | + 1.445            | ...            | ...        |
| 57      | 65 Cancri $\alpha$ ...          | + 3.2855            | - 0.0098           | + 0.001        | + 13.685           | + 0.345            | + 0.02         | 1269       |
| 58      | ... ..                          | + 2.1706            | + 0.0037           | ...            | + 13.847           | + 0.224            | ...            | ...        |
| 59      | 76 Cancri $\kappa$ ...          | + 3.2573            | - 0.0093           | - 0.003        | + 14.270           | + 0.329            | - 0.01         | 1287       |
| 60      | 83 Cancri ...                   | + 3.3657            | - 0.0134           | - 0.009        | + 14.932           | + 0.323            | + 0.14         | 1309       |
| 61      | R. P. L. 62 ...                 | + 23.7048           | - 8.0701           | ..             | + 15.463           | + 2.193            | ..             | ...        |
| 62      | 30 Hydræ $\alpha$ ...           | + 2.9504            | - 0.0013           | - 0.002        | + 15.468           | + 0.268            | - 0.05         | 1330       |
| 63      | 2 Leonis $\omega$ ...           | + 3.2155            | - 0.0088           | + 0.002        | + 15.487           | + 0.292            | - 0.02         | 1328       |
| 64      | Lacaille 3990 ...               | + 1.7754            | + 0.0024           | ...            | + 16.177           | + 0.147            | ...            | ...        |
| 65      | R. P. L. 69 ...                 | + 18.4483           | - 5.3716           | ...            | + 16.385           | + 1.544            | ...            | ...        |
| 66      | 17 Leonis $\epsilon$ ...        | + 3.4203            | - 0.0180           | - 0.004        | + 16.390           | + 0.282            | + 0.01         | 1368       |
| 67      | R. P. L. 70 ...                 | + 10.5091           | - 1.5283           | ...            | + 16.905           | + 0.817            | ...            | ...        |
| 68      | 32 Leonis $\alpha$ ...          | + 3.2185            | - 0.0102           | - 0.018        | + 17.462           | + 0.225            | - 0.02         | 1406       |
| 69      | R. P. L. 72 ...                 | + 9.7581            | - 1.5862           | - 0.096        | + 17.892           | + 0.635            | - 0.04         | 1399       |
| 70      | 41 Leonis $\gamma$ ...          | + 3.2954            | - 0.0148           | + 0.021        | + 17.930           | + 0.208            | + 0.14         | 1432       |

41—Proper motions from Greenwich Catalogue 1880.

## Mean Positions of Stars for 1884, January 1st.

| Number. | Star.                                   | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|---|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |   |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 71      | W. B. E. X. 336                         | 9.0        | 5            | 10                    | 21 | 7.71  | 92                   | 27 | 41.2 | 5             | 0.30              |
| 72      | ...                                     | 7.8        | 5            | 10                    | 21 | 42.22 | 92                   | 55 | 39.0 | 5             | 0.31              |
| 73      | 47 Leonis $\rho$                        | 4.0        | ...          | 10                    | 26 | 42.13 | 80                   | 5  | 47.6 | 1             | 0.29              |
| 74      | Yarnall 4465                            | 5.5        | ...          | 10                    | 37 | 6.39  | 66                   | 12 | 16.6 | 5             | 0.33              |
| 75      | ...                                     | 9.0        | 4            | 10                    | 39 | 7.16  | 65                   | 48 | 40.9 | 4             | 0.30              |
| 76      | ...                                     | 9.0        | 5            | 10                    | 41 | 36.86 | 66                   | 3  | 0.3  | 5             | 0.31              |
| 77      | 53 Leonis $l$                           | 5.3        | ...          | 10                    | 43 | 9.55  | 78                   | 50 | 26.9 | 1             | 0.29              |
| 78      | 63 Leonis $\chi$                        | 4.7        | ...          | 10                    | 59 | 1.98  | 82                   | 2  | 12.5 | 2             | 0.29              |
| 79      | R. P. L. 79                             | 7.7        | ...          | 11                    | 0  | 32.98 | 1                    | 43 | 48.0 | 7             | 0.76              |
| 80      | 68 Leonis $\delta$                      | 2.8        | ...          | 11                    | 7  | 56.32 | 68                   | 50 | 27.7 | 2             | 0.29              |
| 81      | 84 Leonis $\tau$                        | 5.1        | ...          | 11                    | 21 | 58.27 | 86                   | 30 | 17.2 | 10            | 0.32              |
| 82      | 94 Leonis $\beta$                       | 2.2        | ...          | 11                    | 43 | 8.59  | 74                   | 46 | 45.7 | 1             | 0.29              |
| 83      | R. P. L. 87                             | 8.0        | ...          | 11                    | 53 | 35.40 | 2                    | 21 | 33.1 | 5             | 0.87              |
| 84      | 8 Virginis $\pi$                        | 4.4        | ...          | 11                    | 54 | 55.71 | 82                   | 44 | 18.1 | 10            | 0.32              |
| 85      | ...                                     | 9.0        | 5            | 11                    | 58 | 39.63 | 86                   | 44 | 2.1  | 5             | 0.32              |
| 86      | R. P. L. 89                             | 6.3        | ...          | 11                    | 58 | 51.51 | 3                    | 46 | 11.0 | 6             | 0.49              |
| 87      | 2 Corvi $\epsilon$                      | 3.1        | ...          | 12                    | 4  | 9.43  | 111                  | 58 | 25.6 | 1             | 0.29              |
| 88      | R. P. L. 92                             | 6.7        | ...          | 12                    | 13 | 27.51 | 2                    | 55 | 9.1  | 3             | 0.67              |
| 89      | 15 Virginis $\eta$                      | 4.0        | ...          | 12                    | 13 | 58.21 | 90                   | 1  | 19.8 | 3             | 0.30              |
| 90      | R. P. L. 93                             | 6.7        | ...          | 12                    | 14 | 21.69 | 1                    | 39 | 26.4 | 2             | 0.58              |
| 91      | Lalande 23300                           | 8.5        | ...          | 12                    | 21 | 49.85 | 91                   | 44 | 15.9 | 5             | 0.29              |
| 92      | R. P. L. 97                             | 7.2        | ...          | 12                    | 37 | 34.07 | 5                    | 43 | 8.3  | 1             | 0.82              |
| 93      | R. P. L. 99                             | 5.6        | ...          | 12                    | 48 | 16.71 | 5                    | 57 | 22.5 | 2             | 0.29              |
| 94      | 47 Virginis $\epsilon$                  | 3.0        | ...          | 12                    | 56 | 24.18 | 78                   | 25 | 0.0  | 10            | 0.32              |
| 95      | R. P. L. 100                            | 8.0        | ...          | 13                    | 0  | 23.40 | 3                    | 29 | 29.9 | 5             | 0.94              |
| 96      | R. P. L. 101                            | 7.5        | ...          | 13                    | 6  | 57.29 | 1                    | 43 | 41.5 | 4             | 0.49              |
| 97      | 67 Virginis $\alpha$ ( <i>Spica</i> )   | 1.2        | ...          | 13                    | 19 | 4.82  | 100                  | 33 | 18.2 | 1             | 0.30              |
| 98      | R. P. L. 103                            | 7.0        | ...          | 13                    | 19 | 20.11 | 4                    | 38 | 20.8 | 9             | 0.58              |
| 99      | 8 Bootis $\eta$                         | 2.9        | ...          | 13                    | 49 | 9.81  | 71                   | 1  | 13.0 | 1             | 0.30              |
| 100     | 93 Virginis $\tau$                      | 4.3        | ...          | 13                    | 55 | 44.70 | 87                   | 53 | 35.0 | 2             | 0.47              |
| 101     | R. P. L. 108                            | 7.8        | ...          | 14                    | 1  | 21.69 | 3                    | 41 | 10.2 | 2             | 0.48              |
| 102     | 16 Bootis $\alpha$ ( <i>Arcturus</i> )  | 0.0        | ...          | 14                    | 10 | 22.21 | 70                   | 12 | 45.6 | 3             | 0.47              |
| 103     | 25 Bootis $\rho$                        | 3.6        | ...          | 14                    | 26 | 49.78 | 53                   | 7  | 5.7  | 1             | 0.47              |
| 104     | 36 Bootis $\epsilon^2$ ( <i>Mirac</i> ) | 2.6        | ...          | 14                    | 39 | 55.17 | 62                   | 26 | 9.4  | 4             | 0.47              |
| 105     | 9 Libræ $a^2$                           | 3.0        | ...          | 14                    | 44 | 27.81 | 105                  | 33 | 27.9 | 3             | 0.48              |

71—72—74—75—76.—Comparison stars for Sylvia in 1884.  
 85.—Comparison star for Camilla in 1884.  
 88.—Groombridge 1871.  
 91.—Comparison star for Hestia in 1884.  
 96.—Groombridge 2006.  
 101.—Groombridge 2099.

79.—Carrington 1639.  
 86.—Groombridge 1850.  
 90.—Groombridge 1884.  
 93.—Groombridge 1940.  
 98.—Groombridge 2007.



## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                  | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                        | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 71      | W. B. E. X. 336        | + 3.0483            | - 0.0020           | ...            | + 18.216           | + 0.179            | ...            | ...        |
| 72      | ...                    | + 3.0440            | - 0.0016           | ...            | + 18.244           | + 0.177            | ...            | ...        |
| 73      | 47 Leonis $\rho$       | + 3.1648            | - 0.0080           | - 0.001        | + 18.415           | + 0.176            | - 0.01         | 1467       |
| 74      | Yarnall 4465           | + 3.2810            | - 0.0166           | ...            | + 18.757           | + 0.162            | ...            | ...        |
| 75      | ...                    | + 3.2799            | - 0.0168           | ...            | + 18.817           | + 0.158            | ...            | ...        |
| 76      | ...                    | + 3.2715            | - 0.0164           | ...            | + 18.893           | + 0.153            | ...            | ...        |
| 77      | 53 Leonis $l$          | + 3.1592            | - 0.0080           | - 0.002        | + 18.937           | + 0.145            | + 0.02         | 1500       |
| 78      | 63 Leonis $\chi$       | + 3.1215            | - 0.0056           | - 0.026        | + 19.348           | + 0.113            | + 0.02         | 1535       |
| 79      | R. P. L. 79            | + 14.4261           | - 8.0284           | ...            | + 19.383           | + 0.532            | ...            | ...        |
| 80      | 68 Leonis $\delta$     | + 3.1889            | - 0.0132           | + 0.010        | + 19.539           | + 0.098            | + 0.12         | 1546       |
| 81      | 84 Leonis $\tau$       | + 3.0859            | - 0.0020           | - 0.001        | + 19.778           | + 0.066            | + 0.01         | 1570       |
| 82      | 94 Leonis $\beta$      | + 3.0991            | - 0.0074           | - 0.036        | + 19.999           | + 0.025            | + 0.10         | 1605       |
| 83      | R. P. L. 87            | + 3.9799            | - 1.1518           | ..             | + 20.046           | + 0.007            | ...            | ...        |
| 84      | 8 Virginis $\pi$       | + 3.0761            | - 0.0023           | - 0.003        | + 20.048           | + 0.002            | + 0.02         | 1618       |
| 85      | ...                    | + 3.0723            | + 0.0001           | ...            | + 20.054           | - 0.005            | ...            | ...        |
| 86      | R. P. L. 89            | + 3.1735            | - 0.4815           | ...            | + 20.053           | - 0.007            | ...            | ...        |
| 87      | 2 Corvi $\epsilon$     | + 3.0822            | + 0.0142           | - 0.006        | + 20.051           | - 0.016            | - 0.02         | 1626       |
| 88      | R. P. L. 92            | + 1.5341            | + 0.0043           | + 0.285        | + 20.019           | - 0.022            | + 0.02         | 1656       |
| 89      | 15 Virginis $\eta$     | + 3.0724            | + 0.0027           | - 0.006        | + 20.016           | - 0.035            | + 0.02         | 1647       |
| 90      | R. P. L. 93            | + 0.1787            | + 0.9144           | - 0.090        | + 20.014           | - 0.011            | - 0.06         | 1672       |
| 91      | Lalande 23360          | + 3.0763            | + 0.0040           | ...            | + 19.962           | - 0.051            | ...            | ...        |
| 92      | R. P. L. 97            | + 0.8939            | + 0.1280           | ...            | + 19.785           | - 0.030            | ...            | ...        |
| 93      | R. P. L. 99            | + 0.3931            | + 0.2141           | - 0.020        | + 19.610           | - 0.020            | - 0.02         | 1731       |
| 94      | 47 Virginis $\epsilon$ | + 3.0056            | - 0.0007           | - 0.019        | + 19.450           | - 0.114            | - 0.03         | 1735       |
| 95      | R. P. L. 100           | - 2.6354            | + 1.2911           | ...            | + 19.361           | + 0.092            | ..             | ...        |
| 96      | R. P. L. 101           | - 9.6885            | + 6.9738           | ...            | + 19.204           | + 0.399            | ...            | ...        |
| 97      | 67 Virginis $\alpha$   | + 3.1566            | + 0.0116           | - 0.004        | + 18.871           | - 0.163            | + 0.02         | 1774       |
| 98      | R. P. L. 103           | - 2.5175            | + 0.9222           | ...            | + 18.864           | + 0.117            | ...            | ...        |
| 99      | 8 Bootis $\eta$        | + 2.8615            | - 0.0006           | - 0.005        | + 17.821           | - 0.199            | + 0.34         | 1821       |
| 100     | 93 Virginis $\tau$     | + 3.0486            | + 0.0064           | - 0.001        | + 17.550           | - 0.222            | + 0.03         | 1829       |
| 101     | R. P. L. 108           | - 7.4102            | + 2.3425           | ...            | + 17.307           | + 0.539            | ...            | ...        |
| 102     | 16 Bootis $\alpha$     | + 2.8131            | + 0.0014           | - 0.080        | + 16.895           | - 0.227            | + 1.98         | 1847       |
| 103     | 25 Bootis $\rho$       | + 2.5945            | - 0.0015           | - 0.009        | + 16.077           | - 0.233            | - 0.13         | 1869       |
| 104     | 36 Bootis $\epsilon^2$ | + 2.6240            | - 0.0001           | - 0.004        | + 15.366           | - 0.252            | - 0.00         | 1890       |
| 105     | 9 Libræ $\alpha^2$     | + 3.3171            | + 0.0154           | - 0.009        | + 15.103           | - 0.324            | + 0.07         | 1894       |

## Mean Positions of Stars for 1884, January 1st.

| Number. | Star.                                       | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of year. |
|---------|---|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |   |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 106     | T Tringuli Australis, Var.                  | var.       | ...          | 14                    | 58 | 57.26 | 158                  | 16 | 20.9 | 2             | 0.48              |
| 107     | R. P. L. 111 ... ..                         | 7.0        | ...          | 15                    | 3  | 27.20 | 5                    | 36 | 0.7  | 7             | 0.37              |
| 108     | 27 Libræ $\beta$ ... ..                     | 2.7        | ...          | 15                    | 10 | 45.85 | 98                   | 57 | 14.4 | 3             | 0.48              |
| 109     | Redhill 2293 ... ..                         | 8.0        | ...          | 15                    | 11 | 46.31 | 4                    | 25 | 39.8 | 1             | 0.91              |
| 110     | R. P. L. 114 ... ..                         | 6.9        | ...          | 15                    | 15 | 0.11  | 2                    | 19 | 21.5 | 2             | 0.54              |
| 111     | 5 Cor. Bor. $\alpha$ ( <i>Alpheta</i> ) ... | 2.4        | ...          | 15                    | 29 | 46.52 | 62                   | 53 | 38.7 | 7             | 0.54              |
| 112     | 24 Serpentis $\alpha$ ... ..                | 2.7        | ...          | 15                    | 38 | 33.30 | 83                   | 12 | 31.6 | 10            | 0.54              |
| 113     | R. P. L. 115 ... ..                         | 7.0        | ...          | 15                    | 45 | 12.50 | 4                    | 47 | 32.4 | 1             | 0.47              |
| 114     | 16 Ursæ Minoris $\zeta$ ... ..              | 4.5        | ...          | 15                    | 48 | 13.52 | 11                   | 50 | 55.6 | 1             | 0.47              |
| 115     | 8 Scorpil $\beta^1$ ... ..                  | 3.0        | ...          | 15                    | 58 | 41.60 | 109                  | 29 | 11.6 | 5             | 0.50              |
| 116     | R. P. L. 116 ... ..                         | 7.0        | ...          | 16                    | 0  | 35.25 | 4                    | 22 | 2.6  | 2             | 0.25              |
| 117     | 1 Ophiuchi $\delta$ ... ..                  | 2.8        | ...          | 16                    | 8  | 15.93 | 93                   | 23 | 39.6 | 2             | 0.47              |
| 118     | 21 Scorpil $\alpha$ ( <i>Antares</i> ) ...  | 1.1        | ...          | 16                    | 22 | 17.75 | 116                  | 10 | 24.6 | 2             | 0.47              |
| 119     | 40 Herculis $\zeta$ ... ..                  | 3.1        | ...          | 16                    | 36 | 54.71 | 58                   | 11 | 11.4 | 3             | 0.50              |
| 120     | 22 Ursæ Minoris $\epsilon$ ... ..           | 4.5        | ...          | 16                    | 57 | 53.10 | 7                    | 46 | 30.4 | 1             | 0.02              |
| 121     | R. P. L. 118 ... ..                         | 8.0        | ...          | 17                    | 1  | 48.75 | 5                    | 8  | 39.2 | 1             | 0.53              |
| 122     | G. Z. C. XVII. 421 ... ..                   | 9.4        | ...          | 17                    | 7  | 0.73  | 130                  | 55 | 11.6 | 1             | 0.64              |
| 123     | 64 Herculis $\alpha^1$ , Var. 1 ...         | var.       | ...          | 17                    | 9  | 21.46 | 75                   | 28 | 33.9 | 3             | 0.54              |
| 124     | ... ..                                      | 9.0        | 5            | 17                    | 14 | 42.42 | 126                  | 23 | 40.2 | 5             | 0.64              |
| 125     | Taylor 8070 ... ..                          | 6.6        | ...          | 17                    | 21 | 5.23  | 126                  | 40 | 46.3 | 5             | 0.64              |
| 126     | 35 Scorpil $\lambda$ ... ..                 | 1.7        | ...          | 17                    | 25 | 44.05 | 127                  | 1  | 3.8  | 4             | 0.65              |
| 127     | Stone 9578 ... ..                           | 7.8        | ...          | 17                    | 28 | 15.00 | 146                  | 44 | 40.4 | 2             | 0.64              |
| 128     | 55 Ophiuchi $\alpha$ ... ..                 | 2.2        | ...          | 17                    | 20 | 32.99 | 77                   | 21 | 17.6 | 1             | 0.47              |
| 129     | R. P. L. 120 ... ..                         | 7.3        | ...          | 17                    | 31 | 35.51 | 5                    | 17 | 25.9 | 2             | 0.51              |
| 130     | ... ..                                      | 7.5        | 5            | 17                    | 34 | 30.34 | 125                  | 44 | 22.4 | 5             | 0.69              |
| 131     | 60 Ophiuchi $\beta$ ... ..                  | 2.9        | ...          | 17                    | 37 | 44.48 | 85                   | 22 | 58.7 | 10            | 0.65              |
| 132     | 86 Herculis $\mu$ ... ..                    | 3.5        | ...          | 17                    | 41 | 55.08 | 62                   | 12 | 38.2 | 4             | 0.56              |
| 133     | ... ..                                      | 8.3        | 2            | 17                    | 42 | 56.44 | 143                  | 28 | 19.8 | 2             | 0.58              |
| 134     | 72 Ophiuchi ... ..                          | 3.8        | ...          | 18                    | 1  | 50.98 | 80                   | 27 | 5.5  | 10            | 0.65              |
| 135     | Taylor 8410 ... ..                          | 5.7        | ...          | 18                    | 4  | 38.65 | 113                  | 43 | 23.6 | 5             | 0.57              |
| 136     | 13 Sagittarii $\mu^1$ ... ..                | 4.1        | ...          | 18                    | 6  | 49.47 | 111                  | 5  | 16.3 | 1             | 0.55              |
| 137     | Stone 9951 ... ..                           | 6.4        | ...          | 18                    | 8  | 27.26 | 153                  | 55 | 4.1  | 5             | 0.61              |
| 138     | 23 Ursæ Minoris $\delta$ ... ..             | 4.3        | ...          | 18                    | 9  | 44.43 | 3                    | 23 | 24.8 | 9             | 0.07              |
| 139     | Taylor 8440 ... ..                          | 4.4        | ...          | 18                    | 12 | 32.15 | 151                  | 32 | 40.2 | 5             | 0.59              |
| 140     | 24 Ursæ Minoris ... ..                      | 5.9        | ...          | 18                    | 13 | 43.65 | 3                    | 0  | 33.8 | 9             | 0.54              |

107.—Groombridge 2213.  
116.—Carrington 2423.

110.—Groombridge 2283.  
124—125—130.—Comparison stars for comet in 1884.

113.—Carrington 2380.

## Mean Positions of Stars for 1884, January 1st.

| Number. | Star.                            | Magnitude. | Estimations | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|----------------------------------|------------|-------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                                  |            |             | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 176     | Stone 10739 ... ..               | 6.7        | ...         | 19                    | 52 | 23.35 | 133                  | 21 | 31.2 | 1             | 0.59              |
| 177     | ... ..                           | 8.0        | 4           | 19                    | 54 | 29.90 | 130                  | 18 | 7.0  | 4             | 0.63              |
| 178     | Stone 10797 ... ..               | 6.6        | ...         | 20                    | 0  | 43.46 | 137                  | 24 | 3.5  | 2             | 0.58              |
| 179     | Stone 10808 ... ..               | 6.6        | ...         | 20                    | 2  | 1.21  | 134                  | 13 | 52.9 | 5             | 0.61              |
| 180     | 65 Aquilæ $\theta$ ... ..        | 3.4        | ...         | 20                    | 5  | 19.17 | 91                   | 9  | 53.1 | 20            | 0.70              |
| 181     | Taylor 9308 ... ..               | 6.2        | ...         | 20                    | 8  | 3.20  | 117                  | 22 | 40.4 | 3             | 0.62              |
| 182     | 6 Capricorni $\alpha^3$ ... ..   | 3.8        | ...         | 20                    | 11 | 37.16 | 102                  | 54 | 9.8  | 2             | 0.62              |
| 183     | 24 Cephei (Hov.), Var 2. ...     | var.       | ...         | 20                    | 12 | 39.27 | 1                    | 13 | 17.0 | 1             | 0.75              |
| 184     | Taylor 9343 ... ..               | 6.5        | ...         | 20                    | 13 | 15.40 | 140                  | 21 | 21.6 | 1             | 0.59              |
| 185     | ... ..                           | 8.5        | 1           | 20                    | 18 | 5.71  | 121                  | 8  | 2.9  | 1             | 0.70              |
| 186     | ... ..                           | 8.5        | 1           | 20                    | 21 | 33.47 | 133                  | 19 | 21.9 | 1             | 0.62              |
| 187     | Taylor 9464 ... ..               | 7.8        | ...         | 20                    | 26 | 44.31 | 112                  | 37 | 23.7 | 1             | 0.63              |
| 188     | R. P. L. 143 ... ..              | 6.7        | ...         | 20                    | 26 | 50.29 | 5                    | 14 | 27.1 | 3             | 0.64              |
| 189     | 2 Delphini $\epsilon$ ... ..     | 4.1        | ...         | 20                    | 27 | 40.21 | 79                   | 5  | 26.1 | 10            | 0.78              |
| 190     | Taylor 9561 ... ..               | 7.2        | ...         | 20                    | 37 | 18.15 | 126                  | 14 | 39.1 | 1             | 0.61              |
| 191     | 50 Cygni $\alpha$ (Deneb) ... .. | 1.5        | ...         | 20                    | 37 | 28.48 | 45                   | 7  | 58.7 | 5             | 0.72              |
| 192     | Taylor 9573 ... ..               | 7.0        | ...         | 20                    | 39 | 25.58 | 136                  | 16 | 38.0 | 2             | 0.64              |
| 193     | 2 Aquarii $\epsilon$ ... ..      | 3.8        | ...         | 20                    | 41 | 23.66 | 99                   | 55 | 11.8 | 10            | 0.78              |
| 194     | Stone 11091 ... ..               | 7.5        | ...         | 20                    | 44 | 45.11 | 142                  | 8  | 55.3 | 4             | 0.66              |
| 195     | Stone 11115 ... ..               | 6.7        | ...         | 20                    | 47 | 8.92  | 118                  | 21 | 46.3 | 2             | 0.65              |
| 196     | 32 Vulpeculæ ... ..              | 5.1        | ...         | 20                    | 49 | 36.81 | 62                   | 23 | 1.1  | 1             | 0.66              |
| 197     | Lalande 40458 ... ..             | 5.9        | ...         | 20                    | 50 | 37.85 | 100                  | 8  | 30.1 | 5             | 0.75              |
| 198     | 76 Draconis ... ..               | ...        | ...         | 20                    | 50 | 54.95 | 7                    | 53 | 59.1 | 4             | 0.77              |
| 199     | Stone 11191 ... ..               | 7.5        | ...         | 20                    | 58 | 16.69 | 138                  | 59 | 11.8 | 1             | 0.66              |
| 200     | 23 Capricorni $\theta$ ... ..    | 4.3        | ...         | 20                    | 59 | 25.56 | 107                  | 41 | 33.7 | 1             | 0.64              |
| 201     | ... ..                           | 8.0        | 3           | 21                    | 0  | 18.20 | 150                  | 59 | 24.5 | 3             | 0.72              |
| 202     | 24 Capricorni A ... ..           | 4.6        | ...         | 21                    | 0  | 20.45 | 115                  | 28 | 6.3  | 1             | 0.65              |
| 203     | 61 Cygni—1st ... ..              | 5.5        | ...         | 21                    | 1  | 41.84 | 51                   | 49 | 11.8 | 2             | 0.68              |
| 204     | 61 Cygni—2nd ... ..              | 6.3        | ...         | 21                    | 1  | 43.27 | 51                   | 49 | 24.2 | 8             | 0.76              |
| 205     | ... ..                           | 8.5        | 4           | 21                    | 4  | 28.17 | 100                  | 40 | 52.3 | 5             | 0.79              |
| 206     | 64 Cygni $\zeta$ ... ..          | 3.5        | ...         | 21                    | 7  | 59.89 | 60                   | 14 | 51.9 | 1             | 0.67              |
| 207     | 5 Cephei $\alpha$ ... ..         | 2.6        | ...         | 21                    | 15 | 48.46 | 27                   | 54 | 20.8 | 8             | 0.75              |
| 208     | 22 Aquarii $\beta$ ... ..        | 3.1        | ...         | 21                    | 25 | 27.12 | 96                   | 4  | 51.0 | 2             | 0.71              |
| 209     | ... ..                           | 9.0        | 4           | 21                    | 33 | 43.81 | 119                  | 45 | 19.4 | 5             | 0.75              |
| 210     | $\epsilon$ Indi ... ..           | 5.2        | ...         | 21                    | 54 | 28.88 | 147                  | 15 | 41.8 | 10            | 0.76              |

188.—Carrington 3128

197—205.—Comparison stars for Asia in 1884.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                       | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|-----------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                             | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 176     | Stone 10739 ...             | + 4.1859            | - 0.0268           | ...            | - 9.444            | - 0.536            | ...            | ...        |
| 177     | ... ..                      | + 4.0677            | - 0.0239           | ...            | - 9.606            | - 0.519            | ...            | ...        |
| 178     | Stone 10797 ...             | + 4.3292            | - 0.0338           | ...            | - 10.081           | - 0.543            | ...            | ...        |
| 179     | Stone 10803 ...             | + 4.1937            | - 0.0297           | ...            | - 10.180           | - 0.524            | ...            | ...        |
| 180     | 65 Aquilæ $\theta$ ...      | + 3.0956            | - 0.0042           | - 0.000        | - 10.426           | - 0.382            | - 0.01         | 2576       |
| 181     | Taylor 9303 ...             | + 3.6594            | - 0.0155           | ...            | - 10.630           | - 0.448            | ...            | ...        |
| 182     | 6 Capricorni $\alpha^b$ ... | + 3.3295            | - 0.0084           | + 0.002        | - 10.894           | - 0.403            | - 0.02         | 2595       |
| 183     | 24 Cephei (Hev.) ...        | - 49.4201           | - 25.4047          | ...            | - 10.970           | + 6.038            | ...            | ...        |
| 184     | Taylor 9343 ...             | + 4.4207            | - 0.0417           | ...            | - 11.014           | - 0.535            | ...            | ...        |
| 185     | ... ..                      | + 3.7378            | - 0.0191           | ...            | - 11.365           | - 0.447            | ...            | ...        |
| 186     | ... ..                      | + 4.1003            | - 0.0318           | ...            | - 11.600           | - 0.484            | ...            | ...        |
| 187     | Taylor 9464 ...             | + 3.5191            | - 0.0141           | ...            | - 11.981           | - 0.408            | ...            | ...        |
| 188     | R. P. L. 143 ...            | - 8.6122            | - 1.2858           | ...            | - 11.987           | + 1.012            | ...            | ...        |
| 189     | 2 Delphini $\epsilon$ ...   | + 2.8664            | - 0.0013           | - 0.001        | - 12.046           | - 0.330            | + 0.02         | 2642       |
| 190     | Taylor 9561 ...             | + 3.8305            | - 0.0255           | ...            | - 12.708           | - 0.428            | ...            | ...        |
| 191     | 50 Cygni $\alpha$ ...       | + 2.0437            | + 0.0021           | - 0.000        | - 12.720           | - 0.226            | - 0.00         | 2679       |
| 192     | Taylor 9573 ...             | + 4.1454            | - 0.0390           | ...            | - 12.851           | - 0.460            | ...            | ...        |
| 193     | 2 Aquarii $\epsilon$ ...    | + 3.2505            | - 0.0084           | - 0.000        | - 12.983           | - 0.356            | + 0.03         | 2681       |
| 194     | Stone 11091 ...             | + 4.3670            | - 0.0517           | ...            | - 13.206           | - 0.475            | ...            | ...        |
| 195     | Stone 11115 ...             | + 3.6105            | - 0.0192           | ...            | - 13.364           | - 0.388            | ...            | ...        |
| 196     | 32 Vulpeculæ ...            | + 2.5559            | + 0.0026           | - 0.002        | - 13.523           | - 0.270            | + 0.00         | 2709       |
| 197     | Lalande 40458 ...           | + 3.2482            | - 0.0087           | ...            | - 13.597           | - 0.434            | ...            | ...        |
| 198     | 76 Draconis ...             | - 4.0051            | - 0.5286           | + 0.014        | - 13.607           | + 0.435            | - 0.01         | 2754       |
| 199     | Stone 11191 ...             | + 4.1674            | - 0.0464           | ...            | - 14.073           | - 0.429            | ...            | ...        |
| 200     | 23 Capricorni $\theta$ ...  | + 3.3747            | - 0.0128           | + 0.004        | - 14.144           | - 0.344            | + 0.05         | 2733       |
| 201     | ... ..                      | + 4.7746            | - 0.0859           | ...            | - 14.199           | - 0.488            | ...            | ...        |
| 202     | 24 Capricorni A. ...        | + 3.5220            | - 0.0178           | - 0.005        | - 14.201           | - 0.358            | + 0.02         | 2737       |
| 203     | 61 Cygni—1st ...            | + 2.3346            | + 0.0044           | + 0.344        | - 14.281           | - 0.233            | - 3.23         | 2744       |
| 204     | 61 Cygni—2nd ...            | + 2.3348            | + 0.0044           | + 0.350        | - 14.284           | - 0.233            | - 3.03         | 2745       |
| 205     | ... ..                      | + 3.2472            | - 0.0096           | ...            | - 14.454           | - 0.323            | ...            | ...        |
| 206     | 64 Cygni $\zeta$ ...        | + 2.5512            | + 0.0038           | - 0.002        | - 14.666           | - 0.248            | + 0.07         | 2760       |
| 207     | 5 Cephei $\alpha$ ...       | + 1.4148            | - 0.0071           | + 0.021        | - 15.124           | - 0.130            | - 0.03         | 2786       |
| 208     | 22 Aquarii $\beta$ ...      | + 3.1613            | - 0.0071           | - 0.001        | - 15.664           | - 0.282            | + 0.00         | 2797       |
| 209     | ... ..                      | + 3.5304            | - 0.0223           | ...            | - 16.054           | - 0.303            | ...            | ...        |
| 210     | $\epsilon$ Indi ...         | + 4.1558            | - 0.0724           | + 0.480        | - 17.114           | - 0.313            | + 2.45         | Stone      |

## Mean Positions of Stars for 1884, January 1st.

| Number. | Star.                                      | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|--|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |  |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 211     | 34 Aquarii $\alpha$                        | 3.2        | ...          | 21                    | 59 | 42.58 | 90                   | 52 | 59.6 | 1             | 0.73              |
| 212     | 48 Aquarii $\gamma$                        | 4.1        | ...          | 22                    | 15 | 39.87 | 91                   | 58 | 18.2 | 10            | 0.82              |
| 213     | R. P. L. 150                               | 5.5        | ...          | 22                    | 22 | 23.00 | 1                    | 28 | 35.3 | 1             | 0.75              |
| 214     | R. P. L. 151                               | 6.9        | ...          | 22                    | 22 | 48.81 | 1                    | 21 | 42.9 | 2             | 0.75              |
| 215     | R. P. L. 153                               | 7.6        | ...          | 22                    | 26 | 42.58 | 2                    | 30 | 27.7 | 2             | 0.52              |
| 216     | 42 Pegasi $\zeta$                          | 3.6        | ...          | 22                    | 35 | 40.53 | 79                   | 46 | 26.9 | 2             | 0.75              |
| 217     | 73 Aquarii $\lambda$                       | 3.8        | ...          | 22                    | 46 | 33.68 | 98                   | 11 | 49.0 | 14            | 0.78              |
| 218     | 24 Pis. Aus. $\alpha$ ( <i>Fomalhaut</i> ) | 1.3        | ...          | 22                    | 51 | 14.28 | 120                  | 14 | 12.3 | 2             | 0.87              |
| 219     | 6 Piscium $\gamma$                         | 3.8        | ...          | 23                    | 11 | 9.09  | 87                   | 21 | 5.7  | 2             | 0.76              |
| 220     | 8 Piscium $\kappa$                         | 5.0        | ...          | 23                    | 20 | 59.09 | 89                   | 22 | 48.9 | 1             | 0.76              |
| 221     | 17 Piscium $\iota$                         | 4.3        | ...          | 23                    | 33 | 58.95 | 85                   | 0  | 10.3 | 1             | 0.77              |
| 222     | 28 Piscium $\omega$                        | 4.2        | ...          | 23                    | 53 | 21.30 | 83                   | 46 | 44.9 | 1             | 0.77              |

213. Groombridge 3820.

214.—Groombridge 3824.

215.—Carrington 3466.

*Observed with the Madras Meridian Circle in that Year.*

| Number. | Star.                            | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|----------------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                                  | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 211     | 34 Aquarii $\alpha$ ...          | + 3.0827            | - 0.0041           | - 0.001        | - 17.359           | - 0.219            | - 0.00         | 2890       |
| 212     | 48 Aquarii $\gamma$ ...          | + 3.0926            | - 0.0042           | + 0.007        | - 18.011           | - 0.191            | - 0.02         | 2943       |
| 213     | R. P. L. 150 ...                 | - 3.9833            | - 1.2483           | + 0.052        | - 18.262           | + 0.248            | - 0.04         | 2993       |
| 214     | R. P. L. 151 ...                 | - 4.1389            | - 1.3184           | + 0.025        | - 18.277           | + 0.256            | - 0.01         | 2997       |
| 215     | R. P. L. 153 ...                 | - 9.0126            | - 4.2996           | ...            | - 18.415           | + 0.528            | ...            | ...        |
| 216     | 42 Pegasi $\zeta$ ...            | + 2.9856            | + 0.0023           | + 0.004        | - 18.711           | - 0.149            | + 0.02         | 2992       |
| 217     | 73 Aquarii $\lambda$ ...         | + 3.1330            | - 0.0063           | - 0.002        | - 19.033           | - 0.137            | - 0.04         | 3019       |
| 218     | 24 Piscis Australis $\alpha$ ... | + 3.3027            | - 0.0210           | + 0.023        | - 19.158           | - 0.135            | + 0.16         | 3032       |
| 219     | 6 Piscium $\gamma$ ...           | + 3.0592            | + 0.0005           | + 0.049        | - 19.600           | - 0.087            | - 0.02         | 3082       |
| 220     | 8 Piscium $\kappa$ ...           | + 3.0699            | 0.0000             | + 0.004        | - 19.764           | - 0.069            | + 0.10         | 3116       |
| 221     | 17 Piscium $\iota$ ...           | + 3.0591            | + 0.0030           | + 0.023        | - 19.925           | - 0.042            | + 0.44         | 3148       |
| 222     | 28 Piscium $\omega$ ...          | + 3.0681            | + 0.0047           | + 0.009        | - 20.045           | - 0.005            | + 0.11         | 3191       |



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SEPARATE RESULTS  
OF  
OBSERVATIONS  
OF THE FIXED STARS  
MADE WITH THE  
MADRAS MERIDIAN CIRCLE  
IN THE YEAR  
1885

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Separate Results of Madras Meridian Circle Observations in 1885.

| Number and Date.                      | Magnitude. | Mean Right Ascension 1885. |       |       | No. of Wires. | Mean Polar Distance 1885. |      |      | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1885. |    |    | No. of Wires. | Mean Polar Distance 1885. |   |   | Observer. |
|---------------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|------------------|------------|----------------------------|----|----|---------------|---------------------------|---|---|-----------|
|                                       |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |                  |            | h.                         | m. | s. |               | o.                        | ' | " |           |
| <b>1</b> <i>R. P. L. 10.</i>          |            |                            |       |       |               |                           |      |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 1                                | ...        | 0                          | 51    | 56.17 | 3             | 1                         | 35   | 33.5 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| <b>2</b> <i>43 Andromedæ β</i>        |            |                            |       |       |               |                           |      |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 1                                | ...        | 1                          | 3     | 17.68 | ...           | 54                        | 59   | 20.9 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| <b>3</b> <i>1 Tauri α, Var. 5.</i>    |            |                            |       |       |               |                           |      |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 1                                | ...        | 3                          | 18    | 37.50 | ...           | 81                        | 22   | 35.3 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 2                                     | ...        | 18                         | 37.49 | ...   | ...           | 22                        | 85.7 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 5                                     | ...        | 18                         | 37.60 | ...   | ...           | 22                        | 85.5 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 8                                     | ...        | 18                         | 37.62 | ...   | ...           | 22                        | 34.6 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 14                                    | ...        | 18                         | 37.56 | ...   | ...           | 22                        | 85.2 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 17                                    | ...        | 18                         | 37.50 | ...   | ...           | 22                        | 34.8 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 20                                    | ...        | 18                         | 37.56 | ...   | ...           | 22                        | 36.5 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| Dec. 28                               | ...        | 18                         | 37.53 | ...   | ...           | 22                        | 36.8 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>4</b> <i>18 Eridani ε</i>          |            |                            |       |       |               |                           |      |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 1                                | ...        | 3                          | 27    | 30.76 | ...           | 99                        | 50   | 53.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 2                                     | ...        | 27                         | 30.74 | ...   | ...           | 50                        | 55.1 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 5                                     | ...        | 27                         | 30.62 | ...   | ...           | 50                        | 53.7 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 8                                     | ...        | 27                         | 30.62 | ...   | ...           | 50                        | 52.7 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 10                                    | ...        | 27                         | 30.71 | ...   | ...           | 50                        | 53.1 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 14                                    | ...        | 27                         | 30.67 | ...   | ...           | 50                        | 53.6 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 17                                    | ...        | 27                         | 30.75 | ...   | ...           | 50                        | 53.0 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 20                                    | ...        | 27                         | 30.73 | ...   | ...           | 50                        | 53.6 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| Dec. 28                               | ...        | 27                         | 30.75 | ...   | ...           | 50                        | 54.6 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>5</b> <i>37 Tauri A. 1</i>         |            |                            |       |       |               |                           |      |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 2                                | ...        | 3                          | 57    | 53.79 | ...           | 68                        | 14   | 0.7  | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 5                                     | ...        | 57                         | 53.79 | ...   | ...           | 13                        | 59.8 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 8                                     | ...        | 57                         | 53.77 | ...   | ...           | 13                        | 59.6 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 10                                    | ...        | 57                         | 53.77 | ...   | ...           | 13                        | 58.5 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 14                                    | ...        | 57                         | 53.78 | ...   | ...           | 13                        | 59.6 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 17                                    | ...        | 57                         | 53.77 | ...   | ...           | 13                        | 59.1 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 23                                    | ...        | 57                         | 53.81 | ...   | ...           | 14                        | 0.9  | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 26                                    | ...        | 57                         | 53.80 | ...   | ...           | 18                        | 59.3 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 29                                    | ...        | 57                         | 53.78 | ...   | ...           | 13                        | 59.6 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>6</b> <i>57 Eridani μ</i>          |            |                            |       |       |               |                           |      |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 10                               | ...        | 4                          | 39    | 45.14 | ...           | 93                        | 27   | 58.0 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 20                                    | ...        | 39                         | 45.12 | ...   | ...           | 27                        | 59.4 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 23                                    | ...        | 39                         | 45.14 | ...   | ...           | 28                        | 2.7  | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 26                                    | ...        | 39                         | 45.11 | ...   | ...           | 27                        | 58.7 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 29                                    | ...        | 39                         | 45.16 | ...   | ...           | 27                        | 58.5 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 31                                    | ...        | 39                         | 45.18 | ...   | ...           | 27                        | 59.5 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| Feb. 3                                | ...        | 39                         | 45.29 | ...   | ...           | 27                        | 59.1 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 6                                     | ...        | 39                         | 45.20 | ...   | ...           | 28                        | 0.7  | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 9                                     | ...        | 39                         | 45.15 | ...   | ...           | 27                        | 58.4 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 10                                    | ...        | 39                         | 45.14 | ...   | ...           | 27                        | 57.9 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>7</b> <i>R. P. L. 37.</i>          |            |                            |       |       |               |                           |      |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 8                                | ...        | 4                          | 51    | 8.19  | 3             | 4                         | 11   | 38.9 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 14                                    | ...        | 51                         | 8.48  | 3     | ...           | 11                        | 39.1 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 17                                    | ...        | 51                         | 8.33  | 3     | ...           | 11                        | 37.9 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 20                                    | ...        | 51                         | 8.41  | 3     | ...           | 11                        | 39.1 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 26                                    | ...        | 51                         | 8.02  | 3     | ...           | 11                        | 39.1 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 29                                    | ...        | 51                         | 8.30  | 3     | ...           | 11                        | 37.9 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| Feb. 6                                | ...        | 51                         | 8.41  | 3     | ...           | 11                        | 39.4 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 10                                    | ...        | 51                         | 8.16  | 3     | ...           | 11                        | 38.1 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 14                                    | ...        | 51                         | 8.76  | 3     | ...           | 11                        | 38.2 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 20                                    | ...        | 51                         | 8.91  | 3     | ...           | 11                        | 38.6 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>8</b> <i>34 Orionis δ, Var. 1.</i> |            |                            |       |       |               |                           |      |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 23                               | ...        | 5                          | 26    | 7.82  | ...           | 90                        | 28   | 6.2  | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 29                                    | ...        | 26                         | 7.83  | ...   | ...           | 23                        | 4.9  | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| Feb. 3                                | ...        | 26                         | 7.81  | ...   | ...           | 23                        | 6.3  | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 6                                     | ...        | 26                         | 7.91  | ...   | ...           | 23                        | 4.1  | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 9                                     | ...        | 26                         | 7.91  | ...   | ...           | 23                        | 5.6  | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 11                                    | ...        | 26                         | 8.00  | ...   | ...           | 23                        | 4.7  | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 12                                    | ...        | 26                         | 7.94  | ...   | ...           | 23                        | 5.6  | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 13                                    | ...        | 26                         | 7.91  | ...   | ...           | 23                        | 5.8  | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 14                                    | ...        | 26                         | 7.91  | ...   | ...           | 23                        | 4.9  | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 17                                    | ...        | 26                         | 7.95  | ...   | ...           | 23                        | 4.5  | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>9</b> <i>46 Orionis ε</i>          |            |                            |       |       |               |                           |      |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 26                               | ...        | 5                          | 30    | 22.61 | ...           | 91                        | 16   | 35.3 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 31                                    | ...        | 30                         | 22.67 | ...   | ...           | 16                        | 37.0 | R    |           |                  |            |                            |    |    |               |                           |   |   |           |
| Feb. 10                               | ...        | 30                         | 22.67 | ...   | ...           | 16                        | 35.9 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |
| 11                                    | ...        | 30                         | 22.61 | ...   | ...           | 16                        | 37.0 | M    |           |                  |            |                            |    |    |               |                           |   |   |           |

Separate Results of Madras Meridian Circle Observations in 1885.

| Number and Date.                | Magnitude. | Mean Right Ascension 1885. |       |       | No. of Wires. | Mean Polar Distance 1885. |      |      | Observer.                              | Number and Date.                | Magnitude. | Mean Right Ascension 1885. |       |       | No. of Wires. | Mean Polar Distance 1885. |      |      | Observer. |
|---------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|--|---------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                                 |            | h.                         | m.    | s.    |               | o.                        | '    | "    |  |                                 |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |
| Feb. 12                         | ...        | 5                          | 30    | 22.70 | ...           | 91                        | 16   | 37.2 | M                                      | <b>9</b> <i>B. D. +28.1247.</i> |            |                            |       |       |               |                           |      |      |           |
| 14                              | ...        | 30                         | 22.65 | ...   | ...           | 16                        | 35.8 | M    | Feb. 10                                | 8.5                             | 6          | 42                         | 3.56  | ...   | 61            | 19                        | 49.8 | M    |           |
| 16                              | ...        | 30                         | 22.56 | ...   | ...           | 16                        | 36.9 | M    | 11                                     | ...                             | 42         | 3.53                       | ...   | ...   | 19            | 49.9                      | M    |      |           |
| 17                              | ...        | 30                         | 22.52 | ...   | ...           | 16                        | 35.8 | M    | 12                                     | 8.5                             | 42         | 3.57                       | ...   | ...   | 19            | 51.6                      | M    |      |           |
| 18                              | ...        | 30                         | 22.65 | ...   | ...           | 16                        | 35.1 | R    | 17                                     | 8.5                             | 42         | 3.23                       | ...   | ...   | 19            | 50.0                      | M    |      |           |
| 19                              | ...        | 30                         | 22.60 | ...   | ...           | 16                        | 37.8 | M    | 18                                     | 8.5                             | 42         | 3.29                       | ...   | ...   | 19            | 40.7                      | R    |      |           |
| <b>10</b> <i>53 Orionis κ</i>   |            |                            |       |       |               |                           |      |      | <b>14</b> <i>W. B. N. VI. 1239.</i>    |                                 |            |                            |       |       |               |                           |      |      |           |
| Jan. 31                         | ...        | 5                          | 42    | 18.09 | ...           | 99                        | 42   | 42.1 | R                                      | Feb. 13                         | 8.5        | 6                          | 42    | 26.33 | ...           | 61                        | 33   | 10.0 | M         |
| Feb. 3                          | ...        | 42                         | 18.02 | ...   | ...           | 42                        | 42.8 | M    | 14                                     | 8.5                             | 42         | 26.38                      | ...   | ...   | 33            | 10.0                      | M    |      |           |
| 6                               | ...        | 42                         | 18.01 | ...   | ...           | 42                        | 43.0 | M    | 16                                     | 8.5                             | 42         | 26.60                      | ...   | ...   | 33            | 12.9                      | M    |      |           |
| 9                               | ...        | 42                         | 18.06 | ...   | ...           | 42                        | 44.1 | M    | 19                                     | 8.5                             | 42         | 26.82                      | ...   | ...   | 33            | 13.4                      | M    |      |           |
| 10                              | ...        | 42                         | 18.08 | ...   | ...           | 42                        | 40.8 | M    | 20                                     | 8.5                             | 42         | 26.34                      | ...   | ...   | 33            | 12.7                      | M    |      |           |
| 11                              | ...        | 42                         | 18.02 | ...   | ...           | 42                        | 42.3 | M    | <b>15</b> <i>51 Cephei (Hev.).</i>     |                                 |            |                            |       |       |               |                           |      |      |           |
| 12                              | ...        | 42                         | 18.07 | ...   | ...           | 42                        | 43.1 | M    | Feb. 26                                | ...                             | 6          | 46                         | 16.62 | 3     | 2             | 46                        | 34.1 | M    |           |
| 13                              | ...        | 42                         | 18.00 | ...   | ...           | 42                        | 42.7 | M    | Mar. 3                                 | ...                             | 46         | 16.21                      | 3     | ...   | 46            | 32.9                      | R    |      |           |
| 14                              | ...        | 42                         | 18.05 | ...   | ...           | 42                        | 42.8 | M    | 6                                      | ...                             | 46         | 16.87                      | 3     | ...   | 46            | 35.0                      | R    |      |           |
| 16                              | ...        | 42                         | 18.21 | ...   | ...           | 42                        | 48.9 | M    | 12                                     | ...                             | 46         | 16.62                      | 3     | ...   | 46            | 32.6                      | R    |      |           |
| <b>11</b> <i>7 Geminorum η</i>  |            |                            |       |       |               |                           |      |      | <b>20</b> <i>51 Cephei (Hev.)—s.p.</i> |                                 |            |                            |       |       |               |                           |      |      |           |
| Feb. 18                         | ...        | 6                          | 7     | 56.21 | ...           | 67                        | 27   | 41.7 | M                                      | Feb. 26                         | ...        | 46                         | 16.23 | 3     | ...           | 46                        | 32.9 | R    |           |
| 16                              | ...        | 7                          | 56.11 | ...   | ...           | 27                        | 41.4 | M    | 23                                     | ...                             | 46         | 16.23                      | 3     | ...   | 46            | 32.9                      | R    |      |           |
| 17                              | ...        | 7                          | 56.13 | ...   | ...           | 27                        | 38.9 | M    | 26                                     | ...                             | 46         | 15.89                      | 3     | ...   | 46            | 33.4                      | R    |      |           |
| 18                              | ...        | 7                          | 56.14 | ...   | ...           | 27                        | 38.3 | R    | 28                                     | ...                             | 46         | 16.54                      | 3     | ...   | 46            | 34.5                      | R    |      |           |
| 19                              | ...        | 7                          | 56.13 | ...   | ...           | 27                        | 37.2 | M    | 30                                     | ...                             | 46         | 15.77                      | 3     | ...   | 46            | 31.6                      | R    |      |           |
| 20                              | ...        | 7                          | 56.10 | ...   | ...           | 27                        | 38.3 | M    | Apl. 1                                 | ...                             | 46         | 15.50                      | 2     | ...   | 46            | 32.7                      | R    |      |           |
| 23                              | ...        | 7                          | 56.12 | ...   | ...           | 27                        | 36.4 | M    | <b>16</b> <i>14 Canis Majoris θ</i>    |                                 |            |                            |       |       |               |                           |      |      |           |
| 26                              | ...        | 7                          | 56.17 | ...   | ...           | 27                        | 36.4 | M    | Feb. 18                                | ...                             | 6          | 48                         | 50.77 | ...   | 101           | 53                        | 42.4 | R    |           |
| 28                              | ...        | 7                          | 56.13 | ...   | ...           | 27                        | 36.5 | M    | 19                                     | ...                             | 48         | 50.82                      | ...   | ...   | 53            | 43.2                      | M    |      |           |
| Mar. 9                          | ...        | 7                          | 56.11 | ...   | ...           | 27                        | 38.4 | R    | 20                                     | ...                             | 48         | 50.81                      | ...   | ...   | 53            | 43.8                      | M    |      |           |
| <b>12</b> <i>31 Geminorum ξ</i> |            |                            |       |       |               |                           |      |      | <b>28</b> <i>14 Canis Majoris θ</i>    |                                 |            |                            |       |       |               |                           |      |      |           |
| Feb. 23                         | ...        | 6                          | 38    | 50.12 | ...           | 76                        | 58   | 54.6 | M                                      | Feb. 18                         | ...        | 48                         | 50.79 | ...   | ...           | 53                        | 42.9 | M    |           |
| 26                              | ...        | 38                         | 50.15 | ...   | ...           | 58                        | 55.3 | M    | 23                                     | ...                             | 48         | 50.80                      | ...   | ...   | 53            | 44.3                      | M    |      |           |
| 28                              | ...        | 38                         | 50.12 | ...   | ...           | 58                        | 53.4 | M    | Mar. 9                                 | ...                             | 48         | 50.78                      | ...   | ...   | 53            | 43.2                      | R    |      |           |
| Mar. 9                          | ...        | 38                         | 50.16 | ...   | ...           | 58                        | 53.2 | R    | 14                                     | ...                             | 48         | 50.78                      | ...   | ...   | 53            | 41.5                      | R    |      |           |
| 13                              | ...        | 38                         | 50.11 | ...   | ...           | 58                        | 52.8 | R    | 17                                     | ...                             | 48         | 50.72                      | ...   | ...   | 53            | 43.3                      | M    |      |           |
| 14                              | ...        | 38                         | 50.12 | ...   | ...           | 58                        | 52.6 | R    | 23                                     | ...                             | 48         | 50.85                      | ...   | ...   | 53            | 43.6                      | R    |      |           |
| 17                              | ...        | 38                         | 50.12 | ...   | ...           | 58                        | 53.1 | M    | Apl. 1                                 | ...                             | 48         | 50.76                      | ...   | ...   | 53            | 42.4                      | R    |      |           |
| 20                              | ...        | 38                         | 50.05 | ...   | ...           | 58                        | 53.1 | M    |  |                                 |            |                            |       |       |               |                           |      |      |           |
| 23                              | ...        | 38                         | 50.18 | ...   | ...           | 58                        | 52.7 | R    |  |                                 |            |                            |       |       |               |                           |      |      |           |
| 26                              | ...        | 38                         | 50.17 | ...   | ...           | 58                        | 52.3 | R    |  |                                 |            |                            |       |       |               |                           |      |      |           |

## Separate Results of Madras Meridian Circle Observations in 1885.

| Number and Date.                   | Magnitude. | Mean Right Ascension 1885. |     |          | No. of Wires. | Mean Polar Distance 1885. |    |      | Observer.  | Number and Date.              | Magnitude. | Mean Right Ascension 1885. |       |       | No. of Wires. | Mean Polar Distance 1885. |    |      | Observer. |
|------------------------------------|------------|----------------------------|-----|----------|---------------|---------------------------|----|------|--|-------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|
|                                    |            | h.                         | m.  | s.       |               | °                         | '  | "    |  |                               |            | h.                         | m.    | s.    |               | °                         | '  | "    |           |
| <b>17</b> <i>3 Canis Minoris β</i> |            |                            |     |          |               |                           |    |      | Apl. 17    ...    8 36 37.74    ...    68 7 7.9    M |                               |            |                            |       |       |               |                           |    |      |           |
| Feb. 26                            | ...        | 7                          | 20  | 54.75    | ...           | 81                        | 28 | 48.7 | M  | 21                            | ...        | 36                         | 37.62 | ...   | 7             | 6.9                       | M  |      |           |
| Mar. 3                             | ...        | ...                        | ... | 90 54.93 | ...           | ...                       | 28 | 47.0 | R  | 24                            | ...        | 36                         | 37.63 | ...   | 7             | 7.1                       | M  |      |           |
| 6                                  | ...        | ...                        | ... | 90 54.90 | ...           | ...                       | 28 | 45.9 | R  | 28                            | ...        | 36                         | 37.85 | ...   | 7             | 6.3                       | M  |      |           |
| 14                                 | ...        | ...                        | ... | 90 54.83 | ...           | ...                       | 28 | 45.4 | R  | <b>21</b> <i>65 Cancri α</i>  |            |                            |       |       |               |                           |    |      |           |
| 17                                 | ...        | ...                        | ... | 20 54.90 | ...           | ...                       | 28 | 48.3 | M  | Apl. 11                       | ...        | 8                          | 52    | 11.79 | ...           | 77                        | 41 | 52.1 | M         |
| 20                                 | ...        | ...                        | ... | 20 54.91 | ...           | ...                       | 28 | 46.4 | M  | 14                            | ...        | 52                         | 11.78 | ...   | 41            | 52.1                      | M  |      |           |
| 23                                 | ...        | ...                        | ... | 20 54.83 | ...           | ...                       | 28 | 46.3 | R  | 17                            | ...        | 52                         | 11.78 | ...   | 41            | 52.8                      | M  |      |           |
| 26                                 | ...        | ...                        | ... | 20 54.77 | ...           | ...                       | 28 | 46.4 | R  | 21                            | ...        | 52                         | 11.84 | ...   | 41            | 52.2                      | M  |      |           |
| 28                                 | ...        | ...                        | ... | 20 54.78 | ...           | ...                       | 28 | 46.4 | R  | 24                            | ...        | 52                         | 11.85 | ...   | 41            | 51.8                      | M  |      |           |
| 30                                 | ...        | ...                        | ... | 20 54.89 | ...           | ...                       | 28 | 46.3 | R  | 28                            | ...        | 52                         | 11.73 | ...   | 41            | 52.2                      | M  |      |           |
| <b>18</b> <i>ξ Argus.</i>          |            |                            |     |          |               |                           |    |      | <b>22</b> <i>14 Leonis o</i>                         |                               |            |                            |       |       |               |                           |    |      |           |
| Mar. 3                             | ...        | 7                          | 44  | 27.42    | ...           | 114                       | 34 | 17.9 | R  | Apl. 17                       | ...        | 9                          | 35    | 0.72  | ...           | 79                        | 85 | 7.4  | M         |
| 6                                  | ...        | ...                        | ... | 44 27.43 | ...           | ...                       | 34 | 19.4 | R  | 21                            | ...        | 35                         | 0.78  | ...   | 85            | 6.6                       | M  |      |           |
| 12                                 | ...        | ...                        | ... | 44 27.48 | ...           | ...                       | 34 | 19.0 | R  | 24                            | ...        | 35                         | 0.76  | ...   | 85            | 7.2                       | M  |      |           |
| 23                                 | ...        | ...                        | ... | 44 27.42 | ...           | ...                       | 34 | 17.8 | R  | 28                            | ...        | 35                         | 0.67  | ...   | 85            | 6.7                       | M  |      |           |
| 26                                 | ...        | ...                        | ... | 44 27.47 | ...           | ...                       | 34 | 17.6 | R  | <b>23</b> <i>R. P. L. 72.</i> |            |                            |       |       |               |                           |    |      |           |
| 28                                 | ...        | ...                        | ... | 44 27.47 | ...           | ...                       | 34 | 18.2 | R  | Apl. 14                       | ...        | 10                         | 12    | 46.74 | 3             | 5                         | 9  | 53.0 | M         |
| 30                                 | ...        | ...                        | ... | 44 27.40 | ...           | ...                       | 34 | 15.7 | R  | 17                            | ...        | 12                         | 46.44 | 3     | 9             | 53.8                      | M  |      |           |
| Apl. 1                             | ...        | ...                        | ... | 44 27.46 | ...           | ...                       | 34 | 18.3 | R  | 21                            | ...        | 12                         | 46.27 | 3     | 9             | 50.5                      | M  |      |           |
| 3                                  | ...        | ...                        | ... | 44 27.60 | ...           | ...                       | 34 | 17.8 | R  | 24                            | ...        | 12                         | 46.18 | 3     | 9             | 52.3                      | M  |      |           |
| 8                                  | ...        | ...                        | ... | 44 27.53 | ...           | ...                       | 34 | 19.6 | M  | 28                            | ...        | 12                         | 46.34 | 3     | 9             | 52.2                      | M  |      |           |
| <b>19</b> <i>17 Cancri β</i>       |            |                            |     |          |               |                           |    |      | May 1    ...    12 46.73    3    9 53.2    R         |                               |            |                            |       |       |               |                           |    |      |           |
| Mar. 3                             | ...        | 8                          | 10  | 16.65    | ...           | 80                        | 27 | 38.5 | R  | 9                             | ...        | 12                         | 46.25 | 3     | 9             | 52.8                      | R  |      |           |
| 6                                  | ...        | ...                        | ... | 10 16.67 | ...           | ...                       | 27 | 38.9 | R  | 13                            | ...        | 12                         | 46.12 | 3     | 9             | 52.3                      | R  |      |           |
| 12                                 | ...        | ...                        | ... | 16 16.69 | ...           | ...                       | 27 | 39.2 | R  | <b>R. P. L. 72—s.p.</b>       |            |                            |       |       |               |                           |    |      |           |
| 20                                 | ...        | ...                        | ... | 10 16.66 | ...           | ...                       | 27 | 37.7 | M  | Sep. 25                       | ...        | 10                         | 12    | 45.57 | 3             | 5                         | 9  | 53.8 | R         |
| 30                                 | ...        | ...                        | ... | 10 16.69 | ...           | ...                       | 27 | 38.2 | R  | Oct. 7                        | ...        | 12                         | 46.70 | 3     | 9             | 54.6                      | M  |      |           |
| Apl. 1                             | ...        | ...                        | ... | 10 16.74 | ...           | ...                       | 27 | 38.3 | R  | <b>24</b> <i>42 Hydræ μ</i>   |            |                            |       |       |               |                           |    |      |           |
| 3                                  | ...        | ...                        | ... | 10 16.73 | ...           | ...                       | 27 | 37.4 | R  | May 1                         | ...        | 10                         | 20    | 31.69 | ...           | 106                       | 14 | 57.9 | R         |
| 8                                  | ...        | ...                        | ... | 10 16.59 | ...           | ...                       | 27 | 38.2 | M  | 5                             | ...        | 20                         | 31.69 | ...   | 14            | 58.9                      | R  |      |           |
| 11                                 | ...        | ...                        | ... | 10 16.64 | ...           | ...                       | 27 | 37.5 | M  | 7                             | ...        | 20                         | 31.70 | ...   | 14            | 57.8                      | R  |      |           |
| 14                                 | ...        | ...                        | ... | 10 16.71 | ...           | ...                       | 27 | 38.2 | M  | 9                             | ...        | 20                         | 31.71 | ...   | 14            | 55.9                      | R  |      |           |
| <b>20</b> <i>43 Cancri γ</i>       |            |                            |     |          |               |                           |    |      | 11    ...    20 31.69    ...    14 58.1    R         |                               |            |                            |       |       |               |                           |    |      |           |
| Apl. 3                             | ...        | 8                          | 36  | 37.58    | ...           | 68                        | 7  | 7.5  | R  | 18                            | ...        | 20                         | 31.68 | ...   | 14            | 57.4                      | R  |      |           |
| 8                                  | ...        | ...                        | ... | 36 37.80 | ...           | ...                       | 7  | 7.0  | M  |                               |            |                            |       |       |               |                           |    |      |           |
| 11                                 | ...        | ...                        | ... | 36 37.78 | ...           | ...                       | 7  | 7.9  | M  |                               |            |                            |       |       |               |                           |    |      |           |
| 14                                 | ...        | ...                        | ... | 36 37.77 | ...           | ...                       | 7  | 7.8  | M  |                               |            |                            |       |       |               |                           |    |      |           |

Separate Results of Madras Meridian Circle Observations in 1885.

| Number and Date.              | Magnitude. | Mean Right Ascension 1885. |       |       | No. of Wires. | Mean Polar Distance 1885. |    |                                     | Observer.                       | Number and Date. | Magnitude.        | Mean Right Ascension 1885. |       |       | No. of Wires. | Mean Polar Distance 1885. |      |      | Observer. |
|-------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|-------------------------------------|---------------------------------|------------------|-------------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                               |            | h.                         | m.    | s.    |               | °                         | '  | "                                   |                                 |                  |                   | h.                         | m.    | s.    |               | °                         | '    | "    |           |
| May 15                        | ...        | 10                         | 20    | 31.66 | ...           | 106                       | 14 | 57.6                                | R                               | <b>29</b>        | <i>7 Corvi δ²</i> |                            |       |       |               |                           |      |      |           |
| 18                            | ...        | 20                         | 31.66 | ...   | 14            | 57.8                      | R  | May 25                              | ...                             |                  | 12                | 23                         | 54.90 | ...   | 105           | 52                        | 29.8 | R    |           |
| 20                            | ...        | 20                         | 31.73 | ...   | 14            | 56.8                      | R  | 28                                  | ...                             |                  | 23                | 54.89                      | ...   | 52    | 31.0          | R                         |      |      |           |
| 22                            | ...        | 20                         | 31.69 | ...   | 14            | 56.9                      | R  | 30                                  | ...                             |                  | 23                | 54.94                      | ...   | 52    | 29.9          | R                         |      |      |           |
| <b>25</b> <i>58 Leonis δ.</i> |            |                            |       |       |               |                           |    |                                     | June 2                          | ...              | 23                | 54.90                      | ...   | 52    | 34.7          | M                         |      |      |           |
| May 1                         | ...        | 10                         | 54    | 37.29 | ...           | 85                        | 45 | 55.0                                | R                               | 5                | ...               | 23                         | 54.94 | ...   | 52            | 29.7                      | M    |      |           |
| 7                             | ...        | 54                         | 37.27 | ...   | 45            | 55.3                      | R  | <b>30</b> <i>43 Virginis δ</i>      |                                 |                  |                   |                            |       |       |               |                           |      |      |           |
| 9                             | ...        | 54                         | 37.28 | ...   | 45            | 53.5                      | R  | June 2                              | ...                             | 12               | 49                | 48.67                      | ...   | 85    | 58            | 37.1                      | M    |      |           |
| 11                            | ...        | 54                         | 37.29 | ...   | 45            | 54.3                      | R  | 5                                   | ...                             | 49               | 48.68             | ...                        | 58    | 36.1  | M             |                           |      |      |           |
| 18                            | ...        | 54                         | 37.29 | ...   | 45            | 52.3                      | R  | <b>31</b> <i>Anon.</i>              |                                 |                  |                   |                            |       |       |               |                           |      |      |           |
| 15                            | ...        | 54                         | 37.28 | ...   | 45            | 55.1                      | R  | May 5                               | 8.7                             | 13               | 57                | 30.50                      | ...   | 90    | 4             | 23.7                      | R    |      |           |
| 18                            | ...        | 54                         | 37.27 | ...   | 45            | 54.8                      | R  | 9                                   | 8.7                             | 57               | 30.57             | ...                        | 4     | 24.4  | R             |                           |      |      |           |
| 20                            | ...        | 54                         | 37.28 | ...   | 45            | 54.8                      | R  | 11                                  | 8.7                             | 57               | 30.61             | ...                        | 4     | 23.9  | R             |                           |      |      |           |
| 22                            | ...        | 54                         | 37.28 | ...   | 45            | 55.2                      | R  | 15                                  | 8.7                             | 57               | 30.62             | ...                        | 4     | 24.3  | R             |                           |      |      |           |
| 25                            | ...        | 54                         | 37.28 | ...   | 45            | 54.0                      | R  | 22                                  | 8.7                             | 57               | 30.57             | ...                        | 4     | 23.6  | R             |                           |      |      |           |
| <b>26</b> <i>84 Leonis τ</i>  |            |                            |       |       |               |                           |    |                                     | <b>32</b> <i>Lalande 25863.</i> |                  |                   |                            |       |       |               |                           |      |      |           |
| May 5                         | ...        | 11                         | 22    | 1.42  | ...           | 86                        | 30 | 37.0                                | R                               | May 7            | 9.0               | 13                         | 59    | 21.46 | ...           | 90                        | 21   | 51.5 | R         |
| 7                             | ...        | 22                         | 1.37  | ...   | 30            | 37.6                      | R  | 13                                  | 9.0                             | 59               | 21.58             | ...                        | 21    | 51.6  | R             |                           |      |      |           |
| 11                            | ...        | 22                         | 1.36  | ...   | 30            | 36.1                      | R  | 18                                  | 9.0                             | 59               | 21.48             | ...                        | 21    | 51.7  | R             |                           |      |      |           |
| 20                            | ...        | 22                         | 1.35  | ...   | 30            | 36.6                      | R  | 20                                  | 9.0                             | 59               | 21.43             | ...                        | 21    | 51.7  | R             |                           |      |      |           |
| 28                            | ...        | 22                         | 1.41  | ...   | 30            | 38.0                      | R  | 25                                  | 9.0                             | 59               | 21.40             | ...                        | 21    | 52.2  | R             |                           |      |      |           |
| 30                            | ...        | 22                         | 1.40  | ...   | 30            | 36.7                      | R  | <b>33</b> <i>R. P. L. 110.—s.p.</i> |                                 |                  |                   |                            |       |       |               |                           |      |      |           |
| June 2                        | ...        | 22                         | 1.42  | ...   | 30            | 38.3                      | M  | Jan. 1                              | ...                             | 14               | 52                | 29.66                      | 3     | 3     | 34            | 31.7                      | M    |      |           |
| 5                             | ...        | 22                         | 1.39  | ...   | 30            | 38.3                      | M  | 8                                   | ...                             | 52               | 29.08             | 3                          | 34    | 31.0  | R             |                           |      |      |           |
| <b>27</b> <i>8 Virginis π</i> |            |                            |       |       |               |                           |    |                                     | 14                              | ...              | 52                | 29.47                      | 3     | 34    | 31.9          | R                         |      |      |           |
| May 1                         | ...        | 11                         | 54    | 53.79 | ...           | 82                        | 44 | 33.9                                | R                               | 17               | ...               | 52                         | 29.35 | 3     | 34            | 32.7                      | R    |      |           |
| 5                             | ...        | 54                         | 53.78 | ...   | 44            | 33.5                      | R  | 20                                  | ...                             | 52               | 29.34             | 3                          | 34    | 32.3  | R             |                           |      |      |           |
| 9                             | ...        | 54                         | 53.78 | ...   | 44            | 33.2                      | R  | <b>34</b> <i>35 Ophiuchi η</i>      |                                 |                  |                   |                            |       |       |               |                           |      |      |           |
| 13                            | ...        | 54                         | 53.80 | ...   | 44            | 39.1                      | R  | Aug. 5                              | ...                             | 17               | 3                 | 47.05                      | ...   | 105   | 34            | 51.8                      | R    |      |           |
| 15                            | ...        | 54                         | 53.82 | ...   | 44            | 33.8                      | R  | 7                                   | ...                             | 3                | 47.02             | ...                        | 34    | 51.2  | R             |                           |      |      |           |
| 18                            | ...        | 54                         | 53.84 | ...   | 44            | 33.7                      | R  | 15                                  | ...                             | 3                | 46.96             | ...                        | 34    | 53.4  | R             |                           |      |      |           |
| 22                            | ...        | 54                         | 53.81 | ...   | 44            | 33.9                      | R  | 17                                  | ...                             | 3                | 46.99             | ...                        | 34    | 51.8  | R             |                           |      |      |           |
| 25                            | ...        | 54                         | 53.83 | ...   | 44            | 33.0                      | R  | 20                                  | ...                             | 3                | 47.05             | ...                        | 34    | 51.7  | R             |                           |      |      |           |
| 28                            | ...        | 54                         | 53.83 | ...   | 44            | 33.9                      | R  | <b>28</b> <i>R. P. L. 92.</i>       |                                 |                  |                   |                            |       |       |               |                           |      |      |           |
| 30                            | ...        | 54                         | 53.81 | ...   | 44            | 33.3                      | R  | May 22                              | ...                             | 12               | 18                | 27.52                      | 3     | 2     | 55            | 27.3                      | R    |      |           |
| <b>28</b> <i>R. P. L. 92.</i> |            |                            |       |       |               |                           |    |                                     | 25                              | ...              | 18                | 27.56                      | 3     | 55    | 25.7          | R                         |      |      |           |

Separate Results of Madras Meridian Circle Observations in 1885.

| Number and Date.                      | Magnitude. | Mean Right Ascension 1885. |       |       | No of Wires. | Mean Polar Distance 1885. |    |      | Observer. | Number and Date.                 | Magnitude. | Mean Right Ascension 1885. |       |       | No. of Wires. | Mean Polar Distance 1885. |    |      | Observer. |
|---------------------------------------|------------|----------------------------|-------|-------|--------------|---------------------------|----|------|-----------|----------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|
|                                       |            | h.                         | m.    | s.    |              | o.                        | '  | "    |           |                                  |            | h.                         | m.    | s.    |               | o.                        | '  | "    |           |
| <b>35</b> <i>Anon.</i>                |            |                            |       |       |              |                           |    |      |           | <b>40</b> <i>58 Serpentis η</i>  |            |                            |       |       |               |                           |    |      |           |
| Aug. 5                                | 7.5        | 17                         | 16    | 57.58 | ...          | 126                       | 21 | 1.2  | R         | Sep. 7                           | ...        | 18                         | 15    | 21.51 | ...           | 92                        | 55 | 40.0 | R         |
| 7                                     | 7.5        | 16                         | 57.68 | ...   | 21           | 0.9                       | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| 15                                    | 7.5        | 16                         | 57.92 | ...   | 21           | 0.3                       | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| 17                                    | 7.5        | 16                         | 57.81 | ...   | 20           | 59.9                      | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| 20                                    | 7.5        | 16                         | 57.56 | ...   | 21           | 1.1                       | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| <b>36</b> <i>Anon.</i>                |            |                            |       |       |              |                           |    |      |           | <b>41</b> <i>22 Sagittarii λ</i> |            |                            |       |       |               |                           |    |      |           |
| Aug. 15                               | 8.5        | 17                         | 22    | 41.45 | ...          | 130                       | 46 | 48.4 | R         | Sep. 7                           | ...        | 18                         | 20    | 52.32 | ...           | 115                       | 29 | 1.3  | R         |
| 17                                    | 8.5        | 22                         | 41.45 | ...   | 46           | 47.6                      | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| 20                                    | 8.5        | 22                         | 41.55 | ...   | 46           | 40.0                      | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| <b>37</b> <i>60 Ophiuchi β</i>        |            |                            |       |       |              |                           |    |      |           | <b>42</b> <i>13 Aquilæ ε</i>     |            |                            |       |       |               |                           |    |      |           |
| Aug. 5                                | ...        | 17                         | 37    | 47.37 | ...          | 85                        | 23 | 3.2  | R         | Sep. 7                           | ...        | 18                         | 54    | 24.16 | ...           | 75                        | 5  | 12.3 | R         |
| 7                                     | ...        | 37                         | 47.42 | ...   | 28           | 2.8                       | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| 15                                    | ...        | 37                         | 47.41 | ...   | 23           | 2.1                       | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| 17                                    | ...        | 37                         | 47.31 | ...   | 22           | 59.1                      | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| 20                                    | ...        | 37                         | 47.34 | ...   | 28           | 0.4                       | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| <b>38</b> <i>72 Ophiuchi.</i>         |            |                            |       |       |              |                           |    |      |           | <b>43</b> <i>λ Ursæ Minoris.</i> |            |                            |       |       |               |                           |    |      |           |
| Aug. 5                                | ...        | 18                         | 1     | 53.77 | ...          | 80                        | 27 | 5.8  | R         | Sep. 25                          | ...        | 19                         | 38    | 53.66 | 3             | 1                         | 2  | 40.1 | R         |
| 7                                     | ...        | 1                          | 53.77 | ...   | 27           | 4.4                       | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| 17                                    | ...        | 1                          | 53.90 | ...   | 27           | 4.1                       | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| 20                                    | ...        | 1                          | 53.82 | ...   | 27           | 5.2                       | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| <b>39</b> <i>23 Ursæ Minoris δ</i>    |            |                            |       |       |              |                           |    |      |           | <i>λ Ursæ Minoris—s.p.</i>       |            |                            |       |       |               |                           |    |      |           |
| Aug. 17                               | ...        | 18                         | 9     | 24.50 | 3            | 3                         | 23 | 19.6 | R         | Mar. 20                          | ...        | 19                         | 38    | 53.49 | 3             | 1                         | 2  | 41.8 | M         |
| Sep. 7                                | ...        | 9                          | 24.74 | 3     | 23           | 22.1                      | R  |      |           | 23                               | ...        | 38                         | 54.45 | 3     | 2             | 41.0                      | R  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 26                               | ...        | 38                         | 54.17 | 3     | 2             | 40.8                      | R  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 28                               | ...        | 38                         | 54.20 | 3     | 2             | 40.4                      | R  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 30                               | ...        | 38                         | 54.39 | 3     | 2             | 40.3                      | R  |      |           |
| <b>44</b> <i>53 Aquilæ α, Altair.</i> |            |                            |       |       |              |                           |    |      |           | <b>45</b> <i>65 Aquilæ θ</i>     |            |                            |       |       |               |                           |    |      |           |
| Sep. 12                               | ...        | 19                         | 45    | 10.23 | ...          | 81                        | 26 | 3.9  | R         | Sep. 12                          | ...        | 20                         | 5     | 22.25 | ...           | 9                         | 9  | 41.3 | R         |
| Sep. 15                               | ...        | 45                         | 10.29 | ...   | 26           | 3.8                       | R  |      |           | Sep. 15                          | ...        | 5                          | 22.29 | ...   | 9             | 42.4                      | R  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 18                               | ...        | 5                          | 22.21 | ...   | 9             | 40.9                      | R  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 25                               | ...        | 5                          | 22.23 | ...   | 9             | 41.8                      | R  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 29                               | ...        | 5                          | 22.28 | ...   | 9             | 41.8                      | R  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | Oct. 1                           | M          | 5                          | 22.24 | ...   | 9             | 41.0                      | M  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 3                                | M          | 5                          | 22.27 | ...   | 9             | 40.5                      | M  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 5                                | M          | 5                          | 22.32 | ...   | 9             | 39.1                      | M  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 7                                | M          | 5                          | 22.29 | ...   | 9             | 42.9                      | M  |      |           |
|                                       |            |                            |       |       |              |                           |    |      |           | 9                                | M          | 5                          | 22.23 | ...   | 9             | 42.7                      | M  |      |           |
| <b>45</b> <i>65 Aquilæ θ</i>          |            |                            |       |       |              |                           |    |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| Sep. 12                               | ...        | 20                         | 5     | 22.25 | ...          | 9                         | 9  | 41.3 | R         |                                  |            |                            |       |       |               |                           |    |      |           |
| Sep. 15                               | ...        | 5                          | 22.29 | ...   | 9            | 42.4                      | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| Sep. 18                               | ...        | 5                          | 22.21 | ...   | 9            | 40.9                      | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| Sep. 25                               | ...        | 5                          | 22.23 | ...   | 9            | 41.8                      | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| Sep. 29                               | ...        | 5                          | 22.28 | ...   | 9            | 41.8                      | R  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| Oct. 1                                | M          | 5                          | 22.24 | ...   | 9            | 41.0                      | M  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| Oct. 3                                | M          | 5                          | 22.27 | ...   | 9            | 40.5                      | M  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| Oct. 5                                | M          | 5                          | 22.32 | ...   | 9            | 39.1                      | M  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| Oct. 7                                | M          | 5                          | 22.29 | ...   | 9            | 42.9                      | M  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |
| Oct. 9                                | M          | 5                          | 22.23 | ...   | 9            | 42.7                      | M  |      |           |                                  |            |                            |       |       |               |                           |    |      |           |

Separate Results of Madras Meridian Circle Observations in 1885.

| Number and Date.          | Magnitude. | Mean Right Ascension 1885. |       |       | No. of Wires. | Mean Polar Distance 1885. |    |      | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1885. |    |    | No. of Wires. | Mean Polar Distance 1885. |   |   | Observer. |
|---------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|------------------|------------|----------------------------|----|----|---------------|---------------------------|---|---|-----------|
|                           |            | h.                         | m.    | s.    |               | °                         | '  | "    |           |                  |            | h.                         | m. | s. |               | °                         | ' | " |           |
| <b>46</b> 2 Delphini ε    |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Sep. 12                   | ...        | 20                         | 27    | 43.12 | ...           | 79                        | 5  | 13.2 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 15                        | ...        | 27                         | 43.06 | ...   |               |                           | 5  | 12.8 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 18                        | ...        | 27                         | 43.11 | ...   |               |                           | 5  | 11.7 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 25                        | ...        | 27                         | 43.11 | ...   |               |                           | 5  | 13.0 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 29                        | ...        | 27                         | 43.12 | ...   |               |                           | 5  | 12.4 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| Oct. 1                    | ...        | 27                         | 43.15 | ...   |               |                           | 5  | 11.5 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 3                         | ...        | 27                         | 43.07 | ...   |               |                           | 5  | 10.3 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 5                         | ...        | 27                         | 43.01 | ...   |               |                           | 5  | 11.8 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 7                         | ...        | 27                         | 43.03 | ...   |               |                           | 5  | 12.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 9                         | ...        | 27                         | 43.00 | ...   |               |                           | 5  | 13.5 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| <b>47</b> 2 Aquarii ε     |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Sep. 18                   | ...        | 20                         | 41    | 26.99 | ...           | 99                        | 54 | 56.4 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 25                        | ...        | 41                         | 26.96 | ...   |               |                           | 54 | 56.6 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 29                        | ...        | 41                         | 26.90 | ...   |               |                           | 54 | 56.6 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| Oct. 3                    | ...        | 41                         | 26.96 | ...   |               |                           | 54 | 57.2 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 5                         | ...        | 41                         | 26.98 | ...   |               |                           | 54 | 58.0 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 7                         | ...        | 41                         | 26.98 | ...   |               |                           | 54 | 56.8 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 9                         | ...        | 41                         | 27.08 | ...   |               |                           | 54 | 57.5 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 14                        | ...        | 41                         | 27.10 | ...   |               |                           | 54 | 57.9 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 16                        | ...        | 41                         | 27.06 | ...   |               |                           | 54 | 56.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 19                        | ...        | 41                         | 27.05 | ...   |               |                           | 54 | 55.8 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| <b>48</b> 23 Capricorni θ |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Oct. 1                    | ...        | 20                         | 59    | 28.84 | ...           | 107                       | 41 | 20.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 14                        | ...        | 59                         | 28.72 | ...   |               |                           | 41 | 21.2 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 16                        | ...        | 59                         | 28.87 | ...   |               |                           | 41 | 22.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 19                        | ...        | 59                         | 28.85 | ...   |               |                           | 41 | 18.4 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 21                        | ...        | 59                         | 28.82 | ...   |               |                           | 41 | 21.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 23                        | ...        | 59                         | 28.86 | ...   |               |                           | 41 | 22.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| <b>49</b> 48 Aquarii γ    |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Oct. 16                   | ...        | 22                         | 15    | 42.88 | ...           |                           | 91 | 58   | 0.0       | M                |            |                            |    |    |               |                           |   |   |           |
| 19                        | ...        | 15                         | 42.89 | ...   |               |                           | 57 | 58.4 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 21                        | ...        | 15                         | 42.95 | ...   |               |                           | 58 | 0.1  | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 23                        | ...        | 15                         | 43.03 | ...   |               |                           | 58 | 1.3  | M         |                  |            |                            |    |    |               |                           |   |   |           |
| <b>50</b> 73 Aquarii λ    |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Oct. 14                   | ...        | 22                         | 46    | 36.80 | ...           |                           | 98 | 11   | 28.1      | M                |            |                            |    |    |               |                           |   |   |           |
| 21                        | ...        | 46                         | 36.84 | ...   |               |                           | 11 | 28.3 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 23                        | ...        | 46                         | 36.71 | ...   |               |                           | 11 | 29.9 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| <b>51</b> R. P. L. 155.   |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Oct. 7                    | ...        | 23                         | 24    | 19.45 | 3             |                           | 4  | 12   | 56.4      | M                |            |                            |    |    |               |                           |   |   |           |
| <b>R. P. L. 155.—s.p.</b> |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Apl. 14                   | ...        | 23                         | 24    | 19.54 | 3             |                           | 4  | 13   | 0.0       | M                |            |                            |    |    |               |                           |   |   |           |
| 17                        | ...        | 24                         | 19.12 | 3     |               |                           | 12 | 58.3 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 21                        | ...        | 24                         | 19.00 | 3     |               |                           | 12 | 59.5 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 24                        | ...        | 24                         | 18.82 | 3     |               |                           | 12 | 57.6 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 28                        | ...        | 24                         | 19.11 | 3     |               |                           | 12 | 58.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| May 1                     | ...        | 24                         | 19.51 | 3     |               |                           | 12 | 57.8 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 9                         | ...        | 24                         | 19.07 | 3     |               |                           | 12 | 58.7 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 13                        | ...        | 24                         | 18.87 | 3     |               |                           | 12 | 55.2 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 22                        | ...        | 24                         | 18.40 | 3     |               |                           | 12 | 56.2 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 25                        | ...        | 24                         | 18.68 | 3     |               |                           | 12 | 58.4 | R         |                  |            |                            |    |    |               |                           |   |   |           |



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MEAN POSITIONS OF STARS

OBSERVED WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1885

REDUCED TO JANUARY 1 OF THAT YEAR

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## Mean Positions of Stars for 1885, January 1st.

| Number. | Star.                        | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|------------------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                              |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 1       | R. P. L. 10                  | 6.6        | ...          | 0                     | 51 | 56.17 | 1                    | 35 | 33.5 | 1             | 0.00              |
| 2       | 43 Andromedæ $\beta$         | 2.2        | ...          | 1                     | 3  | 17.68 | 54                   | 59 | 20.9 | 1             | 0.00              |
| 3       | 1 Tauri $\alpha$ , Var. 5    | Var.       | ...          | 3                     | 18 | 37.55 | 81                   | 22 | 35.6 | 8             | 0.14              |
| 4       | 18 Eridani $\epsilon$        | 3.7        | ...          | 3                     | 27 | 30.71 | 99                   | 50 | 53.6 | 9             | 0.13              |
| 5       | 37 Tauri A <sup>1</sup>      | 4.4        | ...          | 3                     | 57 | 53.78 | 68                   | 13 | 59.7 | 9             | 0.04              |
| 6       | 57 Eridani $\mu$             | 4.3        | ...          | 4                     | 39 | 45.16 | 93                   | 27 | 59.3 | 10            | 0.07              |
| 7       | R. P. L. 37                  | 7.0        | ...          | 4                     | 51 | 8.40  | 4                    | 11 | 38.6 | 10            | 0.07              |
| 8       | 34 Orionis $\delta$ , Var. 1 | Var.       | ...          | 5                     | 26 | 7.89  | 90                   | 23 | 5.3  | 10            | 0.10              |
| 9       | 46 Orionis $\epsilon$        | 1.8        | ...          | 5                     | 30 | 22.62 | 91                   | 16 | 36.4 | 10            | 0.11              |
| 10      | 53 Orionis $\kappa$          | 2.2        | ...          | 5                     | 42 | 18.06 | 99                   | 42 | 42.8 | 10            | 0.11              |
| 11      | 7 Geminorum $\eta$           | 3.5        | ...          | 6                     | 7  | 56.14 | 67                   | 27 | 38.4 | 10            | 0.14              |
| 12      | 31 Geminorum $\xi$           | 3.4        | ...          | 6                     | 38 | 50.13 | 76                   | 58 | 53.3 | 10            | 0.19              |
| 13      | B. D. + 28. 1247             | 8.5        | 4            | 6                     | 42 | 3.44  | 61                   | 19 | 50.2 | 5             | 0.12              |
| 14      | W. B. N. VI. 1239            | 8.5        | 5            | 6                     | 42 | 26.38 | 61                   | 33 | 11.8 | 5             | 0.13              |
| 15      | 51 Cephei (Hev.)             | 5.3        | ...          | 6                     | 46 | 16.24 | 2                    | 46 | 33.3 | 12            | 0.28              |
| 16      | 14 Canis Majoris $\theta$    | 4.2        | ...          | 6                     | 48 | 50.79 | 101                  | 53 | 43.1 | 10            | 0.18              |
| 17      | 3 Canis Minoris $\beta$      | 3.1        | ...          | 7                     | 20 | 54.85 | 81                   | 28 | 46.7 | 10            | 0.20              |
| 18      | $\xi$ Argus                  | 3.2        | ...          | 7                     | 44 | 27.47 | 114                  | 34 | 18.1 | 10            | 0.22              |
| 19      | 17 Cancri $\beta$            | 3.8        | ...          | 8                     | 10 | 16.68 | 80                   | 27 | 38.2 | 10            | 0.23              |
| 20      | 43 Cancri $\gamma$           | 4.8        | ...          | 8                     | 36 | 37.72 | 68                   | 7  | 7.3  | 8             | 0.29              |
| 21      | 65 Cancri $\alpha$           | 4.3        | ...          | 8                     | 52 | 11.79 | 77                   | 41 | 52.2 | 6             | 0.30              |
| 22      | 14 Leonis $\alpha$           | 3.8        | ...          | 9                     | 35 | 0.73  | 79                   | 35 | 7.0  | 4             | 0.31              |
| 23      | R. P. L. 72                  | 6.0        | ...          | 10                    | 12 | 46.33 | 5                    | 9  | 52.9 | 10            | 0.40              |
| 24      | 42 Hydræ $\mu$               | 4.1        | ...          | 10                    | 20 | 31.69 | 106                  | 14 | 57.5 | 10            | 0.36              |
| 25      | 58 Leonis $d$                | 5.0        | ...          | 10                    | 54 | 37.28 | 85                   | 45 | 54.4 | 10            | 0.36              |
| 26      | 84 Leonis $\tau$             | 5.1        | ...          | 11                    | 22 | 1.39  | 86                   | 30 | 37.3 | 8             | 0.38              |
| 27      | 8 Virginis $\pi$             | 4.4        | ...          | 11                    | 54 | 58.81 | 82                   | 44 | 38.6 | 10            | 0.37              |
| 28      | R. P. L. 92                  | 6.7        | ...          | 12                    | 13 | 27.54 | 2                    | 55 | 26.5 | 2             | 0.39              |
| 29      | 7 Corvi $\delta^2$           | 3.1        | ...          | 12                    | 23 | 54.91 | 105                  | 52 | 31.0 | 5             | 0.41              |
| 30      | 43 Virginis $\delta$         | 3.7        | ...          | 12                    | 49 | 48.68 | 85                   | 58 | 36.6 | 2             | 0.42              |
| 31      | ...                          | 8.7        | 5            | 13                    | 57 | 30.57 | 90                   | 4  | 24.0 | 5             | 0.36              |
| 32      | Lalande 25863                | 9.0        | 5            | 13                    | 59 | 21.47 | 90                   | 21 | 51.7 | 5             | 0.37              |
| 33      | R. P. L. 110                 | 7.0        | ...          | 14                    | 52 | 29.38 | 3                    | 34 | 31.9 | 5             | 0.03              |
| 34      | 35 Ophiuchi $\eta$           | 2.6        | ...          | 17                    | 3  | 47.01 | 105                  | 34 | 52.0 | 5             | 0.61              |
| 35      | ...                          | 7.5        | 5            | 17                    | 16 | 57.71 | 126                  | 21 | 0.7  | 5             | 0.61              |

1.—Groombridge 144.  
28.—Groombridge 1871.

13—14.—Comparison stars for Vera in 1885.  
31—32.—Comparison stars for Sylvia in 1885.  
35.—Comparison star for comet in 1884.

23.—Groombridge 1620.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                       | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|-----------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                             | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
|         |                             | <i>s</i>            | <i>s</i>           | <i>s</i>       | "                  | "                  | "              |            |
| 1       | R. P. L. 10 ...             | + 13·8751           | + 8·4082           | + 0·153        | - 19·541           | + 0·463            | + 0·03         | 65         |
| 2       | 43 Andromedæ β ...          | + 3·3278            | + 0·0286           | + 0·014        | - 19·294           | + 0·139            | + 0·08         | 140        |
| 3       | 1 Tauri α, ...              | + 3·2270            | + 0·0115           | - 0·005        | - 12·982           | + 0·364            | + 0·07         | 477        |
| 4       | 18 Eridani ε ...            | + 2·8899            | + 0·0055           | - 0·068        | - 12·379           | + 0·336            | - 0·01         | 493        |
| 5       | 37 Tauri A <sup>1</sup> ... | + 3·5322            | + 0·0153           | + 0·005        | - 10·186           | + 0·447            | + 0·06         | 554        |
| 6       | 57 Eridani μ ...            | + 2·9964            | + 0·0055           | - 0·000        | - 6·879            | + 0·418            | + 0·00         | 657        |
| 7       | R. P. L. 37 ...             | + 20·4860           | + 1·4852           | ...            | - 5·935            | + 2·853            | ...            | ...        |
| 8       | 34 Orionis δ ...            | + 3·0635            | + 0·0038           | - 0·001        | - 2·953            | + 0·443            | + 0·01         | 787        |
| 9       | 46 Orionis ε ...            | + 3·0429            | + 0·0035           | - 0·002        | - 2·585            | + 0·441            | - 0·01         | 809        |
| 10      | 53 Orionis κ ...            | + 2·8442            | + 0·0027           | - 0·002        | - 1·547            | + 0·414            | - 0·00         | 844        |
| 11      | 7 Geminorum η ...           | + 3·6269            | + 0·0007           | - 0·005        | + 0·695            | + 0·529            | + 0·00         | 909        |
| 12      | 31 Geminorum ξ ...          | + 3·3771            | - 0·0017           | - 0·009        | + 3·883            | + 0·485            | + 0·20         | 989        |
| 13      | B. D. + 28. 1247 ...        | + 3·7911            | - 0·0051           | ...            | + 3·659            | + 0·542            | ...            | ...        |
| 14      | W. B. N. VI. 1239 ...       | + 3·7843            | - 0·0051           | ...            | + 3·693            | + 0·541            | ...            | ...        |
| 15      | 51 Cephei (Hev.) ...        | + 30·0859           | - 2·3086           | - 0·040        | + 4·021            | + 4·297            | + 0·05         | Gr.        |
| 16      | 14 Canis Majoris θ ...      | + 2·7971            | + 0·0004           | - 0·011        | + 4·243            | + 0·397            | + 0·00         | 1011       |
| 17      | 3 Canis Minoris β ...       | + 3·2604            | - 0·0041           | - 0·004        | + 6·933            | + 0·444            | + 0·03         | 1079       |
| 18      | ξ Argūs ...                 | + 2·5235            | + 0·0008           | - 0·001        | + 8·827            | + 0·327            | - 0·02         | 1132       |
| 19      | 17 Cancrī β ...             | + 3·2617            | - 0·0072           | - 0·004        | + 10·796           | + 0·397            | + 0·04         | 1180       |
| 20      | 43 Cancrī γ ...             | + 3·4887            | - 0·0143           | - 0·009        | + 12·663           | + 0·390            | + 0·03         | 1230       |
| 21      | 65 Cancrī α ...             | + 3·2854            | - 0·0098           | + 0·001        | + 13·689           | + 0·345            | + 0·02         | 1289       |
| 22      | 14 Leonis α ...             | + 3·2177            | - 0·0093           | - 0·010        | + 16·173           | + 0·272            | + 0·02         | 1360       |
| 23      | R. P. L. 72 ...             | + 9·7429            | - 1·6821           | - 0·096        | + 17·898           | + 0·633            | - 0·04         | 1399       |
| 24      | 42 Hydræ μ ...              | + 2·9085            | + 0·0040           | - 0·010        | + 18·195           | + 0·171            | + 0·06         | 1451       |
| 25      | 58 Leonis d ...             | + 3·1002            | - 0·0039           | - 0·002        | + 19·243           | + 0·120            | + 0·01         | 1526       |
| 26      | 84 Leonis τ ...             | + 3·0859            | - 0·0020           | - 0·001        | + 19·779           | + 0·066            | + 0·01         | 1570       |
| 27      | 8 Virginis π ...            | + 3·0761            | - 0·0022           | - 0·003        | + 20·048           | + 0·002            | + 0·02         | 1618       |
| 28      | R. P. L. 92 ...             | + 1·5364            | + 0·0034           | + 0·285        | + 20·019           | - 0·022            | + 0·02         | 1656       |
| 29      | 7 Corvi δ <sup>2</sup> ...  | + 3·1120            | + 0·0118           | - 0·014        | + 19·144           | - 0·055            | + 0·15         | 1675       |
| 30      | 43 Virginis δ ...           | + 3·0522            | + 0·0025           | - 0·034        | + 19·582           | - 0·103            | + 0·05         | 1723       |
| 31      | ... ..                      | + 3·0732            | + 0·0075           | ...            | + 17·475           | - 0·228            | ...            | ...        |
| 32      | Lalande 25863 ...           | + 3·0766            | + 0·0077           | ...            | + 17·395           | - 0·230            | ...            | ...        |
| 33      | R. P. L. 110 ...            | - 11·5528           | + 2·9880           | ...            | + 14·637           | + 1·146            | ...            | ...        |
| 34      | 35 Ophiuchi η ...           | + 3·4340            | + 0·0073           | + 0·000        | + 4·870            | - 0·487            | - 0·10         | 2171       |
| 35      | ... ..                      | + 4·0390            | + 0·0106           | ...            | + 3·743            | - 0·581            | ...            | ...        |

15—Proper motions from Greenwich Catalogue 1880.

## Mean Positions of Stars for 1885, January 1st.

| Number. | Star.                                | Magnitude. | Estimations. | Mean Right Ascension. |           |           | Mean Polar Distance. |          |          | Observations. | Fraction of Year. |
|---------|--------------------------------------|------------|--------------|-----------------------|-----------|-----------|----------------------|----------|----------|---------------|-------------------|
|         |                                      |            |              | <i>h.</i>             | <i>m.</i> | <i>s.</i> | <i>°</i>             | <i>'</i> | <i>"</i> |               |                   |
| 36      | ... ..                               | 3.8        | ...          | 17                    | 22        | 41.48     | 130                  | 46       | 48.3     | 3             | 0.63              |
| 37      | 60 Ophiuchi β ... ..                 | 2.9        | ...          | 17                    | 37        | 47.37     | 85                   | 23       | 1.5      | 5             | 0.63              |
| 38      | 72 Ophiuchi ... ..                   | 3.8        | ...          | 18                    | 1         | 53.82     | 80                   | 27       | 4.9      | 4             | 0.61              |
| 39      | 23 Ursæ Minoris δ ... ..             | 4.3        | ...          | 18                    | 9         | 24.76     | 3                    | 23       | 22.1     | 12            | 0.22              |
| 40      | 58 Serpentis η ... ..                | 3.4        | ...          | 18                    | 15        | 21.51     | 92                   | 55       | 40.0     | 1             | 0.68              |
| 41      | 22 Sagittarii λ ... ..               | 3.1        | ...          | 18                    | 20        | 52.32     | 115                  | 29       | 1.3      | 1             | 0.68              |
| 42      | 13 Aquilæ ε ... ..                   | 4.1        | ...          | 18                    | 54        | 24.16     | 75                   | 5        | 12.3     | 1             | 0.68              |
| 43      | λ Ursæ Minoris ... ..                | 6.5        | ...          | 19                    | 38        | 54.06     | 1                    | 2        | 40.7     | 6             | 0.31              |
| 44      | 53 Aquilæ α ( <i>Altair</i> ) ... .. | 1.0        | ...          | 19                    | 45        | 10.29     | 81                   | 26       | 3.9      | 2             | 0.70              |
| 45      | 65 Aquilæ θ ... ..                   | 3.4        | ...          | 20                    | 5         | 22.26     | 91                   | 9        | 41.4     | 10            | 0.74              |
| 46      | 3 Delphini ε ... ..                  | 4.1        | ...          | 20                    | 27        | 43.08     | 79                   | 5        | 12.2     | 10            | 0.74              |
| 47      | 2 Aquarii ε ... ..                   | 3.8        | ...          | 20                    | 41        | 27.01     | 99                   | 54       | 56.9     | 10            | 0.76              |
| 48      | 23 Capricorni θ ... ..               | 4.3        | ...          | 20                    | 59        | 23.83     | 107                  | 41       | 20.3     | 6             | 0.79              |
| 49      | 43 Aquarii γ ... ..                  | 4.1        | ...          | 22                    | 15        | 42.94     | 91                   | 58       | 0.0      | 4             | 0.80              |
| 50      | 73 Aquarii λ ... ..                  | 3.8        | ...          | 22                    | 46        | 36.78     | 98                   | 11       | 23.8     | 3             | 0.80              |
| 51      | R. P. L. 155 ... ..                  | 7.0        | ...          | 23                    | 24        | 19.05     | 4                    | 12       | 57.8     | 11            | 0.37              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                     | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|---------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                           | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 36      | ...                       | + 4.2104            | + 0.0111           | ...            | + 3.251            | - 0.606            | ...            | ...        |
| 37      | 60 Ophiuchi $\beta$       | + 2.9650            | + 0.0030           | - 0.004        | + 1.940            | - 0.431            | - 0.17         | 2229       |
| 38      | 72 Ophiuchi ...           | + 2.8475            | + 0.0019           | - 0.006        | - 0.166            | - 0.415            | - 0.09         | 2275       |
| 39      | 23 Ursæ Minoris $\delta$  | - 19.4808           | - 0.2722           | + 0.026        | - 0.823            | + 2.839            | - 0.04         | 2395       |
| 40      | 58 Serpentis $\eta$       | + 3.1405            | + 0.0010           | - 0.040        | - 1.344            | - 0.456            | + 0.68         | 2298       |
| 41      | 22 Sagittarii $\lambda$   | + 3.7070            | - 0.0013           | - 0.005        | - 1.824            | - 0.537            | + 0.20         | 2310       |
| 42      | 13 Aquilæ $\epsilon$ ...  | + 2.7263            | + 0.0004           | - 0.005        | - 4.716            | - 0.385            | + 0.08         | 2390       |
| 43      | $\lambda$ Ursæ Minoris    | - 68.5193           | - 28.9896          | - 0.050        | - 8.388            | + 8.418            | + 0.01         | 2795       |
| 44      | 53 Aquilæ $\alpha$ ...    | + 2.8919            | - 0.0014           | + 0.035        | - 8.882            | - 0.374            | - 0.38         | 2524       |
| 45      | 65 Aquilæ $\theta$ ...    | + 3.0956            | - 0.0042           | - 0.000        | - 10.430           | - 0.382            | - 0.01         | 2576       |
| 46      | 2 Delphini $\epsilon$ ... | + 2.8664            | - 0.0013           | - 0.001        | - 12.049           | - 0.330            | + 0.02         | 2642       |
| 47      | 2 Aquarii $\epsilon$ ...  | + 3.2505            | - 0.0084           | - 0.000        | - 12.987           | - 0.356            | + 0.03         | 2681       |
| 48      | 23 Capricorni $\theta$    | + 3.3745            | - 0.0128           | + 0.004        | - 14.147           | - 0.344            | + 0.05         | 2733       |
| 49      | 48 Aquarii $\gamma$ ...   | + 3.0926            | - 0.0042           | + 0.007        | - 18.013           | - 0.191            | - 0.02         | 2943       |
| 50      | 73 Aquarii $\lambda$ ...  | + 3.1830            | - 0.0063           | - 0.002        | - 19.035           | - 0.137            | - 0.04         | 3019       |
| 51      | R. P. L. 155 ...          | + 0.2808            | - 0.3314           | ...            | - 19.811           | + 0.003            | ...            | ...        |



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SEPARATE RESULTS  
OF  
OBSERVATIONS  
OF THE FIXED STARS  
MADE WITH THE  
MADRAS MERIDIAN CIRCLE  
IN THE YEAR  
1886

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Separate Results of Madras Meridian Circle Observations in 1886.

| Number and Date.                      | Magnitude. | Mean Right Ascension 1886. |       |       | No. of Wires. | Mean Polar Distance 1886. |    |      | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1886. |    |    | No. of Wires. | Mean Polar Distance 1886. |   |   | Observer. |
|---------------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|------------------|------------|----------------------------|----|----|---------------|---------------------------|---|---|-----------|
|                                       |            | h.                         | m.    | s.    |               | o.                        | '  | "    |           |                  |            | h.                         | m. | s. |               | o.                        | ' | " |           |
| <b>1 43 Andromedæ β</b>               |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Dec. 11                               | ...        | 1                          | 3     | 20.99 | ...           | 54                        | 59 | 3.7  | R         |                  |            |                            |    |    |               |                           |   |   |           |
| <b>2 1 Ursæ Minoris α, Polaris.</b>   |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Dec. 11                               | ...        | 1                          | 16    | 55.64 | 3             | 1                         | 17 | 58.3 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 24                                    | ...        | 16                         | 58.16 | 2     | 17            | 56.4                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>1 Ursæ Minoris α, Polaris—s.p.</b> |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| June 11                               | ...        | 1                          | 16    | 58.29 | 3             | 1                         | 17 | 59.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| <b>3 110 Piscium ο</b>                |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 1                                | ...        | 1                          | 39    | 22.52 | ...           | 81                        | 24 | 59.2 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| Dec. 11                               | ...        | 39                         | 22.42 | ...   | 24            | 59.2                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 24                                    | ...        | 39                         | 22.44 | ...   | 24            | 58.6                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 28                                    | ...        | 39                         | 22.81 | ...   | 24            | 55.9                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>4 43 Arietis σ</b>                 |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 15                               | ...        | 2                          | 45    | 11.92 | ...           | 75                        | 23 | 14.5 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| Dec. 11                               | ...        | 45                         | 11.92 | ...   | 23            | 18.0                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 24                                    | ...        | 45                         | 11.88 | ...   | 23            | 16.7                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 28                                    | ...        | 45                         | 12.01 | ...   | 23            | 16.2                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>5 1 Tauri ο, Var. 5.</b>           |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 1                                | ...        | 3                          | 18    | 40.62 | ...           | 81                        | 22 | 24.5 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 7                                     | ...        | 18                         | 40.73 | ...   | 22            | 22.1                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 15                                    | ...        | 18                         | 40.77 | ...   | 22            | 21.6                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 19                                    | ...        | 18                         | 40.74 | ...   | 22            | 22.8                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Dec. 24                               | ...        | 18                         | 40.74 | ...   | 22            | 25.3                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 28                                    | ...        | 18                         | 40.73 | ...   | 22            | 22.4                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>6 18 Eridani ε</b>                 |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 1                                | ...        | 3                          | 27    | 33.58 | ...           | 99                        | 50 | 40.1 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 7                                     | ...        | 27                         | 33.54 | ...   | 50            | 41.1                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 15                                    | ...        | 27                         | 33.48 | ...   | 50            | 40.9                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 19                                    | ...        | 27                         | 33.50 | ...   | 50            | 38.3                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 29                                    | ...        | 27                         | 33.60 | ...   | 50            | 43.1                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>7 37 Tauri A<sup>1</sup>.</b>      |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 7                                | ...        | 3                          | 57    | 57.28 | ...           | 63                        | 13 | 49.1 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 26                                    | ...        | 57                         | 57.31 | ...   | 13            | 51.2                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 27                                    | ...        | 57                         | 57.87 | ...   | 13            | 53.5                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>8 54 Tauri γ</b>                   |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 19                               | ...        | 4                          | 13    | 18.41 | ...           | 74                        | 38 | 54.4 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 26                                    | ...        | 13                         | 18.34 | ...   | 38            | 56.8                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 27                                    | ...        | 13                         | 18.23 | ...   | 38            | 56.2                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 29                                    | ...        | 13                         | 18.35 | ...   | 38            | 56.2                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>9 57 Eridani μ</b>                 |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 26                               | ...        | 4                          | 39    | 48.11 | ...           | 93                        | 27 | 52.2 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 27                                    | ...        | 39                         | 48.17 | ...   | 27            | 52.5                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 29                                    | ...        | 39                         | 48.08 | ...   | 27            | 53.3                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Feb. 6                                | ...        | 39                         | 48.23 | ...   | 27            | 54.4                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 13                                    | ...        | 39                         | 48.18 | ...   | 27            | 51.3                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 15                                    | ...        | 39                         | 48.10 | ...   | 27            | 51.1                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>10 R. P. L. 37.</b>                |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 1                                | ...        | 4                          | 51    | 28.18 | 3             | 4                         | 11 | 31.4 | M         |                  |            |                            |    |    |               |                           |   |   |           |
| 29                                    | ...        | 51                         | 28.67 | 7     | 11            | 32.9                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| 30                                    | ...        | 51                         | 28.55 | 7     | 11            | 31.7                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Feb. 1                                | ...        | 51                         | 28.25 | 7     | 11            | 30.4                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Dec. 23                               | ...        | 51                         | 29.00 | 3     | 11            | 33.2                      | M  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>11 19 Orionis β, Rigel.</b>        |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 24                               | ...        | 5                          | 9     | 3.48  | ...           | 93                        | 20 | 2.2  | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 30                                    | ...        | 9                          | 3.54  | ...   | 20            | 5.0                       | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Feb. 1                                | ...        | 9                          | 3.57  | ...   | 20            | 1.7                       | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| <b>12 R. P. L. 40.</b>                |            |                            |       |       |               |                           |    |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Jan. 29                               | ...        | 5                          | 25    | 32.63 | 7             | 4                         | 51 | 51.5 | R         |                  |            |                            |    |    |               |                           |   |   |           |
| 30                                    | ...        | 25                         | 33.01 | 7     | 51            | 50.2                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |
| Feb. 1                                | ...        | 25                         | 31.75 | 7     | 51            | 50.0                      | R  |      |           |                  |            |                            |    |    |               |                           |   |   |           |

*Separate Results of Madras Meridian Circle Observations in 1886.*

| Number and Date.                       | Magnitude. | Mean Right Ascension 1886. |       |       | No. of Wires. | Mean Polar Distance 1886. |    |                              | Observer. | Number and Date.                   | Magnitude. | Mean Right Ascension 1886. |       |       | No. of Wires. | Mean Polar Distance 1886. |    |      | Observer. |
|--|------------|----------------------------|-------|-------|---------------|---------------------------|----|------------------------------|-----------|------------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|
|  |            | h.                         | m.    | s.    |               | °                         | '  | "                            |           |                                    |            | h.                         | m.    | s.    |               | °                         | '  | "    |           |
| <b>13</b> <i>34 Orionis δ, Var. 1.</i> |            |                            |       |       |               |                           |    |                              |           | Feb. 6                             | ...        | 6                          | 46    | 48.96 | 7             | 2                         | 46 | 42.6 | M         |
| Jan. 24                                | ...        | 5                          | 26    | 11.00 | ...           | 90                        | 23 | 2.0                          | R         | 13                                 | ...        | 46                         | 45.88 | 7     | 46            | 38.9                      | M  |      |           |
| Feb. 6                                 | ...        | 26                         | 10.86 | ...   | 23            | 4.5                       | M  | 15                           | ...       | 46                                 | 46.37      | 7                          | 46    | 37.7  | M             |                           |    |      |           |
| 13                                     | ...        | 26                         | 10.98 | ...   | 28            | 1.0                       | M  | 17                           | ...       | 46                                 | 46.14      | 7                          | 46    | 38.4  | M             |                           |    |      |           |
| 15                                     | ...        | 26                         | 10.95 | ...   | 28            | 2.2                       | M  | 22                           | ...       | 46                                 | 44.42      | 7                          | 46    | 38.8  | M             |                           |    |      |           |
| 17                                     | ...        | 26                         | 10.98 | ...   | 23            | 1.6                       | M  | <b>51 Cephei (Hev.)—s.p.</b> |           |                                    |            |                            |       |       |               |                           |    |      |           |
| 20                                     | ...        | 26                         | 10.99 | ...   | 23            | 0.6                       | M  | Aug. 4                       | ...       | 6                                  | 46         | 46.33                      | 3     | 2     | 46            | 35.8                      | R  |      |           |
| 22                                     | ...        | 26                         | 11.05 | ...   | 23            | 1.4                       | M  | Sep. 4                       | ...       | 46                                 | 45.84      | 1                          | 46    | 27.7  | M             |                           |    |      |           |
| 25                                     | ...        | 26                         | 11.04 | ...   | 23            | 0.6                       | M  | 25                           | ...       | 46                                 | 46.54      | 3                          | 46    | 38.2  | M             |                           |    |      |           |
| <b>14</b> <i>46 Orionis ε</i>          |            |                            |       |       |               |                           |    |                              |           | <b>18</b> <i>3 Canis Minoris β</i> |            |                            |       |       |               |                           |    |      |           |
| Jan. 24                                | ...        | 5                          | 30    | 25.66 | ...           | 91                        | 16 | 31.7                         | R         | Jan. 30                            | ...        | 7                          | 20    | 58.06 | ...           | 81                        | 28 | 55.5 | R         |
| Feb. 3                                 | ...        | 30                         | 25.66 | ...   | 16            | 33.9                      | R  | <b>19</b> <i>17 Cancri β</i> |           |                                    |            |                            |       |       |               |                           |    |      |           |
| 6                                      | ...        | 30                         | 25.67 | ...   | 16            | 34.4                      | M  | Apl. 2                       | ...       | 8                                  | 10         | 19.89                      | ...   | 80    | 27            | 47.0                      | R  |      |           |
| 13                                     | ...        | 30                         | 25.65 | ...   | 16            | 32.8                      | M  | 5                            | ...       | 10                                 | 19.99      | ...                        | 27    | 47.4  | R             |                           |    |      |           |
| 15                                     | ...        | 30                         | 25.81 | ...   | 16            | 31.9                      | M  | 7                            | ...       | 10                                 | 19.94      | ...                        | 27    | 46.9  | R             |                           |    |      |           |
| 17                                     | ...        | 30                         | 25.68 | ...   | 16            | 33.1                      | M  | <b>20</b> <i>43 Cancri γ</i> |           |                                    |            |                            |       |       |               |                           |    |      |           |
| 20                                     | ...        | 30                         | 25.73 | ...   | 16            | 31.2                      | M  | Apl. 2                       | ...       | 8                                  | 36         | 41.23                      | ...   | 68    | 7             | 19.2                      | R  |      |           |
| 22                                     | ...        | 30                         | 25.69 | ...   | 16            | 31.0                      | M  | 5                            | ...       | 36                                 | 41.21      | ...                        | 7     | 20.4  | R             |                           |    |      |           |
| 25                                     | ...        | 30                         | 25.68 | ...   | 16            | 31.2                      | M  | 7                            | ...       | 36                                 | 41.26      | ...                        | 7     | 20.2  | R             |                           |    |      |           |
| <b>15</b> <i>53 Orionis κ</i>          |            |                            |       |       |               |                           |    |                              |           | 9                                  | ...        | 36                         | 41.22 | ...   | 7             | 21.6                      | R  |      |           |
| Jan. 30                                | ...        | 5                          | 42    | 20.98 | ...           | 99                        | 42 | 40.4                         | R         | 12                                 | ...        | 36                         | 41.27 | ...   | 7             | 19.8                      | R  |      |           |
| Feb. 1                                 | ...        | 42                         | 21.00 | ...   | 42            | 38.7                      | R  | <b>21</b> <i>65 Cancri α</i> |           |                                    |            |                            |       |       |               |                           |    |      |           |
| 3                                      | ...        | 42                         | 20.98 | ...   | 42            | 41.0                      | R  | Apl. 2                       | ...       | 8                                  | 52         | 15.11                      | ...   | 77    | 42            | 3.6                       | R  |      |           |
| 17                                     | ...        | 42                         | 20.90 | ...   | 42            | 39.7                      | M  | 7                            | ...       | 52                                 | 15.05      | ...                        | 42    | 4.9   | R             |                           |    |      |           |
| 20                                     | ...        | 42                         | 20.87 | ...   | 42            | 38.4                      | M  | 9                            | ...       | 52                                 | 15.08      | ...                        | 42    | 4.9   | R             |                           |    |      |           |
| 22                                     | ...        | 42                         | 20.85 | ...   | 42            | 36.7                      | M  | 12                           | ...       | 52                                 | 15.05      | ...                        | 42    | 4.7   | R             |                           |    |      |           |
| 25                                     | ...        | 42                         | 20.92 | ...   | 42            | 38.2                      | M  | <b>22</b> <i>76 Cancri κ</i> |           |                                    |            |                            |       |       |               |                           |    |      |           |
| <b>16</b> <i>7 Geminorum η</i>         |            |                            |       |       |               |                           |    |                              |           | Apl. 5                             | ...        | 9                          | 1     | 34.29 | ...           | 78                        | 52 | 24.4 | R         |
| Feb. 1                                 | ...        | 6                          | 7     | 59.66 | ...           | 67                        | 27 | 38.3                         | R         | 9                                  | ...        | 1                          | 34.34 | ...   | 52            | 23.8                      | R  |      |           |
| <b>17</b> <i>51 Cephei (Hev.).</i>     |            |                            |       |       |               |                           |    |                              |           | 12                                 | ...        | 1                          | 34.31 | ...   | 52            | 24.8                      | R  |      |           |
| Jan. 15                                | ...        | 6                          | 46    | 45.06 | 3             | 2                         | 46 | 38.8                         | R         | 14                                 | ...        | 1                          | 34.32 | ...   | 52            | 26.0                      | R  |      |           |
| 24                                     | ...        | 46                         | 45.94 | 7     | 46            | 38.4                      | R  | 16                           | ...       | 1                                  | 34.35      | ...                        | 52    | 22.1  | R             |                           |    |      |           |
| 26                                     | ...        | 46                         | 47.15 | 7     | 46            | 39.9                      | M  |                              |           |                                    |            |                            |       |       |               |                           |    |      |           |
| 27                                     | ...        | 46                         | 46.86 | 7     | 46            | 38.6                      | M  |                              |           |                                    |            |                            |       |       |               |                           |    |      |           |
| 29                                     | ...        | 46                         | 45.07 | 7     | 46            | 38.9                      | R  |                              |           |                                    |            |                            |       |       |               |                           |    |      |           |
| 30                                     | ...        | 46                         | 46.83 | 7     | 46            | 37.1                      | R  |                              |           |                                    |            |                            |       |       |               |                           |    |      |           |



Separate Results of Madras Meridian Circle Observations in 1886.

| Number and Date.                | Magnitude. | Mean Right Ascension 1886. |       |       | No. of Wires. | Mean Polar Distance 1886. |    |                               | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1886. |       |      | No. of Wires. | Mean Polar Distance 1886. |      |   | Observer. |
|---------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|-------------------------------|-----------|------------------|------------|----------------------------|-------|------|---------------|---------------------------|------|---|-----------|
|                                 |            | h.                         | m.    | s.    |               | o.                        | '  | "                             |           |                  |            | h.                         | m.    | s.   |               | o.                        | '    | " |           |
| <b>23</b> <i>Lalande 18162.</i> |            |                            |       |       |               |                           |    |                               | May 1     | ...              | 10         | 54                         | 40.88 | ...  | 85            | 46                        | 13.5 | R |           |
| Apl. 5                          | 8.5        | 9                          | 6     | 46.14 | ...           | 78                        | 51 | 48.0                          | R         | 4                | ...        | 54                         | 40.49 | ...  | 46            | 13.1                      | R    |   |           |
| 7                               | 8.5        | 6                          | 46.19 | ...   | 51            | 46.6                      | R  | 6                             | ...       | 54               | 40.34      | ...                        | 46    | 13.3 | R             |                           |      |   |           |
| 9                               | 8.5        | 6                          | 46.25 | ...   | 51            | 47.6                      | R  | 8                             | ...       | 54               | 40.32      | ...                        | 46    | 12.2 | R             |                           |      |   |           |
| 12                              | 8.5        | 6                          | 46.32 | ...   | 51            | 48.2                      | R  | 10                            | ...       | 54               | 40.32      | ...                        | 46    | 13.5 | R             |                           |      |   |           |
| 14                              | 8.5        | 6                          | 46.40 | ...   | 51            | 47.1                      | R  | <b>29</b> <i>84 Leonis τ</i>  |           |                  |            |                            |       |      |               |                           |      |   |           |
| <b>24</b> <i>14 Leonis o</i>    |            |                            |       |       |               |                           |    |                               | Apl. 27   | ...              | 11         | 22                         | 4.48  | ...  | 86            | 30                        | 56.4 | R |           |
| Apl. 14                         | ...        | 9                          | 35    | 3.89  | ...           | 79                        | 35 | 20.5                          | R         | May 1            | ...        | 22                         | 4.47  | ...  | 30            | 56.8                      | R    |   |           |
| 16                              | ...        | 35                         | 3.94  | ...   | 35            | 19.8                      | R  | <b>30</b> <i>Anon.</i>        |           |                  |            |                            |       |      |               |                           |      |   |           |
| 19                              | ...        | 35                         | 3.91  | ...   | 35            | 20.1                      | R  | Apl. 7                        | 9.5       | 11               | 38         | 38.70                      | ...   | 80   | 56            | 10.5                      | R    |   |           |
| 21                              | ...        | 35                         | 3.94  | ...   | 35            | 22.2                      | R  | 12                            | 9.7       | 38               | 38.60      | ...                        | 56    | 11.5 | R             |                           |      |   |           |
| 24                              | ...        | 35                         | 3.96  | ...   | 35            | 22.0                      | R  | 16                            | 9.5       | 38               | 38.35      | ...                        | 56    | 11.0 | R             |                           |      |   |           |
| <b>25</b> <i>24 Leonis μ</i>    |            |                            |       |       |               |                           |    |                               | 21        | 9.5              | 38         | 38.66                      | ...   | 56   | 10.0          | R                         |      |   |           |
| Apl. 14                         | ...        | 9                          | 46    | 16.69 | ...           | 63                        | 27 | 22.6                          | R         | 27               | 9.5        | 38                         | 38.83 | ...  | 56            | 8.8                       | R    |   |           |
| 16                              | ...        | 46                         | 16.61 | ...   | 27            | 22.2                      | R  | <b>31</b> <i>Anon.</i>        |           |                  |            |                            |       |      |               |                           |      |   |           |
| 19                              | ...        | 46                         | 16.67 | ...   | 27            | 22.4                      | R  | Apl. 9                        | 9.3       | 11               | 41         | 17.35                      | ...   | 81   | 21            | 9.3                       | R    |   |           |
| 21                              | ...        | 46                         | 16.66 | ...   | 27            | 23.7                      | R  | 14                            | 9.3       | 41               | 17.47      | ...                        | 21    | 9.9  | R             |                           |      |   |           |
| 24                              | ...        | 46                         | 16.72 | ...   | 27            | 23.2                      | R  | 19                            | 9.3       | 41               | 17.44      | ...                        | 21    | 7.9  | R             |                           |      |   |           |
| <b>26</b> <i>R. P. L. 72.</i>   |            |                            |       |       |               |                           |    |                               | 24        | 9.3              | 41         | 17.54                      | ...   | 21   | 9.7           | R                         |      |   |           |
| Apl. 2                          | ...        | 10                         | 12    | 55.34 | 3             | 5                         | 10 | 9.2                           | R         | 29               | 9.3        | 41                         | 17.29 | ...  | 21            | 9.3                       | R    |   |           |
| 9                               | ...        | 12                         | 54.68 | 3     | 10            | 9.4                       | R  | <b>32</b> <i>Anon.</i>        |           |                  |            |                            |       |      |               |                           |      |   |           |
| <b>27</b> <i>42 Hydræ μ</i>     |            |                            |       |       |               |                           |    |                               | Apl. 5    | 9.0              | 11         | 41                         | 43.62 | ...  | 81            | 0                         | 52.6 | R |           |
| Apl. 21                         | ...        | 10                         | 20    | 34.64 | ...           | 106                       | 15 | 16.5                          | R         | May 1            | 9.0        | 41                         | 42.60 | 4    | 0             | 51.2                      | R    |   |           |
| 24                              | ...        | 20                         | 34.55 | ...   | 15            | 16.9                      | R  | 4                             | 9.0       | 41               | 42.73      | ...                        | 0     | 50.1 | R             |                           |      |   |           |
| 27                              | ...        | 20                         | 34.53 | ...   | 15            | 16.6                      | R  | 6                             | 9.0       | 41               | 42.78      | ...                        | 0     | 51.4 | R             |                           |      |   |           |
| 29                              | ...        | 20                         | 34.53 | ...   | 15            | 17.0                      | R  | 10                            | 9.0       | 41               | 43.72      | ...                        | 0     | 50.2 | R             |                           |      |   |           |
| May 1                           | ...        | 20                         | 34.57 | ...   | 15            | 15.5                      | R  | <b>33</b> <i>8 Virginis π</i> |           |                  |            |                            |       |      |               |                           |      |   |           |
| 4                               | ...        | 20                         | 34.50 | ...   | 15            | 15.1                      | R  | Apl. 29                       | ...       | 11               | 55         | 1.89                       | ...   | 82   | 44            | 59.9                      | R    |   |           |
| 6                               | ...        | 20                         | 34.58 | ...   | 15            | 16.2                      | R  | May 4                         | ...       | 55               | 1.85       | ...                        | 45    | 0.2  | R             |                           |      |   |           |
| 8                               | ...        | 20                         | 34.60 | ...   | 15            | 15.5                      | R  | 6                             | ...       | 55               | 1.93       | ...                        | 44    | 59.9 | R             |                           |      |   |           |
| 10                              | ...        | 20                         | 34.69 | ...   | 15            | 16.5                      | R  | 8                             | ...       | 55               | 1.93       | ...                        | 44    | 59.3 | R             |                           |      |   |           |
| <b>28</b> <i>58 Leonis d.</i>   |            |                            |       |       |               |                           |    |                               | 10        | ...              | 55         | 1.84                       | ...   | 44   | 58.5          | R                         |      |   |           |
| Apl. 19                         | ...        | 10                         | 54    | 40.37 | ...           | 85                        | 46 | 12.7                          | R         |                  |            |                            |       |      |               |                           |      |   |           |
| 27                              | ...        | 54                         | 40.41 | ...   | 46            | 13.8                      | R  |                               |           |                  |            |                            |       |      |               |                           |      |   |           |
| 29                              | ...        | 54                         | 40.40 | ...   | 46            | 14.0                      | R  |                               |           |                  |            |                            |       |      |               |                           |      |   |           |

## Separate Results of Madras Meridian Circle Observations in 1886.

| Number and Date.                              | Magnitude. | Mean Right Ascension 1886. |    |       | No. of Wires. | Mean Polar Distance 1886. |    |      | Observer. | Number and Date.                        | Magnitude. | Mean Right Ascension 1886. |       |       | No. of Wires. | Mean Polar Distance 1886. |    |         | Observer. |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|---|------------|----------------------------|-------|-------|---------------|---------------------------|----|---------|-----------|-------------------------------------|-------|----|-------|-------|-----|---------|-----|------------------------------|------|---|----|------|---|---------|-----|---|------|---|----|------|---|---------|-----|---|------|---|----|------|---|
|   |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |   |            | h.                         | m.    | s.    |               | o.                        | '  | "       |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| <b>34</b> <i>Lalande 22762.</i>               |            |                            |    |       |               |                           |    |      |           | <b>42</b> <i>22 Bootis f.</i>           |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| Apl. 5  | 8.7        | 12                         | 2  | 12.97 | ...           | 83                        | 19 | 48.6 | R         | June 22                                 | ...        | 14                         | 21    | 9.23  | ...           | 70                        | 15 | 38.4    | M         | June 25                             | ...   | 21 | 9.21  | ...   | 15  | 38.1    | M   |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 7   | 8.7        |                            | 2  | 13.04 | ...           |                           | 19 | 44.1 | R         | <b>43</b> <i>25 Bootis ρ</i>            |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 9   | 8.7        |                            | 2  | 12.83 | ...           |                           | 19 | 44.2 | R         | June 22                                 | ...        | 14                         | 26    | 54.88 | ...           | 59                        | 7  | 40.0    | M         | <b>44</b> <i>R. P. L. 110.—s.p.</i> |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 12  | 8.7        |                            | 2  | 12.90 | ...           |                           | 19 | 43.8 | R         | Jan. 1                                  | ...        | 14                         | 52    | 17.39 | 3             | 3                         | 34 | 46.7    | M         | Dec. 11                             | ...   | 52 | 16.87 | 3     | 34  | 45.6    | R   |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 14  | 8.7        |                            | 2  | 12.96 | ...           |                           | 19 | 43.6 | R         | 24                                      | ...        | 52                         | 18.94 | 3     | 34            | 45.5                      | R  | 28      | ...       | 52                                  | 17.84 | 3  | 34    | 48.8  | M   |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| <b>35</b> <i>R. P. L. 92.</i>                 |            |                            |    |       |               |                           |    |      |           | <b>45</b> <i>72 Ophiuchi.</i>           |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| Apl. 19                                       | ...        | 12                         | 18 | 29.79 | 3             | 2                         | 55 | 49.5 | R         | Aug. 4                                  | ...        | 18                         | 1     | 56.68 | ...           | 80                        | 27 | 7.4     | R         | <b>46</b> <i>23 Ursæ Minoris δ</i>  |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 29  | ...        |                            | 18 | 29.71 | 3             |                           | 55 | 52.4 | R         | Aug. 4                                  | ...        | 18                         | 9     | 5.05  | 3             | 3                         | 28 | 24.1    | R         | <b>47</b> <i>58 Serpentis η</i>     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| May 10  | ...        |                            | 18 | 28.85 | 3             |                           | 55 | 50.5 | R         | <b>48</b> <i>22 Sagittarii λ</i>        |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| June 11                                       | ...        |                            | 18 | 30.70 | 3             |                           | 55 | 49.3 | M         | Jan. 15                                 | ...        | 18                         | 9     | 4.15  | 3             | 3                         | 28 | 22.1    | R         | Sep. 4                              | ...   | 18 | 15    | 24.68 | ... | 92      | 55  | 39.3                         | M    |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| <b>36</b> <i>7 Corvi δ<sup>2</sup></i>        |            |                            |    |       |               |                           |    |      |           | <b>49</b> <i>13 Aquilæ ε</i>            |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| June 7  | ...        | 12                         | 23 | 58.00 | ...           | 105                       | 52 | 50.4 | M         | Aug. 4                                  | ...        | 18                         | 54    | 26.84 | ...           | 75                        | 5  | 11.0    | R         | Sep. 25                             | ...   | 54 | 26.92 | ...   | 5   | 12.4    | M   |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 11  | ...        |                            | 23 | 57.95 | ...           |                           | 52 | 48.8 | M         | <b>49</b> <i>23 Ursæ Minoris δ—s.p.</i> |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| <b>37</b> <i>29 Virginis γ<sup>1</sup></i>    |            |                            |    |       |               |                           |    |      |           | Jan. 24                                 | ...        | 9                          | 4.65  | 7     | 23            | 21.8                      | R  | Jan. 26 | ...       | 9                                   | 6.14  | 7  | 23    | 20.5  | M   | Jan. 27 | ... | 9                            | 5.56 | 7 | 23 | 21.7 | M | Jan. 29 | ... | 9 | 4.67 | 7 | 23 | 20.9 | R | Jan. 30 | ... | 9 | 5.10 | 7 | 23 | 20.0 | R |
| June 7  | ...        | 12                         | 35 | 53.00 | ...           | 90                        | 49 | 23.7 | M         | <b>47</b> <i>58 Serpentis η</i>         |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 11  | ...        |                            | 35 | 53.05 | ...           |                           | 49 | 23.5 | M         | Sep. 4                                  | ...        | 18                         | 15    | 24.68 | ...           | 92                        | 55 | 39.3    | M         | <b>48</b> <i>22 Sagittarii λ</i>    |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| <b>38</b> <i>43 Virginis δ</i>                |            |                            |    |       |               |                           |    |      |           | Aug. 4                                  | ...        | 18                         | 20    | 56.07 | ...           | 115                       | 28 | 59.5    | R         | Sep. 4                              | ...   | 20 | 56.06 | ...   | 28  | 58.3    | M   | <b>49</b> <i>13 Aquilæ ε</i> |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| June 7  | ...        | 12                         | 49 | 51.68 | ...           | 85                        | 58 | 58.9 | M         | <b>49</b> <i>13 Aquilæ ε</i>            |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 11  | ...        |                            | 49 | 51.68 | ...           |                           | 58 | 57.3 | M         | Aug. 4                                  | ...        | 18                         | 54    | 26.84 | ...           | 75                        | 5  | 11.0    | R         | Sep. 25                             | ...   | 54 | 26.92 | ...   | 5   | 12.4    | M   |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 18  | ...        |                            | 49 | 51.58 | ...           |                           | 58 | 57.0 | M         | <b>47</b> <i>58 Serpentis η</i>         |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| <b>39</b> <i>47 Virginis ε, Vindemiatrix.</i> |            |                            |    |       |               |                           |    |      |           | Sep. 4                                  | ...        | 18                         | 15    | 24.68 | ...           | 92                        | 55 | 39.3    | M         | <b>48</b> <i>22 Sagittarii λ</i>    |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| June 18                                       | ...        | 12                         | 56 | 30.17 | ...           | 78                        | 25 | 40.5 | M         | <b>49</b> <i>13 Aquilæ ε</i>            |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| <b>40</b> <i>4 Bootis τ</i>                   |            |                            |    |       |               |                           |    |      |           | Aug. 4                                  | ...        | 18                         | 20    | 56.07 | ...           | 115                       | 28 | 59.5    | R         | Sep. 4                              | ...   | 20 | 56.06 | ...   | 28  | 58.3    | M   | <b>49</b> <i>13 Aquilæ ε</i> |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| June 18                                       | ...        | 13                         | 41 | 50.73 | ...           | 71                        | 58 | 30.9 | M         | <b>49</b> <i>13 Aquilæ ε</i>            |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 22  | ...        |                            | 41 | 50.87 | ...           |                           | 58 | 29.9 | M         | <b>49</b> <i>13 Aquilæ ε</i>            |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| 25  | ...        |                            | 41 | 50.80 | ...           |                           | 58 | 27.7 | M         | <b>49</b> <i>13 Aquilæ ε</i>            |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| <b>41</b> <i>93 Virginis τ</i>                |            |                            |    |       |               |                           |    |      |           | Aug. 4                                  | ...        | 18                         | 54    | 26.84 | ...           | 75                        | 5  | 11.0    | R         | Sep. 25                             | ...   | 54 | 26.92 | ...   | 5   | 12.4    | M   | <b>49</b> <i>13 Aquilæ ε</i> |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |
| June 25                                       | ...        | 13                         | 55 | 50.69 | ...           | 87                        | 54 | 10.7 | M         | <b>49</b> <i>13 Aquilæ ε</i>            |            |                            |       |       |               |                           |    |         |           |                                     |       |    |       |       |     |         |     |                              |      |   |    |      |   |         |     |   |      |   |    |      |   |         |     |   |      |   |    |      |   |

Separate Results of Madras Meridian Circle Observations in 1886.

| Number and Date.                              | Magnitude. | Mean Right Ascension 1886. |       |       | No. of Wires. | Mean Polar Distance 1886. |      |      | Observer.   | Number and Date.  | Magnitude. | Mean Right Ascension 1886. |       |       | No. of Wires. | Mean Polar Distance 1886. |      |                                     | Observer. |     |       |       |     |     |      |      |   |
|---|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|---|---|------------|----------------------------|-------|-------|---------------|---------------------------|------|-------------------------------------|-----------|-----|-------|-------|-----|-----|------|------|---|
|   |            | h.                         | m.    | s.    |               | o.                        | '    | "    |   |   |            | h.                         | m.    | s.    |               | o.                        | '    | "                                   |           |     |       |       |     |     |      |      |   |
| <b>50</b> <i>52 Sagittarii h<sup>3</sup>.</i> |            |                            |       |       |               |                           |      |      |   | <b>53</b> <i>65 Aquilæ θ</i>                                      |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| Sep. 1  | ...        | 19                         | 29    | 46.23 | ...           | 105                       | 8    | 2.8  | M   | Sep. 1  | ...        | 20                         | 5     | 25.84 | ...           | 91                        | 9    | 31.1                                | M         |     |       |       |     |     |      |      |   |
| 11  | ...        | 29                         | 48.12 | ...   | ...           | 8                         | 1.9  | M    | 4   | ...   | 5          | 25.29                      | ...   | ...   | 9             | 30.8                      | M    | 11                                  | ...       | 5   | 25.38 | ...   | ... | 9   | 30.1 | M    |   |
| <b>51</b> <i>λ Ursæ Minoris.</i>              |            |                            |       |       |               |                           |      |      |   | 15    ...    5    25.40    ...    9    31.4    M                  |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| Sep. 4  | ...        | 19                         | 37    | 50.88 | 3             | 1                         | 2    | 32.0 | M   | 18  | ...        | 5                          | 25.85 | ...   | ...           | 9                         | 31.8 | M                                   | 23        | ... | 5     | 25.88 | ... | ... | 9    | 31.6 | M |
| 25  | ...        | 37                         | 51.15 | 3     | ...           | 2                         | 33.3 | M    | 25  | ...   | 5          | 25.42                      | ...   | ...   | 9             | 33.1                      | M    | <b>54</b> <i>2 Delphini ε</i>       |           |     |       |       |     |     |      |      |   |
| <i>λ Ursæ Minoris—s.p.</i>                    |            |                            |       |       |               |                           |      |      |   | Sep. 15    ...    20    27    45.97    ...    79    5    0.6    M |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| Feb. 1  | ...        | 19                         | 37    | 49.92 | 7             | 1                         | 2    | 31.4 | R   | 16  | ...        | 27                         | 45.82 | ...   | ...           | 5                         | 0.2  | M                                   | 23        | ... | 27    | 46.04 | ... | ... | 5    | 0.9  | M |
| 6   | ...        | 37                         | 53.56 | 7     | ...           | 2                         | 26.7 | M    | 25  | ...   | 27         | 45.79                      | ...   | ...   | 4             | 59.8                      | M    | <b>55</b> <i>R. P. L. 155.—s.p.</i> |           |     |       |       |     |     |      |      |   |
| 13  | ...        | 37                         | 50.53 | 7     | ...           | 2                         | 30.2 | M    | Apl. 2  | ...   | 23         | 24                         | 19.72 | 8     | 4             | 12                        | 40.6 | R                                   | 9         | ... | 24    | 19.10 | 8   | ... | 12   | 39.3 | R |
| 15  | ...        | 37                         | 50.96 | 7     | ...           | 2                         | 31.8 | M    | 19  | ...   | 24         | 18.47                      | 8     | ...   | 12            | 39.4                      | R    | 29                                  | ...       | 24  | 19.48 | 8     | ... | 12  | 37.8 | R    |   |
| 17  | ...        | 37                         | 50.75 | 7     | ...           | 2                         | 31.7 | M    | May 10  | ...   | 24         | 17.86                      | 8     | ...   | 12            | 34.9                      | R    | 23                                  | ...       | 45  | 18.12 | ...   | ... | 25  | 55.2 | M    |   |
| 22  | ...        | 37                         | 49.77 | 7     | ...           | 2                         | 31.5 | M    | <b>52</b> <i>53 Aquilæ α, Altair.</i>                           |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| Sep. 1  | ...        | 19                         | 45    | 13.14 | ...           | 81                        | 25   | 53.2 | M   | Sep. 11    ...    45    13.23    ...    25    54.6    M           |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| 11  | ...        | 45                         | 13.23 | ...   | ...           | 25                        | 54.6 | M    | 15  | ...   | 45         | 13.18                      | ...   | ...   | 25            | 55.8                      | M    | 18                                  | ...       | 45  | 13.26 | ...   | ... | 25  | 55.2 | M    |   |
| 15  | ...        | 45                         | 13.18 | ...   | ...           | 25                        | 55.8 | M    | 22  | ...   | 45         | 13.12                      | ...   | ...   | 25            | 54.0                      | M    | <b>53</b> <i>R. P. L. 155.—s.p.</i> |           |     |       |       |     |     |      |      |   |
| 18  | ...        | 45                         | 13.26 | ...   | ...           | 25                        | 55.2 | M    | Apl. 2  | ...   | 23         | 24                         | 19.72 | 8     | 4             | 12                        | 40.6 | R                                   | 9         | ... | 24    | 19.10 | 8   | ... | 12   | 39.3 | R |
| 22  | ...        | 45                         | 13.12 | ...   | ...           | 25                        | 54.0 | M    | 19  | ...   | 24         | 18.47                      | 8     | ...   | 12            | 39.4                      | R    | 29                                  | ...       | 24  | 19.48 | 8     | ... | 12  | 37.8 | R    |   |
| <b>52</b> <i>53 Aquilæ α, Altair.</i>         |            |                            |       |       |               |                           |      |      |   | May 10    ...    24    17.86    8    12    34.9    R              |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| Sep. 1  | ...        | 19                         | 45    | 13.14 | ...           | 81                        | 25   | 53.2 | M   | <b>53</b> <i>R. P. L. 155.—s.p.</i>                               |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| 11  | ...        | 45                         | 13.23 | ...   | ...           | 25                        | 54.6 | M    | Apl. 2  | ...   | 23         | 24                         | 19.72 | 8     | 4             | 12                        | 40.6 | R                                   | 9         | ... | 24    | 19.10 | 8   | ... | 12   | 39.3 | R |
| 15  | ...        | 45                         | 13.18 | ...   | ...           | 25                        | 55.8 | M    | 19  | ...   | 24         | 18.47                      | 8     | ...   | 12            | 39.4                      | R    | 29                                  | ...       | 24  | 19.48 | 8     | ... | 12  | 37.8 | R    |   |
| 18  | ...        | 45                         | 13.26 | ...   | ...           | 25                        | 55.2 | M    | May 10  | ...   | 24         | 17.86                      | 8     | ...   | 12            | 34.9                      | R    | 23                                  | ...       | 45  | 18.12 | ...   | ... | 25  | 55.2 | M    |   |
| 22  | ...        | 45                         | 13.12 | ...   | ...           | 25                        | 54.0 | M    | <b>53</b> <i>R. P. L. 155.—s.p.</i>                             |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| <b>52</b> <i>53 Aquilæ α, Altair.</i>         |            |                            |       |       |               |                           |      |      |   | Apl. 2    ...    23    24    19.72    8    4    12    40.6    R   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| Sep. 1  | ...        | 19                         | 45    | 13.14 | ...           | 81                        | 25   | 53.2 | M   | 9   | ...        | 24                         | 19.10 | 8     | ...           | 12                        | 39.3 | R                                   | 19        | ... | 24    | 18.47 | 8   | ... | 12   | 39.4 | R |
| 11  | ...        | 45                         | 13.23 | ...   | ...           | 25                        | 54.6 | M    | 29  | ...   | 24         | 19.48                      | 8     | ...   | 12            | 37.8                      | R    | 23                                  | ...       | 45  | 18.12 | ...   | ... | 25  | 55.2 | M    |   |
| 15  | ...        | 45                         | 13.18 | ...   | ...           | 25                        | 55.8 | M    | May 10  | ...   | 24         | 17.86                      | 8     | ...   | 12            | 34.9                      | R    | 29                                  | ...       | 24  | 19.48 | 8     | ... | 12  | 37.8 | R    |   |
| 18  | ...        | 45                         | 13.26 | ...   | ...           | 25                        | 55.2 | M    | <b>53</b> <i>R. P. L. 155.—s.p.</i>                             |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| 22  | ...        | 45                         | 13.12 | ...   | ...           | 25                        | 54.0 | M    | Apl. 2    ...    23    24    19.72    8    4    12    40.6    R |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| <b>52</b> <i>53 Aquilæ α, Altair.</i>         |            |                            |       |       |               |                           |      |      |   | 9    ...    24    19.10    8    12    39.3    R                   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| Sep. 1  | ...        | 19                         | 45    | 13.14 | ...           | 81                        | 25   | 53.2 | M   | 19  | ...        | 24                         | 18.47 | 8     | ...           | 12                        | 39.4 | R                                   | 29        | ... | 24    | 19.48 | 8   | ... | 12   | 37.8 | R |
| 11  | ...        | 45                         | 13.23 | ...   | ...           | 25                        | 54.6 | M    | May 10  | ...   | 24         | 17.86                      | 8     | ...   | 12            | 34.9                      | R    | 23                                  | ...       | 45  | 18.12 | ...   | ... | 25  | 55.2 | M    |   |
| 15  | ...        | 45                         | 13.18 | ...   | ...           | 25                        | 55.8 | M    | <b>53</b> <i>R. P. L. 155.—s.p.</i>                             |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| 18  | ...        | 45                         | 13.26 | ...   | ...           | 25                        | 55.2 | M    | Apl. 2    ...    23    24    19.72    8    4    12    40.6    R |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| 22  | ...        | 45                         | 13.12 | ...   | ...           | 25                        | 54.0 | M    | 9    ...    24    19.10    8    12    39.3    R                 |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| <b>52</b> <i>53 Aquilæ α, Altair.</i>         |            |                            |       |       |               |                           |      |      |   | 19  |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| Sep. 1  | ...        | 19                         | 45    | 13.14 | ...           | 81                        | 25   | 53.2 | M   | 29  | ...        | 24                         | 19.48 | 8     | ...           | 12                        | 37.8 | R                                   | 23        | ... | 45    | 18.12 | ... | ... | 25   | 55.2 | M |
| 11  | ...        | 45                         | 13.23 | ...   | ...           | 25                        | 54.6 | M    | May 10  | ...   | 24         | 17.86                      | 8     | ...   | 12            | 34.9                      | R    | 29                                  | ...       | 24  | 19.48 | 8     | ... | 12  | 37.8 | R    |   |
| 15  | ...        | 45                         | 13.18 | ...   | ...           | 25                        | 55.8 | M    | <b>53</b> <i>R. P. L. 155.—s.p.</i>                             |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| 18  | ...        | 45                         | 13.26 | ...   | ...           | 25                        | 55.2 | M    | Apl. 2    ...    23    24    19.72    8    4    12    40.6    R |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| 22  | ...        | 45                         | 13.12 | ...   | ...           | 25                        | 54.0 | M    | 9    ...    24    19.10    8    12    39.3    R                 |   |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |
| <b>52</b> <i>53 Aquilæ α, Altair.</i>         |            |                            |       |       |               |                           |      |      |   | 19  |            |                            |       |       |               |                           |      |                                     |           |     |       |       |     |     |      |      |   |

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MEAN POSITIONS OF STARS

OBSERVED WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1886

REDUCED TO JANUARY 1 OF THAT YEAR

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## Mean Positions of Stars for 1886, January 1st.

| Number. | Star.                               | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|-------------------------------------|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |                                     |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 1       | 48 Andromedæ $\beta$ ...            | 2.2        | ...          | 1                     | 3  | 20.99 | 54                   | 59 | 3.7  | 1             | 0.94              |
| 2       | 1 Ursæ Minoris $\alpha$ , (Polaris) | 2.2        | ...          | 1                     | 16 | 57.36 | 1                    | 17 | 57.9 | 3             | 0.79              |
| 3       | 110 Piscium $\circ$ ...             | 4.4        | ...          | 1                     | 39 | 22.42 | 81                   | 24 | 58.2 | 4             | 0.73              |
| 4       | 43 Arietis $\sigma$ ...             | 5.5        | ...          | 2                     | 45 | 11.93 | 75                   | 23 | 16.4 | 4             | 0.74              |
| 5       | 1 Tauri $\circ$ , Var. 5            | Var.       | ...          | 3                     | 18 | 40.73 | 81                   | 22 | 23.1 | 6             | 0.85              |
| 6       | 18 Eridani $\epsilon$ ...           | 3.7        | ...          | 3                     | 27 | 33.54 | 99                   | 50 | 40.7 | 5             | 0.04              |
| 7       | 37 Tauri A <sup>1</sup> ...         | 4.4        | ...          | 3                     | 57 | 57.32 | 68                   | 18 | 51.3 | 3             | 0.05              |
| 8       | 54 Tauri $\gamma$ ...               | 3.9        | ...          | 4                     | 13 | 18.33 | 74                   | 38 | 55.9 | 4             | 0.07              |
| 9       | 57 Eridani $\mu$ ...                | 4.3        | ...          | 4                     | 39 | 48.15 | 93                   | 27 | 52.5 | 6             | 0.09              |
| 10      | R. P. L. 37 ...                     | 6.8        | ...          | 4                     | 51 | 28.53 | 4                    | 11 | 31.9 | 5             | 0.25              |
| 11      | 19 Orionis $\beta$ (Rigel)          | 0.3        | ...          | 5                     | 9  | 3.53  | 98                   | 20 | 3.0  | 3             | 0.08              |
| 12      | R. P. L. 40 ...                     | 6.2        | ...          | 5                     | 25 | 32.46 | 4                    | 51 | 50.6 | 3             | 0.08              |
| 13      | 34 Orionis $\delta$ , Var. 1        | Var.       | ...          | 5                     | 26 | 10.98 | 90                   | 23 | 1.7  | 8             | 0.12              |
| 14      | 46 Orionis $\epsilon$ ...           | 1.8        | ...          | 5                     | 30 | 25.69 | 91                   | 16 | 32.4 | 9             | 0.12              |
| 15      | 53 Orionis $\kappa$ ...             | 2.2        | ...          | 5                     | 43 | 20.92 | 99                   | 42 | 39.0 | 7             | 0.12              |
| 16      | 7 Geminorum $\eta$ ...              | 3.5        | ...          | 6                     | 7  | 59.66 | 67                   | 27 | 38.3 | 1             | 0.09              |
| 17      | 51 Cephei (Hev.)                    | 5.3        | ...          | 6                     | 46 | 46.24 | 2                    | 46 | 37.8 | 14            | 0.21              |
| 18      | 3 Canis Minoris $\beta$ ...         | 3.1        | ...          | 7                     | 20 | 58.06 | 81                   | 28 | 55.5 | 1             | 0.08              |
| 19      | 17 Cancri $\beta$ ...               | 3.6        | ...          | 8                     | 10 | 19.94 | 80                   | 27 | 47.1 | 3             | 0.26              |
| 20      | 43 Cancri $\gamma$ ...              | 4.8        | ...          | 8                     | 36 | 41.24 | 68                   | 7  | 20.2 | 5             | 0.26              |
| 21      | 65 Cancri $\alpha$ ...              | 4.3        | ...          | 8                     | 52 | 15.07 | 77                   | 42 | 4.5  | 4             | 0.26              |
| 22      | 76 Cancri $\kappa$ ...              | 5.0        | ...          | 9                     | 1  | 34.32 | 78                   | 52 | 24.2 | 5             | 0.27              |
| 23      | Lalande 18162 ...                   | 8.5        | 5            | 9                     | 6  | 46.26 | 78                   | 51 | 47.5 | 5             | 0.27              |
| 24      | 14 Leonis $\circ$ ...               | 3.8        | ...          | 9                     | 35 | 3.93  | 79                   | 35 | 20.9 | 5             | 0.30              |
| 25      | 24 Leonis $\mu$ ...                 | 4.1        | ...          | 9                     | 46 | 16.67 | 63                   | 27 | 22.8 | 5             | 0.30              |
| 26      | R. P. L. 72 ...                     | 5.9        | ...          | 10                    | 12 | 55.01 | 5                    | 10 | 9.3  | 2             | 0.26              |
| 27      | 42 Hydræ $\mu$ ...                  | 4.1        | ...          | 10                    | 20 | 34.58 | 106                  | 15 | 16.2 | 9             | 0.33              |
| 28      | 58 Leonis $d$ ...                   | 5.0        | ...          | 10                    | 54 | 40.38 | 85                   | 46 | 13.3 | 8             | 0.33              |
| 29      | 84 Leonis $\tau$ ...                | 5.1        | ...          | 11                    | 22 | 4.48  | 86                   | 30 | 56.6 | 2             | 0.32              |
| 30      | ... ..                              | 9.5        | 5            | 11                    | 38 | 38.67 | 80                   | 56 | 10.4 | 5             | 0.29              |
| 31      | ... ..                              | 9.3        | 5            | 11                    | 41 | 17.42 | 81                   | 21 | 9.2  | 5             | 0.30              |
| 32      | ... ..                              | 9.0        | 5            | 11                    | 41 | 42.69 | 81                   | 0  | 51.1 | 5             | 0.32              |
| 33      | 8 Virginis $\pi$ ...                | 4.4        | ...          | 11                    | 55 | 1.89  | 82                   | 44 | 59.6 | 5             | 0.34              |
| 34      | Lalande 22762 ...                   | 8.7        | 5            | 12                    | 2  | 12.94 | 83                   | 19 | 43.9 | 5             | 0.27              |
| 35      | R. P. L. 92 ...                     | 6.7        | ...          | 12                    | 13 | 29.64 | 2                    | 55 | 50.4 | 4             | 0.35              |

12.—Groombridge 944.

23.—Comparison star for Ariadne in 1886.

26.—Groombridge 1620.

30—31—32—34.—Comparison stars for Vera in 1886.

35.—Groombridge 1871.

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                       | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|-----------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                             | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 1       | 43 Andromedæ $\beta$ ...    | + 3.3280            | + 0.0286           | + 0.014        | - 19.293           | + 0.139            | + 0.08         | 140        |
| 2       | 1 Ursæ Minoris $\alpha$ ... | + 22.4929           | + 16.9580          | + 0.108        | - 18.933           | + 1.089            | + 0.00         | 102        |
| 3       | 110 Piscium $\epsilon$ ...  | + 3.1572            | + 0.0111           | + 0.003        | - 18.198           | + 0.200            | - 0.06         | 232        |
| 4       | 43 Arietis $\sigma$ ...     | + 3.3025            | + 0.0150           | - 0.000        | - 15.066           | + 0.323            | + 0.04         | 400        |
| 5       | 1 Tauri $\epsilon$ ...      | + 3.2270            | + 0.0115           | - 0.005        | - 12.978           | + 0.364            | + 0.07         | 477        |
| 6       | 18 Eridani $\epsilon$ ...   | + 2.8899            | + 0.0055           | - 0.068        | - 12.376           | + 0.336            | - 0.01         | 498        |
| 7       | 37 Tauri A <sup>1</sup> ... | + 3.5324            | + 0.0153           | + 0.005        | - 10.182           | + 0.447            | + 0.06         | 554        |
| 8       | 54 Tauri $\gamma$ ...       | + 3.4003            | + 0.0115           | + 0.007        | - 9.002            | + 0.446            | + 0.03         | 588        |
| 9       | 57 Eridani $\mu$ ...        | + 2.9964            | + 0.0055           | - 0.000        | - 6.875            | + 0.413            | + 0.00         | 657        |
| 10      | R. P. L. 37 ...             | + 20.5020           | + 1.4802           | ...            | - 5.907            | + 2.861            | ...            | ...        |
| 11      | 19 Orionis $\beta$ ...      | + 2.8813            | + 0.0040           | - 0.001        | - 4.421            | + 0.412            | - 0.01         | 736        |
| 12      | R. P. L. 40 ...             | + 18.6049           | + 0.5814           | ...            | - 3.004            | + 2.684            | ...            | ...        |
| 13      | 34 Orionis $\delta$ ...     | + 3.0685            | + 0.0088           | - 0.001        | - 2.948            | + 0.443            | + 0.01         | 787        |
| 14      | 46 Orionis $\epsilon$ ...   | + 3.0429            | + 0.0085           | - 0.002        | - 2.580            | + 0.441            | - 0.01         | 809        |
| 15      | 53 Orionis $\kappa$ ...     | + 2.8442            | + 0.0027           | - 0.002        | - 1.543            | + 0.414            | - 0.00         | 844        |
| 16      | 7 Geminorum $\eta$ ...      | + 3.6269            | + 0.0007           | - 0.005        | + 0.700            | + 0.529            | + 0.00         | 909        |
| 17      | 51 Cephei (Hev.) ...        | + 30.0605           | - 2.3299           | - 0.040        | + 4.064            | + 4.291            | + 0.05         | 1880       |
| 18      | 3 Canis Minoris $\beta$ ... | + 3.2804            | - 0.0041           | - 0.004        | + 6.938            | + 0.444            | + 0.03         | 1079       |
| 19      | 17 Cancri $\beta$ ...       | + 3.2616            | - 0.0072           | - 0.004        | + 10.799           | + 0.397            | + 0.04         | 1180       |
| 20      | 43 Cancri $\gamma$ ...      | + 3.4885            | - 0.0143           | - 0.009        | + 12.667           | + 0.390            | + 0.03         | 1230       |
| 21      | 65 Cancri $\alpha$ ...      | + 3.2854            | - 0.0098           | + 0.001        | + 13.692           | + 0.345            | + 0.02         | 1269       |
| 22      | 76 Cancri $\kappa$ ...      | + 3.2571            | - 0.0093           | - 0.003        | + 14.277           | + 0.329            | - 0.01         | 1287       |
| 23      | Lalande 18162 ...           | + 3.2529            | - 0.0094           | ...            | + 14.593           | + 0.320            | ...            | ...        |
| 24      | 14 Leonis $\epsilon$ ...    | + 3.2176            | - 0.0093           | - 0.010        | + 16.176           | + 0.272            | + 0.02         | 1360       |
| 25      | 24 Leonis $\mu$ ...         | + 3.4404            | - 0.0198           | - 0.019        | + 16.736           | + 0.271            | + 0.05         | 1384       |
| 26      | R. P. L. 72 ...             | + 9.7288            | - 1.5787           | - 0.096        | + 17.904           | + 0.631            | - 0.04         | 1399       |
| 27      | 42 Hydræ $\mu$ ...          | + 2.9085            | + 0.0040           | - 0.010        | + 18.197           | + 0.171            | + 0.06         | 1451       |
| 28      | 58 Leonis $\delta$ ...      | + 3.1002            | - 0.0039           | - 0.002        | + 19.244           | + 0.120            | + 0.01         | 1526       |
| 29      | 84 Leonis $\tau$ ...        | + 3.0859            | - 0.0020           | - 0.001        | + 19.770           | + 0.066            | + 0.01         | 1570       |
| 30      | ... ..                      | + 3.0923            | - 0.0042           | ...            | + 19.966           | + 0.033            | ...            | ...        |
| 31      | ... ..                      | + 3.0890            | - 0.0038           | ...            | + 19.987           | + 0.028            | ...            | ...        |
| 32      | ... ..                      | + 3.0893            | - 0.0039           | ...            | + 19.990           | + 0.027            | ...            | ...        |
| 33      | 8 Virginis $\pi$ ...        | + 3.0761            | - 0.0022           | - 0.003        | + 20.048           | + 0.002            | + 0.02         | 1618       |
| 34      | Lalande 22762 ...           | + 3.0709            | - 0.0015           | ...            | + 20.053           | - 0.013            | ...            | ...        |
| 35      | R. P. L. 92 ...             | + 1.5367            | + 0.0036           | + 0.285        | + 20.019           | - 0.022            | + 0.02         | 1656       |

## Mean Positions of Stars for 1886, January 1st.

| Number. | Star.                                    | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations | Fraction of Year. |
|---------|--|------------|--------------|-----------------------|----|-------|----------------------|----|------|--------------|-------------------|
|         |  |            |              | h.                    | m. | s.    | °                    | '  | "    |              |                   |
| 36      | 7 Corvi $\delta^2$ ...                   | 3.1        | ...          | 12                    | 23 | 57.98 | 105                  | 52 | 49.6 | 2            | 0.44              |
| 37      | 29 Virginis $\gamma^1$ ...               | 3.5        | ...          | 12                    | 35 | 58.03 | 90                   | 49 | 23.6 | 2            | 0.44              |
| 38      | 43 Virginis $\delta$ ...                 | 3.7        | ...          | 12                    | 49 | 51.65 | 85                   | 58 | 57.7 | 3            | 0.44              |
| 39      | 47 Virginis $\epsilon$ ...               | 3.0        | ...          | 12                    | 56 | 30.17 | 78                   | 25 | 40.5 | 1            | 0.46              |
| 40      | 4 Bootis $\tau$ ...                      | 4.5        | ...          | 13                    | 41 | 50.80 | 71                   | 58 | 29.5 | 3            | 0.47              |
| 41      | 93 Virginis $\tau$ ...                   | 4.3        | ...          | 13                    | 55 | 50.69 | 87                   | 54 | 10.7 | 1            | 0.48              |
| 42      | 22 Bootis $f$ ...                        | 5.4        | ...          | 14                    | 21 | 9.22  | 70                   | 15 | 38.3 | 2            | 0.47              |
| 43      | 25 Bootis $\rho$ ...                     | 3.6        | ...          | 14                    | 26 | 54.88 | 59                   | 7  | 40.0 | 1            | 0.47              |
| 44      | R. P. L. 110 ...                         | 7.1        | ...          | 14                    | 52 | 17.76 | 3                    | 34 | 46.7 | 4            | 0.73              |
| 45      | 72 Ophiuchi ...                          | 3.8        | ...          | 18                    | 1  | 56.68 | 80                   | 27 | 7.4  | 1            | 0.59              |
| 46      | 23 Ursæ Minoris $\delta$ ...             | 4.3        | ...          | 18                    | 9  | 5.05  | 3                    | 23 | 21.6 | 7            | 0.14              |
| 47      | 58 Serpentis $\eta$ ...                  | 3.4        | ...          | 18                    | 15 | 24.68 | 92                   | 55 | 39.3 | 1            | 0.67              |
| 48      | 22 Sagittarii $\lambda$ ...              | 3.1        | ...          | 18                    | 20 | 56.07 | 115                  | 23 | 58.9 | 2            | 0.63              |
| 49      | 13 Aquilæ $\epsilon$ ...                 | 4.1        | ...          | 18                    | 54 | 26.88 | 75                   | 5  | 11.7 | 2            | 0.66              |
| 50      | 52 Sagittarii $h^2$ ...                  | 4.6        | ...          | 19                    | 29 | 46.18 | 105                  | 8  | 2.1  | 2            | 0.68              |
| 51      | $\lambda$ Ursæ Minoris ...               | 6.5        | ...          | 19                    | 37 | 50.94 | 1                    | 2  | 31.0 | 8            | 0.26              |
| 52      | 53 Aquilæ $\alpha$ ( <i>Altair</i> ) ... | 1.0        | ...          | 19                    | 45 | 13.21 | 81                   | 25 | 54.5 | 5            | 0.70              |
| 53      | 65 Aquilæ $\theta$ ...                   | 3.4        | ...          | 20                    | 5  | 25.37 | 91                   | 9  | 31.4 | 7            | 0.70              |
| 54      | 2 Delphini $\epsilon$ ...                | 4.1        | ...          | 20                    | 27 | 45.91 | 79                   | 5  | 0.4  | 4            | 0.72              |
| 55      | R. P. L. 155 ...                         | 7.0        | ...          | 23                    | 24 | 18.93 | 4                    | 12 | 38.4 | 5            | 0.30              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                        | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|------------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                              | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 36      | 7 Corvi $\delta^a$ ...       | + 3.1120            | + 0.0118           | - 0.014        | + 19.944           | - 0.055            | + 0.15         | 1675       |
| 37      | 29 Virginis $\gamma^1$ ...   | + 3.0754            | + 0.0043           | - 0.039        | + 19.808           | - 0.078            | - 0.02         | 1698       |
| 38      | 43 Virginis $\delta$ ...     | + 3.0522            | + 0.0025           | - 0.034        | + 19.582           | - 0.103            | + 0.05         | 1723       |
| 39      | 47 Virginis $\epsilon$ ...   | + 3.0056            | - 0.0007           | - 0.019        | + 19.448           | - 0.114            | - 0.03         | 1735       |
| 40      | 4 Bootis $\tau$ ...          | + 2.8854            | - 0.0007           | - 0.035        | + 18.16            | - 0.188            | - 0.04         | 1810       |
| 41      | 93 Virgins $\tau$ ...        | + 3.0487            | + 0.0064           | - 0.001        | + 17.546           | - 0.222            | + 0.08         | 1829       |
| 42      | 22 Bootis $f$ ...            | + 2.7953            | + 0.0009           | - 0.006        | + 16.369           | - 0.242            | - 0.03         | 1864       |
| 43      | 25 Bootis $\rho$ ...         | + 2.5944            | - 0.0015           | - 0.009        | + 16.072           | - 0.233            | - 0.13         | 1869       |
| 44      | R. P. L. 110 ...             | - 11.5221           | + 2.9796           | ...            | + 14.649           | + 1.142            | ...            | ...        |
| 45      | 72 Ophiuchi ...              | + 2.8475            | + 0.0019           | - 0.006        | - 0.169            | - 0.415            | - 0.09         | 2275       |
| 46      | 23 Ursæ Minoris $\delta$ ... | - 19.4823           | - 0.2624           | + 0.026        | - 0.795            | + 2.839            | - 0.04         | 2395       |
| 47      | 58 Serpentis $\eta$ ...      | + 3.1405            | + 0.0010           | - 0.040        | + 1.348            | - 0.456            | + 0.68         | 2298       |
| 48      | 22 Sagittarii $\lambda$ ...  | + 3.7070            | - 0.0013           | - 0.005        | - 1.829            | - 0.537            | + 0.20         | 2310       |
| 49      | 13 Aquilæ $\epsilon$ ...     | + 2.7263            | + 0.0004           | - 0.005        | - 4.719            | - 0.385            | + 0.08         | 2390       |
| 50      | 52 Sagittarii $h^a$ ...      | + 3.6521            | - 0.0102           | + 0.002        | - 7.656            | - 0.490            | + 0.01         | 2478       |
| 51      | $\lambda$ Ursæ Minoris ...   | - 63.8390           | - 28.9195          | - 0.050        | - 8.304            | + 8.478            | + 0.01         | 2795       |
| 52      | 53 Aquilæ $\alpha$ ...       | + 2.8919            | - 0.0014           | + 0.035        | - 8.886            | - 0.374            | - 0.38         | 2524       |
| 53      | 65 Aquilæ $\theta$ ...       | + 3.0955            | - 0.0042           | - 0.000        | - 10.484           | - 0.382            | - 0.01         | 2576       |
| 54      | 2 Delphini $\epsilon$ ...    | + 2.8664            | - 0.0013           | - 0.001        | - 12.052           | - 0.330            | + 0.02         | 2642       |
| 55      | R. P. L. 155 ...             | + 0.2564            | - 0.3328           | ...            | - 19.810           | + 0.003            | ...            | ...        |





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SEPARATE RESULTS  
OF  
OBSERVATIONS  
OF THE FIXED STARS  
MADE WITH THE  
MADRAS MERIDIAN CIRCLE  
IN THE YEAR  
1887

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## Separate Results of Madras Meridian Circle Observations in 1887.

| Number and Date.  | Magnitude. | Mean Right Ascension 1887. |    |       | No. of Wires. | Mean Polar Distance 1887. |    |      | Observer. | Number and Date.  | Magnitude. | Mean Right Ascension 1887. |    |       | No. of Wires. | Mean Polar Distance 1887. |    |      | Observer. |
|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|---|------------|----------------------------|----|-------|---------------|---------------------------|----|------|-----------|
|   |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |   |            | h.                         | m. | s.    |               | o.                        | '  | "    |           |
| <b>1</b> <b>21 Andromedæ <math>\alpha</math>, Alpherat.</b> |            |                            |    |       |               |                           |    |      |           | <b>9</b> <b>57 Eridani <math>\mu</math></b>                   |            |                            |    |       |               |                           |    |      |           |
| Nov. 8  | ...        | 0                          | 2  | 32.81 | ...           | 61                        | 81 | 59.3 | R         | Jan. 11   | ...        | 4                          | 39 | 51.12 | ...           | 93                        | 27 | 46.3 | M         |
| 17  | ...        |                            | 2  | 32.89 | ...           |                           | 82 | 1.5  | R         | 25  | ...        |                            | 39 | 51.28 | ...           |                           | 27 | 44.9 | R         |
| 21  | ...        |                            | 2  | 32.82 | ...           |                           | 82 | 1.2  | R         | 28  | ...        |                            | 39 | 51.07 | ...           |                           | 27 | 48.7 | M         |
| 26  | ...        |                            | 2  | 32.74 | ...           |                           | 32 | 1.8  | R         |   |            |                            |    |       |               |                           |    |      |           |
| <b>2</b> <b>8 Ceti <math>\epsilon</math></b>                |            |                            |    |       |               |                           |    |      |           | <b>10</b> <b>R. P. L. 37.</b>                                 |            |                            |    |       |               |                           |    |      |           |
| Nov. 7  | ...        | 0                          | 18 | 40.12 | ...           | 99                        | 27 | 0.5  | R         | Jan. 7  | ...        | 4                          | 51 | 49.55 | 3             | 4                         | 11 | 31.8 | M         |
| 17  | ...        |                            | 18 | 40.05 | ...           |                           | 27 | 0.5  | R         | 28  | ...        |                            | 51 | 50.81 | 3             |                           | 11 | 27.5 | M         |
| 26  | ...        |                            | 18 | 40.16 | ...           |                           | 26 | 59.9 | R         |   |            |                            |    |       |               |                           |    |      |           |
| <b>3</b> <b>63 Piscium <math>\delta</math></b>              |            |                            |    |       |               |                           |    |      |           | <b>11</b> <b>19 Orionis <math>\beta</math>, Rigel.</b>        |            |                            |    |       |               |                           |    |      |           |
| Nov. 21   | ...        | 0                          | 42 | 49.09 | ...           | 83                        | 1  | 47.1 | R         | Feb. 18   | ...        | 5                          | 9  | 6.44  | ...           | 98                        | 19 | 57.3 | R         |
| 26  | ...        |                            | 42 | 49.14 | ...           |                           | 1  | 47.1 | R         |   |            |                            |    |       |               |                           |    |      |           |
| <b>4</b> <b>43 Arietis <math>\sigma</math></b>              |            |                            |    |       |               |                           |    |      |           | <b>12</b> <b>R. P. L. 40.</b>                                 |            |                            |    |       |               |                           |    |      |           |
| Jan. 7  | ...        | 2                          | 45 | 15.29 | ...           | 75                        | 23 | 1.8  | M         | Feb. 18   | ...        | 5                          | 25 | 50.77 | 3             | 4                         | 51 | 46.7 | R         |
| 11  | ...        |                            | 45 | 15.24 | ...           |                           | 23 | 1.3  | M         |   |            |                            |    |       |               |                           |    |      |           |
| <b>5</b> <b>1 Tauri <math>\alpha</math>, Var. 5.</b>        |            |                            |    |       |               |                           |    |      |           | <b>13</b> <b>34 Orionis <math>\delta</math>, Var. 1.</b>      |            |                            |    |       |               |                           |    |      |           |
| Jan. 7  | ...        | 3                          | 18 | 43.87 | ...           | 81                        | 22 | 11.3 | M         | Feb. 22   | ...        | 5                          | 26 | 14.08 | ...           | 90                        | 22 | 59.1 | M         |
| 14  | ...        |                            | 18 | 43.98 | ...           |                           | 22 | 8.7  | R         |   |            |                            |    |       |               |                           |    |      |           |
| 18  | ...        |                            | 18 | 43.97 | ...           |                           | 22 | 9.6  | M         |   |            |                            |    |       |               |                           |    |      |           |
| 21  | ...        |                            | 18 | 43.99 | ...           |                           | 22 | 9.6  | M         |   |            |                            |    |       |               |                           |    |      |           |
| <b>6</b> <b>18 Eridani <math>\epsilon</math></b>            |            |                            |    |       |               |                           |    |      |           | <b>14</b> <b>11 Leporis <math>\alpha</math></b>               |            |                            |    |       |               |                           |    |      |           |
| Jan. 7  | ...        | 3                          | 27 | 36.38 | ...           | 99                        | 50 | 27.8 | M         | Jan. 25   | ...        | 5                          | 27 | 44.73 | ...           | 107                       | 54 | 12.7 | R         |
| 18  | ...        |                            | 27 | 36.41 | ...           |                           | 50 | 29.3 | M         | 28  | ...        |                            | 27 | 44.85 | ...           |                           | 54 | 12.7 | M         |
| 21  | ...        |                            | 27 | 36.32 | ...           |                           | 50 | 29.6 | M         |   |            |                            |    |       |               |                           |    |      |           |
| <b>7</b> <b>73 Tauri <math>\Delta^1</math>.</b>             |            |                            |    |       |               |                           |    |      |           | <b>15</b> <b>46 Orionis <math>\epsilon</math></b>             |            |                            |    |       |               |                           |    |      |           |
| Jan. 14   | ...        | 3                          | 58 | 0.86  | ...           | 68                        | 13 | 39.8 | R         | Feb. 22   | ...        | 5                          | 30 | 28.74 | ...           | 91                        | 16 | 27.8 | M         |
|   |            |                            |    |       |               |                           |    |      |           |   |            |                            |    |       |               |                           |    |      |           |
| <b>8</b> <b>54 Tauri <math>\gamma</math></b>                |            |                            |    |       |               |                           |    |      |           | <b>16</b> <b>53 Orionis <math>\kappa</math></b>               |            |                            |    |       |               |                           |    |      |           |
| Jan. 11   | ...        | 4                          | 13 | 21.72 | ...           | 74                        | 38 | 46.5 | M         | Feb. 18   | ...        | 5                          | 42 | 28.80 | ...           | 99                        | 42 | 36.7 | R         |
| 14  | ...        |                            | 13 | 21.75 | ...           |                           | 38 | 45.0 | R         | 22  | ...        |                            | 42 | 28.71 | ...           |                           | 42 | 35.8 | M         |
| 18  | ...        |                            | 13 | 21.75 | ...           |                           | 38 | 47.0 | M         | 25  | ...        |                            | 42 | 28.78 | ...           |                           | 42 | 35.2 | R         |
| 21  | ...        |                            | 13 | 21.82 | ...           |                           | 38 | 45.9 | M         |   |            |                            |    |       |               |                           |    |      |           |
| 25  | ...        |                            | 13 | 21.62 | ...           |                           | 38 | 44.9 | R         |   |            |                            |    |       |               |                           |    |      |           |
| 28  | ...        |                            | 13 | 21.72 | ...           |                           | 38 | 46.2 | M         |   |            |                            |    |       |               |                           |    |      |           |
|   |            |                            |    |       |               |                           |    |      |           | <b>17</b> <b>31 Geminorum <math>\xi</math></b>                |            |                            |    |       |               |                           |    |      |           |
|   |            |                            |    |       |               |                           |    |      |           | Feb. 18   | ...        | 6                          | 38 | 56.85 | ...           | 76                        | 59 | 0.7  | R         |
|   |            |                            |    |       |               |                           |    |      |           | 25  | ...        |                            | 38 | 56.96 | ..            |                           | 58 | 58.4 | R         |
|   |            |                            |    |       |               |                           |    |      |           | Mar. 4  | ...        |                            | 38 | 56.80 | ...           |                           | 59 | 1.7  | M         |
|   |            |                            |    |       |               |                           |    |      |           | <b>18</b> <b>9 Canis Majoris <math>\alpha</math>, Sirius.</b> |            |                            |    |       |               |                           |    |      |           |
|   |            |                            |    |       |               |                           |    |      |           | Mar. 1  | ...        | 6                          | 40 | 10.02 | ...           | 106                       | 33 | 41.5 | R         |

Separate Results of Madras Meridian Circle Observations in 1887.

| Number and Date.  | Magnitude. | Mean Right Ascension 1887. |       |       | No. of Wires. | Mean Polar Distance 1887. |    |      | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1887. |       |       | No. of Wires. | Mean Polar Distance 1887. |    |      | Observer. |
|---|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|-----------|
|   |            | h.                         | m.    | s.    |               | °                         | '  | "    |           |                  |            | h.                         | m.    | s.    |               | °                         | '  | "    |           |
| <b>19</b> <i>51 Cephei (H<math>\epsilon</math>v.).</i>        |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Feb. 25   | ...        | 6                          | 47    | 16.71 | 3             | 2                         | 46 | 42.6 | R         | Apl. 26          | ...        | 9                          | 46    | 20.10 | ...           | 63                        | 27 | 37.7 | R         |
| Mar. 4  | ...        | 47                         | 16.02 | 3     | 46            | 42.7                      | M  |      |           | 29               | ...        | 46                         | 20.16 | ...   | 27            | 39.9                      | M  |      |           |
| Apl. 1  | ...        | 47                         | 16.81 | 3     | 46            | 47.4                      | M  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| <b>20</b> <i>14 Canis Majoris <math>\theta</math></i>         |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Mar. 1  | ...        | 6                          | 48    | 56.42 | ...           | 101                       | 53 | 51.1 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>21</b> <i>W. B. E. VII. 467.</i>                           |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Feb. 18   | 9.5        | 7                          | 17    | 30.07 | ...           | 81                        | 12 | 16.5 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 23  | 9.5        | 17                         | 30.20 | ...   | 12            | 18.4                      | M  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 25  | 9.5        | 17                         | 30.15 | ...   | 12            | 16.5                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Mar. 1  | 9.5        | 17                         | 30.15 | ...   | 12            | 17.4                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 4   | 9.5        | 17                         | 30.13 | ...   | 12            | 17.1                      | M  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| <b>22</b> <i>3 Canis Minoris <math>\beta</math></i>           |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Feb. 25   | ...        | 7                          | 21    | 1.27  | ...           | 81                        | 28 | 59.1 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| Mar. 1  | ...        | 21                         | 1.28  | ...   | 28            | 59.8                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 4   | ...        | 21                         | 1.46  | ...   | 29            | 1.4                       | M  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 1  | ...        | 21                         | 1.47  | ...   | 29            | 1.7                       | M  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| <b>23</b> <i><math>\xi</math> Arg<math>\acute{u}</math>s.</i> |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Mar. 4  | ...        | 7                          | 44    | 32.47 | ...           | 114                       | 34 | 35.8 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>24</b> <i>17 Cancri <math>\beta</math></i>                 |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 8  | ...        | 8                          | 10    | 23.15 | ...           | 81                        | 27 | 58.3 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>25</b> <i>43 Cancri <math>\gamma</math></i>                |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 1  | ...        | 8                          | 36    | 44.81 | ...           | 68                        | 7  | 32.9 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| 8   | ...        | 36                         | 44.75 | ...   | 7             | 33.1                      | M  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| <b>26</b> <i>65 Cancri <math>\alpha</math></i>                |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 8  | ...        | 8                          | 52    | 18.38 | ...           | 77                        | 42 | 18.2 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>27</b> <i>14 Leonis <math>\sigma</math></i>                |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 26   | ...        | 9                          | 35    | 7.10  | ...           | 79                        | 36 | 40.4 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>28</b> <i>24 Leonis <math>\mu</math></i>                   |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 26   | ...        | 9                          | 46    | 20.10 | ...           | 63                        | 27 | 37.7 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 29  | ...        | 46                         | 20.16 | ...   | 27            | 39.9                      | M  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| <b>29</b> <i>R. P. L. 72.</i>                                 |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 26   | ...        | 10                         | 13    | 6.17  | 3             | 5                         | 10 | 37.5 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| <i>R. P. L. 72—s.p.</i>                                       |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Oct. 10   | ...        | 10                         | 13    | 5.59  | 7             | 5                         | 10 | 32.1 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| <b>30</b> <i>42 Hydr<math>\alpha</math>s <math>\mu</math></i> |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 29   | ...        | 10                         | 20    | 37.44 | ...           | 106                       | 15 | 36.3 | M         |                  |            |                            |       |       |               |                           |    |      |           |
| May 3   | ...        | 20                         | 37.49 | ...   | 15            | 35.0                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 6   | ...        | 20                         | 37.51 | ...   | 15            | 32.6                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| <b>31</b> <i>58 Leonis <math>\delta</math>.</i>               |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| Apl. 26   | ...        | 10                         | 54    | 43.47 | ...           | 85                        | 46 | 32.5 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 29  | ...        | 54                         | 43.49 | ...   | 46            | 33.6                      | M  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| May 3   | ...        | 54                         | 43.48 | ...   | 46            | 32.8                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 6   | ...        | 54                         | 43.44 | ...   | 46            | 31.6                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 10  | ...        | 54                         | 43.51 | ...   | 46            | 32.8                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 16  | ...        | 54                         | 43.49 | ...   | 46            | 32.5                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| <b>32</b> <i>84 Leonis <math>\tau</math></i>                  |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| May 3   | ...        | 11                         | 22    | 7.55  | ...           | 86                        | 31 | 17.4 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 6   | ...        | 22                         | 7.56  | ...   | 31            | 15.5                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| <b>33</b> <i>8 Virginis <math>\pi</math></i>                  |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| May 16  | ...        | 11                         | 55    | 4.98  | ...           | 82                        | 45 | 19.0 | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 27  | ...        | 55                         | 4.93  | ...   | 45            | 18.1                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| 31  | ...        | 55                         | 4.93  | ...   | 45            | 19.0                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| June 3  | ...        | 55                         | 5.01  | ...   | 45            | 19.2                      | M  |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| <b>34</b> <i>R. P. L. 92.</i>                                 |            |                            |       |       |               |                           |    |      |           |                  |            |                            |       |       |               |                           |    |      |           |
| May 16  | ...        | 12                         | 13    | 30.97 | 3             | 2                         | 56 | 9.8  | R         |                  |            |                            |       |       |               |                           |    |      |           |
| 31  | ...        | 13                         | 31.85 | 3     | 56            | 12.2                      | R  |      |           |                  |            |                            |       |       |               |                           |    |      |           |

Separate Results of Madras Meridian Circle Observations in 1887.

| Number and Date.                    | Magnitude. | Mean Right Ascension 1887. |       |       | No. of Wires. | Mean Polar Distance 1887. |    |      | Observer.                 | Number and Date.         | Magnitude. | Mean Right Ascension 1887. |       |       | No. of Wires. | Mean Polar Distance 1887. |      |      | Observer. |
|-------------------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|----|------|---------------------------|--------------------------|------------|----------------------------|-------|-------|---------------|---------------------------|------|------|-----------|
|                                     |            | h.                         | m.    | s.    |               | o.                        | '  | "    |                           |                          |            | h.                         | m.    | s.    |               | o.                        | '    | "    |           |
| <b>R. P. L. 92—s.p.</b>             |            |                            |       |       |               |                           |    |      |                           | <b>40 93 Virginis τ</b>  |            |                            |       |       |               |                           |      |      |           |
| Nov. 3                              | ...        | 12                         | 18    | 31.93 | 3             | 2                         | 56 | 18.0 | R                         | June 28                  | ...        | 18                         | 55    | 53.69 | ...           | 87                        | 54   | 28.1 | M         |
| 21                                  | ...        | 18                         | 31.89 | 3     | 56            | 12.9                      | R  |      | July 1                    | ...                      | 55         | 53.82                      | ...   | 54    | 29.9          | M                         |      |      |           |
| <b>35 7 Corvi δ<sup>3</sup></b>     |            |                            |       |       |               |                           |    |      |                           | <b>41 22 Bootis f.</b>   |            |                            |       |       |               |                           |      |      |           |
| May 10                              | ...        | 12                         | 24    | 1.11  | ...           | 105                       | 53 | 7.5  | R                         | June 28                  | ...        | 14                         | 21    | 12.05 | ...           | 70                        | 15   | 54.2 | M         |
| 16                                  | ...        | 24                         | 1.12  | ...   | 53            | 11.9                      | R  |      | July 1                    | ...                      | 21         | 12.01                      | ...   | 15    | 54.8          | M                         |      |      |           |
| 20                                  | ...        | 24                         | 1.20  | ...   | 53            | 7.4                       | R  |      | <b>42 R. P. L. 110.</b>   |                          |            |                            |       |       |               |                           |      |      |           |
| 24                                  | ...        | 24                         | 1.12  | ...   | 53            | 8.9                       | R  |      | June 14                   | ...                      | 14         | 52                         | 5.29  | 3     | 3             | 34                        | 59.9 | M    |           |
| June 3                              | ...        | 24                         | 1.16  | ...   | 53            | 8.6                       | M  |      | 28                        | ...                      | 52         | 3.65                       | 3     | 34    | 59.3          | M                         |      |      |           |
| 7                                   | ...        | 24                         | 1.20  | ...   | 53            | 9.0                       | M  |      | <b>R. P. L. 110.—s.p.</b> |                          |            |                            |       |       |               |                           |      |      |           |
| <b>36 29 Virginis γ<sup>1</sup></b> |            |                            |       |       |               |                           |    |      |                           | <b>43 37 Serpentis ε</b> |            |                            |       |       |               |                           |      |      |           |
| May 24                              | ...        | 12                         | 35    | 55.99 | ...           | 90                        | 49 | 42.2 | R                         | Jan. 7                   | ...        | 14                         | 52    | 6.32  | 3             | 3                         | 34   | 59.3 | M         |
| 27                                  | ...        | 35                         | 55.99 | ...   | 49            | 41.8                      | R  |      | <b>44 20 Herculis γ</b>   |                          |            |                            |       |       |               |                           |      |      |           |
| June 3                              | ...        | 35                         | 55.99 | ...   | 49            | 42.2                      | M  |      | July 22                   | ...                      | 16         | 16                         | 55.96 | ...   | 70            | 34                        | 52.8 | M    |           |
| 7                                   | ...        | 35                         | 56.04 | ...   | 49            | 43.4                      | M  |      | <b>45 13 Ophiuchi ζ</b>   |                          |            |                            |       |       |               |                           |      |      |           |
| 10                                  | ...        | 35                         | 56.08 | ...   | 49            | 41.7                      | M  |      | July 22                   | ...                      | 16         | 30                         | 56.18 | ...   | 100           | 20                        | 14.4 | M    |           |
| 14                                  | ...        | 35                         | 56.06 | ...   | 49            | 43.8                      | M  |      | <b>46 35 Ophiuchi η</b>   |                          |            |                            |       |       |               |                           |      |      |           |
| <b>37 43 Virginis δ</b>             |            |                            |       |       |               |                           |    |      |                           | <b>47 42 Ophiuchi θ</b>  |            |                            |       |       |               |                           |      |      |           |
| May 10                              | ...        | 12                         | 49    | 54.71 | ...           | 85                        | 59 | 17.1 | R                         | July 12                  | ...        | 17                         | 3     | 53.91 | ...           | 105                       | 35   | 1.7  | M         |
| 20                                  | ...        | 49                         | 54.73 | ...   | 59            | 15.3                      | R  |      | Aug. 27                   | ...                      | 3          | 53.90                      | ...   | 35    | 1.8           | M                         |      |      |           |
| 24                                  | ...        | 49                         | 54.68 | ...   | 59            | 16.6                      | R  |      | <b>48 49 Ophiuchi σ</b>   |                          |            |                            |       |       |               |                           |      |      |           |
| 31                                  | ...        | 49                         | 54.74 | ...   | 59            | 15.4                      | R  |      | July 12                   | ...                      | 17         | 20                         | 54.40 | ...   | 85            | 45                        | 36.9 | M    |           |
| June 7                              | ...        | 49                         | 54.62 | ...   | 59            | 15.9                      | M  |      | Aug. 27                   | ...                      | 20         | 54.41                      | ...   | 45    | 37.6          | M                         |      |      |           |
| 10                                  | ...        | 49                         | 54.71 | ...   | 59            | 14.6                      | M  |      | <b>49 49 Ophiuchi σ</b>   |                          |            |                            |       |       |               |                           |      |      |           |
| 14                                  | ...        | 49                         | 54.68 | ...   | 59            | 17.3                      | M  |      | July 12                   | ...                      | 17         | 20                         | 54.40 | ...   | 85            | 45                        | 36.9 | M    |           |
| <b>38 47 Virginis ε</b>             |            |                            |       |       |               |                           |    |      |                           | <b>43 49 Ophiuchi σ</b>  |            |                            |       |       |               |                           |      |      |           |
| May 20                              | ...        | 12                         | 56    | 33.08 | ...           | 78                        | 25 | 57.3 | R                         | July 12                  | ...        | 17                         | 20    | 54.40 | ...           | 85                        | 45   | 36.9 | M         |
| 27                                  | ...        | 56                         | 33.12 | ...   | 25            | 58.0                      | R  |      | Aug. 27                   | ...                      | 20         | 54.41                      | ...   | 45    | 37.6          | M                         |      |      |           |
| 31                                  | ...        | 56                         | 33.10 | ...   | 25            | 58.5                      | R  |      | <b>49 49 Ophiuchi σ</b>   |                          |            |                            |       |       |               |                           |      |      |           |
| June 10                             | ...        | 56                         | 33.01 | ...   | 25            | 57.2                      | M  |      | July 12                   | ...                      | 17         | 20                         | 54.40 | ...   | 85            | 45                        | 36.9 | M    |           |
| 14                                  | ...        | 56                         | 33.04 | ...   | 25            | 59.7                      | M  |      | Aug. 27                   | ...                      | 20         | 54.41                      | ...   | 45    | 37.6          | M                         |      |      |           |
| <b>39 4 Bootis τ</b>                |            |                            |       |       |               |                           |    |      |                           | <b>43 49 Ophiuchi σ</b>  |            |                            |       |       |               |                           |      |      |           |
| June 23                             | ...        | 13                         | 41    | 53.65 | ...           | 71                        | 58 | 45.2 | M                         | July 12                  | ...        | 17                         | 20    | 54.40 | ...           | 85                        | 45   | 36.9 | M         |
| July 1                              | ...        | 41                         | 53.56 | ...   | 58            | 48.2                      | M  |      | Aug. 27                   | ...                      | 20         | 54.41                      | ...   | 45    | 37.6          | M                         |      |      |           |

## Separate Results of Madras Meridian Circle Observations in 1887.

| Number and Date. | Magnitude. | Mean Right Ascension 1887.                      |    |       | No. of Wires. | Mean Polar Distance 1887. |    |      | Observer. | Number and Date. | Magnitude. | Mean Right Ascension 1887.             |       |       | No. of Wires. | Mean Polar Distance 1887. |      |      | Observer. |
|------------------|------------|---|----|-------|---------------|---------------------------|----|------|-----------|------------------|------------|--|-------|-------|---------------|---------------------------|------|------|-----------|
|                  |            | h.  | m. | s.    |               | o.                        | '  | "    |           |                  |            | h.                                     | m.    | s.    |               | o.                        | '    | "    |           |
| <b>49</b>        |            | <b>23 Ursæ Minoris <math>\delta</math></b>      |    |       |               |                           |    |      |           | <b>54</b>        |            | <b>2 Aquarii <math>\epsilon</math></b> |       |       |               |                           |      |      |           |
| July 29          | ...        | 18  | 8  | 46.60 | 3             | 3                         | 23 | 18.9 | M         | Oct. 10          | ...        | 20                                     | 41    | 33.46 | ...           | 99                        | 54   | 29.9 | R         |
|                  |            | <b>23 Ursæ Minoris <math>\delta</math>—s.p.</b> |    |       |               |                           |    |      |           | <b>55</b>        |            | <b>61 Cygni.—1st.</b>                  |       |       |               |                           |      |      |           |
| Jan. 28          | ...        | 18  | 8  | 46.38 | 3             | 3                         | 23 | 17.9 | M         | Oct. 1           | ...        | 21                                     | 1     | 49.83 | ...           | 51                        | 48   | 16.3 | R         |
| Feb. 18          | ...        |   | 8  | 44.60 | 2             |                           | 23 | 19.3 | R         |                  |            |  |       |       |               |                           |      |      |           |
| 25               | ...        |   | 8  | 46.07 | 3             |                           | 23 | 20.8 | R         |                  |            |  |       |       |               |                           |      |      |           |
| Mar. 4           | ...        |   | 8  | 45.39 | 3             |                           | 23 | 19.0 | M         | <b>56</b>        |            | <b>48 Aquarii <math>\gamma</math></b>  |       |       |               |                           |      |      |           |
|                  |            | <b><math>\lambda</math> Ursæ Minoris—s.p.</b>   |    |       |               |                           |    |      |           | Nov. 3           | ...        | 22                                     | 15    | 49.13 | ...           | 91                        | 57   | 21.6 | R         |
| Apl. 1           | ...        | 19  | 36 | 47.33 | 7             | 1                         | 2  | 23.7 | M         | 7                | ...        | 15                                     | 49.16 | ...   | 57            | 21.6                      | R    |      |           |
| <b>51</b>        |            | <b>53 Aquilæ <math>\alpha</math>, Altair.</b>   |    |       |               |                           |    |      |           | <b>57</b>        |            | <b>73 Aquarii <math>\lambda</math></b> |       |       |               |                           |      |      |           |
| Oct. 1           | ...        | 19  | 45 | 16.19 | ...           | 31                        | 25 | 41.9 | R         | Nov. 3           | ...        | 22                                     | 46    | 43.03 | ...           | 98                        | 10   | 49.3 | R         |
| 5                | ...        |   | 45 | 16.19 | ...           |                           | 25 | 42.5 | R         | 7                | ...        |  | 46    | 42.99 | ...           |                           | 10   | 48.5 | R         |
|                  |            | <b>65 Aquilæ <math>\theta</math></b>            |    |       |               |                           |    |      |           | 17               | ...        |  | 46    | 43.00 | ...           |                           | 10   | 48.2 | R         |
| Oct. 1           | ...        | 20  | 5  | 28.37 | ...           | 91                        | 9  | 18.7 | R         | 21               | ...        |  | 46    | 43.03 | ...           |                           | 10   | 49.7 | R         |
| 5                | ...        |   | 5  | 28.45 | ...           |                           | 9  | 18.5 | R         |                  |            |  |       |       |               |                           |      |      |           |
| 10               | ...        |   | 5  | 28.42 | ...           |                           | 9  | 19.1 | R         | <b>58</b>        |            | <b>R. P. L. 155.</b>                   |       |       |               |                           |      |      |           |
|                  |            | <b>2 Delphini <math>\epsilon</math></b>         |    |       |               |                           |    |      |           | Nov. 3           | ...        | 23                                     | 24    | 20.34 | 4             | 4                         | 12   | 11.0 | R         |
| Oct. 5           | ...        | 20  | 27 | 48.80 | ...           | 79                        | 4  | 45.6 | R         | 21               | ...        |  | 24    | 19.80 | 3             |                           | 12   | 15.4 | R         |
| 10               | ...        |   | 27 | 48.87 | ...           |                           | 4  | 46.8 | R         |                  |            |  |       |       |               |                           |      |      |           |
|                  |            | <b>R. P. L. 155—s.p.</b>                        |    |       |               |                           |    |      |           | Apl. 26          | ...        | 23                                     | 24    | 19.71 | 3             | 4                         | 12   | 19.4 | R         |
|                  |            |   |    |       |               |                           |    |      | May 16    | ...              |            | 24                                     | 19.22 | 3     |               | 12                        | 18.9 | R    |           |



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MEAN POSITIONS OF STARS

OBSERVED WITH THE

MADRAS MERIDIAN CIRCLE

IN THE YEAR

1887

REDUCED TO JANUARY 1 OF THAT YEAR

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## Mean Positions of Stars for 1887, January 1st.

| Number. | Star.  | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|--|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |  |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 1       | 21 Androm. $\alpha$ ( <i>Alpherat</i> ) ..     | 2.1        | ...          | 0                     | 2  | 32.82 | 61                   | 32 | 1.0  | 4             | 0.88              |
| 2       | 8 Ceti $\epsilon$ ... ..                       | 3.6        | ...          | 0                     | 13 | 40.11 | 99                   | 27 | 0.3  | 3             | 0.88              |
| 3       | 68 Piscium $\delta$ ... ..                     | 4.6        | ...          | 0                     | 42 | 49.12 | 68                   | 1  | 47.1 | 2             | 0.89              |
| 4       | 43 Arietis $\epsilon$ ... ..                   | 5.5        | ...          | 2                     | 45 | 15.27 | 75                   | 23 | 1.6  | 2             | 0.02              |
| 5       | 1 Tauri $\sigma$ , Var. 5 ... ..               | Var.       | ...          | 3                     | 18 | 43.95 | 81                   | 22 | 9.8  | 4             | 0.04              |
| 6       | 18 Eridani $\epsilon$ ... ..                   | 3.7        | ...          | 3                     | 27 | 36.37 | 99                   | 50 | 23.9 | 3             | 0.04              |
| 7       | 37 Tauri A <sup>1</sup> ... ..                 | 4.4        | ...          | 3                     | 59 | 9.66  | 68                   | 13 | 39.6 | 1             | 0.04              |
| 8       | 54 Tauri $\gamma$ ... ..                       | 3.9        | ...          | 4                     | 13 | 21.73 | 74                   | 38 | 45.9 | 6             | 0.05              |
| 9       | 57 Eridani $\mu$ ... ..                        | 4.3        | ...          | 4                     | 39 | 51.16 | 93                   | 27 | 45.0 | 3             | 0.06              |
| 10      | R. P. L. 37 ... ..                             | 6.8        | ...          | 4                     | 51 | 50.18 | 4                    | 11 | 29.7 | 2             | 0.04              |
| 11      | 19 Orionis $\beta$ ( <i>Rigel</i> ) ... ..     | 0.3        | ...          | 5                     | 9  | 6.44  | 98                   | 19 | 57.3 | 1             | 0.13              |
| 12      | R. P. L. 40 ... ..                             | 6.2        | ...          | 5                     | 25 | 50.77 | 4                    | 51 | 46.7 | 1             | 0.13              |
| 13      | 34 Orionis $\delta$ , Var. 1 ... ..            | Var.       | ...          | 5                     | 26 | 14.08 | 90                   | 22 | 59.1 | 1             | 0.14              |
| 14      | 11 Leporis $\alpha$ ... ..                     | 3.7        | ...          | 5                     | 27 | 44.79 | 107                  | 54 | 12.7 | 2             | 0.07              |
| 15      | 46 Orionis $\epsilon$ ... ..                   | 1.8        | ...          | 5                     | 30 | 38.74 | 91                   | 16 | 37.8 | 1             | 0.14              |
| 16      | 53 Orionis $\kappa$ ... ..                     | 2.2        | ...          | 5                     | 42 | 23.76 | 99                   | 42 | 35.9 | 3             | 0.14              |
| 17      | 31 Geminorum $\xi$ ... ..                      | 3.4        | ...          | 6                     | 38 | 56.87 | 76                   | 59 | 0.3  | 3             | 0.15              |
| 18      | 9 Canis Maj. $\alpha$ ( <i>Sirius</i> ) ... .. | - 1.4      | ...          | 6                     | 49 | 10.02 | 106                  | 33 | 41.5 | 1             | 0.16              |
| 19      | 51 Cephei ( <i>Hev.</i> ) ... ..               | 5.3        | ...          | 6                     | 47 | 16.51 | 2                    | 46 | 44.2 | 3             | 0.19              |
| 20      | 14 Canis Majoris $\theta$ ... ..               | 4.2        | ...          | 6                     | 48 | 56.42 | 101                  | 53 | 51.1 | 1             | 0.16              |
| 21      | W. B. E. VII. 467 ... ..                       | 9.5        | 5            | 7                     | 17 | 30.14 | 81                   | 12 | 17.2 | 5             | 0.15              |
| 22      | 3 Canis Minoris $\beta$ ... ..                 | 3.1        | ...          | 7                     | 21 | 1.37  | 81                   | 29 | 0.5  | 4             | 0.18              |
| 23      | $\xi$ Argus ... ..                             | 3.4        | ...          | 7                     | 44 | 32.47 | 114                  | 34 | 35.8 | 1             | 0.17              |
| 24      | 17 Canori $\beta$ ... ..                       | 3.8        | ...          | 8                     | 10 | 23.15 | 80                   | 27 | 58.3 | 1             | 0.27              |
| 25      | 43 Canori $\gamma$ ... ..                      | 4.8        | ...          | 8                     | 36 | 44.78 | 68                   | 7  | 33.0 | 2             | 0.26              |
| 26      | 65 Canori $\alpha$ ... ..                      | 4.3        | ...          | 8                     | 52 | 18.38 | 77                   | 42 | 18.2 | 1             | 0.27              |
| 27      | 14 Leonis $\sigma$ ... ..                      | 3.8        | ...          | 9                     | 35 | 7.10  | 79                   | 36 | 40.4 | 1             | 0.32              |
| 28      | 24 Leonis $\mu$ ... ..                         | 4.1        | ...          | 9                     | 46 | 20.13 | 63                   | 27 | 33.8 | 2             | 0.32              |
| 29      | R. P. L. 72 ... ..                             | 5.9        | ...          | 10                    | 13 | 5.83  | 5                    | 10 | 29.3 | 2             | 0.54              |
| 30      | 42 Hydræ $\mu$ ... ..                          | 4.1        | ...          | 10                    | 20 | 37.48 | 106                  | 15 | 34.6 | 3             | 0.33              |
| 31      | 58 Leonis $d$ ... ..                           | 5.0        | ...          | 10                    | 54 | 43.48 | 85                   | 46 | 32.6 | 6             | 0.34              |
| 32      | 84 Leonis $\tau$ ... ..                        | 5.1        | ...          | 11                    | 22 | 7.56  | 86                   | 31 | 16.5 | 2             | 0.34              |
| 33      | 8 Virginis $\pi$ ... ..                        | 4.4        | ...          | 11                    | 55 | 4.96  | 82                   | 45 | 18.8 | 4             | 0.40              |
| 34      | R. P. L. 92 ... ..                             | 6.7        | ...          | 12                    | 13 | 31.41 | 2                    | 56 | 12.0 | 4             | 0.63              |
| 35      | 7 Corvi $\delta^a$ ... ..                      | 3.1        | ...          | 12                    | 24 | 1.15  | 105                  | 53 | 8.9  | 6             | 0.39              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                         | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|-------------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                               | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 1       | 21 Andromedæ $\alpha$ ...     | + 3.0805            | + 0.0152           | + 0.010        | - 20.053           | + 0.013            | + 0.16         | 3215       |
| 2       | 8 Ceti ...                    | + 3.0592            | - 0.0023           | - 0.003        | - 20.018           | + 0.034            | + 0.03         | 14         |
| 3       | 63 Piscium $\delta$ ...       | + 3.1027            | + 0.0079           | + 0.004        | - 19.705           | + 0.091            | + 0.04         | 85         |
| 4       | 43 Arietis $\sigma$ ...       | + 3.3026            | + 0.0150           | - 0.000        | - 15.062           | + 0.323            | + 0.04         | 400        |
| 5       | 1 Tauri $\epsilon$ ...        | + 3.2272            | + 0.0115           | - 0.005        | - 12.974           | + 0.364            | + 0.07         | 477        |
| 6       | 18 Eridani $\epsilon$ ...     | + 2.8900            | + 0.0055           | - 0.068        | - 12.373           | + 0.336            | - 0.01         | 498        |
| 7       | 87 Tauri A <sup>1</sup> ...   | + 3.5325            | + 0.0153           | + 0.005        | - 10.178           | + 0.447            | + 0.06         | 554        |
| 8       | 54 Tauri $\gamma$ ...         | + 3.4005            | + 0.0115           | + 0.007        | - 8.998            | + 0.446            | + 0.03         | 583        |
| 9       | 57 Eridani $\mu$ ...          | + 2.9965            | + 0.0055           | - 0.000        | - 6.871            | + 0.413            | + 0.00         | 657        |
| 10      | R. P. L. 37 ...               | + 20.5128           | + 1.4734           | ...            | - 5.877            | + 2.863            | ...            | ...        |
| 11      | 19 Orionis $\beta$ ...        | + 2.8814            | + 0.0040           | - 0.001        | - 4.417            | + 0.412            | - 0.01         | 736        |
| 12      | R. P. L. 40 ...               | + 18.6117           | + 0.5766           | ...            | - 2.977            | + 2.686            | ...            | ...        |
| 13      | 84 Orionis $\delta$ ...       | + 3.0636            | + 0.0038           | - 0.001        | - 2.944            | + 0.443            | + 0.01         | 787        |
| 14      | 11 Leporis $\alpha$ ...       | + 2.6447            | + 0.0029           | - 0.001        | - 2.813            | + 0.322            | - 0.01         | 796        |
| 15      | 46 Orionis $\epsilon$ ...     | + 3.0429            | + 0.0085           | - 0.002        | - 2.576            | + 0.441            | - 0.01         | 809        |
| 16      | 53 Orionis $\kappa$ ...       | + 2.8442            | + 0.0027           | - 0.002        | - 1.539            | + 0.414            | - 0.00         | 844        |
| 17      | 81 Geminorum $\xi$ ...        | + 3.3771            | - 0.0017           | - 0.009        | + 3.392            | + 0.435            | + 0.20         | 989        |
| 18      | 9 Canis Majoris $\alpha$ ...  | + 2.6310            | + 0.0010           | - 0.037        | + 3.497            | + 0.384            | + 1.20         | 994        |
| 19      | 51 Cephei (Hav.) ...          | + 30.0318           | - 2.3507           | - 0.040        | + 4.107            | + 4.236            | + 0.05         | Gr.        |
| 20      | 14 Canis Majoris $\theta$ ... | + 2.7971            | + 0.0004           | - 0.011        | + 4.251            | + 0.397            | + 0.00         | 1011       |
| 21      | W. B. E. VII. 467 ...         | + 3.2675            | - 0.0088           | ...            | + 6.653            | + 0.447            | ...            | ...        |
| 22      | 8 Canis Minoris $\beta$ ...   | + 3.2603            | - 0.0041           | - 0.004        | + 6.942            | + 0.444            | + 0.03         | 1079       |
| 23      | $\xi$ Argus ...               | + 2.5235            | + 0.0006           | - 0.001        | + 8.833            | + 0.327            | - 0.02         | 1132       |
| 24      | 17 Cancri $\beta$ ...         | + 3.2615            | - 0.0072           | - 0.004        | + 10.804           | + 0.397            | + 0.04         | 1180       |
| 25      | 43 Cancri $\gamma$ ...        | + 3.4864            | - 0.0143           | - 0.009        | + 12.671           | + 0.390            | + 0.03         | 1230       |
| 26      | 65 Cancri $\alpha$ ...        | + 3.2352            | - 0.0098           | + 0.001        | + 13.695           | + 0.345            | + 0.02         | 1269       |
| 27      | 14 Leonis $\sigma$ ...        | + 3.2175            | - 0.0093           | - 0.010        | + 16.173           | + 0.272            | + 0.02         | 1360       |
| 28      | 24 Leonis $\mu$ ...           | + 3.4401            | - 0.0198           | - 0.019        | + 16.738           | + 0.271            | + 0.05         | 1384       |
| 29      | R. P. L. 72 ...               | + 9.7109            | - 1.5738           | - 0.096        | + 17.911           | + 0.629            | - 0.04         | 1399       |
| 30      | 42 Hydræ $\mu$ ...            | + 2.9086            | + 0.0040           | - 0.010        | + 18.199           | + 0.171            | + 0.06         | 1451       |
| 31      | 58 Leonis $d$ ...             | + 3.1001            | - 0.0039           | - 0.002        | + 19.245           | + 0.120            | + 0.01         | 1526       |
| 32      | 84 Leonis $\tau$ ...          | + 3.0859            | - 0.0020           | - 0.001        | + 19.780           | + 0.066            | + 0.01         | 1570       |
| 33      | 8 Virginis $\pi$ ...          | + 3.0760            | - 0.0022           | - 0.003        | + 20.048           | + 0.002            | + 0.02         | 1618       |
| 34      | R. P. L. 92 ...               | + 1.5355            | + 0.0036           | + 0.285        | + 20.019           | - 0.022            | + 0.02         | 1656       |
| 35      | 7 Corvi $\delta^2$ ...        | + 3.1121            | + 0.0118           | - 0.014        | + 19.943           | - 0.055            | + 0.15         | 1675       |

## Mean Positions of Stars for 1887, January 1st.

| Number. | Star.                                       | Magnitude. | Estimations. | Mean Right Ascension. |    |       | Mean Polar Distance. |    |      | Observations. | Fraction of Year. |
|---------|---|------------|--------------|-----------------------|----|-------|----------------------|----|------|---------------|-------------------|
|         |   |            |              | h.                    | m. | s.    | °                    | '  | "    |               |                   |
| 36      | 29 Virginis $\gamma^1$ ... ..               | 3.5        | ...          | 12                    | 35 | 56.08 | 90                   | 49 | 42.5 | 6             | 0.42              |
| 37      | 43 Virginis $\delta$ ... ..                 | 3.7        | ...          | 12                    | 49 | 54.70 | 85                   | 59 | 16.0 | 7             | 0.41              |
| 38      | 47 Virginis $\epsilon$ ... ..               | 3.0        | ...          | 12                    | 56 | 38.07 | 78                   | 25 | 58.1 | 5             | 0.42              |
| 39      | 4 Bootis $\tau$ ... ..                      | 4.5        | ...          | 13                    | 41 | 53.61 | 71                   | 58 | 46.7 | 2             | 0.49              |
| 40      | 98 Virginis $\tau$ ... ..                   | 4.3        | ...          | 13                    | 55 | 52.76 | 87                   | 54 | 29.0 | 2             | 0.49              |
| 41      | 22 Bootis $f$ ... ..                        | 5.4        | ...          | 14                    | 21 | 12.03 | 70                   | 15 | 54.6 | 2             | 0.49              |
| 42      | R. P. L. 110 ... ..                         | 7.1        | ...          | 14                    | 53 | 5.09  | 3                    | 34 | 59.5 | 3             | 0.32              |
| 43      | 37 Serpentis $\epsilon$ ... ..              | 3.7        | ...          | 15                    | 45 | 10.99 | 85                   | 10 | 52.2 | 1             | 0.55              |
| 44      | 20 Herculis $\gamma$ ... ..                 | 3.8        | ...          | 16                    | 16 | 55.96 | 70                   | 34 | 52.8 | 1             | 0.55              |
| 45      | 13 Ophiuchi $\zeta$ ... ..                  | 2.8        | ...          | 16                    | 30 | 56.13 | 100                  | 20 | 14.4 | 1             | 0.55              |
| 46      | 35 Ophiuchi $\eta$ ... ..                   | 2.6        | ...          | 17                    | 3  | 53.91 | 105                  | 35 | 1.8  | 2             | 0.59              |
| 47      | 42 Ophiuchi $\theta$ ... ..                 | 3.4        | ...          | 17                    | 15 | 4.11  | 114                  | 53 | 8.8  | 2             | 0.59              |
| 48      | 49 Ophiuchi $\sigma$ ... ..                 | 4.4        | ...          | 17                    | 20 | 54.41 | 85                   | 45 | 27.3 | 2             | 0.59              |
| 49      | 23 Ursæ Minoris $\delta$ ... ..             | 4.3        | ...          | 18                    | 8  | 45.85 | 3                    | 23 | 19.2 | 5             | 0.22              |
| 50      | $\lambda$ Ursæ Minoris ... ..               | 6.5        | ...          | 19                    | 36 | 47.33 | 1                    | 2  | 23.7 | 1             | 0.25              |
| 51      | 53 Aquilæ $\alpha$ ( <i>Altair</i> ) ... .. | 1.0        | ...          | 19                    | 45 | 16.19 | 81                   | 25 | 42.2 | 2             | 0.75              |
| 52      | 65 Aquilæ $\theta$ ... ..                   | 3.4        | ...          | 20                    | 5  | 28.41 | 91                   | 9  | 18.8 | 3             | 0.76              |
| 53      | 2 Delphini $\epsilon$ ... ..                | 4.1        | ...          | 20                    | 27 | 48.84 | 79                   | 4  | 46.2 | 2             | 0.77              |
| 54      | 2 Aquarii $\epsilon$ ... ..                 | 3.8        | ...          | 20                    | 41 | 33.46 | 99                   | 54 | 29.9 | 1             | 0.77              |
| 55      | 61 Cygni—1st ... ..                         | 5.5        | ...          | 21                    | 1  | 49.83 | 51                   | 48 | 16.3 | 1             | 0.75              |
| 56      | 48 Aquarii $\gamma$ ... ..                  | 4.1        | ...          | 22                    | 15 | 49.15 | 91                   | 57 | 21.6 | 2             | 0.84              |
| 57      | 73 Aquarii $\lambda$ ... ..                 | 3.8        | ...          | 22                    | 46 | 43.01 | 96                   | 10 | 48.7 | 4             | 0.86              |
| 58      | R. P. L. 155 ... ..                         | 7.0        | ...          | 23                    | 24 | 19.77 | 4                    | 12 | 16.2 | 4             | 0.60              |

## Observed with the Madras Meridian Circle in that Year.

| Number. | Star.                        | In Right Ascension. |                    |                | In Polar Distance. |                    |                | Authority. |
|---------|------------------------------|---------------------|--------------------|----------------|--------------------|--------------------|----------------|------------|
|         |                              | Annual Precession.  | Secular Variation. | Proper Motion. | Annual Precession. | Secular Variation. | Proper Motion. |            |
| 36      | 29 Virginis $\gamma^1$ ...   | + 3.0754            | + 0.0043           | - 0.039        | + 19.808           | - 0.078            | - 0.02         | 1698       |
| 37      | 43 Virginis $\delta$ ...     | + 3.0522            | + 0.0025           | - 0.034        | + 19.580           | - 0.103            | + 0.05         | 1723       |
| 38      | 47 Virginis $\epsilon$ ...   | + 3.0056            | - 0.0007           | - 0.019        | + 19.447           | - 0.114            | - 0.03         | 1735       |
| 39      | 4 Bootis $\tau$ ...          | + 2.8854            | - 0.0007           | - 0.035        | + 18.104           | - 0.188            | - 0.04         | 1810       |
| 40      | 93 Virginis $\tau$ ...       | + 3.0488            | + 0.0064           | - 0.001        | + 17.543           | - 0.222            | + 0.03         | 1829       |
| 41      | 22 Bootis $f$ ...            | + 2.7953            | + 0.0009           | - 0.006        | + 16.366           | - 0.242            | - 0.03         | 1864       |
| 42      | R. P. L. 110 ...             | - 11.4956           | + 2.9735           | ...            | + 14.661           | + 1.138            | ...            | ...        |
| 43      | 37 Serpentis $\epsilon$ ...  | + 2.9787            | + 0.0066           | + 0.007        | + 11.123           | - 0.365            | - 0.06         | 2005       |
| 44      | 20 Hercules $\gamma$ ...     | + 2.6480            | + 0.0038           | - 0.005        | + 8.718            | - 0.351            | - 0.05         | 2084       |
| 45      | 13 Ophiuchi $\zeta$ ...      | + 3.2980            | + 0.0087           | - 0.001        | + 7.599            | - 0.447            | - 0.04         | 2109       |
| 46      | 85 Ophiuchi $\eta$ ...       | + 3.4342            | + 0.0073           | + 0.000        | + 4.861            | - 0.487            | - 0.10         | 2171       |
| 47      | 42 Ophiuchi $\theta$ ...     | + 3.6807            | + 0.0080           | - 0.002        | + 3.907            | - 0.528            | + 0.04         | 2189       |
| 48      | 49 Ophiuchi $\sigma$ ...     | + 2.9747            | + 0.0087           | - 0.002        | + 3.404            | - 0.428            | - 0.02         | 2206       |
| 49      | 23 Ursæ Minoris $\delta$ ... | - 19.4892           | - 0.2530           | + 0.026        | - 0.767            | + 2.841            | - 0.04         | 2395       |
| 50      | $\lambda$ Ursæ Minoris ...   | - 64.1043           | - 28.7964          | - 0.050        | - 8.219            | + 8.533            | + 0.01         | 2795       |
| 51      | 53 Aquilæ $\alpha$ ...       | + 2.8918            | - 0.0014           | + 0.035        | - 8.890            | - 0.374            | - 0.38         | 2524       |
| 52      | 65 Aquilæ $\theta$ ...       | + 3.0955            | - 0.0042           | - 0.000        | - 10.438           | - 0.332            | - 0.01         | 2576       |
| 53      | 2 Delphini $\epsilon$ ...    | + 2.8663            | - 0.0013           | - 0.001        | - 12.056           | - 0.330            | + 0.02         | 2642       |
| 54      | 2 Aquarii $\epsilon$ ...     | + 3.2503            | - 0.0084           | - 0.000        | - 12.994           | - 0.356            | + 0.03         | 2681       |
| 55      | 61 Cygni—1st ...             | + 2.3347            | + 0.0044           | + 0.344        | - 14.288           | - 0.233            | - 3.23         | 2744       |
| 56      | 48 Aquarii $\gamma$ ...      | + 3.0925            | - 0.0042           | + 0.007        | - 18.017           | - 0.191            | - 0.02         | 2943       |
| 57      | 73 Aquarii $\lambda$ ...     | + 3.1323            | - 0.0063           | - 0.002        | - 19.036           | - 0.137            | - 0.04         | 3019       |
| 58      | R. P. L. 155 ...             | + 0.2534            | - 0.3341           | ...            | - 19.811           | + 0.003            | ...            | ...        |



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| <b>San Fernando</b>   | ... Marine Observatory.  |  |                                  |  |
|                       | <b>STRAITS SETTLEMENTS.</b>  |  |                                  |  |
| <b>Singapore</b>      | ... Surveyor General.  |  |                                  |  |
|                       | <b>SWEDEN.</b>   |  |                                  |  |
| <b>Lund</b>           | ... The Observatory.<br>Dr. F. Engstrom.<br>Prof. and Dir. A. Moller.  |  |                                  |  |
| <b>Stockholm</b>      | ... Royal Academy of Sciences.<br>Prof. H. Gylden.   |  |                                  |  |
| <b>Upsala</b>         | ... The Observatory.<br>Prof. and Dir. N. C. Duner.<br>Dr. H. Thalen.  |  |                                  |  |



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- Rugby ... Temple Observatory.
- Slough ... Prof. A. S. Herschel.  
Lt. Col. J. Herschel, R.E., F.R.S.
- Southampton ... Ordnance Survey Office.
- Southport ... J. Baxendell.
- Sussex ... Isaac Roberts, F.R.S.
- Twickenham ... Dr. J. R. Hind, F.R.S.
- Westgate on Sea. J. N. Lockyer, C.B., F.R.S.
- Whalley ... Stonyharst College Observatory.
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Dr. Ralph Copeland, Ast. Royal.  
Royal Society of Edinburgh.  
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Ludwig Becker, Ph. D.  
Lord Kelvin, F.R.S.

## UNITED KINGDOM (IRELAND).

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- Ballysodare ... J. E. Gore.
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- Dublin ... Royal Irish Academy.  
Royal Dublin Society.  
Royal Observatory, Dunsink.  
Sir Howard Grubb, F.R.S.  
G. Johnston Stoney, F.R.S.
- Parsonstown ... The Earl of Rosse, F.R.S.

## UNITED STATES (AMERICA).

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Prof. L. Boss.
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- Amherst, Mass ... Lawrence Observatory.

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O. C. Wendell.
- Chicago ... Prof. S. W. Burnham.  
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- Madison, Wis. ... Washburn Observatory.
- Mt. Hamilton Cal. Lick Observatory.  
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- New Haven, Conn. Academy of Arts and Sciences.  
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Prof. and Dir. H. A. Newton.  
Yale College Observatory.
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Pacific.
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