

KG
11 365
861

HENRY DRAPER MEMORIAL.

*Reductions of
Photographic Observations
No. 39*

KG 11365. 861

1682pmae-proj..862P

KG11365- 866



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Broughton from Book 20, Page 214

May 1, 1889.

Plate 3133

| | V. | H | Type | No. Rem. | No. Series | K | From | Other Series |
|------------|-----|------|------------------|----------|------------|--------|------|--------------|
| Plate 3133 | 6.5 | 7.0 | F ₂ ✓ | 658 | 3 | K=H | 2 | F seen |
| | 6.0 | 8.8 | A | | 3 | A | 1 | - |
| | 6.2 | 10.0 | H ₂ ✓ | | 3 | K=H | 2 | F |
| | 6.6 | 11.6 | A ₂ ✓ | | 4 | K=H | 1 | - |
| | 6.8 | 12.1 | A✓ | | 9 | K=.2H | 3 | F |
| | 6.9 | 12.5 | A✓ | | 7 | K=.2H | 2 | F |
| | 6.1 | 15.8 | I✓ | 659 | 3 | K=H | 2 | F seen |
| | 6.8 | 20.2 | A✓ | | 8 | A | 3 | F |
| | 6.9 | 22.7 | A✓ | | 4 | A | 2 | F |
| | 5.3 | 9.4 | A ₂ ✓ | | 9 | K=H | 3 | F |
| | 5.2 | 21.5 | H✓ | | 3 | K=H | 1 | F |
| | 5.0 | 23.5 | A✓ | | 6 | A✓ | 4 | F |
| | 5.9 | 24.0 | H✓ | | 3 | K=1.5H | 3 | F |
| | 4.3 | 10.1 | A | | 3 | A✓ | 1 | - |
| | 4.3 | 11.3 | F✓ | 660 | 3 | K=H | 2 | F seen |
| | 4.5 | 18.0 | H✓ | | 2 | K=H | 1 | - |
| | 4.8 | 18.3 | I✓ | 661 | 3 | K=H | 3 | F |
| | 4.2 | 20.9 | A✓ | | 4 | A✓ | 2 | F |
| | 3.8 | 6.9 | H✓ | | 1 | A✓ | 1 | F |
| | 3.5 | 12.8 | I✓ | 662 | 3 | K=H | 2 | F seen |
| | 3.6 | 18.6 | A✓ | | 6 | A✓ | 3 | F |
| | 3.0 | 18.8 | A✓ | | 6 | A✓ | 2 | F |
| | 2.6 | 6.6 | A✓ | | 6 | ? | 3 | F |
| | 2.1 | 16.0 | I✓ | 663 | 3 | K=H | 2 | F |
| | 2.5 | 21.1 | F ₂ ✓ | 664 | 3 | K=H | 2 | F seen |

Mean $5\frac{1}{2}$
-1.5

| D.M.N. | P.A. | Dec. | Mag. | R.A. | Dec. | Mean | Diff | Br. B. + W. | Cor. Br. | |
|-------------|------|------|----------------|------|------|-----------|-----------|-------------|----------|-----|
| 9 14 + 83.6 | 256 | 9 | 12.5 + 83° 33' | 7.2 | ✓ 9 | 20.5 + 83 | 22 ✓ 5.7 | 5 | 6.2 | 5.7 |
| 8 49 + 84.2 | 199 | 8 | 47.2 + 84 13 | 8.6 | ✓ 8 | 36.6 + 84 | 30 ✓ 6.35 | 6 | 6.8 | 6.4 |
| 8 26 + 84.4 | 186 | 8 | 35.1 + 84 25 | 8.0 | ✓ 8 | 35.4 + 84 | 16 ✓ 6.1X | 3 | 6.4 | 6.0 |
| 7 52 + 84.5 | 173 | 7 | 30.7 + 84 27 | 8.8 | ✓ 8 | 1.9 + 84 | 20 | - | 6.9 | 6.5 |
| 7 42 + 84.5 | 169 | 7 | 41.6 + 84 28 | 6.0 | ✓ 7 | 53.1 + 84 | 21 ✓ 4.89 | 0 | 4.9 | 4.5 |
| 7 34 + 84.7 | 168 | 7 | 33.6 + 84 47 | 7.8 | ✓ 7 | 45.8 + 84 | 41 ✓ 5.79 | 3 | 6.1 | 5.8 |
| 6 21 + 84.8 | 135 | 6 | 20.9 + 84 48 | 8.2 | ✓ 6 | 34.1 + 84 | 47 ✓ 6.20 | 1 | 6.3 | 6.0 |
| 5 1 + 83.7 | 141 | 5 | 0.6 + 83 43 | 7.1 | ✓ 5 | 11.8 + 83 | 47 ✓ 5.34 | 3 | 5.6 | 5.2 |
| 4 28 + 82.9 | 125 | 4 | 27.1 + 82 56 | 8.5 | ✓ 4 | 37.0 + 83 | 21 ✓ 5.72 | 5 | 6.2 | 5.7 |
| 8 45 + 84.7 | 196 | 8 | 44.3 + 84 45 | 6.0 | ✓ 8 | 34.3 + 84 | 33 ✓ 6.2 | 1 | 5.2 | 4.9 |
| 4 13 + 83.7 | 114 | 4 | 11.0 + 83 43 | 7.4 | ✓ 4 | 21.5 + 83 | 30 ✓ 6.00 | 6 | 6.6 | 6.2 |
| 3 55 + 83.5 | 104 | 3 | 55.1 + 83 26 | 5.0 | ✓ 3 | 5.0 + 83 | 34 ✓ 5.38 | 3 | 4.0 | 3.6 |
| 3 58 + 82.9 | 113 | 3 | 58.5 + 83 09 | 5.0 | ✓ 3 | 8.0 + 83 | 6 ✓ 4.97 | 1 | 5.1 | 4.6 |
| 8 38 + 85.3 | 132 | 8 | 36.9 + 85 15 | 8.2 | ✓ 8 | 48.2 + 85 | 6 ✓ 5.7 | 5 | 5.5 | 5.0 |
| 8 13 + 85.5 | 128 | 8 | 12.7 + 85 33 | 7.5 | ✓ 8 | 25.6 + 85 | 23 ✓ 6.2 | 1 | 7.1 | 6.8 |
| 5 21 + 85.2 | 81 | 5 | 20.4 + 85 14 | 8.0 | ✓ 5 | 34.7 + 85 | 17 ✓ 6.35 | 2 | 6.1 | 5.8 |
| 5 19 + 85.1 | 80 | 5 | 16.0 + 85 6 | 6.0 | ✓ 5 | 29.9 + 85 | 9 ✓ 5.9 | 2 | 6.6 | 6.1 |
| 4 21 + 84.6 | 88 | 4 | 31.2 + 84 36 | 7.7 | ✓ 4 | 33.4 + 84 | 42 ✓ 5.77 | 5 | 7.2 | 6.9 |
| 9 45 + 84.6 | 225 | 9 | 44.7 + 84 37 | 6.5 | ✓ 9 | 32.6 + 84 | 25 ✓ 5.9 | 4 | 5.8 | 5.5 |
| 7 39 + 86.1 | 113 | 7 | 37.2 + 86 6 | 7.2 | ✓ 7 | 52.5 + 86 | 0 ✓ 7.8 | 3 | 6.3 | 6.0 |
| 4 55 + 85.5 | 78 | 4 | 55.1 + 85 32 | 7.0 | ✓ 4 | 9.9 + 85 | 36 ✓ 6.3 | 1 | 6.3 | 5.9 |
| 4 40 + 85.7 | 74 | 4 | 41.0 + 85 45 | 6.0 | ✓ 4 | 56.3 + 85 | 30 ✓ 6.88 | 1 | 5.2 | 4.7 |
| 10 9 + 84.9 | 234 | 10 | 7.8 + 84 59 | 5.0 | ✓ 10 | 15.2 + 84 | 46 ✓ 6.1 | 7 | 5.0 | 5.0 |
| 5 50 + 86.7 | 79 | 5 | 48.0 + 86 46 | 7.0 | ✓ 5 | 8.2 + 86 | 46 ✓ 7.35 | 4 | 5.1 | 4.8 |
| 3 54 + 85.2 | 63 | 3 | 52.4 + 85 10 | 6.5 | ✓ 3 | 5.1 + 85 | 17 ✓ 6.70 | 3 | | |

St. lat. 5.4, F.m. & c. 7.3-6.8, F.ch. 6.9. Box No. 510.
 R.A. $9^h 10^m$ Dec. $+81.9$
 May 1, 1889.

Plate 3145

| V. | H. | Type | No. Rev. | No. Series | K | Focus | After Series. |
|------|------|------|----------|------------|--------|-------|---------------|
| 22.5 | 21.1 | M? | 665 | 2 | K=H | 2 | seen |
| 20.3 | 14.4 | A | | 5 | A | 2 | F |
| 18.2 | 16.2 | A? | | 4 | K=H | 1 | - |
| 18.4 | 22.8 | A | | 5 | A | 2 | - |
| 17.8 | 11.6 | H | | 2 | K=H | 1 | - |
| 17.9 | 19.1 | H? | | 2 | K=H | 1 | - |
| 16.0 | 11.8 | A? | | 7 | K=H | 3 | F |
| 16.0 | 14.6 | F? | 666 | 2 | K=H | 1 | seen |
| 15.6 | 9.0 | A | | 6 | K=.2H | 2 | F |
| 15.9 | 15.6 | A | | 6 | K=H | 1 | F |
| 15.2 | 20.0 | F? | 667 | 2 | K=H | 1 | seen |
| 15.0 | 21.1 | A | | 9 | A | 4 | F |
| 14.6 | 16.4 | A | | 6 | A | 2 | F |
| 14.1 | 21.3 | H? | | 1 | A | 1 | F |
| 13.0 | 15.1 | F? | 668 | 3 | K=H | 3 | seen |
| 13.4 | 21.4 | F | 669 | 3 | K=H | 2 | seen |
| 12.0 | 7.8 | A | | 7 | A | 3 | F |
| 12.1 | 8.5 | F | 670 | 3 | K=H | 2 | seen |
| 12.0 | 13.4 | K | 671 | 3 | K=1.2H | 4 | F bright seen |
| 12.5 | 15.4 | A? | | 3 | A | 1 | - |
| 12.1 | 16.1 | F | 672 | 2 | K=H | 1 | - |
| 11.0 | 9.5 | A? | | 4 | K=H | 1 | - |
| 11.3 | 20.7 | H | | 2 | K=H | 1 | - |
| 11.6 | 22.7 | F | 673 | 3 | K=H | 2 | seen |
| 10.0 | 14.6 | A | | 3 | A | 1 | - |
| 10.2 | 17.0 | A | | 7 | A | 3 | F |
| 10.8 | 19.3 | E | | 2 | K=H | 1 | - |
| 10.4 | 21.3 | A | | 5 | A | 1 | F |
| 10.7 | 23.0 | A | | 8 | A | 2 | F |

| D.M. No. R.A. Dec. Mag. R.A. Dec. (A.C. Mean Diff | | | | | | | | | | Mean $\frac{4}{5}$ | | | Cor. Br. | |
|---|------|-------|-----|----|------|--------|-----|---|----|--------------------|------------|-------------------|----------|-----|
| | | | | | | | | | | Br. | Br. + Mean | Br. + Mean + Cor. | | |
| 8 | 1.8 | +76.2 | 310 | 8 | 1.2 | +76.11 | 6.0 | ✓ | 8 | 7.0 | +76 | ✓ | 5.8 | |
| 9 | 0.1 | +77.6 | 359 | 8 | 59.8 | +77 40 | 6.8 | ✓ | 9 | 5.3 | +77 29 | ✓ | 5.6 | 5.7 |
| 8 | 39.2 | +78.7 | 297 | 8 | 39.4 | +78 42 | 6.9 | ✓ | 8 | 45.5 | +78 32 | ✓ | 5.9 | 6.2 |
| 7 | 38 | +77.9 | 303 | 7 | 37.0 | +77 56 | 7.0 | ✓ | 7 | 43.6 | +77 50 | ✓ | 5.6 | 5.7 |
| 9 | 29 | +78.8 | 317 | 9 | 28.8 | +78 47 | 6.8 | ✓ | 9 | 34.2 | +78 36 | ✓ | 5.9 | 5.8 |
| 8 | 11 | +78.6 | 287 | 8 | 10.6 | +78 41 | 6.8 | ✓ | 8 | 17.1 | +78 33 | ✓ | 6.8 | 6.7 |
| 9 | 30.5 | +79.5 | 319 | 9 | 29.8 | +79 48 | 6.0 | ✓ | 9 | 35.4 | +79 36 | ✓ | 5.8 | 5.1 |
| 8 | 58.2 | +79.8 | 300 | 8 | 57.6 | +79 52 | 7.3 | ✓ | 9 | 3.8 | +79 41 | ✓ | 6.0 | 6.5 |
| 10 | 0.7 | +79.6 | 328 | 10 | 0.8 | +79 39 | 6.7 | ✓ | 10 | 5.7 | +79 26 | ✓ | 5.4 | 5.3 |
| 8 | 45.9 | +79.8 | 294 | 8 | 45.4 | +79 55 | 7.0 | ✓ | 8 | 51.8 | +79 43 | ✓ | 6.0 | 6.4 |
| 7 | 54.0 | +79.9 | 269 | 7 | 54.0 | +79 56 | 7.8 | ✓ | 8 | 1.2 | +79 49 | ✓ | 6.3 | 6.7 |
| 7 | 42 | +79.8 | 265 | 7 | 41.9 | +79 52 | 5.8 | ✓ | 7 | 49.1 | +79 45 | ✓ | 4.6 | 4.1 |
| 8 | 35 | +80.6 | 272 | 8 | 34.0 | +80 34 | 7.3 | ✓ | 8 | 40.9 | +80 24 | ✓ | 5.7 | 6.0 |
| 7 | 36 | +80.2 | 240 | 7 | 35.8 | +80 14 | 6.5 | ✓ | 7 | 43.3 | +80 7 | ✓ | 6.2 | 6.5 |
| 8 | 51 | +81.4 | 282 | 8 | 49.2 | +81 24 | 6.7 | ✓ | 8 | 56.3 | +81 14 | ✓ | 5.8 | 5.2 |
| 7 | 34 | +80.6 | 238 | 7 | 32.0 | +80 37 | 6.5 | ✓ | 7 | 39.9 | +80 31 | ✓ | 5.6 | 5.6 |
| 10 | 30 | +81.2 | 349 | 10 | 28.9 | +81 11 | 6.2 | ✓ | 10 | 33.6 | +80 37 | ✓ | 5.9 | 5.9 |
| 10 | 21 | +81.2 | 343 | 10 | 20.8 | +81 14 | 6.2 | ✓ | 10 | 25.7 | +81 1 | ✓ | 5.7 | 5.1 |
| 9 | 16 | +81.9 | 302 | 9 | 16.0 | +81 58 | 4.3 | ✓ | 9 | 22.8 | +81 16 | ✓ | 4.5 | 5.8 |
| 8 | 46 | +81.5 | 278 | 8 | 45.4 | +81 36 | 7.9 | ✓ | 8 | 52.7 | +81 26 | ✓ | 6.2 | 6.3 |
| 8 | 36 | +81.8 | 273 | 8 | 35.2 | +81 49 | 7.6 | ✓ | 8 | 43.8 | +81 40 | ✓ | 6.1 | 6.4 |
| 10 | 13 | +81.8 | 337 | 10 | 11.8 | +81 55 | 7.9 | ✓ | 10 | 17.2 | +81 42 | ✓ | 6.3 | 6.5 |
| 7 | 38 | +81.7 | 257 | 7 | 30.4 | +81 42 | 7.2 | ✓ | 7 | 38.9 | +81 36 | ✓ | 6.3 | 6.4 |
| 7 | 9 | +81.2 | 252 | 7 | 8.0 | +81 11 | 7.0 | ✓ | 7 | 16.4 | +81 6 | ✓ | 5.7 | 6.9 |
| 8 | 57 | +82.9 | 265 | 8 | 56.2 | +82 56 | 8.8 | ✓ | 9 | 4.2 | +82 46 | ✓ | 6.4 | 5.8 |
| 8 | 19 | +82.7 | 253 | 8 | 19.7 | +82 44 | 7.0 | ✓ | 8 | 28.4 | +82 36 | ✓ | 5.1 | 6.2 |
| 7 | 48 | +82.1 | 231 | 7 | 46.4 | +82 10 | 8.3 | ✓ | 7 | 55.2 | +82 3 | ✓ | 6.3 | 6.9 |
| 7 | 18 | +82.0 | 213 | 7 | 18.8 | +82 0 | 7.5 | ✓ | 7 | 27.7 | +81 55 | ✓ | 5.8 | 6.8 |
| 6 | 58 | +81.5 | 242 | 6 | 57.6 | +81 30 | 6.3 | ✓ | 7 | 6.4 | +81 26 | ✓ | 4.8 | 6.2 |

May 1, 1889.

Plate 3145

| V. | H. | Type | No. Perm. | No. Lines | K | Focus | Other Lines |
|---------------|------|------|-----------|-----------|----------|-------|---------------|
| 9.3 | 9.7 | A | . | 4 | $K=H$ | 1 | — |
| 9.2 | 11.4 | H | . | 2 | $K=H$ | 1 | — |
| 9.6 | 13.4 | A | . | 7 | $K=.5H$ | 2 | F |
| 9.2 | 14.4 | A? | . | 4 | $K=H$ | 1 | — |
| 9.3 | 14.8 | A? | . | 4 | K | 1 | — |
| 9.1 | 15.8 | F | 674 | 3 | $K=H$ | 3 | seen |
| 9.2 | 16.0 | K | 675 | 3 | $K=H$ | 1 | 8 bright seen |
| 9.6 | 18.4 | A | . | 9 | $K=.2H$ | 3 | F |
| 8.7 | 7.2 | H? | . | 3 | $K=H$ | 2 | F |
| 8.5 | 10.4 | F | 676 | 3 | $K=1.2H$ | 4 | F seen |
| 8.2 | 10.9 | F | 677 | 3 | $K=H$ | 2 | F seen |
| 8.7 | 13.9 | F | 678 | 3 | $K=H$ | 2 | F seen |
| 8.4 | 18.2 | F? | 679 | 3 | $K=H$ | 1 | F seen |
| 5.4, 5.7, 5.9 | 8.8 | M | 680 | 1 | K | 3 | bright seen |
| 7.8 | 13.2 | A | . | 6 | $K=H$ | 2 | F |
| 7.2 | 14.2 | H | . | 1 | K | 1 | — |
| 7.4 | 15.0 | A | . | 4 | $K=H$ | 1 | — |
| 7.0 | 16.1 | F | 681 | 3 | $K=H$ | 2 | F seen |
| 6.0, 6.2, 6.7 | 6.5 | M? | 682 | 3 | $K=H$ | 2 | F seen |
| 6.9 | 13.8 | A | . | 3 | K | 1 | — |
| 6.4 | 15.2 | F | 683 | 3 | $K=H$ | 3 | F seen |
| 6.4 | 18.1 | A | . | 9 | $K=.1H$ | 3 | F |
| 5.0 | 11.4 | F | 684 | 3 | $K=H$ | 2 | F seen |
| 5.5 | 11.6 | B | 685 | 11 | $K=.5H$ | 5 | F seen |
| 5.7 | 13.3 | A? | . | 3 | K | 1 | — |
| 5.6 | 13.4 | H? | . | 2 | $K=H$ | 1 | — |
| 5.2 | 15.4 | A | . | 4 | $K=H$ | 1 | — |
| 5.7 | 18.3 | A | . | 6 | K | 2 | F |
| 4.6 | 16.3 | F | 686 | 3 | $K=H$ | 2 | F seen |

| No. | | D.M. | | P.A. | | Dec. | | Mag. | | R.I. | | 1900 | | Dec. | | Mean. | | Diff. | | Br. | |
|-----|----|------|------|------|----|------|---|------|----|------|---|------|------|------|----|-------|---|-------|---|-----|-----|
| 10 | 18 | + | 82.7 | 307 | 10 | 17.8 | + | 82 | 46 | 8.2 | ✓ | 10 | 23.4 | + | 82 | 32 | ✓ | 6.23 | 5 | 6.7 | 6.3 |
| 9 | 55 | + | 83.1 | 280 | 9 | 53.1 | + | 83 | 6 | 7.1 | ✓ | 9 | 59.6 | + | 82 | 53 | ✓ | 6.30 | 5 | 6.8 | 6.4 |
| 9 | 19 | + | 83.1 | 262 | 9 | 19.0 | + | 83 | 0 | 7.5 | ✓ | 9 | 26.4 | + | 82 | 49 | ✓ | 5.70 | 5 | 7.3 | 6.9 |
| 9 | 5 | + | 83.4 | 248 | 9 | 3.5 | + | 83 | 18 | 8.4 | ✓ | 9 | 11.5 | + | 83 | 7 | ✓ | 6.87 | 5 | 6.2 | 5.8 |
| 8 | 55 | + | 83.2 | 243 | 8 | 54.9 | + | 83 | 12 | 8.3 | ✓ | 9 | 3.1 | + | 83 | 21 | ✓ | 6.20 | 6 | 6.9 | 6.5 |
| 8 | 37 | + | 83.3 | 233 | 8 | 35.8 | + | 83 | 17 | 7.0 | ✓ | 8 | 44.5 | + | 83 | 8 | ✓ | 5.50 | 3 | 6.8 | 6.4 |
| 8 | 34 | + | 83.3 | 232 | 8 | 33.0 | + | 83 | 15 | 7.0 | ✓ | 8 | 41.8 | + | 83 | 1 | ✓ | 6.17 | 5 | 5.9 | 5.5 |
| 7 | 56 | + | 82.8 | 235 | 7 | 56.0 | + | 82 | 52 | 6.5 | ✓ | 8 | 5.3 | + | 82 | 44 | ✓ | 4.82 | 0 | 6.7 | 6.3 |
| 10 | 58 | + | 82.5 | 325 | 10 | 58.0 | + | 82 | 31 | 7.0 | ✓ | 11 | 2.2 | + | 82 | 17 | ✓ | 5.70 | 2 | 7.3 | 6.9 |
| 10 | 14 | + | 83.3 | 297 | 10 | 13.0 | + | 83 | 18 | 5.2 | ✓ | 10 | 19.0 | + | 83 | 4 | ✓ | 4.00 | 0 | 4.8 | 4.4 |
| 10 | 6 | + | 83.5 | 287 | 10 | 5.4 | + | 83 | 32 | 6.8 | ✓ | 10 | 11.7 | + | 83 | 19 | ✓ | 3.90 | 4 | 6.2 | 5.8 |
| 9 | 14 | + | 83.5 | 256 | 9 | 12.5 | + | 83 | 33 | 7.2 | ✓ | 9 | 20.5 | + | 83 | 22 | ✓ | 5.70 | 2 | 6.4 | 6.0 |
| 7 | 55 | + | 83.5 | 207 | 7 | 52.7 | + | 83 | 32 | 8.2 | ✓ | 8 | 3.6 | + | 83 | 25 | ✓ | 6.30 | 3 | 4.0 | 3.6 |
| 7 | 1 | + | 82.7 | 201 | 7 | 0.3 | + | 82 | 40 | 5.5 | ✓ | 7 | 10.0 | + | 82 | 36 | ✓ | 4.79 | 4 | 6.3 | 5.9 |
| 9 | 35 | + | 83.9 | 263 | 9 | 24.6 | + | 83 | 59 | 8.0 | ✓ | 9 | 32.6 | + | 83 | 47 | ✓ | 6.20 | 3 | 5.4 | 5.0 |
| 9 | 6 | + | 84.4 | 206 | 9 | 5.9 | + | 84 | 22 | 8.0 | ✓ | 9 | 14.9 | + | 84 | 11 | ✓ | 6.40 | 4 | 6.3 | 5.9 |
| 8 | 49 | + | 84.2 | 199 | 8 | 47.2 | + | 84 | 13 | 8.6 | ✓ | 8 | 56.6 | + | 84 | 3 | ✓ | 6.25 | 6 | 6.5 | 6.1 |
| 8 | 26 | + | 84.5 | 186 | 8 | 25.1 | + | 84 | 25 | 8.0 | ✓ | 8 | 35.4 | + | 84 | 16 | ✓ | 6.10 | 2 | 6.8 | 6.4 |
| 9 | 45 | + | 84.6 | 225 | 9 | 44.7 | + | 84 | 37 | 6.5 | ✓ | 9 | 52.6 | + | 84 | 23 | ✓ | 5.90 | 1 | 6.3 | 5.9 |
| 9 | 15 | + | 84.5 | 212 | 9 | 15.2 | + | 84 | 29 | 8.5 | ✓ | 9 | 24.0 | + | 84 | 18 | ✓ | 6.40 | 6 | 6.0 | 5.6 |
| 8 | 46 | + | 84.7 | 196 | 8 | 44.3 | + | 84 | 45 | 6.0 | ✓ | 8 | 34.5 | + | 84 | 35 | ✓ | 6.20 | 2 | 7.0 | 6.6 |
| 7 | 41 | + | 84.5 | 169 | 7 | 41.6 | + | 84 | 28 | 6.0 | ✓ | 7 | 53.1 | + | 84 | 21 | ✓ | 4.80 | 1 | 5.3 | 4.9 |
| 10 | 14 | + | 85.2 | 161 | 10 | 13.4 | + | 85 | 8 | 7.5 | ✓ | 10 | 20.8 | + | 84 | 55 | ✓ | 6.10 | 2 | 5.0 | 4.6 |
| 10 | 9 | + | 84.9 | 234 | 10 | 7.8 | + | 84 | 59 | 5.0 | ✓ | 10 | 15.2 | + | 84 | 46 | ✓ | 4.80 | 2 | 6.3 | 5.9 |
| 9 | 29 | + | 85.0 | 151 | 9 | 28.4 | + | 85 | 3 | 8.5 | ✓ | 9 | 37.5 | + | 84 | 51 | ✓ | 7.90 | 4 | 6.8 | 6.4 |
| 9 | 25 | + | 85.2 | 150 | 9 | 25.4 | + | 85 | 9 | 8.0 | ✓ | 9 | 34.7 | + | 84 | 57 | ✓ | 7.20 | 7 | 7.1 | 6.7 |
| 8 | 38 | + | 85.3 | 132 | 8 | 36.9 | + | 85 | 15 | 8.2 | ✓ | 8 | 48.2 | + | 85 | 6 | ✓ | 7.70 | 3 | 7.0 | 6.6 |
| 7 | 34 | + | 84.7 | 168 | 7 | 33.6 | + | 84 | 47 | 7.8 | ✓ | 8 | 45.8 | + | 84 | 41 | ✓ | 5.70 | 1 | 6.9 | 6.5 |
| 8 | 15 | + | 85.6 | 128 | 8 | 12.7 | + | 85 | 33 | 7.5 | ✓ | 8 | 25.6 | + | 85 | 25 | ✓ | 7.40 | 1 | 5.9 | 5.5 |

May 1, 1889.

Plate 3145

| V. | H. | Type | No. Stars | K | Focus | Other |
|-----|------|------|-----------|-----|-------|-------|
| 4.0 | 21.1 | H? | 3 | K=H | 1 | F |
| 3.1 | 9.4 | H? | 3 | K=H | 2 | F |
| 3.3 | 17.3 | H | 3 | K=H | 2 | - |
| 2.9 | 11.5 | H? | 2 | K=H | 1 | - |
| 2.6 | 13.1 | A | 4 | A | 1 | F |

Plate 3146.

R.A. 10^h 56^m Dec. +81° 9'

St. lat. 52, F. g. d. c. 7.3 - 7.0, Feb. 7.0 Box No. 510.

| | | | | | | | |
|---------|------|------|-----|-----|--------|-----|--------|
| 22.4 | 18.6 | I? | 687 | 3 | K=H | 3 | Seen |
| 19.2 | 8.3 | I | 688 | 3 | K=H | 2 | Seen |
| 18.0 | 7.8 | A | . | 5 | A | 2 | - |
| 18.5 | 15.5 | I | 689 | 3 | K=H | 2 | Seen |
| 17.6 | 8.0 | A | . | 8 | K=.2H | 4 | F |
| 16.4 | 23.0 | H? | . | 1 | A | 1 | - |
| 15.6 | 19.6 | A | . | 6 | A | 2 | F |
| 14.2 | 10.2 | H? | . | 3 | K=H | 1 | - |
| 14.6 | 15.4 | I? | 690 | 3 | K=H | 1 | Seen |
| 14.5 | 22.1 | A | . | 8 | K=.8H | 3 | F |
| 13.8 | 6.6 | I? | 691 | 3 | K=H | 1 | Seen |
| 13.1 | 16.7 | A | . | 6 | ? | 3 | F |
| 12.1 | 7.6 | I? | 692 | 3 | K=H | 2 | Seen |
| 12.8 | 9.0 | I? | 693 | 3 | K=H | 2 | Seen |
| 12.9 | 17.3 | I | 694 | 3 | K=H | 2 | Seen |
| 11.0 | 7.2 | A | . | 7 | K=.3H | 3 | F |
| 6.4-6.6 | 11.8 | 10.7 | M | 695 | 2 | K=H | 1 seen |
| 10.2 | 10.8 | H | . | 3 | K=H | 1 | F |
| 10.6 | 14.6 | H | . | 3 | K=H | 2 | F |
| 10.2 | 21.4 | K | 696 | 3 | K=.62H | 4 | Flight |

| No. R.A. Dec. Mag. | | | | | | | | R.A. 1900 Dec. Mean Diff. | | | | | | | | |
|--------------------|----|-------|-----|----|------|-----|----|---------------------------|---|----|------|-----|----|-----|---|---|
| 6 | 21 | +84.7 | 135 | 6 | 20.9 | +84 | 48 | 8.2 | ✓ | 6 | 34.1 | +84 | 47 | 6.2 | 3 | ✓ |
| 11 | 20 | +85.5 | 183 | 11 | 20.0 | +85 | 30 | 7.5 | ✓ | 11 | 24.4 | +85 | 15 | 6.2 | 1 | ✓ |
| 7 ³ | 19 | +86.1 | 113 | 7 | 37.2 | +86 | 6 | 7.2 | ✓ | 7 | 52.5 | +86 | 0 | 6.5 | 2 | ✓ |
| 10 | 35 | +86.1 | 154 | 10 | 33.4 | +86 | 8 | 8.2 | ✓ | 10 | 40.7 | +85 | 54 | 7.8 | 1 | ✓ |
| 9 | 49 | +86.5 | 143 | 9 | 47.4 | +86 | 32 | 8.6 | ✓ | 9 | 58.2 | +86 | 19 | 8.6 | 2 | ✓ |

| Br. | Cor Br. | Br. |
|-----|---------|-----|
| 6.5 | 6.1 | 6.3 |
| 6.7 | 6.3 | 6.5 |
| 6.3 | 5.9 | 6.1 |
| 6.6 | 6.2 | 6.4 |
| 6.3 | 5.9 | 6.2 |
| 6.5 | 6.1 | 6.3 |
| 6.6 | 6.2 | 6.4 |
| 6.7 | 6.5 | 6.8 |
| 6.6 | 6.2 | 6.4 |

| | | | | | | | | | | | | | | | | |
|----|------|-------|-----|----|------|-----|----|-----|---|----|------|-----|----|-----|---|---|
| 10 | 22.9 | +76.5 | 393 | 10 | 22.6 | +76 | 28 | 5.0 | ✓ | 10 | 26.6 | +76 | 14 | 5.1 | 4 | ✓ |
| 11 | 58.0 | +77.7 | 461 | 11 | 57.9 | +77 | 43 | 5.8 | ✓ | 10 | 0.2 | +77 | 28 | 5.4 | 8 | ✓ |
| 12 | 5.8 | +78.3 | 411 | 12 | 5.0 | +78 | 15 | 7.3 | ✓ | 12 | 7.1 | +78 | 0 | 5.3 | 8 | ✓ |
| 10 | 48.5 | +78.5 | 367 | 10 | 48.2 | +78 | 33 | 6.2 | ✓ | 8 | 52.0 | +78 | 18 | 5.6 | 7 | ✓ |
| 12 | 6 | +78.4 | 412 | 12 | 5.4 | +78 | 26 | 5.1 | ✓ | 10 | 7.5 | +78 | 10 | 4.3 | 7 | ✓ |
| 9 | 29 | +78.7 | 317 | 9 | 28.8 | +78 | 47 | 6.8 | ✓ | 9 | 34.2 | +78 | 36 | 5.7 | 8 | ✓ |
| 10 | 1 | +79.6 | 328 | 10 | 0.8 | +79 | 39 | 6.7 | ✓ | 10 | 5.7 | +79 | 26 | 5.4 | 5 | ✓ |
| 11 | 53 | +80.4 | 370 | 11 | 52.2 | +80 | 24 | 7.5 | ✓ | 11 | 54.7 | +80 | 9 | 6.3 | 9 | ✓ |
| 10 | 48 | +80.4 | 347 | 10 | 46.5 | +80 | 27 | 7.8 | ✓ | 9 | 50.6 | +80 | 13 | 6.1 | 7 | ✓ |
| 9 | 30 | +79.8 | 319 | 9 | 29.8 | +79 | 48 | 6.0 | ✓ | 9 | 35.4 | +79 | 36 | 5.8 | 4 | ✓ |
| 12 | 33 | +80.0 | 389 | 12 | 32.8 | +80 | 1 | 6.7 | ✓ | 12 | 34.3 | +79 | 46 | 5.9 | 7 | ✓ |
| 10 | 30 | +81.2 | 349 | 10 | 28.9 | +81 | 11 | 6.2 | ✓ | 10 | 33.6 | +80 | 57 | 5.1 | 5 | ✓ |
| 12 | 30 | +81.1 | 400 | 12 | 29.7 | +81 | 3 | 6.8 | ✓ | 12 | 31.2 | +80 | 48 | 5.8 | 7 | ✓ |
| 12 | 11 | +80.9 | 381 | 12 | 9.8 | +80 | 56 | 8.3 | ✓ | 12 | 11.9 | +80 | 47 | 5.4 | 5 | ✓ |
| 10 | 21 | +81.2 | 348 | 10 | 20.8 | +81 | 14 | 6.2 | ✓ | 10 | 25.7 | +81 | 1 | 5.7 | 4 | ✓ |
| 12 | 41 | +81.4 | 402 | 12 | 40.8 | +81 | 25 | 6.3 | ✓ | 12 | 41.8 | +81 | 10 | 5.7 | 4 | ✓ |
| 11 | 54 | +81.6 | 389 | 11 | 52.6 | +81 | 40 | 6.2 | ✓ | 11 | 55.1 | +81 | 25 | 5.9 | 5 | ✓ |
| 11 | 56 | +82.5 | 365 | 11 | 55.9 | +82 | 30 | 7.6 | ✓ | 11 | 58.3 | +82 | 15 | 6.3 | 5 | ✓ |
| 10 | 58 | +82.5 | 325 | 10 | 58.0 | +82 | 31 | 7.0 | ✓ | 11 | 2.2 | +82 | 17 | 6.0 | 3 | ✓ |
| 9 | 17 | +81.9 | 302 | 9 | 16.0 | +81 | 38 | 4.3 | ✓ | 9 | 32.8 | +81 | 46 | 4.5 | 1 | ✓ |

| Mean | Cor. Br. | Br. |
|------|----------|-----|
| 5.5 | 5.0 | 5.8 |
| 5.9 | 5.4 | 5.2 |
| 6.2 | 5.7 | 5.5 |
| 6.8 | 6.3 | 6.1 |
| 6.3 | 5.8 | 5.7 |
| 6.3 | 5.8 | 5.7 |
| 7.2 | 6.7 | 6.6 |
| 5.0 | 4.5 | 4.4 |
| 6.8 | 6.3 | 6.2 |
| 7.4 | 6.9 | 6.8 |
| 6.0 | 5.5 | 5.4 |
| 7.2 | 6.7 | 6.7 |
| 7.5 | 7.0 | 7.0 |
| 6.8 | 6.3 | 6.3 |
| 5.5 | 5.0 | 5.0 |
| 6.6 | 6.1 | 6.1 |
| 6.8 | 6.3 | 6.3 |
| 5.6 | 5.1 | 5.1 |
| 6.5 | 6.0 | 6.0 |
| 5.9 | 5.4 | 5.4 |
| 6.1 | 5.6 | 5.6 |
| 6.8 | 6.3 | 6.3 |
| 5.3 | 4.8 | 4.8 |
| 6.4 | 5.9 | 5.9 |
| 7.3 | 6.8 | 6.8 |
| 6.8 | 6.3 | 6.3 |
| 7.1 | 6.6 | 6.6 |
| 6.3 | 5.8 | 5.8 |
| 6.7 | 6.2 | 6.2 |
| 4.6 | 4.1 | 4.1 |
| 5.6 | 5.1 | 5.1 |

May 1, 1889

Plate 3146

| V. | H. | Type | No. Obs. | No. Lines | K | Focus | Other Lines |
|---------|------|------|----------|-----------|--------|-------|-------------|
| 10.1 | 28.6 | F? | 697 | 3 | K=H | 2 | F seen |
| 9.0 | 9.3 | A? | . | 2 | K | 1 | - |
| 9.2 | 12.4 | H | . | 3 | K=H | 1 | F |
| 9.8 | 17.0 | F | 698 | 3 | K=H | 1 | F seen |
| 8.3 | 12.0 | A? | . | 4 | K=H | 1 | - |
| 8.8 | 17.1 | F | 699 | 3 | K=1.2H | 4 | F seen |
| 8.3 | 17.4 | F | 700 | 3 | K=H | 2 | F seen |
| 8.4 | 20.3 | A | . | 5 | K | 2 | F |
| 6.5-6.8 | 7.4 | 8.1 | M? | 701 | 2 | K | 1 F seen |
| 7.2 | 20.2 | F | 702 | 3 | K=H | 2 | F seen |
| 6.4 | 8.2 | A | . | 4 | K=H | 1 | - |
| 6.0 | 9.2 | A | . | 10 | K | 5 | F |
| 6.0 | 17.9 | F | 703 | 3 | K=H | 2 | F seen |
| 6.7 | 19.2 | A? | . | 5 | K=H | 1 | - |
| 6.5 | 22.3 | F? | 704 | 3 | K=H | 2 | F seen |
| 6.6 | 22.5 | H | . | 2 | K=H | 1 | - |
| 6.9 | 23.7 | A | . | 5 | K=H? | 2 | F |
| 5.3 | 5.7 | H | . | 3 | K=1.5H | 2 | F |
| 5.0 | 7.3 | H | . | 3 | K=H | 1 | F |
| 5.8 | 9.9 | E? | . | 3 | K=H | 2 | F |
| 5.2 | 16.4 | H | . | 3 | K=H | 2 | F |
| 5.5 | 16.7 | A | . | 9 | K=.3H | 5 | F |
| 4.2 | 8.2 | A? | . | 4 | K=H | 1 | - |
| 4.6 | 13.7 | H | . | 3 | K=H | 2 | F |
| 4.5 | 20.3 | A? | . | 5 | K=H | 3 | - |
| 4.5 | 21.4 | H? | . | 2 | K=H | 1 | - |
| 2.9 | 9.3 | F | 705 | 3 | K=H | 2 | F seen |
| 2.7 | 12.7 | F | 706 | 3 | K=1.2H | 3 | F seen |
| 2.8 | 13.7 | A? | . | 5 | K=H | 2 | F |

| No. | D.M. | R.A. | Dec. | Mag. | R.A. | Dec. | Mean | Diff. | Br. |
|-----|------|-------|------|------|------|--------|------|-------------------------|-----|
| 8 | 50 | +81.4 | 282 | 8 | 49.2 | +81 24 | 6.7 | ✓ 8 56.3 +81 14 ✓ 56.9 | 7 ✓ |
| 12 | 24 | +82.8 | 365 | 12 | 23.8 | +82 48 | 8.0 | ✓ 12 25.3 +82 32 ✓ 62.5 | 9 ✓ |
| 11 | 36 | +83.1 | 336 | 11 | 34.9 | +83 8 | 7.7 | ✓ 11 38.1 +82 53 ✓ 64.0 | 7 ✓ |
| 10 | 18 | +82.7 | 307 | 10 | 17.8 | +82 46 | 8.2 | ✓ 10 23.4 +82 32 ✓ 62.2 | 6 ✓ |
| 11 | 44 | +83.5 | 339 | 11 | 42.3 | +83 28 | 8.0 | ✓ 11 45.2 +83 13 ✓ 63.4 | 9 ✓ |
| 10 | 14 | +83.3 | 297 | 10 | 13.0 | +83 18 | 5.2 | ✓ 10 19.0 +83 4 ✓ 4.00 | 2 ✓ |
| 10 | 6 | +83.5 | 287 | 10 | 5.4 | +83 32 | 6.8 | ✓ 10 11.7 +83 19 ✓ 39.4 | 3 ✓ |
| 9 | 19 | +83.0 | 262 | 9 | 19.0 | +83 0 | 7.3 | ✓ 9 26.4 +82 49 ✓ 57.2 | 7 ✓ |
| 12 | 34 | +83.3 | 369 | 12 | 32.8 | +83 18 | 7.5 | ✓ 12 53.2 +83 3 ✓ 62.0 | 3 ✓ |
| 9 | 14 | +83.5 | 256 | 9 | 12.5 | +83 33 | 7.2 | ✓ 9 20.3 +83 22 ✓ 57.1 | 2 ✓ |
| 12 | 59 | +83.7 | 373 | 12 | 58.8 | +83 43 | 8.3 | ✓ 12 58.9 +83 28 ✓ 62.5 | 5 ✓ |
| 12 | 50 | +84.2 | 290 | 12 | 48.0 | +84 12 | 6.5 | ✓ 12 48.3 +83 58 ✓ 62.4 | 1 ✓ |
| 9 | 45 | +84.6 | 225 | 9 | 44.7 | +84 27 | 6.5 | ✓ 9 32.6 +84 25 ✓ 57.4 | 1 ✓ |
| 9 | 25 | +83.9 | 263 | 9 | 24.6 | +83 59 | 8.0 | ✓ 9 32.6 +83 47 ✓ 62.2 | 3 ✓ |
| 8 | 37 | +83.3 | 233 | 8 | 35.8 | +83 17 | 7.0 | ✓ 8 44.5 +83 8 ✓ 53.2 | 5 ✓ |
| 8 | 34 | +83.3 | 232 | 8 | 33.0 | +83 15 | 7.0 | ✓ 8 41.8 +83 6 ✓ 51.9 | 5 ✓ |
| 8 | 19 | +82.7 | 253 | 8 | 19.7 | +82 44 | 7.0 | ✓ 8 28.4 +82 36 ✓ 51.4 | 7 ✓ |
| 13 | 49 | +83.5 | 397 | 13 | 46.7 | +83 29 | 6.5 | ✓ 13 45.1 +83 15 ✓ 53.8 | 1 ✓ |
| 13 | 29 | +84.1 | 311 | 13 | 27.9 | +84 3 | 7.5 | ✓ 13 26.7 +83 49 ✓ 58.7 | 4 ✓ |
| 12 | 39 | +84.5 | 286 | 12 | 37.2 | +84 26 | 7.0 | ✓ 12 38.0 +84 12 ✓ 59.9 | 3 ✓ |
| 10 | 12 | +85.2 | 161 | 10 | 13.4 | +85 8 | 7.5 | ✓ 10 20.8 +84 53 ✓ 61.2 | 1 ✓ |
| 10 | 9 | +84.9 | 234 | 10 | 7.8 | +84 59 | 5.0 | ✓ 10 15.2 +84 46 ✓ 48.0 | 1 ✓ |
| 13 | 22 | +84.6 | 307 | 13 | 21.9 | +84 40 | 8.0 | ✓ 13 20.6 +84 25 ✓ 60.4 | 4 ✓ |
| 11 | 20 | +85.5 | 183 | 11 | 20.0 | +85 30 | 7.5 | ✓ 11 24.4 +85 15 ✓ 60.0 | 1 ✓ |
| 8 | 45 | +84.7 | 196 | 8 | 44.3 | +84 45 | 6.0 | ✓ 8 54.5 +84 35 ✓ 58.9 | 2 ✓ |
| 8 | 26 | +84.4 | 186 | 8 | 25.1 | +84 25 | 8.0 | ✓ 8 35.4 +84 16 ✓ 61.4 | 4 ✓ |
| 13 | 20 | +85.5 | 222 | 13 | 20.7 | +85 31 | 7.0 | ✓ 13 18.8 +85 17 ✓ 58.7 | 3 ✓ |
| 11 | 58 | +86.4 | 176 | 11 | 57.4 | +86 24 | 5.7 | ✓ 11 59.8 +86 8 ✓ 60.0 | 1 ✓ |
| 11 | 23 | +86.5 | 170 | 11 | 23.8 | +86 25 | 7.0 | ✓ 11 28.3 +86 10 ✓ 61.4 | 2 ✓ |

May 1, 1889.

Plate 3146

| V. | H. | Type | No. Prim. | No. Lines | K | Focals | Other Series |
|------|------|------|-----------|-----------|-----|--------|--------------|
| 2.9 | 14.8 | A | . | 3 | K | 1 | — |
| 2.3 | 16.7 | A | . | 4 | K | 1 | — |
| 2.4 | 20.4 | F? | 707 | 3 | K=H | 2 | Focals |
| 2.2 | 22.7 | A | . | 4 | K=H | 1 | — |
| 0 40 | 2.9 | 22.9 | A? | 5 | K=H | 3 | F |
| 1 30 | 2.7 | 14.6 | A | 3 | K | 2 | — |

| No. | D.M. | P.A. | Dec. | Mag. | H.D. | 1900 | Dec. | Mean | Diff. | Bu |
|-------------|------|------|------|--------|------|------|------|--------|-------|-----|
| 10 58 +86.5 | 159 | 10 | 50.4 | +86 20 | 83 | 10 | 57.0 | +86 5 | 57.64 | 6.8 |
| | 161 | 10 | 56.2 | +86 26 | 7.2 | 11 | 5.6 | +86 11 | 7.2X | 6.3 |
| 9 49 +86.5 | 143 | 9 | 47.4 | +86 32 | 8.6 | 9 | 38.2 | +86 19 | 7.9 | 6.6 |
| 8 15 +85.6 | 128 | 8 | 12.7 | +85 33 | 7.5 | 8 | 25.6 | +85 25 | 7.42 | |
| 7 35 +84.8 | 168 | 7 | 33.6 | +84 47 | 7.8 | 7 | 45.8 | +84 41 | 8.79 | |
| 7 41 +84.5 | 169 | 7 | 41.6 | +84 28 | 6.0 | 7 | 53.1 | +84 21 | 4.89 | 5.3 |
| 10 58 +86.5 | 161 | 10 | 56.2 | +86 26 | 7.2 | 11 | 2.5 | +86 11 | 5.9 | 4.8 |
| | | | | | | | | | | 5.9 |

St. Lt. 5.3 Fin. & c. 7.5-7.0 Fch. 7.1 Box No. 546

R.A. 13^h 00^m Dec. +81.8

May 8, 1889.

Plate 2551

| | V. | H. | Type | No. Rem. | No. Series | K | Focus | Other Series |
|---------|----------------|-----------------|--------------------------|----------|--------------|----------------------------|--------------|--------------|
| 0 30. | 22.5 | 20.4 | A ₁ | . | β | A ₁ | 3 | — |
| | 19.6 | 10.8 | A ₁ | . | 5 | K=H ₁ | 1 | — |
| | 18.0 | 20.2 | A ₁ | . | 5 | K=5H ₁ ? | 2 | — |
| | 19.0 | 21.2 | g ₁ | 708 | 2 | K=H ₁ | 1 | seen |
| | 17.6 | 7.9 | g ₂ | 709 | 2 | K=H ₁ | 2 | seen |
| | 17.3 | 10.9 | g ₂ | 710 | 2 | K=H ₁ | 1 | seen |
| | 17.8 | 20.1 | G ₂ | . | 6 | K=H ₁ | 3 | seen |
| | 16.4 | 12.6 | H ₁ | . | 2 | K=H ₁ | 2 | — |
| | 15.4 | 10.4 | H ₁ | . | 2 | K=H ₁ | 1 | — |
| | 15.1 | 17.1 | H ₁ | . | 2 | K=H ₁ | 1 | — |
| | 13.0 | 17.1 | A ₂ | . | 4 | K=H ₁ | 1 | — |
| | 13.0 | 18.6 | F ₂ | 711 | 2 | K=H ₁ | 2 | seen |
| 6.5-6.8 | 12.9 | 14.0 | M ₂ | . | 2 | K=H ₁ | 2 | — |
| | 12.5 | 16.1 | A ₁ | . | 6 | K=5H ₁ | 3 | — |
| | 11.2 | 19.5 | H ₂ | . | 2 | K=H ₁ | 1 | — |
| | 10.4 | 6.4 | A ₁ | . | 5 | K=H ₁ | 1 | — |
| | 10.9 | 8.0 | H ₁ | . | 2 | K=H ₁ | 1 | — |
| | 10.0 | 18.3 | g ₁ | 712 | 2 | K=H ₁ | 2 | seen |
| | 10.0 | 21.4 | A ₁ | . | 6 | A ₁ | 3 | F |
| | 8.2 | 12.2 | g ₂ | 713 | 2 | K=H ₁ | 3 | seen |
| | 8.0 | 14.9 | A ₁ | . | 4 | K=H ₁ | 1 | — |
| | 8.8 | 15.2 | H ₁ | . | 2 | K=H ₁ | 1 | — |
| | 8.2 | 22.4 | A ₂ | . | 4 | K=H ₁ | 1 | — |
| | 7.3 | 7.9 | F ₂ | 714 | 3 | K=1.5H ₁ | 3 | seen |
| | 7.1 | 13.4 | A ₂ | . | 4 | K=H ₁ | 1 | — |
| | 7.9 | 14.9 | A₁ | . | 4 | K=H₁ | 1 | — |
| | 7.0 | 15.3 | A ₁ | . | 10 | A ₁ | 5 | F |
| | 6.0 | 18.8 | A ₂ | . | 4 | K=H ₁ | 1 | — |
| | 6.5 | 15.9 | F ₂ | 715 | 2 | K=H ₁ | 1 | seen |

| Mr. D.M. R.C. Dec. Mag. 11.1 1900 Dec. Mean Diff. | | | | | | | | | | | Mean -1.0 Br. Br. + Mean + Cor. Tan. | | | | |
|---|------|-------|-----|----|------|--------|-----|----|------|--------|--------------------------------------|----|-----|-----|-----|
| 12 | 12 | +75.9 | 470 | 12 | 12.3 | +75.59 | 5.8 | 12 | 14.4 | +75.43 | 45.7 | 11 | 5.7 | 4.7 | 4.5 |
| 13 | 39 | +77.5 | 519 | 13 | 39.3 | +77.34 | 6.2 | 13 | 39.7 | +77.20 | 55.2 | 12 | 6.8 | 5.8 | 5.6 |
| 12 | 5.5 | +78.2 | 411 | 12 | 5.0 | +78.15 | 7.3 | 12 | 7.1 | +78.0 | 55.1 | 11 | 6.6 | 5.6 | 5.5 |
| 11 | 58 | +77.7 | 461 | 11 | 57.9 | +77.43 | 5.8 | 12 | 0.2 | +77.28 | 54.2 | 13 | 6.7 | 5.7 | 5.5 |
| 14 | 9.5 | +78.2 | 478 | 14 | 9.5 | +78.14 | 5.0 | 14 | 9.2 | +78.1 | 51.4 | 12 | 7.2 | 6.2 | 6.0 |
| 13 | 42.2 | +78.8 | 466 | 13 | 42.1 | +78.47 | 5.8 | 13 | 42.2 | +78.34 | 56.1 | 11 | 6.3 | 5.3 | 5.2 |
| 12 | 5.9 | +78.4 | 412 | 12 | 5.4 | +78.26 | 5.1 | 12 | 7.5 | +78.10 | 43.2 | 10 | 6.9 | 5.9 | 5.8 |
| 13 | 27 | +79.4 | 422 | 13 | 25.8 | +79.23 | 6.0 | 13 | 26.1 | +79.10 | 51.2 | 10 | 7.1 | 6.1 | 6.0 |
| 13 | 52 | +79.7 | 431 | 13 | 50.6 | +79.43 | 6.6 | 13 | 50.4 | +79.29 | 61.8 | 9 | 7.6 | 6.6 | 6.5 |
| 12 | 34 | +80.0 | 389 | 12 | 32.8 | +80.1 | 6.7 | 12 | 34.3 | +79.46 | 59.2 | 10 | 6.9 | 5.9 | 5.9 |
| 12 | 30 | +81.1 | 400 | 12 | 29.7 | +81.3 | 6.8 | 12 | 31.2 | +80.48 | 58.5 | 10 | 7.8 | 6.8 | 6.7 |
| 12 | 10 | +80.9 | 380 | 12 | 9.8 | +80.56 | 8.4 | 12 | 11.9 | +80.47 | 54.4 | 11 | 6.5 | 5.5 | 5.5 |
| 13 | 12 | +81.2 | 416 | 13 | 11.2 | +81.14 | 6.3 | 13 | 11.5 | +81.0 | 55.1 | 10 | 6.5 | 5.5 | 5.5 |
| 12 | 41 | +81.4 | 402 | 12 | 40.8 | +81.25 | 6.3 | 12 | 41.8 | +81.10 | 48.7 | 9 | 6.9 | 5.9 | 5.9 |
| 11 | 54 | +81.7 | 389 | 11 | 52.6 | +81.40 | 6.2 | 11 | 55.1 | +81.25 | 59.2 | 9 | 6.8 | 5.8 | 5.8 |
| 14 | 57 | +81.3 | 495 | 14 | 57.2 | +81.20 | 6.8 | 14 | 55.0 | +81.9 | 55.0 | 13 | 7.4 | 6.4 | 6.4 |
| 14 | 36 | +81.4 | 482 | 14 | 34.8 | +81.27 | 6.7 | 14 | 33.0 | +81.15 | 59.1 | 10 | 6.9 | 5.9 | 5.9 |
| 12 | 6 | +82.5 | 356 | 12 | 4.4 | +82.31 | 6.7 | 12 | 6.5 | +82.16 | 58.8 | 5 | 7.1 | 6.1 | 6.1 |
| 11 | 22 | +81.9 | 373 | 11 | 21.4 | +81.56 | 6.2 | 11 | 24.9 | +81.41 | 48.8 | 7 | 6.3 | 5.3 | 5.3 |
| 13 | 48 | +83.5 | 397 | 13 | 46.7 | +83.29 | 6.5 | 13 | 45.1 | +83.13 | 58.8 | 7 | 7.3 | 6.3 | 6.3 |
| 12 | 59 | +83.7 | 373 | 12 | 58.8 | +83.43 | 8.3 | 12 | 58.9 | +83.28 | 61.8 | 11 | 7.1 | 6.1 | 6.1 |
| 12 | 54 | +83.3 | 369 | 12 | 52.8 | +83.18 | 7.5 | 12 | 53.2 | +83.3 | 62.0 | 9 | 7.6 | 6.6 | 6.6 |
| 10 | 58 | +82.5 | 325 | 10 | 58.0 | +82.31 | 7.0 | 11 | 58.2 | +82.17 | 59.6 | 9 | 6.9 | 5.9 | 5.9 |
| 15 | 1 | +83.1 | 431 | 15 | 0.4 | +83.6 | 6.0 | 15 | 56.9 | +82.56 | 46.8 | 9 | 5.6 | 4.6 | 4.6 |
| 13 | 29 | +84.7 | 311 | 13 | 27.9 | +84.3 | 7.5 | 13 | 26.7 | +83.49 | 58.7 | 11 | 7.0 | 6.0 | 6.1 |
| 12 | 50 | +84.2 | 289 | 12 | 48.0 | +84.12 | 6.5 | 12 | 48.3 | +83.58 | 38.4 | 2 | 4.0 | 3.0 | 3.1 |
| 13 | 22 | +84.6 | 307 | 13 | 21.9 | +84.40 | 8.0 | 13 | 20.6 | +84.25 | 60.8 | 11 | 7.1 | 6.1 | 6.2 |
| 12 | 39 | +84.5 | 286 | 12 | 37.2 | +84.26 | 7.0 | 12 | 38.0 | +84.12 | 59.8 | 10 | 7.0 | 6.0 | 6.1 |

May 8, 1889.

Plate 2551

| V. | H. | Type | For. Rem. | For. Series | K | From | After Series |
|------|------|---------------------|--------------|----------------|----------------|------|-------------------|
| 5.6 | 23.7 | F ¹ | 716 | 3 | $K=1.5H$ | 3 | F _{seen} |
| 4.3 | 14.1 | A ² | . | 3 | A ¹ | 1 | — |
| 3.6 | 18.6 | H | . | 2 | $K=H$ | 1 | — |
| 2.2 | 8.5 | H ¹ | . | 2 | $K=H$ | 1 | — |
| 2.1 | 12.9 | F ² | 717 | 2 | $K=H$ | 1 | seen |
| 2.2 | 15.6 | A ¹ | . | 3 | A ¹ | 2 | — |
| 2.4 | 16.7 | F ¹ | 718 | 3 | $K=H$ | 3 | F _{seen} |
| 2.0 | 17.8 | A ¹ | . | 3 | A ¹ | 2 | — |
| 0 55 | 1.6 | 18.5 A ¹ | . | 3 | A ¹ | 2 | — |

| | | ^{Mer.} D.M. | R.A. | Dec. | Mag. | R.A. | ¹⁹⁰⁰ Dec. | ^{D.C.} Mean | |
|----|-----------|-------------------------|------|-----------|------|------|--|-------------------------|------|
| 10 | 15 + 83.3 | 297 | 10 | 13.0 + 83 | 18 | 5.2 | ✓ ^h 10 ✓ ^m 19.0 + 83 | 4 ✓ 4.00 | 11 ✓ |
| 13 | 21 + 85.5 | 222 | 13 | 20.7 + 85 | 31 | 7.0 | ✓ 13 18.8 + 85 | 17 ✓ 7.87 | 9 |
| 11 | 20 + 85.5 | 183 | 11 | 20.0 + 85 | 30 | 7.5 | ✓ 11 24.4 + 85 | 15 ✓ 6.20 | 6 |
| 15 | 50 + 85.0 | 263 | 15 | 50.2 + 85 | 18 | 7.2 | ✓ 15 42.5 + 85 | 10 ✓ 7.34 | |
| 14 | 7 + 86.5 | 201 | 14 | 5.1 + 86 | 27 | 7.5 | ✓ 13 59.4 + 86 | 14 ✓ 7.44 | |
| 12 | 38 + 86.5 | 182 | 12 | 34.7 + 86 | 32 | 6.5 | ✓ 12 34.6 + 86 | 17 ✓ 7.40 | |
| 11 | 59 + 86.4 | 176 | 11 | 57.4 + 86 | 24 | 5.7 | ✓ 11 59.8 + 86 | 8 ✓ 6.98 | |
| 11 | 21 + 86.4 | 170 | 11 | 23.8 + 86 | 25 | 7.0 | ✓ 11 28.3 + 86 | 10 ✓ 7.34 | |
| 10 | 59 + 86.5 | 161 | 10 | 56.2 + 86 | 26 | 7.2 | ✓ 11 2.5 + 86 | 11 ✓ 7.24 | |

| B _n | | | |
|----------------|-----|-----|--|
| 5.1 | 4.1 | 4.1 | |
| 6.9 | 5.9 | 6.1 | |
| 6.8 | 5.8 | 6.0 | |
| 7.3 | 6.3 | 6.5 | |

St. lat. 4.9 F. m. & c. 7.5-6.8 F. ch. 6.9

Box No. 615

R. A. 15^h 12^m Dec. +81.9

May 9, 1889.

Plate 2688

| V. | H. | Type | No. Rim. | No. Lins. | K | From | Other Lins. |
|------|------|---------|----------|-----------|--------|------|---------------|
| 0 00 | 22.5 | 5.9 F | 719 | 2 | K=H | 1 | seen |
| | 22.2 | 17.1 A | | 4 | K=H | 1 | - |
| | 22.6 | 19.6 K | 720 | 3 | K=1.5H | 3 | F bright seen |
| | 21.4 | 6.3 F | 721 | 3 | K=H | 3 | F seen |
| | 21.4 | 7.2 A | | 6 | K | 3 | - |
| | 21.2 | 11.7 A | | 5 | K | 1 | - |
| | 20.5 | 6.3 A | | 3 | K | 1 | - |
| | 20.0 | 8.5 A | | 8 | K | 3 | F |
| | 19.7 | 12.2 K? | 722 | 3 | K=H | 3 | F bright seen |
| | 19.7 | 15.1 F | 723 | 2 | K=H | 3 | seen |
| | 19.5 | 21.7 A | | 3 | K | 1 | - |
| | 18.6 | 11.0 A | | 12 | K=1.4H | 5 | F |
| | 18.1 | 16.2 F | 724 | 3 | K=H | 2 | F seen |
| | 18.6 | 21.0 K | 725 | 1 | K | 1 | F bright seen |
| | 17.2 | 5.8 A | | 4 | K=H | 1 | - |
| | 17.9 | 5.9 H | | 3 | K=H | 1 | - |
| | 17.1 | 18.7 F | 726 | 3 | K=H | 2 | F seen |
| | 16.5 | 21.9 F | 727 | 3 | K=H | 1 | F seen |
| | 16.8 | 23.3 F | 728 | 1 | K | 3 | seen |
| | 15.3 | 7.4 A | | 9 | K=1.5H | 4 | F |
| | 15.4 | 15.9 A | | 4 | K | 1 | - |
| | 15.0 | 17.7 K | 729 | 2 | K=H | 1 | F bright seen |
| | 15.3 | 22.0 F | 730 | 2 | K=H | 2 | seen |
| | 14.9 | 6.3 F | 731 | 2 | K=H | 2 | seen |
| | 14.0 | 11.8 A | | 4 | K=H | 2 | - |
| | 14.3 | 12.0 F | 732 | 3 | K=H | 3 | F seen |
| | 14.8 | 13.0 A | | 3 | K | 1 | - |
| | 13.5 | 5.9 A | | 2 | K=H | 1 | - |
| | 13.5 | 7.5 F | 733 | 3 | K=H | 2 | F seen |

| Mr. R.A. Dec. Mag. R.A. 1900 Dec. Mean | | | | | | | | | | Mean - .1 | | |
|--|-----|-----------------|-----|---|-----------------|---|-----|---|-----|---------------------------|-----|-----|
| | | | | | | | | | | Br. Br. + Mean + Cor. Br. | | |
| 15 58.8 + 75.9 | 579 | 15 58.6 + 75 60 | 6.5 | ✓ | 15 57.4 + 75 52 | ✓ | 6.6 | - | - | - | - | - |
| 14 49 + 76.6 | 536 | 14 48.6 + 76 40 | 7.5 | ✓ | 14 48.1 + 76 29 | ✓ | 6.3 | 4 | 6.7 | 6.6 | 6.4 | 6.4 |
| 14 28 + 76.4 | 527 | 14 27.8 + 76 21 | 5.0 | ✓ | 14 27.7 + 76 8 | ✓ | 4.9 | - | - | - | - | - |
| 16 22.0 + 76.1 | 596 | 16 21.8 + 76 5 | 5.3 | ✓ | 16 20.4 + 75 59 | ✓ | 4.7 | 4 | 5.0 | 4.9 | 4.7 | 4.7 |
| 16 15.0 + 76.3 | 594 | 16 15.0 + 76 16 | 6.0 | ✓ | 16 13.6 + 76 8 | ✓ | 4.6 | 4 | 5.0 | 4.9 | 4.7 | 4.7 |
| 15 38.1 + 76.9 | 563 | 15 37.9 + 76 55 | 7.5 | ✓ | 15 36.7 + 76 46 | ✓ | 6.4 | 6 | 6.7 | 6.6 | 6.4 | 6.4 |
| 16 24.6 + 76.5 | 600 | 16 24.5 + 76 28 | 7.2 | ✓ | 16 23.0 + 76 20 | ✓ | 6.2 | 4 | 6.6 | 6.5 | 6.3 | 6.3 |
| 16 8.9 + 77.2 | 616 | 16 8.5 + 77 11 | 6.0 | ✓ | 16 6.9 + 77 4 | ✓ | 4.8 | 2 | 5.0 | 4.9 | 4.7 | 4.7 |
| 15 36.0 + 77.8 | 592 | 15 35.8 + 77 51 | 5.0 | ✓ | 15 34.4 + 77 41 | ✓ | 5.5 | 1 | 5.4 | 5.3 | 5.2 | 5.2 |
| 15 8.0 + 77.9 | 571 | 15 7.4 + 77 53 | 7.8 | ✓ | 15 6.3 + 77 43 | ✓ | 6.8 | 1 | 6.6 | 6.5 | 6.4 | 6.4 |
| 14 5.9 + 77.6 | 529 | 14 5.4 + 77 40 | 7.8 | ✓ | 14 5.3 + 77 27 | ✓ | 6.3 | 4 | 6.9 | 6.8 | 6.7 | 6.7 |
| 15 49.5 + 78.2 | 527 | 15 49.3 + 78 13 | 4.7 | ✓ | 15 47.6 + 78 6 | ✓ | 3.6 | - | 6.8 | 6.7 | 6.5 | 6.5 |
| 14 36.8 + 78.7 | 501 | 14 36.6 + 78 45 | 6.5 | ✓ | 14 35.4 + 78 34 | ✓ | 6.2 | 1 | B | - | - | - |
| 14 9.3 + 78.2 | 478 | 14 9.5 + 78 14 | 5.0 | ✓ | 14 9.2 + 78 1 | ✓ | 5.1 | 1 | 6.1 | 6.0 | 5.9 | 5.9 |
| 16 40 + 77.5 | 628 | 16 39.9 + 77 38 | 7.8 | ✓ | 16 37.8 + 77 33 | ✓ | 6.8 | 0 | 6.1 | 6.0 | 5.9 | 5.9 |
| 16 37.0 + 77.7 | 627 | 16 36.9 + 77 43 | 6.5 | ✓ | 16 35.0 + 77 38 | ✓ | 6.3 | 4 | 6.1 | 6.0 | 5.9 | 5.9 |
| 14 29.5 + 79.2 | 447 | 14 29.1 + 79 9 | 6.8 | ✓ | 14 28.3 + 78 57 | ✓ | 6.7 | 1 | 6.1 | 6.0 | 5.9 | 5.9 |
| 13 55.9 + 79.1 | 433 | 13 55.4 + 79 6 | 7.7 | ✓ | 13 53.2 + 78 53 | ✓ | 6.2 | 5 | 6.1 | 6.0 | 5.9 | 5.9 |
| 13 42.5 + 78.7 | 466 | 13 42.1 + 78 47 | 5.8 | ✓ | 13 40.2 + 78 34 | ✓ | 5.6 | 0 | 6.1 | 6.0 | 5.9 | 5.9 |
| 16 34 + 79.3 | 498 | 16 33.9 + 79 16 | 5.5 | ✓ | 16 31.3 + 79 11 | ✓ | 4.9 | 0 | 6.1 | 6.0 | 5.9 | 5.9 |
| 14 59 + 80.1 | 459 | 14 59.2 + 80 7 | 8.2 | ✓ | 14 57.5 + 79 56 | ✓ | 6.5 | 2 | 4.6 | 4.5 | 4.4 | 4.4 |
| 14 38 + 80.3 | 448 | 14 37.8 + 80 17 | 6.3 | ✓ | 14 36.5 + 80 5 | ✓ | 6.1 | 5 | 6.8 | 6.7 | 6.7 | 6.7 |
| 13 50.5 + 79.7 | 431 | 13 50.6 + 79 43 | 6.6 | ✓ | 13 50.4 + 79 29 | ✓ | 6.1 | 0 | 5.7 | 5.6 | 5.6 | 5.6 |
| 16 47 + 79.2 | 511 | 16 46.2 + 79 11 | 6.3 | ✓ | 16 43.5 + 79 6 | ✓ | 6.1 | 2 | 6.5 | 6.4 | 6.4 | 6.4 |
| 15 53 + 80.5 | 489 | 15 51.6 + 80 34 | 8.0 | ✓ | 15 48.8 + 80 26 | ✓ | 6.7 | 2 | 6.2 | 6.1 | 6.0 | 6.0 |
| 15 49 + 80.4 | 487 | 15 47.8 + 80 26 | 6.7 | ✓ | 15 45.1 + 80 18 | ✓ | 6.7 | 1 | 6.8 | 6.7 | 6.6 | 6.6 |
| 15 36 + 80.2 | 478 | 15 34.5 + 80 16 | 7.8 | ✓ | 15 32.1 + 80 7 | ✓ | 6.4 | 7 | 5.9 | 5.8 | 5.7 | 5.7 |
| 16 57 + 79.7 | 517 | 16 57.1 + 79 44 | 6.8 | ✓ | 16 54.4 + 79 40 | ✓ | 6.3 | 1 | 6.9 | 6.8 | 6.7 | 6.7 |
| 16 41 + 80.1 | 519 | 16 40.8 + 80 5 | 7.0 | ✓ | 16 37.7 + 80 0 | ✓ | 6.8 | 2 | 6.4 | 6.3 | 6.3 | 6.3 |

May 9, 1889.

Plate 2688

| V. | H. | Type | No. Rem. | No. Lines | K | Faint | After Series |
|------|------|------|----------|-----------|--------|-------|---------------|
| 13.1 | 12.4 | F | 734 | 3 | K=H | 3 | F seen |
| 12.5 | 13.0 | F | 735 | 3 | K=H | 3 | F seen |
| 13.0 | 16.0 | A | . | 7 | A | 3 | F |
| 13.5 | 21.4 | F | 736 | 2 | K=H | 1 | seen |
| 12.7 | 8.6 | H | . | 3 | K=H | 1 | F - |
| 12.4 | 9.9 | A | . | 4 | K=H | 1 | - |
| 12.8 | 10.5 | F | 737 | 2 | K=H | 1 | seen |
| 12.4 | 11.0 | A | . | 6 | K=.8H | 2 | F |
| 12.5 | 11.9 | H | . | 2 | K=H | 2 | seen |
| 12.9 | 13.0 | F | 738 | 2 | K=1.2H | 3 | seen |
| 12.4 | 13.8 | F | 739 | 3 | K=H | 1 | F seen |
| 12.7 | 17.7 | F | 740 | 3 | K=1.2H | 2 | F seen |
| 12.0 | 20.7 | K | 741 | 3 | K=H | 2 | F bright seen |
| 11.8 | 9.3 | H | . | 2 | K=H | 1 | - |
| 11.5 | 10.0 | H | . | 2 | K=H | 1 | - |
| 11.6 | 12.1 | E? | . | 2 | K=H | 1 | - |
| 11.2 | 23.9 | H | . | 2 | K=H | 2 | - |
| 10.8 | 6.4 | F | 742 | 2 | K=H | 2 | seen |
| 10.0 | 13.3 | F | 743 | 3 | K=H | 3 | F seen |
| 10.6 | 13.6 | F | 744 | 3 | K=H | 2 | F seen |
| 10.5 | 19.8 | A | . | 4 | K=H | 1 | - |
| 9.1 | 8.1 | K | 745 | 3 | K=1.5H | 5 | F bright seen |
| 9.6 | 10.3 | A | . | 3 | A | 1 | - |
| 9.8 | 10.5 | A | . | 6 | K=H | 2 | - |
| 9.1 | 11.6 | H | . | 2 | K=H | 1 | - |
| 9.5 | 12.2 | A | . | 3 | A | 1 | - |
| 9.5 | 15.8 | K | 746 | 3 | K=1.2H | 4 | F bright seen |
| 8.6 | 10.6 | A | . | 5 | K=.5H | 2 | F |
| 8.7 | 12.1 | F | 747 | 2 | K=H | 1 | seen |

| No. | | D.M. | | RA. | | Dec. | | Mag. | | R.A. | | Dec. | | Mean | | B _v | | I _u | | I _z | |
|-----|----|------|------|-----|----|------|---|------|----|------|---|------|------|------|----|----------------|-----|----------------|-----|----------------|--|
| 15 | 46 | + | 81.1 | 523 | 15 | 45.9 | + | 81 | 7 | 7.3 | ✓ | 15 | 43.0 | + | 80 | 56 | 6.1 | 6.0 | 6.0 | | |
| 15 | 37 | + | 80.8 | 480 | 15 | 37.8 | + | 80 | 56 | 7.0 | ✓ | 15 | 35.1 | + | 80 | 47 | 6.6 | 6.5 | 6.5 | | |
| 14 | 57 | + | 81.3 | 495 | 14 | 57.2 | + | 81 | 20 | 6.8 | ✓ | 14 | 55.0 | + | 81 | 9 | 5.4 | 5.3 | 5.3 | | |
| 13 | 52 | + | 80.6 | 422 | 13 | 50.3 | + | 80 | 38 | 7.4 | ✓ | 13 | 49.9 | + | 80 | 25 | 6.5 | 6.4 | 6.4 | | |
| 16 | 34 | + | 80.7 | 571 | 16 | 33.6 | + | 80 | 40 | 7.8 | ✓ | 16 | 30.3 | + | 80 | 34 | 7.0 | 6.9 | 6.9 | | |
| 16 | 19 | + | 81.1 | 542 | 16 | 19.4 | + | 81 | 4 | 8.5 | ✓ | 16 | 16.0 | + | 80 | 38 | 7.3 | 7.2 | 7.2 | | |
| 16 | 11 | + | 81.0 | 541 | 16 | 10.8 | + | 81 | 1 | 7.3 | ✓ | 16 | 7.5 | + | 80 | 51 | 6.7 | 6.6 | 6.6 | | |
| 16 | 7 | + | 81.2 | 538 | 16 | 6.0 | + | 81 | 14 | 8.0 | ✓ | 16 | 2.8 | + | 81 | 7 | 6.4 | 6.3 | 6.3 | | |
| 15 | 55 | + | 81.4 | 531 | 15 | 54.7 | + | 81 | 22 | 7.4 | ✓ | 15 | 51.4 | + | 81 | 14 | 6.3 | 6.2 | 6.2 | | |
| 15 | 39 | + | 81.2 | 517 | 15 | 38.9 | + | 81 | 15 | 6.8 | ✓ | 15 | 36.0 | + | 81 | 6 | 6.0 | 5.9 | 5.9 | | |
| 15 | 30 | + | 81.5 | 510 | 15 | 29.6 | + | 81 | 33 | 7.8 | ✓ | 15 | 26.6 | + | 81 | 24 | 6.4 | 6.3 | 6.3 | | |
| 14 | 35 | + | 81.5 | 482 | 14 | 34.8 | + | 81 | 27 | 6.7 | ✓ | 14 | 33.0 | + | 81 | 15 | 5.9 | 5.8 | 5.8 | | |
| 13 | 54 | + | 81.5 | 452 | 13 | 53.3 | + | 81 | 29 | 6.8 | ✓ | 13 | 52.3 | + | 81 | 16 | 5.8 | 5.7 | 5.7 | | |
| 16 | 30 | + | 81.3 | 549 | 16 | 29.1 | + | 81 | 17 | 8.2 | ✓ | 16 | 25.4 | + | 81 | 11 | 7.0 | 6.9 | 6.9 | | |
| 16 | 21 | + | 81.5 | 543 | 16 | 21.6 | + | 81 | 30 | 8.2 | ✓ | 16 | 17.9 | + | 81 | 24 | 6.9 | 6.8 | 6.8 | | |
| 15 | 55 | + | 81.7 | 530 | 15 | 54.3 | + | 81 | 45 | 8.4 | ✓ | 15 | 50.8 | + | 81 | 37 | 6.9 | 6.8 | 6.8 | | |
| 13 | 11 | + | 81.2 | 416 | 13 | 11.2 | + | 81 | 14 | 6.3 | ✓ | 13 | 11.5 | + | 81 | 0 | 5.4 | 5.3 | 5.3 | | |
| 17 | 10 | + | 81.1 | 568 | 17 | 8.6 | + | 81 | 4 | 7.3 | ✓ | 17 | 4.8 | + | 81 | 1 | 5.7 | 5.6 | 5.6 | | |
| 15 | 41 | + | 82.7 | 463 | 15 | 42.2 | + | 82 | 44 | 7.5 | ✓ | 15 | 38.1 | + | 82 | 36 | 5.4 | 5.3 | 5.3 | | |
| 15 | 36 | + | 82.4 | 456 | 15 | 35.4 | + | 82 | 23 | 8.2 | ✓ | 15 | 31.7 | + | 82 | 14 | 6.4 | 6.3 | 6.3 | | |
| 14 | 1 | + | 82.3 | 407 | 14 | 0.5 | + | 82 | 19 | 8.2 | ✓ | 14 | 59.1 | + | 82 | 6 | 6.7 | 6.6 | 6.6 | | |
| 17 | 2 | + | 82.2 | 498 | 17 | 1.0 | + | 82 | 16 | 4.0 | ✓ | 17 | 56.2 | + | 82 | 12 | 6.8 | 6.7 | 6.7 | | |
| 16 | 29 | + | 82.4 | 484 | 16 | 27.8 | + | 82 | 26 | 8.7 | ✓ | 16 | 23.2 | + | 82 | 20 | 6.2 | 6.1 | 6.1 | | |
| 16 | 25 | + | 82.4 | 481 | 16 | 24.0 | + | 82 | 26 | 8.5 | ✓ | 16 | 19.5 | + | 82 | 20 | 6.6 | 6.5 | 6.5 | | |
| 16 | 13 | + | 82.9 | 475 | 16 | 12.1 | + | 82 | 56 | 8.6 | ✓ | 16 | 7.3 | + | 82 | 49 | 6.8 | 6.7 | 6.7 | | |
| 15 | 59 | + | 82.8 | 470 | 15 | 59.6 | + | 82 | 48 | 8.2 | ✓ | 15 | 55.1 | + | 82 | 40 | 6.6 | 6.5 | 6.5 | | |
| 15 | 1 | + | 83.1 | 431 | 15 | 0.4 | + | 83 | 6 | 6.0 | ✓ | 15 | 56.9 | + | 82 | 56 | 4.6 | 4.5 | 4.5 | | |
| 16 | 30 | + | 82.9 | 485 | 16 | 29.1 | + | 82 | 58 | 8.0 | ✓ | 16 | 26.0 | + | 82 | 52 | 6.0 | 5.9 | 5.9 | | |
| 16 | 6 | + | 83.2 | 457 | 16 | 4.9 | + | 83 | 13 | 8.5 | ✓ | 16 | 59.9 | + | 83 | 1 | 6.6 | 6.5 | 6.5 | | |

May 9, 1889

Plate 2688

| V. | H. | Type | Sp. Rem. | Sp. Lines | K | From | Other Lines. |
|------|------|--------|----------|-----------|----------|------|---------------|
| 8.5 | 12.6 | A | . | 8 | $K=.8H$ | 3 | F |
| 8.1 | 19.9 | K | 748 | 3 | $K=1.2H$ | 3 | F bright seen |
| 7.4 | 11.7 | F | 749 | 2 | $K=H$ | 2 | seen |
| 7.2 | 12.5 | A | . | 7 | $K=.5H$ | 2 | F |
| 6.8 | 7.0 | A | . | 3 | K | 1 | - |
| 6.6 | 10.8 | A | . | 8 | $K=.5H$ | 3 | F |
| 6.9 | 14.2 | A | . | 5 | $K=H$ | 2 | F |
| 6.7 | 15.5 | F | 750 | 2 | $K=H$ | 2 | seen |
| 6.7 | 20.5 | F | 751 | 1 | K | 2 | seen |
| 6.5 | 22.2 | A? | . | 4 | $K=H$ | 1 | - |
| 7.0 | 22.9 | H | . | 3 | $K=H$ | 2 | F |
| 5.8 | 7.5 | H | . | 2 | $K=H$ | 2 | - |
| 5.1 | 8.0 | A | . | 4 | $K=H$ | 1 | - |
| 5.0 | 11.7 | A | . | 3 | K | 1 | - |
| 5.2 | 13.0 | A? | . | 4 | $K=H$ | 1 | - |
| 5.5 | 20.3 | F? | 752 | 3 | $K=H$ | 2 | F seen |
| 5.5 | 22.2 | A | . | 8 | K | 5 | F |
| 4.0 | 13.5 | A | . | 9 | $K=.5H$ | 3 | F |
| 4.9 | 13.9 | F | 753 | 3 | $K=H$ | 2 | F seen |
| 4.3 | 15.2 | F | 754 | 2 | $K=H$ | 1 | seen |
| 4.8 | 22.4 | H | . | 2 | $K=H$ | 1 | - |
| 3.8 | 9.2 | H | . | 2 | $K=H$ | 2 | - |
| 3.9 | 10.1 | A | . | 4 | K | 1 | - |
| 3.6 | 15.4 | X A? | . | 4 | $K=H$ | 1 | - |
| 3.2 | 18.7 | E | . | 3 | $K=H$ | 1 | - |
| 3.8 | 19.7 | F | 755 | 3 | $K=H$ | 2 | F seen |
| 2.8 | 15.9 | H | . | 3 | $K=H$ | 2 | F |
| 1.00 | 2.6 | 17.6 P | 756 | 3 | $K=H$ | 2 | F seen |

| D.M., P.C. Dec. Mag. | | | | | | | | | | B. | | |
|----------------------|-----|----|-----------|----|-----|---|--------------|----|---|-----|-----|-----|
| R.A. 1900 Dec. Mean | | | | | | | | | | | | |
| 15 59 + 83.4 | 453 | 15 | 58.8 + 83 | 23 | 7.3 | ✓ | 15 53.8 + 83 | 15 | ✓ | 5.8 | 5.7 | 5.7 |
| 13 48 + 83.5 | 397 | 13 | 46.7 + 83 | 29 | 6.5 | ✓ | 13 45.1 + 83 | 15 | ✓ | 5.2 | 5.1 | 5.1 |
| 16 19 + 83.7 | 468 | 16 | 18.1 + 83 | 47 | 8.2 | ✓ | 16 12.2 + 83 | 40 | ✓ | 5.6 | 5.5 | 5.5 |
| 16 8 + 84.1 | 351 | 16 | 7.0 + 84 | 2 | 7.7 | ✓ | 16 1.0 + 83 | 53 | ✓ | 6.3 | 6.2 | 6.3 |
| 17 35 + 82.8 | 521 | 17 | 35.0 + 82 | 51 | 8.5 | ✓ | 17 29.4 + 82 | 49 | ✓ | 6.7 | 6.6 | 6.7 |
| 16 41 + 84.1 | 361 | 16 | 40.2 + 84 | 0 | 7.2 | ✓ | 16 33.6 + 83 | 53 | ✓ | 5.7 | 5.6 | 5.7 |
| 15 35 + 84.4 | 345 | 15 | 35.1 + 84 | 22 | 8.3 | ✓ | 15 29.4 + 84 | 13 | ✓ | 5.4 | 5.3 | 5.4 |
| 15 8 + 84.5 | 335 | 15 | 6.8 + 84 | 31 | 7.5 | ✓ | 15 1.6 + 84 | 20 | ✓ | 5.9 | 5.8 | 5.9 |
| 13 29 + 84.1 | 311 | 13 | 27.9 + 84 | 3 | 7.5 | ✓ | 13 26.7 + 83 | 49 | ✓ | 6.0 | 5.9 | 6.0 |
| 12 59 + 83.7 | 373 | 12 | 58.8 + 83 | 43 | 8.3 | ✓ | 12 58.9 + 83 | 28 | ✓ | 7.0 | 6.9 | 7.0 |
| 12 54 + 83.3 | 369 | 12 | 52.8 + 83 | 18 | 7.5 | ✓ | 12 53.2 + 83 | 3 | ✓ | 6.4 | 6.3 | 6.4 |
| 17 39 + 83.4 | 512 | 17 | 39.0 + 83 | 26 | 7.5 | ✓ | 17 32.6 + 83 | 21 | ✓ | 6.6 | 6.5 | 6.5 |
| 17 38 + 83.8 | 511 | 17 | 38.6 + 83 | 49 | 8.3 | ✓ | 17 31.7 + 83 | 47 | ✓ | 6.5 | 6.4 | 6.4 |
| 16 39 + 84.8 | 360 | 16 | 38.2 + 84 | 53 | 8.5 | ✓ | 16 30.2 + 84 | 47 | ✓ | 7.0 | 6.9 | 7.0 |
| 16 9 + 84.9 | 352 | 16 | 7.8 + 84 | 60 | 8.4 | ✓ | 16 0.2 + 84 | 52 | ✓ | 6.3 | 6.2 | 6.3 |
| 13 22 + 84.6 | 307 | 13 | 21.9 + 84 | 40 | 8.0 | ✓ | 13 20.6 + 84 | 25 | ✓ | 6.5 | 6.4 | 6.4 |
| 12 50 + 84.2 | 290 | 12 | 48.0 + 84 | 12 | 6.5 | ✓ | 12 48.3 + 83 | 58 | ✓ | 6.6 | 6.5 | 6.6 |
| 16 9 + 85.7 | 269 | 16 | 6.6 + 85 | 43 | 7.5 | ✓ | 16 0.2 + 84 | 52 | ✓ | 6.1 | 6.0 | 6.1 |
| 15 50 + 85.3 | 263 | 15 | 50.2 + 85 | 18 | 7.2 | ✓ | 15 48.3 + 83 | 58 | ✓ | B | B | B |
| 15 18 + 85.7 | 249 | 15 | 16.6 + 85 | 41 | 8.0 | ✓ | 15 9.2 + 85 | 31 | ✓ | 5.3 | 5.2 | 5.3 |
| 12 38 + 84.5 | 286 | 12 | 37.2 + 84 | 26 | 7.0 | ✓ | 12 38.0 + 84 | 12 | ✓ | 5.6 | 5.5 | 5.6 |
| 17 39 + 84.7 | 383 | 17 | 37.0 + 84 | 44 | 7.7 | ✓ | 17 28.6 + 84 | 42 | ✓ | 6.3 | 6.2 | 6.3 |
| 17 21 + 84.9 | 378 | 17 | 21.1 + 84 | 57 | 8.2 | ✓ | 17 12.3 + 84 | 54 | ✓ | 7.0 | 6.9 | 7.0 |
| 15 18 + 86.1 | 221 | 15 | 14.6 + 86 | 4 | 8.1 | ✓ | 15 6.4 + 85 | 54 | ✓ | 6.2 | 6.1 | 6.2 |
| 13 39 + 86.0 | 193 | 13 | 35.7 + 86 | 1 | 7.5 | ✓ | 13 32.4 + 85 | 47 | ✓ | 6.4 | 6.3 | 6.4 |
| 13 21 + 85.5 | 222 | 13 | 20.7 + 85 | 31 | 7.0 | ✓ | 13 18.8 + 85 | 17 | ✓ | 6.2 | 6.1 | 6.2 |
| 14 59 + 86.5 | 217 | 14 | 58.5 + 86 | 33 | 6.8 | ✓ | 14 49.6 + 86 | 22 | ✓ | 6.8 | 6.7 | 6.8 |
| 14 9 + 86.5 | 201 | 14 | 5.1 + 86 | 27 | 7.5 | ✓ | 14 59.4 + 86 | 14 | ✓ | 5.7 | 5.6 | 5.7 |

St. Lt. 6.0 F.m. & c. 66 - 6.0 F.ch. 6.5 Box No. 609

R.A. 17^h 00^m Dec. + 81.5

May 9 1889

Plate 2814

| | V. | H. | Type | As. Fm. | As. Lines | K | Fm. | Other Lines |
|-------|------|------|------|------------|--------------|--------|-----|----------------|
| 10 45 | 32.5 | 19.9 | F? | 757 | 2 | K=H | 2 | seen |
| | 22.0 | 20.6 | A | | 6 | A | 2 | - |
| | 21.8 | 19.5 | A | | 3 | A | 1 | - |
| | 21.0 | 15.4 | A? | | 4 | K=H | 1 | - |
| | 20.5 | 9.2 | F | 758 | 2 | K=1.2H | 2 | seen |
| | 20.1 | 21.0 | A | | 6 | A | 2 | F |
| | 19.4 | 15.0 | A | | 6 | A | 1 | - |
| | 19.5 | 16.3 | F | 759 | 2 | K=H | 2 | seen |
| | 19.0 | 17.2 | F | 760 | 2 | K=H | 1 | seen |
| | 19.0 | 17.4 | A | | 4 | A | 1 | - |
| | 19.5 | 17.7 | A? | | 3 | A | 1 | - |
| | 17.0 | 9.3 | F? | 761 | 2 | K=H | 1 | seen |
| | 17.8 | 9.6 | H? | | 2 | K=H | 1 | - |
| | 17.6 | 22.4 | A | | 9 | A | 4 | F |
| | 16.2 | 12.8 | A | | 5 | A | 1 | F |
| | 16.6 | 16.5 | H | | 2 | K=H | 1 | - |
| | 16.5 | 17.7 | A | | 9 | K=1.5H | 3 | F |
| | 15.8 | 6.8 | H | | 3 | K=H | 2 | F |
| | 15.8 | 10.1 | X F | 762 | 2 | K=H | 1 | seen |
| | 15.7 | 13.2 | A | | 3 | A | 1 | - |
| | 15.8 | 15.5 | H | | 2 | K=H | 1 | - |
| | 15.0 | 16.9 | F | 763 | 2 | K=H | 1 | - |
| | 14.4 | 6.9 | A? | | 4 | K=H | 1 | - |
| | 14.4 | 9.3 | F | 764 | 3 | K=1.5H | 3 | seen |
| | 14.6 | 12.9 | F | 765 | 3 | K=H | 2 | seen |
| | 13.1 | 14.7 | F | 766 | 2 | K=H | 2 | seen |
| | 13.2 | 20.8 | A | | 3 | A | 1 | - |
| | 13.4 | 21.2 | A? | | 4 | K=H | 1 | - |
| | 12.2 | 19.3 | A | | 4 | K=H | 1 | - |

N.
D.M. R.A. Dec. Mag. R.A. ¹⁹⁰⁰ Dec. ^{True} Mean.

Cor. Par
Br. Par + Meas + Cor. S
Mean - .8

| | | | | | | | | |
|----------------|-----|-----------------|-----|---|-----------------|---|------|----|
| 16 22 + 76.1 | 596 | 16 21.8 + 76 5 | 583 | ✓ | 16 20.4 + 75 59 | ✓ | 4.57 | — |
| 16 14.9 + 76.2 | 594 | 16 15.0 + 76 16 | 6.0 | ✓ | 16 13.6 + 76 8 | ✓ | 4.62 | 14 |
| 16 25 + 76.5 | 600 | 16 24.5 + 76 28 | 7.2 | ✓ | 16 23.0 + 76 22 | ✓ | 6.22 | 10 |
| 16 59 + 77.1 | 639 | 16 58.7 + 77 4 | 7.2 | ✓ | 16 56.8 + 77 0 | ✓ | 6.32 | 11 |
| 17 56.2 + 76.9 | 667 | 17 55.9 + 76 58 | 5.2 | ✓ | 17 53.9 + 76 58 | ✓ | 4.72 | 13 |
| 16 8.5 + 77.2 | 616 | 16 8.5 + 77 11 | 6.0 | ✓ | 16 6.9 + 77 4 | ✓ | 4.82 | 13 |
| 17 3 + 77.8 | 641 | 17 3.1 + 77 52 | 6.5 | ✓ | 17 0.9 + 77 48 | ✓ | 5.37 | 11 |
| 16 50 + 77.7 | 634 | 16 49.6 + 77 45 | 6.0 | ✓ | 16 47.5 + 77 41 | ✓ | 5.24 | 11 |
| 16 42.3 + 78.1 | 562 | 16 42.0 + 78 2 | 6.8 | ✓ | 16 39.8 + 77 57 | ✓ | 6.22 | 9 |
| 16 39 + 77.9 | 628 | 16 39.9 + 77 58 | 7.8 | ✓ | 16 37.8 + 77 53 | ✓ | 6.22 | 9 |
| 16 37 + 77.7 | 627 | 16 36.9 + 77 43 | 6.5 | ✓ | 16 35.0 + 77 38 | ✓ | 6.12 | 10 |
| 18 3 + 78.7 | 621 | 18 2.9 + 78 41 | 7.4 | ✓ | 18 0.3 + 78 41 | ✓ | 6.12 | 11 |
| 17 58.5 + 78.3 | 616 | 17 58.4 + 78 20 | 6.5 | ✓ | 17 56.0 + 78 20 | ✓ | 6.02 | 11 |
| 15 49.8 + 78.2 | 527 | 15 49.3 + 78 13 | 4.7 | ✓ | 15 47.6 + 78 6 | ✓ | 3.62 | 12 |
| 17 29 + 79.4 | 540 | 17 28.8 + 79 27 | 7.3 | ✓ | 17 25.8 + 79 25 | ✓ | 5.82 | 6 |
| 16 46.4 + 79.2 | 511 | 16 46.2 + 79 11 | 6.3 | ✓ | 16 43.5 + 79 6 | ✓ | 6.12 | 4 |
| 16 34 + 79.3 | 498 | 16 33.9 + 79 16 | 5.5 | ✓ | 16 31.3 + 79 11 | ✓ | 4.57 | 10 |
| 18 34.0 + 79.1 | 587 | 18 33.5 + 79 7 | 7.0 | ✓ | 18 30.7 + 79 9 | ✓ | 5.82 | 6 |
| 17 58.5 + 79.4 | 564 | 17 58.6 + 79 21 | 7.5 | ✓ | 17 55.7 + 79 21 | ✓ | 6.02 | 8 |
| 17 24.6 + 79.7 | 536 | 17 24.7 + 79 41 | 8.0 | ✓ | 17 21.5 + 79 39 | ✓ | 6.52 | 4 |
| 16 57.8 + 79.7 | 517 | 16 57.1 + 79 44 | 6.8 | ✓ | 16 54.1 + 79 40 | ✓ | 6.32 | 6 |
| 16 41 + 80.1 | 579 | 16 40.8 + 80 5 | 7.0 | ✓ | 16 37.7 + 80 0 | ✓ | 5.92 | 7 |
| 18 38 + 79.7 | 591 | 18 37.7 + 79 42 | 7.8 | ✓ | 18 34.6 + 79 44 | ✓ | 5.82 | 7 |
| 18 124 + 79.9 | 571 | 18 121 + 79 36 | 6.5 | ✓ | 18 115 + 79 59 | ✓ | 4.5 | 10 |
| 17 31 + 80.2 | 544 | 17 30.7 + 80 15 | 6.2 | ✓ | 17 27.2 + 80 13 | ✓ | 5.72 | 6 |
| 17 10 + 81.1 | 568 | 17 8.6 + 81 4 | 7.3 | ✓ | 17 4.8 + 81 1 | ✓ | 5.82 | 5 |
| 15 52 + 80.5 | 489 | 15 51.6 + 80 34 | 8.0 | ✓ | 15 48.8 + 80 26 | ✓ | 6.57 | 3 |
| 15 48 + 80.4 | 487 | 15 47.8 + 80 26 | 6.7 | ✓ | 15 45.1 + 80 18 | ✓ | 5.72 | 9 |
| 16 6 + 81.2 | 538 | 16 6.0 + 81 14 | 8.0 | ✓ | 16 3.2 + 81 7 | ✓ | 6.32 | 6 |

| | | |
|-----|-----|-----|
| 6.0 | 5.2 | 5.0 |
| 7.2 | 6.4 | 6.2 |
| 7.4 | 6.6 | 6.4 |
| 6.0 | 5.2 | 5.0 |
| 6.1 | 5.3 | 5.1 |
| 6.5 | 5.7 | 5.6 |
| 6.3 | 5.5 | 5.4 |
| 7.1 | 6.3 | 6.2 |
| 7.2 | 6.4 | 6.3 |
| 7.1 | 6.3 | 6.2 |
| 7.2 | 6.4 | 6.3 |
| 7.1 | 6.3 | 6.2 |
| 7.2 | 6.4 | 6.3 |
| 7.3 | 6.5 | 6.4 |
| 4.8 | 4.0 | 3.9 |
| 6.5 | 5.7 | 5.6 |
| 6.5 | 5.7 | 5.6 |
| 6.9 | 6.1 | 6.0 |
| 5.6 | 4.8 | 4.7 |
| 6.4 | 5.6 | 5.5 |
| 6.8 | 6.0 | 5.9 |
| 6.8 | 6.0 | 5.9 |
| 7.0 | 6.2 | 6.2 |
| 6.9 | 6.1 | 6.0 |
| 7.2 | 6.4 | 6.4 |
| 6.7 | 5.9 | 5.9 |
| 6.6 | 5.8 | 5.8 |
| 5.5 | 4.7 | 4.7 |
| 6.3 | 5.5 | 5.5 |
| 6.9 | 6.1 | 6.1 |
| 6.4 | 5.6 | 5.6 |
| 6.9 | 6.1 | 6.1 |
| 6.9 | 6.1 | 6.1 |
| 6.6 | 5.8 | 5.8 |
| 6.9 | 6.1 | 6.1 |

May 9, 1889.

Plate 2814

| V. | H. | Type | No. Prim. | No. Secs. | K | Focus | Other Series |
|------|------|------|-----------|-----------|--------|-------|--------------|
| 12.2 | 20.9 | H | . | 2 | K=H | 1 | - |
| 12.3 | 21.6 | H? | . | 3 | K=H | 2 | F |
| 11.4 | 9.6 | F? | 767 | 2 | K=H | 1 | seen |
| 11.8 | 20.0 | H | . | 2 | K=H | 1 | - |
| 10.8 | 15.1 | K | 768 | 2 | K=1.2H | 4 | bright seen |
| 10.2 | 17.6 | A | . | 4 | K=H | 1 | - |
| 9.4 | 13.2 | A | . | 4 | K | 1 | - |
| 9.2 | 17.1 | A | . | 4 | K=H | 1 | - |
| 9.0 | 18.1 | A | . | 4 | K=H | 1 | - |
| 9.1 | 18.9 | A | . | 3 | K | 1 | - |
| 8.6 | 6.9 | A | . | 7 | K | 2 | F |
| 8.0 | 9.3 | A | . | 9 | K | 3 | F |
| 8.5 | 9.9 | A | . | 7 | K=H | 2 | F |
| 8.3 | 13.1 | F? | 769 | 2 | K=H | 1 | seen |
| 8.1 | 18.7 | A | . | 5 | K=H | 1 | - |
| 8.9 | 20.0 | F | 770 | 2 | K=H | 2 | seen |
| 7.6 | 9.4 | H | . | 2 | K=H | 1 | - |
| 7.5 | 13.2 | A | . | 3 | K | 1 | - |
| 7.3 | 16.2 | A | . | 7 | K=.5H | 2 | F |
| 7.6 | 17.4 | A? | . | 4 | K=H | 1 | - |
| 7.0 | 17.9 | A | . | 5 | K=H | 2 | F |
| 7.2 | 22.0 | F | 771 | 3 | K=H | 3 | seen |
| 6.1 | 6.8 | A | . | 6 | K=H | 3 | F |
| 6.0 | 8.5 | A | . | 5 | K | 2 | F |
| 5.4 | 11.0 | F | 772 | 2 | K=A | 2 | seen |
| 5.4 | 11.9 | A | . | 4 | K=H | 2 | - |
| 5.8 | 13.6 | H? | . | 2 | K=H | 1 | - |
| 5.4 | 14.3 | A | . | 4 | K | 1 | F |
| 5.6 | 16.1 | A | . | 3 | K | 1 | - |

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May 9 1889

Plate 2814

| V. | H. | Type | No. Rem. | No. Series | K | Figures | Other Series |
|-----|------|------|----------|------------|-----|---------|--------------|
| 4.3 | 18.0 | H | . | 2 | K=H | 1 | - |
| 3.5 | 12.3 | E | 773 | 2 | K=H | 1 | seen |
| 3.7 | 17.1 | A | . | 6 | A | 2 | F |
| 2.8 | 6.4 | A | . | 3 | A | 2 | - |

11 30

| No. | D.M. | P.C. | Dec. | Mag. | R.A. | 1900 | Dec. | Mic. | | | |
|-------------|------|------|------|------|------|------|------|-----------|----|-------|------|
| 1550 + 85.3 | 263 | 15 | 50.2 | + 85 | 18 | 7.2 | ✓15 | 42.5 + 85 | 10 | ✓7.34 | X 5 |
| 1820 + 85.7 | 294 | 18 | 18.1 | + 85 | 40 | 7.5 | ✓18 | 7.2 + 85 | 41 | ✓7.33 | X 6 |
| 169 + 85.7 | 269 | 16 | 6.6 | + 85 | 43 | 7.5 | ✓15 | 57.4 + 85 | 36 | ✓7.54 | X 8 |
| 2020 + 84.2 | 451 | 20 | 20.0 | + 84 | 14 | 7.0 | ✓20 | 14.0 + 84 | 23 | ✓7.53 | X 10 |

St. let. 5.3 Fin. &c. 7.5 - 6.3 Feb. 6.4

Box 585

R. A 19^h 5^m Dec. +81.6

May 10, 1889.

Plate 2808

22 05

| V. | H. | Type | No. Rem. | No. Series | K | Focus | Other Series |
|------|------|----------------|----------|------------|----------------|-------|--------------|
| 22.6 | 13.6 | A ⁺ | . | 7 | K=5H | 3 | F |
| 22.9 | 21.5 | A ⁺ | . | 3 | A ⁺ | 1 | - |
| 22.0 | 7.6 | H ⁺ | . | 2 | K=H | 1 | - |
| 21.6 | 14.9 | F ⁺ | 774 | 2 | K=H | 2 | Seen |
| 20.2 | 16.8 | F ⁺ | 775 | 2 | K=H | 1 | Seen |
| 20.3 | 17.7 | K ⁺ | 776 | 2 | K=H | 2 | bright color |
| 20.1 | 18.3 | H ⁺ | . | 3 | K=H | 1 | F |
| 20.4 | 22.3 | F ⁺ | 777 | 3 | K=1.5H | 3 | F seen |
| 19.5 | 7.3 | A ⁺ | . | 9 | A ⁺ | 5 | F |
| 19.1 | 11.5 | A ⁺ | . | 3 | A ⁺ | 1 | - |
| 18.0 | 21.4 | H ⁺ | . | 2 | K=H | 1 | - |
| 17.8 | 15.3 | A ⁺ | . | 3 | A ⁺ | 1 | - |
| 17.0 | 17.7 | F ⁺ | 778 | 2 | K=H | 2 | Seen |
| 17.2 | 18.6 | F ⁺ | 779 | 2 | K=H | 1 | Seen |
| 17.5 | 20.8 | E ⁺ | . | 2 | K=H | 1 | - |
| 16.5 | 10.5 | A ⁺ | . | 5 | K=H | 1 | - |
| 16.6 | 12.5 | A ⁺ | . | 10 | K=2H | 3 | F |
| 16.0 | 15.6 | A ⁺ | . | 7 | K=.8H | 2 | F |
| 16.3 | 17.4 | A ⁺ | . | 6 | K=H | 3 | - |
| 16.0 | 20.8 | A ⁺ | . | 5 | K=H | 1 | - |
| 15.4 | 5.8 | A ⁺ | . | 4 | A ⁺ | 2 | - |
| 15.9 | 8.9 | F ⁺ | 780 | 3 | K=H | 2 | - |
| 15.0 | 19.4 | G ⁺ | 781 | 3 | K=1.5H | 4 | F seen |
| 15.0 | 23.4 | A ⁺ | . | 4 | K=H | 2 | - |
| 14.2 | 17.2 | A ⁺ | . | 3 | A ⁺ | 2 | - |
| 14.0 | 8.3 | A ⁺ | . | 7 | A ⁺ | 3 | F |
| 14.1 | 8.5 | A ⁺ | . | 2 | A ⁺ | 1 | - |
| 14.6 | 10.9 | A ⁺ | . | 3 | A ⁺ | 1 | - |
| 14.4 | 13.7 | A ⁺ | . | 5 | A ⁺ | 2 | F |

Type (?)

| No. | D.M. | R.A. | Dec. | Mag. | RA | Dec | Mean. | Br. | Red + Mean | Cor Br |
|----------------|------|--|------|----------------|-----------------|------|-------|-----|------------|--------|
| 19 14.9 + 76.3 | 717 | 19 14.4 + 76 19 | 6.5 | ✓ | 19 12.8 + 76 24 | 4.7 | | | | |
| 18 9.0 + 75.7 | 655 | 18 8.2 + 75 46 | 6.5 | ✓ | 18 6.6 + 75 47 | 5.8 | | | | |
| 20 4.0 + 76.1 | 771 | 20 3.6 + 76 4 40 | ✓ | 20 2.3 + 76 12 | | | | | | |
| 19 4 + 76.8 | 712 | 19 3.9 + 76 50 | 6.5 | ✓ | 19 2.2 + 76 53 | 5.77 | 7 | 6.5 | 5.9 | 5.7 |
| 18 4.5 + 77.5 | 702 | 18 4.5 + 77 32 | 7.0 | ✓ | 18 4.5 + 77 35 | 5.77 | 8 | 6.6 | 6.0 | 5.9 |
| 18 3.5 + 77.5 | 699 | 18 3.8 + 77 25 | 6.5 | ✓ | 18 3.6 + 77 28 | 5.62 | 4 | 6.0 | 5.4 | 5.2 |
| 18 3.5 + 77.5 | 696 | 18 3.3 + 77 28 | 7.7 | ✓ | 18 2.3 + 77 30 | 5.32 | 8 | 6.0 | 5.4 | 5.2 |
| 17 6.3 + 76.9 | 667 | 17 5.9 + 76 60 | 5.2 | ✓ | 17 5.9 + 76 58 | 4.72 | 4 | 6.0 | 5.4 | 5.2 |
| 20 14 + 77.3 | 764 | 20 13.8 + 77 16 | 4.8 | ✓ | 20 12.3 + 77 25 | 3.66 | | 6.0 | 5.4 | 5.2 |
| 19 36.8 + 77.9 | 734 | 19 36.2 + 77 57 | 7.0 | ✓ | 19 34.3 + 78 3 | 5.62 | 11 | 6.0 | 5.4 | 5.2 |
| 17 58.5 + 78.3 | 616 | 17 58.4 + 78 20 | 6.5 | ✓ | 17 56.0 + 78 20 | 6.02 | 6 | 6.0 | 5.4 | 5.2 |
| 18 5.9 + 78.7 | 661 | 18 5.8 + 78 46 | 7.5 | ✓ | 18 5.3 + 78 50 | 5.82 | 10 | 6.0 | 5.4 | 5.2 |
| 18 3.0 + 79.1 | 587 | 18 3.5 + 79 7 | 7.0 | ✓ | 18 3.7 + 79 9 | 5.82 | 5 | 6.0 | 5.4 | 5.2 |
| 18 2.4 + 78.9 | 632 | 18 2.4 + 78 59 | 7.7 | ✓ | 18 2.1 + 79 1 | 5.26 | 5 | 6.0 | 5.4 | 5.2 |
| 18 3.2 + 78.6 | 621 | 18 2.9 + 78 41 | 7.4 | ✓ | 18 0.3 + 78 41 | 6.12 | 9 | 6.0 | 5.4 | 5.2 |
| 19 51.3 + 79.2 | 645 | 19 51.7 + 79 10 | 7.5 | ✓ | 19 49.3 + 79 17 | 5.82 | 10 | 6.0 | 5.4 | 5.2 |
| 19 30.8 + 79.3 | 628 | 19 30.4 + 79 18 | 6.3 | ✓ | 19 27.8 + 79 24 | 4.97 | 2 | 6.0 | 5.4 | 5.2 |
| 18 55.7 + 79.7 | 604 | 18 55.8 + 79 46 | 6.5 | ✓ | 18 52.7 + 79 50 | 5.62 | 3 | 6.0 | 5.4 | 5.2 |
| 18 35.9 + 79.5 | | Not on P.M. Chart and not in Catalogue | | | | | | | | |
| 17 58.8 + 79.4 | 564 | 17 58.6 + 79 21 | 7.5 | ✓ | 17 55.7 + 79 21 | 6.02 | 7 | 6.0 | 5.4 | 5.2 |
| 20 4.2 + 78.8 | 716 | 20 4.6 + 78 54 | 6.9 | ✓ | 20 4.0 + 79 5 | 5.52 | 5 | 6.0 | 5.4 | 5.2 |
| 20 11 + 79.2 | 660 | 20 9.8 + 79 16 | 6.5 | ✓ | 20 7.6 + 79 24 | 5.92 | 5 | 6.0 | 5.4 | 5.2 |
| 18 11.9 + 79.9 | 5715 | 18 11.0 + 79 60 | 6.5 | ✓ | 18 11.5 + 79 59 | 4.52 | 5 | 6.0 | 5.4 | 5.2 |
| 17 29.0 + 79.4 | 540 | 17 28.8 + 79 27 | 7.3 | ✓ | 17 25.8 + 79 25 | 5.82 | 5 | 6.0 | 5.4 | 5.2 |
| 20 3.3 + 79.7 | 675 | 20 3.6 + 79 43 | 7.3 | ✓ | 20 3.5 + 79 52 | 5.82 | 6 | 6.0 | 5.4 | 5.2 |
| 20 2.2 + 80.1 | 650 | 20 2.6 + 80 4 | 6.8 | ✓ | 20 2.2 + 80 13 | 5.22 | | 6.0 | 5.4 | 5.2 |
| 20 2.0 + 80.0 | 648 | 20 2.3 + 80 0 | 7.8 | ✓ | 20 1.9 + 80 9 | 6.12 | 8 | 6.0 | 5.4 | 5.2 |
| 19 5.2 + 80.2 | 631 | 19 5.9 + 80 8 | 8.0 | ✓ | 19 4.0 + 80 15 | | | 6.0 | 5.4 | 5.2 |
| 19 1.9 + 80.5 | 604 | 19 1.9 + 80 30 | 7.1 | ✓ | 19 1.5 + 80 35 | 5.77 | 6 | 6.0 | 5.4 | 5.2 |

May 10, 1889.

Plate 2808

| V. | H | Type | for Rem. | for Lins | K | Focus | Other Lins. |
|-------|------|-----------------------|-------------|-------------|---------|-------|--------------------------|
| 14.4 | 13.9 | A ² ✓ | 2 | 2 | A✓ | 1 | — |
| 13.0 | 5.8 | K✓ | 782 | 3 | K=H✓ | 3 | F seen |
| 13.3 | 13.4 | A✓ | 1 | 2 | A✓ | 1 | — |
| 13.9 | 14.7 | A✓ | 1 | 3 | A✓ | 1 | — |
| 13.6 | 22.6 | K✓ | 783 | 3 | K=H✓ | 3 | F ^{bright} seen |
| 12.6 | 7.5 | K✓ | 784 | 3 | K=H✓ | 3 | F seen |
| 12.0 | 7.8 | K✓ | 785 | 3 | K=1.5H✓ | 3 | F ^{bright} seen |
| 12.0 | 8.0 | K✓ | 786 | 3 | K=H✓ | 2 | F seen |
| 12.4 | 10.8 | A✓ | 1 | 3 | A✓ | 1 | — |
| 12.6 | 13.2 | A ² ✓ | 1 | 3 | A✓ | 1 | — |
| 12.0 | 13.2 | A✓ | 1 | 3 | A✓ | 1 | — |
| 12.5 | 17.7 | H✓ | 1 | 2 | K=H✓ | 1 | — |
| 12.4 | 18.2 | A✓ | 1 | 3 | A✓ | 1 | — |
| 11.0 | 9.7 | A ² ✓ | 1 | 3 | A✓ | 1 | — |
| 11.1 | 14.7 | A✓ | 1 | 9 | K=1.4H✓ | 3 | F |
| 11.2 | 23.5 | K✓ | 787 | 3 | K=H✓ | 2 | F seen |
| 10.7 | 7.8 | H✓ | 1 | 1 | A✓ | 1 | — |
| 22 55 | 10.4 | F ² ✓ | 788 | 3 | K=H✓ | 2 | F seen |
| 0 40 | 10.8 | H✓ | 1 | 2 | K=H✓ | 1 | — |
| | 10.5 | 14.2 A✓ | 1 | 5 | K=H✓ | 1 | F |
| | 9.5 | 7.7 A✓ | 1 | 8 | A✓ | 4 | F |
| | 9.4 | 9.3 A✓ | 1 | 3 | A✓ | 1 | — |
| | 9.0 | 13.3 A✓ | 1 | 7 | K=.3H✓ | 3 | F |
| | 9.4 | 16.2 A✓ | 1 | 9 | K=.2H✓ | 4 | F |
| | 9.6 | 17.2 A✓ | 1 | 6 | A✓ | 2 | F |
| | 9.0 | 22.9 F ² ✓ | 789 | 3 | K=.2H✓ | 5 | seen |
| | 8.3 | 7.2 A✓ | 1 | 3 | A✓ | 1 | — |
| | 8.8 | 9.2 K✓ | 790 | 3 | K=H✓ | 2 | F seen |
| | 8.6 | 10.8 A ² ✓ | 1 | 3 | A✓ | 1 | — |

| No. | R.A. | Dec. | Magn. | R.A. | Dec. | Mean | Br. |
|---------------|------|-----------------|-------|------------------|------|------|-------------|
| 19 18 + 80.4 | 607 | 19 17.7 + 80 28 | 7.2 | 19 14.4 + 80 33 | 6.05 | 10' | 7.0 6.4 6.4 |
| 20 55 + 80.1 | 672 | 20 54.1 + 80 0 | 5.3 | 20 52.2 + 80 11 | 5.85 | 1' | 5.5 4.9 4.9 |
| 19 25 + 81.0 | 655 | 19 24.0 + 81 0 | 8.3 | 19 20.4 + 81 5 | 6.65 | 6' | 6.2 5.6 5.6 |
| 19 9 + 80.7 | 603 | 19 7.7 + 80 42 | 8.2 | 19 4.1 + 80 46 | 6.25 | 7' | 7.2 6.6 6.6 |
| 17 32 + 80.2 | 544 | 17 30.7 + 80 15 | 6.2 | 17 27.2 + 80 13 | 5.75 | 2' | 6.9 6.3 6.3 |
| 20 37 + 80.5 | 660 | 20 37.7 + 80 35 | 6.1 | 20 35.2 + 80 44 | 5.5 | 3' | 5.8 5.2 5.2 |
| 20 38 + 80.9 | 659 | 20 37.2 + 80 56 | 5.8 | 20 34.5 + 81 5 | 5.75 | 1' | 6.3 5.7 5.7 |
| 20 36 + 80.9 | 657 | 20 35.8 + 80 56 | 7.5 | 20 33.1 + 81 6 | 6.06 | 3' | 5.2 4.6 4.6 |
| 19 59 + 81.2 | 687 | 19 59.4 + 81 12 | 7.7 | 19 56.0 + 81 19 | 6.45 | 5' | 5.8 5.2 5.2 |
| 19 29 + 81.4 | 659 | 19 28.0 + 81 22 | 7.9 | 19 24.1 + 81 28 | | | 6.4 5.8 5.8 |
| 19 30 + 81.6 | 660 | 19 28.3 + 81 39 | 8.0 | 19 24.2 + 81 45 | 6.24 | 7' | 6.8 6.2 6.2 |
| 18 28 + 81.4 | 622 | 18 26.7 + 81 24 | 7.2 | 18 22.4 + 81 26 | 6.50 | 4' | 6.9 6.3 6.3 |
| 18 19 + 81.4 | 6195 | 18 19.3 + 81 26 | 7.4 | 18 15.0 + 81 27 | 6.4 | 6' | 6.9 6.3 6.3 |
| 20 18 + 81.7 | 699 | 20 19.0 + 81 46 | 7.5 | 20 15.6 + 81 55 | 6.25 | 6' | 7.5 6.9 6.9 |
| 19 10 + 82.2 | 572 | 19 9.4 + 82 9 | 6.0 | 19 4.7 + 82 13 | 5.30 | 3' | 6.6 6.0 6.0 |
| 17 9 + 81.1 | 568 | 17 8.6 + 81 4 | 7.3 | 17 4.8 + 81 1 | 5.86 | 4' | 6.8 6.2 6.2 |
| 20 45 + 81.5 | 712 | 20 44.4 + 81 30 | 7.5 | 20 41.6 + 81 39 | | | 6.9 6.3 6.3 |
| 20 34 + 81.9 | 706 | 20 33.0 + 81 53 | 7.4 | 20 28.7 + 82 0 | 5.80 | 4' | 7.6 7.0 7.0 |
| 20 4 + 82.1 | 598 | 20 2.9 + 82 4 | 7.6 | 19 58.9 + 82 12 | | | 6.2 5.6 5.6 |
| 19 17 + 82.5 | 578 | 19 16.6 + 82 28 | 7.7 | 19 11.7 + 82 31 | 6.00 | 7' | 7.2 6.6 6.6 |
| 20 54 + 81.9 | 718 | 20 52.8 + 81 59 | 6.0 | 20 47.8 + 82 10 | 6.40 | 5' | 7.6 7.0 7.0 |
| 20 34 + 82.4 | 613 | 20 33.1 + 82 22 | 8.5 | 20 29.14 + 82 31 | 6.30 | 8' | 6.7 6.1 6.1 |
| 19 35 + 83.2 | 552 | 19 33.4 + 83 10 | 6.0 | 19 27.9 + 83 16 | 5.89 | 4' | 4.9 4.3 4.3 |
| 18 44 + 83.1 | 536 | 18 43.2 + 83 4 | 6.2 | 18 37.3 + 83 6 | 4.76 | 3' | 7.1 6.5 6.5 |
| 18 30 + 82.8 | 540 | 18 28.6 + 82 52 | 7.5 | 18 23.9 + 82 54 | 5.4 | 9' | 5.5 4.9 4.9 |
| 17 1 + 82.3 | 498 | 17 1.0 + 82 16 | 4.0 | 16 56.2 + 82 12 | 3.89 | - | 5.1 4.5 4.5 |
| 21 10 + 82.4 | 636 | 21 8.4 + 82 24 | 8.5 | 21 5.5 + 82 35 | 6.35 | 8' | 6.3 5.7 5.7 |
| 20 39 + 82.7 | 617 | 20 38.2 + 82 41 | 7.0 | 20 30.4 + 82 51 | 5.90 | 5' | B - B B |
| 20 15 + 82.59 | 608 | 20 14.6 + 82 59 | 8.5 | 20 10.0 + 83 7 | 6.40 | 9' | 7.0 6.4 6.4 |

May 10 1889.

Plate 2808

| V. | H. | Type | No. Rem. | No. Lines. | K | From | Other Lines |
|------|------|----------------|----------|------------|---------|------|-------------|
| 8.1 | 14.7 | A | . | 7 | $K=.2H$ | 3 | F |
| 8.2 | 17.0 | H | . | 1 | N | 1 | - |
| 8.8 | 20.4 | A | . | 3 | N | 1 | - |
| 7.9 | 9.3 | A | . | 8 | $K=.1H$ | 3 | F |
| 7.0 | 16.2 | H | . | 2 | $K=H$ | 1 | - |
| 7.5 | 17.5 | H | . | 2 | $K=H$ | 1 | - |
| 7.1 | 19.5 | A | . | 3 | N | 1 | - |
| 7.8 | 19.7 | E ₂ | . | 2 | $K=H$ | 1 | - |
| 6.9 | 8.5 | E | 791 | 3 | $K=H$ | 2 | From |
| 6.4 | 10.8 | F | 792 | 3 | $K=H$ | 2 | From |
| 6.3 | 11.4 | A | . | 8 | $K=.2H$ | 2 | F |
| 6.3 | 12.4 | A | . | 4 | $K=H$ | 1 | - |
| 6.3 | 16.5 | A ₂ | . | 3 | N | 2 | - |
| 6.0 | 17.3 | A | . | 3 | N | 1 | - |
| 5.1 | 6.2 | E ₂ | 793 | 2 | $K=H$ | 2 | seen |
| 5.4 | 11.2 | F | 794 | 2 | $K=H$ | 2 | seen |
| 5.5 | 19.0 | H | . | 2 | $K=H$ | 1 | - |
| 5.4 | 22.1 | A | . | 4 | $K=H$ | 2 | - |
| 4.0 | 16.8 | A ₂ | . | 5 | $K=H$ | 1 | - |
| 4.8 | 19.5 | A | . | 3 | N | 1 | - |
| 0 50 | 2.4 | A | . | 10 | $K=.2H$ | 5 | F |

| No. | D.M. | R.A. | Dec. | Mag. | R.A. | Dec. | Mean. | Br. |
|--------------|------|-----------------|------|------|-----------------|------|-------|-------------|
| 19 11 + 83.6 | 547 | 19 10.4 + 83 42 | 6.5 | ✓ | 19 4.0 + 83 47 | 5.25 | 4' | 5.6 5.0 5.1 |
| 18 29 + 83.6 | 530 | 18 28.1 + 83 37 | 7.8 | ✓ | 18 21.5 + 83 39 | 6.45 | 8' | 7.2 6.6 7.1 |
| 17 36 + 82.8 | 521 | 17 35.0 + 82 51 | 8.5 | ✓ | 17 29.4 + 82 49 | 6.35 | 7' | 7.1 6.5 6.5 |
| 20 44 + 83.1 | 588 | 20 43.2 + 83 7 | 6.2 | ✓ | 20 39.2 + 83 11 | 5.95 | 6' | 5.3 4.7 4.7 |
| 18 39 + 84.2 | 413 | 18 39.8 + 84 12 | 8.5 | ✓ | 18 32.4 + 84 14 | | | 7.0 6.4 6.5 |
| 18 16 + 83.6 | 527 | 18 15.8 + 83 54 | 7.7 | ✓ | 18 8.7 + 83 50 | 6.17 | 5' | 7.4 6.8 6.9 |
| 17 39 + 83.7 | 511 | 17 38.6 + 83 49 | 8.3 | ✓ | 17 31.7 + 83 47 | 6.27 | 9' | 6.7 6.1 6.2 |
| 17 39 + 83.4 | 512 | 17 39.0 + 83 26 | 7.5 | ✓ | 17 32.1 + 83 26 | 6.12 | 7' | 7.2 6.6 6.7 |
| 21 13 + 83.4 | 596 | 21 2.8 + 83 23 | 7.7 | ✓ | 20 59.0 + 83 34 | 5.80 | 7' | 6.8 6.2 6.2 |
| 20 21 + 84.1 | 462 | 20 30.0 + 84 5 | 7.0 | ✓ | 20 24.4 + 84 14 | 6.93 | 6' | 6.5 5.9 6.0 |
| 20 20 + 84.3 | 457 | 20 20.0 + 84 14 | 7.0 | ✓ | 20 14.0 + 84 28 | 6.47 | 8 4' | 6.3 5.7 5.8 |
| 20 1 + 84.4 | 445 | 20 0.5 + 84 24 | 8.5 | ✓ | 19 53.8 + 84 32 | 7.05 | 5' | 5.7 5.1 5.2 |
| 18 34 + 84.5 | 412 | 18 32.8 + 84 35 | 7.5 | ✓ | 18 21.6 + 84 37 | 6.45 | 6' | 6.9 6.3 6.5 |
| 18 17 + 84.6 | 404 | 18 14.8 + 84 42 | 9.0 | ✓ | 18 6.4 + 84 43 | 6.4 | 5' | 6.4 5.8 6.0 |
| | 406 | 18 13.7 + 84 39 | 8.2 | ✓ | 18 7.3 + 84 40 | 6.63 | 8' | 6.9 6.3 6.5 |
| 21 54 + 83.4 | 618 | 21 52.7 + 83 22 | 7.2 | ✓ | 21 30.3 + 83 35 | 5.65 | 9' | 6.5 5.9 6.0 |
| 20 32 + 84.6 | 463 | 20 31.0 + 84 40 | 7.2 | ✓ | 20 24.5 + 84 49 | 7.05 | 6' | 6.4 5.8 6.0 |
| 17 39 + 84.7 | 383 | 17 37.0 + 84 44 | 7.7 | ✓ | 17 30.6 + 84 42 | 6.62 | 6' | 6.8 6.2 6.4 |
| 16 41 + 84.0 | 361 | 16 40.2 + 84 0 | 7.2 | ✓ | 16 33.6 + 83 33 | 6.55 | 7' | 7.3 6.7 6.8 |
| 18 20 + 85.6 | 294 | 18 18.1 + 85 40 | 7.5 | ✓ | 18 7.2 + 85 41 | 6.30 | 15' | 6.2 5.6 5.7 |
| 17 21 + 84.9 | 378 | 17 21.1 + 84 57 | 8.2 | ✓ | 17 12.3 + 84 54 | 7.16 | 8 7' | 6.5 5.9 6.2 |
| 18 21 + 86.6 | 269 | 18 19.1 + 86 36 | 4.5 | ✓ | 18 4.5 + 86 37 | 5.05 | - | 6.6 6.0 6.2 |

St. Lt. 5.2 F.m. 7c. 75-6.7 F.ch. 6.8
 R.A. 21^h 00^m Dec. + 81.8

Box No. 501

May 13 1889.

Plate 3127

| 21 30 | V. | H. | Type | No. Rem. | No. Series | K | Focus | Other Series. |
|---------|------|------|------|----------|------------|--------|-------|---------------|
| | 22.0 | 12.0 | A | . | 4 | N | 2 | — |
| | 20.1 | 13.8 | A | . | 8 | N | 3 | F |
| | 20.4 | 19.6 | A | . | 9 | N | 4 | F |
| | 19.5 | 9.7 | A | . | 4 | N | 1 | — |
| | 19.2 | 12.8 | A | . | 5 | K=3H | 2 | F |
| | 19.1 | 13.5 | A | . | 4 | N | 1 | — |
| | 18.5 | 5.9 | A | . | 5 | N | 1 | — |
| | 18.5 | 13.2 | B | 795 | 5 | N | 2 | seen |
| | 17.4 | 5.8 | A | . | 7 | K=3H | 3 | F |
| | 17.5 | 6.0 | A | . | 6 | N | 3 | — |
| | 17.5 | 16.4 | A | . | 7 | N | 2 | — |
| | 16.5 | 19.2 | H | . | 2 | K=H | 1 | — |
| | 16.2 | 21.0 | A | . | 4 | N | 1 | F |
| 6.7-6.9 | 15.5 | 9.7 | M? | . | 1 | N | 1 | — |
| | 15.5 | 12.2 | K | 796 | 2 | K=H | 3 | bright seen |
| | 15.8 | 12.8 | F | 797 | 2 | K=H | 1 | seen |
| | 15.0 | 13.2 | A | . | 7 | K=2H | 2 | F |
| | 15.5 | 15.1 | K | 798 | 2 | K=1.2H | 3 | bright seen |
| 22 00 | 15.8 | 17.1 | A | . | 5 | N | 2 | — |
| 22 35 | 15.1 | 17.8 | A | . | 7 | N | 3 | F |
| | 15.2 | 18.1 | A | . | 4 | K=H | 1 | — |
| | 15.4 | 22.8 | A | . | 7 | N | 3 | F |
| | 14.0 | 7.4 | H | . | 2 | K=H | 1 | — |
| | 14.1 | 13.3 | A | . | 8 | K=3H | 3 | F |
| | 14.6 | 13.7 | H | . | 1 | N | 1 | — |
| | 14.3 | 14.0 | A | . | 6 | K=H | 2 | — |
| | 14.2 | 16.5 | K | 799 | 2 | K=1.2H | 3 | F bright seen |
| | 13.6 | 16.4 | K? | 800 | 3 | K=1.2H | 3 | F bright seen |
| | 13.5 | 16.6 | K | 801 | 2 | K=H | 1 | bright seen |

| | | | | 1920 | | Dec. | | Mean | Diff. | Mean - 5 | | |
|-------------------|----------------|---------------|-------------------------|----------------|--------------|----------------------------|--------------|-----------------|--------------|----------------|----------------|----------------|
| D.M. RA Dec. Mag. | | | | R.A. | Dec. | Mean | Diff. | | | Br. | Dist. | Mean + Log S |
| 21 24 + 76.5 | 836 | 21 | 23.7 + 76 28 | 6.5 | ✓ | 21 23.3 + 76 40 | ✓ | 5.44 | 11 | 6.5 | 6.0 | 5.8 |
| 21 8.5 + 77.5 | 800 | 21 | 8.4 + 77 32 | 6.1 | ✓ | 21 7.5 + 77 43 | ✓ | 4.93 | 6 | 5.5 | 5.0 | 4.9 |
| 20 14 + 77.2 | 764 | 20 | 13.8 + 77 16 | 4.8 | ✓ | 20 12.3 + 77 25 | ✓ | 3.66 | 3 | 4.0 | 3.5 | 3.3 |
| 21 47 + 77.5 | 834 | 21 | 46.8 + 77 34 | 7.0 | ✓ | 21 46.6 + 77 47 | ✓ | 5.66 | 10 | 6.7 | 6.2 | 6.1 |
| 21 18.5 + 77.9 | 811 | 21 | 18.4 + 77 59 | 7.0 | ✓ | 21 17.6 + 78 10 | ✓ | 5.88 | 7 | 6.6 | 6.1 | 6.0 |
| 21 127 + 78.1 | 742 | 21 | 12.2 + 78 4 | 7.5 | ✓ | 21 11.2 + 78 15 | ✓ | 5.90 | 8 | 6.7 | 6.2 | 6.1 |
| 22 22.8 + 77.5 | 860 | 22 | 22.4 + 77 30 | 6.8 | ✓ | 22 22.8 + 77 44 | ✓ | 5.71 | 11 | 6.6 | 6.1 | 6.0 |
| 21 15.0 + 78.4 | 744 | 21 | 14.8 + 78 33 | 6.8 | ✓ | 21 13.8 + 78 34 | ✓ | 5.70 | 8 | 6.5 | 6.0 | 5.9 |
| 22 28.5 + 78.1 | 801 | 22 | 28.6 + 78 4 | 5.7 | ✓ | 22 29.0 + 78 19 | ✓ | 4.71 | 7 | 5.4 | 4.9 | 4.8 |
| 22 26.0 + 78.1 | 796 | 22 | 25.6 + 78 1 | 6.0 | ✓ | 22 26.0 + 78 17 | ✓ | 5.04 | 7 | 5.7 | 5.2 | 5.1 |
| 20 42 + 78.9 | 716 | 20 | 41.6 + 78 54 | 6.9 | ✓ | 20 40.0 + 79 5 | ✓ | 5.43 | 5 | 5.9 | 5.4 | 5.3 |
| 20 10 + 79.3 | 660 | 20 | 9.8 + 79 16 | 6.5 | ✓ | 20 7.6 + 79 24 | ✓ | 5.90 | 7 | 6.6 | 6.1 | 6.0 |
| 19 52 + 79.2 | 645 | 19 | 51.7 + 79 10 | 7.5 | ✓ | 19 49.3 + 79 17 | ✓ | 5.80 | 10 | 7.0 | 6.5 | 6.4 |
| 21 57 + 79.6 | 721 | 21 | 56.4 + 79 37 | 6.4 | ✓ | 21 55.9 + 79 50 | ✓ | 6.30 | 4 | 6.8 | 6.3 | 6.2 |
| 21 30 + 79.9 | 707 | 21 | 29.0 + 79 54 | 6.0 | ✓ | 21 27.8 + 80 5 | ✓ | 5.57 | 1 | 6.7 | 6.2 | 6.2 |
| 21 24 + 79.9 | 701 | 21 | 22.7 + 79 44 | 7.8 | ✓ | 21 21.4 + 79 56 | ✓ | 5.80 | 4 | 7.4 | 6.9 | 6.9 |
| 21 19 + 80.2 | 688 | 21 | 18.2 + 80 12 | 6.5 | ✓ | 21 16.7 + 80 23 | ✓ | 5.78 | 6 | 5.7 | 5.2 | 5.2 |
| 20 55 + 80.0 | 672 | 20 | 54.1 + 80 0 | 5.3 | ✓ | 20 52.3 + 80 11 | ✓ | 5.30 | 1 | 6.3 | 5.8 | 5.8 |
| 20 34 + 79.7 | 675 | 20 | 32.6 + 79 43 | 7.3 | ✓ | 20 30.5 + 79 50 | ✓ | 5.80 | 6 | 6.8 | 6.3 | 6.3 |
| 20 24 + 80.1 | 650 | 20 | 22.6 + 80 4 | 6.8 | ✓ | 20 20.2 + 80 13 | ✓ | 5.24 | 2 | 6.4 | 5.9 | 5.9 |
| 20 20 + 80.0 | 648 | 20 | 20.3 + 80 0 | 7.8 | ✓ | 20 17.9 + 80 9 | ✓ | 6.10 | 8 | 5.4 | 4.9 | 4.9 |
| 19 31 + 79.3 | 628 | 19 | 30.4 + 79 18 | 6.3 | ✓ | 19 27.8 + 79 24 | ✓ | 4.97 | 3 | 6.9 | 6.4 | 6.4 |
| 22 27 + 79.9 | 739 | 22 | 26.2 + 79 58 | 7.5 | ✓ | 22 26.1 + 80 11 | ✓ | 6.05 | 6 | 5.3 | 4.8 | 4.7 |
| 21 19 + 80.6 | 690 | 21 | 19.2 + 80 37 | 6.3 | ✓ | 21 17.6 + 80 48 | ✓ | 5.02 | 1 | 6.6 | 6.1 | 6.1 |
| 21 13 + 80.5 | 682 | 21 | 12.9 + 80 25 | 7.0 | ✓ | 21 11.2 + 80 36 | ✓ | 5.50 | 1 | 7.5 | 7.0 | 7.0 |
| 21 10 + 80.6 | 679 | 21 | 10.0 + 80 36 | 7.0 | ✓ | 21 8.2 + 80 47 | ✓ | 5.70 | 1 | 5.1 | 4.6 | 4.6 |
| 20 38 + 80.5 | 660 | 20 | 37.7 + 80 35 | 6.1 | ✓ | 20 35.2 + 80 44 | ✓ | 5.54 | 1 | 6.8 | 6.3 | 6.3 |
| 20 38 + 80.9 | 659 | 20 | 37.2 + 80 56 | 5.8 | ✓ | 20 34.5 + 81 5 | ✓ | 5.12 | 0 | 7.6 | 7.1 | 7.1 |
| 20 36 + 80.9 | 657 | 20 | 35.8 + 80 56 | 7.5 | ✓ | 20 33.1 + 81 6 | ✓ | 6.01 | 4 | 5.8 | 5.3 | 5.3 |

May 13, 1889.

Plate 3127

| V. | H. | Type | No. Rem. | No. Stars. | K | Form | Other Stars |
|---------|------|------|----------|------------|--------|------|-------------|
| 12.3 | 6.9 | F | 802 | 2 | K=H | 2 | seen |
| 12.5 | 12.9 | H | | 1 | A | 1 | - |
| 12.5 | 15.8 | K? | 803 | 2 | K=H | 1 | bright seen |
| 12.7 | 22.7 | A | | 4 | A | 1 | - |
| 11.8 | 8.5 | F | 804 | 3 | K=H | 2 | F seen |
| 11.5 | 15.1 | A | | 10 | K=.2H | 4 | F |
| 11.6 | 16.6 | F | 805 | 2 | K=H | 2 | seen |
| 11.8 | 17.6 | F? | 806 | 2 | K=H | 1 | seen |
| 11.3 | 21.4 | A | | 3 | A | 1 | - |
| 11.9 | 23.4 | A | | 3 | A | 1 | - |
| 10.9 | 6.4 | H | | 1 | A | 1 | - |
| 10.8 | 10.0 | A | | 4 | A | 1 | - |
| 10.5 | 10.6 | G | 807 | 3 | K=1.2H | 2 | bright seen |
| 10.6 | 12.8 | A | | 4 | K=H | 1 | - |
| 10.6 | 14.2 | A | | 4 | A | 1 | - |
| 10.4 | 15.2 | A | | 3 | A | 1 | - |
| 6.0-6.3 | 10.1 | KM? | 808 | 2 | K=H | 2 | bright seen |
| 10.7 | 16.5 | A | | 3 | A | 1 | - |
| 10.9 | 21.2 | A | | 4 | A | 1 | - |
| 9.0 | 7.9 | K | 809 | 3 | K=H | 4 | bright seen |
| 9.2 | 10.9 | A | | 4 | A | 1 | - |
| 9.2 | 15.7 | A | | 8 | K=.8H | 4 | F |
| 9.2 | 17.5 | A | | 4 | K=H | 1 | - |
| 9.2 | 21.3 | A | | 6 | A | 2 | - |
| 9.4 | 22.0 | A | | 6 | A | 3 | - |
| 8.8 | 8.3 | A | | 5 | A | 2 | - |
| 8.4 | 11.8 | A | | 6 | K=.8H | 2 | - |
| 8.9 | 12.6 | A | | 3 | A | 1 | - |
| 8.1 | 13.5 | K | 810 | 1 | A | 1 | bright seen |

| No. | D.M. | R.A. | Dec. | Mag. | R.A. | Dec. | Mean | Diff. | Br. |
|--------------|------|--------------|------|------|-----------------|------|------|-------------|-----|
| 22 37 + 80.6 | 731 | 22 39.1 + 80 | 36 | 6.7 | 22 39.2 + 80 52 | 57x | 8' | 6.5 6.0 6.0 | |
| 21 25 + 81.4 | 736 | 21 24.7 + 81 | 24 | 7.9 | 21 22.8 + 81 36 | 6.0x | 9' | 6.9 6.4 6.4 | |
| 20 45 + 81.5 | 712 | 20 44.4 + 81 | 30 | 7.5 | 20 41.6 + 81 39 | 8 | | 7.4 6.9 6.9 | |
| 19 19 + 80.5 | 609 | 19 18.9 + 80 | 30 | 7.1 | 19 15.5 + 80 35 | 5.9x | 9' | 6.8 6.3 6.3 | |
| 22 25 + 81.2 | 775 | 22 24.1 + 81 | 12 | 7.0 | 22 23.7 + 81 26 | 5.6x | 6' | 7.6 7.1 7.1 | |
| 20 54 + 81.9 | 718 | 20 52.8 + 81 | 59 | 6.0 | 20 49.8 + 82 10 | 4.4x | 2' | 6.7 6.2 6.2 | |
| 20 33 + 81.8 | 706 | 20 32.0 + 81 | 53 | 7.4 | 20 28.7 + 82 21 | 5.8x | 5' | 6.3 5.8 5.8 | |
| 20 19 + 81.8 | 699 | 20 19.0 + 81 | 46 | 7.5 | 20 15.6 + 81 53 | 6.3x | 5' | 6.7 6.2 6.2 | |
| 19 29 + 81.4 | 659 | 19 28.0 + 81 | 22 | 7.9 | 19 24.1 + 81 28 | | | 7.0 6.5 6.5 | |
| 19 9 + 80.7 | 603 | 19 7.7 + 80 | 42 | 8.2 | 19 4.1 + 80 46 | 6.3x | 9' | 7.1 6.6 6.6 | |
| 22 58 + 81.1 | 801 | 22 53.1 + 81 | 10 | 8.0 | 22 53.5 + 81 24 | | | 7.1 6.6 6.6 | |
| 22 10 + 81.9 | 767 | 22 10.0 + 81 | 57 | 7.7 | 22 9.0 + 82 10 | 5.6x | 9' | 7.4 6.9 6.9 | |
| 22 4 + 82.2 | 674 | 22 3.3 + 82 | 10 | 8.0 | 22 2.0 + 82 23 | 5.4x | 3' | 6.5 6.0 6.0 | |
| 21 31 + 82.4 | 648 | 21 30.2 + 82 | 21 | 8.0 | 21 27.9 + 82 33 | | | 5.7 5.2 5.2 | |
| 21 10 + 82.4 | 636 | 21 8.4 + 82 | 24 | 8.5 | 21 5.3 + 82 35 | 6.3x | 5' | 6.7 6.2 6.2 | |
| 20 52 + 82.5 | 627 | 20 51.5 + 82 | 31 | 8.6 | 20 48.1 + 82 41 | 6.5x | 5' | 7.0 6.5 6.5 | |
| 20 39 + 82.7 | 617 | 20 38.2 + 82 | 41 | 7.0 | 20 34.4 + 82 51 | 5.9x | 1' | 6.0 5.5 5.5 | |
| 20 34 + 82.4 | 613 | 20 33.1 + 82 | 32 | 8.5 | 20 29.4 + 82 31 | 6.3x | 6' | 6.5 6.0 6.0 | |
| 19 29 + 81.6 | 660 | 19 28.3 + 81 | 39 | 8.0 | 19 24.2 + 81 45 | 6.2x | 7' | 6.9 6.4 6.4 | |
| 22 49 + 82.4 | 703 | 22 47.9 + 82 | 23 | 5.0 | 22 47.9 + 82 37 | 5.9x | 1' | 4.8 4.3 4.3 | |
| 22 4 + 82.8 | 672 | 22 3.2 + 82 | 48 | 8.2 | 22 1.5 + 83 1 | 5.8x | 7' | 5.8 5.3 5.3 | |
| 20 44 + 83.2 | 588 | 20 43.2 + 83 | 7 | 6.2 | 20 39.2 + 83 16 | 5.9x | 8' | 6.5 6.0 6.0 | |
| 20 15 + 82.9 | 682 | 20 14.1 + 82 | 52 | 8.5 | 20 10.0 + 83 7 | 6.4x | 6' | 5.2 4.7 4.7 | |
| 19 17 + 82.5 | 578 | 19 16.6 + 82 | 28 | 7.7 | 19 11.7 + 82 31 | 6.0x | 5' | 7.0 6.5 6.5 | |
| 19 10 + 82.2 | 572 | 19 9.4 + 82 | 9 | 6.0 | 19 4.7 + 82 13 | 5.3x | 4' | 6.5 6.0 6.0 | |
| 22 45 + 82.5 | 700 | 22 44.1 + 82 | 30 | 8.0 | 22 43.9 + 82 44 | 5.6x | 6' | 5.2 4.7 4.7 | |
| 21 54 + 83.4 | 618 | 21 52.7 + 83 | 22 | 7.2 | 21 50.3 + 83 35 | 5.6x | 2' | 7.0 6.5 6.5 | |
| 21 38 + 83.2 | 613 | 21 38.1 + 83 | 12 | 8.6 | 21 35.4 + 83 24 | 5.8x | 13' | 6.5 6.0 6.0 | |
| 21 26 + 83.6 | 603 | 21 35.0 + 83 | 39 | 7.5 | 21 31.5 + 83 50 | 6.0x | 4' | 5.2 4.7 4.7 | |

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Plate 3127

| V. | H. | Type. | No. Rem. | No. Series | K | Focus | Other Series |
|-----|------|-------|----------|------------|----------|-------|---------------|
| 8.8 | 14.7 | A? | . | 5 | $K=H$ | 2 | F |
| 8.4 | 19.7 | A | . | 8 | $K=.2H$ | 3 | F |
| 7.1 | 10.5 | A | . | 5 | A | 2 | - |
| 7.9 | 12.2 | A | . | 3 | A | 1 | - |
| 7.3 | 14.9 | A | . | 3 | A | 1 | - |
| 7.3 | 16.3 | F | 811 | 3 | $K=H$ | 2 | F seen |
| 7.0 | 16.7 | A | . | 8 | $K=.3H$ | 2 | F |
| 7.1 | 22.5 | A | . | 7 | A | 3 | F |
| 6.3 | 7.7 | A | . | 5 | A | 2 | - |
| 6.8 | 8.6 | K | 812 | 3 | $K=1.2H$ | 4 | F bright seen |
| 6.0 | 9.3 | H | . | 2 | $K=H$ | 2 | - |
| 6.0 | 10.6 | H | . | 3 | $K=H$ | 2 | F |
| 6.2 | 16.1 | F | 813 | 3 | $K=H$ | 2 | F seen |
| 6.4 | 17.6 | A | . | 4 | A | 1 | - |
| 6.8 | 20.6 | A | . | 7 | $K=.3H$ | 3 | F |
| 6.8 | 22.4 | H | . | 2 | $K=H$ | 2 | - |
| 6.9 | 23.5 | A | . | 5 | $K=H$ | 2 | F |
| 5.0 | 9.7 | K | 814 | 3 | $K=H$ | 2 | F bright seen |
| 4.1 | 11.6 | A | . | 10 | A | 5 | F |
| 4.9 | 14.3 | A | . | 4 | $K=H$ | 1 | - |
| 4.3 | 21.3 | F? | 815 | 2 | $K=H$ | 2 | seen |
| 2.7 | 9.3 | A | . | 4 | A | 2 | - |
| 2.5 | 9.7 | A | . | 4 | $K=H$ | 3 | - |
| 2.6 | 14.0 | A | . | 5 | $K=.5H$ | 2 | F |

| No. | R.A. | Dec. | Mag. | R.A. | Dec. | Mean | Br. |
|--------------|------|--------------|------|-----------------------|--------|------|-------------|
| 21 3 + 83.4 | 596 | 31 2.8 + 83 | 23 | ✓ 20 59.0 + 83 34 | ✓ 5.82 | 3' | 6.1 5.6 5.7 |
| 19 35 + 83.2 | 552 | 19 33.4 + 83 | 10 | 6.0 ✓ 19 27.9 + 83 16 | ✓ 5.79 | 2' | 5.3 4.8 4.8 |
| 22 24 + 83.7 | 630 | 22 22.5 + 83 | 46 | 7.0 ✓ 22 20.9 + 84 0 | ✓ 5.64 | 4' | 6.0 5.5 5.6 |
| 21 49 + 83.6 | 616 | 21 48.4 + 83 | 39 | 8.8 ✓ 21 45.7 + 83 52 | ✓ 6.45 | 7' | 7.1 6.6 6.7 |
| 20 59 + 84.1 | 474 | 20 58.2 + 84 | 4 | 8.4 ✓ 20 53.4 + 84 15 | ✓ 6.78 | 2' | 6.9 6.4 6.5 |
| 20 31 + 84.1 | 462 | 20 30.0 + 84 | 5 | 7.0 ✓ 20 34.4 + 84 14 | ✓ 6.93 | 10' | 5.9 5.4 5.5 |
| 20 20 + 84.3 | 451 | 20 20.0 + 84 | 14 | 7.0 ✓ 20 14.0 + 84 23 | ✓ 6.47 | 11' | 5.4 4.9 5.0 |
| 18 44 + 83.1 | 536 | 18 43.2 + 83 | 4 | 6.2 ✓ 18 37.3 + 83 6 | ✓ 4.76 | 1' | 4.9 4.4 4.4 |
| 23 14 + 83.5 | 647 | 23 12.7 + 83 | 27 | 8.0 ✓ 23 13.2 + 83 42 | ✓ 5.62 | 9' | 6.5 6.0 6.1 |
| 22 56 + 83.6 | 640 | 22 55.4 + 83 | 34 | 5.0 ✓ 22 55.2 + 83 49 | ✓ 5.92 | 2' | 5.0 4.5 4.6 |
| 22 57 + 84.0 | 573 | 22 50.7 + 84 | 0 | 7.3 ✓ 22 50.0 + 84 14 | ✓ 5.92 | 7' | 5.9 5.4 5.5 |
| 22 30 + 84.4 | 509 | 22 29.2 + 84 | 19 | 7.2 ✓ 22 27.5 + 84 33 | ✓ 5.90 | 5' | 6.6 6.1 6.2 |
| 20 31 + 84.6 | 463 | 20 31.0 + 84 | 40 | 7.2 ✓ 20 24.5 + 84 49 | ✓ 7.05 | 84' | 7.0 6.5 6.6 |
| 20 1 + 84.4 | 445 | 20 0.5 + 84 | 24 | 8.5 ✓ 19 53.8 + 84 32 | ✓ 7.64 | 84' | 6.4 5.9 6.1 |
| 19 16 + 83.7 | 547 | 19 10.4 + 83 | 42 | 6.5 ✓ 19 4.0 + 83 47 | ✓ 5.25 | 2' | 7.0 6.5 6.7 |
| 18 43 + 83.3 | 535 | 18 42.5 + 83 | 15 | 7.4 ✓ 18 36.4 + 83 18 | | | 6.2 5.7 5.9 |
| 18 29 + 82.8 | 540 | 18 28.6 + 82 | 52 | 7.5 ✓ 18 22.9 + 82 54 | ✓ 5.44 | 7' | 6.8 6.3 6.5 |
| 22 55 + 84.6 | 517 | 22 54.2 + 84 | 36 | 6.5 ✓ 22 53.5 + 84 50 | ✓ 5.55 | 1' | 5.4 4.9 5.0 |
| 22 28 + 85.4 | 383 | 22 24.2 + 85 | 23 | 5.0 ✓ 22 21.3 + 85 36 | ✓ 5.32 | | 6.9 6.4 6.5 |
| 21 14 + 85.3 | 359 | 21 12.6 + 85 | 18 | 8.1 ✓ 21 6.5 + 85 29 | | | B - B B |
| 18 34 + 84.6 | 412 | 18 32.8 + 84 | 35 | 7.5 ✓ 18 24.6 + 84 37 | ✓ 7.04 | 6' | 7.1 6.6 6.8 |
| 23 31 + 85.4 | 403 | 23 29.7 + 85 | 23 | 7.8 ✓ 23 30.4 + 85 38 | ✓ 6.87 | 5.6 | 6.4 5.9 6.1 |
| 23 24 + 85.6 | 399 | 23 24.2 + 85 | 37 | 7.5 ✓ 23 24.4 + 85 52 | ✓ 6.71 | | 5.7 5.2 5.5 |
| 21 29 + 86.4 | 319 | 21 27.7 + 86 | 26 | 7.0 ✓ 21 19.6 + 86 37 | ✓ 7.14 | 2' | 5.9 5.4 5.7 |

St. lat. 4.9 Lon. &c. 7.3-6.7 F. ch. 7.0

Box No. 578

P. A. 23^h 00^m Dec. +81.5

May 13, 1889.

Plate 2841

| V. | H. | Type | No. Rem. | No. Stars | K | Fans | Other Stars |
|------|------|------|----------|-----------|--------|------|---------------|
| 22.5 | 18.0 | F | 516 | 2 | K=H | 1 | seen |
| 22.7 | 15.1 | A | . | 4 | K=H | 1 | - |
| 22.2 | 16.9 | A | . | 3 | K | 1 | - |
| 23.0 | 20.1 | A | . | 6 | K | 3 | - |
| 21.5 | 6.8 | A | . | 6 | K | 3 | F |
| 21.0 | 9.7 | F | 417 | 3 | K=H | 3 | Faint |
| 21.3 | 11.1 | K | 818 | 2 | K=1.5H | 5 | Bright Fishes |
| 21.6 | 12.7 | F | 819 | 2 | K=H | 1 | seen |
| 21.4 | 17.2 | A | . | 5 | K=.5H | 2 | F |
| 21.4 | 19.0 | A | . | 6 | K=.5H | 2 | - |
| 21.0 | 19.5 | A | . | 3 | K | 1 | - |
| 21.0 | 21.6 | A? | . | 3 | K | 1 | - |
| 20.9 | 11.9 | A | . | 7 | K | 2 | F |
| 20.8 | 12.1 | A | . | 7 | K | 2 | - |
| 20.4 | 13.6 | A | . | 6 | K=H | 2 | - |
| 20.4 | 17.1 | A | . | 4 | K | 2 | - |
| 20.0 | 17.6 | A | . | 5 | K=H | 1 | - |
| 19.7 | 15.4 | A | . | 3 | K | 1 | - |
| 19.0 | 15.7 | H | . | 3 | K=H | 2 | F |
| 19.5 | 16.7 | A | . | 6 | K | 2 | - |
| 19.0 | 18.0 | A | . | 11 | K=.1H | 4 | F |
| 19.0 | 18.3 | A | . | 9 | K=.1H | 4 | - |
| 19.9 | 18.8 | A | . | 8 | K | 3 | F |
| 18.1 | 8.9 | A | . | 4 | K=H | 1 | - |
| 18.8 | 13.3 | F | 820 | 2 | K=H | 1 | seen |
| 18.3 | 13.7 | A | . | 6 | K=.3H | 2 | F |
| 18.5 | 15.7 | A | 821 | 4 | K | 1 | - |
| 18.6 | 18.6 | A | . | 4 | K | 1 | - |
| 18.9 | 22.5 | A | . | 6 | K | 3 | - |

Dec. 1900
D.M. R.A. Dec. Mag. R.A. Dec. A.L. Mean

Mean - .1
Br. Br + Mean + Cor. Br.

| | | | | | | | | |
|----------------|----------------|----------------------------|----------------|----------------------------|------|---|------|------|
| 23 56.3 + 75.5 | 906 | 23 55.8 + 75 30 | 68.5 | 23 58.0 + 75 45 | | | | |
| 22 57.9 + 76.1 | 892 | 22 57.2 + 76 6 | 7.3 | 22 58.4 + 76 30 | 6.25 | | | |
| 22 42.2 + 76.5 | 874 | 22 42.0 + 76 26 | 8.5 | 22 42.9 + 76 40 | | | | |
| 22 16.8 + 75.7 | 820 | 22 16.6 + 75 46 | 6.8 | 22 17.1 + 76 0 | 5.52 | | | |
| 0 8.5 + 76.2 | 5 | 0 8.1 + 76 9 | 6.5 | 0 10.6 + 76 24 | 5.26 | 2 | 5.5 | 5.4 |
| 23 47 + 76.7 | 934 | 23 45.0 + 76 48 | 6.9 | 23 47.1 + 77 3 | 5.62 | 2 | 5.8 | 5.7 |
| 23 33.9 + 76.7 | 928 | 23 33.4 + 76 50 | 8.5 | 23 35.2 + 77 4 | 4.11 | | B | B |
| 23 18.7 + 76.7 | 915 | 23 18.9 + 76 43 | 7.9 | 23 20.4 + 76 58 | | | 6.9 | 6.8 |
| 22 39.0 + 76.8 | 870 | 22 39.0 + 76 51 | 7.5 | 22 39.8 + 77 5 | 6.02 | 0 | 6.0 | 5.9 |
| 22 22.5 + 76.7 | 859 | 22 23.4 + 76 42 | 7.3 | 22 23.9 + 76 56 | 5.92 | 1 | 6.0 | 5.9 |
| 22 19.0 + 76.8 | 857 | 22 18.8 + 76 50 | 8.2 | 22 19.2 + 77 4 | 6.62 | 4 | 7.0 | 6.9 |
| 22 1 + 76.6 | 849 | 22 0.4 + 76 38 | 8.0 | 22 0.6 + 76 51 | | | 6.9 | 6.8 |
| 23 26.5 + 77.0 | 909 | 23 26.2 + 77 0 | 6.8 | 23 27.9 + 77 15 | 5.69 | 1 | 5.6 | 5.5 |
| 23 25.9 + 77.1 | 908 | 23 25.2 + 77 5 | 7.0 | 23 26.8 + 77 20 | 5.82 | 1 | 5.7 | 5.6 |
| 23 11.8 + 77.4 | 896 | 23 11.9 + 77 22 | 7.3 | 23 13.3 + 77 37 | 5.97 | 0 | 6.0 | 5.9 |
| 22 38.5 + 77.3 | 868 | 22 38.4 + 77 16 | 8.1 | 22 39.1 + 77 30 | 6.12 | 1 | 6.2 | 6.1 |
| 22 34.0 + 77.5 | 866 | 22 33.8 + 77 29 | 8.5 | 22 34.4 + 77 43 | | | 6.8 | 6.7 |
| 22 52.9 + 77.7 | 879 | 22 53.7 + 77 44 | 7.3 | 22 54.7 + 77 58 | | | 6.6 | 6.5 |
| 22 51.2 + 78.1 | 813 | 22 50.9 + 78 8 | 7.7 | 22 51.8 + 78 22 | 6.22 | 2 | 6.42 | 6.3 |
| 22 41.8 + 77.7 | 871 | 22 41.5 + 77 44 | 7.2 | 22 42.2 + 77 58 | 5.82 | 2 | 6.85 | 6.7 |
| 22 28.8 + 78.1 | 801 | 22 28.6 + 78 4 | 5.7 | 22 29.0 + 78 19 | 4.71 | 5 | 5.6 | 5.5 |
| 22 26.0 + 78.1 | 796 | 22 25.6 + 78 1 | 6.0 | 22 26.0 + 78 17 | 5.01 | 4 | 4.2 | 4.1 |
| 22 22.5 + 77.5 | 860 | 22 22.4 + 77 30 | 6.8 | 22 22.8 + 77 44 | 5.56 | 2 | 4.6 | 4.5 |
| 23 58.0 + 78.2 | 855 | 23 58.1 + 78 8 | 9.1 | 0 0.4 + 78 23 | | | 5.3 | 5.2 |
| 23 15.0 + 78.2 | 826 | 23 14.8 + 78 12 | 7.7 | 23 16.2 + 78 27 | | | 6.9 | 6.8 |
| 23 11.7 + 78.4 | 825 | 23 11.4 + 78 27 | 7.5 | 23 12.7 + 78 42 | Box | 1 | 6.72 | 6.62 |
| 22 51.3 + 78.3 | 814 | 22 51.0 + 78 18 | 8.5 | 22 51.9 + 78 32 | Box | 5 | 7.05 | 6.95 |
| 22 22.0 + 78.2 | 791 | 22 21.7 + 78 8 | 8.6 | 22 22.0 + 78 22 | | | 5.9 | 5.8 |
| 21 47.2 + 77.5 | 834 | 21 46.8 + 77 34 | 7.0 | 21 46.2 + 77 47 | 5.76 | 1 | 6.5 | 6.4 |
| | | | | | | | 6.6 | 6.5 |
| | | | | | | | 5.6 | 5.5 |

May 13, 1889.

Plate 2841

| V. | H. | Type. | Rev. | to. Lines | K. | Focus | Other Lines |
|------|------|-------|------|-----------|---------|-------|---------------|
| 17.0 | 11.6 | A | . | 6 | K | 2 | — |
| 17.7 | 12.7 | A | . | 4 | K | 2 | — |
| 17.1 | 12.7 | A | . | 7 | $K=H$ | 2 | — |
| 17.0 | 13.5 | A | . | 8 | $K=.2H$ | 3 | F |
| 17.0 | 13.9 | A | . | 4 | $K=H$ | 1 | — |
| 17.5 | 14.0 | P | 821 | 2 | $K=H$ | 1 | seen |
| 16.7 | 9.0 | A | . | 9 | $K=.5H$ | 4 | F |
| 16.8 | 10.1 | P | 822 | 2 | $K=H$ | 2 | seen |
| 16.7 | 10.5 | P | 823 | 2 | $K=H$ | 2 | seen |
| 16.4 | 12.8 | H | . | 1 | K | 1 | — |
| 16.5 | 13.6 | H | . | 3 | $K=H$ | 1 | F |
| 16.2 | 15.1 | P | 824 | 3 | $K=H$ | 2 | F seen |
| 16.2 | 16.6 | A | . | 5 | K | 2 | — |
| 16.5 | 18.6 | A | . | 4 | K | 1 | — |
| 16.6 | 21.1 | P | 825 | 3 | $K=H$ | 2 | F seen |
| 15.5 | 7.7 | A | . | 10 | K | 4 | F |
| 15.7 | 9.8 | P | 826 | 3 | $K=H$ | 2 | F seen |
| 15.4 | 11.1 | A | . | 5 | K | 2 | F |
| 15.8 | 14.4 | A | . | 6 | K | 3 | F |
| 15.5 | 14.5 | A | . | 5 | K | 1 | — |
| 15.4 | 15.0 | A | . | 10 | $K=.8H$ | 2 | F |
| 15.9 | 16.3 | H | . | 3 | $K=H$ | 2 | F |
| 15.2 | 17.7 | K | 827 | 3 | $K=H$ | 2 | F bright seen |
| 15.3 | 20.4 | K? | 828 | 1 | K | 2 | bright seen |
| 15.9 | 20.8 | A | . | 7 | $K=H$ | 2 | F |
| 14.0 | 10.0 | A | . | 4 | K | 1 | — |
| 14.0 | 11.8 | A | . | 7 | $K=.2H$ | 3 | — |
| 14.7 | 12.6 | A | . | 6 | K | 2 | F |
| 14.8 | 14.2 | A | . | 5 | K | 2 | — |

| No. | D.M. | P.L. | Dec. | Mag. | R.A. | Dec. | Mean | Br. | | |
|----------------|------|------|-----------|------|------|-----------------|------|-----|---|-------------|
| 23 34.0 + 79.0 | 790 | 23 | 34.0 + 79 | 1 | 8.2 | 23 35.7 + 79 16 | 6.00 | 1 | ✓ | 5.9 5.8 5.7 |
| 23 23.0 + 78.7 | 834 | 23 | 22.4 + 78 | 45 | 8.0 | 23 23.9 + 79 0 | 5.75 | 7 | ✓ | 6.5 6.4 6.3 |
| 23 23.0 + 79.0 | 835 | 23 | 22.5 + 78 | 60 | 7.5 | 23 24.0 + 79 15 | 5.82 | 0 | ✓ | 5.8 5.7 5.6 |
| 23 14.0 + 79.1 | 777 | 23 | 13.9 + 79 | 6 | 7.8 | 23 15.2 + 79 21 | 5.57 | 4 | ✓ | 5.2 5.1 5.0 |
| 23 10 + 79.1 | 772 | 23 | 9.6 + 79 | 7 | 8.7 | 23 10.7 + 79 22 | 6.2 | 4 | ✓ | 6.6 6.5 6.4 |
| 23 8.5 + 78.8 | 823 | 23 | 8.2 + 78 | 51 | 8.5 | 23 7.3 + 79 6 | 6.32 | 3 | ✓ | 6.6 6.5 6.4 |
| 0 1.8 + 78.9 | 1 | 0 | 1.5 + 78 | 55 | 6.5 | 0 3.8 + 79 10 | 5.04 | 4 | ✓ | 4.6 4.5 4.4 |
| 23 50.8 + 78.9 | 851 | 23 | 50.1 + 78 | 57 | 7.8 | 23 52.2 + 79 12 | 5.95 | 0 | ✓ | 6.0 5.9 5.8 |
| 23 46.4 + 79.0 | 796 | 23 | 46.1 + 79 | 2 | 8.3 | 23 48.1 + 79 17 | 6.2 | 3 | ✓ | 6.5 6.4 6.3 |
| 23 21.2 + 79.4 | 781 | 23 | 21.7 + 79 | 22 | 8.8 | 23 23.1 + 79 37 | | | | 6.8 6.7 6.7 |
| 23 13.9 + 79.4 | 776 | 23 | 13.1 + 79 | 21 | 8.5 | 23 14.3 + 79 36 | | | | 7.2 7.1 7.1 |
| 22 57 + 79.5 | 759 | 22 | 56.6 + 79 | 34 | 7.5 | 22 57.4 + 79 48 | 5.82 | 0 | ✓ | 6.8 6.7 6.7 |
| 22 39.9 + 79.4 | 749 | 22 | 39.4 + 79 | 27 | 8.8 | 22 39.8 + 79 41 | | | | 7.3 7.2 7.2 |
| 22 19.2 + 79.2 | 734 | 22 | 18.4 + 79 | 10 | 8.3 | 22 18.4 + 79 24 | | | | 5.8 5.7 5.7 |
| 21 54.0 + 78.8 | 768 | 21 | 53.8 + 78 | 52 | 6.5 | 21 53.3 + 79 5 | 6.32 | 2 | ✓ | 6.3 6.2 6.2 |
| 0 18 + 79.2 | 10 | 0 | 17.9 + 79 | 14 | 7.0 | 0 20.7 + 79 30 | 5.12 | 3 | ✓ | 6.4 6.3 6.3 |
| 23 57 + 79.5 | 799 | 23 | 55.4 + 79 | 30 | 7.5 | 23 57.6 + 79 45 | 5.92 | 1 | ✓ | 6.6 6.5 6.4 |
| 23 43 + 79.7 | 793 | 23 | 41.8 + 79 | 45 | 8.3 | 23 43.7 + 80 0 | 6.27 | 1 | ✓ | 6.0 5.9 5.9 |
| 23 5 + 79.7 | 769 | 23 | 4.6 + 79 | 47 | 7.5 | 23 3.5 + 80 2 | 5.42 | 0 | ✓ | 7.2 7.1 7.1 |
| 23 5 + 79.8 | 768 | 23 | 4.4 + 79 | 51 | 7.7 | 23 3.3 + 80 6 | 6.02 | 4 | ✓ | 6.5 6.4 6.4 |
| 22 59 + 80.0 | 761 | 22 | 58.8 + 79 | 60 | 7.2 | 22 59.6 + 80 14 | 5.55 | 5 | ✓ | 5.4 5.3 5.3 |
| 22 44 + 79.6 | 760 | 22 | 42.8 + 79 | 40 | 7.0 | 22 43.3 + 79 54 | 6.32 | 4 | ✓ | 5.6 5.5 5.5 |
| 22 28 + 79.9 | 739 | 22 | 26.2 + 79 | 58 | 7.5 | 22 26.1 + 80 11 | 6.05 | 3 | ✓ | 4.9 4.8 4.8 |
| 21 57 + 79.6 | 721 | 21 | 56.4 + 79 | 37 | 6.4 | 21 53.9 + 79 50 | 6.32 | 4 | ✓ | 5.8 5.7 5.7 |
| 21 55 + 79.3 | 720 | 21 | 53.9 + 79 | 16 | 8.2 | 21 53.4 + 79 29 | 5.92 | 4 | ✓ | 6.3 6.2 6.2 |
| 23 58 + 80.3 | 793 | 23 | 58.2 + 80 | 17 | 8.8 | 0 0.5 + 80 32 | | | | 5.7 5.6 5.6 |
| 23 37 + 80.5 | 780 | 23 | 37.1 + 80 | 30 | 7.8 | 23 38.8 + 80 46 | 5.82 | 4 | ✓ | 6.3 6.2 6.2 |
| 23 27 + 80.2 | 770 | 23 | 25.8 + 80 | 12 | 8.2 | 23 27.2 + 80 37 | 6.02 | 2 | ✓ | 5.7 5.6 5.6 |
| 23 9 + 80.2 | 752 | 23 | 7.7 + 80 | 13 | 9.0 | 23 8.6 + 80 28 | | | | 6.3 6.2 6.2 |

May 14 1889.

Plate 2841

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| V. | H. | Type | No. Rem. | No. Lines | K | Form | Other Lines |
|------|------|----------------|----------|----------------|---------|------|-------------|
| 14.2 | 14.2 | H ² | | 2 | K=H | 2 | — |
| 14.2 | 15.3 | A | | 5 | H | 2 | — |
| 14.0 | 16.4 | H | 829 | 2 ³ | K=1.2 H | 3 | F. Seen. |
| 14.4 | 20.7 | F ² | 830 | 2 | K=H | 1 | Seen |
| 14.3 | 20.8 | A | | 4 | K=H | 1 | — |
| 14.0 | 22.5 | K | 831 | 2 | K=H | 3 | Br. Seen |
| 14.0 | 23.2 | F | 832 | 2 | K=H | 2 | Seen |
| 13.0 | 8.3 | A | | 7 | H | 2 | F |
| 13.8 | 11.5 | A | | 8 | K=H | 2 | F |
| 14.0 | 12.2 | H ² | | 2 | K=H | 1 | — |
| 13.7 | 12.3 | F | 833 | 2 | K=H | 1 | Seen |
| 13.2 | 13.5 | A | | 5 | K=H | 2 | F |
| 13.9 | 13.7 | A | | 3 | H | 1 | — |
| 13.2 | 14.1 | A | | 6 | K=H | 2 | F |
| 13.2 | 14.2 | F | 834 | 3 | K=H | 2 | F. Seen |
| 13.0 | 15.3 | I | 835 | 3 | K=H | 2 | F. Seen |
| 13.5 | 15.3 | A | | 3 | H | 1 | — |
| 13.0 | 15.6 | A | | 4 | K=H | 2 | — |
| 13.0 | 16.0 | I | 836 | 3 | K=H | 2 | F. Seen |
| 13.0 | 21.3 | A ² | | 3 | H | 1 | — |
| 13.1 | 22.3 | F | 837 | 2 | K=H | 1 | Seen |
| 13.0 | 23.1 | A | | 6 | H | 3 | F |
| 12.8 | 11.3 | A | | 4 | K=H | 2 | — |
| 12.2 | 13.7 | H | | 3 | K=H | 2 | F. |
| 12.1 | 14.1 | H | | 3 | K=H | 3 | F. |
| 12.3 | 17.0 | A | | 4 | H | 2 | — |
| 12.8 | 17.5 | F | 838 | 3 | K=1.2 H | 3 | F. Seen |
| 12.3 | 22.7 | A | | 8 | H | 4 | F |
| 12.4 | 23.3 | I | 839 | 2 | K=H | 2 | Seen |

| Mo. | D.M. | R.A. | Dec. | Mag. | R.A. | Dec. | 1900 | Mean | Br. | | |
|-----|------|-------|------|------|------|------|------|------|-----|-----|-----|
| | 754 | 23 | 53.3 | +80 | 34 | 7.9 | | | 6.3 | 6.2 | 6.2 |
| 23 | 10 | +80.5 | 789 | 22 | 53.3 | +80 | 31 | 7.9 | 6.8 | 6.7 | 6.7 |
| 22 | 55 | +80.5 | 739 | 22 | 53.3 | +80 | 31 | 7.9 | 6.0 | 5.9 | 5.9 |
| 22 | 39 | +80.6 | 731 | 22 | 39.1 | +80 | 36 | 6.7 | 5.3 | 5.2 | 5.2 |
| 21 | 52 | +79.9 | 717 | 21 | 50.9 | +79 | 59 | 8.0 | 6.5 | 6.4 | 6.4 |
| 21 | 50 | +80.1 | 706 | 21 | 49.1 | +80 | 2 | 8.2 | 6.3 | 6.2 | 6.2 |
| 21 | 30 | +79.9 | 707 | 21 | 29.0 | +79 | 54 | 6.0 | 5.1 | 5.0 | 5.0 |
| 21 | 24 | +79.7 | 701 | 21 | 22.7 | +79 | 44 | 7.8 | 5.4 | 5.3 | 5.3 |
| 0 | 22 | +80.5 | 10 | 0 | 21.2 | +80 | 34 | 7.9 | 5.9 | 5.8 | 5.8 |
| 23 | 41 | +80.5 | 784 | 23 | 40.6 | +80 | 34 | 8.0 | 6.1 | 6.0 | 6.0 |
| 23 | 34 | +80.5 | 778 | 23 | 32.4 | +80 | 32 | 8.5 | 5.8 | 5.7 | 5.7 |
| 23 | 32 | +80.6 | 776 | 23 | 30.9 | +80 | 42 | 8.3 | 6.2 | 6.1 | 6.1 |
| 23 | 18 | +81.1 | 818 | 23 | 16.9 | +81 | 8 | 8.5 | 7.0 | 6.9 | 6.9 |
| 23 | 15 | +80.6 | 758 | 23 | 14.0 | +80 | 38 | 8.9 | 6.5 | 6.4 | 6.4 |
| 23 | 11 | +80.9 | 755 | 23 | 9.3 | +80 | 59 | 8.5 | 6.4 | 6.3 | 6.3 |
| 23 | 10 | +81.0 | 812 | 23 | 8.2 | +81 | 2 | 8.3 | 5.8 | 5.7 | 5.7 |
| 22 | 55 | +81.2 | 801 | 22 | 53.1 | +81 | 10 | 8.0 | 6.4 | 6.3 | 6.3 |
| 22 | 54 | +80.9 | 737 | 22 | 52.7 | +80 | 54 | 8.9 | 6.8 | 6.7 | 6.7 |
| 22 | 50 | +81.2 | 795 | 22 | 48.2 | +81 | 10 | 8.9 | 6.2 | 6.1 | 6.1 |
| 22 | 44 | +81.1 | 788 | 22 | 42.8 | +81 | 8 | 7.7 | 6.2 | 6.1 | 6.1 |
| 21 | 39 | +80.5 | 700 | 21 | 38.5 | +80 | 31 | 8.2 | 6.9 | 6.8 | 6.8 |
| 21 | 29 | +80.3 | 695 | 21 | 27.4 | +80 | 18 | 8.9 | 6.8 | 6.7 | 6.7 |
| 21 | 19 | +80.2 | 688 | 21 | 18.2 | +80 | 12 | 6.5 | 5.6 | 5.5 | 5.5 |
| 23 | 47 | +81.0 | 838 | 23 | 45.4 | +81 | 2 | 8.0 | 6.3 | 6.2 | 6.2 |
| 23 | 15 | +81.5 | 816 | 23 | 14.6 | +81 | 32 | 8.1 | 5.9 | 5.8 | 5.8 |
| 23 | 10 | +81.6 | 814 | 23 | 9.6 | +81 | 36 | 8.0 | 5.7 | 5.6 | 5.6 |
| 22 | 30 | +81.4 | 781 | 22 | 29.4 | +81 | 25 | 8.5 | 6.1 | 6.0 | 6.0 |
| 22 | 25 | +81.2 | 775 | 22 | 24.1 | +81 | 12 | 7.0 | 6.0 | 6.4 | 6.4 |
| 21 | 19 | +80.6 | 690 | 21 | 19.2 | +80 | 37 | 6.3 | 5.3 | 5.2 | 5.2 |
| 21 | 14 | +80.4 | 682 | 21 | 12.9 | +80 | 35 | 7.0 | 4.7 | 4.6 | 4.6 |

May, 14, 1889.

Plate 2841

| V. | H. | Type | No. Rem. | No. Lines | K | Focus | Other Lines |
|-------|------|------|----------|-----------|--------|-------|--------------|
| 12.0 | 23.4 | A | | 7 | K=H | 3 | F |
| 11.1 | 6.6 | A | | 7 | K | 3 | F |
| 11.4 | 7.4 | I | 840 | 2 | K=H | 2 | Seen |
| 11.1 | 11.9 | I | 841 | 2 | K=H | 1 | — |
| 11.1 | 12.1 | I | 842 | 3 | K=H | 2 | F. Seen. |
| 11.8 | 14.3 | H | | 3 | K=H | 2 | F |
| 11.8 | 15.9 | H | | 2 | K | 1 | F |
| 11.0 | 18.2 | A | | 6 | K | 3 | F |
| 11.0 | 20.8 | A | | 3 | K | 1 | — |
| 11.8 | 21.4 | H | | 3 | K=H | 2 | F |
| 11.0 | 21.7 | K | 843 | 2 | K=H | 2 | Br. Seen. |
| 11.5 | 21.9 | H | | 2 | K | 1 | F |
| 10.8 | 6.5 | A | | 5 | K | 2 | F |
| 10.8 | 8.5 | F | 844 | 3 | K=1.5H | 3 | F. Seen. |
| 11.0 | 10.9 | A | | 3 | K | 1 | — |
| 11.5 | 11.1 | A | | 9 | K=.2H | 3 | F |
| 10.3 | 11.5 | A | | 10 | K=.2H | 4 | F |
| 10.7 | 11.9 | A | | 3 | K | 2 | — |
| 10.4 | 12.7 | H | | 2 | K=H | 2 | — |
| 10.8 | 15.0 | A? | | 3 | K | 1 | — |
| 10.6 | 15.5 | K | 845 | 3 | K=1.2H | 4 | F. Br. Seen. |
| 10.2 | 15.7 | A | | 6 | K | 3 | F |
| 10.6 | 18.5 | F | 846 | 3 | K=1.2H | 3 | F. Seen |
| 10.2 | 21.2 | F | 847 | 2 | K=H | 2 | Seen |
| 10.0 | 22.1 | E | | 2 | K=H | 1 | — |
| 10.1 | 22.2 | E | | 2 | K=H | 1 | — |
| 10.6 | 23.3 | F | 848 | 3 | K=H | 2 | F. Seen |
| 9.7 | 7.9 | A | | 3 | K | 1 | — |
| 2400. | 9.0 | F | 849 | 3 | K=H | 2 | F. Seen |

| No. | | D.M. | | R.A. Dec. | | Mag. | | R.A. Dec. | | 1900 | | Mean | | B _u | |
|-----|----|-------|-----|-----------|------|------|----|-----------|---|------|-------|------|----|----------------|-------|
| 21 | 10 | +80.5 | 679 | 21 | 10.0 | +80 | 36 | 7.0 | ✓ | 21 | 8.2 | +80 | 47 | 5.7R | 4 ✓ |
| 0 | 50 | +81.1 | 25 | 0 | 49.6 | +81 | 6 | 7.5 | ✓ | 0 | 53.3 | +81 | 21 | 5.3R | 3 ✓ |
| 0 | 39 | +81.2 | 18 | 0 | 38.5 | +81 | 10 | 7.6 | ✓ | 0 | 42.0 | +81 | 25 | 6.1R | 1 ✓ |
| 23 | 44 | +81.9 | 832 | 23 | 42.2 | +81 | 59 | 8.8 | ✓ | 23 | 43.9 | +82 | 14 | | |
| 23 | 39 | +82.0 | 735 | 23 | 39.7 | +82 | 0 | 8.2 | ✓ | 23 | 41.4 | +82 | 15 | 6.3R | 1 ✓ |
| 23 | 7 | +81.7 | 810 | 23 | 6.8 | +81 | 48 | 8.1 | ✓ | 23 | 7.4 | +82 | 3 | 5.9R | 1 ✓ |
| 22 | 44 | +81.7 | 789 | 22 | 43.2 | +81 | 44 | 8.0 | ✓ | 22 | 43.2 | +81 | 38 | 6.1R | 3 ✓ |
| 22 | 10 | +81.9 | 767 | 22 | 10.0 | +81 | 57 | 7.7 | ✓ | 22 | 9.0 | +82 | 10 | 5.6R | 2 ✓ |
| 21 | 36 | +81.5 | 744 | 21 | 35.3 | +81 | 33 | 9.2 | ✓ | 21 | 33.6 | +81 | 45 | | |
| 21 | 34 | +81.1 | 742 | 21 | 32.4 | +81 | 6 | 8.0 | ✓ | 21 | 30.8 | +81 | 18 | | |
| 21 | 25 | +81.4 | 736 | 21 | 24.7 | +81 | 24 | 7.9 | ✓ | 21 | 22.8 | +81 | 36 | 6.0R | 2 ✓ |
| 21 | 24 | +81.2 | 735 | 21 | 23.6 | +81 | 8 | 7.8 | ✓ | 21 | 21.7 | +81 | 20 | | |
| 0 | 54 | +81.2 | 30 | 0 | 52.5 | +81 | 11 | 8.3 | ✓ | 0 | 56.3 | +81 | 26 | 5.7R | 0 ✓ |
| 0 | 30 | +81.7 | 13 | 0 | 29.0 | +81 | 42 | 6.5 | ✓ | 0 | 32.24 | +81 | 56 | 5.3R | 5 ✓ |
| 23 | 57 | +81.8 | 841 | 23 | 55.9 | +81 | 54 | 9.2 | ✓ | 23 | 58.1 | +82 | 9 | | |
| 23 | 56 | +82.2 | 748 | 23 | 55.4 | +82 | 10 | 7.0 | ✓ | 23 | 57.6 | +82 | 25 | 5.5R | 3 ✓ |
| 23 | 51 | +82.4 | 743 | 23 | 49.7 | +82 | 23 | 6.0 | ✓ | 23 | 51.7 | +82 | 38 | 5.0R | 5 ✓ |
| 23 | 43 | +82.2 | 736 | 23 | 42.8 | +82 | 11 | 8.5 | ✓ | 23 | 44.5 | +82 | 26 | 6.3R | 1 ✓ |
| 23 | 34 | +82.4 | 728 | 23 | 31.8 | +82 | 24 | 7.5 | ✓ | 23 | 33.2 | +82 | 39 | 5.9R | 2 ✓ |
| 22 | 57 | +82.3 | 707 | 22 | 56.4 | +82 | 17 | 8.5 | ✓ | 22 | 56.7 | +82 | 31 | | |
| 22 | 49 | +82.4 | 703 | 22 | 47.9 | +82 | 23 | 5.0 | ✓ | 22 | 47.9 | +82 | 37 | 5.9R | 4.9 ✓ |
| 22 | 45 | +82.5 | 700 | 22 | 44.1 | +82 | 30 | 8.0 | ✓ | 22 | 43.9 | +82 | 44 | 5.6R | 4 ✓ |
| 22 | 4 | +82.2 | 673 | 22 | 3.2 | +82 | 10 | 7.5 | ✓ | 22 | 2.0 | +82 | 23 | 5.1R | 4 ✓ |
| 21 | 25 | +81.8 | 737 | 21 | 25.2 | +81 | 54 | 7.5 | ✓ | 21 | 23.0 | +82 | 6 | 5.8R | 5 ✓ |
| 21 | 16 | +81.7 | 729 | 21 | 13.6 | +81 | 45 | 8.7 | ✓ | 21 | 11.2 | +81 | 56 | | |
| 21 | 15 | +81.7 | 728 | 21 | 13.4 | +81 | 42 | 8.8 | ✓ | 21 | 11.0 | +81 | 53 | | |
| 21 | 4 | +81.2 | 725 | 21 | 3.0 | +81 | 14 | 8.0 | ✓ | 21 | 0.6 | +81 | 25 | 6.2R | 1 ✓ |
| 0 | 42 | +81.9 | 23 | 0 | 41.9 | +81 | 58 | 9.3 | ✓ | 0 | 45.6 | +82 | 13 | | |
| 0 | 49 | +82.3 | 23 | 0 | 46.0 | +82 | 19 | 8.4 | ✓ | 0 | 49.9 | +82 | 34 | 5.9R | 1 ✓ |

May, 14 1889.

Plate 2841

| V. | H. | Type | Rem. | Sp. | K | From | after |
|-----------|------|------|------|-----|--------|------|----------|
| 9.5 | 10.4 | H | | 2 | K=H | 1 | - |
| 23 30 9.5 | 10.5 | A? | | 5 | K=H | 2 | F |
| 9.9 | 11.8 | E | | 2 | K=H | 1 | - |
| 9.3 | 13.4 | A | | 4 | K | 1 | F |
| 9.4 | 15.4 | P | 830 | 3 | K=1.2H | 3 | Seen |
| 9.5 | 17.0 | P? | 851 | 2 | K=H | 1 | Seen |
| 9.3 | 17.6 | H? | | 2 | K=H | 1 | - |
| 9.2 | 18.3 | A | | 9 | K=.8H | 3 | F |
| 9.1 | 18.7 | H | | 3 | K=H | 1 | F |
| 9.0 | 20.2 | E? | | 2 | K=H | 1 | - |
| 9.4 | 20.6 | A | | 7 | ? | 2 | F |
| 9.0 | 23.2 | A | | 7 | K | 5 | F |
| 8.0 | 7.6 | A | | 5 | K=H | 2 | - |
| 8.0 | 8.4 | A? | | 3 | K | 1 | - |
| 8.0 | 8.6 | A | | 4 | K | 1 | - |
| 8.2 | 8.7 | A | | 11 | K=.2H | 5 | F |
| 8.7 | 9.6 | A | | 6 | K=.5H | 2 | F |
| 8.3 | 11.0 | A? | | 3 | K | 1 | - |
| 8.2 | 11.2 | P? | 852 | 3 | K=H | 2 | Seen |
| 8.6 | 12.4 | A | | 3 | K | 1 | - |
| 8.5 | 13.0 | E | | 2 | K=H | 1 | - |
| 8.5 | 14.1 | A | | 7 | K | 3 | F |
| 8.3 | 15.0 | K | 853 | 3 | K=1.2H | 4 | F bright |
| 8.9 | 17.4 | A? | | 4 | K=H | 1 | - |
| 8.2 | 18.3 | I | 854 | 2 | K=H | 1 | seen |
| 8.1 | 18.5 | A | | 8 | K=.3H | 3 | F |
| 8.0 | 19.2 | P | 855 | 3 | K=H | 2 | Seen |
| 8.1 | 19.5 | A | | 5 | K=H | 1 | F |
| 8.5 | 19.9 | P? | 856 | 2 | K=H | 1 | seen |

| No. | DM. | P.A. | Dec. | Mag. | R.A. | Dec. | 1900 | A.C. | Mean | | | |
|-------|-------|------|------|------|------|------|------|------|------|-----|----|------|
| 0 11 | +82.5 | 5 | 0 | 9.4 | +82 | 34 | 8.6 | 0 | 12.1 | +82 | 49 | 6.20 |
| 0 9 | +82.6 | 4 | 0 | 7.4 | +82 | 34 | 8.8 | 0 | 10.1 | +82 | 49 | 6.20 |
| 23 30 | +82.6 | 742 | 23 | 45.8 | +82 | 34 | 9.3 | +82 | 49 | | | |
| 23 25 | +82.9 | 720 | 23 | 23.2 | +82 | 58 | 9.2 | 23 | 24.1 | +83 | 13 | 6.6 |
| 22 50 | +82.9 | 704 | 22 | 48.8 | +82 | 56 | 8.0 | 22 | 48.6 | +83 | 9 | 5.60 |
| 22 24 | +82.8 | 689 | 22 | 23.2 | +82 | 48 | 8.3 | 22 | 22.1 | +83 | 2 | 6.6 |
| 22 15 | +82.8 | 682 | 22 | 14.1 | +82 | 52 | 8.5 | 22 | 12.8 | +83 | 5 | 6.6 |
| 22 4 | +82.7 | 672 | 22 | 3.2 | +82 | 48 | 8.2 | 22 | 1.5 | +83 | 1 | 5.80 |
| 21 54 | +82.7 | 667 | 21 | 56.5 | +82 | 46 | 8.7 | 21 | 54.6 | +82 | 59 | 6.6 |
| 21 34 | +82.6 | 650 | 21 | 32.5 | +82 | 39 | 8.6 | 21 | 30.1 | +82 | 51 | 7.2 |
| 21 31 | +82.4 | 648 | 21 | 30.2 | +82 | 21 | 8.0 | 21 | 27.9 | +82 | 33 | 6.4 |
| 20 54 | +81.9 | 718 | 20 | 52.8 | +81 | 59 | 6.0 | 20 | 49.8 | +82 | 10 | 5.7 |
| 0 58 | +82.7 | 30 | 0 | 56.9 | +82 | 41 | 9.0 | 1 | 1.2 | +83 | 6 | 4.1 |
| 0 46 | +82.8 | 22 | 0 | 45.8 | +82 | 54 | 9.1 | 0 | 49.8 | +83 | 9 | 6.4 |
| 0 45 | +82.9 | 21 | 0 | 43.9 | +82 | 55 | 9.1 | 0 | 47.9 | +83 | 10 | 6.7 |
| 0 43 | +82.9 | 20 | 0 | 41.6 | +82 | 55 | 6.5 | 0 | 43.5 | +83 | 10 | 6.7 |
| 0 25 | +82.8 | 14 | 0 | 24.6 | +82 | 50 | 8.3 | 0 | 27.9 | +83 | 5 | 4.0 |
| 0 6 | +83.2 | 3 | 0 | 4.4 | +83 | 14 | 9.0 | 0 | 6.9 | +83 | 29 | 5.6 |
| 0 2 | +83.3 | 1 | 0 | 1.8 | +83 | 21 | 8.5 | 0 | 4.2 | +83 | 36 | 6.8 |
| 23 41 | +83.2 | 663 | 23 | 40.8 | +83 | 15 | 9.1 | 23 | 42.4 | +83 | 30 | 6.2 |
| 23 33 | +83.4 | 660 | 23 | 31.8 | +83 | 21 | 9.0 | 23 | 32.9 | +83 | 36 | 6.7 |
| 23 14 | +83.5 | 647 | 23 | 12.7 | +83 | 27 | 8.0 | 23 | 13.2 | +83 | 40 | 6.6 |
| 22 56 | +83.5 | 640 | 22 | 55.4 | +83 | 34 | 5.0 | 22 | 55.2 | +83 | 49 | 5.4 |
| 22 16 | +83.1 | 627 | 22 | 15.5 | +83 | 4 | 9.2 | 22 | 14.1 | +83 | 18 | 4.3 |
| 21 58 | +83.4 | 620 | 21 | 57.6 | +83 | 21 | 9.0 | 21 | 55.4 | +83 | 34 | 5.2 |
| 21 54 | +83.4 | 618 | 21 | 52.7 | +83 | 22 | 7.2 | 21 | 50.3 | +83 | 35 | 6.7 |
| 21 42 | +83.3 | 614 | 21 | 42.2 | +83 | 18 | 8.4 | 21 | 39.5 | +83 | 30 | 6.7 |
| 21 39 | +83.2 | 613 | 21 | 38.1 | +83 | 12 | 8.6 | 21 | 35.4 | +83 | 24 | 7.3 |
| 21 35 | +82.9 | 651 | 21 | 33.6 | +82 | 56 | 8.5 | 21 | 31.0 | +83 | 8 | 5.0 |

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| V. | H. | Type | No. Rem. | No. Lines | K | Focus | Other Lines |
|-----------------|------|------|----------|-----------|-------|-------|---------------------------|
| 8.8 | 21.8 | A | . | 5 | A | 2 | - |
| 8.0 | 22.7 | A? | . | 4 | K=H | 2 | - |
| 7.4 | 15.2 | K | 857 | 2 | K=H | 3 | F? ^{bright} seen |
| 7.8 | 16.8 | A | . | 9 | K=.2H | 3 | F |
| 7.8 | 17.7 | A | . | 3 | A | 1 | - |
| 7.5 | 18.7 | A | . | 5 | A | 2 | F |
| 7.0 | 19.8 | F | 858 | 2 | K=H | 2 | seen |
| 6.4 | 9.1 | A | . | 9 | K=.8H | 3 | F |
| 6.8 | 10.3 | F | 859 | 3 | K=H | 3 | F seen |
| 6.6 | 11.4 | A | . | 6 | K=.3H | 2 | F |
| 6.7 | 12.7 | F | 860 | 2 | K=H | 2 | seen |
| 6.0 | 13.0 | H | . | 3 | K=H | 2 | F |
| 6.5 | 13.2 | A | . | 3 | A | 2 | - |
| 6.3 | 15.0 | K? | 861 | 2 | K=H | 3 | ^{bright} F? seen |
| 6.2-6.3-7.3 | 6.9 | 15.0 | 0? | 862 | 2 | K=H? | 2 F? seen |
| 6.6 | 16.3 | K | 863 | 2 | K=H | 3 | ^{bright} seen |
| 6.4 | 19.3 | A? | . | 3 | A | 1 | - |
| 6.9 | 21.2 | F | 864 | 3 | K=H | 3 | F seen |
| 6.8 | 22.5 | A | . | 9 | K | 4 | F |
| 5.5 | 8.3 | A | . | 3 | A | 1 | - |
| 5.1 | 9.1 | A | . | 3 | A | 1 | - |
| 5.2 | 10.1 | H | . | 2 | K=H | 1 | - |
| 5.0 | 10.2 | A | . | 5 | K=H | 2 | - |
| 5.9 | 10.2 | A | . | 4 | A | 2 | - |
| 5.8 | 12.0 | A | . | 6 | K=.8H | 3 | F |
| Recorded above. | 5.9 | 13.0 | A? | . | 3 | K=H | 3 F |
| 5.0 | 13.7 | H | . | 3 | K=.5H | 3 | F |
| 5.5 | 14.4 | A | . | 4 | A | 2 | F |
| 5.9 | 16.7 | H | . | 2 | K=H | 2 | - |

| No. | | | | | | | | | | D.M. R.A. Dec. Mag. R.A. Dec. Mean | | | | | | | | | | Br. | | |
|-----|----|-------|-----|----|------|------|----|-----|----|------------------------------------|------|----|-----|---|-----|-----|-----|--|--|-----|--|--|
| | | | | | | | | | | D.C. | | | | | | | | | | | | |
| 21 | 10 | +82.4 | 636 | 21 | 8.4 | + 82 | 24 | 8.5 | 21 | 5.5 | + 82 | 35 | 6.2 | 2 | 6.0 | 5.9 | 5.9 | | | | | |
| 20 | 53 | +82.5 | 627 | 20 | 51.5 | + 82 | 31 | 8.6 | 20 | 48.1 | + 82 | 41 | 6.5 | 4 | 6.1 | 6.0 | 6.0 | | | | | |
| 22 | 51 | +84.0 | 513 | 22 | 50.7 | + 84 | 0 | 7.3 | 22 | 50.0 | + 84 | 14 | 5.9 | 3 | 5.6 | 5.5 | 5.6 | | | | | |
| 22 | 23 | +83.7 | 630 | 22 | 22.5 | + 83 | 46 | 7.0 | 22 | 20.9 | + 84 | 0 | 5.6 | 4 | 6.3 | 6.2 | 6.3 | | | | | |
| 22 | 6 | +83.6 | 622 | 22 | 5.9 | + 83 | 38 | 9.0 | 22 | 3.8 | + 83 | 51 | | | 5.2 | 5.1 | 5.2 | | | | | |
| 21 | 50 | +84.6 | 616 | 21 | 25.0 | + 84 | 39 | 8.8 | 21 | 45.7 | + 83 | 32 | 6.4 | 6 | 6.6 | 6.5 | 6.6 | | | | | |
| 21 | 26 | +83.6 | 603 | 21 | 25.0 | + 83 | 39 | 7.5 | 21 | 21.5 | + 83 | 30 | 6.0 | 3 | 5.8 | 5.7 | 5.8 | | | | | |
| 0 | 50 | +83.7 | 20 | 0 | 48.4 | + 83 | 49 | 7.0 | 0 | 52.8 | + 84 | 4 | 6.3 | 2 | 5.7 | 5.6 | 5.7 | | | | | |
| 0 | 27 | +83.8 | 9 | 0 | 26.3 | + 83 | 53 | 7.8 | 0 | 29.8 | + 84 | 8 | 5.7 | 6 | 6.2 | 6.1 | 6.2 | | | | | |
| 0 | 10 | +84.2 | 3 | 0 | 7.8 | + 84 | 9 | 8.0 | 0 | 10.6 | + 84 | 24 | 5.7 | 2 | 5.0 | 4.9 | 5.0 | | | | | |
| 23 | 44 | +84.3 | 539 | 23 | 42.5 | + 84 | 16 | 8.1 | 23 | 44.0 | + 84 | 31 | 6.0 | 0 | 5.1 | 5.0 | 5.1 | | | | | |
| 23 | 39 | +84.6 | 536 | 23 | 38.2 | + 84 | 39 | 8.2 | 23 | 39.4 | + 84 | 54 | | | 5.5 | 5.4 | 5.5 | | | | | |
| 23 | 33 | +84.4 | 533 | 23 | 32.8 | + 84 | 22 | 8.7 | 23 | 33.8 | + 84 | 37 | 6.1 | 1 | 6.0 | 5.9 | 6.0 | | | | | |
| 22 | 55 | +84.6 | 517 | 22 | 54.2 | + 84 | 36 | 6.5 | 22 | 53.5 | + 84 | 30 | 5.5 | 8 | 6.4 | 6.3 | 6.4 | | | | | |
| 22 | 55 | +84.3 | 516 | 22 | 54.1 | + 84 | 16 | 8.0 | 22 | 53.5 | + 84 | 30 | | | 6.2 | 6.1 | 6.2 | | | | | |
| 22 | 30 | +84.3 | 509 | 22 | 29.2 | + 84 | 19 | 7.2 | 22 | 27.5 | + 84 | 33 | 5.9 | 3 | 6.4 | 6.3 | 6.4 | | | | | |
| 21 | 31 | +83.9 | 608 | 21 | 30.6 | + 83 | 60 | 9.0 | 21 | 27.0 | + 84 | 12 | | | 5.6 | 5.5 | 5.6 | | | | | |
| 21 | 2 | +83.4 | 596 | 21 | 2.8 | + 83 | 23 | 7.7 | 21 | 59.0 | + 83 | 34 | 5.8 | 4 | 6.0 | 5.9 | 6.0 | | | | | |
| 20 | 44 | +83.1 | 588 | 20 | 43.2 | + 83 | 7 | 6.2 | 20 | 39.2 | + 83 | 16 | 5.9 | 4 | 6.2 | 6.1 | 6.2 | | | | | |
| 1 | 8 | +83.7 | 30 | 1 | 8.6 | + 83 | 58 | 9.3 | 1 | 13.9 | + 84 | 12 | | | 6.4 | 6.3 | 6.4 | | | | | |
| 0 | 59 | +84.3 | 18 | 0 | 58.2 | + 84 | 19 | 8.8 | 0 | 3.2 | + 84 | 34 | | | 5.9 | 5.8 | 5.9 | | | | | |
| 0 | 41 | +84.5 | 16 | 0 | 41.3 | + 84 | 31 | 9.1 | 0 | 45.6 | + 84 | 46 | | | 6.2 | 6.1 | 6.2 | | | | | |
| 0 | 41 | +84.6 | 15 | 0 | 40.9 | + 84 | 40 | 8.2 | 0 | 45.3 | + 84 | 55 | 6.5 | 6 | 6.8 | 6.7 | 6.8 | | | | | |
| 0 | 35 | +84.3 | 13 | 0 | 33.9 | + 84 | 15 | 9.0 | 0 | 37.8 | + 84 | 30 | | | 7.3 | 7.2 | 7.3 | | | | | |
| 23 | 59 | +84.6 | 546 | 23 | 59.1 | + 84 | 36 | 8.2 | 23 | 1.4 | + 84 | 51 | 6.0 | 3 | 5.6 | 5.5 | 5.6 | | | | | |
| 23 | 39 | +84.6 | 536 | 23 | 38.2 | + 84 | 39 | 8.2 | 23 | 39.4 | + 84 | 54 | | | 6.7 | 6.6 | 6.7 | | | | | |
| 23 | 28 | +83.2 | 400 | 23 | 25.8 | + 83 | 18 | 8.0 | 23 | 26.3 | + 83 | 27 | 6.0 | 4 | 6.4 | 6.3 | 6.4 | | | | | |
| 23 | 9 | +84.9 | 533 | 23 | 7.6 | + 84 | 57 | 8.4 | 23 | 7.2 | + 85 | 12 | | | 6.5 | 6.4 | 6.5 | | | | | |
| 22 | 18 | +84.7 | 505 | 22 | 16.2 | + 84 | 41 | 8.0 | 22 | 13.1 | + 84 | 55 | 6.5 | 4 | 5.7 | 5.6 | 5.7 | | | | | |

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| V. | H. | Type | No. Rem. | No. Series | K | Focus | Other Series |
|----------------|-----------------|----------------|----------|--------------|----------------|--------------|--------------|
| 5.6 | 20.7 | A | . | 3 | K | 1 | - |
| 4.5 | 17.1 | H | . | 2 | K=H | 2 | - |
| 4.3 | 7.9 | A ² | . | 3 | K | 1 | - |
| 4.2 | 8.1 | A | . | 6 | K=H | 2 | F |
| 4.6 | 10.5 | H | . | 2 | K=H | 1 | - |
| 4.3 | 11.2 | A | . | 6 | K=5H | 2 | 2 F |
| 4.9 | 12.7 | A | . | 4 | K | 2 | - |
| 4.5 | 13.6 | A | . | 10 | K=5H | 3 | F |

Recorded above

| | | | | | | | |
|----------------|-----------------|----------------|-----|--------------|-------------------|--------------|---------------|
| 4.9 | 13.7 | A | . | 5 | K=1.5H | 2 | F |
| 4.1 | 13.9 | A ² | . | 11 | K=H | 3 | F |
| 4.4 | 16.1 | J | 865 | 2 | K=1.2H | 2 | seen |
| 4.6 | 16.2 | A | . | 11 | K | 5 | F |
| 4.8 | 17.1 | A | . | 4 | K=H | 1 | - |
| 4.8 | 22.0 | I | 866 | 2 | K=H | 3 | seen |
| 4.2 | 22.2 | A | . | 4 | K=H | 3 | - |
| 0 30 | 3.5 | 10.7 K | 867 | 3 | K=1.5H | 5 | F bright seen |
| | 3.8 | 11.7 H | | 3 | K=H | 2 | F |

| No. | P.A. | Dec. | Mag. | P.A. | Dec. | 1900 | Mean | Br. |
|-----------------------|----------------|---------------|-------------------------|----------------|------|-----------------|--------|------------------------|
| 20 59+84.1 | 474 | 20 | 58.2 + 84 | 4 | 8.4 | 20.50.4 + 84 15 | 6.7 | 6.0 5.9 6.0 |
| 21 59+85.2 | | | | | | | | |
| 22 59+85.2 | 871 | 21 | 59.7 + 85 18 | 8.5 | | | | 6.5 6.4 6.0 |
| 130+84.4 | 30 | 1 | 28.6 + 84 | 20 | 9.0 | 134.9 + 84 34 | | 6.7 6.6 6.8 |
| 129+84.5 | 29 | 1 | 27.5 + 84 | 29 | 8.0 | 133.9 + 84 43 | 6.30 4 | 5.9 5.8 6.0 |
| 039+84.9 | 14 | 0 | 39.7 + 84 | 55 | 8.6 | 1044.2 + 85 10 | | 6.5 6.4 6.6 |
| 028+85.2 | 11 | 0 | 25.4 + 85 | 10 | 8.8 | 29.2 + 85 25 | 4.61 4 | 7.2 6.9 7.1 |
| 23 58+85.1 | 406 | 23 | 49.1 + 85 | 6 | 8.8 | 23 30.8 + 85 48 | 6.00 2 | 5.7 5.6 5.8 |
| 23 38+85.4 | 403 | 23 | 29.7 + 85 | 23 | 7.8 | 23 30.4 + 85 38 | 9.56 6 | 6.2 6.1 6.3 |
| 23 58+85.2 | 400 | 23 | 25.8 + 85 15 | 8.0 | | | | 5.0 4.9 5.2 |
| 23 28+85.6 | 399 | 23 | 24.2 + 85 | 37 | 7.5 | 23 24.4 + 85 32 | 5.4 6 | 5.8 5.7 6.0 |
| 22 25+85.5 | 384 | 22 | 24.7 + 85 | 29 | 6.5 | 22 21.7 + 85 43 | 6.0 5 | 4.8 4.7 5.0 |
| 22 25+85.4 | 383 | 22 | 24.2 + 85 | 23 | 5.0 | 22 21.3 + 85 36 | 5.32 | 5.5 5.4 5.7 |
| 22 8+85.2 | 376 | 22 | 5.6 + 85 | 10 | 8.5 | 22 2.0 + 85 23 | 5.8 5 | 6.0 5.9 6.2 |
| 20 30+84.1 | 462 | 20 | 30.0 + 84 | 5 | 7.0 | 20 21.4 + 84 16 | 5.3 3 | B B B |
| 20 20+84.3 | 451 | 20 | 20.0 + 84 | 14 | 7.0 | 20 14.0 + 84 23 | 5.3 3 | 6.5 6.4 6.6 |
| 0 50+85.5 | 19 | 0 | 49.7 + 85 | 29 | 5.0 | 0 54.9 + 85 43 | 5.85 | 5.3 5.2 5.3 |
| 0 22+85.5 | 9 | 0 | 22.5 + 85 | 31 | 8.3 | 0 26.2 + 85 46 | 6.00 3 | 5.0 4.9 5.0 |
| | | | | | | | | B B B |
| | | | | | | | | 6.3 6.2 6.5 |
| | | | | | | | | 6.7 6.6 6.9 |

May 16, 1889

Plate 2841.

| V. | H. | Type | No. Rem. | No. Lenses | K | Fraus | Other Lenses |
|--------|-----|--------|----------|------------|-------|-------|--------------|
| 23.16 | 3.4 | 12.9 A | | 9 | K=3H | 3 | F |
| | 3.9 | 13.8 F | 868 | 3 | K=H | 2 | F. Seen |
| | 3.6 | 15.3 H | | 2 | K=H | 1 | — |
| | 3.5 | 17.1 F | 869 | 2 | K=H | 1 | Seen |
| | 3.8 | 19.0 K | | 4 | K=H | 1 | — |
| | 3.9 | 21.2 F | 870 | 3 | K=H | 2 | F. Seen |
| | 3.9 | 21.3 H | | 2 | K=H | 1 | — |
| | 3.2 | 22.7 A | | 3 | K | 2 | — |
| | 2.7 | 8.0 H | | 2 | K=H | 2 | — |
| | 2.5 | 11.7 A | | 3 | K | 1 | — |
| | 2.7 | 13.0 A | | 8 | K=H | 2 | — |
| | 2.5 | 13.9 A | | 6 | K=.5H | 4 | F |
| | 2.4 | 15.2 A | | 4 | K | 2 | — |
| | 2.4 | 16.9 A | | 6 | K=H | 2 | — |
| 23 23. | 2.7 | 16.9 H | | 2 | K=H | 1 | — |

| No. | R.A. | Dec. | Mag. | R.A. | Dec. | Mean | |
|------------|------|------|-----------|------|------|------|-----------------------------|
| 23 57+85.9 | 409 | 23 | 52.8 + 85 | 54 | 8.0 | ✓ | 23 54.7+86 9 ✓ 6.75 19 5 |
| 23 29+85.7 | 401 | 23 | 27.2 + 85 | 46 | 8.0 | ✓ | 23 27.5+86 0 ✓ 7.23 19 6 |
| 22 48+85.9 | 390 | 23 | 45.6 + 85 | 54 | 8.7 | ✓ | 22 43.3 +86 8 |
| 21 59+85.7 | 367 | 21 | 55.8 + 85 | 46 | 8.5 | ✓ | 21 50.9 +85 59 |
| 21 14+85.3 | 359 | 21 | 12.6 + 85 | 18 | 8.1 | ✓ | 21 6.5 +85 29 |
| 20 32+84.7 | 463 | 20 | 31.0 + 84 | 40 | 7.2 | ✓ | 20 20.5+84 49 ✓ 7.05 12 0 ✓ |
| 20 31+84.7 | 461 | 20 | 29.2 + 84 | 38 | 8.5 | ✓ | 20 22.8 +84 47 6.4 0 ✓ |
| 20 1+84.4 | 445 | 20 | 0.5 + 84 | 24 | 8.5 | ✓ | 19 53.8 +84 32 7.1 12 0 ✓ |
| 1 57+85.0 | 41 | 1 | 50.8 + 85 | 2 | 7.7 | ✓ | 1 58.8+85 16 7.2 12 0 ✓ |
| 0 34+86.1 | 9 | 0 | 32.5 + 86 | 9 | 8.6 | ✓ | 0 37.2+86 23 7.8 15 |
| 23 58+86.3 | 347 | 23 | 55.3 + 86 | 14 | 8.6 | ✓ | 23 57.3+86 29 7.8 19 |
| 23 30+86.5 | 344 | 23 | 27.8 + 86 | 30 | 6.0 | ✓ | 23 27.7+86 45 6.27 |
| 22 49+86.5 | 335 | 22 | 45.6 + 86 | 32 | 8.0 | ✓ | 22 42.3+86 46 7.6 |
| 21 58+86.4 | 324 | 21 | 52.8 + 86 | 20 | 8.2 | ✓ | 21 46.4+86 33 7.9 |
| 21 56+86.2 | 325 | 21 | 53.5 + 86 | 12 | 8.3 | ✓ | 21 47.5 +86 25 |

| B. | | |
|------|-----|-----|
| 49 | 4.8 | 5.1 |
| 54 | 5.3 | 5.6 |
| 6.1 | 6.6 | 6.9 |
| 7.05 | 6.9 | 7.2 |
| 6.6 | 6.5 | 6.8 |
| 6.4 | 6.3 | 6.5 |
| 5.8 | 5.7 | 5.9 |
| 6.7 | 6.6 | 6.8 |
| 7.1 | 7.0 | 7.2 |
| 6.4 | 6.3 | 6.5 |
| 5.9 | 5.8 | 6.0 |
| 6.3 | 6.2 | 6.4 |
| 5.9 | 5.8 | 6.1 |
| 6.5 | 6.4 | 6.7 |
| 7.1 | 7.0 | 7.3 |

Plate

V. H. Type ^{So.} ^{So.} ^{So.} K Focus ^{alpha} ^{So.}

Br.

Plate

V. H. Type No. Rim. Sp. K Focus ^{Chin} Lines

Br.

Plate

V. H. Type to. to K Focus after
Rem. Lens Lens

Br.

*Plate**V. H. Type Ia. Ia. K Focus other*
Rem. Lense Lense

Br.

Plate

Plate
V. H. Type to. to. K Focus upper
series

B₁

*Plate**V. H. Type Km. Line K. Focus ^{Walter} Line*

Br.

Plate

| V. | H. | Type | No. Perm. | No. Series | L. | Fours | Alpha Series |
|----|----|------|--------------|---------------|----|-------|-----------------|
|----|----|------|--------------|---------------|----|-------|-----------------|

B.

Plate

| V. | H. | Type | No. Run | No. Series | K. | From | Other Series |
|----|----|------|------------|---------------|----|------|-----------------|
|----|----|------|------------|---------------|----|------|-----------------|

Br.

*Plate**V. H. Type No. ^{to} Limit H. Focus ^{of the} Limit*

Bu.

Plate

| <i>V.</i> | <i>H.</i> | <i>Type</i> | <i>No. Perm.</i> | <i>No. Lines</i> | <i>K</i> | <i>Focus</i> | <i>Other Lines</i> |
|-----------|-----------|-------------|----------------------|----------------------|----------|--------------|------------------------|
|-----------|-----------|-------------|----------------------|----------------------|----------|--------------|------------------------|

Br.

Plate

V. H. Type ^{18.} Rinn. ^{19.} Lines H. Frons ^{after} Lines

B_u.

Plate

V. H. . Type ^{Sp.} Rem. ^{Sp.} Lines H. Fraus ^{Other} Lines

Br.

Plate

| V. | H. | Type. | No. Rev. | No. Series | N. | Focal | Other Series |
|----|----|-------|-------------|---------------|----|-------|-----------------|
|----|----|-------|-------------|---------------|----|-------|-----------------|

Br.

*Plate**V. H. Type ^{to} Rem. Lines ^{to} H. Focus ^{after} Lines*

Br.

Plate

V. H. Type No. No. H. Focus Other
Lines Lines Lines

Br.

Plate

V. H. Type ^{Sp.} Rim. ^{Sp.} Limb N. Focus Altitude

B.

Plate

V. H. Type ^{to} Rim. ^{ly} Lines H. Fous ^{other} Lines

Bv.

Plate

V. H. Type. No. No. S. Focus ^{lateral} _{lateral}

B.

Plate

| V. | H. | Type | No. Rem. | No. Series | St. | Focus | Other Series |
|----|----|------|-------------|---------------|-----|-------|-----------------|
|----|----|------|-------------|---------------|-----|-------|-----------------|

Be.

Plate

V. H. Type λ_0 λ_1 λ_2 λ_3 λ_4 λ_5

B_r

Plate

| | | | | | | | |
|----|----|------|-------------|---------------|----|-------|-----------------|
| V. | H. | Type | No. Rev. | No. Series | S. | Focus | Optic Series |
|----|----|------|-------------|---------------|----|-------|-----------------|

B_v

Plate

V. H. Type to. to. Focus ^{Other} Lenses

B₁

Plate

V. H. Type ^{to} Rim. ^{to} Lines K Focus ^{Altitude} ^{Lines}

Br.

Plate

| V. | H. | Type | No. Perm. | No. Serial | N. | Focus | Other Serials |
|----|----|------|--------------|---------------|----|-------|------------------|
|----|----|------|--------------|---------------|----|-------|------------------|

Br.

Plate

V. H. Type ^{So.}Pam. ^{So.}Lineal St. Focus ^{Other}Leins

Br.

*Plate**V. H. Type ^{to} Rim. Series N. From ^{Arthur} Series*

B_n

Plate

V. H. Type ^{1st} Rem. ^{2nd} Series L. Focus ^{3rd} Series

Br.

Plate

V. H. Type Kim. Lines H. From ^{Other} Lines

Bn.

Plate

V. H. Type Rim. Sp. Lines R. Focus ^{Alt.} Lines

Bn.

Plate

V. H. Types to. No. Series K. Focus Alpha Series

Bm

Plate

V. H. Type ^{No.} ^{Rem.} ^{No.} ^{Line} ^{H.} ^{Front} ^{Other} ^{Lines}

Cr.

Plate

V. H. Type ^{to} Rem. ^{to} kind N. Focus ^{other} Series

B.

1889 Dec. 30. 832P