1873phne.proj.n584R

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Zone Observations & Reductions

618

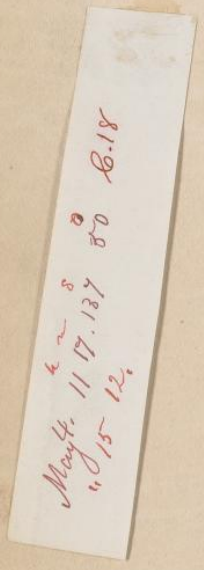
From April 27, 1873 to August 11, 1873.
Also continuation of Feb 4 to 10 1874

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1873phae.proj.1584R

C 18

Aug 27 1873 to Aug 11 1873




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62

C16

Aug 27 1873 to Aug 11 1873

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | $\delta'$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

W. A. K. is Professor and F. R. M. the Recorder throughout this book

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233

Date$_1$ = Apr 23 1873 Observer W. & R.
$n$ = +.09 Recorder J. F. M.

235

Date$_2$ = Apr 27 Observer W & R.
$n$ = +.06 Recorder J. F. M.

| Star. | $\alpha$ | $\delta$ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 12m 40.9 42.4 43.5 42.3 | 13m 8.0 | 11.2 | 14.6 | 17.6 | 21.0 | 72.4 | 14.48 | 13m 14.48 + 6.73 + .10 − 2 | |
| κ | | | | | | | | | | | + 6.81 | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 13 21.29 − 1.38 | |
| $a_1$ | | | | | | | | | | | | 13 19.91 | |
| | | | 8.9 | 12 44.2 46.5 48.0 46.2 | 13 7.7 | 10.8 | 14.0 | 17.4 | 21.7 | 70.6 | 14.12 | 13 14.12 + 7.07 + 7 − 2 | |
| κ | | | | | | | | | | | + 7.12 | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 13 21.24 − 1.29 | |
| $a_2$ | | | | | | | | | | | | 13 19.96 | |
| | | | | 12 ~~44.2~~ | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_1$ | | | | | | | | | | | | | |
| 14 23 | | 51 09 | 8.5 | 13 59.5 | 14 18.0 | 21.3 | 24.6 | 27.8 | 31.2 | 122.9 | 24.58 | 14 24.58 + 6.73 + 10 − 2 | |
| 13 21.9 | | 51 12.6 | 8.0 | 14 04 3.0 | | | | | | | + 6.81 | | |
| κ | | | | 14 0.9 | | | | | | | | 14 31.39 − 1.39 | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 14 30.00 | |
| $a_2$ | | | | | | | | | | | | | |
| | | | 8.4 | 14 16.6 | 17.6 | 21.4 | 24.3 | 27.5 | 30.9 | 121.7 | 24.34 | 14 24.34 + 7.07 + 7 − 2 | |
| κ | | | | | | | | | | | + 7.12 | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 14 31.46 − 1.30 | |
| $a_1$ | | | | | | | | | | | | 14 30.16 | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_2$ | | | | | | | | | | | | | |
| 13 40 | | 50 15 | 8.2 | 15 26.2 27.5 28.9 27.5 | 39.1 | 42.3 | 45.5 | 48.7 | 51.9 | 227.5 | 45.50 | 15 45.50 + 6.73 + 11 − 2 | |
| 14 44.0 | | 50 19.5 | 8.5 | | | | | | | | + 6.82 | | |
| κ | | | | | | | | | | | | 15 52.32 − 1.37 | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 15 50.95 | |
| $a_1$ | | | | | | | | | | | | | |
| | | | 8.3 | 15 21.9 23.1 24.6 23.2 | 38.7 | 41.9 | 45.2 | 48.4 | 51.6 | 225.8 | 45.16 | 15 45.16 + 7.07 + 7 − 2 | |
| κ | | | | | | | | | | | + 7.12 | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 15 52.28 − 1.28 | |
| $a_2$ | | | | | | | | | | | | 15 51.00 | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_1$ | | | | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_2$ | | | | | | | | | | | | | |

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Apr. 23 -2′ 28.″34 +.″10
" 27 -2 28,24 +.10

Runs

2

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~~−26.5~~ | 4′ 56.4 | 4′ 58.1 | 1145 ~~19~~ | 57.″25 | 2 51.10 | | | 25 | 51 0 50.03 | |
| | +33.2 | | | | | 51 0 22.76 | | | | − 29 | +9.37 |
| d | 1.52114 | | | | | + 27.27 | | | | + 49 | |
| | 9.79887 | | | | | | | 0 50.03 | | + 8.87 | |
| 36 ((δ) − D) $\frac{d'}{100}$ | 1.43572 | | | | | | | | | + 30 | |
| | | | | | | | | | | −11.35 | |
| +7.62 $\delta_1$ | | 13 27.53 | | 0 12.2 | | | | | | 0 48.05 | |
| −35.86 | | | | | | | | | | | |
| | −~~32.0~~ | 4 52.2 | 55.9 | 1181 | 19 54.″05 | 2 54.30 | | | 15 | 48.98 | |
| | +27.9 | | | | | 51 0 ~~26~~06 | | | | − 21 | +9.31 |
| d | 1.44560 | | | | | + 22.92 | | | | + 49 | |
| | 9.79887 | | | | | | | 0 48.98 | | + ~~8~~9.78 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.36018 | | | | | | | | | + 25 | |
| | | | | | | | | | | −11.85 | |
| +7.62 $\delta_2$ | | 13 27.57 | | 0 10.6 | | | | | | 0 48.44 | |
| −35.86 | | | | | | | | | | | |
| | | ~~2~~ 29.9 | 32.0 | | | | | | 10 | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | +~~27.9~~ | 2 ~~24.9~~ | 19.7 | | | | | | | | |
| | +23.7 | 29.9 | 32.0 | 619 | 12 ~~30.85~~ | 10 17.40 | | | 10 | 51 8 8.47 | |
| 24 d | 1.37475 | | | | | 51 7 49.06 | | | | − 15 | +9.39 |
| | 9.79762 | | | | | + 19.41 | | | | + 25 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.28808 | | | | | | | 8 8.47 | | + 8.99 | |
| | | | | | | | | | | + 30 | |
| +7.62 $\delta_2$ | | 14 37.62 | | 7 30.6 | | | | | | −11.30 | |
| −35.94 | | | | | | | | | | 8 6.56 | |
| | +7.78 | 2 ~~44.9~~ | ~~19.7~~ | 44.6 | 12 ~~22.30~~ | 10 ~~26~~.05 | | | 10 | ~~9~~4.12 | |
| | 0.88649 | 29.9 | 32.0 | 17.30 | | 51 ~~8~~ ~~57~~.81 | | | | − 2 | +8.41 |
| d | 9.79762 | | | | | + 6.31 | | | | + 24 | |
| | 0.79982 | | | | | | | 8 4.12 | | + 8.93 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 26 | |
| | | | | | | | | | | −11.85 | |
| +7.62 $\delta_1$ | | 14 37.78 | | 7 30.7 | | | | | | 6.68 | |
| −35.94 | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | +180 | 1 33.9 | 34.9 | 688 | 6 34.40 | 16 13.95 | | | 5 | 50 14 0.64 | |
| | 1.25527 | 3 | | | | 50 13 45.61 | | | | − 9 | +9.43 |
| 34 d | 9.80595 | | | | | + 15.03 | | | | + 16 | |
| | 1.17693 | | | | | | | 14 0.64 | | + 9.10 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 26 | |
| | | | | | | | | | | −11.00 | |
| +7.55 $\delta_1$ | | 15 58.50 | | 13 23.0 | | | | | | 13 59.07 | |
| −36.04 | | | | | | | | | | | |
| | +~~1.9~~ | 1 35.0 | 38.4 | 734 | 6 36.70 | 16 11.65 | | | 5 | 1.78 | |
| | +2.2.0 | | | | | 50 13 43.41 | | | | − 14 | +9.24 |
| d | 1.34242 | | | | | + 18.07 | | | | + 9.16 | |
| | 9.80595 | | | | | | | 14 1.78 | | + 8.01 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.26408 | | | | | | | | | + 21 | |
| | | | | | | | | | | −11.50 | |
| +7.55 $\delta_2$ | | 15 58.55 | | 13 23.5 | | | | | | 13 59.52 | |
| −36.04 | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

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233

Date$_1$ = Apr 23 Observer / Recorder

235

Date$_2$ = Apr 27 Observer / Recorder

3

Ru

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U | 1 6 40 | 51 50 | 9.5 | 16m 27.0 | 36.5 | 39.9 | 43.1 | 46.4 | 49.6 | 17 55 | 16m 43.10 | 16m 43.10 | |
| | 15 39.7 | 51 54.6 | 9.4 | 28.5 | | | | | | | | + 6.73 | |
| | κ | | | 30.2 | | | | | | | | + 11 | |
| | | | | 28.6 | | | | | | | + 6.82 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 16 49.92 | |
| | | | | | | | | | | | | − 1.44 | |
| | $a_1$ | | | | | | | | | | | 16 48.48 | |
| | | | 9.4 | 16 30.7 | 36.2 | 39.4 | 42.8 | 46.1 | 49.5 | 16 | 42.80 | 16 42.80 | |
| | | | | 31.9 | | | | | | | | + 7.07 | |
| | κ | | | 33.6 | | | | | | | | + 8 | |
| | | | | 32.1 | | | | | | | + 7.13 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 16 49.93 | |
| | | | | | | | | | | | | − 1.35 | |
| | $a_2$ | | | | | | | | | | | 16 48.58 | |
| | 18 20 | 51 43 | 8.9 | 18 5.3 | 20.7 | 24.1 | 27.5 | 30.8 | 34.1 | 18 | 27.44 | 18 27.44 | |
| | 17 24.5 | 51 48.2 | 8.9 | 6.5 | | | | | | | | + 6.73 | |
| | κ | | | 7.9 | | | | | | | | + 10 | |
| | | | | 6.6 | | | | | | | + 6.81 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 18 34.25 | |
| | | | | | | | | | | | | − 1.45 | |
| | $a_1$ | | | | | | | | | | | 18 32.80 | |
| | | | 9.1 | 17 52.8 | 18 20.5 | 23.7 | 27.2 | 30.6 | 33.8 | 18 | 27.16 | 18 27.16 | |
| | | | | 54.6 | | | | | | | | + 7.07 | |
| | κ | | | 56.2 | | | | | | | | + 7 | |
| | | | | 54.5 | | | | | | | + 7.12 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 18 34.28 | |
| | | | | | | | | | | | | − 1.36 | |
| | $a_2$ | | | | | | | | | | | 18 32.92 | |
| | 19 31 | 52 38 | 9.8 | 19 9.9 | 24.9 | 28.3 | 31.9 | 35.0 | 38.4 | 19 | 31.70 | 19 31.70 | |
| | 18 37.1 | 52 42.0 | 9.4 | 11.6 | | | | | | | | + 6.73 | |
| | κ | | | 13.2 | | | | | | | | + 12 | |
| | | | | 11.6 | | | | | | | + 6.83 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 19 38.53 | |
| | | | | | | | | | | | | − 1.50 | |
| | $a_1$ | | | | | | | | | | | 19 37.03 | |
| | | | | Lost | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |
| | 22 04 | 52 55 | 7.8 | 21 31.5 | 36.6 | 0.0 | 3.4 | 6.9 | 10.1 | 22 | 03.40 | 22 3.40 | |
| | 21 0.3 | 52 59.9 | 8.0 | 32.3 | | | | | | | | + 6.73 | |
| | κ | | | 33.3 | | | | | | | | + 12 | |
| | | | | 32.4 | | | | | | | + 6.83 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 22 10.23 | |
| | | | | | | | | | | | | − 1.53 | |
| | $a_1$ | | | | | | | | | | | 22 8.70 | |
| | | | 7.0 | 21 36.9 | 36.2 | 39.6 | 3.0 | 6.5 | 9.8 | 22 | 02.02 | 22 3.02 | |
| | | | | 38.3 | | | | | | | | + 7.07 | |
| | κ | | | 39.7 | | | | | | | | + 18 | |
| | | | | 38.3 | | | | | | | + 7.13 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 22 10.15 | |
| | | | | | | | | | | | | − 1.44 | |
| | $a_2$ | | | | | | | | | | | 22 8.71 | |
| | 22 41 | 52 03 | 8.7 | 22 24.1 | 34.5 | 37.9 | 41.4 | 44.6 | 48.0 | 22 | 41.28 | 22 41.28 | |
| | 21 38.5 | 52 8.6 | 8.7 | 26.5 | | | | | | | | + 6.73 | |
| | κ | | | 27.2 | | | | | | | | + 12 | |
| | | | | 27.9 | | | | | | | + 6.83 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 26.4 | | | | | | | | 22 48.11 | |
| | | | | | | | | | | | | − 1.50 | |
| | $a_1$ | | | | | | | | | | | 22 46.61 | |
| | | | 8.8 | 22 29.2 | 34.3 | 37.6 | 41.0 | 44.4 | 47.6 | 22 | 40.98 | 22 40.98 | |
| | | | | 30.3 | | | | | | | | + 7.07 | |
| | κ | | | 31.8 | | | | | | | | + 8 | |
| | | | | 30.4 | | | | | | | + 7.13 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 22 48.11 | |
| | | | | | | | | | | | | − 1.41 | |
| | $a_2$ | | | | | | | | | | | 22 46.70 | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +145 | 1 16.5 | 18.0 | | 31 17.25 | 51 31.10 | | | 30 | 51 49 41.46 | |
| | 1.16137 | | | | | 51 49 2.76 | | | | − 5 | +10.09 |
| 30 d | 9.79111 | | | | | +11.70 | | | | + 13 | |
| | 1.06819 | | | | | | 49 | 14.46 | | +9.71 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 29 | |
| | | | | | | | | | | 30 | |
| +7.62 $\delta_1$ | | 16 56.10 | | 48 37.0 | | | | | | −11.40 | |
| −36.12 | | | | | | | | | | 49 13.15 | |
| | +107 | 1 12.0 | 15.7 | 27.7 | 31 13.85 | 51 34.50 | | | 30 | 14.89 | |
| | 1.02938 | | | | | 51 49 6.26 | | | | − 3 | +10.02 |
| d | 9.79111 | | | | | +8.63 | | | | + 12 | |
| | 0.93620 | | | | | | 49 | 14.89 | | +9.64 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 29 | |
| | | | | | | | | | | −11.70 | |
| +7.62 $\delta_2$ | | 16 56.20 | | 48 36.9 | | | | | | 49 13.01 | |
| −36.12 | | | | | | | | | | | |
| | +208 | 3 53.1 | 53.3 | 106.4 | 38 53.20 | 43 55.18 | | | 35 | 51 41 43.64 | |
| | 1.31806 | | | | | 51 41 26.81 | | | | − 12 | +10.16 |
| 28 d | 9.79240 | | | | | +16.83 | | | | + 39 | |
| | 1.22617 | | | | | | 41 | 43.64 | | + 9.59 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −11.30 | |
| +7.59 $\delta_1$ | | 18 40.39 | | 41 6.2 | 39 | | | | | 41 42.50 | |
| −36.26 | | | | | | | | | | | |
| | − ~~2.3~~ +22.7 | 3 2.1 | 4.3 | 6.4 | 3 3.20 | 43 45.15 | | | 35 | 41 43.37 | |
| | 1.51455 | | | | | 51 41 16.81 | | | | − 28 | +9.81 |
| d | 9.79240 | | | | | +26.46 | | | | + 30 | |
| | 1.42266 | | | | | | 41 | 43.37 | | +9.57 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 28 | |
| +7.59 | | | | | | | | | | −11.80 | |
| $\delta_2$ | | 18 40.51 | | 41 5.1 | | | | | | 41 41.38 | |
| −36.26 | | | | | | | | | | | |
| | + 20.1 | 3 19.1 | 19.1 | 38.2 | 4 9.10 | 33 29.25 | | | 45 | 52 31 16.88 | |
| | 1.30320 | | | | | 52 31 0.91 | | | | − 11 | +10.96 |
| d | 9.78428 | | | | | +15.97 | | | | + 33 | |
| | 1.20319 | | | | | | 31 | 16.88 | | +10.44 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −11.45 | |
| $\delta_1$ | | | | | | | | | | 31 16.39 | |
| | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | + 31.0 | 1 18.1 | 17.9 | 36.0 | 26 1.400 | 56 30.35 | | | 25 | 52 54 26.42 | |
| | 1.49136 | | | | | 52 54 2.01 | | | | − 25 | +11.03 |
| 38 d | 9.78047 | | | | | +24.41 | | | | + 13 | |
| | 1.38754 | | | | | | 54 | 26.42 | | +10.85 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −11.40 | |
| +7.61 $\delta_1$ | | 22 16.31 | | 53 49.5 | | | | | | 54 26.05 | |
| −36.52 | | | | | | | | | | | |
| | +24.7 | 1 11.2 | 14.9 | 26.1 | 26 1.305 | 56 35.30 | | | 25 | 26.51 | |
| | 1.39270 | | | | | 52 54 6.96 7.06 | | | | − 16 | +11.04 |
| d | 9.78047 | | | | | +19.45 | | | | + 12 | |
| | 1.28888 | | | | | | 54 | 26.51 | | +10.78 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −11.75 | |
| +7.61 $\delta_2$ | | 22 16.32 | | 53 49.1 | | | | | | 54 25.60 | |
| −36.52 | | | | | | | | | | | |
| | + 14.9 | 2 26.3 | 26.9 | 53.2 | 17 26.10 | 5 22.25 | | | 15 | 52 3 5.87 | |
| | 1.17319 | | | | | 52 2 53.91 | | | | − 6 | +10.444 |
| 30 d | 9.78886 | | | | | +11.96 | | | | + 24 | |
| | 1.07776 | | | | | | 3 | 5.87 | | +9.96 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −11.15 | |
| +7.55 $\delta_1$ | | 22 54.16 | | 2 28.6 | | | | | | 3 5.16 | |
| −36.56 | | | | | | | | | | | |
| | + ~~7.58~~ +10.6 | 2 20.8 | 24.1 | 44.9 | 17 22.45 | 5 25.90 | | | 15 | 6.17 | |
| | 1.02531 | | | | | 52 2 57.56 | | | | − 3 | +10.40 |
| d | 9.78886 | | | | | + 8.51 | | | | + 24 | |
| | 0.92988 | | | | | | 3 | 6.17 | | +9.87 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −11.70 | |
| +7.55 $\delta_2$ | | 22 54.25 | | 2 28.3 | | | | | | 3 4.87 | |
| −36.56 | | | | | | | | | | | |

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233

Date$_1$ = Apr 23 Observer / Recorder

235

Date$_2$ = Apr 27 Observer / Recorder

5

| Star. | α | δ | Mag. | $T_a$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 24m 38s | 52° 30′ | 8.5 | 24m 9.9 | 3s 26 | 34.0 | 37.3 | 40.6 | 44.1 | 27 | 37.32 | 24 | 37.32 |
| | 23 35.0 | 52 35.0 | 8.3 | 11.6 | | | | | | | | | + 6.73 |
| | | | | 12.8 | | | | | | | | | + 12 |
| | | | | 11.4 | | | | | | | + 6.83 | | − 2 |
| κ | | | | | | | | | | | | 24 | 44.15 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.53 |
| $\alpha_1$ | | | | | | | | | | | | 24 | 42.62 |
| | | | 8.8 | 24 10.3 | 30.2 | 33.7 | 36.9 | 40.3 | 43.7 | 24 | 36.96 | 24 | 36.96 |
| | | | | 11.5 | | | | | | | | | + 7.07 |
| | | | | 13.2 | | | | | | | | | + 8 |
| | | | | 11.7 | | | | | | | + 7.13 | | − 2 |
| κ | | | | | | | | | | | | 24 | 44.09 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.44 |
| # $\alpha_2$ | | | | | | | | | | | | 24 | 42.65 |
| | 26m 15s | 50° 49′ | 9.2 | 25 48.4 | 26 10.4 | 13.6 | 16.9 | 21.2 | 23.4 | 25 | 16.90 | 25 | 16.90 |
| | 25 15.0 | 50 54.0 | 9.2 | 52.2 | | | | | | | | 6 | + 6.73 |
| | | | | 51.6 | | | | | | | | | + 11 |
| | | | | 50.1 | | | | | | | + 6.82 | | − 2 |
| κ | | | | | | | | | | | | 25 6 | 23.72 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.47 |
| $\alpha_1$ | | | | | | | | | | | | 25 6 | 22.25 |
| | | | 9.4 | 25 44.1 | 26 10.0 | 13.3 | 16.6 | 19.7 | 23.1 | 25 | 16.54 | 25 | 16.54 |
| | | | | 45.6 | | | | | | 6 | | 6 | + 7.06 |
| | | | | 48.1 | | | | | | | | | + 7 |
| | | | | 45.9 | | | | | | | + 7.11 | | − 2 |
| κ | | | | | | | | | | | | 25 6 | 23.65 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.39 |
| $\alpha_2$ | | | | | | | | | | | | 25 6 | 22.26 |
| | 28m 0.3 | 51° 59′ | 9.0 | 27 43.1 | 57.1 | 0.4 | 3.8 | 7.2 | 10.3 | 27 | 6.80 | 28 | 3.80 |
| | 27 0.3 | 52 4.2 | 9.0 | 44.8 | | | | | | | | | + 6.73 |
| | | | | 46.3 | | | | | | | | | + 12 |
| | | | | 44.7 | | | | | | | + 6.83 | | − 2 |
| κ | | | | | | | | | | | | 28 | 10.63 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.59 |
| $\alpha_1$ | | | | | | | | | | | | 28 | 9.04 |
| | | | 9.0 | 27 42.6 | 56.6 | 0.1 | 3.4 | 6.7 | 10.1 | 27 | 6.38 | 28 | 3.38 |
| | | | | 44.1 | | | | | | | | | + 7.06 |
| | | | | 45.8 | | | | | | | | | + 8 |
| | | | | 44.2 | | | | | | | + 7.12 | | − 2 |
| κ | | | | | | | | | | | | 28 | 10.50 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.49 |
| $\alpha_2$ | | | | | | | | | | | | 28 | 9.01 |
| | 28m 5.9 | 51° 22′ | 9.0 | 28 45.1 | 54.0 | 59.3 | 2.7 | 5.8 | 9.2 | 28 | 62.60 | 29 | 2.60 |
| | 27 59.3 | 51 27.4 | 8.8 | 46.3 | | | | | | | | | + 6.73 |
| | | | | 48.0 | | | | | | | | | + 10 |
| | | | | 46.5 | | | | | | | + 6.81 | | − 2 |
| κ | | | | | | | | | | | | 29 | 9.41 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.44 |
| $\alpha_1$ | | | | | | | | | | | | 29 | 7.97 |
| | | | 9.1 | 28 37.2 | 55.6 | 59.0 | 2.2 | 5.6 | 9.0 | 28 | 62.28 | 29 | 2.28 |
| | | | | 38.5 | | | | | | | | | + 7.06 |
| | | | | 39.8 | | | | | | | | | + 7 |
| | | | | 38.5 | | | | | | | + 7.11 | | − 2 |
| κ | | | | | | | | | | | | 29 | 9.39 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.44 |
| $\alpha_2$ | | | | | | | | | | | | 29 | 7.95 |
| | 30m 4.9 | 52° 10′ | 9.6 | 30 21.2 | 42.4 | 45.8 | 49.1 | 52.4 | 56.0 | 30 | 49.14 | 30 | 49.14 |
| | 29 46.4 | 52 15.7 | 9.4 | 22.7 | | | | | | | | | + 6.73 |
| | | | | 24.9 | | | | | | | | | + 12 |
| | | | | 22.7 | | | | | | | + 6.83 | | − 2 |
| κ | | | | | | | | | | | | 30 | 55.97 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.57 |
| $\alpha_1$ | | | | | | | | | | | | 30 | 54.40 |
| | | | 9.5 | 30 16.2 | 42.0 | 45.3 | 48.6 | 52.0 | 55.5 | 30 | 48.68 | 30 | 48.68 |
| | | | | 17.4 | | | | | | | | | + 7.06 |
| | | | | 19.8 | | | | | | | | | + 8 |
| | | | | 17.8 | | | | | | | + 7.12 | | − 2 |
| κ | | | | | | | | | | | | 30 | 55.80 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 1.56 |
| $\alpha_2$ | | | | | | | | | | | | 30 | 54.24 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +20.92 | 0′ 45.0 | 46.1 | 91.1 | 5′ 0 45.55 | 32 2.80 | | | 50′ | 52 29 55.04 | |
| | 1.41330 | | | | | 52 29 34.46 | | | | − 18 | +10.63 |
| 36 d | 9.78445 | | | | | + 20.58 | | | | + 8 | |
| | 1.31346 | | | | | | 29 55.04 | | | +10.43 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +7.55 | | | | | | | | | | −11.15 | |
| −36.70 $\delta_1$ | | 24 50.17 | | 29 17.8 | | | | | | 29 54.52 | |
| | +25.22 | 0 48.1 | 47.0 | 90.1 | 50 45.05 | 32 3.30 | | | 50 | 55.16 | |
| | 1.40312 | | | | | 52 29 36.06 | | | | − 17 | +10.55 |
| d | 9.78445 | | | | | +20.10 | | | | + 8 | |
| | 1.30328 | | | | | | 29 55.16 | | | +10.34 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +7.55 | | | | | | | | | | −11.75 | |
| −36.70 $\delta_2$ | | 24 50.20 | | 29 17.3 | | | | | | 29 53.96 | |
| +2.68 | −33.3 | 2 1.9 | 3.8 | 5.7 | 32 2.85 | 50 45.50 | | | 30 | 50 47 ~~47.87~~ | 39.27 |
| 36 1.42813 | ~~1.52114~~ | | | | | 50 48 17.16 | | | | − 30 | +8.85 |
| 9.80074 | ~~9.80074~~ | | | | | ~~+27.29~~ | | | | + 20 | |
| 1.34458 | ~~1.43759~~ | | | | | + 22.11 | 47 ~~49.87~~ | | | +8.66 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 29 | |
| | | | | | | | | | | −10.65 | |
| +7.45 $\delta_1$ | | 26 29.70 | | 48 0.6 | | | | | | 47 ~~48.07~~ 48 | 37.47 |
| −36.82 | | | | | | | | | | | |
| +3.06 | −29.36 | 2 4.2 | 8.0 | 12.2 | 33 6.100 | 50 42.25 | | | 30 | ~~49.76~~ | 39.25 |
| 1.48572 | ~~1.46835~~ | | | | | 50 48 18.01 | | | | − 23 | +8.80 |
| 9.80074 | ~~9.80074~~ | | | | | ~~−24.25~~ | | | | + 21 | |
| 1.40217 | ~~1.38480~~ | | | | | + 25.24 | 47 ~~49.76~~ | | | + 8.58 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 24 | |
| +7.45 | | | | | | | | | | −11.20 | |
| −36.82 $\delta_2$ | | 26 29.71 | | 48 0.0 | | | | | | 47 ~~47.36~~ 48 | 36.85 |
| | +19.1 | 2 33.1 | 34.1 | 67.2 | 22 33.60 | 0 14.75 | | | 20 | 51 58 1.43 | |
| 42 | 1.28103 | | | | | 52 57 46.41 | | | | − 9 | +11.40 |
| d | 9.77980 | | | | | +15.02 | | | | + 26 | |
| | 1.17654 | | | | | | 58 1.43 | | | +10.93 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +7.48 | | | | | | | | | | −11.10 | |
| −36.94 $\delta_1$ | | 28 16.52 | | 57 24.8 | | | | | | 58 1.73 | |
| | +19.2 | 2 32.0 | 35.9 | 67.9 | 22 33.95 | 0 14.40 | | | 20 | 1.25 | |
| | 1.28330 | | | | | 52 57 46.86 | | | | − 9 | +11.39 |
| d | 9.77980 | | | | | +15.09 | | | | + 26 | |
| | 1.17881 | | | | | | 58 1.25 | | | +10.92 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +7.48 | | | | | | | | | | −11.70 | |
| −36.94 $\delta_2$ | | 28 16.49 | | 57 24.0 | | | | | | 58 0.94 | |
| | +16.1 | 4 8.7 | 11.0 | 19.7 | 59 9.85 | 23 38.50 | | | 55 | 51 21 23.29 | |
| 32 | 1.20683 | | | | | 51 21 10.16 | | | | − 7 | +9.89 |
| d | 9.79558 | | | | | +13.13 | | | | + 42 | |
| | 1.11812 | | | | | | 21 23.29 | | | + 9.24 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +7.43 | | | | | | | | | | −10.60 | |
| −37.00 $\delta_1$ | | 29 15.40 | | 20 45.6 | | | | | | 21 22.58 | |
| | +23.78 | 4 ~~8.7~~ | 17.3 | 31.4 | 59 15.70 | 23 32.65 | | | 65 | 23.81 | |
| | 1.37668 | 14.1 | | | | 51 21 ~~4.91~~ | | | | − 15 | +9.75 |
| d | 9.79558 | | | | | +19.40 | | | | + 42 | |
| | 1.28787 | | | | | | 21 23.81 | | | + 9.21 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 27 | |
| +7.43 | | | | | | | | | | −11.20 | |
| −37.00 $\delta_2$ | | 29 15.38 | | 20 45.4 | | | | | | 21 22.36 | |
| | +26.48 | 55.2 | 55.9 | 111.1 | 10 55.55 | 11 52.80 | | | 10 | 52 9 45.60 | |
| | 1.42160 | | | | | 52 9 24.46 | | | | − 18 | +10.29 |
| 46 d | 9.78788 | | | | | +21.14 | | | | + 9 | |
| | 1.32519 | | | | | | 9 45.60 | | | +10.08 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +7.45 $\delta_1$ | | 31 1.85 | | 9 8.0 | | | | | | −10.75 | |
| −37.12 | | | | | | | | | | 9 45.14 | |
| | +30.9 | 0 56.5 | 57.8 | 114.3 | 10 58.15 | 11 50.20 | | | 10 | 46.71 | |
| | 1.48976 | | | | | 52 9 21.86 | | | | − 25 | +10.19 |
| d | 9.78788 | | | | | +24.75 | | | | + 10 | |
| | 1.39355 | | | | | | 9 46.71 | | | +10.04 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +7.45 | | | | | | | | | | −11.30 | |
| −37.12 $\delta_2$ | | 31 1.69 | | 9 8.5 | | | | | | 9 45.60 | |

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Date$_1$ = ~~Apr 23~~ 23d Observer
May 4 Recorder
n = +.06
C ~~8~~ −.06

Date$_2$ = ~~Apr 27~~ 27d Observer
May 2 Recorder
$n_{T_h}$ = −.05

7

| Star. α | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $11^h\ 18^m\ 19^s$ | | $17^m$ | $18^m$ | $5^s.2$ | $8^s.3$ | $11^s.6$ | $14^s.7$ | 17 | $68^s.36$ | $18^m$ | $8^s.36$ |
| 17 13.7 | | 58.6 | 25 | | | | | | | | + 7.75 |
| 50 5.9 | | 52.1 | | | | | | | | | + 7 |
| κ | | 53.9 | | | | | | | | | − 2 |
| | | 522 | | | | | | | | | − 9 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | + 7.71 | 18 | 16.07 |
| | | | | | | | | | | | − 1.65 |
| $c_1$ | | | | | | | | | | 18 | 14.42 |
| | | | | | | | | | | | |
| κ | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | |
| $a_2$ | | | | | | | | | | | |
| $21\ 42$ | | $21$ | | | | | | | | | |
| 20 45.3 | 9.6 | 11.4 | 33.5 | 36.8 | 40.2 | 43.6 | 47.0 | 21 | 40.22 | 21 | 40.22 |
| 52 18.4 | 9.5 | 12.9 | | | | | | | | | + 7.74 |
| κ | | 14.5 | | | | | | | | | + 8 |
| | | 12.9 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | + 7.70 | | − 10 |
| | | | | | | | | | | 21 | 47.92 |
| $a_1$ | | | | | | | | | | | − 1.77 |
| | | | | | | | | | | 21 | 46.15 |
| | 9.6 | 21 | 19.3 | 32.1 | 35.5 | 38.6 | 42.2 | 45.7 | 21 | 38.82 | 21 |
| | | | 20.7 | | | | | | | | 38.82 |
| κ | | | 20.0 | | | | | | | | + 9.04 |
| | | | | | | | | | | | − 6 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | + 8.96 | | − 2 |
| | | | | | | | | | | 21 | 47.78 |
| $a_2$ | | | | | | | | | | | − 1.60 |
| | | | | | | | | | | 21 | 46.18 |
| $27\ 43$ | | $27$ | | | | | | | | | |
| 26 46.8 | 8.0 | 20.4 | 33.5 | 36.8 | 40.3 | 43.6 | 47.1 | 27 | 40.26 | 27 | 40.26 |
| 52 47.2 | 8.0 | 21.9 | | | | | | | | | + 7.74 |
| κ | | 23.9 | | | | | | | | | + 8 |
| | | 22.1 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | + 7.70 | | − 10 |
| | | | | | | | | | | 27 | 47.96 |
| $a_1$ | | | | | | | | | | | − 1.83 |
| | | | | | | | | | | 27 | 46.13 |
| | 7.5 | 27 | 57.9 | −35.6 | 38.9 | 42.1 | 45.6 | +++ | 27 | ~~32.44~~ | 27 |
| | | | 53.2 | | | | | | | | + 9.04 |
| κ | | | 55.4 | | | | | | | | − 7 |
| | | | 53.5 | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | + 8.95 | | |
| | | | | | | | | | | 27 | 47.80 |
| $a_2$ | | | | | | | | | | | − 1.67 |
| | | | | | | | | | | 27 | 46.13 |
| $29\ 3^h.9$ | | | | | | | | | | | |
| 29 4.0 | 9.8 | Lost | | | | | | | | | |
| 50 40.7 | 9.5 | | | | | | | | | | |
| κ | | | | | | | | | | | |
| | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | |
| $a_1$ | | | | | | | | | | | |
| | 9.5 | 29 | 40.3 | 50.1 | 53.5 | 56.8 | 0.2 | 3.3 | 29 | 44.12 | (29 ~~44.12~~ |
| | | | 42.0 | | | | | | | | 56.78 ~~30 5.13~~ |
| κ | | | 43.6 | | | | | | | | + 9.04 |
| | | | 42.0 | | | | | | | | − 6 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | + 8.96 | | − 2 |
| | | | | | | | | | | | ~~11~~ ~~11~~ |
| $a_2$ | | | | | | | | | | 30 | 5.74 |
| | | | | | | | | | | | − 1.61 30 4.13 |
| $31\ 08$ | | $30$ | | | | | | | | | |
| 30 13.8 | 8.9 | 42.4 | 31 1.5 | 4.7 | 8.0 | 11.2 | 14.5 | 31 | 7.98 | 31 | 7.98 |
| 50 25.4 | 8.4 | 43.6 | | | | | | | | | + 7.74 |
| κ | | 45.1 | | | | | | | | | + 7 |
| | | 43.7 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | + 7.70 | | − 9 |
| | | | | | | | | | | 31 | 15.68 |
| $a_1$ | | | | | | | | | | | − 1.76 |
| | | | | | | | | | | 31 | 13.92 |
| | 8.0 | 30 | 52.0 | 31 0.0 | 3.3 | 6.5 | 9.7 | 12.8 | 31 | 6.46 | 31 |
| | | | 53.4 | | | | | | | | 6.46 |
| κ | | | 54.6 | | | | | | | | + 9.04 |
| | | | 53.3 | | | | | | | | − 6 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | + 8.96 | | − 2 |
| | | | | | | | | | | 31 | 15.42 |
| $a_2$ | | | | | | | | | | | − 1.61 |
| | | | | | | | | | | 31 | 13.81 |

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May 4 −2′ 28.″23 +.″09
" 12 −2 27.97 +.09

Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +16.16 | 0′ 3.9 | 9.0 | 11.9 | 0.45 | 41.90 | | | 15 | 27.20 | |
| | 1.20 | | | | 16 | 13.53 | | | | 7 | +8.03 |
| d | 9.80731 | | | | | +13.53 | | | | + 1 | |
| | 1.13146 | | | | | | 5 | 27.20 | | + 7.89 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| | | | | | | | | | | − 9.10 | |
| +6.72 δ₁ −39.44 | | 18 21.14 | | 3 46.7 | | | | | | 26.13 | |
| | | 1 12.7 | 22.0 | 34.7 | 16 17.35 | 6 31.00 | | | 15 | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| δ₂ | | | | | | | | | | | |
| | +27.32 | 3 39.2 | 42.7 | 81.9 | 8 40.95 | 14 7.40 | | | 5 | 52 12 1.01 | |
| | 1.43616 | | | | | 52 11 39.83 | | | | − 20 | +10.51 |
| 1.40 d | 9.78739 | | | | | +21.84 | | | | + 33 | |
| | 1.33926 | | | | | | 12 | 1.01 | | +10.08 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 9.45 | |
| +6.72 δ₁ −39.52 | | 21 52.87 | | 11 22.8 | | | | | | 12 2.07 | |
| | + 18.82 | 3 27.1 | 36.9 | 64.0 | 8 32.00 | 14 16.35 | | | 5 | 3.42 | |
| | 1.27416 | | | | | 52 11 48.38 | | | | − 10 | +10.34 |
| d | 9.78739 | | | | | +15.04 | | | | + 32 | |
| | 1.17726 | | | | | | 12 | 3.42 | | +9.86 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 26 | |
| +6.72 | | | | | | | | | | −10.65 | |
| −39.52 δ₂ | | 21 52.90 | | 11 23.4 | | | | | | 3.11 | |
| | +18.28 | 0 24.9 | 27.6 | 52.5 | 40 26.25 | 42 22.10 | | | 40 | 52 40 8.28 | |
| | 1.26007 | | | | | 52 39 53.87 | | | | − 9 | +10.82 |
| d | 9.78280 | | | | | +14.41 | | | | + 4 | |
| 41 | 1.15858 | | | | | | 40 | 8.28 | | +10.57 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +663 | | | | | | | | | | − 9.20 | |
| −39.72 δ₁ | | 27 52.76 | | 39 30.2 | | | | | | 40 9.90 | |
| | −2.06 | 0 58.8 | 2.2 | [40] | 0.50 | 42 47.85 | | | 40 | 8.24 | |
| | −1.47 | | | | | 52 39 19.88 | | | | − 6 | +10.56 |
| d | 1.16732 | | | | | 40 −11.64 | | | | + 0 | |
| | 9.78296 | | | | | | 39 40 | 8.24 | | +10.34 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.06599 | | | | | | | | | + 28 | |
| | | | | | | | | | | −10.20 | |
| +663 δ₂ −39.72 | | 27 52.76 | | 39 28.9 | | | | | | 8.60 | |
| | | 1 13.0 | 16.0 | 29.0 | 46 14.50 | 36 33.85 | | | 45 | | |
| d | | | | | | 34 5.51 | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| δ₁ | | | | | | | | | | | |
| | | 3 | | | | 8.55 | | | | 5285 | |
| −8.13 | +14.8 | 0 44.8 | 44.8 | 89.6 | 45 44.80 | 37 3.55 | | | 45 | 50 34 47.85 | |
| d | 1.17026 | | | | 38 | 50 34 40.68 | | | | − 6 | +8.44 |
| | 9.80274 | | | | | +12.27 | | | | + 7 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.08871 | | | | | | 34 | 47.85 | | +8.23 | |
| +657 | | | | | | | | | | + 20 | |
| −39.76 δ₂ | | 30 10.70 | | 34 11.8 | | | | | | −9.75 | |
| 2.413 | | | | | | | | | | 34 48.54 | |
| | −88.82 | 0 49.9 | 53.1 | 103.0 | 0 51.50 | 21 56.85 | | | 0 | 37.54 | |
| | +24.3 | | | | | 50 19 28.62 | | | | 50 19 48.87 | |
| .52 d | 1.38561 | | | | | +20.25 | | | | − 16 | +8.27 |
| | 9.80519 | | | | | | 19 | 48.87 | | + 8 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.30651 | | | | | | | | | +8.13 | |
| +658 | | | | | | | | | | + 22 | |
| −39.80 δ₁ | | 31 20.47 | | 19 8.9 | | | | | | −8.40 | |
| | | | | | | | | | | 19 48.74 | |
| | +13.2 | 0 38.3 | 45.9 | 84.2 | 0 40.60 | 22 7.75 | | | 0 | 50.78 | |
| | 1.12057 | | | | | 50 19 39.78 | | | | − 5 | +8.19 |
| d | 9.80504 | | | | | +11.00 | | | | + 6 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.04132 | | | | | | 19 | 50.78 | | + 7.98 | |
| +6.55 | | | | | | | | | | + 20 | |
| −39.80 δ₂ | | 31 20.36 | | 19 9.6 | | | | | | −9.60 | |
| | | | | | | | | | | 19 49.37 | |

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Date$_1$ = May 4 (236) Observer / Recorder — Date$_2$ = May 12 (237) Observer / Recorder — 9 — R

Single Observations

| Star. | α | δ | Mag. | $T_s$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 27 22.5 | 50 15 | 9.0 | | | | | | | | | | |
| | 33 23.9 | 50 20.2 | 8.9 | | | | | | | | | | |
| May 4 | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | 36 13 | 50 06 | 9.2 | 35 | 0.8 | 16.9 | 20.4 | 23.5 | 26.8 | 30.1 | 35 | 23.52 | 35 23.52 |
| | 35 14.3 | 50 11.1 | 8.9 | | 2.0 | | | | | | | | + 7.76 |
| | | | | | 1.3 | | | | | | | | + 7½ |
| May 4 | | | | | 1.4 | | | | | | | + 7.72 | − 9 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 35 31.24 |
| | $\alpha_2$ | | | | | | | | | | | | − 1.31 |
| | | | | | | | | | | | | | 35 29.93 |
| | 39 [55] | 50 10 | 9.0 | 36 | 51.0 | 37 9.3 | 12.7 | 15.9 | 19.0 | 22.3 | 37 | 15.84 | 37 15.84 |
| | 36 56.2 | 50 [12.1] 14.6 | 8.5 | | 52.6 | | | | | | | | + 7.76 |
| | | | | | 54.8 | | | | | | | | + 7½ |
| May 4 | | | | | 52.8 | | | | | | | + 7.72 | − 9 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 37 23.56 |
| | $\alpha_1$ | | | | | | | | | | | | − 1.32 |
| | | | | | | | | | | | | | 37 22.24 |
| | 40 15 | 50 37 | 9.6 | 40 | 27.0 | 9.8 | 13.1 | 16.5 | 19.7 | 22.9 | 40 | 16.40 | 40 16.40 |
| | 39 16.6 | 50 41.7 | 9.5 | | 28.3 | | | | | | | | + 7.76 |
| | | | | | 30.0 | | | | | | | | + 7½ |
| May 4 | | | | | 28.4 | | | | | | | + 7.72 | − 9 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 40 24.12 |
| | $\alpha_2$ | | | | | | | | | | | | − 1.36 |
| | | | | | | | | | | | | | 40 22.76 |
| | 43 41 | 52 29 | 8.0 | 42 | 33.4 | 51.4 | 54.7 | 58.1 | 1.5 | 4.8 | 42 | 58.10 | 42 58.10 |
| | 41 59.2 | 52 34.5 | 8.1 | | 36.8 | | | | | | | | + 7.76 |
| | | | | | 38.0 | | | | | | | | + 8 |
| May 4 | | | | | 36.1 | | | | | | | + 7.72 | − 2 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 10 |
| | $\alpha_1$ | | | | | | | | | | | | 43 5.82 |
| | | | | | | 52.8 | | | | | | | − 1.45 |
| | | | | | | | | | | | | | 43 4.37 |
| | 44 00 | 52 45 | 9.1 | 43 | 29.9 | 56.3 | 59.6 | 3.1 | 6.4 | | 43 | 59.64 | 43 59.64 |
| | 42 56.0 | 52 50.7 | 9.0 | | 31.4 | | | | | | | | + 7.76 |
| | | | | | 32.9 | | | | | | | | + 8 |
| May 4 | | | | | 31.4 | | | | | | | + 7.72 | − 2 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 10 |
| | $\alpha_2$ | | | | | | | | | | | | 44 7.36 |
| | | | | | | | | | | | | | − 1.46 |
| | | | | | | | | | | | | | 44 5.90 |
| | 45 55 | 49 55 | 7.8 | 44 | 33.0 | 48.2 | 51.5 | 54.6 | 58.0 | 1.0 | 44 | 54.66 | 44 54.66 |
| | 44 57.8 | 50 02 | 7.5 | | 34.0 | | | | | | | | + 7.76 |
| | | | | | 35.6 | | | | | | | | + 7½ |
| May 4 | | | | | 34.2 | | | | | | | + 7.72 | − 9 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 45 [5] 2.38 |
| | $\alpha_1$ | | | | | | | | | | | | − 1.38 |
| | | | | | | | | | | | | | 45 [6] 1.00 |
| | 48 28 | 50 19 | 9.3 | 48 | 11.8 | 22.6 | 25.9 | 29.1 | 32.4 | 35.6 | 48 | 29.12 | 45 [8] 29.12 |
| | 47 30.6 | 50 24.5 | 9.4 | | 13.0 | | | | | | | | + 7.76 |
| | | | | | 15.1 | | | | | | | | + 7½ |
| May 4 | | | | | 13.3 | | | | | | | + 7.72 | − 9 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 45 [8] 36.84 |
| | $\alpha_2$ | | | | | | | | | | | | − 1.40 |
| | | | | | | | | | | | | | 45 [8] 35.44 |
| | 51 27 | 50 24 | 9.0 | 51 | 0.7 | 22.5 | 25.8 | 29.1 | 32.5 | 35.8 | 51 | 29.08 | [51] 29.08 |
| | 50 29.8 | 50 9.1 | 9.2 | | 1.9 | | | | | | | | + 7.76 |
| | | | | | 3.3 | | | | | | | | + 7½ |
| May 4 | | | | | 1.9 | | | | | | | + 7.72 | − 9 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 51 36.80 |
| | $\alpha_1$ | | | | | | | | | | | | − 1.44 |
| | | | | | | | | | | | | | 51 35.36 |
| | 54 10 | 50 18 | 8.8 | 53 | 55.2 | 4.2 | 7.4 | 10.6 | 13.8 | 17.1 | 53 | 10.62 | 54 10.62 |
| | 53 13.9 | 50 23.5 | 9.1 | | 56.7 | | | | | | | | + 7.76 |
| | | | | | 58.1 | | | | | | | | + 7 |
| May 4 | | | | | 56.7 | | | | | | | + 7.72 | − 9 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 54 18.34 |
| | $\alpha_2$ | | | | | | | | | | | | − 1.47 |
| | | | | | | | | | | | | | 54 16.87 |

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Runs



| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 8 | 1′ 14.1 | 18.1 | 32.2 | 6′ 16.10 | 16 32.25 | | | 5′ | | |
| d | | | | | | 50 14 4.02 | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | +22.1 | 0 12.8 | 17.4 | 30.2 | 15 15.10 | 7 33.25 | | | 15 | 50 5 28.32 | |
| | 1.34439 | | | | | 50 5 5.02 | | | | − 13 | +7.96 |
| d | 9.80731 | | | | | +23.30 | | | | + 2 | |
| | 1.36741 | | | | | | 5 28.32 | | | + 7.80 87 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| $\delta_2$ | | | | | | | | | | −11.40 | |
| | | | | | | | | | | 5 24.88 | |
| | −38.0 +23.0 | 1 57.9 | 55.1 | 107.0 | 11 53.50 | 10 54.85 | | | 10 | 50 8 45.86 | |
| | 1.36173 | | | | | 50 8 26.62 | | | | − 14 | +8.16 |
| d | 9.80686 | | | | | +19.24 | | | | + 17 | |
| | 1.28430 | | | | | | 8 45.86 | | | + 7.952 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 21 | |
| $\delta_1$ | | | | | | | | | | −11.30 | |
| | | | | | | 38 | | | | 8 42.72 | |
| | −12.0 | 4 6.5 | 10.7 | 17.2 | 44 8.60 | 39.75 | | | 40 | 50 35 1.57 | |
| | 1.07918 m | | | | | 50 35 11.52 | | | | 36 − 4 | +8.94 |
| d | 9.80274 | | | | | 36 − 7.95 | | | | + 37 | |
| | 0.99763 m | | | | | | 35 1.57 | | | + 8.44 38 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 23 | |
| +7.25 | | | | | | | | | | −11.30 | |
| −37.72 $\delta_2$ | | 40 30.04 | | 35 21.5 | | | | | | 34 59.21 35 | |
| | | | | | | 30 | | | | | |
| | +22.0 | 2 19.4 | 23.1 | 42.5 | 52 21.25 | 27 27.10 | | | 50 | 52 28 16.37 | |
| | 1.34242 | | | | | 52 24 58.87 | | | | − 13 | +10.72 |
| d | 9.78494 | | | | | +17.50 | | | | + 21 | |
| | 1.24307 | | | | | | 27 16.37 | | | +10.364 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +7.29 | | | | | | | | | | −11.70 | |
| −37.88 $\delta_1$ | | 43 11.66 | | 27 37.5 | 4 +1 | | | | | 27 15.39 | |
| | | | | | | 8 | | | | 8 | |
| | +28.2 | 0 57.1 | 0.2 | | 58.5 | 46 49.70 | | | 35 | 52 49 42.76 | |
| | 1.45025 4 | | | | | 52 49 20.47 | | | 30 | − 21 | +10.81 |
| d | 9.78213 | | | | | +22.27 | | | | + 8 | |
| | 1.34809 | | | | | | 44 42.76 | | | +10.664 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +7.29 | | | | | | | | | | −11.70 | |
| −37.94 $\delta_2$ | | 44 13.19 | | 45 3.9 | | | | | | 44 41.87 | |
| | +20.2 +20.5 | 1 12.1 | 17.0 | 29.1 | 26 14.55 | 56 33.80 | | | 25 | 49 54 21.81 | |
| | 1.31175 | | | | | 49 54 4.57 | | | | − 11 | +7.88 |
| d | 9.80897 | | | | | +17.24 | | | | + 11 | |
| | 1.23643 | | | | | | 54 21.81 | | | + 7.78 68 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +7.16 | | | | | | | | | | −10.85 | |
| −38.04 $\delta_1$ | | 46 8.16 | | 53 40.8 | | | | | | 54 18.84 | |
| | +15.8 | 1 37.6 | 41.2 | 79.8 | 1 39.90 | 21 8.95 | | | 0 | 50 18 53.89 | |
| | 1.19866 | | | | | 50 18 40.72 | | | | − 7 | +8.41 |
| d | 9.80579 | | | | | +13.17 | | | | + 15 | |
| | 1.11956 | | | | | | 18 53.89 | | | + 8.181 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 22 | |
| +7.13 | | | | | | | | | | −10.95 | |
| −38.18 $\delta_2$ | | 48 42.57 | | 18 13.2 | | | | | | 18 51.35 | |
| | +27.2 | 0 1.8 | 7.0 | 8.8 | 15 4.40 | 7 43.95 | | | 15 | 50 44 38.50 | |
| | 1.43457 | | | | 16 | 50 5 18.72 | | | | − 20 | +7.88 |
| d | 9.80731 | | | | | 4 +22.78 | | | | + 0 | |
| | 1.35759 | | | | | | 5 38.50 | | | + 7.88 88 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +7.08 | | | | 3 57.4 | | | | | | −10.60 | |
| −38.34 $\delta_1$ | | 51 42.44 | | ~~57.4~~ | | | | | | 54 35.78 | |
| | −46.1 +13.9 | 2 59.7 | 4.7 | 124.4 | 3 3.20 | 19 46.15 | | | 0 | 50 17 29.51 | |
| | 1.14301 | | | | | 50 17 17.92 | | | | − 5 | +8.53 |
| d | 9.80550 | | | | | +11.59 | | | | + 27 | |
| | 1.06422 | | | | | | 17 29.51 | | | + 8.10 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 21 | |
| +7.05 | | | | | | | | | | −10.50 | |
| −38.48 $\delta_2$ | | 54 23.92 | | 16 49.1 | | | | | | 17 27.54 | |

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Date$_1$ = May 4 (236) Observer / Recorder — Date$_2$ = May 12 (237) Observer / Recorder — Single Observations. — 11

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May 4 K ((δ) — D) $\frac{\kappa'}{100}$ $a_1$ | 5 8 53 / 5 7 56.8 | 50 41 / 50 52.5 | 9.1 / 9.3 | 58 34.6 37.8 37.7 36.0 | 48.5 | 50.5 | 53.8 | 57.1 | 60.7 | 58 + 7.71 | 53.92 | 58 59 59 | 53.92 + 7.75 + 7 − 2 − 9 1.63 − 1.53 0.10 |
| May 4 K ((δ) — D) $\frac{\kappa'}{100}$ $a_2$ | 11 00 12 / 10 59.7 15.6 | 49 53 / 49 57.8 | 8.2 / 8.4 | 59 49.7 50.8 51.9 50.8 | 0 5.0 | 8.3 | 11.6 | 14.8 | 18.0 | 59 0 + 7.71 | 11.54 | 0 0 0 | 11.54 + 7.75 + 7 − 2 − 9 19.25 − 1.51 17.74 |
| May 4 K ((δ) — D) $\frac{\kappa'}{100}$ $a_1$ | 3 14 / 4 18.8 | 50 43 / 50 47.8 | 9.3 / 9.3 | 5 6.5 | 8.1 | 11.2 | 14.4 | 17.6 | 20.8 | 5 + 7.71 | 14.42 | 5 5 5 | 14.42 + 7.75 + 7 − 2 − 9 22.18 − 1.58 20.55 |
| May 4 K ((δ) — D) $\frac{\kappa'}{100}$ $a_2$ | 6 29 / 5 33.8 | 50 34 / 50 39.7 | 7.0 / 7.2 | 6 2.6 4.0 5.4 4.0 | 21.8 | 25.0 | 28.3 | 31.5 | 34.7 | 6 + 7.71 | 28.26 | 6 6 6 | 28.26 + 7.75 + 7 − 2 − 9 35.97 − 1.58 34.39 |
| May 12 K ((δ) — D) $\frac{\kappa'}{100}$ $a_2$ | 6 29 / 5 33.8 | 50 34 / 50 39.7 | 7.8 / 7.2 | 6 2.6 4.3 5.9 4.5 | 20.3 | 23.6 | 26.8 | 30.1 | 33.3 | 6 + 8.96 | 26.82 | 6 35.78 − 1.48 6 34.36 46.50 − 1.46 8 45.04 | 26.82 + 9.04 − 6 − 2 37.54 + 9.04 − 6 − 2 |
| May 12 K ((δ) — D) $\frac{\kappa'}{100}$ $a_1$ | 8 39 / May 13 1434 | 51 20 / 51 25.8 | 8.8 / 9.0 | 8 9.5 9.2 10.8 9.2 | 30.9 | 34.3 | 37.5 | 40.8 | 44.2 | 8 + 8.96 | 37.54 | | |
| May 4 K ((δ) — D) $\frac{\kappa'}{100}$ $a_2$ | 14 47 / 13 47.9 | 51 24 / 51 29.3 | 8.9 / 9.0 | 14 25.9 27.2 29.3 27.5 | 36.8 | 40.1 | 43.5 | 46.7 | 50.0 | 14 + 7.70 | 43.42 | 14 | 43.42 + 7.75 + 7 − 2 − 10 51.12 − 1.68 49.44 |
| May 4 K ((δ) — D) $\frac{\kappa'}{100}$ $a_1$ | 16 25 / 15 27.1 | 52 10 / 52 15.6 | 8.2 / 8.0 | 16 0.7 3.0 4.5 2.7 | 15.3 | 18.7 | 21.9 | 25.3 | 28.6 | 16 + 7.78 | 21.96 | 16 | 21.96 + 7.75 + 8 − 2 − 10 29.67 − 1.72 27.95 |
| May 4 K ((δ) — D) $\frac{\kappa'}{100}$ $a_2$ | 17 2 0 / 16 22.3 | 52 42 / 52 48.0 | 9.4 / 9.2 | 16 48.4 50.0 51.4 49.9 | 17 11.2 | 14.7 | 18.0 | 21.3 | 24.8 | +6 17 + 7.71 | 18.00 | 17 | 18.06 + 7.75 + 8 − 2 − 10 25.71 − 1.75 23.96 |
| May 4 K ((δ) — D) $\frac{\kappa'}{100}$ $a_1$ | 25 5 0 / 24 55.5 | 50 12 / 50 18.0 | 7.9 / 8.1 | 25 23.5 24.9 27.0 25.1 | 41.1 | 44.4 | 47.6 | 50.8 | 54.0 | 25 + 7.70 | 47.58 | 25 | 47.58 + 7.74 + 7 − 4 55.28 − 1.71 53.57 |
| May 12 K ((δ) — D) $\frac{\kappa'}{100}$ $a_2$ | 25 5 0 / 26 39 / 25 39.2 | 50 59 / 51 4.8 / 4. | 9.1 / 9.3 | | | | | | | | | | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +17.9 | 3 28.5 | 32.3 | 60.8 | 83 30.40 | 49 17.95 | | | 30 | 50 47 4.49 | |
| | 1.25285 | | | | | 50 46 49.72 | | | | − 9 | +9.08 |
| d | 9.80089 | | | | | +14.77 | | | | + 31 | |
| | 1.16945 | | | | | | 47 54.49 | | | +8.032 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 24 | |
| | | | | | | | | | | −10.30 | |
| +7.00 | | | | | | | | | | | |
| −38.70 $\delta_1$ | | 59 7.10 | | 46 24.6 | | | | | | 49 3.27 | |
| | −~~39.3~~ +20.7 | 3 46.9 | 51.0 | 97.9 | 28 48.93 | 53 59.40 | | | 25 | 49 51 48.59 | |
| | 1.31397 | | | | | 49 51 31.17 | | | | − 12 | +8.06 |
| d | 9.80935 | | | | | +17.42 | | | | + 34 | |
| | 1.24103 | | | | | | 51 48.59 | | | + 7.666 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 19 | |
| | | | | | | | | | | −10.05 | |
| +6.96 | | | | | | | | | | | |
| −38.76 $\delta_2$ | | 0 24.70 | | 51 7.8 | | | | | | 51 46.60 | |
| | +7.9 | 3 28.9 | 31.9 | 60.8 | 38 30.40 | 44 17.95 | | | 35 | 60 41 66.25 | |
| | 0.89763 | | | | | 50 41 49.72 | | | | − 2 | +9.05 |
| d | 9.80166 | | | | | + 6.53 | | | | + 31 | |
| | 0.81500 | | | | | | 41 56.25 | | | + 8.573 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 23 | |
| | | | | | | | | | | −10.00 | |
| +6.91 | | | | | | | | | | | |
| −38.98 $\delta_1$ | | 5 27.46 | | 41 16.3 | | | | | | 41 55.30 | |
| | +24.3 | 2 48.5 | 53.1 | 101.6 | 47 30.80 | 34 57.55 | | | 45 | 50 32 49.48 | |
| | 1.38561 | | | | | 50 32 29.32 | | | | − 16 | +8.70 |
| d | 9.80312 | | | | | +20.16 | | | | + 26 | |
| | 1.30444 | | | | | | 32 49.48 | | | + 8.387 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 23 | |
| | | | | | | | | | | − 9.90 | |
| +6.89 | | | | | | | | | | | |
| −39.02 $\delta_2$ | | 6 41.28 | | 32 9.3 | | | | | | 32 48.28 | |
| | +22.3 | 2 44.0 50.29 | 53.9 | 97.9 | 47 48.93 | 34 59.40 | | | 45 | 50 32 50.09 | 51 19 58.16 |
| | 1.35218 | 50 32 ~~44.16~~ 51.16 | | 51 19 58.16 | | 50 32 31.43 | | | | − 13 | − 21 |
| +6.89 | 9.80312 | + 8.49 | | + 9.041 | | +18.66 | | | | + 25 | + 7 |
| d | 1.27101 | | | | | | 32 50.09 | | | + 8.17 | + 8.96 |
| − 39.02 | | | | | | | | | | + 20 | + 22 |
| ((δ) − D) $\frac{d'}{100}$ | +26.3 | | | | | | | | | −10.95 | −11.05 |
| | 1.45179 | 0 40.3 | 50.3 | 90.6 | 0 45.30 | 22 3.05 | | | 0 | 32 47.63 | 19 56.15 |
| +6.88 | 9.79573 | 6 41.25 | | 32 8.6 | | 51 19 35.08 | | | | | |
| −39.12 $\delta_1$ | 1.36323 | 8 51.92 | | 19 17.9 | | +23.08 | 19 58.16 | | | | |
| | +10.9 | 2 29.5 | 34.0 | 63.5 | 37 31.75 | 25 16.60 | | | 55 | 51 23 1.32 | |
| | 1.20140 | | | | | 51 22 48.37 | | | | − 7 | +9.67 |
| d | 9.79526 | | | | | +12.95 | | | | + 23 | |
| | 1.11237 | | | | | | 23 1.32 | | | + 9.24 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 27 | |
| | | | | | | | | | | − 9.65 | |
| +6.80 | | | | | | | | | | | |
| −39.34 $\delta_2$ | | 14 56.24 | | 22 22.0 | | | | | | 23 1.34 | |
| | +19.3 | 4 32.8 | 36.9 | 68.7 | 9 34.33 | 13 14.00 | | | 5 | 52 11 1.22 | |
| | 1.28556 | | | | | 52 10 45.77 | | | | − 10 | +10.68 |
| d | 9.78756 | | | | | +15.45 | | | | + 41 | |
| | 1.18883 | | | | | | 11 1.22 | | | +10.07 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 9.75 | |
| +6.79 | | | | | | | | | | | |
| −39.38 $\delta_1$ | | 16 34.74 | | 10 22.8 | | | | | | 11 2.15 | |
| | −~~21.9~~ +28.1 | 4 6.5 | 9.0 | 14.5 | 89 7.25 | 43 41.10 | | | 35 | 52 41 35.11 | |
| | 1.44871 | | | | | 52 41 12.87 | | | | − 21 | +11.07 |
| d | 9.78263 | | | | | +22.24 | | | | + 37 | |
| | 1.34705 | | | | | | 41 35.11 | | | +10.61 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 9.85 | |
| +6.79 | | | | | | | | | | | |
| −38.42 $\delta_2$ | | 17 30.75 | | 40 57.9 | | | | | | 41 36.33 | |
| | +22.5 | 3 45.0 | 48.7 | 93.7 | 8 46.85 | 14 1.50 | | | 5 | 50 11 51.82 | |
| | 1.34635 | | | | | 50 11 33.27 | | | | − 13 | +8.43 |
| d | 9.80630 | | | | | +18.55 | | | | + 34 | |
| | 1.26836 | | | | | | 11 51.82 | | | +8.01 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 21 | |
| | | | | | | | | | | − 8.70 | |
| +6.62 | | | | 11 | | | | | | | |
| −39.66 $\delta_1$ | | 26 0.19 | | ~~11~~ 11.9 | | | | | | 11 51.55 | |
| | | 0 57.9 | 6.3 | 12.42 | 11 2.10 | 11 46.25 | | | 10 | | |
| | | | | | | ~~9 18.28~~ | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

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Date$_1$ = May 13 (238) Observer / Recorder — Date$_2$ = May 15 (239) Observer / Recorder — 13 — Ru

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 34m 37s | 52° 43′ | 8.5 | 34m 8.0s | 26.6 | 30.1 | 33.6 | 37.2 | 40.5 | 34 | 33.60 | 34m | 33.60 |
| | 33 41.9 | 52 48.2 | 8.3 | 9.1 | | | | | | | | | + 9.08 |
| | κ | | | 10.6 | | | | | | | + 6.88 | | − 18 |
| May 12 | | | 8.5 | 9.2 | | | | | | | | | − 2 34 42.48 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 34 18.2 | 26.8 | 30.1 | 33.5 | 36.9 | 40.3 | 34 | 33.52 | 34 | 33.52 − 1.71 |
| | | | | 11.5 | | | | | | | | | + 9.04 34 40.77 |
| | $\alpha_1$ | | | 12.7 | | | | | | | + 8.95 | | − 7 |
| | | | | 11.3 | | | | | | | | | − 2 42.44 |
| ~~36 09~~ | | | 8.3 | 34 3.5 | 22.9 | 26.2 | 29.8 | 33.2 | 36.6 | 34 | 29.74 | 34 | 29.74 − 1.73 |
| | | | | 4.8 | | | | | | | | | + 12.79 34 40.74 |
| | κ | | | 6.3 | | | | | | | + 12.65 | | − 12 |
| ~~May 12~~ | | | | 4.8 | | | | | | | | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 34 | 42.39 |
| | | | | | | | | | | | | | − 1.67 |
| | $\alpha_2$ | | | | | | | | | | | 34 | 40.72 |
| | 3 36 09 | 52 38 | 8.6 | 35 36.4 | 58.5 | 2.0 | 5.8 | 8.9 | 12.3 | 35 | 65.40 | 36 | 5.40 |
| | 35 13.4 | 52 43.9 | 8.3 | 37.8 | | | | | | | | | + 9.08 |
| | κ | | | 39.6 | | | | | | | + 8.88 | | − 18 |
| May 12 | | | — | 37.9 | | | | | | 35 | | | − 2 36 14.28 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 35 45.5 | 58.5 | 1.9 | 5.1 | 8.6 | 12.0 | | 65.22 | 36 | 5.22 − 1.72 |
| | | | | 46.8 | | | | | | | | | + 9.04 36 13.56 |
| | $\alpha_1$ | | | 48.0 | | | | | | | + 8.95 | | − 7 |
| | | | | 46.8 | | | | | | | | | − 2 36 14.77 |
| | | | 8.9 | 35 36.1 | 54.5 | 57.9 | 1.5 | 5.0 | 8.5 | 35 | 61.48 | 36 | 1.48 − 1.74 |
| | | | | 37.7 | | | | | | | | | +12.79 36 12.43 |
| | κ | | | 39.4 | | | | | | | + 12.65 | | − 12 |
| | | | | 37.7 | | | | | | | | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 36 | 14.13 |
| | | | | | | | | | | | | | − 1.68 |
| | $\alpha_2$ | | | | | | | | | | | 36 | 12.45 |
| | 37 00 | 52 42 | 8.6 | 36 43.3 | 48.0 | 51.3 | 54.8 | 58.1 | 61.7 | 36 | 54.18 | 36 | 54.18 |
| | 36 4.4 | 52 47.2 | 8.9 | 44.7 | | | | | | | | | + 9.08 |
| | κ | | | 46.7 | | | | | | | + 8.88 | | − 18 |
| ~~May 12~~ | | | | 44.9 | | | | | | | | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 37 | 3.66 |
| | | | | | | | | | | | | | − 1.73 |
| | $\alpha_1$ | | | | | | | | | | | 37 | 1.93 |
| | | | 9.0 | 36 32.5 | 44.2 | 47.6 | 50.9 | 54.4 | 57.9 | 36 | 51.00 | 36 | 51.00 |
| | | | | 33.7 | | | | | | | | | + 12.77 |
| | κ | | | 35.4 | | | | | | | + 12.65 | | − 12 |
| | | | | 33.9 | | | | | | | | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 37 | 3.65 |
| | | | | | | | | | | | | | − 1.69 |
| | $\alpha_2$ | | | | | | | | | | | 37 | 1.96 |
| | 37 57 | 50 40 | 9.1 | 37 40.5 | 41.2 | 44.4 | 47.6 | 51.1 | 54.6 | 37 | 47.78 | 37 | 47.78 |
| | 36 56.0 | 50 45.3 | 9.1 | 42.5 | | | | | | | | | + 9.08 |
| | κ | | | 43.6 | | | | | | | + 8.89 | | − 17 |
| May 12 | | | 9.2 | 42.2 | | | | | | | | | − 2 37 56.6 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 37 22.9 | 41.0 | 44.3 | 47.4 | 50.8 | 54.0 | 37 | 47.50 | 37 | 47.50 − 1.65 |
| | | | | 24.4 | | | | | | | | | + 9.04 37 55.02 |
| | $\alpha_1$ | | | 26.8 | | | | | | | + 8.96 | | − 6 |
| | | | | 34.7 | | | | | | | | | − 2 37 56.46 |
| | | | 9.0 | 37 24.1 | 37.8 | 41.5 | 43.8 | 47.3 | 50.3 | 37 | 43.84 | 37 | 43.84 − 1.67 |
| | | | | 25.5 | | | | | | | | | +12.79 37 54.79 |
| | κ | | | 27.2 | | | | | | | + 12.66 | | − 11 |
| | | | | 25.6 | | | | | | | | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 37 | 56.50 |
| | | | | | | | | | | | | | − 1.61 |
| | $\alpha_2$ | | | | | | | | | | | 37 | 54.89 |
| | 39 5 0 | 51 52 | 9.4 | 39 33.0 | — | 44.3 | 47.4 | 50.8 | 53.8 | 39 | ~~39.26~~ | 39 | 47.42 |
| | 38 56.0 | 51 57.9 | 9.3 | 34.4 | | | | | | | | | + 9.08 |
| | κ | | | 34.1 | | | | | | | + 8.88 | | − 18 |
| May 12 | | | 9.2 | 34.8 | | | | | | | 47.14 | | − 2 39 56.30 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 39 17.7 | 40.5 | 43.8 | 47.0 | 50.5 | 53.9 | 39 | ~~46.94~~ | 39 | 47.14 − 1.74 |
| | | | | 19.3 | | | | | | | | | + 9.04 39 54.56 |
| | $\alpha_1$ | | | 21.0 | | | | | | | + 8.96 | | − 6 |
| | | | | 18.3 | | | | | | | | | − 2 39 56.10 |
| | | | 9.2 | 39 17.6 | 36.7 | 40.1 | 43.4 | 47.0 | 50.2 | 39 | 43.48 | 39 | 43.48 − 1.74 |
| | | | | 19.1 | | | | | | | | | + 12.79 39 54.36 |
| | κ | | | 21.5 | | | | | | | + 12.65 | | − 12 |
| | | | | 19.4 | | | | | | | | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 39 | 56.13 |
| | | | | | | | | | | | | | − 1.68 |
| | $\alpha_2$ | | | | | | | | | | | 39 | 54.45 |

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May 13 −2′ 28.28 +.09
" 15 −1 9.05 +.09

Runs



May 12

| $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ |
|---|---|---|---|---|---|---|---|---|---|---|
| +24.4 | 4′ 26.2 | 36.0 | 62.2 | 39′ 31.10 | 43 17.25 | | | 35′ | 52 41 8.28 | 9.34 |
| 1.38739 | | | | | 52 40 48.97 | | | | − 16 | − 13 |
| 9.78263 | | | | | +19.31 | 41 | 8.28 | | + 41 | + 40 |
| 1.28573 | 4 24.9 | 32.0 | 56.9 | 39 28.45 | 43 19.90 | | | 35′ | +10.35 | +10.39 |
| + 2.20 | 52 41 8.26 | 52 | 41 9.34 | | 52 40 51.93 | | | | + 28 | + 28 |
| 1.34242 | +10.88 | | +10.94 | | +17.41 | | | | −10.20 | −10.05 |
| 9.78263 | 34 47.30 | | 40 29.1 | | | 41 | 9.34 | | 41 8.96 | 41 10.23 |
| 1.24076 | 47.27 | | 30.4 | | | | | | | |
| +24.9 | 0 45.5 | 52.1 | 97.6 | 40 48.80 | 41 59.55 | | | 40 | 41 10.20 | |
| 1.39620 | | | | | 52 40 50.50 | | | | − 25 | +10.53 ~~+10.53~~ |
| 9.78263 | | | | | +19.70 | | | | + 7 | |
| 1.29454 | | | | | | 41 | 10.20 | | +10.43 | |
| | | | | | | | | | + 28 | |
| | | | | | | | | | −10.50 | |
| | 34 47.25 | | 40 30.4 | | | | | | 41 10.23 | |
| +27.6 | 2 48.1 | 58.0 | 106.1 | 42 53.05 | 39 55.30 | | | 40 | 52 37 48.81 | 49.56 |
| 1.43933 | | | | | 52 37 27.02 | | | | − 20 | − 9 |
| 9.78320 | | | | | +21.79 | 37 | 48.81 | | + 26 | + 25 |
| 1.33824 | 2 41.0 | 49.8 | 90.8 | 42 45.40 | 40 2.95 | | | 40 | +10.30 | +10.32 |
| ~~+20.2~~ | 52 37 48.81 | 52 37 | 49.56 | | 52 37 34.98 | | | | + 25 | + 28 |
| +184 | +10.64 | | +10.76 | | +14.58 | | | | −10.10 | − 9.95 |
| 1.26482 | 36 19.07 | | 37 9.4 | | | 37 | 49.56 | | 37 49.35 | 50.37 |
| 9.78320 | 18.94 | | 10.5 | | | | | | | |
| 1.16373 | | | | | | | | | | |
| +23.8 | 4 3.9 | 11.8 | 15.7 | 44 7.85 | 38 40.50 | | | 40 | 50.31 | |
| 1.37658 | | | | | 52 37 31.45 | | | | − 15 | +10.89 |
| 9.78320 | | | | | +18.86 | | | | + 37 | |
| 1.27549 | | | | | | 37 | 50.31 | | +10.39 | |
| | | | | | | | | | + 28 | |
| | | | | | | | | | −10.40 | |
| | 36 18.96 | | 37 10.9 | | | | | | 50.80 | |
| +9.8 | 6 28.4 | 38.1 | 66.5 | 40 38.25 | 42 15.10 | | | 40 | 52 39 54.66 | |
| 0.99564 | | | | | 52 39 46.82 | | | | − .3 | +10.64 |
| 9.78280 | | | | | + 7.84 | | | | + 5 | |
| 0.89415 | | | | | | 39 | 54.66 | | +10.34 | |
| | | | | | | | | | + 28 | |
| | | | | | | | | | −10.05 | |
| | 37 8.42 | | 39 15.3 | | | | | | 39 55.25 | |
| +17.1 | 1 53.9 | 60.5 | 114.4 | 41 37.20 | 40 51.15 | | | 40 | 55.64 | |
| 1.23300 | | | | | 52 39 42.10 | | | | − 8 | +10.79 |
| 9.78280 | | | | | +13.54 | | | | + 17 | |
| 1.13151 | | | | | | 39 | 55.64 | | +10.42 | |
| | | | | | | | | | + 28 | |
| | | | | | | | | | −10.35 | |
| | 37 8.45 | | 39 16.2 | | | | | | 56.08 | |
| +5.6 | 1 30.2 | 43.0 | 73.2 | 41 36.60 | 41 11.75 | | | 40 | 50 38 48.11 | 47.75 |
| 0.74819 | | | | | 50 38 43.47 | | | | − 1 | − 14 |
| 9.80213 | | | | | + 4.64 | 38 | 48.11 | | + 14 | + 17 |
| 0.66603 | 1 46.8 | 56.2 | 103.0 | 41 57.50 | 40 56.85 | | | 40 | + 8.28 | + 8.31 |
| +2.28 | 50 38 48.11 | 50 38 | 47.75 | | 50 38 28.88 | | | | + 20 | + 20 |
| 1.35793 | +8.61 | | + 8.54 | | +18.87 | | | | − 9.50 | − 9.35 |
| 9.80220 | 38 1.48 | | 38 7.3 | | | 38 | 47.75 | | 38 47.22 | 46.94 |
| 1.27584 | 1.25 | | 7.0 | | | | | | | |
| +18.2 | 3 2.4 | 11.0 | 13.4 | 43 6.70 | 39 41.65 | | | 40 | 47.67 | |
| 1.26007 | | | | | 50 38 32.60 | | | | − 9 | +6.77 |
| 9.80220 | | | | | +15.07 | | | | + 28 | |
| 1.17798 | | | | | | 38 | 47.67 | | + 8.38 | |
| | | | | | | | | | + 20 | |
| | | | | | | | | | − 9.75 | |
| | 38 1.35 | | 38 6.8 | | | | | | 46.69 | |
| 1.26 +7.4 | 3 27.5 | 38.9 | 66.4 | 28 33.20 | 54 15.15 | | | 25 | 51 57 57.03 | 58.04 |
| 1.10037 | | | | | 51 51 46.87 | | | | − 5 | − 20 |
| 9.79079 | | | | | +10.16 | 51 | 57.03 | | + 32 | + 34 |
| 1.00687 | 3 40.3 | 49.2 | 89.5 | 28 44.75 | 54 3.60 | | | 25 | + 9.53 | + 9.55 |
| +27.6 | 51 51 57.03 | 51 51 | 58.04 | | 51 51 35.63 | | | | + 24 | + 25 |
| 1.44404 | +10.04 | | + 9.94 | | + 22.41 | | | | − 9.70 | − 9.55 |
| 9.79070 | 40 1.02 | | 51 17.4 | | | 57 | 58.04 | | 51 57.37 | 58.43 |
| 1.35045 | 0.80 | | 16.5 | | | | | | | |
| +24.1 | 4 57.1 | 4.1 | 121.2 | 30 0.20 | 52 48.15 | | | 25 | 58.53 | |
| 1.38202 | | | | | 51 51 39.10 | | | | − 15 | +9.71 |
| 9.79070 | | | | | +19.43 | | | | 0 | |
| 1.28843 | | | | | | 57 | 58.53 | | + 9.61 | |
| | | | | | | | | | + 25 | |
| | | | | | | | | | −10.00 | |
| | 40 0.89 | | 51 18.3 | | | | | | 58.24 | |

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Date$_1$ = May 13 (295) — Observer / Recorder

Date$_2$ = May 15 (239) — Observer / Recorder

15.

| h | Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 41 | 40 10.3 | 50 3.2 / 50 38.1 | 6.5 / 7.0 | 40 34.3 35.4 36.8 | 52.5 | 55.7 | 59.2 | 2.3 | 5.4 | 40 | 39.02 | 40 | 39.02 + 9.08 − 17 |
| | May 12 | κ | | | | | | | | | | + 8.89 | | − 2 40 49.91 |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | 6.8 | 40 36.6 38.1 40.0 | 52.6 | 55.7 | 58.9 | 2.2 | 5.5 | 40 | 38.98 | 40 | 58.98 − 1.67 |
| | | $\alpha_1$ | | | 38.2 | | | | | | | + 8.96 | | + 9.04 41 6.24 − 6 − 2 41 7.94 |
| | ~~43 19~~ | | | 6.9 | 40 32.8 34.8 36.8 | 48.7 | 51.8 | 55.2 | 58.4 | 1.8 | 40 | 55.18 | 40 | 55.18 − 1.69 |
| | ~~May 12~~ | κ | | | 34.8 | | | | | | | + 12.66 | | + 12.79 41 6.25 − 11 − 2 |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 41 | 7.84 − 1.64 |
| | | $\alpha_2$ | | | | | | | | | | | 41 | 6.20 |
| | 43 19 | 42 24.1 | 50 06 / 50 11.6 | 9.0 / 8.9 | 42 47.5 49.2 51.0 | 43 6.6 | 9.9 | 13.1 | 16.5 | 19.6 | 43 | 13.14 | 43 | 13.14 + 9.08 − 17 |
| | May 12 | κ | | | 49.2 | | | | | | | + 8.89 | | − 2 43 22.03 |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | 9.0 | 42 42.7 48.5 44.6 | 43 6.7 | 9.8 | 13.0 | 16.2 | 19.5 | 43 | 13.04 | 43 | 13.04 − 1.67 + 9.04 43 20.36 − 6 |
| | | $\alpha_1$ | | | 43.6 | | | | | | | + 8.96 | | − 2 43 22.00 |
| | | | | 9.0 | 42 42.9 44.3 45.7 | 43 2.9 | 6.2 | 9.4 | 12.6 | 15.8 | 43 | 9.38 | 43 | 9.38 − 1.69 |
| | | κ | | | 44.3 | | | | | | | + 12.66 | | + 12.79 43 20.31 − 11 − 2 |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 43 | 22.04 − 1.64 |
| | | $\alpha_2$ | | | | | | | | | | | 43 | 20.40 |
| | 44 5.6 | 44 1.5 | 50 45 / 50 50.9 | 9.6 / 9.4 | 44 36.9 38.0 39.4 | 45.3 | 48.5 | 51.8 | 55.2 | 58.3 | 44 | 51.82 | 44 | 51.82 + 9.08 − 17 |
| | ~~May 12~~ | κ | | | 38.1 | | | | | | | + 8.98 | | − 2 |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 45 | 0.71 − 1.71 |
| | | $\alpha_1$ | | | | | | | | | | | 44 | 59.00 |
| | | | | 9.7 | 44 33.2 34.7 33.9 | 41.5 | 44.7 | 48.0 | 51.3 | 54.5 | 44 | 48.00 | 44 | 48.00 + 12.79 − 11 |
| | | κ | | | | | | | | | | + 12.66 | | − 2 |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 45 | 0.66 − 1.67 |
| | | $\alpha_2$ | | | | | | | | | | | 44 | 58.99 |
| | 45 33 | 44 38.1 | 50 39 / 50 44.8 | 7.2 | | | Lost May 13 | | | | | | | |
| | May 12 | κ | | | | | | | | | | | | |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | 7.0 | 45 16.3 19.0 20.3 | 21.0 | 24.2 | 27.4 | 30.9 | 33.9 | 45 | 27.48 | 45 | 27.48 + 9.04 − 6 − 2 45 36.44 |
| | | $\alpha_1$ | | | 18.5 | | | | | | | + 8.96 | | |
| | | | | 7.8 | 45 35.6 37.0 38.5 | — | — | 23.8 | 27.2 | 30.4 | | | 45 | 23.88 − 1.73 |
| | | κ | | | 37.0 | | | | | | | + 12.66 | | + 12.79 45 34.71 − 11 − 2 |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 45 | 36.54 − 1.67 |
| | | $\alpha_2$ | | | | | | | | | | | 45 | 34.87 |
| 11 | 52 3.1 | 51 27.5 | 50 26 / 50 31.4 | 9.4 / 9.5 | 51 57.7 59.1 0.6 | 52 20.3 — | 23.3 | 26.9 | 30.2 | 33.5 | 52 | 26.84 | 52 | 26.84 + 9.08 − 17 |
| | ~~May 12~~ | κ | | | 59.1 | | | | | | | + 8.89 | | − 2 |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 52 | 35.73 − 1.75 |
| | | $\alpha_1$ | | | | | | | | | | | 52 | 33.98 |
| | | | | 9.7 | 52 0.8 2.3 3.6 | 16.7 | 19.9 | 23.1 | 26.2 | 29.5 | 52 | 23.08 | 52 | 23.08 + 12.79 − 11 |
| | | κ | | | 2.2 | | | | | | | + 12.66 | | − 2 |
| | | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 52 | 35.74 − 1.72 |
| | | $\alpha_2$ | | | | | | | | | | | 52 | 34.02 |

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Runs

16

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +23.0 | 3 52.1 | 4.0 | 117.1 | 48 58.55 | 33 49.80 | | | 45 | 50 31 41.02 | 42.59 |
| 94 d | 1.37107 | | | | | 50 31 21.52 | | | | − 15 | − 12 +8.57 +8.62 |
| | 9.80330 | | | | | +19.50 | 31 41.02 | | | + 35 | + 35 |
| 80 ((δ) − D) $\frac{d'}{100}$ | 1.29008 | 3 50.1 | 0.0 | 110.1 | 48 55.05 | 33 53.30 | | | 45 | +8.17 | + 8.19 |
| +6.41 | +20.7 | | | | | 50 31 25.38 | | | | + 20 | + 20 |
| −39.98 δ₁ | 1.31806 | | | | | +17.26 | | | | − 9.30 | − 9.15 |
| | 9.80330 | 41 12.65 | | 31 0.3 | | | 31 42.59 | | | 31 40.29 | 42.06 |
| | 1.23707 | 12.66 | | 31 2.1 | | | | | | | |
| +6.41 | +20.8 | 0 10.1 | 18.7 | 28.8 | 50 14.40 | 32 33.95 | | | 50 | 41.83 | |
| −39.98 d | 1.30963 | | | | | 50 31 24.90 | | | | − 11 | +8.35 |
| | 9.80330 | | | | | +16.93 | | | | + 2 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.22864 | | | | | | 31 41.83 | | | +8.24 | |
| | | | | | | | | | | + 20 | |
| +6.41 | | | | | | | | | | − 9.60 | |
| −39.98 δ₂ | | 41 12.61 | | 31 0.6 | 15 0.85 | | | | | 40.58 | |
| | −~~36.7~~ +23.9 | ~~0~~ 1 53.8 | 6.1 | 121.9 | ~~46 58.5~~ | 6 47.40 | | | 15 | 50 7 39.15 | 40.01 |
| 10 d | 1.37840 | 1.30157 | | | | 50 7 19.12 | | | | − 15 | − 23 +7.85 +7.80 |
| | | | | | | +20.03 | 4 39.15 | | | + 9 | + 10 |
| 66 ((δ) − D) $\frac{d'}{100}$ | −~~36.6~~ +29.4 | 0 59.9 | 10.1 | 70.0 | ~~46 58.5~~ 15 | 6 43.35 | | | 15 | + 7.71 | + 7.73 |
| +6.38 | 1.46835 | | | 57.9 | | 50 4 15.38 | | | | + 20 | + 20 |
| −40.00 δ₁ | 9.80746 | 43 26.74 | | 4 ~~58.5~~ 58.9 | | +24.63 | | | | − 9.05 | − 8.90 |
| | 1.39152 | 26.69 | | | | | 4 40.01 | | | ~~37~~ 37.95 | 5 38.91 |
| +6.38 | −~~33.0~~ +28.1 | 1 16.5 | 24.3 | 40.8 | 16 20.40 | 6 27.95 | | | 15 | 5 39.92 | ✓ 10 min |
| −40.00 d | 1.39967 | | | | | 50 5 18.90 | | | | − 17 | +7.93 |
| | 9.80731 | | | | | +21.02 | | | | + 12 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.32269 | | | | | | 5 39.92 | | | +7.78 | |
| +6.38 | | | | | | | | | | + 20 | |
| −40.00 δ₂ | | 43 26.78 | | 4 58.5 | | | | | | − 9.35 | |
| | | | | | | | | | | 5 38.50 | |
| | + 18.7 | 0 35.0 | 44.7 | 79.7 | 32 39.85 | 47 8.50 | | | 85 | 50 44 51.54 | |
| 82 d | 1.13672 | | | | | 50 44 40.22 | | | | − 5 | +8.60 |
| | 9.80136 | | | | | + 11.32 | | | | + 6 | |
| +6.36 ((δ) − D) $\frac{d'}{100}$ | 1.05379 | | | | | | 44 51.54 | | | + 8.39 | |
| −40.02 δ₁ | | 45 5.36 | | 44 11.0 | | | | | | + 20 | |
| | | | | | | | | | | − 9.10 | |
| | | | | | | | | | | 44 51.04 | |
| | + 14.1 | 1 54.1 | 1.7 | 115.8 | 36 57.90 | 45 50.45 | | | 35 | 53.05 | |
| d | 1.14922 | | | | | 50 44 41.40 | | | | − 5 | +8.80 |
| | 9.80136 | | | | | +11.65 | | | | + 17 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.06629 | | | | | | 44 53.05 | | | +8.48 | |
| +6.36 | | | | | | | | | | + 20 | |
| −40.02 δ₂ | | 45 5.35 | | 44 12.4 | | | | | | − 9.40 | |
| | | | | | | | | | | 52.45 | |
| | | | | | | | | | | 50 38 13.18 | |
| d | | | | | | | | | | − 2 | +8.68 |
| | | | | | | | | | | + 20 | |
| | + ~~8.0~~ +9.0 | 2 10.0 | 19.3 | 29.3 | (42) 14.65 | 40 33.70 | | | 40 | +8.30 | |
| ((δ) − D) $\frac{d'}{100}$ | 0.95424 | | | | | 50 38 5.73 | | | | + 20 | |
| | 9.80228 | | | | | +7.45 | | | | − 8.90 | |
| δ₁ | 0.87223 | | | | | | 38 13.18 | | | 38 12.96 | |
| 644 | | | | | | | | | | | |
| 1.73 +6.35 | −13.1 | 2 10.7 | 19.0 | 29.7 | (43) 14.85 | 39 33.50 | | | 40 | 13.61 | |
| 14.71 −40.04 d | 1.11727n | | | | | 50 38 24.45 | | | | − 5 | +8.74 |
| | 9.80220 | | | | | −10.84 | | | | + 27 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.03518n | | | | | | 38 13.61 | | | + 8.36 | |
| +6.35 | | | | | | | | | | + 20 | |
| −40.04 δ₂ | | 45 41.06 | | 37 32.9 | | | | | | − 9.35 | |
| | | 41.22 | | 33.0 | | | | | | 13.04 | |
| | − ~~22.3~~ +27.7 | 0 10.9 | 26.7 | 42.6 | 35 21.30 | 27 27.05 | | | 55 | 50 25 21.81 | |
| 76 d | 1.44248 | | | | | 50 24 58.77 | | | | − 21 | +8.10 |
| | 9.80428 | | | | | +23.04 | | | | + 3 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.36247 | | | | | | 25 21.81 | | | + 8.08 | |
| +6.25 | | | | | | | | | | + 20 | |
| −40.08 δ₁ | | 52 40.23 | | 24 41.2 | | | | | | − 8.60 | |
| | | | | | | | | | | 25 21.31 | |
| | + ~~20.9~~ | 1 20.0 | 28.3 | 68.3 | 36 34.15 | 26 14.20 | | | 55 | 22.53 | |
| d | 1.32015 | | | | | 50 25 5.15 | | | | − 12 | +8.36 |
| | 9.80428 | | | | | +17.38 | | | | + 14 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.24014 | | | | | | 25 22.53 | | | + 8.14 | |
| +6.25 | | | | | | | | | | + 20 | |
| −40.08 δ₂ | | 52 40.27 | | 24 41.9 | | | | | | − 8.90 | |
| | | | | | | | | | | 21.99 | |

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238

Date$_1$ = May 13 — Observer / Recorder

239

Date$_2$ = May 18 — Observer / Recorder

17

| Star. α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 h 5 6m 38 s | 50 ° 06 ′ | 9.3 | 56m 9.1 | 26.9 | 30.0 | 33.3 | 36.6 | 39.6 | 5 6 | 33.28 | 5 6 33.28 | |
| 55 44.1 | 50 12.1 | 9.2 | 11.6 | | | | | | | | + 9.08 | |
| κ | | | 13.2 | | | | | | | + 8.89 | − 17 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 11.3 | | | | | | | | − 2 | |
| | | | | | | | | | | | 56 42.17 | |
| $a_1$ | | | | | | | | | | | − 1.77 | |
| | | | | | | | | | | | 56 40.40 | |
| | | 9.1 | 56 1.3 | 22.8 | 26.0 | 29.6 | 32.6 | 35.8 | 5 6 | 29.36 | 56 29.36 | |
| | | | 2.8 | | | | | | | | + 12.79 | |
| κ | | | 4.7 | | | | | | | + 12.66 | − 11 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 2.9 | | | | | | | | − 2 | |
| | | | | | | | | | | | 56 42.02 | |
| $a_2$ | | | | | | | | | | | − 1.73 | |
| | | | | | | | | | | | 56 40.29 | |
| 5 9 13 | 50 23 | 8.0 | 58 48.1 | 59 1.8 | 5.0 | 8.5 | 11.7 | 15.0 | 5 9 | 8.40 | 59 8.40 | |
| 5 8 21.3 | 50 29.1 | 8.4 | 49.4 | | | | | | | | + 9.08 | |
| κ | | | 51.3 | | | | | | | + 8.89 | − 17 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 47.6 | | | | | | | | − 2 | |
| | | | | | | | | | | | 59 17.29 | |
| $a_1$ | | | | | | | | | | | − 1.80 | |
| | | | | | | | | | | | 59 15.49 | |
| | | 8.4 | 58 34.8 | 58.0 | 1.3 | 4.6 | 7.9 | 11.1 | 5 9 | 64.38 | 59 4.58 | |
| | | | 36.1 | | | | | | | | + 12.79 | |
| κ | | | 37.2 | | | | | | | + 12.66 | − 11 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 36.0 | | | | | | | | − 2 | |
| | | | | | | | | | | | 59 17.24 | |
| $a_2$ | | | | | | | | | | | − 1.77 | |
| | | | | | | | | | | | 59 15.47 | |
| 12 6 22 | 52 27 | 8.7 | 59 53.5 | 0 13.6 | 16.0 | 19.3 | 22.8 | 26.5 | 5 9 | 19.44 | 0 19.44 | |
| 11 59 30.0 | 52 33.2 | 9.0 | 55.0 | | | | | | 0 | | + 9.08 | |
| κ | | | 56.5 | | | | | | | + 8.88 | − 18 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 55.0 | | | | | | | | − 2 | |
| | | | | | | | | | | | 0 28.32 | |
| $a_1$ | | | | | | | | | | | − 1.89 | |
| | | | | | | | | | | | 0 26.43 | |
| | | 8.8 | 59 58.2 | 0 8.6 | 12.2 | 15.5 | 19.0 | 22.4 | 5 9 | 155.4 | 0 18.54 | |
| | | | 59.9 | | | | | | 0 | | + 12.79 | |
| κ | | | 59.0 | | | | | | | + 12.65 | − 12 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | − 2 | |
| | | | | | | | | | | | 0 28.19 | |
| $a_2$ | | | | | | | | | | | − 1.86 | |
| | | | | | | | | | | | 0 26.33 | |
| 2 2 4 | 51 06 | 9.0 | 1 54.0 | 2 13.9 | 17.2 | 20.4 | 23.9 | 27.3 | 2 | 20.54 | 2 20.54 | |
| 1 32.6 | 51 12.1 | 9.0 | 55.4 | | | | | | | | + 9.08 | |
| κ | | | 56.8 | | | | | | | + 8.89 | − 17 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 55.4 | | | | | | | | − 2 | |
| | | | | | | | | | | | 2 29.43 | |
| $a_1$ | | | | | | | | | | | − 1.85 | |
| | | | | | | | | | | | 2 27.58 | |
| | | 8.7 | 1 59.2 | 2 10.8 | 13.5 | 16.7 | 20.1 | 23.4 | 2 | 16.80 | 2 16.80 | |
| | | | 0.5 | | | | | | | | + 12.79 | |
| κ | | | 2.2 | | | | | | | + 12.67 | − 10 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 2 0.6 | | | | | | | | − 2 | |
| | | | | | | | | | | | 2 29.47 | |
| $a_2$ | | | | | | | | | | | − 1.81 | |
| | | | | | | | | | | | 2 27.66 | |
| 3 3 2 | 50 28 | 9.0 | 3 5.7 | 22.0 | 25.4 | 28.4 | 32.0 | 35.5 | 3 | 28.62 | 3 28.62 | |
| 2 39.5 | 50 33.9 | 9.1 | 11.4 | | | | | | | | + 9.08 | |
| κ | | | 9.4 | | | | | | | + 8.89 | − 17 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 7.5 | | | | | | | | − 2 | |
| | | | | | | | | | | | 3 37.51 | |
| $a_1$ | | | | | | | | | | | − 1.84 | |
| | | | | | | | | | | | 3 35.67 | |
| | | 9.2 | 3 11.5 | 18.2 | 21.5 | 24.8 | 28.3 | 31.2 | 3 | 24.80 | 3 24.80 | |
| | | | 12.8 | | | | | | | | + 12.79 | |
| κ | | | 14.8 | | | | | | | + 12.66 | − 11 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 13.0 | | | | | | | | − 2 | |
| | | | | | | | | | | | 3 37.46 | |
| $a_2$ | | | | | | | | | | | − 1.80 | |
| | | | | | | | | | | | 3 35.66 | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +2~~1~~0 | 4 29.1 | 39.9 | 69.0 | 14 34.50 | 8 13.85 | | | 10 | 50 6 3.99 | |
| | 1.342422 | | | | | 50 5 45.57 | | | | - 13 | +8.22 |
| 92 d | 9.807 14 6 | | | | | +18.42 | | | | + 41 | |
| | 1.26529 | | | | | | 6 3.99 | | | +7.74 | |
| ((δ) — D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +6.19 | | | | | | | | | | −8.25 | |
| −40.10 $\delta_1$ | | 56 46.59 | | 5 23.9 | | | | | | 6 ~~13~~.96 | |
| | +2~~0.4~~ | 0 57.1 | 60.1 | 111.2 | 19 55.60 | 6 52.75 | | | 15 | 5.89 | |
| | 26.5 | | | | | 50 5 43.70 | | | | - 19 | +7.89 |
| d | 1.423225 | | | | | +22.19 | | | | + 8 | |
| | 9.80716 | | | | | | 6 5.89 | | | +7.80 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.34612 | | | | | | | | | + 20 | |
| +6.19 | | | | | | | | | | −8.60 | |
| −40.10 $\delta_2$ | | 56 46.48 | | 5 25.1 | | | | | | 5.18 | |
| | −~~41.2~~ | 2 11.2 | 21.0 | 32.2 | 57 16.10 | 25 32.25 | | | 55 | 50 23 19.62 | |
| | +~~7~~88 | | | | | 50 23 3.97 | | | | - 10 | +8.33 |
| 82 d | 1.274116 | | | | | +15.65 | | | | + 20 | |
| | 9.804 5 8 | | | | | | 23 19.62 | | | +8.03 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.19445 | | | | | | | | | + 20 | |
| +6.15 | | | | | | | | | | −8.20 | |
| −40.10 $\delta_1$ | | 59 21.64 | | 22 39.6 | | | | | | 23 19.75 | |
| | +~~28.3~~ | 3 ~~38~~.1 | 46.1 | 84.2 | 28 42.10 | 24 6.25 | | | 55 | 21.00 | |
| | +286 | | | | | 50 22 57.20 | | | | - 22 | +8.42 |
| d | 1.456 37 | | | | | +23.80 | | | | + 34 | |
| | 9.80458 | | | | | | 23 21.00 | | | +8.10 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.37666 | | | | | | | | | + 20 | |
| +6.15 | | | | | | | | | | −8.30 | |
| −40.10 $\delta_2$ | | 59 21.62 | | 22 40.8 | | | | | | 20.92 | |
| | −~~35.6~~ | 4 6.0 | 14.9 | 20.9 | 34 10.45 | 28 37.90 | | | 50 | 52 26 29.04 | |
| | +2 44 | | | | | 52 26 9.62 | | | | - 16 | +10.61 |
| d | 1.387 39 | | | | | +19.42 | | | | + 37 | |
| 80 | 9.78510 | | | | | | 26 29.04 | | | +10.13 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.28820 | | | | | | | | | + 27 | |
| +6.14 | | | | 509 | | | | | | −8.60 | |
| −40.10 $\delta_1$ | | 0 32.57 | | 25 ~~51.0~~ | | | | | | 26 31.05 | |
| | −~~43.5~~ | 0 17.9 | 24.0 | 41.9 | 35 20.95 | 27 27.40 | | | 55 | 31.48 | |
| | +16.5 | | | | | 52 26 18.35 | | | | - 7 | +10.44 |
| d | 1.21748 | | | | | +13.13 | | | | + 3 | |
| | 9.78570 | | | | | | 26 31.48 | | | +10.21 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.11829 | | | | | | | | | + 27 | |
| +6.14 | | | | 9 | | | | | | −8.75 | |
| −40.10 $\delta_2$ | | 0 32.47 | | 25 52.~~87~~ | | | | | | ~~33.87~~ 32.97 | |
| | −~~34.8~~ | 2 58.0 | 8.9 | 16.9 | 13 3.45 | 9 44.90 | | | 10 | 51 7 32.18 | |
| | +26.1 | | | | | 51 7 16.62 | | | | - 17 | +9.00 |
| 74 d | 1.39967 | | | | | +20.56 | | | | + 18 | |
| | 9.79778 | | | | | | 7 37.18 | | | +8.78 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.31316 | | | | | | | | | + 21 | |
| +6.11 | | | | | | | | | | −8.15 | |
| −40.10 $\delta_1$ | | 2 33.69 | | 6 57.9 | | | | | | 7 38.03 | |
| | + 16.2 | 4 10.4 | 18.0 | 28.4 | 14 14.20 | 8 34.15 | | | 10 | 38.37 | +9.39 |
| | 1.209 52 | | | | | 51 7 25.10 | | | | - 7 | |
| d | 9.79778 | | | | | +13.27 | | | | + 38 | |
| | 1.12301 | | | | | | 7 38.37 | | | +8.87 | |
| ((δ) — D) $\frac{d'}{100}$ | | | | | | | | | | + 21 | |
| +6.11 | | | | | | | | | | −8.50 | |
| −40.10 $\delta_2$ | | 2 33.77 | | 6 59.2 | | | | | | 39.26 | |
| | + 21.1 | 2 3.4 | 14.1 | 17.5 | 32 8.75 | 30 39.60 | | | 50 | 50 28 28.85 | |
| 82 d | 1.324 28 | | | | | 50 28 11.32 | | | | - 12 | +8.40 |
| | 9.80382 | | | | | +17.53 | | | | + 19 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.24381 | | | | | | 28 28.85 | | | +8.13 | |
| +6.09 | | | | | | | | | | + 20 | |
| −40.10 $\delta_1$ | | 3 41.76 | | 27 49.2 | | | | | | −7.95 | |
| | | | | | | | | | | 28 29.30 | |
| | + 11.8 | 3 16.4 | 24.2 | 40.6 | 38 20.30 | 29 28.05 | | | 50 | 28.80 | |
| | 1.071 88 | | | | | 50 28 19.00 | | | | - 4 | +8.67 |
| d | 9.80382 | | | | | + 9.80 | | | | + 36 | |
| | 0.99141 | | | | | | 28 28.80 | | | +8.21 | |
| ((δ) — D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +6.09 | | | | | | | | | | −8.30 | |
| −40.10 $\delta_2$ | | 3 41.75 | | 27 49.1 | | | | | | 29.17 | |

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Date$_1$ = May 13 (235) Observer / Recorder

Date$_2$ = May 15 (239) Observer / Recorder

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2h | 5m 16s | 51° 33′ | 8.3 | 4m 48.8 | 5m 5.5 | 8.8 | 12.0 | 15.5 | 18.8 | 5 | 12.12 | 5 | 12.12 |
| | 4 24.8 | 51 38.9 | 9.5 | 50.0 | | | | | | | | | + 9.08 |
| | | | 7.9 | 51.6 | | | | | | | + 8.88 | | − 18 |
| | | | | 50.1 | | | | | | | | | − 2 |
| May 13 | (δ) — D) $\frac{\kappa'}{100}$ | both | | 5 0.8 | 5 6.0 | 9.4 | 12.5 | 16.0 | 19.2 | 5 | 12.62 | 5 21.00 | 12.62 |
| | | | | 2.4 | | | | | | | | − 1.89 | |
| | $a_1$ | | | 4.1 | | | | | | | | 5 19.11 | + 9.08 |
| | | | | 2.4 | | | | | | | + 8.88 | | − 18 |
| | | | | | | | | | | | | | − 2 |
| | | | 9.6 | 4 | | | | | | | | 5 21.50 | |
| | | | 8.3 | | | | | | | | | − 1.89 | |
| | κ | | | | | | | | | | | 5 19.61 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |
| | 15 | | 9.6 | 4 41.5 | 5 1.6 | 4.9 | 8.3 | 11.7 | 15.2 | 5 | 8.34 | 5 | 8.34 |
| | | | 8.3 | 42.9 | | | | | | | | | + 1.08 |
| | κ | | | 44.5 | | | | | | | + 12.67 | | − 10 |
| May 15 | ((δ) — D) $\frac{\kappa'}{100}$ | | | 42.9 | | | | | | | | 5 17.30 | − 2 |
| | | | | 4 51.4 | 5 2.2 | 5.5 | 8.9 | 12.1 | 15.5 | 5 | 8.84 | − 1.85 | 8.84 |
| | $a_1$ | | | 52.4 | | | | | | | | 5 19.16 | + 1.08 |
| | | | | 51.7 | | | | | | | + 12.67 | | − 10 |
| | | | | 52.5 | | | | | | | | 5 17.80 | − 2 |
| | | | | | | | | | | | | − 1.85 | |
| | | | | | | | | | | | | 5 19.66 | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |
| 6 | 07 | 50 51 | 8.8 | 5 41.2 | 5 5.2 | 58.6 | 2.0 | 5.3 | 8.6 | 5 | 61.94 | 6 | 1.94 |
| 5 | 14.4 | 50 56.5 | 8.4 | 42.8 | | | | | | | | | + 2.08 |
| | κ | | | 45.0 | | | | | | | + 8.88 | | − 17 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | 43.0 | | | | | | | | | − 2 |
| | | | | | | | | | | | | 6 10.83 | |
| | $a_1$ | | | | | | | | | | | − 1.87 | |
| | | | | | | | | | | | | 6 8.96 | |
| | | | 8.7 | 5 39.5 | 5 1.6 | 53.0 | 58.4 | 1.4 | 4.9 | 5 | 58.26 | 5 | 58.26 |
| | κ | | | 41.5 | | | | | | | | | + 12.79 |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | 43.7 | | | | | | | + 12.67 | | − 16 |
| | | | | 41.6 | | | | | | | | | − 2 |
| | | | | | | | | | | | | 6 10.93 | |
| | $a_2$ | | | | | | | | | | | − 1.83 | |
| | | | | | | | | | | | | 6 9.10 | |
| ~~11 54~~ | ~~06~~ | ~~50 46~~ | ~~9.0~~ | ~~54 158~~ | 1.7 | ~~4.9~~ | ~~8.1~~ | ~~11.3~~ | ~~14.6~~ | | | | |
| 11 51 | 06 | 50 57.3 | 9.0 | 170 | | | | | | | | | |
| | κ | 11.9 | | 158 | | | | | | | | | |
| May 13 | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_1$ | | | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_1$ | | | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |

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Runs

20

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | −~~38.0~~ | 2 57.9 | 7.9 | 12.5 8 | 48 2.90 | 34 45.45 | 32 35.03 | | 45 | 57 32 35.03 | 2.54 |
| d | +22.0 | | | | | 51 32 17.17 | | | | − 13 | +9.61 |
| | 1.34242 | 1.25196 | | | | +17.86 | | | | + 27 | |
| +6.07 ((δ) − D) $\frac{d'}{100}$ | +10.2 | | | | | + 8.28 | | | | + ~~8.21~~ 9.24 | |
| −40.10 | 1.00860 | | 5 25.18 | | | | 32 25.45 | | | + 23 | |
| $\delta_1$ | 9.79383 | | ~~4 39.07~~ 25.68 | 31 56.4 47.0 | | | | | | − 8.10 | |
| | 0.91814 | | | | | | | | | 32 36.54 | 26.96 27.06 |
| 78 | | 4 20.8 | 28.2 | | | | | | 45 | 25.45 | |
| 78 d | | | | | | | | | | − 3 | +9.71 |
| +6.07 ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 27 | |
| −40.10 | | | | | | | | | | + ~~8.21~~ 9.24 | |
| $\delta_2$ | | | | | | | | | | + 23 | |
| | | | | | | | | | | − 8.10 | |
| | | | | | | | | | | 27.06 | |
| | −~~34.6~~ | 4 20.8 | 28.2 | 49.0 | 49 24.50 | 33 23.85 | ~~31 16.20~~ | | 45 | 51 ~~31 16.20~~ 32 35.43 | 32 28.04 |
| +6.07 d | +20.4 | | | | | 51 ~~33~~ 32 ~~55.67~~ 14.80 | | | | − 17 | +9.77 |
| −40.10 ((δ) − D) $\frac{d'}{100}$ | 1.40483 | 1.31453 | | | | + 20.63 | | | | + 40 | |
| | − ~~43.7~~ | | | 2 49 24.50 | | +13.24 | | | | + 9.31 | |
| +6.07 $\delta_1$ | +16.3 | | | | | 33 ~~23.85~~ | 31 ~~8.81~~ | | | + 23 | |
| −40.10 | 1.21219 | 5 25.23 | | 31 56.6 | | | | | | − 8.45 | |
| | 9.79399 | 25.73 | | 49.4 | | | | | | 32 36.75 | 32 29.46 |
| | 1.12189 | | | | | | | | | | |
| | | | | | | | | | | 32 ~~8.81~~ 28.04 | |
| d | | | | | | | | | | − 7 | +5.87 |
| | | | | | | | | | | + 40 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 9.31 | |
| | | | | | | | | | | + 23 | |
| $\delta_2$ | | | | | | | | | | − 8.45 | |
| | | | | | | | | | | 32 29.46 | |
| | +18.9 | 0 2.1 | 11.9 | 14.0 | 30 7.00 | 52 41.35 | | | 30 | 50 50 28.65 | |
| 68 d | 1.27646 | | | | | 50 50 13.07 | | | | − 10 | +8.62 |
| | −9.80043 | | | | | +15.58 | | | | + 1 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.19260 | | | | | | 50 28.66 | | | + 8.57 | |
| | | | | | | | | | | + 20 | |
| +6.06 $\delta_1$ | | 6 15.02 | | 49 49.3 | | | | | | − 7.90 | |
| −40.10 | | | | | | | | | | 50 29.36 | |
| | + ~~16.8~~ 17 | 1 19.9 | 27.0 | 46.9 | 31 28.45 | 51 24.90 | | | 30 | 29.62 | |
| d | 1.22272 | | | | | 50 50 15.85 | | | | − 8 | +8.84 |
| | 9.80043 | | | | | +13.77 | | | | + 12 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.13886 | | | | | | 50 29.62 | | | + 8.60 | |
| +6.06 $\delta_2$ | | 6 15.16 | | 49 50.2 | | | | | | + 20 | |
| −40.10 | | | | | | | | | | − 8.20 | |
| | | | | | | | | | | 30.26 | |
| | | 3 15.9 | 25.2 | 4 1.1 | 8 20.55 | 14 ~~27.80~~ | | | 5 | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

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235

Date$_1$ = May 13 Observer Recorder

240

Date$_2$ = May 20 Observer Recorder

n = -.31

21

Ru

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| κ | 2h 8m 10s | 52° 42′ | 8.4 | 7m 39.7s | 59.4 | 3.6 | 6.2 | 9.6 | 13.1 | 12 7 6.18 | | m s | 6.18 |
| | 7 19.0 | 52 48.0 | 8.3 | 41.6 | | | | | | | | | + 9.08 |
| | | | | 43.3 | | | | | | | | | − 18 |
| | | | | 41.5 | | | | | | | + 8.88 | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 8 | 15.06 |
| | | | | | | | | | | | | | − 1.96 |
| $a_1$ | | | | | | | | | | | | 8 | 13.10 |
| κ | | | 8.5 | 7 28.9 | 45.2 | 48.6 | 51.9 | 55.3 | 58.7 | 12 7 37.94 | | 7 | 37.94 |
| | | | | 30.2 | | | | | | | | | + 23.35 |
| | | | | 32.3 | | | | | | | | | − 40 |
| | | | | 30.4 | | | | | | | + 22.93 | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 8 | 14.87 |
| | | | | | | | | | | | | | − 1.72 |
| $a_2$ | | | | | | | | | | | | 8 | 13.15 |
| κ | 12 12 9 | 51 20 | 9.0 | | Lost- | | | | | | | | |
| | 11 17.3 | 51 26.4 | 9.4 | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_1$ | | | | | | | | | | | | | |
| κ | | | 9.8 | 11 26.6 | 44.1 | 47.5 | 50.9 | 54.3 | 57.2 | 12 11 50.80 | | 11 | 50.80 |
| | | | | 28.2 | | | | | | | | | + 23.35 |
| | | | | 30.2 | | | | | | | | | − 39 |
| | | | | 28.2 | | | | | | | + 22.94 | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 12 | 13.74 |
| | | | | | | | | | | | | | − 1.70 |
| $a_2$ | | | | | | | | | | | | 12 | 12.04 |
| κ | 13 22 | 52 18 | 9.6 | | Lost- | | | | | | | | |
| | 12 31.2 | 52 23.3 | 9.4 | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_1$ | | | | | | | | | | | | | |
| κ | | | | | Lost- | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_2$ | | | | | | | | | | | | | |
| κ | 13 52 | 50 12 | 8.8 | 15 28.8 | 45.0 | 48.3 | 51.6 | 54.7 | 57.9 | 12 15 37.30 | | 15 | 37.30 |
| | 15 2.3 | 50 17.6 | 9.2 | 30.1 | | | | | | | | | + 9.08 |
| | | | | 31.5 | | | | | | | | | − 17 |
| | | | | 30.1 | | | | | | | + 8.89 | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 16 | 0.39 |
| | | | | | | | | | | | | | − 1.90 |
| $a_1$ | | | | | | | | | | | | 15 | 58.48 |
| κ | | | 9.2 | 15 6.7 | 30.8 | 33.9 | 37.1 | 40.3 | 43.5 | 12 15 37.12 | | 15 | 37.12 |
| | | | | 8.3 | | | | | | | | | + 23.35 |
| | | | | 9.8 | | | | | | | | | − 37 |
| | | | | 8.3 | | | | | | | + 22.96 | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 16 | 0.08 |
| | | | | | | | | | | | | | − 1.69 |
| $a_2$ | | | | | | | | | | | | 15 | 58.39 |
| κ | 17 12 | 52 52 | 9.2 | 16 44.9 | m 0.9 | 4.3 | 7.7 | 11.2 | 14.8 | 12 16 7.78 | | 17 | 7.78 |
| | 16 20.8 | 52 57.7 | 9.3 | 46.1 | | | | | | | | | + 9.07 |
| | | | | 45.1 | | | | | | | | | − 18 |
| | | | | 46.4 | | | | | | | + 8.87 | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 17 | 16.65 |
| | | | | | | | | | | | | | − 2.04 |
| $a_1$ | | | | | | | | | | | | 17 | 14.61 |
| κ | | | 9.2 | 16 29.0 | 46.6 | 50.1 | 53.5 | 57.0 | 0.3 | 12 16 53.50 | | 16 | 53.50 |
| | | | | 30.6 | | | | | | | | | + 23.36 |
| | | | | 32.7 | | | | | | | | | − 41 |
| | | | | 30.8 | | | | | | | + 22.93 | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 17 | 16.43 |
| | | | | | | | | | | | | | − 1.80 |
| $a_2$ | | | | | | | | | | | | 17 | 14.63 |

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1873phae.proj.15843

May 25 -1' 8.75 +.11

22

Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ' |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | -45.5 | 4 23.1 | 31.3 | 54.40 | 39 27.20 | 43 21.15 | | | 35 | 52 41 12.41 | |
| 9.24 d | +24.7 | | | | | 52 40 52.87 | | | | - 16 | +10.91 |
| | 1.39270 | | | | | +19.54 | | | | + 40 | |
| | 9.78263 | | | | | | 41 12.41 | | | +10.39 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.29104 | | | | | | | | | + 28 | |
| | | | | | | | | | | - 8.20 | |
| +6.02 $\delta_1$ | | 8 19.12 | | 40 35.0 | | | | | | 41 15.12 | |
| | +21.5 | 0 33.7 | 49.2 | 82.90 | 40 41.45 | 42 6.90 | | | 40 | 15.16 | |
| d | 1.33244 | | | | | 52 40 58.15 | | | | - 12 | +10.51 |
| | 9.78263 | | | | | +17.01 | | | | + 8 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.23078 | | | | | | 41 15.16 | | | +10.25 | |
| | | | | | | | | | | + 30 | |
| +6.02 $\delta_2$ | | 8 19.17 | | 40 35.5 | | | | | | - 1005 | |
| -40.08 | | | | | | | | | | 15.62 | |
| | | 0 49.1 | 57.0 | 106.10 | 0 53.05 | 21 54.30 | | | 0 | | |
| d | | | | | | | | | | | |
| ((δ) — D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | +22.6 | 2 9.1 | 25.2 | 34.3 | 2 17.15 | 20 31.20 | | | 0 | 51 19 40.89 | |
| d | 1.35411 | | | | | 51 19 22.45 | | | | - 14 | +9.21 |
| | 9.79589 | | | | | +18.44 | | | | + 25 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.26571 | | | | | | 19 40.89 | | | + 8.87 | |
| +5.97 | | | | | | | | | | + 23 | |
| -40.06 $\delta_2$ | | 12 18.01 | | 19 0.5 | | | | | | - 9.50 | |
| | | | | | | | | | | 19 40.60 | |
| | | 3 12.9 | 21.6 | 34.5 | 3 17.25 | 19 31.10 | | | 0 | | |
| d | | | | | | | | | | | |
| ((δ) — D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) — D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | +21.4 | 4 34.0 | 42.7 | 76.7 | 9 38.35 | 13 10.00 | | | 5 | 50 10 59.61 | |
| .38 d | 1.33041 | | | | | 50 10 41.72 | | | | - 12 | +8.33 |
| | 9.80641 | | | | | +17.89 | | | | + 42 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.25253 | | | | | | 10 59.61 | | | + 7.83 | |
| +5.92 | | | | | | | | | | + 20 | |
| -40.00 $\delta_1$ | | 16 4.40 | | 10 20.8 | | | | | | - 7.10 | |
| | | | | | | | | | | 11 0.84 | |
| | +28.8 | 0 54.0 | 9.8 | 123.8 | 14 1.90 | 11 46.45 | | | 10 | 11 1.77 | |
| d | 1.45939 | | | | | 50 10 37.70 | | | | - 22 | +9.83 |
| | 9.80641 | | | | | +24.07 | | | | + 11 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.38151 | | | | | | 11 1.77 | | | +7.74 | |
| +5.92 | | | | | | | | | | + 20 | |
| -40.00 $\delta_2$ | | 16 4.31 | | 10 20.6 | | | | | | - 9.02 | |
| | | | | | | | | | | 11 0.60 | |
| | -28.7 | 21 1.0 | 10.0 | 11.0 | 28 5.50 | 53 | | | | | |
| | +21.4 | | | | | 54 42.86 | | | 25 | 52 52 31.43 | |
| 28 d | 1.33041 | | | | | 52 51 14.57 | | | | 51 - 12 | +11.04 |
| | 9.78080 | | | | | 51 +16.86 | | | | + 27 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.22692 | | | | | | 52 31.43 | | | +10.60 | |
| +5.88 | | | | | | | | | | + 29 | |
| -40.00 $\delta_1$ | | 17 20.49 | | 50 54.8 | | | | | | - 7.65 | |
| | | | | | | | | | | 52 51 34.82 | |
| | +22.7 | 0 15.5 | 30.2 | 45.7 | 30 22.85 | 52 25.50 | | | 30 | 51 34.64 | |
| d | 1.35603 | | | | | 52 51 16.75 | | | | - 14 | +10.683 |
| | 9.78097 | | | | | +17.89 | | | | + 4 | |
| ((δ) — D) $\frac{d'}{100}$ | 1.25271 | | | | | | 51 34.64 | | | +10.43 | |
| +5.88 | | | | | | | | | | + .30 | |
| -40.00 $\delta_2$ | | 17 20.51 | | 50 55.7 | | | | | | - 9.60 | |
| | | | | | | | | | | 51 35.67 | |

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238

Date$_1$ = May 13 — Observer / Recorder

240

Date$_2$ = May 28 — Observer / Recorder

| No. | Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 17h 57s | 52° 15' | 4.0 | 17m 26.1 | 37.1 | 40.6 | 44.0 | 47.3 | 50.8 | 12 17m 43.96 | | 17 43.96 | |
| | | 17 0.2 | 52 20.5 | 5.2 | 27.5 | | | | | | | | + 9.07 | |
| | κ | | | | 29.4 | | | | | | | | − 18 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | 27.7 | | | | | | | + 8.87 | − 2 | |
| | | | | | | | | | | | | | 17 52.83 | |
| | $a_1$ | | | | | | | | | | | | − 2.01 | |
| | | | | | | | | | | | | | 17 50.82 | |
| | | | | 6.0 | 17 37.2 | 22.8 | 26.3 | 29.7 | 33.1 | 36.5 | 17 29.68 | | 17 29.68 | |
| | | | | | 38.1 | | | | | | | | + 23.36 | |
| | κ | | | | 39.2 | | | | | | | | − 40 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | 38.1 | | | | | | | + 22.94 | − 2 | |
| | | | | | | | | | | | | | 17 52.62 | |
| | $a_2$ | | | | | | | | | | | | − 1.78 | |
| | | | | | | | | | | | | | 17 50.84 | |
| | | 19 24 | 50 36 | 8.8 | 18 56.6 | 19 13.4 | 16.9 | 20.2 | 23.5 | 26.8 | 19 20.16 | | 19 20.16 | |
| | | 18 34.8 | 50 41.9 | 8.4 | 58.0 | | | | | | | | + 9.07 | |
| | κ | | | | 0.1 | | | | | | | | − 17 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | 58.2 | | | | | | | + 8.88 | − 2 | |
| | | | | | | | | | | | | | 19 29.04 | |
| | $a_1$ | | | | | | | | | | | | − 1.95 | |
| | | | | | | | | | | | | | 19 27.09 | |
| | | | | 8.7 | 18 52.6 | 18 59.4 | 2.7 | 5.9 | 9.0 | 12.3 | 19 4.86 | | 19 5.76 | |
| | | | | | 54.1 | | | | | | | | + 23.36 | |
| | κ | | | | 55.8 | | | | | | | | − 38 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | 54.2 | | | | | | | + 22.96 | − 2 | |
| | | | | | | | | | | | | | 19 28.82 | |
| | $a_2$ | | | | | | | | | | | | − 1.73 | |
| | | | | | | | | | | | | | 19 27.09 | |
| | | 20 10 | 50 12 | 9.3 | 19 48.4 | 20 0.1 | 3.5 | 6.7 | 9.9 | 13.3 | 20 6.70 | | 20 6.70 | |
| | | 19 21.1 | 50 17.6 | 9.2 | 49.7 | | | | | | | | + 9.07 | |
| | κ | | | | 51.4 | | | | | | | | − 17 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | 49.8 | | | | | | | + 8.88 | − 2 | |
| | | | | | | | | | | | | | 20 15.58 | |
| | $a_1$ | | | | | | | | | | | | − 1.93 | |
| | | | | | | | | | | | | | 20 13.65 | |
| | | | | 9.4 | 19 45.3 | 46.2 | 49.2 | 52.6 | 55.7 | 58.9 | 19 52.52 | | 19 52.52 | |
| | κ | | | | 46.8 | | | | | | | | + 23.36 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | 46.0 | | | | | | | + 22.97 | − 37 | |
| | | | | | | | | | | | | | − 2 | |
| | | | | | | | | | | | | | 20 15.49 | |
| | $a_2$ | | | | | | | | | | | | − 1.72 | |
| | | | | | | | | | | | | | 20 13.77 | |
| | | 21 00 | 50 34 | 9.1 | 20 32.8 | 50.3 | 53.5 | 56.9 | 0.1 | 3.5 | 20 56.86 | | 20 56.86 | |
| | | 20 11.1 | 50 39.6 | 9.2 | 34.5 | | | | | | | | + 9.07 | |
| | κ | | | | 36.1 | | | | | | | | − 17 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | 34.5 | | | | | | | + 8.88 | − 2 | |
| | | | | | | | | | | | | | 21 5.74 | |
| | $a_1$ | | | | | | | | | | | | − 1.96 | |
| | | | | | | | | | | | | | 21 3.78 | |
| | | | | 8.9 | 20 58.4 | 21 3.6 | 39.2 | 42.8 | 45.9 | 49.2 | 20 42.62 | | 20 42.62 | |
| | | | | | 0.1 | | | | | | | | + 23.36 | |
| | κ | | | | 2.3 | | | | | | | | − 38 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | 21 0.3 | | | | | | | + 22.96 | − 2 | |
| | | | | | | | | | | | | | 21 5.58 | |
| | $a_2$ | | | | | | | | | | | | − 1.74 | |
| | | | | | | | | | | | | | 21 3.84 | |
| | | 22 3.1 | 50 21 | 7.8 | 22 5.1 | 18.8 | 22.2 | 25.4 | 28.6 | 31.7 | 22 25.34 | | 22 25.34 | |
| | | 21 42.0 | 50 26.7 | 7.3 | 7.8 | | | | | | | | + 9.07 | |
| | κ | | | | 6.4 | | | | | | | | − 17 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | + 8.88 | − 2 | |
| | | | | | | | | | | | | | 22 34.22 | |
| | $a_1$ | | | | | | | | | | | | − 1.95 | |
| | | | | | | | | | | | | | 22 32.27 | |
| | | | | 8.2 | 21 46.0 | 22 4.5 | 7.8 | 11.1 | 14.3 | 17.6 | 22 11.06 | | 22 11.06 | |
| | | | | | 47.6 | | | | | | | | + 23.36 | |
| | κ | | | | 49.1 | | | | | | | | − 38 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | 47.6 | | | | | | | + 22.96 | − 2 | |
| | | | | | | | | | | | | | 22 34.02 | |
| | $a_2$ | | | | | | | | | | | | − 1.74 | |
| | | | | | | | | | | | | | 22 32.28 | |

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Runs

24

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1428 d | +16.2 | 4′ 33.8 | 42.9 | 76.7 | 4′ 38.35 | 18 10.00 | | | 0 | 52 15 54.74 | |
| | 1.21219 | | | | | 52 15 41.82 | | | | − 7 | +10.59 |
| | 9.78674 | | | | | +13.02 | | | | + 42 | |
| | 1.11464 | | | | | | 15 54.74 | | | + 9.98 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 24 | |
| +5.87 | | | | | | | | | | − 7.55 | |
| −39.98 $\delta_1$ | | 17 56.69 | | 15 17.8 | | | | | | 15 57.78 | |
| d | −8.4 | 0 24.9 | 43.4 | 68.3 | 5 34.15 | 17 14.20 | | | 5 | 58.74 | |
| | 0.92428m | | | | | 52 16 5.45 | | | | − 2 | +10.17 |
| | 9.78674 | | | | | −6.71 | | | | + 6 | |
| | 0.82673m | | | | | | 15 58.74 | | | + 9.83 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +5.87 | | | | | | | | | | − 9.45 | |
| −39.98 $\delta_2$ | | 17 56.71 | | 15 19.5 | | | | | | 59.46 | |
| 28 d | −28.7 | 0 5.0 | 14.2 | 19.2 | 45 9.60 | 37 38.75 | | | 45 | 50 35 28.70 | |
| | +22.0 | | | | | 50 35 10.47 | | | | − 28 | +8.19 |
| | 1.34242 | | | | | +18.23 | | | | + 1 | |
| | 9.80274 | | | | | | 35 28.70 | | | +8.26 | |
| | 1.26087 | | | | | | | | | + 20 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | −6.95 | |
| +5.87 | | | | | | | | | | | |
| −39.96 $\delta_1$ | | 19 32.96 | | 34 50.0 | | | | | | 35 29.94 | |
| d | −28.7 | 1 10.0 | 14.2 | 36.7 | 46 18.35 | 36 30.00 | | | 45 | 30.95 | |
| | +19.7 | | 26.7 | | | 50 35 21.25 | | | | − 4 | +8.45 |
| | 1.06819 | | | | | + 9.70 | | | | + 14 | |
| | 9.80274 | | | | | | 35 30.95 | | | + 8.15 | |
| | 0.98664 | | | | | | | | | + 20 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | − 8.95 | |
| +5.87 | | | | | | | | | | 35 | |
| −39.96 $\delta_2$ | | 19 32.96 | | 34 50.5 | | | | | | 30.45 | |
| 18 d | −20.1 | 4 7.4 | 26.7 | 16.0 | 9 8.00 | 13 40.35 | | | 5 | 50 11 26.19 | |
| | +16.9 | 6.1 | 9.9 | | | 50 11 12.07 | | | | − 8 | +8.34 |
| | 1.22789 | | | | | +14.12 | | | | + 37 | |
| | 9.80641 | | | | | | 11 26.19 | | | + 7.85 | |
| | 1.15001 | | | | | | | | | + 20 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | − 6.80 | |
| +586 | | | | | | | | | | | |
| −39.96 $\delta_1$ | | 20 19.51 | | 10 47.8 | | | | | | 11 27.73 | |
| d | +6.5 | 0 10.6 | 25.9 | 36.5 | 10 18.25 | 12 30.10 | | | 10 | 26.78 | |
| | 0.81291 | | | | | 50 11 21.35 | | | | − 1 | +7.96 |
| | 9.80641 | | | | | + 5.43 | | | | + 3 | |
| | 0.73503 | | | | | | 11 26.78 | | | + 7.74 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +586 | | | | | | | | | | − 8.80 | |
| −39.96 $\delta_2$ | | 20 19.63 | | 10 46.0 | | | | | | 25.94 | |
| 24 d | +22.1 | 1 40.1 | 49.8 | 89.90 | 46 44.95 | 36 3.40 | | | 45 | 50 33 53.69 | |
| | 1.35025 | | | | | 50 33 35.12 | | | | − 13 | +8.47 |
| | 9.80290 | | | | | +18.57 | | | | + 16 | |
| | 1.26886 | | | | | | 33 53.69 | | | + 8.24 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +5.85 | | | | | | | | | | − 8.85 | |
| −39.94 $\delta_1$ | | 21 9.63 | | 33 15.4 | | | | | | 33 55.31 | |
| d | +22.8 | 2 20.0 | 36.8 | 56.80 | 47 28.40 | 35 19.95 | | | 45 | 56.53 | |
| | −1.7 | | | | | 50 34 11.20 | | | | − 9 | +8.52 |
| | 1.24797m | | | | | − 14.67 | | | | + 27 | |
| | 9.80290 | | | | | | 33 56.53 | | | + 8.14 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.16658m | | | | | | | | | + 20 | |
| +5.85 | | | | | | | | | | − 8.85 | |
| −39.94 $\delta_2$ | | 21 9.69 | | 33 16.3 | | | | | | 56.20 | |
| 28 d | +18.9 | 0 15.9 | 26.2 | 42.10 | 0 21.05 | 22 27.30 | | | 0 | 50 20 14.77 | |
| | 1.27646 | | | | | 50 19 59.02 | | | | − 10 | +8.13 |
| | 9.80504 | | | | | +15.75 | | | | + 3 | |
| | 1.19721 | | | | | | 20 14.77 | | | + 8.00 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +583 | | | | | | | | | | − 6.70 | |
| −39.92 $\delta_1$ | | 22 38.10 | | 19 36.3 | | | | | | 20 16.20 | |
| d | −36.6 | 1 35.0 | 51.0 | 86.00 | 1 43.00 | 21 5.85 | | | 0 | 16.18 | |
| | +23.5 | | | | | 50 19 56.60 | | | | − 14 | +8.15 |
| | 1.37107 | | | | | +19.58 | | | | + 19 | |
| | 9.80504 | | | | | | 20 16.18 | | | + 7.90 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.29182 | | | | | | | | | + 20 | |
| +583 | | | | | | | | | | − 8.70 | |
| −39.92 $\delta_2$ | | 22 38.11 | | 19 35.7 | | | | | | 15.63 | |

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238

Date$_1$ = May 13 Observer Recorder

240

Date$_2$ = May 25 Observer Recorder

25

| Star. | α | δ | Mag. | $T_s$ | $T_m$ | $T_8$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 23m 46s | 52° 17′ | 8.4 | 23m 13.9 | 33.6 | 36.9 | 40.3 | 43.6 | 47.1 | 23m | 40.30 | 23m | 40.30 |
| | 22 54.8 | 52 22.8 | 8.7 | 15.5 | | | | | | | | | +9.07 |
| | κ | | | 14.9 | | | | | | | | | −18 |
| | | | | 15.8 | | | | | | | + 8.87 | | −2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 23 | 31.17 |
| | | | | | | | | | | | | | −2.05 |
| | $a_1$ | | | | | | | | | | | 23 | 47.12 |
| | | | 8.5 | 22 58.8 | 23 19.0 | 22.5 | 25.8 | 29.2 | 32.6 | 23 | 25.82 | 23 | 25.82 |
| | | | | 0.5 | | | | | | 28 | | | +23.36 |
| | κ | | | 1.8 | | | | | | | | | −40 |
| | | | | 23 0.4 | | | | | | | + 22.94 | | −2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 23 | 48.76 |
| | | | | | | | | | | | | | −1.83 |
| | $a_2$ | | | | | | | | | | | 23 | 46.93 |
| | 24 26.4 | 51 58 | 8.8 | 24 14.1 | 15.9 | 19.3 | 22.6 | 26.0 | 29.4 | 24 | 22.64 | 24 | 22.64 |
| | 23 36.4 | 52 3.1 | 8.7 | 15.3 | | | | | | | | | +9.07 |
| | κ | | | 16.4 | | | | | | | | | −18 |
| | | | | 15.3 | | | | | | | + 8.87 | | −2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 24 | 31.51 |
| | | | | | | | | | | | | | −2.04 |
| | $a_1$ | | | | | | | | | | | 24 | 29.47 |
| | | | 9.1 | 23 56.8 | 24 1.4 | 5.0 | 8.4 | 11.7 | 15.1 | 24 | 8.32 | 24 | 8.32 |
| | | | | 57.6 | | | | | | | | | +23.36 |
| | κ | | | 58.9 | | | | | | | | | −40 |
| | | | | 57.8 | | | | | | | + 22.94 | | −2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 24 | 31.26 |
| | | | | | | | | | | | | | −1.82 |
| | $a_2$ | | | | | | | | | | | 24 | 29.44 |
| | 25 24.0 | 50 17 | 9.8 | 25 14.9 | 19.9 | 23.2 | 26.3 | 29.4 | 32.8 | 25 | 26.32 | 25 | 26.32 |
| | 24 40.7 | 50 22.6 | 9.5 | 16.6 | | | | | | | | | +9.07 |
| | κ | | | 18.4 | | | | | | | | | −17 |
| | | | | 16.6 | | | | | | | + 8.88 | | −2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 25 | 35.20 |
| | | | | | | | | | | | | | −1.97 |
| | $a_1$ | | | | | | | | | | | 25 | 33.23 |
| | | | | Lost | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |
| | 27 28 | 51 57 | 8.4 | 27 0.6 | 16.6 | 20.2 | 23.5 | 26.8 | 30.2 | 27 | 23.46 | 27 | 23.46 |
| | 26 38.3 | 52 25 | 8.7 | | | | | | | | | | +9.07 |
| | κ | | 8.7 | | | | | | | | + 8.87 | | −18 |
| | | | | 27 3.2 | 28.3 | 31.4 | 35.1 | 38.5 | 41.7 | 27 | 35.00 | 27 | 35.00 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | +9.07 |
| | 26 49.5 | 52 2.6 | | | | | | | | | + 8.87 | | −18 |
| | $a_1$ | | | | | | | | | | | | −2 |
| | | | | | | | | | | | | 27 | 43.87 |
| | | | 8.7 | 26 36.0 | 27 2.4 | 5.9 | 9.2 | 12.5 | 15.9 | 27 | 9.18 | 27 | 9.18 |
| | | | 9.1 | 38.6 | | | | | | | | | +23.36 |
| | κ | | | 40.5 | | | | | | | | | −40 |
| | | | | 38.4 | | | | | | | + 22.94 | | −2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 26 42.0 | 43.5 | 47.4 | 51.8 | 54.2 | 57.4 | 27 | 20.86 | 27 | 20.86 |
| | | | | | | | | | | | | | +23.36 |
| | $a_2$ | | | | 44.4 | | | | | | + 22.94 | | −40 |
| | | | | | | | | | | | | | −2 |
| | 29 12 | 50 50 | 8.3 | 28 41.7 | 29 1.7 | 4.9 | 8.2 | 11.2 | 14.6 | 29 | 8.12 | 29 | 8.12 |
| | 28 24.5 | 50 55.9 | 9.0 | 42.6 | | | | | | | | | +9.07 |
| | κ | | | 42.1 | | | | | | | | | −17 |
| | | | | | | | | | | | + 8.88 | | −2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 29 | 17.00 |
| | | | | | | | | | | | | | −2.07 |
| | $a_1$ | | | | | | | | | | | 29 | 14.98 |
| | | | 8.8 | 28 24.5 | 47.3 | 50.5 | 53.7 | 57.0 | 0.4 | 28 | 53.78 | 28 | 53.78 |
| | | | | 27.1 | | | | | | | | | +23.37 |
| | κ | | | 28.8 | | | | | | | | | −38 |
| | | | | 26.8 | | | | | | | + 22.97 | | −2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 29 | 16.75 |
| | | | | | | | | | | | | | −1.81 |
| | $a_2$ | | | | | | | | | | | 29 | 14.94 |

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Runs

| | | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | +24.5 | 3 ~~3~~ 55.2 | 54.9 | 3 23 | 3 16.5 | 19 32.20 | | | 0 | 52 17 23.48 | |
| 48 | d | 1.38917 | 3 12.0 | 20.3 | | | 52 17 3.92 | | | | − 16 | +10.39 |
| | | 9.78658 | | | | | +19.56 | | | | + 29 | |
| | ((δ) − D) $\frac{d'}{100}$ | 1.29136 | | | | | | 17 23.48 | | | +10.00 | |
| | | | | | | | | | | | + 26 | |
| +5.79 | | | | | | | | | | | − 7.10 | |
| −39.90 | $\delta_1$ | | 23 52.91 | | 16 46.9 | | | | | | 17 26.77 | |
| | | +25.4 | 4 26.1 | 41.9 | 68.0 | 4 34.00 | 18 14.35 | | | 0 | 25.89 | |
| | | 1.40483 | | | | | 52 17 5.60 | | | | − 17 | +10.50 |
| | d | 9.78658 | | | | | +20.29 | | | | + 50 | |
| | | 1.30722 | | | | | | 17 25.89 | | | + 9.87 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +5.79 | | | | | | | | | | | − 9.10 | |
| − 39.90 | $\delta_2$ | | 23 52.72 | | 16 47.4 | | | | | | 27.29 | |
| | | +7.3 | 3 46.5 | 55.7 | 102.3 | 23 51.18 | 57 57.25 | | | 20 | 51 ~~57~~ 56 34.84 | |
| | | 0.86300 | | | | | 51 ~~57~~ 56 28.97 | | | | − 2 | +10.26 |
| 34 | d | 9.78983 | | | | | 56 + 5.87 | | | | + 35 | |
| | | 0.76884 | | | | | | 57 34.84 | | | + 9.68 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 25 | |
| +5.78 | | | | | | | | | | | − 7.00 | |
| −39.88 | $\delta_1$ | | 24 35.25 | | 55 58.2 | | | | | | ~~57~~ 56 38.10 | |
| | | − ~~49.5~~ +10.5 | 0 3.0 | 18.3 | 21.3 | 25 10.65 | 57 37.70 | | | 25 | 56 37.40 | |
| | | 1.02119 | | | | | 51 56 28.95 | | | | − 3 | +9.80 |
| | d | 9.78990 | | | | | + 8.45 | | | | + 2 | |
| | | 0.92680 | | | | | | 56 37.40 | | | +9.52 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 29 | |
| +5.78 | | | | | | | | | | | − 9.00 | |
| −39.88 | $\delta_2$ | | 24 35.22 | | 55 58.3 | | | | | | 56 38.20 | |
| | | +9.7 | 3 44.1 | 54.7 | 98.8 | 3 49.40 | 18 58.95 | | | 0 | 50 16 38.76 | |
| | | 0.98677 | | | | | 50 16 30.67 | | | | − 3 | +8.46 |
| | d | 9.80560 | | | | | + 8.09 | | | | + 35 | |
| | | 0.90808 | | | | | | 16 38.76 | | | + 7.94 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +5.79 | | | | | | | | | | | − 6.50 | |
| −39.86 | $\delta_1$ | | 25 39.02 | | 16 0.9 | | | | | | 16 40.72 | |
| | d | | | | | | | | | | | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| | $\delta_2$ | | | | | | | | | | | |
| | | +22~~9~~ | 4 4.0 | 12.2 | 27.2 | 24 8.60 | 58 39.75 | 56 29.90 | | 20 | 51 56 29.90 | 37.07 |
| | | 1.35984 | | | | | 51 56 11.47 | | | | − 14 | − 26 +10.13 +10.01 |
| 38 | d | 9.78999 | | | | | +18.43 | | | | + 37 | + 37 |
| 32.33 +5.7~~4~~ | | 1.26554 | | | | | +25.60 | | | | + 9.66 | + 9.66 |
| 2.06 −39.82 | | | | | | | | 56 37.07 | | | + 24 | + 24 |
| 50.27 (13) | ((δ) − D) $\frac{d'}{100}$ | + 31.8 | | | | | | | | | − 6~~7~~6 | − 6.75 |
| | | 1.50243 | | | | | | | | | 56 33.28 | 40.33 |
| | | 9.78999 | 27 36.01 | | 55 53.5 | | | | | | | |
| 06 | $\delta_1$ | 1.40813 | 47.54 | | 56 0.5 | | | | | | | |
| 1.81 | (13) | −~~29~~3 | 0 23.6 | 39.3 | 62.9 | 25 21.45 | 57 16.90 | 56 32.94 | | 25 | 51 56 32.94 | 37.53 |
| | | +30.8 | | | | | 51 56 8.15 | | | | − 25 | − 35 +9.62 +9.52 |
| +5.7~~4~~ | d | 1.48865 | | | | | +24.79 | | | | + 6 | + 6 |
| 32.12 −39.82 | | 9.78999 | 1.39425 | | | | +29.38 | | | | +9.52 | +9.52 |
| 1.84 | ((δ) − D) $\frac{d'}{100}$ | +365 | | | | 25 31.45 | | 56 37.53 | | | + 29 | + 29 |
| 0.28 | (25) | 1.56229 | | | 3, | | | | | | − 8.80 | − 8.80 |
| | | 9.78999 | 27 36.02 | | 55 ~~57~~9 | | | | | | 56 33.76 | 38.25 |
| 3.50 +5.73 | $\delta_2$ | 1.46799 | 47.69 | | 58.4 | | | | | | | |
| 7.84 −39.82 | | −~~39~~.0 | 0 4.9 | 13.7 | 18.6 | 30 9.30 | 52 39.05 | | | 30 | 50 50 32.20 | |
| 41.96 | (25) | +26.0 | | | | | 50 50 10.77 | | | | − 18 | +8.56 |
| 34 | d | 1.41497 | | | | | +21.43 | | | | + 1 | |
| | | 9.80043 | | | | | | 50 32.20 | | | + 8.53 | |
| | ((δ) − D) $\frac{d'}{100}$ | 1.33111 | | | | | | | | | + 20 | |
| +5.73 | | | | | | | | | | | − 6.40 | |
| −39.78 | $\delta_1$ | | 29 20.71 | | 49 54.6 | | | | | | 50 34.36 | |
| | | +~~26.9~~ +27.0 | 1 17.0 | 33.3 | ~~9~~ 0.3 | 31 25.15 | 51 23.20 | | | 30 | 36.71 | |
| | | 1.43136 | | | | | 50 50 14.45 | | | | − 19 | +8.59 |
| | d | 9.80043 | | | | | +22.26 | | | | + 16 | |
| | | 1.34750 | | | | | | 50 36.71 | | | + 8.42 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +5.73 | | | | | | | | | | | − 8.45 | |
| −39.78 | $\delta_2$ | | 29 20.67 | | 49 57.1 | | | | | | 36.85 | |

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Date$_1$ = May 13 — Observer / Recorder — Date$_2$ = May 29 — Observer / Recorder

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 30 06 | 50 04 | 9.1 | 29 40.1 | 58.4 | 1.5 | 4.8 | 8.0 | 11.2 | 30 | 4.78 | 30 4.78 | |
| | 29 18.3 | 50 10.1 | 8.8 | 41.5 | | | | | | | | + 9.07 | |
| κ | | | | 43.4 | | | | | | | | − 17 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | 41.7 | | | | | | | + 8.88 | − 2 | |
| $a_1$ | | | | | | | | | | | | 30 13.66 | |
| | | | | | | | | | | | | − 1.99 | |
| | | | | | | | | | | | | 30 11.67 | |
| | | | 9.4 | 29 34.2 | 44.1 | 47.0 | 50.7 | 53.7 | 56.9 | 29 | 30.48 | 29 30.48 | |
| κ | | | | 35.8 | | | | | | | | + 23.37 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | 39.3 | | | | | | | + 22.98 | − 37 | |
| $a_2$ | | | | 35.8 | | | | | | | | − 2 | |
| | | | | | | | | | | | | 30 13.46 | |
| | | | | | | | | | | | | − 1.80 | |
| | | | | | | | | | | | | 30 11.66 | |
| 31 | 12 | 50 47 | 8.7 | 30 49.4 | 31 1.6 | 4.9 | 8.4 | 11.6 | 15.0 | 31 | 8.30 | 31 8.30 | |
| 30 | 24.0 | 50 52.9 | 9.0 | 51.2 | | | | | | | | + 9.07 | |
| κ | | | | 53.3 | | | | | | | | − 17 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | 51.3 | | | | | | | + 8.88 | − 2 | |
| $a_1$ | | | | | | | | | | | | 31 17.18 | |
| | | | | | | | | | | | | − 2.03 | |
| | | | | | | | | | | | | 31 16.15 | |
| | | | 9.1 | 30 35.5 | 47.4 | 50.8 | 54.1 | 57.2 | 0.5 | 30 | 54.00 | 30 54.00 | |
| κ | | | | 36.8 | | | | | | | | + 23.37 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | 38.0 | | | | | | | + 22.97 | − 38 | |
| $a_2$ | | | | 36.8 | | | | | | | | − 2 | |
| | | | | | | | | | | | | 31 16.97 | |
| | | | | | | | | | | | | − 1.82 | |
| | | | | | | | | | | | | 31 15.15 | |
| 32 | 48 | 50 18 | 9.6 | 32 21.2 | 38.2 | 41.4 | 44.7 | 48.1 | 51.3 | 32 | 44.84 | 32 44.74 | |
| 32 | 0.1 | 50 24.0 | 9.4 | 22.3 | | | | | | | | + 9.07 | |
| κ | | | | 21.8 | | | | | | | | − 17 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | + 8.88 | − 2 | |
| $a_1$ | | | | | | | | | | | | 32 53.62 | |
| | | | | | | | | | | | | − 2.01 | |
| | | | | | | | | | | | | 32 51.61 | |
| | | | 9.7 | 32 11.7 | 23.9 | 27.4 | 30.4 | 33.8 | 56.8 | 32 | 30.50 | 32 30.46 | |
| κ | | | | 12.9 | | | | | | | 30.46 | + 23.37 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | 14.0 | | | | | | | 2. | − 37 | |
| $a_2$ | | | | 12.9 | | | | | | | + 28.98 | − 2 | |
| | | | | | | | | | | | | 32 53.44 | |
| | | | | | | | | | | | | − 1.81 | |
| | | | | | | | | | | | | 32 51.63 | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_1$ | | | | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_2$ | | | | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_1$ | | | | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_2$ | | | | | | | | | | | | | |

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Runs



| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | −~~37.0~~ | 1′ 55.5 | 4.7 | 120.2 | 16′ 60.10 | 5 48.25 | | | 15″ | 50 3 39.33 | |
| | +23.1 | | | | | 50 3 19.97 | | | | − 14 | +7.96 |
| 30 d | 1.36361 | | | | | +19.36 | | | | + 18 | |
| | 9.80762 | | | | | | 3 39.33 | | | + 7.72 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.28694 | | | | | | | | | + 20 | |
| +5.72 | | | | | | | | | | − 6.15 | |
| −39.76 δ₁ | | 30 17.39 | | 3 1.4 | | | | | | 3 41.14 | |
| | +~~17.6~~ | 3 3.3 | 19.1 | 22.4 | 18 11.20 | 4 37.15 | | | 15″ | 40.72 | |
| | +1.47 | | | | | 50 3 28.40 | | | | − 6 | +8.11 |
| d | 1.16732 | | | | | +12.32 | | | | + 35 | |
| | 9.80755 | | | | | | 3 40.72 | | | + 7.62 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.09058 | | | | | | | | | + 20 | |
| +5.72 | | | | | | | | | | − 8.25 | |
| −39.76 δ₂ | | 30 17.38 | | 3 0.8 | | | | | | 40.58 | |
| | −~~23.0~~ | 3 57.1 | 0.1 | 51.2 | 33 ~~55.6~~ 5.60 | 48 52.75 | | | 30″ | 50 46 38.50 | |
| | +1.70 | | | | | 50 46 24.47 | | | | − 8 | +8.94 |
| 30 d | 1.23045 | | | | | +14.03 | | | | + 35 | |
| | 9.80095 | | | | | | 46 38.50 | | | + 8.47 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.14711 | | | | | | | | | + 20 | |
| +5.70 | | | | | | | | | | − 6.25 | |
| −39.74 δ₁ | | 31 20.85 | | 46 1.4 | | | | | | 46 41.19 | |
| | +17.2 | 0 5.9 | 25.1 | 31.0 | 35″ 15.50 | 47 32.85 | | | 35″ | 38.30 | |
| | 1.23553 | | | | | 50 46 24.10 | | | | − 8 | +8.48 |
| d | 9.80095 | | | | | +14.20 | | | | + 3 | |
| | 1.15219 | | | | | | 46 38.30 | | | + 8.33 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +5.70 | | | | | | | | | | − 8.35 | |
| −39.74 δ₂ | | 31 20.85 | | 45″ 58.7 | | | | | | 38.43 | |
| | +22.9 | 2 36.0 | 46.2 | 82.2 | 2″ 41.10 | 20 7.25 | | | 0 | 50 ~~18~~ ~~2.01~~ 5.06 | |
| | 1.35984 | | | | | 50 17 38.97 | | | | 17 − 14 | +8.27 |
| 28 d | 9.80540 | | | | | +~~24.04~~ | | | | + 24 | |
| | 1.~~98~~18095 | | | | | 19.09 | 18 3.01 | | | + 7.97 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +5.68 | | | | | | | | | | − 6.00 | |
| −39.70 δ₁ | | 32 57.29 | | 17 20.6 | | | | | | 18 ~~5.28~~ 0.33 | |
| | | | | 10 | 3 54.90 | | | | | 5 | |
| | +17.6 | 3 46.8 | 20 | ~~4~~98 | 4 ~~24.90~~ | 18 ~~5~~3.45 | | | 0 | 17 ~~19~~.38 | |
| | 1.24551 | | | | | 50 17 44.70 | | | | − 9 | +8.41 |
| d | 9.80550 | | | | | +~~44.68~~ | | | | + ~~47~~ 43 | |
| | 1.16672 | | | | | 1468 | 17 59.38 | | | + 7.87 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +5.68 | | 1 | | | | | | | | − 8.10 | |
| −39.70 δ₂ | | 32 57.33 | | 17 20.0 | | | | | | 17 59.69 | |
| | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| δ₁ | | | | | | | | | | | |
| | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| δ₂ | | | | | | | | | | | |
| | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| δ₁ | | | | | | | | | | | |
| | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| δ₂ | | | | | | | | | | | |

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1873

Date$_1$ = May 5 Observer / Recorder

Date$_2$ = May 10 Observer / Recorder

25

Ru

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 31 26 | 50 08 | 6.5 | | | | | | | | | | |
| | 30 44.9 | 50 12.7 | 6.5 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 6.3 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |
| 34 | 13 | 52 27 | 6.7 | | | | | | | | | | |
| 33 | 31.6 | 52 32.1 | 6.8 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 6.8 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |
| 36 | 18 | 52 28 | 9.3 | | | | | | | | | | |
| 35 | 37.1 | 52 33.5 | 9.2 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 9.3 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |
| 37 | 08 | 50 13 | 9.0 | | | | | | | | | | |
| 36 | 27.4 | 50 18.7 | 8.7 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 9.1 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |
| 38 | 06 | 50 13 | 8.0 | | | | | | | | | | |
| 37 | 26.4 | 50 18.2 | 7.7 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 8.2 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 47.8 | 59.9 | | | | | 10 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 3 | 10.1 | 23.4 | | | | | 10 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 4 | 57.0 | 3.9 | | | | | 50 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 0 | 58.0 | 11.2 | | | | | 55 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 4 | 38.5 | 51.0 | | | | | 50 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 4 | 36.2 | 49.0 | | | | | 50 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 3 | 40.8 | 53.6 | | | | | 5 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 3 | 29.3 | 42.3 | | | | | 5 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 4 | 46.1 | 58.5 | | | | | 5 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 4 | 39.1 | 51.5 | | | | | 5 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

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Date$_1$ = May 6 Observer / Recorder

Date$_2$ = May 10 Observer / Recorder

3

Ru

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 41 00 | 49 59 | 10.0 | | | | | | | | | | |
| | 40 20.5 | 50 3.1 | 9.5 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $c_1$ | | | | | | | | | | | | | |
| | | | 9.8 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $c_2$ | | | | | | | | | | | | | |
| 45 | 14 | 50 59 | 9.2 | | | | | | | | | | |
| 44 | 34.8 | 51 57 4.5 | 8.3 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 9.7 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |
| 48 | 42 | 52 45 | 7.0 | | | | | | | | | | |
| 48 | 3.6 | 52 49.7 | 7.2 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 7.5 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |
| 49 | 45 | 51 56 | 9.0 | | | | | | | | | | |
| 49 | 6.8 | 52 1.3 | 9.0 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 9.0 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |
| 51 | 26 | 51 05 | 9.1 | | | | | | | | | | |
| 50 | 48.0 | 57 9.9 | 8.9 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 9.0 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 19.8 | 32.0 | | | | | | 50 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 3 21.9 | 34.5 | | | | | | 50 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 2 55.8 | 8.2 | | | | | | 20 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 2 45.0 | 57.5 | | | | | | 20 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 2 48.1 | 59.3 | | | | | | 35 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 2 39.1 | 51.1 | | | | | | 35 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 0 1.3 | 13.7 | | | | | | 25 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 0 2.0 | 14.3 | | | | | | 25 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 3 18.0 | 30.5 | | | | | | 15 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 3 15.1 | 28.0 | | | | | | 15 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

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Date$_1$ = May 5 Observer / Recorder

Date$_2$ = May 10 Observer / Recorder

Ru

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 52 49 | 52 37 | 7.7 | | | | | | | | | | |
| | 52 11.6 | 52 4.21 | 8.4 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $c_1$ | | | | | | | | | | | | |
| | | | 8.2 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $c_2$ | | | | | | | | | | | | |
| 53 37 | | 51 59 | 9.2 | | | | | | | | | | |
| 52 5/9.4 | | 52 3.7 | 9.0 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 9.2 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 54 56 | | 52 47 | 8.0 | | | | | | | | | | |
| 54 18.8 | | 52 51.9 | 7.8 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 8.6 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 56 02 | | 50 06 | 8.3 | | | | | | | | | | |
| 55 23.4 | | 50 10.9 | 8.0 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 8.2 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 59 36 | | 49 58 | 8.8 | | | | | | | | | | |
| 58 58.4 | | 50 2.0 | 9.2 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 9.2 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 10.1 | 22.0 | | | | | | 45 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 0 12.8 | 25.1 | | | | | | 45 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 2 42.5 | 55.3 | | | | | | 20 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 2 38.9 | 57.7 | | | | | | 20 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 0 41.9 | 54.4 | | | | | | 35 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 0 21.9 | 32.0 | | | | | | 35 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 1 49.0 | 54.9 | | | | | | 15 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 1 35.7 | 48.2 | | | | | | 15 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 2 54.9 | 9.0 | | | | | | 20 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 2 52.4 | 2.9 | | | | | | 20 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

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Date$_1$ = May 5 Observer / Recorder

Date$_2$ = May. 10 Observer / Recorder

Run

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 23 | 50 16 | 8.0 | | | | | | | | | | |
| | 0 45.3 | 50 20.7 | 7.8 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 8.4 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 3 | 29 | 50 04 | 5.0 | | | | | | | | | | |
| 2 | 51.15 | 50 9.4 | 5.5 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 6.0 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 4 | 29 | 52 42 | 8.9 | | | | | | | | | | |
| 5 | 36 | 52 47.0 | 8.5 | | | | | | | | | | |
| 4 | κ 59.3 | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 8.5 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 7 | 05 | 50 22 | 9.2 | | | | | | | | | | |
| 6 | 22.0 | 50 27.2 | 8.9 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| 8 | | | 9.0 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 8 | 14 | 50 59 | 8.8 | | | | | | | | | | |
| 7 | 36.8 | 51 3.4 | 8.8 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 8.9 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 36.8 | 50.0 | | | | | | 5 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 1 26.5 | 38.9 | | | | | | 5 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 3 24.0 | 38.5 | | | | | | 15 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 3 17.1 | 29.6 | | | | | | 15 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 0 13.2 | 25.9 | | | | | | 40 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 0 0.9 | 12.5 | | | | | | 40 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 0 3.5 | 16.8 | | | | | | 0 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 0 0.9 | 13.8 | | | | | | 0 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 4 19.8 | 32.2 | | | | | | 20 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 4 16.5 | 29.0 | | | | | | 20 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

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Date$_1$ = May 5 Observer / Recorder

Date$_2$ = 10 Observer / Recorder

Ru

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 9 03 | 51 53 | 8.2 | | | | | | | | | | |
| 13 | 8 26.5 | 51 58.3 | 8.3 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 8.1 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 10 | 40 | 51 40 | 8.7 | | | | | | | | | | |
| 10 | 28 | 51 44.9 | 8.3 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 8.1 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 11 | 4 4 | 51 07 | 8.4 | | | | | | | | | | |
| 11 | 3.8 | 51 11.9 | 8.0 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 8.2 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |

single Observations

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 32 55 | 50 41 | 10.0 | | | | | | | | | | |
| May 5 | 13.9 | 50 46.2 | 9.4 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| 13 | 44 11 | 50 03 | 8.5 | | | | | | | | | | |
| | 43 32.5 | 50 8.4 | 8.1 | | | | | | | | | | |
| May 5 | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 13 | 47 31 | 50 38 | 9.0 | | | | | | | | | | |
| | 46 51.8 | 50 43.4 | 8.7 | | | | | | | | | | |
| May 5 | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| 13 | 46 09 | 51 23 | 9.3 | | | | | | | | | | |
| | 45 30.7 | 51 28.3 | 9.0 | | | | | | | | | | |
| May 10 | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 27.0 | 49.9 | | | | | | 25 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 3 25.8 | 37.8 | | | | | | 25 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 1 59.9 | 13.3 | | | | | | 40 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 1 47.2 | 0.2 | | | | | | 40 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 0 0.3 | 14.0 | | | | | | 15 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 0 59.5 | 12.3 | | | | | | 15 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 1 21.9 | 35.2 | | | | | | 40 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 4 54.5 | 7.4 | | | | | | 15 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | | 3 18.9 | 32.0 | | | | | | 40 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | | 3 49.1 | 1.7 | | | | | | 55 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

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241

Date$_1$ = June 11 1873 Observer Recorder

n = 7.34

242

Date$_2$ = June 17 Observer Recorder

n = 7.37

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 3h 46m 59s | 51° 47′ | 8.2 | 46m 27.1 | 45.1 | 46.5 | 49.8 | 53.1 | 56.4 | 4h 46m | 49.78 | 4h 46m | 49.78 |
| | 46 21.3 | 51 51.9 | 7.9 | 28.4 | | | | | | | | | +17.61 |
| | | | | 29.7 | | | | | | | | | − 43 |
| | | | | 28.4 | | | | | | | + 17.16 | | − 2 |
| | | | | | | | | | | | | 47 | 6.94 |
| | | | | | | | | | | | | | − 2.03 |
| | | | | | | | | | | | | 47 | 4.91 |
| | | | 8.2 | 46 34.2 | 45.9 | 49.3 | 52.7 | 55.9 | 59.2 | 4 46 | 52.60 | 46 | 52.60 |
| | | | | 35.4 | | | | | | | | | +14.81 |
| | | | | 36.9 | | | | | | | | | − 47 |
| | | | | 35.5 | | | | | | | + 14.32 | | − 2 |
| | | | | | | | | | | | | 47 | 6.92 |
| | | | | | | | | | | | | | − 1.92 |
| | | | | | | | | | | | | 47 | 5.00 |
| | 52 37 | 51 58 59 | 9.0 | 53 7.4 | 18.5 | 21.8 | 25.2 | 28.4 | 31.9 | 5 3 | 25.16 | 53 | 25.16 |
| | 52 49.4 | 52 3.7 | 9.0 | 8.8 | | | | | | | | | +17.61 |
| | | | | 10.4 | | | | | | | | | − 44 |
| | | | | 8.9 | | | | | | | + 17.15 | | − 2 |
| | | | | | | | | | | | | 53 | 42.31 |
| | | | | | | | | | | | | | − 2.08 |
| | | | | | | | | | | | | 53 | 40.23 |
| | | | 9.0 | 52 59.8 | 53 21.2 | 24.5 | 27.8 | 31.4 | 34.6 | 5 3 | 27.90 | 53 | 27.90 |
| | | | | 1.6 | | | | | | | | | +14.81 |
| | | | | 4.0 | | | | | | | | | − 47 |
| | | | | 1.8 | | | | | | | + 14.32 | | − 2 |
| | | | | | | | | | | | | 53 | 42.22 |
| | | | | | | | | | | | | | − 1.96 |
| | | | | | | | | | | | | 53 | 40.26 |
| | 56 28 | 50 45 | 7.9 | 55 53.1 | 56 7.1 | 10.4 | 13.6 | 16.8 | 20.0 | 5 6 | 13.58 | 56 | 13.58 |
| | 55 48.7 | 50 50.5 | 8.4 | 54.5 | | | | | | | | | +17.61 |
| | | | | 55.7 | | | | | | | | | − 41 |
| | | | | 54.4 | | | | | | | + 17.18 | | − 2 |
| | | | | | | | | | | | | 56 | 30.76 |
| | | | | | | | | | | | | | − 2.05 |
| | | | | | | | | | | | | 56 | 28.71 |
| | | | 8.2 | 56 7.1 | 9.9 | 13.0 | 16.8 | 19.6 | 22.8 | 5 6 | 16.32 | 56 | 16.32 |
| | | | | 19.1 | | | | | | | | | +14.81 |
| | | | | 10.5 | | | | | | | | | − 45 |
| | | | | 8.9 | | | | | | | + 14.34 | | − 2 |
| | | | | | | | | | | | | 56 | 30.66 |
| | | | | | | | | | | | | | − 1.94 |
| | | | | | | | | | | | | 56 | 28.72 |
| | 58 15 | 51 35 | 6.0 | 57 51.4 | 54.4 | 57.6 | 1.0 | 4.3 | 7.7 | 5 8 | 1.00 | 58 | 1.00 |
| | 57 37.5 | 51 40.8 | 6.0 | 52.7 | | | | | | | | | +17.61 |
| | | | | 54.6 | | | | | | | | | − 43 |
| | | | | 52.9 | | | | | | | + 17.16 | | − 2 |
| | | | | | | | | | | | | 58 | 18.16 |
| | | | | | | | | | | | | | − 2.09 |
| | | | | | | | | | | | | 58 | 16.07 |
| | | | 6.0 | 57 40.7 | 57.1 | 0.5 | 3.8 | 7.3 | 10.4 | 5 8 | 3.82 | 58 | 3.82 |
| | | | | 42.5 | | | | | | | | | +14.81 |
| | | | | 43.9 | | | | | | | | | − 47 |
| | | | | 42.4 | | | | | | | + 14.32 | | − 2 |
| | | | | | | | | | | | | 58 | 18.14 |
| | | | | | | | | | | | | | − 1.98 |
| | | | | | | | | | | | | 58 | 16.16 |
| 14 | 4 29 | 50 02 | 9.2 | 3 54.2 | 4 9.5 | 12.9 | 15.7 | 19.2 | 22.4 | 4 | 15.94 | 4 | 15.94 |
| | 3 51.0 | 50 7.4 | 9.0 | 55.9 | | | | | | | | | +17.61 |
| | | | | 58.2 | | | | | | | | | − 40 |
| | | | | 56.1 | | | | | | | + 17.19 | | − 2 |
| | | | | | | | | | | | | 4 | 33.13 |
| | | | | | | | | | | | | | − 2.07 |
| | | | | | | | | | | | | 4 | 31.06 |
| | | | 9.5 | 4 6.1 | 12.3 | 15.5 | 18.6 | 21.8 | 25.1 | 4 | 18.66 | 4 | 18.66 |
| | | | | 7.0 | | | | | | | | | +14.81 |
| | | | | 6.5 | | | | | | | | | − 44 |
| | | | | | | | | | | | + 14.35 | | − 2 |
| | | | | | | | | | | | | 4 | 33.01 |
| | | | | | | | | | | | | | − 1.96 |
| | | | | | | | | | | | | 4 | 31.05 |

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1873phae.proj.1584R

June 11 −1′ 6.01 +.10
" 17 −1 5.69 +.09



Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.82 d | +21.~~8~~<br>1.33041<br>9.79160<br>1.23772 | 0 22.1 | 35.9 | 58.0 | 35 29.0 | 47 19.35<br>51 46 13.34<br>+17.29 | 46 30.63 | | 35 | 51 46 30.63<br>− 12<br>+ 5<br>+ 9.24<br>+ 33<br>− 7.05 | +9.50 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +461<br>−3580 $\delta_1$ | | 47 9.52 | | 45 57.3 | | | | | | 46 33.08 | |
| d | +17.1<br>1.23300<br>9.79160<br>1.14031 | 0 17.2 | 31.4 | 48.6 | 35 24.30 | 47 24.05<br>51 46 18.36<br>+13.81 | 46 32.17 | | 35 | 32.17<br>− 8<br>+ 3<br>+ 9.22<br>+ 33<br>− 7.95 | +9.50 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +~~64~~61<br>−3580 $\delta_2$ | | 47 9.61 | | 45 57.9 | | | | | | 33.72 | |
| 74 d | +16.~~3~~<br>1.21219<br>9.78950<br>1.11740 | 2 47.8 | 12.6 | 60.4 | ~~23 (20.20)~~<br>22 55.20 | 59 ~~48.15~~ 53.15<br>51 58 ~~42.14~~ 47.14<br>+13.10 | 58 55.24 | | 20 | 51 ~~58~~ ~~55.24~~ 55 0.24<br>− 7<br>+ 30<br>+ ~~8~~9.48<br>+ 35<br>− 6.75 | +10.06 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +4.52<br>−3528 $\delta_1$ | | 53 44.75 | | 58 28.3 | | | | | | ~~58 58.65~~<br>59 3.55 | |
| d | +26.~~1~~<br>1.41664<br>9.78950<br>1.32185 | 2 54.0 | 7.9 | 61.9 | 23 30.95 | 59 47.40<br>51 58 41.71<br>+20.98 | 59 2.69 | | 20 | 59 2.69<br>− 18<br>+ 27<br>+ 9.44<br>+ 35<br>− 7.70 | +9.88 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +4.52<br>−3528 $\delta_2$ | | 53 44.78 | | 58 29.6 | | | | | | 59 4.87 | |
| 74 d | ~~+09~~<br>+19.2<br>1.28330<br>9.80120<br>1.20021 | 1 42.5 | 55.7 | 98.2 | 36 49.10 | 45 59.25<br>50 44 53.24<br>+15.86 | 45 9.10 | | 35 | 50 45 9.10<br>− 10<br>+ 18<br>+ 8.24<br>+ 24<br>− 6.35 | +8.56 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +4.55<br>−3502 $\delta_1$ | | 56 33.26 | | 44 36.3 | | | | | | 45 11.31 | |
| d | +7.~~4~~<br>0.86923<br>9.80120<br>0.78614 | 1 32.7 | 45.6 | 78.3 | 36 39.15 | 46 9.20<br>50 45 3.51<br>+6.11 | 45 9.62 | | 35 | 9.62<br>− 2<br>+ 14<br>+ 8.20<br>+ 24<br>− 7.30 | +8.56 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +455<br>−3502 $\delta_2$ | | 33,<br>56 34.27 | | 44 35.9 | | | | | | 10.88 | |
| 82 d | −~~5.9~~<br>+81<br>0.90849<br>9.79335<br>0.81755 | 1 45.4 | 59.0 | 104.4 | 46 52.20 | 35 56.15<br>51 34 50.14<br>+6.57 | 34 56.71 | | 45 | 51 34 56.71<br>− 2<br>+ 19<br>+ 9.07<br>+ 31<br>− 6.40 | +9.55 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +448<br>−3488 $\delta_1$ | | 58 20.55 | | 34 25.0 | | | | | | 34 59.86 | |
| d | −~~28.6~~<br>+21.4<br>1.38041<br>9.79335<br>1.23947 | 1 53.0 | 9.2 | 64.2 | 47 02.10 | 35 46.25<br>51 34 40.56<br>+17.36 | 34 57.92 | | 45 | 57.92<br>− 12<br>+ 18<br>+ 9.10<br>+ 31<br>− 7.35 | +9.47 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +448<br>−3488 $\delta_2$ | | 58 20.64 | | 34 25.2 | | | | | | 35 0.04 | |
| 72 d | −~~43.8~~<br>+19.8<br>1.29667<br>9.80762<br>1.22000 | 3 53.1 | 6.0 | 59.1 | 18 59.55 | 37 48.80<br>50 ~~42~~ 42.79<br>+16.60 | 3/2 ~~29.39~~<br>54.39 | | 15 | 50 ~~59.39~~<br>− 11<br>+ 40<br>+ 7.54<br>+ 20<br>− 5.75 | +8.03 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +449<br>−3432 $\delta_1$ | | 4 35.55 | | 2 27.~~74~~3 | | | | | | 3 1.67 | |
| d | +12.2<br>1.08636<br>9.80762<br>1.00969 | 3 42.8 | 58.9 | 101.7 | 18 51.85 | 3 56.50<br>50 2 50.81<br>+10.23 | 3 1.04 | | 15 | 1.04<br>− 4<br>+ 34<br>+ 7.49<br>+ 20<br>− 6.75 | +7.99 |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +449<br>−3432 $\delta_2$ | | 4 35.54 | | 2 28.0 | | | | | | 2.28 | |

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Date$_1$ = June 11 (241) Observer / Recorder — Date$_2$ = June 17 (242) Observer / Recorder — 41

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 5 58 | 52 37 | 9.0 | 5 21.8 | 44.1 | 44.4 | 47.8 | 51.2 | 54.6 | 5 | 47.82 | 5 47.82 | |
| | 5 20.8 | 52 42.1 | 9.0 | 23.1 | | | | | | | | +17.61 | |
| | κ | | | 24.4 | | | | | | | | − 44 | |
| | | | | 23.1 | | | | | | | + 17.15 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 6 49.97 | |
| | | | | | | | | | | | | − 2.17 | |
| | $c_1$ | | | | | | | | | | | 6 2.80 | |
| | | | 9.2 | 5 21.4 | 43.6 | 47.2 | 50.6 | 53.9 | 57.3 | 5 | 50.52 | 5 50.52 | |
| | | | | 23.0 | | | | | | | | +14.81 | |
| | κ | | | 25.0 | | | | | | | | − 48 | |
| | | | | 23.1 | | | | | | | + 14.31 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 6 4.83 | |
| | | | | | | | | | | | | − 2.06 | |
| | $a_2$ | | | | | | | | | | | 6 2.77 | |
| 1 3 37 | 1 2 5.19 | 50 11 | 9.0 | 13 18.8 | 17.2 | 20.5 | 23.8 | 27.0 | 30.1 | 13 | 23.72 | 13 23.72 | |
| | | 50 15.4 | 9.0 | 3.2 | | | | | | | | +17.61 | |
| | κ | | | 4.5 | | | | | | | | − 41 | |
| | | | | 3.2 | | | | | | | + 17.18 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 13 40.90 | |
| | | | | | | | | | | | | − 2.12 | |
| | $a_1$ | | | | | | | | | | | 13 38.78 | |
| | | | 9.2 | 12 59.8 | 23.1.8 | 23.2 | 26.5 | 29.5 | 32.9 | 13 | 26.88 | 13 26.38 | |
| | | | | 4.1 | | | | | | | | +14.80 | |
| | κ | | | 3.4 | | | | | | | | − 44 | |
| | | | | 13 1.4 | | | | | | | + 14.34 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 13 40.72 | |
| | | | | | | | | | | | | − 2.02 | |
| | $a_2$ | | | | | | | | | | | 13 38.70 | |
| 1 6 02 | 1 5 25.6 | 50 26 | 8.6 | 15 30.7 | 44.5 | 47.7 | 51.0 | 54.2 | 57.4 | 15 | 50.96 | 15 50.96 | |
| | | 50 30.5 | 8.3 | 31.6 | | | | | | | | +17.61 | |
| | κ | | | 33.0 | | | | | | | | − 41 | |
| | | | | 31.8 | | | | | | | + 17.18 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 16 8.14 | |
| | | | | | | | | | | | | − 2.14 | |
| | $a_1$ | | | | | | | | | | | 16 6.00 | |
| | | | 8.9 | 15 32.0 | 47.2 | 50.5 | 53.8 | 57.0 | 0.3 | 15 | 53.76 | 15 53.76 | |
| | | | | 33.4 | | | | | | | | +14.80 | |
| | κ | | | 35.1 | | | | | | | | − 45 | |
| | | | | 33.5 | | | | | | | + 14.33 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 16 8.09 | |
| | | | | | | | | | | | | − 2.04 | |
| | $a_2$ | | | | | | | | | | | 16 6.05 | |
| 1 9 4 3 | 1 9 7.2 | 50 50 | 8.7 | 19 11.8 | 22.9 | 26.2 | 29.5 | 32.7 | 36.0 | 19 | 29.46 | 19 29.46 | |
| | | 50 55.0 | 8.5 | 13.4 | | | | | | | | +17.61 | |
| | κ | | | 15.0 | | | | | | | | − 42 | |
| | | | | 13.4 | | | | | | | + 17.17 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 19 46.63 | |
| | | | | | | | | | | | | − 2.17 | |
| | $a_1$ | | | | | | | | | | | 19 44.46 | |
| | | | 8.7 | 19 3.9 | 25.7 | 29.0 | 32.2 | 35.5 | 38.9 | 19 | 32.26 | 19 32.26 | |
| | | | | 5.0 | | | | | | | | +14.80 | |
| | κ | | | 6.8 | | | | | | | | − 45 | |
| | | | | 5.2 | | | | | | | + 14.33 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 19 46.59 | |
| | | | | | | | | | | | | − 2.07 | |
| | $a_2$ | | | | | | | | | | | 19 44.52 | |
| 2 3 14 | 2 2 39.5 | 52 38 | 9.7 | 22 35.4 | 55.4 | 58.8 | 2.6 | (6.1) | 9.1 | 22 | 49.18 | 23 (2.38) | |
| | | 52 43.1 | 9.5 | 36.8 | | | | | | | | +17.61 | |
| | κ | | | 38.1 | | | | | | | | − 44 | |
| | | | | 36.8 | | | | | | | + 17.15 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 23 19.53 | |
| | | | | | | | | | | | | − 2.26 | |
| | $a_1$ | | | | | | | | | | | 23 17.27 | |
| | | | 9.6 | 22 37.5 | 58.4 | 1.9 | 5.3 | 8.9 | 12.0 | 23 | 5.30 | 23 5.30 | |
| | | | | 36.0 | | | | | | | | +14.80 | |
| | κ | | | 40.6 | | | | | | | | − 48 | |
| | | | | 39.0 | | | | | | | + 14.30 | − 2 | |
| | ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 23 19.60 | |
| | | | | | | | | | | | | − 2.15 | |
| | $a_2$ | | | | | | | | | | | 23 17.45 | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +24.7 | 3′ 26.9 | 32.9 | 66.8 | 43′ 33.40 | 39 14.95 | | | 40′ | 52 38 28.51 | |
| | 1.39270 | | | | | 52 38 8.94 | | | | − 16 | +10.70 |
| 70 d | 9.78313 | | | | | +19.57 | | | | + 35 | |
| | 1.29154 | | | | | | 38 28.51 | | | +10.13 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +4.32 | | | | | | | | | | − 6.15 | |
| −34.20 $\delta_1$ | | 6 7.12 | | 37 58.9 | | | | | | 38 33.06 | |
| | +27.4 | 3 27.9 | 40.9 | 68.8 | 43 34.40 | 39 13.95 | | | 40 | 29.97 | |
| | 1.43775 | | | | | 52 38 8.26 | | | | − 20 | +10.58 |
| d | 9.78313 | | | | | +21.71 | | | | + 32 | |
| | 1.33659 | | | | | | 38 29.97 | | | +10.08 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +4.32 | | | | | | | | | | − 7.20 | |
| −34.20 $\delta_2$ | | 6 7.09 | | 37 59.2 | | | | | | 33.35 | |
| | +20.5 | 1 11.8 | 24.9 | 36.7 | 11 18.35 | 11 30.00 | | | 10 | 50 10 41.13 | |
| | 1.31175 | | | | | 50 10 23.99 | | | | − 11 | +7.89 |
| 66 d | 9.80650 | | | | | +17.14 | | | | + 13 | |
| | 1.23396 | | | | | | 10 41.13 | | | +7.66 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 21 | |
| +4.38 | | | | | | | | | | − 5.30 | |
| −33.48 $\delta_1$ | | 13 43.16 | | 10 10.2 | | | | | | 10 43.72 | |
| | +~~24.9~~ +25.0 | 1 15.0 | 28.0 | 43.0 | 11 21.50 | 11 26.85 | | | 10 | 42.56 | |
| | 1.39794 | | | | | 50 10 21.16 | | | | − 17 | +7.80 |
| d | 9.80656 | | | | | +20.90 | | | | + 12 | |
| | 1.32021 | | | | | | 10 42.06 | | | +7.64 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 21 | |
| +4.38 | | | | | | | | | | − 6.35 | |
| −33.48 $\delta_2$ | | 13 43.08 | | 10 10.0 | | | | | | 43.51 | |
| | +19.2 | 1 40.0 | 53.9 | 93.9 | 56 46.95 | 26 1.40 | | | 55 | 50 25 11.36 | |
| | 1.28330 | | | | | 50 24 55.39 | | | | − 10 | +8.21 |
| 80 d | 9.80428 | | | | | +15.97 | | | | + 18 | |
| | 1.20329 | | | | | | 25 11.36 | | | +7.91 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 22 | |
| +4.33 | | | | | | | | | | − 5.20 | |
| −33.24 $\delta_1$ | | 16 10.33 | | 241 41.1 | | | | | | 25 14.37 | |
| | +20.2 | 1 40.0 | 54.1 | 94.1 | 56 47.05 | 26 1.30 | | | 55 | 12.49 | |
| | 1.30750 | | | | | 50 24 55.61 | | | | − 11 | +8.13 |
| d | 9.80428 | | | | | +16.88 | | | | + 16 | |
| | 1.22749 | | | | | | 25 12.49 | | | +7.86 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 22 | |
| +4.33 | | | | | | | | | | − 6.25 | |
| −33.24 $\delta_2$ | | 16 10.38 | | 24 41.1 | | | | | | 14.37 | |
| | +16.1 | 2 2.2 | 15.3 | 17.5 | 32 8.75 | 50 ~~39~~ 40.60 | | | 30 | 50 49 46.86 | |
| | 1.20683 | | | | | 50 49 33.59 | | | | − 7 | +8.~~30~~ 70 |
| 80 d | 9.80043 | | | | | +13.27 | | | | + 21 | |
| | 1.12297 | | | | | | 49 46.86 | | | +8.02 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 24 | |
| +4.26 | | | | | | | | | | −5.05 | |
| −32.88 $\delta_1$ | | 19 48.72 | | 49 17.6 | | | | | | 49 50.~~27~~ 51 | |
| | +27.1 | 2 10.2 | 24.1 | 34.3 | 82 17.15 | 50 31.20 | | | 30 | 47.86 | |
| | 1.43297 | | | | | 50 49 25.51 | | | | − 20 | +8.52 |
| d | 9.80050 | | | | | +22.35 | | | | + 20 | |
| | 1.34918 | | | | | | 49 47.86 | | | +8.28 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 24 | |
| +4.26 | | | | | | | | | | − 6.55 | |
| −32.88 $\delta_2$ | | 19 48.78 | | 49 17.4 | | | | | | 50.23 | |
| | +~~23~~ +25.6 | 3 44.2 | 57.2 | 101.4 | 43 50.70 | 38 57.66 | | | 40 | 52 38 11.92 | |
| | 1.40824 | | | | | 52 37 51.64 | | | | − 17 | +10.72 |
| 92 d | 9.78313 | | | | | +20.28 | | | | + 38 | |
| | 1.30708 | | | | | | 38 11.92 | | | +10.13 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +4.09 | | | | | | | | | | − 5.20 | |
| −32.52 $\delta_1$ | | 23 21.36 | | 37 44.9 | | | | | | 38 17.44 | |
| | −~~23.8~~ +26.3 | 3 44.8 | 57.0 | 101.8 | 43 50.90 | 38 57.45 | | | 40 | 12.60 | |
| | 1.41996 | | | | | 52 37 51.76 | | | | − 18 | +10.62 |
| d | 9.78313 | | | | | +20.84 | | | | + 34 | |
| | 1.31880 | | | | | | 38 12.60 | | | +10.08 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +4.09 | | | | | | | | | | − 6.30 | |
| −32.52 $\delta_2$ | | 23 21.54 | | 37 44.4 | | | | | | 16.92 | |

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241

Date$_1$ = June 11 — Observer / Recorder

242

Date$_2$ = June 17 — Observer / Recorder

43

Ru

| Star. α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 25 01 | 50 47 | 8.6 | 24 28.3 | 46.0 | 49.4 | 52.6 | 55.8 | 59.2 | 24 | 52.60 | | 24 52.60 |
| 24 25.3 | 50 51.9 | 9.0 | 29.6 | | | | | | | | | +14.80 |
| June 17 | | | 31.1 | | | | | | | | | − 45 |
| | | | 29.7 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 14.33 ✓ | | 25 6.93 ✓ |
| $c_1$ | | | | | | | | | | | | − ~~2.20~~ +2.10 ✓ |
| | | | | | | | | | | | | 25 4.83 |
| June 11 | | 8.5 | 24 32.8 | 43.4 | 46.6 | 49.9 | 53.1 | 56.3 | 24 | 49.86 | | 24 49.86 |
| | | | 34.5 | | | | | | | | | +17.61 |
| κ | | | 36.5 | | | | | | | | | − 41 |
| | | | 34.6 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 17.18 ✓ | | 25 7.04 ✓ |
| $c_2$ | | | | | | | | | | + ~~18.84~~ | | − ~~2.10~~ +2.20 ✓ |
| | | | | | | | | | | | | 25 4.84 |
| 29 17 | 51 30 | 8.9 | ~~28 37.4~~ | 57.6 | 1.0 | 4.5 | 7.6 | 10.7 | 29 | 4.28 | | 29 4.28 |
| 28 46.8 | 51 34.8 | 9.0 | ~~34.6~~ | | | | | | | | | +17.61 |
| κ | | | 28 40.8 | | | | | | | | | − 43 |
| | | | 42.0 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 43.3 | | | | | | | + 17.16 | | 29 21.44 ✓ |
| $\alpha_1$ | | | 42.0 | | | | | | | | | − 24 |
| | | | | | | | | | | | | 29 ~~21~~ 20 |
| | | 9.2 | 28 37.4 | 29 0.2 | 3.7 | 7.0 | 10.4 | 13.7 | 29 | 7.00 | | 29 7.00 |
| | | | 38.6 | | | | | | | | | +14.79 |
| κ | | | 40.3 | | | | | | | | | − 47 |
| | | | 38.8 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 14.30 | | 29 21.30 ✓ |
| $\alpha_2$ | | | | | | | | | | | | − 14 |
| | | | | | | | | | | | | 29 ~~21~~ 16 |
| 30 45 | 51 33 | 8.7 | 30 14.1 | 27.8 | 31.2 | 34.5 | 37.8 | 41.1 | 30 | 34.48 | | 30 34.48 |
| 30 11.4 | 51 37.7 | 8.7 | 15.5 | | | | | | | | | +17.61 |
| κ | | | 17.2 | | | | | | | | | − 43 |
| | | | 15.6 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 17.16 | | 30 51.64 |
| $\alpha_1$ | | | | | | | | | | | | − 2.25 |
| | | | | | | | | | | | | 30 49.39 |
| | | 8.8 | 30 10.7 | 30.5 | 33.8 | 37.2 | 40.7 | 44.0 | 30 | 37.24 | | 30 37.24 |
| | | | 12.1 | | | | | | | | | +14.79 |
| κ | | | 14.1 | | | | | | | | | − 47 |
| | | | 12.3 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 14.30 | | 30 51.54 |
| $\alpha_2$ | | | | | | | | | | | | − 2.15 |
| | | | | | | | | | | | | 30 49.39 |
| 31 32 | 51 26 | 8.9 | 31 9.9 | 15.1 | 18.2 | 21.6 | 24.9 | 28.2 | 31 | 21.60 | | 31 21.60 |
| 30 58.4 | 51 30.5 | 8.7 | 11.5 | | | | | | | | | +17.61 |
| κ | | | 12.9 | | | | | | | | | − 43 |
| | | | 11.4 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 17.16 | | 31 38.76 |
| $\alpha_1$ | | | | | | | | | | | | − 2.25 |
| | | | | | | | | | | | | 31 36.51 |
| | | 8.8 | 31 13.5 | 17.8 | 21.2 | 24.3 | 27.8 | 31.0 | 31 | 24.42 | | 31 24.42 |
| | | | 14.9 | | | | | | | | | +14.79 |
| κ | | | 16.5 | | | | | | | | | − 47 |
| | | | 14.9 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 14.30 | | 31 38.72 |
| $\alpha_2$ | | | | | | | | | | | | − 2.15 |
| | | | | | | | | | | | | 31 36.57 |
| 41 37 | 50 50 | 9.2 | 41 6.0 | 19.2 | 22.5 | 25.8 | 29.1 | 32.4 | 41 | 25.80 | | 41 25.80 |
| 41 4.1 | 50 54.8 | 9.3 | 7.7 | | | | | | | | | +17.61 |
| κ | | | 9.6 | | | | | | | | | − 42 |
| | | | 7.8 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 17.17 | | 41 42.97 |
| $\alpha_1$ | | | | | | | | | | | | − 2.27 |
| | | | | | | | | | | | | 41 40.70 |
| | | 9.2 | 41 18.1 | 21.9 | 25.2 | 28.6 | 31.7 | 34.9 | 41 | 28.46 | | 41 28.46 |
| | | | 19.2 | | | | | | | | | +14.79 |
| κ | | | 20.5 | | | | | | | | | − 45 |
| | | | 19.2 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 14.32 | | 41 42.78 |
| $\alpha_2$ | | | | | | | | | | | | − 2.18 |
| | | | | | | | | | | | | 41 40.60 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +22.9 | 0 8.7 | 22.9 | 31.6 | 15.80 | 47 32.55 = 11 | | 26.54 = 11 | 35 | 50 46 39.49 | 50 46 40.47 |
| | 1.35984 | | | | | 50 46 26.54 | | | | − 6 | −.14 |
| 74 d | 9.80105 | | | | | 18.91 | | | | + 2 | + 3 |
| | 1.27660 | | | | | + 12.63 | 46 | 39.49 | | + 8.23 | + 8.23 |
| ((δ) − D) $\frac{d'}{100}$ | +1891 = 17 | | | | | | | 39.17 = 11 | | + 24 | + 24 |
| +4.21 | | | | | | | | | | − 4.75 − 5.90 | − 5.90 |
| δ1 −32.32 | | 25 8.94 | | 46 9.7 | | | | | | 46 49.34 42.02 | 42.93 |
| | +15.3 | 0 14.1 | 28.1 | 42.2 | 21.10 | 47 27.25 = 17 | | | 35 | 33.87 48.15 | 39.17 |
| | 1.18469 | | | | | 50 46 21.24 | 50 46.2156 = 17 | | | − 6.14 | − 6 |
| d | 9.80105 | | | | | 17.63 | + 1891 | | | + 3 | + 3 |
| | 1.10145 | | | | | + 18.91 | 46 33.87 | | | + 8.29 | + 8.29 |
| ((δ) − D) $\frac{d'}{100}$ | +1263 = 11 | | | | | | 40.15 | | | + 24 | + .24 |
| +4.21 | | | | | | | 4047 = 17 | | | − 5.90 − 4.75 | − 4.75 |
| δ2 −32.32 | | 25 9.15 | | 46 11.5 | | | | | | 36.47 4382 | 42.92 |
| | −87.8 +22.3 | 2 36.2 | 49.5 | 84.7 | 42.35 | 30 6.00 | | | 50 | 51 29 18.12 | |
| | 1.34830 | | | | | 51 28 0.34 | | | | − 13 | +9.44 |
| 72 d | 9.79431 | | | | | 59.99 | | | | + 27 | |
| | 1.25832 | | | | | + 18.13 | 29 18.12 | | | + 9.00 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +4.11 | | | | | | | | | | − 4.65 | |
| δ1 −31.90 | | 29 23.31 | | 28 31.0 | | | | | | 29 22.91 | |
| | −87.8 +28.2 | 2 40.3 | 54.2 | 94.5 | 47.25 | 30 1.10 | | | 50 | 18.33 | |
| | 1.45025 | | | | | 51 28 55.41 | | | | − 21 | +9.28 |
| d | 9.79431 | | | | | + 22.92 | | | | + 25 | |
| | 1.36027 | | | | | | 29 18.33 | | | + 8.94 | |
| ((δ) − D) $\frac{d'}{100}$ | | | 28 | | | | | | | + 30 | |
| +4.11 | | | 26 | | | | | | | − 5.80 | |
| δ2 −31.90 | | 29 23.27 | | 49.9 | | | | | | 29 21.81 | |
| | +18.9 | 4 22.1 | 35.9 | 58.0 | 49 29.00 | 33 19.35 | | | 45 | 51 38 28.59 | |
| | 1.27646 | | | | | 57 32 13.66 | | | | − 10 | +9.70 |
| 76 d | 9.79383 | | | | | + 15.35 | | | | + 45 | |
| | 1.18600 | | | | | | 38 28.59 | | | + 9.05 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +4.08 | | | | | | | | | | − 4.55 | |
| δ1 −31.74 | | 30 53.47 | | 32 2.0 | | | | | | 32 33.74 84 | |
| | +24.9 | 4 25.5 | 39.9 | 65.4 | 49 32.70 | 33 15.65 | | | 45 | 30.18 | |
| | 1.39620 | | | | | 51 32 9.96 | | | | − 17 | +9.52 |
| d | 9.79383 | | | | | + 20.22 | | | | + 40 | |
| | 1.30574 | | | | | | 32 30.18 | | | + 8.99 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +4.08 | | | | | | | | | | − 5.70 | |
| δ2 −31.74 | | 30 53.47 | | 32 2.3 | | | | | | 34.00 | |
| | +1.2 | 0 7.0 | 20.8 | 27.8 | 55 13.90 | 27 34.45 | | | 55 | 51 26 36.75 4 | |
| | 1.00860 | | | | | 51 26 28.76 4 | | | | − 3 | +9.23 |
| d 82 | 9.79470 | | | | | + 8.00 | | | | + 2 | |
| | 0.91901 | | | | | | 26 36.75 | | | + 8.95 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 29 | |
| +4.08 | | | | | | | | | | − 4.50 | |
| δ1 −31.64 | | 31 40.59 | | 26 9.8 | | | | | | 26 41.48 7 | |
| | +9.5 | 0 5.0 | 19.1 | 24.1 | 55 12.05 | 27 36.30 | | | 55 | 38.34 | |
| | 0.97772 | | | | | 51 26 30.61 | | | | − 3 | +9.157 |
| d | 9.79470 | | | | | + 7.73 | | | | + 2 | |
| | 0.88813 | | | | | | 26 38.34 | | | + 8.89 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 29 | |
| +4.08 | | | | | | | | | | − 5.65 | |
| δ2 −31.64 | | 31 40.65 | | 26 10.2 | | | | | | 41.86 | |
| | +18.0 | 1 16.9 | 29.9 | 46.8 | 31 23.40 | 51 24.95 | | | 30 | 50 50 33.78 | |
| | 1.25527 | | | | | 50 50 18.26 | | | | − 9 | +8.65 |
| 66 d | 9.80043 | | | | | + 14.84 | | | | + 14 | |
| | 1.17141 | | | | | | 50 33.78 | | | + 8.36 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 24 | |
| +4.02 | | | | | | | | | | − 3.80 | |
| δ1 −30.50 | | 41 44.72 | | 50 8.1 | | | | | | 50 38.63 | |
| | +9.2 | 1 9.0 | 21.3 | 30.3 | 31 10.15 | 51 33.20 | | | 30 | 35.18 | |
| | 0.96848 | | | | | 50 50 27.51 | | | | − 3 | +8.62 |
| d | 9.80043 | | | | | + 7.67 | | | | + 11 | |
| | 0.88462 | | | | | | 50 35.18 | | | + 8.30 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .24 | |
| +4.02 | | | | | | | | | | − 5.00 | |
| δ2 −30.50 | | 41 44.72 | | 50 8.3 | | | | | | 38.80 | |

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Date$_1$ = June 11 241 Observer Recorder — Date$_2$ = June 17 242 Observer Recorder — 45 — Ru

| Star. | α | δ | Mag. | $T_d$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 45 00 | 50 23 | 7.9 | 44 25.3 | 41.3 | 44.5 | 47.7 | 51.0 | 54.2 | 44 | 47.74 | 44 | 47.74 |
| | 44 27.5 | 50 27.1 | 8.2 | 26.9 | | | | | | | | | +17.61 |
| | κ | | | 28.5 | | | | | | | | | − 41 |
| | | | | 26.9 | | | | | | | + 17.18 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 45 | 4.92 |
| 14 53 19 | | | | | | | | | | | | | − 2.27 |
| | $a_1$ | | | | | | | | | | | 45 | 2.65 |
| | | | 9.8 | 44 18.3 | — | 46.9 | 50.3 | 53.2 | 56.4 | 44 | 47.36 | 44 | 50.10 |
| | | 54 9 | | 19.3 | | | | | | | | | +14.79 |
| | κ | | | 20.5 | | | | | | | | | − 45 |
| | | | | 19.4 | | | | | | | + 14.32 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 45 | 04.42 |
| | | | | | | | | | | | | | − 2.18 |
| | $a_2$ | | | | | | | | | | | 45 | 2.24 |
| 15 | 00 29 | 50 02 | 9.2 | 0 41.4 | 11.9 | 15.2 | 18.3 | 21.6 | 24.8 | 0 | 12.97 | 0 | 18.36 |
| 14 | 59 58.2 | 50 5.9 | 9.3 | 55 | | | | | | | 18.36 | | +17.67 |
| | κ | | | 46 | | | | | | | | | − 41 |
| | | | | 17.2 | | | | | | | + 17.19 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 5.7 | | | | | | | | 0 | 35.55 |
| | | | | | | | | | | | | | − 2.31 |
| | $a_1$ | | | | | | | | | | | 0 | 33.24 |
| | | | 9.5 | 0 41 | 14.9 | 18.2 | 21.3 | 24.5 | 27.9 | 0 | 21.36 | 0 | 21.36 |
| | | | | 5.5 | | | | | | | | | +14.78 |
| | κ | | | 7.6 | | | | | | | | | − 44 |
| | | | | 5.7 | | | | | | | + 14.32 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 0 | 35.68 |
| | | | | | | | | | | | | | − 2.23 |
| | $a_2$ | | | | | | | | | | | 0 | 33.45 |
| 1 | 38 | 49 56 | 8.7 | 1 6.1 | 20.3 | 23.5 | 26.9 | 29.9 | 33.4 | 1 | 26.80 | 1 | 26.80 |
| 1 | 6.9 | 50 2.2 | 8.8 | 7.3 | | | | | | | | | +17.62 |
| | κ | | | 9.0 | | | | | | | | | − 41 |
| | | | | 7.5 | | | | | | | + 17.19 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 1 | 43.99 |
| | | | | | | | | | | | | | − 2.30 |
| | $a_1$ | | | | | | | | | | | 1 | 41.69 |
| | | | 8.8 | 1 8.0 | 23.0 | 26.2 | 29.6 | 32.8 | 35.9 | 1 | 29.50 | 1 | 29.50 |
| | | | | 9.5 | | | | | | | | | +14.78 |
| | κ | | | 11.0 | | | | | | | | | − 44 |
| | | | | 9.5 | | | | | | | + 14.32 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 1 | 43.82 |
| | | | | | | | | | | | | | − 2.22 |
| | $a_2$ | | | | | | | | | | | 1 | 41.60 |
| 3 | 39 | 52 45 | 8.5 | 2 59.5 | 3 22.3 | 25.8 | 28.8 | 32.2 | 35.7 | 3 | 28.90 | 3 | 28.90 |
| 3 | 7.87 | 52 46.6 | 8.3 | 0.8 | | | | | | | | | +17.62 |
| | κ | | | 2.7 | | | | | | | | | − 44 |
| | | | | 3 1.0 | | | | | | | +17.16 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 3 | 46.06 |
| | | | | | | | | | | | | | − 2.43 |
| | $a_1$ | | | | | | | | | | | 3 | 43.63 |
| | | | 8.4 | 3 13.0 | 24.9 | 28.4 | 31.8 | 35.3 | 38.6 | 3 | 31.80 | 3 | 31.80 |
| | | | | 14.6 | | | | | | | | | +14.78 |
| | κ | | | 16.5 | | | | | | | | | − 48 |
| | | | | 14.7 | | | | | | | + 14.28 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 3 | 46.08 |
| | | | | | | | | | | | | | − 2.35 |
| | $a_2$ | | | | | | | | | | | 3 | 43.73 |
| 4 | 16 | 50 33 | 6.0 | 3 52.1 | 56.4 | 59.6 | 2.8 | 6.1 | 9.3 | 4 | 2.84 | 4 | 2.84 |
| 3 | 44.7 | 50 36.6 | 6.8 | 53.2 | | | | | | | | | +17.62 |
| | κ | | | 54.8 | | | | | | | | | − 41 |
| | | | | 53.4 | | | | | | | + 17.19 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 4 | 20.03 |
| | | | | | | | | | | | | | − 2.34 |
| | $a_1$ | | | | | | | | | | | 4 | 17.69 |
| | | | 5.5 | 3 51.3 | 59.2 | 2.4 | 5.8 | 9.0 | 12.3 | 4 | 5.74 | 4 | 5.74 |
| | | | | 52.8 | | | | | | | | | +14.78 |
| | κ | | | 54.3 | | | | | | | | | − 45 |
| | | | | 52.8 | | | | | | | + 14.31 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 4 | 20.05 |
| | | | | | | | | | | | | | − 2.26 |
| | $a_2$ | | | | | | | | | | | 4 | 17.79 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +20.8 | 0 ′ 7.0 | 26.3 | 27.3 | 0 ′ 13.65 | 22 34.70 | | | 0 ′ | 50 21 46.01 | |
| d | 1.31806 | | | | | 50 21 28.81 | | | | − 12 | +7.99 |
| | 9.80480 | | | | | +17.32 | | | | + 2 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.23857 | | | | | | | 21 46.01 | | + 7.87 | |
| | | | | | | | | | | + 22 | |
| +4.01 | | | | | | | | | | − 3.50 | |
| −30.16 $\delta_1$ | | 45 6.66 | | 21 20.3 | | | | | | 21 50.50 | |
| | +30.7 | 4 48.8 | 2.9 | 11 51.7 | 59 55.85 | 2 23 22.50 | | | 55 | 22 12.37 | Ex # |
| d | 1.48714 | | | | | 50 21 46.81 | | | | − 25 | +8.22 |
| | 9.80473 | | | | | +25.56 | | | | + 43 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.40758 | | | | | | | 22 42.37 | | + 7.82 | |
| | | | | | | | | | | + 22 | |
| $\delta_2$ | | | | | | | | | | − 4.75 | |
| | | | | | | | | | | 22 15.84 | |
| +2.53 | +12.7 | 0 22.1 | 35.9 | 58.0 | 20 29.00 | 2 19.35 | | | 20 | 50 1 ~~23.99~~ | 34.56 |
| 1.40312 | 1.10380 | | | | | 50 1 13.96 | | | | − 5 | +7.74 |
| 9.80792 | 9.80792 | | | | | +10.65 | | | | + 5 | |
| 1.32675 | 1.02743 | | | | | +21.22 | 1 23.99 | | | + 7.64 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 20 | |
| +3.88 | | | | | | | | | | − 2.55 | |
| −28.28 $\delta_1$ | | 0 37.12 | | 1 11.5 | | | | | | 1 ~~29.18~~ ? | 39.75 |
| | +15.6 | 0 12.5 | 25.9 | 38.4 | 20 19.20 | 2 29.15 | | | 20 | 1 36.63 | |
| d | 1.19590 | | | | | 50 1 23.46 | | | | − 7 | +7.63 |
| | 9.80792 | | | | | +13.17 | | | | + 3 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.11953 | | | | | | 1 36.63 | | | + 7.47 | |
| | | | | | | | | | | + 20 | |
| +3.88 | | | | | | | | | | − 3.85 | |
| −28.28 $\delta_2$ | | 0 37.33 | | 1 12.1 | | | | | | 1 40.41 ? | |
| | +19.3 | 3 27.3 | 41.5 | 68.8 | 23 34.40 | 59 13.95 | | | 20 | 49 58 24.14 | |
| 70 d | 1.28556 | | | | | 49 58 8.76 | | | | − 10 | +7.96 |
| | 9.80837 | | | | | 7.94 | | | | + 36 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.20964 | | | | | +16.20 | | | | +7.50 | |
| | | | | | | | 58 24.14 | | | + 20 | |
| +3.88 | | | | | | | | | | − 2.50 | |
| −28.16 $\delta_1$ | | 1 45.57 | | 58 1.4 | | | | | | 58 29.60 | |
| | +20.0 | 3 28.0 | 41.6 | 69.6 | 2334.80 | 59 13.55 | | | 20 | 24.65 | |
| d | 1.30103 | | | | | 49 58 7.86 | | | | − 11 | +7.84 |
| | 9.80837 | | | | | +16.79 | | | | + 32 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.22511 | | | | | | 58 24.65 | | | + 7.43 | |
| | | | | | | | | | | + 20 | |
| +3.88 | | | | | | | | | | − 3.80 | |
| −28.16 $\delta_2$ | | 1 45.48 | | 58 0.5 | | | | | | 28.69 | |
| | +27.0 | 2 37.9 | 50.9 | 88.8 | 87 44.40 | 45 3.95 | | | 35 | 52 44 19.99 | |
| d | 1.44860 | | | | | 52 43 57.94 | | | | − 21 | +10.73 |
| 50 | 9.78213 | | | | | +22.05 | | | | + 27 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.34344 | | | | | | 44 19.99 | | | +10.28 | |
| | | | | | | | | | | + 39 | |
| +3.62 | | | | | | | | | | − 2.75 | |
| −27.90 $\delta_1$ | | 3 47.25 | | 44 0.1 | | | | | | 44 27.97 | |
| | +17.1 | 2 28.2 | 42.0 | 70.2 | 37 35.10 | 45 13.25 | | | 35 | 21.08 | |
| d | 1.23300 | | | | | 52 44 7.56 | | | | − 8 | +10.72 |
| | 9.78213 | | | | | +13.52 | | | | + 23 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.13084 | | | | | | 44 21.08 | | | +10.18 | |
| | | | | | | | | | | + 39 | |
| +3.62 | | | | | | | | | | − 4.10 | |
| −27.90 $\delta_2$ | | 3 47.35 | | 43 59.8 | | | | | | 27.70 | |
| | ~~−50.6~~ +9.4 | 4 20.0 | 33.2 | 53.2 | 49 26.60 | 33 21.75 | | | 45 | 50 32 23.54 | |
| 50 d | 0.97313 | | | | | 50 32 16.06 | | | | − 3 | +8.72 |
| | 9.80320 | | | | | 15.74 | | | | + 44 | |
| ((δ) − D) $\frac{d'}{100}$ | 0.89204 | | | | | + 7.80 | | | | + 8.08 | |
| | | | | | | | 32 23.54 | | | + 23 | |
| +3.72 | | | | | | | | | | − 2.40 | |
| −7.82 $\delta_1$ | | 4 21.41 | | 32 22.0 | | | | | | 32 29.86 | |
| | ~~−47.1~~ +12.9 | 4 21.2 | 34.9 | 56.1 | 49 28.05 | 33 20.30 | | | 45 | 25.31 | |
| d | 1.11059 | | | | | 50 32 14.61 | | | | − 5 | +8.58 |
| | 9.80320 | | | | | +10.70 | | | | + 40 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.02950 | | | | | | 32 25.31 | | | + 8.00 | |
| | | | | | | | | | | + 23 | |
| +3.72 | | | | | | | | | | − 3.75 | |
| −7.82 $\delta_2$ | | 4 21.51 | | 32 22.3 | | | | | | 30.14 | |

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241

Date$_1$ = June 11 — Observer / Recorder

242

Date$_2$ = June 17 — Observer / Recorder

47

| Star. α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 h 5m 52s | 50° 45′ | 9.2 | 5m 16.8s | 34.0 | (37.2) | 40.7 | 43.8 | 49.0 | 5m | 33.10 | 5m | 40.54 |
| 5 21.3 | 50 49.2 | 9.2 | 18.1 | | | | | | | | | +17.62 |
| κ | | | 19.8 | | | | | | | | | − 41 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 18.2 | | | | | | | + 17.19 | | − 2 |
| $\alpha_1$ | | | | | | | | | | | 5 | 57.73 |
| | | | | | | | | | | | | − 2.36 |
| | | | | | | | | | | | 5 | 55.37 |
| | | 9.3 | 5 23.6 | 36.7 | 40.1 | 43.5 | 46.6 | 50.1 | 5m | 43.40 | 5m | 43.40 |
| | | | 25.2 | | | | | | | | | +14.78 |
| κ | | | 26.7 | | | | | | | | | − 45 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 25.2 | | | | | | | + 14.31 | | − 2 |
| $\alpha_2$ | | | | | | | | | | | 5 | 57.71 |
| | | | | | | | | | | | | − 2.28 |
| | | | | | | | | | | | 5 | 55.43 |
| 16 10 | 52 45 | 7.8 | | | Lost | | | | | | | |
| 15 40.5 | 52 48.3 | 8.9 | | | | | | | | | | |
| κ | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | |
| 15 34.2 | 52 48.8 | 8.3 | 15 36.5 | 47.4 | 51.0 | 54.4 | 57.7 | 1.1 | 15 | 54.32 | 15 | 54.32 |
| | | | 38.0 | | | | | | | | | +14.77 |
| κ | | | 40.5 | | | | | | | | | − 49 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 38.3 | | | | | | | + 14.26 | | − 2 |
| $\alpha_2$ | | | | | | | | | | | 16 | 8.58 |
| | | | | | | | | | | | | − 2.37 |
| | | | | | | | | | | | 16 | 6.19 |
| 21 03 | 51 40 | 8.4 | 20 42.3 | 43.4 | 46.7 | 50.0 | 53.4 | 56.9 | 20 | 50.08 | 20 | 50.08 |
| 20 32.8 | 51 43.3 | 8.2 | 43.9 | | | | | | | | | +17.62 |
| κ | | | 45.2 | | | | | | | | | − 43 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 43.8 | | | | | | | + 17.17 | | − 2 |
| $\alpha_1$ | | | | | | | | | | | 21 | 7.25 |
| | | | | | | | | | | | | − 2.44 |
| | | | | | | | | | | | 21 | 4.81 |
| | | 8.3 | 20 41.4 | 46.2 | 49.6 | 52.7 | 56.2 | 59.4 | 20 | 52.82 | 20 | 52.82 |
| | | | 42.5 | | | | | | | | | +14.77 |
| κ | | | 43.7 | | | | | | | | | − 47 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 42.5 | | | | | | | + 14.28 | | − 2 |
| $\alpha_2$ | | | | | | | | | | | 21 | 7.10 |
| | | | | | | | | | | | | − 2.37 |
| | | | | | | | | | | | 21 | 4.73 |
| 21 2 16 | 51 49 | 9.0 | 21 46.6 | 55.9 | 59.3 | 2.6 | 5.9 | 9.3 | 22 | 2.60 | 22 | 2.60 |
| 21 43.3 | 51 52.4 | 8.9 | 48.8 | | | | | | | | | +17.62 |
| κ | | | 47.7 | | | | | | | | | − 43 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 17.17 | | − 2 |
| $\alpha_1$ | | | | | | | | | | | 22 | 19.77 |
| | | | | | | | | | | | | − 2.45 |
| | | | | | | | | | | | 22 | ~~2344~~ 1732 |
| | | 9.0 | 21 55.0 | 59.0 | 2.1 | 5.4 | 8.7 | 12.2 | 22 | 5.48 | 22 | 5.48 |
| | | | | | | | | | | | | +14.77 |
| κ | | | | | | | | | | | | − 47 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 14.28 | | − 2 |
| $\alpha_2$ | | | | | | | | | | | 22 | +9.76 |
| | | | | | | | | | | | | − 2.38 |
| | | | | | | | | | | | 22 | 17.38 |
| | | | | Single Observations | | | | | | | | |
| 14 3 3 46 | 52 07 | 6.9 | 33 8.9 | 25.7 | 29.9 | 32.3 | 35.6 | 39.0 | 33 | 32.82 | 33 | 32.32 |
| 33 | | | 10.3 | | | | | | | | | +17.61 |
| June 11 12.4 | 52 12.0 | 6.8 | 11.5 | | | | | | | | | − 44 |
| κ | | | 10.2 | | | | | | | | | − 2 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 17.15 | 33 | 49.44 |
| $\alpha_1$ | | | | | | | | | | | | − 2.29 |
| | | | | | | | | | | | 33 | 47.18 |
| 14 43 26 | 50 06 | 8.0 | 42 55.2 | 43 8.6 | 11.9 | 15.1 | 18.3 | 21.4 | 43 | 15.06 | 43 | 15.06 |
| 42 53.6 | 50 10.1 | 8.0 | 56.5 | | | | | | | | | +17.61 |
| June 11 κ | | | 57.9 | | | | | | | | | − 41 |
| 14 54 09 | 50 36 | 7.5 | 56.3 | | | | | | | + 17.18 | | − 2 |
| June 17 ((δ) − D) $\frac{\kappa'}{100}$ | 50 40.7 | 8.0 | 53 25.6 | 51.9 | 55.3 | 58.5 | 1.7 | 5.0 | 53 | 58.48 | 53 | 58.48 43 32.24 |
| 53 35.8 | | | 27.0 | | | | | | | | | − 2.25 |
| $\alpha_2$ | | | 29.0 | | | | | | | | | 14.78 43 29.99 |
| | | | 27.2 | | | | | | | | | − 45 |
| | | | | | | | | | | + 14.31 | | − 2 |
| 14 55 19 | 50 14 | 9.8 | | Lost | | | | | | | 54 | 12.79 |
| June 11 54 46.6 | 50 18.2 | 9.5 | | | | | | | | | | − 2.23 |
| | | | | | | | | | | | 54 | 10.56 |

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7

Runs

48

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +14.9 +22.3 | 1 0.8 | 15.0 | 15.8 | 37 7.90 | 45 40.45 | | | 35 | 50 45 52.85 | |
| | 1.34830 | | | | | 50 45 34.76 | | | | − 13 | |
| 86 d | 9.80105 | | | | | +18.41 | | | | + 15 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.26506 | | | | | | 45 52.85 | | | + 8.31 | +8.57 |
| | | | | | | | | | | + 24 | |
| +3.77 | | | | | | | | | | − 2.25 | |
| −27.60 $\delta_1$ | | 5 59.14 | | 44 31.6 | | | | | | 45 59.17 | |
| | +18.2 | 1 57.9 | 10.3 | 68.2 | 39 41.0 | 45 44.25 | | | 35 | 44 53.39 | |
| | 1.26007 | | | | | 50 44 38.56 | | | | − 9 | |
| d | 9.80105 | | | | | +15.03 | | | | + 16 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.17683 | | | | | | 44 53.59 | | | + 8.21 | +8.52 |
| +3.77 | | | | | | | | | | + 24 | |
| −27.60 $\delta_2$ | | 5 59.20 | | 44 30.8 | | | | | | − 3.70 | |
| | | | | | | | | | | 44 58.41 | |
| | | 4 10.3 | 22.7 | 33.0 | 34 16.50 | 48 37.85 | | | 30 | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | +16.0 | 2 19.0 | 31.9 | 50.9 | 37 25.45 | 45 22.90 | | | 35 | 52 44 29.85 | |
| | 1.20412 | | | | | 52 44 17.21 | | | | − 7 | +10.73 |
| d | 9.78213 | | | | | +12.64 | | | | + 21 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.00196 | | | | | | 44 29.85 | | | +10.20 | |
| +3.49 | | | | | | | | | | + 39 | |
| −26.28 $\delta_2$ | | 16 9.68 | | 44 10.9 | | | | | | − 3.40 | |
| | | | | | | | | | | 44 37.18 | |
| | +6.2 | 2 20.3 | 34.0 | 54.3 | 42 27.15 | 40 21.20 | | | 40 | 51 39 20.29 | |
| | 0.79134 | | | | | 51 39 15.54 | | | | − 1 | +9.75 |
| 74 d | 9.79272 | | | | | + 5.10 | | | | + 24 | |
| ((δ) − D) $\frac{d'}{100}$ | 0.70777 | | | | | | 39 20.29 | | | + 9.21 | |
| | | | | | | | | | | + 31 | |
| +3.54 | | | | | | | | | | − 1.55 | |
| −25.62 $\delta_1$ | | 21 8.35 | | 39 2.9 | | | | | | 39 28.49 | |
| | +10.3 | 2 24.8 | 37.2 | 62.0 | 42 31.00 | 40 17.35 | | | 40 | 21.00 | |
| | 1.01284 | | | | | 51 39 12.66 | | | | − 3 | +9.61 |
| d | 9.79272 | | | | | + 8.34 | | | | + 22 | |
| ((δ) − D) $\frac{d'}{100}$ | 0.92127 | | | | | | 39 21.00 | | | + 9.11 | |
| | | | | | | | | | | + 31 | |
| +3.54 $\delta_2$ | | | | | | | | | | − 2.95 | |
| −25.62 | | 21 8.27 | | 39 2.0 | | | | | | 39 27.66 | |
| | −49 +49 | 3 20.9 | 33.9 | 54.8 | 33 27.40 | 49 20.95 | | | 30 | 51 48 26.97 | |
| | 1.17319 | | | | | 51 48 15.76 | | | | − 6 | +9.97 |
| 88 d | 9.79128 | | | | | +12.03 | | | | + 34 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.08018 | | | | | | 48 26.97 | | | + 9.36 | |
| | | | | | | | | | | + 33 | |
| +3.52 | | 22 15.84 | | 48 10.0 | | | | | | − 1.52 | |
| −25.46 $\delta_1$ | | | | | | | | | | 48 35.44 | |
| | −49.6 +16.5 | 3 15.5 | 29.5 | 45.0 | 33 23.50 | 49 25.85 | | | 30 | 28.64 | |
| | 1.02114 | | | | | 51 48 20.16 | | | | − 3 | +9.87 |
| d | 9.79128 | | | | | + 8.48 | | | | + 30 | |
| ((δ) − D) $\frac{d'}{100}$ | 0.92813 | | | | | | 48 28.64 | | | + 9.27 | |
| | | | | | | | | | | + 33 | |
| +3.52 | | | | | | | | | | − 2.90 | |
| −25.46 $\delta_2$ | | 22 20.90 | | 48 10.2 | | | | | | 35.61 | |
| | +22.1 | 4 18.9 | 31.9 | 50.8 | 14 25.40 | 8 22.95 | | | 10 | 52 7 34.65 | |
| | 1.34439 | | | | | 52 7 17.76 | | | | − 13 | +10.33 |
| d | 9.78821 | | | | | +17.71 | | | | + 44 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.24831 | | | | | | 7 34.65 | | | + 9.67 | |
| | | | | | | | | | | + 35 | |
| +4.01 | | | | | | | | | | − 4.50 | |
| −31.40 $\delta_1$ | | 33 51.19 | | 7 9.1 | | | | | | 7 40.48 | |
| | −40 +18.6 | 1 25.0 | 39.9 | 64.9 | 16 32.45 | 6 15.90 | | | 15 | 50 5 25.47 | 50 36 42.29 +7.88 +8.06 |
| | 1.26951 | | | | | 50 5 10.24 | | | | − 9 | − 27 |
| +4.05 d | −31.2 | | | | | +15.58 | 5 25.47 | | | + 15 | + 3 |
| −30.32 | +28.3 | 0 19.1 | 33.5 | 52.6 | 45-2630 | 37 22.05 | | | 45 | + 7.62 | + 8.07 |
| 32.24 ((δ) − D) $\frac{d'}{100}$ | +2.13 | | | | | 50 36 16.56 | | | | + .20 | + .23 |
| 2.25 | | | | | | +25.93 | | | | − 3.55 | − 4.30 |
| 29.99 $\delta_2$ | 1.49554 | 43 34.04 | | 4 59.5 | 36 17.0 | | 36 42.29 | | | 5 29.80 | 36 46.05 |
| | 9.80731 | 54 14.46 | | 36 17.0 | | | | | | | |
| +3.90 | 9.80259 | 2 5.5 | 12.2 | | | | | | 5 | | |
| −29.06 | 1.19253 | | | | | | | | | | |

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1873phae.proj.1584R

243

Date$_1$ = June 25 $h$ 73 — Observer — Recorder — $n = -.35$

244

Date$_2$ = June 29 — Observer — Recorder — $n = -.49$



Ru

| Star. | α | δ | Mag. | $T_s$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 45 16 | 54 45 | 6.0 | 45 | 45 0.8 | 4.3 | 7.8 | 11.5 | 14.8 | 43 | 2.84 | 25 | 7.84 |
| | 44 43.24 | 54 49.2 | 7.3 | 45 50 | | | | | | | | | +10.49 |
| June 25 | | | | 46.8 | | | | | | | | | − 50 |
| κ | | | | 48.0 | | | | | | | + 9.96 | | − 3 |
| | | | | 46.6 | | | | | | | | 45 | 17.80 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | − | | | | | | | | | − 2.19 |
| $c_1$ | | | | | | | | | | | | 45 | 15.61 |
| 14 | 46 42 | 54 28 | 9.0 | 46 | 10.5 | 26.7 | 29.9 | 33.5 | 37.0 | 40.5 | 46 | 3346 | 46 33.46 |
| | 46 8.6 | 54 32.0 | 9.0 | 12.5 | | | | | | | | | +10.49 |
| June 25 | | | | 14.3 | | | | | | | | | − 49 |
| κ | | | | 12.4 | | | | | | | + 9.97 | | − 3 |
| | | | | | | | | | | | | 46 | 43.43 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | − 2.19 |
| $a_2$ | | | | | | | | | | | | 46 | 41.24 |
| 14 | 48 07 | 53 08 | 7.8 | 47 | 41.5 | 52.9 | 56.8 | 59.5 | 3.1 | 6.7 | 47 | 5970 | 47 59.70 |
| | 47 33.7 | 53 11.1 | 7.4 | 43.0 | | | | | | | | | +10.49 |
| κ | | | | 44.4 | | | | | | | | | − 46 |
| | | | | 43.0 | | | | | | | + 10.00 | | − 3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 48 | 49.70 |
| $a_1$ | | | | | | | | | | | | | − 2.15 |
| | | | | | | | | | | | | 48 | 7.55 |
| | | | 7.5 | 47 | 34.1 | 55.0 | 58.4 | 1.8 | 5.2 | 8.8 | 48 | 1.84 | 48 1.84 |
| | | | | | 35.3 | | | | | | | | + 8.45 |
| κ | | | | | 36.8 | | | | | | | | − 65 |
| | | | | | 35.4 | | | | | | + 7.77 | | − 3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 48 | ~~8.68~~ 9.61 |
| $a_2$ | | | | | | | | | | | | | − 2.06 |
| | | | | | | | | | | | | 48 | 7.55 |
| 14 | 49 84 | 54 03 | 9.8 | 48 | 47.4 | 50.8 | 53.5 | 57.3 | 0.5 | 14.4 | 48 | 5720 | 48 57.20 |
| | 48 31.5 | 54 7.2 | 9.5 | | 48.1 | | | | | | | | +10.49 |
| κ | | | | | 47.7 | | | | | | | | − 48 |
| | | | | | | | | | | | + 9.98 | | − 3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 49 | 7.18 |
| $a_1$ | | | | | | | | | | | | | − 2.19 |
| | | | | | | | | | | | | 49 | 4.99 |
| | | | | | Lost | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $a_2$ | | | | | | | | | | | | | |
| | 49 42 | 54 32 | 8.9 | 49 | ~~28.0~~ | 28.0 | 35.0 | 38.5 | 42.2 | | 49 | ~~3502~~ | 49 35.02 |
| 49 | 49 9.2 | 54 36.8 | 9.0 | | ~~29.0~~ | 31.4 | | | | | | | +10.49 |
| κ | | | | | 29.4 | | | | | | | | − 49 |
| | | | | | 30.8 | | | | | | + 9.97 | | − 3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | 32.1 | | | | | | | 49 | 44.99 |
| $a_1$ | | | | | 30.8 | | | | | | | | − 2.21 |
| | | | | | | | | | | | | 49 | 42.78 |
| | | | 9.0 | 49 | 28.9 | 30.0 | 33.5 | 37.4 | 40.5 | 44.2 | 49 | 3712 | 49 37.12 |
| | | | | | 30.15 | | | | | | | | + 8.45 |
| κ | | | | | 32.0 | | | | | | | | − 69 |
| | | | | | 30.5 | | | | | | + 7.73 | | − 3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 49 | 44.85 |
| $a_2$ | | | | | | | | | | | | | − 2.12 |
| | | | | | | | | | | | | 49 | 42.73 |
| 51 | 51 36 | 53 59 | 9.2 | 50 | 59.4 | 51 22.0 | 25.3 | 29.0 | 32.4 | 36.0 | 51 | 2894 | 51 28.94 |
| | 51 34 | 54 2.8 | 9.3 | | 1.0 | | | | | | | | +10.48 |
| κ | | | | | 2.5 | | | | | | | | − 48 |
| | | | | 51 | 1.0 | | | | | | + 9.97 | | − 3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 51 | 38.91 |
| $a_1$ | | | | | | | | | | | | | − 2.20 |
| | | | | | | | | | | | | 51 | 36.71 |
| | | | 9.3 | 50 | 62.4 | 51 24.0 | 27.5 | 31.0 | 34.5 | 38.1 | 51 | 3102 | 51 31.02 |
| | | | | | 58.8 | | | | | | | | + 8.45 |
| κ | | | | | 55.8 | | | | | | | | − 67 |
| | | | | | 54.0 | | | | | | + 7.75 | | − 3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 51 | 38.77 |
| $a_2$ | | | | | | | | | | | | | − 2.11 |
| | | | | | | | | | | | | 51 | 36.66 |

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June 25 −1′ 4.″54 +.″08
" 29 −1 3.84 +.08

Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~~−28.8~~ | 1 27.0 | 41.0 | 68.0 | 36 34.00 | 46 14.35 | | | 35 | 54 45 25.78 | |
| | +21.2 | | | | | 54 45 9.81 | | | | − 11 | +12.90 |
| d | 1.32634 | | | | | +15.97 | | | | + 12 | |
| | 9.76129 | | | | | | 45 25.78 | | | +12.49 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.20334 | | | | | | | | | + 40 | |
| +3.65 | | | | | | | | | | − 6.95 | |
| −30.12 $\delta_1$ | | 45 19.26 | | 45 1.6 | | | | | | 45 31.73 | |
| | +21.0 | 4 16.0 | 28.2 | 44.2 | 54 22.10 | 28 26.25 | | | 50 | 54 27 37.72 | |
| | 1.32428 | | | | | 54 27 21.71 | | | | − 11 | +12.82 |
| d | 9.76448 | | | | | +16.01 | | | | + 35 | |
| | 1.20447 | | | | | | 27 37.72 | | | +12.18 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +8.66 | | | | | | | | | | − 6.75 | |
| −29.96 $\delta_2$ | | 46 44.90 | | 27 13.8 | | | | | | 27 43.79 | |
| | +16.7 | 0 22.1 | 37.0 | 60.1 | 15 30.05 | 7 18.30 | | | 15 | 53 6 26.85 | |
| 2.14 d | 1.22272 | | | | | 53 6 13.76 | | | | − 8 | +11.07 |
| | 9.77846 | | | | | +13.09 | | | | + 4 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.11689 | | | | | | 6 26.85 | | | +10.80 | |
| | | | | | | | | | | + 31 | |
| +3.76 | | | | | | | | | | − 6.55 | |
| −29.78 $\delta_1$ | | 48 11.31 | | 6 1.6 | | | | | | 6 31.37 | |
| | ~~−28.6~~ | 0 28.8 | 45.0 | 73.8 | 15 36.90 | 7 11.45 | | | 15 | 28.30 | |
| | +26.4 | | | | | 53 6 7.61 | | | | − 18 | +10.59 |
| d | 1.42160 | | | | | +20.69 | | | | + 5 | |
| | 9.77846 | | | | | | 6 28.30 | | | +10.41 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.31577 | | | | | | | | | + 31 | |
| +3.76 | | | | | | | | | | − 7.15 | |
| −29.78 $\delta_2$ | | 48 11.31 | | 6 2.0 | ✓ | | | | | 31.74 | |
| | +9.5 | 3 2.2 | 15.2 | 18.4 | ~~+8~~ 9.20 | 3 4 39.15 | | | 15 | 54 1 41.89 | |
| | 0.97772 | | | | 19 | 54 1 34.61 | | | | 2 − 3 | +12.48 |
| d | 9.76860 | | | | | 2 + 7.28 | | | | + ~~25~~ 32 | |
| | 0.86203 | | | | | | 3 41.89 | | | +11.78 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.67 | | | | | | | | | | − 6.65 | |
| −29.68 $\delta_1$ | | 49 8.66 | | 2 18.0 | | | | | | $\delta_2$ 47.64 71 | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | +4.2 | 4 46.9 | 0.9 | 49.8 | 49 24.90 | 32 53.45 | | | 45 | 54 31 52.09 | |
| | 0.62325 | | | | | 54 31 48.91 | | | | − 1 | +13.04 |
| 10 d | 9.76370 | | | | | + 3.18 | | | | + 39 | |
| | 0.50266 | | | | | | 31 52.09 | | | +12.26 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.61 | | | | | | | | | | − 6.65 | |
| −29.60 $\delta_1$ | | 49 46.39 | | 31 28.9 | | | | | | 31 58.48 | |
| | +6.6 | 4 49.9 | 4.9 | 54.8 | 49 27.40 | 32 50.95 | | | 45 | 52.11 | |
| | 0.81954 | | | | | 54 31 47.11 | | | | − 1 | +12.62 |
| d | 9.76370 | | | | | + 3.00 | | | | + 40 | |
| | 0.69895 | | | | | | 31 52.11 | | | +11.83 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.61 | | | | | | | | | | − 7.30 | |
| −29.60 $\delta_2$ | | 49 46.34 | | 31 27.8 | | | | | | 57.43 | |
| | +27.9 | 3 39.8 | 51.3 | 91.1 | 23 45.55 | 57 2.80 | | | 20 | 53 58 19.68 | |
| | 1.44560 | | | | | 53 57 58.26 | | | | − 20 | +12.18 |
| .08 d | 9.76957 | | | | | +21.42 | | | | + 30 | |
| | 1.33088 | | | | | | 58 19.68 | | | +11.68 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.64 | | | | | | | | | | − 6.50 | |
| −29.38 $\delta_1$ | | 51 40.35 | | 54 56.0 | | | | | | 58 25.36 | |
| | ~~−23.0~~ | 3 43.9 | 59.0 | 102.9 | 23 51.45 | 58 56.90 | | | 20 | 21.47 | |
| | ~~37.0~~ | | | | | 53 57 53.04 | | | | − 36 | +11.64 |
| d − | 1.56820 | | | | | +28.41 | | | | + 31 | |
| | 9.76957 | | | | | | 58 21.47 | | | +11.29 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.45348 | | | | | | | | | + 40 | |
| +3.64 | | | | | | | | | | − 7.15 | |
| −29.38 $\delta_2$ | | 51 40.30 | | 57 56.6 | | | | | | 25.96 | |

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243

Date$_1$ = June 28 — Observer / Recorder

244

Date$_2$ = June 29 — Observer / Recorder

51

Ru

| Star. | α | δ | Mag. | $T_s$ | $T_m$ | $T_o$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 52 14 | 54 01 | 9.0 | 52 33.6 | 58.7 | 2.3 | 5.7 | 9.3 | 12.7 | 5.3 | 5.74 | 53 | 5.74 |
| | 52 41.9 | 54 5.7 | 9.2 | 35.0 | | | | | | | | | +10.48 |
| | κ | | | 36.2 | | | | | | | | | − 48 |
| | | | | 34.9 | | | | | | | + 9.97 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 53 | 15.71 |
| | | | | | | | | | | | | | − 2.21 |
| | $a_1$ | | | | | | | | | | | 53 | 13.50 |
| | | | 8.9 | 52 32.9 | 53 0.8 | 4.3 | 7.7 | 11.2 | 14.7 | 5.3 | 7.74 | 53 | 7.74 |
| | | | | 34.6 | | | | | | | | | +8.44 |
| | κ | | | 36.1 | | | | | | | | | − 67 |
| | | | | 34.5 | | | | | | | + 7.74 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 53 | 15.48 |
| | | | | | | | | | | | | | − 2.12 |
| | $a_2$ | | | | | | | | | | | 53 | 13.36 |
| 53 | 57 | 54 10 | 8.5 | 53 39.2 | 41.8 | 45.2 | 48.9 | 52.2 | 55.8 | 53 | 48.78 | 53 | 48.78 |
| 53 | 24.9 | 54 14.4 | 8.3 | 31.8 | | | | | | | | | +10.48 |
| | κ | | | ~~36.0~~ 33.2 | | | | | | | | | − 48 |
| | | | | 31.8 | | | | | | | + 9.97 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 53 | 58.75 |
| | | | | | | | | | | | | | − 2.22 |
| | $a_1$ | | | | | | | | | | | 53 | 56.53 |
| | | | 8.6 | 53 28.4 | 43.8 | 47.4 | 50.9 | 54.4 | 58.0 | 5.3 | 50.90 | 53 | 50.90 |
| | | | | 29.8 | | | | | | | | | + 8.44 |
| | κ | | | 31.3 | | | | | | | | | − 67 |
| | | | | 29.8 | | | | | | | + 7.74 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 53 | 58.64 |
| | | | | | | | | | | | | | − 2.13 |
| | $a_2$ | | | | | | | | | | | 53 | 56.51 |
| 55 | 48 | 54 21 | 8.3 | 55 2.0 | 32.0 | 35.4 | 39.2 | 42.5 | 46.3 | 55 | 39.08 | 55 | 39.08 |
| 55 | 15.5 | 54 25.6 | 7.0 | 3.5 | | | | | | | | | +10.48 |
| | κ | | 7.5 | 5.2 | | | | | | | | | − 49 |
| | | | | 3.6 | | | | | | | + 9.96 | | − 3 55 49.04 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 55 54.3 | 33.3 | 37.0 | 40.4 | 44.0 | 47.5 | 55 | 40.44 | 56 | 40.44 − 2.23 |
| 55 | 16.6 | 54 27.1 | | 56.7 | | | | | | | | | +10.48 55 46.81 |
| | $a_1$ | | | 57.9 | | | | | | | + 9.96 | | − 49 |
| | | | | 56.3 | | | | | | | | | − 3 55 50.40 |
| | | | 7.5 | 55 3.8 | 34.1 | 37.7 | 41.2 | 44.9 | 48.3 | 55 | 41.24 | 55 | 41.24 − 2.23 |
| | | | 6.8? | 5.2 | | | | | | | | | + 8.44 55 48.17 |
| | κ | | | 7.1 | | | | | | | + 7.72 | | − 69 |
| | | | | 5.4 | | | | | | 55 | | | − 3 55 48.46 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 55 5.0 | 35.5 | 39.0 | 42.7 | 46.1 | 49.7 | | 42.60 | 55 | 42.60 − 2.15 |
| | | | | 58.5 | | | | | | | | | + 8.44 55 46.81 |
| | $a_2$ | | | 0.0 | | | | | | | + 7.72 | | − 69 |
| | | | | 58.5 | | | | | | | | | − 3 55 50.32 |
| 58 | 07 | 54 06 | 9.3 | 57 26.5 | 52.7 | 56.2 | 59.7 | 3.3 | 6.9 | 57 | 59.76 | 57 | 59.76 − 2.15 |
| 57 | 36.1 | 54 10.3 | 9.1 | 28.2 | | | | | | | | | +10.48 55 48.17 |
| | κ | | | 29.9 | | | | | | | | | − 48 |
| | | | | 28.2 | | | | | | | + 9.97 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 58 | 59.73 |
| | | | | | | | | | | | | | − 2.24 |
| | $a_1$ | | | | | | | | | | | 58 | 7.49 |
| | | | 9.2 | 57 31.1 | 54.8 | 58.5 | 1.9 | 5.3 | 9.0 | 58 | ~~55 1.88~~ 1.90 | 58 | 1.90 |
| | | | | 32.8 | | | | | | | | | +8.44 |
| | κ | | | 34.3 | | | | | | | | | − 67 |
| | | | | 32.7 | | | | | | | + 7.74 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 58 | 9.64 |
| | | | | | | | | | | | | | − 2.15 |
| | $a_2$ | | | | | | | | | | | 58 | 7.49 |
| 15 | 2 18 | 54 12 | 9.1 | 1 34.0 | 58.5 | 2.0 | 5.5 | 9.0 | 12.5 | 2 | 5.50 | 2 | 5.50 |
| 1 | 41.7 | 54 16.5 | 8.9 | 35.4 | | | | | | | | | +10.48 |
| | κ | | | 37.3 | | | | | | | | | − 49 |
| | | | | 35.6 | | | | | | | + 9.96 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 2 | 15.46 |
| | | | | | | | | | | | | | − 2.26 |
| | $a_1$ | | | | | | | | | | | 2 | 13.20 |
| | | | 8.8 | 1 44.5 | 2.0.7 | 4.2 | 7.7 | 11.2 | 14.8 | 2 | 7.72 | 2 | 7.72 |
| | | | | 46.0 | | | | | | | | | +8.44 |
| | κ | | | 47.8 | | | | | | | | | − 68 |
| | | | | 46.1 | | | | | | | + 7.73 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 2 | 15.45 |
| | | | | | | | | | | | | | − 2.18 |
| | $a_2$ | | | | | | | | | | | 2 | 13.27 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~~29.2~~ | 0 ~~43~~.1 | 55.5 | 98.6 | 50 49.30 | 31 59.05 | | | 50 | 54 1 18.13 | ✓ |
| | +30.8 | | | | 20 | 54 ~~30~~ 54.51 | | | 20 | ~~54 31 17.85~~ | |
| 00 d | 1.48855 | | | | | 0 +23.46 | 31 17.85 | | | − 28 | +11.93 |
| | 9.76378904 | | | | | | | | | + 7 | |
| ((δ) − D) $\frac{d'}{100}$ | ~~1.30854~~ | | | | | | | | | + 11.74 | |
| | 1.37330 | | | | | | | | | + 40 | |
| +3.62 | | | | | | | | | | − 6.40 | |
| −29.18 $\delta_1$ | | 53 17.12 | | 0 54.5 | | | | | | 1 23.66 | |
| | ~~25.8~~ | 0 43.8 | 58.8 | 102.6 | 20 51.30 | 1 57.05 | | | 20 | 1 18.67 | |
| | +33.2 | | | | | 54 0 53.21 | | | | − 29 | +11.50 |
| d | 1.52114 | | | | | +25.46 | | | | + 7 | |
| | 9.76904 | | | | | | 1 18.67 | | | +11.32 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.40589 | | | | | | | | | + 40 | |
| +3.62 | | | | | | | | | | − 7.10 | |
| −29.18 $\delta_2$ | | 53 16.98 | | 0 53.9 | | | | | | 1 23.07 | |
| | ~~+16.9~~ | 2 41.3 | 52.8 | 95.1 | 12 47.55 | 10 0.80 | | | 10 | 54 9 9.26 | |
| | +17.0 | | | | | 54 8 56.26 | | | | − 7 | +12.43 |
| 12 d | 1.23045 | | | | | +13.00 | | | | + 22 | |
| | 9.76765 | | | | | | 9 9.26 | | | +11.88 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.11381 | | | | | | | | | + 40 | |
| +3.60 | | | | | | | | | | − 6.40 | |
| −29.10 $\delta_1$ | | 54 0.13 | | 8 46.2 | | | | | | 9 ~~+1.29~~ 15.29 | |
| | +21.1 | 2 43.2 | 57.9 | 101.1 | 12 50.55 | 9 57.80 | | | 10 | 10.09 | |
| | 1.32428 | | | | | 54 8 53.96 | | | | − 11 | +11.97 |
| d | 9.76765 | | | | | +16.13 | | | | + 23 | |
| | 1.20764 | | | | | | 9 10.09 | | | +11.45 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.60 | | | | | | | | | | − 7.10 | |
| −29.10 $\delta_2$ | | 54 0.11 | | 8 45.9 | | | | | | 14.96 | |
| | +35.5 | 4 36.8 | 49.8 | 86.6 | 39 43.30 | 23 5.05 | 22 27.57 | | 55 | 54 22 27.51 | 21 48.42 |
| | 1.55023 | | | | | 54 22 0.51 | | | | − 33 | − 7 +12.55 +12.79 |
| 16 d | 9.76507 | | | | | +27.00 | | | | + 38 | + 38 |
| | 1.43131 | | | | | −12.09 | | | | +12.10 | +12.08 |
| 49.04 | 16 | | | | | | 21 38.42 | | | + 40 | + 40 |
| 2.23 +3.56 ((δ) − D) $\frac{d'}{100}$ | − 15.9 | | | | | | | | | − 6.35 | − 6.35 |
| 46.81 | 1.20140 n | | | | | | | | | 22 33.71 | 21 54.86 |
| −28.88 $\delta_1$ | 9.76507 | 55 50.37 | | 22 4.8 | | | | | | | |
| 50.40 | 1.08248 n | 51.73 | | 21 26.0 | | | | | | | |
| 2.23 +3.56 | +35.8 | 4 36.9 | 50.7 | 86.6 | 39 43.30 | 23 5.05 | 22 28.43 | | 55 | 22 28.43 | 21 49.12 |
| 48.17 −28.88 | 1.55388 | | | | | 54 22 1.21 | | | | − 33 | − 7 +12.14 +12.40 |
| d | 9.76507 | | | | | +27.22 | | | | + 38 | + 38 |
| | 1.43496 | | | | | −12.09 | | | | +11.69 | +11.69 |
| 48.46 | − 15.9 | | | | | | 21 49.12 | | | + 40 | + 40 |
| 2.15 ((δ) − D) $\frac{d'}{100}$ | 1.20140 n | | | | | | | | | − 7.05 | − 7.05 |
| 46.81 +3.56 | 9.76507 | 55 50.37 | | 22 4.6 | | | | | | 22 33.52 | 21 54.47 |
| −28.88 $\delta_2$ | 1.08248 n | 58.73 | | 21 25.6 | | | | | | | |
| 50.32 | | | | | | | | | | | |
| 2.15 +3.56 | ~~31.6~~ | 1 6.1 | 18.0 | 24.1 | 16 12.05 | 6 36.30 | | | 15 | 54 5 55.95 | |
| 48.17 −2888 | +31.6 | | | | | 54 5 31.76 | | | | − 26 | +12.07 |
| d | 1.49969 | | | | | +24.19 | | | | + 10 | |
| | 9.76825 | | | | | | 5 55.95 | | | +11.83 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.38365 | | | | | | | | | + 40 | |
| +3.55 | | | | | | | | | | − 6.20 | |
| −28.58 $\delta_1$ | | 58 11.04 | | 5 33.2 | | | | | | 6 1.82 | |
| | ~~+29.9~~ | 1 3.1 | 18.0 | 21.1 | 16 10.55 | 6 37.80 | | | 15 | 56.31 | |
| | +29.2 | | | | | 54 5 33.96 | | | | − 22 | +11.68 |
| d | 1.46538 | | | | | +22.35 | | | | + 9 | |
| | 9.76825 | | | | | | 5 56.31 | | | +11.41 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.34934 | | | | | | | | | + 40 | |
| +3.55 | | | | | | | | | | − 6.90 | |
| −28.58 $\delta_2$ | | 58 11.04 | | 5 32.5 | | | | | | 6 1.09 | |
| | ~~+29.1~~ | 0 47.0 | 59.0 | 106.0 | 10 33.00 | 11 55.35 | | | 10 | 54 11 13.65 | |
| | +29.9 | | | | | 54 10 50.81 | | | | − 23 | +12.17 |
| 22 d − | 1.47567 | | | | | +22.84 | | | | + 7 | |
| | 9.76730 | | | | | | 11 13.65 | | | +11.93 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.35868 | | | | | | | | | + 40 | |
| +3.50 | | | | | | | | | | − 6.00 | |
| −28.08 $\delta_1$ | | 2 16.70 | | 10 51.7 | | | | | | 11 19.82 | |
| | ~~+28.4~~ | 0 38.8 | 54.0 | 92.8 | 10 46.40 | 12 1.95 | | | 10 | 14.61 | |
| | +21.6 | | | | | 54 10 58.11 | | | | − 12 | +11.83 |
| d | 1.33445 | | | | | + 16.50 | | | | + 6 | |
| | 9.76730 | | | | | | 11 14.61 | | | +11.49 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.21746 | | | | | | | | | + 40 | |
| +3.50 | | | | | | | | | | − 6.70 | |
| −28.08 $\delta_2$ | | 2 16.77 | | 10 51.4 | | | | | | 19.74 | |

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243

Date$_1$ = June 25 — Observer / Recorder

244

Date$_2$ = June 29 — Observer / Recorder

3

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| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 3m 3s 2h | 53 1 14 | 6.5 | 3m 2.0 | 18.6 | 22.1 | 25.7 | 29.0 | 32.4 | 3 | 23.26 | 3 | 25.56 |
| | 3 1.1 | 53 18.2 | 7.3 | 3.2 | | | | | | | | | +10.48 |
| | κ | | | 4.2 | | | | | | | | | − 47 |
| | | | | 3.1 | | | | | | | + 9.98 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 3 | 35.54 |
| | | | | | | | | | | | | | − 2.22 |
| | $\alpha_1$ | | | | | | | | | | | 3 | 33.32 |
| | | | 7.0 | 2 59.2 | 3 20.8 | 24.2 | 27.7 | 31.0 | 34.5 | 3 | 27.64 | 3 | 27.64 |
| | | | | 0.6 | | | | | | | | | + 8.44 |
| | κ | | | 2.1 | | | | | | | | | − 65 |
| | | | | 3 0.6 | | | | | | | + 7.76 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 3 | 35.40 |
| | | | | | | | | | | | | | − 2.15 |
| | $\alpha_2$ | | | | | | | | | | | 3 | 33.25 |
| | 4 50 | 53 45 | 7.7 | 4 20.3 | 36.3 | 39.8 | 43.3 | 46.7 | 50.3 | 4 | 43.28 | 4 | 43.28 |
| | 4 19.4 | 53 48.6 | 7.1 | 21.6 | | | | | | | | | +10.47 |
| | κ | | | 23.0 | | | | | | | | | − 48 |
| | | | | 21.6 | | | | | | | + 9.96 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | " | | | | | | | | | | 4 | 53.24 |
| | | | | | | | | | | | | | − 2.25 |
| | $\alpha_1$ | | | | | | | | | | | 4 | 50.99 |
| | | | 7.1 | 4 21.9 | 38.3 | 41.8 | 45.4 | 48.9 | 52.4 | 4 | 43.36 | 4 | 43.36 |
| | | | | 23.1 | | | | | | | | | + 8.44 |
| | κ | | | 24.9 | | | | | | | | | − 67 |
| | | | | 23.3 | | | | | | | + 7.74 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 4 | 53.10 |
| | | | | | | | | | | | | | − 2.17 |
| | $\alpha_2$ | | | | | | | | | | | 4 | 50.93 |
| | 5 49 | 52 56 | 9.2 | 5 23.0 | 36.6 | 40.1 | 43.5 | 47.0 | 50.3 | 5 | ~~43.40~~ 43.50 | 5 | 43.50 |
| | 5 18.2 | 53 0.0 | 8.9 | 24.9 | | | | | | | | | +10.47 |
| | κ | | | 26.7 | | | | | | | | | − 46 |
| | | | | 24.7 | | | | | | | + 9.99 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 5 | 53.49 |
| | | | | | | | | | | | | | − 2.23 |
| | $\alpha_1$ | | | | | | | | | | | 5 | 51.26 |
| | | | 9.0 | 5 22.8 | 38.7 | 42.2 | 45.6 | 49.0 | 52.5 | 5 | 45.60 | 5 | 45.60 |
| | | | | 24.2 | | | | | | | | | + 8.44 |
| | κ | | | 25.6 | | | | | | | | | − 65 |
| | | | | 24.2 | | | | | | | + 7.77 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 5 | 53.37 |
| | | | | | | | | | | | | | − 2.15 |
| | $\alpha_2$ | | | | | | | | | | | 5 | 51.22 |
| | 8 0 | 54 02 | 9.1 | 7 27.0 | 46.3 | 50.0 | 53.8 | 57.0 | 0.4 | 7 | ~~57.20~~ 53.52 | 7 | 53.80 |
| | 7 29.9 | 54 5.8 | 9.1 | 28.6 | | | | | | | | | +10.47 |
| | κ | | | 30.2 | | | | | | | | | − 48 |
| | | | | 28.6 | | | | | | | + 9.96 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 8 | 3.46 |
| | | | | | | | | | | | | | − 2.28 |
| | $\alpha_1$ | | | | | | | | | | | 8 | 1.18 |
| | | | 9.0 | 7 30.7 | 48.5 | 52.0 | 55.5 | 59.0 | 2.7 | 7 | 55.54 | 7 | 55.54 |
| | | | | 32.3 | | | | | | | | | + 8.43 |
| | κ | | | 33.7 | | | | | | | | | − 67 |
| | | | | 32.2 | | | | | | | + 7.73 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 8 | 3.27 |
| | | | | | | | | | | | | | − 2.20 |
| | $\alpha_2$ | | | | | | | | | | | 8 | 1.07 |
| | 9 0 | 54 30 | 8.3 | 8 21.6 | 46.1 | 49.7 | 53.1 | 56.6 | 0.1 | 8 | 53.12 | 8 | 53.12 |
| | 8 29.9 | 54 33.8 | 8.4 | 22.9 | | | | | | | | | +10.47 |
| | κ | | | 24.5 | | | | | | | | | − 49 |
| | | | | 23.0 | | | | | | | + 9.95 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 9 8 | 3.07 |
| | | | | | | | | | | | | | − 2.30 |
| | $\alpha_1$ | | | | | | | | | | | 9 | 0.77 |
| | | | 8.1 | 8 29.1 | 48.2 | 51.7 | 55.2 | 58.7 | 2.4 | 8 | 55.24 | 8 | 55.24 |
| | | | | 31.0 | | | | | | | | | + 8.43 |
| | κ | | | 32.8 | | | | | | | | | − 64 |
| | | | | 31.0 | | | | | | | + 7.71 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 9 | 2.95 |
| | | | | | | | | | | | | | − 2.22 |
| | $\alpha_2$ | | | | | | | | | | | 9 | 0.73 |

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| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +22.5 | 3′ 3.0 | 15.5 | 18.5 | 8′ 9.25 | 14 39.10 | | | 5′ | 53 13 52.14 | |
| | 1.35218 | | | | | 53 13 34.56 | | | | − 13 | +11.37 |
| 8 d | 9.77720 | | | | | +17.58 | | | | + 25 | |
| | 1.24509 | | | | | | 13 52.14 | | | +10.93 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 382 | |
| | | | | | | | | | | − 5.80 | |
| +3.57 $\delta_1$ | | 3 36.89 | | 13 29.8 | | | | | | 13 57.71 | |
| −27.92 | | | | | | | | | | | |
| | +27.0 | 3 4.1 | 19.8 | 23.9 | 8 11.95 | 14 36.40 | | | 5 | 53.66 | |
| | 1.43136 | | | | | 53 13 32.56 | | | | − 19 | +10.93 |
| d | 9.77720 | | | | | +21.10 | | | | + 25 | |
| | 1.32427 | | | | | | 13 53.66 | | | +10.56 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 382 | |
| | | | | | | | | | | − 6.50 | |
| +3.57 $\delta_2$ | | 3 36.82 | | 13 30.2 | | | | | | 58.04 | |
| −27.92 | | | | | | | | | | | |
| | +21.7 | 2 13.8 | 25.9 | 39.7 | 37 19.80 | 45 28.50 | | | 35 | 53 44 40.72 | |
| | 1.33646 | | | | | 53 44 23.96 | | | | − 13 | +11.87 |
| 8 d | 9.77199 | | | | | +16.76 | | | | + 18 | |
| | 1.22416 | | | | | | 44 40.72 | | | +11.45 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 382 | |
| | | | | | | | | | | − 5.80 | |
| +3.51 $\delta_1$ | | 4 54.50 | | 421 19.0 | | | | | | 44 46.79 | |
| −27.76 | | | | | | | | | | | |
| | +22.1 | 2 12.8 | 27.2 | 40.0 | 37 20.00 | 45 28.35 | | | 35 | 41.57 | |
| | 1.34439 | | | | | 53 44 24.51 | | | | − 13 | +11.44 |
| d | 9.77199 | | | | | +17.06 | | | | + 18 | |
| | 1.23209 | | | | | | 44 41.57 | | | +11.06 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 382 | |
| | | | | | | | | | | − 6.55 | |
| +3.51 $\delta_2$ | | 4 54.44 | | 44 18.7 | ×20 | | | | | 46.50 | |
| −27.76 | | | | | | | | | | | |
| | +18.8 | 1 27.3 | 39.8 | 67.1 | 26 33.55 | 56 14.80 | | | 25 | 52 55 24.86 | |
| | 1.27416 | | | | | 52 55 10.26 | | | | − 9 | +10.95 |
| 10 d | 9.78080 | | | | | +14.80 | | | | + 12 | |
| | 1.17017 | | | | | | 55 24.86 | | | +10.62 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +3.58 | | | | | | | | | | − 5.65 | |
| −27.62 $\delta_1$ | | 5 54.84 | | 55 2.5 | | | | | | 55 30.16 | |
| | +21.4 | 1 28.9 | 43.9 | 72.8 | 26 36.40 | 56 11.95 | | | 25 | 24.95 | |
| | 1.33041 | | | | | 52 55 8.11 | | | | − 12 | +10.55 |
| d | 9.78080 | | | | | +16.84 | | | | + 13 | |
| | 1.22642 | | | | | | 55 24.95 | | | +10.24 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 6.85 | |
| +3.58 $\delta_2$ | | 5 54.80 | | 55 1.5 | | | | | | 29.15 | |
| −27.62 | | | | | | | | | | | |
| | +24.9 | 0 19.0 | 31.2 | 50.2 | 20 25.10 | 2 23.25 | | | 20 | 54 1 37.81 | |
| | 1.39620 | | | | | 54 1 18.71 | | | | − 16 | +12.02 |
| 2 d | 9.76904 | | | | | +19.10 | | | | + 3 | |
| | 1.28095 | | | | | | 1 37.81 | | | +11.75 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.45 | | | | | | | | | | − 5.70 | |
| −27.34 $\delta_1$ | | 8 4.63 | | 1 16.8 | | | | | | 1 44.13 | |
| | +23.3 | 0 16.1 | 30.9 | 47.0 | 20 28.50 | 2 24.85 | | | 20 | 38.88 | |
| | 1.36736 | | | | | 54 1 21.01 | | | | − 14 | +11.62 |
| d | 9.76904 | | | | | +17.87 | | | | + 3 | |
| | 1.25211 | | | | | | 1 38.88 | | | +11.33 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.45 | | | | | | | | | | − 6.40 | |
| −27.34 $\delta_2$ | | 8 4.52 | | 1 16.8 | | | | | | 44.10 | |
| | +30.1 | 2 19.1 | 32.0 | 51.1 | 02 25.55 | 30 22.80 | | | 50 | 54 29 41.09 | |
| | 1.47857 | | | | | 54 29 18.26 | | | | − 23 | +12.60 |
| 12 d | 9.76413 | | | | | +22.83 | | | | + 19 | |
| | 1.35841 | | | | | | 29 41.09 | | | +12.24 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.39 | | | | | | | | | | − 3.70 | |
| −27.22 $\delta_1$ | | 9 4.16 | | 29 20.8 | | | | | | 29 47.99 | |
| | +24.2 | 2 13.9 | 28.9 | 42.8 | 52 21.40 | 30 26.95 | | | 50 | 41.46 | |
| | 1.38382 | | | | | 54 29 23.11 | | | | − 15 | +12.25 |
| d | 9.76413 | | | | | +18.35 | | | | + 19 | |
| | 1.26366 | | | | | | 29 41.46 | | | +11.81 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.39 | | | | | | | | | | − 6.45 | |
| −27.22 $\delta_2$ | | 9 4.12 | | 29 20.0 | | | | | | 47.26 | |

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243

Date$_1$ = June 23 Observer / Recorder

244

Date$_2$ = June 29 Observer / Recorder

55

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| | 10m 2s | 54 22 | 9.5 | 9m 52.0 | 10m 13s | 11.0 | 14.5 | 17.9 | 21.8 | 10 | 14.50 | 10m | 14.50 |
| | 09 50.9 | 54 25.9 | 9.5 | 53.5 | | | | | | | | | +10.47 |
| | | | | 53.4 | | | | | | | | | − 49 |
| | | | | 53.6 | | | | | | | + 9.95 | | − 3 |
| | | | | | | | | | | | | 10 | 24.45 |
| | | | | | | | | | | | | | − 2.30 |
| | | | | | | | | | | | | 10 | 22.15 |
| | | | 9.6 | 9 58.5 | 10 9.4 | 13.0 | 16.3 | 20.0 | 23.7 | 10 | 16.48 | 10 | 16.48 |
| | | | | 59.8 | | | | | | | | | + 8.43 |
| | | | | 0.8 | | | | | | | | | − 69 |
| | | | | 59.7 | | | | | | | + 7.72 | | − 3 |
| | | | | | | | | | | | | 10 | 24.19 |
| | | | | | | | | | | | | | − 2.22 |
| | | | | | | | | | | | | 10 | 21.97 |
| | 11 52 | 54 14 | 8.5 | 11 21.6 | 39.5 | 43.1 | 46.6 | 50.3 | 53.6 | 11 | 46.62 | 11 | 46.62 |
| | 11 24.0 | 54 17.6 | 8.5 | 23.2 | | | | | | | | | + 10.47 |
| | | | | 24.5 | | | | | | | | | − 49 |
| | | | | 23.1 | | | | | | | + 9.95 | | − 3 |
| | | | | | | | | | | | | 11 | 56.57 |
| | | | | | | | | | | | | | − 2.31 |
| | | | | | | | | | | | | 11 | 54.26 |
| | | | 8.6 | 11 24.5 | 41.8 | 45.3 | 48.8 | 52.5 | 55.8 | 11 | 48.84 | 11 | 48.84 |
| | | | | 26.3 | | | | | | | | | + 8.43 |
| | | | | 27.9 | | | | | | | | | − 68 |
| | | | | 26.2 | | | | | | | + 7.72 | | − 3 |
| | | | | | | | | | | | | 11 | 56.56 |
| | | | | | | | | | | | | | − 2.22 |
| | | | | | | | | | | | | 11 | 54.34 |
| | 15 10 | 54 02 | 9.4 | 14 34.7 | 54.9 | 58.4 | 1.9 | 5.3 | 8.6 | 15 | 1.82 | 15 | 1.82 |
| | 14 39.8 | 54 5.8 | 9.2 | 36.4 | | | | | | | | | +10.47 |
| | | | | 38.1 | | | | | | | | | − 48 |
| | | | | 36.3 | | | | | | | + 9.94 | | − 3 |
| | | | | | | | | | | | | 15 | 11.78 |
| | | | | | | | | | | | | | − 2.31 |
| | | | | | | | | | | | | 15 | ~~10.47~~ 9.47 |
| | | | 9.4 | 14 29.1 | 57.0 | 0.4 | 3.9 | 7.5 | 10.8 | 15 | 3.92 | 15 | 3.92 |
| | | | | 30.6 | | | | | | | | | + 8.43 |
| | | | | 32.8 | | | | | | | | | − 67 |
| | | | | 30.8 | | | | | | | + 7.73 | | − 3 |
| | | | | | | | | | | | | 15 | 11.65 |
| | | | | | | | | | | | | | − 2.23 |
| | | | | | | | | | | | | 15 | 9.42 |
| | 17 23 | 54 23 | 7.5 | 16 53.0 | 17 18.2 | 21.9 | 25.4 | 28.9 | 32.5 | 17 | 25.38 | 17 | 25.38 |
| | 17 2.8 | 54 27.0 | 7.3 | 56.4 | | | | | | | | | + 10.46 |
| | | | | 58.0 | | | | | | | | | − 49 |
| | | | | 56.5 | | | | | | | + 9.94 | | − 3 |
| | | | | | | | | | | | | 17 | 35.42 |
| | | | | | | | | | | | | | − 2.34 |
| | | | | | | | | | | | | 17 | 32.98 |
| | | | 7.8 | 17 0.9 | 20.5 | 23.9 | 27.5 | 31.1 | 34.6 | 17 | 27.52 | 17 | 27.52 |
| | | | | 2.5 | | | | | | | | | + 8.43 |
| | | | | 4.0 | | | | | | | | | − 69 |
| | | | | 2.6 | | | | | | | + 7.71 | | − 3 |
| | | | | | | | | | | | | 17 | 35.23 |
| | | | | | | | | | | | | | − 2.26 |
| | | | | | | | | | | | | 17 | 32.97 |
| | 19 02 | 54 26 | 9.0 | 18 32.3 | 49.8 | 53.0 | 56.7 | 0.1 | 3.7 | 18 | ~~56.10~~ 56.66 | 18 | 56.66 |
| | 18 31.9 | 54 29.4 | 9.0 | 33.8 | | | | | | | | | +10.46 |
| | | | | 35.2 | | | | | | | | | − 49 |
| | | | | 32.8 | | | | | | | + 9.94 | | − 3 |
| | | | | | | | | | | | | 19 | 6.60 |
| | | | | | | | | | | | | | − 2.35 |
| | | | | | | | | | | | | 19 | 4.25 |
| | | | 9.0 | 18 27.6 | 51.8 | 55.3 | 58.9 | 2.3 | 5.7 | 18 | 38.80 | 18 | 58.80 |
| | | | | 29.7 | | | | | | | | | + 8.43 |
| | | | | 32.3 | | | | | | | | | − 69 |
| | | | | 29.9 | | | | | | | + 7.71 | | − 3 |
| | | | | | | | | | | | | 19 | 6.51 |
| | | | | | | | | | | | | | − 2.27 |
| | | | | | | | | | | | | 19 | 4.24 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +20.9 | 1 1 19.0 | 26.0 | 45.0 | 1 22.50 | 21 25.85 | | | 0 | 54 20 37.22 | |
| | 1.32015 | | | | | 54 20 21.31 | | | | − 11 | +12.49 |
| d | 9.76572 | | | | | + 15.91 | | | | + 11 | |
| 1.88 | 1.20158 | | | | | | 20 37.22 | | | +12.09 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | 2 | | | | | | − 5.60 | |
| +3.39 δ₁ | | 10 25.54 | | 20 17.1 | | | | | | 20 ~~43.11~~ 44.11 | |
| −27.04 | | | | | | | | | | | |
| | +16.8 | 1 8.8 | 24.4 | 33.2 | 1 16.60 | 21 31.75 | | | 0 | 40.69 | |
| | 1.22531 | | | | | 54 20 27.91 | | | | − 7 | +12.10 |
| d | 9.76572 | | | | | + 12.78 | | | | + 10 | |
| | 1.10674 | | | | | | 20 40.69 | | | +11.67 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | 4 | | | | | | − 6.35 | |
| +3.39 δ₂ | | 10 25.36 | | 20 19.8 | | | | | | 46.44 | |
| −27.04 | | | | | | | | | | | |
| | +23.5 | 3 50.0 | 2.7 | 52.7 | 8 56.35 | 13 52.00 | | | 5 | 54 13 5.40 | |
| 22 | 1.37107 | | | | | 54 12 47.46 | | | | − 14 | +12.53 |
| d | 9.76695 | | | | | + 17.94 | | | | + 31 | |
| | 1.25373 | | | | | | 13 5.40 | | | +11.986 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 5.50 | |
| +3.39 δ₁ | | 11 57.65 | | 12 45.6 | | | | | | 13 12.43 | |
| −26.84 | | | | | | | | | | | |
| | +22.6 | 3 47.4 | 2.3 | 49.7 | 8 54.85 | 13 53.50 | | | 5 | 6.91 | |
| | 1.35411 | | | | | 54 12 49.66 | | | | − 14 | +12.10 |
| d | 9.76695 | | | | | + 17.25 | | | | + 31 | |
| | 1.23677 | | | | | | 13 6.91 | | | +11.53 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 6.25 | |
| +3.39 δ₂ | | 11 57.73 | | 12 45.9 | | | | | | 12.76 | |
| −26.84 | | | | | | | | | | | |
| | +25.5 | 0 46.1 | 58.7 | 104.8 | 20 52.40 | 1 55.95 | | | 20 | 54 1 10.97 | |
| 10 | 1.40654 | | | | | 54 0 51.41 | | | | − 17 | +12.05 |
| d | 9.76904 | | | | | + 19.56 | | | | + 7 | |
| | 1.29129 | | | | | | 1 10.97 | | | +11.75 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 5.35 | |
| +3.37 δ₁ | | 15 12.64 | | 0 57.2 | | | | | | 1 ~~6.07~~ 17.07 | |
| −26.42 | | | | | | | | | | | |
| | +33.1 | 0 51.8 | 6.0 | 57.8 | 20 58.90 | 1 49.45 | | | 20 | 10.99 | |
| | 1.51983 | | | | | 54 0 45.61 | | | | − 28 | +11.54 |
| d | 9.76904 | | | | | + 25.38 | | | | + 8 | |
| | 1.40458 | | | | | | 1 10.99 | | | +11.34 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 6.05 | |
| +3.37 δ₂ | | 15 12.79 | | 0 50.1 | | | | | | 16.48 | |
| −26.42 | | 4 | | | | | | | | | |
| | +28.9 | 3 4.8 | 16.0 | 20.8 | 58 10.40 | 24 37.95 | | | 55 | 54 23 55.37 | |
| | 1.46090 | | | | 59 | 54 22 33.41 | | | | − 22 | +12.58 |
| 14 d | 9.76510 | | | | | + 21.96 | | | | + 25 | |
| | 1.34171 | | | | | | 23 55.37 | | | +12.15 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 5.25 | |
| +3.31 δ₁ | | 17 36.29 | | 22 36.6 | 89 | | | | | 2~~3~~ 2.30 | |
| −26.08 | | | | | | | | | | | |
| | +24.9 | 3 57.2 | 13.3 | 72.5 | 58 46.25 | 24 42.10 | | | 55 | 23 57.19 | |
| | 1.39620 | | | | | 54 23 38.26 | | | | − 16 | +12.24 |
| d | 9.76519 | | | | | + 18.93 | | | | + 29 | |
| | 1.27710 | | | | | | 23 27.19 | | | +11.71 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 6.00 | |
| +3.31 δ₂ | | 17 36.28 | | 22 37.8 | | | | | | 24 33.43 | |
| −26.08 | | | | | | | | | | | |
| | +22.9 | 2 15.0 | 27.4 | 42.4 | 57 21.20 | 25 27.15 | | | 55 | 54 24 40.01 | |
| 14 | 1.35984 | | | | | 54 24 22.61 | | | | − 14 | +12.62 |
| d | 9.76501 | | | | | + 17.40 | | | | + 19 | |
| | 1.24056 | | | | | | 24 40.01 | | | +12.17 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | 4 | | 21. | | | | | | − 5.15 | |
| +3.29 δ₁ | | 19 7.52 | | 24 ~~18.6~~ | | | | | | 24 47.48 | |
| −25.90 | | | | | | | | | | | |
| | +28.9 | 2 17.9 | 32.5 | 50.4 | 57 25.20 | 25 23.15 | | | 55 | 41.27 | |
| | 1.46090 | | | | | 54 24 19.31 | | | | − 22 | +12.12 |
| d | 9.76501 | | | | | + 21.96 | | | | + 19 | |
| | 1.34162 | | | | | | 24 41.27 | | | +11.75 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.29 | | | | | | | | | | − 5.95 | |
| δ₂ −25.90 | | 19 7.53 | | 24 21.5 | | | | | | 47.44 | |

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1873phae.proj.1584R

248

Date$_1$ = June 25 Observer / Recorder

Date$_2$ = June 26 Observer / Recorder

244

57

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_o$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| κ | 19 48.4 | 54 12.3 | 9.0 | 47.2 49.1 51.0 / 49.1 | 20 2.5 | 6.3 | 9.5 | 13.0 | 16.7 | 20 | 9.60 + 9.95 | 20 | 9.60 +10.46 − 48 − 3 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 20 | 19.55 − 2.34 |
| $a_1$ | | | | | | | | | | | | 20 | 17.21 |
| κ | | | 8.9 | 19 43.1 44.8 46.7 / 44.9 | 20 4.7 | 8.3 | 11.7 | 15.0 | 18.8 | 20 | 11.70 + 7.73 | 20 | 11.70 +8.43 − 67 − 8 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 20 | 19.43 − 2.26 |
| $a_2$ | | | | | | | | | | | | 20 | 17.17 |
| κ | 20 38.5 | 54 44.1 | 6.5 | 31.9 33.6 35.1 / 33.5 | 53.5 | 57.0 | 0.5 | 4.4 | 7.3 | 21 | 0.54 + 9.94 | 21 | 0.54 +10.46 − 49 − 3 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 21 | 10.48 − 2.37 |
| $a_1$ | | | | | | | | | | | | 21 | 8.11 |
| κ | | | 6.7 | 20 43.0 44.7 46.5 / 44.7 | 55.6 | 59.2 | 2.9 | 6.3 | 9.9 | 21 | 2.78 + 7.70 | 21 | 2.78 +8.42 − 69 − 3 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 21 | 10.48 − 2.29 |
| $a_2$ | | | | | | | | | | | | 21 | 8.19 |
| κ | 23 18.0 | 53 45.2 | 8.7 | 23.8 10.8 12.8 / 10.8 | 33.4 | 37.0 | 40.4 | 43.9 | 47.3 | 23 | 40.40 + 9.96 | 23 | 40.40 +10.46 − 47 − 3 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 23 | 50.36 − 2.34 |
| $a_1$ | | | | | | | | | | | | 23 | 48.02 |
| κ | | | 8.6 | 23 6.2 7.7 9.6 / 7.8 | 35.6 | 39.1 | 42.6 | 46.0 | 49.5 | 23 | 42.56 + 7.73 | 23 | 42.56 + 8.42 − 66 − 3 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 23 | 50.29 − 2.26 |
| $a_2$ | | | | | | | | | | | | 23 | 48.03 |
| κ | 24 28.0 | 54 48.0 | 9.0 | 24 29.5 30.8 32.4 / 30.9 | 42.7 | 46.2 | 49.7 | 53.3 | 56.9 | 24 | 49.76 + 9.94 | 24 | 49.76 +10.46 − 49 − 3 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 24 | 59.70 − 2.38 |
| $a_1$ | | | | | | | | | | | | 24 | 57.32 |
| κ | | | 9.0 | 24 35.6 37.3 38.7 / 37.2 | 44.7 | 48.3 | 51.9 | 55.4 | 58.9 | 24 | 51.84 + 7.71 | 24 | 51.84 + 8.42 − 68 − 3 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 24 | 59.55 − 2.30 |
| $a_2$ | | | | | | | | | | | | 24 | 57.25 |
| κ | 26 39.0 | 54 19.6 | 9.0 9.0 | 26 36.4 37.7 36.4 / 37.7 | 52.1 | 55.6 | 59.1 | 2.6 | 6.4 | 26 | 39.16 + 9.95 | 26 | 59.16 +10.46 − 48 − 3 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 27 | 9.11 − 2.37 |
| $a_1$ | | | | | | | | | | | | 27 | 6.74 |
| κ | | | 9.0 | 26 31.0 32.6 34.0 / 32.5 | 54.3 | 57.9 | 1.4 | 4.9 | 8.4 | 27 | 1.38 + 7.71 | 27 | 1.38 + 8.42 − 68 − 3 |
| $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | 27 | 9.09 − 2.30 |
| $a_2$ | | | | | | | | | | | | 27 | 6.79 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +20.5 | 3′ 53.1 | 5.2 | 58.8 | 13′ 59.15 | 8 49.20 | | | 10′ | 54 8 0.34 | |
| | 1.31175 | | | | | 54 7 44.66 | | | | − 10 | +12.51 |
| 10 d | 9.76782 | | | | | +15.68 | | | | + 32 | |
| | 1.19528 | | | | | | 8 0.34 | | | +11.89 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.31 | | | | | | | | | | − 5.10 | |
| −26.74 $\delta_1$ | | 20 20.52 | | 7 42.0 | | | | | | 8 7.75 | |
| | +26.8 | 3 57.9 | 12.6 | 70.5 | 14 05.25 | 8 43.10 | | | 10 | 7 59.76 | |
| | 1.42813 | | | | | 54 7 39.26 | | | | − 20 | +11.98 |
| d | 9.76782 | | | | | +20.50 | | | | + 32 | |
| | 1.31166 | | | | | | 7 59.76 | | | +11.46 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.31 | | | | | | | | | | − 5.85 | |
| −25.74 $\delta_2$ | | 20 20.48 | | 7 40.2 | | | | | | 8 5.89 | |
| | +27.0 | 2 21.3 | 32.9 | 54.2 | 42 27.10 | 40 21.25 | | | 40 | 54 39 37.10 | |
| 24 | 1.43136 | | | | | 54 39 16.71 | | | | − 19 | +12.84 |
| d | 9.76236 | | | | | +20.39 | | | | + 19 | |
| | 1.30943 | | | | | | 39 37.10 | | | +12.44 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.24 | | | | | | | | | | − 5.10 | |
| −25.62 $\delta_1$ | | 21 11.35 | | 39 19.2 | | | | | | 39 44.84 | |
| | +18.1 | 2 12.1 | 27.0 | 39.1 | 42 19.55 | 40 28.80 | | | 40 | 38.63 | |
| | 1.25768 | | | | | 54 39 24.96 | | | | − 8 | +12.44 |
| d | 9.76236 | | | | | +13.67 | | | | + 18 | |
| | 1.13575 | | | | | | 39 38.63 | | | +11.99 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.24 | | | | | | | | | | − 5.90 | |
| −25.62 $\delta_2$ | | 21 11.43 | | 39 19.6 | | | | | | 45.22 | |
| | +29.6 | 1 36.8 | 49.1 | 85.9 | 41 42.95 | 41 5.40 | | | 40 | 53 40 23.75 | |
| | 1.47129 | | | | | 53 40 0.86 | | | | − 23 | +11.70 |
| 16 d | 9.77268 | | | | | +22.89 | | | | + 154 | |
| | 1.35968 | | | | | | 40 23.75 | | | +11.42 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 37 | |
| +3.32 | | | | | | | | | | − 4.85 | |
| −25.26 $\delta_1$ | | 23 51.34 | | 40 5.3 | | | | | | 40 39.60 | |
| | +34.8 | 1 39.1 | 34.2 | 93.3 | 41 46.65 | 41 1.70 | | | 40 | 24.77 | |
| | 1.54158 | | | | | 53 39 57.86 | | | | − 31 | +11.23 |
| d | 9.77268 | | | | | +26.91 | | | | + 15 | |
| | 1.42997 | | | | | | 40 24.77 | | | +11.02 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 37 | |
| +3.32 | | | | | | | | | | − 5.65 | |
| −25.26 $\delta_2$ | | 23 51.35 | | 40 5.1 | | | | | | 38.35 | |
| | +18.9 | 4 14.1 | 26.8 | 40.9 | 39 20.45 | 43 27.90 | | | 25 | 54 42 37.62 | |
| | 1.27646 | | | | | 54 42 23.36 | | | | − 9 | +13.15 |
| 8 d | 9.76182 | | | | | +14.26 | | | | + 33 | |
| | 1.15399 | | | | | | 42 37.62 | | | +12.49 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.20 | | | | | | | | | | − 4.90 | |
| −25.10 $\delta_1$ | | 25 0.52 | | 42 20.8 | | | | | | 42 45.87 | |
| | +14.6 | 4 10.7 | 25.0 | 35.7 | 39 17.85 | 43 30.50 | | | 35 | 37.67 | |
| | 1.16435 | | | | | 54 42 26.66 | | | | − 6 | +12.72 |
| d | 9.76182 | | | | | +11.01 | | | | + 34 | |
| | 1.04188 | | | | | | 42 37.67 | | | +12.04 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.20 | | | | | | | | | | − 5.70 | |
| −25.10 $\delta_2$ | | 25 0.45 | | 42 19.6 | | | | | | 44.64 | |
| | +21.5 | 2 10.1 | 22.1 | 32.2 | 7 16.10 | 15 32.25 | | | 5 | 54 14 44.11 | |
| | 1.33244 | | | | | 54 14 27.71 | | | | − 12 | +12.47 |
| 22 d | 9.76677 | | | | | +16.40 | | | | + 18 | |
| | 1.21492 | | | | | | 14 44.11 | | | +12.01 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.23 | | | | | | | | | | − 4.70 | |
| −24.80 $\delta_1$ | | 27 9.94 | | 14 27.1 | | | | | | 14 51.88 | |
| | +28.9 | 2 13.8 | 27.8 | 41.6 | 7 20.80 | 15 27.55 | | | 5 | 46.27 | |
| | 1.46090 | | | | | 54 14 23.71 | | | | − 22 | +11.95 |
| d | 9.76677 | | | | | +22.56 | | | | + 19 | |
| | 1.35338 | | | | | | 14 46.27 | | | +11.58 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +3.23 | | | | | | | | | | − 5.35 | |
| −24.80 $\delta_2$ | | 27 10.02 | | 14 27.9 | | | | | | 52.67 | |

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243

Date$_1$ = June 25 1873 Observer Recorder

244

Date$_2$ = June 29 Observer Recorder

59

Run

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 56 25 | 53 30 | 7.5 | 56 2.8 | 3.2 | 8.4 | 11.9 | 15.4 | 19.0 | 56 | 11.98 | 56 | 15.40 |
| | 55 57.3 | 53 33.3 | 8.0 | 56 4.0 | | 11.9 | 16.4 | 19.0 | 22.3 | | | | 14.58 56 19.46 |
| | κ | | | 56 3.52 | 3.4 | (25.7) | 29.3 | 32.7 | 36.0 | 56 | 24.00 | | 29.20 56 36.68 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | 56 4.00 | | | | | | | + 9.93 | | + 10.43 − 47 − 3 |
| | $c_1$ | | | | | | | | | | | 56 | 39.13 25.33 − 2.45 56 22.88 |
| | | | 8.3 | 55 51.3 52.7 54.6 52.9 | 56 10.6 | 14.1 | 17.6 | 21.0 | 24.5 | 56 | 17.56 | 56 | 17.56 + 8.40 − 66 − 3 |
| | κ | | | | | | | | | | + 7.71 | 56 | 25.27 − 2.38 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | 56 | 22.89 |
| | $c_2$ | | | | | | | | | | | | |
| 58 | 53 | 53 16 | 5.0 | | | | | | | | | | |
| 58 | 25.0 | 53 19.0 | 6.0 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 6.0 | 58 10.2 11.7 18.6 11.8 | 38.9 | 42.3 | 45.8 | 49.2 | 52.8 | 58 | 45.80 | 58 | 45.80 + 8.39 − 65 − 3 |
| | κ | | | | | | | | | | + 7.71 | 58 | 53.51 − 2.39 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | 58 | 51.12 |
| | $\alpha_2$ | | | | | | | | | | | | |
| 16 00 | 19 | 53 45 | 9.0 | | | | | | | | | | |
| 15 59 | 59.9 | 53 46.5 | 8.8 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 8.8 | 59 45.2 46.8 48.1 46.7 | 0 6.4 | 10.0 | 13.4 | 17.0 | 20.5 | 59 0 | 13.40 | 0 | 13.46 + 8.39 − 67 − 3 |
| | κ | | | | | | | | | | + 7.69 | 0 | 21.15 − 2.41 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | 0 | 18.74 |
| | $\alpha_2$ | | | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | +11.4 | 1 16.2 | 29.5 | 45.7 | 51 22.85 | 31 25.50 | 30 28.10 | | 50 | 53 30 29.81 | | |
| | 1.05690 | 0.96379 | | | | 53 30 20.96 | | | | 28.10 | 28.75 | |
| | 9.77439 | +25.0 | | | | +7.14 | +8.15 | | | − 3 | − 17 | +11.72 +11.58 |
| | 0.94709 | 1.40140 | | | | +7.79 | | | | + 11 | + 14 | |
| $\frac{d'}{100}$ | ((δ) − D) | 9.77439 | | | | | 30 28.75 | | | +11.29 | +11.29 | |
| | | 0.85389 | | 17.8 | | | | | | + 35 | + 34 | |
| +3.04 | $\delta_1$ | 0.89150 | 56 25.92 | 30 59.0 | | | | | | − 3.10 | − 3.10 | |
| −20.58 | | | | | | | | | | 30 36.72 | 37.23 | |
| | | | | | | | | | | 3843 | | |
| | | 1 24.0 | 38.3 | 62.3 | 51 31.15 | 31 17.20 | | | 50 | 32.54 | | |
| | +24.7 | | | | | 53 30 13.36 | | | | − 16 | | |
| | 1.39270 | | | | | +19.18 | | | | + 12 | | |
| d | 9.77439 | | | | | | 30 32.54 | | | +10.89 | | +11.20 |
| $\frac{d'}{100}$ | ((δ) − D) | 1.28280 | | | | | | | | + 35 | | |
| +3.04 | | | | | | | | | | − 4.05 | | |
| −20.58 | $\delta_2$ | 56 25.93 | | 30 19.1 | | | | | | 39.69 | | |
| | | 0 51.0 | 3.8 | 54.8 | 5 27.40 | 17 20.95 | | | 5 | | | |
| | | | | | | 16 16.41 | | | | | | |
| d | | | | | | | | | | | | |
| $\frac{d'}{100}$ | ((δ) − D) | | | | | | | | | | | |
| | $\delta_1$ | | | | | | | | | | | |
| | +34.0 | 1 1.0 | 15.4 | 16.4 | 36 8.20 | 176 40.15 | | | 5 | 53 17 6 2.85 | | |
| | 1.53148 | | | | | 53 165 36.81 | | | | − 30 | | +10.64 |
| d | 9.77676 | | | | | +26.54 | | | | + 1 | | |
| $\frac{d'}{100}$ | ((δ) − D) | 1.42389 | | | | | 17 2.85 | | | +10.66 | | |
| +3.05 | | | | | | | | | | + 31 | | |
| −20.22 | $\delta_2$ | 58 54.17 | | 15 49.4 | | | | | | − 3.90 | | |
| | | | | | | | | | | 176 9.63 | | |
| | | 1 33.9 | 46.0 | 79.9 | 36 39.95 | 46 8.40 | | | 35 | | | |
| d | | | | | | | | | | | | |
| $\frac{d'}{100}$ | ((δ) − D) | | | | | | | | | | | |
| | $\delta_1$ | | | | | | | | | | | |
| | +26.8 | 1 35.1 | 49.0 | 84.1 | 36 42.05 | 46 6.30 | | | 35 | 53 45 23.14 | | |
| | 1.42813 | | | | | 53 45 2.46 | | | | − 19 | | +11.46 |
| d | 9.77181 | | | | | +20.68 | | | | + 14 | | |
| $\frac{d'}{100}$ | ((δ) − D) | 1.31565 | | | | | 45 23.14 | | | +11.14 | | |
| +2.98 | | | | | | | | | | + 37 | | |
| −20.00 | $\delta_2$ | 0 21.72 | | 45 10.7 | | | | | | − 3.85 | | |
| | | | | | | | | | | 45 30.75 | | |
| d | | | | | | | | | | | | |
| $\frac{d'}{100}$ | ((δ) − D) | | | | | | | | | | | |
| | $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| $\frac{d'}{100}$ | ((δ) − D) | | | | | | | | | | | |
| | $\delta_2$ | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| $\frac{d'}{100}$ | ((δ) − D) | | | | | | | | | | | |
| | $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| $\frac{d'}{100}$ | ((δ) − D) | | | | | | | | | | | |
| | $\delta_2$ | | | | | | | | | | | |

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245

Date$_1$ = July 6 — Observer / Recorder — n = −.46 C = −.05

246

Date$_2$ = July 9 — Observer / Recorder — n = 7.50

Add +.010 to (ΔT + m) for July 6. It has been added to sum of constants and to final R.A.

| Star. | α | δ | Mag. | $T_s$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 4 16 | 50 33 | 6.0 | 3 51.6 | 4 12.4 | 15.6 | 18.8 | 22.1 | 25.2 | 4 | 18.82 | 4 | 18.82 |
| | 3 44.7 | 50 36.6 | 6.8 | 53.0 | | | | | | | | | + 1.68 |
| | κ | | | 54.4 | | | | | | | | | − 56 |
| | | | | 53.0 | | | | | | | | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 0.98 +01 | | − 8 |
| | | | | | | | | | | | | 4 | 19.82 |
| | $a_1$ | | | | | | | | | | | | − 1.93 |
| | | | | | | | | | | | | 4 | 17.88 |
| 9 1 | | | 6.0 | 4 3.6 | 14.4 5 | 17.6 7 | 21.0 | 24.2 | 27.4 | 4 | 20.92 | 4 | 20.92 |
| | κ | | | 5.4 | | | | | | | | | − 0.68 |
| | | | | 6.0 | | | | | | | − 1.31 | | − 61 |
| | | | | 5.3 | | | | | | | + .005 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 4 | 19.61 |
| | $a_2$ | | | | | | | | | | | | − 1.87 |
| | | | | | | | | | | | | 4 | 17.738 |
| 23 23 | | 51 03 | 7.5 | 22 58.6 | 23 22.0 | 25.6 | 28.8 | 32.0 | 35.2 | 23 | 28.74 | 23 | 28.74 |
| 22 53.3 | κ | 51 6.6 | 6.8 | 1.1 | 22.0 | | | | | | | | + 1.65 |
| | | | | 3.1 | | | | | | | | | − 57 |
| | | | 23 | 0.9 | | | | | | | | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 0.96 +01 | | − 78 |
| 24 35 | | | | | | | | | | | | 23 | 28.82 |
| 27 23 | $a_1$ | | | | | | | | | | | | − 2.04 |
| | | | | | | | | | | | | 23 | 27.68 45 |
| | | | 7.5 | 23 52.2 | 23 24.4 2 | 27.4 5 | 30.7 | 34.4 1 | 37.4 5 | 23 | 30.72 | 23 | 30.7280 |
| | κ | | | 54.5 | | | | | | | | | − 0.69 |
| | | | | 56.7 | | | | | | | | | − 62 |
| | | | | 54.5 | | | | | | | − 1.33 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 23 | 29.39 |
| | $a_2$ | | | | | | | | | | | | − 1.98 |
| | | | | | | | | | | | | 23 | 27.49 |
| 15 52 52 | | 54 32 | 8.8 | 52 15.6 | 46.2 1 | 55.0 3 | 7.9 | | 0.5 | 5.2 | 32.82 | 52 | 53.4236 |
| 52 25.2 | κ | 54 35.0 | 8.8 | 17.8 | 55.8 | 57.0 | | | | | 53.42 | | + 1.642 |
| | | | | 20.8 | | | | | | | | | − 65 |
| | | | | 18.1 | | | | | | | | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 0.83 +01 | | − 9 |
| | | | | | | | | | | | | 52 | 54.29 |
| | $a_1$ | | | | | | | | | | | | − 2.28 |
| | | | | | | | | | | | | 52 | 51.9834 |
| | | | 9.0 | 52 20.8 | 48.4 | 51.3 | 55.8 7 | 59.8 3 | 2.8 | 5.2 | 38.44 | 52 | 55.4450 |
| | κ | | | 22.3 | | | | | | | | | − 0.70 |
| | | | | 23.6 | | | | | | | | | − 70 |
| | | | | 22.2 | | | | | | | − 1.43 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 52 | 54.01 |
| | $a_2$ | | | | | | | | | | | | − 2.21 |
| | | | | | | | | | | | | 52 | 51.88 |
| 53 23 | | 51 01 | 7.0 | 54 59.0 | 55 31.8 | 35.1 | 38.3 | 41.5 | 45.0 | 5.5 | 38.34 | 55 | 38.34 |
| 55 5.2 | κ | 51 4.1 | 7.8 | 0.7 | | | | | | | | | + 1.642 |
| | | | | 3.12 | | | | | | | | | − 56 |
| | | | 55 | 0.9 | | | | | | | | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 0.96 +01 | | − 8 |
| | | | | | | | | | | | | 55 | 39.32 |
| | $a_1$ | | | | | | | | | | | | − 2.183 |
| | | | | | | | | | | | | 55 | 37.142 |
| | | | 7.0 | 55 10.8 | 33.9 | 37.4 | 40.5 | 43.8 | 47.2 | 5.5 | 40.56 | 55 | 40.56 |
| | κ | | | 12.6 | | | | | | | | | − 0.70 |
| | | | | 13.8 | | | | | | | | | − 61 |
| | | | | 12.4 | | | | | | | − 1.33 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 55 | 39.23 |
| | $a_2$ | | | | | | | | | | | | − 2.13 |
| | | | | | | | | | | | | 55 | 37.10 |
| 56 25 | | 53 30 | 6.8 | 56 6.7 | 17.4 | 21.9 | 24.5 | 27.7 | 31.4 | 5.6 | 24.38 | 56 | 24.38 |
| 55 57.3 | κ | 53 33.3 | 8.0 | 8.0 | | | | | | | | | + 1.642 |
| | | | | 9.2 | | | | | | | | | − 62 |
| | | | | 8.0 | | | | | | | | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | + 0.89 +01 | | − 8 |
| | | | | | | | | | | | | 56 | 25.29 |
| | $a_1$ | | | | | | | | | | | | − 2.271 |
| | | | | | | | | | | | | 56 | 23.02 |
| | | | 7.8 | 55 57.3 | 19.5 | 23.2 | 26.7 | 30.1 | 33.6 | 5.6 | 26.62 | 56 | 26.62 |
| | κ | | | 0.9 | | | | | | | | | − 0.70 |
| | | | | 2.5 | | | | | | | | | − 68 |
| | | | 56 | 0.9 | | | | | | | | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | − 1.41 | 56 | 25.21 |
| | $a_2$ | | | | | | | | | | | | − 2.20 |
| | | | | | | | | | | | | 56 | 23.01 |

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July 6 −1′ 4.″33 +.″09
" 9 −1 4.83 +.10

Runs



| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | $\delta'^{-1}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +25.8 | 4 28.4 | 45.1 | 73.5 | 49 36.75 | 33 11.60 | | | 45 | 50 32 28.68 | |
| | 1.41162 | | | | | 50 32 7.27 | | | | − 18 | +8.57 |
| 2.10 d | 9.80320 | | | | | +21.41 | | | | + 41 | |
| | 1.33053 | | | | | | 32 28.68 | | | + 8.05 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 23 | |
| +3.72 | | | | | | | | | | − 7.15 | |
| −7.82 $\delta_1$ | | 4 21.60 | | 32 22.2 | | | | | | 32 30.04 | |
| | +15.6 | 4 19.9 | 36.0 | 55.9 | 49 27.95 | 33 20.40 | | | 45 | 28.51 | |
| | 1.19312 | | | | | 50 32 15.57 | | | | − 7 | +8.69 |
| d | 9.80320 | | | | | +12.94 | | | | + 44 | |
| | 1.11203 | | | | | | 32 28.51 | | | + 8.09 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 23 | |
| +3.72 | | | | | | | | | | − 7.55 | |
| −7.82 $\delta_2$ | | 4 21.50 | | 32 21.8 | | | | | | 29.65 | |
| | +27.8 | 3 19.9 | 36.8 | 56.7 | 17 28.35 | 5 20.00 | | | 15 | 51 3 38.48 | |
| | 1.44404 | | | | | 51 4 15.67 | | | | − 20 | +8.96 |
| 1.88 d | 9.79825 | | | | | 3 +22.81 | | | | + 31 | |
| | 1.35800 | | | | | | 3 38.48 | | | + 8.60 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 25 | |
| +3.58 | | | | | | | | | | − 6.50 | |
| −25.30 $\delta_1$ | | 23 31.24 | | 3 15.6 | | | | | | 3 40.94 | |
| | −23.8 | 2 38.8 | 53.9 | 92.7 | 17 46.35 | 5 2.00 | | | 15 | 3 37.65 | |
| | 1.37658n | | | | | 51 3 57.17 | | | | − 15 | +9.00 |
| d | 9.79825 | | | | | +19.82 | | | | + 28 | |
| | 1.29054n | | | | | | 3 37.65 | | | + 8.62 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 25 | |
| +3.58 | | | | | | | | | | − 7.00 | |
| −25.30 $\delta_2$ | | 23 31.07 | | 3 14.4 | | | | | | 3 39.65 | |
| | +35.3 | 0 36.5 | 51.0 | 87.5 | 50 43.75 | 32 4.60 | | | 50 | 54 31 27.02 | |
| | 1.54777 | | | | | 54 31 0.27 | | | | − 33 | +12.25 |
| 2.02 d | 9.76378 | | | | | +26.75 | | | | + 6 | |
| | 1.42726 | | | | | | 31 27.02 | | | +12.12 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +2.95 | | | | | | | | | | − 5.75 | |
| −21.12 $\delta_1$ | | 52 54.89 | | 31 12.4 | | | | | | 31 33.52 | |
| | +33.2 | 0 34.0 | 48.9 | 82.9 | 50 41.45 | 32 6.90 | | | 50 | 27.23 | |
| | 1.52114 | | | | | 54 31 2.07 | | | | − 28 | +12.36 |
| d | 9.76378 | | | | | +25.16 | | | | + 7 | |
| | 1.40063 | | | | | | 31 27.23 | | | +12.17 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +2.95 | | | | | | | | | | − 6.35 | |
| −21.12 $\delta_2$ | | 52 54.81 | | 31 12.1 | | | | | | 33.24 | |
| | +37.4 | 2 14.2 | 31.8 | 46.0 | 22 23.04 | 0 25.35 | | | 20 | 50 59 51.75 | |
| | 1.57287 | | | | | 50 59 21.02 | | | | − 38 | +8.63 |
| 22 d | 9.79903 | | | | | +30.73 | | | | + 21 | |
| | 1.48761 | | | | | | 59 51.75 | | | + 8.55 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 25 | |
| +3.32 | | | | | | | | | | − 5.25 | |
| −20.70 $\delta_1$ | | 55 40.45 | | 59 34.4 | | | | | | 59 55.13 | |
| | +28.2 | 2 8.2 | 23.0 | 31.2 | 22 15.60 | 0 32.75 | | | 20 | 51.09 | |
| | 1.45025 | | | | | 50 59 27.92 | | | | − 21 | +8.84 |
| d | 9.79903 | | | | | +23.17 | | | | + 22 | |
| | 1.36499 | | | | | | 59 51.09 | | | + 8.58 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 25 | |
| +3.32 | | | | | | | | | | − 5.80 | |
| −20.70 $\delta_2$ | | 55 40.42 | | 59 33.4 | | | | | | 54.13 | |
| | +16.4 | 1 16.9 | 31.9 | 48.8 | 31 24.40 | 31 23.95 | | | 50 | 53 30 32.35 | |
| | 1.21484 | | | | | 53 30 19.62 | | | | − 7 | +11.50 |
| 24 d | 9.77439 | | | | | +12.73 | | | | + 12 | |
| | 1.10494 | | | | | | 30 32.35 | | | +11.10 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 35 | |
| +3.04 | | | | | | | | | | − 5.50 | |
| −20.58 $\delta_1$ | | 56 24.05 | | 30 17.8 | | | | | | 30 38.35 | |
| | +25.7 | 1 22.1 | 37.5 | 59.6 | 31 29.80 | 31 18.55 | | | 50 | 33.67 | |
| | 1.40993 | | | | | 53 30 13.72 | | | | − 17 | +11.46 |
| d | 9.77439 | | | | | +19.95 | | | | + 15 | |
| | 1.30003 | | | | | | 30 33.67 | | | +11.13 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .36 | |
| +3.04 | | | | | | | | | | − 6.10 | |
| −20.58 $\delta_2$ | | 56 26.05 | | 30 18.4 | | | | | | 39.03 | |

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245

Date$_1$ = July 6 1873 — Observer / Recorder

246

Date$_2$ = July 9 — Observer / Recorder

63

| Star. α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 59 48.7 | 52 35 52 38.4 | 9.0 8.9 | 59 45.6 44.3 48.7 | 0m 11.4 | 14.9 | 18.0 | 21.5 | 25.0 | 0m | 18.16 | 0m | 18.16 |
| κ | | | 47.2 | | | | | | | | | + 1.64 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 60 |
| | | | | | | | | | | | | − 3 |
| | | | | | | | | | | + 0.91 | | − 8 |
| $a_1$ | | | | | | | | | | | 0 | 19.10 |
| | | | | | | | | | | | | − 2.25 |
| | | | | | | | | | | | 0 | 16.85 |
| | | 9.2 | 59 55.9 51.5 54.3 | 0 13.3 | 17.0 | 20.3 | 23.8 | 27.1 | 0 | 20.30 | 0 | 20.30 |
| κ | | | 57.6 | | | | | | | | | − 0.71 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 65 |
| | | | | | | | | | | | | − 3 |
| | | | | | | | | | | − 1.38 | | |
| $a_2$ | | | | | | | | | | | 0 | 18.92 |
| | | | | | | | | | | | | − 2.19 |
| | | | | | | | | | | | 0 | 16.73 |
| 1 22 1 5.3 | 54 44 54 47.3 | 8.1 8.7 | 0.0 2.5 3.8 | 25.2 | 28.6 | 32.3 | 35.6 | 39.4 | 0 | 32.22 | 1 | 32.22 |
| κ | | | 2.1 | | | | | | | | | + 1.64 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 65 |
| | | | | | | | | | | | | − 3 |
| | | | | | | | | | | + 0.84 | | − 9 |
| $a_1$ | | | | | | | | | | | 1 | 33.09 |
| | | | | | | | | | | | | − 2.32 |
| | | | | | | | | | | | 1 | 30.745 |
| | | 8.8 | 1 19.2 21.8 24.3 | 27.0 | 30.9 | 34.5 | 38.1 | 41.5 | 1 | 34.40 | 1 | 34.40 |
| κ | | | 21.8 | | | | | | | | | − 0.71 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 70 |
| | | | | | | | | | | + − 1.44 | | − 3 |
| $a_2$ | | | | | | | | | | | 1 | 32.96 |
| | | | | | | | | | | | | − 2.26 |
| | | | | | | | | | | | 1 | 30.70 |
| 5 06 4 39.1 | 51 30 51 33.0 | 8.7 8.5 | 4 51.6 53.2 55.1 | 5 2.7 | 3.8 | 9.3 | 12.6 | 16.0 | 5 | 9.28 | 5 | 9.28 |
| κ | | | 53.3 | | | | | | | | | + 1.64 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 58 |
| | | | | | | | | | | | | − 2 |
| | | | | | | | | | | + 0.93 | | − 8 |
| 17 33 $a_1$ | | | | | 8.1 | 5 | 8 | | | | 5 | 10.24 |
| | | | | | | | | | | | | − 2.23 |
| | | | | | | | | | | | 5 | 7.989 |
| | | 9.0 | 4 39.6 44.5 43.6 | 5 4.8 | 7.9 | 11.7 | 14.7 | 18.0 | 5 | 11.36 | 5 | 11.36 44 |
| κ | 22 | 19 | 41.5 | | | | | | | | | − 0.71 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 63 |
| | | | | | | | | | | − 1.36 | | − 2 |
| $a_2$ | | | | | | | | | | | 5 | 10.00 |
| | | | | | | | | | | | | − 2.18 |
| | | | | | | | | | | | 5 | 7.82 90 |

Single Observations

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 9 01 8 29.9 July 6 | 54 30 54 33.8 | 8.8 8.4 | 8 33.3 34.9 36.3 | 54.9 | 58.4 | 1.9 | 5.4 | 8.9 | 9 | 190 | 9 | 1.90 |
| κ | | | 34.8 | | | | | | | | | + 1.63 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 65 |
| | | | | | | | | | | | | − 3 |
| | | | | | | | | | | + 0.87 | | − 9 |
| $a_1$ | | | | | | | | | | | 9 | 2.78 |
| | | | | | | | | | | | | − 2.06 |
| | | | | | | | | | | | 9 | 0.72 |
| 15 24 35 24 6.3 July 6 | 52 09 52 13.1 | 9.0 9.0 | 24 26.8 28.4 30.4 | (32.8) | 36.1 | (38.4) | 42.7 | 46.0 | 8 | 2.96 | 24 | 39.40 |
| κ | | | 28.5 | | | | | | | | | + 1.63 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 59 |
| | | | | | | | | | | + 0.94 | | − 2 |
| | | | | | | | | | | | | − 8 244 0.36 |
| 15 27 23 26 52.7 July 6 $a_2$ | 53 27 53 30.3 | 9.0 9.3 | 26 51.1 53.4 55.2 53.2 | 27 17.0 | 20.7 | 23.9 | 27.1 | 31.1 | 24 | 23.96 | 27 | 23.96 − 2.08 |
| | | | | | | | | | | | | + 1.63 24 38.26 |
| | | | | | | | | | | | | − 62 |
| 16 02 05 01 37.9 July 6 | 54 46 54 48.8 | 9.2 9.3 | E 54.8 | 1 57.8 | 1.2 | | | | | 23.80 | | − 3 |
| κ | | | | | | | | | | + 0.90 | | − 8 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 27 | 24.88 |
| | | | | | | | | | | | | − 2.13 |
| $a_1$ | | | | | | | | | | | 27 | 22.754 |
| 16 17 33 17 5.6 July 6 | 54 22 54 24.9 | 9.4 9.5 | 17 4.3 5.9 8.5 | 25.5 | 29.2 | 32.8 | 36.0 | 40.2 | 17 | 32.74 | 17 | 32.74 |
| κ | | | 6.2 | | | | | | | | | + 1.64 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | − 65 |
| | | | | | | | | | | | | − 3 |
| | | | | | | | | | | + 0.83 | | − 9 |
| 16 22 19 21 53.0 July 9 $a_2$ | 50 3 50 38 | — 8.0 | 22 22.9 | 19.3 | 22.6 | 25.8 | 29.0 | 32.3 | 22 | 25.80 | 17 23 | 33.61 − 2.37 25.80 17 31.43 |
| | | | | | | | | | | − 1.35 | | − 0.72 |
| | | | | | | | | | | | | − 61 |
| | | | | | | | | | | | | − 2 |
| | | | | | | | | | | | 22 | 24.45 |
| | | | | | | | | | | | | − 2.23 22.22 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +31.0 | 1 41.5 | 57.0 | 98.5 | 46 29.25 | 36 19.10 | | | 45 | 52 35 39.35 | 19.35 |
| | 1.49136 | | | | 4 | 52 35 54.77 | | | | − 25 | +10.34 |
| 14 d | 9.78362 | | | | | 4 +24.58 | | | | + 13 | |
| | 1.39069 | | | | | | 35 39.35 | | | +10.16 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 5.25 | |
| +3.11 δ₁ | | 0 19.94 | | 35 4.4 | | | | | | 35 44.44 | 24.44 |
| −20.00 | | | | | | | | | | | |
| | +22.7 | 1 35.0 | 50.1 | 85.1 | 46 42.55 | 36 5.80 | | | 45 | 35 18.95 | 18.95 |
| | 1.35603 | | | | | 52 35 0.97 | | | | − 13 | +10.53 |
| d | 9.78362 | | | | | +18.00 | | | | + 17 | |
| | 1.25536 | | | | | | 35 18.97 | | | +10.19 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 5.85 | |
| +3.11 δ₂ | | 0 19.84 | | 35 3.6 | | | | | | 23.63 | |
| −20.00 | | | | | | | | | | | |
| | +30.1 | 0 60.0 | 15.2 | 75.2 | 38 37.60 | 46 40.75 | | | 35 | 54 45 59.04 | |
| | 1.47857 | | | | | 54 45 36.42 | | | | − 23 | +12.65 |
| 18 d | 9.76120 | | | | | +22.62 | | | | + 10 | |
| | 1.35448 | | | | | | 45 59.04 | | | +12.38 | |
| +2.86 ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +5.72 | | | | | | | | | | − 5.45 | |
| −39.68 δ₁ | | 1 33.61 | | 45 46.4 | | | | | | 46 6.24 | |
| −19.84 | | | | | | | | | | | |
| | +12.6 | 0 46.1 | 0.7 | 46.8 | 35 23.40 | 46 55.45 | | | 35 | 46 0.11 | |
| | 1.10037 | | | | | 54 45 50.62 | | | | − 5 | +12.86 |
| d | 9.76111 | | | | | + 9.49 | | | | + 9 | |
| | 0.97719 | | | | | | 46 0.11 | | | +12.42 | |
| +2.86 ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +5.72 | | | | | | | | | | − 6.05 | |
| −39.68 δ₂ | | 1 33.56 | | 45 47.1 | | | | | | 46 6.92 | |
| −19.84 | | | | | | | | | | | |
| | +16.0 | 2 45.0 | 1.9 | 46.9 | 32 23.45 | 29 54.90 | | | 50 | 51 29 3.58 | |
| | 1.20412 | | | | | 51 28 50.57 | | | | − 7 | +9.50 |
| 8 d | 9.79431 | | | | | +13.01 | | | | + 25 | |
| | 1.11414 | | | | | | 29 3.58 | | | +9.05 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 27 | |
| | | | | | | | | | | − 4.70 | |
| +3.20 δ₁ | | 5 11.19 | | 28 48.9 | | | | | | 29 8.18 | |
| −19.26 | | | | | | | | | | | |
| | +29.9 | 2 54.8 | 11.8 | 66.6 | 33 33.30 | 29 45.05 | | | 50 | 4.52 | |
| | 1.47567 | | | | | 57 28 40.22 | | | | − 24 | +9.41 |
| d | 9.79431 | | | | | +24.30 | | | | + 30 | |
| | 1.38569 | | | | | | 29 4.52 | | | +9.08 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 27 | |
| | | | | | | | | | | − 5.50 | |
| +3.20 δ₂ | | 5 11.10 | | 28 49.2 | | | | | | 8.43 | |
| −19.26 | | | | | | | | | | | |
| | +27.1 | 2 14.9 | 29.9 | 44.8 | 32 22.40 | 30 25.95 | | | 50 | 54 29 42.17 | |
| | 1.43297 | | | | | 54 29 21.62 | | | | − 19 | +12.48 |
| d | 9.76413 | | | | | +20.55 | | | | + 21 | |
| | 1.31281 | | | | | | 29 42.17 | | | +12.96 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 7.50 | |
| +3.39 δ₁ | | 9 4.11 | | 29 19.9 | | | | | | 29 47.15 | |
| −27.22 | | | | | | | | | | | |
| | +10.9 | 2 55.9 | 12.1 | 68.0 | 13 34.00 | 9 44.35 | | | 10 | 52 8 51.02 | 53 25 59.72 |
| | 1.03743 | | | | | 52 8 40.02 | | | | − 3 | +9.20+11.12 |
| d | 9.78821 | | | | | +11.60 | | | | + 27 | |
| | 1.04135 | | | | | +8.73 | 6 51.02 | | | +8.66 | |
| +3.46 ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| 0.36 −25.16 | +30.8 | 0 0.8 | 15.7 | 16.5 | 8 8.25 | 27 40.10 | | | 55 | 8 −660 | − 6.70 |
| 2.08 δ₂ | 1.48855 | 24 42.73 | | 8 28.5 | 56 | 53 25 35.17 | | | | 6 53.62 | 25 4.14 |
| 38.26 | 9.77500 | | | | | +23.95 | 28 59.72 | | | | |
| 7 | 1.37926 | 0 38.0 | 53.8 | 91.8 | 35 43.90 | 47 2.45 | | | 35 | | |
| | | | | | | 54 45 58.12 | | | | | |
| +3.31 d | | | | | | | | | | | |
| −24.76 | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| | | 27 26.05 | | 25 39.4 | | | | | | | |
| δ₁ | | | | | | | | | | | |
| | +26.5 | 4 45.2 | 0.0 | 45.2 | 09 32.60 | 22 56.75 | 22 12.06 | | 55 | 54 22 12.06 | 50 34 39.27 |
| | 1.42325 | | | | | 54 21 51.42 | | | | − 18 | − 0 +12.64+8.62 |
| d | 9.77575 | | | | | +20.64 | | | | + 44 | + 21 |
| | 1.31471 | | | | | | | | | +11.97 | + 8.16 |
| 37 −17.34 ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | + 25 |
| 1.38 | +2.9 | 1 6.92 | 14.1 | 73.3 | 47 36.65 | 35 41.70 | 34 39.27 | | 45 | − 4.65 | − 4.70 |
| 29 δ₂ | 0.46240 | 17 33.99 | | 22 2.7 | | 50 34 36.87 | | | | 22 20.05 | 32 43.19 |
| | 9.80280 | | | | | + 2.40 | | | | | |
| +3.18 | 0.38091 | 22 29.40 | | 34 26.6 | | | | | | | |
| −16.56 | | | | | | | | | | | |
| 2.22 | | | | | | | | | | | |

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Date$_1$ = July 30. 1873 (247) Observer / Recorder — $n_F$ = −.54

Date$_2$ = Aug. 5 1873 (248) Observer / Recorder — $n$ = −.43

65

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 Lyr | 18h 29m 08s | 50° 28′ | 8.8 | 29m 15.2 | 29m 28.2 | 26.5 | 29.8 | 33.0 | 36.4 | 29m | 29.78 | 29m 29.78 | |
| | 28 42.1 | 50 29.7 | 8.8 | 16.5 | | | | | | | | −15.84 | |
| | κ | | | 17.8 | | | | | | | | − 65 | |
| | | | | 16.5 | | | | | | | − 16.57 | − 2 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 29 44.95 | |
| | | | | | | | | | | | | 13.27 | +3.16 |
| | $\alpha_1$ | | | | | | | | | | | − 1.81 | −15.6 |
| | | | | | | | | | | | | 29 11.46 | |
| | 29 8.4 | 50 26.4 | 8.0 | 29 49.6 | 29 57.6 | 53.7 | 57.1 | 0.4 | 3.7 | 29 | 57.10 | 29 57.10 | |
| | κ | | | | | | | | | | | −18.92 | |
| | | | | | | | | | | | | − 52 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | − 19.46 | − 2 | |
| | | | | | | | | | | | | 29 37.64 | |
| | $\alpha_2$ | | | | | | | | | | | − 1.66 | +3.16 |
| | | | | | | | | | | | | 29 35.98 | |
| | 31 00 | 54 11 | 8.7 | 30 50.3 | 31 13.1 | 16.7 | 20.3 | 25.8 | 27.3 | 31 | 20.24 | 31 20.24 | |
| | 30 34.8 | 54 12.9 | 8.5 | 52.0 | | | | | | | | −15.84 | |
| | κ | | | 53.4 | | | | | | | | − 74 | 6.2 |
| | | | | 57.9 | | | | | | | − 16.61 | − 3 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 31 3.63 | |
| | | | | | | | | | | | | − 1.87 | +2.1 |
| | $\alpha_1$ | | | | | | | | | | | 31 1.76 | −15. |
| | | | 9.0 | 31 1.8 | 31 19.4 | 23.0 | 26.9 | 30.0 | 33.3 | 31 | 26.52 | 31 (26.52) | |
| | κ | | | | | | | | | | | −18.92 | |
| | | | | | | | | | | | | − 59 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | − 19.54 | − 3 | |
| | | | | | | | | | | | | 31 6.98 | |
| | $\alpha_2$ | | | | | | | | | | | − 1.70 | |
| | | | | | | | | | | | | 31 5.28 | |
| July 30 | 34 15 | 54 52 | 9.0 | 33 54.3 | 34 23.5 | 27.3 | 30.8 | 34.1 | 37.9 | 34 | 30.78 | 34 30.78 | |
| | 33 50.2 | 54 54.1 | 9.0 | 56.2 | | | | | | | | −15.84 | |
| | κ | | | 57.7 | | | | | | | | − 77 | 2.4 |
| | | | | 56.1 | | | | | | | − 16.64 | − 3 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 34 14.14 | |
| | | | | | | | | | | | | − 1.90 | +2.6 |
| | $\alpha_1$ | | | | | | | | | | | 34 12.24 | −14. |
| July 30 | 35 15 | 54 05 | 9.0 | 35 4.2 | 35 25.9 | 29.4 | 33.0 | 36.6 | 40.2 | 35 | 33.02 | 35 33.02 | |
| | 34 50.0 | 54 7.6 | 9.0 | 5.9 | | | | | | | | −15.84 | |
| | κ | | | 8.0 | | | | | | | | − 76 | |
| | | | | 6.0 | | | | | | | − 16.63 | − 3 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 35 16.39 | |
| | | | | | | | | | | | | − 1.89 | +2.2 |
| | $\alpha_2$ | | | | | | | | | | | 35 14.50 | −14. |
| | 38 46 | 53 19 | 7.9 | 38 34.9 | 38 58.9 | 2.4 | 5.8 | 9.2 | 12.8 | 39 | 5.82 | 39 5.82 | |
| | 38 21.2 | 53 20.7 | 8.3 | 36.6 | | | | | | | | −18.84 | |
| | κ | | | 38.4 | | | | | | | | − 72 | 2.72 |
| | | | | 36.4 | | | | | | | − 16.59 | − 3 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 38 48.23 | |
| | | | | | | | | | | | | − 1.90 | +2.2 |
| | $\alpha_1$ | | | | | | | | | | | 38 46.33 47.33 | −13.9 |
| | | | 8.5 | 38 43.2 | 39 1.7 | 5.0 | 8.6 | 12.0 | 15.4 | 39 | 8.54 | 39 8.54 | |
| | κ | | | 44.1 | | | | | | | | −18.92 | |
| | | | | 46.5 | | | | | | | | − 57 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | 44.6 | | | | | | | − 19.52 | − 3 | |
| | | | | | | | | | | | | 38 49.02 | |
| | $\alpha_2$ | | | | | | | | | | | − 1.73 | +2.1 |
| | | | | | | | | | | | | 38 47.29 | −13 |
| | 39 23 | | | | | | | | | | | | |
| | 38 58.3 | 53 52 | 8.7 | 39 27.3 | 39 36.6 | 40.2 | 43.5 | 47.0 | 51.5 | 39 | 43.58 | 39 43.56 | |
| | | 53 54.3 | 9.0 | 29.0 | | | | | | | | −18.84 | |
| | κ | | | 31.0 | | | | | | | | − 574 | 2.84 |
| | | | | 29.1 | | | | | | | − 16.61 | − 3 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 39 25.95 | |
| | | | | | | | | | | | | − 1.90 | +2.7 |
| | $\alpha_1$ | | | | | | | | | | | 39 24.05 23.05 | −13.8 |
| | | | 9.0 | 39 41.3 | 39 39.5 | 43.0 | 46.4 | 49.6 | 53.5 | 39 | 46.40 | 39 46.40 | |
| | κ | | | | | | | | | | | −18.93 | |
| | | | | | | | | | | | | − 59 | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | − 19.55 | − 3 | |
| | | | | | | | | | | | | 39 26.85 | |
| | $\alpha_2$ | | | | | | | | | | | − 1.74 | +2.7 |
| | | | | | | | | | | | | 39 25.11 | −13. |

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July 30 −1′ 3.″25 +.13
Aug. 5 −1 5.83 +.13

Runs



| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +13.3 | 4′ 31.″0 | 48.1 | 79.1 | 54 3.955 | 28 8.80 | | | 50′ | 50 27 16.60 | |
| | 1.12385 | | | | 1005 | 50 27 5.55 | | | | − 5 | +8.60 |
| d | 9.80397 | | | | | +11.05 | | | | + 60 | |
| | 1.04353 | | | | | | 27 16.60 | | | +7.78 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | 27 !! | | | | | | + 27 | |
| +3.16 | | | | | | | | | | −8.20 | |
| −15.48 δ₁ | | 29 14.62 | | 16 56.5 | | | | | | 27 16.00 | |
| | +7.5 | 2 5.0 | 20.5 | 25.5 | 57 12.75 | 25 35.60 | | | 55 | | |
| | 0.87506 | | | | | 50 24 29.77 | | | | | |
| d | 9.80443 | | | | | +6.24 | | | | | |
| | 0.79520 | | | | | | 24 36.01 | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | −8.90 | |
| +3.16 | | | | | | | | | | | |
| δ₂ | | 29 39.14 | | | | | | | | | |
| | +28.3 | 0 10.9 | 25.0 | 35.9 | 10 17.95 | 12 30.40 | | | 10 | 54 11 48.77 | |
| | 1.45179 | | | | | 54 11 27.15 | | | | − 21 | +11.78 |
| 6.28 d′ | 9.76730 | | | | | +21.62 | | | | + 12 | |
| | 1.38480 | | | | | | 11 48.77 | | | +11.47 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | −8.55 | |
| +2.72 δ₁ | | 31 4.48 | | 11 36.8 | | | | | | 11 52.00 | |
| −15.18 | | | | | | | | | | | |
| | +10.7 | 4 38.5 | 51.3 | 89.8 | 9 4.90 | 13 3.45 | | | 5 | 12 5.79 | |
| | 1.02938 | | | | | 54 11 57.62 | | | | − 3 | +12.87 |
| d | 9.76712 | | | | | + 8.17 | | | | + .61 | |
| | 0.91221 | | | | | | 12 5.79 | | | +11.89 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | −9.30 | |
| δ₂ | | | | | | | | | | 12 9.36 | |
| | +34.7 | 0 26.1 | 41.7 | 67.8 | 3033.90 | 52 14.45 | | | 30 | 54 51 37.28 | |
| | 1.54033 | | | | | 54 51 11.20 | | | | − 31 | +12.30 |
| 24 d | 9.76021 | | | | | +26.08 | | | | + 7 | |
| | 1.41625 | | | | | | 51 37.28 | | | +12.14 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +2.61 | | | | | | | | | | −8.50 | |
| −14.64 δ₁ | | 34 14.85 | | 51 26.4 | | | | | | 51 41.08 | |
| | +27.0 | 1 37.4 | 51.9 | 89.3 | 16 4.465 | 6 3.70 | | | 15 | 54 5 21.12 | |
| | 1.43136 | | | | | 54 5 0.45 | | | | − 19 | +11.81 |
| d | 9.76835 | | | | | +20.67 | | | | + 23 | |
| | 1.31542 | | | | | | 5 21.12 | | | +11.37 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | −8.45 | |
| +2.70 δ₂ | | 35 17.20 | | 5 10.0 | | | | | | 5 24.48 | |
| −14.48 | | | | | | | | | | | |
| | +29.2 | 3 15.0 | 29.5 | 44.5 | 3 22.20 | 19 26.10 | | | 0 | 53 18 45.63 | |
| | 1.46538 | | | | | 53 18 22.85 | | | | − 23 | +11.14 |
| 2.72 d | 9.77643 | | | | | +22.78 | | | | + 44 | |
| | 1.35752 | | | | | | 18 45.63 | | | +10.60 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 33 | |
| | | | | | | | | | | −8.30 | |
| +2.78 δ₁ | | 38 50.11 | | 18 34.6 | | | | | | 18 48.47 | |
| −13.90 | | | | | | | | | | | |
| | +23.9 | 3 8.6 | 22.1 | 30.7 | 3 15.30 | 19 33.00 | | | 0 | 45.81 | |
| | 1.37840 | | | | | 53 18 27.17 | | | | − 15 | +11.56 |
| d | 9.77643 | | | | | +18.64 | | | | + 42 | |
| | 1.27054 | | | | | | 18 45.81 | | | +10.96 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 33 | |
| | | | | | | | | | | −9.15 | |
| +2.78 δ₂ | | 38 50.07 | | 18 34.3 | | | | | | 48.22 | |
| −13.90 | | | | | | | | | | | |
| | +14.5 | 0 11.2 | 26.1 | 37.3 | 30 18.65 | 52 29.70 | | | 30 | 53 51 37.61 | |
| | 1.16137 | | | | | 53 51 26.45 | | | | − 5 | +11.53 |
| 2.84 d | 9.77070 | | | | | +11.16 | | | | + 4 | |
| | 1.04778 | | | | | | 51 37.61 | | | +11.15 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 39 | |
| | | | | | | | | | | −8.35 | |
| +2.71 δ₁ | | 39 27.76 | | 51 27.0 | | | | | | 51 40.79 | |
| −13.82 | | | | | | | | | | | |
| | +05.1 | 0 2.8 | 16.4 | 19.2 | 30 9.60 | 52 38.75 | | | 30 | 36.85 | |
| | 0.70757 | | | | | 53 51 32.92 | | | | − 1 | +11.91 |
| d | 9.77070 | | | | | +3.93 | | | | + 2 | |
| | 0.59398 | | | | | | 57 36.85 | | | +11.51 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 39 | |
| | | | | | | | | | | −9.20 | |
| +2.71 δ₂ | | 39 27.82 | | 51 25.7 | | | | | | 39.56 | |
| −13.82 | | | | | | | | | | | |

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Date$_1$ = July 30 247 — Observer — Recorder

Date$_2$ = Aug. 5 248 — Observer — Recorder

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 43 04 | 53 02 | 8.7 | 42 56.0 | 43 1.4 | 20.8 | 24.3 | 27.7 | 31.3 | 43 | 24.30 | 43 24.30 | |
| | 42 40.5 | 53 3.7 | 8.5 | 57.6 | | | | | | | | −15.85 | |
| | | | | 56.0 | | | | | | | | − 72 | 78 |
| | | | | 57.5 | | | | | | | − 16.60 | − 3 | |
| | | | | | | | | | | | | 43 7.70 | |
| | | | | | | | | | | | | − 1.91 | +2.7 |
| | | | | | | | | | | | | 43 5.79 | −13. |
| | | | 9.0 | 43 1.3 | 43 20.2 | 23.6 | 27.1 | 30.6 | 33.9 | 43 | 27.08 | 43 27.08 | |
| | | | | 2.9 | | | | | | | | −18.93 | |
| | | | | 4.6 | | | | | | | | − 57 | |
| | | | | 2.9 | | | | | | | − 19.53 | − 3 | |
| | | | | | | | | | | | | 43 7.55 | |
| | | | | | | | | | | | | − 1.75 | +2.7 |
| | | | | | | | | | | | | 43 5.80 | −13 |
| | 46 27 | 53 09 | 6.8 | 46 22.9 | 46 39.6 | 42.9 | 46.4 | 49.9 | 53.4 | 46 | 46.44 | 46 46.44 | |
| | 46 2.9 | 53 9.6 | 7.0 | 24.0 | | | | | | | | −15.85 | |
| | | | | 25.7 | | | | | | | | − 72 | 64 |
| | | | | 24.1 | | | | | | | − 16.60 | − 3 | |
| | | | | | | | | | | | | 46 29.84 | |
| | | | | | | | | | | | | − 1.93 | +2.7 |
| | | | | | | | | | | | | 46 27.91 | −12. |
| | | | 7.0 | 46 18.9 | 46 42.2 | 45.8 | 49.1 | 52.4 | 55.9 | 46 | 49.08 | 46 49.08 | |
| | | | | 19.9 | | | | | | | | −18.93 | |
| | | | | 20.4 | | | | | | | | − 57 | |
| | | | | 19.8 | | | | | | | − 19.53 | − 3 | |
| | | | | | | | | | | | | 46 29.55 | |
| | | | | | | | | | | | | − 1.77 | +2. |
| | | | | | | | | | | | | 46 27.78 | −12 |
| | 48 41 | 54 15 | 8.2 | 48 32.6 | 48 52.4 | 56.1 | 59.9 | 3.3 | 6.9 | 48 | 59.78 | 48 59.78 | |
| | 48 16.6 | 54 16.9 | 8.5 | 34.8 | | | | | | | | −15.85 | |
| | | | | 38.3 | | | | | | | | − 75 | 78 |
| | | | | 35.2 | | | | | | | − 16.63 | − 3 | |
| | | | | | | | | | | | | 48 43.15 | |
| | | | | | | | | | | | | − 1.96 | |
| | | | | | | | | | | | | 48 41.19 | ±5.2 |
| | | | 8.5 | 48 32.7 | 48 55.6 | 59.0 | 2.5 | 6.1 | 9.6 | 49 | 2.56 | 49 2.56 | −27. |
| | | | | 34.3 | | | | | | | | −18.93 | |
| | | | | 35.6 | | | | | | | | − 57 | |
| | | | | 34.2 | | | | | | | − 19.55 | − 3 | |
| | | | | | | | | | | | | 48 43.01 | |
| | | | | | | | | | | | | − 1.79 | |
| | | | | | | | | | | | | 48 41.22 | +5.7 |
| | | | | | | | | | | | | | −24 |
| | 50 17 | 54 57 | 8.9 | 49 59.3 | 50 23.1 | 25.8 | 29.5 | 33.1 | 36.8 | 50 | 29.46 | 50 29.46 | |
| | 49 47.0 | 54 57.2 | 8.7 | 1.3 | | | | | | | | −15.85 | |
| | | | | 3.1 | | | | | | | | − 77 | 80 |
| | | | | 1.2 | | | | | | | − 16.65 | − 3 | |
| | | | | 50 | | | | | | | | 50 12.81 | |
| | | | | | | | | | | | | − 1.96 | +2.3 |
| | | | | | | | | | | | | 50 10.85 | −12. |
| | | | 8.9 | 50 4.6 | 50 26.0 | 28.5 | 32.3 | 36.0 | 39.5 | 50 | 32.26 | 50 32.26 | |
| | | | | 6.0 | | | | | | | | −18.93 | |
| | | | | 8.2 | | | | | | | | − 61 | |
| | | | | 6.3 | | | | | | | − 19.57 | − 3 | |
| | | | | | | | | | | | | 50 12.69 | |
| | | | | | | | | | | | | − 1.80 | |
| | | | | | | | | | | | | 50 10.89 | +2.3 |
| | | | | | | | | | | | | | −12. |
| | 54 40 | 53 12 | 8.9 | 54 36.9 | 54 54.4 | 57.7 | 1.3 | 4.7 | 8.2 | 55 | 1.26 | 55 1.26 | |
| | 54 16.5 | 53 13.7 | 9.0 | 38.3 | | | | | | | | −15.85 | |
| | | | | 39.7 | | | | | | | | − 72 | 80 |
| | | | | 38.3 | | | | | | | − 16.60 | − 3 | |
| | | | | | | | | | | | | 54 44.66 | |
| | | | | | | | | | | | | − 1.97 | +2.7 |
| | | | | | | | | | | | | 54 42.69 | −11. |
| | | | 9.0 | 54 33.0 | 54 57.0 | 0.7 | 4.2 | 7.4 | 11.0 | 55 | 4.06 | 55 4.06 | |
| | | | | 34.5 | | | | | | | | −18.93 | |
| | | | | 37.0 | | | | | | | | − 57 | |
| | | | | 34.8 | | | | | | | − 19.53 | − 3 | |
| | | | | | | | | | | | | 54 44.53 | |
| | | | | | | | | | | | | − 1.81 | |
| | | | | | | | | | | | | 54 42.72 | +2.7 |
| | | | | | | | | | | | | | −11. |

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Runs

| | | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | +26.8 | 0 4.8 | 19.9 | 24.7 | 20 12.35 | 2 36.00 | | | 20 | 53 1 53.89 | |
| | | 1.42813 | | | | | 53 1 32.75 | | | | − 19 | − +10.45 |
| 78 | d | 9.77920 | | | | | +21.84 | | | | + 2 | |
| | | 1.32304 | | | | | | 1 53.89 | | | +10.32 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.79 | | | | | | | | | | | − 8.20 | |
| −13.20 | $\delta_1$ | | 43 8.58 | | 1 42.9 | | | | | | 1 56.14 | |
| | | +24.2 | 0 2.1 | 14.5 | 16.6 | 20 8.30 | 2 40.05 | | | 20 | 53.22 | |
| | | 1.38382 | | | | | 53 1 34.22 | | | | − 15 | +10.84 |
| | d | 9.77920 | | | | | +19.00 | | | | + 2 | |
| | | 1.27873 | | | | | | 1 53.22 | | | +10.67 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.79 | | | | | | | | | | | − 9.05 | |
| −13.20 | $\delta_2$ | | 43 8.59 | | 1 41.8 | | | | | | 55.01 | |
| | | +22.3 | 3 46.9 | 2.7 | 49.6 | 13 3.80 | 8 53.56 | | | 10 | 53 8 7.76 | |
| | | 1.34830 | | | | | 53 7 50.30 | | | | − 13 | +11.12 |
| 64 | d | 9.77812 | | | | | +17.46 | | | | + 51 | |
| | | 1.24213 | | | | | | 8 7.76 | | | +10.43 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 31 | |
| +2.76 | | | | | | | | | | | − 8.15 | |
| −12.64 | $\delta_1$ | | 46 30.67 | | 7 58.1 | | | | | | 8 10.73 | |
| | | +29.3 | 3 53.0 | 6.4 | 59.4 | 13 4.70 | 8 48.65 | | | 10 | 5.77 | |
| | | 1.46687 | | | | | 53 7 42.82 | | | | − 23 | +11.39 |
| | d | 9.77812 | | | | | +22.95 | | | | + 52 | |
| | | 1.36070 | | | | | | 8 5.77 | | | +10.79 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 31 | |
| +2.76 | | | | | | | | | | | − 9.00 | |
| −12.64 | $\delta_2$ | | 46 30.54 | | 7 55.5 | | | | | | 8.16 | |
| | | +24.6 | 2 14.7 | 30.5 | 45.2 | 7 22.60 | 15 25.75 | | | 5 | 54 14 41.27 | |
| | | 1.39094 | | | | | 54 14 22.50 | | | | − 16 | +12.08 |
| 78 | d | 9.76677 | | | | | +18.77 | | | | + 31 | |
| | | 1.27342 | | | | | | 14 41.27 | | | +11.53 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| ~~+5.22~~ +2.61 | | | | | | | | | | | − 8.20 | |
| ~~−24.56~~ −12.28 | $\delta_1$ | | 48 43.80 | | 14 32.9 | | | | | | 14 45.15 | |
| | | +28.4 | 2 15.9 | 30.8 | 46.7 | 7 23.35 | 15 25.00 | | | 5 | 40.84 | |
| | | 1.45332 | | | | | 54 14 19.17 | | | | − 21 | +12.43 |
| | d | 9.76677 | | | | | +21.67 | | | | + 31 | |
| | | 1.33580 | | | | | | 14 40.84 | | | +11.93 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| ~~+5.22~~ +2.61 | | | | | | | | | | | − 9.10 | |
| ~~−24.56~~ −12.28 | $\delta_2$ | | 48 43.83 | | 14 31.9 | | | | | | 44.17 | |
| | | +28.3 | 4 44.5 | 59.7 | 104.2 | 24 52.10 | 57 56.25 | | | 20 | 54 57 14.21 | |
| | | 1.45179 | | | | | 54 56 53.00 | | | | − 21 | +13.08 |
| 80 | d | 9.75913 | | | | | +21.21 | | | | + 64 | |
| | | 1.32663 | | | | | | 57 14.21 | | | +12.25 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +2.51 | | | | | | | | | | | − 8.15 | |
| −12.04 | $\delta_1$ | | 50 13.36 | | 57 7.1 | | | | | | 57 19.14 | |
| | | +26.0 | 4 41.2 | 55.4 | 96.6 | 24 48.80 | 58 0.05 | | | 20 | 13.71 | |
| | | 1.41497 | | | | | 54 56 54.22 | | | | − 17 | +13.51 |
| | d | 9.75913 | | | | | +19.49 | | | | + 63 | |
| | | 1.28981 | | | | | | 57 13.71 | | | +12.65 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| +2.51 | | | | | | | | | | | − 9.06 | |
| −12.04 | $\delta_2$ | | 50 13.40 | | 57 6.1 | | | | | | 18.17 | |
| | | +23.0 | 0 37.7 | 53.3 | 91.0 | 10 45.50 | 12 2.85 | | | 10 | 53 11 ~~17.66~~ | 17.59 |
| | | 1.36173 | | | | | 53 10 59.60 | | | | − 14 | +10.76 |
| 80 | d | 9.77~~930~~761 | | | | | ~~+18.06~~ | | | | + 10 | |
| | | 1.25~~6774~~ | | | | | 1799 | 11 7.66 | | | +10.50 | |
| | ((δ) − D) $\frac{d'}{100}$ | 505 | | | | | | | | | + 32 | |
| +2.71 | | | | | | | | | | | − 8.00 | |
| −11.26 | $\delta_1$ | | 54 45.40 | | 11 9.1 | | | | | | 11 ~~10.41~~ 20.37 | |
| | | | | | | | | | | | 2 | |
| | | +29.3 | 0 41.0 | 54.9 | 95.9 | 10 47.95 | 12 0.40 | | | 10 | 12.49 | |
| | | 1.46687 | | | | | 53 10 54.57 | | | | − 23 | +11.03 |
| | d | 9.77761 | | | | | +22.92 | | | | + 10 | |
| | | 1.36019 | | | | | | 11 1749 | | | +10.84 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 32 | |
| +2.71 | | | | | | | | | | | − 8.90 | |
| −11.26 | $\delta_2$ | | 54 45.43 | | 11 8.4 | | | | | | 19.62 | |

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Date$_1$ = July 30 247 Observer Recorder

Date$_2$ = Aug. 15 248 Observer Recorder



| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | h m s 5 55 59 | ° ′ ″ 52 29 | 8.0 | m s 55 58.0 | m s 56 11.6 | 15.0 | 18.4 | 21.6 | 25.1 | m 56 | s 18.34 | s 56 | s 18.34 |
| | 5.5 3 14.1 | 52 31.3 | 8.2 | 59.5 | | | | | | | | | −15.85 |
| | κ | | | 58 | | | | | | | | | − 70 |
| | | | | 59.4 | | | | | | | − 16.57 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 56 | 1.77 |
| | | | | | | | | | | | | | − 1.96 |
| | $\alpha_1$ | | | | | | | | | | | 56 | 59.71 81 |
| | | | 7.7 | 55 53.9 | 56 14.4 | 17.8 | 21.2 | 24.7 | 27.9 | 56 | 21.20 | 56 | 21.20 |
| | | | | 55.8 | | | | | | | | | −18.93 |
| | κ | | | 57.9 | | | | | | | | | − 56 |
| | | | | 55.9 | | | | | | | − 19.51 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 56 | 1.69 |
| | | | | | | | | | | | | | − 1.81 |
| | $\alpha_2$ | | | | | | | | | | | 55 | 59.88 |
| | 0 8 27 | 53 53 | 8.6 | 58 11.3 | 58 41.9 | 44.4 | 47.8 | 51.3 | 55.0 | 58 | 47.88 | 58 | 47.88 |
| | 5 8 4.6 | 53 54.1 | 8.8 | 12.9 | | | | | | | | | −15.85 |
| | κ | | | 14.6 | | | | | | | | | − 74 |
| | | | | 12.9 | | | | | | | − 16.62 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 58 | 31.26 |
| | | | | | | | | | | | | | − 2.00 |
| | $\alpha_1$ | | | | | | | | | | | 58 | 29.26 |
| | | | 8.6 | 58 33.1 | 58 43.4 | 46.9 | 50.5 | 54.1 | 57.7 | 58 | 50.52 | 58 | 50.52 |
| | | | | 34.6 | | | | | | | | | −18.93 |
| | κ | | | 36.5 | | | | | | | | | − 59 |
| | | | | 34.7 | | | | | | | − 19.55 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 58 | 30.97 |
| | | | | | | | | | | | | | − 1.84 |
| | $\alpha_2$ | | | | | | | | | | | 58 | 29.13 |
| 17 | 1 0 27 | 53 23 | 8.4 | 0 41.6 | 1 19.9 | 21.5 | 24.9 | 28.5 | 32.0 | 1 | 24.96 | 1 | 24.96 |
| | 0 4.3.4 | 53 24.4 | 9.0 | 42.9 | | | | | | | | | −15.86 |
| | κ | | 7.8 | 44.4 | | | | | | | | | − 73 |
| | | | | 42.9 | 1 19.5 | 22.7 | 26.1 | 29.5 | 33.2 | 1 | 26.20 | 1 | 8.34 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 1 | 26.20 − 2.00 |
| | | | | | | | | | | | | 1 | 6.34 |
| | $\alpha_1$ | | | | | | | | | | | | −15.86 |
| | | | | | | | | | | | | | − 73 |
| | | | | | | | | | | | − 16.62 | | − 3 |
| | | | | | | | | | | | | 1 | 9.58 |
| | | | | | | | | | | | | | − 2.00 |
| | | | | | | | | | | | | 1 | 7.58 |
| | | | 8.2 | | 1 20.8 | 24.3 | 27.8 | 31.3 | 34.9 | 1 | 27.82 | 1 | 27.82 |
| | | | 9.1 | | | | | | | | | | −18.93 |
| | κ | | | | | | | | | | − 19.54 | | − 58 |
| | | | | | 1 21.9 | 25.5 | 29.0 | 32.3 | 36.1 | 1 | 28.96 | 1 | 8.28 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 1 | 28.96 − 1.84 |
| | | | | | | | | | | | | 1 | 6.44 |
| | $\alpha_2$ | | | | | | | | | | − 19.54 | | −18.93 |
| | | | | | | | | | | | | | − 58 |
| | | | | | | | | | | | | | − 3 |
| | | | | | | | | | | | | 1 | 9.42 |
| | | | | | | | | | | | | | − 1.84 |
| | | | | | | | | | | | | 1 | 7.58 |
| | 2 1 0 | 53 19 | 9.0 | 2 11.5 | 2 21.4 | 24.9 | 28.4 | 31.7 | 35.3 | 2 | 28.34 | 2 | 28.34 |
| | 1 45.0 | 53 20.5 | 8.5 | 13.0 | | | | | | | | | −15.86 |
| | κ | | | 14.7 | | | | | | | | | − 72 |
| | | | | 13.1 | | | | | | | − 16.61 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 2 | 11.73 |
| | | | | | | | | | | | | | − 2.01 |
| | $\alpha_1$ | | | | | | | | | | | 2 | 9.72 |
| | | | 9.1 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| | 2 1 0 | 53 21 | | | Lost | | | | | | | | |
| | 2 45.8 | 53 22.8 | 9.3 | | | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_1$ | | | | | | | | | | | | |
| | | | 9.5 | 3 12.9 | 3 24.7 | 27.7 | 31.4 | 34.8 | 38.2 | 3 | 31.36 | 3 | 31.36 |
| | | | | 14.9 | | | | | | | | | −18.93 |
| | κ | | | 16.8 | | | | | | | | | − 58 |
| | | | | 14.7 | | | | | | | − 19.54 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 3 | 11.82 |
| | | | | | | | | | | | | | − 1.86 |
| | $\alpha_2$ | | | | | | | | | | | 3 | 9.96 |

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Runs

70

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +18.9 | 1 5.18 | 8.2 | 60.0 | 02 00.00 | 30 48.35 | | | 50′ | 52 30 0.12 | |
| H d | 1.27646 | | | | | 52 29 45.10 | | | | − 10 | +10.26 |
| | 9.78445 | | | | | +15.02 | | | | + 26 | |
| | 1.17662 | | | | | | 30 | 0.12 | | +9.820 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | .61 | | | | | | | | − 7.70 | |
| +2.80 δ₁ | | 56 2.34 | | 29 51.4 | | | | | | 30 2.48 | |
| −11.06 | | | | | | | | | | | |
| | +25.3 | 1 55.2 | 9.9 | 65.1 | 52 with 2.35 | 30 45.80 | | | 50 | 0.07 | |
| d | 1.40312 | | | | | 52 29 39.97 | | | | − 17 | +10.53 |
| | 9.78445 | | | | | +20.10 | | | | + 26 | |
| | 1.30328 | | | | | | 30 | 0.07 | | +10.14 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.80 | | | | | | | | | | − 8.85 | |
| −11.06 δ₂ | | 56 2.68 | | 29 50.7 | | | | | | 1.75 | |
| | +35.0 | 4 32.3 | 47.9 | 80.2 | 29 40.10 | 53 8.25 | | | 25 | 53 52 31.94 | |
| 64 d | 1.54407 | | | | | 53 52 5.00 | | | | − 32 | +11.85 |
| | 9.77061 | | | | | +26.94 | | | | + 61 | |
| | 1.43039 | | | | | | 52 | 31.94 | | +11.187 | |
| ((δ) − D) $\frac{d'}{100}$ | | .8 | | | | | | | | + 39 | |
| +2.61 | | | | | | | | | | − 7.95 | |
| −10.64 δ₁ | | 58 31.87 | | 52 25.2 | | | | | | 35.74 | |
| | +15.8 | 4 17.5 | 30.6 | 48.1 | 29 24.05 | 53 24.30 | | | 25 | 30.63 | |
| d | 1.19866 | | | | | 53 52 18.47 | | | | − 7 | +12.44 |
| | 9.77061 | | | | | +12.16 | | | | + 57 | |
| | 1.08498 | | | | | | 52 | 30.63 | | +11.55 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 39 | |
| +2.61 | | | | | | | | | | − 8.95 | |
| −10.64 δ₂ | | 58 31.74 | | 52 23.5 | | | | | | 34.12 | |
| | +42.1 | 2 52.0 | 8.0 | 60.0 | 28 00.00 | 24 48.35 | | | 55 | 53 24 17.88 | 24 18.81 |
| 56 d | 1.62428 | | | | | 53 23 45.10 | | | | − .46 | +1086 − 48 +1084 |
| | 9.77558 | | | | | + 32.78 | | | | + 39 | + 39 |
| | 1.51557 | | | | | | | | | + 1059 | + 1059 |
| 76 ((δ) − D) $\frac{d'}{100}$ | +433 | .01 | | | | | | | | + 34 | + 34 |
| | 1.63649 | 1 9.26 | | 24 10.7 | | + 33.71 | | | | − 785 | − 785 |
| +2.67 δ₁ | 9.77558 | 1 10.25 | | 2 | | | | | | 24 20.89 | 24 21.80 |
| −10.18 | 1.52778 | | | | | | | | | | |
| | | 2 42.3 | 56.9 | 99.2 | 57 49.60 | 24 58.75 | | | 55 | | |
| +2.67 | | | | | | 53 23 52.92 | | | | | |
| −10.18 d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| +2.67 | | | | | | | | | | | |
| −10.18 δ₂ | | 1 9.11 | | | | | | | | | |
| | | 10.25 | | | | | | | | | |
| +2.67 | +15.2 | 3 10.1 | 24.9 | 35.0 | 3 17.50 | 19 30.85 | | | 0 | 53 18 39.46 | |
| −10.18 | 1.18184 | | | | | 53 18 27.60 | | | | − 6 | +11.30 |
| d | 9.77643 | | | | | +11.86 | | | | + 43 | |
| | 1.07398 | | | | | | 18 | 39.46 | | +10.680 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 33 | |
| +2.67 | | | | | | | | | | − 7.85 | |
| −10.02 δ₁ | | 2 12.39 | | 18 32.9 | | | | | | 18 42.91 | |
| | | 3 9.8 | 23.8 | 31.6 | 3 15.80 | 19 32.55 | | | 0 | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| δ₂ | | | | | | | | | | | |
| | | | Last | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| δ₁ | | | | | | | | | | | |
| | +16.5 | 0 27.0 | 41.8 | 68.8 | 0 34.40 | 22 13.95 | | | 0 | 53 21 20.98 | |
| d | 1.21748 | | | | | 53 21 8.12 | | | | − 7 | +11.37 |
| | 9.77592 | | | | | +12.86 | | | | + 8 | |
| | 1.10911 | | | | | | 21 | 20.98 | | +11.62 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 34 | |
| +2.66 | | | | | | | | | | − 8.80 | |
| −9.84 δ₂ | | 3 12.62 | | 21 13.7 | | | | | | 21 23.55 | |

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Date$_1$ = July 30 247 Observer Recorder

Date$_2$ = Aug. 5 248 Observer Recorder

71

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 γ | 6m 27s | 52° 53′ | 9.1 | 6m 4.0 | 6m 34.0 | 37.7 | 41.0 | 44.3 | 48.1 | 6 | 41.02 | 6 | 41.02 |
| | 57.7 | 52 55.2 | 9.3 | 5.4 | | | | | | | | | −15.86 |
| | | | | 7.5 | | | | | | | | | − 71 |
| | | | | 5.6 | | | | | | | | | − 2 |
| | | | | | | | | | | | − 16.59 | 6 | 24.43 |
| | | | | | | | | | | | | | − 2.02 |
| | | | | | | | | | | | | 6 | 22.41 |
| | | | 9.2 | 6 17.9 | 6 37.0 | 40.4 | 43.9 | 47.4 | 50.8 | 6 | ~~41.07~~ 43.90 | 6 | 43.90 |
| | | | | 19.5 | | | | | | | | | −18.93 |
| | | | | 21.4 | | | | | | | | | − 57 |
| | | | | 19.6 | | | | | | | | | − 2 |
| | | | | | | | | | | | − 19.52 | 6 | 24.38 |
| | | | | | | | | | | | | | − 1.87 |
| | | | | | | | | | | | | 6 | 22.51 |
| 2 32 | | 54 40 | 8.7 | 7 16.1 | 7 43.3 | 47.0 | 51.7 | 54.0 | 58.2 | 7 | 52.40 | 7 | 50.60 |
| 2 8.6 | | 54 41.0 | 8.1 | 17.8 | | | | | | | 52.60 | | −15.86 |
| | | | 8.6 | 19.9 | | | | | | | | | − 76 |
| | | | | 19.9 | | | | | | | − 16.65 | | − 3 |
| | | | | 7 40.1 | 7 45.1 | 49.0 | 52.3 | 56.0 | 59.7 | 7 | 52.42 | 7 | 33.95 |
| 7 11.1 | | 54 40.4 | | 42.4 | | | | | | | | | − 2.05 |
| | | | | 44.1 | | | | | | | −15.86 | 7 | 31.90 |
| | | | | 42.2 | | | | | | | | | − 76 |
| | | | | | | | | | | | − 16.65 | | − 3 |
| | | | 8.6 | 7 25.6 | 7 46.1 | 49.8 | 53.8 | 56.9 | 0.7 | 7 | 53.36 | 7 | 33.76 |
| | | | 9.1 | 27.0 | | | | | | | | | − 2.05 |
| | | | | 28.8 | | | | | | | −18.93 | 7 | 33.72 |
| | | | | 27.1 | | | | | | | | | − 61 |
| | | | | | | | | | | | − 19.57 | | − 3 |
| | | | | 7 50.9 | 7 47.9 | 51.5 | 55.5 | 58.9 | 2.8 | 7 | 53.22 | 7 | 33.79 |
| | | | | | | | | | | | | | − 1.89 |
| | | | | | | | | | | | −18.93 | 7 | 31.90 |
| | | | | | | | | | | | | | − 61 |
| | | | | | | | | | | | − 19.57 | | − 3 |
| 7 32 | | | | | | | | | | | | 7 | 35.65 |
| | | | | | | | | | | | | | − 1.89 |
| | | | | | | | | | | | | 7 | 33.76 |
| 9 08 | | 52 11 | 9.0 | 9 1.7 | 9 20.8 | 24.2 | 27.5 | 31.0 | 34.0 | 9 | 27.50 | 9 | 27.50 |
| 8 44.5 | | 52 12.9 | 9.0 | 2.9 | | | | | | | | | −15.86 |
| | | | | 4.1 | | | | | | | | | − 69 |
| | | | | 3.1 | | | | | | | − 16.57 | | − 2 |
| | | | | | | | | | | | | 9 | 10.93 |
| | | | | | | | | | | | | | − 2.02 |
| | | | | | | | | | | | | 9 | 8.91 |
| | | | 9.0 | 9 5.7 | 9 23.5 | 26.9 | 30.1 | 33.6 | 37.0 | 9 | 30.22 | 9 | 30.22 |
| | | | | 6.7 | | | | | | | | | −18.93 |
| | | | | 8.6 | | | | | | | | | − 55 |
| | | | | 6.9 | | | | | | | − 19.50 | | − 2 |
| | | | | | | | | | | | | 9 | 10.72 |
| | | | | | | | | | | | | | − 1.87 |
| | | | | | | | | | | | | 9 | 8.85 |
| 10 44 | | 52 26 | 8.0 | 10 33.4 | 10 53.3 | 58.8 | 2.2 | 5.5 | 9.0 | 11 | 2.18 | 1 11 | 2.18 |
| 10 19.0 | | 52 27.8 | 8.3 | 34.7 | | | | | | | | | −15.86 |
| | | | | 36.8 | | | | | | | | | − 70 |
| | | | | 34.7 | | | | | | | − 16.58 | | − 2 |
| | | | | | | | | | | | | 10 | 45.58 |
| | | | | | | | | | | | | | − 2.03 |
| | | | | | | | | | | | | 10 | 43.55 |
| | | | 8.6 | 10 40.4 | 10 58.0 | ~1.6 | 4.9 | 8.3 | 11.5 | 11 | 4.86 | 11 | 4.86 |
| | | | | 42.2 | | | | | | | | | −18.92 |
| | | | | 44.1 | | | | | | | | | − 56 |
| | | | | 42.2 | | | | | | | − 19.50 | | − 2 |
| | | | | | | | | | | | | 10 | 45.36 |
| | | | | | | | | | | | | | − 1.88 |
| | | | | | | | | | | | | 10 | 43.48 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 88 d | +35.4 | 3 21.1 | 36.1 | 57.2 | 28 28.60 | 54 19.75 | | | 25 | 52 53 44.38 | |
| | 1.549000 | | | | | 52 53 16.50 | | | | − 33 | +10.62 |
| | 9.780603 | | | | | +27.88 | | | | + 45 | |
| | 1.445534 | | | | | | 53 44.38 | | | +10.20 | |
| ((δ) − D) d′/100 | | | | | | | | | | + 60 | |
| +2.71 | | | | | | | | | | − 7.70 | |
| −9.30 δ₁ | | 6 25.12 | | 53 38.0 | | | | | | 53 47.30 | |
| | +28.3 | 3 12.0 | 25.3 | 37.3 | 28 18.05 | 54 29.70 | | | 25 | 43.01 | |
| | 1.385761 | | | | | 52 53 23.87 | | | | − 15 | +11.13 |
| d | 9.780055 | | | | | +19.14 | | | | + 43 | |
| | 1.281187 | | | | | | 53 43.01 | | | +10.55 | |
| ((δ) − D) d′/100 | | | | | | | | | | + 30 | |
| +2.71 | | | | | | | | | | − 8.75 | |
| −9.30 δ₂ | | 6 25.22 | | 53 36.1 | | | | | | 45.39 | |
| 76 | +32.7 | 2 49.2 | 63.8 | 113.0 | 42 56.50 | 39 51.85 | 39 13.30 | | 40 | 64 39 13.30 | 38 56.30 |
| +2.47 d | 1.514555 | | | | .00 | 54 38 48.60 | | | | − 28 | − 3 +12.45 +12.70 |
| −9.10 | 9.762236 | | | | | +24.70 | | | | + 38 | + 38 |
| ((δ) − D) d′/100 | 1.392621 | | | | | +7.70 | | | | +11.985 | +11.985 |
| | +10.2 | | | | | | 38 56.30 | | | + 40 | + 40 |
| | 1.008600 | | | | | | | | | − 7.85 | − 7.85 |
| +2.47 δ₁ | 9.762236 | 7 34.38 | 36.19 | 39 8.8 | | | | | | 39 17.90 | 39 1.15 |
| −9.10 | 0.886671 | 34.59 | | 38 52.6 | | | | | | | |
| 80 d | +26.3 | 2 42.8 | 55.9 | 98.7 | 42 49.35 | 39 69.00 | 39 13.03 | | 40 | 13.03 | 56.42 |
| | 1.419960 | | | | | 54 38 53.17 | | | | − 18 | − 1 +12.96 +13.13 |
| | 9.762236 | | | | | +19.86 | | | | + 37 | + 37 |
| | 1.298030 | | | | | + 3.25 | | | | +12.37 | +12.37 |
| ((δ) − D) d′/100 | +4.3 | | | | | | 38 56.42 | | | + 40 | + 40 |
| | 0.633470 | | | | | | | | | − 885 | − 885 |
| δ₂ | 9.762236 | 7 34.37 | | 39 8.0 | | | | | | 17.14 | 39 0.70 |
| +2.47 | 0.511540 | 36.23 | | 38 51.6 | | | | | | | |
| −9.10 | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) d′/100 | | | | | | | | | | | |
| δ₁ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) d′/100 | | | | | | | | | | | |
| δ₂ | | | | | | | | | | | |
| | +24.4 | 0 41.1 | 56.7 | 97.8 | 10 48.90 | 11 59.45 | | | 10 | 52 11 15.70 | |
| 72 d | 1.387397 | | | | | 52 10 56.20 | | | | − 16 | +9.75 |
| | 9.787556 | | | | | +19.50 | | | | + 11 | |
| | 1.290660 | | | | | | 11 15.70 | | | +9.50 | |
| ((δ) − D) d′/100 | | | | | | | | | | + 30 | |
| +2.78 | | | | | | | | | | − 7.60 | |
| −8.82 δ₁ | | 9 11.69 | | 11 9.0 | | | | | | 11 17.85 | |
| | +23.3 | 0 38.0 | 52.0 | 90.0 | 10 45.00 | 12 3.35 | | | 10 | 16.17 | |
| d | 1.367360 | | | | | 52 10 57.52 | | | | − 14 | +10.10 |
| | 9.787556 | | | | | +18.65 | | | | + 11 | |
| | 1.270630 | | | | | | 11 16.17 | | | +9.83 | |
| ((δ) − D) d′/100 | | | | | | | | | | + 30 | |
| +2.78 | | | | | | | | | | − 8.60 | |
| −8.82 δ₂ | | 9 11.63 | | 11 8.8 | | | | | | 17.67 | |
| 68 70 d | +27.8 | 0 3.8 | 20.9 | 24.7 | 5 12.35 | 26 36.00 | | | 55 | 52 26 54.55 | ✓ ev min |
| | 1.437775 | | | | | 52 26 31.75 | | | | − 20 | +9.89 |
| | 9.785000 | | | | | +21.80 | | | | + 3 | +9.89 |
| | 1.338460 | | | | | | 26 54.55 | | | +9.786 | |
| ((δ) − D) d′/100 | | | | | | | | | | + 30 | |
| +2.75 | | | | | | | | | | − 7.55 | |
| −8.54 δ₁ | | 10 46.30 | | 26 48.4 | | | | | | 26 5689 | |
| | | | | 1321 | 56 6.05 | 27 42.30 | | | | 5 | |
| | +22.7 | 4 58.2 | 0 13.9 | 72.1 | 55 36.05 | 27 12.30 | | | 55 | 25 54.63 | ✓ ev min |
| | 1.356603 | | | | 55 6.05 | 26 36.47 | | | | 26 − 14 | +10.39 +10.39 |
| d | 9.785100 | | | | | +18.16 | | | | + 14 | |
| | 1.256840 | | | | | | 25 54.63 | | | +10.09 | |
| ((δ) − D) d′/100 | | | | | | | | | | + 30 | |
| +2.75 | | | | | | | | | | − 8.60 | |
| −8.54 δ₂ | | 10 46.23 | | 26 47.9 | | | | | | 25 5642 | |

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Date$_1$ = July 30 247 Observer Recorder Date$_2$ = Aug. 5 248 Observer Recorder 73

| Star. α | δ | Mag. | $T_\delta$ | $T_m$ | $T_a$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 10 44 | 53° 45 | 8.3 | 12 6.5 | 12 15.5 | 19.1 | 22.7 | 26.1 | 29.6 | 12 | 22.60 | 12 | 22.60 |
| 12 03 | 53 46.7 | 8.5 | 8.3 | | | | | | | | | −15.86 |
| 11 κ 39.1 | | | 10.1 | | | | | | | | | − 74 |
| | | | 8.4 | | | | | | | − 16.63 | | − 3 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 12 | 5.97 |
| | | | | | | | | | | | | − 2.06 |
| $a_1$ | | | | | | | | | | | 12 | 3.91 |
| | | 8.8 | 12 1.3 | 12 18.4 | 21.9 | 25.5 | 28.9 | 32.5 | 12 | 25.44 | 12 | 25.44 |
| | | | 2.1 | | | | | | | | | −18.93 |
| κ | | | 3.6 | | | | | | | | | − 58 |
| | | | 2.3 | | | | | | | − 19.54 | | − 3 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 12 | 5.90 |
| | | | | | | | | | | | | − 1.90 |
| $a_2$ | | | | | | | | | | | 12 | 4.00 |
| 13 45 | 52 54 | 7.0 | 13 33.1 | 13 51.1 | 0.9 | 4.3 | 7.9 | 11.3 | 14 | 4.36 | 14 | 4.36 |
| 13 22.0 | 52 56.4 | 7.5 | 35.1 | | | | | | | | | −15.86 |
| κ | | | 36.8 | | | | | | | | | − 71 |
| | | | 35.0 | | | | | | | − 16.59 | | − 2 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 13 | 47.77 |
| | | | | | | | | | | | | − 2.05 |
| $a_1$ | | | | | | | | | | | 13 | 45.72 |
| | | 7.0 | 13 39.4 | 14 0.3 | 3.6 | 7.2 | 10.6 | 13.8 | 14 | 7.10 | 14 | 7.10 |
| | | | 41.0 | | | | | | | | | −18.93 |
| κ | | | 42.5 | | | | | | | | | − 57 |
| | | | 41.0 | | | | | | | − 19.52 | | − 2 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 13 | 47.58 |
| | | | | | | | | | | | | − 1.90 |
| $a_2$ | | | | | | | | | | | 13 | 45.68 |
| 14 39 | 52 57 | 9.0 | 14 27.9 | 14 52.8 | 56.3 | 59.7 | 3.1 | 6.6 | 14 | 39.70 | 14 | 59.70 |
| 14 15.8 | 52 59.4 | 8.9 | 29.2 | | | | | | | | | −15.86 |
| κ | | | 30.6 | | | | | | | | | − 71 |
| | | | 29.2 | | | | | | | − 16.59 | | − 2 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 14 | 43.11 |
| | | | | | | | | | | | | − 2.05 |
| $a_1$ | | | | | | | | | | | 14 | 41.06 |
| | | 9.0 | 14 51.5 | 14 55.1 | 59.0 | 2.6 | 5.9 | 9.8 | 15 | 2.60 | 15 | 2.60 |
| | | | 53.0 | | | | | | | | | −18.93 |
| κ | | | 53.9 | | | | | | | | | − 57 |
| | | | 52.8 | | | | | | | − 19.54 | | − 2 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 14 | 43.08 |
| | | | | | | | | | | | | − 1.91 |
| $a_2$ | | | | | | | | | | | 14 | 41.17 |
| 15 33 | 53 46 | 8.8 | 15 37.0 | 15 45.3 | 48.9 | 52.4 | 56.0 | 59.8 | 15 | 52.38 | 15 | 52.38 |
| 15 9.6 | 53 47.2 | 8.8 | 38.4 | | | | | | | | | −15.86 |
| κ | | | 39.9 | | | | | | | | | − 74 |
| | | | 38.4 | | | | | | | − 16.63 | | − 3 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 15 | 35.75 |
| | | | | | | | | | | | | − 2.07 |
| $a_1$ | | | | | | | | | | | 15 | 33.68 |
| | | 8.9 | 15 30.5 | 15 47.9 | 51.6 | 55.0 | 58.5 | 2.1 | 15 | 55.02 | 15 | 55.02 |
| | | | 31.9 | | | | | | | | | −18.94 |
| κ | | | 33.6 | | | | | | | | | − 58 |
| | | | 32.0 | | | | | | | − 19.55 | | − 3 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 15 | 35.47 |
| | | | | | | | | | | | | − 1.92 |
| $a_2$ | | | | | | | | | | | 15 | 33.55 |
| 16 56 | 52 00. | 8.2 | 16 52.7 | 17 8.4 | 11.7 | 15.0 | 18.4 | 21.8 | 17 | 15.10 | 17 | 15.10 |
| 16 32.5 | 52 1.6 | 7.9 | 54.6 | | | | | | | | | −15.86 |
| κ | | | 55.8 | | | | | | | | | − 69 |
| | | | 54.2 | | | | | | | − 16.57 | | − 2 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 16 | 58.53 |
| | | | | | | | | | | | | − 2.05 |
| $a_1$ | | | | | | | | | | | 16 | 56.48 |
| | | 8.2 | 16 55.0 | 17 11.1 | 14.6 | 17.9 | 21.3 | 24.6 | 17 | 17.90 | 17 | 17.90 |
| | | | 56.4 | | | | | | | | | −18.94 |
| κ | | | 57.4 | | | | | | | | | − 55 |
| | | | 56.4 | | | | | | | − 19.51 | | − 2 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 16 | 58.39 |
| | | | | | | | | | | | | − 1.90 |
| $a_2$ | | | | | | | | | | | 16 | 56.49 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +14.2 | 1 31.0 | 43.3 | 74.3 | 36 37.15 | 46 11.20 | | | 35 | 53 45 18.91 | |
| | 1.15229 | | | | | 53 45 7.95 | | | | − 5 | +11.61 |
| 84 d | 9.77181 | | | | | +10.96 | | | | + 21 | |
| | 1.03981 | | | | | | 45 18.91 | | | +11.07 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +2.58 | | | | | | | | | | − 7.65 | |
| −8.32 $\delta_1$ | | 12 6.49 | | 45 14.6 | | | | | | 45 22.87 | |
| | +23.1 | 1 33.0 | 46.4 | 79.4 | 36 39.70 | 46 8.65 | | | 35 | 20.65 | |
| | 1.36361 | | | | | 53 45 2.82 | | | | − 14 | +11.89 |
| d | 9.77181 | | | | | +17.83 | | | | + 21 | |
| | 1.25113 | | | | | | 45 20.65 | | | +11.44 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +2.58 | | | | | | | | | | − 8.70 | |
| −8.32 $\delta_2$ | | 12 6.68 | | 45 15.5 | | | | | | 23,84 | |
| | +29.4 | 1 42.1 | 58.1 | 100.2 | 26 50.10 | 55 58.25 | | | 25 | 52 55 18.14 | |
| | 1.46835 | | | | | 54 55.00 | | | | − 23 | +10.54 |
| 74 d | 9.78030 | | | | | +23.14 | | | | + 24 | |
| | 1.36436 | | | | | | 55 18.14 | | | +10.23 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.68 | | | | | | | | | | − 7.55 | |
| −8.02 $\delta_1$ | | 13 48.40 | | 55 13.1 | | | | | | 55 21.13 | |
| | +26.1 | 1 36.4 | 51.2 | 87.6 | 26 43.80 | 56 4.55 | | | 25 | 19.26 | |
| | 1.41664 | | | | | 54 58.72 | | | | − 18 | +10.54 |
| d | 9.78030 | | | | | +20.54 | | | | + 23 | |
| | 1.31265 | | | | | | 55 19.26 | | | +10.59 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.68 | | | | | | | | | | − 8.60 | |
| −8.02 $\delta_2$ | | 13 48.36 | | 55 13.6 | | | | | | 21.60 | |
| | +30.5 | 0 57.7 | 12.8 | 71.5 | ~~25 33.70~~ | ~~56 42.60~~ | | | 25 | ~~52 56 33.34~~ | ✓ exp min |
| | 1.48430 | | | | 26 5.175 | ~~57 12.60~~ | | | | 7 − 24 | +10.47 +10.47 |
| 50 d | 9.78013 | | | | | 52 ~~56~~ 9.35 | 55 39.35 | | | + 14 | |
| | 1.38014 | | | | | +23.99 | | | | +10.27 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | ~~56 33.34~~ | | | + 30 | |
| +2.67 | | | | | | | | | | − 7.55 | |
| −7.88 $\delta_1$ | | 14 43.73 | | 56 58.4 | | 0 | | | | ~~58 42.67~~ 6.26. | |
| | +9.8 | 4 41.5 | 54.9 | 96.4 | 24 48.20 | 58 ~~8~~.15 | | | 20 | 57 ~~10.03~~ 2.03 | exp min |
| | 0.99123 | | | | | 52 5~~8~~6 ~~2.31~~ 54.32 | | | | − 3 | +11.39 +11.39 |
| d | 9.77917 | | | | | +7.71 | | | | + 52 | |
| | 0.88691 | | | | | | 57 10.03 | | | +10.8~~8~~ | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.67 | | | | | | | | | | − 8.60 | |
| −7.88 $\delta_2$ | | 14 43.84 | | 56. 56.9 | | | | | | 57 ~~12.82~~ 4.82 | |
| | +14.0 | 0 53.0 | 7.7 | 60.7 | 36 03.5 | 46 48.00 | | | 35 | 53 45 55.55 | |
| | 1.14613 | | | | | 53 45 44.75 | | | | − 5 | +11.53 |
| 64 d | 9.77164 | | | | | +10.80 | | | | + 13 | |
| | 1.03348 | | | | | | 45 55.55 | | | +11.07 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +2.56 | | | | | | | | | | − 7.60 | |
| −7.72 $\delta_1$ | | 15 36.24 | | 45 51.8 | | | | | | 45 59.48 | |
| | +23.0 | 0 56.7 | 9.6 | 66.3 | 36 ~~33~~.10 | 46 45.20 | | | 35 | 57.12 | |
| | 1.36173 | | | | | 53 45 39.37 | | | | − 14 | +11.82 |
| d | 9.77164 | | | | | +17.75 | | | | + 13 | |
| | 1.24908 | | | | | | 45 57.12 | | | +11.45 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +2.56 | | | | | | | | | | − 8.65 | |
| −7.72 $\delta_2$ | 2 | 15 36.11 | | 45 52.6 | +1 | | | | | 46 0.29 | |
| | +10.9 | 1 19.8 | 35.3 | 75.1 | 21 27.55 | 1 20.80 | | | 20 | 52 0 33.35 | |
| | 1.32015 | | | | | 52 0 ~~16.55~~ | | | | − 12 | +9.68 |
| d | 9.78934 | | | | | +16.80 | | | | + 19 | |
| | 1.22520 | | | | | | 0 33.35 | | | + 9.31 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.78 | | | | | | | | | | − 7.40 | |
| −7.48 $\delta_1$ | | 16 59.26 | | 0 28.2 | | | | | | 0 − 35.63 | |
| | +21.5 | 1 18.0 | 32.8 | 50.8 | 21 25.49 | 1 22.95 | | | 20 | 34.40 | |
| | 1.33244 | | | | | 52 0 17.12 | | | | − 12 | +10.02 |
| d | 9.78934 | | | | | +17.28 | | | | + 19 | |
| | 1.23749 | | | | | | 0 34.40 | | | + 9.65 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.78 | | | | | | | | | | − 8.50 | |
| −7.48 $\delta_2$ | | 16 59.27 | | 0 28.4 | | | | | | 35.92 | |

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Date$_1$ = July 30 247 Observer Recorder

Date$_2$ = Aug 5 248 (250 Aug 11) Observer Recorder

75

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | h m s | ° ′ | | m s | m s | | | | | m | s | m | |
| | 17 10 56 | 52 15 | 9.2 | 17 51.9 | 18 9.9 | 13.4 | 17.0 | 20.1 | 23.6 | 18 | 16.80 | 18 | 16.80 |
| | 17 33.0 | 52 16.5 | 9.0 | 59.4 | | | | | | | | | −15.87 |
| | | | | 1.0 | | | | | | | | | − 69 |
| | | | | 59.4 | | | | | | | −16.58 | | − 2 |
| | | | | | | | | | | | | 18 | 0.22 |
| | | | | | | | | | | | | | − 2.06 |
| | | | | | | | | | | | | 17 | 58.16 |
| | | | 9.0 | 17 51.5 | 18 12.6 | 16.2 | 19.6 | 23.0 | 26.4 | 18 | 19.56 | 18 | 19.56 |
| | | | | 53.0 | | | | | | | | | −18.94 |
| | | | | 56.3 | | | | | | | | | − 56 |
| | | | | 53.6 | | | | | | | −19.52 | | − 2 |
| | | | | | | | | | | | | 18 | 0.04 |
| | | | | | | | | | | | | | − 1.91 |
| | | | | | | | | | | | | 17 | 58.13 |
| | 19 21 | 53 58 | 8.8 | 19 21.9 | 19 33.2 | 36.7 | 40.1 | 43.6 | 47.3 | 19 | 40.18 | 19 | 40.18 |
| | 18 56.7 | 53 59.0 | 8.9 | 23.3 | | | | | | | | | −15.87 |
| | | | | 24.5 | | | | | | | | | − 74 |
| | | | | 23.2 | | | | | | | −16.64 | | − 3 |
| | | | | | | | | | | | | 19 | 23.54 |
| | | | | | | | | | | | | | − 2.09 |
| | | | | | | | | | | | | 19 | 21.45 |
| | | | 8.9 | 19 14.9 | 19 36.0 | 39.5 | 43.2 | 46.5 | 49.9 | 19 | 43.02 | 19 | 43.02 |
| | | | | 16.3 | | | | | | | | | −18.94 |
| | | | | 17.9 | | | | | | | | | − 59 |
| | | | | 16.3 | | | | | | | −19.56 | | − 3 |
| | | | | | | | | | | | | 19 | 23.46 |
| | | | | | | | | | | | | | − 1.94 |
| | | | | | | | | | | | | 19 | 21.52 |
| | 20 52 | 53 28 | 8.1 | 20 44.8 | 21 4.0 | 7.6 | 10.9 | 14.5 | 18.0 | 19 | 11.00 | 21 | 11.00 |
| | 20 29.7 | 53 28.2 | 8.1 | 46.0 | | | | | | 21 | | | −15.87 |
| | | | | 47.4 | | | | | | | | | − 73 |
| | | | | 46.1 | | | | | | | −16.63 | | − 3 |
| | | | | | | | | | | | | 20 | 54.37 |
| | | | | | | | | | | | | | − 2.09 |
| | | | | | | | | | | | | 20 | 52.28 |
| | | | 7.9 | 20 47.9 | 21 6.8 | 10.3 | 13.6 | 17.2 | 20.7 | 21 | 13.72 | 21 | 13.72 |
| | | | | 46.3 | | | | | | | | | −18.94 |
| | | | | 51.0 | | | | | | | | | − 58 |
| | | | | 49.4 | | | | | | | −19.55 | | − 3 |
| | | | | | | | | | | | | 20 | 54.17 |
| | | | | | | | | | | | | | − 1.94 |
| | | | | | | | | | | | | 20 | 52.23 |
| | 23 00 | 54 41 | 9.1 | 22 40.4 | 23 9.9 | 13.4 | 17.1 | 20.7 | 24.5 | 23 | 17.12 | 23 | 17.12 |
| | 22 36.3 | 54 42.3 | 9.0 | 42.0 | | | | | | | | | −15.87 |
| | | | | 43.4 | | | | | | | | | − 76 |
| | | | | 41.9 | | | | | | | −16.66 | | − 3 |
| | | | | | | | | | | | | 23 | 0.46 |
| | | | | | | | | | | | | | − 2.12 |
| | | | | | | | | | | | | 22 | 58.34 |
| | | | 9.2 | 22 51.0 | 23 12.7 | 16.4 | 19.9 | 23.3 | 27.0 | 23 | 19.86 | 23 | 19.86 |
| | | | | 53.3 | | | | | | | | | −18.94 |
| | | | | 55.4 | | | | | | | | | − 61 |
| | | | | 53.2 | | | | | | | −19.58 | | − 3 |
| | | | | | | | | | | | | 23 | 0.28 |
| | | | | | | | | | | | | | − 1.97 |
| | | | | | | | | | | | | 22 | 58.31 |
| | 17 10 44 | 52 26 | 8.7 | 10 34.4 | 10 59.6 | 2.1 | 6.5 | 9.9 | 13.0 | 10 | 6.42 | 11 | 6.42 |
| | 10 19.0 | 52 27.8 | 8.3 | 35.7 | | | | | | | | | −20.41 |
| | Aug 9 | | | 36.8 | | | | | | | | | − 62 |
| | | | | 35.6 | | | | | | | −21.05 | | − 2 |
| | | | | | | | | | | | | 10 | 45.39 |
| | | | | | | | | | | | | | − 1.77 |
| | | | | | | | | | | | | 10 | 43.60 |
| | | | 8.5 | 10 48.3 | 11 0.8 | 3.8 | 7.1 | 10.6 | 13.8 | 11 | 7.22 | 11 | 7.22 |
| | Aug 11 | | | 49.8 | | | | | | | | | −21.31 |
| | | | | 51.7 | | | | | | | | | − 57 |
| | | 11 13 | | 49.9 | | | | | | | −21.90 | | − 2 |
| | | | | | | | | | | | | 10 | 45.32 |
| | | | | | | | | | | | | | − 1.72 |
| | | | | | | | | | | | | 10 | 43.60 |

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1873phae.proj.1584R

Aug. 9 −1′ 4.″35 +.″13
" 11 −1 4.50 +.13

Runs



| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +17.4 | 1′ 31.9 | 47.3 | 6′ | 39.60 | 16 8.75 | | | 5′ | 52 15 19.40 | |
| 76 d | 1.24065 | | | | | 52 15 5.50 | | | | − 8 | +10.00 |
| | 9.78691 | | | | | +13.90 | | | | + 22 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.14317 | | | | | | 15 19.40 | | | + 9.56 | |
| | | | | | | | | | | + 30 | |
| +2.75 | | | | | | | | | | − 7.40 | |
| −7.30 $\delta_1$ | | 18 0.91 | | 15 14.7 | | | | | | 15 22.00 | |
| | +26.0 | 1 36.2 | 51.2 | 6 | 43.70 | 16 4.65 | | | 5 | 19.60 | |
| d | 1.41497 | | | | | 52 14 58.82 | | | | − 18 | +10.24 |
| | 9.78691 | | | | | +20.78 | | | | + 22 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.31759 | | | | | | 15 19.60 | | | + 9.90 | |
| | | | | | | | | | | + 30 | |
| +2.75 | | | | | | | | | | − 8.60 | |
| −7.30 $\delta_2$ | | 18 0.88 | | 15 14.0 | | | | | | 21.34 | |
| | +17.0 | 3 38.1 | 52.9 | 23 | 45.50 | 59 2.85 | | | 20 | 53 58 12.65 | |
| 84 d | 1.23045 | | | | | 53 57 59.60 | | | | − 7 | +12.09 |
| | 9.76957 | | | | | +13.05 | | | | + 49 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.11573 | | | | | | 58 12.65 | | | +11.27 | |
| | | | | | | | | | | + 40 | |
| +2.53 | | | | | | | | | | − 7.50 | |
| −7.06 $\delta_1$ | | 19 23.98 | | 58 10.2 | | | | | | 58 ~~32.98~~ 17.24 | |
| | +26.7 | 3 42.7 | 57.0 | 23 | 47.35 | 58 58.00 | | | 20 | 12.67 | |
| d | 1.42681 | | | | | 53 ~~58~~ 57 52.17 | | | | − 19 | +12.38 |
| | 9.76957 | | | | | +20.50 | | | | + 50 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.31179 | | | | | | 58 12.67 | | | +11.67 | |
| | | | | | | | | | | + 40 | |
| +2.53 | | | | | | | | | | − 8.60 | |
| −7.06 $\delta_2$ | | 19 24.05 | | 58 9.4 | +1″ | | | | | 16.45 | |
| | +24.9 | 4 4.1 | 19.0 | 54 | 11.58 | 28 36.80 | | | 50 | 53 27 51.90 | |
| 72 d | 1.39620 | | | | | 53 27 32.55 | | | | − 16 | +11.50 |
| | 9.77480 | | | | | +19.35 | | | | + 54 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.28678 | | | | | | 27 51.90 | | | +10.77 | |
| | | | | | | | | | | + 35 | |
| +2.59 | | | | | | | | | | − 7.45 | |
| −6.80 $\delta_1$ | | 20 54.87 | | 27 49.2 | | | | | | 27 53.95 | |
| | +28.3 | 4 1.1 | 14.5 | 54 | 7.80 | 28 40.55 | | | 50 | 53.61 | |
| d | 1.38676 | | | | | 53 27 34.72 | | | | − 15 | +11.89 |
| | 9.77480 | | | | | +18.89 | | | | + 53 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.27612 | | | | | | 27 53.61 | | | +11.16 | |
| | | | | | | | | | | + 35 | |
| +2.59 | | | | | | | | | | − 8.55 | |
| −6.80 $\delta_2$ | | 20 54.52 | | 27 50.2 | | | | | | 56.95 | |
| | +35.2 | 1 14.1 | 24.8 | 41 | 17.45 | 41 30.90 | | | 40 | 54 40 54.22 | |
| 74 d | 1.54654 | | | | | 54 40 27.65 | | | | − 33 | +12.22 |
| | 9.76210 | | | | | + 26.57 | | | | + 17 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.42435 | | | | | | 40 54.22 | | | +11.98 | |
| | | | | | | | | | | + 40 | |
| +2.42 | | | | | | | | | | − 7.50 | |
| −6.44 $\delta_1$ | | 23 0.76 | | 40 52.5 | | | | | | 40 58.94 | |
| | +26.7 | 1 0.7 | 14.8 | 41 | 7.75 | 41 40.60 | | | 40 | 54.92 | |
| d | 1.42651 | | | | | 54 40 34.77 | | | | − 18 | +12.77 |
| | 9.76210 | | | | | + 20.15 | | | | + 14 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.30432 | | | | | | 40 54.92 | | | +12.41 | |
| | | | | | | | | | | + 40 | |
| +2.42 | | | | | | | | | | − 8.60 | |
| −6.44 $\delta_2$ | | 23 0.73 | | 40 52.6 | +1′ | 27 | | | | 59.09 | |
| | +30.8 | 0 4.8 | 21.9 | 53 | ~~13.55~~ 14.35 | 27 ~~10~~ 35.00 | | | 55 | 52 ~~26.5~~ 55.16 | |
| 81 d | 7.48855 | | | | | 52 26 30.65 | | | | 26 − 25 | see July 30 |
| | 9.78500 | | | | | +24.51 | | | | + 0 | July 5 +9.97 |
| ((δ) − D) $\frac{d'}{100}$ | 1.38926 | | | | | | 26 55.16 | | | + 9.92 | same star. |
| | | | | | | | | | | + 30 | |
| +2.75 | | | | | | | | | | − 9.20 | |
| −8.54 $\delta_1$ | | 10 46.35 | | 26 46.4 | | | | | | 26 4 ~~25~~ 55.53 | |
| | +17.3 | ~~9~~ 5.8 | ~~0~~ 9.7 | 56.5 | 2.25 | 26′ 46.10 | | | 55 | 25 ~~56~~ 55.36 | |
| d | 1.23805 | | | | | 52 ~~25~~ 26 41.60 | | | | − 8 | |
| | 9.78500 | | | | | +13.76 | | | | + 14 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.13876 | | | | | | 25 55.36 | | | +10.02 | 10.38 |
| | | | | | | | | | | + 30 | |
| +2.75 | | | | | | | | | | − 9.50 | |
| −8.54 $\delta_2$ | | 10 46.35 | | 26 47.7 | | | | | | 26 56.24 | |

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Date$_1$ = Aug. 9 1873 (249) Observer / Recorder — Date$_2$ = Aug 11 (250) Observer / Recorder

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 12 58 | 51 57 | 7.8 | 12 47.9 | 13 15.4 | 19.1 | 22.3 | 25.8 | 29.0 | 13 | 22.38 | 13 | 22.38 |
| | 12 33.9 | 51 58.7 | 7.9 | 49.8 | | | | | | | | | −20.41 |
| | κ | | | 50.7 | | | | | | | | | − 68 |
| | | | | 47.3 | | | | | | | − 21.04 | | − 2 |
| | | | | | | | | | | | | 13 | 1.384 |
| | | | | | | | | | | | | | − 1.78 |
| | | | | | | | | | | | | 12 | 59.56 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $c_1$ | | | | | | | | | | | | |
| | | | 7.8 | 13 3.1 | 13 16.4 | 19.8 | 23.1 | 26.5 | 29.9 | 13 | 23.14 | 13 | 23.14 |
| | | | | 4.9 | | | | | | | | | −21.31 |
| | κ | | | 6.9 | | | | | | | | | − 56 |
| | | | | 4.9 | | | | | | | − 21.89 | | − 2 |
| | | | | | | | | | | | | 13 | 1.25 |
| | | | | | | | | | | | | | − 1.73 |
| | | | | | | | | | | | | 12 | 59.52 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $c_2$ | | | | | | | | | | | | |
| 15 | 34 | 51 03 | 8.4 | 15 37.1 | 15 53.2 | 56.5 | 59.9 | 3.1 | 6.4 | 15 | 09.82 | 15 | 59.82 |
| 15 | 10.0 | 51 4.6 | 8.0 | 38.6 | | | | | | | | | −20.41 |
| | κ | | | 40.6 | | | | | | | | | − 69 |
| | | | | 38.8 | | | | | | | − 21.02 | | − 2 |
| | | | | | | | | | | | | 15 | 38.80 |
| | | | | | | | | | | | | | − 1.79 |
| | | | | | | | | | | | | 15 | 37.01 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_1$ | | | | | | | | | | | | |
| | | | 8.5 | 15 33.9 | 15 53.9 | 57.1 | 0.5 | 3.9 | 7.2 | 16 | 0.62 | 16 | 0.62 |
| | | | | 35.4 | | | | | | | | | −21.31 |
| | κ | | | 37.0 | | | | | | | | | − 54 |
| | | | | 35.4 | | | | | | | − 21.87 | | − 2 |
| | | | | | | | | | | | | 15 | 38.65 |
| | | | | | | | | | | | | | − 1.73 |
| | | | | | | | | | | | | 15 | 36.92 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |
| 17 | 10 | 51 47 | 7.8 | 17 5.6 | 17 27.2 | 30.5 | 34.0 | 37.3 | 40.8 | 17 | 33.96 | 17 | 33.96 |
| 16 | 46.9 | 51 49.4 | 8.0 | 6.9 | | | | | | | | | −20.42 |
| | κ | | | 9.2 | | | | | | | | | − 59 |
| | | | | 7.2 | | | | | | | − 21.03 | | − 2 |
| | | | | | | | | | | | | 17 | 12.93 |
| | | | | | | | | | | | | | − 1.80 |
| | | | | | | | | | | | | 17 | 11.13 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_4$ | | | | | | | | | | | | |
| | | | 8.0 | 17 7.2 | 17 27.9 | 31.4 | 34.7 | 38.1 | 41.6 | 17 | 34.74 | 17 | 34.74 |
| | | | | 10.3 | | | | | | | | | −21.32 |
| | κ | | | 11.6 | | | | | | | | | − 54 |
| | | | | 9.7 | | | | | | | − 21.88 | | − 2 |
| | | | | | | | | | | | | 17 | 12.86 |
| | | | | | | | | | | | | | − 1.75 |
| | | | | | | | | | | | | 17 | 11.11 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |
| 19 | 24 | 53 51 | 9.6 | 19 18.9 | 19 40.5 | 44.0 | 47.5 | 51.0 | 54.6 | 19 | 47.52 | 19 | 47.52 |
| 19 | 1.3 | 53 52.5 | 9.5 | 20.4 | | | | | | | | | −20.42 |
| | κ | | | 19.6 | | | | | | | | | − 66 |
| | | | | | | | | | | | − 21.11 | | − 3 |
| | | | | | | | | | | | | 19 | 26.41 |
| | | | | | | | | | | | | | − 1.83 |
| | | | | | | | | | | | | 19 | 24.58 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_1$ | | | | | | | | | | | | |
| | | | 9.6 | 19 14.1 | 19 41.9 | 45.4 | 48.5 | 51.9 | 55.5 | 19 | 48.46 | 19 | 48.46 |
| | | | | 16.1 | | | | | | | 48.46 | | −21.32 |
| | κ | | | 13.1 | | | | | | | | | − 60 |
| | | | | | | | | | | | − 21.95 | | − 3 |
| | | | | | | | | | | | | 19 | 26.51 |
| | | | | | | | | | | | | | − 1.77 |
| | | | | | | | | | | | | 19 | 24.734 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |
| 23 | 07 | 51 58 | 7.8 | 23 56.2 | 24 24.5 | 27.8 | 31.3 | 34.6 | 38.0 | 24 | 31.24 | 24 | 31.24 |
| 23 | 44.2 | 52 0.0 | 8.1 | 57.2 | | | | | | | | | −20.42 |
| | κ | | | 58.4 | | | | | | | | | − 61 |
| | | | | 57.3 | | | | | | | − 21.05 | | − 2 |
| | | | | | | | | | | | | 24 | 10.19 |
| | | | | | | | | | | | | | − 1.84 |
| | | | | | | | | | | | | 24 | 8.35 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_1$ | | | | | | | | | | | | |
| | | | 8.2 | 23 55.5 | 24 25.2 | 28.6 | 32.1 | 35.2 | 38.8 | 24 | 31.98 | 24 | 31.98 |
| | | | | 57.3 | | | | | | | | | −21.32 |
| | κ | | | 59.1 | | | | | | | | | − 56 |
| | | | | 57.3 | | | | | | | − 21.90 | | − 2 |
| | | | | | | | | | | | | 24 | 10.08 |
| | | | | | | | | | | | | | − 1.78 |
| | | | | | | | | | | | | 24 | 8.30 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $a_2$ | | | | | | | | | | | | |

For just obs, see previous page

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Runs



| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +33.1 | 0 18.8 | 35.2 | 25 | 27.00 | 57 21.35 | | | 25 | 51 56 43.64 | |
| | 1.51983 | | | | | 51 56 17.00 | | | | − 29 | +9.49 |
| 76 d | 9.78999 | | | | | +26.64 | | | | + 6 | |
| | 1.42553 | | | | | | 56 43.64 | | | +9.42 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −9.15 | |
| +2.80 $\delta_1$ | | 13 2.36 | | 56 35.8 | | | | | | 56 43.98 | |
| −8.16 | | | | | | | | | | | |
| | +18.2 | 0 7.3 | 22.8 | 23 | 15.05 | 57 33.30 | | | 25 | 43.44 | |
| | 1.26007 | | | | | 51 56 28.80 | | | | − 9 | +9.76 |
| d | 9.78990 | | | | | +14.64 | | | | + 3 | |
| | 1.16568 | | | | | | 56 43.44 | | | +9.52 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.80 | | | | | | | | | | −9.40 | |
| −8.16 $\delta_2$ | | 13 2.32 | | 56 35.6 | | | | | | 48.80 | |
| | +21.0 | 4 40.3 | 56.4 | 19 | 48.35 | 3 0.00 | | | 15 | 51 2 ~~9.34~~ 1.34 | |
| | 1.32222 | | | | | 51 1 55.65 | | | | − 12 | +9.31 |
| 70 d | 9.79856 | | | | | +~~18.69~~ 17.29 | | | | + 63 | |
| | 1.23649 | | | | | | 2 9.34 | | | +8.50 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.90 | | | | | | | | | | −9.00 | |
| −7.70 $\delta_1$ | | 15 39.91 | | 2 5.5 | | | | | | 2 ~~9.65~~ 13.20 | |
| | +25.1 | 4 44.5 | 59.2 | 19 | 51.85 | 2 56.50 | | | 15 | 12.60 | |
| | 1.39967 | | | | | 51 1 52.00 | | | | − 17 | +9.35 |
| d | 9.79856 | | | | | +20.60 | | | | + 63 | |
| | 1.31394 | | | | | | 2 12.60 | | | +8.59 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.90 | | | | | | | | | | −9.30 | |
| −7.70 $\delta_2$ | | 15 39.82 | | 2 5.0 | | | | | | 12.65 | |
| | +26.8 | 3 48.7 | 4.2 | 33 | 56.45 | 48 51.90 | | | 30 | 51 48 8.18 | |
| | 1.42813 | | | | | 51 47 46.55 | | | | − 19 | +9.50 |
| 78 d | 9.79128 | | | | | +21.63 | | | | + 51 | |
| | 1.33512 | | | | | | 48 8.18 | | | +9.28 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.81 | | | | | | | | | | −9.10 | |
| −7.44 $\delta_1$ | | 17 13.94 | | 48 1.5 | | | | | | 48 8.98 | |
| | +25.0 | 3 49.0 | 2.6 | 33 | 53.80 | 48 52.55 | | | 30 | 8.23 | |
| | 1.39794 | | | | | 51 47 48.05 | | | | − 17 | +10.01 |
| d | 9.79128 | | | | | +20.18 | | | | + 51 | |
| | 1.30493 | | | | | | 48 8.23 | | | +9.39 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −9.35 | |
| +2.81 $\delta_2$ | | 17 13.92 | | 48 1.4 | | | | | | 8.89 | |
| −7.44 | | | | | | | | | | | |
| | +27.9 | 0 33.2 | 49.9 | 30 | 41.55 | 52 6.80 | | | 30 | 53 51 23.93 | |
| | 1.44560 | | | | | 53 51 2.45 | | | | − 20 | +11.63 |
| 54 d | 9.77078 | | | | | +21.48 | | | | + 9 | |
| | 1.33209 | | | | | | 51 23.93 | | | +11.35 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 39 | |
| | | | | | | | | | | −9.25 | |
| +2.56 $\delta_1$ | | 19 27.14 | | 51 19.2 | | | | | | 51 26.77 31 | |
| −7.06 | | | | | | | | | | | |
| | +33.4 | 0 37.7 | 50.0 | 30 | 43.85 | 52 4.50 | | | 30 | 25.72 | |
| | 1.52375 | | | | | 53 51 0.00 | | | | − 29 | +11.65 |
| d | 9.77078 | | | | | +25.72 | | | | + 10 | |
| | 1.41024 | | | | | | 51 25.72 | | | +11.45 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 39 | |
| +2.56 | | | | | | | | | | −9.55 | |
| −7.06 $\delta_2$ | | 19 27.30 | | 51 20.8 | | | | | | 27.82 | |
| | +33.9 | 2 28.7 | 43.9 | 22 | 36.30 | 0 12.05 | | | 20 | 51 59 34.95 | |
| | 1.53020 | | | | | 51 59 7.70 | | | | − 31 | +9.80 |
| 74 d | 9.78950 | | | | | +27.25 | | | | + 34 | |
| | 1.43541 | | | | | | 59 34.95 | | | +9.47 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.77 | | | | | | | | | | −9.05 | |
| −6.24 $\delta_1$ | | 24 11.12 | | 59 29.5 | | | | | | 59 35.70 | |
| | +34.7 | 2 30.1 | 44.9 | 22 | 37.50 | 0 10.85 | | | 20 | 34.25 | |
| | 1.54033 | | | | | 51 59 6.35 | | | | − 32 | +9.88 |
| d | 9.78950 | | | | | +27.90 | | | | + 34 | |
| | 1.44554 | | | | | | 59 34.25 | | | +9.56 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −9.35 | |
| +2.77 $\delta_2$ | | 24 11.07 | | 59 28.5 | | | | | | 34.78 | |
| −6.24 | | | | | | | | | | | |

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Date$_1$ = Aug. 9 (249) Observer / Recorder — Date$_2$ = Aug. 11 (250) Observer / Recorder

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17h | 25m 15s | 54° 27′ | 8.5 | 25m 11.2 | 25m 32.3 | 35.9 | 39.4 | 45.0 | 46.6 | 25m | 39.44 | 25m | 39.44 |
| | 24 52.3 | 54 27.9 | 8.4 | 11.5 | | | | | | | | | −20.42 |
| | K | | | 13.5 | | | | | | | | | − 67 |
| | | | | 11.7 | | | | | | | − 21.12 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 25 | 18.32 |
| 26 | | | | | | | | | | | | | − 1.86 |
| | $c_1$ | | | | | | | | | | | 25 | 16.46 |
| | | | 8.8 | 25 19.5 | 25 33.0 | 36.7 | 40.5 | 45.9 | 47.5 | 25 | 40.32 | 25 | 40.32 |
| | | | | 22.7 | | | | | | | | | −21.32 |
| | K | | | 25.6 | | | | | | | | | − 62 |
| | | | | 22.6 | | | | | | | − 21.97 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 25 | 18.35 |
| | | | | | | | | | | | | | − 1.80 |
| | $c_2$ | | | | | | | | | | | 25 | 16.55 |
| 27 | 10m | 53° 01′ | 9.6 | 27 40.5 | 27 28.1 | 31.5 | 35.0 | 38.6 | 42.0 | 27 | 35.00 | 27 | 35.00 |
| 26 | 47.8 | 53 1.8 | 9.4 | 42.9 | | | | | | | | | −20.42 |
| | K | | | 41.7 | | | | | | | | | − 64 |
| | | | | | | | | | | | − 21.09 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 27 | 13.95 |
| | | | | | | | | | | | | | − 1.86 |
| | $a_1$ | | | | | | | | | | | 27 | 12.09 |
| | | | 9.5 | 27 7.2 | 27 29.0 | 32.5 | 36.1 | 39.4 | 43.0 | 27 | 36.00 | 27 | 36.00 |
| | | | | | | | | | | | | | −21.32 |
| | K | | | | | | | | | | | | − 58 |
| | | | | | | | | | | | − 21.93 | | − 3 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 27 | 14.07 |
| | | | | | | | | | | | | | − 1.80 |
| | $a_2$ | | | | | | | | | | | 27 | 12.27 |
| 29 | 24m | 52° 40′ | 7.9 | 29 16.7 | 29 40.4 | 43.9 | 47.4 | 50.8 | 54.1 | 29 | 47.32 | 29 | 47.32 |
| 29 | 0.7 | 52 42.2 | 8.1 | 18.0 | | | | | | | | | −20.43 |
| | K | | | 19.3 | | | | | | | | | − 63 |
| 30 | 18 | | | 18.0 | | | | | | | − 21.08 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 29 | 26.24 |
| | | | | | | | | | | | | | − 1.87 |
| | $a_1$ | | | | | | | | | | | 29 | 24.37 |
| | | | 8.3 | 29 19.4 | 29 41.2 | 44.7 | 48.1 | 51.6 | 55.0 | 29 | 48.12 | 29 | 48.12 |
| | | | | 20.9 | | | | | | | | | −21.32 |
| | K | | | 20.2 | | | | | | | | | − 58 |
| | | | | 20.8 | | | | | | | − 21.92 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 29 | 26.20 |
| | | | | | | | | | | | | | − 1.81 |
| | $a_2$ | | | | | | | | | | | 29 | 24.39 |
| 32 | 07m | 52° 03′ | 9.1 | 32 2.8 | 32 24.9 | 28.2 | 31.6 | 35.1 | 38.4 | 32 | 31.64 | 32 | 31.64 |
| 31 | 47.8 | 52 5.4 | 9.1 | 4.5 | | | | | | | | | −20.43 |
| | K | | | 6.0 | | | | | | | | | − 61 |
| | | | | 4.4 | | | | | | | − 21.06 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 32 | 10.58 |
| | | | | | | | | | | | | | − 1.87 |
| | $a_1$ | | | | | | | | | | | 32 | 8.71 |
| | | | 9.1 | 32 11.4 | 32 25.7 | 29.4 | 32.3 | 35.8 | 39.3 | 32 | 32.50 | 32 | 32.50 |
| | | | | 13.2 | | | | | | | | | −21.32 |
| | K | | | 15.2 | | | | | | | | | − 56 |
| | | | | 13.3 | | | | | | | − 21.90 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 32 | 10.60 |
| | | | | | | | | | | | | | − 1.82 |
| | $a_2$ | | | | | | | | | | | 32 | 8.78 |
| 33 | 50m | 52° 38′ | 9.0 | 33 35.2 | 34 59 9.3 | 12.7 | 16.1 | 19.5 | | 34 | 12.70 | 34 | 12.70 |
| 33 | 26.9 | 52 40.3 | 8.6 | 37.2 | | | | | | | | | −20.43 |
| | K | | | 35.6 | | | | | | | | | − 62 |
| | | | | 37.0 | | | | | | | − 21.07 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 33 | 51.63 |
| | | | | | | | | | | | | | − 1.88 |
| | $a_1$ | | | | | | | | | | | 33 | 49.75 |
| | | | 9.0 | 33 47.0 | 34 6.7 | 10.0 | 13.6 | 16.9 | 21.2 | 34 | 13.48 | 34 | 13.48 |
| | | | | 49.0 | | | | | | | | | −21.32 |
| | K | | | 50.6 | | | | | | | | | − 57 |
| | | | | 48.9 | | | | | | | − 21.91 | | − 2 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | 33 | 51.57 |
| | | | | | | | | | | | | | − 1.83 |
| | $a_2$ | | | | | | | | | | | 33 | 49.74 |

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Runs

80

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +27.7 | 4 42.0 | 57.0 | 54 | 49.50 | 27 58.85 | | | 50 | 54 27 15.52 | |
| | 1.44248 | | | | | 54 26 54.50 | | | | − 20 | +12.78 |
| 88 d | 9.76448 | | | | | +21.02 | | | | + 63 | |
| | 1.32267 | | | | | | 27 15.52 | | | +11.95 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 9.25 | |
| +2.45 $\delta_1$ | | 25 18.91 | | 27 13.0 | | | | | | 19.05 | |
| −6.04 | | | | | | | | | | | |
| | +17.7 | 4 34.4 | 49.0 | 54 | 41.70 | 28 6.65 | | | 50 | 15.58 | |
| | 1.24797 | | | | | 54 27 2.15 | | | | − 8 | +12.98 |
| d | 9.76448 | | | | | +13.43 | | | | + 61 | |
| | 1.02816 | | | | | | 27 15.58 | | | +12.05 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 9.65 | |
| +2.45 $\delta_2$ | | 25 19.03 | | 27 13.0 | | | | | | 19.01 | |
| −6.04 | | | | | | | | | | | |
| | ~~3.3~~ | 0 40.0 | 54.3 | 20 | 47.15 | 2 1.20 | | | 20 | 53 0 57.59 | |
| | −6.7 | | | | | 53 0 56.85 | | | | − 1 | +10.58 |
| d | 0.82607$_m$ | | | | | − 5.26 | | | | + 10 | |
| | 9.77930 | | | | | | 0 51.59 | | | +10.49 | |
| ((δ) − D) $\frac{d'}{100}$ | 0.72108$_m$ | | | | | | | | | + 30 | ✓ |
| | | | | | | | | | | − 9.10 | |
| +2.63 $\delta_1$ | | 27 14.72 | | 0 47.7 | | | | | | 0 53.37 | |
| −5.70 | | | | | | | | | | | |
| | ~~+28.8~~ | 1 8.0 | 21.8 | 21 | 1490 | 1 33.45 | | | 20 | 51.57 | |
| | 1.46937 | | | | | 53 0 28.95 | | | | − 22 | +10.82 |
| d | 9.77940 | | | | | +22.62 | | | | + 16 | |
| | 1.35450 | | | | | | 0 51.57 | | | +10.58 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 9.40 | |
| +2.63 $\delta_2$ | | 27 14.90 | | 0 47.3 | | | | | | 52.99 | |
| −5.70 | | | | | | | | | | | |
| | +29.3 | 1 2.2 | 17.2 | 41 | 9.70 | 41 38.65 | | | 40 | 52 40 56.96 | ✓ Lpo min |
| | 1.46687 | | | | | 52 40 34.30 | | | | − 23 | +10.39 +10.39 |
| 50 d | 9.77270 | | | | | +22.66 | | | | + 16 | |
| | 1.35528 | | | | | | 40 56.96 | | | +10,16 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | −9.05 | |
| +2.67 $\delta_1$ | | 29 27.04 | | 40 53.0 | | | | | | 40 58.30 ? | |
| −5.32 | | | | | | | | | | | |
| | +27.3 | 0 1.1 | 15.0 | 40 | 8.10 | 42 40.25 | | | 40 | 41 57.35 | ✓ Lpo min |
| | 1.43616 | | | | | 52 41 35.75 | | | | − 20 | +10,37 +10.37 |
| d | 9.78255 | | | | | +21.60 | | | | + 1 | |
| | 1.33442 | | | | | | 41 57.35 | | | +10.26 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 9.35 | |
| +2.67 $\delta_2$ | | 29 27.06 | | 40 53.0 | | | | | | 40 58.37 ? | |
| −5.32 | | | | | | | | | | | |
| | +27.2 | 2 23.0 | 39.0 | 17 | 31.08 | 5 17.35 | | | 15 | 52 4 34.83 | |
| | 1.43457 | | | | | 52 4 13.00 | | | | − 19 | +9.98 |
| 86 d | 9.78869 | | | | | +21.83 | | | | + 32 | |
| | 1.33897 | | | | | | 4 34.83 | | | +9.63 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 8.95 | |
| +2.74 $\delta_1$ | | 32 11.45 | | 4 31.0 | | | | | | 4 35.86 | |
| −4.86 | | | | | | | | | | | |
| | +19.2 | 2 17.8 | 32.1 | 17 | 24.95 | 5 23.40 | | | 15 | 34.31 | |
| | 1.28330 | | | | | 52 4 18.90 | | | | − 10 | +10.14 |
| d | 9.78869 | | | | | +15.41 | | | | + 31 | |
| | 1.18770 | | | | | | 4 34.31 | | | +9.63 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 9.30 | |
| +2.74 $\delta_2$ | | 32 11.52 | | 4 30.3 | | | | | | 35.15 | |
| −4.86 | | | | | | | | | | | |
| | +35.7 | 3 2.5 | 18.2 | 43 | 10.85 | 39 37.50 | | | 40 | 52 39 1.43 | |
| | 1.55267 | | | | | 52 38 33.15 | | | | − 33 | +10.50 |
| 78 d | 9.78805 | | | | | +28.28 | | | | + 41 | |
| | 1.45143 | | | | | | 39 1.43 | | | +10.12 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 9.00 | |
| +2.66 $\delta_1$ | | 33 52.41 | | 38 58.4 | | | | | | 39 2.93 | |
| −4.56 | | | | | | | | | | | |
| | +24.6 | 2 53.7 | 9.7 | 43 | 2.70 | 39 45.66 | | | 40 | 0.64 | |
| | 1.39094 | | | | | 52 38 41.15 | | | | − 16 | +10.75 |
| d | 9.78305 | | | | | +19.49 | | | | + 39 | |
| | 1.28970 | | | | | | 39 0.64 | | | +10.22 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 9.30 | |
| +2.66 $\delta_2$ | | 33 52.40 | | 38 57.5 | | | | | | 2.09 | |
| −4.56 | | | | | | | | | | | |

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Date$_1$ = Aug 9 249 Observer Recorder — Date$_2$ = Aug 11 250 Observer Recorder — 81

| Star. | α | δ | Mag. | $T_s$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| κ | 17 34 49 | 53 0 14 | 8.8 | 35m 1.2 | 35m 7.2 | 10.8 | 14.2 | 17.7 | 21.0 | 35 | 14.18 | 35 | 14.18 |
| | 34 16.4 | 53 15.2 | 9.0 | 2.8 | | | | | | | | | −20.43 |
| | | | | 4.7 | | | | | | | | | −64 |
| | | | | 2.9 | | | | | | | − 21.10 | | −3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 34 | 53.08 |
| | | | | | | | | | | | | | − 1.90 |
| $a_1$ | | | | | | | | | | | | 34 | 51.18 |
| κ | | | 9.1 | 35 5.9 | 35 8.2 | 11.6 | 15.3 | 18.4 | 22.0 | 35 | 15.10 | 35 | 15.10 |
| | | | | | | | | | | | | | 21.32 |
| | | | | | | | | | | | | | 20.43 |
| | | | | | | | | | | | | | −59 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | − 21.94 | | −3 |
| | | | | | | | | | | | | 34 | 53.16 |
| | | | | | | | | | | | | | − 1.84 |
| $a_2$ | | | | | | | | | | | | 34 | 51.32 |
| κ | 36 06 | 53 44 | 8.6 | 36 7.3 | 36 22.2 | 25.7 | 29.1 | 32.7 | 36.2 | 36 | 29.18 | 36 | 29.18 |
| | 35 43.3 | 53 44.7 | 8.6 | 8.9 | | | | | | | | | −20.43 |
| | | | | 10.3 | | | | | | | | | −65 |
| | | | | 8.8 | | | | | | | − 21.18 | | −3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 36 | 8.07 |
| | | | | | | | | | | | | | − 1.90 |
| $a_1$ | | | | | | | | | | | | 36 | 6.17 |
| κ | | | 8.6 | 36 8.1 | 36 23.0 | 26.3 | 29.9 | 33.4 | 37.0 | 36 | 29.92 | 36 | 29.92 |
| | | | | 9.5 | | | | | | | | | 21.32 |
| | | | | 11.5 | | | | | | | | | −60 |
| | | | | 9.7 | | | | | | | − 21.95 | | −3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 36 | 7.97 |
| | | | | | | | | | | | | | − 1.85 |
| $a_2$ | | | | | | | | | | | | 36 | 6.12 |
| κ | 37 32 | 53 21 | 7.0 | 37 28.0 | 37 56.8 | 0.3 | 3.7 | 7.2 | 10.6 | 38 | 3.76 | 38 | 3.76 |
| | 37 18.1 | 53 24.7 | 8.9 | 29.8 | | | | | | | | | −20.43 |
| | | | | 31.1 | | | | | | | | | −65 |
| | | | | 29.9 | | | | | | | − 21.18 | 1 | −3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 37 | 42.65 |
| | | | | | | | | | | | | | − 1.91 |
| $a_1$ | | | | | | | | | | | | 37 | 40.74 |
| κ | | | 7.9 | 37 56.6 | 37 57.7 | 1.0 | 4.5 | 7.8 | 11.3 | 38 | 4.46 | 38 | 4.46 |
| | | | | 58.4 | | | | | | | | | 21.32 |
| | | | | 0.2 | | | | | | | | | −57 |
| | | | | 58.4 | | | | | | | − 21.92 | 4 | −3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 37 | 42.52 |
| | | | | | | | | | | | | | − 1.86 |
| $a_2$ | | | | | | | | | | | | 37 | 40.66 |
| κ | 39 16 | 53 30 | 8.8 | 39 8.1 | 39 32.5 | 35.9 | 39.5 | 43.0 | 46.6 | 39 | 39.50 | 39 | 39.50 |
| | 38 54.1 | 53 31.1 | 8.5 | 9.4 | | | | | | | | | −20.43 |
| | | | | 11.1 | | | | | | | | | −65 |
| | | | | 9.5 | | | | | | | − 21.18 | 1 | −3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 39 | 18.39 |
| | | | | | | | | | | | | | − 1.92 |
| $a_1$ | | | | | | | | | | | | 39 | 16.47 |
| κ | | | 9.0 | 39 2.3 | 39 33.5 | 36.9 | 40.2 | 43.7 | 47.5 | 39 | 40.36 | 39 | 40.36 |
| | | | | 3.7 | | | | | | | | | −21.32 |
| | | | | 1.8 | | | | | | | | | −59 |
| | | | | 3.8 | | | | | | | − 21.94 | | −3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 39 | 18.42 |
| | | | | | | | | | | | | | − 1.87 |
| $a_2$ | | | | | | | | | | | | 39 | 16.55 |
| κ | 41 21 | 53 50 | 4.0 | 41 12.7 | 41 36.3 | 39.9 | 43.2 | 46.7 | 50.3 | 41 | 43.28 | 41 | 43.28 |
| | 40 58.8 | 53 50.7 | 5.7 | 14.0 | | | | | | | | | −20.44 |
| | | | | 15.8 | | | | | | | | | −65 |
| | | | | 14.2 | | | | | | | − 21.12 | | −3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 41 | 22.16 |
| | | | | | | | | | | | | | − 1.94 |
| $a_1$ | | | | | | | | | | | | 41 | 20.22 |
| κ | | | 4.0 | 41 7.9 | 41 37.0 | 40.4 | 43.9 | 47.6 | 51.2 | 41 | 44.02 | 41 | 44.02 |
| | | | | 4.3 | | | | | | | | | −21.32 |
| | | | | 11.4 | | | | | | | | | −60 |
| | | | | 9.5 | | | | | | | − 21.95 | | −3 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | 41 | 22.07 |
| | | | | | | | | | | | | | − 1.88 |
| $a_2$ | | | | | | | | | | | | 41 | 20.19 |

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Runs

82

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +18.3 | 2 3.5 | 19.1 | 7 | 11.20 | 15 37.05 | | | 5 | 53 14 41.53 | |
| | 1.05308 | | | | | 53 14 32.70 | | | | − 3 | +11.29 |
| 52 d | 9.77700 | | | | | + 8.83 | | | | + 28 | |
| | 0.94579 | | | | | | 14 41.53 | | | +10.72 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 32 | |
| | | | | | | | | | | − 9.00 | |
| +2.59 $\delta_1$ | | 34 53.77 | | 14 39.4 | | | | | | 14 43.82 | |
| −4.40 | | | | | | | | | | | |
| | +9.2 | 2 2.9 | 16.9 | 7 | 9.90 | 15 38.45 | | | 5 | 41.14 | |
| | 0.96379 | | | | | 53 14 33.95 | | | | − 3 | +11.38 |
| d | 9.77700 | | | | | + 7.19 | | | | + 28 | |
| | 0.85650 | | | | | | 14 41.14 | | | +10.81 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 32 | |
| | | | | | | | | | | − 9.35 | |
| +2.59 $\delta_2$ | | 34 53.91 | | 14 38.8 | | | | | | 43.17 | |
| −4.40 | | | | | | | | | | | |
| | +20.4 | 2 48.9 | 2.2 | 37 | 55.55 | 44 52.80 | | | 35 | 53 44 4.20 | 86 |
| | 1.30963 | | | | | 53 43 48.45 | | | | − 11 | +11.56 |
| 74 d | 9.77199 | | | | | +15.75 | | | | + 38 | |
| | 1.19733 | | | | | | 44 4.20 | | | +11.22 | ✓ |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 07 | |
| | | | | | | | | | | − 9.05 | |
| +2.52 $\delta_1$ | | 36 8.69 | | 44 2.8 | | | | | | 44 7.01 | |
| −4.16 | | | | | | | | | | | |
| | +20.2 | 2 49.9 | 2.1 | 37 | 56.00 | 44 52.35 | | | 35 | 3.45 | |
| | 1.30535 | | | | | 53 43 47.85 | | | | − 10 | +11.96 |
| d | 9.77199 | | | | | +15.60 | | | | + 38 | |
| | 1.19305 | | | | | | 44 3.45 | | | +11.31 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 37 | ✓ |
| | | | | | | | | | | − 9.35 | |
| +2.52 $\delta_2$ | | 36 8.64 | | 44 1.9 | | | | | | ~~15.06~~ 6.06 | |
| −4.16 | | | | | | | | | | | |
| | +33.9 | 3 6.7 | 20.3 | 58 | 13.50 | 24 34.85 | | | 55 | 53 23 56.89 | ✓ |
| | 1.53020 | | | | | 53 23 30.50 | | | | −4.29 | ~~+10.93~~ |
| 70 d | 9.77550 | | | | | +26.39 | | | | +10.88 | +11.33 |
| | 1.42141 | | | | | | 23 56.89 | | | + 04 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | − 9.00 | |
| | | | | | | | | | | ~~23 58.82~~ | |
| +2.57 $\delta_1$ | | 37 43.31 | | 23 55.2 | | | | | | 23 59.24 | |
| −4.08 | | | | | | | | | | | |
| | +6.1 | 2 44.0 | 58.0 | 58 | 51.00 | 23 57.35 | | | 55 | 23 57.60 | ✓ |
| | 0.78533 | | | | | 53 22 52.85 | | | | − 1 | +11.67 |
| d | 9.77558 | | | | | + 4.75 | | | | + 38 | |
| | 0.67668 | | | | | | 22 57.60 | | | +10.96 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 34 | |
| | | | | | | | | | | − 8.80 | |
| +2.57 $\delta_2$ | | 37 43.23 | | 23 55.9 | | | | | | 23 59.97 | |
| −4.08 | | | | | | | | | | | |
| | +30.0 | 1 43.1 | 57.9 | 51 | 50.50 | 30 57.85 | | | 50 | 53 30 16.79 | |
| | 1.47712 | | | | | 53 29 53.60 | | | | − 24 | +11.34 |
| 86 d | 9.77439 | | | | | +23.29 | | | | + 24 | |
| | 1.36722 | | | | | | 30 16.79 | | | +10.99 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 35 | |
| +2.54 | | | | | | | | | | − 8.95 | |
| − 3.62 $\delta_1$ | | 39 19.01 | | 30 15.6 | | | | | | 30 19.18 | |
| | +36.6 | 1 48.2 | 1.9 | 51 | 55.05 | 30 53.30 | | | 50 | 17.22 | |
| | 1.56348 | | | | | 53 29 48.80 | | | | − 35 | +11.34 |
| d | 9.77439 | | | | | +28.42 | | | | + 25 | |
| | 1.45358 | | | | | | 30 17.22 | | | +11.09 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 35 | |
| +2.54 | | | | | | | | | | − 9.30 | |
| −3.62 $\delta_2$ | | 39 19.09 | | 30 15.6 | | | | | | 19.26 | |
| | +29.1 | 0 40.8 | 55.1 | 30 | 47.96 | 52 0.40 | | | 30 | 53 51 18.46 | |
| | 1.46389 | | | | | 53 50 56.05 | | | | − 22 | +11.61 |
| 74 d | 9.77078 | | | | | +22.41 | | | | + 10 | |
| | 1.35038 | | | | | | 51 18.46 | | | +11.34 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 39 | |
| | | | | | | | | | | − 8.95 | |
| +2.50 $\delta_1$ | | 41 22.72 | | 51 17.9 | | | | | | 51 21.12 | |
| −3.24 | | | | | | | | | | | |
| | +34.5 | 0 46.9 | 59.1 | 30 | 52.50 | 51 55.85 | | | 30 | 17.92 | |
| | 1.63782 | | | | | 53 50 51.35 | | | | − 31 | +11.63 |
| d | 9.77078 | | | | | +26.57 | | | | + 12 | |
| | 1.42431 | | | | | | 51 17.92 | | | +11.43 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 39 | |
| | | | | | | | | | | − 9.30 | |
| +2.50 $\delta_2$ | | 41 22.69 | | 51 17.0 | | | | | | 20.25 | |
| −3.24 | | | | | | | | | | | |

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Date$_1$ = Aug. 9 249 Observer / Recorder

Date$_2$ = Aug. 11 257 Observer / Recorder

88

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| p | 42 42.3 | 53 32 7.1 | 9.1 9.0 | 43 2.9 4.6 6.5 4.7 | 43 21.4 | 25.0 | 28.5 | 32.0 | 35.4 | 43 | 28.46 | 43 | 28.46 |
| | κ | | | | | | | | | | | | − 20.44 |
| | | | | | | | | | | | | | − 65 |
| | | | | | | | | | | | − 21.18 | | − 3 |
| | | | | | | | | | | | | 43 | 7.34 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | − 1.94 |
| | $\alpha_1$ | | | | | | | | | | | 43 | 5.40 |
| | | | | 48 1.1 1.6 3.1 1.6 | 48 — | — | — | 32.8 | 36.4 | | | | 43 29.44 36 −01 |
| | κ | | | | | | | | | | | | − 21.33 |
| | | | | | | | | | | | | | − 59 |
| | | | | | | | | | | | − 21.95 | | − 3 |
| | | | | | | | | | | | | 43 | 7.46 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | − 1.89 |
| | $\alpha_2$ | | | | | | | | | | | 43 | 5.57 51 |
| 45 | 10.9 | 53 36.1 | 8.6 8.7 | 45 2.8 2.5 2.6 2.5 | 45 50.7 | 54.1 | 57.7 | 1.1 | 4.5 | 45 | 57.62 | 45 | 57.62 |
| | κ | | | | | | | | | | | | − 20.44 |
| | | | | | | | | | | | | | − 65 |
| | | | | | | | | | | | − 21.12 | | − 3 |
| | | | | | | | | | | | | 45 | 36.60 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | − 1.75 |
| 47 16 48 36 | $\alpha_1$ | | | | | | | | | | | 45 | 34.55 |
| 50 15 51 38 | | | 9.0 | | Lost | | | | | | | | |
| | κ | | | | | | | | | | | | |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| | $\alpha_2$ | | | | | | | | | | | | |
| 52 | 10.4 | 53 45.7 | 9.0 8.9 | 52 36.0 38.1 40.5 38.2 | 52 47.9 | 51.5 | 55.0 | 58.4 | 2.1 | 52 | 54.98 | 52 | 54.98 |
| | κ | | | | | | | | | | | | − 20.44 |
| | | | | | | | | | | | | | − 65 |
| | | | | | | | | | | | − 21.12 | | − 3 |
| | | | | | | | | | | | | 52 | 33.86 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | − 1.97 |
| | $\alpha_1$ | | | | | | | | | | | 52 | 31.87 |
| | | | 9.0 | 52 36.7 37.9 36.0 37.9 | 52 48.8 | 52.3 | 55.7 | 59.3 | 2.8 | 52 | 55.78 | 52 | 55.78 |
| | κ | | | | | | | | | | | | − 21.33 |
| | | | | | | | | | | | | | − 60 |
| | | | | | | | | | | | − 21.96 | | − 3 |
| | | | | | | | | | | | | 52 | 33.82 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | − 1.93 |
| | $\alpha_2$ | | | | | | | | | | | 52 | 31.89 |
| 53 | 56.9 | 53 27.8 | 8.2 8.0 | 54 4.4 6.3 7.9 6.2 | 54 33.6 | 37.0 | 40.6 | 44.2 | 47.6 | 54 | 40.60 | 54 | 40.60 |
| | κ | | | | | | | | | | | | − 20.45 |
| | | | | | | | | | | | | | − 65 |
| | | | | | | | | | | | − 21.13 | | − 3 |
| | | | | | | | | | | | | 54 | 19.47 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | − 1.99 |
| | $\alpha_1$ | | | | | | | | | | | 54 | 17.48 |
| | | | 8.2 | 54 13.5 16.1 18.1 15.9 | 54 34.4 | 38.0 | 41.5 | 45.0 | 48.3 | 54 | 41.44 | 54 | 41.44 |
| | κ | | | | | | | | | | | | − 21.33 |
| | | | | | | | | | | | | | − 60 |
| | | | | | | | | | | | − 21.96 | | − 3 |
| | | | | | | | | | | | | 54 | 19.48 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | − 1.94 |
| | $\alpha_2$ | | | | | | | | | | | 54 | 17.54 |
| 55 | 47.6 | 51 12.1 | 8.9 8.8 | 56 5.1 6.6 8.3 6.6 | 56 29.4 | 32.6 | 35.9 | 39.2 | 42.7 | 56 | 38.96 | 56 | 35.96 |
| | κ | | | | | | | | | | | | − 20.45 |
| | | | | | | | | | | | | | − 59 |
| | | | | | | | | | | | − 21.06 | | − 2 |
| | | | | | | | | | | | | 56 | 14.90 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | − 1.97 |
| | $\alpha_1$ | | | | | | | | | | | 56 | 12.93 |
| | | | — | 56 6.3 7.7 9.6 7.9 | 56 30.1 | 33.5 | 36.8 | 40.0 | 43.9 | 56 | 36.86 36.86 | 56 | 36.86 |
| | κ | | | | | | | | | | | | − 21.33 |
| | | | | | | | | | | | | | − 54 |
| | | | | | | | | | | | − 21.89 | | − 2 |
| | | | | | | | | | | | | 56 | 14.97 |
| | $((\delta) - D)\frac{\kappa'}{100}$ | | | | | | | | | | | | − 1.93 |
| | $\alpha_2$ | | | | | | | | | | | 56 | 13.04 |

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Runs

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | 3′ 11.0 | 25.0 | 55 | 1880 | 29 30.35 | | | 50′ | 53 28 44.49 | |
| | +23.8 | | | | | 53 28 26.00 | | | | − 15 | +11.59 |
| 95 d | 1.376758 | | | | | +18.49 | | | | + 43 | |
| | 9.774465 | | | | | | 28 44.49 | | | +10.96 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.266944 | | | | | | | | | + 35 | |
| +2.54 | | | | | | | | | | − 8.90 | |
| −2.94 $\delta_1$ | | 43 7.94 | | 28 44.2 | | | | | | 28 47.18 | |
| | +27.8 | 3 12.1 | 26.2 | 53 | 19.05 | 29 29.20 | | | 50 | 46.30 | |
| | 1.444404 | | | | | 53 28 24.70 | | | | − 20 | +11.63 |
| d | 9.774465 | | | | | +21.60 | | | | + 43 | |
| | 1.334440 | | | | | | 28 46.30 | | | +11.05 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 35 | |
| +2.54 | | | | | | | | | | − 9.25 | |
| −2.94 $\delta_2$ | | 43 8.05 | | 28 45.7 | | | | | | 48.68 | |
| | +32.4 | 1 43.9 | 57.3 | 46 | 5560 | 35 57.75 | | | 45 | 53 35 18.51 | |
| | 1.510555 | | | | | 53 34 53.40 | | | | − 27 | +11.40 |
| d | 9.773539 | | | | | +25.11 | | | | + 24 | |
| | 1.399179 | | | | | | 35 18.51 | | | +11.07 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 36 | |
| +2.52 | | | | | | | | | | − 8.90 | |
| −2.50 $\delta_1$ | | 45 37.07 | | 35 18.5 | | | | | | 35 21.01 | |
| | | 1 45.8 | 58.9 | | | | | | 45 | | |
| | | | | | | | | | | | |
| d | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| | +16.8 | 0 22.0 | 36.0 | 35 | 29.00 | 47 19.35 | | | 35 | 53 46 27.96 | |
| | 1.225231 | | | | | 53 46 15.00 | | | | − 8 | +11.62 |
| 80 d | 9.771664 | | | | | +12.96 | | | | + 6 | |
| | 1.112266 | | | | | | 46 27.96 | | | +11.26 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +2.50 | | | | | | | | | | − 8.80 | |
| −1.30 $\delta_1$ | | 52 34.37 | | 46 29.5 | | | | | | 46 30.78 | |
| | +17.9 | 0 23.8 | 36.8 | 35 | 30.30 | 47 18.05 | | | 35 | 27.36 | |
| | 1.252855 | | | | | 53 46 13.56 | | | | − 8 | +11.71 |
| d | 9.771664 | | | | | +13.81 | | | | + 6 | |
| | 1.140200 | | | | | | 46 27.36 | | | +11.35 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 38 | |
| +2.50 | | | | | | | | | | − 9.20 | |
| −1.30 $\delta_2$ | | 52 34.39 | | 46 28.6 | | | | | | 29.87 | |
| | +34.4 | 4′ 41.1 | 56.8 | 54 | 48.95 | 27 69.40 | | | 50 | 53 27 21.79 | |
| | 1.536076 | | | | | 53 26 55.05 | | | | − 31 | +11.60 |
| 84 d | 9.774900 | | | | | +26.74 | | | | + 62 | |
| | 1.427177 | | | | | | 27 21.79 | | | +10.94 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 35 | |
| +2.54 | | | | | | | | | | − 8.75 | |
| −1.00 $\delta_1$ | | 54 20.02 | | 27 23.6 | | | | | | 27 24.64 | |
| | +25.5 | 4 34.8 | 48.1 | 54 | 41.45 | 28 6.90 | | | 50 | 22.22 | |
| | 1.406054 | | | | | 53 27 2.40 | | | | − 17 | +11.81 |
| d | 9.774900 | | | | | +19.82 | | | | + 61 | |
| | 1.297154 | | | | | | 27 22.22 | | | +11.02 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 35 | |
| +2.54 | | | | | | | | | | − 9.15 | |
| −1.00 $\delta_2$ | | 54 20.08 | | 27 23.9 | | | | | | 24.88 | |
| | +29.4 | 3 51.1 | 6.9 | 8 | 59.00 | 13 49.35 | | | 5 | 51 13 9.04 | |
| | 1.468354 | | | | | 51 12 45.00 | | | | − 23 | +9.28 |
| 90 d | 9.796844 | | | | | +24.04 | | | | + 52 | |
| | 1.380900 | | | | | | 13 9.04 | | | +8.69 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.82 | | | | | | | | | | − 8.60 | |
| −0.66 $\delta_1$ | | 56 15.75 | | 13 9.1 | | | | | | 13 9.72 | |
| | +29.0 | 3 50.9 | 5.3 | 8 | 58.10 | 13 50.25 | | | 5 | 9.46 | |
| | 1.462400 | | | | | 51 12 45.75 | | | | − 22 | +9.33 |
| d | 9.796844 | | | | | +23.71 | | | | + 52 | |
| | 1.374955 | | | | | | 13 9.46 | | | +8.70 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| +2.82 | | | | | | | | | | − 8.95 | |
| −0.66 $\delta_2$ | | 56 15.86 | | 13 9.2 | | | | | | 9.84 | |

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249

Date$_1$ = Aug. 9 Observer Recorder

250

Date$_2$ = Aug 11 Observer Recorder

Single Observations

85

| Star. α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 26 0 / 25 38.1 | 53 20 / 53 20.8 | 9.7 / 9.3 | 26 | 32.6 | 26 — | — | — | 28.2 | 31.5 | | | 26 24.8 |
| Aug 9 κ | | | | | | | | | | | | − 20.42 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | − 21.18 | − 65 |
| | | | | | | | | | | | | − 3 |
| | | | | | | | | | | | 26 | 3.58 |
| $\alpha_1$ | | | | | | | | | | | | − 1.86 |
| | | | | | | | | | | | 26 | 1.72 |
| 17 30 18 / 29 55.4 | 52 29 / 52 30.6 | 9.5 / 9.3 | 30 | 30.8 / 31.9 / 33.5 / 32.1 | 30 | 39.5 | 43.0 | 46.7 | 49.8 | 30 | 43.16 | 30 43.16 |
| Aug. 9 κ | | | | | | | | | | | | − 20.43 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | − 21.07 | − 62 |
| | | | | | | | | | | | | − 2 |
| | | | | | | | | | | | 30 | 22.09 |
| $\alpha_2$ | | | | | | | | | | | | − 1.87 |
| | | | | | | | | | | | 30 | 20.22 |
| 17 47 16 / 46 6.2 | 54 13 / 54 14.0 | 6.0 / 6.5 | | Lost | | | | | | | | |
| Aug 9 κ | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | |
| 17 48 8b / 48 13.8 | 51 07 / 51 9.3 | 8.0 / 7.9 | 48 | 32.5 / 34.1 / 35.9 / 34.2 | 48 | 54.9 | 58.1 | 1.4 | 4.8 | 8.2 | 49 | 1.48 | 49 1.48 |
| Aug 9 κ | | | | | | | | | | | | − 20.44 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | − 21.06 | − 60 |
| | | | | | | | | | | | | − 2 |
| | | | | | | | | | | | 48 | 40.42 |
| $\alpha_2$ | | | | | | | | | | | | − 1.94 |
| | | | | | | | | | | | 48 | 38.48 |
| 17 50 18 / 49 51.9 | 53 28 / 53 27.5 | 9.1 / 8.8 | 50 | 8.6 / 10.8 / 12.9 / 10.8 | 50 | 30.0 | 33.6 | 37.0 | 40.4 | 43.9 | 50 | 36.98 | 50 36.98 |
| Aug 9 κ | | | | | | | | | | | | − 20.44 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | − 21.12 | − 65 |
| | | | | | | | | | | | | − 3 |
| | | | | | | | | | | | 50 | 15.86 |
| $\alpha_1$ | | | | | | | | | | | | − 1.97 |
| | | | | | | | | | | | 50 | 13.89 |
| 17 57 38 / 57 15.4 | 53 59 / 53 59.0 | 9.1 / 9.0 | 57 | 30.0 / 31.6 / 33.0 / 31.5 | 57 | 57.3 | 0.8 | 4.3 | 8.0 | 10.6 | | 4.20 | 52 4.20 |
| Aug 9 κ | | | | | | | | | | | | − 20.44 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | − 21.13 | − 66 |
| | | | | | | | | | | | | − 3 |
| | | | | | | | | | | | 51 | 43.07 |
| $\alpha_2$ | | | | | | | | | | | | − 1.99 |
| | | | | | | | | | | | 51 | 41.08 |
| 17 11 13 / 10 49.7 | 52 47 / 52 48.5 | 9.0 / 9.0 | 11 | 49.6 / 51.8 / 53.3 / 51.4 | 11 — | — | 38.1 | 41.4 | 45.0 | | | 11 38.10 |
| Aug 11 κ | | | | | | | | | | | | − 21.31 |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | − 21.91 | − 58 |
| | | | | | | | | | | | | − 2 |
| | | | | | | | | | | | 11 | 16.19 |
| $\alpha_1$ | | | | | | | | | | | | − 1.73 |
| | | | | | | | | | | | 11 | 14.46 |
| κ | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | |
| κ | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | |
| κ | | | | | | | | | | | | |
| ((δ) — D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | |

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Runs



| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | −7.9 | 1′ 42.8 | 57.1 | 1′ | 49.5″ | 20 58.40 | | | 0′ | 53 19 47.89 | |
| d | 0.89763 m | | | | | 53 19 54.05 | | | | − 2 | +11.35 |
| | 9.77607 | | | | | − 6.16 | | | | + 24 | |
| | 0.78943 m | | | | | | 19 47.89 | | | +10.80 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | + 33 | |
| | | | | | | | | | | − 9.10 | |
| +2.59 $\delta_1$ | | 26 4.31 | | 19 44.2 | | | | | | 19 50.14 | |
| −5.90 | | | | | | | | | | | |
| | +11.1 | 1 55.5 | 12.1 | 52 | 3.80 | 30 44.55 | | | 50 | 52 29 49.02 | |
| | 1.04532 | | | | | 52 29 40.20 | | | | − 3 | +10.50 |
| d | 9.78445 | | | | | + 8.82 | | | | + 26 | |
| | 0.74548 | | | | | | 29 49.02 | | | + 9.97 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 9.07 | |
| +2.69 $\delta_2$ | | 30 22.91 | | 29 45.3 | | | | | | 29 ~~40.52~~ 50.52 | |
| −5.18 | | | | | | | | | | | |
| | | 3 2.9 | 17.0 | | | | | | 5 | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| | +27.3 | 3 15.9 | 32.3 | .13 | 24.10 | 9 24.25 | | | 10 | 51 8 42.26 | |
| | 1.43616 | | | | | 51 8 19.90 | | | | − 20 | +9.15 |
| d | 9.79762 | | | | | + 22.36 | | | | + 44 | |
| | 1.34949 | | | | | | 8 42.26 | | | +8.61 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | + 30 | |
| | | | | | | | | | | − 8.70 | |
| +2.83 $\delta_2$ | | 48 41.31 | | 8 40.4 | | | | | | 8 42.71 | |
| −1.98 | | | | | | | | | | | |
| | +25.2 | 0 36.6 | 57.2 | 55 | 43.90 | 27 4.45 | | | 55 | 53 26 20.48 | |
| | 1.41830 | | | | | 53 26 0.10 | | | | − 18 | +11.17 |
| d | 9.77807 | | | | | + 20.38 | | | | + 9 | |
| | 1.30908 | | | | | | 26 20.48 | | | +10.92 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | + 34 | |
| | | | | | | | | | | − 8.80 | |
| +2.54 $\delta_1$ | | 50 16.43 | | 26 21.2 | | | | | | 26 22.85 | |
| −1.70 | | | | | | | | | | | |
| | +32.7 | 3 25.9 | 41.0 | 23 | 33.45 | 59 14.90 | | | 20 | 53 58 36.24 | |
| | 1.51455 | | | | | 53 58 10.55 | | | | − 28 | +12.05 |
| d | 9.77957 | | | | | +25.69 | | | | + 46 | |
| | 1.40983 | | | | | | 58 36.24 | | | +11.47 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 8.85 | |
| +2.47 $\delta_2$ | | 51 43.55 | | 58 38.0 | | | | | | 58 39.44 | |
| −1.46 | | | | | | | | | | | |
| | ~~6.7~~ | 1 4.3 | 18.1 | 36 | 11.20 | 46 37.15 | | | 35 | ~~53~~ 52 45 22.14 | |
| | −13.3 | | | | | 52 45 32.65 | | | | − 5 | +11.85 |
| d | 1.12385 m | | | | | − 10.51 | | | | + 15 | |
| | 9.78190 | | | | | | 45 22.14 | | | +11.37 | |
| $((\delta) - D)\frac{d'}{100}$ | 1.0~~8~~146 m | | | | | | | | | + 38 | |
| | | | | | | | | | | − 9.60 | |
| +2.70 $\delta_1$ | | 11 17.16 | | 45 15.9 | | | | | | 45 24.39 | |
| −8.46 | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | |
| d | | | | | | | | | | | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | |

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275

Date$_1$ = Feb. 4 1874 — Observer — Recorder J. F. M. — $n$ = + 36

276

Date$_2$ = Feb. 10 1874 — Observer — Recorder — $n$ = + 33

Continued from No. 20

87

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | h m s | ° ′ ″ | | m s | m s | s | s | s | s | m | m s | m | s |
| | 29 9 | 49 58 | 8.7 | 28 33.0 | 28 56.8 | 0.0 | 3.0 | 6.4 | 9.5 | 29 | 3.14 | | |
| | 27 57.2 | 49 37.8 | 9.2 | 56.0 | | | | | | | +22.41 | | 5.46 |
| | κ | | | 57.0 | | | | | + 22.82 | | + 43 | | |
| | | | | 56.0 | | | | | | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 29 | 25.96 | | |
| | | | | | | | | | | | − 76 | | |
| | $c_1$ | | | | | | | | | 29 | 25.20 | | +4.65 |
| | | | | | | | | | | | | | +2.67 |
| | | | 9.1 | 28 27.9 | 28 31.1 | 34.5 | 37.6 | 1.1 | 4.1 | 28 | 57.68 | | |
| | | | | 30.7 | | | | | | | +27.80 | | |
| | κ | | | 32.4 | | | | | | | + 39 | | |
| | | | | 30.7 | | | | | + 28.17 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 29 | 25.85 | | |
| | | | | | | | | | | | − 65 | | +4.65 |
| | $a_2$ | | | | | | | | | 29 | 25.20 | | +2.67 |
| | 30 27 | 52 30. | 7.5 | 29 49.7 | 30 8.0 | 11.3 | 14.8 | 18.1 | 21.6 | 30 | 14.76 | | |
| | 29 6.2 | 52 28.3 | 7.2 | 52.6 | | | | | | | +22.41 | | 5.36 |
| | κ | | | 53.8 | | | | | | | + .47 | | |
| | | | | 52.8 | | | | | + 22.86 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 30 | 37.62 | | |
| | | | | | | | | | | | − 82 | | +4.80 |
| | $a_1$ | | | | | | | | | 30 | 36.80 | | +2.56 |
| | | | 7.7 | 29 30.0 | 30 2.6 | 6.0 | 9.3 | 12.5 | 16.3 | 30 | 9.40 | | |
| | | | | 33.0 | | | | | | | +27.80 | | |
| | κ | | | 31.8 | | | | | | | + .43 | | |
| | | | | 32.9 | | | | | + 28.21 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 30 | 37.61 | | |
| | | | | | | | | | | | − 71 | | +4.80 |
| | $a_2$ | | | | | | | | | 30 | 36.90 | | +2.56 |
| | 29 05 | 52 36 | 8.0 | 31 12.6 | 31 46.6 | 50.1 | 53.4 | 56.8 | 0.1 | 31 | 53.40 | | |
| | 30 44.7 | 52 33.0 | 8.4 | 14.3 | | | | | | | +22.41 | | 5.38 |
| | κ | | | 17.5 | | | | | | | + .47 | | |
| | | | | 15.1 | | | | | + 22.86 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 32 | 16.26 | | |
| | | | | | | | | | | | − 84 | | +4.81 |
| | $a_1$ | | | | | | | | | 32 | 15.42 | | +2.42 |
| | | | 8.3 | 31 8.8 | 31 41.2 | 44.7 | 48.0 | 51.4 | 54.6 | 31 | 48.02 | | |
| | | | | 12.0 | | | | | | | +27.80 | | |
| | κ | | | 14.8 | | | | | | | + .43 | | |
| | | | | 11.9 | | | | | + 28.21 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 32 | 16.23 | | |
| | | | | | | | | | | | − 73 | | +4.81 |
| | $a_2$ | | | | | | | | | 32 | 15.50 | | +2.42 |
| | 33 07 | 52 24 | 7.5 | 22 28.7 | 32 49.4 | 52.8 | 56.3 | 57.5 | 3.0 | 32 | 56.20 | | |
| | 31 46.7 | 52 23.8 | 7.0 | 31.9 | | | | | | | +22.41 | | 5.48 |
| | κ | | | 34.0 | | | | | | | + .47 | | |
| | | | | 31.5 | | | | | + 22.86 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 33 | 19.06 | | |
| | | | | | | | | | | | − 84 | | +4.80 |
| | $a_1$ | | | | | | | | | 33 | 18.22 | | +2.42 |
| | | | 7.1 | 32 21.0 | 32 43.7 | 47.4 | 50.8 | 54.0 | 57.5 | 32 | 50.72 | | |
| | | | | 24.6 | | | | | | | +27.80 | | |
| | κ | | | 26.6 | | | | | | | + 43 | | |
| | | | | 24.1 | | | | | + 28.21 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 33 | 18.43 | | |
| | | | | | | | | | | | − 73 | | +4.80 |
| | $a_2$ | | | | | | | | | 33 | 18.20 | | +2.42 |
| | 33 00 | 52 33 | 8.3 | 33 33.4 | 34 42.0 | 45.3 | 48.8 | 52.2 | 55.6 | 34 | 48.78 | | |
| | 33 39.4 | 52 34.5 | 8.2 | 37.8 | | | | | | | +22.42 | | 5.44 |
| | κ | | | 41.4 | | | | | | | + 47 | | |
| | | | | 34 18.4 | | | | | + 22.87 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 35 | 11.68 | | |
| | | | | | | | | | | | − 87 | | +4.81 |
| | $a_1$ | | | | | | | | | 35 | 10.78 | | +2.16 |
| | | | 8.2 | 34 4.8 | 34 36.6 | 40.2 | 43.7 | 46.8 | 50.0 | 34 | 43.34 | | |
| | | | | 7.4 | | | | | | | +27.80 | | |
| | κ | | | 10.7 | | | | | | | + 43 | | |
| | | | | 7.6 | | | | | + 28.21 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 35 | 11.55 | | |
| | | | | | | | | | | | − 76 | | +4.81 |
| | $a_2$ | | | | | | | | | 35 | 10.79 | | +2.16 |

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1874 Feb 4 −7′ 31.″69 +.05
" 10 −7 31.62 +.06

Runs

88

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +7.1 | 0′ 35.″1 | 22.″0 | 15′ | 27.″55 | 7 20.80 | | | 15′ | 49 59 ~~55.08~~ 43.14 | |
| 5.546 d | 0.850126 | | | | | 49 59 49.11 | | | | − 2 | +8.67 |
| | 9.80807 | | | | | ∓ 5.97 | | | | + 2 | |
| | 0.77611 m | | | | | | 59 ~~55.08~~ | | | + 8.27 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 14.70 | |
| $\delta_1$ | | 29 29.85 | | 59 39.8 | | | | | | 59 37.11 | |
| | +27.0 | 0 15.0 * | 4.9 | 15 | 9.95 | 7 38.40 | | | 15′ | ~~0 29.49~~ | |
| d | 1.43136 | | | | | 50 0 6.78 | | | | 59 44.07 − .20 | +8.29 |
| | 9.80807 | | | | | ∓22.71 | | | | + 1 | |
| | 1.35621 m | | | | | | 0 ~~29.49~~ | | | + 8.08 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 40 | |
| | | | | | | | | | | − 15.80 | |
| $\delta_2$ | | 29 29.85 | | 59 39.7 | | | | | | 59 37.06 | |
| | +22.0 | 0 16.1? * | 4.7? | 45 | (10.40) | 37 37.95 | | | 45′ | 52 ~~30 23.78~~ 29 48.74 | |
| 36 d | 1.34242 | | | | | 52 30 6.26 | | | | − 13 | +11.43 |
| | 9.78445 | | | | | ∓17.52 | | | | + 1 | |
| | 1.24365 m | | | | | | 30 ~~23.78~~ | | | + 11.03 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .52 | |
| | | | | | | | | | | − 15.30 | |
| $\delta_1$ | | 30 41.60 | | 29 47.4 44 | 59.00 | | | 49.35 | | 29 44.87 ? | |
| | +36.5 | 0 23.? | 5.7? | ~~45~~ | (~~44.8~~ 3) | 37 ~~33.90~~ | | | 45′ | 29 ~~31.36~~ ~~30.20~~ | 48.65 |
| d | 1.56229 | | | | | 52 30 ~~2.28~~ | | 17.73 | | − .34 | +10.98 |
| | 9.78445 | | | | | ∓29.08 | | | | + 1 | |
| | 1.46352 m | | | | | | 30 ~~31.36~~ | | | + 10.79 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .52 | |
| | | | | | | | | | | − 16.00 | |
| $\delta_2$ | | 30 41.70 | | 29 46.2 | | | | | | 25 ~~28.15~~ 43.63 | |
| | +38.3 | 8 4.0 | 5 2.0 | 3 7.8 | 5.800 | 3 4 50.35 | | | 35′ | 52 37 ~~49.09~~ ~~35.36~~ 48.23 | |
| 38 d | 1.58320 | | | | | 52 37 6 18.66 | | | | − 38 | +11.36 46 |
| | 9.78329 | | | | | ∓30.43 | | | | + 15 | |
| | 1.48327 m | | | | | | 37 ~~49.09~~ | | | + 11.16 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .53 | |
| | | | | | | | | | | − 15.25 | |
| $\delta_1$ | | 32 20.23 4 | | 35 46.9 | | | | | | ~~36~~ 35 44.44 | |
| | +36.1 | 8 4.0 | 5 2.9 | 3 7.8 | 5.845 | 3 4 49.70 | | | 35′ | 35 ~~46.90~~ 49.60 | |
| d | 1.55751 | | | | | 52 37 6 18.28 | | | | − 34 | +11.24 |
| | 9.78329 | | | | | ∓28.68 | | | | + 18 | |
| | 1.45758 m | | | | | | 37 ~~46.96~~ | | | + 10.91 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .53 | |
| | | | | | | | | | | − 15.95 | |
| $\delta_2$ | | 32 20.31 | | 35 47.4 | | | | | | 35 44.98 | |
| | +24.7 | 4 40.5 | 30.1 | 49 | 35.30 | 33 13.05 | | | 45′ | 52 ~~26 1.07~~ 25 ~~0~~ 1.65 | |
| 48 d | 1.39270 | | | | | 52 25 41.36 | | | | − .17 | +11.53 |
| | 9.78510 | | | | | ∓19.71 | | | | + 028 | |
| | 1.29458 m | | | | | | ~~26~~ ~~1.07~~ | | | + 10.95 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .52 | |
| | | | | | | | | | | − 15.20 | |
| $\delta_1$ | | 33 23.02 | | 25 20.4 | | | | | | 25 17.98 | |
| | +26.6 | 4 38.3 | 25.9 | 49 | 32.10 | 33 16.25 | | | 45′ | ~~5.85~~ 23.41 | |
| d | 1.42488 | | | | | 52 25 44.68 3 | | | | − .19 | +11.30 |
| | 9.78510 | | | | | ∓21.22 | | | | + 27 | |
| | 1.32676 m | | | | | | ~~26~~ ~~5.85~~ | | | + 10.70 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .52 | |
| | | | | | | | | | | − 15.90 | |
| $\delta_2$ | | 33 23.00 | | 25 21.2 | | | | | | 18.81 | |
| | +27.8 | 2 ~~12.9~~ | 3.9 | 39 | 8.90 | ~~45 39.45~~ | | | 35′ | 52 ~~37 29.84~~ ~~37 45.68~~ ~~36~~ 35 15.83 | |
| 44 d | 1.44404 | 2nd # observed. | | | | 52 38 7.76 | | | | ~~2 11.06~~ − 2 | +11.68 |
| | 9.78313 | | | | | ∓22.08 | | | | + .23 | |
| | 1.34395 4 | 44.2 | 33.2 | 39 | 38.70 | 43 9.65 | ~~38~~ | ~~27.84~~ | 35′ | + 11.13 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | 52 35 37.96 | | | | + .53 | |
| | | | | | | ∓22.08 | | | | − 15.20 | |
| $\delta_1$ | | 35 15.59 | | 35 14.5 | | | ~~36~~ | 0.04 | | 35 12.36 | |
| | +35.7 | 4 36.9 | 24.7 | 39 | 30.80 | 43 17.55 | | | 35′ | 35 ~~14.30~~ 17.86 | |
| d | 1.55267 | | | | | 52 35 45.93 | | | | − .34 | +11.34 |
| | 9.78346 | | | | | ∓28.37 | | | | + .27 | |
| | 1.45291 m | | | | | | 35 ~~14.30~~ | | | + 10.88 | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .53 | |
| | | | | | | | | | | − 15.90 | |
| $\delta_2$ | | 35 15.60 | | 35 15.~~16~~ 2 | | | | | | 35 ~~14.00~~ 13.00 | |

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275

Date$_1$ = Feb 4 1874 Observer N. A. R. Recorder J. F. M.

276

Date$_2$ = Feb. 10 1874 Observer Recorder

89

| Star. | α | δ | Mag. | $T_a$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | h m s | ° ′ ″ | | m s | m s | s | s | s | s | m | s | | |
| | 37 43 | 52 39 | 8.5 | 36 37.5 | 37 25.5 | 29.1 | 32.5 | 36.0 | 37.3 | 37 | 32.48 | | |
| | 26 22.7 | 52 38.4 | 9.0 | 0.4 | | | | | | | + 22.42 | | |
| | κ | | | 3.5 | | | | | | | + .47 | | 5.50 |
| | | | | 60.5 | | | | | + 22.87 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 37 | 55.35 | | |
| | | | | | | | | | | | − 89 | | |
| | $a_1$ | | | | | | | | | 37 | 54.46 | | +4.82 +1.92 |
| | | | 8.7 | 36 40.4 | 37 20.2 | 23.6 | 27.0 | 30.3 | 32.5 | 37 | 26.98 | | |
| | | | | 43.4 | | | | | | | + 27.80 | | |
| | κ | | | 46.7 | | | | | | | + .43 | | |
| | | | | 43.5 | | | | | + 28.21 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 37 | 55.19 | | |
| | | | | | | | | | | | − 78 | | +4.82 |
| | $a_2$ | | | | | | | | | 37 | 54.41 | | +1.92 |
| | 39 28 | 51 20 | 8.0 | 38 51.0 | 37 23.8 | 27.0 | 30.3 | 33.7 | 37.0 | 39 | 30.36 | | |
| | 38 23.0 | 51 19.3 | 8.2 | 52.3 | | | | | | | + 22.42 | | |
| | κ | | | 53.6 | | | | | | | + .45 | | 50 |
| | | | | 53.3 | | | | | + 22.85 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 39 | 53.21 | | |
| | | | | | | | | | | | − 89 | | |
| | $a_1$ | | | | | | | | | 39 | 52.32 | | +4.74 +1.75 |
| | | | 7.9 | 38 48.6 | 37 18.3 | 21.4 | 25.0 | 28.2 | 31.4 | 39 | 24.80 | | |
| | | | | 51.8 | | | | | | | + 27.81 | | |
| | κ | | | 54.7 | | | | | | | + .41 | | |
| | | | | 51.7 | | | | | + 28.20 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 39 | 53.06 | | |
| | | | | | | | | | | | − 78 | | +4.74 |
| | $a_2$ | | | | | | | | | 39 | 52.28 | | +1.75 |
| | 40 42 | 51 29 | 6.5 | 40 4.0 | 40 27.1 | 30.5 | 33.8 | 37.1 | 40.4 | 40 | 33.78 | | |
| | 39 27.0 | 51 28.2 | 6.3 | 6.9 | | | | | | | + 22.42 | | |
| | κ | | | 9.7 | | | | | | | + .45 | | 50 |
| | | | | 6.9 | | | | | + 22.85 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 40 | 56.63 | | |
| | | | | | | | | | | | − 90 | | +4.75 |
| | $a_1$ | | | | | | | | | 40 | 55.73 | | +1.66 |
| | | | 6.4 | 39 33.8 | 40 21.6 | 23.0 | 26.2 | 31.6 | 33.0 | 40 | 28.28 | | |
| | | | | 38.6 | | | | | | | + 27.81 | | |
| | κ | | | 1.3 | | | | | | | + .41 | | |
| | | | | 38.6 | | | | | + 28.20 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 40 | 56.48 | | +4.75 |
| | | | | | | | | | | | − 79 | | +1.66 |
| | $a_2$ | | | | | | | | | 40 | 54.69 | 5569 | |
| | 42 27 | | 9.0 | 41 19.7 | 41 45.8 | 49.1 | 52.4 | 55.9 | 57.0 | 41 | 52.44 | | |
| | 42 03 | 52 09 | | 22.0 | | | | | | | + 22.42 | | |
| Feb. 4 | 40 44.2 | 52 8.4 | 8.9 | 25.3 | | | | | | | + 46 | | 46 |
| | | | | 22.3 | | | | | + 22.86 | | − 2 | | +4.79 +1.54 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 42 | 15.30 | | |
| Feb. 10 | | | — | 41 22.6 | 41 40.2 | 43.6 | 47.0 | 50.5 | 53.6 | | − 93 | 42 14.37 | |
| | | | | 25.6 | | | | | | 41 | 46.98 | | |
| | | | | 27.9 | | | | | 7 28.21 | | + 27.81 | | |
| | $a_1$ | | | 25.4 | | | | | | | + 42 | 42 15.19 | |
| | 43 29 | 52 36 | 8.5 | 42 42.1 | 43 8.6 | 12.1 | 15.3 | 18.8 | 22.2 | 43 | 15.40 | − 93 | |
| Feb. 4 | 42 8.2 | 52 35.5 | 8.5 | 45.0 | | | | | | | + 22.42 | 42 14.37 | +4.79 |
| | κ | | | 44.6 | | | | | | | + 47 | | +1.54 |
| | | | | 44.9 | | | | | + 22.87 | | − 2 | 43 38.27 | 42 |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | − 93 | |
| Feb. 10 | | | 8.6 | 42 24.6 | 43 3.1 | 6.5 | 10.0 | 13.4 | 16.9 | 43 | 9.98 | 43 37.32 | +4.82 |
| | | | | 28.0 | | | | | | | + 27.81 | | +1.42 |
| | $a_2$ | | | 30.4 | | | | | + 28.22 | | + 43 | 43 38.20 | |
| | 43 10 | 52 19 | 8.2 | 44 33.0 | 44 32.4 | 33.5 | 37.0 | 2.5 | 2.8 | 44 | 59.04 | − 84 | |
| | 42 49.6 | 52 18.2 | 9.1 | 28.0 | | | | | | | + 22.43 | 43 37.36 | +4.82 |
| | κ | | | 31.8 | | | | | | | + .46 | | +1.42 |
| | | | | 28.3 | | | | | + 22.87 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 45 | 21.91 | | |
| | | | | | | | | | | | − 936 | | +4.80 |
| | $a_1$ | | | | | | | | | 45 | 20.98 | | +1.27 |
| | | | 8.2 | 44 8.0 | 44 47.0 | 50.3 | 53.5 | 57.1 | 0.6 | 44 | 53.70 | | |
| | | | | 11.8 | | | | | | | + 27.81 | | |
| | κ | | | 13.1 | | | | | | | + .42 | | |
| | | | | 11.7 | | | | | + 28.21 | | − 2 | | |
| | ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | 45 | 21.91 | | +4.80 |
| | | | | | | | | | | | − 885 | | |
| | $a_2$ | | | | | | | | | 45 | 21.06 | | +1.27 |

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Runs

80

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +32.0 | 1 4.9 | 53.6 | 85 | 58.95 | 46 49.40 | | | 35 | 52 39 ~~37.11~~ 38 52.31 | +11.52 |
| d | 1.50515 | | | | | 52 39 17.71 | | | | − .27 | |
| | 9.78296 | | | | | ∓26.40 | | | | + .5 | |
| | 1.40 ~~3842~~ 4897 m | | | | | | 39 | 33.11 | | + 11.21 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | ∓ .53 | |
| | | | | | | | | | | − 15.15 | |
| $\delta_1$ | | 37 59.28 | | 38 50.6 | | | | | | 38 48.68 | |
| | +43.5 | 0 52.7 | 41.3 | 35 | 47.00 | 47 1.35 | | | 35 | 40 ~~4.26~~ 38 55.20 | +11.05 |
| d | 1.63849 | | | | | 52 39 29.73 | | | | − .49 | |
| | 9.78290 | | | | | ∓34.53 | | | | + .5 | |
| | 1.53817 m | | | | | | 40 | 4.26 | | + 10.96 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | ∓ .53 | |
| | | | | | | | | | | − 16.80 | |
| $\delta_2$ | | 37 59.23 | | 38 52.4 | | | | | | 38 50.45 | |
| | +37.1 | 0 10.8 * | 0.4 | 55 | 5.60 | 27 42.75 | | | 55 | 51 ~~20~~ 19 ~~41.39~~ 40.73 | +9.84 |
| 50 d | 1.56937 | | | | | 51 20 11.06 | | | | − .37 | |
| | 9.79573 | | | | | ∓30.33 | | | | + 1 | |
| | 1.48 ~~041~~ 188 m | | | | | | 20 | 41.39 | | + 9.74 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | ∓ .46 | |
| | | | | | | | | | | − 14.70 | |
| $\delta_1$ | | 39 57.06 | | 19 37.8 6 | | | | | | 19 35.84 | |
| | +33.2 | 0 11.0 | 1.7 | 55 | 6.35 | 27 42.00 | | | 55 | ~~37.52~~ 43.24 | +9.69 |
| d | 1.52114 | | | | | 51 20 10.38 | | | | − .29 | |
| | 9.79573 | | | | | ∓27.14 | | | | + 1 | |
| | 1.43 ~~258~~ 365 m | | | | | | 20 | 37.52 | | + 9.51 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | ∓ .46 | |
| | | | | | | | | | | − 15.40 | |
| $\delta_2$ | | 39 57.02 | | 19 39.3 | | | | | | 19 37.53 | |
| | +26.9 | 1 34.1 | 22.3 | 46 | 28.20 | 36 20.15 | | | 45 | 51 28 ~~10.38~~ 26.54 | +10.24 |
| 60 d | 1.42975 | | | | | 51 28 48.46 | | | | − 19 | |
| | 9.79431 | | | | | ∓21.92 | | | | + 9.89 | |
| | 1.3 ~~3977~~ 4084 m | | | | | | 29 | 10.38 | | ∓ .47 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | − 14.75 | |
| $\delta_1$ | | 41 0.48 | | 28 23.7 | | | | | | 28 22.03 | |
| | +29.7 | 1 29.9 | 18.8 | 46 | 24.35 | 36 24.00 | | | 45 | 28 ~~16.58~~ 28.18 | +9.97 |
| d | 1.47276 | | | | | 51 28 52.38 | | | | − .24 | |
| | 9.79431 | | | | | ∓24.20 | | | | + 8 | |
| | 1.38 ~~278~~ 385 m | | | | | | 29 | 16.58 | | + 9.66 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | ∓ .47 | |
| | | | | | | | | | | − 15.45 | |
| $\delta_2$ | | 41 0.44 | | 28 24.4 | | | | | | 28 22.70 | |
| | +30.1 | 1 25.1 | 18.7 | 6 | 19.40 | 16 28.95 | | | 5 | 52 ~~7~~ 8 ~~21.43~~ 33.09 | ~~8.87~~ 34.19 |
| 46 d | 1.47857 | 42 19.16 | | ~~52~~ 28 30.8 | | 52 8 57.26 | | | | − 24 | − 13 |
| | 9.78788 | 19.16 | | 31.0 | | ∓24.17 | 9 | 21.43 | | + 6 | + 8 |
| | 1.38 ~~216~~ 323 m | | | | | | | | | + 10.64 | + 10.40 |
| $((\delta) - D)\frac{d'}{100}$ | +21.6 | 1 31.1 | 18.3 | 6 | 25.20 | 16 23.15 | | | 5 | + .50 | + .50 |
| | 1.33445 | 911 | | | | 52 8 51.53 | | | | − 14.85 | ~~− 14.85~~ |
| $\delta_1$ | 9.78788 | 1.23 ~~804~~ m | | | | ∓17.34 | 9 | 8.87 | | 8 29.21 | 15.55 29.49 |
| | +30.5 | 3 33.5 | 22.1 | 38 | 27.80 | 44 20.55 | | | 35 | 52 ~~27~~ 36 ~~17.07~~ 24.63 | ~~35.89~~ 28.67 |
| 42 d | 1.48430 | 43 42.14 | ~~52.2~~ | ~~56~~ 22.7 | | 52 36 48.86 | | | | − .24 | − .47 |
| | 9.78329 | 42.18 | | 25.6 | | ∓24.23 | 37 | 13.09 | | + 17 | + 19 |
| | 1.38 ~~330~~ 437 m | 3 18.9 | 10.0 | 38 | 14.45 | 44 33.90 | | | 35 | + 11.15 | + 10.90 |
| $((\delta) - D)\frac{d'}{100}$ | +423 | | | | | 52 37 2.28 | | | | + .53 | + .53 |
| | 1.62634 | 641 5 | | | | ∓33.61 | 37 | ~~35.89~~ | | ~~− 15.53~~ 14.95 | ~~− 15.53~~ 15.60 |
| $\delta_2$ | 9.78329 | 1.52 ~~534~~ m | | | | | | | | 21.29 | 29.22 |
| | +30.7 | 1 15.3 | 8.5 | 56 | 9.40 | 26 38.95 | | | 55 | 52 ~~19~~ 18 ~~31.82~~ 42.70 | |
| d | 1.48714 | | | | | 52 19 7.26 | | | | − .25 | |
| | 9.78625 | | | | | ∓24.56 | 19 | 31.82 | | − .6 | |
| | 1.3 ~~8910~~ 9017 m | | | | | | | | | + 10.62 | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | + .57 | |
| | | | | | | | | | | − 14.85 | |
| $\delta_1$ | | 45 25.75 | | 18 40.2 | | | | | | 38.93 (2) | |
| | +42.6 | 0 4.9 | 53.0 | 5 ~~4~~ 5 | 58.95 | 28 49.40 | | | 55 | ~~20~~ 18 ~~51.56~~ 44.20 | +10.62 |
| d | 1.62226 | | | | | 52 20 17.78 | | | | − .47 | |
| | 9.78609 | | | | | ∓00.58 | | | | + | |
| | 1.62 ~~505~~ 612 m | | | | | | 20 | 51.36 | | + 10 ~~68~~ | |
| $((\delta) - D)\frac{d'}{100}$ | | | | | | | | | | + .57 | |
| | | | | | | | | | | − 15 ~~60~~ 50 | |
| $\delta_2$ | | ~~45~~ 25.82 | | 18 40.6 | | | | | | 39.32 | |

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Date$_1$ = Feb 4 1874 Observer H. A. R. Recorder J. F. M. Date$_2$ = Feb. 10 1874 Observer Recorder

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | h m s | ° ′ ″ | | m s | m s | s | s | s | s | m | s | m | s |
| | 46 18 | 52 33 | 9.0 | 45 30.1 | 45 58.5 | 57.1 | 0.6 | 4.0 | 7.4 | 45 | 0.62 | | |
| | 44 49.9 | 52 54.7 | 9.0 | 32.1 | | | | | | | +22.43 | | |
| κ | | | | 26.0 | | | | | | | + .48 | | |
| | | | | 32.7 | | | | | + 22.89 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 46 | 23.41 | | |
| | | | | | | | | | | | − 98 | | +4.84 |
| $\alpha_1$ | | | | | | | | | | 46 | 22.43 | | +1.19 |
| | | | 9.1 | 45 32.4 | 45 48.4 | 57.6 | 58.2 | 58.7 | 2.0 | 45 | 56.18 | | |
| | | | | 36.1 | | | | | | | +27.81 | | |
| κ | | | | 39.8 | | | | | | | + .44 | | |
| | | | | 36.1 | | | | | + 28.23 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 46 | 23.41 | | |
| | | | | | | | | | | | − 88 | | +4.84 |
| $\alpha_2$ | | | | | | | | | | 46 | 23.53 | | +1.19 |
| | 47 26 | 52 08 | 8.9 | 46 59.0 | 47 17.5 | 20.8 | 24.1 | 27.5 | 31.0 | 47 | 24.18 | | |
| | 46 14.4 | 52 7.9 | 9.0 | 2.2 | | | | | | | +22.43 | | |
| κ | | | | 2.0 | | | | | | | + .46 | | |
| | | | | 62.1 | | | | | + 22.87 | | − 4 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 47 | 25.05 | | |
| | | | | | | | | | | | − 98 | | +4.79 |
| $\alpha_1$ | | | | | | | | | | 47 | 46.07 | | +1.07 |
| | | | 8.9 | 46 48.0 | 47 12.0 | 15.4 | 17.1 | 22.2 | 24.6 | 47 | 18.86 | | |
| | | | | 50.9 | | | | | | | + 2781 | | |
| κ | | | | 54.0 | | | | | | | + 42 | | |
| | | | | 50.9 | | | | | + 28.21 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 47 | 47.07 | | |
| | | | | | | | | | | | − 88 | | +4.79 |
| $\alpha_2$ | | | | | | | | | | 47 | 46.19 | | +1.07 |
| | 47 04 | 52 23 | 8.4 | 48 | | Lost | | | | | | | |
| | 47 45.2 | 52 23.2 | | | | | | | | | | | |
| κ | 42.1 | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| | | | 8.5 | 48 38 | 48 40.1 | 44.3 | 47.6 | 50.9 | 54.3 | 48 | 47.60 | | |
| | | | | 3.0 | | | | | | | + 27.81 | | |
| κ | | | | 7.7 | | | | | | | + 43 | | |
| | | | | 6.9 | | | | | + 28.22 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 49 | 15.82 | | |
| | | | | | | | | | | | − 90 | | +4.81 |
| $\alpha_2$ | | | | | | | | | | 49 | 14.92 | | +0.93 |
| | 50 01 | 52 21 | | | | Lost | | | | | | | |
| | 48 39.2 | 52 21.0 | 8.8 | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| 1 . 10 | | | 8.8 | 49 18.0 | 49 38.0 | 41.5 | 44.5 | 48.3 | 51.6 | 49 | 44.84 | | |
| | | | | 21.2 | | | | | | | +27.81 | | |
| κ | | | | 23.8 | | | | | | | + .43 | | |
| | | | | 21.0 | | | | | + 28.22 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 50 | 13.06 | | |
| | | | | | | | | | | | − 91 | | +4.80 |
| $\alpha_2$ | | | | | | | | | | 50 | 12.15 | | +0.85 |
| 51 | 26 | 52 49 | 9.2 | 51 24.4 | 51 17.7 | 21.1 | 24.5 | 28.0 | 31.6 | 51 | 24.58 | | |
| 50 | 14.3 | 52 48.4 | 9.4 | 4.6 | | | | | | | + 22.44 | | |
| κ | | | | 8.5 | | | | | | | + .48 | | |
| | | | | 5.2 | | | | | + 22.90 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 51 | 47.48 | | |
| | | | | | | | | | | | − 1.04 | | +4.83 |
| $\alpha_1$ | | | | | | | | | | 51 | 46.44 | | +0.71 |
| | | | 9.3 | 50 41.4 | 51 12.7 | 15.8 | 19.1 | 22.5 | 25.4 | 51 | 19.10 | | |
| | | | | 48.0 | | | | | | | + 27.81 | | |
| κ | | | | 37.0 | | | | | | | + .44 | | |
| | | | | 48.1 | | | | | + 28.23 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 51 | 47.33 | | |
| | | | | | | | | | | | − 93 | | +4.83 |
| $\alpha_2$ | | | | | | | | | | 51 | 46.40 | | +0.71 |

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Runs

52

| | | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ° | 0′ 60.″ | 57.″7 | 20′ | 0.″35 | 2 48.00 | | | 20′ | 52 ~~55~~ ~~38.27~~ | |
| | | +27.8 | | | | | 52 55 16.31 | | | | 54 54.38 | +11.84 |
| 5.32 | d | 1.44404 | | | | | ∓21.93 | | | | − .21 | |
| | | 9.78030 | | | | | | ~~56~~ ~~38.24~~ | | | + 0 | |
| | ((δ) − D) $\frac{d'}{100}$ | 1.34112 m | | | | | | | | | + 11.50 | |
| | | | | | | | | | | | + .55 | |
| | | | | | | | | | | | − ~~14.85~~ 15.00 | |
| | $\delta_1$ | | 46 27.27 | | 54 ~~52.4~~ | | | | | | 54 37.22 | |
| | | +19.1 | 0 10.9 | * 59.4 | 20 | 5.15 | 2 43.20 | | | 20 | ~~20.65~~ 56.51 | |
| | | 1.28103 | | | | | 52 55 11.58 | | | | − .9 | +11.71 |
| | d | 9.78030 | | | | | ∓15.07 | | | | + 0 | |
| | | 1.17811 m | | | | | | ~~55~~ ~~26.65~~ | | | + 11.25 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .55 | |
| | | | | | | | | | | | − 15.50 .65 | |
| | $\delta_2$ | | 46 27.37 | | 54 53.8 | | | | | | 52.57 | |
| | | +22.1 | 0 54.1 | 41.9 | 5 | 4800 | 17 0.35 | | | 5′ | 52 9 ~~46.40~~ 10.92 | |
| | | 1.34439 | | | | | 52 9 28.66 | | | | − .13 | +11.05 |
| 32 | d | 9.78780 | | | | | ∓17.74 | | | | + 4 | |
| | | 1.24897 m | | | | | | 9 46.40 | | | + 10.64 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .50 | |
| | | | | | | | | | | | − ~~15.00~~ 14.80 | |
| | $\delta_1$ | | 47 50.86 | | 9 8.2 | | | | | | 9 7.14 | |
| | | +28.0 | 0 45.6 | 34.0 | 5′ | 3980 | 17 8.55 | | | 5′ | 9 ~~57.41~~ 14.45 | |
| | | 1.44716 | | | | | 52 9 36.93 | | | | − .21 | +10.74 |
| | d | 9.78780 | | | | | ∓22.48 | | | | + 4 | |
| | | 1.35174 m | | | | | | 9 ~~57.41~~ | | | + 10.41 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .50 | |
| | | | | | | | | | | | − 15.65 .40 | |
| | $\delta_2$ | | 47 50.98 | | 9 10.9 | | | | | | 9 9.79 | |
| | | | 0 48.3 | 35.8 | | | | | | 50′ | | |
| | d | | | | | | | | | | | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| | $\delta_1$ | | | | | | | | | | | |
| | | +40.7 | 0 36.7 | 24.3 | 30 | 38.50 | 32 17.85 | | | 30 | 52 ~~20~~ 18.71 | |
| | | 1.60959 | | | | | 52 24 46.23 | | | | 24 13.75 | |
| | d | 9.78527 | | | | | ∓32.48 | | | | − .45 | +10.79 |
| | | 1.51164 m | | | | | | ~~25~~ ~~18.71~~ | | | + 3 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 10.69 | |
| | | | | | | | | | | | + .52 | |
| | | | | | | | | | | | − 15.40 | |
| | $\delta_2$ | | 49 19.73 | | 24 10.1 | | | | | | 24 9.14 | |
| | d | | | | | | | | | | | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | |
| | $\delta_1$ | | | | | | | | | | | |
| | | +23.8 | 3 31.2 | 20.2 | 53 | 25.70 | 29 22.65 | | | 50′ | 52 ~~22~~ ~~10.05~~ | |
| | | 1.37658 | | | | | 52 21 51.03 | | | | 21 32.01 | |
| | d | 9.78576 | | | | | ∓19.02 | | | | − .15 | +11.22 |
| | | 1.27912 m | | | | | | ~~22~~ ~~10.06~~ | | | + 21 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + 10.64 | |
| | | | | | | | | | | | + .52 | |
| | | | | | | | | | | | − 15.35 | |
| | $\delta_2$ | | 50 16.95 | | 21 28.7 | | | | | | 21 27.88 | |
| | | +19.4 | 1.318 | 20.1 | 26 | 25.95 | 56 22.40 | | | 25′ | 52 49 ~~6.05~~ | |
| | | 1.28780 | | | | | 52 48 50.71 | | | | 48 35.37 | |
| 48 | d | 9.78130 | | | | | ∓15.34 | | | | − 9 | +11.90 |
| | | 1.18588 m | | | | | | ·49 6.05 | | | + 11.38 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .54 | |
| | | | | | | | | | | | − 14.90 | |
| | $\delta_1$ | | 51 51.27 | | 48 33.1 | | | | | | 48 32.34 | |
| | | +31.0 | 1 20.3 | 9.1 | 26 | 14.90 | 56 33.65 | | | 25′ | ~~26.54~~ 37.52 | |
| | | 1.49136 | | | | | 52 49 2.03 | | | | − .25 | +11.49 |
| | d | 9.78130 | | | | | ∓24.51 | | | | + 7 | |
| | | 1.38944 m | | | | | | 49 ~~26.54~~ | | | + 16.13 | |
| | ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | + .64 | |
| | | | | | | | | | | | − 16.40 | |
| | $\delta_2$ | | 51 51.23 | | 48 34.3 | | | | | | 33.61 | |

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275

Date$_1$ = Feb 4 1874 Observer / Recorder G. N. R. / J. F. M.

276

Date$_2$ = Feb. 10 1874 Observer / Recorder

93

Ru

| Star. | α | δ | Mag. | $T_\delta$ | $T_m$ | $T_e$ | $T_f$ | $T_g$ | $T_h$ | Sum | Mean | Red. to $T_m$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| λ | 52 | 57 15 | 8.4 | 52 26.7 | 52 42.0 | 43.4 | 48.7 | 57.8 | 53.2 | 52 | 48.62 | | |
| | 51 42.1 | 57 14.4 | 8.1 | 30.5 | | | | | | | + 22.44 | | |
| κ | | | | 33.0 | | | | | | | + 45 | | 36 |
| | | | | | | | | | + 22.87 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | 30.1 | | | | | | 53 | 11.49 | | +4.74 |
| $\alpha_1$ | | | | | | | | | | | − 1.01 | | |
| | | | | | | | | | | 53 | 10.48 | | +0.59 |
| | | | 8.0 | 52 8.0 | 52 36.8 | 40.0 | 43.1 | 46.6 | 49.8 | 52 | 43.26 | | |
| | | | | 11.0 | | | | | | | + 27.81 | | |
| κ | | | | 14.0 | | | | | | | + 41 | | |
| | | | | | | | | | + 28.20 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | 11.0 | | | | | | | ~~+56~~ | | |
| | | | | | | | | | | 53 | 11.46 | | +4.74 |
| $\alpha_2$ | | | | | | | | | | | − 91 | | +0.59 |
| | | | | | | | | | | 53 | 10.55 | | |
| | 54 16 | 57 35 | 7.0 | 53 47.5 | 54 1.0 | 4.3 | 7.9 | 11.0 | 14.3 | 54 | 7.78 | | |
| | 53 1.0 | 57 34.6 | ~~7.2~~ | 50.5 | | | | | | | + 22.44 | | 42 |
| κ | | | 6.3 | 52.3 | | | | | | | + 45 | | |
| | | | | 50.1 | | | | | + 22.87 | | − 2 | 54 30.65 | +4.76 |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 9.2 | 54 35.0 | 2.0 | 5.5 | 8.8 | 12.2 | 15.5 | 54 | 8.80 | − 1.03 | +0.57 |
| | | | | 37.8 | | | | | | | + 22.44 | 54 29.62 | |
| $\alpha_1$ | | | | 41.3 | | | | | + 22.87 | | + 45 | | |
| | | | | 38.0 | | | | | | | − 2 | 54 31.67 | +4.76 |
| | | | 6.5 | 53 22.4 | 53 35.8 | 37.0 | 2.4 | 5.6 | 8.0 | 54 | 2.36 | − 1.03 | |
| | | | | 23.3 | | | | | | | + 27.81 | 54 30.64 | +0.57 |
| κ | | | | 27.6 | | | | | | | + 41 | | |
| | | | | 25.1 | | | | | + 28.20 | | − 2 | 54 30.56 | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | 9.1 | 54 10.6 | 53 36.6 | 0.0 | 3.4 | 6.6 | 10.2 | 54 | 8.36 | − 93 | +4.76 |
| | | | | 13.3 | | | | | | | + 27.81 | 54 29.63 | +0.57 |
| $\alpha_2$ | | | | 14.8 | | | | | +28.20 | | + 41 | | |
| | | | | 12.9 | | | | | | | − 2 | 54 31.56 | +4.76 |
| | | | | | | | | | | | | − 93 | +0.57 |
| | | | | | | | | | | | | 54 30.63 | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| Feb. 4 $\alpha_1$ | | | | Single Observations | | | | | | | | | |
| 5 42 5 | | | | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| Feb. 4 $\alpha_2$ | | | | | | | | | | | | | |
| | 53 23 | 57 3~~5~~ 2 | 8.2 | 53 4.3 | 53 10.6 | 13.8 | 17.0 | 20.6 | 23.8 | 55 | 17.16 | | |
| | 54 7.7 | 57 53.0 | 8.1 | 6.0 | | | | | | | + 22.44 | | |
| κ | | | | 8.2 | | | | | | | + 46 | | 38 |
| | | | | 6.2 | | | | | + 22.88 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 55 | 40.04 | | +4.78 |
| | | | | | | | | | | | − 1.04 | | +0.38 |
| Feb. 10 $\alpha_1$ | | | | | | | | | | 55 | 39.00 | | |
| | | | — | 54 48.8 | 53 57.0 | 8.5 | 11.8 | 15.0 | 18.6 | 55 | 11.78 | | |
| | | | | 52.2 | | | | | | | + 27.81 | | |
| κ | | | | 54.8 | | | | | | | + .42 | | |
| | | | | 51.9 | | | | | + 28.21 | | − 2 | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | 55 | 39.99 | | +4.78 |
| | | | | | | | | | | | − 95 | | +0.38 |
| $\alpha_2$ | | | | | | | | | | 55 | 39.04 | | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_1$ | | | | | | | | | | | | | |
| κ | | | | | | | | | | | | | |
| ((δ) − D) $\frac{\kappa'}{100}$ | | | | | | | | | | | | | |
| $\alpha_2$ | | | | | | | | | | | | | |

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Runs

54

| | $T_m - T$ | A | C | Sum | Mean | Red. to m. wire | Red. to h. wire | Red. runs | Stroke | z | δ′ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | +18.5 | 4 46.9 | 36.8 | 59 | 41.85 | 23 6.50 | | | 53 | 51 15 ~~49.96~~ 19.66 | | |
| 36 d | 1.26717 | | | | | 51 15 34.81 | | | | − 9 | | +10.25 |
| | 9.79645 | | | | | ∓15.15 | | | | + 23 | | |
| ((δ) − D) $\frac{d'}{100}$ | 1.18040 m | | | | | | 15 | 49.96 | | + 9.65 | | |
| | | | | | | | | | | + .46 | | |
| $\delta_1$ | | 53 15.22 | | 15 16.0 | | | | | | −14.55 | | |
| | | | | | | | | | | 15 15.36 | | |
| | +32.3 | 4 34.0 | 23.9 | 59 | 28.95 | 23 19.40 | | | 53 | ~~16~~ ~~14.23~~ | | |
| d | 1.50920 | | | | | 51 15 47.78 | | | | 15 21.33 | | +9.89 |
| | 9.79645 | | | | | ∓26.45 | | | | − .27 | | |
| ((δ) − D) $\frac{d'}{100}$ | 1.42243 m | | | | | | ~~16~~ | ~~14.23~~ | | + .27 | | |
| | | | | | | | | | | + 9.43 | | |
| | | | | | | | | | | + .46 | | |
| $\delta_2$ | | 53 15.29 | | 15 16.9 | | | | | | −14.95 | | |
| | | | | | | | | | | 15 16.27 | | |
| 42 | +17.7 | 0 40.3 | 29.4 | 40 | 34.85 | 42 13.50 | ~~34~~ | ~~56.20~~ | 40 | 51 34 ~~36.20~~ 27.42 | 35 ~~18.06~~ 5.56 | |
| d | 1.24797 | | | | | 51 34 41.81 | | | | − 9 | − .22 | +0.42 +10.30 |
| 44 | 9.79345 | | | | | ∓14.39 | | | | + 3 | + 3 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.15820 | | | | | +23.75 | | | | +10.01 | +1002 | |
| | −29.2 | | | | | | ~~34~~ | ~~18.06~~ | 40 | + .47 | + .47 | |
| | 1.46538 m | | | | | | | | | −1460 | −1460 | |
| $\delta_1$ | 9.79345 m | 54 34.38 | | 34 23.8 | | | | | | 34 23.24 | 35 1.26 | |
| | 1.37861 m | 35.10 | | 35 1.8 | | | | | | | | |
| | +37.3 | 0 22.0 | 11.2 | 40 | 16.60 | 42 31.75 | ~~35~~ | ~~30.46~~ | 40 | ~~30.46~~ 29.80 | ~~52.41~~ 7.85 | |
| d | 1.57171 | | | | | 51 35 0.13 | | | | − 37 | − 3 | +9.90 +10.25 |
| | 9.79335 | | | | | ∓30.33 | | | | + 2 | + 2 | |
| ((δ) − D) $\frac{d'}{100}$ | 1.48184 | | | | | + 7.72 | | | | +9.78 | +9.99 | |
| | −9.5 | | | | | | ~~34~~ | ~~52.41~~ | 40 | + .47 | + .47 | |
| | 0.97772 m | | | | | | | | | −1500 | −1500 | |
| $\delta_2$ | 9.79335 m | 54 34.39 | | 34 25.3 | | | | | | 34 24.70 | 35 3.10 | |
| | 0.88785 m | 35.39 | | 35 3.7 | | | | | | | | |
| | | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | | |
| | +18.0 | 0 53.5 | 44.1 | 20 | 49.80 | 1 58.55 | | | 20 | 51 54 ~~35.74~~ 17.98 | | |
| 38 d | 1.04139 | | | | | 51 54 26.86 | | | | − 3 | | +10.58 |
| | 9.79025 | | | | | ∓ 8.68 | | | | + 4 | | |
| ((δ) − D) $\frac{d'}{100}$ | 0.94842 m | | | | | | ~~54~~ | ~~35.74~~ | | +10.37 | | |
| | | | | | | | | | | + 50 | | |
| $\delta_1$ | | 55 43.78 | | 54 14.54 | | | | | | −14.70 | | |
| | | | | | | | | | | 54 14.16 | | |
| | +19.9 | 0 48.9 | 24.0 | 20 | 39.95 | 2 8.40 | | | 20 | ~~52.84~~ 20.72 | | |
| d | 1.29885 | | | | | 51 54 36.78 | | | | − 11 | | +10.56 |
| | 9.79025 | | | | | ∓16.06 | | | | + 4 | | |
| ((δ) − D) $\frac{d'}{100}$ | 1.20588 m | | | | | | ~~54~~ | ~~52.84~~ | | +10.13 | | |
| | | | | | | | | | | + 50 | | |
| $\delta_2$ | | 55 43.82 | | 54 16.6 | | | | | | −1505 | | |
| | | | | | | | | | | 16.23 | | |
| | | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | | |
| $\delta_1$ | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| ((δ) − D) $\frac{d'}{100}$ | | | | | | | | | | | | |
| $\delta_2$ | | | | | | | | | | | | |

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