

KG  
11366  
v. 778

# ERROR<sup>OF</sup> SIDEREAL CLOCK

















Saturday May 6, 1911

Mer. Circle

P.S. O'Reilly obsr.

Rattle 12 37

12 Can. Ven sq.  
38° 47'43 Comae  
28° 19'

12 <sup>h</sup> 54 <sup>m</sup>	23.1	23.4	6.5
	26.4	20.1	6.5
	29.7	17.3	7.0
	32.5	13.9	6.4
	35.8	10.9	6.7
	43.6	02.9	6.5
	48.4	57.9	6.3

$$\begin{array}{r} 52.9 \\ 15 \overline{) 1878} \\ 52. \\ \hline 1.25 \\ \hline 53.25 \end{array}$$

13 <sup>h</sup> 10 <sup>m</sup>	17.8	10.9	8.7
	20.5	08.1	8.6
	23.1	05.3	8.4
	25.9	02.5	8.4
	28.9	59.9	8.8
	35.8	52.9	8.7
	40.3	48.7	9.0

$$\begin{array}{r} 44.5 \\ 15 \overline{) 5.1} \\ \hline 44.34 \end{array}$$

$$\begin{array}{r} 37 \\ 16 \\ \hline 222 \\ 37 \\ \hline 0592 \\ .06 \end{array}$$
10  
0160

12 <sup>h</sup> 54 <sup>m</sup>	53.25
12 <sup>h</sup> 51 <sup>m</sup>	53.96
2	59.29
	.02
2	59.27
	57
2	59.84

13	10	44.34
13	7	45.03
2		59.31
		.06
2		59.25
		.57
2		59.82

Frod. 1327 is fast  
2<sup>m</sup> 59.83 at 13<sup>h</sup> 00<sup>m</sup>

Sidereal Time

P.S. O'Reilly obsr.

Wednesg. May 10, 1911

Mer. Circle

P.S. O'Reilly Obs.

Rattle 123<sup>6</sup>

20 Comae

21° 22'

8 Carum ven

41° 49'

12 28(?) 52.8 42.9 5.7

55.2 40.3 5.5

58.0 37.8 5.8

00.9 35.1 6.0

03.3 32.1 5.4

09.9 25.5 5.4

14.2 22.1 6.3

12 33 02.0 06.1 9.1

06.1 02.6 8.7

09.6 59.3 8.9

12.9 55.9 8.8

16.1 52.5 8.6

24.4 44.4 8.8

29.5 39.5 9.0

$$\begin{array}{r} .52 \\ .16 \\ \hline 312 \\ .52 \\ \hline .0832 \end{array}$$

$$\begin{array}{r} 18.0 \\ 15 \overline{) 181} \\ \underline{178} \\ 3 \end{array}$$

$$\begin{array}{r} .349 \\ 15 \overline{) 6.8} \\ \underline{34.45} \end{array}$$

12 28(?) 17.87

12 25 16.60

3 01.27

.08

3 01.19

57

3 01.76

12 32 34.45

12 29 33.15

3 01.30

.00

3 01.30

57

3 01.87

3 01.76

3 01.87

2 6 03.63

3 01.82

Rattle at apparently 12 36

7 vod 1327 in fast

3 01.82

12 30 8T

P.S. O'Reilly



Thursday May 18, 1911

Mer. Circle

Thurs. S. O. R. obs.

Rattle 14<sup>h</sup> 0<sup>m</sup>d Bootis <sup>mirror</sup>  
first series  
25° 30'<sup>3</sup>  
p Bootis  
30° 45'<sup>2</sup>  
a Bootis  
19° 38'

14<sup>n</sup> 9<sup>m</sup> 19  
 19.5 35.9  
 23.6 31.8

14<sup>n</sup> 30<sup>m</sup> 40.0 34.4 4.4 14<sup>n</sup> 14<sup>m</sup> 18.3 08.0 6.3  
 42.7 31.6 4.3 21.2 05.5 6.7  
 45.5 28.8 4.3 23.9 03.1 7.0  
 48.5 26.1 4.6 26.3 00.7 7.0  
 51.5 22.9 4.4 29.0 57.8 6.8  
 58.6 15.9 4.5 35.3 51.2 6.5  
 62.9 11.4 4.3 39.3 47.4 6.7

44  
 16  
 264  
 44  
 .07 04  
 36  
 16  
 336  
 36  
 07.08 96

27.9  
 5) 3.7  
 27.74

07.3  
 15) 3.1  
 07.20

43.4  
 15) 5.4  
 43.36

32  
 16  
 192  
 32  
 05 12

14 9 27.74  
 14 6 22.31  
 3 05.43  
 .07  
 3 05.36  
 57  
 3 05.93

14<sup>n</sup> 30<sup>m</sup> 07.20  
 14 27 61.66  
 3 05.54  
 .05  
 3 05.49  
 57  
 3 06 06

14 14 43.36  
 14 11 37.85  
 3 05.51  
 .09  
 3 05.42  
 57  
 3 05.99

3 5 93  
 3 6 06  
 3 5 99  
 3) 9 17 98  
 3 05.99

Frod 1327 is fast  
 3<sup>n</sup> 05.99 at  
 14<sup>n</sup> 15<sup>n</sup> S.T.  
 T.S. O'Reilly  
 obs.

Sta Saturday May 27 '11

Mer. Bricks

P.S. O'Reilly obs

Ratth 1444'

J Bootis

33° 38'

J Bootis

37° 40'

15	14	37.9	34.2	2.1	15	23	49.6	48.9	8.5
		41.0	31.3	2.3			52.9	45.6	8.5
		44.0	28.8	2.8			55.6	42.6	8.2
		47.0	25.3	2.3			58.9	39.3	8.2
		49.9	22.7	2.6			62.2	36.2	8.4
		57.2	15.2	2.4			10.0	28.2	8.2
		01.9	10.8	2.7			14.4	23.9	8.3

$$\begin{array}{r} 6.2 \\ 15 \overline{) 34} \\ \underline{06.2} \end{array}$$

$$\begin{array}{r} 17.2 \\ 15 \overline{) 25} \\ \underline{19.16} \end{array}$$

$$\begin{array}{r} .25 \\ .16 \\ \hline 150 \\ 25 \\ \hline .0406 \end{array}$$

$$\begin{array}{r} 15 \\ 16 \\ \hline 96 \\ 1.5 \\ \hline 240 \end{array}$$

$$\begin{array}{r} 15 \quad 15 \quad 06.22 \\ 15 \quad 11 \quad 57.02 \\ \hline 3 \quad 09.20 \\ \underline{.04} \\ 3 \quad 09.16 \\ \hline 57 \\ 3 \quad 09.73 \end{array}$$

$$\begin{array}{r} 15 \quad 24 \quad 17.16 \\ 15 \quad 21 \quad 9.91 \\ \hline 3 \quad 09.25 \\ \underline{.02} \\ 3 \quad 09.23 \\ \hline 3 \quad 09.23 \\ \underline{.07} \\ 3 \quad 09.80 \end{array}$$

$$\begin{array}{r} 3 \quad 09.73 \\ 3 \quad 09.80 \\ \hline 2 \overline{) 6 \quad 19.53} \\ 3 \quad 9.76 \end{array}$$

From 1327 to  
fast 3<sup>2</sup> 9.26 at  
15<sup>2</sup> 15<sup>2</sup> ST  
P.S. O'Reilly obs.



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Thursday June 1, 1911

Mer. Circle

P. S. O'Reilly Obs.

Wattle 147

d Bootis  
25° 30'

a Bootis  
19° 38'

14 <sup>h</sup> 9 <sup>m</sup>	7.9	59.8	7.7
	10.4	57.2	7.6
	13.4	54.4	7.8
	16.1	51.6	7.7
	18.9	48.9	7.8
	25.5	42.1	7.6
	29.9	37.9	7.8

14 <sup>h</sup> 14 <sup>m</sup>	24.3	14.1	8.4
	27.1	11.6	8.7
	29.7	08.9	8.6
	32.4	06.2	8.6
	34.9	03.9	8.8
	41.4	57.1	8.5
	45.2	53.3	8.5

$$\begin{array}{r} 83.9 \\ 15 \overline{) 12.9} \\ \underline{33.86} \end{array}$$

$$\begin{array}{r} 49.2 \\ 15 \overline{) 4.3} .28 \\ \underline{30} \\ 130 \end{array}$$

14 <sup>h</sup> 9 <sup>m</sup>	33.86
14	6 22.29
	3 11.576
	07
	3 11.50
	57
	3 12.07

14 <sup>h</sup> 14 <sup>m</sup>	47.28
14	11 37.86
	3 11.42
	09
	3 11.33
	57
	3 11.90

3	12.07
3	11.90
2	6 23.97
	3 11.98

Find 1321 is fast  
3<sup>m</sup> 11:98 at

14<sup>h</sup> 10<sup>m</sup> ST.

P. S. O'Reilly Obs.

$$\begin{array}{r} 44 \\ 16 \\ \underline{264} \\ 44 \\ \underline{176} \\ 168 \end{array}$$

$$\begin{array}{r} 56 \\ 16 \\ \underline{336} \\ 56 \\ \underline{1792} \end{array}$$



Wednesday June 7, 1911

Mer. Circle

T. S. O'Reilly Obs.

Rath 16 50

ε Herculis

31° 3'

$$\begin{array}{r} 9 \\ 1.0 \\ \hline .072 \end{array}$$
16<sup>h</sup> 59<sup>m</sup>

42.8 37.3 0.1

45.8 34.7 0.5

48.5 31.8 0.3

51.3 29.0 0.3

54.3 26.0 0.3

01.2 18.9 0.1

05.9 14.5 0.4

$$\begin{array}{r} 10.3 \\ 15 \overline{) 2.3} \\ \hline 10.15 \end{array}$$

π Herculis

36° 54'

44.7 43.1 7.8

44.7 40.2 7.9

50.9 37.0 7.9

54.0 34.0 8.0

56.9 31.0 7.9

04.6 23.1 7.7

09.1 18.6 7.7

$$\begin{array}{r} 14.0 \\ 15 \overline{) 12.9} \\ \hline 13.86 \end{array}$$

$$\begin{array}{r} .91 \\ .16 \\ \hline 186 \\ 31 \\ \hline 10496 \\ = 05 \end{array}$$

$$\begin{array}{r} 16 \\ 16 \\ \hline 96 \\ 16 \\ \hline 252 \end{array}$$

16 4

17 0 10.15

16 56 55.04

43 15.11

43 15.06

43 15.63

3 15.63

3 15.55

$$\begin{array}{r} 2 \overline{) 631.88} \\ \hline 315.64 \\ 59 \end{array}$$

$$\begin{array}{r} 3 \overline{) 15.63} \\ 3 \overline{) 15.55} \\ \hline 0.08 \end{array}$$

17 15 13.86

17 11 58.85

3 15.01

.03

3 14.98

57

3 15.55

Frod 1327 is just  
3 15.59 at  
17<sup>h</sup> 8<sup>m</sup> S.T.

Philip's actually observed.

Friday June 9, 1911

Mer. Circle

P. S. O'Reilly Obs.

Rate 13 53

$\alpha$  Bootis

$19^{\circ} 38'$

14	14	29.0	18.8	7.8
		31.6	16.1	7.7
		34.1	13.4	7.5
		36.9	10.9	7.8
		39.4	08.1	7.5
		46.0	01.7	7.7
		49.9	57.8	7.7

53.9  
15) 126  
53.84

56  
16  
336  
56  
08.96

=09

14	14	53.84
14	11	37.86
	3	15.98
		09
	3	15.89
		57
	3	16.46

Frod 13 27 is fast  
8<sup>m</sup> 16<sup>s</sup> 46 at  
14<sup>m</sup> 14<sup>s</sup> ST.

P. S. O'Reilly Obs.



Friday June 16, 1911.

Meridian Circle

Philip S. O'Reilly observed

Watch at 17<sup>h</sup> 9<sup>m</sup>

$\pi$  Herculis

36° 54'

$\delta$  Herculis

46° 2'

17 <sup>h</sup> 14 <sup>m</sup>	53.0	51.2	4.2
	56.1	48.4	4.5
	59.1	45.4	4.5
	02.1	42.3	4.4
	05.1	39.1	4.2
	13.0	31.3	4.3
	17.8	27.0	4.8

17 <sup>h</sup> 39 <sup>m</sup>	49.0	56.1	5.1
	52.5	52.9	5.4
	56.2	49.2	5.3
	00.1	45.9	6.0
	03.1	42.4	5.5
	12.1	33.1	5.2
	17.4	27.9	5.3

16  
16  
96  
256

31

22.1  
3.0  
15 ) 22.20

22.9  
10 97  
15 ) 22.71

6  
42  
12  
16  
72  
12  
01 92

17	15	22.20
17	11	59.00
3	23.20	.03
3	23.17	57
3	23.74	

3	23.74
3	23.86
2 ) 6	47.60
3	23.80

17	40	22.71
17	36	59.44
3	23.27	.02
3	23.29	57
3	23.86	

Frod. 13.27 is fast.  
2<sup>m</sup> 23.80 at  
17<sup>h</sup> 30<sup>m</sup> S.T.  
Philip S. O'Reilly observed.

Monday June 19, 1911

Mer. Circle

Phil S. O'Reilly Obs.

Rattle at 19<sup>h</sup> 16<sup>m</sup>

$\delta$  Cygnus  
37° 58'

$\beta$  Cygnus  
27° 45'

19 <sup>h</sup> 16	15.1	14.3	9.4
	18.4	11.5	9.9
	21.4	08.3	9.7
	24.6	05.2	9.8
	27.9	02.1	9.0
	35.8	54.3	9.1
	40.2	49.4	9.6

19 <sup>h</sup> 30 <sup>m</sup>	9.4	02.6	2.0
	12.2	59.8	2.0
	15.1	56.9	2.0
	17.9	54.0	1.9
	20.6	51.1	1.7
	27.7	44.4	2.1
	32.1	40.1	2.2

$$\begin{array}{r} 44.9 \\ 15 \overline{) 134} \\ 44.89 \end{array}$$

$$\begin{array}{r} 35.9 \\ 15 \overline{) 148} \\ 35.98 \end{array}$$

$$\begin{array}{r} 19 \quad 16 \quad 44.89 \\ 19 \quad 13 \quad 18.76 \\ \hline 3 \quad 26.13 \\ \quad \quad 02 \end{array}$$

$$\begin{array}{r} 3 \quad 26.13 \\ \quad \quad 57 \\ \hline 3 \quad 26.68 \end{array}$$

$$\begin{array}{r} 3 \quad 26.80 \\ 3 \quad 26.68 \\ \hline 2 \overline{) 653.48} \\ 326.74 \end{array}$$

$$\begin{array}{r} 19^h \quad 30^m \quad 85.94 \\ 19 \quad 27 \quad 9.65 \\ \hline 3 \quad 26.29 \\ \quad \quad 1.66 \\ \hline 3 \quad 26.23 \\ \quad \quad 37 \\ \hline 3 \quad 26.80 \end{array}$$

Frod 1322 <sup>m</sup> at  
3 26.74  
2-19<sup>m</sup> 2.8 ST.  
Kemp & O'Reilly



Tuesday June 20 1911

Meridian Circle

Phil G. O'Reilly Obs. Tattle 16 55

$\delta$  Herculis

$31^{\circ} 3'$

$\pi$  Herculis

$86^{\circ} 54'$

$16^h 59^m$	54.9	49.7	4.6
	57.8	46.9	4.7
	00.5	43.9	4.4
	03.5	41.1	4.6
	06.4	38.1	4.5
	13.5	31.1	4.6
	18.0	26.5	4.5
		22.3	
		15) 4.2	
		22.28	

$17^h 14^m$	56.9	55.5	2.4
	00.1	52.4	2.5
	03.1	49.2	2.3
	06.2	46.3	2.5
	09.1	43.5	2.6
	16.9	35.7	2.6
	21.6	30.8	2.4
		26.3	
		15) 36	
		26.24	

$$\begin{array}{r} 16 \\ 16 \\ \hline 31.96 \\ = 0.3116 \\ 31.0256 \\ .16 \\ \hline 186 \\ 31 \\ \hline = 0.0496 \end{array}$$

16	17	0	22.28
16	56	55.25	
	3	27.03	
		.05	
	3	27.08	
		.57	
	3	27.55	

17	15	26.24
17	11	59.10
	3	27.14
		.03
	3	27.11
		.55
	3	27.66

3	27.55
3	27.66
2) 6	55.21
3	27.60

7 rod 13 27 is  
fast  $3^m 27.60$   
at  $\times 17^h 5' S.T.$   
Phil O'Reilly Obs.

Wednesday June 21, 1911

Mer. Circle

Phil O'Reilly (Observer)

Latitude  $15^{\circ} 7'$

$\beta$  Bootis  
 $40^{\circ} 43'$

$\delta$  Bootis  
 $33^{\circ} 38'$

$15^h 1^m$	34.9	36.5	1.4
	38.0	33.2	1.2
	41.3	30.1	1.4
	44.7	26.9	1.6
	48.0	23.7	1.7
	56.0	15.3	1.3
	00.8	10.9	1.7

$15^h 14^m$	56.4	52.9	9.3
	59.6	50.0	9.6
	02.3	47.1	9.4
	05.3	44.1	9.4
	08.3	41.1	9.4
	15.9	33.7	9.6
	20.3	29.1	9.4

$$\begin{array}{r} 5.9 \\ 15 \overline{) 112} \\ \underline{05.74} \end{array}$$

$$\begin{array}{r} 25.1 \\ 15 \overline{) 112} \\ \underline{24.74} \end{array}$$

$$\begin{array}{r} .06 \\ 16 \\ \hline .096 \end{array}$$

$$\begin{array}{r} .25 \\ 16 \\ \hline 150 \\ 25 \\ \hline 408 \end{array}$$

15 2 05.74

14 58 37.85

3 27.89

3 27.88

3 27.88

5.7

3 28.45

3 28.45

3 28.33

2) 6 56.78

3 28.39

15 15 24.74

15 11 56.94

3 27.80

3 27.76

3 27.76

5.7

3 28.33

3 28.33

7 root 13 22 10

fact 3 28.39

at  $15^h 5^m$  S.T.

Phil O'Reilly



Friday June 30, 1911

Meridian Circle Phil O'Kelly elev.

Rathat 19° 09'

$\gamma$  Lyrae  
32° 32'

$\epsilon$  Aquilae  
13° 43'

$\delta$  Draconis  
67° 29'

18 58 46.2 41.5 7.7

19 4 32.0 20.2 2.2

19 15 9.8 12.2 2.0

++

49.2 39.0 8.2

34.7 18.0 2.7

16.1 05.9 2.0

52.0 35.9 7.9

37.1 15.1 2.2

22.9 58.9 1.8

55.1 33.1 8.2

39.9 12.6 2.5

29.2 52.5 1.7

58.0 30.1 8.1

42.1 10.1 2.2

35.1 46.5 1.6

05.2 22.9 8.1

48.7 03.8 2.5

51.6 30.2 1.8

09.5 18.4 7.9

52.4 59.9 2.3

01.2 20.5 1.7

$$\begin{array}{r} 14.1 \\ 15 \overline{) 152} \\ 13. \\ \hline 1.01 \\ 14.01 \end{array}$$

$$\begin{array}{r} 56.4 \\ 15 \overline{) 3.0} \\ 56.20 \end{array}$$

$$\begin{array}{r} 11.4 \\ 15 \overline{) 14.0} \\ 10.93 \end{array}$$

18 59 14.01

19 4 56.20

19 16 10.93

18 55 39.05

19 1 21.34

19 12 35.49

3 34.96

3 34.86

3 35.49

.04

3 34.92

57

3 35.49

3 35.58 - see other pp for star (14)

$$\begin{array}{r} 2 \overline{) 671.07} \\ 335.53 \end{array}$$

See pp. 14 for other stars.

$$3 \cdot 35:07 = 837 \tan = .152$$

$$3 \cdot 35:49 \quad 6729 \tan = 2.416$$

$$2 \cdot 264 \cdot 4200 \cdot 185 = 19 = n \quad 2.264$$

$$\begin{array}{r} 19360 \\ 18112 \\ \hline 12480 \end{array}$$

Use n. 20 positive for stars south Phil O'Kelly elev. of the zenith.

Frod 1327 is  
fast 3 35.53  
at 19° 30' 8"

Friday June 30 1911

Mer. Circle

Phil O'Reilly Obs.

Rattle 19° 26'

τ Draconis

73° 10'

5 Aquarii

44° 54'

missed first  
5<sup>th</sup> last 8 were  
also 3 into 6  
male group.

α Aquilae

80° 37'

19 19 34.6 16.2 08

42.8 08.1 0.9

52.0 59.4 1.4

00.1 50.9 1.0

09.1 42.9 2.0

30.1 21.1 1.2

42.5 08.0 0.5

19 45 —

—

—

—

—

38.4 59.1 = 7.5

19 49 39.7 27.2 7.1

42.2 24.9 7.1

44.8 22.3 7.1

47.2 19.9 7.1

49.7 17.3 7.0

56.2 11.0 7.2

59.9 7.2 7.0

$$\begin{array}{r} 55.7 \\ 15 \overline{) 8.5} \\ \underline{55.56} \end{array}$$

$$\begin{array}{r} 48.9 \\ 3 \overline{) 2.4} \\ \underline{48.80} \end{array}$$

$$\begin{array}{r} 03.7 \\ 15 \overline{) 10.3} \\ \underline{03.68} \end{array}$$

$$\begin{array}{r} 09 \\ 16 \\ \hline 54 \\ 9 \\ \hline .0144 \end{array}$$

19 20 55.56

19 17 20.00

3 35.56

19 45 48.80

19 42 13.80

3 35.00

3 35.01

3 35.01

3 35.57

19 50 03.68

19 46 28.61

3 35.07

73° 10' = 3 35.56 tan = 3.305

13° 43' = 3 34.86 tan = 3.244

$$\begin{array}{r} 3.061 \overline{) 7.000} \\ \underline{6.122} \\ 8780 \end{array}$$

$$\begin{array}{r} .22 \\ .19 \\ \hline 2 \overline{) .41} \\ \underline{.20} \end{array}$$

Use n.20 for each

Use n.20 positive for stars South of Zenith.

Phil O'Reilly



Monday July 3, 1911

Meridian Circle

Phil S. Kelly obs.

Rattle 18<sup>58</sup>

8 Cygnus  
37° 58'

13 Cygni  
27° 45'

19<sup>h</sup> 16 26.3 25.6 1.9  
29.4 22.5 1.9  
32.5 19.4 1.9  
35.5 16.2 1.7  
38.7 13.2 1.9  
46.6 05.4 2.0  
51.7 00.7 2.4

19<sup>h</sup> 30 20.6 13.8 4.4  
23.2 11.1 4.3  
26.0 08.1 4.1  
28.9 05.1 4.0  
31.4 02.7 4.1  
38.5 55.4 3.9  
42.9 51.3 4.2

10  
4  
040

13  
20  
260

55.9  
15) 146  
55.97

47.1  
15) 1641  
46  
1.07  
47.07

39  
20  
0180

19 16 55.97  
19 13 18.94  
3 37.03  
16.3  
3 37.06  
57  
3 37.63

19 30 47.07  
19 27 10.07  
3 37.00  
08  
3 37.08  
57  
3 37.65

3 37.63  
3 37.65  
2) 6 75.28  
3 37.64

Found 13 27 10 just  
8<sup>h</sup> 37.64 at  
19<sup>h</sup> 20<sup>h</sup> 8.7.  
T. S. W. R. obs.

Friday, July 7, 1911.

Mer. Circle      S.C.C. lbs.      Rattle at 18 8  
 Could not get any light in field to see the wires.  
 Cord was probably broken, having got caught when  
 moving telescope.



Saturday, July 8, 1911.

Meridian Circle

S. C. Cottrell / Obs.

Rattle at 21<sup>h</sup> 32<sup>m</sup> 13<sup>s</sup>

74 Cygni  
40° 0'

34.8 35.8 0.6

37.8 32.8 0.6

40.9 29.4 0.3

44.3 26.1 0.4

47.5 23.0 0.5

55.5 15.0 0.5

0.3 9.9 0.2

05.2

3.3

21 37 05.22

21 33 24.68

3 40.54

+ .74

+ .57

3 41.12

$\pi^2$  Cygni  
48° 53'

6.9 8.2 5.1

0.7 4.3 5.0

4.5 0.8 5.3

8.3 6.8 5.1

2.1 3.4 5.5

1.6 4.1 5.7

7.1 8.2 5.3

12.8

9.8

21 47 12.65

21 43 32.08

3 40.57

- .04

+ .57

3 41.10

Prod 1327 3<sup>m</sup> 41.11 fast at 21<sup>h</sup> 40<sup>m</sup>

.26  
.9  
234  
20.41  
26.68

.29  
.9  
261  
31.82  
32.08

.07  
.2  
014

.20  
.2  
040

Monday, July 10, 1911.

Meridian Circle

S.C. Catterall. Obs.

Read at 20<sup>h</sup> 37

$\epsilon$  Cygni  
33° 37'

32 Vulpecul.  
27° 42'

61 Cygni  
38° 18'



Tuesday, July 11, 1911.

Meridian Circle

S.C. Cattell Obs

Amount of pen  $\rightarrow$  3d Rattle at 16 54  
Rattle at 17 19

E Hercules

$31^{\circ} 3'$

$\times$  Arac

$49^{\circ} 48'$

L Hercules

$46^{\circ} 2'$

1.0 5.5 6.5

2.2 4.8 7.0

9.2 7.0 6.2

3.9 2.9 6.8

6.0 0.8 6.8

2.6 3.3 5.9

6.8 0.0 6.8

9.5 7.3 6.8

6.2 9.5 5.7

9.8 7.0 6.8

$3.\frac{2}{3}$  3.6 6.8

0.0 6.0 6.0

2.4 4.2 6.6

7.2 9.8 7.0

3.3 2.5 5.8

9.7 7.0 6.7

6.7 0.2 6.9

2.1 3.7 5.8

3.8 2.7 6.5

2.6 4.3 6.9

7.8 8.2 6.0

38.5

58.5

42.9

5.2

6.7

14.3

17 0 38.35

17 28 58.45

17 40 42.95

16 56 55.22

17 2 $\frac{5}{6}$  0.94

17 36 59.53

+ 3 43.13

7.51

+ 3 43.42

+ .06

+ .02

+ .57

+ .57

3 43.76

3 43.97

$\overline{F} 1327 3^m 43.86$  fast  
at  $17^h 20^m$

Wednesday, July 19, 1911.

Meridian Circle

S.C. Cattell (lbs.)

Rattle at 17 57

o Hercules  
28° 44'

o Diacanis  
58° 44'

x Lyrae  
38° 41'



Tuesday, July 25, 1911.

Meridian Circle

S. C. Catherall Obs.

Rattle at 7 12

$\alpha$  Herculis

$27^{\circ} 45'$

8.0 1.0 9.0

0.6 8.3 8.9

3.3 5.4 8.7

6.4 2.8 9.2

9.2 0.0 9.2

6.2 2.9 9.1

0.5 8.8 9.3

34.6

8.0

17 42 34.53

17 43 0.64

- 26.11

+ .08

+ .57

- 25.46

$\alpha$  Lyrae

$38^{\circ} 41'$

1.8 1.7 3.4

4.9 8.5 3.4

8.0 5.3 3.3

1.1 2.2 3.3

4.2 9.3 3.5

2.2 1.2 3.4

6.6 6.4 3.0

31.9

10.2

18 33 31.68

18 33 57.81

- 26.13

+ .03

+ .57

- 25.50

$\beta$  Lyrae <sup>not sure of this star</sup>  
 $33^{\circ} 15'$

.39  
.2  
+ .08  
.078

.13  
.2  
+ .026

J. 1327  $25.48^s$  slow at  $18^{\circ}$ .

22

Monday August 7, 1911

Meridian Circle T. G. O'Reilly Obs.

Wattle

See cloudy

ahyad,  
38° 41'

33° 15'

18 <sup>h</sup> 32'	58.1	58.1	6.2
	01.1	55.1	6.2
	04.3	52.0	6.3
	07.4	48.2	5.6
	10.4	45.1	5.5
	18.6	37.8	6.4
	23.4	32.9	6.3

ent.

28.1  
15) 15.6  
28  
1.04  
28.04

.10  
2  
.020

18 34 28.04  
18 33 57.69  
0 30.35

18 33 28.04

18 33 57.69

- 29.65  
+ 0.02 29.63 -  
- 29.67 .57 +  
+ 0.57 29.06 -  
- 0 30.24

slow  
Frod. 1327 is fast  
0 30.24

slow at 18<sup>h</sup> 33'

Thilo G. O'Reilly Obs.



Tuesday August 8, 1911

Meridian Circle Philip S. O'Reilly Obs. Rate 1834

110 Hercules

20 27

 $\beta$  Lyrae

33° 15'

18	40	57.1	47.0	4.1
		59.8	44.5	4.3
		02.5	41.9	4.4
		05.0	39.2	4.2
		<u>07.1</u>	<u>36.9</u>	<u>4.5</u>
		14.2	30.0	4.2
		18.2	26.1	4.3

$$\begin{array}{r} 22.2 \\ 15 \overline{) 2.2} \\ \hline 22.14 \end{array}$$

18	45	51.6	47.4	9.0
		54.8	45.0	9.8
		57.5	42.0	9.5
		00.6	39.0	9.6
		<u>03.8</u>	<u>36.1</u>	<u>9.9</u>
		11.2	28.4	9.6
		15.3	24.4	9.7

$$\begin{array}{r} 20.0 \\ 15 \overline{) 12.1} \\ \hline 19.80 \end{array}$$

$$\begin{array}{r} 55 \\ .2 \\ \hline 110 \\ 26 \\ .2 \\ \hline 052 \end{array}$$

18	41	22.14
18	41	52.14
-	0	30.00
+	11	
-	0	30.11
+	57	
-	0	30.68

$$\begin{array}{r} -29.89 \\ -29.32 \\ -29.45 \\ \hline 58.77 \\ 29.38 \end{array}$$

$$\begin{array}{r} 0 \ 30.68 \\ 0 \ 30.69 \\ 2 \overline{) 0 \ 61.37} \\ \hline 0 \ 30.68 \end{array}$$

18	46	19.80
18	46	49.87
-	0	30.07
+		.65
-	0	30.12
+	57	
-	0	30.69

slow  
Frod. 1827 is fast  
0' 30.68  
18h 43' S.T.  
Philip S. O'Reilly Obs.

Wednesday August 9, 1911

Mes. Circle

Philip S. O'Reilly Allev.

Rattle 18 31

u Herculis

~~46° 27' 45"~~

u Herculis

~~27° 45'~~  
46° 21'18<sup>h</sup> 42' 3.8 56.4 0.2

6.4 54.0 0.4

9.3 51.0 0.3

12.3 48.4 0.7

14.9 45.6 0.5

21.8 38.5 0.3

26.4 34.4 0.8

30.2

15) 34

30.22

cut.

18<sup>h</sup> 35' 55.1 02.8 7.9

59.0 59.1 8.1

02.2 55.6 7.8

06.1 52.2 8.3

10.1 48.6 8.7

18.1 39.3 7.4

23.8 34.3 8.1

29.0

15) 153

28

1.02

29.02

18<sup>h</sup> 42' 30.2218<sup>h</sup> 42' 60.49

+ 0 30.27

+ 29

- 30.35

+ 57

- 30.92

30.29

57

29.72

30.92

30.62

2) 61.64

30.82

29.12

29.56

59.28

29.64

18<sup>h</sup> 36' 29.0218<sup>h</sup> 36' 59.13

- 0 30.11

+ 02

- 0 30.09

+ 57

- 0 30.62

30.13

- 57

29.56

Frost 1327 is fast  
 0' 29.64 18<sup>h</sup> 43' S.T.  
 The O'Reilly Allev.



Monday August 14, 1911

Mer. Circle

Philip S. O'Reilly Obsr.

Rattle 2047

a Cygnus  
44° 57'

ε Cygni & Cygnus  
33° 37' 40° 49'

20 37 21.0 27.0 8.0  
24.4 23.8 8.2  
27.9 20.2 8.1  
31.3 16.8 8.1  
34.9 13.3 8.2  
43.9 04.7 8.6  
48.9 59.2 8.1

20 52 51.5 53.4 4.9  
54.8 50.3 5.1  
57.9 47.0 4.9  
01.3 43.9 5.2  
04.7 40.5 5.2  
12.9 32.5 5.4  
17.6 27.4 5.0

09  
2  
48

54.1  
15 ) 1.4  
54.049

22.9  
15 ) 8.6  
22.57

54  
2  
008

20 37 54.09

20 38 26.25

— 31.16

— .02

— 31.18

+ 57

31.75 30.61

31.75

31.68

2 ) 63.43  
31.72

20 53 22.57

20 53 53.67

— 31.10

+ .01

— 31.11 31.09

+ 57 .57

— 31.68 30.52

0 30.61

0 30.52

0 61.13

0 30.56

7 rods 13.27 is fast  
0 30.56  
0 31.72 at 20"

45' S.T.

Philip S. O'Reilly  
Observed.

Wednesday August 16, 1911

Mer. Circle

Philip S. Kelly Obs.

Bottle 18 58

2 hours missed  
just wind  
37° 58'

missed 15 mins

8  
B. Aguirre  
276 451  
44° 54'

19	12	20.1	18.4	3.5
		23.1	10.1	3.2
		26.2	6.9	3.1
		29.3	4.0	2.3
		37.4	55.9	3.3
		42.1	51.3	3.4

46.6  
+ 58.4  
13 46.56  
46.65

ANT

19	41	38.4	31.2	126	3.6
		35.4	45.9	1.3	3.3

40.5 40.5  
5 34 5 34  
40.68 41.68

19 41 40.68

19 46

19 12 46.56

19 13 18.91

0 32.35

19 12 46.65

19 13 18.91

— 0 32.36  
+ 0.3

32.86

— 0 32.29 — 32.23 32.25  
+ 57. + 57.2 15.6  
— 0 32.86 — 31.66 32.80

19 41 40.68

19 42 13.88

— 0 = 32.20

— 0 = 32.02

— 0 32.18 32.22

+ 57 + 57

— 0 32.75 31.65

Final 1327 50 at Shore  
0 31.566 at 29° 30'  
Philip S. Kelly Obs.



Monday August 21, 1911.

Meridian Circle

Philip G. Kelly Obs.

Alt 18° 25'

$\alpha$  Lyrae  
38° 41'

110 Hercules  
20° 21'

18 32 54.2 54.5

8.7

18 40 53.8 43.8 7.6

57.5 51.2 8.7

56.4 41.1 7.5

00.6 48.1 8.7

58.9 38.4 7.3

03.9 45.0 8.9

01.8 35.8 7.6

06.9 41.6 --- 8.5

04.2 33.1 --- 7.3

15.0 34.0 9.0

10.9 26.6 7.5

19.8 29.0 8.8

14.8 22.8 7.6

$$\begin{array}{r} 24.4 \\ 15 \overline{) 5.7} \\ \underline{24.38} \end{array}$$

$$\begin{array}{r} 18.8 \\ 15 \overline{) 11.2} \\ \underline{18.74} \end{array}$$

End

18 33 24.38

18 41 18.74

18 33 57.50

18 41 52.01

- 0 33.12

- 0 33.27

+ .02

+ 10.

- 0 33.14 33.10 - 0 33.71

- 0 33.37 33.17

+ .57 +.57 - 0 33.94

+ .57 .57

- 0 33.71 32.53 2) 0 67.65

- 0 33.94 32.60

0 33.82

0 32.53

0 32.60

0 65.13

0 32.56

Frod. 1327 to Fast Slow  
0 32.56 at 18° 35' ST.  
Philip G. Kelly Obs.

September 1, 1911 Mo Friday

Mrs. Circle

Shit Alow.

Paltb 22 28

10 Lacertae

38° 34'

η Pegasi

29° 43'

22	84	11.9	11.7	3.6
		15.0	08.8	3.8
		18.1	05.4	3.5
		21.7	02.2	3.9
		24.6	59.1	3.7
		32.2	51.2	3.4
		37.1	46.6	3.7

$$\begin{array}{r} 42.0 \\ 15 \overline{) 12.6} \\ 41.84 \end{array}$$

22	37	48.6	42.5	1.1
		51.4	39.8	1.2
		54.1	36.8	0.9
		57.1	33.9	1.0
		59.8	31.1	0.9
		07.0	24.1	1.1
		11.2	19.9	1.1

$$\begin{array}{r} 15.6 \\ 15 \overline{) 79} \\ 15.52 \end{array}$$

$$\begin{array}{r} 34 \\ 2 \\ \hline .068 \end{array}$$

$$\begin{array}{r} 10 \\ 2 \\ \hline .020 \end{array}$$

End

22	84	41.84
22	35	18.48
- 0		36.64
+		.02
- 0		36.66 36.62
+		57 .57
- 0		37.23 36.05

$$\begin{array}{r} 0 \quad 36.05 \\ 0 \quad 36.10 \\ \hline 0 \quad 72.15 \\ 0 \quad 36.08 \end{array}$$

0 37.23

$$\begin{array}{r} 0 \quad 37.38 \\ 0 \quad 74.61 \\ \hline 0 \quad 37.30 \end{array}$$

22 38 15.1152

22	38	52.26
- 0		36.74
+		.92
- 0		34.8 36.67
+		.57 .57
- 0		37.38 36.10

Prod 1327 is slow

22 35 36.08 at

22 35 S.T.

Report Kaitly Alow.



September 4, 1911 (Monday)

Meridian Circle

Antypod Kelly Obsv.

Path 21" 51'

$\pi$  Pegasi,  
32° 44'

22	4	13.9	09.4	3.3
		16.5	06.3	2.8
		19.7	03.6	3.3
		22.4	00.8	3.2
		25.9	57.5	3.4
		32.8	50.4	3.2
		37.1	45.9	3.0

	41.6
15)	8.8
	41.58

22	4	41.58
22	5	

1911  
1857  
54  
2

September 6, 1911 (Wednesday)

Mex. Circle

Philip G. Kelly Obsr.

Ratlb 20 44

32 Vulpecul  
27° 42'4 Cygni  
48° 49'

20 <sup>h</sup>	49 <sup>m</sup>	43.3	36.1	9.4	20 <sup>h</sup>	52 <sup>m</sup>	44.0	45.6	9.6
		46.0	33.4	9.4			47.3	42.9	0.2
		48.9	30.5	9.4			50.6	39.3	9.9
		51.8	27.6	9.4			53.8	36.1	9.9
		54.7	24.9	9.6			57.4	32.9	0.3
		01.3	18.1	9.4			05.2	24.8	0.0
		05.6	13.9	9.5			10.2	19.9	0.1

$$\begin{array}{r} .39 \\ .2 \\ \hline .078 \end{array}$$

$$\begin{array}{r} .06 \\ .2 \\ \hline .012 \end{array}$$

$$\begin{array}{r} .09.7 \\ 15 \overline{) 10.8} \\ \hline .09.72 \end{array}$$

$$\begin{array}{r} 14.9 \\ 15 \overline{) 148.9} \\ \hline 14.99 \end{array}$$

$$\begin{array}{r} 20^h \quad 50 \quad 09.72 \\ 20^h \quad 50 \quad 48.33 \\ - \quad 0 \quad 38.61 \\ + \quad \quad .08 \\ \hline - \quad 0 \quad 38.69 \quad 38.53 \\ + \quad \quad .57 \quad .57 \\ \hline 0 \quad 39.26 \quad 37.96 \end{array}$$

$$\begin{array}{r} 0 \quad 39.26 \\ 0 \quad 39 \quad 13 \\ 2 \overline{) 0 \quad 78.39} \\ \hline 0 \quad 39.20 \end{array}$$

$$\begin{array}{r} 20^h \quad 53 \quad 53 \quad 14.99 \\ 20^h \quad 53 \quad 53.54 \\ - \quad 0 \quad 38.55 \\ + \quad \quad .01 \\ \hline - \quad 0 \quad 38.56 \quad 38.54 \\ + \quad \quad .57 \quad .57 \\ \hline 0 \quad 39.13 \quad 37.97 \end{array}$$

Frod 13 27 10  
Slow ~~37.20~~ <sup>37.96</sup>  
at 20<sup>h</sup> 50<sup>m</sup> ST.  
Philip G. Kelly Obsr.



September 10, 1911 (Sunday)

Meridian Circle

Philip G. Bailey Observed

Battle 21<sup>m</sup> 16

74 Cygni  
40° 0'

π Cygni  
48° 53'

21 <sup>h</sup>	32 <sup>m</sup>	15.0	16.2	1.2
		18.4	13.1	1.5
		21.7	10.0	1.7
		25.0	06.7	1.7
		28.3	03.3	1.6
		36.2	55.2	1.4
		41.1	50.6	1.7
		46.0		
		15)	118	
			45.78	

21 <sup>h</sup>	42 <sup>m</sup>	17.5	28.9	6.4
		21.3	25.1	6.4
		25.1	21.2	6.3
		28.8	17.9	6.7
		32.1	14.1	6.7
		42.3	04.4	6.7
		47.8	58.8	6.6
		53.1		
		15)	39	
			53.26	

$$\frac{07}{.02} = 35$$

$$\frac{.24}{.048} = 5$$

□ □ □



21 <sup>h</sup>	32 <sup>m</sup>	45.78
21	33	25.03
- 0		39.25
+		.01
- 0		39.26
+		57
- 0		39.83
		-39.24
		+57
		-38.67

$$\begin{array}{r} 0 - 38.67 \\ 0 \quad 38.88 \\ 2 \quad 077.55 \\ \hline 038.78 \end{array}$$

End

21 <sup>h</sup>	42 <sup>m</sup>	53.26
21	43	32.66
- 0		39.40
+		.03
- 0		39.43
+		57
- 0		40.02
		-38.88

$$\begin{array}{r} 0 \quad 40.02 \\ 2 \quad 0 \quad 79.85 \\ \hline 0 \quad 39.92 \end{array}$$

7 mod 1327 is slow  
38.578 at 21<sup>h</sup> 35<sup>m</sup>  
Bilateral Line  
Philip G. Bailey Observed

September 13, 1911 Wednesday

Mer. Circle

Philips Observer

Rattles 20-6-7

0:59 Cygni  
46° 27'24 Vulpecul  
24° 23'γ Cygni  
39° 57'

20 9<sup>m</sup> 37.5 45.9 34  
 41.6 42.1 37  
 44.9 38.3 3.2  
 48.5 35.0 3.5  
 52.1 31.3 3.4  
 01.0 22.7 3.7  
 06.8 17.1 3.9

20 11<sup>m</sup> 55.0 46.4 1.4 20 17<sup>m</sup> 53.7 54.8 8.5  
 58.0 44.0 2.0 56.8 52.0 8.8  
 00.4 41.1 1.5 59.9 48.5 8.4  
 03.3 38.4 1.7 03.3 45.3 8.6  
 06.2 36.0 2.2 06.5 42.0 8.5  
 13.0 29.1 2.1 14.5 33.8 8.3  
 17.0 25.1 2.1 19.8 29.0 8.8

$$\frac{17}{102} = .167$$

$$\frac{12.1}{15) 11.9} = 11.79$$

$$\frac{20.9}{15) 13.9} = 20.92$$

$$\frac{24.2}{15) 4.1} = 24.27$$

$$\frac{13}{.078} = .08$$

$$\frac{14}{.126} = .03$$

$$\frac{46}{5.93} = .092$$

$$\frac{07}{.014} = .01$$

20 10<sup>m</sup> 11.29  
 20 10 51.67  
 - 39.88  
 - .03  
 - 39.85 39.91  
 + 57.57  
 - 40.42 39.44

20 12 20.92  
 20 12 60.74  
 - 39.82  
 + .09  
 - 39.91 39.73  
 + 57.57  
 - 40.48 39.16

20 18 24.27  
 20 18 64.15  
 - 39.88  
 + .01  
 - 39.87 39.87  
 + 57.57  
 - 39.30 40.46

0 40.42 0 39.44  
 0 40.48 0 39.16  
 0 40.46 0 39.30  
 3 2 01.36  
 40.45

Frod 13 27 is 39.30  
 Slow at 20 14 S.T.  
 Philips & Keilly Obs.



NB Minus just 5' wing  
of the star  
Phul

33

 Tuesday  
September 19, 1911 ~~Monday~~

Meridian Circle

Philip Observer

Rattle 20' 37"

 I star  
ε Cygni  
38° 37'

 II star  
32 Vulpecul  
27° 42'

 III star  
γ Cygni  
40° 49'

20	41	29.6	26.0	5.6	←	20	52	41.5	43.3	4.8	
		32.8	23.1	5.9	←			44.8	40.1	4.9	
		35.6	20.1	5.7	←			43.0	36.9	4.9	
		38.6	17.0	5.6	←			51.5	33.8	4.3	
		41.5	14.1	5.6	←			54.7	30.3	5.0	
		48.9	06.6	5.5		59.0	15.8	4.8	02.9	22.3	5.2
		53.2	02.0	5.2		03.2	11.4	4.6	07.9	17.8	5.7

$$\begin{array}{r} 16 \\ 2 \\ \hline 032 \\ 25 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 39 \\ 2 \\ \hline 08078 \end{array}$$

$$\begin{array}{r} 04 \\ 2 \\ \hline 008 \\ =01 \end{array}$$

M 250

$$\begin{array}{r} 57.7 \\ 15 \overline{) 11.8} \\ 57.78 \end{array}$$

$$\begin{array}{r} 07.3 \\ 5 \overline{) 8.7} \\ 07.34 \end{array}$$

$$\begin{array}{r} 12.6 \\ 15 \overline{) 7.4} \\ 12.49 \end{array}$$

$$\begin{array}{r} 20 \quad 41 \quad 57.78 \\ 20 \quad 42 \quad 38.71 \\ \hline - \quad 0 \quad 40.93 \\ + \quad .05 \end{array}$$

$$\begin{array}{r} 40.98 \quad 40.88 - \\ + \quad .57 \quad .57 + \\ \hline - \quad 0 \quad 41.55 \quad 40.31 - \end{array}$$

$$\begin{array}{r} - \quad 0 \quad 41.53 \\ 0 \quad 41.50 \\ 0 \quad 41.46 \\ \hline 3 \overline{) 0124.51} \\ 0 \quad 41.50 \end{array}$$

$$\begin{array}{r} 20 \quad 50 \quad 07.34 \\ 20 \quad 50 \quad 53.37 \\ \hline 46.03 \end{array}$$

$$\begin{array}{r} 20 \quad 50 \quad 07.34 \\ 20 \quad 50 \quad 48.19 \\ \hline - \quad 0 \quad 40.85 \\ + \quad .08 \end{array}$$

$$\begin{array}{r} -40.77 \\ + .57 \\ \hline -40.20 \\ -40.30 \\ -40.31 \\ \hline -120.87 \\ \hline 40.27 \end{array}$$

$$\begin{array}{r} 20 \quad 52 \quad 12.49 \\ 20 \quad 53 \quad 48.19 \\ \hline 0 \quad 35.70 \end{array}$$

$$\begin{array}{r} 20 \quad 53 \quad 12.49 \\ 20 \quad 53 \quad 53.37 \\ \hline - \quad 0 \quad 40.88 \\ + \quad .01 \end{array}$$

 Prod 1327 is just 40.527  
at 20° 45' S.T.

Philip S. Bell, Observer

September 22, 1911 (Friday)

Wes. Circle

Phil Cleaver

Rattle 21 18

74 Cygni  
40° 0'

missed first stars

16 Pegasi  
25° 30'

21 <sup>m</sup> 32 <sup>m</sup>	13.2	14.3	7.5
	16.9	11.6	8.5
	20.0	08.2	8.2
	23.0	04.9	8.0
	26.4	01.7	8.1
	34.4	53.6	8.0
	39.3	48.9	8.2

21 <sup>m</sup> 48 <sup>m</sup>	---	---
	---	---
	---	---
	---	---
	13.5	30.0 3.5
	18.0	26.0 4.0

$$\begin{array}{r} 44.1 \\ 15 \overline{) 15.6} \\ \underline{45.10} \\ 43 \\ \underline{1.04} \\ 44.04 \end{array}$$

$$\begin{array}{r} 22.0 \\ 5 \overline{) 45} \\ \underline{21.90} \end{array}$$

$$\frac{13}{5} = 07$$

$$\begin{array}{r} 07 \\ 0.2 \\ \hline 2014 \\ 44 \frac{2}{8} \\ \hline = 09 \end{array}$$

21 <sup>m</sup> 32 <sup>m</sup>	44.04
21 <sup>m</sup> 33 <sup>m</sup>	25.08
- 0	41.04
+	.01
- 0	41.05
- 57	41.03
- 0	41.62
	40.46
	40.58
	.04

21 <sup>m</sup> 48 <sup>m</sup>	21.90
21 <sup>m</sup> 48 <sup>m</sup>	63.14
- 0	41.24
+	.07
- 0	41.33
+	57
-	41.90
	41.15
	.57
	40.58

Found 1322 is fast 40.52  
at 21<sup>m</sup> 45<sup>m</sup> S.T.

Philip S. Kelly  
Cleaver



September 27, 1911 (Wednesday)

Mendians Circle This 20th July 1899 Call at 5 6'

$\alpha$  Andromed

28° 35'

$\gamma$  Pegasi

14° 41'

0 <sup>m</sup> 2 <sup>m</sup>	41.8	35.0	6.8
	44.4	32.4	6.8
	47.2	29.5	6.7
	50.2	26.8	7.0
	53.0	24.0	7.0
	00.1	16.8	6.9
	04.7	12.7	7.4

$$\begin{array}{r} 08.3 \\ 15 \overline{) 6.9} \\ \underline{08.46} \end{array}$$

0 <sup>m</sup> 7 <sup>m</sup>	36.2	24.6	0.8
	38.9	22.1	1.0
	41.4	19.4	0.8
	44.0	16.9	0.9
	46.5	14.4	0.9
	52.9	08.0	0.9
	56.7	04.1	0.8

$$\begin{array}{r} 00.4 \\ 15 \overline{) 6.5} \\ \underline{00.43} \end{array}$$

$$\begin{array}{r} 37 \\ .2 \\ \hline .074 \end{array}$$

$$\begin{array}{r} 62 \\ .2 \\ \hline .124 \end{array}$$

0<sup>m</sup> 03 08.46

$$\begin{array}{r} 03 \\ - 03 \\ \hline 0 \\ 49.89 \\ 41.43 \\ + .07 \end{array}$$

$$- 41.50 - 41.36$$

$$+ .57 + .57 = \text{bsec } \phi$$

$$42.07$$

$$42.17$$

$$\begin{array}{r} 2 \overline{) .24} \\ \underline{42.12} \end{array}$$

0<sup>m</sup> 8<sup>m</sup> 00.43

$$\begin{array}{r} 08 \\ - 41.91 \\ \hline - 41.48 \\ + .12 \end{array}$$

$$\begin{array}{r} - 41.60 \\ \text{bsec } \phi + .57 \\ \hline - 41.17 \end{array}$$

Ent

Frod. 1327 is slow

$$0^m 42.12 \text{ at}$$

0<sup>m</sup> 5<sup>m</sup> S.T.

July 20th 1899

Thursday September 28, 1911

Mer. Circle

Pulvis Observed

Battle 1857

J. hyrae  
37° 58'

19 <sup>h</sup>	12 <sup>m</sup>	08.9	06.2	3.1
		10.0	03.1	3.1
		13.1	00.1	3.2
		16.3	57.0	3.3
		19.8	53.5	3.3
		27.0	46.1	3.1
		31.9	41.2	3.1

$$\begin{array}{r} 36.8 \\ 15 \overline{) 9.0} \\ \hline 36.60 \end{array}$$
J. Cygnus  
27° 45'

19 <sup>h</sup>	26 <sup>m</sup>	01.3	54.4	5.7
		04.3	51.7	6.0
		07.0	48.9	5.9
		09.9	46.1	6.0
		12.8	43.2	6.0
		19.8	36.1	5.9
		23.8	32.1	5.9

$$\begin{array}{r} 27.9 \\ 15 \overline{) 14.35} \\ \hline 27.95 \end{array}$$

Ent

$$\begin{array}{r} 38 \\ .2 \\ \hline .76 \end{array}$$

19	12	36.60
19	13	18.10
-	0	41.50
+		.03
-	0	41.53
+	57	.57
-		40.90
-		42.18

$$\begin{array}{r} 42.10 \\ 25 \\ \hline 2 \overline{) 35} \\ 18 \end{array}$$

19	26	27.95
19	27	9.55
-	0	41.60
+		.08
-	0	41.68
+	57	.57
-		40.95
-		42.25

 Mittambs  
 1911phae  
 (Signature)

Frod 132700 slow

0<sup>m</sup> 42.18 at 19<sup>h</sup> 20<sup>m</sup>

S.T. Pulvis &amp; Kelly Observed



Saturday September 30, 1911

Mer. Circle

Philip S. Kelly ~~and~~ Rattle 19<sup>h</sup> 31<sup>m</sup>

13 Cygni  
27<sup>h</sup> 45<sup>m</sup>

8 Cygni  
44<sup>h</sup> 54<sup>m</sup>

19<sup>h</sup> 26<sup>m</sup> 01.5 54.3 5.8  
04.5 51.9 6.4  
07.1 48.9 6.0  
10.0 46.1 6.1  
12.9 43.2 6.1  
19.9 36.3 6.2  
23.9 32.1 6.0

28.0  
15 | 15.6  
27.  
1.04  
2.8.04

19<sup>h</sup> 40 58.2 04.6 2.8  
01.9 01.2 3.1  
05.4 57.8 3.2  
8.9 54.2 3.1  
12.1 50.9 3.0  
21.1 41.9 3.0  
26.4 36.9 3.3

32.0  
15 | 8 5<sup>10</sup>  
32.56

out

19<sup>h</sup> 26 28.04

19 27 9:51

— 0 41.47

+ .08

— 0 41.55 — 41.39

+ .57 + .57

— 0 42.12 — 40.82

0 42.12

0 41.97

2 | 0 64.09

0 42.05

19 48 32.56

19 42 12.98

— 0 41.42

— 0 41.40 41.44

+ .57 + .57

— 0 41.97 40.87

38  
+ .02  
+ .06 .076  
02  
+ .025 218

+ 4.14 + 4.14  
+ 4.14 + 4.14

Frost 1327 is

slow 40.584

at 19<sup>h</sup> 35<sup>m</sup> S.T.

Missell Kelly Obs

Saturday October 7, 1911

Mer. Circle

Philip S. Kelly

Ratto

Observer 2249

o Andromed

41° 50'

minia first spring Phil

β Pegasi

27° 35'

22 56 38.1 41.2 9.3 22 58

41.2 38.1 9.3

44.1 34.5 8.6

48.3 31.4 9.7

51.4 28.0 9.4

59.8 19.8 9.6

04.9 14.9 9.8

9.9  
15) 10.6  
9.70

*EW*

22 567 9.70

22 57 51.97

- 0 42.27 - 0 42.27

+ .57 + .57

- 0 42.84 - 0 41.70

- 0 41.70

- 0 41.46

- 0 83.16

0 41.58

.84  
7.6  
2) 16.0  
8.0

22 58 47.78

22 59 30.09

- 42.11

+ .08

- 0 42.19 42.03

57 .57

- 0 42.76 41.46

Frod 1327 in slow

0 41 58 at

22 52 S.T.

Philip S. Kelly

01  
1.2  
202

3.9  
1.2  
078



Tuesday October 10, 1911

Meridian Circle

Philip G. Kelly Obsr.

Rattle 2359

$\alpha$  Andromed  
28° 35'

$\gamma$  Pegasi  
14° 41'

0 <sup>h</sup> 2 <sup>m</sup>	40.1	33.9	4.0
	43.1	31.1	4.2
	46.0	28.1	4.1
	49.0	25.4	4.4
	51.9	22.6	4.5
	58.8	15.4	4.2
	03.1	11.3	4.4

07.0
15 $\overline{) 1.8}$
07.12

0 <sup>h</sup> 7 <sup>m</sup>	34.9	23.1	8.0
	37.5	20.8	8.3
	40.0	18.3	8.3
	42.5	15.9	8.4
	45.0	13.0	8.0
	51.8	6.7	8.5
	55.2	3.1	8.3

59.2
15 $\overline{) 2.0}$
59.13

$\frac{37}{2}$   
074

$\frac{64}{2}$   
0128 713

0 <sup>h</sup> 3 <sup>m</sup>	07.12
0 <sup>h</sup> 3 <sup>m</sup>	49.92
-	0 42.80
+	07
-	0 42.87
+	57
	0 42.73
	1 + .57
	0 43.44
	- 0 42.16

44
53
2.97
48

0 <sup>h</sup> 7 <sup>m</sup>	59.13
0 <sup>h</sup> 8 <sup>m</sup>	41.96
-	0 42.83
+	13
-	0 42.92
+	57
-	0 43.53
	42.70
	.57
	42.13

$\gamma$  rod 1327 is slow

0<sup>h</sup> 5<sup>m</sup> 42.515 at S.T.

Philip G. Kelly  
Observer

Monday October 23, 1911

Meridian Circle Phelps & Kelly Obs. Battle 119

Perseus  
48° 10'

Triangulum  
29° 8'

1 <sup>m</sup> 31 <sup>m</sup>	15.9	26.9	2.8
	20.1	23.6	3.7
	23.8	18.9	2.7
	28.0	15.3	3.3
	31.5	11.4	2.7
	40.1	63.1	3.2
	46.1	57.7	3.8

1 <sup>m</sup> 46	53.1	47.2	0.3
	56.1	44.6	0.7
	58.9	41.4	0.3
	61.9	38.8	0.7
	64.6	35.9	0.5
	11.5	28.6	0.1
	15.9	24.5	0.4

22  
132

8

51.6  
15 ) 9.0  
51.60

20.3  
15 ) 3.3  
20.22

50.4

1	31	51.60
1	32	34.92
-	0	43.32
-		.04
-	0	43.28
+		5.7
-	0	43.85

43.36  
42.79 85  
42.66 94  
85.45 17.9  
42.72 89 = 10

1	47	20.22
1	47	63.52
-	0	43.30
+		.07
-	0	43.37
+		5.7
-	0	43.94

From 1322 to 1300.  
at 1<sup>m</sup> 35<sup>m</sup> S.T.  
Phelps & Kelly Obs.



Tuesday October 24, 1911

Meridian Circle

Thos. E. Bailey Obs.

Rate 21.46

20 Cephei  
62° 20'

β Pegasi<sup>2</sup>  
5° 45'

β Pegasi  
10° 21'

22 0	45.9	26.9	2.8	22 4	38.2	25.5	3.7	22 35	56.9	44.5	1.4
	51.3	22.2	3.5		40.9	23.0	3.9		89.2	42.0	1.2
	56.9	16.8	3.7		43.0	20.2	3.2		01.6	39.5	1.1
	01.9	11.8	3.7		45.6	18.0	3.6		04.5	37.1	1.6
	07.0	05.9	2.9		48.0	15.3	3.3		06.9	34.3	1.2
	20.6	52.9	3.5		54.1	09.1	3.2		13.1	28.1	1.2
	29.0	44.9 <sup>5</sup>	3.5		58.2	05.4	3.6		16.9	24.4	1.3

$$\begin{array}{r} 97 \\ 2 \\ \hline 194 \end{array}$$

$$\begin{array}{r} 99 \\ 21 \\ \hline 198 \end{array}$$

$$\begin{array}{r} 82 \\ 24 \\ \hline 164 \end{array}$$

$$\begin{array}{r} 35 \\ 73 \\ \hline 245 \end{array}$$

$$\begin{array}{r} 92 \\ 24 \\ \hline 68 \end{array}$$

$$\begin{array}{r} 1806 \\ 97 \\ \hline 16254 \\ 1806 \\ \hline 126425 \end{array}$$

$$\begin{array}{r} 37.0 \\ 15 \overline{) 10.6} \\ \hline 36.70 \end{array}$$

$$\begin{array}{r} 01.9 \\ 15 \overline{) 11.4} \\ \hline 01.76 \end{array}$$

$$\begin{array}{r} 20.9 \\ 15 \overline{) 9.9} \\ \hline 20.66 \end{array}$$

$$\begin{array}{r} 22 4 \\ 22 2 \\ \hline 19.68 \\ - 0 42.98 \\ \hline - 1.9 \\ \hline - 43.17 \end{array}$$

$$\begin{array}{r} 22 5 \\ 22 5 \\ \hline 45.06 \\ - 43.30 \\ \hline + 26 \\ \hline 0 43.14 \end{array}$$

$$\begin{array}{r} 22 36 \\ 22 36 \\ \hline 63.89 \\ - 0 43.23 \\ \hline 0 43.10 \end{array}$$

$$\begin{array}{r} 62^\circ 20' = 0 \quad 42.98 \tan \quad 1.907 \\ 5^\circ 45' = 0 \quad 43.30 \quad " \quad .101 \\ \hline 1.806 \overline{) 32000} \quad (.17 \overline{) 1806} \quad .17 \\ \hline 1806 \\ \hline 13940 \\ \hline 12642 \end{array}$$

See page 42 for instructions.

South

Use n o. 2 positive for stars North of Zenith

Use n (lat S - lat φ) negative for stars South of Zenith.

October 24, 1911

Mer. Circle

Philip S. O'Reilly

Rattle 21 46

i Cephei  
65° 43'β Pegasi  
27° 35'γ Andromedae  
41° 50'

22 58 44  
52.4 46.9 7.3  
59.0 41.6 0.6  
04.9 35.0 9.9  
10.2 29.1 9.3  
16.9 22.9 9.8  
32.0 07.6 9.6  
40.9 59.2 0.1

22 58 44  
13.0  
10.2  
26.1 07.5 3.6  
28.8 04.9 3.7  
31.1  
29.9 02.1 3.2  
38.1 55.0 3.1  
42.9 50.9 3.8

22 56 44  
36.9 46.0 6.9  
36.9  
43.8  
47.1 29.9 7.0  
50.2 26.7 6.9  
58.4 18.5 6.9  
3.3 13.4 6.7

39  
2  
07.8

50.0  
15 136  
49.90

46.9  
11 8.3  
46.75

8.6  
11 5.0  
8.33

32 7  
224  
1.01  
2  
002

1.30  
2  
2.60

122  
91

22 45 49.90  
22 46 32.66  
0 42.76  
+ 2.6  
0 43.02

22 58 46.75

22 56 8.33

22 59 29.96

22 57 51.78

43.21  
+ .08  
43.13  
+ .57  
43.70  
43.56

43.45  
+ .57  
44.02

65° 43' = 0 42.76

See pp. 4 &amp; 5 for other stars

65° 43' = 0 42.26 tan = 2.216

76  
2187.02  
43.86

42.88  
42.88  
44

10° 21' = 0 43.23 tan = .183

.47

2.033

470.00(23

7066  
6340  
6099

2,033 47.00  
47 20.33

Fred 1347 is

slow fast 0 42.72

S.T. at 23 S.T.

Philip S. O'Reilly, observer



Thursday October 26, 1911

Mex. Circle

Battle 25 23

Thrup S. G. Kelly

Arietis

21° 34'

41 Arietis

26° 53'

2 32 40.9 31.1 2.0

42.9 28.2 1.1

46.1 25.3 1.4

48.8 22.9 1.7

51.1 20.0 1.1

57.1 13.2 0.3

61.3 9.3 0.6

$$\begin{array}{r} 5.8 \\ 15 \overline{) 9.0} \\ \underline{5.6} \end{array}$$

2 43 38.1 30.9 9.0

41.0 28.1 9.1

43.9 25.2 9.1

46.9 22.5 9.4

49.2 19.7 8.9

56.1 12.9 9.0

60.3 8.9 9.2

$$\begin{array}{r} 4.3 \\ 15 \overline{) 8.0} \\ \underline{4.53} \end{array}$$

END.

$$\begin{array}{r} 52 \\ 2 \\ \hline 4102 \end{array}$$

$$\begin{array}{r} 402 \\ 2 \\ \hline 804 \end{array}$$

2 33 05.60

2 33 48.88

- 0 43.28

+ 10

- 0 43.18

+ 5.7

- 0 43.75

42.61

72

8333

4270

$$\begin{array}{r} 75 \\ 86 \\ 2 \overline{) 61} \\ \underline{80} \end{array}$$

2 44 04.53

2 44 47.90

- 0 43.37

+ 08

- 0 43.29

+ 57

- 0 43.86

42.72

Frod 1327 is 81000

0 42.570 at

2 36 S. T.

Thrup S. G. Kelly

Sunday October 29, 1911

Mer. Circle

Thrupp & Keilly Obs.

Railbar 54

$\alpha$  Andromed

28° 35'

$\gamma$  Pegasi  
14° 41'

0	2	39.9	33.3	3.2
		43.0	31.1	4.1
		45.7	27.4	3.1
		48.4	24.8	3.2
		51.2	21.9	3.1
		58.2	14.8	3.0
		62.6	10.9	3.5

$$\begin{array}{r} 6.9 \\ 15 \overline{) 101} \\ \underline{6.67} \end{array}$$

0	7	34.1	22.8	6.9
		37.1	19.9	7.0
		39.8	17.8	7.6
		41.9	15.1	7.0
		44.3	12.2	7.1
		50.1	06.2	6.3
		54.8	02.4	7.2

$$\begin{array}{r} 58.9 \\ 15 \overline{) 8.0} \\ \underline{58.53} \end{array}$$

ENT

0 3 6.67

0 3 49.88

- 0 43.21

+ .08

- 0 43.13

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

0 42.56

0 42.72

0 85.28

0 42.64

0 7 58.53

0 8 41.95

- 0 43.42

+ .13

- 0 43.29

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

- 0 43.70

+ .57

Frod 1327 is 86000

0 42.645

0 43.78 at

0 5 8.1

Thrupp & Keilly Obs.

$$\frac{6}{.012}$$

$$\frac{38}{.076} = .08$$

$$\frac{65}{.130}$$



Thursday October November 2, 1911

Mer. Circle

Philip S. O'Reilly observer. Rattle 2225

i. Andromedae

42° 46'

a. Andromedae

28° 85'

23 <sup>h</sup>	32 <sup>m</sup>	33.0	36.4	9.4
		36.1	33.4	9.5
		39.7	30.1	9.8
		43.1	26.7	9.8
		46.4	23.3	9.7
		54.8	15.0	9.8
		59.9	9.9	9.8

$$\frac{13}{.072}$$

22

$$\begin{array}{r} 5.1 \\ 15 \overline{) 129} \\ 4.86 \end{array}$$

ent.

0 <sup>h</sup>	2 <sup>m</sup>	39.1	32.7	1.8
		42.2	30.2	2.4
		44.9	27.2	2.1
		47.9	23.9	2.8
		50.5	21.4	1.9
		57.5	14.2	1.7
		01.4	10.2	1.6

$$\begin{array}{r} 0.59 \\ 15 \overline{) 15.2} \\ 05. \\ 101 \\ 06.01 \end{array}$$

23 <sup>h</sup>	33	04.86
23	33	48.61
+	0	43.75
+		.57
	0	44.32
	0	43.18

$$\frac{32}{.074}$$

0 <sup>h</sup>	3 <sup>m</sup>	06.01
0	3	49.85
-	6	43.84
+		.07
-	0	43.77
+		.57
-	0	43.34

43.77  
.57  
32  
34  
2.66  
33

Prod. 1327 is 8600

on 43.519 at

23:45 58

Philip S. O'Reilly observer.

46

 by  
 7.754 votes  
 to load 4e  
 8 1/2" P. 9.17.

Tuesday (Election night) Nov. 7 1911

Meridian Circle Philip G. Kelly Obs. Rattle 16

 u Piscium  
 26° 47'

 γ Piscium  
 14° 53'

1	13	27.0	19.6	6.6
		29.8	16.8	6.6
		32.7	14.1	6.8
		35.3	11.3	6.6
		38.1	08.7	6.8
		45.0	01.6	6.6
		49.1	57.5	6.6

$$\begin{array}{r} 53.2 \\ 15 \overline{) 48} \\ \underline{53.32} \end{array}$$

Ent.

1	25	37.9	26.2	4.1
		40.4	24.0	4.4
		43.0	21.0	4.0
		45.3	18.7	4.0
		48.1	16.1	4.2
		54.5	9.9	4.4
		58.3	6.0	4.3

$$\begin{array}{r} 2.1 \\ 15 \overline{) 15} \\ \underline{02.10} \end{array}$$

$$\begin{array}{r} 4\frac{1}{2} \\ .082 \\ 64 \\ \underline{2} \\ .128 \end{array}$$

1	13	53.32
1.	14	37.45
-	0	44.13
+		.08
-	0	44.05
+		57
0		44.62

-	0	44.05
+		57
-		43.48



1	26	02.10
1	26	46.29
-	0	44.19
+		.13
-	44.06	- 0 44.06
57	+	- 57
43.49	-	0 44.63

Prod 1327 is 36000

$$\begin{array}{r} 43.548 \\ 0 44.62 \end{array}$$

at 1" 15" S. E.

Philip G. Kelly Obs.



1911phae.proj.17820

Friday - November 10, 1911

Meridian Circle

Philip G. Bailey Observer

Rate 3"43'

♂ Persei

31° 37'

♂ Persei

39° 45'

3 47 23.6 18.8 2.4

26.4 15.8 2.2

29.5 12.9 2.4

32.0 9.9 1.9

35.1 07.1 2.2

42.2 59.9 2.1

46.6 55.4 2.0

3 50 41.3 42.6 3.9

44.9 39.1 4.0

48.1 36.2 4.3

51.2 33.1 4.3

54.1 29.2 3.3

2.4 21.5 3.9

7.0 16.9 3.9

15 ) 51.0  
15 ) 16'2  
50.  
1 08  
51.08

15 ) 12.0  
15 ) 14 6  
11.97

SW

3 47 51.08

3 48 35.54

0.44.46

0.06

52

57

45 07

44.40 99

57 21

230

43 19379

3 51 11.97

3 51 56.60

58

0 44.63

64

57

45 21

0 43.93

0 44.03 0 44.62

87.28

43.99 44.05

43.79

43.79

43.79

43.79

November 13, 1911 (Monday)

Mer. Circle

Thrup 50 Kelly Ells. Path 23

v Arctis

21° 34

41 Arctis

26° 53

L	m	S
2	32	39.9 80.1 - 0.0
		42.5 27.8 0.3
		45.0 24.9 9.9
		47.8 22.2 0.0
		50.0 20.0 0.0
		56.9 12.9 9.8
		01.2 9.0 0.2

$$\begin{array}{r}
 5.0 \\
 15 \overline{) 15.2} \\
 \underline{04} \\
 1.01 \\
 \underline{05.01}
 \end{array}$$

L	m	S
2	43	36.8 29.1 5.9
		39.4 26.8 6.2
		42.3 23.6 5.9
		44.9 20.9 5.8
		47.9 18.0 5.1
		54.3 11.1 5.4
		58.9 7.1 6.0

$$\begin{array}{r}
 3.1 \\
 15 \overline{) 14.2} \\
 \underline{2.94}
 \end{array}$$

Ent.

2 33 05.01

2 33 49.02

$$\begin{array}{r}
 -0 \quad 45.02 \\
 + .10 \\
 \hline
 0 \quad 45.12 \\
 + .58 \\
 \hline
 -0 \quad 45.70
 \end{array}$$

$$\begin{array}{r}
 -0 \quad 45.05 \\
 + 10 \\
 \hline
 -0 \quad 44.95 \\
 + .57 \\
 \hline
 44.38
 \end{array}$$

2 44 2.94

2 44 48.09

$$\begin{array}{r}
 -0 \quad 45.15 \\
 + .08 \\
 \hline
 0 \quad 45.23 \\
 + .57 \\
 \hline
 0 \quad 45.80
 \end{array}$$

$$\begin{array}{r}
 -0 \quad 45.07 \\
 + .57 \\
 \hline
 0 \quad 44.50
 \end{array}$$

$$\begin{array}{r}
 15.12 \\
 2 \overline{) 15.12} \\
 \underline{76} \\
 80 \\
 \underline{158} \\
 3 \overline{) 75}
 \end{array}$$

$$\begin{array}{r}
 0 \quad 44.38 \\
 0 \quad 44.50 \\
 0 \quad 48.88 \\
 \hline
 0 \quad 44.44
 \end{array}$$

Fred 13 27 18 8600

0 44.44 at

2 39 8.7. Thrup 50 Kelly Ells.

$$\begin{array}{r}
 52 \\
 107 \\
 \hline
 107
 \end{array}$$

$$\begin{array}{r}
 40 \\
 1080 \\
 \hline
 1080
 \end{array}$$

64

65

75



Wednesday Nov. 15, 1911

Level of Meridian Circle

S. Obs. O' recorder

Zero E

Zero W

Wednesday November 15, 1911

Collimation of Mer. Circle

G. lar. OT. recorder

Micrometer found set at 33.557

S. on N.	Tel on S.	Tel on N
----------	-----------	----------

82.2	33.678	33.538
------	--------	--------

83.2	.684	.546
------	------	------

81.8	.685	.548
------	------	------

84.0	.684	.545
------	------	------

81.9	.700	.554
------	------	------

81.0	.679	.561
------	------	------

82.7	.684	.524
------	------	------

82.2	.699	.532
------	------	------

83.3	.677	.528
------	------	------

83.1	.692	.557
------	------	------

825.4	6.852	5.433
-------	-------	-------

82.5	33.685	33.543
------	--------	--------

Set S. Collimator 82.5	<del>33.543</del>	33.685
------------------------	-------------------	--------

67.228

33.614

Aberration constant .012

33.626

Micrometer set at 33.626



Wednesday Nov. 15, 1911

Level of Mer. Circle

Yellow OK. recorder

Zero E.

Zero W

Tel. N. 40.1

26.1

93.0

80.0

38.2

15.0

95.0

71.7

Tel. S. 44.7

39.0

99.5

94.7

44.6

38.6 38.3

100.9

95.3 95.1

+ 556.0

- 459.9

459.9

16) 496.1 (6.00 = 2  
96.  
 01

November 15, 1911

Level of Meridian Circle

G obs off recorder

Zero EZero W

37.1

13.0

Tel. N. 93.970.0

35.4

13.1

92.970.2

Tel. S. 45.0

35.1

103.093.0

44.5

36.4

102.894.8

+ 554.6

- 425.6

- 425.6

16 | 980.2 | 61.3962016

42

4816 | 129.0 | + 8.06 = z1281.00

+ 6.00

.4218

+ 8.06

sec  $\varphi$ 1.3514.06

21090

7.03

12654

1.064218

b = .4218

.569430

Continue to use  $\beta \sec \varphi = 0.57$



Thursday November 16, 1911

Mex. Circle Philip G. O'Reilly Obs. Tattle 0<sup>h</sup> 21

8 Andromeda  
30° 22'

μ Andromeda  
38° 0'

0 <sup>h</sup> 33 <sup>m</sup>	23.9 <sup>s</sup>	18.2	2.1
	26.8	15.5	2.3
	29.7	12.8	2.5
	32.8	09.9	2.7
	35.2	06.8	2.0
	42.3	59.7	2.0
	47.0	55.5	2.5

0 <sup>h</sup> 50 <sup>m</sup>	36.1	35.4	1.5
	39.3	32.6	1.9
	42.5	29.3	1.8
	45.7	26.1	1.8
	48.9	23.1	1.9
	56.1	15.2	1.3
	01.1	10.8	1.9

51.82  
15) 2.3  
51.15

5.9  
15) 13.0  
5.86

33  
2  
066

13  
2  
026

0<sup>h</sup> 33<sup>m</sup> 51.15

0<sup>h</sup> 34<sup>m</sup> 36.84

- 0 45.69

+ .07

- 0 45.76 - 0 45.62

+ 57 +.57 33

- 0 46.33 0 45.05 36

1/2 69  
35

0<sup>h</sup> 51<sup>m</sup> 5.86

0<sup>h</sup> 51<sup>m</sup> 51.62

- 0 45.76

+ .03

- 0 45.79 - 45.73

+ .57 +.57

- 0 46.36 45.16

0 45.05 Fred 1327 is slow

0 45.16

0 20 21

0 45.10

0<sup>h</sup> 0<sup>m</sup> 45.10 at

0<sup>h</sup> 34<sup>m</sup> S.T.

Philip G. O'Reilly Obs

Saturday Nov. 18, 1911

Mer. Circle

P. 9.00 + 8.15 obsv.

Pattle 23, 51

missed first four  
wire data  
wire

These stars were  
observed by  
P. S. 017

♂ Pegasi  
23<sup>h</sup> 14'

♂ Andromedae  
42<sup>h</sup> 46'

observed last  
five wires  
only.

♂ Andromedae  
28<sup>h</sup> 35'

23<sup>h</sup> 15<sup>m</sup> ———

23<sup>h</sup> 32<sup>m</sup> 29.9 88.8 3.7

33.1 30.4 3.5

36.5 27.3 3.8

39.8 28.9 3.7

43.1 20.1 3.2

21.3 37.8 9.51

51.8 11.5 3.3

25.6 33.6 9.2

56.9 6.7 3.6

$$\begin{array}{r} 29.6 \\ 5 \overline{) 2.9} \\ 29.58 \end{array}$$

$$\begin{array}{r} 01.7 \\ 15 \overline{) 11.5} \\ 01.76 \end{array}$$

*200*

$$\begin{array}{r} 42 \\ 49 \\ \hline 98 \end{array}$$

23<sup>h</sup> 15<sup>m</sup> 29.58

23<sup>h</sup> 16<sup>m</sup> 16.16

- 0 46.58

+ .10

0 46.68 - 0 46.48

57 +.57

0 45.25 0 45.91

23 33 01.76

23 33 48.88

+ 0 46.62

+ .57

+ 47.19

- 25

2 44

22

46.05

0 45.91

0 46.05

$\frac{1}{2} \overline{) 0} 91.96$

0 45.98

Frod 1827 is 8600

45<sup>h</sup> 47.25

at 23<sup>h</sup> 20<sup>m</sup> St.

P. 9.00 Pattle



Nov. 18, 1911

Mer. Circle

E.K. O'R. Alar.

Baith <sup>0.44</sup>

♂ Andromed

23° 46'

5 minutes  
first four  
♂ Andromedae

83° 13'

0<sup>h</sup> 41<sup>m</sup> 27.9 19.1 7.0

30.8 16.3 7.1

33.1 13.5 6.6

35.9 11.1 7.0

38.4 9.2 6.1

45.2 01.5 6.7

49.6 57.5 7.1

$$\begin{array}{r} 53.3 \\ 15 \overline{) 59} \\ \underline{58.39} \end{array}$$

0<sup>h</sup> 38 14.7

—

—

—

—

14.9 32.4 7.3

19.6 28.1 7.7

$$\begin{array}{r} 23.8 \\ 5 \overline{) 3.8} \\ \underline{23.76} \end{array}$$

0 41 53.39

0

0<sup>h</sup> 38 23.760 32 10.32  
6

Wednesday November 22, 1911

Mess. Circle

Philip S. Bailey + Everett King Obs.

Rattle 2123

2.15 observed this star

74 Cygni  
40° 8'16 Pegasi  
25° 30'17 Pegasi  
32° 44'
$$\begin{array}{r} 22^h 32^m 5.1 \\ 8.8 \\ 12.2 \\ 15.2 \\ 18.4 \\ 26.4 \\ 31.6 \end{array} \begin{array}{l} 06.9 \\ 04.0 \\ 01.0 \\ 57.4 \\ 54.0 \\ 45.9 \\ 41.2 \end{array} \begin{array}{l} 2.0 \\ 2.8 \\ 3.2 \\ 2.6 \\ 2.4 \\ 2.3 \\ 2.18 \end{array}$$

$$\begin{array}{r} 22^h 49.0 \\ 51.5 \\ 54.1 \\ 56.9 \\ 59.1 \\ 56.1 \\ 50.8 \end{array}$$

Opposition moved middle eye

$$\begin{array}{r} 22^h 5 \\ 56.1 \\ 54.0 \\ 57.0 \\ 59.8 \\ 7.1 \\ 11.5 \end{array} \begin{array}{l} 48.1 \\ 41.0 \\ 37.9 \\ 35.1 \\ 32.1 \\ 24.9 \\ 20.4 \end{array} \begin{array}{l} 1.9 \\ 2.1 \\ 1.9 \\ 2.1 \\ 1.9 \\ 2.0 \\ 1.9 \end{array}$$

$$\begin{array}{r} 85.9 \\ 15 \overline{) 19.0} \\ 35 \\ 1.26 \\ 36.26 \end{array}$$

$$\begin{array}{r} 16.1 \\ 15 \overline{) 149} \\ 15.99 \end{array}$$

Ent.

22 32 36.26

22 33 28.92

$$\begin{array}{r} 47.87 \\ - 0 47.66 \\ + .01 \\ \hline 0 47.67 - 47.65 \\ \hline .02 \\ + .57 \\ \hline 0 48.24 - 47.08 \end{array}$$

22 5 15.99

22 5 63.53

$$\begin{array}{r} 0 46.91 - 47.54 \\ 0 47.08 - .06 \\ \hline 2 0 93.97 - 47.48 \\ \hline 0 46.99 + .57 \\ \hline 17 46.91 \\ \hline 24 \\ 2 \overline{) 41} \\ 28 \end{array}$$

Fool. 1327 is 8600

0 48.20 at

22h 0m ST.

Philip S. Bailey Obs.



Friday Nov. 11, 1911

Mex. Arch

Thurs S. O'Leary Obs.

Alt 21° 48'

To Tugasi  
32° 44'

10 hachet  
38° 34'

22 <sup>h</sup>	4 <sup>m</sup>	45.9	41.1	7.0
		48.7	38.4	7.1
		52.0	35.4	7.4
		54.5	32.9	7.4
		57.3	29.6	6.9
		04.9	22.1	7.0
		09.1	17.9	7.0

22 <sup>h</sup>	33 <sup>m</sup>	57.3	57.7	5.0
		00.9	54.1	5.0
		03.9	51.1	5.0
		07.0	47.9	4.9
		10.4	44.9	5.3
		17.9	37.1	5.0
		22.7	32.4	5.1

13.8  
15) 8.6  
13.57

21.9  
15) 8.2  
27.54

26  
2

22<sup>h</sup> 5 13.57

22 5 68.43  
- 0 49.86  
+ .05

0 49.91 - 0 49.81 48  
57 + .57 102  
50.48 - 49.24 51

*Out*

22 34 27.54

22 35 17.48

- 0 49.94 - 0 49.94  
+ .03 + .03  
- 49.91 - 49.91  
+ .57 + .57  
49.34 + 57  
50.54

34  
24  
21.29

Frod 1327 is slow

0<sup>h</sup> 49<sup>m</sup> 32.93  
50.48 at

22<sup>h</sup> 15<sup>m</sup> S.T.

Wednesday December 6 1911

Mex. Circle

Philip Goffally obs.

Patte 2146

# *sumata*

$\pi$  Pegasi

32° 44'

10 Lacertae

39° 34'

22 <sup>h</sup> 4	43.8	39.3	3.1
	46.9	36.5	3.4
	49.4	38.4	2.8
	52.5	30.6	-3.1
	55.3	27.6	2.9
	62.6	20.2	2.8
	67.0	16.0	3.0

22 <sup>h</sup> 33	55.7	55.6	1.3
	58.7	52.4	1.1
	62.0	49.1	1.1
	65.0	45.5	0.5
	68.1	42.9	1.0
	75.9	35.1	1.0
	81.0	30.3	1.3

$$\begin{array}{r} 12.4 \\ 15 \overline{) 75} \\ \underline{11.50} \end{array}$$

$$\begin{array}{r} 25.1 \\ 25 \overline{) 7.4} \\ \underline{25.49} \end{array}$$

*cut.*

$$\begin{array}{r} .22 \\ .2 \\ \hline .054 \end{array}$$

$$\begin{array}{r} 12 \\ 2 \\ \hline .024 \\ 80 \quad 33 \\ \hline 156 \\ 28 \end{array}$$

$$\begin{array}{r} 22 \quad 5 \quad 11.50 \\ 22 \quad 5 \quad 63.85 \\ \hline - 51.85 \\ + .05 = n \\ \hline 0 \quad 51.90 \\ \hline .57 = t \text{ seg } \phi \\ \hline 0 \quad 52.47 \end{array}$$

$$\begin{array}{r} 22 \quad 34 \quad 25.49 \\ 22 \quad 35 \quad 17.41 \\ \hline - 0 \quad 51.92 \\ + .02 \end{array}$$

$$\begin{array}{r} .47 \\ .51 \\ \hline 2 \quad 98 \\ \hline 0 \quad 51.94 - .90 \\ \hline .57 + .57 \\ \hline 0 \quad 52.51 \quad 33 \end{array}$$

When I sat down to observe  $\pi$  Pegasi I overlooked to look what magnitude it was, about the time when I thought the star was 7 mag. I noticed a star about 7 mag. and observed the first 10 wires when I discovered that it was not the right star. *Phil Goffally* December 6, 1911.



Thursday December 7, 1911

Meridian Circle

Thrup 30° 44' 49"

Tattle 20° 49' 22" 7

5 Cygni  
29° 51'

$\pi$  Pegasi  
32° 44'

21<sup>h</sup> 7<sup>m</sup> 50.4 44.3 4.7  
53.4 41.6 5.0  
56.0 38.9 4.9  
59.0 35.9 4.9  
01.9 32.9 4.8  
08.9 26.0 4.9  
13.1 21.5 4.6

42.9 38.8 1.7  
22<sup>h</sup> 4 46.0 35.9 1.9  
49.1 32.9 2.0  
51.7 29.9 1.6  
54.7 27.0 1.7  
02.0 19.5 1.5  
06.3 15.1 1.4

$$\begin{array}{r} 17.4 \\ 15 \overline{) 62} \\ \underline{17.41} \end{array}$$

$$\begin{array}{r} 10.9 \\ .15 \overline{) 12.7} \\ \underline{10.84} \end{array}$$

21<sup>h</sup> 18<sup>m</sup> 17.41

21 9 9.84

$$\begin{array}{r} - 0 \quad 52.43 \\ + \quad .07 \\ \hline 0 \quad 52.50 \\ + \quad .57 \\ \hline 0 \quad 53.07 \\ - 51.79 \\ \hline - 51.87 \end{array}$$

$$\begin{array}{r} 0 \quad 52.50 \\ + \quad .57 \\ \hline 0 \quad 53.07 \\ - 51.79 \\ \hline - 51.87 \end{array}$$

$$\begin{array}{r} 0 \quad 53.07 \\ - 51.79 \\ \hline - 51.87 \end{array}$$

$$\begin{array}{r} 07 \\ 17 \overline{) 34} \\ \underline{17} \end{array}$$

$$\begin{array}{r} 7 \\ 11 \overline{) 18} \\ \underline{11} \end{array}$$

22<sup>h</sup> 5 10.84

22 5 63.49

$$\begin{array}{r} - 0 \quad 52.65 \\ + \quad .05 \\ \hline 0 \quad 52.70 \\ + \quad .57 \\ \hline 0 \quad 53.27 \\ - 51.87 \\ \hline - 51.87 \end{array}$$

$$\begin{array}{r} 0 \quad 52.70 \\ + \quad .57 \\ \hline 0 \quad 53.27 \\ - 51.87 \\ \hline - 51.87 \end{array}$$

$$\begin{array}{r} 0 \quad 53.27 \\ - 51.87 \\ \hline - 51.87 \end{array}$$

Frod. 1827 is slow

0<sup>h</sup> 53.09 at

21<sup>h</sup> 40<sup>m</sup> S.T.

Thrup 30° 44' 49"

Monday December 11, 1911

Level of Meridian Circle S. Obs. of recorder

	<u>Zero E.</u>	<u>Zero W</u>
Feb. North	46.9	20.3
	<u>94.0</u>	<u>67.9</u>
	47.0	80.3
	<u>95.0</u>	<u>78.0</u>
Feb. South	63.9	47.0
	<u>121.0</u>	<u>94.2</u>
	61.2	45.8
	<u>109.0</u>	<u>93.3</u>
	+ 628.0	- 476.8
	- 476.8	

$$\begin{array}{r}
 16 \overline{) 151.2} \\
 \underline{144} \phantom{.00} \\
 72 \phantom{.00} \\
 \underline{64} \phantom{.00} \\
 80 \phantom{.00} \\
 \underline{80} \phantom{.00} \\
 0 \phantom{.00}
 \end{array}
 \begin{array}{l}
 (+9.45 = 2 \\
 .06 \\
 64 + .5670 = 6 \\
 80 \phantom{.00} 1.35 = 2.4 \\
 2835 \\
 1701 \\
 567 \\
 + .76545 = 6 \text{ sec } 4
 \end{array}$$



Monday December 11, 1911

Meridian Circle Philip G. Mearns Obs. Path 22° 22'

18 Roacertus

38° 34'

2 Tegasi

23° 5'

22	33	52.4	52.8	5.2
		55.9	49.7	5.6
		59.7	46.3	6.0
		02.3	43.1	5.4
		05.5	40.0	5.5
		13.1	32.0	5.1
		18.0	27.8	5.8

22	40	56.4	47.1	3.5
		59.1	44.6	3.7
		01.8	41.9	3.7
		04.4	39.1	3.5
		06.9	36.7	3.6
		13.8	29.8	3.6
		17.5	25.8	3.3

$$\begin{array}{r} 23.1 \\ 15 \overline{) 117} \\ \underline{22.78} \end{array}$$

$$\begin{array}{r} 22.0 \\ 15 \overline{) 11.9} \\ \underline{21.79} \end{array}$$

$$\begin{array}{r} 12 \\ .02 \\ \underline{.024} \\ =02 \end{array}$$

$$\begin{array}{r} 49 \\ 2 \\ \underline{.098} \end{array}$$

22	33	22.78
22	35	17.32
-	0	54.54
		+ .02
		54.52
		+ .77
-		53.75

22	41	21.79
22	42	16.37
-	0	54.58
		+ .10
		54.48
		+ .77
-		53.71

0 53.75

$$\begin{array}{r} 0 \quad 53.71 \\ 2 \overline{) 07.46} \\ \underline{0 \quad 53.73} \end{array}$$

Prod. 13.27 is slow  
 0 0 53.73 at  
 22° 36'  
 T. G. Mearns Obs.

Wednesday December 13, 1911

Mer. Circle Philip J. Kelly Observer Battle 4<sup>m</sup> 48

i Aurigae

83° 1'

e Aurigae

43° 41'

4 <sup>m</sup> 49 <sup>m</sup>	52.8 48.5	1.3
	55.2 45.3	0.5
	58.1 42.4	0.5
	01.1 39.6	0.7
	04.0 36.9	0.9
	11.8 29.4	1.2
	16.1 25.0	1.1

4 <sup>m</sup> 54 <sup>m</sup>	11.8 16.1	7.9
	14.9 12.9	7.8
	18.4 09.7	8.1
	22.1 06.3	8.4
	25.3 02.8	8.1
	33.9 54.4	8.3
	38.9 49.0	7.9

$$\frac{26}{12} = 52$$

$$\begin{array}{r} 20.4 \\ 15 \overline{) 66} \\ \underline{20.44} \end{array}$$

$$\begin{array}{r} 44.1 \\ 15 \overline{) 15.6} \\ \underline{43.8} \\ 1.04 \\ \underline{44.04} \end{array}$$

$$\frac{13}{84} = 0.08$$

$$\frac{14}{72} = 0.198$$

$$\begin{array}{r} 4^m 50 \quad 20.44 \\ 4 \quad 51 \quad 16.13 \\ \hline - 0 \quad 55.29 \\ \quad + 05 \\ \hline - 0 \quad 55.24 \\ \quad + .77 \\ \hline - 0 \quad 54.47 \end{array}$$

$$\begin{array}{r} 4^m 54 \quad 44.04 \\ 4 \quad 55 \quad 39.66 \\ \hline - 0 \quad 55.62 \\ \quad - .01 \\ \hline - 55.63 \\ \quad + .77 \\ \hline - 54.86 \end{array}$$

$$\begin{array}{r} 0 \quad 54.47 \\ 54.86 \\ \hline 2 \overline{) 109.33} \\ \underline{54.86} \end{array}$$

7 nod 13 22 is slow

0<sup>m</sup> 54.86 at 4<sup>m</sup> 52<sup>m</sup> S.T.



Thursday December 14, 1911

Mess. Circle    Philip S. Bailey Obs.    Battle 201

p. Persei  
38° 29'

Clouded over Tail

β Persei  
40° 36'

Monday December 18, 1911

Max. Circle      Philips G. Bailey Obs.      Rattle

5 Persei

31° 37'

P. Forgot to rattle on minutes but used stars. This

5 Persei

39° 45'

3<sup>h</sup> 47<sup>m</sup> 9.1 04.3 3.4  
 12.2 01.7 3.9  
 15.1 58.5 3.6  
 17.8 55.4 3.2  
 20.9 52.9 --- 3.8  
 28.1 45.5 3.6  
 32.6 41.0 3.6

36.8  
 15) 11.9  
 36.79

3<sup>h</sup> 50<sup>m</sup> 18.2 27.2 28.0 5.2  
 21.8 30.9 25.0 5.9  
 25.0 33.7 21.8 5.5  
 36.8 18.2 5.0  
 39.9 15.5 --- 5.4  
 48.0 06.8 4.8  
 52.5 02.0 5.2

57.4  
 15) 9.4  
 57.62

3<sup>h</sup> 47<sup>m</sup> 36.79  
 3<sup>h</sup> 48<sup>m</sup> 36.29  
 - 0 59.50  
 + .06  
 - 0 59.44  
 + .57  
 - 0 58.87  
 + .20  
 - 0 58.67

*Handwritten squiggle*

3<sup>h</sup> 50<sup>m</sup> 57.62  
 3<sup>h</sup> 51<sup>m</sup> 57.19  
 - 0 59.57  
 + .01  
 - 59.56  
 + .57  
 - 58.99  
 + .20  
 - 58.79

0 58.87  
 0 58.99  
 1 17.86  
 58.93

67  
 89  
 2746  
 73

From 1327 is slow  
 0<sup>h</sup> 58<sup>m</sup> 73<sup>s</sup> at  
 3<sup>h</sup> 49<sup>m</sup> 85<sup>s</sup>



Wednesday December 20, 1911

Mex. Circle Thulis 30 Killy Obs. Battle 22<sup>h</sup> 29<sup>m</sup>

o Andromed

41° 50'

i Andromedae

42° 46'

22 <sup>h</sup>	56 <sup>m</sup>	<sup>s</sup>		
		19.0	22.0	1.0
		22.2	18.8	1.0
		25.0	15.1	0.1
		28.9	12.0	0.9
		32.1	08.8	0.9
		41.1	00.4	1.5
		45.4	55.4	0.8

$$\begin{array}{r} 50.2 \\ 15 \overline{) 6.4} \\ \hline 50.42 \end{array}$$

23 <sup>h</sup>	32 <sup>m</sup>	<sup>s</sup>		
		15.0	19.1	4.1
		18.8	16.0	4.8
		22.2	12.6	4.8
		25.6	09.2	4.8
		28.9	05.9	4.8
		37.3	57.4	4.7
		42.5	52.4	4.9

$$\begin{array}{r} 47.3 \\ 15 \overline{) 5.2} \\ \hline 47.34 \end{array}$$

$$\begin{array}{r} 19 \\ 43 \\ \hline 76 \\ 0 = 0.8 \end{array}$$

$$\frac{0.1}{0.2}$$

22 <sup>h</sup>	56 <sup>m</sup>	<sup>s</sup>	
		50.42	
22	57	50.77	
-	1	00.35	
		+1.57	
-	0	59.78	
		+1.20	
-	0	59.58	

ent.

$$\begin{array}{r} 59.78 \\ 0 \\ 59.90 \\ 1 \\ \hline 19.68 \\ 0 \\ 59.84 \end{array}$$

23 <sup>h</sup>	32 <sup>m</sup>	<sup>s</sup>	
		47.34	
23	33	47.81	
-	1	00.47	
		+1.57	
-	0	59.90	
		+1.20	
-	0	59.70	

Frod. 1327 is Slow

om 59.84 at

23<sup>h</sup> 15<sup>m</sup> S. N

Thursday December 28, 1911

Mendocino Arch Philip & Kelly Star Path 343

Persci  
6 Eridani  
31° 37'

2 Persci  
39° 45'

3 <sup>h</sup> 48 <sup>m</sup>	3.8 58.5	2.3	3 <sup>h</sup> 50 <sup>m</sup>	21.2 22.6	3.8
	6.3 55.3	1.6		24.9 19.2	4.1
	9.4 52.8	2.2		27.8 16.1	3.9
	12.0 50.0	2.0		31.1 13.0	4.1
	15.2 47.0	2.2		34.0 9.8	3.8
	22.4 40.0	2.4		42.1 01.6	3.7
	26.7 35.3	2.0		47.1 56.8	3.9

$$\begin{array}{r} 30.9 \\ 15 \overline{) 156} \\ \underline{30.} \\ 104 \\ \underline{31.04} \end{array}$$

$$\begin{array}{r} 52.0 \\ 15 \overline{) 143} \\ \underline{51.95} \end{array}$$

$$\begin{array}{r} 3^h \quad 48^m \quad 31.04 \\ 3 \quad 48 \quad 36.29 \\ \hline -1 \quad 05.25 \\ \quad +.06 \\ \hline -1 \quad 05.19 \\ \quad +.57 \\ \hline -1 \quad 04.62 \\ \quad +.20 \\ \hline -1 \quad 04.42 \end{array}$$

$$\begin{array}{r} 3^h \quad 50^m \quad 51.95 \\ 3 \quad 51 \quad 57.19 \\ \hline -1 \quad 05.24 \\ \quad +.02 \\ \hline -1 \quad 05.22 \\ \quad +.57 \\ \hline -1 \quad 04.62 \\ -1 \quad 04.65 \\ \hline -1 \quad 04.64 \end{array}$$

7 nod 1322 is  
slow 1<sup>m</sup> 04.64

at 3<sup>h</sup> 50<sup>m</sup> S T



Friday December 29, 1911

Mex. Circle

Philip G. Gaily Obs.

Payto

1

Monday January 1, 1912

Mex. Circle

Philip G. Kelly (Observer)

Walth

8 Persei

31° 37'

8 Persei

39° 45'

$h$	$s$		
3	0.02	55.1	5.3
	0.3.1	52.4	5.5
	0.5.9	49.3	5.2
	0.8.8	46.5	5.3
	11.7	43.3	5.0
	19.0	36.7	5.7
	23.2	32.7	5.3

$$\begin{array}{r} 27.8 \\ 15 \overline{) 10.1} \\ \underline{27.67} \end{array}$$

$h$	$m$		
3	17.9	18.8	6.7
	21.3	15.9	7.2
	24.5	12.5	7.0
	27.8	09.4	7.2
	30.9	06.2	7.1
	39.0	58.1	7.1
	43.7	53.1	6.8

$$\begin{array}{r} 48.8 \\ 15 \overline{) 7.8} \\ \underline{48.52} \end{array}$$

$$\begin{array}{r} .30 \\ .2 \\ \hline .060 \\ .08 \\ \hline .16 \end{array}$$

$$\begin{array}{r} 3 \quad 49 \quad 27.67 \\ 3 \quad 48 \quad 36.29 \\ \hline -1 \quad 08.62 \\ \quad + .06 \\ \hline 1 - 08.56 \\ \quad + .57 \\ \hline 1 - 07.99 \\ \quad + .20 \\ \hline 1 - 07.79 \end{array}$$

End

$$\begin{array}{r} 3 \quad 51 \quad 57.18 \\ 3 \quad 50 \quad 48.52 \\ \hline -1 \quad 08.66 \\ \quad + .02 \\ \hline 1 - 08.64 \\ \quad + .57 \\ \hline 1 - 08.07 \\ \quad + .20 \\ \hline 1 - 07.87 \end{array}$$

$$\begin{array}{r} 07.99 \\ 08.07 \\ \hline 16.06 \\ 1 \quad 8.03 \end{array}$$

Good 132.7 is slow  
1 - 07.87 at  
3h 50m



Wednesday, Jan. 3, 1912

Mer Circle

E.T. King, Obs.

Rattle

4 50

4 59

5 11

note, rattle after  
first star

5 16

a Aurigae

45° 54'

5 <sup>h</sup>	<del>28.08</del>	28.2	35.6	3.8
		31.8	33.1	4.9
		35.2	29.5	4.7
		39.2	25.9	5.1
		42.2	22.1	4.3
		51.8	12.7	4.5
		57.1	7.2	4.3

$$\begin{array}{r}
 02.6 \\
 15 \overline{) 4.2} \\
 \underline{- 2.28} \\
 15 \overline{) 9.2} \\
 \underline{- 01} \\
 1.28 \\
 02.28
 \end{array}$$

$$\begin{array}{r}
 .12 \\
 .2 \\
 \hline
 .024
 \end{array}$$

$$\begin{array}{r}
 5^h \quad 08^m \quad 02.28^s \\
 5 \quad 10 \quad 12.22 \\
 \hline
 - 8' \quad 09.94 \\
 \quad \quad \quad .02 \\
 \hline
 - 8' \quad 09.92 \\
 \quad \quad \quad .57 \\
 \hline
 - 8' \quad 09.35
 \end{array}$$

$$\begin{array}{r}
 - 1 \quad 09.94 \\
 \quad \quad \quad -.02 \\
 \hline
 - 1 \quad 09.96 \\
 \quad \quad \quad +.57 \\
 \hline
 - 1 \quad 09.39 \\
 \quad \quad \quad +.20 \\
 \hline
 1 \quad 09.19
 \end{array}$$

ent.

Prod 1327 is slow  
1<sup>m</sup> 09.35<sup>s</sup> at

5<sup>h</sup> 10<sup>m</sup> S.T. Everett J. King, Obs.

checked by Tuckey & Feilley

Thursday, Jan. 4, 1912

Mer. Circle

Everett S. King, Observer

Rattle

3 58

c Persi

$47^{\circ} 28'$

8 Tauri

$17^{\circ} 20'$

too cloudy

too cloudy



Thursday, Jan 4, 1912,

Mer. Circle      Everett B. King, Observer.

$\alpha$  Tauri

$16^{\circ} 19'$

too cloudy

Saturday, Jan. 6, 1912.

Mer. Circle

Everett T. King,

Rattle

3 of 26

$\eta$  Tauri

23° 50'

3 <sup>h</sup>	40 <sup>m</sup>	34.6	26.0	0.6
		37.8	23.0	0.8
		40.0	20.4	0.4
		43.0	17.2	0.2
		46.0	15.1	1.1
		52.1	08.1	0.2
		56.2	04.2	0.4

$$\begin{array}{r} 0.3 \\ 15 \overline{) 40} \\ \underline{0.26} \end{array}$$

$$\begin{array}{r} 3^h \quad 42^m \quad 0.26^s \\ 3 \quad 42 \quad 15.44 \\ - \quad 1 \quad 15.18 \\ \hline \quad \quad + \quad .10 \\ - \quad 1 \quad 15.08 \\ \hline \quad \quad + \quad .57 \\ - \quad 1 \quad 14.51 \\ \hline \quad \quad + .20 \\ \hline - \quad 1 \quad 14.31 \end{array}$$

Do Not Use

note: original record in ink  
because I had no pencil.  
E.T.K.

Frod 1327 is slow

1<sup>m</sup> 14.51<sup>31</sup> at

3<sup>h</sup> 42<sup>m</sup> S.T. Everett T. King, Jr.



Tuesday January 9, 1912

Meridian Circle Phillips S. O'Leary Obs.

Rattle 15  
4<sup>h</sup> 54<sup>m</sup>

$\beta$  Andromed  
35° 9'

Please do not disturb  
this record  
as I will  
finish this  
evening my-self.  
Phil O.

$\eta$  Aurigae  
41° 06'

1 <sup>m</sup>	3 <sup>m</sup>	6.8	04.0	0.8
		10.0	01.1	1.1
		12.6	58.1	0.7
		15.8	55.0	0.8
		18.6	51.9	0.5
		26.3	44.7	1.0
		31.1	40.2	1.3

$$\begin{array}{r} 35.3 \\ 15) \quad 6.5 \\ \hline 35.43 \end{array}$$

$$\begin{array}{r} 21 \\ .2 \\ \hline .042 \end{array}$$

$$\begin{array}{r} 1^m \quad 3 \quad 35.43 \\ 1 \quad 4 \quad 47.28 \\ \hline - 1 \quad 17.85 \\ + \quad .04 \\ \hline - 1 \quad 17.81 \\ + \quad .57 \\ \hline - 1 \quad 17.24 \\ + \quad .20 \\ \hline - 1 \quad 11.04 \end{array}$$

ent.

Prod. 1327 is slow  
1<sup>m</sup> 18.24<sup>501</sup> at  
1<sup>h</sup> 5<sup>m</sup> 8<sup>s</sup> T.

Wednesday January 10, 1912

Mess. Circle Philip G. O'Reilly Obsr. Rattle 5' 47

$\beta$  Aurigae  
44° 56'

$\gamma$  Geminae  
22° 31'

5 <sup>h</sup>	51 <sup>m</sup>	20.1	26.2	6.3	6 <sup>h</sup>	7 <sup>m</sup>	57.2	47.9	5.1
		23.7	23.0	6.7			59.9	45.4	5.3
		27.1	19.1	6.2			02.5	42.3	4.8
		30.7	15.9	6.6			05.0	40.0	5.0
		34.1	12.1	6.2			07.9	37.2	5.1
		42.9	03.3	6.2			14.8	30.3	5.1
		47.8	58.3	6.1			18.4	26.1	4.5

$$\begin{array}{r} 53.2 \\ 15 \overline{) 2.5} \\ \underline{53.16} \end{array}$$

$$\begin{array}{r} 22.1 \\ 15 \overline{) 7.0} \\ \underline{22.46} \end{array}$$

$$\begin{array}{r} 50 \\ \cdot 100 \\ \hline .09 \\ \cdot 2 \\ \hline .018 = 0.2 \end{array}$$

$$\begin{array}{r} 5^h \quad 51^m \quad 53.16 \\ \hline 5^h \quad 53^m \quad 57.3 \\ - 1 \quad 12.43 \\ \hline \quad \quad .02 \\ - 1 \quad 12.55 \\ \hline \quad \quad .57 \\ + 1 \quad 11.98 \\ \hline \quad \quad +.20 \\ - 1 \quad 11.78 \end{array}$$

ent.

$$\begin{array}{r} 11.98 \\ 11.86 \\ \hline 23.84 \\ \hline 11.92 \end{array}$$

$$\begin{array}{r} 6^h \quad 8^m \quad 22.46 \\ \hline 6^h \quad 9^m \quad 34.99 \\ - 1 \quad 12.53 \\ \hline \quad \quad .10 \\ + 1 \quad 12.43 \\ \hline \quad \quad +.57 \\ - 1 \quad 11.86 \\ \hline \quad \quad +.20 \\ - 1 \quad 11.66 \end{array}$$

Food 1322 is  
slow 11.72 at



Saturday, Jan 13, 1912

Mer Circle Everett J. King, Obs. Rattle 2<sup>h</sup> 53<sup>m</sup>

$\beta$  Persei  
40° 37'

8 Arietis  
19° 23'

3 <sup>h</sup>	00 <sup>m</sup>	<sup>40</sup> 39.5	42.5	3.0
		<sup>4</sup> 48.4	39.3	3.7
		<sup>7</sup> 46.3	36.1	3.4
		<sup>50</sup> 47.8	32.7	3.5
		<sup>3</sup> 52.7	29.7	3.4
01		01.5	21.5	3.0
		06.6	16.6	3.2

11.5  
15 ) 9.7  
11.64

3 <sup>h</sup>	04	56.6	46.4	3.0
		59.3	44.0	3.3
05		02.0	41.1	3.1
		04.7	38.2	2.9
		07.0	35.7	2.9
		13.3	29.3	2.6
		17.4	25.3	2.7

21.7  
15 ) 78.2  
21.48

.06  
2  
0.12

.56  
2  
1.12

3 <sup>h</sup>	01 <sup>m</sup>	11.64 <sup>s</sup>
3 <sup>h</sup>	02 <sup>m</sup>	26.31 <sup>s</sup>
-	1	14.67
		+ .01
-	1	14.66
		+ .57
-	1	14.09
		+ .20
-	1	13.89

ent

14.09  
13.64  
2 ) 27.73  
13.86

3 <sup>h</sup>	05 <sup>m</sup>	21.48 <sup>s</sup>
3 <sup>h</sup>	06 <sup>m</sup>	35.80 <sup>s</sup>
-	1	14.32
		+ .11
-	1	14.21
		+ .57
-	1	13.64
		+ .20
-	1	13.44

Frod 1327 is slow  
1<sup>m</sup> 13.86<sup>s</sup> at 3<sup>h</sup> 03<sup>m</sup> S.T.

Monday, Jan 15, 1912

Mer Circle

Everett J. King, Obs.

Rattle 4 28

Tauri

22° 47'

$4^h$   $35^m$  17.0 17.9 4.9  
 19.9 45.1 5.0  
 22.4 02.8 5.2  
 25.1 59.9 5.0  
27.8 57.2 5.0  
 34.5 50.5 5.0  
 38.5 46.5 5.0

L

$\frac{42.8}{15) 7.9}$   
 42.52

$4^h$   $35^m$  42.52<sup>2</sup>  
4 36 58.35  
 - 1 15.83  
   + 10  
- 1 15.73  
   + .57  
- 1 15.16  
   + .20  
- 1 14.96

$\frac{1}{3} \frac{4}{12}$   
 $\frac{1}{6} \frac{2}{12}$   
 $\frac{1}{6} \frac{2}{12}$   
 $\frac{1}{3} \frac{4}{12}$   
 $\frac{1}{12} \frac{1}{12}$   
 $\frac{1}{2} \frac{6}{12}$   
14 21

See pp. 77

$\frac{41}{30}$   
 $\frac{71}{30}$   
14 21



Monday, Jan 15 1912

Mer Circle Everett H. King, Cal.

Rattle 3 52

c Persei  
47° 28'

ε Jauri  
18° 59'

Pen ran off chronograph  
sheet for last 5 wires

4 <sup>h</sup>	00 <sup>m</sup>	25.9	34.9	0.8
		29.2		
		<del>27.6</del>	31.7	0.9
		32.9	27.6	0.5
		36.8	24.4	1.2
		40.1	20.3	0.4
		49.5	11.2	0.7
		54.6	05.9	1.5

66.3  
15<sup>m</sup> 6.3  
00.42

4 <sup>h</sup>	01 <sup>m</sup>	00.42 <sup>s</sup>
4	02	16.63
—	1	16.21
		.03
—	1	16.24
	+	.57
—	1	15.67
		+ .20
—	1	15.47

See page 77





Monday Jan 15, 1912

Mer Circle Everett T. King Obs

 $\pi^5$  Orionis  
 i furae  
 33° 1'

 i Jani  
 21° 27'

4 <sup>h</sup>	49 <sup>m</sup>	<del>19.8</del>	32.4	28.2	0.6	4 <sup>h</sup>	56 <sup>m</sup>	9.8	50.0	9.8
		<del>22.4</del>	35.4	25.4	0.8			12.5	57.7	0.2
		<del>25.0</del>	38.3	22.4	0.7			15.0	54.7	9.7
		<del>28.2</del>	41.1	19.8	0.9			17.5	52.0	9.5
			44.0	16.9	0.9			20.2	49.5	9.2
			51.6	09.0	0.6			27.1	33.0	0.1
			56.1	04.8	0.9			30.9	38.2	9.1

$$\begin{array}{r} .26 \\ .2 \\ \hline .052 \end{array}$$

$$\begin{array}{r} .62 \\ .2 \\ \hline .104 \end{array}$$

4 <sup>h</sup>	50 <sup>m</sup>	00.41
4	51	16.42
—	1	16.01
		+ .05
—	1	15.96
		+ .57
—	1	15.39
		+ .20
1		15.19

$$\begin{array}{r} 15.67 \\ 15.16 \\ 15.39 \\ 15.54 \\ 4 \overline{) 61.76} \\ 15.44 \end{array}$$

$$\begin{array}{r} 80.8 \\ 15 \overline{) 62} \\ 00.41 \end{array}$$

4 <sup>h</sup>	56 <sup>m</sup>	34.60
4	57	50.81
—	01	16.21
		+ .10
—	1	16.11
		+ .57
—	1	15.54

End.

$$\begin{array}{r} 67 \ 16 \\ 16 \ 26 \\ 39 \\ \hline 181 \\ 40 \end{array}$$

 Fred 1327 is slow  
 1<sup>m</sup> 15.44<sup>s</sup> at  
 4<sup>h</sup> 35<sup>m</sup> S.T.

$$\begin{array}{r} 35.0 \\ 15 \overline{) 491} \\ 354.60 \\ \hline 15 \overline{) 131} \\ 34.87 \\ 87 \\ 4 \ 56 \ 34.87 \\ 4 \ 57 \ 50.81 \\ \hline - 116.21 \\ + . \\ 4 \ 56 \ 34.87 \\ 4 \ 57 \ 50.81 \\ \hline - 115.94 \\ + .10 \\ - 115.83 \\ + .57 \\ 115.26 \\ + .20 \\ \hline 115.06 \end{array}$$

Friday January 19, 1912

Mex. Circle <sup>at north</sup> ~~at~~ <sup>ten</sup> ~~four~~ <sup>times</sup> & O'Reilly class. Rath ~~707~~

w. 7 Aurigae sheet was taken from Chou. <sup>just</sup> after  
 41° 6' <sup>the second</sup> Fo Battle for stars recorded by memory, after  
 38° 22' <sup>in first</sup> <sup>the</sup> Aurigae <sup>sheet</sup>

5	5	36.5	36.3	2.8
		39.3	33.1	2.4
		42.8	30.2	3.0
		44.0	27.1	3.1
		<u>49.1</u>	<u>23.7</u>	<u>2.8</u>
		57.1	15.9	3.0
		61.8	11.2	3.0

$$\begin{array}{r} 6.5 \\ \hline 6.6 \\ \hline 06.44 \end{array}$$

	5	6	7	8	9	10
1	19.9	27.0	6.9			
2	23.3	23.7	7.0			
3	26.8	20.2	7.0			
4	30.5	16.8	7.3			
5	33.9	13.3	7.2			
6	43.0	03.9	6.9			
7	48.2	58.8	7.0			

$$\begin{array}{r} 53.5 \\ 7.8 \\ \hline 53.52 \end{array}$$
$$\begin{array}{r} 12 \\ , 2 \\ \hline , 24 \end{array}$$
$$\begin{array}{r} 5 \\ 5 \end{array} \begin{array}{r} 76 \\ 88 \\ 7 \\ -1 \\ -1 \\ -1 \end{array} \begin{array}{r} 06.44 \\ 25.17 \\ 18.73 \\ +.02 \\ 18.71 \\ +.57 \\ 18.14 \\ +.20 \\ 17.94 \end{array}$$
$$\begin{array}{r} 14 \\ : 02 \\ \hline .16 \\ \hline 08 \end{array}$$
$$\begin{array}{r} 5 \phantom{00} \phantom{00} 8 \phantom{00} 53.52 \\ 5 \phantom{00} 10 \phantom{00} 12.09 \\ - \phantom{00} 1 \phantom{00} 18.57 \\ - \phantom{00} \phantom{00} .02 \\ - \phantom{00} 1 \phantom{00} 18.59 \\ + \phantom{00} \phantom{00} .57 \\ \hline 14 \phantom{00} 18.02 \\ 02 \phantom{00} + .20 \\ \hline .16 \phantom{00} 1 \phantom{00} 17.82 \\ \hline .08 \phantom{00} \end{array}$$

7 rod. 1327' is slow  
in ~~17388~~ at  
~~18108~~  
5<sup>th</sup> 8<sup>th</sup> S.T.



Saturday January 20, 1911

Mer. Circle      Philip S. Wilby Obs.      Bottle 749

$\eta$  Cancri  
20° 44'

$\zeta$  Cancri  
29° 4'

<sup>Fry.</sup>  
I tried for both of these stars but the clouds were too thick and too many.  
T. S. OR.

Very Clear when starting

Sunday January 21, 1912

Mer. Circle

Philip G. McIlly

Rattle 4<sup>31</sup>

i Aurigae

Very Hazy in heliometer. i Aurigae

33° 1'

43° 41'

4<sup>m</sup> 49<sup>m</sup> 27.2 24.3 1.5  
 31.2 21.2 2.4  
 33.7 18.0 1.7  
 37.0 15.2 2.2  
 39.7 12.2 1.7  
 46.3 04.9 1.2  
 51.7 00.5 2.2

15  $\overline{) 56.1}$   
 14.2  
 55.94

4<sup>m</sup> 53<sup>m</sup> 47.2 51.8 9.0  
 50.3 48.1 8.4  
 53.8 44.7 8.5  
 57.0 41.3 8.3  
 60.9 38.0 8.9  
 68.5 29.0 7.5  
 14.1 24.4 8.5

13  $\overline{) 19.9}$   
 4.5  
 19.34

4<sup>m</sup> 49 55.94  
 4 51 16.39  
 - 1 20.45  
 + .05  
 - 1 20.40  
 + .57  
 - 1 19.83  
 + .20  
 1 19.63

1 20.06  
 1 19.83  
 2 39.89  
 1 19.95

4 54 19.34  
 4 55 39.96  
 - 1 20.62  
 - .05  
 1 20.63  
 - .57  
 - 1 20.06  
 + .20  
 1 19.86

Frod 1327 is slow

1-19.75<sup>75</sup> at  
 4<sup>m</sup> 52<sup>m</sup> S.T.



Tues day January 23, 1912

Mer. Arch

Philip G. O'Reilly Obsr.

Watts 4<sup>h</sup> 52<sup>m</sup>

8 Aurigae  
43° 41'

1 Jauri  
21° 21'

4 <sup>h</sup> 53 <sup>m</sup>	45.3 50.1	5.4	4 56	3.6 53.8	7.4
	48.6 47.0	5.6		6.3 51.5	7.8
	52.1 43.4	5.5		9.1 48.5	7.6
	55.8 39.9	5.7		11.7 45.8	7.5
	59.0 36.7	5.7		14.2 43.1	7.3
	67.6 27.9	5.5		20.9 36.7	7.6
	12.7 22.9	5.6		25.1 32.7	7.8

$$\begin{array}{r} 17.9 \\ 15 \overline{) 11.9} \\ 17.79 \end{array}$$

$$\begin{array}{r} 29.0 \\ 15 \overline{) 12.0} \\ 28.80 \end{array}$$

0<sub>2</sub>

$$\begin{array}{r} 52 \\ 2 \\ 105 \overline{) 104} \end{array}$$

$$\begin{array}{r} 4 \quad 54 \quad 17.79 \\ 4 \quad 55 \quad 39.94 \\ - 1 \quad 22.15 \\ \hline \quad \quad +.57 \end{array}$$

$$\begin{array}{r} - 1 \quad 21.58 \\ \quad \quad +.20 \\ \hline - 1 \quad 21.38 \end{array}$$

sub.

$$\begin{array}{r} 1 \quad 21.30 \\ 1 \quad 21.58 \\ \hline 2 \quad 42.88 \\ 1 \quad 21.44 \end{array}$$

$$\begin{array}{r} 4 \quad 56 \quad 28.80 \\ 4 \quad 57 \quad 50.77 \\ - 1 \quad 21.97 \\ \hline \quad \quad +.10 \\ - 1 \quad 21.87 \\ \quad \quad +.57 \\ \hline - 1 \quad 21.30 \\ \quad \quad +.20 \\ \hline 1 \quad 21.10 \end{array}$$

7 mod. 1327 is slow  
1<sup>m</sup> 21.44<sup>24</sup> at  
4<sup>h</sup> 55<sup>m</sup> ST.

Wednesday January 24, 1912

Mex. Circle      Philips 30 Pelly Obs.      Rattle 96

40 by vis  
34° 45'

10 Leon. min  
36° 47'

9 <sup>h</sup> 18 <sup>m</sup>	52.4 49.0	1.4	9 <sup>h</sup> 26 <sup>m</sup>	59.7 58.1	7.8
	55.0 45.9	0.9		02.5 55.1	7.6
	57.9 43.1	1.0		05.6 51.8	7.4
	01.2 39.9	1.1		08.9 49.7	8.6
	04.3 37.1	1.4		12.0 45.9	7.9
	11.6 29.5	1.1		19.6 38.2	7.8
	15.9 25.1	1.0		24.4 33.6	8.0

$$\begin{array}{r} 20.4 \\ 13 \overline{) 83} \\ \underline{20.55} \end{array}$$

$$\begin{array}{r} 29.0 \\ 15 \overline{) 141} \\ \underline{28.94} \end{array}$$

$$\begin{array}{r} 23 \\ 2 \\ \hline 46, 05 \end{array}$$

$$\begin{array}{r} 17 \\ 2 \\ \hline 034 \end{array}$$

$$\begin{array}{r} 10 \\ 20 \\ \hline 2.00 \end{array}$$

$$\begin{array}{r} 9 \quad 14 \quad 20.55 \\ 9 \quad 15 \quad 43.49 \\ - \quad 1 \quad 22.84 \\ \quad + .05 \\ \hline - \quad 1 \quad 22.89 \\ \quad + .57 \\ \hline - \quad 1 \quad 22.32 \\ \quad + .20 \\ \hline 1 \quad 22.12 \end{array}$$

$$\begin{array}{r} 9 \quad 27 \quad 28.94 \\ 9 \quad 28 \quad 51.87 \\ - \quad 1 \quad 22.93 \\ \quad + .03 \\ \hline - \quad 1 \quad 22.90 \\ \quad + .57 \\ \hline - \quad 1 \quad 22.33 \\ \quad + .20 \\ \hline 1 \quad 22.13 \end{array}$$

Frod. 1327 is slow  
1 22.32 ST.  
at 9:20<sup>m</sup>



January 25, 1912 Thursday

Mer. Circle Philip G. Kelly Observ.

Rattle 9 10

40 Synais  
34° 45'

nursed first four years  
apparently wrong  
reflected min  
36° 47'

9 <sup>h</sup> 13 <sup>m</sup>	51.0	47.9	8.9
	54.0	45.2	9.2
	56.7	42.2	8.9
	00.5	39.0	9.5
	03.2	36.0	9.2
	10.5	28.6	9.1
	15.4	23.9	9.3
		19.6	
	15	8.7	
		19.58	

9 <sup>h</sup> 26	—	—
	—	—
	—	—
	—	—
	27.5	00.9
	34.4	53.2
	40.1	49.1
		8.4
		7.6
		9.2
		49.1

44.4
7) 8.6
43.
1.23
44.23

9 <sup>h</sup> 14	19.58
9 <sup>h</sup> 15	43.51
	4.03
- 1	23.93
	1.05
- 1	23.88
	.57
- 1 <sup>st</sup>	23.31
	1.20
1	23.11

out.

9 <sup>h</sup> 26	44.23
9 <sup>h</sup> 28	51.89
2	07.66

Frod 1327 is ~~fast~~ <sup>slow</sup>

1<sup>st</sup> 23.31  
at 9<sup>h</sup> 14<sup>m</sup> ST.

Friday January 26, 1912

Mer. Circle. Philip S. Offley. Rattle 326

miscellaneous  
account of  
phenomena.

V Persei  
42° 18'

5 Persei  
31° 37'

ε Persei  
39° 45'

3<sup>h</sup> 46 43.5386 2.1

46.836.0 2.8

49.533.1 2.6

52.630.1 2.7

55.426.8 2.3

02.819.7 2.5

06.915.6 2.5

3<sup>h</sup> 50 01.602.6 4.2

04.159.3 3.4

07.956.1 4.0

11.253.5 4.7

14.150.2 4.1

21.941.9 3.8

27.431.3 4.7

$$\begin{array}{r} 11.4 \\ 15 \overline{) 3.8} \\ \underline{11.25} \end{array}$$

$$\begin{array}{r} 32.2 \\ 15 \overline{) 16.1} \\ \underline{31.} \\ 1.07 \end{array}$$

3<sup>h</sup> 47<sup>m</sup> 11.25

3 48 36.06

- 1 24.81

+ .06

- 1 24.75

+ .57

- 1 24.18

+ .20

1 23.98

3<sup>h</sup> 50 32.07 3 2.07

3 51 56.92

- 1 24.85

+ .62

- 1 24.83

+ .57

- 1 24.26

+ .20

- 1 24.06

$$\begin{array}{r} 1 \ 24 \ 18 \\ 1 \ 24 \ 26 \\ \underline{\phantom{1} .44} \\ 1 \ 24 \ 22 \end{array}$$

Frod 1322 is slow

1 24.22 at

3<sup>h</sup> 48<sup>m</sup> 8<sup>s</sup>



Saturday, January 27, 1912

Mer Circle

Philip G. Peilly Obsr.

Battle 9<sup>h</sup> 2<sup>m</sup>

40 Hyncois  
34° 45'

10 Leon Min  
36° 47'

9<sup>L</sup> 13<sup>m</sup> 49.0 46.1 5.1  
52.1 43.5 5.6  
55.1 40.1 5.2  
58.1 37.1 5.2  
01.0 34.1 5.1  
08.3 26.5 4.8  
13.2 22.1 5.3

17.6  
15 | 8.9  
17.59

9<sup>L</sup> 26<sup>m</sup> 56.7 55.1 1.8  
59.8 52.2 2.0  
02.5 49.0 1.5  
05.9 46.6 2.5  
08.6 42.9 1.5  
16.6 34.9 1.5  
21.5 30.6 1.5

25.2  
15 | 12.7  
25.84

Est.

22  
2  
04 44  
14  
28  
03

9 18<sup>4</sup> 17.59  
9 15 48.54  
- 1 25.95  
+ 0.4  
- 1 25.91  
+ .57  
1 25.34  
+ .20  
1 25.14

1 25.34  
1 25.49  
83  
1 25.42

9 27 25.84  
9 28 51.93  
- 1 26.09  
+ .03  
- 1 26.06  
+ .57  
1 25.49  
+ .20  
1 25.29

7 nod. 13.27 is slow

1 25.42  
at 9<sup>h</sup> 19<sup>m</sup> S.T.

Sunday January 28, 1912

Mer. Circle Philip G. Pillsbury Observer Battle 2<sup>h</sup> 51<sup>m</sup> 52<sup>s</sup>

$\beta$  Persei  
40° 37'

$\alpha$  Persei  
49° 32'

$\gamma$  Persei  
42° 18'

3 <sup>h</sup> 1 <sup>m</sup>	28.2 30.0	8.2	3 <sup>h</sup> 16 <sup>m</sup>	58.6 11.0	9.6	3 <sup>h</sup> 38 <sup>m</sup>	14.1 17.4	1.5
	32.0 26.7	8.7		02.4 07.2	9.6		18.0 14.1	2.1
	34.9 28.5	8.4		06.2 03.1	9.3		21.4 11.0	2.4
	38.0 20.4	8.4		10.1 57.8	9.9		24.7 7.3	2.0
	41.2 15.9	8.1		13.9 55.9	8.8		27.3 4.0	1.3
	49.3 9.8	8.3		23.2 46.1	9.3		35.9 5.0	1.9
	54.2 4.1	8.3		29.1 40.3	9.4		40.2 50.9	1.1

$$\begin{array}{r} 59.3 \\ 15 \overline{) 27} \\ \hline 59.18 \end{array}$$

$$\begin{array}{r} 34.8 \\ 15 \overline{) 10.7} \\ \hline 34.71 \end{array}$$

$$\begin{array}{r} 45.8 \\ 15 \overline{) 13.1} \\ \hline 45.87 \end{array}$$

East

$$\frac{0.3}{.006} = .01$$

$$\frac{26}{.052}$$

$$\begin{array}{r} 3^h 0^m \quad 59.18 \\ 3 \quad 12 \quad 26.16 \\ - 1 \quad 26.98 \\ \hline \quad \quad + .01 \\ - 1 \quad 22.97 \\ \hline \quad \quad \quad + .57 \\ - 1 \quad 22.40 \\ \hline \quad \quad \quad \quad + .20 \\ - 1 \quad 26.20 \end{array}$$

$$\begin{array}{r} 3^h 18^m \quad 34.71 \\ 3 \quad 18 \quad 1.89 \\ - 1 \quad 23.18 \\ \hline \quad \quad - .05 \\ - 1 \quad 27.23 \\ \hline \quad \quad \quad + .57 \\ - 1 \quad 26.66 \\ \hline \quad \quad \quad \quad + .20 \\ - 1 \quad 26.46 \end{array}$$

$$\begin{array}{r} 3^h 38^m \quad 45.87 \\ 3 \quad 39 \quad 12.71 \\ - 1 \quad 26.89 \\ \hline \quad \quad \quad + .57 \\ - 1 \quad 26.32 \\ \hline \quad \quad \quad \quad + .20 \\ - 1 \quad 26.12 \end{array}$$

$$\begin{array}{r} 1 \quad 26.40 \\ 1 \quad 26.66 \\ 1 \quad 26.32 \\ \hline \quad \quad 88 \\ 1 \quad 26.44 \end{array}$$

Frod. 1322 is slow

$$\begin{array}{r} 1 \quad 26.44 \text{ at } 24 \\ 3^h 28^m \text{ S.T.} \end{array}$$



Friday, February 2, 1912

Mev. Circle Philip S. O'Reilly Obs.  
Break before dawn.

Rattle 14<sup>h</sup> 22<sup>m</sup>

Very Very cloudy

$\gamma$  Bootis  
38° 40'

$\delta$  Bootis  
14<sup>h</sup> 51<sup>m</sup>  
*mean the length*

$\beta$  Bootis  
40° 43'

14 <sup>h</sup> 26 <sup>m</sup>	30.9	31.2	2.1	14 <sup>h</sup> 35 <sup>m</sup>	01.1	50.0	1.1	14 <sup>h</sup> 57	33.7	36.8
	34.1	27.8	1.9		47.0	50.0	1.0		34.2	
	37.2	24.1	2.3		44.4	47.0	0.8			
	40.3	21.1	1.4		41.9	44.4	0.7		45.4	27.8
	48.5	18.7	2.2		11.6	39.4	1.0		48.5	24.1
	51.5	10.3	1.8		17.4				56.8	15.8
	56.3	05.7	2.0		21.7	29.2	0.8		1.6	11.1

$$\begin{array}{r} 01.1 \\ 15 \overline{) 148} \\ \underline{00.98} \end{array}$$

$$\begin{array}{r} 25.2 \\ 13 \overline{) 5.6} \\ \underline{25.43} \end{array}$$

$$\begin{array}{r} 6.1 \\ 7 \overline{) 2.0} \\ \underline{6.28} \end{array}$$

End

$$\begin{array}{r} 14 \ 2 \ 6 \ 00.98 \\ 14 \ 2 \ 8 \ 32.48 \\ -1 \ 31.50 \\ \underline{+ .02} \\ -1 \ 31.48 \\ \underline{+ .57} \\ 1 \ 30.91 \\ \underline{- .20} \\ 1 \ 30.71 \end{array}$$

$$\begin{array}{r} 14 \ 3 \ 5 \ 25.43 \\ 14 \ 3 \ 6 \ 56.82 \\ -1 \ 31.39 \\ \underline{+ .13} \\ -1 \ 31.26 \\ \underline{+ .57} \\ -1 \ 30.69 \\ \underline{- .20} \\ 1 \ 30.91 \ 30.49 \end{array}$$

$$\begin{array}{r} 14 \ 5 \ 7 \ 6.28 \\ 14 \ 5 \ 8 \ 38.03 \\ -1 \ 31.75 \\ \underline{+ .01} \\ -1 \ 31.74 \\ \underline{+ .57} \\ 1 \ 31.17 \\ \underline{- .20} \\ 30.97 \end{array}$$

$$\begin{array}{r} 1 \ 30.69 \\ 7 \ 31.17 \\ \underline{.3} \ 92.77 \\ 1 \ 30.92 \end{array}$$

Frod. 1327 is slow

1 30.92 at  
14<sup>h</sup> 40<sup>m</sup> 5<sup>s</sup>

Saturday February 3, 1912

Mer. Circle Philip S. O'Reilly Observer Rattle 5<sup>h</sup> 22

$\alpha$  Orionis  $\beta$  Aurigae  $\gamma$  Orionis  $2^{\text{nd}}$  H. Camelopardalis  $\delta$  Lynx  $\epsilon$  Aurigae  
 $7^{\circ} 23'$   $44^{\circ} 56'$   $14^{\circ} 46'$   $69^{\circ} 21'$   $61^{\circ} 33'$   $39^{\circ} 28'$

5 <sup>h</sup> 48 <sup>m</sup> 29.7 11.0 6.7	5 <sup>h</sup> 51 <sup>m</sup> 00.0 06.6 6.6	6 <sup>h</sup> 0 <sup>m</sup> 37.5 21.0 3.5	6 <sup>h</sup> 6 <sup>m</sup> 32.7 45.0 7.7	6 <sup>h</sup> 19 <sup>m</sup> 55.1 77.2	6 <sup>h</sup> 30 <sup>m</sup> 32.4 32.1 5.5
32.1 14.5 6.6	03.7 03.1 6.8	40.1 23.2 3.3	39.3 38.4 7.7	24.1 53.4 7.5	35.9 30.5 6.4
34.5 11.9 6.4	07.0 59.4 6.4	42.6 20.9 3.5	45.8 31.6 7.4	29.8 47.7 7.5	39.1 27.2 6.8
37.1 9.8 6.9	10.6 55.9 6.5	45.0 19.0 3.0	53.2 24.1 7.3	35.1 42.1 7.2	42.0 23.9 5.9
39.5 07.2 6.7	14.0 52.6 6.6	47.6 15.4 3.0	00.8 18.2 7.0	37.2 31.2	45.3 20.4 5.7
45.9 00.6 6.5	23.1 43.8 6.9	54.0 9.2 3.2	18.1 00.0 8.1	53.3 24.8 9.1	58.1 12.9 6.0
49.7 56.9 6.6	28.2 38.8 7.0	57.9 5.0 2.9	28.5 49.5 8.0	00.5 16.8 7.3	57.9 7.9 5.8
$\frac{53.4}{1548}$ 53.32	$\frac{33.5}{155.3}$ 33.85	$\frac{06.6}{159.0}$ 06.60	$\frac{38.4}{13736}$ 38.90	$\frac{8.8}{13796}$ 8.73	$\frac{3.0}{15146}$ 02.97

5 <sup>h</sup> 48 <sup>m</sup> 53.32	5 <sup>h</sup> 51 <sup>m</sup> 33.35	6 <sup>h</sup> 1 <sup>m</sup> 01.60	6 <sup>h</sup> 7 <sup>m</sup> 38.90	6 <sup>h</sup> 28 <sup>m</sup> 02.23	6 <sup>h</sup> 31 <sup>m</sup> 02.97
5 <sup>h</sup> 50 <sup>m</sup> 25.30	5 <sup>h</sup> 53 <sup>m</sup> 5.66	6 <sup>h</sup> 2 <sup>m</sup> 33.79	6 <sup>h</sup> 9 <sup>m</sup> 11.90	6 <sup>h</sup> 29 <sup>m</sup> 41.33	6 <sup>h</sup> 32 <sup>m</sup> 35.12
1 31.98	-1 32.31	12 32.19	1 33.00	1 32.40	-1 32.15
	-1 32.33				+0.02
61° 23' = 1.32.40 tan 1.8331 31.76					-1 32.13
7 23' = 1 31.98	.130	1 31.56			+0.57
1.703 ) 42.000					+0.20
					-1 31.34

$$1.703 \overline{) 42000} \begin{array}{r} 24 \\ 3406 \\ \hline 7940 \\ 6912 \\ \hline 10280 \\ 1103 \end{array}$$

$$69^{\circ} 21' \sim 90^{\circ} 00' 00' \tan 2.653$$

$$14^{\circ} 46' \quad \frac{132.19}{2.389} \quad \frac{.264}{2.389} \quad (32.2389)$$

$$2.389 \overline{) 1.167} \begin{array}{r} 32 \\ 2389 \\ \hline 1167 \end{array}$$

Use  $\eta (\tan \delta \cdot \tan \rho) = \rho \sin \delta \cos \delta$  for stars south of Zenith

Frost 1327 is 8 below

1 31.66 alt

Negative 5<sup>h</sup> 58<sup>m</sup> ST.



140 ~  
Sunday February 4, 1912

Meridian Circle

Theraps G. & P. Kelly Observed

Pattie 6<sup>h</sup> 13<sup>m</sup>

$\gamma$  Seminov,  
 22° 31'

$\mu$  Seminov,  
 22° 33'

6<sup>h</sup> 7<sup>m</sup> 36.6 27.6 4.3

39.1 25.0 4.1

42.1 22.0 4.1

44.8 19.4 4.2

47.5 16.5 4.0

54.1 10.2 4.3

57.9 5.9 3.8

$$\begin{array}{r} 02.2 \\ 13 \overline{) 16.0} \\ \underline{01.} \\ 106 \\ \underline{02.06} \end{array}$$

6<sup>h</sup> 15<sup>m</sup> 46.1 31.7 2.8

43.6 29.0 2.6

46.1 26.1 2.2

49.0 23.9 2.9

51.5 20.9 2.4

58.3 14.3 2.6

02.4 10.5 2.9

$$\begin{array}{r} 6.4 \\ 15 \overline{) 4.8} \\ \underline{6.32} \end{array}$$

$$\begin{array}{r} 50 \\ 2 \\ \hline 100 \end{array}$$

6<sup>h</sup> 8 02.06

6 9 34.96

- 1 32.90

+ 10

- 1 32.80

+ 57

- 1 32.23

+ .20

- 1 32.03

ent

132.23

132.29

52

132.26

6 16 6.32

6 17 39.28

- 1 32.96

+ 10

- 1 32.86

+ 57

- 1 32.29

+ .20

7 total 132.70

slow 132.26 at

Monday February 5, 1912

Mrs. Circle      Philip I. O'Reilly Obsr.      Rate 86  
829

31 Synch's  
43° 28'

i Cancri  
29° 4'

8 <sup>h</sup>	14 <sup>m</sup>	44.8	49.1	8.9	8 <sup>h</sup>	39 <sup>m</sup>	23.3	17.4	0.7
		48.1	45.7	8.8			26.3	14.3	0.6
		51.3	42.8	4.1			29.3	11.5	0.8
		54.8	40.1	4.9			32.0	8.8	0.8
		58.3	35.9	4.2			34.8	5.8	0.6
		6.9	27.1	4.0			41.8	58.3	0.1
		11.9	22.2	4.1			46.3	54.7	1.0

$$\begin{array}{r} 17.2 \\ 15 \overline{) 162} \\ \underline{16} \\ 1.08 \\ \underline{17.08} \end{array}$$

$$\begin{array}{r} 50.3' \\ 13 \overline{) 419} \\ \underline{50.32} \end{array}$$

$$\begin{array}{r} 36 \\ 284 \\ \hline 288 \\ 72 \\ \hline 1008 \end{array}$$

15 17.08

8 16 50.93

- 1 33.85

+ 57

- 1 33.28

- .01

- 3 1 33.29

+ .20

1 33.09

Ext.

8<sup>h</sup> 39<sup>m</sup> 50.32

8 41 24.13

- 1 33.81

+ .10

- 1 33.71

+ 57

- 1 33.14

+ .20

1 33.29

1 33.14

Frod. 1327 is slow

13 32.92

502

13 32.22 set

8<sup>h</sup> 20<sup>m</sup> S.T.



135

91

Tuesday February 6, 1912

Mer. Circle

Philip G. Murphy Obs.

Ratth 635  
700J Luminous  
34° 4'J Luminous  
20° 42'

b <sup>h</sup> 44 <sup>m</sup>	58.1	54.4	2.5
	01.0	51.4	2.4
	04.0	48.5	2.5
	06.8	45.8	2.6
	09.9	42.8	2.7
	16.9	34.7	1.6
	21.2	30.4	1.6

b <sup>h</sup> 56 <sup>m</sup>	54.7	45.4	0.1
	51.8	43.0	0.8
	00.6	40.0	0.6
	03.2	37.3	0.5
	05.1	34.8	0.4
	12.0	27.3	9.3
	16.0	23.5	9.5

$$\begin{array}{r} .24 \\ .28 \\ \hline 192 \\ 48 \\ \hline .0072 = .07 \end{array}$$

$$\begin{array}{r} 50 \\ 28 \\ \hline 400 \\ 100 \\ \hline .1400 \end{array}$$

$$\begin{array}{r} 25.9 \\ 15 \overline{) 16.8} \\ 275 \\ \hline 1.12 \\ 26.12 \end{array}$$

$$\begin{array}{r} 19.9 \\ 15 \overline{) 16.1} \\ 19 \\ \hline 1.07 \\ 20.07 \end{array}$$

b <sup>h</sup> 45 <sup>m</sup>	26.12
b 46	60.77
- 1	34.65
	26.12
- 1	34.72
	26.57
- 1	34.15
	26.20
- 1	33.95

Ent.

b <sup>h</sup> 57 <sup>m</sup>	20.07
b 58	54.64
- 1	34.57
	20.14
- 1	34.71
	20.57
- 1	34.14
	20.20
- 1	33.94

This should be 1<sup>m</sup> 33.94

Food 1327 is slow

1<sup>m</sup> 34.15 at6<sup>m</sup> 50<sup>m</sup> S.F.

92

145

Wednesday February 7, 1912

Mer. Circle Philip G. O'Reilly Obs. 2 years in clay to day, Battle 350

*min 7 min*  
c Persei  
47° 28'

Very Very cloudy

a Jauri  
16° 19'

$$\begin{array}{r} 4^h \ 0^m \\ 6.0 \ 15.0 \ 15.0 \end{array}$$

$$9.4 \ 11.1 \ 0.5$$

$$13.4 \ 7.7 \ 1.1$$

$$17.1 \ 4.0 \ 1.1$$

$$21.1 \ 0.4 \ 1.5$$

$$29.4 \ 50.9 \ 0.3$$

$$45.9$$

$$\begin{array}{r} 41.0 \\ 13 \overline{) 65} \\ 40.50 \end{array}$$

$$\begin{array}{r} 4^h \ 28^m \\ 53.6 \ 41.4 \ 5.0 \end{array}$$

$$55.1 \ 39.0 \ 4.1$$

$$57.9 \ 36.3 \ 4.2$$

$$60.4 \ 33.9 \ 4.3$$

$$\begin{array}{r} 63.1 \\ 63.1 \overline{) 36.4} \end{array} \quad 4.5$$

$$59.3 \ 29.9 \ 4.2$$

$$13.3 \ 21.0 \ 4.3$$

$$\begin{array}{r} 17.1 \\ 15 \overline{) 27} \\ 17.18 \end{array}$$

$$\begin{array}{r} 4^h \ 0 \\ 40.50 \end{array}$$

$$\begin{array}{r} 4^h \ 2 \\ 16.22 \end{array}$$

$$-1 \ 35.72$$

$$+ .05$$

$$-1 \ 35.67$$

$$+ .57$$

$$-1 \ 35.10$$

$$+ 20$$

$$-1 \ 34.90$$

$$\begin{array}{r} 4^h \ 28^m \\ 17.18 \end{array}$$

$$\begin{array}{r} 4^h \ 30 \\ 52.68 \end{array}$$

$$-1 \ 35.50$$

$$- .17$$

$$1 \ 35.67$$

$$+ .57$$

$$1 \ 35.10$$

$$+ .20$$

$$1 \ 34.90$$

Frwd 1327 is slow  
1<sup>st</sup> 34.90 at  
2<sup>nd</sup> 15<sup>th</sup>



Thursday, Feb. 8, 1912

Mer. Circle Everett T. King, Obs. Rattle 5-29

$\beta$  Aurigae  
44° 56'

$\eta$  Geminorum  
22° 31'

5<sup>h</sup> 50<sup>m</sup> 55.8 02.0 7.8  
59.1 58.9 8.0  
51<sup>m</sup> 03.9 55.0 7.9  
06.1 51.9 8.0  
09.7 - 48.2 - 7.9  
18.6 39.3 7.9  
23.8 34.3 8.1

$\frac{28.8}{15) 38.4}$   
28.96

6<sup>h</sup> 07<sup>m</sup> 33.2 23.9 7.1  
35.9 21.2 7.1  
38.4 18.8 7.2  
41.2 15.8 7.0  
43.9 - 13.2 7.1  
50.6 06.5 7.1  
54.4 02.5 6.9

$\frac{58.7}{15) 8.2}$   
58.754

$\frac{.09}{.26}$   
0.236

$\frac{.51}{.28}$   
4.68  
1.62  
1.428

5<sup>h</sup> 57<sup>m</sup> 28.96<sup>s</sup>  
5 53 5.54  
- 0 1 36.58  
- .02  
1 38.60  
+ .57  
- 1 36.03  
- .20  
- 1 35.83

36.03  
35.68  
271.71  
35.95

~~ent.~~

6<sup>h</sup> 07<sup>m</sup> 58.54  
6 08 34.93  
- 1 36.39  
+ .14  
- 1 36.25  
+ .57  
- 1 35.68  
- .20  
1 35.48

Frod 1327 is slow  
1<sup>m</sup> 35.85<sup>65</sup> at  
6<sup>h</sup> 00<sup>m</sup> S.T. E.T. King, Obs.

94

130

Friday February 9, 1912

Meridian Circle

Thilo G. O'Killy Obs.

Patt 10° 6'

λ Ursa maj  
43° 20'

observed first five wires of wrong star  
w Ursa maj  
41° 56'

10 <sup>m</sup>	19 <sup>m</sup>	39.8	44.2	4.0
		48.8	40.6	4.4
		—	37.8	—
		—	34.3	—
		53	30.9	— 4.4
		02.1	22.1	4.2
		07.0	17.3	4.3
				12.2
				15 ) 1.5
				12.10

10 <sup>m</sup>	15 <sup>m</sup>	01.1
		58.0
		54.9
		51.3
		18.3 48.3 9.6
		19.6 39.8 9.4
		25.1 34.7 9.8
		29.9
		7 ) 5.7
		29.81

ent.

10 <sup>m</sup>	9	12.10
10	11	49.86
-	1	37.78
		+ .57
-	1	37.19
		+ .20
		1 36.99

10	15	29.81
10	17	7.60
-	1	37.79
		+ .57
-	1	37.22
		+ .20
		1 37.02

7 rods 13.27 in slow  
1 37.22

at 10<sup>m</sup> 15<sup>m</sup> S.T.



200

Sunday February 11, 1912

Mex. Circle

Temp 8.0° Partly clear

Wattle 8° 53

1 Cancri

29° 4'

8 <sup>h</sup> 39	18.0	11.6	9.6
	21.0	08.9	9.9
	23.5	05.6	9.1
	26.5	3.4	9.9
	29.3	00.6	9.9
	36.4	53.4	9.8
	40.8	49.1	9.9

45.1  
15 | 13.2  
44.88

10 Ursa Major

420 7'

8 <sup>h</sup> 54	46.8	50.0	6.8
	50.0	47.0	7.0
	53.4	43.5	6.9
	57.0	40.0	7.0
	00.2	37.1	7.3
	8.6	28.3	6.9
	13.5	23.7	7.2

18.7  
15 | 78  
18.52

ent.

28

8	39	44.88
8	41	24.17
<hr/>		
	1	39.29
		10
<hr/>		
	1	39.39
		57
<hr/>		
	1	38.82
		20
<hr/>		
	1	38.62

36  
28  
28  
7.6  
20 48

8 <sup>h</sup>	53	18.52
8	54	58.04
<hr/>		
	1	39.48
		57
<hr/>		
	1	38.91
		20
<hr/>		
	1	38.71

7 rod 1337 is slow  
1 38.82 at  
8<sup>h</sup> 46.5.5

Monday February 12, 1912

Mex. Circle

Thelip G. O'Farley Obsrv. Battle 10<sup>7</sup> $\lambda$  Ursa maj

43° 20

 $\mu$  Ursa maj

41° 56

10<sup>h</sup> 9<sup>m</sup> 36.8 41.3 8.1  
 40.4 37.7 8.1  
 43.9 34.9 8.8  
 47.6 31.5 9.1  
 50.6 27.9 8.5  
 59.5 19.5 9.0  
 04.0 15.0 9.0

9.2  
 15 | 58  
 9.39

200

10<sup>h</sup> 14 55.2 58.2 3.4  
 59.0 55.5 4.5  
 02.0 52.0 4.0  
 05.5 48.7 4.2  
 08.8 45.4 4.2  
 16.9 37.0 3.9  
 22.0 32.0 4.0

27.0  
 15 | 152  
 26  
 101  
 27.01

10 10 9.39  
 10 11 49.91  
 - 1 40.52  
 - .01  
 - 1 40.53  
 + .57  
 - 1 39.96  
 + 1.20  
 1 39.76

76  
 87  
 2163  
 2182

10<sup>h</sup> 15 27.01  
 10 17 7.65  
 - 1 40.64  
 + .57  
 - 1 40.07  
 - .20  
 1 39.87

1 40.07  
 1 39.96  
 2 80.03  
 1 40.01

Frod 1327 is slow  
 39.81  
 40.01 at  
 10<sup>h</sup> 25<sup>m</sup>



150  
Tuesday February 13, 1912

Wes. Circle

Philip S. Offically Obs.

Rattle 7145

$\gamma$  Gemmaurum

28° 2'

31 Synais

43° 28'

$\gamma$ 56	00.8 53.9	4.7	$\delta$ 14	36.9 41.6	8.5
	03.5 51.2	4.7		40.5 <del>37.3</del>	8.8
	06.4 48.3	4.7		44.1 34.9	9.0
	09.1 45.6	4.7		47.3 31.3	8.6
	11.9 42.8	4.7		50.9 28.0	8.9
	19.1 35.8	4.7		59.2 19.6	8.8
	23.1 31.2	4.3		04.3 14.5	8.8

$$\begin{array}{r} 27.2 \\ 15 \overline{) 49} \\ \underline{27.32} \\ \text{Sub.} \end{array}$$

$$\begin{array}{r} 9.3 \\ 15 \overline{) 59} \\ \underline{7} \\ 9.38 \end{array}$$

$$\begin{array}{r} 38 \\ 28.6 \\ \hline 30.4 \\ 76 \\ \hline 1064 \\ 04 \\ \hline 28 \\ \hline 112 \end{array}$$

$$\begin{array}{r} \gamma \quad 56 \quad 27.32 \\ 7 \quad 58 \quad 8.47 \\ \hline -1 \quad 41.15 \\ \hline \quad \quad .11 \\ \hline -1 \quad 41.26 \\ \hline \quad \quad +.57 \\ \hline -1 \quad 40.69 \\ \hline \quad \quad +.20 \\ \hline 1.40.49 \end{array}$$

$$\begin{array}{r} 94 \\ 69 \\ \hline 163 \\ \hline 81 \end{array}$$

$$\begin{array}{r} \delta \quad 5 \quad 9.38 \\ 8 \quad 16 \quad 50.96 \\ \hline +1 \quad 41.52 \\ \hline \quad \quad +1 \\ \hline -1 \quad 41.51 \\ \hline \quad \quad +.57 \\ \hline -1 \quad 40.94 \\ \hline \quad \quad +.20 \\ \hline -1 \quad 40.74 \end{array}$$

From 1327 is  
 slow 1 ~~40.81~~ <sup>62</sup>

98

Wednesday February 14, 1912

Max. Circle

Theraps P. O'Neil's Obs.

Battle 4 12

 $\epsilon$  Aurigae

43° 41'

 $\gamma$  Aurigae

41° 6'

$$\begin{array}{r} 4^h \ 53^m \ 24.8 \ 29.4 \end{array}$$

4.2

$$28.3 \ 25.9 \ 4.2$$

$$31.7 \ 22.9 \ 4.6$$

$$35.1 \ 19.3 \ 4.4$$

$$38.3 \ 16.2 \ 4.5$$

$$42.1 \ 07.8 \ 4.9$$

$$52.2 \ 01.5 \ 8.7$$

$$\begin{array}{r} 51.3 \\ 15 \overline{) 178} \\ 56 \\ 18 \\ \hline 57.18 \end{array}$$

$$4^h \ 58^m \ 07.7 \ 9.9 \ 7.6$$

$$10.9 \ 6.4 \ 7.3$$

$$14.1 \ 3.1 \ 7.2$$

$$17.5 \ 59.6 \ 7.1$$

$$56.8$$

$$28.9 \ 48.6 \ 1.5$$

$$33.8 \ 43.8 \ 7.6$$

$$\begin{array}{r} 38.8 \\ 13 \overline{) 9.1} \\ \hline 38.70 \end{array}$$

$$4 \ 53 \ 57.18$$

$$4 \ 55 \ 39.60$$

$$- 1 \ 42.42$$

$$+ .01$$

$$- 1 \ 42.41$$

$$+ .57$$

$$- 1 \ 41.84$$

$$+ .20$$

$$- 1 \ 41.64$$

$$4 \ 58 \ 38.70$$

$$5 \ 0 \ 21.03$$

$$- 1 \ 42.33$$

$$- .01$$

$$- 1 \ 42.34$$

$$+ .57$$

$$- 1 \ 41.77$$

$$+ .20$$

$$- 1 \ 41.57$$

Prod. 1327 is slow

$$1 \ 41.80 \text{ at}$$

$$4^h \ 55^m \ \text{S.T.}$$

$$\begin{array}{r} .04 \\ .26 \\ 32 \\ 8 \\ \hline 0112 \\ 04 \end{array}$$



v

Friday February 16, 1912

Meridian Circle. Thiele's & Gilliey clock. Rattle # 35<sup>m</sup> $\lambda$  Ursae maj  
43° 20' $\mu$  Ursae maj  
41° 56'

10 <sup>h</sup> 9 <sup>m</sup>	33.4	37.8	1.2
	35.8	34.7	0.5
	40.1	31.1	1.2
	43.8	27.8	1.6
	47.0	24.1	1.1
	55.4	15.7	1.1
	00.6	10.7	1.3

$$\begin{array}{r} 5.3 \\ 15 \overline{) 83} \\ \underline{9} 5.55 \end{array}$$

10 <sup>h</sup> 9 <sup>m</sup>	52.1	54.9	7.0
	54.9	51.6	6.5
	58.4	48.1	6.5
	01.8	44.8	6.6
	05.1	41.4	6.5
	13.4	33.1	6.5
	18.2	28.2	6.4

$$\begin{array}{r} 23.4 \\ 13 \overline{) 44} \\ \underline{23} 29 \end{array}$$

Ent.

9 <sup>h</sup>	10	5.55
9	11	49.96
	- 1	44.41
		- .01
	- 1	44.42
		+ .57
	- 1	43.85
		+ .20
	- 1	43.65

9 <sup>h</sup>	15	23.29
9	17	7.70
	- 1	44.41
		+ .57
	- 1	43.84
		+ .20
	- 1	43.64

Frod 13.27 to 5/100  
 1 43.84  
 at 10<sup>h</sup> 1/2<sup>m</sup>

100

Saturday February 17, 1912

Mer. Circle

Therip G. O'Farley Obs.

Rattle 6 51

J. Gemma

20° 42'

lost last 5 min  
due to clouds

63 Arizae

39° 27'

6<sup>h</sup> 56<sup>m</sup> 44.2

47.1

50.1

52.7

55.3 -----

01.4 17.3 8.7

05.4 13.8 9.2

$$\begin{array}{r} 9.9 \\ 15 \overline{) 28.13} \\ 09.18 \end{array}$$

SW.

$$\begin{array}{r} 154 \\ 1283 \\ \hline 432 \\ 108 \\ \hline 1512 \end{array}$$

$$\begin{array}{r} 6 \quad 57 \quad 09.18 \\ \hline 6 \quad 57 \quad 09.33 \\ 6 \quad 58 \quad 54.58 \\ \hline 1 \quad 45.25 \end{array}$$

$$\begin{array}{r} 09.18 \\ 54.58 \\ \hline 45.40 \\ 15 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 6 \quad 57 \quad 09.18 \\ 6 \quad 58 \quad 54.58 \\ \hline - 1 \quad 45.40 \\ \hline - .15 \\ - 1 \quad 45.55 \\ \hline + .57 \\ \hline - 1 \quad 44.98 \\ \hline + 20.8 \\ \hline 1 \quad 44.78 \end{array}$$

Prod. 1827 is slow.

$$\begin{array}{r} 1 \quad 44.98 \\ \hline 1 \quad 51 \end{array}$$



145

101

Saturday February 18, 1912

Mex. Circle Philip L. O'Reilly Astro. Battle 4<sup>h</sup> 26

Hazy.

T. Jauri  
22° 47'i Aurigae  
33° 01'

4<sup>h</sup> 34<sup>m</sup> 46.9 37.7 4.6  
 49.4 35.0 4.4  
 52.0 32.0 4.0  
 54.9 29.4 4.3  
 57.3 26.5 - 3.8  
 04.2 20.1 4.3  
 08.3 16.1 4.4

4<sup>h</sup> 49 2.0 58.1 0.1  
 5.1 55.2 0.3  
 8.1 52.1 0.2  
 11.0 49.2 0.2  
 14.1 46.3 0.4  
 21.2 38.7 9.9  
 25.6 34.4 0.0

28 28  
 48 26  
 252 38  
 11 2 214  
 137 2

28  
 28  
 16  
 56  
 07 28

12.1  
 15) 16.9  
 11  
 1.12  
 12.12

ent.

30.1  
 15) 16.2  
 129  
 1.08  
 30.08

4 35 12.12  
 4 36 57.97  
 - 1 45.85  
 - 1 45.99  
 + 57  
 - 1 45.42  
 120  
 - 1 45.22

4 49 30.08  
 4 51 16.02  
 - 1 45.94  
 - 1 46.01  
 + 57  
 - 1 45.44  
 + 120  
 - 1 45.24

Fred 1327 is slow

1 45.23 at  
 4 30<sup>m</sup>

102

46

Monday February 19, 1912.

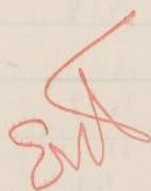
Meridian Circle Philip S. O'Reilly Obs. V. Path 458

w Aurigae  
88° 22'a Aurigae  
45° 54'

5 <sup>h</sup>	5 <sup>m</sup>	7.2	07.8	5.0
		10.9	04.8	5.7
		14.2	01.6	5.8
		17.1	58.1	5.2
		20.8	54.7	5.5
		28.2	47.3	5.5
		33.2	42.9	6.1

$$\begin{array}{r} 39.0 \\ 15 \overline{) 12.8} \\ \underline{37.8} \phantom{5} \end{array}$$

5 <sup>h</sup>	7 <sup>m</sup>	51.1	58.6	9.7
		54.5	55.0	9.5
		58.1	51.1	9.2
		01.8	47.9	9.7
		05.2	44.7	9.9
		14.3	35.5	9.8
		19.5	30.0	9.6

$$\begin{array}{r} 24.3 \\ 15 \overline{) 11.6} \\ \underline{24.7} \phantom{7} \end{array}$$


5 <sup>h</sup>	5 <sup>m</sup>	37.85
5	7	24.78
-1		46.93
		- .04
		1 46.97
		57
		1 46.40
		<u>.20</u>
		1 46.20

5 <sup>h</sup>	8 <sup>m</sup>	24.77
5	10	11.74
-1		46.97
		+ .03
		1 46.94
		+ 57
		1 46.37
		<u>.20</u>
		1 46.17

Find 1327 to slow  
 1 46.38  
 5<sup>h</sup> 6<sup>m</sup>



Tuesday Feb. 20, 1912

Added 2g to F1327 at  $1^h 36^m$  (Sid). Sea = 5g.





150

There was a small hurricane this evening II Great spectacular fire in Arlington?

105

Thursday February 22, 1912

Mrs. Circle

Philip S. O'Leary Clerk.

Ratle —

31 hynais  
43° 28' mixed 15 min

Go. 1450

38° 18'

8<sup>h</sup> 14 — 35.2

34.1 32.0 6.1

37.4 28.7 6.1

40.9 25.1 6.0

--- 44.6 21.8 --- 6.4

53.0 13.1 6.1

58.0 8.4 6.4

8<sup>h</sup> 24<sup>m</sup> 56.0 56.1 2.1

59.1 52.9 2.0

02.5 49.9 2.4

05.3 46.4 1.7

08.6 43.2 1.8

16.7 35.4 2.1

21.4 30.9 2.3

3.3  
13 | 1.4  
03.10

26.0  
15 | 15.4  
25  
1.02  
26.02

End

03  
28  
0084

12  
28  
26  
24  
0336

8<sup>h</sup> 15 03.10

8<sup>h</sup> 16 50.94

- 1 47.84

- 1 47.83

+ .57

- 1 47.26

+ .20

- 1 47.06

8<sup>h</sup> 25 26.02

8<sup>h</sup> 27 13.84

- 1 47.82

- 103

- 1 47.85

+ .57

- 1 47.28

+ .20

1 47.08

Frod 132.7 is slow  
307  
47.27 at  
8<sup>h</sup> 28<sup>m</sup>

Phil O'

150

Friday February 23, 1912

Mer. Circle Thirys L. O'Grady Obs. Rattle 8 57

40 Reynold's  
34° 45'

9 <sup>h</sup> 13 <sup>m</sup>	27.8	24.7	2.7
	30.8	21.6	2.4
	33.7	18.7	2.4
	36.7	15.7	2.4
	39.8	12.6	2.4
	47.1	05.1	2.2
	51.6	00.7	2.3

$$\begin{array}{r} 56.6 \\ 15 \overline{) 3.4} \\ \hline 56.22 \end{array}$$
10 Leon min  
36° 47'

9 <sup>h</sup> 26 <sup>m</sup>	35.3	33.9	9.2
	38.3	30.9	9.2
	41.5	27.8	9.3
	44.5	24.9	9.4
	47.7	21.7	9.4
	55.3	13.9	9.2
	00.4	9.3	9.7

$$\begin{array}{r} - 4.9 \\ 15 \overline{) 10.3} \\ \hline 4.68 \end{array}$$

200

9 <sup>h</sup> 13	56.22
9 15	43.80
	- 47.58
	- .06
	- 1 47.64
	+ .57
	- 1 47.07
	+ .20
	- 1 46.87

9 <sup>h</sup> 27	4.68
9 28	52.23
	- 1 47.55
	- .04
	- 1 47.59
	+ .57
	- 1 47.02
	+ .20
	- 1 46.82

$$\begin{array}{r} 22.15 \\ 28 \overline{) 84} \\ 176 \overline{) 28} \\ 44 \overline{) 112} \\ 061 \overline{) 428} \\ 392 \end{array}$$
This should be 1<sup>m</sup> 46.84Prod. 1327 is slow  
1<sup>m</sup> 47.04 at 5849<sup>h</sup> 20<sup>m</sup> 87.

Thirys L. O'Grady Obs.



200

107

Tuesday February 27, 1912

Mer. Arch

Philip L. Mitty Obs.

Tether 5<sup>h</sup> 15<sup>m</sup>

L. Jauri

21<sup>h</sup> 5'

8 Aurigae

37<sup>h</sup> 12'5<sup>h</sup> 30<sup>m</sup> 11.1 01.3 2.4

14.0 59.1 3.1

16.9 56.3 3.2

19.2 53.8 3.0

21.9 51.1 3.0

28.5 44.4 2.9

32.4 40.5 2.9

36.5

15) 7.0

36.46

EM

5<sup>h</sup> 51<sup>m</sup> 27.2 21.2 3.4

30.5 23.1 3.6

33.5 20.1 3.6

37.0 17.0 4.0

39.9 13.9 3.8

47.7 06.0 3.7

52.7 01.3 4.0

56.7

15) 128

56.85

5<sup>h</sup> 30<sup>m</sup> 36.46

5 32 23.60

- 1 47.14

- .15

- 1 47.29

+ .57

- 1 46.72

+ .20

- 1 46.52

5<sup>h</sup> 51 56.85

5 53 43.98

- 1 47.13

- .05

- 1 47.18

.57

6 .61

14X 6.20

1146.66

41.46

Frod 13 27 s  
slow at 5<sup>h</sup> 45<sup>m</sup>

$$\begin{array}{r} 16 \\ 28 \\ \hline 128 \\ 36 \\ \hline 468 \end{array}$$

$$\begin{array}{r} 1710 \\ 4410 \\ \hline 12 \\ 4398 \end{array}$$

$$\begin{array}{r} 52 \\ 28 \\ \hline 416 \\ 104 \\ \hline 11456 \end{array}$$

Thursday, Feb. 29, 1912

Mer. Circle

Philip S. O'Leary Obsr.

Pathe 548

$\eta$  Geminae  
22° 31'

$\mu$  Geminae  
22° 33'

$\begin{array}{r} 6 \quad 7 \quad 21.4 \quad 12.1 \quad 3.5 \\ 24.2 \quad 09.6 \quad 3.8 \\ 26.9 \quad 06.9 \quad 3.8 \\ 29.4 \quad 04.1 \quad 3.5 \\ 32.0 \quad 01.6 \quad 3.6 \\ 39.2 \quad 59.8 \quad 4.0 \\ 43.1 \quad 50.7 \quad 3.8 \end{array}$

$\begin{array}{r} 47.0 \\ 15 \overline{) 130} \\ 46.86 \end{array}$

$\begin{array}{r} 6 \quad 15 \quad 25.9 \quad 16.8 \quad 2.7 \\ 28.5 \quad 13.9 \quad 2.4 \\ 31.1 \quad 11.1 \quad 2.2 \\ 33.8 \quad 8.7 \quad 2.5 \\ 36.4 \quad 5.9 \quad 2.3 \\ 43.0 \quad \text{---} \\ 46.8 \quad 54.8 \quad 1.6 \end{array}$

$\begin{array}{r} 51.4 \\ 13 \overline{) 151} \\ 58 \\ 1.16 \\ 51.16 \end{array}$

$\begin{array}{r} 6 \quad 7 \quad 46.86 \\ 6 \quad 9 \quad 34.68 \\ - 1 \quad 47.82 \\ \text{---} \quad .14 \\ - 1 \quad 47.96 \\ \text{---} \quad + 57 \\ - 1 \quad 47.39 \\ \text{---} \quad + 1.20 \\ 1 \quad 47.19 \end{array}$

sub

$\begin{array}{r} 6 \quad 15 \quad 51.16 \\ 6 \quad 17 \quad 39.01 \\ - 1 \quad 47.85 \\ \text{---} \quad .14 \\ \Sigma 1 \quad 47.99 \\ \text{---} \quad + 57 \\ - 1 \quad 47.42 \\ \text{---} \quad + 1.20 \\ - 1 \quad 47.22 \end{array}$

$\begin{array}{r} 147.39 \\ 147.42 \\ \text{---} \quad .11 \end{array}$

I read 1327 is slow  
 $\begin{array}{r} 1^m \quad 47.40 \quad \text{at} \\ 2^m \quad 10^m \quad \text{S.T.} \end{array}$



Friday March 1, 1912

Mex. Circle      Thetys G. McMillan Obs.      Patter 6<sup>h</sup> 7<sup>m</sup>

clouds interfere

$\mu$  Geminorum

22° 33'

$\delta$  Aurigae

39° 28'

b	15	26.9	17.3	4.2
		29.8	15.0	4.8
		32.3	12.4	4.7
		35.0	09.5	4.6
		37.7	07.6	4.7
		44.8	00.3	5.1
		48.3	56.2	4.5

b	30	17.3	17.5	4.8
		21.1	14.8	5.9
		24.3	11.9	6.2
		27.2	9.0	6.2
		30.1	5.6	5.7
		38.6	58.0	6.6
		43.0	53.1	6.1

$$15 \overline{) 52.4} \\ \underline{5.0} \\ 52.33$$

$$15 \overline{) 48.3} \\ \underline{14.8} \\ 47.98$$

$$\begin{array}{r} 08 \\ 28 \\ \hline 68 \\ 168 \\ \hline 24 \\ 50 \\ 28 \\ \hline 400 \\ 100 \\ \hline 1400 \end{array}$$

b	15	52.33
b	17	39.90
	1	47.67
		6.14
	1	46.81
		+ .57
		146.24
		+ .20
		146.04

b	30	47.98
b	32	34.79
	1	46.81
		.02
	1	46.83
		+ .57
		146.26
		+ .20
		146.06

Flood 1327 is slow  
1 46.25 at  
6<sup>h</sup> 20<sup>m</sup>

March 2, 1912 (Tues Saturday)

Mer. Circle Philip S. O'Reilly Obsr. Battle 7 18+15

8 Gemmorum

22° 8'

7 <sup>L</sup> 3 <sup>m</sup>	20.1	21.2	1.3
	23.9	17.9	1.8
	26.8	14.0	0.8
	30.3	11.9	2.2
	33.2	08.1	1.3
	41.1	00.2	1.3
	45.9	55.8	1.7

51.1  
15) 11.5  
51.76

i Gemmorum

27° 58'

7 <sup>L</sup> 18 <sup>m</sup>	3.8	57.0	0.8
	6.8	54.1	0.9
	9.3	51.3	0.6
	11.9	48.8	0.7
	15.0	45.7	0.7
	22.0	38.9	0.9
	26.5	34.6	1.1

30.6  
15) 6.3  
30.42

7 <sup>L</sup> 3	51.76
7 <sup>L</sup> 5	37.58
- 1	45.82
	- .14
1	45.96
	57
1	45.39
	120
1	45.19

7	18	30.42
7	20	17.00
- 1	46.58	
	- 12	
- 1	46.48	
	.57	
1	45.91	
	120	
1	45.71	

- 1	46.58
	- 10
- 1	46.68
	.57
- 1	46.11
	.20
- 1	45.91

91  
39  
13  
65

7 mod. 1327 is 45  
slow 145.38  
145.45

1027 slow  
Corrected value 1<sup>m</sup> 45.55



Sunday March 3, 1912

Mus. Circle

Thos. G. O'Farrell Obs.

Watts 6 37<sup>m</sup>

3 Geminorum

ε Geminor

63 Aurigae

34° 4'

29° 42'

39° 27'

6 56 <sup>m</sup>	42.8	32.8	5.6	7 3	20.1	20.9	1.0
	45.5	30.4	5.9		23.8	17.9	1.7
	47.8	27.9	5.7		26.9	15.0	1.9
	50.7	25.2	5.9		30.0	11.8	1.8
	53.1	22.1	5.2		33.1	08.3	1.4
	55.1	19.9	6.0		41.3	00.3	1.6
	58.9	11.9	5.8		46.1	56.0	2.1

$$\begin{array}{r} 8.0 \\ 15 \overline{) 131} \\ 67.87 \end{array}$$

$$\begin{array}{r} 50.5 \\ 15 \overline{) 20} \\ 50.80 \end{array}$$

End.

$$\begin{array}{r} .59 \\ .28 \\ 432 \\ \hline 108 \\ 1512 \\ \hline 7 \\ 58 \\ 1925 \end{array}$$

$$\begin{array}{r} 6 56 \\ 6 58 \\ \hline - 1 \\ \hline 46.55 \\ - 15 \\ \hline 46.70 \\ + .57 \\ \hline 46.13 \\ + .20 \\ \hline 45.93 \end{array}$$

$$\begin{array}{r} 13 \\ 22 \\ \hline 35 \\ 18 \end{array}$$

$$\begin{array}{r} 7 3 \\ 7 5 \\ \hline - 1 \\ \hline 46.87 \\ - 6.02 \\ \hline 40.85 \\ - 1 \\ \hline 39.85 \\ + .57 \\ \hline 40.42 \\ - 1 \\ \hline 39.42 \end{array}$$

Frost. 1327 is slow  
45.98  
46.18

Tuesday, March 5, 1912

Meridian Circle

Ther. S. O'Leary Obs. Tally 851

40 Synsis  
34° 45'

missed 1410 in wire

10 Leon. min  
36° 41'

9 <sup>h</sup> 13 <sup>m</sup>	28.4	31.9	25.1	3.5
		34.9	22.5	4.4
		37.4	19.3	4.2
		40.5	16.4	3.8
			13.4	3.9
		48.1	05.9	4.0
		52.1	01.4	3.5

9 <sup>h</sup>	51.4	
	55.9	
	58.9	45.0
	02.3	42.1
	05.1	39.1
	12.8	31.0
	17.4	26.8

57.0  
13 | 12.8  
34  
56.98

22.0  
18 | 11.5  
21.  
1.04  
22.04

SW

9<sup>h</sup> 13 56.98  
9 15 43.78  
1 46.80

9<sup>h</sup> 26 22.04  
9 28 52.23  
2 30.19

9 <sup>h</sup>	28.4	25.1	3.5
	32.0	22.4	4.4
	35.0	19.2	4.2
	37.4	16.3	3.7
	40.5	13.5	4.0
	48.1	05.9	4.0
	52.1	01.4	3.5

9 13 56.96

57.1  
15 | 14 4  
56.96

1 46.80  
- 05

1 46.85

+ 57

1 46.28

1 46.88

1 Fred 13 27 is fast

1 46.28

17  
28  
136  
34  
6476



Monday March 19, 1912

Mer. Circle    Thilo's S. Kelly Obs.    Tattle 6.37

8 Gemini  
34° 4'

63 Aurigae  
39° 27'

644	45.4	42.0	7.4	73	26.8	21.8	2.6
	48.5	39.0	7.5		23.8	18.1	1.9
	51.6	35.9	7.5		26.8	14.9	1.7
	54.4	33.2	7.6		30.1	12.0	2.1
	57.1	30.0	7.1		33.3	08.2	1.5
	04.8	22.8	7.6		41.5	00.2	1.7
	69.3	18.4	7.7		46.1	55.4	1.5

$$\begin{array}{r} 24 \\ 28 \\ \hline 192 \\ 48 \\ \hline .6672 \end{array}$$

$$\begin{array}{r} 13.9 \\ 15 \overline{) 11.3} \\ 13.75 \end{array}$$

$$\begin{array}{r} 51.1 \\ 15 \overline{) 14.1} \\ 50.94 \end{array}$$

$$\begin{array}{r} .09 \\ 28 \\ \hline 72 \\ 18 \\ \hline .0252 \end{array}$$

$$\begin{array}{r} 6 \quad 45 \quad 13.75 \\ 6 \quad 46 \quad 60.35 \\ -1 \quad 46.60 \\ \hline \quad \quad .07 \\ - \quad 1 \quad 46.67 \\ \hline \quad \quad +.73 \\ \hline \quad \quad 1 \quad 45.94 \end{array}$$

$$\begin{array}{r} 79 \\ 84 \\ \hline 2113 \\ 86 \end{array}$$

$$\begin{array}{r} .52 \\ .67 \\ \hline 1.19 \\ 2 \overline{) 59} \end{array}$$

$$\begin{array}{r} 7 \quad 3 \quad 50.94 \\ 7 \quad 5 \quad 37.43 \\ \hline \quad \quad 1 \quad 46.49 \\ \hline \quad \quad \quad .03 \\ \hline \quad \quad 1 \quad 46.52 \\ \hline \quad \quad \quad +.73 \\ \hline \quad \quad 1 \quad 45.79 \end{array}$$

Prod 1327 is slow  
1 45.86 at  
6" 58" - 51"

Saturday March 16, 1912

Mer. Circle

*This story was  
written by  
Will was disconnected  
from*

E. Coron. bor.

27° 7'

Philip J. O'Reilly obs. Hatt's 15 41

*missed on account of  
clouds.*

T. Herculis

46° 30'

15 51 45.4 38.2 3.6

48.4 35.1 3.5

51.3 32.3 3.6

54.0 30.0 4.0

56.8 26.7 3.5

58.4 20.1 3.5

58.2 14.1 4.3

12.0

15  $\overline{) 13.0}^{10}$   
11.86

15 52 11.86

15 53 57.33

6.47

1 45.1

29 29  
26 5  
 $\overline{) 17445}^4$



Sunday March 17, 1912

Mer. Circle 2 mms  
minut 15  
clouds.

Ther. L. & P.ully Obs.

Rattle 9<sup>h</sup> 49

Th. Unsa Maj  
43° 20'

Th. Unsa Maj  
41° 56'

10	9.	—	36.3	10 <sup>h</sup>	15	53.4	—
		—	33.0			50.0	—
		38.7	29.3	8.0		51.9	46.5
		42.1	26.0	8.1		55.1	48.4
		45.5				—	39. 40.1
		51.	22.5	8.0		11.9	31.7
		53.9	14.2	8.1		16.8	27.0
		58.9	9.2	8.1			3.8

$$\begin{array}{r} 11 \overline{) 4.4} \\ 4.0 \end{array}$$

$$\begin{array}{r} 9 \overline{) 22.0} \\ 18.0 \\ \hline 4.0 \\ 3.6 \\ \hline 0.4 \\ 0.36 \\ \hline 0.04 \end{array}$$

$$\begin{array}{r} 01 \\ 28 \\ 08 \\ 02 \\ \hline 1028 \end{array}$$

$$\begin{array}{r} 90 \quad 10 \quad 04.03 \\ 10 \quad 11 \quad 50.06 \\ \hline \quad \quad 46.03 \\ \quad \quad + 01 \\ \hline \quad \quad 46.01 \\ \quad \quad .57 \\ \hline 1 \quad 45.44 \\ \quad \quad 20 \\ \hline 1 \quad 45.24 \end{array}$$

$$\begin{array}{r} 44 \\ 35 \\ \hline 79 \\ 39 \end{array}$$

$$\begin{array}{r} 10 \quad 15 \quad 21.91 \\ 10 \quad 17 \quad 7.83 \\ \hline \quad \quad 45.92 \\ \quad \quad 00 \\ \hline \quad \quad 45.92 \\ \quad \quad + 57 \\ \hline 1 \quad 45.35 \end{array}$$

$$\begin{array}{r} 1 \quad 45.35 \\ 13.21 \quad 1.55 \text{ slow} \\ \hline 1 \quad 45.40 \text{ at } 10^h 10^m \end{array}$$

116<sup>2</sup>

Wednesday March 20, 1912

Mex. Circle

Thos. G. W. Kelly

Tattle 641

8 Gemini

20° 42'

13 Aurigae

39° 21'

$1^m 56^s$  43.2 33.0 6.2  
 46.2 31.0 7.2  
 48.3 28.3 6.6  
 51.8 25.4 7.2  
 $54.3 - 22.8 = 31.5$   
 00.4 16.2 6.6  
 04.2 12.1 6.3

$7^m 3^s$  20.8 21.6 2.4  
 24.1 18.5 2.6  
 27.4 15.2 2.6  
 30.3 12.0 2.3  
 $33.6 - 8.5 = 25.1$   
 41.7 01.0 2.7  
 46.1 55.9 2.0

$\begin{array}{r} 8.2 \\ 15 \overline{) 5.4} \\ \underline{08.36} \end{array}$

$\begin{array}{r} 51.4 \\ 15 \overline{) 31} \\ \underline{51.20} \end{array}$

sub.

$\begin{array}{r} 6 \quad 57 \quad 08.36 \\ 6 \quad 58 \quad 54.17 \\ \underline{- 1 \quad 45.81} \\ \quad \quad - 15 \\ \underline{- 1 \quad 45.96} \\ \quad \quad + 57 \\ \underline{- 1 \quad 45.39} \\ \quad \quad + .20 \\ \underline{- 1 \quad 45.19} \end{array}$

$\begin{array}{r} 7 \quad 3 \quad 51.20 \\ 7 \quad 5 \quad 37.26 \\ \underline{- 1 \quad 46.06} \\ \quad \quad - .02 \\ \underline{- 1 \quad 46.08} \\ \quad \quad + .57 \\ \underline{- 1 \quad 45.51} \\ \quad \quad + .20 \\ \underline{- 1 \quad 45.31} \end{array}$

$\begin{array}{r} 51 \\ 39 \\ \underline{90} \end{array}$

Prod. 1327 is slow  
 1 45.45 at

$6^m 59.2^s$  ST.  
 Thos. G. W. Kelly

$\begin{array}{r} .54 \\ .28 \quad 3 \\ \underline{43 \quad 2} \\ 08 \quad 108 \\ 28 \quad \underline{1512} \\ 64 \\ 26 \\ \underline{224} \end{array}$

$\begin{array}{r} .19 \\ .31 \\ \underline{0} \end{array}$



Pan broke down trunk of stars without getting one... 117

Friday March 22, 1912

Wber. Circle

Thos L. O'Reilly observed

North 649

1357

S. Seminov,

22° 42'

63 Quigai

39° 27'

6 56 43.1

45.5

48.3

51.1

53.7

00.3

04.2

Saturday March 23, 1912

Mov. Circle

Thurs. 23<sup>rd</sup> fully observed. 7<sup>h</sup> 1<sup>m</sup>  
*missed units were out of range.*

$\lambda$  Sun.  $\mu$ . 13 08  
 $16^{\circ} 41'$   $63^{\circ} 38'$

$\alpha$  Sun.  $\alpha$  Caus Min  
 $32^{\circ} 4'$   $5^{\circ} 27'$

7 10 52.4 41.5 39

55.2 37.1 43

57.8 36.8 46

00.2 33.9 41

02.9 31.2 41

9.3 24.9 42

13.2 20.7 39

39.8 20.0

49.0 9.8

7 25 46.3 41.9 8.2 7 32 32.8 19.9 2.7

49.6 39.1 8.7 35.5 17.7 3.2

52.6 36.0 8.6 37.9 15.1 3.0

55.1 33.8 8.1 40.2 12.8 3.0

59.1 30.0 9.1 43.0 10.0 3.0

5.5 23.0 8.2 49.1 14.2 3.3

9.8 18.6 8.4 52.8 00.3 3.1

$$\begin{array}{r} 16.8 \\ 15 \overline{) 15.9} \\ 16. \\ 1.06 \\ 17.06 \end{array}$$

$$\begin{array}{r} 59.8 \\ 5 \overline{) 34} \\ 59.68 \end{array}$$

$$\begin{array}{r} 14.1 \\ 15 \overline{) 3.4} \\ 14.22 \end{array}$$

$$\begin{array}{r} 56.1 \\ 15 \overline{) 74} \\ 56.49 \end{array}$$

7 11 17.06

7 13 2.93

- 1 45.87

- 11.7

- 1 45.94

+ 1.57

- 1 45.87

+ 1.20

- 1 45.17

7 19 59.48

7 21 46.16

+ 46.48

30

20

.17

3 67

2 3

7 27 14.22

7 28 60.11

- 1 45.89

- 0.8

- 1 45.97

+ 1.57

- 1 45.40

+ 1.20

1 45.20

7 32 56.49

7 34 42.49

- 1 46.00

+ 1.17

- 1 46.17

+ 1.57

- 1 45.50

+ 1.20

1 45.30

ent.

Find 1327 is slow  
 1 45 24 at  
 7<sup>h</sup> 20<sup>m</sup>



To whom it may concern:-

There was no record on this page  
when it was cut out of book.

P.G.R.

July 25, 1912.





Monday March 25, 1912

Mov. Circle

Therip J. O'Reilly Obs.

Platte 7<sup>h</sup> 5<sup>m</sup>

i Geminorum

27° 58'

a Geminorum

32° 6'

7<sup>h</sup> 18<sup>m</sup>

4.2	57.1	1.3
7.0	54.5	1.5
10.0	51.4	1.4
12.6	49.0	1.6
15.6	46.0	1.6
22.3	39.3	1.6
26.2	34.8	1.0

7<sup>h</sup> 26<sup>m</sup>

46.5	41.9	8.4
49.7	39.0	8.7
52.4	36.1	8.5
55.1	33.1	8.2
58.2	30.4	8.6
65.4	23.0	8.4
10.0	18.5	8.5

$$\begin{array}{r} .38 \\ .28 \\ \hline 304 \\ 76 \\ \hline 1064 \end{array}$$

$$\begin{array}{r} 30.8 \\ 15 \overline{) 10.8} \\ \hline 30.72 \end{array}$$

$$\begin{array}{r} 14.1 \\ 15 \overline{) 34} \\ \hline 14.22 \end{array}$$

7<sup>h</sup> 18 30.72

7 20 16.63

- 1 45.91

- .18

1 46.01

+ .57

- 1 45.44

+ .20

- 1 45.24

ent.

7<sup>h</sup> 27 14.22

7 28 60.07

- 1 45.85

- .08

- 1 45.93

- .57

1 45.36

+ .20

1 45.16

Frod 13 27 is slow

1 45.40

at 7<sup>h</sup> 20<sup>m</sup> 5<sup>s</sup>

Therip J. O'Reilly Obs.

Tuesday March 26, 1912

Mer. Circle

Philip C. Mally Observer

Watts 10<sup>h</sup> 28<sup>m</sup>

Very cloudy





Friday, March 29, 1912.

Mer. Circ. Everett T. King Obsr. Rattle 10 27

These stars are too far South

♌ Leonis

11° 0'

♋ Leonis

7° 48'

10 <sup>h</sup> 44 <sup>m</sup> 10.5	30.2	18.0	8.2	10 <sup>h</sup> 58 <sup>m</sup> 21.1	08.6	9.7
13.0	33.0	15.6	8.6	23.9	06.1	0.0
15.6	35.2	13.0	8.2	26.4	03.8	0.2
18.0	37.8	10.5	8.3	28.7	01.0	9.7
40.5	08.0	8.5		31.1	58.5	9.6
46.7	01.9	8.6		37.5	52.4	9.9
50.3	57.8	8.1		41.1	48.5	9.6

$$\begin{array}{r} 15 \overline{) 54.1} \\ 15 \overline{) 260} \\ \hline 54.17 \end{array}$$

$$\begin{array}{r} 15 \overline{) 44.9} \\ 15 \overline{) 57} \\ \hline 44.58 \end{array}$$

$$\begin{array}{r} .72 \\ .12 \\ \hline 1.44 \\ .72 \\ \hline .0864 \end{array}$$

$$\begin{array}{r} .78 \\ .12 \\ \hline 1.56 \\ .78 \\ \hline .0936 \end{array}$$

$$\begin{array}{r} 10^h \quad 44^m \quad 54.17 \\ 10 \quad 44 \quad 39.54 \\ \hline - \quad 1 \quad 45.37 \\ \hline \quad \quad .09 \\ \hline - \quad 1 \quad 45.46 \\ \hline \quad + \quad .57 \\ \hline - \quad 1 \quad 44.89 \\ \hline \quad + \quad .26 \\ \hline - \quad 1 \quad 44.69 \end{array}$$

$$\begin{array}{r} 44.89 \\ 45.22 \\ \hline 2 \overline{) 90.11} \\ \hline 45.05 \end{array}$$

$$\begin{array}{r} 10^h \quad 58^m \quad 44.58 \\ 11 \quad 0 \quad 30.28 \\ \hline - \quad 1 \quad 45.70 \\ \hline \quad \quad .09 \\ \hline - \quad 1 \quad 45.79 \\ \hline \quad + \quad .57 \\ \hline - \quad 1 \quad 45.22 \\ \hline \quad + \quad .20 \\ \hline - \quad 1 \quad 45.02 \end{array}$$

$$\begin{array}{r} 44.69 \\ 45.02 \\ \hline 2 \overline{) 89.71} \\ \hline 44.85 \end{array}$$

$$\begin{array}{r} .69 \\ .02 \\ \hline .71 \\ .35 \end{array}$$

Frod 13 27 is slow  
1<sup>m</sup> 44.85 at 10<sup>h</sup> 50<sup>m</sup> S.T.  
E.T. King Obsr.



Saturday March 30, 1912

M. w. Circle      Turkey G. offally Udon.      Path 941

2. Use mag  
43° 20'

31 Leon min.  
37° 9'

10	9 9	32.2	36.2	8.4
		35.9	38.0	8.9
		39.2	29.8	9.0
		42.4	26.2	8.6
		45.9	23.0	8.9
		54.1	14.6	8.7
		59.6	9.4	9.0
				5.0
				13) 6.5
				04.43

10	20	34.7	34.2	8.9
		38.6	31.2	9.8
		41.2	27.5	8.7
		44.1	24.9	9.0
		47.0	21.3	8.3
		54.8	13.4	8.2
		59.6	9.5	9.1
				5.4
				15) 7.4
				04.49

12  
17  
89  
1.2  
0207

10 910 04.43  
10 4 49.97  
- 1 45.54  
+ .58  
- 1 44.97  
+ .20  
- 1 44.77

End

10 21 04.49  
10 19 50.05  
- 1 45.56  
+ .02  
- 1 45.58  
+ .57  
- 1 45.01  
+ .20  
- 1 44.81

77  
81  
158  
79

Food (32) is slow  
1<sup>m</sup> 44.79 at  
1<sup>m</sup> 15<sup>m</sup> set  
Turkey G. offally

April 3, 1912 Wednesday.

Mer. Circle Thrup L. Offally clear Pathe 10 57

$\psi$  hrase may  
44° 58'

11 <sup>h</sup> 2 <sup>m</sup>	27.9 33.9	1.8
	<del>31.4</del>	
	<del>36.5</del> 30.5	1.9
	34.7 26.9	1.6
	38.4 23.6	2.0
	<u>41.8</u> 20.1	1.9
	50.5 16.5	2.0
	55.7 6.1	1.7

$\phi$  Leorus  
20° 59'

11 <sup>h</sup> 7 <sup>m</sup>	17.5	
	20.3	5.3
	23.1	2.8
	25.6	0.0
	28.1	46.9
	35.1	42.8
		39.0

18  
14 4

00.3  
15) 13.2  
00.88

end

11 <sup>h</sup> 7 <sup>m</sup>	17.5	7.5	5.0
	20.3	5.3	5.6
	23.1	2.8	5.9
	25.6	0.0	5.6
	28.1	57.5	5.6
	35.1	50.2	5.3
	39.0	46.9	5.9

12  
09  
0108.

11 3 00.88

11 4 45.82

-	1	44.94	
		+ .01	
-	1	44.93	
		+ .57	
-	1	44.36	
		+ .20	
-	1	44.16	

44 36  
1 44.36  
1 44.14  
1 44.50  
1 44.25  
46 51 35. 20

42.8  
15) 11.7  
42.78

53  
12  
10 6  
53  
0636

1 Prod 1327 is

Slow 1 44.05 at 11<sup>h</sup> 5<sup>m</sup> 57<sup>s</sup>  
Thrup L. Offally clear.

11 <sup>h</sup> 2 <sup>m</sup>	42.78	
4 9	27.63	
- 1	44.65	
	+ .20	
	44.85	
	43.94	



April 8, 1912 Monday.

New Circle

i Cancri

29° 4'

missed  
just 5 mi. mo.

July 9. 8 P.M. 1912

Table 834

843

10 U.S. Navy  
42° 7'

8<sup>r</sup> 39<sup>m</sup> ~~3~~ — —  
— — —  
— — —  
— — —  
— — —

31.8 47.8 9.1

35.0 43.2 8.2

39.4  
5) 1.7  
39.34

8<sup>r</sup> 52<sup>m</sup> 41.3 44.7 6.0  
44.9 44.1 6.0  
47.9 37.8 5.7  
51.2 34.8 6.0  
54.5 31.1 5.6  
03.1 28.1 6.2  
08.0 18.0 6.0

12.9  
15) 14 4  
12.96

843

36  
12  
72  
36  
0832

8 39 39.34  
8 41 23.71  
— 1 44.37  
— 04  
— 1 44 41  
+ .57  
— 1 43.84  
+ .20  
— 1 43.64

8 53 12.96  
8 54 57.54  
— 1 44.58  
+ .57  
— 1 44.01  
+ .20  
— 1 43.81

44.01  
43.84  
2) 87.85  
43.92

Frod 13.22 23.09  
1 1 43.72  
at 2 45 54  
July 9 1912

Wednesday April 10, 1912

Mer. Circle *missed 15 stars  
darker than obs. of* *Theraps G. H. pretty clear.*

Trans 18° 35'

o Hercules  
28° 44'

a hydra  
38° 41'

18" 2" — 30.1  
— 47.1  
— 44.0  
5.7 41.9 7.7  
7.7 38.9 6.6  
15.0 32.2 7.2  
19.6 27.0 6.6

23.3  
7) 27  
23.39

SWT.

18" 2 23.39  
18 4 7.41  
— 1 44.02  
— .04  
— 1 44.06  
+ 1 57  
— 143.49  
+ 120  
— 1 43.29

49  
37  
106  
53

37  
39  
6

18" 31 44.1 44.1 8.2  
47.2 41.1 8.3  
50.2 37.9 8.1  
53.4 34.4 7.8  
56.2 31.5 7.7  
64.7 23.5 8.2  
9.1 18.8 7.9

14.4  
15) 153  
13  
1.02  
14.02

18" 32 14.02  
18 33 58.15  
— 1 44.13  
— .01  
— 1 44.14  
+ .57  
— 1 43.57  
+ 20  
1. 43.37

Trans 13 27' 8" low  
1 43.33 at

18" 20" 8"



Saturday April 13, 1912

Mow Circle

Thurs G. O'Keilly Allen

Pathe 91

40 Syncis  
340 45

18 Leo in  
36 47'

9<sup>h</sup> 13 30.9 22.9 8.8  
33.9 25.1 9.0  
37.6 22.2 9.8  
40.1 19.3 9.4  
43.0 16.2 9.2  
50.6 8.8 9.4  
55.1 04.2 9.3

9<sup>h</sup> 26 38.5 37.8 6.3  
42.0 34.3 6.3  
45.0 31.5 6.5  
48.1 28.7 6.8  
51.1 25.0 6.1  
58.6 17.5 6.1  
03.5 12.9 6.4

59.8  
15) 9.7  
59.64

8.1  
15) 26  
08.17

22  
122  
0264

14  
124  
0168

95  
89  
2154  
92

ent.

9<sup>h</sup> 13 59.64  
9 15 43.33  
- 1 43.69  
+ .03  
- 1 43.72  
+ .57  
- 1 43.15  
+ .20  
- 1 42.95

9<sup>h</sup> 26 08.17  
9 28 51.81  
- 1 43.64  
+ .02  
- 1 43.66  
+ .57  
- 1 43.09  
+ .20  
- 1 42.89

Tied 1327 is slow

42 92  
1 43 12 at 9<sup>h</sup> 2055  
Thurs G. O'Keilly Allen

Saturday April, 20, 1912

Mer. Circle

Thos G. Pelly Obs

1230  
736

8 Canum Ven

41° 49'

12 27<sup>m</sup> 22.9 26.1 9.0  
 26.4 22.2 8.6  
 29.5 18.9 8.4  
 38.0 15.9 8.9  
 35.9 12.3 8.2  
 44.1 04.3 8.4  
 49.4 59.0 8.4

5 54.0  
 15) 319  
 54.26

12 27 54.26  
 12 29 36.53  
 142.27  
 .57  
 141.70  
 .20  
 141.50

ent

Find 1327 to show

141.50  
 70 out

12 28



Sunday April 21, 1912

Mer. Circle

Thurs. S. Offilly, Obs.

Platte 84

Mer. Circle  
43° 20'

10	9	34.9	39.4	4.3
		38.4	36.1	4.5
		42.0	33.0	5.0
		45.7	29.4	5.1
		48.5	26.4	4.9
		51.1	17.5	4.6
		2.6	12.8	5.94

7.5  
15 | 63  
7.42

Mer. Circle  
41° 56'

10	14	53.2	56.7	9.9
		56.9	53.5	0.4
		00.5	50.3	0.8
		3.4	46.8	0.2
		6.5	43.3	9.8
		15.1	34.9	0.0
		20.1	30.0	0.1

25.2  
15 | 16.4  
24.  
1.09  
25.09

ent.

10	10	7.42
10	11	49.65
	1	42.23
		.57
	1	41.66
		.20
	1	41.46

66  
78  
144

10	15	25.09
10	17	7.44
	1	42.35
		.57
	1	41.78
		.20
	1	41.58

7 mod 1327 is slow  
1<sup>m</sup> 41.72 at  
10<sup>m</sup> 12<sup>m</sup>

Tuesday, April, 23, 1912

Mer. Circle

Thilys J. O'Grady, Allen.

Ratth 13 58

d Bootis

25° 29'

γ Bootis

38° 40'

14 4 17.4 9.5 6.9  
20.2 6.7 6.9  
23.1 04.1 7.2  
25.8 01.1 6.9  
28.1 58.4 7.0  
35.1 51.5 6.6  
39.4 47.6 7.0

14 26 22.8 22.5 5.3  
25.9 19.5 5.4  
29.0 16.3 5.3  
32.1 13.2 5.3  
35.4 10.1 5.5  
43.3 2.1 5.4  
49.0 57.3 5.3

43.8  
13) 68  
43.45

52.6  
13) 101  
52.67

1.4 4 43.45  
14 6 25.25  
- 1 41.80  
+ 1.05  
- 1 41.75  
+ .57  
- 1 41.18  
+ .20  
- 1 41.98

14 26 52.67  
14 28 34.48  
- 1 37.81  
41.02  
- 1 41.79  
+ .57  
- 1 41.22

Final 13.25 51.0

141.20 at 19.5



Wednesday  
Thursday April 24, 1911

Mer. Circle

Philip S. Kelly Observed

Plate 159

N. Bootis  
+ 37° 40'

N. Bootis  
41° 7'

15 <sup>h</sup> 19 <sup>m</sup>	01.0	00.2	1.2
	4.1	37.2	1.3
	7.4	54.3	1.7
	10.7	51.1	1.8
	13.3	47.9	1.2
	21.2	40.1	1.3
	26.1	35.3	1.4

15 <sup>h</sup> 25 <sup>m</sup>	35.9	37.8	3.7
	39.0	34.8	3.8
	42.3	31.6	3.9
	45.7	28.2	3.9
	48.9	24.7	3.6
	57.0	16.6	3.6
	25	12.0	4.5

13  
12  
26  
13  
0156

30.9  
15 | 108  
30.72

6.9  
15 | 139  
6.92

sub

15	19	30.72
15	21	12.07
-	1	41.35
-		02
-	1	41.37
+		57
-	1	40.80
+		20
1		40.60

15 <sup>h</sup>	26	6.92
15	27	48.29
-	1	41.37
+		1.57
-	1	40.80
+		20
1		40.60

Frod 1827 is slow  
1<sup>m</sup> 40.60 at  
15<sup>m</sup> 25<sup>m</sup>  
Philip S. Kelly

Monday Sept 29, 1912

Mr. C. C. C.

Thos. S. O'Reilly Adv.

T. C. C.



Tuesday April 30, 1912

Mex. Circle      Philip S. Pelly, Observer      Rath 1536

ε Coronae  
27° 7'τ Herculis  
46° 30'

15 <sup>h</sup> 51 <sup>m</sup>	51.2 44.1	5.3
	54.1 41.2	5.3
	57.6 38.9	6.5
	59.8 35.9	5.7
	62.5 33.1	5.6
	8.9 26.1	5.0
	13.9 22.1	6.0

$$\begin{array}{r} 18.1 \\ 15 \overline{) 125} \\ 17.83 \end{array}$$

16 <sup>h</sup> 14 <sup>m</sup>	1.6	—
	56.9 58.1	5.0
	0.2 54.4	4.6
	4.0 50.5	4.5
	07.4 47.1	4.5
	11.9 38.9	5.8
	21.9 33.1	5.0

$$\begin{array}{r} 27.4 \\ 13 \overline{) 584} \\ 27.44 \end{array}$$

$$\begin{array}{r} 40 \\ 12 \\ \hline 520 \end{array}$$

$$\begin{array}{r} 14 \\ 12 \\ \hline 28 \\ 14 \\ \hline 0168 \end{array}$$

$$\begin{array}{r} 15^h 52^m 17.83 \\ 15 \quad 53 \quad 58.63 \\ - 1 \quad 340.80 \\ \hline \quad \quad \quad .83 \\ - 1 \quad 340.85 \\ \hline \quad \quad \quad 57 \\ - 1 \quad 4028 \\ \hline \quad \quad \quad 20 \\ 1 \quad 40.08 \end{array}$$

$$\begin{array}{r} 28 \\ 02 \\ \hline 430 \\ 15 \end{array}$$

$$\begin{array}{r} 08 \\ 62 \\ \hline 70 \end{array}$$

$$\begin{array}{r} 16 \quad 17 \quad 27.44 \\ .6 \quad 17 \quad 8.05 \\ \hline 1 \quad 340.61 \\ \quad \quad .02 \\ \hline 1 \quad 340.59 \\ \quad \quad 57 \\ \hline 1 \quad 40.02 \\ \quad \quad 3 \quad 20 \\ \hline 1 \quad 39.82 \end{array}$$

Find 1327 is  
slow + 39.95  
at 15<sup>h</sup> 0<sup>m</sup>

136

Thursday May 1, 1912

Collimation New Circle

S. obs. OK. records

Micrometer found set at

South on North



Thursday May 2, 1912

Collimation Mer. Circle

S. obs. OK. recorder

Micrometer found at 33.626

South on North

Tel. on N.

Tel. on S.

92.8	33.420	84.33.842
90.2	.432	.838
92.1	.424	.849
91.1	.431	.832
91.0	.414	.861
91.0	.402	.810
90.8	.410	.832
90.8	.407	.849
91.0	.407	.832
<u>89.9</u>	<u>.409</u>	<u>.848</u>
910.7	4.155	8.393
<u>91.07</u>	33.416	33.839
		33.416
		<u>67.255</u>
		33.628
		<u>.012</u>
		33.640

Aberration

Micrometer set at 33.640

Thursday, May 2, 1912

Mer. Circle Tully G. O'Reilly Obs. Tattletale

 $\delta$  Hercules <sup>unusually faint</sup>  
 42° 36'

 $\eta$  Hercules  
 39° 4'
16 29 ——— ~~27~~16<sup>h</sup> 37<sup>m</sup> 44.2 44.4 8.6

47.7 41.3 9.0

50.3 38.1 8.4

53.8 35.0 8.8

57.0 32.1 9.1

5.1 23.1 8.2

9.8 19.0 — 8.8

27.5 47.9 5.4

32.8 42.9 5.7

$$\begin{array}{r} 87.9 \\ 15 \overline{) 40} \\ 37.26 \\ 8 \end{array}$$

$$\begin{array}{r} 14.7 \\ 15 \overline{) 56} \\ 14.37 \end{array}$$

$$\begin{array}{r} 10 \\ 12 \\ \hline 20 \\ 10 \\ \hline 0/20 \end{array}$$

$$\begin{array}{r} 16 \quad 29 \quad 37.80 \\ 16 \quad 31 \quad 18.14 \\ \hline - 1 \quad 49 \quad 18.84 \\ \hline + \quad 57 \\ \hline - 1 \quad 39 \quad 07 \\ \hline + \quad 20 \\ \hline - 1 \quad 39 \quad 87 \end{array}$$

$$\begin{array}{r} 16 \quad 29 \quad 37.80 \\ 16 \quad 31 \quad 18.14 \\ \hline - 1 \quad 40 \quad 34 \\ \hline + \quad 177 \\ \hline - 1 \quad 39 \quad 57 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 16^h \quad 38 \quad 14.37 \\ 16 \quad 39 \quad 54.80 \\ \hline - 1 \quad 40 \quad 43 \\ \hline + \quad 01 \\ \hline - 1 \quad 40 \quad 44 \\ \hline + \quad 57 \\ \hline - 1 \quad 39 \quad 87 \\ \hline + \quad 20 \\ \hline - 1 \quad 39 \quad 67 \end{array}$$

$$\begin{array}{r} 87 \\ 77 \\ \hline 2 \overline{) 164} \\ 82 \end{array}$$

$$\begin{array}{r} 87 \\ 77 \\ \hline 2 \overline{) 164} \\ 82 \end{array}$$

Fred says below 139.77  
 at 16<sup>h</sup> 39<sup>m</sup> 37.62 S.T.  
 Tully G. O'Reilly



Friday May 3, 1912

Mr. Circle

Thy G. Offley Chv. Tattle 163<sup>1</sup>/<sub>2</sub>

$\gamma$  Herculis  
39° 4'

$\epsilon$  Herculis  
31° 2'

16<sup>h</sup> 37<sup>m</sup> 44.8 45.0 9.8  
47.9 41.9 9.8  
51.2 38.7 9.9  
54.3 35.6 9.9  
57.4 31.9 9.3  
5.6 24.7 10.3  
10.2 19.5 9.7

14.6  
15) 133  
14.89

16<sup>h</sup> 54 50.0 44.5 4.5  
52.9 41.9 4.8  
55.8 38.9 4.7  
58.4 36.0 4.4  
01.7 33.0 4.7  
8.8 25.8 4.6  
13.0 21.6 4.6

17.4  
15) 47  
17.31

31  
12  
62  
37  
037<sup>2</sup>

16 38 14.89  
16 39 54.82  
- 1 39.93  
- .01  
- 1 39.94  
+ .57  
- 1 39.37  
+ .20  
- 1 39.17

16 55 17.31  
16 56 57.22  
- 1 39.918  
- .04  
- 1 39.95  
57  
1 39.38  
- 1 39.38  
183 27 is 19

slow 1 39.38  
at 2 16<sup>h</sup> 45<sup>m</sup>  
S. F. Offley

Tuesday May 7, 1912

Level of Meridian Circle      G. obs. OK. Records

	<u>Zero E.</u>	<u>Zero W.</u>
Telescope N.	45.0	82.2
	<u>87.8</u>	<u>76.0</u>
	41.4	30.2
	<u>85.8</u>	<u>74.1</u>

Telescope S.	66.0	45.9
	<u>109.7</u>	<u>89.7</u>
	64.2	50.0
	<u>108.2</u>	<u>93.8</u>
	+ 608.1	- 491.9

	491.9	
16)	+ 116.2	+ 7.26 = z
	<u>112</u>	
	42	
	<u>32</u>	
	100	
	<u>96</u>	
	0	

	+ 7.26 = z
	<u>.06</u>
	.4356 = b
	<u>1.35 = sec <math>\varphi</math></u>
	21780
	13068
	<u>4356</u>
	+ .588068 = b sec $\varphi$



Thursday May 9, 1912

Level of Meridian Circle

G. obs. Alt. recorder.

Zero EastZero West

Telescope N.

71.4

115.6

Thursday May 9, 1912

to incl. of Mer. Circle

G. obs. obs. O'Keilly

	<u>Zero E</u>	<u>Zero W</u>
Jel. N.	41.6	41.0
	<u>79.9</u>	<u>79.8</u>
	34.5	54.3
	<u>72.7</u>	<u>92.3</u>
Jel. S.	<u>68.0</u>	5.5
	<u>54.3</u>	
	<u>104.9</u>	<u>42.3</u>
	<u>92.3</u>	
	66.0	15.4
	<u>103.0</u>	<u>67.9</u>
	+570.6	-398.5
	-398.5	

$$16 \overline{) +172.1} \left[ +10.756 = 2 \right.$$

$$\begin{array}{r} 16 \\ 12.1 \\ 112 \\ 90 \\ 80 \\ 100 \\ 96 \end{array}$$

$$+10.756 = 2$$

$$\begin{array}{r} .06 \\ .64536 = 2 \\ 1.85 = \text{sw } 4 \\ 322680 \\ 193608 \\ 6.4536 \\ .8712368 = \text{b sec } 4 \end{array}$$

Changed adjustments of level: bubble ran  
Too near end of scale.



May 9, 1912

Revol. of Meridian Circle

Solar. or recorder

Zero E.  
Tel. S. 52.8

90.7

48.2

86.3

Tel. N. 41.6

78.9

44.0

82.6

+ 525.1

- 406.4

16 | 118.7 | +7.419 = 2

112

67

64

30

16

140

144

Zero W.

27.0

27.4

65.0

24.9

68.0

34.5

73.0

40.1

78.9

- 406.4

+ 7.419 = 2

.06

.44514 = 2

1.35 = sw 4

222570

133542

44514

.6008990 = base 4

May 9, 1912

Revel of Mrs. Circle

S. obs. O.R. recorder

$$\begin{array}{r}
 \text{Tel. N} \quad \text{Zero E} \\
 43.5 \\
 \underline{86.2} \\
 41.8 \\
 \underline{80.5} \\
 \text{Tel S.} \quad 53.0 \\
 \underline{91.6} \\
 48.8 \\
 \underline{87.1} \\
 + 548.5 \\
 - 411.6
 \end{array}$$

$$\begin{array}{r}
 \text{Zero W.} \\
 40.0 \\
 \underline{78.5} \\
 40.8 \\
 \underline{79.7} \\
 27.7 \\
 \underline{65.8} \\
 20.1 \\
 \underline{59.0} \\
 - 411.6
 \end{array}$$

$$\begin{array}{r}
 16 \overline{) 136.9} \quad (8.556 \\
 \underline{128} \\
 89 \\
 \underline{80} \\
 90 \\
 \underline{80} \\
 100 \\
 \underline{96}
 \end{array}$$

$$\begin{array}{r}
 8.556 = z \\
 \underline{.06} \\
 .51336 = G \\
 \underline{1.35} = \text{Sec } \varphi \\
 256680 \\
 154008 \\
 51336 \\
 \hline
 16930368
 \end{array}$$



May 9, 1912

Revol of Meridian Circle

Solar Alt. recorder

Zero S.

$$\begin{array}{r} \text{Tel. N. } 34.9 \\ \hline 73.0 \end{array}$$

41.0

$$\hline 79.2$$

Tel. S. 65.0

$$\hline 103.1$$

63.3

$$\hline 102.0$$

+ 561.5

$$\hline - 376.1$$

$$16 \overline{) 185.4} \quad + 11.525 = 2$$

$$\hline 25$$

$$\hline 16$$

9.4

$$\hline 80$$

40

$$\hline 32$$

80

$$\hline 80$$

Zero W.

39.9

$$\hline 78.1$$

49.4

$$\hline 87.6$$

17.0

$$\hline 55.0$$

05.1

$$\hline 44.0$$

- 376.1

11.525 = 2'

$$\hline .06$$

.69150 = h

$$\hline 1.35 = \sec \varphi$$

345750

207450

$$\hline 69150$$
+ .9335250 = h sec  $\varphi$ 

93

69

60

87

59

$$\begin{array}{r} 368 \overline{) 3518} \\ \hline 125 \end{array}$$

146

8:30 10

12:30 - 14:30

Friday May 10, 1912

Mer. Circle

Thurs G. O'Pelly Obs

Tatto at 11:22

 $\delta$  Herculis  
 $42^{\circ} 36'$ 
 $\eta$  Herculis  
 $39^{\circ} 4'$ 

$16^{\circ}$	$29^{\circ}$	$13.0$	—
		12.9	9.8 2.7
		16.1	6.5 2.6
		19.8	3.0 2.8
		23.0	59.8 2.8
		31.2	51.3 2.5
		36.2	46.1 2.3

$16^{\circ}$	$37^{\circ}$	47.9	48.1	6.8
		51.8	45.1	6.9
		54.7	42.0	6.7
		57.2	38.4	5.6
		00.4	35.8	6.2
		08.8	27.9	6.7
		13.5	22.8	6.3

$$\begin{array}{r} 10 \\ 12 \\ 20 \\ 10 \\ 01 \end{array} 20$$

$$\begin{array}{r} 41.3 \\ 13 \overline{) 46} \\ \underline{41.30} \end{array}$$

$$\begin{array}{r} 18.2 \\ 13 \overline{) 17.6} \\ \underline{17} \\ 1.17 \end{array}$$

16	29	41.30
16	31	18.28
	-1	36.98
		4.57

16	38	18.17
16	39	54.95
	-1	36.78
		.01

$$\begin{array}{r} -136.41 \\ +.20 \\ \hline -136.21 \end{array}$$

$$\begin{array}{r} .41 \\ .22 \\ \hline .63 \\ 32 \end{array}$$

ent.

$$\begin{array}{r} -136.79 \\ +.57 \\ \hline -136.22 \\ +.20 \\ \hline -136.02 \end{array}$$

T rod 1327 is slow  
 $1^{\circ} 36' 32''$  at

$16^{\circ} 33'$   
 Thurs G. O'Pelly Obs



15.10 - 17.00

Sunday, May 12, 1912

Mar Circle

Ratth 1525

x Serpentis  
18<sup>h</sup> 24<sup>m</sup>

8 Coron bor.  
270 7'

15<sup>h</sup> 42<sup>m</sup> 47.7 37.1 4.8  
50.2 34.3 4.5  
53.0 31.8 4.8  
55.6 28.9 4.5  
58.1 26.6 4.7  
04.6 20.1 4.7  
08.3 16.3 4.8

15<sup>h</sup> 51<sup>m</sup> 56.0 48.8 4.8  
59.0 45.9 4.9  
01.7 43.1 4.8  
04.4 40.4 4.8  
07.4 37.6 5.0  
14.1 — —  
18.4 26.7 5.1

12.2  
15) 5.0  
12.33

22.4  
13) 5.8  
22.44

15<sup>h</sup> 43 12.33  
15 44 48.78  
— 1 36.45  
— .07  
— 1 36.52  
+ 73  
— 1 35.79  
+ 1.20  
1 35.59

59  
47  
2) 10.6  
53  
1.27  
79  
2) 1.46  
73

15 52 22.44  
1.5 53 58.79  
— 1 36.35  
— .05  
— 1 36.40  
+ .73  
— 1 35.67  
+ 1.20  
1 35.47

Find 1327 1327 1327 slow  
1 35.73 1 35.73 1 35.73  
1 35.73 1 35.73 1 35.73

148

600  
1000

Friday May 17, 1912

Mer. Circle Philip S. Kelly Obs.

Tatto 12 12

o Virginis  
p 12o Ursa maj  
57° 30'8 Can. ven.  
41° 49'16 Ursa maj  
63° 11'12 Can. ven.  
38° 41'3 Virgin  
11° 25'

12 21 31.3 34.1 5.4

34.6 30.9 5.5

37.9 27.6 5.5

41.1 24.2 5.3

44.7 21.0 5.7

52.9 12.7 5.6

57.8 7.6 5.4

12 49 53.4 53.4 6.8

57.0 50.4 7.4

59.9 47.2 7.1

62.9 44.1 7.0

66.1 41.6 7.7

14.1 33.6 7.1

18.9 28.3 7.2

$$\begin{array}{r} 2.8, \\ 15 \overline{) 11.2} \\ \underline{2.74} \end{array}$$

$$\begin{array}{r} 2.87 \\ 13 \overline{) 90} \\ \underline{23.60} \end{array}$$

12 28 274

12 29 36.30

- 1 33.56

+ 73

- 1 32.83

+ 20

- 1 32.63

12 50 23.60

12 51 57.12

- 1 33.52

- .01

- 1 33.53

+ 73

- 1 32.80

+ 20

1 32.60

Prod. 1.521 is slow 1.82.2

at 12<sup>h</sup> 45<sup>m</sup> ST.

Philip S. Kelly Obs.



Sunday May 19, 1912

Mer. Circle

Wm. G. O. Wally Allen

W. Boots  
37° 40

a <sup>3</sup>Coron. bar,  
27° 0' <sup>min</sup> 5 min

v. <sup>2</sup>Boots <sup>min</sup> on account of clouds  
41° 7'

15 19 16.7 9.8 0.5  
13.8 06.4 0.2  
17.0 03.5 0.5  
19.9 00.3 0.2  
23.1 57.3 0.4  
31.1 49.5 0.6  
36.0 44.9 0.9

40.2  
15 ) 3.5  
40.23

15 29 01.3 53.9 5.2  
4.1 51.0 5.1  
7.0 48.2 5.2  
9.7 45.8 5.5  
— 43.1 —  
19.4 36.1 5.5  
24.1 32.0 6.1

28.2  
13 ) 98  
27.75

15 19 40.23  
15 21 12.43  
— 1 32.20  
— 1 32.22  
+ .57  
— 1 31.65  
+ 20  
— 1 31.45

15 29 27.75  
15 30 39.98  
— 1 32.23  
— 1 32.28  
+ .57  
— 1 31.71  
+ .20  
1 31.51

Trud 1327 is slow

1 31.68 at 48

Monday, 20, May 1912

Max Circle

Thurs 20 Fully Clear

Start 1210

minima on arc of  
opelousas

20 Comae

21° 22'

8 Cam vir

41° 49'

12 29 32.9 33.7 8.6

36.2 32.7 8.9

39.4 29.4 8.9

42.9 23.7 8.6

46.4 22.3 8.9

54.2 14.1 8.3

59.8 9.1 8.9

4.5  
15  $\overline{) 35.10}$   
41.36

12 28 43.6

12 29 36.26

— 1 31.90

+ .73

— 1 31.17

7 vel 13 27 2

slow 1.31.17

at 12 29

20 20 20 20



Sunday May 26, 1912

Max. Circle

Thurs. S. Openly Obs.

Rate 17<sup>9</sup>

i Hercules

46° 2'

u Hercules

27° 45'

17<sup>h</sup> 34<sup>m</sup> 58.9 5.9 4.8  
 2.5 02.7 5.2  
 5.5 59.0 4.5  
 9.1 53.3 4.4  
 -13.0 51.9 4.9  
 22.5 43.2 5.7  
 27.4 37.7 5.1

17<sup>h</sup> 41<sup>m</sup> 7.7 00.9 8.6  
 10.3 57.7 8.0  
 13.0 53.0 8.0  
 15.9 52.1 8.6  
 18.6 49.4 8.0  
 23.9 42.3 8.2  
 30.0 38.2 8.2

11  
 102

39  
 12  
 78  
 39  
 128.68  
 12  
 0144

323  
 15) 69  
 32.46

341.  
 15) 11  
 34.07

17<sup>h</sup> 35 32.46  
 17 36 61.17  
 -1 28.71  
 + .01  
 1 28.70  
 73  
 1 27.97

End

17 41 34.07  
 17 42 62.90  
 -1 28.83  
 - .05

1 27.97  
 128.15  
 286.12  
 128.06

- 128.88  
 + .73  
 128.15

Fwd 13 27 16.0 hr

128.06  
 out 17 40<sup>m</sup>

152

11:30

Monday May 27, 1912

Mer Cuck

Thurs 50 Pilly

Matto 5<sup>49</sup>

missed on  
account of  
clouds

$\eta$  Herculis  
39° 4'

2 Color bar  
27° 7'

15 <sup>h</sup>	52	4.0	56.9	0.9
		6.9	54.0	0.9
		10.0	—	—
		12.3	48.4	0.7
		15.0	45.8	0.8
		22.0	38.5	0.5
		26.4	35.0	1.4

30.5
13 ) 5.7
30.44

15 <sup>h</sup>	52	30.44
15	53	38.93
	- 1	28.49
		- 1.05
	- 1	28.54
		+ 1.73
	1	27.81

7 rods 1327 is  
slow 127.81

at 25<sup>h</sup> 52

Thurs 50 Pilly, Oliver



Saturday June 1, 1912

Mer Circle

Thompson & Bailey, Cal.

Pathe 1433

37 Boötis  
40° 43'

4 Boötis  
27° 16'

14	57	43.1	44.8	7.9
		46.1	41.8	7.9
		49.7	38.6	8.3
		52.9	35.2	8.1
		56.1	31.9	8.0
		64.3	23.5	7.8
		69.1	19.0	8.1

14	59	49.9	42.8	2.7
		52.9	40.0	2.9
		55.6	37.1	2.7
		58.3	34.2	2.5
		61.1	31.2	2.3
		8.84	24.7	3.1
		12.2	20.5	2.7

40  
12  
40

14.11  
15 15 2  
13  
1.01  
14.01

16.2  
15 41  
16.27

06  
05  
12  
C060

14	57	14.01
14	58	40.45
		- 1 26.44
		- .01
		- 1 26.45
		+ .73
		- 1 25.72

14	59	16.27
15	00	42.78

		- 1 26.51
		- .05
		- 1 26.56
		- 1.23

7 vol 1327 12577 1 25.83  
12577

2

Sunday June 2, 1912

Mar. Circle

Thy S. of Puley Obs. Battle 13<sup>h</sup> 5<sup>m</sup>43 Comae  
28° 18'H. can ven  
370 37'

13 <sup>h</sup> 5	55.3	48.5	3.8	13	28	58.9	57.9	6.8
	58.1	46.0	4.1			02.1	54.9	7.0
	00.9	43.0	3.9			05.0	51.7	6.7
	03.7	40.1	3.8			08.1	48.7	6.8
	06.4	37.5	3.9			11.2	45.5	6.7
	13.5	30.3	3.8			18.9	37.7	6.6
	17.7	26.2	3.9			23.8	33.1	6.9

$$\begin{array}{r} 22.1 \\ 15 \overline{) 143} \\ \underline{21.95} \end{array}$$

$$\begin{array}{r} 28.4 \\ 15 \overline{) 5.9} \\ \underline{28.39} \end{array}$$

$$\begin{array}{r} 13 \\ 122 \\ \hline 156 \\ 38 \\ \hline 129 \\ \hline 0456 \end{array}$$

$$\begin{array}{r} 13 \quad 6 \quad 21.95 \\ 13^h \quad 7^m \quad 48.05 \\ \hline -1 \quad 26.10 \\ \hline \quad \quad \quad .05 \\ \hline -1^h \quad 26.15 \\ \hline \quad \quad \quad 4.73 \\ \hline 1^h \quad 25.42 \end{array}$$

$$\begin{array}{r} 42 \\ 31 \\ \hline 73 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 13 \quad 29 \quad 28.39 \\ 13 \quad 30 \quad 54.41 \\ \hline -1 \quad 26.02 \\ \hline \quad \quad \quad .02 \\ \hline -1 \quad 26.04 \\ \hline \quad \quad \quad + 73 \\ \hline 1 \quad 25.31 \end{array}$$

Prod 1327 is slow  
 ↑ 25.86 at  
 13<sup>h</sup> 20<sup>m</sup> 8.5



2

Monday June 8, 1912

New Circle. Thirty S. O'Keilly Obs., Tattler 12 57

12 Con V mag  
38° 47'43 Comae  
28° 18'

12 <sup>h</sup> 49 <sup>m</sup>	1.3	01.4	2.7
	4.6	58.9	3.5
	7.8	55.1	2.9
	10.9	52.1	3.0
	13.9	48.9	2.8
	22.0	40.9	2.9
	26.9	36.2	3.1

$$\begin{array}{r} 31.6 \\ 15 \overline{) 75} \\ \underline{31.50} \end{array}$$

13 <sup>h</sup> 5 <sup>m</sup>	56.0	49.6	5.0
	58.7	46.3	5.0
	01.6	43.4	5.0
	04.4	40.8	5.2
	07.3	37.9	5.2
	14.1	30.9	5.0
	18.5	26.8	5.3

$$\begin{array}{r} 22.5 \\ 15 \overline{) 9.2} \\ \underline{22.54} \end{array}$$

$$\begin{array}{r} 11 \\ 12 \\ \hline 22 \\ 11 \\ \hline 0132 \end{array}$$

$$\begin{array}{r} 87 \\ 12 \\ \hline 74 \\ 37 \\ \hline .0444 \end{array}$$

$$\begin{array}{r} 12^h \quad 50 \\ 49 \quad 31.50 \\ 12 \quad 51 \quad 56.92 \\ \hline -1 \quad 25.42 \\ \hline -1 \quad 25.43 \\ \hline +.73 \\ \hline -1 \quad 24.70 \end{array}$$

$$\begin{array}{r} 13^h \quad 6 \quad 22.54 \\ 13 \quad 7 \quad 48.03 \\ \hline -1 \quad 25.49 \\ \hline -1 \quad 25.53 \\ \hline +.73 \\ \hline -1 \quad 24.80 \end{array}$$

20  
80

Food 1327 is slow

1 24 75 at  
12<sup>h</sup> 59<sup>m</sup> 8 T.

Thirty S. O'Keilly Obs.

156

7/30/30

B

June 11, Tuesday 1912

Mer Circle Philip G. Trilly Obs. Tatt<sup>1245</sup>

43 Comau

28° 18'

lost all way after  
the 9<sup>th</sup> clouds

17 A Comau

37° 31'

13 5 59.4 52.7 2.1

2.2 50.0 2.2

5.2 47.2 2.4

8.1 44.2 2.3

10.7 41.4 2.1

17.7 34.5 2.2

21.9 30.3 2.2

26.1

13) 16

26.10

23.0

28.0 37.1 5.1

32.9

3) 2.0  
32.66
$$\begin{array}{r} 38 \\ 12 \\ \hline 76 \\ 38 \\ \hline 10456 \\ 15 \\ \hline 126 \\ \hline 0180 \end{array}$$

13 6 26.10

13 7 47.96

1 21.86

.04

1 21.82

.73

1 21.09

13 29 32.66

13 30 54.31

1 21.65  
02

1 21.63

173

1 20.90

Prod 1327 is also

Philip G. Trilly Obs. 1 26.00 at  
13<sup>h</sup> 15<sup>m</sup> 50<sup>s</sup>



730 930

1600  
220

3

Wednesday June 19, 1912

157

Mer. Circle

Thurs. S. O'Fally Obs.

Thurs 14<sup>h</sup> 53<sup>m</sup>p 4 Bootes  
40° 48'8 Bootes  
33° 38'14<sup>h</sup> 56<sup>m</sup> 20.1 22.2 2.3

23.9 19.1 3.0

27.0 15.9 2.9

30.3 12.5 2.8

33.6 9.3 2.9

41.0 1.1 2.1

46.5 54.2 2.7

$$\begin{array}{r} 51.2 \\ 15 \overline{) 49} \\ 51.32 \end{array}$$
15<sup>h</sup> 9<sup>m</sup> 42.8 38.9 1.7

45.4 36.0 1.4

48.3 33.0 1.3

51.5 29.8 1.3

54.3 26.8 1.1

2.2 19.6 1.8

6.3 15.1 1.4

$$\begin{array}{r} 10.9 \\ 13 \overline{) 109} \\ 10.72 \end{array}$$
10<sup>h</sup> 56<sup>m</sup> 51.3214<sup>h</sup> 58<sup>m</sup> 40.32
$$\begin{array}{r} -1 \quad 49.08 \\ -1.01 \end{array}$$

$$\begin{array}{r} -1 \quad 49.01 \\ +1.73 \end{array}$$

$$\begin{array}{r} -1 \quad 48.28 \end{array}$$
15<sup>h</sup> 10<sup>m</sup> 10.7215<sup>h</sup> 11<sup>m</sup> 59.66
$$\begin{array}{r} -1 \quad 48.94 \\ -1.03 \end{array}$$

$$\begin{array}{r} 1 \quad 48.97 \\ +1.73 \end{array}$$

$$\begin{array}{r} -1 \quad 48.24 \end{array}$$

From 1327 is show

$$\begin{array}{r} 1 \quad 48.26 \text{ at } 15^{\text{h}} 00^{\text{m}} \text{ this dlo.} \end{array}$$

Thursday June 20, 1912

Mer. Circle Thos. G. Kelly Obs. Ratt 15" 10

W Bootes  
37° 40'

V Bootes  
41° 7'

15 <sup>h</sup>	18 <sup>m</sup>	54.4	53.6	8.0	15 <sup>h</sup>	25 <sup>m</sup>	29.1	31.3	0.4
		57.8	50.5	8.3			32.5	28.1	0.6
		00.8	47.5	8.3			35.9	25.0	0.9
		04.1	44.3	8.4			<del>37.0</del>	21.7	0.7
		07.1	41.2	8.3			42.4	18.4	0.8
		14.9	33.5	8.4			50.5	10.2	0.7
		19.4	28.9	8.3			<del>56.4</del>	5.1	0.5

$$\begin{array}{r} 24.11 \\ 15 \overline{) 21} \\ \underline{24.14} \end{array}$$

$$\begin{array}{r} 00.5 \\ 13 \overline{) 51} \\ \underline{00.34} \end{array}$$

$$\begin{array}{r} 14 \\ 12 \\ \hline 28 \\ 14 \\ \hline 10168 \end{array}$$

$$\begin{array}{r} 04 \\ 12 \\ \hline 10048 \end{array}$$

$$\begin{array}{r} 15^h \quad 19 \quad 24.14 \\ 15 \quad 20 \quad 12.38 \\ \hline -1 \quad 48.124 \\ \quad - .01 \\ \hline -1 \quad 48.125 \\ \quad +.73 \\ \hline -1 \quad 47.52 \end{array}$$

$$\begin{array}{r} 15^h \quad 26 \quad 00.34 \\ 15 \quad 27 \quad 48.60 \\ \hline -1 \quad 48.26 \\ \quad - .00 \\ \hline -1 \quad 48.26 \\ \quad +.73 \\ \hline 1 \quad 47.53 \end{array}$$

Frederick W. W. W. W.

Thos. G. Kelly Obs. 47 52 at  
15<sup>h</sup> 20<sup>m</sup>



Sunday June 28, 1912

Mar Circle Philip S. O'Reilly Oberlin. Patti 1827

a hyper  
38° 41'

110 Hercules  
20° 27'

18° 31' 43.7 438 7.5  
46.6 40.4 7.0  
49.9 37.1 7.0  
53.1 34.1 7.2  
56.2 31.0 7.2  
4.123.0 7.4  
9.018.2 7.2

18° 39' 43.5 33.2 6.7  
46.1 30.7 6.8  
48.8 28.1 6.9  
51.1 25.4 6.5  
54.0 22.9 6.9  
00.4 16.2 6.6  
04.5 12.4 6.9

$\frac{11}{12}$   
0.44

$\frac{13.5}{15 \overline{) 87}}$   
13.58

$\frac{8.3}{15 \overline{) 56}}$   
8.37

$\frac{52}{12}$   
0.624

18° 32' 13.58  
18 33 59.96  
- 1 46.38  
- 1 46.39  
+ 73  
1 45.66

$\frac{78}{144}$

18 30 8.37  
18 41 54.82  
- 1 46.45  
- 1 46.51  
+ 73  
1 45.78

- Fred 1327 is shown  
1 45.72 at  
18 40

Wednesday, June 26, 1912

Mer. Circle Everett S. King Rattle 15 44

$\eta$  Draconis  
61° 42

$\beta$  Herculis  
21° 40'

—  
—  
—  
—  
—

35.8 57.7 7.5

40.0 47.7 7.7

43.8

5/ 4.0

16 24 43.80

16 26 28.55

— 1 44.75

— .06

+ .73

— 1 44.08

.51  
.12  
102  
51  
—  
.0612

Frodsham 1327 is slow  
1<sup>m</sup> 44.<sup>s</sup>08 at  
16<sup>h</sup> 25<sup>m</sup> 8.5.



Wednesday, June 26, 1912

Mer. Circle.

Everett J. King.

$\alpha$  Herculis

$42^{\circ} 36'$

$\eta$  Herculis

$39^{\circ} 4'$

clouds interfered

chronograph  
stopped.

~~Thursday~~, <sup>\*</sup>Friday June 28, 1912

Mer. Circle

Everett J. King

Rattle 14 <sup>39</sup>  
47

d Boötis  
25° 29'

$\beta$  Serpentis  
15° 41'

got  
wrong star.



Friday, June 28, 1912

Mer Circle

Everett J. King

E. Coron. bor.

27° 7'

9.0 1.8 0.8

1.2 9.1 0.3

4.5 6.1 0.6

7.4 3.2 0.6

— 0.5 —

— 3.7 —

1.1 9.6 0.7

~~5.3 3.7~~

~~19.6~~

15.3

11 3.3

15 5.2 15.30

15 5.3 58.95

— 1 43.65

— .05

+ .73

— 1 42.97

T Herculis

46° 30'

0.8 8.9 9.7

4.5 5.2 9.7

8.2 1.8 0.0

1.6 8.4 0.0

5.0 4.5 9.5

4.3 5.6 9.9

9.6 0.2 9.8

24.8

15 13.4

16 15 24.89

16 17 8.34

— 12 23.45

+ .02

+ .73

— 1 42.70

Mean — 1 42.84 (Clock slow)





Friday July 5, 1912

Mer. Circle

M. & O'Reilly Obs.

Rattle 14 01

2 Bootis

19 27  
14 9

37.1 27.0

4.1

39.9 24.3

4.1

42.7 21.8

4.5

45.0 19.1

4.1

47.8 16.4

4.2

54.2 10.0

4.2

58.1 5.7

3.8  
5.7

2.1  
157 1.561

01.07

1.

02.07

14 10 02.07

14 11 40.64

-1 38.57

-0.07 =  $\eta(\tan \delta - \tan \phi)$

-1 38.64

+1.73  $\sec \phi$

-1 37.91

-1 37.91

-1 37.69

-1 37.80

.56

.12

11 2

56

0672

.11

.12

0132

2 Bootis

39 40

14 26

25.9 25.9

1.8

29.1 22.9

2.0

31.9 19.6

1.5

35.2 16.2

1.4

38.4 13.1

1.5

45.9 5.2

1.1

51.1 0.6

1.7

55.9

15 11.9

55.79

14 26 55.79

14 28 34.20

-1 38.41

$\eta(\tan \delta - \tan \phi) = -0.1$

-1 38.42

+1.73

-1 37.69

Frodham 13 27 is slow

1 37.80 at 14 20

M. & O'Reilly Obs.

Tuesday July 9 1912

Mer. Circle E.T. King. Ober Rattle 15 20

$\alpha$  Coron. bor.

27° 0'

8.4 1.1 9.5

1.2 8.2 9.4

3.9 5.4 9.3

6.8 3.0 9.8

9.4 9.9 9.3

6.4 3.1 9.5

0.5 9.0 9.5

25.0  
15 | 11.3

15 29 24.75

15 30 59.89

- 1 35.14

- 1.05

+ .73

- 1 34.46

$\alpha$  Serpentes

18° 24'

9.1 8.3 7.4

1.3 5.7 7.0

4.2 3.1 7.3

6.9 0.7 7.6

9.3 7.9 7.2

6.0 1.5 7.5

9.8 7.6 7.4

13.9  
15 | 10.3

15 43 13.68

15 44 48.89

- 1 35.20

- 1.08

+ .73

- 1 34.55

.40  
.12  
---  
.048

.59  
.12  
---  
.118  
.59  
---  
.0708

1 34.46  
1 34.53  
---  
9.01  
1 34.50



6 17  
2 16

169

Wednesday, July 17, 1912

Mar. Circle

missed first revision  
account of clouds.

Y. hypae

32° 33'

Philip G. Kelly, Chas.

Ratth 18° 52'

J. hypae

37° 58'

~~This is on all probability the wrong star.~~  
 This is all O.K. P.G.R.

$$\begin{array}{r} .13 \\ .12 \\ \hline 26 \\ 13 \\ \hline .0156 \end{array}$$

19 <sup>L</sup>	1	24.9	24.0	8.9
		24.9	21.2	9.1
		31.0	17.9	8.9
		34.1	15.0	9.1
		37.1	11.5	8.6
		44.8	3.9	8.7
		49.8	59.2	9.0

$$\begin{array}{r} 54.4 \\ 15 \overline{) 6.7} \\ \hline 54.45 \end{array}$$

19 <sup>L</sup>	11	54.45
19	13	21.00
	- 1	26.55
		- .02
		+ .73
	- 1	25.84

Trodscham 1327 is slow

1<sup>m</sup> 25/84 2519<sup>L</sup> 8<sup>th</sup>

Friday July 19, 1912

Mer Circle

Philip G. Bailey Obs.

Reith 1858

J Pyrae

37° 58'

B. Cygnus

27° 46'

19<sup>m</sup> 11<sup>m</sup> 26.8<sup>s</sup> 26.5 3.8

30.0 28.0 3.0

33.1 19.9 3.0

36.1 17.2 3.3

39.3 13.8 3.1

47.1 5.9 3.6

51.2 1.2 3.0

$$\begin{array}{r} 56.8 \\ 15 \overline{) 85} \\ \underline{56.56} \end{array}$$

19<sup>m</sup> 25<sup>m</sup> 21.8-14.4 6.2

24.1 11.8 5.9

26.9 9.1 6.0

29.9 6.1 6.0

32.7 3.4 6.1

39.6 56.4 6.0

43.9 52.1 6.0

$$\begin{array}{r} 48.0 \\ 15 \overline{) 152} \\ \underline{47.} \\ 101 \\ \underline{48.01} \end{array}$$

$$\begin{array}{r} 13 \quad 38 \\ \underline{12} \quad \underline{12} \\ 26 \quad 76 \\ \underline{13} \quad \underline{38} \\ 0156 \quad 156 \end{array}$$

19<sup>m</sup> 11<sup>m</sup> 56.56

19 13 21.33

- 1 24.77

- 02

+ 73

- 1 24.06

19<sup>m</sup> 25 48.01

19 27 12.87

- 1 24.86

- 05

+ 73

- 1 24.18

Flood is slow 1<sup>s</sup> 24.12 at  
19<sup>m</sup> 18<sup>m</sup>



Sunday, July 23, 1912

Mar Circle    Temp. G. Barry obs.    P. 18<sup>m</sup> 58

9.5 years  
37° 58'

9.5 years  
27° 46'

19<sup>m</sup> 11    32.1 31.7    3.8  
              35.4 28.8    4.2  
              38.7 26.5    4.2  
              41.9 22.2    4.1  
              44.7 19.5    4.4  
              52.9 11.3    4.2  
              57.4 6.9    4.3

$$\begin{array}{r} 2.0 \\ 15 \overline{) 152} \\ \underline{01} \\ 1.08 \\ \underline{02.08} \end{array}$$

27.0 19.9    6.9

19<sup>m</sup> 25    29.9 17.3    7.2  
              32.2 14.7    6.9  
              35.3 11.5    6.8  
              38.1 8.8    6.8  
              45.0 1.8    6.8  
              49.3 57.8    7.1

$$\begin{array}{r} 53.9 \\ 15 \overline{) 75} \\ \underline{53.50} \end{array}$$

$$\begin{array}{r} 13 \\ 12 \\ \hline 26 \\ 13 \\ \hline 10156 \end{array}$$

$$\begin{array}{r} 38 \\ 12 \\ \hline 76 \\ 38 \\ \hline 0456 \end{array}$$

19 12 02.08

19 13 21.33  
   - 1 19.25  
       .08  
   - 1 19.27  
       +.73  
   - 1 18.54

$$\begin{array}{r} 70 \\ 54 \\ \hline 2 \overline{) 124} \\ \underline{62} \end{array}$$

19<sup>m</sup> 25    53.50

19 27 12.88  
       1 19.38  
           .05  
       1 19.43  
           73  
       1 18.70

Food 13.27 to 18.62

Wednesday July 24, 1912

New Circle Philip & Bailey Obs. Realtb 1652

$\pi$  Herculis  
36° 54'

$\epsilon$  Herculis  
46° 2'

17<sup>h</sup> 10<sup>m</sup> 13.9 12.0 5.9

16.7 9.8 6.0

19.9 6.1 6.0

23.0 3.0 6.0

— 69.9

33.7 52.1 5.8

38.2 47.5 5.7

42.0

813  $\overline{) 114}$   
42187

17<sup>h</sup> 10 42.87

17 11 61.25

— 1 18.38

— 1.02

— 73

— 1 17.167

16.  
12  
— 32  
16  
— 192



Friday July 26, 1912

Max. Cich

Philip L. Petty, Chem.

Path 1912

10 Cygni  
270 46'5 Cygni  
44 54

minia first summer

19 <sup>h</sup> 25 <sup>m</sup>	29.0 21.8	0.8
	31.9 19.0	0.9
	34.7 16.3	1.0
	37.3 13.5	0.8
	39.8 10.8	0.6
	47.0 3.9	0.9
	51.2 59.4	0.6

31.5

28.2

24.8

21.2

16.7

3.8

58.4

$$\begin{array}{r} 39 \\ 12 \\ \hline 51 \\ 58 \\ \hline 109 \end{array}$$

$$\begin{array}{r} 55.3 \\ 13 \overline{) 5.9} \\ \hline 55.39 \end{array}$$

$$\begin{array}{r} 55.9 \\ 58.4 \end{array}$$

middle line

19 <sup>h</sup> 25	55.39
19 <sup>h</sup> 27	12.89
- 1	17.56
	1.05
- 1	17.55
	+ .73
- 1	16.82

$$\begin{array}{r} 09. \\ 12 \\ \hline 0108 \end{array}$$

$$\begin{array}{r} 82 \\ 88 \end{array}$$

19 <sup>h</sup> 40	53.9
19 <sup>h</sup> 42	16.03
1	22.13

19 40 58.4

19 42 16.03

- 1 17.63

+ .01

+ .74

- 1 16.88

Fred 1327 is slow

$$\begin{array}{r} 16.85 \\ 19 \overline{) 30} \end{array}$$

174

23.

Thursday August 1, 1912

$\pi$  Anchored

330 13

5 Andromeda

30° 22'

0<sup>L</sup> 30<sup>m</sup> 29.5 25.4 4.9

32.328.0 5.3

35.319.9      5.2

38.216.9      5.1

41.6 13.6 5.2

48.66.5 5.1

52.9 2.1 5.0

$$\begin{array}{r} 57.5 \\ 13 \overline{) 83} \\ \underline{57.55} \end{array}$$

0<sup>2</sup> 32 56.8 51.1 7.9

59.7 48.4 8.1

2.5 4 5.5 8.0

5.342.6 7.19

8.1.39.8 7.9

13.4 32.5 7.9

19,828.1 7.9

$$\begin{array}{r} 24.1 \\ 13 \overline{) 147} \\ \underline{239} 8 \end{array}$$

0<sup>h</sup> 30<sup>m</sup> 57.55

0. 38<sup>2</sup> 12.65

1 15.10

03

+ 73

- 1 14.43

0<sup>4</sup> 33 23.98

0 34 39.15

-1 15.17

- 64

472

- 1 14,48

7 rod 1327 is slow  $\hat{1} 14.46^s$   
at  $0^h 31^m$  S.T.



12:30 - 15<sup>00</sup>

175

Tuesday August 6, 1912

Meridian Circle Only &amp; Reilly obs.

Patto 20° 34'

-a Cygni  
44° 57'2 Cygni  
33° 38'

20 <sup>h</sup> 36 <sup>m</sup>	42.1 48.0	0.1
	45.4 44.5	9.9
	48.9 41.3	0.2
	52.1 37.5	9.6
	55.5 34.1	9.6
	4.4 25.2	9.6
	9.8 20.2	0.0

20 <sup>h</sup> 40 <sup>m</sup>	59.8 50.1	5.9
	2.8 53.1	5.9
	5.9 50.1	6.0
	8.8 47.2	6.0
	11.7 44.2	5.9
	19.1 37.0	6.1
	28.5 32.3	5.8

$$\begin{array}{r} 09 \\ 12 \\ \hline 10108 \end{array}$$

$$\begin{array}{r} 15.0 \\ 15 \overline{) 140} \\ \hline 14.93 \end{array}$$

$$\begin{array}{r} 28.0 \\ 15 \overline{) 146} \\ \hline 27.97 \end{array}$$

$$\begin{array}{r} 24 \\ 12 \\ \hline 36 \\ 21 \\ \hline 10258 \end{array}$$

20 <sup>h</sup> 37	14.93
<u>20</u> 38	<u>28.45</u>
- 1	13.52
	+ 0.1
	<u>+ 73</u>
- 1	12.78

20 41	27.97
20 42	<u>41.62</u>
- 1	13.65
	- 0.3
	<u>+ 73</u>
- 1	12.95

$$\begin{array}{r} 78 \\ 95 \\ \hline 2 \overline{) 173} \\ 86 \end{array}$$

Food rest is slow  
1" 12.86 at  
20<sup>h</sup> 18<sup>m</sup>

176

Saturday August 10, 1912

Mov. Circle Ship & Pully Obs. Ratto

$\pi$  Pegasi  
32° 44'

cloudy.

refraction  
38° 35'

22<sup>h</sup> 4 26.8 22.2 9.0  
29.8 19.6 9.4  
32.8 16.6 9.4  
35.3 13.7 9.0  
38.5 10.8 9.3  
46.0 3.1 9.1  
50.1 39.1 9.2

54.9  
13) 93  
54.62

29  
12  
58  
29  
2  
0348

22 4 ~~54.62~~  
22 6 725  
- 1 | 2.63  
- .03  
+ .73  
1 11 93

Frost 13 27 is slow

1 11.93  
at 22<sup>h</sup> 5<sup>m</sup>



Sunday, August 11, 1912

Mer. Circle. Thy. & P. Obs. Pathe 22 2.30

Pygasi  
32° 44'

chronograph gave  
considerable trouble  
power off but still  
failed to work.

P.S.P. 10 hacteria  
32° 35'

Wednesday August 14, 1912

Meridian Circle *Temp. 9. P. 11.11.12*

Spalte 11<sup>h</sup> 2<sup>m</sup>

i Herculis  
46° 2'

*Very cloudy at times  
star would disappear  
due to clouds P. 4.11.12  
missed 10<sup>m</sup> min. circles*

11 Herculis  
27° 45'

17<sup>h</sup> 35    15.3 23.1 8.4  
          19.0 19.7 8.7  
          22.5 16.1 8.6  
          26.1 12.6 8.7  
          29.8 9.0 8.8  
          38.7 0.2 8.9  
          43.6 54.8 8.4

17<sup>h</sup> 41    24.9 17.9 2.8  
          28.0 13.2 3.2  
          30.9 12.9 3.8  
          33.4 9.7 3.1  
          36.5 — —  
          43.0 59.9 2.9  
          47.0 55.8 2.8

$\frac{49.6}{15) 51}$   
49.34

$\frac{51.9}{15) 75}$   
51.50

$\frac{14}{22}$   
84  
6132

61.01  
0 15  
60.88

$\frac{12}{12}$   
0144  
39  
12  
78  
39  
04 68

17<sup>h</sup> 35    49.34  
17    36    60.88  
— 1    11.54  
          + .01  
          + .73  
— 1    10.84

17<sup>h</sup> 41    51.50  
17    42    63.01  
— 1    11.51  
          — .04  
          + .73  
— 1    10.82

Frod 1827 is slow  
1<sup>h</sup> 10.83 at  
17<sup>h</sup> 37<sup>m</sup>



Thursday August 15, 1912

Meridian Circle *Thurs. 8. Pelly slow.*

*Rate* 22<sup>m</sup> 38<sup>s</sup>

*1 Pegasi*  
22<sup>m</sup> 45<sup>s</sup>

*Andromeda*  
41<sup>m</sup> 50<sup>s</sup>

22 <sup>m</sup>	40 <sup>m</sup>	43.5	34.8	8.3
		46.2	31.8	8.0
		48.9	29.1	8.0
		51.8	26.4	8.2
		54.3	23.9	8.2
		1.1	17.1	8.2
		5.1	13.1	8.2

22 <sup>m</sup>	56 <sup>m</sup>	12.3	15.2	7.5
		15.8	12.1	7.9
		19.1	8.8	7.9
		22.1	5.1	7.2
		25.9	2.2	8.1
		33.9	38.9	7.8
		38.8	49.1	7.9

$$\begin{array}{r} 49 \\ 12 \\ \hline 98 \\ 49 \\ \hline 0588 \end{array}$$

$$\begin{array}{r} 9.0 \\ 15 \overline{) 1.1} \\ \hline 09.073 \end{array}$$

$$\begin{array}{r} 43.9 \\ 15 \overline{) 13.2} \\ \hline 43.88 \end{array}$$

$$\begin{array}{r} 7 \\ 74 \\ \hline 119 \end{array}$$

$$\begin{array}{r} 19 \\ 17 \\ \hline 0.133 \end{array}$$

$$\begin{array}{r} 01 \\ 12 \\ \hline 02 \\ 000 \end{array}$$

22 <sup>m</sup>	41 <sup>m</sup>	09.07
22 <sup>m</sup>	42 <sup>m</sup>	19.98
	- 1	10.91
		- .06
		+ 73
	- 1	10.24

22 <sup>m</sup>	56 <sup>m</sup>	43.88
22 <sup>m</sup>	57 <sup>m</sup>	54.25
	- 1	10.87
		+ 73
	- 1	10.14

*Frod. 1327 is slow*  

$$\begin{array}{r} 10.19 \text{ at} \\ 22^m 50^m \end{array}$$

180 ✓

12

Friday August 16, 1912

Meridian Circle

Thompson's Reilly's

Rattle 1732

i Herculis

46° 21'

w Herculis

27° 45'

17<sup>h</sup> 35<sup>m</sup> 16.524.0 0.5

20.120.9 1.0

23.417.1 0.5

27.213.5 0.7

30.89.9 0.7

39.901.0 0.9

46.056.0 1.0

$$\begin{array}{r} 50.2 \\ 15 \overline{) 57} \end{array}$$

50.38

17<sup>h</sup> 41<sup>m</sup> 25.918.9 4.8

28.716.1 4.8

31.113.0 4.1

34.010.5 4.5

37.007.5 4.5

43.901.0 4.9

48.156.3 4.4

$$\begin{array}{r} 52.1 \\ 15 \overline{) 41} \end{array}$$

52.27

17<sup>h</sup> 35<sup>m</sup> 50.38

17 36 60.83

- 1 10.45

+ .01

+ .73

- 1 9.71

$$\begin{array}{r} 10.03 \\ 9.71 \\ \hline 19.74 \\ 987 \end{array}$$
17<sup>h</sup> 41<sup>m</sup> 52.27

17 42 62.98

- 1 10.71

- .05

+ .73

1 10.03

Fwd 1322 is slow  
1 09.87 at  
17<sup>h</sup> 36<sup>m</sup>



Tuesday August 20, 1912

Meridian Circle

Ther. P. Pelly Olsen

Pathe <sup>21 18</sup>  
~~21~~

74 Cygnus  
40° 0'

2 Vega  
90° 28'

21	31	48.950.0	8.9
		52.1 46.9	9.0
		55.0 43.6	8.6
		58.3 40.2	8.5
		01.8 37.1	8.9
		9.8 29.1	8.9
		14.7 24.3	9.0
		19.4	
		15   6 <sup>12</sup>	
		19.41	

21	38	22.4 09.9	2.3
		25.0 07.3	2.3
		27.3 04.9	2.2
		30.0 02.4	2.4
		33.1 59.9	3.0
		38.5 53.7	2.2
		42.3 49.9	2.2
		46.1	
		15   27	
		46.18	

07  
12  
0084

76  
12  
152  
76  
0912

21 31 19.41  
21 33 27.86  
- 1 08.45  
- 1.01  
1 08.46  
+ .73  
- 1 07.73

70  
90  
2153  
82

21 38 46.18  
21 39 54.72  
- 1 08.54  
- .09  
1 08.63  
- .73  
1 07.90

Prod. 132745 show

1 07.82  
21 35

Friday August 24<sup>3</sup> 1912

Meridian Circle *W. S. Pelly* observed *W. S. Pelly* 19<sup>h</sup> 11<sup>m</sup>

$\beta$  Cygni  
27° 46'

19 <sup>h</sup> 25	39.132.2	1.3
	42.1.29.4	1.5
	44.926.5	1.4
	47.623.9	1.5
	50.221.0	1.2
	57.314.11	1.1
	01.610.0	1.6

$$\begin{array}{r} 5.9 \\ 15 \overline{) 108} \\ 5.72 \end{array}$$

$\delta$  Cygni  
44° 54'

19 <sup>h</sup> 40	39.942.0	7.9
	39.538.6	8.1
	42.834.9	7.7
	46.131.6	7.7
	49.928.0	7.9
	58.419.1	7.8
	3.914.11	8.0

$$\begin{array}{r} 9.0 \\ 15 \overline{) 141} \\ 08.94 \end{array}$$

$$\begin{array}{r} 39 \\ 12 \\ \hline 78 \\ 39 \\ \hline 0468 \end{array}$$

$$\begin{array}{r} 09 \\ 12 \\ \hline 0108 \end{array}$$

$$\begin{array}{r} 19 \quad 26 \quad 5.72 \\ 19 \quad 27 \quad 12.77 \\ \hline - \quad 1 \quad 07.05 \\ \quad \quad 05 \\ \quad \quad \hline \quad \quad 73 \\ \quad \quad \hline 1 \quad 06.37 \end{array}$$

$$\begin{array}{r} 4 \\ 37 \\ \hline 51 \\ 26 \end{array}$$

$$\begin{array}{r} 19 \quad 41 \quad 08.94 \\ 19 \quad 42 \quad 15.82 \\ \hline - \quad 1 \quad 06.88 \\ \quad \quad + 01 \\ \quad \quad + 73 \\ \quad \quad \hline 1 \quad 06.14 \end{array}$$

Found 1.327 as slow  
 1 06 26 at  
 19<sup>h</sup> 35<sup>m</sup>



Tuesday August 27, 1912

Mendocino Creek Twp. S. Kelly Chm.

Tatto 20 30

α Cygni  
449 31

Very poor night  
no new faint stars  
records P.S.R.

ε Cygni  
330 38

20<sup>h</sup> 36 50.056.2 6.2  
53.852.8 6.6  
57.049.5 6.5  
00.846.0 6.8  
04.042.4 6.4  
13.033.8 6.8  
18.128.4 6.5

23.5  
15 | 4.3<sup>2</sup>  
23.28

20<sup>h</sup> 41 8.304.5 2.8  
11.301.6 2.9  
14.158.8 2.9  
17.255.8 3.0  
20.052.9 2.9  
27.745.5 3.2  
31.941.1 3.0

36.7  
15 | 7.4<sup>11</sup>  
36.49

.09  
.12  
0108  
25  
12  
50  
25  
0300

20 37 23.28  
20 38 28 37  
- 1 05.09  
+ 01  
+ 73  
- 1 04.35

20<sup>h</sup> 41 36.49  
20 42 41.59  
- 1 05.10  
+ 03  
+ 73  
1 04.40

Frost 1327 is slow  
1 04.38  
at 22<sup>h</sup> 39<sup>m</sup>

Thursday, August 29, 1912

Meridian Circle W. L. G. Bailey Obs. Path 1959

24 Vulpecul.  
24° 23'

γ Cygni  
39° 58'

20 11 34.1 5.8 9.9  
36.9 3.0 9.9  
39.8 6.2 6.0  
42.4 7.9 0.3  
45.0 4.9 9.9  
51.8 8.0 9.8  
56.0 0.4 11 0.1

20 17 32.2 3.3 5.5  
36.0 0.3 6.3  
38.9 7.0 5.9  
42.1 8.7 5.8  
45.3 0.7 6.0  
53.3 12.8 6.1  
58.1 7.4 5.5

000  
15) 149  
59.99

2.9  
15) 140  
2.93

07  
12  
0084

20 11 59.99  
20 12 63.71  
- 1 03.72  
- 06  
+ 73  
- 1 03.05

20 18 02.93  
20 19 06.60  
- 1 03.67  
- 01  
+ 73  
1 02.95

7 mod 13 2712s  
slow 1 03.00  
out 20 15<sup>mm</sup>



Saturday August 31/90

Max Circle

minutes per min.

Thurs. S. Pully Obs.

Path 22 2

5 Pegasus  
32° 44'

10 hacten  
38° 35'

22<sup>h</sup> 4 — 32.8 —

40.0 29.9 9.9

48.0 27.0 0.0

46.0 24.5 0.5

48.9 21.1 0.0

56.2 13.9 0.1

00.5 9.3 9.8

$$\begin{array}{r} 5.2 \\ 13 \overline{) 135} \\ \underline{04} \\ 1.04 \\ \underline{05.04} \end{array}$$

22<sup>h</sup> 38<sup>m</sup> 49.0 48.9 7.9

52.1 46.0 8.1

56.2 42.7 7.9

58.6 39.5 8.1

01.9 36.2 8.1

9.6 28.1 7.7

14.3 23.9 8.2

$$\begin{array}{r} 19.0 \\ 15 \overline{) 150} \\ \underline{148} \\ 1.0 \\ \underline{19.00} \end{array}$$

22<sup>h</sup> 5 05.04

22 6 07.39

— 1 02.35

— .03

+ .73

— 1 01.65

28

$$\begin{array}{r} 27 \\ 12 \\ \underline{54} \\ 27 \\ \underline{0824} \end{array}$$

$$\begin{array}{r} 4 \\ 12 \\ \underline{22} \\ 41 \\ \underline{0432} \end{array}$$

22<sup>h</sup> 34 19.00

22 35 21.38

— 1 02.38

— .01

+ .73

1 01.66

Frod 1327 is slow

1 01.65 at

22 20

186

755

Tuesday September 8, 1912

Merdian inch

July 8. Fully clear.

Very very cloudy  
naked eye observations  
P 3.11Pathe 19<sup>h</sup> 4<sup>m</sup>I Lyrae  
37° 58'β Cygni  
27° 46'
$$\begin{array}{r} 13 \\ 12 \\ \hline 26 \\ 13 \\ \hline 0156 \end{array}$$

19 <sup>h</sup> 11 <sup>m</sup>	50.0 49.5	9.5
	53.2 46.4	9.6
	56.3 43.2	9.5
	59.3 40.2	9.7
	2.7 37.1	9.8
	10.4 29.2	9.6
	15.1 24.5	9.6
	19.9	
	15   12.2	
	19.81	

19 <sup>h</sup> 25 <sup>m</sup>	44.8 32.1	2.9
	48.0 35.2	3.2
	51.0 32.9	3.9
	53.8 29.9	3.7
	56.8 26.9	3.7
	3.1 20.2	3.3
	7.3 15.9	3.2
	11.8	
	15   10.7	
	11.71	

$$\begin{array}{r} 14 \\ 084 \\ \hline 19 \\ 39 \\ \hline 12 \\ 78 \\ \hline 210237 \\ 11468 \\ \hline 2091 \end{array}$$

19 <sup>h</sup> 12 <sup>m</sup>	19.81
19	13
- 1	1.10
	- .02
	+ .23
- 1	0.29
	3

19 <sup>h</sup> 26 <sup>m</sup>	11.71
19	27
- 1	1.13
	+ .03
	+ .43
- 1	0.45

$$\begin{array}{r} 43 \\ 39 \\ \hline 4 \end{array}$$

F. nod 1357 is slow  
1 0.42 at  
19 20<sup>m</sup>



Wednesday September 4, 1912

Meridian Circle Wm. S. Pelly Obs. Path 821

a Syrac  
38° 41'

β Syrac  
33° 15'

5202

13

51.89

10

0.1

18h 32m

28.8 28.5 7.3

31.9 25.6 7.5

35.0 22.1 7.4

38.1 19.1 7.2

41.3 16.0 7.3

49.2 8.0 7.2

54.0 3.3 7.3

18 45

23.1 18.9 2.0

25.9 16.2 2.1

28.9 13.2 2.1

31.9 10.3 2.2

35.0 7.2 2.2

42.1 0.1 2.2

46.9 55.5 2.4

78

7.5

0 126

11

12

238

11

0132

147

26

12

52

21

0312

18h 32 58.64

18 33 59.43

- 1 00.79

- 01

+ 73

- 1 00.07

58.7  
15 9 6  
58.64

51.1  
15 13  
51.08

18 45 51.08

18 46 51.89

- 1 00.81

- 03

+ 73

- 1 00.11

From 13.27 is slow

00.09 at

18h 39m

Sep.  
Friday August 6, 1912

Meridian Circle July 8, 1912, Obs. Rate 18.4.

min. P 5 lines  
R. 3 R.

$\beta$  hyper  
33° 15'

$\beta$  hyper  
43° 49'

18<sup>h</sup> 45<sup>m</sup> 24.1 20.0 4.1  
27.1 17.3 4.4  
30.1 14.1 4.2  
33.0 11.2 4.2  
36.0 8.3 4.3  
43.2 01.0 4.2  
47.9 56.5 4.4

18<sup>h</sup> 51<sup>m</sup>

31.2 51.9 3.1  
36.5 46.5 3.0

52.1  
15 | 19  
52.12

41.6  
5 | 27  
41.54

23  
9

26  
12  
52  
26  
0312

04  
12  
0041

18<sup>h</sup> 45<sup>m</sup> 52.12  
18 46 51.86  
- 0 59.74  
- 0.3  
- 0 59.71  
+ 7.3  
- 0 58.98

18<sup>h</sup> 51 41.54  
18 52 41.32  
0 59.78  
+ 7.3  
59.05

From 152.12 slow  
1 57.02 at  
18<sup>h</sup> 50<sup>m</sup>



54p.  
Monday August 9, 1912

Mer. Circle. Phil S. Peelly Obs. Patta 19<sup>h</sup> 6'

8 Pyrae,  
37° 58'

13 Cygni  
27° 46'

19 <sup>h</sup> 11 <sup>m</sup>	—	52.5		19 <sup>h</sup> 25 <sup>m</sup>	48.0 40.9	8.9
	—	49.5			50.8 38.6	9.4
	59.1	46.1	5.2		53.3 35.5	8.8
	21.3	43.0	5.3		56.2 32.7	8.9
	5.5	40.0	5.5		58.9 29.9	8.8
	13.1	32.0	5.1		6.0 22.7	8.7
	18.0	27.3	5.3		18.4	8.7
					10.3 <del>22.7</del>	8.7

22.8  
11 | 72  
22.65

14.2  
18.4  
15 | 64  
14.42

13  
12  
26  
13  
156  
38  
12  
76  
3.8  
OF 56

19<sup>h</sup> 12 22.65  
19 13 20.79  
— 0 58.14  
— 73  
— 0 57.43

19 26 14.42  
19 27 12.55  
— 0 58.13  
— 05  
73  
— 0 57.45

Find 1327 is slow  
0 57.43  
at 19<sup>h</sup> 18<sup>m</sup>

190<sup>30</sup>21<sup>30</sup>  
19<sup>no</sup>  
21<sup>30</sup>

Tuesday September 10, 1912

Meridian Circle

Phil. &amp; Paily Obs.

Rattle 1900

♄ Lyra  
37<sup>58</sup>pen failed on  
recording this star♄ Cygnus  
27<sup>46</sup>

19<sup>h</sup> 11 53.6 53.1 6.9  
 56.9 50.0 6.9  
 59.9 46.9 6.8  
 3.1 48.8 6.9  
 6.0 40.3 6.7  
 14.0 32.9 6.9  
 18.7 28.0 6.7

19<sup>h</sup> 25 48.5 41.7 0.2  
 51.2 39.0 0.2  
 54.1 31.0 0.1  
 56.9 33.1 0.0  
 58.7 30.4 0.1  
 6.9 23.3 0.2  
 11.1 19.3 0.4

13  
12  
26  
13  
0156

23.3  
15) 59  
23.39

15.1  
15) 16  
15.10

38  
12  
76  
38  
456

19<sup>h</sup> 12 23.39  
 19 13 26.77  
 - 0 57.38  
 - .02  
 + .73  
 - 0 56.67

19<sup>h</sup> 26 15.10  
 19 27 12.63  
 - 0 57.143  
 - .05  
 + .73  
 0 56.75

75  
47  
2142  
76

From 13 27 is slow  
 1 56.72 at  
 19<sup>h</sup> 19<sup>m</sup>



Thurs & Friday 13-1912 (September)

Meridian Circle Philip S. Bailey

Latitude 15° 30'

$\alpha$  Lyrae  
38° 41'

$\beta$  Lyrae  
38° 15'

18<sup>h</sup> 32<sup>m</sup> 33.9<sup>s</sup> 33.8 7.7

37.1 30.7 7.8

40.0 27.4 7.4

43.1 24.2 7.3

46.2 21.1 7.3

54.1 13.3 7.4

59.0 8.4 7.4

18<sup>h</sup> 45<sup>m</sup> 28.1<sup>s</sup> 24.1 2.2

31.1 21.4 2.5

34.2 18.3 2.5

37.1 15.3 2.4

40.1 12.4 2.5

47.2 5.1 2.3

51.9 00.8 2.7

24.2  
0144

21 12.6

11 28.2  
12 12.2  
22 2.2  
11 3.2  
0132.5 km

1800  
20

3.9  
15) 11.2  
3.74

36.2  
15) 3.3  
56.22

18 33 8.74

18 33 59.23

- 0 55.49

- .01

+ .73

- 0 54.77

18<sup>h</sup> 46<sup>m</sup> 56.22

18 46 31.78

- 0 55.49

- .03

+ .73

0 54.79

Find 1327 to slow

0 54.79 at

18<sup>h</sup> 37<sup>m</sup> 5.1

Monday September 16, 1912

Mendianicle Phelps P. Kelly Obs. Patts 19<sup>h</sup> 1

♂ Pyrae  
87° 58

♂ Cygni  
27° 46'

19<sup>h</sup> 11<sup>m</sup> 57.1 57.1 4.2  
0.9 54.0 4.9  
50.7  
3.8 49 4.5  
7.0 47.6 4.6  
10.0 44.4 4.4  
17.9 36.5 4.4  
22.5 32.0 4.5

27.2  
15) 37  
27.24

19<sup>h</sup> 25 52.4 45.5 7.9  
55.1 42.6 6.7  
58.1 39.8 7.9  
00.9 37.3 8.2  
3.6 34.2 7.8  
10.5 27.4 7.9  
14.9 23.1 8.0

19.1  
15) 135  
18.90

38  
12  
76  
38  
0456

13  
12  
26  
13  
015600

19 12 27.24

19 13 20.64

- 0 53.40

- 102

+ 73

0 52.69

19<sup>h</sup> 26 18.90

19 27 12.43

- 0 53.53

- 05

+ 73

0 52.85

Food is 27 is slow

0 52.77 at  
19 20<sup>m</sup>



Tuesday September 17, 1912

Mr. C. C. C.

Philip S. Pally

Patterson 2043

32 Yulpecul.  
27° 431 Cygni  
40° 49

20 49	32.0	24.9	6.9	20 52	32.2	33.9	6.1
	34.5	22.2	6.7		35.4	30.9	6.3
	37.4	19.3	6.7		38.9	27.9	6.8
	40.2	16.2	6.4		42.1	24.2	6.3
	42.9	13.8	6.7		45.1	21.1	6.2
	50.0	6.9	6.9		53.3	18.0	6.3
	54.1	2.4	6.5		58.3	8.1	6.4

$$\begin{array}{r} 58.3 \\ 15 \overline{) 51} \\ 58.34 \end{array}$$

$$\begin{array}{r} 3.4 \\ 15 \overline{) 28} \\ 5.18 \end{array}$$

$$\begin{array}{r} 39 \\ 12 \\ 78 \\ 39 \\ \hline 6468 \\ 505 \quad 07 \\ 106 \\ 12 \\ \hline 1022 \end{array}$$

$$\begin{array}{r} 20 \quad 49 \quad 58.34 \\ 20 \quad 50 \quad 51.01 \\ \hline - 0 \quad 52.67 \\ - 105 \\ + 73 \\ \hline - 0 \quad 51.99 \end{array}$$

$$\begin{array}{r} 20 \quad 53 \quad 55.81 \\ 20 \quad 50 \quad 3.18 \\ \hline - 0 \quad 52.63 \\ - 01 \\ + 123 \\ \hline 0 \quad 51.91 \end{array}$$

91  
99From 1327 is slow  
1 51.95 at

Wednesday September 25, 1912

Meridian Circle - Thilo S. Pelly Obs Path 2531

10 Racterae  
38° 35'

71 Pegasi  
29° 45'

22<sup>h</sup> 34<sup>m</sup> 5.5 5.5 1.0

8.9 2.5 1.4

12.1 59.3 1.4

15.2 56.1 1.3

18.3 52.9 1.2

26.1 45.1 1.2

30.9 40.4 1.3

35.9  
15 9 7  
35.64

22<sup>h</sup> 57<sup>m</sup> 42.7 36.4 9.1

45.5 33.9 9.4

48.4 31.0 9.4

51.3 28.1 9.4

54.0 25.1 9.1

1.1 18.4 9.5

5.2 14.2 9.4

9.7  
15 10 0  
9.66

34  
12 4  
040 8

11 24  
12 24  
22  
11 13 2

22<sup>h</sup> 00<sup>m</sup> 50<sup>s</sup>

22<sup>h</sup> 34 35.64

22 35 21.38

- 0 45.74

- 31

+ 73

- 0 45.02

22<sup>h</sup> 38 9.66

22 38 55.34

- 0 45.68

- 04

+ 73

44.99

Foot 13 27 is slow

1 45.00 at

22<sup>h</sup> 36<sup>m</sup>



Saturday, Sep. 28, 1912

Mrs. Circle Philip P. Kelly Club,

Battle 0<sup>h</sup> 12

T And.

33° 13'

F And.

30° 22'

0 <sup>h</sup> 31	2.9	58.9	1.8
	5.9	56.1	1.5
	<del>6.5</del>		
	8.6	53.1	1.7
	11.7	50.0	1.7
	14.4	47.1	1.5
	21.8	39.5	1.3
	26.1	35.1	1.2

30.7  

$$\begin{array}{r} 15 \overline{) 114} \\ \underline{30.76} \end{array}$$

0 <sup>h</sup> 33	30.1	24.5	4.6
	33.0	21.6	4.6
	35.9	18.7	4.6
	38.9	15.7	4.6
	41.4	13.1	4.5
	48.4	05.7	4.1 "
	53.6	01.2	4.2

57.3  

$$\begin{array}{r} 15 \overline{) 35} \\ \underline{57} \end{array}$$

0 <sup>h</sup> 31 <sup>m</sup>	30.76
0 32	13.82
-	43.06
	- 03
	+ 73
-	42.36

0 <sup>h</sup> 32	57.23
0 34	40.30
-	43.13
	- 07
	- 04
	+ 73
-	42.38

Frod 1327<sup>h</sup> slow  
 0<sup>m</sup> 42.36 at  
 0<sup>h</sup> 32<sup>m</sup> 07.

196

23 00  
2.00

Saturday October 5. 1912

Mercury

Thurs. S. Pelly Obs. Waltho

 $\pi$  And,  
88° 13' $\delta$  And,  
20° 22'

$\delta^h$ 31	8.3.04.1	2.4	$\delta^h$ 33	35.8	30.2	6.0
	11.4	01.4	2.8	38.5	27.3	5.8
	14.3	58.6	2.9	41.4	24.5	5.9
	17.4	55.5	2.9	44.3	21.3	5.6
	20.2	52.5	2.7	47.3	18.9	6.2
	28.0	45.5	3.5	54.5	11.9	6.4
	32.1	40.7	2.8	59.0	7.4	6.4

$$\begin{array}{r} 36.7 \\ 15 \overline{) 6.7} \\ \underline{36.44} \end{array}$$

$$\begin{array}{r} 3.0 \\ 15 \overline{) 15.3} \\ \underline{02} \\ 102 \\ \underline{03.02} \end{array}$$

$$\begin{array}{r} 0^h 31 \quad 36.44 \\ 0^h 32 \quad 13.90 \\ \hline 0 \quad 37.46 \\ \quad \quad 03 \\ \quad \quad + 73 \\ \hline 0 \quad 36.76 \end{array}$$

$$\begin{array}{r} 0 \quad 34 \quad 03.02 \\ 0 \quad 34 \quad 40.31 \\ \hline 0 \quad 37.29 \\ \quad \quad 04 \\ \quad \quad + 73 \\ \hline 0 \quad 36.60 \end{array}$$

Found 1327.5 days  
0 36.60 at  
0.33



2300  
2600Sunday October 6, 1912,

Mar. Circle

Thurs. L. Paddy Obs. ~~Feb 23~~ 23.50Ti. Quad.  
33° 13'S. Quad.  
30° 22'

0 <sup>h</sup> 31 <sup>m</sup>	9.3	5.1	4.4
	12.3	2.3	4.6
	15.2	59.3	4.5
	18.7	5.2	4.7
	21.0	53.5	4.5
	28.1	46.1	4.5
	33.0	41.9	4.9

	37.1
15	4.4
	37.29

0 <sup>h</sup> 33 <sup>m</sup>	36.7	30.7	7.4
	39.1	27.8	6.9
	42.1	25.1	7.2
	45.1	22.1	7.2
	48.0	19.1	7.1
	55.1	12.0	7.1
	59.7	8.1	7.8

	39.
15	9.6
	3.64

0 <sup>h</sup> 31	37.29
0 <sup>h</sup> 32	13.89
- 0	36.60
	- 0.3
	+ 7.3
- 0	35.90

0 <sup>h</sup> 34	3.64
0 <sup>h</sup> 34	40.30
- 0	36.74
	- 0.4
	+ 7.3
- 0	36.05

Found 1327 is shure  
0 35.98 at  
33

198

#6:10  
850

Monday October 14, 1912

Mexican Cielo Pulque L. Kelly Obs. Patts 1923

β Cygni  
27° 46'

δ Cygni  
44° 54'

19<sup>h</sup> 26 15.5 8.3 3.8  
18.3 ~~8.3~~ 4.2  
20.0 3.9 3.9  
24.0 00.2 4.2  
27.0 57.2 4.2  
33.6 50.3 3.9  
38.0 46.2 4.2

19<sup>h</sup> 41 11.5 17.9 9.4  
15.1 14.3 9.4  
18.5 10.8 9.3  
22.1 7.4 9.5  
25.3 4.0 9.3  
34.1 55.0 9.1  
39.1 50.0 9.1

28  
75  
196  
20

42.2  
15) 156  
41.  
1.04  
42.04

44.9  
15) 100  
44.66

38  
12  
76  
38  
0456  
1201  
14  
1187  
108

19 26 42.04  
19 27 11.87  
— 0 29.83  
— .04  
— 29.87  
— 73  
— 29.14

19<sup>h</sup> 41<sup>m</sup> 44.66  
19 42 14.61  
— 0 29.95  
+ 01  
+ .73  
— 0 29.21

slow  
find 1327 in as 0  
0 29.18 at  
19<sup>h</sup> 33<sup>m</sup>



8<sup>00</sup>  
10:20

Tuesday October 15, 1912

Mr. Cicer. Philip D. Bailey Obs. Ratto 20<sup>h</sup> 17  
Pen worked very poorly, and finally stopped.

44° 57'  
α Cygni

33° 38'  
ε Cygni

6.40

9500

♂ Cygnis missa  
440 54' 18.9  
191 missa first 15.4

191	18.9	—
18.4	15.4	—
11.6	—	—
22.4	8.4	0.8
26.2	4.9	1.1
35.0	55.9	0.9
40.2	50.9	1.1

$$\begin{array}{r} 45.2 \\ 9 \overline{) 415} \\ \underline{45} \phantom{0} \\ 45 \phantom{0} \\ \underline{45} \phantom{0} \\ 0 \end{array}$$

from that before  
the my close  
pen-fishes

7 Sagatta  
1904

19	53	58.7	48.1	6.8
			45.6	
		4.0	43.2	7.2
		6.7	40.2	6.9
			38.0	
		15.6	31.3	6.9
		19.6	27.5	7.1

$$\begin{array}{r} 23.4 \\ 11 \overline{) 43} \\ \underline{23} \phantom{29} \\ 23.29 \end{array}$$
$$\begin{array}{r} 19 \text{ } 41 \text{ } 45.45 \\ 19 \text{ } 42 \text{ } 14.56 \\ \hline - 029.11 \\ \phantom{-} + .01 \\ \phantom{-} + 73 \\ \hline - 028.37 \end{array}$$
$$\begin{array}{r} 19\ 54\ 23.39 \\ 19\ 54\ 52.46 \\ \hline -\ 0\ 29.07 \\ -\ 1.67 \\ +\ 73 \\ \hline -\ 0\ 28.41 \end{array}$$

Trod 1327 to shore  
o 28 39 at  
19<sup>th</sup> 50 m



21

'23

Sunday October 20, 1912.

Meridian Circle

Philip P. Kelly Obs.

Patt 21<sup>h</sup> 24<sup>m</sup>74 Cygni  
40° 0'

missed first 6 ins.

16 Pegasi

25 30

21 <sup>h</sup> 32 <sup>m</sup>	20.231.3	1.5
	38.928.3	2.2
	36.925.1	2.0
	40.122.2	2.3
	43.318.9	2.2
	51.410.6	2.0
	56.35.9	2.2

01.2
15) 15.6
00
1.04
01.04

57
12
18089
44
12
88
47
10528

21 <sup>h</sup> 33	01.04
21 33	27.01
- 0	25.97
- 01	
+ 73	
-	025.25

21 <sup>h</sup> 48 <sup>m</sup>	_____
	_____
	_____
	_____
	_____
	_____

48.0	
43.9	
48.1	9.8
39.8	
3	26
	39.87

21 <sup>h</sup> 48	39.87
21 49	5.79
- 0	25.92
	- 05
	+ 73
-	025.24

Prod 1327 is slow  
- 0<sup>m</sup> 25.24 at  
21<sup>h</sup> 38<sup>m</sup>

Sunday October 27, 1912

Mendocino *at times* Ship G. Peily Obs. Patter 210

Pegasi  
23° 15'

Andromeda  
42° 46'

23<sup>h</sup> 14<sup>m</sup> 34.225.1 9.3  
37.122.6 9.7  
39.920.0 9.9  
42.617.2 9.8  
45.115.0 0.1  
51.47.4 8.8  
55.93.6 9.5

59.5  
15) 11.6  
59.77

23<sup>h</sup> 33<sup>m</sup> 0124.3 4.5  
3.900.9 4.8  
7.057.4 4.4  
10.554.1 4.6  
13.750.8 4.5  
22.142.1 4.2  
27.037.5 4.5

32.1  
15) 3.6  
32.24  
15) 10.6  
32.70

23<sup>h</sup> 15 59.77  
23 16 19.63  
- 19.86  
- 0.5  
- 19.91  
+ 73  
19.18

19.18  
19.88  
2) 38.06  
19.03  
19.14  
19.42  
2) 37.68  
18.80

32.24  
23 33 32.70  
23 33 51.85  
- 19.15 19.61  
+ 1.73 +.73  
18.88  
= 18.42

Final 13.27 is slow  
19.03 at 23<sup>h</sup> 19



Wednesday, October 30, 1912

Meridian Circle

Thompson's Bell's Obs. Rattle 025

Andromed

33° 13'

Andromed

30° 22'

$0^h 31^m$  29.0 24.6 3.6  
 32.0 21.9 3.9  
 34.9 19.1 4.0  
 37.7 16.0 3.7  
 40.6 13.3 3.9  
 48.0 5.8 3.8  
 52.2 01.4 3.6

$$\begin{array}{r} 57.0 \\ 15 \overline{) 135} \\ \underline{56.90} \end{array}$$

$0^h 33^m$  56.2 50.5 6.7  
 59.3 48.0 7.3  
 2.0 44.8 6.8  
 4.9 42.1 7.0  
 7.6 39.2 6.8  
 14.9 32.0 6.9  
 18.9 27.8 6.7

$$\begin{array}{r} 23.5 \\ 15 \overline{) 67} \\ \underline{23.44} \end{array}$$

$0^h 31$  56.96  
 $0^h 32$  13.91  
 $- 0$  17.01  
 $- 03$   
 $- 0$  17.04  
 $+ .73$   
 $- 0$  16.31

$0^h 33^m$  23.44  
 $0^h 34$  40.42  
 $- 0$  16.98  
 $- 04$   
 $- 0$  17.02  
 $+ .73$   
 $- 0$  16.29

Firdsham 1327 is below 0 16 30  
 at  $0^h 32^m$  sidereal time

204

Monday November 4, 1912

22:45 Start  
24:55 Stop

Mr. Circle

Philip G. Peilly

Part 23<sup>h</sup> 00<sup>m</sup>

1096

7 Pegasi  
23° 15'1 Andromeda  
42° 46'
$$\begin{array}{r}
 28^h 15^m \quad 41.832.9 \quad 4.7 \\
 \quad 44.630.1 \quad 4.7 \\
 \quad 47.027.2 \quad 4.2 \\
 \quad 50.024.5 \quad 4.5 \\
 \quad 52.321.9 \quad 4.2 \\
 \quad 59.015.2 \quad 4.2 \\
 \quad 3.111.2 \quad 4.3 \\
 \hline
 \quad \quad 7.2 \\
 15 \overline{) 30} \\
 \quad 7.2
 \end{array}$$

$$\begin{array}{r}
 23^h 38^m \quad 7.911.2 \quad 9.1 \\
 \quad 10.908.0 \quad 8.9 \\
 \quad 14.205.0 \quad 9.2 \\
 \quad 17.501.1 \quad 8.6 \\
 \quad 20.957.9 \quad 8.8 \\
 \quad 29.349.4 \quad 8.7 \\
 \quad 34.344.6 \quad 8.9 \\
 \hline
 \quad \quad 39.5 \\
 15 \overline{) 67} \\
 \quad 39.44
 \end{array}$$

$$\begin{array}{r}
 23^h 16 \quad 7.20 \\
 23 \quad 16 \quad 19.55 \\
 \quad - 12.85 \\
 \quad \quad - 06 \\
 \quad \quad + 73 \\
 \hline
 \quad - 12.658
 \end{array}$$

$$\begin{array}{r}
 23^h 38^m \quad 89.44 \\
 23 \quad 38 \quad 51.75 \\
 \quad - 12.31 \\
 \quad + 1.73 \\
 \hline
 \quad - 11.58
 \end{array}$$

Prod. 1327 as  
slow D<sup>m</sup> 11.63  
at 23<sup>h</sup> 25<sup>m</sup>



$$\begin{array}{r} 21^m 00 \\ 24.30 \\ \hline 3.30 \end{array}$$

Tuesday November 5, 1912

Mr. C. C. P. G. P. G. P. G.

Path 21<sup>m</sup> 21<sup>m</sup> 22<sup>m</sup> 40

$\pi$  Pegasi  
32° 44'

10 Lactiae  
38° 35'

$$\begin{array}{r} 28 \\ 12 \\ \hline 56 \\ 28 \\ \hline 0336 \end{array}$$

$$\begin{array}{r} 12 \\ 17 \end{array}$$

$$\begin{array}{r} 22^h 5^m \\ 27.6229 \quad 0.5 \\ 30.5204 \quad 0.9 \\ 33.5174 \quad 0.9 \\ 36.4148 \quad 1.2 \\ 39.3118 \quad 0.6 \\ 46.6045 \quad 1.1 \\ 51.1000 \quad 1.1 \end{array}$$

$$\begin{array}{r} 55.5 \\ 15 \overline{) 68} \\ \underline{55.45} \end{array}$$

$$\begin{array}{r} 22^h 34^m \\ 39.536.8 \quad 39.9 \\ 42.735.7 \quad 7.8 \\ 45.733.2 \quad 8.9 \\ 49.130.1 \quad 9.2 \\ 54.426.9 \quad 1.3 \\ 59.919.0 \quad 8.9 \\ 4.814.3 \quad 9.1 \end{array}$$

$$\begin{array}{r} 9.8 \\ 15 \overline{) 110} \\ \underline{9.73} \end{array}$$

$$\begin{array}{r} 21^m 5^m \\ 21 \quad 6 \quad 6.77 \\ \hline - 0 \quad 11.32 \\ \quad - 0.3 \\ \quad + 73 \\ \hline 0 \quad 10.62 \end{array}$$

$$\begin{array}{r} 22 \quad 35 \quad 9.73 \\ 22 \quad 35 \quad 20.88 \\ \hline - 0 \quad 11.45 \\ \quad - 0.1 \\ \quad + .73 \\ \hline 0 \quad 10.43 \end{array}$$

$$\begin{array}{r} 43 \\ 62 \\ 2 \overline{) 105} \\ \underline{52} \end{array}$$

Prod. 1327 to slow.  
0 10.62 at  
22 20<sup>m</sup>

Monday November 11, 1912

Mar Circle Philip L. Petty Clerk, Patti 22<sup>h</sup> 22<sup>m</sup>

Thactura

49 49

Very cloudy  
but  
blew by  
for 10 Thactura  
38 35

22 <sup>h</sup>	27 <sup>m</sup>	00.212.9	3.1
		41.19.5	3.6
		81.5.2	3.3
		11.90.5	3.4
		15.357.3	2.6
		23.048.1	3.1
		30.442.1	2.5
		36.1	
		15) 7.7	
		36.51	

078

25

24  
12  
48  
24  
0288

22 <sup>h</sup>	27 <sup>m</sup>	36.51
22	27	42.25
		- 05.74
		+ .02
		+ .73
		- 04.99

Prod 1327-04.99<sup>s</sup>  
at 22<sup>h</sup> 27<sup>m</sup>



Sunday November 17, 1912

Mrs. Gail ~~W. P. Kelly~~ ~~Obs.~~ ~~Nov 3 42~~

Persei light clouds  
31° 37'

Persei  
390 45'

3<sup>h</sup> 48<sup>m</sup> 12.9 7.4 0.3

15.7 5.0 0.7

18.5 2.1 0.6

21.3 59.1 0.4

24.5 55.5 0.0

31.9 49.5 1.4

36.5 44.7 1.2

40.4  
15 | 50  
40.33

3<sup>h</sup> 51<sup>m</sup> 31.0 31.6 2.6

34.3 28.4 2.7

37.6 25.1 2.7

40.9 22.3 3.2

43.8 19.2 3.0

51.8 11.3 3.1

56.9 6.4 3.3

1.1  
15 | 67  
01.44

84  
12  
106

3<sup>h</sup> 48<sup>m</sup> 40.33

3<sup>h</sup> 48<sup>m</sup> 40.17

+ 00.16

+ .03

+ 73

+ 80.92

28  
12  
56  
28  
84

3<sup>h</sup> 52<sup>m</sup> 01.44

3<sup>h</sup> 51<sup>m</sup> 61.31

+ 0 0.13

+ 01

+ 73

+ 00.87

81  
92  
2/1719  
89

Prod 327 is  
Fast 800.90

*True for*



Tuesday, December 3, 1912

Mex. City. Philip L. Peilly, Alex.

Tabb 22<sup>h</sup> 25

o Andromeda  
41° 50'

numerical

13 Pegasi  
27° 36'

22<sup>h</sup> 58<sup>m</sup> 32.9 36.0 8.9  
35.9 32.9 8.8  
39.4 29.1 8.5  
42.7 26.0 8.7  
46.0 22.5 8.5  
54.2 14.0 8.2  
59.3 9.2 8.5

22<sup>h</sup> 59<sup>m</sup> 9.1 —  
19.4 6.7 6.1  
21.8 4.0 5.8  
24.9 1.0 5.9  
27.4 58.3 5.7  
34.3 51.0 5.3  
38.8 47.2 6.0

38  
12  
76  
38  
10456  
72  
691

15 | 4.4  
4.5  
4.80

3 | 42.9  
11.7  
42.788

13  
10.2  
11.7  
13

7  
12

18  
7  
0126

22<sup>h</sup> 58<sup>m</sup> 4.30  
22 57 54.19  
10.11  
.73  
10.84

22 59 42.90  
22 59 52.62  
10.28  
10.5  
.73  
11.06

10.84  
11.06  
2 | 21.90  
10.95

Fast  
Prod. 1327 is ~~1327~~  
10.95 at  
22<sup>h</sup> 59<sup>m</sup> ST.

Tuesday November 10, 1912

Max. Circle

Philips & Billy

Path 20° 54'

11 *Spiss*  
32° 44'

22 <sup>h</sup> 6 <sup>m</sup>	6.8	02.5	9.3
	9.7	59.8	9.5
	12.6	56.8	9.4
	15.6	53.7	9.3
	18.7	50.9	9.6
	25.9	48.3	9.2
	30.0	38.9	8.9

$$\begin{array}{r} 84.5 \\ 15 \overline{) 107} \\ \underline{34.71} \end{array}$$

*cloudy* *Spectro*  
38° 35'

22 <sup>h</sup> 35 <sup>m</sup>	3.5	03.8	7.3
	6.9	00.2	7.1
	10.9	57.1	8.0
	13.9	54.2	8.1
	17.2	51.3	8.5
	24.3	42.3	6.6
	29.0	38.4	7.4

$$\begin{array}{r} 83.2 \\ 15 \overline{) 112} \\ \underline{33.74} \end{array}$$

$\frac{17}{68} = .07$

13  
12  
149

22 <sup>h</sup> 6 <sup>m</sup>	34.71
22 <sup>h</sup> 6 <sup>m</sup>	6.19
	<u>28.52</u>
	8

22 <sup>h</sup> 35 <sup>m</sup>	33.74
22 <sup>h</sup> 35 <sup>m</sup>	20.25
	<u>13.49</u>
	+ .01
	<u>7.73</u>
	14 2.3

Good 1327 is fast  
0<sup>m</sup> 14.23 at  
22<sup>h</sup> 35<sup>m</sup> Deben's time



Friday December, 20, 1912,

Mrs. Arch. T. L. Peally Obs.

Path ~~20~~ 4' 10

7 Janu  
22° 47'

1 Auriga  
33° 0'

10<sup>h</sup> 36 58.4 49.4 7.8  
1.0 46.5 7.5  
3.8 44.0 7.8  
6.6 41.7 8.3  
8.9 38.4 8.3  
15.8 32.6 7.8  
19.9 28.0 7.9

10<sup>h</sup> 51 14.3 10.2 4.5  
17.2 6.9 4.1  
20.0 4.2 4.2  
23.0 1.5 4.3  
25.8 58.2 4.0  
33.2 51.4 4.16  
37.6 46.3 4.1

48  
26  
48  
6576

26  
12  
52  
22  
0312

240  
15 | 134  
2389

422  
15 | 22  
12.14

4 37.23.89  
4 36.62.30  
+ 0 21.59  
+ 7.86  
+ 1.1  
+ 0 22.148

48  
22  
70

4 51 42.14  
4 51 20.68  
+ 0 21.46  
+ .03  
+ .73  
0 22.22

Frost 1327 5fast  
0 22.35 at  
4 46

Sunday December 29, 1912

Adjusted minute hand of F 1327 to coincide with the minute marks when second hand is at 60. This necessitated setting the minute hand back slightly. The change was made at 17<sup>h</sup>.13<sup>m</sup>.



Tuesday December 31, 1912

Mer. Circle

Thurs & Pully Obs.

Rally

Getting very cloudy

last few minutes very cloudy

very

5 Anchored

5 Anch.

5 Anch.

30° 22'

23° 45'

38° 1'

34 39.1 33.5 2.6  
42.6 <sup>30.5</sup> 3.5  
45.9 30.5 —  
48.8 25.8 4.6  
51.0 22.0 3.0  
57.8 15.7 3.5  
2.8 11.0 3.8

32 44.4 35.1 9.5  
47.2 33.0 0.2  
49.8 31.0 0.8  
52.1 27.6 9.17  
55.2 26.0 1.2  
2.0 18.3 0.3  
6.3 14.3 0.16

52.0 51.0 3.0  
51 54.9 48.11 3.0  
58.1 45.8 3.9  
1.0 42.0 3.0  
4.0 38.9 2.9  
12.1 30.7 2.8  
16.9 26.5 3.14

34  
12

68  
34  
408

47  
12  
94

47  
0564

13  
12  
26  
13  
0156

6.6  
13 9.2  
16.70

10.0  
15 17.3  
9.  
1.15  
10.15

21.7  
15 87  
21.58

16.70

35 46.70  
34 39.85  
0 26.85  
P 4  
7.3  
0 27.62

43 10.15  
42 43.11  
0 27.04  
10.5  
7.3  
0 27.82  
6.2  
6.3  
21.7  
72

52 21.58  
51 54.70  
0 26.88  
10.2  
7.3  
21.163

Fred. 1327 is  
fast 0 27.72  
at 0 39

4 ans.

214 1913

Wednesday January 1, 1913

7:00  
10:00

New Circle - Telescope Ready day Ratts 2346

18 And,  
33° 14'8 And,  
30° 23'
$$\begin{array}{r}
 0^h \quad 32^m \quad 12.4 \quad 8.2 \quad 0.6 \\
 \quad \quad \quad 15.0 \quad 5.5 \quad 0.5 \\
 \quad \quad \quad 18.1 \quad 02.4 \quad 0.5 \\
 \quad \quad \quad 21.0 \quad 59.7 \quad 0.7 \\
 \quad \quad \quad 24.3 \quad 56.6 \quad 0.9 \\
 \quad \quad \quad 31.5 \quad 49.1 \quad 0.6 \\
 \quad \quad \quad 36.0 \quad 44.9 \quad 0.9
 \end{array}$$

$$\begin{array}{r}
 40.2 \\
 15 \overline{) 49} \\
 \underline{40.32}
 \end{array}$$

$$\begin{array}{r}
 0^h \quad 34^m \quad 39.9 \quad 34.0 \quad 3.9 \\
 \quad \quad \quad 42.6 \quad 31.3 \quad 3.9 \\
 \quad \quad \quad 48.5 \quad 28.5 \quad 4.0 \\
 \quad \quad \quad 48.3 \quad 25.4 \quad 3.7 \\
 \quad \quad \quad 51.2 \quad 22.8 \quad 4.0 \\
 \quad \quad \quad 58.3 \quad 15.4 \quad 3.7 \\
 \quad \quad \quad 2.9 \quad 11.1 \quad 4.0
 \end{array}$$

$$\begin{array}{r}
 6.9 \\
 15 \overline{) 141} \\
 \underline{6.94}
 \end{array}$$

$$\begin{array}{r}
 0^h \quad 32 \quad 40.32 \\
 0^h \quad 32 \quad 13.29 \\
 \quad \quad 0 \quad 27.03 \\
 \quad \quad \quad .03 \\
 \quad \quad \quad .73 \\
 \hline
 0 \quad 27.79
 \end{array}$$

$$\begin{array}{r}
 0^h \quad 35 \quad 6.94 \\
 0^h \quad 34 \quad 39.84 \\
 \quad \quad 27.10 \\
 \quad \quad \quad .04 \\
 \quad \quad \quad .73 \\
 \hline
 27.87
 \end{array}$$

$$\begin{array}{r}
 79. \\
 87. \\
 2 \overline{) 166} \\
 \underline{82}
 \end{array}$$

Prod 1327 in fact

0 27.82

at 0 38 3.1



7.00  
9.00  
2.00

Thursday, January 2, 1912

Mer. Circle Philip S. Paddy Obs.  
 16) Andromeda *mined to get this*  
 33° 14' *star on account of clouds getting red cloudy*  
*mined to get this*  
*lost 8 min. over 11*  
*partly obscured*  
*observed 11*  
*give as much as possible*  
*first 7:31.2*  
 Total cloudy now  
 30° 23

0" 34<sup>m</sup> 40.1 34.4 4.5  
 43.0 31.5 4.5  
 45.9 28.9 4.8  
 48.9 25.9 4.8  
 51.8 22.7 4.5  
 58.9 16.0 4.9  
 8.2 —

77  
 13 | 47  
 7.36

0" 35 7.36

0 34 39.82

+ 0 27.54  
 + .04  
 + 1.73

0 28.31

Fwd 1327 is  
 fast 0" 38.31  
 at 0 35

Wednesday, January 8, 1913

Mer. Circle

Philip S. Rally Obs.

Realt 78

5<sup>h</sup> 58<sup>m</sup>

20° 42'

63 Aurigae

39° 27'

6<sup>h</sup> 58<sup>m</sup> 4.6 5.4 9.5 9.5  
 7.1 54.9 9.3  
 9.8 52.2 9.1  
 12.4 48.0 9.4  
 13.0 44.2 9.2  
 22.0 37.5 9.3  
 23.8 33.9 9.7  
 14 45 7  
 29.05

7<sup>h</sup> 5<sup>m</sup> 42.6 43.9 6.5  
 46.2 40.7 6.9  
 49.6 37.7 7.3  
 52.9 34.5 7.4  
 55.7 31.0 6.7  
 3.9 22.9 6.8  
 8.9 18.2 7.1

132  
 15 69  
 13.46

55  
 12  
 110  
 55  
 660  
 97  
 12  
 0084

6<sup>h</sup> 58<sup>m</sup> 29.05  
 6 58 52.48  
 + 0 30.57  
 + 07  
 7.3  
 0 31.37

7 6 13.46  
 7 5 42.28  
 0 31.08  
 + 01  
 + 7.3  
 0 31.92

37  
 92  
 2/129  
 65

Prod 1327 is  
 Fast 0 31.64  
 at 7 2



Thursday January 9, 1913

Mrs. Arch

Philip S. Rielly, Jr.

Pathe # 40

63) a Cass.

70<sup>50</sup> for

B Inanguli

3<sup>3</sup> Ceti

89) Arctis

90) Persi

63° 14'

71° 59'

84° 34'

8° 4'

21° 35'

48° 51'

47.45.9310.69

441

3<sup>4</sup> 24.8426.02<sup>33</sup> 40.6 27.91.92<sup>30</sup> 59.09.8 8.82<sup>38</sup> —

52.051.71

36.2

27.526.1<sup>41</sup>

47.253 8.2

1.56.9 8.4

57.020.77.7

28.7 28.1 6.7

30.55.45.9

45.222.57.7

4.34.38.6

3.04.8 7.8

36.20.99.1

33.92.66.5

47.7 20.1 7.8

6.91.4 8.3

8.17.2 7.3

48.31.80.7.3

36.09.76.7

50.017.9 7.9

7.59.0 8.5

21.954.1 6.0

4.9 53.07.9

44.0 7.06.0

56.4 11.6 8.0

6.52.0 8.5

35.1 57.7 2.8

29.846.45.7

16.641.2 7.8

48.957.46.3

50.0 7.77.7

0.48.3 8.7

40.7 52.22.9

$$\begin{array}{r}
 37.5 \\
 15 \overline{) 210} \\
 \underline{37.} \\
 1.40 \\
 28.40 \\
 15 \overline{) 284} \\
 \underline{15} \\
 134 \\
 15 \overline{) 134} \\
 \underline{15} \\
 19 \\
 15 \overline{) 19} \\
 \underline{15} \\
 4 \\
 15 \overline{) 4} \\
 \underline{15} \\
 19 \\
 15 \overline{) 19} \\
 \underline{15} \\
 4 \\
 15 \overline{) 4} \\
 \underline{15} \\
 19 \\
 15 \overline{) 19} \\
 \underline{15} \\
 4
 \end{array}$$

$$\begin{array}{r}
 52.8 \\
 15 \overline{) 103} \\
 \underline{15} \\
 52 \\
 15 \overline{) 52} \\
 \underline{15} \\
 37 \\
 15 \overline{) 37} \\
 \underline{15} \\
 22 \\
 15 \overline{) 22} \\
 \underline{15} \\
 7 \\
 15 \overline{) 7} \\
 \underline{15} \\
 22 \\
 15 \overline{) 22} \\
 \underline{15} \\
 7
 \end{array}$$

$$\begin{array}{r}
 3.9 \\
 15 \overline{) 187} \\
 \underline{15} \\
 37 \\
 15 \overline{) 37} \\
 \underline{15} \\
 22 \\
 15 \overline{) 22} \\
 \underline{15} \\
 7 \\
 15 \overline{) 7} \\
 \underline{15} \\
 22 \\
 15 \overline{) 22} \\
 \underline{15} \\
 7
 \end{array}$$

$$\begin{array}{r}
 46.5 \\
 5 \overline{) 22} \\
 \underline{5} \\
 17 \\
 5 \overline{) 17} \\
 \underline{5} \\
 12 \\
 5 \overline{) 12} \\
 \underline{5} \\
 7 \\
 5 \overline{) 7} \\
 \underline{5} \\
 2 \\
 5 \overline{) 2} \\
 \underline{5} \\
 2
 \end{array}$$

$$63^\circ 14' = 0.31.59 \tan =$$

$$8^\circ 4' = 0.31.66 \tan =$$

$$1.703 \cdot 0.070$$

$$71^\circ 59' \pm 0.20.59 \tan =$$

$$21^\circ 35' = 0.34.56 \tan =$$

Monday January 13, 1913

Meridian Circle. Duty S. Kelly Obs. Rate 1" 13"

3 And. 35° 9' 8 Cass. 59° 46' η Pisc. 14° 53' 43 Cass. 67° 35' 0 Pisc. 80° 42' alt 29° 9'

14 54.3 52.3 6.6

57.9 49.7 7.6

110 46.8 6.8

4.843.7 8.2

7.1 40.9 8.0

14.6 53.0 7.6

19.4 28.2 7.6

23.6  
15 | 11 0  
23.73

1 5 23.73

1 4 50.87

0 32 86  
03  
73  
0 33 63

85  
53  
149  
75

1 48 13.0 6.8 9.8

16.0 4.0 0.0

18.8 01.1 8.9

21.5586 0.1

24.9 660 0.9

31.748.5 0.2

35.644.2 9.8

46.1  
15 | 15.8  
39  
105  
1 48 40.05

1 49 40.05

1 48 6.98  
0 33 07  
04  
73  
33.84

From 1377 is Fast 0 33.75  
at 1" 36" 0.5



Tuesday January 14, 1913

Mendocino Cal. Thompson's Ferry Cal. Talt 19<sup>m</sup>

v. Piscum  
26° 48'

v. Piscum  
14° 53'

1<sup>m</sup> 14<sup>m</sup> 47.5 40.3 7.8  
50.3 37.3 7.6  
53.0 34.7 7.7  
56.0 32.3 8.3  
58.9 29.2 8.1  
5.7 22.0 7.7  
9.9 18.0 7.9

14.1  
15 | 14 2<sup>7</sup>  
13.94

1<sup>m</sup> 5 13.94  
1 14 40.52  
+ 0 33.42  
+ , 05  
+ , , 7.3  
+ 0 34.20

64  
12  
138  
768  
40  
12  
80  
40  
1048

1<sup>m</sup> 26<sup>m</sup> 58.9 48.1 6.9  
61.3 45.1 6.4  
3.8 42.1 5.9  
6.4 39.8 6.2  
9.0 37.0 6.0  
14.5 30.6 6.1  
19.4 26.9 6.3

23.1  
15 | 16 9<sup>1</sup>  
52  
1.12

1 27 23.12  
1 26 49.41  
0 33.71  
+ .08  
+ 7.3  
0 34.52

52  
20  
2 | 72  
36

Frod 1327 is fast  
0<sup>m</sup> 34.36 at  
1<sup>m</sup> 20<sup>m</sup> S.T.

P&R

















(Sample.)

Wednesday Jan. 1. 1972

Level of Meridian Circle

S. obsr. Q.R. Recorder.

	<u>Zero E</u>	<u>Zero W</u>
Telescope S.	89.0	44.6
	<u>53.0</u>	<u>81.1</u>

<del>Telescope S.</del>	89.0	44.0
	<u>53.0</u>	<u>80.1</u>

Telescope N.	81.8	24.9
	<u>46.0</u>	<u>60.9</u>

<del>Telescope N.</del>	81.1	25.8
	<u>44.1</u>	<u>62.3</u>

+ 537.0      -423.7

- 423.7

$$16 \overline{) 113.3} \left( 7.08 = z \right.$$
$$\begin{array}{r} 112 \\ \hline 130 \\ \hline 128 \\ \hline \end{array}$$

122  
180  
302





42 28 30



