

KG  
11365  
611

15-Inch



KG-11365.641

## HARVARD COLLEGE OBSERVATORY.

## FORM OF RECORDS.

All observations made at the Harvard College Observatory should be recorded according to the following system. The size of the record-books used is  $20 \times 25$  cm., and each book contains 216 pages, each ruled with 31 lines. Each day's work should begin a fresh page, the date being placed at the top and underlined. Subsequent pages used on the same day should also be dated at the top, without underlining the date. All original records should be entered in pencil, and no erasures should be made under any circumstances. If it is desired to change a word or figure, draw a line through it, taking care not to render it illegible, and enter the correction between the lines or following the original entry. Any subsequent remarks or corrections may be added in ink, provided that they do not obscure the original pencil record. The time of every observation should be entered in the left-hand margin of the record-book in standard time, twelve hours being added between midnight and noon. The day is regarded as beginning at noon, so that an observation made in the forenoon belongs to the previous date. All records, especially descriptions of apparatus or experiments, should be made sufficiently full to be intelligible without further explanation to any person familiar with the subject, and not familiar with the particular research. When a record-book is not at hand, notes may be made on paper and afterwards pasted into the book. In copying or computing, accuracy is of the first importance, rapidity second, and the character of the writing, so long as it is legible, third. Errors should not be erased, but the correct values interlined, both to save time and to permit a subsequent recovery of the original computation, which may prove to be correct.

EDWARD C. PICKERING.

CAMBRIDGE, U. S.,  
*October 2, 1887.*











KG-11365.611





Nov 21 1912

h m  
7 40

S Cygni

1  
✓

12.0

Variable = 12.0 magnitude

Haze  
Moonlighth m  
8 15

ST Cygni

4

Variable = 11.3 magnitude

h m  
8 40

ST Cygni

4

Variable = 11.7 magnitude

SV Andromeda

h m  
8 55

15

Variable = 11.1 magnitude

X Andromeda

h m  
9 25

11

Variable = 13.1 magnitude

Nov 23 1912

6 5

SX Cygni

Haze

Moonlight - Variable cannot be seen  
but comparison star of 13.3 magnitude  
near it just visible.

YY Cygni

6 45

Variable = 13.2 magnitude

Poor  
sky.

Difficult.

X Cephei

7 15

Variable = 9.45 magnitude

I am not sure }  
of this star.

S Carinae

7 45

Variable invisible. Can  
just see star which is 12.3 magnitude.  
Variable must be fainter.



Nov 27 1912 RT Cygni  
7 20

Variable = 13.1 magnitude

7 50 RT Andromeda

Variable = 11.2 magnitude

RT Andromeda

8 25-

Variable = 12.7 magnitude

X Andromeda

8 50

Variable = 13.3 Magnitude

Cloudy

4

✓  
 Nov 29 1912  
 6 15 Z Cassiopeae.

Variable = 13.2 magnitude

Partly  
 Cloudy.

6 45 RY Cassiopeae

~~Variable = 10.6 magnitude,~~  
 Clouds

M Andromeda.

✓ 7 20  
 Variable = 13.0 magnitude  
 are nat. size of sight star.  
 R M Andromeda.

✓ 7 45  
 Variable is certainly fainter  
 than 13.5 magnitude. Can  
 see 13.1 magnitude star near it,  
 M Andromeda.

✓ 8 10  
 Variable = 12.90 magnitude



~~5~~ Ceti

8 35

✓

Variable = 12.65 magnitude

RX Tauri

✓ 9 5

Variable = 12.1 magnitude

W Aurigae

✓ 9 40

Variable difficult <sup>to see</sup> & surely  
less than 13.6 magnitude.

Nov 30 1912

S Cygni

✓ 5 30

Variable = 13.9 magnitude

ST Cygni

✓ 5 45

Variable = 12.6 magnitude

SS Cygni

6 5 ✓

Variable = 11.7 magnitude

RR Cephei

6 3.5 ✓

Variable = 11.6 magnitude

W Cassiopeae

7 9 ✓

Variable = 11.10 magnitude

RT Cassiopeae

7 30 ✓

Variable = 12.9 magnitude

SL Cassiopeae

8 50 ✓

Variable = 13.2 magnitude



Dec 4 1912  $\eta$  Cassiopeae

✓ 7 15

Variable = 10.6 magnitude

Clouds

$\alpha$  Cephei

✓ 18 10

Variable 13.8 magnitude

Clouds

difficult —  
 $\eta$  Aurigae

✓ 8 40

Variable difficult. Surely fainter than 12.8 magnitude.

Clouds

Dec 6 1912  $\delta$  Cygni

5 25

Variable = 10.85 magnitude

$\zeta$  Cygni

6 0

Variable = 12.75 magnitude

8

6 35

Z Cassiopeae

Variable fainter than 13.5 mag.

SV Andromeda

7 0

Variable = 10.7 magnitude

X Andromeda

7 15

Variable = 13.0 magnitude

RV Cassiopeae

7 50

Variable = 11.55 magnitude

W Cassiopeae

8 15

Variable = 11.15 magnitude

Clouds



Dec 7 1912. W Andromeda

7 35 Variable = 8.80 magnitude

RR Cephei

8 0 Variable = 11.65 magnitude

W Aurigae

8 20

Variable fainter than 12.8 magnitude

X Ceti

8 40

Variable = 9.15 magnitude

RX Tauri

9 10 Variable = 13.1 magnitude

difficult

γ Monocerotis

9 50

Variable = 12.20 magnitude



210.1

372.0

37.1

138.0



10,00

215.4

Instrument slipped by  
pair

S. J. B. obs.  
F. E. H. Recorder.

Dec 14 1912

Z Cassiopeae

8 15

Variable can be seen, but  
is most difficult on account  
haze - Moonlight Fainter than  
12.9 magnitude

8 55

W Cassiopeae

Variable = 10.85 magnitude

W Aurigae

9 20

Variable = 12.85 magnitude

RX Tauri

10 5

Variable fainter than 12.9 mag

U Orionis

10 40

Variable = 10.2 magnitude



Dec 19 1912

ST Cygni

5 15

Variable = 10.95 magnitude

V Cassiopeae

5 50

Variable = 12.10 magnitude

SV Andromeda

6 5

Variable = 9.30 magnitude

F Andromeda

6 25

Variable = 12.45 magnitude

RR Cephei

6 50

Variable = 10.55 magnitude

*T Andromeda*

7 15

Variable invisible, but can see 10.7 magnitude stars here. Moon within a few degrees.

*RX Tauri*

8 25

Variable invisible. Moonlight.

8 55

*M Orionis*

Variable = 11.0 magnitude

*R Aurigae*

9 10

$f - 2\frac{1}{2} \text{ VVI } 1\frac{1}{2}.9$



Dec 25 1912 ST Cygni

5 30

Variable = 10.20 magnitude

V Carriopeae

5 50

Variable = 12.85 magnitude

Z Carriopeae

6 20

Variable fainter than 13.10 mag.

X Andromeda

6 40

Variable = 12.35 magnitude

SY Andromeda

7 0

Variable = 8.35 magnitude

RV Cassiopeae

7 15

Variable = 9.95 magnitude

W Cassiopeae

7 30

Variable = 10.45 magnitude

U Orionis

8 5

Variable = 11.10 magnitude

Moonlight, Sky hazy.

$\theta = 10.16$

$\gamma$  Monocerotis

8 35

Cannot see variable, strong  
Moonlight,

R Aurigae

8 55

$\gamma 2\frac{1}{2} \text{VV} 19$



Dec 26 1912

5 20

SX Cygni

Variable = 12.20 magnitude

ST Cygni

5 35

Variable = 10.25 magnitude

R/Cassiopeae

5 50

Variable = 12.75 magnitude

V Cassiopeae

6 10

Variable = 12.80 magnitude

X Cephei

6 30

Variable = 9.35 magnitude

$\gamma$  Cephei

6 45

Variable fainter than 13.0 magnitude

$\tau$  Andromeda

7 5

Variable 12.50 magnitude

\*  
+ + +  
+

$\eta$  Aurigae

7 35

Variable fainter than 12.80 magnitude

R-X Tauri

8 0

Variable fainter than 13.10 magnitude

$\mu$  Orionis

8 20

Variable = ~~B.~~ = 11.07 magnitude.



*γ Monocerotis*

8 40

Dec 31 1912 *IX Cygni*

5 30

Variable = 11.75 magnitude

*ST Cygni*

5 45 Variable = 10.25 magnitude

*γ Cassiopeae*

6 10

Variable = 12.85 magnitude

*Z Cassiopeae*

6 25

Variable = 13.40 magnitude

*Difficult*

R Cassiopeae

7 5

Variable = 12.80 magnitude

Jan 1 1913

Clouds

W Cassiopeae

5 40

Variable = 10.35 magnitude

R Cassiopeae

5 20

Variable = 12.85 magnitude

RZ Persei

6 0

Variable = 13.30 magnitude

S Cassiopeae

6 20

Variable fainter than 12.8 mag. whd.



*J Andromeda*

6 40

Variable = 12.45 magnitude

~~*X Andromeda*~~

7 0

Variable = 12.35 magnitude

~~*RX Tauri*~~

7 20

Variable fainter than 13.40 mag

~~*M Andrae*~~

8 0

Variable fainter than 13.2 mag

~~*M Orionis*~~

8 25

Variable = 12.20 magnitude

4  
m

Jan 4 1913 V Cassiopeae

5 40

Variable = 12.85 magnitude

Z Cassiopeae

5 55

Variable fainter than 13.40 magnitude

Difficult.

R Cassiopeae

6 15

Variable = 13.20 magnitude

S Cassiopeae

6 35

Variable fainter than 13.10 magnitude

RZ Persei

6 55

Variable = 13.45 magnitude



~~X~~ Andromeda

7 10

Variable = 12.30 magnitude

## J Andromeda

7 25

Variable = 12.35 magnitude

## W Aurigae

7 45

Variable invisible

## R Aurigae

7 55

Variable =  $g =$ R ~~X~~ Tauri

8 10

Variable = 13.05 magnitude.

*U Orionis*

8 20

Variable = 12.05 magnitude

*U Geminae*

9 15

Variable = 13.60 magnitude

*U Canis Minoris*

9 40

Variable = 11.20 magnitude

Jan 9 1913 *W Pegasi*

5 25

Variable = 10.95 magnitude

note,

*SX Cygni*

5 40

Variable = 10.15 magnitude



ST Cygni

5 55

Variable = 9.95 magnitude

V Cassiopeae

6 10

Variable = 12.90 magnitude

$\gamma$  Cassiopeae

6 30

Variable = 11.05 magnitude.

Z Cassiopeae

6 45

Variable fainter than 13.50 mag

Just glimpsed. Difficult.

R Cassiopeae

6 55

Variable = 13.30 magnitude

RZ Persei

7 10

Variable = 13.35 magnitude.

S Cassiopeae

7 25

Variable fainter than 13.50 mag

W Cassiopeae

7 40

Variable = 10.55 magnitude

X Andromeda

8 0

Variable fainter than 13.10 mag

note

W Aurigae

8 50

Variable invisible



RX Tauri

9 5

Variable = 12.95 magnitude

$\alpha$  Orionis

9 20

Variable = 12.10 magnitude

$\alpha$  Geminae

9 35

Variable = 13.70 magnitude

$\alpha$  Cassiopeiae

9 40

Variable = 11.70 magnitude

S Ursae Maj  
Circle 50 above

Jan. 9, 1913

1005 PM

124.5

246.1

317.4

61.3

135.0

235.9

304.0

66.7

123.6

103.9

227.5

100.9

121.7

222.6

Camp. star disolving

-.93

-.88

-.83

Circle 750 blow.

220.0

333.0

49.1

146.7

229.1

324.9

39.2

152.1

113.0

99.6

212.6

95.8

112.9

208.7

-.63

-.59

-.55

-.74

48.81

48.07



Circle 230 below

220.7

332.4

49.6

146.0

231.8

326.0

41.1

157.8

111.7

96.4

208.1

- .54

- .56

94.2

116.7

210.9

- .59

Circle 50 above

302.0

70.4

133.9

220.3

353.0

60.2

123.5

128.4

106.4

234.8

- 1.08

- 1.06

107.2

126.4

233.6

- 1.05

- 0.81

8.81

8.00

1034

249.9

Observer Prof. Bailey  
Recorder Hinkley

Jan 10 1913

Z Carinae

7 0 Variable fainter than 13.50 mag.

I can just see the variable.

W Carinae

7 15 Variable = 10.60 magnitude

T Andromeda

7 25 Variable = 12.70 magnitude

Thin clouds share.

U Orionis

8 0 Variable = 12.05 magnitude

U Canis Minor

8 25 Variable = 11.65 magnitude



$\alpha$  Genionarum

8 40 Variable fainter than 13.70 magnitude

Jan 13 '1913  $\eta$  Pegasi

5 30 Variable = 11.10 magnitude

$\delta$  Cygni

5 45 Variable = 10.00 magnitude

$\gamma$  Cassiopeae

6 0

Variable = 12.90 magnitude

$\zeta$  Cassiopeae

6 20 Variable fainter than 13.30  
magnitude

R Cassiopeae

6 30

Variable = 13.30 magnitude

W Cassiopeae

6 45

Variable = 10.55 magnitude

RZ Persei

7 0

Variable = 13.25 magnitude

Difficult. Moonlight & haze.

T Andromeda

7 20

Variable fainter than 12.60  
magnitude. Heavy moonlight &  
from sky

X Andromeda

7 40

Variable = 12.30 magnitude



R Andromeda

7<sup>55</sup>

Variable = 7.30 magnitude

January 13. 1913.

W. W. May

845

Circle 50 above -

128.1

248.0

314.9

60.1

131.8

238.8

307.2

63.8

119.9

105.2

225.1

107.0

116.6

223.6

Professor Bailey Obs  
Hinkley Recorder.

- 0.88

- 0.85

- 0.86

Circle 230 below

216.0

338.9

45.0

148.9

221.6

329.0

39.3

- 159.4

122.9

103.9

226.8

107.4

120.1

247.5

- 0.91

- 0.92

- 0.93

- 0.89

8.81

7.92



Circle 230 below

$$\begin{array}{r}
 218.4 \\
 333.1 \\
 42.6 \\
 150.1 \\
 \hline
 222.2
 \end{array}
 \begin{array}{r}
 114.7 \\
 107.5 \\
 \hline
 222.2
 \end{array}
 \sim 0.82$$

$$\begin{array}{r}
 226.8 \\
 330.5 \\
 36.6 \\
 156.3 \\
 \hline
 223.4
 \end{array}
 \begin{array}{r}
 103.7 \\
 119.7 \\
 \hline
 223.4
 \end{array}
 \begin{array}{l}
 \sim 0.84 \\
 \sim 0.83
 \end{array}$$

Circle 50 above

$$\begin{array}{r}
 \cancel{129.6} \\
 127.8 \\
 247.9 \\
 315.3 \\
 57.8 \\
 134.2 \\
 238.5 \\
 306.0 \\
 65.1 \\
 \hline
 222.6
 \end{array}
 \begin{array}{r}
 120.1 \\
 102.5 \\
 \hline
 222.6
 \end{array}
 \sim 0.83$$

$$\begin{array}{r}
 104.3 \\
 119.1 \\
 \hline
 223.4
 \end{array}
 \begin{array}{l}
 \sim 0.84 \\
 \sim 0.84
 \end{array}$$

9.20

R.H. a. 7<sup>h</sup> 30<sup>m</sup> E sec + 61.5

$$\begin{array}{r}
 - 0.84 \\
 8.81 \\
 \hline
 7.97
 \end{array}$$

Jan 19 1913 Y Cassiopeae

5 45

Variable = 12.90 magnitude

Clear = Moonlight.  
Z Cassiopeae

6 0

Variable fainter than 13.20 mag

R Cassiopeae

6 20

Variable fainter than 13.20 magnitude.

W Cassiopeae

6 35

Variable = 10.35 magnitude

RZ Persei

6 55

Variable invisible, but can see 12.60 magnitude stars. Clear = Moonlight



## R Andromeda

7<sup>5</sup> - Variable = 7.30 magnitude

## J Andromeda

7<sup>20</sup> Variable totally invisible on account of thin clouds & moonlight.

## RX Tauri

7<sup>40</sup> Variable = 12.85 magnitude

Very difficult.

## U Geminorum

8<sup>15</sup> Variable = 9.40 magnitude

## U Canis Minoris

8<sup>40</sup> Variable invisible. Near  
Moonlight.

Jan 21 1913 ST Cygni

5 45

Variable = 9.65 magnitude

Y Cassiopeae

6 5

Variable = 12.80 magnitude

Z Cassiopeae

6 25

Variable fainter than 13.20 magnitude

S Cassiopeae

6 35

Variable invisible. Can just see  
12.50 magnitude stars here strong  
Moonlight.

X Andromeda

6 50

Variable = 12.00 magnitude.



# T Andromeda

7<sup>0</sup> Variable fainter than 12.50 magnitude  
Can just glimpse it.

# R Andromeda

7<sup>15</sup> Variable = 7.40 magnitude.

# T Cassiopeae

7<sup>35</sup> Variable = 10.40 magnitude.

# $\alpha$ Orionis

8<sup>0</sup> Variable = 12.10 magnitude

Very difficult on account Moonlight.

# $\delta$ Orionis

8<sup>20</sup>  $\frac{1}{10}$  brighter than  $\delta$  Tauri.

44 ✓

Jan 22 1913

J Cassiopeae

5 50

Variable = 10.40 magnitude

RZ Persei

6 10 Variable fainter than 12.70 mag  
Poor obs. Monlight,

R Cassiopeae

6 35

Variable invisible, fainter  
than 13.00. Poor obs.

RX Tauri

6 55

Variable fainter than 12.75 mag

W Aurigae

7 10

Variable invisible, fainter than  
12.30 magnitude



# U Orionis

7 25 Variable = 12.15 magnitude

Poor star. Difficult

## ST Persei

at 8 25 PM (75m) there is not a star here brighter than 11.6 magnitude.

9 0 Variable = 11.70 magnitude

9 20 " " " " = 11.60 " " " " "

9 35 " " " " = 11.55 " " " " "

9 50 " " " " = 11.55 " " " " "

## 9 40 $\delta$ Orionis

Variable  $\frac{25}{100}$  brighter than  $\delta$  Tauri.

Jan 25 1913  $\gamma$  Cassiopeae

5 35

Variable = 12.70 magnitude

$\zeta$  Cassiopeae

5 50

Variable fainter than 13.40 magnitude

$\eta$  Cassiopeae

6 10

Variable = 10.50 magnitude

$\delta$  Cassiopeae

6 25

Variable = 13.50 magnitude

$\pi$  Cassiopeae

6 40

Variable = 10.40 magnitude.



## RZ Persei

6 50

Variable = 13.40 magnitude

## T Andromeda

7 10

Variable = 12.65 magnitude

## R Andromeda

7 20

Variable = 7.30 magnitude

## W Aurigae

7 40

Variable fainter than 13.50 mag  
Invisible

## RX Tauri

7 55

Variable = 12.85 magnitude

$\alpha$  Orionis

8 10

Variable  $1\frac{1}{2}$  brighter than  $\alpha$ 

Variable = 12.05 magnitude

 $\alpha$  Geminorum

8 30

Variable = 13.00 magnitude

 $\alpha$  Canis Minoris

8 50

Variable = 12.00 magnitude

R Z Aurigae9 0 exactly

(algebraic star.)

Variable = 11.80 magnitude

 $\delta$  Orionis

9 35

Var  $\frac{25}{100}$  brighter than  $\delta$  Tauri.



Jan 28 1913 RZ Aurigae

7 12 exactly Variable = 11.55 magnitude

RW Tauri

7 37 exactly Variable = 7.75 magnitude

ST Persei

7 52 exactly Variable = 9.70 magnitude

Z Persei

8 40 exactly Variable = 10.10 magnitude

RW Persei

9 0 exactly Variable = 9.70 magnitude

$\mu$  Orionis

9 55

Variable = 11.85 magnitude

$\mu$  Geminae

10 15

Variable = 13.65 magnitude

RR Draconis

10 45  
exactly

Variable = 9.30 magnitude

Z Draconis

11 5  
exactly

Variable = 9.90 magnitude

RS Cephei

11 35  
exactly

Variable = 9.95 magnitude



# W Aurigae

11 55

Variable = 13.75 magnitude  
just glimpse it.

## U Cassiopeiae

12 20

Variable = 12.20 magnitude

## Jan 30 1913 Y Cassiopeae

5 45

Variable = 11.75 magnitude

## Z Cassiopeae

6 5

Variable invisible. Fainter  
than 13.50 magnitude.

## W Cassiopeae

6 15

Variable = 10.50 magnitude

RZ Persei

6 20

Variable = 13.60 magnitude

X Andromeda

6 30

Variable = 12.00 magnitude

J Andromeda

6 45

Variable = 12.45 magnitude

ST Persei

6 45  
exactly

Variable = 11.75 magnitude

near m

RW Tauri

7 8  
exactly

Variable = 8.75 magnitude



Z Persei

7 32  
exactly Variable = 9.95 magnitude

RX Tauri

7 50 Variable = 12.85 magnitude

RN Persei

8 3  
exactly Variable = 9.80 magnitude

$\alpha$  Aurigae

8 15 Variable = 13.75 magnitude

$\alpha$  Cassiopeiae

8 25 Variable = 12.35 magnitude

*M Orionis*

8 40

Variable = 11.60 magnitude

*RZ Aurigae*

8 58

exactly

I can just glimpse the variable. It is fainter than 13.60 magnitude

*W Aurigae*

9 20

Variable = 13.75 magnitude

Difficult

*Z Draconis*

9 40

exactly

Variable = 10.15 magnitude

*RR Draconis*

9 55

exactly

Variable = 9.25 magnitude



$\delta$  Orionis

10 15

Variable  $\frac{2}{10}$  brighter than  $\delta$  Tauri.Jan 31 1913 Z. Persei5 52  
exactly

Variable = 10.00 magnitude

## RZ Aurigae

6 8  
exactly

Variable = 11.60 magnitude

## RW Tauri

6 27.  
exactly

Variable = 8.35 magnitude

N 11 41

## RW Persei

6 39  
exactly

Variable = 9.50 magnitude

ST Pisci

6 50  
exactly

Variable = 9.65 magnitude

Z Draconis

7 32  
exactly

Variable = 10.05 magnitude

<sup>h m</sup>  
2 11 45

Feb 1 1913

6 50

RX Tauri

Cloudy

Variable = 12.80 magnitude.

$\alpha$  Orionis

7 0

Variable = 11.60 magnitude

$\alpha$  Canis Minoris

7 15

Variable = 12.45 magnitude



*W Geminorum*

7 25

Variable = 13.75 magnitude

*W Aurigae*

7 40

Variable = 13.75 magnitude

*RZ Aurigae*

7 50  
exactly

Variable = 11.55 magnitude

*RW Tauri*

8 2  
exactly

Variable = 8.35 magnitude

February 1, 1913

8 Ursae maj - Prof. Bailey Obs  
Circle 50 above Hunkley - Red  
com star disappearing

8 55

126.9

250.2

310.6

60.9

130.8

239.0

313.8

66.6

123.3

110.3

233.6

108.2

112.8

221.0

- 1.05

- 0.92

- 0.79

Circle 230 below

219.2

335.0

45.2

145.0

- 126.4

329.6

40.2

158.9

115.8

199.8

215.6

103.2

118.1

221.3

- 0.69

- 0.74

- 0.80

$$\begin{array}{r} - 0.83 \\ 8.81 \\ \hline 7.98 \end{array}$$

$$\begin{array}{r} 9 \ 18 \\ 9 \ 12 \\ \hline \end{array}$$

Circle 230 below

218.2

337.3

45.9

149.2

228.0

328.0

37.9

155.3

119.1

103.3

222.4

100.0

117.6

217.6

- 0.82

- 0.74

- 0.73



lens 50 above

122.2

251.9

315.0

58.6

133.6

240.0

304.8

68.0

129.7

103.5

232.2

106.4

123.8

230.2

- 1.03

- 1.00

- 0.98

- 0.89

- 8.81

7.92

730  
924

Feb 2 1913  
5 45

seeing from strong wind.

✓ Cassiopea

Variable = 11.50 magnitude

Z Cassiopea

6 0

Variable invisible. Fainter than 13.60 magnitude.

R Cassiopea

6 20

Variable = 13.45 magnitude

*T Cassiopeae*

6 35

Variable = 10.50 magnitude

*S Cassiopeae*

6 50

Variable = 13.60 magnitude

Difficult.

*Z Persei*

7<sup>0</sup>  
exact

Variable = 9.75 magnitude

*ST Persei*

7 11  
exact

Variable = 9.65 magnitude.

*RW Persei*

7 26  
exact

Variable = 9.50 magnitude



## RZ Aurigae

7 43  
exactly

Variable = 13.65 magnitude

## M Geminorum

8 0

Variable normal at  
13.75 magnitude.

## Z Draconis

8 9	=	Variable = 10.05 magnitude
8 55	=	" " " = 10.15 " " " "
9 38	=	" " " = 10.30 " " " "
10 5	=	" " " = 10.40 " " " "

## δ Orionis

clouds.

9 20 Variable  $\frac{25}{100}$  mag brighter than δ Tauri.

Feb 4 1913

## γ Cassiopeae

5 50

Variable = 11.45 magnitude

Z Cassiopeae

6 10

Variable invisible. Fainter  
than 13.60 magnitude

R Cassiopeae

6 20

Variable = 13.50 magnitude

RZ Persei

6 30

Variable = 13.75 magnitude

W Cassiopeae

6 45

Variable = 10.40 magnitude

R Andromeda

7 5

Variable = 7.45 magnitude



ST Persei

6 55  
exact Variable = 9.65 magnitude

Z Persei

7 7  
exact Variable = 9.80 magnitude

RW Tauri

7 16  
exact Variable = 8.35 magnitude

RW Persei

7 27  
exact Variable = 9.55 magnitude

RZ Aurigae

7 38  
exact Variable = 11.60 magnitude

## RX Tauri

7 55 ✓ Variable = 12.70 magnitude

## U Orionis

8 10 ✓ Variable = 11.45 magnitude

## U Gemmorum.

8 20  
 ✓ I cannot see the variable although  
 I can see the 13.70 magnitude star  
 just north of it. Variable fainter than  
 13.70 one.  
 Z Draconis.

9 10  
 exact ✓ Variable = 10.15 magnitude.

## - Leo Minoris

9 33  
 exact ✓ Variable = 12.55 magnitude.



W Aurigae

9 50

✓ Variable = 13.75 magnitude

$\alpha$  Orionis

10 10

✓ Variable  $\frac{25}{100}$  brighter than  $\alpha$  Tauri.

Feb 5 1913

J Andromeda

6 10

✓ Variable = 12.45 magnitude

RZ Aurigae

6 55

exact

✓ Variable = 12.75 magnitude

$\alpha$  Perseus

7 50

✓ Variable = 13.70 magnitude

- Leo Minoris

8 0  
exact ✓ Variable = 9.50 magnitude

Z Draconis

8 15  
exact ✓ Variable = 10.10 magnitude

RN Persei

8 30  
exact ✓ Variable = 9.55 magnitude

net  
+ 42 4  
ok 43 40  
out 1 36

Z Persei

8 40  
exact ✓ Variable = 9.85 magnitude

ST Persei

8 50  
exact ✓ Variable = 9.75 magnitude



R R Tauri

8 57  
exact ✓

Variable = 8.35 magnitude

R S Cephei

9 7  
exact ✓

Variable = 10.15 magnitude

Feb 6 1913  
6 5

Z Cassiopeae

Variable invisible. Fainter.  
than 13.60 magnitude

R Cassiopeae

6 15 ✓

Variable = 13.50 magnitude

T Cassiopeae

6 25 ✓

Variable = 10.65 magnitude

n

S Canis major

6 40

✓

Variable invisible. Fainter  
than 13.75 magnitude

Z. Pesei

7 0  
exact

✓

Variable = 9.80 magnitude

RW Pesei

7 18  
exact

✓

Variable = 9.55 magnitude

ST Pesei

7 29  
exact

✓

Variable = 9.70 magnitude

RZ Aurigae

7 48  
exact

✓

Variable = 11.55 magnitude



$\alpha$  Canis Minoris

8 10 ✓ Variable = 12.45 magnitude

$\alpha$  Gemmae

8 25 ✓ Variable fainter than 13.90 magnitude

$\gamma$  Leo Minoris

8 40 ✓  
exact Variable = 9.45 magnitude

$\zeta$  Draconis

8 55 ✓  
exact Variable = 10.10 magnitude

$R$  Cephei

9 8 ✓  
exact Variable = 10.40 magnitude

Feb 7 1913

RZ Aurigae

6 17  
exact

Variable = 11.60 magnitude

W Aurigae

6 25

Variable fainter than 13.70 mag

Z Persei

6 37  
exact

Variable = 9.80 magnitude

ST Persei

6 45  
exact

Variable = 11.85 magnitude

RW Tauri

6 57  
exact

Variable = 8.35 magnitude



RW Persei

7.4  
exact ✓ Variable = 9.80 magnitude

Z Cassiopeae

7.15 ✓ Variable invisible, Fainter than  
13.60 magnitude

RZ Persei

7.35 ✓ Variable = 13.80 magnitude  
Difficult

~~Z~~ Camelopard

7.55 ✓ Variable = 7.45 magnitude

RS Cephei

8.12 ✓ Variable = 10.35 magnitude  
exact

## Z Draconis

8 26  
exact

✓ Variable = 10.15 magnitude

## — Leo Minoris

8 33  
exact

✓ Variable = 11.05 magnitude

## M Geminorum

8 50

✓ Variable fainter than 13.70  
magnitude.

## M Orionis

9 0

✓ Variable = 11.35 magnitude

## RX Tauri

9 8

✓ Variable = 12.40 magnitude



Feb 8<sup>1</sup> 1913 ✓ Carriapeae

6 20 ✓ Variable = 11.15 magnitude

Z Carriapeae

6 30 ✓ Variable invisible. Fainter than 13.60 magnitude.

R Carriapeae

6 50 ✓ Variable = 13.55 magnitude

T Carriapeae

7 0 ✓ Variable = 10.60 magnitude

Z<sup>n</sup> Persei

7 18 ✓ Variable = 9.85 magnitude  
Exact

ST Persei

7<sup>26</sup><sub>exact</sub> ✓ Variable = 9.70 magnitude

W Cariopeae

7<sup>40</sup> ✓ Variable = 10.30 magnitude

RW Persei

7<sup>49</sup><sub>exact</sub> ✓ Variable = 9.55 magnitude

RW Tauri

7<sup>58</sup><sub>exact</sub> ✓ Variable = 8.35 magnitude

Y Camelopard

8<sup>18</sup><sub>exact</sub> ✓ Variable = 10.05 magnitude



## Z Draconis

8 26  
exact

✓ Variable = 10.15 magnitude

## RR Cephei

8 40

✓ Variable = 11.75 magnitude

## RS Cephei

9 2  
exact

✓ Variable = 10.35 magnitude

## - Leo Minoris

9 12  
exact

✓ Variable = 9.35 magnitude

## M Geminorum

9 25

✓ Variable fainter than 13.75 magnitude

RZ Aurigae

9.42  
exact

✓ Variable fainter than  
13.70 magnitude.

♂ Orionis

9.55 ✓ Variable  $\frac{25}{100}$  brighter than  
♂ Tauri.



Feb 9 1913 R Andromeda

6 0 ✓ Variable = 7.15 magnitude

X Andromeda

6 15 ✓ Variable = 11.95 magnitude

Clouds -

Feb 10 1913 Y Cassiopea

5 50 ✓ Variable = 11.10 magnitude

Z Cassiopea

6 5 ✓ Variable fainter than 13.60 mag

R Cassiopea

6 15 ✓ Variable = 13.55 magnitude

RZ Persei

6 25 ✓ Variable = 13.80 magnitude

Very difficult

Z Persei

6 40 ✓ Variable = 9.95 magnitude  
exact

ST Persei

6 49 ✓ Variable = 9.70 magnitude  
exact

RW Persei

6 56 ✓ Variable = 9.55 magnitude  
exact

RW Tauri

7 17 ✓ Variable = 11.30 magnitude  
exact



RZ Aurigae

7 28  
exact

Variable = 11.55 magnitude

R Rucinae

7 40

Variable = 13.70 magnitude

X Camelopard

8 25

Variable = 7.40 magnitude

Y Camelopard

8 37  
exact

Variable = 9.95 magnitude

Z Draconis

8 53  
exact

Variable = 10.15 magnitude

— Leo Minoris

9<sup>2</sup><sub>exact</sub> ✓ Variable = 9.45 magnitude

u Canis Minoris

9<sup>15</sup> ✓ Variable = 12.50 magnitude

RX Tauri

9<sup>25</sup> ✓ Variable = 11.95 magnitude

W Aurigae

9<sup>35</sup> ✓ Variable = 13.80 magnitude  
Just glimmer variable.

α Orionis

9<sup>50</sup> ✓ Variable  $\frac{3}{10}$  brighter than  
α Tauri



Feb 12 1913 Z Cassiopeae

6 5

✓ Variable invisible. Fainter than 13.50 magnitude

R Cassiopeae

6 20

✓

Variable = 13.55 magnitude

Very difficult.

Z Persei

6 33

exact

✓

Variable = 9.95 magnitude

S T Persei

6 44

exact

✓

Variable = 9.70 magnitude

R W Tauri

6 54

exact

✓

Variable = 8.35 magnitude

RW Persei

$7_{\text{exact}}^0$  / Variable = 9.55 magnitude

RZ Aurigae

$7_{\text{exact}}^{12}$  / Variable = 11.65 magnitude

Y Camelopard

$7_{\text{exact}}^{24}$  / Variable = 10.20 magnitude

Z Draconis

$7_{\text{exact}}^{32}$  / Variable = 10.10 magnitude

RS Cephei

$7_{\text{exact}}^{41}$  / Variable = 10.25 magnitude



# *σ Cassiopeae*

7 55

✓

Variable totally invisible. Fainter  
than 13.50 magnitude,

## *α Geminorum*

8 30

✓

Variable invisible. Sky white  
Moonlight. Variable much  
fainter than 13.50 magnitude

— Leo Minoris

8 9

exact

✓

Variable = 9.55 magnitude

## *RZ Aurigae*

Variable = 11.60 magnitude

8 40

exact

2<sup>h</sup> obs.

Thursday Feb 13, 1913

S Ursae Maj' circle 50 above

8 24

124.0

250.6

314.5

58.5

135.4

237.6

308.6

67.8

125.6

104.0

229.6

102.2

119.2

221.4

- .97

- 0.88

- 0.80

circle 230 below

226.0

328.1

47.1

139.6

226.1

319.4

44.0

151.1

102.1

92.5

194.6

93.3

107.1

200.4

- 0.28

- 0.34

- 0.39

$$\begin{array}{r} - 0.61 \\ 8.81 \\ \hline 8.20 \end{array}$$

9 18

circle 230 below

222.9

326.2

49.4

143.3

229.6

319.0

43.9

151.9

103.3

93.9

$$\begin{array}{r} 197.2 \\ 19 \end{array}$$

- 0.33

- 0.33

- 0.33

f:51

89.4

108.0

197.4



bunch 350 above

102.0

270.7

285.3

90.1

103.5

269.3

283.5

89.8

16.8.7

164.8

333.5

166.0

166.3

332.3

3h 2

+ 44.0

- 4.67

- 4.62

- 4.58

- 4.14

7.21

3.07

10 12

945

Prof. Bailey Ober  
Hunkley Recorder

Stay with this old, wh. low, and  
moon.                      pining poor.

Feb 14 1913 Z Persei

<sup>6 17</sup>  
exact- / Variable = 9.95 magnitude

ST Persei

<sup>6 28</sup>  
exact- / Variable = 9.75 magnitude

RW Tauri

<sup>6 36</sup>  
exact- / Variable = 8.30 magnitude

RW Persei

<sup>6 42</sup>  
exact- / Variable = 9.70 magnitude

RZ Aurigae

<sup>6 55</sup>  
exact- / Variable = 12.05 magnitude



# $\gamma$ Camelopard

6 53	✓	Variable = 11.80 magnitude.	
exact			
7 22	✓	Variable = 11.85 " " " "	
7 " 59	✓	Variable = 11.75 " " " "	
8 " 25	✓	Variable = 11.70 " " " "	
8 " 48	✓	Variable = 11.70 " " " "	
9 7	✓	Variable = 11.65 " " " "	
9 29	✓	Variable = 11.55 " " " "	
9 56	✓	Variable = 11.35 " " " "	
10 5	✓	Variable = 11.25 " " " "	
10 20	✓	Variable = 11.15 " " " "	

## $\Sigma$ Draconis

7 34 ✓ Variable = 10.10 magnitude  
exact

## $\delta$ Orionis

8 55 Variable =  $\frac{35}{100}$  brighter than  
 $\delta$  Tauri.

Feb 15 1913 Z Persei

5 58  
exact

✓ Variable = 9.90 magnitude

RW Tauri

6 9  
exact

✓ Variable = 8.35 magnitude

ST Persei

6 20	✓	Var = 11.10 <sup>05</sup> magnitude	11.05
<del>6 35</del>	✓	Var = 11.05 <sup>00</sup> " " " "	11.00
6 58	✓	Var = 10.95 <sup>90</sup> " " " "	10.90
7 15	✓	Var = 10.50 " " " "	10.50
7 25	✓	Var = 10.25 " " " "	10.25
7 35	✓	Var = 10.15 " " " "	10.15
7 50	✓	Var = 10.00 " " " "	10.00
8 5	✓	Var = 9.90 " " " "	9.90
8 15	✓	Var = " " " "	9.75

RW Persei

6 29  
exact

✓ Variable = 9.55 magnitude



$\gamma$  Camelopard

8<sup>24</sup>  
exact

✓ Variable = 10.05 magnitude

Z. Draconis

8<sup>35</sup>  
exact

✓ Variable = 10.15 magnitude

M. Geminorum

8<sup>50</sup>

✓ Variable and faint stars  
invisible on account of Moonlight.  
Variable not brighter than  
13 magnitude.

RZ. Aurigae

9<sup>10</sup>

✓ Variable normal. I can just  
glimpse it. Moon only a  
few degrees away.

Feb 18 1913

Z Persei

6 40  
exact

✓ Variable = 9.90 magnitude

ST Persei

6 54  
exact

✓ Variable = 9.75 magnitude

RM Persei

7 5  
exact

✓ Variable = 9.55 magnitude

RM Tauri

7 10  
exact

✓ Variable = 8.35 magnitude

RS Cephei

7 19  
exact

✓ Variable = 10.30 magnitude



X Camelopard

7 25 ✓ Variable = 7.60 magnitude

Y Camelopard

7 34 ✓  
exact Variable = 10.10 magnitude

Z Draconis

7 40 ✓  
exact Variable = 10.15 magnitude

RZ Aurigae

8 11 ✓  
exact Variable = 11.60 magnitude

M Guineanum

8 30 ✓ Examined region here, but  
Moonlight too bright to see  
variable or comparison stars.

S Ursa Majoris

8 55 ✓ Variable = 8.25 magnitude

Feb 19 1913 Z Cassiopeae

6 20 ✓ Variable invisible. Fainter than  
13.40 magnitude

R Cassiopeae

6 40 ✓ Variable fainter than 13.40.  
Invisible on recent Moonlight  
- from sky.  
R Z Persei

6 55 ✓ Variable invisible. Dark  
sky = Moonlight. Fainter  
than 13.40 magnitude

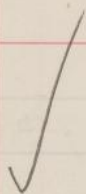
Z Persei

6 48 exact ✓ Variable = 9.95 magnitude



RM Persei

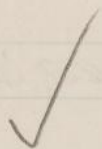
7 0



Variable = 9.55 magnitude

RM Tauri

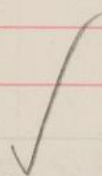
7 10  
exact



Variable = 8.35 magnitude

4 Camelopard

7 22



Variable = 10.20 magnitude

Feb 23 1913 Z Cassiopeae

6 25 ✓ Variable fainter than 13.60  
magnitude

R Cassiopeae

6 35 ✓ Variable = 13.55 magnitude

RZ Persei

6 45 ✓ Variable = 13.80 magnitude  
Difficult

S Cassiopeae

7 0 ✓ Variable = 13.80 magnitude

X Canisopand

7 20 ✓ Variable = 7.75 magnitude



$\gamma$  Camelopard

7<sup>25</sup>  
exact ✓ Variable = 10.05 magnitude

$\pi$  Aurigae

7<sup>40</sup> ✓ Variable = 12.70 magnitude

$\mu$  Geminae

7<sup>50</sup> ✓ Variable = 13.70 magnitude

$\alpha$  Canis Minoris

8<sup>00</sup> ✓ Variable = 12.90 magnitude

$\mu$  Orionis

8<sup>15</sup> ✓ Variable = 10.38 magnitude

2 fainter  $\gamma$

Cloudy

Feb 24 1913

Z Persei

6 24  
exact

✓

Variable = 9.95 magnitude

J Cassiopeae

6 30

✓

Variable = 11.35 magnitude

 $\frac{1}{2}$  fainter p

ST Persei

6 42  
exact

✓

Variable = 9.70 magnitude

RW Tauri

6 51  
exact

✓

Variable = 8.35 magnitude

RW Persei

7 exact

✓

Variable = 9.65 magnitude



# W Cassiopeae

7<sup>10</sup> ✓ Variable = 9.55 magnitude

# RR Cephei

7<sup>20</sup> ✓ Variable = 12.35 magnitude

# RS Cephei

7<sup>31</sup> ✓ Variable = 10.90 magnitude  
 exact  
 9<sup>25</sup> ✓ Variable = 10.85 " " "

# γ Cameloopard

7<sup>42</sup> ✓ Variable = 11.20 magnitude  
 exact  
 7<sup>58</sup> ✓ Variable = 11.15 " " " "  
 8<sup>15</sup> ✓ Variable = 11.15 " " " "  
 9<sup>31</sup> ✓ Variable = 11.05 " " " "  
 10<sup>7</sup> ✓ Variable = 11.00 " " " "  
 10<sup>35</sup> ✓ Variable = 11.00 " " " "

## Z Draconis

7<sup>54</sup>  
exact ✓ Variable = 10.10 magnitude

## M Geminorum

8 25 ✓ Variable = 13.80 magnitude

Sky clear and dark, but  
variable difficult  
to observe

8 35 ✓ Variable  $\frac{40}{100}$  brighter than  
to Tauri. Sudden brightening.

## RX Tauri

8 50 ✓ Variable = 10.70 magnitude

## Comp near RX Geminorum

9<sup>2</sup>  
exact ✓ Variable = 10.70 magnitude



✓ S Ursa Majoris

9 40

Variable = 8.70 magnitude

179

Tuesday Feby 25. 1913

S Ursa Maj Circle 50 above

Prof. Bailey Obs  
Hurkley Riv.

822

314.9

106.1

61.0

~~82.8~~

143.8

~~188.9~~

235.7

91.9

198.0

- 0.34

322.3

96.8

- 0.38

59.1

104.9

- 0.41

137.1

201.7

242.0

Circle 230 below.

233.9

90.6

324.5

80.0

+ 0.19

58.9

170.6

+ 0.16

138.9

236.8

81.0

317.8

92.4

+ 0.13

53.0

173.4

- 0.11

145.4

8.81

8.70

230.6

94.8

325.4

83.0

56.0

177.8

+ 0.04

139.0

237.1

82.9

+ 0.06

320.0

93.4

51.9

176.3

+ 0.07

145.3



Circle 50 above

131.2

240.0

322.0

55.8

140.9

234.0

315.8

60.3

109.3

93.8

203.1

-0.44

93.6

-0.39

104.5

198.1

-0.34

-0.16

853

R A 6 47

+ 61.2

$$\begin{array}{r} 8.81 \\ \hline 8.65 \end{array}$$

Mch 2 1913 in Gemini

6 30

Variable = 13.70 magnitude

S Carriopea

6 40

Variable = 13.70 magnitude

r = 6

Z Carriopea

7 0

Variable invisible, Fainter than 13.70 magnitude

R Carriopea

7 15

Variable = 13.60 magnitude

RZ Persei

7 25

Variable = 13.80 magnitude

Difficult



X Canulepand

7 40 / Variable = 7.80 magnitude

W Aurigae

7 50 / Variable = 12.50 magnitude

Comp near RV Geminorum

8 25 / Variable = 10.65 magnitude  
exact

V Ursa Majoris.

9 2 / Variable = 10.30 magnitude  
exact

S Ursa Majoris

9 15 / Variable = 8.85 magnitude

Z Draconis

9<sup>25</sup><sub>exact</sub> ✓ Variable = 10.10 magnitude

$\alpha$  Orionis

9<sup>35</sup> ✓ Variable to brighter than Rigel

$\gamma$  Camelopard

9<sup>38</sup><sub>exact</sub> ✓ Variable = 10.05 magnitude

R S Cephei

9<sup>44</sup><sub>exact</sub> ✓ Variable = 10.30 magnitude



1912phae.proj..612B  
 Mch 7 1913 Z Canis Major

6 35 ✓ Variable invisible, Fainter than  
 13.60 magnitude.

R Canis Major

6 50 ✓ Variable = 13.70 magnitude

J Canis Major

7 5 ✓ Variable = 11.50 magnitude 1130

RZ Persei

7 20 ✓ Variable = 13.80 magnitude

W Canis Major

7 30 ✓ Variable = 9.50 magnitude

*S Cassiopeae*

7 40

✓

Variable = 13.65 magnitude

1 Brighter ~~rr~~

*RR Cephei*

7 50

✓

Variable = 12.55 magnitude

*W Geminae*

8 5

✓

Variable = 13.75 magnitude

*W Canis Minoris*

8 15

✓

Variable = 12.90 magnitude

*S Ursa Majoris*

8 35

✓

Variable = 8.85 magnitude



✓ Ursa Majoris

8 45  
exact

✓ Variable = 10.20 magnitude

Z Draconis

8 55  
exact

✓ Variable = 10.10 magnitude

Y Camelopard

9 5  
exact

✓ Variable = 10.10 magnitude

X Camelopard

9 15

✓ Variable = 8.30 magnitude

α Orionis

9 25

✓ Variable, 15 brighter than Rigel.

Mch 12 1913

Z. Cassiopeae

6 50

✓ Variable curvilinear. Fainter than  
13.60 magnitude.

R Cassiopeae

7 0

✓

Variable = 13.60 magnitude

RZ Persei

7 10

✓

Variable = 13.45 magnitude

S Cassiopeae

7 20

✓

Variable = 13.60 magnitude

SV Tauri

7 55  
exact

✓

Variable = 9.40 magnitude



# RW Geminorum

8 10  
exact ✓ Variable = 9.75 magnitude  
Carpenter " " = 10.85 " "

# U Geminorum

8 25 ✓ Variable = 13.60 magnitude

# T Ursa Majoris

8 45  
exact ✓ Variable = 10.25 magnitude

# S Ursa Majoris

8 55 ✓ Variable = 9.15 magnitude

# $\delta$ Orionis

$\frac{7}{8}$  to  $\frac{8}{8}$  ✓ Variable to magnitude brighter  
than Rigel.

$\gamma$  Camelopard

$\gamma^8$   
lucet

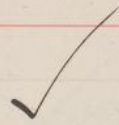
✓ Variable = 10.05 magnitude



Mo 18 1913

SV Tauri

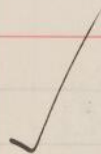
7<sup>0</sup>  
exact



Variable = 9.30 magnitude

RW Geminorum

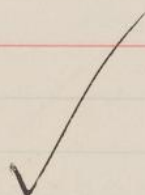
7 7  
exact



Variable = 9.80 magnitude  
Compan " " = 10.85 " " "

V Ursa Majoris

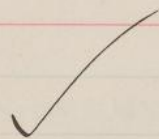
7 35  
exact



Variable = 10.65 magnitude

γ Camelopard

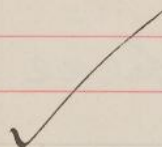
7 47  
exact



Variable = 10.10 magnitude

RZ Cassiopeae

7 55  
exact



Variable = 6.15 magnitude

RX Cassiopeae

8 15  
exact

Variable = 8.75 magnitude

$\delta$  Orionis

8 30 ✓ Variable 10 magnitude brighter  
than Rigel

Mch 19 1913  $\alpha$  Aurigae

6 50 ✓ Variable = 13.60 magnitude

SV Tauri

7 7 ✓ Variable = 9.45 magnitude  
exact

RZ Cassiopeae

7 40  
exact

Variable = 6.25 magnitude



# RX Canis Major

7 53  
max

✓ Variable = 8.70 magnitude

## $\delta$ Orionis

8 0

✓ Variable = Rigel

## $\gamma$ Ursa Majoris

8 7  
exact

✓ Variable = 10.40 magnitude

## $\epsilon$ Canis Major

exact 8 10

= ✓ Variable = 11.70 magnitude

" 8 25

= ✓ Variable = 11.65 " " " "

" 8 42

= ✓ Variable = 11.70 " " " "

" 8 53

= ✓ Variable = 11.75 " " " "

" 9 3

= ✓ Variable = 11.75 " " " "

" 9 15

= ✓ Variable = 11.70 " " " "

" 9 23

= ✓ Variable = 11.70 " " " "

" 9 32

= ✓ Variable = 11.70 " " " "

" 9 37

= ✓ Variable = 11.65 " " " "

Mo 28 1913 RZ Persei

7 0 ✓ Variable = 11.90 magnitude

RZ Cassiopeae

7 13 ✓ Variable = 6.00 magnitude  
exact

RX Cassiopeae

7 23 ✓ Variable = 8.70 magnitude  
exact

γ Cameloopard

7 33 ✓ Variable = 10.10 magnitude  
exact

44  
27  
22

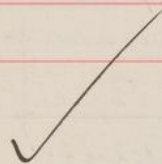
M Geminorum

✓ Variable normal = 13.60 mag

Clouding up.

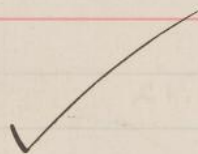


## SV Tauri

8 4  
exact

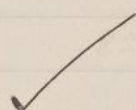
Variable = 9.60 magnitude

## RW Geminorum

8 22  
exactVariable = ~~9.90~~ 10.10 magnitude

## - Leo Minoris

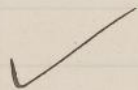
8 38



Variable = 9.40 magnitude

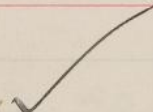
 $\alpha$  Orionis

8 50

Variable =  $\frac{1}{10}$  magnitude  
brighter than Rigel. $\gamma$  Ursa Majoris

8 58

exact



Variable = 10.40 magnitude

April 1, 1913

SU Draconis, 113267,

7 55-

lamp star disappearing

Circle 72 above.

Prof. Bailey Obsr

Hinkley

Recorder

236.0

80.1

316.1

98.7

49.4

178.8

+ 0.02

148.1

232.4

93.1

+ 0.07

325.5

80.5

+ 0.12

57.3

173.6

8.02

137.8

Circle 252 below

320.9

90.5

51.2

104.1

138.0

194.6

- 0.28

242.1

317.9

98.2

- 0.14

56.1

81.6

146.9

179.8

0.00

- 0.04

8.94

8.08

228.5

P.M.  
(8.02)

8.90

8.17

325.1

85.3

50.4

101.5

136.9

186.8

- 0.13

238.4

320.2

9

- 0.06

57.3

87.1

149.4

81.7

+ 0.02

8.25

231.1

188.8



April 8 1913 U Geminorum

7 30

Sky partly cloudy. Variable is normal at about 13.60 magnitude.

SV Tauri

7 45  
max

Variable = ~~9.90~~ magnitude  
10.30

S Cassiopeae

8 20

Variable = 13.50 magnitude  
Cloudy - poor obs.

April 9 1913 u Geminorum

7 25 ✓ Variable = 13.60 magnitude

7 47 ✓ RZ Cassiopei  
exact Variable = 6.00 magnitude

8 2 ✓ RX Cassiopei  
exact Variable = 8.95 magnitude

8 40 ✓ RR Draconis  
exact Variable = 9.70 magnitude

9 5 ✓ S Ursa Majoris  
Variable = 10.25 magnitude



*S. Corona Borealis*

9 20  $\sqrt{\text{Variable} = 8.65 \text{ magnitude}}$

*$\alpha$  Orionis*

7 30  $\sqrt{\text{Variable} = \frac{15}{100} \text{ brighter than Rigel.}}$   
to 8

455

April 17 1913 in Gemini

7 15 ✓ Variable normal at about  
13.60 magnitude. Difficult  
on account of moonlight.

RZ Cassiopeae

7 47 ✓ Variable = 6.15 magnitude  
exact

RX Cassiopeae

7 55 ✓ Variable = 8.85 magnitude  
exact

RR Draconis

8 6 ✓ Variable = 9.75 magnitude  
exact

S Carinae Borealis

8 35 ✓ Variable = 8.70 magnitude



✓ U Carinae Borealis

8 42  
exact

Variable = 8.80 magnitude

6 D W - 26.9905

Could not identify this star  
on account of strong Moonlight -  
white star. <sup>h</sup>9 <sup>h</sup>5 <sup>h</sup>9 <sup>am</sup>40.

Monday June 2  
~~Wednesday~~ ~~May~~ #1/1913

S Ursae majoris

circle 50

Prof. Bailey Obs  
 Hinckley Recdr

849

232.0

45.0

277.0

48.0

93.0

1.83

49.9

97.9

277.9

55.2

1.78

285.1

42.3

50.5

97.5

1.72

92.8

circle 230

131.6

65.4

197.0

57.4

1.13

314.9

122.8

1.20

12.3

136.4

57.4

193.6

59.2

1.27

315.1

116.6

1.49  
 8.81  
 10.30

14.3

132.0

62.4

194.4

52.7

318.5

115.1

1.30

11.2

138.6

51.0

189.6

60.9

313.0

111.9

13.9

circle 50

57.8

100.0



1912phae.proj..612B

er  
ir













6 m  
4 44  
0  
+ 66 10

4.3 mag



108

8  $\frac{3}{11}$



1912phae.proj..612B