

KG

11365

536

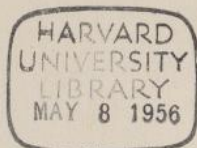


KG-11365.536





KG 11365.536













Oct. 16. 1896. (Friday)

Cloudy the first of evening. Some clear  
now.

Will try for

$\beta$  Lyrae.

Cramer do.

Index left. + below.

L 15

63.8

97.2

Clouds.

63.5

94.7

33.4 >

31.2 >

64.6 >

2.69 >

L 20

66.2

93.9

63.1

95.5

27.7 >

32.4 >

60.1 >

2.86 >

2.78 >

Clouds.

Index right + above.

L 26

147.1

129.4

~~147.1~~

147.2

190.9

42.3 >

43.7 >

86.0 >

2.02 >



Oct. 16. 1896.

$$\begin{array}{r} A \quad 3K \\ \hline 8 \quad 23.8 > \end{array}$$

$$\begin{array}{r} 147.9 \\ 192.2 \\ 149.4 \quad \cancel{145.10} \\ \hline 193.5 \end{array}$$

$$\begin{array}{r} 44.3 > \\ 48.7 > \\ \hline 88.0 > \end{array} \quad \begin{array}{r} 1.97 > \\ 2.00 > \\ \hline \end{array}$$

mean = 2.39 >

Observations  $\frac{1}{3}$  wt.  
 Observations made with much difficulty,  
 moon bright and much cloud.  
 No chance for  $\beta$  Persei.

Clouds coming in very heavy masses  
 and covering the whole sky again.  
 Will try for Double Star with  
 Equatorial although it looks quite  
 hopeless.

$$22^h 50^m S. J. = 22^h 53^m E. T.$$

$$\Sigma 331 : P II 220 : Phot R: Wds$$

$$\begin{array}{r} 2 \quad 52 \quad + \quad 51.9 \\ \hline 22 \quad 52 \\ 4 \quad 0 \end{array}$$

Position angle =  $90^\circ$  : distance =  $14''$  :  
 magn. = 5.5 and 6.8

Impossible to measure stars now.



Oct. 16, 1896.

clouds thick: stars all gone.

9 30 Sky still thickly clouded in: no stars visible: evidently clouded in for the night.

10 15 Sudden clearing: sky clear.

B Lyrae. Phot. N. Crum. obs.

Index to left

10 44.5

71.0

101.1

73.3

100.3

&lt; B dis.

30.1

27.0

57.1

2.97

Reject: not  
finished.

10 59.3

72.8

101.8

71.3

102.0

29.0

30.7

59.7

2.87

2.92

Index to right.

11 06.7

337.0

16.0

336.9

16.4

39.0

39.5

78.5

2.24

clouds

Oct. 16, 1896.

11

40

Still cloudy and impossible  
to finish



Oct. 17. 1896. (Saturday)

7 0

Thickly cloudy everywhere.

Showed Mr. Davidson again the method  
of operating Photometer V. and also  
adjusted Photometer.

8 0

Still thickly cloudy.

Oct. 19. 1896. (Monday)

$\Sigma 2078.117$  Draconis : Phot H : W: obs

16	33	+53.2
<u>20</u>	<u>38</u>	
4	5	

Double not identified.  
Chronometer found to be 1<sup>h</sup> slow.

16	33	+53.2
<u>21</u>	<u>47</u>	
5	14	

Index to right and below A.

95.8

164.3

95.4

165.0

< brighter dis.

68.5 >

69.6 >

138.17

0.81 >

96.8

164.9

96.7

165.0

68.17

68.3 >

136.47

0.85 >

0.83 >

Index to left and above B.

184.2

256.8

184.8

250.0

72.67

65.2 >

137.87

0.82 >



Oct. 19, 1896,

190.0  
2848.9  
184.9  
2857.5

58.9 >  
72.6 >  
131.5 >  
mean = 0.86 >

0.95 &gt;

0.88 &gt;

Settings rather difficult: images rather blurry: stars rather close.  
Position angle = 100: distance = 3.5  
magn. = 5.0 and 6.3

Σ 2082 42 Hercules: Phot R: W. obs

16 25 + 49.2  
22 11  
5 26

Position angle = 80°, distance = 2.5  
magn. = 4.2 and 10.0

Index to left.

171.5  
181.2  
171.0  
181.6

&lt; brighter dis.

9.7 >  
10.6 >  
20.3 >

5.26 &gt;

171.4  
180.9  
171.5  
181.0

9.5  
9.5  
19.0  
5.40 >  
5.33 >

Oct. 19, 1896.

Index to right.

262.4

272.1

261.4

271.4

9.7 &gt;

10.0 >

19.7 &gt;

5.32 &gt;

261.2

271.2

261.6

270.7

10.0 &gt;

9.1 >

19.1

5.39 &gt;

5.36 >mean = 5.34 >

Image faint in moonlight

M 2190 : P XVII : 163 : Phot. R: Wals

$$\begin{array}{r} 17 \\ 22 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 21 \\ 43 \\ \hline 12 \end{array}$$

+21.8

Position angle =  $20^\circ$  : Distance  $10''$  ;  
 magn. = 5.8 and 9.4



Oct. 19, 1896.

Index to right and below.

$255.7$   $\leftarrow$  brighter dis  
 $277.6$   
 $253.4$   
 $240.1$

$21.9 >$   
 $26.7 >$   
 $48.6 >$

$3.33 >$

$254.1$   
 $279.5$   
 $255.2$   
 $277.3$

$25.4 >$   
 $22.1 >$   
 $47.5 >$

$3.39 >$   
 $3.36 >$

Index to left and above.

$345.0$   
 $8.4$   
 $341.9$   
 $7.7$   
 $3$

$23.4 >$   
 $25.8 >$   
 $49.2 >$

$3.31 >$

$342.1$   
 $369.7$   
 $345.2$   
 $7.8$

$27.6 >$   
 $22.6 >$   
 $50.2 >$

$3.26 >$   
 $3.28 >$   
mean = 3.32 >

Oct. 19, 1896.

O at: Phot R: W obs

$$\begin{array}{r} 23 \\ -2 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 4 \\ 15 \\ \hline 49 \\ 11 \end{array}$$

-2.5

Index above.

235.5

&lt; van der.

295.6

60.1 ✓

239.8

55.2 ✓

295.0 ~~298.2~~

115.3 ✓ -1.30 ✓

238.8

296.0

57.2 ✓

237.0

58.1 ✓

295.1

115.3 ✓ -1.30 ✓  
-1.30 ✓

Index below.

326.5

26.0

60.0 ✓

329.8

53.5 ✓

23.3

113.5 ✓ -1.34 ✓

328.1

22.8

54.7 ✓

327.5

59.7 ✓

27.2

114.4 ✓ -1.32 ✓

van. is brighter than comp. van. -1.33 ✓  
mean -1.32 ✓
$$\begin{array}{r} 9 \\ \hline 9.19 \end{array}$$



Oct. 19, 1896.

M. P. 441

Phot Q: Wals

$$\begin{array}{r} 3 \\ 23 \\ -3 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 31 \\ 39 \\ 52 \\ \hline 8 \end{array}$$

$$+ 62.8$$

var is brighter than comp. star.  
Index to below.

$$330.2$$

$$23.9$$

$$327.2$$

$$26.9$$

&lt; var dis.

$$53.4$$

$$-1.34$$

$$59.7$$

$$113.14$$

$$325.6$$

$$27.5$$

$$332.0$$

$$26.6$$

$$61.9$$

$$-1.27$$

$$54.6$$

$$116.5 - 1.30$$

Index above

$$60.3$$

$$116.1$$

$$57.7$$

$$117.1$$

$$55.8$$

$$-1.30$$

$$59.14$$

$$115.12$$

$$56.2$$

$$117.3$$

$$60.0$$

$$114.7$$

$$61.1$$

$$-1.29$$

$$54.7$$

$$-1.30$$

$$115.8$$

$$-1.30$$

$$\begin{array}{r} 9 \quad 50 \\ \hline 14 \quad 46 \end{array}$$

Oct. 19, 1896.

Same again

$$\begin{array}{r}
 60.0 \\
 113.3 \\
 56.9 \\
 119.7 \\
 \hline
 53.3 - 1.28 \\
 62.8 \\
 116.1
 \end{array}$$

$$\begin{array}{r}
 58.5 \\
 116.6 \\
 62.3 \\
 113.0 \\
 \hline
 58.1 - 1.45 \\
 50.7 - 1.36 \\
 108.8
 \end{array}$$

Index below.

$$\begin{array}{r}
 150.8 \\
 203.9 \\
 147.6 \\
 207.7 \\
 \hline
 53.1 - 1.34 \\
 60.1 \\
 113.2
 \end{array}$$

$$\begin{array}{r}
 147.2 \\
 208.3 \\
 149.3 \\
 205.0 \\
 \hline
 61.1 - 1.26 \\
 55.7 - 1.30 \\
 116.8 - 1.33
 \end{array}$$

$$\begin{array}{r}
 56 \\
 2107 \\
 9 \overline{) 53.5}
 \end{array}$$



Oct. 19, 1896.

N 53' { <sup>48 Argini</sup> ~~PXX~~ 243 : Phot R : W obs
$$\begin{array}{r} 20 \\ 24 \\ \hline 44 \end{array}$$

$$\begin{array}{r} 32 \\ 21 \\ \hline 49 \end{array}$$

311

Index bulbos B.  
northward + dis  
< brighter
$$\begin{array}{r} 132.9 \\ 2319.7 \\ 131.5 \\ 221.0 \end{array}$$

$$\begin{array}{r} 86.8 > \\ 89.5 > \\ \hline 176.3 > \end{array} \quad 0.07 >$$

$$\begin{array}{r} 135.2 \\ 218.6 \\ 130.6 \\ 223.5 \end{array}$$

$$\begin{array}{r} 83.4 > \\ 92.9 > \\ \hline 176.3 > \end{array} \quad \begin{array}{r} 0.07 > \\ 0.07 > \end{array}$$

Index above. d.

$$\begin{array}{r} 225.9 \\ 314.4 \\ 222.2 \\ 310.7 \end{array}$$

$$\begin{array}{r} 88.5 > \\ 88.5 > \\ \hline 177.0 > \end{array} \quad 0.06 >$$

$$\begin{array}{r} 223.4 \\ 309.5 \\ 221.8 \\ 312.2 \end{array}$$

$$\begin{array}{r} 86.1 > \\ 90.4 > \\ \hline 176.5 > \end{array} \quad \begin{array}{r} 0.06 > \\ 0.06 > \end{array}$$

mean = 0.06 >

Oct. 19, 1896.

Position angle =  $160^\circ$ : distance = 3'  
 magn. = 5.9 and 6.1

$\Sigma 2809$  J-IV 38? : Phot R: Wds

$$\begin{array}{r} 21 \\ 24 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 31 \\ 52 \\ \hline 21 \end{array}$$

-1.0

Position angle = distance  
 magn. =

A. Index brighter and below.

160.9 < brighter dis.

191.1

165.5

188.2

30.27

22.77

52.97

3.147

164.1

187.7

160.7

190.1

23.67

29.47

53.07

3.147

3.147



Oct. 19, 1896.

B. Index to left and above.

253.0

281.3

255.1

278.4

28.3 &gt;

23.3 &gt;

51.6 &gt;

3.20 &gt;

254.0

278.9

252.4

281.5

24.9 &gt;

29.1 &gt;

54.10 &gt;

3.10 &gt;

3.15 &gt;

mean = 3.14 &gt;

Obs. forgot to estimate position angle  
~~but this was calculated~~2838  
 $\Sigma 57' \{ \begin{smallmatrix} 121, 123 \\ \text{Aphel } B \end{smallmatrix}$ 

Phot R: W abs.

21 32 +66.2

 $\frac{1}{3}$   $\frac{9}{37}$ Northern comp. thought to be brighter.  
Position angle =  $210^\circ$ . distance = 3'.  
magn. = 6.5 and 6.6.

Index below above A.

219.0

319.9

220.6

314.9

< north and brighter  
dis.

98.9 &gt;

94.3 &gt;

193.2 &gt;

-0.25 &gt;

Oct. 19, 1896.

220. 0

315. 8

217. 6

318. 0

$$\begin{array}{r}
 95.87 \\
 160.47 \\
 \hline
 196.27 \\
 \hline
 -0.317 \\
 \hline
 -0.287
 \end{array}$$

~~Index~~ Index to Index. B.

309. 8

44. 4

311. 8

46. 6

$$\begin{array}{r}
 95.17 \\
 94.57 \\
 \hline
 189.67 \\
 \hline
 -0.187
 \end{array}$$

309. 8

44. 9

308. 9

44. 0

$$\begin{array}{r}
 95.17 \\
 94.57 \\
 \hline
 190.27 \\
 \hline
 -0.197 \\
 \hline
 -0.187 \\
 \hline
 \text{mean} = -0.237
 \end{array}$$

B Lyrae too low so that  
comp. than at full brightness is  
at limit of visibility.



Oct. 21, 1896. (Wednesday)

7 0 cloudy

7 30 cloudy

8 20 Clear

$\Sigma$  2585  $\delta$  Sagittae: Phot R: W: vls

$$\begin{array}{r} 19 \\ 22 \\ \hline 3 \end{array} \quad \begin{array}{r} 43 \\ 57 \\ \hline 14 \end{array} \quad +18.8$$

Position angle =  $300^\circ$ : distance = 8''  
magn = 5.6 and 8.9.

8 45 clouds thick.

8 55 clouds too thick to measure.

Index to left and below.  
 ~~$\begin{array}{r} 257.1 \\ 276.0 \end{array}$~~  < brighter dis.  
~~clouds thick.~~ Reject.

8 59

9 0

9 30

Still cloudy

Oct. 21, 1896..

Clouds still thick.



(Thursday) Oct. 22. 1896.

B Lyrae : Phot. V : Gamma abs.

Index above.

b	21.5	338.7	< B dis.	41.5 >	
		20.2		41.9 >	2.10 >
		336.4		<u>83.4 &gt;</u>	
		18.3			

b	30.5	338.5		40.2 >	
		<del>16.5</del> 18.7		<u>40.2 &gt;</u>	2.18 >
		337.4		80.4 >	2.14 >
		17.6			

Index below

b	45.2	71.9			
		101.2		29.3 >	
		71.4		<u>32.2 &gt;</u>	2.80 >
		103.6		61.5 >	

b	50.1	71.8		29.6 >	
		101.4		<u>29.4 &gt;</u>	2.90 >
		71.8		59.0 >	2.85 >
b	36.8 >	101.2			

mean = 2.50 >

PA. 22. 1296.

re baphei

W: obs.

$$\begin{array}{r} 0 \\ 21 \\ \hline -2 \\ 9 \end{array}$$

30  
 35  
 55  
 4

+ 81.7

alvan done d

Well's War.

W: vhs.

20

31

+17.7

Abandoned.

$\Sigma$  2161 *P. l-arealis*: Phot.H: W:abs.

$$\begin{array}{r} 14 \\ 21 \\ \hline 4 \end{array}$$
$$\begin{array}{r} 19 \\ 53 \\ \hline 24 \end{array}$$

+ 39.3



Oct. 22, 1896.

Position angle =  $310^\circ$  distance =  $4''$   
 magn. = 4.2 and 5.3

Index to right

12.3 < brighter des:  
 69.4  
 5.0  
 73.4

57.1  
 68.4  
 125.5 1.07

5.7  
 74.2  
 9.3  
 70.9

68.5  
 61.6  
 130.1 0.98  
 1.02

Index to left.

94.7  
 161.5  
 94.6  
 164.7

100.7  
 60.8  
 70.1  
 130.9 0.96

93.9  
 164.5  
 97.7  
 158.0

70.6  
 60.3  
 130.9 0.96  
 0.96

mean = 0.99

Oct. 22, 1896.

 $\Sigma 2190$ ; P XVII 163; Phot Q. W. obs.

$$\begin{array}{r} 17 \\ 22 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 31 \\ 30 \\ \hline 59 \end{array}$$

+2111

Position angle =  $20^\circ$  distance =  $10''$   
magn. = 5.9 and 9.3

Index to right and below.

73.9 &lt; brighter dis.

97.9

75.1

99.4

24.0 &lt;

24.3 &lt;

48.3 &lt;

3.35 &gt;

73.0

97.8

72.8

98.8

24.8 &gt;

26.0 &gt;

50.8 &gt;

3.24 &gt;

3.30 &gt;

Index to left and above.

165.7

187.9

163.0

187.6

22.2 &gt;

24.6 &gt;

46.8 &gt;

3.42 &gt;

166.6

189.2

164.4

187.2

22.6 &gt;

22.8 &gt;

45.4 &gt;

3.49 &gt;

3.46 &gt;

mean = 3.38 &gt;



Oct 22. 1896

 $\Sigma$  2220 in Hirculis - Phot Q. Wols

$$\begin{array}{r} 17 \\ 22 \\ \hline 5 \end{array} \quad \begin{array}{r} 42 \\ 47 \\ \hline 5 \end{array} \quad +27.8$$

Position angle =  $240^\circ$ ; Distance =  $25''$   
 magn = 2.7 and 9.3.

Index to right and below

173.0

179.6

173.4

179.7

173.9

179.5

173.1

179.8

&lt; brighter dis.

6.6 &gt;

6.3 &gt;

12.9 >

6.25 &gt;

5.6 &gt;

6.7 &gt;

12.3 >

6.35 &gt;

6.30 &gt;

Index to left and above.

263.6

269.9

263.7

269.7

6.3 &gt;

6.0 &gt;

12.3 >

6.35 &gt;

Oct. 22, 1896.

263.7  
269.8  
263.1  
269.8

6.17  
6.77  
12.87  
6.267  
6.307  
mean = 6.307

M. Q 441 : P but R: W:als

3  
22  
-4  
7

31  
5  
26  
34

+62-8

var. brighter than comp. star.  
Existed to left and behind.

33 4.5 &lt; var. dis.

20.6

329.1

27.1

46.1 &lt;

58.0 &lt; 1.0-67

104.1 <

(1.49)7

327.5

27.7

333.0

22.6

60.2 &lt;

49.6 &lt;

109.8 <

1.427



Oct. 22. 1896.

Index to right and above.

63.0

112.3

55.2

117.1

49.3 &lt;

61.8 &lt;

111.1 &lt;

1.39 &gt;

(1.36) &gt;

55.6

117.2

61.2

113.1 + 12.3

61.6 &lt;

51.9

113.5

1.34 &gt;

M = 1.42 &gt;

8 [54]

8 52

Full Bright  
Wellis War: but. 5:

W. obs.

20

23

2

31

20

49

+ 17.7

Index above

281.8

15.8

288.9

10.8

< comp. star dis  
94.0 >

21.9 &gt;

175.9 &gt; + 0.02 &gt;

[9 22 10]

Oct 22, 1896.

9 22 0

289.3  
13.0  
282.3  
15.9

83.7 ✓  
93.6 ✓  
177.3 ✓  
0.05 ✓  
+0.06 ✓

Index reduced.

9 26 52

13.2  
107.2  
19.0  
99.6

94.0 ✓  
80.6 ✓  
174.6 ✓  
+0.10 ✓

9 28 40  
4(21 43.2)  
9 20 20.84  
-0.4.1  
14 24 31.7

19.7  
103.0  
12.0  
107.7

83.3 ✓  
95.7 ✓  
179.0 ✓  
+0.02 ✓  
+0.06 ✓  
mean +0.06 ✓

9 30 52

11.9  
108.6  
19.8  
100.1

96.7 ✓  
80.3 ✓  
177.0 ✓  
+0.06 ✓

9 32 33

18.1  
101.1  
11.9  
108.2

85.0 ✓  
96.3 ✓  
179.3 ✓  
+0.01 ✓  
+0.04 ✓



Oct. 22. 1896.

Index Tab.

9 35 53

102.1

196.9

109.8

192.2

94.8 ✓

82.4 ✓

177.2 ✓

0.0 ✓

9 37 38

110.3

192.2

102.3

198.3

81.9 ✓

96.0 ✓

177.9 ✓

0.0 ✓

+0.0 ✓

mean +0.0 ✓

14 33 15.9

105.5

200.7

112.1

194.8

95.2 ✓

82.7 ✓

177.9 ✓

+0.0 ✓

9 39 32

112.6

189.9

103.1

200.0

77.3 ✓

96.9 ✓

174.2 ✓

+0.1 ✓

+0.02 ✓

9 41 02

Index Tab.

194.4

286.9

200.3

280.3

92.5 ✓

80.0 ✓

172.5 ✓

+0.1 ✓

9 43 39

Oct. 22 1896.

$$\begin{array}{r}
 9 \quad 45 \quad 27 \\
 \hline
 4 \quad 169 \quad 404 \\
 9 \quad 42 \quad 252 \\
 \hline
 14 \quad 41 \quad 30.9
 \end{array}$$

$$\begin{array}{r}
 198.7 \\
 282.2 \\
 193.3 \\
 286.6
 \end{array}$$

$$\begin{array}{r}
 83.5 \checkmark \\
 93.3 \checkmark \\
 \hline
 176.8 \checkmark + 0.06 \checkmark \\
 \hline
 + 0.10 \checkmark \\
 \hline
 \text{mean} + 0.09 \checkmark
 \end{array}$$

$$9 \quad 47 \quad 38$$

$$\begin{array}{r}
 195.2 \\
 288.3 \\
 200.6 \\
 282.9
 \end{array}$$

$$\begin{array}{r}
 93.1 \checkmark \\
 82.3 \checkmark \\
 \hline
 175.4 \checkmark + 0.09 \checkmark
 \end{array}$$

$$9 \quad 49 \quad 33$$

$$\begin{array}{r}
 200.4 \\
 282.8 \\
 194.6 \\
 285.8
 \end{array}$$

$$\begin{array}{r}
 82.4 \checkmark \\
 91.2 \checkmark \\
 \hline
 173.6 \checkmark + 0.12 \checkmark \\
 \hline
 + 0.10 \checkmark
 \end{array}$$

Index IV above.

$$9 \quad 52 \quad 12$$

$$\begin{array}{r}
 282.8 \\
 17.5 \\
 290.2 \\
 12.1
 \end{array}$$

$$\begin{array}{r}
 94.7 \checkmark \\
 81.9 \checkmark \\
 \hline
 176.6 \checkmark + 0.06 \checkmark
 \end{array}$$

$$\begin{array}{r}
 9 \quad 54 \quad 09 \\
 \hline
 4 \quad 203 \quad 324 \\
 9 \quad 50 \quad 532 \\
 \hline
 14 \quad 49 \quad 58.9
 \end{array}$$

212

$$\begin{array}{r}
 288.4 \\
 12.2 \\
 284.4 \\
 18.0
 \end{array}$$

$$\begin{array}{r}
 83.8 \checkmark \\
 93.6 \checkmark \\
 \hline
 177.4 \checkmark + 0.05 \checkmark \\
 \hline
 + 0.06 \checkmark \\
 \hline
 \text{mean} + 0.08 \checkmark
 \end{array}$$



Oct. 22, 1896.

9 56 42

283.0

17.6

289.6

10.0

94.6 ✓

80.4 ✓

175.0 ✓ +0.09 &gt;

9 58 16

290.1

9.7

283.6

15.6

79.6 ✓

92.0 ✓

171.6 ✓ +0.16 >  
+0.12 >

Index below.

10 1 04

11.9

107.9

19.7

102.2

96.0 ✓

82.5 ✓

178.5 ✓ +0.03 &gt;

10 2 48

19.0

103.4

14.8

107.4

84.4 ✓

92.6 ✓

177.0 ✓ +0.06 >  
+0.04 >

Mean +0.02 &gt;

$$\begin{array}{r} 4 \overline{) 238 \ 502} \\ 9 \ 59 \ 42.54 \\ \underline{-54.1} \\ 14 \ 58 \ 48.4 \end{array}$$

Oct. 22. 1896.

Arnold + Dent #958 = Band # 394

$$9^h \quad 16^m \quad \overset{s}{53.9} = 9^h \quad 16^m \quad \overset{m.}{00.0}$$

$$54.1$$

o. beti : Phot R : W. obs.

2	4	-2.5
$\frac{0}{-1}$	$\frac{44}{20}$	
10	40	

Index to right and above.

~~$$\begin{array}{r} 58.1 \\ 114.6 \end{array}$$~~
~~58.0~~
~~115.2~~
~~60.4~~
~~111.5~~
~~57.6~~
~~115.1~~
~~56.5~~
~~57.2~~
~~112.7~~
~~51.1~~
~~57.5~~
~~108.6~~

Reject.

Phot not clamped.



Oct. 22. 1896.

Index to left and below,

151.3 &lt; var dis.

202.0

149.4 50.7 ✓

205.2 55.8 ✓

106.5 ✓ -1.5 ✓

149.4

205.0 55.6 ✓

150.2 53.0 ✓

203.2 108.6 ✓ -1.4 ✓

-1.4 ✓

Index to right and above

240.7

294.4

239.9

295.9

53.7 ✓

56.0 ✓

109.7 ✓ -1.42 ✓

240.7

292.9

240.6

293.7

52.2 ✓

52.1 ✓

105.3 ✓ -1.53 ✓-1.42 ✓

• mean -1.42 ✓

10 36

10 4

10 38 30  
54

10 37 36

Oct. 22, 1896.

 $\Sigma 57' \begin{cases} 121, 123 \\ \text{Cephei } \beta \end{cases}$ 

Phot R:

W: obs.

21  
 $\frac{1}{3}$ 32  
 $\frac{10}{38}$ 

+66.2

Position angle =  
mag. =

Distance =

Index above. A.

222.3

&lt; ninth following dis

314.4

218.6

92.17

315.0

96.47

-0.167

188.57

222.6

314.2

91.67

219.9

96.07

-0.147

315.9

187.67

-0.157

Index below. B.

312.0

~~311.4~~

39.8

~~53.5~~

309.5

~~309.8~~

46.0

~~37.5~~

87.87

-0.087

96.57

184.3



Oct. 22, 1896.

11 03

308.7  
45.3  
310.8  
43.8

96.6 > - 0.18 >  
93.0 > - 0.13 >  
189.6 >  
mean = -0.14 >

North following comp. thought to be  
the brightest.

Same again B.

11 05

314.0  
42.6  
309.7  
44.3

88.0 >  
94.6 > - 0.05 >  
182.6 >

308.3  
46.2  
311.4  
45.2

98.0 >  
93.8 > - 0.22 >  
191.8 > - 0.14 >

Index above. C.

45.1  
131.5  
29.9  
135.1

86.2 >  
95.2 > - 0.03 >  
181.4

Oct. 22 1896

39.4  
136.2  
42.6  
120.9

96.8 >  
88.3 > -0.097  
185.1 > -0.127  
mean = -0.107

Dis. Jup. I. Phot. R. W. Dr. Colson rec,  
Comp. with second est. fol. = Sat. IV.



Oct. 22, 1966.

Checked.

16 <sup>th</sup> # 44	26			118.0		
	46	16 44 54 <sup>x</sup>		235.0	117.0 <sup>v</sup>	
	45	- 0 54 <sup>x</sup>		121.1	<u>111.9<sup>v</sup></u>	<del>0.96<sup>v</sup></del>
	22	16 44 00 <sup>x</sup>		233.0	<u>114.4<sup>v</sup></u>	-1.0 <sup>v</sup>
46	44	16 46 02 <sup>x</sup>		120.9	114.1 <sup>v</sup>	
	54	- 0 54 <sup>x</sup>		235.0	<u>116.0<sup>v</sup></u>	<del>0.98<sup>v</sup></del>
	10	119.0 ←		190.0	<u>230.1<sup>v</sup></u>	
	20	probably		235.0	<u>115.0<sup>v</sup></u>	-1.0 <sup>v</sup>
47	35-			135.0		
	43	16 46 48 <sup>x</sup>		234.5	99.5 <sup>v</sup>	<del>0.70<sup>v</sup></del>
	52	- 0 54 <sup>x</sup>		119.0	<u>117.0<sup>v</sup></u>	
	02	16 45 54 <sup>x</sup>		236.0	<u>108.2<sup>v</sup></u>	-0.7 <sup>v</sup>
	12			122.2		
	21	16 47 25 <sup>x</sup>		236.2	114.0 <sup>v</sup>	<del>0.96<sup>v</sup></del>
	28	0 - 0 54 <sup>x</sup>		127.0	<u>115.2<sup>v</sup></u>	
	38	16 46 31 <sup>x</sup>		232.2	<u>114.6<sup>v</sup></u>	-1.0 <sup>v</sup>
48	51			123.8		
	02	16 48 07 <sup>x</sup>		236.0	112.2 <sup>v</sup>	<del>0.86<sup>v</sup></del>
	11	- 0 54 <sup>x</sup>		121.1	<u>112.1<sup>v</sup></u>	
	24	16 47 13 <sup>x</sup>		233.2	<u>112.2<sup>v</sup></u>	-0.9 <sup>v</sup>
49	34			119.5		
	41	16 48 50 <sup>x</sup>		233.0	113.5 <sup>v</sup>	<del>0.99<sup>v</sup></del>
	57	- 0 54 <sup>x</sup>		119.0	<u>117.0<sup>v</sup></u>	
	07	16 47 56 <sup>x</sup>		236.0	<u>115.2<sup>v</sup></u>	-1.0 <sup>v</sup>

Oct. 22. 1896.

15		118.7	
24	16 49 28	236.0	117.3
32	- 0 54	115.8	119.2
43	16 48 34	230.0	236.5
			118.2
			-1.1

50	52		122.6	
	01	16 50 06	230.8	108.2
	11	- 0 54	120.0	112.8
	22	16 49 12	232.8	221.0
				110.5
				-0.8

	32	16 49 38	-0.7	107.9	124.2	
	40	46	-0.9	112.1	232.1	107.9
	51	57	-0.8	110.0	120.0	110.0
51	02	50 08	-0.7	108.8	230.0	217.9

	11	17	-0.7	109.3	121.2	
	22	28	-0.7	107.3	230.0	109.3
	39	45	-0.5	102.3	123.2	102.3
	49	55	-0.3	97.3	225.5	216.6

52	58	51 04	-0.6	104.8	128.2	
	09	15	-0.5	104.0	233.0	104.8
	19	25	-0.2	96.0	129.0	96.0
	29	35	-0.1	92.8	225.0	200.8

53	50	56	+0.3	82.9	132.2	
	02	52 8	+0.6	74.9	215.1	82.9
	13	19	+0.8	69.0	141.2	69.0
	30	41	+1.2	60.4	210.2	151.9



Oct. 22, 1896.  
 $\begin{array}{r} [\sqrt{3}] \\ \sqrt{4} \end{array}$  48 16 52 54 149.5  
~~54~~ 54 

---

 137.2  
~~55~~ Seeing bad.

### Limit of Visibility.

57 06 140.9  
 31 16 57 38 \* ~~140.9~~  
 44 54 215.0 74.1  
 58 10 16 56 44 \* 148.0 65.0  
 213.0 69.6

Seeing extremely bad. Clouds came up about this region shortly before eclipse, causing seeing to be very poor and blurry. It was impossible to see the satellite except a portion of the time, and when the satellite began to diminish in brightness, the conditions became worse still.

A. L. D. 95 L.  
 17 18 53.7  
 19 53.2

B. 39 K.  
 17 18 0.0  
 19 0.0

Oct 24, 1896. (Saturday)

B Lyrae. Phot. N: Cram. obs.  
Index above.

~~32.0~~ ~~72.0~~ Nicol moved: Reject

~~56.8~~

b

13.9

36.7 < B dis.

74.6

37.9 >

2.26 >

34.7

39.9 >

74.6

77.8 >

3 4,639.6

b

28.8

76.6

42.0 >

2.26 >

39.6

35.9 >

2.26 >

75.5

77.9 >

Index below.

b

35.6

127.0

163.0

36.0 >

2.60 >

129.9

31.2 >

161.1

67.2 >

129.7 + 31.0

b

46.0

32.8 >

31.5

2.71 >

b

31.1 >

162.5

31.3 >

2.66 >

129.8

161.1

64.1 >

mean = 2.46 >



Oct. 24, 1896.

Well's War: Phot. T: W. obs.

20	31	+17.7
<u>21</u>	<u>39</u>	
1	8	

Index to left and above

~~|       |   |
|-------|---|
| 123.7 | < |
| 206.3 |   |
| 117.2 |   |
| 210.4 |   |~~

8 2.6
<u>9 3.2</u>
175.8

something  
wrong  
Right.

122.8

206.1

120.1

209.4

8 3.3 &lt;

8 9.3 <

17.2 16 &lt;

0.14

119.3

210.2

125.1

203.3

100.9 &lt;

78.2 <

179.1 &lt;

0.02

7 13 47

7 17 00

[14] 55

Oct 24, 1896  
Index to right and below. I.

7	21	36	216.1		
			298.3	82.2 <	
			211.9	<u>86.0</u> <	0.22
			197.9	168.2 <	
			212.8		(0.24)
7	23	10	300.7	87.9 <	
			215.7	<u>78.7</u> <	0.25
7	20	10.2	294.4	166.6 <	
		-34			
12	19	36			

			217.2		
7	25	07	293.5	76.3 <	
			211.9	<u>88.5</u> <	0.29
			300.4	164.8 <	
			211.3		(0.28)
			299.9	88.6 <	
			217.4	<u>76.7</u> <	0.28
			294.1	165.3 <	

Index to left and above. II

			306.4		
7	29	50	21.0	74.6 <	
			299.7	<u>90.7</u> <	0.28
			30.4	165.3 <	



Oct. 24, 1896.

$$\begin{array}{r}
 31 \quad 46 \\
 \hline
 4 \overline{) 113 \quad 22} \\
 7 \quad 28 \quad 200 \\
 \hline
 12 \quad 27 \quad 46
 \end{array}$$

$$\begin{array}{r}
 300.7 \\
 30.5 \\
 307.3 \\
 21.9
 \end{array}$$

$$\begin{array}{r}
 8 \\
 89.8 < \\
 \hline
 74.6 < \quad 0.30 \\
 174.4 \\
 6
 \end{array}
 \quad (0.29)$$

$M = 0.28$

Arnold Dent #958.

Band #394.

$$\begin{array}{r}
 7^h \quad 35^m \quad 33.7 = 7^h \quad 35^m \quad 00.0 \\
 \text{Add } -33.7
 \end{array}$$

$$\begin{array}{r}
 7 \quad 43 \quad 50
 \end{array}$$

$$\begin{array}{r}
 309.3 \\
 23.9 \\
 299.8 \\
 29.9
 \end{array}$$

$$\begin{array}{r}
 74.6 < \\
 90.1 < \\
 \hline
 164.7 < \quad 0.29
 \end{array}$$

$$\begin{array}{r}
 45 \quad 43
 \end{array}$$

$$\begin{array}{r}
 303.9 \\
 29.9 \\
 308.6 \\
 24.4
 \end{array}$$

$$\begin{array}{r}
 86.0 < \\
 75.8 < \quad 0.30 \\
 \hline
 161.8 < \quad (0.32)
 \end{array}$$

Index to right and below. III

$$[K2] \quad 08$$

$$\begin{array}{r}
 39.8 \\
 113.7 \\
 31.8 \\
 115.9
 \end{array}$$

$$\begin{array}{r}
 73.9 < \\
 84.1 < \quad 0.42 \\
 \hline
 158.0 <
 \end{array}$$

Oct. 24, 1896.

$$\begin{array}{r}
 49 \quad 48 \\
 4 \overline{) 27 \quad 29} \\
 7 \quad 46 \quad 5-2.0 \\
 \quad \quad -34 \\
 \hline
 12 \quad 46 \quad 18
 \end{array}$$

209

$$\begin{array}{r}
 30.7 \\
 117.2 \\
 38.2 \\
 111.0
 \end{array}$$

$$\begin{array}{r}
 86.5 < (0.40) \\
 72.8 < 0.39 \\
 159.3 <
 \end{array}$$

$$M = 0.36$$

$$\begin{array}{r}
 53 \quad 27
 \end{array}$$

$$\begin{array}{r}
 38.2 \\
 112.0 \\
 32.1 \\
 116.7
 \end{array}$$

$$\begin{array}{r}
 73.8 < \\
 84.6 < 0.81 \\
 158.4 <
 \end{array}$$

$$\begin{array}{r}
 55 \quad 03
 \end{array}$$

$$\begin{array}{r}
 34.1 \\
 115.0 \\
 36.9 \\
 112.3
 \end{array}$$

$$\begin{array}{r}
 80.9 < (0.82) \\
 75.4 < 0.80 \\
 156.3 <
 \end{array}$$

IV

Index to left and above.  
 Reject: wrong image dis

$$\begin{array}{r}
 59 \quad 45
 \end{array}$$

$$\begin{array}{r}
 59 \quad 10
 \end{array}$$

$$\begin{array}{r}
 \cancel{29.0} \\
 \cancel{123.9} \\
 126.9 \\
 203.4 \\
 121.7 \\
 207.5
 \end{array}$$

$$\begin{array}{r}
 \cancel{94.9} \\
 76.5 < \\
 85.8 < 0.34 \\
 162.3 <
 \end{array}$$



Oct. 24, 1896.

$$\begin{array}{r}
 8 \quad 1 \quad 00 \\
 \hline
 4 \overline{) 228 \quad 40} \\
 7 \quad 57 \quad 10 \\
 \hline
 12 \quad 58 \quad 36
 \end{array}$$

122.4  
206.9  
129.8  
204.1

$$\begin{array}{r}
 8 \quad 4.5 < \\
 7 \quad 4.3 < \\
 \hline
 158.8 <
 \end{array}
 \begin{array}{l}
 (0.37) \\
 0.40 \\
 M = 0.40
 \end{array}$$

8 07 29

127.6  
202.5  
122.5  
207.0

$$\begin{array}{r}
 7 \quad 4.9 < \\
 8 \quad 4.5 < \\
 \hline
 159.4 <
 \end{array}
 \begin{array}{l}
 0.39
 \end{array}$$

8 09 12

122.6  
205.1  
127.2  
201.2

$$\begin{array}{r}
 8 \quad 2.5 < \\
 7 \quad 4.0 < \\
 \hline
 156.5 <
 \end{array}
 \begin{array}{l}
 (0.42) \\
 0.40
 \end{array}$$

Index height and below. V.

8 17 54

217.9  
291.4  
217.0  
298.1

$$\begin{array}{r}
 7 \quad 3.5 < \\
 8 \quad 1.1 < \\
 \hline
 154.6 <
 \end{array}
 \begin{array}{l}
 0.49
 \end{array}$$

8 13 45

213.9  
295.4  
220.5  
290.3

$$\begin{array}{r}
 8 \quad 1.5 < \\
 6 \quad 9.8 < \\
 \hline
 151.3 <
 \end{array}
 \begin{array}{l}
 (0.42) \\
 0.55
 \end{array}$$

$$\begin{array}{r}
 8 \quad 10 \quad 34.0 \\
 \hline
 4 \overline{) 42 \quad 18} \\
 8 \quad 10 \quad 34.0 \\
 \hline
 13 \quad 10 \quad 0
 \end{array}$$

$$M = 0.47$$

Oct. 24, 1896.

8 15 22

220.4

291.5

216.0

295.9

71.1 &lt;

79.9 < 0.56

151.0 &lt;

(0.54)

8 17 00

214.5

295.3

219.3

291.2

80.8 &lt;

71.9 <

152.7 &lt;

0.52

VI

Index to left and above.

8 19 49

309.3

24.2

304.0

28.0

74.9 &lt;

84.0 <

158.9 &lt;

0.40

(0.46)

8 21 17

304.9

24.8

310.0

22.2

79.9 &lt;

72.2 <

152.1 &lt;

0.53

8 18 25.8

-34

13 17 5.2

8 23 26

311.8

20.7

304.9

27.5

68.9 &lt;

82.6 <

151.5 &lt;

0.55



Oct. 24, 1896.

8	25	26	304.1	83.4 <	(0.54)
			27.5	69.3 <	
			811.1	152.7 <	0.52
			20.4		

VII

Index to right and below.

8	29	00	39.4	69.1 <	
			108.5	83.7 <	0.52
			32.4	152.8 <	
			116.1		
			32.1		(0.54)
8	30	17	115.4	83.3 <	
			41.3	67.1 <	0.57
			108.4	150.4 <	M = 0.54
$\begin{array}{r} 4 \overline{) 108} \quad 9 \\ 8 \quad 27 \quad -34 \quad 2.02 \\ \hline 13 \quad 26 \quad 28 \end{array}$					

8	31	50	41.0	67.3 <	
			108.2	78.3 <	0.66
			36.4	145.6 <	
			114.7		

8	33	10	35.4	79.3 <	(0.66)
			114.7	66.5 <	0.66
			42.1	145.8 <	
			108.6		

Oct. 24, 1896.

Index to ~~the~~ <sup>VIII</sup> left and above

8 35 51

130.2

201.0

70.8 &lt;

125.7

77.7 &lt;

0.60

203.4

148.5 &lt;

126.0

(0.09)

205.2

79.2 &lt;

130.3

70.4 &lt;

0.58

200.7

149.6 &lt;

M = 0.62

37 43  
 4/18 34  
 8 34 38.5  
 -34  
 13 34 4

10x

8 40 12

131.1

199.6

68.5 &lt;

126.1

79.8 &lt;

0.61

205.9

148.3 &lt;

(0.09)

124.7

79.5 &lt;

204.2

70.6 &lt;

0.07

129.6

150.1 &lt;

200.2

8 40 54

Index to right <sup>IX</sup> and below.

219.3

70.0 &lt;

289.3

79.9 &lt;

0.70

217.9

143.9 &lt;

291.8

8 44 10



Oct. 24, 1896.

8	45	49		217.4		(0.72)
	4	11	11	293.2	75.8 <	
				220.6	66.6 <	0.73
8	42	47.8		287.2	142.4 <	
		-34				$M = 0.66$
13	42	14				

8	49	14		223.1		
				291.2	68.1 <	
				218.3	74.6 <	0.72
				292.9	142.7 <	

8	50	20		217.2		(0.74)
				292.3	75.1 <	
				222.5	65.7 <	0.76
				288.2	140.8 <	

II  
Index to left and above.

8	52	48		312.3		
				17.9	65.6 <	
				307.2	74.8 <	0.77
				22.0	140.4 <	

8	54	14		309.2		(0.76)
	4	20	6	22.0	72.8 <	
				310.6	68.3 <	0.75
8	57	41.5		18.9	141.1 <	
		-34				$M = 0.75$
13	57	8				

Oct. 24, 1896.

9 0 28

312.4

18.6

308.3

23.9

66.2 &lt;

$$\frac{75.6}{141.8} < 0.74$$

9 02 10

306.9

23.2

313.0

19.0

76.3 &lt;

$$\frac{66.0}{142.3} < 0.73$$

(0.74)

Index to right and below.

45.6

9 04 25

107.4

39.7

109.8

61.8 &lt;

$$\frac{70.1}{131.9} < 0.94$$

40.0

(0.91)

9 05 58

111.0

45.8

109.5

71.0 &lt;

$$\frac{63.7}{134.7} < 0.88$$

M = 0.82

$$\begin{array}{r} 4 \overline{) 137} \\ 8 \phantom{0} \\ \hline 3 \phantom{0} \\ 16.8 \\ \hline -34 \\ \hline 142 \phantom{0} \end{array}$$

41.8

9 08 03

107.9

38.6

110.9

66.1 &lt;

$$\frac{72.3}{138.4} < 0.81$$



Oct. 24, 1896

9 09 25

39.7  
109.0  
42.9  
106.5

69.3 < (0.86)  
63.6 < 0.92  
132.9 <

Index to left <sup>XII</sup> and above.

9 12 22

131.2  
200.9  
127.4  
203.7

69.7 <  
76.3 < 0.65  
146.0 <

9 12 54  
443 55-  
9 10 5-8.8  
-34  
14 10 25-

180  
10  
200-

125.1  
199.9  
133.0  
192.0

74.8 < (0.72)  
65.0 < 0.78  
139.8 <  
 $M = 0.79$

9 15 37

122.5  
195.5  
128.0  
202.5

63.0 <  
74.8 < 0.82  
137.8 <

9 17 00

126.2  
200.4  
131.6

74.2 < (0.80)  
65.6 < 0.78  
139.8 <

197.2 + 99.2

Oct. 24, 1896.

Index to right and below XIII

9 20 17

224.7

286.4

219.8

292.1

61.7 &lt;

72.3 &lt;

124.0 &lt;

0.90

(0.90)

220.1

290.8

223.3

286.5

70.7 &lt;

63.2 &lt;

133.9 &lt;

0.90

M = 0.85

9 21 42  
~~474 36~~  
 9 18 39  
~~-34~~  
 14 18 5-

227.5

284.5

221.0

289.4

57.0 &lt;

68.4 &lt;

125.4 &lt;

1.08

(1.03)

219.4

290.5

225.5

284.4

71.1 &lt;

58.9 &lt;

130.0 &lt;

0.92

XIV

Index to left and above.

314.2

15.6

313.5

19.4

61.4 &lt;

65.9 &lt;

127.3 &lt;

1.04

9 30 14



Oct. 24, 1896.

$$\begin{array}{r}
 9 \quad 31 \quad 30 \\
 \hline
 4 \overline{) 116 \quad 15} \\
 9 \quad 29 \quad 03.8 \\
 \hline
 14 \quad 28 \quad 30
 \end{array}$$

$$313.4$$

$$20.0$$

$$314.1$$

$$15.0$$

$$66.6 <$$

$$60.9 <$$

$$127.5 <$$

$$(1.04)$$

$$1.03$$

$$M = 1.04$$

$$9 \quad 41 \quad 58$$

$$316.0$$

$$16.2$$

$$312.5$$

$$16.3$$

$$60.2 <$$

$$63.8 <$$

$$124.0 <$$

$$1.11$$

$$(1.12)$$

$$9 \quad 42 \quad 08$$

$$313.7$$

$$17.2$$

$$315.9$$

$$15.1$$

$$63.5 <$$

$$59.2 <$$

$$122.7 <$$

$$1.13$$

IV

Index to right and below.

$$46.7$$

$$102.1$$

$$45.0$$

$$105.1$$

$$55.4 <$$

$$60.1 <$$

$$115.5 <$$

$$1.29$$

$$9 \quad 44 \quad 50$$

$$45.3$$

$$106.1$$

$$46.2$$

$$102.3$$

$$60.8 <$$

$$56.1 <$$

$$116.9 <$$

$$(1.28)$$

$$1.26$$

$$M = 1.26$$

$$\begin{array}{r}
 9 \quad 46 \quad 04 \\
 \hline
 4 \overline{) 16 \quad 0} \\
 9 \quad 44 \quad 0 \\
 \hline
 14 \quad 43 \quad 26
 \end{array}$$

Oct. 24, 1896.

9 48 37

48.0	54.2 <	
106.2	58.4 <	1.36
45.0	<u>58.4</u>	
103.7	112.6 <	

9 50 08

46.1	61.0 <	(1.35)
107.1	52.2 <	
49.0	<u>52.2</u>	1.34
101.2	193.2 <	

XVI

Index to left and above

9 52 38

137.2	56.8 <	
194.0	67.0 <	1.11
132.1	<u>67.0</u>	
199.1	123.8 <	

(1.09)

9 54 05

132.4	66.3 <	
198.7	59.6 <	1.07
135.0	<u>59.6</u>	
194.6	125.9 <	

M = 1.22

9	57	22
		-34
14	50	38

9 56 49

192.8	734.4	58.4 <	
	<del>192.2</del>	66.6 <	1.08
	130.1	<u>66.6</u>	
	196.7	125.0 <	



Oct. 24, 1896.

9 58 29

133.1  
198.4  
136.1  
191.0

65.3 <  
54.9 <  
120.2 <

(1.14)

1.19

right XVII  
Index to left and below.

10 00 55

227.9  
284.3  
225.6  
285.6

56.4 <  
60.0 <  
116.4 <

1.27

10 02 24

4(238 37)

9 59 39.2

14 59 5

224.5  
283.9  
229.6  
280.7

59.4 <  
51.1 <  
110.5 <

(1.34)

1.41

M = 1.24

10 06 23

231.1  
279.9  
224.2  
296.9

48.8 <  
62.7 <  
111.5 <

1.38

(1.38)

10 07 27

226.2  
285.1  
228.9  
282.1

58.9 <  
53.2 <  
112.1 <

1.37

Oct 24, 1896.

XVIII  
Index to left and above

10 10 17

320.0

13.3

315.4

16.1

53.3 &lt;

$$\begin{array}{r} 60.7 \\ \hline 114.0 \end{array}$$

1.33

(1.32)

316.5

17.0

319.2

12.8

60.5 &lt;

$$\begin{array}{r} 53.6 \\ \hline 114.1 \end{array}$$

1.32

 $M = 1.30$ 

10 11 39

$$\begin{array}{r} 4 \overline{) 36 \ 16} \\ 10 \ 9 \ 04 \\ \hline 15 \ 8 \ 30 \end{array}$$

10 12 18

320.3

12.6

315.3

16.2

52.3 &lt;

$$\begin{array}{r} 60.9 \\ \hline 113.2 \end{array}$$

1.34

(1.38)

10 14 38

316.8

14.5

320.2

11.8

57.7 &lt;

$$\begin{array}{r} 51.6 \\ \hline 109.3 \end{array}$$

1.43

XIX  
Index to right and below

10 12 13

51.0

100.0

47.9

102.9

49.0 &lt;

$$\begin{array}{r} 55.0 \\ \hline 104.0 \end{array}$$

1.56



Oct. 24. 1896

$$\begin{array}{r}
 10 \quad 19 \quad 40 \\
 \hline
 4 \overline{) 26 \quad 9} \\
 10 \quad 16 \quad 32 \\
 \hline
 \quad \quad -34 \\
 \hline
 15 \quad 15 \quad 58
 \end{array}$$

$$\begin{array}{r}
 47.8 \\
 101.6 \\
 51.6 \\
 99.9
 \end{array}$$

$$\begin{array}{r}
 53.8 < \\
 48.3 < \\
 \hline
 102.1 <
 \end{array}$$

(1.58)

1.61

 $M = 1.48$ 

10 27 19

$$\begin{array}{r}
 54.1 \\
 99.8 \\
 51.0 \\
 101.4
 \end{array}$$

$$\begin{array}{r}
 45.7 < \\
 50.4 < \\
 \hline
 96.1 <
 \end{array}$$

1.70

(1.68)

$$54.0 <$$

$$\begin{array}{r}
 47.7 < \\
 101.7 <
 \end{array}$$

1.61

10 29 00

$$\begin{array}{r}
 50.0 \\
 104.0 \\
 51.1 \\
 98.8
 \end{array}$$

~~XX~~  
Index to left and above.

$$\begin{array}{r}
 138.8 \\
 189.6 \\
 139.0 \\
 191.0
 \end{array}$$

$$\begin{array}{r}
 50.8 < \\
 52.0 < \\
 \hline
 102.8 <
 \end{array}$$

1.59

10 31 32

$$\begin{array}{r}
 138.8 \\
 191.4 \\
 140.2 \\
 189.0
 \end{array}$$

$$\begin{array}{r}
 52.6 < \\
 48.8 < \\
 \hline
 101.4 <
 \end{array}$$

(1.60)

1.62

 $M = 1.64$ 

$$\begin{array}{r}
 10 \quad 32 \quad 50 \\
 \hline
 4 \overline{) 120 \quad 41} \\
 10 \quad 30 \quad 10.2 \\
 \hline
 \quad \quad -34 \\
 \hline
 15 \quad 29 \quad 36
 \end{array}$$

Oct. 24, 1896.

10 37 22

139.2		
187.8	48.6 <	1.64 <
138.8	<u>52.2 &lt;</u>	
194.0	100.8 <	

10 39 02

138.6	52.4 <	
191.0	48.6 <	1.63 <
140.5	<u>101.0 &lt;</u>	
189.1		1.64 <

~~XXX~~  
Index to right and below.

10 42 32

231.9		
279.2	47.3 <	
230.3	49.6 <	1.73 <
279.9	<u>96.9 &lt;</u>	

10 44 30

232.0		
279.9	47.9 <	1.86 <
232.9	44.1 <	1.80 <
277.0	<u>92.0 &lt;</u>	1.72 <

206

4	163	26
10	40	57.5
		-34
10	40	18

10 46 51

232.9	45.1 <	
278.0	46.1 <	1.88 <
232.9	<u>91.2 &lt;</u>	
279.0		



Oct. 24, 1896.

10 49 22

232.1

281.9

232.9

277.6

49.8 &lt;

44.7 &lt;

94.5 &lt;

1.80 &lt;

1.84 &lt;

Index to left and above.

323.9

6.0

322.0

8.5

42.1 &lt;

46.5 &lt;

88.6 &lt;

1.95 &lt;

10 55 29

324.0

6.7

324.4

6.1

42.7 &lt;

41.7 &lt;

84.4 &lt;

2.07 &lt;

2.01 &lt;

1.92 &lt;

10 57 23

4(209 57

10 52 16.2

-34

10 57 42

323.8

5.8

323.6

8.0

42.0 &lt;

44.4 &lt;

86.4 &lt;

2.01 &lt;

11 00 28

321.8

9.0

325.0

4.7

46.2 &lt;

39.7 &lt;

85.9 &lt;

2.03 &lt;

2.02 &lt;

11 02 43

Oct. 24, 1896.

Index to right and below.

56.3

95.9

54.0

96.7

29.6 &lt;

42.7 <

72.3 &lt;

2.13 &lt;

54.0

95.9

55.6

94.7

41.9 &lt;

39.1 <

81.0 &lt;

2.17 &lt;

2.15 &lt;

2.08 &lt;

11 10 02  
4(19 49  
 11 4 57.0  
 -34  
 16 4 23

229

56.4

95.9

55.4

94.0

29.5 &lt;

28.6 <

78.1 &lt;

2.20 &gt;

57.7

93.0

58.0

95.0

35.3 &lt;

27.0 <

72.3 &lt;

(2.34) &gt;

2.43 &gt;

XXIV

Index to left and above.

146.7

123.2

146.0

184.0

36.5 &lt;

38.0 <

74.5 &lt;

2.36 &gt;

11 25 10



Oct. 24, 1896

$$\begin{array}{r}
 11 \quad 26 \quad 38 \\
 \hline
 49 \quad 3 \quad 38 \\
 11 \quad 23 \quad 24.5 \\
 \hline
 16 \quad 22 \quad 50
 \end{array}
 \quad
 \begin{array}{r}
 143.7 \\
 183.9 \\
 146.1 \\
 184.4
 \end{array}
 \quad
 \begin{array}{r}
 40.2 < \\
 28.2 < \\
 78.5 <
 \end{array}
 \quad
 \begin{array}{l}
 (2.30) > \\
 2.24 > \\
 M = 2.327
 \end{array}$$

Images very faint in last  
2 or 3 groups.

Annals & Det ~~#~~  
958

Band #394

$$\begin{array}{r}
 11^h \quad 37^m \quad 33.7^s \\
 \text{Add} \quad -33.7^s \\
 \hline
 11^h \quad 37^m \quad 00.0^s
 \end{array}
 = 11^h \quad 37^m \quad 00.0^s$$

Oct. 25, 1896.

(Sunday)

B Lyrae.

P hot: N.

Cann. obs

~~Index below~~

6

40.1

~~169.3~~~~200.6~~~~31.3~~~~167.2~~~~34.1~~

2.66

~~201.3~~~~65.4~~~~168.1~~

48.3

~~200.3~~~~32.2~~~~170.6~~~~31.7~~~~2.72~~~~202.3~~~~63.9~~~~2.69~~

Direct.

~~Index above~~

59.2

~~77.0~~~~115.7~~~~38.7~~~~76.6~~~~38.3~~

2.28

~~114.9~~~~77.0~~~~74.0~~~~114.8~~~~40.8~~~~74.9~~~~40.5~~~~2.16~~~~81.3~~~~2.22~~~~115.4 117.5~~~~2.46~~

I immediately after taking this group it was found that Nicol prism was loose from its place: in middle of group obs. thought that the prism was moved at one time but was not entirely certain, but as Nicol was found



Oct. 25, 1896.

lone at end. litter reject.

micol fixed fast.

Same again  
Index above.292.6 <  $\beta$  dis.

7 43.7

333.5	40.9 >	
290.4	43.1 >	2.08 >
333.5	<u>84.0 &gt;</u>	

7 50.7

291.7	44.5 >	
336.2	42.7 >	1.99 >
291.5	<u>87.2 &gt;</u>	2.04 >
334.2		

Index below.

7 59.0

26.5	32.5 >	
59.0	33.5 >	2.64 >
26.0	<u>66.0 &gt;</u>	
59.5		

8	01.9
7	<u>53.8 &gt;</u>

25.4	35.8 >	
61.2	36.1 >	2.44 >
25.2	<u>71.9 &gt;</u>	2.54 >
61.3		

mean = 2.29 >

Oct 25, 1896.

Same again.  
Index below.

205.9 &lt; B dis.

240.9 35.0 &gt;

203.5 36.1 >

239.6 71.1 &gt;

2.47 &gt;

205.0

239.8 34.8 &gt;

205.0 35.2 >

240.2 70.0 &gt;

2.51 &gt;

2.49 &gt;

Index above.

290.2

332.4 42.2 &gt;

293.9 39.5 >

333.4 81.7 &gt;

2.14 &gt;

292.4

333.4 41.0 &gt;

291.3 44.6 >

335.9 85.6 &gt;

2.03 &gt;

2.08 &gt;

mean = 2.28 >



Oct. 25, 1896.

Same again  
Index above.

9	15.2	290.2	$\begin{array}{r} 45.0 > \\ 41.1 > \\ \hline 86.1 > \end{array}$	$\begin{array}{r} 2.02 > \end{array}$
		335.2		
		292.9		
		334.0		

9	25.0	292.1	$\begin{array}{r} 42.0 > \\ 45.8 > \\ \hline 87.8 > \end{array}$	$\begin{array}{r} 1.97 > \\ 2.00 > \end{array}$
		334.1		
		289.6		
		335.4		

Index below

9	29.9	26.2	$\begin{array}{r} 34.5 > \\ 34.0 > \\ \hline 68.5 > \end{array}$	$\begin{array}{r} 2.56 > \end{array}$
		60.7		
		25.5		
	59.5	<del>59.0</del>		

9	34.9	26.7	$\begin{array}{r} 32.2 > \\ 35.6 > \\ \hline 67.8 > \end{array}$	$\begin{array}{r} 2.58 > \\ 2.57 > \end{array}$
		58.9		
		24.5		
9	26.2	60.1		

mean = 2.28

Oct. 26, 1896. (Monday)

 $\beta$  Lyrae: Phot. N. Crum. obs

Indexulus.

5	55.7	204.1 < B dis.		
		239.6	35.5 >	2.38 >
		209.0	38.3 >	
		241.3	73.8 >	

b	04.8	204.6	34.4 >	2.52 >
		239.0	35.3 >	2.45 >
		204.9	69.7 >	
		240.2		

Index above.

b	18.9	290.5	45.0 >	
		335.5	43.0 >	1.97 >
		290.5	88.0 >	
		332.5		

b	24.2	292.1	42.4 >	
b	10.9 >	334.5	45.9 >	1.96 >
		290.0	88.3 >	1.96 >
		335.9		
			mean =	2.20 >



Oct. 26, 1896.

Same again. . . . . Crani:ols  
Index above

$$\begin{array}{r}
 290.0 \\
 335.9 \\
 249.7 \\
 333.7 \\
 \hline
 89.9 >
 \end{array}
 \begin{array}{l}
 < B \text{ dis.} \\
 45.9 > \\
 44.0 > \\
 1.92 >
 \end{array}$$

$$\begin{array}{r}
 290.0 \\
 334.7 \\
 290.7 \\
 335.8 \\
 \hline
 89.7 >
 \end{array}
 \begin{array}{l}
 44.7 > \\
 45.0 > \\
 1.92 > \\
 1.92 >
 \end{array}$$

Index below.

$$\begin{array}{r}
 25.7 \\
 60.4 \\
 24.9 \\
 60.5 \\
 \hline
 69.8 >
 \end{array}
 \begin{array}{l}
 34.7 > \\
 35.1 > \\
 2.51 >
 \end{array}$$

$$\begin{array}{r}
 24.1 \\
 61.9 \\
 23.7 \\
 61.2 \\
 \hline
 75.3 >
 \end{array}
 \begin{array}{l}
 37.8 > \\
 37.5 > \\
 2.34 > \\
 2.42 >
 \end{array}$$

$$\underline{\text{mean}} = 2.17 >$$

Oct. 26, 1896.

u Cephei : Phot. T. W. obs.

$$\begin{array}{r} 0 \\ 21 \\ \hline -2 \\ 9 \end{array}$$

$$\begin{array}{r} 30 \\ 45 \\ \hline 45 \\ 15 \end{array}$$

+81.7

Index to left and above.

49.9

&lt; var dis.

7 17 35

97.7

~~100.4~~

54.5

98.7

47.8 &gt; -1.86 &gt;

44.2 &gt;

92.0 >

54.7

7 18 58

96.2

51.5

100.4

41.5 &gt;

48.9 &gt; -1.90 &gt;

I 90.4 &gt; -1.88 &gt;

Index to right and below.

138.3

7 21 17

193.4

142.2

189.1

55.1 &gt;

46.9 &gt;

102.0 >

-1.61 &gt;



Oct. 26. 1896.

7	22	30
7	20	05
		-36
12	19	29

141.8

188.9

186.7

192.3

47.1	>	-1.59
55.6	>	-1.60
102.7		
mean	=	1.74

7	24	54
---	----	----

139.1

194.7

141.0

190.0

55.6	>	-1.54
49.0	>	
104.6	>	

7	26	32
---	----	----

139.7

188.6

139.6

191.6

~~192.4~~

48.9	>	-1.63
52.0	>	-1.58
100.9	>	

Index to left and above. II

7	29	12
---	----	----

228.8

283.2

229.8

278.9

54.4	>	-1.57
49.1	>	
103.5	>	

7	31	12
7	27	58
		-36
7	27	22
12		

230.6

278.8

228.2

280.9

~~281.2~~

48.2	>	-1.63
52.7	>	-1.60
101.3	>	-1.59
100.9	>	

mean.

Oct. 26, 1896.

7 34 52

$$\begin{array}{r} 227.4 \\ 282.7 \\ 231.7 \\ 280.8 \end{array}$$

$$\begin{array}{r} 55.3 > \\ 49.1 > - 1.55 > \\ \hline 104.4 > \end{array}$$

7 27 18

$$\begin{array}{r} 231.3 \\ 280.6 \\ 229.4 \\ 283.6 \end{array}$$

$$\begin{array}{r} 49.3 > - 1.57 > \\ 54.2 > \\ \hline 103.5 > - 1.56 > \end{array}$$

III  
Index to right and below.

7 40 14

$$\begin{array}{r} 313.1 \\ 12.8 \\ 321.6 \\ 9.4 \end{array}$$

$$\begin{array}{r} 59.7 > - 1.48 > \\ 47.8 > \\ \hline 107.5 > \end{array}$$

$$\begin{array}{r} 42.2 \\ 47.2 \\ \hline 38.41 > \\ - 36 \\ \hline 12.38.5 \end{array}$$

$$\begin{array}{r} 8.8 \\ 320.5 \\ 8.5 \\ 318.1 \\ 10.9 \end{array}$$

$$\begin{array}{r} 48.3 > \\ 52.8 > - 1.63 > \\ \hline 101.1 > - 1.56 > \\ \hline \text{mean} = 1.56 > \end{array}$$

7 45 20

$$\begin{array}{r} 319.5 \\ 10.8 \\ 322.8 \\ 10.6 \end{array}$$

$$\begin{array}{r} 51.3 > \\ 47.8 > - 1.68 > \\ \hline 99.1 > \end{array}$$



Oct. 26, 1896.

7 47 08

319.8

9.6

318.9

11.0

49.87

52.17

101.97

-1.617

-1.647

Index to left <sup>IV</sup> and above.

7 49 42

50.2

100.9

52.9

98.5

50.77

-1.757

45.67

96.37

$$\begin{array}{r} 7 \quad 52 \quad 10 \\ 7 \quad 48 \quad 357 \\ \hline -36 \\ \hline 12 \quad 47 \quad 59 \end{array}$$

50.3

100.2

53.0

96.8

49.97

-1.827

43.87

93.77

-1.787

mean = -1.717

7 56 49

232.4

278.7

226.5

282.3

46.37

55.47

101.77

-1.617

7 58 53

238.9

282.1

231.9

279.1

53.27

47.27

(98.4)

100.47

-1.657

-1.637

probably ought to be 228.9  
and it has been assumed.





Oct. 26, 1896.

8	19	42	52.5	45.47	-1.767
8	15	037	<del>50.3</del>	50.67	-1.787
		-36	97.9	96.07	-1.70 =
13	14	27	50.9		<u>mean</u>
			101.5		

8	23	53	46.9	55.47	-1.557
			102.3	48.87	
			50.1	104.27	
			98.9		-1.547
8	25	31	49.0	50.17	<del>-1.54</del>
			99.1	54.87	-1.537
			45.2	104.97	
			101.1		

VII  
Index to ~~left~~ right and below.

8	28	57	137.0	58.27	-1.417
			195.2	52.37	
			139.0	110.57	
			191.3		-1.477
8	30	26	139.3	50.87	-1.447
8	27	147	190.1	57.17	<del>-1.49</del>
		-36	135.8	107.97	mean = -1.487
13	26	38	192.19		

Oct. 26, 1896.

8 36 57

138.2

192.0

140.0

189.6

53.87

49.67

103.47

-1.577

8 41 38  
39 58

136.8

~~140.7~~ ~~142.8~~194.5 ~~190.4~~

139.6

191.5

57.77

49.77

51.97

109.67

-1.437

-1.507

Index to <sup>VIII</sup> left and above.

8 44 23

230.8

279.3

226.7

281.3

48.57

54.67

103.17

-1.587

8 45 53

8 42 087

-36

13 41 32

228.0

283.1

232.1

279.7

55.17 - 1.597

47.67 - 1.587

102.77  
mean = -1.547

8 56 53

233.4

279.7

228.2

283.0

46.37

54.87

101.17

-1.637



Oct. 26. 1896.

8 58 37

228.3

54.0 &gt;

282.3

-1.64 >

232.7

46.5 >-1.64 >

279.2

100.5 &gt;

Index to right and below.

318.3

50.8 &gt;

9.1

45.7 >-1.74 >

323.0

96.5 &gt;

8.7

322.1

45.7 &gt;

-1.70 >

7.8

52.7 >-1.72 >

318.4

98.4 &gt;

11.1

mean = 1.68 >

9	02	48
18	59	57 >
		<u>-0.6</u>
13	59	21

9 05 04

316.3

55.1 &gt;

11.4

-1.62 >

321.1

46.2 >

7.3

101.3 &gt;

9 06 12

321.1

47.5 &gt;

8.6

54.6 >-1.61 >

317.5

102.1 >

12.1

-1.62 >

Oct. 26, 1896.

Index 4 to left and above.

9 02 46

48.9  
101.1  
52.0  
97.8

52.27  
45.87 - 1.717  
98.07

9 09 54

51.7

97.2

49.0

102.1

45.57 - 1.647  
54.17 - 1.697  
99.67  
mean = -1.667

9 07 297  
-36  
14 6 53

9 16 11

49.0

105.4

51.2

98.0

56.47  
46.87 - 1.587  
103.27

9 17 25

52.3

97.0

48.1

101.4

44.77  
53.87 - 1.717  
98.07 - 1.647

Index 4 to right and below.

9 19 37

137.0

194.1

140.7

190.3

57.17 - 1.497  
49.67  
106.77



Oct. 26, 1896.

9 20 55  


---

9 18 34  
-36  


---

14 17 58

141.6

189.6

136.8

195.1

48.0 &gt; -1.50 &gt;

58.3 &gt; -1.50 &gt;

106.3 &gt; -1.50 &gt;

mean = -1.57 &gt;

9 22 44

135.6

195.4

141.8

187.5

59.8 &gt;

45.7 &gt; -1.52 &gt;

105.5 &gt;

9 24 07

140.0

190.0

135.7

195.0

50.0 &gt; -1.43 &gt;

59.3 &gt; -1.48 &gt;

109.3 &gt;

XII  
Index to left and above.

9 26 10

229.7

283.7

232.7

280.3

54.0 &gt;

47.6 &gt; -1.62 &gt;

101.6 &gt;

9 27 43  


---

9 25 11  
-36  


---

14 24 35

201.7

278.8

228.9

280.0

47.1 &gt; -1.63 &gt;

54.1 &gt; -1.62 &gt;

101.2 &gt; -1.54 &gt;

mean = -1.55 &gt;

Oct. 26, 1896.

9 29 29

222.6

283.7

231.5

279.7

56.17

48.27 - 1.557

104.37

9 30 43

232.0

278.4

228.0

284.7

46.47 - 1.587

56.77 - 1.567

102.17

Index tonight and below,

9 32 47

316.6

12.4

321.7

7.5

55.87 - 1.627

45.87

101.67

9 34 00

321.6

8.6

319.2

47.07 - 1.687

53.17

99.47

9 31 45  
-36

11.3 12.6

99.47

17

mean = 1.607

14 31 9

314.9

14.2

320.2

7.8

59.37

47.67 - 1.497

106.97

9 35 45



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9 36 58

321.9  
8.3  
315.8  
14.2

46.47 -1.547  
58.47 -1.527  
104.8

<sup>XIV</sup>  
Index to left and above.

9 39 23

48.9  
102.3  
50.4  
98.6

53.47 -1.627  
48.27  
101.67

9 40 05

51.8  
97.6  
49.8  
100.4

45.87 -1.757  
50.67 -1.687  
96.47  
mean = -1.607

9 37 58  
-36  
14 37 22

9 42 05

49.4  
101.8  
51.3  
97.5

52.47 -1.697  
46.27  
98.67

9 43 16

53.3  
97.1  
47.4  
100.1

43.87 -1.747  
52.77 -1.727  
96.57

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Index Wright and below

9 4<sup>b</sup> 09

138.5

192.1

141.8

190.0

54.6 =

48.2 &gt; -1.59 &gt;

102.8 &gt;

9 47 19

9 44 42 &gt;

$$\begin{array}{r} 4 \overline{) 18} \quad 47 \\ 44 \quad 41.2 \\ \hline -36 \end{array}$$

14 44 6

140.2

189.6

137.2

192.5

49.4 &gt; -1.54 &gt;

55.3 &gt; -1.54 &gt;

104.7 &gt; -

-1.56 &gt;

mean = -1.64 >

Arnold + Dent #958. Bond #394.

$$9^h \quad 53^m \quad 35.6^s = 9^h \quad 53^m \quad 00.0^s$$

therefore Arnold + Dent is fast of Bond #394  
 35.6; but Bond #394 is  
 so that Arnold + Dent #958 is.



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Wall's War. Phot 5 W. 6

$$\begin{array}{r} 20 \\ 24 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 31 \\ 45 \\ \hline 14 \end{array}$$

$$+19.7$$

Full Brightness.  
Index to left and above.

10 11 01

$$304.1$$

$$28.0$$

$$298.9$$

$$34.1$$

&lt; comp. star dis.

$$83.9 >$$

$$95.2 > +0.02 >$$

$$149.1 >$$

10 13 02

$$297.3$$

$$33.8$$

$$304.5$$

$$28.3$$

$$96.5 > -0.01 >$$

$$83.8 >$$

$$180.3 > \pm 0.00 >$$

I  
Index to right and below.

10 16 03

$$33.8$$

$$115.8$$

$$25.3$$

$$122.9 \quad +21.6$$

$$82.0 >$$

$$97.6 >$$

$$97.6 >$$

$$149.6 >$$

$$+0.01 >$$

$$\begin{array}{r} 10 \quad 18 \quad 36 \\ 10 \quad 14 \quad 41 > \\ \hline -36 \\ \hline 10 \quad 14 \quad 5 \end{array}$$

$$26.9$$

$$123.9$$

$$34.4$$

$$116.7$$

$$97.0 >$$

$$82.3 >$$

$$+0.01 >$$

$$149.3 > +0.01 >$$

$$\text{mean} = \pm 0.00 >$$

Oct. 26, 1896.

10	22	05	35.9		
			116.1	80.2>	
			28.6	93.2>	+0.13>
			121.8	173.4>	

10	24	38	28.7		
			122.8	94.1>	
			37.2	76.9>	+0.17>
			114.1	171.0>	+0.15>

II  
Index to left and above.

10	27	51	122.9	83.0>	
			205.9	96.5>	+0.01>
			116.7	179.5>	
			213.2		

10	29	55	115.7	97.6>	+0.01>
10	26	07>	213.3	81.7>	+0.01>
		-3.6	123.6	179.3>	
10	20	31	205.3	mean = +0.08>	

10	32	15	123.2	83.6>	
			206.8	96.9>	-0.01>
			116.8	180.5>	
			213.7		



Oct. 26, 1896.

10	34	16	115.0	98.5 >	-0.04 >
			213.5	83.5 >	
			<del>122.4</del> <del>+23.1</del>	182.0 >	-0.02 >
			205.9		

III  
Index bright and below.

10	37	53	35.2	80.9 >	
			116.1	94.5 >	+0.09 >
			29.7	175.4 >	
			124.2		

10	40	17	28.1	94.9 >	+0.09 >
10	36	10 >	123.0	80.0 >	+0.09 >
		-36	35.7	174.9 >	+0.09 >
15	35	34	115.7	mean =	+0.04 >

10	42	37	34.8	78.9 >	
			113.7	94.6 >	+0.12 >
			27.8	173.5 >	
			122.4		

10	44	30	26.8	95.5 >	+0.07 >
			122.3	80.9 >	+0.10 >
			34.0	176.4 >	
			114.9		

Oct. 26, 1896.

Index <sup>IV</sup> to left and above

10	47	20	120.8	83.97
			204.7	95.47 + 0.027
			117.8	179.17
			213.0	
			116.4	93.37
10	49	<del>22</del>	210.0 <del>212.6</del>	<del>95.9</del>
			122.5	83.77 + 0.067
10	46	007	206.2	177.07 + 0.047
		-36		mean = +0.077
15	45	28		

10	51	24	121.3	85.07
			206.3	94.87 ± 0.007
			118.0	179.87
			212.8	
			116.5 <del>115.2</del>	97.37
10	53	31	213.8	-0.037
			122.6	84.37 - 0.027
			206.9	181.67

Index <sup>V</sup> to right and below.

10	57	07	215.9	80.17
	<del>50</del>	<del>45</del>	295.2 <del>295.9</del>	97.47 + 0.057
			208.2	177.57
			205.6	



Oct. 26. 1896.

~~208.5~~ ~~202.9~~

10	59	13
10	55	21
		-36
10	54	20

296.4

304.0

214.8

~~294.3~~

95.5

81.6

177.1

mean

+0.05

+0.05

+0.02

$\beta$  Persi. Phot V. W. obs.  
comp. star = W Persi  
Index tonight.

296.6

330.0

294.1

332.3

<  $\beta$  dis

33.4

38.2

71.6

2.45

294.1

331.2

296.8

330.6

37.1

33.8

70.9

2.48

2.46

Index to left.

29.4

57.6

27.2

58.9

28.2

31.7

59.9

2.86

28.2

60.4

28.8

58.1

32.2

29.3

61.5

mean

2.80

2.83

2.64

Oct. 26, 1896.

Same again: <sup>right</sup> craniob.  
Index to left and below

12	29.7	31.2	< 3 dis.	
		54.6	23.4 >	
		32.8	21.7 >	3.50 >
		54.5	<u>45.1 &gt;</u>	

12	37.2	31.6		
		54.8	23.2 >	3.49 >
		31.5	<u>22.1 &gt;</u>	3.50 >
		53.6	45.3 >	

Index to left and above

12	49.2	113.0		
		151.4	38.4 >	
		111.5	<u>42.0 &gt;</u>	2.18 >
		153.5	80.4 >	

13	04.0	112.7	42.1 >	
12	45.0 >	154.9	<u>36.6 &gt;</u>	2.23 >
		114.9	78.7 >	2.20 >
		151.5		
			<u>mean</u>	= 2.85 >

Observations somewhat slow on account of somewhat different manipulation of phot. being required.



Oct. 26. 1896.

Same again : Crani: dis.  
Index to left and above.292.1 <  $\beta$  dis:

13 58.4

330.1

291.8

332.6

38.0 &gt;

40.8 &gt;

78.8 &gt;

2.23 &gt;

14 08.8

292.5

334.8

292.2

333.4

42.3 &gt;

41.2 &gt;

83.5 &gt;

2.09 &gt;

2.16 &gt;

Index to right and below.

14 14.5

32.5

55.1

32.6

54.9

22.6 &gt;

22.3 &gt;

44.9 &gt;

3.51 &gt;

14 25.1

14 12.4 &gt;

31.2

54.8

31.0

53.8

23.6 &gt;

22.8 &gt;

46.4 &gt;

3.44 &gt;

3.48 &gt;

mean = 2.82 >

Oct. 26, 1896.

Same again: mean: obs  
Index to right and below.

14 34.5

213.5 &lt; B dis.

233.4

212.7

234.3

19.9 &gt;

21.6 &gt;

41.5 &gt;

3.69 &gt;

14 39.5

212.2

234.5

214.2

235.0

22.3 &gt;

20.8 &gt;

43.1 &gt;

3.60 &gt;

3.64 &gt;

Index to left and above.

14 47.0

290.2

335.0

291.2

336.2

44.8 &gt;

45.0 &gt;

89.8 &gt;

1.92 &gt;

14 52.2

292.1 ~~289.2~~336.5 ~~337.9~~293.8 ~~295.7~~

334.8

44.4 &gt;

41.0 &gt;

85.4 &gt;

2.04 &gt;

1.98 &gt;

mean = 2.81 >

14 43.3 &gt;



Posted to here.

Oct. 27, 1896. (Tuesday)

$\beta$  Lyrae.

Phot. V:

trans: obs

Index above.

291.3 ~~294.1~~  $\beta$  dis.

334.3

43.0 >

290.4

43.0 >

2.02 >

333.4

86.0 >

291.4

334.1 ~~331.3~~

293.0

42.7 >

2.08 >

334.2

41.2 >

2.05 >

83.9 >

Index below

26.9 ~~24.5~~

59.7

32.8 >

24.7

35.7 >

2.56 >

60.4

68.5 >

26.2

61.4

35.2 >

2.46 >

23.3

36.1 >

2.51 >

59.4

71.3 >

mean = 2.28 >

Oct. 27, 1896

Same again  
Index below.

hands

6

51.5

$$\begin{array}{r}
 26.0 \\
 61.7 \leftarrow \text{Basis} \\
 \hline
 204.4 \\
 239.4 \\
 \hline
 35.7 > \\
 35.0 > \\
 \hline
 70.7 >
 \end{array}
 \quad
 \begin{array}{r}
 2.48 >
 \end{array}$$

6

55.5

$$\begin{array}{r}
 206.5 \\
 238.4 \\
 206.6 \\
 239.0 \\
 \hline
 31.9 > \\
 32.4 > \\
 \hline
 64.3 >
 \end{array}
 \quad
 \begin{array}{r}
 2.70 > \\
 2.59 >
 \end{array}$$

Index above.

7

03.5

$$\begin{array}{r}
 292.7 \\
 333.4 \\
 292.1 \\
 334.7 \\
 \hline
 40.7 > \\
 42.6 > \\
 \hline
 83.3 >
 \end{array}
 \quad
 \begin{array}{r}
 2.10 >
 \end{array}$$

7

09.0

6

59.9 &gt;

$$\begin{array}{r}
 291.9 \\
 334.1 \\
 287.8 \\
 334.9 \quad 334.0 \\
 \hline
 42.2 > \\
 \hline
 47.1 > \\
 \hline
 89.3 >
 \end{array}
 \quad
 \begin{array}{r}
 1.93 > \\
 2.02 > \\
 \hline
 \text{mean} = 2.30 >
 \end{array}$$

above groups taken in great hurry to finish before beginning East. G. work: last group taken during spare moments in East. G. work: last time only approx.



Oct. 27, 1896.

u Cephei: Phot. T: W: obs

$$\begin{array}{r} 0 \\ 21 \\ -2 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 30 \\ 55 \\ 35 \\ \hline 25 \end{array}$$

$$+81.7$$

Index to left and above.

$$232.1$$

&lt; var dis.

$$280.4$$

$$223.0$$

$$286.2$$

$$48.37$$

$$63.27$$

$$-1.387$$

$$\hline 111.57$$

$$224.7$$

$$285.7$$

$$231.2$$

$$279.4$$

$$61.07$$

$$48.27$$

$$-1.447$$

$$-1.417$$

$$\hline 109.27$$

I

Index to right and below.

$$319.3$$

$$8.7$$

$$318.4$$

$$12.7$$

$$49.47$$

$$54.37$$

$$-1.577$$

$$\hline 103.77$$

$$319.3$$

$$15.3$$

$$322.8$$

$$9.2$$

$$56.07$$

$$46.47$$

$$-1.607$$

$$-1.577$$

$$\hline 102.47$$

$$\hline \text{mean} = 1.507$$

$$\begin{array}{r} 7 \quad 23 \quad 52 \\ \hline 7 \quad 21 \quad 007 \\ \quad -37 \\ \hline 12 \quad 20 \quad 23 \end{array}$$

Oct. 27, 1896.

7 25 11

323.1

9.5

317.3

14.0

46.47

56.77

103.17

- 1.587

7 26 20

314.0

12.4

321.3

9.7

58.47

48.47

106.87

= 1.497

- 1.547

II

Index to left and above.

50.9

7 27 58

98.2

46.2

104.4

47.37

58.27

105.57

- 1.527

47.7

101.2

50.0

98.6

53.57

48.67

102.17

- 1.617

- 1.567

mean = -1.557

7	29	15
7	27	117
		-37
12	26	34

7 35 54

52.4

99.9

48.3

102.8

47.57

54.57

102.07

- 1.617



Oct. 27. 1896.

7 39 33

49.5  
102.1  
52.3  
99.5

$$\begin{array}{r} 52.67 \\ 47.27 \\ \hline 99.87 \end{array} \quad \begin{array}{r} -1.667 \\ -1.64 \end{array}$$

Index to right and below.

7 40 50

136.0 ~~+41.2~~  
189.9  
136.3  
194.2

$$\begin{array}{r} 53.9^\circ \\ 57.9^\circ \\ \hline 111.8^\circ \end{array} \quad - 1.38^\circ$$

136.4  
193.3  
141.5  
~~192.2~~

$$\begin{array}{r} 56.67 \\ 51.37 \\ \hline 107.97 \\ \text{mean} = -1.527 \end{array}$$

mean = -1.527

$$\begin{array}{r} 7 \overline{) 4251} \\ \underline{7} \phantom{00} 39 \phantom{00} 047 \\ \phantom{00} 37 \phantom{00} 047 \\ \phantom{00} \underline{37} \phantom{00} 047 \\ \phantom{00} \phantom{00} 000 \end{array}$$

192.8

142.2  
189.4  
134.1  
194.2

$$\begin{array}{r} 47.2 \\ 60.1 \\ \hline 107.3 \end{array} \quad -1.48$$

7 49 05

137.0  
194.1  
140.9  
189.2

$$\begin{array}{r} 57.17 \\ 48.87 \\ \hline 105.47 \end{array} \quad \begin{array}{r} -1.537 \\ \hline -1.507 \end{array}$$

7 51 10

Oct. 27, 1896.

Index to left and above <sup>IV</sup>

7 53 42

231. 4

282. 7

234. 4

285. 8

51.37 - 1.597

51.47

102.77

228.7 ~~224.4~~

286. 3

231. 2

279. 9

57.67 - 1.507

48.77 - 1.547

106.37

7	55	23
7	52	217
		-37
12	57	44

mean = 1.527

Arnold + Dent #958.

Bond #394.

 $7^h \quad 59^m \quad 36.8^s = 7^h \quad 59 \quad +00.0$ 

8 04 05

230. 8

280. 0

225. 9

283. 7

49.27

57.87

107.07

-1.497

8 06 17

225. 2

280. 9

231. 0

276. 9

55.77

45.97

101.67

-1.627

-1.567



Oct. 27, 1896.

Index to right and below. V

8 09 28

320.6

9.9

315.9

12.5

49.3 &gt; -1.51 &gt;

56.6 &gt;

105.9 >

318.3

13.4

320.3

9.6

55.1 &gt;

-1.55 &gt;

49.3 &gt;

-1.53 &gt;

104.4 >mean = -1.54 >

8 10 54

8 07 41 &gt;

-37

13 7 4

8 12 56

321.7

9.2

316.9

12.0

47.5 &gt;

-1.59 &gt;

55.1 &gt;

102.6 >

8 14 11

316.2

12.2

319.1

12.6

56.0 &gt; -1.43 &gt;

53.5 &gt; -1.51 &gt;

109.5 >VI

Index to left and above,

8 17 13

50.7

100.6

48.4

102.3

49.9 &gt;

53.9 &gt; -1.56 &gt;

103.8 >

Oct. 27, 1896.

8	18	37
8	15	44
		-37
13	15	7

46.1  
104.3  
50.6  
99.4

58.2	>	-1.49
48.8	>	-1.52
107.0	>	
mean	=	-1.52

8	21	12
---	----	----

49.9  
98.2  
47.0  
101.4

48.3	>	
54.4	>	-1.59
102.7	>	

8	22	40
---	----	----

48.0  
104.1  
52.1  
98.3

56.1	>	
46.2	>	-1.60
102.3	>	<u>1.59</u>
		-1.60

Index to right and below.

VII

8	24	45
---	----	----

141.2  
190.8  
137.8  
193.4

49.6	>	-1.53
55.6	>	
105.2	>	

8	26	10
8	23	43
		-37
13	23	6

135.3  
194.5  
137.8  
192.1

59.2	>	-1.34
54.3	>	-1.44
113.5	>	
mean	=	-1.52



Oct. 27. 1896.

8	28	07	137.2	54.17	-1.347
			191.3	59.47	
		135.9	<del>133.6</del>	113.57	
			195.3		

8	30	34	136.0	57.07	-1.467
			193.0	51.37	-1.407
			139.6	108.37	
			190.9		

Index to left and above. VIII

8	32	29	227.3	56.67	-1.347
			283.9	56.67	-1.347
			227.7	113.27	
			284.3		

8	34	50	230.6	50.77	-1.457
8	31	307	281.3	57.87	-1.407
		-37	226.2	108.57	-1.407
13	30	5-3	284.0		mean -1.407

8	42	43	227.4	57.17	-1.467
			284.5	51.07	
			229.9	108.17	
			280.9		

Oct. 24, 1896.

8 44 32

229.2

282.3

226.2

285.9

53.17 - 1.357

59.77 - 1.407

112.87

Index to right and below. IX

8 46 58

315.4

15.6

320.6

10.9

60.27

50.37 - 1.447

110.57

8 48 30

8 45 417

-37

13 40 4

320.4

9.8

312.7

11.2

49.47 - 1.477

58.57

107.97 - 1.447

mean = -1.427

8 53 16

319.4

12.0

317.4

12.0

52.67

54.67 - 1.487

107.27

8 54 34

317.0

11.4

314.7

13.8 ~~14.8~~

54.47

59.17 - 1.347

113.57 - 1.417



Oct. 27, 1896.

Index to left and above X

8	57	15	48.6	53.8 >	
			102.4	48.6 >	-1.60 >
			52.4	102.4 >	
			101.0		

8	59	01	52.3	48.4 >	
8	56	01 >	100.7	56.1 >	-1.55 >
		-37	46.6	104.5 >	-1.58 >
13	55	24	102.7	mean	= -1.50 >

9	01	43	45.0	59.6 >	
			104.6	45.4 >	-1.54 >
			53.3	105.0 >	
			98.7		

9	03	11	54.0	44.3 >	-1.51 >
			98.3	61.8 >	-1.52 >
			45.4	106.1 >	
			107.2		

Index to right and below. XI

9	06	07	135.0	59.7 >	-1.29 >
			194.7	56.1 >	
			137.2	115.8 >	
			193.3		

Oct. 27, 1896.

9	07	28
9	04	37
		-37
14	4	0

138.3

191.3

131.1

197.7

53.07	-1.207
66.67	
119.67	-1.247
mean	= 1.387

9	16	57
---	----	----

135.0

192.7

134.9

195.4

57.77	
60.57	-1.237
118.27	

9	18	23
---	----	----

137.9

195.0

135.5 ~~133.1~~

197.2

57.17	-1.227
61.77	-1.227
118.87	

Index to left and above. XII

226.6

285.9

227.4

281.2

59.37	
53.87	-1.357
113.17	

9	20	36
---	----	----

228.5

281.9

223.8

286.4

53.47	-1.287
62.67	-1.327
116.07	
mean	= -1.277

9	22	23
9	19	35
		-37
14	18	58



Oct. 27. 1896.

9 24 32

224.1

287.8

229.7

280.0

63.7

50.3

114.0

-1.33

9 26 27

230.9

281.7

224.2

286.1

50.8

61.9

112.7

-1.36

-1.34

~~XIV~~

Index tonight and below.

314.3

17.2

321.2

13.0

62.9

51.8

114.7

-1.31

9 29 05

319.3

11.5

312.6

15.2

52.2

62.6

114.8

-1.31

-1.31

mean = 1.32

9	30	21
9	27	39
		-37
14	27	2

9 33 07

313.1

15.9

316.9

12.5

62.8

55.6

118.4

-1.23

Oct. 27, 1896.

9 39 31

317.2

14.9

311.9

17.0

57.7 &gt; -1.13 &gt;

65.1 &gt; -1.18 &gt;

122.8 &gt;

Index to left and above. <sup>XV</sup>

43.9

9 41 31

107.9

45.7

101.8

64.0 &gt;

56.1 &gt; -1.19 &gt;

120.1 &gt;

48.4

9	42	23
9	40	23 >
		-37
14	39	46

101.1

40.0

106.6

52.7 &gt;

66.6 &gt; -1.21 &gt;

119.3 &gt; -1.20 &gt;

mean = -1.19 >

9 48 54

43.0

106.0

47.2

101.5

63.0 &gt; -1.25 &gt;

54.3 &gt;

117.3 &gt;

9 50 58

45.6

101.3

44.6

107.8

55.7 &gt; -1.22 &gt;

63.2 &gt;

118.9 &gt; -1.24 &gt;



Oct 24. 1896.

Index to right and below XV

9	55 32 <del>52 52</del>	138.5	<del>+28.2</del>	56.37	
		194.8	<del>200.9</del>	72.7	-0.997
			128.1	<u>73.27</u>	
			201.3	129.57	

9	57 07	
9	53 047	
	<del>-37</del>	
14	52 27	

	131.2		
	200.3	69.17	-1.047
	136.2	57.87	-1.027
194.0	<del>193.6</del>	126.97	
		<u>mean</u>	<u>-1.137</u>

10	10 19	133.9		
		195.6	61.77	
		130.8	71.17	-0.927
		201.9	132.87	

10	11 52	130.0		
		202.3	72.37	
		131.7	65.57	-0.827
194.2	<del>196.2</del>	137.87	-0.877	

Index to left and above XVI

10	15 08	226.7		
		283.6	56.97	
		220.1	72.47	-0.997
		292.5	129.37	

Oct. 27, 1896.

10	16	48
10	13	32
		-37
15	12	55

219.6

291.5

228.1

284.4

71.9

59.3

131.2

-0.95

-0.97

mean = -0.92

10 22 48

221.7

287.2

218.2

~~216.0~~

293.6

65.5

75.4

140.9

-0.76

10 25 07

218.4

292.2

224.1

285.3

73.8

61.2

135.0

-0.88

-0.82

Index to right and below

10 28 22

314.7

15.8

308.5

21.2

61.1

72.7

133.8

-0.90

10 30 06

10 26 36

-37

15 25 59

306.2

20.4

312.1

17.9 + 8.7

74.2

64.8

139.0

-0.79

-0.84

mean = -0.83



Oct. 27, 1896.

~~10 41 27~~

Reject

~~10 43 05~~~~312.4~~~~19.5~~~~309.2~~~~23.3~~~~67.1~~~~74.1~~~~141.2~~some-  
thing  
wrong~~323.2~~~~23.8~~~~124.0~~~~18.5~~~~60.6~~~~54.5~~~~115.1~~

Index to left and above

41.6

10 45 07

107.5

65.9 &gt;

36.1

76.6 >

-0.72 &gt;

112.7

142.5 &gt;

36.6

10 46 40

115.2

78.6 &gt;

44.2

62.5 >

-0.75 &gt;

106.7 108.7

141.1 &gt;

-0.74 &gt;

Index to right and below.

129.9

10 51 40

202.3

72.4 &gt;

123.6

82.0 >

-0.49 &gt;

205.6

154.4 &gt;

Oct 27 1896

10 52 43  
10 49 02  
-37  
10 48 25

120.0  
206.5  
128.4  
203.0

86.5  
74.3 - 0.37  
160.8 - 0.43  
mean = 0.58

belonds coming up from N.  
Telescope moved.

~~215.5~~  
belonds

Index to left and below.

11 29 00

212.3

301.6

204.4

307.6

203.6

307.7

209.1

300.2

89.3

103.2

192.5

167.5

104.1

91.1

195.12

+ 0.24

+ 0.29

+ 0.26



Oct. 24, 1896.

Index tonight and above

291.7

40.6

297.6

32.1

108.9

94.5  $\pm 0.45$ 

203.4

299.3

32.8

290.0

39.3

93.5

99.3  $\pm 0.24$ 192.8  $\pm 0.34$ mean =  $\pm 0.30$ 

11 35 49

11 32 27

-37

16 31 50

~~11 40 37~~Reject.~~11 42 02~~

belands

too  
thick

287.2

42.3

295.2

32.0

115.1

96.8

211.9

297.4

34.7

291.2

40.1

97.3

Don

For chron. comp. see next  
page.

Oct. 27. 1896.

Arnold + Dent #98

$\beta$  and #394

12<sup>h</sup> 27<sup>m</sup> 37.1<sup>s</sup> = 12<sup>h</sup> 27<sup>m</sup> 00.0<sup>s</sup>

Somewhat clearer: will try

$\beta$  Persei: Phot. V: same as  
comp. star =  $\omega$  Persei.

Index to right.

112.9 <  $\beta$  dis.

154.0

115.1

153.4

41.1 >

38.3 >

2.21 >

79.4 >

113.2

152.2

114.2

155.6

39.0 >

41.4 >

2.18 >

80.4 >

2.20 >

Index to left.

211.6

236.9

212.1

235.2

25.3 >

23.1 >

3.34 >

48.4 >



Oct. 27, 1896.

13 56.4  
13 41.3

212.7

233.6

212.8

236.5

20.9

23.7

44.6

3.53

3.44

mean = 2.82

Same again: trans. obs.  
Index to left

14 19.0

212.1

234.7

32.1

55.0

&lt; B dis.

22.6

22.9

45.5

3.48

14 31.5

33.5

56.0

31.3

56.4

22.5

25.1

47.6

3.38

3.43

clouds until about 15:40  
Index to right.

15 37.6

292.3

334.7

291.9

334.7

42.4

42.8

85.2

2.05

16 09.4  
15 14.4

291.6

335.2

293.4

334.2

43.6

40.8

84.4

2.07

2.06

mean = 2.74

Oct. 27. 1896.

Same again. Exam: obs  
Index to right.

16	15.5	292.9	< B dis.		
		334.2			
		111.9		41.3 >	2.05 >
		155.9		43.8 >	
				<u>85.1 &gt;</u>	

16	24.2	112.5			
		156.9		44.4 >	
		112.6		40.3 >	2.06 >
		153.9		<u>84.7 &gt;</u>	<u>2.06 &gt;</u>

Index to left.

16	34.7	31.3			
		56.8		25.5 >	
		31.9		22.8 >	3.35 >
		54.7		<u>48.3 &gt;</u>	

16	42.2	32.0	<del>32.4</del>		
16	29.2 >	55.3		23.0 >	3.32 >
		20.0		26.0 >	3.34 >
		56.0		<u>49.0 &gt;</u>	<u>2.70 &gt;</u>
					mean

Images a little faint and flickering  
at last but observations considered good.



2A.  
Oct. 24. 1896 (Wednesday)

B Lyrae : Phot. V : Cam. obs.

Index below.

6	02.9	29.4	< Bdis. 28.1 >	2.89 >
		57.5		
		28.4		
		59.4		
		31.0 >		
		59.1 >		

6	09.4	27.0	31.7 >	2.81 >
		58.7		
		29.4		
		59.0		
		29.6 >	2.85 >	
	61.3 >			

Index above.

6	21.7	112.1	41.7 >	2.09 >
		153.8		
		110.9		
		152.7		
		41.8 >		
		83.5 >		

6	28.0	112.9	41.3 >	2.11 >
		154.2		
6	15.6 >	111.3	41.6 >	2.10 >
		152.9	82.9 >	
		mean = 2.48 >		

Oct. 28. 1896.

Same again:  
Index above

Cram: obs

b	41.2	112.1	< B dis		
		153.9		41.8 >	
		292.1		<u>40.9</u> >	2.12 >
		333.0		82.7 >	

b	47.8	292.3			
		333.1		40.8 >	
		290.8		<u>43.6</u> >	2.07 >
		334.4		84.14 >	2.10 >

Index below

b	56.7	27.2			
		59.3		32.1 >	
		27.5		<u>32.4</u> >	2.69 >
		59.9		64.15 >	

7	01.8	28.2			
6	<u>01.8</u>	58.2		30.0 >	2.76 >
	51.9 >	26.5		<u>32.8</u> >	2.72 >
		59.3		62.8 >	
				mean =	2.41 >



Oct. 28, 1896.

sky pretty hazy, but will try  
Faint Camp. Stars for  $\alpha$ . Delphinus

$$\begin{array}{r} 20 \\ 22 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 10 \\ 22 \\ \hline 12 \end{array}$$

+ 8.8

W:obs

9 30 Somewhat clearer.

9 45 Very much hazier.

8 0 Hazy still.

8 15 Growing worse.

8 30 Worse still.

I identified faint camp stars  
for  $\alpha$  but  $\beta$ : one or two of the faint  
camp. stars practically invisible in  
ordinary eyepiece: put on phot.  
reference star in phot is barely  
visible, altho it is a 9.3, so  
that nothing can be <sup>done</sup> in measur-  
ing.

Oct. 28, 1896.

U Cephei : Phot 5: w: obs.

$$\begin{array}{r} 20 \\ 23 \\ \hline 1 \\ 11 \end{array}$$

$$\begin{array}{r} 30 \\ 30 \\ \hline 0 \\ 0 \end{array}$$

$$+ 81.7$$

9 50 Stars faint: observer afraid to take U Cephei on account of cloudiness.

$$\Sigma 53' \left\{ \begin{array}{l} 48 \text{ Cygni} \\ P \text{ XX } 243 \end{array} \right. : \text{ Phot R: W obs } \frac{9}{9}$$

$$\begin{array}{r} 20 \\ 23 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 32 \\ 45 \\ \hline 13 \end{array}$$

$$+ 31.1$$

Position angle =  $165^\circ$ ; distance = 3';  
magn. = 5.9 and 6.1

Index above. A.

$$\begin{array}{r} 1.0 < \text{rather +} \\ 83.2 & \text{brighter dis.} \\ 352.7 \\ 92.5 \\ \hline 82.2 > \\ 99.8 > \\ \hline 182.0 > \end{array}$$

$$-0.04 >$$



Oct. 28, 1896.

$$\begin{array}{r}
 354.8 \\
 89.2 \\
 357.6 \\
 86.1 \\
 \hline
 94.4 > \\
 88.5 > \\
 \hline
 182.9 >
 \end{array}
 \begin{array}{r}
 -0.05 > \\
 -0.04 > \\
 \hline
 \end{array}$$

Index below, B.

$$\begin{array}{r}
 93.5 \\
 171.5 \quad \cancel{+41.3} \\
 88.8 \\
 178.4 \\
 \hline
 78.0 > \\
 89.6 > \\
 \hline
 167.6 >
 \end{array}
 \begin{array}{r}
 +0.24 >
 \end{array}$$

$$\begin{array}{r}
 86.8 \\
 179.7 \\
 92.2 \\
 175.2 \\
 \hline
 92.9 > \\
 83.0 > \\
 \hline
 175.9 >
 \end{array}
 \begin{array}{r}
 +0.08 > \\
 +0.16 > \\
 \hline
 \text{mean} = +0.06 >
 \end{array}$$

 $\Sigma 2726 : 52 \text{ Cygni.}$ 

W. obs

$$\begin{array}{r}
 20 \quad 41 \\
 24 \quad 7 \\
 \hline
 3 \quad 26
 \end{array}
 \quad + 30.2$$

Abandoned.

clouds too thick,

Oct. 28, 1896.

 $\Sigma$  2822 : *U Cygni* : Phot H : Wels

21	38	+28.2
<u>24</u>	<u>15</u>	
2	37	

Position angle =  $130^\circ$  : distance =  $6''$  :  
 magn = 4.0 and 5.3.

Index to left.

189.9 &lt; brighter dis.

249.1

189.2

249.1

59.2 &gt;

59.9 &gt;

119.1 >

1.21 &gt;

189.9

248.0

191.0

245.6

60.1 &gt;

54.6 &gt;

114.7 >

1.31 &gt;

1.26 &gt;

Index to right.

280.5

340.2

279.8

339.1

59.7 &gt;

59.3 &gt;

119.0 >

1.21 &gt;



Oct. 28, 1896.

$$\begin{array}{r} 9 \\ 9 \end{array} \frac{44}{40}$$

278.1

340.2

283.0

337.5

62.17

54.57

116.67

mean = 1.257

1.277

1.247

blends rather thick and growing thicker.

Images blurry, and running together.

$\Sigma$  571 { 121, 123 : Phot Q : Wob

$$\begin{array}{r} 21 \\ 24 \\ 3 \end{array}$$

$$\begin{array}{r} 32 \\ 35 \\ 3 \end{array}$$

+66.2

Position angle =  $200^\circ$ ; distance = 3';  
magn = 6.4 and 6.5.

q-59

Reject.

173.0

272.9

~~Index to above~~~~177.6~~~~270.0~~~~179.6~~~~267.5~~~~more  
brighter dis.~~

99.9

.9

Oct. 28, 1896.

Reject.  
phot. not  
clamped.

<del>181.0</del>	<del>83.5</del>
<del>264.5</del>	<del>98.0</del>
<del>174.6</del>	<del>181.5</del>
<del>272.6</del>	

Index above. A.

174.1	< northern +	
276.2	brighter dis.	
179.0	102.1 >	
267.5	88.5 >	-0.20 >
	<hr/> 190.6 >	

177.5		
267.3	89.8 >	
170.6	104.4 >	-0.27 >
275.0	<hr/> 194.2 >	-0.24 >

Index below. B.

261.8		
366.7	104.9 >	
270.8	84.8 >	-0.18 >
355.6	<hr/> 189.7 >	

270.2		
357.0	86.8 >	-0.20 >
262.2	103.5 >	-0.19 >
365.7	<hr/> 190.3 >	
	mean =	-0.22 >

10	08
10	06 >



Oct. 28. 1896.

Sky getting pretty thick.

Too cloudy for further work.

10 20

Oct. 29, 1896. (Thursday.)

6 00 cloudy.

6 15 cloudy.

6 30 Still cloudy.

6 45 cloudy still.

7 55 Clearing a little.

Well's Var: Phot. T: W: abs.

20

31

+ 17.7

21  
1

45  
14

Region found by ~~var~~

7 0 Var. not even seen in ordinary eye-  
piece because of clouds.

clouds thicker.

7 30 Thickly cloudy



Oct. 29. 1896.

2 0 Thickly cloudy.

8 30 Sky thickly cloudy with no prospect  
of clearing.  
Object glass also covered with dew.  
Walls of dome covered with -  
moisture.

Oct. 31, 1896. (Saturday)

Bryae : Phot. N : <sup>ray</sup> obs.

Index below.

82.1 ~~82.3~~ < B dis.

b	16.4	110.3	28.27	2.887
		49.8	<u>31.27</u>	
		111.0	59.47	

b	26.9	78.8		
		111.4	32.67	2.797
		81.8	<u>29.27</u>	2.847
		111.0	61.87	

Index above.

b	44.9	346.9		
		26.0	39.17	2.267
		345.9	<u>38.67</u>	
		24.5	77.77	

b	56.8	345.3		
		25.1	39.87	2.177
b	36.37	345.4	<u>40.97</u>	2.227
		26.3	80.77	
			mean =	2.537

Images blurry and flickering: seeing not very good.



Oct. 31, 1896.

Same again:

exam: obs.

Index above.

1	06.4	185.4	< 3 dis.	40.6 >	
		206.0		41.1 >	2.14 >
		163.4		<u>81.7 &gt;</u>	
		204.5			

7	24.5	166.2		40.16 >	2.09 >
		206.8		43.1 >	2.12 >
		165.2		<u>83.7 &gt;</u>	
		208.3			

Index below.

8	42.9	261.4		28.2 >	2.80 >
		289.6		33.4 >	
		258.0		<u>61.6 &gt;</u>	
		291.4			

8	48.9	259.7		32.8 >	2.79 >
8	00.7 >	292.5		29.2 >	2.80 >
		261.1		<u>62.0 &gt;</u>	
		290.3		mean = 2.46 >	

Abur group was taken during spare moments in East Lg. work.

Images and seeing perhaps worse than in first group.

Oct. 31. 1896.

R. Delphini: Phot. T: W. obs

$$\begin{array}{r} 20 \\ 22 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 10 \\ 10 \\ \hline 0 \end{array}$$

+8.5

$$\begin{array}{r} 10 \times 9.1 \\ 6 \\ 4.5 \\ 3 \end{array} \quad \begin{array}{r} 2.5 \\ 2 \\ 1.5 \\ 1 \end{array} \quad \begin{array}{r} 2 \\ 1.5 \\ 1 \\ 0.5 \end{array} \quad \begin{array}{r} 2 \\ 1.5 \\ 1 \\ 0.5 \end{array} \quad \begin{array}{r} 2 \\ 1.5 \\ 1 \\ 0.5 \end{array} \quad \begin{array}{r} 2 \\ 1.5 \\ 1 \\ 0.5 \end{array} \quad \begin{array}{r} 2 \\ 1.5 \\ 1 \\ 0.5 \end{array}$$

W. obs.

Dec. + 2° 4391 (9.3) compared with Dec.  
+ 2° 4393 (6.7)

right  
Index to left and above.  
25.6 < brighter des.

52.0

26.4 ✓

25.9

26.8 ✓

52.7

26.2 ✓

3.13<sup>2</sup>

25.8

51.3

23.9

51.9

25.5 ✓

28.0 ✓

23.0 ✓

$$\begin{array}{r} 3.12 \\ \hline 3.12 \end{array}$$



Oct. 31. 1896.

Index to left and below.

117.9	23.2 ✓	
141.1		
115.3	$\frac{25.5}{42.7}$ ✓	3.33 ✓
140.8		

112.3	27.5 ✓	
139.8		
114.1	$\frac{25.3}{42.4}$ ✓	3.15 ✓
139.4		3.24 ✓
		mean 3.18 ✓

Star 5 compared with comp. star.  
Index to left and below.

299.2	< comp. star dis.	
320.3	21.1 ✓	
297.5	21.2 ✓	
319.3	$\frac{42.9}{42.9}$ ✓	3.61 ✓

297.7	22.5 ✓	
320.2		
297.6	22.3 ✓	
319.9	$\frac{44.8}{44.8}$ ✓	3.52 ✓
		3.56 ✓

Oct. 31. 1896.

Index to right and above.

$$\begin{array}{r}
 29.2 \\
 49.1 \quad 19.2^{\vee} \\
 29.0 \\
 49.6 \quad \frac{22.6^{\vee}}{42.8^{\vee}} \quad 3.64^{\vee}
 \end{array}$$

$$\begin{array}{r}
 28.9 \quad 21.3^{\vee} \\
 50.2 \\
 29.9 \quad 21.2^{\vee} \\
 49.1 \quad \frac{21.2^{\vee}}{42.5^{\vee}} \quad \frac{3.63^{\vee}}{3.64^{\vee}} \\
 \text{Mean} = 3.60^{\vee}
 \end{array}$$

Star C compared with comp star  
Index to right and above.

$$\begin{array}{r}
 207.0 \\
 229.0 < \text{comp. star dis.} \\
 205.4 \quad 22.0^{\vee} \\
 231.4 \quad 26.0^{\vee} \\
 \frac{48.0^{\vee}}{48.0^{\vee}} \quad 3.36^{\vee}
 \end{array}$$

$$\begin{array}{r}
 207.0 \quad 21.7^{\vee} \\
 228.9 \\
 207.6 \\
 229.9 \quad \frac{20.3^{\vee}}{42.0^{\vee}} \quad \frac{3.66^{\vee}}{3.51^{\vee}}
 \end{array}$$



Oct. 31. 1896.

Index to left and below.

295.3

24.5 ✓

319.8

294.8

26.5 ✓

321.3

 $\frac{26.5}{\sqrt{1.0}} \checkmark$ 

3.23 ✓

297.2

23.3 ✓

320.5

295.4

24.4 ✓

320.2

 $\frac{24.4}{\sqrt{1.1}} \checkmark$ 

3.36 ✓

 $\frac{3.36}{3.30}$ 

mean = 3.40 ✓

Star 5 compared with comp. star.  
Index to left and below.

296.0

321.4

293.0

322.2

&lt; comp. star dis.

25.4 ✓

29.2 ✓

 $\frac{29.2}{\sqrt{1.6}} \checkmark$ 

3.07 ✓

295.4

320.2

295.9

320.3

24.2 ✓

24.4 ✓

 $\frac{24.4}{\sqrt{1.2}} \checkmark$ 

3.31 ✓

 $\frac{3.31}{3.19} \checkmark$ 

Index to right and above.

24.8

52.0

23.3

51.6

27.2 ✓

27.2 ✓

 $\frac{27.2}{\sqrt{1.9}} \checkmark$ 

3.07 ✓

Oct. 31. 1896.

$$\begin{array}{r}
 26.8 \\
 52.7 \\
 22.4 \\
 51.9 \\
 \hline
 \end{array}
 \begin{array}{r}
 25.9^{\circ} \\
 29.2^{\circ} \\
 \hline
 55.1^{\circ}
 \end{array}
 \begin{array}{r}
 3.0^{\circ} \\
 \hline
 3.06^{\circ}
 \end{array}$$

mean =  $3.12^{\circ}$

Star γ compared with comp. star.  
Index to left and below.

$$\begin{array}{r}
 17.9 \\
 62.4 \\
 15.6 \\
 60.4 \\
 \hline
 \end{array}
 \begin{array}{r}
 < \text{comp. star dis.} \\
 44.5^{\circ} \\
 44.4^{\circ} \\
 \hline
 49.3^{\circ}
 \end{array}
 \begin{array}{r}
 1.93^{\circ}
 \end{array}$$

$$\begin{array}{r}
 18.3 \\
 60.2 \\
 17.7 \\
 60.4 \\
 \hline
 \end{array}
 \begin{array}{r}
 41.9^{\circ} \\
 42.7^{\circ} \\
 42.6^{\circ} \\
 \hline
 42.6^{\circ}
 \end{array}
 \begin{array}{r}
 2.06^{\circ} \\
 \hline
 2.00^{\circ}
 \end{array}$$

Index to right and above.

$$\begin{array}{r}
 103.5 \\
 152.7 \\
 107.9 \\
 151.0 \\
 \hline
 \end{array}
 \begin{array}{r}
 49.2^{\circ} \\
 43.1^{\circ} \\
 \hline
 92.3^{\circ}
 \end{array}
 \begin{array}{r}
 1.4^{\circ}
 \end{array}$$

$$\begin{array}{r}
 107.2 \\
 150.2 \\
 104.8 \\
 153.9 \\
 \hline
 \end{array}
 \begin{array}{r}
 43.0^{\circ} \\
 49.1^{\circ} \\
 \hline
 92.1^{\circ}
 \end{array}
 \begin{array}{r}
 1.46^{\circ} \\
 \hline
 1.46^{\circ}
 \end{array}$$



Oct. 31. 1896.

U Cygni: Phot. T. W. obs.  
+ 4.7.3

20

$$\begin{array}{r} 23 \\ 2 \end{array}$$

11

$$\begin{array}{r} 55 \\ 44 \end{array}$$

Measurement of faint comp. stars.

Star y comp with star k.  
Index above.

11.0

&lt; comp. star dis

65.7

 $\sqrt{K.7} \checkmark$ 

11.4

 $\sqrt{2.7} \checkmark$ 

64.1

 $\frac{10.7.2 \checkmark}{10.7.2 \checkmark}$ 1.12  $\checkmark$ 

15.1

62.7

 $K7.6 \checkmark$ 

13.8

 $\sqrt{0.6} \checkmark$ 

64.4

 $\frac{94.2 \checkmark}{94.2 \checkmark}$ 

$$\frac{1.70 \checkmark}{1.59 \checkmark}$$

Index below.

97.7

 $\sqrt{6.7} \checkmark$ 

154.4

104.9

 $K4.5 \checkmark$ 

152.4

 $\frac{105.2 \checkmark}{105.2 \checkmark}$ 1.53  $\checkmark$ 

99.1

60.5  $\checkmark$ 

159.6

197.2

 $\sqrt{6.2} \checkmark$ 

155.9

 $\frac{119.2 \checkmark}{119.2 \checkmark}$ 

$$\frac{1.26 \checkmark}{1.32 \checkmark}$$
Mean = 1.12  $\checkmark$

Oct. 31, 1896.

B Lyrae:      Phot. V:      Cam: obs

Index to left and below

9      16.0      262.4 < B dis.      28.4 >      2.89 >  
                          290.8      30.7 >  
                          260.1      59.1 >  
                          290.8

9      19.6      260.9      31.0 >  
                          291.9      28.1 >      2.89 >  
                          262.1      59.1 >      2.89 >  
                          290.2 ~~289.0~~

Index to right and above.

9      25.0      343.6      46.2 >      1.89 >  
                          29.8      44.6 >  
                          343.2      90.8 >  
                          27.8

9      28.7      343.7      43.0 >      1.98 >  
 9      22.3 >      343.4      44.7 >      1.94 >  
                          26.7      87.7 >  
                          28.1      mean = 2.42 >

above group was taken while I was identifying region of Ulygni: taken in great hurry: images very bad and faint, the worst of the three groups taken this evening.



Oct. 31, 1896.

U Cygni continued: Phot. 5: W: obs.  
 Measurement of faint comp. stars.  
 Estimates

$\alpha$	4.5	$\beta$	$\beta$	4	$\beta'$	} W: obs.
$\beta'$	3	$\gamma$	$\gamma$	2.5	$\delta$	
$\delta$	5	$\epsilon$	$\epsilon$	3.5	$\eta$	

estimate of  $\delta$  difficult because of  
 nearness of var. and  $\delta$  magn. than.  
 Star  $\beta'$  and  $\eta$  added by W. to-  
 night and put on Mr. Reed's  
 chart in that notation.

10 20 5-l are coming up and  
 rapidly increasing.

Star  $\beta$  compared with  $k$   
 index below.

10	25	90.4	< comp. star
		162.4	
		92.3	72.0 ✓
		162.9	69.6 ✓
			<u>161.6</u>
			141.6 ✓ 0.74 ✓

Oct. 31, 1896.

$$\begin{array}{r} 91.9 \\ 166.8 \end{array} \quad 75.9 \checkmark$$

$$\begin{array}{r} 92.1 \\ 164.1 \end{array} \quad \begin{array}{r} 72.0 \checkmark \\ 146.9 \checkmark \end{array}$$

$$\begin{array}{r} 0.64 \checkmark \\ 0.69 \checkmark \end{array}$$

Index above.

$$\begin{array}{r} 184.9 \\ 250.2 \end{array} \quad 65.3 \checkmark$$

$$\begin{array}{r} 183.6 \\ 255.0 \end{array} \quad \begin{array}{r} 71.4 \checkmark \\ 136.7 \checkmark \end{array} \quad 0.44 \checkmark$$

$$\begin{array}{r} 184.3 \\ 249.5 \end{array} \quad 65.2 \checkmark$$

$$\begin{array}{r} 185.2 \\ 249.6 \end{array} \quad \begin{array}{r} 64.4 \checkmark \\ 129.6 \checkmark \end{array} \quad \begin{array}{r} 0.99 \checkmark \\ 0.92 \checkmark \end{array}$$

$$\text{mean} = 0.20 \checkmark$$
8<sup>th</sup> magnitude var

Star 12 compared with star 12.  
Index above.

$$\begin{array}{r} 148.0 \\ 284.7 \end{array} \quad \begin{array}{r} 283.4 \\ 234.2 \end{array}$$

$$\begin{array}{l} \leftarrow \text{comp star dis} \\ = \text{star 12} \end{array}$$

$$\begin{array}{r} 154.0 \\ 284.8 \end{array}$$

$$\begin{array}{r} 136.7 \checkmark \\ 130.2 \checkmark \end{array}$$

$$\begin{array}{r} 267.5 \\ 92.5 \end{array}$$

1.25

$$\begin{array}{r} 156.2 \\ 284.1 \end{array}$$

$$\begin{array}{r} 127.9 \checkmark \end{array}$$

$$\begin{array}{r} 149.4 \\ 288.7 \end{array}$$

$$\begin{array}{r} 139.3 \checkmark \\ 267.2 \checkmark \end{array}$$

1.25



Oct. 31, 1896.

Index below

238.4 136.3 ✓

14.7

242.7 130.5 ✓

13.2

266.2 ✓

~~13.2~~

93.2 ✓

241.8 130.5 ✓

12.3

237.3 139.2 ✓

16.5

269.7

90.3 ✓

J-laze increasing rapidly.

1.43 ✓  
mean = 1.46 ✓

2<sup>nd</sup> magn. below =  $\underline{e}$  = +47° 30' 7" (A.3)  
 8<sup>th</sup> magn. star near var. compared star  $\alpha$   
 Index below.

290.2 < 8<sup>th</sup> magn. dis.

325.2

35.0 ✓

290.7

34.7 ✓

325.4

69.7 ✓

2.52 ✓

290.4

32.6 ✓

323.0

290.2

36.6 ✓

326.8

69.7 ✓

2.53 ✓

2.52 ✓

Oct. 31, 1896.

Index above,

15.9

40.3 ✓

56.2

17.7

57.5

$$\frac{39.2}{40.1} \checkmark$$

2.19 ✓

mean = 2.39 ✓

20.8

35.3 ✓

56.1

17.1

56.9

~~57.4~~

$$\frac{39.2}{25.1} \checkmark$$

$$\frac{2.34}{2.26} \checkmark$$

In all the settings on comparison stars in the Cygni observations difficult on account of increasing haze.

± entire series of series could not be taken.

It was found contrary to expectation that star K could not be directly compared with star α so that K was joined to α thro' 8 ± magn. near var.



Nov. 2 1896. (Monday.)  
 $\beta$  Lyrae: Phot. N: Cam: obs.

Index below.

~~+54.0~~

76.5 <  $\beta$  dis.

5 53.2

116.1

39.6 >

75.8

41.6 >

2.16 >

117.4

81.2 >

75.1

6 01.0

118.1

43.0 >

2.05 >

75.2

42.1 >

2.10 >

117.2 ~~+54.0~~

85.1 >

Index above.

157.9

6 11.2

212.5

54.6 >

1.43 >

158.3

54.7 >

212.0

109.3 >

158.4

6 17.1

212.6

55.2 >

1.37 >

157.4

6 05.6 >

57.0 >

1.40 >

214.4

112.2 >

mean = 1.45 >

Nov. 2, 1896.

Same again: trans: obs.  
Index above.

30.2

335.5 &lt; B dis.

33.6

337.9

34.1

58.1 &gt;

56.2 &gt;

114.3 &gt;

1.32 &gt;

337.5

32.0

338.6

35.0

54.5 &gt;

56.4 &gt;

110.9 &gt;

1.40 &gt;

1.36 &gt;

Index below.

483

255.5

297.2

254.4

296.3

41.7 &gt;

41.9 &gt;

83.6 &gt;

2.09 &gt;

253.2

296.2

355.3

296.2

43.0 &gt;

40.9 &gt;

83.9 &gt;

2.08 &gt;

2.08 &gt;

mean = 1.72 >

568

44.4 &gt;



Nov. 2, 1896.

Same again:

Index below:

Cum: obs.

7	04.0	76.2	< B dis.		
		115.2			
		75.4		39.0 >	
		117.5		42.1 >	2.16 >
				81.1 >	
7	08.8	74.0			
		117.4		43.4 >	2.09 >
		76.2		40.2 >	
		116.4		83.6 >	2.12 >

Index above.

7	19.9	338.4			
		33.3		54.9 >	1.46 >
		339.7		53.3 >	
		33.0		108.2 >	
7	24.8	340.3			
		32.5		52.2 >	1.42 >
7	14.4 >	336.7		57.9 >	1.44 >
		34.6		110.1 >	
				mean = 1.78 >	

Above group was taken in great hurry to finish before East Eq. work.

Stopped between first and last two sets to help on East Eq.

Nov. 2, 1896.

R D Delphini: Phot. 5: W: obs.

$$\begin{array}{r} 20 \\ 22 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 10 \\ 19 \\ \hline 9 \end{array} + 8.5$$

Measurement of faint comp. stars.

Star Scorp. with D. M. +8° 42 9 (9.3)

Index to right and above

$$\begin{array}{r} 29.1 \\ 47.8 \\ 25.8 \\ 50.0 \end{array} < \text{higher dis.}$$

$$\begin{array}{r} 18.7 < \\ 24.2 < \\ \hline 42.9 < \end{array} \quad 3.61 <$$

$$\begin{array}{r} 26.7 \\ 48.9 \\ 29.9 \\ 49.7 \end{array}$$

$$\begin{array}{r} 22.2 < \\ 19.8 < \\ \hline 42.0 < \end{array} \quad \begin{array}{r} 3.66 < \\ 3.64 < \end{array}$$

Index to left and below.

$$\begin{array}{r} 115.0 \\ 129.0 \\ 117.5 \\ 138.4 \end{array}$$

$$\begin{array}{r} 24.0 < \\ 20.9 < \\ \hline 44.9 < \end{array} \quad 2.51 <$$



Nov. 2, 1896.

116.5

138.7

116.9

139.0

22.2 &lt;

22.1 &lt;

44.3 &lt;

3.54 &lt;

3.52 &lt;

 $M = 3.58 <$ 

DM + 8° 4391 (9.3) comp with D.M. + 8° 4393 (6.7)  
 Index to left and below.

114.4

140.1

112.4

141.3

&lt; brighter dis

25.7 &lt;

28.9 &lt;

54.6 &lt;

3.07 &lt;

113.6

141.2

113.8

140.1

27.6 &lt;

26.3 &lt;

53.9 &lt;

3.11 &lt;

3.09 &lt;

Index to right and above.

205.5

229.6

205.9

230.2

24.1 &lt;

24.3 &lt;

478.4 &lt;

3.34 &lt;

2.92

204.8

229.9

207.2

229.67

25.1 &lt;

22.4 &lt;

47.5 &lt;

3.39 &lt;

3.36 &lt;

 $M = 3.22 <$ 

7 32 30

7 51

7 58 30

Nov. 2, 1896.

$\alpha'$	$\beta$	$\alpha$	$\alpha$	$\beta$	$\gamma$
$\frac{10}{2}$	$\frac{5}{1}$	$\frac{10}{2}$	$\frac{10}{2}$	$\frac{3}{1}$	$\frac{5}{1}$
5	5	5	5	3	5

W: obs.

U Cygni: Phot. 5: W: obs.

20	11	+ 47.3
$\frac{20}{10}$	$\frac{22}{11}$	

Measurement of faint comp. stars.

$\alpha'$	$\beta$	$\alpha$	$\beta$	$\beta'$	
$\frac{10}{2}$	$\frac{10}{2}$	$\frac{10}{2}$	$\frac{10}{2}$	$\frac{10}{2}$	
5	5	5	5	5	
					W: obs.



Nov. 2. 1896.

Star  $\eta$  comp. with star  $k$ .  
Index above.

8	44	22.8		
		54.8	< comp star dis.	
		24.2		
		50.4		
			32.0<	
			<u>26.2&lt;</u>	2.93<
			58.2<	
		25.6		
		51.4	25.8<	
		22.0	<u>31.4&lt;</u>	2.97<
		53.4	57.2<	2.95<
		<del>54.0</del>		

Index below.

	111.2		
	145.9	34.7<	
	111.9	<u>29.8&lt;</u>	2.69<
	141.7	64.5<	

111.6

144.3

110.2

144.5

32.7&lt;

34.3<

67.0&lt;

2.61&lt;

2.65<

M = 2.80&lt;

9.33

12.13

8	52
8	88
	0

Nov. 2, 1896.

Star  $\theta$  comp with star  $\phi$   
Index to left and below.

114.1 &lt; comp. star dis.

141.3

116.4

141.0

27.2 &lt;

24.6 &lt;

51.8 &lt;

3.19 &lt;

114.9

139.6

114.9

140.9

24.7 &lt;

26.0 &lt;

50.7 &lt;

3.24 &lt;

3.22 &lt;

Index to right and above.

207.2

229.4

205.7

229.7

22.2 &lt;

24.0 &lt;

46.2 &lt;

3.45 &lt;

207.4

229.0

207.3

227.6

21.6 &lt;

20.3 &lt;

41.9 &lt;

3.67 &lt;

3.56 &lt;

M = 3.39 &lt;

9.33

12.72

9		07
9	3	30



Nov. 2, 1896.

Star S comp. with star k.  
Index to right and above.

200.0

234.0

198.9

238.5

comp. star dis.

34.0&lt;

39.6&lt; + 2.39&lt;

73.6<

+ (2.38)&gt;

199.2

237.2

199.9

236.6

38.0&lt;

36.7&lt; + 2.36&lt;

74.7<

Index to left and below.

289.7

325.6

286.9

328.2

35.9&lt;

41.3&lt; + 2.28&lt;

77.2<

+ (2.35)&gt;

289.3

328.0

291.3

325.4

38.7&lt;

34.1&lt; + 2.42&lt;

72.8<

M = +2.36&gt;

Star S comp. with star k.  
Index to left and below.

282.7

330.2

297.4

336.9

comp. star dis.

46.6&lt;

38.0&lt; + 2.00&lt;

84.6<

Nov. 2, 1896.

279.8  
336.3  
284.1  
331.8

+ (1.80)

56.5 <  
47.7 < + 1.00 <  
104.2 <

Index to right and above.

15.4

60.4

12.4

63.6

45.0 &lt;

51.2 &lt; + 1.70 &lt;

96.2 <

8.8

+ (1.69)

64.1

14.5

60.4

55.3 &lt;

45.9 <

+ 1.63 &lt;

101.2 &lt;

M = + 1.74

Star y comp. with year R.  
Index to right and above.

12.4

62.2

8.8

64.5

&lt; comp. star dis.

49.8 &lt;

55.9 <

105.5 &lt;

+ 1.02 &lt;

+ (1.02)

9.7

64.4

14.0

64.4

54.7 &lt;

50.4 <

105.1 &lt;

+ 1.53 &lt;



Nov. 2. 1896.

Index to left and below.

101.2

153.9

98.9

159.6

$$\begin{array}{r} 52.7 < \\ 60.7 < \\ \hline 113.4 < \end{array} + 1.34 <$$

$$1.35 > \\ + \cancel{(1.36)}$$

99.4

158.4

99.4

153.2

$$\begin{array}{r} 59.0 < \\ 53.5 < \\ \hline 112.5 < \end{array} + 1.36 <$$

$$M = +1.44$$

$$\begin{array}{r} 9 \quad 34 \\ \hline 9 \quad 31 \quad 30 \end{array}$$

Star  $\beta$  comp with star  $\beta$ .  
Index below.

94.4

161.8

91.2

164.2

&lt; comp. star dis.

$$\begin{array}{r} 67.4 < \\ 73.0 < \\ \hline 140.4 < \end{array} + 0.77 <$$

$$+(0.78) >$$

92.8

163.4

93.8

162.4

$$\begin{array}{r} 70.9 < \\ 68.6 < \\ \hline 139.5 < \end{array} + 0.78 <$$

Index above.

187.3

253.4

181.8

255.4

$$\begin{array}{r} 66.4 < \\ 73.6 < \\ \hline 140.0 < \end{array} + 0.77 <$$

Nov. 2, 1896.

9 44  
9 41 0

182.5

+ (0.79)

256.4

72.9 &lt;

187.9

 $\frac{65.3}{138.2} < +0.51 <$ 

253.2

138.2 &lt;

 $M = +0.78$ 

2<sup>nd</sup> mag. to below =  $\underline{e} = +K 7^{\circ} 30' 7.4$  (4.3)  
Star R comp. with 8.0 magn. star  
Index to right and above

290.9

328.8

284.2

334.2

&lt; 8.0 magn. dis.

37.9 &lt;

 $\frac{50.0}{87.9} <$ 

1.97 &lt;

(1.89) &gt;

281.3

322.9

286.4

328.8

51.6 &lt;

 $\frac{42.4}{94.0} <$ 

1.81 &lt;

Index to left and below.

17.0

59.2

11.4

62.4

42.2 &lt;

 $\frac{51.0}{93.2} <$ 

1.83 &lt;

(1.78) &gt;

9.3

62.9

15.7

59.2

53.6 &lt;

 $\frac{43.5}{97.1} <$ 

1.73 &lt;

 $M = 1.84$ 

9 50  
9 47 30



Nov. 2, 1896.

Star & comp. with 8.0 magn.  
Index below.

9 54

$$\begin{array}{r} 108.9 \\ 147.4 \\ 111.2 \\ 144.0 \end{array}$$

$$\begin{array}{r} < 8.0 \text{ magn. dis.} \\ 38.5 < \\ \frac{32.8 <}{71.3 <} 2.46 < \end{array}$$

$$\begin{array}{r} 110.7 \\ 145.3 \\ 108.6 \end{array}$$

(2.40) &gt;

149.6 ~~+50.2~~

$$\begin{array}{r} 34.6 < \\ 41.0 < \\ \frac{75.6 <}{2.38 <} \end{array}$$

Index above.

$$\begin{array}{r} 198.3 \\ 238.4 \\ 201.3 \\ 234.2 \end{array}$$

$$\begin{array}{r} 40.1 < \\ 32.9 < \\ \frac{73.0 <}{2.40 <} \end{array}$$

$$\begin{array}{r} 200.2 \\ 235.2 \\ 198.4 \\ 237.2 \end{array}$$

(2.40) &gt;

$$\begin{array}{r} 9 \quad 58 \\ \hline 19 \quad 56 \quad 0 \end{array}$$

$$\begin{array}{r} 35.0 < \\ 38.8 < \\ \frac{73.8 <}{2.38 <} \end{array}$$

$$\text{mean} = \frac{2.40}{\text{W. W.}}$$

$$10 \quad 0 \quad 3 \quad 6 \quad 0$$

Nov. 2, 1896.

Measurement of faint group stars for  
R. Vulpecula: Phot. 5: W. obs.

$$\begin{array}{r} 20 \\ 1 \\ \hline 4 \end{array} \quad \begin{array}{r} 57 \\ 30 \\ \hline 33 \end{array} \quad +23.5$$

Abandoned: region cloudy

10 30 clouds coming up from west and south.

R. Pegasus: Phot. 5: W. obs.

$$\begin{array}{r} 23 \\ 1 \\ \hline \end{array} \quad \begin{array}{r} 1 \\ 40 \\ \hline \end{array} \quad +9.5$$

cloudy.

W. Cygni: Phot. 5: W. obs.

$$\begin{array}{r} 20 \\ 1 \\ \hline 5 \end{array} \quad \begin{array}{r} 43 \\ 43 \\ \hline 0 \end{array} \quad +47.3$$



Nov. 2, 1896.

10 50 coming up very thick.

o Beti : Phot. R. Wals2  
1  
-0  
114  
59  
5  
55

-2.5

Var. is brighter than comp. star.  
Index tonight and above.

78.0

&lt; var. dis

115.9

379 &lt;

75.4

 $\frac{39.0}{77.7} < -2.26 <$ 

115.2

77.4

- (2.31)

115.5

381 &lt;

77.8

 $\frac{36.6}{78.7} < -2.36 <$ 

114.4

Index to left and below.

167.9

205.3

167.1

205.7

374 &lt;

 $\frac{386}{76.0} < -2.32 <$

Nov. 2, 1896

$$\begin{array}{r}
 11 \quad 9 \quad 23 \\
 \hline
 2 \overline{) 12 \quad 6} \\
 11 \quad 6 \quad 03
 \end{array}$$

$$\begin{array}{r}
 164.0 \\
 203.8 \\
 \hline
 166.4 \\
 206.1
 \end{array}$$

$$-(2.32)$$

$$\begin{array}{r}
 36.8 < \\
 39.4 < - 2.31 < \\
 \hline
 76.2 <
 \end{array}$$

$$M = -2.32$$



Nov. 3, 1896.(Tuesday.) $\beta$  Lyrae :

Phot. N.

Cran: obs

Index below.

259.6  $\beta$  dis.

5	47.7	291.8	32.27	
		257.9	35.77	2.587
		293.6	67.97	

258.2

5	53.0	292.8	34.67	2.587
		260.3	33.37	2.587
		293.6	67.97	

Index above.

344.7

6	02.2	26.8	42.17	
		343.2	43.47	2.047
		26.6	85.57	

343.9

6	10.2	26.5	42.67	
5	55.87	345.3	41.87	2.047
		27.1	84.47	2.067

mean = 2.327

Nov. 3, 1896.

Same again.  
Index above:

mean: obs

b	21.3	163.7	< 3 dis.	44.0	
		207.7		42.8	2.00
		163.9		86.8	
		206.7			

164.0 + ~~165.2~~

b	29.4	207.2	43.2		
		164.1	44.7	1.94	
		208.8	87.9	1.98	

Index below.

b	35.9	259.0			
		291.7	32.7	2.59	
		257.6	34.9		
		292.5	67.6		

b	41.6	258.5	34.2	2.59	
b	32.0	292.7	33.2	2.59	
		258.9	67.4		
		292.1			
			mean = 2.28		



Nov. 3, 1896.

Same again: Cann: obs  
Index below.

6	47.0	78.9	B dis.	
		111.1	32.2	
		79.4	33.4	2.66
		112.8	<del>114.4</del>	65.6

6	52.7	79.2		
		112.6	33.4	
		79.9	32.0	2.66
		111.9	65.4	2.66

Index above.

6	57.8	165.8		
		206.8	41.0	
		165.4	40.6	2.15
		206.0	81.6	

7 16	05.7 55.8	163.9		
		206.6	42.7	
		164.1	43.7	2.01
		207.8	86.4	2.08
		<u>mean = 2.37</u>		

This last group hurried a little: but  
all observations considered very good.

Nov. 3, 1896.

U boyagni : Phot 5: W: obs.

$$\begin{array}{r} 20 \\ 22 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 11 \\ 30 \\ \hline 19 \end{array}$$

+ 47.3

Measurement of faint comp. stars.

Star  $\Theta$  compared with star  $\kappa$ .

Index to right and above.

$$\begin{array}{r} 25.8 \quad 28.6 \\ 49.4 \end{array} \quad \text{comp. star dis.}$$

25.1

23.6&lt;

3.19&lt;

53.3

28.2&lt;

51.8&lt;

26.8

50.5

23.7&lt;

3.37&lt;

27.2

24.1&lt;

3.28&lt;

51.3 48.4

47.8&lt;

Index to left and below.

116.1

141.1

25.0&lt;

113.1

27.9&lt;

3.14&lt;

141.0

52.9&lt;

3.12



Nov. 3, 1896.

113.3

141.6

116.0

141.6

28.3 &lt;

25.6 <

52.9 &lt;

M =

3.11 &lt;

3.12 <

3.20 &lt;

3.20 &lt;

Star  $\eta$  compared with star  $\kappa$ .  
 Index to left and below.

112.3

144.6

112.6

146.9

&lt; comp. star dis.

32.3 &lt;

34.3 <

66.6 &lt;

2.62 &lt;

110.5

146.4

114.1

143.3

36.2 &lt;

29.2 <

65.4 &lt;

2.66 &lt;

(2.64) &lt;

Index to right and above.

202.9

233.0

201.9

234.5

30.1 &lt;

32.6 <

62.7 &lt;

2.76 &lt;

(2.76) &lt;

202.6

233.1

202.8

234.7

30.5 &lt;

31.9 <

62.4 &lt;

2.77 &lt;

M = 2.70 &lt;

Nov. 3, 1896.

Star 5 compared with star 6.  
Index to right and above.

$$\begin{array}{r}
 201.2 \\
 225.8 \\
 198.9 \\
 236.4 \\
 \hline
 34.6 < \\
 37.5 < \\
 72.1 <
 \end{array}
 \quad
 \begin{array}{r}
 \text{comp. star dis.} \\
 2.44 <
 \end{array}$$

$$\begin{array}{r}
 201.2 \\
 236.2 \\
 200.3 \\
 235.7 \\
 \hline
 35.0 < \\
 35.4 < \\
 70.4 <
 \end{array}
 \quad
 \begin{array}{r}
 (2.86) < \\
 2.49 <
 \end{array}$$

Index to left and below.

$$\begin{array}{r}
 289.9 \\
 324.8 \\
 290.8 \\
 325.6 \\
 \hline
 34.9 < \\
 34.8 < \\
 69.7 <
 \end{array}
 \quad
 \begin{array}{r}
 2.52 <
 \end{array}$$

$$\begin{array}{r}
 289.2 \\
 325.8 \\
 290.9 \\
 324.3 \\
 \hline
 36.6 < \\
 33.4 < \\
 70.0 <
 \end{array}
 \quad
 \begin{array}{r}
 (2.52) < \\
 2.51 <
 \end{array}$$

$$M = 2.49$$



Nov. 3, 1896.

Star 8 compared with star 6.  
Index to left and below.

8 30

284.6	<	comp. star 6
329.4		44.8 <
281.9		50.9 <
332.8		<u>95.7 &lt;</u> 1.76 <

283.6			1.80
334.6		51.0 <	
288.4		42.3 <	1.83 <
330.7		<u>93.3 &lt;</u>	

Index to right and above.

12.6		
60.7		48.1 <
7.9		58.2 <
66.1		<u>106.3 &lt;</u> 1.50 <

8

9.7			1.53 >
66.9		57.2 <	
14.8		46.6 <	1.56 <
61.4		<u>103.8 &lt;</u>	M = 1.66 >

Nov. 3. 1896.

Star  $\beta$  compared with star  $k$ .  
Index to right and above

$$\begin{array}{r}
 4.1 \\
 70.4 \\
 1.5 \\
 72.7 \\
 \hline
 66.3 < \\
 71.2 < \\
 137.0 <
 \end{array}
 \quad
 \begin{array}{l}
 < \text{comp. star dis.} \\
 0.82 <
 \end{array}$$

$$\begin{array}{r}
 0.2 \\
 72.9 \\
 3.7 \\
 71.2 \\
 \hline
 72.7 < \\
 67.5 < \\
 140.2 <
 \end{array}
 \quad
 \begin{array}{l}
 (0.80) < \\
 0.77 <
 \end{array}$$

Index to left and below

$$\begin{array}{r}
 95.4 \\
 158.2 \\
 93.9 \\
 164.8 \\
 \hline
 6 \\
 2.8 < \\
 70.9 < \\
 133.7 < \\
 3
 \end{array}
 \quad
 \begin{array}{l}
 0.90 > \\
 (0.88) \\
 (0.78)
 \end{array}$$

$$\begin{array}{r}
 94.5 \\
 163.4 \\
 94.5 \\
 161.8 \\
 \hline
 68.9 < \\
 67.3 < \\
 136.2 <
 \end{array}
 \quad
 \begin{array}{l}
 0.85 < \\
 M = 0.84
 \end{array}$$



Nov. 3, 1896.

Star y compared with star h.  
Index to left and below.

99.3		
156.5	< comp. star dis.	
101.9	$\sqrt{2.2} <$	
154.7	$\sqrt{2.8} <$	1.42 <
	$\frac{110.0}{10.0} <$	

102.0		(1.44) <
154.9	$\sqrt{2.9} <$	
100.8	$\sqrt{4.7} <$	1.47 <
155.5	$\frac{107.6}{10.0} <$	

Index to right and above

192.3		
245.6	$\sqrt{3.3} <$	
193.4	$\sqrt{0.0} <$	1.58 <
243.4	$\frac{103.3}{10.0} <$	

191.3		(1.52) <
-------	--	----------

245.9	$\sqrt{4.6} <$	
191.2	$\sqrt{4.0} <$	1.45 <
245.2	$\frac{108.6}{10.0} <$	

 $M = 1.48 <$ 

9	04
<hr/>	
9	10

Nov. 3, 1896.

Star 1/2 comp. with 8.0 magn. star.  
Index tonight and above

$$\begin{array}{r}
 157.0 \\
 280.5 \\
 147.3 \\
 288.4
 \end{array}
 \begin{array}{r}
 < \text{star } 2.5 \\
 23.5 < \\
 41.1 < \\
 \hline
 64.6 <
 \end{array}
 \begin{array}{r}
 \\
 \\
 2.69 <
 \end{array}$$

$$\begin{array}{r}
 147.2 \\
 288.6 \\
 153.6 \\
 282.4
 \end{array}
 \begin{array}{r}
 \\
 41.4 < \\
 28.8 < \\
 70.2 <
 \end{array}
 \begin{array}{r}
 (2.60) < \\
 \\
 2.50 <
 \end{array}$$

Index 10 left and below.

$$\begin{array}{r}
 244.0 \\
 8.7 \\
 236.8 \\
 14.4
 \end{array}
 \begin{array}{r}
 24.7 < \\
 37.6 < \\
 \hline
 62.3 <
 \end{array}
 \begin{array}{r}
 \\
 2.77 <
 \end{array}$$

$$\begin{array}{r}
 236.8 \\
 16.6 \\
 245.9 \\
 10.7
 \end{array}
 \begin{array}{r}
 \\
 39.8 < \\
 24.8 < \\
 \hline
 64.6 <
 \end{array}
 \begin{array}{r}
 (2.73) < \\
 \\
 2.69 < \\
 M = 2.66 <
 \end{array}$$

above.  
Reject something wrong and observations enough already obtained.



Nov. 3, 1896.

Star compared with 8.0 magn. star.  
Index to left and below.

$$\begin{array}{r}
 108.9 \\
 149.6 < 8.0 \text{ magn. dis.} \\
 112.2 \\
 146.4
 \end{array}
 \begin{array}{r}
 40.7 < \\
 34.2 < \\
 \hline
 74.9 <
 \end{array}
 \begin{array}{r}
 2.35 <
 \end{array}$$

$$\begin{array}{r}
 111.4 \\
 145.2 \\
 108.2 \\
 148.9
 \end{array}
 \begin{array}{r}
 33.8 < \\
 40.7 < \\
 \hline
 74.5 <
 \end{array}
 \begin{array}{r}
 (2.36) < \\
 2.36 <
 \end{array}$$

Index to right and above.

$$\begin{array}{r}
 202.2 \\
 235.9 \\
 199.4 \\
 237.9
 \end{array}
 \begin{array}{r}
 33.7 < \\
 40.5 < \\
 \hline
 74.2 <
 \end{array}
 \begin{array}{r}
 2.37 <
 \end{array}$$

$$\begin{array}{r}
 197.0 \\
 237.6 \\
 201.6 \\
 234.0
 \end{array}
 \begin{array}{r}
 40.6 < \\
 32.4 < \\
 \hline
 73.0 <
 \end{array}
 \begin{array}{r}
 (2.39) < \\
 2.41 < \\
 M = 2.38 <
 \end{array}$$

$$\begin{array}{r}
 9 \quad 20 \\
 \hline
 9 \quad 17 \quad 30
 \end{array}$$

$$\begin{array}{ccccccc}
 \alpha & 4.5 & \beta : \beta & 4.5 & \gamma & & \\
 \delta & 2. & \delta : \delta & 5 & \delta & & \\
 \epsilon & 3.5 & \epsilon : \epsilon & 6 & \epsilon & & \\
 \zeta & & & & & & 
 \end{array}$$

W. obs.

Nov. 3, 1896.

R. Vulpecula: Phot. 5: W: obs.

20	59	+ 23.0
24	46	
<u>3</u>	<u>47</u>	

Measurement of faint comp. stars

Y	4.5	$\frac{5}{2} : \frac{5}{2}$	4.5	E
W	3.5	$\frac{2}{2} : \frac{2}{2}$	3	W
3	4.5	0		W: obs.

Hazy in south and west.

S var S comp. with star l.  
Index to left and above.

10.6 + 4.0 = star l. dis.

63.3	52.7 <
8.2	$\frac{62.1}{114.8} < 1.31 <$
70.3	

10.4

(1.40) <

69.3	58.9 <
16.1	$\frac{47.6}{106.5} < 1.50 <$
63.7	



Nov. 3, 1896.

Index to right and below.

107.2

148.7

96.3

158.4

$$\begin{array}{r} 41.5 < \\ 621 < \\ \hline 103.6 < \end{array} \quad 1.07 <$$

(1.66) &lt;

101.3

156.1

108.3

150.3

$$\begin{array}{r} 54.8 < \\ 420 < \\ \hline 96.8 < \end{array} \quad 1.74 <$$

 $M = 1.53 <$ Star G compared with star L.  
Index below.

91.9

159.5

103.1

158.2

$$\begin{array}{r} < \text{star L dis.} \\ 676 < \\ 551 < \\ \hline 122.7 < \end{array} \quad 1.13 <$$

94.8

162.0

94.9

163.7

$$\begin{array}{r} (1.00) < \\ 672 < \\ 68.8 < \\ \hline 136.0 < \end{array} \quad 0.86 <$$

Index above:

187.7

248.7

188.0

246.7

$$\begin{array}{r} 61.0 < \\ 58.7 < \\ \hline 119.7 < \end{array} \quad 1.20 <$$

Nov. 3. 1896.

10 49  
10 47 30

188.2 (1.14)  
247.9 57.7  
186.0 65.2 1.09  
251.2 124.9 M = 1.07

Star y compared with star l.  
Index to left and above.

10 52

180.2 < star l dis.  
256.7 76.5  
183.7 66.6 0.71  
250.3 143.1

183.4 (0.66)  
252.7 69.3  
178.3 78.6 0.62  
256.9 147.9

Index to right and below.

265.6  
343.6 78.0  
272.2 73.5 0.55  
345.7 151.5

275.6 (0.64)  
341.8 66.2  
269.4 75.6 0.74  
345.0 141.8

10 56  
10 54 0

M = 0.65



Nov. 3, 1896.

Star  $\eta$  comp with star l.  
Index to right and below.

10

58

$$\begin{array}{r}
 285.9 \\
 326.8 \\
 288.2 \\
 323.3 \\
 \hline
 76.0
 \end{array}
 \begin{array}{l}
 < \text{star l dis.} \\
 40.9 < \\
 35.1 < \\
 76.0 <
 \end{array}
 \begin{array}{l}
 \\
 \\
 2.32 <
 \end{array}$$

$$\begin{array}{r}
 287.8 \\
 323.3 \\
 286.1 \\
 327.9 \\
 \hline
 77.3
 \end{array}
 \begin{array}{l}
 \\
 35.5 < \\
 41.8 < \\
 77.3 <
 \end{array}
 \begin{array}{l}
 (2.38^0) < \\
 \\
 2.28 <
 \end{array}$$

Index to left and above.

$$\begin{array}{r}
 196.9 \\
 239.1 \\
 197.2 \\
 234.5 \\
 \hline
 79.5
 \end{array}
 \begin{array}{l}
 \\
 42.2 < \\
 37.3 < \\
 79.5 <
 \end{array}
 \begin{array}{l}
 \\
 \\
 2.21 <
 \end{array}$$

$$\begin{array}{r}
 202.3 \\
 238.1 \\
 200.4 \\
 242.6 \\
 \hline
 78.0
 \end{array}
 \begin{array}{l}
 \\
 35.8 < \\
 42.2 < \\
 78.0 <
 \end{array}
 \begin{array}{l}
 (2.23) < \\
 \\
 2.25 < \\
 M = 2.26 <
 \end{array}$$

$$\begin{array}{r}
 11 \quad 06 \\
 \hline
 11 \quad 2 \quad 0
 \end{array}$$

Nov. 3, 1896.

Star  $\delta$  compared with star  $\gamma$ .  
Index to left and above.

$$\begin{array}{r}
 261.4 \\
 86.4 < 350.7 \\
 92.2 < 268.9 \\
 \hline
 178.6 < 347.6 \\
 0.03 <
 \end{array}$$

< star  $\gamma$  dis.  
This set to be retained.

$$\begin{array}{r}
 261.4 \\
 350.7 \\
 268.9 \\
 347.6
 \end{array}$$

(0.13) <  
This set copied from above.

$$\begin{array}{r}
 89.3 < \\
 78.7 < \\
 \hline
 168.0 <
 \end{array}
 \quad 0.23 <$$

Index to right and below.

$$\begin{array}{r}
 357.2 \\
 77.2 \\
 351.2 \\
 82.7
 \end{array}$$

$$\begin{array}{r}
 80.0 < \\
 92.5 < \\
 \hline
 172.5 <
 \end{array}
 \quad 0.14 <$$

$$\begin{array}{r}
 353.5 \\
 80.1 \\
 358.9 \\
 78.9
 \end{array}$$

$$\begin{array}{r}
 86.6 < \\
 80.0 < \\
 \hline
 166.6 <
 \end{array}
 \quad 0.25 <$$

$M = 0.16 <$

Star  $\delta$  was too near reference star  $\alpha$  to be measured directly so that the value of  $\delta$  was obtained by measuring it with  $\gamma$ ,  $\gamma$  having already been measured with  $\delta$ .



Nov. 3, 1896.

all the above observations of comp.  
stars for R. Vulpecula a little uncer-  
tain on account of rather low altitude  
and increasing haze.

This is especially the case with  
the fainter stars.

Arnold + Dent #958 . Bond #394.  
 $13^h \quad 36^m \quad 49^s.1 = 13^h \quad 36^m \quad 00^s.0$

Reappearance of Jup. III  
 W. obs. from Oregon.  
 comp. with satellite on preceding  
 = satellite I (Phot. A.)

Nov. 3, 1896.

~~+4h~~ ~~11m~~ ~~22s~~ ~~unconfirmed.~~

Jupiter rather faint.

14 <sup>h</sup>	15 <sup>m</sup>	10 <sup>s</sup>	✓	14 <sup>h</sup>	15 <sup>m</sup>	59 <sup>s</sup>	sum.	
		39	✓	16		28	107.2	83.87
16		02	✓			51	171.0	73.77
		15	✓	17		04	101.3	137.57
		30	✓			19	175.0	0.827
		46	✓			35	92.9	68.8
17		02	✓			51	174.0	81.17
		18	✓	18		07	96.0	77.27
		31	✓			18	173.2	158.37
		53	✓			20		79.2
		04	✓			(assumed to be 20)		
18		22	✓	19		42	90.2	84.67
		38	✓			53	177.8	84.87
			✓			11	98.12	169.47
			✓			27	183.0	84.7
			✓			58	95.0	
14 <sup>h</sup>	20 <sup>m</sup>	22.2 <sup>s</sup>	unconnected mean.	20		15	175.2	80.27
		-49.1	chron. correction.			30	93.0	89.07
14 <sup>h</sup>	19 <sup>m</sup>	33 <sup>s</sup>	corrected mean.			46	182.0	169.27
						57		84.67
						18	180.5	86.67
						37	93.1	89.87
14 <sup>h</sup>	20	39				01	182.9	176.47
								88.27
								0.1



Nov. 3, 1896.

22	47.2	✓	14	21	58	✓	22	22	94.0	
	-49.1						35		185.0	
							58		92.0	$\frac{91.0}{86.5} + 0.05$
							23	14	178.5	$\frac{177.5}{88.8} 0.0$
							26		89.8	
23	52.2	✓					46		181.5	$\frac{91.7}{87.5} + 0.02$
	-49.1						24	00	92.5	$\frac{179.2}{89.6} 0.0$
			14	23	03	✓	17		180.0	
							38		92.0	
25	14.8	✓					09		183.8	
	-49.1						26		91.3	$\frac{91.8}{91.7} + 0.06$
			14	24	26	✓	46		183.0	$\frac{183.5}{91.8} 0.1$
							26	09	91.0	
26	37.0	✓					24		182.3	$\frac{91.3}{84.5} + 0.08$
	-49.1						48		96.5	$\frac{175.8}{87.9} 0.1$
			14	25	48	✓	27	07	181.0	
							26		96.0	
27	52.2	✓					46		184.9	$\frac{88.9}{85.5} 7$
	-49.1						28	02	95.5	$\frac{174.4}{87.2} + 0.1$
			14	27	03	✓	16		181.0	$\frac{174.4}{87.2} + 0.1$
							31		90.2	II
29	01.5	✓					53	46	178.8	180.7
	-49.1						29	13	89.9	$\frac{90.5}{92.0} 7$
			14	28	12	✓	29		181.9	$\frac{182.5}{91.2} 0.0$
										$\frac{91.2}{91.2} 0.0$





Nov. 3, 1896.

## Limit of Vis.

37	55.7	✓	14	37	25	110.0	55.9	^
	-49.1				50	165.9	51.8	^
				38	04	113.0	107.7	✓
					24	164.8	52.8	^
14	37	07	✓				71.5	

Observations made with very much difficulty: satellite reappeared quite close to planet: also considerable cloud & fog, so that Jupiter was rather faint to naked eye and satellite rather faint at full brightness in telescope: in fact quite faint for considerable of time of observations: probably reappearance of satellite was late on this account.

Arnold + Dent #958      Band #394.

14<sup>h</sup> 45<sup>m</sup> 49.<sup>s</sup>0 = 14<sup>h</sup> 45<sup>m</sup> 00.<sup>s</sup>0

therefore Arnold + Dent #958 is 49.<sup>s</sup>0 fast of Band #394: but Band #394 is — — — — —: therefore Arnold + Dent #958 is — — — — — of true time

Nov. 3, 1896.

U Puppis:

W. obs

$$\begin{array}{r} 7 \\ 6 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 50 \\ 0 \\ \hline 50 \\ 10 \end{array}$$

- 12.5

much fog and cloud but region  
thought to be identified  
U Puppis probably about 9.0  
magn.



Nov. 4, 1896.(Wednesday) $\beta$  Lyrae:

Phot: N

Rain obs

30 Cloudy.

6 a little clear but not clear long enough  
to get fairly started.

Nov. 6, 1896. (Friday)

5 30 cloudy.  
6 00 still cloudy.

$\beta$  Lyrae. Phot. N: Cam: obs.

Index below.

6 01.7  
 $\begin{array}{r} \text{clouds. } 30.4 < \beta \text{ dis.} \\ \text{Clouds. } 59.6 & 29.2 > \\ \text{clouds. } 29.0 & 31.2 > & 2.84 > \\ \hline \text{clouds.} & 60.4 > \\ 60.2 \end{array}$

Bothered by clouds over region during equalizations

6 08.8  
 $\begin{array}{r} 29.0 \\ 60.7 & 31.7 > & 2.85 > \\ 30.8 & 28.6 > & \hline 59.4 & 60.3 > & 2.84 > \end{array}$

Index above.

6 16.3  
 $\begin{array}{r} 296.4 \\ 333.2 & 36.8 > & 2.28 \\ 294.2 & 40.4 > \\ 334.6 & 77.2 > \end{array}$

6 25.2  
 $\begin{array}{r} 294.7 \\ 333.2 & 38.5 > & 2.25 > \\ 295.0 & 39.8 > & 2.26 > \\ 334.8 & 78.3 > \end{array}$

6 12.0  
 $\begin{array}{r} \text{mean} = 2.55 > \end{array}$



Nov. 6. 1896.

As the whole of the first part of previous group was taken  
thru clouds, the stars being invisible part of the time,  
whole group had better be rejected.

Same again.  
Index above.

6	42.7	294.8	< B dis.	
		335.9	41.1 >	
		294.7	39.7 >	2.17 >
		334.4	80.8 >	

6	49.6	294.8	40.1 >	
		334.9	38.7 >	2.23 >
		294.7	<del>296.0</del>	<del>2.20 &gt;</del>
		333.4	78.8 >	

Index below.

7	000	28.6		
		60.6	32.0 >	2.74 >
		28.5	31.2 >	
		59.7	63.2 >	

7	049	28.6		
6	54.3 >	60.5	31.9 >	2.71 >
		28.1	32.3 >	2.72 >
		60.4	64.2 >	

mean = 2.46 >

above group considered good as  
there were no clouds anywhere near region.

Nov. 6, 1896.

U Cygni : Phot. T: W: obs.

20 11 + 47.3  
 $\frac{22}{2}$   $\frac{55}{44}$

Reject.

~~$\alpha$  4.5  $\beta$   $\beta$  5  $\gamma$   
 $\gamma$  2.5  $\delta$   $\delta$  4.5  $\epsilon$   
 $\epsilon$  3  $\eta$   $\eta$  5  $\theta$~~ W: obs

$\alpha$  4.5  $\beta$   $\beta$  4  $\beta'$   
 $\beta$  3  $\gamma$   $\gamma$  2.5  $\delta$   
 $\gamma$  4.5  $\delta$   $\delta$  3  $\eta$   
 $\delta$  5  $\theta$

Measurement of faint comp. stars.

Star  $\beta'$  comp. with 8.0 magn.  
 Index above.

205.6 < 8.0 magn. dis.

232.2

206.8

230.6

26.6

24.8

50.9 3.28



Nov. 6, 1896.

207.9

230.9

204.7

232.0

23.07

27.37

50.137

$$\begin{array}{r} 3.267 \\ \hline 3.277 \end{array}$$

Index below.

113.6

143.8

114.7

142.6

30.27

27.97

58.17

2.937

116.4

142.3

113.7

142.9

25.97

29.27

55.17

3.077

2.997

mean 3.127

Q. Vulpecula: Phot. 5: Wobs.

20

23

2

59

39

40

+23.0

2

2

3

4.5

3.5

4

 $\frac{5}{5} : \frac{5}{5}$  $\frac{5}{5} : \frac{5}{5}$  $\frac{5}{5} : \frac{5}{5}$  $\frac{5}{5} : \frac{5}{5}$ 

4

3.5

0

e

7

}

Wobs.

Nov. 6. 1896.

Measurement of faint comp. stars.

Star 0 comp. with star 1.  
Index to left and above.

$$\begin{array}{r}
 19.0 < \text{star 1 dis.} \\
 56.8 \quad \cancel{37.3} \\
 21.8 \\
 50.0 \\
 \hline
 37.8 > \\
 28.2 > \\
 \hline
 66.0 > \quad 264 >
 \end{array}$$

$$\begin{array}{r}
 22.7 \\
 51.1 \\
 18.1 \\
 54.3 \\
 \hline
 28.4 > \\
 36.2 > \\
 \hline
 64.6 > \quad \frac{269 >}{266 >}
 \end{array}$$

Index to right and below.

$$\begin{array}{r}
 109.3 \\
 147.7 \\
 112.5 \\
 146.3 \\
 \hline
 38.4 > \\
 33.8 > \\
 \hline
 72.2 > \quad 243 >
 \end{array}$$

$$\begin{array}{r}
 112.8 \\
 144.3 \\
 107.4 \\
 148.8 \quad \cancel{147.0} \\
 \hline
 31.5 > \\
 41.4 > \\
 \hline
 72.9 > \quad \frac{241 >}{242 >} \\
 \hline
 \text{Mean} = 254 >
 \end{array}$$



Nov. 6, 1896.

Star  $\eta$  comp. with star  $\lambda$ .  
Index to right and below109.9 < star  $\lambda$  dis:

148.6

106.3

152.5

38.7 &gt;

46.2 &gt;

84.9 &gt; 2.05 &gt;

106.6

152.3

108.8

147.2

45.7 &gt;

38.4 &gt;

84.1

2.02 &gt;

2.06 &gt;

Index to left and above.

201.3

234.8

195.1

243.3

33.5 &gt;

48.2 &gt;

81.7 &gt;

2.14 &gt;

198.3

243.1

201.4

236.9

44.8 &gt;

35.5 &gt;

80.3 &gt;

2.19 &gt;

2.16 &gt;

mean = 2.11 &gt;

Nov. 6, 1896.

Star Scamp, with star 4.  
Index to left and above.

194.5	< star 4's.
242.4	

188.6	47.9 >
-------	--------

246.5	57.9 >
-------	--------

105.8 >	1.52 >
---------	--------

191.4	
-------	--

248.7	57.3 >
-------	--------

196.6	43.7 >
-------	--------

240.3	101.0 >	1.63 >
		1.58 >

Index to right and below.

287.4	
-------	--

333.1	45.7 >
-------	--------

281.1	55.8 >
-------	--------

336.9	101.5 >	1.62 >
-------	---------	--------

282.1	
-------	--

332.7	50.6 >
-------	--------

285.6	45.1 >
-------	--------

330.7	329.0	328.3	95.7 >	1.76 >
-------	-------	-------	--------	--------

1.69 >
--------

mean 1.68 >
-------------



Nov. 6, 1896.

Star & comp. with star l.  
Index bright and below.

9

03

$$\begin{array}{r}
 275.3 \\
 339.8 \\
 278.0 \\
 336.0 \\
 \hline
 833.4
 \end{array}
 \begin{array}{r}
 < \text{star l. dis.} \\
 64.5 > \\
 58.0 > \\
 \hline
 122.5 >
 \end{array}
 \begin{array}{r}
 1.14 >
 \end{array}$$

$$\begin{array}{r}
 277.7 \\
 337.1 \\
 271.9 \\
 339.4 \\
 \hline
 126.9 >
 \end{array}
 \begin{array}{r}
 59.4 > \\
 67.5 > \\
 \hline
 126.9 >
 \end{array}
 \begin{array}{r}
 1.04 > \\
 \hline
 1.09 >
 \end{array}$$

Index to left and above.

$$\begin{array}{r}
 4.1 \\
 69.1 \\
 8.0 \\
 67.0 \\
 \hline
 124.0 >
 \end{array}
 \begin{array}{r}
 65.0 > \\
 59.0 > \\
 \hline
 124.0 >
 \end{array}
 \begin{array}{r}
 1.11 >
 \end{array}$$

9

12

$$\begin{array}{r}
 8.3 \\
 69.7 \\
 4.2 \\
 72.1 \\
 \hline
 129.3 >
 \end{array}
 \begin{array}{r}
 61.4 > \\
 67.9 > \\
 \hline
 129.3 >
 \end{array}
 \begin{array}{r}
 0.99 > \\
 \hline
 1.05 > \\
 \hline
 \text{mean } 1.07 >
 \end{array}$$

Nov. 6, 1896.

Star γ comp. with star β.  
Index to left and above.

$$\begin{array}{r}
 354.9 \\
 79.3 \\
 0.7 \\
 72.9 \\
 \hline
 156.4 > 0.45,
 \end{array}$$

$$\begin{array}{r}
 2.9 \\
 74.1 \\
 356.5 \\
 79.3 \\
 \hline
 71.2 > \\
 82.8 > \\
 154.0 > 0.50 > \\
 \hline
 0.45 >
 \end{array}$$

Index to right and below.

$$\begin{array}{r}
 87.4 \\
 171.6 \\
 91.3 \\
 164.1 \\
 \hline
 84.2 > \\
 72.8 > \\
 157.0 > 0.45 >
 \end{array}$$

$$\begin{array}{r}
 692.7 \\
 182.2 \\
 88.7 \\
 169.8 \\
 \hline
 69.5 > \\
 81.1 > \\
 150.6 > 0.56 > \\
 \hline
 0.50 > \\
 \text{mean} = 0.49 >
 \end{array}$$



Nov. 6, 1896.

Starry comp. with star  $\delta$ .  
Index to right and below.

182.6

~~166.6~~

254.9

172.0

286.3

< star  $\gamma$  dis.

72.3 &gt;

94.3 &gt;

---

166.6 > 0.25 >

171.9

264.8

180.4

258.4

92.9 &gt;

78.0 &gt;

---

170.9  $\frac{0.17 >}{0.21 >}$ 

Index to left and above.

261.9

357.0

269.8

346.5

95.1 &gt;

76.7 &gt;

---

171.8 > 0.16 >

271.7

347.2

261.6

354.0

75.5 &gt;

92.4 &gt;

---

167.9 > 0.23 >

---

0.20 >

mean 0.20 &gt;

Nov. 6, 1896

*N. longi* : Phot. 5: W. obs.

$$\frac{20}{4}$$

$$\begin{array}{r} 41 \\ 10 \\ \hline 29 \end{array}$$

+ 47.2

Islands.

$\left. \begin{array}{ccccccc} 2 & 4,5 & \frac{3}{2} & \frac{3}{1} & 4 & 5 & 8 \end{array} \right\} \text{Wieder.}$

This yr abandoned. For new yr see p. 209.  
Also diagram. chart.

Measurement of faint comp. stars.

S var = wrap. with star g.  
Index to left and below

29 .6 < star g dis.  
45 .3

$$\begin{array}{r} 31.1 \\ 44.9 \\ \hline 29.5 \end{array} \quad \begin{array}{r} 15.7 \\ 13.8 \\ \hline 29.5 \end{array} \quad \begin{array}{r} 4.44 \\ 4.44 \\ \hline 4.44 \end{array}$$

$$\begin{array}{r} 31.2 \\ 45.9 \\ 31.7 \\ 47.9 \end{array} \quad \begin{array}{r} 14.7 \\ 16.2 \\ \hline 30.9 \end{array} \quad \begin{array}{r} K.3K \\ \hline K.39 \end{array}$$



Nov. 6. 1896.

Index to right and above

$$\begin{array}{r}
 119.4 \\
 135.7 \\
 121.2 \\
 134.0 \\
 \hline
 29.17 \quad K.K. >
 \end{array}$$

10 30

$$\begin{array}{r}
 120.6 \\
 134.3 \\
 120.7 \\
 133.8 \\
 \hline
 13.77 \\
 13.17 \\
 \hline
 26.87 \quad K.K. > \\
 \hline
 K.K. > \\
 \hline
 K.K. > \\
 \hline
 K.K. >
 \end{array}$$

mean = K.K. &gt;

Star 8 comp. with star 9.  
Index to right and above.

$$\begin{array}{r}
 117.9 < \text{star 8 dis.} \\
 138.0 \\
 118.5 \\
 138.7 \\
 \hline
 20.17 \\
 20.27 \\
 \hline
 40.37 \quad 3.77
 \end{array}$$

$$\begin{array}{r}
 117.6 \\
 138.4 \\
 118.2 \\
 138.9 \\
 \hline
 20.87 \\
 20.77 \\
 \hline
 41.57 \quad 3.697 \\
 \hline
 3.722
 \end{array}$$

Index to left and below.

$$\begin{array}{r}
 210.4 \\
 228.7 \\
 210.0 \\
 227.2 \\
 \hline
 18.37 \\
 17.27 \\
 \hline
 35.57 \quad K.O.37
 \end{array}$$

Nov. 6, 1896.

10

39

209.7		
227.6	17.9 >	
209.7	18.9 >	
228.6	<u>36.8 &gt;</u>	3.95
		<u>3.99 &gt;</u>
		mean 3.46

Star y comp. with star g.  
 Index to left and below  
 < star g dis.

10

47

205.4		
232.3		
204.8	26.9 >	
233.0	<u>28.2 &gt;</u>	
	55.1 >	3.05 >

202.8		
232.9	30.1 >	
206.4	<del>206.4</del>	
231.3	<u>24.9 &gt;</u>	
	55.0 >	3.06 >
		<u>3.06 &gt;</u>

Index to right and above

294.0		
322.2	28.2 >	
295.3	<u>25.5 &gt;</u>	
320.8	53.7 >	3.11 >

10

53

296.4		
320.4	24.0 >	
295.3	<u>29.1 &gt;</u>	
324.4	53.1 >	3.14 >
		<u>3.12 &gt;</u>
		mean = 3.09 >



Nov. 6, 1896.

Star  $\gamma'$  comp. with star  $\alpha$ .  
Index to right and above.295.7 < star  $\alpha$  dis.

324.0

296.9

320.4

28.3 &gt;

23.5 &gt;

51.8 &gt;

3.19 &gt;

297.8

319.6

296.1

325.0

21.8 &gt;

28.9 &gt;

50.7 &gt;

3.2 &gt;

3.2 &gt;

Index to left and below.

21.9

54.2

26.7

50.2

32.3 &gt;

23.5 &gt;

55.8 &gt;

3.02 &gt;

25.3

49.4

21.0

53.2

24.1 &gt;

32.8 &gt;

56.9 &gt;

2.92 &gt;

3.00 &gt;

mean = 3.11 &gt;

This  $\gamma'$  observed. See p. 212. ~~for~~  
and diagram <sup>chart</sup> for new  $\gamma'$ .

Nov. 6, 1896.

I ran  $\beta$  camp with star g.  
Index to left

23.4

55.1

21.0

53.2

22.2

52.4

23.0

54.7

&lt; star g. dis.

21.7

32.2

63.9

2.72

30.2

31.7

61.9

2.79

2.76

Index to right and above.

111.4

142.7

111.4

144.6

31.3

33.2

64.5

2.69

112.2

143.0

112.4

143.5

30.8

31.1

61.9

2.79

2.74

mean = 2.75

12 20 noticed for first time very low aurora  
arch, from west to east complete: arch not  
distinct: summit about  $\frac{1}{10}$  altitude pole.



Nov. 6, 1896.

 $\beta$  Persei. Phot. W. Cam. obs.

Index to right and below.

12	49.6	242.9	< $\beta$ dis.	
		236.0		
		213.2	23.1 >	3.43
		236.7	23.5 >	
			<u>46.6 &gt;</u>	

13	07.3	213.0		
		237.0	24.0 >	3.36 >
		213.0	24.0 >	<u>3.40 &gt;</u>
		237.0	48.0 >	

Index to left and above.

13	14.2	117.0		
		152.6	35.6 >	2.44 >
		117.2	36.4 >	
		153.6	<u>72.0 &gt;</u>	

13	21.7	115.5		
		154.7	39.2 >	2.26 >
		115.5	38.5 >	2.35 >
13	08.2 >	154.0	77.7 >	<u>2.88 &gt;</u>
			mean =	

Obs. bothered very much by very prominent spectrum to one of the images.

Nov. 6, 1896.

13 25 Aurora arch somewhat higher, altitude perhaps  $1/6$  altitude of pole: highest point of arch to west of north point of horizon.

$\beta$  Curii again: trans. obs.  
Index to left and above.

14 46.6

294 .7		
334 .6	$< \beta$ dis.	
294 .9	39.9 >	2.22 >
334 .2	39.3 >	
	79.2 >	

14 533

296 .7		
335 .3	38.6 >	
295 .6	39.8 >	2.24 >
335 .4	78.4 >	2.23 >

Index to right and below.

15 00.6

213 .8		
235 .9	22.1 >	
213.4	23.0 >	3.50 >
<del>208 .4</del>	45.1 >	
236 .4		

15 05.9

212 .8	24.4 >	3.49 >
237 .2	21.0 >	3.50 >
214 .4	45.4 >	
235 .4		
	mean = 2.86 >	

14 56.6 >



Nov. 6, 1896

Same again: Grand  
Index to right and below.

213.6  $\leftarrow$   $\beta$  dis.

15 11.9

236.1

22.5 >

3, 42 >

213.0

24.2 >

237.2

46.7 >

213.3

15 16.4

236.5

23.2 >

3, 55 >

214.4

20.9 >

3, 48 >

235.3

44.1 >

Index to left and above.

15 27.5

116.1

154.0

37.9 >

2, 29 >

114.7

38.9 >

153.6

76.8 >

114.0

154.6

40.6 >

2, 29 >

116.5

36.2 >

2, 29 >

152.7

76.8 >

mean = 2.88 >

15

0

At this time or perhaps somewhat before  
aurora had entirely disappeared.

Nov. 6, 1896.

Same again: Index to lift and above. Cranes: abs.

16	30.4	117.2	< B dis.		
		152.6		35.4 >	2.41 >
		116.2		37.4 >	<del>2.44</del>
		153.9		<u>73.11</u>	
		115.9			
16	40.6	154.8		38.9 >	2.37 >
		117.2		<u>35.4</u>	<u>2.40</u>
		152.6		<u>74.3</u>	<u>2.42</u>
					2.39 >

Index to right and below.

16	47.8	213.7			
		236.3		22.6 >	
		212.5		<u>23.9</u>	3.43 >
		236.4		46.5 >	
		213.5			
16	51.6	237.0		23.5 >	3.43 >
16	42.5 >	214.6		<u>23.1</u>	<u>3.43</u>
		237.17		46.6 >	
					<u>mean = 2.91 &gt;</u>



3 Syrae: Phot. N. 5. Gram: obs.

5 53.3

210.2	← 3 dis.	
238.8		28.6 >
207.6		<u>32.2</u> >
239.8		60.8 >

2.83 >

5	56.9	207.2	33.4	2.74
		240.6	29.9	
		210.1	<u>63.3</u>	<u>2.78</u>
		240.0		

6 03.7

292.1	
336.2	44.1
292.7	<u>43.5</u>
336.2	87.6

1.98

$$\begin{array}{r} 0 \quad 09.6 \\ \hline 6 \quad 00.9 \end{array}$$

$$\begin{array}{r} 292.2 \\ 335.1 \\ 292.8 \\ \hline 334.8 \end{array}$$

$$\begin{array}{r} 42.9 \\ 42.0 \\ \hline 84.9 \end{array}$$

$$\begin{array}{r} 2.05 \\ 2.02 \\ \hline \end{array}$$

$$\text{mean} = 2.40$$

Nov. 7. 1896

Same again:  
Index above.

Cranial

6

22.7

113 .6

154 .7

112 .6

154 .8

- 3 dis.

4 1.1 &gt;

4 1.2 &gt;

8 2.3 &gt;

2.13 &gt;

6

23.8

113 .0

155 .2

113 .2

156 .9

4 2.2 &gt;

4 3.7 &gt;

8 5.9 &gt;

2.03 &gt;

2.08 &gt;

Index below.

6

28.3

28 .9

62 .1

29 .2

60 .7

33.2

31.5

64.7

2.69 &gt;

6

44.3

6

33.8 &gt;

28 .9

60 .2

29 .0

61 .4

31.3

32.4

63.7

2.73 &gt;

2.71 &gt;

mean = 2.40 >

6

30

At this was seen for first time in  
 evening low aurora arch, the sum-  
 mit of which was about  $\frac{1}{6}$  of Pole  
 arch faint and not well marked.



Nov. 7, 1896.

Same again: crani. obs.  
Index below.

6 52.8

208.8 &lt; B dis.

239.7

30.9 &gt;

208.7

30.8 &gt;

2.80 &gt;

239.5

61.7 &gt;

6 57.4

207.8

239.9

32.1 &gt;

208.7

32.7 &gt;

2.68 &gt;

241.4

64.8 &gt;

2.74 &gt;

Index above.

7 02.9

291.9

44.6 &gt;

336.5

40.3 &gt;

2.05 &gt;

294.7

84.9 &gt;

~~335.0 332.8~~

7 10.1

295.3

333.9

38.6 &gt;

293.4

42.6 &gt;

2.16 &gt;

336.0

81.2 &gt;

2.10 &gt;

mean = 2.42 >

Nov. 7, 1896.

Same again  
Index above.

Crane: obs.

7

14.4

114.5

&lt; 3 dis.

154.8

40.3 &gt;

112.3

44.5 &gt;

2.06 &gt;

156.8

84.8 &gt;

7

25.2

114.1

156.8

42.7 &gt;

2.08 &gt;

113.9 + 15.9

41.3 &gt;

2.07 &gt;

155.2

84.0 &gt;

Index below.

7

32.5

27.7

59.3

31.6

28.5

33.5

2.67 &gt;

62.0

65.1

7

45.1

28.7

59.3

30.6

2.71 &gt;

27.5

33.6

2.69 &gt;

61.1

64.2

mean = 2.38 >



Nov. 7, 1896.

u Cygni: Phot. 5: W: obs.

20	11	47.3
----	----	------

abandoned to take

R Vulpeculae: Phot 5: W: obs

20	59	+23.0
<u>23</u>	<u>0</u>	
2	0	

Measurement of faint comp. star.

Star 8 comp. with star 1.  
Index to left and above.

23.3	< star 1 dis.
53.0	

19.9	29.7✓	
57.7	<u>37.8</u> ✓	2.59✓
	67.5✓	

19.8	36.1✓	
55.9	<u>30.9</u> ✓	2.61✓
21.4	67.0✓	2.60✓
52.3		

Nov. 7, 1896.

Index to right and below.

113.0

145.4

106.0

149.4

32.4 ✓

43.4 ✓

75.8 ✓

2.32 ✓

110.1

148.5

112.0

144.4

38.4 ✓

32.4 ✓

70.8 ✓

2.48 ✓

2.40 ✓mean = 2.50 ✓

Ulygnis : Phot. 5: W. obs.

20  
23  
311  
48  
37

47.3

Measurement of faint comp. stars.

Star  $\beta'$  comp. with 8.0 magn.  $\gamma$ .  
Index to right and above.

25.0

51.0

23.7

53.3

&lt; 8.0 magn. dis.

26.0 ✓

29.6 ✓

55.6 ✓

3.03 ✓



Nov. 7. 1896.

22.5

53.4

24.7

52.7

30.9 ✓

28.0 ✓

58.9 ✓

2.90 ✓

2.96 ✓

Index to left and below:

117.1

142.2

114.2

142.7

25.1 ✓

28.5 ✓

53.6 ✓

3.11 ✓

113.7

142.4

115.6

141.9

28.7 ✓

26.3 ✓

55.0 ✓

3.06 ✓

3.08 ✓

mean = 3.02 ✓

U Cygni

Phot 5:

W. obs

20  
24  
3

41  
08  
27

+ 47.2

Measurement of faint comp. stars.

$\frac{\alpha}{\beta}$  5  $\frac{\beta}{\gamma}$  3  $\frac{\gamma}{\delta}$  2  $\frac{\delta}{\epsilon}$  3  
4.5 5.5 3.5 4.5

W. obs  
This is a standard  
for 0.212 ft dia

Nov. 7, 1896.

Star = comp with star, q  
Index to left and below.

30.3		
44.4	< star of dis.	
31.4	14.1	
45.0	13.6	
	<hr/> 27.7	K.52

31.5		
44.2	12.7	
31.4	14.7	
46.1	<hr/> 27.4	K.60
		<hr/> K.59

Index to right and above.

120.4		
136.2	15.8	
121.9	14.1	
136.0	<hr/> 29.9	K.41

122.5		
136.9	14.4	
119.9	15.7	
135.6	<hr/> 30.1	K.40
		<hr/> K.40
		mean = K.50



Nov. 7, 1896.

Star 8 comp. with star 9.  
Index tonight and above.

118.9	
136.6	< star 9 dis.
120.2	17.7 ✓
135.0	<u>18.2</u> ✓
	32.5 ✓ K.22 ✓

120.0	
135.8	15.2 ✓
119.0	17.0 ✓
136.0	<u>32.2</u> ✓
	K.21 ✓
	<u>K.22</u> ✓

Index to left and below.

211.5	16.5 ✓
223.0	
211.4	13.3 ✓
224.7	<u>29.2</u> ✓
	<u>K.22</u> ✓
	<u>K.32</u>

212.2	12.2 ✓
225.0	
212.9	13.2 ✓
226.7	<u>26.6</u> ✓
	K.67 ✓
	<u>K.54</u> ✓
	mean = K.32 ✓

Nov. 7, 1896.

Star & comp. with star g.  
Index to left.

206.9  
230.7  
203.4  
234.0

23.2 ✓  
30.6 ✓  
✓ 8.8 ✓

3.0 2 ✓

205.9  
232.1  
206.4  
231.6

26.2 ✓  
25.2 ✓  
✓ 1.0 ✓

3.21 ✓  
3.14 ✓

Index to right.

296.3  
320.0  
296.9  
322.2

23.7 ✓  
25.3 ✓  
✓ 9.0 ✓

3.3 ✓

295.9  
323.0  
296.6  
321.6

27.1 ✓  
25.0 ✓  
✓ 2.1

3.1 2 ✓  
3.2 ✓

Mean = 3.20 ✓



Nov. 7. 1896.

Star  $\beta'$  comp. with star  $\gamma$ .  
Index to right and above.

$$\begin{array}{r}
 295.4 \\
 320.0 \\
 296.9 \\
 326.0
 \end{array}
 \begin{array}{r}
 < \text{star } \gamma \text{ dis.} \\
 24.6 \checkmark \\
 33.1 \checkmark \\
 \hline
 57.7 \checkmark
 \end{array}
 \begin{array}{r}
 2.9 \checkmark \checkmark
 \end{array}$$

$$\begin{array}{r}
 296.9 \\
 322.8 \\
 295.5 \\
 321.4
 \end{array}
 \begin{array}{r}
 29.9 \checkmark \\
 25.9 \checkmark \\
 \hline
 55.8 \checkmark
 \end{array}
 \begin{array}{r}
 3.02 \checkmark \\
 \hline
 2.9 \checkmark
 \end{array}$$

Index to left and below.

$$\begin{array}{r}
 24.7 \\
 53.4 \\
 20.1 \\
 58.2
 \end{array}
 \begin{array}{r}
 24.7 \checkmark \\
 34.1 \checkmark \\
 \hline
 66.4 \checkmark
 \end{array}
 \begin{array}{r}
 2.61 \checkmark
 \end{array}$$

$$\begin{array}{r}
 18.9 \\
 59.0 \\
 23.6 \\
 50.1
 \end{array}
 \begin{array}{r}
 40.1 \checkmark \\
 29.5 \checkmark \\
 \hline
 69.6 \checkmark
 \end{array}
 \begin{array}{r}
 2.52 \checkmark \\
 \hline
 2.56 \checkmark
 \end{array}$$

$$\text{mean} = 2.77 \checkmark$$

Nov. 7, 1896.

Star y' comp. with star g  
Index to left and future.

$$\begin{array}{r}
 23.0 \\
 55.6 \\
 26.4 \\
 51.0 \\
 \hline
 156.0
 \end{array}
 \begin{array}{l}
 < \text{star g dis.} \\
 32.6 \checkmark \\
 24.6 \checkmark \\
 \hline
 57.2 \checkmark \quad 2.97 \checkmark
 \end{array}$$

$$\begin{array}{r}
 26.8 \\
 50.2 \\
 19.4 \\
 54.7 \\
 \hline
 141.1
 \end{array}
 \begin{array}{l}
 23.4 \checkmark \\
 35.0 \checkmark \\
 \hline
 58.4 \checkmark \quad 2.92 \checkmark \\
 2.94 \checkmark
 \end{array}$$

Index to right and above.

$$\begin{array}{r}
 114.1 \\
 143.4 \\
 112.7 \\
 144.0 \\
 \hline
 514.2
 \end{array}
 \begin{array}{l}
 29.6 \checkmark \\
 31.3 \checkmark \\
 \hline
 60.9 \checkmark \quad 2.43 \checkmark
 \end{array}$$

$$\begin{array}{r}
 112.1 \\
 142.9 \\
 110.8 \\
 144.0 \\
 \hline
 510.8
 \end{array}
 \begin{array}{l}
 30.2 \checkmark \\
 30.2 \checkmark \\
 \hline
 60.4 \checkmark \quad 2.42 \checkmark \\
 2.42 \checkmark
 \end{array}$$

(above)

This y' abandoned. For new y' see  
p. 212 and chart.

mean = 2.44



Nov. 7, 1896.

R. P. Regasi: Phot 5: W. obs

$$\begin{array}{r} 23 \\ 1 \\ \hline 2 \end{array} \quad \begin{array}{r} 03 \\ 45 \\ \hline 42 \end{array} \quad +9.0$$

10 20 clouds.

cloudy so that no faint stars are visible.

10 30 A little clear

$$\begin{array}{r} 5 \\ 2 \\ \hline 3 \end{array} \quad \begin{array}{r} 4 \\ 3.5 \\ 3 \\ 2.5 \end{array} \quad \begin{array}{r} 7:7 \\ 0:0 \\ 11:11 \\ \hline 1 \end{array} \quad \begin{array}{r} 4.5 \\ 4 \\ 3 \end{array} \quad \begin{array}{r} 7 \\ 1 \\ 0 \end{array} \quad \left. \begin{array}{l} \\ \\ \\ \end{array} \right\} \text{W. obs.}$$

11 0 Faint aurora along north horizon

Star 2 camp with Star h  
 I made 10 left and 2 below  
 118.8 < star h dis

11 25

$$\begin{array}{r} 142.2 \\ 118.1 \\ 140.1 \end{array} \quad \begin{array}{r} 23.4 > \\ 22.0 > \\ \hline 45.4 > \end{array} \quad 3.49 >$$

Nov. 7, 1896.

116.1

138.8

117.0

139.4

22.77

22.47

45.17

3.507

3.507

Index to right and above,  
clouds + haze.

207.6

230.3

209.3

227.9

22.77

18.67

41.37

3.707

209.2

227.6

208.2

228.5

18.47

20.37

38.77

3.847

3.777

mean = 3.647~~Star ③ comp. with star h.  
Index to right and above~~~~205.9~~~~229.4~~~~204.7~~~~230.5~~~~< star h dis.~~



Nov. 7, 1896.

~~203.7~~

~~230.8~~

~~207.1~~

~~228.8~~

~~Index to left and below~~

Reject above observations on  $\ominus$   
as old. thinks. he got wrong  
star.

Observations on  $\delta$  very dif-  
ficult and somewhat doubtful as  
region is getting somewhat low and  
sky hazy.  
No farther observations possible.

Nov. 9, 1896. (Monday)  
 B. Ryce: Phot. V: Cramps

Index below.

5	45.5	209.8	< B dis.	30.2 >	
		240.0			
		207.5		33.9 >	2.71 >
		241.4		64.1 >	

5	49.3	207.4		35.3 >	
		242.7		30.8 >	2.64 >
		209.0		66.1 >	2.68 >
		239.8			

Index above.

5	56.1	292.7		43.6 >	
		336.3		40.1 >	2.09 >
		294.6		83.7 >	
		334.7			

6	02.9	294.1		43.0 >	2.04 >
5	53.4 >	337.1		42.4 >	2.06 >
		292.8		85.4 >	
		335.2			
				mean =	2.37 >



Nov. 9. 1896.

Same again:  
Index above.

Cram: obs

6	15.2	293.5	< Basis.	42.5 >	2.12 >
		336.0		40.2 >	
		293.0		<u>82.7 &gt;</u>	
		333.2			

6	20.4	293.0		41.4 >	2.14 >
		334.4		40.6 >	
		294.2		<u>82.0 &gt;</u>	2.13 >
		334.8			

Index below

6	27.8	28.2		34.5 >	2.47 >
		62.7		36.6 >	
		25.6		<u>71.1 &gt;</u>	
		62.2			

6	81.2	27.6		35.4 >	2.54 >
6	23.6 >	63.0		33.7 >	<u>2.50 &gt;</u>
		27.9		69.11 >	
		61.6		<u>mean = 2.32 &gt;</u>	

Same again:

Cram: obs.

Nov. 9. 1896.

Index below.

6

42.4

203.2 <  $\beta$  dis.

241.2 33.0 >

207.0 36.1 > 2.54 >

243.1 69.1 >

6

49.0

207.5

241.6 34.1 >

208.1 32.4 > 2.62 >

240.5 66.5 > 2.58 >

Index above.

6

55.8

293.8

335.3 41.5 >

294.6 41.2 > 2.12 >

335.8 82.7 >

7

01.1

294.8

333.6 38.8 >

294.0 40.8 > 2.21 >

334.8 79.6 > 2.16 >

mean = 2.37 >



Nov. 9, 1896.

V bygni : O hat. 5: W: obs.

20

41

+ 47.2

2305

2

24

Measurement of faint comp. stars.

$$\begin{array}{r} \alpha \quad 5.5 \\ \beta' \quad 4.5 \\ \gamma' \quad 4 \end{array}$$

$$\begin{array}{r} \beta : \beta \\ \gamma : \gamma \\ \delta : \delta \end{array}$$

$$\begin{array}{r} \delta \quad 2.5 \\ \epsilon \quad 4 \end{array}$$

$$\begin{array}{r} \beta' \\ \gamma' \\ \epsilon \end{array}$$

This  $\gamma'$  is abandoned.  
Comp. 262 +  
chart W: obs.

~~The above  $\gamma'$  is the final one selected. The  $\gamma'$  observed on Nov. 6. and  $\gamma$  has been abandoned.~~

Star  $\delta$  comp. with star  $\gamma$ .  
Index to left.

210.4

227.0

211.1

227.5

210.7

228.7

208.6

228.2

< comp. star =  $\gamma$  dis

16.6 &gt;

16.4 >

33.0 &gt;

4.19 &gt;

18.0 &gt;

19.6 >

37.6 &gt;

3.91 >

4.05 &gt;

Nov. 9, 1896.

Index bright.

299.0	18.1 >	
317.1	19.5 >	3.91 >
299.2	37.6 >	
318.7		
<del>319.6</del>		

299.6	18.1 >	
317.7	18.1 >	3.99 >
299.1	36.2 >	3.95 >
<del>300.4</del>		
317.2		
		4.00
		8.60

mean = 12.60

S vary comp. with star a  
Index bright and above295.9  
324.6 < star g dis.

297.2	28.7 >	
321.4	24.2 >	3.14 >
	52.9 >	

296.7	22.8 >	
319.5	30.0 >	3.15 >
294.3	52.8 >	3.14 >
324.3		



Nov. 9, 1896.

Index to left and below.

22.2 ~~21.2~~

53.9

27.3

50.8

31.77

23.57

55.27

3.057

26.2

51.2

22.6

55.6

25.07

33.07

58.07

2.947

2.007

3.077

8.60

This  $\gamma$  'replaced' by a new one on p.  
212 and on chart.

mean = 11.67

The above  $\gamma$  'is the final one selected.  
The  $\gamma$  'observed' on Nov. 6, and 7, and p.

Star comp. with star of  
Index to left and below.

26.7

49.5

25.8

50.7

22.8

24.9

47.7

3.38

25.0

51.7

27.4

50.5

26.7

23.7

48.2

3.35

3.36

48.9

Nov. 9, 1896.

Index tonight and above.

118.1 ~~116.0~~  
~~139.6~~ 21.5  
~~115.6~~ 26.3 3.37  
~~141.9~~ 47.8

116.7 24.1  
 140.8 22.9 3.41  
 115.9 47.0 3.39  
 138.8

3.38  
 8.160  
 11.98

Reject above as better star  
 is selected immediately below.

Star y'camp. with star 18  
 Index to right and below.  
 above.

116.8 < Star g dis  
 141.8  
 116.2 25.0 > 3.28  
 141.1 24.9 >  
 49.9 >  
 118.0  
 140.6  
 116.0 22.6 >  
 25.0 > 3.38 >  
 141.0 47.6 > 3.33 >



Nov. 9, 1896.

Index to left and below.

208.0

200.7

209.2

229.0

22.7

19.8

42.5

3.63

208.1

229.5

207.5

228.5

21.4

21.0

42.4

3.64

3.64

3.48

8.60

mean = 12.08

y 4.5 y' : y' 4 5 W. also

also is a new and final y'.

The y' measured on Nov. 6, 91, and the early part of this evening is now abandoned, and the new y' just taken also takes its place.

Nov. 9, 1896.

R Pegasi: Phot. 5: Wobs

$$\frac{23}{\frac{1}{2}}$$

$$\frac{23}{\frac{20}{17}}$$

+9.0

Measurements of faint comp. stars.

$\frac{p}{m}$	+	5:5	4	$\frac{m}{\theta}$	} Wobs.
$\frac{\theta}{u}$	3.5	$\frac{m'}{u'}$	3	$\frac{\theta}{u}$	
	3	$\frac{m'}{u'}$	3	$\frac{u}{\theta}$	
	3.5	$\frac{m'}{u'}$	3	$\frac{u}{\theta}$	

S var  $\frac{6}{5}$  comp. with star h.

Index to left and below;

302.5 &lt; star h dis.

314.6

301.0

315.2

12.1 &gt;

14.2 &gt; 4.69 &gt;

26.3 &gt;

302.3

315.7

304.1

314.0

13.4 &gt;

9.9 &gt; 4.96 &gt;

23.3 &gt; 4.82 &gt;



Nov. 9. 1896.

Index to right and above.

32.9

45.0

32.3

47.1

12.1 &gt;

14.8 &gt;

26.9 &gt;

4.64 &gt;

32.7

47.4

33.1

45.4

14.7 &gt;

12.3 &gt;

27.0 &gt;

4.63 &gt;

4.64 &gt;

mean = 4.73 &gt;

3 bar &amp; comp with star h.

Index to right and above.

31.0 ← star h 2nd

48.1

30.2

46.6

17.1 &gt;

16.4 &gt;

33.5 &gt;

4.16 &gt;

31.8

46.4

29.9

46.9

14.6 &gt;

17.0 &gt;

31.6 &gt;

4.29 &gt;

4.22 &gt;

Index to left and below.

121.4

139.1

120.9

136.5

17.7 &gt;

15.6 &gt;

33.3 &gt;

4.17 &gt;

Nov. 9, 1896.

10	39	119.9	17.6 >	
		137.5	16.8 >	4.10 >
		120.6	34.4 >	4.14 >
		137.4	mean =	4.18 >

Star 1 camp with star h.  
Index to left and below.

10	41	115.6	< star h 2nd.	
		141.6		
		118.2	26.0 >	
		139.6	21.4 >	3.39 >
			47.4 >	
		117.3		
		140.8	23.5 >	
		115.6	27.2 >	3.24 >
		142.8	50.7 >	3.32 >

Index to right and above.  
clouds and haze from S.

10	50	205.4		
		230.2	24.8 >	
		211.1	18.7 >	3.58 >
		229.8	43.5 >	

clouds.

little clear.



Nov. 9. 1896.

~~209.2~~  
clouds
$$\begin{array}{r} 3,457 \\ \hline 3,527 \\ \hline 3,427 \end{array}$$

206.9

mean = 22.87

229.4

23.47

205.6

46.27

229.0

Observations difficult because of haze and clouds

Star.  $\Theta$  comp with star  $\eta$ .  
Index to right and above

202.0

233.2

208.8

234.6

31.2

30.8

62.0

Reject.

203.3

238.6

206.1

232.5

35.3

26.4

61.7

clouds.

Too cloudy for farther work.

From 12 h. to 15 h. sky was clear during such brief intervals that it was impossible to observe; the haze would come up very quickly, cutting off all stars.

Nov. 9, 1896.

at about 1<sup>st</sup> 15<sup>m</sup>. sky became clear and remained so for some considerable time, when obs. adjusted focus of phot. N by pointing at Sirius.

Phot was then turned on  $\beta$  Persei which was brought into the field only after at least a dozen times adjusting altitude and azimuth: probably bar along which sight is taken for azimuth is bent as it points several degrees away from star.

With adjusted focus both images of the same stars were almost exactly similar when  $\beta$  Persei was brought beside its comp. star the images, altho' elongated, were more nearly similar than before.

$\beta$  Persei: Phot. T: Cam: obs.

Index to left and below.

		21.1	< $\beta$ dis.	
16	25.3	48.2	27.1 >	3.00 >
		18.7	29.4 >	
		48.1	56.5 >	
		19.0		
16	31.4	50.6	31.6 >	2.94 >
		22.1	26.2 >	2.97 >
		48.3	57.8 >	



Nov. 9, 1896.

Index to right and above.

16	39.2	288.9	321.4	32.5 >	
		284.8	323.0	38.2 >	2.48 >
				70.7 >	

Stopped by flagpole.

16	49.7	288.5	322.1	33.6 >	
16	36.4 >	286.0	323.1	37.1 >	2.48 >
				70.7 >	2.48 >
				mean =	2.72 >

During flagpole interfering, obs. was obliged to stop between sets after reversing photometer.

During last half of group observations were taken thro' clouds of varying intensity.

Above group was taken with adjusted images: it seemed as if the observations were more easily obtained with the more nearly similar images, altho' the actual mean magn. above (= 2.72) is not considered of any value, as the observations were taken thro' varying clouds and were hurried before stars should be lost in heavier clouds rapidly advancing.

No chance for another set.

Nov. 10. 1896. (Tuesday)

5 45 Set on  $\beta$  Persei but too cloudy to observe.

clouds can be <sup>seen</sup> with naked eye to extend over  $\beta$  Persei but not over its comp. star =  $\gamma$  Persei.

5 55 Temporarily clearer.

$\beta$  Persei: Phot. V: Cam: obs

~~271.7  
325.6 328.2 wrong: clouds interfere~~

Reject: clouds irregular: images seen to vary.  
clouds.

~~279.5  
323.1  
279.5  
329.5 326.5~~

Reject.



Nov. 10, 1896.

Reject.~~beluinds until 6:23  
saw a gain.~~~~279.2  
283.1  
331.6~~~~262~~h. m.  
6 30.0

278.6	< 13 dis.	52.0 >	
330.6		51.4 >	
278.8			1.57 >
330.2		103.4 >	

6 36.3

277.4	54.0 >	
331.4	55.2 >	1.44 >
277.4		1.50 >
332.6	109.2 >	

Index to left and above.

6 45.5

13.2	37.6 >	
50.8	34.4 >	2.44 >
18.2		
52.6	72.0 >	

6 49.3

16.3

54.6

38.3 &gt;

2.33 &gt;

6 40.3 &gt;

14.4

37.1 &gt;

2.38 &gt;

6h. 39.4 > = corrected time.

51.5

75.4 &gt;

mean = 1.94 >

Obs. rejects all settings above line as  
they were made thro' varying clouds.  
All readings below line were made  
with no clouds near region.

Nov. 10, 1896.

Index to left and above.

h	m	15.2	$\beta$ Dis.	37.0	
6	55.3	52.2		37.5	2.36
		14.8		74.5	
		52.3			
		16.0			
7	00.7	52.5		36.5	2.34
		14.2		38.2	
		53.0		75.3	2.35

Index to right and below.

7	05.5	95.0			
		151.3		56.3	1.38
		96.4		55.3	
		151.7		111.6	
		96.2			
7	12.0	153.0		56.8	1.29
		95.1		58.6	1.34
7	03.4	153.7		115.4	1.84
7 h.	02.5				mean

Arnold + Dent #958.

 $\beta$  and #394.

7 h. 36<sup>m</sup>. 55.3 = 7<sup>h</sup>. 36<sup>m</sup> 00.0

therefore Arnold + Dent #958 is fast of  
 $\beta$  and #394 by 55.3; but  $\beta$  and #394  
 is 3 sec. slow; therefore Arnold + Dent  
 #958 is 0.9<sup>m</sup> fast of true time; hence  
 subtract 0.9<sup>m</sup> from mean of times.



Posted to here





1696 pages, 600 p., 5370

KG 1385.534



