KG
11365
556

KG 11365.556

July 3, 1902

to

Sept 23, 1902

KG 11365.556

HARVARD
UNIVERSITY
LIBRARY
MAY 8 1956

July 3, 1902 (Thursday)

BOC, 82 B. 39×
7 38 15.0 7 35 00

Co's watch = 38.5 sec. fast at 7:36

B Lyrae 33.2 w Cls.
Phot T. 18 45 + ~~33~~.6 6" cap.
18 50
3 55 Co's watch used.

Above grandis. 8 05
~~8~~.10.3 Reject
807.8 45.1 34.8
189.5 35.3
~~224.8~~ 70.1 2.50
8.8
10.2 45.2 36.4 -2.45
188.3 36.8
225.1 73.2 - 2.40
Below
Mean = -2.30
276.0
13.4 315.8 39.8
96.8 42.3
139.1 82.1 2.13

275.2 -2.16
8 15.6 316.6 41.4
47.0 98.8 38.8
8 01.8 137.6 80.2 -2.19
5-0.6
13 11.2 G.M.T.

July 3, 1902

Same Again

Below

Reject

276.6
8 17.6 314.8 38.3 ✓
97.7 40.5 ✓
138.2 78.7 — 2.23 ✓

275.9 40.6 ✓ — 2.24
19.8 316.5
99.5 37.7
137.2 78.3 ✓ — 2.25

Above

Mean = — 2.40

190.9
22.6 ~~224.8~~ 33.9 ✓
9.7 34.9 ✓
~~4~~4.6 6~~7~~8.8 ✓ — 2.55 ✓

190.2 — 2.56 ✓
8 24.4 225.0 34.8 ✓
8 4.4 9.6 33.0 ✓
8 21.1 42.6 67.8 ✓ — 258
5 — 0.6 ~~P.a.~~
13 20.54 M T [illegible]

July 3, 1902

III

Above

10.5

8 30.6 42.6 32.1 Reject

189.3 36.3

225.6 68.4 − 2.56

−2.58

10.1

32.4 44.6 34.5

190.8 33.2

224.0 67.7 − 2.59

Below Mean = −2.43

278.1

35.2 315.4 37.3

97.4 40.1

137.5 77.4 − 2.27

277.4

8 37.6 316.4 39.0 − 2.28

15.8 99.4 38.0

8 3~~4~~0 1~~2~~37.4 77.0 − 2.28

5 − 0.6

13 33.4 P.A. ~~=0~~ 192.6 Ven B

H.A. − 2:50 East

Dec. = + 33.1

S.T. = 15:57

Sp. wh. − 0.5 a

+ 0.5 B

+ 1.1 C

(over)

July 3, 1902

IV

Below

~~99 H~~

~~8 H 2.5~~ 13.

There seems to be some trouble in measurement of β Lyrae, exceptionally so tonight, ~~the image~~ + whichever of the two stars are in one and the same prism, this image looks very poor, It it either elongated and ~~[illegible]~~ ~~[illegible]~~ winged or else larger and more porous while the other image will ~~be~~ invariably be sharp. It would seem that there must be some trouble in the photometer as it is impossible to get satisfactory settings.

Previous measurements will be rejected, will investigate and see what the trouble is.

Noticed trouble with images before beginning and found it impossible to get satisfactory focus. Observations considered experimental. Will examine photometer and try and see what the trouble is.

July 3, 1902

R Leonis Min. W Obs.

9 31 + 35.8
16 05
6 34

Impossible to do anything with region; region low & probably some clouds.

S Virginis W Obs

13 24 - 5.5
16 16
2 52

Selection of 14th Magn. Stands.

30.5 9.0
56.5 26.0 35.0 26.0

No 1 prec. var by 26.0 secs & 2.0′ N. of var.

~~21.5~~
11.5~~[illegible]~~ 44.5
34.0 22.5 07.5 23.0

No 2 fols var by 22.8 sec. & 3.0′ N. of var.

03.0 54.5
40.0 37.0 31.0 36.5

No 3 fols var by 36.8 secs & 7.7′ N ~~[illegible]~~ of var.

40.5 ~~40.0~~
13.0 32.5 [illegible] 53.0
~~28.5~~ ~~15.5~~ [illegible] 25.5 32.5
~~46.0~~

stand
No 4 fols ~~var~~ by 32.5 secs & 5.3′ N of ~~var~~ l.

(over)

July 3, 1902.

SV Virginis. Cont.

~~57.5~~ 07.0 15.5 ~~3~~ 43.5
22.5 59.0 15.5

No 5 fols no 4 by 15.5 secs. & is 2.1 N of ~~#~~ No 4.

No 5' fols no 4 by 15.5 secs. & is 1.0 S of No 4.

No 5 is probably a better no 5 than no 5', but will look at region again when some higher. No 5' probably a little too bright

R Scorpii WCh

16 11 −22.7
16 54
0 43

33.0
53.0

Selection of 14~~th~~ mags seems all right for R Scorpii

July 3, 1902

R Serpentis WCM.

15 44 +15.0
17 25
1 41

Selection of 14th magns.

33.5 15.5
55.0 21.5 37.5 22.0

No 1 fols var 21.8 sec. & 2.'2 S of it.

50.0 13.5
01.0 ~~06~~ 11.0 24.5 11.0

No 2 fols No 1 by 11.0 secs. & 0.'7 S. of it

29.0 24.5 10.0 24.0
53.5 34.0

No 3 fols var 24.2 secs. & 4.'7 N of it.

19.5 02.0 57.5 1.5
21.5 59.0

No 4 prec. no 3 by 1.8 secs. & 0.'8 ~~S~~ N of it.

39.0 26.5 22.0 26.5
05.5 48.5

No 5 fols No 3 by 26.5 secs. ~~&~~ is 0.'2 N of it.

41.0 2.0 56.0 2.5
43.0 58.5

July 3, 1902

R Serpentis Cont

No 5' prec No 5 by 2.2 sec. & 1.28' of it

No 5' may possibly be better than No 4 when examined on another night.

B&C 1182   B 394
11 05 17.4   11 02 00
06 17.5   03 00

21 14 −16.8
18 07
3 07
8 53

Dis Jup II Phot R. W Obs.
Campbell Rec.
Comp. with Sat. on fol. side = Sat III

18
11 ~~56~~ 56   169.5
11 19 19   19 13   75.7 245.2   1
−3 18   25   74.8 169.2
11 16 01   42   150.5 244.0   +0.6
75.2

July 3, 1902

~~11 19 8~~

	11 20 07		169.3	
11 20 31	23	74.6	243.9	2
- 3 18	41	75.8	168.2	
11 17 13	53	75.2	244.0	+0.6
	21 09		167.1	
11 21 29	23	76.0	243.1	
3 18	35	76.2	168.0	3
11 18 11	50	76.1	244.2	+0.5
	22 01		167.8	
11 22 22	14	75.7	243.5	4
3 18	29	77.2	167.0	
11 19 04	43	76.4	244.2	+0.5
	59		167.0	
11 23 32	23 30	79.3	246.3	
3 18	43	79.0	168.0	5
11 20 14	57	79.2	247.0	+0.4
11 24 38	24 13		167.1	
3 18	27	79.4	246.5	
	47	80.6	166.8	6
11 21 20	25 03	80.0	247.4	+0.4
11 25 44	17		167.8	
3 18	35	80.1	247.9	
11 22 26	54	80.2	167.2	7
	26 08	80.2	247.4	→ +0.4

July 3, 1902

11	23	11	11	26	29	99.5	167.0	+0.4
		22			40	77.3	246.5	+0.5
			reject		~~54~~		~~170.5~~	
		44		27	02	75.6	169.2	+0.6
		58			16	72.8	244.8	+0.7
	24	08			26	69.8	172.0	+0.8
		19			37	65.6	241.8	+1.0
		29			47	63.2	176.2	+1.1
		38			56	63.9	239.4	+1.0
		46		28	04	62.4	175.5	+1.1
		56			14	57.7	237.9	+1.3
	25	03			21	53.6	180.2	+1.5
		12			30	51.7	233.8	+1.6
		23			41	47.1	182.1	+1.8
		33			51	39.1	229.2	+2.2
		42		29	00	35.9	190.1	+2.4
		51			09	33.0	226.0	+2.6
	26	01			19	29.5	193.0	+2.9
		11			29	26.5	222.5	+3.1
		21			39	20.9	196.0	+3.7
		35			53		216.9	
		46		30	04	Not seen later		
						Limit of visibility		
				30	21		197.0	
11	30	51			~~31~~		~~225.~~	
	3	8			43	20.0	217.0	
11	27	33			59	~~18.5~~	198.5	
				31	22	19.2	217.0	+3.9

July 3, 1902

Seeing rather good; air a little unsteady

BOC 1182			B. 394		
11	34	17.7	11	31	00
	35	17.7		32	00

Ledgered, Plotted, Posted.

July 7, 1902 (Monday)

BOC \ 118   B. 334
7 30 52.5   7 27 00

C's watch — 8.5 fast at 7:28

Phot T. T Cygni w Cb.
~~7" Cb.~~

20 40 + 33.4
15 \ 05
above 5 35
6 20

19 2.8 < var. dis.   C's watch used.
8 09.0 2 20.8 clds.
13.6
40.5
19 . clds. thicker
2 . stars gone
8 20 . clouds still thick no stars invisible
8 30 . Below Reject above " " "

Impossible to finish group

New Start

see next page

July 7, 1902
Comp star = DM +33° 4027 (8.5)

above
191.6 < var dis   Full aperture
8 57.0   223.0   31.4
12.6   28.0   C's watch used.
40.6   59.4   — 2.88 ✓

197.9   — 2.84 ✓
222.0   29.1
10.8   32.5
43.3   61.6   — 2.80 ✓

Below   Mean = — 2.69 ✓
98.9
136.0   37.1 ✓
282.3   30.9
313.2   68.0   — 2.57 ✓

✓
— 2.54
101.6
9 03.0   133.0   31.4   ✓
9 00.0   280.0   38.4
5 — 0.2   318.4   69.8   — 2.51
13 59.8 G.M.T.
5938.583

July 7, 1902

II

Below
99.4
9 05.0 135.5 36.1
282.3 clouds 28.5
310.8 64.6 – 2.69

102.5 – 2.68
132.6 30.1
279.1 35.2
314.3 65.3 – 2.67

Above Mean = – 2.79
10.8
42.2 31.4
192.9 27.9
220.8 59.3 – 2.89

12.2 – 2.90
9 13.0 40.5 28.3
191.5 30.1
221.6 58.4 – 2.92

~~Reject~~

July 7, 1902

III

Above

11.3
9 19.4 42.9 30.7
19.5 29.5
22.0 60.2 — 2.85

12.3
41.2 28.9 — 2.88
19.0 29.6
22.1.6 58.5 — 2.92

Below Mean = —2.72

279.5
316.2 36.7
101.6 31.4
133.0 68.1 — 2.57

280.1 —2.54
9 25.2 313.6 33.5
4 46 98.8 36.6
9 22.3 ~~135.8~~ 70.1 — 2.51
5 —0.2 135.4 (over)
14 22.1

5938.599

P.a. = 184.4 to B
H.a. = -3:57 East
S.T. = 16:46
Dec. = +33.7
Sp.Wh. = 3.5 a, 4.5 B, 5.1 C

Final Mean = —2.70

Troubled somewhat in previous measurements by clouds; but in first and last groups sky was much clearer than in middle group. Images fairly steady in 1 & 3 but varying a little in middle group.

Extreme care exercised throughout. Middle group 1/4 weight first & last groups full weight.

July 7, 1902

Note on previous ~~of~~ measurements

Sky in first group rather clear.
Sky in last group a little more hazy, images varied together~~ed~~ and ~~to~~ not alternately. In middle group sky more cloudy & images varying alternately.
Reject middle group.

No chance for 14th magns. or faint variables. Clouds now
9 47 becoming thick everywhere.

W Ob

Phot R Σ 2822
~~Σ1 39 + 25.~~
Σ1 38 + 28.2
17 03
4 35
7 25

Clouds thick no stars.
9 52 visible in finder.

$\Sigma\ 56^{I}$ W Ob.

Phot R. Σ1 32 + 6.1
17 12
4 20
7 40

1000 Clouds thick no stars visible

July 7, 1902

1035 Impossible to get anything farther
too Cloudy everywhere.

Cleaned Double Image Prism, Nicol and
eye piece — also achromatic prisms again —
of Phot. Ic

Ledgered, Plotted, Posted.

July 8, 1902 (Tuesday)

~~B O C 182 B.394~~

7 30 48.5 7 31 0.0

Cs watch = ~~4.5~~ 7 secs fast at 7.32

Reset B & C before above comparison

β Lyrae w Obs

Phot R. 18 45 + 33.2 6" cap.

15 00

3.45

8 15 Cs watch

experimental only

Above

257.1 < var. dis.

7 59.0 294.5 37.4

74.4 41.1

115.5 78.5 − 2.24 ✓

256.1

295.0 38.9 − 2.26 ✓

76.1 37.9

114.0 76.8 − 2.29

Below Mean = − 2.10

165.6

207.0 41.4

342.0 47.3

29.3 88.7 − 1.95

− 1.95

July 8, 1902

163.6
8 06.4 208.3 44.7
344.3 43.8
28.1 88.5 − 1.95

Same again

Below
164.4
8 08.8 206.3 41.9
343.8 45.1
28.9 87.0 − 2.00 ✓

163.4 1.96 ✓
207.9 44.5
343.7 45.4
29.1 89.9 − 1.92 ✓
mean = −2.15

Above
77.9
113.5 35.6
255.1 39.4 ✓
294.5 75.0 − 2.35

7$\overset{5}{\cancel{3}}$.2 − 2.34 ✓
8 17.8 115.2 40.0
257.4 35.2 ✓
292.6 75.2 − 2.34

R.A. = 13.5 VmB Sp. Vel. = −0.5a, +0.5B, +1.1C
H.A. = −2.58 East Dec. = +33.1
S.T. 15:43

(over)

July 8, 1902.

Images improved since cleaning phot. last night, but not perfect and not just alike.

Phot R. Σ 2325 WOb

18 25 -10.9
15 53
2 32
9 28

PA. 250°
Dist 12"
Magns 6.0-9.0

+0.6.1 ∠ for dis

8 43.0 131.8 25.7
281.0 37.7
318.7 63.4 - 2.73
103.4
135.2 31.8 - 2.84
~~28~~ 6.8 25.9
312.7 57.7 - 2.95
Reversed. mean = - 3.10
16.5
43.2 26.7
~~20~~ 199.1 21.6
220.7 48.3 - 3.35

18.0 - 3.36
8 50.4 41.2 23.2
9.3.4 197.9 24.7
8 46.7 222.6 47.9 - 3.37
5 - 0.1
13 46.6 G.M.T.
5939

July 8, 1902

S Virginis wCb.

~~Plot~~

13 25 −5.8
16 15
2 50

Exam. of 14~~th~~ magns. Standards
The selection made ~~the~~ other night keeping star 5 and rejecting 5' seems to be as well as can be done

U Virginis wCb.
Selection of 14~~th~~ magns.

12 48 +4.1
16 30
3 42

19.0 45.0
23.5 49.5

No 1 fols star s by 4.5 sec. & 2.8' N. of it

135 ~~var~~ 30.5 ~~#~~ 06.5 30.0
44.0 36.5

No 2 prec. var by 30.2 secs. & 5.2' S from.

~~12.5~~ 27.5 43.0
~~14.0~~ 28.5 44.0

No 3 prec. var by 1.0 sec. & 6.0' N of it.

July 8, 1902

W Virginis Cont.

~~550~~ ~~57.5~~ 050 19.0 36.0

07.0 20.0 37.5

No 4 prec. var by 1.5^{s} & $4.3'$ N of it.

07.5 20.0 54.5 20.0

27.5 14.5

No 5 prec var by 20.0^{s} ~~&~~ $7.2'$ N of it

955 12.69

12.53 No 2 var 3 X

12.61

Atmospheric conditions especially at this altitude very poor faint stars extremely difficult to see and owing to murky atmosphere & bad seeing they will disappear & reappear faintly. Sequence not considered fully satisfactory of neccessity but must be examined on a subsequent night.

Much fog illuminated by electric light in the air.

~~RR~~ July 8, 1902

RR Librae W.Obs.

15 48 − 18 00
17 32
1 44

Selection of 14 ~~th~~ magns.

Reference star (x) prec. var 5 secs. & 3.'0 S of it.

19 18 48 18.5
37 06.5

No 1 fols ~~18~~ x by $18.^s2$ + 2.'7 N of it.

53.5 48.0 11.0 49.0
41.5 00.0
45.0 51.5 03.0 52.0
51.0 57.5 09.5 58.5

No 2 fols ~~var~~ x 48.5 sec. & ~~3.'5 S~~ 1.'9 S of it

No 3 fols x 51.8 sec & is 4.'2 S of it.

No 4 fols x 58.0 sec. & is 2.'0 S of it.

~~17.5~~ ~~7~~ 9 23.5
11 25.5

No 5 prec. x by $2.^s0$ & 5.'0 South of it.

1048 PM Selection thought to be fairly good consider-ing the murky atmospheric ~~conditions~~

July 8, 1902

T Urs Maj 20 Obs.

12 32 + 60.5
18 12
5 40
7

~~48~~ ~~46~~

18.5 ~~360~~ ~~21.5~~
26.0 ~~46~~0

39.0
44.0

No 1 fols star q 5.2 secs & 1.7 N of it.

Impossible to do anything farther as atmospheric conditions are very poor. 11 13

Although stars at moderately high altitudes seem fairly bright to the naked eye, yet all through the air especially at low altitudes there is a foggy condition which is especially obnoxious to good seeing & also to seeing faint objects. This poor condition is steadily increasing. 11 20

Slight fog on 15" object glass.

L. P. P.

July 9, 1902 (Wednesday)

BOC 1182 Ball 103
7 32 04.0 7 32 05

C's ~~watch~~ = 20 sec. slow at 7:33

U Sagittae 2006

Phot T. 19 20 +20.0
15 05
4 15
7 45

7 40 Cloudy

8 00 "

19 20 +20.0
15 48
3 32
8 28

8 25 Clouds thick

8 35 Clouds all thick everywhere
no stars visible.

July 10, 1902 (Thursday)

BD C 1182 Ball 103
7 25 32.5 7 25 00

C's watch = 9.5 sec. fast at 7:26

β Lyrae W Obs.
Phot T. 18 45 +33.2 6" cap
15 10
3 35

Above 8 25 C's watch used. Experimented

260.1 < var. dis. 31.1
7 55.4 291.2
79.1 34.1
113.2 65.2 — 2.67

258.8
292.1 33.3 — 2.66
79.2 32.6
111.8 65.9 — 2.65

Below
167.6 Mean = -2.47
204.2 366
346.6 40.0
26.6. 76.6 — 2.30

167.4 — 2.28
8 03.0 204.9 37.5
345.8 40.5
26.3 78.0 -2.25

July 10, 1902

Same Again

Below

166.3
8 05.4 204.8 38.5
348.1 37.6
25.7 76.1 — 2.31

167.2 −2.32
204.1 36.9
347.2 39.0
26.2 75.9 — 2.32

Above Mean = — 2.49
79.5
111.7 32.2
258.6 33.2
291.8 65.4 — 2.66

78.5 —2.66
8 12.6 112.8 34.3
259.6 31.6
291.2 65.9 — 2.65

P.A. 12.2 Ver B Final Mean = — 2.48
H.A. — 2:58 East
Dec. +33.1
S.T. = 15:46
Sp. Wh. { a — 0.5
B + 0.5
C + 1.1

July 10, 1902

Phot 7. χ Cygni W. Ob.
~~2 9.5 Cap~~

19 45 + 32.6
15 50
3 55

Above 8 05 C's watch used

333.9 comp ✕ chi

8 42.0 36.1 62.2
147.7 75.3
223.0 137.5 + 0.82

328.1 + 0.82
41.7 73.6
154.3 64.5
218.8 138.1 + 0.81

Below

247.3 Mean = + 0.91
304.~~2~~4 57.1
60.6 70.5
131.1 127.6 + 1.03

241.0 + 1.00
8 49.6 314.3 73.3
11.6 67.5 56.6
8 45.8 124.1 129.9 + 0.98
5 − 0.2

13 45.6

5941.574

July 10, 1902.

Same again.

Below
249.6
8 51.0 306.8 57.2
60.3 69.5
129.8 126.7 + 1.05

241.1
309.7 68.6 + 1.07
68.3 56.0
~~122.~~ 124.3 124.6 + 1.09
Above mean = +0.94
155.4
217.4 620
327.6 76.0
43.6 138.0 +0.81

+0.82
148.7
8 57.2 224.3 75.6
P 54.1 334.3 62.2
5 - 0.2 36.5 137.8 +0.82
13 53.9 P.a. - 25.0 Ver. B. Final Mean = +0.92
59 41. 579 Ha. -3:12 East
Dec. +32.6
S.T. = 16:34
Sp. Wh. = { 4.5 a
5.5 B
6.1 C

July 10, 1902 F

U Virginis W Obs

~~12 28~~ +4.1

12 48

16 48

4 00

U Herculis W Obs.

16 16 +19.6

17 03

0 47

9 46 → t 1 var 3 u 11.70
11.72
11.71

R Herculis W Obs -

15 55 +18.2

17 16

1 21

56.0 12.5 36.5
00.5 16.0 41.5

~~04.8~~

Two ~~stars~~ w & x added tonight

x prec. u by 04.8 sec. & 1.'8 N. of it

46. 17
07. 21 38 21

w prec u by 21 sec. & is 5.'0 N. of it.

July 10, 1902

u 5.5 w
w 4 x

14.30 w
14.70 x
✓

10-16 w 3.5 var 0.5 x

14.65
14.65
14.65

R R Librae Wllb.

Selection of 14th Magns

15 48 − 1810
17 52
2 04

No 1 fols. x by $18\overset{s}{.}2$ & 2'.7 N of it.
No 2 prec. x by $2\overset{s}{.}0$ & 5.0 S of it.
No 3 fols x by 51.8 sec. & 4'.1 S of it,

~~04.5~~ ~~02.0~~ 29.5 33.5 64.0 45.5 ~~59.5~~ 49.0 6~~4~~.0

No 4 fols x by 64 sec. & 2'.7 N of it.

~~24.5~~ 17.5 15.0 57.5 30.0 27.5, 54.5

No 5 fols x by 57.5 secs. & 7.9 N. of it.

Selection ~~fo~~ of 14th Magns made anew tonight but not considered absolutely final.

July 10, 1902

~~R~~ R Draconis. W Obs.

16 28 +67.4
18 28
2 00

B. + C. 1182. Ballou 103.

13	26	3~~5.7~~ 5.7	13	26	0.0
	27	35.0		27	0.0
	28	34.7		28	0.0

Dis. of Jup. Sat II. Phot. R.

W. Obs.
Colson. Recorder.

Compared with other sat. on same side = sat. I.

13 48 05	13 48	38		72.0	
28	49	01	100.5	172.5	1 80.4
40	13 48 32	13	98.7	73.1	
			199.2		
~~48~~ 57		30	99.6	171.8	+ 0.4
49 11		44		71.5	
21	13 49 28	55	99.5	171.0	
35	50	08	102.3	70.8	79.1
			201.8		+ 0.4
			100.9		

July 10. 1902

13 49 45		18		173.1	2	
53		26		70.3		
50 07	13 50 11	40	101.2	171.5		79.8
18		51	99.3	72.3	3	+0.4
27	13 51	00	200.5	171.6		
39		12	100.2	73.5		
47		20	98.5	172.0	4	
58	13 50 53	31	98.0	74.0		δ 1.8
51 09		42	196.5	172.0		+0.3
22		55	98.2	73.2		
33	52	06	98.3	171.5		
43	13 51 38 x	16	97.2	76.0	5	+0.3
54		27	195.5	173.2		δ 2.2
		~~35~~	~~97.8~~	~~72.0~~		
52 09		42		70.1		
23	13 52 33 x	56	104.7	174.8	6	
41	53	13	102.7	70.5		+0.5
58		30	207.4	173.2		76.3
53 10		42	103.7	72.6		
20	13 53 26 x	52	96.9	169.5		
32	54	04	95.8	75.1	7	+0.2
43		15	192.7	170.9		δ 3.6
54		29	96.4	73.2		
54 06	13 54 16 x ~~50 0~~	38	93.8	167.0		
23		55	99.5	70.0	8	+0.3
37	55	09	193.3	169.5		δ 3.4
47		19	96.6	73.0		
57	13 55 10 x	29	96.9	169.9		+0.3
55 06		38	96.6	73.5		δ 3.2
09			96.8			

July 10. 1902

13 55 17		49			170.1	9	
26		58			72.0	81.8	
38	56	10		995	171.5		
59	13 55 50 x	31		970	73.1	10 +0.3	
56 16		48		982 8.2	170.1		
25		57			73.8	82.4	
37	57 13 56 45 x	69		973	171.1		
51		23		978	72.9	11 +0.3	
57 07		39		97.6 7.6	170.7		
18		50			74.0	81.5	
31	58	03		95.0	169.0		
44	13 57 39 x	16		102.0	72.5	12 +0.3	
58 02		34		98.5 8.5	174.5		
24		56	+0.8		66.2	20.1	69.9
48	59	20	+0.9	110.1	176.3	22.3	67.7
59 05		37	+1.2	112.3	64.0	30.2	59.8
19		51	+1.5	120.2	184.2	37.2	52.8
34 14	00	06	+1.8	127.2	57.0	43.0	47.0
56		28	+2.3	133.0	190.0	52.5	37.5
14 00 14		46	+2.8	142.5	47.5	59.6	30.4
29	01	01	+3.1	149.6	197.1	63.3	26.7
44		16	+3.3	153.3	43.8	65.2	24.8
55		27		155.2	199.0		

Limit of visibility. Sat. I.

~~01 3~~					
01 35	02	07			201.9
42	14 01 46	14		22.2	224.1
51		23		19.6	202.5
02 04	02	36	+3.7	20.8	221.9

July 10. 1902.

Seeing rather poor, at intervals, however, a little better. Jup. II was made to disappear accidentally throughout eclipse but Comparison sat. disappeared during limit of visibility. Jup II ~~very~~ quite close to Comparison sat. at beginning, and practically in contact with it at end of eclipse.

B. + C. 1182.			Ballou 103.		
14	12	30.7	14	12	0.0
	13	30.5		13	0.0

Ledgered, Plotted, Posted.

July 11, 1902 (Friday)

BOC 1182 Ball 103
7 25 36.5 7 25 58

C's watch 2 sec. slow at 7:26

β Lyrae

18 45 +33.2 Wells
Phot I. 15 12 6 cap
3 33 ~~Ex~~ Experimental
Abov 8 27
814 < var. dis. C's watch used:

7 53.0 109.8 28.4
26a.2 31.1
291.3 59.5 = 2.88
80.0 2.82
112.5 32.5
260.0
289.8 29.8
Below 62.3 - 2.77
347.9
260.0 38.1 mean = -2.57
167.2 37.4
204.6 75.5 - 2.33

347.4 2.32
8 00.4 26.0 38.6
11 34 167.2 37.2
7 56.7 204.4 75.8 - 2.32
12 56.7
5942.540

July 11, 1902

Same Again.

Below

348.2

8 003.4 27.0 38.8

167.0 36.9

203.9 75.7 — 2.32

347.4 — 2.32

26.6 39.2

167.0 37.0

204.0 76.2 — 2.31

Above Mean = —2.54

262.4

292.0 29.6

71.8 32.5

111.3 62.1 — 2.78

261.5 — 2.76

8 10.0 293.9 32.4

134 79.3 30.5

8 06.7 109.8 62.9 — 2.75

13 06.7 P.A. = 14.0 Var B Final mean = —2.56

5 42.547 Dec = +32.9

Ha = ~~+32~~ — 2.32

S.T. = 16.14

St Wh = { —0.5 a
+0.5 B
+1.5 C

July 11, 1902

No 8 Lyrae with 9 Lyrae. W Obs
Phot T
Above 6″ cap.

8 13.4 149.5 < 9 Lyrae dis. C's watch
224.5
329.2 75.0
41.2 72.0
1470 +0.63

150.5 +064
222.1 71.6
327.7 75.3 +064
43.0 1469

Mean +0.76

Below
61.8
131.8 70.0
243.4 64.5
307.9 134.5 +089

63.1 +087
8 21.4 128.4 65.3
8 17.4 241.4 71.0
13 17.4 312.4 136.3 +085
553
5942.~~512~~

July 11, 1902

Same Again. It

Below
62.1
8 22.4 131.5 69.4 ✓
242.2 65.6 ✓
307.8 135.0 ✓ + 0.88 ✓

63.6
129.3 65.7 ✓ + 0.86 ✓
240.6 71.4 ✓ ✓
312.0 137.1 ✓ + 0.83

Above mean = + 0.74 ✓
327.2
44.6 77.4 ✓
151.8 68.4 ✓
220.2 145.8 ✓ + 0.66

330.0
8 32.4 42.0 72.0 ✓ + 0.62 ✓
8 27.4 147.3 78.0 ✓
18 27.4 225.3 150.0 ✓ + 0.58 ✓

P.A. = 358.5 Ver B.
5942560 H.A. = − 2:34 Final mean = + 0.75
Dec = + 32.6
S.T. = 16:11
Sp.W. = 5.5 B, 6.5 C,

July 11, 1902

Phot T. χ Cygni W Obs

19 45 +32.6
.16 20
3 25 C's watch
Above 8 35
154.5
8 54.0 218.8 Comp * dis 64.3
326.9 76.1
43.0 140.4 + 0.77 ✓

119.4 +0 80 ✓
224.6 75.2
334.0 62.3
36.3 137.5 + 0.82 ✓
Below
~~267.2~~ 66.5 Mean + 0.94 ✓
124.3 57.8
242.0 67.9
309.9 125.7 + 1.07 ✓

62.6 +1.08 ✓
9 02.4 131.2 68.6
248.5 56.5 ✓
8 58.2 305.0 125.1 +1.08
13 58.2
5942.582

July 11, 1902

Same Again.

Below
68.6
9 05.2 125.3 56.7
241.2 70.1
311.3 126.8 + 1.05

61.4
130.0 69.2 +1.06
248.5 56.2
304.7 125.4 +1.08

Above Mean = +0.95
334.0
~~35.8~~ 36.1 62.1
148.5 75.7
224.2 137.8 +0.82

326.4 +0.84
9 11.2 43.4 77.0
9 08.2 158.5 59.1
217.~~8~~6 136.1 +0.85

18 08.2
5942.549 Pa 25.1 Ver B Final Mean = +0.94
Ha -2 53
St. T. = 16:51
Dec. +32.4
Sp Wh {4.5 a
5.5 B
6.1 Be

July 11, 1902

V Virginis WCb

~~Phot~~

1323 − 2.2
17 23
4 00

Region rather low, & moon too bright to observe this variable

R Draconis WCb

16 26 +67.4
17 40
1 14

1025 11.99 ✓ p H var 0.5 q
11.96 ✓
11.98 ✓

S Scorpii

16 16 − 22.7
18 05
1 55

R R Librae
15 48 − 18.0
18 08
2 20

July 11, 1902

33.5 | 53 0 | 23
36.0 | 55.2 | 25

This star fols x by $2^s.2$ & $2'.2$ S of it.

~~Reg~~ 14th magns. for R R Librae examined again tonight, ~~selection~~ sky not quite as clear as last night, will examine region again on a subsequent night.
It is possible that the above star can be substituted with advantage for one of ~~the~~ four selected last night.

R Aurigae WCB

5 3 +53.0

18 43
13 40
12 00
1 40

5 3 +5 30
19 00
13 57
12 00
1 57

5 10 +54.1
18 53
13 43
12 00
1 43

Region low
Obs rather diff.
but made with
care R. P. P.

11 40 12.18 / 12.16 / 12.17 0 2.5, 2 p

July 12, 1902 (Saturday)

BAC 1182 Bell 03
7 38.5 50.4 7 35 00

D's watch = 2 sec. slow at 7.36

U Sagittae WCh

Phot T. 19 20 + 20.0
15 15
4 05
7 55

Right BAC 1182 used
<vardis
255.0
8 13 07 300.7 45.7
71.4 48.3
119.7 94.0 −1.81

−1.82
253.1
15 03 301.1 48.0
72.3 45.5
118.0 93.5 −1.82
Left
Mean = −1.81
162.6
17 55 211.9 49.3
343.3 45.5
28.8 94.8 −1.79

163.3 −1.80
8 20 00 209.3 46.0
26 05 342.7 48.5
8 16 37 31.2 94.5 −1.80
5 −0 57
13 15 40 GMT

5963.5526
5960.3656
3.1870
3.3800
−0.1930

July 12, 1902

II

Left
161.1
8 23 08 210.3 49.2
342.7 46.5
29.2 95.7 − 1.76

− 1.74
162.3
25 12 210.1 47.8
341.7 49.5
31.2 97.3 − 1.72

Mean = − 1.80

Right
73.1
27 50 119.4 46.3
254.6 46.3
300.9 92.6 − 1.84

72.8 − 1.86
8 29 55 117.8 45.0
26 05 254.4 45.8
8 26 31 300.2 90.8 − 1.89
5 − 0 57
13 25 40 G.M.T.
5943.5595
5940.3656
3.1939
3.3800
− 0.1861

July 12, 1902

III

Right
253.8
8 39 00 299.9 46.1
73.5 45.8
119.3 91.9 -1.87

254.1
8 40 56 300.9 46.8 -1.87
73.2 45.0
118.2 91.8 -1.87

Left
Mean = -1.82
163.2
8 46 44 208.2 45.0
341.3 50.3
31.6 95.3 -1.77

160.8 -1.76
8 48 46 211.0 50.2
1 75 26 343.2 45.7
8 43 52 28.9 95.9 -1.76
5 - 0 52
13 43 00
5943.5715
5940.3656
3.2059
3.3800
-0.1741

July 12, 1902

IV

Left

	163.1		
8 55 52	208.9	45.8	
	341.4	49.6	
	31.0	95.7	− 1.76
			− 1.76
	159.7		
8 58 18	210.8	51.1	
	344.1	44.6	
	28.7	95.7	− 1.76

Right

Mean = − 1.76

	72.4		
9 02 00	119.4	47.0	
	251.1	52.2	
	303.3	99.2	− 1.68
	72.1		−1.76
9 04 04	120.0	47.9	
	254.2	45.3	
8 00 14	299.5	93.2	− 1.83

9 00 03
5 – 0 52
13 59 11 G.M.T.

5943.5827
5940.3656

3.2171
3.3800
−0.1629

July 12, 1902

V

Right
73.4
9 11 35 119.6 46.2
251.1 50.0
301.1 96.2 −1.75

70.8 −1.75
13 33 121.4 50.6
254.7 45.6
300.3 96.2 − 1.75

Left
Mean = −1.72
343.5
16 34 27.7 44.4
158.5 55.5
214.0 99.9 − 1.66

−1.67
340.2
9 19 08 32.4 52.2
162.5 47.0
20 50 209.5 99.2 1.64
9 15 12
~~5 0 1~~
5 − 0 52

14 14 20
5943.5933
5960.3656

3.2277
3.3800

−0.1523

July 12, 1902

VI

Left

343.2
9 23 47 27.9 44.7
160.2 53.4
213.6 98.1 −1.70

−1.69

339.5
26 40 32.5 53.0
163.2 46.0
209.2 99.0 −1.68

255.3 Mean = −1.70
30 18 299.3 64.0
69.1 52.1
121.2 96.1 −1.75

250.4 −1.72
9 32 10 302.~~5~~6 52.6
11 2 55 72.1 46.5
9 28 14 ~~117.9~~ 99.1 −1.68
5 0 52 118.6
1~~4~~27 22
5743. 6024
5740 - 3656
3.2368
3.3000
+0.1432

July 12, 1902

VII

Right
253.6
9 38 55 300.6 47.0
70.5 53.0
123.5 100.0 − 1.66

248.6 −1.62
41 06 303.2 54.6
71.9 49.0
120.9 103.6 − 1.57

Left Mean = −1.58
162.5
44 06 ~~210.~~211.4 48.9
337.6 55.7
33.3 104.6 − 1.54

158.4 −1.54
9 46 27 213.9 55.5
341.3 49.4
~~30.7~~ 104.9 −1.54
~~31.0~~
~~31.0~~
30.7

17 0 34
9 42 39
5 − 0 53
14 41 46
5943.6124
5940.3656
3.2468
3.3800
− 0.1332

July 12, 1902

VIII

Left
161.5
9 5 14 210.6 49.1
338.4 53.8
34.2 104.9 — 1.54

15~~8.8~~
53 50 212.6 53.8 — 1.58
341.8 48.1
29.9 101.9 — 1.61

Right. Mean = 1.60
69.1
57 22 122.9 53.8
253.7 46.4
300.1 100.2 — 1.65

71.0 — 1.61
9 59 30 119.2 48.2
22 29 249.2 55.2
9 55 37 304.4 103.4 — 1.57
5 — 0 53
14 54 44 G.M.T.
59 43.6213
59 40.3656
3.2557
3.3800
-~~7~~0.1243

July 12, 1902

~~VIII~~
IX

Right
67.4
10 07 00 123.5 56.1
258.5 46.6
300.1 102.7 — 1.59

72.3
10 13 119.6 47.1 —1.57
249.0 57.4
306.4 104.5 —1.55

Left Mean = —1.50
341.0
1443 21.3 50.3
155.3 60.0
215.3 110.3 —1.41

335.6 —1.44
10 18 48 33.8 58.2
50 44 160.8 50.0
10 12 41 210.8 108.2 — 1.46
5 - 0 53
13 11 48 G.M.T.
5943.6332
5940.3656
3.2676
3.3800
-0.1124

July 12, 1902

X

Left

341.7

10 28 25 30.2 49.5 ✓

153.3 64.0 ✓

217.3 113.5 – 1.34 ✓

335.6 –1.37 ✓

31 50 36.2 60.6 ✓

160.7 50.0 ✓

210.7 110.6 ✓ – 1.40 ✓

Right

Mean = –1.39 ✓

252.3

36 05 300.8 48.5 =

66.3 60.0 ✓ – 1.45 ✓

126.3 108.5

245.4 –1.41 ✓

10 38 11 308.0 62.6 ✓

~~7~~ 71.3 49.6 ✓

134 31 ~~110~~. 112.2 1.37

10 33 38 120.9

5 – 0 53

15 22 45

594 3.6478

5940.3656

3.2822

3.3800

–0.0978

July 12, 1902

XI

Right

	252.1		
10 49 08	300.6	48.5 ✓	
	64.3	6~~4~~2.5	
	126.~~4~~8	111.0 ✓	— 1.39 ✓
			✓
			— 1.36
	246.1		
5 2 30	307.6	61.5	
	69.6	52.2	✓
	121.8	113.7	— 1.33

Left

Mean = -1.29 ✓

	159.7		
57 30	211.4	51.7 ✓	
	331.~~4~~5	66.7 ✓	
	38.2	118.4	— 1.23 ✓
	152.7		— 1.22 ✓
10 59 35	218.5	65.8	
18 43	3~~4~~39.4	53.8	
10 54 41	33.2	119.6	— 1.20 ✓

5 0 54

15 53 47

5943.6624

5960 3656

3.2968

3.3800

-0.0832

July 12, 1902

XII

~~Left~~

~~160~~. 159.8

11 06 38 213.5 — 53.7

332.5 — 66.3

38.8 — 120.0 − 1.19

~~+2~~ 1.19

152.0

09 36 219.3 — 67.3

339.7 — 53.0

32.7 — 120.3 − 1.19

Right

Mean − 1.20

170.0

1412 121.5 — 51.5

243.5 — 67.9

311.4 — 119.4 − 1.21

1.20

62.1

11 16 38 129.6 — 67.5

47 04 249.6 — 52.8

11 11 46 302.4 — 120.3 − 1.19

5 − 0 54

16 10 52 G.M.T.

5943.6742

5940.3656

+3.3086

3.3A00

0.0754

July 12, 190~~[illegible]~~2

~~XIII~~

Right
69.9
11 2~~8~~4 10 12~~3~~.9 — 54.0
243.4 — 70.9
314.3 — 124.9 — 1.09

58.7 — 1.10
26 23 127.4 — 68.7
248.9 — 55.6
304.5 — 124.3 — 1.10
Left — mean = —1.00
336.6
30 02 35.9 — 59.3
149.1 — 73.7
222.8 — 133.0 — 0.91

327.1 — 0.89
11 31 56 42.7 — 75.6
156.2 — 59.6
11 2 31 ~~214.9~~ — 135.2 — 0.87
11 28 08 215.8
5 — 0 54
16 27 14 P.a. = 132.6 Var B
5943.6855 H.a. = — 0.03
5940.3656 Dec. = +19.1
3.3199 S.T. = 19.12
3.3800 Sp Wh. = 3.5 B
—0.0601 4.5 C

July 12, 1902

At ~~the~~ time of ending of ~~Ht~~ U Sagittae var was, practically on the meridian. ~~Last~~ On this account the last group was rather the most difficult, especially as clocks had stopped, but extreme care exercised ~~throughout & observations considered first rate~~

BOC 1182	Ball 103
11 55 54.6	11 55 00
11 56 54.6	11 56 00

L. P. P.

July 14, 1902 (Monday)

BOC 1182 Ball 103
7 27 33.6 7 26 0.5

C's watch = 21 sec. slow at 7:27

Phot. β Lyrae W. Obs.
6" cap

18 45 +33.2
15 20
3 25
8 35

7 40 clouds rather thick

7 58 clouds thicker; stars gone

8 06 Stars dim.

8 12 Stars dimmer again, & varying relatively

8 30 Abandoned too much cloud in sky.

Phot R Urs. Min. W. Obs.
I. 16 34 +72.9
II 16 10
24
11 = 36

Abandoned for the present

July 14, 1902

Phot T. S' Can. Ven. Wells
13 18 +37.8
16 38
3 20

47 305 57.5
53 06.5 15.0

C's watch used.

Comp. star selected it is
+37° 2380 (8.5), but sky is too cloudy
9 50 to measure variable, and clouds grow-
ing worse.

Phot μ Cephei (+58°.2316) Wells
21 39 +58.1
17 29
4 10 Full aperture
Above 7 50
C's watch used
343.9 < var. dis.
10 01.0 27.4 43.5
160.0 52.6
212.6 96.1 – 1.75

337.7 – 1.74
30.8 53.1
1648 43.5
20~~7~~8.3 96.6 – .74

Below

(over)

July 14, 1902,

Cont. from prev. page

Below

Mean 1.98

2588
2946   35.8
742   43.7
1179   79.5 − 2.21

2530
10 09.0   2976   44.6 − 2.21
10 05.0   78.5   34.9
5 + 0.4   113.4   79.5 = 2.21
15 05.4 G.M.T.
594~~6~~5.

Below   Same again II
2588
10 11.0   2946   35.8
741   441
1182   79.9 − 2.20

2537   − 2.20
2983   44.6
789   35.1
1140   797 − 2.20

Mean 2.12

Above
1656
~~2.01~~
2088   43.2
3429   43.4
26.3   86.6 − 2.01

2.03

2.05

July 14, 1902

Cont. from prev. page

164.5 -203
10 18.0 209.2 447
344.4 405
10 14.5 249 852 - 205
5 + 0.4 ~~Mean~~
15 14.9 G.M.T. ~~General Mean - 2.05~~
5945.

III

Above
343.9
10 25.0 2529 42.0
164.1 46.3
210.4 88.3 Reject
3425.7
27. Clds thicker.
1

Stopped by clouds impossible
~~Below~~ to finish this last group.
Comp. Star = +58° 2314 (6.7)
In The two groups taken, troubled by
clouds, and observations made
through more or less cloud; full
aperture used, and images quite poor,
The two groups taken 1/4 weight

P.a. = 353.8 on B
D.a. = -3.18
Dec = +58.6
S.T. = 18.17
Spl Wt +0.5 a
+1.5 B
+2.0 C

Continually troubled
by clouds throughout
the whole evening

L. P. P.

July 16, 1902 (Wednesday)

BD C 1182 Ball 103
7 33 32.4 7 31 05

C's watch = 20 sec. slow at 7:32

Phot T. U Ophiuchi W.S. 6" cap.

17 9 +1.4
15 32
1 37
10 23

(BD C 1182 used)

Above I
148.1 <var. dis

8 04 55 225.3 77.2
330.6 68.2
38.8 145.4 −0.67

150.5 −0.61
0~~8~~ 05 221.5 71.0
323.7 80.1
43.8 151.1 −0.55

Below mean = −0.74
58.4
12 02 134.4 76.0
245.8 59.8
305.6 135.8 −0.86
66.6
−0.88
8 13 58 124.9 58.3
29 00 238.5 76.0
8 09 45 314.5 134.3 −0.89
5 2 33

13 07 12 GMT

5947 5466
5946:8722
+0.6740

.8387
.6740
−.1647

July 16, 1902

II

Below

	238.8		
8 18 52	314.2	75.4	
	67.1	59.3	
	126.4	134.7	— 0.88
	245.4		—0.86
21 23	308.~~4~~0	62.6	
	58.1	76.0	
	134.1	138.6	— 0.80

Above

Mean = −0.7~~6~~2

	146.1		
25 11	226.9	80.8	
	332.1	66.3	
	38.4	147.1	— 0.63
	152.8		—0.61
8 28 28	220.4	67.6	
13 54	324.6	81.8	
8 2$3_2$ 28	46.4	149.4	— 0.59

5 — 0 33

13 20 55 G.M.T.

5947.5562
5946.8726

+0.6836
08387

−0.1551

July 14, 1902

Above　III

146.1
8 37 15 227.1　81.0
331.2　67.8
39.0　148.8 − 0.60

154.8　−0.59
40 28 220.7　65.9
322.7　84.0
46.7　149.9 − 0.58

Below　Mean = −0.65

235.7
45 31 ~~136.5~~ 315.4　79.7
67.4　60.5
127.9　140.2 − 0.77

244.0　0.71
8 48 56 308.9　64.9
172 10 56.1　81.5
8 43 02 137.6　146.4 − 0.65
5 −2 33
13 40 29 G.M.T.
5947.5698
5946.8726
+0.69722
0.83887
−0.14165

July 16, 1902

~~IV~~

Below

234.6
8 56 12 318.4 83.8
64.6 64.9
129.5 148.7 − 0.60

243.0 − 0.59
5 8 36 309.7 66.7
55.1 83.2
138.3 149.9 − 0.58

Above Mean = − 0.52

142.7
9 02 36 230.0 87.3
330.9 69.0
39.9 156.3 − 0.45

153.9 − 0.46
9 05 46 ~~218~~ 221.0 67.1
3 10 321.8 88.1
9 00 48 49.9 153.2 − 0.47
5 − 2 33
13 58 15 G.M.T.
5947.5820
59468726
+ 0.7094
0.8387
− 0.1293

July 16, 1902

V

Above

141.8

9 15 25 230.0 88.2

328.9 74.4

43.3 162.6 −0.33

5

1~~4~~1.9 −0.36

18 37 221.7 69.8

321.0 90.2

51.2 160.0 −0.38

Below Mean = −0.45

54.8

22 30 137.6 82.8

24~~8~~.8 69.0

310.8 157.8 −0.54

63.2 −0.54

9 24 ~~4~~3 ~~129.2~~ 131.4 68.2

81 15 235.2 83.2

~~311.2~~ 151.4 −0.55

9 20 19 318.~~0~~4

5 − 2 33

14 17 56 G.M.T.

5947.5957

5946.8726

+0.7231

0.8387

−0.1156

July 16, 1902

VI

Below

55.5

9 38 48 136.7 81.2

242.8 68.6

311.4 149.8 — 0.58

60.1

41 31 131.1 71.0 —0.52

235.1 84.4

319.5 155.4 —0.47

Mean —0.41

Above

321.8

45 30 50.8 89.0

149.1 73.3

222.4 162.3 —0.34

—0.30

8

9 4~~7~~ 20 327.4

45.1 77.7

174 09 141.4 ~~88.6~~ 88.6 —0.26

9 43 32 230.0 166.3

5 - 2 33 P.a. = ~~33.8~~ 32.8 Var B

14 40 59 Dec = +1.4

S.T. = 17:42

5947.6118 Spwl = −1.5a − 0.5B + 0.1 C

5946.8726 H.a. = +0:32 West

+0.7392 The ~~other~~ preceding measurements

0.8387 made with all possible care.

−0.0995

July 16, 1902

Settings made slowly, But the seeing is rather poor, images somewhat blurry especially at times, due ~~to~~ partly to N.W. wind and cooler atmospheric conditions. Images also somewhat alternating in brightness. In addition to the above the nearly full moon is about due South of the variable and glaring observer in the face all the time (although shielded a little in the eyes by the end of the telescope). — This with the above producing much strain & weariness upon the eyes, so that it was thought best not to continue observations farther.

R Lyncis W Obs

~~Pho~~ 6 49 +55.1
18 15
11 26

10.28
10.17
10.22

10 40 k 1.5 var 3.5 l

R Urs Min W Obs

Phot T. 16 34 +72.9
18 34
2 00

July 16, 1902

R Urs Min

Left var ~~O's watch used~~

11 11.0 → 36.5 < ~~comp~~ + dio B & C used

157.0 120.5

213.6 125.0

328.6 245.5

114.5 + 1.31

31.9

160.5 128.6 + 1.28

219.7 113.7

333.4 2 × 2.3

117.7 + 1.24

Right

302.9 mean = + 1.29

68.6 125.7

126.4 116.4

242.8 2 × 2.1

117.9 + 1.24

309.8

11 20.0 66.4 116.6 + 1.30

31.0 119.8 131.5

11 15.5 251.3 248.1

5 −2.6 111.9 + 1.37

16 12.9 G.M.T.

5947.676

July 16, 1902

Same Again

Right
30 2.5
11 21.6 70.7 178.2
126.1 1183
244.4 2x6.5+ 1.34
113.5

308.5 +1.32
65.9 117.4
122.2 127.9
250.1 2x5.3
1147 +1.31
Left mean = +1.30
~~59.9~~
~~211.3~~
216.6
333.3 1167
308 128.9
159.7 245.6 +1.32
1144

21~~3~~.6 +1.28
11 31.4 339.~~3~~4 126.8
530 38.3 1155
11 26.5 153.8 2x23
5 −2.6 PA = 141.0 Var B 1177 +1.24
76 23.9 Ha = +2.53
5947.683 S.T. = 19:25 [illegible] mean +1.30
Dec = +7 25
Sp. Ul = 2.5 B + 3.5 C

July 16. 1902

B. + C. 1182			Ballou 103		
14	38	34.5	14	36	0.0
	39	34.2		37	0.0

Dis of Jup. ~~IV~~ I
Phot R
W. Obs.
Colson Recorder
Compared with other sat. on same preceding side = Sat. II.
Seeing fairly good

Checked.

	14	49	51		177.3		
14 50 10		50	03	78.5	255.8		
~~8~~ − 2 32			16	81.0	175.2	1	− 0.4
14 47 38			28	79.8 (100.2)	256.2		

In above + settings Sat. I dir. – in fol. settings Sat II.

			42		253.2		
14 51 09		51	04	100.7	353.9		
2 32			19	97.2	256.0	2	− 0.3
14 48 37			32	98.0	353.2		
			41		257.4		
51 58			52	95.8	353.2		
2 33		52	03	96.8	257.0	3	− 0.2
49 26			16	96.3	353.8		
			31		257.0		

July 16, 1902

14 52 51		31		257.0	
2 32		44	98.0	355.0	−0.3
14 50 19		59	95.7	257.5	4
	14 53	10	96.8	353.2	
53 41		23		256.9	
2 32		33	95.9	352.8	
51 09		48	96.4	257.1	5 −0.3
		59	96.2	353.5	
54 32	54	13		258.0	
2 32		28	950	353.0	
5~~4~~2 00		38	92.9	260.1	6
		49	94.0	353.0	−0.2
55 18	55	00		257.2	
2 31		12	95.3	352.5	
52 47		23	93.9 94.6	258.9	7 −0.2
		35		352.8	
55 58		44		259.5	
2 31		53	92.3	351.8	−0.1
53 27	56	04	90.8	261.0	8
		13	91.6	351.8	
56 40		23		259.6	
2 31		34	93.4	353.0	
54 09		45	91.9	259.0	9 −0.1
		58	92.6	350.9	
54 41 ×	57	12	89.9	261.0	0.0
52 ×		23	89.2	350.9	0.0
55 00 ×		31	88.3	261.7	+0.1
11 ×		42	87.0	350.0	+0.1
29 ×	58	00	87.0	263.0	+0.1
38 ×		09	85.0	350.0	+0.2

July 16. 1902

14 5~~7~~5 47			18	83.0	265.0	+0.3
58			29	80.8	348.0	+0.4
56 10			41	74.9	267.2	+0.6
19			50	1.6 7~~84~~	342.1	+0.7
28			59	69.5	270.5	+0.8
38		59	09	63.7	340.0	+1.0
46			~~47~~ (17 assumed]	62.0	276.3	+1.1
55			26	61.3	338.3	+1.1
57 03			34	54.8	277.0	+1.4
12			43	50.7	339.8	+1.6
21			52	44.1	281.1	+2.0
33	15	00	04	34.2	325.2	+2.6
46			17	25.5	291.0	+3.2
58 00			31		316.5	

Not seen later

Limit of visibility

15 01 23	15	01	02		294.9	
-2 30			15	22.9	317.8	
14 58 53			30	22.6	295.7	
		01	44	22.8	318.3	+3.5

In first ~~two~~ 4 settings the eclipse sat. was made to disappear by accident but in the remainder comparison sat. was made to disappear between settings.

July 16. 1902.

B. + C. 11A2.			Ballou 103.		
15	27	26.0	15	25	0.0
	28	25.5		26	0.0

L. P. P.

July 17, 1902 (Thursday)

BDC1182 Ball 103
> 36 35.5 > 34 00

Cs' watch = ~~3~~ 23 sec slow at 7:35
> 40 Rather cloudy

$\Sigma\,41^{I}$

Phot R. 19 19 +16.7 WCCs
15 44
3 35
8 25

19 19
15 59
3 20
8 40
>

P.a. 75,°
Dist 5.5 ±
magns. 5.8 - 6.7
349.4 < br. dis
~~7~~7.3

19 19
14 45
4 34
7 26

19 19
16 54
2 25
9 35

Cs watch used.

Abandoned clouds too troublesome

$\Sigma\,60^{I}$ WCCs

Phot R. 23 29 +59.8
17 09
6 20
5 40

P.a. 35°
Dist 4 ±
magns 6.4 - 6.6
9 20 clouds.

July 17, 1902

$\Sigma\,60^{\mathrm{I}}$ see prev. page.

345.8
9 21.0 83.3 ∠ br dis C's watch used
170.4 clouds thick star too faint.

Clouds now coming thicker still & in heavy masses covering the whole sky.

~~10~~ 9 25 No chance for anything farther

July 18, 1902 (Friday)

BOC 1182 Ball 103

7 35 46.5 7 33 00

C's watch = 4 sec. slow at 7:34

Phot T δ Librae W Ob.
14 55 – 8.1 6″ cap.
15 50
0 55

Cloudy
~~Sky too~~ cloudy for δ Librae

Σ 60 I W Ob
Phot R. 2 3 30 +59.7
PA 35° 16 35
Dist 4′± 6 55
Magns. 6.4–6.6 5 05 C's watch used

173.8 fr 4 ft dis. B.
8.46 255.3 81.5
348.2 88.6
76.8 170.1 – 0.19
167.3
256.9 89.6 – 0.13
347.1 86.7
73.8 176.3 – 0.07
Reversed Fift. A. mean = – 0.19
80.8
164.2 83.4
259.6 84.7
344.3 168.1 – 0.22
– 0.25
(over)
0.28

July 18, 1902
≤ 60 I cont.

81.8
8 54 162.7
260.3
344.6

80.9
84.3
165.2 − 028

BOC 1182
9 02 46.9
9 03 47.0

Ball 103
9 00 00
01 00

Oil dome 21 08 −7.3
17 02
4 06
7 54

Dis Jup I Photo Wedb
Comp with other Sat on same mer-Diff = Sat III Campbell Recorder.

82.1
9 19 38
+0.3
9 20 04
-2 48
~~14~~ 9 17 16
56
20 10
32
52
80.4
81.9
81.2
162.5
81.1
163.0
1

82.5
9 21 17
2 48
9 18 29
21 07
26
43
80.7
78.8
79.8
163.2
83.2
162.0
+0.4
2

82.9
9 22 27
2 48
9 19 39
22 05
18
36
49
78.9
76.8
77.8
161.8
84.2
161.0
+0.5
3

July 18, 1902

9 23 37	9	23	18	80.1	82.9		
− 2 48			28		163.0	4	+0.4
9 20 49			44	79.1	83.7		
			58	79.6	162.8		
9 24 32		24	15		83.3		
2 48			26	78.2	161.5		+0.4
9 21 44			36	80.0	82.8	√	
			✱ 53	79.1	162.8		
9 25 31		25	16		83.8		+0.5
2 48			25	78.2	162.0		
9 22 43			36	75.4	83.9	6	
			48	76.8	159.3	→	
9 23 08			56	74.2	86.0		+0.6
		~~26~~	~~0~~				
28		26	16	72.4	160.2		+0.7
41			29	69.2	87.8		+0.8
53			41	67.5	157.0		+0.9
24 02			50	67.3	89.5		+0.9
13		27	01	65.0	156.8		+1.0
26			14	64.2	91.8		+1.0
34			22	62.2	156.0		+1.1
44			32	58.2	93.8		+1.3
52			40	57.1	152.0		+1.3
25 00			48	53.1	94.9		+1.5
08			56	51.0	148.0		+1.6
17		28	05	49.8	97.0		+1.7
25			13	49.1	146.8		+1.7

July 18, 1902

9	25	33✓	9	28	21	46.6✓	97.7	+1.8✓
		42✓			30	40.5✓	144.3	+2.2✓
		52✓			40	36.1✓	103.8	+2.4✓
	26	04✓			52	32.1✓	139.9	+2.7✓
		12✓		29	00	28.2✓	107.8	+3.0✓
		21✓			09	22.2✓	136.0	+3.5✓
		30✓			18	18.2✓	113.8	+4.0✓
		41✓			29		132.0	
		54✓			42		Not seen later	

Limit of Visibility

					53		114.8	
9	30	12		30	04	17.4	132.2	
	2	48			16	21.0	113.0	
9	27	24			37	19.2	134.0	+3.9✓

BD C 1182	Ball 103
9 32 48.0	9 30 6.0
9 33 48.0	9 31 6.0

Subtract 2m 48s from times on eclipse

Seeing fairly good, although boiling a little and images a little large but not very much. Jupiter a little low, but observations considered good.

9 50 Cloudier again.

July 18, 1902.

U Camelop wells

Phot R.I 3 33 +62.3

17 48

14 15

12 00

2 15

~~9 45~~

Below

271.9 < var dis

10 00.7 330.4

95.~~4~~° clds project.

148.3

276.4 clds. thicker
stars gone

Abandoned too cloudy
Stopped by clouds.

Σ 54± wells

Phot R. 21 4 +9.6

18 16

Pa 150° 2 48

Dist 6'± 9 12

magns 4.2—5.7

clouds thick.
stars gone

10 27

July 18, 1902

5.7 < br dis
10 29 66.4 clds.
181.4 stars gone.
251.2 clds thicker

357.2

Clouds now thick everywhere

10 45 Impossible to finish double

NL

Ledgered, Plotted, Posted.

July 23, 1902 (Wednesday)

~~R~~C 118 = Ball 103

7 36 13.0 7 32 00

C's Watch = 15 sec. slow at 7:33

Phot T. χ Cygni w Ob.

Oil Dome Line 19 45 +32.6

16 00

3 45

Above 8 15 C's watch used

334.4 ∠ comp & dis

8 10.6 36.0 61.6

150.0 73.7

223.7 134.3 + 0.89

330.7

40.8 70.1 + 0.91

154.6 62.2

216.8 132.3 + 0.93

Below

248.0 Mean = + 1.06

302.7 54.7

63.7 65.8

129.5 120.5 + 1.18

243.4 + 1.20

8 12.8 310.7 67.3

8 14.7 70.1 51.5

5 +0.2 121.6 118.8 + 1.22

13 14.9 G.M.T.

0954.552

July 23, 1902

Same again

Below

251.3

8 21.0 303.0 51.7

62.4 67.6

130.0 119.3 + 1.21

1.20

242.2

309.7 67.5

71.0 52.4

123.4 119.9 + 1.19

Above mean = +1.06

156.0

214.4 58.4

329.5 73.3

42.8 131.7 + 0.94

1~~4~~50.0 + 0.93

8 27.0 223.8 73.8

334.8 59.1

8 24.0 33.9 132.9 + 0.92

5 +0.2

13 24.2 PA = 26.0 VaB General Mean = +1.06

5954.558 Dec = +32.6 8.11

Ha. = −2:47

S. T. = 16:58

Sp Wh = { 4.5 A
5.5 B
6.1 C

July 23, 1902

Sky clear throughout observations
on χ Cygni. Fog now coming in
8 48 somewhat densely.

9 05 Fog thick. No Stars visible.
No stars visible in large telescope.

Oil dome

Dense fog now everywhere
9 35 No stars visible or in large
telescope. Wind fresh from East.

Ledgered, Plotted, Posted.

July 24 1902 (Thursday)

JD 5955

Recd BDC 1182.

BDC 1182 Ball 1 03

7 28 25.0 7 29 05

Cs' watch = 31 sec. slow at 7.30

Y Cygni Wells

phot *

20 40 + 33.4
16 15

above 48 25 BDC used.
~~48 35~~

250.4 readings

8 13 50 303.8 53.4
73.1 44.4
117.5 97.8 − 1.71
255.0
16 30 297.5 42.5 − 1.73
68.1 53.6
121.7 96.1 − 1.75
Below Mean = − 1.60
157.1
20 45 216.1 59.0 5955.5549
342.7 46.8 5955.5472
29.5 105.8 − 1.52 + 0.0077
162.7
8 22 45 210.5 47.8 − 1.48
7 3 50 336.3 61.5
8 18 28 37.8 109.3 − 1.43
5 + 0 35
13 [illegible] G.M.T.

July 24, 1902

II

Below

156.7

8 24 46 217.0

343.2

29.0

162.2

26 50 209.1

336.1

34.6

Above

67.9

30 45 120.8

252.1 Clds.

29. stars ft. stars gone

Stars too dim to finish group.

8 3 Reject above partial group

8 42 Fog now coming in thicker.

I in the above full group on ~~the~~ Y Cygni twilight rather strong, and stars varying a little relatively due to ~~east~~ rather strong east wind and approaching foggy conditions.

over for circle readings.

July 24, 1902.

Pa 4c?
S.T. 17:23
Ha - 3:23 East
Dec. +34.1
Sp.Wh. 5.5 a, 6.5 B & 7.1 C

T Cygni W.Ob.

Phot T = 20 43 +34.0 6" cap
17 43
3 00
3 00

9 30 ~~Too~~ Fog coming in thicker in this region abandoned.

W Bootis W.Ob.

Phot

13 39 +27.0
17 54
4 15

Comp star for W Bootis will probably be +26° 2592 (7.9) possibly however +27° 2412 (8.5) may do and not prove ~~to~~ to be too near.

10 00 Clouds & fog now thick everywhere no ~~stars~~ visible
No chance for anything further

Ledgered, Plotted Posted.

July 28, 1902 (Monday)

B&C 1182 ~~Ball 103~~

7 33 54.0 7 33 0.0

C's watch = ~~2~~5 sec. slow at 7:34

Σ 54' WCLb.

Phot R. 21 4 49.6

16 20

4 44

7 16

Abandoned for Eclipse

21 17 - 16.6~~08~~

16 24

4 53

7 07

Dis Jup II Phot R. W. Observer

Campbell Recorder.

Comp. with nearer of two remaining Sats. on same preceding side = Sat. I

8 12 50 Clouds.

checked.

8 14 38 92.2

8 15 00x 56 81.9 174.1

- 55 15 10 82.9 94.1 /

8 14 05~~18~~ 18 82.4 177.0

July 28, 1902

	8 15	47		92.4	
8 16 07 ×		59	8 37	176.1	2
~~8~~ -55	16	11	8 46	93.2	
8 15 12 +		31	84.2	177.8	
		44		93.0	
8 17 07 ×	17	01	81.5	174.5	
55		13	81.0	94.0	3
8 16 12 ×		31	81.2	175.0	
		52		93.0	
8 18 17 ×	18	07	80.5	173.5	
55		27	79.3	94.2	4
8 17 22 ×		42	79.9	173.5	
		54		93.6	
8 19 17 ×	19	06	81.2	174.8	
55		26	80.8	94.2	5
8 18 22 +		41	81.0	175.0	
		51		95.1	
8 20 15 ×	20	05	80.7	175.8	
55		~~44~~		~~9~~	
8 19 20 +		53	79.1	95.0	6
	~~21~~	~~10~~	79.9	174.1	
		23		95.1	
8 21 48 ×		39	78.0	173.1	
55		56	80.7	95.3	7
8 20 53 ×	22	16	79.4	176.0	

July 28, 1902

	8 22	28		93.1	
8 22 52 x		42	821	175.2	
55		59	829	94.0	7 8
8 21 57	23	17	82.5	176.9	
		33		93.1	
8 23 55 x		48	81.0	174.1	
55	24	02	78.0	96.2	~~8~~ 9
8 23 00 x		17	79.5	174.2	
		33		96.0	
8 24 52 x		43	77.2	173.2	10
55		59	78.5	95.0	
8 23 57 x	25	13	77.8	173.5	
24 31 x		26	75.5	96.4	
			Clds.		
53 x		48	73.9	171.9	
25 10	26	05	71.2	98.0	
24 x		19	67.8	169.2	
39 x		34	65.6	101.4	
49 x		44	63.0	167.0	
26 04 x		59	58.3	104.0	
15 x	27	10	53.3	162.3	
30 x		25	52.1	109.0	
44 x		39	45.0	161.1	
55 x		50	37.9	116.1	
27 10 x	28	05		154.0	

July 28, 1902

8 28 36 Not seen later.

Limit of Visibility

	8 28	52		119.0
8 29 16+	29	07	30.2	149.2
55		24	28.4	120.1
8 28 21+		40	29.3	148.5

B & C 1182
8 31 55.5
32 55.5

Ball 103
8 31 00
32 00

Jupiter rather low, troubled by clouds a little during eclipse images somewhat large, blurry and unsteady. The atmospheric conditions became somewhat poorer while Jupiter was steadily disappearing and Satellite also disappeared pretty close to limb of Jupiter. Settings however made slowly of necessity and with extreme care.

July 28, 1902

W Leonis.
10 48 +14.8^{2}
17 27
6 39

too low.

~~Phot~~ T Urs. Maj Webb.

12 35 +60.2
17 40
5 05

Selection of 14th magns.

~~59.5~~

~~21.5~~

~~No 1 (X W)~~
No 1 = comp* ~~star~~ u
" 2 = " w
" 3 = " x

No 4 = 31 39.5 11.5 ~~33.0~~ 33 45.5
No 5 = 51.0 57.0 11.5
Ref* l = 32 33.0 62.0 34 38.0 61.0

No ~~4~~ is 2'.2 South of l & prec. 53.0 sec
No 5 is 1'.3 South of l & prec. 41.5 sec.

July 28, 1902

S Cygni Wells

20 8 +57.2
18 24
1 44
10 16

13.48
10 05 13.26 q 2.5, 2.5 r
13.37

R Delphini Wells.

20 8 +10.0
18 45
1 23
10 37

12.53
10 20 12.59 r 2.5, 2 s
12.56

R Cass. Wells

23 52 +49.6
19 07
4 45
7 15

12.96
10 50 12.78 w 1.5, 3.5 x
12.87

July 28, 1902

R Urs Maj. Wells

10 32 +69.7
19 32
9 00

12.63
12.82
12.72

1105 t 1 var 3 w

Ledgered, Plotted, Posted.

July 29, 1902 (Tuesday)

B & C 1182 Ball 103
9 10 21.0 9 09 00

C's watch = 14 sec. slow at 9:10
Cloudy early part of evening
Σ 55 W Obs.
PhotR. 21 19 +36.8
18 04
3 15
8 45

9 25 Sky more or less cloudy

P.A. 130° Dist 6″± Magns 6.0-6.6
Above C's watch used.

88.8 < bi dis. 94.0
9 32 182.8 69.4
280.2 163.4 − 0.32
349.6

98.3 +0.16
174.1 75.8
264.1 104.5
368.6 180.3
~~[illegible]~~ 179.7 +0.01
348.9 Mean = +0.28
101.1 112.2
183.3 87.3
270.6 199.5
161.5 + 0.35

July 29, 1902
ξ 55' cont.

$ 2.2
9 38.0 90.2 88.0 +0.40
9 35 168.8 115.9
284.7 203.9
156.1 +0.46

Same again

352.2
9 44 99.8 107.6
181.2 90.6
271.8 198.2
0.6 161.8 + 0.35
92.2 91.6 +0.40
1~~8~~71.1 111.8
2~~8~~82.9 203.4 + 0.45
Above 156.6 mean = +0.22
270.8
366.6 95.8
96.9 78.3
175.2 174.1 − 0.11

274.3
9 54 358.4 84.1 + 0.04
82.4 106.4
9 49.0 188.8 190.5
5 +0.2 199.5 + 0.20.
14 49.2
5960.

Reject above. It is impossible for the photometer to grasp the stars. The images fail of covering ~~[illegible]~~ over each other correctly by quite a little angular space. Night also poor.

July 29, 1902

Σ 2960 W Obs.

Phot R. 22 51 +41.0
18 51 P.A. 55°
4 00 Dist 1' ±
8 00 Magns. 5.4 – 9.0

Right

304.7 ∠ br. dis C's not to be used

10 15 325.7 21.0
125.2 20.5
145.7 41.5 – 3.69 ✓

304.4 3.65 ✓
325.7 21.3
124.6 21.6 ✓
146.2 42.9 – 3.61

Left

214.5 Mean = –3.70 ✓
235.~~4~~5 21.0
35.1 20.1
55.1 41.1 – 3.71 ✓

216.1 ✓
10 23 235.4 19.3 – 3.75
10 19.0ˣ ~~30~~35.4 20.2 ✓
5 +0.2 55.6 39.5 – 3.79
15 19.2+
5960.

July 29, 1902

ε Pegasi

21 39 + 9.4 W Obs.

P.A. 310° 19 19

Dist 23 ± 2 20

Magns. 2.5 - 8.8 9 40 C's watch used.

Above ∠ bi dis

42.6

1042 49.8 7.2

222.4 6.3

228.7 13.5 - 6.15 ✓

41.5

47.4 5.9 - 6.12 ✓

220.3 7.9 ✓

228.2 13.8 - 6.10

Below

130.6 Mean = - 6.05 ✓

13~~7.4~~8.6 8.0

311.4 7.2

318.6 15.2 - 5.89 ✓

132.0 - 5.98 ✓

10 52 138.2 6.2

10 47.8 311.0 7.7

5 40.2 318.~~8~~7 13.9 - 6.08 ✓

15 47.2 Night very poor. Too poor for anything but doubles. More or less cloud through-

11.00 out evening. Fog also.

July 30, 1902 (Wednesday)

BOC 11 P 2 B 394

7 15 39.5 7 ~~01~~ 14 00

7 16 39.5 7 15 00

C's watch = 26.5 fast at 7:16

Phot T. χ Cygni Wlb.

19 45 +32.6

16 25

320

8 40

Above

332.1 < comp * dis C's watch used.

8 05.0 38.9 66.8

148.8 74.6

223.4 141.4 + 0.75

328.5

42.0 73.5 + 0.78

158.2 65.0

218.2 138.5 + 0.80

Below Mean = + 0.99

248.4

304.7 56.3

63.3 65.2

128.5 121.5 + 1.16

244.3 +1.20

8 12.0 309.5 65.2

17.0 69.7 52.6

8 08.5

8 4.04 122.3 117.8 + 1.24

13 08.1 S.M.T. 5961.547

July 30, 1902

Same Again.

Below

248.7

8 14.6 303.8 55.1

64.2 62.6

126.8 117.7 + 1.24

243.4 + 1.23

308.8 65.4

69.8 53.3

123.1 118.7 + 1.22

Above Mean = + 1.04'

154.5

218.3 63.8

328.5 72.1

40.6 135.9 + .086'

149.9 + 0.86'

8 20.6 223.3 73.4

8 17.6 334.1 62.8

5 ~~20.4~~ 36.9 136.2 + 0.85'

13 17.2 Final Mean. + 1.02"

5961.555 × P.A. = 250 Var B

H.A. = -2:31 East.

Dec = + 32.6

S.T. = 17:15

Spk = × 5a, 5.5 B, 6.1 C

Var. ~~very~~ ~~[illegible]~~ ~~[illegible]~~ somewhat strongly fainter than comparison star as seen both in large telescope and finder; The star seems to the eye to have about the same difference with respect to comp * as when last taken.

July 30, 1902

H3. H101 Wilb.

Phot T.

22 00 + 44.3
17 35
4 25
7 35

8 30 Cloudy
Above BOC used
151.5 ∠comp * dis
9 24 41 218.8 67.3
326.0 78.6
44.6 145.9 + 0.66
147.3
27 54 224.8 77.5 + 0.69
332.8 65.0
37.8 142.5 + 0.72
Below Mean = + 0.82
65.8
30 45 126.3 60.5
241.4 69.4
310.8 129.9 + 0.98

60.0 + 0.96
9 32 55 130.8 70.8
116 15 246.3 60.5
9 29 04 306.8 131.3 + 0.95
5 -1 40
14 27 24 G.M.T.

5961.6024
5931.5036
+30.0988

July 30, 1902

Same again.

Below

65.4

5

9 3~~7~~ 10 126.1 60.7

240.1 70.2

310.3 130.9 + 0.96 ✓

60.3 + 0.98

37 30 129.6 69.3

247.3 59.5

306.8 128.8 + 1.00

Above Mean = + 0.88 ✓

327.0

40 55 42.3 75.3

152.9 65.7

218.~~4~~6 141.0 + 0.75

333.5 + 0.77

9 43 32 36.~~6~~7 63.2

15 7 07 147.4 76.1

9 39 17 223.~~4~~5 139.3 + 0.79

5 - 1 40

14 37 37 G.M.T.

5961.6094

5931.5036

+30.1058

July 30, 1902

III

Above

	327.4		
9 50 49	42.8	75.4	
	154.2	64.0	
	218.2	139.4	+0.78 ✓
	333.3		+0.76 ✓
53 08	36.4	63.1	
	147.1	78.2	
	225.3	141.3	+ 0.75 ✓

Below

mean = + 0.87 ✓

	240.3		
56 18	310.5	70.2	✓
	67.2	56.7	+ 1.04
	123.9	126.9	
	245.8		+0.98 ✓
9 58 40	307.1	61.3	
18 55	61.1	71.2	✓
9 54 44	132.3	132.5	+ 0.93

5 - 8 40

14 53 04

5961.6202

5931.5036

+30.1166

P.a. 142.8 Van B

H.a. ✕ - 3:06 East

Dec +43 8

S.T. 18:48

Sp wh. 6.5B, 7.5C

July 30, 1902

T Urs Maj W.C.B.

12 35 +60.2
18 58
6 23

Night too poor & too much fog for critical examination of 14th magnitudes. There seems to be a faint star somewhat N. fol. star q which can possibly be substituted by examination on a subsequent night for star w. Selection in general seems very good.

R Ophiuchi W.C.B.

17 3 −15.8
19 28
2 25

10 54 s 3.5, 1 t 12.34
12.47
12.40

R Pegasi W.C.B.

23 03 +9.1
19 43
3 20
8 40

~~To~~ Abandoned bright enough for Field Glass.

July 30, 1902

R And. wCOb.

24 10 +37.9
20 00

4 10
7 50

Star β added tonight and put on Hagen chart by alineation.

14.39

11 25 α 4.5 var 0.5 β

δ Cassiop wOb

25 11 +72.1
20 18

4 53
7 07

14.01
13.86

13.94

11 42 w 4.5 var 0.5 x

L.P.P.

July 31, 1902 (Thursday)

B & C 1182 Ball 103
7 34 09.5 7 32 00.0

C's watch = 5 sec. slow at 7:33

~~260.6~~ T Cygni W Obs.
6" cap.

20 40 +33.4
16 30
4 10
7 50

Above
260.6 < var dis.
A 03.0 293.8 33.2 L.P.P.
80.6 28.3
108.9 61.5 ~~A~~ – 280
262.8
291.1 28.3 –2.75
76.6 36.1
112.7 64.4 – 2.70
Below
165.9 Mean = –265
204.5 38.6
351.1 30.0
21.1 68.6 – 255

171.6
A 10.0 201.6 30.0 – 255
13.0 346.7 38.6
A 6.5 25.3 68.6 – 255
5 – 2.2
13 43 G.M.T.
5962.544

July 31, 1902

Below
166.1
8 12.0 205.8 39.7
352.3 28.9
21.2 68.6 - 255

171.0
200.6 29.6 -2.56
347.9 38.9
2~~1~~.68 68.5 - 2.56

Above Mean = -2.64
78.3
113.4 35.1
262.1 27.6
289.7 62.7 - 2.76

82.1 -2.72
8 19.0 111.2 29.1
31.0 257.3 36.2
8 15.5 293.5 65.3 -2.67
5 - 2.2
13 13.3
5962.551

PA = 75 Ver. B.
H.a. = -3:23 East.
S.T. = 17:17
Dec. = +33.7
Sp Wh = 35a, 45 B, 51 C

July 31, 1902

WOb.

Phot T. H3 H101

22 20 +44.3

17 28

x 32

7 28

L. P. P.

Above

BDC 1182 used

352.0 <comp ✱ dis

8 50 37 19.1 27.1 ✓

169.6 33.1 ✓

202.7 60.2 ✓ + 2.85 ✓

349.9 + 2.84 ✓

54 20 22.2 32.3 ✓

172.7 28.6 ✓

201.3 60.9 ✓ + 2.83 ✓

Below

Mean = + 2.84 ✓

260.7

58 23 292.4 31.7 ✓

81.5 28.3 ✓

109.8 60.0 ✓ + 2.86 ✓

263.1

9 02 10 290.8 27.7 ✓ + 2.83 ✓

25 30 78.9 34.0 ✓

8 56 22 112.9 61.7 ✓ + 2.80 ✓

5 - 2 10

13 54 12 G.M.T.

5962.5793 ×

5962.8075 ×

− 0.2282 ×

31.3040

+ 31.0758 ×

July 31, 1902

Same Again

Below
259.6
9 05 43 293.5 33.9 ✓
~~1~~81.3 27.4 ✓
108.7 61.3 ✓ + 2.81 ✓

262.9
10 13 290.9 28.0 ✓ + 2.78 ✓
77.7 34.7 ✓
112.4 62.7 ✓ + 2.76 ✓
Above
Mean = + 2.79 ✓
172.4
14 56 200.8 28.4 ✓
348.0 33.4 ✓
21.4 61.8 ✓ + 2.79 ✓

168.8
+ 2.80 ✓
9 17 40 203.0 34.2 ✓
~~4~~8 32 351.8 27.0 ✓
9 12 08 + 18.8 61.2 ✓ + 2.81 ✓
5 - 2 10 PA = 322.5 Var B:
14 09 58 + HA - 3:44 East Mean = + 2.82 ✓
5962.5903 ST = 18:11
5962.8075 Dec. + 43.8
- 0.2172 + Diph. 65. B, 75 C
37.3040 Observation somewhat difficult
+ 31.0868 + from proximity of brighter star c
(old notation) but extreme care exercised
& Obs. considered good.

July 31, 1902
δ Bootis W Ob.

14 22 +54.0
14 8 +52.5 18 38
18 45 4 16
4 37

pred. select. 14th magn.

~~10 16 59~~
10 17 17.5 37 4.0
17 22.0 4.5 41

No 1 fols var 4.2 secs. & is 5.'9 N. of var.

18 52.5 var 55.0
19 47.5 No 2
20 04.5 No 3 17.0
21 03.5 No 4 59.0

21 52.5 var
22 46.5 No 2 54.0
23 05.5 No 3 19.0
24 03.0 No 4 57.5
~~24 09.5 No 5~~

26 28.0
27.5

~~0t~~ 15.5 ~~59~~ x 28.0
24.5 ~~19.0~~ 37.5

(over)

July 31, 1902

No 2 fols var by 54.5 secs. & is 0.9 S' of it

No 3 fols var by 72.5 secs & is 1.5 N of it.

No 4 fols var by 131.0 secs & is 1.8 N of it

No 5 fols var by 140.3 secs & is 1.2 S' of it

Selection of S Bootis 14~~th~~ Magns seems to be very good.

R Draconis WCL
16 28 +67.4
19 33
3 05

11.99 ✓
11.96
11.98

11 00 Est var 0,5 q

R Herculis WCL
15 54 +18.2
19 52
3 58

Var. is very faint. Star a which is

July 31, 1902

the last star on chart is not faint enough. Star w added by alienation on Hagen chart. ✓

11 23 w 4.5, var 1 w 14.20±

Phot T R Urs. Min. WCB.
16 34 +72.9
20 14
R. O. A. 3 40 Plotted.

L. P.

241,1 < ~~var~~ C. S. dis
11 37.0 312.8 71.7 ✓
64.9 59.3 ✓
124.2 131.0 ✓ + 0.96 ✓
245.9
307.7 61.8 ✓ +0.92 ✓
57.9 73.5 ✓
131.4 135.3 ✓ + 0.87 ✓
L. O. B. mean = + 0.88
156.7
219.0 62.3 ✓
327.3 74.5 ✓
41.8 136.8 ✓ + 0.84 ✓

147.5 + 0.84 ✓
11 44.6 224.0 76.5 ✓
81.6 334.1 60.2 ✓
11 40.8 34.3 136.7 ✓ + 0.84 ✓
5 - 2 2
16 38.6 G. M. T.
5962.694

July 31, 1902

L.O.B.

1553

11 46.0 218.1 62.8

328.1 75.1

43.2 137.9 + 0.82

149.5 + 0.83

224.5 75.0

333.7 61.7

35.4 136.7 + 0.84

Mean = +0.78

R.D.A.

56.0

130.8 74.8

246.4 60.4

306.8 135.2 + 0.87

54.2

11 52.4 125.9 71.7 + 0.74

98.4 237.7 76.0

11 49.2 313.7 147.7 + 0.92

5 - 2.2

16 47.0 P.A. 321.2 Mean = +0.83

5962.699 H.A. + 4:16 West

S.T. 20:47

Dec. +47.2.5

12 05 Sp.Wh. 2.5 B, 3.5 C

(Sunday morn.)

Aug. 16. 1902. (~~Saturday.~~)

B. & C. 11 A 2.   B. 394.

12 32 43.0   12 33 0.0

33 43.0   34 0.0

X Cygni. Phot. J. W. obs. ~~Fr. rec~~

L. & A.   Full Aperture.

156.6 < 56.6 < Var. dis.   Plotted.

– 219.2   Ledgered

334.1 63.0 *✓

13 38.5 37.1 119.6 *✓ –1.20 ✓

154.6 65.1 *✓ –1.20

219.7

~~13 40.6~~ 339.3 54.0 *✓

33.~~2~~3 119.1 *✓ –1.21

R. & B.

68.9 53.9 *✓

122.8

247.3 58.8 *✓

306.1 112.7 *✓ –1.36 ✓

64.0 57.5 *

~~65.2~~ ~~60.5~~ –1.42

– 124.5

259.8

~~251.2~~ 50.4 ✓*

13 55.6

301.2 107.9 * –1.47 ✓

9 41   mean –1.31

13 47.0 *

5 + 0.3

18 47.3 ~~7~~ G.M.T.

5978.783 *

(Sunday morn.)

Aug. 16, 1902 ~~Sat~~)

Same again R. + B.

69.4
~~70.2~~ 52.4 ✓✓
13 58.7 121.8
246.7 59.1 ✓✓
305.8 111.5 ✓✓ −1.3 d ✓

65.6 60.6 ✓✓
126.2 −1.3 d ✓
250.4 51.0 ✓✓
301.4 111.6 ✓✓ −1.3 d ✓

L. + A.

1.2
3~~38.8~~ 66.8 ✓✓
−38.~~7~~0
158.1 53.9 ✓✓
212.0 120.7 ✓✓ −1.1 d ✓

339.~~9~~5 52.4 ✓✓ −1.1 d ✓
14 10.3 31.9 ✓
129.0 150.5 67.5 ✓
218.0
14 04.5 ~~219.1~~ 119.9 ✓✓ −1.19 ✓
5 − 2.2 Mean −1.2 d ✓
19 02.3 ✓ S. Time (B) 0h 42m.3 Gen. " −1.30 ✓
5978.793 ✓ H. A. +4h 50m

Dec. +32°.3

Pos. Ang. 24°.5

Sprocket. * 4.5 A

" 5.5 B

" 6.1 C

Aug. 16. 1902.

B. + C. 1182.			B. 394.		
15	6	44.8	15	7	0.0
	7	44.6		8	0.0

Aug. 17, 1902. (Sunday)

B. + C. 1182   B. 394.
11 39 2.0   11 39 0.0
40 1.9   40 0.0

R Urs. min. W. obs. Phot. T.
21 50
16 34   +72.5
+5 19

Plotted.
Ledgered.

R. & A. full aperture
244.3 < 66.9 ✓✓ < Comp. star dis.
311.2
12 03.7   57.4   76.5 ✓✓ ✓
133.9   143.4 ✓✓ +0.71 ✓

238.4   77.6 ✓ ✓   +0.71 ✓✓
31~~4.2~~6.0
62.4   65.6 ✓✓
128.0   143.2 ✓✓ +0.71 ✓✓

L & B
151.~~6~~3   69.9 ✓✓
221.2
325.0   85.0 ✓✓
50.~~6~~0   154.9 ✓✓ +0.48 ✓✓

14~~2~~4.~~3~~8   83.7 ✓✓   +0.47 ✓
12 14.5   2~~30~~28.5
18.2 x   329.~~8~~7
12 9.1   4~~1.2~~2.0   72.3 ✓✓   156.0 ✓✓ +0.46 ✓✓
5 0.0
17 9.1 G.M.T. 5979.715   mean +0.59 ✓

Aug. 17. 1902.

Same again

151.8
70.3 ✓
12 18.1 222.1
32~~3~~4.~~9~~8 83.0 ✓
47.8 153.3 ✓ +0.51 ✓

143.2
~~237.9~~ 86.0 ✓ +0.49 ✓
229.2
331.0 69.3 ✓
40.3 155.3 ✓ +0.47 ✓

62.1
12~~7~~9.6 67.5 ✓
237.7 77.8 ✓
315.5 145.3 ✓ +0.67 ✓

55.5 79.7 ✓ +0.66 ✓
135.2
12 30.7 243.8 66.6 ✓
48.8 310.4 146.3 ✓ +0.65 ✓

12 24.4 ×

mean +0.58 ✓

5 0.0

Gen. mean +0.58 ✓

17 24.4 × Sid Time 22 49
5977.725 H. A. 6 14 W
Dec. +72.2
Pos. Ang. 320.9
Sprocket 2.5 B
" 3.5 C

Aug. 17. 1902.

B. + C. 1182.			B. 394.		
13	18	59.8	13	19	0.0
	19	59.6		20	0.0

Wed. morn.

Aug. 26. 1902. (Tuesday)

B.+C. 1182.			B. 394.		
13	32	14.8	13	32	0.0
	33	14.6		33	0.0

X Cygni. Phot. T. Fr. obs.

19	45	+32.6
24	23	
+4	38	

Index to ~~right~~ left and above.
9.5 inch cap. Plotted.

173.2 < Var. dis.
14 07.2 198.3
350.9 25.1
20.9 30.0
55.1 −3.05

169.1 32.0 −3.04
201.1
355.0 23.8
18.8 55.8 −3.02

Index to right and below

85.0
[108.0] Reject 23.3
108.3
[258.2] Reject 30.9
259.4 54.2 3.09

Tuesday August 26. 1902

290.3

[80.0] Reject.
80.3 — 31.6 ✓ — −3.06 ✓✓
14 16.5 — 111.9 — 23.7 ✓
14 11.8 × — 264.0 — 55.3 ✓ — 3.04 ✓
5 −0.2 — 287.7 — mean −3.05 ✓✓
19 11.6 + G.M.T. — Same again.
5988.803+ — [84.0] Reject.
83.5 — 24.4 ✓✓
14 19.7 — 107.9 — 29.0 ✓✓
264.1 — 53.4 ✓✓ — 3.12 ✓✓
[291.2] Reject.
290.1

[82.2] Reject. — −3.12
81.1 — 29.5 ✓✓
[110.9] Reject.
110.6 — 23.9 ✓
[264.4] Reject — 53.4 ✓✓ — 3.12 ✓✓
264.0
287.9
Index to left and above
[355.1] Reject
354.1 — 24.8 ✓✓
[17.9] Reject.
18.9 — 30.9 ✓✓
[169.4] Reject. — 55.7 ✓✓ — −3.03 ✓
170.1
201.0

Tuesday August 26. 1902

350.1 31.1 ✓✓ −3.00 ✓
14 32.5 21.2
[172.8] Reject 26.0 ✓✓
~~14~~ 52.2 ✓ 172.0 5.1 ✓ 2.97 ✓
14 26.1
5 −0.2 198.0 mean −3.06 ✓
19 25.9 G.M.T. Gen. mean −3.06 ✓
5988.810

Sid. Time. 1h 26m
H. A. +5 37.5
Dec. +32°.3
Pos. Ang. 24.5
Sprocket 4.5
" 5.5
" 6.1

(Thurs. morn.)

Wednesday. Aug. 27. 1902.

B. & C. 11 A 2. B. 394.

12 22 30.5 12 22 0.0

23 30.5 23 0.0

R Urs. min., Phot. T. Lr. obs.

16 32 +72.6

23 7

+6 35

Plotted.

Ledgend

Index above

56.3 ⌞ 73.7 ✓ Comp. star dis.

13 12.0 130.0

245.0 65.0 ✓ +0.80 ✓

310.0 138.7 ✓

63.9 +0.80

[127.0] Reject 63.3 ✓

127.2

238.0 75.9 ✓

313.9 139.2 ✓ +0.79 ✓

Index below

324.0 84.2 ✓

48.2

151.4 69.5 ✓

220.9 153.7 ✓ +0.50 ✓

~~St~~ Aug. 27. 1902.

330.0 70.3
18.5 40.3 +0.50
[144.2] Reject
13 15.25 144.9
5 -0.5
18 14.7 [228.7] 83.2
5989.760 228.1 153.5 +0.51
Sky clear in above group. Mean +0.65
Same again.
[325,1] Reject
325.9 79.0
44.9
151.1 69.9
221.0 148.9

[333.0] Reject.
332.0
[37.3] Reject 65.2
37.2
[146.0] Reject
145.9 82.0
227.9 147.2

Index above.
237.1 ~~60.9~~
238.0
313.2 ~~110.7~~
63.9

Aug. 27. 1902.

132.2
13 38.9 242.4
[310.0] Reject
[310.8] "
[56.2] Reject.

Sid. Time	0h 56m
H. A.	8 21
Dec.	72.2
Pos. Ang.	320.5
Sprocket	2.5 ~~A~~ B
"	3.5 C

Impossible to finish above, second, partial group. Reject same. Sky clear in first group. In second, partial group, images continually varying relatively, and especially so after reversal. Settings wholly unsatisfactory. Clouds steadily grew thicker and more flocculent, and images steadily grew fainter, and disappeared entirely. Some little time elapsed between the end of first group and the beginning of the second, partial group, as W. waited for Mr. Coleson to rearrange the photographic apparatus. Meanwhile clouds began to come.

Aug. 31. 1902. (Sunday, (Monday noon)

+43° 4101 Phot. T. W. obs.

21 v3 +43.6

B + C. 1182.
14 9 2v.3
10 2v.1

Ballow 103.
14 12 0.0
13 0.0

1 25
21 v3 +43.6
3 32

15 15 Tried for a long time to obtain measures on var. but utterly impossible to do anything with it. Night very poor, Sky hazy and much fog. Much moisture around about also much glare from electric lights. Fog now coming in thicker.

Sept. 1, 1902. (Monday)

+43°: 4101 Phot. J. W. obs.

21 53 +43°.6

$$\begin{array}{rr} 21 & 53 \\ \underline{19} & \underline{20} \\ 2 & 33 \end{array}$$

8 20 Sky all cloudy again: no stars visible in finder.

$$\begin{array}{rr} 21 & 53 \\ \underline{20} & \underline{00} \\ 1 & 53 \end{array}$$

9 30 Still cloudy

$$\begin{array}{rr} 21 & 53 \\ \underline{20} & \underline{16} \\ 1 & 37 \end{array}$$

9 40 Sky still cloudy everywhere: no possible chance for variable or of any other work.

Sept 1, 1902

B&C 1182 Ball 103

21 07 04.0 21 07 0.0

Reset B&C just before above comparison

Sept 2, 1902 (Tuesday)

BAC 1182 Ball 103
7 06 02.0 7 06 0.0

C's watch = 21.5 sec. fast at 7:07

W Herculis W Obs.

16 36 + 36 7
20 30
3 5 ~~4~~

Selection of 1st ~~&~~ Magns. Stand

10 02 50 10 03 53.5
03 19 29 04 22.5 29.0
~~0~~

No, 1 fols var by 29 ~~secs~~ & is 5.2' South of it.

05 13.5 06 33.5
06 06.5 53.0 07 26.5 53.0

No 2, fols var by 53 secs & is 5.5' South of it.

08 ~~4~~ 32.0 ~~08~~ 09 10.0
08 43.5 11.5 09 21.5 11.5

No 3 fols No 2 by 11.5 sec & is 1.3' north of No 2.

10 15.0 11 24.0
11 11.5 56.5 12 20.5 56.5

Sept 2, 1902

No 4 fols var by 56.5 sec & 4.'7 North of variable

10 13 13 Var 15 19.5
14 50 No 5 (97 102) 16 56 96.5 101.5
14 55 No 6 17 01

No 5 fols var by 96.8 secs & is 2.'3 North of it.

No 6 fols var by 101.8 secs & is 2.'2 South of it.

The above a preliminary provisional selection possibly not 6 ~~better~~ than No 2.

R Draconis W Obs.

16 26 + 67.4
21 26
5 00

~~10 35 14~~

10 36 19.5 *v ~~10 37~~
36 44.0 No 1 24.5 2.1 N of it.
36 59.0 No 2 39.5 3.5 N of it

No 1 fols *v by 24.5 secs & is 2.'1 N of it

No 2 fols *v by 39.5 secs & is 3.5

Sept 2, 1902

10 38 23.5 * p
25.5
38 49.0 No 3

No 3 fols * p by 25.5 ~~s~~ & is 4.2 S of it

39 16.0
39 19.0 3

No 4 fols * No 3 by 3 secs & 4.0 N of No 3.

40 38 No 3
41 05.5 No 5 37.5

No 5 fols No 3 by 37.5 secs & is 2.0 N of it

Phot T. / χ Cygni W 6b.
9.5" cap
19 45 + 32.6
21 45
2 00

Cs watch used on χ Cygni

Above
χ
177.6 < var dis Ledgered
10 54.0 196.8 19.2 ✓
352.6 25.8 ✓
18.4 45.0 ✓ — 3.51

— 350 ✓
172.6
199.3 26.7 ✓
356.5 18.6 ✓
15.1 45.3 ✓ — 349 ✓

Over

Sept. 2, 1902

Below
86.8
105.8 19.0
263.8 24.1
287.9 43.1 — 3.60

84.9 — 3.64
11 02.0 108.7 23.8
10 58.0 266.6 17.8
5 - 0.4 284.4 41.6 — 3.68 Mean = — 3.57
15 57.6 G.M.T.
5995.665 Same again
Below
87.4
11 04.6 104.9 17.5
263.6 23.7
287.3 41.2 — 3.70

84.2 — 3.65
109.3 25.1
266.4 18.1
284.5 43.2 — 3.60
Above
359.9
18.1 24.2
176.1 18.4
194.5 42.6 — 3.63

— 3.58

mn - 3.54

Sept. 2, 1902
χ Cygni cont.

11 13.2
17.8
11 08.9
5 -0.4
16 08.5 9 mt.
5995.672

356.1
15.3
173.2
198.4

19.2
25.2
44.4 — 3.54

P.A. 25.0 Ver.
H.A. +2:37 West
Dec. +32.5
S.T. = 22:22
S.p.Wh. = 4.5 a
5.5 B
6.1 C

Mean = -3.62
General Mean = -3.60
.11
Magn = -4.51

~~BOC~~ 1182
11 42 02.5
43 02.5

Ball 183
~~B.C. 11~~
11 42 00
43 00

Co's watch = 21.0 sec fast at 11:44

Jupiter

20 47 — 18.9
22 47
2

Sept 2, 1902

Read Sup I w Ob Campbell Rec.
~~R~~ Phot R. compared with
nearer of 2 Sts on fol. side = Sat II

Checked.

12 08 27	12 08	29		seen				
37		39	38.0	211.8	76.0			+ 2.3
49		51	47.8	249.8	95.6			1.8
09 00	09	02	50.1	202.0	100.2			1.6
09		11	53.8	252.1	107.6			1.5
18		20	58.8	198.3	117.6			1.2
28		30	61.9	257.1	123.8			1.1
43		45	63.3	195.2	126.6			1.0
49		51	66.8	258.5	133.6			0.9
59	10	01	70.8	191.7	141.6			0.7
10 09		11	72.5	262.5	145.0			0.7
19		21	76.6	190.0	153.2			0.5
26		28	79.1	266.6	158.2			0.4
36		38	83.3	187.5	166.6			0.2
50		52	87.8	270.8	175.6			+ 0.1
59	11	01	89.0	183.0	178.0		*	0.0
11 10		12	91.0	272.0	182.0	178.0	♄	0.0
19		~~21~~	90.8	18~~2~~1.0	181.6	178.4	♄	0.0
31		33		271.8 →				
41		43		179.8				
57	12 12 03	59	92.4	272.2		175.3	−	0.1
12 09	12	11	92.3	~~160~~ 179.5				
			184.7					
25		27	92.4	271.8				
~~35~~		~~37~~		179.6				

Sept 2, 1902

92.4
12 12 58 12 12 50 92.5 272.0 175.1 −0.1
2 184.9
12 12 56 13 03 92.4 180.5 2
22 273.0
35 181.6
13 54 3
2 48 91.9 273.5
13 52 14 01 91.9 180.1 176.2 −0.1
183.8
12 91.9 272.0
27 181.0
14 48 45 91.8 272.8
2 4
14 46 56 91.9 181.1 176.3 −0.1
183.7
15 06 91.8 273.0
23 181.5
15 40 91.5
2 33 92.5 273.0 5
15 38 184.0 180.3 176.0 −0.1
43 92.0
59 272.8
16 53 16 38 180.4
2 47 92.1 272.5 6
16 51 93.5
58 185.6 180.0 174.4 −0.1
92.8
17 09 273.5
18 180.0
17 48 32 93.2 273.2 7
2 ~~40~~ 58 94.3
17 46 187.5 179.5 172.8 −0.1
93.8
18 22 273.8
37 181.3
18 55 46 92.7 274.0
−2
18 53 19 01 91.7 181.8 8
184.4
16 92.2 273.5 175.6 −0.1

Sept. 2, 1902

seeing fairly good although a little blurry at times.

BOC 118			Ball 103		
12	23	02.1	12	23	00.5
	24	02.0		24	0.0

Posted to here.

Sept. 3, 1902 (Wednesday)

BOC 1182 | Bond 894
7 11 10.0 | 7 11 00

C's watch = 25 secs fast at 7.11

7 15 Rather cloudy

Σ 55′ 20 Obs.

Phot R. 21 19 + 36.8
18 29
2 50
9 10

P.A. 130° Magns 6.0 − 6.5
Dist 6′ ±

C's watch used
above

92.8 < bz. dis

7 39 184.4 | 91.6
282.1 | 72.7
354.8 | 164.3 − 0.30 ✓
98.0 | ✓
176.5 | 78.5 −0.16
268.2 | 100.8 ✓
369.0 | 179.3 − 0.01

over

Sept. 3, 1902

4 55′ Cont.

Reversed.

	~~352.2~~	354.9	cloudier
	~~10~~	104.6	
			109.7 ✓
	178.0		97.8 ✓
	275.8		207.5 ✓ + 0.53
			152.5 ✓
	0.5		+0.56
7 51	100.0		99.5 ✓
	173.1		110.5
7 45	283.6		210.0 ✓ + 0.58
			150.0 ✓

Mean = +0.20 ✓

Observations very difficult throughout. Stars dim and images varying on account of very cloudy conditions.

8 00 Group should probably be rejected

8 30 Clouds thick everywhere only one or two stars invisible clouds coming in thicker.

Sept. 4. 1902 (Thursday)

A little clearer.

Cloudy again.

Expts. with Phot. X. W. Obs.

Σ 61 W Ob
Phot 24 43 +27.1
21 03
3 40
8 20

9 50 Too cloudy
10 05 Clearer
10 12 Too cloudy for this one

Σ 131 W Ob
25 25 +60.0
21 22
4 03
7 57

10 18 Clouds again
Stars gone

Σ 21 30 W Ob
17 3 +54.6
21 45
4 42

Sept 4, 1902

17 3
21 59
4 56

Σ 2082 W Obs
16 35 + 49.~~20~~
22 02
5 27
Too cloudy

Σ 2325 20 Obs

18 25 − 109
22 05
3 40

~~Right~~ C' ~~watch~~ used = 24 sec. fast at 9:57
222.6
11 04 244.2 < br. dis
40.0
65.8

11 14 Stopped by clouds again

Led. Plat. Post.

Sept 5, 1902 (Friday)

B&C 1182 Ball 103
7 01 31.3 7 01 00

C's watch = 11.8 secs fast at 7:02

A
~~Phot~~ Nova Sagittarii
18 51 -13.0 W.C.B.
18 45
0 06
11 54

24.5 36 28.5
26.5 38 55.5 27.0
10.5 15.0

19.5 39.0
30.5 50.5

There is a faintish star about 11.5 magn. which preceeds -13° 5193 (9.5) by 11.0 and is 0.3 S. of it.

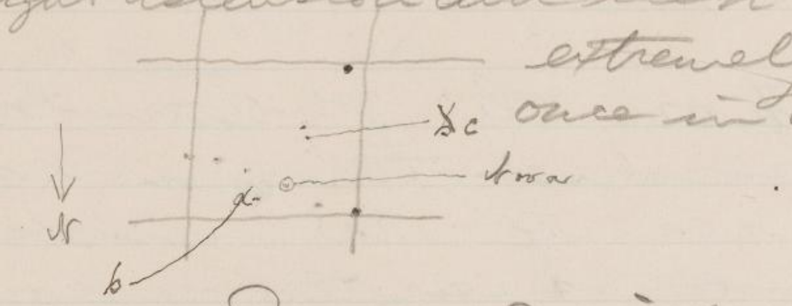
54.5 10.0
14.5 31.0

The Nova? preceeds ~~the~~ -13° 5193 (9.5) by 20 secs and is 1.7 South of it.

It is thought that ~~the~~ above however is probably not ~~the~~ Nova, but ~~that~~ it is possibly a

Sept 5, 1902.

star a little south in the same
Right Ascension and seen only as an
extremely faint glimmer
once in a while



Nova Aquilae WCBs.

19 15 −0,5
20 25
1 10

48.5
46.5

19.0 03
35.0 26

Reference = 3710 (9.5)

22.5 03.5
41.5 19.0 23.0 19.5

There is a faint star preceding
−0°, 3710 (9.5) by 19 secs. & about
2′.2 N. of it.

Assuming the DM place of −0° 3710
as absolutely correct the nova
should precede 16 sec. instead of 19
and be 0′.2 farther north. But there
is no star to be seen in this position
the only star is the one preceding
by 19 secs. Impossible to measure
either of the novae assuming that they

*9.5 − 2
/ −

Sept 5, 1902.

are the brighter of the two stars seen pretty close to the region.

Put on the photometer a second time in order to see if W could measure the star near the region of the Nova, but impossible to do so. It is barely possible that it might be done with Phot T when the eye is less tired on another night

---

Exam. of 14 th magns.

W Herculis WCCb.

16 36 +36.7
21 26
4 50

52.5
21.5

No 1 fols var. by 29 secs and is + 5.4' S. of it

No 2 fols var by 62.8 secs. and is ~~0.0 of it~~ in the same dec. as var.

59.0
39.5
40.5

49.5
29.5
40.0

No 3 fols var by 40.2 secs. & is 1.8' ~~2.0~~ South of it.

17.0
13.0
56.0

27.0
23.5
56.5

No 4 fols var. by 56.2 secs & is 4.7' N of it. ~~about~~

Sept 5, 1902

40 03.5   64.0   ~~41 27.0~~   4
41 07.5   ~~42~~

43 06.5   64.0
44 10.5

No 5 fols var. by 64.0 secs and is 4.7 South of it

This selection final

Exam of 14th magn
R Draconis   W Ob.

16 26 +67.4
22 02
5 36

10 55 21.5
56 27.0   65.5

~~No 1 fols var by 65.5 secs & 6.0~~

10 58 55   24
59 19   16
59 35

No 1 fols * ~~s~~ n by 24 secs & is 1.9 N. of it

No 2 fols * n by 40 secs & is 4.0 N. of it

~~33.5~~   ~~24.3~~   40.0   23.0
~~17.8~~   ~~28.5~~   03.0   27.0
~~22.0~~   07.0

No 3 fols * k by 23 secs & is 4.6 S of it

Sept 5, 1902

No 4 fols * p by 27 secs. δ is 0'.2 S of it.

36.0   9.0   ~~59.5~~ 10.0
45.0   ~~09.5~~

No 5 ~~fo~~ prec. var by 9 sec, δ is 5'.2 N of it.

This above selection considered final.

S Cassiop   W C B

25   8   72.0
22   32

2   36
9   26

11 30

Preliminary selection of 14th mapes. made.

Sept 5. 1902

24 40
20 45
3 55 +19.0

Re. Jup Sat II. W. Obs
Phot. R
Colson Recorder

Compared with most remote 7 sats on following side = Sat IV

Checked.

13 34 46	13	35	16		Seen.			
34 57		35	27	61.8	28.0	123.6		−1.1
35 07			37	62.6	81.8	125.2		−1.1
13			43	68.7	19.2	137.4		−0.8
22			52	72.6	87.9	145.2		−0.7
33		36	03	70.7	15.3	141.4		−0.8
42			12	74.8	86.0	149.6		−0.6
51			21	75.2	11.2	150.4		−0.6
36 00			30	83.4	86.4	166.8		−0.2
			~~45~~		~~1.0~~			
24			54	98.8	3.0	197.6	162.4	+0.3
		~~37~~	~~16~~					

Sept 5. 1902

13 36 54	13 37	24	103.8	101.8	207.6	152.4	+0.5
37 04		34	104.0	358.0	208.0	152.0	+0.5
17		47	103.2	102.0	206.4	153.6	+ 0.5
32	38	02	105.1	358.8	210.2	149.8	+ 0.6
43		13	104.1	103.9	208.2	151.8	+ 0.5
58		28	104.1	359.8	208.2	151.8	+ 0.5
38 12		42		103.9			
		54		355.5	217.2		
39 14	39	08	109.7	105.2		142.8	+0.7
−30		21	107.5	358.5			
38 44		32	108.6	106.0			
		49		358.0	215.6		
40 07	40	02	108.8	106.8		144.4	+0.7
−30		14	106.9	359.1	2		
39 37		22	107.8	106.0			
		35		356.1	215.2		
40 55		49	109.8	105.9		144.8	+0.7
−30		59	105.5	358.5			
40 25	~~41~~	~~09~~	107.6		3		
	41	17		104.0			
		30		357.4	212.0		
41 48		43	107.4	104.8		148.0	+0.6
30		51	104.6	358.9	4		
41 18	42	07	106.0	103.5			
		17		358.5	210.4		
42 33		28	105.3	103.8		149.6	+0.6
30		38	105.1	358.9	5		
42 03		49	105.2	104.0			
	43	05		358.0			

Sept 5. 1902

		15	107.5	105.5	211.4 148.6 +0.6
13 43 20		25	103.9	359.1	
- 30		34	105.7	103.0	
13 42 50 x		44		359.5	208.8
43 59		52	104.0	103.5	151.2 +0.6
30	44	05	104.9	359.9	7
43 29 x		15	104.4	104.8	
		26		359.5	211.4
45 26 x	44	36	104.7	104.0	148.6 +0.6 8
30	46	15	106.7	357.8	
44 56 x		28	105.7	104.5	

Limit of visibility

	47	16		15.0	148.4 - 0.6
47 51 x		43	76.5	91.5	
30 x		54	72.0	17.0	
47 21	48	31	74.2	89.0	

Region rather low and seeing rather poor. Setting a little uncertain but considered fairly good.

Obliged to hurry in preparing for eclipse, so that limit of visibility could only be taken at end. Limit of visibility somewhat uncertain.

Sept. 5. 1902.

B. + C. 1182.			~~B. 39~~ Ballou 103.		
1K	s	30.5	1K	s	0.0
	g	30.4		g	0.0

Did not have time to get comparison before eclipse.

Sept 6, 1902 (Saturday)

Boc 1182 Ball 103

7 05 24.0 7 05 00

C's watch = 5.5 secs slow at 7:06

~~Nova Sagittarii W.O.G.~~

Nova Sagittarii W.O.G.

18 51 -13.0
18 35
0 16
11 44

Nova Sagittarii extremely faint. especially on account of some moonlight. The best est. ~~that~~ can be made which however is a little uncertain due to some moonlight and probably a slight amount of cloud, as well as ~~extreme~~ faintness of the nova ~~in the air~~ is as follows

8 20 a 5 var var 1 b

Comparison stars a and b are those so indicated in diagram on p. 143 of this book. W.O.G.

Nova Aquilae

19 15 -0.5
19 55
0 40

8 45 Sky all cloudy

Sept 6, 1902

9 45 Clouds came before Nova Aquilae could be obtained Sky still thickly cloudy every-where

Cleaned and readjusted Photometers Z and X.

Ledgered, Plotted, Posted

Sept. 8, 1902 (Monday)

BAC 1182 Ball 105
7 07 28.0 7 05 05

C's watch = 18 sec. fast at 7:06

R Ursae Min. WCG

16 34 +72.9
18 44
2 10
9 50

Too high

R Scorpii WCB.

16 9 −22.7
19 03
2 54

Moon too bright and near. ~~Vars. not~~ Neither R nor S seen.
" very close to region.

R Herculis WCB

15 55 +18.2
19 20
3 25

R Herculis extremely faint but thought to be seen.

8 15 u x var 14.15 (over)

Sept 8, 1902

Its impossible to select a fainter star to put on the other side of the variable

R Ophiuchi W Ob

17 02 −15.5
19 45
2 43 ✓

13.83 ✓
13.72 ✓
13.78 ✓

8 37 w 4, 1 x Ob. difficult region somewhat low & moon not very far distant.

R Delphini W Ob.

20 10 +8.5
20 10
0 00

12.53 ✓
12.54 ✓
12.54

9 01 r 2.5 var 2.5 s

R Ursae Minoris W Ob.

16 34 +72.9
20 34
4 00

C's watch used.

see next page

Sept 8, 1902
R Urs Min   w Obs

Phot I.
Right
236.5 < comp * dis
9 28.0 304.4   77.9
63.3   63.9
127.2   141.8 + 0.74
II

243.9   + 0.70
308.7   64.8
55.7   80.4
136.1   145.2 + 0.67

Left   Mean = + 0.69
154.6
218.3   63.7
324.9   81.7
46.6   145.4 + 0.67

145.1
9 35.0 226.7   81.6 + 0.68
63.0 335.1   62.2
9 31.5 37.3   143.8 + 0.70
5 − 0.3
14 31.2 G.M.T.
6001.605

Sept. 8, 1902

Same Again

Left
154.2
9 37.0 218.1 63.9
324.7 79.4
44.1 143.3 +0.71

+0.68
144.8
225.9 81.1
332.9 65.0
37.9 146.1 +0.65

Right Mean = +0.70
65.1
128.3 63.2
236.4 79.7
316.1 142.9 +0.72

56.6 +0.73
9 45.0 134.9 78.3
9 41.0* 245.2 63.4
5 -0.3 308.6 141.7 +0.74
14 40.7* P.A. = 321.0 Var B
6001.612 H.A. = 4:42 West Final Mean = +0.70
S.T. = 21:16
Dec = +72.5
Sf Wl = 2.5 B, 3.5 C

Sept. 8, 1902

Boötis

S ~~Cassiopeiae~~ W.Cb.

Selection of 14th magn. Standards.

14 22 +54.0
21 22
7 00

~~No 1 fols var 4 secs & 5'.9 S of it~~

No 2 fols var 54 secs & 1'.2 S. of var.

No 3 fols var 72 secs & 1'.9 N of var

No 4 fols var 131 secs & 2'.5 N of var

No 5 fols No 3 by 7 " & 3'.0 S of it

No 1 prec. No 4 by +2.5 secs. & 7'.3 N of it

Possibly after the moon will look at
this region again, but revised selection
10 33 tonight thought to be all right.

S Cassiop. W.Cb.

25 08 +71.6
22 12
2 56
9 04

Sept. 8, 1902.

S Cassiop. WCOb.

No 1	11	10	45.0		11	12	~~03.5~~ 04.0	
No 2		10	53.0	8.0		12	12.5	8.5
No 3		10	58.5	5.5		12	16.5	4.0
No 4		11	15.0	16.5		12	34.0	17.5
		~~11~~	~~18.5~~	~~3.5~~		~~12~~	~~38.0~~	~~4.0~~
Star m		11	36.5	m 18.0		12	56.0	18.0

~~20~~

11	13	43.0		17	07.5	
		51.0	8.0		11.0	3.5
		56.5	5.5			
	14	11.5	15.0	17	30.0	
		~~16.5~~	~~5.0~~		33.5	3.5
		34.5	18.0			
					~~47.0~~	
				17	55.0	3.5
					58.5	

No 5 fols. m by 3.5 secs. & is 2.8′ S of it

No 1 prec No 2 by 8.2 secs & is 4.8′ S of m

No 2 prec No 3 by 5.0 secs & is 4.6′ S of m

No 3 prec No 4 by 16.3 secs. & is 7.8′ S of m

No 4 prec. * m by 22.2 secs & is 5.8′ S of m

11 30 14.31 14.23 / 14.27 X Her var 1 f WCOb

var. extremely faint but certainly seen

Sept 8, 1902

there is a star in about the position of the var. as indicated on the Hagen Chart.

~~S C~~

χ Cygni — W.C.B.
Phot T. 95 cap.

19 45 +32.6
22 55
3 10

Above
354.1
11 37.6 17.5 Krandis 23.4
175.7 18.1
193.8 41.5 − 3.69
356.9
14.3 17.4 − 3.73
174.2 22.5
196.7 39.9 − 3.77
Below mean = − 3.84
87.4
107.7 20.3
266.9 16.7
283.6 37.0 − 3.94

88.7 − 3.94
11 44.0 104.9 16.2
81.6
11 40.8 264.3 20.9
5 − 0.3 285.2 37.1 − 3.93
16 40.5 G.M.T.
6001.694

Sept. 8, 1902

Same again

Below

86.1

11 46.0 107.8 21.7 ✓

266.2 18.1 ✓

284.3 39.8 ✓ — 3.78 ✓

88.3 -3.82 ✓

105.7 17.4 ✓

264.4 20.9 ✓

285.3 38.3 ✓ — 3.86 ✓

Above Mean = -3.76 ✓

355.9

14.6 18.7 ✓

175.2 22.8 ✓

198.0 41.5 ✓ - 3.69 ✓

353.6

11 54.0 15.2 21.6 ✓ -3.71 ✓

11 50.0 176.1 19.1 ✓

5 -.3 195.2 40.7 ✓ - 3.73 ✓

16 49.7 G.M.T.

6001.701 +

Sept 8, 1902

~~III~~

above

356.3

11 58.0 15.3 19.0✓

174.5 21.7✓

196.2 40.7✓ — 3.73✓

355.7

16.2 20.5✓ — 3.82✓

177.5 17.1✓

194.6 37.6✓ — 3.91✓

Below Mean = — 3.86✓

265.3

285.4 20.1✓

88.2 17.5✓

105.7 37.6✓ — 3.91✓

266.9

12 05.0 283.6 16.7✓ — 3.89✓

1230

12 01.5 86.6 21.5✓

5 -0.3 108.1 38.2✓ — 3.87✓

17 01.2 G. M.T.

6001.709✓

Mean = — 3.82✓

~~8.10~~

4Σ8.

Obs. a little diff. on account of brightness of variable and large difference in brightness between var and comp *.

P.A. 205.5 V&B HA = 3:45 West

12 15 Dec. 32.6" S.T. 23:34 S.p.Uh. 45-55-61

Posted Plotted Ledgered.

Sept 10, 1902 (Wednesday)

BOC1182 Ball 103

7 05 330 7 03 00

C' watch = 14 secs fast at 7:04

16 9 - 22 7
18 52
2 43

R Scorpii W Obs.

7 40 ζ 3, 1 α 12.94 12.87 12.90 ✓

S Scorpii W Obs.

7 41 β 1 n 13.3 ✓

V Cygni W Obs.

20 43 + 47.3
19 23
1 20
10 40

Too high

S Pegasi W Obs

23 13 +7.2
19 23
3 50
8 10

Sept 10, 1902

8 10 u 3, 1 w
12.79
12.84
12.82

R Androm. Wells.

24 13 + 37.1
19 43
4 20
7 40

24 10 + 37.9
19 47
4 23
7 37

A 25 z 3 ~~#~~ 2,5 α
13.65
13.69
13.67

R Arietis Wells.
26 02 + 25.1
20 02
6 00
6 00

8 46 t 2.5, 2.5 u
13.51
13.45
13.48

Sept 10, 1902

S Aquarii

22 48 − 20.9
20 40
2 08
9 52

9 25 u 2, 1 w 12.05 12.11 12.08 ✓

R Aquarii WOb

23 35 − 16.2
21 03
2 32
9 28

9 46 p 2.5, 1.5 q 10.79 10.66 10.72

R Persei W Obs

Selection of 12th magns

Sept 10, 1902

~~10 16 46.5 30.0~~
~~17 16.5~~

10 20 14.5
~~20 25.5~~ 11.0

20 40.0 11.0
20 57.0

~~No 1 fols ran by 11 secs & 1.60' S of it.~~

29	28.0		30	41.0	
30	14.0	46.0	31	27.0	46.0
30	27.0	13.0	31	40.0	13.0
30	28.0	1.0	31	40.0	1.0

No 2 fols ran by 46.0 secs. & 3.52' N of it.

No 3 fols ran by 59.0 secs & 5.8' N of it.

No 4 fols ran by 60.0 secs & 7.75' S of it.

33	32.5	54.0	34	40.0	54.5
34	26.5		35	34.5	

No 5 fols ran by 54.2 secs & 1.8' N. of it.

44	26.0	14.0	~~44~~	~~49.5~~	
44	40.0		~~45~~		
			45	12.5	13.5
			45	26.0	

(over)

Sept 10, 1902

No 1 fol. var by 13.8 secs & is 9'.5 S. of it.

R Camelop. 20 Ob.

15 8 +84.5
22 22
7 14

Sequence selected & thought to be pretty good but will have to be examined again on a subsequent night.

11 25

11 20 m 2 Var., Var, 2 n 12.86 12.66 12.76

Ledgered Plotted Posted.

Sept 11, 1902 (Thursday)

B O C 1182 Ball 1.03
> 04 39.8 > 02 00

C's watch = 34 secs fast at 7:03

U Sagittae W Ob

19 20 +20.0
19 00
0 20
11 40

~~V Cephei~~
V Cygni W Ob.

20 43 +47.3
19 08
1 35
10 25

) 57 ~~Star w added tonight and plotted on Hagen chart by alienation.~~

u 2,5 var 3 w 13.72

U Cephei W Ob

24 ~~0~~ 50 + 81.1
19. 40
5 10
6 55

(Over)

Sept. 11, 1902.

U Cephei

I

Above

3
142.8 <var. dis
8 13 06 229.2 86.9 ✓
328.0 71.4 ✓
39.4 158.3 ✓ −0.41

150.9 −0.38
14 24 224.3 73.4 ✓
320.4 88.3 ✓
48.7 161.7 ✓ −0.35

Below Mean = −0.40
52.3
16 00 137.9 85.6 ✓
240.0 72.3 ✓
312.3 157.9 ✓ −0.42

61.4 −0.42
8 17 18 131.7 70.3 ✓
20 48 232.4 88.3 ✓
8 15 12 320.7 158.6 ✓ −0.41
5 − 2 40
13 12 32 G.M.T.
6004.5504
6004.3837
+0.1667

Sept 11, 1902

II

Below

52.6

8 19 37 140.0 87.4

241.5 71.3

312.8 158.7 – 0.41

– 0.40

61.2

21 11 131.2 70.0

232.2 89.2

321.4 159.2 – 0.40

Above Mean = – 0.30

318.6

23 40 50.6 92.0

149.6 Clds. stars dim 77.8

227.4 169.8 – 0.19

3261 – 0.20

8 25 10 43.5 77.4

9 38 140.6 91.9

8 22 25 232.5 169.3 – 0.20

5 – 2 40

13 19 45 G.M.T.

600K.5555

600K 3837

01718

Sept 11, 1902

III

Above

318.2

8 27 16 52.6 94.4

150.0 73.8

223.8 168.2 − 0.22

324.2 − 0.14

28 47 46.9 82.7

138.5 94.4

232.9 177.1 − 0.05

Below Mean = −0.12

228.9 95.9

31 09 324.8

56.7 sky somewhat clearer

136.2 79.5

175.4 − 0.09

236.0

8 33 06 315.2 79.2 − 0.10

00 18 48.6 94.8

8 30 04 143.4 174.0 − 0.11

5 −2 40

13 27 24 G.M.T.

6004.5607

6004.3837

0.1770

Sept 11, 1902

~~IV~~

Below

218.0

8 35 12 323.2 more cloudy 105.2

54.3 81.0

135.3 186.2

173.8 + 0.12

235.8

37 12 317.1 81.3 + 0.04

47.3 96.4

143.7 177.7 - 0.04

Above mean = + 0.10

314.8

41 15 55.4 100.6

143.5 87.3

230.8 Clds troublesome

187.9

321.5 172.1 + 0.15

8 43 54 49.2

157 33 135.5 87.7 + 0.16

8 39 23 237.2 101.7

5 - 2 40 189.4

13 36 43 G.M.T. 170.6 + 0.18

600K .5672

600K 3837

0.1835

Sept. 11, 1902

V

Above

3~~4~~3.8

8 46 05 56.5 102.7✓

139.7 91.7✓

231.4

194.4

165.6✓ ~~+0.08~~ +0.27✓

3~~2~~8.8 ~~+0.22~~ (+0.30✓)

49 05 51.0 92.2✓

133.8 104.6✓

238.4 196.8✓

163.2✓ +0.32✓

Below

mean = ~~+0.29~~ +0.33

44.4

51 55 148.2 clds thicker 103.8✓

227.2 96.0✓

323.2 199.8✓

160.2✓ +0.38✓

50.0

8 54 24 140.8 90.8✓ (+0.36✓)

20 1/5 29 222.8 107.8✓

8 40 22 ~~329.~~ 198.6✓

5 -2 40✓ 330.6 161.4✓ +0.35✓

13 437 42 G.M.T.

6004.5748 P.a. 195.5 Ver B

6004.3837 H.a. -4:14 East

+0.1911✓ S.T. 20:40 δ p.Wl. = {5.5 a 5.6; 6.5 B 6.5; 6.2 C 7.2}

Dec. +81.2

Sept 11, 1902

Note: - In first group sky pretty clear, and after that troubled more or less by feathery but somewhat dense clouds. Especially towards latter part of series.

Images some of the time rather dim but cloud rather uniform and extreme care exercised. Images varying a little relatively, especially in latter part of series, but observer watched them as carefully as possible in order to make equalization as correct as could be.

Phot T. U Sagittae WCObs

19 20 +20.0

21 05

1 45

(Over)

Sept. 11, 1902

U Sagittae

Above

57.6 < comp * dis

I

9 49 11 133.2 75.6

241.9 67.2

309.1 142.8 + 0.72

61.4 + 0.72

51 40 129.3 67.9

238.3 75.5

313.8 143.4 + 0.71

Below mean = + 0.66

325.7

54 46 45.4 79.7

150.8 69.7

220.5 149.4 + 0.59

331.0 + 0.60

9 56 54 39.9 68.9

2 31 146.9 79.9

9 53 08 226.8 148.8 + 0.60

5 -2 40

14 50 28

6004.6184

6004.5874

0.0310

Sept 11, 1902

Below

II

~~328.8~~ ~~221.5~~
~~9 59 08~~ ~~143.9~~ 151.8 69.7
10 11 11 ~~149.5~~ 221.5
~~221.2~~ 329.6 74.9
445 1446 +0.68

147.0
13 22 238.8 ~~7.8~~ 76.8 +0.67
332.0 68.8
408 145.6 +0.66

Above

Mean = + 0.76

642 63.6
16 42 127.8
239.0 74.3
313.3 137.9 +0.82

60.3 72.7 +0.84
10 18 55 133.0
20 10 243.9 62.4
10 15 02 306.3 135.1 +0.87
5 - 2 40
15 12 22 G.M.T.

6004.6336
6004.5874
0.0462

Sept 11, 1902

~~III~~

Above

649 61.5

10 22 55 126.4

237.4 74.7

312.1 136.2 +0.85

58.4 75.3 +0.83

25 05 133.7

244.5 62.8

307.3 138.1 +0.81

Below Mean = +0.76

333.3 64.4

27 52 37.7

145.8 78.6

224.4 143.0 +0.71

326.5 76.4 +0.68

10 29 27 142.9

151.9

25 19

10 26 20 ~~219.6~~ 69.2

5 - 2 40 221.1 145.6 +0.66

15 23 40

6004.6415

6004.5874

0.0541

Sept. 11, 1902

IV

Below

10 35 44 331.4 66.3 ✓
37.7
147.4 79.8 ✓
227.2 146.1 ✓ +0.65 ✓

328.0
38 06 48.56 77.6 ✓ +0.65 ✓
152.3
221.1 68.8 ✓
146.4 ✓ +0.65 ✓

Above

Mean +0.76

244.2 63.4 ✓
41 37 307.6
59.1 72.1 ✓
131.2 135.5 ✓ +0.87

240.4 +0.88
10 4335 313.3 72.9 ✓
159 02 64.3 61.9 ✓
10 39 46 126.2 134.8 ✓ +0.88 ✓
5 2 00
15 37 06 G.M.T.

6004.6508 ✓
6004.5874
0.0634

Sept. 11, 1902

V

Above

245.9

10 50 10 306.8 60.9

59.0 73.1

132.1 134.0 + 0.90

+0.92

241.2

52 56 313.4 72.2

64.6 59.8

124.4 132.0 + 0.94

Below Mean = + 0.76

152.9

56 31 ~~219~~. 221.3 68.4

325.8 80.2

46.0 148.6 + 0.60

144.1

10 58 30 225.5 81.4 + 0.60

18 07 332.8 66.7

10 54 32 39.5 148.1 + 0.61

5 - 2 40

15 51 52

6004.6610

6004.5874

0.0736

Sept. 11, 1902

VI

Below

152.2 69.8

11 07 50 222.0

326.0 79.0

45.0 148.8 +0.69

145.5 80.8 +0.62

09 50 226.3

331.8 65.5

37.3 146.3 +0.65

Above Mean = +0.72

65.8 61.6

12 25 127.4

236.8 74.7

311.5 136.3 +0.85

54.3 74.5 +0.82

11 15 42 138.8

05 47 243.1 64.3

11 11 27 307.4 138.8 +0.80

5 - 2 40

16 08 47 G.M.T.

6004.6724

6004.5870

0.0854

Sept. 11, 1902

VII

Above

64.2

11 22 40 127.4 — 63.2

240.2 — 72.6

312.8 — 135.8 + 0.86

56.4 — + 0.84

25 15 132.5 — 76.1

245.0 — 60.9

305.9 — 137.0 + 0.83

Mean = + 0.73

Below

333.2

28 30 40.7 — 67.5

146.0 — 79.0

225.0 — 146.5 + 0.64

325.1 — + 0.62

11 30 33 45.6 — 80.5

26 58 151.8 — ~~68.0~~ 67.7

11 26 44 219.5 — 148.2 + 0.61

5 - 2 40

16 24 04

6004.6834

6004.5874

0.0960

Sept. 11, 1902

~~VIII~~

Below

332.5 66.3

11 38 40 38.8

145.9 80.0

225.9 146.3 +0.65

326.8 79.1 +0.64

40 15 45.9

150.2 67.5

217.7 146.6 +064

Above

Mean = +0.73

244.2

43 00 307.0 62.8

60.1 73.4

133.5 136.2 +.085

238.7 74.0 +0.82

" 45 00 312.4

6 55 68.8 64.6

11 41 44 127.4 138.6 +0.80

5 - 2 40

16 39 04

6004.6939

6004.5874

0.1065

Sept. 11, 1902

IX

Above
242.0
11 50 06 307.8 66.8
61.5 70.3
131.8 137.1 + 0.83

239.1 + 0.81
51 46 311.7 72.6
61.6 66.5
128.1 139.1 + 0.79

Below Mean = + 0.69
151.4
54 21 221.4 70.0
326.2 79.4
45.6 149. + 0.59

144.7 + 0.57
11 56 10 224.3 79.6
12 23 329.6 71.5
11 53 06 41.1 151.1 + 0.55
5 - 2 40
16 50 26

6004.7017
6004.5874
0.1143

Sept. 11, 1902

I

Below

148.8

12 00 30 222.9 78.1

325.2 81.5

46.7 155.6 +0.47

143.7 +0.43

02 50 230.4 86.7

328.8 73.0

41.8 159.7 +0.39

Above Mean = +0.44

60.6

05 35 132.8 72.2

234.4 82.2

316.6 154.4 +0.49

52.9 84.1 +0.46

12 07 27 137.0

16 22 234.7 73.2

310.9 157.3 +0.43

12 04 06

5 -2 40

17 01 26

6004.7093

6004.5874

0.1219

Sept 11, 1902

~~XI~~

Above
58.5
12 11 35 132.8 74.3
233.0 85.3
318.3 159.6 + 0.39

53.8 + 0.36
13 25 139.0 85.2
237.9 77.0 + 0.34
314.9 162.2 ~~182.2~~ ~~+ = 0.0~~
~~177.8~~
Below ~~Mean~~ = + 0.23
326.2
15 46 47.4 81.2
140.0 92.9
232.9 174.1 + 0.11

321.0 + 0.10
12 17 44 51.1 90.1
18 30 143.1 85.2
12 14 38 228.3 175.3 + 0.09
5 - 2 40
17 11 58

6004.7167
6004.5874
0.1293

Sept. 11, 1902

XII

Below

323.3
12 22 20 48.2 84.9
137.8 97.0
234.8 181.9
178.1 − 0.03

347.6 −0.04
24 30 51.7 94.1
140.8 88.6
229.4 182.7 − 0.05
177.3

Above

mean = − 0.06

234.2
27 30 318.6 84.4
45.8 99.5
145.3 183.9
176.1 − 0.07

238.1
12 29 40 323.5 95.4 −0.07
24 00 51.4 88.4
12 26 00 ~~141.8~~ 183.8
5 − 2 40 139.8 176.2 − 0.07
17 23 20

P.A. 312 < Ven B

6004.7245 H.a. = +4.57

6004.5874 S.T. = 0.14

+0.1371 Dec. +19.2

Sp. Wt. 3.5 B & 4.5 C

Sky cleared during observations.

Sept 11, 1902

BOC1182	Ball 103
23 06 43.4	23 04 0.0

Posted, Plotted, Ledgered (expt U Cepha.)

Sept. 12, 1902 (Friday)

B&C 1182 Ball 103
⟩ 03 58.5 ⟩ 01 00

C's watch = 22 secs fast at 7:02

U Ophiuchi W Ob
Phot 17 9 +1.4 6" cof
18 59
1 50

17 9 ~~+0.4~~ −04
19 47
2 38

Prism got off track two or three so ~~fa~~ abandoned
seems to be some [illegible] up track

W Delphini W Ob.
20 31 +17.8
Phot T. 20 01
0 30
11 30

over

Sept. 12, 1902.

I

Left
50.6 < comp* dis
8 45 00 143.1 92.5
237.8 76.2
314.0 168.7 + 0.21

58.5 + 0.22
49 30 132.5 74.0
228.2 94.2
322.4 168.2 + 0.22

Right Mean * = + 0.14
316.3
52 30 55.4 99.1
148.2 77.0
225.2 176.1 + 0.07

326.3 + 0.06
8 54 50 45.4 79.1
1 50 137.2 98.6
8 50 28^{x} 235.~~4~~8 177.7 + 0.04
5 - 0 00
13 49 28^{+} G.M.T.
6005.5760^{x}
6001.2783^{x}
4.2977

~~Fr~~ Sept. 12, 1902

II

Right

317.2
8 57 37 54.2 97.0
148.4 77.8
226.2 174.8 + 0.10

326.1 + 0.07
9 00 33 44.8 78.7
137.4 99.0
236.4 177.7 + 0.08

Left Mean = + 0.12

49.6
143.3 93.7
05 27 238.7 75.1
313.8 168.8 + 0.21

57.2
9 07 53 135.6 78.4 + 0.18
11 30 229.8 92.9
9 02 52 322.7 171.3 + 0.16
5 -1 00
14 01 52 G.M.T. ~~Fr~~
6005.5846
6001.2783
+ 4.3063

20 31 + 178.
21 01
0 30

Sept 12, 1902

III

Left

~~51.8~~

~~9 32 05 143.0~~

~~23~~

~~3~~

~~1~~

~~2~~

~~3~~

Reject

Abandoned, bar about on meridian and farther obs. not considered neccessary

Right

PA = 168.0 Ver B

Ha = + 0.37

Dec = +17.7

S. T. = 21.13

Sp wh = a 6.5
B 7.5
C 8.1

Sept. 12, 1902.

U Camelop. W.C.K.

Phot R 27 33 +62.3
21 23
6 10
5 30

C's watch used.
£8a
22.4 Grande
9 5 50 ~~19~~
70.4 48.0
199.0 57.8
250.8 99.8 — 1.66

168 — 1.66
67.9 57.1
198.2 49.0
247.2 100.1 — 1.65
RHB Mean = — 1.66
288.1
336.8 48.7
106.2 53.8
160.0 102.5 — 1.60

285.3
10 02.0 338.3 53.0 — 1.67
117.0 108.4 43.8
9 58.5
5 —04 152.2 96.8 — 1.74
14 5A1 — G.M.T.
600 5.624

Sept. 12, 1902

II

ROB
288.7
10 04.5~~30~~ 336.7 48.0 Fix plot I
106.~~8~~4 52.8
159.2 100.8 — 1.64

286.6
337.3 50.7 — 1.65
108.2 49.2
157.4 99.9 — 1.66

LOA Mean = 1.62
198.7
248.0 49.3
15.0 54.2
69.2 103.5 — 157

193.7
10 10.5 248.1 54.4 — 160
10 07.5 16.2 47.1
5 −0.4 63.3 101.5 — 162
15 07.1 M.T.
6005.630+ P.A. 132.5 Ver B Final m = ~~11~~ −1.64
H.A. 5' 38 East
S.T. 21.54
Dec. +62.3

Sept. 12, 1902

o Ceti volts

Phot R 2612 - 3.6
2205
407
753

Right C watch used
116.6 < var dis
10 31.0 155.8 39.2
298.2 30.0
328.2 69.2 - 2.53

117.0 - 2.48
151.2 34.2
295.8 38.4
334.2 72.6 - 2.42
Left mean - - 2.48
25.4
64.5 39.1
207.0 30.1
237.1 69.2 - 2.53

25.8 - 2.49
10 36.2 ~~8~~ 59.2 33.4
7.2 203.3 38.3
10 33.6×
5 - 0.4 241.6 71.7 - 2.45
15 - 33.2× G.M.T.
6005.648×

Sept. 12, 1902

II

Left

22.2
10 38.0 61.9 39.7 ✓
205.6 31.4 ✓
237.0 71.1 — 2.47 ✓

25.2 — 2.52 ✓
55.9 30.7 ✓
201.6 37.2 ✓
238.8 67.9 — 2.58 ✓

Right Mean = — 2.50 ✓

291.4
330.1 38.7
113.8 33.0
146.8 71.7 — 2.45 ✓
294.1 — 2.48 ✓
10 44.0 326.0 31.9 ✓
10 41.0x 111.1 38.3
5 — 0.4 149.4 70.2 — 2.50 ✓
15 40.6+ G.M.T.
6005.653x P.a. 441 V&B. Mean — 2.49 ✓
S.T. 22:30 C.S. 9.19
Ha. -3.44 East magn = 6.70
Dec — 3.6

Sept. 12, 1902

Phot T. X Cygni W.C.L.

19 45 +32.6 9" cap.

22 48

3 03

11 10 Clds.

Comet ~~B~~ b 1902.

26 58 +40.6

22 52

4 06

7 56

11 25 ~~Clouds thick~~. Comet seen through clouds but apparently not yet a very striking object.

11 25 Clouds thicker.

12 05 Impossible to get comet or faint variables. Clouds too thick, and sky growing worse.

B + C. 1182.			B. 394.		
12	10	5.0	12	7	0.0
	11	4.7		8	0.0

L. P. V. except { U Camelop.
~~W Delphini~~

Sept. 15. 1902 (Monday)

C's watch = 4 secs fast at 7:05

~~Reset B&C 118 2~~

B&C 118 2　　Ball 10 3
> 06 09.0　　> 06 00

Reap. Jup IV Phot R. W Obs.
Campbell Red.

Compared with on following side = Sat. I

checked.

	7 44 15		Clds.		
7 44 31	40		seen		
40	49	31.8	212.2	63.6	+ 2.7
45 04	45 13	33.5	244.0	67.0	2.6
16	25	32.5	210.5	65.0	2.7
28	37	33.0	243.0	66.0	2.6
38	47	34.5	210.0	69.0	2.5
51	46 00	39.0	244.5	78.0	2.2
46 07	16	42.3	205.5	84.6	2.1

sky worse

22	31	43.0	247.8	86.0	2.0
35	44	43.1	204.8	86.2	2.0
47	56	42.9	247.9	85.8	2.0
47 01	47 10	43.5	205.0	87.0	2.0
14	23	45.8	248.5	91.6	+ 1.9

Sept. 15, 1902.

7 47 27	7 47	36		48.3	202.7	96.6	+1.7
42		51		51.8	251.0	103.6	1.6
57	48	06		52.8	199.2	105.6	1.5
48 08	48 18	17	52.8	54.4	252.0	108.8	1.4
21		30	54.4	54.4	197.6	108.8	1.4
47		~~#~~56	107.2 53.6	54.8	252.0	109.6	1.4
58	49	07		57.8	197.2	115.6	1.3
49 10	49 18	19	57.8	60.0	255.0	120.0	1.2
23		32	61.2 119.0	61.2	195.0	122.4	1.1
39		48	59.5	61.7	256.2	123.4	1.1
59	50	08		64.3	194.0	128.6	1.0
50 10	50 20	19	64.3	65.9	258.8	131.8	0.9
28		37	68.2 132.5	68.2	192.9	136.4	0.8
43		52	66.2	68.0	261.1	136.0	0.9
	51	14	~~sky worse~~				
51 09		18		66.9	193.1	133.8	0.9
27	51 34	36	66.9	66.8	260.0	133.6	0.9
42		51	66.8 133.7	66.8	193.2	133.6	0.9
52 00	52	09	66.8	67.2	260.0	134.4	0.9
15		24		68.2	192.8	136.4	0.8
34	52 39	43	68.2	69.1	261.0	138.2	0.8
45		54	71.1 139.3	71.1	191.9	142.2	0.7
53 01	53	10	69.6	70.5	263.0	141.0	0.8
17		26		72.3	192.5	144.6	0.7
34	53 44	43	72.3	71.7	264.8	143.4	0.7
57	54	02	70.0 142.3	70.0	193.1	140.0	0.8
54 11		20	71.2	72.4	263.1	144.8	0.7
24		33		71.3	190.7	142.6	+0.7

Sept. 15, 1902.

(24)
7 54 38 7 54 47 71.3 70.9 262.0 141.8 +0.7
55 08 7 54 55 17 72.7 72.7 191.1 145.4 0.7
54 54
28 37 144.0 72.0 71.8 263.8 143.6 0.7
41 50 70.0 192.8 140.0 0.8
55 56 04 70.1 70.1 262.0 140.2 0.8
56 10 7 56 10 19 70.2 140.3 70.2 191.9 140.4 0.8
52 57 01 70.2 69.6 262.1 139.2 0.8
57 09 18 69.6 192.5 139.2 0.8
21 57 33 30 69.6 71.0 262.1 142.0 0.7
43 52 70.7 70.7 191.1 141.4 0.8
58 58 07 140.3 70.2 70.8 261.8 141.6 0.7
58 16 25 70.1 191.0 140.2 0.8
48 57 70.1 68.1 261.1 136.2 0.8
59 33 59 08 59 42 68.1 138.2 69.1 68.1 193.0 136.2 +0.8
53 8 06 8 02 261.1

8 01 08 8 00 48 192.5
9 01 02 70.3 262.8 1
8 00 59 17 67.9 193.1 +0.8
27 69.1 (5) 138.2 261.0
01 52 36 191.0
9 45 70.9 261.9 +0.8
01 43 58 68.2 139.1 69.6 192.8 2
02 08 261.0
19 191.1
02 36 32 70.0 263.1 +0.7 3
9 41 69.8 141.8 192.2
02 27 50 70.9 262.0

Sept. 15, 1902

	8 03	01		192.8	
8 03 22		15	68.2	261.0	4
9			70.9		
		31	139.1	193.1	+0.8
8 03 13		41	69.6	264.0	
		53		192.1	
04 13	04	04	71.4	263.5	
9		21	70.2	192.8	5
04 04			141.6		
		35	70.8	263.0	+0.7
		45		192.5	
05 03		57	69.1	261.8	6
9					
04 54	05	09	69.2	191.9	+0.8
		clds	138.3		
			69.2	261.1	
		21			
05 50		35	69.2	192.6	
9		45	70.4	261.8	7
05 41		56	139.6	191.7	+0.8
	06	06	69.8	262.1	
		23		193.0	
06 45		37	68.6	261.6	
9			71.3		8
06 36		53	139.9	192.6	+0.8
	07	06	70.0	263.9	

Limit of Visibility

07 57	07	33		212.8	
9		53	26.2	239.0	
07 48	08	04	24.9	213.5	+3.2
			51.1		
		18	25.6	238.4	

(Over)

Sept. 15, 1902

Troubled somewhat by a soft thinish cloud of rather uniform density but which caused images to become some fainter at times. Eclipse however thought to be pretty good.

B&C 1182	Ball 103
8 12 08.8	8 12 0.0
13 08.9	8 13 0.0

Chron. corr. throughout equals − 09^s

U Coronae W Obs

Phot T. 15 12 +32.2
20 32
5 20

15 17 +30.8
20 37
5 20

Set on region of U Coronae and put on phot., but too much cloud about together with bright moonlight to make setting satisfactorily

9 00 Abandoned

Sept. 15, 1902

μ Herculis WCb

Phot F 17 14 +33 2
21 10 9.5" cap.
3 : 56

Below C's watch used.
82.5 < var dis

9 31.0 109.3 26.8
259.5 33.2
292.7 60.0 – 2.86

78.7 – 2.86
112.6 33.9
263.8 26.0
289.8 59.9 – 2.86
above
349.8 Mean = – 2.70
21.8 32.5
167.7 34.7
202.4 67.2 – 2.60

346.7 – 2.53
9 40.0 23.1 36.4
9 35.5 168.7 34.9
–.1 203.6 71.4 – 2.46
9 35.4 G.M.T.
600 f.

Sept. 15, 1902

II

Above
348.2
9 41.6 237 35.5 ✓
164.5 39.3 ✓
203.8 74.8 ✓ — 2.35 ✓

348.1 — 2.41 ✓
24.1 36.0 ✓
167.4 35.0 ✓
202.4 76.0 ✓ — 2.47 ✓
Below mean = — 2.59
261.7
291.1 29.4 ✓
79.5 32.1 ✓
111.6 61.5 ✓ — 2.80 ✓

259.2 ✓
9 48.8 291.7 32.5 ✓ — 2.77
10.4 80.0 30.7
9 45.2 110.7 63.2 ✓ — 2.74 ✓
— 1
9 45.1 G.M.T.
600 f.

Sept. 15, 1902.

III

Below
78.7
9 54.0 111.6 32.9
260.8 30.2
291.0 63.1 − 274

79.1 − 276
111.5 32.4
261.6 30.0
291.6 62.4 − 277

Mean = −2.66

Above
348.7
22.6 33.9
167.6 34.8
202.4 68.7 − 255

348.5
10 00.8 23.1 34.6 2.56
9 57.4 168.7 33.4
.1 202.2 68.0 − 257
9 57.3 G.M.T.

Final mean = −2.65

600 f. Night rather poor more or less floating and moonlight strong; all possible care exercised.

FER

Sept. 15, 1902.

S.T. = 21:56
R.A. = 312.0
H.a. = 4.42 West
Dec. = +33.1
Sp. Wt. = { 3.5 B
4.4 C

Phot T. Nova Persei W.Obs

27 24 +43.6
22 04
5 20
6 40

27 21 +44.1
22 05
5 16
6 44

O's watch used.
L.D.a.
163.5 comp. ✱ dis.
10 38.8 210.1
344.9
23.4
166.7
205.8
340.5
27.2
R.A.B.
77.8
113.8
256.4
297.0
73.6
10 47.2 115.7
10 43.0 259.6
5 -0.1 29[illegible]1
15 42.9

46.6 ✓
38.5 ✓
85.1 ✓ + 2.05 ✓
+ 2.04 ✓
39.1 ✓
46.7 ✓
85.8 ✓ + 2.03 ✓
mean = + 2.16 ✓
7.25
9.41
36.0 ✓
40.6 ✓
76.6 ✓ + 2.30 ✓
42.1 ✓ + 2.28 ✓
35.5 ✓
77.6 + 2.26

Sept. 15, 1901

II

R.&B.

77.1
1049.2 112.6   35.5
255.6   42.0
297.6   77.5 + 2.27

75.3   + 2.30
116.7   41.4
259.7   34.4
294.1   75.8 + 2.32

L.O.A.   Mean = + 2.15
    7.25
    9.40
347.5
26.5   39.0
161.4   47.8
209.2   86.8 + 2.00

340.3
10 56.0 28.4   48.1 + 2.00
10 52.2 166.3   38.8
10 52.6 205.1   86.9 + 2.00
5 -0.1   Final Mean = 2.16
15 52.5 P.A. = 76.2 Vu B   C.S. 7.25
H.A. = 4:29 East   Mean Magn = 9.41
N.T. = 22:54
Dec = + 43.8
Stph = { -0.5 a
+0.5 B
+1.1 C

Sept. 15, 1902.

Comp stars for χ Cygni W Obs.
Phot I. ~~9.5~~

19 45 +32.6
2 3 0 0
3 15

Meas. of * y with star r

L & a.

258.6 < star r dis

11 29.6 295.8 37.2

80.5 27.8

108.3 65.0 + 2.68

262.8 + 2.70

290.3 27.5

77.8 36.7

114.5 64.2 + 2.71

R & B. Mean = + 2.58

162.4 8.10

205.2 42.8 10.68

349.8 31.0

20.8 73.8 + 2.38

172.0 + 2.46

11 38.0 201.3 29.3

67.6 344.8 39.6

11 33.8 24.4 68.9 + 2.54

5 −1

16 33.7

Sept. 15, 1902

II

R.W.B.

165.2
11 40.0 206.6 41.4
350.2 30.8
21.0 72.2 + 2.43

+ 2.44

169.9
203.5 33.6
345.8 37.8
23.6 71.4 + 2.46

L.W.A.

Mean = + 2.55

78.3
113.6 35.3
260.9 28.6
289.5 63.9 + 2.72

81.8 + 2.66
11 46.8 110.8 29.0
11 43.4 255.6 38.7
5 - .1 294.3 67.7 + 2.59
16 43.3

Final mean = + 2.56

P.A. - 17.2 C. N. = 8.10
H.a. = 3:57 West Magn = 10.66
Dec = + 3 25
S.T. = 23:44 Led. Plotted, Posted.
11 55 Sky Wt. { 6.5 B
7.5 C

Sept. 16, 1902 (Tuesday)

7 00 Cloudy.

8 30 "

9 00 Sky ~~too thick~~ for work.
Sky growing worse.

Sept. 17, 1902 (Wednesday)

BOC 1182 Ball 103
7 05 16.0 7 05 55

C's watch = 10 secs fast at 7:06

Phot. T. U Ophiuchi W. Ob.
7" cap.

17 9 -0.4
19 23
2 14

~~Left~~
232.3 < radius
7 31 05 320.3
57.8
133.8
238.6
32 01 312.6
52.7
139.2
Right
148.8
36 00 225.4
320.8

mean = -

Reject above partial
7.40 group. Stopped by clouds

7 45 Stars dissappeared entirely before group could be finished

Sept. 17, 1902.

7 45 Stars still invisible

7 52 Stars faintly seen but alternating in brightness.

8 00 Stars invisible

8 10 Sky still too cloudy for variable.

8 22 Clouds thicker stars invisible

8 50 Clouds too thick for U Ophiuchi

Abandoned

T Persei W Ob

26 ~~12~~ 8 + 5 7.2
21 0

5 8
6 52

9 05 Too cloudy here also

9 15 Clouds thick everywhere at the present time, apparently no chance for anything farther

Sept. 22, 1902 (Monday)

BOC 1182 Beal 103
7 06 35.4 7 05 00
07 35.5 7 06 00

C's watch = 33 secs fast at 7:07

U Ophiuchi W Obs.
7" cap 17 9 −0.4 Phot T'
19 59
2 50

Left
248.8 < var. dis.
7 54 45 323.3
73.8
148.2
2528
7 57 18 327.8
68.6 clouds.
15°.
~~Right~~
8 15 Stars growing dim as well as relatively decidedly
Abandoned

Phot T. W Delphini W Obs
20 31 +17 8.
20 38
0 07
8 20 Too cloudy.

Sept. 22, 1902.

Σ 131 wlb

P.A. 140° 25 25 +60.0
Dist. 11" 20 40
Magn. 7.2 - 9.5 4 45
7 15

8 26 Clouds thick double not seen
Below
207.8 < for dis.
8 47 253.2 45.4
33.~~7~~9 31.6
65.5 77.0 — 228
212.2
246.3 34.1 — 2.26
28.0 44.2
72.2 78.3 — 225
Above mean = — 2.16
115.6
162.7 47.1
303.6 33.0
336.6 80.1 — 2.19

117.8
9 01 159.4 41.6 — 2.07
294.8 47.0
341.8 88.6 — 1.95

~~Observations~~ Measurement 1/3 wt.

Sept 22, 1902

~~8:15~~

The double just measured
9 25 fols +59° 248 (3.0) about 8 m. by
the hour circle and is about 27' N.
of it as near as can be estimated
in the fog. Both components look
relatively considerably fainter to the eye
than is indicated in the double star
book, but it seems to be the only
star in this position which can
be found tonight.

The measurements made with
great difficulty on account of
9 27 faintness of companion and fog.

9 35 Fog & cloud so thick everywhere
No chance for anything further

Sept. 23, 1902 (Tuesday)

B&C 1182 ~~Ball 103~~

7 05 53.0 7 04 00

Chr watch = 33 secs. fast at 7:05

R Draconis W.Ob.

16 28 +67.4
19 38
3 10

S Bootis W Ob.

14 17 +54.5
19 52
5 35

7 35 Selection of 14ths on Sept. 8, 1902
7 37 considered pretty good.

m 1 var. + 4 n

12.14
12.10
12.12

B&C 1182 Ball 103

7 39 53.0 7 38 0.0

20 41 −19.3
20 08
0 33
11 17

Sept. 23, 1902

II

Reap. Jup ~~III~~ Phot R. W. Ob.

Compared with δ at I Campbell Rec.

Limit of Visibility L. P. Checked.

	7	59	45	16.7	126.8	
8 00 04			59	15.0	143.5	
−1 53 7 58 11	8	00	14	31.7	127.2	
			36	15.8	142.2	+4.3
8 06 34	8	08	27		seen	
40			33	27.5	122.5	3.1
50			43	34.5	150.0	2.5
07 00			53	39.6	115.5	2.2
07		09	00	41.5	155.1	2.1
14			~~12~~ 07	44.2	113.6	2.0
22			15	48.3	157.8	1.7
30			23	50.7	109.5	1.6
38			31	55.4	160.2	1.4
46			39	60.2	104.8	1.2
54			47	64.3	165.0	1.0
08 01			54	67.6	100.7	0.9
10		10	03	69.5	168.3	0.8
21			14	72.3	98.8	0.7
30			23	74.2	171.1	0.6
38			31	77.3	96.9	0.5
46			39	80.2	174.2	0.4
55			48	83.1	94.0	0.3
09 04			57	82.6	177.1	0.3

Sept. 23, 1902

8 09 12	8 11 05	82.5	94.5	0.3
21	14	86.1	177.0	+0.1
36	29	90.9	90.9	0.0
44	37		181.8	
	47		~~88~~ 87.3	
8 12 03	56	93.6	180.9	
1 53		97.5		
8 10 10	12 06	95.6	86.4	1
	~~11~~ 24		183.9	−0.2
8 12 51	32		89.0	
−1 53	45	95.0	184.0	
8 10 58	56	96.0	88.0	2
	13 10	95.5	184.0	−0.2
	23		89.2	
8 13 42	34	89.8	179.0	
1 53		92.9		
8 11 49	49	182.7	88.0	3
		91.4		−0.1
	14 01		180.9	
	09		88.0	
8 14 24	19	92.2	180.2	
1 53		101.1		
8 12 31	28	193.3	78.9	4
		96.6		−0.3
	39		180.0	
	15 ~~8~~ 10		89.5	
8 15 32	24	91.8	181.3	−0.1
−1 53	37	93.4	88.5	5
8 13 39		92.6		
	57		181.9	
	16 09		89.0	
8 16 26	21	91.9	180.9	−0.1
−1 53		90.8		
8 14 33		91.4		

Sept. 23, 1902.

8 17 29
1 53
8 15 36

8 18 40
−1 53
8 16 47

8 16 30
42
56
17 11
49
18 00
12
27
52
19 10

101.5
91.7
96.6

92.8
90.4
91.6

~~27~~ 89.6
180.4
78.8
180.3
89.0
180.7
88.4
181.2
89.8
180.2

6
7
−0.3
8
−0.1

BDC 1182
8 21 53.0
22 53.0

Ball 103
8 20 00
8 21 00

Before begining eclipse Sats. I & III were on the preceding side of the planet, Sat. III being the outermost of the two. About the end of the observations however Sat. IV appeared on western limb of Jup. coming out from transit. Comp. ~~it~~ Sat. was the middle one of the three, which was Sat. I Seeing pretty good.

Sept. 23, 1902

R Persei Wells.

23 23 +35.3
21 18
6 05
5 55

Selection of 14th magns.

Star No. 1. all right sep 166

9 07 45
08 31

Star No 2 all right sep 165
09 04.5 10 27.5
10 04.0 26.5

Star No 3 fols var by 59.0 secs. & is 5.8′ South of it. = old No 3.

Star No 4 fols var. by 60 secs. & is 7.7′ S of it.

Star No 5. fols var by 54 secs & 1.8′ N. of it

Selection seems pretty good, but possibly on another night a better star can be found for Star No 4.

Sept. 23, 1902

T Persei Wolds

Meas. of Comp. * for T Persei compared with star g 7 26 8 +57.2
the regular 2 1 51 ~~Con~~
sequence + 17
7 ~~x3~~

Rf above
202.8 < star g dis
9 55 — 280.2 77.4
17.7 87.2
104.9 164.6 +0.29

+0.30
199.4
287.6 88.2
24.2 75.6
99.8 163.8 +0.31

LT Below Mean = +0.32
115.7
191.1 75.4
288.2 89.2
17.4 164.6 +0.29

107.8 +0.34
10 01 — 195.1 87.3
9 58.0 295.8 72.8
5 - 0.6 8.6 160.1 +0.38
14 57.4

Sept 23, 1902

Same Again

L ☉ Below

~~115.2~~ 106.2

10 05 ~~199.9~~ 193.8 87.6

293.8 75.4

9.2 163.0 +0.32

115.2 +0.32

~~190.~~ 190.1 74.9

286.0 88.2

14.2 163.1 +0.32

R ☉ Above Mean = +0.35

19.3

104.5 85.2

205.2 74.2

279.4 159.4 +0.39

25.5 +0.38

10 13 97.5 72.0

10 09.0 198.4 87.7

5 −0.6 286.1 159.9 +0.38

15 08.4

6016.

P.a. 328.2 Ver B Final Mean = +0.36

H.a. − 3:33

S.T. 22:42

Dec. +58.1

Sp wh { 7.5 B.
8.2 C.

Sept 23, 1902

Meas. of Light of Comet b 1902 Perrine
Phot Q W Obs.

25 50 +50.0
22 56 6" cap.
3 9 0 0

10 45 Cloud in this region

	Outside	Focus	Inside	
11:13	17.3	14.0	10.2	11 14
		13.0	10.8	11:17
11:16	17.4	12.8	10.8	11:20
11:18	17.0			
	17.2	13.3	10.6	

Comp. * = Upsilon Persei.

Nucleus quite stellar ~~and~~ so much so and so bright that no * star could be obtained through the aperture of ~~the~~ dome to compare it with favorably. The aperture of the large ~~telescope~~ was ~~therefore~~ reduced to 6" Measurements ~~rather~~ difficult ~~throughout~~ even with cap on, on account of ~~the~~ bright stellar ~~al~~ character of ~~the~~ nucleus. In the large ~~telescope~~

Sept. 23, 1902.

there is no well defined coma and no particular indications of a tail, but the surrounding light is diffuse ~~and~~ rather thin and rapidly fading off from the nucleus. In the finder the coma seems to be more pronounced, being ~~several~~ a few minutes of arc in diameter.

χ Cygni Wolb.

Phot T.

Meas of (1) 11th magn with ★ 2

19 45 +32.6
23 55
4 10

Above

11 41 | 315.6 < 2 dis
349.7
136.1
168.1

316.2
347.7
133.2
168.6

Below

224.0
260.3
45.6
77.3

11 48 | 227.0
260.2
42.9
80.0

16 44.5
− 0.6
16 43.9

34.1
32.0
66.1 + 2.64

+2.62

31.5
35.4
66.9 +2.61

Mean = +2.58"
8.10
10.68

36.3
31.7
68.0 + 2.57

33.2 +2.54
37.1
70.3 +2.50

Sept 23, 1902
Same again

Below

223.3
11 50 261.6
45.7
78.1

226.3
258.3
42.7
79.6

Above

133.4
170.1
316.4
348.0

136.3
11 56 167.2
313.8
349.2

11 53
5 - 0.6
16524

38.3
32.4
70.7 + 2.48

+ 2.51

32.0
36.9
68.9 + 254

Mean = + 255
18.10
10.65

36.7
31.9
68.6 + 255

+ 259

30.9
35.4
66.3 + 263

S.T. = 0:25
Pa = 16.4 Van B.
~~H.A.~~ = + 4:36 West
Dec = + 33.4
Sp Wh = { 6.5 B
7.5 C

L. P. P.

This book Ledgered, Plotted, Posted.