

KG

11365

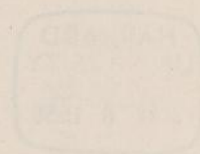
554

KG 11365.554

R. Book 131

March 25, 1902
to

May 17, 1902.



KG 11365.554



March 25, 1902

Cont from previous book.

$$\begin{array}{r} \text{Phot W} \quad \begin{array}{r} \leq 76.2 \\ 5.32 \\ 10.22 \end{array} \quad \text{re-Ob} \\ \hline \end{array}$$

Re 100° Dist 15" Magn 4.1 - 7.5
Below

$$\begin{array}{r} 1005 \quad 48.9 \\ 79.40 \quad \leftarrow \text{br. dis} \quad 30.1 \\ 229.4 \quad 306 \\ \hline 260.0 \quad 60.7 - 284 \\ 48.2 \end{array}$$

$$\begin{array}{r} 80.3 \quad 32.1 - 274 \\ 226.4 \quad 340 \\ 260.4 \quad \hline 66.1 - 264 \end{array}$$

Above mean = - 2.78

$$\begin{array}{r} 318.3 \\ 348.6 \quad 30.3 \\ 138.3 \quad 29.8 \\ 167.3 \quad \hline 59.31 - 289 \end{array}$$

$$\begin{array}{r} 1012 \quad 317.1 \\ 347.9 \quad 30.8 - 283 \\ 136.2 \quad 31.7 \\ 15.14.m.t. 167.9 \quad \hline 62.5 - 277 \end{array}$$

5834. Region rather low. moon bright & images a little blurry. Obs somewhat difficult

March 25, 1902

Phot T. X Camera Wells
9.5 caps used

Left column

10 29.0

84.6

130.7

268.4

306.6

46.1

38.2[✓]84.3[✓] - 207[✓]

888

126.8

263.4

312.1

38.0[✓] - 204[✓]48.7[✓]86.7[✓] - 2.00[✓]Mean = -1.93[✓]

RAB

357.3

40.3

173.1

222.7

42.8[✓]49.6[✓]92.4 - 185[✓]

353.3

44.3

175.3

219.1

51.0[✓] - 1.82[✓]43.8[✓]94.8 - 179[✓]

10 36.4

5.4

10 32.7

5 - 2.6

15 30.1 8 m.T.

5834.

March 25, 1902

Same Again
Right & Below

1039.0
353.6
40.0
170.7
223.4

44.4[✓]
52.7[✓]
97.1[✓] - 1.73[✓]

351.5
42.1[✓]
176.8
220.5

51.1[✓] - 1.76[✓]
43.7[✓]
94.8[✓] - 1.79[✓]

Left & Above

mean - 1.86[✓]

262.3
307.0
81.8
130.6

38.7[✓]
48.8[✓]
87.5[✓] - 1.98[✓]

263.1

- 1.97[✓]

1047.0

1043.0

5-26 126.4

1540.4

5834.

48.4[✓]

39.6[✓]

88.3[✓]

- 1.96[✓]

March 25, 1902

Same Again

III

Left Above

10 52.0

2654

310.3

83.6

128.8

44.9

45.2

90.1 - 1.91

263.0

313.0

86.2

127.1

50.0

40.9

90.9 - 1.89

- 1.90

RAB

174.9

220.8

353.3

40.7

45.9

47.4

93.3

mean = -1.86

- 1.83

11 00.0

1956.0

5-2.6

172.7

221.4

354.5

40.8

48.7

46.1

94.8 - 1.79

- 1.81

Trial mean = -1.88

15 53.49 mt. POA = 199.0 VWB

3834. HA = +23.37 mt

S.T. = ~~+17.8~~ 11.25

Dec. = +17.8

Spwh = $1. \sqrt{a^2 + b^2}$, S.I.C.

March 25, 1902

Fl 3451
21 29 57.0Ball 103
21 03 00

L. P. P.

March 2⁶ 1902 (Wednesday)

BOC 1182
701 17.4

Ball 103
658 00

Phosw $\Sigma 762$
532 - 2.7 wcb.

754

PA 100 Dist 13" mag. 1-7.5

Right Below

448 < 60 dia

735

73.3

28.5 ✓

223.2

254.6

31.4

599 ✓ - 286

42.5

73.7

31.2 ✓

- 286

224.3

28.7

253.0

599 ✓

- 286

Left below

mean = - 286

313.6

342.2

28.6 ✓

132.2

30.7 ✓

162.9

59.3 ✓

- 289

311.0

- 286

342.6

31.6

132.1

28.8

160.9

60.4

- 284

7 41

7 380

5-33

12 347 A.M.T.

583

Mar. 26, 1902

Phot T T Persei wells

$$\begin{array}{r} \text{Above } 8 \ 20 \\ \hline 6 \ 12 \end{array}$$
~~Right~~

170.0 < vards

$$\begin{array}{r} 8 \ 22.0 \ 224.3 \\ 347.3 \\ 47.0 \\ \hline 543. \checkmark \\ 59.9 \checkmark \\ \hline 114.0 \checkmark - 1.33 \checkmark \end{array}$$

$$\begin{array}{r} 168.0 \\ 227.9 \\ 349.3 \\ 44.0 \\ \hline 59.9 \checkmark - 1.32 \checkmark \\ 54.7 \checkmark \\ \hline 114.6 \checkmark - 1.31 \checkmark \end{array}$$

$$\begin{array}{r} \text{Left Below} \\ 84.2 \\ 131.4 \\ 259.1 \\ 315.2 \\ \hline 47.2 \checkmark \\ 56.1 \checkmark \\ \hline 103.3 \checkmark - 1.58 \checkmark \end{array}$$

Mean = -1.40 ✓

$$\begin{array}{r} 8 \ 29.8 \ 78.5 \\ 135.4 \\ \hline 11.8 \ 262.2 \\ 8 \ 25.9 \ 311.3 \\ \hline 5-3.3 \end{array}$$

$$\begin{array}{r} 56.9 \checkmark - 1.54 \checkmark \\ 49.1 \checkmark \\ \hline 106.0 \checkmark - 1.51 \checkmark \end{array}$$

$$\begin{array}{r} 1322.6 \text{ M.T.} \\ 885.0 \end{array}$$

March 26, 1902

Below - Same Again

8 32.6

~~111~~

83.2

133.6

259.3

314.4

50.4

55.1

105.5 - 1.52

498

136.0

262.9

312.0

Above

352.0

44.6

165.9

230.0

56.2

49.1

105.3

-1.52

-1.53

mean = -1.41

52.6

64.1

116.7 - 1.27

347.6

47.6

171.3

224.6

60.0

53.3

113.3

-1.30

-1.34

Final mean = -1.42

8 46.4

8 39.5

5 - 3.3

13 36.2

5835.567

V.A. = 339.5

H.A. = +6.5 West

P.T. = 9:12

Due = 582

Spk Wh. = 25 B 03 5C

March 26, 1902

Phot T. B. Persee w Ob.
 3 0 + 40.6 6 in cap.

$$\begin{array}{r} 912 \\ \hline 612 \end{array}$$

Left

I

9 0100		28.1	189.1	205.5	28.2	16.4	39.6	- 3.79
		9.3	23.3	184.6	14.0	26.0	42.0	- 3.72
0400		28.1	189.1	205.5	28.2	16.4	39.6	- 3.79
		9.3	23.3	184.6	14.0	26.0	42.0	- 3.72
		210.6						
Right		277.7	298.0	100.0	20.3	14.3	34.6	- 4.09
0845		277.7	298.0	100.0	20.3	14.3	34.6	- 4.09
		114.3						
9 1100		281.4	296.4	97.3	15.0	19.3	34.3	- 4.11
		116.6						

mean = - 3.91

Had to continually change focus in above group as focus was hard to obtain, on account of poor seeing. Focus obtained finally in last of above group. Reject above group, as it was affected by change of focus.

March 26, 1902.

* I

Right
 2780
 9 16 00 296.8
 99.7
 114.8

18.8
15.1
 34.9 — 4.07

280.9
 18 10 296.9
 18.0
 116.3

16.0[✓] — 4.09
18.3[✓]
 34.3[✓] — 4.11[✓]

Mean = -404[✓]

Left
 187.8
 21 12 208.6
 8.3
 238

208[✓]
15.5
 36.3[✓] — 398[✓]

190.7
 9 23 40 206.2
 79 02 5.8
 9 19 45 265
 5 -3 17

15.5[✓] — 399[✓]
20.7
 36.2 — 400[✓]

14 16 28 9 Mt.
 5835.5948⁺
 5832.8774
+2.6974⁺
 28673
-0.1699

March 26 1902

H

Left

189.0

9 32 15 207.1

80

25.9

$$\begin{array}{r} 18.1^{\checkmark} \\ 17.9^{\checkmark} \\ \hline 36.0^{\checkmark} \end{array} - 4.00$$

189.6

34 42 206.8

6.2

25.7

Right

99.6

38 06 117.2

279.5

295.7

$$\begin{array}{r} 17.2^{\checkmark} \\ 19.5^{\checkmark} \\ \hline 36.7 \end{array} - 3.98$$

$$\begin{array}{r} - 3.96 \\ \text{mean} = - 4.04^{\checkmark} \end{array}$$

$$\begin{array}{r} 17.6^{\checkmark} \\ 16.2^{\checkmark} \\ \hline 33.8 \end{array} - 4.14^{\checkmark}$$

$$- 4.10^{\checkmark}$$

$$\begin{array}{r} 5^{\checkmark} \\ 14.6^{\checkmark} \\ 19.3^{\checkmark} \\ \hline 34.9 \end{array} - 4.07^{\checkmark}$$

100.0

9 40 34 11 56

25 40 278.6

9 36 25 294.9

5-3 17

14 33 08 G.M.T.

5835.606 3x

5835.897 4

+ 2.708 9

2.867 3

- 0.158 4

March 26, 1902

III

Right

9 48 51 9 7.9
 11 6.8
~~27~~ 9.3
 29 5.5

18.9[✓]
 $\frac{16.2^{\checkmark}}{35.1^{\checkmark}} - 406^{\checkmark}$

- 404[✓]

51 00 99.4
 115.6
 278.5
 298.0

16.2[✓]
 $\frac{19.5^{\checkmark}}{35.7^{\checkmark}} - 402^{\checkmark}$

Left

mean = - 3.94[✓] 6[✓]

55 00 5.2
 25.3
 189.0
 206.8

20.1[✓]
 $\frac{17.8^{\checkmark}}{37.9^{\checkmark}} - 3.89^{\checkmark}$

- 3.86[✓]

9 58 30 7.5
 25.5
 13 21 187.8
 9 53 20⁺ 208.0
 5-3 17

18.0[✓]
 $\frac{20.8^{\checkmark}}{38.8^{\checkmark}} - 3.84^{\checkmark}$

14 50 03 P.M.T.

5835.6181⁺

5832.8974

+ 27207 P.M.T.

28673

- 0.1466

March 26, 1902

IV

Left
A.O.10 08 33 24.4
18 57
20 6.816.4[✓]
21.1[✓]
37.5[✓] - 391[✓]~~6.1~~12 38 25.8
18 8.1
20 7.419.7[✓] - 386[✓]
19.3[✓]
39.0[✓] - 382[✓]

Right

Mean = -392[✓]16 28 278.7
297.5
~~988~~
116.118.8[✓]
17.3[✓]
36.1[✓] - 400[✓]- 398[✓]10 19 36 279.6
297.5
57 15 980
10 14 18 116.8717.8[✓]
18.9[✓]
36.7[✓] - 394[✓]5-317 PA. = ~~239.5~~ 239.5[✓] 123

15-11 01 HA = +7.50

5835.6326 S.T. = 10.51

5832.8974 Dec = +40.5

+27332 Sp. Wh = -1.5B, -0.8C

~~72.8623~~
-0.1341
21 35 530

Ball 103

21 05 00

March 26, 1902

Phot. X ~~8~~ Cancri Wdr.
~~8~~ 48 + 128 95 cas.
 11 08
220

~~220~~ R & B

10 46.0 171.4 ~~Cardis~~
 221.9 50.5
 355.3 44.9
 40.2 95.4 - 1.77 ✓

175.0
 221.8 46.8 - 1.76
 352.7 49.9 ✓
 42.6 96.7 - 1.74 ✓

Lda.

Mean = - 190

88.8
 127.1
 264.1
 310.0

39.3
45.9
 84.2 - 207

83.8

- 204

10 53.4 130.0
 89.4 266.3
 10 49.7 306.9

46.2
40.6
 86.8 - 200

5 - 33

15 46.4 59.4 mt.
 5835.657

March 26, 1902

Same Again

L & A

89.0

1053.4 128.70

264.2

309.1

39.0 ✓

44.9 ✓

83.9 - 208

85.4

- 206

129.7

44.3 ✓

266.7

40.6 ✓

307.3

84.9 - 205

R & B

mean = -1.92

354.2

38.5

44.3 ✓

172.4

50.4 ✓

222.8

94.7 - 179

352.3

1102.0

42.3

500 - 1.75

117.4

145.1

45.9

1258.7 221.0

95.7

- 1.76

5 = 3.3

Final mean = -1.91

1555.4

V.D. = 1990 B

3835.663

H.A. = +2.44

Dec = +17.5

R.T. = 11.32

Sp.W. = 1.52, 1.33, 1.2

see bottom of p 13 for comparison put there by mistake

March 27, 1902 (Thursday)

7 00

Cloudy

7 30

~~sky~~ a little clearer in parts

7 55

pretty cloudy again

8 18

Sky thickly cloudy no stars visible

8 35

Sky thickly cloudy no chance for anything at present time

Alt 3451

Ball 103

21 34 48.0

21 00 00

Bar 1018.2

Ball 103

21 00 54.0

21 02 00

March 28 1902 (Friday)

FD 3451

Ball 103

21 43 45.5

21 05 08

March 30, 1902 (Sunday)

Fl 3451

21 49 38.0

Ball 103

21 03 00

Mar. 31, 1902 (Monday)

B & C 182

7 13 33.5

Bellies

7 08 00

£ 750

5 30 - K4

8 10

2 40

Abandoned,

Phot R

£ 762

Wabs

5 32 - 27

8 17

2 45

P.A. 235 Dist 10"

Magnis. of stars mean 10.0

Comp with other comps at P.A. 70° Dist 40" Magn. 7.0

Above

213.1 (2.0 br. dis.)

7 42

249.1

32.9

68.2

211.6

251.6

31.5

72.5

Below

122.3

163.8

298.8

338.7

122.8

7 58

159.1

300.9

338.9

36.0

35.3

71.3

- 246

40.0

- 2.32

41.0

81.0

- 2.17

Mean = -2.29

41.5

39.9

81.4

- 2.15

36.5

- 2.26

38.0

74.3

- 2.37

Settings somewhat difficult on account of pt. of comp. & pt. of rather close primary

Phot T. 16 34 + 172.9 wells

8 57

7 37

4 23

$81.3 < \text{comp \& dis}$
 $\$ 240$ 133.3 52.0^{\checkmark}
 2591 543^{\checkmark}
 313.4 $\underline{1063^{\checkmark}}$ $+ 1.50v$

$$\begin{array}{r}
 79.5 \\
 135.8 \\
 264.96 \\
 316.8 \\
 \hline
 \text{Right}
 \end{array}$$

 $3\sqrt{-2} \cdot 2$

43.6

166.7

226.7

347.0

8 300

8 270⁺

5-56

13 21.4⁺ g. M. Time

5840. 556x

March 31, 1902

* Same Again *

Right

8 32.0	351.3	55.4 ^v	
	46.7	62.1 ^v	
	165.1 clds	117.5	+
	227.2		
	349.4 clds	60.6 ^v	+
	50.0	5	
	168.9	11	+
	22 . clds. thick		

Left

Mean = +

Sky especially cloudy in above half group. Settings extremely difficult and

over

somewhat uncertain.

As sky became clear in above part of group rejected & new start made

March 31, 1992
Same Again

II

Right

8 58.0

351.4

45.3

165.3

229.1

53.9 ✓

63.8 ✓

117.7 ✓ + 1.24 ✓

347.2

49.6

171.2

224.1

62.4 ✓ + 1.26

53.9 ✓

116.3 ✓ + 1.27 ✓

Left

264.6

311.1

77.2

139.6

46.5 ✓

62.4 ✓

108.9 ✓ + 1.44 ✓

mean = +1.35 ✓

255.9

317.4

82.8

1300

61.5 ✓

47.2 ✓

108.7 ✓ + 1.45 ✓

9 07.0
1250

9 02.5
15-5.6

13 56.9 g. Mt.

1840.081⁺

Mar. 31, 1902

III

Left

9 14.6

262.2

311.6

79.6

135.2

$$\begin{array}{r} 49.4^\vee \\ 55.6^\vee \\ \hline 105.0^\vee \end{array}$$
+ 1.54[✓]

257.2

315.7

82.2

132.2

$$\begin{array}{r} 58.5^\vee \\ 50.0^\vee \\ \hline 108.5^\vee \end{array}$$
+ 1.50[✓]+ 1.45[✓]

Right

171.3

225.3

345.3

48.3

$$\begin{array}{r} 54.0^\vee \\ 63.0^\vee \\ \hline 117.0^\vee \end{array}$$
+ 1.26[✓]Mean = + 1.38[✓]+ 1.26[✓]

9 22.0

166.0

229.2

9 18.3

359.4

5-56

44.6

$$\begin{array}{r} 63.2^\vee \\ 53.2^\vee \\ \hline 116.4^\vee \end{array}$$
+ 1.27[✓]

14 12.7

G.M.T.

5840.592

PA = 321.5 km/s

HA = -6.20

N.T. = 10.10

Dec. = +72.4

St. wh. = 2.5 B & 3.5 C

Final mean = + 1.38

(over)

Mar 31, 1902

Notes on R Ursae Minoris.
 Obs. somewhat difficult throughout
 on account of some light clouds and
 somewhat poor seeing. Clouds rather
 more troublesome in first of three groups
 but extreme care exercised

V Virg.

w Obs.

$$\begin{array}{r}
 13 \ 23 \ -2.3 \\
 10 \ 33 \\
 \hline
 2 \ 50 \\
 9 \ 10 \\
 \hline
 13.26 \\
 13.11 \\
 \hline
 13.18
 \end{array}$$

10 05

u 3.5, 1 w

$$\begin{array}{r}
 13.52 \\
 2.59 \\
 \hline
 16.11 \\
 12.46 \\
 \hline
 3.65
 \end{array}$$

St Virginis

w Obs.

$$\begin{array}{r}
 13 \ 24 \ -55 \\
 10 \ 57 \\
 \hline
 2 \ 27 \\
 9 \ 33 \\
 \hline
 \hline
 \end{array}$$

$$\begin{array}{r}
 (Hag 23) \ 3.5 \ (24) \\
 (24) \ 3.5 \ (28) \\
 \hline
 (H28)
 \end{array}$$

$$13.09 \pm$$

a faint fol. Hag 29 by 2 sec + 1 1/2 South
 call this prov. star x

H 28 5 x

H 28 4 var, var 1 x

Hag. 24 28.0 x
 added beyond u
 to night

10

35

Mar. 31, 1902

St Aggie

2006

20 8 + 572

$$\begin{array}{r} 11 \ 28 \\ 8 \ 40 \\ \hline \end{array}$$

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

star seen

" s faintly seen at intervals

" t thought to be faintly seen at intervals, but not

Var. not certainly seen

s 11 N14.0

1100

Region a little low some light cloud
& seeing somewhat poor.

Some feathery cloud near this region

Ledgered, Plotted, Posted.

April 1, 1902 (Tuesday)

Reset BOC 1182

BOC 1182

652470

Ball 103

65300

B Persei

W Ob.

Phot T.

6 in cap

I

Left

0.5 L vardis.

7 08 25

32.3

31.8 ✓

183.9

27.4 ✓

211.3

59.2 ✓ - 289 ✓

2.4

11 25

30.3

27.9 ✓

- 287 ✓

181.9

32.3 ✓

214.2

60.2 ✓ - 285 ✓

Right

mean = -3.00 ✓

19 15

271.4

301.4

30.0 ✓

97.2

23.4

119.6

52.4 ✓ - 317 ✓

275.5

7 21 05

299.8

24.3 ✓

- 3.14 ✓

50 10

91.8

39.0 ✓

7 12 32

121.8

58.8 ✓

- 3.09 ✓

5 + 0.13

W. a little hurried in the group as clouds were coming.

12 12 45 MT.

Let half of group of images
regret to grow fainter especially in last

5841. 5089

5841. 5014

+ 0.0070

April 1, 1902

regions. Images did ~~not~~ not seem to
relatively good at some times ~~although they did~~

7 25 ~~Cld's thick here neither can nor can't~~ visible
a little but all possible care exercised.
Group considered as about $\frac{1}{2}$ Wright.

7 25 Clouds thick here neither can nor can't are
visible in large telescopes.

Right

IF

7 45 Reject cld's too thick to continue now.
7 48 00 1/2

7 55 Cld's thick here stars invisible in the
telescopes

8 25 ~~Cld's~~ Cld's still thick anywhere: T.D.

V.C. 2390 Ver B

S.T. 9:42

HA. +6:41

Dec. +40.4

Sp. W.L. -2.12 -1.5 B -0.5 C

Telescope has run since
region became the region
must be nearly correct

8 50 Too cloudy at present to do anything

April 2, 1902 (Wednesday)
 BOC 1182 Ball 103
 6 54 56.7 6 55 00

Phot 7 U. A. phi ei W. A. B.

) 00 Clouds

~~Left~~ Above

66.0 \leftarrow var. dia. cldr

7 11 40 148.1 82.1 ✓
 256.6 63.8 ✓
 320.4 145.9 ✓ - 066 ✓

13 50 73.7
 141.3 67.6 ✓ - 064 ✓

247.1 cld. thick 80.0

327.1 147.6 - 062 ✓

Below

Mean = -042 ✓

331.8 cld. thick.

20 50 627 cld. thick 90.9 ✓

1620 stars gone 77.6 ✓

279.6 168.5 - 022 ✓

341.8

- 0.21 ✓

9 26 00

541

42.3 ✓

72 20 148.6

97.2 ✓

7 18 05 245.8

169.5 - 020 ✓

5 40 03

12 18 08

4 M. Time

The above group taken through clouds but all possible care exercised. Group $\frac{1}{2}$ weight.

5842.5126

5842.3533

+ 0.1593

April 2, 1902

II

Below

~~328.2~~

1.3

~~324.7~~

~~7 29 40~~ 6 . ~~Clouds thicker~~ ~~Clouds thicker~~ 771.6 110.3^v
~~1~~ . ~~154.0~~ 95.5^v
~~2~~ . ~~249.5~~ 205.8^v +
~~Clouds thicker, star gone~~ 154.2

3

1

2

- d.

Above

Mean -

8 00 Clouds thicker
 8 18 " "
 8 20 " "
 Throughout time of
 variation it was impossible
 to get anything farther con-
 tinuously.

April 2, 1902

H

Below

147.0

8 32 14249.2

31

Abandoned.

Impossible to get anything
Too cloudy

1 + A + 8:37 West

Pa. 195.6 Vm B

S.T. 8:30

Dec. + 81.2

~~Right~~ S/W 6.5 B 87 A

R. Yew.

W. Ch

6 56 + 22.9

9 52

2 56

X is the last star in regular
list Y, Z added tonight &
their positions can be obtained
from Vazens chart.

X 2 Y
Y 4 Z

1379

9 17

Y 2 var, var 2 Z

April 2, 1902

$$\begin{array}{r}
 R \text{ Lynx} \quad wOb. \\
 6 \ 48 + 559 \\
 10 \ 18 \\
 \hline
 3 \ 30
 \end{array}$$

9 H3

22.5 var 05 t

$$\begin{array}{r}
 13.38 \\
 13.41 \\
 \hline
 13.40
 \end{array}$$

R Aurigae wOb.

$$\begin{array}{r}
 5 \ 3 + 530 \\
 10 \ 43 \\
 \hline
 5 \ 40
 \end{array}$$

9 57

9 2.5 var 2.5 r

$$\begin{array}{r}
 13.07 \\
 13.01 \\
 \hline
 13.04
 \end{array}$$

W-Herschel wOb.

$$\begin{array}{r}
 16 \ 32 + 37.8 \\
 11 \ 02 \\
 \hline
 5 \ 32 \\
 6 \ 28 \\
 \hline
 \hline
 \end{array}$$

10 22

t 3 var 2 u

$$\begin{array}{r}
 13.80 \\
 13.62 \\
 \hline
 13.71
 \end{array}$$

April 2, 1902

I Canon wells

Phot T. & H. + 178

$$\begin{array}{r} 11 \quad 22 \\ \hline 234 \end{array}$$

95 cap.

L.A.

266.3 L. nav dis

10 31.6

306.9

40.6

82.5

48.7

131.2

89.3

-1.93

266.2

-1.93

316.0

49.8

87.3

39.7

127.0

89.5

-1.93

RAB

mean = -1.86

176.4

219.7

43.3

351.1

50.9

42.0

94.2

-1.80

171.1

-1.78

10 38.4

223.9

52.8

15 350

356.7

43.2

5

89.8

96.0

-1.76

10 350

9.71

5842.649

April 3, 1902 (Thursday)

B8C1A7

7 06 01.0

Bael 103

7 06 05

± 762

wob

phot re

5-32-2.7

8 19

2 47

RA 225° Dist 10"

Magnus. 4.0 - 10.0

Comp. with star at RA 70°

Dist 40" Magn. 7.0

Above

205.2

248.9

25.5

60.6

687.0 dis

43.7

35.1

788

- 223

207.1

243.4

26.6

65.8

36.3

- 228

39.2

75.5

- 2.33

Below

Mean = - 2.32

115.4

153.9

295.4

333.3

38.4

37.9

76.3

- 2.31

- 2.36

116.9

152.1

295.8

333.6

35.2

37.8

73.0

- 2.41

7 43.

7 38

5 38

12 38

58 43.

Observations difficult from fact that the ft. companion is close to bright primary. Also fainter star is a

April 3, 1902
R Bootis

WLB

$$\begin{array}{r} 14 \ 26 \quad + 27.3 \\ 9 \ 10 \\ \hline 5 \ 16 \\ 6 \ 44 \\ \hline \end{array}$$

f 22

9 4.5, 12

$$\begin{array}{r} 11.73 \\ 11.63 \\ \hline 11.68 \end{array}$$

R Coronae

WLB

$$\begin{array}{r} 11 \ 53 \quad + 20.2 \\ 9 \ 29 \\ \hline 2 \ 30 \\ 9 \ 30 \\ \hline \end{array}$$

f 45

w 3 var 0.5x 13.68

Phot R Coronae WLB

$$15 \ 42 \quad + 28.8$$

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

$$5 \ 30$$

$$6 \ 30$$

T. Tinscap

(over)

April 3, 1902

Phot. T. R. Coronae W. O. L.

~~#8~~

7" cap used.

Left Comp. \times = comp. \div f.

260.9 (radius)

9 18.7

315.8

54.9^v

84.9

44.0^v

128.9

98.9 - 1.68^v

268.5

307.8

806

1340

Right

173.3

221.9

347.1

50.0

39.3^v - 1.76^v53.4^v92.7^v-1.84^vMean = -1.54^v48.6^v62.9^v111.5^v - 1.38^v

165.1

226.1

352.8

43.5

61.0^v - 1.38^v50.7^v111.7^v - 1.38^v

9 27.3

46.0

9 23.0

5

14 23.0^x 9 MT.

5843.599

April 3, 1902

Same Again

Right

9.30.0
173.4
218.6
344.6
49.3

45.2^v
64.7^v
109.9^v - 1.42^v

163.6
228.4
354.1
44.1

64.8^v - 1.36^v
50.0
114.8 - 1.31

Left

86.0
128.3
259.4
314.3

42.3
54.9^v
97.2^v - 1.73^v
- 1.72^v

Mean = -1.54^v

9.40.0

78.0
134.4
267.5
309.4

56.4
41.9
98.3^v - 1.70^v

9.30.0

14.30.0

0843.60

9 MT.

P.A. = 152.0 Ver B

HA = - 5.58 East

N.T. = 10.45

Dec = + 28.6

Spk = 3.5 B to 4.5 C

Final Mean = -1.56

C.N. = 7.45

5.89

April 3, 1902

Phot. X Cancri well
 8 48 95 cap.
 11 13
 2 25

L & Abbe

10 19.4 266.5 < var. dis.
 313.8 47.3
 85.3 40.0
 12 4.3 87.3 - 199

268.5 - 1.96
 308.7 40.2
 80.1 49.6
 1 29.7 89.6 - 192
 R.D.B. Mean = -1.88

~~10~~ 177.7
 219.4 41.7
 350.5 54.5
 45.0 96.2 - 1.75

10 171.4
 28.0 223.8 52.4 - 1.74
 47.4 355.1 44.2
 10 23.7 39.3 96.6 - 1.74
 5 23.7
 10 23.7
 5840.642

April 3, 1902

Same Again

RAB

$$\begin{array}{r}
 176.5 \\
 219.8 \text{ cld.} \\
 351.2 \\
 43.2 \\
 \hline
 10 30.0
 \end{array}
 \begin{array}{r}
 43.3^{\vee} \\
 52.0^{\vee} \\
 \hline
 95.3^{\vee} - 177^{\vee}
 \end{array}$$

$$\begin{array}{r}
 171.3 \text{ cld.} \\
 225.0 \\
 356.3 \\
 39.1 \\
 \hline
 10 30.0
 \end{array}
 \begin{array}{r}
 53.7^{\vee} \\
 42.8^{\vee} \\
 \hline
 96.5^{\vee} - 176^{\vee}
 \end{array}$$

Left & Above

Mean = -1.87^v

$$\begin{array}{r}
 86.3 \text{ cld.} \\
 129.5 \\
 268.2 \\
 309.4 \\
 \hline
 10 30.0
 \end{array}
 \begin{array}{r}
 43.2^{\vee} \\
 43.2^{\vee} \\
 \hline
 86.4^{\vee} - 2.01^{\vee}
 \end{array}$$

$$\begin{array}{r}
 81.2 \\
 129.8 \\
 266.6 \\
 306.6 \\
 \hline
 10 46.0
 \end{array}
 \begin{array}{r}
 48.6^{\vee} \\
 40.0^{\vee} \\
 \hline
 88.6^{\vee} - 195^{\vee}
 \end{array}$$

$$\begin{array}{r}
 5 \\
 10 38.0 \\
 5843.651^{\vee}
 \end{array}
 \begin{array}{l}
 \text{PA.} = 18.5^{\vee} \text{ Ver } B \\
 \text{P.T.} = 11.53 \\
 \text{Ha.} = +3.06 \text{ West} \\
 \text{Dec.} = +17.6 \\
 \text{Sp. Vel.} = 150, 25 B \text{ } 3.1 C
 \end{array}
 \begin{array}{l}
 \text{Final Mean} = -1.86^{\vee}
 \end{array}$$

April 3, 1902
 3 Lyrae
 18 HV + 33.2
 12 10
 6 35
 5 25

Examined var. with photometer T.

11 25

Ledgered
 Plotted
 Posted

April 4, 1902 (Friday)

BOC 1182

Ball 63

64807.5

J.D. 544

64808

Phot 77 B. Persci well

30

740.2

9.5 cap used.

6-50

Cloudy

820

320

7-30

Still cloudy

Clear at 7:45

Left

8.74

- word dis

(Reserve)

5110

253

17.9

1888

17.4

206.2

35.3

- 14.04

6.6

5410

25.9

19.3

188.6

19.3

207.9

38.6

- 3.94

Right

Mean = - 4.01

278.8

5630

297.2

18.4

99.6

16.0

115.6

34.4

- 14.10

280.4

- 4.08

75850

294.8

14.4

2040 98.7

20.7

75570

118.8

30.1

- 4.06

5007

112.4

120503 Gmt. 9.5 cap used & obs. made through
 varying cloud. obs. ^{not over} weight.
 5444.3687
 + 0.1695
 Repeat above

April 4, 1902
6 in case put on.

II

Right

8 11 18

277.3
297.8
100.3
115.7

20.3[✓]
15.4[✓]
35.7 - 402[✓]

14 00

279.7
296.8
98.3
116.9
Left
188.8

17.1[✓] - 402[✓]
18.6[✓]
35.7 - 402[✓]

Mean = -13.97

18 02

208.8
7.2
23.4

20.0[✓]
16.2[✓]
36.2 - 399[✓]

-39.2[✓]

8 20 40

190.6
206.4

17.8[✓]
20.7[✓]

38.5[✓] - 395[✓]

24 00

5.8

8 16 00

26.5

5 - 0 07

13 15 53

4 M. Time

5844.5327

5844.3687

+0.1840

April 4, 1902

III

Left

188.3

8 26 25 209.3

17.8

24.7

$$\begin{array}{r} 21.0^{\vee} \\ 16.9^{\vee} \\ \hline 37.9^{\vee} \end{array}$$
- 389[✓]

188.8

29 20 206.3

5.4

26.0

$$\begin{array}{r} 17.5^{\vee} \\ 20.6^{\vee} \\ \hline 38.1^{\vee} \end{array}$$
- 388[✓]- 388[✓]

Mean = -4.00

Right

97.0

3 2 30 116.6 cld.

280.6

29.58

$$\begin{array}{r} 19.6^{\vee} \\ 15.2^{\vee} \\ \hline 34.8^{\vee} \end{array}$$
- 4.08[✓]- 4.12[✓]

99.9 cld.

8 36 46 115.7

5 01 248.8

8 31 15* 296.3

5 0 7

15.8[✓]17.5[✓]33.3[✓]- 4.17[✓]133108⁺ g. m. time58445633⁺3687⁺+ 0.1946⁺

April 4, 1902.

~~IV~~

Right

99.5
 8 4330 116.5
 280.0
 295.4

17.0
 15.4
 32.4 - 4.23

- 4.20

99.9
 46 05 114.2
 279.3
 298.5
 Left

14.3
 19.2
 33.5 - 4.16

Mean = - ~~4.20~~ 4.16

5000 24.6
 189.3
 205.8

17.7
 16.5
 34.2 - 4.11

8 5250 9.1
 24.3

- 4.16

192 25 189.8

8 48 06 206.8

37 - 0

13 4 2.073

5844.375

5844.368

0.207

Region getting quite low. ^{good} more than in two preceding groups.

Images poor & varying. Group should have not more than 1/4 wt. & probably should be rejected. Reject above. Region too low & conditions too poor to continue on this star.

April 4, 1902.

P.A. 58.4

S.T. 10.18

Dec +40.3

HA. 17:18 West

Sp.W. -2.32 - 15.38 - 0.5C

Phot W $\Sigma 653$ P.W.C. 62.
 $\begin{array}{r} 57 \\ 1043 \\ \hline 536 \end{array} + 32.6$

P.A. 230° Dist 15" Magns. = 5.0 - 7.4
 R.O.A.

~~22.2 Lbr. dis~~~~945 51.1 clds.~~~~201.2 clds. thicker~~~~232.1~~~~20.4~~~~51.0~~~~198.6~~~~228.6 clds. thicker~~~~L.O.B.~~

957.0 290.4 haze thick.

321.4 hazier.

108.8

140.2

289.0

10-00.0 319.3

9-50.5 109.2

5-0.1 136.8

14 52.4 977.7

5844

28.9^v

30.9

59.8 - 287

30.6^v - 28630.0^v

60.6 - 284

31.0^v31.4^v62.4^v - 277^v- 286^v30.3^v27.6^v57.9^v - 294

April 4, 1902
double count.

R.9A.

19 ~~48.1~~

10 03.0

226.1

28.0[✓]

16.1

30.6[✓]

46.6 cld.

58.6[✓]

- 291[✓]

195.5 cld. thick

- 2.88[✓]

10 12.0

226.2

30.7[✓]

12.0

16.0

29.6[✓]

10 03.

45.6

60.3[✓]

- 2.85[✓]

5

15 03.4 MT

Mean = -2.87

SP44

Two new sets taken above to replace two first sets taken in previous group as sky became somewhat clearer. The last half of 1st group & the last two sets taken compare group wanted. Obs. made through somewhat variable haze, but group retained sky somewhat clearer.

Σ 7224

W. 062

Phot W

8 19 +24.9

11 29

3 10

10 30 Clouds too thick.

Apr 4 1902

 $\frac{1}{2}$ 1223

W-106

Phot 26R

8 19 +27.4

$$\begin{array}{r} 11 \ 3 \ 1 \\ \hline 3 \ 20 \end{array}$$
PA = 40° Dist = 4.5 Magn = 6.0-6.1

Components apparently nearly equal
in brightness & from closeness it
is difficult which is the brighter
South preceding seems to be a little
brighter of the two & so assumed.
Left & Albor

268.7 < App. dis

10 44

350.4

81.7

82.0

17

old thicker

2

3

Reject above settings

10 55

R & B

Impossible to finish.

Ledgered, Plotted, Posted.

April 8, 1902 (Tuesday)

BDC 1182
21 09 27.0

Ball 103
21 09 00

April 9, 1902 (Wednesday)

138C182

21 01 59.6

Ball 103

21 01 00

April 10, 1902 (Thursday)

B+C 1182

21 05.57.8

Ball 103

21 04.05

April 11, 1902

(Friday)

1800 1182

7 20 07.6

Ball 103

7 1800

Phot $\Sigma 10'$
 4 21 415.6
 8 58
 4 34

w Ob.

~~Soth Southern~~ ^{for prec.} ~~Cowf~~ seems a
 little brighter & assumed as so
 in measurements
 Pa 3400° Dist 5.5 mag 4.7-4.9

Olds thick here

Below

179.7 < br. dis

215.3

7

7 41

7 00

All cloudy no chance for any
 thing at present time.

Experiments with new electric
 light for Phot X.

~~Olds~~

~~Butterflies~~ The two cells of battery
 put in parallel & rheostat out,
 and light seems too be very
 good being both white and bright
 and giving in the field of view two stars
 which are very well seen on a back-
 ground of somewhat bright cloudy

April 11, 1902.

sky with moon near.

The light seems to be much better than the last one tried a few months ago, and probably as full as good if not better than any as yet tried.

9 10 Clouds everywhere no stars visible apparently no chance for any thing more

B & C 1182
21 12 22.2

Ball 103
21 10 00

April 14, 1902 (Monday)

B+C 1182

7 04 36.7

Bull 103

7 02 00

Photo

$\Sigma 762$

W-C 1/2

$\sqrt{32} = 27$

above

9.06

3 34

8 00

3.6

37.7

comp + dis 8 = 7.

182.6

341

218.1

355

69.6 +

4.2

37.8

182.7

218.5

33.6 +

35.8

69.4 +

Below

272.8

31.3.2

mean = +

~~Reject impossible to finish group~~

40.4

2

3

8

Reject, moon light
poor seeing, light cloud over
region & low altitude prevent
completion of group

April 14, 1902

V Virginis 2006.

$$\begin{array}{r}
 13 \quad 23 \quad -2.3 \\
 10 \quad 07 \\
 \hline
 3 \quad 16 \\
 8 \quad 44 \\
 \hline
 \hline
 \end{array}$$

Region abandoned; impossible
to see faint star on account
of haze & moonlight

R Vir. Min. 2006

$$\begin{array}{r}
 \text{Phot.} \quad 16 \quad 34 \quad +72.9 \\
 \text{Left} \quad 10 \quad 44 \\
 \hline
 \text{above} \quad 5 \quad 50
 \end{array}$$

$$263.2 \text{ } \angle \text{comp. } \times \text{ dia } \quad 6 \quad 10$$

$$309.2 \quad 46.0^{\vee}$$

$$78.6 \quad 56.5^{\vee}$$

$$\underline{135.1} \quad 1025^{\vee} + 1.60^{\vee}$$

$$258.0$$

$$315.1 \quad 57.1^{\vee} + 1.60^{\vee}$$

$$* 84.0 \quad 45.8^{\vee}$$

$$\underline{129.8} \quad 102.9^{\vee} + 1.59^{\vee}$$

$$\text{Right} \quad \text{Mean} = +1.48^{\vee}$$

$$171.6 \quad 51.3^{\vee}$$

$$222.9 \quad 62.6^{\vee}$$

$$347.4 \quad 113.9^{\vee} + 1.33^{\vee}$$

$$\underline{50.0}$$

$$166.2 \quad 61.2^{\vee} + 1.37^{\vee}$$

$$227.4 \quad 49.6^{\vee}$$

$$358.1 \quad 110.8^{\vee} + 1.40^{\vee}$$

$$42.7$$

$$126 \quad 164 \quad 4 \text{ m. } 1054.594$$

April 14, 1902

Same Again

Right

9 25.0 225.1
343.6
49.3

53.2
63.7
116.9 + 1.26

165.9
229.3
351.7
47.4

63.4 + 1.27
52.7
116.1 + 1.28

Left

82.6
132.8
259.9
315.2

50.2
55.8
105.3 + 1.53

Mean = + 1.44

9 35.0
5 - 2.6
14 27.4

82.2
134.0
263.4
310.7

51.8
47.0
98.8 + 1.69

+ 1.61

G.M. Time

Final mean = + 1.46

PA = 140.8 per B

HA = - 5.08

Dec. = + 72.4

S.T. = 11:23

Sp. W. = 2.583 to 3.5 C

Apr. 14, 1902

Phot T. X Cancri Wellb

95 cap

8 16.2 +17.9

11 48

3 07

Above

3 00

264.9 var. dis ✓

10 11.4 311.3

46.4 ✓

86.2

42.2 ✓

128.4

88.6 - 1.95 ✓

267.8

- 1.93 ✓

309.8

42.0

82.2

48.0 ✓

130.2

90.0 - 1.91 ✓

R Below

Mean - 1.82 ✓

169.9

221.7

51.8

356.5

44.7 ✓

41.2

96.5 - 1.74 ✓

174.3

- 1.70 ✓

221.3

47.0

350.2

53.0

413.2

100.0 - 1.66 ✓

10 19.4

10 15.4

5 - 2.6

15 12.8

5854.634

April 14, 1902
Same Again

Right Below

10 21.6 171.3
222.8 51.5 ✓
351.9 47.9 ✓
39.8 99.4 ✓ - 167 ✓

174.7 45.0 ✓ - 169 ✓
219.7 52.7 ✓
351.5 97.7 - 171 ✓
44.2

Loabore

Mean - 1.80 ✓

86.7
129.5 42.8
263.8 47.2 ✓
311.0 90.0 - 1.91 ✓

84.6

-1.92 ✓

10 28.4
100

130.7

46.1
43.2 ✓

10 25.0

265.8

89.3 * - 1.93 ✓

5-2.6

15 22.4

P.A. 14.0 VnB

Final Mean - 1.81

5854.640

RT = 12.43

HA = +3.25 West

Dec = +17.7

SpW = 1.5A 2VB, 3/C,

April 14, 1902.

Sygm W-Ob
20 + 57.2

12 22

7 46
14 14

11 05

Star ~~seen~~ star ~~seen~~
star \pm very faintly seen at
intervals Var. not certainly seen.
 ± 1 14.4

Power 270 used; adjacent 9th mag
star put behind wax on eyepiece
Region of variable carefully scrutinized
& sky quite clear. Moon nearly
nearly at $\frac{1}{4}$ but low in west.
Var. long in N.E. estimate considered
critical

Ledgered, Plotted, Potted

BOC182
710 52.5

April 15, 1902 (Tuesday)

Ball 103
7 08 00

Phot R

± 762

WCObs.

5 32 - 2.7

9 02

~~4~~ 30

✓

PA. 125° Dist 10"

Magn. 4.0 - 10.0

Compared with companion at PA. 70° Dist ~~2~~ 40"

180.7 Magn = 7.0

7 32

219.6

comp. stars dis

1.2

44.5

38.9^v

43.3^v

~~82.2~~^v

+ 213^v

144.6

223.6

356.7

30.2

49.0^v

33.5^v

82.5^v

+ 212^v

+ 212^v

87.1

119.8

261.5

299.9

32.7^v

38.4^v

71.1^v

Mean = + 2.26^v

+ 247^v

81.0

119.9

261.1

297.2

38.9^v

36.1^v

75.0^v

+ 241^v

+ 235^v

7 40

7 36.0

5 - 2.9

12 33.1

April 15, 1902

S¹ Cassiof

$$\begin{array}{r}
 100 + 71.8 \\
 1000 \\
 \hline
 900
 \end{array}$$

Region of S¹ Cass. examined for
~~14th~~ Magn. being quite a distance from
 moon as well as another region
 not quite so far distant from moon.
 Utterly impossible to do anything
 with ~~14th~~ Magn. tonight on account
 of bright moonlight & a little haze.

V Virgins

WOK

$$\begin{array}{r}
 1323 - 2.3 \\
 1029 \\
 \hline
 254 \\
 906 \\
 \hline
 \hline
 \end{array}$$

9 00

Moon too bright & far too fl.
 to do anything with variable to
 night.

S¹ Virgins

1324 - 1.5

$$\begin{array}{r}
 1048 \\
 236 \\
 \hline
 \hline
 \end{array}$$

9 24

9 24 Hag 28 2 var var 4 X

April 15, 1902

Phot $\frac{1}{2}$ Canon Wells
9.5 cas

P.H.F. + 17.8

$$\begin{array}{r} 11 \ 25 \\ \hline 237 \end{array}$$

280.

263.8 < vards

$$\begin{array}{r} 9 \ 50.4 \ 310.3 \\ \quad \quad 86.6 \\ \quad \quad 127.8 \\ \hline 46.5 \\ \hline 41.2 \\ \hline 87.7 \end{array}$$

- 1.98

267.2

307.5

228

1308

R.D.B

171.7

222.7

352.1

41.2

40.3

48.0

88.3

- 1.97

- 1.96

mean = - 1.84

51.0

46.1

97.1

- 1.73

175.4

- 1.70

58.0 220.0

44.6

9 54.2 351.8

54.5

5 - 2.9 46.3

99.1

- 1.68

14 51.3 4 M.T.

5855.619^x

April 15, 1902

Same Again

RTR

171.3

223.7

355.8

420

~~174.4~~

174.4

220.5

345.8

43.9

52.4^v46.2^v98.6^v - 1.691.68^v46.1^v53.1^v
99.2^v - 1.68^v

LRA

85.8

129.2

264.4

380.4

43.4^v46.0^v89.4^v - 1.93

84.8

- 1.94

10 07.0 131.0

10 03.5 266.2

5 2.9 309.2

15 00.6 9.2

5855.626 * 1.5 = 18.5

Aer + 3.4 West

Dec = 11.54

S.T. = +17.6

SpWt = 1.5A 2.5B, 3.1C

46.2^v43.0^v89.2^v - 1.94

Final mean = -1.82

April 15, 1902.

Brooks' Suspected Comet.

L. ob.

14 30

$$\begin{array}{r}
 22 \ 56 \quad +29.2 \\
 \underline{16 \ 10} \\
 -6 \ 46 \\
 \underline{5 \ 14} \\
 22 \ 56 \\
 \underline{16 \ 40} \\
 -6 \ 16 \\
 \underline{5 \ 44} \\
 22 \ 56 \\
 \underline{17 \ 30} \\
 -5 \ 26 \\
 \underline{6 \ 34} \\
 22 \ 56 \\
 \underline{17 \ 40} \\
 \underline{5 \ 16} \\
 6 \ 44
 \end{array}$$

16 15

Comet not found.

April 16, 1902 (Wednesday)

BCC 1182

7 1004.5

Phot R

$\pm 24'$

13 4 +39.2

9 8

3 56

8 04

P.A. 120° Dist. $5' \pm$ Magn. 15.5 ^{5.1}
 Prec. & northern assumed to be the
 brighter provisionally although in the
 sky it is difficult to tell which is the
 brighter.

Below B.
~~334.6~~ L pr. & N dis

46.6

51.2

147.2

225.2

332.0

45.9

151.7 cld

231.3

324.2

322.5

50.1

138.7

239.2

312.4

58.1

142.6

232.7

72.0

96.0

106.8

202.8

157.2

+0.43

105.8

+0.40

92.9

198.7

+0.36

161.3

Mean = +0.31

87.6

100.5

188.1

+0.15

171.9

105.7

+0.22

89.1

194.8

+0.28

April 16, 1902.

Proceeding double measured through
some clouds. By previous measurements
the S. Hol. component turns out to be a little br.

Magns estimated throughly $\frac{1}{2}$ 25 W C 15.

Photo R 13 8 +68.0

9 36

3 32

8 28

PA, 300° Dist 3' ± Magn. 5.9 - 6.2

238.2

< S. Hol. br. dis

309.2

78.0

54.6

68.8

123.4

146.8

- 0.64

234.7

302.9 cloudier

68.2

- 0.88

46.6

83.0

129.6

151.2

- 0.52

Mean = - 0.49

135.9

221.8

85.9

320.0

72.8

32.8

158.7

- 0.41

142.4

216.7

74.3

- 0.40

315.2

85.3

40.4

159.6

- 0.39

April 16, 1902.

Phot R Σ 3124 W Obe.
 $\begin{array}{r} 144 \quad 12 \quad +52.0 \\ 10 \quad 12 \\ \hline 44 \quad 00 \\ 2 \quad 00 \end{array}$ ✓

PA = 30° Dist = $0.6 \pm$ Magn. = $4.5 - 7.6$

A & B conjointly compared with companion 0.6 away.

Principal component not seen to be certainly double in this sky although it seems possibly a little elongated.

8 38

~~3480~~ < br. dia

~~381.0~~

~~1442~~ old thicker

~~1442~~

3 157.4

3 181.1

1 336.1

1 360.3

64.3

90.4

245.7

269.5

63.1

84.2

241.4

266.1

266.1

266.1

266.1

266.1

266.1

157.4

180.5

339.0

361.4

23.1

22.4

23.7

24.2

47.9

Mean = 3.36

26.1

23.8

49.9

3.22

24.1

24.7

49.9

3.33

3.30

3.33

3.33

3.33

April 16, 1902

Phot R	Σ 1888	WObz
14 46 + 19.6	14 46 + 19.6	
11 03	10 56	
3 43	3 50	
8 17	8 10	

9 18

Abandoned.

Phot R.	Σ 1970	WObz
	15 40 + N.A.	
	11 10	
	4 30	

P.A. 265° Dist 0.5 ± Magn. 3.0 - 9.2

Abandoned too faint in haze & moonlight

Phot R.	Σ 2032	WObz
	16 11 + 34.1	
	11 24	
	4 47	
	7 13	

There is a star about in the position of δ Coronae with the following P.A. & Dist.: P.A. 210° Dist about 4" Magn 5.2-6.3
~~The faint companion~~ There seems to be a companion (over) which is quite faint in this sky at approximately P.A. 80° Dist. 7 or 8" from.

April 16, 1901.

it is impossible however to measure
faint companion tonight
Will try & measure bright components
14" apart.

Light cloudy & moonlight.

See prev. page. ✓

9 54 85.5 ✓ b. dis
148.8 63.3 ✓
265.8 63.4 ✓
328.2 125.7 - 1.07 ✓

869 ✓ - 1.08
148.4 61.5 ✓
264.4 63.8 ✓
328.2 125.3 - 1.08 ✓

Mean = - 1.09

357.4
59.7 62.3 ✓
174.2 64.8 ✓
239.0 127.1 - 1.04 ✓

10 04 357.2 0 - 1.10
9 59 59.2 62.4
176.9 60.0
236.9 122.0 - 1.15

Seeing a little blurry at times obs. made
with much care images do not
quite reverse over each other although
nearly so. Eye piece with double plane

April 16, 1902

convex lenses close together and micol
between them and eye used in meas.
on preceding star. This micol with eye-
piece combined is about an inch long

Phot R S Corvi wellb.

PA 210° 12 25 - 16.0 ✓
Dist 0.4 ± $\frac{12}{11} \frac{10}{25}$

Magn. 3.0 - 8.9

10.31 329.5
341.3 < br. dis 11.8
148.6 10.3
158.9 22.1 - 5.07 ✓

327.5
338.1 10.6 ✓ - 5.10 ✓
146.3 10.8 ✓
157.1 21.4 - 5.14 ✓
Mean = - 5.07 ✓

235.7
246.6 10.9 ✓
54.5 11.1 ✓
65.6 22.0 - 5.02 ✓

10-41 235.3 - 5.04 ✓
244.5 12.2
55.8 10.6 ✓
66.4 22.8 - 5.00

Sky little hazy, moon rather bright, observations
somewhat difficult.

April 16, 1902

S Libiae

W. Ob.

14 52

-8.0

12 32

2 20

10 55 Region examined but as sky is somewhat cloudy will not make a measurement.

Ledgered, Plotted, Posted to here.

April 17, 1902 (Thursday)

~~to 19~~
B00 1182
7 06 19.4

Ball 103
7 03 00

Phot

$\Sigma 1596$

WCB

11 58 + 22.2

9 12
2 46

9 14

Observed seeing to unsteady.

Phot R

$\Sigma 24'$

WCB

13 4 + 39.2

9 17

3 47

8 13

P.A. 300° Dist 5' Magn 5.5 - 5.7.

The star assumed as the brighter tonight is the one assumed as the slightly fainter last night. The clouds & haze gave trouble as regards to critical estimate last night while tonight sky is clearer.

(over)

April 17, 1902

Below. B.

7 32

202.6 < S. fol. 862. dis

273.9 71.3

19.7 89.1 sec prev. page

99.8 151.4 - 0.55

202.5

-0.56

277.8

75.3

22.4

75.0

97.4

150.3 - 0.57

Above. A. Mean - 0.50

112.7

180.7

288.3

368.8

740

805

154.5 - 0.49

110.6

-0.45

187.4

76.8

287.7

81.5

369.2

158.3 - 0.41

7 44

7.38.0

5.3.3

12.34.7

Measurements rather difficult on account of distance apart of stars in photometer, as well as east wind making rather poor seeing. One South. Pol. star is somewhat red, while others is white which also increases the difficulty of comparison.

April 17, 1902

Σ 1560 Wclb

$$\begin{array}{r}
 10 \ 32 \ -1.7 \\
 9 \ 40 \\
 \hline
 0 \ 47 \\
 11 \ 13 \\
 \hline
 \end{array}$$

Phot R

$$\begin{array}{r}
 \Sigma \ 3174 \quad Wclb \\
 14 \ 12 \ +52 \\
 10 \ 02 \\
 \hline
 4 \ 10
 \end{array}$$

~~P.A. 240° Dist 0.5± Magn. 4.7 - 7.5~~
P.A. 30° Dist 0.6± Magn. = 4.7 - 7.7

Phot T.

$$\begin{array}{r}
 Wclb \\
 7 \ 59 \ +22.0 \\
 10 \ 24 \\
 \hline
 2 \ 25
 \end{array}$$

A 45° clouds

$$\begin{array}{r}
 7.47 \ +20.2 \\
 11 \ 12 \\
 \hline
 3 \ 25
 \end{array}$$

(over)

April 17, 1902

Phot T. M. Gammoun w. Oe.

$$\text{comp}^* = \text{Im} + 22^{\circ} \text{ 1808 (22)}$$

Above

$$\begin{array}{r}
 9 \quad 37.6 \quad 269.0 < \text{comp}^* \text{ dia} \\
 310.6 \quad 41.6 \\
 90.0 \quad 34.8 \\
 124.8 \quad 76.4 \quad + 2.30
 \end{array}$$

$$269.3 \quad + 226$$

$$305.2$$

$$85.1$$

$$128.4$$

$$35.9 \checkmark$$

$$43.3 \checkmark$$

$$79.2 \checkmark$$

$$+ 2.22$$

Below

$$\text{mean} = + 2.04$$

$$174.4$$

$$223.4$$

$$355.8$$

$$38.3$$

$$49.0 \checkmark$$

$$42.5 \checkmark$$

$$91.5 \checkmark + 1.87$$

$$174.4 \times 3$$

$$+ 1.81$$

$$9 \quad 48.4$$

$$219.9$$

$$352.1$$

$$9 \quad 43.0$$

$$42.8$$

$$45.6 \checkmark$$

$$50.7 \checkmark$$

$$96.3 \checkmark + 1.75$$

$$5 - 3.3$$

$$14 \quad 39.7 \quad 9 \text{ M. Time.}$$

$$5857.611$$

April 17, 1902

Same Again

Below

172.8

+ 952.4

223.2

355.1

39.1

50.4

44.0

94.4 + 1.80

176.2

220.2

351.3

44.3

44.2

52.0

96.2

+ 178

+ 175

Above

86.4

129.2

269.8

307.4

Mean = + 2.00

42.8

37.6

80.4

+ 2.18

88.9

+ 2.20

10 04.0

126.3

37.4

116.4

267.6

42.1

9 58.2

309.7

79.5

+ 2.21

5-3.3

14 54.9

5857.622

PA

HA

Dec.

PA 1.2 Var B Filial Mean = + 2.02

HA 4.13 Var

S/W 4.5138 V.0 C

8.7 12.01

Telescope moved in Dec.

April 17, 1902

Phot 7. M Cephei WClb

Left

326.2

$$\begin{array}{r} 12 \ 05 \\ \hline 11 \ 15 \end{array}$$

68.1 (Comp * dis)

10 20 10

154.7

101.9

242.7

88.0

189.9

170.1

- 0.19

331.2

21 36

61.7

90.5

145.2

105.9

- 0.14

211.1

195.4

174.6

- 0.10

Right

Mean = - 0.14

244.2

24 03

333.0

88.8

57.2

109.4

157.6

189.2

- 0.17

170.8

- 0.14

238.1

10 25 37

339.4

101.3

11 26

64.3

84.0

10 22 52

148.3

185.3

- 0.10

5 - 3 19

174.7

15 19 33 G.M.T.

5857.6386

5857.3107

+ 0.3279

April 17, 1902

H

Right

244.9

10 2730 332.7

59.7

159.7

237.6

2850 329.6

64.3

150.0

Left

147.8

3050 246.8

322.2

71.3

145.1

10 3208 250.7

119 18 327.3

67.6

10 29 50^r5-3 19^r15 26 31^r 4 M.T.

5857.6434

5857.3107

0.3327

87.8^v100.0^v187.8^v - 0.15⁻17.2²102.0^v - 0.1485.7^v187.7^v - 0.1417.2³

Mean = - 0.33

99.0^v109.1^v208.1^v * - 0.54151.9

- 0.52

1056

100.3

205.9

154.1

- 0.50

April 17, 1902

III

Left

147.8

10 34 47

247.4

323.2

42.1

$$\begin{array}{r}
 99.6 \\
 108.9 \\
 \hline
 208.5 - 0.55 \\
 151.5 \\
 \hline
 \end{array}$$

143.8
 35 28 251.1
 327.1
 67.2

$$\begin{array}{r}
 107.3 \\
 10.01 \\
 \hline
 207.4 - 0.52 \\
 152.6 \\
 \hline
 \end{array}$$

- 0.54

Right

66.1

38 21

153.7

234.3

342.5

$$\begin{array}{r}
 92.6 \\
 108.2 \\
 \hline
 200.8 - 0.59 \\
 159.2 \\
 \hline
 \end{array}$$

Mean = - 0.48

58.7
 10 39 55 163.0

28 31 248.9

10 37 08 333.8

5- 3 19

15 33 49 9.m.t.

5857.6487

5857.3107

0.3380

111.3 - 0.42

$$\begin{array}{r}
 91.9 \\
 203.2 \\
 \hline
 156.8 - 0.44 \\
 \hline
 \end{array}$$

April 17, 1902

IV

Right
60.5

104148 155.0
2348
341.9

945
107.1
201.6 * - 0.41
158.4

52.3
4323 161.8
241.4
336.3

109.5
94.9
204.4 - 0.66
145.6

- 0.54

Left

Mean = - 0.68

324.2
4554 69.2
140.2
258.0

105.0
117.8
222.8 - 0.83
137.2

- 0.81

321.0
104734 73.4
1839 144.2
252.6

112.4
108.4
220.8 - 0.79
139.2

104440

5-8 19

1541 21 G.M. Time.

5457.6538

5457.3107

0.3431

April 17, 1902
✓

Left

10 49 25
323.8
71.4
137.4
256.7

107.6 ✓
119.3 ✓
226.9 ✓ - 0.91
133.1

51 30
318.7⁴
76.0
143.2
251.2

117.6 - 0.90
108.0
225.6 - 0.89
134.4

Right

Mean = - 0.77

53 43
237.1
338.5
51.6
164.7

101.4
113.1 ✓
214.5 - 0.65
145.5
- 0.64

10 55 30
10 08
10 52 31
5 - 3 19

231.2
343.4
57.4
157.4

112.2
100.0
212.2 - 0.62
147.8

15 49 12
5857.6591
5857 3107
11 0.3484

h.m.T.
H.A. = 196.5 V m 13
H.A. = 0:0 on meridian
Dec = +81.1
S.T. = 12:55

Spwh = 0.513 + 7.2 α

Ledgered, Plotted, Posted,

April 18, 1902 (Friday)

B+C 1182
7 04 28.1

Ball
7 01 05

Phot 7 B. Persei WOB
3 0 + 40.2 6 in caps.

Left

$\frac{9}{6} \frac{10}{10}$

7 48 10 26.3 < var dis
188.7
206.9

19.4

18.2

37.6

- 3.91 ✓

8.5

- 3.90 ✓

51 55 26.1

184.2

204.3

17.6 ✓

20.1

37.7

- 3.90 ✓

Right

Mean = - 4.03 ✓

278.3

57 20 297.1

99.0

114.1

18.8 ✓

15.1 ✓

33.9

- 4.13 ✓

280.9

- 4.16 ✓

8 00 20 290.0

217 45 297.5

7 54 26 115.5

5-3 28

15.1 ✓

18.8 ✓

33.9 ✓

- 4.19 ✓

12 50 58 9.M.T.

5858. 5354

5855. 5346

+ 26968

2.8673

2.6962

- .1705

April 18, 1902

Right

II

8 08 15 297.2
99.2
115.2

18.4
16.0
34.4 - 410 ✓

11 07 280.4
296.5
97.6
116.2

16.1 ✓ - 410
18.6
34.7 ✓ - 409 ✓

Left

Mean = - 404

14 20 189.1
206.7
7.0
25.1

18.2
18.1
36.3 - 398

189.0
A 17 10 206.6 17.6
50 52 6.9 198
8 12 43 26.6 37.4
5-3 28 26.7

13 09 15 9.M.T.

5858.5480

5855.8386

2.7094

2.8673

0.1579

April 18, 1902

Left

III

A 29 00

187.1

208.6

68

26.0

21.5

189.2

40.7

- 37.2

3200

189.1

206.4

4.7

27.5

17.3

22.8

40.1

- 37.4

- 3.76

Right

Mean = -39.2

3740

98.8

115.9

279.2

296.8

17.1

17.6

34.7

- 4.09

98.7

A 39 40

116.1

279.6

A 34 35 * 296.8

5.3 28

17.4

17.3

34.7

- 4.09

- 4.09

1331 07 2 m.t.

5858.5633

5855.8386

4019

+ 2.7247

28673

40.1426

April 18, 1902

		Right	IV
8 47 10		98.4	
		115.6	17.2
		249.3	17.7
		297.0	34.9
50 00		98.9	
		115.4	17.0
		249.5	18.3
		297.8	35.3
		297.8	35.3

Impossible to finish this group. region very low and settings becoming uncertain. Images dim, and varying relatively much fog and evidently some cloud now at this altitude.

9 00 Previous three groups considered all right. In this group conditions became worse

All 58.1 VUB
 Ha 7.56 West
 Dec. +40.2
 SP 10.57
 SP Wh - 1.00, -0.7 C

April 18, 1902.
U Camelops

Phot R

3 33 +62.3

W-Ob

$\frac{11 \ 13}{17} \ 40$

Left

9 220 118.6 < rardis
155.6 58.0 ✓
303.7 44.9 ✓
348.4 192.7 ✓ 1.59 ✓

123.6

-1.64 ✓

167.7

44.1 ✓

296.0

54.7 ✓

350.7

98.8 ✓

-1.69

Right

mean = 1.61 ✓

209.2

260.1

30.6

86.9

50.9

56.3

107.2

-1.48 ✓

-1.58 ✓

9 320

211.1

256.4

9 37.0

240

5 - 3.5

78.2

14 53.5 g.m.t.

5858.

45.3

54.2

99.5

-1.67

April 18, 1902

Same Again

9 33.6

Right

204.4

256.2

27.6

76.3

57.8

48.7

101.5 - 1.62

-1.62

208.0

254.2

24.3

79.3

46.2

55.0

101.2 - 1.63

Left

Mean = -1.64

111.9

169.15

296.2

345.8

47.6

49.6

97.2 - 1.73

116.8

-1.66

165.2

48.4

293.4

54.9

103.13 - 1.58

348.46

Mean = -1.62

9 41.4

75.0

9 37.5

5 - 3.5

14 34.0

585.8

PA 315.5 KLB

S.T. 11'45"

Magn = 7.56

H.O. 8:12 West

Dec. +62.3

Meas. made with all possible care but settings somewhat difficult on account of bright moonlight & poor atmospheric conditions

April 18, 1902

Phot. 3 Lyrae wellb.
 18 45 + 33.2
 12 15
 6 30
 5 30
 6 incaps.

Above Comp * = 8 Lyrae
~~Below~~

88.9 < var dis.
 10 27.6 123.8 349
 272.0 30.6
 302.6 65.5 - 2.66 ✓

91.7 - 2.60 ✓
 123.5 31.8 ✓
 269.6 37.2 ✓
 306.8 69.0 - 2.54 ✓

~~Above~~ Below Mean = - 2.39 ✓

355.4
 38.7 43.3 ✓
 179.5 36.6 ✓
 216.1 79.9 - 2.20 ✓

359.4
 10 35.8 34.5 - 2.18
 63.4 174.1
 10 31.7 220.1
 35.1 46.0
 81.1 - 2.16

5- 3.5
 15 28.2 L.M.T.
 5058.644
 5058.640
 4.004

April 18, 1902

Same Again

Below

10 38.0

354.4

39.0

44.6^v

181.0

35.6^v

216.6

80.2^v- 219^v

358.7

- 224^v

34.3

35.6^v

176.0

43.2

219.2

78.8- 223^v

Above

Mean = - 241^v

268.4

305.8

37.4^v

92.8

29.5^v

122.3

66.9^v- 261^v

273.5

- 261^v

10 47.0

303.0

29.5^v

10 42.5

88.8

37.5^v

5 - 3.5

125.8

67.0^v- 261^v

15 39.0

M₁Final Mean = - 240^v

5858.652

5854.640

4.012

S.T. = 12.51

Dec = +33.2

Ha = 5.33 East

Pa = 12.5 Ver B

Sp. Wh. = - 15a + 0.513 + 1.00

Apr. 1A. 1902.

B. + C. 11A2.

11	2A	29.0
	29	29.0
	30	29.0

Ballou 103.

11	25	0.0
	26	0.0
	27	0.0

April 19, 1902 (Saturday)

C's Watch = $2^{\frac{2}{3}}$ sec. fast at $7^{\frac{10}{11}}$ o'clock

PPC 1182

Ball 103

> 28 270

> 25 00

C's watch used tonight.

Phot R Σ 3124 W. Lb2.

14 12 + 52.0

9 55
4 17
7 43

PP 3124 Dist 3A" Magnitude, 4th 7.4

312.4
337.2 < br. dis.

130.3

24.8

155.5

25.2

50.0 - 3.27[✓]

308.7

334.5

25.0[✓] - 32[✓]

128.1

25.2[✓]

153.3

51.0[✓] - 323[✓]

217.5

242.2

24.7

361

25.2

61.3

49.9 - 328[✓]

see next page

April 19, 1902

8 07	214.8	26.0	-326
	240.8	251	
	34.2	51.1	
8 04.0	59.3		-323
$\sqrt{= 0.4}$			Mean = -326
13 3.8	G.M.T.		
5-807			

Phot R	≤ 1940	WObz
	1540 +15.8	
	10 18	
	<u>522</u>	
	6 3A	

Too low

Phot	$\leq 188A$	WObz
	1445 +19.6	
	10 30	
	4 15	
	<u>245</u>	

Abandoned for
too low

Companion seen and separated from primary for a moment at times but on account of East wind seeing is very poor & impossible to measure it at present times. Although it is impossible due to present conditions to get an estimate of distance between components it would seem as if the distance given was little larger and real distance about $\sqrt{5}$.

April 19, 1902 ~~Stat~~

Phot R

Couri

♂ ~~Booris~~

wells

 $PA = 210^\circ$ $Dist = 0.4 \pm$ $Magns = 30 - 9.0$

12 25 -16

10 50

1 35

10 25

8 55

42.6

54.9

22 96

233.8

< by dis.

12.3

13.2

25.5 - 476 ✓

41.2

53.5

249.5

232.8

12.3

12.5

24.8 - 482 ✓

mean = - 4.86 ✓

310.0

322.2

129.0

140.4

12.2 ✓

11.4

23.6 - 493 ✓

- 492 ✓

307.2

349.8

128.0

139.1

12.6 ✓

11.1

23.7 - 492 ✓

9 02
8 585

5 - 0.4

13 58.1

585.9

Measurements rather difficult on account
of b. moon and large difference of mag

April 19, 1902

Phot R

 $\Sigma 2032$ W. Ob.

16 11 +34.1

11 31

440

720#3 $\frac{1}{3}$ wt only

PA. 220 Dist 5" Magn. 5.1-6.4

83.1

9 38

151.4 < buds

68.3

258.8

71.4

330.2

139.7

- 0.78

78.8

- 0.79

152.2

73.4

262.8

65.1

327.9

138.5

- 0.80

mean = -0.80

350.9

57.5

66.6

170.7

69.7

240.4

136.3

- 0.85

349.6

68.1 - 0.80

9 49

54.7

73.3

167.5

141.4

- 0.75

9 43.5

240.8

5-0.4

14 43.1

5859

Measurements extremely difficult and a little uncertain on account of closeness of components and especially due to my bad seeing. Images at equalization would entirely disappear.

April 19, 1902

and all the images run together; but observations waited for moments of good seeing as were obtainable although seeing throughout was bad.

Phot T 3 Lyrae W Obs
 $18.45 + 33.2$ 6" cap
 12.10
 $\hline 6.35$
 $\hline 5.25$

Abandoned; 3 of invisible to naked eye; and 39 com. ~~at~~ practically invisible at equalization. Thicker clouds also coming into region.
 3 now wholly disappeared in fader

10 20
 $\Sigma 1224$ W Obs
 Phot R 8 19 + 24.9
 12.29
 $\hline 4.10$

Clouds near

$\Sigma 2130$ W Obs
 Phot R 17 3 + 54.6
 12.38
 $\hline 4.25$
 $\hline 7.35$

seeing too bad. Impossible to measure stars.

April 19, 1902.

Phot R Σ 30' WLB

16	33	+53.2
12	48	
3	145	
8	15	

North fol. comp. is a rather close double and combined light of the close double makes the magn. seem a little brighter than companion 1.5 distant. N. assumed to be little brighter ~~as~~ as before indicated.

Combined light of N.F. component compared with companion 1.5 away. Plt 200° dist 1.5± Magn. 4.8-5.0 Index right. A.

10 53 267.8 N.F. dis 84.6^v
 352.4 77.9^v
 91.3 162.5 - 0.33
169.2

270.0
 353.7 83.7^v - 0.29
 89.2 83.0^v
172.2 166.7^v - 0.25

179.9 Index left. B. Mean - 0.28
 262.7 81.8^v
 358.8 84.8^v

83.6 166.6^v - 0.25
 180.0

11 00 260.9 80.9^v - 0.28
 10 56.5 83.5^v
 $v = 0.4$ 0.9 164.4^v - 0.30
 10 56.1 84.4^v
 505.9

Observation rather difficult as brighter star is double

L.P.

April 23, 1902 (Wednesday)

C's watch is 6 sec slow at 7:05
 1380 1182 Ball 103

7 09 51.4 7 06 08
 C's watch used tonight.

Phot R ± 3.24 Wob. 2006.

Pl. 35° 14 12 752.0
 Dist $96 \pm$ 9 45-
 Magn $4.6-7.7$ 4 27
 122.6 7 33

7 37

147.4 < br. dis 24.8 ✓
 301.4 23.4 ✓
 324.8 48.2 - 3.35 ✓
 119.6 23.7 - 3.39 ✓
 143.3 22.8 ✓
 309.3 46.5 - 3.43 ✓
 322.1 mean = - 3.42 ✓

217.3 24.0 ✓
 51.3 22.4 ✓
 207.4 46.4 - 3.44 ✓
 229.8

26.9 - 3.44 ✓
 50.4 23.5 ✓
 207.7 22.6 ✓
 230.3 46.1 - 3.45 ✓

7 47

7 42

Measurements rather difficult on account
 of twilight & clouds.

April 23, 1902

Phot R. $\Sigma 2130$ Wob

$$\begin{array}{r}
 17 \quad 3 \quad + 54.6 \\
 10 \quad 23 \\
 \hline
 6 \quad 40 \\
 \hline
 5 \quad 20
 \end{array}$$

Abandoned too low & too much cloud.

$\Sigma 2032$ Wob

$$\begin{array}{r}
 16 \quad 11 \quad + 34.1 \\
 10 \quad 27 \\
 \hline
 5 \quad 48 \\
 \hline
 6 \quad 16
 \end{array}$$

Abandoned too low & too much cloud

Phot R $\Sigma 1890$ Wob

$$\begin{array}{r}
 14 \quad 46 \quad + 49.2 \\
 10 \quad 36 \\
 \hline
 4 \quad 10 \\
 \hline
 7 \quad 50
 \end{array}$$

I magn. do not quite agree over one
another though nearly so.
clouds

Too cloudy & atmospheric
conditions too bad to measure
full moon also up.

April 23, 1902

Phot. R. ≈ 1669 W. C. L.
 Pa 300° $12\ 35 - 12.3$
 Dist 5" $11\ 00$
 Magn 6.5-6.5 $1\ 35$
 $10\ 25$
 Above 18. fol. component seems a little

353.3 lighter & disappears
 87.2 < 6c dis. 8.7. 93.9
 177.6 90.3
 268.1 184.4
 175.6 + 0.08 ✓

356.1 ✓
 85.3 cldz thicker 89.2 ✓ 0.00 ✓
 174.9 86.2 ✓
 261.1 175.4 ✓ - 0.09 ✓

Reversed

Mean = - 0.06 ✓

265.8
 352.2 86.4 ✓
 83.8 89.2 ✓
 173.0 175.6 ✓ - 0.08 ✓

stars gone ✓ - 0.10

9 12 89.9 ✓
 86.0 ✓
 9 02 83.4 ✓
 168.4 ✓
 169.2 ✓
 173.1 ✓ - 0.13 ✓

Observations extremely difficult on account of
 clouds, bright moonlight together with the
 closeness of components.

April 23, 1902

Phot R

29^I

2006

PA 160°

Dist 6'±

Magn. 4.9-5.1

16 18 + 340

11 58

4 20

7 40

9 40 Clds.

Through clouds N Puc. component
seems a little brighter

9 45 Clds thicker

9 47

350.7

90.0

164.1

272.1

62 dis = N Puc

Clds

99.3 ✓

108.0 ✓

207.3 ✓

152.7 ✓

+ 0.52 ✓

350.0

91.3

169.5

268.8

Reversed Part

268.2

350.1 Clds.

84.8 star zone

171.1

101.3 ✓

99.3 ✓

200.6 ✓

159.4 ✓

+ 0.46 ✓

+ 0.39 ✓

Mean = + 0.08 ✓

81.9 ✓

83.3 ✓

165.2 ✓

- 0.28 ✓

- 0.30 ✓

9 59

269.0

350.8 star zone

88.1

169.5

81.8 ✓

81.4 ✓

163.2 ✓

- 0.32 ✓

(over)

April 23, 1902

Notes to previous double just measured
 — Troubled throughout by clouds
 images alternately disappearing and
 reappearing, equalization difficult
 images very nearly reverse over each
 other but fall a little short
 Observation $\frac{1}{3}$ weight

Phot R α Librae WCh
 14 45 - 15.6
 12 30
2 15
 Dist 4" 9 45
 Magn. 3.0-6.0

10 18 202.9
 2 40.2 < bcd is 37.3^v
 22.7 < cldz 38.4
 star zone 75.7 - 2.32
61.1
 204.2
 239.2 star zone 35.0 - 2.32
 20.9 star zone 40.5^v
61.4 " " 75.5 - 2.33
 Reversed Mean = - 2.30
 111.4
 151.1 39.7^v
 292.8 37.7^v
 330.5 77.4 - 2.27
112.0
 10 36 150.9 star zone 38.9^v - 2.27
 10 27 291.4 " " 38.6^v
 330.0 " " 77.5 - 2.27

April 23, 1902

Troubled throughout evening by clouds
which were more or less of a flocculent
nature and passing somewhat rapidly
from their feathery character permeating the
whole air

Ledgend, Plotted, Posted

April 24, 1902 (Thursday)

C's Watch 5.5 sec. slow at 7:06

B8C 1182

7 11 08.4

Phot. B Persei

Ball 103

7 07 08

Wolfs.
6 in cap.

$$\begin{array}{r} 3 \quad 0 \quad +40.0 \\ 9 \quad 38 \\ \hline 6 \quad 38 \end{array}$$

Reset B8C

7 21 08.4

Ball 103

7 21 08

B8C 1182 used on B Persei

Left

1829 < van der

7 33 06

212.4

4.0

29.1

185.6

39 24 209.2

4.1

29.5

Right

95.3

42 31 120.4

278.0

299.1

98.0

7 44 39 118.2

159 30 276.0

7 53 58 300.0

12 39 50 24m

29.5^v25.1^v54.6 - 3.07^v23.6^v - 3.20^v25.4^v49.0^v 3.32^vmean = - 3.35^v25.1^v21.1^v46.2 - 3.45^v20.2^v - 3.50^v24.0^v44.2 - 3.55^v

5864.5271

5864.4407

+ 0.0864

April 24, 1902

II

Right
 95.6
 7 5300 120.0
 277.4
 297.4

24.4 ✓
 20.0 ✓
 44.4 ✓ - 3.54 ✓

97.6
 7 5535 116.9
 276.1
 300.5

19.3 ✓
 24.4 ✓
 43.7 ✓ - 3.57 ✓

Mean = -3.45 ✓

Lift
 3.0
 7 5915 31.6
 187.6
 208.5

28.6 ✓
 20.9 ✓
 49.5 ✓ - 3.29 ✓

4.3
 8 0135 28.7
 29 25 184.0
 57 21 210.2
 5-0 8

21.4 - 3.34 ✓
 26.2 ✓
 47.6 - 3.38 ✓

12 57 13 4 M.T.
 5864.5397
 5864.4407
 + 0.0990

April 24, 1902

Left
6.0

8 12 35 29.4
187.2
206.7

23.4
19.5
42.9 - 361

III

16 15 7.9
26.7
184.5
209.0
=

18.8^v
24.5
43.3 - 360
- 3.59

Right
277.0

20 10 298.8
98.6
116.1

21.8^v
17.5
39.3 - 381

- 384

8 22 50 278.0
296.3
71.50 98.8
8 17 58 117.9
5 - 0 8

18.3^v
20.1
38.4 - 386

13 17 50 - 9 M.T.

5864.5541

5864.4407

+ 0.1134

April 24, 1902.

Right

IV

~~277.8~~
+ 3320 298.4

$PA = 239.5$
 $S.T. = 11.03$
 $Ha = 8.01$
 $Da = +40.2$
 $Sp Wh = -1.5B - 0.6 \alpha$

Left

Phot T. R Coronae W Obs
 $15.42 + 2.4.4$
 12.12
 3.30
 8.30
 $7''$ Cal.

C's watch used on this variable
 see next page.

April 24, 1902

R Corouae
see previous page.

Right

9 56.0 170.4 < radius
224.1 53.7 ✓
349.4 57.7 ✓
47.1 111.4 - 1.39 ✓

166.4
228.0 61.6 - 1.39 ✓
352.8 49.7 ✓
42.0 111.3 - 1.39 ✓

~~Below~~

Left

Mean - 1.58 ✓

85.8
132.1 46.3 ✓
260.0 49.2 ✓
309.2 95.5 - 1.77 ✓

10 06.0 84.7
10 01.0, 134.4
5 + 0.6 262.8
15 01.8 L.M.T. 309.6
5864. 50.0 ✓
46.8 ✓
96.8 - 1.74 ✓

April 24, 1902

Same Again

H

Left

82.7

10 080 131.4

261.6

312.7

48.7

51.1

 $\frac{99.8}{-1.66}$ ✓

80.7

132.9

262.8

310.8

52.2 ✓

48.0

 $\frac{100.2}{-1.65}$ ✓

-166 ✓

Mean = 1.51 ✓

Right

353.6

43.2

164.9

229.0

49.6 ✓

64.1 ✓

 $\frac{113.7}{-1.33}$ ✓

348.4

10 160

49.0

10 12.0

172.5

5 + 0.1

223.0

15 12.1 G.M.T.

60.6 - 1.36 ✓

50.8 ✓

 $\frac{111.4}{-1.39}$ ✓

Final Mean = -1.54

5-864,

Ha. - 3:00 East

Dec. +28.6

RA. = 3513 04.50

R.T. 12:45

Sp. Wl. = 331.5 KRB

74.6
Mag. = 5.91

April 24, 1962

Phot 7 δ Librae 2506

6" exp. 14 53 - 7.9

12 58

1 55

10 05

14 53

13 03

1 50

10 10

BOL 1182 used

Below

I

269.3 < var dis.

10 46 55 307.4

85.2

129.0

267.2

49 25 307.4

90.1

125.4

Above

177.2

52 35 219.5

351.3

41.4

169.5

10 54 55 224.7

3 50 356.0

36.0

10 50 58

5-0 8

15-00 50

9 M.T.

38.1 ✓

43.8

81.9 - 2.14 ✓

40.2 - 2.24 ✓

35.3 ✓

75.5 - 2.33 ✓

Mean = 2.00 ✓

42.3 ✓

50.1

92.4 - 1.85 ✓

- 1.82 ✓

55.2 ✓

40.0

95.2 - 1.78 ✓

526.5 - 560.3

1.3472

April 24, 1902

Same Again

Above

~~180.3~~

177.7

10 5730 220.3

349.9

42.3

426

52.4

95.0 - 178

H

5920

169.8

2250

356.5

36.4

Below

89.8

11 0220

1248

264.9

311.1

55.2^v - 17839.9^v95.1^v - 178

Mean = - 1.98

35.0^v46.2^v81.2^v - 2.16

85.1

- 2.18

11 0450

130.0

400 270.0

11 0100

305.3

5 - 0 8

44.9^v35.3^v80.2^v - 2.19Final Mean = - 2.00

16 0052

PA = 242.2^v B

5864.8673

HA = 1.23 East

5863.3134

Dec = - 8.2

+ 1.2542

ST = 1.34 E

11 15

Spwr. 4.5 B & 5.6 C

April 24, 1902

Boc 182
11 18 07.8

Ball 103
11 18 00.

Ledgered, Plotted, Posted;

Apr. 23, 1902 (Friday)

B&C 1182

7 59 19.2

Ball 103

7 59 00

Cs Watch = 5 sec slow at 8:00

Prot $\begin{array}{r} \pm 1224 \\ 8 \ 19 \ +24.9 \\ 10 \ 43 \\ \hline 2 \ 24 \end{array}$ with

Abandoned seeing too unsteady for so
 & 3V close a double

Prot R $\begin{array}{r} \pm 1065 \\ 7 \ 12 \ +50.4 \\ 11 \ 05 \\ \hline 3 \ 53 \end{array}$ with

Nof seems slightly brighter and so assumed.

PA. $\approx 60^\circ$ Magn. 6.6 - 6.7

Dist 15"

over

Apr 25, 1902

Σ 1065

see previous page

S 43 ~~to~~ Clouds

S 47 Abandoned Clouds coming in this region

Phot R	Σ 29 ^I	25 Ob
	16 17 + 34.0	
	<u>11 17</u>	
	5 00	
	<u>2 00</u>	

S 53 Cloudy

9 10 Clouds now thick growing worse everywhere no chance for anything farther

BOC 1182 Apr 26, 1902 (Saturday)
 704 48.0 Ball 103
 704 00

C notch 14 sec fast at 7:05

Prot R 4 1821 Wobs
 14 9 +52.4
 9 45
 424
 706

Dist 12" Magns = 4.9 - 7.2

1980 < 62. obs
 242.4 44.4 ✓
 88.6 clds 49.8 ✓
 58.4 stars gone 94.2 ✓ - 1.80 ✓
~~2000~~ 7.2 ✓
~~236.1~~ 58.3 stars gone 51.1 ✓ - 1.77 ✓
 194.9 clouds thick 45.4 ✓
 240.3 96.5 ✓ - 1.74 ✓
 280.2 Reversed Mean = -1.80 ✓
 331.8 clouds. 51.6 ✓
 105.5 stars gone. 41.8 ✓
 147.3 93.4 ✓ - 1.82 ✓
 287.1
 328.2 41.1 ✓ - 1.82 ✓
 101.6 stars gone 53.0 ✓
 154.6 94.1 ✓ - 1.81 ✓

April 26, 1902

Phot R

 $\Sigma 1972$

15 36 + 80.9

wlb

10 36

5 007 00Pl 75°
Dist 0.5 ±

Mags 6.0 - 6.9

~~89.5~~

< 6. dms

Rained at 7.20 - 8.30

94.8

P 34

162.3 clouds

67.5 ✓

270.8

75.4 ✓

346.2 clouds

142.9 - 0.72 ✓

89.3

166.2

275.2

340.2

76.9 ✓ - 0.73 ✓

65.0 ✓

141.9 - 0.74 ✓

Reversed clouds
511

Mean = -0.74 ✓

70.0 clouds

64.9 ✓

180.0

75.2 ✓

255.2

140.1 - 0.77 ✓

0.0

75.8

75.8 ✓ - 0.74 ✓

183.7

68.0 ✓

251.7

143.8 - 0.70 ✓

April 26, 1902

Phot. R. Σ 29^I WCh

$$\begin{array}{r}
 16 \quad 12 \quad + 34 \\
 11 \quad 25 \\
 \hline
 4 \quad 53 \\
 \hline
 \underline{\underline{7 \quad 07}}
 \end{array}$$

8 57 clouds

~~At~~ N. prec. assumed to be slightly
 the brighter as near as can be estimated
 through clouds.

P.A. 170° Dist $6' \pm$ Magn. 4.9 - 5.0

9 00 Stars gone

9 14 Stars invisible cannot measure this one

$$\begin{array}{r}
 \text{Phot. R.} \quad \Sigma 18 \overset{3}{P} 3 \quad \text{WCh} \\
 14 \quad 16 \quad - 7.2 \\
 11 \quad 50 \\
 \hline
 2 \quad 26 \\
 9 \quad 34 \\
 \hline
 \end{array}$$

9 23 Abandoned most stars visible in large
 telescope or finder

$$\begin{array}{r}
 \Sigma 12 \quad 24 \quad \text{WCh} \\
 8 \quad 19 \quad + 24.9 \\
 11 \quad 59 \\
 \hline
 3 \quad 40
 \end{array}$$

Apr. 24, 1902

Phot R Σ 12.24 W. Obs.
 PA 55° Dist. 6" Magn. 6.0-7.1

8.2 < br. dis.

78.8 clouds

185.3

260.4

70.6 ✓

75.1 ✓

145.7 - 0.66 ✓

6.0

85.4

186.0

258.5

79.4 ✓

72.5 ✓

151.9 - 0.54 ✓

-0.60 ✓

Reversed

Mean = -0.49 ✓

276.3

350.1 clouds

73.8 ✓

89.8 clouds thicker

89.0 ✓

178.8 clouds

162.8 ✓

-0.33 ✓

270.0 clouds thicker

-0.38 ✓

355.2

85.2 ✓

96.5 clouds thicker

73.0 ✓

169.5 stars gone

158.2 ✓

-0.42 ✓

clouds thicker

9 45
 9 40

10 00

Much troubled throughout evening
 by clouds.

Ledgered, Plotted, Posted

Apr. 28, 1902 (Monday)

13001182

706 21.1

Ball 103

705 00

Cs watch = 10 sec. slow at 7.06

Phot R.

$\leq 2.3^{\pm}$ W-Ob.

12 46 +17.8

10 00

2 46

9 14

PA 50°

Dist 3'±

Magn. 5.3-6.0

7 26 189.6 < to dis 6

256.8

11.2

75.4

191.0

255.0

4.3

46.4

Reversed

98.8

164.7

257.2

344.8

64.2✓

151.4✓

131.4

64.0✓ - 0.95✓

72.1✓

136.1✓

68.9✓

66.6✓

135.5 - 0.87✓

63.1✓

69.1✓

132.2 - 0.93✓

63.1✓

69.1✓

132.2 - 0.93✓

63.1✓

69.1✓

132.2 - 0.93✓

63.1✓

69.1✓

132.2 - 0.93✓

- 0.95✓

64.0✓ - 0.90✓

72.1✓

136.1✓ - 0.85✓

Mean = - 0.90✓

68.9✓

66.6✓

135.5 - 0.87✓

63.1✓

69.1✓

132.2 - 0.93✓

63.1✓

69.1✓

132.2 - 0.93✓

63.1✓

69.1✓

132.2 - 0.93✓

Apr. 28, 1902.

V Tauri Wcb.

$$\begin{array}{r} 24 \ 49 \ +17.0 \\ 10 \ 39 \\ \hline 3 \ 50 \end{array}$$

f 10 Too low not all the
Hagen stars visible.

R Persei Wcb.

$$\begin{array}{r} 3 \ 23 \ +35.3 \\ 10 \ 53 \\ \hline 7 \ 30 \end{array}$$

Too low region lower
than preceding star many Hagen
stars not seen.

V Aurigae Wcb.

$$\begin{array}{r} 6 \ 7 \ 46.5 \quad 6 \ 11 \ 47.2 \\ 11 \ 03 \quad 10 \ 58 \\ \hline 4 \ 56 \quad 4 \ 47 \end{array}$$

28.f 15

~~was~~ a 14th fol var by 46.1 sec,
and is 4.3 fourth of it

18 1 44

a 14th magn fol var by 1^m 26²⁸
is x 5.2 North of it.

5.5 03.1

a 14th magn fol var by 1^m 26²⁸ & is
30 North of it.

16 23.5 Apr 28, 1902

a 14th folc var by 7.5 sec & is
4.6 North of it.

~~49~~ 13

36.5 02

a 14th folc var by 25.5 sec & is
5.0 South

44 25 var

45 33

46 04

a 14th folc var by 1^m 28^s and is
5' north of Var.

a 14th folc var by 1^m 49 and is
3.3 North of it

possibly these last two immediately
preceding them.

April 28, 1902

~~I can~~
 Phot I α Cephei W. Lb.

$$\begin{array}{r} 0 \ 50 \ +8 \ 11 \\ 11 \ 38 \\ \hline 10 \ 48 \end{array}$$

9 03 α Cephei does not vary to-
 night but last night.

R. Gem. W. Lb.

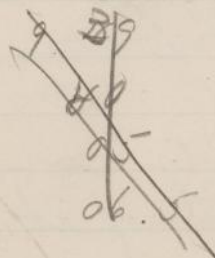
$$\begin{array}{r} 6 \ 57 \ +22 \ 9 \\ 11 \ 47 \\ \hline 4 \ 50 \end{array}$$

9 20 α 25 var 2.54

$$\begin{array}{r} 13.44 \\ 13.2A \\ \hline 13.36 \end{array}$$

Hagen No 19 = reference star.

9 39 18.5
 " 34.0
 " 37.0



9 40 33
 " 49.5
 " 52

a 14th magn. fol No 19 by 16 sec is
 0.45' south of it.

a 16th magn. fol No 19 by 19 sec is
 1.8' South of it

April 24, 1902

$$\begin{array}{r} 9 \ 42 \ 23 \\ - 478 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \ 42 \ 57 \\ 43 \ 21 \\ \hline \end{array}$$

14th magn No 3 fol 19 by 24 sec &
is 1.9 North of it.

$$\begin{array}{r} 44 \ 25 \\ - 368 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \ 44 \ 51.5 \\ 45 \ 03. \\ \hline \end{array}$$

12th magn No 4 fol 19 by 35.5 sec &
in same dec. at No. 3

$$\begin{array}{r} 9 \ 46 \ 22 \\ 47 \ 00.5 \\ \hline \end{array} \quad \begin{array}{r} 49 \ 00.5 \\ 47 \ 16 \\ - 49 \ 39.0 \\ \hline \end{array} \quad \begin{array}{r} 48 \ 08 \\ 47 \\ \hline \end{array}$$

14th magn No 5 fol No 19 by 18.7 sec &
is 1.3 South of it.

3 Reynal

$$18 \ 45 + 33.0$$

$$1253$$

$$\begin{array}{r} 9 \ 52 \\ 6 \ 08 \\ \hline \hline \end{array}$$

(over)

April 28, 1902

Phot 7. B Lyrae wdb
5" cap.
C watch used

above

802

← radius

10 20.0

132.0

57.8

266.8

308.2

85.1

126.1

258.5

3

41.0

Below

5" cap removed

see next page

April 28, 1902

6" cap put on

Above

H

10300

81.4

131.6

264.6

307.6

50.2^v142.0^v92.2 - 1.86^v

860

129.3

256.5

315.20

438.3^v58.5^v101.8^v1.74^v1.61^v

Below

Mean - 1.59^v

347.5

46.3

144.0

223.1

58.8

49.1

107.9

-147

351.2

1038.0

42.1

50.9

-144^{1/2}

10340

170.2

58.8

570.2

229.0

109.7

-142

1534.2

87.7

5868.649

5867.556

+ 1.093

April 28, 1902
Same Again

Below

10 40.6

347.5

47.4

174.5

223.2

59.9 ✓

48.7 ✓

108.6

145 ✓

351.8

40.7

167.5

229.2

48.9 ✓

1.42 ✓

61.7 ✓

110.6 ✓ - 140 ✓

Above

mean = -1.58 ✓

261.4

313.5

86.3

129.5

52.1 ✓

43.2 ✓

95.3 - 177

10 48.8

266.3

311.3

79.3

131.83

45.0 ✓ - 174 ✓

52.0 ✓

97.0 ✓ - 173 ✓

5 40.2

15 44.9 GMT

5868.656

5867.556

11 05

RA = 124 Vnt B

ALT = 1.35

HA = 5:13 East Dec + 32.8

Sipwh = -0.4a + 0.5B + 1.1C

Final mean = -1.59

~~May 1, 1902 (Thursday)~~

B8C1182
7 04 55.8

Ball 103
7 03 00

C's watch is 3 sec slow at 7:04

Phot R. $\Sigma 3124$ WOL6
14 12 + 52

$\frac{1012}{1400}$
Dist 06 $\frac{800}{800}$

Magn. 4.9-7.5

7 25
112.2 < br. dis
155.7 clds star zone 43.5 ✓
294.5 40.0 ✓
334.5 83.5 ✓

114.6 clds
156.3 star zone clds thd. 41.7

3
Reversed

mean =

~~Abandoned~~

V Aurigae WOL6

6 7 + 46.5
 $\frac{1102}{455}$

over

May 1, 1902

V Aurigae

Selection of 14thW.C.B.
Magns.

♂ 33 49.0 20.0 ~~34 23.5~~
34 09.0

♂ 34 53.0 20.0
35 14.0

No 2nd fol var by 20 sec & is
1.6 North of it.

♂ 36 10.5 25.5
36 36.0

♂ 37 02.5 25.0
37 27.5

No 3rd fol var by 25.2 sec & is 5.0
South of it.

♂ 38 26.0 45.5
39 11.5

♂ 39 25.5 46.5
40 12.0

No 4th fol var by 4.6 sec & is 4.2
~~South of it.~~ South of it.

~~744 17.5~~ ♂ 45 07.0 11.0
45 12.0
45 35.0 11.5
45 47.0

No 4th fol var by 11.2 sec & is 2.9
North of it

♂ 54 32.5
55 11.5

♂ 52 25.0
53 02.5 37.5

♂ 53 21.0 39.0
54 00.0

No 5th fol var by 39 sec & is a.s
South of it

May 1, 1902

This selection of tonight's supplants
that of the previous time and is
better.

Star = H4 near U. Can.

7 44 + 22.7 W.C.B.
12 19 Phot T.

4 35 star on H4. chart =
Left comp. +

76.2 < p. obs C's watch used
9 43.0 137.8 61.6
251.3 69.5
320.8 131.1 + 0.96 ✓

71.2 +0.94 ✓
144.0
258.3
318.8
Right 72.8 ✓
344.0 60.5 ✓
52.8 133.3 ✓ + 0.91 ✓
157.1 Mean = + 0.80 ✓
234.8

68.8 ✓
77.7 ✓
146.5 + 0.64 ✓

338.6
9 52.0 56.1 +0.65 ✓
948.5 163.2
5 231.3
1448.5 68.1 ✓
5871.616 145.6 + 0.66

May 1, 1902

Same again.

Right

344.3

9 54.0

53.3

155.4

237.9

69.0

82.9

151.9 + 0.54 ✓

+0.60 ✓

340.7

57.4

163.2

232.8

76.7

69.6

146.3 + 0.65 ✓

Left.

256.4

321.4

71.1

141.9

Mean = +0.76 ✓

65.0 ✓

70.8 ✓

135.8 ✓ + 0.86 ✓

252.4

10 00.0

319.2

76.0

140.0

66.8 ✓

+0.91 ✓

64.0 ✓

130.8 ✓ + 0.96 ✓

Final Mean + 0.78

Magn = 9.20

9 57.0

14 57.0

5871.623

PA = 632 v m B

ST = 12.57

Dec = +22.2

HA = 5.07 West

Sp. Alt. = 4.5 B + 5.4 C

May 1, 1902

R Gammoun Webb.
14th magn. standard

$$\begin{array}{r} 6.57 + 22.9 \\ 13.00 \\ \hline 6.03 \end{array}$$

10 20 The preliminary selection made on preceding night seems to be very good region rather low will examine again when region is higher

B Lyrae Webb.

$$\begin{array}{r} 18.45 + 33.2 \\ 13.20 \\ \hline 5.25 \end{array}$$

6" cap Phot T.
C's watch used.~~6.31~~

elbow L var obs

270.4

10 400

306.2

90.7

122.2

272.2

302.8

86.5

120.8

Below

176.6

221.2

0.0

32.6

180.5

213.7

354.5

38.4

587.656

35.8

31.5

67.3

30.6

39.3

69.9

44.6

32.6

77.2

32.8

43.9

78.7

32.8

43.9

78.7

71.656

67.556

+ 4.100

- 260

- 256

- 257 mean = - 2.41

- 228

- 226

- 223

May 1, 1902

Same Again

Below

10 49.0

174.2

220.5

2.0

35.0

46.3 ✓

33.0 ✓

79.3 ✓

- 2.22 ✓

182.0

212.6

354.6

38.4

30.6

43.8

74.4

- 2.36 ✓

- 2.29 ✓

Above

26.6

125.3

271.9

302.4

38.7 ✓

30.5

69.2

- 2.53

Mean = - 2.42

10 57.0

93.8

122.0

268.2

307.3

28.2

39.1 ✓

67.3 ✓

- 2.60

2.56 ✓

Final Mean = - 2.42

10 53.0x
5

15 53.0 + 4m. PA = 12.2 Verr

5871.662

5867.556x

11 05

+ 4.106x

PA = - 4.54 East

P.T. = 1.53

Dec. = + 33.1

S/p Wh. = - 0.5A + 0.5B + 1.1C

L.P.P.

May 2, 1902 (Friday)

1340 1182
704 139

1340 103
702 00

Cs watch = ^{11.0}~~10.5~~ sec fast at 703

Nova Persei
Phot 7. 3 24 + 43.6 WOb
10 46
7 22

9.5 caps. used

Left

262.8 < cap * dis.

Cs watch used

8 020

311.3

44.5 ✓

77.9

60.2 ✓

138.1

108.7 ✓ + 14.5 ✓

255.0

+ 1.44 ✓

311.0

62.0

83.3

472 ✓

130.5

109.2 + 14.4 ✓

Right

Mean = +1.31 ✓

170.8

223.6

52.8 ✓

345.7

660 ✓

51.7

118.8 ✓ + 1.22 ✓

164.2

+ 1.18 ✓

8 09.0

233.5

68.3

8 05.5

352.2

54.3 ✓

5-0.2

46.5

122.6 + 1.14 ✓

1305.3

47 m.T.

587.2

May 2, 1902
Same Again

8 11.0

Right
168.8
223.8
345.2
50.8

55.0 ✓
65.6 ✓
120.6 ✓ + 1.18 ✓

164.3
231.0
351.4
43.2

66.7 ✓
57.8 ✓
118.5 ✓ + 1.23 ✓

+ 1.20 ✓

Left
84.7
131.7
258.5
314.7

47.0
56.2
103.2 + 1.58 ✓

Mean = + 1.38

8 18.0
8 14.5 ✓
5 - 0.2 ✓
13 14.3 ✓
5072.551 ✓

792
138.1
263.6
310.4

58.9 ✓
46.8 ✓
105.7 + 1.52 ✓

+ 1.55 ✓

Final mean = +

7.25

Mean =

~~RA =~~
~~HA =~~
~~Alt =~~
~~Dist =~~
~~Spl. =~~

Region rather low
some twilight and some
images varying somewhat but
observations considered very good

May 2, 1902

Star Azani

Left

~~75.5~~

2 230 136.8

263.6

311.3

61.3

~~47.7~~

109.0

+ 1.44

84.1

130.1

259.1

316.8

46.0

57.7

103.7

+ 1.50

+ 1.57

Right

349.7

S 300 45.5 clds.

161.5

234.8

53.8

73.3

129.1

+ 1.00

clds.

~~330.6~~

46.0

S 330

Reject above group

continually troubled by clouds impossible to finish group.

Final mean = +1.34

7.25

Magn = 7.09

PA = 257.0 W B

ST = 11.33

HA = 8.08

Dec = 43.4

Sp wh = +0.5 A - +0.5 B + 0.1 C

May 2, 1902

Phot I *W. C. Schie* *W. C. Schie*
~~0.5~~ 0 50 + 8 11

$$\begin{array}{r} 11 \ 40 \\ \hline 10 \ 50 \end{array}$$

Left

150.8

< comp * dia

I

BOCHZ used.

8 51 16

245.4

94.6

342.3

70.4

52.7

165.0

+ 0.29 ✓

159.4

+ 0.23 ✓

52 06

234.3

74.9

330.0

96.2

66.2

171.1

+ 0.17 ✓

Right

62.2

Mean + 0.35 ✓

54 52

150.4

85.2

254.4

67.4

321.8

152.6

+ 0.52 ✓

70.7

+ 0.47 ✓

56 09

142.2

71.5

15 23

244.4

86.6

8 53 51

331.50

108.1

5- 2 14

13 51 37 9 m.T.

5872.5775

5872.2633

+ 0.3142

May 2, 1902

II

Right

64.3

P 07 35 151.4

253.6

323.4

87.1[✓]69.8[✓]156.9[✓]+0.44[✓]

71.4

P 58 55 142.1

241.6

332.3

70.7

90.7

161.4

+0.35[✓]+0.40[✓]

Left

326.9

P 00 45 66.9

160.0

238.0

100.0

72.0

172.0

+0.00[✓]Mean = +0.19[✓]

331.7

9 02 31 57.3

149.2

239 46 6247.8³

8 59 57

5-214

13 57 42 GMT.

5872.5817

5872.2623

+0.0184

85.6

98.1

183.7

176.3

-0.02[✓]-0.07[✓]

May 2, 1902

TH

Left

9 04 25 325.3
 641.5
 156.5
 240.4

99.2[✓]
 839[✓]
 183.1[✓]
176.9 - 0.06[✓]

0606 335.3
 57.6
 145.0
 249.3

82.3
 104.3
 186.6 - 0.13[✓]
173.4 mean = + 0.01[✓]

Right

08
~~26~~ 26 238.9
 335.3
 68.0
 146.8

96.4[✓]
 78.8[✓]
175.2 + 0.09[✓]

251.2

9 10 45 324.7
 32 42 56.1
 9 08 10 155.2
 5- 2 14

73.5[✓]
 99.1[✓]
172.6 + 0.14[✓]

14 05 56 H.M.T.

5872.5874⁺

5872.2633

+ 0.3241

May 2, 1902

clds.

IV

Right clds

~~338~~ 57.4

9 2037 158.3
244.6
335.0

100.9 ✓
90.4 ✓
191.3
168.7

- 0.21 ✓

64.40

22 38 148.8
236.1
339.1

148
1030
1878
1722

- 0.18 ✓

Left

321.2

2455 71.8
150.2
246.5

110.6
96.3
206.9
152.1

- 0.51 ✓

328.2

9 2705 67.8
1515 140.1

99.6
111.9
211.5
148.5

- 0.56 ✓

923 44 252.0

5- 214

14 21 30 9.14.1

5872 5922

5872 2633

+ 0.3349

- 0.60 ✓

May 2, 1902

V

Left
 9 29 15 ~~328.7~~ 74.9

149.3
 246.9

113.2

97.6
 210.8

1149.2 - 0.59^v

30 35 328.7
 68.8

140.0
 253.2

1031

113.2
 216.3

143.7 - 0.70^v

Right

2470

34 03 340.5

61.0

153.9

103.3

929
 206.2 - 0.50^v

153.8
 - 0.43^v

2424

9 36 30 335.4

130 25 53.8

9 32 39 159.86

5-2 14

14 30 25

5872.6045

5872.2633

+0.3412

PA. = 199.5⁵ Ver K

HA. = 11:45

Dec = +81.1

ST = 12:39

Sp Wr = 6.5 B + 7.3C

930

105.8190.8 - 0.36^v161.2

Troubled by clouds
 in last two groups
 and especially so in
 4th group. During first
 3 groups sky pretty clear
 and fairly so in last group

May 2, 1902

3 Hyaee with
Phot T 6" cap.

18 45 + 33.2
13 35
5 00
7 00

Cloudy

~~1055~~ Too dark over region of 3 Hyaee
1100 stars varying constantly impossible
to take it satisfactorily

Ledgend

Plotted

Tested

May 3, 1902 (Saturday)

BCC 1182
10 08 43.0

Ball 103
10 06 50

Cs Watch = 12 sec fast at 10:07

R Lyrae WCh.

$$\begin{array}{r} 6 \ 50 \ + \ 5 \ 5.1 \\ 1 \ 3 \ 30 \\ \hline 6 \ 40 \end{array}$$

Var vary ft in this shy &
ob. doubtful as near as
can be estimated (to be looked at
again if possible)

¹⁰
\$ 44f

± 4 var 1 u

$$\begin{array}{r} 1386 \\ 1368 \\ \hline 1377 \end{array}$$

S Librae

$$\begin{array}{r} 14 \ 50 \ - \ 7.8 \\ 13 \ 50 \\ \hline 1 \ 00 \end{array}$$

Abandoned

V Virginis WCh

$$\begin{array}{r} 13 \ 23 \ - \ 2.2 \\ 13 \ 53 \\ \hline \end{array}$$

~~172~~

May 3, 1902.

V Virginis well.

11 28

w 3 var 1X 13.51

star X added tonight w 4X

There are several faint stars
~~near~~ not far from the variable
 which are not on Heger's chart.
 Var. thought to be certainly identical
 although very faint.

Lead Plot Post.

May 5, 1902 Sunday

340.1182
704.320

Ball 123
7.01.00

C's watch = 14.5 sec fast at 7:02
Σ 3124 C. B. 123

Phot. R.

PA = 240°

Dist = 0.6 ±

Magn = 4.9 - 7.4

14.12 + 52.0

10.22

3.50

8.10

well

~~Left~~

294.8 < 60 dis

7 23

340.7

45.9 ✓

113.8

42.8 ✓

156.6

88.7 - 1.95 ✓

294.6

-1.96

336.2

41.6 ✓

112.2

40.4 ✓

158.6

88.0 ✓ / 1.97 ✓

Reversed.

Mean = -2.03 ✓

202.5

248.7

46.2 ✓

26.8

37.4 ✓

64.2

83.6 ✓ - 2.09 ✓

208.1

243.4

35.3 ✓ - 2.10 ✓

21.3

48.1 ✓

69.4

83.4 ✓ - 2.10 ✓

7 31

7 27

12.49 M.

3475

May 5, 1902.

$$\begin{array}{r}
 14 \ 12 \ 45 \ 20 \\
 10 \ 42 \\
 \hline
 3 \ 30 \\
 8 \ 30 \\
 \hline
 \hline
 \end{array}$$

Phot R.

Alt = 200° Dist = $0.5 \pm$ Inequs. = $30 - 8.7$

38.3

8 04 50.1 br. dis

216.4

228.4

34.9

48.2

214.5

227.3

Reversed

304.2

315.8

125.3

137.0

304.8

8 12 316.2

8 08 125.1

13.1 9m. 137.1

5875.

P. Cowie

W. O. O.

12 25 - 16.0

10 55

1 30

10 30

11.8 ✓

12.0 ✓

23.8 ✓

- 4.91 ✓

13.3 ✓

12.8 ✓

261 ✓

- 4.81 ✓

- 4.71 ✓

Mean = - 4.88 ✓

11.6 ✓

11.7 ✓

23.3 ✓

- 4.96 ✓

11.4 ✓

12.0 ✓

23.4 ✓

- 4.96 ✓

- 4.95 ✓

May 5, 1902

R Aurigae Wcb

5 3 + 53.0

11 43

6 40

9 00

2 2.5 2.52

$$\begin{array}{r} 13.51 \\ 13.37 \\ \hline 13.44 \end{array}$$

St. Virginis Wcb

13 24 - 5.5

12 10

$$\begin{array}{r} 1 14 \\ 10 46 \\ \hline \end{array}$$

$$\begin{array}{r} 11.92 \\ 11.99 \\ \hline 11.96 \end{array}$$

9 23

t 4 var 0.5 u

R Comae Wcb

11 53 + 20.2

$$\begin{array}{r} 12 33 \\ \hline 0 40 \end{array}$$

9 43

t 4 var 1 u

$$\begin{array}{r} 12.93 \\ 12.85 \\ \hline 12.89 \end{array}$$

Wcb

W Her.

Wcb

16 34 + 3.6

16 32 + 37.8

13 00

12 58

3 34

3 34

8 268 26

$$\begin{array}{r} 11.80 \\ 11.75 \\ \hline 11.86 \end{array}$$

10 43

t 2 var 1.2

May 5, 1902

Phot T.

X Caveri.

W 002

8 38 + 17.4

9.5" cap.

13 23

1045

Above

C's watch used & ~~5~~ 0 sec fast
at 10:30

10 340 265.3
307.2
83.7
134.2

← vards

41.9[✓]
50.5[✓]
92.4[✓] - 1.80[✓]

260.6

313.6

85.8

128.4

Below

143.7

~~221.7~~

349.0

46.4

53.0[✓]

- 1.81

42.6[✓]95.6[✓]

- 1.77

Mean = - 1.69[✓]48.0[✓]57.4[✓]105.4[✓]- 1.53[✓]

170.0

- 1.57[✓]54.6[✓]47.5[✓]102.1[✓]- 1.61[✓]

10 44.0

224.6

10 39.0

355.0

5 - .1

42.5

15 38.9

9. M.T.

5875.652

May 5, 1902

Same Again

Below

10 46.0

173.1

222.4

351.8

44.8

49.3

53.0

107.3 - 1.60

170.4

225.4

354.0

42.2

55.0 - 1.59

48.2

103.2 - 1.58

Above

86.4

129.4

262.5

313.3

43.0

50.8

93.8 - 1.81

Mean = -1.69

88.1

135.3

265.4

307.8

53.2

42.8

95.3 - 1.77

10 58.0

10 52.0

5 - .1

15 51.9

5875.661

RA = 18.2 Ver B

Dec = +17.6

S.T. = 14.12

Ha. = 3.2 West

Sp. Wh. = 15.2 3.10

Fluxal Mean = -1.69

L.P.P.

May 6, 1902 (Tuesday)

B9C1182
8 35 08.0

Bull 123
8 31 08

Ci watch is 10.5 low at 8:32

	$\pm 29^{\circ}$	WCh.
Phot R	16 17 + 34.0	
PA-160°	<u>11 57</u>	
	4 20	
Dist-6'±	<u>7 40</u>	
Magn. 4.8-5.1		

N pres. assumed the brighter.

PA. best made through clouds.

9 05 Stars now gone

9 10 cld. stars invisible in finder and practically so in photometer.

9 30 Clouds came in thick and now thick everywhere no chance for any work.

May 7, 1902 (Wednesday)

BOC 1182

Ball 103

7 08 34.0

7 04 00

Cs watch 0.5 fast, at 7.00

Prot R $\Sigma 1884$ Wob
 14 46 + 19.6
 10 30
 4 16
7 44

7 15 clouds.

7 20 clouds

7 25 Utterly impossible to get this double.

Prot R $\Sigma 3124$ i Bootis (Wob)
 i. s. the one measured on May
 5, 1902

14 12 + 52.0
 10 42
 3 30
 3 30
6 00

This one measured measured is
 the N. Prec. of the two doubles in
 question. They being distant a little
 over $\frac{1}{2}$ in direct line
 clouds thick

7 35

7 40

clouds thicker

May 7, 1902

Σ 3124 see prev. page

Cs watch used.

R 41.0

294.5 < br. dis.

332.7

112.7

156.0

38.2 ✓

43.3 ✓

81.5 ✓

- 2.15 ✓

290.4

337.8

115.7

155.8

47.4 ✓

40.0 ✓

87.4 ✓

- 2.06 ✓

- 1.98 ✓

clouds

Reversed.

Mean = - 2.10 ✓

207.7

240.2

21.1

68.2

32.5 ✓

47.1 ✓

79.6 ✓

- 2.21 ✓

201.2

248.0

25.6

63.0

46.8

37.4 ✓

84.2

- 2.14 ✓

- 2.07 ✓

749.0

745.0

5

12.45 - 9 M.T.

5877.

May 7, 1902

U Cephei WCB

Phot T. 0 50 + 81.1
 11 20
 10 30

8 08 Clouds thick; no stars visible
 in the finder or large telescope

8 18 Sky thickly cloudy everywhere no stars
 visible in telescope or finder

8 27 No stars visible in telescope or finder. clouds
 thick.

8 33 " " " " " "

8 43 " " " " " "

8 50 " " " " " "

8 55 Impossible to do anything on U Cephei
 therefore abandoned.

E 29 I

WCB

Phot R. 16 17 + 34
 12 13
 26 04

PA 160° 7 56

Dist 6' ±

Magn 4.8 - 5.1

9 05 clouds thick stars gone

9 15 now growing still worse & no chance for
 anything more

May 8, 1902 (Thursday)

POCNS ~~Butt 123~~
 710 490 706 00.
 CS watch = 11 sec. slow at 7:07

Phot R. $\frac{1}{2}$ 3124 Well
 14 12 + 520

PA. 240
 Dist. 0.6 ±
 Magn. 49-7.4

10 35
 3 37
 8 23

7 27 203.1 < br. dis
 248.8
 25.3
 64.3

45.7 ✓
 39.0 ✓
 84.7 ✓ - 2.06 ✓

206.7
 243.4
 23.7
 69.1

36.7 ✓
 45.4 ✓
 82.1 ✓

-2.10

2.13

Mean = -2.12

Revised

296.7
 333.7
 111.2
 159.3

37.0 ✓
 48.1 ✓
 85.1 ✓ - 2.05 ✓

7.39
 7.33
 12.6 ±
 4. M.T.
 5878

292.7
 336.8
 116.1
 151.2

44.1 ✓ - 2.14 ✓
 35.1 ✓
 79.2 - 2.22 ✓

May 8, 1902

Phot - R Mrs. Min Wells

$$\begin{array}{r}
 16 \quad 344 + 72.9 \\
 \hline
 11 \quad 24 \\
 \hline
 5 \quad 10 \\
 \hline
 6 \quad 50
 \end{array}$$

Left

$$\begin{array}{r}
 85.3 < \text{comp} * \text{dis} \\
 129.2 \\
 257.75 \\
 \hline
 315.2
 \end{array}$$

$$43.9^{\circ}$$

$$\underline{57.7}$$

$$101.6 + 1.62^{\circ}$$

$$+ 1.67^{\circ}$$

$$81.3$$

$$135.8$$

$$266.2$$

$$309.0$$

Right

$$351.8$$

$$41.9$$

$$164.6$$

$$229.3$$

$$344.8$$

$$49.3$$

$$172.6$$

$$220.4$$

$$13 \quad 18.2 \quad 4 \text{ m.c.}$$

$$587.6$$

$$54.5^{\circ}$$

$$42.8$$

$$97.3$$

$$+ 1.72^{\circ}$$

$$\text{Mean} = + 1.52$$

$$50.0$$

$$54$$

$$61.7^{\circ}$$

$$101.7^{\circ}$$

$$+ 1.38$$

$$64.5^{\circ}$$

$$48.1$$

$$112.6$$

$$+ 1.37$$

$$+ 1.36$$

May 8, 1902

Right

352.2
743.2 5

824.0 166.6
229.1

51.3
62.5
113.8 + 1.33 ✓

348.3
47.4
172.0
224.0

59.1
52.0
111.1 + 1.39 ✓

+1.36 ✓

Left

266.1
309.8
76.3
136.3

40.7
60.0
100.7 + 1.64 ✓

Mean = +1.48 ✓

254.9

+1.61

832.0 317.0
838.0 86.4
5 + 0.2 127.4

62.1
41.0
103.1 + 1.58

13 38.2 E.M.T.

that means +1.50

5878. $R_1 = 141.0 \text{ V } 13$

$SET = 11.57$

$Dec = +72.4$

$Ha = 10.36 \text{ East}$

$\% \text{ wh} = 2.513 \text{ } 8.5 \text{ } 0$

May 8, 1902

S Hydrae Wlch

$$\begin{array}{r}
 841 + 3.08 \times 50 + 2.1 \\
 \underline{12 \ 22} \\
 3 \ 41
 \end{array}
 \qquad
 \begin{array}{r}
 12 \ 18 \\
 \underline{ 3 \ 28}
 \end{array}$$

$$\begin{array}{r}
 12.58 \\
 \underline{12.62} \\
 12.60
 \end{array}$$

9 15

9 3, var 22

T Herculis Wlch

$$\begin{array}{r}
 18 \ 2 + 30.5 \\
 \underline{12 \ 42} \\
 5 \ 20 \\
 \underline{6 \ 40}
 \end{array}$$

$$\begin{array}{r}
 12.71 \\
 \underline{12.81} \\
 12.76
 \end{array}$$

9 32

2 3, 11.52

R Cygni Wlch

$$\begin{array}{r}
 19 \ 26 + 51.4 \\
 \underline{13 \ 02} \\
 6 \ 24 \\
 \underline{5 \ 36}
 \end{array}
 \qquad
 \begin{array}{r}
 19 \ 33 + 49.8 \\
 \underline{12 \ 56} \\
 6 \ 37 \\
 \underline{5 \ 23}
 \end{array}$$

$$\begin{array}{r}
 12.79 \\
 \underline{12.66} \\
 12.72
 \end{array}$$

9 50

25 ~~3.5~~ 41 var 18

May 8 1902

β Cygni W.O. b.
 20 8 + 57.2

$$\begin{array}{r}
 13 \quad 15 \\
 \hline
 6 \quad 53 \\
 5 \quad 07 \\
 \hline
 11 \quad 60
 \end{array}$$

1.0 15 stars α, β, γ all seen.
 Variable not certainly seen.
 In fact not much suspected.

$t = 2 \quad \underline{21}$

~~14.5~~

Phot 7 β Lyrae W.O. b.

18 45 + 33.2 6" cap

above

$$\begin{array}{r}
 13 \quad 40 \\
 \hline
 5 \quad 05
 \end{array}$$

Cap not used.

87.1

55 05

10 270 126.1 < Vardis 6 55

$$\begin{array}{r}
 39.0 \checkmark \\
 30.9 \checkmark \\
 \hline
 69.9 - 2.51 \checkmark
 \end{array}$$

242.5

303.4

92.8

$$\begin{array}{r}
 30.0 \checkmark \\
 \hline
 39.8 \checkmark
 \end{array}$$

122.8

$$\begin{array}{r}
 39.8 \checkmark \\
 \hline
 69.8 - 2.51 \checkmark
 \end{array}$$

268.4

308.2

Mean = -23.8

Below

353.5

40 39.5

180.3

214.3

$$\begin{array}{r}
 44.0 \checkmark \\
 35.0 \checkmark \\
 \hline
 79.0 - 2.22 \checkmark
 \end{array}$$

112

$$\begin{array}{r}
 33.7 \checkmark \\
 \hline
 43.6 \checkmark
 \end{array}$$

10 42.0 34.9

10 69.0 176.8

5 34.5

5 40.2 220.4

10 34.7

5878.649

5878.649

5867.506

+11.093

77.3 - 2.28

May 8, 1902

Same Again

Below

10 45.3

355.3

38.2

180.5

214.2

42.9

33.7

76.6 - 2.30

1.4

358

176.4

220.9

Above

269.9

~~306.0~~ 308.6

91.3

221.7

34.4

44.5

78.9 - 2.23

Mean = -2.40

38.7

30.4

69.1 - 2.54

10 57.0

1025

10 51.2

540.2

15 51.4

5878.66

5867.556

+11,104

272.0

302.6

868

125.9

30.6 - 2.53

39.1

69.7 - 2.52

Final Mean = -2.39

PQ. 12.7 Vink

S.T. 14.22

Dec. +33.0

Spwh ~~-0.5A + 1.5~~ -0.5A + 0.5B, +1.1C

Aa 4.26 East

May 8, 1902.

Des. Jup. # I. Phot. R.

W. Obs.
Cobson Recorder.

Compared with sot. on preceding = sot III

14 16 09 [*]	14 15 47		96.4
- 4 49 ⁺	16 03	A 5.6	182.0
14 11 20	17	A 2.0	98.5 ¹
	28	A 3.2	180.5
	42		97.5
17 00 ^x	55	A 3.5	181.0
4 49	17 05	A 4.0	96.0 ²
14 11 ⁺	16	A 3.8	180.0
	33		97.5
17 56 ^x	52	A 2.6	180.1
4 49	18 02	A 2.0	99.8 ³
13 07	15	A 1.3	179.8
	30		97.7
14 46 ^x	40	A 1.3	179.0
4 49	53	79.9	98.1 ⁴
13 57 ⁺	19 03	A 0.6	178.0
	20		102.0
19 36 ^x	30	78.1	180.1 ⁵
4 49	41	79.0	100.0
14 14 47 ¹			

May 8. 1902

14 20 32 ^x	52	179.8	✓
4 49	05	102.2	
<u>14 15 43^x</u>	32	75.0	177.2
	42	79.8	101.2
	51	77.4	181.0
21	03	100.0	

21 24 ^x	17	72.8	178.8	
4 49	30	75.7	102.5	7
<u>16 35^x</u>	46	77.2	178.2	
	58		101.9	

22 16 ^x	22	10	77.8	179.7	
4 49	23	78.8	100.7		2
<u>17 27</u>	35	78.3	179.5		
	43		101.8		

23 03 ^x	53	79.2	181.0	
4 49	23	13	77.4	101.1
<u>18 14^x</u>	24	<u>78.3</u>	178.5	9
	<u>35</u>		<u>102.1</u>	

23 50 ³	45	76.9	179.0	
4 49	59	78.9	101.1	10
<u>19 01</u>	24	<u>09</u>	<u>77.9</u>	180.0

Mixed numbers slightly with distinct 6

Moved images slightly with respect to Jux.

2x 42	22		99.0	
4 49	34	81.0	180.0	
<u>19 53</u> ^x	49	<u>80.0</u>	100.0	11
	25	03	<u>80.5</u>	180.0

2535 ^x	17	99.0	
449	28	20.0	20.0
<u>2046^x</u>		78.8	179.8
			<u>20.4</u>
			22.6

May 8. 1902

159

14 26 16 "

4 49 "

14 21 27

21 51 "

22 02 "

09 "

18 "

27 "

37 "

46 "

55 "

23 03 "

11 "

24 "

32 "

42 "

57 "

24 10 "

19 "

31 "

47 "

14 30 11 "

4 49 "

14 25 22

40

56

26 03

10

20

30

40

51

58

27 07

16

26

35

44

52

28 00

13

21

31

40

46

59

29 08

20

36

Not seen later
 Limit of visibility

30 55

05

16

29

100

~~180.7~~

179.1

102.0

74.0 176.0

74.8 102.2

74.4 177.0

75.2 101.7

72.5 176.9

70.3 104.4

69.7 174.7

57.2 105.0

65.5 104.0

64.4 108.0

61.9 173.5

61.5 109.1

61.4 171.0

59.4 109.5

58.0 170.9

55.0 111.5

46

51.0 166.5

45.6 115.5

34.2 161.1

31.3 122.9

154.2

124.1

32.4 156.5

29.8 125.2

31.1 155.0

May 8. 1902.

Jup. rather low. Seeing somewhat
hazy and settings a little difficult.

B. & C. 11A2.

14	3A	49.0
	39	44.7
	40	44.5

Ballou 103.

14	34	0.0
	35	0.0
	36	0.0

L. P. P.

May 9, 1902 (Thursday)
 Ballou 103 B+C. 1142.
~~B+C. 1182~~ ~~Bull 103~~
 7 04 50 7 08 57.0

C's watch = 20 sec slow at 7:04

Phot R $\pm 28^{\circ}$ WCO62
 15 20 +37.8
 10 45
435
725

PA 165°
 Dist 1.6 ±

Magn. 4.0-5.6

C's watch used

20 6.2 2 br chs

25 1.6

25.3

69.3

203.3

248.3

23.3

69.3

Reversed.

111.3

156.9

291.7

336.9

110.3

155.7

292.4

336.1

45.4 ✓

44.0

89.4 - 1.93 ✓

45.0 ✓

46.0 ✓

910 - 1.89 ✓

Mean = -1.92

45.6 ✓

45.2 ✓

908 - 1.89 ✓

45.4

43.7

89.1 - 1.94

May 9, 1902

Phot T. Librae with
 14 55 - A.1
 110 2A 6" cap.
 above
~~left~~ = 3 27
 8 33

16A.5 < var. dis

8 24 54 236.1

337.9

57.0

64.6^v49.1^v146.7^v - 0.62^v

159.1

27 28 237.0

347.2

46.6

77.9^v - 0.72^v59.4^v

137.3 - 0.83

Below

mean = -0.92^v

31 31 83.7

135.5

252.2

321.7

51.8^v69.5^v121.3^v - 1.16^v8 33 40 450
146.3

117 33 260.4

8 29 23 314.1

5 - 4 58

13 24 25 9.M.T.

5879.5586⁺

77.2768

+ 2.2818⁺

79.5586

79.6046

- 0.0460

71.3^v - 1.12^v53.7^v125.0 - 1.08^v

May 9, 1902

II

Below

$$\begin{array}{r}
 8 \ 36 \ 40 \ 82.7 \\
 134.7 \\
 252.0 \\
 324.0 \\
 \hline
 52.0 \\
 72.0 \\
 \hline
 124.0 \quad -1.11 \checkmark
 \end{array}$$

$$\begin{array}{r}
 72.0 \\
 3820 \ 145.3 \\
 260.3 \\
 313.1 \\
 \hline
 73.3 \\
 52.8 \\
 \hline
 126.1 \quad -1.08 \checkmark \\
 \quad \quad -1.06 \checkmark
 \end{array}$$

Above

Mean = -0.93

$$\begin{array}{r}
 43 \ 20 \ 347.3 \\
 48.3 \\
 160.9 \\
 236.9 \\
 \hline
 61.0 \\
 76.0 \\
 \hline
 137.0 \quad -0.83 \checkmark
 \end{array}$$

$$\begin{array}{r}
 846 \ 00 \ 339.3 \\
 56.9 \\
 16420 \ 163.1 \\
 841052297 \\
 \hline
 77.6 \\
 64.6 \\
 \hline
 142.2 \quad -0.78 \checkmark \\
 \quad \quad -0.73 \checkmark
 \end{array}$$

5-458

13 36 07 G.M.T.

$$\begin{array}{r}
 5879.566 \checkmark \\
 77.276 \checkmark \\
 \hline
 2.2900 \checkmark \\
 \quad \quad 79.566 \checkmark \\
 \quad \quad 79.6046 \\
 \hline
 \quad \quad -0.037 \checkmark
 \end{array}$$

May 9, 1902

~~111~~

Above

$\begin{array}{r} 348.1 \\ 44.7 \\ 159.0 \\ 239.2 \end{array}$
 $\begin{array}{r} 59.6 \\ 80.2 \\ \hline 139.8 \end{array}$
 -0.78^{\vee}

$\begin{array}{r} 337.9 \\ 56.1 \\ 166.9 \\ 228.3 \end{array}$
 $\begin{array}{r} 78.2 \\ 61.4 \\ \hline 139.6 \end{array}$
 -0.78^{\vee}

Below

Mean = -0.95

$\begin{array}{r} 258.7 \\ 314.2 \\ 74.4 \\ 143.8 \end{array}$
 $\begin{array}{r} 55.8 \\ 69.4 \\ \hline 124.9 \end{array}$
 -1.09^{\vee}

254.2

-1.12

$\begin{array}{r} 9\ 05\ 02 \\ \hline 2\ 00 \end{array}$
 $\begin{array}{r} 322.0 \\ 82.6 \\ \hline 136.5 \end{array}$
 $\begin{array}{r} 67.8^{\vee} \\ 53.9 \\ \hline 121.7^{\vee} \end{array}$
 -1.16

5-14 5A

13 55 52 A.M.T.

$\begin{array}{r} 5879.5805 \\ 27.2768 \\ \hline 2.3037 \end{array}$
 $\begin{array}{r} 79.5805 \\ 79.6046 \\ \hline 0.0241 \end{array}$

May 9, 1902

IV

Below

9

260.8

9 13 55

316.5

45.0

146.2

53.7

71.2

126.9

-1.04 ✓

251.5

16 20

324.1

82.8

134.7

72.6

51.9

124.5

-1.07 ✓

-1.10 ✓

Above

Mean = -0.88 ✓

166.8

19 45

230.8

335.2

55.8

64.0

80.6

144.6

-0.68

154.0

-0.70

9 21 55

236.5

30 55

345.9

9 17 44

48.5

5 = 4.58

79.5

62.6

142.1

-0.73

14 18 46 G.M.T.

5879.5923

79.5923

77.2768

79.6046

+ 23155

00123

May 9, 1902

IV

Above

9 30 25 163.1
229.7
337.5
54.6

66.6
77.1
143.7 - 0.70 ✓

#

159.3
34 00 237.1
344.1
47.7

77.8
63.6
141.4 - 0.75 ✓

-0.72 ✓

Below

81.4

37 15 134.1
250.2
322.4

52.7
72.2
124.9 - 1.09 ✓

748

9 39 35 143.1

68.3 - 1.12 ✓

31 15 260.9

54.2
122.5 - 1.14 ✓

9 37 49 315.1

5 - 4 58

14 32 51 2 mt.

3879.6061 *

29.6046 *

0.0015

May 9, 1902

VI

Below

9 5635 81.6
134.6
254.8
319.4

5
850
64.6
117.6 - 1.25 ✓

9 5910 77.3
141.6
262.4
313.2

64.3
50.8
115.1 - 1.28 ✓
- 1.30 ✓

Above

10 0230 347.9
44.2
162.3
231.5

Mean = -1.14 ✓
56.3
69.2
125.5 - 1.07 ✓

341.6

-0.99 ✓

10 0440 53.4
255 166.0

10 0044 227.6

5 - 458

14 55 46 A.M.T.

5879.6221 *

79.6046 *

+ 0.0175

71.8
61.6
133.4 - 0.91

May 9, 1902

VII

above

10 13 40
 347.0
 47.6
 158.6
 232.6

60.6
74.0
 134.6

- 0.88 ✓

17 55
 341.2
 52.6
 178.6
 228.0

71.4
49.4
 120.8

- 1.03 ✓

- 1.18 ✓

Below

21 30
 264.3
 311.6
 75.7
 141.0

47.3
65.3
 112.6

- 1.36 ✓

Mean - 1.28 ✓

10 24 20
 255.5
 316.2
 84.5
 77 25
 10 19 21 131.2
 5 - 4 58

60.7
46.7
 107.4

- 1.42 ✓

- 1.48 ✓

15 14 23 8 mt.
 5879.6350
79.6046
 0.0304

May 9, 1902

VIII

Below

2642
 10 2920 7313.3
 80.2
 140.3

49.1
 60.1
 109.2 — 1.44^v

255.8
 3120 316.6
 86.3
 133.2

60.8
 46.9
 107.7 — 1.46^v
 107.7 — 1.47^v

Above

Mean 1.27^v

169.0
 3430 225.0
 342.0
 51.8

56.0
 69.8
 125.8 — 1.07^v

162.3
 10 37502 33.0
 133053 50.2
 10 3316 43.8
 5 = 4.58

70.7^v — 1.08^v
 536^v
 124.3 — 1.10^v

15 2818 9.111 T.
 5879.6446
 796046
 0.0400

May 9, 1902

IX

Above

10 49 30

170.2

224.4

346.4

50.3

54.2

63.9

118.1

-1.23 ✓

163.3

52 55

233.4

350.2

42.2

70.1

52.0

122.1 - 1.14 ✓

-1.18 ✓

Below

56 25

85.4

133.4

259.4

318.4

48.0

59.0

107.0 - 1.49

Mean = -1.34 ✓

10 58 25 79.2

137.8

217 15 26 5.5

10 54 44 31 2.5

5 - 4 59

15 49 45 9.M.T.

5879.6596

79.6046

0.0550

58.6

47.0

105.6 - 1.52 ✓

-1.50 ✓

May 9, 1902

Clouds

Below

85.7

1114.0 129.8

258.0

316.0

77.6

1625 134.8 clouds

2

3

Above

over

May 9, 1902

X

Below

11 23 35 268.4
309.2
81.3
134.3

40.8 ✓
530 ✓
938 ✓ - 1.81 ✓

- 1.80

26 30 259.6
313.7
86.6
127.7

54.1 ✓
41.1 ✓
95.2 - 1.78 ✓

Above

mean = -1.73 ✓

29 40 174.4
298.2
355.7
48.2

46.5 ✓
525 ✓
990 ✓ - 1.68 ✓

166.0

- 1.66 ✓

11 3200 2.202
111 45 354.8

54.2

11 27 56 41.4
5-4 59

46.6

100.8

- 1.64 ✓

PA = 242.5 ✓

HA = 0.0

Dec = 8.1

M.T. = 14.57

Sph. = 45 B 55 C

Ball 103 130 C 112

11 44 00 11 49 0.8

May 9. 1902.

B.C. 1122.

11	54	59.1
	59	59.0
12	1	54.7

Ballou 103.

11	54	0.0
	55	0.0
	57	0.0

L.P.P.

May 10, 1902 (Saturday)

130C 118.2
8 20 11.0Ball 103
8 15 00

O's watch = 29 sec fast at 8.15

Phot R. $\pm 29^{\text{I}}$

W. Ch.

16 17 + 34.0

11 5.2

4 25

7 30P.A. 165°
Dist. 6.1

Magna. = 4.9 - 5.1

8 30 - Sky pretty cloudy; somewhat clearer
through the zenith

P 38

100.8 < N + br. dis

166.3

65.5

266.8

87.2

354.0

152.7 - 0.52

85.1

175.3

90.2

- 0.48

276.5

67.2

343.7

157.4 - 0.43

Reversed

~~346.4~~~~114.8~~~~4 cld. thicker~~~~8.0~~~~119.2~~~~39.3~~~~258.5~~~~227.3~~~~132.7~~~~+ 0.92~~

May 10, 1902
 29th Cont.

850	00 78.5 168.3 273.4	78.5 105.1 183.6 176.4	273.4 + 0.50 0.5
Troubled continually by varying clouds. stars changing in relative light and mostly of the time during			
			Mean = +0.01

Reject last half of above group.
 Clouds especially troublesome
 Last half retained below.

Reversed (cloudier)

902 Clouds thicker again

7348.3

95.2	106.9	
176.9	86.3	
263.2 clouds thicker	193.2	
	<u>166.8</u>	+ 0.25
356.6 clds. still thicker		

908	848	88.2	+ 0.34
853	163.0	114.2	
13.99 M.T.	277.2	202.4	
		<u>157.6</u>	+ 0.43

5711. Troubled by clouds but not as much in general or Mean = +0.07 as much relatively as in previous rejected half group.

May 10, 1902

9 15 Cloudier.

$\angle 33^\circ$ W clb.
 Phot R 16 58 + 138
 12 58

 4 00
 8 00

9 35 Clouds thick

9 38 No stars visible in fuder.

9 42 Abandoned Clouds too thick

$\angle 230^\circ$ W clb.
 Phot R. 18 10 + 80
 13 10

 5 00
 7 00

9 48 Clouds too thick & present

10 00 Abandoned too thick
 I try now growing nose upwards
 to get anything better

May 13, 1902 (Tuesday)

187C/182
7 09 15.0

Ball 103
7 03 00

Cs watch = 1 sec slow at 7.00

Phot R $\Sigma 29^{\circ}$ W 06
16 18 + 34.0
10 55

Pl 165°
Dist 6.4
Magna. 4.9-5.1

5.23
6.37
1.14

Cs watch used.

7.33 355.6 \angle N. 86.2 dis.
82.8 87.2^v
175.3 83.0^v
258.3 170.2^v - 0.18^v
357.3
78.2 80.9^v - 0.24^v
174.8 83.0^v
257.8 163.9^v - 0.30^v

Reversed

Mean = -0.33^v

267.3
348.0 80.7^v
80.9 81.1^v
168.0 161.8^v - 0.35^v
268.3
344.3 76.0^v - 0.42^v
88.2 78.8^v
167.0 154.8^v - 0.48^v

Images difficult
due to distance apart
and elongation of
same, but sky
clear.

7.39
7.36

12.6 AM 167.0

5883.

May 13, 1902

Phot T. Nova Persei No. 2. W66
 3 24 + 43.6
 11 24
 8 00

~~93 caps used~~: C's watch used.
 full Aperture
 left

8 22.0 78.7 < Comp * dis

133.2 54.5^v
 262.9 50.4^v
 313.3 104.9^v + 1.54^v

8 3.1 46.1^v + 1.56^v
 129.2 57.4^v
 258.8 103.5^v + 1.57^v
 316.2 Mean = + 1.36^v
 Right

342.9 63.0^v
 45.9 57.8^v
 168.3 120.8^v + 1.18^v
 226.1

349.7 56.1^v + 1.13^v
 8 30.0 45.8
 260 163.7
 5 230.8
 13 260
 588 3.560
 123.2^v + 1.12^v

May 13, 1902

Same Again.

8 33.0
 346.1
~~5~~ 2.2
 169.2
 226.8

66.1
~~57.6~~
 123.7 + 1.11

348.3
 45.4
 166.7
 231.6

57.1
~~64.9~~
 122.0 + 1.13

Left

Mean = +1.37

260.1
 314.8
 84.2
 129.1

54.7
~~44.9~~
 99.6 + 1.67

+ 1.61

8 46.0

264.0
 312.8

48.8

8 37.0

78.9
 134.5

55.6

104.4 + 1.55

Final Mean = +1.36

5

13 37.0

PA = 76.2' Ver B

383.567

HA = 9.06 West

Dra = +43.6

ST = 12:29

Sp. W. 0.5 B. 1.5 B, 2.1 C

Magn = 8.61

Region low, seeing somewhat unsteady but
 extreme care exercised and observations considered
 good.

May 13, 1902

Phot T. 3 Lyrae wells.

6" Cap

18 45 + 33.2

$$\begin{array}{r} 1257 \\ 548 \\ \hline 612 \end{array}$$

C's watch used.

Above

888

9 30.0

127.1

38.3

273.6

29.1

302.7

67.4 - 2.59

92.8

- 2.56

122.3

30.5

267.9

38.8

302.7

69.3 - 2.53

Below

mean - 2.36

354.6

38.5

43.9

180.5

37.8

218.3

81.7 - 2.14

358.6

34.7

36.7 - 2.16

175.8

44.4

220.2

80.5 - 2.18

9 38.8

9 184.4

5

14 344

5883.607

5888.472

+ 3.135

May 13, 1902
Same Again.

Below—

9 40.6
354.7
38.4
178.8
215.6

43.7 ✓
36.8 ✓
80.5 ✓ — 2.18 ✓

358.3
35.3
174.6
219.2

370 ✓
44.6 ✓
81.6 ✓ — 2.16 ✓
— 2.15 ✓

Above

268.6
306.7
94.0
122.0

38.1 ✓
28.0 ✓
66.1 ✓ — 2.64 ✓

mean = -2.35 ✓

9 48.0
274.0
303.6
84.2
9 44.3
5
14 44.3

29.6 ✓
42.2 ✓
71.8 ✓ — 2.45 ✓

-2.54 ✓

5883.614 PA = 12.5 Tris
5880.472 Ho = -5.14 list
+ 3.1 42.1 T = 13.32

Final Mean = -2.36

Dec = +33.1

Sp. Vel. = -0.5a + 0.5b + 1.1c

May 13, 1902

X Cygni

19 41 + 334

2566

Phot T. $\frac{13 \ 51}{5 \ 50}$
6 10

10 25

5 1 var 47

12.02

C's watch used.

Above

11 00.0 7.2 < comp + dis 21.2 ✓

28.4

184.9

209.6

4.9

29.6

184.8

208.8

Below

279.0

295.8

98.2

120.5

247 ✓

45.9 + 3.46 ✓

247 ✓ + 3.46 ✓

21.0 ✓

45.7 + 3.47 ✓

Mean = +3.67 ✓

16.8 ✓

223 ✓

39.1 + 3.82 ✓

+3.88 ✓

20.8

16.1

36.9 + 3.95 ✓

11 06.8

11 034

5

16 034

5883.669*

275.5

296.3

99.8

115.9

4. m.t.

May 13, 1902

Below

11 10.0

~~2~~ 9.2

295.6

99.1

118.8

16.4

198

362 + 3.99✓

277.3

298.3

100.0

116.0

21.0✓ + 3.96✓

16.0
37.0✓ + 3.94✓

Above

Mean = -3.76✓

187.5

206.8

55

29.6

19.3✓

24.1✓ + 3.59✓

43.4

+ 3.56✓

184.3

208.9

7.0

27.0

24.6✓

20.0✓ + 3.53✓

44.6

11 17.6

11 13.8

5

16 13.8 9.7 m.t.

5883.676+

May 13, 1902

III

Above

A.O

1124.0

27.3

185.5

208.8

19.3

23.3

42.6

+ 363

5.7

29.3

187.6

208.9

23.6

+ 3.57

21.3

44.9

+ 3.51

Below

Mean = +3.72

279.6

296.6

97.4

117.4

17.0

29.0

37.0

+ 3.94

276.3

297.6

98.6

116.3

+ 3.88

21.3

17.7

39.0

+ 3.82

11 32.4

11 28.2

5

16 28.2

5883.686

PA = 206.2 MB

HA = -4.33 East

Dec + 32.4

S.T. 14.15

S/W 4.5A, 5.3B, 6.1 C

Final mean = +3.72

11 40

see lot of next page

May 13, 1902

Variable faint & rather difficult
in phot. but core exposed & obs.
considered good.

L. P. P.

May 14, 1902 (Wednesday)

Bol 1182
7 21 49.5

Bull 103
7 15 00

Cs watch = 12 sec fast at 7:15

Phot R.	$\Sigma 1888$	20 Cls
	14 46	+19.6
	11 06	
	<u>3 40</u>	
	<u><u>20</u></u>	

7 15⁻ Cloudy
7 30⁻ "
7 45⁻ Cloudy

Too cloudy in this region
abandoned

Phot R.	$\Sigma 2308$	20 Cls
	18 9	+80.
	11 49	
	<u>6 20</u>	
	<u><u>5 40</u></u>	

8 15⁻ clbs stars gone

abandoned: too cloudy

May 14, 1902

Σ 872

WCB

6 7 +36.2

$$\begin{array}{r} 12 \ 27 \\ \hline 6 \ 20 \end{array}$$

8 50

Clouds thick

Abandoned too cloudy
for any work.

9 10

Clouds thick everywhere.

May 15, 1902 (Thursday)

BOC 112

Bull 103

7 08 07.5

7 01 00

Cs watch = $\frac{6}{7.5}$ sec fast at 7:01

Phot R

$\pm 29^{\circ}$

WOB

16 14 + 34.0

11 00

5 18

6 42

PA 165°

Dist 6' ±

Magn 4.9 - 5.1

Cs watch used

IP 2.7 < N. 0.62 dia

7 36

267.2

84.5^v

- 0.0

86.9^v

86.9

171.4^v - 0.16^v

148.7

265.2

86.5^v - 0.13^v

357.2

88.2^v

85.4

174.7^v - 0.10^v

Reversed

mean = -0.32^v

93.2

167.3

74.1^v

269.3

77.6^v

3469

151.7^v - 0.54^v

90.4

7 44

166.9

12.7 S.M.T. 2 69.0

5885

3470

56.5^v - 0.52^v

78.0^v

154.5^v - 0.49^v

May 15, 1902

Phot T. R. Coronae

wob.

$$\begin{array}{r}
 15 \quad 42. + 28.6 \\
 11 \quad 32 \\
 \hline
 3 \quad 50 \\
 \hline
 A \quad 10
 \end{array}$$

7' Cap

Left

$$\begin{array}{r}
 8 \quad 18.0 \quad 25.9 \quad < \text{var dis} \quad 43.0^{\checkmark} \\
 128.9 \\
 260.7 \\
 312.8 \\
 \hline
 521^{\checkmark} \\
 95.1^{\checkmark} - 1.78^{\checkmark}
 \end{array}$$

$$\begin{array}{r}
 80.0 \\
 133.1 \\
 267.8 \\
 308.9 \\
 \hline
 53.1^{\checkmark} \\
 41.1^{\checkmark} \\
 94.2^{\checkmark} - 1.80
 \end{array}$$

Mean = -1.60

Right

$$\begin{array}{r}
 352.6 \\
 42.1 \\
 166.2 \\
 227.2 \\
 \hline
 49.5^{\checkmark} \\
 61.0^{\checkmark} \\
 110.5^{\checkmark} - 1.41^{\checkmark}
 \end{array}$$

348.3

$$\begin{array}{r}
 8 \quad 25.0 \quad 48.5 \\
 \hline
 43.0 \quad 172.8
 \end{array}$$

$$\begin{array}{r}
 A \quad 21.5 \quad 222.8 \\
 \hline
 5-0.1
 \end{array}$$

$$\begin{array}{r}
 1321.4 \quad 9 \text{ M.T.} \\
 \hline
 5885.556
 \end{array}$$

$$\begin{array}{r}
 60.2^{\checkmark} \\
 50.0^{\checkmark} \\
 \hline
 110.2^{\checkmark} - 1.41^{\checkmark}
 \end{array}$$

190

May 15, 1902

Same Again

Right

226.6

352.8

43.2

167.4

230.1

50.4[✓]

62.7

113.1[✓]- 1.35[✓]

346.8

49.4

172.9

223.5

62.6[✓]50.6[✓]113.2[✓]- 1.34[✓]- 1.34[✓]

Left

266.4

310.8

79.8

134.7

44.4[✓]

54.9

99.3[✓]Mean = -1.52[✓]- 1.67[✓]

233.4

60.0

290.4

5 - 0.1

1329.9^{*}

5885.562

289.0⁵

313.8

85.0

128.8

199

199

199

548⁶43.0[✓]94.8[✓]- 1.59[✓]- 1.71[✓]

May 15, 1902

Left

267.8
 309.8
 77.8
 135.8

42.0
 58.0
 100.0

- 1.66^v

260.5
 313.8
 86.9
 129.6

53.3
 42.7
 96.0

- 1.71
 - 1.76^v

Right

173.5
 222.8
 346.9
 47.5

Mean = -1.54^v

49.3
 60.6
 109.9

- 1.42^v

166.7
 47.2
 229.5
 860 359.3
 43.0^x 43.6

62.8
 50.3
 113.1

- 1.38^v
 - 1.35^v

Final Mean = -1.54^v

5 - 0.1
 13 42.9^v RA = 333.5^v VB
 500.572 HA - 3.08 East
 Dec. + 33.6
 S.T. 12.37
 S.P. Wh. { 3.5 B }
 { 4.5 C }

Alt. rather high,
 seeing a little poor.
 obs. somewhat diff.
 but extremes care observed
 obs. considered good.

192

May 15, 1902

26 Ophiuchi w 66.
 Phot T. 17 9 - 0.2
 7" Cap. 12 53
 4 16
 7.44

B & C 11A2 used.

Comp* = the 6.8

Above " " = +1° 34' 11" (6.8)

I

3403 < var dia

9 27 50 53.4 73.1 ✓
 155.4 86.2 ✓
 241.6 159.3 - 0.39 ✓

334.5 - 0.46 ✓

29 45 54.3 83.8 ✓
 162.3 69.0 ✓
 231.3 152.8 - 0.52 ✓

Below

Mean = - 0.60 ✓

256.3 64.2
 32 57 320.5 75.4 ✓
 69.9 139.6 - 0.74 ✓
 141.3

248.3 - 0.74 ✓

9 34 50 324.0 75.7
 125 22 74.3
 9 31 20 141.4 67.1 ✓
 5-7 8 143.8 - 0.70 ✓

14 24 12 4.21
 588.5 - 600.6
 588.5 - 600.6

0.7923
 0.8387
 - 0.0464

May 15, 1902

7" Cap. ~~II~~

Below

9 44 20 $\begin{array}{r} 75.2 \\ 139.8 \\ 250.0 \\ 324.3 \end{array}$

$\begin{array}{r} 64.6 \\ 74.3 \\ \hline 138.9 \end{array} - 0.80$

46 52 $\begin{array}{r} 68.4 \\ 148.56 \\ 254.2 \\ 314.6 \end{array}$

$\begin{array}{r} 77.2 \\ 60.4 \\ \hline 137.6 \end{array} - 0.82$

Above

50 00 $\begin{array}{r} 342.7 \\ 50.3 \\ 154.7 \\ 238.9 \end{array}$

Mean = - 0.70
 $\begin{array}{r} 67.6 \\ 84.2 \\ \hline 151.8 \end{array} - 0.54$

338.2

9 51 55 $\begin{array}{r} 57.8 \\ 193.07 \\ 9 48 17 \\ 5-8 8 230.2 \end{array}$

$\begin{array}{r} 79.6 \\ 68.4 \\ \hline 148.0 \end{array} - 0.61$

14 48 09 G.M.T.

5885.0119

5884.8078

+ 0.8041

0.8387

- 0.0346

May 15, 1902

6" coh. used now

Above

III

9 59 40

~~34~~ 3.7

51.3

160.9

237.8

67.6[✓]76.9144.5 - 0.68[✓]

10 01 30

~~34~~ 9.9

55.5

162.8

231.6

75.6[✓]68.8[✓]144.4 - 0.69[✓]-0.68[✓]Mean - 0.75[✓]

Below

04 22

254.7

320.9

71.6

144.8

66.2[✓]73.2139.4[✓] - 0.79[✓]

10 06 25

252.1

322.6

74.3

139.4[✓]70.5[✓] - 0.82[✓]66.0136.5[✓] - 0.84[✓]

251 57

10 02 59

5 - 8 8

14 55 51

5888.6221

5884.8078

+ 0.8143

- 0.8307

- 0.0244

P.M.T.

May 15, 1902

6" cap

IV

Below

101350 257.3
320.9
69.6
143.2

63.6
73.6
137.2 - 0.83

- 0.92

1538 253.3
321.2
77.0
138.10

67.9
61.0
128.9 - 1.00

mean = -0.78

1907 Above
161.3
231.3
338.2
56.3

70.0
78.1
148.1 - 0.61

102140 156.4
236.0
70.15 345.3

- 0.64

101724 50.3

79.6
65.0
144.6 - 0.68

5-7 A

151026 E.M.T.

5885.6329

5884.8078

+ 0.8244

0.8387

- 0.0143

196

May 15, 1902

6" Cap

V

Above

10 31 20 165.9
228.3
336.8
55.6

62.4

78.8

141.2

- 0.75

158.2

- 0.76

33 22

236.0

347.5

49.2

97.8

61.7

139.5

- 0.78

Below

Mean - 0.90

77.3

36 15

136.9

252.3

320.8

59.6

68.5

128.1

- 1.02

73.6

- 1.03

10 38 45

142.0

68.4

19 42

257.7

58.9

- 1.04

10 34 56

316.6

127.3

5 - 7 P

15 27 48 P.M.T.

5885.6443

5884.8078

+ 0.8365

0.8387

- 00022

May 15, 1902

VI

Below

80.8

10 42 30 137.9
256.8
317.3

571
60.5
117.6 - 1.25

73.6

44 40 140.0
261.27
316.8

66.4
55.5
121.9 - 1.15

- 1.20

Above

347.0

47 25 448.2
157.8
237.4

61.2
79.6
140.8 - 0.76

339.8

10 49 10 55.2
23 45 164.3
10 45 56 227.2

75.4
62.9
138.3 - 0.81

- 0.78

5- 7 8
1538 48 9.M.T.

5885.6520

5885.6458

+0.0062

May 15, 1902

VII

Above

347.1

46.9

161.5

235.1

59.8[✓]

73.6

133.4 - 0.91[✓]

340.0

54.2

168.0

227.3

74.2[✓]-0.91[✓]59.3[✓]133.5[✓] - 0.91[✓]

Below

259.3

315.0

73.0

170.8

55.7[✓]67.8[✓]123.5 - 1.12[✓]Mean - -1.00[✓]

253.2

-1.09[✓]

11 07 30 321.0

251 30

74.8[✓]

67.8

58.3[✓]126.1 - 1.06[✓]

11 02 52 136.6

5 - 7.8

15 58 44 P.M.T.

5885.6638

5885.6452

+ 0.0186

May 15, 1902

VIIII

Below

260.0

11 16 20

315.6

673.6

143.3

55.6

69.7

125.3 - 1.08

253.1

-1.11

19 35

321.0

80.5

134.7

67.9

54.2

122.1 - 1.14

Above

Mean = - 1.00

167.6

22 25 228.8

340.4

54.1

61.2

73.7

134.9 - 0.88

159.6

-0.90

11 24 30

234.8

82.50 350.0

11 20 42

147.2

5-7 A

1612.349 M.T.

5885.6761

5885.6458

+0.0303

75.2

57.2

132.4 - 0.93

May 15, 1902

IX

Above

6
 112720 ~~1894~~ 227.8
 340.3
 55.0

58.4[✓]
74.7[✓]
 133.1 - 0.91

29 20 159.6
 234.1
 347.1
 46.9

74.5[✓] - 0.90
59.8[✓]
 134.3 - 0.89

Below

Mean = 1.02

80.6
 31 40 135.2
 250.0
 325.0

54.6[✓]
70.0[✓]
 124.6 - 1.09

67.2
 11 33 40 134.9
122.00 261.2
 11 30 30 313.5
5-7 8
 16 23 22 G.M.T.
 5885.6829⁺
 5885.6458
+0.0371

-1.14
 67.7[✓]
52.3[✓]
 120.0 - 1.19

May 15, 1902

X

Below

11 3610 81.7
134.6
255.6
349.7

52.9
64.1
117.0 - 126

74.2
3810 141.7
261.7
314.7

-1.22
67.5
53.0
120.5 - 1.18

Above

346.7
4100 49.3
161.2
233.9

Mean - 1.06
62.6
72.7
135.3 - 0.87

342.8

-0.91

11 4310 54.3
158 30 168.6

72.0
59.2
131.2

-0.95

11 3930 227.8

5-2 A

16 3230 P.T. = 15.26

5285.6892 Ha = 1.48 East

5285.6452 Dec = +1.5

+0.043 KPa = 33.5 Vm K

D/Wt. -0.5 B. +0.3 C

May 15, 1902

Bocler

11 55 08.5

Ball 103

11 48 0.0

L. P. P.

May 16, 1902 (Friday)

B+C 1182
7 09 05.5Ball 103
7 12 05

Is watch = 2 sec fast at 7:00
 $\pm 29^{\circ}$ W. Ob.
 Phot R 16 18 + 340

10 58
 5 20
6 40

7 15 Considerably cloudy

7 40 Clouds thick

7 50 More cloudy
 Abandoned too cloudy

Phot R. $\pm 230^{\circ}$
 18 9 + 80.0
 12 19
550
6 10

W. Ob.

Alt. 230
 Dist 14 ±
 Magns 5.5 - 6.0

+ 35 Obs.

(over)

May 16, 1902
 2308 see prev page
 CS watch used.

8 42

$$\begin{array}{r}
 356.2 < \text{birds} \\
 73.6 \\
 174.1 \\
 \hline
 254.0
 \end{array}
 \quad
 \begin{array}{r}
 77.4 \\
 82.3 \\
 \hline
 159.7 - 0.39
 \end{array}$$

8 47

$$\begin{array}{r}
 353.1 \\
 76.6 \text{ stars} \\
 175.6 \text{ clds.} \\
 \hline
 252.5
 \end{array}
 \quad
 \begin{array}{r}
 83.5 \\
 76.9 \\
 \hline
 160.4 - 0.37
 \end{array}$$

Reversed clds. Mean = - 0.34

~~263.1~~ stars gone
~~345.3~~ clds. stars gone 82.2
 80.5

9 23

$$\begin{array}{r}
 167.5 \\
 264.8 \\
 \hline
 344.9
 \end{array}
 \quad
 \begin{array}{r}
 87.0 \\
 80.1 \\
 \hline
 167.1 - 0.24
 \end{array}$$

85.2 - 0.30

9 37

$$\begin{array}{r}
 162.2 \text{ clds thick} \\
 263.6 \\
 \hline
 347.0
 \end{array}
 \quad
 \begin{array}{r}
 77.0 \\
 84.0 \\
 \hline
 161.0 - 0.36
 \end{array}$$

9 07.2

5
 146.07

Troubled by clouds in above group.

May 16, 1902

Phot - S Lehae Wds
 14 55-8.1 6" cap
 13 50
 1 05
 10 55 *clearer*

Above
 10 11 45 345.8
 46.3
 1 60.9
 233.0

B & C 1122 used.

60.5
 72.1
 132.6 - 0.92

340.2
 13 45 51.6
 1 69.3
 2 28.9

-0.94

71.4
 59.6
 131.0 - 0.96

Below

Mean = -1.18

261.6
 16 ⁵⁰ 311.3
 46.8
 136.8

49.7
 60.0
 109.7 - 1.42

256.3
 10 18 40 318.1
 2100 83.5
 10 15 15 131.8
 5-7-5

61.8 - 1.42
 48.3
 110.1 - 1.42

15-08-10 9 M.T.
 5886.6307
 5886.5867
 400440

May 16, 1902

H

Below

262.6

10 21 25

312.6

75.6

136.3

50.0

60.7

110.7 - 1.40

254.6

- 1.40

23 15

315.8

83.3

133.3

61.2

50.0

111.2 - 1.39

Above

170.4

26 05

227.1

342.8

52.0

56.7

69.2

125.9 - 1.07

162.7

- 1.07

10 28 15

233.0

19 00 349.6

10 24 45

45.0

5-7 5

15 17 40.8 m.t.

5886.6373

5886.5867

+ 0.0506

70.3

55.4

125.7 - 1.07

May 16, 1902.

III

above

103330 168.9
~~229.2~~
 346.4
~~48.3~~

60.3
 61.9
 122.2 - 1.14

3700 167.4
~~230.3~~
 348.8
 43.6

62.9
~~54.8~~
 117.7 - 1.19
 117.7 - 1.24

Below

3945 83.5
 133.0
~~258.0~~
 317.9

49.5
~~59.9~~
 109.4 - 1.43

77.3

104155 137.4
~~3210~~ 264.8
 103802 312.3
~~5-75~~

60.1
~~47.5~~
 107.6 - 1.45
 107.6 - 1.47

153057 9 m.t.
 5886.6465
~~5886.5867~~
 + 0.0598

May 16, 1902

IV

Below

P38

10 4930 131.0
 260.4
 313.8

80.6

51 53 134.4
 264.3
 311.9

Above

55 30 351.7
 45.9
 165.4
 228.6

348.0

10 5625 47.2
 213 181 70.1
 10 53 202 25.8
 5 - 7 5

15 46 15

5886.6570

5886 5867

0.0708

47.2

53.4

100.6 - 1.64

- 1.63

53.8

47.6

101.4 - 1.62

Mean = - 1.44

54.2

63.2

117.4 - 1.25

- 1.24

63.2

55.7

118.9 - 1.22

May 16, 1902

V

Above

110630 352.0
 43.5
 165.3
 229.0

57.5
63.7
 115.2 - 1.30

- 1.33

0830 348.2
 46.2
 168.7
 223.4

58.0
54.7
 112.7 - 1.36

Below

Mean = -1.54

265.8
 1048 311.3
 78.9
 131.6

45.5
51.7
 97.2 - 1.73

259.2
 111232 312.5
382.0 87.00
 110935 130.2

53.3 - 1.74
43.0
 96.3 - 1.75

5-75

160230

5886.68 6684

5886. 5867

+ 0.0817

May 16, 1902

VI

Below

264.4

11 1550

309.3

79.9

133.2

262.5

17 10

312.1

84.2

129.0 cld

Above cld.

170.6

24 20 2

.

.

.

.

.

.

1

2

Mean = -

Clouds prevented finishing this group.

May 16, 1902

~~III~~

VI

Above

349.8

113240 42.4

165.5

229.9

~~2~~

52.6

64.4

117.0 - 1.26

- 1.35

348.1

3450 45.8

171.9

223.2

57.7

51.3

109.0 - 1.44

Below

266.3

3755 310.0

83.1

132.2

43.7

49.1

92.8 - 1.84

Mean = - 1.62

262.9

- 1.89

11400 310.9

20.33 84.87

1136 2312 84.89

5-7 5

16 29 18

58866870*

58865867

0.1003

48.0

41.2

89.2 - 1.94

May 16, 1902

VII

Below

14310

268.8

309.0

85.0

131.9

40.2

46.9

27.1 - 1.99

262.2

4535

310.6

87.8

128.9

48.4

40.9

29.3 - 1.93

- 1.96

Above

173.6

4748

220.9

348.4

45.8

47.3

57.4

104.7 - 1.54

Mean = - 1.73

167.6

11 4937

227.4

358.4

41.4

59.8

48.0

107.8 - 1.47

- 1.50

26 10

11 46 32

5-7 05

16 39 27

120 62.7

5886.6941

J.T. 15.40

5886.5867

Ha = 0.40 West

+ 0.1074

Dec = - 22

Stk W = 4.513 885C

clouds thicker now over day

May 16, 1902

Bac 1182

~~Bac 103~~

12 03 04.4

Bac 103

11 56 00

Slightly troubled by clouds in last two groups.

Ledgered Plotted Posted.

May 17, 1902 (Saturday)

BBC 1182

7 11 06.0

Ball 103

7 04 58

Cs watch = 9 sec. slow at 7:04

Phot T. U Cephei WObs

0	50	+81.1
11	10	
<hr/>		
10	20	

Left

63.3 ← van der

8 22 20 152.4

248.9

325.8

68.3

24 15 146.8

244.7

330.5

Right

330.7

26 35 65.8

159.2

237.0

340.6

8 28 30 58.1

21 40 150.8

8 25 25 246.2

5-7 06

13 22 19 9 M. Time.

5887.5544

5887.2249

0.3295

89.1

76.9

166.0 - 0.27

78.5 - 0.28

85.8

164.3 - 0.30

mean - - 0.20

95.1

77.8

172.9 - 0.13

- 0.13

77.5 ✓

95.4 ✓

172.9 ✓ - 0.13

May 17, 1902

II

Right

332.0
 8 30 00 64.3
 161.0
 235.1

92.3
 $\frac{74.1}{166.4} - 0.26$

338.6
 31 48 54.3
 1452.0
 2440

- 0.24

75.7
 $\frac{92.0}{167.7} - 0.23$

Left

241.7
 34 10 329.3
 72.0
 140.3

Mean = - 0.34

47.6
 $\frac{69.3}{156.9} - 0.44$

- 0.44

253.4
 8 36 15 321.8

63.6
 12 13
 8 33 03 450.8
 5 - 7 06

68.1
 $\frac{88.2}{156.3} - 0.45$

13 25 57⁵ M.T.

5887.5597

5887.2249

0.3348

216

May 17, 1902

III

Left

244.0

P 39 00

329.2

75.1

140.0

85.2

64.9

150.1

- 0.57

255.4

- 0.60

40 34

320.3

64.8

147.8

64.9

83.0

147.9

- 0.62

Right

mean = - 0.54

153.2

4 255

241.82

344.1

52.8

88.0

64.7

156.7

- 0.44

162.9

8 4520

237.9

752

335.3

8 41 58

59.1

70.0

- 0.47

83.8

153.8

- 0.50

5 - 7 6

13 34 52 * 8 Mt.

5887.5659

5887.2249

0.3410

May 17, 1902

IV

Right

$\begin{array}{r} 155.1 \\ 240.2 \\ 344.8 \\ 51.7 \\ \hline \end{array}$

$\begin{array}{r} 163.6 \\ 4845 \quad 232.9 \\ 336.9 \\ 61.2 \end{array}$

Left

$\begin{array}{r} 76.5 \\ 5050 \quad 138.8 \\ 249.8 \\ 326.3 \end{array}$

71.9

$\begin{array}{r} 8 \quad 5245 \quad 145.5 \end{array}$

$\begin{array}{r} 199 \quad 152.578 \end{array}$

$\begin{array}{r} 8 \quad 4949 \quad 326.83 \\ 5-7 \quad 6 \end{array}$

$\begin{array}{r} 13 \quad 4243 \quad 1.9. \quad 158 \text{ Ven } 13 \end{array}$

$\begin{array}{r} 58A \quad 7.5713 \quad HA - 11.55 \text{ West} \end{array}$

$\begin{array}{r} 58A \quad 7.2249 \quad Dec. + A1.0 \end{array}$

$\begin{array}{r} 0.3464 \quad 17 \quad 12.48 \end{array}$

$\begin{array}{r} 8 \text{ Feb. } 6.5138 \quad 7.2 \text{ C} \end{array}$

85.1

66.9

$\begin{array}{r} 152.0 - 0.50 \checkmark \end{array}$

69.3

-0.50 ✓

84.3

$\begin{array}{r} 153.6 - 0.50 \checkmark \end{array}$

Mean = -0.63

62.3

76.5

$\begin{array}{r} 138.8 - 0.80 \checkmark \end{array}$

73.6

-0.76 ✓

68.5

$\begin{array}{r} 142.1 - 0.73 \checkmark \end{array}$

May 17, 1902

Phot T.

S Librae W 1162

1~~4~~ 55-A.1 6" cap.

13	15
1	40
10	20

above

9 35 12

355.1 < vordis

38.7

170.4

224.2

43.6

53.8

97.4 - 172^v

37 07

352.3

41.1

175.3

219.3

40.8 - 1.78^v

44.0 ✓

92.8 - 184

Mean - 200^v

Below

40 35

269.9

306.7

85.2

130.8

36.8

45.6

82.4 - 212^v

9 42 55

155.49

9 38 53

5-7-6

12 5.5

264.3

305.4

91.0

36.8

41.1 - 2.22

34.5 ✓

75.6 - 233

14 31 46

588 76055

5886.5867

10188

May 17, 1902

Below

945.50 2670.3
304.7
84.8
131.9

344
471
81.5 - 2.15

48.35 263.8
~~309~~
316.4
91.4
125.8

46.6
344
81.0 - 2.17

Above

176.5
51.50 290.3
351.0
421.3

43.8
51.3
95.1 - 1.78

171.0
954.40 223.2
200.55 355.8
950.14
5-7.6 37.7

52.2 - 1.80
41.9
94.1 - 1.81

144.308
5887.6133
5886.5867
740266

RA = 62.9 Vn B.

HA = 1.06 East

ST = 13.48

Dep. = -8.0

Wplw = 45 B 56 C

Final mean = -1.99

May 17, 1902

Continued in B. 132.

This book Ledgered

Plotted, Posted throughout

