KG
11365
568

5

KG 11365.568

KG 11365.56 8

HARVARD
UNIVERSITY
LIBRARY
MAY 8 1956

May 6, 1904

Cont. from Book 144.

Comet a 1904 (Cont.)

II

Below

326.3

9 50.5 23.6 57.3 *

140.5 65.5

206.0 122.8 +1.13

323.9

28.8 64.9 +1.16

146.2 55.1 +1.19

201.3 120.0

Mean = +1.05

Above

234.4

293.8 59.4

47.2 72.4

119.6 131.8 +0.94

227.7 +0.94

9 59.0 ~~29~~ 301.3 73.6 ~~73.6~~

9 54.8 52.3 58.1 ~~57.0~~

14 54.9 ~~109.3~~ 131.7 ~~130.6~~ + 0.94

6607. 110.4

R.a. = 7.7 Var B

Ha = −2:32 East.

10 05 Dec = +53.9 North

S.T. = 13:16

Sp.Wh. = { −3.5 B
−2.5 C

Over

May 6, 1904.

An attempt was made to meas- the nucleus itself. On acct of surrounding nebulosity together with the fact that the sky is no particularly transparent, the observations of nucleus proper were a little difficult.

Much care exercised and observations considered good.
Nucleus itself somewhat stellar but not quite sharply so.

+7.3404 Algol Var

17 19 +7.7
13 42
3 37
8 23

W.C.B.
Plot

Bond 236 used on this Algol Variable

See following pages for measurements

1904phae.proj..56OW

May 6, 1904

+7, 3404

I

Lta

48.8

10 40 49 126.5 <comp ★ dis.

85.7

227.6

70.9

298.5

156.6 +0.45

+0.44

48.2

10 43 14 118.4

70.2

219.9

87.3

307.2

157.5 +0.43

R & B

309.8

10 46 16 38.6

88.8

Mean = +0.41

137.7

71.3

209.0

160.1

+0.38

320.0

+0.38

10 48 20 28.7

68.7

18 35 127.4

91.6

10 44 39 219.0

160.3 +0.38

5 59

10 43 40 G.M.T.

May 6, 1904

II

ROB

309.2

10 50 35 37.3 88.1

138.0 68.9

206.9 157.0 +0.44

318.0 +0.41

10 52 48 29.8 71.8

128.8 88.4

217.2 160.2 +0.38

LOA.

218.1 Mean = +0.46

10 55 35 305.3 87.2

47.3 69.1

116.4 156.3 +0.45

225.8 +0.50

10 58 27 297.7 71.9

17 25 48.0 78.8

10 54 21 126.8 150.7 +0.56

5 −1 1 P.a. 105.0

15 53 20 S.T. = 14:15

Dec. +6.8 North

H.a. ~~+2.28~~ −3:08 East

S.W.h. { −2.5 a
−1.5 B
−0.9 C

B. 236 B 39 K

11 11 35 11 10 50

May 6, 1904.

Sky a little lacking in transparency tonight but no definite cloud or much haze. The obs. on the Algol variable were a very little more difficult than sometimes but not particularly so, and some considered good

L.A.P.

May 7, 1904 (Saturday)

7 06 C's watch 17s slow of B 394

B 236 B 394

7 07 29.8 7 08 00

08 30.0 09 00

Double W. Obs. Plotk.

P.a. = 110°
Dist = 11″
Magns = 5.0 - 6.8

13 46.0 -32 30
10 31
3 15
8 45

13 46
10 56
2 50
9 10

C's watch used on Double.

Below
178.6 Pr. N. Obr. dis

7 49.9

229.8
351.8
48.7
174.8
228.8
354.0
50.4
Above
81.6

51.2
56.9
108.1 + 1.46

54.0 + 1.44
56.4
110.4 + 1.41
mean = +1.44

139.8
267.3
321.1
86.8

5.8.2
53.8
112.0 + 1.37

+1.45

7 54.6
10 4.5
7 52.2
12 52.59 M.T.

137.3
266.4
321.0

50.5
54.6
105.1 +1.53

May 7, 1904.

Iris W Obs.

7 55 +15.4
11 25
3 30

~~33~~
8 19 34.0
19 45.5
20 11.0

8 21 23.8
21 45.5

~~27~~
26.5
37.8

8 23 35.5
24 21.0

8 25 20 ~~85~~
25 23 3 ~~2~~ ~~02.5~~
25:29 12 ~~04.5~~
25 35

26 ~~14~~.8 2.4
26 17.2
26 23.5 13.0
26 30.2

26 45.5 1.9
26 47.4 13.4
26 54.4
27 00.8

27 16.0 2.5
27 18.5
27 24.5 12.5
27 31.0

27 42.0 2.8
27 44.8
27 57.0 13.2
27 58.0

May 7, 1904

15.5 ~~41.0~~ 15.5
18.2 2.7 ~~44.2~~ 18.5 3.0
23.2 ~~50.5~~ 24.8
12.3 12.5
30.5 ~~55.0~~ 31.0

8 33 35.0
35 23.0

~~8 39 30.0~~

8 40 07.5
40 11.5 4.0
40 16.3 11.5
40 23.0

8 50 18.0 50 45.0
23.0 5.0 49.5 4.5
27.2 11.0 53.8 11.0
34.0 00.5

39.5 08.5 ~~030~~
44.5 5.0 13.0 4.5 ~~0~~ ~~11.5~~
49.0 11.0 17.2 11.0
55.5 24.0 18.0
22.2 4.2
26.5 10.8
33.0

May 7, 1904

8 54 02.24 (9.2)
.54 49.4

8 55 Iris fols + 15.1732 (9.2) by 47s and
is 4'.9 N. of it.

Algol Var + 7°.3404
Clouds.
17 19' +7.7
12 19
5 00
LHA. 7 00

WOB.
Plot T.

B236 used

222.2 < comp ★ dis

9 04 35 303.8
48.3
117.8
229.1
.06 15 297.4
39.9
124.3
ROB.
136.8
08 48 207.2
309.8
32.6
132.4
9 10 40 215.3
30 17 320.2
9 07 34 28.30
5 + 8
14 07 42

81.6
69.5
151.1 +0.55

+0.54

68.3
84.4
152.7 +0.52

Mean = +0.54

70.4
82.8
153.2 +0.51

+0.54

82.9
67.8
150.7 +0.56

May 7. 1904

II

RDB

136.0
9 13 47 208.8 72.8
308.5 86.3
34.8 159.1 +0.40

131.0 +0.43
16 12 216.5 85.5
317.8 70.2
28.0 155.7 +0.46

LOA. Mean = +0.44

48.3
21 08 116.3 68.0
214.8 91.5
306.3 159.5 +0.39

39.6 +0.44
9 22 48 123.5 83.9
73 55 226.6 71.2
9 18 29 297.8 155.1 +0.48
5 +6
14 18 35

May 7, 1904

J.G.A. III

46.5
9 28 51 117.1 70.6
218.0 88.4
306.4 159.0 +0.40

38.1 +0.40
31 04 124.9 86.8
226.3 72.4
298.7 159.2 +0.40

R.D.B. Mean = +0.40
316.4
34 08 29.6 73.2
130.3 84.3
214.6 157.5 +0.43

307.7
9 36 40 37.0 89.3 +0.39
10 35 136.7 72.1
9 32 39 208.8 161.4 +0.35
5 + 5
14 32 43

9 May 7, 1904

R O B

IV

316.2
9 39 22 27.0 70.8
127.0 89.4
216.4 160.2 +0.38

+0.39
308.3
41 46 37.5 89.2
137.8 69.6
207.4 158.8 +0.40

L O A. Mean = +0.42
228.2
45 15 297.4 69.2
37.2 87.6
124.8 156.8 +0.44

+0.46
219.0
9 47 20 304.7 85.7
173 43 46.5 69.3
9 43 26 115.8 155.0 +0.48
5 +3
14 43 29

May 7, 1904

V

LGA

	223.5		
10 06 55	297.4	73.9	
	38.6	87.9	
	126.5	161.8	+ 0.35
	216.9		+ 0.35
08 55	305.3	88.4	
	43.3	73.4	
	116.7	161.8	+ 0.35

RTB

Mean + 0.39

	138.5		
11 28	206.0	67.5	
	308.6	89.0	
	37.6	156.5	+ 0.45
	128.4		
10 13 28	213.5	85.1	+ 0.43
40 46	315.8	73.6	
10 10 12	29.4	158.7	+ 0.41
5 − 1			
15 10 11			

May 7, 1904

ROB. ~~VI~~

136.3

10 15 33 209.0 72.7

309.8 85.8

35.6 158.5 +0.41

129.2

17 25 214.5 85.3 +0.44

317.6 70.6

27.2 155.9 +0.46

LOA. mean = +0.44

44.8

20 15 115.1 70.3

219.2 87.1

306.3 157.4 +0.43

*36.6 cloud +0.44

4

10 ~~2~~3 43 127.2 86.6

96 56 227.0 70.5

10 24 14 297.5 157.1 +0.44

5 -4

15 24 10

P.A. 105.0 Ver B

S.T. * 14:06

H.a. +6.8 ~~North~~

Dec. -3:23 East

Spiral = { 2.5
-1.5
-0.9

May 7, 1904.

Delayed in making last
34 settings in last group by
clouds, but waited until
10 52 sky became clear and
images bright before making
these settings.
Troubled by clouds during observations.

Iris

~~+3~~ 7 55 +16
14 25
6 30

B-236 11 15 12.0

B 394 11 15 05

L. P. P.

1904phae.proj..56OW

May 11, 1904 (Wednesday)

Double

15 27.3 − 24.9
11 47
3 40
8 20

8 25 Double found but comps. so faint in clds that it is impossible to measure it at the present time. In fact it is so cloudy that comps. are only momentarily seen as separate.

8 28 ~~Sta.~~ Double has entirely disappeared in cloud.

8 45. Impossible to do anything with double sky cloudy everywhere no chance for any work at least for the present.

At about 9^h 30^m had a vigorous shower of rather short duration.

May 12, 1904 (Thursday)

B 236
> 17 57.5
18 57.6

B 394
> 18 00
19 00

> 20 Cs' watch = 22^s fast of B 394

Iris W Obs.
Plot T.

8 3 +15,1~~8~~
11 08
3 05

> 42 55.8
44 33.5
44 35,0

39.5
44.0

> 4~~4~~9 31.5
49 58.5

> 50 21.8
50 49.0

51 ~~11.8~~ 15,0
51 42.0

52 08,0
52 35.2

~~52 35.5~~
~~52 2~~

53 39.8
54 06.8

May 12, 1904
Iris cont.

8 00 29.0 8 01 01.8
00 48.3 01 21.5

01 37.5 ~~02 11.5~~
01 56.7 ~~02~~

~~02 44.5~~ 03 23.8
~~03 0~~ 03 43.5

03 56.0
04 15.3

---

8 05 00.5 05 41.8
05 27.5 06 08.8

06 50.5 ~~0~~
07 17.5

---

8 10 14.0 6.5 29.3 6.7
10 20.5 36.0

10 46.0 6.0 11 03.0 6.0
12.0 11 09.0

11 18.0 6.3
24.3 Mean 6.3

May 12, 1904

8 14 24.0 14 56.8
14 43.0 15 16.0

15 28.6 16 02.8
15 48.0 22.0

---

18 6.0 a 5.8 a 16.0 a
12.0 11.6 22.0

---

b

8 20 11.0 20 ~~30~~ 36.0
20 20.8 45.5

20 52.0 21 07.5 32.5
20 01.5 17.0 42.5

---

c

22 33.5 47.0 02.0
39.5 52.5 07.5

24.0 ~~8 14 55.5~~
29.5

14.5
19.5

---

a

8 27 16.8 32.0 47.3
21.5 37.0 51.8

May 12, 1904.

8 29 ~~25~~ 33.0 3
~~29~~ 30 01.0

30 12.5
30 39.5

---

8 31. 05.5 Iris
31 ~~05~~ 40.0 (9.3)

31 52.8 Iris
32 26.5 (9.3)

8 31 Iris prec +15 1782 (9.3) by 34.1^{s}
and is 8.2 North of it.

σ a

8 35 13.8 4.2 26.0 4.5 40.0 4.5
18.0 30.5 44.5

& 51.0 (4) 13.8 4.2
55.7 17.0

Mean = 4.5

14.5 35.0 ~~03 5~~
24.0 44.5 ~~03.0 0 5~~

May 12, 1904.
c

42.0 55.5 07.0
47.5 81.0 12.5

Meas of Iris with +15.° 1781 (9.4)

Wlb.
Phot T.

B 236 used for times.

I

Above

315.0 ← Comp * dis

8 50 12 29.0 74.0 ✓
3
1~~4~~9.1 63.3 ✓
202.4 137.3 ✓ +0.83 ✓

321.5
52 16 21.9 60.4 ✓ +0.84 ✓
132.1 76.5 ✓
208.6 136.9 ✓ +0.84 ✓

Mean = +0.76 ✓

Below

221.2
5 5 30 301.9 80.7 ✓
50.1 64.1 ✓
114.2 144.8 ✓ +0.68 ✓

230.8 +0.68 ✓
8 57 22 295.3 64.5 ✓
2 15 20
8 53 50 ✓ 41.7 80.3 ✓
5 -13 122.0 144.8 ✓ +0.68 ✓

13 53 37

66 13.579
13.486
+0.093

May 12, 1904

Below

II

	224.7		
8 59 45	298.3	73.6 ✓	
	48.7	64.8 ✓	
	113.5	138.4 ✓	+ 0.81 ✓
	226.3		+ 0.72 ✓
9 02 14	295.2	68.9 ✓	
	42.8	78.4 ✓	
	121.2	147.3 ✓	+ 0.63 ✓

Above

Mean = + 0.76

	134.1		
9 05 20	209.2	75.1 ✓	
	321.6	61.2 ✓	
	22.8	136.3 ✓	+ 0.85 ✓
	139.5		+ 0.81 ✓
9 08 20	202.2	62.7 ✓	
	311.9	77.5 ✓	
	~~30.2~~ 29.4	140.2 ✓	+ 0.77 ✓

255 42 ✓

9 3 56. ✓

5 15

14 3 41

66.3 .586

13.486

0.100

May 12, 1904.

III

Above

135.3
9 15 46 207.8 72.5 ✓
322.1 59.7 ✓
21.8 132.2 ✓ +0.93 ✓

140.6
18 16 202.8 62.2 ✓ +0.91 ✓
315.8 72.3 ✓
28.1 134.5 ✓ +0.89 ✓

Below Mean = +0.84 ✓

142.4
21 55 117.2 74.8 ✓
229.3 64.0 ✓
293.3 138.8 ✓ +0.80 ✓

50.5
9 24 40 115.5 65.0 ✓ +0.78 ✓
20 37 ✓ 224.6 75.8 ✓
9 20 9. ✓ 300.4 140.8 ✓ +0.76 ✓
6 -17
14 19 52
6613597
13.486
+0.111

May 12, 1904

IV

	Below		
	224.1		
9 28 35	302.6	78.5 ✓	
	50.6	61.5 ✓	
	112.1	140.0 ✓	+ 0.77 ✓
	230.9		+ 0.82 ✓
32 ~~44~~	292.9	62.0 ✓	
	45.8	73.2 ✓	
	1~~2~~9.0	135.2 ✓	+ 0.87 ✓
			Mean = + 0.90 ✓
	Above		
	134.2		
35 10	210.0	75.8 ✓	
	323.4	54.9 ✓	
	18.3	130.7 ✓	+ 0.96 ✓
			+ 0.98 ✓
	142.6		
9 ~~38 00.~~	~~4~~ 200.8	58.2 ✓	
134 29. ✓	316.6	70.7 ✓	
9 33 37. ✓	~~3~~27.3	128.9 ✓	+1.00 ✓
5 -19			
14 33 18			

661 3.606

13.486

0.120

May 12, 1904

V

Above

135.1

9 46 15 207.5 72.4

322.9 57.7

20.6 130.1 + 0.98

140.8 + 0.99

50 31 200.7 59.9

315.8 69.3

25.1 129.2 + 1.00

Below Mean = + 0.97

44.5

54 15 116.2 71.7

231.7 59.2

290.9 130.9 + 0.96

53.1

9 58 16 109.4 56.3

209 17 224.9 75.8 + 0.95

300.7 ~~4.1~~

9 52 19. 132.1 + 0.94

5 - 23

14 51 56

661~~2~~3.619

13.406

0.133

May 12, 1904

Below

VI

45.3
10 01 40 119.3 74.0 ✓
232.2 62.1 ✓
294.3 136.1 ✓ + 0.85 ✓

55.1 + 0.84 ✓
10 06 00 115.2 60.1 ✓
224.2 76.6 ✓
300.8 136.7 ✓ + 0.84 ✓

Above mean = + 0.94 ✓

316.8
10 10 12 26.3 69.5 ✓
141.0 58.0 ✓
199.0 127.5 ✓ + 1.03 ✓

324.9 + 1.04 ✓
10 13 24 20.8 55.9 ✓
31 16. ✓ 135.4 71.0 ✓
10 7 49. ✓ 206.4 126.9 ✓ + 1.04 ✓

5 -25

15 7 24
6613.630
13.486
0.144

P.a. 348.3 V on B
~~Ha.~~ 5.52 West
~~Dec.~~ +15.6 North
S.T. 1.59
Sp wh { −3.5 B
−2.5 C

May 12, 1904.

The object finally assumed as Iris is Iris, as is proved not only by the variation in light but also from the fact that it has perceptibly moved in R.A. Whereas at the first it prec. an adjacent star, it now fol. the same. As Iris was not readily found on account of error in computed position there was a little delay in beginning observations as well as by reason of the strong twilight. Observations somewhat labored throughout partly on account of the glare on the sky from electric lights as well as from the decreasing altitude, and faintness of Iris ~~itself~~.

Double

Wlb.
Elot R.

13 46.0 — 32 30
14 26
0 40 C's watch used.

P.a 110°
Dist 9"
magns ~~8~~ 5.0 — 6.7

(over)

May 12, 1904.

Double
see prev page.

Lt Below

358.2 ∠ for N. Ob. dis.
10 58.0 44.1 45.9✓
168.9 61.1✓
230.0 107.0✓ + 1.49✓

355.4
48.2 52.8✓ + 1.62✓
183.0 43.3✓
226.3 96.1✓ + 1.75✓
Mean = +1.55✓

Rt Above

264.3
315.9 48.6✓
85.3 52.2✓
134.5 100.8✓ + 1.64✓
264.9
11 06.4 321.~~7~~0 56.1✓ + 1.48✓
83.2 58.8✓
142.0 114.9✓ + 1.31✓

Region low and seeing intermittent in character. Some of the time images fairly sharp, but much of the time seeing blurry and ~~ou~~ images out of shape. Obs. somewhat difficult.

May 12, 1904

B 236 B 394
11 15 35.8 11 1$\overset{5}{8}$ 0.0

May 13, 1904 (Friday)

B 236			B 394		
7	17	27.0	7	18	00
	18	27.2		19	00

7 19 Cs' watch = 9ˢ slow of B 394

Iris

20 Ob.
Plot T.

8 3 +15.1
11 10
3 7

7 59 11.0
59 15.5

8 00 11.8
01 09.8 ' = 57.3 ~~01~~ '
02 06.5 58.3
03 04.8

8 02 Iris fols DM +15.1782 (9.3) by 57ˢ.8 ⊕ — is 4'.3 N. of it

May 13, 1904.

~~8 04 45.8~~

8 05 30.6		~~8 06 [illegible] 23.6~~		
05 42.3	11.7	8 06 26.0		
05 53.0	10.7	06 37.5	11.5	
		06 49.0	11.5	
07 14.3		07 47.0		
07 26.0	11.7	0 58.~~8~~6	11.6	
07 36.8	10.8	08 09.2	10.6	
08 23.0				
08 35.0	12.0			
08 46.0	11.0			

The star assumed for Iris last night has gone from that place, Hence as was stated, the object assumed for Iris was Iris.

8 18 28.0	19 02.6	19 38.5
18 40.8	19 15.3	19 51.0
18 50.0	19 24.8	19 00.8

Comp * = Dm + 15° 1781 (9.4) = same as last night.

May 13, 1904

Iris

I

Left

317.2 <Comp. dis

8 32 58 26.8 69.6

142.0 58.0

200.0 127.6 +1.03

322.4 +0.96

35 50 24.3 61.9

135.8 72.2

208.0 134.1 +0.89

Right Mean = +0.92

45.8

39 13 117.0 71.2

230.7 60.6

291.3 131.8 +0.94

52.1

8 41 40 113.6 61.5 +0.88

223.6 76.6

~~29~~

300.2 138.1 +0.81

29 41

8 37 ~~40~~

25

5 +19

13 37 06

6614.567

14522

0.045

May 13, 1904

Right

46.7
8 44 33 119.4 72.7
231.5 61.2
292.7 133.9 + 0.90

53.2 + 0.88
46 59 114.2 61.0
224.2 74.4
298.6 135.4 + 0.87

Left Mean = + 0.87

321.1
50 27 25.0 63.9
136.0 72.0
208.0 135.9 + 0.86

313.3 + 0.86
8 52 49 29.6 76.3
19 3 48 142.1 59.6
8 48 27 201.7 135.9 + 0.86
5 +17
13 48 10 G.M.T.
6614.575
14.522
0.053

May 13/1904.

III

9 00 Clouds

Stars practically gone

P.a. = 47.3 Van B
Dec. = +155 North
S.T. = 12:44
Ha = 4:36 West.

P.a. is pretty close altho images disappeared in cloud befor they were exactly superimposed.

9 20 Clearer now

May 13 1904

III

Left
140.2
9 25 40 201.8
312.4
~~27.~~
27.7

134.0

, clds thicker.
3 , stars practically gone
,

Right

Clouds

$$\text{Sp. Wh} = \begin{cases} -4.5 & a \\ -3.5 & B \\ -2.9 & C \end{cases}$$

Impossible to finish third group and what ~~settings~~ were made in this group were difficult and a ~~little~~ uncertain on account of faintness of images as well as from the fact ~~that~~ varying cloud made them alternate in brightness
as regards the two groups actually taken the sky was pretty clear in first group; in

May 13, 1904

second group the images were quite all and steadily seen in most of the settings. Some of the last settings were a little more difficult from fact that sky was becoming hazy, but both groups considered good

10 12 ~~Stop now~~ Fog now becoming denser and only a star here & there visible to naked eye.

10 18 Fog now becoming denser and wind somewhat more to N.E. Evidently no chance for anything further as air is most chilly & fog more pronounced

β394 β236

~~10 22~~ ~~Fz~~ 10 22 0,0 10 22 0.0

L.P.

May 16. 1904 (Monday)

7 11 Cs' watch = 5^m fast of B 394

B 236 B 394

7 11 44.0 7 12 50

12 44.0 13 50

Iris w Ob. Phot T.

8 3 + 15.0
11 15
3 12

7 50 37.8 (9.3)
57 55.8 (8.7)

A 02 29.4 ~~Iris~~
03 16.0

05 43.0 7.8 06 10.0 8.0
05 50.8 6.5 18.0 7.0
05 57.5 25.0

8 07

36.0 8.0 ~~39.0~~ 07.0 8.5 07.2 8.3
44.0 6.5 ~~47.5~~ 12.5 6.3 15.5 6.3
50.5 ~~54.5~~ 18.8 21.8

May 16, 1904.

04.5
09.8

8 17	9.5	38.0	04.5
	18.8	47.0	14.0
	24.0	52.5	20.0
8 19			
	39.8	~~5~~	04.0
	39.8		13.0
	45.5		18.8

8 20 24.5 ~~&~~ Iris
21 04.5

=

8 21 Iris prec +15°.1795 (9.5) by 40.0^s
& is 11'.0 North of it!

8 21 51.0
22 36.0

8 22 Iris prec +15.1796 (8.7) by 45.0^s &
is 4'.2 North of it.

Comparison star = +15.° 1795 (9.5)

May 16, 1904

Bond 236 used for times.

I

L O A.

209.0 < Comp * dis

8 3 246 315.~~8~~2 106.2 ✓

35.2 91.0 ✓

136.2 197.2 ✓

162.8 ✓ — 0.33

215.8

3545 306.4 90.6 ✓ — 0.23

32.5 99.1 ✓

131.6 189.7 ✓

R O B. 170.3 ✓ — 0.13

127.8 Mean = — 0.25

~~#~~3 8 40 216.2 88.4 ✓

300.0 104.3 ✓

44.3 192.7 ✓ — 0.24

167.3 ✓

116.8

8 4128 224.7 107.9 ✓ — 0.27

28 39 309.3 87.9 ✓

8 37 10 37.2 195.8 ✓

5 - 3 164.2 ✓ — 0.30

13 37 07

6617 567

7 371

0.196

May 16, 1904.

RDB. II

276.1
8 44 47 369.1 93.0
90.5 106.9
197.4 199.9
160.1 — 0.38

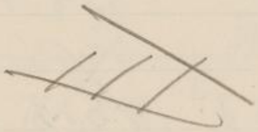
270.4
47 07 15.3 104.9
99.0 89.0 — 0.32
188.0 193.9
166.1 — 0.26

LDB. Mean = −0.23

188.8
50 50 277.9 89.1
359.0 96.2
95.2 185.3
174.7 — 0.10

182.4
8 53 55 285.4 103.0
196 39 10.1 86.5 — 0.14
8 49 10 96.6 189.5
5 − 1 170.5 — 0.18
13 49 09 GMT.
6617.576
17.371
0.205

May 16, 1904.



L + a

	−187.2			
9h 10m 50s	−276.2	89.0		
	−0.2	106.6		
	106.8	195.6	164.4	−0.30
	176.0	110.7		−0.32
9h 16m 25s	286.7			
	−6.5	87.4		
	93.9	198.1	161.9	−0.34

R + B

	−99.1	86.7		
9h 23m 50s	185.8			
	269.2	107.7		
	16.4	194.4	165.6	−0.27
	−85.2	112.7		−0.34
9h 29m 40s	197.9			
0 45	277.6	88.4		
		201.1	158.9	−0.40
9 20 11	−6.0			

5 − 5

14 20 06 G.M.T.

6617.597

17.371

0.226

Mean −0.33

May 16, 1904

$\overline{\text{IV}}$

R + B

$9\ 33^m 58^s$ ~~99.0~~ ~~186.8~~

R + B

$9\ 36^m 35^s$ 270.4 / 11.3 / 99.0 / 184.2 — 100.9 / 85.2 / 186.1 — 173.9 — −0.11

$9.48^m 10^s$ 288.0 / 6.3 / 88.6 / 196.8 — 86.3 / 108.2 / 194.5 — 165.5 — −0.27 — −0.19

$9\ 53^m 8^s$ 8.3 / 91.8 / 181.2 / 283.1 — 83.5 / 101.9 / 185.4 — 174.6 — −0.10

$9\ 56^m 10^s$ 3.7 / 104.1 / 189.7 / 274.8 — 100.4 / 85.1 / 185.5 — 174.5 — −0.10 — −0.10

mean −0.14

18 5 55
9 46 29
5 −5
14 46 24 G.M.T.
6617.615
17.371
+0.244

A. A. 39°.0 Ver. B.
H. A. $56^h\ 44^m$
Dec. +15.8°
S. T. $13^h 57^m$
Sprocket −1.5 −A
" −0.5 B
" +0.1 C

May 16. 1904.

~~Double Star.~~ ~~W. obs.~~
~~Phot. R.~~

Obs. very difficult throughout evening, on Iris, on account of decreasing alt-~~alt~~itude, and some cloud in the air. Last 2 groups especially difficult.

Double Star. W. obs.
Phot. R.

15. 27 −24°.2
14 25
−1 2

Pos. Ang. 110°
~~63.0~~ Dist. 11".
Mag. 7.0, 7.1

For obs. see next page.

There is not much difference in brightness between the two components of this double, but prec. and northern component assumed to be slightly brighter.

~~Index above~~ May 16, 1904
Index Above A.

63.0 ← 89.5 ✓ Prec. northern + bttr. dis.
10:47 152.5
250.0 85.9 ✓
335.9 175.4 ✓ −0.09 ✓

70.5 88.5 ✓ −0.05 ✓
159.0
247.0 91.0 ✓
338.0 179.5 ✓ −0.01 ✓
Index below: B.
341.4 83.5 ✓
64.9
156.4 87.1 ✓
243.5 170.6 ✓ −0.18 ✓

336.7 90.4 ✓ −0.08 ✓
10:58 40 67.1
105 40 158.4 90.3
10 52 50 248.7 180.7 ✓
5 — 5 179.3 ✓ +0.01 ✓

15 52.8 G.M.T.
6617

mean −0.06 ✓

May 16. 1904.

B. 236 B 394.
11 2^m 27.2 11 2^m 0.0

B236 used for times in first two groups on Eros.

W's watch used for times in last two groups on Eros, and also on double star.
W's watch is 5 secs. fast.
L. P. P.

The object assumed for Eros and measured as such, was seen to move, during observations, relatively to adjacent star.
Hence right object was measured.

May 20, 1904 (Friday)

7 20 C's watch 25s fast

B 236 B 394

7 21 09.4 7 21 00

22 10.0 22 0.0

V Ursae Maj Webb

9 2 +51.0

11 42

2 40

7 40 Some cloud in region of the variable

7 50 Clouds

7 53 Clouds, star gone.

7 57 Clouds thicker.

8 00 Clouds, star gone

8 15 Still cloudy especially north of zenith

8 26 " " " " "

" "

1904phae.proj..56GW

May 20, 1904

8 45 Clouds Stars gone

8 47 08.5
50 46.5

8 51 45.5

8 52 06.5
54 24.5

8 55 06.5
56 03.5

56 49.0
57 04.5

57 30.2 − 57 +7.2
58 27.2

59 18.8
59 32.8

Variable prec. +51°.1485 (8.0) by 43^{s} & is about 19'.8 North of it.

May 20, 1904

9 01 25.0
02 01.8

A ~~slig~~ somewhat brighter star fols the var. by 36.8 & is 2'.2 N. of it.

9 05 More clouds coming in this region

9 14 10 Var
16 34 (9.3)
Comp ~~star~~ = +51°1486 (9.3)

C's watch used on V Urs Maj

10 00 Clearer here

May 20, 1904.

~~Left~~

V Urs Maj

I

199.8 < comp ☆ obs

10 1.2 267.8 68.0

23.3 55.3

78.6 123.3 +1.12

202.9 58.8 +1.08

261.7 67.6

19.8

84.4 126.4 +1.05

Right. Mean = +1.14

111.0

176.2 65.2

296.6 52.4

349.0 117.6 +1.25

115.3

10 8.6 170.0 54.7 +1.20

9.8 289.3 66.8

10 4.9 356.1 121.5 +1.16

15 45 9 m.t.

6621.

May 20, 1904.

II

Right

109.4
10 11.2 176.0 66.6
297.1 51.1
348.2 117.7 +1.24
116.4 +1.23
170.9 54.5
291.1 64.1
355.2 118.6 +1.22
Left mean = +1.18
~~356.2~~
17.6
89.1 71.5
204.8 52.8
257.6 124.3 +1.10
27.4
10 17.7 77.6 51.2 +1.14
28.9 196.8 69.4
1.0 14.4 261.2 120.6 +1.18
15 14.0
6621.

P.a. 100.0 ver B
Ha. = 5:27 West
S.T. = 2:30
Dec = +51.7 North
Spwl. = −4.5 a.
−3.5 B.
−2.9 C.

May 20, 1904

Meas. slightly difficult, partly because var. is a little faint as well as from rather bright moonlight and lack of transparency in the air. This lack of transparency is due to the fact there is considerable moisture in the air, as well as from the fact that ~~th~~ it has been more or less cloudy during the evening and there is perhaps a slight remainder of cloud altho none is visible to the eye. Obs. however considered good.

Double at

15 27.3 − 24 9
14 37

0 50
11 10

W Obs.
Phot R

P.a. 110°
Dist 11"
Mags 7.0 − 7.1

N. pr. comp. assumed to be slightly brighter
over for ~~ts~~ times.
C's watch used.

1904phae.proj..56OW

May 20, 1904

Double

see previous page

Left & above B.

245.1 < N. fr. 8 hr. dis.

10 42.0 342.3 97.2

67.6 88.2

155.8 185.4

174.6 − 0.10

247.2

~~336.8~~ 337.4 90.2 − 0.14

63.8 98.6

162.4 188.8

171.2 − 0.17

R & B A. Mean = −0.14

152.2

247.2 95.0

337.5 92.3

69.8 187.3 − 0.14

172.7

156.8

10 51.4 249.6 92.8 − 0.14

93.4 336.6 94.0

10 46.7 70.6 186.8

15 46.3 R.M.T. 173.2 − 0.13

6621.

L. P. P.

May 21, 1904 (Saturday)

B 236	B 394
7 19 53.0	7 20 00
20 53.3	21 00

7 22 C's watch = 2^s fast of B 394

7 33 Heavy clouds coming from the west at present. Sky generally pretty cloudy.

8 00 Thick clouds cover the sky at the present time quite completely, also very slight amount of rain falling.

8 30 Clearing

V Urs Maj WCb.
Plot T.

$$\begin{array}{rrr} 9 & 2 & +51.0 \\ 12 & 45 & \\ \hline 3 & 43 & \end{array}$$

C's watch used.

(over)

May 21, 1904
V Urs Maj

~~Left~~ I

199.1 < comp * dis
8 49.4 268.6 69.5′
26.0 54.8′
80.8 124.3′ + 1.10′

204.8
259.9 55.1′ + 1.09′
14.2 69.9
84.1 125.0′ + 1.08′

Right mean = + 1.14′
108.9
176.0 67.1′
295.8 54.0′
349.8 121.1′ + 1.17′

115.6
8 57.2 168.6 53.0′ + 1.19′
289.0 66.3
~~8~~ 53.3 355.3 119.3′ + 1.21′
13 53.3
6622

May 21, 1904

Right II

109.3
8 59.4 172.7 63.4″
299.2 51.1″
350.3 114.5″ +1.31″

116.4 +1.24″
168.2 51.8″
287.9 68.8″
356.7 120.6″ +1.18″
Left mean = +1.18″
17.3
86.7 69.4″
204.8 56.2″
261.0 125.6″ +1.07″
26.8
907.8 78.9 52.1″ +1.13″
903.6 199.0 67.8″
14 3.6″ 266.8 119.9″ +1.19″
6622. Final mean = +1.16

P.A. = 100.9 Ver B
H.A. = 4.21 West
S.T. = 1.19
Dec. = +51.6 North
Spwt = { −4.5 a
−3.5 B
−2.9 C

May 21, 1904

ι Librae wObs.

15 6 −19.4 Phot I.
13 56
1 10
10 50 ″ 9,5 cap.

Above
300 < Var. dis. I
10 02.0 75.5 45.5
201.8 59.6
261.4 105.1 ✱ −1.53
22.6
83.1 60.5 −1.47
207.1 49.9
257.0 110.4 −1.41

Below mean = −1.56
300.7
344.0 43.3
116.8 54.4
171.2 97.7 −1.71

292.4 −1.64
10 10.0 357.4 60.0
10 6.0 122.5 44.0
15 6.0 166.5 104.0 −1.56
6622.

May 21, 1904

Below II

300.4
10 13.6 347.6 47.2
114.9 58.1
173.0 105.3 −1.53

292.5 −1.56
350.9 58.4
120.6 43.8
164.4 102.2 −1.60
Above Mean = −1.52
209.6
256.6 47.0
23.1 58.6
81.7 105.6 −1.52

201.9
10 20.4 263.0 61.1 −1.48
10 17.0 27.6 47.7
15 17.0 75.3 108.8 −1.45
66 22. PA = 66.1 Var B Trial Mean = −1.54
HA = −0:30 East
Dec = −19.8 South
S.T. = 14:37
Sp. Wh. = −2.5 B
−1.5 α

May 21, 1904.

+7.3404 wells
Phot T

17 19 +7.7
14 43
2 36
9 24

B 236 used

I

LOA

11.0 < Comp * dis
10 51 25 92.4
196.6
~~268.8~~
17.3
54 07 86.0
188.8
275.3
R of B
279.6
57 55 363.2
108.4
175.8

81.4
72.2
153.6 + 0.50

68.7 + 0.48
86.5
155.2 + 0.47

mean = + 0.50

83.6
67.4
151.0 + 0.56

289.3
10 59 25 359.9
22 52 100.6
10 55 43 185.3
5 - 31
15 55 12 GMT

70.6 + 0.52
84.7
155.3 + 0.47

~~6623.6355~~
6623.6633
19.6884
3.1749

May 21, 1904

~~R.O.B.~~ 4

279.5
11 02 10 366.3 86.8
107.5 68.9
176.4 155.7 +0.46

286.9
03 43 358.0 71.1 +0.43
98.3 87.9
186.2 159.0 +0.40
~~L.O.C.~~ Mean = +0.46
188.9
06 20 274.4 85.5
17.3 71.3
88.6 156.8 +0.44

199.4
11 08 27 268.0 68.6 +0.48
20 40 8.7 84.6
11 05 10 ~~92.0~~ 93.3 153.2 +0.51
5 - 33 P.a. = 105.7 Ver B.
16 04 37 G.M.T. H.a. = -2:03 East
6622.6698 Dec = +7.4 North
19.4884 S.T. = 15:20
3.1814 δpuh = { -2.5 a
-1.5 B
-0.9 δ

L. P. P.

B 236 B 394

May 23, 1904 (Monday)

7 49 C's watch = 3^s slow

B236
7 50 5.3
51 5.5

B394
7 50 00
51 00.

V Urs Maj   Wolf. Plot I.

9 2 + 51.0
12 15
3 13

8 00 Sky quite cloudy everywhere. No stars visible in this region at present.

8 07 Var. & comp. * seen, but cloudy again.

8 40 Too cloudy in this vicinity

May 23, 1904

Var 130802.

Wolfs. Phot. T.

13 1 − 2.0
13 1
0 0

C's watch used on this

~~Left &~~ above < Comp * dis

5.5

A 57.6 ~~A~~101.3 95.8
193.0 84.1
~~247.1~~ 179.9 0.00
12.2
96.2 840 +0.02
184.4 98.0
~~28~~2.4 182.0 +0.04
Right & Below 178.0 Mean = +0.02

275.3
12.2 96.9
103.0 81.1
184.1 178.0 + 0.04

280.3 +0.01
9 ~~6~~4.0 5.9 85.6
121.6 95.3 95.6
9 00.8 190.9 181.2
14 01.89. M.T. 178.8 − 0.02
6624. ~~0.0~~

Clds prevented a second from being taken. In fact actually taken sky pretty clear & obs. considered good

OVER

May 23, 1904

9 10 Cloudy

P.a. 144.5 Ver B
S.T. 1:25
H.a. −2.4 North
Dec 0:18 West
Sp Wl = d − 3.5 a
− 2.5 B
− 1.9 C

ι Librae 2 wdbs
Phot T.
9.5 Cap

Cs' watch used
15 6 − 19.4
13 46
1 20
Above 10 40
208.0 < Vardis
9 28.4 259.4 51.4
22.6 58.8
81.4 110.2 − 1.42
205.8
261.0 55.2 − 1.47
26.2 50.2
76.4 105.4 − 1.53
Below mean = − 1.60
120.5
168.4 47.9
298.6 49.7
348.3 97.6 − 1.72
− 1.72

May 23, 1904

Same continued

	119.3		
9 33.5	168.5	49.2	
61.9	300.5	48.2	
9 31.0	~~349.0~~	97.4	-1.72
14 31.0 G.M.T.	348.7		
66 24			

Heavy masses of cloud coming all ~~through~~ west & into this region Clouds prevent a second group being taken.

[illegible]

9 40 In group actually taken sky in this region quite clear and images steady.

P.A. = 246.2 Var B
H.a. = -1.06 East
Dec. -19.4 South
S.T. 2.00
Sp Wh. { -2.5 B
-1.5 C

9 48 Very heavy and continuous clouds from the West and overspreading whole sky. ~~Sk~~ Clds well down in East no chance for anything further.

May 23, 1904

In early part of evening students were here from Mr. Thurar's school, as well as some members of the Cantabrigia club. Showed them telescope & general working of instrument & dome. They were also shown the mer. cir. & other yard instruments

May 24 1904 (Tuesday)

7 18 Cs watch = 13^s fast ~~of~~ B.394

B 256		B394
7 19	03.5	7 19 00.0
20	03.7	20 00.0

V Ursae Maj. w Obs. Phot T.

9 2 +51.0
12 2
3 0

8 07 Region of var. seen & thoroughly identified, but var. not seen up to present on account of haze & glare from moon light!

Cs watch used for times on this.

~~Left~~

29.0 < Comp * dis.

8 35.0 47.8 48.8^r

198.0 68.3^r

266.3 117.1^r + 1.26^r

21.9

87.8 65.9^r + 1.28^r

207.3 48.8^r

256.1 114.7^r + 1.31^r

over

May 24, 1904

~~Below~~ Plane Cont.

Right mean = + 1.30

290.9
354.6 63.7
120.2 48.2
168.4 111.9 + 1.37

300.7
8 48.4 349.3 48.6 + 1.33
83.4 110.2 67.2
8 41.7 ~~180.~~ 115.8 +1.29
13 41.5 177.4
6625.

Same Over II

Right
295.1
8 55.0 356.1 63.0
118.0 50.4
168.4 113.4 + 1.34

301.1
349.4 48.3 +1.39
112.4 60.6
173.0 108.9 + 1.44

Left mean = 1.33
266.5
254.8 51.3
19.6 67.0
86.6 118.3 + 1.23

see next page +1.27

May 24, 1904

202.3

9 08.0 266.1 63.8

12 30 27.5 51.1

9 01.5 78.6 114.9 +1.31

14 01.3 Final mean = +1.32

6625

P. A. 100.2 Ver B.

H. A. 4:37 West

Dec. +51.4 ~~North~~

S.T. 1:40

Sp. wh.
- −4.5 a
- −3.5 B
- −2.9 c

T Lyrae 2 Obs.
Phot f.

18 32 +38.7
14 02
4 30
7 30

May 24 1904

RDA. T Lyrae

I

11.7 < comp ✱ dis

10 0.0 93.1 81.4'

183.0 99.8'

282.8 187.2' + 0.02

178.8

6.8

99.1 92.3' + 0.04

191.8 82.2

274.0 174.5' + 0.10

LDB. Mean = + 0.11

286.0

358.8 72.8'

97.9 91.9'

189.8 174.7' + 0.10

276.9 + 0.18

10 5.8 368.6 91.7'

10 2.9 107.3 75.1'

15 2.7 182.4 166.8' + 0.25

6625.

May 24, 1906

LOB

II

284.3
107.4 362.7 78.4
97.9 90.3
188.2 168.7 +0.21

276.3
366.7 90.4 +0.26
107.3 72.6
179.9 163.0 +0.32

R.D.a. Mean = +0.13
193.0
276.2 83.2
~~36~~ 3.0 97.5
100.5 180.7 −0.01
179.3

185.5
10134 284.3 98.8 ± 0.00
11.9 81.0
10 10.4
15 10.2 92.9 179.8 ± 0.00
6625

P.a. 359.6 VnB
H.a. −3:48 East
Dec. +36.8 North
S.T. 14:41
Sp. wh. { −3.5 a
−2.5 B
−1.9 C

May 24, 1904.

V Aquilae ★

Webb
Plot T
9.5" cap

18 58 − 5.1
15 08
3 50
8 10

L.O.A.:
195.3 < Comp ★ dis
10 59.0 271.0 75.7
17.5 70.3
87.8 146.0 + 0.65
200.9 + 0.66
267.4 66.5
12.6 79.2
91.8 145.7 + 0.66
R.O.B. Mean = + 0.68
103.8
181.4 77.6
291.3 63.9
355.2 141.5 + 0.74

112.0 + 0.70
11 04.4 176.4 64.4
12 4.4 282.6 81.1
11 02.2 363.7 145.5 + 0.66
16 02.0
6625.

May 24, 1904

RDB

107.1

11 5.5 180.9 73.8

290.4 66.4

356.8 140.2 +0.77

108.4 +0.72

174.7 68.3

286.4 76.3

362.7 144.6 +0.68

LDA. Mean = +0.68

12.7

93.7 81.0

200.6 67.3

267.9 148.3 +0.61

18.4 +0.63

11 10.5 87.4 69.0

160 195.4 77.0

11 8.0 272.4 146.0 +0.65

167.8

662.5

P.a. 119.0

S.T. = 15:~~4~~ 37

Ha. −3:22 East

Dec. −5.8 South

Sp wh = { −2.5 B
−1.5 C

L.P.P.

C's watch used throughout evening

May 27. 1904 (Friday)

B 296
7 25 535
26 53.7

B 394
7 26 00
27 00

7 28 C's ~~watch~~ = 10s fast of B 394
C's watch used on V Urs Maj.

V. Urs. Maj. Wells
Plot T.

9 2 51.0
12 12
3 10

Left
27.5 < comp * obs
8 32.0 77.9 50.4
198.5 69.8
268.3 120.2 +1.19
+1.25
20.3
84.1 63.8
208.1 51.0
259.1 114.8 +1.31

Mean = +1.28

Right
289.0
357.0 68.0
118.1 49.2
167.3 117.2 +1.25
300.5 +1.32
8 41.6 348.3 47.8
73.6 109.5 63.2
8 368
13 366 172.7 111.0 +1.39
662

May 27, 1904.

Right
288.8
8 44.0 354.8 66.0
116.8 51.2
168.0 117.2 +1.25

298.0 +1.30
346.9 48.9
108.1 63.9
172.0 112.8 +1.35

Left Mean = +1.29
200.6
267.2 66.6
26.6 50.3
76.9 116.9 +1.26

207.7 +1.28
8 54.4 258.0 50.3
4.7
18.0 6 ~~5.5~~
8 49.7 ~~82.0~~ 82.7 ~~115.8~~ + 1.~~29~~30
115.0
8 49.5 P.A. = 100.5 Ver B
662P. H.A. = 4:32 West
13 49.5 G.M.T. Dec = +57.4 North.
S.T. = 13:34
Sp.Uh. = { −4.5 a
−3.5 B.
−2.9 C.

Sky pretty clear; showers have fallen within ~~the~~ last 2 days and clouds swept off in a solid mass this afternoon leaving sky quite transparent and air quite cool. Seeing also pretty good. ~~[illegible]~~

May 27, 1904.

Altho there is more moonlight tonight than when this var was last measured, yet it is farther east, atmospheric conditions are better and var. somewhat better seen at equalization. Observer consequently thinks that obs. tonight is probably a little better than in the last previous measurement.

RX Cygni Wilk.

Phot.

20 9 +46.3 9.5 cap.
14 20

5 49
6 11

#9 57 25 9.3
9 59 44 Var
10 00 57 7.5

C's watch used on these groups following

1904phae.proj..56OW

May 27 1904

R X Cygni ~~2~~

I

Above

108.4 <comp * obs

10 9.0 174.0 65.6

299.4 46.0

345.4 111.6 + 1.38

118.6

165.7 49.1 + 1.38

292.6 62.2

354.8 111.3 + 1.39

Mean = + 1.33

Below

18.3

85.3 67.0

207.5 49.6

257.1 113.6 + 1.36

+ 1.28

28.7

10 13.0 78.7 50.0

10 11.0 198.2 68.6

15 10.8 266.3 8 118.6 + 1.22

66 28.633

P.a. = 0.0 Ver B

Ha = − 5.08 East

Dec = + 47.8 North

S.T. = 14.59

Spwl = { −4.5 B
−3.6 C

May 27, 1904

47° 3031 (9.3) with
same comp ✱ as RX Cygni.

Below
37.0 < comp. ✱ obs
10 17.4 69.7
210.3
253.3

wedg
phot ✱
9.5 cap

3837
430
~~106.7~~ + 2.30
76.7

30.9
77.0
216.4
248.9

45.1 + 2.28
32.5
77.6 + 2.27

Above

Mean = + 2.38

308.8
337.5
122.0
164.3

28.7
42.3
71.0 + 2.47

303.5
10 22.0 341.6
126.7
158.5

39.1 + 2.48
31.8
70.9 + 2.48

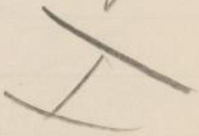
39.4
10 19.7
15 19.5
6628

~~Pa.~~ After meas. the var. went
& measured +47.°3031 (9.3). Star
was thoroughly identified being near

May 27, 1904.
the var. so that only P.A. was read.
P.A. = 32.0° ~~vert~~.

V Aquilae ~~5~~ w of. Pliot T. 9.5 cap.

19 0 − 5
15 15
3 45
8 15



~~Left~~ ∠ comp ★ dis
195.2
10 48.6 268.6 73.4
1~~#~~7.7 79.1
~~A~~90.8 152.5 + 0.53
192.2 + 0.48
2~~7~~3.2 81.0
14~~4~~0 75.9
89.9 156.9 + 0.44
Right mean = + 0.40
106.2
1~~7~~81.9 75.7
280.8 83.6
364.4 159.3 + 0.39
~~X~~99.4
10 54.8 185.9 86.5 + 0.32
10 51.7 282.2 80.0
15 51.5 362.2 166.5 + 0.25

May 27, 1904

Same one

II

Right

1040
10 56.4 181.8 77.8
282.4 84.5
366.9 162.3 +0.34

102.5 +0.40
185.0 82.5
287.0 72.9
359.9 155.4 +0.47

Left Mean +0.43
117.0
186.4 69.4
189.8 86.0
275.8 155.4 +0.47

9.3
11 01.6 93.0 83.7 +0.46
10 59.0 195.8 72.4 0.46
15 58.8 268.2 156.1 +
66 28.

P.a = 119.5 Ver B
RA = −3'.18 East
Dec = −5'.8 South
S.T. = 15.60
Shift = 9 −25 B

May 28, 1904 Saturday

7 25 C's watch 25^s fast of B 394

B 286 B 394

7 25 34.0 7 26 05

26 34.3 27 05

044068 — Camelop Wills Pliott.

4 40 + 6~~8~~.0 9.5 cap

12 20

7 40

C's watch used tonight

~~Left~~

193.4 < Comp * obs

8 26.0 274.4 81.0 ✓

~~21~~ 21.1 62.8 ✓

83.9 143.8 ✓ + 0.70 ✓

~~200.0~~ + 0.68 ✓

264.3 64.3 ✓

12.4 81.1 ✓

93.8 145.4 ✓ + 0.67 ✓

Right mean = + 0.76 ✓

112.8

171.2 58.4 ✓

282.6 79.4 ✓

362.0 137.8 ✓ + 0.82 ✓

104.4 + 0.83 ✓

8 30.8 182.6 77.9 ✓

~~8 24.4~~ ✓ 293.8 58.8 ✓

13 28.08 352.6 136.7 ✓ + 0.84 ✓

M.T.

6629.

May 28, 1904

Right — II

112.2
8 32.0 — 172.6 — 60.4 ✓
$28\overset{3}{4}.5$ — 77.9 ✓
361.4 — 138.3 ✓ +0.81 ✓

102.4 — +0.81 ✓
181.3 — 78.9 ✓
292.1 — 59.5 ✓
351.6 — 138.4 ✓ +0.81 ✓

Left — Mean = +0.76 ✓

22.2
84.0 — 61.8 ✓
$19\overset{3}{0}.3$ — 80.5 ✓
273.8 — 142.3 ✓ +0.7^3 ✓

12.6 — +0.7^2 ✓
8 37.4 — 92.0 — 79.4 ✓
8 34.7 ✓ — 200.0 — 64.2 ✓
264.8^2 — 143.6 ✓ +0.70 ✓

13 34.3 G.M.T.
6629.

P.a = 80.5 Var B
S.T. = 13:20
H.a. = 8:37
Dec. = +68.0
Sh. Wh. { −1.5 B
−0.5 C

May 28, 1904.

Dent. Var. 122001

Wells
Phot I.

12 12 + 0.1
13 48
1 36

ROO

119.3 ∠ Var. dis.
9 24.0 161.0 41.7✓
305.7 34.0✓
339.7 75.7✓ − 2.32✓
124.8
161.4 36.6✓ − 2.27✓
300.6 42.6✓
343.2 79.2✓ − 2.22✓
LOB. Mean = −2.10✓
24.8
47.6 49.8✓
211.1 40.1✓
251.2 89.9✓ − 1.92✓

32.6
9 33.0 71.5 38.9✓ − 1.94✓
9 30.0✓ 208.2 49.2✓
257.4 88.1✓ − 1.96✓
14 29.6✓ G.M.T.
6629.

May 28, 1904

LQB. H

27.7
9 34.0 76.0 48.3 ✓
214.0 38.2 ✓
252.2 86.5 ✓ — 2.01 ✓

34.1 — 1.98 ✓
71.9 37.8 ✓
206.0 50.4 ✓
256.4 88.2 ✓ — 1.96 ✓

R.D.a. Mean — 2.10 ✓
300.6
343.3 42.7 ✓
123.9 35.5 ✓
159.4 78.2 ✓ — 225 ✓

3~~0~~14.0
9 ~~4~~39.0 348.9 34.9 ✓ — 2.23 ✓
9 36.5 ✓ 120.0 44.5 ✓
164.5 79.4 ✓ — 221 ✓
14 36.1 ✓ R.M.T.
6629.

p.a = 264.5 VnB
H.a. = 2:00 West
Dec. = +0.8 North
S.T. = 14:20
Sp. wh. = { —1.5 B
—0.5 C

May 28, 1904

~~III~~

V Aquilae.

W.Obs.
phot T.
9.5" cap

17 0 – 5.0
14 30
4 30
7 30

Left
194.3 < comp + dis
10 5.0 272.4
16.0 78.1 ✓
85.5 69.5 ✓
147.6 ✓ + 0.62 ✓
195.0
266.9 71.9 ✓ + 0.57 ✓
11.2 81.0 ✓
92.2 152.9 ✓ + 0.52 ✓
Right. Mean = + 0.53 ✓
101.3
1828 ✓ 81.5 ✓
285.2 74.0 ✓
359.2 155.5 ✓ + 0.47 ✓

108.0 + 0.49 ✓
10 11.0 178.0 70.0 ✓
10 8.0 ✓ 281.3 83.1 ✓
15 7.6 364.4 153.1 ✓ + 0.57 ✓
6629.

May 28, 1904

	Right	II
	101.6	
10 18.0	182.3	80.7 ✓
	284.5	74.9 ✓
	359.4	155.6 ✓ +0.47 ✓
	105.2	+0.48 ✓
	176.8	71.6 ✓
	279.8	83.5 ✓
	363.3	155.1 ✓ +0.48 ✓
	Left	Mean = +0.52 ✓
	11.8	
	92.2	80.4 ✓
	196.6	70.6 ✓
	267.2	151.0 ✓ +0.56 ✓
	17.1	+0.55 ✓
10 24.2	85.7	68.6 ✓
10 21.1 ✓	189.8	83.4 ✓
	273.2	152.0 ✓ +0.54 ✓

15 20.7
66-29.

May 28, 1904

III

Left

12.2

10 37.0 89.8 77.6✓

195.~~7~~8 69.4✓

265.2 147.0✓ +0.63✓

15.6 +0.53✓

89.1 73.5✓

191.1 83.7✓

274.8 157.2✓ +0.43✓

Right Mean = +0.46✓

281.2

366.0 84.8✓

105.3 74.5✓

177.8 159.3✓ +0.39✓

283.4 +0.39✓

10 44.0 358.4 75.0✓

10 40.5✓ 100.0 84.7✓

~~185.2~~ 159.7✓ +0.39✓

15 60.1 184.7

66 29.

May 28, 1904

Right

IV

282.4
10 50.0 362.8 80.4 ✓
105.7 72.2 ✓
177.9 152.6 ✓ + 0.52 ✓

282.7 + 0.48 ✓
358.6 75.9 ✓
102.2 80.9 ✓
183.1 156.8 ✓ + 0.44 ✓

Left

Mean = + 0.51 ✓

196.0 ✓
266.4 70.4
10.2 82.7 ✓
92.9 153.1 ✓ + 0.51 ✓

194.7 + 0.54 ✓
10 56.8 274.4 79.7 ✓
10 53.4 ✓ 17.1 70.3 ✓
~~88.~~ 150.0 ✓ + 0.58 ✓
15 53.0 G.M.T. 87.4
6629

May 28/1904.

P.a. = 119.5 Var B
H.A. = −3:18 East
Dec. = −5.7 South
S.T. = 15:41
Sp.Wh. = −2.5 B
−1.5 C

L.H.P.

May 31, 1904 (Tuesday)

B 236 B 394
8 49 ~~37~~.36.8 8 ~~50~~ 50.00
50 37.0 51.00

8 52 C's watch correct by B 394

V Urs Maj - W Obs. Plot

9 2 + 51.0
13 52
4 50

~~Left~~
200.8 < comp * obs
9 12.6 264.8 64.0
22.4 52.7
75.1 116.7 + 1.27
~~203.1~~ clds. ~~star gone~~ + 1.30
~~260.0~~ clds.
9 28.0 19.6 ~~80.7~~ 61.1
204.5 52.5
257.0 113.6 + 1.34
Right. Mean = + 1.37
293.8 59.1
33.0 352.9 50.4 +1.43
11 49 109.5
165.3
296.4 +1.44
9 35.0 343.8 47.4
108.6 110.3 60.9 + 1.46
9 27.2 171.2 108.3
14 27.2

May 31, 1904

II

Right
290.2
9 38.0 349.8 — 59.6
119.0 — 42.2
161.2 — 101.8 +1.61

300.7
9 40.6 341.3 — 40.6 +1.58
111.4 — 64.3
175.7 — 104.9 +1.56

Reject

Left
200.3 — Mean = +1.44
42.8 265.5 — 65.2
25.8 — 50.1
75.9 — 115.3 +1.30

see next page

203.6
9 44.6 252.5 — 48.9

PA 99.5 Var β.
Δa +5:40 West
Dec. +5 14 North
S.T. = 14:45
Sf wh. = { -4.5 a
-3.~~9~~5 β
-2.9 c

over

May 31, 1904

Impossible to finish second group on account of the increasing cloudiness.
In first group sky not fully clear, but moderately so, and ~~images~~ by watching images equilizations made when said images were rather steady.
First group considered good

In second group much troubled by clouds and images varying somewhat relatively in light. Observations very difficult and much more uncertain than first group.
Clouds also became so thick that it was impossible to finish second group, consequently latter group rejected.

1000 Clouds now coming in thick and heavy masses from the West and overspreading whole sky impossible to do anything further.

L. P.

June 3, 1904 (Friday)

7 26 C's watch 3s slow of B 394
B236
B 394
7 26 370
27 372
7 27 00
28 00

ι Librae
10 6 −1.4
13 6
2 00
10 00

Wells
Pilot T.
9.5 cap.

C's watch used.

Below
120.0 <Ver. dis.
8 1 36 164.8
294.3
551.2
114.2
172.1
301.5
344.3
Above
28.6
76.0
199.6
263.4
23.1
80.0
208.2
13 15.8 9h 256.0

44.8
56.9
101.7 −1.61

−1.62

57.9
42.8
100.7 −1.64

Mean = −1.54

47.4
63.8
111.2 −1.39

56.9 −1.46
47.8
104.7 −1.54

8 18.6
31.6
8 15.8

June 3, 1904

II

Above
27.6
8 20.4 75.7 48.1
199.8 62.7
262.5 110.8 — 1.40

18.4 — 1.06
43.0 64.6
206.6 49.2
255.8 113.8 — 1.33

Below Mean = −1.49
300.7
344.8 44.1
113.3 57.9
171.2 102.0 — 1.61

293.5
8 26.0 353.0 59.5 — 1.62
13 23.2 121.4 42.1
6635. 163.5 101.6 — 1.62

P.a. = 246.5 Ver B
Ha. = −1.34 East
Dec. = −19.2 South
S.T. = 13. 35
Spl Wh. = { −2.5 B
−1.5 C

1904phae.proj..56QW

June 3, 1904

+7°3404 Wolb.
17 19 +7.7 phot.
14 15
3 04
8 56 β 236 used

LDO.

187.8 {comp. radii
9 25 31 277.8
20.9 90.0
83.9 63.0
133.0 + 0.52

197.8 + 0.50
27 18 267.4 69.6
8.3 85.1
93.4 154.7 + 0.48
~~[illegible]~~ Mean = + 0.48
107.6
30 00 175.9 mar for 67.3
279.2 standard 89.6
368.8 *
156.9 + 0.44

98.7
9 32 15 184.9 87.5 + 0.46
11 50 04 287.2 67.4
9 28 46 354.6 154.9 + 0.48
5 55
14 28 44 G.M.T.
66 35.603
66 34.237

June 3, 1904

II

R.O.B.
107.8
9 38 30 174.9 67.1
278.3 87.0
365.3 154.1 + 0.150
Stars gone

99.1
36 30 185.2 + 0.48
286.5 86.1
356.8 70.3
156.4 + 0.45
Rejected

L.O.A. Mean =
12.3
39 30 87.1 74.8✓
181.3 96.9✓
278.2 171.7 +

6.8 Stars gone
9 47 12 97.2 " " 90.4 +
1 .
2 . +

P.a. = 107.0 V.n.B
H.A. −2:29 East
Dec. 47.4 North
S.T. 15.06
S.P.wl. { −2.5 a; −1.5 B; −0.9 C

June 3, 1904

Impossible to finish second group; greatly troubled by clds in second group during settings made, stars disappearing and alternating in brightness continually. Second group rejected.

During first group sky clear, and this group considered good.

Clouds prevented setting images exactly before setting circle & sprocket, but images quite ~~close~~ near so that readings of P.A. & Sp. Wh. are quite close.

U Z
~~SU~~ Cygni

W Obs.
Phot T.

+43°.4301

22 00 + 44.0
15 00
7 00
5 00

over

B 236 used

June 3, 1904

U Z Cygni

I

Left

104.5 <comp ★ dis.

10 23 54 180.4 75.9

292.7 Fog 59.6

352.3 clouds 135.5 + 0.87

110.8 + 0.86

49 00 172.3 cloudier 61.5

282.3 75.4

357.7 136.9 + 0.86

clearer

Right mean = + 0.84

111.7

52 20 90.0 78.3

202.0 58.9

260.9 137.2 + 0.83

22.1 + 0.82

10 56 45 83.0 60.9

18.1 59 192.5 77.4

10 45 30 269.9 138.3 + 0.81

5 - 12

15 45 18

June 3, 1904

II

Right

~~13.5~~

~~11 04 15~~

193.0 80.2

11 08 56 273.2 60.8

20.2 141.0 +0.75

81.0

301.5 +0.78

11 48 265.5 62.0

12.5 76.8 +0.80

89.3 138.8

Left Mean = +0.82

102.4

15 13 180.3 77.9

292.6 57.2

349.8 135.1 +0.87

111.0 +0.86

11 18 32 168.6 57.6

54 29 282.3 78.5

11 13 37 ~~359.8~~ 136.1 +0.85

5 17 360.8

16 13 20

June 3, 1904

Left III

105.7
11 20 55 181.3 75.6
292.4 59.0
351.4 134.6 + 0.88

114.30 + 0.90
22 46 169.8 55.8
281.4 77.1 + 0.92
358.5 132.9

Right Mean = + 0.83
13.3
11 25 35 89.3 76.0
9 16 ~~19~~ 203.0 cloudier 64.5
267.5 140.5 + 0.76
11 23 05 Clds
~~16~~5 -18
16 22 47 2.

+

Obs. made thru some cloud, Images however very carefully watched and taken readings when the images were pretty steady. Obs. considered good
11 58 Impossible to get anything further

June 3, 1906.

P.a. 323.0 Vert B
H.a. −4:59 East
Dec +44.0 North
S.T. = 16:56 a
Sp Wt. = { −1.5 a
−0.5 B
+0.1

Clds prevented images being set exactly but readings of P.a. & S. Pracks quite close.

PB 236 PB 394

12 05 25.0 12.0000

L. P. P.

June 4th 1904 (Saturday)

9 20 Cs' watch 8^s slow of B 394

B 236
9 22 35.0
9 23 37.2

B 394
9 23 00
26 00

U Z Cygni Wells.
Plate 1.

22 00 + 4 40
14 35
7 25
4 35

9 30 Clouds thick in this region.
No stars visible in telescope.

9 50 Two or three stars seen for a
moment but immediately disappeared.

10 12 Sky thickly cloudy; no stars
visible. Clouds now coming heavier
Evidently no chance for anything tonight.

June 9 1904 ♃ (Thursday)

7 35 C's watch 28^s fast of B 394
B 236 B 394
7 36 54.2 7 37 00
37 54.4 38 00

V Urs Maj Wllbs Plot T.
9 2 +51.0
13 12
4 10

8 57 abandoned; clouds too thick for this var. tonight.

ι Librae 9.5 cap
Wllbs Plot T
15 6 −19.4
14 26
0 40
11 20

9 10 Impossible to get this Var. Clouds too thick.

June 9, 1904

μ Cephei

[illegible]
9.5 cap
Pliot L

21 40 + 58.1
14 40
7 00
5 00

above
~~Left~~

Cs Watch used

330 ∠ Vardis

1/3 wt

9 21.2 631 30.1 ✓
205.3 35.9 ✓
261.2 86.0 ✓ — 2.02 ✓
26.4
73.5 47.1 ✓ — 2.12 ✓
21~~7~~6.5 32.4 ✓
248.9 79.5 ✓ — 2.21 ✓
mean = — 2.04 ✓

Below
305.3
338.2 32.9 ✓
1~~7~~04.0 57.4 ✓
161.4 90.3 ✓ — 1.91 ✓

296.5
9 26.8 350.4 53.9 ✓ — 1.95 ✓
125.2 33.3 ✓
9 24.0 158.5 87.2 ✓ — 1.99 ✓
14 23.5

June 9, 1904

II

Below

303.0

9 29.4 338.4 35.4 ✓

116.8 49.0 ✓

165.8 84.4 ✓ — 207 ✓

294.7

347.1 52.4 ✓ — 201 ✓

123.7 36.3 ✓

160.0 88.7 ✓ — 1.95 ✓

above Mean = ~~1.96~~ -1.86

211.3

254.3 43.0 ✓

214.0 57.0 ✓ -1.66 ✓

81.0 ~~87.0~~ ~~-2.00~~

100.0 ✓

~~206.7~~

~~9 36.8~~ ~~262.1~~ ~~55.4~~ ~~1.77~~ ✓

~~23.4~~ ~~50.5~~ ~~1.90~~

~~143.9~~ ~~105.9~~ -1.72 ✓

205.9

9 40.0 252.1 46.2 ✓ -1.79 ✓

69.4 26.4 48.7 ✓ ~~-1.80~~

9 34.7 75.1 94.9 ✓

5 - .5

14 34.2

June 9, 1904

III

Above

212.2

9 48.0 254.3 42.1✓

27.0 50.5✓

77.5 92.6✓ — 1.84✓

206.6 — 1.84✓

258.3 51.7✓

30.6 41.0✓

71.6 92.7✓ — 1.84✓

Below Mean = — 1.90✓

119.2

161.6 42.4✓

294.8 48.0✓

342.8 90.6 — 1.90✓

118.1

9 54.0 169.2 51.1✓ — 1.96✓

102.0 302.9 34.7✓

9 51.0 384.6 85.8✓ — 2.03✓

14 50.5

6641.

Gen. weighted mean — 1.90✓

Meas. made through clouds, the observations the most difficult in first group, consequently this group 1/3 wt. The fourth set in second group rejected as it was so cloudy and images varying so much that another set was taken to replace this.

June 9, 1905

Sky clearer in the last set which is retained in place of said fourth set. The final result considered alright, altho obs. rather diff. throughout

P.A. = ~~35~~ 176.0 Var + B Sd.T. = 15:27

H.A. = −6:43 East Sd.wh. = {−6.5 B, −5.5 C}

Dec. = +58.6 North

+7°.3404 welb.

Plot T

17 19 +7.7
15 39
1 40
10 20

B 236 used on this Var

above

19
10 2 27

23.1
77.7 < comp. ~~Xo~~dis.
207.6
253.6

546
460
100.6 + 1.64

28.7
21 53 72.9
203.1
260.3

442
572
101.4 + 1.63
+1.62

Below

mean = +1.52

292.7
25 00 351.2
117.3
164.7

58.5
47.4
105.9 +1.51

294.1
344.3
110.5
170.8

53.2
60.3
113.5 1.34

1.4~~5~~2

10 27 32
13 52
10 23 28
5 −21
15 23 07

6641.6411
41.6116
0.0295

June 9, 1904

II

Below

290.3

10 29 45 353.9 63.6 ✓

118.2 47.6 ✓

165.8 111.2 ✓ + 1.39 ✓

300.0 +1.44 ✓

31 55 346.8 46.8 ✓

112.1 60.5 ✓

172.6 107.3 ✓ + 1.48 ✓

Above Mean = + 1.40 ✓

205.9

34 56 256.4 50.5 ✓

20.4 62.8 ✓

83.2 113.3 ✓ + 1.34 ✓

200.7 +1.36 ✓

10 37 05 263.0 62.3 ✓

13 41 26.8 48.8 ✓

10 33 25 75.6 111.1 ✓ +1.39 ✓

5 -23

15 33 02

6641.6479

41.6116

0.0363

June 9, 1904

III.

Above

206.1
10 44 00 255.2 49.1 ✓
17.8 65.0 ✓
82.8 114.1 ✓ +1.32

198.0 +1.28 ✓
45 53 264.9 66.9 ✓
24.7 51.2 ✓
75.9 118.1 ✓ +1.23 ✓

Below Mean = +1.30

115.0
48 36 167.0 52.0 ✓
291.6 57.7 ✓
349.3 109.7 ✓ +1.42 ✓

+1.31 ✓

110.0
10 50 28 176.0 66.0 ✓
28 57 296.6 53.6 ✓
10 47 14 350.2 119.6 ✓ +1.20 ✓
5 -25
15 46 49
6641.6575
6641.6116
+0.0459

June 9, 1904

IV

Below

117.0

10 53 15 168.5 51.5 ✓

290.0 67.3 ✓

357.3 118.8 ✓ +1.22 ✓

109.0 +1.21 ✓

10 55 08 174.4 65.4 ✓

296.3 54.1 ✓

350.4 119.5 ✓ +1.20 ✓

Above Mean = +1.18 ✓

256

10 58 12 77.7 52.1 ✓

196.7 68.7 ✓

265.4 120.8 ✓ +1.18 ✓

16.8 +1.16 ✓

11 00 40 85.5 68.7 ✓

27 15 203.6 53.3 ✓ ✓

10 56 49 256.9 122.0 ✓ +1.15

5 -26

15 56 23

6641.6642

41.6116

0.0526

June 9, 1904

V

Above

23.8

11 05 53 77.0 54.2 ✓

195.1 72.7 ✓

267.8 126.9 ✓ +1.04

15.5 +1.04 ✓

08 40 86.7 71.2 ✓

203.2 55.5 ✓

258.7 126.7 ✓ +1.05

Below

Mean = +1.02 ✓

295.3

11 49 352.3 57.0 ✓

106.0 71.0 ✓

177.0 128.0 ✓ +1.02 ✓

286.0

11 14 28 358.0 72.0 ✓ +1.01 ✓

00 52 113.0 57.2 ✓

11 10 13 170.2 129.2 ✓ +1.00 ✓

5 -29

16 09 44

6641.6727

6641.6116

0.0611

June 9, 1904

VI

Below

294.3
11 17 17 351.6 57.3 ✓
104.8 75.8 ✓
180.6 133.1 ✓ + 0.9~~4~~1

+ 0.89
~~+ 0.90~~

285.4
19 27 360.2 74.8 ✓
111.2 60.5 ✓
171.7 135.3 ✓ + 0.87 ✓

Above

Mean = + 0.9~~1~~0 ✓

197.2
23 23 271.4 74.2 ✓
20.6 59.5 ✓
80.1 133.7 ✓ + 0.90 ✓

201.7
11 25 36 262.2 60.5 ✓ + 0.92 ✓
85 43 15.2 71.5 ✓
11 21 26 86.7 132.0 ✓ + 0.94 ✓
5 -30
16 20 56
66416812
4.6116
0.0696

June 9, 1904

VII

Above

~~196.5~~ haze, cloudy

~~11 3147 26.~~ images dim

13.2 sky clearer altho a little hazy

11 3828 90.0 76.8 ✓

200.9 62.3 ✓

~~267.4~~ 263.2 139.1 ✓ +0.79 ✓

21.4

41 ~~25~~ 81.4 600 ✓ +0.77 ✓

190.7 81.3 ✓

272.0 141.3 ✓ +0.75 ✓

Below . mean = +0.75

292.1

4523 352.9 60.8 ✓

100.4 82.1 ✓

183.3 142.9 ✓ +0.72

283.9 +0.74 ✓

11 47 13 364.4 80.5 ✓

12 29 111.3 60.5 ✓

11 43 07 171.8 141.0 ✓ +0.75 ✓

5 -34

16 42 33

6641.6962

41.6116

0.0846

June 9, 1904

VIII

Below

291.4
11 49 00 352.7 61.3 ✓
101.1 80.7 ✓
181.8 142.0 ✓ +0.73 ✓

282.8
50 52 362.8 80.0 ✓ +0.74 ✓
110.3 61.9 ✓
172.2 141.9 ✓ +0.74 ✓

Above mean = +0.74

200.8
54 30 263.0 62.2 ✓
12.2 77.6 ✓
89.8 139.8 ✓ +0.78 ✓

189.3 +0.73 ✓
11 56 34 242.3 83.0 ✓
21 0 56 20.2 61.5 ✓
11 52 44 81.7 144.5 ✓ +0.68 ✓
5 -35
16 52 09
6641.7029
41.6116
0.0913

June 9, 1904

IX

above

200.4
12 01 28 265.3 64.9 ✓
10.84 81.2 ✓
91.6 146.1 ✓ + 0.65 ✓

+ 0.62 ✓
189.0
03 14 275.0 86.0 ✓
19.8 63.5 ✓ + 0.58 ✓
83.3 149.5 ✓

Below mean = + 0.61 ✓
109.4 stars dim
06 43 173.2 63.8 ✓
282.2 80.7 ✓
362.9 144.5 ✓ + 0.68 ✓

96.0 + 0.60 ✓
12 09 40 184.5 88.5 ✓
21 05 ~~291~~. 289.4 ~~64.7~~ 65.0 ✓
12 05 16 354.4 153.75 ✓ + 0.57 ✓
5 - 37
17 04 39 G.M.T.
6641.7115
41.6116
+0.0999

June 9, 1904

clouds

Below X

~~35 41.3~~

288.3

12 22 00 357.3 clds 69.9

100.2 80.4

180.6 cldsthicker 149.4 +

12 38 sky now Clearer New Slant

280.3 82.2 ✓

12 42 30 362.5 68.2 ✓

104.8 150.4 ✓ + 0.57 ✓

176.0 + 0.55 ✓

288.2

44 30 355.5 67.3 ✓

100.2 84.8 ✓

185.0 152.1 ✓ + 0.53 ✓

Above mean = + 0.52 ✓

197.3

47 35 266.8 69.5 ✓

9.8 83.4 ✓

93.2 152.9 + 0.52 ✓

188.8 + 0.49 ✓

12 49 00 276.9 88.1 ✓

23 35 16.2 68.0 ✓

12.45 54 84.2 156.1 ✓ + 0.46 ✓

5 -44

17 45 10

6641.7397

41.6116

0.1281

June 9, 1904

Above

XI

196.7
12 53 10 266.6 69.9 ✓
8.0 83.2 ✓ + 0.51 ✓
91.2 153.1 ✓

+ 0.50 ✓

188.8
54 55 274.5 85.7 ✓
14.5 69.3 ✓
83.8 155.0 ✓ + 0.48 ✓

Below

mean = + 0.47 ✓

106.6
57 39 171.6 65.0 ✓
260.8 92.4 ✓
353.2 157.6 ✓ + 0.43 ✓

~~110.0~~ 98.4 + 0.44 ✓
13 01 00 184.8 86.4 ✓
2 26 44 288.0 69.4 ✓
18 56 41 357.4 155.8 ✓ + 0.46 ✓
5 - 46
18 55 55 P.a. 106.0 Var Δa
6641.7471 AR. +1.00 West
41.6176 Dec. +7.6 North
+0.1355 ST = 18:30
Sp wh. - 2.5 a, - 1.5 B 8 - 0.9 c

June 9, 1904

B 236	B 394
13 11 48.0	13 11 0.5

Much troubled by cld. in 9th group, especially the last part. Also troubled by cloud in 10th group. In 11th sky partly clear.

L. P. P.

June 10, 1904 (Friday)

7 42 Cr. watch 5^s slow of B 394

B 236
7 43 0.0
6 40.2

B 394
7 43 00
44 00

∠ Librae

9.5" cap
Wells.
Plot.

15 6 − 1.94
13 26
1 40
10 20

~~Cs~~ Watch used on this variable

I

Above
220.0 ∠ Var. obs
A 05.4 76.8 54.8
205.2 54.8
260.0 109.6 − 1.43

24.4
76.2 51.8 − 1.48
202.7 53.3
256.0 105.1 − 1.53
mean = − 1.60

Below
297.5
346.5 49.0
117.8 48.8
166.6 97.8 − 1.71

over

June 10, 1904

298.2
8 11.0 346.3 48.1 : 1.72
8 8.2 115.8 49.4
5 +.1 165.2 97.5 −1.72
13 8.3 G.M.T.

Same Over

II

Below
297.3
8 13.0 347.5 50.2
117.1 49.1
166.2 99.3 −1.67
296.5
347.1 50.6 −1.66
116.3 49.1
165.4 99.7 −1.66
mean = * − 1.51
Above
202.5
257.4 55.2
23.0 57.5
80.5 112.7 −1.36
203.2
8 19.6 259.0 55.8 −1.36
8 16.3 22.0 56.7
13 16.4 78.7 112.5 −1.36

June 10, 1904

III

Above
203.4
8 25.8 259.6 56.2
24.8 53.7
78.5 109.9 — 1.42

203.6
256.2 52.6 — 1.47
24.2 53.0
77.2 105.6 — 1.52
Below Mean = — 1.62
114.3
165.5 48.2
297.8 47.1
344.9 95.3 — 1.77

116.2
8 32.0 163.9 47.7 — 1.76
57.8 297.4 48.6
8 28.9 346.50 96.3 — 1.75
13 29.0

P.A. = 246.5 Ver B
Ha. = —1:03 East
Dec. = -193 North
S.T. = 14:05
Sp wh. = { -2.5 B
—1.5 C

(over)

June 10. 1904. -

Remarks:- Seeing rather poor on account of East wind and somewhat chilly air. ~~Front [illegible] also~~ Somewhat massive and broken clouds in the West and South which drift through this region during observations, causing images to vary somewhat relatively in their light. A sharp focus cannot be obtained on the images also on account of East wind and atmospheric conditions so that from these combined causes obs are somewhat difficult. General mean however considered good, as observer watched for intervals of best seeing & when images were the steadyest.

Aquitania

WB
Plot T.

16 40 + 5.5
15 00
1 40
10 20

June 10, 1904

9 38 15.5
38 32.0 53.0
08.0

39 06.0
40 30.0

9 44 31.0 a
45 42.8 b
45 58.0 c (asteroid)
46 01.5 d
46 9.0 e

m s
b fols a ~~by~~ by 1 11.8 & 7.5 South
c " a by 1 27.0 & 12.0 South
d " a by 1 30.5 & 8.2 South
e " a by 38.0 & 2.3 South

11.0 b ~~06~~ 46.0 b 15.0 b 43.0 b 41.8
26.0 c 02.0 c 30.5 c 58.0 c
29.5 d 05.0 d 34.0 d 01.0 d
9 50

05.5 b ~~25.0~~ 56.0 b
20.5 c ~~40.5~~ 11.5 c
24.0 d 14.0 d

over

June 10, 1904.

9 5 0³ C is 4.7 South of B &
D is 1.9 South of B

Comp. star = +4°. 3281 (9.5)

Bond 236 used

16 48 +4.7
15 38

1 10
10 50

L.O.A.

I

3.3 < comp ✱ dis

10 11 48 99.4 96.1 ✓
144.7 113.6 ✓
288.3 209.7 ✓ −0.57 ✓
356.3 150.3 ✓ ~~−0.38~~

14 10 406.6 110.3 ✓ −0.40 ✓
186.2 90.6 ✓ ~~−0.39~~
276.8 200.9 ✓
159.1 ✓ −0.60 ✓

L.O.B. mean = ~~0.48~~ = 0.53 ✓

273.3

17 43 370.3 97.0 ✓
85.2 114.8 ✓
200.0 211.8 ✓ −0.61 ✓
148.2 ✓
264.8

10 20 00 377.9 113.1 ✓
23 41 94.8 95.7 ✓
208.8 ✓ − 0.58 ✓
10 15 55 190.5
5 −25 151.2 ✓ −0.55 ✓
15 15 30

June 10, 1904

II

RBB.

275.1
10 23 06 369.8 — 94.7
43.6 — 116.4
200.0 — 211.1
148.9 — 0.60

267.6
25 30 374.3 — 110.7
96.6 — 93.1 — 0.52
189.7 — 203.8
~~200~~ — 156.2 — 0.45

171.2
28 08 286.4 — 115.2 — Mean = −0.54
7.0 — 89.3
96.3 — 204.5
155.5 — 0.48

188.2
10 30 10 281.5 — 100.3
354.2 — 111.8 — 0.55
26 54 106.0 — 212.1
147.9 — 0.62

10 26 ~~41~~
5 − 27
15 26 17

June 10, 1904

III

Pa

182.1

10 37 32 277.0

356.2

107.5

175.2 Rejected

39 00 286.0

2.8

99.3

clouds became so thick that it was impossible to finish

RDB

16 40

16 30

Pa 307.6 Vert B

Dec + 5.1 ~~North~~

Ha -0:36 East

S.T. 16:14

Spirit { -45 B

35 C

June 10, 1904

10 51 37.0 b 09.0 38.5
50.8 c 22.0 51.0
56.0 d 28.0 57.0

10 51

12.8 45.0 14.5
25.5 58.0 27.0
31.5 63.5 33.0

~~10 56~~

~~LOA~~ Over Again ~~III~~

1.7
11 08 30 100.3 98.6
174.8 113.8
288.6 212.4
357.5 147.6 −0.62
10 55 96.6 109.1
183.2 95.8 −0.55
279.0 206.9
155.1 −0.48
ROB mean = −0.56
273.3
14 22 370.3 97.0
86.3 112.9
199.2 209.9
150.1 −0.57
270.3
11 16 40 29.2 108.9
50 27 92.0 99.9
11 12 37 191.9 208.8
5 −3 4 151.2 −0.55
16 12 0 3

June 10, 1904

P.A. 307.5 Var B
S.T. 16:51
Dec. +5.0 North
He. +0.02 West
Sph. -4.5 B
-3.V C

B 236 B 39t

11 $3\overset{0}{\cancel{7}}$ 370 11 30 00

Troubled somewhat ~~more or less~~ by cloud during obs. of Aquitania. The most of the time sky not very definitely cloudy but yet some light cloud which steadily approached the region and portions of which came over the region at intervals. Obs considered good altho individual groups differ a little more than they would had the sky been perfectly clear all the time. A third group was first attempted but clouds prevented so abandoned & what taken rejected. Afterwards as sky cleared again another complete group was taken L. P. P.

June 11, 1904 (Saturday)

B 236 B 394
7 54 0.0 7 54 0.0
54 0.2 53 0.0

7 56 C's watch 6^s slow of B 394

V has maj

Wlls.
Phot. T.

9 2 +51.0
13 42
4 40 C's watch used on this.

Left
193.0
8 50.0 257.0 ∠ comp * dis. 640
23.4 45.5
68.9 109.5 +1.43
20~~3~~1.4
24~~7.2~~8.6 47.2 +1.42
13.7 63.8
47.5 111.0 +1.42
Right mean = +1.38
110.4
156.8 46.4
102.2 66.0
168.2 112.4 +1.36
283.1
9 00.0 348.0 64.9 +1.35
110.6 48.7
~~11~~
8 55.0
13 55.1 159.3 113.6 +1.34
6643.

June 11. 1904

II

Right
293.9
9 03.6 340.0 46.1 ✓
104.9 62.9 ✓
167.8 109.0 ✓ + 1.44 ✓

282.8 + 1.38 ✓
347.8 65.0 ✓
109.1 49.4 ✓
158.5 114.4 ✓ + 1.32 ✓

Left Mean = + 1.38 ✓
202.2
248.2 46.0 ✓
12.2 63.8 ✓
76.0 109.8 ✓ + 1.42 ✓

191.8 + 1.38 ✓
9 13.0 256.7 64.9 ✓
9 08.3 20.0 48.4 ✓
14 08.4 ✓ G.M.T. 68.4 113.3 ✓ + 1.34 ✓
6643

P.a. 1012 VerB
~~H~~a. 5:52 West
Dec +51.3 North
S.T. 14.54
Sp wh { −45 a
−35 β
−28 c

June 11, 1904.

Meas. made with a little difficulty on account of some twilight and a slight amount of increasing haze. Second group a little more difficult than the first, as there was a little more haze then in this region. Extreme care exercised and obs. considered good

Aquitania

W.Obs.
Pliot T.

16 40 + 5°.5
15 10
1 30

10 30

9 39 41.8 a
40 01.5 b

b 5.0 South of a

~~40 28.~~
40 38.5 b
40 54.5 c

c fols b & 13.5" N of it.

43 22.0
43 30.5

BB used on Aquitania

9 40 Hence asteroid fols comp ★ of last night by 36ˢ & 18.5 South of it
Comp ★ = same as last night

June 11, 1904.

9 45	37.3 46.0	0.0 8.5	17.0 25.7	37.5 46.0	55.5 04.0

9 46 asteroid prec. +4° 3283 (9.5) by 8.6

is 5.'4 ~~North~~ North of it.

The object observed last night for aquitania was correct as ~~there~~ is no object in that region tonight.

I

~~Left~~

272.5 asteroid dis

10 01 10 358.2 85.7

100.4 69.8

170.2 155.5 — 0.47

283.9

04 33 ~~349~~351.4 67.5 — 0.48

91.0 87.6

178.6 155.1 — 0.48

Right.

Mean = — 0.49

182.9

08 00 267.3 84.4

9.0 70.9

79.9 155.3 — 0.47

191.8

10 11 00 260.9 69.1 — 0.50

24 43 5.0 83.5

10 06 11 88.5 152.6 — 0.52

×5 -22

15 05 49

June 11, 1904

II

Right
184.0
10 13 20 268.5 84.5
9.8 69.4
79.2 153.9 — 0.58

191.0 — 0.51
15 58 261.0 70.0
1.4 82.9
84.3 152.9 — 0.52

Mean = — 0.52

Left
95.7
19 33 176.6 80.9
281.5 69.7
351.2 150.6 — 0.56

101.0 — 0.53
10 21 58 169.2 68.2
30 49 273.0 85.5
10 17 42 358.5 153.7 — 0.50
5 -25
15 17 17 G.M.T.

June 11, 1904

III

Left

90.8
10 33 00 176.~~8~~2 85.4 ✓
282.0 69.0 ✓
351.0 154.4 ✓ — 0.49

100.1
35 00 171.6 71.5 ✓ — 0.4~~8~~6
273.9 85.4 ✓
3~~6~~59.3 156.9 ✓ — 0.44

Right Mean = — 0.47
9.6
37 40 77.8 68.2 ✓
183.2 85.2 ✓
268.4 153.4 ✓ — 0.51

0.7
10 40 05 88.~~5~~2 87.5 ✓ — 0.48
25 45 193.0 68.7 ✓
10 36 26 261.7 156.2 ✓ — 0.45
5 - 27
15 35 59

June 11, 1904

IV

Right

12.8

10 43 25 78.8 66.0 ✓

184.2 84.4 ✓

268.6 150.4 ✓ — 0.57

1.3 — 0.54

45 45 87.7 86.4 ✓

192.8 67.2 ✓

260.0 153.6 ✓ — 0.50

Left

Mean = — 0.51

281.4

50 33 351.2 69.8 ✓

91.3 89.1 ✓

180.4 158.9 ✓ — 0.40

273.2

10 53 20 358.9 85.7 ✓ — 0.48

193 03 101.5 65.2 ✓

10 42 14 166.7 150.9 ✓ — 0.56

5 -30

15 47 44

June 11, 1904

V

~~Left~~

281.4
11 00 18 351.7 70.3
91.7 88.7
180.4 159.0 − 0.40

274.3 − 0.49
03 00 358.0 83.7
102.0 66.0
168.0 149.7 − 0.58

Mean = − 0.50

~~Right~~
184.6
06 35 268.0 83.4
10.1 69.9
80.0 153.3 − 0.51

192.6 66.7 − 0.52
11 09 33 259.3 85.1
19 26 2.8 151.8 − 0.54
11 04 52 87.9
5 −33
16 04 19

Pa = 341.5 Ver B
Ha = − 0:02 East
Dec = +4.6 North
S.T. = 16:47
Spwh = 5 3.5 B
1 −2.5 C

June 11, 1904

11 17 38.5 0.8 23.7
51.0 13.5 36.7

11 18 Asteroid now prec. +4°.3283 (9.5)
by 12ˢ.6 & is 5'.1 N. of it
Hence this is the asteroid.

Sky slightly hazy and rendering obs. a little labored. Images however well seen, and settings made with much slowness & great care. Obs. considered good.

B 236
11 26 36.5

B 394
11 26 00

L. P. P.

June 12, 1904. (Sunday)

Aquitania. Fr. obs.
Phot. I.

16 40 +5.5

17 48

17 56

Object in theoretical place of asteroid measured.

For meas. see next two pages.

June 12, 1904,

Comp. star used was same as that used in previous obs. = +4° 3281 (9.5)

Index Left. Asteroid dis.

12 40
281.2
353.7 72.5 ✓
96.0
176.8 80.8 ✓
153.3 ✓ −0.51 ✓

12 47
273.0
355.9 82.9 ✓ −0.52 ✓
99.9
168.8 68.9 ✓
151.8 ✓ −0.54 ✓

Index Right.

12 54
188.0
262.9 74.9 ✓
1.9
82.3 80.4 ✓
155.3 ✓ −0.47 ✓

13 3
1.9
83.2 81.3 ✓ −0.52 ✓
204
192.0 69.0 ✓
12 51.0
261.0 150.3 ✓ −0.57 ✓
5
17 51.0

mean −0.52 ✓

June 12, 1904.

Index right.

0.4
13 8 83.0 82.6
193.0
261.5 68.5
151.1 −0.55

188.7 −0.54
13 17 260.8 72.1
2.0
82.7 80.7
152.8 −0.52

Index left

281.9 72.1
13 21 354.0
95.5 81.4
176.9 153.5 −0.51

273.8 −0.52
13 28 356.0 82.2

74
100.1 69.4
13 18.5 169.5 151.6 −0.54
17 18.57 M.T.

mean −0.53
Gen mean −0.52

1904phae.proj..56G

June 12, 1908.

S. T. = 19 19

H. A. = 12 29

Dec. = +8.2

P. A. = 200.5

Sprocket B = -5.5

" C = -4.5

W's watch used ~~in con~~ for times in connection with meas'ts, of asteroid. Watch 2 secs. fast.

The object assumed for Aquitania was ~~the~~ Aquitania. It came in the computed place and moved very perceptibly during observations.

Observer recorded for himself. Mr. Hill helping some about setting telescope &c.

L. P. P.

June 13, 1904 (Monday)

7 34 C's watch 28s fast of B394

B236 B394

7 35 42.5 7 36 00

36 42.7 37 00

T Cygni Wells

Plot T.

20 41 +33.8 9.5" Caf.

13 45

6 56

Above 5 0x C's watch used

115.7 < Var dis

8 29.5 152.6 36.9

302.7 25.7

328.4 62.6 − 2.76

120.8

149.8 29.0 − 2.72

298.5 35.8

334.3 64.8 − 2.68

Below mean = − 2.64

26.8 39.7

66.5 29.3

209.4 69.0 − 2.56

238.7

see next page − 2.57

June 13, 1904

31.1
A 35.5 61.0
8 32.5 206.3
13 32.0 243.6
6645.

29.9
37.3
67.2 - 2.60

Same Again II

Below
2~~8~~7.1
A 37.0 66.0
210.0
239.1

38.9
29.1
68.0 — 2.57

30.0
60.3
204.3
244.8

30.3 — 2.52
40.5
70.8 — 2.48

Mean = — 2.56

Above
297.7
335.2
11~~8~~5.6
1~~4~~0.2

37.5
31.6
69.1 — 2.54

301.4
A 43.3 330.2
A 40.2 117.2
13 39.7 154.4
6645.

- 2.59

28.8
37.2
66.0 — 2.64

June 13, 1904

Above

III

	115.6		
8 50.0	153.9	38.3	
	302.9	26.0	
	328.9	64.3	− 2.70
	121.7		
	149.9	28.2	− 2.68
	296.7	37.0	
	334.7	65.2	− 2.67

Below

mean = − 2.59

	25.0		
	65.8	40.8	
	209.7	30.2	
	239.9	71.0	− 2.47
	31.6		− 2.50
8 56.0	60.3	28.7	
8 53.0	204.8	40.2	
13 52.5	245.0	68.9	− 2.54
6642.			

P.a. 190.2 Var β
H.a. ~~+~~ −6:03 East
Dec +33.6 North
S.T. = 14:41
Sp'ch = { −3.5 β
−2.5 C

June 13, 1904

Sky pretty clear region a little low – seeing rather poor, images varying
9 e 3 in shape & general character on account of the poor seeing. Good round images cannot be obtained on this star tonight and at this altitude hence groups not so accordant as usual; much care however exercised in settings & result considered good.

RV Ophiuchi:

~~=~~

Webb.

Pilot T.

B. 236 used on this var. only.

7. 3404

17 19 +7.7

15 00

2 19

~~9 41~~

Above

183.3 <Comp & dis

9 37 00 266.5

10.7

79.8

191.1

3913 260.2

3.1

87.5

Below

100.0

4210 170.4

272.3

360.5

9 44 16 92.9

179.4

2 39 280.5

9 40 40 351.1

5 –5

14

83.2

69.1

152.3 + 0.53

69.1 + 0.52

84.4

153.5 + 0.51

Mean = + 0.47

70.4

88.2

158.6 + 0.41

86.5 + 0.42

70.6

157.1 + 0.44

6645.61

45.299

+0.313

June 13, 1906.

II

Below

101.3

9 46 16 170.3 69.0

272.5 86.5

358.8 155.5 +0.47

93.2 +0.48

48 40 178.5 85.3

281.0 68.9

349.9 154.2 +0.49

Above Mean = +0.49

11.0

51 40 80.3 69.3

183.1 85.2

268.3 154.5 +0.49

2.4

9 53 45 87.7 +0.50

0 21 191.4 85.3

9 50 05 259.2 67.8

-07 153.1 +0.51

5

~~44~~ 49 58

P.a. 105.5 Var B

6645.618 H.a. −1:47 East

45.299 Dec +7.6 North

+0.319 S.T. 15:41

Sp. wh. { −2.5 a

−1.5 B

−0.9 C

June 13, 1904

V aquilae Wells.
Phot. T.
9.5 cap.

18 59 − 5.5
16 59
3 00
9 00

C's watch used
henceforth this evening

Left
3.0 < comp ✱ dis
10 34.6 84.2 82.2
193.8 64.6
258.4 146.8 + 0.64
12.5
47.8 65.3 + 0.64
184.3 82.1
266.4 147.4 + 0.63
Mean = + 0.5~~9~~8
Right
27~~4~~3.4
358.3 84.9
100.8 67.2
168.0 152.1 + 0.53

281.4 + 0.52
10 41.6 352.2 70.8
76.2 93.6 82.4
10 38.1 146.0 153.2 + 0.51
5 −.5
15 37.6 G.M.T.
6645.

June 13, 1904

II

Below
274.2
10 43.6 357.6 83.4
98.0 71.3
169.3 154.7 +0.48

+0.48

281.3
352.6 71.3
95.0 83.2
178.2 154.5 +0.49
Above Mean = +0.55
191.1
261.7 70.6
~~36~~11.3 786.4
87.7 ~~147~~.0 +0.63

184.8
10 50.0 265.8 81.0 +0.62
93.6 11.9 66.8
10 46.8 78.7 147.8 +0.62
15 46.3 G.M.T.
6645

PA. 1185
S.T. = 16:37
Dec. − 5.6 North
H.A. − 2:19 East
Spwk { −2.5 B
−1.5 C

June 13, 1904

~~Obs~~

B 236	B 394
11 17 21.5	11 17 00

L. P. R.

June 14. 1904. (Tuesday)

R. S. Ophiuchi

W. Obs.
Phot. T.

17 45 −6.1
13 48

3 57E

17 45
14 02

3 43

14 20
17 45

3 25

- 8 35

Same R. A. 5' South.
Fols. 47 sec 6' South
Fols. 24 sec. 0.3' North.
Fols 12 sec 1.8' " .

June 14, 1904

Index Left

111.7 ← Comp. Star dia.
155.0 43.3 ✓

9:10:25 288.9 50.2 ✓
339.1 93.5 ✓ +1.82 ✓

108.4 56.6 ✓ +1.76 ✓
165.0
295.3 41.2 ✓
336.5 97.8 ✓ +1.71 ✓

>
24.5 43.2 ✓
67.7
197.0 55.3 ✓
252.3 98.5 ✓ +1.69 ✓

19.7 50.9 ✓ +1.72 ✓
9:20:40 70.6

9 15 32. ✓ 202.6 45.4 ✓
+5 -1. ✓ 248.0 96.3 ✓ +1.75 ✓

14 15 31. ✓

mean +1.74 ✓

S. T. $15^h 15^s$
H. A. -2h. 4m.
Dec. -6.3
P. A. 317.2 Vernier B.
Sprocket -2.5 A. -1.5 B. -0.9 C.

June 14, 1904
T Lyrae

W Obs.
Phot. J

R.A. 18h 32m +38.7
15 26
3 6 E

Abandoned.

~~+7° 34 0.4~~

+7° 34 04

Phot. J. W. obs.

16 79
17 19 +7°.7
15 39
1 40 E

Index Left & Above.

190.3
10;06:10 261.4 71.1 ✓ Comp. Star dis.
1.9 87.3 ✓
89.2 158.4 ✓ +0.41 ✓

181.4 87.7 ✓ +0.40 ✓
269.1
10.1 71.5 ✓
81.6 159.2 ✓ +0.40 ✓

Index Right + Below June 14, 1904.

100.8
170.5 69.7 ✓
273.2 84.9 ✓
358.1 154.6 ✓ +0.49 ✓

92.7 84.1 ✓ +0.48 ✓
176.8
10:17:40 280.1 72.0 ✓
10 11 55 3[illegible] 156.1 ✓ +0.46 ✓
+5 -1 ✓
15 11 54 ✓

mean +0.44 ✓

Same Again.

Index Right + Below.

100.9
10:21:10 171.8 70.9 ✓
270.0 89.9 ✓
359.9 160.8 ✓ +0.37 ✓

93.6 84.2 ✓ ~~83.6~~ +0.42 ✓
177.8
280.2 71.1
351.3 155.3 ✓ ~~154.7~~ +0.4~~2~~7 ✓

Index Left + Above ~~+0.46~~

11.1
81.5 70.4 ✓
185.5 85.4 ✓
270.9 155.8 ✓ +0.46 ✓

+0.49 ✓
4.9 81.3 ✓
10:31:40 86.2 71.7 ✓ mean +0.46 ✓
10 26 25 189.8 153.0 ✓ +0.52 ✓
+5 -1 ✓
15 26 5 261.5 Gen. mean = +0.45 ✓

June 14, 1904.
7° 3404
S.T. 16 37
H.A. −0 52
Dec. + 7.3°
P.A. 107.5 Vernier B.
Sprocket. −2.5 A
−1.5 B
−0.9 C

L's watch used for times in margin.
Watch 1 sec. fast.

L.A.P.

June 15, 1904 (Wednesday)

7 38 Cs' watch 40s fast of B394

B206
7 39 04.8
40 05.0

B394
7 39 00
40 00

T Lyrae W. Obs.
Plot T.

18 52 +38.7 9'.5 cap.
13 42
5 10 Cs' watch used

Above 6 50
187.3 <comp & dis
8 37.6 264.5 77.2
359.5 90.7
90.2 167.9 + 0.23
176.3
274.6 98.3 +0.13
4.5 79.8
84.3 178.1 +0.03
Below mean = +0.24
98.6
169.6 71.0
268.8 91.2
360.0 162.2 +0.34
Over

+0.36

June 15, 1904

92.5

8 45.0 181.6 89.1

8 41.3 278.8 71.4

5 .7 350.2 160.5 +0.37

13 40.6 G.M.T.

6647.

Below Same Arr 7.7

100.0

8 46.4 173.3 73.3

273.5 86.4

359.9 159.7 +0.39

91.9 +0.38

180.2 88.3

280.2 72.0

352.2 160.3 +0.38

Above mean = +0.25

86.1

83.7 77.6

179.0 96.7

275.7 174.3 +0.11

357.5

8 52.0 91.3 93.8 +0.12

8 49.2 187.8 79.9

13 48.5 267.7 173.7 +0.12

6647.

P.A. 359.5 Var B Dec +36.8 North

S.T. = 14:48 Ha. − 3:42 East

S'h wh. = 5-35a -25B, -1.9 C

June 15, 1904

+7.3404

W Obs.
Plot T.

17 19 +7.7
15 49
2 00
10 00

B 236 used

Above
183.6 < Comp + dis
9 39 00 269.0
10.0
81.6
191.4

85.4
71.6
157.0 +0.44

41 52 262.1
2.5
87.7

70.7
85.2
155.9 +0.46

+0.45

Mean = +0.48

Below
94.7
45 26 187.4
281.0
350.2

83.7
69.2
152.9 +0.52

1020
9 47 37 171.2
13 55 273.9
9 43 29 357.8
5 -25
14 43 04 G.M.T.
6647 6133
45.2988
+231 45

69.2
83.9
153.1 +0.51

+0.52

1904phae.proj..56oW

June 15, 1904

Same Again ~~II~~

Hazy

Below

94.2

9 50 00 177.7 83.5

280.0 69.9

349.9 153.4 +0.51

101.45 +0.50

52 20 169.9 68.4

272.9 Haze Imagination 85.8

358.7 154.2 +0.49

Above Mean = +0.50

1.0

56 10 87.5 86.5

191.2 69.0

260.2 155.5 +0.47

11.6

9 58 35 79.5 67.9 +0.30

17 05 184.2 83.7

9 54 16 267.9 155.6 +0.54

5 -27

14 53 49 P.M. P.a. = 106.0 Vel B

6647.6207x Ha. = -1.36 ~~East~~

47.2988x Dec. = +7.5 ~~North~~

0.3219x S.T. = 15:5~~4~~

Sperb = f -2.5 a. 1.5 B 8 -0.9 C

June 15, 1904.

Troubled a little by light cloud in second group, but observations made slowly & with great care & group considered good.

V Aquilae W.A.B. Eliott.

18 59 − 5.5 9.5" cap.
15 59
3 00

L.O.A. 9 00 C's ~~watch~~ used

(0 1) Clouds

192.8 ∠comp ★ dia
10 29.0 25.8 66.0
5.3 80.3
85.6 146.3 + 0.65
187.8
267.2 79.4 + 0.64
10.8 68.3
79.1 147.7 + 0.62
R.O.P. mean = + 0.59
100.5
172.4 71.9
275.1 81.3
356.4 153.2 + 0.51

OVER

0.54

June 15, 1904

95.8
10 36.4 176.2 80.4
69.6
10 32.7 280.6 Obs star gone 150.0 +0.58
15 32.2 350.2
6647.

Obs Same Obs
ROB
101.2
10 43.0 169.3 68.1
277.0 78.8
355.8 146.9 +0.64
94.2
176.0 81.8 +0.61
280.9 68.1
349.0 149.9 +0.58
mean = +0.62
Lga
14.0
78.7 64.7
185.2 82.2
267.4 146.9 +0.64

5.83 +0.64
10 48.0 84.0
11.0
10 45.5 192.0 78.7
15 45.0 260.6 68.6 +0.63
6647. 147.3

June 15, 1904.

P.A. 119.5 Var B
H.A. — 2:13 East
Dec. — 5.6 South
S.T. 16:46
Spirl. { — 2.5 B.
{ — 1.5 C.

Troubled a little by light cloud during observations and ~~[illegible]~~ mostly so in second group, but obs. made with much care waiting also for images to be steady & obs. considered good

B 236
11 04 37.0

B 394
11 04 00

L. P. P.

June 17, 1904 (Friday)

> 34 C's watch = 26ˢ fast of B 394

B 236 — B 394

7 35 33.2 — 7 36 00

36 33.3 — 7 37 00

V Urs Maj [illegible]
~~Plot~~

9 2 +51.0
13 57
4 55 C's watch used.

~~Left~~

17.2 < comp * dis

9 06.0 76.3 59.1
198.2 52.0
250.2 111.1 +1.39
~~20.0~~ 3
+1.~~2~~ ~~4~~
198.4 52.9
251.3 63.1
144.4
77.5 116.0 +1.28

Right mean = +1.40

286.3
343.6 57.3
111.3 47.8
159.1 105.1 +1.53

292.8 56.4 +1.46
* 9 19.2 349.2 55.3
107.5 111.7 +1.38
9 25.2
12.6 162.8 1412.2 [illegible]

June 17, 1904

II

	Right		
	288.2		
9 22.0	344.7	59.5 ✓	
	112.4	45.9 ✓	
	158.3	105.4 ✓	+1.53 ✓
	292.4		+1.51 ✓
	340.0	47.6 ✓	
	105.0	59.2 ✓	
	164.2	106.8 ✓	+1.49 ✓
	Left		Mean = +1.42 ✓
	194.5		
	257.0	62.5 ✓	
	18.0	53.4 ✓	
	71.4	115.9 ✓	+1.28 ✓
	200.0		+1.32 ✓
9 31.0	249.8	49.8 ✓	
5 30	14.7	62.6 ✓	
9 26.5	77.3	112.4 ✓	+1.36 ✓
14 26.1 ✓			

P.A. = 101.0 Var B
H.A. = 6:32 West
Dec. = +57.2 ~~North~~
S.T. = 15:34
Sp.wh. = η −45 a. −35 B. −29 C.

June 17, 1904

Aquitania - Wilb.
Phot T.

16 40 +5.5
15 40
1 00
11 00

~~10 03~~

10 06	36.0	56.3	17.8
	42.5	2.5	24.5
	46.5	7.0	29.0

10 08

57.0	59.5	26.0
43.8	6.5	32.5
47.5	10.0	37.0

10 18	28.5	22	31.8
19	43.5	22	57.5
		23	04.5
		23	08.8

June 17, 1904

10 24 18.0 # 51.0 11.8
25.0 58.0 19.5
29.0 02.2 23.5

33.0
40.5 53.5
44.5 00.3
04.5

10 28 35.0
29 12.0

10 40 12.5 ~~34~~ 8 53.0 12.9
20.0 ~~43~~ 00.5 21.0
24.5 04.8 25.6

10 42

31.8 ~~5~~ 07.3
39.8 15.0
46.0 19.0

10. 43 (asteriod) An object without doubt [illegible] ~~x~~ (as indicated by transits) prec. + 3°.3281 (9.4) by 12^s & is very slightly north of it.

June 17, 1904

BD +7°.3404 Wilde
17 19 +7.7 Plot T.
16 54
0 25
11 35

B 236 used

Above
9.2 ∠ Comp ★ dis.

11 03 03 81.2 72.0 ~~70~~
181.5 88.9
270.4 160.9 +0.36
1.5 +0.38
06 11 88.4 86.9
190.2 71.5
261.7 158.4 +0.41
Below Mean = +0.42
283.0
08 55 352.1 69.1
92.0 86.5
178.5 155.6 +0.4~~5~~7

+0.46
269.9
11 11 15 360.7 90.8
29 24 102.6 65.2
11 07 21 167.8 156.0 +0.46
5 1 - 11
16 07 10
49.6716
48.9860
+0.6856

June 17, 1904

II

Below
282.6
111318 351.2 68.6 ✓
93.0 82.9 ✓
175.9 151.5 ✓ +0.55 ✓

272.2
1510 357.8 85.6 ✓ +0.54 ✓
101.8 66.9 ✓
168.7 152.5 ✓ +0.53 ✓
Above mean = +0.46 ✓
190.4
1800 263.0 72.6 ✓
359.5 88.4 ✓
87.9 161.0 ✓ +0.36 ✓

0.38 ✓
183.2
11 1942 270.1 86.9 ✓ 86.9 ~~+0.44~~
26 10 10.4 71.8 ✓ 68.6
11 16 32 ~~79.0~~ 158.7 ✓ 155.5 +0.47 ✓
5 −12 82.2
16 16 20
49.6780
48.9860
0.6920

June 17, 1908

Above

III

188.8
11 28 08 261.6 72.8
1.7 86.8
88.5 159.6 + 0.39

181.6 + 0.38
30 20 270.2 88.6
9.8 71.3 + 0.38
81.1 159.9
Below mean = +0.42
100.9
33 30 171.6 70.7
272.8 85.5
358.3 156.2 + 0.45

+ 0.46
97.4 87.0
11 35 30 178.4 68.8
7 20 282.8 155.4 + 0.46
11 31 50 351.6
5 -15
16 31 35
6649.6886
.9860
0.7026
11 40

PA. 285.5 Var β
RA. + 0:07 West
Dec. + 7.6 North
S.T. 17:3
Sp. Wh. -25 α
-15 β
-09 C

June 17, 1904

Obs. made with Var. practically on the meridian. Alt somewhat high but ob. considered good. Great care exercised.

β 236   β 394

11 47 17 5   11 47 00

L. P. P.

June 18, 1904 (Saturday)

B236 B394

7 38 485 > 39 00
39 488 > 40 00

> 45 Rather cloudy
B236 used

ι Librae Wells.
Phot.

15 3 −19.2 9.5 cap
14 3
1 0

Abov 11 00 ~~[illegible]~~

201.8 <Vardis.
8–11 24 249.9 48.1
17.4 55.0
72.4 103.1 −1.58
185.8
254.2 68.4 −1.46
22.0 45.4
67.4 113.8 −1.33
Below
113.0 Mean = −1.61
158.3 45.3
289.6 50.9
344.5 96.2 −1.75

see next page −1.76

June 18, 1906.

Cont.

109.2
A 18 33 161.6 52.4
29 57 293.9 43.6
8 14 58 337.5 96.0 −1.76
5 0
13 15.0

Same Ave

Below
113.3
A 20 31 157.8 44.5
289.6 53.4
343.0 97.9 −1.71

110.2 −1.73
163.9 53.7
~~294~~.4 42.6
337.0 96.3 −1.75
Above Mean = −1.56
20.4
68.5 48.1
195.2 60.9
256.1 109.0 −1.44

12.3 −1.38
A 26 25 75.8 63.5
8 23 28 200.5 50.8
5 0 251.3 114.3 −1.32
13 23.5

P.a. 66.5 Var B S.T. = 14:33
Dec. −19.2 / ~~HA~~ −0:33 Spch. δ −2.5 B
−1.5 C

June 18, 1904.

+7. 3604 Wells
Plot T.

17 19 +5.5
14 59
2 20
9 40

B 394 used

9 00 Clouds

~~Left & Above~~

1859 < comp ★ dis.

9 10 14 269.1 83.2
~~7.0~~ 68.7
8.7 151.9 +0.54
77.4
192.2 +0.56
11 35 258.1 65.9
2.2 83.6
85.8 149.5 +0.58
R.O.B. mean = +0.52
92.0
14 10 178.3 86.3
280.0 67.7 +0.50
347.7 154.0 + ~~0.49~~
102.6 + 0.47 8
9 16 50 168.8 66.2
12 49 + 271.2 6650.5925 90.0
9 13 12 361.2 48.9860 156.2 +0.45
5 - 1.6065
14 3 2

June 18, 1906

RAB

~~91.2~~ Clouds ~~II~~

~~9 22 45~~

91.8
9 32 00 178.1 86.3
~~279.~~ 280.1 70.2
350.3 156.5 +0.45

101.1 +0.48
9 34 00 169.0 67.9
272.4 86.2
358.6 154.1 +0.50

Ltd. clouds mean = +0.47

3.0
3712 88.5 85.5
191.8 69.4
261.2 154.9 +0.48

9.5 +0.467

9 39 48 79.9 70.4
oo 181.7 85.4
9 35 45 ~~268.8~~ ~~157.5~~ +0.46
5 - 9 267.1 155.8

14 35 36
6650.6080
48.9860
1.6220

June 18 1904

Lt ⊙ above   III

15.0
9 47 00   85.0   70.0
184.2   84.8
269.0   154.8   + 0.48

2.6   + 0.52
50 05   87.0   84.4
192.8   66.3
259.1   150.7   + 0.56

R ⊙ Below   Mean = + 0.50

282.0
53 00   352.7   70.7
93.7   84.6
178.3   155.3   + 0.47

273.3   + 0.48
9 55 15   360.8   87.5
5 20   101.7   67.0
9 51 20   168.7   154.5   + 0.49
5   −12
14 56 08
66 50.6188
48.9860
1.6328

P.A. = 286.1 Vert β
H.A. = −1.28 East
Dec. = +7.4 North
S.T. = 15 09

− 2.5 α
− 1.5 β
− 0.9 c

June 18, 1904

In first two groups troubled somewhat by light cloud the same being at times slightly flocculant. ~~and~~ But settings made very slowly and corrected with much care. As sky became quite clear after second group a third group was taken with comes midway in brightness between the other two. All observations considered good.

R S Chinclie

17 45 — 6.0 Wlb
16 25 Plot T.
~~1 20~~
1 20
10 40 B 236 used

Left
101.8 {comp* dr
1057.2 170.3 68.5
290.2 51.2
341.4 119.7 +1.20
108.6
159.4 50.8 +1.20
281.8 68.2
350.0 119.0 +1.21
Right

over

June 18, 1904.

mean = +1.28

Right

19.2
70.8 51.6
194.3 61.9 +1.34
256.2 113.0
12.4 +1.36
11 3.4 75.6 63.2
11 0.3 201.6 48.8
16 0.0 250.4 112.0 +1.37

Same Over

Right.
18.7
11 05.2 71.4 52.7
196.6 60.2
256.8 112.9 +1.35
13.2
74.5 61.3 +1.36
201.8 50.7
252.5 112.0 +1.37

mean = +1.34

Left
290.4
341.9 51.5
103.8 62.5
166.3 114.0 +1.33
284.3
11 11.7 347.2 62.9 ~~62.9~~ +1.31
11 08.4 108.4 52.6 ~~50.8~~
16 8.0 159.2 115.5 ~~112.7~~ +1.29
161.0

June 18 1904

P.a. 138.5 Ver. B.
H.a. — 0:23 East
Dec. — 6.5 ~~N North~~
S.T. 17:18
Sp. wt. { —2.5 a
—1.5 B
—0.9 C

B 236
11 28 29.0

B 39K
11 28 00.0

L.P.P.

June 20, 1904. Monday

Senior Night.

A goodly number of seniors &
10 35 rather more than usual
for the first night were here
Showed them the moon and
some other apparatus. The first of
the evening was clear, and views
excellent, the latter part evening
more or less light varying in
density, but in general views
good throughout

14 0 Cloudy at time of Reap. of
Jupiter II.

June 21, 1904 (Tuesday)

Second Senior Night.

Altho sky was a little hazy at times
yet seeing throughout was very good.
Showed students the moon, and
10 15 gave them general descriptions of ~~the~~
telescope, dome + ~~&c~~ & other instruments & methods

June 22. 1904 (Wednesday)

Third Senior night.

Showed seniors the general working of the equatorial and dome, explaining the same as well as the general methods of work.

As it was cloudy throughout evening, the moon could not be shown.

June 23, 1904 (Thursday)

B 236	B 394
7 35 37.6	7 36 00
36 37.8	37 00

7 38 C's watch = 34s fast of B 394

∠ Librae UXUbs.
Plot T.

15 3 − 19.2 9.5" cap.
14 13

0 50

11 10 C's watch used on this.

Above
196.7 ∠ Vardis
A 09.0 255.6
17.2
73.3

196.0
254.2
16.6
74.0

58.9
56.1
.115.0 — 1.30

58.2 — 1.30
57.4
115.6 — 1.29

Mean = −1.55

Below
112.2
160.6
293.1
339.8

111.1
158.6
292.6
338.3

48.4
46.7
95.1 — 1.78

47.5 — 1.80
46.7
93.2 — 1.83

8 17.0

8 13.0
13 12.49 G.M.T.

June 23, 1904

II

Below
112.4
8 20.4 154.9 45.5
293.3 45.1
338.4 90.6 −1.90

−1.88

112.8
158.5 45.7
292.1 46.7
338.8 92.4 −1.85

above Mean = −1.60
16.1
73.7 57.6
197.1 56.0
253.1 113.6 −1.34

−1.32
17.7
8 25.4 73.1 55.4
5.8 195.4 59.4
8 22.9 254.8 114.8 −1.31
13 22.3 P.a. 66.5 Ver B
66 55. H.a. 0:16 East
Dec. −19.4 South
S.T. = 14:29
Spirit { −2.5 B
−1.5 C

June 23, 1904.

R S Ophiuchi

W Obs.
Phot. T

16 165

$17^h\ 45^m$ − 6.0°
15 00
$2^h 45^m$

17 45
15 16
$2^h 29^m$

(over)

For meas'ts, see fol. pages.

June 23, 1904
RS Ophiuchi
Index Left & Above

388.0 54.8 ← comp. star dis.
9:05 342.8
115.9 39.5
155.4 94.3 +1.80

294.2 42.6 +1.72
336.8
105.6 58.6
164.2 101.2 +1.63

W's watch used

196.3 57.5
253.8
25.0 39.2
64.2 96.7 +1.74

208.0 37.2 +1.80
9:~~7~~16 245.2
9 10.5 18.9 54.6 +1.87
14 10.3 73.5 91.8

mean +1.76

June 23, 1904.

Same Again

~~199.3~~ 198.5

9:21 ~~195.2~~ 247.5 49.0

24.1 40.7

64.8 89.7 +1.92

205.7 40.4 +1.86

246.1

18.5 53.8

~~70.6~~ 72.3 94.2 +1.80

~~106.1~~ 117.8 38.7

~~163.5~~ 156.5

288.9 52.7

341.6 91.4 +1.88

108.1 55.1 +1.77

163.2

9:40 292.2 44.9

9 30.5 337.1 100.0 +1.66

14 30.3

mean +1.82

~~Gen. mean = +1.79~~

over.

June 23, 1904

Measurements difficult on acc't. of rather bright moonlight & faintness of variable. The moon also is not so very far distant although not close to region at all. The difficulty ~~due~~ of measurement (due to above causes) is somewhat apparant from the fact that the individual sets do not agree quite as closely as usual. But settings were made with extreme slowness & care and final result is considered good beyond question. When first looked at tonight it was seen at once that the variable was fainter than when measured the last time, this faintness being evident both in regard to its appearance as to absolute brightness. It was also apparant at once that it was fainter, as regards the somewhat brighter star which is in the field of the variable..

June 23, 1904.

	Left & Above.		Same again.	
	114.2	41.6		
9:57	155.8			
	285.9	58.2		
	344.1	99.8	+1.66	
	106.4	56.7		+1.68
	163.1			
	294.9	41.3		
	336.2	98.0	+1.71	
	21.9	41.4		
	63.3			
	199.5	54.7		
	254.2	96.1	+1.75	
	15.0	59.0		+1.69
10:09	74.0			
10 03	205.2	41.9		
15 02 28 G.M.T.	247.1	100.9	+1.63	
6655				

mean +1.68

~~Gen. mean = +1.75~~

~~Weighted mean = +1.77~~

After previous remarks another group was taken on same object, the measurements being as before ~~rather~~ difficult. Great care, however, exercised.

(over)

June 23, 1904

S.T. 16h 40m
H.A. -1h 2m
Dec. -6.5°
P.A. 319.5°

Sprocket	A	-2.5
	B	-1.5
	C	-0.9

The last group the most difficult of the three and relatively considerably more difficult than the other two. ~~This group some half weight.~~ Measts. extremely difficult throughout but results considered pretty good.

V Aquilae.

W. Ow.
Phot T
9.5" Cap

18h 58m   -5.1°
17 3
= 1 55

June 23, 1904.

Left + Above.

	183.5	82.3		
10:57	265.8			
	11.1	69.2		
	~~2~~80.3	151.5	+0.55	
	189.2	72.9		+0.51
	262.1			
	3.5	82.7		
	86.2	155.6	0.87	
	101.5	69.3		
	170.8			
	273.6	83.6		
	357.2	152.9	+0.52	
	94.8	80.2		+0.56
11:01	175.0			
115	281.5	68.0		
10 57.5	349.5	148.2	+0.61	
15 57.3	G.M.T.			
66.55				

(over) Mean +0.58

June 23. 1904.

Same Again!

99.3

11:04 169.2 69.9

276.0 75.8

351.8 145.7 +0.66

94.8

177.6 82.8 +0.56

279.4 72.7

252.1 155.5 +0.47

3.0 83.3

86.3

189.4 70.9

260.3 154.2 +0.49

~~121~~

+0.46

~~82.1~~ 183.5 86.7

11:08 ~~183.6~~ 270.2

11:06 ~~268.7~~ 9.1 70.5

16 05.8 G.M.T. ~~269~~ 79.6 157.2 +0.43

6655.

mean +0.51

S.T. $17^h\ 40^m$ ~~+50~~ Gen. mean +0.52

H.A. $-1^h\ 18^m$

Dec. $-5.7°$

P.A. 120.5 Vernier B.

Sprocket A. ——

B. −2.5

C. −1.5

June 23. 1904.

W's watch used for times tonight.
Watch 10 secs. fast.

B. 236.			B. 394.		
13	58	42.2	13	58	0.0
	59	42.3		59	0.0

Dis. of Jup I Phot. R. W. obs Hill rec. compared with sat on following side = sat III.

	14h	12m	24s		61.9	
14 12 44 −44			38	4.8	136.7	1
14 12 00			50	2.2	60.0	0.6
		13	6	3.5	137.2	
			18		62.0	
13 43 −44			37	5.0	137.0	
12 59			51	3.1	63.1	0.6 2
		14	6	4.2	136.2	
			18		63.2	
14 42 −44			33	4.8	138.0	0.6
13 58			52	2.5	63.5	3
		15	4	3.6	136.0	
			18		64.0	
15 38 −44			31	2.3	136.3	0.8
14 54			45	65.5	63.5	4
			59	68.9	133.0	
		16	9		63.2	
			21		133.6	

June 23, 1904.

			~~16~~	70.4		
14 16 26 ~~44~~	14	16	~~40~~. Assume 30ˢ.	68.7	64.9	0.8 √
14 15 42			42	69.6	133.6	
			58		65.0	
17 21		17	13	70.0	135.0	6
−44			26	66.7	65.2	
16 37			46	68.4	131.9	0.8
17 14			58	67.0	66.0	0.9
25		18	09	62.9	133.0	1.1 1.2
40			24	60.6	70.1	
50			34	59.2	130.7	1.2
			~~44~~		~~68.0~~	
18 9			53	57.5	71.5	1.3
21		19	05?	56.5	129.0	1.3
3~~2~~1			16	49.3	72.5	1.7
4~~4~~3			28	44.6	121.8	1.9
5~~4~~5			40	45.8	77.2	1.9
13			58	45.0	120.0	1.9
26		20	11	47.0	78.0	1.8
52			37	44.8	125.0	1.9
20 10			55	37.3	80.2	2.4
20		21	05		117.5	

not seen later

Limit of visibility

14 21 53 45	14ʰ	21	28	38.1	80.1	
14 21 08 ~~47~~ E.M.T.			48	40.5	118.2	
				39.3	2.2	

June 23. 1904.

14^h 22 02 81.0
15 121.5

Seeing rather poor and blury. Observations throughout rather difficult. Both images were of necessity placed on top of a ghost of Jupiter which made the observations additionaly difficult especially as sat I grew faint. altitude of Jupiter also rather low.
Troubled also during eclipse by light and somewhat variable clouds

additional remarks.
It may also be added that on account of the above conditions the sats were rather faint even at full brightness.

B. 236
14 53 48.5
54 48.5

B. 394.
14 53 0.0
54 0.0

L. P. P.

June 24, 1904 (Friday)

B236 B394
7 38 57.5 7 39 00
39 57.7 40 00

7 41 C's watch 15s slow of B 394

ι Librae WRS
15 .3 - 19.2 Plot
14 16 95 cof
0 47
11 13 C's Watch used.

Above
8 15.0 196.9 ι Vandis -
254.5 57.6
16.4 54.8
71.2 112.4 - 1.36
197.6
253.8 56.2 - 1.36
17.4 56.0
73.4 112.2 - 1.37
Below mean = - 1.58
112.2
159.2 47.0
292.5 45.7
338.2 92.7 - 1.84
111.4 - 1.80
8 22.0 159.0 47.6
37.0 292.2 48.5
8 18.5
13 18.7 340.7 96.1 - 1.75

June 24. 1904.

~~Below~~ Same Over

II

110.8
8 24.4 160.0 49.2
292.7 45.5
338.2 94.7 — 1.79

112.6 — 1.81
158.4 45.8
293.0 47.4
340.4 93.2 — ~~1~~183

mean = — 1.66

above
18.6
71.3 52.7
197.4 53.8
251.2 106.5 — 1.50

20.9 — 1.52
8 30.0 69.5 48.6
197.2 55.8
8 27.2 253.~~6~~0 104.4 — 1.55
13 27.4

P.A. = 66.5 V on B
H.A. = −0.07 East
Dec = −19.3 South
S.T. = 15.00
Spwh = { −2.5 B. / −1.5 C.

(over)

June 24, 1904.

Seeing a little poor but not very bad. It is impossible to obtain and hold sharply defined images. Images however in general very good, but varying in their definition making observations a little more difficult than would otherwise be the case. Ob. however considered good.

R. St Ophiuchi Wells

Plut T

17 45 – 6.0
15 25
2 20
9 40

O's Watch used

Left

104.5 < comp ✱ dis

9 20.0 167.7

293.2

338.4

I

63.2
45.2
108.4 + 1.45

113.4
159.5
283.4
345.3

46.1 +1.46
61.9
108.0 + 1.46

Right

mean = +1.57

22.2
64.7
199.1
254.2

42.5
58.1
100.6 + 1.64

14.8
9 39.0 68.3
9 29.5 203.0
14 29.7 247.2

53.5 + 1.68
44.2
97.7 +1.71

June 24, 1904

	Right		II
	27.2		
10 13.0	65.7	38.5 ✓	
	194.4	64.3	
	261.7	102.8 ✓	+ 1.59
	14.4		
	75.2	60.8 ✓	+ 1.60
	205.9	41.5 ✓	
	247.4	102.3 ✓	+ 1.60
	~~Left~~	mean = + 1.58	
	285.1		
	344.6	59.5 ✓	
	110.8	46.4 ✓	
	157.2	105.9 ✓	+ 1.51
	291.8		
10 28.0	338.2	46.4 ✓	+ 1.56
41.0	106.6	55.2 ✓	
10 20.5	161.8	101.6 ✓	+ 1.62
15 20.7			

June 24, 1904

III

L & a.

105.3
11 01.4 167.9 62.6
298.0 51.4
339.4 114.0 +1.33

109.7 +1.33
159.1 49.4
284.1 64.3
348.4 113.7 +1.33

R & B Mean = +1.46

194.3
255.3 61.0
23.6 40.7
64.3 101.7 +1.61

203.3 1.59
11 15.0 249.0 45.7
14.0 57.7
11 8.2 71.7 103.4 +1.57
16 8.4

P.A. = 319.0 Ver B.
H.O. = +0:02 West
Dec. = −6.4 South
S.T. = 17:47
Sp. Wh. = { −2.5 a.
−1.5 B.
−0.9 C

June 24, 1904

~~Meas. throughout~~

All the meas. on this Var. quite difficult, on acct. of faintness of Var, as well as from the fact that the moon which is bright is not very remote from region. Obs. however used greatest possible care making meas. with extreme slowness & resting eye frequently between times. Eye also rested between groups for a short time. Ob. considered good

L. P. P.

June 2~~6~~7, 1904 (Monday)

B236 B394

7 43 21.0 7 43 0.0
44 21.3 44 0.0

7 45 Cs watch = 12^{s} slow of B394

i Librae wells
Plate T.
15 3 – 19.2 9.5 cap.
14 30
0 33
11 27

8 00 Light cloud in this region

8 15 Still cloudy in this region
Stars gone.

see next pages

Cs watch used on this object

June 27, 1904

i Librae

I

above

21.0 < Var. dis.

ϑ 22.0 72.2 clds 51.2

197.5 57.8

255.3 109.0 — 1.44

14.4 images dim — 1.44

73.5 59.1

203.5 49.7

2453.2 108.8 — 1.45

Below mean = — 1.52

293.0

340.2 47.2

102.2 55.8

158.0 103.0 — 1.58

Clds thicker

images dimmer

293.0 clds thicker 1.61

ϑ 34.0 339.0 46.0 —

ϑ 28.0 108.4 54.5

5 + 2 162.9 100.5 — 1.66

13 28.2 more cloudy again

6659

June 27, 190~~4~~.

II

Below

285.9

8 36.0 341.9 56.0 ✓
114.6 42.2 ✓
156.8 98.2 — 1.70

293.0
340.0 47.0 ✓ — 1.69
110.0 52.2 ✓
162.2 99.2 — 1.68

Above mean = — 1.50

188.6
254.4 65.8
18.4 51.2
69.6 117.0 — 1.26

201.2
8 42.6 252.3 51.1 — 1.32
~~19.1~~ 60.0
~~62.~~ 111.1 — 1.39

8 39.3
13 39.5 69.1
6659

P.A. 66.0
St. T. = 15:34
H.a. + 0:27 West
~~Dec~~ -19.2 ~~South~~
Sp Wh. = ~~A~~ B -2.5 ~~B~~ C -1.5 ~~A -0.9~~

June 27, 1904.

Meas. made through some light cloud of varying density. Cloud a little less troublesome in first group than in Second. ~~Ob~~ However much care exercised & obs. considered good. Set out to take a third group but as somewhat heavier clouds came into this region it was not considered best to wait.

Var. 130802

W Obs.
Phot. J.

13 06 −1.8
15 55
2 49

(over)

June 27, 1904.

Left + ~~Index~~ Above.

92.6 — Var dis.

9:42 176.7 84.1

277.7 75.9

353.6 160.0 −0.38

96.6 78.1 −0.42

174.7

275.8 78.1

353.9 156.2 −0.45

Right + Below.

4.5 81.3

85.8

183.1 90.5

273.6 171.8 −0.16

~~183.0 85.6~~

~~268.6~~

~~4.8 79.9~~

~~84.7 165.5 0.27~~

~~−0.21 −0.26~~

5.2 82.7

9:49 87.9

11 181.7 86.6

9 45.5 268.3 169.3 −0.26

14 45.3 Mean −0.32

6659.

June 27, 1904.

Right & Below.

2.5 86.3

9:51:30 88.8

185.0 82.8

267.8 169.1 Clouds −0.20

4.7 81.1 −0.12

85.8

176.7 96.5

273.2 177.6 −0.05

273.7 85.4

359.1

94.0 81.4

175.4 166.8 −0.25

277.8 −0.30

10:04 356.5 78.7

115 30 94.6 82.4

9 57 45 177.0 161.1 −0.36

14 57.5 G.m.T.

8859

Mean −0.21

June 27, 1904.

Left & Above.

275.8
10:11 358.6 82.8
96.5 77.2
173.7 160.0 −0.38

278.8 75.8 −0.38
354.6
91.0 84.0
175.0 159.8 −0.38

Right & Below

182.1 88.2
Clouds 270.3
356.3 89.4
85.7 177.6 −0.05

186.2 78.4 −0.17
10:19:30 264.6
30 30 0.5 86.2
10 15,5 86.7 164.6 −0.29
15 15.3 9 m. t. mean −0.28
6659

P.A. 147.0 Vernier B.
H.A. + 4 0
Dec. − 2.8
S.T. 17 05
Sprocket A − 3.5
" B − 2.5
" C − 1.9

June 27, 1904.

Troubled greatly by clouds in first two groups on var. 130802. In last group, sky pretty clear, except in 3d. set, when observer waited until clouds passed. First two groups ½ weight.

Var 130837 W Obs.
δ Can. Ven Phot T.

13 03 +38.2
17 20
4 17

(over)

June 27, 1904

Left + Above.

Var dis.

181.7
11:04. 272.6 90.9
~~354.0~~ 101.4
95.4 192.3 167.7 +0.24

174.0 103.9
277.9 +0.20
4.3 85.4
89.7 189.3 170.7 +0.17

Right + Below.

94.0 82.2
176.2
263.8 103.2
7.0 185.4 174.6 +0.10

82.6 103.6 +0.11
11:12 186.2
274.0 82.9
11 8.0 356.9 186.5 173.5 +0.12
16 7.8 G.M.T.
6659

P.A. 180.5 Vernier B Mean +0.16
H.A 4 47
Dec +37.5
S.T. 17 55
Sprocket A ~~0.~~
B −0.5
C +0.5

June 27. 1904.

W's watch used for ~~transits~~ times to-night. Watch 14 secs. fast.

H. L. P. P.

Friday July 1 1904

ι Librae. Plat T

W. Obs.

15 03 − 19.2
14 41
22 ε 9.5 inch cap.

Right and above

18.1 ← Var. dis.
50.5
E.T. → 68.6
t 14.7 196.2 60.0
256.2 110.5 1.41

16.9 56.2 1.38
73.1
198.9 57.1
256.0 113.3 1.34

Left and below

290.4
340.2 49.8
110.0 52.7
162.7 102.5 1.60

1.57

288.3 54.1
t 26.7 342.4 50.6 1.54
110.8 104.7
161.4

− 1.48

Friday July 1 '04

L & below

8 29.5 288.2
342.5 54.3
111.0 49.6
160.6 103.9 1.56

290.4
~~344.4~~ 51.6 1.58
342.3
112.2 51.0
163.2 102.6 1.59

R and above

202.1 49.9
252.0
16.1 56.3
72.4 106.2 1.51

199.4 55.6 1.55
8 41.5 255.0
20.4 47.1
67.5 102.7 1.59

-1.56

July 1 1904 Friday

R and above

S.T.
8 51.5

260.8
250.1 49.3
16.2 58.1
74.3 107.4 1.48

197.6 55.1 1.54
252.7
21.6 47.6
69.2 102.7 1.59

L. and below

140.3 45.1
185.4
311.6 58.9 1.56
10.5 104.0

133.0 58.0 1.56
8 58.7 191.0
318.4 46.5
10.2
8 55.1 4.9 104.5 1.55
13 54.6

1.55
Weighted mean – 1.54

– Much troubled by clds in first group and especially in first half of group. Sky clear in two other groups
First group 1/3 weight

July 1 1904 Friday

S. T. 15 57
H. A. + 0 53
Dec. − 19.7
P. A. 66.5 Ver "B"
Sprocket − 2.5 b − 1.5 c

R. Y. Opphiuchi

W. Obs.
Phot T.

17 45 − 6.0
16 13
1 ~~x~~3 2

L and above

41
319.5 ← C. S. dis.
9 ~~4~~1.4 12.6 53.1
91.0 65.7
156.7 118.8 +1.22

272.6 64.6 +1.22
337.2 54.5
96.9 119.1 1.21
151.4

R and below

181.0 64.6
245.6
11.4 48.1
59.5 112.7 1.36

July 1, 1904 - Friday

~~187.5~~ ~~49.9~~ 49.1

~~237.4~~

+1.32

~~0.0~~

~~65.6~~ 65.6

9 58.2

9 49.8

+5 -0.5

14 49.3

6663.617

188.2 49.8

238.6 115.4 1.29 mean +1.27

R and below

ET

1.0 10.5

11.1 47.4

58.5

181.5 64.2

245.7 111.6 1.38

+1.34

0.0 65.8

65.8

187.4 49.6

237.0 115.4 1.29

L and above

277.0 54.3

331.3

90.2 67.4

157.6 121.7 1.16

+1.12

267.7 70.0

10 22.0

337.7

32.5

95.6 55.7

10 16.2

+5 -0.5

151.3 125.7 1.07 mean +1.23

15 15.7

6663.636

Gen mean, +1.25

July 1, 1904 Friday

S.T. $17^{h}\ 3.2$
H.a. $-0^{h}\ 8^{m}$
Dec $-6.7°$
P.a. 13~~6~~7.0 Ver. B.
Sprocket -2.5 a -1.5 b -0.9 c

Somewhat troubled by light clds on last Var. In first group sky ~~pretty~~ quite clear, more troubled in second group, but especially in last half of second group. But abundance of time was taken, so that by waiting in last half of second group for clds to grant time in connection with each setting, ~~observations were~~ good settings were obtained. First group considered very reliable, Second group considered also very good.

W's watch used for times tonight. Watch 32 secs. fast.

July 2. 1904. (Saturday)

R S Ophiuchi: Phot. T. H. obs.

17 45 −6.0
15 30
−2 15
9 45

L and above

ET
8 47.0
303.0 ← d.s dis
7.0
128.8 64.0
180.5 51.7
115.7 +1.29 I

309.2
49.7
1.0 51.8 +1.20
119.5 72.0
191.5 123.8 1.11

R and below
215.6 60.7
53.1 276.3
39.2 52.0
91.2 112.7 1.36

+1.30

218.7 53.9
55.5 272.6 63.8
20 5.3 32.2 117.7 1.24
8 5 1.3
+5 −0.6
13 50.7 96.0 mean +1.25
6664 577

July 2 1904 (Saturday)

Same again

II

213.5
65.2
900.3 278.7
40.1 51.4
~~3.~~ 91.5 116.6 1.27

218.1 1.2~~7~~8
51.3
3.3 269.4
33.5 64.5
98.0 115.8 1.29

L. and above

303.2
65.5
7.6 8.7
129.1 53.4
182.5 118.9 1.22

309.0 52.3 1.21
10.4 1.3
21.6 121.6 67.3
9 5.4 188.9 119.6 1.20
15 -0.6
14 4.8 mean +1.24
6664.587

July 2 1904

Left and above

III

303.3
9 22.2 6.3 64.0 ✓
128.5 52.5 ✓
181.0 116.5 ✓ 1.27 ✓

309.4 54.5 ✓ +1.22 ✓
26.8 3.9
120.2 66.9 ✓
187.1 121.4 ✓ 1.16 ✓

Right and below

214.9 63.0 ✓
29.7 247.9
40.2 50.0 ✓
90.2 113.0 ✓ 1.35 ✓

219.7 50.0 ✓ +1.32 ✓
33.4 269.7
112.1 30.8 65.9 ✓
9 28.0 ✓ 96.~~8~~7 115.9 ✓ 1.28 ✓
+5 -0.6 ✓
14 27.4 ✓
6664.602 ✓

mean +1.27 ✓

July 2 1904

Same again

IV

212.4 63.0 ✓
9 42.3 275.4
40.8 51.0 ✓
91.8 114.0 ✓ 1.33 ✓

220.2 51.6 ✓ +1.29 ✓
46.5 271.8
31.3 65.6 ✓
~~97.8~~ 117.2 ✓ 1.25 ✓
96.9

Left and above
~~187.7~~
301.5
52.4 12.3 70.8 ✓
129.4 52.7 ✓
182.1 123.5 ✓ 1.12 ✓

309.9 51.9 ✓ +1.16 ✓
56.2 1.8
197.4 120.7 67.3 ✓
9 49.4 188.0 119.2 ✓ 1.21 ✓
+5 −0.6 ✓
14 48.8 ✓
6664.617 ✓

Mean +1.22 ✓

July 2, 1904

L. and above

ET
1002.1 300.1 72.1 ✓ V
12.2
127.4 53.7 ✓
181.1 125.8 ✓ 1.07 ✓

319.9 50.2 ✓ +1.17 ✓
5.3 1.1
120.8 66.2 ✓
187.0 116.4 ✓ 1.27 ✓

R. and below

211.7
8.8 277.5 65.8 ✓
42.1 48.1 ✓
90.2 113.9 ✓ 1.33 ✓

218.8 50.5 ~~49.3~~ ✓ +1.29 ✓
~~+1.30~~
11.5 269.3

27.7 ✓ 30.8 67.0 ✓
10 6.9 ✓ 97.8 117.5 ✓ 1.2~~7~~5 ✓
+5 −0.6 ✓
15 6.3 ✓
6664.629 ✓

mean +1.2~~8~~3 ✓

July 2, 1904

R. and below

VI

213.1 66.5 ✓

1017.9 279.6

38.9 51.5 ✓

90.4 118.0 ✓ 1.24 ✓

219.5 53.2 ✓ +1.23 ✓

20.9 272.7

33.4 65.6 ✓

~~98.7~~ 118.8 ✓ 1.22 ✓

99.0

L. and above

121.4

~~189.9~~ 68.3 ✓

25.3 189.7

309.0 52.7 ✓ 1.17 ✓

1.7 121.0 ✓

~~127.6~~

+1.12 ✓

127.6 54.9 ✓

30.5 182.5

94.6 299.1 70.3 ✓

10 23.6 ✓ 9.4 125.2 ✓ 1.08 ✓

+5 −0.6 ✓

15 23.0 ✓ mean +1.18 ✓

6664.641 ✓

July 2 1904

Left and above

VII

10 34.5 118.9 71.6✓
190.5
308.8 52.3✓
1.1 123.9✓ 1.11✓

37.7 128.2 53.4✓ +1.12✓
181.6
300.4 68.7✓
9.1 122.1✓ 1.14✓

R. and below

32.3 64.4✓
40.2 96.7
218.6 52.4✓
271.8° 116.8✓ 1.26✓

40.9 49.8✓ +1.26✓
43.5 96.7
211.0 67.5✓
278.5 117.3✓ 1.25✓

155.9✓
10 39.0✓
+5 −0.6✓
15 38.4✓
6664.651✓

mean +1.19✓

July 2, 1904

R. and below

VIII

31.2
68 49.7 98.5 67.3 ✓
219.7 53.1 ✓
272.8 120.4 ✓ 1.18 ✓

~~41.3~~
~~53.0~~ ~~91.7~~

+1.1~~3~~5 ✓

208.2
54.6 280.6 72.4 ✓
39.8 51.1 ✓
90.9 123.5 ✓ 1.1~~3~~2

L. and above

120.5
58.7 190.8 70.3 ✓
306.8 56.6 ✓
3.4 126.9 ✓ 1.04 ✓
~~126.9~~

126.9 55.0 ✓ +1.08 ✓
1103.0 181.9
226.0 301.8 68.7 ✓
10 565 ✓ 10.5 123.7 ✓ 1.11 ✓
+5 −0.6 ✓
15 55.9 ✓
6664.664 ✓

mean +1.12 ✓

July 2 1904

S.T $18^{h}.4^{m}$
H a + 0.20
Dec − 6.6
Sprocket ~~P.a~~ −2.5 a, −1.5 b, − 0.9 c:
~~Sprocket~~ P.a 138

17 4:5 − 6.0
18 2.2
0 37

Troubled a little by clouds in last part of last group, but great care exercised, and group considered good.

Attempted to follow variable still further but heavy clouds came again, so that it was impossible to do more.
a heavy mass of clouds coming slowly
" and steadily from the North.

W's watch used for times tonight. Watch 33^{s} fast

1904phae.proj..56oW