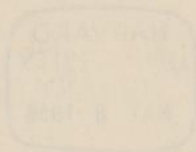


KG
11365
567

KG 11365.567

X



KG 11365.567



March 23, 1904 (Wednesday)

Bond 236

7 04 59.2

0.5 59.4

Bond 394

7 05 00

06 00

7 07 Cs' watch 25² fast of B. 394

Hides 20 Wobs.

8 20 +24.6

7 30

0 50

11 10

7 24 41.0 (8.8)

25 12.4 (9.1)

25 20.0 Hides

~~7 25 Hides fols + 22.1942 (9.1) by 7.6 8 is
0.2 North of it.~~

7 25 Hides fols + 22.1944 (8.8) by 39.0 8 is
2.0 North of it.

7 37 04.5

11.7

20.5

27.5

37.2

44.7

53.0

00.2

10.2

17.5

7 38 Hides fols + 22.1942 (9.1) by 7.2 8
0.2 North of it.

March 23, 1904

Field (cont.)

Owing to clouds also the moon, which is not far distant, faintness of field and rather close proximity of 9th mag star, it is impossible to measure field tonight.

Iris Wbb

6	54	+18.0
8	14	
1	20	

8	11	21.0
	11	22.0
	12	
	13	04.5

8	34	23.6	comp*
	35	03.2	Iris
	36	45.0	(9.0)

Iris was abt. 2' south of the above mentioned
9.0 = (+17.1491)

Mar. 23, 1904

19.2		32		42.5	53.5	
22.0	2.5	35	3.0	45.0	56.0	2.5

0.32	2.8
0.60	

The spot supposed to be Iris
 & 46 has a somewhat faint
 comp. preceding it by 2.79
 1.8 South of it at the time

Comp star precedes +17.1491 (9.0)
 by 2nd 21st & 3.0 South of it.

Iris Plot T.

Bond 236 used on Iris.

4

Mean 23,1904

R Above

I

$$\begin{array}{r}
 204.0 \\
 \star 5650 \quad 282.8 \quad \left(\text{Comp} \times \text{dis} \right. \\
 16.3 \\
 107.5 \\
 \hline
 170.0 \quad + 0.19
 \end{array}$$

$$\begin{array}{r}
 198.2 \\
 \star 5825 \quad 289.4 \\
 23.40 \\
 99.9 \\
 \hline
 168.1 \quad + 0.22
 \end{array}$$

L Below

Mean = + 0.28

$$\begin{array}{r}
 115.3 \\
 90210 \quad 191.2 \\
 289.2 \\
 15.8 \\
 \hline
 162.5 \quad + 0.33
 \end{array}$$

$$\begin{array}{r}
 108.6 \\
 90400 \quad 197.2 \\
 297.4 \\
 \hline
 158.3 \quad + 0.37
 \end{array}$$

$$\begin{array}{r}
 125 \\
 90021 \quad 367.1 \\
 18 \\
 5 \\
 \hline
 140003 \quad 921.7
 \end{array}$$

6563.523

6563.499

0.024

March 23, 1904

LT Below

II

116.9
90610 186.3
290.3
15.6

69.4
85.3
154.7 + 0.48

109.8
0844 195.3
296.8
368.4

+ 0.46
85.5
71.6
157.1 + 0.44

R & A.
24.4

Mean = + 0.35

1204 102.7
197.5
287.5

78.3
90.0
168.3 + 0.22

19.1
9 1405 106.3
41 03 203.0
10 16
9 ~~2246~~ 282.2
5 -20

+ 0.24
87.2
79.7
166.9 + 0.25

14 9 56 P.M.T.
656 3.590
656 3.499
0.091

Mar 23, 1904

R & A.

III

2¹ 28.7 lt. cloud.

9 23 54

~~100.3~~

195.9

286.9

78.6

91.0

169.6 + 0.20

27 33

17.7

105.7

203.5

279.6

88.0

+ 0.25

76.1

164.1 + 0.30

L & B.

Mean = + 0.40

298.2

31 44 369.4

119.4²

194.8

71.2

75.6

146.8 + 0.64

288.8

+ 0.54

9 35 07

17.2

118 18

117.6

9 29 34

186.0

88.4

68.4

156.8 + 0.44

5 23

14 29 11

6563608

1499

104

Mar. 23, 1904

L873

IV

296.8
 9 3735 368.6
 110.8
 193.4

71.8
 + 2.6
 154.4 + 0.49

292.2
 40 00 16.0
 119.0
 186.4

83.8 + 0.52
 67.4
 151.2 + 0.55

R0 C.

Mean = + 0.42

204.1
 243 552 80.6
 17.2
 105.4

76.5
 88.2
 164.7 + 0.29

+ 197.6
 9 4645 286.8
 815 25.6

88.5 + 0.32
 73.3
 161.8 + 0.35

94204 98.9

5 25

144109

6563.612

499
 173

March 23, 1904

V

RCC

205.3

9 57 10

248.7

~~14.6~~

1023.8

73.4

86.2

159.6 + 0.39

198.2

10.00 18

285.8

27.3

97.4

27.6

+ 0.41

70.1

157.7 + 0.43

LBB

119.8

10 03 20

183.4

293.0

12.7

63.6

79.7

143.3 + 0.65

0.71

+ 0.68

111.7

10 05 33

190.4

6 21

299.9

10 01 35

367.2

5 28

78.7

67.3

146.0 + 0.65

15 01 07

8m. T

6563.626

499

0.127

March 23, 1904

VI.

L. 813

121.6

101313

182.7

291.6

13.2

61.1

81.6

142.7 + 0.72

1608

113.3

191.8

298.6

365.8

78.5

+ 0.69

67.2

145.7 + 0.66

RDO

Mean = + 0.60

29.4

1940 96.6

200.1

285.1

67.2

85.0

152.2 + 0.53

22.9

+ 0.51

10 2127

105.9

30 2A

206.9

10 17

272.3

5

31

83.0

71.4

154.4 + 0.49

1517 068MT

6563.637

.499

.138

10

Mar. 23, 1904.

VIIR~~00~~

206.1

10 34 00

279.0

~~18.5~~

100.9

72.9

83.4

156.3 + 0.45

35 45 19A.3

284.6

27.9

96.1

86.3

+ 0.47

68.2

154.5 + 0.49

L~~00~~

mean = +0.58

119.8

~~36 50~~ 184.2

39 05 291.0

10.0

64.4

79.0

143.4 + 0.71

111.9

+ 0.70

10 41 00

190.0

29 50

299.0

10 37 28

365.8

5 34

78.1

66.8

144.9 + 0.68

15 36 54

6563.651

.499

.152

March 23, 1904

R972

VIII

104318
 120.6
 184.8
 293.3
 12.0

64.2
 78.7
 142.9 + 0.72

4515
 112.6
 191.7
 300.5
 367.0

79.1
 66.5
 145.6 + 0.66

R99.

Mean = +0.54

4844
 24.7
 97.9
 200.8
 286.8

73.2
 86.0
 159.2 + 0.40

105200
 20.7
 103.8
 2917
 202.6
 104719
 278.8
 536

82.7
 79.2
 159.9 + 0.39
 + 0.38

154643
 6563.658
 .499
 .159

12

Mar. 28, 1904

~~RTP~~

IX

10 57 11
 $\begin{array}{r} 25.9 \\ 98.7 \\ \hline 199.2 \\ 287.0 \end{array}$

72.8
 $\begin{array}{r} 87.8 \\ \hline 160.6 \end{array} + 0.37$

10 58 35
 $\begin{array}{r} 20.4 \\ 102.8 \\ \hline 206.3 \\ 279.9 \end{array}$

82.5
 $\begin{array}{r} 73.6 \\ \hline 156.1 \end{array} + 0.46$

~~TOP~~

Mean = +0.50

11 00 55
 $\begin{array}{r} 297.0 \\ 367.3 \\ \hline 110.1 \\ 193.0 \end{array}$

70.3 ✓
 $\begin{array}{r} 82.9 \\ \hline 153.2 \end{array} + 0.51$

11 02 32
 $\begin{array}{r} 290.4 \\ 372.3 \\ \hline 239.13 \\ 118.4 \\ 10 59 48 \\ 184.48 \\ 5 38 \end{array}$

80.9 ✓
 $\begin{array}{r} 66.4 \\ \hline 147.3 \end{array} + 0.63$

15 59 10 gmt. PA 47.4 vrb

6563.666

Ha.

4.26

.499

Dec.

+17.9

0.167

S.T.

11.23

Sp Wh.

-0.5 B

+0.5 C

Mon. 23, 1904

B236

11 11 39.4

B394

11 11 00

The object assumed as Iris to night,
is Iris. It moved very perceptibly during
the observations.

L. P. P.

14

March 24, 1904 (Thursday)

7 06 Cs' watch = 32^s fast of B 394
$$\begin{array}{r} 236 \\ B \cancel{39} \\ 7 \ 07 \ 00 \\ 08 \ 0.1 \end{array}$$

$$\begin{array}{r} B \ 394 \\ 7 \ 07 \ 00 \\ 08 \ 00 \end{array}$$

Iris	W Obs.	Phot T.
6 54	+18.0	
7 39		
0 45		

$$\begin{array}{r} 7 \ 25 \ 08.8 \\ 25 \ 45.8 \\ 26 \ 49.0 \\ 27 \ 30.0 \end{array}$$
7 26 Iris prec. +17.1491(9.0) by 41.0 and is 25^s W of it.

Comparison star = same one as the last night

Bond 236 used on Iris tonight

see following pages
for measurements of Iris

March 24 1904

Iris

I

Rt above

7 45 22 26.8 \angle comp * dis
 96.5
 196.3
 286.8

69.7
 90.5
 160.2 + 0.38

48 38 17.0
 105.0
 207.4
 278.8

88.0 + 0.40
 70.7
 158.7 + 0.41
 Mean + 0.64

Lo Below
 302.80
 54 00 365.8
 117.3
 190.0

63.8
 72.7
 136.5 + 0.84

7 57 22 296.4
 371.1
 522123.0
 75120181.6

74.7 + 0.88
 58.6
 133.0 + 0.91

5 - 7
 12 51 13
 .535
 .535
 000

March 24, 1904

~~II~~ II

L 003.

303.8

8 00 46

363.3

114.8

190.3

$$\begin{array}{r}
 59.5 \\
 75.5 \\
 \hline
 135.0 + 0.88
 \end{array}$$

296.0

03 35

~~340.4~~

370.3

126.2

181.4

$$\begin{array}{r}
 74.3 \\
 55.2 \\
 \hline
 129.5 + 0.99
 \end{array}$$

R 013

Mean = + 0.72

205.8

08 26

278.1

21.6

102.0

$$\begin{array}{r}
 72.3 \\
 80.4 \\
 \hline
 152.7 + 0.52
 \end{array}$$

8 11 22

197.5

284.0

24.2

96.0

$$\begin{array}{r}
 86.5 \\
 68.8 \\
 \hline
 155.3 + 0.47
 \end{array}$$

$$\begin{array}{r}
 24 \quad 09 \\
 8 \quad 06 \quad 02 \\
 \hline
 5 \quad -9 \\
 13 \quad 05 \quad 51
 \end{array}$$

.546

-535

.011

March 24 1904

P 20

III

204.2
 1733 277.1
 14.9
 106.5

72.9
 91.6
 164.5 + 0.39

195.6
 2117 288.7
 26.0
 95.2

93.1
 69.2
 162.3 + 0.32
 + 0.34

P 20

Mean = + 0.46

121.9
 219 30 182.6
 289.3
 138

60.7
 84.5
 145.2 + 0.67

0.60

108.6
 8 3148 199.3
 18 08 299.4
 8 24 32 364.7
 5 -12 367.3

84.7
 67.9
 152.6 + 0.52

13 24 20
 .552
 .535
 .023

18

March 24 1904
Hager

IV

Lg B.

8 4300 122.3
183.6
292.3
12.8

61.3
80.5
141.8 + 0.74

HP 50 111.4
191.7²
298.0
367.2

79.8 + 0.66
69.2
149.0 + 0.59
mean = + 0.46

RBA.
26.7
55 45 98.4
198.3
289.6

71.7
91.3
163.0 + 0.32

14.9
9 00 50 108.6
20A 25 204.0
A 52 06 280.0
5 -17
13 51 49

93.7 + 0.26
76.0
169.7 + 0.20

.578

.535
0.43

March 24, 1904

Roa.

V

213.5

91604 100.8

193.1

292.3

77.3

99.3

176.5

+ 0.06

14.2

+ 0.10

1930 109.0

202.4

210.3

LDB.

119.0

2523 184.0

290.8

15.3

94.8

77.9

172.7 + 0.14

Mean = + 0.36

65.0

84.5

149.5

+ 0.58

112.3

+ 0.62

9 2832 190.9

299.3

366.8

78.6

67.5

146.1

+ 0.65

9 2152

5 -21

14 21 31

.598

.535

.063

March 24, 1904

L & B

VI

9 38 15
 118.0
 184.8
 289.8
 15.4

66.8
 85.6
 152.4 + 0.53

108.8
 4056 192.0
 300.6
 368.3

+ 0.54
 83.2
 67.7
 150.9 + 0.56

R & B

Mean = + 0.35

24.2
 45 10 100.8
 196.6
 291.0

76.6
 94.4
 171.0 + 0.17

9 47 08 14.8
 106.8
 201.8
 9 11 29 282.0
 42 52
 5 25

92.0 + 0.16
 80.2
 172.2 + 0.15

14 42 27
 612
 585
 077

March 24, 190K

R & L

VII

100121 20.8
99.9
194.2
289.6

79.1
95.4
174.5 + 0.10

0607 13.5
108.6
204.3
280.4

93.1 + 0.15
76.1
169.2 + 0.20

L & B

Mean = + 0.39

1035 297.6
865.7
110.5
189.4

68.1
789
149.0 + 0.63

101322 289.9
345.0
3125 122.5
100751 184.7
5 - 27

85.1 + 0.63
62.2
147.3 + 0.63

15722
630
-535
.095

March 24, 1904

VIII

L8B.

10 1723 300.4
 366.0
 113.6
 194.5

65.6
 80.9
 146.5 + 0.64

20 00 29¹/₂
 372.0
 120.8
 183.0

+ 0.68
 80.3
 62.2
 142.5 + 0.72

RDA.

Mean = + 0.45

201.8
 2400 281.4
 15.6
 105.6

79.6
 90.0
 169.6 + 0.20

10 2622 195.0
 87 45 288.2
 25.2
 10 21 56 99.8
 5 31 100.3
 15 21 25 99.1

+ 0.22
 93.2
 76.9
~~169.3~~ + 0.24
 167.1

.640
 .535
 .105

March 24, 1904

RDA

TX

10 38 46 207.0
 245.9
 1A.2
 105.0

689
 86.8
 155.7 + 0.46

196.4
 43 12 247.2
 23.8
 98.3

+ 0.37
 90.8
 74.5
 165.3 + 0.28

LDB

Mean = + 0.58

123.0
 48 38 180.4
 294.1
 13.8

54.4
 79.7
 137.1 + 0.83

10 52 40 1127
 191.4
 23 16 301.8
 10 45 49 366.8
 5 - 35

+ 0.78
 77.7
 65.8
 142.7 + 0.72

15 45 14
 .656
 .535
 .121

Pa. 95.2 Ver. B.
 Ita. 4.26 West
 Dec. 17.8 North
 S.T. 11.26
 Sp. W. 9 - 55 a
 - 4.5 B
 - 3.9 C

over

Mar 24. 1905

B 236
11 13 89.5B 394
11 13 00

Observations throughout very difficult. Moon quite near horizon and at the quarter. Field very bright. Moon also throughout covered by variable haze & light clouds. The individual groups are probably not quite as critical as they would be under better circumstances.

It was considered desirable however to make the run and as a great deal of exercise the obs. are considered pretty good & will be of value.

It was deemed advisable to make a run to night on 30's in order to get a check on the period, even if the observations should not come out quite as well on account of unfavorable conditions. L.P.

Mar. 26, 1904 (Saturday)

> 0) C's watch 42² fast of B 394

B 236

> 0) 54.0
08 54.1

B 394

> 08 00
> 09 00

Vesta

W Ob.

4	30	+ 20.4
8	35	
4	05	

8 9 43.2
110 26.2

8 15 57.5
17 11.4

11 43.8
12 54.0

14 09.5
32.0

23.5
35.0

A 18 Clouds thick

8 15 Vesta folw + 20.596 (A.D.) by 12² and
is 12.6 North of it

March 26, 1904.

The asteroid also comes about
in position as indicated by the
ephemeris.

f 23 Clouds thick at present time
no stars visible.

Comp star = $+20^{\circ} 802$ (ff)

A 43 ~~10.0~~
44 25.5

f 47 Clouds thick; stars gone

A 52 clouds thick no stars visible
in telescope.

f 55 Clouds still thick everywhere
no stars visible in
telescope.

March 26, 1904.

9 10 Clouds now thicker everywhere
no chance for anything at
present

9 21 Clouds still thick, no stars
still visible in the telescopes

9 27 Abandoned too cloudy.
No stars visible in telescopes
Clouds everywhere.

044068 - Canceled W. Ob.

44	40	+6.0	Phot T.
10	00		9.5 caps.
<hr/>			
5	20		

9 30 Clouds too thick

9 40 Clouds everywhere no chance
for anything further.

Vertex tried for a long time
but only seen cannally and
no obs. could be made

March 29, 1904 (Tuesday)

B 236
 7 06 30
 07 3.1

B 394
 7 06 00
 07 00

7 08 As watch 36 feet of B 394

Vesta W. Obs.
 Plot T.

4.30 +20.4

7 57
 3 27

7 38 35.5
 35.3

7 39 29.3
 42 08.5
 42 35.8

44 53.5
 26.8

March 29, 1904

$$\begin{array}{r}
 4 \ 30 \\
 8 \ 36 \\
 \hline
 4 \ 16
 \end{array}
 \quad + \ 20.4$$

Comp star + 20.808 (25)

$\begin{array}{r}
 14 \ 57.0 \\
 15 \ 09.8
 \end{array}$

B236 used

Left

194.8

Vesta dis

I

 $\begin{array}{r}
 2145 \ 291.3 \\
 22.05 \\
 \hline
 100.0 \\
 203.3
 \end{array}$

$$\begin{array}{r}
 96.5 \\
 79.5 \\
 \hline
 174.0
 \end{array}
 \quad - \ 0.11$$

2351 280.8

18.3

107.3

Right.

108.9

2644 195.8

297.9

369.2

$$\begin{array}{r}
 77.5 \\
 89.0 \\
 \hline
 166.5
 \end{array}
 \quad - \ 0.19^8$$

Mean = - 0.29⁵

$$\begin{array}{r}
 86.9 \\
 71.3 \\
 \hline
 158.2
 \end{array}
 \quad - \ 0.42$$

 $\begin{array}{r}
 116.2 \\
 2820 \ 189.1
 \end{array}$

2040 288.8

 $\begin{array}{r}
 2510 \ 15.8 \\
 5 \ 16 \\
 \hline
 132454
 \end{array}$

$$\begin{array}{r}
 72.9 \\
 87.0 \\
 \hline
 159.9
 \end{array}
 \quad - \ 0.40$$

$$\begin{array}{r}
 159.9
 \end{array}
 \quad - \ 0.38$$

30

March 29. 1904

II

~~108~~
Right
~~108.9~~

~~8 29 40~~

A 32 43 ~~107.8~~
195.8
297.7
368.8

880[✓]
71.1[✓]
159.1[✓] - 0.40[✓]

34 09 117.3
189.2
286.2
18.5

- 0.30[✓]
71.9[✓]
92.3[✓]
164.2[✓] - 0.30[✓]
Mean = -0.23[✓]

Left
12.3
36 30 110.4
203.8
278.7

98.1[✓]
74.9[✓]
173.0[✓] - 0.13[✓]

25.7
8 38 12 10 1.0
21 34 191.8
8 35 24 291.9
5- -18
13 35 6

75.3[✓] - 0.11[✓]
100.1[✓]
175.4[✓] - 0.09[✓]

March 29, 1904

Left

III

$\begin{array}{r} 15.0 \\ 4208 \ 108.0 \\ 201.0 \\ \hline 278.0 \end{array}$

$\begin{array}{r} 93.0 \\ 77.0 \\ \hline 170.0 \end{array} - 0.19$

$\begin{array}{r} 22.3 \\ 44 \ 12 \ 899.5 \\ 191.4 \\ \hline 288.8 \end{array}$

$\begin{array}{r} 77.2 \\ 97.4 \\ \hline 174.6 \end{array} - 0.14$
 $- 0.10$

Right

Mean = -0.27

$\begin{array}{r} 288.3 \\ 46 \ 28 \ 187.0 \\ 116.3 \\ \hline 187.2 \end{array}$

$\begin{array}{r} 89.7 \\ 70.9 \\ \hline 160.6 \end{array} - 0.37$

-0.40

$\begin{array}{r} 297.6 \\ 8 \ 4752 \ 368.1 \\ 2040 \ 108.4 \\ \hline 8 \ 4510 \ 195.9 \\ 5 \ 26 \\ \hline 13 \ 44 \ 60 \end{array}$

$\begin{array}{r} 70.5 \\ 87.5 \\ \hline 158.0 \end{array} - 0.42$

Mar. 29, 1904

IV

Right

$\begin{array}{r} 287.4 \\ 16.8 \\ 115.4 \\ 186.8 \end{array}$

$\begin{array}{r} 29.4 \\ 71.4 \\ \hline 160.8 \end{array} - 0.37$

$\begin{array}{r} 296.5 \\ 368.3 \\ 108.6 \\ 195.0 \end{array}$

$\begin{array}{r} 72.8 \\ 86.4 \\ \hline 159.2 \end{array} - 0.34$

Left

Mean = - 0.31

$\begin{array}{r} 195.4 \\ 54.28 \quad 289.0 \\ 26.2 \\ 99.3 \end{array}$

$\begin{array}{r} 93.6 \\ 73.1 \\ \hline 166.7 \end{array} - 0.25$

$\begin{array}{r} 202.4 \\ 56.22 \quad 270.6 \\ 12.37 \quad 18.4 \\ 53.09 \quad 108.4 \\ 5 \quad - 21 \\ \hline 13 \quad 52 \quad 48 \end{array}$

$\begin{array}{r} 78.2 \\ 90.0 \\ \hline 168.2 \end{array} - 0.24$

$\begin{array}{r} 168.2 \\ \hline \end{array} - 0.22$

March 29, 1904

Left

V

197.8
 90200 287.0
 240
 100.8

89.2
 76.8
 166.0 - 0.27

201.5
 0402 280.7
 17.2
 108.4

79.2
 91.2
 170.4 - 0.18

Right

Mean = - 0.31

109.3
 0637 194.1
 296.4
 369.4

84.8
 73.0
 157.8 - 0.42

114.0
 90832 189.0
 289.9
 21 11 15
 9 5 18 15.6
 5 - 23
 14 4 55

75.0 - 0.40
 85.7
 160.7 - 0.37

March 29, 1904

Right

VI

9 10 30
 109.0
 194.9
 296.7
 366.9

85.9^v
 70.2^v
 156.1 - 0.46^v

12 36
 114.7
 189.8
 288.0
 16.4

75.1 - 0.38^v
 88.4^v
 163.5 - 0.31^v

Left

mean = -0.24

15 00
 16.4
 110.4
 201.4
 284.1

94.0^v
 82.7^v
 176.7 - 0.06^v

- 0.10^v

9 17 12
 24.1
 102.1
 192.8
 15 18
 9 13 50 288.9
 5 - 24
 14 13 26

77.0^v
 95.1^v
 172.1 - 0.15^v

March 29, 1904

Left

VII

9 30 10 17.1
~~105.7~~
 201.2
 283.8

88.1
 82.6

 170.7 - 0.17

23.2
 33 00 10 9.8
 193.4
 290.9

80.6 - 0.10
 97.5

 178.1 - 0.03

Mean = -0.25

Right

36 00 28.7
~~18.3~~
 11.4
 186.5

86.6
 71.6

 158.2 - 0.42

-0.40

9 38 10 295.8

 367.2
 17 20 108.6
 9 34 20 194.6

 5 - 28
 14 33 52

71.4
 88.0

 159.4 - 0.39

March 29, 190K.

Right

VII

9 41 06 290.8²
 16.0
 114.7
 189.2

83.8[✓]
 74.5[✓]
 160.3[✓] - 0.3A[✓]

43 47 296.5
 368.4
 105.2
 196.0

71.9[✓] - 0.36[✓]
 90.8[✓]
 162.7[✓] - 0.33[✓]

Left

Mean = -0.32[✓]

194.0
 47 08 291.0
 24.0
 101.3

97.0[✓]
 77.3[✓]
 174.3[✓] - 0.11[✓]

203.6
 9 49 30 280.2
 21 23 20.6
 9 45 21 101.3
 5 -30
 14 44 51

76.6[✓] - 0.27[✓]
 80.7[✓]
 157.3[✓] - 0.43[✓]

Mar 29, 1904

Left

~~TX~~~~18A~~

10 0200 107.3
 206.1
~~279.3~~

88.5
~~73.2~~
 161.5 - 0.35

05 54 23.8
 94.8
 196.1
 290.3

74.0
~~94.2~~
 168.2 - 0.22

- 0.28

Right

Mean = - 0.29

011 15 107.8
 194.0
 290.0
 12.2

86.2
~~78.2~~
 164.4 - 0.30

29 12
 10 9 44
 5 - 34
 15 9 10

~~118.0~~
 10 16 24 190.3
~~2...~~

PA = 23A.0 Ver 10

ST = 11.15

Ha = 6.36

Dec = +21.2

Sp wt = 7.5 B
 7 - 6.5 C

March 29, 1904

Observations on Vesta rather difficult and progressively more so, owing to ^{very} bright moonlight and decreasing altitude.

It was impossible to finish the last group as region had got so low that images ^{entirely} disappeared at equalizations.

Region so low that lowest of small shutters interfered somewhat with object glass at the very last. The greatest possible care however exercised throughout evening and observations are considered very good.

The three sets in last group considered alright.

0440 68 - Camelopard w/lf
Phot 75

4 40 + 68.4
11 3 5
6 55

March 29, 1904

— Camelopard

I

CS watch used on this star.

Left

10 57.0 208.0 \angle comp x dis 67.8^v
 275.8 54.9^v + 1.13^v
 34.9
 89.8 122.7^v

215.0
 268.6 57.6^v + 1.04^v
 25.0 74.0^v
 99.0 131.6^v + 0.95^v

Right

mean = +1.04^v

113.5
~~108.0~~ 187.5
 308.4
 358.3

74.0^v
 52.9^v
 126.9^v + 1.04^v

11 4.0 123.4
 178.9
 126.0 297.1
~~40.5~~ 308.8

55.5^v + 1.04^v
 71.7^v
 127.2^v + 1.04^v

11 00.5
 5 - .6
 15 59.9² M.T.

RA = 259.2^v or 13
 HA = 7.08 West
 Dec. = +68.4
 S.T. = 11.52

Spahr 9-1.5
 -0.5

Mar 29, 1904

B 236
11 15 45.0

B 394
11 15 00

[Signature]

March 30, 1904 (Wednesday)

C's watch used tonight

7 03 C's watch = 29² fast of B. 394

Cassiof.

W Obs.
Phot T.
9.5 cap.

23 50 + 56.4
7 50
A 00

Above

I

7 18.5 35.7 / Var

205.3
274.76

25.2
98.2

216.0
269.0

Below

305.7

356.4

114.50

187.0

294.8

7 25.1 367.6

43.6 128.8

7 21.8 176.2

5 5

12 21.3
6570.515

50.0

723

122.3

- 1.14

69.2 - 1.14

53.0

122.2

- 1.14

Mean = - 1.15

50.7

720

122.7

- 1.13

728

- 1.16

47.4

120.2

- 1.19

March 30, 1904

II

Below

7 27.2

306.1

356.3

116.3

184.7

296.4

366.0

128.2

145.4

50.2

68.4

118.6 - 1.22

69.2 - 1.24

47.6

116.8 - 1.26

Above

Mean = -1.16

212.9

268.9

23.9

96.3

560

724

1284 - 1.01

205.0

-1.07

246.4

35.3

86.2

71.8

50.9

122.7 - 1.13

7 33.8
7 30.5
 12 30.0⁴
 6570.521⁴

PA = 301.5 VmB

S.T. = 8.25

H.A. = 8.33 West

Dec = +57.5

Sfwh = 9 - 0.5 B
 + 0.5 C

March 30, 1904

Doubtful Var = Webb
+ 21.01146 Phot T

$$\begin{array}{r} 6 \quad 6 + 22.5 \\ 9 \quad 5.6 \\ \hline 3 \quad 50 \end{array}$$

9 15 41
15 47
16 47
17 05
20 05

~~L & A~~ < Var dis

9 40.2 15.6
110.0
200.9
281.4

22.9
102.9
191.0
291.3
120.3
~~285.8~~ 286.6

376.8
116.3
187.5

9 47.2 294.5
368.6
105.7
197.2

14432
6570.613

944.
80.5
174.9

- 0.09
- 0.04

800.
100.3
180.3
179.7

+ 0.01

Mean = - 0.18

90.2

71.2
161.4 - 0.35

74.1 - 0.31

91.5
165.6 - 0.27

over

Mar 30, 1904

Pa. 206.0 Van B.
 H.C. 4:31 West
 Dec. +21.9 North
 N.T. 10.3
 Sp. 9 - 3.5 2
 - 2.5 13
 - 1.9 6

044068 - Camelopard web.
 Photo 1
 4 40 + 6.4 4
 11 0.5

6 2.5

Left 206.4 < Sample

10 27.2

278.9
 33.0
 88.6

72.5 ✓
 55.6 ✓
 128.1 + 1.02

214.8
 269.1
 22.6
 299.1

54.3 ✓ + 0.99
 76.5 ✓
 130.8 + 0.96

Right

Mean = +1.04

116.3
 185.6
 305.6
 358.2

69.3 ✓
 52.6 ✓
 121.9 + 1.15

10 34.0
 61.2
 10 30.6
 15 30.1
 6570.646 r.m.s.

122.8
 178.3
 296.3
 367.04

55.5 ✓ + 1.10
 71.1 ✓
 126.6 + 1.05

Mar 30, 1904

PA-260.3KBP

Ha. 6:42 west

S.T. = 11:25

S'p.Wh. = -0.5C

Dec. 768.4 North

Only one group taken on each
of the last two objects means
tonight as observer's eye was
10.48 much inflamed & running water
and single groups taken ran
so well, that it was evident
everything was alright.

L.P.P.

April 2, 1904 (Saturday)

> 07 Cs watch $\12 fast of B 394

Cs watch used tonight
P Cassio. W Ob.

$$\begin{array}{r} 23.50 + 54.0 \\ \underline{\$ 15} \\ \$ 25 \end{array}$$

Phot T
9.5 cap used,

Above

$$\begin{array}{r} 233.8 \\ 2817.4 < \text{var. dis.} \\ 46.7 \\ \underline{117.2} \\ 221.0 \\ \$ 98.7 \\ 55.3 \\ 108.2 \\ \underline{70.5} \\ 124.1 - 1.107 \end{array}$$

$$\begin{array}{r} 77.7 - 1.14 \\ \underline{52.9} \\ 120.6 - 1.18 \end{array}$$

Below

$$\text{Mean} = \# - 1.27$$

$$\begin{array}{r} 146.8 \\ 196.9 \\ 315.9 \\ \$ 22.0 \\ \underline{50.1} \\ 56.1 \\ \underline{106.2} - 1.28 \end{array}$$

$$\begin{array}{r} 136.8 \\ 7 \ 27.8 \ 201.4 \\ 7 \ 24.7 \ 327.2 \\ 12 \ 24.6 \ 15.7 \\ 6573 \end{array}$$

$$\begin{array}{r} 64.6 - 1.32 \\ \underline{48.5} \\ 113.1 - 1.35 \end{array}$$

April 2, 1904.

II

Below

7 29.6
145.9
198.0
313.2
22.6

521
694
121.5

— 1.16

136.4
206.4
326.8
16.4

69.6
50.4
120.0

— 1.18

— 1.19

Above

53.6
109.3
223.8
298.2

55.7
74.4
130.1

Mean = 1.10

— 0.98

7 35.6
46.2
115.2

69.0
— 1.02

7 32.6
232.2
12 32.5
288.8

56.6
125.6
— 1.07

6573.

Emergent pencils gave trouble, especially in
1st group, ~~position~~ Eye stop moved after
" " and pencils somewhat bettered.
1st group 1/2 weight.

April 2, 1904

III

above.

7 46.0
 53.4
 108.6
 222.4
 298.4

55.2
76.0
 131.2 — 0.95

44.2
 147.4
 232.3
 298.8

73.2
56.5
 129.7 — 0.97

Below

Mean = - 1.09

326.0
 147.4
 137.4
 208.6

57.4
71.2
 122.6 — 1.14

318.4
 7 54.0
7 50.0
 12 42.9
 657.3

64.8
51.4
 116.2 — 1.21

P.A. = 121.5
 H.A. = 9.07
 Dec. = +57.4
 S.T. = 8:56
 Sp. wh. = $\begin{cases} -0.5 B \\ +0.5 C \end{cases}$

April 2, 1904

E aurigae web.

$$\begin{array}{r}
 41 \ 52 \\
 10 \ 02 \\
 \hline
 5 \ 10
 \end{array}
 + 43.6$$

 Phot T.
 9.5 Cap used.

$$\begin{array}{r}
 10 \ 12 \ 43.5 \\
 15 \ 17.5
 \end{array}$$

Comp star used = +43° 11' 77" (2.0)

Left

348.7 < Vardis.

9 33.0

368.2

166.0

184.2

346.7

364.9

168.2

180.7

Right

254.0

271.8

45.6

92.8

255.3

274.9

48.0

92.3

9 41.0

9 37.0

14 36.9

6573.

12.5

18.2

30.7

— 4.35

18.2

12.5

30.7

— 4.35

Mean = — 4.22

14.8

20.2

35.0

— 4.06

19.6

14.3

33.9

— 4.10

— 4.13

April 2, 1904

II

Right

9 43.0
 254.86
 277.0
 255.0
 274.0

75.8
 94.3
 257.6
 272.0

Left

4
 354.0
 361.2
 166.1
 183.8

9 50.6
 9 46.8
 14 46.7
 6573.
 345.6
 363.6
 168.8
~~180.6~~
 181.1

19.4
 200
 39.4 - 3.86

18.5
 14.4
 32.9 - 4.20

Mean = - 4.11

27.2
 19.7
 46.9 - 4.07

18.0
 12.3
 30.3 - 4.22
 4.38

April 2, 1904

III

Left

10 000

349.3

361.9

166.2

183.5

126

17.3

29.9 - 441

345.2

362.8

168.4

181.8

17.6

12.9

30.5 - 4387

Right

257.7

241.7

75.7

93.1

14.0

17.4

31.4 - 430

Mean = 4.32

10 12.6

10 6.3

15 6.2

6573.

254.4

244.8

78.3

~~91.3~~

91.3

20.4

130

33.4

20.4

12.2

32.2

4.24

33.2 - 4187

Pa 285.0 Ver B

S.T. 11:18

H.C. 6:23 West

Dec +44.1 North

S.T. -6.32 - 55.13 - 480

April 2, 1904

Aurigae,
E^{comp.} with +44° 1077

Above

165.6 < Var. dis.

10 27.0

184.7

19.1

347.2

16.0

363.2

35.1

- 406

166.3

181.8

345.0

365.8

15.5

20.8

36.3

- 402

- 398

Below

74.5

98.5

255.4

275.0

28.0

19.6

41.6

- 3.62

Mean = - 3.85

176.4

98.2

252.6

277.2

10 32.6

10 30.3

15 30.2

6573

16.8

24.4

41.2

- 3.72 - 3.62

- 3.69

- 3.74

PA 175.0 VERA

HA 6:42

Dec +44.3

JIT 11.34

Spunk 5-25 a

7-75 B

7-69 C

April 2, 1904

044068 - Camelof.

200b
Phot T.
9.5 cap

$$\begin{array}{r} 4 \quad 4016.4 \\ 11 \quad 4.8 \\ \hline 7 \quad 8 \end{array}$$

Left

228.3

< comp & obs

10 54.8

300.9

58.6

111.9

233.9

291.7

51.8

120.0

Right

140.8

217.6

328.6

21.4

148.4

11 01.0

203.9

115.8

321.0

10 57.9

288.7

15 57.8

657.3

72.6

65.3

127.9 + 1.03

57.8

+ 1.04

68.2

126.0 + 1.06

Mean = +1.04

76.8

53.8

130.6 + 0.97

+ 1.065

55.5

67.8

122.5 + 1.145

123.2

L.P.

P.A. 259.5 V₁₃ / V₁₇ = 122.02

Ha 7.27

Dec +68.4

Spwld -1.5 B

-0.5 C

much wind being variable & troublesome throughout evening.

April 4, 1904 (Monday)

Bond 236
 7 05 59.4
 06 59.6

Bond 394
 7 06 00
 7 07 00

Hertha

WOb.
 Photo.

9 10 +17.0
 8 20

 0 50

 11 10

9 18 +17.2
 8 28

 0 50

 11 10

7 31 58.0
 34 02.0

38.5
 57.5

34 48
 35 42

36 42.0
 37 32.0

April 4, 1904

Hertle (continued)

~~7 39 42.0~~

7	41	25.5	
		33.2	7.7

	44.0	7.5
	51.5	

	10.0	7.5
	17.5	

	24.0	7.5
	31.8	

	46.0	7.5
	53.5	

7 42 Star, a pec. +17.205, 19.5 by 7.6 & is 4.9 North of it.

7	44	04.0
	44	12.5

over

April 4, 1904

7 46 16.5
24.5 8.0
40.8 16.3

56.7
53.5 8.8
21.5 16.0

35.8
44.5 8.7
00.8 16.3

13.2
22.0 8.8
37.8 15.8

46.0
54.8 8.8
10.8 16.5

#748 Star b folr +17.2051 (9.5) by 8.5
8 is 6.0 South of it.

7 48 Star C folr +17.2051 (9.5) by 24.8
8 is 8.0 South

April 4, 1904

50.8
05.2~~90.8~~
~~44.8~~

751

star a very faint, ^{star (d)} follows the star
+17. 2051 (95) by 14.4" & about 3.0 South
of it

Star d (above) is about in the position
of asteriod but extremely faint.
It is nearly down to 14 ~~15~~ magn.

Star a is brighter than the other three
and is perhaps 12.8 magn.

The order of brightness of the stars
is a, b, c, d.

It would be impossible tonight to
measure b, c, or d with
the photometer and, even star a
would be pretty difficult.
These are about all the stars
possibly representing the asteriod
tonight in this region.

April 4, 1904

Iris W Obs.
Phot T

1	10	+16.8
9	10	
2	00	

8 12 48.8

13 19.0

14 44.2 (9.0)

8 13 Iris spec. +17.1533 (9.0) by 1^m 25^s
t is 11.0 N. of it.

Comp * = +17.1533 (9.0)

Bond 236 used

see fol. pages

April 4, 1904

Above

I

$$\begin{array}{r}
 84710 \quad 326.2 \quad \leftarrow \text{comp \& dis.} \\
 \quad \quad 25.2 \\
 \quad \quad 136.9 \\
 \quad \quad 211.8 \\
 \hline
 \quad \quad 590. \\
 \quad \quad 74.9 \\
 \hline
 \quad \quad 133.9^{\circ} + 0.90^{\circ}
 \end{array}$$

$$\begin{array}{r}
 4920 \quad 314.6 \\
 \quad \quad 35.3 \\
 \quad \quad 146.0 \\
 \quad \quad 204.7 \\
 \hline
 \quad \quad 77.7^{\circ} \\
 \quad \quad 58.7^{\circ} \\
 \hline
 \quad \quad 136.4^{\circ} + 0.88^{\circ}
 \end{array}$$

Below

Mean = +0.68^{\circ}

$$\begin{array}{r}
 5245 \quad 230.2 \\
 \quad \quad 298.4 \\
 \quad \quad 41.9 \\
 \quad \quad 127.2 \\
 \hline
 \quad \quad 68.2^{\circ} \\
 \quad \quad 85.3^{\circ} \\
 \hline
 \quad \quad 153.5^{\circ} + 0.51^{\circ}
 \end{array}$$

$$\begin{array}{r}
 85415 \quad 220.9 \\
 \quad \quad 309.0 \\
 \hline
 \quad \quad 3 \quad 30 \quad 50.5 \\
 85052 \quad 119.0 \\
 5 \quad -17 \\
 \hline
 1350 \quad 35^{\circ} \\
 6575.577^{\circ}
 \end{array}$$

$$\begin{array}{r}
 \quad \quad 88.1^{\circ} \\
 \quad \quad 68.5^{\circ} \\
 \hline
 \quad \quad 156.6^{\circ} + 0.48^{\circ}
 \end{array}$$

April 4, 190X

Below

II

8 56 16 229.2
 298.9
 43.2
 128.4

697^v
 85.2^v
 154.9^v + 0.48^v

58 54 307.8⁶
 52.4
 1120.2

84.2^v + 0.50^v
 67.8^v
 152.0^v + 0.53^v

Above

Mean = + 0.65^v

9 01 07 142.8
 206.3
 316.2
 33.0

63.5^v
 76.8^v
 140.3^v + 0.77^v

9 02 47 134.4
 212.2

+ 0.80^v

239 04 323.1
 59 46 24.9

74.8^v
 61.8^v
 136.6^v + 0.84^v

5
 13 59 27^v
 6575.583^v

April 4, 1904.

III

Above

143.0

9 9 33 245.5

316.5

32.2

#

134.6

11 12 214.1

324.2

244.5

Below

50.4

14 15 118.9

223.0

306.5

62.5^v75.7^v138.2^v+ 0.81^v79.5^v+ 0.80^v60.3^v139.8^v + 0.78^vMean = +0.66^v64.5^v235^v152.0^v+ 0.54^v+ 0.52^v

9 18 35 125.4

52 30 224.1

9 13 08 30.1

5 -21 299.2⁶14 12 4^v6575.592^v22.9^v71.5^v154.4^v0.49^v

April 11, 1904

Below

IV

9 21 20
 50.5
 148.4
 220.0
 300.3

67.9
 90.3
 158.2 + 0.42

23 10
 4³ 4.9
 129.0
 228.3
~~29.1~~ 300.5

+ 0.42
 85.1
 72.2
 157.3 + 0.43
 Mean = +0.63

25 33
 324.8
 24.2
 137.3
 213.8

59.4
 76.5
 135.9 + 0.86

9 27 40
 316.6
 30.5
 144.9
 205.2
 17 43
 9 24 26
 5 -23

+ 0.84
 76.9
 60.3
 137.2 + 0.83

14 24 03
 6575.600

April 4, 1904.

Above

✓

9 42 40 144.3
 204.3
 315.8
 33.7

60.0
 77.9
 137.9 + 0.82
 + 0.82

13 2.2
 44 10 216.40
 328.2
 22.8

83.8
 54.6
 138.4 + 0.81

Below

Mean = +0.67

54.4
 46 45 118.8
 221.8
 310.4

64.4
 88.6
 153.0 + 0.51

44.0

+0.52

9 48 17 130.1
 21 52 232.1
 9 45 28 298.4
 5 - 27

26.1
 66.3
 152.4 + 0.53

14 45 01
 6575.615

April 4, 1904.

Below

VI

1006 25 50.6
 117.6
 220.4
 307.6

67.0⁺
87.2⁺
 154.2⁺ + 0.49⁺

09 03 44.9
 128.4
 231.2
 298.0

83.5⁺ + 0.53⁺
66.8⁺
 150.3⁺ + 0.57⁺

Above

Mean = +0.66⁺

12 38 325.2
 27.0
 134.6
 218.2

61.8⁺
78.6⁺
 140.4⁺ + 0.77⁺

10 15 12 316.2
 35.0
 43 18 144.2
 10 10 50 204.8
 5 -31

78.8⁺ + 0.78⁺
60.6⁺
 139.4⁺ + 0.79⁺

15 10 19⁺
 6575.632⁺

Plc = 301.5 Var B
 H.A. = 4.17 West
 Dec = +17.8 North
 P.T. = 11.26
 Spwrk = -0.5 B
 +0.5 C

April 4, 1904.

Iris (cont.)

10 28 02.8
28 32.8

~~10 30 21.0~~

~~31 14.0~~
~~31 44.8~~ 30.8
~~33 28.5~~ 33.7

10 34 12.8
34 42.5 29.7
35 07.0 24.5

The ~~for~~ six previous groups were observations of a star (as it turned out to be) preceding $+17^{\circ} 15' 33''$ (9.0) by $1^m 25^s$ and 11.0 north of it. The comp. star was $+17^{\circ} 15' 33''$ (9.0). It was thought at first, that the object observed might be Iris, but it ~~was~~ to be a star.

L.P.O.

April 5, 1904, (Tuesday)

Bond 236
7 03 51.3
04 51.5

Bond 394
7 04 00
05 00

7 05 Co watch = 13^s slow of B. 394

Iris re Obs. Photo +

7 10 +16. A
P 20

1 10

7 19 20.0
20 11.0

7 23 20.45

31.0 10.5
32.5 1.5

23.0
33.0 10.0
34.5 1.5

7 25

42.0
52.0 10.0
53.5 1.5

54.8
0.5

1.0
11.0 11.0
12.8 1.6

14.8
24.5 9.7
26.6 1.2

April 5, 1904.

Object thought to be Iris ~~folia~~
 7 20 the (85) $17^{\circ}.1538$ by $\frac{4}{3}$ is $7.6 N$.

$47.4-3$		34.1		
59.0	11.7	46.0	11.5	20.0
59.5	0.5	46.2		36.5 11.5
				36.7 0.2

7 54

8.0	11.0	54.5	
19.0	0.3	05.5	11.0
19.3		05.7	

~~The~~ From above transit to the
 object assumed as Iris turns
 out to be Iris.

7 54 59.0
 55 40.5

Comp * = $Im + 17^{\circ}.1541$ (9.4)

Bond 236 used for times

over

April 5, 1904.

Above

$$\begin{array}{r}
 8 \ 06 \ 42 \quad 315.7 \quad \leftarrow \text{Comp \& dis} \\
 \quad \quad 34.6 \\
 \quad \quad 142.8 \\
 \quad \quad 202.7 \\
 \quad \quad 78.9 \\
 \quad \quad \underline{59.9} \\
 \quad \quad 138.8 \quad + 0.80
 \end{array}$$

$$\begin{array}{r}
 08 \ 41 \quad 323.2 \\
 \quad \quad 28.1 \\
 \quad \quad 132.7 \\
 \quad \quad 215.6 \\
 \quad \quad 64.9 \quad + 0.71 \\
 \quad \quad \underline{82.9} \\
 \quad \quad 147.8 \quad + 0.62
 \end{array}$$

Below

Mean = +0.62

$$\begin{array}{r}
 11 \ 43 \quad 220.2 \\
 \quad \quad 309.3 \\
 \quad \quad 52.6 \\
 \quad \quad 118.0 \\
 \quad \quad 89.1 \\
 \quad \quad \underline{65.4} \\
 \quad \quad 154.5 \quad + 0.49
 \end{array}$$

$$\begin{array}{r}
 233.3 \\
 13 \ 46 \quad 300.1 \\
 \quad \quad 40 \ 12 \quad 42.1 \\
 2 \ 10 \ 3 \quad 127.2 \\
 5 \quad \quad -1 \\
 \quad \quad \underline{\quad} \\
 13 \ 10 \ 2 \\
 6576.549 \\
 \quad \quad 76.449 \\
 \quad \quad \underline{\quad} \\
 \quad \quad 0.100
 \end{array}$$

$$\begin{array}{r}
 66.8 \\
 \quad \quad \underline{85.1} \\
 \quad \quad 151.9 \quad + 0.54
 \end{array}$$

April 5, 1904

II

Below

$\begin{array}{r} 220.9 \\ 1633 \quad 307.6 \\ 51.84 \\ 117.9 \end{array}$

$\begin{array}{r} 86.7 \\ 66.5 \\ \hline 153.2 \end{array} + 0.51$

$\begin{array}{r} 231.3 \\ 1840 \quad 301.2 \\ 41.6 \\ 127.2 \end{array}$

$\begin{array}{r} 69.9 \\ 85.6 \\ \hline 155.5 \end{array} + 0.49$
 $+ 0.47$

Above

$\begin{array}{r} 143.4 \\ 2200 \quad 216.1 \\ 312.8 \\ 33.8 \end{array}$

$\begin{array}{r} 62.7 \\ 81.0 \\ \hline 143.7 \end{array} + 0.70$
 $\text{Mean} = +0.60$

$\begin{array}{r} 134.3 \\ 2340 \quad 214.8 \\ 2053 \quad 323.2 \\ 82013 \quad 25.14 \\ 5 - 3 \\ \hline 132010 \end{array}$

$\begin{array}{r} 80.5 \\ 62.2 \\ \hline 142.7 \end{array} + 0.71$
 $+ 0.72$

$\begin{array}{r} 6576.556 \\ 76.449 \\ \hline 0.107 \end{array}$

70

April 5, 1904.

Above

III

143.0
 8.34 02 205.9
 313.5
 30.6

629.
 77.1
 140.0 + 0.77

135.2
 36 22 214.0
 32 4.5
 24.2

78.8 + 0.80
 58.7
 137.5 + 0.82

~~44.9~~
 Below

Mean = +0.65

39 20
~~33 0~~
 125.2
 228.5
 299.3

80.3
 70.8
 157.1 + 0.55

52.0
 8 41 45 119.8
 31 29 222.0
 A 37 52 306.3
 5 -6

67.8 + 0.54
 44.3
 152.1 + 0.53

13 37 46
 65)6.568
 76.449
 0.119

April 5, 1904

Below

IV

46.0
 44 16 128.0
 231.8
 297.2

220.
 65.4
 147.4 + 0.63

50.7
 46 11 120.1
 223.7
 306.8

69.4 + 0.58
 83.1
 152.5 + 0.53

Above

Mean = + 0.67

321.3
 49 10 25.6
 134.8
 200.2 10.3

64.3
 75.5
 139.8 + 0.78

313.5
 50 56 32.4
 30 33 143.6
 8 47 38 205.8
 5 - 8

79.2
 62.1
 141.3 + 0.75

134730

6576.574

76.449

0.125

72

April 5, 1904

V

above

9 08 27 323.0
25.3
135.6
214.7

62.3
79.1
141.4 + 0.75

10 30 314.6
33.0
143.3
206.9

78.4 + 0.74
63.6
142.0 + 0.73

Below

Mean = +0.68

14 06 231.7
297.5
42.9
125.1

65.8
82.2
148.0 + 0.61

9 16 50 2343.6
298.0
145.2
9 53 127.0
9 12 28
5 -12

644.4 + 0.63
81.8
146.2 + 0.65

14 12 16 9 33 55.5
6576.592 34 29.8
76449 34 40.5
0.143 34 46.5

~~9 35 24.0~~
9 35 53.5
36 27.5
36 39.5
36 44.8

April 5, 1904

9.5 38.8
16.5 45.0

VI

9 410.8
4112.0

Below.

316.2

9 5050 30.0

143.3

207.8

323.1

5248 26.0

134.0

213.6

Above

2230.3

5750 301.2

440.8

126.1

222.0

9 5914 308.4

19 52

449.9

9 5458 120.5

5 - 19

14 5439

6576.622

76.449

0.173

73.8
64.5
138.3

+ 0.81

62.9
79.6
142.5

+ 0.76

+ 0.72

Mean = + 0.60

70.9
85.3
156.2

+ 0.45

86.7 + 0.44

70.6
137.3

+ 0.43

74

April 5, 1904.

Above

VII

10 06 48 ~~289.5~~
~~29~~ 300.5
 43.0
 127.0

71.0
 84.0
 155.0 + 0.48

09 15 ~~289.3~~
 304.4
 49.8
 120.2

88.1 + 0.44
 70.4
 158.5 + 0.41

Below

Mean = +0.54

12 30 141.4
 206.1
 315.2
 33.6

64.7
 78.4
 143.1 + 0.71

10 14 14 133.4
 214.0
 42 47 322.0
 10 10 42 25.7
 5 - 21

80.3 + 0.70
 63.7
 144.0 + 0.69

13 10 21
 6576.632
 76.449
 0.183

April 5, 1904

Below

VIII

1540.6

10 23 51 209.5

~~3129~~

313.5

33.0

132.3

26 39 214.1

320.9

244

62.9

79.5

148.4

+ 0.61

+ 0.64

81.8

63.5

145.3

+ 0.67

Above

Mean = + 0.50

49.5

32 13 121.1

219.4

320.0

71.6

90.6

162.2

+ 0.36

43.5

10 34 27 128.0

117 10 226.6

10 29 18 303.8

5 - 15

15 29 03

6576.645

76.449

0.196

84.5

77.2

161.7

+ 0.35

April 5, 1905

IX

Above

49.2

10 41 05 120.6

218.0

308.0

71.4

900

161.4

+ 0.35

41.7

43 12 128.8

226.3

301.4

87.1

75.1

162.2

+ 0.34

+ 0.34

Below

318.7

46 05 25.3

132.9

215.0

66.6

82.1

148.7

+ 0.60

313.5

10 47 52 32.7

138.4

18 14 208.8

79.2

70.4

149.6

+ 0.59

+ 0.58

10 44 34

5 - 27

15 44 07

65 76.656

76.449

0.207

April 5, 1905.

Below

X

10 5243 318.2
23.9
129.8
217.0

65.7
27.2
152.9 + 0.52

55 15 314.6
32.0
138.3
206.8

+ 0.60
77.4
67.5
144.9 + 0.68

Above

Mean = +0.419

58 45 229.0
300.0
41.8
131.0

71.0
29.2
169.2 + 0.38

218.9

+ 0.382

11 01 07 308.9

27 50 49.0

10 56 58 119.2

5 - 29

90.6
70.2
160.8 + 0.37

15 56 29 Pa. = 18.00 Ver 13
6576.664 Ha. = 5.02 West
76.449 Dec = +17.5 North
0.215 S.T. = 12:14

Sp. wh. = { -1.5 a
-0.5 B
+0.1 C

April 5, 1904

Bond 236
11 14 32.0

B 394
11 14 0.0

Between the 5th & 6th groups
photometer removed and
motion of Iris tested by new
transits as it did not seem
to be varying quite as formerly.
Transits showed a motion of
about 8" relative to previous ones
proving object was Iris.
Night calm & mild, and
seeing pretty good.

L. P. P.

Apr. 11, 1904 (Monday)

B. 236
 $\begin{array}{r} 709.075 \\ 10 \quad 07.7 \end{array}$

~~the~~
 B 394
 $\begin{array}{r} 709.00 \\ 10 \quad 00 \end{array}$

& 7 10 C's watch 27° east of B. 394

Iris w Ob.
 Plot T

$\begin{array}{r} 7 \quad 10 \quad +16.8 \\ 8 \quad 50 \\ \hline 1 \quad 40 \end{array}$

$\begin{array}{r} 7 \quad 45 \quad 47.0 \\ 45 \quad 16.0 \end{array}$

$\begin{array}{r} 45 \quad 59.5 \\ 46 \quad 59.0 \end{array}$

~~$\begin{array}{r} 7 \quad 51 \quad 20.5 \\ 33.2 \\ 38.5 \end{array}$~~

$\begin{array}{r} 7 \quad 51 \quad 51.3 \quad b \\ 52 \quad 04.0 \quad C \quad 12.7 \\ 52 \quad 9.8 \quad a \quad 5.8 \end{array}$

~~$\begin{array}{r} 7 \quad 52 \quad 20.9 \\ 3. \end{array}$~~

~~$\begin{array}{r} 7 \quad 52 \quad 42.0 \quad b \\ 54.5 \quad C \\ a \end{array}$~~

improvement transits
 star $a_n = +17.1575 (p.9)$

April 11, 1904.

7 53 \$6.5 b
18.8 c 12.3
25.0 a 6.2

\$
32.5 b
45.0 c 12.5
51.2 a 6.2

7 54 03.2 b
15.7 c 12.5
22.0 a 6.3

31.2 f
44.0 c 12.8
50.0 a 6.0

56 37.5 d
57 5.3 e
57 7.5 f

57 \$ 37.5 d
47.5 e
47.5 f

April 11, 1904

7 58 08.8 d
19.0 e
19.0 f

28.5 d
38.0 e
38.0 f

47.0 d
56.5 e
56.5 f

P 00

22.0 d
32.0 e
32.0 f

~~4~~
59.5 d
9.0 e f
9.1 e

Apr. 11, 1904

f01 03.0 e

23.5 g

20.0

36.0 e

56.8 g

20.8

f 02

08.0 e

29.2 g

21.2

43.8³ e

04.8 g

21.5

19.0 e

40.2 g

21.2

16.0 g

18.0 h

f 05

30.0 g

32.0 h

43.5 g

45.8 h

Apr. 11, 1904

3.5 g
3.5 h15.5 g
17.5 h

44.0 e

45.8 g

16.0 e

37.2 g

58.0 e

20.0 g

f Clouds

R 0 f

~~57.5~~ clouds

14.0 e

36.0 g

R 10

58.5 e

f clouds

April 11, 1904

ρ 09 36.0
 , clouds

ρ 13 20.5 e
 41.5 g

14 40.8 e
 15 01.5 g

27.0 e
 48.5 g

11.0 e
 32.5 g

ρ 17 16.7 b
 29.0 c
 a clouds

ρ 18 03.0 b
 15.5 c
 21.8 a

Apr. 11, 1904

8 19

8

Stars gone

8 35

Sky practically all cloudy

8 52

Sky all cloudy no stars visible

9 00

Clouds thick & continuous everywhere, apparently no chance for anything further

10 35

Some clearer.
Is again.

H. obs.

$$\begin{array}{r}
 7 \quad 10 \quad +16.2 \\
 12 \quad 22 \\
 \hline
 5 \quad 12
 \end{array}$$

over.

Apr. 11. 1904.

Star d is the asteroid.

11^h 0^m At 11^h 0^m it follows star a
~~by~~ $[+17^{\circ} 15' 70'' - (A.9)]$ by 43.0 sec.
 and is 6.9 ~~north of it.~~

Apr. 12, 1904 (Tuesday)

B 236

B 394

7 04 25.0
7 05 23.8
06 24.0

7 05 05
7 06 05
07 05

06

Cs watch 09.55⁰⁰ fast of B. 394

Iris

web.

Phot. T.

7 10 +16.8
8 50
1 40

19
#8 59.0 star a - +17.1575 (ag)
entered 21 50.5 8 + 5.0 North of it.
21 59.0
22 04.2
22 10.5

Set chron. min. hand to = sec 0.

7 25 18.0
26 19.8

7 27 18.0 a
27 33.5 b 15.5
27 42.0 c 8.5
~~27 51.0~~

27 51.0 a
28 06.5 b 15.5
28 15.0 c 8.5

28 2 3.0 a
3 2.0 b 15.0
4 2.0 c 9.0

April 12, 1904.

$\begin{array}{l} 29 \text{ ~~44~~ } 10.5 \text{ a} \\ 29 \quad 26.5 \text{ b } 16.0 \\ 29 \quad 35.0 \text{ c } 8.5 \end{array}$

$\begin{array}{l} \text{20 } 29 \quad 43.0 \text{ a} \\ 29 \quad 58.5 \text{ b } 15.5 \\ 30 \quad 06.5 \text{ c } 8.0 \end{array}$

$\begin{array}{l} 34 \quad 27.4 \\ 34 \quad 52.0 \end{array}$

$\begin{array}{l} 35 \quad 28.2 \\ 35 \quad 53.0 \quad +17.15 \text{ b } \text{ (9.5)} \end{array}$

$\begin{array}{l} 36 \quad 41.0 \\ 37 \quad 36.8 \end{array}$

$\begin{array}{l} 38 \quad 26.0 \\ 39 \quad 46.0 \end{array}$

$\begin{array}{l} 38 \quad 57.8 \\ 39 \quad 18.0 \end{array}$

~~Comp & proceed + 17.15 b (9.5)
by 20.1 is 4.8 North of it~~

April 12, 1904

7 #0	39.0	a		7 41	22.5	a
	55.0	b	16.0		38.5	b 16.0
	02.5	c	7.5		46.3	c 7.5

42	34.0	42.0	a
42		38.2	b
43		05.5	c

43	18.5	a
43	35.0	b
43	42.0	c

~~a~~
~~b~~
~~c~~

7 56	44.5	a
	00.8	b
	07.5	c

57	39.5	a
	56.7	b
	03.5	c

58	14.2	a
58	30.8	b
58	37.8	c

April 12, 1904.

7 59 28.5
01 20.5

8 00 Dirie foh. $+17^{\circ}15'75''$ by $1^m 52^s$
 8 is 5.0 North of it
 Comp $\times = +17^{\circ}15'44''$ (9.5)
 Left B 236 used on Dirie
 228.5

8 09 42 298.5 < comp \times dis. $\frac{700}{23.3}$
 41.2
 124.5
 220.3
 11 58 306.9
 47.8
 118.7
 above
 142.8
 14 45 208.7
 381.8
 34.8
 86.6 + 0.47
 70.9
 157.5 + 0.43
 Mean = + 0.56

65.9
 83.0
 148.9 + 0.60

8 16 35 133.0
 215.0
 13 00 322.6
 8 13 15 25.9
 5 - 35
 82.0 + 0.64
 63.3
 145.3 + 0.67

13 12 40
 6583.551
 23.442
 0.482

April 12, 1904.

Right

II

δ 19 45
 140.6
 204.8
 312.7
 35.7

64.2
 δ 3.0
 147.2 $+ 0.63$

22 02
 132.5
 215.2
 320.7
 27.6

δ 2.7 $+ 0.61$
 66.9
 149.3 $+ 0.59$

Left

Mean $+ 0.53$

δ 48.2
 25 59
 119.4
 221.5
 306.8

71.2
 δ 5.3
 156.5 $+ 0.45$

41.5
 δ 28 15
 125.9
 16 01
 224.0
 δ 24 00
 298.9
 5 - 06
 13 23 24

δ 4.4 $+ 0.45$
 71.9
 156.3 $+ 0.45$

558
 442
 95

April 12, 1904

Left

III

8 36 07
 51.0
 136.3
 218.9
 306.6

? 25.3
 27.7
 173.0 +

3804
 386
 126.4
 229.6
 297.4

27.8
 67.8
 155.6 + 0.4711

Right

Mean = +0.63

4116
 327.5
 26.9
 133.9
 213.2

59.4 ✓
 79.3 ✓
 138.7 + 0.81

315.4
 A 4322 32.3
 158 49 141.3
 8 39 42 204.6
 5 39
 13 39 03
 .569
 .442
 .127

46.9 + 0.79
 63.3
 140.2 + 0.77

april 12, 1904

IV

Right

324.0

8 46 03 27.5

133.2

213.0

315.2

48 20 32.3

142.4

204.4

63.5

79.8

143.3

+0.71

77.1

62.0

139.1

+0.75

+0.79

Left

228.8

51 15 296.8

42.6

124.4

221.3

8 54 04 306.1

199.42 53.0

8 49 56 116.9

5 40

13 49 16

.576

.443

.134

68.0

82.1

150.1

+0.57

+0.58

84.8

63.9

148.7

+0.60

Mean = +0.66

April 12, 1904

Left

V

9 04 54 233.2
 297.9
 42.6
 126.8

64.7
 24.2
 148.9 + 0.60

07 13 218.9
 305.1
 50.0
 116.9

+ 0.56
 86.2
 66.9
 153.1 + 0.51

Right
 142.4

mean = +0.65

09 50 205.3
 315.3
 35.3

62.9
 80.0
 142.9 + 0.72

9 11 36 135.3
 212.0
 323.2

+ 0.74

9 08 23 24.8
 5 43

76.7
 64.6
 141.3 + 0.75

14 07 40
 .589
 .442
 .147

April 12, 1904

Right

VII

9 13 50 143.0
 20 8.3
 3 2.2
 25.0

65.3
 82.8
 148.1

+ 0.61

15 40 132.2
 215.1
 324.3

82.9
 62.9
 145.8

+ 0.64

27.2

+ 0.66

Left

Mean = +0.58

19 20 58.1
 117.8
 220.4
 307.7

66.7
 87.3
 154.0

+ 0.50

41.4

+ 0.52

9 22 20 125.2

83.8

31 10 239.4

68.4

+ 0.53

9 27 48 297.8
 5 47

152.2

14 27 01

602

442

160

Apr. 12, 1904

VII

Left

9	38 18	48.7	73.0	
		121.7	88.0	
		217.9	161.0	+ 0.36
		305.9		

		39.3		+ 0.39
--	--	------	--	--------

{	40 20	127.6	88.3	
		228.0	69.8	
		297.8	158.1	+ 0.42

Right

Mean = + 0.48

		321.4		
43 56		26.8	65.4	
		132.1	84.8	
		216.9	150.2	+ 0.57

		312.3		
9	46 00	35.1	82.8	+ 0.56
	8 34	139.5	68.1	
9	42 08	207.6	150.9	+ 0.56

5	49	
14	41 19	
	.612	
	.442	
	.170	

April 12, 1904.

VIII

Right

320.9

9 48 15 28.6

132.5

214.7

67.7

82.2

149.9

+ 0.54

309.3

+ 0.62

50 33 28.8

140.64

206.9

79.5

66.5

146.0

+ 0.65

Left

Mean = + 0.54

220.0

54 10 307.3

49.2

147.4

87.3

68.2

155.5

+ 0.47

229.4

+ 0.45

9 53 35 298.9

A 33 39.3

9 52 08 127.4

5 - 00

14 51 18

.619

.442

.177

69.5

88.1

157.6

+ 0.43

Apr. 12, 1904

~~IX~~

Left

218.2

10 11 10

305.8

48.1

118.1

49.6

700

159.6 + 0.39

226.7

13 13

298.3

40.0

127.3

71.6 ✓ + 0.40

87.3 ✓
158.9 + 0.42

Right

129.6

16 37

214.0

317.7

28.3

47.4

70.6
158.0 + 0.42

128.7

0.40

10 18 53

212.0

311.3

19 53

37.8

10 14 58

5 - 53

15 14 05

.635

.442

.193

73.3 ✓
86.5 + 0.38

159.8

Apr. 12, 1904

X

Right

131.5

10 21.53 213.9

318.2

29.8

82.4

71.6

154.0

+0.50

1079.0

23 48 208.2

309.6

35.8

69.2

86.2

155.4

+0.47

+0.48

Left

39.3

26 55 126.3

227.3

297.4

87.0

70.1

157.1

+0.44

Mean = +0.44

44.4

+0.41

10 29 18 117.9

21 54 218.1

10 25 24 307.6

5 - 35

15 24 33

642

442

200

70.5

89.5

160.0

+0.38

100

Apr. 12, 1905

XI

Left

41.5
 10 35 23 126.0
 226.7
 295.3

84.5
 68.6
 153.1 + 0.51

47.3
 37 30 117.9
~~218.8~~
 305.3

70.6
 86.5
 157.1 + 0.44

+ 0.48

Right

Mean = + 0.52

313.6
 40 40 38.6
 138.8
 207.6

85.0
 68.8
 153.8 + 0.50

323.2
 10 43 00 28.8
 156 33 130.2
 10 39 08 212.8
 5 - 57
 15 38 11

65.6 + 0.56
 82.6
 148.2 + 0.61

651
 .442
 .209

Apr. 12, 1904

XII

Right

10 45 26 312.5
 3.8.7
 139.3
 204.5

83.2
 69.2
 152.4 + 0.53

47 18 322.1
 28.2
 131.1
 214.5

66.1 + 0.56
 83.4
 149.5 + 0.58

Left

Mean = + 0.51

50 45 22 228.0
 201.0
 40.2
 123.4

73.0
 83.2
 156.2 + 0.45

10 53 00 221.0
 307.3
 197 29 49.2
 10 49 22 118.61
 5 - 59

86.3 + 0.46
 68.9
 155.2 + 0.47

125 48 23 Pa 57.0 Verk
 .658 Wa. 5.13 West
 .442 Dec +17.4 North
 .216 N.T. 12.34
 Spark - 1.5 B
 - 0.5 C

Apr. 12, 1904.

B 236

B 394

11 05 02.0

11 04 00

L.P.

Apr. 13, 1904 (Wednesday)

B 236
 7 08 01.8
 09 02.0

B 394
 7 08 00.
 09 00

7 10 C's watch 12^h slow at 7:10 of B394

Iris 250h
 Plot T.

7 10
 7 00
 1 50

7 25 31.0 (ag)
 28 42.8 Iris.

7 28 Iris foh + 107.1575 (ag) by 3^m 11.8 this
 2.9 Wouts of it.

Same comp * used as last night

Iris rather near an A.5 magn. star.

B 236 used for times.

7 37
 34.0 43.0 47.0 52.0 02.2 80
 35.0 44.0 48.0 53.2 02.2 92

Apr. 13, 1904

19.0	38.0	43.0	01.0	9.0	14.0
19.4	38.5	43.5	01.5	9.4	14.4

7 5-6 In the previous transits Iris ^{by 1.0} was 1.0
 S.S. & now in the above transit Iris
 now follows by 0.5.

Above

228.4 (comp & dis)

80340 296.0

41.7

134.4

221.2

65.6^v82.7^v150.3^v+ 0.57^v

0700 303.8

48.2

119.3

82.6^v+ 0.54^v71.1^v153.7^v+ 0.50^v

Below

Mean = + 0.55^v

136.8

10 19 209.8

313.3

30.8

73.0^v77.5^v150.5^v+ 0.57^v

132.4

+ 0.56^v

8 12 50 214.3

33 49 318.8

808 27 28.9

5 - 12

13 8 15

6584.547

81.9^v70.1^v152.0^v+ 0.54^v

April 13, 1904.

II

Below

δ 16 33
 139.0
 207.6
 314.0
 344.9

68.6[✓]
 80.9[✓]
 149.5[✓] + 0.58[✓]

136.4
 δ 18 32 213.4
 318.4
 29.2

79.0[✓]
 70.8[✓]
 147.8[✓] + 0.62[✓]

Above

Mean = +0.58[✓]

49.6
 δ 23 00 119.6
 222.0
~~300.7~~

70.0[✓]
 80.7[✓]
 150.7[✓] + 0.56[✓]

42.0
 δ 25 30 122.5
 3 35 226.7
 δ 20 54 297.2
 5 -64
 13 20 40

80.5[✓]
 70.5[✓]
 151.0[✓] + 0.56[✓]

6544.556

April 13, 1904

above

III

46.4

8 37 04 119.6

219.8

300.8

73.2 ✓

81.0 ✓

154.2 ✓ + 0.49 ✓

42.0

39 30 122.2

226.8

298.1

80.2 ✓

+ 0.52 ✓

71.3 ✓

151.5 ✓ + 0.55 ✓

Below

Mean = +0.53

316.2

43 00 24.6

134.0

214.4

71.4 ✓

80.7 ✓

152.1 ✓ + 0.53 ✓

312.9

0.54 ✓

8 46 44 33.6

166 18 139.0

8 41 34 ~~204.6~~

5 17 209.0

13 41 17

.570

80.7 ✓

70.0 ✓

150.7 ✓ + 0.56 ✓

April 13, 1904

Below

IV

85039 318.3
 29.3
 132.4
 212.2

71.0 ✓
 79.8 ✓
 150.8 ✓ + 0.56 ✓

5311 314.8
 340
 138.0
 209.2

79.2 ✓ + 0.56 ✓
 71.2 ✓
 150.4 ✓ + 0.57 ✓

Above

Mean = +0.62

228.3
 5612 297.6
 41.7
 112.0

69.3 ✓
 70.3 ✓
 139.6 ✓ + 0.78 ✓

22.6.3
 85807 303.5
 40.2
 1A 09
 85432 117.8

77.2 ✓ + 0.69 ✓
 71.6 ✓
 148.8 ✓ + 0.60 ✓

5 19
 135418
 1579

Apr. 13, 1904.

Above

V

9 13 00 228.4
 297.4
 45.2
 121.3

69.4
 76.1
 145.5 + 0.66

15 32 225.6
 299.5
 48.3
 118.9

73.9 + 0.67
 70.6
 144.5 + 0.68

Below

Mean = + 0.64

134.6
 18 55 207.1
 315.7
 33.0

69.5
 77.3
 146.8 + 0.64

133.0
 9 21 30 214.0
 28 57 318.5
 9 17 14 28.7
 5 23
 124 16 51
 1595

81.0 + 0.60
 70.2
 151.2 + 0.55

April 13, 1904

VI

Below

13A.1

9 2450 208.8

315.9

344.7

70.7✓

78.8✓

149.5✓ + 0.5✓

134.2

2750 214.0

320.3

29.0

79.8✓

+ 0.59✓

68.7✓

148.5✓ + 0.60✓

Above

4A.8

3130 116.0

225.5

300.0

67.2✓

74.5✓

141.7✓ + 0.74✓

45.2

~~114.8~~

9 3400 119.7

118 10 230.4

9 29 32 297.40

5 25

74.5✓

+ 0.74✓

66.6✓

141.1✓ + 0.75✓

14 29 07

.603

Apr. 13/1904

Above

9 5320 48.0
116.1
221.8
303.3

~~VII~~
681
81.5
149.6 + 0.54

55 52 44.2
119.4
229.3
298.5

75.2 + 0.64
69.2
144.4 + 0.69

Below

Mean = +0.64

58 48 317.8
28.6
134.2
211.4

70.8
77.2
148.0 + 0.61

10 0140 314.4
31.8

9 31 40 139.0
10 57 55 207.2
5 30

+ 0.64
77.4
68.2
145.6 + 0.66

14 57 25
.623

April 13, 1904

Below

VLP

10 04 45
 322.0
 29.6
 133.8
 212.7

67.6 ✓
 78.9 ✓
146.5 ✓ + 0.64 ✓

07 48
 318.52
 34.8
 137.6
 206.9
 above

+ 0.62 ✓
 79.6 ✓
 69.3 ✓
148.9 ✓ + 0.60 ✓
 mean = + 0.58 ✓

12 30
 228.8
 299.12
 41.2
 120.8

70.4 ✓
 79.6 ✓
150.0 ✓ + 0.58 ✓

10 15 00
 222.2
 303.7
 40.03
 40.4
 10 10 01
 117.7
 5 - 32

+ 0.55 ✓
 81.5 ✓
 71.3 ✓
152.8 ✓ + 0.52 ✓

15 09 29
 , 632

April 13, 1904

Above

IX

10 30 00 226.3
 299.5
 40.3
 123.6

73.2 ✓
 83.3 ✓
 156.5 ✓ + 0.45 ✓

22¹/₆
 33 43 304.0
 44.0
 112.0

82.4 ✓ + 0.51 ✓
 68.0 ✓
 150.4 ✓ + 0.57 ✓

Below

Mean = +0.50 ✓

135.3
 35 33 209.4
 314.5
 357.0

74.1 ✓
 80.5 ✓
 154.6 ✓ + 0.49 ✓

10 37 47 131.3
 212.5
 17 03 318.4
 30.5
 10 34 16
 5 36
 13 33 40

81.2 ✓ + 0.50 ✓
 72.1 ✓
 153.3 ✓ + 0.51 ✓

.649

April 13, 1904

X

Below

10 41 05 136.2
209.3
314.6
344.1

731 ✓
79.5 ✓
152.6 ✓ + 0.52 ✓

132.8
43 33 216.6
320.0
32.8

23.8 ✓ + 0.48 ✓
72.8 ✓
156.6 ✓ + 0.45 ✓

above

mean = + 0.42 ✓

47.0
46 38 121.3
219.5
304.0

74.3 ✓
87.5 ✓
161.8 ✓ + 0.35 ✓
+ 0.37 ✓

41.2
10 49 05 123.0
19 16 227.4
10 44 49 304.9
5 -36
10 44 13
656

21.8 ✓
77.5 ✓
159.3 ✓ + 0.39 ✓

Apr. 13, 1904.

Above

XI

10 55 48

44.2

119.9

223.4

304.2

75.7 ✓

80.8 ✓

156.5 ✓ + 0.45 ✓

40.8

5 00 125.8

228.2

300.72

85.0 ✓ + 0.44 ✓

72.0 ✓

157.0 + 0.44 ✓

Below

mean = + 0.48 ✓

31.8

11 01 07

29.9

131.9

212.6

312.5

71.1 ✓

80.7 ✓

151.8 ✓ + 0.54 ✓

11 03 45

35.0

23 8 40

136.3

10 59 40

~~207.7~~ 6

5 - 40

208.1

82.5 ✓ + 0.52 ✓

71.8 ✓

153.8 ✓ + 0.49 ✓

154.3 ✓

15 59 00

.666

P.A. = 148.5

N.T. = 12.49

H.A. 5.27 West

Dec. +17.4 North

Sph. -1.5 B 0 - 0.5 C

B 236

11 17 44.2

B 394

11 17 00

April 14, 1904 (Thursday)

B 236
 > 02 58.0

B 394
 > 03 00

> 04 Cal watch > fast of B 394

Iris Webb shot T.
 + 16.8

$$\begin{array}{r} > 10 \\ 9 \text{ } 00 \\ \hline 1 \text{ } 50 \end{array}$$

> 17 31.5 (A9) = 17.1575.
 22 04.0 Iris

> 22 Iris for the (A9) by 4^m 32.5 and 1.0 N. of the (A9)

> 25 53.8
 57.5
 030

14 21.0
 25.0
 30.5

> 26

37.5
 41.5
 46.8

~~555~~ 5

02.0 18.8
 06.0 22.8
 11.4 28.0

Apr. 14, 1904

8 14 47.5
54.2
02.5

8 15 33.4
40.0
43.0

54.8
01.0
04.0

12.0
18.5
21.5

$$\text{Comp} * = \text{DM} + 17.6^{\circ} 149.5 \text{ (p.7)}$$

09.5
20.8

Bond 236 used on Iris.
above

8 28 20 325.2
23.2
150.0
197.9
331.2

30 11 17.8
144.8
200.7

Below

234.3

33 14 293.5
69.7
106.4

< comp * dis.
58.0

47.9
105.9 + 1.51

46.6 + 1.56

55.9
102.5 + 1.60

Mean = + 1.57

56.2

46.7
102.9 + 1.59

Apr. 14, 1904

$$\begin{array}{r}
 2143.0 \\
 290.5 \\
 56.0 \\
 112.5 \\
 \hline
 240.3
 \end{array}
 \qquad
 \begin{array}{r}
 47.5 \\
 56.5 \\
 1040 \\
 \hline
 + 1.56 \\
 \hline
 \text{II}
 \end{array}
 \qquad
 1.58$$

$$\begin{array}{r}
 6375.564 \\
 .574 \\
 .000 \\
 \hline
 6375.564
 \end{array}
 \qquad
 \text{Below}$$

$$\begin{array}{r}
 233.2 \\
 293.2 \\
 60.5 \\
 104.4 \\
 \hline
 240.3
 \end{array}
 \qquad
 \begin{array}{r}
 60.0 \\
 47.2 \\
 107.2 \\
 \hline
 + 1.48
 \end{array}$$

$$\begin{array}{r}
 4520 \\
 289.3 \\
 53.6 \\
 113.4 \\
 \hline
 240.3
 \end{array}
 \qquad
 \begin{array}{r}
 490 \\
 59.8 \\
 1088 \\
 \hline
 + 1.46
 \end{array}$$

$$\begin{array}{r}
 325.4 \\
 25.81 \\
 151.6 \\
 197.4 \\
 \hline
 240.3
 \end{array}
 \qquad
 \begin{array}{r}
 490 \\
 59.8 \\
 1088 \\
 \hline
 + 1.45
 \end{array}$$

above

Mean = +1.48

$$\begin{array}{r}
 5135 \\
 25.81 \\
 151.6 \\
 197.4 \\
 \hline
 325.4
 \end{array}
 \qquad
 \begin{array}{r}
 59.7 \\
 45.8 \\
 105.5 \\
 \hline
 + 1.52
 \end{array}$$

$$\begin{array}{r}
 5330 \\
 192.05 \\
 145.2 \\
 204.5 \\
 \hline
 328.4
 \end{array}
 \qquad
 \begin{array}{r}
 47.2 \\
 59.3 \\
 106.5 \\
 \hline
 + 1.51
 \end{array}$$

$$\begin{array}{r}
 4801 \\
 5 \\
 134746 \\
 \hline
 574 \\
 .514 \\
 .060
 \end{array}
 \qquad
 \begin{array}{r}
 47.2 \\
 59.3 \\
 106.5 \\
 \hline
 + 1.50
 \end{array}$$

Apr. 14, 1904.

Above

111

9 01 17 322.8
 20.8 58.0
 151.0 47.2
 198.2 105.2 + 1.53

03 10 329.4
 17.4 48.0 + 1.52
 145.7 57.6
 203.3 105.6 + 1.52

Below

Mean = +1.52

06 50 62.2
 106.0 44.8 ✓
 234.4 60.8 ✓
 295.2 105.6 + 1.52

9 09 30 56.4
 111.8 55.4 ✓ + 1.53
 20 47 240.8 49.2
 9 05 12 290.0 104.6 + 1.54
 5 - 17
 14 04 55

.587
 .174
.023

April 14, 1914

IV

Below

$$\begin{array}{r}
 61.6 \\
 91213 \quad 104.1 \\
 235.3 \\
 290.0 \\
 45.5 \\
 \underline{59.7} \\
 105.2 \quad + 1.53
 \end{array}$$

$$\begin{array}{r}
 54.9 \\
 1432 \quad 111.7 \\
 240.6 \\
 289.6 \\
 56.8 \\
 \underline{49.0} \\
 105.8 \quad + 1.52
 \end{array}$$

above

Mean = +1.44

$$\begin{array}{r}
 339.7 \\
 1720 \quad 122.0 \\
 144.3 \\
 200.6 \\
 48.3 \\
 \underline{59.3} \\
 107.6 \quad + 1.47
 \end{array}$$

+1.44

$$\begin{array}{r}
 322.8 \\
 91900 \quad 22.8 \\
 144.6 \\
 198.0 \\
 60.0 \\
 \underline{50.4} \\
 110.4 \quad + 1.41
 \end{array}$$

$$\begin{array}{r}
 91546 \\
 5-19 \\
 \hline
 141527 \\
 .094 \\
 .074 \\
 \hline
 .020
 \end{array}$$

April 14, 1904

V

Above

9 28 46

149.3

196.9

324.2

23.7

47.6

59.5

107.1

+ 1.49

31 38

144.3

201.3

329.9

17.9

57.0

48.0

105.0

+ 1.52

+ 1.54

Below

61.0

34 45

107.3

234.5

294.9

46.3

60.4

106.7

+ 1.49

9 37 00

54.7

112.8

241.4

58.1

50.3

108.4

+ 1.47

9 33 02

291.7

5 - 22

108.4

+ 1.45

14 32 40

.606

.516

.092

April 14, 1904

VIBelow
60.5

9 40 07

107.5
236.0
294.547.0
58.5
105.5 + 1.52

54.2

+ 1.52

42 40

112.8
242.2
299.258.6
47.0
105.6 + 1.52

above

mean = + 1.49

46 17

329.5
17.0
143.2
204.747.5
61.5
109.0 + 1.44

9 48 33

323.2
23.6
150.1
197.260.4
47.1
107.5 + 1.48

47 37

9 44 24

5 -23

14 44 01

.614
1.574
-1.00

April 14, 1904

VII

above

330.3

10 03 25 15.7

45.4

143.8

59.6

203.4

105.0

+ 1.54

325.4

06 00 21.4

56.0[✓]

+ 1.56

145.4

46.8

197.2

102.8

+ 1.59

Below

Mean = +1.57

240.6

10 36 289.9

49.3[✓]

56.2

56.0

112.2

105.3

+ 1.53

236.1

10 13 35 291.8

55.7

+ 1.58

33 86 61.3

45.4

10 08 24 106.7

101.1

+ 1.63

5 -27

15 07 57

.631

.514

.117

April 14, 1904

VIII

Below

240.4
 10 16 49 289.4
 55.8
 111.7

49.0
55.9
 104.9 + 1.54

235.6
 19 00 262.4
 62.8
 105.3

+ 1.60
 56.8
42.5
 99.3 + 1.67

Above

Mean = +1.61

152.2
 23 40 194.4
 324.4
 20.6

45.2
36.2
 101.4 + 1.62

145.2
 10 26 40 203.2
 6.9 331.4
 10 21 32 14.1
 5 - 29

+ 1.62
 3 - 0.0
43.9
 100.9 + 1.63

15 21 03
 .640
.514
 .126

April 14, 1904

IX

Above

10 40 57
L
152.2
195.6
326.3
20.4

43.4
54.1
97.5 + 172

43 13
145.3
200.4
330.2
134.9
13.19

55.1 + 1.69
44.7
99.8 + 1.66

Below

Mean = +1.75

64.2
45 13
103.8
238.3
291.5

39.6
53.2
92.8 + 184

10 47 55
17 18
10 44 20
5 33
57.6
109.0
242.7
286.4

181
51.4
43.7
95.1 + 1.78

15 43 47
656
514
142

Apr. 14, 1904

XBelow

10.51 07 62.0
103.4
234.1
290.8

41.8
52.7
94.5 + 1.80

5350 54.4
104.0
241.4
246.2

49.2 + 1.82
44.4
93.2 + 1.83

Above

Mean = +1.80

57 30 331.8
14.7
144.9
199.9

42.9
52.0
95.9 + 1.76

11 00 40 327.4
19.4
223 07 152.0
10 55 47 194.7
5 - 34

52.0 + 1.78
42.7
94.7 + 1.79

16 55 13
.663
.514
.149

R.A. = 02^h 42^m 10^s / H.R. = 5124 / West
Dec = +17.2 North / S.T. = 12:50
Sph. wh. $\left\{ \begin{array}{l} -0.5 B \\ +0.5 C \end{array} \right.$

B 236 18 394
11 11 37.2 L.P.P. 11 11 00

April 16, 1904 (Saturday)

B 236
7 07 32.3
7 08 32.5

B 394
7 08 00
09 00

7 10 Is watch 22^s east of B.394
Iris Webb Photo

7 10 +16.5
7 10
2 00

7 19 57.5 (sg)
7 24 15.5 Iris

7 27 Iris fol. + 17.1575 (sg) by 7^m 10² and
3.9 South of it

7 29 37.5
29 47.5

7 36

44.8	04.5	27 28.5	54
48.0	08.0	31.8	
54.5	14.5	38.8	

27	16.0	33.0
	19.2	36.2
	26.0	43.0

April 16, 1904

A star fol₂ +17° 16' 10 (2.0) by 6. sec_s, 2' 4" south
of it, which is not in the Dm. Magn. 4.9 ±
Var. ?

Comp * = +17. 15 98 (9.0)

37.0

44.0

47.0

This object assumed as
Iris is Iris.

B. ²³⁶~~374~~ used for times

22.0

36.0

8 40 Iris fol₂ +17° 16' 02 (9.5) by 14" 0
is 5.7 South of it.

~~44.5~~

44.5

4

44.5

Dm +17. 16 02 has another star
following 3 sec. & 2' 0" North of
it, which is not in the Dm.

over

April 16, 1905

above

I

$$\begin{array}{r}
 8 \ 49 \ 45 \quad 237.4^{\circ} \text{ comp } * \text{ dis} \\
 \quad \quad 2899 \quad 52.9^{\circ} \\
 \quad \quad 51.1 \quad 64.9^{\circ} \\
 \quad \quad 116.0 \quad 127.8^{\circ} \quad +1.24
 \end{array}$$

$$\begin{array}{r}
 51 \ 30 \quad 231.2 \\
 \quad \quad 295.8 \quad 64.6^{\circ} \quad +1.26 \\
 \quad \quad 58.74 \\
 \quad \quad 108.4 \quad 52.0^{\circ} \\
 \quad \quad \quad 116.2 \quad +1.28
 \end{array}$$

Below

Mean = +136

$$\begin{array}{r}
 55 \ 03 \quad 146.9 \\
 \quad \quad 197.9 \quad 51.0^{\circ} \\
 \quad \quad 326.3 \quad 57.3^{\circ} \\
 \quad \quad 23.6 \quad 108.3^{\circ} \quad +1.46
 \end{array}$$

$$\begin{array}{r}
 8 \ 57 \ 10 \quad 144.4^2 \\
 \quad \quad 204.2 \quad 60.0^{\circ} \quad +1.46 \\
 \quad \quad 13 \ 28 \ 330.5 \quad 48.7^{\circ} \\
 8 \ 53 \ 22 \quad 19.2 \quad 108.7^{\circ} \quad +1.45
 \end{array}$$

$$\begin{array}{r}
 5 \quad +10 \\
 \hline
 13 \ 53 \ 32
 \end{array}$$

$$\begin{array}{r}
 6587.579 \\
 87.327 \\
 \hline
 0.252
 \end{array}$$

April 16, 1904

II

Below

$$\begin{array}{r}
 148.9 \\
 9 \text{ } 02 \text{ } 18 \text{ } 195.9 \\
 326.4 \\
 24.6 \\
 \hline
 47.0 \\
 58.2 \\
 \hline
 105.2 \quad +1.53
 \end{array}$$

$$\begin{array}{r}
 145.4 \\
 04 \text{ } 10 \text{ } 203.0 \\
 330.6 \\
 19.0 \\
 \hline
 57.6 \\
 48.4 \\
 \hline
 106.0 \quad +1.52
 \end{array}$$

above

Mean = +1.42

$$\begin{array}{r}
 60.0 \\
 07 \text{ } 18 \text{ } 107.3 \\
 232.7 \\
 296.4 \\
 \hline
 47.3 \\
 63.7 \\
 \hline
 111.0 \quad +1.39
 \end{array}$$

$$\begin{array}{r}
 57.4 \\
 9 \text{ } 09 \text{ } 32 \text{ } 114.1 \\
 23 \text{ } 18 \text{ } 236.1 \\
 9 \text{ } 05 \text{ } 50 \text{ } 290.4 \text{ } \Delta \\
 \hline
 61.7 \\
 54.7 \\
 \hline
 116.4 \quad +1.33
 \end{array}$$

5 + Δ

14 05 58 P.M.T.

27.527

27.526

0.001

April 16, 1904

III

Above

9 14 30

54.6

9⁹ 1.2

230.9

295.7

40.6

64.8

105.4 + 1.53

16 41

53.2

115.2

234.3

289.9

62.0 + 1.42

52.6

114.6 + 1.31

Below

Mean = + 1.45

20 43

150.0

197.50

324.3

28.7

47.0

61.4

108.4 + 1.45

143.3

+ 1.48

9 24 33

202.2

66 27

330.2

9 16 37

17.4

5 + 6

14 16 43

58.9

47.2

106.1 + 1.51

.595

.586

.009

April 16, 1904

IV

Below

9 27 21 150.5
 194.3
 324.6
 24.6

46.8
 600
 106.8 + 1.49

30 00 143.7
 205.0
 331.2
 17.1

61.3 + 1.48
 45.9
 107.2 + 1.48

Above

33 29 56.3
 109.0
 230.9
 296.6

Mean = + 1.36
 527
 657
 1184 + 1.23

9 35 40 58.7
 115.7
 6 30 236.8

9 31 38 290.1

5 + 4

+ 1.23
 65.0
 53.3
 118.3 + 1.23

14 31 42

.606

.586

.020

Apr. 16, 1904

V

above

56.2
 9 50 38 110.6
 231.6
 297.6

54.4
66.0
 120.4 + 1.18

54.4
 53 00 114.2
 237.1
 290.2

1.26
 59.8
53.1
 112.9 + 1.35

Below

Mean = + 1.33

329.6
 56 10 18.1
~~143.0~~
 203.0

48.5
60.0
 108.5 + 1.45

328.0
 9 59 15 140.5
 143.8
 9 54 46 204.0
 5 00

52.5 + 1.40
60.2
 112.7 + 1.36

14 54 46

.622

.586

.036

Apr. 16, 1904

VI

Below

	323.6		63.5	
10 04 20	27.1		<u>50.0</u>	
	147.2		113.5	+ 1.34
	197.2			

	324.8			+ 1.32
06 15	20.6		52.8	
	141.2		<u>62.7</u>	
	203.9		115.5	+ 1.29

Above

Mean = +1.24

	230.6			
09 11	296.0		65.4	
	55.7		<u>56.1</u>	
	111.8		121.5	+ 1.16

	236.2			+ 1.17
10 10 55	292.2		56.0	
30 41	50.6		<u>64.6</u>	
10 07 40	115.2		120.6	+ 1.18
5 - 2				

15 07 34	
631	
586	
<u> </u>	
+045	

April 16, 1904

VII

above

10 23 33
 230.7
 297.7
 58.55
 110.7

67.0
 55.2
 122.2 + 1.14

+ 1.10

25 27
 235.7
 294.1
 49.1
 116.3

58.4
 67.2
 125.6 + 1.07

Below

Mean = + 1.22

29 18
 143.2
 204.4
 329.8
 20.4

61.2
 50.6
 111.8 + 1.38

147.0

10 32 30 200.6
 30 148 323.8

53.6
 62.4
 116.0 + 1.33

10 27 42 26.2
 5 - 6

+ 1.28

15 27 36

.644

.586

+ 0.058

Apr. 16, 1904

VIII

Below

10 34 32 143.3
20 5.3
3 27.2
2 2.1

62.0
54.9
116.9 + 1.26

36 12 146.8
198.8
3 22.5
~~2 17~~

52.0 + 1.28
62.2
115.2 + 1.30

Above

Mean = + 1.18

46.3
39 20 116.4
236.5
292.6

70.1
56.1
126.2 + 1.06

55.6
10 41 16 109.6
31 20 224.6
10 37 50 ~~300.0~~
5 - 7 299.8

54.0 + 1.08
70.2
124.2 + 1.10

15 37 42
651
1586
0.065

April 16, 1904

IX

Above

51.3

10 46 52 114.6

233.8

293.6

63.3

59.8

123.1 + 1.13

51.9

49 18 112.5

228.8

297.8

60.6

+1.06

69.0

129.6 + 0.99

Below

Mean = +1.21

325.4

52 40 26.6

147.1

198.9

61.2

57.8

119.0 + 1.35

329.2

10 55 60 21.1

144.3.0

10 50 58 203.0

5 - 9

15 50 49

.660

.586

0.074

51.9

136

60.0

111.9 + 1.37

Apr 16, 1908

X

Below

10 58 40
 324.5
 25.7
 145.4
 199.7

61.2
 54.3
 115.5 + 1.29

11 00 25
 328.4
 22.4
 144.0
 203.9

540
 599
 1139 + 1.33

Mean = +1.22

Above

03 08
 230.6
 297.9
 54.0
 1079

673
 539
 1212 + 1.17

11 04 45
 236.3
 294.3
 6 58 + 48.8

58.0
 67.6
 125.6 + 1.12

11 01 46
 110.4
 5 - 11

125.6 + 1.07

16 01 35
 .662
 .506
 0.002

Pa - 333.7 Vn. B.

Ha - +5.34 West

Dec = +1.74 North

N.T.P. 1.01

Sph. - 4.4a, 3.5 B9 - 2.0

B 236

B 39K

11 14 30

11 14 00

L.P.D.

Thursday Apr. 21, 1904

B 236
 7 03 25.0
 04 25.1

B 394
 7 03 00
 04 00

> 05 Ci watch = 24² fast of B 394
 Brooks Comet a 1904 weeks.

16 45 + 47.4
 10 20
 6 25
 5 35

Comet

8 1A
 - 5:47^{ex} AA. Circle reading
 + 47.1 Dec. circle reading
 10:2 A:30 S.T.
 16:41.5 RA.

Above not the comet but a nebula

2 42 47.7 a
 43 34.0 b
 43 46.7 c
 43 51.0 d

46 33.0 d
 46 34.5 (20)

April 21, 1904

Comet continued.

\star 47 11.5 d
 48 47.0 \llcorner 35.5

49 04.5 d
 49 40.0 \llcorner 35.5

\star 49 Comet, folr +47.2302(0.5) by 35.5
 & is 5.0 north of it.
 Cal watch used on this.
 Comp * = DM +47.2379 (2.0)
 above Meas. of light of nucleus
 L comp * dis

9 44	107.3	48.5	
	231.3	64.2	
	<u>295.5</u>	112.7	+ 1.36
	58.1		
	114.4	61.6	+ 1.36
	238.5	50.6	
	<u>289.1</u>	112.2	+ 1.37

Below
 332.0
 15.9
 148.5
 199.8

43.9
 53.3
97.2 + 1.73

Mean = +1.50

over 1.74

April 21, 1904

$$\begin{array}{r}
 9 \ 12.6 \\
 \hline
 9 \ 8.5 \\
 5 \ - .4 \\
 \hline
 14 \ 8.1
 \end{array}$$

$$\begin{array}{r}
 324.0 \\
 19.9 \\
 153.2 \\
 196.84
 \end{array}$$

$$\begin{array}{r}
 52.9 \\
 43.2 \\
 \hline
 96.1 + 175-
 \end{array}$$

Same Over

Below

II

$$9 \ 15.7$$

$$\begin{array}{r}
 33 \ 3.0 \\
 16.6 \\
 146.3 \\
 20 \ 3.0
 \end{array}$$

$$\begin{array}{r}
 43.6 \\
 56.7 \\
 \hline
 100.3 + 165-
 \end{array}$$

$$326.5$$

$$23.3$$

$$150.0$$

$$198.4$$

Above

$$237.2$$

$$290.1$$

$$53.4$$

$$113.0$$

$$232.2$$

$$297.4$$

$$54.8$$

$$106.9$$

$$\begin{array}{r}
 56.8 \\
 46.4 \\
 \hline
 103.2 + 162 \\
 + 1.58
 \end{array}$$

Mean = + 148

$$9 \ 23.4$$

$$\begin{array}{r}
 9 \ 19.6 \\
 5 \ - .4 \\
 \hline
 14 \ 19.2
 \end{array}$$

$$\begin{array}{r}
 51.9 \\
 59.6 \\
 \hline
 111.5 + 1.38
 \end{array}$$

$$65.2 + 1.35$$

$$\begin{array}{r}
 49.1 \\
 \hline
 114.3 + 1.32
 \end{array}$$

April 21, 1904

Pa 28.3 Var B
 Ha. ~~7.1~~ 4:59 East
 Dec. +46.6 North
 S.T. 11:41
 Spwh. $\left\{ \begin{array}{l} 3.5 a \\ -2.5 B \\ -1.9 C \end{array} \right.$

9 31

9 35 03.5
 35 32.8

Comet Feb +47° 2382 (63) by 29.3°
 9 35 is about 5.8 North of it.

Ancient object measured above is
 the comet.

Pallas wellb
 Phot.

16 24 + 21.8
 12 18

 4 6
 7 54

10 14 46.5 Pallas
 15 13.8
 15 52.2

10 15 Pallas pos +21.295 (91) by 29.3° 46.2 N

April 21, 1904
Pallas

Comp * = $DM + 17.2946^{+5}_{-5} (9.0)$
Bond 236 used on this

~~45.0~~

~~44.3~~

10 22 27.0

Left ³ 56.5

31 4.5

Pallas dis
Comp * dis

I

10 48 45

34.0

126.2

321.8

302.6

10 49 53

40.9

132.0

213.4

Right.

210.8

52 21

312.9

41.6

128.2

221.1

10 54 00

306.4

5 01

34.6

10 51 15

134.0

5 - 1 4

6592.660

15 50 11

79.5

95.6

175.1

- 0.09

188.3

- 0.05

81.4

179.7

- 0.01

mean = +0.04

102.1

86.6

188.7

171.3

+ 0.16

85.3

99.4

+ 0.12

184.7

175.3

+ 0.09

April 21, 1904

II

Right

210.8

10 55 46 311.8

43.8

124.6

101.0

81.8

182.8

177.2

+ 0.05

222.1

57 24 304.6

35.0

131.8

83.5

+ 0.04

99.8

182.3 + 0.0x

177.7

Left

125.8

11 00 25 221.8⁰

313.2

32.4

95.2

77.2

172.4

- 0.14

133.8

- 0.14

11 02 20 214.8

235 49 307.8

10 58 57 440.80

5 - 1 - 5

15 57 52

6592.665

81.0

92.2

173.2 - 0.10

Apr. 21, 1904

III

Left

126.0

11 04 20 221.0

313.0

30.49

95.0

78.9

173.9 - 0.11

135.0

06 28 211.0

306.9

40.9

Right

76.0

- 0.15

94.0

170.0 - 0.19

Mean = - 0.02

33.7

09 00 133.5

222.5

308.2

99.8

85.7

185.5

174.5 + 0.10

44.0

11 10 45 127.4

83.4

30 33 213.5

101.3 + 0.10

11 07 3A 314.8

184.7

5 - 1 7

175.3 + 0.09

16 06 31

6592672

Apr 21, 1904

Right

IV

36.6

101228 133.1

223.1

306.0

$$\begin{array}{r} 96.5 \\ 82.9 \\ \hline 179.4 \end{array}$$

- 0.01

44.0

1355

124.4

212.4

314.7

$$\begin{array}{r} 80.7 \\ 102.3 \\ \hline 183.0 \\ \hline 177.0 \end{array}$$

+ 0.02

+ 0.06

Left

Mean = - 0.02

304.8

1647

41.0

134.0

214.4

$$\begin{array}{r} 96.2 \\ 80.4 \\ \hline 176.6 \end{array}$$

- 0.06

312.7

11 1805

30.9

2115

124.6

11 15 19

222.1

5-1-8

$$\begin{array}{r} 78.2 \\ 97.5 \\ \hline 175.7 \end{array}$$

- 0.07

- 0.08

16 1411

6592.676

Apr 21, 1904

Left

V

11 19.55

307.2

42.0

133.0

213.8

948

808

175.6 - 0.08

312.5

21 30 32.3

125.0

221.8⁰

Right

211.2

24 28 310.6

40.4

125.7

79.8

- 0.08

96.0

175.8 - 0.08

Mean = -0.02

102.4

22.3

184.7

175.3 + 0.09

221.9

11 26 13 306.2

12 06 37.0

11 23 02 ~~132.8~~

5 - 1 9 133.0

16 21 53

6592.682^{*}

843.0

+ 0.05

95.8

180.3 + 0.01

179.77

RA = 293.9 Ver B

HA = 2.44 East

Dec = +20.8 North

ST = 13.46

Spwh = $\begin{cases} -3.5 & B \\ -2.5 & C \end{cases}$

Apr 21, 1904

B. 236
11 41 12.0

B 394
11 40 00

L. P. P.

Apr 22, 1904 (Friday)

B 236
 7 04 55.2
 05 55.4

B 394
 7 05 00
 06 00

7 06 Cs watch = 9^h fast at 7 07

Comet a 1904

Wells

Phot.

Mean of nucleus only.

1649 + 47.7

10 22
 6 27
 5 33

8 14 00

15 02

8 17 17.5 comet
 19 46.8 (7.5)

8 19 Comet precedes DM +47° 23' 01 (7.5) by
 2^m 29.3 and is 7.7 North of it.

8 24 51.5

25 07.5

25 30.0

~~Comet~~ Comp * = DM +47° 23' 6" (9.4)

Apr. 22, 1904

Cs' watch used on Canet.

above

$\begin{array}{r} 227.6 \\ 30 \\ \hline 293.2 \\ 55.6 \\ \hline 112.1 \end{array}$
 $\begin{array}{r} 75.6 \\ 56.5 \\ \hline 132.1 \end{array}$
 $+ 0.94$

$\begin{array}{r} 233.5 \\ 293.2 \\ 40.0 \\ \hline 117.6 \end{array}$
 $\begin{array}{r} 60.3 \\ 77.6 \\ \hline 137.9 \end{array}$
 $+ 0.82$

Below

Mean = $+0.92$

$\begin{array}{r} 138.8 \\ 210.4 \\ 326.2 \\ \hline 22.9 \end{array}$
 $\begin{array}{r} 71.6 \\ 56.1 \\ \hline 127.7 \end{array}$
 $+ 1.03$

$\begin{array}{r} 145.6 \\ 200.5 \\ 322.1 \\ \hline 29.0 \end{array}$
 $\begin{array}{r} 54.9 \\ 66.9 \\ \hline 121.8 \end{array}$
 $+ 1.09$
 $+ 1.15$

$\begin{array}{r} 27.2 \\ 43.6 \\ \hline 5 - 2 \\ 13 \quad 43.4 \end{array}$

Obs. somewhat a little difficult, on acct of moonlight and small amount of fog and smoke in the air.
 P.A. = 261.5 Ver B.
 Ha. = -5.29 ant.
 Dec. = +47.3 North
 S.T. = 11.02
 S.p.h. = -4.5 B. attempt was made to meas. nucleus proper, the surrounding coma and atmosphere conditions

Apr 22, 1904
 however render the obs. a little
 difficult. Extreme care however
 exercised and obs. considered
 pretty good

Pallas.

WOB
 Phot. 1

$$\begin{array}{r} 16 \quad 24 \quad +21.4 \\ 11 \quad 20 \\ \hline \end{array}$$

$$5 \quad 04$$

$$\underline{6 \quad 56}$$

B. 236 used now
 on Pallas

$$9 \quad 11 \quad 24.2 \quad DM+$$

$$12 \quad 40.0 \quad \text{comp} *$$

$$13 \quad 40.4 \quad \text{Pallas}$$

9 13 Pallas fol. the comp. * by 1^m 0.8
 and is 5.6 North of it

Comp * = same as last
 night.

see following pages
 for measures of
 Pallas.

Apr. 22, 1904

Above

140.3

9 24 35 126.7

213.5

314.0

32.2

27 00 133.1

221.5

304.6

Below

313.2

29 30 33.2

126.6

227.8

307.8

9 31 05 42.7

32 10 132.8

9 28 02 213.4

5 -20

14 27 42

6593.603

comp*

< ~~Pallas~~ dia86.4^v100.5^v186.9^v173.1^v

- 0.13

99.9^v

- 0.10

83.1^v183.0^v173.0^v

- 0.06

Mean = -0.04

80.0^v101.2^v181.2^v178.8^v

- 0.02

+ 0.03

94.9^v80.6^v175.5^v

+ 0.08

Apr. 22, 1904

II

Below

9 33 00
 313.4
 37.6
 126.3
 219.3

842.[✓]
930
 177.2 +0.05-

35 15
 306.7
 44.0
 132.7
 211.9

97.3[✓] +0.06
79.2[✓]
 176.5[✓] +0.06

Above

Mean = +0.01

38 08
 221.7
 306.2
 35.3
 131.5

845.[✓]
96.2[✓]
 180.7[✓]
179.3[✓] -0.01

9 39 50
 26 13
 9 36 33
5
 14 06 11
 6593.608

213.4
 312.0
 40.0
 125.7
 98.6[✓] -0.04[✓]
857[✓]
 184.3[✓]
175.7[✓] -0.08

Apr 22, 1904

III

Above

9 50 15 221.2
30 6.5
35.2
13 2.0

85.3

96.8

182.1

177.9

— 0.04

213.2

52 30 313.3

40.0

124.7

100.1

86.7

186.8

173.2

— 0.08

— 0.13

Below

126.6
56 30 220.0
30 6.6
341.4

Mean = ~~12~~ 0.02

93.4

85.8

179.2

+ 0.02

132.8

9 58 42 214.6

17 57 309.2

9 54 29 43.0

5 - 25

81.8 + 0.04

95.8

177.6

+ 0.05

14 54 04

6593.621

Apr. 22, 1904.

Below

IV

124.1
10 01 06 219.4
314.6
34.2

94.3
79.6
173.9 + 0.11

134.3
03 34 212.1
307.3
42.3

+ 0.12
778.
95.0
1728 + 0.14

Above

Mean = + 0.03

32.0
07 12 131.6
221.5
305.9

99.6
84.4
184.0
176.0 - 0.08

10 30 42.0 222.8
10 ~~09 12~~ 123.8 305.1
22 22 221.9 33.6
10 05 36 3. 132.7
5 - 27

82.3 - 0.06
99.1
181.4 - 0.03
178.6

15 05 09
6593.628

Apr. 22, 1904

Above

V

10 2428 215.0
 311.3
~~39.0~~
 124.2

96.3
 85.2
 181.5
178.5 * - 0.03

222.8
 2718 304.7
 33.0
 132.5

81.9
 99.5
 181.4
178.6 - 0.03

Below

Mean = 11.000

126.8
 2950 218.8
 311.8
 34.8

92.0
 83.0
175.0 + 0.09

+ 0.04

132.5
 10 3140 213.6
33 16 305.5
 10 28 19 114.2
5 - 31

81.1
 98.7
179.8 + 0.00

15 2748
 6593.644

Apr 22, 1904

Below

VI

10 33 48
125.9
221.4
313.3
34.8

955.
81.5
177.0 ~~177.0~~ + 0.06
~~177.0~~

132.6
35 23 213.6
304.9
46.4

81.0 + 0.06
965.
177.5 + 0.05

Above

Mean = - 0.02

40.0
38 12 126.2
213.4
315.4

86.2
101.7
187.9
172.1 - 0.15

33.3
10 39 53 131.2
26 16 221.8

10 36 34 306.2
5 - 32

15 36 02^x
6593, 650^x

979 - 0.10
84.4
182.3
177.7 - 0.04

Apr 22, 1904

VII.

above

104915 43.1
 124.1
 213.9
 313.9

81.0
 100.0
 181.0
 179.0

— 0.02

3748 34.8
 132.6

97.8

— 0.02

223.0
 305.2

83.2
 181.0

— 0.02

Below

179.0 mean = + 0.02

3124
 3510 34.4
 127.0
 221.0

83.0
 94.0
 177.0 + 0.06

306.6
 10 57 19 43.2
 13 32 133.5
 10 53 23 218.8

96.6 + 0.06
 79.3
 175.9 + 0.06

5 - 35
 15 52 48
 6593.662

April 22, 1904

VIII

Below

11 00 00 314.7
 34.6
 126.2
 248.4

80.9'
 92.6'
 173.5 + 0.13

02 00 306.3
 40.5
 132.7
 212.5

+ 0.12
 94.2'
 179.8' + 0.11
 174.0

Above

Mean = + 0.04

05 42 222.4
 307.1
 384.9
 132.9

84.7'
 98.0'
 182.7'
 177.3' - 0.05

11 07 20 214.0
 313.0
 15 02 41.4
 11 03 46 123.9
 5 - 36

99.0'
 82.1' - 0.04
 181.1'
 178.9' - 0.02

16 03 10 800.0

6593.669

PA > 1.5 Vm B

SIT. 1:27

HA. - 3:03 East

Dec. + 21.0 North

SIT. W. - 1.5 B. 0.5 C

Apr. 22, 190X

B 236
11 18 39.0
19 39.2

B 394
11 18 00
19 00

LPP

Apr. 23, 1904 (Saturday)

B236

7 03 35.4
04 35.5

B394

7 04 00
05 00

7 06

Ca watch = 10^2 slow of B394
Double Star (Special List)

10 25 - 30.1

9 45

0 40

11 20

7 33

Tried for double when about
on Meridian. Two stars
found in this region, but only
a part of the time seen in
finder. Both of these stars
examined with our inch eye-
piece but with the present
atmospheric conditions ^{there was} no
~~sign~~ suspicion of either star
being double. It is however
quite cloudy in this region
and ~~brakes~~ that and the
moonlight it is impossible
to do anything with these low
southern doubles tonight even

Apr 23, 1904

when on the meridian

Comet a 1904Meas. of Nucleus only with
Photo T.

$$\begin{array}{r}
 16 \quad 35 \quad + 49.2 \\
 10 \quad 00 \\
 \hline
 6 \quad 35 \\
 5 \quad 25 \\
 \hline
 \hline
 \end{array}$$

7 48 0.0
17.5
17.5

7 55 58.5
57 57.0

35.5

41.0

~~5 56~~

7 56 26.5 (94)
57 15.8 Comet
59 15.5 (P.1)

7 59 Comet free + 48° 24' 29" (P.1) by me
1 m 59.7 & is 11.0 S. of it

8 01 23.5
02 24.4

8 06 03.0
07 06.4

Apr. 23, 1904.

A 08 34.4
10 03.0

8 12 30.0 d 2423
13 15.5 b

8 15 A star of about magn. ^(9.1)~~(9.0)~~ precedes +48. 2423 (9.3) by 45.3 and is 8.3 North of it.

This star is not in the DM.

~~8 18 13.0~~

18 58.0
50.0

Comp * = DM + 48. 2425 (4.4)

8 20 Sky too cloudy at present to do anything with comet

8 30 Sky too hazy at present to measure comet; ~~comet~~ dir in large telescope

Apr, 23, 1904

C watch used on comet

I

Above

2 48.4

244.6

287.8

56.9

110.1

L Comp * obs

43.2

53.2

96.4

+ 1.75

234.3

289.2

859.4

104.6

54.9

+ 1.70

45.2

100.1

+ 1.65

Below

156.4

192.5

327.8

18.7

35.1

50.9

86.0

+ 2.02

146.6

195.8

336.6

11.8

49.2

34.6

83.8

+ 2.05

+ 2.08

2 54.8

103.2

8 51.6

5 +.2

13 57.8

6594.

PA = 170.3 Var 13

AA = -5.17 East

Dec = +42.8 North

S.T. = 11:19

Sp wh = 9 - 1.5 B

- 0.5 C

faint obs. there

some light obs.

and comet some

what faint in obs.

coming to moonlight

slight obs. much

in obs. much

in obs. much

Apr. 23, 1904

Pallas

Wobbs.

16	24	+218	Photo.
11	24		
<hr/>			
5	00		
<hr/>			
2	00		
<hr/>			

9-06	34.0
0A	49.5

103	53.0
14	22.0

9 14 Pallas folz. comp. * by 29th
 One 17.4 North of it
 Comp. * = same as last night

Apr. 23, 1904

above Pallas. Phot. I. H. obs.
I

9 21 30 37.2 (comp & obs
127.5 clds 90.3
210.6 103.7
314.3 194.0 - 0.27
166.0

23 32.8
~~23~~ 38 133.6 100.8 - 0.22
218.7 88.0
306.7 188.8
171.2 - 0.17

Mean = - 0.04

Below
315.6
26 42 34.2
126.5
220.5

78.6
94.0
172.6 + 0.14

306.5
9 28 48 40.0
20 38 135.9
9 25 10 218.2
5 + 1

93.5 + 0.15
78.3
171.8 + 0.16

14 25 11

Apr. 23, 1904

Below

H

9 31 20 311.4
 32.2
 128.6
 217.0

81.4
 88.4
 169.8 + 0.19

clouds

33 16 310.0
 37.4
 132.4
 212.4

87.4 + 0.22
 80.0
 167.4 + 0.24
 mean = + 0.06

above
 42 20 221.6
~~36 23~~ 306.4
 33.6
 130.7

Stars dim
 sky clearer

85.1
 97.1
 182.2
 177.8 - 0.04

212.0

9 46 50 315.2
 153 46 40.5
 9 38 26 124.6
 5 - 1
 14 38 25

103.2
 84.1 - 0.09
 187.3
 172.7 - 0.14

Apr. 23, 1904

Above

111

2x A A
 9 54 30 306.4
 34.4
 133.0

87.9
 $\times 98.6$
 186.5
173.5 - 0.12

211.5
 5646 318.6
 40.0
 123.9

102.1 - 0.12
 83.9
 $\times 98.6$
 186.0
174.0 - 0.11

Below

Mean = +0.01

134.5
 10 00 23 213.6
 306.2
 41.3

79.1
 $\times 98.6$
174.2 + 0.11

125.2
 10 02 18 218.2
233.57 314.8
 9 58 29 ~~314.8~~
5 - 4 32.4
 14 58 25

93.0 + 0.14
 $\times 98.6$
170.6 + 0.18

Apr. 23, 1904

~~Below~~IV~~Above~~

135.2

10 06 07 211.4
304.5
39.8

76.2
95.3
171.5

+0.16

124.5

slightly more lazy

+0.14

08 50

219.2

314.3

33.0

94.7

78.7

173.4 +0.13

~~Above~~~~Below~~

39.8

12 15

125.9

209.0

314.8

86.1 ✓

105.8 ✓

191.9 ✓ -0.22

168.1

33.6

-0.10

10 14 07

123.8

221.0

307.8

308.4

92.2 ✓

87.4

179.6 +0.01

41 19

10 10 20

5 - 6

15 10 14

Apr. 23, 1904

Above

41.4

10 2155 1244

210.9

316.8

31.7

2348 133.0

221.7

307.0

Below—

314.6

2720 32.9

125.9

220.2

306.8

10 2938 40.1

2241 134.7

10 2540 211.0

5 -9

15 2531

V

23.0

105.9

188.9

171.1

— 0.17

101.3

85.3

186.6

173.4

— 0.15

— 0.13

Mean = +0.01

78.3

94.3

172.6

+ 0.14

+ 0.17

93.3

76.3

169.6

+ 0.20

Apr. 23, 1904

Below

VI

10 32 30

314.7

32.2

125.8

218.6

77.5

92.8

170.3

+ 0.18

305.3

+ 0.18

34 2.3

40.4

135.3

201.3

95.1

76.0

171.1

+ 0.17

Above

Mean = + 0.02

220.0

37 30

305.3

29.2

133.6

85.3

104.4

189.7

170.3

- 0.18

211.8

10 39 25

313.3

23 48

40.2

101.5

~~84.5~~

- 0.14

10 35 57

~~125.2~~

5 - 11

124.7

186.0

174.0

- 0.11

15 35 46

Apr. 23, 1904

VII

above

218.7

10 50 10 306.2

31.6

132.1

881

100.5

188.6

171.4

- 0.16

212.6

52 02 316.2

40.9

124.2

103.6

83.3

186.9

173.1

- 0.14

- 0.12

Below

134.3

56 15 208.4

305.2

42.4

74.1

97.2

171.3

+ 0.16

125.2

10 58 05 218.0

16 27 315.2

10 54 08 322.6

5 - 14

15 53 53

92.8

77.4

170.2

+ 0.18

+ 0.19

mean = + 0.02

Apr. 23, 190K

Below

VIII

11 00 2A

210.A

305.A

42.4

76.6

96.6

173.2 + 0.13

02 24

126.A

229.0

314.3

30.9

92.2

76.6

168.8 + 0.21

+ 0.17

Above

Mean 0.00

05 30

125.0

208.2

316.7

83.4

107.5

190.9

169.1

- 0.20

32.4

11 04 15

132.4

220.6

15 37 306.8

100.0

86.2

186.2

173.8

- 0.16

- 0.12

5 - 15

Pa. = 23.5 VERT 3

16 03 39

HA = -2.59 East

Dec. = +21.1

ST = 13.31

Spk = -3.5 a

-2.5 B

-1.9 C

Apr. 23, 1904

B 236
 11 22 20.0
 23 20.2

B 394
 11 22 00
 23 00

Troubled somewhat in first two groups on *Pallae* by light cloud of slightly varying density, cloud being sometimes dense to make stars dim, and clouds in 2nd group caused observer to stop for a few minutes. In remaining groups sky pretty clear and growing progressively quite so. Much care exercised in first two groups as well as in others and all observations considered good.

L. P. P.

174

Apr 25, 1904 (Monday)

7 45

clearer now

Double Spec. List.

9 26 - 31.4

Webb

10 26

Phot R

1 00PA. 210° Dist #9" Magn. 640634

8 30

Draw of Phot. came out.
Abandoned.

04 40 68

- candle

Webb

Phot 1

4 40 + 68.4

11 10

6 30

9.5" cap used.

C. watch used tonight and
is 0.14 slow.

see next page for Meas.

Apr. 23, 1904

- Camelopard I

Left

A 47.0

223.6

302.4

53.2

181.6

232.0

293.2

42.7

121.0

< comp * dis.

78.8 ✓

58.8 ✓

137.6 ✓

+ 0.82 ✓

61.8 ✓

+ 0.80 ✓

78.3 ✓

140.1 ✓

+ 0.77 ✓

Right

136.4

210.0

325.2

23.0

Mean = + 0.88 ✓

73.6 ✓

57.8 ✓

131.4 ✓

+ 0.95 ✓

145.3

202.0

316.6

31.0

A 54.0

101.0

250.5

1350.5

+ 0.4

1350.9 ✓

56.7 ✓

44.4 ✓

131.1 ✓

+ 0.96 ✓

+ 0.96 ✓

Apr. 25, 1904

Right

II

8 55.6

135.6

212.6

325.4

21.7

760 ✓

559 ✓

1319 ✓ + 0.94 ✓

145.6

201.3

315.4

~~24~~ 30.3

559 ✓ + 0.95 ✓

74.9 ✓

130.8 ✓ + 0.96 ✓

Left

Mean = + 0.86 ✓

140.6

121.6

231.6

292.7

810 ✓

61.1 ✓

142.1 ✓ + 0.73 ✓

53.0

9 02.4

112.4

8 59.6 ✓

222.4

13 59.4 ✓

301.42

59.7 ✓ + 0.76 ✓

78.8 ✓

138.5 ✓ + 0.80 ✓

O.A.

80.0 Ver B

Gen. Mean = + 0.27 ✓

A.A.

+ 6.55 West

Dec.

+ 6.84 North

N.T.

11.35

Sp. wh

- 15 B

- 0.5 ✓

April 25, 1904

Var looks a little brighter, relative to comparison and intermediate star, than in the last previous measurement.

u Herculis, WCB

$$\begin{array}{r}
 17 \ 12 \ + \ 33 \ 15 \\
 \hline
 12 \ 00 \\
 \hline
 5 \ 12 \\
 \hline
 6 \ 48
 \end{array}$$

Plot 7
9.5 cap

Left

64.3

9 33.8

10 3.7

24.2

27.4

68.0

98.0

240.3

282.6

Right

336.2

12.1

159.2

184.4

340.0

9 43.6

365.8

9 39.7

155.1

14 40.1

189.2

Kardis

39.4 ✓

31.2 ✓

70.6 ✓

- 2.49 ✓

30.0 ✓

42.3 ✓

72.3 ✓

- 2.46 ✓

- 2.43 ✓

Mean = -2.65 ✓

35.9 ✓

25.2 ✓

61.1 ✓

- 2.82 ✓

25.8 ✓

34.1 ✓

59.9 ✓

- 2.8K ✓

- 2.86 ✓

April 25, 1904

II

Right

9 44.8
 335.4
 11.7
 160.0
 184.8

36.3[✓]
 24.8[✓]
 61.1[✓] - 2.82[✓]

341.3
 366.2
 154.5
 190.7

24.9[✓] - 2.82[✓]
 36.2[✓]
 61.1[✓] - 2.82[✓]

Left

241.8
 283.0
 66.7
 98.0

Mean = -2.64[✓]

9 50.6
 246.8
 278.3
 64.2
 9 47.7[✓]
 102.6
 5 +.4[✓]
 14 48.1[✓]

41.2[✓]
 31.3[✓]
 72.5[✓] - 2.43[✓]

-2.47[✓]

31.5[✓]
 38.4[✓]
 69.9[✓] - 2.51[✓]

Gen. mean = -2.64[✓]

pa. 131.12 Ver B
 S.T. = 12.23
 Wa 4:48 East
 Dec. +32.4 North

Splwld -45 B
 -3.5 C

Apr 25, 1904

RX Cygni

Web
Plot T

$$\begin{array}{r}
 20 \quad 9 \quad + 46.3 \\
 12 \quad 49 \\
 \hline
 7 \quad 20 \\
 4 \quad 40 \\
 \hline
 \end{array}$$

9.5 cap
/

R.O.C.

$$\begin{array}{r}
 10356 \quad 143.6 \quad \leftarrow \text{comp + dis} \\
 202.0 \\
 329.8 \\
 16.1 \\
 \hline
 149.4 \\
 195.8 \\
 326.0 \\
 22.7 \\
 2813 \\
 47.6 \\
 117.1 \\
 235.9 \\
 290.0
 \end{array}$$

$$\begin{array}{r}
 58.4 \checkmark \\
 46.3 \checkmark \\
 \hline
 104.7 \checkmark + 1.54 \checkmark
 \end{array}$$

$$\begin{array}{r}
 46.4 \checkmark + 1.56 \checkmark \\
 56.7 \checkmark \\
 \hline
 103.1 \checkmark + 1.58 \checkmark
 \end{array}$$

Mean = +1.32

$$\begin{array}{r}
 69.5 \checkmark \\
 54.1 \checkmark \\
 \hline
 123.6 \checkmark + 1.11 \checkmark
 \end{array}$$

$$\begin{array}{r}
 55.3 \checkmark + 1.09 \checkmark \\
 70.6 \checkmark \\
 \hline
 125.9 \checkmark + 1.07 \checkmark
 \end{array}$$

$$\begin{array}{r}
 70.6 \checkmark \\
 \hline
 125.9 \checkmark + 1.07 \checkmark
 \end{array}$$

$$\begin{array}{r}
 10 \quad 43.2 \quad 111.0 \\
 72.2 \quad 227.8 \\
 10 \quad 39.4 \quad 294.4 \\
 \checkmark \quad 0.0 \\
 \hline
 15 \quad 39.2 \checkmark
 \end{array}$$

Apr. 25, 1904

11

LOB

10 45.2 46.8
116.4
2 35.2
288.4

696 ✓
53.2 ✓
122.8 ✓ + 1.13 ✓

55.9
10 8.9
226.6
297.0

+1.12 ✓
53.0 ✓
70.4 ✓ + 1.12 ✓
123.4 ✓ Mean = +1.30 ✓

ROL

321.8
23.7
149.8
195.3

61.9 ✓
45.5 ✓
107.4 ✓ + 1.48 ✓

329.7

10 52.4 15.0
97.6 ✓ + 42.3
10 42.2 ~~204.2~~
✓ 0.4 ✓ 203.6
15 49.2 ✓

45.3 ✓ + 1.49 ✓
61.3 ✓
106.6 ✓ + 1.50 ✓
Gen. Mean = +1.31 ✓

PA = 0.1 VarP
S.T. = 1.26
Dec. = +47.2 North
HA = -6:41 East

SpW h/ - 45B
- 3.8 E
L.P.P.

Apr. 30, 1904 (Saturday)

> 44 Cs watch - correct
Double (Spec List)

Wob.
Photo R

$$\begin{array}{r} 9 \quad 26 - 31.4 \\ 10 \quad 36 \\ \hline 1 \quad 10 \end{array}$$

P.A. 210° Dist 9" Magn. $6\frac{1}{4} \times 6\frac{3}{4}$

Below
~~Right~~

Cs watch used tonight.

> 56.0 351.0 < br. dis

58.6

67.6

172.0

67.8

239.8

135.4

+ 0.87

350.6

65.8

+ 0.88

56.4

68.5

179.5

134.3

+ 0.89

234.0

Mean = + 0.70

Above

251.8

334.2

72.4

77.9

74.1

152.0

156.5

+ 0.45

256.1

8 02.6

331.5

75.4

+ 0.52

7 59.3

78.5

73.5

12 59.3

152.0

148.9

+ 0.60

April 30, 1904.

Double

Webb
Phot R.

$$\begin{array}{r} 51 - 7.6 \\ 11 \quad 01 \\ \hline 2 \quad 10 \\ \hline \hline \end{array}$$

Abandoned for the present.

Double

Web
Photo

$$\begin{array}{r} 10 \ 25 - 30.1 \\ 11 \ 05 \\ \hline 0 \ 40 \end{array}$$

Pa 230⁰ Dist 9"

Magnus 6 - 9 1/2

Below. B

for dis

21.6

191.2
214.5
16.9
31.6

Observation rather diff.
on account of low altitude
features of comparison
best understood by a
expert cloud.

$$\begin{array}{r} 263 \\ 147 \\ \hline 410 \end{array}$$

+ 3.71

197.0
208.5
9.4
36.0

$$\begin{array}{r} 11.5 \\ 26.6 \\ \hline 38.1 \end{array} + 3.80 = 38.9$$

Abou

A.

$21 + 388 = 395$
 $\text{mean} = + \frac{395}{10}$

99.6
126.6
288.6
299.1

$$\begin{array}{r} 27.0 \text{ V} \\ 10.5 \text{ V} \\ \hline 37.5 \text{ V} \end{array} + 391$$

+ 4.10

$$\begin{array}{r} 829.4 \\ \hline 825.5 \\ 100 \\ \hline 200 \end{array}$$

108.4
117.8
282.5
304.8

$$\begin{array}{r} 9.4 \\ 22.3 \\ \hline 31.7 \end{array} \quad + 4.2 A$$

April 30, 1904.

Double

with
Phot R

$$\begin{array}{r} 8 \ 51 \quad - \ 7.6 \\ 11 \ 36 \\ \hline 2 \ 45 \end{array}$$

Pa. 5-0 Dist 87" Magns 6.5-6.8

Above

Southern obs. dis

Probably
P 59.2

188.6

245.9

339.2

68.0

163.2

246.8

345.8

68.3

Below

45.0

154.4

256.7

338.8

75.8

188.0

256.3

336.7

75.8

188.0

256.3

336.7

75.8

188.0

256.3

336.7

75.8

188.0

256.3

336.7

75.8

188.0

256.3

336.7

75.8

188.0

256.3

336.7

75.8

188.0

256.3

336.7

75.8

188.0

256.3

336.7

75.8

188.0

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336.7

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256.3

336.7

75.8

188.0

256.3

336.7

75.8

188.0

256.3

336.7

75.8

188.0

April 30, 1904

Double

Wells

Photo. R

$$\begin{array}{r} 11 \ 27 - 28.7 \\ 12 \ 12 \\ \hline 0 \ 45 \end{array}$$

P.A. 25° Dist 10" Magns. 6.0-6.1
 Southern & prec. comp. assumed as
 slightly the brighter
 Below B.

9	28.5	250.6	< Southern dis	28.6	✓	
		339.2		96.8	✓	
		68.4		145.4	-	0.10
		165.2		174.6	-	
		249.2		92.5	-	0.05 ⁶
		341.7		88.6	-	
		70. A		146.6	-	0.02
		159.4		174.3	-	
		Above A.		Mean =	-	0.06
		161.4				
		251.1		89.7	✓	
		338.4		96.0	✓	
		75.4		145.7	✓	
		161.9		174.3	-	0.11
9	35.0	253.2		91.3		
	63.5	342.3		89.0	-	0.06
9	31.8	71.3		180.3		
14	31.8			179.7	-	0.01
6601.						

When components are looked at in photo
 at full brightness the Northern image
 seems to be slightly the brighter as
 is born out by the photo. tonight, but

April 30, 1904
 when first seen with low power
 eyepiece, the southern image
 seemed to be slightly the brighter,
 and this southern image was
 made to disappear.

Double

Webb

Phot R

$$\begin{array}{r} 13 \text{ } \delta - 14.3 \\ 12 \text{ } 3 \delta \\ \hline 0 \text{ } 30 \\ 11 \text{ } 30 \end{array}$$

This is 54 Virginis = Burnham No. 6422.

PA = 30° Dist = $7''$ Magn = $6.8 - 7.2$
 above A.

9 53.0	347.8	← Southern dis.	76.1	
	63.9		79.3	
	166.7		<u>79.3</u>	
	246.0		155.4	+ 0.47

347.0		
67.0	80.0	+ 0.42
167.3	80.0	
247.3	<u>80.0</u>	160.0 + 0.38

Below B. Mean = + 0.36

255.6		
334.4	79.8	
173.4	85.8	
<u>159.2</u>	<u>85.8</u>	165.6 + 0.27

10 01.4	254.3		
	347.3	83.0	+ 0.29
	75.6	80.5	
9 57.2	<u>75.6</u>	<u>80.5</u>	
14 57.2	156.1	163.5	+ 0.31

April 30, 1904

Double

Wells

Photo R.

1 3 46

- 32.5

1 3 06

0 40

11 20

PA. = 110°

Dist = 10"

Magna = 5.0 - 6.6

Left

~~Below~~

179.8

< brighter dia.

10 23.0

235.0

53.2

357.0

52.9

449.9

108.1

+ 1.46

178.4

236.9

58.2

+ 1.37

355.8

57.9

+ 1.28

53.7

116.1~~Below~~ Right

Mean = +1.36

43.8

143.3

54.5

267.4

54.5

320.9

112.0 + 1.37

89.5

10 30.2

143.7

54.2

+ 1.36

10 26.6

~~267.4~~ 268.159.4

15 26.6

327.5

113.6 + 1.34

April 30, 1904

Double

W. Ob.

$$\begin{array}{r}
 14 \ 52 - 20.9 \text{ Phot. R.} \\
 13 \ 32 \\
 \hline
 1 \ 20 \\
 10 \ 40 \\
 \hline
 \hline
 \end{array}$$

Pa 300° Dist 15" Magns 6.2-7.3
Right

$$\begin{array}{r}
 10 \ 50.0 \\
 14 \ 4.9 \\
 18 \ 7.2 \\
 \hline
 22 \ 4.4 \\
 9.6 \\
 45.2 \\
 146.9 \\
 \hline
 224.3
 \end{array}$$

$$\begin{array}{r}
 224.3 \\
 244.1 \\
 317.2 \\
 96.4 \\
 134.7 \\
 \hline
 247.2
 \end{array}$$

Left

$$\begin{array}{r}
 10 \ 57.4 \\
 \hline
 15 \ 53.7
 \end{array}$$

$$\begin{array}{r}
 313.4 \\
 95.0 \\
 136.9
 \end{array}$$

< brighter dis

$$\begin{array}{r}
 41.9 \\
 37.2 \\
 \hline
 79.1 + 2.22 \\
 44.6 + 2.18 \\
 37.4 + 2.14 \\
 + 2.0
 \end{array}$$

Mean = +2.22

$$\begin{array}{r}
 391 \\
 383 \\
 \hline
 774 + 2.27
 \end{array}$$

$$\begin{array}{r}
 36.2 + 2.26 \\
 41.9 \\
 \hline
 78.1 + 2.25
 \end{array}$$

L.P.

May 2, 1904 (Monday)

B236

> 0144.8

02.450

B 394

> 02 00

03 00

> 00

C's watch = 3rd slow of B 394

Double (Spec. List) - WLB

>	30.1	- 23.8	Plot P
10	05		
2	05		

C's watch used on Doubles

P.A. = 110° Dist. = 12" Magnitude = 6.7-6.8

Prec. & Northern ^{comp.} assumed to be slightly the brighterRight ~~above~~

250.2

L Pr. Northern & Br. dis

341.2

91.0 ✓

73.9

82.2 ✓

156.1

173.2 + 0.13

251.9

334.0

82.1 ✓ + 0.14

68.9

90.1 ✓ + 0.15

159.0

172.2

Mean = +0.25

Left ~~below~~

163.2

249.4

86.2 ✓

349.2

70.1 ✓

459.3

156.3 + 0.45

170.1

241.1

71.0 ✓ + 0.36

336.3

94.2 ✓

70.5

165.2 ✓ + 0.28

7 48.4

7 43.7

12 43.7

May 2, 1904.

Seeing fairly good before reversal of photometer. In latter part of observation principally after reversal seeing somewhat poorer as altitude was rather low and progressively growing worse so, but all possible care exercised and observations considered pretty good.

Double

W. L. B.
Phot. R.

9 5.7 - 29 57
10 5.0 PA. 160°
1 44 Dist 18"

B. d. v.

Magnus. 5.8 - 10.2

δ 5.0
 18.4 < br. dis.
 32.0
 196.6
 213.2
 16.4
 32.1
 196.7
 211.1
 Above
 286.0
 304.5
 108.0
 121.9
 286.1
 δ 13.5
 302.0
 106.4
 122.0

13.6
 16.6
 30.2 + 4.39
 15.7 + 4.40
 14.4
 30.1 + 4.40
 Mean = +4.37²

19.5^v
 18.9^v
 38.4^v + 4.17

15.9 + 4.24
 15.2
 31.1 + 4.32

over

May 2, 1904

Observations a little difficult on acct of low alt. and faintness of companion. The seeing however during meas. of this last double was pretty good observer waiting for moments of best definition before making settings.

Double

W. Obs.

9 26.5

-31 26 photo

11 26

Pa. 210° Dist 9" Magn $6\frac{1}{2}$ & $6\frac{3}{4}$

above

76.0

North br. dis

8 36.2

152.0

76.0

266.8

55.4

322.2

131.4 + 0.95

84.2

145.6

58.4

+ 0.84

254.2

80.2

336.4

138.6

+ 0.80

Below

mean = + 0.86

341.8

83.0

64.8

55.2

174.0

138.2

+ 0.81

232.2

355.3

55.6

+ 0.83

50.9

80.7

163.4

136.3

+ 0.85

224.1

8 46.8

8 41.5

13 41.5

May 2, 1904.

Region rather low, seeing a little
 blurry on acct of East Wind, observations
 a little difficult, but considered
 very good.

RV Alpha Chi.

Dir +7° 3404 (22)

New algo Variable.

$$\begin{array}{r}
 17 \ 19 \ +7.8 \\
 12 \ 09 \\
 \hline
 5 \ 10 \\
 6 \ 50 \\
 \hline
 \hline
 \end{array}$$

WOB.
Photo.

9 26 0.0 (2.0)

26 35 (2.1)

27 5.5 Var

27 41.0 (2.3)

B236 used on Var.

Comp * = +7° 3399 (2)

LbL

220.6

9 3940 308.4

46.2

133.4

<Comp * Obs

878 ✓

67.2 ✓

1550 ✓ + 0.48 ✓

2288

41 52 294.7

39.9

125.2

68.9 ✓

+ 0.48 ✓

85.3 ✓

154.2 ✓ + 0.49 ✓

RWB

over

May 2, 1904.

Mean = +0.46 ✓

ROB

316.5

9 44 48 26.8

129.4

213.7

309.5

9 46 10 36.2

136.3

9 43 2 ✓ 204.9

5 -13

14 42 55

$$\begin{array}{r} 70.3 \\ 84.3 \\ \hline 154.6 \end{array} \quad +0.49 \checkmark$$

$$\begin{array}{r} 86.7 \\ 71.6 \\ \hline 158.3 \end{array} \quad +0.45 \checkmark$$

$$\begin{array}{r} 71.6 \\ 158.3 \end{array} \quad +0.41 \checkmark$$

Same Over II

ROB

320.0

9 48 50 25.6

124.8

214.1

312.6

49 40 36.4

134.8

206.4

ROA

220.9

52 06 305.5

45.3

116.4

226.0

9 54 25 300.0

204 1 ✓ 39.3

9 51 0 ✓ 124.0

15 -14

$$\begin{array}{r} 65.6 \\ 89.3 \\ \hline 154.9 \end{array} \quad +0.48 \checkmark$$

$$\begin{array}{r} 83.8 \\ 68.6 \\ \hline 152.4 \end{array} \quad +0.50 \checkmark$$

$$\begin{array}{r} 68.6 \\ 152.4 \end{array} \quad +0.53 \checkmark$$

Mean = +0.47 ✓

$$\begin{array}{r} 84.6 \\ 71.1 \\ \hline 155.7 \end{array} \quad +0.46 \checkmark$$

$$\begin{array}{r} 74.0 \\ 84.7 \\ \hline 158.7 \end{array} \quad +0.44 \checkmark$$

$$\begin{array}{r} 84.7 \\ 158.7 \end{array} \quad +0.41 \checkmark$$

Sum. Mean +0.46 ✓

May 2, 1904.

θ - 4'32 East
 ρ - 104.1 Var B
 Δ - +68 North
 ΔT - 12.55
 $\Delta \text{width} = \begin{cases} -2.5 \text{ a.} \\ -1.5 \text{ B.} \\ -0.9 \text{ C.} \end{cases}$

u z Cygni W Ch.
 Phot II

21 5A +44.0

13 18

8 40

3 20

Left

313A

11 2020 29.80

140.0

202A

321.9

24 33 29.8

134.3

206.7

Right

225.0

29 05 301.6

53.5

109.0

234.6

11 32 38 298.6

106 31 144.4

11 26 32 119.4

5 - 31

16 26 07

< Consp. dis

785.2^v62.8^v +0.41^v134.0^v - 10260.9^v~~+0.91~~ +0.2672.4^v133.3^v+0.91^v~~mean~~+0.29^vmean = ~~40.74~~76.6^v55.5^v132.1^v+0.94^v59.0^v75.0^v134.0^v+0.92^v+0.90^v

May 2, 1904.

Right

II

11 36 00 224.4
 301.4
 54.6
 110.8
 233.0
 39 52 293.0
 46.6
 120. 117.8

77.0[✓]
 57.2[✓]
 134.2[✓] + 0.89[✓]
 60.0[✓] + 0.92[✓]
 71.2[✓]
 131.2[✓] + 0.95[✓]

Left

mean = +0.88[✓]

1313.5
 44 52 211.8
 322.1
 223
 143.4
 11 48 38 203.1
 9 22 315.2
 11 42 20 29.2
 5 - 34
 16 41 46

78.3[✓]
 61.2[✓]
 139.5[✓] + 0.72[✓]
 59.7[✓] + 0.85[✓]
 74.0[✓]
 133.7[✓] + 0.91[✓]

May 2, 1904

Left

111

1142.3
 11 55 02 202.6
 313.4
29.4
 134.9
 01 58 00 208.1
 321.2
 22.4

60.3 ✓
76.0 ✓
 136.3 ✓ + 0.85 ✓
 73.2 ✓ + 0.84 ✓
61.2 ✓
 134.4 ✓ + 0.89 ✓

Right

Mean = +0.90 ✓

50.8
 12 00 55 108.4
 224.2
 301.0

54.6 ✓
76.2 ✓
 131.4 ✓ + 0.95 ✓

45.2
 12 03 33 118.4
27 30 232.2
 11 59 22 291.7
5 - 37 292.0
 16 58 45

73.2 ✓ + 0.94 ✓
59.8 ✓
 133.0 ✓ + 0.92 ✓
 Sum, Mean = +0.92 ✓

Ha = 6.52 East

Pa = 143.0

12 10 Dec. = +43.4 North

S.T. = 15.02

Sph. = 5 - 15.2

196

May 2, 1904

B 236

B 394

12 13 39.0

12 13 0.0

L.P.

May 3, 1904 (Tuesday)

7 04 C's watch 40² fast at 7:04 15394

13 236

13 394

7 04 46.8

7 05 00

06 47.0

7 07 00

Double

Spec. Rest

7 30.1

23 15

W. B.

10 10

Plot R

C's watch used on Doubles

PA. 110²

Dist 12"

Magn. 6.7-6.8

Left

340.9

69.0

18.9

24.7

342.4

68.2

160.5

248.7

Right

249.0

343.2

70.5

158.8

249.0

330.9

70.6

164.8

7 48.0

7 43.3

12 42.6

< Northern Dr. dis

P.P.I

88.0

176.1

+0.07

85.8

88.2

174.0

+ 0.09

+ 0.11

Mean = + 0.05

94.2

88.3

182.5

177.5

- 0.05

81.9

+ 0.01

94.2

176.1

+ 0.07

over

May 3, 190K

In the early part of the observations, seeing fairly good but currents arose in the air so that in last half of observations seeing was extremely bad; Much of the time in the last part of observations the images ran together forming a sort of confused patch of light, but by waiting for moments of a little better definition settings were made as closely as possible altho the results are not considered quite as good as last night.

Double at

9 57

11 00

11 54

- 29 57

Wolb.

Photo R

Pa.

Dist

Magn.

See next page for measures.

§ 10 abandoned, as companion can not be seen in photo, & only occasionally in eye here

May 3, 1904

Double at wellb. Photo R

$$\begin{array}{r} 8 \quad 50.6 \quad -7 \quad 36 \\ 11 \quad 11 \\ \hline 2 \quad 20 \end{array}$$

P.A. 5° Dist. $7''$ Magns. 6.5-6.8
Below B.

$$\begin{array}{r} 71.2 \\ 8 \quad 25.0 \quad 152.8 \\ 251.0 \\ \hline 335.1 \end{array} \quad \begin{array}{r} < \text{br. dis} = \text{Southern} \\ 81.6 \checkmark \\ 84.1 \checkmark \\ \hline 165.7 \checkmark \end{array} \quad \begin{array}{r} \bar{x} \quad 0.27 \checkmark \end{array}$$

$$\begin{array}{r} 70.0 \\ 152.8 \\ 251.4 \\ \hline 335.4 \end{array} \quad \begin{array}{r} 82.8 \checkmark \\ 83.7 \checkmark \\ \hline 166.5 \checkmark \end{array} \quad \begin{array}{r} \bar{x} \quad 0.26 \checkmark \\ \bar{x} \quad 0.25 \checkmark \end{array}$$

Above A. Mean = $\bar{x} \quad 0.24 \checkmark$

$$\begin{array}{r} 345.2 \\ 629 \\ 162.5 \\ \hline 244.2 \\ 338.3 \\ 66.2 \\ 155.0 \\ \hline 244.3 \end{array} \quad \begin{array}{r} 75.7 \checkmark \\ 81.7 \checkmark \\ \hline 157.4 \checkmark \\ 159.4 \checkmark \end{array} \quad \begin{array}{r} \bar{x} \quad 0.39 \checkmark \\ \bar{x} \quad 0.43 \checkmark \\ \bar{x} \quad 0.24 \checkmark \end{array}$$

$$8 \quad 40.0$$

$$8 \quad 32.5 \\ 13 \quad 31.0$$

$$\begin{array}{r} 87.9 \checkmark \\ 89.3 \checkmark \\ \hline 177.2 \checkmark \end{array} \quad \bar{x} \quad 0.05 \checkmark$$

Seeing poorer on this double tonight than on previous night of observation, but obs. considered pretty good altho the results of the previous night are probably a little closer than tonight.

May 3, 1904

Algol +7.3404

Wells
Photo T
$$\begin{array}{r} 17 \quad 19 \quad +7.4 \\ 12 \quad 05 \end{array}$$

$$\begin{array}{r} 5 \quad 14 \\ 6 \quad 46 \end{array}$$

B. 236 used

L.O.C.

234.3

9 28 55 293.4

< comp & dir

59.4 ✓

51.0

65.7 ✓

116.7

125.1 ✓

229.6

30 50 299.1

53.7

69.5 ✓

56.9 ✓

110.6

126.5 ✓

R913

Mean = + 1.06 ✓

144.7

33 40 204.4

318.0

56.7 ✓

71.0 ✓

29.0

127.7 ✓

138.3

+ 1.03 ✓

9 35 06 208.0

124 31 251

69.7 ✓

54.9 ✓

9 32 04 200

5 -10

124.6 ✓

+ 1.09 ✓

15 31 58

6604

May 31, 1904

ROB

9 3732 146.8
198.0
319.3
27.3

140.6
3930 206.6
325.8
182.1

LDB

58.9
105.8
4248 226.0
295.4

50.48
9 4520 117.40
165 10 238.6
9 41 12. 287.83
5 - 11
1441 07
6604.

II

57.2 ✓
68.0 ✓
119.2 ✓ + 1.21 ✓

66.0 ✓ + 1.22 ✓
52.3 ✓
118.3 ✓ + 1.23 ✓

Mean = +1.26 ✓

46.9 ✓
69.4 ✓
116.3 ✓ + 1.27 ✓

66.2 ✓ + 1.29 ✓
48.7 ✓
114.9 ✓ + 1.31 ✓

202

May 3, 1904

III

III Loo.

56.8
 9 57 21 109.0
 228.6
 294.7
 5.

51.0
 10 00 02 113.5
 238.4
 286.6

ROR

329.8
 10 03 10 19.1
 141.8
 201.6

328.2

10 05 05 24.1
 245 38 148.8
 10 1 24 196.0
 5 -15

15 01 09

6604

52.2 ✓

66.1 ✓

118.3 ✓ + 1.23 ✓

1.32 ✓

62.5 ✓

48.2 ✓

110.7 ✓ + 1.40 ✓

Mean = + 1.38 ✓

49.3 ✓

59.8 ✓

109.1 ✓ + 1.44 ✓

+ 1.45 ✓

60.9 ✓

47.2 ✓

108.1 ✓ + 1.46 ✓

May 3, 1904.

IV

R973

328.0

10 07 15

19.0

~~179.8~~

201.3

51.0 ✓

61.5 ✓

112.5 ✓ + 1.36 ✓

09 40

323.0

24.6

150.4

195.8

61.6 ✓

+ 1.42 ✓

45.4 ✓

107.0 ✓ + 1.49 ✓

L00

Mean = +1.48 ✓

238.1

13 15

286.7

54.6

110.6

48.6 ✓

56.0 ✓

104.6 ✓ + 1.54 ✓

231.6

10 13 35

291.2

45 45

58.3

10 11 26

103.2

5 - 16

15 11 10

59.6 ✓

+ 1.54 ✓

44.9 ✓

104.5 ✓ + 1.55 ✓

6604.

May 31, 1904

L.R.

V

240.6
 10 27 35 293.9
 55.8
 111.4

43.3 ✓
 55.6 ✓
 98.9 ✓ + 1.68 ✓

233.2
 29 40 291.4
 64.8

58.1 ✓ + 1.68 ✓
 40.5 ✓
 98.6 ✓ + 1.69 ✓

102.3
 R.B.
 152.2

Mean = +1.74 ✓

32 35 193.3
 324.7
 20.3

41.1 ✓
 55.6 ✓
 96.7 ✓ + 1.74 ✓

148.6

+ 1.81 ✓

10 35 03 200.8
 124 53 333.9

52.2 ✓
 39.1 ✓ + 1.88 ✓
 91.3 ✓

10 31 13.5 13.0

5 - 19

15 30 54

6604

May 3, 1904

R.D.B.

VI

10 39 30 192.1

~~338.0~~

327.2

18.3

149.1

41 40 197.6

335.2

10.9

38.5[✓]511[✓]29.6[✓]+ 1.92[✓]+ 2.00[✓]48.5[✓]357[✓]24.2[✓]+ 2.07[✓]

Lod.

647

45 00 101.0

239.0

285.8

580

10 47 30 106.2

174 0 206.4

10 43 30 248.7

5 - 21

15 43 09

6604

P.A. = 105.2 Ver R

S.T. = 1.54

H.A. ~~6.0~~ - 3.33 East

Dec. + 6.8 North

Sp. Wh. - 2.15 a
- 1.5 B
- 0.9 CMean = ~~+ 1.94~~ + 2.0046.3[✓]

46.8

283.1[✓]+ 2.10[✓]~~+ 1.83~~+ 2.00[✓]~~+ 1.87~~48.2[✓]41.9[✓]90.1[✓]+ 1.91[✓]

May 3, 1904

U. J. Cygni - W.B.

$$\begin{array}{r} 21.58 + 44.0 \\ 13.58 \\ \hline \end{array}$$

Photo 7

8 00

4 00

Clouds

Left

31.5.7

Compt. dis.

11 21 50

30.0

Clds, stars gone

Waited till nearly 3 o'clock but it was impossible to get a single group on U. J. Cygni. When region ^{was} first set on it was quite low, photometer was put on and adjusted and two settings obtained but some cloud was already in this region and became thicker. Clouds continued to come more abundantly and overspread the whole sky remaining so all night. It was also impossible to do anything more with +7.3404

B. 236

B. 325

14 58 1.5

14 57 00

May 4, 1904 (Wednesday)

B 236
 > 06 59.8
 04 00.0

B 394
 > 07 00
 04 00

> 09

C's watch = 40^s fast of B 394
 C's watch used on Double
 Double at (Specialist.)

11 27.3 - 24 43
 10 22
 1 05
 10 05

Wab.
 Photo.

P.A. = 205°
 Dist = 10"
 Magn. = 6.0-6.1

Northern fol. component seems to lie slightly
 the brighter.

Left & above

> 38.0

250.8 < N.f. ob. dis

336.9

86.1

68.8

87.0

155.8

173.1

+0.13

249.0

335.8

86.8

+0.12

67.7

87.1

154.8

173.9

+0.11

Right & Below

Mean = +0.14

159.0

87.2

246.2

82.6

340.7

169.8

+0.19

63.3

OVER

+0.17

+0.15

May 4, 1904
Same continued.

161.0

242.5

81.5

337.5

90.5

68.0

172.0 + 0.15

7 45.8
7 42.9
5 - .7

12 41.29^m

Seeing pretty good considering the altitude.

Double at

Wells,
Phot R.

9 5.7
10 56
1 50

-29 57

PA = 160°
Dist =

Magns.

Altho seeing is pretty steady yet the air lacks transparency especially at this altitude and it is impossible to measure this double on account of faintness of companion.

The companion is practically not at all seen in photometer, and is almost totally invisible in ordinary eyepiece.

Double at

10 24.9 -30 6

Wells,
Phot R.

11 0.7
0 42

PA = 230°

Dist = 9"

Magns = 59-95

see next page

May 4, 1904.

Double

10 24.9 -30 6

R & Below

δ 12.8
 10.8
 34.8
 195.0
 208.7

< br. dis
 24.0
 13.7
 37.7 + 3.90

+3.94

15.8
 27.8
 187.6
 213.0

11.0
 25.4
 36.4 + 3.98

L & Above

Mean = +3.81

~~St~~

274.1
 306.4
 106.1
 119.4

29.3
 13.3
 42.6 + 3.63

+3.68

 δ 23.4

280.6
 295.8
 97.3
 125.9

12.2
 28.6
 40.8 + 3.72

36.2
 δ 18.1
 13 17.4

Meas. made with some difficulty.
 on acct. of faintness of comp. and lack
 of transparency of air at this altitude.
 Great care exercised and observations
 considered good

May 4, 1904

Comet α 1904

wells

Phot T

15	58	+53.3
11	50	
<hr/>		
4	08	
<hr/>		
7	52	

9	22	39.5
	25	34.0

26	57.0
27	48.5

9	24	34.0	(9.3)
	30	05.5	Comet

9 30 The comet fol. the $(9.3) 54.1783 (9.3)$ by
 $1^m 31.5$ and is 1.6 North

Comp $\star = +54.1783 (9.3)$

see next page for
 meas. of nucleus.

C's watch used for Comet

May 4, 1904

Left

947.0 53.9 < comp & dis
 109.4 53.5 ✓
 240.0 49.5 ✓
 289.8⁵ 105.0 ✓ + 1.54 ✓

57.3
 108.6 57.3 ✓ + 1.48 ✓
 233.0 59.1 ✓
 292.1 110.4 ✓ + 1.41 ✓

Right

322.4
 22.5 60.1 ✓
 144.4 50.9 ✓
 198.3 111.0 ✓ + 1.39 ✓

Mean = + 1.44 ✓

327.2
 955.6 12.9 51.2 ✓ + 1.40 ✓
 143.0 58.9 ✓
 951.3 201.9 110.1 ✓ + 1.42 ✓
 1450.6 201.9

1800 P.A. 266.0 Var B. nucleus rather
 H.A. - 2:49 East stellar and fairly
 Dec. +53.3 North will seem.
 N.T. 1:03
 Sp Wh. 5-0.5 B.
 + 0.3 C.

May 4, 1904.

Algol Var $+7^{\circ}34'04''$ Web
Photo T.

$$\begin{array}{r}
 17 \quad 19 \quad +5.8 \\
 13 \quad 19 \\
 \hline
 4 \quad 00 \\
 \hline
 \underline{\underline{8 \quad 00}}
 \end{array}$$

T

Bond 236 used on this var
 I also ~~the~~ 23 3 ggm.
 Lgd.

	219.1	<comp * dis	
10 33 40	306.5	87.4 ✓	
	45.8	71.8 ✓	
	<u>114.6</u>	159.2 ✓	+ 0.40 ✓
36 00	224.9		
	298.0	70.1 ✓	+ 0.42 ✓
	34.8	87.0 ✓	
	124.8	157.1 ✓	+ 0.44 ✓
	128.8		Mean = + 0.38 ✓
39 12	219.3	90.5 ✓	
	315.6	73.5 ✓	
	29.1	164.0 ✓	+ 0.30 ✓
	134.3		+ 0.35 ✓
10 41 00	208.3	71.0 ✓	
29 58	309.3	88.0 ✓	
10 37 30	371.3	159.0 ✓	+ 0.40 ✓
5 1 - 34			
15 36 56			

May 4, 1904.

RBB

H

129.1
 104242 246.7
 317.2
 27.7

276.
 70.5
 158.1 + 0.42

139.3
 4418 210.0
 310.4
 36.1

71.7
 25.7
 157.4 + 0.43

+ 0.42

Mean = +0.42

Lobbe

39.8
 4650 125.8
 227.7
 298.7.1

26.0
 69.4
 155.4 + 0.47

44⁶₃

+ 0.41

10 4900 117.7

71.4

216.8

90.0

2250
 10 4542 306.8

161.4 + 0.35

5 - 35

Gen. mean to 0.0

15 45 07

PA = 104.5 Var B

HA = - 3.32 East

10 55

Dec = +6.7 North

St. T. = 13.56

St. W. = -25.2

May 4, 1904.

22 G Cygni

Wobs

Plot T

21 58 +44.0

13 58

A 00

4 00

I

Left

< comp & dia

11 11 05

316.0

29.6

143.2

200.8

322.9

14 48

24.4

135.9

210.7

Right

18 19

225.3

298.5

52.8

115.0

11 22 50

231.51

~~11 22 10~~

295.9

27 02

145.0

11 16 46

124.3

6 - 40

16 16 06

73.6

57.6

131.2

+ 0.95

61.5

+ 0.90

74.8

136.3

+ 0.85

mean = + 0.84

73.2

62.2

135.4

+ 0.87

64.8

+ 0.78

79.3

144.1

+ 0.69

May 4, 1904.

Right

II

224.2
 11 2500 303.2
 49.4
 116.8

79.0 ✓
 67.1 ✓
 146.1 ✓ + 0.65 ✓

232.8
 2740 293.4
 43.6
 119.6

60.6 ✓ + 0.74 ✓
 76.0 ✓
 136.6 ✓ + 0.84 ✓

Left

133.9
 3118 207.4
 323.1
 21.4

Mean = +0.28³
 Gen. Mean = +0.24

73.5 ✓
 58.3 ✓
 131.8 ✓ + 0.94 ✓

142.0
 11 3400 202.2
 117 58 315.9
 11 2900 29.5

+ 0.92 ✓
 60.2 ✓
 73.6 ✓
 133.8 ✓ + 0.90 ✓

5 - 42

16 28 48

P.A. = 143.5 Ver B

Ha. = -7.12 East

Dec. = +43.4 North

S.T. = 14.43

Sip. = \int -1.5 a
 -0.5 B
 +0.1 d

11 45

(over)

May 4, 1904.

Region rather low, observations
a little difficult both ~~of~~ on
account of low alt. & somewhat
murky sky near horizon.

(11 47)

Greatest care exercised however &
obs. considered good.

B 286

11 48 45.0

B 394

11 48 ~~45.0~~
0.0

May 6, 1904 (Friday)

B 236
 > 05 17.8
 06 200

B 394
 > 05 00
 06 00

7 07 Cs watch = 5⁰ slow of B39K
 Double

13 A1 - 1A 1A Webb
 10 2A Plot R.

Right 2 40 P.A. 30°
 9 20 Dist 7"

~~Left~~ A.

Magnus 6.4 - 7.2

Cs watch used on Doubles
 < Southern dec.

73.2

152.4

255.1

332.2

71.6

152.4

244.3

334.1

~~Left~~

335.9

63.5

166.3

242.0

344.9

60.4

157.5

244.3

79.2

77.1

156.3

+ 0.45

80.8

+ 0.35

+ 5.8

166.6

+ 0.25

Mean = + 0.34

+ 7.6

75.7

163.3

+ 0.32

75.5

86.8

162.3

+ 0.33

+ 0.34

17 59.6
 5 54.7
 12 54.4

May 6, 1904.

Comet a 1904Meas. α

Abandoned for present

Wolfe
Phot.

Double

$$\begin{array}{r} 14 \ 51.5 \\ 11 \ 48 \\ \hline 3 \ 04 \\ 8 \ 56 \end{array}$$

-20 56

Wolfe

Phot.

pa. 300°

Dist 15"

Magn. 6.2-7.3

Left

93.2

8 H10

128.8

269.2

385.3

89.6

134.8

274.6

312.8

Right

4.6

142.6

182.3

224.8

1.9

8 48.8

144.9

8 44.9

182.1

8

221.4

13 45.0 2 M.T.

6. dist

35.6

146.1

81.7

+ 2.14

45.7

+ 2.11

38.2

83.9

+ 2.08

Mean = + 2.14

38.0

42.5

80.5

+ 2.18

43.0

+ 2.16

39.3

82.3

+ 2.13

May 6, 1904

Comet α 1904

Web.

Phot.

Meas. of nucleus only.

$$\begin{array}{r}
 15 \quad 54 \quad + 55.2 \\
 12 \quad 20 \\
 \hline
 3 \quad 34 \\
 8 \quad 26 \\
 \hline
 \hline
 \end{array}$$

9 19 27.0 a
 19 29.0 b
 19 46.5 c
 20 26.0 comet

9 | 20 The comet fol., $+54^{\circ}.1774$ (9.4) by
 39.5 & is 0.1 North of it

22 26 d
 22 28 e

23 13.0 d
 23 45.5 e

Comp $\ast = +54^{\circ}.1775$ (9.4)

see fol. pages

May 6, 1904.

Meas of Nucleus of Comet a

C. watch used for times

above

56.4

D

9 33.6

112.3

< Comp & dis

55.9 ✓

227.4

71.9 ✓

299.3

127.8 + 1.03 ✓

44.0

112.3

64.3 ✓ + 1.08

233.4

58.8 ✓

292.5

123.1 + 1.13 ✓

Below

326.4

Mean = +1.12 ✓

23.0

56.6 ✓

109.0

68.1 ✓

204.1

124.7 ✓ + 1.09 ✓

320.0

65.4 ✓ + 1.15 ✓

9 44.2

28.4

53.7 ✓

77.8

146.3

119.1 + 1.21 ✓

9 34.9

200.0

14 39.0 GMT.

Cont in B 145

LPH

See New Book for continuation
of tonight's records.

1004phae.proj..56W