

KG

11365

532

KG 11365.532

KG-11365.532



11

Feb. 14. 1896. (Cont. from R 79.)
 Reappearance of Jupiter's Photo. R. W. ds.
 Rich. Rec.

A. + S. 95 S. Balloon 103.
 10 36 6.7 10 36 8.0
 37 6.7 37 0.0

Comp. with nearest of the satellites on
 following rich. = sat. II

11	15	54	11	16	16	1	95.0	40.8	2.1
	16	18				25	135.8	44.8	1.9
		27				34	91.0	44.2	2.0
		34				41	135.2	47.2	1.8
		43				50	88.0	51.8	1.6
		48				55	139.8	48.7	1.7
		53				60	191.1	53.0	1.5
		58	11	17		55	144.1	56.9	1.3
17	3					10	87.2	54.0	1.5
	8					15	141.2	53.2	1.5
	15					22	88.0	56.4	1.4
	19					24	144.4	57.4	1.3
	24					31	87.0	59.9	1.2
	28					35	146.9	60.9	1.2
	35					42	86.0	63.0	1.1
	40					47	149.0	68.0	0.9
	45					52	81.0	71.0	0.7
	52					59	152.0	70.0	0.8
	59	11	18			6	82.0	62.9	1.1
18	6					13	144.9	64.9	1.0
	11					18	80.0	71.1	0.7
	14					21	157.1	74.4	0.6
	24					31	77.0	72.0	0.7

Feb. 14, 1896.

11 18 32'		29	149.0	0.7 9.3 70.7
39'		44	78.3	0.5 76.7
48'		<u>55</u>	<u>153.0</u>	
11 19 20'	19	3	70.3	90.5
7		17	160.8	1 89.8
<u>19 13'</u>		25	72.2	<u>180.3</u>
		33	162.0	90.2
		<u>39</u>	<u>72.7</u>	0.0
19 48'		45	154.8	82.1
7		<u>52</u>	<u>71.0</u>	88.0
<u>19 41'</u>		<u>58</u>	<u>159.0</u>	<u>85.0</u>
				0.2
20 15'	20	5	69.8	88.3
7		11	158.1	79.2
20 8'		19	73.0	167.5
		26	153.2	83.8
20 44'		<u>34</u>	<u>69.7</u>	0.2
7		40	153.0	85.3
20 37'		47	71.8	87.2
		<u>54</u>	<u>159.0</u>	<u>125</u>
				86.2
21 9'	21	00	71.0	0.1
7		6	157.8	86.8
21 2'		12	69.3	89.7
		19	159.0	<u>165</u>
		<u>29</u>	<u>73.0</u>	88.2
21 38'		35	163.0	0.1
7		42	71.1	90.0
21 31'		47	161.2	90.1
				90.0
				0.0

Feb. 14 1896.

$$\begin{array}{r} 1 \ 225 \\ \underline{7} \\ 2158 \end{array}$$

$$\begin{array}{r} 22 \ 55 \\ \underline{00} \\ 9 \\ \underline{16} \end{array}$$

$$\begin{array}{r} 70.7 \\ 158.8 \\ 67.2 \\ \underline{162.3} \end{array}$$

$$\begin{array}{r} 88.1 \\ 7 \ 91.1 \\ \underline{183.2} \\ 91.6 \\ -0.1 \end{array}$$

$$\begin{array}{r} 22 \ 36^+ \\ \underline{7} \\ 22 \ 29^+ \end{array}$$

$$\begin{array}{r} 23 \\ 31 \\ 37 \\ 52 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} 69.1 \\ 159.3 \\ 72.9 \\ 157.3 \end{array}$$

$$\begin{array}{r} 84.4 \\ f \ 174.6 \\ \underline{87.3} \\ 0.1 \end{array}$$

$$\begin{array}{r} 23 \ 11^+ \\ \underline{2} \\ 23 \ 04^+ \end{array}$$

$$\begin{array}{r} 23 \\ 7 \\ 14 \\ 21 \end{array}$$

$$\begin{array}{r} -72.3 \\ 158.8 \\ 74.2 \\ \underline{160.9} \end{array}$$

$$\begin{array}{r} 86.5 \\ 9 \ 86.7 \\ \underline{86.6} \\ 0.1 \end{array}$$

Altitude of Jupiter extremely high. Seeing
partly good, troubled by frost on eye piece.

$$\begin{array}{r} A. + S. \ 95A. \\ 41 \ 7.0 \\ 42 \ 7.0 \end{array}$$

$$\begin{array}{r} Balloon \ 103. \\ 11 \ 41 \ 0.0 \\ 42 \ 0.0 \end{array}$$

Feb 16 1896

o Ceti

Mobs.

2 4
5 40
3 36

-2.5

Index to right.

8 19

199.4

207.5

8.1

200.4

7.1

207.5

15.2 ✓

5.89

200.2

8 21

207.5

7.3

199.7

8.1

207.8

15.4 ✓

5.86

Index to left.

5.88

8 22

289.2

297.0

7.8

290.5

6.5

297.0

14.3 ✓

6.02

290.3

8 24

296.7

6.4

294.3

7.9

297.2

14.3 ✓

6.02

6.02

$M = (5.95)$

Feb. 16, 1896.

Index to left

8 32	290.3		
	296.9	6.6	
	290.1 290.0	5.9	
	296.0	12.5 [✓]	630 <

8 35	290.5		
	297.0	6.5	
	289.0 297.6	8.6	
	297.6	15.1 [✓]	5.90 <
			(6.10) (5.60)

Index to right.

8 37	19.0		
	27.0	8.0	
	20.7	5.8	
	26.5	13.8 [✓]	6.10 <

8 45	20.3	21.7		
	28.2	26.5	7.9	4.8
	108.8	19.6	8.9	4.6
8 37 15	117.7	25.2	16.8 [✓]	11.4

5.67
5.67
~~6.50~~
5.89
2 (1177)
5.885

$$M = (5.99)$$

$$\frac{1}{11} \text{ of } 4 = 5.97$$

Feb. 16. 1896.

Faint comp. stars for S. Cephei with
Photo T. Mels.
$$\begin{array}{r} 21 \quad 37 \\ 31 \quad 60 \\ \hline 9 \quad 23 \end{array}$$

+ 78.3

Star 2

Index to left & above

9 20

$$\begin{array}{r} 74.6 \\ 94.8 \\ 74.3 \\ 97.6 \end{array}$$

20.2

$$\begin{array}{r} 23.3 \\ \hline 43.5 \end{array}$$

3.58

9 22

$$\begin{array}{r} 74.4 \\ 97.9 \\ 72.4 \\ 95.4 \end{array}$$

23.5

$$\begin{array}{r} 23.0 \\ \hline 46.5 \end{array}$$

$$\begin{array}{r} 3.43 \\ \hline (3.50) \end{array}$$

Index to right and below

9 24

$$\begin{array}{r} 162.6 \\ 185.3 \\ 142.5 \\ 190.5 \end{array}$$

22.7

$$\begin{array}{r} 24.0 \\ \hline 50.7 \end{array}$$

3.24

9 26

9 23 0

$$\begin{array}{r} 142.2 \\ 187.7 \\ 160.1 \\ 192.0 \end{array}$$

25.5

$$\begin{array}{r} 31.9 \\ \hline 57.4 \end{array}$$

$$\begin{array}{r} 2.96 \\ \hline (3.10) \end{array}$$

M = (3.30)

Feb. 16, 1896.

Star m

Index to right + below

9 29

157.9

191.3

154.8

194.3

33.4

39.8

72.9

2.41

9 30

155.1

193.9

160.6

190.3

34.4

29.7
64.52.56
(2.48)

9 35

247.8

283.4

248.8

283.6

Index to left + above

35.6

34.2
70.8

2.49

9 36

247.8

280.7

247.1

282.3

32.9

35.2
64.12.57
(2.53)

9 32 30

 $M = (2.50)$

Feb. 16, 1896.

Star p

Index to left & above

9 40

251.4

279.2

253.3

276.6

27.0

$$\begin{array}{r} 23.3 \\ \hline 51.1 \end{array}$$

3.23

9 41

253.8

278.7

254.2

279.3

24.9

$$\begin{array}{r} 25.1 \\ \hline 50.0 \end{array}$$

$$\begin{array}{r} 3.27 \\ \hline (3.20) \end{array}$$

1

Index to right & below

9 42

346.2

5.6

346.2

5.5

19.4

$$\begin{array}{r} 19.3 \\ \hline 38.7 \end{array}$$

3.84

9 44

345.3

4.2

343.9

4.3

14.9

$$\begin{array}{r} 20.4 \\ \hline 39.3 \end{array}$$

3.81

$$\begin{array}{r} (3.82) \end{array}$$

$$\begin{array}{r} 9 \quad 44 \\ \hline 4(2) \\ 9 \quad 41 \quad 45 \end{array}$$

$$\begin{array}{r} 107 \\ \hline 535 \end{array}$$
 $M = (3.54)$

Feb 16, 1896.

Star 9

Index to right + below

9 48

344.2

7.2

348.0

5.1

230

$$\begin{array}{r} 17.1 \\ \hline 40.1 \end{array}$$

3.76

9 49

344.5

6.9

345.9

4.2

22.4

$$\begin{array}{r} 12.3 \\ \hline 40.7 \end{array}$$

$$\begin{array}{r} 3.73 \\ \hline (3.74) \end{array}$$

Index to left + above

9 50

76.3

95.2

75.4

97.2

14.9

$$\begin{array}{r} 21.4 \\ \hline 40.7 \end{array}$$

3.73

9 51

74.9

93.2

78.0

96.3

14.3

$$\begin{array}{r} 14.3 \\ \hline 36.6 \end{array}$$

$$\begin{array}{r} 3.96 \\ \hline (3.84) \end{array}$$

M = (3.79)

$$\begin{array}{r} 9 \quad 51 \\ \hline 9 \quad 49 \quad 30 \end{array}$$

Feb. 16, 1896.

Star m

Index to left + above

9 55

69.8

98.2

28.4

69.1

98.3

29.2

57.6

29.5

9 57

69.5

97.3

27.4

69.9

96.7

26.2

54.6 $\frac{3.07}{(3.01)}$

Index to right + below

9 58

161.0

188.3

27.3

155.2

192.5

37.3

64.6

26.9

$$\begin{array}{r} 10 \quad 1 \\ \hline 4 \overline{) 23 \quad 1} \\ 9 \quad 57 \quad 45 \end{array}$$

157.0

190.4

33.4

161.6

187.2

25.6

59.0 $\frac{2.90}{(2.80)}$ $M = (290)$

Feb 16, 1896.

P
M.B. 441 N. obs.

$$\begin{array}{r} 3 \quad 31 \\ 8 \quad 45 \\ \hline 5 \quad 14 \end{array}$$

+ 6 2.08

Index to left + below

$$\begin{array}{r} 10 \quad 45 \quad \text{variable} \quad 177.0 \\ \quad \quad \text{disap.} \quad 229.5 \\ \quad \quad \quad 180.5 \\ \quad \quad \quad 228.1 \end{array}$$

 $\sqrt{2.5}$

$$\frac{47.6}{100.1}$$

1.65

10 46

178.5

 $\sqrt{0.4}$

228.9

177.5

$$\frac{\sqrt{1.2}}{101.6}$$

$$\frac{1.62}{(1.64)}$$

228.7

Index above + to right

10 50

267.4 ~~270.5~~

320.0

 $\sqrt{2.6}$

271.4

317.3

$$\frac{45.9}{92.5}$$

1.69

10 52

271.2

 $\sqrt{0.2}$

320.0

267.1

319.0

$$\frac{\sqrt{1.9}}{100.7}$$

$$\frac{1.64}{(1.66)}$$

$$\begin{array}{r} 4(19.3) \\ \hline 10 \quad 48 \quad 15 \end{array}$$

$$M = (1.65)$$

Feb. 19, 1896.

Comp. of Chron.

Bahr 103

A + 10, 958. Checked.

14 23 00.0

14 23 18.5

14 24 00.0

14 24 18.5

Reap. Jap. III. Phot. R. Wobs. Waitree.
Comp. with ~~Reap. Jap. III.~~ Bath on pre. side, within about $\frac{1}{2}$ radius
from hint of Jap. = Sat. I.

14 41 47

14 42 05

186.1 34.7 2.5

42 2

20

220.8 36.6 2.4

42 14

32

184.2 36.8 2.4

42 23

41

221.0 36.8 2.4

42 30

48

184.2 36.6 2.4

40

58

220.8 37.7 2.3

48

43

06

183.1 40.1 2.2

57

15

223.2 43.9 2.0

43 5

23

179.3 45.5 1.9

12

30

224.8 47.5 1.8

20

38

177.3 53.0 1.5

28

46

230.3 54.3 1.5

36

54

176.0 52.9 1.5

45

44

03

228.9 57.9 1.3

51

09

171.0 64.1 1.0

44 0

18

235.1 64.1 1.0

7

25

171.0 67.0 0.9

12

30

238.0 68.0 0.9

21

39

170.0 69.2 0.8

31

49

239.2 71.9 0.7

39

57

167.3 67.8 0.9

44 46

45

04

235.1 67.5 0.9

Feb. 19, 1896.

14 44 57 14 45 15
45 4

45 40
14 45 22

46 8
18
14 45 50

46 3 8
18
46 19 20

14 47 8
18
46 50

47 43
18
47 25

48 14
18
47 56

46 04

12

20

26

34

42

49

56

03

12

23

31

40

46

55

48 02

10

19

26

32

42

167.6 72.5 10.7

240.1
168.2 → 75.0

243.2
165.0
249.0
165.0 78.0

243.0
163.0
246.1 77.1
0.5 77.6

160.3 83.0
243.3 85.2

161.0 82
246.2 0.2 84.1

159.0 87.3
246.3 91.9

159.1 179.2
251.0 0.0 89.6

158.2 87.9
246.1 90.9

155.0 89.4
245.9 0.0

158.5 88.6
247.1 90.0

161.0 78.6
251.0 0.0 89.3

159.0 7.0
247.0

Feb. 19, 1896.

14 14 14	48 55	153.0	88.0
48 30	49 03	250.0 -0.1	97.0
	10	157.0	185.0
49 25	20	251.4	94.4
49 7	30	153.2	98.0
	40	251.2 -0.2	192.4
49 59	48	156.1	96.2
49 41	56	251.2	95.1
	50 02	157.3	93.0
	11	250.3	108.1
50 33	19	156.0	94.0
50 15	30	249.0	93.0
	38	152.1	102.2
	45	254.3	195.2
51 9	57	157.8	97.6
50 51	51 05	251.0	93.2
	12	156.0	94.5
	21	250.5	77
51 46	29	158.1	73.8
51 25	40	249.3	91.2
	53	159.0	90.2
	52 02	249.2	90.7
	14	157.3	0.0
52 30	25	252.9	95.6
52 12	36	153.8	97.5
	44	251.3	13.1
52 59	49	160.9	96.6
52 41	55	254.8	93.9
			103.4
			197.3
			98.6

Feb. 19, 1896.

14	53	03	153.0	2
		10	256.4	
✓ 53 32		20	159.0	91.0
✓ 53 14		27	250.0	95.8
		37	154.2	3
		43	250.0	68
		50	155.8	-0.1 93.4
✓ 54 0		57	250.2	94.4
✓ 53 42	54	04	154.0	101.3
		11	255.3	195.7
✓ 54 35		18	156.0	97.8
✓ 54 17		31	251.0	94.5
		42	157.0	95.0
		48	251.0	94.5
✓ 55 4		54	155.0	94.5
✓ 54 46	55	01	250.0	6
		08	157.1	95.0
✓ 55 34		15	250.0	92.9
✓ 55 18		19	157.0	94.0
✓ 55 16		32	247.1	90.1
		40	157.3	90.7
		46	248.0	90.4
		52	154.8	0.0
✓ 56 2		58	251.0	96.2
✓ 55 44	56	04	158.0	93.0
		12	251.0	94.6
		21	157.8	94.6
		30	249.1	

Feb. 19, 1896.

$$\begin{array}{r}
 14 \ 56 \ 25 \\
 \underline{18} \\
 56 \ 17
 \end{array}
 \quad
 \begin{array}{r}
 14 \ 56 \\
 42 \\
 47
 \end{array}
 \quad
 \begin{array}{r}
 159.3 \\
 \underline{253.4}
 \end{array}
 \quad
 \begin{array}{r}
 9 \ 91.3 \\
 \underline{94.1} \\
 54 \\
 -0.1 \ 92.7
 \end{array}$$

Limit of Visibility

$$\begin{array}{r}
 14 \ 57 \ 34 \\
 \underline{18} \\
 57 \ 16
 \end{array}
 \quad
 \begin{array}{r}
 14 \ 57 \\
 15 \\
 26 \\
 38 \\
 55
 \end{array}
 \quad
 \begin{array}{r}
 189.8 \\
 218.7 \\
 190.2 \\
 214.7
 \end{array}
 \quad
 \begin{array}{r}
 28.9 \\
 \underline{24.5} \\
 534 \\
 26.7 \\
 3.1
 \end{array}$$

Troubled throughout, more or less, by frost on eyepiece. Clock also would not run, so that observer had to continually push telescope with his arm.

Comp. of Chron.

Feb. 103.

A. & D. 938.

$$\begin{array}{rclclcl}
 15 & 19 & 00.0 & = & 15 & 19 & 18.5 \\
 15 & 20 & 00.0 & = & 15 & 20 & 18.5
 \end{array}$$

Feb. 20, 1896.

Ceti.

Thols.

2 4

: 2.5

$$\begin{array}{r} 5 \quad 40 \\ 3 \quad 36 \end{array}$$

Index to right.

7 25

19.4 *

28.5

9.1 ✓

200

7.0 ✓

27.0

16.1 ✓

5.76 ✓

19.8

7.6 ✓

27.4

18.9

$$\begin{array}{r} 2.7 \quad \checkmark \\ 16.3 \quad \checkmark \end{array}$$

5.75 ✓

(5.75)

27.6

Index to left.

7 29

109.3

A.K ✓

117.7

110.3

$$\begin{array}{r} 6.9 \quad \checkmark \\ 15.3 \quad \checkmark \end{array}$$

5.27 ✓

117.2

110.3

6.2 ✓

116.5

(5.96)

109.5

$$\begin{array}{r} 7.9 \quad \checkmark \\ 18.1 \quad \checkmark \end{array}$$

6.05 ✓

117.4

M = (5.86)

7 30

7 27 30

20

7 27 10

Feb. 20. 1896.

U. + S. 958.
 7 42 20.0
 43 20.1

Ballou 103.
 7 42 0.0
 43 0.0

Reappearance of Jupth II Photo. R. 5 M. obs
 Comp with ^{mean} satellite on following side of Jup. { Rich. mo.
 7 56 36 L.V. 105.0 = sat. I

7 56 42

52.5 100⁺ 123.0

57 1 2.0 15.1 106.2

26.0 15.0² 124.3

☉ II I III
 40[←]

7 52 50.0
~~49.5~~

53.

59 01

06.8

16

~~15.8~~

24

29

36

43

40.8

54

5 00 03

09

15

19

26

31

37

7 59 9.5

13.

21

26.5

35.5

44.0

49.0

56.0

8

00

3.0

8.5

14

23

29

35

39

46

51

57

Dean.

101.0

124.3

99.0

130.0

88.0

135.1

84.0

141.2

86.0

145.3

85.7

149.2

83.2

153.1

79.7

153.0

81.1

Feb. 20. 1896.

2 00 45	8 1 5	157.8	
54	14	77.3	
01 00	20	153.3	
05	25	72.0	
13	33	153.0	
25	45	71.5	
30	50	153.9	153.9 undoubtedly
32	58	74.0	
47	2 7	155.7	
51	11	70.2	
55	15	155.2	
02 05	25	68.2	
13	33	22.0 ^x 156.2	
18	38	29.6 ^x 67.5	1
24	54.5	22.2 ^x 157.1	pp ^x
46	6.5	72.5	
54	14.5	25.0 ^x 157.5	
03 06	26.0	94.0 ^x	
H	36	179.0 ^x 66.3	2 0.0 ^x
	46	29.5 ^x 160.3	
	56	67.9	
3 42 ^x	4 6.5	26.4 ^x 154.3	3
	10.0	26.4 ^x 66.8	
	25.0	26.4 ^x 153.2	0.1 ^x
	36.5	69.0	
4 30	47.0	22.9 ^x 157.9	
	53.5	24.3 ^x 71.8	4 0.1 ^x
	57	173.2 ^x 156.1	
		26.6 ^x	

Feb. 20. 1896.

5	12	8	5	16.0	69.1	
				26.0	90.2 ⁺	159.9
				40.1 ⁺	25.2 ⁺	72.2
				46.0	176.6 ⁺	158.0
				<u>58.0</u>		68.1
5	52 ⁺	6		6.5	91.6 ⁺	159.7
				29.0	91.9 ⁺	66.1
				37.5 ⁺	91.2 ⁺	158.0
				<u>44.0</u>		64.2
6	41	7		54.5	96.2 ⁺	161.0
				7.5	25.2 ⁺	70.9
				18.0	122.6 ⁺	156.7
				<u>31.0</u>	91.3 ⁺	66.3
7	24			38.0	92.7 ⁺	159.0
				50.0	29.2 ⁺	66.1
				58.1 ⁺	122.6 ⁺	153.7
					91.2 ⁺	

$$25.3^+ = 0.1^+$$

0.1

0.0

0.0

A. f. d. 95A.

A 16 20.5
17 20.5

Ballou 103.

A 16 0.0
17 0.0

Correction = - 20. sec.

Feb 20, 1896

Nova Aurigar

$$\begin{array}{r} 5 \quad 23 \\ 7 \quad 00 \\ \hline 1 \quad 37 \end{array} \quad + 32.0$$

General region identified but cloud too thick.

Feb 1596

$$\begin{array}{r} 11 \quad 58 \\ 31 \quad 20 \\ \hline 19 \quad 22 \end{array} \quad + 22.1 \quad 7 \quad 22$$

Experiments with Plate I on above star for focus. Clouds too thick to make any progress.

Feb. 29, 1896.

 $\leq 20'$

No obs.

$$\begin{array}{r}
 11 \quad 49 \\
 \underline{7 \quad 50} \\
 3 \quad 59
 \end{array}$$

+ 47.2

Clouds very thick. No stars visible.

9 40

Still thickly clouded. No chance for anything further.

Feb. 21. 1896. (Friday)

U Cygni.
Cloudy.

Gr. h.

$$\begin{array}{r} 0 \quad 30 \quad +21.7 \\ 4 \quad 30 \\ \hline +4 \quad 0 \end{array}$$

Cloudy.

$$\begin{array}{r} 6 \quad 25 \\ \hline +5 \quad 55 \end{array}$$

Index above.

L 35 40

$$\begin{array}{r} 203.1 \\ 302.3 \\ 193.6 \\ 307.9 \end{array}$$

Res.

Feb 21 1896

I
8 49 C. S. disappears > 197.0 Index above a
298.5 101.5<
188.0 116.5<
3045 216.0<
182.0< - 0.73<

8 50 188.0 121.0< - 0.20
309.0
196.5 103.7<
3002 224.7<
135.3< - 0.27<

8 52 Index below - 0.80 b
278.4 92.2<
26.6
276.3 119.9<
36.2 216.1<
141.9< - 0.74<

8 53 278.3 117.1< - 0.78
35.4
286.4 105.1<
31.5 222.2<
137.4< - 0.22<
4/3.16
0.79<

M = 0.79

1420.4
26 51.0
5 37.0
+3 14.0

Feb. 21, 1896.

Index below bII
8 54
$$\begin{array}{r}
 288.2 \\
 27.9 \\
 \hline
 276.0 \\
 37.5 \\
 \hline
 221.5 \\
 221.2 \\
 \hline
 134.3 \approx 0.20
 \end{array}$$

8 55

$$\begin{array}{r}
 276.7 \\
 35.5 \\
 \hline
 282.3 \\
 26.5 \\
 \hline
 104.2 \\
 223.0 \\
 \hline
 137.0 \approx 0.23
 \end{array}$$

-0.22

Index above a

8 57

$$\begin{array}{r}
 10.8 \\
 118.2 \\
 4.1 \\
 \hline
 128.8 \\
 124.7 \\
 \hline
 232.1 \\
 127.9 \\
 \hline
 \approx 1.02
 \end{array}$$

8 58

$$\begin{array}{r}
 4.5 \\
 128.9 \\
 12.4 \\
 116.7 \\
 \hline
 104.4 \\
 104.3 \\
 \hline
 224.7 \\
 131.3 \\
 \hline
 -0.95 \\
 4/3.60 \\
 \hline
 -0.90
 \end{array}$$

-0.92

$$\begin{array}{r}
 4/224 \\
 8 \quad 56.0 \\
 5 \quad 37.0 \\
 \hline
 +3 \quad 19.0
 \end{array}$$

Feb. 21, 1896

Index above. a

$$\begin{array}{r} \text{III} \\ 8 \quad 59 \end{array}$$

$$\begin{array}{r} 12.8 \\ 119.7 \\ 2.3 \\ 127.6 \end{array} \quad \begin{array}{r} 106.9 < \\ 125.3 < \\ \hline 232.2 < \\ 127.2 < -1.03 < \end{array}$$

$$\begin{array}{r} 9 \quad 1 \end{array}$$

$$\begin{array}{r} 4.5 \\ 127.0 \\ 12.3 \\ 118.9 \end{array} \quad \begin{array}{r} 122.5 < \\ 106.6 < \\ \hline 229.1 < \\ 130.9 < -0.96 < \end{array} \quad -1.00$$
Index below b

$$\begin{array}{r} 9 \quad 2 \end{array}$$

$$\begin{array}{r} 100.0 \\ 206.4 \\ 93.8 \\ 218.5 \end{array} \quad \begin{array}{r} 106.4 < \\ 124.7 < \\ \hline 231.1 < \\ 124.9 < -1.00 < \end{array}$$

$$\begin{array}{r} 9 \quad 4 \\ \hline 5 \quad 37.0 \\ +3 \quad 24.5 \end{array}$$

$$\begin{array}{r} 96.4 \\ 218.2 \\ 101.3 \\ 212.2 \end{array} \quad \begin{array}{r} 121.2 < \\ 110.9 < \\ \hline 232.7 < \\ 127.3 < -1.04 < \\ \hline 1.01 < \end{array} \quad -1.02$$

Feb, 21, 1896.

$$\begin{array}{r} \text{1 V} \\ 9 \quad 5 \end{array}$$

Index below b

$$\begin{array}{r} 101.7 \\ 210.8 \\ 95.1 \\ 219.7 \end{array} \quad \begin{array}{r} 109.1 < \\ 124.6 < \\ \hline 233.7 < \\ 126.3 < -1.06 < \end{array}$$

$$\begin{array}{r} 9 \quad 6 \\ 1 \end{array}$$

Index below a

$$\begin{array}{r} 95.4 \\ 218.7 \\ 97.7 \\ 202.5 \end{array} \quad \begin{array}{r} 123.3 < \\ 111.1 < \\ \hline 235.1 < \\ 124.9 < -1.09 < \end{array} \quad -1.02$$

$$\begin{array}{r} 9 \quad 8 \end{array}$$

Index above a

$$\begin{array}{r} 12.7 \\ 119.8 \\ 1.3 \\ 126.8 \end{array} \quad \begin{array}{r} 107.1 < \\ 125.5 < \\ \hline 232.6 < \\ 127.4 < -1.03 < \end{array}$$

$$\begin{array}{r} 9 \quad 10 \\ \hline 8/2.9 \\ 9 \quad 7.2 \\ 5 \quad 37.0 \\ \hline +3 \quad 30.2 \end{array}$$

Index above a

$$\begin{array}{r} 3.4 \\ 127.0 \\ 10.4 \\ 119.7 \end{array} \quad \begin{array}{r} 123.6 < \\ 109.3 < \\ \hline 232.9 < \\ 127.1 < -1.04 < \\ \hline 8/4.22 \\ 1.06 < \end{array} \quad -1.04$$

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~~IV~~Index above. a

9 14

9.1
118.3

109.2

1.3
126.6125.3
234.5

125.5 - 1.07

9 15

1.5
127.9

126.4

- 1.09

8.9
118.5109.6
236.0

124.0 - 1.11

Index below b

17

98.8
210.0

111.2

93.2
221.6125.4
239.6

120.4 - 1.14

94.9
220.0

125.1

- 1.14

97.1
211.2114.1
239.2

120.2 - 1.12

4/15.5
- 1.14
$$\begin{array}{r}
 18 \\
 \hline
 4/64 \\
 9 \quad 16.0 \\
 5 \quad 37.0 \\
 \hline
 +3 \quad 39.0
 \end{array}$$

Feb. 21, 1896.

Index below 4

$$\begin{array}{r} \text{VI} \\ 9 \quad 20 \end{array}$$

$$\begin{array}{r} 99.5 \\ 213.4 \\ 92.5 \\ 220.3 \end{array} \quad \begin{array}{r} 113.9 < \\ 127.8 < \\ \hline 241.7 < \\ 114.3 < \end{array} \quad -173 <$$

$$9 \quad 21$$

$$\begin{array}{r} 94.8 \\ 219.6 \\ 96.8 \\ 215.2 \end{array} \quad \begin{array}{r} 124.8 < \\ 116.4 < \\ \hline 242.2 < \\ 116.4 < \end{array} \quad -1.2 <$$
Index above 2

$$9 \quad 23$$

$$\begin{array}{r} 190.2 \\ 304.8 \\ 182.4 \\ 309.8 \end{array} \quad \begin{array}{r} 114.6 < \\ 127.4 < \\ \hline 242.0 < \\ 114.0 < \end{array} \quad -1.2 <$$

$$\begin{array}{r} 9 \quad 24 \\ \hline 84.2 \\ 9 \quad 22.0 \\ 5 \quad 37.0 \\ \hline +3 \quad 45.0 \end{array}$$

$$\begin{array}{r} 184.2 \\ 309.8 \\ 193.0 \\ 303.5 \end{array} \quad \begin{array}{r} 125.6 < \\ 110.5 < \\ \hline 236.1 < \\ 123.9 < \end{array} \quad \begin{array}{r} -1.12 \\ \hline 114.2 < \\ \hline -1.21 \end{array}$$

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$$\begin{array}{r} \overline{VII} \\ 9 \end{array} 26$$

Index above a

188.5	111.7 <
300.2	
182.2	$\frac{124.5 <}{240.2 <}$
310.7	119.2 < -120 <

$$9 \quad 27$$

182.7	125.9 <	-121
308.6		
190.1	$\frac{115.8 <}{241.3 <}$	
305.5	114.7 < -122 <	

$$9 \quad 29$$

Index above b

97.2	116.2 <
213.4	
89.6	$\frac{130.8 <}{246.6 <}$
220.0	112.8 < -134 <

$$\begin{array}{r} 9 \quad 31. \\ \hline K/113 \\ \hline 9 \quad 242 \\ \hline 5 \quad 370 \\ \hline +3 \quad 512 \end{array}$$

91.4	130.7 <	-134
222.1		
97.5	$\frac{115.6 <}{246.3 <}$	
213.1	113.7 < -133 <	
	$\frac{K/5.09}{-1.27}$	

Feb. 21, 1896.

Index below b

$$\begin{array}{r} \text{VIII} \\ 9 \quad 32 \end{array}$$

$$\begin{array}{r} 98.6 \\ 213.0 \\ 92.7 \\ 221.2 \end{array} \quad \begin{array}{r} 114.4 < \\ 124.5 < \\ \hline 242.9 < \\ 117.1 < - 126 < \end{array}$$

$$\begin{array}{r} 9 \quad 33 \end{array}$$

$$\begin{array}{r} 92.5 \\ 220.4 \\ 95.0 \\ 213.9 \end{array} \quad \begin{array}{r} 127.9 < \\ 114.9 < \\ \hline 246.4 < \\ 113.2 < - 134 < \end{array} \quad -1.30$$
Index above a

$$\begin{array}{r} 9 \quad 35 \end{array}$$

$$\begin{array}{r} 189.0 \\ 306.8 \\ 182.7 \\ 310.2 \end{array} \quad \begin{array}{r} 117.4 < \\ 127.5 < \\ \hline 245.3 < \\ 114.7 < - 131 < \end{array}$$

$$\begin{array}{r} 36 \\ \hline 4136 \\ 9 \quad 340 \\ \hline 5 \quad 370 \\ +3 \quad 570 \end{array}$$

$$\begin{array}{r} 173.4 \\ 310.5 \\ 191.3 \\ 303.4 \end{array} \quad \begin{array}{r} 127.1 < \\ 112.1 < \\ \hline 239.2 < \\ 120.2 < - 112 < \\ \hline 45.09 \\ -1.27 \end{array} \quad -1.24$$

Feb. 21, 1896.

IX
9 37

191.4
304.3
185.6
310.5

Index above a

112.9 <

124.9 <

237.4 <

122.2 < -1.14 <

9 38

181.5
311.4
189.4
307.5

129.9 <

114.1 <

244.0 <

112.0 < -1.37 <

~~-1.10~~
-1.26

9 39

279.6
31.8

Index above b

112.2 <

272.9
39.4

126.5 <

234.7 <

121.3 < -1.16 <

271.5
38.7
280.2
32.0

127.2 <

111.4 <

239.0 <

121.0 < -1.17 <

444.44

-1.21

-1.16

41
4155
9 34.2
5 37.0
+4 1.2

Feb 2, 1896

Indy libr 5

X
9 48

280.8
31.0 110.2
272.0
38.8 126.2
237.0
123.0 - 1.13

99

271.6
39.0 127.5
276.5
35.4 112.9
246.3
113.7 - 1.33

-1.23

Indy aboir. 2

9 57

3.5
122.3 112.2
0.0
131.7 131.7
250.5
109.5 - 1.43

9 52
4200
9 500
5 37.0
+ 13.0

2.8
130.5 127.7
9.0
123.5 114.5
242.2
117.2 - 1.24
45.13
-1.22

-1.34

Feb. 21, 1896.

Indy above a

五

9 59

$$\begin{array}{r} 120 \\ 124.7 \\ 0.3 \\ 133.2 \end{array} \quad \begin{array}{r} 112.7 \angle \\ 132.9 \angle \\ \hline 245.6 \angle \\ 1144 \angle - 132 \angle \end{array}$$

101

$$\begin{array}{r}
 1.2 \\
 130.0 \quad (2.2) \\
 140 \\
 122.5 \quad (12.5) \\
 \hline
 241.3 \quad (241.3) \\
 \hline
 114.7 \quad (114.7)
 \end{array}$$

End of letter 6

102

$$\begin{array}{r} 97.4 \\ 215.5 \\ \hline 91.1 \\ 223.2 \\ \hline 109.2 \end{array}$$
$$\begin{array}{r} 10 \quad 3 \\ \hline \times 5 \\ \hline 10 \quad 1.2 \\ \times 5 \quad 37.0 \\ \hline + 40 \quad 24.2 \end{array}$$

$$\begin{array}{r} 93.7 \\ 221.3 \\ 94.3 \\ 214.8 \\ \hline 127.6 \end{array}$$

$$\begin{array}{r} 120.5 \\ 244.1 \\ \hline 111.9 \end{array}$$

$$\begin{array}{r} 111.9 \\ -1.37 \\ \hline 110.53 \\ -1.33 \\ \hline 109.20 \end{array}$$

Feb 21, 1894.

$$\begin{array}{r} \text{XII} \\ 10 \quad 4 \end{array}$$

Index above b

94.0	123.1
217.1	
89.5	133.1
222.6	<u>256.2</u>
	103.0 - 1.56

$$\begin{array}{r} 10 \quad 5 \end{array}$$

Index above a

90.0	132.2
222.2	
96.3	119.7
216.0	<u>251.9</u>
	100.1 - 1.46

-1.51

$$\begin{array}{r} 10 \quad 6 \end{array}$$

Index above a

191.1	113.0
304.1	
183.0	129.5
312.5	<u>242.5</u>
	117.5 - 1.25

$$\begin{array}{r} 10 \quad 7 \\ \hline 122 \\ 10 \quad 5.5 \\ +5 \quad 37.0 \\ +5 \quad 22.5 \end{array}$$

182.0	124.0
310.0	
193.4	112.7
306.1	<u>240.7</u>
	119.3 - 1.21
	<u>45.48</u>
	-1.37

-1.23

Feb 21, 1896.

Ludes above a

$$\begin{array}{r} \text{XIII} \\ 10 \quad 22 \end{array}$$

187.0

305.8

186.0

309.8

114.4 <

129.4 <

244.6 <

111.4 < - 1.39 <

$$\begin{array}{r} 10 \quad 24 \end{array}$$

182.4.4

310.0

186.0

305.3

124.0 <

-1.36

119.3 <

247.3 <

112.7 < - 1.36 <

Ludes above b

$$\begin{array}{r} 10 \quad 26 \end{array}$$

98.4

[3] 13.3

98.1

223.1

114.9 <

135.0 <

249.9 <

110.1 < - 1.42 <

$$\begin{array}{r} 10 \quad 27 \\ \hline \end{array}$$

419.

10 24.4

5 37.0

+K 47.2

90.0

221.8

94.2

216.5

131.2 <

-1.46

122.3 <

254.1 <

105.9 < - 1.51 <

45.62

-1.42

Feb 21, 1896

~~714~~

10 28

$$\begin{array}{r}
 96.2 \\
 214.3 \\
 86.8 \\
 \hline
 224.4
 \end{array}
 \begin{array}{r}
 114.1 < \\
 137.6 < \\
 \hline
 255.7 < \\
 104.3 < -155 <
 \end{array}$$

Index below b

10 29

$$\begin{array}{r}
 .88.8 \\
 226.2 \\
 93.9 \\
 \hline
 217.6
 \end{array}
 \begin{array}{r}
 137.4 < \\
 123.7 < \\
 \hline
 261.1 < \\
 94.9 < -1.62 <
 \end{array}
 \quad -1.62$$

Index above a

10 31

$$\begin{array}{r}
 186.0 \\
 306.0 \\
 179.0 \\
 \hline
 312.5
 \end{array}
 \begin{array}{r}
 120.0 < \\
 133.5 < \\
 \hline
 253.5 < \\
 106.5 < -1.50 <
 \end{array}$$

$$\begin{array}{r}
 10 \quad 33 \\
 \hline
 4/121
 \end{array}$$

$$\begin{array}{r}
 10 \quad 30.2 \\
 \hline
 \sqrt{\quad} \quad 37.0 \\
 +4 \quad \sqrt{3.2}
 \end{array}$$

$$\begin{array}{r}
 180.5 \\
 313.0 \\
 177.8 \\
 \hline
 304.2
 \end{array}
 \begin{array}{r}
 132.5 < \\
 115.4 < \\
 \hline
 247.9 < \\
 112.1 < -1.37 < \\
 \hline
 4/6.10 \\
 -1.52
 \end{array}
 \quad -1.44$$

Feb. 2, 1896.

Index above, a
~~XV~~
 10 35

187.2
 305.0 117.2 <
 179.5
 314.2 134.7 <
 252.5 <
 107.56 - 1.42 <

10 36

179.8
 314.5 134.7 < ~~(1.53)~~
 187.0
 308.0 122.0 < - 1.53
 256.7 <
~~109.2~~ ~~1.43~~ - 1.58 <
 103.3 ✓

10 38

278.5
 30.2 111.7 <
 249.8
 43.0 133.2 <
 244.9 <
 115.1 < - 1.30 <

10 39

414.2
 10 37.0
 5 37.0
 +5 0.0

269.1
 43.2 134.1 < - 1.32
 278.5
 31.3 112.2 <
 21 246.9 <
 113.1 < - 1.35 <
 - 1.39

~~1.71~~
~~1.428~~

M = 1.43

Feb. 21, 1896.

Index below b

$$\begin{array}{r} \text{XVI} \\ 10 \quad 41 \end{array}$$

$$\begin{array}{r} 281.7 \\ 31.9 \\ 268.2 \\ 40.2 \\ \hline 110.2 < \\ 132.0 < \\ \hline 242.2 < \\ 117.4 < -1.2K < \end{array}$$

$$\begin{array}{r} 10 \quad 42 \end{array}$$

$$\begin{array}{r} 268.0 \\ 043.6 \\ 280.4 \\ 35.2 \\ \hline 135.6 < \\ 114.2 < \\ \hline 250.4 < \\ 109.6 < -1.43 < \end{array} \quad -1.3K$$
Index above a

$$\begin{array}{r} 10 \quad 44 \end{array}$$

$$\begin{array}{r} 5.0 \\ 123.9 \\ 356.5 \\ 134.0 \\ \hline 114.9 < \\ 137.5 < \\ \hline 256.4 < \\ 103.6 < -1.57 < \end{array}$$

$$\begin{array}{r} 10 \quad 45 \\ \hline K/12. \\ 10 \quad K3.0 \\ 5 \quad 37.0 \\ \hline 15 \quad 6.0 \end{array}$$

$$\begin{array}{r} 359.4 \\ 134.3 \\ 5.0 \\ 124.0 \\ \hline 134.9 < \\ 119.0 < \\ \hline 253.9 < \\ 106.1 < -1.51 < \\ \hline -1.4K \end{array} \quad -1.5K$$

Feb 21, 1896.

Index above a~~XVII~~
10 46

11.0	112.3
123.3	
356.0	137.6
133.6	<u>249.9</u>
	110.1 - 1.42

10 47

359.2	13 K.K	-1.46
133.6		
7.0	114.6	
125.6	<u>253.0</u>	
	107.0 - 1.49	

Index below b

10 50

92.5	126.3
218.8	
88.0	134.2
226.2	<u>26 K.V</u>
	95.5 - 1.77

10 52

87.8	134.2	-1.73
226.0		
95.2	123.1	
218.3	<u>261.3</u>	
	94.7 - 1.69	
	<u>46.37</u>	
	-1.59	

4195	
10 K.A.A	
5 37.0	
+5 11.2	

Feb 21, 1896.

Index below b

XV 111
10 53

96.6 114.2 <
215.4
84.5 145.1 <
229.6 263.9 <
96.1 < -1.75 <

10 54

87.0 139.2 <
226.8 -1.72
93.5 122.1 <
214.6 261.9 <
94.1 < -1.70 <

Index above a

10 56

187.4 114.3 <
305.7
175.4 134.4 <
316.8 256.7 <
103.3 < -1.54 <

10 58

178.1 137.4 <
315.5 -1.59
187.4 120.2 <
307.6 257.6 <
102.4 < -1.60 <
46.63
1.66 <

421.

10 55.2 <
5 37.0
+ 5 14.2

Feb. 2, 1896

$$\begin{array}{r} \text{XIX} \\ 10 \quad 59 \end{array}$$
Index above a

$$\begin{array}{r} 185.0 \\ 307.4 \\ 178.0 \\ 317.0 \end{array} \quad \begin{array}{r} 122.4 < \\ 139.0 < \\ \hline 261.4 < \\ 94.6 < -1.69 < \end{array}$$

16 00

$$\begin{array}{r} 171.7 \\ 316.1 \\ 187.3 \\ 305.6 \end{array} \quad \begin{array}{r} 144.4 < \\ 114.3 < \\ \hline 262.7 < \\ 97.3 < -1.72 < \end{array} \quad \begin{array}{r} (170) -1.70 \end{array}$$
Index above b

16 2

$$\begin{array}{r} 277.2 \\ 34.8 \\ 269.5 \\ 43.9 \end{array} \quad \begin{array}{r} 119.6 < \\ 134.4 < \\ \hline 254.0 < \\ 106.0 < -1.51 < \end{array}$$

$$\begin{array}{r} 11 \quad 3 \\ \hline 44 \\ 11 \quad 1.0 \\ 5 \quad 37.0 \\ \hline +5 \quad 24.0 \end{array}$$

$$\begin{array}{r} 270.1 \\ 43.9 \\ 275.2 \\ 46.1 \end{array} \quad \begin{array}{r} 133.2 < \\ 130.9 < \\ \hline 264.7 < \\ 95.3 < -1.77 < \\ \hline 86.69 \\ \hline -1.67 < \end{array} \quad \begin{array}{r} (1.64) \\ -1.64 \end{array}$$

Feb. 22, 1896.

e Ceto

Mols.

$$\begin{array}{r} 2 \quad 4 \\ 6 \quad 0 \\ \hline 3 \quad 5-6 \end{array}$$

$\rightarrow 2.5$

Index to right.

7 37

199.0

208.9

199.9

207.9

9.9 <

8.0 <

17.9 <

5.53 <

200.2

208.1

199.5

207.7

7.9 <

8.2 <

16.1 <

5.76 <

Index to left (5.64)

7 41

288.2

297.4⁰

288.8

297.4

7.3 <

8.6 <

15.9 <

5.79 <

288.7

297.3

289.9

297.1

8.6 <

7.2 <

15.8 <

5.80 <

(5.80)

$M = (5.72)$

7 42

4(159)

7-39 45

Feb. 22, 1896.

No. 2.

←

— 1

— 2 74.4

No. 1.

— 1

— 2

— 3

— 4

— 73.9

No. 3.

— 1

— 2

— 3

— 4

— 67.7

No. 4.

— 1

— 2

— 3

— 4

— ~~61.9~~ 61.9

The above are expts. for focus of the two lenses in the two achromatics of Phot. T. when down at eye piece and also when way up the track.

R. Lyncis

6	49
6	55
<hr/>	
	6

+ 55.1

Sky too bright.

Feb. 22, 1896.

 Σ 528

Mobs.

$$\begin{array}{r} 4 \quad 15 \\ 6 \quad 55 \\ \hline 2 \quad 40 \end{array}$$

$$+ 25.3$$

Position angle 25° distance $20''$
 $5.6 + 9.8$

Index to left + above

8 36

279.1

306.3

276.1

310.7

27.2

33.6

60.8

2.83

8 37

278.3

307.1

279.1

306.2

28.8

27.1

55.9

$$\frac{3.02}{(2.92)}$$

Index to right + below

8 39

11.7

37.3

3.8

41.0

26.6

37.2

63.8

2.72

$$\begin{array}{r} 8 \quad 40 \\ \hline 8 \quad 38 \quad 0 \end{array}$$

4.7

43.9

9.1

36.1

39.2

27.0

66.2

$$\frac{2.64}{(2.68)}$$

$$M = (2.80)$$

Feb 22, 1896

Nova Aurigar

Mols.

$$\begin{array}{r}
 5 \quad 23. \\
 7 \quad 10. \\
 \hline
 1 \quad 47
 \end{array}
 \quad + 32.0$$

Moon too near region and sky too bright. Region identified.

 $\approx 8'$ γ Pleiad.

Mols.

$$\begin{array}{r}
 3 \quad 40 \\
 7 \quad 30 \\
 \hline
 3 \quad 50
 \end{array}
 \quad + 23.7$$

Position Angl 280° distance $120''$
 $31.5 - 7.2$

Index to right & above

9	10	brightly disap.	>	116.8		
				141.2	24.4 <	
				115.0	<u>26.1</u> <	3.25
				141.1	50.5 <	

(3.27)

9	11			116.1		
				139.6	23.5	
				115.9	<u>26.1</u>	3.29
				142.0	49.6	

Feb. 22, 1896

Index to left & below

9 12

206.0

230.0

206.9

228.7

240

21.8

45.8

3.47

(3.40)

207.0

229.2

204.3

231.0

222

26.7

48.9

3.32

M = (3.34)

Feb. 2~~2~~⁴, 1896.

Ceti.

Mols.

2 4

6 0

3 56

-2.5

Index to right,

7 36

214.2

222.2

213.5

222.4

8.04

8.94

16.94

5.66

Feb 24, 1896.

Index to right.

$$\begin{array}{r} 3 \\ 7 \quad 37 \end{array}$$

213.6

222.2

214.1

222.3

8.6 <

8.2 <

16.8 <

5.67 <

(5.66)

Index to left.

$$\begin{array}{r} 38 \\ 4 \quad 38 \end{array}$$

303.8

311.8

303.5

312.1

8.0 <

8.6 <

16.6 <

5.70 <

~~302.9~~

302.9

312.2

303.7

311.9

9.3 <

8.2 <

17.5 <

M = (5.65-)

5.58 <

(5.64)

$$\begin{array}{r} 40 \\ 7 \quad 40 \\ \hline 4 \quad 151 \\ 7 \quad 37 \quad 45 \end{array}$$

Experiments with Photo. T. measured
Transit of bright star through the field. When
star The preceding and left hand image
is one which goes to left or more to
preceding apparently as the achromatics
are run up the track. While the following
(or right hand image) goes more to following
as the achromatics are run up the track
the left hand achromatic of photo. is the
old prism and the right hand achromatic
is the new.

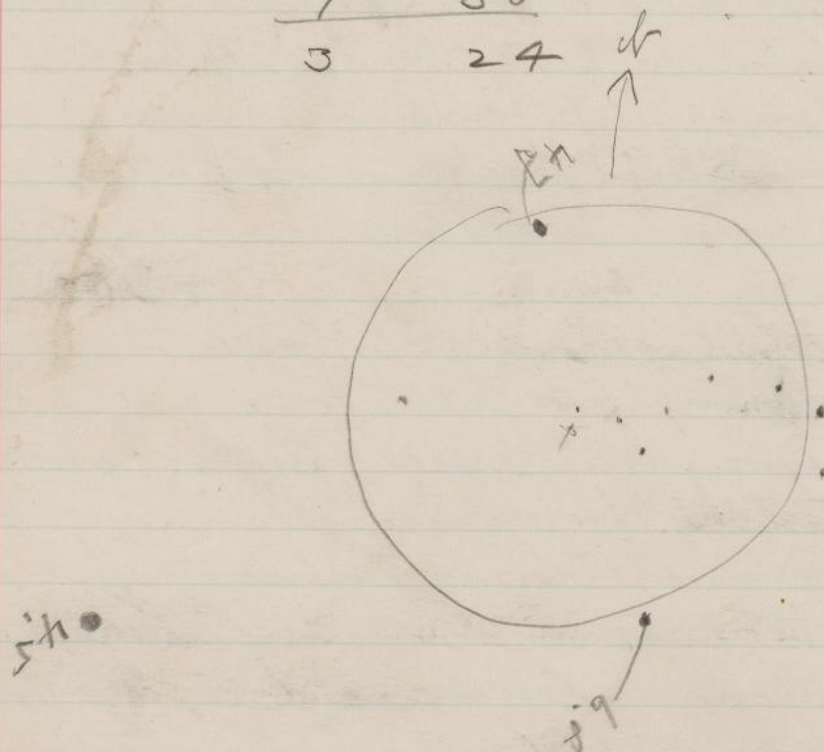
Feb. 24, 1896.

When achromatics are drawn close to eye-piece reading of ~~some~~ head of focusing screw is about 63.0 for preceding image. As achromatics are run up the track, reading of head of focusing screw has to be increased from 63.0 to through 0 to about 35.0 , that is not quite one revolution of screw-head. When achromatics are drawn pretty close to eye-piece focus on following image reads about 62.0 and when achromatics are run up the track focus on following image 58.0 . That is much less change of focus is necessitated on following image than on preceding image, during the motion of the achromatics up the track. However, the following image in general does not come to quite as sharp a focus as the preceding image, thus being a little more tendency to rings and spectrum effect on a bright star. The star used in the experiment is a naked eye star of about 3.5^m .

Feb. 24, 1896.

$$\begin{array}{r}
 4 \quad 6 \\
 7 \quad 30 \\
 \hline
 5 \quad 24
 \end{array}$$

+ 8.9



9 11

Clouds. Abandoned.

Feb 24 1896

 $\Sigma 3^{\text{II}}$ 2 Am 14 V 22

$$\begin{array}{r}
 4 \quad 16 \\
 5 \quad 10. \\
 8 \quad 00 \\
 \hline
 2 \quad 50
 \end{array}
 \begin{array}{r}
 = 17.0 \\
 + 40.0
 \end{array}$$

 $\Sigma 872$

$$\begin{array}{r}
 6 \quad 7. \\
 08 \quad 15 \\
 \hline
 2 \quad 8
 \end{array}
 \begin{array}{r}
 + 30.2
 \end{array}$$

9 42

clouds.

Pos. Ang. 210° dis. $12''$ Mag. 6.287.0
 due to night & below

$$\begin{array}{r}
 9 \quad 53 \quad \left. \begin{array}{l} \text{brighten} \\ \text{disap.} \end{array} \right\} \begin{array}{r}
 264.7 \\
 350.4 \\
 271.4 \\
 340.6
 \end{array}
 \end{array}
 \begin{array}{r}
 85.7 \\
 69.2 \\
 \hline
 154.9
 \end{array}
 \begin{array}{r}
 0.48
 \end{array}$$

9 54

272.3

340.0

264.5

349.8

$$\begin{array}{r}
 67.7 \\
 85.3 \\
 \hline
 153.0
 \end{array}$$

0.52

(0.50)

Feb. 24, 1896.

Index left above.

9 57

356.8

81.6

3.9

73.7

84.8

69.8

154.6

0.49

3.0

(M = 0.50)

$$\begin{array}{r} 9 \quad 59 \\ \hline 4(23) \\ 9 \quad 55 \quad 45 \end{array}$$

75.0

356.8

79.4

72.0

82.6

154.6

0.49

(0.49)

In above observation troubled somewhat by blurriness of images on account of clouds.

Σ 921 (A.M. 2)

6 24

+ 11.3

8 40

2 16

Index above & to right

10 10

28.5

46.6

30.8

48.2

18.1 <

17.4 <

35.5 <

7.03 <

Feb 24, 1896

10 12

$$\begin{array}{r} 28.9 \\ 46.9 \\ 27.0 \\ 46.3 \end{array}$$

$$\begin{array}{r} 18.0 < \\ 149.3 < \\ \hline 376.3 \end{array}$$

$$\begin{array}{r} 3.92 \\ 3.98 \\ (3.98) \end{array}$$

Quoted to left + below

16 14

$$\begin{array}{r} 114.3 \\ 140.9 \\ 719.1 \\ 1351 \end{array}$$

$$\begin{array}{r} 24.6 < \\ 16.0 < \\ \hline 40.6 < \end{array}$$

3.74 <

16 15

$$\begin{array}{r} 4(11) \\ 10 \ 12 \ 45 \end{array}$$

$$\begin{array}{r} 118.2 \\ 137.2 \\ 117.1 \\ 138.0 \end{array}$$

$$\begin{array}{r} 190 < \\ 20.9 < \\ 39.9 < \\ (M = 3.87) \end{array}$$

$$\begin{array}{r} 3.77 < \\ (3.76) \end{array}$$

Pos. Ang 100° dis. 8" Mag 6.2 + 9.8

The above observations are of wrong star. It was found that the Pos. was radically wrong. $\delta = 17.3$ which was about right.

The following is a correct observation.

Feb 24 1896

 ≤ 921 H. N. 2.

$$\begin{array}{r} 624 \\ 900 \\ \hline 236 \end{array}$$

+ 11.3

Posi. Aug 10° dis $20''$ May 4.1 8.4
 Index to right + above.

10	30	brighten } decap. }	205.5		
			231.7	26.2	
			200.5	23.7	3.28
			234.2	49.9	

10	31		196.3		
			235.0	38.7	
			204.5	25.5	2.71
			230.0	64.2	(3.00)

Index to left + above.

10	33		295.7		
			319.5	23.8	
			290.0	34.9	2.91
			324.9	58.7	

10	34		285.0		
			326.5	41.5	
			295.0	25.0	2.62
			320.0	66.5	(2.76)

$$M = (2.88)$$

Feb. 24, 1896.

 Σ 747 133 Orionis B

$$\begin{array}{r}
 5- \\
 9 \\
 \hline
 3
 \end{array}
 \begin{array}{r}
 29 \\
 10 \\
 \hline
 41
 \end{array}
 \begin{array}{r}
 -6.1
 \end{array}$$

Pos. Ang 240° dis $40''$ Mag. 5.4, 6.5
Index to left.

10 ~~48~~ ⁴⁸ } bright
53 } dis. up. } > 1.5

$$\begin{array}{r}
 744 \\
 41 \\
 \hline
 720
 \end{array}
 \begin{array}{r}
 72.9 \\
 67.9 \\
 \hline
 140.8
 \end{array}
 \begin{array}{r}
 0.76
 \end{array}$$

10 ~~51~~ ⁵¹ } 5.7 3.6
51 } 67.5 71.0
359.9
75.9

$$\begin{array}{r}
 62.8 \\
 76.0 \\
 \hline
 138.8
 \end{array}
 \begin{array}{r}
 (0.78) \\
 0.80
 \end{array}$$

Index to right.

10 54

$$\begin{array}{r}
 91.2 \\
 165.0 \\
 98.0 \\
 \hline
 158.9
 \end{array}
 \begin{array}{r}
 73.8 \\
 60.9 \\
 \hline
 134.7
 \end{array}
 \begin{array}{r}
 0.88
 \end{array}$$

10 55

$$\begin{array}{r}
 97.7 \\
 159.6 \\
 87.5 \\
 \hline
 146.0 + 166.2
 \end{array}
 \begin{array}{r}
 61.9 \\
 78.5 \\
 \hline
 140.4
 \end{array}
 \begin{array}{r}
 (0.82) \\
 0.77
 \end{array}$$

$$(M = 0.80)$$

Feb. 25. 1896.

U Pysari.

Gr. st.

$$\begin{array}{r} 23 \quad 51 \quad +15.1 \\ 24 \quad 30 \\ \hline +K \quad 39 \end{array}$$

$$\begin{array}{r} 23 \quad K9 \quad +15.5 \\ 24 \quad K0 \\ \hline +K \quad 51 \end{array}$$

$$\begin{array}{r} 23 \quad KA \quad +14.4 \\ 24 \quad 57 \\ \hline +5 \quad 9 \end{array}$$

$$\begin{array}{r} 29 \quad 15 \\ \hline +5 \quad 27 \end{array}$$

$$\begin{array}{r} \sqrt{h} \quad 25 \quad 05 \quad S.T. \\ = 6^h \quad 50^m \quad K9^s \quad E.T. \end{array} \quad \begin{array}{r} 219.2 \\ 296.0 \\ 216.0 \\ 305.5 \end{array} \quad \begin{array}{r} 76.8 < \\ 89.5 < \\ \hline 166.3 < \end{array} \quad 0.26 <$$

$$\begin{array}{r} \sqrt{h} \quad 29 \quad 30 \quad S.T. \\ = 6 \quad 55 \quad 1A. \quad E.T. \end{array} \quad \begin{array}{r} 216.2 \\ 302.2 \\ 218.4 \\ \hline 304.3 \end{array} \quad \begin{array}{r} 86.0 < \\ 88.0 < \\ \hline 174.0 < \end{array} \quad \begin{array}{l} (0.18) \\ 0.11 < \end{array}$$

Feb 25, 1896

Index to above

7 3

312.7

24.5

309.4

26.4

71.8 <

77.0 <

148.8 <

0.60 <

7 5

$$\begin{array}{r} 4 \overline{) 2347} \\ 6 \quad 58 \quad 31.8 \end{array}$$

308.3

23.5

313.0

23.5

75.2 <

69.5 <

144.7 <

(0.64)

0.68 <

4 $\overline{) 165}$

= 0.412

7 8

~~28.7~~ ~~313.5~~
~~123.1~~ ~~20.2~~

13.10

196.8

116.8

210.4

65.8 <

93.6 <

159.4 <

0.39 <

7 12

117.2

211.2

132.3

201.9

94.0 <

69.6 <

163.6 <

0.31 <

Index below

7 16

211.8

297.2

216.4

291.2

85.4 <

74.8 <

160.2 <

0.38 <

Feb. 25, 1896

$$\begin{array}{r} 7 \quad 18 \\ \hline 7 \quad 13 \quad 30 \end{array}$$

$$\begin{array}{r} 219.3 \\ 293.6 \\ 214.5 \\ \hline 297.3 \end{array}$$

$$\begin{array}{r} 74.3 \\ 82.8 \\ \hline 157.1 \end{array} \quad M = \frac{0.44}{4(1.52)} = 0.38$$

Index above

7 20

$$211.5$$

$$299.2$$

$$87.7 <$$

$$220.0$$

$$72.6 <$$

$$0.38 <$$

$$292.6$$

$$160.3 <$$

(0.36)

7 21

$$217.1$$

$$290.3$$

$$73.2 <$$

$$212.2$$

$$88.5 <$$

$$0.38 <$$

$$300.7$$

$$161.7 <$$

Index above.

7 23

$$210.6$$

$$300.1$$

$$89.5 <$$

$$198.8$$

$$110.7 <$$

$$+ 0.38 <$$

$$309.5$$

$$200.2 <$$

$$159.8 <$$

(0.36)

7 24

$$198.4$$

$$308.6$$

$$110.2 <$$

$$212.5$$

$$87.5 <$$

$$+ 0.38 <$$

$$300.0$$

$$197.7 <$$

$$162.3 <$$

$$4(2.5) = 0.362$$

 $M = (0.36) <$

Feb. 25, 1896.

Index above

7 28

$$\begin{array}{r}
 124.2208.5 \\
 194.1300.5 \\
 114.3 \\
 207.8
 \end{array}$$

$$\begin{array}{r}
 69.9 \angle \\
 93.5 \angle \\
 \hline
 163.4 \angle
 \end{array}
 \quad 0.32 \angle$$

7 29

$$\begin{array}{r}
 114.9 \\
 213.5 \\
 128.9 \\
 204.5
 \end{array}$$

$$\begin{array}{r}
 98.6 \angle \\
 75.6 \angle \\
 \hline
 174.2 \angle
 \end{array}
 \quad 0.11 \angle$$

(0.22)

Index below

7 31

$$\begin{array}{r}
 216.8 \\
 286.8 \\
 208.5 \\
 293.9
 \end{array}$$

$$\begin{array}{r}
 70.0 \angle \\
 85.4 \angle \\
 \hline
 155.4 \angle
 \end{array}
 \quad 0.47 \angle$$

208.6

(0.38)

7 33

$$\begin{array}{r}
 4 \overline{) 121} \\
 7 \quad 30 \quad 15
 \end{array}$$

$$\begin{array}{r}
 300.6 \\
 217.7 \\
 290.0
 \end{array}$$

$$\begin{array}{r}
 92.0 \angle \\
 72.3 \angle \\
 \hline
 164.3 \angle
 \end{array}
 \quad \begin{array}{r}
 0.30 \angle \\
 4 \overline{) 120} \\
 0.30
 \end{array}$$
 $M = (0.30) \angle$

Feb 25, 1896.

B. 236.

6	19	19.7
	<u>20</u>	
	21	20.0

Ballou 103.

7	45	00
	<u>46</u>	00
	47	00

∴ B. 236 is 2^m 40.6 slow.
 a Ceti.

M. de.

2 4

-2.5

6 30

4 26

Index to right.

7 51

2 13.3

2 22.4

9.1 <

2 14.2

8.7 <

2 22.9

17.8 <

5.54 <

7 53

2 13.7

2 22.1

8.4 <

2 13.7

8.7 <

2 22.4

17.1 <

5.63 <

Index to left.

(5.58)

8 1

3 02.5

3 12.2

9.7 <

3 04.3

7.9 <

3 12.2

17.6 <

5.57 <

Feb 25, 1896.

$$\begin{array}{r}
 83 \\
 \hline
 757^0 \\
 \quad 241 \\
 \hline
 75941
 \end{array}$$

304.1

311.9

7.84

(5.64)

~~33~~ 303.28.84

312.0

16.64

57.704

(M = 5.61)

$$\begin{array}{r}
 42.44 \\
 \hline
 5.61
 \end{array}$$

B* Orionis.

Experiments to determine amount of leak
in Nicol Prism.

$$\begin{array}{r}
 5 \quad 9 \\
 6 \quad 50 \\
 \hline
 1 \quad 41
 \end{array}
 \quad - 8.3$$

A 3 (bright star), (bright star) 1 h

C compared with D

Index to right + below

8 53

54.8

64.1

9.3

57.2

56.9

7.1

64.0

16.4

Feb. 25, 1896.

Lucky to night + above

8 54

56.3

64.0

56.5

63.8

7.7 <

7.3 <

157.0 <

5.92 <

Lucky to left + above

8 58

145.0

103.6

146.2

153.1

8.6 <

6.9 <

107.5 <

5.85 <

(5.88)

146.0

153.0

145.8

153.6

7.0

7.8

14.8

5.95

Same again.

144.9

153.2

145.6

152.8

8.3 <

7.2 <

157.5 <

5.85 <

(5.86)

9 5

145.5

153.2

145.3

153.0 153.4

7

p. 7 <

7.7 <

157.4 <

5.86 <

9 6

Feb 25, 1896.

Index to night + below

9 9

236.5

244.1

7.6 <

236.1

7.1 <

5.96 <

243.2

14.7 <

(5.97)

$$\begin{array}{r} 9 \quad 11 \\ \hline 9 \quad 7 \quad 45 \end{array}$$

236.5

243.6

7.1 <

237.0

7.5 <

5.98 <

244.5

14.6 <

D compared with *Index above.*
brighter or
disapp. >

9 14

222.2

254.2

32.0 <

220.0

38.2 <

2.50 <

258.2

70.2 <

(2.48)

9 15

218.7

259.8

41.1 <

223.8

30.1 <

2.47 <

253.9

71.2 <

~~Index above~~

9 23

301.5

345.0

43.5 <

304.5

48.3 <

1.87 <

352.8

91.8 <

Feb. 25, 1896

Index below

$$\begin{array}{r} 9 \quad 24 \\ \hline 9 \quad 19 \quad 0 \end{array}$$

310.2

350.0

314.6

$$\underline{344.6}$$

39.8

30.0

$$\underline{69.8}$$

2.51

Index above.

$$\begin{array}{r} 9 \quad 19 \end{array}$$

220.8

254.9

220.9

260.2

34.1 <

39.3 <

$$\underline{73.4 <}$$

2.40 <

$$\begin{array}{r} 9 \quad 20 \end{array}$$

219.1

259.9

224.2

254.7

40.8 <

30.5 <

$$\underline{71.3 <}$$

2.46 <

(2.43)

$$\begin{array}{r} 9 \quad 25 \end{array}$$

$$\begin{array}{r} 314.6 \\ \hline 310.2 \end{array}$$

343.6

311.8

346.0

Index below.

29.0 <

34.2 <

$$\underline{63.2 <}$$

2.74 <

$$\begin{array}{r} 9 \quad 27 \end{array}$$

314.0

348.9

314.5

343.2

38.9 <

28.7 <

$$\underline{67.6 <}$$

2.59 <

(2.66)

Feb. 25, 1896.

D compared with B

Index below

9 30	316.4		
	343.9	27.5	
	314.2	<u>30.9</u>	
	345.1	58.4	2.92

9 31	312.3		
	341.9	29.6	(2.94)
	313.9	<u>28.1</u>	
	342.0	57.7	2.95

Index above

9 37	43.0		
	75.8	32.8	
	42.5	<u>32.0</u>	
	74.5	64.8	2.62

9 39	42.6		(2.68)
	76.4	33.8	
	42.5	<u>31.3</u>	
	73.8	65.1	2.67

Feb, 25, 1896.

Index above

9	33	317,0		
		343,2	26.2 <	
		314,2	28.9 <	
		343,1	<u>55.1</u> <	3.05 <

9	34	313,3		
		342,2	28.9 <	(3.08) <
		315,1	25.1 <	
		340,2	<u>54.0</u> <	3.10 <

Index above

9	40	43,2		
		75,3	32.1 <	
		44.5	<u>32.0</u> <	
		76,5	64.1 <	2.71 <

9	41	42,1		(2.69)
		75,8	33.7 <	
		42,4	31.4 <	
		73.8	<u>65.1</u> <	2.67 <

Feb. 25, 1896

Call bright star C and
 " 9th mag. D
 " brightest 12th mag star H
 " faintest " " " B
D ~~B~~ precedes C ~~1/2 arc~~ 0.5 and is - 9'
 north of it.

Star H follows star C 1^m 10.59
 and is 3' of arc south of it.

Star B follows star H 4.50 and
 is about 13' of arc north of it.

H 4 B

Bright star C is κ Orionis. (mag. by H.P. = 2.22)
 It is fol. and flr. of pair.

Feb. 27, 1896.

o Ceti

U.S.

2	4
6	0
3	56

- 2° 5'

Feb. 27, 1896.

Index left + below

7	20	303.1		
		312.5	9.4 <	
		304.2	<u>6.9 <</u>	
		311.1	16.3 <	5.74 <

7	21	304.3		
		311.0	6.7 <	
		303.0	<u>9.5 <</u>	
		312.5	16.2 <	5.75 <
				(5.74)

Index right + above

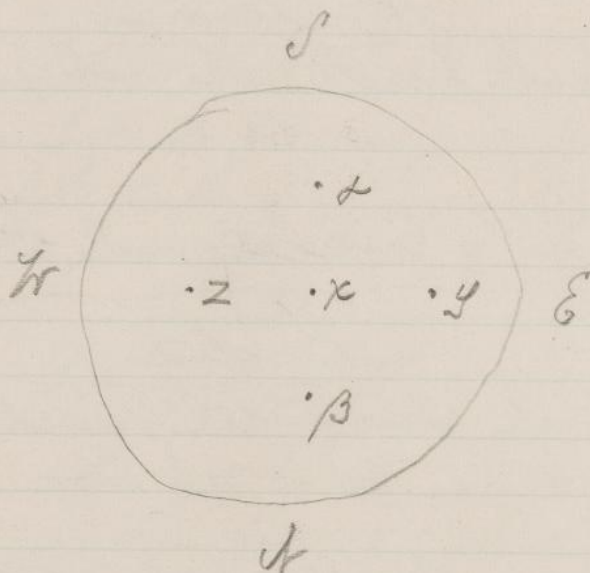
7	23	33.2		
		42.6	9.4 <	
		34.5	<u>7.2 <</u>	
		41.7	16.6 <	5.70 <

7	25	33.3	33.5		
		43.1	42.0	9.8 <	5.5
		34.4	33.2	<u>7.5 <</u>	9.9
		41.9	43.1	17.3 <	8.4
					5.61
					5.62 (5.66)
					5.41
					4) 2.81
					Mean (5.70) <

Feb 27, 1896.

α \times Orionis.
Experiments to determine leak of Nicol.

$$\begin{array}{r} -5 \quad 42 \\ \underline{6 \quad 25} \\ 43 \end{array} \quad -9.7^{\circ}$$



Leak of Nicol. Index above.
In position of α , leak = star 6 of page 67.
" " " " " = " " " " "
" " " " " = " " " " "

Circle Reads $\sqrt{3.2}$

In position of γ , leak = 4 star 8 e
" " " " " = 5 " 8 e
" " " " " = 4 " e e

Circle reads $\sqrt{3.6}$
Index above.

Feb. 27, 1896.

Index above.

In position +, ~~test~~, $\frac{L}{L} \sqrt{L}, L 1 b$
 " " " " $L = b$
 " " " " $L = b$
 Circle reads $\sqrt{2.1}$

Position 2.

Leak practically extinguished

" " "

" " "

Circle reads $\sqrt{3.9}$

Position B

Leak almost extinguished and = ~~star~~ d

" " " " = " "

" " " " = " "

Circle reads $\sqrt{5.2}$

Star $\frac{L}{L}$ is the 10th mag. which slightly precedes star a. (that is, betw. of pair).

Star $\frac{L}{L}$ is the faintest of all the stars used and is in the right upper part of field when $\frac{L}{L}$ and a are in center.

Feb. 27. 1896.

Index below.

Position α

323°.2 b 3 L. L 1 δ f

324°.1 " " " " " "

324°.1 L = δ f

311. K
323.2

Index below

Position γ

325°.3 δ 1 L.

324°.5 L = δ f

325°.4 f δ 1 L

151.6
325.2 In this position, leak is about extinguished

Index below.

Position ϵ

324°.2 L 2.5 ϵ e

324°.1 " " "

324°.5 " 2 ϵ e

324.2
324.3

Index below.

Position ζ

322°.5 b ³2.5 L. L 1 δ f

322°.9 b 2 L. L 2 δ f

322°.6 b 3 L. L 2 δ f

2.0
322.7

Index below.

Position β

323°.6 L extinguished.

323°.4 " "

323°.4 " "

323.4
323.4

Feb. 27, 1896.

Index above.

Position X

$\sqrt{2.9}$	a 2 L. L 2 b
$\sqrt{2.5}$	a 1.5 L. L 2 b
$\sqrt{2.6}$	a 1.5 L. L 1 b
<u>2.0</u>	
$\sqrt{2.7}$	

Index above.

Position Y

$\sqrt{2.5}$	L 3 & e
$\sqrt{2.5}$	L 3.5 & e
$\sqrt{2.3}$	L 3.5 & e
<u>1.3</u>	
$\sqrt{2.4}$	

Index above.

Position Z

$\sqrt{0.2}$	b 2.5 L. L 2.5 d f
$\sqrt{0.2}$	b 3 L. L 2 d f
$\sqrt{1.2}$	b 2.5 L. L 2.5 d f
<u>1.6</u>	
$\sqrt{0.5}$	

Index above.

Position Z

$\sqrt{1.9}$	L extinguished.
$\sqrt{1.9}$	" "
$\sqrt{1.4}$	" "
<u>1.7</u>	
$\sqrt{1.9}$	

Index above.

Position B

$\sqrt{3.7}$	b 2.5 L. L 2 d f
$\sqrt{3.6}$	b 2.5 L. L 2.5 d f
$\sqrt{3.4}$	b 3 L. L 2 d f
<u>1.7</u>	
$\sqrt{3.6}$	

Feb. 27 1895.

Star II (SD - 9° 12' 34" (7.2)) compared with star 2
Phot. I. H. obs.

Index above

9 25

27.6		
75.7	48.1	
23.4	<u>57.6</u>	1.52
81.0	105.7	

9 26

24.2		
80.8	56.6	
28.3	<u>48.5</u>	$\frac{1.53}{(1.52)}$
76.8	105.1	

Index above

9 31

118.7		
165.6	46.9	
114.5	<u>57.3</u>	1.55
171.8	104.2	

9 32

9 28 30

115.7		
172.2	56.5	
115.5	<u>50.4</u>	$\frac{1.49}{(1.52)}$
165.9	106.9	

 $M = (1.52)$

Feb. 27, 1896.

Same again.

Index above

9 28

27.3

75.0

23.2

78.9

47.7

55.7

103.4

1.57

9 29

25.1

80.6

26.8

75.5

55.5

48.7

104.2

1.55

(1.56)

Index below

9 34

117.2 + 20.1

165.9

113.0

169.0

48.7

56.0

104.7

1.54

9 36

115.4

167.8

119.3

161.1

52.4

41.8

94.2

1.80

1.72

(1.67)

M = (1.62)

Feb 27/1896.

Star B (13-9° 1234 (7A) compared with star f.
Plot. 7. W. obs.

Index below

9 39

130.3

155.4

126.0

155.4

25.1 <

29.4 <

54.5 <

3.08 <

9 40

130.0

155.1

133.1

102.5

25.1 <

19.4 <

44.5 <

3.53 <

16.1
(3.30) <

Index above.

9 ~~43~~

220.7

246.3

219.7

244.4

25.6 <

24.7 <

50.3 <

3.26 <

9 ~~45~~4167

9 41 45 <

220.2

243.8

218.4

246.4

23.6 <

28.0 <

51.6 <

3.20 <

(3.23) <

M = (3.26) <

Feb. 27, 1896.

Same gain.

Index above.

9 46

220.0

244.9

219.8

245.5

24.9

25.7

50.6

3.24

9 48

220.5

245.5

221.5

244.3

25.0

22.8

47.8

3.37

(3.30)

Index below

9 51

313.6

334.9

313.5

335.1

21.3

21.6

42.9

3.61

$$\begin{array}{r} 9 \quad 53 \\ \hline 9 \quad 49 \quad 30 \end{array}$$

311.0

335.9

312.6

333.5

24.9

20.9

45.8

3.47

(3.54)

Star ² proceeds star ¹ a 1.5 and is 0.1' north of it. Star ³ follows star ² a 6.7 and is 3.8 south of it.

Feb. 27, 1896

Ballon 103.
 9 39 00
 40 00

W
 A. + D 95 L.
 9 39 35.2
 40 35.2

See bottom of p. 79.
 companion sat. }
 disappears }>

Indice to night & above

10	33	55	10	34	3 4 4	Rem.
		59		34	35	118.0
	34	00			41	142.8
		10			46	117.1
		14			50	140.0
		24			0	115.0
	29	10	35		5	142.3
	35				11	112.3
	38				14	146.2
	46				22	106.9
	52				28	148.0
	56				32	98.8
35	03				39	153.3
	10				46	199.9
	20				54	157.9
	24	10	36		0	96.0
	32				8	161.1
	41				17	107.0
	47				23	162.7
	52				28	97.8
	58				34	169.2

Feb 27, 1896.

10	36	06	4	2	90.1	
		12	4	5	163.1	
		20	5	6	89.1	
	10	37		3	165.0	
		34	10		92.7	
		41	17		169.0	
		40	24		90.9	
		56	32	34	120.0	
37	05		41		91.9	
	10		46		166.0	
			54		85.0	
	10	38	3	250	170.0	1
		37 29	8	23.9	88.9	
			15	165.9	172.8	0.2
				24.4		
			24		87.0	
		32 06	39	24.3	171.3	
			47	22.9	84.5	2 0.1
			55	173.2	173.4	
				26.6		
	10	39	2		95.0	
			8	270	172.0	3
		35 36	16	91.1	83.0	0.0
			23	175.1	174.1	
				29.0		
			31		87.1	
39	02	09 09	38	21.9	169.0	
			50	92.6	83.0	4 0.1
	10	40	00	174.5	175.6	
				27.2		
			6		85.1	
			12		170.5	

Feb 27, 1896.

10 39 44'

$$\begin{array}{r}
 21 \quad 25.4'' \\
 27.9'' \quad 85.2 \\
 32 \quad 173.3 \quad 173.1 \\
 \hline
 39 \quad 85.3
 \end{array}$$

✓ 0.1'

40 20

10 41

$$\begin{array}{r}
 47 \quad 91.6'' \\
 94.0'' \quad 176.9 \\
 57 \quad 25.6'' \quad 80.0 \\
 \hline
 11 \quad 174.0
 \end{array}$$

6 0.1'

40 56

$$\begin{array}{r}
 18 \quad 79.8 \\
 27 \quad 92.7'' \quad 178.5 \\
 37 \quad 91.0'' \quad 84.0 \\
 45 \quad 94.8'' \quad 175.0 \\
 \hline
 56 \quad 75.3
 \end{array}$$

7 0.2'

41 33

10 42

$$\begin{array}{r}
 4 \quad 24.5'' \quad 169.8 \\
 15 \quad 54.8'' \quad 83.0 \\
 21 \quad 167.5'' \\
 33 \quad 85.0
 \end{array}$$

A 0.2'

42 11

10 43

$$\begin{array}{r}
 41 \quad 26.0'' \quad 171.0 \\
 51 \quad 93.2'' \quad 82.9 \\
 51 \quad 179.2'' \quad 176.1 \\
 2 \quad 29.6'' \\
 \hline
 13 \quad 82.9
 \end{array}$$

9 0.0'

Limit of visibility

$$\begin{array}{r}
 10 \quad 44 \quad 24 \quad 116.1 \\
 44 \quad 17 \quad 116.0 \\
 28 \quad 24.1'' \quad 140.1 \\
 40 \quad 20.6'' \quad 116.8 \\
 54 \quad 44.7'' \quad 137.4 \\
 22.4''
 \end{array}$$

3.5'

The preceding is a reappearance of Jupiter II
 Photo R. H. obs. Rich. m. comp. with
 1st sat. following planet before eclipse = sat. I
 Seeing fine but observer troubled by clock.

Feb 27, 1896

Clock would not carry telescope and motor kept jumping. Clamp of clock would not be thrown off so that observer continually had to push telescope with clock on.

Ballon 103..	A. + D. gva.
11 0 0.0	11 0 36.0
1 0.0	1 36.0

Chron. Corr = -36 sec. throughout.

Thursday, March 5, 1896.

J.D. = 3624.

J Andro.

Mols.

0	14
6	35
<hr/>	
6	21

26.1

Cloudy in this region.

a Ceti.

22. obs.

2	4
6	40
<hr/>	
4	36

- 2.5

7 35

All cloudy.

2	4
7	6
<hr/>	
3	2

- 2.5

Index to left + below.

8 00

303.0
312.8
303.8
311.8

9.8 <

8.0 <

17.8 <

554 <

March 5, 1896.

Index to left & below

8 2

303.5

311.3

302.8

313.0

7.8 <

10.2 <

18.0 <

67.52

(0.003)

Index to right & above

8 6

33.8 ~~32.0~~

42.9

32.0

44.0

9.1 <

12.0 <

21.1 <

5.17 <

8 8

33.0

43.3

33.8

42.9

10.3 <

9.1 <

19.4 <

(0.26)

5.36 <

9) 1.19

Mean. 5.40 <

Mids.

J Andromeda

0 14

7 30

7 16

26.1

March 5, 1896,

R. H. M. Min.

H. L.

$$\begin{array}{r}
 16 \quad 34 \\
 \hline
 7 \quad 55 \\
 8 \quad 39 \\
 94 \quad 21
 \end{array}$$

+ 72.9

Star temp. with d

Star f comp. with d.

Ludex above to right.

9 30 d disappears.

$$\begin{array}{r}
 91.8 \\
 153.7 \\
 94.9 \\
 148.8
 \end{array}$$

$$\begin{array}{r}
 61.9 < \\
 53.9 < \\
 \hline
 115.8 <
 \end{array}$$

1.29 <

9 31

$$\begin{array}{r}
 96.0 \\
 146.5 \\
 92.6 \\
 153.1
 \end{array}$$

(1.23)

$$\begin{array}{r}
 60.5 < \\
 60.5 < \\
 \hline
 121.0 <
 \end{array}$$

1.17 <

Ludex below to left.

9 33

$$\begin{array}{r}
 180.8 \\
 244.7 \\
 186.9 \\
 237.0
 \end{array}$$

$$\begin{array}{r}
 63.6 < \\
 50.1 < \\
 \hline
 113.7 <
 \end{array}$$

1.33 <

185.8

(1.30)

9 34

$$\begin{array}{r}
 9 \quad 32 \quad 0
 \end{array}$$

$$\begin{array}{r}
 237.7 \\
 179.5 \\
 244.0
 \end{array}$$

$$\begin{array}{r}
 51.9 < \\
 64.5 < \\
 \hline
 116.4 <
 \end{array}$$

1.27 <

M = 1.26

March 5, 1896

Star γ comp with δ
 Index to left + above.

9 37	193.2		
	233.5	40.3	
	193.0	<u>41.0</u>	2.16
	234.0	81.3	

9 40	190.7		(2.12)
	235.8	45.1	
	194.1	<u>39.1</u>	2.07
	233.2	84.2	

Index to right + above

9 43	280.5		
	320.0	39.5	
	276.9	<u>42.3</u>	2.14
	319.2	81.8	

9 44	278.8		
	322.2	43.4	
	278.2	<u>38.6</u>	2.11
	317.8	82.0	

 $M = 2.12$

March 5, 1896
 $\begin{matrix} h & d \end{matrix}$
 Star L comp method
 Index to right + above

10 3
 $\begin{array}{r} 3.5 \\ 51.6 \\ 6.0 \\ \hline 51.9 \end{array}$
 $\begin{array}{r} 48.1 < \\ 45.9 < \\ \hline 94.0 < \end{array}$ 1.81

(1.88)

10 4
 $\begin{array}{r} 5.9 \\ 50.7 \\ 7.0 \\ \hline 50.5 \end{array}$
 $\begin{array}{r} 44.8 < \\ 43.5 < \\ \hline 88.3 < \end{array}$ 1.96

Index to left + below

10 15
 $\begin{array}{r} 96.2 \\ 138.1 \\ 95.8 \\ \hline 143.8 \end{array}$
 $\begin{array}{r} 41.9 < \\ 48.0 < \\ \hline 89.9 < \end{array}$ 1.92

(1.88)

10 16
 $\begin{array}{r} 95.3 \\ 143.9 \\ 97.6 \\ \hline 142.2 \end{array}$
 $\begin{array}{r} 48.6 < \\ 44.6 < \\ \hline 93.2 < \end{array}$ 1.83

 $M = 1.88$

March 5, 1896.

Star k comp. with d .Star h comp. with d

Indices to right & above

10	6	4.9		
		54.5	49.6 <	
		8.6	43.1 <	1.84
		51.7	<u>92.7 <</u>	

(1.88)

10	7	7.4		
		52.5	45.1 <	
		6.0	45.1 <	1.91
		51.1	<u>90.2 <</u>	

Indices to left & above

10	11	97.1		
		142.9	45.8 <	
		96.2	43.4 <	1.94
		139.6	<u>89.2 <</u>	

(1.86)

10	12	96.9		
		143.1	46.2 <	
		95.8	49.2 <	1.77
		145.0	<u>95.4 <</u>	

 $M = (1.87)$

March, 5 1896.

Star l corap with d
Index to left + below

10 21	100.3		
	137.5	37.2 <	
	98.6	42.3 <	2.21 <
	140.9	79.5 <	

(2.18)

10 22	96.8		
	141.9	45.1 <	
	102.3	36.2 <	2.16 <
	138.5	81.3 <	

Index to right + above.

10 24	195.0		
	222.5	27.5 <	
	195.1	28.2 <	3.03 <
	223.3	55.7 <	

(3.05)

10 26	194.9		
	222.4	27.5 <	
	195.8	27.1 <	3.07 <
10 23 15	222.9	54.6 <	

 $M = 2.62$

March 5, 1886.

Looked at ~~III~~^{IV} satellite of Jupiter with various powers, as far as can be seen the satellite seems to ~~be~~ to be perfectly round tonight. Also across round to Prof. William Pickering. Seeing not very good, quite windy.

Comp. of Chron.
 Ballon 103 A + D 958
 12 59 00.0 - 12 59 57.0

Keef I. II Phot. R. W. for wants me
comp. with Sat. which was second on following side
before release I Sat. III.

13	04	18		117.2	} two sort. L.V.
		34		142.2	
		43	21.6 ⁺	138.8	
		55	17.2 ⁺	119.8	
05	11		3.7 ⁺	137.0	
			<u>19.4⁺</u>		3.8

13	09	22	13	10	19	seen
		32			29	122.9
		41			38	141.0
		50			47	116.2
		55			52	141.0
10	02				59	113.0

March 5, 1896.

13	10	07	13	11	04	146.2
		12			09	112.0
		17			14	144.3
		21			18	108.0
		27			24	145.8
		32			29	111.8
		32			35	147.8
		43			40	105.2
		49			46	151.0
		54			51	103.2
11	02				59	153.0
	07		12		04	102.8
	11				08	156.2
	17				14	101.8
	23				20	161.2
	22				25	103.0
	33				30	158.2
	40				37	99.7
	45				42	157.8
	51				48	95.8
	59				56	161.9
12	07		13		04	93.2 (Refocused on images)
	17				14	160.2
	24				21	92.8
	30				27	165.0
					33	95.2
					38	165.2

March 5, 1896.

13 12 44 ⁺	13 13 ⁺	44	70.0	
		50	<u>64.2</u>	95.8
		55	134.2	160.0
13 13 09 ⁺	14	04	<u>67.1</u>	96.2
		09	65.2 ⁺	162.0
		16	<u>67.2</u>	94.1
		22	133.6	161.9
		28	<u>66.2</u>	94.3
13 33 ⁺		33	67.7	162.0
		39	<u>62.4</u>	95.8
		46	136.1	164.2
13 07 ⁺		51	<u>62.0</u>	92.0
		57	72.0 ⁺	164.0
	15	05	<u>70.4</u>	91.7
		13	71.2	162.1
		18		97.0
14 24 ⁺		24	<u>67.2</u>	164.8
		30	70.5	94.7
		37	132.3	165.2
14 49 ⁺		42	<u>69.2</u>	97.0
		49	64.3	161.3
		55	<u>62.1</u>	93.9
	16	01	132.4	162.0
		07	<u>66.2</u>	96.9
15 13 ⁺		13	63.5	160.4
		19	<u>65.0</u>	97.0
		25	64.2	162.0
				94.2

March 5, 1896.

13	16	31	70.2 ^x	165.0	
16	17	43	69.6 ^x	94.2	8
10		50	140.4 ^x	63.8	0.2 ^x
			70.2 ^x		

Seeing fairly good, but
considerable infid. Images
of satellites pretty fair.

Comp. of Chrono.

Ballon	103		44	10958.
13	26	00.0	=	13 26 57.2
13	27	00.0	=	13 27 57.2

i.e. Subtract 57. sec. from chron. times.

March 6, 1896.

o Ceti

W. obs.

2 4
5 50
 4 46

- 2.5

8 00

Heavy haze over hangs western horizon.

8 22

Clouds too thick.

Examination of region + 8" 1928
 for ~~too~~ variable suspected at this
 Photo. There is no 8.2 mag. per. 0.4"
 S 5" W. obs.

7 49
7 55
 6

+ 9.0

Star 1929 follows 1928 3.5" and is
 4' north as by 10.9M.

Too thick for any further work.

Saturday, Nov. 7. 1896.

U. Cyphei.

L. obs.

0	30	+21.7
6	40	
<hr/>		
+6	10	

Indt above

7 36
 26 Cyphus } 168.0
 dis. } 246.6
 179.0
 235.0
 175.0

78.6
 56.0
 124.6

- 0.88 =
 - (0.77) =

$$\begin{array}{r} 7 \quad 37 \\ \hline 7 \quad 36 \quad 30 \end{array}$$
 Clouds.

$$\begin{array}{r} 241.2 \\ 169.2 \\ \hline 248.8 \end{array}$$

$$\begin{array}{r} 66.2 \text{ Clouds.} \\ 79.6 \text{ c} \\ \hline 145.8 \text{ c} \end{array}$$

$$-0.66 \text{ c}$$

Ludw. Blom.

7 39 clouds ~~259.0~~
~~337.9~~
~~267.0~~

~~$\mu_{\text{Mag}} = 0.82$~~

$$\begin{array}{r} 7 \overline{) 53} \\ 7 \overline{) 44} \quad 45-4 \end{array}$$

x assumed to be 1
 265.5
 334.0
 271.6
 275.9

20.4
 20.4
 20.4
 20.4

much troubled by clouds. so
 Reject this set.

much troubled by clouds. Settings
Reject this set. uncertain.
Supported by clouds.

March, 7, 1896.

Clear again.

Index above

II
7 582.5
57.6
357.0
64.455.1
73.4 - 1.01
128.5

-0.94

7 59

352.3
64.8
358.0
57.17
62.5 - 0.95
59.1
141.6
3

Index below

8 2

269.0
325.1
259.1
337.156.1
79.0 - 0.87
135.1

-0.96

8 3
8030261.1
334.9
270.2
323.573.8
53.3 - 1.04
127.1
4387
408
1.02
0.968M = 1.02

M = 0.97

March, 7, 1896.

$$\begin{array}{r} \text{III} \\ 8 \quad 5 \end{array}$$

269.5

327.8

260.2

337.5

Index below

58.3 <

77.3 <

13 5.6 <

- 0.86 <

$$\begin{array}{r} 8 \quad 7 \end{array}$$

259.0

335.9

270.1

325.6

76.9 <

55.5 <

13 2.4 <

- 0.93 <

- 0.90

Index above.

$$\begin{array}{r} 8 \quad 9 \end{array}$$

0.4

57.0

350.5

62.1

56.6 <

71.6 <

128.2 <

- 1.02 <

~~8~~

- 1.01

$$\begin{array}{r} 8 \quad 10 \\ \hline 4 \overline{) 31} \\ 8 \quad 7 \quad 45 \end{array}$$

353.5

64.5

358.4

56.5

71.0 <

58.1 <

129.1 <

- 1.00 <

4 $\overline{) 381}$

0.95 <

 $M = 0.95 <$

March 7, 1896.

Index above.

IV

8 11

0.5

55.7

55.2

347.7

77.7

- 0.92

6.54

132.9

- 0.96

8 12

350.0

67.3

77.3

1.8

51.2

- 1.01

53.0

128.5

Index below

8 14

93.7

145.2

51.5

81.1

72.9

- 1.10

154.0

124.4

- 1.14

8 16

83.2

153.2

70.0

91.3

50.8

- 1.18

142.1

120.8

442.1

- 1.05

M = 1.05

8 16
 4 | 13
 8 13 15

March 7 1896

Index above

V
8 17

92.2
143.0
84.2
154.0

50.8 <
69.8 < -1.18 <
120.6 <

-1.12

8 18

81.1
150.5
91.4
143.0

69.4 <
51.6 < -1.17 <
121.0 <

Index above

8 20

181.2
231.5
172.2
241.3

50.3 <
69.1 < -1.21 <
119.4 <

-1.24

8 21
8 19 0

175.1
240.1
180.5
232.2

65.0 <
51.7 < -1.27 <
116.7 <
483 <
-1.208 <

M = 1.21

March 7, 1896.

Index above

 $\sqrt{1}$
 8 22

181.4

234.0

169.4

241.1

52.6 <

71.7 < - 1.10 <

124.3 <

-1.16

8 23

174.0

241.2

182.2

234.3

67.2 <

52.1 < - 1.21 <

119.3 <

Index below

8 25

272.6

323.2

261.1

333.3

50.6 <

72.2 < - 1.13 <

122.8 <

-1.14

8 27

 $\sqrt{17}$
 8 24 15

259.4

330.5

272.1

323.5

71.1 <

51.4 < - 1.14 <

122.5 <

458

- 1.145 <

M = 1.14 <

March 7, 1896

Index above below

VII

8 28

271.6

324.0

261.4

332.8

52.4 <

71.4 <

123.8 <

- 1.11 <

- 1.16

8 29

263.5

330.7

270.7

323.1

67.2 <

52.4 <

119.6 <

- 1.20 <

Index above.

8 31

4.0

53.0

353.8

61.0

49.0 <

67.2 <

116.2 <

- 1.28 <

3

- 1.19

8 33

352.8

60.5

359.4

55.8

67.7 <

56.4 <

124.1 <

- 1.10 <

469 <

- 1.172 <

MA = 1.17 <

March, 7, 1896

Index above

$$\begin{array}{r} \text{VIII} \\ 8 \end{array} 34$$

$$\begin{array}{r} 2.0 \\ 53.9 \\ 352.8 \\ 41.8 \end{array}$$

$$\begin{array}{r} 51.9 < \\ 69.0 < \\ \hline 120.9 < \end{array} - 1.17 <$$

-1.16

8 35

$$\begin{array}{r} 350.8 \\ 60.3 \\ 1.5 \\ 54.0 \end{array}$$

$$\begin{array}{r} 69.5 < \\ 52.5 < \\ \hline 122.0 < \end{array} - 1.15 <$$

Index below

8 38

$$\begin{array}{r} 94.7 \\ 141.0 \\ 81.8 \\ 153.1 \end{array}$$

$$\begin{array}{r} 46.3 < \\ 71.3 < \\ \hline 117.6 < \end{array} - 1.25 <$$

-1.24

$$\begin{array}{r} 8 \quad 39 \\ \hline 8 \quad 36 \quad 30 \end{array}$$

$$\begin{array}{r} 84.0 \\ 152.0 \\ 90.5 \\ 141.4 \end{array}$$

$$\begin{array}{r} 68.0 < \\ 50.9 < \\ \hline 118.9 < \end{array} - 1.22 <$$

$$\begin{array}{r} 479 < \\ \hline 1.198 < \end{array}$$
 $M = 1.20 <$

March 7, 1896.

Index below

XIX
8 41950
140.8
82.6
152.4
$$\begin{array}{r} 45.8 < \\ 69.8 < \\ \hline 115.6 < \end{array} \quad - 1.29 <$$

- 1.32

8 42

86.4
150.4
91.6
140.3
$$\begin{array}{r} 64.0 < \\ 48.7 < \\ \hline 112.7 < \end{array} \quad - 1.36 <$$

Index below above.

8 44

181.2
231.5
175.3
237.3
$$\begin{array}{r} 50.3 < \\ 62.0 < \\ \hline 112.3 < \end{array} \quad - 1.36 <$$

- 1.33

$$\begin{array}{r} 5 \\ 645 \\ \hline 8430 \end{array}$$

175.5

239.5

180.7

231.2

$$\begin{array}{r} 64.0 < \\ 50.5 < \\ \hline 114.5 < \end{array} \quad - 1.31 <$$

$$\begin{array}{r} 4132 < \\ \hline - 1.33 < \end{array}$$
 $M = 1.33 <$

March 7 1896

Lucky above

~~8 47~~
 8 47

184.6	
230.0	45.4
169.4	<u>71.5</u> - 1.26
240.9	116.9

-1.26

8 48

171.1	
241.4	70.3
182.3	<u>48.7</u> - 1.21
231.0	119.0

Lucky below

8 50

271.0	
318.6	47.6
262.1	<u>69.9</u> - 1.25
332.0	117.5

-1.30

8 52
<u>4197</u>
8 49 15

263.1	
331.2	68.1
274.9	<u>45.1</u> - 1.34
320.0	113.2
	<u>4106</u> - 1.265

M = -1.26

March 7, 1896.

Lucky blow

XI

8 54

274.1

319.2

262.8

335.5

45.1 <

72.7 < - 1.24 <

117.8 <

-1.26

8 55

259.6

333.0

275.9

319.0

7

43.4 <

43.1 < - 1.27 <

116.5 <

Lucky above

8 56

5.5

48.1

347.9

61.0

42.6 <

73.1 < - 1.29 <

115.7 <

-1.26

8 57

8 55 30

350.0

63.5

5.6

48.9

73.5 <

43.3 < - 1.26 <

116.8 <

42.6 <

-1.265 <

M = 1.26 <

March 7, 1896.

Index above

XII

9 4

$$\begin{array}{r} 50 \\ 47.5 \\ 355.0 \\ 62.4 \end{array}$$

$$\begin{array}{r} 42.5 \\ 67.4 \\ \hline 109.9 \end{array} \quad - 1.42$$

- 1.36

9 5

$$\begin{array}{r} 353.0 \\ 62.1 \\ 4.0 \\ 50.2 \end{array}$$

$$\begin{array}{r} 69.1 \\ 46.2 \\ \hline 115.3 \end{array} \quad - 1.30$$

Index below

9 7

$$\begin{array}{r} 98.4 \\ 139.0 \\ 83.3 \\ 153.4 \end{array}$$

$$\begin{array}{r} 40.6 \\ 70.1 \\ \hline 110.7 \end{array} \quad - 1.40$$

- 1.49

$$\begin{array}{r} 9 \quad 8 \\ \hline 9 \quad 6 \quad 0 \end{array}$$

x assumed to be 1

$$\begin{array}{r} 88.4 \\ \times 49.7 \\ \hline 96.5 \\ 138.5 \end{array}$$

$$\begin{array}{r} 61.3 \\ 42.0 \\ \hline 103.3 \end{array} \quad \begin{array}{r} - 1.58 \\ \hline 417.0 \\ - 1.420 \end{array}$$

M = 1.42

March 7, 1896.

Lindy below

XIII

9 9

94.5

137.8

84.0

151.3

43.3 <

67.3 <

110.6 <

1.40 <

-1.34

9 10

79.7

130.2

93.0

138.8 ~~139.1~~

70.5 <

45.8 <

116.3 <

1.27 <

Lindy above.

9 13

6.5

47.8

355.2

59.4 ~~237.0~~

41.3 <

64.2 <

105.5 <

1.52 <

-1.49

9 16

9 17

30

49

9 12 15

354.3

Clouds.

57.4

4.0

49.0

63.1 <

45.0 <

108.1 <

1.46 <

416.5 <

1.41 <

M = 1.41 <

March 7, 1896.

Index above

~~XIV~~
 9 20

 5.6
 48.6
 351.2
 62.2

 43.0 <
71.0 < - 1.33 <
 114.0 <

-1.36

9 21

 353.3
 60.0
 6.6
 49.4

 66.7 <
42.8 < - 1.43 <
 109.5 <

Index below

9 24

 97.0
 136.4
 83.0
 151.8

 39.4 <
68.8 < - 1.46 <
 108.2 <

-1.36

 9 25

 9 22 30

 82.7
 154.1
 95.9
 139.8

 71.4 <
43.9 < - 1.30 <
 115.3 < 4115.2 <
 - 1.38 <
 $M = 1.38$

March 7, 1896.

Index below

~~XV~~

9 27

97.0
137.2
86.7
149.3

40.2 <
62.6 < - 1.59 <
102.8 <

-1.50

9 28

86.4
152.4
95.5
140.4

66.0 <
44.9 < - 1.40 <
110.9 <

Index above.

9 30

185.0
229.2
176.4
238.2⁼²

44.2 <
61.8 < - 1.57 <
106.0 <

-1.50

9 31

9 29 0

173.0
237.1
185.5⁼²
228.0

64.1
42.5 - 1.50 <
106.6
420.0
- 1.50 <

M = 1.50 <

March 7/1896.

XVI

Index above

9 33

187.1

229.1

172.7

237.6

42.0

64.9

106.9

- 1.49

9 35

176.5

237.5

186.0

229.0

61.0

43.0

104.0

- 1.56

- 1.52

9 38

275.7

316.5

243.8

327.0

41.4

63.2

104.6

- 1.54

Index below

9 39

267.0

333.5 assumed.

~~333.5 assumed.~~

274.4

317.2

319.4

66.5

42.8

79.3

109.3

- 4.82

4(20.2)

- 1.500

- 1.48

M = 1.50

March 7, 1896

~~X 171~~
 9 40

²
~~276.5~~
 318.7
 262.5
 328.5
~~26~~

Indy below

$$\begin{array}{r} 42.2 \\ 66.0 \\ \hline 108.2 \end{array} \quad -1.46$$

9 44

 276.5
 318.0
 264.1
 328.0

~~263.5 + 328.2~~
~~317.0~~

$$\begin{array}{r} 41.5 \\ 63.9 \\ \hline 105.4 \end{array} \quad -1.53$$

-1.50

9 46

 176.1
 235.5
 186.3
 228.2

Indy above

$$\begin{array}{r} 59.4 \\ 41.9 \\ \hline 101.3 \end{array} \quad -1.62$$

-1.60

$$\begin{array}{r} 947 \\ \hline 4(17) \\ 944 \quad 15 \end{array}$$

 186.8
 227.8
 175.5
 237.2

$$\begin{array}{r} 41.0 \\ 61.7 \\ \hline 102.7 \end{array} \quad -1.59$$

$$\begin{array}{r} 422.0 \\ \hline 1.55 \end{array}$$
 $M = 1.55$

March 7 1896

Index above

XVIII
9 57

174.0

241.3

189.4

224.5

67.3

35.1 - 1.60

102.4

-1.62

9 59

190.0

224.3

172.3

238.7

34.3

66.4 - 1.64

100.7

Index below

10 00

276.6

315.5

261.1

332.0

38.9

70.9 - 1.42

109.8

-1.42

10 1

262.2

331.5

277.3

318.5

69.3

41.2 - 1.41

110.5 - 1.5 - 175

$$\begin{array}{r} 10 \ 1 \\ \hline 4 \ (23 \ 7) \\ 9 \ 59 \ 15 \end{array}$$

M = 1.52

7 March, 7, 1896.

Index above

~~XIX~~
 10 2

276.2

317.1

260.0

330.3

⁴
 509.

$$\begin{array}{r} 70.3 \\ \hline 11 \end{array} 1.2 - 1.39$$

-1.42

10 4

263.5

333.1

277.2

316.2

69.6

$$\begin{array}{r} 39.0 \\ \hline 10 \end{array} 8.6 - 1.45$$

Index above.

10 6

351.5

61.1

6.2

46.8

9.6

40.6

69.6

$$\begin{array}{r} 40.6 \\ \hline 11 \end{array} 0.2 - 1.41$$

-1.40

10 7

5.8

46.8

352.2

62.2

41.0

$$\begin{array}{r} 70.0 \\ \hline 11 \end{array} 1.0 - 1.39$$

$$\begin{array}{r} 41.64 \\ \hline \end{array} - 1.41$$

M = 1.41

4119

10 - 4 45

March 7, 1896.

Indy above

~~XX~~

10 9

358.7

52.4

0.5

54.0

53.7 <

53.5 < - 1.48 <

10 7.2 <

-1.48

9 10

0.2

55.8

1.0

52.9

55.6 <

51.9 < - 1.48 <

10 7.5 <

Indy above

9 12

89.5

143.2

93.1

140.2

53.7 <

47.1 < - 1.64 <

10 0.8 <

-1.56

10 13

~~$$\begin{array}{r} 10 \quad 11 \quad 13 \\ 10 \quad 11 \quad 00 \\ 10 \quad 11 \quad 0 \end{array}$$~~

93.7

142.2

87.6

144.4

48.5 <

56.8 <

10 5.3 <

-4.53 <

4213 <

-1.532 <

 $M = 1.53 <$

March 7, 1846.

Indy above

10 21	91.5	5 1.5 <	
	143.0	5 0.0 <	- 1.6 2 <
	91.0	<u>10 1.5 <</u>	
	141.0		

- 1.5 A

10 22	92.5	5 0.7 <	
	143.2	5 4.0 <	- 1.5 4 <
	91.1	<u>10 4.7 <</u>	
	145.1		

Indy above

10 24	182.0	5 2.8 <	
	234.8	4 7.9 <	- 1.6 4 <
	180.9	<u>10 0.7 <</u>	
	228.8		

- 1.6 0

10 25	181.0	5 1.5 <	
<u>10 20 0</u>	232.5	5 2.8 <	- 1.5 5 <
	180.9	<u>10 4.3 <</u>	4 (20.5 < 4)
	233.7		- 1.5 8 8 <

$$M = 1.59 <$$

March 7, 1996

Index above

10 28

181.7

232.9

184.2

234.0

51.2

49.8 - 1.63

10 1.0

10 29

183.0

230.0

178.8

234.1

47.0

55.3 - 1.60

10 2.3

-1.62

Index above

10 31

272.5

322.0

267.5

320.8

326.4

49.5

52.3 - 1.61

10 1.8

-1.52

$$\begin{array}{r} 10 \quad 32 \\ \hline 10 \quad 30 \quad 0 \end{array}$$

268.8

321.8

269.5

319.4

53.0

50.9 - 1.5

10 1.9

3

4 23.8

1.595

-1.60

M = 1.60

March 7, 1896.

Index above

~~XXIII~~
 10 35
273.2 ~~273.2~~

321.4

265.5

321.2

48.2 <

55.7 < -1.56 <

10 5.9 <

-1.52

10 36

265.6

324.5

271.1

319.8

58.9 <

48.7 <

10 7.6 <

-1.47 <

Index above.

359.6

58.0

5.0

51.0

58.4 <

46.0 <

10 4.4 <

-1.55 <

-1.57

10 41

$$\begin{array}{r} 10 \ 41 \\ \hline 10 \ 38 \ 0 \end{array}$$

2.2

51.2

0.0

53.8

49.0 <

53.8 <

10 2.8 <

-1.59 <

4(2.17) <

-1.542 <

M = 1.54 <

March 7, 1896.

Dudley store.

10 42

35-8.8

53.5

1.8

53.0

54.7

51.2 - 1.51

10 5.9

-1.52

10 45

2.8

51.2

1.7

53.8

48.4

52.1 - 1.64

10 0.5

Dudley store

10 48

268.1

323.2

274.5

321.6

55.1

47.1 - 1.60

10 2.2

-1.55

10 49

4(24)

10 46

272.3

321.2

266.8

324.2

48.9

57.4 - 1.50

10 6.3

4(225)

-1.562

M = 1.56

March 7, 1896.

Index below

$$\begin{array}{r} \text{XXV} \\ 10 \quad 50 \end{array}$$

266.2

325.2

270.4

320.0

59.0

49.6

108.6

-1.40

$$\begin{array}{r} 10 \quad 51 \end{array}$$

274.5

321.1

266.2

322.2

46.6

56.0

102.6

-1.59

-1.52

Index above.

$$\begin{array}{r} 10 \quad 54 \end{array}$$

0.5 5.6

52.8

2.8

50.5

52.3

47.7

100.0

-1.66

-1.64

$$\begin{array}{r} 10 \quad 55 \\ \hline 10 \quad 52 \quad 30 \end{array}$$

2.0

50.5

1.5

54.0

48.5

52.5

101.0

-1.63

423.3

-1.582

M = 1.58

March 7, 1896.

Ludy above

~~XXVI~~

10 56

359.5

52.7

1.5

52.2

53.2 L

50.7 L - 1.56 L

10 3.9 L

-1.52

10 57

3.3

50.0

357.8

52.8

46.7 L

55.0 L - 1.61 L

10 1.7 L

Ludy below

91.3

10 59

143.1 assumed.

113.1

93.4

139.4

51.8 L - 1.71 L

46.0 L - 2.58

67.8

97.2 L

-1.69

$$\begin{array}{r} 11 \ 00 \\ 10 \ 58 \ 0 \end{array}$$

93.5

139.6

90.6

144.0

46.1 L

53.4 L - 1.67 L

$$\begin{array}{r} 99.5 L \\ 4 \ 25.5 L \\ - 1.638 L \end{array}$$

M = 1.64

March 7, 1895.

Dude below

	89.6		
	143.1		53.5
11 1	93.2		46.4 - 1.66
	139.6		99.9

-1.62

	92.4		
	142.0		49.6
11 2	99.0		54.1 - 1.57
	144.1		103.7

Dude above.

	180.0		
	231.0		51.0
11 4	184.6		42.2 - 1.83
	226.8		93.2

-1.76

11 5			
11 3 0	182.0		
	229.5		47.5
	179.0		51.6 - 1.68
	230.6		99.1
			427.4
			1.685

 $M = -1.68$

120

$$\begin{array}{r} 43 \\ 27 \\ \hline 70 \end{array}$$

$$\begin{array}{r} 16 \\ 76 \\ 124 \\ \hline 226 \\ 448 \end{array}$$

March, 7, 1895.

Index above

XXVIII
11 6

179.0

234.2

183.6

230.0

55.2

46.4 - 1.62

10 1.6

-1.65

184.0

228.0

178.6

233.5

44.0

54.9 - 1.68

98.9

Index above

11 9

265.6

322.9

271.9

322.3

57.3

50.4 - 1.47

107.7

-1.47

11 10
11 8 0

271.3

321.5 = 5

265.4

323.0

50.2 - 1.47

57.6 - 1.52

107.8

6

M = 1.57

$$\begin{array}{r} 4 \overline{) 229} \\ 157 \\ \hline 156 \end{array}$$

March 7, 1896.

Well's Algol Var. ($20^h 33^m + 17^{\circ} 56'$)
Comp. of Chron.

Wt.'s Watch. Balloon 103

14 30 33 = 14 31 00, 0

14 31 33 = 14 32 00, 0

\therefore Watch was 27. sec. slow.

Index to right,

$15^h 27^m 15^s$	248.3	248.3	
	328.5	80.2 <	
	247.7	83.6 <	+0.31 <
	331.3	16 3.8 <	

Index

15 30 10	249.6		
	329.8	80.2 <	1
	249.0	79.9 <	+0.38 <
	328.9	16 0.1 <	

Index to left,

15 33 54	341.2		
	54.0	72.8 <	
	339.1	77.2 <	+0.58 <
	56.3	15 0.0 <	

March 7, 1896.

$$\begin{array}{r}
 15 \quad 36 \quad 53 \\
 \hline
 4 \overline{) 128} \quad 12 \\
 15 \quad 32 \quad 3. \\
 \hline
 10 \quad 32 \quad 30. \\
 - (4 \quad 58 \quad 30) \\
 \hline
 20 \quad 32 \quad 30. \\
 \hline
 15 \quad 38 \quad 30
 \end{array}$$

$$\begin{array}{r}
 338.4 \\
 55.0 \\
 \hline
 341.9 \\
 55.3 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 76.6 < \quad +0.58 \\
 73.4 < \\
 \hline
 100.0 < \quad M +0.46
 \end{array}$$

Lft.

$$\begin{array}{r}
 341.3 \\
 53.4 \\
 \hline
 338.7 \\
 54.0 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 72.1 < \\
 75.3 < \quad +0.63 < \\
 \hline
 147.4 <
 \end{array}$$

$$15 \quad 44 \quad 20$$

$$\begin{array}{r}
 337.3 \\
 55.5 \\
 \hline
 333.8 \\
 51.8 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 78.2 < \quad 2. \\
 78.0 < \quad +0.45 < \\
 \hline
 156.2 <
 \end{array}$$

Indep to rt.

$$15 \quad 45 \quad 58$$

$$\begin{array}{r}
 70.3 \\
 138.8 \\
 65.6 \\
 \hline
 141.7
 \end{array}$$

$$\begin{array}{r}
 68.5 < \\
 76.1 < \quad +0.68 < \\
 \hline
 144.6 <
 \end{array}$$

$$\begin{array}{r}
 (15 \quad 44 \quad 29.8) = \text{mean of group} \\
 - (4 \quad 46 \quad 30.2) \\
 \hline
 20 \quad 44 \quad 29.2 \\
 15 \quad 47 \quad 23.5 \\
 \hline
 4 \overline{) 176} \quad 11 \\
 15 \quad 44 \quad 20.8
 \end{array}$$

$$\begin{array}{r}
 69.3 \\
 143.0 \\
 64.3 \\
 \hline
 141.6
 \end{array}$$

$$\begin{array}{r}
 73.7 < \\
 77.3 < \quad +0.56 < \\
 \hline
 151.0 < \quad +0.52 <
 \end{array}$$

March 9, 1896.

15 49 16

$$\begin{array}{r} 67.0 \\ 139.8 \\ 66.6 \\ 142.7 \end{array}$$

$$\begin{array}{r} 72.8 < \\ 76.1 < \\ \hline 148.9 < \end{array} \quad +0.60 <$$

15 50 28

$$\begin{array}{r} 63.0 \\ 143.3 \\ 65.4 \\ 140.0 \end{array}$$

$$\begin{array}{r} 80.3 < \\ 74.6 < \\ \hline 154.9 < \end{array} \quad \begin{array}{l} 3. \\ +0.48 < \end{array}$$

Index to left

15 52 30

$$\begin{array}{r} 157.3 \\ 226.8 \\ 156.6 \\ 228.7 \end{array}$$

$$\begin{array}{r} 69.5 < \\ 72.1 < \\ \hline 141.6 < \end{array} \quad +0.74 <$$

15 54 19

$$\begin{array}{r} 158.1 \\ 226.9 \end{array}$$

68.8 Clouds.

158.8

$$\begin{array}{r} 65.7 < \\ 224.5 \end{array}$$

134.5 <

$$\begin{array}{r} +0.89 < \\ \hline +0.64 < \end{array} \quad 271$$

$$\begin{array}{r} 4(206 \quad 33) \\ 15 \quad 51 \quad 38.2 \\ +27.2 \checkmark \\ \hline 15 \quad 52 \quad 5.2 \checkmark \\ - (4 \quad 38 \quad 54.8) \\ \hline 20 \quad 52 \quad 5.2 \checkmark \end{array}$$

March 7, 1896

15 57 22

$$\begin{array}{r}
 157.3 \\
 224.3 \\
 157.3 \\
 \hline
 228.0
 \end{array}
 \begin{array}{r}
 67.0 < \\
 70.7 < \\
 \hline
 137.7 <
 \end{array}
 +0.82 <$$

15 59 05

$$\begin{array}{r}
 158.1 \\
 223.6 \\
 157.7 \\
 \hline
 226.2
 \end{array}
 \begin{array}{r}
 65.5 < \\
 68.5 < \\
 \hline
 134.0 <
 \end{array}
 +0.90 <$$

Index to nt.

16 02 40

$$\begin{array}{r}
 243.6 \\
 315.2 \\
 \hline
 245.0 \\
 243.5 \\
 \hline
 314.4
 \end{array}
 \begin{array}{r}
 71.6 < \\
 70.9 < \\
 \hline
 142.5 <
 \end{array}
 +0.72 <$$

$$\begin{array}{r}
 16 \quad 04 \quad 48 \\
 \hline
 4 \mid 3 \quad 55- \\
 16 \quad 0 \quad 58.8 \checkmark \\
 +27. \checkmark
 \end{array}$$

$$\begin{array}{r}
 16 \quad 1 \quad 25.8 \checkmark \\
 \hline
 (-4 \quad 29 \quad 34.2) \\
 21 \quad 1 \quad 25.8 \checkmark
 \end{array}$$

$$\begin{array}{r}
 242.9 \\
 319.8 \\
 245.5 \\
 \hline
 317.5
 \end{array}
 \begin{array}{r}
 76.9 < \\
 72.0 < \\
 \hline
 148.9 <
 \end{array}
 \begin{array}{r}
 +0.60 < \\
 +0.76 <
 \end{array}$$

March 7, 1896.

16 13 29

$$\begin{array}{r} \text{nt} \\ 244, \overline{6} \\ 313, \overline{5} \\ 244, \overline{3} \\ 317, \overline{1} \end{array}$$

$$\begin{array}{r} 68.9 < \\ 72.8 < \\ \hline 141.7 < \end{array} \quad +0.74 <$$

16 14 36

$$\begin{array}{r} 243, \overline{8} \\ 320, \overline{4} \\ 248, \overline{2} \\ 316, \overline{3} \end{array}$$

$$\begin{array}{r} 76.6 < \\ 68.1 < \\ \hline 144.7 < \end{array} \quad +0.68 <$$

5,

Index to left

16 18 10

$$\begin{array}{r} 330, \overline{9} \\ 46, \overline{2} \\ 332, \overline{3} \\ 42, \overline{2} \end{array}$$

$$\begin{array}{r} 75.3 < \\ 69.9 < \\ \hline 145.2 < \end{array} \quad +0.67 <$$

16 19 41

$$\begin{array}{r} 332, \overline{2} \\ 41, \overline{9} \\ 334, \overline{1} \\ 41, \overline{4} \end{array}$$

$$\begin{array}{r} 69.7 < \\ 67.3 < \\ \hline 137.0 < \end{array} \quad \begin{array}{r} +0.83 < \\ \hline +0.73 < \end{array} \quad 292$$

$$\begin{array}{r} 16 \quad 6 \quad 29 \\ \hline 4 \quad 25 \quad 56 \\ \hline 16 \quad 6 \quad 29 \\ +27 \checkmark \\ \hline 16 \quad 6 \quad 56 \checkmark \\ \hline (-4 \quad 24 \quad 4) \\ \hline 21 \quad 6 \quad 56 \checkmark \end{array}$$

March 7, 1896.

16 21 00

$$\begin{array}{r} 334.7 \\ 40.4 \\ \hline 333.1 \\ 40.9 \end{array}$$

$$\begin{array}{r} 65.7 \\ 67.8 \\ \hline 133.5 \end{array} +0.91$$

16 22 33

$$\begin{array}{r} 332.7 \\ 46.6 \\ \hline 335.1 \\ 41.3 \end{array}$$

$$\begin{array}{r} 73.9 \\ 66.2 \\ \hline 140.1 \end{array} +0.776$$

Index to st.

16 25 50

$$\begin{array}{r} 313.4 \\ 61.8 \\ \hline 314.5 \\ 61.5 \end{array}$$

$$\begin{array}{r} 108.4 \\ 107.0 \\ \hline 215.4 \\ 144.6 \end{array} \begin{array}{l} \text{Many errors} \\ \text{prob. dis.} \\ +0.68 \end{array}$$

$$\begin{array}{r} 316.2 \\ 59.9 \\ \hline 313.3 \\ 59.6 \end{array}$$

$$\begin{array}{r} 103.7 \\ 106.3 \\ \hline 210.0 \\ 150.0 \end{array} \begin{array}{l} \text{Many errors} \\ \text{dis.} \\ +0.58 \\ +0.7K \end{array}$$

16 27 15

$$\begin{array}{r} 4(16) \quad 38 \\ \hline 16 \quad 24 \quad 9.5 \\ +27. \end{array}$$

16 24 36.5 ✓

(-4, 6 23.5)

21 24 36.5 ✓

~~M = 0.74~~

March 7, 1896.

Rt.

$$\begin{array}{r}
 16 \quad 28 \quad 38 \\
 3 \quad 20.2 \\
 62.3 \\
 314.4 \\
 61.6 \\
 \hline
 102.1 < \\
 107.2 < +0.56 < \\
 209.3 < \\
 150.7 <
 \end{array}$$

$$\begin{array}{r}
 16 \quad 30 \quad 12 \\
 316.9 \\
 60.9 \\
 314.7 \\
 62.6 \\
 \hline
 104.0 < \\
 107.9 < \\
 211.9 < \\
 148.1 <
 \end{array}
 \quad 7+0.61 <$$

Index to left.

$$\begin{array}{r}
 16 \quad 34 \quad 48 \\
 337.1 \\
 40.2 \\
 334.3 \\
 41.2 \\
 \hline
 63.1 < \\
 66.9 < +0.98 < \\
 130.0 <
 \end{array}$$

$$\begin{array}{r}
 332.7 \\
 41.0 \\
 336.2 \\
 40.3 \\
 \hline
 68.3 < \\
 64.1 < +0.93 < \\
 132.4 < +0.77
 \end{array}$$

$$\begin{array}{r}
 16 \quad 36 \quad 20 \\
 \hline
 4(129 - 58) \\
 16 \quad 32 \quad 29.5 \checkmark \\
 +27. \checkmark \\
 \hline
 16 \quad 32 \quad 56.5 \checkmark \\
 \hline
 -3 \quad 58 \quad 3.5 - \\
 \hline
 121 \quad 32 \quad 56.5 \checkmark
 \end{array}$$

$$\begin{array}{r}
 \cancel{911} \\
 911 = 0.77
 \end{array}$$

March 7, 1896.

16 37 35

334.0

38.8

331.6

41.2

64.8 <

69.6 <

134.4 <

+0.89 <

16 38 53

332.0

38.5

331.2

38.1

66.5 <

66.9 <

133.4 <

+0.91 <

Index to st.

16 40 45

63.5

130.7

60.6

131.8

67.2 <

71.2 <

138.4 <

+0.81 <

16 42 00

58.6

129.8

62.2

132.0

71.2 <

69.8 <

141.0 <

+0.75 <

+0.24

 $M = 0.84$

4 | 159 13

16 39 48.2 ✓

+ 27. ✓

16 40 15.2

(-3 00 44.8)

21 40 15.2 ✓

March 7, 1896.

16 43 10

63.2

129.6

59.7

132.4

66.4 <

72.7 <

139.1 <

+0.79 <

16 44 10

61.0

126.9

61.3

128.8

65.9 <

67.5 <

133.4 <

9. +0.91 <

Ponder to left

16 46 12

152.3

218.8

153.5

217.3

66.5 <

63.8 <

130.3 <

+0.97 <

16 47 57

4 (21 29

16 45 22.2 v

+27. v

16 45 49.2 v

(-3 45 10.8)

21 45 49.2 v

151.3

218.7

152.3

216.9

67.4 <

64.6 <

132.0 <

+0.94 <

+0.90

~~9.11 - 0.90~~

March 7, 1896.

16 54 30

155.0

218.6

63.6c

153.6

64.4c + 1.02c

218.0

128.0c

16 56 11

150.1

218.4

68.3c

153.4

62.9c + 0.95c

216.3

131.2c

10

Index to nt.

16 59 00

242.8

304.4

61.6c

239.8

69.3c + 0.96c

309.1

130.9c

240.3

307.9

67.6c

241.8

60.9c + 1.01c

302.7

128.5c + 0.92c

$$\begin{array}{r} 17 \quad 00 \quad 00 \\ 4 \overline{) 1229 \quad 41} \end{array}$$

$$\begin{array}{r} 16 \quad 57 \quad 25.2 \checkmark \\ + 27. \checkmark \end{array}$$

$$\begin{array}{r} 16 \quad 57 \quad 52.2 \checkmark \end{array}$$

$$\begin{array}{r} (-3 \quad 33 \quad 7.8) \end{array}$$

$$\begin{array}{r} 21 \quad 57 \quad 52.2 \checkmark \end{array}$$

$$\frac{241.8}{11} = 21.98$$

March 7, 1896

17 01 05

240.8

306.2

240.7

308.9

65.4

$$\begin{array}{r} 68.2 \\ 133.6 \end{array} \quad +0.90$$

17 02 23

242.1

306.6

243.5

307.2

64.5

$$\begin{array}{r} 63.7 \\ 128.2 \end{array}$$

11. + 1.02

Index to left.

331.9

17 03 58

329.6

328.8

337.1

67.7

$$\begin{array}{r} 68.3 \\ 136.0 \end{array} \quad +0.86$$

331.8

36.6

331.3

34.8

64.8

$$\begin{array}{r} 63.5 \\ 128.3 \end{array} \quad \begin{array}{r} +1.01 \\ +0.95 \end{array}$$
~~11~~ = 0.95

17 05 21

4 12 47

17 3 11.8 ✓

$$\begin{array}{r} 17 \\ 3 \end{array} \quad \begin{array}{r} 11.8 \\ +27.0 \\ \hline 38.8 \end{array} \quad \checkmark$$

$$\begin{array}{r} (-3 \quad 27 \quad 21.2) \\ 22 \quad 3 \quad 38.8 \end{array} \quad \checkmark$$

March 7, 1896.

Images rather faint in first settings, and in last group growing faint on account of approaching daylight. Moon also a little past the quarter.

Comp. of Chron.

Wt. 1/2 Watch.

Bulb 103.

17 20 33

17 21 00.0

17 21 33

17 22 00.0

∴ Watch was 27. sec. slow.

Monday, March 9, 1896.

0 Cts.

St. obs.

2 4 - 2.5
 6 55
 4 51

Index to right.

7 34

212.8
 223.8 11.0 <
 212.6 11.2 <
 223.8 22.2 < 5.06 <

7 36

212.7 ~~213.5~~
 223.2 10.5 < (5.22)
 213.8 8.8 <
 222.6 19.3 < 5.37 <

Index to left.

7 39

303.2
 312.5 9.3 <
 301.8 11.9 <
 313.7 24.2 < 5.16 <

7 46

301.4
 314.2 12.8 < (5.10)

7 57 30

303.0 9.5 <
 312.5 22.3 < 5.05 <
 4) .64
 5.16

M = 5.16

March 9, 1896.

S. Cygni

M. obs.

20	8
37	35
11	23

+57.2

abandoned; too low

S Cassio.

M. obs.

1	10
7	90
6	30

+72.1

8 22 S Cassiof thought to be certainly seen
about equal to stars of Estimate 14.8

R. Aurigar

M. obs.

5	3
7	55
2	52

+53.0

8 43 S 2.5 variable variable 2.5 ±
estimate 14.4

March 9, 1896.

T. Cassiope-

M. obs.

$$\begin{array}{r} 0 \\ 8 \\ \hline 8 \end{array} \quad \begin{array}{r} 19 \\ 20 \\ \hline 1 \end{array}$$

$$+ 55^{\circ} 9$$

9 2

3.0 variab variab 2.5 p
estimate. 11.3

R Lyncis

M. obs.

$$\begin{array}{r} 6 \\ 8 \\ \hline 1 \end{array} \quad \begin{array}{r} 49 \\ 40 \\ \hline 51 \end{array}$$

$$+ 55^{\circ} 1$$

9 17

2.5 variab, variab 3.5 p
estimate 10.9

R Cameloopardis.

$$\begin{array}{r} 14 \\ 8 \\ \hline 5 \\ 6 \end{array} \quad \begin{array}{r} 40 \\ 55 \\ \hline 45 \\ 15 \end{array}$$

$$+ 84^{\circ} 1$$

d 3 variab variab 2 E (in large telescope)
d 2 variab variab 2 E ("finder")
estimate 9.3

9 37

March 9, 1896.

Nova Dingar

$$\begin{array}{r} 5 \quad 23 \\ 9 \quad 10 \\ \hline 3 \quad 47 \end{array}$$

+320

Examined with direct vision spectro-
scope, for focus with extreme care.
~~The Nova~~ Spectrum practically ^{or nearly} achromatic. However there seems to be
a slight spectrum appendage in the plane
of the other spectrum which is persistent
when the eye is moved into various
planes, although the phenomenon is
rather slight - quite slight.

Indx to right + below

10 3	companion star this appears	266.7		
		348.3	81.6 <	
		270.2	75.1 <	
		345.3	156.7 <	0.44 <
10 6		269.5		
		345.0	75.3 <	(0.48)
		270.0	77.3 <	
		347.3	152.8 <	0.52 <

March 9, 1896.

Index to left above.

10 9

358.1

78.9

0.1

78.5

80.8 <

78.4 <

159.2 <

0.40 <

358.4

78.5

358.1

78.2

80.1 <

80.1 <

160.2 <

(0.39)

0.38 <

4) 1.74

.435

.44

 $M = (0.44)$

S Cygni.

N. obs.

20

8

9

55

10

15

1

47

+57.2

R Ursa Min.

N. obs.

16

34

10

5

6

29

5

31

+72.9

f 2.5 variable variable 2.5 g (in ^{large tubes} ~~12~~)
 f 2 variable variable 3 g (in ~~finder~~)
 estimate 9.8

10 47

March 9, 1896,

S Cygni

$$\begin{array}{r}
 20 \qquad \qquad 8 \qquad \qquad + 57.2 \\
 10 \qquad \qquad 20 \\
 \hline
 9 \qquad \qquad 48 \\
 2 \qquad \qquad 12
 \end{array}$$

Stars α and δ seen; stars ϵ faintly seen
at intervals; no fainter companion stars
seen. Variable at times suspected, but
very faint and not certainly seen.

Probably as much as 1 or 2 grades fainter
than stars ϵ . Estimate, probably fainter
than 14.7. Bright (adjacent) star put
behind bar; Region low.

11 5

Tuesday, March 10, 1896.

Measurement of I.M. + $59^{\circ} 28'10''$
 T 2812 H. obs.

$$\begin{array}{r} 23 \quad 5-4 \\ 31 \quad 10 \\ \hline 7 \quad 1.6 \end{array}$$

+60.0

Index to left + below

7 41

orange star } 101.0
 disappears } ~~157.4 + 56.0~~
 99.1 ~~72.2~~
 165.9

56.4 <
~~71.8~~ <
 128.2 < 1.02 <

7 44

90.8
 165.1
 98.7
 159.9

74.3 < (0.94)
~~61.2~~ <
 135.5 < 0.87 <

Index to right + above.

7 50

clouds.
 190.9
 245.8
 181.1
 250.0

54.9 <
~~68.9~~ <
 129.8
 128.8 < 1.11 <

7 52

~~187~~
 7 46 45

182.2
 252.9
 187.0
 246.2

70.7 < (1.04)
~~59.2~~ <
 129.9 < 0.98 <
 4)3.98
 .99

M = 299

March 10, 1896.

R Ursa Minoris.

N. ds.

$$\begin{array}{r}
 16 \quad 34 \\
 \underline{7 \quad 45} \\
 8 \quad 49 \\
 3 \quad 11
 \end{array}
 \quad +72.9$$

Star fump. mid star d

Index to left + above

$$\begin{array}{r}
 8 \quad 35 \quad \left. \begin{array}{l} \text{comparison} \\ \text{disappears.} \end{array} \right\} \begin{array}{r} 62.0 \\ 125.0 \\ 62.2 \\ 126.1 \end{array} \\
 \quad \quad \quad \begin{array}{r} 63.0 \\ \underline{63.9} \\ 126.9 \end{array} \quad 1.04
 \end{array}$$

$$\begin{array}{r}
 8 \quad 36 \quad \begin{array}{l} 64.0 \\ \text{clouds.} \end{array} \quad (1.08) \\
 8 \quad 37 \quad \begin{array}{r} 127.3 \\ 64.2 \\ \underline{4.} \\ 128.4 \end{array} \quad \begin{array}{r} 63.3 \\ \underline{60.2} \\ 123.5 \end{array} \quad 1.12
 \end{array}$$

Index to right +

$$\begin{array}{r}
 8 \quad 40 \quad \begin{array}{r} 156.2 \\ 213.5 \\ 150.4 \\ 217.2 \end{array} \quad \begin{array}{r} 57.3 \\ \underline{66.8} \\ 124.51 \end{array} \quad 1.10
 \end{array}$$

Clouds.

$$\begin{array}{r}
 9 \quad 00 \quad \begin{array}{r} 149.5 \\ 216.2 \end{array}
 \end{array}$$

Observations seriously effected and stopped by clouds.

March 10, 1896.
~~March 10, 1896.~~

Ston

~~wrap with Ston d~~

Indr to

~~March 10, 1896~~

Σ 1615

12	8
8	40
<hr/>	
3	28
8	32

+ 33.5

all cloudy in this region.

Σ 1622 2 Can Venat.

12	10
8	45
<hr/>	
3	25
8	35

+ 41.3

Cloudy here.

March 10, 1896,

Σ 627

4	54	+ 3.4
8	95	
3	5 1	

Clouds thick every where

Σ 655 Leporis.

5	7	- 12.0
8	55	
3	48	

Clouds thick no stars visible.

Σ 654 ρ Orionis.

5	7	+ 2.5
9	00	
3	53	

Not visible although one of the components
is bright.

No stars visible.

Thursday
~~Thursday~~ March. 12. 1896.

2 Ceti.

W. obs.

$$\begin{array}{r} 2 \quad 4 \quad -2.5 \\ 7 \quad 0 \\ \hline +4 \quad 5.6 \end{array}$$

Dudley to right.

$$\begin{array}{r} 7 \quad 31 \\ 33.3 \\ 42.6 \quad 9.3 < \\ 30.6 \quad 14.4 < \\ 45.0 \quad 23.7 < \quad 4.92 < \end{array}$$

$$\begin{array}{r} 7 \quad 32 \\ 31.2 \quad (4.96) \\ 44.5 \quad 13.3 < \\ 33.6 \quad 9.6 < \\ 43.2 \quad 22.9 < \quad 4.99 < \end{array}$$

Dudley to left.

$$\begin{array}{r} 7 \quad 35 \\ 123.8 \\ 132.1 \quad 8.3 < \\ 122.9 \quad 10.6 < \\ 133.5 \quad 18.9 < \quad 5.41 < \end{array}$$

$$\begin{array}{r} 7 \quad 36 \\ 122.0 \quad (5.32) \\ 133.5 \quad 11.5 < \\ 123.2 \quad 9.1 < \\ 132.3 \quad 20.6 < \end{array}$$

$$\begin{array}{r} 5.23 < \\ 4)20.55 \\ \underline{5.14} \end{array}$$

$$M = 5.14$$

March 12, 1896.

Index to left.

7 43

123.2

132.3

122.2

133.8

9.1<

11.6<

20.7<

5.22<

7 45

121.9

134.0

123.1

132.1

12.1<

9.0<

21.1<

(5.20)

5.17<

Index to right.

7 48

213.2

223.3

212.1

223.5

10.1<

11.4<

21.5<

5.13<

7 49

212.4

223.4

213.1

223.2

11.0<

10.1<

21.1<

(5.15)

5.17<

 41.69
 5.17

 46 15

M = 5.18

March 12, 1896.

Companion Stars for R Ursa Minoris
Hols.

$$\begin{array}{r}
 16 \quad 34 \\
 31 \quad 40 \\
 \hline
 15 \quad 6
 \end{array}
 \quad + 72.9$$

Star f comp with d

Index to left & above

8 15

$$\begin{array}{l}
 \text{Star d dis. } \left\{ \begin{array}{l} 231.2 \\ 292.6 \\ 225.5 \\ 291.7 \end{array} \right.
 \end{array}$$

$$\begin{array}{r}
 61.4 \text{ c} \\
 66.2 \text{ c} \\
 \hline
 127.6 \text{ c}
 \end{array}
 \quad 1.03 \text{ c}$$

8 17

$$\begin{array}{r}
 229.6 \\
 294.9 \\
 229.4 \\
 291.1
 \end{array}$$

$$\begin{array}{r}
 65.3 \text{ c} \\
 61.7 \text{ c} \\
 \hline
 127.0 \text{ c}
 \end{array}
 \quad 1.04 \text{ c}$$

(1.04)

Index to right & below

8 19

$$\begin{array}{r}
 320.6 \\
 21.2 \\
 316.1 \\
 23.4
 \end{array}$$

$$\begin{array}{r}
 60.6 \text{ c} \\
 67.3 \text{ c} \\
 \hline
 127.9 \text{ c}
 \end{array}
 \quad 1.02 \text{ c}$$

(1.00)

8 21

A 18 0

$$\begin{array}{r}
 316.5 \\
 25.6 \\
 320.7 \\
 22.1
 \end{array}$$

$$\begin{array}{r}
 69.1 \text{ c} \\
 61.4 \text{ c} \\
 \hline
 130.5 \text{ c}
 \end{array}
 \quad 0.97 \text{ c}$$

$$M = 1.02$$

March 12, 1896.

Star γ comp. with d

Index to left + blue

Star d disappears } 319.5
 8 23 } 20.0
 321.5
 21.2

60.5-
 59.7- 1.19-
 120.2-

(1.21)

8 25

322.2

19.8

57.6-

319.3

60.8-

1.23-

20.1

118.4-

Index to right + ~~blue~~ ^{alv}

8 ~~24~~
 30

50.7 ~~290.8~~
 110.8 ~~57.3~~
 49.7
 107.9

60.1-
 58.2- 1.23-
 118.3-

(1.24)

8 31
 4109
 8 27 15

50.7

111.2

60.52

51.0

57.0-

1.25-

108.0

117.5-

 $M = 1.22$

March 12, 1896.

Star h comp with star d

Index to left + above.

8	36	55.1		
		106.3	51.2 <	
		56.4	<u>45.3 <</u>	1.74 <
		101.7	96.5 <	

(1.72)

8	37	57.3		
		101.8	44.5 <	
		53.0	<u>54.3 <</u>	1.69 <
		107.3	98.8 <	

Index to right + above.

8	59	143.2	196.6	
		198.5	55.3 <	
		150.5	<u>40.3 <</u>	1.77 <
		190.8	95.6 <	

(1.77)

9	1	149.4		
		190.0	40.6 <	
		142.2	<u>54.9 <</u>	1.77 <
8	48	197.1	95.5 <	

$M = 1.74$

March 12, 1896.

Star K compared with star d
Index to left + below

8	40	57.8		
		103.6	45.8 <	
		59.1	42.1 <	1.97 <
		101.2	87.9 <	

(1.98)

8	42	58.7		
		102.0	43.3 <	
		58.9	44.0 <	1.99 <
		102.9	87.3 <	

Index to right + above

8	43	151.5	145.6	
		188.3	193.4	36.8 <
		147.7	151.3	47.5 <
		195.2	189.9	84.3 <

2.07 <

(2.04)

8	48	145.6		
		193.5	47.9 <	
		150.4	38.7 <	2.01 <
		189.1	86.6 <	

 $M = 2.01$

March 12, 1896.

Star c compared with star d
Index to right + above.

star d disappears

9 25

156.2

186.6

30.4 <

151.0

39.6 <

2.51 <

190.6

70.0 <

(2.52)

9 26

151.8

191.1

39.3 <

156.7

29.8 <

2.54 <

186.5 ~~184.5~~

69.1 <

Index to left + below

9 31

244.0

277.5

33.5 <

240.0

40.4 <

2.38 <

280.4

73.9 <

(2.44)

9 32
9 28 30

241.9

279.6

37.7 <

242.9

32.6 <

2.50 <

275.5

70.3 <

$M = 2.48$

March 12, 1896.

M. P. 441.

$$\begin{array}{r} 3 \ 31 \\ 7 \ 45 \\ \hline 6 \ 14 \end{array}$$

+62.8

Index below

variabl. disp. > 193.5

10 16

243.7

50.2 <

196.6

44.8 <

241.4

93.0 <

1.78 <

196.3

(1.80)

10 17

240.5

44.2 <

192.3

49.3 <

241.6

93.5 <

1.82 <

Index above.

280.2

10 20

335.1

54.9 <

284.6

47.7 <

332.3

102.6 <

1.59 <

284.5

10 22

330.3

45.8 <

(1.62)

281.6

54.2 <

335.8

100.0 <

1.66 <
$$\begin{array}{r} 475 \\ 10 \ 18 \ 45- \end{array}$$

4)2.85

1.71 <

Variabl. is brighter than companion star.

M=1.71

March 12, 1896.

Circumpolar Variables
S. C. Cephei. W. obs.

$$\begin{array}{r} 21 \quad 37 \\ 10 \quad 20 \\ \hline 11 \quad 17 \\ 43 \end{array}$$

+78.3

10 45 f 3.0 variable, variab 2.0g (in large tel.)
f 3.8 variable, variab 1.0g (in finder)
Estimate 8.7

Well's Variable.

$$\begin{array}{r} 20 \quad 31 \\ 14 \quad 25 \\ \hline -6 \quad 06 \end{array} \quad +17.8$$

14 57 } Star k seen
Star l probably seen. } W. obs.
Var. not seen.

15 18 } Star l seen
Var. not seen.

15 28 } Star m faintly seen.

March 12, 1896.

N 40 Star is thought to be certainly seen at intervals, but variable not certainly seen. Observer sometimes thinks he suspects it, but it may possibly be due to strained vision.

16 02 Star is certainly seen.

A star one or two grades fainter than we could probably see.

Var. probably not seen.

16 50 Twilight begins to intensify. Can feel
examination of the organ with long branches
expanses 1 and 2 fails to show the
vanilla; Sky clear, altitude $30^{\circ} \pm$ moon
cutting near. Can see both 2 quads further
than in. E.C.P. obs

1655 var. ^{above} ~~var.~~ ^{at limit of width of} many
times in the same pla. Much fainter than
photo m. (455 grades) Y. str.

17 2 *Par. suspiciosa*. Not seen with certainty, C. obs.

1.7 4 Var. *gentle* actually born in 4 v

March 12, 1896.

Sid Time. 2 V. Var prot. seen
16 46 30 Twilight strong.

P. H.

The variable was actually seen but not recognized
^(March 12, 1896)
~~at this morning~~ ^{being} ~~an~~ ^{an} error of identification.
On the photograph the position of $+17^{\circ} 43' 70''$
is near the variable and was supposed to be the ~~the~~ ^a real
star. The object seen near this place was the variable.
March ~~12~~¹⁴ 1896. E. C. G.

Mr. was unaware of the presimetic companion
being on photographic chart, and so the var-
iable was supposed to be very faint, and,
until the last, invisible, whereas it was really
visible throughout. - That is, the presimetic comp-
anion on chart was supposed to be a star
and ~~was mistaken~~ the variable itself was
taken for this star. J. C. G.

March 14, 1896. (Saturday)

2 Ceti

W. ds.

2 4 - 2.5
 7 25
 5 11

Index to right + above.

7 31

34.5

44.8

10.3 ✓

33.5

13.8 ✓

47.3

24.1 ✓

4.88 ✓

33.2

46.8

13.6 ✓

(4.90)

34.7

10.1 ✓

44.8

23.7 ✓

4.92 ✓

Index to left + above

7 35

124.3

134.0

9.7 ✓

124.4

11.9 ✓

136.3

21.6 ✓

5.12 ✓

124.1

136.7

12.6 ✓

(5.88)

124.6 125.2

134.4

9.9 ✓

22.5 ✓

5.03 ✓

4) 19.95 ✓

Man. 4.99 ✓

7 38

4(17)
 7 34 15

March 14, 1896.

R Ursa Minoris.

M. cl.

Measurement of faint companion stars with Photo. T.

$$\begin{array}{r}
 161 \quad 34 \\
 \hline
 7 \quad 40 \\
 8 \quad 54 \\
 3 \quad 6
 \end{array}$$

+ 72.9

Star f comp with d

Index above.

$$\begin{array}{r}
 8 \quad 12 \\
 \hline
 229.9 \\
 296.4 \\
 237.5 \\
 295.6
 \end{array}$$

66.5 <

$$\begin{array}{r}
 54.1 < \\
 \hline
 124.6 <
 \end{array}$$

1.09

$$\begin{array}{r}
 235.5 \\
 293.8
 \end{array}$$

54.3 <

(1.08)

8 13

$$\begin{array}{r}
 231.3 \\
 299.0
 \end{array}$$

$$\begin{array}{r}
 67.7 < \\
 \hline
 126.0 <
 \end{array}$$

1.06

Index below.

$$\begin{array}{r}
 8 \quad 23 \\
 \hline
 317.0 \\
 29.2 \\
 326.0 \\
 249
 \end{array}$$

72.2 <

$$\begin{array}{r}
 54.9 < \\
 \hline
 131.1 <
 \end{array}$$

0.96

$$\begin{array}{r}
 329.4 \\
 24.8
 \end{array}$$

57.4 <

(0.98)

$$\begin{array}{r}
 8 \quad 24 \\
 \hline
 8 \quad 18 \quad 0
 \end{array}$$

$$\begin{array}{r}
 319.2 \\
 30.7
 \end{array}$$

$$\begin{array}{r}
 71.5 < \\
 \hline
 126.9 <
 \end{array}$$

1.00

M = 1.03

March 14, 1896.

Star γ compared with star d
 Index above to right.

8 15

233.0	64.0	
297.0		
239.0	56.4	1.18
295.8	<u>120.4</u>	

8 17

234.8	62.6	(1.18)
297.4		
236.8	54.6	1.17
295.4	<u>121.2</u>	

Index to left + below.

8 19

326.2	56.3	
22.5		
325.7	54.5	1.31
24.2	<u>114.4</u>	

(1.32)

8 20

326.5	56.9	
23.4		
321.8	57.1	1.33
43.9	<u>114.0</u>	

 $M = 1.25$

March 14, 1896.

Star h compared with d

Index to left + below

8 33

239.0

290.1

$\sqrt{1.1} <$

243.8

285.0

$\sqrt{1.2} <$

$\sqrt{1.85} <$

$\sqrt{92.3} <$

8 36

241.2

285.3

$\sqrt{4.1} <$

242.2

291.2

$\sqrt{9.0} <$

$\sqrt{1.83} <$

$\sqrt{93.1} <$

$(1.84) <$

Index to right + above.

8 47

331.2

19.8

$\sqrt{4.6} <$

325.6

20.7

$\sqrt{5.1} <$

$\sqrt{1.07} <$

$\sqrt{103.7} <$

$(1.64) <$

8 49

4 (16.5)

8 41 15

323.5

22.2

$\sqrt{4.7} <$

334.1

13.8

$\sqrt{39.7} <$

$\sqrt{1.70} <$

$\sqrt{92.4} <$

$M = 1.74 <$

March 14, 1896.

Star K comp. with d

Index to left + above

8 39

242.0

288.1

243.9

285.7

46.1 <

41.8 <

87.9 <

1.97 <

(2.04) <

8 40

243.9

281.8

241.0

285.6 298.3

37.9 <

44.6 <

82.5 <

2.12 <

Index to right + above

8 43

328.5

20.0

333.0

11.8

5
11.5 <

38.8 <

90.3 <

1.91 <

(2.04)
(1.90)

8 45

335.1

14.7

328.1

19.1

39.6 <

5
1.0 <

98.6 <

1.90

2.18

M = 1.97
2.04

March 14, 1896.

Star C compared with d

Index to right + above.

8 57

336.5

12.1

337.2

10.1

35.6 <

$\frac{32.9}{68.5} <$

2.56 <

(2.58) <

8 59

336.9

11.3

336.1

8.8

34.4 <

$\frac{32.7}{67.1} <$

2.60 <

Index to left + below.

9 1

64.7

102.2

67.7

101.5

37.5 <

$\frac{33.8}{71.3} <$

2.46 <

(2.43) <

9 3
9 0 0

65.6

101.0

64.0

101.9

35.4 <

$\frac{37.9}{73.3} <$

2.40 <

$M = 2.50 <$

March 14, 1896

R. W. Dracoris. M. ds.
Measurement of faint comparison stars with Photo. T.

16 26

+67.4

9 25

7 1

4 59

comp with ch

Index to right +

10 6

comp. stars
disappears > 171.1

191.2

20.1 <

170.3

18.6 <

3.84 <

188.9

38.7 <

168.9

(3.80) <

10 8

191.6

22.7 <

171.3

17.7 <

3.75 <

189.0

40.4 <

Index to left.

10 15

77.6

103.4

25.8 <

80.9

21.7 <

3.39 <

102.6

47.5 <

10 17

78.8

(3.36) <

102.0

23.2 <

79.4

25.7 <

3.82 <

105.1

48.9 <

2(1.16
3.58)~~10 11 30~~

46.5

10

~~22~~

11.5

M = 3.5*

March 14, 1896.

Star p compared with star h
Lud. to left + above

10 22

companion star	76.7
disappears	107.9
	74.4
	108.9

31.2	<	
34.5	<	2.65
65.7	<	

(2.65)
(2.64)

10 23

	74.1
	109.6
	74.1
	105.3

5		
34.5	<	
31.2	<	2.65
65.7	<	
6		

Lud. to right + above

11 5

	142.0
	195.0
	163.3
	194.2

33.0	<	
30.9	<	2.72
63.9	<	

(2.76) <

11 7

41677	
10 -44 10	

	143.1
	194.7
	164.4
	194.8

31.6	<	
30.4	<	2.79
62.0	<	

M = 2.78

March 14, 1896.

Star of compand with h
Index to left + above.

10	26	72.4		
		103.5	31.1 <	
		75.3	<u>29.1 <</u>	2.88 <
		104.4	60.2 <	

(2.90)

10	28	76.7		
		103.8	27.1 <	
		74.4	<u>30.8 <</u>	2.94 <
		105.2	57.9 <	

Index to right + below

10	59	168.0		
		194.1	26.1 <	
		167.8	<u>24.2 <</u>	3.26 <
		192.0	50.3 <	

(2.29) <

11	2	168.4		
		192.7	24.3 <	
		166.8	<u>24.7 <</u>	3.32 <
		191.5	49.0 <	

11	2
4	17 5
10	43 45

M = 3.10 <

March 14, 1896.

Star recompand with star h
Index to left + above

10	30	60.2		
		117.7	57.5 <	
		63.5	<u>57.5</u> <	1.30 <
		121.0	11 57 0 <	

(1.29) <

10	31	63.6		
		118.6	55.0 <	
		62.4	6 0.9 <	1.28 <
		123.3	<u>11 5.9</u> <	

Index to right + above

10	56	153.2		
		207.2	54.0 <	
		149.0	<u>67 2.3</u> <	1.27 <
		211.3	12 6.3 <	

(1.32) <

10	58	148.8		
		209.0	60.2 <	
		153.9	<u>51.8</u> <	1.37 <
		205.7	11 2.0 <	

M = 1.30 <

March 14, 1896.

Star compared with star h
Index to left

	66.9		
10 33	113.9	47.0 c	
	64.8	<u>49.5 c</u>	1.74 c
	114.3	96.5 c	

	67.6		(1.76) c
10 34	112.0	44.4 c	
	64.1	<u>51.0 c</u>	1.77 c
115.1	118.0	95.4 c	

Index to right.

10 52	159.1		
	201.5	42.4 c	
	159.2	<u>41.6 c</u>	2.08 c
	200.8	84.0 c	

10 54	158.8		(2.08) c
<u>4 (17 3)</u>	201.7	42.9 c	
10 43 10	159.8	<u>40.7 c</u>	2.09 c
	200.5	83.6 c	

$M = 1.92$

$2 \overline{) 3.84}$
1.92

March 17, 1896 (Tuesday)

Measurement of *U. Aphi* with Photo. T. M. S.

$$\begin{array}{r} 6 \quad 2 \\ \hline 5 \quad 12 \end{array}$$

$$\begin{array}{r} 6 \quad 13 \\ \hline 5 \quad 25 \end{array}$$

Lucky above.

$$\begin{array}{r} 6 \quad 35 \\ \hline 157.5 \\ 241.6 \\ 157.7 \\ 236.3 \end{array} \quad \begin{array}{r} 84.1 \\ \hline 78.6 \\ 162.7 \end{array} \quad \begin{array}{r} -0.33 \end{array}$$

-0.36

$$\begin{array}{r} 36 \\ \hline 142.6 \\ 236.8 \\ 156.4 \\ 241.2 \end{array} \quad \begin{array}{r} 74.2 \\ \hline 84.8 \\ 159.0 \end{array} \quad \begin{array}{r} -0.40 \end{array}$$

Lucky below.

$$\begin{array}{r} 6 \quad 39 \\ \hline 153.1 \\ 71.2 \\ 141.8 \end{array} \quad \begin{array}{r} 72.3 \\ \hline 70.6 \\ 162.9 \end{array} \quad \begin{array}{r} -0.32 \end{array}$$

-0.34

$$\begin{array}{r} 233 \\ 190 \\ \hline 53 \end{array}$$

March 17, 1896

Index above.

$$\begin{array}{r} \text{III} \\ 6 \quad 48 \end{array}$$

158.2

238.1

163.8

231.9

$$\begin{array}{r} 79.9 \\ \cdot 68.18 \\ \hline 148.0 \end{array} \quad -0.61$$

-0.64

$$\begin{array}{r} 6 \quad 49 \end{array}$$

166.4

230.3

156.1

236.8

$$\begin{array}{r} 63.9 \\ 80.7 \\ \hline 144.6 \end{array} \quad \begin{array}{r} -0.68 \\ -0.29 \end{array}$$

Index below

$$\begin{array}{r} 6 \quad 51 \end{array}$$

245.4

332.3

256.2

322.7

$$\begin{array}{r} 86.9 \\ 66.5 \\ \hline 153.4 \end{array} \quad -0.51$$

-0.54

$$\begin{array}{r} 6 \quad 53 \end{array}$$

257.2

323.1

245.4

329.0

$$\begin{array}{r} 65.9 \\ 83.6 \\ \hline 149.5 \end{array} \quad -0.58$$

$$\begin{array}{r} 4(23.7) \\ -0.595 \end{array}$$

M = -0.60

$$\begin{array}{r} 4(201) \\ 6 \quad 50 \quad 10 \\ \hline -4 \\ 6 \quad 50 \quad 11 \\ 3 \quad 53 \\ \hline +2 \quad 57 \quad 11 \end{array}$$

March 17/1896.

Index above.

IV

6 58

247.3

330.8

253.0

323.1

83.5

70.1 - 0.50

153.6

-0.5K

255.0

323.2

247.3

329.4

68.2

82.1 - 0.57

150.3

Index above.

338.9

39.6

344.4

51.3

80.7

66.9 - 0.62

147.6

-0.65

344.2

49.7

337.5

56.5

65.5

79.0 - 0.68

144.5

4(237)
-0.59

M = -0.59

6 58

6 56 0
- 4

6 55 56

3 53

+3 2 56

March 17, 1896.

Index above.

$$\begin{array}{r} \text{V} \\ 7 \quad 00 \end{array}$$

$$\begin{array}{r} 338.8 \\ 58.5 \\ 344.0 \\ 49.9 \end{array}$$

$$\begin{array}{r} 79.7 < \\ 65.9 < \\ \hline 145.6 < \end{array} \quad -0.66$$
 -0.66

$$\begin{array}{r} 7 \quad 1 \end{array}$$

$$\begin{array}{r} 344.7 \\ 50.0 \\ * 336.8 \\ 59.4 \end{array}$$

$$\begin{array}{r} 6 \\ 75.3 < \\ 82.6 < \\ \hline 147.9 < \end{array} \quad -0.62$$

Index below

$$\begin{array}{r} 7 \quad 4 \end{array}$$

$$\begin{array}{r} 69.8 \\ 146.0 \\ 73.7 \\ 138.3 \end{array}$$

$$\begin{array}{r} 76.2 < \\ 64.6 < \\ \hline 140.8 < \end{array} \quad -0.76$$
 -0.76

$$\begin{array}{r} 7 \quad 5 \end{array}$$

$$\begin{array}{r} 7 \quad 2 \quad 30 \\ - 4.5 \\ \hline 7 \quad 2 \quad 25.5 \\ 3 \quad 53 \\ \hline +3 \quad 9 \quad 20.5 \end{array}$$

$$\begin{array}{r} 79.4 \\ 139.7 \\ 66.1 \\ 145.2 \end{array}$$

$$\begin{array}{r} 60.3 < \\ 79.1 < \\ \hline 139.4 < \end{array} \quad -0.79$$

$$\begin{array}{r} 428.3 \\ -5.708 \end{array}$$
 $M = 0.71$

March 17/1896

VI

Dudley below

7 6

70.0

144.6

74.5

141.3

74.6

66.8

141.4

-0.75

-0.74

7 7

74.1

141.1

69.0

144.0

74.0

75.0

142.0

-0.73

Dudley above.

7 9

140.0

235.8

165.2

228.8

70.8

63.6

139.4

-0.77

-0.74

10

166.8

227.8

141.0

234.6

61.0

73.6

134.6

-0.88

431.5
-0.79

M = -0.79

7 8 0
-4.5
7 7 58.5
3 53
+3 14 55.5

March 17, 1896.

VII

7 11

160.5

235.2

166.2

227.4

Index above.

74.7

61.2

135.9

-0.86

-0.92

7 12

170.0

227.3

160.9

234.2

57.3

73.3

130.6

-0.97

Index below

7 15

252.2

327.2

256.4

319.3

75.0

62.9

137.9

-0.82

-0.74

16

7 13 30

-5

7 13 25

3 53

+3 20 25

254.6

318.8

244.2

325.0

64.2

80.8

145.0

-0.67

433.2

-0.83

M = -4.83

March 17, 1896.

VIII

Lucky below

17

250.6

323.1

259.0

317.5

72.5^c58.5^c131.0^c

- 0.96

-0.92

7 19

257.1

317.7

250.7

325.2

60.6^c74.5^c135.1^c

- 0.87

Lucky above.

7 20

340.5

355.0

343.0

49.2

74.5^c66.2^c140.7^c

- 0.76

-0.80

7 21

348.6

49.5

338.5

54.1

60.7^c75.6^c136.3^c

- 0.85

4(344)
- 0.86

M = -0.86

7	19	10
3	53	
+ 3	26	10

March 17, 1896.

XI

Index above.

7 32

340.6

53.0

346.8

45.0

-

$$\begin{array}{r} 72.4 \\ 58.2 \\ \hline 130.6 \end{array} - 0.97$$

-0.97

7 34

348.2

47.0

340.4

52.0 ~~54.8~~

$$\begin{array}{r} 58.8 \\ 71.6 \\ \hline 130.4 \end{array} - 0.97$$

Index below.

7 35

75.2

146.3

80.1

135.8

$$\begin{array}{r} 71.1 \\ 55.7 \\ \hline 126.8 \end{array} - 1.05$$

-1.14

7 37

84.6

133.8

74.6

143.6

$$\begin{array}{r} 49.2 \\ 69.0 \\ \hline 118.2 \end{array} - 1.23$$

$$\begin{array}{r} 4422 \\ \hline -1.055 \end{array}$$

$$\begin{array}{r} 7 \quad 34 \quad 30 \\ \hline 7 \quad 34 \quad 25 \\ 3 \quad 53 \\ \hline + 0 \quad 41 \quad 25 \end{array}$$
 $M = 1.06$

March 17, 1896.

X

Index below

7 38

70.8
144.2
78.9
134.3

73.4
55.4 - 1.50
128.8

-1.06

7 39

81.8
133.0
72.0
~~141.0~~

51.2
72.0 - 1.12
123.2

Index above.

7 41

162.5
231.6
170.8
224.4

69.1
53.6 - 1.13
122.7

-1.09

7 42
7 40 0
-5
7 39 55
3 53
+ 3 46 55

170.5
225.0
141.4
233.5

54.5
72.1 - 1.05
126.6

430
-1.08

M = -1.08

March 17, 1896

XT

7 30

146.5
230.4
171.6
227.5

Lucy above.

63.9
55.9
119.8 - 1.20

-1.20

7 37

168.0
226.0
145.8
228.0

58.0
62.2
120.2 - 1.19

Lucy below

7 33

254.5
320.4
262.7
313.3

65.9
50.6
116.5 - 1.27

-1.27

7 53
463

7 53 15
- 5

7 53 10
3 53

+ 4 0 10

255.2 ~~254.5~~
318.8 ~~315.2~~
261.1
314.1

63.6
53.0
116.6 - 1.27

493
71.23

M = 7.23

March 17, 1896.

~~XII~~

8 00

261.4

313.2

255.5

320.2

Duch's above

51.8

64.7

116.5

-1.27

-1.20

8 1

253.5

321.2

260.2

315.0

67.7

54.8

122.5

-1.14

Duch's above.

8 2

351.5

43.9

341.1

53.7

52.4

72.6

125.0

-1.08

-1.14

8 3

341.0 341

51.1

353.2

43.3

70.1

50.1

120.2

-1.19

468

-1.17

M = -1.17

8	1	30
		-6
8	1	24
3	53	
+4	8	24

March 17, 1896.

XIII

8 7

352.8
43.6
345.7
50.7

Index above.

50.8
65.0
115.8 - 1.29

-1.32

8 8

346.4
48.2
352.0
42.5

61.8
50.5
112.3 - 1.36

8
7 11

81.4
134.8
73.5
138.9

Index above

50.4
65.4
115.8 - 1.29

-1.31

8
7 12

75.3
138.7
81.2
131.6

63.4
50.4
113.8 - 1.33

4127
-1.32

8 9 30
- 6
8 9 24
3 53
4 16 24

$M = -1.32$

March 17, 1896.

XIV

Dudf above

8 14

$$\begin{array}{r}
 84.5 \\
 131.2 \\
 76.4 \\
 \hline
 142.2
 \end{array}
 \begin{array}{r}
 46.7 \\
 65.8 \\
 \hline
 112.5
 \end{array}
 \begin{array}{r}
 \\
 \\
 -1.36
 \end{array}$$

-1.36

8 15

$$\begin{array}{r}
 76.7 \\
 139.2 \\
 81.3 \\
 \hline
 131.2
 \end{array}
 \begin{array}{r}
 62.5 \\
 49.9 \\
 \hline
 112.4
 \end{array}
 \begin{array}{r}
 \\
 -1.36
 \end{array}$$

Dudf above.

8 17

$$\begin{array}{r}
 174.2 \\
 219.0 \\
 166.1 \\
 \hline
 228.6
 \end{array}
 \begin{array}{r}
 44.8 \\
 62.5 \\
 \hline
 107.3
 \end{array}
 \begin{array}{r}
 \\
 -1.48
 \end{array}$$

-1.40

8 18

$$\begin{array}{r}
 164.4 \\
 228.2 \\
 \hline
 227.4 \\
 171.8 \\
 \hline
 222.0
 \end{array}
 \begin{array}{r}
 63.8 \\
 50.2 \\
 \hline
 114.0
 \end{array}
 \begin{array}{r}
 \\
 -1.33
 \end{array}$$

$$\begin{array}{r}
 8 \quad 16 \quad 0 \\
 \hline
 8 \quad 10 \quad 54 \\
 3 \quad 53 \\
 \hline
 +4 \quad 22 \quad 54
 \end{array}$$

$$\begin{array}{r}
 4 \quad 15 \quad 3 \\
 \hline
 -1.38
 \end{array}$$

$$M = -1.38$$

March 17, 1896.

XV

8 20

173.5
219.8
145.0
227.3

Index above.

46.3 -
62.3 - 1.40 -
108.6

-1.42

8 21

167.6
226.8
173.3
219.7

59.2
46.4 - 1.52 -
105.6

Index below

8 22

260.8
310.0
254.4
320.5

49.2
66.1 - 1.30 -
115.3

-1.22

8 24

253.6
319.8
260.5
316.4

66.2 -
55.9 - 1.14 -
122.1

4141
-1.35 -

M = -1.35

8 24
412
8 21 45
6
8 21 39
3 53
+ 4 28 39

March 17, 1896.

~~XVI~~

Lucky below

8 26 30'

262.8

312.8

50.0

253.2

67.0

- 1.26

320.2

117.0

- 1.24

27

8 37 45

253.2

320.3

67.1

260.5

47.7

- 1.31

308.2

114.8

Lucky above

8 30 00

357.2

42.3

51.1

343.2

65.8

- 1.26

49.0

116.9

- 1.32

8 31 35

343.2

47.7

64.5

352.3

47.5

- 1.37

8 31

39.8

112.0

4 120
- 1.30

4 115 50

8 28 57.5

 $M = -1.30$

-6

8 28 57.5
- 3 53
+ 4 35 51.5

180
58
230

March 17, 1896.

XVII

Lucky above.

8 32 45

$$\begin{array}{r}
 351.1 \\
 39.0 \\
 342.2 \\
 \hline
 48.8
 \end{array}$$

$$\begin{array}{r}
 47.9 \\
 66.6 \\
 \hline
 114.5
 \end{array}
 \quad -1.31$$

-1.40

8 34 55

$$\begin{array}{r}
 346.4 \\
 47.0 \\
 353.4 \\
 \hline
 40.3
 \end{array}$$

$$\begin{array}{r}
 60.6 \\
 46.9 \\
 \hline
 107.5
 \end{array}
 \quad -1.48$$
~~Lucky below~~

8 35 55

$$\begin{array}{r}
 86.3 \\
 139.1 \\
 73.0 \\
 \hline
 140.2
 \end{array}$$

$$\begin{array}{r}
 52.8 \\
 67.2 \\
 \hline
 120.0
 \end{array}
 \quad -1.19$$

-1.30

8 37 10

$$\begin{array}{r}
 75.3 \\
 141.1 \\
 84.9 \\
 \hline
 129.8
 \end{array}$$

$$\begin{array}{r}
 65.8 \\
 44.9 \\
 \hline
 110.7
 \end{array}
 \quad -1.40$$

$$\begin{array}{r}
 413.8 \\
 \hline
 -1.345
 \end{array}$$

$$\begin{array}{r}
 8 \ 37 \ 10 \\
 \hline
 4 \ 20 \ 45 \\
 8 \ 35 \ 11.2 \\
 \hline
 -6 \\
 8 \ 35 \ 5.2 \\
 -3 \ 53 \\
 \hline
 +4 \ 42 \ 5.2
 \end{array}$$
 $\Sigma = -1.34$

March 17, 1896

XVIII

8 39 15

84.1
133.1
80.8
138.9

49.0
58.1
107.1

- 1.49

- 1.47

8 40 35

74.5
138.1
85.2
130.2

63.6
45.0
108.6

- 1.40

Index above.

8 42 45

173.2
221.4
166.5
228.4

48.2
61.9
110.1

- 1.42

- 1.49

8 49 17

165.9
225.9
175.6
219.5

60.0
43.9
103.9

- 1.56

4(172 12)

8 43 30

8 42 56.0

8 53

+ 4 49 56

4(192
- 1.48

 $M = -1.48$

March 17, 1896.

~~XIX~~

8 45 40

174.0

217.4

163.5

227.4

Index above.

43.4

63.9

107.3

- 1.48

8^h 47^m 02^s

165.3

230.0

172.6

221.0

64.7

48.4

113.1

- 1.35

-1.42

Index below

8 49 00

264.5

311.2

254.6

319.3

46.7

64.7

111.4

- 1.39

8 50 27

253.6

318.6

262.6

308.5

65.0

45.9

110.9

- 1.40

4 192 9

A 48 2.2

-7

8 47 55.2

3 53

+ 4 54 55.2

4162

- 1.405

M = 1.40

March 17, 1896.

XX

Ducky below

8 52 55

264.1

308.2

257.6

317.2

44.1

60.6

109.7

-1.42

8 54 18

255.3

320.0

264.2

309.7

6.47

45.5

110.2

-1.41

-1.42

Ducky below.

56 16

35.4

355.2

39.2

340.5

50.1

40.2

69.6

109.8

1.42

(M = 1.40)

-1.38

342.9

52.1

353.2

37.4

69.2

44.2

113.4

1.34

415.9

-1.398

394

match

6

2

2.3

-2.3

9

1

10.5

-10.5

6 2 00

1 00

57 29

4 (20 5.8)

8 55 14.5

-10.5

8 55 4.0

-8

8 55 26.5

3 55

3 55

15 1 56

March 17, 1896. (Tuesday)
R Draconis

Measurement of faint Crapiron's Stars with
Photo. T. Nobs.

16	26	
9	10	
7	16	
4	44	

+ 67.3

Stars comp. with R
str & disp.

Index to left + above

9 24

105.5
127.2
106.0
124.4

21.7

18.4

40.1

3.76

9 27

107.5
127.0
105.3
129.4

19.5

24.1

43.6

3.58

(3.67)

Index to right + below

10 32

14.8
36.3

March 18, 1896.

Q Ceti

W. obs.

$$\begin{array}{r} 2 \quad 4 \\ 7 \quad 25 \\ \hline 5 \quad 21 \end{array}$$

- 2.5

$$\begin{array}{r} 2 \quad 4 \\ 7 \quad 38 \\ \hline 5 \quad 34 \end{array}$$

Too low and too many clouds to be visible.

T Androm.

W. obs.

$$\begin{array}{r} 0 \quad 14 \\ 7 \quad 55 \\ \hline 7 \quad 41 \end{array}$$

+ 26.1

Too low and in too much cloud to be seen.

S Ursa Majoris

W. obs.

$$\begin{array}{r} 1 \quad 2 \quad 3 \quad 1 \\ 8 \quad 5 \\ \hline 4 \quad 26 \\ 7 \quad 34 \end{array}$$

+ 61.7

*

March 18 1896

$\Sigma 1478$

12	39
9	00
3	39
8	21

+ 15.0

Index to right + above

8 54⁵ - bright disappears >

265.1
349.6
275.0
341.7

84.5
66.7
15 1.2

0.55

(0.52)

8 56

273.7
+ 342.3
264.8
349.9

68.6
85.1
15 3.7

0.50

Index to left + above.

8 59

357.6
86.3
6.1
73.0

94.7
66.9
16 1.6

0.35

(0.38)

9 1

3.5
75.8
357.0
82.6

72.3
85.6
15 7.9

0.42

241
4231

2 57 85 Position angle of above double star
Position angle 200° Distance 28" Magn. 6.0 + 6.8

$M = 0.44$

March 18, 1896.

Σ $\frac{23'}{1694}$ Com. Ber. H. ds

$$\begin{array}{r}
 12 \quad 46.1 \\
 9 \quad 15 \\
 \hline
 3 \quad 31 \\
 8 \quad 29
 \end{array}
 \quad + 17.8$$

Position angle 50° Dist $3'$ Mags. $5.2 + 6.0$

Duchx to blom.

light disappear $89.7 + 46.6$

$$\begin{array}{r}
 9 \quad 15 \\
 168.6 \\
 88.5 \\
 \hline
 172.7
 \end{array}
 \quad
 \begin{array}{r}
 78.9 \\
 84.2 \\
 \hline
 163.1
 \end{array}
 \quad 0.32$$

$$\begin{array}{r}
 9 \quad 16 \\
 88.9 \\
 174.4 \\
 93.9 \\
 \hline
 168.5
 \end{array}
 \quad
 \begin{array}{r}
 85.5 \\
 74.6 \\
 \hline
 160.1
 \end{array}
 \quad 0.38$$

(0.35)

Duchx alone.

$$\begin{array}{r}
 9 \quad 17 \\
 359.2 \\
 80.9 \\
 357.2 \\
 84.8 \\
 \hline
 358.3
 \end{array}
 \quad
 \begin{array}{r}
 81.7 \\
 87.6 \\
 \hline
 169.3
 \end{array}
 \quad 0.20$$

(0.26)

$$\begin{array}{r}
 9 \quad 18 \\
 9 \quad 16 \quad 30 \\
 \hline
 9 \quad 16 \quad 30
 \end{array}
 \quad
 \begin{array}{r}
 82.9 \\
 0.9 \\
 78.7
 \end{array}
 \quad
 \begin{array}{r}
 84.6 \\
 77.8 \\
 \hline
 162.4
 \end{array}
 \quad 0.33$$

 $m = 0.30$

March 18, 1896.

 Σ 169212 Carr Vm.
Hols.
+ 39.0

12	50
9	25
3	25
8	35

Position angle 220° Dis. $16''$ Mags $3.5 + 7.0$
Index above

9 2.8

brights disappear 109.2
 153.4
 111.1
 * 149.2

44.2	
38.1	
82.3	2.13

9 30

108.5
 150.0
 108.6
 148.9

41.5	
40.3	
81.8	2.14

(2.14)

Index below

9 31 239.4 assumed

199.6
~~289.4~~
 204.2
 234.4
 200.4

89.8		39.8
30.2		30.2
120.0	1.99	70.0

2.57

9 32

200.4
 236.3
 199.6
 240.6

35.9	
41.0	
76.9	2.29

(2.40)

4	121
9	30 15

 $M = 2.27$

March 18, 1896.

 $\Sigma 1744$ 3 Thar Majors
Mds.

13	19
9	40
3	39
8	21

+ 552

Pos. angle 150° Distance 15" Mags. 2.3 + 4.3
Index left & above.

9 39 ^{light} disappears $\begin{matrix} 12.8 \\ 7.6 \\ 68.9 \\ 8.3 \\ 65.1 \end{matrix}$

56.1	
56.8	1.35
112.9	

(1.34)

9 40

10.4
70.8
10.9
64.2

60.4	
53.3	1.33
113.7	

Index to right & above.

42

105.4
156.3
101.9
157.5

50.9	
55.6	1.50
106.5	

(1.48)

9 43

9	41	0
---	----	---

102.3
158.3
104.1
156.8

56.0	
52.7	1.45
108.7	

 $M = 1.41$

March 18, 1896

Σ 1821

K Boötis Th. ds

14	9
<u>9</u>	52
4	19
7	41

+ 52.4

Pos. angle Dis. Mag.

Clouds too thick.

Σ 213124 K Boötis Th. ds

14	12
<u>9</u>	55
4	17
7	43

+ 52.0

Clouds too thick.

March 18, 1896.

Σ 1850

$$\begin{array}{r}
 14 \quad 23 \\
 10 \quad 00 \\
 \hline
 4 \quad 23 \\
 7 \quad 37
 \end{array}$$

+ 28.8

Pos. ang 245° Dist. $25''$ Magn. $6.2 + 6.5$
 North following star seems to be a little
 brighter.

10 6 following and brighter disappear } 90.4 Deduct to left + above.

$$\begin{array}{r}
 171.0 \\
 89.2 \\
 \hline
 168.2
 \end{array}$$

$$\begin{array}{r}
 80.6 \\
 79.0 \\
 \hline
 159.6
 \end{array}$$

0.39

10 8

$$\begin{array}{r}
 92.1 \\
 166.8 \\
 90.3 \\
 \hline
 167.2
 \end{array}$$

$$\begin{array}{r}
 74.7 \\
 76.9 \\
 \hline
 151.6
 \end{array}$$

(0.46)
0.54

Deduct to right + above

10 9

$$\begin{array}{r}
 182.7 \\
 254.3 \\
 181.8 \\
 \hline
 255.0
 \end{array}$$

$$\begin{array}{r}
 71.6 \\
 73.2 \\
 \hline
 144.8
 \end{array}$$

0.68

10 11

$$\begin{array}{r}
 185.1 \\
 256.1 \\
 178.4 \\
 \hline
 256.5
 \end{array}$$

$$\begin{array}{r}
 71.0 \\
 78.1 \\
 \hline
 149.1
 \end{array}$$

(0.64)
0.579
(M = 0.55)

Measurements very difficult on account of faintness in clouds.

March 18, 1896.
Clouds too thick for any
thing further.

March 20. 1896. (Friday)

0 Ctr.

W. obs.

$$\begin{array}{r}
 2 \quad 4 \quad -2.5 \\
 7 \quad 12 \\
 \hline
 +5 \quad 1 \\
 \text{Cloudy.}
 \end{array}$$

A .0

Still cloudy.

$\Sigma 627$

$$\begin{array}{r}
 4 \quad 5 \quad 4 \quad +3.4 \\
 A \quad 1 \quad 2 \\
 \hline
 +3 \quad 2 \quad 4
 \end{array}$$

Cloudy

A 30

Still cloudy.

A 45

Still cloudy.

A 50

" "

Mar. 21. 1896. (Saturday)

γ Androm.

W. obs.

$$\begin{array}{r} 0 \quad 14 \quad +26.1 \\ 6 \quad 40 \\ \hline +6 \quad 26 \end{array}$$

Impossible to see γ Androm.

α Ceti

W. obs.

$$\begin{array}{r} 2 \quad 8 \quad -2.5 \\ 7 \quad 8 \\ \hline +5 \quad 0 \end{array}$$

Looked again for γ Androm. before
setting on α Ceti, but not seen.

α Ceti.

Index to left.

122.2

137.1

14.3 <

124.0

12.0 <

136.0

26.3 <

4.69 <

123.2

135.6

11.8 <

(4.76)

123.2

13.0 <

136.2

24.8 <

4.82 <

1961

March 21, 1896 (Saturday)

Index to right.

7 13

213.2

226.4

214.7

225.7

13.2 <

11.0 <

24.2 <

4.87 <

214.6

225.8

213.2

226.2

11.2 <

13.0 <

24.2 <

(4.87)

4.87 <

4) 3.25

Mean = 4.81 <

D.M. + 59° 2810 + 2812
Photo. R. N. ds.

23

54

3155

8

61

+ 59.6

Index to left & below

7 30

orange + bright
star direct

280.7

338.9

272.2

347.1

58.2 <

74.9 <

133.1 <

0.91 <

March 21, 1896.

7 53

270.6

345.2

280.6

338.7

74.6 <

58.1 <

132.7 <

(0.92)

0.92 <

Dudley to right + above

7 55

12.7

69.6

2.8

78.7

56.9 <

76.4 <

133.3 <

0.91 <

7 57

3.6

77.5

104

70.8

73.9 <

60.4 <

134.3 <

(0.90)

0.89 <

4) 3.63

M = 0.91 <

Σ

548

M. obs

421

820

359

+30.1

Position angle, 25° Distance, 14" Mag. 6.0 + 8.2

March 21, 1896

This star (double) to be measured is probably the right one but the distance does not correspond to that given in the double star book. The double star book is probably wrong and that instead of $142''.0$ it should be $14''.2$. Will look the distance up by daylight.

Index to right + below

8	20	Brighter decap. >	196.9		
			244.6	47.7	
			192.6	<u>54.3</u>	1.61
			246.9	102.0	

(1.66)

8	21		189.7		
			244.7	55.0	
			197.4	<u>42.9</u>	1.71
			240.3	97.9	

Index to left + above

8	23		286.2		
			330.3	44.1	
			281.1	<u>55.2</u>	1.67
			336.3	99.3	

(1.67)

8	24 ±		283.0		
			337.1	54.1	
			285.2	<u>45.5</u>	1.67
			330.7	99.6	

$M = 1.66$

March 21, 1896

 $\Sigma 8'$ η Pliad.

H. cl.

3	40
8	45
5	5

+ 23.7

Position angle 285° Dis. 2' Mag's. 3.8 + 7.2
 Index left & below

lighter disapp. 25.9

8 41

54.5

28.6

26.5

27.8

3.00

54.3

56.4

(3.02)

8 42

26.6

53.4

26.8

24.7

28.5

3.04

53.2

55.3

Index to right + above

8 44

119.5

143.6

24.1

118.7

22.6

3.42

141.3

46.7

(3.44)

8 46

119.2

141.2

22.0

118.5

23.8

3.47

142.3

45.8

M = 3.23

March 21, 1891.

 $\leq 3^{\text{II}}$ λ Am. NV 22

5	10
9	5
<u>3</u>	<u>50</u>

+ 40.0

Position ang. 350° Dis 100" Mags. 5.27 ~~9.3~~
 Index above.

8 55 Brighter disapp. 123.7
 137.0 13.3^3
 125.2 10.5^3
 135.7 23.8^3 4.91^3

8 57 124.4
 135.4 11.0^3 (5.02)
 125.4 10.6^3
 136.0 21.6^3 5.12^3
 Index below

8 59 212.9
 226.7 13.8^3
 215.5 9.5^3
 225.0 23.3^3 4.96^3

215.4
 225.0 9.6^3 (4.92)
 212.0 14.6^3
 226.6 24.2^3

9 00
4(231)
 4 57 45

4.87^3
 $4)19.86$
 4.97^3

Mean

March 21, 1896.

R. Draconis

H. obs.

16	26
9	26
7	00
4	60

+ 67.4

Stem & comparison

index to left

9 35 L dis ap. 281.8
 309.6
 283.7
 307.7

27.8

24.0

5 1.8

3.19

284.5

(3.21)

9 36

310.1

25.6

281.7

25.4

3.23

307.1

5 1.0

Index to right.

9 40

14.0

34.0

20.0

13.2

21.9

3.67

35.1

41.9

(3.52)

9 41

10.9

35.4

24.5

13.3

23.5

3.36

9 38 0

36.8

48.0

M = 3.36

March 21, 1896.

Star of camp with

Indy. & night

9 46

	10.2		
	42.2	3 2.0	
	10.0	2 8.3	
38.3	35.4	6 0.3	2.85

(2.86)

9 48

	10.6		
	38.3	27.7	
* remembered to be 7.9 * * assumed	07.9	3 2.3	
	40.2	6 0.0	2.86

Indy to left.

9 50

	98.7		
	127.2	28.5	
96.5	100.5	34.1	2.76
	130.6	6 2.6	

(2.63)

53

4 19 7
9 49 15

	92.6		
	129.0	36.4	
	95.5	33.8	
129.3		70.2	2.80

(Mean = 2.74)

Observations 2 and 3 extremely difficult and increasing on account of thin clouds and moon light. Possible they should be rejected.

March 21. 1896.

Further observations on these components stopped by clouds.

≤ 1850

W. obs.

$$\begin{array}{r} 14 \quad 23 \\ 10 \quad 30 \\ \hline 3 \quad 53 \\ 8 \quad 7 \end{array}$$

+ 28.8

Stars do not differ much in brightness but following component ought to be a little brighter.

Position angle 355° Distance $20''$ Mag. 4.3 + 6.6
Index to right + below

10 26 following disappears $\left\{ \begin{array}{l} 1.1 \\ 77.4 \\ 359.4 \\ 80.0 \end{array} \right.$

$$\begin{array}{r} 76.3 \\ 80.6 \\ \hline 156.9 \end{array} \quad 0.44$$

(0.38)

10 28

$$\begin{array}{r} 356.2 \\ 83.9 \\ 1.9 \\ 77.3 \end{array} \quad \begin{array}{r} 87.7 \\ 75.4 \\ \hline 163.1 \end{array} \quad 0.32$$

March 21 1896.

Index to left + above.

10 30

96.3
145.0
88.8
170.7

68.7
81.9
150.6

0.56

(0.53)

10 32
10 29 0

92.3
172.3
92.9
166.6

80.0
73.7
153.7

0.50

 $M = 0.46$ ≤ 1919

H N 42

15 7
10 55
4 12
7 48

 $+1987$ Position - ang. 20° Dis $25''$ Maps 6.3 + 7.1Index to left + ^{below} above.

10 41

brighter
disap. 7 99.7
162.2
93.6
165.0

62.5
71.4
133.9

0.99

March 21, 1896,

Index to left + below

10 43

95.9
147.0
101.3
158.7

71.1 (0.96)
57.4
128.5 1.01

Index to right + above

10 45

187.0
252.5
180.5
253.2

65.5
72.7
138.2 0.81

(0.84)

10 47
10 44 0

182.5
254.3
186.9
258.5

71.8
64.1
135.9 0.86

$M = 0.90$

$\leq 27'$

δ Boötis N. ds.

15 11
11 5
4 6
7 54

+33.8

Pcs Ang 80° Dis 105 Mag's 3.087.7

March 21, 1896.

Index to right + above

10 52
 bright
 disappears } 298.2
 320.0
 303.0
 317.2

21.8
 14.2
 36.0
 4.00

(4.04)

10 53

302.4
 317.0
 300.0
 320.0

14.6
 20.0
 34.6
 4.09

Index to left + above.

10 55

28.8
 50.4
 33.0
 46.9

21.6
 13.9
 35.5
 4.03

(4.12)

10 56

10 54 0

32.7
 46.6
 30.3
 49.1

13.9
 18.8
 32.7
 4.21

M = 4.08

March 24 1896 (Tuesday)

Σ $\frac{8'}{46}$ η
0 Cete η Mols.

2 4
 $\frac{7}{5}$ $\frac{40}{36}$

- 2.8

Too low.

Σ 8' η Pleiad Mols.

3 40
 $\frac{7}{4}$ $\frac{50}{10}$

+ 23.8

Position ang. 285° Dist. 2' Mag. 3.8 ∇ 7.2
 Index to left. + below

lighter disappear. \rightarrow 205.6

7 34

232.4

26.8 \angle

209.3

21.6 \angle

230.9

48.4 \angle

3.34 \angle

210.0

7 35

231.3

21.3 \angle

(3.40)

206.9

24.4 \angle

231.3

45.7 \angle

3.47 \angle

March 24, 1896.

Index to right & above.

7 37

297.5

322.4

24.9 <

298.4

23.3 <

3.30-

321.7

48.2 <

299.4

(3.42)

320.0

20.6 <

298.5

24.5 <

3.50

~~321.8~~

45.1 <

(M = 3.41)

323.0

7 39
4(25)
7 36 15

Seeing very blurry. Equalizations difficult.

Σ 464

3(Tau)!P

3 46

+ 31.5

8 20

4 34

Position ang.

Dist.

Mags

Abandoned for bright star does not quite disappear.

March 24, 1896

 $\leq 5-1.8$ 40 Erid. W. obs.

$$\begin{array}{r}
 4 \quad 10 \\
 8 \quad 30 \\
 \hline
 4 \quad 20
 \end{array}
 \quad - 7.8^{\circ}$$

Too low.

 $\leq 5-4.8$

$$\begin{array}{r}
 4 \quad 21 \\
 8 \quad 30 \\
 \hline
 4 \quad 9
 \end{array}
 \quad + 30.1$$

Position angle 25° Dist. $14''$ Magns $6.0 + 8.2$

This double star to be measured is probably the right one but the distance does not correspond to that given in the double star-book. The book is probably wrong and that instead of $142.0''$ it should be $14.2''$. Will look the distance up by daylight. Doubt the left & below

brighter diam. 17.7

8 10

60.9

43.2

11.4 8.6

59.6

1.59

71.0

10 2.8

March 24, 1896.

8 12

10.4

(1.56)

66.3

55.9

1.52

14.2

49.8
105.7

64.0

Index to left + above.

8 14

108.4

153.5

45.1

100.5

54.9
100.0

1.66

153.4

(1.68)

8 15
4 11
8 12 45-

102.1

156.2

54.1

107.6

44.0

17.0

151.6

98.1

(M = 1.62)

Σ 610

7 Camelopard

M.els

4 47

+53.5

8 50

4 3

Position avg.

Dist

Magn

+

Principal star seen but companion not seen.

March 24 1896

 ≤ 654 ρ Orionis W. Lo.

$$\begin{array}{r} 57 \\ 855 \\ \hline 348 \end{array}$$

 $+2^{\circ} 7$ Position ang 70° Dist. 8" Mags 4.5 & 8.7

Index to left +

8 30

Lengths disap. $\left\{ \begin{array}{l} 300.5 \\ 318.8 \\ 298.9 \\ 318.3 \end{array} \right.$

18.3

19.9

3.87

 $\underline{38.2}$

(3.85)

8 31

300.7

319.6

299.5

319.5

18.9

20.0

3.83

 $\underline{38.9}$

Index to right.

8 34

28.6

48.4

27.6

52.1

19.8

24.5

3.54

 $\underline{44.3}$

(3.60)

8 35

24.8

51.0

31.5

47.5

26.2

16.0

3.65

 $\underline{42.2}$

(M = 372)

8 32 30

March 24, 1896.

 $\leq 3^{\text{II}}$ λ Ann H. V. 22

N. obs.

5-	10
9	10
<hr/>	
4	00

+40.0

Position Aug. 350' Dis. 100" Magn. 5.2 + 9.3

Index error

8 45	brighter dis op.	32.9		
		47.0	14.1	
		35.4	10.0	4.88
		43.4	24.1	

(4.78)

8 46		39.9		
		45.0	10.1	
		32.3	16.4	4.67
		48.7	26.5	

Index error.

8 49		129.9		
		138.2	8.3	
		125.3	9.6	5.53
		134.9	17.9	

(5.22)

8 50		122.2		
		137.1	14.9	
		126.1	8.9	4.91
		135.0	23.8	

 $M = 500$

March 24, 1896

 Σ 747 133 Orionis B 77. ds.

$$\begin{array}{r} 5 \quad 29 \\ 9 \quad 20 \\ \hline 3 \quad 51 \end{array} \quad - 6.1$$

Position ang 210° Dist $35''$ Mag's 5.5, 4.7

Index to left + above.

8 59 Brighter discap 4.2

$$\begin{array}{r} 73.9 \\ 359.6 \\ 177.7 \end{array} \quad \begin{array}{r} 77.7 \\ 78.1 \\ \hline 155.8 \end{array} \quad \begin{array}{l} 0.46 \\ (0.54) \end{array}$$

9 00

$$\begin{array}{r} 2.9 \\ 82.1 \\ 5.0 \\ 73.5 \end{array} \quad \begin{array}{r} 79.2 \\ 68.5 \\ \hline 147.7 \end{array} \quad \begin{array}{l} 0.62 \end{array}$$

Index to right + below

9 2

$$\begin{array}{r} 97.3 \\ 160.9 \\ 92.8 \\ 168.1 \end{array} \quad \begin{array}{r} 63.6 \\ 75.3 \\ \hline 138.9 \end{array} \quad \begin{array}{l} 0.80 \end{array}$$

(0.80)

9 3

$$\begin{array}{r} 95.0 \\ 168.8 \\ 92.5 \\ 162.5 \end{array} \quad \begin{array}{r} 73.8 \\ 65.0 \\ \hline 138.8 \end{array} \quad \begin{array}{l} 0.80 \end{array}$$

$$M = 0.67$$

March 24 1896

 $\leq 16'$ θ^2 Orionis Wals.

$$\begin{array}{r} 5-29 \\ 9 \quad 35- \\ \hline 4 \quad 6 \end{array} \quad -5.5^{\circ}$$

Position Abandoned

 ≤ 7.52 θ^2 Orionis Wals.

$$\begin{array}{r} 5-29 \\ 9 \quad 40 \\ \hline 4 \quad 11 \end{array} \quad +6.0$$

Position ang 120° Dist $10''$ Mag's 3.0 7.5

Index right + above

$$\begin{array}{r} 9 \quad 12 \quad \text{lights disapp.} \left\{ \begin{array}{l} 28.7 \\ 47.5 \\ 31.0 \\ 47.6 \end{array} \right. \quad \begin{array}{r} 18.8 \\ 16.6 \\ \hline 35.4 \end{array} \quad 4.04 \end{array}$$

$$\begin{array}{r} 9 \quad 16 \quad \begin{array}{l} 30.9 \\ 48.4 \\ 31.5 \\ 46.9 \end{array} \quad \begin{array}{r} 17.5 \\ 15.4 \\ \hline 32.9 \end{array} \quad \begin{array}{l} (4.12) \\ 4.20 \end{array} \end{array}$$

March 24, 1895

Looking to left + below

9 17

123.1

136.4

122.5

137.1

133.6

14.6

27.9

4.0-6

(4.44)

9 19

4/24

9 16 0

122.6

137.4

123.0

136.2

14.8

16.2

31.0

4.32

(M = 42.8)

A. + J. 95-2.

9 25 51.0

26 51.0

Bond 394.

9 24 0.0

25 0.0

Reap. Jup I Photo. R. H. ds
 Compared with satellite following planet.
 - Sat II

9 48 47

54

49 04

15

19

25

9

50

37.5

45

5

55

51

6

10

14

Reap.

114.2

148.2

111.0

152.5

109.0

March 24, 1896,

9 49	33 ⁺	9	5-1	24	15-5-8	
	39 ⁺			30	10 2.2	
	46 ⁺			37	16 1.0	
	51 ⁺			42	10 1.0	
	56 ⁺			47	162.0	
50	06 ⁺			57	94.8	
	12 ⁺	5-2		3	16 1.0	
	12 ⁺			9	96.1	
	25 ⁺			16	174.1	
	35 ⁺			26	92.2	
	43 ⁺			34	170.3	
	51 ⁺			42	88.0	
	52 ⁺			49	172.0	
51	07 ⁺			58	87.0	
	17 ⁺	5-3		8	171.7	
	25 ⁺			16 16	88.1	
	34 ⁺			25	175.8	
	44 ⁺			35	84.7	
	52 ⁺			43	175.2	
				51 51	86.8	
		5-4		3	92.3 ⁺ 179.1	1
52	15 ⁺			12	29.2 ⁺ 85.0	0.0 ⁺
				20	121.5 ⁺	
				27	90.8 ⁺ 174.2	
				37	85.3	
				47	91.7 ⁺	
52	51 ⁺			56	90.5 ⁺ 177.0	2
					122.2 ⁺ 85.7	
					91.1 ⁺ 176.2	0.0 ⁺

March 24, 1896.

9 53 29 ⁺ 9	55	5	89.0	
	16	59.7	178.7	3
	25	94.9	83.9	0.1 ⁺
	35	154.6	178.8	
	47	92.3	84.8	
	59	94.4	179.2	4
54 45	54	99.2	81.0	
9 57 3 ⁺	5	193.6	180.2	0.3 ⁺
	13	96.5	81.8	
55 35	24	99.0	180.8	✓
	34	95.0	83.0	
	44	194.0	178.0	0.3 ⁺
	52	97.0	83.0	
56 17 ⁺	58	5	93.1	6
	14	99.2	81.8	
	23	192.3	181.0	0.2 ⁺
	32	96.2	82.9	
56 56 ⁺	42	95.6	178.0	7
	52	29.1	86.1	
59	2	124.7	175.2	0.1 ⁺
	14	92.4	85.0	
57 30	24	92.3	177.3	2
	35	102.9	81.1	0.3 ⁺
	44	195.2	184.0	
		97.6		

Limit of visibility

10	00	21.5	116.3
9 55 49		34.5	141.1

March 24, 1896

242.1

46.0

58.5

23.0 117.1

47.8 190.1

23.9

Seeing fairly good.

A. + S. 95A.

10

6

$\sqrt{1.2}$

7

$\sqrt{1.2}$

B. 394.

10

5

0.0

6

0.0

Cor. to A. + S. = $-1^m \sqrt{1.2}$

Σ 921

H N 2 N. 15

6 24

10 50

4 26

+ 11.4

abandoned

Σ 1183

N. 15.

8

00

10

50

2

50

- 8.9

Position - mag. 320° Dist 25" May's 5.44 7.8

March 24, 1896.

Ludg ~~to right~~ above.

10 30 bright. diap > 280.4
 337.6
 280.4
 331.6

57.2
 $\frac{51.4}{10.8.6}$ 1.45

(1.42)

10 31 283.6
 336.7
 279.1
 337.1

53.1
 $\frac{580}{18111}$ 1.39

Ludg below

10 33 10.5
 70.9
 12.6
 66.7

60.4
 $\frac{54.1}{114.5}$ (1.31)

(1.32)

10 35

 49
 10 32 15

13.8
 65.5
 7.3
 69.2

51.7
 $\frac{61.9}{113.6}$ 1.34

M = 1.37

220

March 24, 1896.

 ≤ 1268 482 Cami Th. ds.

$$\begin{array}{r}
 8 \quad 39 \\
 11 \quad 10 \\
 \hline
 2 \quad 91
 \end{array}
 + 29.2$$

Abandoned.

 ≤ 1193 176 ^{Camel} ~~Camel~~ B Th. ds.

$$\begin{array}{r}
 8 \quad 7 \\
 11 \quad 10 \\
 \hline
 3 \quad 3
 \end{array}
 + 72.8$$

Position ang 270° Dist 45" Mag's 5.9 + 9.0

Index to left & above

10 52

$$\begin{array}{r}
 \text{Brighter disapp} \quad 117.1 \\
 140.0 \\
 118.5 \\
 139.5
 \end{array}
 \begin{array}{r}
 22.9 \\
 21.0 \\
 \hline
 43.9
 \end{array}
 3.56$$

10 55

$$\begin{array}{r}
 119.7 \\
 140.7 \\
 \hline
 118.3 \\
 140.7
 \end{array}
 \begin{array}{r}
 21.0 \\
 22.4 \\
 \hline
 43.4
 \end{array}
 \begin{array}{r}
 3.58 \\
 3.59
 \end{array}$$

March 24, 1896

Index to nights + below

10 57

208.5

230.5

208.2

229.0

22.0

20.8

42.8

3.62

10 59

209.2

229.4

208.6

229.0

20.2

20.4

40.6

3.74

(3.68)

4/23
10 55 45

(M = 3.63)

1896phae.proj..533W

March 25. 1896. (Tuesday)

1 Ceti,

Gr. obs.

2 K - 2, v

6 v7
+K v3

Var. not seen. Clouds thick
in this region.

Posted to here.

