

KG
11366
v. 346

Jan. 1, 1898.

U Pegasus.

Phot. T.

7. obs

Continued from Book 94.

342.4 63.6[✓]
 8 39 20 46.0 76.6 [✓]
 335.1 140.2 [✓] +0.77⁷
 51.7

VI

337.1 77.3[✓] +0.74⁷
 4056 54.4 66.4 [✓]
 340.6 143.7 [✓] +0.70⁷
 47.0

Index below.

62.7 83.6[✓]
 4254 146.3 76.2 [✓]
 ~~41.4~~ 64.8 159.8 [✓] +0.32⁷
 141.0

 67.0 73.9[✓] +0.32⁷
 4424 140.9 85.9 [✓]
 59.3 159.8 [✓] +0.32⁷
 13 41 51 mean +0.56⁷
 145.2
 13 41 51
 -10 38
 +3 4

Jan. 1, 1895.

VIII

		62.5	80.3 ✓	
8	45 48	142.8	<u>79.5</u> ✓	
		64.3	159.5 ✓	+0.32'
		143.8		

		65.0	77.2 ✓	+0.40'
47	8	141.9 142.2	<u>80.5</u> ✓	
		63.2	157.7 ✓	+0.43'
		143.7		

Index above

		156.0	74.2 ✓	
48	38	230.2	<u>71.5</u> ✓	
		158.5	145.7 ✓	+0.66'
		230.0		

		158.2	72.2 ✓	+0.63'
50	11	230.4	<u>76.5</u> ✓	
30	10 ✓	155.4	148.7 ✓	+0.60'
13	47 ✓	231.9		mean +0.52'
		3		

13	47	53
-10	38	
+3	9	
+3	10	

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8	51	⁴⁵ 46	158.2	75.1 [✓]	
			233.3	<u>70.4</u> [✓]	
			158.8	145.5 [✓]	+0.66 ⁷
			229.2		

VIII

54	52	159.0	155.0	74.9 [✓]	
55	15	229.4	229.9	72.6 [✓]	
		155.5	158.2	147.5 [✓]	+0.62 ⁷
			230.8		

+0.64⁷

Index below.

		243.8	77.2 [✓]	
57	10	321.0	<u>81.8</u> [✓]	
		242.7	159.0 [✓]	+0.40 ⁷
		324.5		

		245.9	78.1 [✓]	+0.43 ⁷
58	31	324.0	<u>77.9</u> [✓]	
20	134	246.1	156.0 [✓]	+0.46 ⁷
13	✓✓	324.0		

13	55	31
-10	38	
+3	18	

mean +0.54⁷

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IX

8 59 50 244.0 78.0 ✓
 322.0 84.2 ✓
 241.1 162.2 ✓ +0.34
 325.3

243.0 82.6 ✓ +0.34
 9 1 13 325.6 79.1 ✓
~~244.5~~ 244.5 161.7 ✓ +0.3 ✓
 323.6

Index above

3 53 336.8 74.2 ✓
~~49.9~~ 50.3 71.6 ✓
 337.4 145.8 ✓ +0.66
 49.0

+0.62

335.9 76.0 ✓
 5 17 51.9 73.6 ✓
 2 133 337.0 149.6 ✓ +0.52
 14 2 33.4 336.4
 -3 50.0
 14 2 30
 -10 38
 +3 24

mean +0.42

Jan 1, 1898.

9 7 26 334.7 73.4[✓]
 48.1 74.8[✓]
 336.6 148.2[✓] +0.61[?]
 51.4

X

8 56 337.0 74.5[✓]
 51.5 73.5[✓]
 337.7 148.0[✓] +0.61[?]
 51.2

+0.61[?]

Index below

64.3 79.0[✓]
 12 57 143.3 81.4[✓]
 61.7 160.4[✓] +0.37[?]
 143.1

62.0 80.2[✓] +0.32[?]
 14 22 142.2 80.1[✓]
 41 161 62.2 160.3[✓] +0.32[?]
 14 10 55.142.3 mean +0.50[?]

-3
 14 10 52
 -10 38
 +3 32

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XI

9	18	59	62.8	80.1 ✓	
			142.9	80.9 ✓	
			62.0	161.0 ✓	+0.36?
			142.9		

+0.32?

20	18		64.2 63.2	79.6 ✓	
			142.8	79.1 ✓	
			64.4	158.7 ✓	+0.41?
			143.5		

Index above.

22	10		155.0	75.7 ✓	
			230.7	76.8 ✓	
			155.3	152.5 ✓	+0.53?
			232.1		

+0.52?

			155.0	77.2 ✓	
23	36		232.2	75.9 ✓	
3	123		156.0	153.1 ✓	+0.51?
18	28	16. ✓	155.4		mean +0.45?
		3			
14	21	13	231.3		

-10	38
+3	43

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9	25	2	155.2	76.4	✓	<u>XII</u>
			231.6	<u>77.4</u>	✓	
			154.0	153.8	✓	
			231.4			

+0.50

			154.2	78.6	✓	+0.49
26	26		232.8	<u>76.2</u>	✓	
			156.0	154.8	✓	
			232.2			

+0.42

Index below

			244.8	80.1	✓
28	30		324.9	<u>82.4</u>	✓
			242.7	162.5	✓
			325.1		

+0.33

+0.32

31	5	R 6'	243.5	82.7	✓
29	52	R 6'	326.2	<u>81.3</u>	✓
30	63		242.3	164.0	✓

+0.30

14	27	46	✓	323.6
----	----	----	---	-------

mean +0.40

7	-3
14	27
43	

-10 38

+3 50

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9 51 25 234.5 93.6 ✓
 328.1 79.9 ✓
 243.2 173.5 ✓ +0.12'
 323.1

XIII

53 45 245.3 76.7 ✓
 322.0 87.6 ✓
 239.4 164.3 ✓ +0.30'
 327.0

+0.21'

Index above

55 54 335.8 75.5 ✓
 51.3 75.7 ✓
 335.0 151.2 ✓ +0.55'
 50.7

57 18 335.7 76.6 ✓
 52.3 77.5 ✓
 16 182 332.4 154.1 ✓ +0.50'
 18 57 36. 49.9 mean +0.36'
 -3
 14 54 33
 -10 38
 +4 17

+0.52'

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9	58	52	333.0	77.0 ✓	<u>XIV</u>
			50.0	<u>76.3</u> ✓	
			335.4	153.3 ✓	
			51.7	+0.51 ✓	

10	0	26	335.0	77.0 ✓	+0.50 ✓
		10	57.3 52.0	<u>77.8</u> ✓	
			334.3	154.8 ✓	+0.52 ✓
			52.1		

Index below

2	11	63.1	20.6 ✓
		143.7	
		60.9	<u>23.5</u> ✓
		144.4	167.1 ✓ +0.30 ✓

3	35	60.8	21.4 ✓	+0.24 ✓
		142.2		
3	12	60.8	<u>25.4</u> ✓	
15	1	16. ✓	166.8 ✓	+0.25 ✓
		-3		
15	1	13		
+10	38			
+4	23			

mean +0.39 ✓

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XV

$$\begin{array}{rcl}
 10 & 5 & 2 \\
 & 60.2 & 43.6 \checkmark \\
 & 143.8 & \\
 & 63.7 & \\
 & 143.2 & \frac{79.5 \checkmark}{163.1 \checkmark} + 0.32 \checkmark
 \end{array}$$

$$\begin{array}{rcl}
 6 & 20 & \\
 & 62.4 & 20.4 \checkmark \\
 & 142.8 & + 0.33 \checkmark \\
 & 61.2 & \\
 & 142.7 & \frac{41.5 \checkmark}{161.9 \checkmark} + 0.34 \checkmark
 \end{array}$$

Index above.

$$\begin{array}{rcl}
 7 & 50 & \\
 & 156.0 & 76.0 \checkmark \\
 & 232.0 & \\
 & 155.2 & \frac{76.9 \checkmark}{152.9 \checkmark} + 0.52 \checkmark \\
 & 232.1 &
 \end{array}$$

$$\begin{array}{rcl}
 9 & 35 & 155.9 \\
 & 230.4 & 75.5 \checkmark + 0.51 \checkmark \\
 27 & 107 & 154.0 \\
 15 & 12 & \frac{75.2 \checkmark}{153.7 \checkmark} + 0.50 \checkmark \\
 & -3 &
 \end{array}$$

$$\begin{array}{r}
 15 \quad 7 \quad 9 \\
 + 10 \quad 38 \\
 + 4 \quad 29
 \end{array}$$

mean + 0.42

Jan. 1, 1898.

XVI

$$\begin{array}{r}
 157.2 \\
 155.5 \\
 10 \quad 21 \quad 12 \quad 231.0 \quad 75.5 \quad \checkmark \\
 156.8 \\
 231.9 \quad \frac{75.1}{150.6} \quad \checkmark \quad +0.56 \quad \checkmark
 \end{array}$$

$$\begin{array}{r}
 231.9 \\
 22 \quad 23 \quad 157.9 \quad 157.3 \quad \checkmark \\
 22 \quad 30 \quad 235.3 \quad 72.0 \quad \checkmark \quad +0.52 \quad \checkmark \\
 154.7 \\
 232.3 \quad \frac{77.6}{154.6} \quad \checkmark \quad +0.47 \quad \checkmark
 \end{array}$$

Index below.

$$\begin{array}{r}
 246.1 \\
 25 \quad 26 \quad 326.0 \quad 79.9 \quad \checkmark \\
 241.3 \\
 325.4 \quad \frac{24.1}{164.0} \quad \checkmark \quad +0.30 \quad \checkmark
 \end{array}$$

$$\begin{array}{r}
 241.9 \\
 26 \quad 54 \quad 326.4 \quad 24.5 \quad \checkmark \\
 18 \quad 122. \quad 244.4 \quad \frac{21.1}{165.6} \quad \checkmark \quad +0.24 \quad \checkmark \\
 15 \quad 23 \quad 325.5 \quad \checkmark \quad +0.27 \quad \checkmark
 \end{array}$$

$$\begin{array}{r}
 15 \quad 28 \quad 12. \\
 15 \quad 28 \quad 2. \quad \checkmark \\
 -3 \\
 15 \quad 23 \quad 57 \\
 -15 \quad 8 \\
 +0 \quad 16
 \end{array}$$

$$\text{became } +0.35 \quad +0.40 \quad \checkmark$$

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XVII

10 29 22 242.3 22.5 ✓
 324.8
 241.8
 324.7 $\frac{22.9}{165.4}$ ✓ +0.24'

31 34 238.9 26.1 ✓ +0.24'
 325.0
 243.7 $\frac{24.1}{170.2}$ ✓ +0.19'
 327.8

Index above.

33 45 333.1 75.9 ✓
 49.0
 334.0 $\frac{74.0}{149.9}$ ✓ +0.52'
 48.0

35 20 336.0 72.9 ✓ +0.56'
 48.9
 334.1 $\frac{74.2}{151.1}$ ✓ +0.55'
 15 32 30.5 52.3

$\frac{-3}{15 \ 32 \ 27}$
 $\frac{-15 \ 8}{+0 \ 24}$
 mean +0.40'

Jan. 1, 1898.

XVIII

$$\begin{array}{r}
 10 \quad 37 \quad 50 \\
 \hline
 335.9 \\
 337.0 \\
 51.2 \\
 337.0 \\
 53.7 \\
 \hline
 74.2 \checkmark \\
 26.2 \checkmark \\
 150.9 \checkmark \\
 +0.56 \checkmark
 \end{array}$$

$$\begin{array}{r}
 39 \quad 38 \\
 \hline
 333.5 \\
 51.0 \\
 332.7 \\
 50.0 \\
 \hline
 77.5 \checkmark \\
 77.3 \checkmark \\
 152.2 \checkmark \\
 +0.54 \checkmark \\
 +0.52 \checkmark
 \end{array}$$

Index below.

$$\begin{array}{r}
 41 \quad 44 \\
 \hline
 62.5 \\
 144.3 \\
 61.0 \\
 144.2 \\
 \hline
 21.2 \checkmark \\
 23.2 \checkmark \\
 165.0 \checkmark \\
 +0.29 \checkmark
 \end{array}$$

$$\begin{array}{r}
 43 \quad 8 \\
 \hline
 144.7 \\
 62.7 \\
 146.0 \\
 \hline
 24.2 \checkmark \\
 23.3 \checkmark \\
 167.5 \checkmark \\
 +0.26 \checkmark \\
 +0.24 \checkmark
 \end{array}$$

$$\begin{array}{r}
 15 \quad 40 \quad 47 \\
 \hline
 15 \quad 8 \\
 \hline
 +0 \quad 33
 \end{array}$$

mean +0.40

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XIX

$$\begin{array}{r}
 10 \quad 45 \quad 17 \\
 63.0 \\
 144.3 \quad 21.3 \checkmark \\
 61.0 \\
 147.3 \quad \frac{26.3 \checkmark}{167.6 \checkmark} \quad +0.267
 \end{array}$$

$$\begin{array}{r}
 46 \quad 51 \\
 \cancel{62.7} \quad 62.0 \quad 23.5 \checkmark \\
 145.5 \quad +0.267 \\
 \cancel{63.0} \quad 62.5 \\
 143.5 \quad \frac{21.0 \checkmark}{164.5 \checkmark} \quad +0.297
 \end{array}$$

Index above.

$$\begin{array}{r}
 49 \quad 48 \\
 155.9 \quad 72.1 \checkmark \\
 234.0 \\
 154.1 \quad \frac{20.1 \checkmark}{174.2 \checkmark} \quad +0.427 \\
 234.2
 \end{array}$$

$$\begin{array}{r}
 51 \quad 16 \quad 154.7 \quad 72.6 \checkmark \quad +0.457 \\
 \quad 5 \quad 232.3 \\
 \hline
 31 \quad 13 \quad 156.0 \\
 15 \quad 42 \quad 12 \quad 234.4 \quad \frac{76.3 \checkmark}{157.9 \checkmark} \quad +0.427 \\
 \quad \quad \quad -3 \\
 15 \quad 48 \quad 15 \quad 232.3 \\
 \hline
 15 \quad 8
 \end{array}$$

+0 40

mean ~~to 40~~ +0.367

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XX

10 55 46 155.0
230.4
154.7
234.2

59 44 153.2
235.2
157.0
231.9

Reject ~~two~~ last sets above. Too cloudy to
Index below follow any longer.

11 4 Troubled by moonlight and increasing
haze. Images steadily growing fainter
and becoming very difficult in the last
group. Images almost invisible at
the last. Settings very difficult.

11 10 Watch Correction = -3 sec. (Watch is fast)

Jan. 2. 1898. (Sunday)

Sis Jup. II. Theoretical time
13h 2^m.

All cloudy at eclipse time and for
some time before. ^{1/2}

Posted to here.

January 3, 1898. (Monday)

7 0 Watch Correction = -18 sec. (Watch is fast 18 sec.)
 T Andromodae. Phot. T. H. Obs.

0 14 +26.1

2 24

2 10 Comp star = 7.5 magn

Index left and below.

327.0 Comp. dis

7 27 63.2

96.2 ✓

331.0

26.0 ✓

57.0

122.2 ✓

-0.04 ✓

177.2 ✓

333.2

24.4 ✓

57.6

(-0.04 ✓)

326.0

97.2 ✓

63.2

121.6 ✓

172.4 ✓

-0.03 ✓

Index above right and above

54.3

92.9 ✓

153.2

56.9

91.2 ✓

148.1

190.1 ✓

169.9 ✓

-0.19 ✓

56.2

95.3 ✓

7 33 151.5

(-0.19 ✓)

5 30.0 56.8

94.5 ✓

12 20.0 151.3

169.2 ✓

170.2 ✓

-0.19 ✓

mean -0.12 ✓

Jan. 3, 1898

Same again

7 35 55.3 92.7 ✓
154.0

56.3 ✓
149.9 93.6 ✓
192.3 ✓
167.7 ✓

-0.23 ✓

56.6
149.5 92.9 ✓

(-0.22 ✓)

53.9 ✓
+52.4 94.3 ✓
191.2 ✓
152.2 164.2 ✓

-0.21 ✓

Index left and below.

150.3 26.2 ✓
236.5

149.8 ✓
237.6 27.2 ✓
174.0 ✓

+0.11 ✓

149.0 29.9 ✓
236.9 238.9

(+0.10 ✓)

7 40 236.9 238.9 29.9 ✓
7 37.5 151.6 25.6 ✓
5 237.2 175.5 ✓
12 37.5

+0.02 ✓

mean -0.06 ✓

Var is brighter than Comp Star in finder

Jan. 3, 1898.

U Pegasus

Phot. T.

H. Obs.

23	49	+14.4
23	3	
3	14	

Index below

62.8 Comp. dis.

I

8	7	33	143.3	70.5 ✓	
			64.9	7.22 ✓	
			143.7	159.3 ✓	0.39 ✓

8	48	64.5	140.7	76.2 ✓	
		62.5		41.0 ✓	
		63.3		157.2 ✓	0.43 ✓
		144.3			

Index above:

13	41	155.0	158.5
12	12	229.8	229.4 230.0
		153.9	
		230.4	

71.5 ✓	
76.5 ✓	0.61 ✓
148.0 ✓	0.52

		155.7		
15	1	231.5	75.8 ✓	0.51 (0.60)
3	123	157.0		
8	11	16	230.0	0.60 ✓
		-19 ✓		
13	10	✓ 7. ✓		
12	8			
+1	3			mean 0.52 ✓

Jan. 3, 1898

II

8 16 57 157.9
230.3 72.4 ✓
156.0
230.7 $\frac{74.7}{147.1}$ ✓ 0.63 ✓

18 35 156.5
231.0 74.5 ✓ (0.66) ✓
158.3
228.7 $\frac{70.4}{144.9}$ ✓ 0.62 ✓

Index below

21 31 242.4
323.0 77.6 ✓
242.1
324.7 $\frac{22.6}{160.2}$ ✓ 0.32 ✓

23 10 242.6
324.7 22.1 ✓ (0.40) ✓

32 133 244.8
321.0 $\frac{76.2}{154.3}$ ✓ 0.41 ✓

20 3. ✓
-19. ✓
mean 0.53 ✓

13 19 44 ✓
-12 8
+1 12

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$$\begin{array}{r}
 244.2 \\
 26 \ 28 \ 320.7 \\
 \hline
 243.2 \\
 320.7 \\
 \hline
 21.5 \checkmark \\
 152.0 \checkmark
 \end{array}
 \quad
 \begin{array}{r}
 76.5 \checkmark \\
 \\
 \\
 \\
 \\
 \end{array}
 \quad
 \begin{array}{r}
 \text{III} \\
 \\
 \\
 \\
 0.42
 \end{array}$$

$$\begin{array}{r}
 243.3 \\
 28 \ 23 \ 323.8 \\
 \hline
 244.3 \\
 321.4 \\
 \hline
 20.5 \checkmark \\
 77.1 \checkmark \\
 157.6 \checkmark
 \end{array}
 \quad
 \begin{array}{r}
 \\
 \\
 \\
 \\
 0.43
 \end{array}
 \quad
 \begin{array}{r}
 \\
 \\
 \\
 (0.42 \checkmark)
 \end{array}$$

Index above

$$\begin{array}{r}
 339.7 \\
 30 \ 39 \ 48.9 \\
 337.0 \\
 \hline
 50.5 \ 49.5 \\
 \hline
 69.2 \checkmark \\
 72.5 \checkmark \\
 141.7 \checkmark
 \end{array}
 \quad
 \begin{array}{r}
 \\
 \\
 \\
 0.74 \checkmark
 \end{array}$$

$$\begin{array}{r}
 337.2 \\
 32 \ 21 \ 48.9 \\
 36 \ 111 \ 336.8 \\
 \hline
 47.2 \\
 \hline
 71.7 \checkmark \\
 70.4 \checkmark \\
 142.1 \checkmark
 \end{array}
 \quad
 \begin{array}{r}
 \\
 \\
 \\
 0.73 \\
 \text{mean } 0.52 \checkmark
 \end{array}
 \quad
 \begin{array}{r}
 \\
 \\
 (0.74)
 \end{array}$$

$$\begin{array}{r}
 13 \ 29 \ 9. \checkmark \\
 \hline
 -12 \ 8 \\
 \hline
 +1 \ 21
 \end{array}$$

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IV

8 44 23 337.0 71.2 ✓
~~47.9~~ 48.2
 339.0 64.6 ✓
 47.6 139.2 ✓ 0.74 ✓

46 5 339.9 67.1 ✓
 47.0 (0.44 ✓)
 338.6 67.3 ✓
 45.9 134.4 ✓ 0.49 ✓

Index below.

48 42 67.8 72.2 ✓
 140.0
 66.5 74.2 ✓
 140.7 146.4 ✓ 0.65 ✓

49 54 66.0 76.5 ✓ (0.62 ✓)
 142.5
 27 127 66.4 73.3 ✓
 47 17. ✓ 139.7 149.4 ✓ 0.52 ✓
 -19.
 13 46 52. ✓

mean 0.73 ✓

-12 8
 +1 39

Jan. 3, 1898.

V

$$\begin{array}{r}
 67.7 \\
 52 \quad 12 \quad 139.8 \quad 72.1^{\checkmark} \\
 67.3 \\
 138.9 \quad \underline{71.6^{\checkmark}} \quad 0.70 \\
 143.7^{\checkmark}
 \end{array}$$

$$\begin{array}{r}
 66.8 \\
 53 \quad 58 \quad 141.0 \quad 74.2^{\checkmark} \quad (0.6 \checkmark) \\
 66.5 \\
 137.4 \quad \underline{70.9^{\checkmark}} \quad 0.67 \\
 145.1^{\checkmark}
 \end{array}$$

Index above

$$\begin{array}{r}
 160.7 \\
 56 \quad 15 \quad 228.0 \quad 67.3^{\checkmark} \\
 158.1 \\
 229.6 \quad \underline{71.5^{\checkmark}} \quad 0.40^{\checkmark} \\
 132.2^{\checkmark}
 \end{array}$$

$$\begin{array}{r}
 159.3 \\
 57 \quad 36 \quad 227.4 \quad 62.1^{\checkmark} \quad (0.46^{\checkmark}) \\
 12 \quad 121 \quad 162.0 \quad 68.1^{\checkmark} \\
 226.1 \quad \underline{68.1^{\checkmark}} \quad 0.93 \\
 132.2^{\checkmark}
 \end{array}$$

$$\begin{array}{r}
 2 \quad 55 \quad 0. \\
 -19. \\
 13 \quad 50 \quad 41. \\
 \hline
 -12 \quad 8 \\
 +1 \quad 47
 \end{array}$$

mean 0.77[✓]

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VII

8 58 58 ~~224.6~~ 225.2
158.4 160.0
226.9

64.2 ✓

$\frac{66.9}{131.1}$ ✓

0.96 ✓

9 0 40 161.4
226.4
162.0
225.6

65.0 ✓

$\frac{63.6}{124.6}$ ✓

1.01

(0.92 ✓)

Index below.

3 26 249.4
319.0
246.3
320.3

69.6 ✓

$\frac{74.0}{143.6}$ ✓

0.70

5 14 247.6
320.4

72.2 ✓

(0.70 ✓)

6 13 247.2
317.6

$\frac{70.4}{143.2}$ ✓

0.71

-19. ✓

mean 0.44 ✓

14 1 Kv ✓
-12 8
+1 54

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VII

9 9 13 245.9 62.3 ✓
 317.2
 247.7
 319.4 $\frac{71.7}{140.0}$ ✓ 0.77 ✓

10 48 250.8 69.0 ✓
 319.8
 249.0 $\frac{69.4}{132.4}$ ✓ 0.41 ✓
~~315.5~~
 318.4

Index above

13 57 342.9 63.6
 46.5
 339.2 $\frac{67.0}{130.6}$ ✓ 0.97 ✓
 46.2

15 20 340.5 65.3 ✓ (0.95 ✓)
 45.8
 47 132 340.0 $\frac{66.9}{132.2}$ ✓
 9 12 12 ✓ 46.9 0.93 ✓
~~-19. ✓~~
 mean 0.47 ✓

14 11 59. ✓
~~-12 8~~
~~+2 4~~

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VIII

9 17 0 340.1 65.7 ✓
 45.5
 338.9 67.4 ✓
 46.3 $\frac{67.4}{133.1}$ ✓ 0.91 ✓

18 45 340.9 65.0 ✓
 45.9 (0.93 ✓)
 340.0 66.3 ✓
~~47.4~~ $\frac{66.3}{131.3}$ ✓ 0.9 ✓
 46.3

Index below.

21 2 67.1 73.9 ✓
 141.0
 66.7 70.9 ✓
 137.6 $\frac{70.9}{144.4}$ ✓ 0.62 ✓

22 26 68.0 62.7 ✓ (0.76 ✓)
 136.7
 72 73 69.3 62.6 ✓
 9 19 42 137.9 $\frac{62.6}{137.3}$ ✓ 0.43
 -19. ✓
 mean 0.64 ✓

14 19 29. ✓
~~12~~ 18
 +2 11

Jan. 3, 1898

$$\begin{array}{r}
 9 \quad 23 \quad 57 \quad 70.3 \\
 137.5 \quad 67.2^{\checkmark} \\
 68.0 \\
 138.3 \quad \underline{70.3^{\checkmark}} \\
 137.5^{\checkmark} \quad 0.42^{\checkmark}
 \end{array}$$

IX

$$\begin{array}{r}
 25 \quad 9 \quad 67.3 \\
 139.0 \quad 71.7^{\checkmark} \\
 66.5 \\
 137.7 \quad \underline{71.2^{\checkmark}} \\
 142.9^{\checkmark} \quad 0.72^{\checkmark}
 \end{array}$$

0.77

Index above

$$\begin{array}{r}
 27 \quad 31 \quad 163.5 \\
 225.0 \quad 61.5^{\checkmark} \\
 158.9 \\
 227.0 \quad \underline{64.1^{\checkmark}} \\
 129.6^{\checkmark} \quad 0.99^{\checkmark}
 \end{array}$$

~~160.4~~ 160.5

$$\begin{array}{r}
 28 \quad 42 \quad 226.5 \\
 23 \quad 139 \quad 160.7 \\
 9 \quad 26 \quad 20. \quad \underline{224.7} \\
 -19. \quad 225.4 \quad \underline{64.7^{\checkmark}} \\
 14 \quad 26 \quad 1. \quad 130.4^{\checkmark}
 \end{array}$$

0.94

0.97

0.82

$$\begin{array}{r}
 -12 \quad 8 \\
 +2 \quad 18
 \end{array}$$

Jan. 3, 1898.

X

9 49 39 158.4
 225.8 67.4 ✓
 159.8 64.3 ✓
 228.1 135.7 ✓

0.46 ✓

51 11 161.9
~~229.4~~ 228.4 66.5 ✓
 158.5
 226.9 64.5 ✓
 134.9 ✓

(0.47 ✓)

0.22 ✓

Index below.

53 10 246.5
 321.4 74.9 ✓
 246.7 76.5 ✓
 323.1 151.3 ✓

0.55 ✓

54 43 246.4
 323.3 76.9 ✓
 7 123 246.6 75.2 ✓
 9 52 16 322.4 152.7 ✓
 -19. ✓
 18 51 57. ✓

0.52 ✓

mean 0.72 ✓

-12 8
 +2 44

Jan. 3, 1898

XI

$$\begin{array}{r}
 9 \quad 56 \quad 20 \quad 246.7 \\
 320.7 \quad 74.0 \checkmark \\
 245.8 \\
 322.3 \quad \frac{76.5 \checkmark}{150.5 \checkmark} \quad 0.57 \checkmark
 \end{array}$$

$$\begin{array}{r}
 58 \quad 19 \quad 244.4 \quad 74.9 \checkmark \quad (0.5-4 \checkmark) \\
 323.3 \\
 246.2 \quad \frac{73.2 \checkmark}{152.7 \checkmark} \quad 0.52 \checkmark \\
 320.0
 \end{array}$$

Index above

$$\begin{array}{r}
 10 \quad \frac{1}{2} \quad 3 \quad 341.0 \quad 64.0 \checkmark \\
 49.0 \\
 337.4 \quad \frac{70.0 \checkmark}{44.4 \quad 134.0} \quad 0.27 \checkmark
 \end{array}$$

$$\begin{array}{r}
 2 \quad 18 \quad 339.0 \quad 64.2 \checkmark \quad \text{mean } (0.20 \checkmark) \\
 47.2 \\
 60 \quad 334.5 \quad \frac{70.7 \checkmark}{134.9 \checkmark} \quad 0.20 \\
 9 \quad 59 \quad 30 \quad 48.2 \\
 -19. \checkmark \\
 14 \quad 59 \quad 11. \checkmark \\
 -12 \quad 8 \\
 +2 \quad 51
 \end{array}$$

mean 0.67 \checkmark

Jan. 3, 1898

XII

$$\begin{array}{r}
 10 \quad 4 \quad 0 \quad 337.7 \\
 \quad \quad \quad 48.9 \quad 71.2 \checkmark \\
 \quad \quad 336.9 \quad 71.5 \checkmark \\
 \quad \quad 48.4 \quad \underline{142.7} \checkmark \quad 0.72 \checkmark
 \end{array}$$

$$\begin{array}{r}
 5 \quad 14 \quad 337.3 \\
 \quad \quad 47.8 \quad 70.5 \checkmark \quad (0.76 \checkmark) \\
 \quad \quad 341.1 \quad 62.2 \checkmark \\
 \quad \quad 49.9 \quad \underline{139.3} \checkmark \quad 0.79 \checkmark
 \end{array}$$

Index below.

$$\begin{array}{r}
 6 \quad 52 \quad 65.0 \\
 \quad \quad 139.3 \quad 74.3 \checkmark \\
 \quad \quad 64.1 \quad 79.6 \checkmark \\
 \quad \quad 143.7 \quad \underline{153.9} \checkmark \quad 0.50 \checkmark
 \end{array}$$

$$\begin{array}{r}
 8 \quad 11 \quad 63.7 \\
 \quad \quad 142.2 \quad 74.5 \checkmark \quad (0.49 \checkmark) \\
 \quad \quad 23 \quad 77 \quad 66.5 \\
 10 \quad 6 \quad 4 \checkmark \quad 64.7 \quad 76.2 \checkmark \\
 \quad \quad -19.7 \quad 140.9 \quad \underline{154.7} \checkmark \quad 0.44 \checkmark \\
 15 \checkmark \quad 45 \checkmark
 \end{array}$$

Mean 0.62 \checkmark

$$\begin{array}{r}
 -12 \quad 8 \\
 +2 \quad 58
 \end{array}$$

Jan 3, 1898.

$$\begin{array}{r}
 64.5 \\
 10 \quad 10 \quad 14 \quad 143.4 \quad 72.9 \checkmark \\
 64.8 \quad 73.5 \checkmark \\
 138.3 \quad 152.4 \checkmark \quad 0.53 \checkmark
 \end{array}$$

XIII

$$\begin{array}{r}
 63.2 \\
 11 \quad 23 \quad 140.5 \quad 140.0 \quad 76.2 \checkmark \\
 62.7 \\
 140.1 \quad 77.4 \checkmark \\
 \quad \quad 154.2 \checkmark \quad 0.49 \checkmark
 \end{array}$$

(0.51)

Index above

$$\begin{array}{r}
 158.7 \\
 13 \quad 32 \quad 231.0 \quad 72.3 \checkmark \\
 156.2 \quad 72.0 \checkmark \\
 228.2 \quad 144.3 \checkmark \quad 0.69 \checkmark
 \end{array}$$

$$\begin{array}{r}
 155.7 \\
 14 \quad 57 \quad 229.6 \quad 228.5 \quad 72.2 \checkmark \\
 2 \quad 126 \quad 157.7 \\
 10 \quad 12 \quad 32 \quad 229.3 \quad 72.2 \checkmark \\
 \quad \quad -29.9 \quad 229.9 \quad 145.0 \checkmark \quad 0.67 \\
 15 \quad 12 \quad 12. \quad \text{mean } 0.60 \checkmark
 \end{array}$$

(0.62)

$$\begin{array}{r}
 -12.8 \\
 +3.4
 \end{array}$$

Jan. 3, 1895

XIV

10 16 35 156.0 74.9 ✓
 230.9
 157.2 74.6 ✓
 231.8 149.5 ✓ 0.52 ✓

18 13 156.4 72.5 ✓
~~229.3~~ 228.9 (0.62) ✓
 156.0
 228.9 72.9 ✓
 145.4 ✓ 0.67 ✓

Index below.

20 15 246.3 77.0 ✓
 323.3
 244.4 74.6 ✓
 323.0 155.6 ✓ 0.47 ✓

21 32 245.0 79.4 ✓ (0.465)
 324.4
 35 95 245.0
 10 19 9. 322.7 77.7 ✓
 157.1 ✓ 0.44 ✓
 -20. ✓ mean 0.54 ✓
 15 12 49. ✓
 -12 8
 +3 11

Jan. 3, 1898

XV

10 23 23 322.4

244.0

72.4 ✓

245.3

322.7

$$\begin{array}{r} 77K \\ 155.4 \end{array}$$

0.46 ✓

24 39 323.1

244.0

79.1 ✓

(0.42) ✓

241.8

216 ✓

323.4

$$\begin{array}{r} 160.7 \end{array}$$

0.37 ✓

Index above

~~335.0~~ 334.5

26 44 49.2

74.7 ✓

336.3

49.7

$$\begin{array}{r} 73K \\ 148.1 \end{array}$$

0.61 ✓

336.0

28 32 45

~~46.7~~ 49.0

73.0 ✓

(0.62) ✓

21 13A 335.0

10 25 50. ✓ 49.4

$$\begin{array}{r} 74.7 \\ 147.7 \end{array}$$

0.62 ✓

~~-20. ✓~~

15 25 30. ✓

mean 0.52 ✓

$$\begin{array}{r} -12 \\ +3 \\ \hline 8 \\ 18 \end{array}$$

Jan. 3, 1898

XVI

10 44 27
335.7
49.9
336.0
53.8
74.2 ✓
23.2 ✓
152.0 ✓
0.42 ✓

46 26
335.7
53.0
336.0
48.0
77.3 ✓
72.0 ✓
149.3 ✓
(0.50 ✓)
0.59 ✓

Index below

~~65.3~~ 61.1
49 32
145.5
63.0
144.4
24.4 ✓
21.4 ✓
165.2 ✓
0.27

64.0 ✓
51 11 141.7
30 96 60.2
10 47 54.7 ✓
-20. ✓
144.7
77.7 ✓
28.5 ✓
162.2 ✓
(0.30 ✓)
0.34
mean 0.40 ✓

15 47 34. ✓
-12 8
+3 40

Jan. 3, 1898

XVII

10 54 45 62.2 23.0 ✓
145.2

65.4
141.4 $\frac{76.0}{159.0}$ ✓

0.40 ✓

56 11 64.1 76.9 ✓
141.0

(0.32 ✓)

60.2
~~143.7~~ $\frac{24.2}{161.1}$ ✓
144.4

0.36 ✓

Index above

59 4 453.7 74.3 ✓
232.0
~~167.~~ +59.4 157.2 $\frac{71.2}{150.1}$ ✓
229.0

0.57 ✓

11 1 16 155.5 73.5 ✓
229.3

(0.54 ✓)

230 76 155.1 $\frac{75.2}{142.7}$ ✓
10 57 49.2 230.3
~~-20.1~~

0.60

mean 0.54 ✓

15 57 29. ✓
~~-12~~ 8
+3 49

Jan. 3, 1898

XVIII

11 2 58 152.7
232.2 79.5 ✓
154.6
232.0 $\frac{77.4}{156.9}$ ✓

0.44 ✓

5 4 155.0
231.1 76.1 ✓
155.1
234.6 $\frac{79.5}{155.6}$ ✓

0.47 ✓

(0.46 ✓)

Index below

7 23 244.1
324.4 20.3 ✓
243.2
326.5 $\frac{23.3}{1636}$ ✓

0.31 ✓

243.0
9 31 324.9
23 116 243.2
11 6 14 326.5 $\frac{23.3}{1652}$ ✓
-20. ✓
16 5 54. ✓

0.24 ✓

(0.30 ✓)

Mean 0.32 ✓

-12 8
43 58

11 15 Watch Correction = -20 sec. (Watch is fast.)

January 5, 1898. (Wednesday)

0 Watch Correction = + 22 sec. (Watch is slow 22 sec.)
U Pegasi. Phot. T. N. Obs.

23 49 +14.4

26 36

2 47

Index below.

243.4

Comp. dis.

80.9 ✓

I

7 32 40 324.3

81.2 ✓

243.7

162.1 ✓ +0.34

324.9

242.8

80.4 ✓

(+0.36) ✓

35 16 323.2

79.5 ✓

243.7

159.9 ✓ +0.38

323.2

Index above.

337.0

72.0 ✓

37 16 49.0

77.1 ✓

334.3

149.1 ✓ +0.59

51.4

334.6

75.4 ✓

(+0.61) ✓

38 51 50.0

71.6 ✓

22 123 336.7

147.0 ✓ +0.63

12 36 48.3

+22. ✓

12 36 23. ✓

6 56 45. ✓

Mean +0.48

Jan. 5, 1898.

II

$$\begin{array}{r}
 337.7 \\
 40 \quad 42 \quad 52.4 \quad 77.7 \\
 334.0 \\
 51.5 \\
 \hline
 52.0 \quad 77.5 \\
 155.2 + 0.47
 \end{array}$$

$$\begin{array}{r}
 332.7 \\
 42 \quad 19 \quad 51.0 \quad 72.3 \\
 337.0 \\
 49.3 \\
 \hline
 48.4 \quad 72.3 \\
 150.6 + 0.56
 \end{array}$$

(+0.52)✓

Index below.

$$\begin{array}{r}
 64.1 \\
 64.4 \\
 45 \quad 35 \quad 144.0 \quad 79.9 \\
 63.8 \\
 \hline
 62.8 \quad 79.9 \\
 144.2 \quad 160.3 + 0.38
 \end{array}$$

$$\begin{array}{r}
 64.9 \\
 48 \quad 21 \quad 144.7 \quad 79.2 \\
 15 \quad 117 \quad 61.4 \\
 \hline
 12 \quad 44 \quad 14 \quad 143.4 \quad 79.2 \\
 161.4 + 0.35
 \end{array}$$

(+0.36)✓

$$\begin{array}{r}
 12 \quad 44 \quad 36.5 \\
 6 \quad 50 \\
 \hline
 +5 \quad 54
 \end{array}$$

mean. +0.88✓

Jan. 5, 1898.

III

$$\begin{array}{r}
 63.0 \\
 143.2 \\
 63.1 \\
 144.3 \\
 \hline
 20.2 \\
 21.2 \\
 161.4 + 0.35
 \end{array}$$

$$\begin{array}{r}
 63.0 \\
 142.0 \\
 60.2 \\
 143.0 \\
 \hline
 79.0 \\
 22.2 \\
 161.2 + 0.35
 \end{array}
 \quad (+0.35)^{\checkmark}$$

Index above.

$$\begin{array}{r}
 156.8 \\
 232.8 \\
 156.0 \\
 231.4 \\
 \hline
 76.0 \\
 75.4 \\
 151.4 + 0.55
 \end{array}$$

$$\begin{array}{r}
 156.0 \\
 230.0 \\
 10 \quad 142 \\
 12 \quad 53 \quad 6 \\
 +22 \\
 \hline
 155.5 \\
 232.0 \\
 151.5 + 0.55
 \end{array}
 \quad (+0.55)^{\checkmark}$$

mean $+0.45^{\checkmark}$

Jan. 5, 1898.

IV

$$\begin{array}{r}
 7 \quad 58 \quad 20 \quad 156.0 \\
 \quad \quad \quad 232.0 \quad 76.0 \\
 \quad \quad \quad \hline
 \quad \quad \quad 230.0 \\
 \quad \quad \quad 155.0 \\
 \quad \quad \quad 232.7 \quad 77.7 \\
 \quad \quad \quad \hline
 \quad \quad \quad 153.7 \quad +0.50
 \end{array}$$

$$\begin{array}{r}
 8 \quad 0 \quad 10 \quad 157.3 \\
 \quad \quad \quad 230.2 \quad 72.9 \quad (+0.56)^\vee \\
 \quad \quad \quad 156.7 \\
 \quad \quad \quad 231.5 \quad 74.2 \\
 \quad \quad \quad \hline
 \quad \quad \quad 147.7 \quad +0.62
 \end{array}$$

Index below.

$$\begin{array}{r}
 2 \quad 14 \quad 243.8 \quad 20.6 \\
 \quad \quad \quad 324.4 \\
 \quad \quad \quad 242.0 \\
 \quad \quad \quad 323.3 \quad 21.3 \\
 \quad \quad \quad \hline
 \quad \quad \quad 161.9 \quad +0.34
 \end{array}$$

$$\begin{array}{r}
 3 \quad 59 \quad 242.3 \quad 20.1 \\
 \quad \quad \quad 322.4 \quad (+0.36)^\vee \\
 \quad \quad \quad 3 \quad 103 \quad 246.2 \\
 \quad \quad \quad 326.0 \quad 79.2 \\
 \quad \quad \quad \hline
 \quad \quad \quad 159.9 \quad +0.38 \\
 13 \quad 1 \quad 11.^\vee \\
 \quad \quad \quad +22.^\vee \\
 \quad \quad \quad 13 \quad 1 \quad 33.^\vee \\
 \quad \quad \quad 6 \quad 56 \\
 \quad \quad \quad \hline
 \quad \quad \quad +6 \quad 17^\vee
 \end{array}$$

mean + 0.46

Jan. 5, 1898.

8	7	36	243.7	79.3 [✓]	<u>V</u>
			323.0	<u>83.0</u> [✓]	
			243.0	162.3 [✓] + 0.34 [✓]	
			326.0		

			243.2	82.4 [✓]	(+0.32) [✓]
9	47		325.6	<u>82.1</u> [✓]	
			243.4	164.5 [✓] + 0.29 [✓]	
			325.5		

Index above.

			335.0	73.0 [✓]
11	54		48.0	<u>77.0</u> [✓]
			334.3	150.0 [✓] + 0.58 [✓]
			51.3	

			335.3	75.4 [✓]	(+0.56) [✓]
13	17		50.7	<u>76.3</u> [✓]	
40	12-4 [✓]		334.4	151.7 [✓] + 0.54 [✓]	

13	10	32 [✓]	50.7
		+22.1 [✓]	

13	11	0.1 [✓]
6	50	

+6	20 [✓]
----	-----------------

Mean + 0.44[✓]

Jan. 5, 1895

VI

$$\begin{array}{r}
 8 \quad 29 \quad 26 \quad 335.2 \\
 \quad \quad \quad 52.3 \quad 77.1 \\
 \quad \quad \quad 332.8 \\
 \quad \quad \quad 51.1 \quad \frac{72.3}{155.4 + 0.47}
 \end{array}$$

$$\begin{array}{r}
 31 \quad 14 \quad 334.4 \\
 \quad \quad \quad 51.7 \quad 77.3 \\
 \quad \quad \quad 335.8 \\
 \quad \quad \quad 50.3 \quad \frac{74.5}{151.2 + 0.54}
 \end{array}$$

(+0.50) ✓

Index below.

$$\begin{array}{r}
 33 \quad 40 \quad 62.0 \quad 22.0 \\
 \quad \quad \quad 144.0 \\
 \quad \quad \quad 62.7 \quad \frac{22.3}{164.3 + 0.30} \\
 \quad \quad \quad 145.0
 \end{array}$$

$$\begin{array}{r}
 35 \quad 1 \quad 62.8 \quad 22.6 \quad +0.31 \quad \checkmark \\
 \quad \quad \quad 145.4 \\
 \quad \quad \quad 2 \quad 21 \quad \checkmark \quad 62.5 \quad \frac{20.7}{163.3 + 0.32} \\
 13 \quad 32 \quad 20. \checkmark \quad 143.2
 \end{array}$$

mean +0.40 ✓

$$\begin{array}{r}
 \quad \quad \quad 9 \quad 2. \checkmark \\
 13 \quad 32 \quad 20. \checkmark \\
 \quad \quad \quad +22. \checkmark \\
 \hline
 13 \quad 32 \quad 42. \checkmark \\
 \quad \quad \quad 6 \quad 5 \quad 1 \\
 +6 \quad 42 \checkmark
 \end{array}$$

Jan. 5. 1894.

$$\begin{array}{r}
 8 \quad 37 \quad 2 \quad 63.3 \\
 8 \quad 36 \quad 43 \quad 142.0 \quad 72.7 \\
 61.0 \\
 144.4 \quad \frac{23.4}{162.1} + 0.34
 \end{array}$$

VII

$$\begin{array}{r}
 39 \quad 17 \quad 146.0 \quad 24.2 \quad (+0.30)^{\vee} \\
 61.0 \quad \frac{21.6}{165.2} + 0.27 \\
 142.2 \\
 142.6
 \end{array}$$

Index above

$$\begin{array}{r}
 41 \quad 40 \quad 158.0 \quad 73.2 \\
 231.8 \\
 154.4 \quad \frac{76.2}{150.6} + 0.56 \\
 231.2
 \end{array}$$

$$\begin{array}{r}
 43 \quad 5 \quad 154.3 \quad 77.6 \quad (+0.54)^{\vee} \\
 231.9 \\
 232.2 \\
 64 \quad 156.3 \quad \frac{74.7}{152.3} + 0.53 \\
 13 \quad 40 \quad 16. \quad 231.0 \\
 + 22 \\
 13 \quad 40 \quad 32. \\
 6 \quad 56 \\
 + 6 \quad 50
 \end{array}$$

mean + 0.42

Jan. 5, 1898

VIII

8 45 0 154.4 74.8 ✓
 232.2 77.2 ✓
 154.8 152.0 " +0.54"
 232.0

46 23 155.0 77.9 ✓ (+0.52)
 232.9 76.4 ✓
 156.0 154.3 " +0.49"
 232.4

Index below

49 52 ~~246.2~~ 244.8 81.2 ✓
~~48 29~~ ~~324.4~~ 326.0 79.1 ✓
 245.2 160.3 " +0.38"
 324.3

243.0 81.3 ✓ (+0.35)
 51 28 324.3 82.1 ✓
 31 103 243.3 163.4 " +0.32"
 13 42 7 325.4
 13 42 11 ✓
 +22.1 ✓

Mean +0.44"

13 42 33.1 ✓
 6 51 ✓
 +6 52 ✓

Jan. 5, 1898

IX

$$\begin{array}{r}
 8 \quad 54 \quad 10 \quad 244.7 \\
 321.8 \quad 77.1 \\
 242.7 \\
 325.0 \quad \frac{22.3}{159.8} + 0.39
 \end{array}$$

$$\begin{array}{r}
 55 \quad 27 \quad 241.7 \quad 23.9 \\
 325.6 \quad (+0.31)^{\checkmark} \\
 242.2 \\
 326.0 \quad \frac{23.2}{167.7} + 0.23
 \end{array}$$

Index above

$$\begin{array}{r}
 57 \quad 15 \quad 335.3 \quad 74.0 \\
 49.3 \\
 333.0 \quad \frac{76.0}{150.0} + 0.58 \\
 49.0
 \end{array}$$

$$\begin{array}{r}
 58 \quad 24 \quad 333.0 \quad 79.0 \quad (+0.55)^{\checkmark} \\
 52.0 \\
 24 \quad 76^{\checkmark} \quad 336.0 \\
 13 \quad 56 \quad 19^{\checkmark} \quad 50.0 \quad \frac{78.0}{153.0} + 0.52
 \end{array}$$

mean $+0.43^{\checkmark}$

$$\begin{array}{r}
 13 \quad 56 \quad 41.5 \\
 6 \quad 56 \\
 +7 \quad 6^{\checkmark}
 \end{array}$$

Jan. 5, 1898.

5 59 58 334.2 75.8 ✓
50.0 76.4 ✓
334.3 152.2 ✓ +0.53'
50.7

X

9 1 17 334.3 76.4 ✓ (+0.53)'
50.7 75.7 ✓
334.9 152.1 ✓ +0.53'
50.6

Index below.

3 17 62.5 80.6 ✓
143.4 79.5 ✓
60.8 160.1 ✓ +0.38'
140.3

(+0.35)'

4 40 63.9 79.5 ✓
143.7 83.1 ✓
7 132 61.5 162.9 ✓ +0.32'
14 2 144.6
+22.1 ✓
14 2 140.5
6 51
+7 12 ✓

Mean +0.44'

Jan. 5, 1898.

XI

$$\begin{array}{r}
 64.8 \\
 9 \quad 26 \quad 22 \quad 140.6 \quad 75.2 \\
 64.2 \\
 144.4 \quad \frac{20.2}{156.0} + 0.46
 \end{array}$$

$$\begin{array}{r}
 64.0 \\
 27 \quad 36 \quad 144.0 \quad 20.0 \quad (+0.80)^{\vee} \\
 62.8 \\
 144.9 \quad \frac{22.1}{162.1} + 0.34
 \end{array}$$

Index above

$$\begin{array}{r}
 158.2 \\
 29 \quad 3 \quad 232.0 \quad 73.2 \\
 157.7 \\
 230.0 \quad \frac{72.3}{146.1} + 0.65
 \end{array}$$

$$\begin{array}{r}
 156.2 \\
 30 \quad 26 \quad 230.1 \quad 73.9 \quad (+0.66)^{\vee} \\
 32 \quad 27 \quad 158.2 \quad 71.2 \\
 14 \quad 24 \quad 22 \quad 230.0 \quad \frac{145.7}{145.7} + 0.66 \\
 +22.1^{\vee} \\
 14 \quad 24 \quad 23.1^{\vee} \\
 6 \quad 51 \\
 +7 \quad 32^{\vee}
 \end{array}$$

mean +0.53[✓]

Jan. 5, 1898.

XII

9 $\frac{34}{33}$ 2 $\frac{157.8}{231.4}$ 73.9
 $\frac{231.2}{156.2}$
 $\frac{230.5}{144.2} + 0.61$

35 29 $\frac{158.6}{230.0}$ 71.4 $(+0.6\sqrt{v})^v$
 $\frac{158.0}{230.8}$ 72.2
 $\frac{144.2}{+0.69}$

Index below.

37 57 $\frac{244.0}{323.7}$ 79.7
 $\frac{243.0}{324.9}$ 21.9
 $\frac{161.6}{+0.35}$

39 40 $\frac{243.3}{326.0}$ 22.7 $(+0.34)^v$
 $\frac{243.6}{324.3}$ 20.7
 $\frac{163.4}{+0.32}$
 $+21.1^v$

mean $+0.50^v$

14 37 4.
 $\frac{.6}{+7}$

Jan. 5. 1892.

XIII

$$\begin{array}{r}
 246.8 \\
 9 \quad 41 \quad 12 \quad 324.1 \quad 77.3 \\
 242.2 \\
 322.0 \quad \frac{79.2}{1.27.1} + 0.44
 \end{array}$$

$$\begin{array}{r}
 245.3 \\
 42 \quad 46 \quad 323.3 \quad 72.0 \quad (+0.44) \\
 243.4 \\
 322.5 \quad \frac{79.1}{1.27.1} + 0.44
 \end{array}$$

Index above.

$$\begin{array}{r}
 336.3 \\
 44 \quad 40 \quad 48.9 \quad 72.6 \\
 336.4 \\
 48.0 \quad \frac{71.6}{1.44.2} + 0.69
 \end{array}$$

$$\begin{array}{r}
 338.7 \\
 46 \quad 14 \quad 50.0 \quad 71.3 \quad (+0.69) \\
 13 \quad 93 \quad 337.9 \\
 14 \quad 43 \quad 32.5 \quad 50.7 \quad \frac{72.2}{1.44.1} + 0.69 \\
 +2.1.
 \end{array}$$

Mean + 0.56

$$\begin{array}{r}
 14 \quad 43 \quad 59. \\
 6 \quad 54 \\
 +7 \quad 53
 \end{array}$$

Jan. 5, 1898

XIV

9 47 40 336.0 72.1 ✓
 48.1 69.3 ✓
 337.9 141.4 ✓ +0.75
 47.2

49 1 337.3 72.5 ✓ (+0.73)
~~336.8~~
 49.5 70.8 ✓
 338.1 143.3 ✓ +0.71
 48.9

Index below.

51 3 64.3 78.7 ✓
 143.0 79.4 ✓
 62.7 158.1 ✓ +0.42
 142.1

52 34 64.2 77.6 ✓ (+0.46)
~~65.2~~
 141.8 76.4 ✓
 39 7A ✓ 66.3 154.0 ✓ +0.50
 14 50 8 ✓ 142.7

+21. ✓
 18 50 25. ✓
 6 51
 +7 59 ✓

Mean +0.60

Jan. 5, 1898

XV

$$\begin{array}{r}
 10 \quad 13 \quad 7 \\
 64.3 \\
 141.7 \\
 65.9 \\
 139.83 \\
 \hline
 77.4 \\
 73.4 \\
 150.2 + 0.56
 \end{array}$$

$$\begin{array}{r}
 14 \quad 38 \\
 66.7 \\
 139.0 \\
 67.1 \\
 66.6 \\
 142.2 \\
 \hline
 72.3 \\
 75.6 \\
 147.9 + 0.62
 \end{array}$$

 $(+0.59)^{\vee}$

Index above.

$$\begin{array}{r}
 16 \quad 54 \\
 164.0 \\
 227.6 \\
 162.0 \\
 225.0 \\
 \hline
 63.6 \\
 63.0 \\
 126.6 + 1.05
 \end{array}$$

$$\begin{array}{r}
 19 \quad 8 \\
 18 \quad 49 \\
 \hline
 22 \quad 107 \\
 162.3 \\
 228.0 \\
 161.3 \\
 225.0 \\
 \hline
 65.7 \\
 63.7 \\
 129.4 + 0.99
 \end{array}$$

 $(+1.02)^{\vee}$ mean $+0.20^{\vee}$

$$\begin{array}{r}
 15 \quad 16 \quad 12. \\
 6 \quad 56 \\
 \hline
 +2 \quad 25^{\vee}
 \end{array}$$

Jan. 5, 1898

XVI

10	21	40	163.3	62.4	
			225.7		
			160.9	62.9	
			225.8	<u>125.3</u>	+1.08

23	27		163.3	60.9	
			224.2		(+1.10 ✓)
			162.7	62.4	
			226.1	<u>123.3</u>	+1.12
			225.1		

Index below.

26	5		249.3	70.5	
			319.8		
			248.2	70.1	
			318.3	<u>140.6</u>	+0.76

27	54		248.9	66.9	
			315.8		(+0.74) ✓
17	126 ✓		244.4	71.7	
15	24	46. ✓	319.1	<u>132.6</u>	+0.80
		+21. ✓			
15	25	7. ✓			
6	51				
+2	34 ✓				

mean +0.94 ✓

Jan. 5, 1898.

XVII

10 30 16 247.7 70.0
 317.7
 248.2
 317.1 $\frac{62.9}{132.9} + 0.50$

33 8 247.3 70.5 (+0.20")
 317.8
~~250.6~~
 249.8 $\frac{62.2}{139.3} + 0.79$
 318.6

Index above

36 10 341.6 63.5
 45.1
 342.0 $\frac{64.1}{127.6} + 1.03$
 46.1

38 4 342.7 63.5
 46.2 (+1.04")
 17 32 343.0 63.5
 15 34 24 46.4 $\frac{63.5}{126.9} + 1.04$
 +21.5

mean +0.92"

15 34 45.5
 6 50

+2 44" Moonlight bright. Altitudes becoming low and observations growing difficult

Jan. 5 1898
 T Andromedae Phot T Th. Ob

0 14 +26.1

5 58

5 44 Comp Star = 7.5 mag
 Index right and above

237.8 Comp Star 93.2

10 50 331.0

~~334.3~~ 336.7

329.2

$\frac{92.5}{145.7}$
 178.3

-0.11^v

237.2

329.0

91.2

-0.12^v

236.7

331.4

$\frac{98.7}{146.5}$
 173.5

-0.12^v

Index left and below

330.0

22.5

58.5

330.0

57.8

$\frac{27.2}{176.3}$

+0.07^v

331.4

10 56

~~58.4~~ 57.4

26.0

+0.12^v

10 53.0

330.7

5 530

~~55.7~~

15 530

56.5

$\frac{25.2}{171.2}$

+0.16^v

mean 0.00^v

Jan. 5, 1895

Same again

10	58	331.7	24.2	
		55.9		
		331.5		
		55.6	$\frac{23.2}{162.0}$	+0.23 ^v

		329.4	27.6	+0.16 ^v
		57.0		
		329.3		
		57.2	$\frac{27.9}{175.5}$	+0.02 ^v

Index right and above

		55.8		
		147.2	91.4	
		55.2		
		151.0	$\frac{95.2}{127.2}$	-0.14 ^v
			172.2	

11	5	57.4		
		146.3	22.9	-0.07 ^v
11	1.5	57.0		
5			91.3	
16	1.5	148.3	$\frac{120.2}{179.2}$	0.00 ^v

mean +0.04^vGen. mean +0.02^v

11 15 Watch Correction = +21 sec. (Watch is slow)

January 7, 1898. (Friday)

0 Watch Correction = +6 sec. (Watch is slow)

U Pegasi.

Phot. T.

H. Ols

23 49 +14.4

24 33

0 44 Comp. Star - DM +15° 49' 16" (8.8)

Index above

156.2

Comp. dis.

76.2'

I

232.4

75.0'

155.4

151.2' + 0.55'

230.4

155.3

74.4'

(+0.54)'

35 22 229.7

77.2'

154.7

151.6' + 0.54'

231.9

Index below.

241.0

84.5'

325.5

333.8

76.8'

245.1

161.3' + 0.36'

321.9

(+0.32)'

243.8

79.3'

323.1

85.2'

240.7

164.5' + 0.29'

325.9

Mean + 0.43'

+6

10 37 19

3 51

+6 46

Jan. 7, 1895.

II

5 44 44 239.8 83.1'
 322.9 81.0'
 244.7 164.1' + 0.30'
 325.7

46 25 245.8 77.2' (+0.32)'
 323.0 84.6'
 241.7 161.8' + 0.35'
~~326.8~~
 326.3

Index above

49 10 335.7 73.5'
 49.2 79.8'
 332.5 153.3' + 0.51'
 52.6

52 50 ~~392.5~~ 331.8 79.2' (+0.54)'
~~51 22~~ 51.1 51.0 70.8'
 31 129 337.7 150.0' + 0.58'
 5 48 17 48.5
 5 +6

Mean + 0.43'

10 48 23
 -3 51
 +6 57

Jan. 7, 1898

5 55 54 335.4 73.0'
 48.4 77.9'
 333.8 150.9' + 0.56'
 51.7

III

57 12 335.3 75.7' (+0.58)
 51.0 72.5'
 336.0 148.2' + 0.61'
~~147.7~~
 48.5

Index below

58 57 62.8 82.5'
 145.3 84.7'
 60.3 167.2' + 0.24'
 145.0

60.0 86.8' (+0.20)
 6 0 33 147.2 146.8 83.9'
 30 156' 61.5 170.7' + 0.17'
 5 58 9' 145.4
 5 +6
 10 58 15
 -3 51
 +7 7

Mean + 0.39'

Jan 7, 1898

6	2	34	63.5	79.7'	
			64.0	<u>84.0'</u>	
			143.2		
			50.8	163.7'	+0.31'
			144.8		

IV

			60.2	84.2'	(+0.29)'
4	8		144.4	<u>81.7'</u>	
			62.2	165.9'	+0.27'
			143.9		

Index above

			157.9	73.8'	
6	8		231.7	<u>79.7'</u>	
			152.2	153.5'	+0.51'
			231.9		

			153.3	79.5'	(+0.52)'
	7	57	232.8	<u>73.1'</u>	
	19	109	157.8	152.6'	+0.52'
6	5	12	230.9		
5		+6			

Mean +0.40'

11	5	18
-3	57	
+7	14	

Jan. 7, 1898.

6	12	18	157.4	71.9'	$\overline{\text{V}}$
			229.3	76.0'	
			155.3	147.9' + 0.62'	
			231.3		

			155.2	76.8'	(+0.56)
			154.5	77.1'	
14	32		232.0	153.9' + 0.50'	
			154.9		
			232.0		

Index below.

			243.0	79.2'
18	0		322.2	82.6'
			241.4	161.8' + 0.35'
			326.2 324.0	

			242.4	84.7'	(+0.33)'
			325.1	78.8'	
20	10		243.7	163.5' + 0.31'	
6	16	15	322.5		
5		+6			

Mean + 0.44'

11	16	21
3	51	
+7	25	

6
5
11
-3
+7

Jan. 7, 1898

VI

6	22	8	244.0	78.2'
			322.7	<u>81.8'</u>
			243.5	160.0' + 0.38'
			325.3	

23	34	241.8	82.6'	(+0.37)'
		324.4	<u>78.4'</u>	
		243.4	161.0' + 0.36'	
		321.8		

Index above

26	20	337.9	72.1'
		50.0	<u>75.8'</u>
		335.1	147.9' + 0.62'
		51.2	50.9

		335.0	75.6'	(+0.62)'
27	48	50.6	<u>72.6'</u>	
18	110	337.2	148.2' + 0.61'	
6	24	58'	44.4	
5	+6	49.8		

Mean + 0.50'

11	25	4
----	----	---

-3	51
+7	34

Jan. 7, 1898

VII

6 35 8

336.5	74.2'
50.7	<u>73.5'</u>
335.4	147.7' + 0.62'
48.9	

37 30

335.0	72.7'	(+0.66)'
47.7	<u>71.5'</u>	
336.8	144.2' + 0.69'	
47.5		
48.3		

Index below.

39 26

65.5	77.9'
143.4	<u>77.9'</u>
64.1	155.8' + 0.46'
142.0	

40.58

63.0	78.5'	(+0.43)'
141.5	<u>80.7'</u>	
31 122	61.5	159.2' + 0.40'
6 38 16	142.7	
5 +6	142.2	Mean + 0.54'

11 38 22

-3 51
+7 47

Jan. 7, 1895

VIII

$$\begin{array}{r}
 6 \quad 43 \quad \frac{24}{10} \quad \begin{array}{r} 63.9 \\ 142.2 \\ \hline 140.9 \end{array} \quad \begin{array}{r} 78.3' \\ 78.9' \\ \hline 157.2' + 0.43' \end{array} \\
 62.2 \\
 141.1
 \end{array}$$

$$\begin{array}{r}
 44 \quad 56 \quad \begin{array}{r} 64.4 \\ 143.2 \\ \hline 62.7 \\ 142.6 \end{array} \quad \begin{array}{r} 78.8' \\ 78.9' \\ \hline 157.7' + 0.43' \end{array} \quad (+0.43)'
 \end{array}$$

Index above.

$$\begin{array}{r}
 46 \quad 56 \quad \begin{array}{r} 158.7 \\ 228.4 \\ \hline 155.0 \\ 230.3 \end{array} \quad \begin{array}{r} 69.7' \\ 72.3' \\ \hline 142.0' + 0.73' \end{array}
 \end{array}$$

$$\begin{array}{r}
 48 \quad 26 \quad \begin{array}{r} 158.2 \\ 229.7 \\ \hline 158.3 \end{array} \quad \begin{array}{r} 71.5' \\ 70.9' \\ \hline 142.4' + 0.73' \end{array} \quad (+0.73)' \\
 21 \quad 162' \\
 6 \quad 45 \quad 56' \quad 229.2 \\
 5 \quad +6
 \end{array}$$

Mean +0.58'

$$\begin{array}{r}
 11 \quad 46 \quad 2 \\
 -3 \quad 57 \\
 \hline
 +7 \quad 55
 \end{array}$$

Jan 7, 1898

IX

6	50	0	157.2	0.7
			228.9	71.7'
			156.1	73.9'
			230.0	<u>145.6' + 0.66'</u>

			156.6	72.4'	(+0.70)'
51	20		229.0	69.0'	
			159.0	<u>141.4' + 0.75'</u>	
			228.0		

Index below.

			247.3	74.0'
53	12		321.3	80.1'
			242.2	<u>154.1' + 0.50'</u>
			322.3	

			245.3	75.4'	(+0.51)'
55	2		321.7	76.6'	
	9	34'	244.7	<u>153.0' + 0.52'</u>	
6	52	24'	321.3		
5		+6			

Mean + 0.60'

11 52 30

-3 51
+8 1

Jan 7, 1898

6 58 0 246.0
 321.6
 245.7
 322.8 322.5

75.6'
 76.8'
 152.4' + 0.53'

X

59 36 245.2
 321.3
 245.4
 321.4

76.1' (+0.53)'
 76.0'
 152.1' + 0.53'

Index above

7 1 36 338.4
 48.0
 339.9
 49.2

69.6'
 69.3'
 138.9' + 0.50'

3 0 338.3
 48.9
 339.8
 46.7
 5 +6

70.6' (+0.51)'
 66.9'
 137.5' + 0.52'

12 0 39

-3 37
 +8 10

Mean + 0.67'

Jan 7, 1895.

7	7	8	338.7	69.8'	<u>XI</u>
			338.4		
			48.5	68.9'	
			339.0	138.7' + 0.50'	
			47.9		

8	42	338.0	68.4'	(+0.86)'
		46.4	65.0'	
		340.4	133.4' + 0.91'	
		45.4		

Index below

11	56	66.0	73.3'
		139.3	75.7'
		65.7	149.0' + 0.59'
		141.4	

		66.6	73.2'	(+0.64)'
		139.8	70.9'	
		66.4	144.1' + 0.69'	
7	10	24'	137.3	
5		+6		

Mean + 0.75

12	10	30
-3	51	
+8	19	

Jan 7 1898

7	15	40	66.0	72.5'
			138.5	<u>69.3'</u>
			67.7	141.8' + 0.74'
			137.0	

XII

17	2	68.0	67.7	71.5'	(+0.74)'
			139.2	<u>70.6'</u>	
			66.7	142.1' + 0.73'	
			137.3		

Index above

19	28	162.0	65.0'
		227.0	<u>64.5'</u>
		161.3	129.5' + 0.99'
		227.3 225.5	

21	48	161.3	63.7'	(+1.01)'
		225.0	<u>64.0'</u>	
32	118'	162.0	127.7' + 1.03'	
7	18 30'	226.0		
5	+6			

Mean + 0.88'

12	18	36
----	----	----

-3	51
+8	28

Jan. 7, 1895.

XIII

7 28 2

$$\begin{array}{r} 161.2 \\ 226.8 \\ 162.1 \\ 224.3 \end{array}$$

$$\begin{array}{r} 65.6' \\ 62.2' \\ \hline 127.8' + 1.03' \end{array}$$

31 48

$$\begin{array}{r} 162.7 \\ 224.9 \\ 161.8 \\ 224.9 \end{array}$$

$$\begin{array}{r} 62.2' \\ 63.1' \\ \hline 125.3' + 1.08' \end{array}$$

$$(+1.06)'$$

Index below.

34 10

$$\begin{array}{r} 248.8 \\ 318.0 \\ 248.4 \\ 319.7 \end{array}$$

$$\begin{array}{r} 69.2' \\ 68.9' \\ \hline 138.1' + 0.81' \end{array}$$

$$317.3$$

36 40

$$\begin{array}{r} 249.4 \\ 318.7 \\ 249.6 \\ 319.3 \end{array}$$

$$\begin{array}{r} 69.3' \\ 69.7' \\ \hline 139.0' + 0.79' \end{array}$$

$$(+0.80)'$$

7 32 40

$$\begin{array}{r} 5 \\ +6 \end{array}$$

12 32 46

$$\begin{array}{r} -3 \\ +8 \end{array}$$

$$\begin{array}{r} 51 \\ 42 \end{array}$$

Mean + 0.93'

Jan. 7, 1895.

XIV

$$\begin{array}{r}
 7 \quad 50 \quad 56 \quad 250.0 \\
 \quad \quad \quad 319.0 \\
 \quad \quad \quad 249.4 \\
 \quad \quad \quad 317.4 \\
 \hline
 \quad \quad \quad 137.0' + 0.83'
 \end{array}$$

$$\begin{array}{r}
 53 \quad 20 \quad 250.8 \\
 \quad \quad \quad 318.9 \quad 319.7 \\
 \quad \quad \quad 251.3 \\
 \quad \quad \quad 316.8 \\
 \hline
 \quad \quad \quad 134.4' + 0.89'
 \end{array}$$

(+0.86)'

Index above

$$\begin{array}{r}
 56 \quad 12 \quad 162.7 \\
 \quad \quad \quad 224.0 \quad 224.3 \\
 \quad \quad \quad 160.9 \\
 \quad \quad \quad 225.4 \\
 \hline
 \quad \quad \quad 126.1' + 1.06'
 \end{array}$$

$$\begin{array}{r}
 58 \quad 10 \quad 162.4 \\
 \quad \quad \quad 225.9 \\
 \quad \quad \quad 161.2 \\
 \quad \quad \quad 225.1 \\
 \hline
 \quad \quad \quad 127.4' + 1.03'
 \end{array}$$

(+1.04)'

$$\begin{array}{r}
 12 \quad 54 \quad 40' \\
 \quad \quad \quad +5 \\
 \hline
 12 \quad 54 \quad 45
 \end{array}$$

$$\begin{array}{r}
 12 \quad 50 \\
 \quad \quad +0 \quad 5
 \end{array}$$

Mean +0.95'

Jan. 4, 1898.

8	4	20	161.8	341.2	62.8'	<u>XV</u>
8	0	0	161.8	44.0	64.3'	
			161.8	340.4	127.1' + 1.04'	
			226.0	44.7		

6	0	402.2	342.1	64.8'	(+ 1.02)'
1	36	255.2	46.9	63.8'	
		34	339.9	128.6' + 1.01'	
			43.7		

Index below

7	54	66.0	72.8'
		138.8	71.8'
		67.2	144.6' + 0.68'
		139.0	

9	36	67.8	70.4'	(+ 0.70)'
		138.2	71.8'	
		66.8	142.2' + 0.73'	
26	11 0'			

8	6	55'	67.0	Mean + 0.86'
5		+5	138.8	
13	7	0		

-12 50
+0 17

Jan. 7, 1898.

8 19 26 65.8 75.1'
 140.9 76.2'
 65.5 151.3' +0.55'
 141.7

XVI

21 20 66.4 73.9' (+0.60)'
 140.3 72.9'
 65.9 146.8' +0.64'
 138.8

Index above

24 24 160.3 67.5'
~~23 20~~ ~~228.0~~ 227.8 65.0'
 160.3 132.5' +0.93'
 225.3

26 20 159.4 69.6' (+0.89)'
 229.0 66.5'
 10 90' 159.9 136.1' +0.85'
 8 22 52' 226.4

5 +5 Mean +0.74
 13 22 57
 -12 50
 +0 33

Jan. 7, 1895

XVII

5 33 0
157.0 73.0'
230.0 70.7'
157.5 143.7' + 0.70'
228.2

34 20
158.9 68.2' (+0.76)'
~~226.9~~ 227.1 70.2'
156.8 138.4' + 0.81'
227.0

Index below.

39 4
245.5 75.7'
321.2 78.8'
246.2 154.5' + 0.49'
325.0

246.0 (+0.48)'

42 20 323.9 78.9'
28 44' 245.8 77.0'
8 37 11' 246.0 155.9' + 0.46'

5 +5 323.0

Mean + 0.62

13 37 16
-12 370
+0 47

8
5
13
-12
+0

Jan. 7, 1895

$$\begin{array}{r}
 \cancel{242.8} \\
 243.4 \\
 8 \quad 44 \quad 40 \quad 321.2 \\
 243.3 \\
 323.7
 \end{array}
 \begin{array}{r}
 77.8' \\
 \underline{80.4'} \\
 158.2' + 0.42'
 \end{array}$$

XVIII

$$\begin{array}{r}
 246.6 \\
 46 \quad 4 \quad 321.7 \\
 244.7 \\
 323.0
 \end{array}
 \begin{array}{r}
 75.1' \\
 \underline{78.3'} \\
 153.4' + 0.51'
 \end{array}
 (+0.46)'$$

Index above

$$\begin{array}{r}
 337.8 \\
 48 \quad 36 \quad 50.2 \\
 337.0 \\
 48.9 \quad 48.5
 \end{array}
 \begin{array}{r}
 72.4' \\
 \underline{71.5'} \\
 143.9' + 0.70'
 \end{array}$$

$$\begin{array}{r}
 337.3 \\
 50 \quad 14 \quad 48.4 \\
 28 \quad 9 \quad 4' \quad 336.9 \\
 8 \quad 47 \quad 24' \quad 49.4 \\
 5 \quad +5
 \end{array}
 \begin{array}{r}
 71.1' \\
 \underline{72.5'} \\
 143.6' + 0.70'
 \end{array}
 (+0.70)'$$

Mean +0.58'

$$\begin{array}{r}
 13 \quad 47 \quad 29 \\
 -12 \quad 50 \\
 \hline
 +0 \quad 57
 \end{array}$$

Jan. 7, 1895.

XIX

8 56 20
 336.8
 51.4
 336.7
 49.7
 746'
 $\frac{730'}{1476'}$
 0.62

58 20
 334.3
 48.7
~~333.9~~
 335.7
 47.8
 744'
 $\frac{721'}{1465'}$
 0.64
 (0.63)'

Index below

9 0 48
 65.3
 140.8
 65.3
~~143.7~~ 143.0
 75.5'
 $\frac{77.7'}{153.2'}$
 0.51'

2 28
 36 116
 8 59 29
 5 +5
 13 59 34
 -12 50
 +1 10
 64.2
 143.6
 62.0
 143.0
 79.4'
 $\frac{41.0'}{160.4'}$
 0.37'
 mean 0.54'
 [0.44]'

Jan. 7, 1898.

XX

$$\begin{array}{r}
 62.8 \\
 63.0 \\
 9 \quad 7 \quad 0 \quad 144.2 \\
 63.2 \\
 144.7 \\
 \hline
 81.2' \\
 81.5' \\
 162.7' + 0.33'
 \end{array}$$

$$\begin{array}{r}
 60.9 \\
 8 \quad 30 \quad 143.7 \\
 62.1 \\
 142.4 \\
 \hline
 82.8' \\
 80.3' \\
 163.1' + 0.32'
 \end{array}
 \quad (+0.32)'$$

Index above

$$\begin{array}{r}
 156.7 \\
 11 \quad 20 \quad 233.1 \\
 155.2 \\
 231.3 \\
 \hline
 76.4' \\
 76.1' \\
 152.5' + 0.53'
 \end{array}$$

$$\begin{array}{r}
 157.2 \\
 12 \quad 44 \quad 233.0 \\
 38 \quad 94' \quad 158.6 \\
 9 \quad 9 \quad 54' \quad 230.2 \\
 5 \quad 15 \\
 14 \quad 9 \quad 59 \\
 -12 \quad 50 \\
 +1 \quad 20 \\
 \hline
 75.8' \\
 71.6' \\
 147.4' + 0.63' \\
 \text{Mean } + 0.45'
 \end{array}
 \quad (+0.58)'$$

Jan. 7, 1895.

XXI

~~9~~ ~~14~~ ~~4~~ ~~230.2~~
~~15~~ ~~156.1~~
 9 17 18 230.0
 156.4
 229.5
 155.0 75.0'
 73.1'
 148.1' + 0.61'

18 54 231.7
 155.7
 230.9
 157.0 74.7'
 75.2'
 149.9' + 0.58' (+0.60)

Index below.

22 30 242.9
 324.3
~~239.8~~ 240.4
 326.7
~~81.4~~ 81.4'
~~6.1~~ 86.3'
 167.7' + 0.23'

24 10 244.7
 325.8
 1 112' 245.3
 9 20 43' 324.5
 5 +5
 14 20 48
 -12 50
 +1 31
 81.1' (+0.30)
 79.2'
 160.3' + 0.38'
 Mean + 0.45'

Jan. 7, 1898.

9 $\begin{array}{r} 31 \ 0 \\ 30 \ 15 \end{array}$ $\begin{array}{r} 242.7 \\ 323.1 \\ 324.3 \\ 242.2 \\ 324.7 \end{array}$

$\begin{array}{r} 81.6' \\ 82.5' \\ \hline 164.1' + 0.30' \end{array}$

XXII

32 16 $\begin{array}{r} 245.3 \\ 324.3 \\ 242.9 \\ 243.3 \\ 325.4 \end{array}$

$\begin{array}{r} 79.0' \\ 82.1' \\ \hline 161.1' + 0.36' \end{array}$

 $(+0.33)'$

Index above.

35 24 $\begin{array}{r} 337.9 \\ 51.3 \\ 334.8 \\ 49.7 \end{array}$

$\begin{array}{r} 73.6' \\ 74.9' \\ \hline 148.5' + 0.60' \end{array}$

$\begin{array}{r} 36 \ 56 \\ 14 \ 96 \\ 9 \ 33 \ 54 \\ 5 \ 15 \end{array}$ $\begin{array}{r} 335.0 \\ 52.8 \\ 337.0 \\ 49.2 \end{array}$

$\begin{array}{r} 77.8' \\ 72.2' \\ \hline 150.0' + 0.58' \end{array}$

 $(+0.59)'$

$\begin{array}{r} 14 \ 33 \ 59 \\ -12 \ 50 \\ +1 \ 44 \end{array}$

Mean $+0.46'$

Jan. 7, 1895.

XXIII

9 39 20
337.6 72.5"
50.1 75.3"
336.0 147.8" 0.62"
57.3

41 32
334.1 76.3"
~~58.4~~ 72.7"
337.0 149.0" 0.49"
49.7 (0.60)"

Index below.

63.7 77.6"
44 20 141.3 83.0"
62.2 160.6" 0.37"
145.2

0.31"

47 30 59.2 84.5"
~~46.5~~ 143.7 82.2"
11 102 61.0 166.7" 0.24"
9 43 10 143.2
5 + 3

mean 0.46"

14 43 15
-12 50
+1 53

Jan. 7, 1898.

XXIV

9 50 58 ~~64.3~~ 142.7 78.4'
~~62.9~~ 62.0 83.5'
 145.8 162.2' +0.34'

52 52 61.3 83.0' (+0.34)'
 144.3 78.8'
~~62.6~~ 161.8' +0.35'
 62.9
 141.7

Index above

158.6 73.1'
 55 10 230.7 75.7'
 155.3 148.8' +0.60'
 231.0

157.1 73.1' (+0.61)'
 56 40 ~~229.3~~ 230.2 74.4'
 13 160' 155.8 147.5' +0.62'
 9 53 55' 230.2
 5 15
 Mean +0.48'

14 54 0' +
 12 50 +
 +2 4 +

Jan. 7, 1898

XXV

9 58 16 153.7
233.3
156.0
231.0

77.6'
75.0'
152.6' + 0.52'

59 54 36 157.9
~~229.4~~ 231.0
155.8
232.0

73.1'
76.2'
149.3' + 0.59'

(+0.56)'

Index below

10 3 20 243.7
323.8
241.5
325.0

80.1'
83.5'
163.6' + 0.31'

4 42 324.8
44 13 2' 244.4
10 1 33' ~~322.3~~
+5 +5 322.6
15 1 38

79.8'
78.2'
158.0' + 0.42'

(+0.36)'

Mean + 0.46' ±

72 36
+2 12

Jan. 7, 1898

XXVI

10 7 30 243.2
 324.2 $\Delta 1.0'$
 242.3
 326.7 $\frac{\Delta KK'}{16 \sqrt{K}'} 0.2 \Delta'$

9 48 242.4
 324.7 $\Delta 2.3'$ (0.30)'
 242.3
 322.8 $\frac{\Delta 0.5'}{16 \Delta.2'} 0.33'$

Index above

12 50 ~~338.4~~ 339.0
~~46.3~~ 48.7 $69.7'$
 335.0
 53.5 $\frac{7 \Delta.5'}{14 \Delta.2'} 0.61'$

15 26 333.4
 50.0 $76.6'$ (0.56)'

43 154' 336.0
 52.7 $\frac{76.7'}{153.3'} 0.51'$

+5 +5

15 11 29

-12 50
 +2 21

10 30

Watch Correction = +5 sec (Watch is slow)

January 5, 1898. (Saturday.)

☉ Beti.	Phot. H.	H. Obs.
2 4	-2.5	
2 48		
0 44		

7 25 clouds.

7 35 Clouds thick

7 45 Thickly cloudy everywhere

Index right and below.

273.7

Clouds, var. dis.

8 25 284.6

Index right and below.

273.0 < var. dis 10.87

8 36 283.8 11.47

273.0 22.27 - 5.067

284.4

272.6

11.77

(-5.04)7

284.3

10.97

273.2

22.67 - 5.027

284.1

Jan 5, 1895,

Index left and above

2.6	12.1'
14.7	<u>10.2'</u>
3.7	22.3' - 5.05'
13.9	

5	45	4.2	9.8'	(-5.10)'
8	40.5	14.0	<u>11.4'</u>	
5		3.4	21.2' - 5.16'	Mean - 5.07
13	40.5	14.8		

Same again

5	47	3.0	11.3'	(-5.10)'
	47	14.3	<u>10.0'</u>	
		4.0	21.3' - 5.15'	
		3.8		
		13.8		
		3.8	10.3'	
		14.1	<u>11.9'</u>	
		2.8	22.2' - 5.06'	
		14.7		

Jan. 8, 1898.

Index right and below.

92.6	12.1'
104.7	<u>10.7'</u>
93.4	22.8' - 5.00'
<u>104.3</u>	
104.1	

(-4.99)

8	59	93.0	11.0'
	<u>49</u>	104.0	<u>12.0'</u>
8	53.0	92.7	23.0' - 4.98'
<u>5</u>		104.7	
13	53.0		

Mean -5.04

S Ursae Minoris. Phot. W.

H. Obs

15	50	+78.2
<u>28</u>	<u>25</u>	
12	35	

15	50
<u>28</u>	<u>30</u>
12	40

S Urs. Min Jan 5, 1898
Index above Phot. 76.

7.06.

9

13

~~66.4~~ < Var. dis.
~~131.4~~
~~65.9~~
~~130.7~~

~~66.3~~
~~129.9~~
~~66.2~~
~~131.3~~

Reject
Instrument not
clamped

Index below
Index above

9

~~64.9~~ < var. dis.
~~17130.4~~
~~65.5~~
66.6
132.5

65.5'
65.9'
131.4' \neq -0.95'

66.4
131.0
~~67.0~~
65.5
130.9

64.6'
65.4'
130.0' -0.98' (-0.96)'

Jan 8, 1898.

Index below.

157.3	62.9'
220.2	<u>64.4'</u>
155.7	127.3' - 1.04'
220.1	

156.5	63.6'	(-1.04)'
220.1	<u>63.9'</u>	
157.1	127.5' - 1.03'	
221.0		Mean -1.00

Same again

27	154.0	66.5'
37	220.5	<u>63.4'</u>
	157.8	129.9' - 0.98'
	221.2	

158.5	61.5'	(-1.00)
220.0	<u>66.2'</u>	
154.2	127.7' - 1.03'	
220.4		

Jan. 5, 1898.

Index above

247.8	61.9'
309.7	<u>63.8'</u>
247.2	125.7' - 11.07'
311.0	

		246.8	64.1'	($\bar{x}=1.02$)'
<u>9</u>	<u>33</u>	310.9	<u>66.2'</u>	
9	30.0	245.1	130.3' - 0.97'	
<u>5</u>				
14	30.0	311.3		

Mean $\bar{x}=1.01$

M.P. 441

H. Obs.

3	31	+62.8
<u>5</u>	<u>3</u>	
1	32	

Jan. 5, 1895

M.P. 441

Phot. R.

W. Obs.

Var is brighter
Index above.

49 269.3 < Vardis 54.9'
324.2 48.8'
272.8 103.7' - 1.57'
321.6

272.7 48.2' (-1.56)'
320.9 56.6'
269.4 104.8' - 1.54'
326.0

Index below.

1.0 51.2'
52.2 49.3'
2.2 100.5' - 1.64'
57.5

9 54 52.4 53.4' (-1.59)'
9 51.5 0.8 104.8' - 1.54'
5 54.2
14 51.5
Mean - 1.58'

Jan. 5, 1895.

Same again

9

	1.8	52.7'
55	54.9 54.5	<u>49.0'</u>
	2.4	101.7' - 1.61'
	2.0	
	51.0	

 $(-1.61)'$
$$\begin{array}{r} 2.0 \\ 51.0 \\ 0.8 \\ \hline 53.9 \end{array} \qquad \begin{array}{r} 49.0' \\ 53.1' \\ \hline 102.1' - 1.61' \end{array}$$

Index above

~~89.4~~
 90.0
 143.5
 91.5
 142.9

53.5'
51.4'
 104.9' - 1.54'

$$(-1.52)^7$$

		92.5	50.5'
10	2	143.0	56.0'
9	58.5	89.0	106.5' - 1.50'
5			
14	58.5	145.0	

Mean - 1.56"

Jan. 5, 1898

<i>T</i> Androm.		Phot. <i>T</i> .	<i>W. Ob.</i>
0	14	+26.1	
5	34		
5	20		

Index left and below

10	20	149.5	Comp. dis.	84.8'
		234.3		85.1'
		151.1		169.9' + 0.19'
		236.2		

150.0	87.7'	(+0.15)'
237.7	86.7'	
149.4	174.4' + 0.11'	
236.1		

Index right and above

238.5	91.4'
329.9	91.3'
238.8	182.7'
330.1	177.3' - 0.05'

10	26	238.8	90.0'	
		328.8	90.2'	(-0.02)'
10	23.0	238.8	180.2'	
5		329.0	179.8' - 0.00'	
15	23.0			Mean +0.06

Jan. 5, 1895

Same again

10	28	237.9	92.4'
		330.3	87.1'
		240.3	179.5' + 0.01'
		327.4	

238.9	89.3'	(0.00)'
328.2	91.7'	
238.	181.0'	
237.5	179.0 - 0.02'	
329.5		

Index left and below

327.0	93.0'
60.3	86.0'
60.0	179.0' + 0.02'
331.0	
56.3	
57.0	

(+0.07)'

10	36	329.8	86.1'
		55.9	87.5'
10	32.0	327.8	173.6' + 0.12'
5		55.3	
15	32.0		Mean + 0.04

Dome interferes slightly at the last

Jan 5, 1898

$\Sigma 281$

Phot H. (spar prism inserted)

7.06

2 28 75.0

6 8

3 40

Pos angle 85° dis. 8 sec Magn. 5.0 and 5.8
Index right and below

194.1

10 5.0

206.8

12.7

192.8

13.0

205.8

25.7

- 4.74

191.6

- 4.44

208.4

16.8

192.2

16.8

209.0

33.6

- 4.15

Index left and above

Mean = - 4.60

301.4

315.8

14.4

303.0

11.8

314.8

26.2

- 4.70

302.0

- 4.76

10 5.7

313.1

11.1

10 5.35

300.9

13.6

314.5

24.7

- 4.83

Seeing very bad. Images when equalized very faint. Probably observation should be rejected.

(Sunday), Jan. 9, 1898.

Dis. Jup. IV, Phot. R. W. Ch. White re.
Comp. with nearest sat. to sat. IV
on same side = Sat. I.

15 36 1.5	15 38 00	177.6	✓7.2 ✓
	13	254.8	✓2.2 ✓
	(15 38 20.5) 25	181.8	✓4.7 ✓
	40	234.0	✓4.6 ✓
	48	179.2	✓7.0 ✓
15 36 46.	(15 39 5.5) 57	233.8	✓11.8 ✓
	39 09	176.0	✓1.4 ✓
	27	233.0	
	44	181.8	✓2.1 ✓
15 37 41.5	(15 40 0.5) 53	233.9	✓0.0 ✓
	40 08	180.8	✓1.0 ✓
	16	230.8	
	33	185.1	✓4.9 ✓
15 38 21.5	(15 40 40.5) 54	230.0	✓6.0 ✓
	02	183.0	✓0.9 ✓
	41 10	229.0	✓4.4 ✓
	22	181.0	✓9.0 ✓
15 39 22.5	(15 41 41.5) 38	230.0	✓3.7 ✓
	48	185.0	✓2.7 ✓
	56	228.7	✓6.4 ✓

Jan. 9, 1898.

15	42	04	184.5	
		22	228.3	K3.2 ^v
15	K0	6. (15 K2 2 ^v)	186.7	$\frac{K0.1}{23.9}$ ^v
		31	226.8	K20 ^v
		44	187.4	
		53	228.1	K0.7 ^v
	43	02	184.7	$\frac{K1.3}{22.0}$ ^v
15	K0	K9. (15 K3 2 ^v)	226.0	$\frac{K0.4}{K1.0}$ ^v
		14	184.1	K0.1 ^v
		24	224.2	37.3 ^v
		34	190.0	77.4 ^v
15	K1	32. (15 K3 5 ^v)	227.3	36.7 ^v
		49	189.8	33.8 ^v
		44	223.2	$\frac{32.0}{65.4}$ ^v
		09	190.2	32.7 ^v
		16	222.2	
		30	190.2	31.2 ^v
15	K2	3K. (15 KK 5 ^v)	222.0	$\frac{29.5}{61.3}$ ^v
		41	191.5	30.6 ^v
		45	221.0	
		07	193.0	22.0 ^v
		15	221.0	25.2 ^v
		26	193.0	$\frac{53.2}{26.9}$ ^v
15	K3	21. (15 KK K0.)	218.8	
		36	194.0	28.0 ^v
		45	219.0	
		52		
	46	00		
		10		
15	KK	1. (15 K6 20 ^v)		
		24		
		44		
		52		
15	KK	K9. (15 K7 2 ^v)		
		47		
		00		

Jan. 9, 1898.

15	47	15	194.6	23.6 ✓
		25	218.2	KA.6 ✓
		34	193.7	24.3 ✓
15	47	45	218.6	24.9 ✓
15	47	57	195.8	25.0 ✓
	48	07	217.8	KA.9 ✓
		17	196.1	23.4 ✓
		29	217.0	
		41	197.0	
		51	214.8	
	49	08	197.3	
		19	216.8	
		29	198.5	
		45	214.0	
		57	198.9	
	50	12	213.8	
		24	199.2	
		42	212.9	
		58	201.0	
	51	15	211.9	
		33	201.5	
		44	210.0	

Not seen later.

Jan. 9, 1898.

Limit of Visibility.

15	52	12	203.7	2.0
15	50	21	(15 52 40.) 24	211.7
			55	202.0
				2.0
				2.5
			53	07
				211.0

Seeing fairly good part of time,
but blurry at times. Troubled
also by frost on eyepiece so
that settings had to be
made slowly.

Comp. of Chron.

23	39	4	At 12 9 58.
15	58	00.0 = 16	00 19.0
15	59	00.0 = 16	01 19.0

Comp. of Chron.

13	39	4	At 12 9 58.
17	21	00.0 = 17	23 19.0
17	22	00.0 = 17	24 19.0

Jan. 9, 1898.

Reaps. Jup. IV. Phot. R. W. obs. Waiter rec.
 Comp. with sat. near it on same
 side = Sat. I.

17 K3 K9	17	46	08	285.0	
K4 1K			33	307.6	
44 31			50	285.2	
K4 KV		47	04	304.8	
K5 0			19	286.0	
K5 11			30	302.2	
K5 23			42	284.1	
K5 35			54	306.3	
K5 K6		48	05	285.9	
K6 3			22	307.0	
K6 12			31	282.9	
K6 20			39	309.1	
K6 30			49	282.0	
K6 49		49	08	308.6	
			20	282.8	
K7 15	(17	K9 34	29	308.0	25.2
			39	281.0	27.0
			50	308.0	22.2
		50	05	279.4	26.1
				310.0	30.6
17 K8 5	(17	K8 24	17		

Jan. 9, 1898.

17	50	34	278.8	314. ✓
		42	310.2	62.0 ✓
		51	278.0	31.0 ✓
17 KA v2. ✓	(17 v1 11. ✓)	51 08	349.8	32.2 ✓
		19	278.0	33.5 ✓
		27	311.5	66.3 ✓
		36		33.2 ✓
17 49 31. ✓	(17 v1 v0. ✓)	44	276.0	35.9 ✓
		54	311.9	36.3 ✓
	52	04	276.7	72.2 ✓
		12	313.0	36.1 ✓
17 50 21. ✓	(17 v2 40. ✓)	34	275.0	41.9 ✓
		45	316.9	37.4 ✓
	53	10	276.9	79.3 ✓
		23	314.3	39.6 ✓
17 51 23. ✓	(17 v3 44. ✓)	40	276.3	39.7 ✓
		50	316.0	40.2 ✓
	54	04	275.2	20.5 ✓
		25	316.0	40.2 ✓
17 52 27. ✓	(17 v4 46. ✓)	42	274.0	42.3 ✓
		54	316.3	46.7 ✓
	55	02	272.0	29.0 ✓
		12	318.7	44.5 ✓
17 53 14. ✓	(17 v5 33. ✓)	23	274.0	43.7 ✓
		42	317.7	47.9 ✓
			272.8	91.6 ✓
				44.2 ✓

Jan. 9, 1898.

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Jan. 9, 1898.

1A 1 33.5	18 02	04	268.9	53.3
	(1A 3 52.5)	15	322.2	54.0
	05	30	265.0	113.5
		40	323.0	56.6
		49	267.0	56.7
1A 3 46.5	(1A 6 52.5)	58	323.7	56.2
	06	07	268.0	113.5
		26	324.8	56.2
		36	269.2	55.0
1A 4 35.5	(1A 6 54.5)	49	324.2	54.2
		59	266.2	113.2
	07	14	325.0	56.9
		24	268.0	55.0
1A 5 21.5	(1A 7 40.5)	34	323.0	54.2
		43	267.2	113.9
		58	326.1	56.9
	08	56	268.3	56.2
	09	07	325.1	59.7
1A 6 53.5	(1A 9 12.5)	18	266.3	118.5
		29	326.0	54.2
		40	266.7	61.0
1A 7 32.5	(1A 9 57.5)	49	327.7	54.2
	10	03	266.8	119.2
		16	325.0	59.6

Jan. 9, 1898.

18	10	25	267.7	✓ 7.6
12	2	25	325.3	60.5
(12	10	44)	266.5	112.5
	11	06	327.0	✓ 9.0

Limit of Visibility.

18	12	05	287.0	20.9
12	10	2	307.9	19.7
(12	12	27)	284.0	40.6
		50	306.0	20.3
			303.7	

Seeing somewhat poor at beginning of rears, but rather improved during eclipse, so that it was ~~pretty~~ good during latter part, although not the very best.

Comp. of Chrons.

B	394.	A + D	958.
18	40 00.0 =	18	42 19.0
	41 00.0 =		43 19.0

January 10, 1898. (Monday)

Comparison Stars for α Ceti Phot. T. H. Obs

2 29 -14.0

3 19

50

2 28 -13.0

3 29

1 1

56 24.50

0 4 p

59 Too cloudy to measure at present.

α Ceti Phot. T. H. Obs

2 4 -2.5

3 40

1 36

Index right and below.

105.1 \angle Var. dis. $12.0'$

11 117.1 $11.5'$

105.3 $23.5' - 4.94'$

116.8

105.2 $11.2'$ $(-4.94)'$

116.4 $12.2'$

104.8 $23.4' - 4.95'$

117.0

Jan. 19, 1898

Index left and below.

194.8	12.2'
207.5	<u>12.0'</u>
207.0	24.2' - 4.87'
195.0	
207.0	

(-4.88)'

195.0	11.9'
206.8	<u>12.2'</u>
206.9	24.1' - 4.88'

5	18	206.9
8	14.5	195.0
5		207.2
13	14.5	

Mean - 4.91'

Same again.

5	21	194.9	12.3'
		207.2	<u>12.2'</u>
		195.0	24.5' - 4.85'
		207.2	

195.0	12.2'	(-4.86)'
207.2	<u>12.1'</u>	
195.0	24.3' - 4.86'	
207.1		

Jan. 10, 1895.

Index right and below

285.0	12.0'
297.0	12.8'
285.2	23.8' - 4.91'
297.0	

$$\begin{aligned} &(-4.88) \\ &(-11.89) \end{aligned}$$

8	25	297.0	12.6' - 4.86
8	24.5	284.6	24.4' - 4.87
5		297.2	
13	24.5		

$$\begin{aligned} &-4.87 \\ \text{Mean} &-4.88 \end{aligned}$$

42 Becoming quite thickly cloudy.

Σ	6'	Phot. H.	H. Obs.
3	13	+7.0	
4	2.3		
1	20		

N preceding component seems to be slightly the brighter

Pos angle 170° . dis. 80 sec. Magn 7.0 and 7.3

Index right and above

332.4
68.5
332.8
67.9

Jan. 10, 1895

~~333.9~~~~66.2~~~~332.5~~~~68.4~~ $\Sigma 6'$

Reject wrong image made to disappear

Phot. H.

H. Obs

Index right and above

70.0

151.2

66.4

157.8

66.8

155.8

69.2

153.1

N Pre. & Brighter
dis.

81.2

91.2

172.4 - 0.14

- 0.14

89.0

83.9

172.9 - 0.13

Index left and below Mean = -0.16

158.4

~~244.8~~

241.2

158.0

244.9

82.5

86.9

169.4 - 0.20

157.9

245.2

~~160.5~~

159.5

242.7

87.3

- 0.19

83.2

170.5 - 0.18

Jan. 10, 1898.

Σ 422	Phot. H. (spar prism. inserted)	N. Obs.
3 31	+0.2	
4 46		
1 15		

Pos. angle 250° dis. 6 sec Magn. 6.0 and 8.4
Index

9 25 Clouds becoming so thick that it is impossible to do anything further.

Posted to here.

January 11, 1895. (Tuesday)

- 7 0 Cloudy
- 7 30 A few stars appeared for a few minutes
but shortly closed up again
- 8 00 All Cloudy
- 8 15 All Cloudy with no prospect of clearing
Storm coming

January 13, 1898. (Thursday)

0 Watch correction = -33 sec. (Watch is fast)

Comparison Stars for β Beti. Phot. T. H. Obs.

0 12 -9.7
3 37
3 25

β compared with γ .
Index right and above.

353.2 γ comp. dis. 15.4 \checkmark
07 8.9 17.3 \checkmark
353.7 33.0 +4.19 \checkmark
11.0

352.7 17.6 \checkmark (+4.20) \checkmark
10.3 14.9 \checkmark
353.0 32.5 +4.22 \checkmark
7.9

Index left and below.

83.1 15.1 \checkmark
98.2 15.3 \checkmark
82.8 30.4 +4.37 \checkmark
98.1

81.0 17.4 \checkmark (+4.36) \checkmark
8 14 98.4 13.5 \checkmark
84.2 30.9 +4.34 \checkmark
97.7

Mean +4.25 \checkmark

Jan. 13, 1895.

Comp. Stars for U Beti.

Phot. T.

H. Obs.

2	29	-13.0
---	----	-------

4	25	
---	----	--

1	56	
---	----	--

8 43 Clouds

8 55 Still Cloudy

9 15 Still Cloudy.

9 30 Still thickly cloudy with no possibility of clearing.

January 14, 1898. (Friday)

- 7 0 Cloudy
- 7 30 Cloudy.
- 8 0 All Cloudy with no prospect of clearing

January 17, 1898. (Monday)

o Hatch Correction = + 4 sec. (Hatch is slow)

S. Cancri.		Phot. T.	H. Obs.
8	36	+ 19.6	
1	54		
6	42		
8	32	+ 20.2	
1	57		
6	35		

See next page for measurements.

Jan. 17, 1898.

S. Cancri.

Phot. T.

H. Obs.

Index left and above.

322.7' < Comp. dis 77.0'

19 40 39.7' 69.7'

325.5' 146.7' + 0.64'

35.2

I

~~21~~ 50 325.3

22 20 36.0

325.5

36.7

70.7'

(+0.69)'

71.2'

141.9' + 0.74'

Index right and below

55.0 70.4'

24 36 125.4' 69.7'

55.6' 140.1' + 0.77'

125.3

57.0 68.8'

(+0.78)'

26 47 125.8' 70.1'

11 138 56.8' 138.9' + 0.80'

6 23 20' 126.7'

5 +4

11 23 24

.4746'

-.5076

-.0330'

Mean +0.74'

Jan. 17, 1895.

II

$$\begin{array}{r}
 57 \\
 55.0 \\
 6 \quad 31 \quad 10 \quad 124.8 \\
 58.4 \quad 57.7 \\
 124.4
 \end{array}
 \qquad
 \begin{array}{r}
 69.8' \\
 66.7' \\
 \hline
 136.5' + 0.84'
 \end{array}$$

$$\begin{array}{r}
 56.7 \\
 54.1 \\
 33 \quad 14 \quad 124.3 \\
 57.0 \\
 126.8
 \end{array}
 \qquad
 \begin{array}{r}
 67.6' \\
 69.8' \\
 \hline
 137.4' + 0.83'
 \end{array}
 \qquad
 (+0.84)'$$

Index left and above

$$\begin{array}{r}
 146.0 \\
 36 \quad 32 \quad 219.3 \\
 144.9 \\
 216.9
 \end{array}
 \qquad
 \begin{array}{r}
 73.3' \\
 72.0' \\
 \hline
 145.3' + 0.67'
 \end{array}$$

$$\begin{array}{r}
 144.9 \\
 38 \quad 16 \quad 216.8 \\
 18 \quad 72 \quad 144.6 \\
 6 \quad 34 \quad 48 \quad 219.2 \\
 5 \quad 11
 \end{array}
 \qquad
 \begin{array}{r}
 71.9' \\
 74.6' \\
 \hline
 146.5' + 0.64'
 \end{array}
 \qquad
 (+0.66)'$$

Mean + 0.75'

$$\begin{array}{r}
 .4825' \\
 -.5076 \\
 \hline
 -.0251'
 \end{array}$$

Jan. 17, 1898.

III

6	40	36	145.2	71.8'	
			217.0	72.8'	
			146.0	144.6' + 0.68'	
			218.8		

			145.7	72.3'	(+0.68)'
42	12		218.0	72.8'	
			145.1	145.1' + 0.67'	
			217.9		

Index right and below.

			236.3	70.9'	
44	44		307.2	72.0'	
			236.8	142.9' + 0.72'	
			308.8		

			236.2	69.8'	(+0.74)'
46	24		306.0	71.5'	
12	126		235.5	141.3' + 0.75'	
6	43	29	307.0		
5		+ 4			

Mean + 0.71'

11 43 33

.4886'
 -.5076
 -.0190

Jan. 17, 1898.

IV

6	48	12	235.8	72.7'
			308.5	70.7'
			235.0	143.4' + 0.71'
			305.7	

50	4	236.9	68.8'	(+0.74)'
		305.7	71.1'	
		234.9	139.9' + 0.78'	
		306.0		

Index left and above.

52	8	326.3	70.1'
		36.4	69.5'
		326.6	139.6' + 0.78'
		36.1	

53	40	327.3	68.0'	(+0.82)'
		35.3	68.3'	
3	64	326.7	136.3' + 0.85'	
6	51	1 ✓ 35.0		

Mean + 0.78'

5	74
---	----

11	51	5
----	----	---

- .4938'

- .5076

- .0138'

Jan. 17, 1898.

6	57	16	326.7	69.8'	V
			36.5	69.8'	
			325.0	139.6' + 0.78'	
			34.8		

59	8	325.5	70.5'	(+ 0.78)'
		36.0	68.9'	
		326.1	139.4' + 0.79'	
		35.0		

Index right and below

7	1	20	56.4	70.4'
			126.8	70.2'
			54.2	140.6' + 0.76'
			124.4	

(+ 0.76)'

			56.6	68.4'
3	0		125.0	71.6'
0	44		56.1	140.0' + 0.77'
7	0	11	127.7	

Mean + 0.77'

5		+4
12	0	15

.5001'

-.5076

-.0075'

Jan. 17, 1898.

VI

7	5	24	57.1	68.4'	
			125.5	<u>68.6'</u>	
			57.4	137.0' + 0.83'	
			126.0		

			57.5	69.2'	(+0.83)'
7	8		126.7	<u>68.0'</u>	
			56.5	137.2' + 0.83'	
			124.5		

Index left and ^{above} below.

			149.6	67.4'	
9	28		217.0	<u>71.1'</u>	
			145.5	138.5' + 0.80'	
			216.6		

			145.6	70.8'	(+0.76)'
11	0		215.9 216.4	<u>71.4'</u>	
32	60		145.6	142.2' + 0.73'	
7	8	15	217.0		
5		+11			

Mean + 0.80'

12 8 19

.5058'

- .5076

- .0018'

Jan. 17, 1898

VII

7 22 32 147.8 67.9'
 215.7 72.5'
 146.3 140.4' + 0.77'
 218.8

24 12 145.0 73.4' (+0.74)
 218.4 69.7'
 146.4 143.1' + 0.71'
 216.1

Index ^{right} and below

26 28 236.3 69.0'
 305.3 71.0'
 234.2 140.0' + 0.77'
 305.2

27 40 236.5 69.2' (+0.78)
 305.7 70.3'
 19 112 236.0 139.5' + 0.78'
 7 25 13 306.3
 5 14
 Mean + 0.76'

12 25 17

.5176'
 - .5076
 + .0100'

Jan. 17, 1895.

VIII

7	30	0	235.8	70.7'
			306.5	<u>71.2'</u>
			236.4	141.9' + 0.74'
			307.6	

			238.3	69.1'	(+0.76)'
31	32		307.4	<u>70.9'</u>	
			235.8	140.0' + 0.77'	
			306.7		

Index left and above.

			326.0	70.0'
33	32		36.0	<u>68.0'</u>
			327.0	138.0' + 0.81'
			35.0	

			323.0	73.0'	(+0.78)'
34	56		36.0	<u>68.9'</u>	
8	120		327.2	141.9' + 0.74'	
7	32	30	36.1		

5		+4
---	--	----

12	32	34
----	----	----

.5226'

- .5076"
+ .0150"

Mean + 0.77'

Jan. 17, 1898

325.5

E

IX

7 39 12

35.0

66.5'

323.6

71.0'

34.6

137.5' + 0.82'

324.0

69.5'

(+ 0.82)'

40 16

33.5

67.9'

327.1

137.4' + 0.83'

35.0

Index left right and below

55.4

70.8'

42 0

126.2

66.0'

57.0

136.8' + 0.84'

123.0

(+ 0.88)'

57.8

65.5'

43 36

122.4 123.3

67.6'

4 64

57.2

133.1' + 0.91'

7 41 16

124.8

5 + 11

Mean + 0.85'

12 41 20

.5287'

-.5076

+.0211'

Jan 17, 1898

7	45 0	55.6	69.4'	<u>X</u>
		125.1	<u>68.0'</u>	
		57.0	137.4' + 0.83'	
		125.0		

		57.4	66.2'	(+0.86)'
46	28	123.6	<u>68.5'</u>	
		56.8	134.7' + 0.88'	
		125.3		

Index left and above.

		145.4	70.1'
48	12	215.5	<u>72.0'</u>
		148.2	142.1' + 0.73'
		220.2	

		147.1		(+0.76)'
		146.8	69.1'	
49	34	215.9	<u>69.8'</u>	
28	74	146.1	138.9' + 0.80'	
7	47 18'	215.9		

5	+4	
---	----	--

12	47 22	
----	-------	--

.5329'

- .5076

+ .0253'

Mean + 0.51'

Jan 17, 1898

XI

7 57 32 ~~143.4~~
 144.2 72.0"
 216.2 68.5"
 146.5 140.5' + 0.76'
 215.0

53 24 ~~145.8~~
~~146.4~~ 72.4' (+0.70)
 218.2 74.4'
 143.8 146.8' + 0.64'
 218.2

Index right and below

55 32 ~~234.8~~
 307.4 72.7"
~~237.7~~ 67.5"
~~240.8~~ 140.2' + 0.77'
 305.2

(+0.78)'

57 28 239.0 67.4"
 306.4 71.3"
 16 116 235.9 138.7' + 0.80'
 7 54 29 307.2
 5 +4

Mean + 0.74'

12 54 33

.5379'

- .5076

+ .0303'

Jan. 17, 1898.

XII

8 0 20 235.3 70.5'
 305.8 68.6'
 236.4 139.1' + 0.79'
 305.0

2 0 237.8 68.3' (+0.80)'
 306.1 69.4'
 236.6 137.7' + 0.82'
 306.0

Index left and above.

6
 * 0 327.8 68.2'
 36.0 66.0'
 327.0 134.2' + 0.89'
 33.0

7 16 325.5 73.2' (+0.81)'
 39.1 38.7 69.2'
 15 36 327.0 142.4' + 0.73'
 8 3 54 36.2

Mean + 0.80'

5 11

13 3 58

.54444

- .5076

+ .0368

Jan. 17, 1898.

8 27 12 325.9
34.3
325.7
36.3

$$\begin{array}{r} 68.4' \\ 70.6' \\ \hline 139.0' + 0.79' \end{array}$$

XVII

28 48 323.1
38.1
327.7
35.0

$$\begin{array}{r} 75.0' \\ 67.3' \\ \hline 142.3' + 0.73' \end{array}$$

(+0.76)

Index right and below

58.3
31 48 122.6
548
123.3
124.0

$$\begin{array}{r} 64.3' \\ 68.5' \\ \hline 132.8' + 0.92' \end{array}$$
$$\begin{array}{r} 54.1 \\ 33 \ 12 \ 125.4 \\ \hline 39 \ 120 \ 57.2 \\ 8 \ 30 \ 15 \ 123.2 \\ 5 \qquad +4 \\ \hline 13 \ 30 \ 19 \\ .5624 \end{array}$$
$$\begin{array}{r} 71.3' \\ \underline{66.0'} \\ 137.3' + 0.83'' \end{array} \quad (+0.88)'$$

Mean $+0.82'$

$$\begin{array}{r} -5076 \\ +0551 \\ \hline \end{array}$$

Jan. 7, 1898

XIV

8	35	0	57.9	66.2'
			124.7	66.7'
			56.2	132.9' + 0.92'
			122.9	

			56.7	68.3'	(+0.88)'
36	36		125.0	69.1'	
			56.7	137.4' + 0.83'	
			125.8		

Index left and above.

			146.1	69.6'
39	40		215.7	71.7'
			145.3	141.3' + 0.75'
			217.0	

			145.7	71.5'	(+0.76)'
41	12		217.2	69.0'	
31	88		146.3	140.5' + 0.76'	
8	38	7	215.3		
5		+4			Mean + 0.82'

13 38 11

.5682'

- .5076

+ 0.0606'

Jan. 17, 1898.

XIV

8	44	³⁶ 16	146.3	70.5'
			216.8	<u>70.8'</u>
			147.0	141.3' + 0.75'
			217.8	

			147.0	70.2'	(+0.73)'
46	28		217.2	<u>72.9'</u>	
			146.1	143.1' + 0.71'	
			219.0		

Index right and below.

			234.2	72.6'
49	0		306.8	<u>66.5'</u>
			237.4	139.1' + 0.79'
			303.9	

			237.0	69.9'	(+0.78)'
52	16		306.9	<u>70.7'</u>	
31	80		236.2	140.6' + 0.76'	
8	48	5'	306.9		

Mean + 0.76'

5		+4
---	--	----

13	48	9
----	----	---

.5751'

- .5076

+ .0675'

Jan 17, 1898.

XVI

8 53 44 235.5 70.3'
 305.8 66.7'
 238.5 137.0' + 0.83'
 305.2.

237.5
~~327.8~~ 67.9' (+0.84)'
 55 24 305.7 68.3'
 236.4 136.2' + 0.85'
 304.7

Index left and above.

57 36 325.3 71.6'
 36.9 71.8'
 324.0 143.4' + 0.71'
 35.8

327.2
~~58 56 33.3~~ 68.7' (+0.80)'
 59 16 35.9 65.8'
 24 120 328.3 134.5' + 0.89'

8 56 30' 34.1

5- 11

13 56 34

.5810'

-.5076
 +0.734'

Mean + 0.82'

Jan. 17, 1898

XVII

9 2 0
 $\begin{array}{r} 326.9 \\ 35.8 \\ \hline 36.0 \\ 327.7 \\ 35.2 \end{array}$

$\begin{array}{r} 68.9' \\ 67.5' \\ \hline 136.4' + 0.85' \end{array}$

3 36
 $\begin{array}{r} 328.4 \\ 36.0 \\ \hline 327.0 \\ 37.7 \end{array}$

$\begin{array}{r} 67.6' \\ 70.7' \\ \hline 138.3' + 0.81' \end{array} \quad (+0.83)'$

Index right and below.

5 40
 $\begin{array}{r} 56.7 \\ 124.0 \\ \hline 58.0 \\ 127.8 \end{array}$

$\begin{array}{r} 67.3' \\ 69.8' \\ \hline 137.1' + 0.83' \end{array}$

7 24
 $\begin{array}{r} 56.6 \\ 126.6 \\ \hline 57.6 \\ 124.0 \end{array}$

$\begin{array}{r} 70.0' \\ 66.4' \\ \hline 136.4' + 0.85' \end{array} \quad (+0.84)'$

9 4 40
 $\begin{array}{r} 5 \\ 14 \\ \hline 14 \end{array}$

Mean +0.84'

$\begin{array}{r} .5866' \\ -.5076 \\ \hline +0.0790' \end{array}$

Jan. 17, 1898.

9 22 0 56.8
123.4
55.2
128.0

66.6
72.8
139.4' + 0.79'

XVIII

23 20 53.7
127.0
55.8
125.0

73.3
69.2
142.5' + 0.72'

(+0.76)'

Index left and above

25 0 149.0
214.7
143.5
217.6

65.7
74.1
139.8' + 0.78'

26 20 147.6
219.2
16 40 146.5
9 24 10' 215.4

71.6
68.9
140.5' + 0.76'

(+0.77)'

5 14 14
14 24 14

Mean + 0.76'

.6001'

- .5076
+ .0925

Jan. 17, 1898

XIX

9 27 40 148.3 68.3'
 216.6 69.0'
 146.8 137.3' + 0.83'
 215.8

143.0 72.0' (+0.82)'
 28 52 ~~214.3~~ 215.0 65.9'
 148.8 137.9' + 0.82'
 214.7

Index right and below

30 20 237.3 68.9'
 306.2 69.6'
 236.8 138.5' + 0.80'
 306.4

238.9 66.9' (+0.86)'
 31 20 305.8 66.3'
 36 132 238.7 133.2' + 0.91'
 9 29' 33' 305.0

Mean + 0.84

5 14 29 37
 .6039'
 -.5076
 +.0963'

Jan. 17, 1898

XX

9	33	20	235.2	71.3'
			306.5	<u>71.2'</u>
			236.8	142.5' + 0.72'
			308.0	

			236.9	69.5'	(+0.75)'
34	20		306.4	<u>70.1'</u>	
			235.6	139.6' + 0.75'	
			305.7		

Index left and above

			328.0	69.4'
36	0		37.4	<u>71.6'</u>
			324.0	141.0' + 0.75'
			35.6	

			324.7	72.7'	(+0.72)'
	36	56	37.4	<u>70.9'</u>	
	19	96	324.8	143.6' + 0.70'	
9	35	9'	35.7		
5		+4			

Mean + 0.74'

14 35 13

.6077'
-.5076
 +.1001'

Jan. 17, 1898

XXI

$$\begin{array}{r}
 9 \quad 38 \quad 20 \quad 324.0 \\
 \quad \quad \quad 36.8 \\
 \quad \quad \quad 325.7 \\
 \quad \quad \quad 35.4 \\
 \hline
 \quad \quad \quad 72.8' \\
 \quad \quad \quad 69.7' \\
 \hline
 \quad \quad \quad 142.5' + 0.72'
 \end{array}$$

$$\begin{array}{r}
 39 \quad 36 \quad 325.0 \\
 \quad \quad \quad 36.3 \\
 \quad \quad \quad 325.0 \\
 \quad \quad \quad 36.2 \\
 \hline
 \quad \quad \quad 71.3' \\
 \quad \quad \quad 71.2' \\
 \hline
 \quad \quad \quad 142.5' + 0.72'
 \end{array}
 \quad (+0.72)'$$

Index right and below

$$\begin{array}{r}
 41 \quad 16 \quad 56.0 \\
 \quad \quad \quad 127.9 \\
 \quad \quad \quad 53.0 \\
 \quad \quad \quad 126.0 \\
 \hline
 \quad \quad \quad 71.9' \\
 \quad \quad \quad 73.0' \\
 \hline
 \quad \quad \quad 144.9' + 0.68'
 \end{array}$$

$$\begin{array}{r}
 42 \quad 8 \quad 56.0 \\
 \quad \quad \quad 123.8 \\
 \quad \quad \quad 56.0 \\
 \quad \quad \quad 126.0 \\
 \hline
 \quad \quad \quad 67.7' \\
 \quad \quad \quad 70.0' \\
 \hline
 \quad \quad \quad 137.7' + 0.82'
 \end{array}
 \quad (+0.75)'$$

$$\begin{array}{r}
 9 \quad 40 \quad 20' \\
 5 \quad 14 \\
 \hline
 14 \quad 40 \quad 24'
 \end{array}
 \quad \text{Mean } +0.74'$$

$$\begin{array}{r}
 .6114' \\
 - .5076 \\
 \hline
 + .1038'
 \end{array}$$

Jan. 17, 1898.

~~XXII~~

$$\begin{array}{r}
 9 \quad 43 \quad 30 \quad 55.6 \\
 125.5 \\
 55.2 \\
 125.7 \\
 \hline
 69.9' \\
 70.5' \\
 \hline
 140.4' + 0.77'
 \end{array}$$

$$\begin{array}{r}
 44 \quad 32 \quad 56.6 \\
 126.5 \\
 55.1 \\
 125.3 \\
 \hline
 69.9' \\
 70.2' \\
 \hline
 140.1' + 0.77'
 \end{array}
 \quad (+0.77)'$$

Index left and above

$$\begin{array}{r}
 46 \quad 0 \quad 143.6 \\
 217.7 \\
 144.1 \\
 216.9 \\
 \hline
 74.1' \\
 69.8' \\
 \hline
 143.9' + 0.70'
 \end{array}$$

$$\begin{array}{r}
 44 \quad 20 \quad 143.7 \\
 218.5 \\
 20 \quad 82 \quad 146.0 \\
 9 \quad 45 \quad 20' \quad 215.5 \\
 5 \quad +11' \\
 \hline
 74.8' \\
 69.5' \\
 \hline
 144.3' + 0.69'
 \end{array}
 \quad (+0.70)'$$

Mean +0.74'

$$14 \quad 45 \quad 24$$

$$\begin{array}{r}
 .6149' \\
 - .5076 \\
 \hline
 + .1073'
 \end{array}$$

Jan. 17, 1895

$$\begin{array}{r}
 144.6 \\
 48 \quad 32 \quad 218.7 \\
 145.0 \\
 218.2 \\
 \hline
 220.
 \end{array}
 \quad
 \begin{array}{r}
 74.1' \\
 73.2' \\
 \hline
 147.3' + 0.63'
 \end{array}$$

XXIII

$$\begin{array}{r}
 146.9 \\
 49 \quad 52 \quad 217.5 \\
 143.9 \\
 219.0
 \end{array}
 \quad
 \begin{array}{r}
 70.6' \\
 74.8' \\
 \hline
 145.4' + 0.67'
 \end{array}
 \quad (+0.65)'$$

Index right and below

$$\begin{array}{r}
 234.0 \\
 51 \quad 26 \quad 306.8 \\
 237.2 \\
 305.3
 \end{array}
 \quad
 \begin{array}{r}
 72.8' \\
 68.1' \\
 \hline
 140.9' + 0.76'
 \end{array}$$

$$\begin{array}{r}
 236.1 \\
 52 \quad 44 \quad 307.5 \\
 0 \quad 164 \quad 233.6 \\
 9 \quad 50 \quad 41' \quad 310.2
 \end{array}
 \quad
 \begin{array}{r}
 71.4' \\
 76.6' \\
 \hline
 148.0' + 0.61'
 \end{array}
 \quad (+0.68)'$$

Mean +0.66'

$$\begin{array}{r}
 5 \\
 14 \quad 50 \quad 45
 \end{array}$$

$$.6186'$$

$$\begin{array}{r}
 -5076 \\
 +1110
 \end{array}$$

Jan. 17, 1898

XXIV

$$\begin{array}{r}
 9 \quad 54 \quad 12 \quad 234.2 \\
 \quad \quad \quad 307.1 \\
 \quad \quad \quad 236.8 \\
 \quad \quad \quad 306.8 \\
 \hline
 \quad \quad \quad 72.9' \\
 \quad \quad \quad 70.0' \\
 \hline
 \quad \quad \quad 142.9' + 0.72'
 \end{array}$$

$$\begin{array}{r}
 8 \quad 16 \quad 234.8 \\
 55 \quad 12 \quad 306.3 \\
 \quad \quad \quad 231.8 \\
 \quad \quad \quad 307.8 \\
 \hline
 \quad \quad \quad 71.5' \\
 \quad \quad \quad 76.0' \\
 \hline
 \quad \quad \quad 147.5' + 0.62'
 \end{array}
 \quad (+0.67)'$$

Index left and above

$$\begin{array}{r}
 57 \quad 0 \quad 326.3 \\
 \quad \quad \quad 36.0 \\
 \quad \quad \quad 322.3 \\
 \quad \quad \quad 37.6 \\
 \hline
 \quad \quad \quad 69.7' \\
 \quad \quad \quad 75.3' \\
 \hline
 \quad \quad \quad 145.0' + 0.67'
 \end{array}$$

$$\begin{array}{r}
 57 \quad 52 \quad 321.8 \\
 \quad \quad \quad 36.0 \\
 \quad \quad \quad 323.4 \\
 \quad \quad \quad 39.1 \\
 \hline
 \quad \quad \quad 74.2' \\
 \quad \quad \quad 75.7' \\
 \hline
 \quad \quad \quad 149.9' + 0.55'
 \end{array}
 \quad (+0.62)'$$

$$\begin{array}{r}
 9 \quad 56 \quad 5' \quad 39.1 \\
 5 \quad \quad \quad +14 \\
 \hline
 \quad \quad \quad \text{Mean} + 0.64'
 \end{array}$$

$$\begin{array}{r}
 14 \quad 56 \quad 9 \\
 \quad \quad \quad .6223'
 \end{array}$$

$$\begin{array}{r}
 -50.76 \\
 +11.47'
 \end{array}$$

Jan. 7, 1898

XXV

9 59 4 324.6 74.1'
 38.7 75.3'
 323.0 149.4' + 0.59'
 38.3

~~2~~

10 0 32 322.5 74.3' (+0.60)'
 37.1 74.5'
 323.7 148.8' + 0.60'
 38.2

Index right and below.

2 4 54.8 72.1'
 126.9 73.9'
 53.1 146.0' + 0.65'
 127.0

3 4 54.3 71.9' (+0.65)'
 126.2 74.1'
 4 44 54.7 146.0' + 0.65'
 10 1 11' 128.8

+5 +4 Mean +0.62

15 1 15
 10 .6258 30
 - .5076
 + .1182

Watch Correction = + 4 Sec. (Watch is slow)

January 18, 1898. (Tuesday.)

0 Watch Correction = 0
Comp Stars for U. Beti.

H. Obs.

2	29	-13.0
3	29	
1	0	

30 n 50

~~22.5~~

23.7

Index left

242.7

(new)
Star α compared with m.

Comp. dis

46

301.9

59.2'

238.7

64.3'

303.0

123.5' + 1.12'

238.7

65.3'

(+1.05)'

304.0

64.6'

238.3

129.9' + 0.98'

302.9

Index right

330.4

59.5'

29.9

63.9'

329.3

123.4' + 1.12'

33.2

330.5

62.7'

(+1.11)'

52 33.5

61.5'

329.4

124.2' + 1.10'

30.9

Mean +1.05'

Jan. 18, 1898.

Andromodas.

Phot. G.

H. Obs.

0 14 +26.1

4 14

4 0

Index left.

45.5 Comp. dis

90.3'

8 12 135.8

75.9'

53.8

166.2' + 0.26'

~~+28.5~~ 129.7

52.9

74.5'

(+0.35)'

127.4

82.6'

48.8

157.1' + 0.44'

131.4

Index right

136.6

88.3'

224.9

76.1'

142.0

164.4' + 0.30'

218.1

142.8

76.1'

(+0.31)'

218.9

87.0'

137.0

163.1' + 0.32'

224.0

Mean +0.33'

5 20

8 16.0

5

13 16.0

Jan. 18, 1898.

Same again.

8		137.7	86.0'
22		223.7	<u>78.5'</u>
		141.0	164.5' + 0.29'
		119.5	

		140.2	78.7'	(+0.26)'
		218.9	<u>88.9'</u>	
		136.0	167.6' + 0.24'	
		224.9		

Index left.

		233.0	78.0'
		311.0	<u>76.8'</u>
		232.3	154.8' + 0.48'
		309.1	

		235.3	71.0'	(+0.54)'
5	30	306.3	<u>78.4'</u>	
5	26.0	230.9	149.4' + 0.59'	
5		231.7		
13	26.0	310.1		

Mean + 0.40

Jan. 18, 1898.

Same again

8
32
230.8
311.0
234.0
309.5

80.2'
75.5'
155.7' + 0.46'

230.6
309.4
231.2
310.6

78.8'
79.4'
158.2' + 0.42'

(+0.44)'

Index right.

319.1
42.4 41.8
320.7
41.7

82.7'
81.0'
163.7' + 0.31'

(+0.30)'

8
8
5
13

36
34.0
42.2
34.0

43.7
319.0
42.2

81.6'
83.2'
164.8' + 0.29'

Mean + 0.37'

Jan. 18, 1898.

S S Cygni.

Phot. T.

7.06

21 37

+42.7

28 49

7 12

Comp Star = m

Index right

44.0 < m ds.

95.1'

8 54 56

139.1

98.5'

41.9

193.6'

140.4

166.4' - 0.26'

40.0

100.8'

57 12

140.8

91.3'

(-0.24)'

44.5

192.1'

135.8

167.9' - 0.23'

Index left

308.7

101.9'

59 32

150.6

108.6'

306.3

210.5'

54.9

149.5' - 0.58'

306.5

107.2'

9 1 4

53.7

101.0'

(-0.56)'

31 104

308.4

208.2'

8 58 11

49.4

151.8' - 0.52'

5 + 1

13 58 12

Mean - 0.40'

Jan. 15, 1895

9	2	36	310.7	100.0'	<u>II</u>
			50.7	108.4'	
			307.6 308.3	208.4'	
			56.7	151.6' - 0.54'	

4	12	306.9	108.6'	(-0.55)'
		55.5	100.6'	
		309.1	209.2'	
		49.7	150.8' - 0.56'	

Index right

6	8	43.7	90.3'
		134.0	103.6'
		38.2	193.9'
		141.8	166.1' - 0.26'

		38.2	103.8'	(-0.30)'
7	40	142.0	94.4'	
19	96	42.8	198.2'	
9	5	9' 138.2	161.8' - 0.35'	
5		+1		
14	5	10		Mean - 0.42'

Jan 15, 1898

T Andromedae \pm

0	14	+ 26.1
6	54	
6	40	

W. Obs

Went over into W. Dome and revised DM Comp Stars for T Andromedae. Star "K" is Mr Reed's last star #5 and is to be joined by intermediate stars with star "d." of W's orderly sequence

10 5-0 K 5.5 a
 a 4 b
 b 5 c
 c 6 c'
 c' 4.5 d

Star a, b, c, and c' inserted between "K" and "d." Region low so that estimate can not be made quite as critical as desired to-night. The interval between stars "c" and "c'" evidently a little large, but nothing can be found at this altitude to fill the gap. Will wait till another night

for
 For stars "K" onwards see diagram
 Book 94, page 96.

11 0 Watch Correction = + 20 sec. (Watch is slow)

January 19, 1898. (Wednesday)

Q Beti

Phot. W.

W. Obs.

2 11 - 2.5

3 54

1 50

Index right and below.

181.0 Var. dis. 14.4'

58 195.4 14.5'

181.3 28.9' - 4.48'

195.8

181.7

14.3'

(-4.48)'

196.0

14.7'

181.2

29.0' - 4.48'

195.9

Index left and above.

271.9 14.6'

286.5 14.3'

271.6 28.9' - 4.48'

285.9

271.0

14.5'

(-4.48)'

8 6

285.5

14.4'

8 2.0

271.6

28.9' + 4.48'

5

286.0

13 2.0

Mean - 4.48'

Jan. 19, 1898.

Same again

$$\begin{array}{r}
 8 \quad 271.7 \quad 14.1' \\
 8 \quad 285.8 \quad 14.8' \\
 \hline
 271.1 \quad 28.9' - 4.48' \\
 285.9
 \end{array}$$

$$\begin{array}{r}
 271.7 \quad 14.1' \quad (-4.48)' \\
 285.8 \quad 14.9' \\
 \hline
 271.0 \quad 29.0' - 4.48' \\
 285.9
 \end{array}$$

Index right and below

$$\begin{array}{r}
 1.4 \quad 15.0' \\
 16.4 \quad 14.1' \\
 \hline
 1.9 \quad 29.1' - 4.47' \\
 16.0
 \end{array}$$

$$\begin{array}{r}
 8 \quad 15 \quad 15.3 \quad 14.2' \quad (-4.48)' \\
 8 \quad 11.5 \quad 1.3 \quad 14.7' \\
 5 \quad 16.0 \quad 28.9' - 4.48' \\
 \hline
 13 \quad 11.5
 \end{array}$$

Mean - 4.48'

Jan. 19, 1895.

Andromodae.

H. Obs

0 14 + 26.1

4 31

4 17

K 5 K'

K' 3 a

a 5 b

b K 5 c

~~c 6 c'~~~~c' 3.5 d~~

c 4.5 c'

c' 3.5 c'

c' 3.5 d

For notation see R 94, p. 96.
 Sky considerably hazy.

Jan. 19, 1898.

T Andromedae Phot. T W. Ols

Index left and below

	231.1	80.0'
	309.5	81.0'
9	21 311.1	161.0' + 0.36'
	231.2	
	312.2	

(+0.35)'

	230.3	88.9'
	310.2	73.4'
	234.9	162.3' + 0.34'
	308.3	

Index right and above.

	324.2	77.0'
	41.2	77.8'
	320.9	154.8' + 0.48'
	38.7	

	319.0	83.7'	(+0.46)'
	41.2	73.5'	

157.2' + 0.43'

9	24	42.7
9	24.0	324.6
5		38.1
14	24.0	

Mean +0.40'

Jan. 19, 1898

Same again.

~~323.7~~

323.0

~~37.5~~

38.6

317.8

~~+5.2~~

43.7

75.6'

85.9'

161.5' + 0.35'

(+0.34)'

317.0

85.2'

42.2

77.5'

322.5

162.7' + 0.33'

40.0

Index left and below

53.4

~~2.9~~

+26.3

78.9'

132.3

78.4'

Clouds thick

157.3' + 0.43'

52.0

130.4

(+0.48)'

50.3

79.5'

10

1

129.8

73.5'

9

45.5

54.7

153.0' + 0.52'

5

128.2

14

45.5

Mean + 0.41'

Jan. 19, 1898.

Observations of δ Androm, made with much difficulty through cloud. Last group especially difficult and uncertain.
Observations $\frac{1}{3}$ weight.

$\Sigma 401$ Phot. W. W. Obs.

3 24 + 27.1

6 24

3 0

Pos. angle 270° dis 11 sec. Magn 6.6 and 7.0

Index left and above

326.0 (brightness)

10

27

49.2

83.4

329.5

75.5

45.0

152.9 - 0.140 ✓

330.0

- 0.38 ✓

46.8

76.8

325.0

83.6

48.6

160.4 - 0.37 ✓

Index right and below.

Mean = - 0.46

55.6

139.3

73.7

61.2

73.2

134.4

146.9 - 0.64 ✓

- 0.54

- 0.44

Jan. 19, 1895.

10	37	62.0	135.2
			57.0
15	32		140.8

73.2	
<u>83.2</u>	
157.0	- 0.44

 Σ 590Phot H ^(sparkless) (inserted) N. Obs.

4	38	-9.0
6	54	
2	16	

Pos angle 150° disperse Magn 6.2 and 6.7

10 55 Too cloudy abandoned

POSTED TO HEFLE

151

January 24, 1898. (Monday)

5 30 Watch Correction = + 21 sec. (Watch is slow.)
 W. Delphine. Phot. T. W. Obs.

20 31 + 17.7

26 15

5 44

Index above

I

240.9 < Comp. dis. 59.0'

5 53 32 299.9 48.7'

246.5 107.7' + 1.47'

295.2

247.8 49.3'

(+1.52)'

55 48 297.1 53.8'

242.9 103.1' + 1.58'

296.7

Index below

326.0 66.0'

58 4 32.0 58.8'

331.9 124.8' + 1.09'

30.7

331.2 59.6' (+1.06)'

59 40 30.8 67.7'

25 124' 326.7 127.3' + 1.04'

5 56 46' 34.4

5 +21 4563'

10 54 7' 3830'

+0733'

+146'

9.27,
 Mean +1.29
 10.56

Jan. 24, 1898.

II

6 2 12 327.0 66.9'
~~1~~ ~~44~~ 33.9 61.6'
 331.0 128.5' + 1.01'
 32.6

(+0.97)'
~~(+0.93)~~

3 36 33.2 70.2'
 325.4 132.4' + 0.93'
 35.6

Index above

5 44 60.6 62.1'
 122.7 50.6'
 65.9 112.7' + 1.36'
 116.5

7 16 61.9 54.0'
~~17~~ 108' 115.9 60.5'
 6 4 42' 59.4 114.5' + 1.31'
 5 +21 60.1
 120.6

(+0.2)
 (+1.34)'

11 5 3'

Mean + ~~1.14~~
 + 1.16'

.4618

- .3830

+ .0788

+ 1.53'

9.27
 10.43

Jan. 24, 1898

6 10 28 61.8
~~120.4~~ 119.7
 59.9 60.9
 120.0

57.9'
59.1'
 117.0' + 1.26'

III

12 0 63.5
 117.2
 60.3
 121.0

53.7' (+1.29)'
60.7'
 114.4' + 1.32'

Index below.

14 32 144.8
 212.0
 151.0
 214.7

67.2'
63.7'
 130.9' + 0.96'

16 0 149.3
 212.2
 12 60' ~~143.7~~
 6 13 15' 144.3
 5 + 21 214.2

62.9' (+0.94)'
69.9'
 132.8' + 0.92'

11 13 36'
 146.78'
- .3830
+ .0848'
 + 2 2'

Mean + 1.12'
9.27
 10.39

Jan. 24, 1898.

6 18 0 144.8 69.9'
 214.7 59.5'
 151.9 129.4' + 0.99'
 211.4

IV

19 28 149.6 64.7' (+0.93)'
 214.3 70.4'
 145.0 135.1' + 0.87'
 215.4

Index above.

22 10 239.3 62.6'
~~240.0~~
 301.9 56.9'
 242.0 119.5' + 1.20'
 298.9

24 20 241.4 59.6' (+1.16)'
 301.0 63.9'
 3 88' ~~239.1~~ 123.5' + 1.12'
 6 21 7' 238.8
 5 +21 302.7
 11 21 28'

Mean 9.27,
 +1.04
 10.31

.4733'

- .3830

+ .0903'

+ 2 10'

Jan. 24, 1898.

V

6	26	56	240.0	61.4'	
			301.4	<u>58.7'</u>	
			241.2	120.1' + 1.19'	
			299.9		

			241.9	59.4'	(+1.18)'
28	40		301.3	<u>62.1'</u>	
			239.3	121.5' + 1.16'	
			301.4		

Index below

			326.7	70.0'	
			327.2		
30	50		36.7	<u>66.9'</u>	
			327.9	136.9' + 0.84'	
			35.3 34.8		

			328.4	66.6'	
			35.0		
32	36		35.2	<u>68.9'</u>	(+0.86)'
36	188'		326.0	135.5' + 0.87'	
6	29	47'	34.9		

5 + 21

11 30 8'

Mean $\frac{9.27}{+1.02'}$

10.29

.4793'

- .3830

+.0963'

+ 2 19'

Jan. 24, 1898.

6	34	28	324.8	69.0'	<u>VI</u>
			33.8		
			22.8	<u>62.6'</u>	
			326.4	131.6' + 0.95'	
			29.0		

35	52	330.4	60.3'	(+ 1.02)'
		30.7	<u>64.7'</u>	
		327.1	125.0' + 1.08'	
		31.8		

Index above

38	0	61.7	61.4'
		123.1	<u>60.1'</u>
		59.6	121.5' + 1.16'
		119.7	

40	20	56.1	65.1'	(+ 1.03)'
		121.2	<u>68.7'</u>	
		56.3	133.8' + 0.90'	
		125.0		
6	37	10	125.0	Mean <u>9.27</u>
5		+21		<u>+1.02</u>
				10.29

11 37 31 All the above observations difficult. First on account of twilight and second on account of low altitude. Last group extremely difficult $\frac{1}{2}$ weight.
 Hour angle at ending = 6^h 43^m.

6 50 Watch Correction = + 21 sec. (Watch is slow)

Jan. 24, 1895.

Comparison Stars for R. Beti. Phot. T. H. Obs.

2	23	-0.4
3	33	
1	10	

Star 5 compared with m.
Index right.

0.8

5 — 08 15.0

344.5 < Comp. dis. 31.8'

5 11 16.3

30.3'

346.0

62.1' + 2.78'

16.3

345.0

343.8

31.8'

(+2.78)'

16.8

30.3'

345.5

62.1' + 2.78'

15.8

Index left.

76.0

30.2'

106.2

26.7'

76.1

56.9' + 2.98'

103.8

103.9

76.7

28.2'

(+2.96)'

5 17 104.9

29.5'

76.5

57.7' + 2.95'

106.0

Mean + 2.84'

Jan. 24, 1898.

Star m. compared with m.
Index left.

8 22 71.9 comp. dis. 36.8'
108.7 38.3'
72.0 75.1' + 2.34'
110.3

71.8 38.6' (+2.32)'
110.4 38.0'
71.8 76.6
109.8 76.6' + 2.30'

Index right.

162.3 40.8'
203.1 39.5'
160.5 80.3' + 2.19'
200.0

8 32 161.8 40.9' (+2.14)'
202.7 43.0'
160.4 83.9' + 2.08'
203.4

Mean + 2.23'

Jan. 24, 1898.

Star ⁿ compared m.
Index right

5 35 152.0 < comp. dis 56.3'
 208.3 62.9'
 150.7 119.2' + 1.21'
 213.6

149.1 62.8' (+1.18)'
~~211.7~~
~~211.4~~ 58.9'
 151.0 121.5' + 1.16'
 209.9

Index left.

243.9 52.3'
 296.2 57.7'
 241.3 110.0' + 1.42'
 299.0

5 40 241.3 55.9' (+1.46)'
 297.2 50.9'
 243.1 106.8' + 1.49'
 294.0

Mean +1.32'

Jan. 24, 1898.

Star n' compared with m.
Index left and below.

8 $\begin{array}{r} 55 \\ 53 \end{array}$ $\begin{array}{r} 249.7 \\ 249.0 \\ 290.1 \\ 294.5 \\ 248.3 \\ 294.2 \end{array}$ < Comp. dis. $\begin{array}{r} 49.4' \\ 45.9' \\ \hline 95.3' + 1.77' \end{array}$

$\begin{array}{r} 249.7 \\ 295.1 \\ 247.4 \\ 294.9 \end{array}$ $\begin{array}{r} 45.4' \\ 47.5' \\ \hline 92.9' + 1.84' \end{array}$ $(+1.80)'$

Index right and above.

$\begin{array}{r} 335.1 \\ 25.1 \\ 335.5 \\ 25.9 \\ 24.6 \end{array}$ $\begin{array}{r} 336.3 \\ 28.2 \end{array}$ $\begin{array}{r} 51.9' \\ 49.5' \\ \hline 101.4' + 1.62' \end{array}$

9 $\begin{array}{r} 03 \\ 24.7 \\ 337.0 \\ 27.0 \end{array}$ $\begin{array}{r} 336.0 \\ 24.7 \\ 337.0 \\ 27.0 \end{array}$ $\begin{array}{r} 48.7' \\ 50.0' \\ \hline 98.7' + 1.69' \end{array}$ $(+1.66)'$

Mean $+1.73'$

Jan. 24, 1898

<i>T</i>	<i>Andromodae</i>	<i>Phot. T.</i>	<i>W. Obs</i>
0	14	+26.1	
5	57		
5	37		

Index left and below

$\begin{array}{r} 241.0 \\ 241.2 \end{array}$
 $\begin{array}{r} 63.5' \\ 79.5' \end{array}$
 15 304.5 $\begin{array}{r} 79.5' \\ 143.0' \end{array}$ + 0.71'
 234.0
 313.5

$\begin{array}{r} 234.3 \\ 311.7 \end{array}$
 $\begin{array}{r} 77.4' \\ 70.5' \end{array}$ (+0.66)'
 235.5 $\begin{array}{r} 147.9' \\ 306.0 \end{array}$ + 0.62'

Index right and above

$\begin{array}{r} 329.0 \\ 34.1 \end{array}$
 $\begin{array}{r} 65.1' \\ 80.4' \end{array}$
 322.4 $\begin{array}{r} 145.5' \\ 42.8 \end{array}$ + 0.66'

$\begin{array}{r} 322.7 \\ 38.9 \end{array}$
 $\begin{array}{r} 76.2' \\ 67.1' \end{array}$ (+0.68)'
 9 19 326.1 $\begin{array}{r} 67.1' \\ 143.3' \end{array}$ + 0.71'
 9 17.0
 5 33.2
 14 17.0

Mean + 0.67'

Jan. 24, 1898
Same again

327.3 68.6'
35.9 78.3'
320.9 146.9' + 0.64'
39.2

323.7 73.3' (+0.69)'
~~36.4~~ 37.0 68.3'
327.5 141.6' + 0.74'
35.8

Index left and below

58.3 62.4'
178.7 78.3'
50.0 140.7' + 0.76'
128.3

9 24 52.8 73.9' (+0.76)
9 22.0 126.7 66.2'
5 56.3 140.1' + 0.77'
114 22.0 122.5

Mean + 0.73'

January 27, 1898. (Thursday)

7 0 Watch Correction = +12 sec (Watch is slow)
V Andromedar Comp Stars

0	43	+34.7
4	25	
3	42	

'e' compared with 'b'
Index above

256.7	25.4'
-------	-------

8 37 282.1 30.4'

255.6	55.8' + 3.02'
-------	---------------

286.0

260.4	24.6'	(+3.18)'
-------	-------	----------

285.0	24.2'
-------	-------

259.2	48.8' + 3.33'
-------	---------------

283.4

Index below

346.0	26.3'
-------	-------

12.3	30.8'
------	-------

346.8	57.1' + 2.97'
345.4	

17.6

347.3	27.7'	(+2.99)'
-------	-------	----------

8 41 15.0 28.5'

345.9	56.2' + 3.01'
-------	---------------

14.4

Mean + 3.05'

Measurements very difficult through clouds

January 27, 1898.

8

45 Clouds getting thick

Index.

9

20 Continuously cloudy in this region
Abandoned

T Andromedae	Phot. T.	H. Obs
0	14	+26.1
6	9	
5	55	

0	14	+26.1
6	15	
6	1	

Jan. 27, 1898.

Androm

Phot T

W.C.

Index right and above

323.8

72.0'

~~35~~ < Comp. dis. 62.4'

35 35.8

134.4' + 0.89'

329.8

32.2

(+0.84)'

326.0

68.9'

34.9

70.0'

325.5

138.9' + 0.80'

35.5

Index left and below

58.7

63.6'

122.3

68.7'

56.9

132.3' + 0.93'

125.6

53.5

73.7'

(+0.86)'

40 127.2

65.0'

37.5 58.0

138.7' + 0.80'

5 123.0

144 37.5

Mean + 0.85'

Jan. 27, 1898.

Same again

57.1 67.1'
 41 124.2 71.9'
 55.0 139.0' + 0.79'
 126.9

54.2 72.7' (+0.82)'
 126.9 62.9'
~~59.6~~ 59.0 135.6' + 0.86'
 121.9

Index right and above

148.0 66.3'
 214.3 73.9'
 144.7 140.2' + 0.77'
 218.6

143.1 74.6' (+0.74)
 46 216.9 217.7 68.4'
 9 43.5 144.0 143.0' + 0.71'
 5 215.4

14 43.5

Mean + 0.78

Shutter interferes slightly at end of measurements

Jan. 27, 1895.

V Androm. Comp Stars Phot. T. H. Obs

$$\begin{array}{r}
 0 \quad 43 \quad +34.7 \\
 6 \quad 51 \\
 \hline
 6 \quad 8
 \end{array}$$

"d" compared with "b."

Index above

$$\begin{array}{r}
 261.1 \quad 21.4' \\
 14 \quad 282.5 \quad \underline{18.8'} \\
 262.0 \quad 40.2' + 37.6' \\
 280.8
 \end{array}$$

$$\begin{array}{r}
 262.4 \quad 17.5' \quad (+3.79)' \\
 279.9 \quad \underline{21.5'} \\
 261.1 \quad 39.0' + 3.82' \\
 282.0
 \end{array}$$

Index below

$$\begin{array}{r}
 350.4 \quad 21.6' \\
 12.0 \quad \underline{18.0'} \\
 351.0 \quad 39.6' + 3.79' \\
 9.0
 \end{array}$$

$$\begin{array}{r}
 352.4 \quad 19.1' \quad (+3.78)' \\
 19 \quad 11.5 \quad \underline{20.9'} \\
 350.5 \quad 40.0' + 3.77' \\
 11.4
 \end{array}$$

Mean + 3.78'

Jan. 27, 1898.

"o" compared with "b"
Index right and below

~~349.6~~ 349.0

10 22 . 12.6

351.2

13.1

10 23 Clouds again.

Index left a

Clouds so thick impossible to proceed

Comp. of Chron.

73394.

4410958.

14 26 00:0 = 14 25 14.5

14 27 00:0 = 14 26 14.5

Jan. 27, 1898.

Dis. Jup. I. Phot. R. W. obs. Waiter.
Comp. with act preceding = Sat. III.

14 36 01 ⁺	14	35	45	197.8	
+ 45			56 73 ⁺	270.9	1
<u>14 36 46⁺</u>	36	05	76.2 ⁺	195.8	
36 39 ⁺			19 74.6	272.0	
+ 45			26	198.0	
<u>37 24⁺</u>			34 71.9 ⁺	269.9	2
37 18 ⁺			42 72.0 ⁺	198.0	
+ 45			54 72.0 ⁺	270.0	
<u>38 03⁺</u>	37	04		198.0	
37 54 ⁺		13	68.9 ⁺	266.9	3
+ 45		23	73.3 ⁺	196.0	
<u>38 39⁺</u>		30	71.1 ⁺	269.3	
38 36 ⁺		39		200.0	
+ 45	38	00	71.6 ⁺	271.6	4
<u>39 21⁺</u>		09	70.2 ⁺	198.1	
		22	70.9 ⁺	268.3	
		30		198.1	
		42	70.7 ⁺	269.0	✓
		48	70.8 ⁺	198.1	
				268.8	

Jan. 27, 1898.

$$\begin{array}{r} 14 \ 39 \ 54^+ \\ + 45 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \ 40 \ 39^+ \\ \hline \end{array}$$

$$\begin{array}{r} 40 \ 31^+ \\ + 45 \\ \hline 41 \ 16^+ \\ \hline \end{array}$$

$$\begin{array}{r} 41 \ 16^+ \\ + 45^+ \\ \hline 42 \ 01^+ \\ \hline \end{array}$$

$$\begin{array}{r} 42 \ 03^+ \\ + 43^+ \\ \hline 42 \ 48^+ \\ \hline \end{array}$$

$$\begin{array}{r} 42 \ 46^+ \\ + 45 \\ \hline 43 \ 31^+ \\ \hline \end{array}$$

$$\begin{array}{r} 43 \ 29^+ \\ + 45 \\ \hline 44 \ 14^+ \\ \hline \end{array}$$

$$14 \ 39 \ 38 \ 195.0$$

$$49 \ 76.3 \ 271.3 \quad 6$$

$$40 \ 00 \ 69.42 \ 200.8$$

$$09 \ 72.8^+ \ 270.2$$

$$18 \ 197.5$$

$$27 \ 74.5^+ \ 272.0 \quad 7$$

$$35 \ 74.0^+ \ 198.0$$

$$44 \ 74.2 \ 272.0$$

$$52 \ 197.8$$

$$41 \ 07 \ 72.2^+ \ 270.0 \quad 2$$

$$23 \ 77.6^+ \ 195.2$$

$$41 \ 74.9^+ \ 272.8$$

$$50 \ 195.7$$

$$56 \ 76.3^+ \ 272.0$$

$$42 \ 05 \ 76.1^+ \ 196.0 \quad 9$$

$$21 \ 76.2^+ \ 272.1$$

$$31 \ 196.0$$

$$41 \ 74.0^+ \ 270.0$$

$$51 \ 76.7^+ \ 194.1 \quad 10$$

$$43 \ 01 \ 75.4^+ \ 270.8$$

$$16 \ 198.8$$

$$24 \ 70.2^+ \ 269.0 \quad 11$$

$$34 \ 74.7^+ \ 197.0$$

$$43 \ 72.4^+ \ 271.7$$

Jan. 27, 1898.

14 44 04 ⁺	14	43	52	198.5	
+45	43	03	70.5 ⁺	269.0	
14 44 49 ⁺		08	71.1 ⁺	198.8	12
		15	70.8 ⁺	269.9	
		22	195.1		
44 31 ⁺		28	74.7 ⁺	269.8	
+45		34	69.4 ⁺	198.1	13
45 16 ⁺		40	72.0 ⁺	267.5	
		46	198.8		
44 57 ⁺		54	70.7 ⁺	269.5	
+45		45 00	69.5 ⁺	197.8	14
45 42 ⁺		07	70.1 ⁺	267.3	
46 00 ⁺		15	200.5		
06		21	268.0		
13 ⁺		28	200.2		
19 ⁺		34	266.0		
25 ⁺		40	200.4		
32 ⁺		47	266.0		
39 ⁺		54	201.0		
46 ⁺	46	01	266.3		
52 ⁺		07	201.8		
47 00 ⁺		15	266.3		
08 ⁺		23	207.0		
15 ⁺		30	264.2		
21 ⁺		36	204.6		

Jan. 27, 1898.

14	47	30 ⁺	14	46	45	262.8
		37 ⁺			52	207.1
		47 ⁺		47	02	260.6
		54 ⁺			09	208.0
48		02			17	255.0
		13 ⁺			28	213.1
		20 ⁺			35	255.2
		26 ⁺			41	214.0
		37 ⁺			52	257.0
		48 ⁺		48	03	218.3
		55 ⁺			10	248.0
49		05 ⁺			20	226.0
		15 ⁺			30	248.3

Not seen later.

Limit of Visibility.

14	49	40	219.2
50	20 ⁺	51	263 ⁺ 245.5
+ 145 ⁺	50	47	23.8 ⁺ 223.0
51 05 ⁺	51	04	25.0 ⁺ 246.8

Seeing very irregular, and
~~seeing in general rather~~
~~poor, although~~

Jan. 27, 1898.

Some of time seeing very good then again extremely bad at these latter times Jup. would boil right over the face of satellites and the satellites also become very blurry and indistinct. This caused observation during time of real disappearance to be made slowly, at times however satellites were well seen.

Comp. of Chron.

B 394.

A + 10.958.

15	55	00.0	=	15	54	14.7
15	56	00.0	=	15	55	14.7

\therefore Chron. Corr. = + 45 secs.

January 25, 1898. (Friday)

<u>o Ceti</u>		Phot. H.	H. Obs.
2	4	-2.5	
4	31		
2	27		

Index left and above.

141.0 < Var. dis. 16.8'

5 00 157.8 16.0
141.0 32.8' ~~4.21~~ -4.21'
157.0

141.6 18.4' (-4.20)'
158.0 16.7'
141.0
140.6 33.1' -4.19'
157.7

Index right and below.

228.8 18.5'
247.3 17.2'
229.5 35.7' -4.02'
247.0

230.0 17.0' (-4.02)'
5 06 247.0 18.7'
5 03.0 229.1 35.7' -4.02'
5 247.8

13 03.0

Mean -4.11

Jan. 28, 1898

Same again.

5		229.5	17.6'
08		247.1	18.0'
		229.1	35.6' - 4.03'
		247.1	

		229.8	18.0'	(-4.00)'
		247.8	18.7'	
		229.1	36.7' - 3.96'	
		247.8		

Index left and above

		320.0	17.8'
		337.8	16.5'
		320.5	34.3' - 4.11'
		337.0	

		320.6		(-4.12)'
		320.8	16.5'	

5	18	337.1	17.6'
8	13.0	320.3	34.1' - 4.12'
5		337.9	

13	13.0		
----	------	--	--

Mean - 4.06'

Observations made with some difficulty through clouds

Jan. 28, 1898.

Andromedae.

Phot. T.

H. Obs

0	14	+26.1
---	----	-------

5	16	
---	----	--

5	2	
---	---	--

0	14	
---	----	--

5	36	
---	----	--

5	22	
---	----	--

0	14	
---	----	--

5	41	
---	----	--

5	27	
---	----	--

Too cloudy after long trying

 $\Sigma 16'$

Phot. H.

H. Obs

5	29	
---	----	--

-5.5

5	49	
---	----	--

0	20	
---	----	--

Pos. angle 95° , dis. 9 min of arc. Magn 4.5 and 6.0

Jan. 25, 1898.

 $\Sigma 16'$

Phot. N.

N. Obs

Index left and above,

9 13 135.2 - brighter dis 61.6
 196.8
 140.1
 192.8

52.7
 114.3 - 1.32

138.8
 192.2
 136.0
 195.7

53.4 - 1.34
 59.7
 113.1 - 1.35

Index right and below Mean = -1.31

224.4
 286.7
 225.4
 282.1

62.3
 53.7
 116.0 - 1.28

9 18 227.1
 281.1
 225.2

9 16.5 287.9

54.0
 62.7
 116.7 - 1.27

Jan. 25, 1898.

Tandromodae

Phot. T.

H. Obs

0	14	+ 26.1
6	10	
5	56	

Index left and below.

9 37

56.4	^{Comp. dis.} 66.8'
123.2	62.8'
60.0	129.6' + 0.99'
122.8	

61.8	60.5'	(+1.02)'
122.3	66.1'	
56.7	126.6' + 1.05'	
122.8		

Index right and above

142.2	75.1'
217.3	71.5'
144.5	146.6' + 0.64'
216.0	

146.8	68.8'	(+0.67)'
42 215.6	75.0'	
9 39.5 141.7	143.8' + 0.70'	
5 216.7		

14	39.5
----	------

Mean + 0.84'

Jan. 28, 1898.

Same again.

9	43	142.3	75.5'
		214.8	<u>67.8'</u>
		145.5	143.3' + 0.71'
		213.3	

		144.0	69.8'	(+0.70)'
		213.8	<u>73.7'</u>	
		142.2	143.5' + 0.70'	
		142.2		
		215.9		

Index left and below.

238.2	237.0	68.7'
—	305.7	<u>62.8'</u>
240.9	239.2	131.5' + 0.95'
	302.0	

9	47	239.7	64.3'	(+0.96)'
9	45.0	304.0	<u>66.7'</u>	
9		237.3	131.0' + 0.96'	
5		304.0		
14	45.0			Mean + 0.83

Jan. 28, 1898

S. Cancri

Phot. T.

N. Obs.

8	36
---	----

+15.7

7	10
---	----

1	26
---	----

10	34
----	----

8	36
---	----

7	26
---	----

1	10
---	----

10	50
----	----

10 30 Watch Correction = +11 Sec. (Watch is slow.)

Jan. 28, 1898.

S. Cancri.

Phot. T.

H. C. S.

Full Brightness

Index above.

10	47	48	58.0	Vandier	64.0'
			122.0		51.2'
			65.8		115.2' - 1.30'
			117.0		

I

			65.0		
			66.0	51.2'	(-1.36)'
50	0		116.2	59.2'	
			61.8	110.4' - 1.41'	
			121.0		

Index below

			148.2	62.3'
52	44		210.5	50.5'
			155.3	112.8' - 1.35'
			205.8	

			153.8	54.2'	(-1.34)'
55	4		208.0	59.7'	
	4	96'	150.7	113.9' - 1.33'	
10	51	24	157.2		
5		+11	210.9		
15	51	35			

Mean - 1.35'

Jan. 25, 1898.

		150.0	63.4'	
10	56	48	213.4	<u>53.2'</u>
			153.8	116.6' - 1.27'
			207.0	

II

		154.0	52.7'	(-1.24)'
58	20		206.7	<u>66.0'</u>
			149.0	118.7' - 1.22'
			215.0	

Index above

		239.0	65.0'	
11	0	36	304.0	<u>51.0'</u>
			245.0	116.0' - 1.28'
			246.8	
			296.0	

		246.5	48.6'	(-1.34)'
2	28		295.1	<u>62.6'</u>
36	132		239.2	111.2' - 1.39'
10	59	33	240.2	
5	+11		302.8	
15	59	44		

Mean - 1.29'

February 3, 1895. (Thursday)

See page 213. (Looked for object on Sun)

7 0 Watch Correction = -23 sec. (Watch is fast.)
 0 Beti Phot. H. H. Obs.

2 4 -2.5

4 49

2 4.5

Index right and below

168.0

8 03 157.4

19.4 ✓

167.2

21.1 ✓

188.6

40.5 ✓

3.74 ✓

188.3

167.5

167.7

19.6 ✓

(3.76) ✓

187.4

167.7

20.1 ✓

187.5

39.7 ✓

3.79 ✓

Index left and above

258.1

244.2

19.3 ✓

277.4

257.9

19.2 ✓

277.1

34.5 ✓

3.2 ✓

258.0

8 11 277.5

19.5 ✓

(3.24) ✓

8 7.0 258.3

19.6 ✓

3.22 ✓

5 277.9

39.1 ✓

mean 3.79 ✓

13 7.0

Feb. 3, 1898.

Same again.

8	14	258.1	19.0 ✓	
		277.1		
		258.0	19.3 ✓	
		277.3	<u>38.3</u> ✓	3.26 ✓

		258.2	19.1 ✓	(3.26) ✓
		277.3		
		258.2	19.4 ✓	
		277.6	<u>38.8</u> ✓	3.25 ✓

Index ^{right} ~~left~~ and below.

		348.0		
		8.3	20.5 ✓	
		8.5		
		348.3		
		348.4	12.2 ✓	
		7.2	<u>39.3</u> ✓	3.21 ✓

8	24	348.2	19.0 ✓	(3.21) ✓
		7.2		
8	19.0	347.7	20.3 ✓	
5		8.0	<u>39.3</u> ✓	3.21 ✓
13	19.0			

Mean 3.24 ✓
 Gen. Mean 3.22 ✓

~~Feb. 2~~ Feb. 3, 1898

T Andromodae. Phot. *T.* H. Obs.

0 14 +26.1

5 38

5 24

Index left and below.

58.0 Comp. dis. 66.3'

8 36 124.3 58.9'

62.5

125.2' +1.08'

61.3

120.2

(+1.08)'

61.5

57.7'

119.5

67.1'

56.8

124.8' +1.09'

123.9

Index right and above:

148.0 67.0'

215.0 61.0'

150.9 128.0' +1.02'

211.9

150.2

62.1'

(+0.98)'

8 44 212.3

69.5'

8 40.0 146.4

131.6' +0.95'

5 215.9

13 40.0

Mean +1.03'

Feb. 3, 1898.

Same again

	146.5	69.5'
8	46 216.0	<u>62.4'</u>
	150.0	131.9' + 0.94'
	212.4	

	153.0	58.9'	(+0.94)'
	211.9	<u>69.9'</u>	
	146.9	128.8' + 1.00'	
	216.8		

Index right left and below

	237.5	68.0'
	305.5	<u>61.1'</u>
	240.6	129.1' + 1.00'
	301.7	

	240.6	60.8'	(+1.06)'
--	-------	-------	----------

5	53	301.4	<u>62.5'</u>
8	49.5	239.8	123.3' + 1.12'
5		302.3	
13	49.5		

Mean + 1.02'

Feb. 3, 1898.

Searneri.

Phot. T.

N. obs.

8	36
6	36
2	00
10	0

+19.6

Full Brightness. I

Index left and above.

61.0	var. dis.	59.3'
43 40	120.3	54.9'
63.3		114.2' - 1.32'
118.2		

63.9		53.9'	(-1.36)'
64.9		57.5'	
45 48	117.8	111.4' - 1.39'	
60.9			
120.1			
118.4			

Index right and below

152.0		56.1'
48 44	208.1	56.6'
151.8		112.7' - 1.36'
208.4		

151.9		58.3'	(-1.30)'
50 32	210.2	59.0'	
26 16.4	150.7	117.3' - 1.25'	
9 47 11	209.7		
5	-23		
14 46 48			

Mean -1.33'

Feb. 3, 1898

II

9	52	16	152.0	57.0'	
			209.0	<u>57.7'</u>	
			151.3	114.7'	-1.31'
			209.0		

			150.2	59.4'	(-1.27)'
54	0		209.6	<u>59.1'</u>	
			150.8	118.5'	-1.23'
			209.9		

Index left and above.

			242.7	57.6'	
56	24		300.3	<u>52.8'</u>	
			245.0	110.4'	-1.41'
			297.8		

			242.0	58.7'	(-1.33)'
58	4		300.7	<u>58.8'</u>	(-1.28)'
20	44		241.5	117.5'	-1.25'
9	55	11	300.3		
5			-23		
114	54	48			

Mean -1.30'

Feb. 3, 1898.

III

9 59 40 243.2 57.8'
 301.0 56.4'
 244.0 114.2' - 1.32'
 300.4

10 1 0 242.8 56.6' (-1.30)'
 299.4 59.7'
 242.5 116.3' - 1.27'
 302.2

Index right and below

3 40 334.9 54.9'
 29.8 57.0'
 332.0 111.9' - 1.37'
 29.9
 28.7

331.0 58.1' (-1.34)'
 5 40 29.1 57.1'
 8 120 331.7 115.2' - 1.30'
 10 2 30 28.8
 5 -23
 15 2 7'

Mean - 1.32'

10 15 Watch correction = -23 sec. (Watch is fast)

Feb. 3, 1898

m.p. 441

Phot. R.

W. Obs.

3 31

+62.8

7 53

4 22

Index right

163.5 Var. des.

55.7'

10 56 219.2

53.1'

165.3

108.8' - 1.45'

218.4

163.8

54.2'

(-1.44)

218.0

55.4'

164.0

109.6' - 1.43'

219.4

Index left

254.0

52.6'

306.6

53.3'

254.4

105.9' - 1.51'

307.7

255.0

52.0'

(-1.50)'

11 02 307.0

54.3'

10 59.0 254.2

106.3' - 1.50'

5 308.5

15 59.0

Mean - 1.47'

Feb. 3, 1898.

Same again

11		255.0	53.3'
	0.3	308.3	<u>51.3'</u>
		255.8	104.6' - 1.54'
		307.1	

		256.0	50.5'	(-1.56)'
		306.5	<u>53.1'</u>	
		256.7	103.6' - 1.57'	
		309.8		

Index right

		345.2	53.3'
		38.5	<u>53.2'</u>
		344.0	106.5' - 1.50'
		37.2	

		345.1	53.1'	(-1.48)'
11	09	38.2	<u>54.7'</u>	
11	06.0	344.1	107.8' - 1.47'	
5		38.8		

16	06.0			Mean $\bar{1.52}'$
----	------	--	--	--------------------

Reading Circle of Phot. turn hand tending to rotate tail piece, but observations thought not to be vitiated by same as care was exercised.

Feb. 3, 1898.

Comp. of Chron.

to 394

At 10 958.

$$12 \ 25 \ 00.0 = 12 \ 24 \ 57.5$$

$$12 \ 26 \ 00.0 = 12 \ 25 \ 57.5$$

Chron. ~~the~~ corr. = + 02 ^{secs.}

Dis. Imp. II. Phot. R. W. obs. Waiter rec.

Comp. with nearer of two other
sets. on same side = Sat. I.

12 45 ⁻ 28 [*]	12 44 55	330.0	
+ 02	45 25	941 [*] 64.1	
<u>12 45 30[*]</u>	40	<u>951[*]</u> 331.1	1.
	52	<u>946[*]</u> 66.2	
46 30 [*]	46 08	330.0	
+ 02	23	970 [*] 67.0	
<u>46 32[*]</u>	35	<u>970[*]</u> 330.0	2.
	54	<u>970[*]</u> 67.0	
47 58 [*]	47 36	331.9	
+ 02	51	931 [*] 65.0	
<u>48 00[*]</u>	48 04	<u>946[*]</u> 330.3	3.
	21	<u>938[*]</u> 64.9	
	41	330.0	
49 08 [*]	55 ⁻	957 [*] 65.1	
+ 02	49 23	<u>951[*]</u> 330.9	4.
<u>49 10[*]</u>	35	<u>951[*]</u> 66.0	

Feb. 3, 1898.

12	50	3 ^h 5	329.2	
12 50 08 ^s		58	96.7 ⁺ 65.9	
02	51	06	90.7 ⁺ 332.0	5.
12 51 00 ^s		12	93.7 ⁺ 62.7	
		25	331.0	
51 39		33	94.0 ⁺ 65.0	
02		44	90.5 ⁺ 332.0	6.
51 41 ^s		55	92.2 ⁺ 62.5	
	52	10	333.1	
52 24 ^s		21	87.6 ⁺ 60.7	
02		30	86.7 ⁺ 333.2	7
52 26 ^s		36	87.2 ⁺ 60.9	
52 46 ^s		44	333.5	
05		53	60.1	
53 09	53	07	336.0	8.
17 ^s		15	56.0	
24 ^s		22	335.8	
31 ^s		29	56.0	
40		38	341.0	
49 ^s		47	53.2	
56 ^s		54	341.8	
54 03 ^s	54	01	50.1	
09 ^s		07	344.1	
17 ^s		15	46.6	
26 ^s		24	348.0	
36 ^s		34	43.9	

Feb. 3, 1898.

12	54	46	12	54	44	353.9
		53			51	42.0
55		03		55	01	355.3
		12			10	36.6
		26			24	358.9
		30			33	29.0
		46			44	3.0
		57			55	33.0

~~56~~

Not seen later.

Limit of Visibility.

56	48	12	56	18	5.1
	02			28	31.5
56	50			49	30.0
			57	38	30.8

Seeing pretty good during eclipse, but became a little blurry while L. V. was being taken.

Camp. of Chron.

To 394

At D. 958.

13	07	00.0	= 13	06	57.5
13	08	00.0	= 13	07	57.5

February 4, 1895. (Friday)

30 Watch Correction = +33 sec. (Watch is slow.)

o beti

Phot. H.

H. Obs.

2 4 -2.5

~~4 6~~

2 2

Index left and above

101.5 Var. dis. 19.9'

03 121.4 19.4'

102.0 39.3' -3.81'

121.4

101.2 20.1'

121.3 19.8'

101.4 39.9' -3.77'

121.2

~~(-3.79)'~~
~~(-3.79)'~~

Index right and below

191.4 19.9'

211.3 20.4'

191.2 40.3' -3.75'

211.6

191.4 20.5'

~~(-3.74)'~~

11 211.9 20.1'

7 7.0 191.3 40.6' -3.74'

5 211.4

12 7.0

Mean -3.76'

Feb. 4, 1898.

Same again

191.1 20.5'
 14 211.9 20.0'
 191.4 40.8' - 3.72'
 211.4

191.5 19.6' (-3.74)'
 211.1 20.6' - 3.76'
 191.2 40.2' - 3.77'
 211.8

Index left and above.

281.4 19.5'
 301.2 19.6'
 281.5 39.4' - 3.80'
 301.1

281.2 20.0'
 25 301.2 20.1' - 3.76'
 7 19.5 281.4 40.1' - 3.77'
 5 301.5
 12
 44 19.5

Mean - 3.76'

Feb 4, 1898

R Canis Majoris Phot. T. H. Obs.

7 13 -16.1

4 50

2 23

9 37

Comp Star = S.D-15° 1774 (9.1)A
Index above.

347.8 Van. dis

25.4'

5 8 40 13.2

27.2'

347.3

52.6' - 3.16'

14.5

347.2

25.9'

(-3.20)'

10 36 13.1

25.1'

348.0

51.0' - 3.23'

13.1

Index below.

79.4

22.0'

13 24 101.4

22.8'

79.4

44.8' - 3.52'

102.2

78.4

24.3'

(-3.50)'

15 8 102.7

21.5'

6 108' 79.5

45.8' - 3.47'

8 11 57' 101.0

5 +33

Mean -3.35'

13 12.5 30

-12 10.6

+1 1.9

Feb. 4, 1898.

II

8	16	40	79.5	22.5'
			102.3	<u>23.3'</u>
			79.2	45.8' - 3.47'
			102.5	

			79.3	23.8'	(-3.45)'
18	40		103.1	<u>22.8'</u>	
			79.2	46.6' - 3.43'	
			102.0		

Index above

			169.0	23.8'
21	4		192.8	<u>26.1'</u>
			168.2	49.9' - 3.28'
			194.3	

			167.9	26.1'	(-3.28)'
22	56		194.0	<u>23.5'</u>	
37	140		169.2	49.6' - 3.29'	
8	19	50	192.7		
5		+33			Mean - 3.36'

13 20.4 23

-12 10.6

+1 9.8

Feb. 4, 1898

8 24 40 169.0
192.2
166.2
194.2

23.2'

28.0'

51.2' - 3.22'

III

26 0 167.0
194.0
169.0
193.3

27.0'

24.3'

51.3' - 3.22'

(-3.22)'

Index below

28 12 260.0
283.2
259.0
283.9

23.2'

24.9'

48.1' - 3.36'

29 32 259.4
283.4
27 54 260.3
8 27 6 282.3

24.0'

22.0'

46.0' - 3.46'

(-3.41)'

5 +33

13 27.639

-12 10.6

+1 17.0

Mean - 3.32'

Feb. 4, 1898.

IV

		260.4	22.0'
8	30	48 282.4	24.8'
		258.2	46.8' - 3.42'
		283.0	

		259.4	23.4'	(-3.41)'
32	12	282.8	23.8'	
		259.5	47.2' - 3.40'	
		283.3		

Index above

		348.6	24.1'
34	20	12.7	24.6'
		348.9	48.7' - 3.33'
		14.0	
		18.5	

		348.0	25.0'	(-3.32)'
	5	35 44	13.0	
		11 124	348.9	49.0' - 3.32'
8	33	16	12.9	
5		+33		

Mean - 3.36'

13	33.8	49
-12	10.6	
+1	23.2	

~~Jan~~ Feb. 4, 1898

V

$$\begin{array}{r}
 8 \quad 39 \quad 0 \quad 349.0 \quad 23.8' \\
 \quad \quad \quad 12.8 \quad 24.5' \\
 \quad \quad \quad 348.3 \quad \hline
 \quad \quad \quad 12.8 \quad 48.3' - 3.35'
 \end{array}$$

$$\begin{array}{r}
 40 \quad 20 \quad 348.1 \quad 24.6' \quad (-3.34)' \\
 \quad \quad \quad 12.7 \quad 23.8' \\
 \quad \quad \quad 348.8 \quad \hline
 \quad \quad \quad 12.6 \quad 48.4' - 3.34'
 \end{array}$$

Index below.

$$\begin{array}{r}
 43 \quad 24 \quad 79.0 \quad 21.9' \\
 \quad \quad \quad 100.9 \quad 22.3' \\
 \quad \quad \quad 79.6 \quad \hline
 \quad \quad \quad 101.9 \quad 44.2' - 3.55'
 \end{array}$$

$$\begin{array}{r}
 44 \quad 40 \quad 79.5 \quad 22.3' \quad (-3.56)' \\
 \quad \quad \quad 101.8 \quad 24.6' \\
 \quad \quad \quad 6 \quad 84 \quad 79.4 \quad \hline
 8 \quad 41 \quad 51 \quad 101.0 \quad 43.9' - 3.56'
 \end{array}$$

$$5 \quad 43 \quad 73$$

$$13 \quad 42.4 \quad 24$$

$$-12 \quad 70.6$$

$$+1 \quad 31.8$$

Mean - 3.45'

Feb. 4, 1898

VL

8 52 48 79.4 21.9'
101.3 20.5'
80.8 42.4' - 3.64'
101.3

54 12 80.4 20.6' (-3.66)'
101.0 21.0'
79.3 41.6' - 3.68'
100.3

Index above

56 8 178.0 21.5'
191.5 24.4'
168.0 45.9' - 3.46'
192.4

58 0 169.0 24.3' (-3.44)'
193.3 22.3'
20 68 169.7 46.6' - 3.43'
8 55 17' 192.0
5 +33 Mean - 3.55'

-12 10.6
+1 45.2

9
5
14
-12
+1

Feb. 4, 1898.

9	0	0	169.9	21.8'	
			191.7	<u>23.1'</u>	<u>VII</u>
			169.3	44.9' - 3.51'	
			192.4		

0	56	169.8	23.0'		(-3.48)'
		192.8	<u>23.0'</u>		
		169.9	46.0' - 3.46'		
		192.9			

Index below

		262.0	19.6'	
3	24	281.6	<u>20.4'</u>	
		260.8	40.0' - 3.77'	
		281.2		

		259.8	21.5'		(-3.74)'
5	16	281.3	<u>19.7'</u>		
8	96	261.8	41.2' - 3.70'		
9	2	24' 281.5			

Mean * = 3.61

5 +33

14 2 57

-12 10.6

+1 524

Feb. 4, 1898

VIII

9 23 12 261.4 18.9'
 280.3 19.7'
 261.4 38.6' - 3.85'
 281.1

24 48 260.2 20.2' (-3.80)'
 280.4 20.0'
 262.0 40.2' - 3.76'
 282.0

Indet above.

26 40 350.2 21.9'
 12.1 21.6'
 350.3 43.5' - 3.58'
 12.9

28 12 350.3 21.6' (-3.58)'
 11.9 22.0'
 21 112 349.4 43.6' - 3.58'

9 25 43' 11.4
 5 + 33

14 26.3 16

-12 10.6

+2 15.7

Mean - 3.69'

Feb. 4, 1895

9 30 0 349.2
11.1
349.2₃
11.3

21.9'
22.1'
44.0' - 3.56'

IX

31 32 349.7
11.9
350.1
12.0

22.2' (-3.56)'
21.9'
44.1' - 3.55'

Index below

~~81.2~~
~~80.4~~
33 56 100.9
81.0
100.9

19.7'
19.9'
39.6' - 3.79'

81.3
35 28 101.0
9 116 81.3
9 32 44' 101.0

19.7' (-3.80)'
19.7'
39.4' - 3.80'

5 +33

14 33.3 17

-12 10.6

+2 22.7

Mean -3.68'

Feb. 4, 1898

9 36 44 81.7
101.4
80.3
101.0

19.7'
19.7'
39.4' - 3.50'

X

38 20 80.8
101.4
80.6
100.5

20.6'
19.9'
40.5' - 3.74'

(-3.77)'

Index above.

41 24 169.7
191.5
169.8
191.7

22.1'
21.9'
44.0' - 3.56'

42 40 169.7
192.3
37 128 170.0
9 39 47 191.3
5 +33

22.6'
21.3'
43.9' - 3.56'

(-3.56)'

Mean -3.66'

14 49.3 20
-12 10.6
+2 29.7

9
5

14

-12

+2

Feb. 4, 1898.

XI

9 45 4 169.8 21.3'
 191.1 22.1'
 170.3 43.4' - 3.59'
 192.4

46 52 170.0 22.9' (-3.56)
 192.9 21.7'
 170.0 44.6' - 3.53'
 191.4

Index below.

49 4 261.1 20.2'
 281.3 21.3'
~~259.6~~ 260.1 41.5' - 3.69'
 281.4

50 40 260.5 20.6' (-3.71)
 281.4 20.1'
 30 100 261.2 40.7' - 3.73'
 9 47 55 281.3
 5 133

14 48.5 28

-12 10.6

+2 37.9

Mean - 3.64

Feb. 4, 1898.

XII

9 52 48
 262.1
 279.9
 260.2
 280.2

17.8'
20.0'
 37.8' - 3.89'

54 32
 260.8
 280.4
 261.3
 281.1

19.6'
19.8'
 39.4' - 3.80'

(-3.84)'

Index above

57 12
 349.0
 11.8
 349.8
 10.0

22.8'
20.2'
 43.0' - 3.61'

58 32
 349.6
 11.6
 21124 349.0
 11.6

22.0'
22.6'
 44.6' - 3.53'

(-3.57)'

9 58 46'
 5 +33
 14 56.319

Mean -3.70'

-12 10.6
 +2 45.7

Feb. 4, 1898

10	0	40	349.6	21.4'	<u>XIII</u>
			11.0	<u>22.0'</u>	
			349.7	43.4' - 3.59'	
			11.7		

32	0	349.3	21.7'	(-3.58)'
		11.0	<u>22.2'</u>	
		349.3	43.9' - 3.56'	
		11.5		

Index below

5	0	81.3	19.4'
5	5	100.7	<u>19.5'</u>
		80.6 81.0	38.9' - 3.83'
		100.5	

		81.2	19.2'	(-3.84)'
6	36	100.4	<u>19.4'</u>	
13	76	80.0	38.6' - 3.85'	
10	3	34' 81.3		
5	+33	100.7		

Mean - 3.71'

-12 10.6

+2 53.5

Feb. 4, 1898.

XIV

10	9	0	79.8	20.4'
			100.2	19.7'
			80.6	40.1' - 3.76'
			100.0	

10	8	50.5	20.2'	(-3.78)'
		100.7	19.5'	
		80.0	39.7' - 3.79'	
		80.2		
		99.7		

Index above

13	4	169.3	22.9'
		192.2	22.0'
		170.3	44.9' - 3.51'
		192.3	

		169.7	22.8'	(-3.52)'
--	--	-------	-------	----------

14	57	192.5	21.7'
6	64	164.	44.5' - 3.53'
10	11 46'	170.2	
5	+33	191.9	

Mean - 3.65'

-12 10.6

+3 1.7

Feb 4, 1898.

10 40 28	169.8	22.2'	<u>XV</u>
	192.0	<u>22.5'</u>	
	168.9	44.7' - 3.52'	
	191.4		

42 28	168.8	23.6'	(-3.51)'
	192.4	<u>22.6'</u>	
	169.3	45.2' - 3.50'	
	191.9		

Index below

44 28	262.8	18.7'
	381.5	<u>20.6'</u>
	261.0	39.3' - 3.81'
	281.6	

46 28	260.0	21.4'	(-3.78)'
	281.4	<u>18.8'</u>	
12	262.1	40.2' - 3.76'	Mean - 3.64'
10 43 28	280.9		
5	+33		
15	44.0 1		
-12	10.6		
+3	33.4		

Feb 4, 1898

XVI

10 48 0 260.7 21.4'
 282.1 20.6'
 260.4 42.0' - 3.66'
 281.0

49 28 261.0 19.2'
 280.7 19.7'
 261.4 38.9' - 3.83'
 281.1

(-3.74)'

Index above

51 36 349.6 21.9'
 11.5 21.8'
 350.0 43.7' - 3.57'
 11.8

52 48 350.5 20.6' (-3.62)'
 11.1 21.3'
 0 112 350.5 41.9' - 3.67'
 10 50 28' 11.4
 5 33 11.8
 15 51.0 1

Mean - 3.68'

-12 10.6
 +3 40.4

11 0 Watch Correction = +33 sec (Watch is slow)

Feb. 7. 1894.

The object announced by
as going to pass in transit across the Sun
on Feb. 3. at a quarter of two, was looked
for from a quarter of two until two. But
no object was seen. H. L.

Feb. 7. 1894. (Monday)

Cloudy.

7 0

7 30

"

8 0

Some clearing.

Y Androm. Phot. T.

H. L.

0	10	+26.1
5	25	
<hr/>	<hr/>	
+5	11	

Cloudy again.

Becoming thickly cloudy everywhere.

Feb. 7, 1892.

o Cete. Plot. Fr. Fr. No.

$$\begin{array}{r} 2 \quad 4 \quad -2.5 \\ 6 \quad 0 \\ \hline +3 \quad \sqrt{6} \end{array}$$

Cloudy.

Cloudy everywhere and growing worse.

February 8, 1898. (Tuesday)

Andromodae Phot. T H. Obs.

0	14	+26.1
5	4	
4	50	

Index left and below.

242.3 < Comp. dis.

47 296.9 $\sqrt{4.6}$ ✓

244.0

291.8

$$\frac{47.8}{102.8}$$

1.60 ✓

244.6

 $\sqrt{0.7}$ ✓

295.3

244.0

$$\frac{\sqrt{4.3}}{105.0}$$

1.54 ✓

298.3

(1.57) ✓

Index right and above

332.9

 $\sqrt{6.1}$ ✓

29.0

335.1

$$\frac{\sqrt{2.9}}{109.0}$$

1.44 ✓

28.0

334.2

 $\sqrt{4.3}$ ✓

28.5

332.7

$$\frac{\sqrt{5.1}}{109.4}$$

1.43 ✓

27.8

(1.44) ✓

Mean + 1.50 ✓

Feb. 8, 1898

Same again

331.7

7 55 31.4

332.5

26.3

331.0
clouds.

8 15 Clouds thick

Index left and below

8 45 Growing cloudy everywhere growing worse
Stopped by clouds. Repeat above set.

February 10, 1898. (Thursday)

Watch Correction = +16 sec.

Andromedae Comp Star.

Phot T.

Th. Obs

0 14

+ 26.1

4 54

4 40

K 4.5 K'

K' 2.5 a

a 4 b

b 5.5 c

c 5 c²

c² 4.5 c'

c' 4.5 c''

c'' 4.5 d.

For notation of stars see diagram Pg 94 page 96

Star "c" compared with $\delta_{\text{m}} + 26^{\circ} 37'$

Index left

74.1 < Comp. dis 33.9'

04 108.0 38.8'

71.0

72.7' + 2.42'

109.8

71.2

37.4'

(+ 2.42)'

108.6

35.0'

73.8

72.4' + 2.43'

108.8

Saw very bright meteor at
y^h 1^m 20^s. It ~~started~~ was first
noticed at a point about midway
between the Pleiades and the
bright stars in Aries, and descended
in about a vertical line to the
horizon. Nearly twice as bright as
Jupiter. Leaving earth at a tail
about 10° long. It vanished about at horizon.
Color was about that of Jupiter.

> that is a yellowish white
Frost Obs.

Feb. 10, 1898.

Index right

160.4	41.1'
201.5	<u>46.4'</u>
157.0	87.5' + 1.98'
203.4	

155.8	46.9'	(+1.94)'
8 10 202.7	<u>43.8'</u>	
158.2	90.7' + 1.90'	
202.0		

Mean + 2.18'

Star "a" compared with DNI + 26° 37'

Index below.

247.0	
246.7 (Comp. dis.)	47.1'
8 15 294.1	<u>49.0'</u>
246.0	96.1' + 1.75'
295.0	

245.0	51.2'	(+1.70)'
296.2	<u>49.5'</u>	
247.0	100.7' + 1.64'	
296.5		

Index above.

332.4	96.4
28.2	56.4'
28.8	<u>56.3'</u>
331.7	102.7
28.0	112.7' + 1.36'

Feb. 19, 1898.

8	20	332.0	57.4'	(+1.32)'
		29.4	58.8'	
		330.2	116.2' + 1.28'	
		25.4 29.0		Mean + 1.51'

Star K' compared with DTT + 26° 37.
Index left and above.

8	74	66.0	50.3'
		116.3	51.5'
8		64.7	101.8' + 1.61'
		116.2	

64.3	49.9'	(+1.64)'
114.2	49.3'	
66.6	99.2' + 1.68'	
66.0		
115.3		

Index right and below.

150.5	57.1'
207.6	57.0'
152.0	114.1' + 1.32'
209.0	

8	34	180.7	148.5	61.5'	(+1.22)'
	30	212.0	210.3	62.3'	
		147.9	147.6	123.8' + 1.11'	
		210.5	209.9		Mean + 1.43'

Feb. 10, 1898.

Comp Stars for R Beti. Phot. J. H. Obs

2	23	-0.4
6	33	
4	10	

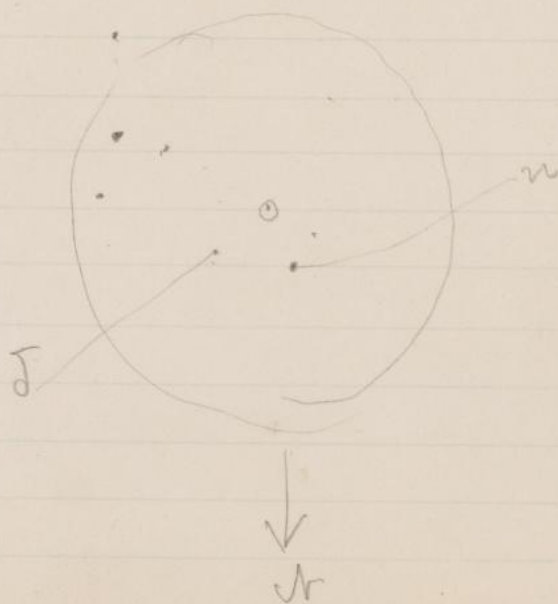
9
08 Region too low. Sky hazy.

Comp Stars for δ Hydraz

H. Obs.

8	54	-5.7
7	24	
1	30	
10	30	

9	2	-5.0
7	23	
1	39	
10	21	



Feb. 10, 1898

Mr. Reed's 'x' is considerably fainter than his 'B'. It is also a little fainter than his 'y'. The interval from 'n' to 'B' is considerably too large.

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Posted to here.

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