

KG  
11365  
582

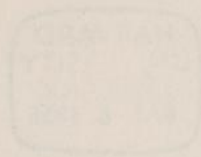


KG11365.582











KG-11365.582



9

9

9

9

9

5

14

753

70

+



Dec. 7, 1906

U baphei

Phot. J. H. Obs. Bowie Res

0	50	+81.2
2	55	
2	5	

Full aperture

Index Lx  $\Phi$ 

I

47.4<sub>e</sub> var. dis

B

9 51 40

137.2

240.0

304.8

89.8<sup>^</sup>64.8<sup>^</sup>154.6<sup>^</sup> - 0.49<sup>^</sup>

57.9

-0.50<sup>^</sup>

9 54 2

123.6

229.3

317.5

65.7<sup>^</sup>88.2<sup>^</sup>153.9<sup>^</sup> - 0.50<sup>^</sup>

Index Rect

A

9 57 34

317.4

46.7

150.8

213.8

89.3<sup>^</sup>63.0<sup>^</sup>152.3<sup>^</sup> - 0.53<sup>^</sup>

331.1

-0.54<sup>^</sup>

9 59 29

35.9

138.9

226.0

64.8<sup>^</sup>87.1<sup>^</sup>151.9<sup>^</sup> - 0.54<sup>^</sup>

221	105 <sup>^</sup>
9	55 41 <sup>^</sup>
5	-8 <sup>^</sup>
14	55 33 <sup>^</sup>

7552.6219 = Obs.

7550.2236 = Comp. (Cor. for Lt. Eq.)

+2.3983 = Phase

Mean -0.52<sup>^</sup>



Dec. 7. 1906

Index Red

II

10 2 30

317.0

42.9

148.0

214.2

85.9<sup>^</sup>66.2<sup>^</sup>152.1<sup>^</sup> - 0.53<sup>^</sup>

A

10 4 48

329.1

35.8

137.3

226.7

66.7<sup>^</sup>89.4<sup>^</sup>156.1<sup>^</sup> - 0.46<sup>^</sup>-0.50<sup>^</sup>

Index Le B

10 8 20

224.8

319.8

55.2

128.2

95.0<sup>^</sup>73.0<sup>^</sup>168.0<sup>^</sup> - 0.23<sup>^</sup>

B

10 11 2

25 100<sup>^</sup>10 6 40<sup>^</sup>5 -8<sup>^</sup>15 6 32<sup>^</sup>

236.4

308.9

41.0

143.6

72.5<sup>^</sup>102.6<sup>^</sup>175.1<sup>^</sup> - 0.09<sup>^</sup>-0.16<sup>^</sup>Mean -0.33<sup>^</sup>

7552.6296

7550.2236<sup>^</sup>+2.4060<sup>^</sup>



Dec. 7, 1906

Index L &amp; D

10 14 40

223.8

320.3

54.0

131.8

96.5<sup>^</sup>77.8<sup>^</sup>174.3<sup>^</sup> - 0.11<sup>^</sup>

III

B

234.0

311.5

39.5

143.0

77.5<sup>^</sup>103.5<sup>^</sup>181.0<sup>^</sup>179.0<sup>^</sup> + 0.02<sup>^</sup>-0.04<sup>^</sup>

10 18 0

Index R &amp; A

10 22 17

131.9

230.5

324.9

40.0

98.6<sup>^</sup>75.1<sup>^</sup>173.7<sup>^</sup> - 0.12<sup>^</sup>

A

141.8

219.3

313.5

52.4

77.5<sup>^</sup>98.9<sup>^</sup>176.4<sup>^</sup> - 0.07<sup>^</sup>-0.10<sup>^</sup>

10 25 10

79 67<sup>^</sup>10 19 62<sup>^</sup>5 -8<sup>^</sup>15 19 54<sup>^</sup>

7552.6388

7550.2236<sup>^</sup>+ 2.4152<sup>^</sup>Mean - 0.07<sup>^</sup>

Dec. 7, 1906

Index Rack

IV

10 28 48

130.3

231.8

325.4

39.8

101.5<sup>^</sup>74.4<sup>^</sup>175.9<sup>^</sup> = 0.08<sup>^</sup>

A

10 31 29

140.3

221.9

308.8

54.2

81.6<sup>^</sup>+ 0.02<sup>^</sup>105.4<sup>^</sup>187.0<sup>^</sup>173.0<sup>^</sup> + 0.13<sup>^</sup>

Index Rack

10 35 2

35.5

146.3

231.1

313.8

110.8<sup>^</sup>82.7<sup>^</sup>193.5<sup>^</sup>166.5<sup>^</sup> + 0.25<sup>^</sup>

B

10 37 30

131 109<sup>^</sup>10 32 72<sup>^</sup>5 -8<sup>^</sup>15 33 4<sup>^</sup>

48.8

136.9

216.2

327.4

88.1<sup>^</sup>+ 0.31<sup>^</sup>111.2<sup>^</sup>199.3<sup>^</sup>160.7<sup>^</sup> + 0.37<sup>^</sup>Mean + 0.16<sup>^</sup>

7552.6480

7550.2236<sup>^</sup>+2.4244<sup>^</sup>



Dec. 7, 1906.

Index L+B

10 40 0	351.4	113.6 <sup>^</sup>	V
	149.0	86.9 <sup>^</sup>	⊙
	228.6	<u>200.5<sup>^</sup></u>	
	315.5	159.5 <sup>^</sup> + 0.39 <sup>^</sup>	

10 42 12	47.2	89.0 <sup>^</sup>	+0.42 <sup>^</sup>
	136.2	114.1 <sup>^</sup>	
	214.5	<u>203.1<sup>^</sup></u>	
	328.6	156.9 <sup>^</sup> + 0.44 <sup>^</sup>	

Index B+A

10 45 48	307.8	109.3 <sup>^</sup>	A
	57.1	89.0 <sup>^</sup>	
	137.0	<u>198.3<sup>^</sup></u>	
	226.0	161.7 <sup>^</sup> + 0.35 <sup>^</sup>	
	317.4		+0.39 <sup>^</sup>

10 49 32	46.23	88.9 <sup>^</sup>
176 92 <sup>^</sup>	124.0	113.8 <sup>^</sup>
10 44 23 <sup>^</sup>	237.8	<u>202.7<sup>^</sup></u>
5 -8 <sup>^</sup>		157.3 <sup>^</sup> + 0.43 <sup>^</sup>

15 44 15	S.I. 4 <sup>h</sup> 12 <sup>m</sup>	Mean +0.40 <sup>^</sup>
	Ab. A. +3 15	

7552.6557	Dec +8.19
7550.2236	P.A. 16.5
+2.4321	Sprocket -1.5 A
	" -0.5 B
	" 0.06

It's watch used for times  
 Watch 8 sec. fast.

Dec. 11, 1906 (Tuesday)

o beti

2	12	-3.6
0	57	
1	15	
10	45	

Dome frozen, abandoned for present

Double Star No. 12 (Promstock's List) =  $\Sigma 80$ .

Phot R & H. Obs. Same R<sub>2</sub>

0	56	+0.6
1	56	
1	0	

P.A. 320° Dist. 22"



Dec. 11, 1906

Index Led

~~8 3520~~
~~60.3  
 123.4  
 240.0  
 310.0~~ 

Brights do

~~63.1  
 70.0  
 133.1~~ 

0.91

~~60.5  
 128.3  
 239.0  
 308.6~~ 
~~67.8  
 69.6  
 137.4~~ 

0.83

0.87

Index Below B.

327.4

38.0

143.8

221.3

70.6<sup>^</sup>77.5<sup>^</sup>148.1<sup>^</sup> 0.61<sup>^</sup>

323.0

38.8

146.0

215.8

75.8<sup>^</sup>69.8<sup>^</sup>145.6<sup>^</sup> 0.66<sup>^</sup>0.64<sup>^</sup>

8 47 38

Dec. 11, 1906

Index Above A.

237.7		
307.5	69.8 <sup>^</sup>	
52.7	82.9 <sup>^</sup>	
135.6	152.7 <sup>^</sup>	0.52 <sup>^</sup>

233.1		0.36 <sup>^</sup>
311.7	78.6 <sup>^</sup>	
34.9	90.5 <sup>^</sup>	
125.4	169.1 <sup>^</sup>	0.20 <sup>^</sup>

8	55	33
8	102	71 <sup>^</sup>
	51	36 <sup>^</sup>
5		-12 <sup>^</sup>
13	51	24 <sup>^</sup>

Mean 0.50<sup>^</sup>

In above measurements seeing <sup>extremely</sup> ~~very~~ bad. The first two sets were rejected and retaken as the seeing was so very bad that the two stars were a combined and confused blur with only casual intervals of very slightly better seeing. As seeing slightly improved, the observations were started again and the group finished, but said group 1/2 not

o beti Phot. R. &amp; Obs. Above Rec

2 12 -3.6

Measurements on fol. page



Dec. 11, 1906

9 42 50

Index R & B <sup>var. dis</sup>

269.9 4.5

274.4 3.9

90.2

8.4

-7.18^

94.1

-7.13^

269.8

4.6

274.4

4.2

89.9

8.8

-7.08^

94.1

Index L &amp; U

179.8

184.5

0.4

4.2

4.7

3.8

8.5

-7.15^

179.9

184.5

0.1

3.8

4.6

3.7

8.3

-7.20^

-7.18^

9 58 10

100 60 ^

9 50 30 ^

5 -12 ^

14 50 18 ^

7556.6183

Mean -7.16^

Dec. 11, 1906

Double Star No. 33 (Jomstock's List) = 96, K, beti

$$\begin{array}{r} 3 \quad 14 \\ 3 \quad 46 \\ \hline 34 \end{array}$$

Index Red d.

173.8 Brighter dis

193.3

354.8

9.5

19.5

14.7

34.2

4.11^

173.5

191.4

351.2

13.78

17.9

22.6

40.5

3.74^

3.92^

Index L &amp; B B.

80.6

104.9

263.5

280.5

24.3

17.0

41.3

3.70^

85.0

100.0

260.9

284.41

15.0

23.2

38.2

3.87^

3.78^

$$\begin{array}{r} 10 \quad 39 \quad 10 \\ \quad 69 \quad 65 \quad ^ \\ 10 \quad 34 \quad 62 \quad ^ \\ 5 \quad \quad -12 \quad ^ \\ \hline 15 \quad 34 \quad 50 \quad ^ \end{array}$$

Mean 3.85^

It's watch used for times tonight  
 Watch 12 sec fast



Dec 12, 1906 (Wednesday)

- 8 30 All cloudy the first of the evening.  
 8 30 A break in the clouds occurred about this time but massive clouds swept in right away, so that nothing could be done
- 8 450 Sky all cloudy no stars visible
- 9 0 0 " " " " " "
- 9 150 All cloudy everywhere no stars visible. Evidently no chance for anything tonight

Dec. 18, 1906 (Tuesday)

<u>e</u> beti	Phot	H. Obs. Lowie Rec
2      12	-3.6	
1      52		
<hr/>		
11      20		
40		

Seeing too bad for measurement. Images boiling badly and much of the time will not dis. between settings

76.1905	beraski	Phot. 3	H. Obs. Lowie Rec
19	27	+55.1	
26	43		
<hr/>			
7	16		



Dec. 18, 1906

Index R &amp; B

I

41.0 ← var. dis

8 54 45

1431

102.1<sup>^</sup>

A

228.6

83.2<sup>^</sup>

311.8

185.3<sup>^</sup>174.7<sup>^</sup> + 0.10<sup>^</sup>

50.2

8 58 28

135.0

84.8<sup>^</sup>+0.16<sup>^</sup>

217.9

107.1<sup>^</sup>

325.0

191.9<sup>^</sup>168.1<sup>^</sup> + 0.22<sup>^</sup>

Index L &amp; A

9 3 10

311.0

51.2

100.2<sup>^</sup>

B

141.4

79.6<sup>^</sup>

221.0

179.8<sup>^</sup> - 0.00~~320.0~~ 18.5+0.08<sup>^</sup>

9 5 53

42.6

84.1<sup>^</sup>34 120 136<sup>^</sup>

128.5

104.5<sup>^</sup>8 60 34<sup>^</sup>

233.0

188.6<sup>^</sup>5 - 5<sup>^</sup>171.4<sup>^</sup> + 0.16<sup>^</sup>14 0 29<sup>^</sup>Mean +0.12<sup>^</sup>

7563.5836

14

Dec. 18. 1906

Index Led

9 24 24	308.5		II
	53.8	105.3 <sup>^</sup>	
	140.0	82.1 <sup>^</sup>	
	222.1	187.4 <sup>^</sup>	
		172.6 <sup>^</sup> + 0.14 <sup>^</sup>	

9 27 37	319.9		
	42.1	82.2 <sup>^</sup>	+ 0.14 <sup>^</sup>
	128.5	105.3 <sup>^</sup>	
	233.5	187.5 <sup>^</sup>	
		172.5 <sup>^</sup> + 0.14 <sup>^</sup>	

Index Q &amp; G

9 33 12	217.0		
	323.5	106.5 <sup>^</sup>	
	49.2	84.8 <sup>^</sup>	
	134.0	191.3 <sup>^</sup>	
		168.7 <sup>^</sup> + 0.21 <sup>^</sup>	

9 36 23	227.9		
	314.5	86.6 <sup>^</sup>	+ 0.23 <sup>^</sup>
	38.5	106.9 <sup>^</sup>	
	145.4	193.5 <sup>^</sup>	
		166.5 <sup>^</sup> + 0.25 <sup>^</sup>	

9	120	96	^
9	30	24	^
5		-5	^
14	30	19	^

7563.6044

Mean + 0.18<sup>^</sup>



Dec. 18, 1906

Index Q &amp; B

III

9 46 13

218.2

324.4

49.4

134.5

106.2<sup>^</sup>85.1<sup>^</sup>191.3<sup>^</sup>168.7<sup>^</sup> + 0.21<sup>^</sup>

A

9 50 14

226.8

317.0

38.6

145.7

90.2<sup>^</sup>107.1<sup>^</sup>197.3<sup>^</sup>162.7<sup>^</sup> + 0.33<sup>^</sup>+0.27<sup>^</sup>

Index L &amp; H

9 56 8

320.0

43.0

128.6

234.2

83.0<sup>^</sup>105.6<sup>^</sup>188.6<sup>^</sup>171.4<sup>^</sup> + 0.16<sup>^</sup>

B

9 59 5

309.7

54.3

140.3

225.4 4.8

104.6<sup>^</sup>84.5<sup>^</sup>189.1<sup>^</sup>170.9<sup>^</sup> + 0.17<sup>^</sup>0.16<sup>^</sup>211 40<sup>^</sup>9 52 55<sup>^</sup>5 -5<sup>^</sup>14 52 50<sup>^</sup>

7563.6200

Mean + 0.22<sup>^</sup>

Dec. 18. 1906

Index L &amp; A

10 6 4

318.4

43.0

126.5

235.6

84.6<sup>^</sup>109.1<sup>^</sup>193.7<sup>^</sup>166.3<sup>^</sup> + 0.26<sup>^</sup>

IV

B

10 9 49

309.6

55.86

140.4

222.5

106.0<sup>^</sup> + 0.20<sup>^</sup>82.1<sup>^</sup>188.1<sup>^</sup>171.9<sup>^</sup> + 0.15<sup>^</sup>

Index Q &amp; B

10 15 28

228.4

312.5

36.7

146.3

84.1<sup>^</sup>109.6<sup>^</sup>193.7<sup>^</sup>166.3<sup>^</sup> + 0.26<sup>^</sup>

A

10 18 20

10 48 101<sup>^</sup>5 12 25<sup>^</sup>5 5<sup>^</sup>15 12 20<sup>^</sup>

7563.6335

218.0

324.8

47.8

135.2

106.8<sup>^</sup> + 0.26<sup>^</sup>87.4<sup>^</sup>194.2<sup>^</sup>165.8<sup>^</sup> + 0.27<sup>^</sup>Mean + 0.23<sup>^</sup>



Dec. 18, 1906

Index Red

V

10 40 50

225.5

316.0

40.8

141.4

90.5<sup>^</sup>100.6<sup>^</sup>191.1<sup>^</sup>168.9<sup>^</sup> + 0.21<sup>^</sup>

d

220.4

10 42 22

321.5

49.2

134.6

101.1<sup>^</sup>+ 0.16<sup>^</sup>85.4<sup>^</sup>186.5<sup>^</sup>173.5<sup>^</sup> + 0.12<sup>^</sup>

Index Lead

128.8 ~~130.4~~

10 47 26

232.0

319.2

42.9

103.2<sup>^</sup>83.7<sup>^</sup>186.9<sup>^</sup>173.1<sup>^</sup> + 0.13<sup>^</sup>

B

140.8

10 50 40

224.0

83.2<sup>^</sup>+ 0.16<sup>^</sup>179 138<sup>^</sup>

309.3

107.4<sup>^</sup>10 44 80<sup>^</sup>56.7 ~~54.6~~190.6<sup>^</sup>169.4<sup>^</sup> + 0.20<sup>^</sup>5 5<sup>^</sup>15 45 15<sup>^</sup>

2.3. 5 1

7563.6564 L.A. + 9 30

Dec + 56.7

P.A. 218.5 Ver. B

2 protons - 2.5 B

" - 1.5 b

Mean + 0.16<sup>^</sup>

Dec. 18. 1906

Double Star No. 33 (Bonstoeck's List) <sup>96</sup> K, beti  
3 14.1 + 3.0 Phot. & Obs. & over Sec

5	40
2	26

P. h. 155 Dist. 4.2 mag 5.2, 8.0  
Index L & B B.

83.5 Northern &amp; brighter dis

10 2.6

19.1<sup>^</sup>

26 5.8

13.7<sup>^</sup>

27 9.5

32.8<sup>^</sup>4.21<sup>^</sup>

85.5

4.04<sup>^</sup>

10 0.4

14.9<sup>^</sup>

26 0.9

23.3<sup>^</sup>

28 4.2

38.2<sup>^</sup>3.87<sup>^</sup>

Index Red A.

352.3

13.8

21.5<sup>^</sup>

174.9

14.9<sup>^</sup>

189.8

36.4<sup>^</sup>3.98<sup>^</sup>

354.3

3.87<sup>^</sup>

10.1

15.8<sup>^</sup>

170.0

24.4<sup>^</sup>

194.84

40.2<sup>^</sup>3.76<sup>^</sup>

12	1	35
23	52	85 <sup>^</sup>
11	56	42 <sup>^</sup>
5		5 <sup>^</sup>
16	56	37 <sup>^</sup>

It a watch used in previous obs. Mean 3.96<sup>^</sup>  
Watch 5 sec fast.



Dec. 18, 1906

B. &amp; b. 1182

12	42	53.1
12	43	52.9

B. 394

12	43	0.0
12	44	0.0

Dis. Infr. I Phot. R. H. Obs. Bowie Rec.  
comp. with Sat. on fol. side = Sat. II

12	57	26
12	58	18 <sup>^</sup>
		+8 <sup>^</sup>
12	58	26 <sup>^</sup>
13	0	25 <sup>^</sup> 13
		+9 <sup>^</sup>
13	0	34 <sup>^</sup>
	59	40
	59	6
	"	49
	0	11
	"	39
	1	0

97.8 <sup>^</sup>	225.5
95.0 <sup>^</sup>	323.3
192.8 <sup>^</sup>	225.0
-0.2 <sup>^</sup> 96.4 <sup>^</sup>	320.0
94.9 <sup>^</sup>	228.0
97.7 <sup>^</sup>	322.9
192.6 <sup>^</sup>	224.8
-0.2 <sup>^</sup> 96.3 <sup>^</sup>	322.5

Dec. 18, 1906

13	2	25 <sup>^</sup>	13	1	29	96.7 <sup>^</sup> 3 26.1	
		+9 <sup>^</sup>		2	20	96.0 <sup>^</sup> 3 22.8	
13	2	34 <sup>^</sup>		"	43	192.7 <sup>^</sup> 2 27.0	3
				3	7	-0.2 <sup>^</sup> 96.4 <sup>^</sup> 3 23.0	
				"	49		
13	4	46 <sup>^</sup>		4	33	92.7 <sup>^</sup> 2 27.5	
		+9 <sup>^</sup>		5	1	92.5 <sup>^</sup> 3 20.2	
13	4	55 <sup>^</sup>		"	40	185.2 <sup>^</sup> 2 27.5	4
				6	20	-0.1 <sup>^</sup> 92.6 <sup>^</sup> 3 20.0	
				"	58		
13	7	8 <sup>^</sup>		7	20	92.2 <sup>^</sup> 2 26.8	
		+9 <sup>^</sup>		"	52	94.0 <sup>^</sup> 3 19.0	
13	7	17 <sup>^</sup>		8	50	186.2 <sup>^</sup> 2 27.0	✓
				9	20	-0.1 <sup>^</sup> 93.1 <sup>^</sup> 3 21.0	
				10	20		
13	9	49 <sup>^</sup>		11	24	91.5 <sup>^</sup> 2 28.0	
		+10 <sup>^</sup>		"	45	90.5 <sup>^</sup> 3 19.5	
13	9	59		12	13	182.0 <sup>^</sup> 2 27.5	6
				"	30	0.0 <sup>^</sup> 91.0 <sup>^</sup> 3 18.0	
				13	14		
13	11	58 <sup>^</sup>		"	45	90.1 <sup>^</sup> 2 27.9	
		+10 <sup>^</sup>		14	4	90.6 <sup>^</sup> 3 18.0	
13	12	8		"	59	180.7 <sup>^</sup> 2 26.5	7
				"	55	0.0 <sup>^</sup> 90.4 <sup>^</sup> 3 17.1	
				15	9		
13	13	30 <sup>^</sup>		13	14	88.5 <sup>^</sup> 2 27.5	
		+10 <sup>^</sup>		"	48	90.4 <sup>^</sup> 3 16.0	
13	13	40		14	4	178.9 <sup>^</sup> 2 26.5	8
				"	28	0.0 <sup>^</sup> 89.4 <sup>^</sup> 3 16.9	
13	14	38		"	59		
				"	59	0.0 <sup>^</sup> 89.5 <sup>^</sup> 2 28.0	→
15	9			"	59	0.0 <sup>^</sup> 90.0 <sup>^</sup> 3 17.5	16



Dec. 18, 1906

13	15	44	13	15	34	$+0.1^{\wedge} 87.5^{\wedge} 227.5$
	16	16		16	6	$+0.3^{\wedge} 81.0^{\wedge} 315.0$
	16	37			27	$+0.4^{\wedge} 80.0^{\wedge} 234.0$
	16	54			44	$+0.5^{\wedge} 76.0^{\wedge} 314.0$
	17	14		17	4	$+0.8^{\wedge} 69.0^{\wedge} 238.0$
	17	32		"	22	$+1.1^{\wedge} 61.9^{\wedge} 307.0$
	17	50		"	40	$+1.5^{\wedge} 53.8^{\wedge} 245.1$
	18	4		"	54	$+2.2^{\wedge} 40.1^{\wedge} 298.9$
	18	25		18	15	$+2.8^{\wedge} 30.2^{\wedge} 258.8$
	18	43		"	33	289.0
				"	49	not seen later

Limit of Vis.

13	19	52	13	19	8	35.0	255.0
		+11		"	54	33.0	290.0
13	20	3		20	8	68.0	255.5
				"	18	+2.6	34.0
							288.5

B. &amp; b. 1182

13	30	48.4
13	31	48.2

B. 394

13	31	0.0
13	32	0.0

Altitude extremely high. Seeing most of time during eclipse pretty bad. Sat. also dis. very close to limb of Jup. Barometer rising

Dec. 18, 1906

and temperature rather low. On account of above reasons, not many settings could be obtained during time of variations in light. A fairly good number were obtained for constant as H. began observations rather early and watched for moments of better definition. Sat. frequent at times could not be seen at all when the seeing was worse. At other times it could be seen fairly well.

∴ In previous Eclipse.

From	12 <sup>h</sup>	42 <sup>m</sup>	3 <sup>s</sup>	to	12 <sup>h</sup>	52 <sup>m</sup>	29 <sup>s</sup>	add	2	secs.
"	12	52	29.	"	13	2	55.	"	9	"
"	13	2	55.	"	13	19	20.	"	10	"
"	13	19	20.	"	13	29	46.	"	16	"



Dec. 19, 1906 (Wednesday)

H. Geminorum Phot. 3 H. Obs. Bowie Rec

6 26 +15.4

1 50

4 36

7 24

blonds

Index Red

163.4 ← var. dis.

199.7

347.6

15.3

9.5 cap used

36.3<sup>^</sup>

27.7<sup>^</sup>

64.0<sup>^</sup> - 2.71<sup>^</sup>

I

A

166.7

194.7

341.5

20.6

28.0<sup>^</sup>

39.1<sup>^</sup>

67.1<sup>^</sup> - 2.60<sup>^</sup>

-2.66<sup>^</sup>

Index Red

68.2

114.2

255.0

288.5

46.0<sup>^</sup>

33.5<sup>^</sup>

79.5<sup>^</sup> - 2.21<sup>^</sup>

B

74.9

109.4

246.4

295.1

34.5<sup>^</sup>

48.7<sup>^</sup>

83.2<sup>^</sup> - 2.10<sup>^</sup>

-2.16<sup>^</sup>

Mean - 2.41<sup>^</sup>

8 23 45

35 94<sup>^</sup>

8 17 77<sup>^</sup>

5 -11<sup>^</sup>

13 18 6<sup>^</sup>

7564.5543

Dec. 19, 1906

Index Le 8

8 37 17

67.1  
114.8  
255.6  
286.5

47.7<sup>^</sup>  
30.9<sup>^</sup>  
78.6<sup>^</sup> - 2.24<sup>^</sup>

II

B

75.2  
108.8  
244.8  
295.4

33.6<sup>^</sup>  
50.6<sup>^</sup>  
84.2<sup>^</sup> - 2.07<sup>^</sup>

-2.16<sup>^</sup>

Index Red

337.8  
25.5  
166.0  
195.8

47.7<sup>^</sup>  
29.8<sup>^</sup>  
77.5<sup>^</sup> - 2.27<sup>^</sup>

A

347.3  
15.9  
158.9  
201.9

28.1<sup>^</sup>  
43.0<sup>^</sup>  
71.6<sup>^</sup> - 2.45<sup>^</sup>

-2.36<sup>^</sup>

8 47 42  
84 59<sup>^</sup>  
8 42 30<sup>^</sup>  
5 -11<sup>^</sup>  
13 42 19<sup>^</sup>

7564.5710

Mean - 2.26<sup>^</sup>



Dec. 19, 1906

Index Red

340.0

22.4

168.1

197.1

42.4<sup>^</sup>29.0<sup>^</sup>71.4<sup>^</sup> - 2.46<sup>^</sup>

III

A

346.9

15.8

160.2

203.4

28.9<sup>^</sup>43.2<sup>^</sup>72.1<sup>^</sup> - 2.44<sup>^</sup>-2.45<sup>^</sup>

Index L &amp; B

246.2

295.5

74.6

107.7

49.3<sup>^</sup>33.1<sup>^</sup>82.4<sup>^</sup> - 2.12<sup>^</sup>

B

255.3

288.4

66.4

116.3

33.1<sup>^</sup>49.9<sup>^</sup>83.0<sup>^</sup> - 2.11<sup>^</sup>-2.12<sup>^</sup>

9 24 58

35 113<sup>^</sup>9 17 86<sup>^</sup>5 -11<sup>^</sup>14 18 15<sup>^</sup>Mean -2.28<sup>^</sup>

7564.5959

Dec. 19, 1906

Index L &amp; B

248.3

295.8

73.7

107.0

$$\begin{array}{r} 47.5^{\wedge} \\ 33.3^{\wedge} \\ \hline 80.8^{\wedge} - 2.17^{\wedge} \end{array} \quad \text{B}$$

254.2

289.5

65.4

114.7

$$\begin{array}{r} 35.3^{\wedge} \\ 49.3^{\wedge} \\ \hline 84.6^{\wedge} - 2.06^{\wedge} \end{array}$$

-2.12<sup>^</sup>

Index R &amp; A

161.5

202.9

346.0

14.8

$$\begin{array}{r} 41.4^{\wedge} \\ 28.8^{\wedge} \\ \hline 70.2^{\wedge} - 2.50^{\wedge} \end{array} \quad \text{A}$$

168.0

196.7

338.8

21.9

$$\begin{array}{r} 28.7^{\wedge} \\ 43.1^{\wedge} \\ \hline 71.8^{\wedge} - 2.45^{\wedge} \end{array}$$

-2.48<sup>^</sup>Mean -2.30<sup>^</sup>

10	0	18
19	43	48 <sup>^</sup>
9	51	54 <sup>^</sup>
5		-11 <sup>^</sup>
14	51	43 <sup>^</sup>

7564.6192



Dec. 19 1906

Index Red

10 30 47

162.7  
201.7  
345.6  
14.8

39.0<sup>^</sup>  
29.2<sup>^</sup>  
68.2 - 2.57<sup>^</sup>

V

A

167.4  
198.2  
339.5  
23.0

30.8<sup>^</sup>  
43.5<sup>^</sup>  
74.3<sup>^</sup> - 2.37<sup>^</sup>

-2.47<sup>^</sup>

Index LeS

67.1  
114.2  
255.0  
288.4

47.1<sup>^</sup>  
33.4<sup>^</sup>  
80.5<sup>^</sup> - 2.18<sup>^</sup>

B

74.8  
107.87  
247.4  
295.7

32.9<sup>^</sup>  
48.3<sup>^</sup>  
81.2<sup>^</sup> - 2.16<sup>^</sup>

-2.17<sup>^</sup>

10 45 10  
75 57<sup>^</sup>  
10 37 58<sup>^</sup>  
5 -11<sup>^</sup>  
15 37 47<sup>^</sup>

Mean - 2.32<sup>^</sup>

7564.6513

Dec 19, 1906

Index L &amp; B

11 16 8

68.9  
114.0  
253.8  
290.8

45.1<sup>^</sup>  
37.0<sup>^</sup>  
82.1<sup>^</sup> - 2.13<sup>^</sup>

VI

B

73.8  
108.3  
246.3  
295.30

34.5<sup>^</sup>  
48.7<sup>^</sup>  
83.2<sup>^</sup> - 2.10<sup>^</sup>

-2.12<sup>^</sup>

Index R &amp; A

340.0  
20.4  
168.0  
196.9

40.4<sup>^</sup>  
28.9<sup>^</sup>  
69.3<sup>^</sup> - 2.53<sup>^</sup>

A

345.3  
15.2  
163.3  
203.2

-2.52

11 32 34  
50 42<sup>^</sup>  
11 25 21<sup>^</sup>  
5 -11<sup>^</sup>  
16 25 10<sup>^</sup>

29.9<sup>^</sup>  
39.9<sup>^</sup>  
69.8<sup>^</sup> - 2.51<sup>^</sup>

L.J. 5<sup>h</sup> 46<sup>m</sup>

7564.6841 H.A. - 0 45

Dec +14.6

P.A. 340.7 Vn B

Sprockets -4.5A

" -3.5B

" -3.0C

Mean -2.32<sup>^</sup>

Watches matched for times  
Watch 11 sec fast



Dec. 21, 1906 (Friday)

Clear suddenly about 8.30 P.M.  
Came to Observatory and prepared for  
work, but before anything could be done,  
it all clouded again.

8 520 Heavy clouds coming everywhere  
9 000 Clouds thick everywhere

A little after 8.30 P.M. H. noticed  
what seemed to be <sup>traces of</sup> an aurora low down  
in the north. At about 8.45 P.M. there  
seemed to be indications of streamers a little  
west of the vertical of the Pole Star. The  
atmosphere was pretty moist and the Moon  
at quarter but it, nevertheless seemed, not  
withstanding these conditions, that there  
were traces of auroral light.

Double Star No. 66. (Cromstock's List) Castor AC  
Phot. Obs. Bowie Arc

7	26	+ 32.0
3	46	
3	40	
8	20	P. alt. 160° Dist. 1.2

Measurements on fol. page

Dec. 21, 1906  
 Combined light of principal component used in meat,  
 Index LVS prec. A.

9 43 30

269.2 Northern, a brighter dis  
 275.40 5.8<sup>^</sup>  
 91.0 2.9<sup>^</sup>  
 93.9 8.7<sup>^</sup> 7.10<sup>^</sup>

269.7 6.95<sup>^</sup>  
 274.1 4.4<sup>^</sup>  
 89.7 5.6<sup>^</sup>  
 95.3 10.0<sup>^</sup> 6.80<sup>^</sup>

Index L & A B.

179.1  
 184.5 5.4<sup>^</sup>  
 0.2 3.4<sup>^</sup>  
 3.6 8.8<sup>^</sup> 7.08<sup>^</sup>

9 54 28

181.4 7.18<sup>^</sup>  
 184.1 2.7<sup>^</sup>  
 359.6 5.3<sup>^</sup>  
 4.9 8.0<sup>^</sup> 7.28<sup>^</sup>

Mean 7.06<sup>^</sup>

Troubled by clouds and bad seeing  
 in above group. Observations difficult.



Dec. 21. 1906.

Double star No. 67 (Bonstoeck's List) factors AD  
 Index L & S Full aperture med

$$\begin{array}{r}
 58 \ 10 \\
 \begin{array}{r}
 0.4 \\
 4.0 \\
 182.6 \\
 \hline
 184.0
 \end{array}
 \begin{array}{r}
 3.6 \\
 1.4 \\
 \hline
 5.0
 \end{array}
 8.31
 \end{array}$$

$$\begin{array}{r}
 2.3 \\
 4.4 \\
 181.8 \\
 \hline
 184.0
 \end{array}
 \begin{array}{r}
 2.1 \\
 2.2 \\
 \hline
 4.3
 \end{array}
 8.63$$

$$\begin{array}{r}
 271.0 \\
 274.6 \\
 92.5
 \end{array}$$

Reject above partial group images  
 do not disappear.

Dec 21, 1906

Double Star No. 67 (Lamont's List) haster 4D Barre Rec  
 Phot. R. H. Ols<sup>n</sup>  
 9.5 cap

Index Right & A  
 92.6 Northern & brighter drc

10 18 4

94.2 1.6<sup>^</sup>  
 272.2 1.1<sup>^</sup>  
 273.3 2.7 9.64<sup>^</sup>

91.3 9.11<sup>^</sup>  
 94.4 3.1<sup>^</sup>  
 272.4 1.3<sup>^</sup>  
 273.7 4.4 8.58<sup>^</sup>

Index L &amp; B

2.0  
 3.4 1.4<sup>^</sup>  
 181.9 2.0<sup>^</sup>  
 183.9 3.4<sup>^</sup> 9.14

10 42 20

181.5 8.54<sup>^</sup>  
 184.0 2.5<sup>^</sup>  
 180.6 3.4<sup>^</sup>  
 184.0 5.9 7.95

Mean 8.82<sup>^</sup>



Dec. 21, 1906

Double Star No. 21 (Cromstock's List) Androm

Phot. C. H. lbs. Lowie

$$\begin{array}{r} 1 \quad 30 \quad + 40.8 \\ 5 \quad 10 \\ \hline 3 \quad 40 \end{array}$$

P.A.  $280^\circ$  Dist.  $4.7$  Magn.  $4.0, 9.5$   
Index R & B A.

267.3 Brighter dis

277.3

87.8

96.3

 $10.0^{\wedge}$  $8.5^{\wedge}$  $18.5^{\wedge}$  $5.46^{\wedge}$ 

269.07

276.0

87.1

98.1

 $6.3^{\wedge}$  $11.0^{\wedge}$  $17.3^{\wedge}$  $5.54^{\wedge}$  $5.61^{\wedge}$ 

Index L &amp; A B.

357.1

7.0

179.7 + 81.5

185.7

 $9.9^{\wedge}$  $6.0^{\wedge}$  $15.9^{\wedge}$  $5.79^{\wedge}$ 

359.5

6.0

178.3

187.0

 $6.5^{\wedge}$  $8.7^{\wedge}$  $15.2^{\wedge}$  $5.84^{\wedge}$  $5.89^{\wedge}$ Mean  $5.69^{\wedge}$ 

11 18 35

26 40

11 13 20

5 - 30

16 12 50

It's watch used for times tonight  
Watch 30 sec fast

Dec. 26, 1906 (Wednesday)

Double Star No 221 (Bonstock's List)  $\gamma$  Aquarii

23 10 -9.6 Phot. R & Lb Same Rec  
 26 50  
 3 40

P.A. 310 Dist. 50"

Index L & B.

351.6  $\leftarrow$  Brighter dis.

8.7

17.1<sup>^</sup>

171.8

15.5<sup>^</sup>

187.3

32.6<sup>^</sup>

4.22<sup>^</sup>

351.5

4.23<sup>^</sup>

8.2

16.7<sup>^</sup>

172.3

15.6<sup>^</sup>

187.9

32.3<sup>^</sup>

4.24<sup>^</sup>

Index R & A. A.

262.7

278.1

15.4<sup>^</sup>

82.1

15.9<sup>^</sup>

98.0

31.3<sup>^</sup>

4.31<sup>^</sup>

262.2

4.28<sup>^</sup>

278.3

16.1<sup>^</sup>

81.6

16.0<sup>^</sup>

97.6

32.1<sup>^</sup>

4.25<sup>^</sup>

8 33 36  
 58 82<sup>^</sup>  
 8 29 41<sup>^</sup>  
 5 -16<sup>^</sup>  
 13 29 25<sup>^</sup>

Seeing in above group  
 pretty good

Mean 4.26<sup>^</sup>



Dec. 26 1906

Double Star No. 12 (Barnard's List)  $\Sigma 80$ 

0	56	+0.6	Phot. R. H. Ob. Bowie.
3	21		
2	25		

P.A.  $320^\circ$  Dist.  $20''$  Magns 7.9.

Index R &amp; A

51.4 Brighter dis

8 57 33

114.2

62.8<sup>^</sup>

232.7

60.2<sup>^</sup>

292.9

123.0<sup>^</sup>1.13<sup>^</sup>

50.5

1.12<sup>^</sup>

116.2

65.7<sup>^</sup>

234.2

58.8<sup>^</sup>

293.0

124.5<sup>^</sup>1.10<sup>^</sup>

Index L &amp; B B.

320.2

26.2

66.0<sup>^</sup>

139.0

67.9<sup>^</sup>

206.9

133.9<sup>^</sup>0.90<sup>^</sup>

321.0

0.92<sup>^</sup>

25.2

64.2<sup>^</sup>

138.9

67.1<sup>^</sup>

206.0

131.3<sup>^</sup>0.95<sup>^</sup>Means 1.02<sup>^</sup>

9	6	8
17	63	41 <sup>^</sup>
8	61	50 <sup>^</sup>
5		-16 <sup>^</sup>
14	1	34 <sup>^</sup>

Dec. 26, 1906

Double Star No. 15 (Barnstock's List) 80 Piscum  
Phot. R. H. Obs. Bowie Rec

1	1
3	46
2	45

+4.9

P.A. 135 Dist. 2.8 Magns. 6.0; 10.5

Index R &amp; A.

3 4 7.8 ← Brighter dis.

3 5 5.4

7.6<sup>^</sup>

1 6 5.9

11.5<sup>^</sup>

1 7 7.4

19.1<sup>^</sup> 5.39<sup>^</sup>

3 4 6.0

5.35<sup>^</sup>

3 5 7.0

11.0<sup>^</sup>

1 6 6.6

8.8<sup>^</sup>

1 7 5.4

19.8<sup>^</sup> 5.31<sup>^</sup>

Index L &amp; B B.

2 5 6.4

2 6 5.0

8.6<sup>^</sup>

7 4.0

11.5<sup>^</sup>

8 6.5

20.1<sup>^</sup> 5.28<sup>^</sup>

2 5 4.2

5.28<sup>^</sup>

2 6 6.0

11.8<sup>^</sup>

7 5.7

8.4<sup>^</sup>

8 4.1

20.2<sup>^</sup> 5.27<sup>^</sup>Mean 5.32<sup>^</sup>It's match needi for times tonight  
Sketch 16 sec. fast

9	31	26
7	52	58 <sup>^</sup>
9	26	29 <sup>^</sup>
5		-16 <sup>^</sup>
14	26	13 <sup>^</sup>



Dec. 28, 1906 (Friday)

Double Star No. 15 (Comstock's List) 80 Piscium

1	2
2	17
1	15

+5.1

Phot. R. H. Obs. Bowie Pic

P.A.  $135^\circ$  Dist 2.7 Magn. 6.0 : 10.5.

Index L & B.

252.9 ← Brighter dis.

261.30

72.7

82.4

8.1<sup>^</sup>

9.7<sup>^</sup>

17.8<sup>^</sup> 5.54<sup>^</sup>

252.0

263.0

72.5

80.3

11.0<sup>^</sup>

7.8<sup>^</sup>

18.8<sup>^</sup> 5.43<sup>^</sup>

5.48<sup>^</sup>

Index L & A A.

163.0

171.4

340.8

352.2

8.4<sup>^</sup>

11.4<sup>^</sup>

19.8<sup>^</sup> 5.31<sup>^</sup>

161.0

172.8

342.7

350.8

11.8<sup>^</sup>

8.1<sup>^</sup>

19.9<sup>^</sup> 5.30<sup>^</sup>

5.30<sup>^</sup>

Mean 5.39<sup>^</sup>

Region thoroughly identified

7 54 52

100 97<sup>^</sup>

7 50 48<sup>^</sup>

5 -26<sup>^</sup>

12 50 22<sup>^</sup>

Dec. 28, 1906

Fourth Type Star +14° 1283 Phot. 3 X. Obs. Bavi Rec.

$$\begin{array}{r}
 6 \quad 17 \quad +14.8 \\
 3 \quad 00 \\
 \hline
 3 \quad 17 \\
 8 \quad 43
 \end{array}$$

9.5 hrs used

Index R &amp; R

$$\begin{array}{r}
 221.9 \leftarrow \text{4th type dis.} \\
 318.1 \\
 56.8 \\
 129.3
 \end{array}$$

$$\begin{array}{r}
 96.2^{\wedge} \\
 72.5^{\wedge} \\
 \hline
 168.7^{\wedge} - 0.21^{\wedge}
 \end{array}$$

A

$$\begin{array}{r}
 233.9 \\
 307.1 \\
 46.4 \\
 135.0
 \end{array}$$

$$\begin{array}{r}
 73.2^{\wedge} \\
 88.6^{\wedge} \\
 \hline
 161.8^{\wedge} - 0.35^{\wedge}
 \end{array}$$

-0.28^{\wedge}

Index L &amp; P

$$\begin{array}{r}
 144.9 \\
 219.2 \\
 331.0 \\
 30.6
 \end{array}$$

$$\begin{array}{r}
 74.3^{\wedge} \\
 59.6^{\wedge} \\
 \hline
 133.9^{\wedge} - 0.90^{\wedge}
 \end{array}$$

B

$$\begin{array}{r}
 152.7 \\
 209.4 \\
 321.4 \\
 39.9
 \end{array}$$

$$\begin{array}{r}
 56.7^{\wedge} \\
 78.5^{\wedge} \\
 \hline
 135.2^{\wedge} - 0.87^{\wedge}
 \end{array}$$

-0.88^{\wedge}

$$\begin{array}{r}
 8 \quad 41 \quad 50 \\
 \hline
 8 \quad 73 \quad 98^{\wedge} \\
 36 \quad 79^{\wedge} \\
 5 \quad -26^{\wedge} \\
 \hline
 13 \quad 36 \quad 53^{\wedge}
 \end{array}$$

7573.5673

Mean - 0.58^{\wedge}



Dec. 28, 1906.

S. J.  $3^h$   $40^m$   
 H. B. - 2  $42$   
 Dec. + 14.2  
 P. A. 203.5  
 Sprocket - 5.5  $\odot$   
 " - 4.5  $b$

Fourth Type Star +68° 617 Phot. J. K. Ols. Bowie Res.

10	35	+68.2
3	45	
6	50	
7	10	

color 5 in Phot.

Measurements on fol. page.

Dec. 28, 1906

Index Led

9 17 25

77.6	← 4th type dis	
105.1	27.5 <sup>^</sup>	B
252.6	40.2 <sup>^</sup>	
292.8	67.7 <sup>^</sup> - 2.59 <sup>^</sup>	

73.7		-2.68 <sup>^</sup>
109.5	35.8 <sup>^</sup>	
259.2	26.6 <sup>^</sup>	
285.8	62.4 <sup>^</sup> - 2.77 <sup>^</sup>	

Index ReB

350.0		A
13.8	23.8 <sup>^</sup>	
164.6	34.7 <sup>^</sup>	
199.3	58.5 <sup>^</sup> - 2.92 <sup>^</sup>	

343.9		-2.90 <sup>^</sup>
19.0	35.1 <sup>^</sup>	
169.1	24.6 <sup>^</sup>	
193.7	59.7 <sup>^</sup> - 2.87 <sup>^</sup>	

9 25 23  
 42 48<sup>^</sup>  
 9 21 24<sup>^</sup>  
 5 -26<sup>^</sup>

14 20 58

S.J. 4<sup>h</sup> 15<sup>m</sup>  
 H.A. -6 36

7573.5979

Dec. + 67.4  
 P.A. 239.5 Ver B  
 Sprockets - 2.5 B  
 " - 1.5 b

mean -2.79<sup>^</sup>



Dec. 28, 1906

Fourth Type Star +38°1539(6.3) Phot. 3 St. Obs. Bonn Be

6	27	+38.6	bolor 6 in Phot.
4	27		Full aperture used.
2	0		
10	0		

Index Red

252.9

290.1

77.8

104.5

4th type dis

37.2^

26.7^

63.9^ -2.72^

A

258.7

285.0

73.1

108.7

-2.76^

26.3^

35.6^

61.9^ -2.79^

Index I &amp; B

166.2

197.1

351.3

13.2

30.9^

21.9^

52.8^ -3.15^

B

171.1

192.5

346.6

16.5

-3.18^

21.4^

29.9^

51.3^ -3.22^

Mean -2.97^

9 50 30

9 59 20

109 50 ^

9 54 55 ^

5 -26 ^

14 54 29 ^

7573.6212

Dec. 28, 1906

S. 3. 4 44

H. A. -1 47

Dec. + 38.0

P. A. 191.5

Sprockets - 3.5 B

" - 2.5 b

It's watch used for times tonight  
 Sketch 26 sec fast

10 150 Stopped by clouds





Jan. 2, 1907 (Wednesday)

Double Star No. 51 (bometak's List) 111 Jauri Phot. R  
H. Ok. Bowie Rec.

5	24
2	17
3	7
8	53

P.A.  $265^\circ$  Dist. 1.3 Magns 6.0 & 9.5  
Index L & B

7 30 25

Brighter dis  
149.8  
168.0  
325.0  
352.1  
18.2<sup>^</sup>  
27.1<sup>^</sup>  
45.3<sup>^</sup> 3.49<sup>^</sup>

144.6  
172.6  
328.4  
347.7  
28.0<sup>^</sup>  
19.3<sup>^</sup>  
47.3<sup>^</sup> 3.40<sup>^</sup>

Index Red A

58.8  
77.8  
232.0  
259.3  
19.0<sup>^</sup>  
27.3<sup>^</sup>  
46.3<sup>^</sup> 3.44<sup>^</sup>

7	39	43
	69	68
7	34	64
5		+15
12	35	19

52.9  
80.5  
235.8  
256.0  
27.6<sup>^</sup>  
20.2<sup>^</sup>  
47.8<sup>^</sup> 3.37<sup>^</sup>

Mean 3.42<sup>^</sup>



Jan. 2 1907

Double Star No. 58 (Bonstock's List) 15-Geminorum

6	20	+20.3	Phot. L. H. Ob. Cove Rec.
2	50		
3	30		
8	30		

P.A. 200° Dist. 30" Magn 6 28.2  
Index L & A B.122.0 ~~rather~~ Brighter dis

181.7	59.7 <sup>^</sup>
307.0	48.1 <sup>^</sup>
355.1	107.8 <sup>^</sup> 1.47 <sup>^</sup>

121.6 1.36

176.2	54.6 <sup>^</sup>
296.0	63.3 <sup>^</sup>
359.3	117.9 <sup>^</sup> 1.24 <sup>^</sup>

Index R &amp; B A.

22.7	
86.5	63.8 <sup>^</sup>
209.4	50.1 <sup>^</sup>
259.5	113.9 <sup>^</sup> 1.33 <sup>^</sup>

29.7 1.36<sup>^</sup>

76.2	46.5 <sup>^</sup>
201.0	64.5 <sup>^</sup>
265.5	111.0 <sup>^</sup> 1.39 <sup>^</sup>

Mean 1.36<sup>^</sup>

8	11	22
	11	76
8	5	68
5		+15
13	6	23

Observations in above last double made through clouds and rather dif. at times

Jan. 2, 1906

Double Star No. 81 (homstock's List)  $\sigma$  294 Phot  
H. Obs. Bore Rec.

8	18	+43.7
3	23	
4	50	
7	10	

clouds now thick.

P. is 16.5 Dist. 1.4 Mags. 6.0 &amp; 8.5

8 36 0 clouds, stars gone.

8 45 0 Sky thickly cloudy.

Measurements on following page.

2.



Jan. 2, 1906

Index Q &amp; B A.

213.1 ← South &amp; brighter dis

261.2

48.1<sup>^</sup>

39.0

35.2<sup>^</sup>

74.2

83.3<sup>^</sup>2.10<sup>^</sup>

217.3

2.11<sup>^</sup>

252.6

35.3<sup>^</sup>

30.0

47.2<sup>^</sup>

77.2

82.5<sup>^</sup>2.12<sup>^</sup>

Index Led B.

302.2

336.6

34.4<sup>^</sup>

114.4

49.8<sup>^</sup>

164.2

84.2<sup>^</sup>2.07<sup>^</sup>

295.0

2.10

344.6

49.6<sup>^</sup>

119.5

33.0<sup>^</sup>

152.5

82.6<sup>^</sup>2.12<sup>^</sup>

9 27 48

48 71

9 24 36

5 +15

14 24 51

Somewhat troubled by clouds  
in above group

Mean 2.10

Jan. 2, 1907

Double Star No. 87 (Comstock's List)  $\delta 1 \pi$  Cancri

$$\begin{array}{r}
 9 \quad 7 \quad +15.6 \\
 \hline
 4 \quad 37 \\
 4 \quad 30 \\
 7 \quad 30
 \end{array}$$

Not seen. clouds thick.

9 45 0 Thick clouds now overspreading the whole sky. No chance for anything further

It's watch used for times tonight.  
 Skatch 15 sec slow



Jan. 4, 1907 (Friday)

Jan. 4, 1907

Double Star No. 223 (Bonstock's List)  $\Sigma 3041$  A6

23	40	+16.3	Phot. R. Dr. Obs. Bourne Sec
26	40		
<u>3</u>	<u>00</u>		

P.A. 18.5 Dist. 1.3 Magn. 7.8 &amp; 8.0

Region thought to be well identified although there is no chart at hand. The northern component is a close double, and assumed to be slightly the brighter of the pair to be measured.

Index L &amp; B. B.

13.0 ← North &amp; brighter dis

91.9	78.9 <sup>^</sup>	
187.2	<u>91.8<sup>^</sup></u>	
279.0	170.7 <sup>^</sup>	0.17 <sup>^</sup>

4.4

0.16<sup>^</sup>

96.2	91.8 <sup>^</sup>	
190.2	<u>99.8<sup>^</sup></u>	
270.0	171.6 <sup>^</sup>	0.16 <sup>^</sup>

Index R &amp; A. A.

In measurements  
of this combined  
light of brighter  
component  
used.

280.7

356.4

87.1

184.9

75.7 <sup>^</sup>	
<u>97.8<sup>^</sup></u>	
173.5 <sup>^</sup>	0.12 <sup>^</sup>

271.0

0.12<sup>^</sup>

2.7

96.1

178.0

91.7 <sup>^</sup>	
<u>81.9<sup>^</sup></u>	
173.6 <sup>^</sup>	0.12 <sup>^</sup>

Mean 0.14<sup>^</sup>

By above measurements, the star  
assumed to be the brighter is  
the brighter.

8	5	48
15	61	50
7	60	55
5		+22
<u>13</u>	<u>1</u>	<u>17</u>



Jan. 4, 1907

Double Star <sup>For</sup> 219 (Comstock's List) 60 Pegasi Phot. R  
 H. Obs. Bowie Rec.

23 5  
 27 35  
 4 30

+ 26.1

P.A. 290 Dist. 4' ± Magn. 6.0 + 9.0  
 Index L & B.

301.8 ← Fol. 2 brighter dis

332.6

124.0

146.9

30.8<sup>^</sup>22.9<sup>^</sup>53.7<sup>^</sup>3.11<sup>^</sup>

304.3

325.5

116.7

149.7

21.2<sup>^</sup>33.0<sup>^</sup>54.2<sup>^</sup>3.09<sup>^</sup>3.10<sup>^</sup>

Index L &amp; B A.

206.4

238.3

31.6

52.5

31.9<sup>^</sup>20.9<sup>^</sup>52.8<sup>^</sup>3.15<sup>^</sup>

211.0

234.0

25.6

56.3

23.0<sup>^</sup>30.7<sup>^</sup>53.7<sup>^</sup>3.11<sup>^</sup>3.13<sup>^</sup>Mean 3.12<sup>^</sup>

8 38 40

8 48 27  
 86 67<sup>^</sup>  
 8 43 34<sup>^</sup>  
 5 + 22<sup>^</sup>  
 13 43 56<sup>^</sup>

Jan. 4, 1907

Double Star No 21 (Comstock's List) v Androm

1	29	+40.6	Phot. R. & Obs.
4	15		
2	46		

P.A. 280° Dist. 4.7" Ang 4.0 &amp; 9.5

Index A &amp; B A.

217.7 ← Sol &amp; brighter dis.

226.5

39.68

45.4

8.8^

5.6^

14.4^ 6.01^

218.8

226.2

37.6

47.567

5.86^

7.4^

9.1^

16.5^ 5.71^

Index Let A B.

blonds

127.0

137.5

309.0

315.1

10.5^

6.1^

16.6^ 5.70^

129.6

135.1

307.3

316.2

5.86^

5.5^

8.9^

14.4^ 6.01^

Mean 5.86^

Somewhat troubled in above group by passing clouds. Measurements made through some clouds.



Jan. 4, 1907

Double Star No. 10 (Barnard's List) &amp; Cassiope Phot. C.

0. 32 +55.8 H. Obs. Bowie Rec.

5	12
4	40

P.A. 250° Dist 1.2 ± Mags.

Index L &amp; B.

126.4 Fol. &amp; brighter dis

134.2

7.8<sup>^</sup>

307.2

6.1<sup>^</sup>

313.3

13.9<sup>^</sup>6.08<sup>^</sup>

126.8

6.23<sup>^</sup>

133.3

6.5<sup>^</sup>

307.5

5.6<sup>^</sup>

313.1

12.1<sup>^</sup>6.38<sup>^</sup>

Index R &amp; B A.

36.2

43.7

216.1

223.4

7.5<sup>^</sup>7.3<sup>^</sup>14.8<sup>^</sup>5.95<sup>^</sup>

36.6

6.06<sup>^</sup>

43.2

215.9

222.7

6.6<sup>^</sup>6.8<sup>^</sup>13.4<sup>^</sup>6.16<sup>^</sup>Mean 6.14<sup>^</sup>

Barometer rising rapidly during evening

Jan. 4, 1907

and storm condition gradually clearing up, but troubled more or less by clouds throughout the evening. Extreme care however exercised ~~the~~ The clouds in general were not of a massive character but of a loose texture being sometimes thinner and sometimes thicker.

H's watch used for times tonight -  
Sketch 22 sec. slow



Jan. 5, 1907 (Saturday)

Double Star No 223 (Bonstrock's List)  $\Sigma$  3041 AC

23 46 +17.1  
 26 31  
 2 45

Phot C H. Obs. Bowie Rec

Index A. A.

26 4.8 North & brighter dis.

359.0

85.8

172.4

94.2<sup>^</sup>

86.6<sup>^</sup>

180.8<sup>^</sup>

179.2<sup>^</sup> - 0.02

266.0

356.0

87.0

177.6

90.0<sup>^</sup>

-0.02

90.6<sup>^</sup>

180.6<sup>^</sup>

179.4<sup>^</sup> - 0.01

Index L & B B.

175.5

267.0

354.0

78.0

91.5<sup>^</sup>

84.0<sup>^</sup>

175.5<sup>^</sup> + 0.08

179.4

+0.16

256.4

354.3

83.9

77.0<sup>^</sup>

89.6<sup>^</sup>

166.6<sup>^</sup> + 0.25

Mean + 0.07

7 34 40

62 50<sup>^</sup>

7 31 25<sup>^</sup>

5 +32<sup>^</sup>

12 31 57<sup>^</sup>

Jan. 5, 1907.

B & b 1182			B 394		
7	56	16.5	7	56	0.0
7	57	16.0	7	57	0.0

Reap. Jup. I Phot. W. K. Obs. Bowie Rec.  
 comp. with nearer of two Sats. (before eclipse)  
 on same fol. side

8	18	11 <sup>8</sup>	18	24	Seen
18	20 <sup>^</sup>	"	33	+1.0 <sup>^</sup> 65.2 <sup>^</sup>	184.0
18	49 <sup>^</sup> 8	19	2	+0.5 <sup>^</sup> 78.2 <sup>^</sup>	249.2
19	3 <sup>^</sup>	"	16	+0.3 <sup>^</sup> 82.8 <sup>^</sup>	171.0
19	20 <sup>^</sup>	"	33	+0.2 <sup>^</sup> 83.8 <sup>^</sup>	253.8
19	37 <sup>^</sup>	"	50	+0.2 <sup>^</sup> 85.0 <sup>^</sup>	170.0
19	48 <sup>^</sup>	20	1	+0.1 <sup>^</sup> 87.0 <sup>^</sup>	255.0
20	16 <sup>^</sup>	"	29	0.0 <sup>^</sup> 90.5 <sup>^</sup>	168.0
20	30 <sup>^</sup>	"	43	-0.1 <sup>^</sup> 93.5 <sup>^</sup>	258.5
20	47 <sup>^</sup>	21	0	-0.2 <sup>^</sup> 95.4 <sup>^</sup>	16 <sup>5.0</sup> <del>6.5</del>
21	21 <sup>^</sup>	"	34	-0.3 <sup>^</sup> 96.9 <sup>^</sup>	260.4 <sub>W</sub>
21	49 <sup>^</sup>	22	2	-0.3 <sup>^</sup> 97.5 <sup>^</sup>	163.5
22	13 <sup>^</sup>	"	26		261.0



Jan. 5, 1907.

8 22 39 164.0  $\rightarrow$   
 Moved image of comp. sat. a little

8	23	25 <sup>^</sup>	8	23	31	96.0 <sup>^</sup>	260.0	1
		-12 <sup>^</sup>		"	46	99.5 <sup>^</sup>		
8	23	16 <sup>^</sup>		"	57	195.8 <sup>^</sup>	161.0	
						-0.3 <sup>^</sup>	260.8	
			24	12		101.6 <sup>^</sup>	160.4	
8	24	32 <sup>^</sup>		26		99.2 <sup>^</sup>	262.0	
		-12 <sup>^</sup>		"	39	200.8 <sup>^</sup>	161.8	2
8	24	20 <sup>^</sup>		"	52	-0.4 <sup>^</sup>	261.0	
						100.4 <sup>^</sup>		
			25	1		99.3 <sup>^</sup>	161.8	
8	25	19 <sup>^</sup>		14		100.3 <sup>^</sup>	261.1	
		-12 <sup>^</sup>		"	25	199.6 <sup>^</sup>	161.9	3
8	25	7 <sup>^</sup>		"	37	-0.4 <sup>^</sup>	262.2	
						99.8 <sup>^</sup>		
				49		101.0 <sup>^</sup>	161.0	
8	26	10 <sup>^</sup>	26	4		99.9 <sup>^</sup>	262.0	
		-12 <sup>^</sup>		"	16	200.9 <sup>^</sup>	161.1	4
8	25	58 <sup>^</sup>		"	29	-0.4 <sup>^</sup>	261.0	
						100.4 <sup>^</sup>		
				42		100.7 <sup>^</sup>	161.0	
8	26	59 <sup>^</sup>		"	53	99.6 <sup>^</sup>	261.7	
		-12 <sup>^</sup>				200.3 <sup>^</sup>	162.1	5
8	26	47 <sup>^</sup>	27	5		-0.4 <sup>^</sup>	261.7	
				"	17	100.2 <sup>^</sup>		
						101.0 <sup>^</sup>	161.2	
				43		101.6 <sup>^</sup>	262.2	
8	28	1 <sup>^</sup>		"	53	202.6 <sup>^</sup>	160.5	6
		-12 <sup>^</sup>	28	9		-0.4 <sup>^</sup>	262.1	
8	27	49 <sup>^</sup>		"	18	101.3 <sup>^</sup>		

Jan. 5, 1907

Moved image of comp. sat. a little

8	29	50 <sup>^</sup>	28	102.0 <sup>^</sup>	159.0
8	29	50 <sup>^</sup>	"	97.5 <sup>^</sup>	26 1.0
8	29	38 <sup>^</sup>	"	199.5 <sup>^</sup>	16 2.5 7
			30	-0.4 <sup>^</sup>	99.8 <sup>^</sup>
			"		26 0.0
8	30	39 <sup>^</sup>	19	98.5 <sup>^</sup>	16 2.5
8	30	28 <sup>^</sup>	"	98.8 <sup>^</sup>	26 1.0
			"	197.3 <sup>^</sup>	16 2.0 2
			31	-0.3 <sup>^</sup>	98.6 <sup>^</sup>
					26 0.8

Limit of Vis.

8	32	18 <sup>^</sup>	31	49	44.5 <sup>^</sup>	187.5
8	32	7 <sup>^</sup>	32	3	46.7 <sup>^</sup>	232.0
			"	24	91.2 <sup>^</sup>	189.6
			"	57	+1.9 <sup>^</sup>	45.6 <sup>^</sup>
						236.3

B. &amp; b. 1182

8	39	10.3
8	40	10.2

B. 394

8	39	0.0
8	40	0.0

Sat. reap. pretty ~~close~~ near limb of Jup.  
and a little out of position as given by  
Almanac. Although the seeing was not



Jan. 5, 1907

extremely bad, yet near the limb it was rather blurry in early part of eclipse. The fact that the Sat. reap. pretty close to limb; also the necessary readjustment of images, as well as the rather blurry seeing, rendered the observations during the variation of light, somewhat difficult and caused fewer settings to be taken, than otherwise would have been the case. At about the time of beginning the constant the seeing improved and this, combined with the fact that the Sat. was a little farther from the planet, made the settings for constant somewhat easier and better than the others.

i. In previous eclipses

From  $2^h 15^m 39.$  to  $2^h 23^m 0.$  subtract 13, secs.  
 $A \ 23 \ 0. \quad " \quad A \ 30 \ 21. \quad " \quad 12. \quad "$   
 $A \ 30 \ 21. \quad " \quad A \ 37 \ 42. \quad " \quad 11. \quad "$

$\alpha$  Beti Phot. R. H. Obs. Bowie Tex.  
 $\begin{array}{r} 2 \\ 4 \\ \hline 2 \end{array} \quad \begin{array}{r} 12 \\ 32 \\ \hline 20 \end{array} - 3.6$  Full aperture used

Measurements on fol. page

Jan. 5, 1907

Index R &amp; B

9	54	30	111.0	var. dis.	
			115.8		
			290.1	4.8 <sup>^</sup>	64
			296.6	<u>6.5<sup>^</sup></u>	
				11.3 <sup>^</sup> - 6.53 <sup>^</sup>	
			291.0		
			295.8	4.8 <sup>^</sup>	-6.60 <sup>^</sup>
			110.5	<u>5.8<sup>^</sup></u>	
			116.3	10.6 <sup>^</sup> - 6.67 <sup>^</sup>	

Index L &amp; A

			200.6	5.4 <sup>^</sup>	
			206.0	<u>5.1<sup>^</sup></u>	B
			20.7	10.5 <sup>^</sup> - 6.69 <sup>^</sup>	
			25.8		
			201.0		-6.62 <sup>^</sup>
			205.7	4.7 <sup>^</sup>	
			20.3	<u>6.5<sup>^</sup></u>	
			26.8	11.2 <sup>^</sup> - 6.55 <sup>^</sup>	
10	5	35			
19	59	65 <sup>^</sup>			
9	59	62 <sup>^</sup>			
5		+32 <sup>^</sup>			
15	0	34 <sup>^</sup>			

7581.6254

Mean - 6.61<sup>^</sup>



Jan. 5, 1907

Double Star No. 95 (Bonstock's List) 6 Leonis

9	24	+10.0
5	39	
3	45	
8	15	

Sky more or less cloudy everywhere and more clouds coming from the West

It's watch used for times tonight.  
Watch 32 sec. slow

Jan. 9 1907 (Wednesday)

Y Camelopard Phot. J. H. Ols. Bowie Rec.

7 25  
2 50  
4 35  
7 25

+76.3

Index Below

67.5

I

38 28

115.2

57.3

comp. Star dis

B

7 41 40

122.4

65.1<sup>^</sup>

250.7

42.1<sup>^</sup>

292.8

107.2<sup>^</sup> +1.48<sup>^</sup>

67.0

+1.46<sup>^</sup>

7 44 50

114.7

47.7<sup>^</sup>

242.0

61.8<sup>^</sup>

304.8

109.5<sup>^</sup> +1.43<sup>^</sup>

Index Above

A

7 49 21

333.8

33.6

59.8<sup>^</sup>

160.0

42.8<sup>^</sup>

202.8

102.6<sup>^</sup> +1.59<sup>^</sup>

340.1

+1.54<sup>^</sup>

7 52 35

26.2

46.1<sup>^</sup>

186 146

149.7

62.9<sup>^</sup>

7 46 66

217.0

107.0<sup>^</sup> +1.49<sup>^</sup>

5 40

12 47 46

7585.5332

mean +1.50<sup>^</sup>



Jan. 9, 1907.

Index Above

3324

II

33.6

61.2<sup>^</sup>

159.4

42.6<sup>^</sup>

202.0

 $103.8^{\wedge} + 1.56^{\wedge}$ 

A

338.7

+1.52<sup>^</sup>

23.5

44.8<sup>^</sup>

147.4

62.6<sup>^</sup>

210.0

 $107.4^{\wedge} + 1.48^{\wedge}$ 

Index Below

241.0

299.9

68.3

114.7

58.9<sup>^</sup>46.4<sup>^</sup> $105.3^{\wedge} + 1.53^{\wedge}$ 

B

249.8

+1.54<sup>^</sup>

293.8

44.0<sup>^</sup>

58.36

60.9<sup>^</sup>

119.5

 $104.9^{\wedge} + 1.54^{\wedge}$ Mean +1.53<sup>^</sup>

7 57 48

8 1 30

8 6 6

8 8 48

31 72 132

7 63 33

5 +40

13 4 13

7585.5445

Jan. 9, 1907.

4 27 7

Index Below

III

245.5

297.67

69.4

109.7

52.2<sup>^</sup>40.3<sup>^</sup>92.5<sup>^</sup> + 1.85<sup>^</sup>

Q

8 31 14

247.9

289.9

62.6

120.9

42.0<sup>^</sup>58.3<sup>^</sup>100.3<sup>^</sup> + 1.65<sup>^</sup>+ 1.75<sup>^</sup>

Index Above

8 35 54

153.3

209.4

343.4

21.2

56.1<sup>^</sup>37.8<sup>^</sup>93.9<sup>^</sup> + 1.81<sup>^</sup>

A

4	40	5
	133	80 <sup>^</sup>
8	33	35 <sup>^</sup>
5		+40 <sup>^</sup>
13	34	15 <sup>^</sup>

161.0

201.0

336.0

29.2

40.0<sup>^</sup>53.2<sup>^</sup>93.2<sup>^</sup> + 1.83<sup>^</sup>+ 1.82<sup>^</sup>

7585.5654

Mean + 1.78<sup>^</sup>



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Index Above

IV

8 46 42

337.0

27.0

161.6

200.2

50.0<sup>^</sup>38.6<sup>^</sup>88.6<sup>^</sup> + 1.95<sup>^</sup>

A

8 50 6

344.6

21.0

153.9

205.3

36.4<sup>^</sup>51.4<sup>^</sup>87.8<sup>^</sup> + 1.97<sup>^</sup>+ 1.96<sup>^</sup>

Index Below

8 55 53

244.8

295.1

72.6

109.0

50.3<sup>^</sup>36.4<sup>^</sup>86.7<sup>^</sup> + 2.00<sup>^</sup>

B

8 59 2

251.8

289.0

67.0

116.6

37.2<sup>^</sup>49.6<sup>^</sup>86.8<sup>^</sup> + 2.00<sup>^</sup>+ 2.00<sup>^</sup>210 103<sup>^</sup>8 52 56<sup>^</sup>5 + 40<sup>^</sup>12 53 36<sup>^</sup>

7585.5789

Mean + 1.98<sup>^</sup>

66

Jan. 9, 1907

Index Below

9 10 56

245.3

V

292.9

47.6<sup>^</sup>

B

71.0

39.0<sup>^</sup>

110.0

86.6<sup>^</sup> + 2.01<sup>^</sup>

253.5

+ 2.04<sup>^</sup>

9 14 10

288.9

35.4<sup>^</sup>

68.2

49.0<sup>^</sup>

117.2

84.4<sup>^</sup> + 2.07<sup>^</sup>

Index Above

9 20 14

159.0

205.2

46.2<sup>^</sup>

A

344.8

32.5<sup>^</sup>

17.3

78.7<sup>^</sup> + 2.23<sup>^</sup>

165.7

+ 2.23<sup>^</sup>

9 23 29

195.5

29.8<sup>^</sup>67 109<sup>^</sup>

336.6

48.9<sup>^</sup>9 16 72<sup>^</sup>

25.5

78.7<sup>^</sup> + 2.23<sup>^</sup>5 + 40<sup>^</sup>14 17 52<sup>^</sup>Mean + 2.14<sup>^</sup>

7585.5957



Jan 9, 1907

Index Above

9	37 30	160.8		VI
		198.7	37.9 <sup>^</sup>	
		345.1	<u>33.6<sup>^</sup></u>	
		18.7	71.5 <sup>^</sup> + 2.46 <sup>^</sup>	

9	42 38	165.5		+2.44 <sup>^</sup>
		196.0	30.5 <sup>^</sup>	
		340.1	<u>42.5<sup>^</sup></u>	
		22.6	73.0 <sup>^</sup> + 2.41 <sup>^</sup>	

Index Below

9	48 27	70.4		
		115.7	45.3 <sup>^</sup>	
		256.1	<u>30.9<sup>^</sup></u>	
		287.0	76.2 <sup>^</sup> + 2.31 <sup>^</sup>	

9	53 0	73.7		+2.28 <sup>^</sup>
		108.2	34.5 <sup>^</sup>	
	180 95 <sup>^</sup>	249.4	<u>44.1<sup>^</sup></u>	
9	45 24 <sup>^</sup>	293.5	78.6 <sup>^</sup> + 2.24 <sup>^</sup>	
5	+40			

14 46 4<sup>^</sup>Mean + 2.36<sup>^</sup>

7585.6154

68

Jan. 9, 1907

Index Below

10	3	40	70.1		VII
			117.0	46.9 <sup>^</sup>	
			256.0	31.6 <sup>^</sup>	B
			287.6	78.5 <sup>^</sup> + 2.24 <sup>^</sup>	
			76.5		+2.38 <sup>^</sup>
10	7	42	106.6	30.1 <sup>^</sup>	
			251.4	39.8 <sup>^</sup>	
			291.2	69.9 <sup>^</sup> + 2.51 <sup>^</sup>	

Index Above

10	13	13	341.6		
			24.4	42.8 <sup>^</sup>	IA
			164.8	30.7 <sup>^</sup>	
			195.5	73.5 <sup>^</sup> + 2.39 <sup>^</sup>	
			347.7		+2.40 <sup>^</sup>
10	17	39	19.6	31.9 <sup>^</sup>	
	40	134 <sup>^</sup>	159.2	40.8 <sup>^</sup>	
10	10	34 <sup>^</sup>	200.0	72.7 <sup>^</sup> + 2.42 <sup>^</sup>	
5		+40 <sup>^</sup>			
15	11	14 <sup>^</sup>			
				Mean	+2.39 <sup>^</sup>

7585.6327



Jan. 9 1907

Index Above

		341.4		VIII
10	26	54	23.0	41.6 <sup>^</sup>
		162.5		34.6 <sup>^</sup>
		197.1		76.2 <sup>^</sup> + 2.31 <sup>^</sup>
		345.4		+ 2.34 <sup>^</sup>
10	31	31	18.7	33.3 <sup>^</sup>
		160.1		40.8 <sup>^</sup>
		200.9		74.1 <sup>^</sup> + 2.37 <sup>^</sup>

Index Below

		249.7		
10	40	10	295.0	45.3 <sup>^</sup>
			76.1	34.2 <sup>^</sup>
			110.3	79.5 <sup>^</sup> + 2.21 <sup>^</sup>
		255.3		+ 2.20 <sup>^</sup>
10	44	15	287.2	31.9 <sup>^</sup>
	141	110 <sup>^</sup>	68.0	48.2 <sup>^</sup>
10	35	42 <sup>^</sup>	116.2	80.1 <sup>^</sup> + 2.19 <sup>^</sup>
5		+ 40 <sup>^</sup>		
15	36	22 <sup>^</sup>		Mean + 2.27 <sup>^</sup>

7585.6503

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Index Below

11	1	57	248.5		IX
			297.5	49.0 <sup>^</sup>	
			73.4	<u>37.2<sup>^</sup></u>	B
			110.6	86.2 <sup>^</sup> + 2.02 <sup>^</sup>	

11	5	54	252.2		+ 2.03 <sup>^</sup>
			287.6	35.4 <sup>^</sup>	
			68.2	<u>50.0<sup>^</sup></u>	
			118.2	85.4 <sup>^</sup> + 2.04 <sup>^</sup>	

Index Above

11	11	10	156.5		
			207.9	51.4 <sup>^</sup>	A
			342.4	<u>38.4<sup>^</sup></u>	
			20.8	89.8 <sup>^</sup> + 1.92 <sup>^</sup>	

11	14	33	162.6		+ 1.92 <sup>^</sup>
			200.9	38.3 <sup>^</sup>	
	31	154 <sup>^</sup>	334.5	<u>51.5<sup>^</sup></u>	
11	7	84 <sup>^</sup>	26.0	89.8 <sup>^</sup> + 1.92	
5		+40 <sup>^</sup>			

16	9	4	S.J. 6 <sup>h</sup>	52 <sup>m</sup>	known + 1.98 <sup>^</sup>
			H.A. -0	37	

7585.6730 Dec +75.8

P.A. 346.5 Var. B

Sprocket -1.5 d

" -0.5 B

" 0.0 b

It's watch used for times  
Sketch 40 sec slow



Jan. 10, 1907 (Thursday)

- 7 50 Clouds coming rapidly and overspreading the whole sky.
- 7 10 0 Thick clouds over the whole sky. no stars visible. According to weather map storm coming rapidly
- 7 30 0 Sky still thickly cloudy everywhere. No stars visible
- 7 40 0 Sky thickly cloudy everywhere, storm evident by coming.

Jan. 11, 1907 (Friday)

U Cephei

Phot. 3 H. Obs. Davis. Rec.

0 50 +81.2  
2 30  
1 40

Full aperture used

Index Red

I

7 19 50

142.3 ← var. dia  
222.9 80.6 ^ A  
330.7 61.3 ^  
32.0 141.9 ^ - 0.74 ^

7 22 0

151.6 - 0.68 ^  
211.9 60.3 ^  
318.9 87.2 ^  
46.1 147.5 ^ - 0.62 ^

Index L + B

7 25 32

44.5  
136.7 92.2 ^ B  
239.4 66.1 ^  
305.5 158.3 ^ - 0.41 ^

7 27 2

93 84 ^

7 23 36 ^

5 -30 ^

12 23 6

57.4 - 0.38 ^  
124.3 66.9 ^  
224.7 94.0 ^  
318.7 160.9 ^ - 0.36 ^

Mean - 0.53 ^



Jan. 11, 1907

Index L &amp; P.

II

7 31 10

45.0  
 137.7 2  
 238.0  
 307.6

92.2 ^  
 69.6 ^  
 161.8 ^ - 0.35 ^

B

7 33 17

54.6  
 124.6  
 226.9  
 318.3

70.0 ^  
 91.4 ^  
 161.4 ^ - 0.35 ^

-0.35 ^

Index R &amp; A.

7 36 50

318.3  
 44.0  
 150.8  
 212.4

85.7 ^  
 61.6 ^  
 147.3 ^ - 0.63 ^

A

330.6

-0.56 ^

7 39 5

36.1  
 136.3  
 225.2

65.5 ^  
 88.9 ^  
 154.4 ^ - 0.49 ^

139 82 ^  
 7 34 66 ^  
 5 -30 ^

12 34 36 ^

Mean - 0.46 ^

Jan. 11, 1907

III

Index Rect

7 42 22

318.0

48.1

148.6

214.0

90.1<sup>^</sup>

A

65.4<sup>^</sup> $155.5^{\wedge} - 0.47^{\wedge}$ 

7 44 45

328.5

37.5

136.3

225.5

69.0<sup>^</sup> $-0.44^{\wedge}$ 89.2<sup>^</sup> $158.2^{\wedge} - 0.42^{\wedge}$ 

Index L &amp; B

7 47 34

236.9

309.1

39.5

143.0

72.2<sup>^</sup>

B

103.5<sup>^</sup> $175.7^{\wedge} - 0.08^{\wedge}$ 

7 49 49

221.7

 $-0.08^{\wedge}$ 

320.3

52.0

129.5

98.6<sup>^</sup>77.5<sup>^</sup> $176.1^{\wedge} - 0.07^{\wedge}$ 182 150<sup>^</sup>7 45 68<sup>^</sup>5 -30<sup>^</sup>12 45 38<sup>^</sup>Mean  $-0.26^{\wedge}$



Jan. 11, 1907

Index L+B

7	54	30	23.4		
			313.3		IV
			26.4	81.9 <sup>^</sup>	B
			143.0	106.6 <sup>^</sup>	
				188.5 <sup>^</sup>	
				171.5 <sup>^</sup> + 0.16 <sup>^</sup>	
7	56	22	219.0		
			323.1	104.1 <sup>^</sup>	+0.14 <sup>^</sup>
			50.9	82.0 <sup>^</sup>	
			133.02.9	186.1 <sup>^</sup>	
				173.9 <sup>^</sup> + 0.11 <sup>^</sup>	

Index R+A

8	0	0	143.75		
			219.8	76.3 <sup>^</sup>	d
			311.90	98.4 <sup>^</sup>	
			49.4	174.7 <sup>^</sup> - 0.10 <sup>^</sup>	
			133.1		-0.10 <sup>^</sup>
8	1	39	229.0	95.9 <sup>^</sup>	
30	111	91 <sup>^</sup>	324.2	78.3 <sup>^</sup>	
7	57	68 <sup>^</sup>	42.5	174.2 <sup>^</sup> - 0.11 <sup>^</sup>	
5		-30 <sup>^</sup>			
12	57	38 <sup>^</sup>			

Mean +0.02<sup>^</sup>

Jan. 11 1907.

Index R &amp; A

8 4 52

144.1

220.1

310.9

54.4

76.0<sup>^</sup>103.5<sup>^</sup>179.5<sup>^</sup> - 0.01<sup>^</sup>

V

A

8 7 18

129.7

230.2

320.9

4233.1

100.5<sup>^</sup> + 0.02<sup>^</sup>82.2<sup>^</sup>182.7<sup>^</sup>177.3<sup>^</sup> + 0.05<sup>^</sup>

Index L &amp; B

8 10 10

48.0

136.0

216.4

326.5

88.0<sup>^</sup>110.1<sup>^</sup>198.1<sup>^</sup>161.9<sup>^</sup> + 0.34<sup>^</sup>

B

8 12 32

33 112<sup>^</sup>8 8 43<sup>^</sup>5 -30<sup>^</sup>13 8 13<sup>^</sup>

35.6

146.8

227.4

318.2

111.2<sup>^</sup> + 0.38<sup>^</sup>90.8<sup>^</sup>202.0<sup>^</sup>158.0<sup>^</sup> + 0.42<sup>^</sup>Mean + 0.20<sup>^</sup>



Jan. 11, 1907.

B. 6.1182

8	23	13.5
8	24	13.5

B. 394

8	22	0.0
8	23	0.0

Reap. Jup. II Phot. H. H. Obs. Cove Rec.  
 Comp. with nearest Sat. (before eclipse) on same  
 fol. side = Sat. I. Comp. Sat is about  $\frac{3}{5}$  of  
 dia. of Jup. from limb

8		8	$\frac{35}{38}$	47		<i>Falszegalmu</i>
37	11 <sup>^</sup>		$\frac{35}{38}$	22		<i>Simp.</i>
37	16 <sup>^</sup>		$\frac{35}{38}$	27		<i>Deer</i>
37	56 <sup>^</sup>		39	7	+1.9 <sup>^</sup> 45.3 <sup>^</sup>	186.2
38	11 <sup>^</sup>		"	22	+1.7 <sup>^</sup> 49.5 <sup>^</sup>	231.5
38	21 <sup>^</sup>		"	32	+1.6 <sup>^</sup> 52.0 <sup>^</sup>	182.0
38	28 <sup>^</sup>		"	39	+1.4 <sup>^</sup> 54.5 <sup>^</sup>	234.0
38	36 <sup>^</sup>		"	47	+1.2 <sup>^</sup> 60.4 <sup>^</sup>	179.5
38	43 <sup>^</sup>		"	54	+1.1 <sup>^</sup> 63.0 <sup>^</sup>	239.9
38	51 <sup>^</sup>		40	2	+1.0 <sup>^</sup> 65.1 <sup>^</sup>	176.9
38	58 <sup>^</sup>		40	9	+0.7 <sup>^</sup> 70.9 <sup>^</sup>	242.0
39	6 <sup>^</sup>		"	17	+0.7 <sup>^</sup> 72.4 <sup>^</sup>	171.1
39	17 <sup>^</sup>		"	28	+0.6 <sup>^</sup> 73.5 <sup>^</sup>	243.5
39	25 <sup>^</sup>		"	36	+0.6 <sup>^</sup> 75.0 <sup>^</sup>	170.0

Jan. 11, 1907

8	39	33 <sup>^</sup> 8	40	44	+0.5 <sup>^</sup> 77.0 <sup>^</sup>	245.0	
	39	42 <sup>^</sup>	"	53	+0.4 <sup>^</sup> 79.0 <sup>^</sup>	168.0	
	39	48 <sup>^</sup>	"	59	+0.4 <sup>^</sup> 80.5 <sup>^</sup>	247.0	
	40	0 <sup>^</sup>	41	11	+0.3 <sup>^</sup> 81.5 <sup>^</sup>	166.5	
	40	10 <sup>^</sup>	"	21	+0.3 <sup>^</sup> 83.0 <sup>^</sup>	248.0	
	40	21 <sup>^</sup>	"	32	+0.2 <sup>^</sup> 86.0 <sup>^</sup>	165.0	
	40	28 <sup>^</sup>	"	39	+0.1 <sup>^</sup> 86.5 <sup>^</sup>	251.0	
	40	37 <sup>^</sup>	"	48	+0.1 <sup>^</sup> 88.0 <sup>^</sup>	164.5	
	40	51 <sup>^</sup>	42	2		252.5	
			"	12	90.0 <sup>^</sup>	163.0	→
8	42	26 <sup>^</sup>	"	21	91.0 <sup>^</sup>	253.0	
	-1	-11 <sup>^</sup>	"	30	181.0 <sup>^</sup>	162.0	
8	41	15 <sup>^</sup>	"	39	0.0 <sup>^</sup> 90.5 <sup>^</sup>	253.0	
			"	47		161.5	
8	42	58 <sup>^</sup>	"	53	91.0 <sup>^</sup>	252.5	
	-1	-11 <sup>^</sup>	43	3	89.9 <sup>^</sup>	163.0	2
8	41	47 <sup>^</sup>	"	11	180.9 <sup>^</sup>	252.9	
			"	19	0.0 <sup>^</sup> 90.4 <sup>^</sup>	162.5	
8	43	30 <sup>^</sup>	"	25	91.5 <sup>^</sup>	254.0	
	-1	-11 <sup>^</sup>	"	35	91.0 <sup>^</sup>	162.1	3
8	42	19 <sup>^</sup>	"	41	182.5 <sup>^</sup>	253.1	
			"	49	0.0 <sup>^</sup> 91.2 <sup>^</sup>	163.1	
8	44	10 <sup>^</sup>	44	4		253.2	
	-1	-11 <sup>^</sup>					
8	42	59 <sup>^</sup> 8	44	17	90.1 <sup>^</sup>	163.1	4
			"	28	89.4 <sup>^</sup>	252.5	
					179.5 <sup>^</sup>		
					0.0 <sup>^</sup> 89.8 <sup>^</sup>		

Moved images slightly



Jan. 11, 1907.

8	44	50	8	44	36	88.5	163.5
8	44	50	8	44	36	89.6	252.0
	-1	-11		53	6	178.1	162.4
8	43	39	45	16	35	89.0	252.0
8	45	38	46	1	42	88.5	163.0
	-1	-10		14	21	89.2	251.5
8	44	28		29	38	177.7	162.8
8	46	26	47	7	19	88.8	252.0
	-1	-10		45	13	90.4	161.6
8	45	16	49	27	43	89.9	252.0
8	47	1	50	0	0	180.3	162.0
	-1	-10				90.2	251.9
8	45	51				90.1	161.8
8	49	36				90.5	251.9
	-1	-10				180.6	162.0
8	48	26				90.3	252.5
8	49	36					
	-1	-10					
8	48	26					

There is another Sat. (or star) on same side  
about 3 diameters of Jup. away from limb  
There is still another Sat. (probably Sat. IV)

Jan. 11, 1907.

about 1 field of photometer away from Jup.  
 About the time Sat. II reap., the seeing near  
 the edge became somewhat blurry. It was suspected  
 about 5 sec. before it was actually seen. In general  
 the seeing was fairly good, although there were intervals  
 of somewhat blurry definition. The first actual  
 setting was delayed a little from necessary ready-  
 nstrument of images and especially from the fact  
 that sudden blurry seeing at that moment caused  
 the Sats. to become invisible for a few seconds.  
 For most of the time however, as mentioned above,  
 the seeing was fairly good.

B. 4 b. 1182

9	2	8.1
9	3	8.0

B. 394

9	1	0.0
9	2	0.0

In previous eclipse.

From  $2^h 31^m 15^s$  to  $2^h 32^m 16^s$  subtract  $1^m 12^s$   

2	32	16.	"	2	45	17.	"	1	11
2	45	17.	"	2	52	18.	"	1	10
2	52	18.	"	2	59	20.	"	1	9



Jan. 11, 1907

Double Star No. 67 (Barnard's List) Phot. C. H. Obs.

Savi Rec.

$$\begin{array}{r}
 7 \quad 28 \quad +32.0 \\
 4 \quad 58 \\
 2 \quad 30 \\
 9 \quad 30
 \end{array}$$

P.A.  $220^\circ$  Dist.  $3.4 \pm$  Magn.  $2. + 9.5^{10.0}$ 

Faint companion at P to baster at P.A.  $164^\circ$  Dist.  $73''$ ,  
 comp. with faint companion to baster at P.A.  $223^\circ$   
 Dist.  $207$

Red A.  
Index companion at  $223^\circ$  dis.

$$\begin{array}{r}
 51.9 \\
 180.4 \\
 241.0 \\
 349.2
 \end{array}
 \begin{array}{r}
 128.5^{\wedge} \\
 108.2^{\wedge} \\
 236.7^{\wedge} \\
 123.3^{\wedge}
 \end{array}
 \begin{array}{r}
 1.12^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 63.9 \\
 164.2 \\
 231.5 \\
 357.3
 \end{array}
 \begin{array}{r}
 100.3^{\wedge} \\
 125.8^{\wedge} \\
 226.1^{\wedge} \\
 133.9^{\wedge}
 \end{array}
 \begin{array}{r}
 1.01^{\wedge} \\
 0.90^{\wedge}
 \end{array}$$

Index L &amp; B

$$\begin{array}{r}
 320.3 \\
 87.4 \\
 156.5 \\
 253.1
 \end{array}
 \begin{array}{r}
 127.1^{\wedge} \\
 96.6^{\wedge} \\
 223.7^{\wedge} \\
 136.3^{\wedge}
 \end{array}
 \begin{array}{r}
 0.85^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 332.4 \\
 78.0 \\
 145.3 \\
 266.9
 \end{array}
 \begin{array}{r}
 105.6^{\wedge} \\
 121.6^{\wedge} \\
 227.2^{\wedge} \\
 132.8^{\wedge}
 \end{array}
 \begin{array}{r}
 0.88^{\wedge} \\
 0.92^{\wedge}
 \end{array}$$

Mean  $0.94^{\wedge}$ 

$$\begin{array}{r}
 9 \quad 54.6 \\
 9 \quad 3 \quad 6 \\
 9 \quad 46 \quad 33 \\
 5 \quad -30 \\
 14 \quad 46 \quad 3
 \end{array}$$

Jan. 11, 1907

Observations dif. on account of faintness  
of stars and brightness and proximity of  
Castor

For all observations made tonight except  
on Ishepher, W's watch used for times  
Watch 30 sec. fast.

7  
7  
5  
12



Jan. 16 1907 (Wednesday)

Double Star No. 81 (Bonstock's List) & 294 Phot. R  
H. Obs. Bowie Rec.

8	13	+43.7
3	18	
4	55	
7	5	

P.A. 170. Dist. 1.3 ± Magns 6.0 + 8.2.  
Index L & B. A.

3.0 North + brighter dis

37.0 6.2

174.0

227.5

33.2 <sup>^</sup>	
53.5 <sup>^</sup>	
86.7 <sup>^</sup>	2.00 <sup>^</sup>

354.4

43.8

180.9

215.8

49.4 <sup>^</sup>	
34.9 <sup>^</sup>	
84.3 <sup>^</sup>	2.07 <sup>^</sup>

2.04<sup>^</sup>

Index L & B. B.

272.6

306.0

83.3

132.4

33.4 <sup>^</sup>	
49.1 <sup>^</sup>	
82.5 <sup>^</sup>	2.12 <sup>^</sup>

262.8

317.0

91.4

126.0

54.2 <sup>^</sup>	
34.6 <sup>^</sup>	
88.8 <sup>^</sup>	1.95 <sup>^</sup>

2.04<sup>^</sup>

Mean 2.04<sup>^</sup>

7	38	30
7	69	64 <sup>^</sup>
5	34	62 <sup>^</sup>
		+53 <sup>^</sup>
12	35	55 <sup>^</sup>

Jan. 16, 1907

Double Star No. 92 (Barnard's List) 41 Lyncis A B.

$$\begin{array}{r}
 9 \quad 19 \quad + 46.2 \\
 3 \quad 49 \\
 \hline
 5 \quad 30 \\
 6 \quad 30
 \end{array}$$

P. A. 165 dist.  $1.2 \pm$  mag 6.0 48.0  
Index L A. B.

7 58 22

$$\begin{array}{r}
 269.7 \\
 301.7 \\
 81.1 \\
 129.5
 \end{array}
 \quad
 \begin{array}{r}
 32.0^{\wedge} \\
 48.4^{\wedge} \\
 \hline
 80.4^{\wedge} \quad 2.18^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 260.9 \\
 310.0 \\
 91.6 \\
 120.3
 \end{array}
 \quad
 \begin{array}{r}
 49.1^{\wedge} \\
 28.7^{\wedge} \\
 \hline
 77.8^{\wedge} \quad 2.26^{\wedge}
 \end{array}$$

Index R A. B. A.

$$\begin{array}{r}
 181.6 \\
 212.1 \\
 354.2 \\
 40.1
 \end{array}
 \quad
 \begin{array}{r}
 30.5^{\wedge} \\
 45.9^{\wedge} \\
 \hline
 76.4^{\wedge} \quad 2.30^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 8 \quad 6 \quad 40 \\
 15 \quad 64 \quad 62^{\wedge} \\
 7 \quad 62 \quad 31^{\wedge} \\
 5 \quad \quad +53^{\wedge} \\
 \hline
 13 \quad 3 \quad 24^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 171.0 \\
 224.8 \\
 1.0 \\
 29.7
 \end{array}
 \quad
 \begin{array}{r}
 53.8^{\wedge} \\
 28.7^{\wedge} \\
 \hline
 82.5^{\wedge} \quad 2.12^{\wedge}
 \end{array}$$

Oring<sup>to</sup> homogeneous but somewhat dense  
clouds companion B which is fainter, cannot  
be measured.

Mean 2.22<sup>^</sup>



Jan. 16, 1907.

Double Star No 102 (Cassiopeia's List)  $\sigma$  377.

11 0 +68.0 Phot. R. H. Obs. Grave Rec.

4	30
6	30
5	30

South preceding component assumed to  
be slightly ~~the~~ brighter P.A.  $50^\circ$  Dist 1.1 mag.  $8.0 + 8.3$   
Index ~~R.A.~~ <sup>+ prec</sup> Southern brighter dis.

8 43 49

243.8	
324.8	81.0 <sup>^</sup>
62.2	82.0 <sup>^</sup>
144.2	163.0 <sup>^</sup> 0.32 <sup>^</sup>

243.9		0.28 <sup>^</sup>
324.4	80.5 <sup>^</sup>	
60.0	86.9 <sup>^</sup>	
146.9	167.4 <sup>^</sup> 0.24 <sup>^</sup>	

Index L &amp; B B.

150.4	
238.4	88.0 <sup>^</sup>
334.0	77.8 <sup>^</sup>
51.8	165.8 <sup>^</sup> 0.27 <sup>^</sup>

154.3		0.18 <sup>^</sup>
235.1	80.8 <sup>^</sup>	
325.1	94.8 <sup>^</sup>	
59.9	175.6 <sup>^</sup> 0.08 <sup>^</sup>	

8	53	52
	96	101
8	48	50
5		+53
13	49	43

Mean 0.23<sup>^</sup>~~Somewhat~~ Troubled in all the preceding

Jan. 16, 1907

observations by some clouds and haze as well as some blurry seeing. The cloud in general was of a feathery and rather uniform character. More troubled however in last group by a more definite cloud. Sky now becoming too cloudy for anything further. Storm coming. Temperature rather low, the thermometer reading about  $+10^{\circ}$ . The barometer high on front edge of storm.

It's watch used for times tonight.  
Watch 53 sec slow.



Jan. 20. 1907 (Sunday).

Double Star No. 41 (Constock's List) + 294. H. ob.  
H. rap.

$$\begin{array}{r} 2 \quad 13 \\ 3 \quad 0 \\ \hline - \sqrt{\quad} \quad 13 \\ 6 \quad 47 \end{array}$$

P. A. 165°. Dist. 1.3 ±. Magn. 6.0, A. 1.

Index L. + A. B.

$$273.2$$

$$305.2$$

$$24.6$$

$$134.1$$

$$32.0^{\wedge}$$

$$49.5^{\wedge}$$

$$\frac{81.5^{\wedge}}{2.15^{\wedge}}$$

$$2.15^{\wedge}$$

$$263.7$$

$$312.5$$

$$90.0$$

$$125.5$$

$$54.8^{\wedge}$$

$$34.7^{\wedge}$$

$$\frac{89.5^{\wedge}}{1.93^{\wedge}}$$

$$1.93^{\wedge}$$

$$2.04^{\wedge}$$

Index R + B. A.

$$3.6$$

$$37.1$$

$$174.5$$

$$226.5$$

$$33.5^{\wedge}$$

$$52.0^{\wedge}$$

$$\frac{85.5^{\wedge}}{2.04^{\wedge}}$$

$$2.04^{\wedge}$$

$$355.0$$

$$44.0$$

$$121.5$$

$$217.0$$

$$49.0^{\wedge}$$

$$35.5^{\wedge}$$

$$\frac{84.5^{\wedge}}{2.06^{\wedge}}$$

$$2.06^{\wedge}$$

$$2.05^{\wedge}$$

$$\text{Mean } 2.04^{\wedge}$$

$$\begin{array}{r} 7 \quad 100 \\ \hline 13 \quad 73 \\ 6 \quad 66 \quad 30^{\wedge} \\ 5 \quad -58^{\wedge} \\ \hline 12 \quad 5 \quad 32^{\wedge} \end{array}$$

Jan. 20. 1907.

Double Star No. 102 (Comstock's List.) - 377.

H. Str.  
H. rec.

11 0 +62.0

3 ~~75~~

---

7 25

4 ~~75~~South proc. comp. the stars.  
P.A. 60°. Dist. 1.1, mag. 2.0, 24.  
Index  $\frac{1}{2}$  + B. B.

154.0

236.6

324.5

60.0

$$\begin{array}{r} 82.6^{\wedge} \\ 95.5^{\wedge} \\ \hline 178.1^{\wedge} \end{array}$$
0.03<sup>^</sup>

151.2

234.0

333.2

50.9

Index A. + d. d.

243.1

324.0

59.2

144.0

$$\begin{array}{r} 86.8^{\wedge} \\ 77.7^{\wedge} \\ \hline 164.5^{\wedge} \end{array}$$
0.29<sup>^</sup>

$$\begin{array}{r} 80.9^{\wedge} \\ 84.8^{\wedge} \\ \hline 165.7^{\wedge} \end{array}$$
0.27<sup>^</sup>

242.4

323.9

61.3

141.5

$$\begin{array}{r} 81.5^{\wedge} \\ 80.2^{\wedge} \\ \hline 161.7^{\wedge} \end{array}$$
0.35<sup>^</sup>0.31<sup>^</sup>Mean 0.24<sup>^</sup>

7	46
7	75
5	37
12	36
	32
	30
	-58



Jan. 20, 1907

Double Star No. 92 (Comstock's List) 41 Lynce's, A.B.

$$\begin{array}{r} 9 \quad 19 \\ 14 \quad 5 \\ \hline -5 \quad 14 \\ 6 \quad 46 \end{array} + 46.2$$

P. A. 170°. Dist.  $1.2 \pm$ , mag. 6.0, 2.2.

Index R. &amp; B. A.

$$\begin{array}{r} 176.0 \\ 225.2 \\ 1.4 \\ \hline 30.0 \end{array}$$

$$\begin{array}{r} 49.2^{\wedge} \\ 28.6^{\wedge} \\ \hline 77.8^{\wedge} \end{array} \quad 2.26^{\wedge}$$

$$120.0$$

$$2.28^{\wedge}$$

$$213.0$$

$$33.0^{\wedge}$$

$$356.6$$

$$43.4^{\wedge}$$

$$40.0$$

$$\begin{array}{r} 76.4^{\wedge} \\ \hline \end{array} \quad 2.30^{\wedge}$$

Index L. &amp; A. B.

$$262.1$$

$$311.1$$

$$491.5$$

$$120.0$$

$$49.0^{\wedge}$$

$$28.5^{\wedge}$$

$$\begin{array}{r} 77.5^{\wedge} \\ \hline \end{array} \quad 2.27^{\wedge}$$

$$270.0$$

$$2.26^{\wedge}$$

$$302.2$$

$$32.2^{\wedge}$$

$$45.7^{\wedge}$$

$$82.2$$

$$77.9^{\wedge}$$

$$2.26^{\wedge} \quad \text{Mean } 2.27^{\wedge}$$

$$120.5$$

A	20
15	78
7	69
5	-58
13	8

Troubled by clouds in last group, and stopped by clouds.

Jan. 20. 1907.

W's watch used for trans.  
Watch 52. sec. slow.



Jan. 21, 1907 (Monday)

B. & b. 1182

b 10 40.5  
b 11 40.5

B. 394

b 10 0.0  
b 11 0.0

Leap. Jup. I Phot. H. H. Obs. Jovian Rec.  
comp. with only Sat. (before eclipse) on same fol.  
side = Sat. III.

6	37	5 <sup>6</sup>	37	43	Seen
	37	10 <sup>^</sup>	37	48	" better
	37	13 <sup>^</sup>		51	" " still
	37	32 <sup>^</sup>	38	10	+1.1 <sup>^</sup> 63.0 <sup>^</sup> 154.0
	37	44 <sup>^</sup>	"	21	+0.9 <sup>^</sup> 66.2 <sup>^</sup> 217.0
	37	54 <sup>^</sup>	"	31	+0.8 <sup>^</sup> 68.7 <sup>^</sup> 150.8
	38	5 <sup>^</sup>	"	42	+0.7 <sup>^</sup> 72.0 <sup>^</sup> 219.5
	38	16 <sup>^</sup>	"	53	+0.6 <sup>^</sup> 73.5 <sup>^</sup> 147.5
	38	28 <sup>^</sup>	39	5	+0.5 <sup>^</sup> 78.0 <sup>^</sup> 221.0
	38	35 <sup>^</sup>	"	12	+0.3 <sup>^</sup> 82.0 <sup>^</sup> 143.0
	38	43 <sup>^</sup>	"	20	+0.3 <sup>^</sup> 82.5 <sup>^</sup> 225.0

Jan. 21, 1907

6	38	59 <sup>6</sup>	39	36	+0.3 <sup>81.0</sup>	142.5	
	39	10 <sup>^</sup>		47	+0.3 <sup>81.9</sup>	223.5	
<i>Moved comp. Sat. slightly in field.</i>							
	39	25 <sup>6</sup>	40	2	+0.2 <sup>83.9</sup>	141.6	
	39	36 <sup>^</sup>		13	+0.2 <sup>84.0</sup>	225.5	
	39	50 <sup>^</sup>		27	+0.2 <sup>85.0</sup>	142.5	
	40	3 <sup>^</sup>		40	+0.2 <sup>84.0</sup>	226.5	
	40	19 <sup>^</sup>		56	+0.1 <sup>86.1</sup>	142.5	
	40	30 <sup>^</sup>	41	7		228.6	
<hr/>							
				19	89.5 <sup>^</sup>	141.0	
				28	88.0 <sup>^</sup>	230.5	
				39	177.5 <sup>^</sup>		
				52	0.0 <sup>88.8</sup>	141.0	
						229.0	
<hr/>							
			42	8	88.4 <sup>^</sup>	140.1	
				19	87.3 <sup>^</sup>	228.5	
				43	175.7 <sup>^</sup>	142.0	
				53	+0.1 <sup>87.8</sup>	229.3	
<hr/>							
			43	4	86.5 <sup>^</sup>	141.5	
				26	86.2 <sup>^</sup>	228.0	
				34	172.7 <sup>^</sup>	142.3	
				45	+0.1 <sup>86.4</sup>	228.5	
<hr/>							
				57	87.3 <sup>^</sup>	141.2	
				18	85.2 <sup>^</sup>	228.5	
				38	172.5 <sup>^</sup>	142.8	
				50	+0.1 <sup>86.2</sup>	228.0	
<hr/>							
6	41	34 <sup>^</sup>					
		-37 <sup>^</sup>					
6	40	57 <sup>^</sup>					
6	42	31 <sup>^</sup>					
		-37 <sup>^</sup>					
6	41	54 <sup>^</sup>					
6	43	27 <sup>^</sup>					
		-37 <sup>^</sup>					
6	42	50 <sup>^</sup>					
6	44	26 <sup>6</sup>					
		-37 <sup>^</sup>					
6	43	49 <sup>^</sup>					



Jan. 21, 1907.

6	45	20 <sup>^</sup>	6	45	5	86.7 <sup>^</sup>	141.8	
		-37 <sup>^</sup>			15	87.1 <sup>^</sup>	228.5	✓
6	44	43 <sup>^</sup>			26	173.8 <sup>^</sup>	141.3	
					34	+0.1 <sup>^</sup> 86.9 <sup>^</sup>	228.4	
					54			
6	46	16 <sup>^</sup>	46		12	87.7 <sup>^</sup>	141.0	
		-37 <sup>^</sup>			23	87.5 <sup>^</sup>	228.7	6
6	45	39 <sup>^</sup>			36	175.2 <sup>^</sup>	141.5	
					50	+0.1 <sup>^</sup> 87.6 <sup>^</sup>	229.50	
6	47	10 <sup>^</sup>	47		1	87.9 <sup>^</sup>	141.0	
		-36 <sup>^</sup>			17	87.9 <sup>^</sup>	228.9	
6	46	34 <sup>^</sup>			30	175.8 <sup>^</sup>	141.1	7
					58	+0.1 <sup>^</sup> 87.9 <sup>^</sup>	229.0	
			brunt →					
6	49	23 <sup>^</sup>	48		13	86.5 <sup>^</sup>	141.5	
		-36 <sup>^</sup>	49		35	86.0 <sup>^</sup>	228.0	
6	48	47 <sup>^</sup>	"		47	172.5 <sup>^</sup>	142.0	8
			"			+0.1 <sup>^</sup> 86.2 <sup>^</sup>	228.0	
6	53	21 <sup>^</sup>	52		47		166.0	
		-36 <sup>^</sup>	53		6	44.0 <sup>^</sup>	210.0	
6	52	45 <sup>^</sup>	"		39	50.3 <sup>^</sup>	164.1	
			"		53	94.3 <sup>^</sup>	214.4	
						+1.8 <sup>^</sup> 47.2 <sup>^</sup>		

Limit of Vis.

Seeing a little blurry throughout. Barometer rising after storm, and air growing rather cold. At intervals seeing pretty blurry, causing some delay in settings, - at other times seeing fairly good. Use Sat. I

Jan. 21, 1907

B &amp; b 1182

		<del>45</del>
6	58	35.2
6	59	35.0

B 394

6	57	0.0
6	58	0.0
6	59	0.0

reap. moderately near limb of Jup. a little delay was caused in first setting by somewhat blurry seeing at that time. Eclipse however considered pretty good

In free. eclipse:

From	6h 11m 40s.	to	6h 20m 32	subtract	40 sec.
6	20 32.	"	6 29 23	"	39 "
6	29 23.	"	6 32 14	"	32 "
6	32 14.	"	6 47 5	"	37 "
6	47 5.	"	6 55 56	"	36 "

o betis Phot. R. & Obs. Lowie Rec. 75

2	12	-3.6
3	37	
1	25	

Measurements on fol. page.



Jan. 21, 1907

Index Left

7 56 20

$$\begin{array}{r}
 3.6 \text{ var. dis} \\
 9.4 \\
 184.1 \\
 190.0 \\
 \hline
 5.8^{\wedge} \\
 5.9^{\wedge} \\
 11.7^{\wedge} - 6.46^{\wedge} \quad \textcircled{B}
 \end{array}$$

$$\begin{array}{r}
 3.3 \\
 10.0 \\
 184.9 \\
 189.0 \\
 \hline
 6.7^{\wedge} \\
 4.1^{\wedge} \\
 10.8^{\wedge} - 6.63^{\wedge} \quad -6.54^{\wedge}
 \end{array}$$

Index Right

$$\begin{array}{r}
 273.6 \\
 279.2 \\
 93.2 \\
 101.5 \\
 \hline
 5.6^{\wedge} \\
 8.3^{\wedge} \\
 13.9^{\wedge} - 6.08^{\wedge} \quad \textcircled{A}
 \end{array}$$

$$\begin{array}{r}
 273.0 \\
 280.4 \\
 94.0 \\
 100.0 \\
 \hline
 7.4^{\wedge} \\
 6.0^{\wedge} \\
 13.4^{\wedge} - 6.16^{\wedge} \quad -6.12^{\wedge}
 \end{array}$$

Means  $-6.33^{\wedge}$ 

8	3	54	
15	59	74	$^{\wedge}$
7	59	67	$^{\wedge}$
5		-60	$^{\wedge}$
12	59	7	$^{\wedge}$

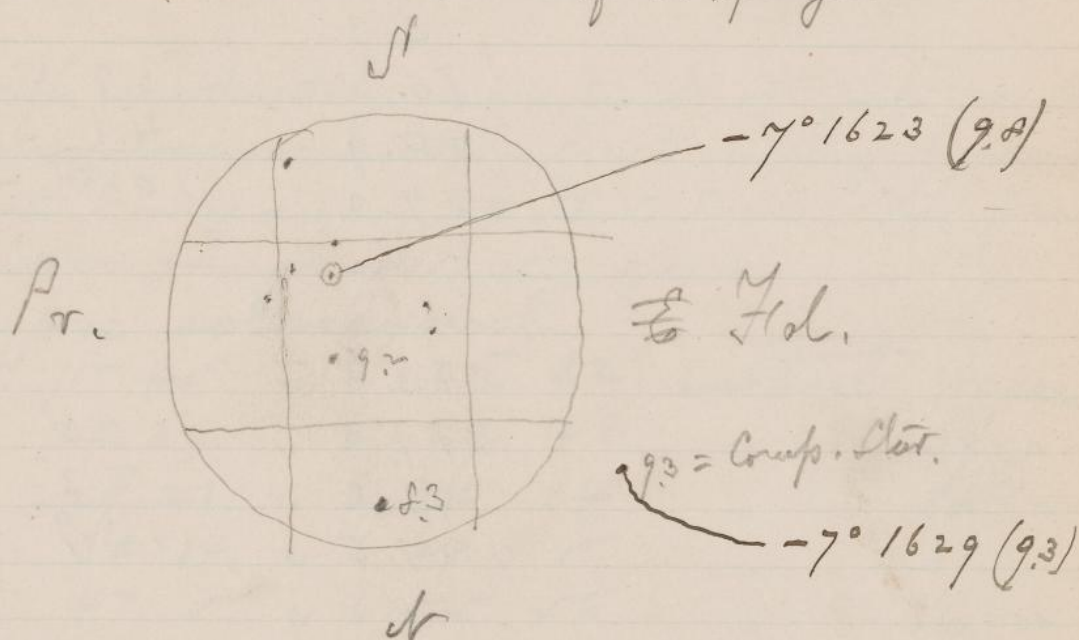
7597.5411

Jan. 21, 1907.

R U Monocerotis Phot. J. H. Obs. Bowie Rec.

6	50	-8.0
4	55	
1	55	
10	5	

Measurements on fol. page.



Comp. Star = -7° 1629 (9.3)



Jan. 21, 1907

Index LxH

9 14 16

322.7 ← comp. Star dis.  
 38.0 75.3<sup>^</sup>  
 153.5 56.5<sup>^</sup>  
 210.0 131.8<sup>^</sup> + 0.94<sup>^</sup>

A

334.1 +0.98<sup>^</sup>  
 28.0 53.9<sup>^</sup>  
 144.4 74.0<sup>^</sup>  
 218.4 127.9<sup>^</sup> + 1.02<sup>^</sup>

Index LxB

231.9  
 310.5 78.6<sup>^</sup>  
 61.0 62.0<sup>^</sup>  
 123.0 140.6<sup>^</sup> + 0.76<sup>^</sup>

B

239.0 +0.68<sup>^</sup>  
 303.2 64.2<sup>^</sup>  
 48.3 85.2<sup>^</sup>  
 133.5 149.4<sup>^</sup> + 0.59<sup>^</sup>

9 25 0

39 16<sup>^</sup>9 19 38<sup>^</sup>5 -60<sup>^</sup>14 18 38<sup>^</sup>L.J. 5<sup>h</sup> 52<sup>m</sup>

H.C. -1 0

7597.5962

Dec. -8.0

P.A. 240.5 Var B

Sprockets -2.5 B

" -1.5 b

Obs. a little diff. on account  
 of moonlight and faintness  
 of star. Var. looks perceptibly brighter  
 when in one prism than when in the other, from  
 unequal sizing of two prisms

Mean +0.83<sup>^</sup>

Jan. 21, 1907

Fourth Type Star -  $1^{\circ}23'12''$  Phot. 3 Hr. Obs. Lowie Rec

$$\begin{array}{r} 9 \quad 33 \quad -0.5 \\ 6 \quad 13 \\ \hline 3 \quad 20 \\ 8 \quad 40 \end{array}$$

Index R &amp; A

157.5  $\leftarrow$  comp. Star dis.

204.4

342.5

22.0

46.9<sup>^</sup>39.5<sup>^</sup>86.4<sup>^</sup>+2.01<sup>^</sup>

A

162.8

+2.02<sup>^</sup>

201.8

339.3

26.2

39.0<sup>^</sup>46.9<sup>^</sup>85.9<sup>^</sup>+2.03<sup>^</sup>

Index L &amp; B

63.5

119.0

252.8

291.2

55.5<sup>^</sup>38.4<sup>^</sup>93.9<sup>^</sup>+1.81<sup>^</sup>

B

72.0

+1.78<sup>^</sup>

113.0

244.0

299.0

41.0<sup>^</sup>55.0<sup>^</sup>96.0<sup>^</sup>+1.76<sup>^</sup>

Mean +1.90

7597.6339



Jan. 21, 1907

S.I.  $6^h$   $42^m$   
 H. A. - 3 5  
 Dec. - 2.0  
 P. A. 211.0 Ver B  
 Sprocket - 0.5 B  
 " + 0.5 b

H's watch used for times tonight.  
 Hatch 60 sec. slow

Jan. 22, 1907 (Tuesday)

o beti	Phot	W. Obs. Bowie Rec
2	12	-3.6
5	40	
3	28	

Abandoned. Region too low <sup>and</sup> sky too impure with cloud remaining from storm

Fourth Type Star  $+59^{\circ}28'10''$  Phot. 3 W. Obs. Bowie Rec

o	1	+58.3
6	1	
6	0	

color 6 in ordinary eye piece  
" " " Phot.

Full aperture used



Jan. 22, 1907

Index Right

10 5 0

319.6	4th type dis	
42.4	82.8 <sup>^</sup>	
150.6	61.3 <sup>^</sup>	
211.9	144.1 <sup>^</sup>	-0.69 <sup>^</sup> A

331.5		-0.68 <sup>^</sup>
33.98	62.3 <sup>^</sup>	
140.9	82.4 <sup>^</sup>	
223.3	144.7 <sup>^</sup>	-0.68 <sup>^</sup>

Index Left

232.3		
312.53.0	80.7 <sup>^</sup>	
58.8	62.2 <sup>^</sup>	
121.0	142.9 <sup>^</sup>	-0.72 <sup>^</sup> B

10 23 23	233.0	237.4	-0.72 <sup>^</sup>
<del>10 13 40</del>	310.9	305.5	
10 28 23 <sup>^</sup>	59.3	46.5	
14 12 <sup>^</sup>	123.4	133.1	
5 +1 +15 <sup>^</sup>			77.9 <sup>^</sup>
			64.1 <sup>^</sup>
			142.0 <sup>^</sup> -0.73 <sup>^</sup>

15 15 27 2.3. + 6<sup>h</sup> 45<sup>m</sup>

H.A. + 6 43

7598.6357 Dec + 60.0

P.A. 78.1 Ver B

Sprockets - 0.5 B

" + 0.5 b

Mean -0.70<sup>^</sup>

Fourth set retaken as images got out to side of field and seeing was bad at times. Seeing improved and images put in centre of field

Jan. 22, 1907.

Fourth Type Star  $+14^{\circ}1283$  Phot. 3 H. Obs. Error Dec.

$$\begin{array}{r}
 6 \quad 17 \quad +14.8 \quad 9.5 \text{ cap. used.} \\
 6 \quad 57 \\
 \hline
 40
 \end{array}$$

Index Right

11 5 36

$$\begin{array}{r}
 47.9 \leftarrow 4^{\text{th}} \text{ type dis.} \quad A \\
 133.7 \quad 85.8^{\wedge} \\
 235.5 \quad 68.5^{\wedge} \\
 \hline
 304.0 \quad 154.3^{\wedge} -0.49^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 57.9 \quad -0.49^{\wedge} \\
 125.7 \quad 67.8^{\wedge} \\
 227.0 \quad 86.4^{\wedge} \\
 \hline
 313.4 \quad 154.2^{\wedge} -0.49^{\wedge}
 \end{array}$$

Index Left

$$\begin{array}{r}
 321.1 \\
 42.5 \quad 81.4^{\wedge} \quad B \\
 148.0 \quad 65.6^{\wedge} \\
 \hline
 213.6 \quad 147.0^{\wedge} -0.63^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 327.4 \quad -0.61 \\
 33.6 \quad 66.2^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 137.0 \quad 83.0^{\wedge} \\
 225.4 \quad 0.0 \quad 149.2^{\wedge} -0.59^{\wedge}
 \end{array}$$

Mean  $-0.55^{\wedge}$ 

$$\begin{array}{r}
 11 \quad 13 \quad 30 \\
 \hline
 11 \quad 18 \quad 66^{\wedge} \\
 11 \quad 9 \quad 33^{\wedge} \\
 5 \quad +1 \quad +15^{\wedge} \\
 \hline
 16 \quad 10 \quad 48^{\wedge}
 \end{array}$$

$$7598.6742$$



Jan. 22, 1907.

S.J. 7 37  
 H.A. +1 23  
 Dec. +15.1  
 P.A. 23.5  $\frac{1}{2}$   $\frac{1}{2}$   
 Sprockets - 5.5  $\frac{1}{2}$   
 " - 4.5  $\frac{1}{2}$

It's watch used for times tonight  
 Watch 1 m. 15 sec. slow

Jan. 23, 1907 (Wednesday)

R. S. Sapphei Phot. J. St. Obs. Bowie Rec

4 3.4 +81.0

3 54

Full aperture used

0 40

11 20

Index Right

224.9 ← comp. Star dis

314.7

89.8<sup>uv</sup>

54.0

72.5<sup>uv</sup>

126.5

162.3<sup>uv</sup> + 0.34<sup>uv</sup>

239.1

+0.34<sup>uv</sup>

306.0

66.9<sup>uv</sup>

43.2

94.8<sup>uv</sup>

138.0

161.7<sup>uv</sup> + 0.35<sup>uv</sup>

Index Left

136.9

226.1

326.6

37.0

89.2<sup>uv</sup>

70.4<sup>uv</sup>

159.6<sup>uv</sup> + 0.39<sup>uv</sup>

141.3

+0.35<sup>uv</sup>

214.9

73.6<sup>uv</sup>

316.0

90.2<sup>uv</sup>

46.2

163.8<sup>uv</sup> + 0.31<sup>uv</sup>

Mean + 0.34<sup>uv</sup>

8 3 30

15 50 75<sup>uv</sup>

7 55 38<sup>uv</sup>

5 +1 +45<sup>uv</sup>

12 5.7 23<sup>uv</sup>

7599.5399<sup>uv</sup>



Jan. 23, 1907

S. J.  $4^h$   $40^m$

H. A. - 0 10

Dec + 79.8

P. A. 7.5 Ver B

Sprocket -1.5 A

" -0.5 B

" 0.0 B

Seeing a little poor. Moon a little past the quarter. Telescope very close to pier and var., though faint, about up to full brightness, so that it is not considered desirable to take another group.

Fourth Superstar  $+70^\circ 644$  Phot. J. H. Obs. Louie Res.

10 52 + 70.8

5	7
5	4 5
6	1 5

Full aperture used

Color 2 in ordinary eyepiece  
color estimate dif. on account of rather blurry seeing  
at that present moment

Jan. 23, 1907

Index Red

8 55 35

1	38.9	← compr. star dis	
2	23.7	84.8 <sup>^</sup>	A
3	31.2	62.6 <sup>^</sup>	
	33.8	147.4 <sup>^</sup> + 0.63 <sup>^</sup>	

1	50.2		+0.64 <sup>^</sup>
2	13.0	62.8 <sup>^</sup>	
3	20.5	83.7 <sup>^</sup>	
	44.2	146.5 <sup>^</sup> + 0.64 <sup>^</sup>	

Index L &amp; B

	45.8		
1	37.5	91.7 <sup>^</sup>	B
2	39.0	66.0 <sup>^</sup>	
3	05.0	157.7 <sup>^</sup> + 0.43 <sup>^</sup>	

	57.4		+0.48 <sup>^</sup>
1	25.8	68.4 <sup>^</sup>	
2	29.3	84.3 <sup>^</sup>	
3	13.6	152.7 <sup>^</sup> + 0.52 <sup>^</sup>	

9	5	10
17	60	45 <sup>^</sup>
8	60	22 <sup>^</sup>
5	+1	+45 <sup>^</sup>
14	2	7 <sup>^</sup>

7599.5848

8.3	5 <sup>h</sup>	39 <sup>m</sup>
H.A. - 5		15

Dec +69.4

P.A. 155.0

Sprocket -4.5 B

" -3.5 b

Mean +0.56<sup>^</sup>



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Fourth Type Star +2° 17' 15" Phot. J. H. Obs. Bowie Res

$$\begin{array}{r}
 7 \quad 26 \quad +3.6 \\
 6 \quad 1 \\
 \hline
 1 \quad 25 \\
 10 \quad 35
 \end{array}$$

Full aperture used.

Index Q + A

Q

325.0 ← Comp. Star dis.

40.0

152.2

207.9

75.0<sup>^</sup>55.7<sup>^</sup>130.7<sup>^</sup> + 0.96<sup>^</sup>

335.1

29.0

142.0

218.2

53.9<sup>^</sup>76.2<sup>^</sup>130.1<sup>^</sup> + 0.98<sup>^</sup>+ 0.97<sup>^</sup>

Index L + B

231.4

311.6

60.5

120.1

80.2<sup>^</sup>59.6<sup>^</sup>139.8<sup>^</sup> + 0.78<sup>^</sup>

240.5

302.4

50.0

133.0

+ 0.73<sup>^</sup>61.9<sup>^</sup>83.0<sup>^</sup>144.9<sup>^</sup> + 0.68<sup>^</sup>Mean + 0.85<sup>^</sup>

$$\begin{array}{r}
 10 \quad 15 \quad 2 \\
 \hline
 15 \quad 40 \quad ^ \\
 10 \quad 7 \quad 50 \quad ^ \\
 5 \quad +1 \quad +45 \quad ^ \\
 \hline
 15 \quad 9 \quad 35 \quad ^
 \end{array}$$

7599.6316

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S.J. 6<sup>h</sup> 49<sup>m</sup>

H.A. -0 42

Dec. +1.8

P.A. 207.0 Ver. B

Sprocket -1.5 B

" -0.5 b

Fourth Type Star +38° 2389 Phot 3 H. Ab. Bowie Rec

12 49 +39.1

7	14
<hr/>	

5	35
---	----

6	25
---	----

Full aperture used.

Measurements on fol. page



Jan. 23, 1907

Index Q & A Var. dis.  
~~Comp. Star dis.~~

11 2 20

146.8  
217.4  
334.0  
28.270.6<sup>^</sup>  
54.2<sup>^</sup>  
124.8<sup>^</sup>  $\bar{E} 1.09^{\wedge}$ 

A

154.8  
207.0  
326.9  
34.852.2<sup>^</sup>  
67.9<sup>^</sup>  
120.1<sup>^</sup>  $\bar{E} 1.19^{\wedge}$  $\bar{E} 1.14^{\wedge}$ 

Index L &amp; B

52.5  
126.6  
241.4  
299.574.1<sup>^</sup>  
58.1<sup>^</sup>  
132.2<sup>^</sup>  $\bar{E} 0.93^{\wedge}$ 

B

60.5

 $\bar{E} 0.88^{\wedge}$ 

11 10 54

121.4

60.9<sup>^</sup>

11 12 74

231.4

77.0<sup>^</sup>

11 6 3.7

308.4

137.9<sup>^</sup>  $\bar{E} 0.82^{\wedge}$ 

5 +1 +45

16 8 22

L. J. 7<sup>h</sup> 42<sup>m</sup>Mean  $\bar{E} 1.01^{\wedge}$ 

7599.6725

H. A. -5 10

Dec +37.5

P. A. 204.0 Var B

Sprockets -3.5 B

-2.5 b

It's watch used for times tonight  
 Watch 1 m. 45 sec. slow  
 Comp. Star accidentally recorded as  
 disappearing, but H. remembers perfectly  
 that the K type was the bot. and that he made it  
 disappear.

Jan. 24, 1907 (Thursday)

S. b. 1182

4.5

5      2      4.5  
5      3      4.4

S. 394

~~4      59      0.0~~  
~~5      00      0.0~~

5      2      0.0  
5      3      0.0

Dis. Jup. IV Phot. K. K. Obs. Bowie Res  
comp. with nearest of three Sats. on preceding  
side = Sat. I

5	26	54		235.7
5	27	59		235.2
5	28	19		302.0
5	28	34		233.0
		47		300.5
	29	17	+0.9 <sup>^</sup>	233.0
		52		304.8
	30	10		232.0
		29		72.3 <sup>^</sup>
			+0.7 <sup>^</sup>	72.3 <sup>^</sup>

5	28	36 <sup>^</sup>		
		-2 <sup>^</sup>		
5	28	34 <sup>^</sup>		

5	30	20 <sup>^</sup>		
		-2 <sup>^</sup>		
5	30	18 <sup>^</sup>		

66.8 <sup>^</sup>	
67.5 <sup>^</sup>	
134.3 <sup>^</sup>	
67.2 <sup>^</sup>	
71.8 <sup>^</sup>	
72.5 <sup>^</sup>	
144.6 <sup>^</sup>	
72.3 <sup>^</sup>	



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5			30	48		304.8	2
5			31	30		232.5	
5			31	48	72.6^	305.1	
5			32	8	70.6^	232.8	3
5				28	143.2^	303.4	
5				45	+0.7^ 71.6^	233.1	
5			33	10	70.9^	304.0	
5			33	32	70.5^	232.0	4
5				47	141.4^	302.5	
5			34	5	+0.7^ 70.7^	231.0	
5				20		304.8	
5				35	73.8^	232.2	✓
5				50	72.8^	305.0	
5			35	46	146.6^	231.1	
5			36	1	+0.6^ 73.3^	304.5	
5				31		230.5	6
5				53	73.4^	303.0	
5			37	21	72.5^	230.0	
5				39	145.9^	304.0	
5			38	8	+0.7^ 73.0^	229.5	7
5				56		305.5	
5			39	24	74.0^	231.8	
5				41	76.0^	305.0	
5			40	58	150.0^	230.9	A
5			41	16	+0.6^ 75.0^	230.0	
5						305.5	

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5	42	9	5	41	32	73.9 <sup>^</sup>	230.1	
5	42	9	5	"	48	76.5 <sup>^</sup>	304.0	9
				42	29	150.4 <sup>^</sup>	229.0	
				"	48	+0.6 75.2 <sup>^</sup>	306.5.5	
				43	15		229.5	
5	43	55	5	"	37	76.5 <sup>^</sup>	306.50	10
5	43	55	5	44	9	76.5 <sup>^</sup>	230.0	
				"	39	+0.5 153.0 <sup>^</sup>	306.5	
				45	10		230.0	
5	45	45	5	"	34	76.1 <sup>^</sup>	306.1	11
5	45	45	5	"	54	75.9 <sup>^</sup>	229.1	
				46	22	+0.5 152.0 <sup>^</sup>	305.0	
				"	41		230.1	
5	47	9	5	"	57	76.9 <sup>^</sup>	307.0	12
5	47	9	5	47	17	75.0 <sup>^</sup>	229.0	
				"	41	+0.5 151.9 <sup>^</sup>	304.0	
				48	1		229.0	
5	48	34	5	"	26	76.2 <sup>^</sup>	305.2	13
5	48	34	5	"	44	74.9 <sup>^</sup>	230.0	
				49	5	+0.6 151.1 <sup>^</sup>	304.9	
				50	7	75.6 <sup>^</sup>	230.5	
5	50	32	5	"	27	75.4 <sup>^</sup>	305.9	14
5	50	32	5	"	37	74.0 <sup>^</sup>	230.50	
				"	55	+0.6 149.4 <sup>^</sup>	304.0	
				51	38		231.0	
5	52	7	5	52	2	72.8 <sup>^</sup>	303.8	
5	52	8	5			73.0 <sup>^</sup>		
						+0.7 145.8 <sup>^</sup>		
						72.9 <sup>^</sup>		



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5	52	16		231.0	15
	"	31		304.0	
		55		75.1^ 230.0	
5	53	13		76.5^ 305.1	
		41		151.6^ 229.5	16
5	53	5	+0.5^	75.8^ 306.0	
		22		75.3^ 230.2	
5	54	43		73.7^ 305.5	
		6		149.0^ 230.5	17
5	54	27	+0.6^	74.5^ 304.2	
		55		75.5^ 231.0	
5	56	15		75.4^ 306.5	
		33		150.9^ 231.1	18
5	56	48	+0.6^	75.4^ 307.0 6.5	
		57		73.5^ 231.0	
5	57	45		76.2^ 304.5	
		11		149.7^ 229.8	19
5	57	31	+0.6^	74.8^ 306.0	
		58		74.9^ 229.0	
5	59	16		75.9^ 303.9	
		30		150.8^ 229.6	20
5	59	54	+0.6^	75.4^ 306.5	
		0		305.5	
6	1	14		75.5^ 229.5	
		30		75.8^ 305.0	
6	1	55		151.3^ 229.0	21
		6	+0.6^	75.6^	

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6	2	24	^	6
		+2	^	
6	2	26	^	
6	3	50	^	
		+2	^	
6	3	52	^	
6	4	56	^	
		+2	^	
6	4	58	^	
6	7	24	^	
		+2	^	
6	7	26	^	
6	9	10	^	
		2	^	
6	9	12	^	
6	11	23	^	
		+3	^	
6	11	26	^	

1	36		304.8	
"	53		74.4^	229.1
2	10		71.0^	303.5
"	34		145.4^	232.5
3	0	+0.7^	72.7^	303.5
"	27			232.0
"	39		71.5^	303.5
4	0		72.0^	232.5
"	16	+0.7^	143.5^	304.5
"	31		70.4^	233.7
"	48		68.1^	304.1
5	4		138.5^	233.7
"	23	+0.8^	69.2^	301.8
6	49		68.0^	233.5
7	7		68.2^	301.5
"	25		136.2^	233.8
8	17	+0.9^	68.1^	301.5
"	34		67.1^	233.5
"	58		65.5^	300.6
9	20		132.6^	235.0
"	46	+0.9^	66.3^	300.5
10	41		65.5^	234.0
11	14		60.0^	299.5
"	39		125.5^	236.5
"	57	+1.1^	62.8^	296.5



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6	12	49 <sup>^</sup>	12	19	57.5 <sup>^</sup>	237.5
		+3 <sup>^</sup>	"	31	59.0 <sup>^</sup>	295.50
6	12	52 <sup>^</sup>	"	54	116.5 <sup>^</sup>	238.5
			13	33	+1.3 <sup>^</sup> 58.2 <sup>^</sup>	297.5
6	14	38 <sup>^</sup>	"	59	54.6 <sup>^</sup>	241.8
		+3 <sup>^</sup>	14	27	52.3 <sup>^</sup>	296.4
6	14	41 <sup>^</sup>	"	54	+1.5 <sup>^</sup> 106.9 <sup>^</sup>	242.0
			15	13	53.4 <sup>^</sup>	294.3
6	17	16 <sup>^</sup>	16	4	49.0 <sup>^</sup>	243.5
		+3 <sup>^</sup>	"	42	43.6 <sup>^</sup>	292.5
6	17	19 <sup>^</sup>	17	<del>40</del>	92.6 <sup>^</sup>	245.6
			17	58	+1.8 <sup>^</sup> 46.3 <sup>^</sup>	246.2
6	20	1 <sup>^</sup>	18	19		292.5
		+3 <sup>^</sup>	19	6	41.5 <sup>^</sup>	247.0
6	20	4 <sup>^</sup>	"	40	37.0 <sup>^</sup>	288.5
			20	23	78.5 <sup>^</sup>	249.0
6	21	57 <sup>^</sup>	"	56	+2.2 <sup>^</sup> 39.2 <sup>^</sup>	286.0
			21	53	+2.8 <sup>^</sup> 30.5 <sup>^</sup>	251.0
22	25 <sup>^</sup>		22	21	+3.1 <sup>^</sup> 27.2 <sup>^</sup>	282.15
23	8 <sup>^</sup>		23	4	+3.0 <sup>^</sup> 27.7 <sup>^</sup>	254.3
24	19 <sup>^</sup>		24	15	+3.2 <sup>^</sup> 26.0 <sup>^</sup>	282.0
24	47 <sup>^</sup>		"	43	+3.5 <sup>^</sup> 23.0 <sup>^</sup>	256.0
25	29 <sup>^</sup>		25	25		279.0
6	26	6 <sup>^</sup>	26	2		not seen later

Limit of vis. over.

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Limit of Vis.

6	28	7	6	27	3.4	26.0 <sup>^</sup>	254.0
		+4		"	5.6	24.5 <sup>^</sup>	280.0
6	28	11		28	1.6	50.5 <sup>^</sup>	255.5
				"	4.3	25.2 <sup>^</sup>	280.0
					+3.3		

S. &amp; b. 1182

6	33	55.2
6	34	55.0

S. 394

6	34	0.0
6	35	0.0

As the time of dis. of Sat. IV is somewhat uncertain H. began observations early and as the Sat. was late in dis. the series was very long. The air was very cold and the seeing for most of time rather blurry and at times decidedly so. <sup>very</sup> Frequently the images would entirely dis. on account of blurry seeing. Furthermore observer was considerably troubled by the formation of dew and frost on the eye-piece. At intervals the seeing would steady and the seeing become better for a few seconds, and then the blurriness would return. These unfavorable conditions were became more pronounced as Sat. began to enter shadow. This caused the settings during diminution of light to be made rather slowly and they were not so satisfactory as during full brightness.



Corrections for previous Dis. IV.

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From.	$\sqrt{h}$	21 <sup>m</sup>	$\sqrt{h}$	31 <sup>m</sup>	44 <sup>m</sup>	subtract	2	res.
"	$\sqrt{h}$	31	44	"	$\sqrt{h}$	41	37	1 "
"	$\sqrt{h}$	41	37	"	$\sqrt{h}$	51	30	0 "
"	$\sqrt{h}$	51	30	"	6	1	23	add 1 "
"	6	1	23	"	6	11	16	" 2 "
"	6	11	16	"	6	21	9	" 3 "
"	6	21	9	"	6	31	2	" 4 "

B. & b. 1182

B. 394

7	39	55.0	7	40	0.0
7	40	54.5	7	41	0.0
7	41	54.5	7	42	0.0

Last two of the above comparisons considered the better

7 52 0 clouds

Reapr. Jup. IV Phot. C. H. Obs. Bowie Tex.  
comp. with nearest of three Sats. on preceding  
side = Sat. I.

8	0	26 <sup>^</sup> 8	0	18	seen.
	1	58 <sup>^</sup>	1	50	+1.0 <sup>^</sup> 64.3 <sup>^</sup> 239.2
	2	20 <sup>^</sup>	2	12	+1.1 <sup>^</sup> 63.0 <sup>^</sup> 307.5
	"	44 <sup>^</sup>	"	36	+1.1 <sup>^</sup> 61.5 <sup>^</sup> 239.0 40.5
	3	12 <sup>^</sup>	3	4	+1.0 <sup>^</sup> 64.5 <sup>^</sup> 302.0
	"	36 <sup>^</sup>	"	28	+0.9 <sup>^</sup> 66.0 <sup>^</sup> 237.5
8	"	55 <sup>^</sup>	"	47	+1.0 <sup>^</sup> 64.3 <sup>^</sup> 303.5

Clouds

Jan 24, 1907

8	4	21 <sup>^</sup>	8	4	13	+1.0 <sup>^</sup>	65.6 <sup>^</sup>	$\frac{239.2}{240.0}$
"	"	53 <sup>^</sup>	"	"	44	+1.0 <sup>^</sup>	64.3 <sup>^</sup>	304.28
5	47 <sup>^</sup>		5	38	+0.9 <sup>^</sup>	66.1 <sup>^</sup>	240.5	
6	13 <sup>^</sup>		6	4			306.6	
			"	23			239.3	→
8	7	18 <sup>^</sup>	"			clouds		
		+9 <sup>^</sup>	7	7			$\frac{67.7^{\wedge}}{67.6^{\wedge}}$	307.80
8	7	27 <sup>^</sup>	"	38			$\frac{135.3^{\wedge}}{67.6^{\wedge}}$	239.4
			8	3	+0.9 <sup>^</sup>		307.0	
			"	29			239.0	
8	9	23 <sup>^</sup>	9	19			$\frac{70.1^{\wedge}}{71.5^{\wedge}}$	309.1
		+9 <sup>^</sup>	"	39			$\frac{141.6^{\wedge}}{70.8^{\wedge}}$	238.0
8	9	32 <sup>^</sup>	10	4	+0.7 <sup>^</sup>		309.25	
			"	36			239.0	
8	11	46 <sup>^</sup>	11	26			$\frac{68.5^{\wedge}}{72.5^{\wedge}}$	307.5
		+9 <sup>^</sup>	12	20			$\frac{141.0^{\wedge}}{70.5^{\wedge}}$	235.0
8	11	55 <sup>^</sup>	"	42	+0.8 <sup>^</sup>		307.5	
			13	28			23	
			13	46			234.5	
8	15	6 <sup>^</sup>	14	46			$\frac{73.5^{\wedge}}{75.5^{\wedge}}$	308.0
		10 <sup>^</sup>	15	23			234.5	
8	15	16 <sup>^</sup>	16	7			$\frac{149.0^{\wedge}}{74.5^{\wedge}}$	313.0
			"	29	+0.6 <sup>^</sup>		310.0	
			"	56			227.5	
8			17	17			229.0	→



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8	18	128	17	45	83.4	312.4	
		+10		49	76.0		1
8	18	22	18	41	159.4	233.0	
			19	6	+0.4 79.7	309.0	
			"	38		232.1	
8	20	21	20	3	80.4	312.5	2
		+11	"	31	80.0		
8	20	32	21	13	160.4	231.0	
			"	39	+0.4 80.2	311.0	
8	22	49	22	45	83.0	231.5	
		+11	23	8	82.8	314.5	3
8	23	0	"	44	165.8	230.5	1.2
			24	5	+0.3 82.9	314.0	
8	25	20	25	9	82.8	230.7	
		+11	"	38	83.5	313.5	
8	25	31	26	27	166.3	230.5	
			28	32	+0.3 83.2	314.0	
8	29	15	29	7		232.0	
		+12	"	28	82.0	314.0	
8	29	27	"	52	83.0	314.0	
			30	19	165.0	230.0	
8	30	54	"	36	+0.3 82.5	313.0	
		+12	"	56		232.0	
8	31	6	31	44	82.0	314.0	
			32	2	82.0	314.0	
8	32	40	"	27	164.0	232.0	
		+12	"		+0.3 82.0	314.0	
8	32	52				232.2	
					82.0	314.2	
					82.3		
					164.3		
					+0.3 82.2		

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	8	32	44		231.7	
		33	28		314.0	
		"	44		81.7^	232.2
8	34	26	10		82.3^	313.9
		+12			164.0^	
8	34	38	30		+0.3^	82.0^
			22			313.5
			59		80.9^	232.1
8	36	44	23		82.1^	313.0
		13			163.0^	232.1
8	36	57	48		+0.3^	81.5^
			37			314.2
				Limit of Vis.		
		44	20			248.0
8	45	2	45		40.5^	288.5
		14			39.6^	
8	45	16	20		80.1^	249.2
			44		+2.2^	40.0^
						288.38

B. &amp; b. 1182

8	51	45.2
8	52	45.0

B. 394

8	52	0.0
8	53	0.0

Troubled by clouds especially during variations  
of light during eclipse. The Sat. was susp.



Jan. 24, 1907.

before it was recorded as seen, but as it became somewhat more cloudy, it was lost sight of, for a little, and then, with its increasing brightness it was actually recorded as seen. Owing to the rather cloudy condition, even from the first, the Sat. must have been somewhat bright before the first settings were obtained, hence not as many settings could be taken during variation as would have been the case. In the ~~latter~~ later settings of the eclipse the sky progressively became much clearer and when the Limit of Vis. was taken the sky was pretty clear in the region of Jup.

in previous Rep. Jup. IV. ~~the~~

From	7 <sup>h</sup>	56 <sup>m</sup>	56 <sup>s</sup>	to	8 <sup>h</sup>	4 <sup>m</sup>	26 <sup>s</sup>	add	S. res. to times.
"	8	4	26.	"	8	11	57.	"	9. " " "
"	8	11	57.	"	8	19	22.	"	10. " " "
"	8	19	22.	"	8	26	52.	"	11. " " "
"	8	26	52.	"	8	34	29.	"	12. " " "
"	8	34	29.	"	8	41	59.	"	13. " " "
"	8	41	59.	"	8	49	30.	"	14. " " "

9 10

Sky now all cloudy everywhere. Storm coming

Jan. 26, 1907. (Saturday)

Fourth Type Star  $+68^{\circ}617$  Phot. 3 H. Obs. Bowe Res

10 35  $+68.2$

4 10

6 25

5 35

color 3 in ordinary eye-piece

Index R & B

344.4 ← 4th type dis.

17.5

33.1<sup>^</sup>

A

167.2

25.9<sup>^</sup>

193.1

59.0<sup>^</sup> - 2.90<sup>^</sup>

347.9

-2.86<sup>^</sup>

14.4

26.5<sup>^</sup>

164.8

34.4<sup>^</sup>

199.2

60.9<sup>^</sup> - 2.83<sup>^</sup>

Index L & A

252.8

290.4

37.6<sup>^</sup>

B

77.0

28.0<sup>^</sup>

105.0

65.6<sup>^</sup> - 2.66<sup>^</sup>

258.5

-2.70<sup>^</sup>

286.7

28.2<sup>^</sup>

73.6

35.3<sup>^</sup>

108.9

63.5<sup>^</sup> - 2.73<sup>^</sup>

Mean - 2.78<sup>^</sup>

7 55 25

7 102 45<sup>^</sup>

7 51 22<sup>^</sup>

5 +4 +2<sup>^</sup>

12 55 24<sup>^</sup>

7602.5385



Jan. 26, 1907.

L.3. 4<sup>h</sup> 50<sup>m</sup>

H.A. -5 50

Dec. +67.5

P.A. 60.2 Ver. 8

Sprocket - 2.58

" - 1.56

Fourth Type Star + 25° 205 Phot. 3 St. Obs. Bowie Rec.

1	6	+ 23.8
5	1	
3	55	

color 3 is ordinary eye piece

For measurements see fol. page

Jan. 26, 1907.

## Index 2 &amp; B

8 35 33

71.4 ← 4th type dis

11.2.1

40.7<sup>^</sup>

255.8

31.6<sup>^</sup>

287.4

72.3<sup>^</sup>-2.43<sup>^</sup>

A

76.5

105.7

250.0

294.4

29.2<sup>^</sup>44.4<sup>^</sup>73.6<sup>^</sup>-2.39<sup>^</sup>-2.41<sup>^</sup>

## Index 1 &amp; A

341.0

21.6

167.1

197.4

40.6<sup>^</sup>30.3<sup>^</sup>70.9<sup>^</sup>-2.48<sup>^</sup>

B

346.8

17.4

162.0

200.8

30.6<sup>^</sup>38.8<sup>^</sup>69.4<sup>^</sup>-2.53<sup>^</sup>-2.50<sup>^</sup>

8 44 25

8 79 58<sup>^</sup>8 39 59<sup>^</sup>5 +4 +2<sup>^</sup>13 44 1<sup>^</sup>S.J. 5<sup>h</sup> 32<sup>m</sup>

H.A. +4 20

Dec. +25.8

P.A. 35.5 Ver. B

Sprocket -3.5 A

" -2.5 B

" -2.0 B

Mean -2.46<sup>^</sup>

7602, 5722



Jan. 26, 1907

Fourth Type Star +49° 41 Phot. J. H. Obs. Bowie Res

0	8	+49.2
5	43	
5	35	
6	25	

Index Right

A

41.4 ← Comp. Star dis.

9 38 30

139.4

98.0<sup>^</sup>

23 1.1

79.7<sup>^</sup>

310.8

177.7<sup>^</sup> + 0.04<sup>^</sup>

50.0

+ 0.10<sup>^</sup>

129.9

79.9<sup>^</sup>

226.0

91.5<sup>^</sup>

317.5

171.4<sup>^</sup> + 0.16<sup>^</sup>

Index Left

B

313.1

47.6

94.5<sup>^</sup>

140.1

77.7<sup>^</sup>

217.8

172.2<sup>^</sup> + 0.15<sup>^</sup>

324.3

+ 0.18<sup>^</sup>

38.9

74.6<sup>^</sup>

135.4

93.9<sup>^</sup>

229.3

168.5<sup>^</sup> + 0.22<sup>^</sup>Mean + 0.14<sup>^</sup>

9 48 4

86 34<sup>^</sup>9 43 17<sup>^</sup>5 +4 +2<sup>^</sup>14 47 19<sup>^</sup>

7602.6162

Jan. 26, 1907.

S.J. 6<sup>h</sup> 36<sup>m</sup>  
 H.A. +6 25  
 Dec. +50.0  
 P.A. 77.2 Ver 8  
 Sprocket - 0.5 8  
 " +0.5 6

H's watch used for times tonight.  
 Watch 4 m. 2 sec. slow.



Jan. 28, 1907. (Monday)

S. 2 b. 1182

7 43 54.0  
7 44 54.0

S. 394

7 44 0.0  
7 45 0.0

Reap. Jup. I Phot. H. H. Obs. Bowie Rec.  
bromp. with nearer of two Sats. (before eclipse)  
on fol. side = Sat. III

8	31	49 <sup>^</sup> 8	31	40	Seen
	31	59 <sup>^</sup>		50	+2.8 <sup>^</sup> 30.3 <sup>^</sup> 168.9
	32	22 <sup>^</sup>	32	13	+2.1 <sup>^</sup> 42.2 <sup>^</sup> 199.2
	32	32 <sup>^</sup>		23	+1.7 <sup>^</sup> 49.1 <sup>^</sup> 157.0
	32	46 <sup>^</sup>		37	+1.4 <sup>^</sup> 55.9 <sup>^</sup> 206.1
	33	1 <sup>^</sup>		52	+1.2 <sup>^</sup> 60.8 <sup>^</sup> 150.2
	33	13 <sup>^</sup>	33	4	+1.0 <sup>^</sup> 63.9 <sup>^</sup> 211.0
	33	21 <sup>^</sup>		12	+0.9 <sup>^</sup> 66.3 <sup>^</sup> 147.1
	33	30 <sup>^</sup>		21	+0.7 <sup>^</sup> 70.6 <sup>^</sup> 213.4
	33	40 <sup>^</sup>		31	+0.6 <sup>^</sup> 73.7 <sup>^</sup> 142.8
	34	3 <sup>^</sup>		54	+0.5 <sup>^</sup> 75.9 <sup>^</sup> 216.5
	34	18 <sup>^</sup>	34	9	+0.5 <sup>^</sup> 77.8 <sup>^</sup> 140.6
	34	29 <sup>^</sup>		20	+0.4 <sup>^</sup> 78.6 <sup>^</sup> 218.4

Jan. 28, 1907.

34	42 <sup>6</sup>	34	33	+0.3 <sup>8</sup>	82.0 <sup>1</sup>	139.8	
35	1 <sup>^</sup>	52	59			221.8	→
			59		85.0 <sup>1</sup>	137.0	
35	17 <sup>^</sup>	35	8		84.5 <sup>^</sup>	222.0	1
	+9 <sup>^</sup>	23	23		169.5 <sup>^</sup>	137.0	
35	26 <sup>^</sup>	38	38	+0.2 <sup>8</sup>	84.8 <sup>^</sup>	221.5	
		46	46				
36	13 <sup>^</sup>	36	1		83.6 <sup>^</sup>	137.5	
	+9 <sup>^</sup>	11	11		84.9 <sup>^</sup>	221.1	
36	22 <sup>^</sup>	26	26		168.5 <sup>^</sup>		2
		40	40	+0.2 <sup>8</sup>	84.2 <sup>^</sup>	135.2	
		50	50			220.1	
37	10 <sup>^</sup>	37	4		84.9 <sup>^</sup>	136.4	
	+9 <sup>^</sup>	18	18		85.5 <sup>^</sup>	221.3	
37	19 <sup>^</sup>	30	30		170.4 <sup>^</sup>	134.9	3
		42	42	+0.2 <sup>8</sup>	85.2 <sup>^</sup>	220.4	
38	3 <sup>^</sup>	58	58				
	+9 <sup>^</sup>	9	9		84.4 <sup>^</sup>	135.7	
38	12 <sup>^</sup>	22	22		84.5 <sup>^</sup>	220.1	
		37	37		168.9 <sup>^</sup>	136.0	4
38	55 <sup>^</sup>	49	49	+0.2 <sup>8</sup>	84.4 <sup>^</sup>	220.5	
	+9 <sup>^</sup>	1	1				
39	4 <sup>^</sup>	14	14		84.0 <sup>^</sup>	136.0	
		26	26		85.3 <sup>^</sup>	220.0	
39	45 <sup>^</sup>	39	39		169.3 <sup>^</sup>	136.5	5
	+10 <sup>^</sup>	50	50	+0.2 <sup>8</sup>	84.6 <sup>^</sup>	221.8	
39	55 <sup>^</sup>	6	6				
		38	38		83.0 <sup>^</sup>	137.0	
		50	50		85.4 <sup>^</sup>	220.0	
		40	40		168.4 <sup>^</sup>	136.1	6
				+0.2 <sup>8</sup>	84.2 <sup>^</sup>	221.5	



Jan. 28, 1907.

6	40	15	84.5^	137.0	
8	40	26	85.8^	221.5	
	+10^	37	170.3^		
8	40	48	+0.2^	85.2^	135.8
		59		221.6	
		14	85.0^	136.0	
8	41	14	83.8^	221.0	
	+10^	18	168.8^		
8	41	35	+0.2^	84.4^	137.0
		46		220.8	
42		1	84.6^	137.0	
"		11	83.9^	221.6	
43		22	168.5^	137.1	
		33	+0.2^	84.2^	221.0
8	43	42	84.0^	137.0	
	+10^	44	84.4^	220.5	
8	43	14	168.4^	137.1	
		26	+0.2^	84.2^	221.5
8	44	39	84.0^	137.0	
	+10^	53	84.5^	221.0	
8	44	5	168.5^	137.0	
		15	+0.2^	84.2^	221.5
8	45	24	84.7^	137.0	
	+10^	36	84.5^	221.7	
8	45	48	169.2^	137.3	
		46	+0.2^	84.6^	221.8
8	45	11		136.9	

Jan. 28, 1907.

$$\begin{array}{r} 8 \quad 46 \quad 30^{\wedge} \\ \hline 8 \quad 46 \quad 40^{\wedge} \end{array}$$

46 25  
" 36  
" 47

$$\begin{array}{r} 83.9^{\wedge} 220.8 \quad 13 \\ 84.4^{\wedge} \\ \hline 168.3^{\wedge} 136.8 \\ +0.2^{\wedge} 84.2^{\wedge} \\ \hline 221.2^{\wedge} \end{array}$$

Limit of Vis.

$$\begin{array}{r} 8 \quad 48 \quad 32^{\wedge} \\ \hline 8 \quad 48 \quad 42^{\wedge} \end{array}$$

47 57  
48 19  
" 47  
49 3

$$\begin{array}{r} 21.3^{\wedge} 167.8 \\ 22.0^{\wedge} 189.1 \\ \hline 43.3^{\wedge} 167.0 \\ +3.6^{\wedge} 21.6^{\wedge} \\ \hline 189.0 \end{array}$$

B. 4 b. 1182

8 54 49.5

8 55 49.4

B. 394

8 55 0.0

8 56 0.0

In previous eclipse  
From 2<sup>h</sup> 23<sup>m</sup> 45<sup>s</sup> to 2<sup>h</sup> 39<sup>m</sup> 17<sup>s</sup> add. 9 sec.  
" 2 39 17. " 2 54 49. " 10 "

Seeing pretty good. Eclipse considered good.



Jan. 28, 1907.

Fourth Type Star  $+53^{\circ} 66$  Phot. J. H. Oke. Bowie Rec

0	24	+53.7
6	4	
5	40	

Full aperture used

Index Q &amp; A

10	6	20
9	49	22

50.8	227.0
132.0	345.2
237.2	61.2
300.1	143.8

Comp. Star dis.

81.2 <sup>^</sup>
62.9 <sup>^</sup>
144.1 <sup>^</sup> + 0.69 <sup>^</sup>

A

241.0
301.9
48.5
131.5

60.9 <sup>^</sup> + 0.70 <sup>^</sup>
83.0 <sup>^</sup>
143.9 <sup>^</sup> + 0.70 <sup>^</sup>

Index L &amp; B

139.8
223.7
331.0
32.4

83.9 <sup>^</sup>
61.4 <sup>^</sup>
145.3 <sup>^</sup> 0.67 <sup>^</sup>

B

151.4
213.3
319.9
41.4

61.9 <sup>^</sup> + 0.69 <sup>^</sup>
81.5 <sup>^</sup>
143.4 <sup>^</sup> 0.71 <sup>^</sup>

Mean + 0.70

9	57	44
19	63	64 <sup>^</sup>
9	61	62 <sup>^</sup>
5		+18 <sup>^</sup>
15	2	20 <sup>^</sup>

7604.6266

Jan. 28, 1907.

S.I. 6<sup>h</sup> 55<sup>m</sup>  
 H.A. +6 35  
 Dec +54.0  
 P.A. 322.28 or 8  
 Sprocket -0.5 8  
 " +0.5 6

Fourth Type Star +61° 667 Phot 3 H. O. Bowe

3	44	+62.6
7	4	
3	20	

color 3 in large telescope

Measurements on fol. page



Jan. 28, 1907.

Index Clock

10 34 4

326.7	4th type dis	
36.6	69.9 <sup>^</sup>	
154.0	52.5 <sup>^</sup>	
206.5	122.4 <sup>^</sup>	-1.14 <sup>^</sup> A

334.6		-1.14 <sup>^</sup>
28.2	53.6 <sup>^</sup>	
145.9	69.0 <sup>^</sup>	
214.9	122.6 <sup>^</sup>	-1.14 <sup>^</sup>

Index Clock

229.9		
309.5	79.6 <sup>^</sup>	
62.6	58.2 <sup>^</sup>	
120.8	137.8 <sup>^</sup>	-0.82 <sup>^</sup> B

244.0		-0.86 <sup>^</sup>
301.8	57.8 <sup>^</sup>	
52.9	76.6 <sup>^</sup>	
129.5	134.4 <sup>^</sup>	-0.89 <sup>^</sup>

10 39 54

---

10 73 58<sup>^</sup>

10 36 59<sup>^</sup>

5 +18<sup>^</sup>

15 37 17<sup>^</sup>

76 04.6509

S.I. 7<sup>h</sup> 26<sup>m</sup>

H.A. +3 28

Dec. +62.0

P.A. 184.5 VmB

Sprockets -4.5 A

" -3.5 B

" -3.0 C

Mean -1.00<sup>^</sup>

It's watch used for times  
Watch 18 sec slow

Janv. 30, 1907 (Wednesday)

Fourth Type Star +2° 4709 Phot. J. H. Ols. Bowie Rec

23	40
28	10
4	30

+2.7

Full aperture used

Index above

253.4

291.0

77.3

106.0

257.3

285.4

71.7

111.0

4th type, dis

37.6<sup>^</sup>28.7<sup>^</sup>66.3<sup>^</sup> - 2.63

✓

-2.61

28.1<sup>^</sup>39.3<sup>^</sup>67.4<sup>^</sup> - 2.59

Index Below

167.4

194.9

351.5

11.4

27.5<sup>^</sup>19.9<sup>^</sup>47.4<sup>^</sup> - 3.39

⊗

172.3

194.8 2.0

346.5

15.8 + 6.24

19.7<sup>^</sup>29.3<sup>^</sup>49.0<sup>^</sup> - 3.32

-3.36

Region low.

Mean -2.98

7 43 13

7 77 63<sup>^</sup>7 38 62<sup>^</sup>5 -1<sup>^</sup>12 39 1<sup>^</sup>

7606.5271



Jan. 30, 1907

S.J.  $4^h$  46<sup>m</sup>

H.A. + 5 3

Dec. + 3.0

P.A. 165.2 Ker. B

Sprocket -9.5 A +14.5 A

" -8.5 B or +15.5 B

" -8.0 b +16.0 b

Star rather low. ~~and~~ Moon up and one day past full but color estimated as near as may be at 6 on the usual scale. After ~~see~~ preceding measurements examined achromatic prisms and found them ~~to~~ both to be much soiled, and one decidedly more so than the other. Then cleaned prisms as well as possible but there is some soiling and dust between component parts which cannot be removed without taking them apart. This however cannot be done tonight

Fourth Type Star + 34° 56 Phot. J. H. Obs. Bowie Rec.

0	29	+32.9
5	4	
4	35	

Full aperture used  
color 3 in large telescope

Measurements on fol. page

Jan. 30, 1907

Index Above

8 30 41

231.0 ← 4th type dis  
 312.0 81.0<sup>^</sup>  
 59.3 64.3<sup>^</sup>  
 123.6 145.3<sup>^</sup> -0.67

A

239.4 -0.66  
 304.0 64.6<sup>^</sup>  
 51.4 81.5<sup>^</sup>  
 132.9 146.1<sup>^</sup> -0.65

Index Below

142.7  
 219.2 76.5<sup>^</sup>  
 332.0 58.4<sup>^</sup>  
 30.4 134.9<sup>^</sup> -0.88

B

153.1 -0.88  
 211.5 58.4<sup>^</sup>  
 323.7 76.0<sup>^</sup>  
 39.7 134.4<sup>^</sup> -0.89

8 39 21  
 69 62  
 8 34 61  
 5 -1  
 13 35 0

S. J. 5<sup>h</sup> 48<sup>m</sup>

P. A. +5 23

Dec. +35.1

P. A. 156.7 Ver. B

Sprocket -3.5 A

" -2.5 B

" -2.0 b

Mean -0.77



Jan. 30, 1907.

Fourth Type Star +11° 30.5 Phot. J. H. Ols. Bowie Rec.

$$\begin{array}{r} 2 \\ 5 \\ \hline 3 \end{array} \quad \begin{array}{r} 29 \\ 54 \\ \hline 25 \end{array} \quad +11.8$$

color 2 in large telescope

Index R &amp; A

322.0 ← comp Star dis

41.5

79.5<sup>^</sup>

153.3

54.9<sup>^</sup>

208.2

134.4<sup>^</sup> + 0.89

333.5

+0.88

32.9

59.4<sup>^</sup>

142.5

75.4<sup>^</sup>

217.9

134.8<sup>^</sup> + 0.88

Index L &amp; B

233.2

307.6

74.4<sup>^</sup>

61.0

63.3<sup>^</sup>

124.3

137.7<sup>^</sup> + 0.82

9 36 30

9 28 2

55 71<sup>^</sup>9 27 66<sup>^</sup>5 -1<sup>^</sup>14 28 5<sup>^</sup>

230.9 240.9

309.5 303.6

59.8 48.5

123.0 133.0 2.5

78.6<sup>^</sup>63.2<sup>^</sup>141.8<sup>^</sup> + 0.74

+0.78

mean +0.83

7606.6029

As seeing was rather bad in fourth  
set (first taken) this set was retaken.

Jan. 30, 1907.

S.I. 6<sup>h</sup> 36<sup>m</sup>  
 H.A. + 4 25  
 Dec + 12.1  
 P.A. 72.0 Ver. 8  
 Sprocket - 4.5 A  
 " - 3.5 B  
 " - 3.0 C

Fourth Type Star +17° 979 Chrt. 3 H. Obs. Error Rec.  
 5 29 +17.0  
 7 17  
 1 48

Full aperture used

Measurements on fol. page



Jan. 30 1907

Index Right.

142.5 ← 4th type dis  
 220.4  
 333.6  
 29.9

77.9<sup>^</sup>  
 56.3<sup>^</sup>  
 134.2<sup>^</sup> - 0.89<sup>^</sup>

A

153.8

-0.89<sup>^</sup>

210.2

56.4<sup>^</sup>

321.9

77.8<sup>^</sup>  
 134.2<sup>^</sup> - 0.89<sup>^</sup>

39.7

Index Left

62.9

119.8

228.8

312.4

56.9<sup>^</sup>83.6<sup>^</sup>140.5<sup>^</sup> - 0.76<sup>^</sup>

B

50.5

-0.80<sup>^</sup>

10 46 12

86 20<sup>^</sup>

129.0

78.5<sup>^</sup>

244.0

57.7<sup>^</sup>

301.37

136.2<sup>^</sup> - 0.85<sup>^</sup>10 43 10<sup>^</sup>5 -1<sup>^</sup>15 43 9<sup>^</sup>S. J. 7<sup>h</sup> 41<sup>m</sup>Mean - 0.84<sup>^</sup>

76.06.6550

P. A. 2 5

Dec. +17.5

P. A. 36.5 ver. B

Sprocket -1.5 B

" -0.5 b

It's watch used for times  
 Watch 1 sec. fast

Feb. 7, 1907 (Thursday)

Z Persei Phot. 3 H. Obs. Bowie Rec

2	33	+42.1
4	43	
2	10	

I

Index Lab

62.6 ← Comp. Star dis.

118.4

55.8<sup>^</sup>

231.7

77.3<sup>^</sup>

309.0

133.1<sup>^</sup> + 0.91<sup>^</sup>

52.3

131.0

78.7<sup>^</sup>

+0.96<sup>^</sup>

246.6

50.0<sup>^</sup>

296.6

128.7<sup>^</sup> + 1.00<sup>^</sup>

Index Red

336.6

25.8

142.4

49.2<sup>^</sup>

74.5<sup>^</sup>

216.9

123.7<sup>^</sup> + 1.11<sup>^</sup>

326.4

+1.12<sup>^</sup>

37.8

71.4<sup>^</sup>

155.3

51.7<sup>^</sup>

207.0

123.1<sup>^</sup> + 1.13<sup>^</sup>

Mean +1.04<sup>^</sup>

7 39 0

69 10<sup>^</sup>

7 34 35<sup>^</sup>

5 -1 -15<sup>^</sup>

12 33 20<sup>^</sup>

7614.5231



Feb. 7, 1907

Index R &amp; B

7 49 15

153.0

210.7

326.2

34.5

57.7<sup>^</sup>68.3<sup>^</sup>126.0<sup>^</sup> + 1.06<sup>^</sup>

II

A

142.6

218.0

334.6

28.5

75.4<sup>^</sup>53.9<sup>^</sup>129.3<sup>^</sup> + 0.99<sup>^</sup>+1.02<sup>^</sup>

Index L &amp; A

64.0

121.2

231.4

310.3

57.2<sup>^</sup>78.9<sup>^</sup>136.1<sup>^</sup> + 0.85<sup>^</sup>

B

50.6

131.6

242.6

299.2 ~~300.0~~81.0<sup>^</sup>56.6<sup>^</sup>137.6<sup>^</sup> + 0.82<sup>^</sup>+0.84<sup>^</sup>

7 58 48

107 63<sup>^</sup>7 53 62<sup>^</sup>5 -1 -15<sup>^</sup>12 52 47<sup>^</sup>

7614.5367

Mean + 0.93<sup>^</sup>

Feb. 7, 1907

Index Led

III

8 13 12

62.2

123.0

231.2

313.0

60.8<sup>^</sup>81.8<sup>^</sup>142.6<sup>^</sup> + 0.72<sup>^</sup>

8

50.0

+ 0.72<sup>^</sup>

131.5

81.5<sup>^</sup>

240.7

61.5<sup>^</sup>

302.2

143.0<sup>^</sup> + 0.71<sup>^</sup>

Index P. &amp; B

334.4

31.5

140.8

219.2

57.1<sup>^</sup>78.4<sup>^</sup>135.5<sup>^</sup> + 0.87<sup>^</sup>

A

323.5

+ 0.85<sup>^</sup>

41.0

77.5<sup>^</sup>

151.3

59.7<sup>^</sup>

211.0

137.2 + 0.83<sup>^</sup>

8 24 40

37 52<sup>^</sup>8 18 56<sup>^</sup>5 -1 -15<sup>^</sup>13 17 41<sup>^</sup>

L. 3 6 10

7614.5540 R. A 3 35

Dec 42.1

P. A 197.0 V. &amp; B

Sprocket -2.5 S

" -1.5 b

Mean + 0.78<sup>^</sup>



Feb. 7, 1907

- 6 15 $\pm$  An auroral arch noticed ~~to~~ under the Pole, the summit of the arch being about  $\frac{1}{6}$  the altitude of the Pole Star. Arch rather bright.
- 7 0 Aurora more pronounced in the north and altitude somewhat higher than before. Some cloud intermingled with arch.
- 7 45 Aurora brighter still and more pronounced. Arch  $\frac{1}{4}$  altitude ~~to~~ of Pole Star.
- 8 0 Not only arch visible but a few light streamers also.
- 8 27 Streamers have vanished but aurora fairly bright.
- 8 37 More clouds in the north under the Pole. but ~~and~~ auroral light still visible  $\frac{1}{3}$  of way to Pole Star but no particular arch visible and general light fainter. One <sup>light</sup> streamer through handle of dipper and one farther east.
- 8 39 One light streamer through handle of the dipper. Partly on account of clouds but evidently so

Feb. 7, 1907.

not wholly so, the aurora phenomena does  
not seem to be so bright or marked.

It's watch need for times tonight.  
Sketch 1 m. 15 sec. fast.



Feb. 8, 1907 (Friday)

Y camelop Phot. 3 H. Obs. Bowie Rec.

7	25	+76.3
4	45	
2	40	
9	20	

Index Above

330.2 ← Comp. Star dis. I

34.6

64.4<sup>^</sup>

153.4

55.6<sup>^</sup>

209.0

120.0<sup>^</sup> + 1.19<sup>^</sup> A

335.5

+1.13<sup>^</sup>

27.7

52.2<sup>^</sup>

143.7

73.4<sup>^</sup>

217.1

125.6<sup>^</sup> + 1.07<sup>^</sup>

Index Below

236.0

304.1

68.1<sup>^</sup>

65.8

52.5<sup>^</sup>

118.3

120.6<sup>^</sup> + 1.18<sup>^</sup> B

244.0

+1.09<sup>^</sup>

300.0

56.0<sup>^</sup>

55.0

73.2<sup>^</sup>

128.2

129.2<sup>^</sup> + 1.00<sup>^</sup>

Mean +1.11<sup>^</sup>

7 41 27

74 77<sup>^</sup>

7 37 38<sup>^</sup>

5 -58<sup>^</sup>

12 36 40<sup>^</sup>

76 15.5255

Feb. 8, 1907

Index Below

II

7 49 40

239.0  
304.50  
63.9  
118.5

65.0<sup>^</sup>  
54.6<sup>^</sup>  

---

119.6<sup>^</sup> + 1.20<sup>^</sup>

D

242.6  
298.0  
53.6  
126.5

55.4<sup>^</sup>  
72.9<sup>^</sup>  

---

128.3<sup>^</sup> + 1.01<sup>^</sup>

+1.10<sup>^</sup>

Index Above

144.8  
216.1  
333.9  
33.3

71.3<sup>^</sup>  
59.4<sup>^</sup>  

---

130.7<sup>^</sup> + 0.96<sup>^</sup>

A

154.2  
210.4  
325.0  
37.4

56.2<sup>^</sup>  
72.4<sup>^</sup>  

---

128.6<sup>^</sup> + 1.01<sup>^</sup>

+0.98<sup>^</sup>

7 59 33  

---

108 73<sup>^</sup>  
7 54 36<sup>^</sup>  
5 -58<sup>^</sup>  

---

12 53 38<sup>^</sup>

7615.5372

Mean + 1.04<sup>^</sup>



Feb. 8, 1907

III

Index Above

143.5

218.0

334.0

30.9

74.5<sup>^</sup>56.9<sup>^</sup>131.4<sup>^</sup> + 0.95<sup>^</sup>

A

151.4

209.4

225.7

38.5

58.0<sup>^</sup>72.8<sup>^</sup>130.8<sup>^</sup> + 0.96<sup>^</sup>+ 0.96<sup>^</sup>

Index Below

51.1

127.4

244.0

301.3

76.3<sup>^</sup>57.3<sup>^</sup>133.6<sup>^</sup> + 0.90<sup>^</sup>

B

61.0

123.0

236.0

308.3

62.0<sup>^</sup>72.3<sup>^</sup>134.3<sup>^</sup> + 0.89<sup>^</sup>+ 0.90<sup>^</sup>

8 21 30

32 77<sup>^</sup>8 16 38<sup>^</sup>5 -58<sup>^</sup>13 15 40<sup>^</sup>

7615.5526

Mean + 0.93<sup>^</sup>

Feb. 8, 1907

Index Below

IV

A 38 54

55.5

128.2

243.4

302.3

72.7<sup>^</sup>58.9<sup>^</sup>131.6<sup>^</sup> + 0.95<sup>^</sup>

B

60.9

124.2

233.3

309.5

63.3<sup>^</sup>76.2<sup>^</sup>139.5<sup>^</sup> + 0.78<sup>^</sup>+ 0.86<sup>^</sup>

Index Above

324.4

39.0

150.8

210.5

74.6<sup>^</sup>59.7<sup>^</sup>134.3<sup>^</sup> + 0.89<sup>^</sup>

A

331.5

34.25

140.6

220.0

63.0<sup>^</sup>79.4<sup>^</sup>142.4<sup>^</sup> + 0.73<sup>^</sup>+ 0.81<sup>^</sup>

A 50 2

88 56<sup>^</sup>8 44 28<sup>^</sup>5 -58<sup>^</sup>13 43 30<sup>^</sup>

7615.5718

Mean + 0.84<sup>^</sup>



Feb. 8, 1907

Index Above

IV

~~221.4~~~~324.5~~

139.0

220.3

330.0

36.0

$$\begin{array}{r} 81.3^{\wedge} \\ 66.0^{\wedge} \\ \hline 147.3^{\wedge} + 0.63^{\wedge} \end{array}$$

A

147.5

214.9

321.5

42.4

$$\begin{array}{r} 67.4^{\wedge} \\ 80.9^{\wedge} \\ \hline 148.3^{\wedge} + 0.61^{\wedge} \end{array}$$

+ 0.62^

Index Below

52.0

129.8

239.5

304.2

$$\begin{array}{r} 77.8^{\wedge} \\ 64.7^{\wedge} \\ \hline 142.5^{\wedge} + 0.72^{\wedge} \end{array}$$

B

59.0

123.6

236.0

309.6 310.4

$$\begin{array}{r} 64.6^{\wedge} \\ 73.6^{\wedge} \\ \hline 138.2^{\wedge} + 0.81^{\wedge} \end{array}$$

+ 0.76

9 30 40

50 72^

9 25 36^

5 -58^

14 24 38^

7615.6004

Mean + 0.69

Feb. 8, 1907

S.I. 7 12

H.A. -0 17

Dec. +73.9

P.A. 166.7

Sprocket -1.5 A

" -0.5 B

" 0.0 b

It's watch used for times.  
Watch 58 sec. fast.



Feb. 8, 1907

B. &amp; b. 1182

11	5	3.3
11	6	3.1
11	7	3.0

B. 394

11	5	0.0
11	6	0.0
11	7	0.0

Dis. Jup. III Phot. H. H. Obs. Bowie Res.  
comp. with other Sat. on same fol. side =  
Sat. I

11	24	54	^
		-2	
11	24	52	

11	24	19
		42
25		6
		28

97.0	220.0
95.5	317.0
192.5	220.0
-0.2	96.2
	315.5

26	57	^
	-2	
11	26	55

26	0
	34
27	24
	49

98.8	219.0
98.9	317.5
197.7	218.5
-0.3	98.8
	317.4

11	28	43	^
		-2	
11	28	41	

28	11
"	33
"	57

98.7	219.9
99.5	318.6
198.2	218.5
-0.3	99.1

Feb. 8, 1907.

			29	12	318.0	3
			30	13	99.1^ 218.7	
11	30	48^		37	98.0^ 317.8	
		-1^			197.1^	
11	30	47^	31	2	-0.3^ 98.6^ 319.0	4
				21	317.0	
			32	24	97.5^ 220.0	
11	32	53^		42	99.7^ 317.5	
		-1^			197.2^	
11	32	52^	33	0	-0.3^ 98.6^ 219.2	✓
				27	318.9	
				53	97.5^ 221.0	
11	34	21^	34	15	99.6^ 318.5	
		-1^		31	197.1^ 218.5	6
11	34	20^		46	-0.3^ 98.6^ 318.1	
			35	1	97.4^ 219.2	
11	35	30^		17	99.3^ 316.6	
		-1^		43	196.7^ 218.2	7
11	35	29^		59	-0.3^ 98.4^ 317.5	
			36	17	99.2^ 219.2	
11	36	37^		50	98.0^ 318.4	
		-1^		22	197.2^ 220.0	2
11	36	36^		59	-0.3^ 98.6^ 318.0	
			39	21	98.5^ 220.0	
11	39	50^		43	96.0^ 318.5	
		-1^			194.5^	
11	39	49^	40	1	-0.3^ 97.2^ 221.0	9
				17	317.0	
				33	220.8	→



Feb. 8, 1907

$$\begin{array}{r} 11 \quad 40 \quad 58 \quad 11 \\ \hline 11 \quad 40 \quad 57 \end{array}$$

$$\begin{array}{r} 40 \quad 48 \\ 41 \quad 5 \\ 26 \end{array}$$

$$\begin{array}{r} 97.4^{\wedge} 318.2 \\ 95.3^{\wedge} \\ \hline 192.7^{\wedge} 221.2 \\ -0.2^{\wedge} 96.4^{\wedge} 316.5 \end{array}$$

$$\begin{array}{r} 11 \quad 42 \quad 12^{\wedge} \\ \hline 11 \quad 42 \quad 11^{\wedge} \end{array}$$

$$\begin{array}{r} 42 \quad 3 \\ 19 \\ 40 \end{array}$$

$$\begin{array}{r} 97.8^{\wedge} 220.4 \\ 94.0^{\wedge} 318.2 \\ \hline 191.8^{\wedge} 222.5 \\ -0.2^{\wedge} 95.9^{\wedge} 316.5 \end{array}$$

$$\begin{array}{r} 11 \quad 43 \quad 34^{\wedge} \\ \hline 11 \quad 43 \quad 33^{\wedge} \end{array}$$

$$\begin{array}{r} 43 \quad 31 \\ 46 \\ 44 \quad .4 \end{array}$$

$$\begin{array}{r} 92.2^{\wedge} 221.8 \\ 90.3^{\wedge} 314.0 \\ \hline 182.5^{\wedge} 223.5 \\ 0.0^{\wedge} 91.2^{\wedge} 313.8 \end{array}$$

$$\begin{array}{r} 11 \quad 45 \quad 6^{\wedge} \\ \hline 11 \quad 45 \quad 5^{\wedge} \end{array}$$

$$\begin{array}{r} 45 \quad 20 \\ 40 \end{array}$$

$$\begin{array}{r} 88.6^{\wedge} 224.4 \\ 81.5^{\wedge} 313.0 \\ \hline 170.1^{\wedge} 228.5 \\ +0.2^{\wedge} 85.0^{\wedge} 310.0 \end{array}$$

$$\begin{array}{r} 11 \quad 46 \quad 34^{\wedge} \\ \hline 11 \quad 46 \quad 34^{\wedge} \end{array}$$

$$\begin{array}{r} 46 \quad 4 \\ 21 \\ 47 \\ 47 \quad 6 \end{array}$$

$$\begin{array}{r} 77.5^{\wedge} 230.5 \\ 72.1^{\wedge} 308.0 \\ \hline 149.6^{\wedge} 232.0 \\ +0.6^{\wedge} 74.8^{\wedge} 304.1 \end{array}$$

$$47 \quad 28^{\wedge}$$

$$28$$

$$+0.9^{\wedge} 68.0^{\wedge} 234.5$$

$$47 \quad 46^{\wedge}$$

$$46$$

$$+0.9^{\wedge} 66.7^{\wedge} 302.5$$

$$48 \quad 15^{\wedge}$$

$$48 \quad 15$$

$$+1.1^{\wedge} 62.2^{\wedge} 235.8$$

$$48 \quad 39^{\wedge}$$

$$39$$

$$+1.4^{\wedge} 55.5^{\wedge} 298.0$$

$$49 \quad 1^{\wedge}$$

$$49 \quad 1$$

$$+1.6^{\wedge} 51.5^{\wedge} 242.5$$

$$49 \quad 18^{\wedge}$$

$$18$$

$$+1.7^{\wedge} 49.9^{\wedge} 294.0$$

$$49 \quad 35^{\wedge}$$

$$35$$

$$+1.8^{\wedge} 46.7^{\wedge} 244.1$$

Feb. 8, 1907

11	49	51 <sup>^</sup> 11	49	51	+1.9 <sup>^</sup> 45.6 <sup>^</sup>	290.8
	50	6 <sup>^</sup>	50	6	+2.0 <sup>^</sup> 42.8 <sup>^</sup>	245.2
	50	36 <sup>^</sup>		36	+2.6 <sup>^</sup> 34.0 <sup>^</sup>	288.0
	50	58 <sup>^</sup>		58	+2.9 <sup>^</sup> 30.1 <sup>^</sup>	254.0
	51	15 <sup>^</sup>	51	15		284.1
			"	34		Not seen later

Limit of Vis.

		11	52	12		248.2
11	52	45 <sup>^</sup>		36	33.5 <sup>^</sup>	
		0 <sup>^</sup>			32.5 <sup>^</sup>	281.7
11	52	45 <sup>^</sup>		56	66.0 <sup>^</sup>	252.5
		11	53	16	+2.6 <sup>^</sup> 33.0 <sup>^</sup>	285.0

Sat. dis. pretty close to limb of Jup. Seeing somewhat blurry near limb especially for quite a portion of the time, but there were interposed intervals when the seeing was better. Although the seeing would not be called extremely bad, yet, the closeness of the Sat. to the limb involved the Sat. in this seeing, causing the settings to be made rather slowly. Dr. H. waited as much as possible for moments of better definition. This care having been exercised the eclipse is considered pretty good.



Feb. 8 1907

B. &amp; b. 1182

12	5	59.2
12	6	59.3

B. 394

12	6	0.0
12	7	0.0

From the previous eclipse

11 <sup>h</sup> 14 <sup>m</sup> 42 <sup>s</sup>	to	11 <sup>h</sup> 30 <sup>m</sup> 19 <sup>s</sup>	subtract 2 sec.
11 30 19	"	11 45 50	" 1 "
11 45 50	"	12 1 20	" 0 "

Feb. 9, 1907. (Saturday)

Noticed shortly after 6 P.M. more or less aurora over the sky especially north of the zenith and extend south also. Although there were some streamers its general character was that of masses of bright light like luminous clouds.

7 16

Its form now is that of a great sheet of luminous cloud cover the whole northern half of the sky and sweeping more or less down into the southern half. It looks as if a little actual clouds was intermingled at points especially in the south but the whole phenomenon is quite completely auroral in its character. The extensiveness of this auroral manifestation is much greater than H. has noticed for a great while.

R W Tauri Phot. J H. Obs Lowie Rec.

3 58 +27.2

5 00

1 2

Full aperture used

Measurements on fol. page.



Feb. 9, 1907.

Index L &amp; B

I

132.2 ← Comp. Star dis

228.8

320.6

46.0

96.6<sup>^</sup>85.4<sup>^</sup>182.0<sup>^</sup>178.0<sup>^</sup>-0.04<sup>^</sup>

138.1

225.8

310.2

51.5

87.7<sup>^</sup>101.3<sup>^</sup>189.0<sup>^</sup>171.0<sup>^</sup>-0.17<sup>^</sup>

Index R &amp; A

35.0

147.8

223.3

322.5

112.8<sup>^</sup>99.2<sup>^</sup>212.0<sup>^</sup>148.0<sup>^</sup>-0.61<sup>^</sup>

44.1

141.3

212.2

329.8

97.2<sup>^</sup>-0.64<sup>^</sup>117.6<sup>^</sup>214.8<sup>^</sup>145.2<sup>^</sup>-0.67<sup>^</sup>Means -0.37<sup>^</sup>

8 29 46

8 33 0

8 38 18

8 40 56

140 120<sup>^</sup>8 35 30<sup>^</sup>5 -42<sup>^</sup>13 34 48<sup>^</sup>

76 16.5666

Feb. 9, 1907

Index Red

II

8 46 46

329.1 ← var. dis.

34.1

142.6

223.4

65.0<sup>^</sup>

A

80.8<sup>^</sup>145.8<sup>^</sup> - 0.66<sup>^</sup>

8 49 30

319.6

40.7

152.0

211.0

81.1<sup>^</sup> - 0.72<sup>^</sup>59.0<sup>^</sup>140.1<sup>^</sup> - 0.77<sup>^</sup>

Index L &amp; B

8 53 44

238.0

303.4

49.1

132.5

65.4<sup>^</sup>

B

83.4<sup>^</sup>148.8<sup>^</sup> - 0.60<sup>^</sup>

8 56 20

232.3

- 0.68<sup>^</sup>

311.0

78.7<sup>^</sup>

61.9

61.9<sup>^</sup>

123.8

140.6<sup>^</sup> - 0.76<sup>^</sup>8 51 35<sup>^</sup>5 - 42<sup>^</sup>13 50 53<sup>^</sup>

7616.5770

Mean - 0.70<sup>^</sup>



Feb. 9, 1907

Index L &amp; B

III

9 2 4

242.3

299.5

50.3

131.0

57.2<sup>^</sup>80.7<sup>^</sup>137.9<sup>^</sup> - 0.82<sup>^</sup>

B

231.4

- 0.85<sup>^</sup>

310.87

64.9

120.5

79.3<sup>^</sup>55.6<sup>^</sup>134.9<sup>^</sup> - 0.88<sup>^</sup>

9 5 44

Index R &amp; A

154.4

208.1

325.4

35.6

53.7<sup>^</sup>70.2<sup>^</sup>123.9<sup>^</sup> - 1.11<sup>^</sup>

A

148.3

- 1.17<sup>^</sup>

213.9

334.0

26.8

65.6<sup>^</sup>52.8<sup>^</sup>118.4<sup>^</sup> - 1.23<sup>^</sup>

9 12 21

29 91<sup>^</sup>9 7 38<sup>^</sup>5 - 42<sup>^</sup>14 6 56<sup>^</sup>

7616.5881

Mean - 1.01<sup>^</sup>

Feb. 9, 1907.

Index Rect.

IV

9 17 8

154.9

206.4

328.9

34.0

51.5<sup>^</sup>65.1<sup>^</sup>116.6<sup>^</sup> -1.27<sup>^</sup>

A

9 20 0

149.0

213.5

337.0

25.8

64.5<sup>^</sup>48.8<sup>^</sup>113.3<sup>^</sup> -1.34<sup>^</sup>-1.30<sup>^</sup>

Index L &amp; B

9 24 12

65.2

117.0

247.2

303.6

51.8<sup>^</sup>56.4<sup>^</sup>108.2<sup>^</sup> -1.46<sup>^</sup>

B

9 27 35

88 55<sup>^</sup>9 22 14<sup>^</sup>5 -42<sup>^</sup>14 21 32<sup>^</sup>

76 16.59 52

57.6

123.5

246.8

308.6

65.9<sup>^</sup>61.8<sup>^</sup>127.7<sup>^</sup> -1.03<sup>^</sup>-1.24<sup>^</sup>Mean -1.27<sup>^</sup>



Feb. 9, 1907

Index LeB

67.6

V

9 45 45

114.9

47.3<sup>^</sup>

B

241.7

58.5<sup>^</sup>

300.2

105.8<sup>^</sup> -1.52<sup>^</sup>

61.0

-1.38<sup>^</sup>

9 47 50

122.4

61.4<sup>^</sup>

249.0

56.8<sup>^</sup>

305.8

118.2<sup>^</sup> -1.23<sup>^</sup>

Index RedA

~~339.9~~~~51 25~~~~23.0~~

153.0

A

9 52 5.0

209.61

56.1<sup>^</sup>

341.7

41.3<sup>^</sup>

23.0

97.4<sup>^</sup> -1.72<sup>^</sup>

161.4

-1.72<sup>^</sup>

9 55 30

202.0

40.6<sup>^</sup>

332.7

57.2<sup>^</sup>

29.9

97.8<sup>^</sup> -1.71<sup>^</sup>199 175<sup>^</sup>9 49 89<sup>^</sup>5 -42<sup>^</sup>14 49 47<sup>^</sup>Mean -1.55<sup>^</sup>

7616.6180

Feb. 9, 1907

Index Red

VI

10 2 18

157.3

209.7

341.2

22.9

52.4<sup>^</sup>41.7<sup>^</sup>94.1<sup>^</sup>-1.81<sup>^</sup>

A

10 4 40

161.0

202.3

334.2

29.2

41.3<sup>^</sup>55.0<sup>^</sup>96.3<sup>^</sup>-1.75<sup>^</sup>-1.78<sup>^</sup>

Index L &amp; B

10 8 14

63.4

120.0

250.5

293.2

56.6<sup>^</sup>42.7<sup>^</sup>99.3<sup>^</sup>-1.67<sup>^</sup>

B

10 10 27

70.3

113.8

243.0

298.8

43.5<sup>^</sup>55.8<sup>^</sup>99.3<sup>^</sup>-1.67<sup>^</sup>-1.67<sup>^</sup>24 99<sup>^</sup>10 6 25<sup>^</sup>5 -42<sup>^</sup>15 5 43<sup>^</sup>

7616.6290

Mean -1.72<sup>^</sup>



Feb. 9, 1907

Index L &amp; B

64.2

VII

10 14 18

119.5

55.3<sup>^</sup>

250.8

42.4<sup>^</sup>

293.2

97.7<sup>^</sup> -1.71<sup>^</sup>

B

~~69.9~~~~18~~ 0~~113.4~~-1.73<sup>^</sup>~~244.7~~

243.9

53.0<sup>^</sup>

10 19 31

296.9

43.1<sup>^</sup>

70.1

96.1<sup>^</sup> -1.75<sup>^</sup>

113.2

Index L &amp; A

162.5

10 22 40

200.9

38.4<sup>^</sup>

335.9

49.7<sup>^</sup>

25.6

88.1<sup>^</sup> -1.96<sup>^</sup>

A

156.0

-1.95<sup>^</sup>

10 24 57

206.0

50.0<sup>^</sup>79 146<sup>^</sup>

341.9

39.0<sup>^</sup>10 19 82<sup>^</sup>

20.9

89.0<sup>^</sup> -1.94<sup>^</sup>5 -42<sup>^</sup>15 19 40<sup>^</sup>

76 16.6387

Somewhat troubled by haze in above graph -1.84<sup>^</sup>  
 Stopped by increasing haze

Feb. 9, 1907

S.T. 7 58

H.A. +4 0

Dec +28.0

P.A. 309.8

Sprockets -1.5 B

" -0.5 b

8 44 0 Aurora very beautiful <sup>and brilliant</sup> in north. There was a continuous <sup>sheet</sup> ~~mass~~ of light below the ~~altitude~~ of the Pole extending from west to east (and more pronounced towards the west) which resembled a beautiful curtain with folds in it - these folds changing in position and brightness. The phenomenon was very brilliant. There was some pinkish color on lower edge of the curtain at times.

9  
9 30 Aurora has largely faded out.

10 30 Aurora not particularly visible. Sky hazy and becoming cloudy.

It's watch used for times tonight  
Watch 42 sec. fast.



Feb. 11. 1907 (Monday)

- 8 15 A low but not very bright auroral arch in North, the summit of arch being about  $\frac{1}{6}$  the altitude of the Pole Star.
- 8 35 0 Auroral arch still visible but rather fainter and not particularly visible at eastern or western ends of prolongation of arch.

o beti	Phot. R	H. Obs.	Bowie	Sec.
2	12	-3.6		
6	18			
+4	6			

Measurements on fol. page

Feb. 11, 1907

Index L &amp; A

8 52 34

356.3 var. dis.

4.2

7.9<sup>^</sup>

B

174.0

12.3<sup>^</sup>

186.3

20.2<sup>^</sup> -5.27<sup>^</sup>

353.8

-5.27<sup>^</sup>

6.0

12.2<sup>^</sup>

176.6

8.0<sup>^</sup>

184.6

20.2<sup>^</sup> -5.27<sup>^</sup>

Index R &amp; B

266.1

274.3

84.5

95.5

8.2<sup>^</sup>

A

11.0<sup>^</sup>19.2<sup>^</sup> -5.38<sup>^</sup>

264.4

-5.33<sup>^</sup>

276.3

11.9<sup>^</sup>

266.2

8.2<sup>^</sup>

274.4

20.1<sup>^</sup> -5.28<sup>^</sup>

9 3 15

17 55 49<sup>^</sup>8 57 54<sup>^</sup>5 -20<sup>^</sup>13 57 34<sup>^</sup>

7618.5816

Mean -5.30<sup>^</sup>

Measurements in above group a little difficult. Seeing a little for somewhat blurry. Region rather low



Feb. 11, 1907.

9 12 0 Aurora is now becoming much brighter and stronger in its manifestation. Some streamers and light in the north under Pole rather brilliant and changing its character frequently

Double Star No. 112 (Bonstoeck's List) = 126 mae

12	15	+ 26.6	Phot. R. H. O. by Bowie Rec
7	15		
<hr/>			
5	0		
7	0		

P.A. 165 Dist. 1.0 ± Magn. 5.04 9.2

Measurements on fol. page

Feb. 11, 1907

Index L &amp; A. B.

9 49 20

263.0 further &amp; brighter

278.2

75.5

102.7

15.2^

27.2^

42.4^ 3.64^

253.4

286.8

82.4

97.0

23.4^

14.6^

48.0^ 3.36^

3.50^

Index L &amp; A. A.

172.9

187.7

341.5

14.2

14.8^

32.7^

47.5^ 3.39^

165.3

194.8

352.7

7.0

29.5^

14.3^

43.8^ 3.57^

3.48^

9 56 2

105 22^

9 52 41^

5 -20^

14 52 21^

Mean 3.49^

Seeing in above group very blurry  
Observations difficult

10 2 0

Aurora has now quite completely faded out. Only a slight auroral light visible.



Feb. 11, 1907.

Double Star No. 103 (Leinstock's List) =  $\Sigma$  1517

11	.6	+ 21.2	Phot R & Obs	Bowie Rec
7	51		P.A. 105	List 3.5 $\pm$ Range 7.5 11.0
3	15			
8	45			

Index L &amp; B.

172.0  $\leftarrow$  Pres a brighter dis.

191.4

349.3

11.8

19.4 <sup>^</sup>	
22.5 <sup>^</sup>	
41.9 <sup>^</sup>	3.67 <sup>^</sup>

168.9

192.0

351.7

9.0

23.1 <sup>^</sup>	
17.3 <sup>^</sup>	
40.4 <sup>^</sup>	3.75 <sup>^</sup>

3.71<sup>^</sup>

Index R &amp; A A.

83.0

100.4

258.5

282.2

17.4 <sup>^</sup>	
23.7 <sup>^</sup>	
41.1 <sup>^</sup>	3.71 <sup>^</sup>

78.7

102.5

262.4

279.2

23.8 <sup>^</sup>	
16.8 <sup>^</sup>	
40.6 <sup>^</sup>	3.74 <sup>^</sup>

3.72<sup>^</sup>

10	29	32	
	50	42	<sup>^</sup>
10	25	21	<sup>^</sup>
5		-20	<sup>^</sup>
15	25	1	<sup>^</sup>

Mean 3.72<sup>^</sup>

Feb. 11, 1907

10 40 Auroral light has now ~~practically~~ faded  
out.

It's watch used for times.  
Watch 20 sec. fast.



Feb. 12, 1907 (Tuesday)

B. 2 b. 1182

7 26 55.1  
7 27 55.0

B. 394

7 27 0.0  
7 28 0.0

Leap. Jap. II Phot. V. V. Obs. Bore Rec  
comp. with Sat. on pres. side = Sat. III

8

14

11

False alarm

51

" "

15

13

" Jap. "

17

Seen

15 26^

15 36^

15 55^

16 12^

16 34^

16 43^

16 55^

17 8^

17 22^

17 36^

17 49^

18 1^

18 15^

18 29^

16

17

18

46

3

25

34

46

59

13

27

40

52

6

20

+2.9^ 29.9^ 254.6

+2.2^ 40.5^ 284.5

+1.6^ 51.2^ 244.0

+1.6^ 50.2^ 295.2

+1.6^ 52.0^ 245.0

+1.3^ 57.9^ 297.0

+1.1^ 61.7^ 239.1

+1.1^ 62.7^ 300.8

+1.0^ 65.0^ 238.1

+0.8^ 68.6^ 303.1

+0.9^ 68.0^ 234.5

+0.8^ 69.1^ 302.5

Feb. 12, 1907

8	18	42 <sup>8</sup>	18	33	+0.7 <sup>71.6</sup>	233.4	
	18	53 <sup>^</sup>		44		305.0	→
				56		71.7 <sup>^</sup>	233.8
8	19	20 <sup>^</sup>	19	15		74.0 <sup>^</sup>	305.5 1
		+10 <sup>^</sup>		28		145.7 <sup>^</sup>	
8	19	30 <sup>^</sup>		41	+0.7 <sup>72.8</sup>	231.4	
				53		305.4	
8	20	12 <sup>^</sup>	20	6		71.8 <sup>^</sup>	230.2
		+10 <sup>^</sup>		19		72.0 <sup>^</sup>	302.0 2
8	20	22 <sup>^</sup>		31		143.8 <sup>^</sup>	231.0
				44	+0.7 <sup>71.9</sup>	303.0	
8	21	16 <sup>^</sup>	21	13		73.9 <sup>^</sup>	305.0 3
		+10 <sup>^</sup>		25	moved images of comparat. slightly		
8	21	26 <sup>^</sup>		41		72.0 <sup>^</sup>	230.0
				54	+0.7 <sup>73.0</sup>	302.0	
8	22	12 <sup>^</sup>	22	5		76.2 <sup>^</sup>	229.8
		+10 <sup>^</sup>		19		74.4 <sup>^</sup>	306.0 4
8	22	22 <sup>^</sup>		30	+0.6 <sup>75.3</sup>	229.7	
				43		304.1	
8	23	1 <sup>^</sup>	23	5		74.7 <sup>^</sup>	230.0
		+10 <sup>^</sup>		23		74.2 <sup>^</sup>	304.7
8	23	11 <sup>^</sup>		36		148.9 <sup>^</sup>	230.1 5
				47	+0.6 <sup>74.4</sup>	304.3	
8	23	54 <sup>^</sup>		36		73.5 <sup>^</sup>	230.0
		+10 <sup>^</sup>		47		75.1 <sup>^</sup>	303.5 6
8	24	4 <sup>^</sup>			+0.6 <sup>74.3</sup>		



Feb. 12, 1907

8	24	47	1	228.8	6
		+10	13	303.9	6
8	24	57	26	74.3	229.5
			40	73.9	303.8
			55	148.2	229.2
				+0.6	74.1
			25	7	303.1
			25	74.7	229.5
8	26	11	37	75.0	304.2
		+10	44	149.7	230.0
8	26	21	57	+0.6	74.8
					305.0
			27	15	75.4
			29	75.8	304.5
8	27	23	43	151.2	229.2
		+10	6	+0.6	75.6
8	27	33			304.2
					5.0
Limit of Vis.					
8	31	38	5	28.9	253.1
		+11	27	27.7	282.0
8	31	49	46	56.6	254.3
			32	15	+3.0
					28.3
					282.0

Seeing a little blurry but eclipse considered pretty good. Altitude high and telescope very close to pier. It was compelled to observe on his knees on account of high altitude. Sat. reaps. on top of a faint ghost of Jup. This ghost however was pretty faint so that it did not give much <sup>of any</sup> trouble.

Feb. 12, 1907

B & b 1182			B. 394		
8	42	48.4	8	43	0.0
8	43	48.5	8	44	0.0

1. In previous eclipse.

From  $\Delta^h$  7<sup>m</sup> 32<sup>n</sup> to  $\Delta^h$  12<sup>m</sup> 59<sup>n</sup> add 9 sec.  
 $\Delta$  12 59. "  $\Delta$  30 19. " 10 "  
 $\Delta$  30 19. "  $\Delta$  41 40. " 11 "

Stars in region of  $\epsilon$  3 Virginis

13	10	+ 6.2
9	15	
3	55	
8	5	

Seeing so bad on account of cold snap that it is best to wait for another night



Feb. 13, 1907 (Wednesday)

Z Persei Phot. 5 Hr. Obs. Bowie Rec.

2	31	+ 41.6
5	16	
2	45	

7 30 0 Sky pretty thickly cloudy west of meridian and becoming cloudy east of meridian also.

Index L & A

7 54 44	67.1 ← comp. Star dis.	
	114.0	
	252.6	46.9^
	290.8	38.2^
		85.1^ + 2.05^
	73.8	+ 1.98^
	110.1	36.3^
	245.6	53.4^
	299.0	89.7^ + 1.92^

Index R & S

336.6	
23.6	47.0^
164.6	33.4^
198.0	80.4^ + 2.18^

340.7	+ 2.09^
18.6	37.9^
157.0	49.0^
206.50	86.9^ + 2.00^

8	2	0
15	56	44^
7	58	22^
5		+ 14^
12	58	36^
76	20.54	07

Mean + 2.04^

Feb. 13, 1907

II

Index A+B

8 5 53

334.6

27.8

163.0

201.7

53.2<sup>^</sup>38.7<sup>^</sup>91.9<sup>^</sup> +1.46<sup>^</sup>

A

343.1

20.9

155.6

207.0

37.8<sup>^</sup>51.4<sup>^</sup>89.2<sup>^</sup> +1.94<sup>^</sup>+1.90<sup>^</sup>

Index L+A

245.1

296.6

69.0

112.1

51.5<sup>^</sup>43.1<sup>^</sup>94.6<sup>^</sup> +1.79<sup>^</sup>

B

252.0

290.2

64.4

120.0

34.2<sup>^</sup>55.6<sup>^</sup>93.8<sup>^</sup> +1.81<sup>^</sup>+1.80<sup>^</sup>Mean +1.85<sup>^</sup>

8	13	48
8	18	101
5	9	50
		+14
13	10	4

7620.5487



Feb. 13, 1907

Index Led

III

6 17 47

241.9

54.4<sup>^</sup>

300.7

70.1

34.2<sup>^</sup>

108.9

97.6<sup>^</sup>+1.72<sup>^</sup>

B

251.6

41.6<sup>^</sup>

292.8 3.2

+1.72<sup>^</sup>

63.0

56.4<sup>^</sup>

119.4

92.0<sup>^</sup>+1.71<sup>^</sup>

Index R+B

154.0

54.6<sup>^</sup>

208.6

342.1

34.1<sup>^</sup>

20.2

92.7<sup>^</sup>+1.24<sup>^</sup>

A

160.3

42.9<sup>^</sup>+1.76<sup>^</sup>

203.2

333.5

56.3<sup>^</sup>

29.8

99.2<sup>^</sup>+1.62<sup>^</sup>Mean +1.74<sup>^</sup>

6 25 47

42 94

8 21 47

5 +14

13 22 1

7620.5569

Feb. 13, 1907

Index R &amp; B

IV

8 33 0

154.4	54.6 <sup>^</sup>	
209.0		
341.3	41.7 <sup>^</sup>	
231.0	<u>96.3<sup>^</sup></u>	+1.75 <sup>^</sup>

A

159.6	44.7 <sup>^</sup>	
204.3		+1.66 <sup>^</sup>
332.4	59.0 <sup>^</sup>	
311.4	<u>103.7<sup>^</sup></u>	+1.57 <sup>^</sup>

Index L &amp; A

60.2	61.6 <sup>^</sup>	
121.8		
250.0	44.0 <sup>^</sup>	
294.0	<u>105.6<sup>^</sup></u>	+1.52 <sup>^</sup>

B

8	42	30
	75	30 <sup>^</sup>
8	37	45 <sup>^</sup>
5		+14 <sup>^</sup>
13	37	59 <sup>^</sup>

7620.568.1

68.0	46.9 <sup>^</sup>	+1.46 <sup>^</sup>
114.9		
239.7	63.4 <sup>^</sup>	
303.5	<u>110.7<sup>^</sup></u>	+1.40 <sup>^</sup>

Mean +1.56<sup>^</sup>



Feb. 13, 1907

V

Index L &amp; A

8 47 0

58.4  
121.9  
250.3  
297.3

63.5<sup>^</sup>  
47.0<sup>^</sup>  

---

110.5<sup>^</sup> +1.41<sup>^</sup>

B

67.7  
116.0  
239.8  
306.6

48.3<sup>^</sup>  
66.8<sup>^</sup>  

---

115.1<sup>^</sup> +1.36<sup>^</sup>

+1.36<sup>^</sup>

Index R &amp; B

329.0  
32.9  
158.1  
206.0

63.9<sup>^</sup>  
47.9<sup>^</sup>  

---

111.8<sup>^</sup> +1.36<sup>^</sup>

A

339.0

25.8

150.8

211.89

46.8<sup>^</sup>61.1<sup>^</sup>107.9<sup>^</sup> +1.47<sup>^</sup>+1.42<sup>^</sup>

8 56 2  

---

103 2<sup>^</sup>  
8 51 31<sup>^</sup>  
5 +14<sup>^</sup>  

---

13 51 45<sup>^</sup>

7620.5777

Mean +1.39<sup>^</sup>

Feb. 13, 1907.

Index R &amp; B

330.5

VT

32.46

62.1^

157.4

47.2^

204.86

109.3^ + 1.43^

A

338.4

+1.37^

27.5

49.1^

148.4

65.8^

214.12

114.9^ + 1.31^

Index L &amp; A

240.0

303.9

64.6

116.0

63.9^

51.4^

115.3^ + 1.30^

B

245.4

+1.26^

295.9

50.5^

56.0

68.0^

124.0

118.5^ + 1.23^

9 9 50

9 9 67^

9 4 64^

5 +14^

14 5 18^

2.3. 7<sup>h</sup> 13<sup>m</sup>

Mean +1.32^

7620.5870 H.A. +4 37

Dec: +42.1

P.A. 16.5 Var. B

Sprocket - 2.5 B

" - 1.5 b

It's watch used for times

Watch 14 sec. slow



Feb. 15 1907 (Friday)

Measurement of diff. in brightness of two comp.  
Stars for Z Persei Phot. R. H. Obs. Bowie Res.

$$\begin{array}{r} 2 \quad 3 \quad 3 \quad + 42.2 \\ 5 \quad 18 \\ \hline 2 \quad 45 \end{array}$$

Index Above

229.8 from b. S. dis.

$$\begin{array}{r} 310.4 \quad 80.6^{\wedge} \\ 61.6 \quad 59.2^{\wedge} \\ \hline 120.8 \quad 139.8^{\wedge} + 0.78^{\wedge} \end{array}$$

242.4

+ 0.77^

302.4

51.0

131.7

$$\begin{array}{r} 60.0^{\wedge} \\ 80.7^{\wedge} \\ \hline 140.7^{\wedge} + 0.76^{\wedge} \end{array}$$

Index Below

147.7

217.7

336.0

27.0

$$\begin{array}{r} 70.0^{\wedge} \\ 51.0^{\wedge} \\ \hline 121.0^{\wedge} + 1.17^{\wedge} \end{array}$$

155.8

+ 1.18^

208.0

327.3

35.0

$$\begin{array}{r} 52.2^{\wedge} \\ 67.7^{\wedge} \\ \hline 119.9^{\wedge} + 1.19^{\wedge} \end{array}$$

Mean + 0.98^

7 44 17

$$\begin{array}{r} 7 \quad 55 \quad 10 \\ 99 \quad 27^{\wedge} \\ 7 \quad 49 \quad 44^{\wedge} \\ 5 \quad + 35^{\wedge} \\ \hline 12 \quad 50 \quad 19^{\wedge} \end{array}$$

76 22.5349

Feb. 15, 1907

Z Persei Phot. J. H. O. b. Bore Rec.  
Index L & B

~~37.6~~ b. S. dis

321, 3

40.2

152.8

21.1.4

78.9

58.6

$$137.5^{\circ} + 0.82^{\circ}$$

333.8

 $+0.82^{\wedge}$ 

32, 5

58.7<sup>^</sup>

140.6

78.9

219.5

$$137.6^\circ + 0.82^\circ$$

Index Leaf

232.0

314.7

59.2

1 2 2. 4

82.7 ^

63.2<sup>^</sup>

$$145.9^{\wedge} + 0.66^{\wedge}$$

242.8

 $+0.70^{\circ}$ 

302.57

59.9 ~

50.8

82.3

1 3 3. ~~3~~ 1

$$142.2^{\wedge} + 0.73^{\wedge}$$

8 11 22

14 78

8 7 39

$$5 + 35$$

13      8      14

7622,5473



Feb. 15, 1907

S. I. 6 71  
 Ib. A. +3 35  
 Dec. +42.2  
 P. A. 16.8  
 Sprocket - 2.5-8  
 " - 1.5 b

It's watch used for times tonight.  
 Watch 35 sec. slow.

Stars in region of  $\alpha$  I Virginis  
 Phot. L. H. Obs. Bowie Res

13	10	+6.2
9	10	
4	00	
8	00	

12	10
10	20
2	50
9	10

Measurements on fol. page

Feb. 15, 1907

Provis.

Star, No. 1. = +5° 27' 12" (9.5)

Index Left

12 36 11

239.3 ← b. Star dis.

302.7

63.4<sup>^</sup>

64.7

53.9<sup>^</sup>

118.6

117.3<sup>^</sup> +1.25<sup>^</sup>

246.0

+1.30<sup>^</sup>

294.4

48.4<sup>^</sup>

59.5

64.5<sup>^</sup>

124.0

112.9<sup>^</sup> +1.35<sup>^</sup>

Index Right

151.9

213.0

61.1<sup>^</sup>

339.8

43.5<sup>^</sup>

23.3

104.6<sup>^</sup> +1.54<sup>^</sup>

157.0

+1.44<sup>^</sup>

204.9

47.9<sup>^</sup>

328.9

66.0<sup>^</sup>

34.9

113.9<sup>^</sup> +1.33<sup>^</sup>Mean +1.37<sup>^</sup>

72 42 30

78 41<sup>^</sup>12 39 20<sup>^</sup>5 +35<sup>^</sup>17 40 5<sup>^</sup>

7622.8362



Feb. 15, 1907.

Provis.

Star, No. 2 = Hagen No. 5.

Index LeB

12 48 55

314.4	←	bramp. Star dis.
47.4		93.0^
144.0		75.0^
219.0		<u>162.0^</u> +0.23^

<del>323.8</del>		
<del>37.7</del>		
143.0		+0.23^
219.0	76.0^	
314.9	91.9^	
46.8	<u>167.9^</u>	+0.23^

Index R + A

40.0	99.0^	
139.0		
230.8	21.4^	
312.2	<u>197.4^</u>	-0.01^
	720.4^	
49.8	<u>179.6^</u>	-0.04^
13273.2	23.4^	
221.2	100.2^	
321.4	<u>123.6^</u>	-0.07^
	176.4^	

12	57	30
	105	85 ^
12	52	72 ^
5		+35 ^
17	53	47 ^
7622.8457		

Mean +0.10^

Feb. 15, 1907.

Polaris.

Star No. 3 = Hagen No. 15.

Index Q &amp; A

245.8 comp. Star dis.

13 1 38

297.6

51.8<sup>^</sup>

69.0

43.9<sup>^</sup>

112.9

95.7<sup>^</sup> + 1.76<sup>^</sup> A

249.5

+1.73<sup>^</sup>

294.4

44.9<sup>^</sup>

63.1

53.4<sup>^</sup>

116.5

98.3<sup>^</sup> + 1.70<sup>^</sup>

Index L &amp; B

157.2

207.5

50.3<sup>^</sup>

342.4

38.3<sup>^</sup>

20.7

88.6<sup>^</sup> + 1.95<sup>^</sup> B

163.5

+1.96<sup>^</sup>

200.7

37.2<sup>^</sup>

336.4

51.1<sup>^</sup>

27.5

88.3<sup>^</sup> + 1.96<sup>^</sup>Mean + 1.84<sup>^</sup>

13 9 8

10 46<sup>^</sup>13 5 23<sup>^</sup>5 + 35<sup>^</sup>18 5 58<sup>^</sup>

76 22,2542



Feb. 15, 1907

Provis.

Star No. 4 = Hagen No. 20.

Index L &amp; B

13 13 0

165.6 ← Comp. Star dis.  
 198.0 32.4<sup>^</sup>  
 346.9 24.0<sup>^</sup>  
 14.9 60.4<sup>^</sup> + 2.44<sup>^</sup> B

166.4 27.6<sup>^</sup> + 2.41<sup>^</sup>  
 194.0  
 342.0 34.6<sup>^</sup>  
 16.6 62.2<sup>^</sup> + 2.72<sup>^</sup>

Index R &amp; A

73.0  
 111.2 34.2<sup>^</sup>  
 256.8 30.4<sup>^</sup>  
 287.6 69.0<sup>^</sup> + 2.54<sup>^</sup> A

13 22 40  
 35 40<sup>^</sup>  
 13 17 50<sup>^</sup>  
 5 +35<sup>^</sup>  
 18 18 25<sup>^</sup>

75.7  
 107.5  
 253.4 31.8<sup>^</sup>  
 291.84 38.0<sup>^</sup>  
 69.4<sup>^</sup> + 2.51<sup>^</sup>

7622.2628

Mean + 2.66<sup>^</sup>

Feb 15, 1907

Provis.  
Star, No. 5 = Hagen No. 13.

Index Above

334.8 ← Comp. Star dis.

32.1

155.4

206.5

336.4

27.4

150.5

211.6

13. 55 30

Stopped by clouds.

Comparison star used in previous measts, was  
Hagen No. 4.

The previous measts were of 4 stars and part of  
a 5th, to be used as standards in the region  
of R T Virginis.



Feb. 18, 1907 (Monday)

R 3 Persei Phot. 3 H. Obs. Bowie Rec.

$$\begin{array}{r} 3 \quad 0 \quad +44.3 \\ 5 \quad 30 \\ \hline +2 \quad 30 \end{array}$$

I

Index Below

150.3 — b. s. dis.

$$\begin{array}{r} 209.3 \quad 59.0^{\wedge} \\ 340.4 \quad 39.2^{\wedge} \\ 19.6 \quad \hline 98.2^{\wedge} +1.70^{\wedge} \end{array} \quad \text{B}$$

$$\begin{array}{r} 159.5 \quad +1.62^{\wedge} \\ 201.0 \quad 41.5^{\wedge} \\ 329.0 \quad 62.9^{\wedge} \\ 31.9 \quad \hline 104.4^{\wedge} +1.55^{\wedge} \end{array}$$

Index Above

$$\begin{array}{r} 57.6 \\ 125.5 \quad 67.9^{\wedge} \\ 246.5 \quad 51.2^{\wedge} \\ 297.7 \quad \hline 119.1^{\wedge} +1.21^{\wedge} \end{array} \quad \text{A}$$

$$66.4 \quad +1.19^{\wedge}$$

$$\begin{array}{r} 117.5 \quad 51.1^{\wedge} \\ 237.0 \quad 69.8^{\wedge} \\ 306.8 \quad \hline 120.9^{\wedge} +1.17^{\wedge} \end{array}$$

Mean  $+1.40^{\wedge}$

$$\begin{array}{r} 7 \quad 50 \quad 0 \\ 90 \quad 23^{\wedge} \\ 7 \quad 45 \quad 12^{\wedge} \\ 5 \quad +1 \quad +23^{\wedge} \\ \hline 12 \quad 46 \quad 35^{\wedge} \end{array}$$

$$7625.5323$$

Feb. 18, 1907

Index Above

II.

7 52 57

56.3

124.8

245.8

297.5

68.5<sup>^</sup>51.7<sup>^</sup>120.2<sup>^</sup> + 1.19<sup>^</sup>

A

64.8

116.0

233.0

307.0

51.2<sup>^</sup>74.0<sup>^</sup>125.2<sup>^</sup> + 1.08<sup>^</sup>+ 1.14<sup>^</sup>

Index Below

326.0

30.9

153.9

206.8

64.9<sup>^</sup>52.9<sup>^</sup>117.8<sup>^</sup> + 1.24<sup>^</sup>

B

337.0

25.0

145.0

215.5

48.0<sup>^</sup>70.5<sup>^</sup>118.5<sup>^</sup> + 1.23<sup>^</sup>+ 1.24<sup>^</sup>

8 3 50

15 55 107<sup>^</sup>7 57 84<sup>^</sup>5 +1 +32<sup>^</sup>12 59 56<sup>^</sup>

7625.5416

Mean + 1.19<sup>^</sup>



Feb. 18, 1907.

Index Below

325.2

35.4

155.4

204.4

70.2<sup>^</sup>49.0<sup>^</sup>119.2<sup>^</sup> + 1.21<sup>^</sup>

III

B

336.0

26.5

145.4

214.4

50.5<sup>^</sup>69.0<sup>^</sup>119.5<sup>^</sup> + 1.20<sup>^</sup>+1.20<sup>^</sup>

Index Above

235.3

309.3

62.6

119.1

74.0<sup>^</sup>56.5<sup>^</sup>130.5<sup>^</sup> + 0.97<sup>^</sup>

A

245.6

300.2

55.4

127.0

54.6<sup>^</sup>71.6<sup>^</sup>126.2<sup>^</sup> + 1.06<sup>^</sup>+1.02<sup>^</sup>

8 17 48

26 78<sup>^</sup>8 13 39<sup>^</sup>5 +1 +32<sup>^</sup>13 15 11<sup>^</sup>

7625.5522

Mean + 1.11<sup>^</sup>

Feb. 18, 1907.

Index Above

8 21 20

231.4

311.7

62.8

119.3

80.3<sup>^</sup>56.5<sup>^</sup>136.8<sup>^</sup> + 0.84<sup>^</sup>

IV

A

244.6

299.4

53.4

128.0

54.8<sup>^</sup>74.6<sup>^</sup>129.4<sup>^</sup> + 0.99<sup>^</sup>+ 0.92<sup>^</sup>

Index Below

145.8

213.9

334.3

27.3

68.1<sup>^</sup>53.0<sup>^</sup>121.1<sup>^</sup> + 1.17<sup>^</sup>

B

154.5

206.2

325.6

36.8

51.7<sup>^</sup>71.2<sup>^</sup>122.9<sup>^</sup> + 1.13<sup>^</sup>+ 1.15<sup>^</sup>

8 30 32

51 52<sup>^</sup>8 25 56<sup>^</sup>5 +1 +32<sup>^</sup>13 27 28<sup>^</sup>

7625.5608

Means + 1.04<sup>^</sup>



Feb. 18, 1907

Index Below

147.1

217.0

334.0

27.2

69.9<sup>^</sup>53.2<sup>^</sup>123.1<sup>^</sup>+1.13<sup>^</sup>

B

153.6

208.4

324.8

35.9

54.8<sup>^</sup>71.1<sup>^</sup>125.9<sup>^</sup>+1.07<sup>^</sup>+1.10<sup>^</sup>

Index Above

53.4

126.4

244.0

300.0

73.0<sup>^</sup>56.0<sup>^</sup>129.0<sup>^</sup>+1.00<sup>^</sup>

A

63.0

119.5

232.8

308.0

56.5<sup>^</sup>75.2<sup>^</sup>131.7<sup>^</sup>+0.94<sup>^</sup>+0.97<sup>^</sup>Mean +1.04<sup>^</sup>

8 52 38

95 84<sup>^</sup>8 47 72<sup>^</sup>5 +1 +32<sup>^</sup>13 49 44<sup>^</sup>

7625.5762

L.J. 7<sup>hr</sup> 8<sup>min</sup>

H.A. +3 50

Dec +46.7

P.A. 359.1 Ver B

Sprockets -2.5 B

" -1.56

Feb. 18, 1907

Measurement of diff. in brightness of two  
comp. Stars for  $\zeta$  Persei Phot. 3 Dr. Oke. Bowe Inc

$$\begin{array}{r} 2 \quad 33 \quad +42.2 \\ 7 \quad 18 \\ \hline 4 \quad 45 \end{array}$$

Index L &amp; A

52.3 New b. S. dis.

$$\begin{array}{r} 129.4 \\ 244.3 \\ 301.9 \\ \hline 77.1^{\wedge} \\ 57.6^{\wedge} \\ \hline 134.7^{\wedge} + 0.88^{\wedge} \end{array} \quad \text{B}$$

61.1

+0.85<sup>^</sup>

$$\begin{array}{r} 120.2 \\ 231.5 \\ 310.0 \\ \hline 59.1^{\wedge} \\ 78.5^{\wedge} \\ \hline 137.6^{\wedge} + 0.82^{\wedge} \end{array}$$

Index R &amp; B

$$\begin{array}{r} 224.4 \\ 37.0 \\ 154.0 \\ 206.5 \\ \hline 72.6^{\wedge} \\ 52.5^{\wedge} \\ \hline 125.1^{\wedge} + 1.08^{\wedge} \end{array} \quad \text{A}$$

335.0

+1.04<sup>^</sup>

$$\begin{array}{r} 29.2 \\ 143.5 \\ 217.9 \\ \hline 54.2^{\wedge} \\ 74.4^{\wedge} \\ \hline 128.6^{\wedge} + 1.01^{\wedge} \end{array}$$

Mean +0.94<sup>^</sup>

$$\begin{array}{r} 9 \quad 26 \quad 48 \\ \hline 44 \quad 60^{\wedge} \\ 9 \quad 22 \quad 30^{\wedge} \\ 5 \quad +1 \quad +32^{\wedge} \\ \hline 14 \quad 24 \quad 2^{\wedge} \end{array}$$

7625.6000



Feb. 18, 1907.

S. J. 7<sup>h</sup> 42<sup>m</sup>

H. A. + 5 8

Dec. + 42.0

P. A. 189.8 Ver. 8

Sprocket - 7.5 S

" - 6.5 b

It's watch used for times tonight.  
Watch 1 m. 32 sec. slow.

Feb. 21, 1907 (Thursday)

Y Camelopard Phot. J. H. Obs. Same Rec

7	25	+76.3
5	45	
1	40	
10	20	

Index Led

332.6	comp. Star dis	
29.7	57.1 <sup>v</sup>	3
160.0	40.1 <sup>v</sup>	
200.1	97.2 <sup>v</sup> + 1.73 <sup>v</sup>	

7 52 30

342.8		+1.72 <sup>v</sup>
21.0	38.2 <sup>v</sup>	
151.8	59.2 <sup>v</sup>	
211.0	97.4 <sup>v</sup> + 1.72 <sup>v</sup>	

Index Red

243.0		
301.0	58.0 <sup>v</sup>	4
71.6	41.2 <sup>v</sup>	
112.8	99.2 <sup>v</sup> + 1.68 <sup>v</sup>	

8	5	10	
15	57	40	^
7	58	50	^
5	+1	+30	^
13	0	20	^

7628.5419

253.1		+1.72 <sup>v</sup>
289.0	35.9 <sup>v</sup>	
63.3	55.9 <sup>v</sup>	
119.2	91.8 <sup>v</sup> + 1.87 <sup>v</sup>	

mean +1.7<sup>v</sup>



Feb. 21, 1907

S J 6 36

H A - 0 55

Dec +75.9

P. A 170.0 Ver S

Sprocket -1.5 A

" -0.5 S

" 0.0

On account of rather bright moonlight and faintness of variable together with rapidly rising barometer and somewhat blurry seeing, the above group was a little difficult and had to be made very slowly. By reason of the above conditions and as the variable is pretty faint and growing fainter, it is not considered best to try another group.

Fourth Inferior +2° 1715 Phot 3 H. Obs. Bowie Obs

7 25 + 2.2

6 55

0 30

11 30

Measurements on fol. page

Feb. 21, 1907

Index Recd

8 55 50

324.8 ← *biomp* Star dis.

39.5

74.7<sup>✓</sup>

150.9

56.1<sup>✓</sup>

207.0

130.8<sup>✓</sup> + 0.96<sup>✓</sup> A

334.0

+ 0.96<sup>✓</sup>

27.7

53.7<sup>✓</sup>

140.5

76.7<sup>✓</sup>

217.2

130.4<sup>✓</sup> + 0.97<sup>✓</sup>

Index Recd

235.0

309.8

74.8<sup>✓</sup>

64.9

55.8<sup>✓</sup>

120.7

130.6<sup>✓</sup> + 0.97<sup>✓</sup> B

243.0

+ 0.91<sup>✓</sup>

300.0

57.0<sup>✓</sup>

50.6

79.4<sup>✓</sup>

130.0

136.4<sup>✓</sup> + 0.85<sup>✓</sup>Mean + 0.94<sup>✓</sup>

9	3	12
17	58	62
8	59	31
5	+1	+30
14	1	1

7628.5840 L.3. 7<sup>h</sup> 31<sup>m</sup>

L.A. - 0 1

Dec. + 1.7

P.A. 26.0 Var B

Sprockit - 1.5 B

" - 0.5 b



Feb. 21, 1907

Fourth Type Star - 1° 23' 2" Phot 3 H. Obs. Bowie Res

9	32	-0.5
7	42	
1	50	
10	10	

Index to A

245.9 ← comp. Star dis

298.3

52.4"

69.3

42.4"

111.7

94.8" + 1.79"

A

251.8

+1.72"

292.6

40.8"

61.8

59.1"

120.9

99.9" + 1.66"

Index L+B

153.1

207.4

54.3"

342.0

39.9"

21.9

94.2" + 1.80"

B

160.6

+1.76"

201.7

41.1"

333.1

55.9"

29.0

97.0" + 1.73"

Mean +1.74"

9 36 6

9 44 20

80 26 ^

9 40 13 ^

5 +1 +30 ^

14 41 43 ^

76 28.6/23

Feb. 21, 1907.

S.I.  $\delta^h$  13<sup>m</sup>  
 H.A. -1 34  
 Dec. -2.1  
 P.A. 30.2 Ver B  
 Sprocket -0.5 B  
 " +0.5 b

Double Star 103 (Hamstrick's List) =  $\Sigma$  1517

Phot. R. H. Ok. Bowie Dec

11	6	+ 21.3
8	22	
2	44	
9	16	

P.d. 105° Dist 3.5 $\pm$  Magn 6.8 & 10.5



Feb. 21, 1907

Index Q &amp; A it.

79.8 Pres &amp; brighter dis

10 14 0

101.1

21.3<sup>^</sup>

261.8

17.8<sup>^</sup>

279.6

39.1<sup>^</sup>3.82<sup>^</sup>

81.6

3.76<sup>^</sup>

100.1

18.5<sup>^</sup>

259.1

22.6<sup>^</sup>

281.7

41.1<sup>^</sup>3.71<sup>^</sup>

Index L &amp; B B.

348.6

13.2

24.6<sup>^</sup>

171.0

19.3<sup>^</sup>

190.3

43.9<sup>^</sup>3.56<sup>^</sup>

351.0

3.52<sup>^</sup>

10.9

19.9<sup>^</sup>

167.6

25.9<sup>^</sup>

193.5

45.8<sup>^</sup>3.47<sup>^</sup>Mean 3.64<sup>^</sup>

It's watch used for times tonight  
 Hatch 1 m. 30 sec. slow

Feb. 22, 1907 (Friday)

Fourth Type Star +14° 20' 48" Phot 3 V. Obs. Found

$$\begin{array}{r} 9 \\ 5 \\ \hline 3 \\ 8 \end{array} \quad \begin{array}{r} 7 \\ 42 \\ \hline 25 \\ 35 \end{array}$$

+15.5

Index Led

55.8

4th type dis

125.9

70.1<sup>^</sup>

243.4

53.9<sup>^</sup>

297.3

124.0<sup>^</sup> -1.11<sup>^</sup>

B

61.7

-1.03<sup>^</sup>

119.2

57.5<sup>^</sup>

234.3

74.1<sup>^</sup>

308.4

131.6<sup>^</sup> -0.95<sup>^</sup>

Index Red

325.6

38.8

73.2<sup>^</sup>

151.5

56.2<sup>^</sup>

207.7

129.4<sup>^</sup> -0.99<sup>^</sup>

A

334.0

-1.04<sup>^</sup>

27.4

53.4<sup>^</sup>

146.4

71.3<sup>^</sup>

217.7

124.7<sup>^</sup> -1.09<sup>^</sup>

Mean -1.04<sup>^</sup>

8 7 26

16 6 31<sup>^</sup>

8 3 16<sup>^</sup>

5 -13<sup>^</sup>

13 3 3<sup>^</sup>

7629.5438

In above group seeing rather blurry  
but great care exercised and observations considered  
good



Feb. 22, 1907

S.J. 6      37  
 H.A. - 2      34  
 Dec + 14.0  
 P.A. 282.1  $\delta$   $\gamma$   $\beta$   
 Sprocket - 3.5  $\delta$   
           "      - 2.5  $\beta$   
           "      - 2.0  $\delta$

Fourth Type Star +59 2810 Phot 3 & Obs. Smith  
           0      1      + 58.3  
           6      51  
           6      50  
                     Full aperture used.  
                     Solar 6

Measurements on fol. page

Feb. 22, 1907

Index Lab

8 43 45

229.5 ← ~~5th~~ type dis.

311.6

82.1<sup>^</sup>

59.2

61.8<sup>^</sup>

121.0

143.9<sup>^</sup> - 0.70<sup>^</sup>

B

239.0

-0.66<sup>^</sup>

301.9

62.9<sup>^</sup>

47.5

84.1<sup>^</sup>

131.6

147.0<sup>^</sup> - 0.63<sup>^</sup>

Index Red

152.0

211.9

59.9<sup>^</sup>

317.4

85.0<sup>^</sup>

42.4

144.9<sup>^</sup> - 0.68<sup>^</sup> A

137.2

-0.68<sup>^</sup>

8 51 48

221.8

84.6<sup>^</sup>8 94 93<sup>^</sup>

331.3

60.7<sup>^</sup>8 47 46<sup>^</sup>

32.0

145.3<sup>^</sup> - 0.67<sup>^</sup>5 -13<sup>^</sup>13 47 33<sup>^</sup>L.J. 7<sup>2</sup> 21<sup>~</sup>Mean - 0.67<sup>^</sup>

7629.5747

H.A. + 7 25

Dec. + 60.0

C.A. 259.0 var. B

Sprocket - 0.5 B

" + 0.5 b



Feb. 22, 1907

Double Stars No. 43 (Comstock's List) O 3auri

4	12	+ 27.1	Phot. R. H. Obs. Bowie Rec.
7	42		P.A. $245^\circ$ Dist. $1.0 \pm$ Angs. $5.0 \pm 9.2$
3	30		

Index R &amp; B 4.

348.9 Fol. a brighter dis

11.0

22.1<sup>^</sup>

167.6

25.9<sup>^</sup>

193.5

48.0<sup>^</sup> 3.36<sup>^</sup>

347.0

3.40<sup>^</sup>

12.5

25.5<sup>^</sup>

169.8

21.1<sup>^</sup>

190.9

46.6<sup>^</sup> 3.43<sup>^</sup>

Index Last B.

261.1

280.0

18.9<sup>^</sup>

76.8

29.2<sup>^</sup>

106.0

48.1<sup>^</sup> 3.36<sup>^</sup>

256.0

3.44<sup>^</sup>

282.1

26.1<sup>^</sup>

81.2

18.5<sup>^</sup>

99.7

44.6<sup>^</sup> 3.53<sup>^</sup>Mean 3.42<sup>^</sup>

It's watch used for times  
 Skatch 13 sec. fast

Feb. 23, 1907. (Saturday)

Fourth Type Star + 38 2389

12	49	+39.1
5	49	
7	0	
5	0	

Abandoned for present

Double Star No. 33 (Bonstock's List) = 96 K beti

3	12	+2.9	Phot. R. St. Obs. Bowie Rec
5	52		
2	40		

P. A. 255° Dist. 4.5 ± Mags 5.0 & 8.5



Feb. 23, 1907

Index Red A.

7 33 50

262.5	North. 2 brighter dis.	
279.4	16.9 <sup>^</sup>	
80.6	<u>20.8<sup>^</sup></u>	
101.4	37.7 <sup>^</sup>	3.90 <sup>^</sup>

259.9		3.91 <sup>^</sup>
281.3	21.4 <sup>^</sup>	
83.0	<u>15.9<sup>^</sup></u>	
98.9	37.3 <sup>^</sup>	3.92 <sup>^</sup>

Index Le B.

172.9		
188.5	15.6 <sup>^</sup>	
348.4	<u>24.6<sup>^</sup></u>	
13.0	40.2 <sup>^</sup>	3.76 <sup>^</sup>

168.5		3.72 <sup>^</sup>
-------	--	-------------------

193.7	25.2 <sup>^</sup>	
352.0	<u>16.6<sup>^</sup></u>	
8.6	41.8 <sup>^</sup>	3.67 <sup>^</sup>

Mean 3.82<sup>^</sup>

7 40 54

---

73	104	<sup>^</sup>
7 36	82	<sup>^</sup>
5	-12	<sup>^</sup>

---

12	37	10	<sup>^</sup>
----	----	----	--------------

Feb. 23, 1907

Double Star No. 37 (Barnard's List) A' Tauri  
3 56 +21.7 Phot P. H. Obs. Board Rec

6 21

2 25

P.A. 195° Dist. 2'3" + Magn. 5.1 - 10.5

Index L &amp; B B.

354.4 ← Northern &amp; brighter star

5.5

11.1^

176.3

8.6^

184.9

19.7^ 5.32^

356.4

5.32^

4.8

8.4^

175.2

11.2^

186.4

19.6^ 5.33^

Index Red A.

264.7

276.3

11.6^

86.5

8.1^

94.6

19.7^ 5.32^

266.0

5.32

274.7

8.7^

85.2

11.0^

96.2

19.7^ 5.32^

Mean 5.32^

8	9	24	
	10	83	^
8	5	42	^
5		-12	^
13	5	30	^



Feb. 23, 1907

Double Star No. 38 (Bonestock's List) = 39 Jauri  
3 57 +21.7 Phot. R. St. Obs. Bowie Res.

6 45

2 48

P.A. 5° Dist. 3.9 ± Magn. 6.1 + 7.5  
Index Rank A.

154.1 ← Southern &amp; brighter dis.

207.2

343.1

17.9

53.1<sup>^</sup>34.8<sup>^</sup>87.9<sup>^</sup>1.97<sup>^</sup>

163.5

198.4

331.8

27.8

34.9<sup>^</sup>56.0<sup>^</sup>90.9<sup>^</sup>1.89<sup>^</sup>1.93<sup>^</sup>

Index L &amp; B B.

63.3

117.3

251.9

286.5

54.0<sup>^</sup>34.6<sup>^</sup>88.6<sup>^</sup>1.95<sup>^</sup>

73.9

108.9

243.2

297.6

35.0<sup>^</sup>54.4<sup>^</sup>89.4<sup>^</sup>1.93<sup>^</sup>1.94<sup>^</sup>

8 30 28

53 44<sup>^</sup>8 26 52<sup>^</sup>5 -12<sup>^</sup>13 26 40<sup>^</sup>Mean 1.94<sup>^</sup>

Feb. 23, 1907

Fourth Type Star +38° 2389 Phot 3 St Alb Bourie Res

12	49	+39.1
7	14	
5	35	
6	25	

Index Rel

320.5	4th type dis	
40.1	79.6 <sup>^</sup>	
154.4	53.5 <sup>^</sup>	
207.9	133.1 <sup>^</sup>	-0.91 <sup>^</sup> A

332.2		-0.93 <sup>^</sup>
29.43	57.1 <sup>^</sup>	
144.0	74.4 <sup>^</sup>	
218.4	131.5 <sup>^</sup>	-0.95 <sup>^</sup>

Index Lab

232.3		
312.2		
62.1		
122.9	60.8 <sup>^</sup>	
234.0	78.9 <sup>^</sup>	
312.9	139.7 <sup>^</sup>	-0.78 <sup>^</sup> B

51.0		-0.76 <sup>^</sup>
132.5	81.5 <sup>^</sup>	
242.0	60.6 <sup>^</sup>	
302.6	142.1 <sup>^</sup>	-0.73 <sup>^</sup>

Mean -0.84<sup>^</sup>

9	17	40
9	23	46 <sup>^</sup>
5	11	53 <sup>^</sup>
14	11	41 <sup>^</sup>
76	30.5	915 <sup>^</sup>



Feb. 23, 1907.

S. J. 7<sup>h</sup> 54<sup>m</sup> /  
 H. A. - 5 0  
 Dec. +37.5  
 Pub. 205.0 Ver. B  
 Sprocket -4.5 A  
 " -3.5 B  
 " -2.8 b

It's watch used for times tonight.  
 Hatch 12 sec. fast.

Feb. 25, 1907. (Monday)

U baphei

Phot. J

H. Obs. Bowie Rec.

0 50

+81.2

Full aperture used.

5 45

4 55

Index <sup>Left</sup> Above

52.6 <sup>comp</sup> Star dis

7 49 56

128.0

75.4<sup>^</sup>

238.9

67.1<sup>^</sup>

306.0

142.5<sup>^</sup> + 0.72<sup>^</sup> B

57.0

+0.64<sup>^</sup>

7 52 2

123.3

66.3<sup>^</sup>

229.2

85.0<sup>^</sup>

314.2

151.3<sup>^</sup> + 0.55<sup>^</sup>

Index R & B

319.9

40.8

80.9<sup>^</sup>

A

150.0

63.8<sup>^</sup>

213.8

144.7<sup>^</sup> + 0.68<sup>^</sup>

7 57 10

330.0

+0.66<sup>^</sup>

212 116

34.1

64.1<sup>^</sup>

7 53 29

139.1

82.4<sup>^</sup>

5 -14

221.5

146.5<sup>^</sup> + 0.64<sup>^</sup>

12 53 15

Mean +0.65<sup>^</sup>



Feb. 25, 1907.

II

Index R+B

8 0 36

318.8

43.3

149.8

214.4

84.5<sup>^</sup>64.6<sup>^</sup>149.1<sup>^</sup> + 0.59<sup>^</sup>

A

328.9

+ 0.57<sup>^</sup>

8 3 33

33.4

64.5<sup>^</sup>

137.7

87.0<sup>^</sup>

224.7

151.5<sup>^</sup> + 0.55<sup>^</sup>

Index L+A

8 6 45

227.1

317.1

55.8

124.4

90.0<sup>^</sup>68.6<sup>^</sup>158.6<sup>^</sup> + 0.41<sup>^</sup>

B

234.7

+ 0.33<sup>^</sup>

8 9 4

308.3

73.6<sup>^</sup>

43.6

93.2<sup>^</sup>

136.8

166.8<sup>^</sup> + 0.25<sup>^</sup>8 18 118<sup>^</sup>8 4 60<sup>^</sup>5 -14<sup>^</sup>13 4 46<sup>^</sup>Mean + 0.45<sup>^</sup>

Feb. 25, 1907

Index L &amp; A

III

8 15 3

222.0

319.0

52.5

130.0

97.0<sup>^</sup>77.5<sup>^</sup>174.5<sup>^</sup> + 0.10<sup>^</sup>

B

8 17 38

233.5

310.9

41.6

138.24

77.4<sup>^</sup>96.8<sup>^</sup>174.2<sup>^</sup> + 0.11<sup>^</sup>+ 0.10<sup>^</sup>

Index R &amp; B

8 21 11

132.2

229.62

323.5

38.8

97.0<sup>^</sup>75.3<sup>^</sup>172.3<sup>^</sup> + 0.14<sup>^</sup>

A

8 23 58

143.4

219.2

311.1

49.1 50.4

75.8<sup>^</sup>99.3<sup>^</sup>175.1<sup>^</sup> + 0.09<sup>^</sup>+ 0.12<sup>^</sup>76 110<sup>^</sup>8 19 28<sup>^</sup>5 -14<sup>^</sup>13 19 14<sup>^</sup>Mean + 0.11<sup>^</sup>



Feb. 25, 1907

Index ReB

IV

8 29 20

129.0  
231.9  
321.5  
42.8

102.9<sup>^</sup>  
81.3<sup>^</sup>  

---

184.2<sup>^</sup>  
175.8<sup>^</sup> - 0.08<sup>^</sup>

A

8 33 13

140.9  
224.0  
307.8  
54.0

83.1<sup>^</sup> - 0.12<sup>^</sup>  
106.2<sup>^</sup>  

---

189.3<sup>^</sup>  
170.7<sup>^</sup> - 0.17<sup>^</sup>

Index Left

8 35 1

57.0  
145.0  
230.6  
313.4

88.0<sup>^</sup>  
82.8<sup>^</sup>  

---

170.8<sup>^</sup> + 0.17<sup>^</sup>

B

8 37 35

45.9  
134.3  
216.4  
325.2

88.4<sup>^</sup> - 0.08<sup>^</sup>  
188.8<sup>^</sup>  

---

197.2<sup>^</sup>  
162.8<sup>^</sup> - 0.33<sup>^</sup>

8 134 69<sup>^</sup>8 33 47<sup>^</sup>5 -14<sup>^</sup>13 33 33<sup>^</sup>Mean - 0.10<sup>^</sup>

Feb. 25, 1907

Index L a d

35.2

V

8 40 18

144.9

109.7<sup>^</sup>

229.2

88.2<sup>^</sup>

B

317.4

197.9<sup>^</sup>162.1<sup>^</sup> - 0.34<sup>^</sup>

47.8

8 43 16

136.0

88.2<sup>^</sup>-0.36<sup>^</sup>

215.0

112.1<sup>^</sup>

327.1

200.3<sup>^</sup>159.7<sup>^</sup> - 0.39<sup>^</sup>

Index Q a B

306.0

8 46 20

55.9

109.9<sup>^</sup>

137.9

87.8<sup>^</sup>

A

225.7

197.7<sup>^</sup>162.3<sup>^</sup> - 0.34<sup>^</sup>

316.9

8 48 48

46.4

89.5<sup>^</sup>-0.36<sup>^</sup>

125.8

110.2<sup>^</sup>

236.0

199.7<sup>^</sup>160.3<sup>^</sup> - 0.38<sup>^</sup>

8	177	102 <sup>^</sup>
8	44	40 <sup>^</sup>
5		-14 <sup>^</sup>
13	44	26 <sup>^</sup>

Mean - 0.36<sup>^</sup>



Feb. 25, 1907

Index ReB

8	51	8	306.8		VI
			56.4	109.6 <sup>^</sup>	
			135.2	89.3 <sup>^</sup>	A
			224.5	<u>198.9<sup>^</sup></u>	
				161.1 <sup>^</sup> - 0.36 <sup>^</sup>	

8	53	30	316.5		
			47.5	91.0 <sup>^</sup> - 0.38 <sup>^</sup>	
			125.5	<u>110.4<sup>^</sup></u>	
			235.9	201.4 <sup>^</sup>	
				158.6 <sup>^</sup> - 0.41 <sup>^</sup>	

Index LcA

8	56	12	215.5		
			329.48.0	112.5 <sup>^</sup>	
			44.3	<u>92.7<sup>^</sup></u>	B
			137.0	205.2 <sup>^</sup>	
				154.8 <sup>^</sup> - 0.48 <sup>^</sup>	

8	59	10	224.5		
			320.9	96.4 <sup>^</sup> - 0.52 <sup>^</sup>	
			34.8	<u>112.8<sup>^</sup></u>	
8	54	60	147.6	209.2 <sup>^</sup>	
5	-14			150.8 <sup>^</sup> - 0.56 <sup>^</sup>	

13	54	46			
			2.5. 7 <sup>h</sup>	37 <sup>m</sup>	
			H. d. +6	40	

Dec. +82.0

P. d. 16.7 hr. B

Sprocket -1.5 d

" -0.5 B

0.0 b

mean -0.45<sup>^</sup>

Feb. 25, 1907

Fourth Type Star +38°1539 Phot. J. St. Obs. Some Pec

6	27	+38.6	Full aperture used bolar 5
8	22		
1	55		

Index Lock

342.4 ← 4th type dis

B

9 54 57

21.2

38.8<sup>^</sup>

165.0

32.5<sup>^</sup>

197.5

71.3<sup>^</sup> - 2.46<sup>^</sup>

344.8

-2.44<sup>^</sup>

16.9

32.1<sup>^</sup>

160.0

40.6<sup>^</sup>

200.6

72.7<sup>^</sup> - 2.42<sup>^</sup>

Index QCB

250.0

292.8

43.8<sup>^</sup>

A

74.6

31.9<sup>^</sup>

106.5

75.7<sup>^</sup> - 2.32<sup>^</sup>

255.0

-2.35<sup>^</sup>

287.4

32.4<sup>^</sup>

69.3

41.6<sup>^</sup>

110.9

74.0<sup>^</sup> - 2.38<sup>^</sup>

10 3 11

19 57 68<sup>^</sup>9 58 64<sup>^</sup>5 -14<sup>^</sup>

14 58 50

S. J. 5 45

H. A. +2 15

Dec. +39.0

P. A. 192.0 km B

Sprockets - 3.5 B

-2.5 b

7632.6242

Mean -2.40<sup>^</sup>



Feb. 25, 1907

Earth Type Start  $14^{\circ} 1283$  Phot. 3 H. Obs. Bowie Res.

$$\begin{array}{r} 6 \\ 8 \\ \hline 2 \end{array} \quad \begin{array}{r} 12 \\ 57 \\ \hline 45 \end{array} \quad +14.8$$

9.5 inch cap used

10 32 10

Index L &amp; B

321.7 ← 4th type dis

~~40.0~~ 39.7

149.6

213.4

78.0<sup>^</sup>63.8<sup>^</sup>141.8<sup>^</sup> -0.74<sup>^</sup>

B

329.6

32.8

138.7

222.9

-0.68<sup>^</sup>63.2<sup>^</sup>84.2<sup>^</sup>147.4<sup>^</sup> -0.63<sup>^</sup>

Index R &amp; B

230.9

312.8

59.4

122.8

81.9<sup>^</sup>63.4<sup>^</sup>145.3<sup>^</sup> -0.67<sup>^</sup>

A

-0.62<sup>^</sup>

10 39 10

71 20<sup>^</sup>10 35 40<sup>^</sup>5 -14<sup>^</sup>15 35 26<sup>^</sup>

238.2

304.5

48.3

131.7

66.3<sup>^</sup>83.4<sup>^</sup>149.7<sup>^</sup> -0.58<sup>^</sup>Mean -0.65<sup>^</sup>

7632.5496

S. I. 9

20

H. A + 3

0

Dec + 15.0

P. A. 203.2 Ver B

H's watch used for times

Sprocket -5.5 B

Sketch 14 sec. fast

" -4.5 b















1906phae.proj..583W