

1905phae.proj..578W

KG

11365

577

KG 11365.577



KG 11365.577



10

Dec. 8, 1905.

Reapr. Jupr. I Phot. H. H. Obs. Grove Rec.
 Comp with nearer to Jupr. of ~~two~~ Sat. (before
 reapr.) on fol. side = Sat. III

B 46 1182

9 54 4.5
 9 55 4.5

B 394

9 54 0.0
 9 55 0.0

10	18	23^10	18	26		Seen
	18	34^	"	37	+3.1^ 26.7^	188.8
	18	45^	"	48	+2.5^ 34.6^	215.5
	19	2^	19	5	+2.1^ 41.0^	180.9
	19	13^	"	16	+1.9^ 44.9^	221.9
	19	21^	"	24	+1.8^ 47.9^	177.0
	19	31^	"	34	+1.5^ 52.4^	224.9
	19	43^	"	46	+1.3^ 58.5^	172.5
	19	50^	"	53	+1.2^ 60.2^	231.0
	19	59^	20	2	+1.1^ 62.2^	170.8
20	7^		"	10	+0.9^ 66.7^	233.0

Dec. 8, 1905.

10	20	17	10	20	20	+0.9^	67.2^	166.3	
	20	27	^	"	30	+0.8^	68.5^	233.5	
	20	38	^	"	41	+0.7^	72.0^	165.0	
	20	52	^	"	55	+0.7^	72.2^	237.0	
	21	2	^	21	5	+0.7^	72.0^	164.8	
	21	12	^	"	15	+0.6^	74.3^	236.8	
	21	21	^	"	24	+0.6^	73.5^	162.5	
	21	34	^	"	37			236.0	
				"	47		75.5^	163.5	
10	22	4	^	"	59		75.7^	239.0	1
		-3	^	22	10		151.2^	164.0	
10	22	1	^	"	19	+0.6^	75.6^	239.7	
				"	29			162.8	
10	22	45	^	"	41		77.2^	240.0	
		-3	^	"	51		77.7^	161.8	2
10	22	42	^	23	0	+0.5^	154.9^	239.5	
				"	11		77.4^	162.1	
10	23	31	^	"	27		78.2^	240.3	
		-2	^	"	37		79.5^	162.0	3
10	23	29	^	"	50	+0.4^	157.7^	241.5	
				24	0		78.8^	162.0	
10	24	14	^	"	10		79.2^	241.2	
		-2	^	"	17		77.8^	162.7	4
10	24	12	^	"	27	+0.4^	157.0^	240.5	
				"	39		78.5^	161.8	
10	24	59	^	"	51		79.2^	241.0	
		-2	^				80.1^		
10	24	57	^			+0.4^	159.3^		
							79.6^		

10	25	1		161.4	✓
	"	24		241.5	
	"	54	80.5^{\wedge}	161.0	
	"	4	81.0^{\wedge}	241.5	6
	26	7	$\frac{161.5^{\wedge}}{+0.4^{\wedge} 80.8^{\wedge}}$	161.0	
	"	28		242.0	
	"	42	81.3^{\wedge}	160.5	
	"	55	80.7^{\wedge}	241.8	
	27	10	$\frac{162.0^{\wedge}}{+0.3^{\wedge} 81.0^{\wedge}}$	160.5	7
	"	20		241.2	
	"	39	80.5^{\wedge}	160.5	
	"	51	81.0^{\wedge}	241.0	
	28	1	$\frac{161.5^{\wedge}}{+0.4^{\wedge} 80.8^{\wedge}}$	161.0	A
	"	12		242.0	
	"	24		160.0	
	"	46	83.5^{\wedge}		
	28	55	$\frac{81.5^{\wedge}}{165.0^{\wedge}}$	243.5	
stopped to count sets. } →	30	26	$+0.3^{\wedge} 82.5^{\wedge}$	161.0	9
	"	48		242.5	
	Limit of vis.				
	31	54	26.0^{\wedge}	186.0	
	32	10	25.5^{\wedge}	212.0	
	"	35	$\frac{51.5^{\wedge}}$	189.5	
	"	53	$+3.2^{\wedge} 25.8^{\wedge}$	215.0	

Altitude rather high; seeing fairly good.
Eclipse considered good.

Dec. 8, 1905

B & b 1182

10	39	1.4
10	40	.
10	41	.
10	42	1.5

B 394

10	39	0.0
10	40	0.0
10	41	0.0
10	42	0.0

For previous obs. tonight see R. 153

From 9^h 55^m 45^s to 10^h 9^m 15^s subtract 4^{sec}

10	9	15.	10	23	26.	10	3.
10	23	26.	10	37	36.	10	2.

Dec. 13, 1905 (Wednesday)

U Vulpeculae Phot. J. H. Obs. Bowie Rec.
 20 31 + 26.0 9.5 days
 25 5 Index L.A.
 4 34 318.8 \pm 6.8. obs

9 20 20

57.8 99.0
 149.8 77.2
 227.0 176.2 + 0.07

330.1 + 0.12
 46.6 76.5
 140.8 94.0
 234.8 \pm 170.5 + 0.18

9 35

clouds again. Impossible to finish group;
 region very low; moon nearly at the full.
 The settings which were taken were extremely
 dif. and more or less uncertain. The set-
 tings taken through some cloud and no
 particular reliance placed upon them.
 No chance for anything further

Dec. 14, 1905 (Thursday)

V Vulpeculae Phot. 3 St. Obs. Bowie Rec.

20 31 +26.0

9.5 bap

25 5

Index L & A

+4 34

139.7 b.s. dis.

236.7 3

96.6

8

330.5

78.8

49.3

175.4 +0.09

149.7

+0.08

225.8

76.1

318.2

99.6

57.8

175.7 +0.08

Index R & B

48.1

150.8

102.7

239.0

79.5

A

318.5

182.2

177.8 -0.04

58.7

138.4

79.7

-0.06

225.2

104.5

329.7

184.2

175.8 -0.08

Mean +0.01

7 49 35

85 42

7 42 51

5 -1 6

12 41 45

Dec. 14, 1905

Index R & B

Same again

8 2 22

49.0
 149.8
 237.4
 320.6

100.8'
 83.2'
 184.0'
 176.0'

-0.08'

B

56.5

140.1

226.0

330.0

83.6'

104.0'

187.6'

172.4'

-0.11'

Index L & A

320.0

54.7

150.0

226.1

94.7'

76.1'

170.8'

+0.17'

B

320.0

46.8

138.5

233.2

86.8'

94.7'

181.5'

178.5'

+0.07'

-0.03'

8 12 14

8 14 36

8 7 18

5 -1 6

13 6 12

S.T. 2^h 17^m

P.A. + 5 45

Dec. + 26.4

P.A. 9.4 per B

Sprocket - 0.5 B

" + 0.5 B

Mean - 0.02'

Dec. 14, 1905

4th type star +17° 979 (8.0) Part 3 H. Ok Bowie Rec

$$\begin{array}{r}
 5 \\
 2 \\
 \hline
 3 \\
 9
 \end{array}
 \begin{array}{r}
 24 \\
 48 \\
 36 \\
 24
 \end{array}$$

+18.5

9.5 bap

Index R & A

151.0 4th type star.

226.6 75.6'

340.6 56.1'

36.7 131.7' -0.94'

A

160.4

-0.94'

217.1

56.7'

331.1

74.5'

45.6

131.2' -0.95'

Index L & B

57.9

138.0

247.0

309.9

80.1'

62.9'

143.0' -0.71'

B

66.3

-0.72'

127.9

61.6'

236.9

80.2'

317.6

142.3' -0.73'

Mean -0.83'

9 26 25

9	34	20
9	60	45
9	30	22
5	-1	6
14	29	16

Dec. 14, 1905.

L.I. 3 27
 H.C. - 2 8
 Dec. + 16.8
 P.A. 219.4 Ser B
 Sprocket - 1.5 B
 " - 0.5 b

Alt Geminorum Phot 3 Alt. Obs. Bowie Rec.

6	29	+ 16.5
4	3	
2	26	
9	34	

9.5" Graf used

For measurements see fol. page.

Comp. Dist = +15° 125' (4.9)

Dec. 14, 1905.

Index Q & A

10	33	55	347.3	var. dis.	
			30.8	43.5	
			170.3	32.7	
			<u>203.0</u>	76.2	-2.31'

351.9		-2.28'
26.3	34.4	
164.6	44.0	
208.6	<u>78.4</u>	-2.24'

Index L & B

253.5		
301.0	47.5	
79.0	<u>38.1</u>	
117.1	85.6	-2.03'

259.8		-2.02'
296.6	36.8	
72.4	<u>49.2</u>	
121.6	86.0	-2.02'

Mean - 2.15'

10	45	18
10	78	73
10	39	36
5	-1	6
15	38	30

S. J. 4^h 40^m

H. A. - 1 50

Dec. + 14.7

P. A. 165.5 var. B

Sprocket - 4.5 A

" - 3.5 B

" - 3.0 B

His watch used for times
Sketch 1 m. 6 sec. fast

Dec. 14 1905

Seeing in previous group of H Gemini-
 orium, quite blurry but great care
 exercised and obs. considered good

B 26 1182
 11 54 10.7
 11 55 10.7

B 394
 11 54 0.0
 11 55 0.0

Limit of vis
 12 11 3 178.2
 21 224.0
 41 179.0
 12 14 221.0

Dec. 14, 1905

The eclipse for which preparations were made occurs tomorrow night instead of tonight. Mistake was made by supposing this to be the 15th instead of the 14th.

* A very bright meteor was seen by F. L. Bowie on the night of Dec. 17, 1905. (Sunday) at 9h 50m Eastern Time.

(or was first seen)
It started a little south west of α Pegasi and ~~was~~ disappeared very close to γ Cygni. The motion was rather slow and Mr. Bowie estimated its brightness as three times that of Sirius.

Dec. 18, 1905. (Monday)

V Vulpeculae Phot. J. H. Obs. Bowie Rec.
9.5 hr. used

20 31 + 26.0
25 16
+ 4 45

Index Lx A

140.6 b. S. dis.

235.8

331.6

43.3

95.2

71.7

166.9 + 0.25

8

151.4

222.7

320.0

54.0

71.3

94.0

165.3 + 0.28

Index R & B

48.5

147.3

238.5

315.7

98.8

77.2

176.0 + 0.08

A

60.7

136.6

228.2

327.3

75.9

99.1

175.0 + 0.09

+ 0.08

Mean + 0.17

7 24 48

7 35 8

7 59 56

7 29 58

5 -1 -15

12 28 43

Dec. 18, 1905.

S.J. 2^h 00^m
 H.A. +5 25
 Dec. + 26.4
 P.A. 190.0 ~~verb~~
 Sprockets -0.5 B
 " +0.5 b

Meast. of old and new comp. stars for
 Mmemberaski's Var. 79.1905 Phot. 3 H. Obs Bonn Rec

4	34	+ 81.0
2	15	
2	19	
9	41	

Full aperture used

For measurements see fol. page.

Dec. 18, 1905.

Index L & B

8 42 25

53.0 Old b. S. dis

140.6

87.6

239.3

73.8

313.1

161.4 + 0.35

D

60.0

+ 0.32

133.4

73.4

232.1

71.0

323.1

164.4 + 0.30

Index R & A

322.0

52.0

90.0

150.1

72.2

222.3

162.2 + 0.34

A

331.0

+ 0.33

46.3

75.3

141.9

88.0

229.9 230.8

163.3 + 0.32

Mean + 0.32

8 51 38

6 93 63

5 46 62

5 -1 -15

13 45 47

S. J. 3 4

S. J. -1 43

Dec. +79.9

O. A. 229.8 Ver B

Sprocket -5.5 B

" -4.5 B

Dec. 18, 1905.

4th type star +14° 1283 Phot. 3 & Obs. Bowie Rec.

$$\begin{array}{r} 6 \\ 3 \\ \hline 2 \\ 9 \end{array} \quad \begin{array}{r} 12 \\ 22 \\ \hline 50 \\ 10 \end{array}$$

+14.7

Index R & A

9.5 b ap

9 30 18

$$\begin{array}{r} 64.6 \\ 131.2 \\ 236.6 \\ 317.3 \end{array} \quad \begin{array}{r} 4th \text{ type obs} \\ 66.6 \\ 80.7 \\ \hline 147.3 \end{array}$$

A

55.3

-0.66

136.2

80.9

245.0

63.3

308.3

144.2 - 0.69

Index L & B

341.5

36.8

152.1

225.0

55.3

72.9

128.2 - 1.02

B

331.0

-0.98

46.9

75.9

160.0

55.9

215.9

131.8 - 0.94

Mean - 0.82

$$\begin{array}{r} 9 \\ 9 \\ 5 \\ 14 \end{array} \quad \begin{array}{r} 38 \\ 68 \\ 34 \\ -1 \end{array} \quad \begin{array}{r} 35 \\ 53 \\ 26 \\ -15 \end{array}$$

Dec. 18, 1905.

S. J. 3^h 48^m

H. A. -2 33

Dec. + 14.3

P. A. 211.5 Ver. B

Sprocket -5.5 B

" -4.5 b

U S e p h e i

0 50

+ 81.2

3	58
3	8

9.5" strip used

For measurements see fol. page

Dec. 18, 1905.

Index Q & A

I

10	9	13	325.3	var. reds		
			48.7	83.4		
			156.3	63.8		
			220.1	147.2	-0.63	A
10	11	8	333.0		-0.56	
			41.1	68.1		
			143.1	85.9		
			229.0	154.0	-0.50	

Index L & B

10	13	44	231.7			
			325.0	93.3		
			59.3	74.3		
			133.6	167.6	-0.24	
10	15	54	242.0		-0.24	
			316.0	74.0		
			50.6	92.6		
			143.2	166.6	-0.25	
10	12	30				
5	-1	-15				
15	11	15				
719.2			63.27			
					mean -0.40	

Dec. 18 1905.

Index L & B

II

10 18 47
 231.8 90.8
 322.6
 63.2 $\frac{71.2}{162.6}$ - 0.33
 135.0

B

10 21 20
 241.3 76.0 - 0.22
 317.3
 47.3 $\frac{97.7}{173.7}$ - 0.12
 145.0

Index Red

10 24 43
 140.7 92.8
 233.5
 334.6 64.0
 42.6 $\frac{160.8}{-0.38}$

A

10 27 18
 90 128
 10 22 62
 5 -1 -15
 15 21 47
 154.9 67.1 - 0.38
 222.0
 321.6 $\frac{92.7}{179.2}$ - 0.32
 54.83
 Mean $\frac{-0.30}{-0.29}$

7198.6402

Dec 18 1905

Index R & A

III

10 31 50

138.9

234.1

333.3

43.0

95.2

69.7

164.9 - 0.29

A

150.2

- 0.22

10 34 8

223.2

318.8

57.5

73.0

98.7

171.7 - 0.16

Index L & B

41.7

10 37 15

149.8 ~~150.2~~

237.0

318.5

108.1

81.5

189.6

170.4 + 0.18

B

55.6

10 40 24

140.4

226.4

328.7

84.8

102.3

187.1

172.9 + 0.13

+ 0.16

10	142	97
10	35	54
5	-1	-15

15 34 39

7198.6490

Mean - 0.03

Dec. 18, 1905.

Index L & B

IV

10	44.8	42.7	110.7'	
		153.4	85.6'	
		235.1	196.3'	
		320.7	163.7'	+ 0.31'

B

10	47.8	52.2	89.4'	+ 0.31'
		141.6	106.8'	
		224.9	196.2'	
		331.7	163.8'	+ 0.31'

Index Q & A

10	51.5	313.8	106.4'	
		60.2	81.8'	
		145.0	188.2'	
		226.8	171.8'	+ 0.16'

A

10	53.38	325.6	86.7'	+ 0.22'
		52.3	108.0'	
	195.59	129.8	194.7'	
10	48.60	237.8	165.3'	+ 0.28'
5	7.15			

15	47.45			mean + 0.26
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7198.6582

Dec. 18, 1905.

Index R & A

V

10 57 31

314.2

61.8

107.6'

142.4

86.2'

228.6

193.8'

166.2

+0.26'

A

11 0 21

324.0

54.2

90.2'

+0.32'

130.7

109.8'

240.5

200.0'

160.0'

+0.38'

Index L & B

218.6

11 4 8

336.7

118.1'

48.5

97.9'

146.4

216.0'

144.0'

+0.69'

B

229.7

328.4

98.7'

+0.71'

38.4

119.0'

157.4

217.7'

142.3'

+0.73'

11 6 57

43 67 117

10 61 74

+5 -1 -15

16 0 59

7198.6674

2.3. 5h 22m

R.A. + 4 24

Dec. + 81.9

P.A. 199.5 Var. B

Sprockets -1.5 B

" -0.5 B

Mean + 0.52'

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

Dec. 19, 1905 (Tuesday)

4th type star +31° 1388 Phot H. Obs. Gravier Rec

$$\begin{array}{r}
 6 \quad 43 \quad + 34.1 \\
 2 \quad 23 \\
 \hline
 4 \quad 20 \\
 7 \quad 40
 \end{array}$$

8. 45 Night poor at the first but a little later it became somewhat clearer opened dome and tried for fourth ^{clearest} type star in part of sky clouds kept coming and now practically no stars visible. No chance for anything further

Dec. 20, 1905 (Wednesday)

V Vulpesulae Phot. J. H. Obs. Bowie Res.

20 31 + 26.0

26 00

5

29

Index L & A

9.5 hrs.

141.1 b. S. dis

231.9 90.8'

333.0 70.5'

43.5 161.3' + 0.36'

150.6

+ 0.32'

220.9 70.3'

318.8 94.2'

53.0 164.5' + 0.29'

Index R & B

47.2

146.5 99.3'

242.2 73.3'

315.5 172.6' + 0.14'

59.8

+ 0.12'

134.6

74.8'

227.0

100.4'

327.4

175.2' + 0.09'

Mean + 0.22'

8 11 44

8 12 84

8 6 42

+5 -1 -18

13 5 24

Dec. 20, 1905.

S.I. 2^h 29^m
 H.A. + 5 57
 Dec. + 26.4
 P.A. 189.7 Ver B
 Sprocket - 0.5 B
 " + 0.5 b

4th type star +38° 1539 Phot 5 H. Obs. Bowie Rec
 6 44 +38.6
 2 44

 4 0
 8 0

9.5 Grafr

For measurements see fol. page.

Dec. 20, 1905

Index R & A

8	45	blonds	254.8	← 4th. type dis.		
9	8	25	301.0	46.2		
			80.5	31.5		
			112.0	77.7	-2.26	A
			263.0		-2.31	
			294.1	31.1		
			75.6	43.5		
			119.1	74.6	-2.36	

Index L & B

			168.2			
			206.8	38.6		
			353.4	28.6		
			22.0	67.2	-2.60	B
			174.0		-2.58	
9	16	30	201.8	27.8		
	24	55	347.6	40.4		
9	12	28	28.0	68.2	-2.57	
5	-1	-18				
14	11	10				
					Mean -2.44	

S. J.

H. A. - 2 55

Dec. + 38.0

P. A. 192.5 Ver B

Sprockets - 3.5 B

"

-2.58

Troubled somewhat by light clouds in above last group but great care exercised and settings considered good.

Dec. 20, 1905.

9 27 o blonde again

It's watch used for times tonight.
Watch 1 m. 18 sec. fast.

Dec. 21, 1905.

For the last few days there has seemed to be a tendency to a slightly different position angle in connection with stars with Phot. T.

An examination of Phot. T. shows that one of the screws at the upper end of the track was a little loose and that the track was a little twisted. This screw tightened and track straightened to day.

Dec. 22, 1905. (Friday)

U Vulpeculae Phot. J. H. Obs. Bowie Rec.

20	31	+26.0
25	38	
+5	7	

7 26 0

8 6 0

8 15

cloudy; no stars visible through the shutter
 Still pretty cloudy
 Sky now decidedly worse

4th. type star +24° 16 86 (8.2) Phot J. H. Obs. Bowie Rec

7	36	+24.8
3	4	
4	32	
7	28	

Full aperture used

9 7 0

clouds again

For measurements see fol. page

Dec. 22, 1905.

Index R & A

9 19 47

335.4 ← 4th type dis.
 40.0 $64.6'$
 162.6 $47.6'$

 210.2 $112.2'$ $-1.37'$

A

343.0 $-1.34'$
 30.4 $47.4'$
 152.0 $67.8'$

 219.8 $115.2'$ $-1.30'$

Index L & B

242.2
 313.9 $71.7'$
 70.9 $53.4'$

 124.3 $125.1'$ $-1.08'$

B

249.6 $-1.00'$
 306.0 $56.4'$
 58.2 $75.9'$

 134.1 $132.3'$ $-0.93'$

Mean $-1.17'$

$9 \quad 26 \quad 3$

 $45 \quad 50$
 $9 \quad 22 \quad 55$
 $5 \quad -1 \quad -12$

 $14 \quad 21 \quad 43$

Dec. 22, 1905.

Index L48

Same again

9 35 12

244.8

310.7

67.3

126.8

65.9

59.5

125.4

-1.08

B

248.0

-1.03

304.4

56.4

60.1

73.6

133.7

130.0

-0.98

Index R2A

152.2

219.7

344.2

32.7

67.5

48.5

116.0

-1.28

A

160.4

-1.30

211.8

51.4

336.9

62.6

39.5

114.0

-1.33

Mean -1.16

9	42	22
9	77	34
9	38	47
5	-1	-12
14	37	35

S.S. 4 7

S.A. -3 18

Dec + 24.0

P.A. 347.0 Ver B

Sprockets -5.5 B

" -4.5 B

Dec. 22, 1905

Mme. beraski's Var. 79.1905 Photo. J. H. Ok. Bonn. Rec.

$$\begin{array}{r}
 4 \\
 4 \\
 \hline
 +0
 \end{array}
 \qquad
 \begin{array}{r}
 34 \\
 25 \\
 \hline
 9
 \end{array}
 \qquad
 +81.0$$

Region identified phot. put on but clouds
came again so that nothing could be
done

It's watch used for times
Sketch 1 m. 12 sec. fast

Dec. 23, 1905 (Saturday)

Fourth type star +14° 1283 Phot. H. Ok. Some Rec

6	12	+14.7
3.	27	
2	45	
9	15	

blondy first of evening, sky afterwards be-
came clearer, opened dome but clouded up
again almost immediately. Sky all cloudy

9 14 0 at present time

9 350 clouds thick everywhere no chance for
any work

Recap. Jup. II. H. obs. H. rec.
Clouds.

11	50	30.	Seen.
	51	3.	Brighter.

Troubled by clouds.

H's watch used. Watch 45th fast.

Taken with No. 1 Ring micrometer eyepiece

Dec. 25. 1905. (Monday)

V Vulpecular Phot. of Hots, H. rec.
20 31 +26.0 9th exp. used.

Index left & above.

$$\begin{array}{r} 322.6 \\ 51.5 \\ 150.5 \\ 222.2 \end{array} \quad \begin{array}{r} 24.9 \\ 71.7 \\ 166.6 \end{array} \quad +0.37$$

B

$$\begin{array}{r} 332.5 \\ 43.9 \\ 142.5 \\ 232.0 \end{array} \quad \begin{array}{r} 71.4 \\ 29.5 \\ 160.9 \end{array} \quad +0.36$$

Index right & below.

$$\begin{array}{r} 227.3 \\ 326.0 \\ 59.2 \\ 134.0 \end{array} \quad \begin{array}{r} 92.7 \\ 74.2 \\ 172.9 \end{array} \quad +0.13$$

W

$$\begin{array}{r} 241.2 \\ 315.4 \\ 49.2 \\ 145.6 \end{array} \quad \begin{array}{r} 74.2 \\ 95.4 \\ 170.0 \end{array} \quad +0.16$$

Mean +0.26

His watch used for times. Watch 40 sec. fast

$$\begin{array}{r} 6 \ 46 \ 10 \\ 72 \ 10 \\ 6 \ 36 \ 5 \\ 5 \ -40 \\ 11 \ 35 \ 25 \end{array}$$

Dec. 25. 1905.

S. S.	1 ^h 26 ^m
H. S.	+4 51
Sec.	+26.5
P. S.	189.5
Sprocket	{ -0.5 B.
	{ +0.5 C.

Dec. 26, 1905 (Tuesday)

As this record book was misplaced, & Vul-
peculae, the first object observed this evening
was recorded in accident book Balance
of evenings work recorded in this book.

name. Beraska's Var.

79:1905

4	34
3	10
1	24
10	36

Phot. 3 H. Obs. Bowie Rec.

+81.0

Full aperture

For measurements see fol. page

Dec. 26, 1905.

Index RAB

226.7 ← b. S. dis

325.3

98.6

58.8

76.2

135.0

174.8 + 0.10

A

239.7

+ 0.08

314.6

74.9

47.2

101.5

148.7

176.4 + 0.07

Index LCA

148.3

B

226.0

77.7

319.1

99.1

58.2

176.8 + 0.06

138.0

+ 0.08

9 11 32

239.1

101.1

9 11 48

331.8

73.1

9 5 54

44.9

174.2 + 0.11

5 -28

Mean + 0.08

14 5 26

23. 4^h 6^m

Sb. A. -0 45

Dec. + 79.9

P. A. 8.3 Ver B

Sprockets -1.5 A

-0.5 B

0.0 b

Dec. 26, 1905.

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

$$\begin{array}{r} 2 \quad 33 \\ 4 \quad 35 \\ \hline +2 \quad 2 \end{array}$$

Index Lcd

⊙

$$\begin{array}{r} 245.2 \\ 311.2 \\ 56.6 \\ 138.3 \end{array} \quad \begin{array}{r} \text{brnfr. star, dis} \\ 66.0' \\ 81.7' \\ \hline 147.7' + 0.62' \end{array}$$

10 39 2

$$\begin{array}{r} 233.8 \\ 318.4 \\ 66.5 \\ 128.4 \end{array} \quad \begin{array}{r} 84.6' \\ 61.9' \\ \hline 146.5' + 0.64' \end{array} \quad +0.63'$$

Index R & B

CA

$$\begin{array}{r} 159.3 \\ 216.8 \\ 328.0 \\ 47.1 \end{array} \quad \begin{array}{r} 57.5' \\ 79.1' \\ \hline 136.6' + 0.84' \end{array}$$

$$\begin{array}{r} 147.4 \\ 228.5 \\ 338.5 \\ 36.9 \end{array} \quad \begin{array}{r} 81.1' \\ 58.4' \\ \hline 139.5' + 0.78' \end{array} \quad +0.81'$$

Mean +0.72'

$$\begin{array}{r} 10 \quad 51 \quad 28 \\ \hline 90 \quad 30 \\ 10 \quad 45 \quad 15 \\ 5 \quad -28 \\ \hline 15 \quad 44 \quad 47 \end{array}$$

Dec. 26, 1905.

S. J 5 35

H. A + 3 0

Dec + 42.1

P. A 197.0 Ver B

Sprocket - 2.5 B

" - 1.5 B

It's watch used for times tonight
 Watch 28 sec. fast.

Dec. 27, 1905 (Wednesday)

H Delphini Phot. J H. Obs. Bowie Rec.

Index L & A

337.2
38.0 ← b. S. dis.

168.5
208.6

60.8
40.1

100.9 + 1.63

B

349.5

+ 1.71

27.5

38.0

159.6

56.9

216.5

94.9

+ 1.79

Index R & B

250.0

305.0

55.0

76.0

42.2

118.2

97.2

+ 1.73

A

258.0

+ 1.69

302.0

44.0

70.6

56.4

127.0

100.4

+ 1.65

Mean + 1.70

7 25 36

7 ~~25~~ 27 45

7 32 10

7 34 45

118 136

7 29 64

5 -23

12 29 41

Dec. 27, 1905

Index R+B

7 37 56

250.3

306.8

76.5

115.5

56.5

39.0

95.5 +1.77

A

7 40 48

257.0

299.0

68.8

125.5

42.0

56.7

98.7 +1.69

+1.73

Index L+A

7 45 36

160.0

211.6

347.2

26.1

51.6

38.9

90.5 +1.90

B

+2.04

7 49 55

171 195

7 42 94

5 -23

12 43 11

171.5

205.7

344.3

30.3

34.2

46.0

80.2 +2.19

Mean +1.88

S.J. 2^h 40^m

R.A. + 6 5

Dec. + 18.2

P.A. 349.5

Dec. 27, 1905

U Vulpeculae Phot 3 H. Obs. Brown Rec.

20	31	+ 26.0
26	41	
<hr/> 6	<hr/> 10	

9.5" lens used

For measurements see fol. page.

Dec. 27, 1905

Index Led

8 9 56

322.6	← b. s. dis.	
52.0	89.4	
151.0	<u>73.0</u>	
224.0	162.4	+0.33

B

332.1		+0.32
44.4	72.3	
142.6	<u>91.9</u>	
234.5	164.2	+0.30

Index R2B

225.8		
327.8	102.0	
58.5	<u>75.3</u>	
133.8	177.3	+0.05

A

8	20	8		238.2		+0.08
8	29	64		317.4	79.2	
5	14	62		48.8	<u>94.9</u>	
		-23		143.7	174.1	+0.11

13 14 39

S. S. 3^h 9^m

Mean +0.20

B. A. +6 35

Dec. +26.5

P. A. 189.2 Ver B

sprocket -0.5 B

+0.5 B

Dec. 27, 1905.

4th type star +34° 4500 Photo. J. K. Oke. Brown Rec.

21	36	+34.9
27	16	
5	40	Index LXB

9.5 Graph

8 45 30

255.3	- 4th type dis	B
300.9		
79.3		
116.0		
	45.6'	
	36.7'	
	82.3'	-2.13'

258.9		-2.14'
295.2	36.3'	
74.8	44.8'	
119.6	81.1'	-2.16'

Index Re A

165.9		
209.0	43.1'	
351.4	31.6'	
23.0	74.7'	-2.36'

A

8	52	48
5	97	78
5	48	69
5		-23
13	48	46

171.4		-2.34'
204.2	32.8'	
345.4	43.5'	
28.9	76.3'	-2.31'

Mean -2.24'

Dec. 27, 1905.

L.J	3	38
H.A	+ 6	0
Dec	+ 35.3	
P.A	252.5	Ver. B
Sprocket	+ 0.5	B
"	+ 1.5	B

~~H's watch~~ used for times
~~Watch~~ 23 sec fast

Dec. 28, 1905 (Thursday)

U Unlabeledae Phot J K Obs Bowie Rec

20 31 +26.0

25 57

5

20

Index L & A

318.9 b. & dis

54.0

95.1'

153.5

68.7'

222.2

163.8'

+0.31'

ⓑ

330.8

+0.25'

42.7

71.9'

138.2

98.2'

236.4

170.1'

+0.19'

Index R & B

225.7 ~~224.6~~

330.1 ~~328.1~~

56.8 ~~58.6~~

136.6 ~~136.8~~

104.4'

79.8'

184.2'

175.8'

-0.08'

ⓐ

237.8

319.6

46.5

148.1

81.8'

101.6'

183.4'

176.6'

-0.07'

-0.06'

Mean +0.09'

7 19 12

7 37 14

56 26

7 28 13

5 -11

12 28 2

Dec. 28, 1905.

Index R & B

7 48 15

233.1		
3 24.9	918	
54.9	88.1	
143.0	179.9	+ 0.00

235.2		- 0.02
3 20.1	84.9	
48.9	97.1	
146.0	182.0	- 0.04
	178.0	

Region rather low in first group, sky hazy from approaching cloudy conditions observations somewhat dif. Great care was however exercised in settings in first group and obs. considered pretty good. A second group was attempted mainly as a check on first group but region was still lower and obs. so much more dif. in the haze that it had to be abandoned.

S.J. 2^h 37^m
 H.A. + 6 7
 Dec. + 26.2
 P.A. 189.6 Ver B
 Sprocket - 0.5 B
 + 0.5 b

Dec. 28, 1905.

Yf Lancelop.

7	20
3	10
4	10
7	50

Phot. J. H. Obs. Fovie Rec.

+76.1

Full aperture used

Index R & B

236.5 ← b. S. dia

318.1

81.6'

66.5

64.0'

130.5

145.6' +0.66'

246.6

+0.68'

309.5

62.9'

57.0

80.7'

137.7

143.6' +0.70'

Index L & A

146.3

225.5

79.2'

338.0

58.0'

36.0

137.2' +0.83'

158.0

+0.84'

217.3

59.3'

327.8

77.6'

45.4

136.9' +0.84'

Mean +0.76'

8 49 40

8 59 10

108 50'

8 54 25'

5 -11'

13 54 14'

Dec. 28, 1905

2.3 3^h 43^m
 Ho. A - 3 43
 Dec. + 76.0
 P. A. 346.6
 Sprocket - 1.5 A
 " - 0.5 B
 " 0.0 b

U	Sephei	Photo. 3	W	Obs.	Brown	Dec
0	50	+ 81.2				
3	50					
3	00					

9.5 bap

For measurements see fol. page.

Dec. 28, 1905.

Index R & A

9	22	20	151.4	← var. dis		A
			225.0	3.9		I
			336.0	72.5		
			38.4	62.4		
				<u>134.9</u>	- 0.88	
			155.7			-0.78
9	24	52.	216.5	60.8		
9	27	35	326.5	83.3		
			49.8	<u>144.1</u>	- 0.69	

Index L & B

9	28	42	51.0			B
			143.8	2	92.2	
			244.2		66.6	
			310.8		<u>158.8</u>	- 0.40
			62.0			-0.40
9	31	16	132.4	70.4		
			234.0	88.4		
			322.4	<u>158.8</u>	- 0.40	
9	105	130				
9	26	48				
5		-11				
14	26	37				
						mean - 0.59

Dec. 28, 1905

Index L & B

II

9	33	52	50.5		
			143.9	93.4	B
			242.5	69.0	
			311.5	<u>162.4</u>	-0.33

9	36	20	61.2		-0.30
			132.9	71.7	
			229.9	94.7	
			324.6	<u>166.4</u>	-0.26

Index R & B

9	39	8	323.5		
			52.9	89.4	A
			154.0	65.8	
			219.8	<u>155.2</u>	-0.47

9	41	44	334.2		-0.45
			40.9	66.7	
			141.3	91.0	
			232.3	<u>157.7</u>	-0.43

9	41	44			
	149	124			
9	37	46			
5		-11			
14	37	35			

Mean -0.38

Dec. 28, 1905.

Index Rect

III

9	44	13	320.8			
			52.0	91.2'		
			153.4	68.0'		
			221.4	159.2'	-0.40'	

A

9	46	51	333.9			-0.38'
			43.4	69.5'		
			141.2	91.4'		
			232.6	160.9'	-0.36'	

Index L & B

9	50	2	225.3			
			325.5	100.2'		
			59.4	79.0'		
			138.4	179.2'	-0.02'	

B

9	52	28	238.8			-0.04'
			316.0	77.2'		
			46.5	100.2'		
9	48	24	146.7	177.4'	-0.05'	
5		-11				
14	48	13				

Mean -0.21'

Dec. 28, 1905.

Index L4B

IV

9 56 21

226.1

328.6

102.5

57.3

81.0

138.3

183.5

176.5 + 0.06

B

236.15

9 58 33

317.8

81.3

+ 0.08

46.0

104.1

150.1

185.4

174.6 + 0.10

Index R4A

10 1 30

135.7

234.6

98.9

330.3

76.3

46.6

175.2 - 0.09

A

147.0

- 0.08

225.2

78.2

317.8

98.1

55.9 56.3

176.3 - 0.07

10	4	34
38	119	118
9	59	74
5		-11
15	0	3

Mean 0.00

Dec 28, 1905

Index R4A

V

10 7 17

133.1

237.8

328.5

48.83

104.7'

79.8'

184.5'

175.5'

+ 0.08'

A

10 9 58

146.9

226.4

317.2

57.6

79.5'

100.4'

179.9'

0.00'

+ 0.04'

Index L4B

10 13 46

43.0

153.0

232.3

322.6

110.0'

90.3'

200.3'

159.7'

+ 0.39'

B

10 16 48

50.2

145.6

222.9

95.4'

110.5'

205.9'

154.1'

+ 0.50'

+ 0.44'

10 45 169

10 11 57

5 -11

15 11 46

333.4 ~~332.46~~

Mean + 0.24'

Dec. 28, 1905.

Index Lx B

VI

10	21	0	40.1	115.8	ⓑ
			155.9	94.1	
			231.1	209.9	
			325.2	150.1	

+ 0.57

10	23	56	47.4	99.2	+ 0.60
			146.6	114.2	
			219.6	213.4	
			333.8	146.6	

+ 0.64

Index Red

10	28	57	312.1	110.7	Ⓐ
			62.8	94.2	
			139.3	204.9	
			233.5	155.1	

+ 0.48

10	32	0	322.6	94.4	+ 0.48
			57.0	110.2	
			131.6	204.6	
			241.8	155.4	

+ 0.47

15	26	17	23.	5	26	Mean + 0.54
			H.A.	+ 4	32	
			Dec.	+ 76.9		
			P.A.	18.5	Ver. ⓑ	

Sprocket - 1.5 ⓑ
 " - 0.5 b

It's watch used for times
 Hatch 11 sec. fast

Dec. 29, 1905 (Friday)

4th type star $38^{\circ} 153.9$ Phot H. Ok Bowie Rec

6 27 +38.6

3 47

2 40

9 20

Sky all cloudy everywhere again

9 20 0 cleared temporarily a little after 8 o'clock,
opened dome but clouds came right away
and prevented work, all thick everywhere
now no stars visible, no chance for anything
further

Dec. 30, 1905 (Saturday)

U Unipennae Phot. 3 H. Ols. Bore Rec

20 31
26 0
5 29

+26.0

9.5 hr

Index L & A

136.1 ← b. S. dis.

239.54

327.2

46.8

147.4

225.8

314.5

58.6

103.3

79.6

182.9

177.1

-0.05

78.4

104.1

182.5

177.5

-0.05

B

-0.05

Index R & B

42.0

150.9

236.2

319.7

56.5

139.5

224.7

330.7

108.9

83.5

192.4

167.6

-0.24

83.0

106.0

189.0

171.0

-0.20

-0.17

A

Mean -0.12

7 20 38

7 33 22
53 60
7 26 60
5 +1
12 27 1

Dec. 30, 1905.

S. J. 2^h 38^m
 B. A. + 6 5
 Dec. + 26.5
 P. A. 189.5 Ver. B
 Sprocket - 0.5 B
 " + 0.5 b

79.1905 Same, Seraski's Var. Phot. J. H. Obs. B. on Rec

4	34	+ 81.0
<u>2</u>	<u>47</u>	
1	47	
10	13	

Full aperture used

For measurements see fol. page

Dec. 30, 1905

Index L & A

8 10 38

143.0 b. & dis

232.2

89.2'

B

329.7

75.9'

45.6

165.1' + 0.28'

8 13 54

145.5

+ 0.18'

227.5

82.0'

322.0

92.9'

54.9

174.9' + 0.09'

Index R & B

8 18 ~~50~~ 40

48.0

147.2

99.2'

A

238.2

78.5'

316.7

177.7' + 0.04'

8 20 54

58.2

+ 0.02'

138.5 9.0

80.8'

228.1

99.2'

8 15 62

180.0' 0.00'

5 +1

13 16 3

Mean + 0.10'

Dec. 30, 1905.

Index R & B

8	23	48	48.6			
			147.3	98.7		
			238.7	76.7		
			315.4	175.4	+0.09	

A

8	26	18	59.4			+0.09
			136.8	77.7		
			227.4	97.7		
			325.1	175.4	+0.09	

Index L & A.

8	29	30	319.1			
			52.9	93.8		
			149.1	78.1		
			227.2	171.9	+0.15	

B

8	35	0	329.9			+0.16
			45.8	75.9		
			138.7	95.7		
			234.4	171.6	+0.16	
					mean +0.12	

8	113	96
8	28	39
5		+1
13	28	40

Troubled more or less in preceding obs. of 79. 1905. by clouds, but great care exercised and obs. considered good.

Dec. 30, 1905.

S. J. 4th 8^m

Jb. A - 0 43

Dec. +79.8

P. A. 9.0 Ver B

Sprocket -1.5 d

" -0.5 B

" 0.0 b

It is watch used for times tonight
 Watch 1 sec. slow

14

14

14

Dec. 30. 1905.

Reap. Jup. II. Phot. W. W. do. Stark rec.
Compared with

13 B. + C. 1122.

~~14~~ 55 41.3

56 41.3

Limit of Vis.

14

19 46

20 - 0.3

20 - 2.4

20 - 4.4

14 20 14

+21

14 20 35

13 B. 394.

~~14~~ 56 0.0

57 0.0

30.0

29.1

59.1

29.6

+2.9

180.0 (180.0 assumed)

210.0

181.1

210.2

14 23 46

24 5

24 16

24 31

24 43

24 57

25 7

25 17

25 32

25 43

25 54

26 12

26 22

26 35

26 46

27 0

23 24

23 43

23 54

24 09

24 21

24 35

24 45

24 55

25 10

25 21

25 32

25 50

26 00

26 13

26 24

26 38

+1.6 51.0

+1.4 55.5

+1.1 61.0

+1.0 63.6

+1.0 65.1

+0.8 69.0

+0.7 73.0

+0.6 74.8

+0.6 75.0

+0.6 74.7

+0.5 77.7

+0.4 79.3

+0.3 82.1

+0.2 84.5

+0.2 84.5

seen

170.0

221.0

165.5

226.5

162.9

228.0

159.0

232.0

157.2

232.2

157.5

235.2

155.9

238.0

153.5

Dec. 30. 1905.

14 27 12 ^h 14 ^m 26 ^{sec} 50 ⁱⁿ	27 ^m 02 ⁱⁿ	238.0
14 27 21 ^h	27 15	154.1
+22 ^h	27 27	84.0 ^h 238.1
14 27 43 ^h	27 39	85.6 ^h 152.2 1
	27 58	+0.2 ^h 169.6 ^h 237.8
14 28 11 ^h	28 06	83.8 ^h 153.2
+22 ^h	28 17	82.7 ^h 237.0
14 28 33 ^h	28 28	166.5 ^h 153.8 2
	28 39	+0.3 ^h 83.2 ^h 236.5
14 29 1 ^h	28 53	84.4 ^h 152.9
+22 ^h	29 10	85.5 ^h 237.3
14 29 23 ^h	29 21	169.9 ^h 151.5 3
	29 39	+0.2 ^h 85.0 ^h 237.0
14 29 57 ^h	29 52	85.2 ^h 152.2
+23 ^h	30 03	84.5 ^h 237.4
14 30 20 ^h	30 15	169.7 ^h 153.5 4
	30 42	+0.2 ^h 84.8 ^h 238.0
14 31 0 ^h	30 54	83.0 ^h 153.5
+23 ^h	31 06	84.6 ^h 236.5
14 31 23 ^h	31 18	167.6 ^h 152.4 ✓
	31 30	+0.2 ^h 83.8 ^h 237.0
14 31 54 ^h	31 49	84.3 ^h 153.5
+23 ^h	32 02	85.8 ^h 237.8
14 32 17 ^h	32 16	170.1 ^h 152.2 6
	32 31	+0.2 ^h 85.0 ^h 238.0
14 32 47 ^h	32 42	83.8 ^h 153.3
+23 ^h	32 52	83.3 ^h 237.1
14 33 10 ^h	33 04	167.1 ^h 153.2 7
	33 17	+0.2 ^h 83.6 ^h 236.5
14 33 39 ^h	34 3 31	84.0 ^h 153.0
+23 ^h		85.1 ^h 237.0
14 34 2 ^h		169.1 ^h 154.6

Dec. 30. 1905.

$$\begin{array}{r} 14 \quad 34 \quad 36 \\ +23 \\ \hline 14 \quad 34 \quad 59 \end{array}$$

$$\begin{array}{r} 14 \quad 36 \quad 47 \\ +23 \\ \hline 14 \quad 37 \quad 10 \end{array}$$

$$\begin{array}{r} 343 \quad 48 \\ 343 \quad 59 \\ \hline 344 \quad 16 \end{array}$$

$$\begin{array}{r} 344 \quad 27 \\ 34 \quad 45 \\ \hline 34 \quad 56 \end{array}$$

$$\begin{array}{r} 35 \quad 12 \\ 35 \quad 25 \\ \hline 37 \quad 58 \end{array}$$

$$\begin{array}{r} 37 \quad 58 \\ 38 \quad 33 \\ \hline \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 35 \quad 12 \\ 35 \quad 25 \\ \hline 37 \quad 58 \end{array}$$

$$\begin{array}{r} 37 \quad 58 \\ 38 \quad 33 \\ \hline \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

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$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$\begin{array}{r} 38 \quad 33 \end{array}$$

$$1530$$

$$7381$$

$$153.5$$

$$238.4$$

$$1530$$

$$7380$$

$$1529$$

$$237.5$$

$$1539$$

$$2375$$

B. + C. 1122.

$$14 \quad 50 \quad 35.1$$

$$51 \quad 35.1$$

B. 394.

$$14 \quad 51 \quad 0.0$$

$$52 \quad 0.0$$

From 13^h 54^m 57^s to 14^h 3^m 39^s add. 19 sec.

14	3	39	"	14	12	20	"	20	"
14	12	20	"	14	21	21	"	21	"
14	21	21	"	14	29	43	"	22	"
14	29	43	"	14	32	25	"	23	"
14	32	25	"	14	47	7	"	24	"
14	47	7	"	14					

Jan. 1, 1906 (Monday)

W Vulpeculae Phot. 3 H. Obs. Bowie Rec
 20 31 + 26.0 9.5 bars used
 26 11

5 40 Index Led

134.0 ← b. S. dis

241.76

323.5

50.3

107.6'

86.8'

194.4'

165.6'

-0.27'

143.1

228.6

314.3

59.3

85.5'

-0.24'

105.0'

190.5'

169.5'

-0.20'

Index QLB

40.8

151.8

234.0

321.1

111.0'

87.1'

198.1'

161.9'

-0.34'

51.7

145.8

221.4

333.5

94.1'

-0.42'

112.1'

206.2'

153.8'

-0.50'

Mean - 0.33'

7 23. 10

7 33 34

56 44

7 28 22

5 + 9

12 28 31

Jan. 1, 1906

Index $\mathcal{L} \& \mathcal{A}$

	43.5		
7 46 40	152.3	108.8'	
	230.4	92.3'	
	322.7	<u>201.1'</u>	
		158.9'	-0.40'
	50.8		
	143.0	92.2'	-0.42'
	222.0	<u>111.1'</u>	
	333.1	203.3'	
		156.7'	-0.44'

blonds Index $\mathcal{L} \& \mathcal{A}$

	316.7		
	59.1	102.4'	
	150.0	<u>83.0'</u>	
	233.0	185.4'	
		174.6'	-0.10'

8 12 12	323.6		-0.20'
15 58 52	52.2	88.6'	<u>-0.18</u>
7 59 26	134.8	<u>106.5'</u>	
5 +9	241.3	195.1'	
12 59 35		164.9'	-0.29'

$\mathcal{L} \& \mathcal{A}$ 3^h 21^m
 $\mathcal{L} \& \mathcal{A}$ +6 47
 $\mathcal{L} \& \mathcal{A}$ +26.7
 $\mathcal{P} \& \mathcal{A}$ 9.5
 sprockets -0.5 B
 " +0.5 b

Mean -0.31

Jan, 1, 1906.

In first group sky generally clear. In second group region rather low and in last half of second group much troubled and delayed by clouds. The observations in last half of second group were rather labored. It however waited and used all possible care. First group considered good and second group, from care taken also considered pretty good. In confirmation of increase of brightness of variable it may be said that in the finder the var. is quite perceptible higher than the comp. star. This indirectly confirms the result obtained with the photometer which makes the var. ^{over}.03 magn. brighter than the comp. star.

8 25

Heavy clouds coming from the north.

8 45

Sky practically all cloudy

9 00

" still " "

" thickly ~~so~~ cloudy everywhere clouds in heavy masses no stars visible evidently no chance for anything further

It's watch used for times tonight
Watch 9 sec. slow

Jan. 4, 1906 (Thursday)

Q	Unspecularae	Phot.	H. Obs. Bowie Rec.
	20	31	+26.0
	27	46	
	<hr/> 7	<hr/> 15	

Too low Sky a little more cloudy in this region

79.1905	Same	beraskie Var	Phot	H. Obs	Bowie Rec.
	4	34			+81.0
	<hr/> 4	<hr/> 6			
	0	28			
	11	32			

For measurements see fol. page.

Jan. 4, 1906.

Index Left

323.9	←	br. S. dis	
53.0		89.1	
150.1		<u>74.6</u>	
224.7		163.7	+0.31'

B

334.2			+0.34'
43.5		69.3	
141.0		<u>91.8</u>	
232.8		161.1	+0.36'

Index Right

229.0			
326.7		97.7	
59.0		<u>80.0</u>	
139.0		177.7	+0.04'

A

236.1			+0.02'
317.7	8.0	81.9	
49.9		<u>97.6</u>	
147.5		179.5	+0.01'
		mean	+0.18'

9	33	38
	52	48
9	26	24
5		+37
14	27	1

Jan. 4, 1906.

Index Right

9	44	12	228.8			
			326.1	97.3		
			56.0	82.2		
			138.2	179.5	+0.01	A

236.4		0.00
316.1	79.7	
46.1	100.3	
146.4	180.0	0.00

Index Left

143.1		
232.0	88.9	
329.5	74.3	
43.8	163.2	+0.32

~~56 18~~

117.8		One circle reading evidently wrong in this set. Let it rather below.
223.0	105.2	
322.0	91.2	
53.2	196.4	
		+0.29

10	4	40
19	48	52
9	54	26
5		+37
14	55	3

138.5		
233.0	94.5	
332.1	71.9	
44.0	166.4	+0.26

Mean +0.14

Jan. 4, 1906.

Index Left

10 20 40
 150.2
 224.9
 321.7
 52.3

74.7
 90.6
 165.3 + 0.28

B

140.0

+ 0.26

234.0

94.0

331.0

73.8

44.8

167.8 + 0.23

Index Right

56.8

136.6

227.4

226.6

79.8

99.2

179.0 + 0.02

A

46.5

- 0.04

146.7

100.2

234.4

84.5

318.9

184.7

175.3 - 0.09

mean + 0.11

10 34 20
 54 60
 10 27 30
 5 +37
 15 28 7

83 6 0

L.A. +1 10

Dec +80.8

B.A. 8.2 Dev B

Sprockets - 1.5 d

" - 0.5 B

" - 0.0 b

This watch used for times
 Watch 37 sec. slow

Jan. 5, 1906 (Friday)

U Umlpencilae Phot. 5 H. Obs. Bowie Rec.

20 31 + 26.0

26 31

6

0 Index Ltd

9.5 brp used

129,43144 S. S. dis.

242,5 ~~61.5~~

324,6

51,5

113.1'

86.9'

200.0'

160.0'

-0.38'

141.8

233.3

312.6

61.6

91.5'

-0.38'

109.0'

200.5'

159.5'

-0.39'

Index R & B

41,6

blonde stars 154,8

gone

229,2

322,8

113.2'

93.6'

206.8'

153.2'

-0.51

51,2

143,82

92.0'

-0.51

220.2

114.5'

334,97

206.5'

153.5'

-0.51

Mean -0.44'

7 47 48

71 56

7 35 58

5 + 42

12 36 40

Jan. 5, 1906.

S. J. 3 15
 H. A. + 6 42
 Dec + 26.6
 P. A. 188.2 Ver B
 Sprockets - 0.5 B
 " + 0.5 b

Moon pretty bright.
 Delayed in middle of
 third set by passing
 clouds, obs. however
 waited until the clouds
 rolled by, so that settings
 were not affected by them

Settings made very slowly and with the greatest
 possible care and group considered first
 class.

4th type star +42° 4827 Phot. J H. Obs B over Rec

23	58	+44.4
27	58	
4	0	

Full aperture used
 Solar 1

Comp. stars = D.M. +43° 4620 (8.7)

Jan. 5, 1906.

Left above

9 3 2

147.0 ← 4th type dis
 230.3
 336.0
 38.8

83.3
 62.8
 146.1 -0.65

B

154.8
 219.0
 325.6
 48.3

-0.64
 64.2
 82.7
 146.9 -0.64

Indeg. B

51.9
 141.9
 243.4
 310.3

90.0
 66.9
 156.9 -0.44

A

64.1

-0.43

9 11 18

14 20

9 7 10

5 +42

14 7 52

131.3

232.2

323.2

67.2

91.0

158.2

-0.42

Mean -0.54

L.J. 4^h 32^m

H.A. + 4 32

Dec. + 43.4

P.A. 171.7 Ver B

Sprocket -1.5 B

-0.5 B

Jan. 5, 1905

4th type star $+59^{\circ} 28' 10''$ Phot. H. Obs. Bowie Rec

0	2	+58.3
---	---	-------

4	42
4	40

comp. star precedes 4th type star
by 1 m. 32 sec. and is 3.7 south of it.
Magn. of comp. star 8.4. Solar 6

9 49 0 clouds, stars gone

comp. star $=_{\lambda} +59^{\circ} 28' 03''$ (8.5)10 2 0 clouds now thick everywhere. No chance
for anything further.

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

Jan. 6 1906 (Saturday)

Q Vulpeculae Phot. 3 K. Obs. Bowie Rec.
20 31 + 26.0 9.5 bap.

26 31
6 0 Index L & A

312.1 ← b.L. dis

60.9 108.8

blonds

142.0 87.8

229.5 196.6

163.4 - 0.32

324.4

51.9

87.5

- 0.29

134.8

106.2

241.0

193.7

166.3 - 0.26

Index R & B

222.2

334.8

112.6

51.0

94.0

145.0

206.6

153.4 - 0.51

231.0

94.1

- 0.50

325.1

111.8

41.3

205.9

153.1

154.1 - 0.50

Mean - 0.40

7 34 6

7 50 19

7 25 10

5 + 47

12 25 57

Jan. 6, 1906

S.I. 3^h 1^m
 H.A. + 6 29
 Dec. + 26.6
 P.A. 189.5 Ver B
 Sprockets - 0.5 B
 " + 0.5 b

H. Geminorum Phot. J.H. Obs. Bowie Rec

6	29	+16.5
3	14	
3	15	
8	45	

For measurements see fol. page

Comp. Alt = +15° 12.5' (2.9)

Jan. 6, 1906

Index L & B

8 20 43

252.5	var. dis.	
301.0		
79.7		
115.5		
	48.5	
	<u>35.8</u>	
	84.3	-2.07

B

blonds 1220

259.0		
295.2		
724.30		
	36.2	
	<u>49.0</u>	
	85.2	-2.05

-2.06

Index Red

165.4		
208.7		
351.2		
23.8		
	43.3	
	<u>32.6</u>	
	75.9	-2.32

A

8 42 37	171.0		
62 80	203.9		
8 31 40	346.3		
5 + 47	29.5		
13 32 27			
		32.9	
		<u>43.2</u>	
		76.1	-2.31

Mean -2.19

-2.32

Jan. 6, 1906.

Index R4A Same again.

8 46 27

~~163.5~~

165.7

207.9

351.3

23.4

42.2'

32.1'

74.3' -2.37'

A

-2.38'

170.0

202.0

346.8

28.6

32.0'

41.8'

73.8' -2.38'

Index L4B

72.6

121.0

258.2

294.8

48.4'

36.6'

85.0' -2.05'

B

-2.00'

8 54 40

100 67'

8 50 34'

5 +47'

13 51 21

79.3

115.9

251.4

303.0

36.6'

51.6'

88.2' -1.96

Mean -2.19'

L.S. 4² 24^m

L.A. -2 5

Lac +14.8

P.A. 160.5 Ver B

Sprocket -4.5 A

" -3.5 B

" -3.0 B

Jan. 6, 1906.

4th type star $42^{\circ} 48' 27''$ Photo. J. K. Ok. Borneo Res.

23	58	+44.4
----	----	-------

28	28
----	----

4

30

Index I & C

Full aperture

326.1 ← 4th type dis

49.4

155.3

7.5

219.8

83.3

62.3

145.6

-0.66

B

336.6

41.0

145.0

228.8

64.4

83.8

148.2

-0.61

-0.64

Index R & B

234.8

319.6

63.5

131.9

84.8

68.4

153.2

-0.51

A

244.5

312.3

53.4

141.7

67.8

88.3

156.1

-0.46

-0.48

9 38 30

67 78

9 33 69

5 +47

14 34 56

Mean -0.56

Jan. 6, 1906.

S.J. 5^h 6^m
 Jb. A + 5 5
 Dec. + 43.4
 P. A 171.5 Ger B
 Sprockets -1.5 B
 " -0.5 b

4th type star + 59° 281.0 Phot. J H. Obs. Bowie Rec
 0 2 +58.3

5	32
5	0

9.5 bap used

For measurements see fol. page

Jan. 6, 1906.

Index L & B

10 26 30

233.7 ← 4th type dia
 320.4
 60.4
 132.3

86.7
 71.9
 158.6

-0.41'

B

241.0
 313.5
 52.0
 141.8

72.5
 89.8
 162.3

-0.38'
 -0.34'

Index R & B

144.3
 229.5
 334.6
 40.0

85.2
 65.4
 150.6

-0.56'

A

152.0
 222.2
 326.2
 50.8

70.2
 84.6
 154.8

-0.52'
 -0.48'

Means -0.45'

10 36 32
 62 62
 10 31 31
 5 +47
 15 32 18

S.J. 5h 59m
 H.A. + 6 3
 Dec + 60.0
 P.A. 258.5 Gen B
 Sprockets - 0.5 B
 " + 0.5 b

It's watch used for times
 Watch 47 sec. slow

Jan. 7. 1906. (Sunday)

B+C. 1152. B. 394.
 12 11 52.0 12 12 0.0
 12 52.0 13 0.0

Reap. of Jup. I. Phot. R. W. dr. W.W. Stark rec.
 Comp. with nearer of 2 stars ^(before eclipse) on following
 side = Sat. II.

12	29	15 [^]	12	29	06	Seen
	29	24 [^]	-	15	+2.6 [^] 33.0 [^]	275.0
	29	37 [^]	-	28	+1.9 [^] 45.0 [^]	308.0
	29	52 [^]	-	43	+1.5 [^] 53.0 [^]	263.0
	30	16 [^]	30	07	+1.3 [^] 57.6 [^]	316.0
	30	26 [^]	"	17	+0.9 [^] 66.6 [^]	258.4
	30	36 ⁻	"	27	+0.5 [^] 76.5 [^]	325.0
	30	50 [^]	"	40	+0.4 [^] 78.7 [^]	248.5
	31	6 [^]	"	56	+0.2 [^] 84.2 [^]	327.2
	31	16 [^]	31	06	+0.2 [^] 85.0 [^]	243.0
	31	26 [^]	"	16	+0.2 [^] 84.7 [^]	328.0
	31	37 [^]	"	27	+0.1 [^] 87.2 [^]	243.3
	31	55 [^]	"	45	+0.1 [^] 87.5 [^]	330.5
	32	10 [^]	32	00	0.0 [^] 90.0 [^]	243.0
	32	20 [^]		10	-0.1 [^] 92.0 [^]	333.0
	32	27 [^]		17	-0.2 [^] 94.0 [^]	241.0
	32	37 [^]		27		335.0
	32	55 [^]		41		240.0
	32	58 [^]		53		354.0
	32	58 [^]		53		242.5
	32	58 [^]		53		242.5

+ Attached to
 be 334.

194.5
 17.5

950
 1015
 196.5
 98.2

Jan. 7. 1906.

33 m. copied from erroneous minutes at bottom of previous page and not read from chronometer 33 m. is higher.

12	323	17	348.0	242.1
	323	31	89.8^	243.2
12	34	35	90.0^	333.0
		3554	179.8^	242.1
12	34	42	0.0^	89.9^
		35		332.1
		07		
		17	89.1^	243.0
12	35	38	88.7^	332.1
		27	177.8^	243.2
12	35	48	0.0^	88.9^
		46		331.9
	36	0		
	13	13	90.0^	242.5
12	36	34	90.6^	332.5
		30	180.6^	242.2
12	36	44	0.0^	90.3^
		40		332.8
		51		
	37	04	90.1^	241.8
12	37	26	88.3^	331.9
		15	178.4^	243.2
12	37	36	0.0^	89.2^
		34		331.5
		51		
	38	02	88.8^	243.3
12	38	35	91.1^	332.1
		20	179.9^	240.0
12	38	45	0.0^	90.0^
		52		331.1
	39	06		
		19	91.1^	241.1
12	39	35	90.2^	332.2
		27	181.3^	242.0
12	39	45	0.0^	90.6^
		40		332.2
		53		
	40	17	91.1^	241.8
12	42	50	89.4^	332.9
		29	180.5^	
12	43	1	0.0^	90.2^

Jan. 7. 1906.

$$\begin{array}{r} 12 \quad 46 \quad 7^{\wedge} \\ +11^{\wedge} \\ \hline 12 \quad 46 \quad 18^{\wedge} \end{array}$$

$$\begin{array}{r} 12 \quad 47 \quad 48^{\wedge} \\ +11^{\wedge} \\ \hline 12 \quad 47 \quad 59^{\wedge} \end{array}$$

12	45	10	242.7	2	1
"		24	332.1		
"		38	91.7^	241.3	
"		55	93.0^	333.0	9
46	21		184.7^	241.0	1
"	34		-0.1^	92.4^	
47	02			334.0	
"	30		91.4^	241.6	10
48	12		91.8^	333.0	10
"	26		183.2^	241.8	
			-0.1^	91.6^	
				333.6	

Some trouble with 1st. set of 4 readings. Seeing bad.
This set not included in constant.

Limit of Vis.

12	49	57	274.5	
12	50	25	26.0^	274.5
		36	29.0^	300.5
12	50	38	55.0^	273.0
		51	+3.1^	27.5^
				302.0

B. + C. 1122.

13	6	47.4
	7	47.5

B. 394.

13	7	0.0
	8	0.0

Seeing a little blurry but fairly good.

∴ From 12^h 10^m 44^s to 12^h 30^m 27^s add 9 sec.

12 30 27. " 12 42 10. " 10 "

12 42 10. " 12 53 54. " 11 "

12 53 54. " 13 5 37. " 12 "

Jan. 9. 1906. (Tuesday)

B. +. C. 1122.
6 30 11.5
31 11.5

B. 394.
6 30 0.0
31 0.0

Reap. of Jup. I Phot. R H. Obs. Bowie Rec.
comp. with nearer and a little more southern
of two stars on prec. side = S. at. II

6	58	47 ^ 6	58	56		Seen
	58	55 ^	59	4	+1.0 ^	65.0 ^ 76.0
	59	8 ^	"	17	+0.9 ^	67.8 ^ 141.0
	59	18 ^	"	27	+0.6 ^	73.8 ^ 73.2
	59	28 ^	"	37	+0.2 ^	86.0 ^ 147.0
	59	47 ^	"	56	0.0 ^	91.2 ^ 61.0
6	59	58 ^ 7	0	7	-0.1 ^	93.2 ^ 152.2
7	0	9 ^	"	18	-0.3 ^	98.2 ^ 59.0
	0	21 ^	"	30	-0.4 ^	100.9 ^ 157.2
	0	30 ^	"	39	-0.5 ^	102.5 ^ 56.3
	0	40 ^	"	49	-0.5 ^	103.4 ^ 158.8
	0	51 ^	1	0	-0.6 ^	106.5 ^ 55.4
				11		
1	9 ^		"	18	-0.7 ^	109.4 ^ 161.9

Jan. 9, 1906.

7 1 21[^]
 1 33[^]
 1 47[^]
 1 58[^]

7 2 39[^]
 -9[^]
 7 2 30[^]

7 3 51[^]
 -8[^]
 7 3 43[^]

7 5 1[^]
 -8[^]
 7 4 53[^]

7 6 15[^]
 -8[^]
 7 6 7[^]

7 7 11[^]
 -8[^]
 7 7 3[^]

1 30 -0.8[^]/10.3[^] 52.5
 " 42 -0.8[^]/11.5[^] 162.8
 " 56 -0.8[^]/11.0[^] 51.3
 2 7 162.3

" 16 109.6[^] 52.5
 " 27 110.9[^] 162.1
 " 42 220.5[^] 51.6
 3 12 -0.8[^]/10.2[^] 162.5

" 26 111.8[^] 51.5
 " 43 110.7[^] 163.3
 " 55 222.5[^] 52.2
 " 9 -0.8[^]/11.2[^] 164.2

4 20 162.9
 " 31 112.8[^] 51.2
 " 54 112.9[^] 164.0
 5 9 225.7[^] 50.3
 " 31 -0.9[^]/11.2[^] 163.2

" 55 113.5[^] 50.5
 6 9 113.6[^] 164.0
 " 19 227.1[^] 50.7
 " 37 -0.9[^]/11.3[^] 164.3

" 50 112.9[^] 51.7
 7 1 112.8[^] 164.6
 " 15 225.7[^] 51.0
 " 38 -0.9[^]/11.2[^] 163.8

Stopped to count no. sets.

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$$\begin{array}{r} 7 \quad 9 \quad 36^{\wedge} \\ -8^{\wedge} \\ \hline 7 \quad 9 \quad 28^{\wedge} \end{array}$$

$$\begin{array}{r} 7 \quad 10 \quad 49^{\wedge} \\ -8^{\wedge} \\ \hline 7 \quad 10 \quad 41^{\wedge} \end{array}$$

$$\begin{array}{r} 7 \quad 11 \quad 56^{\wedge} \\ -8^{\wedge} \\ \hline 7 \quad 11 \quad 48^{\wedge} \end{array}$$

$$\begin{array}{r} 8 \quad 59 \\ 9 \quad 19 \\ " \quad 54 \\ 10 \quad 10 \end{array}$$

$$\begin{array}{r} " \quad 27 \\ " \quad 43 \\ " \quad 55 \\ 11 \quad 10 \end{array}$$

$$\begin{array}{r} " \quad 27 \\ " \quad 44 \\ 12 \quad 3 \\ " \quad 28 \end{array}$$

$$\begin{array}{r} 112.5^{\wedge} 50.0 \\ 112.7^{\wedge} 163.5 \\ \hline 225.2^{\wedge} 50.3 \quad 6 \\ -0.9^{\wedge} 112.6^{\wedge} 163.0 \end{array}$$

$$\begin{array}{r} 113.0^{\wedge} 50.1 \\ 112.0^{\wedge} 163.1 \\ \hline 225.0^{\wedge} 51.0 \quad 7 \\ -0.9^{\wedge} 112.5^{\wedge} 163.0 \end{array}$$

$$\begin{array}{r} 112.0^{\wedge} 50.8 \\ 113.5^{\wedge} 162.8 \\ \hline 225.5^{\wedge} 50.5 \\ -0.9^{\wedge} 112.8^{\wedge} 164.0 \end{array}$$

Limit of Vis.

$$\begin{array}{r} 7 \quad 13 \quad 59^{\wedge} \\ -7^{\wedge} \\ \hline 7 \quad 13 \quad 52^{\wedge} \end{array}$$

$$\begin{array}{r} 13 \quad 9 \quad 82.7 \\ " \quad 49 \quad 55.3^{\wedge} 138.0 \\ 14 \quad 10 \quad 53.3^{\wedge} 80.7 \\ " \quad 48 \quad \hline 108.6^{\wedge} 134.0 \\ +1.5^{\wedge} 54.3^{\wedge} \end{array}$$

B & L 1182

$$\begin{array}{r} 7 \quad 17 \quad 7.2 \\ 7 \quad 18 \quad 7.2 \end{array}$$

B 394

$$\begin{array}{r} 7 \quad 17 \quad 0.0 \\ 7 \quad 18 \quad 0.0 \end{array}$$

Seeing pretty blurry most of the time. Sat.
resp. somewhat closer to limb of Jup. than
Ammas indicated. Owing to blurry

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seeing the disc of Jup. would sometimes overlap the Sats. At times also owing to the seeing Sats. would quite dis. from view. These various reasons caused quite a little delay especially in first and other early settings. Settings have ever made as fast as possible, fewer settings obtained during variation of light on account of these unfavorable conditions. Sky however clear, altitude pretty high Jup. quite near the meridian and at about $+18.6^\circ$ dec.

\therefore From $6^h 31^m 12^s$ to $6^h 41^m 52^s$ subtract 11 sec.

6	41	52.	"	6	52	33.	"	10.	"
6	52	33.	"	7	3	14.	"	9.	"
7	3	14.	"	7	13	55.	"	2.	"
7	13	55.	"	7	17	7.	"	7.	"

4th type star $+34^\circ 45' 00''$ Phot. 3 H. Obs. Brown Rec

21	36	$+34.8$
27	16	
5	50	

 9.5 brap

Measurements on fol. page

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Index L & B

8 3 26

75.5 4th type dis

118.4

42.9

259.5

34.9

294.4

77.8

-2.26

B

78.5

-2.22

114.6

36.1

255.8

44.2

300.0

80.3

-2.19

Index R & A

345.7

28.2

42.5

169.6

34.0

203.6

76.5

-2.30

A

351.1

-2.30

8 13 48

23.49

32.8

16 74

165.1

43.3

8 8 37

208.74

76.1

-2.31

5 +1 +3

13 9 40

S. J. 3 51

H. A. + 6 15

Dec. + 35.3

P. A. 251.0 Var B

Sprocket + 0.5 B

+ 1.5 b

Mean -2.26

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4th type stars + 2° 4709 Photo. 3 K. Abz Bowie Res
23 39 + 2.7 9.5 bap
18 4

23 39 + 2.7
28 4

4 25 Index 2 & 4

8 39 18

83.0 ← 4th. type star dis

112.3	29.3	
260.5	<u>34.3</u>	
294.8	63.6	-2.73

$$\begin{array}{r} 79.6 \\ 114.2 \\ 263.6 \\ 292.3 \\ \hline 63.3 \end{array} \quad \begin{array}{r} -2.74 \\ 34.6 \\ 28.7 \\ \hline -2.74 \end{array}$$

Index R & B

$$\begin{array}{r} 356.9 \\ 19.5 \\ 172.8 \\ 201.8 \\ \hline 22.6 \\ 29.0 \\ \hline 51.6 \end{array} \quad -3.20$$

354,0 - 3,16

$$\begin{array}{r} 23.9 \\ 174.7 \\ 197.8 \\ \hline 53.3 \end{array} \quad \begin{array}{r} 29.9 \\ 2.34 \\ \hline 53.3 \end{array} \quad -3.13$$

Mean - 2.95'

$$\begin{array}{r} 8 \quad 47 \quad 57 \\ \hline 86 \quad 75 \\ 8 \quad 43 \quad 38 \\ 5 \quad +1 \quad +3 \\ \hline 13 \quad 44 \quad 41 \end{array}$$

Jan. 9, 1905.

S.J. 4^h 26^m
 H.A. 4 45
 Dec +3.0
 P.A. 165.0 Ver B
 Sprockets - 9.5 A +14.5 d
 " - 8.5 B or +15.5 B
 " - 8.0 C +16.0 B

4th type star +25° 20.5 Phot J K Obs. Bowie Rec
 1 11 +26.5
 5 11
 4 00

Full aperture used

For measurements see fol. page

Jan. 9, 1906.

Index L & A

344.0 ← 4th type dis

31.1

47.1'

169.8

35.2'

205.0

82.3

-2.13'

B

348.3

-2.12'

25.7

37.4'

165.0

45.0'

210.0

82.4'

-2.12'

Index R & B

253.8

300.6

46.8'

79.4

36.3'

115.7

83.1'

-2.10'

A

259.0

-2.10'

295.0

36.0'

73.8

46.9'

120.27

82.9'

-2.11'

Mean -2.11'

9 57 18

106 36

9 53 18

5 +1 +3

14 54 21

S.J. 5 35

H.A. + 4 23

Dec +25.8

P.A. 214.5 Gen B

Sprocket -3.5 A

" -2.5 B

" -2.0 C

Jan. 9, 1906.

4th type star +11° 30.5 Phot. J. H. Oke. Bowie Rec
Full aperture

$$\begin{array}{r} 2 \\ 5 \\ 3 \end{array} \quad \begin{array}{r} 29 \\ 49 \\ 20 \end{array}$$

Index L & B

241.2 ← b. s. dis

314.8

65.5

126.0

73.6

60.5

134.1

+0.89

B

10 27 28.

246.5

310.2

60.0

136.0

63.7

76.0

139.7

+0.78

+0.84

Index B & A

~~738.7~~~~222.1~~~~339.5~~~~34.2~~~~83.4~~~~54.7~~~~138.1~~

A

Mean + 0.89~~36.8~~~~36 22~~~~44 10~~

154.4

221.0

335.6

37.7

156.6

331.7

43.6

66.6

62.1

128.7

+1.00

+0.94

154.5

217.8

331.8

42.6

63.3

70.8

134.1

+0.89

10 51 6

78 34

10 39 17

5 +1 +3

15 40 20

Jan. 9, 1906.

S.I. 6 hr 29 m
 S.D. 4 18
 Dec. +12.1
 P.A. 254.5 Ver. B
 Sprockets -4.5 A
 " -3.5 B
 " -3.0 C

It's watch used for times tonight
 Watch 1 m. 3 sec. slow

Jan. 10, 1906.

^{original}
 In ~~former~~ last set in previous page,
 observer thought the set was finished when it was
 only half done (as he was having much difficulty
 with the bad seeing. In order, therefore, to avoid
 any possible error, the last two sets were retaken.

Jan. 10, 1906 (Wednesday)

B. & b. 1182
 5 59 17.5
 6 00 17.5

B. 394
 5 59. 0.0
 6 00 0.0

Reap. of Jup. II Phot. R & Obs. Bowier
 comp. with Sat. on prec. side = Sat. I

6	17	2 ^ 6	17	18	Seen
	17	15 ^	"	31	+2.3 ^ 38.9 ^ 88.0
	17	28 ^	"	44	+1.9 ^ 44.8 ^ 126.9
	17	40 ^	"	56	+1.5 ^ 53.0 ^ 82.1
	17	51 ^	18	7	+1.2 ^ 59.9 ^ 135.1
	18	8 ^	"	24	+1.1 ^ 62.8 ^ 75.2
	18	20 ^	"	36	+0.9 ^ 67.5 ^ 138.0
	18	36 ^	"	52	+0.7 ^ 72.5 ^ 70.5
	18	51 ^	19	7	+0.6 ^ 74.0 ^ 143.0
	19	3 ^	"	19	+0.5 ^ 77.1 ^ 69.0
	19	20 ^	"	36	+0.4 ^ 79.2 ^ 146.1
	19	31 ^	"	47	+0.3 ^ 81.4 ^ 66.9
	19	48 ^	20	4	148.3

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			6	20	54 [^]		20	34	84.8 [^]	63.3	→	
					-15 [^]			46	85.1 [^]	148.1		
6	20	39 [^]					21	2	169.9 [^]	63.0	1	
							"	16	+0.2 [^] 85.0 [^]	148.1		
							"	38	86.9 [^]	63.1		
6	22	8 [^]					"	53	87.5 [^]	150.0		
		-15 [^]					22	19	174.4 [^]	64.5	✓	
6	21	53 [^]					"	40	+0.1 [^] 87.2 [^]	152.0		
							"	55		64.8		
6	23	18 [^]					23	8	87.2 [^]	64.8		
		-15 [^]					"	24	91.0 [^]	152.0		
6	23	3 [^]					"	47	178.2 [^]	63.1	3	
							"		0.0 [^] 89.1 [^]	154.1		
							24	3		63.5	62.8	
6	24	35 [^]					"	30	86.0 [^]	148.5		
		-15 [^]					"	44	88.5 [^]	63.0	4	
6	24	20 [^]					25	4	174.5 [^]	151.5		
							"	17	+0.1 [^] 87.2 [^]	63.2		
6	25	55 [^]					"	39	87.5 [^]	150.7		
		-15 [^]					26	5	87.9 [^]	63.1	✓	
6	25	40 [^]					"	38	175.4 [^]	151.0		
							"		+0.1 [^] 87.7 [^]	62.1		
6	27	48 [^]					27	7	88.4 [^]	150.5	6	
		-15 [^]					"	25	89.4 [^]	62.5		
6	27	33 [^]					28	10	177.8 [^]	151.9		
							"	31	0.0 [^] 88.9 [^]			

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6	30	32	^	28	57	89.2^	62.3
		-14	^	29	37	89.4^	51.5
6	30	18	^	31	39	<u>178.6^</u>	62.0
				"	53	0.0^89.3^	151.4
				32	15	87.0^	63.5
6	33	22	^	33	23	89.5^	50.5
		-14	^	"	44	<u>176.5^</u>	62.7
6	33	8	^	34	7	+0.1^88.2^	152.2
				Limit of visibility			
				34	48	35.3^	89.5
6	35	14	^	"	59	33.2^	124.8
		-14	^	35	25	<u>68.5^</u>	91.0
6	35	0	^	"	46	+2.6^34.2^	124.2

B 46 1182

6 45 13.0

6 46 13.0

B 394

6 45 0.0

6 46 0.0

Seeing fairly good but yet a little blurry. Altitude pretty high. Sat. reap. on ghost of Jup. possibly delaying first setting a little, probably however not very much, settings had to be made very slowly from the start partly from the high altitude but

Jan, 10, 1906.

also from the fact that obs. wished to put the eye in a certain relation to images, this produced some contortion of body which was tiresome

∴ From 6^h 0^m 10^s to 6^h 10^m 16^s subtract 17 sec.
 6 10 16. " 6 20 16. " 16 "
 6 20 16. " 6 30 14. " 15 "
 6 30 14. " 6 40 14. " 14 "
 6 40 14. " 6 45 13. " 13 "

∫ Unipocular Phot. 3 V. Obs Error Rec
 20 31 + 26.0
 26 31
 6 00 9.5 cap

Measurements on fol. page

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Index L & A

133.9 ← b. S. dis
 240.30
 322.6
 50.7

106.1
 88.1
 194.2
 165.8

-0.27

B

141.7
 230.9
 313.6
 62.7

89.2
 109.1
 198.3
 161.7

-0.31

-0.35

Index R & B

43.1
 148.4
 233.1
 322.4

105.3
 89.3
 194.6
 165.4

-0.28

A

53.0
 140.5
 223.7
 331.6

87.5
 107.9
 195.4
 164.6

-0.28

-0.29

mean -0.30

7 19 10

7 25 16
 5 12 38
 5 1 4

12 13 42

2.3. 3 3
 H.A. + 6 30

Dec. + 26.5

P.A. 188.2 Ver 8

Sprockets -0.5 B

" +0.5 b

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B & b 1182

7	43	13.4
7	44	13.4

B 394

7	43	0.0
7	44	0.0

Dis. Infr. III Phot. R. H. Obs. Bowie Rec.
comp. with middle of three Sats. (before ec.) on fol.
side = Sat. II

7	53	5	19	113.3	139.8	
7	52	52	40	104.0	253.1	
		-13	22	217.3	145.0	1
				-0.7	108.6	
			58	102.0	249.0	
7	54	40	17	99.3	147.0	
7	54	28	33	99.1	246.3	2
		-12	48	198.4	147.1	
			4	-0.4	99.2	
			27	102.0	145.5	
7	55	52	44	100.9	247.5	
7	55	40	0	202.9	147.0	3
		-12	18	-0.4	101.4	
			35	98.7	148.1	
7	57	2	54	99.3	246.8	4
7	56	50	13	198.0	147.2	
		-12		-0.3	99.0	

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$$\begin{array}{r} 7 \quad 59 \quad 14 \quad ^\wedge \quad 7 \\ -12 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 7 \quad 59 \quad 2 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 0 \quad 37 \quad ^\wedge \\ -12 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 0 \quad 25 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 2 \quad 22 \quad ^\wedge \\ -12 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 2 \quad 10 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 3 \quad 36 \quad ^\wedge \\ -12 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 3 \quad 24 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 5 \quad 13 \quad ^\wedge \\ -11 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 5 \quad 2 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 6 \quad 37 \quad ^\wedge \\ -11 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 8 \quad 6 \quad 26 \quad ^\wedge \end{array}$$

$$\begin{array}{r} 57 \quad 28 \quad 246.5 \\ \hline 58 \quad 52 \quad 100.7 \quad ^\wedge \quad 147.8 \end{array}$$

$$\begin{array}{r} 59 \quad 5 \quad 100.3 \quad ^\wedge \quad 248.5 \end{array}$$

$$\begin{array}{r} " \quad 20 \quad 201.0 \quad ^\wedge \quad 147.7 \end{array}$$

$$\begin{array}{r} " \quad 38 \quad -0.4 \quad ^\wedge \quad 100.5 \quad ^\wedge \quad 248.0 \end{array}$$

$$\begin{array}{r} 0 \quad 7 \quad 98.7 \quad ^\wedge \quad 148.2 \end{array}$$

$$\begin{array}{r} " \quad 22 \quad 97.5 \quad ^\wedge \quad 246.9 \end{array}$$

$$\begin{array}{r} " \quad 46 \quad 196.2 \quad ^\wedge \quad 149.0 \end{array}$$

$$\begin{array}{r} 1 \quad 5 \quad -0.3 \quad ^\wedge \quad 98.1 \quad ^\wedge \quad 248. \end{array}$$

$$\begin{array}{r} " \quad 13 \quad 246.5 \end{array}$$

$$\begin{array}{r} " \quad 55 \quad 94.8 \quad ^\wedge \quad 150.0 \end{array}$$

$$\begin{array}{r} 2 \quad 13 \quad 95.5 \quad ^\wedge \quad 244.8 \end{array}$$

$$\begin{array}{r} " \quad 29 \quad 190.3 \quad ^\wedge \quad 149.5 \end{array}$$

$$\begin{array}{r} " \quad 53 \quad -0.2 \quad ^\wedge \quad 95.2 \quad ^\wedge \quad 245.0 \end{array}$$

$$\begin{array}{r} 3 \quad 9 \quad 96.0 \quad ^\wedge \quad 150.0 \end{array}$$

$$\begin{array}{r} " \quad 28 \quad 94.8 \quad ^\wedge \quad 246.0 \end{array}$$

$$\begin{array}{r} " \quad 47 \quad 190.8 \quad ^\wedge \quad 150.2 \end{array}$$

$$\begin{array}{r} 4 \quad 2 \quad -0.2 \quad ^\wedge \quad 95.4 \quad ^\wedge \quad 245.50 \end{array}$$

$$\begin{array}{r} " \quad 40 \quad 93.3 \quad ^\wedge \quad 151.5 \end{array}$$

$$\begin{array}{r} 5 \quad 0 \quad 91.3 \quad ^\wedge \quad 244.8 \end{array}$$

$$\begin{array}{r} " \quad 25 \quad 184.6 \quad ^\wedge \quad 153.0 \end{array}$$

$$\begin{array}{r} " \quad 46 \quad -0.1 \quad ^\wedge \quad 92.3 \quad ^\wedge \quad 244.3 \end{array}$$

$$\begin{array}{r} 6 \quad 5 \quad 88.6 \quad ^\wedge \quad 153.0 \end{array}$$

$$\begin{array}{r} " \quad 27 \quad 88.4 \quad ^\wedge \quad 241.6 \end{array}$$

$$\begin{array}{r} " \quad 50 \quad 177.0 \quad ^\wedge \quad 153.1 \end{array}$$

$$\begin{array}{r} +0.1 \quad ^\wedge \quad 88.5 \quad ^\wedge \end{array}$$

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	8		7	5	241.5
8	8	1	"	30	86.3 [^] 154.2
8	7	-11	"	50	81.8 [^] 240.5
		50	8	9	168.1 [^] 155.2
			"	34	+0.2 [^] 84.0 [^] 238.0
8	9	15	"	50	80.1 [^] 156.4
8	9	-11	9	6	77.1 [^] 236.5
		4	"	22	157.2 [^] 157.6
8	10	21	"	42	+0.4 [^] 78.6 [^] 234.7
8	10	-11	"	59	72.7 [^] 160.8
		10	10	11	68.2 [^] 233.5
8	10	10	"	28	140.9 [^] 163.4
			"	45	+0.8 [^] 70.4 [^] 231.6
8	11	44	11	19	66.5 [^] 164.8
8	11	11	"	33	62.4 [^] 230.25
8	11	33	"	54	128.9 [^] 165.4
8	12	13	12	9	+1.0 [^] 64.4 [^] 227.8
8	12	36	"	24	+2.1 [^] 42.2 [^] 169.0
8	12	53	"	47	+2.1 [^] 41.5 [^] 211.2
8	13	35	13	4	+1.5 [^] 52.2 [^] 169.7
8	13	52	"	46	+1.9 [^] 45.9 [^] 221.9
8	14	12	14	3	+2.2 [^] 40.2 [^] 176.0
8	14	22	"	23	+2.3 [^] 38.1 [^] 216.2
8	14	42	"	33	+2.9 [^] 29.4 [^] 178.1
			"	53	+3.1 [^] 27.0 [^] 207.5

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8	15	5	8	15	16 [^]	+2.6 [^] 33.0 [^] 180.5	111
	15	23 [^]		"	33	+2.8 [^] 30.5 [^] 213.5	111
	15	43 [^]		"	53	+2.9 [^] 29.0 [^] 183.0	111
	16	9 [^]		16	19	212.0	
	16	44 [^]		"	54	not seen later	
Limit of vis.							
8	18	4 [^]		17	17	24.9 [^] 184.1	
	"	-10 [^]		"	50	24.9 [^] 209.0	
	17	54 [^]		18	21	49.8 [^] 185.1	
				"	46	+3.3 [^] 24.9 [^] 210.0	

Seeing ^{somewhat} a little blurry, but yet somewhat good. Altitude very high. Jup. near the meridian. Owing to altitude and somewhat blurry seeing obs. had to make settings rather slowly, waiting a little for best intervals of steadiness.

B. & B. 1182				B. 394			
8	26	9.5		8	26	0.0	
8	27	9.5		8	27	0.0	
From	7 ^h 43 ^m	9 ^m to	7 ^h 53 ^m - 54 ^m	subtract	13	secs.	
	7 53	54	" A K 39.	"	12	"	
	A 4	39.	" A 15 24.	"	11	"	
	A 15	24.	" A 26 10.	"	10	"	

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4th type star +25 205 Phot 3 H. Obs Bowie Rec

$$\begin{array}{r} 1 \\ 4 \\ \hline 3 \end{array} \quad \begin{array}{r} 11 \\ 16 \\ \hline 5 \end{array}$$

+26.5

Full aperture

Index R & B

8 52 0

$$\begin{array}{r} 74.5 \\ 121.4 \\ 262.0 \\ 294.3 \end{array} = 4th \text{ type dis.}$$

A

$$\begin{array}{r} 46.9' \\ 33.3' \\ \hline 79.2' \end{array} -2.22'$$

$$\begin{array}{r} 80.4 \\ 113.7 \\ 253.9 \\ 300.7 \end{array}$$

-2.20'

$$\begin{array}{r} 33.3' \\ 46.8' \\ \hline 80.1' \end{array} -2.19'$$

Index L & A

$$\begin{array}{r} 344.4 \\ 31.2 \\ 170.1 \\ 204.6 \end{array}$$

$$\begin{array}{r} 46.8' \\ 34.5' \\ \hline 81.3' \end{array} -2.16'$$

B

$$\begin{array}{r} 350.5 \\ 26.6 \\ 162.3 \\ 212.1 \end{array}$$

-2.10'

$$\begin{array}{r} 36.1' \\ 49.8' \\ \hline 85.9' \end{array} -2.03'$$

Mean -2.15'

9	0	52
17	52	52
8	56	26
5	+1	+4
13	57	30

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S. 3. 4 46
 H. A. + 3 35
 Dec. + 25.7
 P. A. 34.6 Ger B
 Sprocket - 3.5 A
 " - 2.5 B
 " - 2.0 C

9 18

A bright meteor of yellowish white color (about color of Jup. and about $\frac{3}{4}$ as bright as Jup.) was seen to move slowly ^{starting} from about 4° below in a south to southwest direction. Its path extending over about 10 to 12°

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B. & b. 1182

9	40	10.2
9	41	10.2

B. 394

9	40	0.0
9	41	0.0

Reap. Imp. III Phot. R. H. Ok. Bowie Rec.
 Comp. with more remote of two Sats. (before reap) on fol.
 side = Sat. IV

9	57	58	9	58	6	Seen
	58	26		"	34	+1.6 [^] 51.6 [^] 79.5
	58	37		"	45	+1.6 [^] 51.1 [^] 13 1.1
	58	51		"	59	+1.5 [^] 53.0 [^] 80.0
	59	12	9	59	20	+1.2 [^] 58.8 [^] 13 3.0
	59	23		"	31	+1.1 [^] 62.8 [^] 74.2
	59	35		"	43	+0.9 [^] 65.9 [^] 13 7.0
9	59	51		"	59	+0.9 [^] 67.9 [^] 71.1
10	0	2	10	0	10	+0.7 [^] 71.0 [^] 13 9.0
	0	16		"	24	+0.6 [^] 73.2 [^] 68.0
					35	13
	0	36		"	44	+0.6 [^] 74.4 [^] 14 1.2
	0	49		"	57	+0.4 [^] 78.5 [^] 66.8
1	2		1	10		+0.3 [^] 81.8 [^] 14 5.3
1	21		"	29		+0.3 [^] 83.3 [^] 63.5
1	33		"	41		+0.2 [^] 84.7 [^] 14 6.8
1	47		"	55		+0.2 [^] 85.8 [^] 62.1

Jan. 10, 1906.

10 2 2[^] 10
$$\begin{array}{r} 10 \quad 2 \quad 51^{\wedge} \\ \quad \quad -8^{\wedge} \\ \hline 10 \quad 2 \quad 43^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 3 \quad 53^{\wedge} \\ \quad \quad -8^{\wedge} \\ \hline 10 \quad 3 \quad 45^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 5 \quad 5^{\wedge} \\ \quad \quad -8^{\wedge} \\ \hline 10 \quad 4 \quad 57^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 6 \quad 26^{\wedge} \\ \quad \quad -7^{\wedge} \\ \hline 10 \quad 6 \quad 19^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 8 \quad 13^{\wedge} \\ \quad \quad -7^{\wedge} \\ \hline 10 \quad 8 \quad 6^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 9 \quad 40^{\wedge} \\ \quad \quad -7^{\wedge} \\ \hline 10 \quad 9 \quad 33^{\wedge} \end{array}$$

$$\begin{array}{r} 2 \quad 10 \quad 147.9 \rightarrow \\ \hline \end{array}$$

$$\begin{array}{r} " \quad 29 \quad 93.2^{\wedge} 59.0 \end{array}$$

$$\begin{array}{r} " \quad 41 \quad 94.5^{\wedge} 52.2 \end{array}$$

$$\begin{array}{r} 3 \quad 0 \quad 187.7^{\wedge} 58.1 \end{array}$$

$$\begin{array}{r} " \quad 14 \quad -0.1^{\wedge} 93.8^{\wedge} 152.6 \end{array}$$

$$\begin{array}{r} " \quad 30 \quad 56.9 \end{array}$$

$$\begin{array}{r} " \quad 45 \quad 97.1^{\wedge} 154.0 \end{array}$$

$$\begin{array}{r} 4 \quad 2 \quad 100.7^{\wedge} 54.1 \end{array}$$

$$\begin{array}{r} " \quad 16 \quad 197.8^{\wedge} -0.3^{\wedge} 98.9^{\wedge} 154.8 \end{array}$$

$$\begin{array}{r} " \quad 35 \quad 53.1 \end{array}$$

$$\begin{array}{r} " \quad 52 \quad 103.0^{\wedge} 56.1 \end{array}$$

$$\begin{array}{r} 5 \quad 15 \quad 106.3^{\wedge} 51.9 \end{array}$$

$$\begin{array}{r} " \quad 39 \quad 209.3^{\wedge} -0.6^{\wedge} 104.6^{\wedge} 158.2 \end{array}$$

$$\begin{array}{r} " \quad 51 \quad 51.0 \end{array}$$

$$\begin{array}{r} 6 \quad 10 \quad 108.5^{\wedge} 159.5 \end{array}$$

$$\begin{array}{r} " \quad 37 \quad 109.4^{\wedge} 50.0 \end{array}$$

$$\begin{array}{r} 7 \quad 6 \quad 217.9^{\wedge} -0.7^{\wedge} 109.0^{\wedge} 159.4 \end{array}$$

$$\begin{array}{r} " \quad 27 \quad 49. \end{array}$$

$$\begin{array}{r} " \quad 40 \quad 113.4^{\wedge} 48.8 \end{array}$$

$$\begin{array}{r} 8 \quad 7 \quad 115.2^{\wedge} 62.2 \end{array}$$

$$\begin{array}{r} " \quad 24 \quad 228.6^{\wedge} 47.4 \end{array}$$

$$\begin{array}{r} " \quad 40 \quad -0.9^{\wedge} 114.3^{\wedge} 62.26 \end{array}$$

$$\begin{array}{r} 9 \quad 14 \quad 116.0^{\wedge} 46.0 \end{array}$$

$$\begin{array}{r} " \quad 32 \quad 117.2^{\wedge} 62.0 \end{array}$$

$$\begin{array}{r} " \quad 46 \quad 233.2^{\wedge} 45.8 \end{array}$$

$$\begin{array}{r} " \quad 1.0^{\wedge} 116.6^{\wedge} \end{array}$$

Jan. 10, 1906.

10

$$\begin{array}{r} 10 \quad 10 \quad 39^{\wedge} \\ -7^{\wedge} \\ \hline 10 \quad 10 \quad 32^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 11 \quad 40^{\wedge} \\ -7^{\wedge} \\ \hline 10 \quad 11 \quad 33^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 12 \quad 48^{\wedge} \\ -7^{\wedge} \\ \hline 10 \quad 12 \quad 41^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 13 \quad 56^{\wedge} \\ -7^{\wedge} \\ \hline 10 \quad 13 \quad 49^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 15 \quad 19^{\wedge} \\ -6^{\wedge} \\ \hline 10 \quad 15 \quad 13^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 16 \quad 27^{\wedge} \\ -6^{\wedge} \\ \hline 10 \quad 16 \quad 21^{\wedge} \end{array}$$

10

6

163.0

1

$$\begin{array}{r} 10 \quad 19 \quad 116.9^{\wedge} \quad 46.1 \\ 31 \quad 117.5^{\wedge} \quad 63.0 \\ 46 \quad 234.4^{\wedge} \quad 46.0 \\ 11 \quad 1 \quad -1.1^{\wedge} \quad 117.2^{\wedge} \quad 63.5 \end{array}$$

$$\begin{array}{r} 10 \quad 18 \quad 118.2^{\wedge} \quad 45.8 \\ 32 \quad 118.5^{\wedge} \quad 64.0 \\ 47 \quad 236.7^{\wedge} \quad 45.5 \\ 12 \quad 5 \quad -1.1^{\wedge} \quad 118.4^{\wedge} \quad 64.0 \end{array}$$

$$\begin{array}{r} 10 \quad 21 \quad 119.6^{\wedge} \quad 44.9 \\ 40 \quad 119.3^{\wedge} \quad 64.5 \\ 57 \quad 238.9^{\wedge} \quad 45.0 \\ 13 \quad 12 \quad -1.2^{\wedge} \quad 119.4^{\wedge} \quad 64.3 \end{array}$$

$$\begin{array}{r} 10 \quad 29 \quad 120.1^{\wedge} \quad 45.1 \\ 43 \quad 121.1^{\wedge} \quad 65.2 \\ 14 \quad 6 \quad 241.2^{\wedge} \quad 44.0 \\ 26 \quad -1.2^{\wedge} \quad 120.6^{\wedge} \quad 65.1 \end{array}$$

$$\begin{array}{r} 10 \quad 50 \quad 121.3^{\wedge} \quad 44.0 \\ 15 \quad 9 \quad 122.5^{\wedge} \quad 65.3 \\ 28 \quad 243.8^{\wedge} \quad 43.5 \\ 49 \quad -1.3^{\wedge} \quad 121.9^{\wedge} \quad 66.0 \end{array}$$

$$\begin{array}{r} 16 \quad 6 \quad 121.0^{\wedge} \quad 44.2 \\ 22 \quad 121.2^{\wedge} \quad 65.2 \\ 32 \quad 242.2^{\wedge} \quad 44.1 \\ 49 \quad -1.2^{\wedge} \quad 121.1^{\wedge} \quad 65.3 \end{array}$$

Jan. 10, 1906.

$$\begin{array}{r} 10 \quad 17 \quad 26^{\wedge} \\ -6^{\wedge} \\ \hline 10 \quad 17 \quad 20^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 18 \quad 36^{\wedge} \\ -6^{\wedge} \\ \hline 10 \quad 18 \quad 30^{\wedge} \end{array}$$

$$\begin{array}{r} 10 \quad 24 \quad 7^{\wedge} \\ -5^{\wedge} \\ \hline 10 \quad 24 \quad 2^{\wedge} \end{array}$$

$$\begin{array}{r} 17 \quad 0 \quad 121.4^{\wedge} \quad 44.0 \\ " \quad 24 \quad 120.9^{\wedge} \quad 165.4 \\ " \quad 33 \quad -1.2^{\wedge} \quad 242.3^{\wedge} \quad 44.4 \quad 2 \\ " \quad 46 \quad 121.2^{\wedge} \quad 165.3 \end{array}$$

$$\begin{array}{r} 18 \quad 14 \quad 121.7^{\wedge} \quad 43.8 \\ " \quad 29 \quad 121.7^{\wedge} \quad 165.5 \\ " \quad 42 \quad 243.4^{\wedge} \quad 43.5 \quad 9 \\ " \quad 59 \quad -1.3^{\wedge} \quad 121.7^{\wedge} \quad 165.2 \end{array}$$

Limit of viz

$$\begin{array}{r} 23 \quad 17 \quad 36.9^{\wedge} \quad 88.1 \\ " \quad 53 \quad 39.5^{\wedge} \quad 125.0 \\ 24 \quad 16 \quad 76.4^{\wedge} \quad 85.5 \\ 25 \quad 1 \quad +2.3^{\wedge} \quad 38.2^{\wedge} \quad 125.0 \end{array}$$

Seeing a little blurry, but fairly good. Obs. delayed a little in obtaining first setting from the fact that Sat. III reaps. nearer the planet than was indicated by the Almanac, hence a little delay was occasioned from necessary readjustment of images. Eclipse however considered pretty good.

∴ From 9^h 47^m 29^s to 9^h 56^m 30^s subtract 9. sec.
 9 56 30. " 10 5 31. " 2. "
 10 5 31. " 10 14 32. " 7. "
 10 14 32. " 10 23 32. " 6. "
 10 23 32. " 10 32 33. " 5. "

Jan. 10, 1906.

B & b 1182
 10 37 4.0
 10 38. 4.0

B 294
 10 37 0.0
 10 38 0.0

It's watch used for times tonight
 Sketch 1 m. 4 sec. slow

Jan. 12, 1906. (Friday)

Astbury's Snap. var. 48 Aurigae Phot. 3 H. Ok. Bowie Rec.
Full aperture

6	19
2	56
3	23
4	37

Index Lead

258.8 ← var. dis

296.5

83.9

109.6

37.7'

25.7'

63.4' -2.73'

B

264.3

-2.73'

291.0

26.7'

78.4

37.0'

115.4

63.7' -2.73'

Index R & B

170.1

203.6

357.1

18.8

33.5'

21.7'

55.2' -3.05'

A

176.4

-3.04'

197.6

21.0'

350.8

34.6'

25.4

55.6' -3.03'

Mean -2.88'

7 30 1

7 38 18

68 19

7 34 10

5 + 53

12 35 3

Jan. 12, 1905

S.J. 3^h 27^m

L.A. -2 55

Dec. +30.0

P.A. 282.3 Ver B

Sprocket -4.5 A

" -3.5 B

" -2.8 b

U Sapher Photo. 3 H. O. R. Bowie Rec.

0. 50

+81.1

3 35

2 45

9.5 Gap

For measurements see fol. page

Jan. 12, 1906.

Index Q & A

332.2 par. dis

8 22 32

44.3

72.1'

A

153.7

66.7'

220.4

138.8' -0.80'

337.3

-0.75'

8 26 20

40.8

63.5'

146.2

80.0'

226.2

143.5' -0.70'

Index L & B

231.3

8 29 30

324.4

93.1'

B

60.2

73.2'

133.4

166.3' -0.26'

238.9

-0.22'

8 31 40

316.6

77.7'

50.9

93.3'

144.2

171.0' -0.17

Mean -0.48'

8 108 122'

8 27 30'

5 +53'

13 28 23'

Jan. 12, 1906.

Index L & B

8 35 49	230.4			
	323.5	93.1'		
	61.1	<u>72.5'</u>		
	133.6	165.6'	-0.27'	Ⓟ
8 38 10	239.1		-0.20'	
	314.1	75.0'		
	47.5	<u>98.1'</u>		
	145.6	173.1'	-0.13'	

Index R & A

8 41 35	142.4			
	229.5	87.1'		
	333.7	<u>67.8'</u>		
	41.5	154.9	-0.48'	Ⓟ
8 43 40	151.0		-0.41'	
	222.7	71.7'		
	324.6	<u>90.2'</u>		
	54.8	161.9	-0.34'	
5	157 134			
8	39 48			
5	+53			
13	40 41			

Mean -0.30'

Jan. 12, 1906

Index Q & A

8	46	34	143.4			
			231.4	88.0'	III	
			333.2	69.4'		
			42.6	157.4'	-0.43'	A

8	49	10	151.7			-0.36'
			221.69	70.2'		
			321.7	93.7'		
			55.4	163.9'	-0.30'	

Index L & B

8	53	0	42.6			
			152.0	109.4'		
			235.6	81.5'		
			318.1	190.9'		
				169.1'	+0.20'	B

54.5

8	56	31	137.9	83.4'	+0.22'
	204	75	221.0	108.8'	
8	51	19	329.8	192.2'	
5	+53			167.8'	+0.23'

13 52 12

mean -0.07'

Jan 12 1906

Index L & B

428

9 0 4

132.0

109.2'

233.4

87.2'

320.6

196.4'

163.6'

+0.31'

IV

B

51.8

9 2 20

141.5

89.7'

+0.32'

222.8

107.4'

330.2

197.1'

162.9'

+0.32'

Index A & A

317.0

9 6 0

57.4

100.4'

145.2

80.6'

225.8

181.0'

179.0'

+0.02'

A

325.5

9 8 16

51.4

85.9'

+0.10

135.3

103.2'

238.85

189.1'

170.9'

+0.17'

9 4 10
5 +53

14 5 3

Mean +0.21

Jan 12, 1906

Index R & A

9	13	2	316.4		<u>V</u>	
			62.0	105.6'		
			142.8	86.4'		W
			229.2	192.0'		
				168.0'		+ 0.23'

9	16	8	323.1			
			51.4	88.3'		+0.28'
			132.3	108.7'		
			241.0	197.0'		
				163.0'		+0.32'

Index L & B

9	19	35	218.6			
			335.0	116.4'		
			50.0	95.5'		
			145.5	211.9'		8
				148.1'		+0.61'

9	22	17	229.6			
			324.9	95.3'		+0.65'
			36.5	120.5'		
9	17	46	157.0	215.8'		
5		+53		144.2'		+0.69'

14	18	39	2.3.	5 hr	11 min	Mean +0.46'
			L.A.	4	15	

Dec. +81.9
 P.A. 196.2 Ver B
 Sprocket -1.5 B
 " -0.5 B

W's watch used for times
 Watch 53 sec. slow

Jan. 15, 1906 (Monday)

7 2 0 Sky pretty cloudy everywhere

7 13 Sky perfectly cloudy everywhere no
stars visible evidently closed in for
night

Jan. 16. 1906 (Tuesday)

& Vulpeculae Phot T. H. Oke Brook

20	31
27	11
6	40

+26.0

9.5 bap

Index Left

139.3 b.s. dis.

237.0

330.6

47.2

97.7

76.6

174.3 + 0.11

143.6

224.1

316.7

62.3

80.5

105.6

186.1

173.9 - 0.11

0.00

Index Right

43.8

149.1

235.5

318.5

105.3

83.0

188.3

171.7 - 0.16

54.0

140.1

225.4

332.6

86.1

107.2

193.3

166.7 - 0.25

-0.20

7 30 10

50 58

7 25 29

5 + 29

12 25 58

Mean - 0.10

Jan. 16, 1906

S.S. 3 44
 H.A. +7 9
 Dec +26.6
 P.A. 8.5 Var B

Region so low sprocket could not be
 set preliminary to reading region thoroughly
 identified

Astbury's Snap. Var. Phot T.H. Obs. Bonn Rec.

6	19
3	49
2	30
9	30

+30.6

Full aperture used

Jan. 16, 1906

Index R & B

8 6 42

168.6 ← var. dis
 205.4 36.8
 356.4 22.4
 18.8 59.2 -2.89'

176.5 -2.88'

198.0 21.5
 348.4 38.3
 26.7 59.8 -2.87'

Index L & A

85.0

109.8 24.8
 257.8 39.4
 297.2 64.2 -2.71'

76.8

-2.71'

8 14 35

20 77

117.65

40.7

265.3

23.3

8 10 38

288.6

64.0

5 +29

-2.71'

Mean -2.80'

13 11 7

2.3 4 15

Sb. A -2 8

Dec +29.9

P. A. 101.5

Sprockets -4.5 A

" -3.5 B

" -2.5 C

Jan. 16, 1906.

B. & b. 1182

8	37	10.5
8	38	10.4

B. 394

8	38	0.0
8	39	0.0

Recp. Inf. I Phot. R. H. Obs. Bowie Rec.
 Comp. with nearest of three Sats. on pres. side =
 = Sat. II

8	54	2 ^	8	53	10	Seen
	54	8 ^		"	16	+2.4 ^ 36.2 ^ 84.0
	54	17 ^		"	25	+1.9 ^ 44.7 ^ 120.2
	54	30 ^		"	38	+1.7 ^ 49.5 ^ 75.5
	54	39 ^		"	47	+1.5 ^ 53.6 ^ 125.0
	54	47 ^		"	55	+1.3 ^ 58.6 ^ 71.4
	54	57 ^	54	5		+1.1 ^ 62.1 ^ 130.0
	55	9 ^	"	17		+0.8 ^ 69.2 ^ 67.9
	55	20 ^	"	28		+0.6 ^ 74.9 ^ 137.1
	55	36 ^	"	44		+0.5 ^ 75.9 ^ 62.2
	55	52 ^	55	0		+0.3 ^ 83.0 ^ 138.1
	56	8 ^	"	16		0.0 ^ 88.9 ^ 55.1
	56	19 ^	"	27		+0.1 ^ 88.0 ^ 144.0

Jan. 16, 1906.

8 56 34 ^ 8
 56 50 ^
 57 9
 57 19 ^

8 57 11 ^
 +52 ^
 8 58 3 ^

8 58 8 ^
 +52 ^
 8 59 0 ^

8 59 26 ^ 8
 +52 ^
 9 0 18 ^
 - 9

9 0 28 ^
 +53 ^
 9 1 21 ^

9 1 32 ^
 +53 ^
 9 2 25 ^

9 2 43 ^
 +53 ^
 9 3 36 ^

55 42

" 58

56 17

" 27

" 50

57 1

" 19

" 33

" 46

" 59

58 12

" 33

" 46

59 25

" 41

" 52

0 5

" 17

" 39

" 51

1 8

" 19

" 45

" 54

2 12

" 29

0.0^90.2^ 56.0

-0.1^91.4^ 46.2

-0.1^93.7^ 54.8

148.5

98.1^ 52.0

96.4^ 50.1

194.5^ 53.1

-0.3^97.2^ 149.5

96.8^ 53.2

93.9^ 50.0

190.7^ 54.1

-0.2^95.4^ 148.0

92.0^ 55.8

96.1^ 147.8

188.1^ 52.0

-0.2^94.0^ 148.1

97.0^ 51.9

95.5^ 148.9

192.5^ 52.4

-0.2^96.2^ 147.9

97.4^ 52.0

95.3^ 149.4

192.7^ 54.1

-0.2^96.4^ 149.4

95.8^ 54.0

94.6^ 149.8

190.4^

-0.2^95.2^

Jan. 16, 1906

9	4	12	^	2	56	53.4	6
		+53	^	3	14	148.0	
9	5	5	^	"	42	94.0^ 54.5	
				4	9	95.4^ 148.5	
				"	21	189.4^ 53.5	7
				"	36	-0.2^ 94.7^ 148.9	
				6	34	95.6^ 54.2	
				"	57	95.9^ 149.58	8
				7	44	191.5^ 53.6	
				8	0	-0.2^ 95.8^ 149.5	
				Limits of vis.			
				8	29	25.5^ 88.5	
				"	58	25.1^ 114.0	
				9	12	50.6^ 88.9	
				"	32	+3.2^ 25.3^ 114.0	

Seeing pretty good, altitude rather high, but Jup. a little west of the meridian. Obs. taken with much care and eclipse considered good.

Jan. 16, 1906.

B. 46. 1182

9	16	5.3
9	17	5.2

B. 394

9	17	0.0
9	18	0.0

From A^h 37^m 26.^s to A^h 44^m 52.^s add 50. sec.
 " A 44 52. " A 52 12. " 51. "
 " A 52 12. " A 59 44. " 52. "
 " A 59 44. " 9 7 10. " 53. "
 " 9 7 10. " 9 14 36. " 54. "

Fourth Type Star +59° 28' 10" Phot. T. H. Obs. Bowie Pa

0	2	+58.3
5	32	
5	30	

9.5 laps

9 55 0

Stopped by clouds, came up heavily cloudy everywhere. No chance for anything further

It's watch used for times tonight
 Watch 29 sec. slow

Jan. 17. 1906 (Wednesday)

U Vulpeculae

Phot T K. Obs. Bowie Rec

20 31 +26.0

9.5 bap

27 11

6 40

Lead

319.2 b.S. dis

58.3

99.1

146.0

80.0

226.0

179.1 +0.02

327.6

+0.03

47.2

79.6

138.9

98.4

237.3

178.0 +0.04

Index R & B

2230

329.9

106.9

54.8

84.6

139.4

191.5

168.5

-0.22

235.7

320.5

84.8

-0.19

44.3

103.7

148.0

188.5

171.5

-0.16

Mean -0.08

7 23 14

7 28 52

51 66

7 25 63

5 +24

12 26 27

Jan. 17 1906

S.I. 3^h 38^m
 S.A. + 7 5
 Dec. + 26.6
 P.A. 188.5 per 8
 Sprocket - 0.5 8
 " + 0.5 6

Arthur's Susp. Var.	Phot T & Obs. Bowie Rec
6 19	+ 30.6
3 44	
2 35	
9 25	

Full aperture used

For measurements see fol. page

Jan 17, 1906

Index L & A

7 54 25

257.8 ← *randis*

295.2

84.7

109.1

37.4'

24.4'

61.8'

-2.79'

B

264.2

-2.78'

289.5

35.3'

78.6

36.9'

115.5

62.2'

-2.78'

Index R & B

167.8

205.9

354.4

19.0

38.1'

24.6'

62.7'

-2.76'

A

176.0

-2.80'

198.9.1

23.1'

348.9.3

37.3'

26.6

60.4'

-2.84'

8 3 30

15 57 55'

7 58 58'

5 +24'

12 59 22

S.J. 4^h 13^m

R.A. - 2 10

Dec. + 30.0

P.A. 281.5 Ver B

Sprocket -4.5 d

" -3.5 B

" -2.9 B

Mean -2.79'

It's watch used for times
Watch 24 sec slow

Jan. 17, 1906

B & b 1182
 8 23 23.7
 8 24 23.7

B 394
 8 24 0.0
 8 25 0.0

Reap. Sat. II Phot. R. H. Obs. Bowie Rec.
 comp. with nearer of two Sats. on prec. side
 = Sat. I

8	52	57 ^	8	52	20	Seen
53	5	^	"	28	+2.9 ^ 29.2 ^	85.8
53	15	^	"	38	+2.7 ^ 32.0 ^	115.0
53	24	^	"	47	+2.3 ^ 38.5 ^	83.0
53	34	^	"	57	+1.9 ^ 46.0 ^	121.5
53	42	^	53	5	+1.6 ^ 50.5 ^	75.5
53	52	^	"	15	+1.5 ^ 53.1 ^	126.0
54	9	^	"	32	+1.3 ^ 58.1 ^	72.9
54	20	^	"	43	+1.1 ^ 61.5 ^	131.0

Jan. 17, 1906.

8	54	29 ⁸	53	52	+1.1 [^]	62.0 [^]	69.5 [^]	
	54	38 ⁸	54	1	+1.0 [^]	64.0 [^]	31.5 [^]	
				10			6	
	54	54 [^]	"	17	+1.0 [^]	64.5 [^]	67.5 [^]	
	55	4 [^]	"	27	+1.0 [^]	65.0 [^]	32.0 [^]	
	55	15 [^]	"	38	+0.8 [^]	69.0 [^]	67.0 [^]	
	55	29 [^]	"	52	+0.8 [^]	70.0 [^]	36.0 [^]	
	55	39 [^]	55	2	+0.7 [^]	72.5 [^]	66.0 [^]	
	55	54 [^]	"	17			138.5	
			"	41		80.5 [^]	62.0 [^]	
8	55	58 [^]	"	52		82.8 [^]	42.5 [^]	
		+37 [^]	56	4		163.3 [^]	60.7 [^]	1
8	56	35 [^]	"	13	+0.3 [^]	81.6 [^]	143.5 [^]	
			"	26			60.8 [^]	
8	56	53 [^]	"	40		81.2 [^]	42.0 [^]	
		+37 [^]	"	57		77.0 [^]	62.5 [^]	2
8	57	30 [^]	57	28	+0.4 [^]	79.1 [^]	139.5 [^]	
			"	43		78.7 [^]	60.5 [^]	
8	58	9 [^]	58	2		78.8 [^]	39.2 [^]	
		+37 [^]	"	20		157.5 [^]	61.0 [^]	3
8	58	46 [^]	"	30	+0.4 [^]	78.8 [^]	139.8 [^]	
			"	39		77.3 [^]	61.2 [^]	
8	59	6 [^]	59	2		79.0 [^]	38.5 [^]	
		+37 [^]	"	12		156.3 [^]	61.0 [^]	4
8	59	43 [^]	"	29	+0.5 [^]	78.2 [^]	140.0 [^]	

Jan. 17, 1906

$$\begin{array}{r} 8 \quad 59 \quad 59^{\wedge} \\ + 37^{\wedge} 9 \\ \hline 9 \quad 0 \quad 36^{\wedge} 9 \end{array}$$

$$\begin{array}{r} 9 \quad 0 \quad 50^{\wedge} \\ + 37^{\wedge} \\ \hline 9 \quad 1 \quad 27^{\wedge} \end{array}$$

$$\begin{array}{r} 9 \quad 2 \quad 7^{\wedge} \\ + 37^{\wedge} \\ \hline 9 \quad 2 \quad 44^{\wedge} \end{array}$$

$$\begin{array}{r} 9 \quad 3 \quad 9^{\wedge} \\ + 37^{\wedge} \\ \hline 9 \quad 3 \quad 46^{\wedge} \end{array}$$

$$\begin{array}{r} 9 \quad 4 \quad 22^{\wedge} \\ + 37^{\wedge} \\ \hline 9 \quad 4 \quad 59^{\wedge} \end{array}$$

$$\begin{array}{r} 9 \quad 7 \quad 4^{\wedge} 9 \\ + 37^{\wedge} \\ \hline 9 \quad 7 \quad 41^{\wedge} \end{array}$$

$$59 \quad 37$$

$$" \quad 53$$

$$0 \quad 5$$

$$" \quad 20$$

$$" \quad 30$$

$$" \quad 44$$

$$" \quad 54$$

$$1 \quad 12$$

$$" \quad 38$$

$$2 \quad 1$$

$$" \quad 19$$

$$" \quad 30$$

$$" \quad 44$$

$$" \quad 59$$

$$3 \quad 17$$

$$" \quad 37$$

$$" \quad 56$$

$$4 \quad 14$$

$$" \quad 30$$

$$" \quad 47$$

Limits of vis.

$$6 \quad 40$$

$$" \quad 59$$

$$7 \quad 11$$

$$" \quad 28$$

$$\begin{array}{r} 79.8^{\wedge} \quad 61.2 \\ 78.9^{\wedge} \quad 141.0 \\ \hline 158.7^{\wedge} \quad 62.5 \quad \checkmark \\ + 0.4^{\wedge} 79.4^{\wedge} \quad 141.4 \end{array}$$

$$\begin{array}{r} 80.4^{\wedge} \quad 61.1 \\ 79.5^{\wedge} \quad 141.5 \\ \hline 159.9^{\wedge} \quad 61.5 \quad 6 \\ + 0.4^{\wedge} 80.0^{\wedge} \quad 141.0 \end{array}$$

$$\begin{array}{r} 79.1^{\wedge} \quad 61.7 \\ 79.4^{\wedge} \quad 140.8 \\ \hline 158.5^{\wedge} \quad 60.8 \quad 7 \\ + 0.4^{\wedge} 79.2^{\wedge} \quad 140.2 \end{array}$$

$$\begin{array}{r} 79.0^{\wedge} \quad 62.0 \\ 81.6^{\wedge} \quad 141.0 \\ \hline 160.6^{\wedge} \quad 60.1 \quad 2 \\ + 0.4^{\wedge} 80.3^{\wedge} \quad 141.7 \end{array}$$

$$\begin{array}{r} 79.7^{\wedge} \quad 139.9 \\ 80.3^{\wedge} \quad 60.9 \quad 9 \\ \hline 160.0^{\wedge} \quad 141.2 \\ + 0.4^{\wedge} 80.0^{\wedge} \end{array}$$

$$\begin{array}{r} 24.9^{\wedge} \quad 87.0 \\ 27.3^{\wedge} \quad 111.9 \\ \hline 52.2^{\wedge} \quad 86.8 \\ + 3.2^{\wedge} 26.1^{\wedge} \quad 114.1 \end{array}$$

Jan. 17, 1906.

Seeing pretty good, Altitude rather high
Sat. reap. on ghost of Jup. Comp. Sat. was
also put on ghost of Jup. and they remained
so throughout. Limit of Vis. also taken
on ghost of Jup. Much care exercised
and eclipse considered good.

B 26 1182

9	17	22.7
9	18	22.5

B 394

9	18	0.0
9	19	0.0

From 4^h 35^m 0^s to 9^h 27^m 52^s add 37 sec.

Jan. 17, 1906

B 2 b 1182

B 394

11 25 24.5

11 26 0.0

11 26 24.5

11 27 0.0

Dis. Jup. III Phot. R. H. Obs. Bowie Res.
 Comp. with remaining Sat. (after eclipse) on fol.
 side = Sat. II.

As obs. theoretically, for constant.

12	8	58 [^]	12	8	27	80.7 [^] 149.1
		+38 [^]	"		45	78.4 [^] 229.8
12	9	36 [^]	"	9	12	159.1 [^] 150.6
			"		30	+0.4 [^] 79.6 [^] 229.0
			"		49	151.1
12	10	17 [^]	"	10	0	77.7 [^] 228.8
		+38 [^]	"		31	76.0 [^] 228.8
12	10	55 [^]	"		48	153.7 [^] 152.0
			"		48	+0.5 [^] 76.8 [^] 228.0
			"	11	20	66.4 [^] 155.1
12	11	43 [^]	"		37	67.0 [^] 221.5
		+38 [^]	"		49	133.4 [^] 156.2
12	12	21 [^]	"	12	7	+0.9 [^] 66.7 [^] 223.2
			"		26	60.0 [^] 158.8
12	12	47 [^]	"		43	57.8 [^] 218.8
		+38 [^]	"		54	117.8 [^] 161.0
12	13	25 [^]	"	13	6	+1.2 [^] 58.9 [^] 218.8

Jan. 17, 1906.

12	13	43 [^]	12	13	22	54.5 [^]	163.4 [^]
12	14	21 [^]	"	32	32	51.8 [^]	217.9 [^]
		+38 [^]	"	53	53	106.3 [^]	164.0 [^]
			14	5	5	+1.5 [^]	53.2 [^]
							215.8 [^]
12	14	56 [^]	"	18	18	+1.8 [^]	46.9 [^]
12	15	10 [^]	"	31	31	+1.9 [^]	46.2 [^]
12	15	21 [^]	"	42	42	+2.0 [^]	44.2 [^]
	15	35 [^]	"	56	56	+2.2 [^]	40.5 [^]
	15	46 [^]	15	7	7	+2.2 [^]	40.5 [^]
	16	4 [^]	"	25	25	+2.2 [^]	39.6 [^]
	16	25 [^]	"	46	46	+2.5 [^]	35.8 [^]
	16	42 [^]	16	3	3	+2.8 [^]	31.2 [^]
	17	1 [^]	"	22	22	+2.9 [^]	29.9 [^]
	17	17 [^]	"	38	38	+3.1 [^]	27.5 [^]
	17	33 [^]	"	54	54	+3.3 [^]	24.5 [^]
	17	49 [^]	17	10	10		203.80
	18	16	"	37	37		not seen later
			Limits of vis.				
12	18	39 [^]	18	14	14	21.3 [^]	179.7 [^]
		+39 [^]	"	26	26	22.0 [^]	201.0 [^]
12	19	18	"	49	49	43.3 [^]	179.5 [^]
			19	8	8	+3.6 [^]	21.6 [^]
							201.5 [^]

Sky so cloudy. Haze so thick (although

Jan. 17, 1906.

Jup. was easily visible) that nothing could be done with ~~late~~ phot. up to the time that the first setting was actually obtained. At ^{that} time ~~late~~ began to be faintly visible and measurements were immediately begun. It would seem from the settings that ~~variation~~ as well as from theoretical considerations, that variation began about the time that obs. began his measurements, so that no constant could be determined.

Observations made with great care and eclipse considered first class

B. & C. 1182

12	35	20.2
12	36	20.1

B. 394

12	36	0.0
12	37	0.0

∴ From 11^h 26^m 24^s to 11^h 42^m 26^s add 36 sec.
 11 42 26. " 11 52 22. " 37. "
 11 52 22. " 12 14 30. " 32. "
 12 14 30. " 12 30 32. " 39. "

Jan. 18, 1906 (Thursday)

Atburys Snap. Cass. Phot. T.K. Obs. Bowie Rec.
 6 19 +30.6 Full aperture used
 3 19
 3 00
 9 00

Index Led

264.8 ← *various*

291.2

26.4'

87.4

17.6'

105.0

44.0'

-3.56'

8

267.9

-3.51'

286.6

18.7'

83.0

27.2'

110.2

45.9'

-3.46'

Index R & B

174.7

201.0

26.3'

6A

357.9

17.7'

15.6

44.0'

-3.56'

178.6

-3.57'

195.1

16.5'

354.0

27.1'

21.1

43.6'

-3.58'

Mean -3.54'

7 33 18
 56 28
 7 28 14
 5 +22
 12 28 36

Jan. 18, 1906.

Index R4 B Same again 9.5' gap

7	45 38	174.5			
		198.0	23.5'		A
		359.1	17.9'		
		17.0	41.4'	-3.69'	

176.3		-3.60'
194.5	18.2'	
355.7	27.0'	
22.7	45.2'	-3.50'

Index L4 B

84.6			
112.3	27.7'		B
266.6	18.8'		
285.4	46.5'	-3.43'	

88.0		-3.37'
------	--	--------

7	57 45	107.7	19.7'	
		261.5	29.5'	
		291.0	49.2'	-3.31'

5	+22
---	-----

12	52 4
----	------

S.J.	4 ^h	17 ^m
H.A.	-2	6

Dec. +29.9

P.A. 101.3 Var-B

Sprocket -4.5 A

" -3.5 B

" -2.9 B

Var. ~~moderately~~ ^{much} brighter than
last night relatively to somewhat
bright star north of it in finder

Jan. 18, 1906.

Y. Camelopard Phot. T. H. Ok. Bonnie Rec.

7	25	+76.3
5	00	
2	25	
9	35	

144.1 ← b.s. dis

227.9

340.2

37.1

83.8

56.9

140.7 + 0.76

B

155.7

218.9

327.4

47.8

63.2

80.4

143.6 + 0.70

+0.73

248

54.4

140.4

245.3

306.9

86.0

61.6

147.6 + 0.62

A

66.5

130.3

234.8

319.7

63.8

84.9

148.7 + 0.60

+0.61

9 22.24

9 34.69

9 17.34

5 +22

14 17.56

Mean + 0.67

Jan. 18, 1906.

S. J. 5^h 37^m
 H. A. -1 50
 Dec. +75.8
 P. A. 167.0 deg
 Sprockets -1.5 A
 " -0.5 B
 " +0.1 B

Region thoroughly identified by chart

γ
 α 3 Persei Phot T. H. Obs Bowie Rec.
 3 32 +47.3
 5 52
 2 20

For measurements see fol. page.

Jan. 15, 1906.

Index ^d aboveI
Comp. Star dis.

10 15 35

255.0

297.8

70.4

126.0

55.6

92.4

+1.70

B

10 17 58

250.8

306.9

77.9

117.0

56.1

39.1

95.2

+1.74

+1.7K

Index Q & B

10 22 0

169.0

206.8

343.8

31.6

37.2

47.2

25.6

+2.03

A

10 24 38

164.0

210.4

350.1

23.1

46.0

33.0

79.0

+2.22

+2.12

10 78 131

10 19 63

5 +22

15 20 25

7229.6392

Mean +1.93

Jan. 18, 1906.

Index R4B

II

10 28 30

170.2
204.8 346'

345.5 431'

28.6 $\frac{431}{77.7}$

+2.26'

d

10 31.22

163.0 45.3'

208.3

350.9

21.6

 $\frac{30.7}{76.0}$

+2.32'

+2.29'

Index Lead

10 36 35

80.1

114.8

254.7

300.7

34.7'

 $\frac{46.0}{140.7}$

+2.17'

d

10 39 33

72.8

118.6

261.3

293.1

45.2'

 $\frac{31.2}{77.6}$

+2.27'

+2.22'

134 120

10 33 60

5 +22'

15 34 22

7229.6489

Mean +2.26'

142

Jan. 18, 1906

Index L & A

III

80.3

10 43 25

110.7 1.2

30.9

B

254.4

299.7

$$\frac{45.3}{76.2}$$

+ 2.31'

73.3

10 47 30

120.4

47.1

+ 2.24'

261.7

292.7

$$\frac{31.0}{72.1}$$

+ 2.25'

Index R & B

352.4

10 52 40

21.9

29.5

A

167.0

205.6

$$\frac{34.6}{62.1}$$

+ 2.57'

346.4

10 56 30

25.4

39.0

+ 2.53'

198 125

171.1

31.5

10 49 61

5 + 22

15 50 23

202.6

$$\frac{70.5}{70.5}$$

+ 2.49'

Mean + 2.40'

7229.6600

Jan. 18, 1906

Index R & B

$$\begin{array}{r}
 351.3 \\
 23.8 \quad 32.5' \\
 164.5 \\
 209.6 \quad \frac{45.1'}{77.6'} \quad +2.27'
 \end{array}
 \quad \text{J}$$

$$\begin{array}{r}
 344.3 \\
 28.5 \quad 44.2' \\
 169.2 \\
 203.4 \quad \frac{35.2'}{74.4'} \quad +2.24'
 \end{array}
 \quad +2.26'$$

Index L & A

$$\begin{array}{r}
 258.9 \\
 295.7 \quad 36.4' \\
 69.9 \\
 122.4 \quad \frac{52.5'}{29.3'} \quad +1.93'
 \end{array}
 \quad \text{B}$$

$$\begin{array}{r}
 249.6 \\
 304.7 \quad 55.1' \\
 \quad \quad +1.26'
 \end{array}$$

$$\begin{array}{r}
 23 \quad 165' \\
 11 \quad 5 \quad 86' \\
 5 \quad +22' \\
 16 \quad 6 \quad 48'
 \end{array}
 \quad \begin{array}{r}
 77.7 \\
 117.5 \quad \frac{39.4'}{94.9'} \quad +1.79'
 \end{array}$$

Mean +2.06'

7229.6714

Jan. 18, 1906

Index L & B

V

11 19 35

256.5

298.0

70.6

124.3

41.5'

$$\frac{53.7}{95.2}$$

+1.72'

B

11 21 48

246.3

309.5

76.8

117.7

63.2'

$$\frac{40.9}{104.1}$$

+1.56'

+1.67'

Index R & B

11 25 57

168.1

205.6

338.8

34.7

37.5'

$$\frac{55.9}{93.4}$$

+1.22'

A

11 27 48

157.4

214.8

347.0

28.8

57.2'

$$\frac{41.2}{99.2}$$

+1.62'

+1.75'

11 92 188

11 23 47

5 +22

16 24 9

7229.6834

Mean +1.71'

Jan 18, 1906

Index R & B

$$\begin{array}{r}
 166.0 \\
 207.5 \quad 41.5 \\
 337.7 \quad 60.2 \\
 38.5 \quad \underline{102.3} \quad +1.60
 \end{array}$$

VI

A

$$\begin{array}{r}
 158.6 \\
 215.1 \quad \sqrt{6.5} \quad +1.66 \\
 346.8 \quad 40.9 \\
 27.7 \quad \underline{97.4} \quad +1.72
 \end{array}$$

Index L & A

$$\begin{array}{r}
 74.6 \\
 119.9 \quad 45.3 \\
 244.2 \quad 65.9 \\
 310.1 \quad \underline{111.2} \quad +1.39
 \end{array}$$

B

$$\begin{array}{r}
 63.0 \\
 129.1 \quad 66.1 \quad +1.38 \\
 253.8 \quad 46.2 \\
 300.0 \quad \underline{112.3} \quad +1.36
 \end{array}$$

$$\begin{array}{r}
 11 \quad 41 \quad 32 \\
 \hline
 11 \quad 146 \quad 79 \\
 36 \quad 50 \\
 5 \quad +22 \\
 \hline
 16 \quad 37 \quad 12
 \end{array}$$

Mean +1.52

$$7229.6925$$

146

Jan 18, 1906.

Index L & A

11 46 0

72.6		
121.6	49.0.	
243.6	66.7.	
310.3	<u>215.7.</u>	+1.29.

VII

B

11 48 34

63.7	66.7.	
130.4		+1.31.
254.4	47.2.	
301.6	<u>113.9.</u>	+1.33.

Index R & B

11 52 ² 54

344.9	84.9.	
29.8		
153.6	65.2.	
218.8	<u>210.1.</u>	+1.42.

A

11 55 8

333.0	65.5.	+1.38.
38.5		
163.8	67.4.	
211.2	<u>112.9.</u>	+1.35.

mean +1.34.

201 66
11 50 32
5 +22
16 50 54

7229.7020

L.J. 8 4
H.A. +4 46
Dec +46.6
P.A. 180.0 VnB
Sprockets -2.5 B
-1.5 b

It's watch used for times.
Watch 22 secs. slow.

Jan. 19, 1906. (Friday)

Astbury's Snap. Vars. Photo. T X Ok Bowie Rec.

6 19 +30.6

9.5 bap

2 46

3 33

8 27

Index Led

260.5

292.9

85.0

108.9

← var dis.

32.4'

23.9'

56.3

-3.00'

264.4

287.9

79.4

113.4

23.5'

34.0'

57.5'

-2.96'

Index Rab

170.0

203.0

358.1

18.5

33.0'

20.4'

53.4'

-3.12'

174.8

197.2

349.3

23.0

22.4'

33.7'

56.1'

-3.01'

Mean -3.02'

6 58 52

104 96

6 52 48

5 +24

11 53 12

Jan. 19, 1906.

Index R & B Lammagan (but)
Full aperture used

7 13 12

170.2			
202.5	32.3		
356.9	<u>20.0</u>		
16.9	52.3	-3.17	A

176.0			-3.06
197.1	21.1		
349.4	<u>36.4</u>		
25.8	57.5	-2.96	

Index L & A

78.8			
114.9	36.1		
265.5	<u>22.1</u>		
287.6	58.2	-2.93	B

7	20	41
	33	53
7	16	56
5	+24	

85.0			
107.3	22.3		-2.92
257.7	<u>36.5</u>		
294.2	58.8	-2.91	

12 17 20

S.J. 32 .43^m
 H.A. -2 40
 Dec. +29.9
 P.A. 100.8 $\ln B$
 Sprocket -4.5 d
 " -3.5 B
 " -2.9 B

Mean -2.99

Jan. 19, 1906.

18 40 62 = 188.1904 = Name Braskie Var Phot. T. W. Alb. Bond Rec

18	40	+62.6
<u>27</u>	<u>50</u>	
9	10	

8 0 0 Var. seen in telescope with no phot. on but very faint. Region seq rather low, object glass down in the small shutters, sky hazy.

8 20 Region so low, sky so hazy, var. so faint, that it is impossible to see var. in tel with phot. on.

4th Type Star +24° 1686 Phot. T. W. Alb. Bond Rec

7	36	+24.7
<u>4</u>	<u>46</u>	
2	50	
9	10	

See note on fol. page.

Jan. 19, 1906

58,50

9 50 Haze and clouds so thick, no settings could be taken at present time

His watch used for times tonight
Watch 24 sec. slow

Jan. 22, 1906 (Monday)

W. Geminarum Phot. T. K. Obs. Error Rec.
 6 29 +16.5 9.5 Cap used
 3 36
 2 53
 9 7

7 30 0 Thick clouds coming up in the west and extending to the east. All cloudy in this region. Index Left

252.5

8 39 52

304.9 2.1

49.6

80.0

33.3

113.3

82.9

2.11

259.1

2.07

Clouds

295.6

36.5

71.0

49.1

120.1

85.6

2.03

9

Wind now blowing very fresh from the south heavy southern fog has already come in practically obliterating all the stars so close for anything further. The above two sets on var were taken as carefully as possible but the second set through more or less fog making obs. difficult. These two sets rejected as group could not be completed.

Jan. 24, 1906 (Wednesday)

Northbury's Snap. Bar. Phot. T. H. Oke. Bowie Res.
9.5 bar

6 19 +30.6
3 49
2 30
9 30

Index L & A

256.5 ← var. dis.

296.6 40.1'

83.4

26.7'

110.1

66.8'

-2.61'

263.5

-2.58'

289.5

26.0'

74.3

42.7'

117.0

68.7'

-2.55'

Index R & B

170.0

164.7

204.0

207.2

356.8

354.7

20.4

18.7

34.0'

23.6'

57.6'

-2.95'

175.1

-2.91'

199.23

24.2'

350.0

35.5'

25.5

59.7'

-2.87'

Mean -2.74'

7 42 7
72 37
7 36 18
5 +45
12 37 3

Jan. 24, 1906

S.J. 4 30

H.A. - 1 52

Dec. +29.9

P.A. 281.0 Ver B

Sprocket - 4.5 d

" - 3.5 B

" - 2.9 B

Y. Lancelotti	Phot. I & Obs	Bowie Rec.
7 25	+76.3	

4 45
<hr/>
2 40
9 20

Full aperture used

For measurements see fol. page

Jan. 24, 1906

Index L & A

326.9 ← b.s. dis.

46.7

155.8

216.6

79.8'

60.8'

140.6'

+0.76'

B

335.8

38.8

145.9

225.6

63.0'

79.7'

142.7'

+0.72'

+0.74'

Index R & B

234.7

317.6

65.7

128.1

82.9'

62.4'

145.3

+0.67'

A

245.0

307.7

55.5

138.6

62.7'

83.1'

145.8'

+0.66'

+0.66'

8 40 18

68 62'

8 34 31'

5 +45'

13 35 16

S.J. 52 18 m

L.A. - 2 10

Dev. +75.8

P.A. 166.5 Ver B

Sprocket - 1.5 A

" - 0.5 B

" 0.0 b

Mean +0.70'

Jan. 24, 1906.

R J Persei. Phot. I. H. Obs. Bowie Per.

$$\begin{array}{r} 3 \\ 5 \\ \hline 2 \end{array} \quad \begin{array}{r} 3 \\ 35 \\ \hline 32 \end{array} \quad +45.7$$

Index Above

I

259.8 ← b. S. dis

291.9

74.4

118.1

32.1^v43.7^v

$$\begin{array}{r} 43.7 \\ 75.8 \end{array} \quad +2.32$$

A

254.4

296.8

82.8

113.3

42.4^v30.5^v

$$\begin{array}{r} 42.4 \\ 30.5 \\ \hline 72.9 \end{array} \quad +2.41$$

+2.36

Index Below

170.2

202.6

346.7

27.4

32.4^v40.7^v

$$\begin{array}{r} 40.7 \\ 73.1 \end{array} \quad +2.41$$

B

167.0

208.8

352.0

22.9

41.8^v30.9^v

$$\begin{array}{r} 41.8 \\ 30.9 \\ \hline 72.7 \end{array} \quad +2.42$$

+2.42

Mean +2.39

9 27 2

9 30 37

9 33 55

9 36 47

126 141

9 31 65

5 +45

14 32 50

Jan. 24, 1906.

Index Below

II

9 39 54

171.4

202.8

345.2

27.5

31.4[✓]42.3[✓]73.7[✓]+2.39[✓]

B

164.6

+2.36[✓]

9 42 44

208.1

351.3

23.5

43.5[✓]32.2[✓]75.7[✓]+2.32[✓]

Index Above

9 46 53

79.0

114.9

251.3

302.5

35.9[✓]51.2[✓]87.1[✓]+1.99[✓]

A

72.5

+1.99[✓]

9 49 42

121.0

257.0

295.8

48.5[✓]38.8[✓]87.3[✓]+1.99[✓]

9 176 193

9 44 48

5 +45

14 45 33

Mean +2.10[✓]

Jan. 24, 1906.

Index Above

9	53	28	77.2			<u>III</u>	A
			116.9	7.2	40.0	✓	
			249.8		55.0	✓	
			304.8		95.0	✓	+1.72

9	57	38	71.0				+1.20
			124.6	5	3.5	✓	
			257.6		40.0	✓	
			297.6		93.5	✓	+1.22

Index Below

10	1	48	347.0				B
			25.6		38.6	✓	
			159.4		53.1	✓	
			212.5		91.7	✓	+1.27

10	5	8	339.3				+1.22
			33.6		54.3	✓	
			166.5		40.7	✓	
			207.5		95.0	✓	+1.72

38	116	122
9	59	30
5		+45
15	0	15

Mean +1.21

Jan. 24, 1906.

Index Below

IV

10 10 48

347.1

26.7

157.4

215.7

39.6[✓]58.3[✓]97.9[✓]+1.71[✓]

B

10 14 18

337.3

35.8

165.4

207.0

58.5[✓]41.6[✓]100.1[✓]+1.65[✓]+1.62[✓]

Index Above

10 18 11

254.2

300.1

64.7

128.9

45.9[✓]64.2[✓]110.1[✓]+1.42[✓]

A

10 22 36

244.5

310.3

72.0

119.7

65.8[✓]47.7[✓]113.5[✓]+1.34[✓]+1.32[✓]

10 64 113

10 16 28

5 +45

15 17 13

Mean +1.53[✓]

Jan. 24, 1906.

Index Above

	252.6			V
10 28 32	302.2	49.6'		
	63.2	69.3'		A
	132.5	118.9'	+1.22'	

	240.6		+1.20'
10 32 2	311.1	70.5'	
	71.6	50.6'	
	122.2	121.1'	+1.17'

Index Below

	163.6			
10 37 18	210.8	47.2'		
	334.2	64.3'		
	38.5	111.5'	+1.30'	

	154.2		+1.32'
10 41 22	221.2	67.0'	
	341.2	49.3'	
10 34 48	30.5	116.3'	+1.27'

5 +458 J 7^h15 35 33 L.A. +3 14^m 56

Slow +46.7

P.A. 180.05 ver B

Sprocket -2.58

" -1.56

Mean +1.26'

K's watch used for times
in previous obs.

Watch 45 sec. slow

Jan. 24, 1906.

B. & b. 1182

10	59	2.6
11	0	2.6

B. 394

10	59	0.0
11	00	0.0

Reap. Jup. II Phot. R. H. Obs. Bowie Rec
 comp. with Sat. on pres. side = Sat. I

11	29	25^	11	29	25	Seen
	29	56^			56	+1.0^ 63.9^ 157.3
	30	15^		30	15	+0.9^ 66.2^ 221.2
	30	32^		"	32	+0.7^ 72.0^ 155.0
	30	40^		"	40	+0.5^ 76.5^ 227.0
	30	51^		"	51	+0.4^ 78.5^ 150.5
	31	2^		31	2	+0.3^ 81.0^ 229.0
	31	14^			14	+0.3^ 81.8^ 148.0
	31	30^			30	+0.2^ 83.6^ 229.8
	31	42^			42	+0.2^ 85.1^ 146.2
	31	52^			52	+0.2^ 85.8^ 231.3
	32	10^		32	10	0.0^ 89.5^ 145.5
	32	24^			24	0.0^ 90.5^ 235.0
	32	42^			42	-0.1^ 93.5^ 144.5
	32	55^			55	238.0



Jan. 24, 1906

11	33	46 [^]	11	33	46 [^]	90.8 [^]	144.2	
11	33	46 [^]	"	42	42	89.9 [^]	235.0	
			"	59	59	180.7 [^]	145.0	1
			34	14	14	0.0 [^] 90.4 [^]	234.9	
			"	38	38	88.5 [^]	146.5	
11	34	59 [^]	"	50	50	88.9 [^]	235.0	
		+1 [^]	35	8	8	177.4 [^]	145.6	2
11	35	0 [^]	"	20	20	0.0 [^] 88.7 [^]	234.5	
			"	35	35	88.0 [^]	146.0	
11	36	22 [^]	36	12	12	88.0 [^]	234.0	
		+1 [^]	"	44	44	176.0 [^]	145.5	3
11	36	23 [^]	"	57	57	+0.1 [^] 88.0 [^]	233.5	
			37	16	16	88.9 [^]	145.1	
11	37	48 [^]	"	34	34	92.0 [^]	234.0	
		+1 [^]	"	59	59	180.9 [^]	144.5	4
11	37	49 [^]	38	24	24	0.0 [^] 90.4 [^]	236.5	
			"	46	46	90.5 [^]	145.5	
11	39	12 [^]	39	7	7	90.2 [^]	236.0	
		+1 [^]	"	23	23	180.7 [^]	144.8	✓
11	39	13 [^]	"	34	34	0.0 [^] 90.4 [^]	235.0	
			"	52	52	88.9 [^]	145.5	
11	40	25 [^]	40	21	21	88.9 [^]	234.4	
		+1 [^]	"	36	36	177.8 [^]	145.4	6
11	40	26 [^]	"	50	50	0.0 [^] 88.9 [^]	234.3	
			41	6	6	89.8 [^]	145.7	
11	41	34 [^]	"	20	20	89.4 [^]	235.5	
		+1 [^]				179.2 [^]		
11	41	35 [^]				0.0 [^] 89.6 [^]		

Jan. 24, 1906

11	41	47	146.4	
	42	4	235.8	7
	"	21	90.4^	144.8
11	43	44	88.5^	235.2
	+1	37	178.9^	
11	43	44	0.0^	89.4^
	45	14		234.5
	Limit of Visibility.			
	45	59	57.0^	162.0
11	46	33	54.2^	219.0
	+2	40	111.2^	
11	46	35	+1.4^	55.6^
	47	6		216.5

Seeing pretty bad, barometer rising somewhat rapidly after the clearing off of the storm. Temp. also falling and considerable wind. Sat. reap. close to edge of ghost of Jup. gradually ~~also~~ encroaching also on ghost, in fact, it may better be said that it practically reap. on ghost of Jup. This con. comp. Sat. had to be also placed on ghost of Jup. These circumstances combined with the poor seeing caused delay in first settings as well as during the progress of the eclipse. Settings during variations of light as well as afterwards had to be made slowly and with much care. Eclipse however considered pretty good.

Jan. 24, 1906

B. 1182

12 1 57.1

12 2 57.0

B. 394

12 2 0.0

12 3 0.0

1. 11^h 23^m 45^s to 11^h 34^m 56^s add
 " 11 34 56. " 11 46 12. " 1. "
 " 11 46 12 " 11 57 27. " 2. "

Jan. 25, 1906 (Wednesday)

E Anriage

5	6
1	56
<hr/>	
3	10
8	50

Phot. J.H. Obs. Bowie Rec.
+ 45.9 7" cap

Index Red

268.3	88.2	var. dis	id
283.6	100.48		
83.4	266.0		
105.1	287.9		

5 39 8

82.1

105.0

268.9

282.6

22.9

13.7

36.6

-3.95

-3.96

Index Red

359.4

11.5

173.9

195.1

12.1

21.2

33.3

-4.17

354.1

15.76

178.6

191.0

21.5

12.4

33.9

-4.13

Mean -4.05

5	49	46
<hr/>		
5	84	54
5	44	27
5		+40
<hr/>		
10	45	7

Jan 25. 1906

S 5 2^h 38^m
 H. A - 2 17
 Dec + 43.3
 P. A 358.0 deg
 Sprocket - 8.5 A
 " - 7.5 B
 " - 7.0 b

V Vulpeculae. Photo I. K. Obs. Bowie rec.
 20 31 + 26.0
 26 46

 6 15

9.5" cap used

Measurements on fol. page

Jan, 25, 1906.

Index Led

6 26 0

138.6 ← b.S. dis

230.72

328.3

39.5

91.6

71.2

162.8 + 0.33

B

151.9

222.3

319.0

52.2

70.4

93.2

163.6 + 0.31

+ 0.32

Index RLB

47.3

141.3

238.2

312.3

94.0

74.1

168.1 + 0.22

A

58.5

130.0 2.4

227.0

322.0

73.9

95.0

168.9 + 0.21

+ 0.22

mean + 0.27

6 39 14

6 5 14

6 32 37

5 40

11 33 17

8.5 3h 21m

H.A. + 6 48

Dec. + 26.5

P.A. 189.0 var B

Sprockets - 0.5 B

" + 0.5 L

Jan. 25, 1906.

Arthur's Surf. Var. Photo I. H. Obs. Bowie Rec.

$$\begin{array}{r}
 6 \quad 19 \\
 3 \quad 39 \\
 \hline
 -2 \quad 40 \\
 +9 \quad 20
 \end{array}$$

+30.6

9.5 bap

7 16 45

Index L & A

260.55

← var dis

289.7

29.2'

86.1

18.0'

104.1

47.2'

-3.40'

B

266.0

-3.42'

284.0

18.0'

80.5

28.5'

109.0

46.5'

-3.43'

Index Q & B

170.9

199.1

357.3

14.5

28.2'

17.2'

45.4'

-3.49'

A

176.5

-3.53'

193.6

352.1

18.8

17.1'

26.7'

43.8'

-3.57'

Mean -3.48'

7 28 18

7 44 66

7 22 33

5 +40

12 23 13

Jan. 25, 1906.

S.J. 4^h 13^m
 H.A. - 2 10
 Dec. + 29.9
 P.A. 281.1 ver @
 Sprockets - 4.5 A
 " - 3.5 B
 " - 2.9 C

79.1905, Mm. Leask's Var. Phot. 3. H. Obs. Error Rec.

4	33	+81.0
4	27	
0	6	
11	54	

Measurements on fol. page

Jan. 25 1906

Index Left

319.1 ← b. & dis

54.6 95.5'

145.4 76.5'

221.9 172.0' + 0.15'

B

329.0

+ 0.15'

40.6

71.6'

134.7 100.5'

235.2 172.1' + 0.15'

Index Right

220.6

324.6 104.0'

55.9 79.4'

135.3 183.4' - 0.06'

176.6'

236.2

313.2 2.9 76.7' 0.00'

44.7 100.9'

145.6 177.6' + 0.05'

Firearm + 0.08'

8 19 38

8 25 38

8 12 49

5 + 40

13 13 29

23 5 8

b. A + 0 20

Dec + 79.6

P. A 188.0 & on B

Sprockets - 1.5 A

" - 0.5 B

" 0.0 b

Jan. 25, 1906

Q J Persei. Phot. J. H. Obs. Bowie Rec.

$$\begin{array}{r}
 3 \\
 5 \\
 \hline
 2
 \end{array}
 \begin{array}{r}
 3 \\
 43 \\
 \hline
 40
 \end{array}
 +45.7$$

Index Above

245.8 ← b.s. dis

305.43

59.6

129.9

59.5

70.3

129.8

+0.98

A

235.0

312.8

67.4

123.6

77.8

56.2

134.0

+0.94

+0.94

Index Below

158.0

212.7

329.6

41.0

54.7

71.4

126.1

+1.06

B

151.0

220.4

338.0

32.3

69.4

54.3

123.7

+1.11

+1.08

$$\begin{array}{r}
 9 \quad 37 \quad 8 \\
 \hline
 60 \quad 43 \\
 9 \quad 30 \quad 22 \\
 5 \quad +40 \\
 \hline
 14 \quad 31 \quad 2
 \end{array}$$

Mean + 1.01

Jan. 25, 1906.

S.J. 6^{hr} 22^m

H.A. + 3 5

Dec. + 46.6

P.A. 179.0 Ver B

Sprocket - 2.5 B

" - 1.5 b

It's watch used for times tonight
 Watch 40 sec. slow

Jan. 26, 1906. (Friday)

Z Draconis Phot. I & K. Obs. Cowie Rec.

11	46	+73.0
3	46	
<hr/> -8	00	
+4	00	Index

Abandoned for present too faint and
images too blurry for this state of sky

Astbury's Snap Var. Phot I & K Obs. Cowie Rec

6	19	+30.6
---	----	-------

4	19
---	----

2	0
---	---

10	0
----	---

9.5 Grafs used

Measurements on fol. page

Jan. 26, 1906.

Index L & A

7 51 38
 78.3 ← var. dis.
 110.6 32.3'
 264.4 22.2'
 286.6 54.5' -3.08'

B

84.1 -3.10'
 105.2 21.1'
 258.8 32.6'
 291.4 53.7' -3.11'

Index Q & B

351.1
 22.9 31.8'
 173.8 19.2'
 193.0 51.0' -3.23'

A

356.4 -3.26'

8 1 26
 15 52 64
 7 56 32
 5 +32
 169.1 20.2'
 199.4 29.2'
 8.3 49.4' -3.30'

Mean -3.18'

12 57 4 S.J. 4^a 53^m

H.A. -1 30

Dec. +29.9

P.A. 282.2 2^h 23

Sprocket -4.5 d

" -3.5 @

" -3.0 b

Jan. 26, 1906

Z Draconis

Phot. I K. Obs. Bowie Rec

11	46
5	00
6	46
5	14

+ 73.0

Index Rect

I

262.1 ← b.s. dis

290.7

28.6'

76.0

37.6'

113.6

66.2'

+ 2.64'

255.5

+ 2.55'

296.3

40.8'

79.0

30.6'

109.6

71.4'

+ 2.46'

Index L & B

170.3

199.7

29.4'

345.7

39.1'

24.8

68.5'

+ 2.56'

165.5

+ 2.56'

204.2 3.6

38.1'

349.6

30.4'

20.0

68.5'

+ 2.56'

Mean + 2.56'

8 32 36

8 36 2

8 40 6

8	43	37
8	151	81
5	37	65
		+32
13	38	37

Jan. 26, 1906.

Index L & B

II

8 49 37

348.6

20.6

164.6

206.4

32.0'

41.8'

73.8'

+ 2.38'

Q

8 53 10

343.5

25.9

168.2

200.8

42.4'

32.6'

75.0'

+ 2.35'

+ 2.36'

Index R & A

8 57 55

257.7

~~293.9~~ 4.3

71.1

~~118.7~~ 2

36.6'

47.1'

83.7'

+ 2.09'

Q

250.7

+ 2.03'

301.2

75.4

112.9

50.5'

37.5'

88.0'

+ 1.97'

Mean + 2.20'

9	2	2
33	161	104
8	55	41
5		+ 32
13	56	13

Jan. 26, 1906

III

Index A & A

256.8

296.4

69.0

122.3

39.6'

53.3'

92.9'

+ 1.84'

A

248.9

302.5

75.6

114.5

53.6'

38.9'

92.5'

+ 1.85'

+ 1.84'

Index L & B

166.8

202.9

340.0

29.1

36.1'

49.1'

85.2'

+ 2.05'

B

160.5

209.6

346.1

24.5

49.1'

38.4'

87.5'

+ 1.98'

2.02'

Mean + 1.93'

9 7 5

9 10 2

9 15 24

9 18 36

9 50 67

9 12 47

5 + 32

14 13 19

Jan. 26, 1906.

Index L & B

165.5

IV

9 25 40

205.4

340.0

32.9

39.9'

52.9'

92.8'

+ 1.84'

B

158.4

+ 1.85'

9 29 4

211.3

346.3

25.4

52.9'

39.1'

92.0'

+ 1.86'

Index R & A

74.6

9 33 52

115.5

244.8

305.9

40.9'

61.1'

102.0'

+ 1.61'

A

66.7

+ 1.62

9 36 47

124.0

253.9

297.3

57.3'

43.4'

100.7'

+ 1.64'

9 123 143

9 30 81

5 32

14 31 53

Mean + 1.74'

Jan. 26, 1906.

Index Rect

V

9 42 0

72.0

116.6

245.0

306.8

44.6'

61.8'

106.4'

+1.50'

A

9 44 58

64.3

123.4

253.7

297.2

59.1'

43.5'

102.6'

+1.59'

L+B

9 49 30

344.0

~~259~~ 6.4

155.0

213.8

42.4'

58.8'

101.2'

+1.63'

B

9 53 26

334.6

33.78

163.0

207.8

59.2'

44.8'

104.0'

+1.56'

+1.60'

9	188	114
9	47	28
5		+32

14	48	0
----	----	---

Mean +1.57'

Jan. 26, 1906

Index L & B

9 58 46

343.4

26.9

154.6

215.0

43.5'

60.4'

103.9' + 1.56'

VI

Ⓟ

10 2 30

334.7

35.0

162.7

207.0

60.3'

44.3'

104.6' + 1.54'

+ 1.55'

Index R & A

10 9 18

300.2298.6

251.4

61.4

127.3

48.8'

65.9'

114.7' + 1.31'

A

10 13 12

39 82 106'

9 65 56'

5 + 32'

15 6 28'

244.2

308.0

70.0

119.0

63.8'

49.0'

112.8' + 1.35'

+ 1.33

Mean + 1.44'

Jan 26, 1906

Index Red

VII

10 28 44

249.0

302.3

64.0

126.5

$$\begin{array}{r} 53.3' \\ 62.5' \\ \hline 115.8' \end{array}$$

+ 1.29'

A

10 32 15

241.0

309.1

71.5

119.6

$$\begin{array}{r} 68.1' \\ 48.1' \\ \hline 116.2' \end{array}$$

+ 1.28'

+ 1.28'

Index L&B

10 37 0

162.3

210.7

333.4

36.0

$$\begin{array}{r} 48.4' \\ 62.6' \\ \hline 111.0' \end{array}$$

+ 1.39'

B

10 40 3

155.1

~~218.0~~ 7.8

340.1

28.2

$$\begin{array}{r} 62.7' \\ 48.1' \\ \hline 110.8' \end{array}$$

+ 1.40'

+ 1.40'

10 137 62

10 34 30

5 32

15 35 2

Mean + 1.34'

Jan. 26, 1906.

Index L & B

10	45	8	162.4	46.3'	+ 1.42'	VIII B
			208.7	63.8'		
			332.6	110.1'		
			36.4			

10	48	16	153.5		+ 1.38'
			217.85	64.0'	
			340.0	48.9'	
			28.9	112.9'	+ 1.35'

R & A

10	52	4	70.9		+ 1.30'	A
			118.7	47.8'		
			241.4	67.3'		
			308.7	115.1'		

10	55	0	60.6		+ 1.33'
			124.45	63.9'	
			252.0	48.7'	
			300.57	112.6'	+ 1.36'

10	200	28'
10	50	7'
5		+ 32'

15	50	39'
----	----	-----

23 7^m 36^m

K.A. - 4 3

Disc + 72.0

P.A. 351.6 Blue B

Sparck + 0.5 B

" + 1.5 B

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

Jan. 27, 1906

Index L & B

7	29	18	46.8	98.0'	II	
			144.8	71.9'		
			238.8	169.9'	-0.19'	B
			310.7			

7	31	46	56.8	76.2'	-0.19'	
			132.0	94.0'		
			227.7	170.2'	-0.19'	
			321.7			

Index R & A

7	35	8	321.4	88.8'		
			50.2	65.4'		
			151.6	154.2'	-0.49'	A
			217.0			

7	38	4	331.3	68.7'	-0.43'	
			40.0	91.9'		
			138.8	160.6'	-0.37'	
			230.3			

7	33	34				
5		+23				
12	33	57				

Mean -0.31'

Jan. 27, 1906.

Index Ref

III

7 41 9

317.4

51.40

151.0

218.8

93.6

67.8

161.4

-0.35

(A)

330.6

40.2

137.8

230.6

69.6

92.8

162.4

-0.33

-0.34

7 44 37

Index Lab

222.5

325.9

54.2

135.6

102.4

81.4

184.8

175.2

+0.09

(B)

232.0

315.1

41.0

148.8

83.1

107.8

190.9

169.1

+0.20

+0.14

7 51 2

184 56

7 46 14

5 +23

12 46 37

Mean -0.10

Jan. 27, 1906

Index L & B

IV

7 54 34

221.1

327.0

105.9'

52.0

87.0'

139.0

192.9'

167.1'

+ 0.24'

B

232.4

319.0

86.6'

+ 0.28'

39.6

110.8'

150.4

197.4'

162.6'

+ 0.33'

Index Red

8 2 50

131.4

236.8

105.4'

326.2

79.1'

45.3

184.5'

175.5' + 0.08'

A

143.0

225.6

82.6'

+ 0.12'

312.3

106.4'

59.2 8.7

189.0'

171.0' + 0.17'

Mean + 0.20'

8 5 48

30 118 190'

7 59 78'

5 + 23'

13 0 41'

Jan. 27, 1906.

Index R & A

V

8 10 0

120.6

239.4

325.0

46.6

108.8'

81.6'

190.4'

169.6'

+ 0.20'

A

141.0

227.2

309.0

60.4

86.2'

111.4'

197.6'

162.4'

+ 0.33'

+ 0.26'

Index L & B

34.8

154.8

227.2

323.7

120.0'

96.5'

216.5'

143.5'

+ 0.70'

B

45.2

144.9

215.1

334.0

99.7'

118.9'

218.6'

141.4'

+ 0.72'

+ 0.75'

8 20 10

59 66'

8 14 62'

5 + 32'

13 15 34'

S.J. 5h

14m

B.A. + 4

18

Dec. + 82.0

P.A. 195.0 Wnd

Sprocket - 1.5 B

" - 0.5 B

Mean + 0.49'

Jan. 27, 1906

Y. Lancelotti Phot. J. H. Obs. Bowie Rec.

$$\begin{array}{r}
 7 \quad 25 \quad +76.3 \\
 \hline
 5 \quad 45 \\
 -1 \quad 40 \\
 +10 \quad 20
 \end{array}$$

Index L & A

B

I

3429 ← b. S. dis.

29.0

45.1'

166.5

36.1'

202.6

21.2' + 2.16'

347.5

36.9'

+ 2.12'

24.4

160.6

47.4'

208.0

24.3' + 2.07'

Index R & B

248.2

51.4'

~~30299.6~~

78.0

36.4'

114.4

27.2' + 1.97'

255.0

32.2'

+ 1.96'

293.8

249.5 ~~302.3~~

49.6'

299.1

22.4' + 1.96'

Mean + 2.04'

9 11 6

9 20 13

9 31 19'

9 15 40'

5 +32'

14 16 12

Jan. 27, 1906

Index R & B

9	25	0	71.6		II	
			121.9	50.3		
			255.7	<u>39.1</u>		
			294.8	89.4	+1.93	(A)

9	31	42	77.2	7.0		
	<u>23</u>	<u>48</u>	115.5	<u>6.3</u>	39.2	+1.90
			248.5	51.5		
			300.0	<u>91.3</u>	+1.88	

Index L & B

9	35	22	342.0	42.0		
			30.0			
			164.0	<u>32.0</u>		
			202.0	26.0	+2.02	(B)

9	38	24	345.4	32.9		+1.94
			24.3			
9	129	88	157.6	<u>52.4</u>		
5	32	37	210.4	<u>94.7</u>	+1.87	
		+32				
14	33	9				

Mean +1.92

Jan. 27, 1906

Lack

9 41 36

$$\begin{array}{r}
 339.3 \\
 30.8 \ 8 \\
 164.2 \\
 \hline
 204.3
 \end{array}
 \begin{array}{r}
 \sqrt{1.5} \\
 40.1 \\
 \hline
 91.6
 \end{array}
 +1.27$$

III

B

9 45 57

$$\begin{array}{r}
 345.3 \\
 23.5 \\
 155.5 \\
 \hline
 213.1
 \end{array}
 \begin{array}{r}
 34.2 \\
 \sqrt{7.6} \\
 95.2
 \end{array}
 +1.22$$

R & B

9 49 46

$$\begin{array}{r}
 244.0 \\
 301.7 \\
 74.0 \\
 \hline
 116.2
 \end{array}
 \begin{array}{r}
 \sqrt{7.7} \\
 42.2 \\
 99.9
 \end{array}
 +1.66$$

A

9 53 8

$$\begin{array}{r}
 254.9 \\
 296.4 \\
 65.6 \\
 \hline
 126.7
 \end{array}
 \begin{array}{r}
 41.5 \\
 61.1 \\
 102.6
 \end{array}
 +1.62$$

$$\begin{array}{r}
 188 \ 147 \\
 9 \ 47 \ 37 \\
 5 \quad \quad +32 \\
 \hline
 14 \ 48 \ 9
 \end{array}$$

Mean +1.72

Jan 27. 1906.

Index R & B

243.0 62.0

205.0

72.9 44.2

117.7 106.2

+1.49

IV

A

250.9 46.6

297.5

63.1 64.2

127.3 110.2

+1.40

+1.44

Index L & A

152.2 64.3

216.5

341.0 45.2

26.8 110.1

+1.42

B

162.1 44.9

207.0

332.0 62.0

34.0 106.9

+1.49

+1.46

10 8 2

39 66 17

9 61 34

5 +23

15 1 57

S.J. 6 54

B. J. - 0 35

Dec. +75.8

P. A. 346.0

Sprocket -1.5 A

" -0.5 B

" 0.0 B

Mean +1.45

It's watch used for time

Watch 23 sec. slow

Sky throughout evening more or less foggy, seeing somewhat poor

Jan. 29, 1906. (Monday)

St. Geminorum Phot. J. H. Obs. Bowie Res.

6 29 +16.5 9.5 bap

4 29
2 0
10 0

Index Left

73.0 var. dis

116.0 43.0
255.9 36.3
292.2 79.3 -2.22

B

77.9

-2.12

112.3

34.4

249.1

51.8

300.9

86.2 -2.02

Index Right

340.1

27.0

46.9

170.2

30.0

200.2

76.9 -2.29

A

348.7

-2.31

18.8

30.1

162.0

45.3

207.3

75.4 -2.33

Mean -2.22

7 53 36

8 5 14

15 58 50

7 59 25

5 +7

12 59 32

Jan. 29, 1906.

S.W. 5 h 7 m

H.A. - 1 25

Dec. +14.6

P.A. 340.0 Var B

Sprockets - 4.5 A

" - 3.5 B

" - 3.0 C

79.1905 Anne. Beraskie's Var Phot. J & Ok. Bowie Re

4	34	+81.0
5	14	
<hr/>	<hr/>	
+0	40	

For measurements see fol. page

Jan. 29, 1906.

Index L & B

321.0 ← b. S. dis

I

51.4

90.4'

146.3

76.7'

223.0

167.1 + 0.24'

Q

329.0

+ 0.24

40.1

71.1'

136.2

95.4'

231.6

166.5 + 0.25'

Index R & B

226.3

322.7

96.4'

57.4

76.6'

134.0

173.0 + 0.13'

A

234.0

+ 0.11'

313.0

79.0'

46.7

96.3'

143.0

175.3 + 0.09'

mean + 0.18'

8 53 44

8 92 60

8 46 30

5 + 7

13 46 37

Jan. 29, 1906.

Index Q & A

$$\begin{array}{r}
 9 \quad 23 \quad 25 \\
 47.2 \\
 145.6 \quad 1.0 \quad 938' \\
 234.8 \quad 77.4' \\
 312.2 \quad 171.2' + 0.17
 \end{array}
 \quad \begin{array}{c}
 \text{II} \\
 \text{A}
 \end{array}$$

$$\begin{array}{r}
 57.6 \\
 134.1 \\
 222.1 \\
 323.39
 \end{array}
 \quad \begin{array}{r}
 76.5' \\
 101.8' \\
 178.3' + 0.03
 \end{array}
 \quad + 0.10'$$

Index L & B

$$\begin{array}{r}
 326.0 \\
 40.0 \\
 137.0 \\
 232.5
 \end{array}
 \quad \begin{array}{r}
 74.0' \\
 95.5' \\
 169.5' + 0.20
 \end{array}
 \quad \text{B}$$

$$316.4 \quad + 0.18'$$

$$\begin{array}{r}
 9 \quad 39 \quad 2 \\
 9 \quad 62 \quad 27 \\
 9 \quad 31 \quad 14 \\
 5 \quad \quad +7 \\
 14 \quad 31 \quad 21
 \end{array}
 \quad \begin{array}{r}
 50.3 \\
 147.7 \\
 220.8 \quad 4.7 \\
 170.9' + 0.17
 \end{array}
 \quad \begin{array}{c}
 93.9' \\
 77.0' \\
 \text{mean} + 0.14'
 \end{array}$$

Jan. 29, 1906

L+B

10 0 0

326.5

4344.0

138.5

221.4

77.5'

92.9'

170.4' + 0.18'

III

B

317.8

50.7

146.8

222.6

92.9'

75.8'

168.7' + 0.21'

+0.20'

May 2nd

233.4

314.1

46.8

141.0

80.7'

(94.2')

174.9' + 0.09'

A

225.4

324.0

55.6

139.8
~~140.0~~ 135.4

98.6'

84.2'

182.8'
177.2' + 0.05'

+0.02'

10 13 0

13 0'

10 6 30'

5 +7

15 6 37

S.J. 72 15"

P.A. +2 24

Dec +80.9

P.A. 8.0 km B

Sprockets -1.5 A

" -0.5 B

0.0 B

Mean +0.11'

Jan. 29, 1906

4th type stars +14° 1283 (6.5) Photo 3 K. Ok. Bonn Rec
6 12 +14.7 9.5 baf

$$\begin{array}{r}
 6 \\
 7 \\
 \hline
 +1
 \end{array}
 \begin{array}{r}
 12 \\
 27 \\
 \hline
 15
 \end{array}$$

Index Left

143.5 ← 4th type stars

224.2

80.7'

332.0

66.5'

38.5

147.2' - 0.63'

149.6

- 0.58'

216.5

66.9'

323.3

85.7'

49.0

152.6' - 0.52'

Index Right

61.8

130.0

68.2'

232.3

86.3'

318.6

154.5' - 0.49'

49.4

- 0.40'

148.2

98.8'

241.0

64.6'

305.6

163.4' - 0.32'

Mean - 0.49'

10 53 4

11	1	34
21	54	38
10	57	19
5		+7
15	57	26

Jan. 29, 1906.

S.I. 7 58

H.A. +1 36

Dec +15.1

P.A. 204.5 in B

Sprockets -5.5 B

" -4.5 b

His watch used for time's tonight
 Watch 7 sec slow

Jan. 30, 1906 (Tuesday)

Geminorum

Phot. 3 H. Obs. Bowie Rec.

6 29
4 9

- 2 20
+ 9 40

+16.5

9.5 Gap

Index Rxd

161.9

var. dis

A

206.4

44.5'

349.7

29.7

19.4

74.2'

-2.37'

168.7

-2.36'

200.0 + 99.9

31.3'

342.9

43.4'

26.3

74.7'

-2.36'

Index L & B

69.3

B

120.3

51.0'

256.7

34.6'

291.3

85.6'

-2.03'

78.3

-2.06'

111.5

33.2'

249.6

50.4'

300.0

83.6'

-2.09'

Mean -2.21'

7 42 24

7 72 76
7 36 38
5 0

12 36 38

Jan. 30, 1906

S. J. 4th 40 m

H. A. -1 50

Dec. +14.7

P. A. 160.0 Ser B

Sprockets - 4.5 A

" - 3.5 B

" - 3.0 b

Z Persei Phot. J. H. Obs. Bowie Rec.

2	33	+42.1
5	3	
2	30	

For measurements see fol. page

Jan. 30, 1906.

Index Lech

8	27	22	71.3	← comp. star dis.	I
			114.8	43.5	
			243.6	60.4	
			304.0	103.9	+1.56

			64.0		+1.58
8	30	2	123.0	59.0	
			252.8	42.8	
			295.6	101.8	+1.61

Index R 48

8	34	28	346.4		
			25.2	38.8	
			157.2	54.8	
			212.0	93.6	+1.82

8	37	30	335.9		+1.76
			34.1	58.2	
			164.5	39.6	
8	32	20	204.1	97.8	+1.71
5		0			
13	32	20			

Mean +1.67

Jan. 30, 1906.

Index R & B

II

8 40 53

344.6

25.6

155.7

212.6

41.0

56.9

97.9

+1.71

A

332.8

+1.61

8 43 10

351.7

163.8

206.8

62.9

43.0

105.9

+1.51

Index L & A

8 49 0

251.1

297.3

59.5

127.7

46.2

68.2

114.4

+1.32

B

241.3

+1.37

8 52 57

306.0

71.3

116.7

64.7

45.4

110.1

+1.42

8 46 30

5 0

13 46 30

Mean +1.49

Jan. 30, 1906.

Index L 2A

III

8 52 52

251.6

296.8

59.6

127.6

45.2

68.0

113.2

+1.34

C

238.6

+1.28

9 1 21

309.9

70.0

118.0

71.3

48.0

119.3

+1.21

Index L 2B

163.0

9 5 8

206.7 7.2

332.2

35.3

44.2

63.1

107.3

+1.48

A

150.7

+1.44

9 7 30

35 65 111

8 61 43

5 0

14 1 43

215.9

341.9

26.9

65.2

45.0

110.2

+1.41

Mean +1.36

Jan. 30, 1906.

Index Ref

IV

9 15 53

161.8

208.1

330.7

38.0

$$\begin{array}{r} 46.3 \\ 67.3 \\ \hline 113.6 \end{array}$$

+1.34

A

9 19 35

151.0

217.0

340.6

26.9

$$\begin{array}{r} 66.0 \\ 46.3 \\ \hline 112.3 \end{array}$$

+1.35

+1.36

Index Ref

9 23 23

69.2

118.3

237.7

309.2

$$\begin{array}{r} 49.1 \\ 71.5 \\ \hline 120.6 \end{array}$$

+1.18

B

9 26 23

58.6

130.0

249.3

299.2

71.4

49.9

$$\begin{array}{r} 71.4 \\ 49.9 \\ \hline 121.3 \end{array}$$

+1.17

+1.16

Mean +1.26

9 20 78

5 0

14 21 18

S.J. 6^h 33^m

H.A. 4 0

Dec. +42.1

P.A. 15.0 Ver B

Sprockets. - 2.5 B

" - 1.5 b

Jan. 30, 1906.

4th type star +59° 2810 Phot. 3 H. Obs. Lowie Per
9.5 gap.

$$\begin{array}{r} 0 \quad 1 \\ 6 \quad 51 \\ \hline 6 \quad 50 \end{array}$$

Index L & B

10 29 40

$$\begin{array}{r} 47.0 \leftarrow 4 \text{th. type dis.} \\ 143.0 \quad 42.4 \quad 95.4' \\ 237.6 \quad 71.7' \\ \hline 309.3 \quad 167.1' \quad -0.24' \end{array}$$

B

$$\begin{array}{r} 56.6 \quad -0.24' \\ 131.3 \quad 74.7' \\ 228.3 \quad 92.1' \\ \hline 320.4 \quad 166.8' \quad -0.25' \end{array}$$

Index R & A

$$\begin{array}{r} 319.6 \\ 49.3 \quad 89.7' \\ 150.8 \quad 65.6' \\ \hline 216.4 \quad 155.3' \quad -0.47' \end{array}$$

A

$$330.1 \quad -0.42'$$

$$\begin{array}{r} 39.3 \quad 38.8 \\ 138.8 \quad 69.2' \\ \hline 230.0 \quad 229.4 \quad 90.6' \\ 159.8' \quad -0.38' \end{array}$$

Mean -0.33'

$$\begin{array}{r} 10 \quad 41 \quad 40 \\ \hline 10 \quad 70 \quad 80 \\ 10 \quad 35 \quad 40 \\ 5 \quad 0 \\ \hline 15 \quad 35 \quad 40 \end{array}$$

Jan. 30, 1906.

S. J. 7 41

H. A. +7. 45

Dec. +60.0

P. A. 259.0 Ver B

Sprocket - 0.5 B

+ 0.5 b

Sky a little smoky and slightly hazy
for a little distance above the horizon
but in general sky pretty clear throughout
evening and seeing pretty good

It's watch used for times tonight
Watch 0

Jan. 31, 1906 (Wednesday)

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

6 29 +16.5 9.5 bap

4 6

2 23

9 37

Index L & B

247.5 ← *var. dis*

301.5

54.1'

73.1

40.0'

113.1

94.1'

-1.81'

254.3

-1.79'

295.1

40.8'

66.4

54.5'

120.9

95.3'

-1.77'

Index R & A

160.2

206.6

46.4'

347.9

34.7'

22.6

81.1'

-2.16'

165.3

-2.16'

200.7

35.4'

339.2

45.9'

251.2

81.3'

-2.16'

Mean -1.98'

7 36 48

58 55

7 29 28

5 - 5

12 29 23

Jan. 31, 1906

Index R. A.

8 57 28
 160.7
 207.0 463.
 347.5 34.7
 bloude 22.2 81.0 - 2.17'

A

164.9 - 2.12'
 201.7 36.8
 341.0 47.7
 28.7 84.5 - 2.06'

Index L & B

66.3
 120.5 54.2
 254.3 37.8
 292.1 92.0 - 1.86'

B

74.2 - 1.82'
 113.8 39.6
 245.0 55.9
 300.9 95.5 - 1.77'

8 12 0
69 28
 8 34 44
 5 - 5
 13 34 39

S.J. 5 15
 H.A. -1 15
 Dec. +14.8
 P.A. 160.0 Var B
 sprockets. -4.5 A
 " -3.5 B
 " -3.0 b

mean - 1.97'

Jan. 31 1906

8 20 0 Sky steadily becoming more cloudy bal-
comes very wet. the moisture in air condens-
ing

8 33 Sky now pretty thickly cloudy everywhere

It's match used for times tonight
Match 5 sec fast

α beti	Phot	H. Obs. Bowie Rec.
2	12	-3.6
5	46	
3	34	

Sky too cloudy in this region α beti seen
but comp. stars too faint

9 15 0 The wind has now changed air is growing cooler also
full of moisture sky cloudy everywhere and no stars
visible apparently no chance for anything further

Feb. 2, 1906 (Friday)

4th type star b.D.M. -36° 1884 Phot 3 & Obs Bowie Re

4	43	-36.4	4	42	-36.4
<u>4</u>	<u>20</u>		<u>4</u>	<u>30</u>	
	23			12	
11	37		23	48	

Index Red

66.7 ← 4th type star

124.8	30	56.3'
235.8		77.0'
312.0		<u>133.3'</u> -0.91'

A

56.5

-0.90'

132.1

75.6'

245.0

58.3'

303.3

133.9' -0.90'

Index I+B

337.7

30.6

52.9'

149.0

68.4'

217.4

121.3' -1.16'

B

328.0

-1.17'

37.6

69.6'

157.9

50.9'

208.8

120.5' -1.18'

Mean -1.04'

Sample star in above group = b.D.M. -36° 1894 (9.0)

8 6 40

8 17 8

23 48

8 11 54

5 -14

13 11 40

Feb. 2, 1906

S.I. 5h. 41m
 R.A. + 0 56
 Dec - 35.9
 P.A. 59.0 8mB
 Sprockets -3.5 d
 " -2.5 B
 " -2.0 B

4th type star L.D.M. -25° 2539 Phot. J.W. Olz Bouric
 Full aperture

5	31	-25.8
5	51	
0	20	

Comp. star = L.D.M. -25° 2545 (8.1)

Feb. 2, 1906.

Index L & B

9 22.40

240.0	65.8'
305.8	84.5'
50.2	<hr/>
134.7	150.3' -0.57'

B

230.9	-0.58
317.0	86.1'
62.8	63.8'
126.6	<hr/>
	149.9' -0.58'

Index L & B

153.9	60.9'
214.8	82.1'
322.6	<hr/>
44.7	143.0' -0.71'

A

142.3	-0.71'
224.8	82.5'
333.5	60.9'
34.4	<hr/>
	143.4' -0.71'

9 31 25

53 65'

9 26 62'

5 -14'

14 26 48'

Mean -0.64'

L.J. 6^h 40^m

B. & + 1 8

Dec -25.5

P. & 120.0 Ver. B

Sprocket -0.5 B

" +0.5 b

Feb. 2, 1906.

4th type star +14° 1283 Phot. 3 H. Ab. Bowie Rec.

$$\begin{array}{r} 6 \\ 7 \\ 0 \end{array} \quad \begin{array}{r} 29 \\ 10 \\ 41 \end{array}$$

+16.5

9.5 days

Index Left

321.5

47.0

154.0

214.2

4th type dis

85.5

60.2

145.7 - 0.66

B

332.7

35.8

138.8

226.1

63.1

87.3

150.4 - 0.57

-0.62

Index Right

~~228.8306.1~~316.0 ~~63.2~~

60.2

127.3

87.2

67.1

154.3 - 0.49

A

241.0

307.1

47.8

140.5

66.1

92.7

158.8 - 0.40

-0.44

Mean -0.53

10 21 14

$$\begin{array}{r} 10 \quad 33 \quad 10 \\ 54 \quad 24 \\ 10 \quad 27 \quad 12 \\ 5 \quad -14 \\ 15 \quad 26 \quad 58 \end{array}$$

Feb. 2, 1906.

L. J. 7 44
 H. A. +1 25
 Dec. +15.1
 P. A. 202.5 ver B
 Sprocket -5.5 B
 " -4.5 b

It's watch used for time tonight
 Hatch 14 sec. fast

106
 52

Feb. 3, 1906 (Saturday)

4th type star L.D.M. $-36^{\circ}18'84''$ Phot. 3 & Obs. Brown
 4 43 -36.4 solar 4
 4 33

23 50

Index R & A

66.4 ← 4th type star

123.1

56.7'

236.1

76.7'

312.8

133.4'

-0.91'

A

57.2

-0.85'

139.1

81.9'

244.8

57.2'

304.8 21.0

139.1'

-0.79'

Index L & B

336.3

30.8

54.5'

151.5

68.1'

219.6

122.6'

-1.14'

B

329.2

-1.18'

38.0

68.8'

159.5

50.4'

209.9

119.2'

-1.21'

Mean -1.02'

8 12 40

15 69 98'

7 64 79'

5 - 21'

13 4 58'

Feb. 3, 1906

S.J. 5^h 35^m

P.A. +0 52

Dec -35.9

P.A. 58.5

Sprocket -3.5 A

" -2.5 B

" -2.0 C

4th type star G.D.M. -25 2539 Phot. J.H. Or. Lorne Res

5	31	-25.8
5	55	
+ 0	24	

For measurements see fol. page

Feb. 3, 1906.

Index L & A

9 5 8

242.2 ← 4th type dis
 305.1 62.9'
 55.5 79.5'
 135.0 142.4' -0.73'

B

235.3 -0.74'
 313.8 78.5'
 64.0 62.0'
 126.0 140.5' -0.76'

Index Q & B

153.6
 216.3 62.7'
 324.8 80.3'
 45.1 143.0' -0.71'

A

145.3 -0.74'

223.4 78.1'
 333.4 61.9'
 35.3 140.0' -0.77'

Mean -0.74'

9 14 56
 9 19 64
 9 9 62
 5 -21
 14 9 41

2.3. 6 31
 h.c. +1 0
 Dec. -25.4
 P.A. 120.0 h.m.B
 Sprocket. -0.5 B
 " +0.5 b

Feb. 3, 1906

4th type star +68° 617 (6.2) Photo J & O. Sonne Bee

$$\begin{array}{r}
 10 \quad 32 \\
 7 \quad 20 \\
 \hline
 3 \quad 12 \\
 8 \quad 48
 \end{array}$$

+69.8

Full aperture

Index R & B

346.0 ← 4th type dis

24.87

38.7'

170.4

(27.0')

197.4

65.7'

-2.65'

352.1

-2.70'

18.6

26.5'

165.6

(36.4')

202.0

62.9'

-2.75'

Index L & A

261.5

288.3

73.7

112.67

26.8'

(39.0')

65.8'

-2.65'

256.2

-2.64'

295.3

79.9

107.1

39.1'

(27.2')

66.3'

-2.63'

Mean - 2.67'

color 3

10 35 40

62 41

10 31 20

5 -21

15 30 59

Feb. 3, 1906

S. J. 7 49
H. A. - 2 50

Dec. +67.7

P. A. 59.0 VerB

Sprockets - 2.5 B

" - 1.5 b

Seeing throughout evening somewhat blurry on account of the cold. On last star seeing was rather more blurry at times than on the other objects observed. Obs. however waited for intervals of better seeing and obs. throughout evening considered first class

H's watch used for times tonight
Watch 21 sec. fast

y
w
er
e
a

1905phae.proj..578W