KG
11365
558

KG 1136 5.556

1902phac.proj...56W

1902phae.proj..55OW

KG 11365.55F

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Nov. 7. 1902. (Friday)

B.+C. 1182			Ballou 103.		
7	2	43.2	7	10	0.0
	3	43.0		11	00

Region of S Boötis. L. obs.

14 16 +54.6
22 7
+7 51

22 30
+8 14

14 8 +52.5
22 47
+8 39

Region too low, abandoned.

Nov. 7. 1902

X Cygni. Phot. J. W. do.

19 45 +32.6
22 55
+3 10

19 45
23 49
+4 4

Measts. of X Cygni on next two pages.

1902phae.proj..55OW

Nov. 7. 1902

χ Cygni. L + A. 9.″5 cap. used.

8.52.1 Comp. Stat. dis > 300.9 — 44.6 ✓
345.5

— ~~126.0~~ 125.9 32.6 ✓
— 158.5 77.2 ✓ −2.28 ✓

— 306.0 34.1 ✓ (−2.22) ✓
— 340.1
— 118.8 46.7 ✓
— 165.5 40.8 ✓ −2.17 ✓
R + B

— 212.0 43.2 ✓
— 255.2
— 37.2 30.6 ✓
— 67.2 73.2 ✓ −2.40 ✓

— 219.0 29.2 ✓ (−2.40) ✓
9.4.0 — 248.2
1161 — 30.0 44.5 ✓
8 58.0 ✓ — 74.5 73.7 ✓ −2.39 ✓
5 −.1 ✓ Mean −2.31 ✓
13 57.9 G.M.T.
6061.582

Nov. 7. 1902.

R + B. (Same again.)

211.0 45.0
9.8.5 256.0

37.9 29.4
67.3 74.4 -2.36

218.4 29.6 (-2.38)
248.0
30.9 43.5
74.4 73.1 -2.41
L + A
119.5 45.7
165.2
306.4 32.8
339.2 78.5 -2.24

126.5 32.0 (-2.20)
9.19.8 158.5
28.3 298.4 49.4
9 14.2 347.8 81.4 -2.15
5 - 01
14 14.1 G.M.T.
6061.593

mean -2.29
Gen. mean -2.30

Sid. T. 0h 58m
H. A. 5 10.
Dec. +32°.2
Pos. Ang. 24°.0
Sprocket 4.5 A
" 5.5 B
" 6.1 C

Nov. 7. 1902.

o Ceti. Phot. Tr. Tr. Obs.

2 12 −3.6
1 12
−1 0
11 0

Index to right.

Var. dis. > 93.1
10.3 166.0 72.9✓
269.1 81.9✓
351.0 154.8✓ −0.48✓

88.5 82.9✓ (−0.50)✓
171.4
275.3 69.7✓
345.0 152.6✓ −0.52✓

Index to left.

6.8 68.1✓
74.9
176.0 84.8✓
260.08 152.9✓ −0.52✓

(−0.54)✓
355.1 84.8✓
10.13.30 80.9 66.4✓
16.5 185.7 151.2✓ −0.55✓
10 8.2 ~~251.3~~ 252.1 mean −0.52✓
5 −0.1
15 7.1 G.M.T.
6061.630

Nov. 7. 1902.

Index to left. (Same again).

10.16.30 ~~73.3~~ 72.8 5.7 67.1
174.8 87.6
262.4 154.7 −0.48

355.2 84.3 (−0.52)
79.5
185.1 66.4
150.7 −0.56
251.5

Index to right.

274.5 69.0
343.5
88.5 82.0
170.5 151.0 −0.56

X6 10,28 267.1 83.5 (−0.54)
~~16 58~~ ~~357.1~~ 350.6
93.0 70.0
163.0 153.5 −0.51

44.5
10 22.2
5 −0.1
15 22.1 G.M.T.

Mean −0.53
Gen. mean −0.52

6061.640

Sid. T. 2^h 14^m
H. A. 0 0
Dec. −3°.2
Pos. Ang. 232°.1 A

Nov. 7. 1902.

14th magn. standards for δ Orionis.

5 28 −5.0
2 50
−2 38
9 22

Selection seems pretty good but seeing rather poor.

Finder out of adjustment. Adjusted it as well as could be done tonight.

H's watch used tonight for times. Watch 8 secs. fast.

Nov. 8. 1902. (Saturday)

B. + C. 11 & 2.   Ballou 1 & 3

6 59 50.8   7 7 0.0

7 0 50.9   7 8 0.0

Nova Persei. Phot. T. W. obs.

27 ~~3~~ 24 +43.6

22 45

-4 39

7 21

Haze too thick.

Doubtful Variable +28° 707

Phot. T. W. obs.

28 ~~4~~ 44 +27.6

23 37

-5 7

6 53

Clds too thick.

Nov. 8. 1902.

μ Cephei. Phot. I. W. obs.

21 39 + 58.1
23 55
+2 16

7" cap used.

Index R and above.

8h 50.9 27.0 < 52.9✓ Var. dir.
79.9
213.2 47.7✓
260.9 100.6✓ −1.64✓

25.3 56.0✓ (−1.69)✓
81.3
212.8 40.5✓
253.3 96.5✓ −1.74✓

Index L. and below

301.2 44.6✓
345.8
113.8 57.6✓
171.4 102.2✓ −1.60✓

−1.57✓

293.1 60.7✓
9h 03.3 353.8
11 4.2 120.5 44.3✓
8 57.1✓ 164.8 105.0✓ −1.54✓
5 − 0.2
13 56.9 M.T. mean −1.63✓
6062.581✓

Saturday Nov 8 1902

Same again. Index Left + Below.

302.2
9^{h}.08.3 346.1 43.9 ✓
113.1
170.1 57.0 ✓
100.9 ✓ −1.63 ✓

294.7 60.3 ✓ (−1.60 ✓)
355.0
121.0 43.8 ✓
164.8 104.1 ✓ −1.56 ✓

Index Right + Above.

209.8 44.3 ✓
~~9 20 2~~ 254.1
26.6 52.6 ✓
79.2 96.9 ✓ −1.73 ✓

206.0 54.5 ✓ −1.76 ✓
9 23.8 260.5
32.1 32.8 40.3 ✓
9 16.0 73.1 94.8 ✓ −1.79 ✓
5 −0.1 Mean −1.68 ✓
14 15.9 ✓ G.M.T. Gen. Mean −1.66
$606\overset{2}{8}.594$ ✓

Observations made through increasing haze.

Nov. 8, 1902.

Sid Time 1h 3m
H. A. 3h 21m ~~20~~
Dec. 58°.3
Pos. Ang. 353°.5
Sprocket 0.5 A
" 1.5 B
" 2.1 C

μ Herculis Phot. T. Vr. obs.

17 14 +33.2
25 20
+8 6

Region too low. Clouds thick.

T Cygni, Phot. T. Vr. obs.

20 43 +34.0
25 25
+4 42

~~Sky~~ Clds too thick.
Clds growing thick every where
hardly any stars to be seen
no chance for any thing further

Nov. 8. 1902.

W's watch used in times to night.
Watch 10 secs. fast.

Nov. 10. 1902 (Monday)

B. + C. 1182.　　　　Ballone 103.
8　6　45.0　　　　8　13　0.0
　　7　44.5　　　　　14　0.0

~~19~~ 14. 1902 Persei. Phot. J. Wr. obs.

2　31　　+41.6
R + A.

283.9 < Comp. Star dis.
8.44.00　1.9
98.0　　78.0
187.3　　89.3
　　　　167.3　+0.24

276.7　　91.5　　　(+0.24)
8.47.30　8.2
~~106.0~~ 105.4　75.1
180.5　　166.6　+0.25
L + B.

197.0　　65.8
8.52.~~5~~ 30　262.8
7.7　　88.2
95.9　　154.0　+0.50

(+0.50)

~~192.5~~ 192.5　82.5
8.55.40　~~276.5~~ 275.0
16.5
19 9 40
8 49 55　88.4　　71.9
　　　　154.4　+0.49
5 + 6 14
13 56 09.2 m.T.　　mean +0.37
60 64

Nov. 10. 1902.

~~R and star~~ L + B. Same again.

	12.4	82.6 ✓		
9h 02.10	95.0			
	199.8	64.5 ✓		
	264.3	147.1 ✓	+0.63 ✓	
	20.8	64.3 ✓		(+0.58 ✓)
05.10	89.1			
	188.8	88.1 ✓		
	272.9	152.4 ✓	+0.53 ✓	

R + A.

	280.0	90.0 ✓		
09.42	10.0			
	108.1	68.6 ✓		
	176.7	158.6 ✓	+0.41 ✓	
	288.9	72.3 ✓		(+0.40 ✓)
12.45	1.2			
	98.1	87.2 ✓		
	185.3	159.5 ✓	+0.39 ✓	mean. +0.49 ✓

29 47
9 07 27 ✓
5+6 14 ✓
14 14 01
6064.

R + A. Same again.

	281.0	87.9 ✓		
15.53	8.9			
	106.1	72.5 ✓		
	178.6	160.4 ✓	+0.37 ✓	
	287.4	69.6 ✓		(+0.44 ✓)
18.35	357.0			
	100.8	83.0 ✓		
	183.8	152.6 ✓	+0.52 ✓	

Nov. 10. 1902

L + B.

195.2

22.57 271.6 76.4 ✓

21.2 65.2 ✓

86.4 141.6 ✓ +0.74 ✓

(+0.70) ✓

200.2 65.0 ✓

25.115 265.2

82 40 11.8 81.2 ✓

9 20 40 ✓ 93.9 146.2 ✓ +0.65 ✓

5 + 6 14 ✓ mean +0.57 ✓

14 26 54

6064

L + B Same again.

195.2

30.49 271.3 76.1 ✓

19.9 67.9 ✓

87.8 144.0 ✓ +0.69 ✓

(+0.72) ✓

200.9 65.4 ✓

33.52 266.3

14.7 76.3 ✓

91.0 141.7 ✓ +0.74 ✓

R + A.

101.3 80.2 ✓

37.47 181.5

291.2 66.9 ✓

358.1 147.1 ✓ +0.63 ✓

(+0.64) ✓

107.2 67.9 ✓

41.43 175.1

9 24 11 285.2 78.8 ✓

9 36 03

5 6 13 4.0 146.7 ✓ +0.64 ✓ mean +0.68 ✓

14 42 16 G.M.T.

6064

Nov. 10. 1902.

Sid Time 1h 33
H. a. - 1h 03
~~P. a.~~ Dec + 41°.3
P.a. 354°.1 Venus B
Sprocket 5.5 & B
" 6.5 & C

Altitude high, especially at end of series.

Doubtful Var. +30°1014 8.5
Phot. T. Vr. obs.

5 39 +30.5
2 0
-3 39
8 21

5 46 +31.7
2 05
3 41
8 19

Index left and above

16 .51/2 96.0
195.3 < Comp. Star dis.
105.3
277.1
91.9
197.2
162.8
0.33
9 9

Nov. 10. 1902

97.4
187.2 89.8 ✓ (−0.32 ✓)
268.0 107.3 ✓
15.3 197.1 ✓ 162.9 ✓ 0.32 ✓
R + B

1.0 104.0 ✓
105.0
188.1 87.4 ✓
275.5 191.4 ✓
168.6 ✓ 0.22 ✓

11 00.4 9.3 85.9 ✓ (−0.24 ✓)
111.6 95.2
10 55.8 179.1 107.1 ✓
5 +6.2 ✓ 193.0 ✓
10 02.0 ~~92~~ 286.2 167.0 ✓ 0.25 ✓ Mean −0.28 ✓
6064.668 ✓
R + B Same again
359.8
106.2 ✓
11 3.0 106.0
187.9 87.2 ✓
275.1 193.4 ✓
166.6 0.25 ✓

11.0 85.5 ✓ (−0.22 ✓)
96.5
180.0 105.4 ✓
285.4 190.9
169.1 ✓ 0.20 ✓
L + R
269.2 106.1 ✓
15.3 (~~0.22~~ ✓ −0.25)
99.0 86.5 ✓
185.5 192.6 ✓ 0.24 ✓
167.4 ✓

Nov. 10. 1902.

11ʰ 11.3 → 277.7

5.1 87.4

14.3 89.0 106.3

11 7.2 195.3 193.7 −0.26

5 +6.2 166.3

16 13.4 G.M.T. mean −0.24

6064.676 Gen. mean −0.26

Sid Time	2ʰ 55ᵐ	
H. a	−2 47	
Dec	+30. 3	
P. a.	98.9	Ver B
Sprocket	6.5	B
"	7.5	C.

Comp. Star = +30° 1007 (9.1)

B + C. 1182			Ballou 103.		
11	28	50.0	11	35	0.0
	29	49.5		36	0.0

~~No watch used to-night.~~
~~Correction to watch~~

Nov. 11. 1902. Tuesday.

B. + C. 1182.			Ballou 103.		
7	21	8.0	7	27	0.0
	22	7.5		28	0.0

7 30 Cloudy.

Nov. 14. 1902. (Friday.)

B. & C. 1142.
7 26 24.5
27 24.5

Ballou 103.
7 26 00
27 00

R Ursae Min. Phot. I. Lo. obs.

16 34 +72.9
23 34
+7 0

Index Right & above

Comp. Star dis. 7
8h 09m 30s
202.2 63.1 ✓
265.~~7~~3
29.0 49.2 ✓
78.2 112.3 ✓ +1.36 ✓

8 11 50s
208.~~4~~9 48.8 ✓ (+1.36) ✓
257.7
~~21.9~~ 22.4 64.1 ✓
86.~~8~~5 112.9 ✓ 1.35 ✓

Left & below
16 30
110.7 65.1 ✓
~~178.3~~ ~~174.4~~ 175.8
293.9 56.1 ✓
350.0 121.2 ✓ 1.17 ✓

Nov. 14. 1902.

116.2
8 20m 27s 165.9 49.7 (+1.20)
58 17 287.5
8 14 34 ~~354.7~~ 355.9 68.4
5 - 26
118.1 1.23
13 14 9 Same again, mean 1.28
6068. 108.~~2~~4 67.2
23m 07s ~~174.0~~ 175.6
29~~3.7~~4.8 54.2
349.~~2~~0 121.4 1.16

106.0
~~116.7~~ ~~176.0~~ 70.0 1.11
29 48s
~~26 35~~ ~~169.0~~ 176.0
294.1 56.2
350.3 126.2 1.06
Right & above
29.1 48.6
33m 27s 77.7
201.4 63.7 1.36
265.1 112.3
1.34

21.2 63.6
38m 36s 84.8 50.3 1.33 mean +1.22
126 50 207.0 113.9 Gen. mean +1.25
8 31 42 257.3
5 - 25
13 31 17 ~~S.M.T.~~
6068.

~~16 34~~
~~24 34~~
~~8 0~~ ~~72.9~~

16 34 +72.2°
But extreme 7 57
care exercised. 0 31 Region also a little low.
Obs. of R Ursae Min rather diff. on account
of murky atmos. & very bright moonlight.

Nov. 14, 1902 (Friday)

Sid. Time = 0h ~~48~~ 34m
H. A. = 7h 57m
Dec = +72.2
Pos. Ang = 140.7° Vern. A
Sprog = 2.5 B
" = 3.5 C

W Delphini. Phot. T. W. obs.,

20 31 +17.4
25 10
+4 39

Utterly impossible to do anything with W Delphini.
Region too low & seeing too bad
Var. ~~visible~~ not certainly seen in large telescope.

T Cygni. Phot. T. W. obs.

20 40 +33.5
25 50
+5 10

Left & above

~~Ob~~ Var. dis. > 308.8 29.2
10h 20 25 338.0 35.2
124.3 64.4 2.70
159.5

Friday Nov 14, 1902

304.5 36.9 ✓ (−2.67)
22 38 341.4
128.0 29.3 ✓
157.3 66.2 ✓ 2.64

Right & below

219.5 26.3 ✓
26m 15s 245.8
35.0 34.8 ✓
69.8 61.1 ✓ 2.42

(2.76)

215.1 35.3 ✓
28m ~~2~~8s 250.4
23 46 39.0 28.7 ✓
10 25 56
5 −20 67.7 64.0 ✓ 2.71 mean 2.72
15 25 31 GMT.
6068.

Same again.

218.2 28.3 ✓
30m 05s 246.5
34.8 35.3 ✓
70.1 63.6 ✓ 2.73

(−2.75)

214.7 35.1 ✓
32m 45s 249.8
39.6 27.3 ✓
66.9 62.4 ✓ 2.77

Left & above

128.1 29.1 ✓
35m ~~40~~ 55s 157.2
303.8 43.4 ✓
347.2 72.5 ✓ 2.43 (2.47)

Nov 14, 1902 (Friday)

$10^h 38^m 40^s$

~~17 25~~
~~10 34 21~~
~~5 25~~
~~15 33 56~~ G.M.T.
~~6068.~~

123.8 38.1 ✓
161.9
306.3 31.7 ✓
338.0 69.8 ✓ 2.51

Last two sets taken again. Seeing better in these last two sets than in the two previous.

$49^m 45^s$

127.0 31.8 ✓
158.8
304.1 36.3 ✓
340.4 68.1 ✓ 2.57 ✓

(−2.60) ✓

$50^m 35^s$

23 10
10 45 48
5 −25
15 45 23 G.M.T.
6068.

124.5 35.5 ✓
160.0
307.3 30.7 ✓
338.0 66.2 ✓ 2.64 ✓ mean −2.68

Gen. mean −2.70

Sid. Time = $2^h 47^m$
Rt. A. = $6^h 03^m$
Dec = +32.6
Pos. Ang = 7.5 Vern. B
Space = 3.5 A
" = 4.5 B
" = 5.1 C

Full Aperture used.

Very sl't fog on obj. glass.

Night rather poor. Sky murky. Moon bright also.

Nov. 14. 1902.

B. + C. 11 A 2.			Ballou 103.		
12	12	25.5	12	12	0.0
	13	25.1		13	0.0

B + C. 11 A 2.			Ballou 103.		
16	9	26.1	16	9	0.0
	10	26.0		10	0.0

Nov. 15. 1902. (Saturday)

B. & C. 1182.   Ballou 103.

7 16 33.9   7 16 0.0

   17 33.9   17 0.0

7 30 Cloudy.

μ Cygni. Phot. H.   Fr. obs.

21 34 +24°.2

Abandoned. Too high.

Σ 2675   Phot. H. Fr. obs.

20 13 +77.3

23 43

+3 30

Clds too thick at present to see double.

Σ 2998: (94 Aquarii) Fr. obs.
Phot. Fr.

23 12 −14.1

24 55

+1 43

11^{h}.05 clds thick!

Nov 15 1902

Clds too thick for previous double.

Doubtful Var.
u. Herculis. Phot T W. obs.

17 14 +33.2
25. 15
8. 01

Too cloudy

9:30. Clouds so thick and massive and moving so fast that it is impossible to accomplish any thing.
no chance for any thing farther. Clds thick every where.

Nov. 19. 1902. (Wednesday)

A. + C. 11A2. Ballou 103

7 13 42.6 7 13 0.0
14 42.5 14 0.0

Nova Persei. Phot. T. W. obs.

27
3 24 +43.6
23 42
— 3 42
8 18

24 08
— 3 16

9.5 inch c ap used
Index 2 and alone

363.4 ← 38.0 ✓ C. S. des.
8 04.7 341.4
127.6 29.2 ✓
157.0 67.2 ✓ +2.60

307.6 30.6 ✓ (+2.53)
338.2
122.2 ✓ 40.8 ✓ +2.46
163.0 71.4 ✓

215.1 362 ✓
251.3
38.2 29.9 +2.64
68.1 66.1

Mar 19 1902

218.0
6 13.5 247.8 29.8 (+2.58)
18. 2
34.2 39.9
8 9.1
5 -0.2 74.1 69.7 +2.52 mean 2.56
13 8.9 G.M.T
6073.

Same again

213.8 38.6
16.4 252.4
36.9 31.7
68.6 70.3 +2.50

(+2.52)

217.8 30.2
248.0
34.9 39.1
74.0 69.3 +2.53

122.1 41.0
163.1
307.3 30.6
337.9 71.6 +2.45

(+2.44)

126.3 30.9
20.4 157.2
44 8 302.2 41.8 +2.42
8 22.4 344.0 72.7
5 -0.2
13 22.2 G.M.T.
6073.

mean +2.44
Gen. mean + 2.52

Mar 19 1902

W's watch used. Watch 9s fast.

Sid Time	24^h	54
H. A.	− 2	30
Dec.	43.6°	
P A	76.2°	
Sprocket		
"	0.5	a
"	1.5	B
"	2.1	C

Emergent pencils not quite in adjustment causing obsr some trouble in getting hold of them properly. This being the case the 9½" cap being on, somewhat aggravates the difficulty. But extreme care ensured Re-appearance of Jup I.

W. Ms. Mc Culloch.

20 54 −14.4
25 15
+4 21

9h. 18:00 Suspected. 9 17 17
9 18:24 Seen 9 17 41
9 19:00 Seen again 9 18 17

Region very low, some fog, moon also up, Other satellites quite faint [illegible] time of reappearance set a little late

Nov 19, 1902

Impossible to do any thing with photometer.
R.E.-appearance taken with ordinary eye-piece

B.+C. 1182.			Ballou 103.		
9	27	43.0	9	27	0.0
	28	42.8		28	0.0

Doubtful Var. Phot. T.   W. obs,
" " +28° 707 ~~(8.5)~~ (8.1)
Comp. Star = +28° 704 (7.4)

4 42 +28.1
1 58
−2 44

9 16   W's watch used.
Watch 9s fast.

Full aperture used
Index left and above

109.0 66.8✓ C.V. dis.
$1\overset{9}{0}06.3$ 175.8
275.0 94.0✓
9.0 160.8✓ +0.37✓

(+0.38)✓

98.4 88.3✓
186.7
286.4 71.5✓ +0.38✓
357.9 159.8✓

Mar 19, 1902

Index right + below.

17.1
84.8 67.7 ✓
189.0 90.0 ✓
279.0 157.7 ✓ +0.43 ✓

(+0.43) ✓

9.4
10^m 15.4 98.5 89.1 ✓
21.7 199.0 68.2 ✓
10 10.8 267.2 157.3 ✓ +0.43 ✓
5 − 0.2
mean +0.40 ✓
15 10.6 G.M.T. Same again
6073.

Index right + below.

17.5 ✓ → 18.1
89.0 70.9 ✓
187.8 90.2 ✓
278.0 161.1 ✓ +0.36 ✓

(+0.38) ✓

11.0
98.6 87.5 ✓
199.2 71.4 ✓
270.6 158.9 ✓ +0.40 ✓

Index left + above.

287.3 72.7 ✓
0.0
98.8 89.0 ✓
187.8 161.7 ✓ +0.35 ✓

Nov 19 1902

2 8 0 . 0 86.1 ✓
10 27.0 6 . 1 (+0.36) ✓
44.5 1 0 3 . 7 74.5 ✓
10 22.2 1 7 8 . 4 160.6 ✓ +0.37 ✓
5 −0.2
15 22.0 G.M.T. mean +0.37 ✓
60873. Gen. mean +0.38 ✓

Sid Time		2ʰ. 5 1
H a		− 1 5 6
Dec		+ 2 8 . 0°
P a		3 6 . 5
Sprocket	~~a~~	
"	B	5 . 5
"	c	6 . 5

Full aperture being used in two previous groups the emergent pencils appreciable difficulty

1902phae.proj.55BW

Nov 19 1902

S Cygni. W. obs.

20 4 + 57.4
27 5
6 57

Region too low for
S Cygni.
Moon bright.

Nov. 20. 1902. (Thursday)

Pleiades

3^{27} 40 + 23.7
23 40

4 00

Alcyone = a, with
L and alone

134.1 ← 16.4^{r} a dis.
→150.5
749.4 313.3 18.9^{r}
332.2 35.3^{r} -4.04^{r}

(-4.01^{r})

133.0 18.2^{r}
151.2
314.2 18.2^{r}
36.4^{r} -3.98^{r}
332.4

R and below

43.7 18.1^{r}
61.8
223.3 18.6^{r}
241.9 36.7^{r} -3.96^{r}

(-4.00^{r})

43.0 19.4^{r}
59.2 62.4
7_5 54.3 ✓ 225.0 16.0^{r}
-0.2 241.0 35.4^{r} -4.04^{r}

12 54.1 G.M.T.

6074.537

mean -4.00^{r}

Nov 20, 1902

R. and below

46.0
8 02.7 61.8 15.8
222.8 19.1
241.9 34.9 -4.07

43.2 19.4 (-4.02)
62.6
223.8 17.0
240.8 36.4 -3.98

L and above

313.6 18.6
332.2
133.0 17.5
150.5 36.1 -4.00

313.8 18.4 (-3.98)
13.6 - 332.2
16.3 132.7 18.5
8 8.2 151.2 36.9 -3.95
5 -0.2
13 8.0 G.M.T.
6074.547

mean -4.00
Gen. mean -4.00

Mar 20 1902

a' with

~~129.7~~

6220.0 ~~150.4~~

R. and above

311.0 ← 25.2 a' dis.

6402 336.2

130.8 24.1

154.9 49.3 −3.30

310.5 25.7 (−3.26)

336.2

130.0 25.4

155.4 51.1 −3.23

L and below

222.7 21.5

244.2

40.0 23.4

63.4 44.9 −3.51

222.6 21.5 (−3.50)

6449.4 244.1

40.2 23.8

9.6 64.0 45.3 −3.49

8 44.8

5 −02 mean −3.40

13 44.6 G.M.T.

6074.573

Nov 20, 1902

Index L and below

223.0 20,2 ✓
8 56.0 243.2
40.9 22,4 ✓
63.3 42,6 −3.63 ✓

220.0 24,1 ✓ (−3,55 ✓)
244.1 ✓
41.4 21,6
63.0 45,7 ✓ −3,47

R and above

128.8 25,7 ✓
154.5
310.5 26,1 ✓
336.6 51,8 ✓ −3,19

129.8 25,2 ✓
903.4 155.0 (−3.18)
119.4 310.0 26,8 ✓
8 59.7 336.8 52.0 ✓ −3,18
5 −0.2 Mean −3,36
13 59.5 G.M.T. Gen. mean −3.38
6074.583 ✓

Nov. 20. 1902.

b' with

R. and above

299.4
915,2 346.0 ← 46.6 b' dis.
119.1 47.0
166.1 93.6 -1.82

< b' dis

298.4 51.6 (-1.78)
350 0
119.3 45.6
164.9 97.2 1.73

L and below

212.4
252.8 40.4
30.4 43.0
73.4 83.4 -2.10

212.1 -2.10
25.2 1E2 254.5 42.4
9 20.2
5 -0.2
32.0 40.4
72.4 82.8 -2.11
14 20.0
6074.~~604~~ 597

mean -1.94

Nov 20 1902

L and below

9 27.2 ± 214.0 4.12 ✓

255.2

31.0 4.14 ✓

72.4 8.26 ✓ -2.12

212.4 4.16 ✓ (-2.12)

254.0

32.2 4.12 ✓

73.4 8.28 ✓ -2.11

R and above

120.1 4.50 ✓

165.1

301.8 4.38 ✓

345.6 8.88 ✓ -1.95

120.0 4.22 ✓ (-1.96)

9 35.2 162.2

62.4 301.3 4.61 ✓

9 31.2 347.4 8.83 ✓ -1.96

5 - 0.2 mean -2.04

14 31.0 G.M.T. Gen. mean -1.99

6074.605

Nov 20 1902

e with
Indicator left and above

282.3
9 46.7 3.5 ∠ e dis.
95.1 81.2
188.7 93.6
174.8 −0.10

275.5 91.7 −0.14
7.2
101.9 79.5
181.4 171.2 −0.17
R. and below
12.9
93.8 80.9
183.9 94.2
278.1 175.1 −0.09

6.9
93.9 (−0.12)
9 59.5 100.8
10 6.2 193.4 78.6
9 53.1 272.0 172.5 −0.14 mean −0.13
5 − 0.2 R and below
14 52.9 M.T. 193.7
6074.620 268.4 74.7
10 ~~01.0~~ 2.0 99.0
101.0 173.7 −0.12

Mar 20 1902

184.0
262.0 98.0
14.0 (−0.12)
90.3 76.3
174.3 −0.11 ~~better~~

L and above

101.1 82.7
183.8
274.6 93.0
7.6 175.7 −0.08

95.4 92.7 (−0.14)
10:11.3 188.1
284.2 77.1
1.3 169.8 −0.19 mean −0.13
Gen. mean −0.13

+	12.3
10	6.2
5	−0.2
15	6.0 G.M.T.

6074.629

f with

Index L. and above

288.0 ∠ Comp. Star disc
10:22.0 0.0
72.0
97.4
182.2 84.8
156.8 +0.44

Mar 20 1902

277.8
6.0 88.2
107.2 70.1 — 158.3 +0.41 (+0.42)
177.3

Under R. and below

190.0
275.3 85.3
20.4 70.5
90.8 — 155.7 +0.46

196.0 70.0 (+0.55)
266.0
10 31.2 — 10.8 87.0
97.8 — 157.0 +0.44 mean +0.44

53.2
10 26.6
5 -0.2
15 26.4
6074.643

Under R. and below

Same again.

~~188.1~~
~~273.0~~
~~18.1~~
~~87.0~~
~~201.3~~

~~11~~ 17.9 68.6
10 38.0 86.5
189.3 84.3
273.6 — 152.9 +0.52

Nov 20 1902

10.2
98.5 88.3
199.3 67.7 (+0.49)
267.0 156.0 +0.46

Index left and above

279.2 87.7
6.9
107.8 70.2
178.0 157.9 +0.42

287.8 69.4 +0.40
357.2
96.8 90.0
186.8 159.4 +0.39 mean +0.44

10 48.0 ±
10.5 43.0
-0.2
~~6074.653~~
15 42.8 -9 M.T.
6074.605

Gen mean +0.44

g. with

Index left and above

104.5
185.5 ← conf. star dis

10.' 51.5

287.7 81.0
356.0 68.3
149.3 +0.59

~~89.5~~
~~40 44.8~~
~~5 - 0.2~~
~~44.6~~
~~6074.663~~

110.0 65.0 (+0.59)
176.0
280.0 84.2
4.2 149.2 +0.59

Mar 20 02

Indigo right and below

15.1
92.6 77.5 ✓
200.0 63.0 ✓
263.0 140.5 ✓ +0.76

22.8 60.3 ✓ (+0.76)
11 01.5 83.1
193.0 80.5 ✓
10 56.5 273.5 140.8 ✓ +0.76 mean +0.68
5 - 0.2
15 54.3 G.M.T.
6074.662

Red below Same again.

12.5 81.4 ✓
11.07.2 93.9
201.2 61.3 ✓
262.5 142.7 ✓ +0.72

22.1 62.0 ✓ (+0.68)
84.1
191.1 84.1 ✓
275.2 146.1 ✓ +0.65

Red alone.

278.2 86.8 ✓
5.0
109.2 65.3 ✓
174.5 152.1 ✓ +0.53

Mar 20 02

~~289.1~~

(+0.55)

	290.0		
11 15.6	356.0	66.0	
22. 8	100.0	84.1	
11 11.4	184.1	150.1	+0.57 mean +0.62
5 -0.2			Gen. mean +0.65
16 11.2 G.M.T.			
6074.674			

Sid Time 3 33
Dec 24.0
H a - 0.5
P. a 92.8 V—B
Spectrum B 4.5
c: 5.5

noticed at end of series that there was some light cld and fog on the sky.

The above H.A., Spectrum &c. is on the last star.

W's watch used throughout evening. Watch 9 secs. fast.

Friday Nov 21 1902

Measurements of standard in Pleiades.

27
3 40 +23.7
23 50
3 .50

Cloudy.

B and C 1182			Ballan 103		
8	17	$1\overset{3}{\cancel{2}}.6$	8	16	do
	18	13.6		17	do
	20	13.6		19	do

Friday Mar 21 1902

Resp. Jup. IV.

20 55 -18.3
24 42
+3 47

20 55
24 45
3.50

8 3~~2~~3.0 All cloudy Jupiter invisible

8 38.0 Thickly cloudy Jupiter invisible

20 55 - 18.3
24 55
4.00

8 44.3 Clouds thick Jupiter invisible in telescope

8 50.7 Sky thickly cloudy Jupiter invisible in telescope

8 55.8 Sky thickly cloudy Jupiter invisible in large telescope

Friday Nov 21 1902

9.00.00 ~~20~~ Jupiter invisible in large telescope Sky thickly cloudy.

05.0 Jupiter invisible & etc.

10.0 " " "

15.0 " " "

20.0 Jupiter theoretically on the horizon. Sky thickly cloudy Jupiter invisible

Jupiter has not been seen at all with the eye or the telescope.

Sky thickly cloudy every where no stars visible no chance for any thing further

50 1

Nov. 28. 1902. (Friday).

B + C. 1182.			Ballou 103.		
5	6	14.7	5	17	0.0
	7	14.5		18	0.0

Reap of Jup. I Phot R. W Obs Macul[illegible]
Compared with Sat on preceding side = Sat II

	5	26	59		96.0	
	–	26	55	52.0✓	147.0	
5 27 09✓ +10 46		~~27~~	~~06~~	✓	~~106.0~~	
5 37 55		27	24	35.5	106.5	+2.0✓
		27	38	43.8	142.0	

5 41 19✓

5h	30	32		seen	
26✓	30	39	61.8✓	91.3 ~~0~~	1.1✓
47	31	00	67.3✓	153.1	0.9✓
58✓	31	11	77.1	85.8	0.5✓
42 15✓	31	28	73.6✓	162.9	0.6✓
* 27✓	31	40	81.4✓	89.3	+0.3✓
39✓	31	52	95.7✓	170.7	−0.2✓
49✓	32	02	97.1✓	75.0	−0.3✓
59✓	32	12	99.0✓	172.1	−0.3✓
43 15✓	32	28	101.2✓	73.1	−0.4✓
31✓	32	44	103.3✓	174.3	−0.5✓

Nov. 28. 1902

~~5~~	~~3~~ 2			~~67.0~~	
5 h					
5 44 01	33	14	101.0	71.0	−0.4
15	33	28		172.0	
	33	54		73.0	
			100.0		
5 34 14	34	04	102.0	173.0	1
10 47					
5 45 01	34	23	101.0	71.0	−0.4
	34	36		173.0	
	34	52		72.2	
			99.8		
5 35 19	35	04	101.5	172.0	
10 47	35	22	100.6	72.5	2
5 46 06					−0.4
	35	54		174.0	
	37	08		72.2	
5 37 28	37	17	101.3	173.5	−0.5
10 47			102.7		
5 48 15	37	35	102.0	71.8	3
	37	53		174.5	
	38	05		73.0	
					−0.4
5 38 42	38	39	99.0	172.0	
10 47			100.0		4
5 49 29	38	54		73.0	
			99.5		
	39	08		173.0	1
	39	22		71.8	
5 39 44	39	38	100.0	171.8	−0.4
10 47			100.0		5
5 50 31	39	50	100.0	72.5	
	40	08			

52

Nov. 24. 1902.

~~4~~ 5

	5h 46	08		172.5	
	43	47	100.3	172.5	
5 44 10	43	59	98.1	172.8	✓
10 47					-0.4 6
5 54 57	44	22	99.2	73.9	
	44	34		172.0	
	44	51		73.0	
5 45 15	45.	11	97.2	170.2	7
10 47			98.5		
5 56 02	45	23	97.8	73.3	-0.3
	45	35		171.8	
	45	56		73.1	
5 46 42	46.	39	98.9	172.0	8
10 47			101.0		-0.4
5 57 29	47.	01	100.0	71.0	
	47	14		17~~3.0~~ 2.0	

Seeing extremely bad. Rapidly rising barometer and much wind. Obs delayed in making first setting as Sat became invisible due to wind. Setting had to be made slowly and with care. Obs waited for intervals of fairly good seeing before making settings. Observations considered pretty good.

Nov. 28. 1902.

B + C. 11 A 2.			Ballou 103.		
5h	58	12.0	6	9	0.0
	59	11.6		10	0.0

Nov 28 1902

Standards in Pleiades
Phot. T. H. obs.

27
3 4.0 +23.7
24 10
~~4~~3 30

h
Index Left and above

106.3 < comp star dis
7h 43.7 179.0 72.7
295.2
349.0 53.8
126.5 +1.05

116.0 54.2 (+1.02)
170.2
283.4 75.6
359.0 129.8 +0.98

Index R and below
17.1 74.6
91.7
204.8 53.2
258.0 127.8 +1.03

Mar 28, 1902

26.7 53.0 (+1.00)
7 53.8 79.7
97.5 193.0 78.0
7 48.8 271.0 131.0 +0.96 mean +1.01
5 — 0.2
12 48.6
8
60~~7~~2.534

R and below

15.3
7 56.2 91.5 76.2
204.7 53.4
258.1 129.6 +0.99

26.1 54.0 (+1.00)
80.1
195.0 75.0
270.0 129.0 +1.00

L and above

282.1
1.0 78.9
117.1 50.9
168.0 129.8 +0.98

296.3 52.0 (+0.97)
8 05.1 348.3
121.3 103.0 78.2
8 00.6 181.2 131.0 +0.96
5 -.2 mean +0.98
13 00.4 G.M.T.
6082.542

Nov 28 1902

j

I mdip L and abv

119.7 < comp star dis

8^h 11.2 — 166.2 — 46.5 ✓

305.2

338.2 — 33.0 ✓

~~+253~~ — 79.5 ✓ — +2.21

~~159.9~~

~~296.0~~

~~348.5~~

(+2.16)

298.3

347.7 — 49.4 ✓

126.3 — 33.1 ✓

159.4 — 82.5 ✓ — +2.12

R and below

215.4

2~~50~~49.8 — 34.4 ✓

29.6

78.6 — 49.0 ✓

83.4 ✓ — +2.10

208.6 — 47.7 ✓

256.3

36.5 — 33.3 ✓

69.8 — 81.0 ✓ — +2.17

(+2.14)

mean +2.15

8.24

35.2

8 17.6 ✓

5 −0.2

13 17.4 ✓ G.M.T

6082.553 ✓

Mar 28. 1902

R and below

~~245.3~~

8 27± 215.5 34.5^s

250.0

29.5 48.6^s

78.1 83.1^s +2.10

207.9 48.8^s (+2.14)

256.7

38.0 32.1^s

70.1 80.9^s +2.17

L and above

121.1 43.7^s

164.8

304.2

340.0 35.8^s

79.5^s +2.21

125.6 35.2^s +2.14

8 37.0 160.8

8 32.0^s 296.5 49.6^s

5 – 0 2 346.1 84.8^s +2.06

13 31.8^s G.M.T. mean +2.14

60 82.564^s

Mar 28 1902

L and above

129.0
8 42.2 154.2 ← Lamp standing
30$\overset{4}{8}$.9 25.2
341.1 $\underline{36.2}$
61.4 +2.81

124.7 34.5 (+2.82)
159.2
309.1 $\underline{26.4}$
335.5 60.9 +2.83

R. and below

40.8
66.6 25.8

215.8 $\underline{33.2}$
249.0 59.0 +2.90

35.2 36.8 (+2.81)
72.0
217.5 $\underline{27.1}$
244.6 63.9 +2.72

$\underline{8\quad 48.2\pm}$
10.4
8 45.2
$\underline{5 - 0.2}$
13 45.0 G.M.T.
6082.573

mean +2.82

Mar 28 1902

R. and below

40.2
8 55.5 ± 66.3 26.1 ✓
215.8 32.0 ✓
247.8 58.1 ✓ +2.93

35.5 35.2 ✓ +2.90
70.7
219.3 24.7 ✓
244.0 59.9 ✓ +2.86

L. and above
308.8 26.2 ✓
335.0
125.0 33.4 ✓
158.4 59.6 ✓ +2.87

306.4 33.6 ✓ +2.86
8 59.5 339.0
8 54.8 129.0 26.6 ✓
5 − 0.2 155.6 60.2 ✓ +2.85
13 54.6 ✓ mean +2.88
6082.580 ✓

Nov 26 1902

L l

L. and above

9h 19.9 136.9
150.2 < Comp star dim
314.2 13.3
324.9 10.7
24.0 +4.89

136.3 14.0 (+4.76)
150.3
315.6 13.1
27.1 +4.64
328.7

R. and below

52.0
8.1
60.1
224.4 14.7
239.1 22.8 +5.00

9 30.0± 46.4 14.4 (+4.84)
60.8
49.9
9 25.0 225.8 12.0
26.4 +4.68
5 — 0.2 237.8
14 24.8 G.M.T. mean +4.80
6082.601

Nov 28, 1902

R. and below

46.8
9 33.0± 59.5 12.7″
224.2 15.8″
240.0 28.5″ +4.52″

46.2 14.6″ (+4.53)
60.8
224.2 13.6″
237.8 28.2″ +4.54″

L and above
315.0
327.5 12.5″
136.0 14.7″
150.7 27.2″ +4.62″

314.8 14.4″ (+4.62″)
9h 43.0 329.2
137.1
9 38.0 150.0 12.9″
5 −0.2 27.3″ +4.61″
14 37.8 G.M.T.
6082610

mean +4.58″

Nov 28. 1902

j′

~~L~~ R. and above

39.2
9^h 55 6$\overset{7}{8}$.$\overset{5}{8}$ < Comp star dims
219.7 24.3 ✓
245.0 25.3 ✓ / 536 ✓ + 3.11 ✓

40.9 24.0 ✓ (+3.11 ✓)
64.9
217.3 29.7 ✓
247.0 53.7 ✓ + 3.11 ✓

L and below
306.2
336.5 30.3 ✓
130.8 24.2 ✓
155.0 545 ✓ + 3.04 ✓

3$\overset{1}{0}$0.3 + 3.12 ✓
332.1 21.4 ✓
10 05 ± 128.4 30.7 ✓
10 000 ✓ 159.1 525 ✓ + 3.16 ✓ mean + 3.12 ✓
5 − 0.2
14 59.8 G.M.T.
6082.625 ✓

Nov 28 1902

L and below

306.8
$10^h 07.3$ 337.5 30.7 ✓
132.1 22.9 ✓
155.0 $\frac{22.9}{53.6}$ ✓ +3.11 ✓

309.9 23.0 ✓ (+3.06) ✓
332.9
126.4 33.5 ✓
159.9 $\frac{33.5}{56.5}$ ✓ +3.00 ✓

R. and above

217.5
248.3 30.8 ✓
40.0 23.1 ✓
63.1 $\frac{23.1}{53.9}$ ✓ +3.11 ✓

~~222.0~~
~~246.4~~

+3.06

221.5 23.3 ✓
22.6 244.8
29.9 36.5 $\frac{32.5}{55.8}$ ✓ +3.02 ✓ mean +3.06
10 15.0 ✓ 69.0
5 -0.2 ✓
15 14.8 ✓
60 82.635

Mar 2~~9~~8 1902

Sid Time	3.13
~~H~~ A	− 0.33
Dec.	+23.8
P.a	7.0
Sprocket	
a	4.5
B	5.5
C.	6.1

Nov 28 1902

O Ceti w Obs. Phot R.

2 12 − 3.6
3 35
1.23

Index L and above

171.9
11.00 263.4 ∠ Vandiss
352.7 91.8 ✓
77.5 84.8 ✓
176.3 ✓ −0.07

170.0
257.4 87.4 ✓ (−0.04)
347.2 91.8 ✓
79.0 179.2 ✓ −0.02

R and below

76.2
171.2 95.0 ✓
262.8 79.5 ✓
342.3 174.5 ✓ −0.10

81.2
08.9 163.0 81.8 ✓ [0.09]
11 04.4 ✓ 258.0 93.8 ✓
5 −0.2 ✓ 351.8 175.6 ✓ −0.08 mean −0.06
16 04.2 ✓
6082.669 ✓

Mar 28 1902

R. and below

76.9
11h 10.0 176.2 93.3
259.7 81.7
341.4 175.0 −0.09

79.8 83.2 (−0.07)
163.0
255.5 94.3
349.8 177.5 −0.05

L. and above

349.0
76.3 87.3
173.3 79.0
252.3 166.3 −0.26

352.2 −0.30
71.0 78.8
1~~9~~75.2 83.8
259.0 162.6 −0.33

mean −0.18

18.5
8.5
11 14.2
5 −0.2
16 14.0 G.M.T.
6082.676

Mar 28 1902

Sid Time 4.09
H. a 1^{m} 51
Dec - 3.5°
P. a 226.5 Var B

Seeing ~~rather~~ poor
through evening. Characte
of seeing varied somewhat
however being some bette
at intervals.

W's watch used for time to-night.
Watch 9 secs. fast.
on all objects except for eclipse, for which
B. & C. 1182 was used.

Saturday Nov 29 1902

Standards in Pleiades

Phot. T. W. obs.

3 : 40 + 23.7

0 ca

3 : 40

Star M.

Index L. and above

319.2

7^{m} 31.9 327.0 < Comp standards

137.2 7.8✓

146.7 9.5✓

17.3✓ +5.61✓

317.9 10.1✓ (+5.54✓)

328.0

138.3 8.3✓

146.6 18.4✓ +5.47✓

Index R. and below

228.3

236.4 8.1✓

49.5

57.3 7.8✓

15.9✓ +5.79✓

228.2 7.8✓ +5.65✓

45.5 236.0

77.4 47.9 10.3✓

7 38.7

5 – 0.1 68.2 18.1✓ +5.51✓

12 38.6 G.M.T.

6083.527✓

mean + 5.60✓

Mar 29 1902

Same again.

Index R. and below

228.2

7 50.3 237.3 9.1

49.0 7.9

56.9 17.0 +5.64

(+5.70)

228.8

236.6 7.8

48.9 8.4

57.3 16.2 +5.75

Index Left and above

138.2

147.2 9.0

318.1 8.1

326.2 17.1 +5.63

(+5.58)

138.7 7.7

146.4

8 03.1 317.0 10.1

113.4 327.1 17.8 +5.54 mean +5.64

7 56.7 Gen. mean +5.62

5 − 0.2

12 56.6 G.M.T.

6083.540

Mar 29 1902

Standards in Pleiades con. Phot. T. W. ob.

8 12.0 Clouds

8 22.0 Stars gone

Star i

I under R. and above

~~120.8~~

8 29.5 ~~164.0~~ ~~← lamp standards~~

i

120.1

8 35.0 164.1 ← Lamp standards

296.5 44.0 ✓

350.1 53.6 ✓

97.6 ✓ +1.72 ✓

113.3 56.2 ✓ (+1.70) ✓

169.5

302.0 42.4 ✓

344.4 98.6 ✓ +1.69 ✓

I L. and below

33.8 38.7 ✓

72.5

207.0 50.6 ✓

257.6 ~~8~~93. ✓ +1.93 ✓

(+1.90) ✓

25.5 53.6 ✓

8 45.2 79.1

214.0 38.5 ✓

252.5 92.1 +1.86 ✓

mean +1.80 ✓

8 +0.1 ✓

5 − 0.1

13 +0.0 ✓

6083.569 ✓

Mar 29. 1902

Same again.

Image L and below

33.7
46.0 73.0 39.3✓
209.0 48.2✓
257.2 87.5✓ +1.98✓

27.1 50.4✓ (+1.96)✓
77.6
214.2 38.3✓
252.5 88.7✓ +1.95✓

Image R and above

301.1 46.1✓
347.2
116.2 54.0✓
170.2 100.1✓ +1.65✓

295.3 52.7✓ (+1.66✓)
9 00.00 348.0
8 54.0✓ 120.5 47.0✓
5 -0.1✓ 167.5 99.7✓ +1.66✓
13 53.9✓
6083.579

Mean +1.81✓
Gen mean +1.80✓

Nov 29 1902.

Sid Time 2h 02
St a - 1 42
Dec + 24.0°
P a 325.5 Ver B
Sprocket a 2.5
B 3.5
C 4.3

The above are ~~st~~ readings on star i

In measuments on Star in sky quite clean

In measuments on star i sky quite clear in first group but troubled by clouds somewhat in second group and especially in later part of second group but extreme care experienced

Clouds thick every where no chance for any thing further.

W's watch used for time to-night.
Watch 7 secs. fast.

Dec. 1. 1902. (Monday).

Bat C, 11 & 2.			Ballow 103,		
f	10	2~~7~~5.7	f	10	0.0
	11	25.5		11	0.0
	12	25.1		12	0.0

U Sagittae. Phot. T. W. obs.

19 12 +19.4
25 40
+6 28 (abandon.) too low.

Stars in Pleiades. Phot. W. obs.

3 40 +23.7
1 45
−1 55
10 5

December 1, 1902

Star H h

Index left and above

107.2 < long star disc

9.04 179.0 71.8✓

293.0 59.0✓

352.0 130.8✓ +0.96✓

115.8 56.3✓ (+0.96✓)

172.1 74.9✓

284.9 131.2✓ +0.95✓

359.8

Index Right and below

~~117.0~~ 17.0

89.9 72.9✓

207.0 53.2✓

260.2 126.1✓ +1.06✓

26.7 52.3✓ (+1.07✓)

9.16

79.0 73.1✓

9. 12.0 195.6 125.4✓

5 -0.1

~~269.9~~ 268.7 +1.08✓ mean +1.02✓

14 11.9

6085.592✓

Same again.

16.5

9.19 ~~71.0~~ 88.1 71.6✓

205.0 56.4✓

128.0✓ +1.02✓

261.4

(+1.06✓)

26.5 53.0✓

79.5 71.5✓

198.1 124.5✓

+1.10✓

269.6 ~~mean + 1.06✓~~

(Dec 1, 1902)

284.5 ← Index Left and above
357.5 73.0 ✓
113.05 57.0 ✓
170.5 130.0 ✓ +0.98 ✓

292.5 57.5 ✓ (+0.96 ✓)
9.31 350.0
9 25.0 ✓ 105.0 75.0 ✓
5 = 0.1
14 24.9 ✓ 180.0 132.5 ✓ +0.93 ✓ mean +1.01 ✓
6085.600 ✓

Star j, Index Left and above
120.0 ∠ Comp star disc
9.39 165.1 45.1 ✓
304.2
338.5 34.3 ✓
79.4 ✓ +2.21 ✓

125.4 35.1 ✓ (+2.15 ✓)
~~159.7~~ 160.5
296.5 48.5
83.6 +2.09
345.0

Index Right and below
31.2
75.0 43.8 ✓
216.2 34.0 ✓
250.2 77.8 ✓ +2.26 ✓

215.9 34.7 ✓ (+2.24 ✓)
9.54 250.6
~~9.~~ 93.0 30.1 44.9 ✓
9 46.5 75.0 79.6 ✓ +2.21 ✓
5 = 0.1
14 46.4 ✓ mean +2.20 ✓
6085.615

Dec 1, 1902

Same again

210.5

9:56 ~~356~~ 255.0 45.0 R and below

36.4 33.6

70.0 78.6 +2.24

215.9 33.6 (+2.20)

249.25

28.8 47.4

76.2 81.0 +2.17

Index left and above.

118.0 49.0

167.50

305.6 34.6

340.2 83.6 +2.09

~~126.2~~0 +2.11

~~125.5~~ 125.5

10.10 ~~159.5~~ 160.0 34.5

298.5 47.7

10 03.0

5 0.1

15 02.9

6085.627

346.2 82.2 +2.13

mean +2.16

Star k

Index L and above

305.4 L comp star dim

10 12 339.4 34.0

129.3 28.2

157.5 62.2 +2.76

307.4 28.6 (+2.74)

336.0

125.25 35.5

161.0 64.1 +2.71

Dec 1, 1902

5 Index Right and below

219.5 219.5
~~252.2~~ ~~249.1~~ 249.1 29.6 ✓
~~40.5~~ 39.0 26.8 ✓
65.8 56.6 ✓ +2.99 ✓
~~218.5~~

218.5
246.0 27.5 ✓ (+2.96 ✓)
38.0 31.0 ✓
69.70 58.5 ✓ +2.92 mean +2.95 ✓

← Same again

10.22
10 17.0 ✓
5 - 0.1
15 16.9
6085.637 ✓
10 32 3±

215.6
249.50 33.4 ✓
40.5 26.0 ✓
~~67.0~~ 68.5 59.4 ✓ +2.88 ✓

219.8 25.7 ✓ (+2.94 ✓)
245.5
~~39.2~~ 38.5 31.0 ✓
69.5 56.7 ✓ +2.99 ✓

Dec 1, 1902

Index L and above

126.7 33.6
160.3
309.2 27.1
336.3 60.7 +2.44

(+2.43)

129.3 26.9
10 42.2 156.2
10 37.2 305.6 34.1
5 -0.1 339.7 61.0 +2.42 mean +2.44
15 37.1 G.M.T.
6085.651

Sid Time 3^h 53
H. a. ~~+ 23.8~~ + 0.8
Dec + 23.8
P. a. 112.8 Ver B
Sprocket

On the last star:
A = 4.5
B = 5.5
C = 6.1

W's watch used through the evening. Watch 7^s fast.

1902phae.proj..55OW

Dec. 2. 1902. (Tuesday)

B.+C. 11 A 2.			Ballou 103.		
7	3	32.3	7	3	0.0
	4	32.0		4	0.0

7.10 all cloudy
7.15 all cloudy
7.30 all cloudy

+43° 4101 Abst. T. Gr. obs.

22h 0m +44°.3
25 0
+3 0

Clouds
8.11.30 ^ Pretty thick
8.19.00 Clouds thick
8.37.15 Clouds thick, no stars visible
9.10.45 Clouds thick no stars visible, no chance
for anything further.
Impossible to get variable or anything else,

Dec, 3, 1903. (Wednesday)

B. + C. 11 & 2 Ballon 103.
Δ 36 v25 Δ 36 0.0

+43° 4101. Phot. T. H. obs.

22h 0m +44.3
25 50
3. 50

8 57.0 Clouds thick, stars invisible
9.23.30 Clouds thick, Photo. on and adjusted
(9.36.30) Saw variable few minutes in photo; but it was so faint, and so much clouds that no setting could be made. Variable seen only for a moment or two then all cloudy again.
Clouds still thick.
10.21.30 Too much clouds to see variable

11 30 0 Utterly impossible to get variable. Sky bad ~~so and~~ region getting low, and variable faint.

Dec. 5, 1902. (Friday).

Resp. Jup. I. Phot. R. W.obs. Brasch rec.

21 4 −17.9
24 22
+3 18

7 – – –
– –
– –

7.25.25 Jupiter rather low, and somewhat dim. Seeing very bad, and air more or less full of light snow and clouds. Cleared suddenly, some clouds also passing. No satellites visible in large telescope. Field white and milky. Jupiter in middle of small shutters.

7.30.25 Jupiter dimmer, and nearly invisible to naked eye

7.31.15 Jupiter invisible to naked. and quite faint in telescope. No satellites visible

7.33.25 Jupiter faint: no satellites visible, & more clouds coming

7.35.00 Jupiter rather faint in large telescope no satellites visible, utterly impossible to do any thing with eclipse. (over)

Dec. 5th 1902 (Friday.)

generally more cloudy. It is now theoritically time for reappearance of Jupiter I

~~3. 40~~

Standards in Pleiades

3. 40 + 23.7
1. 02
2. 38 Σ.

3. 40
1. 06 + 23.7
2. 34 Σ

Dec. 5. 1902.

Star k L

Index Left and above

306.4 ✓ 31.9 ✓ Comp. Star dis.
8.14.30 338.3
130.0 26.0 ✓
156.0 57.9 2.94

(+2.96)

307.5 27.5 ✓
335.0 29.1 ✓
129.9 56.6
~~160.5~~ 159.0 2.99

Index Right and below

117.5 ✓
248.9 31.4
26.7
39.~~40.8~~4 58.1 Clouds 2.91
66.1

Clouds.

(+2.92)

219.3 26.2
8.24.00 245.5
37.84 32.1
58.3 2.93
69.5

8 19 15
5 +12
13 19.4~~2~~7 G.M.T.
6089.555

mean +2.94

Same again
Index Right and below

217.5 32.5
8.27.20 250.0
26.7
39.2 59.2 2.89
65.9

(+2.86)

219.2 27.3
246.35 33.5
60.8 2.83

Dec. 5th Friday

36.4

69.9

Index left and above

9
8.38.30

8 34 25
5 +12

13 34.6~~37~~

6089.566

129.5 25.6
155.1
304.6 34.4
339.0 60.0 2.46

(+2.44)

126.0 32.9
158.9 28.1
307.8 61.0 2.42
330.9

mean + 2.45

P.A. 300.0 Ver A

Dec. 5th Friday
Star j' ✓
Index Right and Above

219.5 26.4 ✓ Comp. Stat dis.
9.01.60 245.9
40.6 $\frac{23.9}{50.3}$ ✓ 3.26
64.5

219.4 26.2 ✓ (+3.18)
245.6
39.4 $\frac{28.1}{54.3}$ ✓
67.5 3.09

Index Left and below

129.0 30.2
159.2
311.5 $\frac{23.5}{53.7}$
335.0 3.11

131.5 24.4 (+3.08)
9.10.60 155.9 31.1
307.4 $\frac{31.1}{55.5}$
338.5 3.04 Mean +3.13

9 05 30
5 12
14 05.7
6089.587 ✓

This page omitted by mistake.

This page omitted by mistake.

1902phae.proj..55C

Dec. 5th 1902 Friday
Same Again (j')

Index Left and Below

1

129.5 28.5
9.14.30 158.0
310.6 25.8
336.4 54.3 3.09

130.9 24.1 (+3.08)
153.0 30.5
307.5 54.6 3.07
338.0

Index Right and Above

36.6 31.4
68.0 23.7
222.1 55.1 3.05
245.8

39.9 24.6 (+3.02)
9 24 00± 64.5 32.2
217.8 56.8 2.98
249.4

Mean +3.05

P.A. 195 Vel. A

9 19 15
+12
14 19.427
5
6089.597

Dec. 5th Friday
Star ε
Index left and Above

9.42.30 177.0 112.0 Comp. Star dis.
289.0
14.8 78.2
93.0 190.2 −0.19
169.8

19.3.0 81.5 (−0.20)
~~273.9~~ 274.5
356.9 109.5
191.0
106.4 169.0 −0.21

Index Right and below

92.5 103.5
196.0
282.5 79.9
2.4 183.4 −0.06
176.6

102.5 79.8
9.50.00 182.3 (−0.14)
9 46 15 265.4 111.5
5 12 191.3
16.9 168.7 −0.21 mean −0.17
14 46.4
6089.615

Dec. 5th Friday
Index Right and below
Same Again

9.54.30 89.4 106.9
196.3
282.6 81.4
4.0 188.3 -0.16
171.7

103.2 78.2 (-0.14)
181.4
266.4 108.8
15.2 187.0
173.0 -0.13

Index Left and Above

28.4 107.1
115.5
190.7
271.5 80.8
187.9
172.1 -0.15

11.6 79.7
10. ~~3~~ 2 30 91.3 -0.18
175.5 111.5
9 58 30 267.0 191.2
~~57~~ +12
168.8 -0.21 mean -0.16
14 58 42
6089.624

Dec. 5th Friday
Star g
Index Left and Above

293.2 257.3 Comp. Star dis.
10. 3.25 350.5
98.1 87.8
185.9 145.1 0.67

275.6 91.6 (+0.58)
7.2
110.5 62.3
172.8 153.9 0.50
Index Right and Below

200.5
265.5 65.0
8.5 82.8
91.3 147.8 0.62

190.8 84.1 (+0.64)
10.18.10 274.9
21 35 21.5 61.7
10 10 48 83.2 145.8 0.66 Mean +0.61
5 + 12
15 16 00 G.M.T.
6089.633

Dec. 5. 1902.
Same Again

Index Right and below

202.5
264.3 61.8
10 21 0 ~~7.9~~ 12.0
95.0 83.0
144.8 0.68

186.2 (+0.60)
~~10. 21. 00~~ 276.3 90.1
21.3 62.7
84.0 152.8 0.52

Index Left and Above.

111.0
173.0 62.0
274.5
6.0 91.5
153.5 0.51

96.2 85.3 (+0.56)
10. 30. 30 181.5
5,1 30 290.5 62.3
10 25 45 ✓ 352.8 147.6 0.62 mean +0.58.
5 + 12
P.A. 281 Ver. A.
15 25 57 ✓
6089.643 ✓

W's watch used for times to-night on Pleiades. Watch 12 secs. slow.

Dec. 5. 1902.
Star f

L and A.

10 40 2

288.72 71.5 Comp. Star dir.
0.2
97.6 84.4
182.0 155.9 +0.46

278.0
6.8 88.8 (+0.42)
107.0 70.8
177.8 159.6 0.39

A + B

189.5
275.0 85.5
20.9 69.7
90.6 155.2 0.47

195.6
266.5 70.9 (+0.44)
10.0 87.5
97.5 158.4 0.41

mean +0.43

10 52 18
10 46 10.2
5 12
15 46.4
6089.657

Dec. 5. 1902.
Same again.

A + B
17.2
10 54 6 86.6 69.4
189.5 84.2
273.7 153.6 +0.50

10.6 88.2 (+0.47)
98.8
199.4 68.6
268.0 156.8 +0.44

L + A
278.8 87.4
6.2
107.9 70.3
178.2 157.7 +0.43

288.2 (+0.40)
11 9 11 358.0 69.8
123 17 96.5 90.5
11 01 ~~18~~ 187.0 160.3 +0.38
17 mean +0.44
5 +12

16 01 29 G.M.T.
6089.668

Dec. 6th 1902 (Saturday)

Standards in Pleiades.

3.40 +23.7
0.31

3.92.

Star in
Index left and above

317.9 - 9.5 ✓ Comp. Star dis.
7.34.00 327.4
137.9 9.9 ✓
147.8 19.4 ✓ +5.36

318.0 8.2 ✓ (+5.43)
326.2
136.5 10.0 ✓
146.0 18.2 ✓ 5.50

Index Right and below.

227.5 10.7 ✓
238.2
48.2 9.6 ✓
57.8 20.3 ✓ +5.26

227.5 8.5 ✓ (+5.38)
7.40.50 236.0
7 37 25 48.2
5 12 57.8 9.6 ✓ 18.1 ✓ +5.51 mean +5.40

12 ~~8~~3 7 37 ✓
60~~8~~9 526

Dec. 6. 1902.

~~Same~~

Same Again
Index Right & below

~~8~~ 7.57.30 227.9
237.3 9.4
48.6 8.0
56.6 17.4 +5.59

228.3
236.0 7.7 (+5.54)
47.6 10.5
58.1 18.2 +5.50

Index Left and Above

137.3
146.5 9.2
318.2 8.3
326.5 17.5 +5.58

(+5.58)

138.9
146.7 7.8
~~316.8~~ 317.52 9.6
326.8 17.4 +5.59 mean +5.56

8.03.00
7 114 30
~~8~~ 7 57 15
5 12
12 57 27
60~~89~~ 90 .540 G.M.T.

P.a. 107 Ver. A

Dec. 6. 1902.

Star C

Index Left and Above

313.5
8.11.30 329.7 L 16.2 Comp. Star dis.
136.6
148.3 11.7
27.9 +4.56

315.5
327.8 12.3 (+4.58)
134.3 15.3
149.6 27.6 +4.59

Index Right & below

224.9
240.2 15.3
46.7 12.1
58.8 27.4 +4.60

226.0
8.25.15 238.4 12.4 (+4.60)
8 18 22
5 12 46.0 15.0
61.0 27.4 +4.60
13 18 34 G.M.T. Mean +4.59
90.
608~~9~~ 55~~42~~

Dec. 6. 1902.

Same Again

Index Right and below

224.2
8.27.30 238.3 14.1
47.5 12.0
59.5 26.1 +4.71

225.4 12.4 (+4.65)
237.8
40.4 15.1
60.5 27.5 +4.59

Index Left and Above.

134.5
149.5 15.0
310.5 12.5
328.0 27.5 +4.59

135.5 13.5 (+4.52)
8.45.00 149.0
314.0 15.7
329.7 29.2 +4.46 mean +4.52

8 36 15
5 12
13 36 27 G.M.T.
90
60~~8~~9.567

P.A. 290 Ver. A

Dec. 6. 1902.

Star i below
Index ~~Left~~ Right and Above.

302.0
8.55.00 342.5 = 40.5 Comp. Star dis.
112.0 56.0
168.0 96.5 +1.74

294.4 ~~63.1~~ (+1.78)
357.5 57.1
122.4 39.2
161.6 96.3 +1.75

Index Left and Above.

204.0 54.7
258.7
33.5 36.6
70.1 91.3 +1.88

~~209.5~~ 214.5 +1.89
9.3:50 249.2 34.7
8 59 25 24.0
0 7 12 79.9 55.9
13 59 37 90.6 +1.90
6089.583 (90 written over 89)

~~Mean +1.72~~
Mean +1.82

Dec. 6. 1902.
Same again
Index left and above

204.5
9.6.20 259.5 55.0
34.0 36.5
70.5 91.5 +1.87

214.0 36.5 (+1.86)
250.5
24.0 55.5
79.5 92.0 +1.86

Index Right and below

~~44~~
~~112.8~~
~~171.0~~
~~302.3~~
~~343.5~~

120.8
161.6 40.8
290.5 59.8
350.3 100.6 +1.64

9.21.30 (+1.66)

27 50
9 13 55
5 + 12
14 14 07 G.M.T.
6090.593

112.0 59.4
171.4 40.0
302.0 99.4 +1.67 mean +1.76
~~341.6~~ 342.0

P.A. 153. Ven. A.

Dec. 6th 1902. Sat.

Star a'

Index Left and Above.

37.5
9.49.20 67.5 30.0 Star a' dis.
222.0 21.8
243.8 51.8 −3.19

41.6 21.4 (−3.19)
63.0
216.5 30.4
246.9 51.8 −3.19

Index Right and below

313.0 19.6
332.6
129.4 26.6
156.0 46.2 −3.45

9.59.10 307.6 (−3.39)
335.0 27.4
9 54 15
5 +12 131.9 21.4
14 54 27 153.3 48.8 −3.33 mean −3.29
6090.621

Dec. 6. 1902.

Same Again

Index Right and below

311.3
10. 0. 30 332.9 21.6
128.1 27.4
155.5 49.0 -3.32

307.8 (-3.24)
337.0 29.2
131.0 21.3
152.3 50.5 -3.25

Index Left and Above.

219.6 24.3
243.9
39.2 25.6
64.8 49.9 -3.24

218.1 -3.24
10. 11. 30 240.1 27.0
39.5 24.5
64.0 51.5 -3.21 mean -3.26

10 06 00✓
5 12✓

15 06 12
6090.629✓

P. Q. 344 Ver. A.

Dec. 6. 1902.
Star δ'
Index Left and Above
Star b' dis.

10.15.00 → 27.8
75.2 47.4
210.5 42.5
253.0 89.9 −1.92

30.5
72.85 42.0 (−1.94)
208.8 46.2
255.0 88.2 −1.96

Index Right and below.

297.2
347.5 50.3
121.5 42.1
163.6 92.4 −1.85

11.24.00 302.5
341.2 38.7 (−1.88)

39 00
10 19 30
5 12
15 19 42
6090.639

116.4 51.8
168.2 90.5 −1.90 mean −1.91

Dec. 6. 1902.
Same Again.
Index Right and below

10.26.20 295.9
347.9 52.0
123.0 38.0
161.0 90.0 −1.91

301.0 44.2 (−1.86)
345.2
117.2 49.3
166.5 93.5 −1.82

Index Left. and Above

207.3 52.0
259.3
31.0 41.2
72.2 93.2 −1.83

210.8 43.9 (−1.82)
10.35.00 254.7
61 20 25.5 50.2
10 30 40 75.7 94.1 −1.81 mean −1.84
5 12
15 30 52 W's watch used to right, for times.
6090.647 Watch 12 secs. slow.

P.A. 338 View A

Dec. 8. 1902. (Monday).

U Sagittae.

19 20 +19.4
24 25
+5 5

0.25. Region rather low, and clouds in this region

19.20 +19.4
24.30
18.50

24.30 +19.4
19.20
5.10

24.53 +19.8
19.20
5.33

1.03. Region too low and seeing bad (abandon)

1902phae.proj..55GW

Dec. 8th 1902

X Cygni

25. 05
19. 45   +32.6
5. 20

(Abandon for Pleiades)

~~25. 08~~
3. 40   +23.7
1 08
2. 32

Dec. 8. 1902.

Star a (Pleiades)
Index left and above

133.0 L 17.0 ✓ Star a (Alcyone) dis.
7
8.56.00 150.0
314.6 16.9 ✓
331.5 33.9 ✓ 4.13

132.2 4.08
17.9 ✓
150.1
17.5 ✓
313.5
35.4 ✓ 4.04
331.0

Index Right and below

43.5
60.9 17.4 ✓
224.0 18.5
242.5 35.9 ~~3.03~~ 4.01

~~3.96~~ (4.05)
43.5
18.1
8.08.—
61.6
16.5
124 00 224.6
34.6 4.09
8 02 00 ✓ 241.1 mean 4.06
5 +14
13 02.14
6092.543

Dec. 8. 1902.

Same again

Index Right and below

44.4
8.11.30 61.8 17.4 ✓
224.5 17.5 ✓
242.8 34.9 ✓ 4.07 ✓

(4.12 ✓)

43.5 17.3 ✓
60.8
225.3 15.9 ✓
241.2 33.2 4.18 ✓

Index Left and above.

312.8 17.7 ✓
330.5
133.4 17.6 ✓
151.0 35.3 ✓ 4.04 ✓

(4.02 ✓)

313.0
8.25 – ~~330.2~~ 333.5 20.5 ✓
134.4 ~~15.6~~ 15.6 ✓ 4.00 ✓
150.0 36.1 ✓

mean – 4.07 ✓
Gen. mean – 4.06 ✓

36 30
8 18 15 ✓
5 + 14
13 18 29 ✓
6092.554 ✓

P.a. 235° Ver. A.

Dec. 2. 1902.

R. Ursae Minoris Phot. J. W. Obs.

$$\begin{array}{r} \overset{75}{26.15} \\ \underline{16.31} \\ 9.44\ \text{E} \end{array} \qquad +72.5$$

$$\begin{array}{r} \overset{80}{26.20} \\ \underline{16.31} \\ 9.49 \end{array} \qquad +72.5$$

$$\begin{array}{r} 26\ \ 25 \\ \underline{16\ \ 31} \\ 9\ \ 54 \end{array}$$

Dec. 8 1902 Monday

R Ursae Minoris

Index Right and below

109.5 ∠ 63.4✓ Comp. Star dis.
9. 26. 30 172.8
294.5 55.3✓
349.8 118.7✓ +1.22

115.5 54.9✓ (+1.18)
170.4
289.5 67.7✓
257.2 122.6✓ +1.14

Index left and above

19.1
86.2 67.1✓
203.5 55.5✓
259.0 122.6✓ +1.14

25.5 54.2✓ +1.16
9. 40. 50 79.7
200.0 65.7✓
265.7 119.9✓ +1.19

9 33 50✓
5 14
14 34 04 G. M. T. mean +1.17
6092.607

Dec. 8. 1902.

Same again
Index Left and above

19.4
9.44.35 86.7 67.3
201.5 59.0
260.5 126.3 +1.06

20.8 56.2
80.0 (+1.06)
196.6 69.4
266.0 125.6 +1.07

Index Right and below

291.0
(9.50.–) 355.0 63.7
115.0 53.0
168.0 116.7 +1.27

296.0 +1.28
9 53 00 348.5 51.0
97 35 110.0 65.0
9 48 24 175.0 116.0 +1.28
5 14 mean +1.17
14 48 38 G.M.T. S.T. 3.21 Gen: mean +1.17
6092.617

H.A. – ~~1h 15m~~ 10h 45m
Dec. +72°.2
P.A. 328
Ver. A
Spo. 2.5 b
3.5 c

Dec. 8. 1902.

μ Cephei, Phot. T. W. S.
7" cap used.

21 40 +58.3
27 35
+5 55

Index Right and below

294.4 ∠ 54.6 ✓ / Var. dis.
10.~~23~~ 18 — 349.0
123.0 39.5 ✓
162.5 94.1 ✓ −1.81

(±1.74)

302.5 38.6 ✓
341.1 61.0 ✓
109.4 99.6 ✓ −1.67
170.4

Index Left and Above

303.5 59.3 ✓
262.8 37.5 ✓ ~~40.5~~
33.0
70.5 ~~99.8~~
96.8 ✓ −1.74

212.0 40.7 ✓
10.25.00 252.7 (−1.72)
43 00 293.5 57.7 ✓
10 21 30 ✓ 81.2 94.4 ✓ −1.70 mean −1.73
5 14
15 21 44 ✓ G.M.T.
6092.640 ✓

Dec. 8. 1902.

Same again

Index Left and above.

202.7
10.28.20 260.5 57.8
30.5 41.0
71.5 98.8 −1.69

210.50 42.6 (−1.66)
252.6
22.2 58.8
81.0 101.4 −1.62

Index Right and below

413.0 60.5
173.5
302.0 43.5
345.05 104.0 −1.56

121.9 42.1 (−1.59)
10.~~26~~.30 164.0
33
61 50 293.0 59.5
10 30 55 352.5 101.6 −1.62 mean −1.62
Gen: mean −1.68
5 14
15 31 09 G.M.T.

W's watch used to-night. Watch 14 secs. slow.

6092.647

P. A. 4° Ver A.

Sid. T. 4h 3m

H. A. 6 21

Dec. +58°.3

Sprocket 0.5 A

" 1.5 B

" 2.1 C

Dec. 8/9th 1902 (Tuesday).

X Cygni

19.45   + 32.6
24.46
5.01

Index Left and Above

287.0 = 71.5 Var. dis.
358.5
7.42.20 96.8 90.7
187.5 162.2 −0.34

(−0.34)

270.5 93.5
9.0
107.5 68.2
175.7 161.7 −0.35

Index Right and below.

196.9
269.0 72.1
9.5 87.0
96.5 159.1 −0.40

187.4 −0.38
8.06.20 276.2 88.8
17.0 72.9
89.9 161.7 −0.35 mean −0.36

7 54 20
5 16
12 54 36 G.M.T.
6093.538

8.10
7.74

Sa Dec. 9. 1902.
Same again
Index Right & below

8.8.50

16.9			
89.5	72.6 ✓		
188.9	86.6 ✓		
275.5	159.2 ✓	−0.40	
8.6	89.2 ✓		−0.37
97.8			
196.0	73.0 ✓		
269.0	162.2 ✓	−0.34	

Index Left and Above

287.4			
357.9	70.5 ✓		
96.5	90.5 ✓		
187.0	161.0 ✓	−0.36	
286.9	72.6 ✓		(−0.42)
359.5			
95.8	82.6 ✓		
178.4	155.2 ✓	−0.47	mean −0.40

8.15.00
23 50
8 11 55
5 16
13 12 11 G.M.T.
6093.550

mean −0.40
8.10
7.70

Dec. 9. 1902.

3rd Group
Same Again. Index Left and Above

	279.0			
8.22.00	6.5	87.5		
	166.6	70.8		
	177.4	158.3	−0.41	
	286.0	73.0		(−0.35)
	359.0			
	95.0	91.5		
	186.5	164.5	−0.29	

Index Right & below.

	189.0	86.4		
	275.4			
	16.5	73.0		
	89.5	159.4	−0.39	
	196.0	71.6		(−0.40)
8.30.00	267.6			
	9.5	87.0		
	96.5	158.6	−0.41	mean −0.38

00

8 26 00
5 16
13 26 16
6093.560

8.10
7.72

P.A. 354.0 Ver. A.
S.T. 2.06 H.A. 6.15
Dec. 32.2
Sprocket
~~H.A. 6.15~~

4.5 a
5.5 b
6.1 c

Dec. 9. 1902.

S Cygni. Sr. obs.

20 8 + 57.0
26 40
+6 32

26. 43
20. 8
6. 35 + 57.0

9. 25 0 2,5 V, V 2,5 p 12.62 ✓
12.60
12.64

S. Cassiop
2. 58
1. 12 + 72.1
1. 46

Star w seen. Star x seen Var. not certainly seen.

9 47 x 1 N Ftr. Chron 14.01

Dec. 9. 1902.

T. Cygni Phot. T. W obs.

27.25
20.43 +34.0
6.42

(Abandon)

V Cygni W. obs.

27. 27
20 43 +47.3
6 .44

10 17 Var. thought to be seen quite certainly, but region little low and Moon & rather higher ✓

t 3.5 V, V 1 u 13.43
Above est. a little uncertain 13.37
13.40

S. Cam. Min.

7.19 +8.6
3.50
3.29

12.00
3.29
8.31

7.19
3.56
3.23

10 53 m 1 var, var 1.5 n 10.54 ✓
10.67
10.60

W's watch used for times to-night.
Watch 16 slow

Dec. 12 1902 (Friday).

T Cygni

20 40 +33.4
25.00

~~5~~ 4
4. 20 W.

25 06
20 40
4. 26 +33.4

7.34 Clouds too thick

25 19
20 40
4. 39 + 33.4

Some clearer.

Dec. 12. 1902.

T Cygni

Index Left and Above

128.8 29.4

7.52.50 158.2 ← Var. Dis Var. dis.

304.9 37.3 / 66.7 −2.62

Clouds rather thick

342.2

Index Left and Above.

123.5

(7.55.10) 159.0 35.5

307.5 29.4 / 65.0 −2.64 (−2.6~~4~~5)

337.0

Index Right and below.

128.5 26.5

155.0

303.0 38.0 / 64.5 −2.69

341.0

Index Right and below

34.4 36.1

8 03 30 70.5

7 57 50 218.4 28.1 / 64.2 −2.71 −2.70

5 +20

12 58 10

6096.540

More clouds stars gone mean −2.68

246.5

P.A. 15° Var. A.

HA. 6.15

Dec. 33.6

Sprocket { 3.5 A
4.5 B
5.1 C

Dec. 12. 1902.

Stopped by clouds, no chance for any thing further.

Impossible to finish preceding group. Settings on preceding group made through some what varying clouds.

Last set especially difficult.

Images rather dim, but as much care as possible exercised.

W's watch used for times to night.

Watch 20^s slow.

Wed. Dec. 17th 1902

7 15:00
~~7.16~~ Cloudy

Doubtful Variable +21°.1146
Phot. J. W. Ob.

6.6 +22.5
1.31
5.35 E
12.00
5.35
6.25

6.6
1.41
5.25
12
6.35 +22.5

7.47 50 Clouds thick

8.47 00 Clouds thick everywhere apparently no chance for any other work

Thursday Dec 18 1902

W Herculis W. Ob.

16 32 + 37.5
25 20
8.48

~~Too Low~~

7.22.00 Clouds and star too Low.

V. Cygni W. Ob.

20 43 + 47.3
25 28
4.45

Abandon for the present.

7 29.20 Somewhat cloudy

R S. Tauri

4.23 + 9.3
1.33
2.50 ~~H~~ E
12.00
9.10 E

+ 9.3
4.23
1 37
2.46
12.00
9.14 E

Dec. 18 1902

R. Tauri

7.47.0 ~~#~~ t 2.5 Var., Var. 2.5 u. 12.71 ✓ 12.76 ✓ 12.74

S ~~R~~ Tauri

Thought to be seen, there is a faint star apparently in the position of the variable

8 02.00 w 3.5 var., var 1.~~x~~ 13.77 ✓ 13.74 ✓ 13.76

much wind and seeing rather poor, but this seem to be the variable.

V Cygni

20.43 +47.3
26 09
5.26

20.43
26.15
5.32 +47.3

8.35.00 t 2.5 var., var ~~f~~ 1.5 u 13.33 ✓ 13.32 ✓ 13.32 ✓

✓

Dec. 18 1902

S. Cygni

20.08 +57.0
26 37
6. 29

8.57.00 p 2. var, var 2. $\frac{a}{g}$ v

1305
13.03
13.04

Selection of 14 mag. stars for S R Orionis

5. 24 − 4.8
3. 31
1. 53
12. 00
10. 7

9.45.00 Selection seems to be very good.

+43.4101

22. 00 +44. 4
27 48
5. 48

(Abandon)

Clouds apparently coming up in N.W.

Dec 18th 1902

~~o Ceti~~ o Ceti. Phot. W.
W. S.

2.12 — 3.6
3.52
1.40
12.~~40~~
10.20

2.12
3.57
1.45

~~2.59~~
~~3~~

2.12
3.59
1.47

Dec. 18th 1902
Index R. and below

~~279.5~~ 260.5
10. 9. 00 341.5 81.0✓ Var. dis.
77.0 ✓
166.0 89.0
170.0✓ −0.19✓✓

256.8 88.6✓
~~14 00 +~~ 345.4 (−0.20)✓
81.5 81.0✓
162.5 169.6✓ −0.20✓✓

Index L. and above

172.0 ~~85.2~~
257.2 79.2✓
345.9 90.2✓
76.1 169.4✓ −0.20✓✓

164.9
10.19.00 255.4 90.5✓ (−0.18)✓✓
10 14 00✓ 349.5 80.5✓
5 29✓
15 14 29 G.M.T. 70.0 171.0✓ −0.17✓✓ mean −0.19✓✓
6102.635✓

Same again
Index L. and above

171.5
10.23.00 250.8 79.3✓
~~65 00~~ 344.8 91.5✓
10 16 15✓ 76.3 170.8✓ −0.17✓✓
5 +29✓
15 16 44✓ ~~G.M.T.~~
~~608~~
6102.

Dec. 18. 1902.

164.0
257.8 93.8 ✓ (−0.14) ✓✓
349.8 80.2 ✓
70.0 174.0 ✓ −0.11 ✓✓

Index R. and Below

81.5
161.2 79.7 ✓
255.4 91.3 ✓
346.7 171.0 ✓ −0.17 ✓✓

75.4 92.3 ✓ −0.16 ✓✓
10, 32, 30 167.7
55 30 260.5 80.1 ✓
10 27 45 ✓ 340.6 172.4 ✓ −0.14 ✓✓ Mean −0.15 ✓✓
5 29 Gen. Mean −0.17 ✓✓
15 28 14 G.M.T. 919
~~60~~ 6102.644 ✓ S. T. 4h 39m 9.02 ✓
H. A. 2 25
Dec. −3.°8
P. A. 11.°0 V4r. B.

Troubled by clouds in last group.

Wr's watch used for times to right.
Watch 29 secs. slow.

Posted throughout to here.

Friday Dec. 19th 1902

u Herculis

17 14   +33.2
25 35
8.21 W

7.28.05 Too low, Clouds also.

+43° 1401

~~22~~

Phot. J. W. Ob.

22.00   +44.3
25 45
3.45

22.00
25 50
3.50

7 45 00 Clouds rather thick, Stars invisible.

1902phae.proj.55bw

Dec. 19 1912 (Friday)

Index R. and above

8 32 30 22.4 61.2
83.6
194.5 72.6 +0,90
267.1 133.8

(+0.94)

15.0
88.5 73.5
202.5 57.1 +0,97
259.6 130.6

Index L and below

~~295.1~~
~~352.0~~

~~105.0~~
~~181.6 76.6~~
~~284.5 75.4~~
~~359.9 152.0~~

– 285.0
– 359.0 74.0
– 112.5 61.5
– 174.0 135.5 +0,87

– 291.5 60.9 (+0,82)
– 352.4
– 103.5 79.0
– 182.5 139.9 +0.78

mean ~~+0.90~~ 0.88

8 49 00
81 30
8 40 45
5 +29
13 41 14 G.M.T.
6103.5702
6088.0261
15.5441

Dec 19th 1902 (Friday)
Same Again
Index L. and below

164.3
8 57.00 ~~181.7~~ 182.0 77.7
293.5 60.5
354.0 138.2 +0.81

114.5 59.0 (+0.89)
173.5 76.0
285.0 135.0 +0.88
1.0

Index R and above

15.0
89.3 74.3
201.5 60.3
261.8 134.6 +0.88

23.1 59.3 (+0.89)
9.12.00 82.04
~~63~~ 00 193.0 74.5
123
9 ~~01~~ 60 30 267.5 133.8 +0.90 mean +0.86
5 29 Gen. mean +0.87
14 01 59 G.M.T.

6103.5847 S.T. 3 50
6088.0261 H.A. 5 54
15.5586 Dec. 43.5
P.A. 142.2 Ver. B.
Sprocket. 6.5 B
7.5 C

Dec. 19 1902 (Friday)

Selection of 14th mag. stars for
V Cancri

8 16 + 17.6
4. 02
4. 14
12 00
7.46

7.51

Star No. 1 follows var. 26 sec 4' N

Star No. 2 follows var. 31 sec 3'.5 N

Star No. 3 follows var. 23 sec 3'.2 ~~4.8~~ S.

Star No. 4 follows var. 35 sec. 1'.8 S

Star No. 5 follows var. 23 sec 2'.1 N

S. Cassiop.

1 10 + 72.0
4. 15
3. 05

Dec 19 1902 (Friday)

Var. not certainly seen

10 20 00 x 1 N

Sky now becoming a little more cloudy.
~~colour~~ estimate not quite satisfactory
Moon also up, will look at variable
again at subsequent night.

S Orionis W. Ob.
(abandon)

Clear again,
R Leonis Minoris W. Ob.

9 40 +35.0
4.34
5.06
12.00
6.54

9.40
4.37
5 03 +35.0
12.00
6.57

over.

Dec. 19. 1902.

No. 4 fols 25 secs. 2'.7 north.
" 5 " 32 " 3,5 "

Rather difficult. Will go over all the stars on subsequent night.

L's watch used for times to night.
Watch 29 secs. slow.

Posted. Ledgered to here.

Dec. 20th 1902. (Sat.).

78, 1901 Cygni. Phot. T. W. ob.

20 18 +42.8
25 50
5.32

20.18 +42.5
25 56
5.38

Impossible to do anything on var. Clouds too thick to see var. in large telescope
(Abandon)

Doubtful var. Phot. T. W. Ob.

~~445~~
445 +28.4
2.24
2.21
12.00
9.39

Dec. 20th 1902 (Sat)

+28 707

4 39 +29.0
2.31
2 08
12 00
9.52

4 39
2 42
1.53 +29.0
12 00
10.07

8
4.39
2.44
1 55
12.00
10.05

Dec. 20th 1902 (Sat.)

Index. R. and above
comparison dis.

107.5 70.2
8.43 00 177.7 89.5
277.0 159.7 +0.39
6.5

(+0.43)

96|0 289.5 67.2
186.|3 356.7
~~289.~~ 296 99.2 88.0
187.2 155.2 +0.47

Index L and below

191.1 85.1
276.2
19.9 65.1
85.0 150.2 +0.57

(+0.58)

200.4 63.1
8.52.00 263.5 86.0
95 00 8.9 149.1 +0.59
8 47 30 ~~95~~ 94.9 mean +0.50
5 +39
13 48 09
6104.575

S.T. 3 15
R.A. −1 30
Dec. 28.0
~~Spacket~~
P.A. 225 Ver B.

Spacket { 5.5 B.
6.5 C

Dec. 20th 1902 (Sat.)

+42° 3338 Phot. J. W. Ob.

19 20 +43.1
27 28
---
8 08

19 20
27 34

8.14

Region too low and Clouds too thick, also cannot find var. in the clouds.

Dec. 20th 1902 (Sat.)

Doubtful var.
+21° 1146 Phot. T. W. Ob.

5 55 +23.2
3.48
2 07
12.00
9 53

5 55
4 07
1.48 +23.2

5 55
3 53
2.02
12 00
9.58

Comp. Star = +21° 1143 (7.8)

See next two pages for measts.

Dec. 20th 1902 (Sat.)

Index R. and above

6.5 ← Susp. Var. dis.
~~10~~ 9 12 00 98.5 92.0 ✓
197.5 71.1 ✓
268.6 163.1 ✓ − 0.32 ✓

− 0.34

17.2
86.3 69.1 ✓
187.0 91.3 ✓
160.4 − 0.37 ✓
278.3

Index L and below
Mean = − 0.28 ✓

275.7
12.6 96.9 ✓
107.~~8~~2 74.0 ✓
181.2 170.9 ✓ − 0.17 ✓

285.0 − 0.23 ✓
9 22 30 358.5 73.5 ✓
9 17 15 ✓ − 95.0 91.0 ✓
5 + 39 186.0 164.5 ✓ − 029
14 17 54 ✓ G.M.T.
6104.596 ✓

Dec. 20. 1902.

Same Again
Index L. and below.

276.6
9 24.00 8.0 91.4
105.4 75.4
180.8 166.8 — 0.25

— 0.16

282.8
8.5 85.7
96.8 91.1
187.9 176.8 — 0.06

Index R. and above.

Mean = −0.26

189.0
277.0 88.0
15.5 73.4
~~88.9~~ 88.9 161.4 — 0.35

197.0 —0.36
9. 31 00 268.5 71.5
55 00 8.0 88.8
9 27 30 96.8 160.3 — 0.38
5 39
1~~5~~4 28 09

Final mean = −0.27

S. T. 4h 50m
6104.603 H. A. −1 17
Dec. +21°.9
P. A. 27°.9 Var. B.
~~Sprocket~~ 4.5 B
" 5.5 C

Dec. 20, 1902.

Reexamination of 14th mags. for
V Cancri. W. ds.

8 16 +17.6
5 0
-3 16
8 44

10 50 Sky too hazy in this region for critical examination.

Reexamination of 14th mags. for
R Leo Minis. W. ds.

9 40 +35.0
5 15
-4 25
7 35

11 13 Selection of two remaining stars probably pretty good but night is too poor for critical examination to-night. Will examine on a subsequent night.

Dec. 20. 1902.

W's watch used for times to night.
Watch 39 secs. slow.

L. P. P.

Dec. 23rd 1902 (Tuesday)

14, 1902   Phot. T. W obs.

2 31   + 41.6
2 36
.05 W   Abandon, too high.

S. Bootis   Phot. T. W obs.

14 17   + 24.2
3 30   + 54.2
10 47
12 00
1.13 E

14 17
3 32
10 45
12 00
1.15

(Abandon)

Practically impossible to see any thing
but bright stars.
Region too low and seeing too poor.

Dec 23rd 1902 (Tuesday)

V Cancri

8 18 +17 5
3 47
4 31
12.00
7 29

8.18 +17.5
3 52
4 26
12 00
7.34

Examination of 14th mag. stars for
V Cancri
Much wind and air sharp, seeing rather poor, will have to examine again on subsequent night.

Dec 23rd 1902 (Tuesday)

Examination of 14th mag stars of

Leonis Minoris

9 34 +35.8
4 43
4.51
12 00
7.09

9 34
4 46
4 48
12 00
7 12

S Bootis, again. W. St.

14 17 +54.2
4 50
9 27
12 00
2 33

11.77
11.84
11.80

11 15 l 2 Var. Var. 2 m

L. P. P.

Dec. 24 1902 (Wednesday)

S. W. Cygni   Phot. T. W. ob.

~~20 9~~
~~23 14~~
~~3 5~~   ~~+46 8~~ +46.3

20. 9
26 15
6 6

26 17
20 9
6 8   +46.3

(Abandon)

+43 4101   Phot. T. W. Ob.

26 31
22 00
4. 31   +44.4

26 37
22 00
4 37

8 35 00 Abandon, too cloudy and impossible to get variable.

Dec. 24 1902

14 1902 Phot. T. W. Ob.

2 33 + 42.2
3 00
0 27

abandon altitude very high
and sky too cloudy

M.P. 441 Phot. T. W. Ob.

3 33 +62.3
3 05
0.28

Altitude very high, abandon for the
present.

+43 4101 Phot. T. W. Ob.

27 17 +44.4
22 00
5 17

27.22
22 00
5 22

Dec. 24 1902

Index R. and above

~~204.~~ ~~202~~.201.4
97.10 261.4 60.0 ✓
13.4 76.6 ✓
90.0 136.6 ✓ +0.84 ✓

(+0.86)

194.8 75.2 ✓
270.0 60.1 ✓
22.2 135.3 ✓ +0.87 ✓
82.3

Index L. and below

114.5 60.4 ✓
174.9 ✓
283.0 77.5
+2 0.5 137.9 ✓ +0.82 ✓

(+0.80)

102.8 77.7 ✓
9.20.0 180.5 62.5 ✓
27 10 292.0 140.2 ✓ +0.77 ✓ mean +0.83 ✓
9 13 35 354.5
5 + 48
14 14 23 G.M.T. S.T. 4. 11
6108.5933 ✓ H.a. 6.15
6088.0265 Dec 43.5
20.5668 P.a. 331 Ven. A

Sprocket { 6.5 B
7.5 C

Dec. 24 1902

Stopped by clouds

Doubtful Var. +26 1117
Phot. J. W. 06.

~~26 11~~

6 2 +26 0
4 30
1 ~~28~~ 32

6. 2.
4 36
1. 26
1 2 0 0
.10 34

Comp. Star ≈ +

For observations see next two pages (151+152).

Dec. 24. 1902.

Index L. and Above

104.4 ∠ Var. dis:
10.22.0 183.0 78.6 ✓
276.0 92.4 ✓
8.4 171.0 ✓ −0.17 ✓

96.4 95.1 ✓ (−0.20) ✓
191.5
287.0 72.0 ✓
359.0 167.1 ✓ −0.24 ✓

Index R. and below

6.0 92.1 ✓
98.1
195.8 70.1 ✓
265.9 162.2 ✓ −0.31 ✓

14.8 75.7 ✓ (−0.29) ✓
18.30 00 90.5
10 26 00 188.0 91.4 ✓
5 +48 279.4 167.1 ✓ −0.24 ✓ mean −0.26 ✓
15 26 48 ✓ G. M. T.
610 & 644 ✓

Dec. 24. 1902.

Same again.

55 92.5
10 35 0 98.0
196.6 69.1
265.7 161.6 −0.35

15.6 (−0.30)
91.0 75.4
189.0 91.1
280.1 166.5 −0.25

Index left & above.

105.2
184.0 78.8
277.5 89.3
6.8 168.1 −0.22

97.1 (−0.23)
10 46 16 192.0 94.9
81 16 286.5 72.6
10 40 38 359.1 167.5 −0.24
5 +48
15 41 26 G.M.T.
610~~4~~8 654

mean −0.26
Gen mean −0.2~~4~~5

S.T. 5h 15m
H.A. −0 46
Dec +26.0
P.A. 279.0 Var. B.
Sprocket 6.5 A
" 7.5 B
" 8.1 C

1902phne.proj..559W

Dec. 24. 1902.

Σ 10′ Phot. R. W. do.

4 21 +15.6
5 17
40 5.6

P.A. 335° Dist 5.5 ± mags. 4.8, 5.2

Index below.

82.0
11 2 160.8 78.8
263.0 72.5
335.5 151.3 − 0.55

83.5 − 0.48
159.2 75.7
257.0 83.0
340.0 158.7 − 0.41

Index above.

Mean = − 0.47

350.8
67.8 77.0
171.0 79.2
250.2 156.2 − 0.45

350.1 − 0.46
11 15 67.2 77.1
11 08.5 170.2 78.1
5 4.8 248.3 155.2 − 0.47
16 09.3 G.M.T.
6 104.673

Dec. 24. 1902.

Expts with Phot. X He. ob.

Photometer seems to be in pretty good adjustment and electric light working all right.

W's watch used for times to night.
Watch 48 secs. slow.
L. P. P.

Dec 26 1902 (Friday)

Sky partly clear will try for
William's New Var.

W. Obs.

21 00 +43.3
26.29
5 29

21.00
26 35
5 35

8 40 Clouds thick again

9 930 Still cloudy no chance for any work

Dec. 27 1902 (Sat)

Mme Ceraski New Var. = 20.1902 Cyg.

21 00
25 39
4 39 +43.3

21.00
25 42
4 42

Ledgered
Posted

Star b follows star a 39 sec.
and is 4' south of it.
Star c follows star b 55 sec.
and is 2.5' south of it.

Dec. 27 1902.

Index L. and below

23.2✓ 54.2✓ Comp. Stat dis.
8 6 25 77.4✓
212.6 37.8✓
250.4 92.0✓ +1.86✓

29.0 (+1.84✓)
8 8 00 70.9 41.9✓
205.5 52.1✓
257.X1 94.0✓ +1.81✓

Index R. and Above.

346.5 50.0✓
8.16 10 296.5
121.6 40.3✓
161.9 90.3✓ +1.91✓

(+1.80✓)
300.5 44.5✓
8 21 20 345.0
51 55 113.1 53.8✓
8 12 59✓ ~~168.0~~ 166.9 98.3✓ +1.70✓ mean +1.82✓
5 +52✓
13 13 51✓ G.M.T.
6111.5513✓
~~6108~~ 6099✓
~~+2.9410~~✓

Dec. 27 1902
Same again
Index R and above

294.2 55.0
8 25 30 349.2
121.0 42.0
163.0 97.0 +1.73

302.0 42.2 (+1.70)
8 34 0 344.2
113.0 57.0
170.0 99.2 +1.68

Index L and below

205.5
8 40 50 260.6 55.1
32.6 40.9
73.5 96.0 +1.76

211.3 41.9 (+1.80)
8 46 55 253.2
26.2 51.0
77.2 92.9 +1.84

mean +1.75

14.7 15
8 36 49
5 + 52
13 37 41 G.M.T.
6111.5679
~~6108.6099~~
~~+2.9580~~

Dec. 27. 1912

Same again
Index L. and below

205.9
8 06.10 258.4 52.5
31.5 38.0
69.5 90.5 +1.90

~~212.6~~ 211.8
9 4 50 257.5 397 (+1.92)
27.4
77.1 49.7
89.4 +1.93
Index R and above.

110.5
9 17 0 168.1 57.6
301.5 41.7
343.2 99.3 +1.67

121.7 43.2 +1.68
9 19 20 164.9 56.0
277 20 295.0 99.2 +1.68 mean +1.80
9 09 20 ~~350.5~~ 351.0 Gen. mean +1.79
5 +52

14 10 12 G.M.T. S.T. 4 14
6111.5904 R.A. 7 12
~~6108.6099~~ Dec. 45.0
~~+2.9805~~ P.A. 70 Ver. A

Spacket
5.6 A
6.5 B
7.2 C

Dec. 27 1902

> 14 magn. standards for V Carmi W. ob.

8 18 +17.5
4 36

8 18
4 44
3 34

8 18
4 47
3 31

No. 1 follows var. 4^{sec} and is 5'
6.0' north of it.

~~No. 2 follows star, 18 sec and 5'~~
~~2.0' north of it.~~

No. 2 follows ~~var.~~ 10 ~~sec~~ ~~and 5~~

Dec. 27. 1902.

No. 2. fol. var. 17.5 secs. and is 2'.2 north.

11 15 No. 3 precedes the var. 21 secs., 1'.3 north.

No. 4 fols comp. star t 6 secs. and is 2'.8 south.

No. 5 fols. var 2 secs. and is 7'.7 south.

R Leo min. W. obs.
14 magn. standards.
9 40 +34.8
6 5
−3 35.
8 25

Seeing very bad. Will examine stars again on a subsequent night.

W's watch used to night for times.
Watch 52 secs. slow.

Ledgered, Plotted, Posted.

Dec. 30, 1902 (Tuesday)

Ball 103 B&C 1182
6 59 00 6 58 48.5

7:00
C's watch = 5 secs slow at 7h

21 00 +43.3
26 02
5 02

21.00
26 12
5 12 +43.3

Dec. 30 1902 (Tuesday)
Measts of Comp. Star for
Mme. Cesaskin's New Var. = 20.1902 Cygni.

Index L. and Clear.

117.0 < Comp. Star dis.
82436 167.8 50.8
301.3 41.5
342.8 92.3 + 1.85

122.4 +1.84
163.0 40.6
296.5 53.0
349.5 93.6 +1.82

Index R. and Above

28.2
77.5 49.3 Mean = +1.91
214.0 38.0
252.0 87.3 + 1.99

32.9 +1.98
8 36. ~~58~~ 45 71.9 39.0
61 15 267.4 48.4
8 30 38 255.8 87.4 + 1.98
5 +59
13 31 37 G.M.T.
6114.564

Dec. 30 1902. IX

Same Again

Index R. and above

27.9
8 40 00 77.5 49.6
212.0 40.7
252.7 90.3 + 1.91

33.0 +1.90
72.6 39.6
206.5 51.0
257.5 90.6 +1.90

Index L. and below.

297.0 Mean = +1.90
347.0 50.0
121.2 41.7
162.9 91.7 +1.87

302.3 +1.90
8 48 30 342.5 40.2
117.3 49.2
8 44 15 ~~167.0~~ 166.5 89.4 +1.93
5 +59 Final Mean = +1.90
13 45 14 G.M.T. S.T. 3 48
6114.573 R.A. 6 45
Dec. 45.0
P.A. 76.0 Ver. B.
Spickets { 6.5 B
7.5 C

Dec. 30 1902

The two preceding groups are meas'ts of +45° 3391 (9.5) with +45° 3403 (A.K.)

+45° 3391 is comp. star for new Ceraski's star Var.

Selection of 14th mag standards for V Tauri W. Obs.

449 +17.0
429
20
12 00
11 40

449
434
15
12 00
11 45

Dec. 30 1902

No. 1 follow var 35 sec and is 4.8'5'
north of it.

No. 2 follow var 48 sec. and is 2.7' ~~2.5~~
north of it

No. 3 follows var. 57 sec and is 4.9'
north of it.

No. 4 follow var. 31 sec and is ~~4.7~~
4.7' south of it.

10 20

No. 5 follow var 63 sec and is
1.5' south of it

No. 6 follow var. 22 sec and is
7.5' south of it.

Will look at this region again
This selection is preliminary

No. 6 seems to be a better than
No. 2 to-night

Dec. 30 1902

14th mag standards for

R. Leonis Min. N. Ob.

9 40 +34.8
5 13
4 27
12 00
7 33

9 40
5 18
4 22
12 00
7 38

	No.	1	prec.	32	secs.	5.1	north.
	"	2	fol	33	"	8.2	"
10 45	"	3	"	34	"	12.5	"
	"	4	"	18	"	2.7	~~south~~ south
	"	5	"	5	"	9.8	north.

The above selection adopted.

Dec. 30. 1902

14 mag. standards for V Cancri W. obs.

8 18 +17.5
6 0
-2 18
9 42

11 25 Selection seems pretty good, but will perhaps look at region once more.

W's watch used for times to right.
Watch 59 secs. slow.

L. P. P.

Dec. 31, 1902 (Wednesday)

B D C 1182 — 6 48 54.0

Ball 103 — 6 50 0.0

Mme Ceraski's New Var.

21 00 +43.3
26 06
5 06

21 00 +43.3
26 13
5 13

		(Gr.) In Light Scale.		mean.
7 50 7 51	~~b~~ c 5 var	15.0		
8 00 8:01	~~b~~ c 4 var	14.0		
8 23 8 24	~~b~~ c 3 var	13.0		
8 31 8 32	~~b~~ c 1.5 var 2 d	11.5	11.5	11.5
8 50 20 8 51 18	~~a~~ b 4 var 1.5 ~~b~~ c	8.0	8.5	8.2

χ 4.5
a 6
b 3.5
d

DEC. 31st 1902

				Mean
9 9 13 X 9 8 45	✱^{b} 3 var., var. 3 ✱^{c}	7.0	7.0	7.0
9 25 18 9 24 20	✱^{b} 2 var., var. 4 ✱^{c}	6.0	6.0	6.0
9 47 43 9 46 45	✱^{a} 3.5 var., var 0.5 ✱^{b} (region getting rather low images somewhat blurry.)	3.5	3.5	3.5
10 7 48 10 6 50	✱^{a} 1.5 var. var 2.5 ✱^{b}.	1.5	1.5	1.5
10 18 38 10 17 40	✱^{a} 1 var., var 3 ✱^{b} (region now pretty low, variable apparently at normal brightness. Object-glass of telescope about down to top of lower small shutter.	1.0	1.0	1.0

14th mag standards for R Leonis Minoris — W. Ob.

9 40 + 34.8
5 16
4 24
12 00
7 36

9 40
5 20
4 20
12 00
7 40

Abandoned.

Dec. 31, 1902.

14 mag. standards for V Cancri. W. Ls.

8 18 +17.5
5 35
−2 43
9 17

10 58 Selection seems pretty good.

W's watch used for times to-night.
Watch 58 secs. slow.

L. P. P.

~~Dec~~ Jan. 1, 1903 (Thursday)

BOC 1182 Ball 103
~~Ball~~ ~~BOC 1182~~

7 00 43.0 02 00
Ceraski's New Var.
W. Obs.

21 00 +43.3
26 13
5 13

21 00
26 15
5 15

7 30 20 Var 0.5 a - 0.5
7 31 18 a 3.5 b, ~~3.6 c~~
b 6.0 c
c 4.5 d

W. Delphini Phot. V
W. Obs.

20 31 +17.8
26 32
~~6.01~~
6 1

20 31
26 36
6 5

Jan 1st 1903
Index Li and Above

202.5

Abandon region low and [illegible] elecm: at Madison St very troublesome

X Cygni. Phot. T. H. obs.

$$\begin{array}{rr} 19 & 45 \\ 27 & 03 \\ \hline 7 & 18 \end{array} \qquad +32.6$$

$$\begin{array}{rr} 19 & 45 \\ 27 & 10 \\ \hline 7 & 25 \end{array} \qquad \begin{array}{rr} 19 & 45 \\ 27 & 14 \\ \hline 7 & 29 \end{array}$$

$$\begin{array}{rr} 19 & 45 \\ 27 & 16 \\ \hline 7 & 31 \end{array} \qquad \begin{array}{rr} 19 & 45 \\ 27 & 20 \\ \hline 7 & 35 \end{array}$$

Abandon region too low, will try it on other night.

Jan 1 1903

Ceraski's New Var.

21 00 +43.3
27 40
6 40

star a follows var. 5 sec and is
2.2' north of it
~~star~~ somewhat brighter star follows star a
6 sec and is about 0.2' north of it.
star d ~~follows~~ precedes star a
about 3½ sec. in about the same
dec. ~~4~~

Will locate star d more
accurately on subsequent night.
Star b follow var. about 4 sec.
and is slightly ~~south~~ north of it.
Star c is about same R.A. as star
b and 1 min. of arc south of it.
Star c follows var. about 1 sec and
is little over 1' south of it
Will locate these stars more
accurately on a subsequent night
when region is a little, and seeing
better.

Jan. 1 1903

R. Leonis Minoris ~~117.0~~ 34.8

9 40
4 20
5 20

9 40
4 32
5 08

9 45 No. 1 prec. var 32 sec. and 5'.3 north of it.
No. 2 follows " 32 sec. " 8'.2 ~~south~~ north of it.
No. 3 " " 34 sec. " '12.5 north of it
No. 4 prec. " 7 sec. " 9.1' north of it
No. 5 follow " 18 sec. " 2.8 south of it

V Tauri

~~8 18~~ +17.5
~~5 25~~
3.53

4 49 +17.0.
5 26
0 37

5 35
0 46

over.

Jan. 1. 1903.

No. 1. fol. var 48 secs. 2'.6 north
" 2 " " 58 " 2.3 "
" 3 " " 57 " 4.8 "
" 4 " " 63 " 2.0 south.
" 5 " " 39 " 4.6 "

Selection considered final.

v' Cancri.

8 18 +17.5
6 30
-1 48
10 12

11 40 Selection seems pretty good.

W's watch used for times to right.
Watch 58 secs. slow.

Selection considered final.

Posted Ledgered

Jan. 5. 1903 (Monday)

Meas. Ceraski's Star. Var. W. obs.

21 00 +43.03
25 23
4 23

6 29 08 6 30 43
29 58 17

6 33 45 a 0 var 3.5 b 0.00 0.05 0.02 ✓
5 +1 08
11 34 53

sky fairly clear when ~~estimates~~ were made ~~although~~ moon is at about ~~the~~ quarter. Var, a, & b quite well seen at ~~time~~ of ~~estimate~~. Sky now more cloudy. The above stars now have disappeared. Power 270 used. Nothing can be apparently done on ~~with~~ variable with low power tonight.

6 36

6 55 Clouds ~~thick~~

7 38 Too cloudy

1902phae.proj..55OW

Jan. 5, 1903

+43.4101 wOb.

21 57 +44.0
26 57
5 00

7 50 clouds thick no stars visible in finder

21 57
27 23
5 26

8 20 Abandoned sky too cld. all time for anything on variable

Doubtful Var =
I Gem +26°.1117
6 5 +26.0
3 45
2 20
9 40

8 55 Too cloudy

ε Gem.
6 38 +25.2
4 08
2 30
9 30

Jan 5, 190~~2~~3

9 00 Sky now practically cloudy everywhere & growing worse no chance for anything farther

W's watch used for times to night.
Watch 1^m 8 secs. slow.

January 8, 190~~7~~3 (Thursday)

BOC 1182 Ball 103
6 06 045 6 06 00

C's watch = 23 secs fast at 6:07

6 15 Sky rather cloudy

20.1902 W Cb.
Phot 21 00 +43.3
25 40
4 40

6 30.5 ~~28~~ Sky more or less cloudy. But variable thought to be seen faintly, and also thought to be at normal brightness

6 45.0 Var. quite certainly at normal brightness ~~but there~~ ~~star~~ b seen var seen and is brighter ~~than b~~, but there is so much cloud & moonlight that it is impossible to estimate it

Phot T. χ Cygni W Cb.
19 45 + 32.6
26 11
6 26

6 50 clouds thick in the χ region no stars visible in large telescope at present ~~time~~.

January 8, 190~~2~~3

Impossible to get χ Cygni, clouds
7 08 very thick everywhere. Abandoned.

+26.1117 wclb

6 5 +26.0
2 45

3 20
8 40

7 30 Star invisible No ~~stars~~ visible
in finder or large telescope
Clouds thick everywhere and
sky apparently growing worse.

Somewhat clearer.

+26° 1117. W. obs.

6 5 +26.0
5 4:

−0 √7
11 3

Clouds came again, before identification
of comparison star could be made.

L. P. P.

Jan. 9, 1903 (Friday)

BDC 1182 Ball 103
5 2~~1~~ 17.0 5 20 00

20.1902 W Obs

21 00 +4 33
25 00
4 00

Focused

~~6~~ 5 49 00 b ~~4~~ 3, 3 ~~4~~ c 7.0 2.0 7.0
10 47 43
11 30

6 ~~11 00~~ b 3.5, 3 c 7.5 2.0 7.2
11 10 13
11 36 23

6 37 40 b 2, 4 c 6.0 6.0 6.0

6 58 20 a 1.5, 1.5 b 1.5 2.5 2.0
11 57 03

7 04 05 a 1, 2 b 1.0 2.0 1.5
12 02 48

7 08 Var & comp *s have now entirely disappeared. Bright stars in field not becoming faint.

7 24, No chance for anything further on this var. tonight.
Var & comp *s have all disappeared in cloud, and stars brighter ~~than~~ a invisible

1902phae.proj..55OW

Jan. 9, 1903

20.1902 cont.

7 50 55 Var comp*s a & b seen for a
7 49 38 moment through some cloud
as near as could be estimated =
a 0, 3.5 b

0.0
0.5
0.2

This est. somewhat uncertain
owing to the short duration of
the time of seeing the star
as well as the difficulty of it,
but var. seemed to be practically at
normal brightness.

7 54 clouds now quite thick. Brighter stars
disappearing.

o ceti w

2 12 −3.6
3 26

1 14

clouds too thick. Abandoned.
No stars visible in large
[illegible]

Jan. 9. 1903

20.1902 w Ob

21 00 + 43.3
28 00
7 00

8 45 15 a 0, 3.5 b — 0.0
13 43 58 0.5
0.2

~~Var.~~ The above estimate is a little uncertain from some cloud & poor atmospheric conditions, but was thought to be certainly at normal brightness.

R Urs. Min.
Phot T. w Ob.

9 00 16 3~~1~~4 +7 29
28 20
11 46
Too low

o Ceti w Ob
2 12 -3.6
4 22
2 10

9 07 Abandoned, too much cloud

Jan. 9, 1903
+26°.1117

W.Ob.

6 5 +26.0
4 40
---
1 25
10 35

Too cloudy & too high.

μ Cephei

Phot I. 7" cap. W.Ob.

21 39 +58.1
28 47
7 8

C's watch used.

Vandis
Lda.

22.6
9 48.0 80.9 58.3
209.8 42.7
252.5 101.0 - 1.63

31.5 - 1.64
73.8 42.3
201.6 57.8
259.4 100.1 - 1.65

RAP.

293.6
350.9 57.3
122.3 41.3
163.6 98.6 - 1.69 1.68

Jan. 9, 1903

-168

	301.1		
9 55.6	344.3	43 2	
103.6	113.8	56.6	
9 52.8	170.4	99.8	-1.66
5 -1.3		Mean = -1.66	
14 51.5			
	Same again		
	290.6		
9 57.6	350.3	59.7	
	121.1	43.0	
	164.1	102.7	-1.59
	300.7	43.5	-1.60
	344.2		
	112.8	58.6	
	171.4	102.1	-1.61
	LOA	Mean = -1.64	
	203.3		
10 01.0	259.~~7~~3	56.0	
118.6	30.5	42.8	
9 59.3	73.3	98.8	-1.69
5 -1.3			
14 58.0 G.m.T.			Final Mean = -1.65
	~~210.6~~		
10 04.2	25.	4.	

P.A. 345.0 Ver B
St. T. 5.38
Dec +58.4
Ha. +7.58

Jan. 9, 1903

Note: - from the cold weather there was probably a little extra tension off the chains of the track of the photometer which caused the P.A. to read 8 or 9° different from usual. but stars thoroughly identified before beginning & right stars taken.

At end of 3d set in last group prisms suddenly got a little askew - which caused images to leave the field Images all right and in good ~~efl~~ shape up to this point. so that none of the settings were affected.

The prisms do not seem to be really off the track, although they can not be run down in tail piece. Last set could not be taken. Becoming more cloudy

10.20 again

L. P. P.

Jan. 10, 1903 (Saturday)

BOC 1182   Ball 103
5 17 425   5 16 00

C's watch = 31 secs slow at 5:17

Phot T   X. Cygni   W Obs.

19 45 +32.6
25 00
5 15

LOA.

C's watch   196.8 } comp * obs
5 42.6   265.6   68.8
25.7   53.0
78.7   121.8   +1.15
204.8   +1.18
258.0   53.2
18.5   66.4
84.9   119.6   +1.20
RDB   mean = +1.20
109.7
177.3   67.6
295.6   52.4
348.0   120.0   +1.19

116.3   +1.22
5 53.4   169.2   52.9
96.0   290.4   64.9
5 48.0   355.3   117.8   +1.24
5 +0.5
10 48.5 GMT.
6 12.5 4.50

Jan. 19, 1903

RDB Same again

111.4
5 55.6 176.1 64.7
295.3 52.7
348.0 117.4 +1.25

116.6 +1.26
168.3 51.7
291.4 64.9
35~~4~~6.3 116.6 +1.27

LDA Mean = +1.22
174
84.8 67.4
205.2 54.0
259.2 121.4 +1.16

26.1 +1.18
608.8 7~~4~~6.8 50.7
124.4 ~~1~~198.5 68.4
6 02.2 266.9 119.1 +1.21
5 +0.5 Final M = +1.21
11 02.7

6125.460

PA = 16.0° Ver B
Ha = 6:08 West
Dec = +32.4
S.T. = 1:54
Sp Wh = { 4.5 a
5.5 B
6.1 C

Jan 10, 1903

2D.1902

21 00 +43.3
26 00
5 00

~~6 41~~

6 41 05. a o ~~#~~ var 3.5 b
5 -1 42
11 39 23

R. Urs. Min W Ob

Phot T.

16 34 +72.9
26 45
10 11

C's watch

Lf Above

202.1 comp & dis
7 38.0 261.6 59.5
18.1 72.4
~~8~~ 90.5 131.9 + 0.94
196.4
268.5 72.1 + 0.95
23.1 58.9
82.0 131.0 + 0.96
mean = +0.98

Rf Below

11 28
170.2 57.4
289.3 69.6
358.9 127.0 + 1.04

+ 1.02

Jan. 10, 1903

108.3 70.4
7 56.8 178.7 58.7
7 47.4 292.7 129.1 +1.00
5 +0.5 351.4
12 47.9 G.M.T.
6125.533 Same again
RTB
114.9 clouds
8 13.0 169.9 55.0
286.2 74.9
361.1 129.9 +0.98
106.8
174.5 70.7 +1.02
294.8 55.4
350.2 126.1 +1.06
LDA mean = +0.96
22.0
83.0 61.0
195.4 72.5
267.9 133.5 +0.91

15.0
8 39.6 90.0 75.0 +0.90
203.0 59.0
8 26.3 262.0 134.0 +0.90
5 +0.5 P.A. = 313.0 VnB
13 26.8 H.A. = 11:47 West Final Mean = +0.97
6125.560 Dec. = +72.4
S.T. = 4:19
Split. = 25 B
35 E

Jan. 10, 1903

Note on R. Urs. Min. =–
Troubled somewhat by clds
in second group, but waited until
sky became pretty clear, before
finishing second group.

0 Cato WClbz
Phot # W 2 12 –3.6
5 02
2 50

C's watch ROB
265.8 words
9 42.0 355.3 89.5
95.8 71.2
167.0 160.7 –0.37
270.3
345.7 75.4 –0.34
81.8 89.0
170.8 164.4 –0.30
LOA Mean = –0.42
9.19
8.77
174.6
258.6 84.0
0.0 73.0
73.0 157.0 –0.44

181.3 –0.49
9 52.0 240.3 69.0
9 47.0 355.2 82.9
5 +0.5 78.1 157.9 –0.54
14 47.5
6125.616

Jan. 10, 1903

Same again

LOA.

174.6
9 55.0 259.6 85.0
~~3~~ 0.9 70.5
71.6 155.5 − 0.47

181.4 − 0.46
251.6 70.2
355.1 85.7
80.8 155.9 − 0.46

ROB Mean = − 0.39
80.8 9.19
168.9 8.80 88.1
~~247.0~~ 268.5 73.7
342.2 161.8 − 0.35

88.4
10 05.2 164.8 76.4 − 0.32
262.7 87.8
10 00.1 − 350.5 164.2 − 0.30
~~5 +0.5~~ − H.A. = 3:33 West Final m = − 0.40
15 00.6 Dec. = − 3.5 9.19
6125.626 S.T. = 5:46 Magn. 8.79
P.A. = 207.7 Ver B

June 10. 1903.

Latter part of evening, found tail piece of telescope a little loose and slightly unscrewed. Tightened it. This looseness, combined with tension ~~on Photom~~ of rods and chain of Phot. I. ~~may in fr~~ is probably the reason that position angles on stars read a few degrees different to-night and last night, from what they have been reading.

It probably explains also the difference in reading on o Ceti, with Phot. R., the ~~tightening of T~~ looseness of tail piece being discovered while preparing to take o Ceti to-night, and the tightening being made just before o Ceti was measured.

Jan. 12, 1903 (Monday)

See C's record books for comparisons of chron & watch used ~~tonight~~ W Obs 20, 1902.

Phot X

21 00 +43.0
25 15
4 15

Focused

5 40 00 a 1, 2.5 b 1.0
5 −2 30 1.5
1.2 m
10 37 30 GMT. 443
C's watch

Var.

~~5 45 30 10.3~~
~~12.1~~
~~10.9~~
~~11.6~~
Experimental.

~~5 48~~

Var
5 49 21 9.0
7.3
6.2
7.8
5 52 50 6.6
102 11
5 51 06
5 +40
10 51:46 GMT.

Over

Jan. 12, 1903.

20.1902 cont!

star a

~~5 56 40~~

6 00 35 9.3

10.4

8.8

8.8

5.2

6 11 35

12 10 11:06:45 G.M.T.

BOC

6 17 30 Est = a 0, 3.5 b 0.0 0.5 0.2

5 -2 30

11 15 00 469 Var

Cs watch

6 18 20 8.1

7.8

6.7

6.9

6.8

6 23 13

41 33

6 20 46

5 + 40

11 21 26 G.M.T. Star a

6 25 03 6.8

5.9

6.~~4~~8

7.2

6.4

6 28 08 6:26:32 = 11:27:12 G.M.T.

BOC

6 32 00 Est = a 0, 3.5 b 0.0 0.5 0.2

5 -2 30

11 29 30 G.M.T. 478

Jan. 12, 1903

C's watch   Var.

6 39 42   6.4
6.2
5.8
6.6
6 42 52   6.2
8 2 34
6 41 17
5 +40
11 41 57 G.M.T.   Star a

~~6 45 11~~   7.7
6 46 55   6.8
7.4
6   7.4
6 49 55   7.2
11 44 35 G.M.T.

~~3 00~~   ~~a   b~~
6 54 30   var 0.5 a, 4 b   − 0.5
5 − 2 30   0.0
11 52 00 G.M.T.   .494   − 0.2

C's watch   Var.
7.6
7 05 30   7.6
7.6
7.4
7 08 50   7.8
14 20
7 07 10
5 +40
12 07 50 G.M.T.

(over)

Jan. 12, 1903

~~C's watch~~ Star a

7 15 20 8.7

9.0

8.8

8.8

7 18 38 8.7

7 16 59
5 + 40 = 12 17 39 G.M.T.

~~B.O.C. used.~~

7 24 45 Est = 0.5 a, 4 b -0.5
5 -2 30 0.0
-0.2

12 22 15 G.M.T. .515

21 50 +43.3
27 40
6 40

B.O.C. used

8 08 20 Removed phot. & put on ~~the~~
5 -2 30 tube with 1" eyepiece. Impossible
13 05 50 G.M.T. to give an estimate of variable,
variable not steadily seen but at
6127.546 intervals, about all ~~that~~ can be said
is "it seems to be at normal brightness".
+0.5 Sky extremely bright from moonlight
0.0 and region somewhat low.

Jan. 12, 1903

Phot T + 26°.1117 W Obs.

6 02 +26.0
4 02
2 00
10 00

8 35 Too near the moon.

Phot T. T Cygni W Obs.

20 40 +33.5
28 20
7 40

~~G' watch~~ used Prisms got off the track.

R Y Hydrae
Phot T. +3°.1958 (8.3) W Obs.

8 8 +3.2
4 58
3 10
8 50

8 18 +2.5
5 13
3 05

9 2
5 11
3 51
8 09

8 54 +3.1 8 55
5 08
3 46
8 14

Jan. 12, 1903

+3.1958 8.3

Plate T. 20 lbs

Cs' Watch

Left   Comp * = +3° 1960 (8.0)

214.2 < comp * dis

9 55.0   250.2   36.0✓

31.6   39.7✓

71.3   75.7✓ + 2.32✓

211.5

254.2   42.7✓ + 2.25✓

32.9   37.9✓

70.8   80.6✓ + 2.18✓

Right   mean = + 2.28✓

124.2

159.1   34.9✓

302.1   40.9✓

343.0   75.8✓ + 2.32✓

121.3   + 2.30✓

10 06.0   164.6   43.3✓

121.0   303.5   34.3✓

10 00.5   337.8   77.6✓ + 2.27✓

5 +0.7

15 1.2 G.M.T.

6127.626+

Jan. 12, 1903

Same again

Right

122.7

10 09.4 157.3 34.6

302.3 41.1

343.4 75.7 + 2.32

121.8

163.3 41.5 + 2.31

304.6 35.1

339.7 76.6 + 2.30

Left Mean = + 2.26

33.8

69.2 35.4

209.2 42.2

251.4 77.6 + 2.27

29.2 + 2.20

10 20.8 73.8 44.6

~~20.2~~ 213.5 37.7

15.1

10 ~~20.1~~ 251.2 82.3 + 2.13

5 +0.7 P.A. = 309.5 Ver ~~A~~ Final Mean = +2.27

15 ~~20.8~~ 15.8 G.M.T. H.A. = −1:04 East

6 27.636 Dec = + 3.1

S.T. = 6:08 LPP

S&Wh = {76 B / 85 C}

Jan. 13, 1903 (Tuesday)

~~6 29~~

BOC 1182 — Ball 103

5h 18 29.5 — 5h 16 00

C' watch = 17 secs fast at 5:17

20.1902 Cygni

WOb.

21 00 +43.3
25 10
4 10

BOC.
5 37 30
5 −2 30
10 35 00 G.M.T.
6128.441

Var 0.5 a
Var 3.5 b

−0.5
+0.5
00

Jupiter

21 35 −15.3
25 20
3 45

Reap. Sat I w Ob.

Campbell Rec.

Jan 13, 1903

6	9	22×	6	11	52	susp.
6	9	29×	6	11	59	seen
6	9	35×		12	05	confirmed,
6	9	52×		12	22	brighter
6	10 ~~12~~	27×		12	57	still more plainly seen
6	11 ~~13~~ 11	11×		13	41	quite bright,
6	~~13~~ 13	51×		14	21	brighter still,
6	~~[illegible]~~	05×		15	35	quite bright, allowing for proximity of Jupiter.

~~21 31~~ ~~Jupiter & Sat I are now growing somewhat dimmer & more unsteady on account of low alt. & fact that moon is [illegible]~~

Eclipse taken with 1 in. eyepiece power 270. It was not possible to take the eclipse with photometer from the fact that Sats II & III were invisible being involved in the planet.

There is a star about in the position of sat IV but it could be used photometrically for comparison as double image prism when up at the end of photometer would not quite reach it. This is the only object which is seen in about the position of Sat IV and it looks ~~X~~ rather bright for it, yet it may be Sat IV. ~~Sky~~ Region also rather low for good photometric

Jan. 13, 1903.

work. Seeing fairly good for this altitude and for a winter's night. Jupiter however colored & boiling some.

6 21 31 Jup & Sat I are now growing dimmer and more unsteady on account of low altitude & the fact that the moon is a little way up. Satellite now evidently at full brightness

BAC 1182			Ball 103		
6	29	30.5	6	27	00
6	30	30.5	6	28	00

U Camelop Webb

3 33 +6 2.3
2 13
1 20
10 40

too high

Jan. 13, 1903

T Cygni

Phot T. W.Co.

20 40 +33.5
26 20
5 40

~~Cs watch~~ L.D.A.

35.1 Evardi's

6 46.6 69.2 34.1
213.5 38.2
251.7 72.3 − 2.43

32.9 − 2.41
71.3 38.4
213.8 35.1
248.9 73.5 − 2.39
RTB Mean = − 2.38
302.5
342.3 39.8
124.6 35.9
160.5 75.7 − 2.32

302.7 − 2.35
6 52.6 339.4 36.7
99.2 124.3 37.3
6 49.6 161.6 74.0 − 2.38
5 − 0.3
11 49.3 G.M.T.
6128.492

Jan. 13, 1903

Same Again

R & B

303.0
6 54.0 342.8 39.8
124.9 36.3
161.2 76.1 − 2.31

303.4
338.9 35.5 −2.34
123.4 38.4
161.8 73.9 − 2.38

L & A Mean = − 2.39

213.7
249.7 36.0
33.6 35.5
69.1 71.5 − 2.46

214.3
7 00.6 249.5 −2.44
6 57.3 33.7 35.2
5 −0.3 71.1 37.4
11 57.0 72.6 − 2.42
61 28498

R.A. 305 Ver B Final m = − 2.38
H.A. + 6.05 West
Dec. + 33.5
S.T. 2:46
Spwld = 1.5 B
= 25 C

Jan. 13, 1903

T U Geminorum.

~~Phot T~~ 26°.1117 25 Ob

5 59 +25.6
3 33
2 26
9 34

~~L+a~~ Comp * = +26°

~~284.0~~ < var dis

813.0 362.2 78.2
109.0 65.6
174.6 143.8 − 070

289.1 − 0.70
355.1 66.0
102.9 77.8
180.7 143.8 − 070
~~RTB~~
191.2 Mean = − 0.60
273.2 82.0
12.1 73.7
85.8 155.7 − 0.46

198.4
8 23.8 265.8 67.4 − 0.50
8 18.4 11.1 83.7
5 −0.3 94.8 151.1 − 0.55
13 18.1 G.M.T.
61 24.554

Jan. 13, 1903

Same Again

R of B
191.2
8 26.2 273.3 82.1
19.4 69.4
88.8 151.5 − 0.55

198.0 −0.56
265.9 67.9
11.3 82.8
94.1 150.7 − 0.56

L of a Mean m − 0.62
101.8
182.6 80.8
289.9 65.3
355.2 146.1 − 0.65

− 0.67
108.6
8 36.8 175.0 66.4
281.4 77.6
8 31.5 359.0 144.0 − 0.69
5 −0.3 P.a = 103.2 Vri B
13 31.2 G.M.T. H.a = −1.37 East Final m. = − 0.61
6128.563 Dec. = +26.0
S.T. = 4:24
Sjuh = { 6.5 a
7.5 B
8.1 C

Jan. 13, 1903

Double = β Orionis Σ 668

5 9 - 8.4 W.C.Obs

Sid t ~~[illegible]~~ W 5 16

0 7

P.A. 210° Dist. 9″ Magns 1.5 – 8.0

Below

30.4 < br. dis.

9 42.0 36.4 6.0

211.0 4.9

2~~1~~15.9 10.9 – 6.61

– 6.57

30.4

36.2 5.8

210.2 5.5

215.7 11.3 – 6.53

Above

Mean = – 6.58

300.4

306.0 5.6

~~119.~~ 120.1 5.5

125.6 11.1 – 6.57

300.0 – 6.58

9 54.6 306.0 6.0

96.6 120.5 5.0

9 48.3 125.5 11.0 – 6.59

5 – 0.3

14 48.0 Obs a little diff. on account of unsteadiness

6128 617 due to cold & some wind.

Jan 13, 1903

U Camelop

Phot R W Ob

3 33 +623

5 40

2 07

ROB

188.1 < var dis

10 160 230.8 42.7

356.2 62.0

58.2 104.7 -1.54

178.7

237.6 58.9 -1.52

4.8 47.0

51.8 105.9 -151

mean = 1.52

~~RDA~~

95.6

140.3 44.7

267.9 60.4

328.3 105.1 - 153

85.4 15~~0~~1

10 25.6 147.7 62.3

41.0 277.2 44.6

10 ~~4~~20.5 321.8 106.9 - 149

5 -0.3

15 ~~2~~0.2 G.M.T.

6 1 28.~~653~~ 63.9

Jan. 13, 1903

Same again.

~~D~~ Above

~~98.~~
97.6
10 34.4 142.3
269.4 — 44.7
328.7 — 59.3
104.0 − 1.56

~~8~~ 88.9 — −1.54
148.7 — 59.8
277.1 — 46.2
323.3 — 106.0 − 1.51
ROB — mean = −1.52
~~1~~ 6.6 — 9.18
528 — 7.66
180.4 — 46.2
239.4 — 59.0
105.2 − 1.53

359.0 — 1.50
10 43.0 — 61.1 — 62.1
77.4 — 186.4 — 45.7
10 38.7 — 232.1 — 107.8 − 1.47
5 −.13
15 38.4 9 M.T.
6128.651
10 56

Pa = ~~314.5~~ 245.2 Ver B
HA = 2.59 West
Dec = + 6 24
S.T. = 6:27

Final M = −1.52

L. P.

Jan. 16, 1903 (Friday)

BOC 1182 Boll 103

7 21 31.2 7 18 00

C's watch 14 secs fast at 7.19

20.1902 Cygni WCb

21 00 +43.3
27 25
6 25

7 5 3 Var, 0.5 a, 3.5 b

Var. at normal brightness

Var ~~pretty~~ and comparison stars pretty well seen in a short interval between clouds.

Variable very certainly at normal brightness.

Doubtful Var+ 21.1146 WCb

6 6 +21.9
4 16
1 50
10 10

6 3 +21.8
4 26
1 37
10 23

Phot T. Jan. 16, 1903 T V Geminorum W C Ohs

+21.1146

6 3 +21.8

4 43

1 20

10 40

Above

189.6 C's watch used.

9 00.0 276.8 < var dis 87.2

177.8 clouds 69.4

27.2 clouds 156.6 − 0.45

194.1

271.1 −0.36

8.0 77.0

96.3 88.3

165.3 − 0.28

Below mean = − 0.23

93.1

190.4 clouds 97.3

283.9 77.8

361.7 175.1 − 0.09

103.6 −0.10

9 08.6 179.0 75.4

9 04.3 270.8 98.9

5 − .2 ~~36~~9.7 174.3 − 0.11

14 04.1 G.M.T.

6131.586*

January 16, 1903

Same again

Below

95.2 clouds
10 00.0 188.7 93.5
283.5 77.5
361.0 171.0 − 0.17

105.1 − 0.14
181.0 75.9
273.1 clouds 97.7
310.8 173.6 − 0.12

Above mean = − 0.24
4.9
96.4 91.5
195.9 70.2
266.1 161.7 − 0.35

157 − 0.35
10 08.0 88.5 72.8
186.2 87.9
10 04.0 274.1 161.7 − 0.35
5 − 2
15 03.8 G.M.T. Final mean = − 0.24
6131.628

P.a. = 280 Ver B
H.R. = + 0.04 West
Dec = + 21.7
S.T. = 6:13
Sp. Wh. { 4.5 B
5.5 C

Both groups observed through more or less cloud, but extreme care exercised & ob. thought to be good.

Jan. 16, 1903

Troubled by cloud rather more in first group than in second group.

10 30 Clouds thick everywhere.
No stars visible in large telescope
No chance for anything further

L. P. P.

Jan. 17, 1903 (Saturday)

B&C1182 Ball 103
7 08 39.0 7 05 0.0

C's watch = 12 secs fast at 7:05

20.1902 W Obs
~~Phot T.~~ 21 00 +43.3
27 15
6 15

B&C.
7 34 40 a 0, 3.5 b +0.2
5 - 3 39
12 31 01
6132.522 Phot T.

43.4101 W Obs

22 00 +44.3
27 40
5 40

~~B&C used~~
C's watch used
above
22.6 < Comp * dis
8 18 20 82.4 59.8
191.8 79.8
271.6 139.6 + 0.78

10.9 +0.883
20 55 89.5 78.6
203.1 56.3
259.4 134.9 + 0.88

cont'd on next page

Jan. 17, 1903

Below

293.7
8 25 45 351.2 57.5
103.4 77.9
181.3 135.4 + 0.87

281.0 + 0.82
8 28 35 361.2 80.2
15 35 113.5 59.3
8 23 59
5 – 12 172.8 139.5 + 0.78
13 23 47 Mean = + 0.82

6132.5582 Same Again
6119.3319
13.2263 Below

292.0
8 31 30 353.1 61.1
101.2 82.4
183.6 143.5 + 0.70
281.2
33 40 362.7 81.5 + 0.72
110.8 60.0
1~~1~~70.8 141.5 + 0.74
Above
Mean = + 0.77
202.1
36 50 261.3 59.2
10.8 80.5
91.3 139.7 + 0.78
193.8
8 38 50 27~~8~~1.5 77.7 + 0.82
20 50
8 35 12 22.5 58.4
5 –12
13 35 00 80.9 136.1 + 0.85

6132.5660
6119.3319
13.2341

6132.5660

Jan. 17, 1903

P.A. 324.5 Var B
H.a. 6:52 West
Dec. +43.6
S.T. 4:47
S. phot. { 6.5 B
7.5 C

p 50 Region a little low and sky a little hazy, but images very well seen and extreme care exercised, observations considered good.

+51° 762

Phot T.

W Obs

3 34 +51.2
5 40
2 06

3 38 +50.6 3 36 +51.0
5 53 5 49
2 15 2 ~~1~~3

Jan 17, 1903

Phot T. +51.762 Wlbs

Above

104.3 < var dis

10 05.3 180.9

274.3

367.4

76.6

93.1

169.7 — 0.20"

92.0

188.8

282.2

358.3

— 0.16"

96.8

76.1

172.9 — 0.13"

Below

Mean = −0.22"

16.4

89.2

182.3

279.0

72.8

96.7

169.5 — 0.20"

7.3

10 12.6 96.5

179 196.2

10 9.0 269.2

5 −.2

15 8.8 G.M.T.

6132.631

−0.27"

89.2

73.0

162.2 —0.34

Jan. 17, 1903

Same again

Below

16.8
10 14.7 89.2 72.4
184.8 96.1
280.9 168.5 − 0.22

6.3 − 0.26
~~1~~99.7 93.4
196.9 70.8
267.7 164.2 − 0.30

Above mean = − 0.19
283.4
359.8 76.4
94.8 95.6
190.4 172.0 − 0.15
264.4
10 22.4 $ 11.3 96.9 − 0.12
37.1 101.8 78.2
10 18.6 180.0 175.1 − 0.09
5 − 0.2
15 18.4

6132.63~~7~~8

P.A. 356.4 Var B
H.A. +2:53 West
Dec. +51.0
S.T. 6:27
Sp. Wh. { 6.5 B
7.5 C

Jan. 17, 1903

RY Hydrae, 081403

Phot T.

+3 0 19 58 20cl

8 18 +2.6
6 38

1 40
10 20

LdA.

211.3

10 59.0 250.7 < compt + obs

37.2
66.8

394
296
690 + 2.54

215.9
248.1

32.6
70.7

322 +2.52
381
703 +2.50
mean = +2.46

RPB

122.2
163.2
306.0
338.5

410
325
735 + 2.39

+2.41

11 04.0

12 3.0
11 01.5
5 — 2
16 01.3
6132.~~67~~ 67

128.5
158.6
301.0
343.2

301
422
723 + 2.43 (E)

Jan. 17, 1903

Same Again

RDB

120.4

11 05.4 161.1 40.7

3 38

304.7 74.5 + 2.36

338.5

+ 2.40

127.3

157.3 30.0

301.0 41.8

342.8 71.8 + 2.45

Mean = + 2.44

LDA

31.3

38.7

70.0 30.1

216.7 68.8 + 2.55

246.8

30.9 + 2.48

36.5

11 12.0 67.4 42.5

17.4 73.4 + 2.40

11 08.7 210.8

5 -.2 253.3 Final M = + 2.45

16 08.5

6132.672

P.A = 129.0 Var B.

H.A = - 0.58 East

Dec. + 3.1

S.T. = 7:17

Sp. Wh. L 7.5 B

8.5 C

11 20

L. P. B.

This book
Ledgered
Plotted
Posted.