KG
11365
517

KG 11365.51.7

KG 11365.517

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MAY 8 1956

Sept. 12. 1892.

Dur. Wedge Zone. W. obs.

Series ~~99~~ 100. +19°

16 54
19 18
+2 20
19 25
+2 27

7 φa 3245
3.00
3.41
3.47 9.88 4.28

~~3.09~~
~~3.10~~
~~2.90~~ wrong star

3249
3.39
3.02
3.41 9.82 4.25

3255
3.89
3.99
3.80 11.68 5.06

3264
5.53
5.66
5.70 16.89 7.31

Sept. 12, 1892.

3265 2.80
2.89
2.85 8.54 ~~3.69~~ 3.70

3273 2.80
2.99
3.02 8.81 3.81

3279 2.98
3.37 Middle of three
3.29 9.64 4.17

3280 4.30
4.27
4.10 12.67 5.49

3284 2.70
3.19
3.00 8.89 3.85

3287 3.91
3.69
3.90 11.50 4.9~~7~~8

3291 4.77
4.80
4.80 14.37 6.22

Sept. 12, 1892.

3293	4.92 4.80 5.09	14.81	6.41
3296	2.50 2.58 2.54	7.62	3.30
3298	2.98 3.10 3.00	9.08	3.93
3299	2.89 3.01 2.95	8.85	3.83
3307	4.78 4.62 4.70	14.10	6.1~~0~~1
3310	3.52 3.70 3.97	11.19	4.8~~4~~5
3315	3.22 3.52 3.70	10.44	4.52

Sept 12, 1892.

3320	3.95		
	4.29		
	4.40	12.64	5.47
3325	3.40		
	3.55		
	3.50	10.45	4.52
3327	~~32~~ 3.40		
	3.50		
	3.55	10.45	4.52
3328	4.40		
	4.58		
	4.79	13.77	5.96
3337	2.53		
	2.81		
	3.02	8.36	3.62
3343	2.79		
	2.92		
	2.90	8.61	3.73
3356	4.35		
	4.20		
	4.60	13.15	5.69

Sept. 12. 1892.

		3357	2.79 3.29 3.11	9.19	3.98
		3362	2.32 2.29 2.35	6.96	3.01
		3369	2.61 2.75 2.70	8.06	3.49
		3370	2.80 2.50 2.50	7.80	3.3$\overset{8}{7}$
		3371	2.70 2.69 2.73	8.12	3.52
9	30	3372	5.80 5.62 5.59	17.01	7.3$\overset{7}{6}$

Sept. 12. 1892.

9 40 to 11 15 Looked for 5th sat. of Jupiter announced by the Lick Observatory.
Sat. not certainly seen.
Seeing not the best. Clock gives trouble.

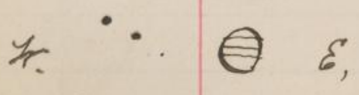
Nova Aurigae. St. obs.

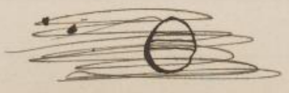
5 23 +32.0
23 10
−6 13
5 47

11 42 r 2 N. N 3 s
Est. 10.7
Spec. mon.

Sept. 13. Additional Record with reference to supposed Sat. of Jupiter.

A suspicious stellar point which was thought to be ~~seen~~ many times with the achromatic (400), was also suspected ~~seen~~ with the Mars micrometer eye piece. (350). It seemed to be a fact, and in the position indicated below, and also seemed to move slowly towards the planet but obs. was not considered certain.





Sept. 15. 1892.

Dun. Wedge Zone. W. obs.
Series 101. +19°.

17 16 +19.9
19 29
+2 13

7 40 3287 3.98
4.21
4.19 12.38 5.36

3291 4.61
4.69
4.65 13.95 6.04

3293 4.79
4.81
4.95 14.55 6.30

3296 2.60
2.47
2.50 7.57 3.28

3298 2.92
3.07
3.01 9.00 3.90

Sept. 15. 1892.

3299 3.00
3.30
3.09 9.39 4.0$\overset{7}{6}$

3307 4.42
4.33
4.22 12.97 5.62

3310 3.90
4.22
3.99 12.11 5.24

3315 ~~3.59~~ 3.20
wrong ~~3.16~~ 3.59
~~4.15~~ 3.31 10.10 4.37

3320 4.11
4.22
4.30 12.63 5.47

3325 3.10
2.98
3.00 9.08 3.93

~~Here st~~ There is ~~a sli~~ apparently a slight error in the Dec. of 3327 in the D.M. The star probably meant for 3327 precedes 3328 $1^s.5$ and is 0'.5 north of it, This is the same star which was assumed the other night.

Sepr. 15 1892

3327	3.19		
	3.20		
	3.22	9.61	4.16
3328	4.00		
	4.10		
	4.22	12.32	5.33
3337	2.57		
	2.78		
	2.65	8.00	3.46
3343	2.73		
	2.51		
	2.60	7.84	3.39
3356	4.10		
	4.29		
	4.23	12.62	5.46
3357	2.90		
	2.89		
	2.93	8.72	3.78
3362	2.38		
	2.45		
	2.40	7.23	3.13

Sept. 15, 1892.

3369	2.83		
	2.70		
	2.75	8.28	3.5~~8~~9
3370	2.60		
	2.61		
	2.63	7.84	3.39
3371	2.40		
	2.50		
	2.47	7.37	3.19
3372	5.60		
	5.70		
	5.67	16.97	7.35
3375	2.49		
	2.60		
	2.53	7.62	3.30

Preceding and northern of pair.

3387	3.60		
	3.80		
	3.72	11.12	4.81
3388	2.49		
	2.48		
	2.50	7.47	3.23

Sept. 15. 1892.

3396	3.20		
	3.30		
	3.27	9.77	4.23
3409	3.89		
	4.08		
	3.91	11.88	5.14
3412	2.58		
	2.77		
	2.65	8.00	3.46
3420	3.79		
	4.02		
	3.90	11.71	5.07
3422	2.52		
	2.78		
	2~~7~~.80	8.10	3.51
3433	2.79		
	2.98		
	2.98	8.75	3.79
3445	3.80		
	3.80		
	3.85	11.45	4.96

Sept. 15, 1892

3446	2,79		
	3,18		
	3,22	9.19	3.98
3453	2,85		
	3,22.		
	3,12	9.19	3.98
3454	2,84		
	2,92		
	2,90	8.66	3.75
3468	2,48		
	2,61		
	2,55	7.64	3.31
3470	3,70		
	4,22		
	4,49	12.41	5.37
3471	2,93		
	3,00		
	3,19	9.12	3.95
3474	5,41		
	5,32		
	5,46	16.19	7.01

Sep. 15. 1892.

3497	2,89		
	2,92		
	2,90	8.71	3.77
3502	3.01		
	3,35		
	3.38	9.74	4.22
3513	3.02		
	3.43		
	3.60	10.05	4.35
3514	2,80		
	2,99		
	2,91	8.70	3.77
3516	3.00		
	3,14		
	3.11	9.25	4.00
3519	3,91		
	4,00		
	4.25	12.16	5.2~~8~~7
3530	2,60		
	2,79		
	2,71	8.10	3.51

Posted to here.

Sept. 15, 1892.

3536 3.40
3.49
3.53 10.42 4.51

3541 2.99
3.12
3.19 9.30 4.03

3544 4.20
10 40 4.39
4.29 12.88 5.58

Nova Aurigae W. obs.

5 23 +32.0
22 37
17 14
−6 46

10 58 e 2 n, n 3 s in large tel.

Est. 10.6

Spec. principally mono, probably faint continuous spectrum also.

Posted to here.

Sept. 16. 1892.

Circumpolar Var. St. obs.

R. Urs. Maj.
10 32 +69.3
19 29
+8 57

7 48 ~~t~~ s 1.5 R, R 2 t in large tel.
Too fr. for finder
Est. 119

8 9 S. Urs. Maj.
12 33 +60.4
19 51
+7 18

k 3 T, T 3 l in long tel
k 2 T, T 3 l in finder.
Est. 9.2

S. Urs. Maj.

S = e in large tel.
S = e in finder
Est. 7.5

Sept. 16. 1892.

B.&C. 1162.			B. 394.		
8	11	3.6	8	20	0.0
	12	3.6		21	0.0

Dis. of Jupiter I. U. obs. Davis Rec.
Comp. with Sat. on preceding side = Sat II.

8	46	32
	8	12
8	58	44
8	20	0
	38	44
8	11	4
8	45	48.

Ap. time ecl.

8	[21]	2.0			175.0	95.0
		25.5	8 30 25.9		270.0	91.5 186.5
		35.0		28.9	178.4	93.2 223.3
		53.0			269.9	
	22	9.5			179.9	87.6
		22.5	8 31 26.0		267.5	91.9 179.5 89.8
		35.5		29.0	177.0	223.3
		48.5			268.9	
	23	1.5			176.0	90.5
	Z	18.0	8 32 18.4		266.5	92.9 183.4 91.7
		27.5		21.4	175.1	221.4
		38.5			268.0	
		48.5			180.2	90.6 86.0
	24	5.0	8 33 05.9		270.8	176.6 88.3
		16.0		~~23.9~~ 8.9	178.8	223.6

Sept. 16. 1892.

26.0 264.8
39.5 8 33 54.9 88.5 178.8
51.5 ~~27.9~~ 57.9 90.4
178.9 267.3 223.4
88.4
25 2.5 178.5
18.0 268.9
27 25.5 94.8 173.0
35.0 ~~27.5~~ 93.0
187.8 267.8 222.0
48.0 8 36 39.5
42.5 93.9 177.0
28 1.5 270.0
51.5 175.0
99.7
29 0.5 95.9
195.6 274.7 223.4
8.0 ~~20.1~~ 97.8 175.1
8 38 02.1
20.5 5.1 271.0
31 55.5 95.3 175.0
10.5 94.3
189.6 270.3 221.9
19.5 ~~29.5~~ 8 40 11.5 94.8 174.0
~~14.5~~ ~~58.0~~ 14.5
32 32.5 268.3
37.5 172.7
47.0 96.3 269.0
33 58.5 ~~38.4~~ 89.4 221.6
23.4 8 42 20.4 185.7 177.1
92.8
34 10.5 267.1
8 38 46.0 179.2
55.0 87.6 268.0
39 55.5 ~~30.6~~ 82.0
169.8 178.0 222.8
15.6 8 47 57.4 84.9 263.8
0.4
25.5 173.7
33.5 ~~39.0~~ 98.5 272.2 223.0
42.5 85.7
184.2 180.1
8 48 36.0
54.5 39.0 92.1 265.8
40 2.0 178.5

Sep. 16. 1892.

				1 7 8.5	
	16.5		89.7	268.2	222.8
	28.5	~~21.1~~ 8|49 18.1	89.1 178.8	177.8	
	37.5	21.1	89.4	266.9	
	45.0			179.0	
	54.5	~~28.9~~ 58.9	89.5	268.5	222.5
	3.5	8 49 55.9	93.0 183.5	174.8	
41	12.5		91.2	267.8	
	19.5			177.0	
	27.5	~~31.2~~	90.8	267.8	223.4
	35.5	8 50 2~~7~~8.2	92.6 183.4	178.2	
41	42.5	31.2	91.7	270.8	
	58.5			177.0	
[42]	8.5		88.0	265.0	222.6
		~~37.5~~	88.2		
	37.5	8|51 19.5	176.2 88.1	180.0	
	45.5	22.5		268.2	
	53.5	8 51 ~~49~~50.5		← 182.1	
	58.5	8 51 56.5		267.8	
	9.5	8 52 07.5		172.0	
43	16.5	8 52 14.5		264.7	
	42.5 22.5 ?	8 52 20.5 ?		182.1	
[~~44~~]	38.5	8 52 36.5		261.5	
	44.5	8 52 42.5		186.0	
	50.5	8 52 48.5		266.0	
	56.5	8 52 54.5		181.0	
[~~45~~]	3.0	8 53 01.0		260.1	
[44]	9.0	8 53 07.0		185.4	
	15.5	8 53 13.5		261.0	
	22.0	8 53 20.0		188.0	
	28.0	8 53 26.0		260.0	
	34.0	8 53 32.0		182.2	

Sep. 16. 1892

	39.5	8	53	37.5	2588
	45.0	8	53	43.0	190.0
	50.5	8	53	48.5	256.0
	57.5	8	53	55.5	1948
[~~46~~] [45]	2.5	8	54	0$\overset{0}{2}$.5	2557
	9.0	8	54	07.0	1918
	14.5	8	54	12.5	2528
	20.0	8	54	18.0	1932
	26.5	8	54	24.5	2500
	33.5	8	54	31.5	198.2
	39.0	8	54	37.0	2460
	44.0	8	54	42.0	201.5
	50.5	8	54	48.5	2430
	56.5	8	54	54.5	2047
	2.5	8	55	00.5	234.0
46	10.5	8	55	08.5	214.2

Not seen later
S. V

47	0.5					213.0
	16.5				20.2	2332
	31.5	8	56	22	21.0	213.0
					41.2	
	47.5	24.0			20.6	234.0 223.3

Images somewhat poor, Sat. dis. quite near limb of Jupiter

Clouds.

Sept. 16. 1892.

B.+C. 11+2   B. 394.
9 30 0.5   9 39 0.0
    31 0.6   40 0.0

Some auroral streamers in North seen through gaps in clouds.

10 10 Still cloudy

Nova Aurigae   W. obs.

5 23 +32.0
22 15
-7 8
 4 52

e 2 N. N 2 s
10 22 Spec. mainly mon.
Est. 10.6

Still somewhat cloudy.

10 30 Some aurora in north. as a diffused auroral light.

Sept. 17. 1892.

Exam. of spectrum of

S.D. −21° 4867. Wr. obs.

17 58 −21.5
19 24
+1 26

S.D.−21° 4867 has apparently nothing marked in its spectrum but S.D.−21° 4864 has a very fine spectrum. There is a very bright band in orange. The spectrum grows somewhat fainter toward the more refrangible end but beyond this in blue at end of spectrum the light becomes quite vivid. ~~and~~ so that end of spectrum is decidedly bright & rather massive.
Spectroscope readjusted. The above may be expressed by saying that there is a very bright & rather narrow band in the yellow & another very bright & rather broad band in blue.

Stars about exam. with spectroscope. Nothing else peculiar seen.

Circumpolar Var. Wr. obs.

S. Bootis

14 16 +54.6
20 41
+6 25

(over)

Sept. 17. 1892.

9 3 h 2.5 S, S 3 k in large tel.
Too fr. for finder
Est. 10.9

R. Camelop.
14 40 +84.1
21 10
+6 30

9 16 c 3 R, R 1 d in finder
c 4 R', R 1 d in large tel.
Est. 9.0

R. Urs. Min.
16 33 +72.9
21 22
+4 49

9 33 R = g in finder.
g 1.5 R, R 2.5 h in large tel.
Est. 10.5

Sep. 17. 1892.

R. Draconis

16 26 + 67.4
21 38
+5 12

9 47 R = j in large tel.
R = ~~j~~ in finder.
Est. 8.5

S. Cygni

20 8 +57.2
22 1
+1 53

10 14 ~~p~~ z = S, $\underline{S}$ z q in large tel.
Too fr. for finder
Est. 13.5

T. Cephei

21 5 +68.0
22 20
+1 15

10 28 T = d in finder
T = $\overline{d}$ in large tel.
Est. 6.8

Sept. 17. 1892.

S. Cephei
21 37 +78.3
22 33
+ 0 56

10 44 S = 9 in large tel.
Doto pr. for finder
Ost. 13.1

Nova Aurigae U. Obs

5 23 +32.0
22 48
+17 25
6 35

10 58 r 1.5 st, st 3.5 s in large tel.

Spec. principally mon.

Sept. 20. 1892

B+C 1182				B 394		
9	43	23.0	9	5	5	0.0
	44	23.0		5	6	0.0

Computed time 10 39 46
11 37
10 28 9

Dis. Jup. III. P. obs. Davis rec.

(65.1 called 165.1)

10	14	11.0			165.1 Assumed
		30.0	10^h 26^m ~~4~~9^s.	111.9 108.1 220.0 110.0	277.0
		40.5			168.5
		47.5	32.2 ✓	221.8 ~~196.8~~	276.6
		59.5		100.0	169.7
	15	8.5	10 ~~27~~ 26 51.	104.4 204.4 102.2	269.7
		20.0			170.82
		29.5	14.5	221.4	275.2
		40.5		106.3	169.1
		50.0		107.4 213.7 106.8	27543
	16	10.0	10 27 ~~47~~ 38.2		169.2
		20.5	0.2	222.6	276.6
		33.5		105.8	171.4
		42.5	10 28 ~~34.5~~ 25.9	106.0 211.8	277.2
		53.5	47.9	105.9	172.04
	17	2.0		224.6	278.0
		14.5		97.5	176.9
		25.0	10 29 ~~16.5~~ 7.6	105.0 202.5	274.4
		35.5		101.2	171.65
		43.5	29.6	224.9	276.6

Sep. 20. 1892

	52.0			97.9	173.7
[18]	3.0			107.6	271.6 6
			45	204.9	
	13 0		10 29 ~~54~~	102.4	172.1
	20 0	7.0		224.2	279.1
	31.5			97.6	173.1
			24.6		
	42.5		1.0 30 ~~33.5~~	94.7	270.7 7
				192.3	
	50.5	46.6		96.2	174.6
19	2.0			222.0	269.2
	23.5			77.5	193.1
			16.5	91.3	
	33.0		10 31 ~~25.5~~	168.8	270.68
	43.5			84.4	177.5
	54.0	38.5		227.5	268.8
20	5.5				174.2
				92.2	
	15.5			92.9	266.4
			1 57.1	185.1	
	23.0		10 3~~2~~ ~~6.~~	92.6	174.8
	32.5	19.1		220.8	267.7
	42.5			100.6	171.2
			35.6		
	52.0	57.6	10 32 ~~44.5~~	94.5	271.8
				195.1	
21	3.0			97.6	174.2
	13.0			221.5	268.7
	25.0			95.7	172.9
	34.5			87.3	268.6
			16.4	183.0	
	42.5		10 33 ~~25.5~~	91.5	178.3
	51.5	38.4		221.4	265.6
	58.0			90.6	174.6
[22]	4.5			86.6	265.2
			47.1	177.2	
	12.5		10 33 ~~56~~	88.6	177.4
	21.5	9.1		220.8	264.0
	29.0				176.5
	36.5				260.2

Sept. 20. 1892

	42.0	10 34 ~~26~~ 17.2	83.7 85.3 169.0 84.5	176.6
	49.5	39.2	218.8	261.9
	57.5		83.7	177.0
[23]	7.5		79.9 163.6	260.7
	13.5	10 34 ~~56.5~~ 47.6	81.8	183.2
	20.0	9.6	221.0	263.1
	28.0		87.7	177.5
	37.0		74.3 162.0	265.2
	43.5	10 35 ~~26.5~~ 17.5	81.0	185.3
	49.5	39.5	221.9	259.6
	59.0		80.5	179.1
	6.0		73.9 154.4	259.6
24	15.0	10 35 ~~47.5~~ 458.8	77.2	184.7
	23.0	10.8	220.5	258.6
	33.0		73.7	183.0
	41.5	10 36 ~~34.5~~ 25.4	74.4 148.1	256.7
	52.5	47.4	74.0	182.7
25	2.5		219.6	257.1
	12.5		69.9	185.3
	21.5		62.5 132.4	255.2
	30.0	10 37 ~~11~~ 03.0	66.2	191.3
	36.0	25.0	221.4	253.8
	44.0	10 37 ~~43~~ 34.8	69.8	184.0
	53.0	56.8	70.0 139.8	253.8
26	1.0		69.9	184.6
	9.0		219.2	254.6
	17.5		68.1	194.9
	25.5		69.4 137.5	253.0
	31.5	10 38 ~~14~~ 06.1	68.8	190.8
	38.0	28.1	222.2	250.2

Sepr. 20. 1892

	45.0	10 38 $\overset{36.6}{\cancel{44.5}}$	57.5	187.9
	54.5	58.6 —	57.3 114.8	245.4
[27]	3.5		57.4	191.3
	11.5		218.3	248.6
	21.5	10 39 $0\overset{0}{\cancel{7}}.5$		191.4
	29.5	10 39 $0\overset{6}{\cancel{8}}.5$		250.2
	37.5	10 39 $\overset{17.5}{\cancel{25.5}}$		198.3
	50.0	10 39 $2\overset{9}{\cancel{1}}.0$		246.2
	57.7	10 39 $\overset{36}{\cancel{44}}.5$		195.7
[28]	4.5	10 39 $\overset{43}{\cancel{51}}.5$		241.3
	11.5	~~10 39 58.5~~ ~~40 00~~ 10 39 50.5		198.1
	19.0	~~10 40 06.0~~ 10 39 58.0		241.2
	26.5	~~10 40 15.5~~ 10 40 05.5		201.6
	35.5	10 40 14.5		240.7
	45.5	10 40 24.5		204.2
	55.5	10 40 34.5		239.0
	1.5	10 40 40.5		203.8
	8.5	10 40 47.5		237.3
29	19.0	10 40 58.0		206.3
	27.0	10 41 07.0		236.3
	36.5	10 41 15.5		209.0
	43.5	10 41 22.5		234.5
	50.0	10 41 29.0		216.4
	56.0	10 41 35.0		231.0
	2.5	10 41 41.5		212.4
	8.5	10 41 47.5		230.0
	17.5	10 41 56.5		214.1
30	26.5	10 42 05.5		229.4

Limit visibility

Sepr. 20. 1892

31	√,0	1		214,6	11.0
	13,5			225.6	13.3
	25,0	10 43 00.0		213,4	24.3
	40,5	21.0	220.1	226.7	12.2

The above is an observation of the Dis. of Jupiter III. Phot. R. P. obs. D. Rec Comp. Sat. II.
Seeing medium.

B + C. 1182 B. 394

10 40 21.0 10 √ 2 0.0
41 21,0 √ 3 0.0

Reap. Jup. III. P. obs. Fowle rec. Comp. with Sat. II.

[12]	36	44.5	12 48 30	
		59.5?.	12 48 45	203.4
	37	17.0	12 49 2.	245.3
		27.0	12 49 12	200.4
		36.0	12 49 21	243.3
		45.5	12 49 31	203.1
		57.0	12 49 42	249.6
	38	6.0	12 49 51	191.7
		22.0	12 50 7	249.8
		32.5	12 50 18	195.7
		42.5	12 50 28	249.0
		53.5	12 50 39	200.1
	39	2.5	12 50 48	245.6
		11.5	12 50 57	193.0
		21.5	12 51 7	250.3

Sept 20, 1892

	30.0	12 51 15	194.9	
	39.5	12 51 24	250.3	
	58.0	12 51 35	193.4	
[T2] 40	2.5	12 51 48	251.4	
	21.0	~~12 52 6~~	192.4	
	34.5	~~12 52 20~~	253.1	

Moon's images ~~equal~~ to render them equally distant from limb of Jupiter

		4226.5 56.6 12 52 42		60.7 81.5 142.2 71.1
41	20.0		186.5	900.0
	31.0		268.0	2350.0
	42.5		186.0	81.3
	56.5		267.3	94.1 175.4 87.7
42	10.0	273.5 8.43	178.3	904.0
	44.5	12 52 53	272.4	2260.0
43	15.0		175.1	
	32.5		267.9	92.8 97.7 190.5 95.2
	46.0	163.0 40.8	171.3	883.3 220.8
	58.5	12 54 26	269.0	
44	16.0		168.6	100.4 96.4 196.8
	28.5		269.0	98.4
45	3.5	182.5 45.6	170.4	874.8 2186.7
	14.5	12 56 31	266.8	
	24.5		172.3	101.9 102.9 204.8
	40.5		274.2	102.4

Sept 20, 1892,

12	45	53.5	186.5 46.6	170.1	893.6 223.4	
	46	8.0	12 57 32	277.0		
		20.5		170.2		100.0 102.1 202.1 101.0
		32.5		270.7		
		44.5	152.5 38.1	172.6	887.7 221.9	
		55.0	12 58 23	274.7		
	47	25.5		171.9		102.7 102.9 205.6 102.8 Corr.
		42.0		274.6		
		59.0	201.5 50.4	167.8	885.0 221.2	
	48	15.0	12 59 36	270.7		
		29.5		175.0		95.4 99.2 194.6 97.3
		45.0		270.4	888.8 222.2	Corr.
		57.0	205.0 51.2	172.1		
	49	13.5	13 00 37	271.3		

Seeing of visibility with comp. sat at nearly the same distance as Sat III when it appeared.

12	50	30.0		209.6		22.2 22.7 44.9 22.4
		38.0		231.8		
		48.5	172.5 43.1	210.3	884.7 221.2	
		56.0	13 2 29	233.0		

Satellite appeared several minutes before the computed time. It was seen for perhaps a minute before the first observation. At end of observation it was so near the limb of Jupiter that measures were difficult.

Sept 20, 1892.

B+C 1182			B394		
13	3	13.7	13	15	0.0
13	4	13.7	13	16	0.0

B. + C. 1182.			B. 394.		
			15	~~42~~	~~0.0~~
15	31	6.0		43	0.0
	32	6.0		44	0.0

Dis. Jup. II. W. obs. Fowle sec. Phot. R.
Comp. with first sat. fol. = Sat. III.

16 9 14
8 12

16 17 26.
15 43 0.

34 26.
15 31 6.

16 5 32. Ap. time ecl.

Sept. 20, 1892

3^h	47 27		190.0		68.2
	45.0		258.2		68.8 137.0
47 46.6	53.0	~~47m 46.6s~~	195.2		68.5
48	2.0	15 59 41.8	264.0	226.8	
	11.0		190.0		70.2 67.0
48 24.2	19.5		260.2		137.2 68.6
	29.0	16^h 00^m $19^s.2$	289.0		
	37.5	24.2	256.0	223.8	
	40.5		188.2		72.0
49	9.0		260.2		71.6 143.6
49 12.4	19.5	16 1 7.4	188.4		71.8
	30.5		260.0	224.2	
	39.5	16 07 ~~34.8~~ 49.6	188.7		72.5 65.7
	47.0	39.8	261.2		138.2 69.1
49 54.8 50	0.0		192.8		
	12.5		258.5	225.3	
	26.0		187.1		71.0 66.1
	40.5		258.1		137.1
50 43.2	49.0	16 02 38.1	190.0		68.6
	57.5	43.1	256.1	222.3	
51	8.5		287.9		73.8
	18.0		261.7		66.5 140.3
	26.5	16 03 17.0	191.0		70.2
	35.0	22.0	257.5	224.5	
	45.5		193.6		68.2
	54.0	16 03 54.9 59.9	261.8		64.2 132.4 66.2

Sept 20, 1892

3	52	4.0		190.0		
		16.0		254.2	224.9	
		28.5		191.2		70.0
		36.0		261.2		71.8 141.8
		46.5	16 04 36.8	188.2		70.9
		56.0	41.8	260.0	225.2	
	53	51.5		188.9		69.2
		13.5	54m 57.6	258.1		70.1 139.3
	56	40.0	16 06 52.6	190.0		69.6
		51.5		260.1	224.3	
	57	18.0		192.2		64.8
		40.0	54.9	257.0		71.2 136.0
	58	15.2	16 09 49.9	187.8		68.0
		26.5		259.0	224.0	
		37.5		191.0		67.2
		49.0		258.2		69.7 136.9
	59	32.0	16 11 6.8	186.7		68.4
		44.5	10.8	256.4	223.1	
		56.5		190.0		66.2
4	0	7.0		256.2		68.8 135.0
		52.0	16 12 25.5 29.5	188.2		67.5
	1	2.5		257.0	222.8	
		20.5	57.6	192.5		59.5
	2	1.0	16 13 53.6	252.0		60.4 119.9
		10.5		194.8		~~59~~ 60.0
		18.5		255.2	223.6	
		26.0		189.0		51.7
		32.5		250.7		51.0 102.7
		37.5		194.0		51.4

Sept 20, 1892.

		45.0	16	14	31.2 35.2	250.0 224.7 →
						198.0
		57.0	16	14	47.0	249.0
		56.0	16	14	52.0	249.0
4h	[3]	1.0	16	14	57.0	201.0
		4.1	16	15	0.5	247.0
		12.5	16	15	8.5	200.8
		18.0	16	15	14.0	244.0
		24.0	16	15	20.0	200.2
		30.0	16	15	26.0	247.2
		35.0	16	15	31.0	206.0
		41.0	16	15	37.0	243.0
		46.0	16	15	42.0	206.0
		51.5	16	15	47.5	244.2
	[4]	0.0	16	15	56.0	263.0
		7.0	16	16	3.0	245.8
		12.0	16	16	8.0	209.0
		18.5	16	16	14.5	242.0
		23.0	16	16	19.0	216.0
		28.0	16	16	24.0	240.4
		34.0	16	16	30.0	208.2
		40.0	16	16	36.0	240.8
		46.0	16	16	42.0	215.7
		52.5	16	16	48.5	239.0
		58.0	16	16	54.0	215.2
	[5]	6.5	16	17	2.5	234.0
		17.0	16	17	13.0	217.8
		26.0	16	17	22.0	233.8
		40.5	16	17	36.5	219.9

Sept 20, 1892.

4^h 5 55.5 16 17 51.5 228.9
Not seen later.

Limit of visibility.
6 53.5 220.0
7 4.5 230.0
18.5 16 19 8.5 221.1
33.5 12.5 230.0 225.3

10.0
8.9
1.8.9
9.4

Above is Dist of Jupiter II. Phot. R. compared with first satellite following = Sat III.

~~Sat. disappeared before almanac theoretical time. Sat. was seen to be growing faint before the 3rd limit began & observations were hastened.~~
Observations ~~as little~~ difficult on account of proximity of satellites (especially the comp. satellite) to limb of Jupiter. This caused observations to be taken more slowly ~~as~~ when satellite was getting near actual disappearances, as certainty of equalization became more difficult.

Sept. 21. 1892.

Circumpolar Var. Fr. Sts.

R. Cassiop.
23 51 +49.7
19 55
-3 56

0 3 R R 3 p in large tel.
Rather too faint + close to adjacent star for finder
Est. 10.0

T. Cassiop.
0 18 +55.9
20 18
-4 0

8 0 ± l = T ~~T, T 3m~~ in large tel
l = T in finder
Est. 10.1

S. Cassiop
1 10 +72.1
20 34
-4 36

Careful examination of region of S. Cassiop made, S. certainly seen but very faint.
~~l3 ± 1/2 S, in large tel.~~ (over)

Sept. 21, 1892,
y 2 S in large tel.
Do. fr. for finder.
Est. 15.0

Aurora in North becoming brilliant. Low arch with streamers.

S. Persei
2 8 +57.2
20 57
−5 11

8 53 f 2 S, S 2 g in large tel.
f 2.5 S, S 2 g in finder
Est. 9.3

T. Persei

9 2 d 2 T, T 1.5 l in finder
d 3 T, T 2 l in large tel.
Est. 9.1

R. Aurigae
5 3 +53.0
21 20
−7 43
21 27
−7 36

Sept. 21. 1892.

9 23 k 2 a, R 2.d in large tel.
Rather ft. for finder
Est. 10.3

R. Lyncis
6 49 +55.1
21 44
-9 5

9 44 m 2.5 R, a 2.5 n in large tel.
Too ft. for finder
Est. 11.0

Examination of Comp. Stars for
R. Pegasi
23 0 +8.6
22 9
0 51

Star f brighter than star e. Star p probably not needed.
With these exceptions selection quite good.

Sept. 21. 1892,

Nova Aurigae W. Obs.

5 23 +32.0
22 45
+17 22
−6 38

10 37 ≏ 1 N, N 3.5 ≜

Spectrum prim. mon.

Cst 10.6

Put on extra battery cell & tried electric light on Phot. in order to see if light was sufficently bright for Eclipse

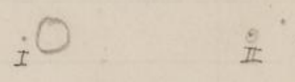
Disap. of Jupiter I. W observ., Fowle recorded Phot. R.

B. + C. 1182. B. 394

15 55 10.5 15 50 0.0
56 10.5 51 0.0

→ compared with 1'st satellite on following side = Sat II.

16 12 34
8 12
16 20 46
50 0
30 46.
15 55 10
15 25 56,



Sept. 21, 1892,

4	[13]	37.0		183.0		81.0
		47.0		264.0		79.9 160.9
		55.0	16 08 40.6	186.0		80.4
4	14	3.5	50.6	265.9	224.7	
		10.5		183.0		81.2
		16.0		264.2		78.9 160.1
		21.5	16 09 09.0	184.3		80.0
		28.0	19	263.2	223.6	
		33.5		183.9		76.5
		39.0		260.4		78.6 155.1
		46.0	16 09 32.9	183.2		77.6
		53.0	42.9	261.8	222.3	
	15	0.0		183.0		81.2
		6.0		264.2		83.4 164.6
		15.0	16 10 00.6	182.0		82.3
		21.5	10.6	265.4	223.6	
		27.0		180.7		83.1
		32.5		263.8		83.0 166.1
		38.0	16 10 25.2	180.0		83.0
		43.0	35.2	263.0	221.9	
		50.0		188.0		72.2
		57.5	59.8	260.2		77.9 150.1
	16	7.0	16 10 49.8	184.2		75.0
		9.0		262.1	223.6	
		16.0		184.9		81.2
		22.0		266.1		81.1 162.3
		28.0	16 11 16.0	183.2		81.2
		34.0	25.0	264.3	224.6	
		41.0		182.8		

Sept 21, 1892.

		57.5			266.0	83.2 76.1
4	[17]	10.0	16 11 52.2		184.2	159.3 79.6
		16.5		1.2	260.3	223.3
		21.5			186.7	74.6
		27.5			261.3	79.0 153.6
		33.0	16 12 21.2		184.2	76.8
		39.0		30.2	263.2	223.8
		44.5			189.2	74.6
		49.0			263.8	79.2 153.8
		55.0	16 12 43.4		191.0	76.9
	[18]	1.0		52.4	260.2	$22\overset{6}{8}.0$
		6.0			192.2	69.6
		11.5			261.8	76.0 145.6
		17.0	16 13 05.6		186.2	72.8
		24.0		14.6	262.2	225.6
		29.0			188.7	73.3
		34.5			262.0	73.1 146.4
		39.5	16 13 28.1		187.2	73.2
		45.5		37.1	260.3	224.6
		51.5			186.8	74.2
		56.5		59.4	261.0	70.8 145.0
	[19]	2.0	16 13 50.4		190.2	72.5
		7.5			261.0	224.8
		12.5			188.4	77.4
		18.0			265.8	78.6 156.0
		23.5	16 14 11.9		182.7	78.0
		29.5		20.9	261.3	224.6

Sept. 21, 1892.

		34.5		187.5		73.4 70.1 143.5 71.8
		41.0		260.9		
		46.5	16 14 34.6	189.2		
		52.5	43.6	259.3	224.2	
		58.0		182.0		81.2 73.7 154.9 77.4
[4]	[20]	4.0		263.2		
		10.0	16 14 58.6	185.7		
		17.5	7.6	259.4	222.6	
		23.5		185.2		74.0 66.2 140.2 70.1
		29.5		259.2		
		35.5	16 15 23.6	192.0		
		42.0	32.6	258.2	223.6	
		48.0		190.3		70.7 71.1 141.8 70.9
		53.0	~~44.6~~ 56.6	261.0		
	[21]	0.0	16 15 47.6	189.0		
		5.5		260.1	222.6	
		11.0		183.8		79.3 77.5 156.8 78.4
		17.0		263.1		
		23.0	16 16 10.9	187.8		
		28.5	19.9	265.3	225.0	
		35.0		140.8		71.2 73.9 145.1 72.6
		40.0		262.0		
		45.0	16 16 34.0	187.0		
		52.0	43.0	260.9	225.2	
		57.5		191.8		66.4 70.0 136.4 68.2
	[22]	3.0		258.2		
		8.5	16 16 57.1	187.0		
		15.5	6.1	257.0	223.5	
		21.0		184.8		

Sept 21, 1892

76.4
69.2
145.6
72.8

		26.5		261.2
		32.0	16 17 20.0	189.9
		36.5	29.0	259.1 → 223.8
		42.5	16 17 33.5	189.3
		47.5	16 17 38.5	260.8
		53.0	16 17 44.0	191.2
		58.0	16 17 49.0	259.2
[4]	[23]	4.0	16 17 55.0	184.0
		9.5	16 18 00.5	257.0
		15.5	16 18 06.5	184.2
		21.0	16 18 12.0	262.2
		28.0	16 18 19.0	188.3
		34.5	16 18 25.5	260.1
		40.0	16 18 31.0	188.2
		46.0	16 18 37.0	258.0
		52.5 ~~57.5~~	16 18 4~~8~~3.5 †	193.1
		57.0	16 18 48.0 †	259.0
	[24]	2.5	16 18 53.5	195.8
		7.5	16 18 58.5	255.2
		12.5	16 19 03.5	191.0
		18.0	16 19 09.0	252.0
		23.5	16 19 14.5	195.0
		29.5	16 19 20.5	260.1
		35.5	16 19 26.5	191.8
		40.5	16 19 31.5	254.0
		46.0	16 19 37.0	197.1

Sept 21, 1892

	57.0	16 19 42.0	252.0
	56.5	16 19 47.5	195.8
[25]	3.5	16 19 54.5	248.8
	9.0	16 20 00.0	195.8
-	14.5	16 20 5.5	247.2
	21.0	16 20 12.0	200.5
	27.5	16 20 18.5	249.0
	34.0	16 20 25.0	207.0
	43.0	16 20 34.0	241.8
25	56.5	16 20 47.5	209.5

Not seen later

Limit of visibility.

26	44.5		209.5		32.0
27	57.5		241.5		29.0
					61.0
	17.5	22.4	210.0		30.5
28	18.0	16 22 13.4	239.0	225.0	

Images rather bad. ~~Observation~~ On this account and also because satellite disappears quite near limb of Jupiter, observation rather difficult. Some cloud also.

B. + C. 1142.			B. 394		
16	48	8.0	16	43	00
	49	8.0		44	00

Sept. 26. 1892.

Dec. Wedge Zone. W. obs.
+19° Series

19 20
20 12
+0 √8

Reject this series. Not enough obs. for constant.

4039	6.39
	5.40
	5.80
4064	2.67
	3.50
	2.51
4067	4.18
	3.30
	4.41
4084	3.66
	4.20
	4.58
4087	2.99
	2.60
	2.62

Sept. 26. 1892.

4094	2,81 2,58 2,97
4096	3.01 3.11 2,62
4103	2,71 2,55 2,90

Sept. 27. 1892.

Comet Swift. (Mar. 6.)   W. obs.

0	8	. +48.0
20	8	
-4	0	

20	15.
3	49
24	4

Comp. Star = Dm +48° No. 38 (8.8 A)

Pos. zero	197.7
	45.0
Setting	152.7

20	33	37.5	*
	34	13.1	*
	34	40.5	☄
	35	6.4	☄
	35	40.5	
	36	15.8	
	36	43.2	
	37	8.5	

Sept. 27. 1892.

20	37	33.6		
	38	8.6	35.0	
	38	36.0	27.4	
	39	1.5	25.5	
		~~1.5~~		
	39	41.6		
	40	15.8	34.2	
	40	43.5	~~57.7~~	27.7
	41	9.4	~~55.9~~	25.9
	41	47.3		
	42	22.0	34.7	
	42	49.9	27.9	
	43	15.0	25.1	

Order in preceeding transits star, star, comet, comet.
Star in Northern half. Comet in southern

~~Comet north~~ General light impression of comet about equal to a 10.3 mag. star.
Dia. of total nebulosity 2' to 3'. outlying portions however rather faint.
Nucleus somewhat stellar.

Sept. 27. 1892.

S. Cassiop.

1 10 +72.1
21 2
−4 8

8 35 y 15 S, in large tel.
200 pr. for finder.
Est. 14.9
Var. certainly seen.

S. Cygni
20 8 +57.1
21 17
+1 9

8 45 p 2 S, S 15 g in large tel.
200 pr. for finder
Est. 13.3

Nova Aurigae. N. ob.
5 23 +32.0
21 48
16 25
−7 35

Sept. 27. 1892.

Region rather low. Obs. difficult.

10 0 r 1 s, s 3 s

Sept. 28. 1892.

Cloudy early part of evening.

Nova Aurigae. St. obs.

5 23 +32,0
22 30
6 5 3
5 7

Clouds again.

11 20 Still cloudy.

Sept. 29. 1892.

Circumpolar Var. [illegible]

R. Urs. Maj.
10 33 +69.3
20 19
+9 46

7 43 s 1 a, R 3 t in large tel.
#
Too fr. for finder
Est. 11.7

S. Urs. Maj.
12 33 +60.4
20 35
+8 2

8 6 m t 2 I, T 3 n in large tel
Rather too fr. for finder
Est. 10.3

S. Urs. Maj.
12 34 +61.9
21 2
+8 28

8 20 S = e in large tel.
S = e in finder
Est. 7.4

Sept. 29. 1892.

S. Bootis

14 16 +54.5
21 16
+7 0

8 39 g 3 S, S 1.5 h in large tel.
Rather too fr. for finder.
Est. 9.2

R. Camelop
14 40 +84.1
21 50
+7 10

9 8 e 1 R, R 4 f in finder
e 1 R, R 4 f in large tel.
Est. 9.9

R. Urs. Min.
16 33 +72.9
22 3
+5 30
22 5
+5 32

9 25 f 2.5 R, R 2.5 g in finder
f 2.5 R, R 2.5 g in large tel.
Est. 10.2

Sept. 29, 1892.

R. Draconis
16 26 +67.4
22 17
+5 51

22 23
+5 57

9 43 k 4 R, R 2 l in finder.
k 4 R, R 2 l in large tel.
Est. 8.0

T. Cephei
21 5 +68.0
22 35
+1 30

9 53 f 2 T, T 3 g in finder
f 2 T, T 3.5 g in large tel.
Est. 8.1

S. Cephei
21 37 +78.4
22 45
+1 8

10 9 g 1 S, S 4 r in large tel
Too fr. for finder
Est. 13.6

Sept. 29. 1892.

Nova Aurigae

5 23 32.0

23 4

+17 41

23 7

−6 16

~~p 4 n, n 1 q in larger tel.~~

Nova = q

Est. 10.3

10 25

242.0 107.3

349.3

243.3 106.6 ~~7.3~~

~~213.9~~

349.9 146.1 −0.65 Index to right

[10 30]

332.8 99.3

72.1 99.0 ~~1.7~~

335.0 ~~198.3~~

74.0 161.7 −0.35 Index to left.

332.7 99.3

72.0 102.5 ~~1.6~~

331.3 ~~201.8~~

73.8 158.2 −0.42 Index to ~~right~~ left.

Sept. 29. 1892.

63.0
164.0 101.0
66.9 89.1
156.0 190.1 1.8
169.9 Index to right
-0.19

66.7 97.3
164.0 104.5
59.9 201.8 1.6
164.4 158.2 -0.42
Index to right.

149.8 Index to left
255.7 105.9
148.7 100.4
249.1 206.3 1.5
153.7 -0.50

10 57
10 43.5

Electric light gone out so the observer had to read circle by use of lantern the difficulty of doing this probably slightly affected measurements.

Sept. 30, 1892.

Somewhat cloudy.

Now a little clearer.

R. Cassiop
23 51 +49.7
21 14
−2 37

Stopped for Mr. Clark to test object glass on star.

22 17
−1 34
0 5 Q, R 1 p in large tel.
Rather too close to adjacent star for finder.
Est. 10.2

T. Cassiop
0 18 +55.9
22 30
−1 48

9 45 K 2 T, T 1 l in finder
k 3 T, T 1 l in large tel.
Est. 9.8

1892phae.prpj..518W

Sept. 30. 1892.

S. Cassiop

1 10 +72.1
22 43
—2 27

9 56 y > S in large tel.
Too fr. for finder
Est. 14.9

S. Persei
26 8 +57.2
23 5
—3 3

10 16 S = g in finder
S ± g in large tel.
Est. 9.8

T. Persei

T = e in finder
T = e in large tel.
Est. 9.1

Examination of stars to 1

Troubled considerably by clouds.

Sep. 30. 1892.

Region of two or three vars. examined for meas. with Phot. R of bright star + two fainter adjacent stars. Region of S. Persei furnishes a pretty good case, (star of being the bright star provided the faint star is not faint for the Phot.

Nova Aurigae W. obs.

5 23 0 + 32.0

23 15

− 6 8

10 25 ~~A 1 N, N 3.5 S are larger tel.~~

" " " "5" 1 "Loo" "fr." "for" "finder" " " "

Ex.

Meas. of Nova Aurigae in terms of star s with Phot. R.

Cloud

244.0 Index to right

[10 30] 345.1 101.1

243.0 100.2

343.2 201.3 1.6 ✓

158.7 − 0.41

331.0 Index to left

72.8 101.8

332.0 102.4

74.4 204.2 1.5 ✓

155.8 − 0.46

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332.1
75.0 102.9^
333.1 100.9^
74.0 203.8^ ~~1.5~~ ✓
156.2 −0.45

~~Index to right~~

244.8 101.4^
346.2 101.6^ ~~1.6~~ ✓
242.2 203.0^
157.0 −0.44
343.8 Index to right

245.0 98.2^
343.2
243.6 103.2^ ~~1.6~~ ✓
346.8 201.4^
158.6 −0.41

Index to left

333.9 99.0^
72.9
330.8 103.9^
74.7 202.9^ ~~1.6~~ ✓
157.1 −0.44

11 0
10 45.0

Sept. 30. 1892.

B & C. 1182. 12 17 57.0 / 18 57.0

B. 394. 12 17 0.0 / 18 0.0

12 36 17
8 12
12 44 29.
17 0
27 29.
12 17 57.
12 45 26. Ap. time ecl.

Dis. Jup.-I. Phot. R. W. obs.
Power rec. comp. with first sat. to left of I = Sat. IV

12 32 27 — 103.6 / 105.9 / 209.5 / 104.8 — 151.8
42 12 31 49.2 — 255.4
53 46.2 — 149.0
33 3 — 254.9 — 202.8
43 — 105.0 / 102.8 / 207.8 — 149.0
55 58.0 — 103.9 — 254.0
34 3 12 33 02.0 — 150.7
11 — 253.5 — 201.8
24 — 111.0 / 108.0 / 219.0 — 147.0
36 — 109.5 — 258.0
46 12 33 43.8 — 145.0
53 39.8 — 253.0 — 200.8
35 ~~3 148.8~~
~~11~~

Sept. 30 1892

12 (mean)	35	14			147.0	
~~12~~	~~35~~	~~26~~		108.1 105.0	~~145.3~~	
		36		217.1 108.6	255.1	201.3
		46	149 37		147.0	
		53	12 34 41		256.0	~~200.6~~ ~~201.3~~
	36	1		106.2 108.5	151.0	
		11		214.7 107.4	257.2	
		19	12 35 18.5		147.0	
		27	14.5		255.4	202.7
		35		104.5 103.7	149.5	
		42	53.0	208.2 104.1	254.0	
	37	2	12 35 57.0		150.3	
		13			254.0	202.0
		20		107.8 103.8	147.2	
		27		211.6 105.8	255.0	
		35	12 36 35.0		152.2	
		42	31.0		256.0	202.1
		52		106.8 105.4	152.2	
		59		206.2 103.1	253.0	
	38	5	12 37 06.2		146.8	201.0
		13	2.2		252.2	
	39	12		102.2 103.6	148.0	
		20		205.8 102.9	250.2	
		26	12 38 26.8		148.8	
		33	22.8		252.0	199.6
		40		100.4 102.9	153.1	
		52	55.5	203.3 101.7	253.5	
	40	1	12 38 59.5		152.2	
		9	~~55.5~~		255.4	203.5
		~~47~~	±		154.0	

Sept. 30 1892

12	40	19		99.0 105.0 204.0 102.0	253.0	
		33	12 39 30		153.0	
		40 26			258.8	204.5
		54		104.3 101.1 205.4 102.7	150.7	
	41	1			255.0	
		8	12 40 08.0		150.9	
		13 4.0			252.0	202.2
		20		104.0 104.8 208.8 104.4	151.0	
		26			255.0	
		51	12 40 42.2		150.2	
		56 38.2			255.0	202.8
		3		97.7 94.0 191.7 95.8	153.1	
[42]		8			250.6	
		13	12 41 14.8		154.0	
		19 10.8			248.0	201.5
		25	12 41 29.0		155.0	
		33	12 41 37.0		248.5	
		38	12 41 42.0		151.2	
		44	12 41 48.0		246.2	
		51	12 41 55.0		155.2	
		58	12 42 02		249.0	
[43]		5	12 42 09		155.5	
		12	12 42 16		249.0	
		18	12 42 22		156.0	
		25	12 42 29		248.5	
		32	12 42 36		157.2	
		37	12 42 41		244.2	
		54	12 42 58		164.0	
[44]		10	12 43 14		240.0	

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12 44

16 12 43 20 169.2
23 12 43 27 209.0
27 12 43 31 169.0
32 12 43 36 209.8
42 12 43 46 224.0
47 12 43 51 172.2
√ 51 12 43 55 227.0
√ 55 12 43 59 172.3
[45]
0 12 44 04 228.0
6 12 44 10 180.0
10 12 44 14 224.5
15 12 44 19 182.0
20 12 44 24 225.0
25 12 44 29 185.8
30 12 44 34 218.0
38 12 44 42 189.0

Not seen later.

~~46~~ ~~10~~

Limit of vis.

47 ~~51~~
48

51 29.3 188.5
36.6
16 59.9 217.8
38.0
35 12 47 27.2 186.3
202.4
51 23.2 216.9

Seeing good. Sat. disap. however quite near limb of Jup. Electric light became faint during the last ~~three~~ minutes, which necessitated bringing the lantern into

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use. thus causing a little delay.

B. + C. 1182.			B. 394.		
13	0	55.5	13	0	0.0
	1	55.5		1.	0.0

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Des. Jup. II. Phot. R. Pole. Tr. rec.
Comp. Sat. = southern of two near east, and
fol. = Sat. I.

8 1 59.
8 12

8 10 11.
7 48 0

22 15.
7 49 40.

8 11 51. Ap. time ecl.

B. + C. 1182.
7 49 39.5
50 39.5

B. 394.
7 48 0.0
49 0.0

8	4	9.0		476.7 119.2	80.0		79.7 83.4 163.1 81.6
		18.0			159.7		
		28.0	8 02 44.8		76.8		
		40.0	23.8		160.2	119.2	
		49.0			77.6		81.4 79.4 160.8 80.4
	5	1.0			159.0		
		17.0	8 03 29.1		77.8		
		25.5	8.1		157.2	117.9	
		34.5			77.7		81.1 80.8 161.9 81[illegible].0
		44.0			158.8		

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3

8	5	56.0 49.8		75.6	
	6	4.5	8 04 10.8	156.4	117.1
		13.5		76.3	
		24.0		157.9	
		32.0	8 04 49.2	80.1	
		43.5 ~~8.0~~ 28.2		159.7	118.5
		53.5		78.2	
	7	2.0		157.8	
		14.0	8 05 29.9	72.6	
		26.0 8.9		158.9	116.9
		43.0		75.6	
		57.5		154.6	
	8	15.0	8 06 26.6	78.0	
		~~27.0 5.6~~		158.6	116.7
		38.0		79.6	
		45.0	~~8 07 11.4~~	154.4	
		54.0 50.4		79.9	
	9	4.5 ~~50.4~~		146.5	117.6
		12.5	8 07 33.5	86.2	
		18.0	8 07 39.0	151.7	
		23.0	8 07 44.0	85.2	
		29.0	8 07 50.0	149.4	
		36.0	8 07 57.0	57.5	
		42.0	8 08 03.0	149.7	
		47.5	8 08 08.5	88.7	
		54.0	8 08 15.0	145.9	

81.6
79.6
161.2
80.6

79.6
86.3
165.9
83.0

79.0
80.6
159.6
79.8

74.6
66.6
141.2
79.6

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10	0.0	8 08 21.0	90.7
	7.0	8 08 28.0	147.6
	15.5	8 08 36.5	94.2
	22.5	8 08 43.5	142.3
	31.0	8 08 52.0	97.1
	39.0	8 09 00.0	137.7
	47.0	8 09 08.0	97.0
	54.0	8 09 15.0	132.6
11	1.0	8 09 22.0	99.4
	7.5	8 09 28.5	134.1
	15.0	8 09 36.0	105.6
	23.5	8 09 44.5	131.3
	38.0	8 09 59.0	104.7

Limit of Vis.

11	57.0		104.3	27.3
12	7.5		131.6	24.6
				51.9
	20.5	8 10 34.4	102.5	26.0
	28.5	13.4	127.1	116.4

~~Obs. of~~

B. + C. 1182.
8 26 38.3
27 38.2

B. 394.
8 25 0.0
26 0.0

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S. Persei
26 8 +57.2
21 36
-4 32

Examination of region of Circumpolar Var.
in order to see if there are any good
cases where 9th mag. stars can be compared
photometrically with stars about 2 and
4 mag's. fainter.
Region of S. Persei examined
Star f presents rather a good case provided
it can be meas. with the Meridian Phot.
Star e is 9.3 by the Meridian Phot. and
star f would be consequently about 9.3
and has not yet be meas with the Phot.
as far as known. There is a 10.7 Mag.
within about 3' of it and a 12.6 within
2.5 of it, both of which can be meas.
although the 12.6 is rather faint.
a 10.5 could be compared with an 11.5 ~~[illegible]~~
(already meas. by M.P. the 11.5 being comp.
star c but the 10.5 has another star a little
fainter not far from it and the 10.5 is
also pretty far distant from the 11.5
so that the images are not quite so good.
The 11.5 also has a 13 mag. star within some
2' of it which could be comp with it.
but the star is pretty faint for Phot.
and is perhaps a little near the 11.5

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for subsequent comp. with faint comp. stars of sequence already selected, the first case mentioned namely, star f and its adjacent faint stars is really the best case provided f can be meas. with the M. Phot.

R Aurigae

5 40 +53.0
22 33
-6 31

Star e already meas. by M. Pas a 8.1 mag. has a star of about 11.2 mag. 4' distant from it, it also has a star about 13 mag 4' distant from it on the opposite side which is pretty faint in moonlight. It can be comp. with star e by meas. slowly + with much care but is pretty faint in Phot.

A somewhat easier case for the fainter star would be to compare a 9.2 mag. which fol's star e 7 sec. and is 9mi south of it ~~(now a Comp. star)~~ with a 12.2 mag. 2.5' distant from it. But the first mentioned case is really the better of the two when both stars can be compared with star e. provided the

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faint star is not to faint to be meas. photometrically.
On examining again it is found that the 9.2 mag. mentioned above is Comp. star "k" and it is probably a little fainter than 9.2 & possibly might be rather faint for the M.P. the meas. although ~~that~~ it is not certain that it would be.

10 19 L 4 R R 1 k in large tel.
Rather too fa. for finder in moonlight
Est. 10.0

R. Lyncis
6 49 +55.0
23 18
−7[illegible] 31

Star f ~~be a faint star~~ which has been meas. as a 9.0 by the M.P. has a faint star of about the 12.8 mag. within 0'.5 of it, but the faint star is rather too close to f and a little over a field distant from the Var. So ~~that~~ it could not be very well comp. with other ~~Comp.~~ faint Comp. ~~stars~~. Star a has a 9.2 mag. preceding it 31 sec. and 5' North of it. ~~this latter~~ which is not a Comp. star. This latter

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Star has a 10.4 mag. and also a 12.0 mag. star ~~within~~ about 3'.5 of it. which could well be comp. with it provided the principle 9.2 mag. star ~~Star be so~~ is not too faint for the M. Phot. the only remaining trouble however is that these two faint stars would be about a field & a half away from the var. about which the faint Comp. Stars are situated so that R-Cygni is does not present quite so good a case as the two previous variables.

10 v0 R = 0 in large Tel.
Too fr. for finder
Est 12.0

Nova Aurigae W. Obs.

5 23 + 32.0
23 √0
− √ 33

11 0 N = ~~R~~ r

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B+C 1182
6 47 59.0
48 59.0

B394
6 47 0.0
48 0.0

7	6	14.5			82.1 75.0	167.1	
		24.0			157.1 1 78.6	249.2	
		40.5	7 05 34.1			170.8	
		49.0		32.1		245.8	208.2
	7	1.5			80.5 80.0	166.3	
		13.5			160.5 2 80.2	246.8	
		25.5	7 06 20.8			168.6	
		34.5		18.8		248.6	207.6
		45.5			79.6 76.1	166.2	
		54.5			155.7 3 77.8	245.8	
	8	6.5	7 0~~8~~7 02.5			170.1	
		15.5		0.5		246.2	207.1
		27.5			76.8 79.5	169.2	
		35.0			156.3 78.2	246.0	
		~~3~~43.0	7 0~~8~~7 41.4			168.2	
		52.0		39.4		247.7	207.8
	9	7.5			86.1 79.6	167.7	
		23.5			165.7 82.8	251.8	
		34.5	7 0~~8~~ 29.0			168.0	
		42.5		27.0		247.6	208.3
		54.5	7 08 56.5			170.3	
	10	7.5	7 09 09.5		73.1 .41	243.4	
		16.5	7 09 18.5			~~[illegible]~~ 164.4	
		24.0	7 09 26.0			248.8	
		31.0	7 09 33.0			168.3	

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	40.5	7	09	42.5		244.2
	45.0	7	09	47.0		172.2
	55.0	7	09	57.5		244.6
11	4.0	7	10	06.0		172.1
	11.5	7	10	13.5		244.2
	20.0	7	10	22.0		169.9
	30.0	7	10	32.0		250.7
	37.0	7	10	39.0		172.6
	44.0	7	10	46.0		245.6
	53.0	7	10	55.0		177.9
12	1.0	7	11	03.0		242.4
	7.5	7	11	09.5		175.0
	14.5	7	11	16.5		241.6
	23.0	7	11	25.0		174.3
	31.0	7	11	33.0		237.5
	42.0	7	11	44.0		175.3
	49.5	7	11	51.5		234.2
	55.5	7	11	57.5		181.8
13	6.0	7	12	08.0		236.4

Limit of ~~v~~isibility

13	53.5	~~7~~	~~12~~		36.4 49.6 86.0	188.6
14	4.5				43.0	225.0
	14.0	7	13	11.4		180.2
	25.5			9.4	205.9	229.8

Comp. with sat. ~~III~~

Dis of Jup. I ~~III~~ P.T.P. D, Rec. Phot R.
Conf. Sol. that pos. Jupiter.
Seeing very poor owing to low altitude
comp/obs. difficult owing to proximity
of Jupiter. Electric light turned out, reading by lantern.

Oct. 2. 1892.

B.A.C. 1182			B 394		
7	24	5.7.5	7	24	0.0
	25	5 7.5		25	0.0

Oct. 6. 1892.

Clouds the very first of evening.

D.M. Wedge Zone +19° W. Obs.

19 20 +19.8
20 57
+1 37

Too high as at present.

R. Pegasi
23 0 +8.6
21 10
−1 50

Moon bright. Obs. somewhat difficult. Stars e & p not needed. Otherwise selection very good.

Examination of Com. Stars for S. Aquarii
22 55 −19.3
22 32
−0 23

Stars a & f not needed

Clouds.

Oct. 6. 1892.

Clouds prevented obs. of g to t inclusive which should be obsd. on a subsequent night. Otherwise selection very good.

Sky pretty cloudy but will look for Nova Aurigae

Nova Aurigae
5 23 +32.0
23 18
−6 5

~~It is~~ Nova seen but it is not safe to compare it with r which is about equal in brightness as r is a number of ' away & r and Nova are seen ~~th~~ very differently & independently at different times owing to the changing
10 15 position of the clouds. Nova however has not altered much if any. At times it seems to be a grade and half brighter than r but this is quite uncertain for the reason above mentioned.

Too cloudy for anything further & growing worse.

Oct. 7. 1892.

7 15 Cloudy.

S. Aquarii

22	55	−19.3
21	27	
−1	28	

All cloudy

8 30 Too cloudy for work and growing worse.

Oct. 8. 1892.

Exam. of Faint Comp. Stars for S Aquarii Sec obs,

22 55 −19.3
20 59
−1 56
21 5
−1 50

Stars a & f not wanted. Rest of selection quite good. Star h however is decidedly brighter than star g, it is not wanted however as the interval between g & S seems small enough

Exam. of Comp. Stars for S. Ceti

0 12 −9.6
22 20
−1 52

Clouds.

Clouds prevented completion of exam. As far as examined selection seemed very good.

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B+C 1182			B 394		
10	14	27.0	10	16	0.0
	15	27.0		17	0.0

Too cloudy for Eclipse to be taken.

Oct. 10. 1892.

Exam. of Comp. Stars for W. Obs.
S. Ceti
0 12 −9.6
21 17
−2 VV

Interval between m and n decidedly too large. A better and brighter star than the present m would be S.D −9° No 66 (10 mag) It is also nearer the Var.

Exam. of regions near variables for faint stars to be meas. with Phot. R.

R. Draconis
16 26 +67.4
22 37
+6 11

Star p is about ~~10.8~~ 11.6 mag. and within about 5' of star f. Star q is about 12.7 mag. + within 4' of star f. All these are Comp. stars and p and q can probably be referred to star f with the Phot.
Star f is an 8.4 by M.P.
Star p is rather near q in brightness, so those two better stars would be n and q but star n is too far

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Try to be meas. by Phot. Star of however could be meas. and ~~than the~~ if desirable

Exam. of region of
R. Urs. Min
16 34 +72.9
23 38
+7 4

There is an 11 mag star pretty near star e which could be comp. either with e or d but better with d. There is a pretty faint star which could also be comp. with d but it is prob. too faint for Phot. These are about the only available stars for this var.

Exam. of region of
S Cygni
20 8 +57.2
24 8
+4 0

There is a 10.9 & 12.6 mag. each within 4' of an 8.9 mag. star quite close to var. and which could be very well comp. with it. This seems to be the best case for S. Cygni

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There is however an 11.0 4' distant
from star e & a 12.3 2' distant
from star e. However star e has been
meas. as a 9.7 by the M.P. it is therefore
rather faint so that perhaps the
M.P measurement of star e may
not be quite correct, beside the
range of mag. of the two stars which
would be comp. with the 8.9 mag.
would be rather larger. & so a
~~bt~~ rather better case.

The two stars mentioned which would
be comp. with the 8.9 mag. are star
l & o

0 2 8, 8 1.5 p in large tel.

11 0 2 eyep. for finder
Est. 12.9

Oct. 11. 1892.

Photometric meas. of two faint stars near
S. Persei   W. Obs.
26 8   +57.2
21 8
−5 0

Comp. of star c with 13 mag.

c dis. > 275.8   20.4^
296.2   16.8^ ✓^ ~~5.9~~ ✓ 5.9 ✓
[7 45]   277.2   37.2
294.0   Index to right

187.4   Index to left
206.5   19.1^
185.3   21.6^
40.7 ✓^ 5.7 ✓.
206.9

184.3   23.7^
208.0   15.8^
188.2   39.5 ✓^ 5.8 ✓
204.0

276.0 ~~279.0~~   Index to right
294.2 ~~290.0~~   18.2^
277.1   15.9^
293.0   34.1 ✓^   6.1 ✓

Oct. 11. 1892.

Comp. of star c with 11 mag. ✓

[8 25] c dis. > 269.3 Index above
304.8 35.5
270.9 33.4 4.5 ✓
304.3 68.9 ✓

1.0 Index below
31.0 30.0
0.0 31.2
31.2 61.2 ✓ 4.8 ✓

359.8
30.0 30.2
3.0 26.5
29.5 56.7 ✓ 5.0 ✓

94.8 Index above
122.1 27.3
8 49 92.0 34.0
126.0 61.3 ✓ 4.8 ✓

Comp. of 11 mag with 13 mag. star

[9 5] 11 mag. dis. > 164.2 Index above
228.7 64.5
167.2 56.8
224.0 121.3 ✓ 3.2 ✓

Oct. 11, 1892.

77.9 Index below
138.2 60.3
72.2 65.6
137.8 125.9 ✓ 3.1 ✓

78.2
139.9 61.7
81.2 55.8
137.0 117.5 ✓ 3.2 ✓

353.0 Index above.
44.2 51.2
349.0 57.0
46.0 108.2 ✓ 3.5 ✓

~~It~~ Comp. of 11 & 13 mag. in last four sets above difficult on account of faintness of stars as well as proximity of 11 mag. to brighter 8.5 mag. especially when it is on one side of the 13 mag.

o 2.5 (13 mag), (13 mag.) 2.5 p
[9 45] l 1 (11 mag), (11 mag.) 3 w

Oct. 11. 1892.

Approx. locations of 11 + 13 mag. stars relative to the 8.5 mag.
The 13 mag. prec. the 8.5 mag. 5 sec. and 0'.5 south of it.
The 11 mag. prec. the 8.5 mag. 26 sec and is 0'.5 north of it.
The 11 mag. has a star slightly fainter, prec. it (4.5 sec) slightly north of it.
The 8.5 mag. mentioned above and which was used in the comp's. with the Phot. tonight is Comp. star c.

Comp. of 11 mag. with star ~~c~~ d.

R. Urs. Min.

[10 0]

16 34 +72.9
23 42
+7 8

355.0 ∠ d dir. Index to right & above.
40.0 45.0^
355.0 46.0^ 3.9✓
41.0 91.0^

263.2 Index to left & below
313.2 50.0^
267.1 42.7^ 3.8✓
309.8 92.7^

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265.5
310.8 45.3
263.9 46.2
310.1 $\frac{}{91.5}$ 3.9

354.2 Index to right & above
40.5 49.0
357.0 41.1
38.1 $\frac{}{90.1}$ 3.9

After much trying it seems probable that the faint star mentioned on page 83 have not been comp. photometrically with stand since it is so extremely faint.
[0 50] Besides it is quite remote from the Var. The 11 mag. fol's. star = 4.5 sec & is 1' south of it.

Oct. 12. 1892

S. Persei

26 8 +57.2
21 8
-5 ⊖

Comp. of Star a with 13 mag.

7 43 169.0 Index to right + above
189.0 20.0^
170.8 ~~192.0~~ 22.2^
193.0 42.2 ✓^ 5.6 ✓

78.3 Index to left + below
116.3 ~~105.0~~ 28.0^
82.5 16.7^
99.2 44.7 ✓^ 5.5 ✓

82.4
99.2 16.8^
76.0 27.8^
103.8 44.6 ✓^ 5.5 ✓

351.4 Index to right + above
10.3 18.9^
354.0 16.1^
10.1 35.0 ✓^ 6.1 ✓

Oct. 12, 1892.

Comparison of star c with the 11 mag.

7 58 343.0 Index above
19.8 36.8 ✓^
346.9 30.1 ^ 4.6 ✓
17.0 66.9 ✓^

76.0 Index below
106.2 30.2 ^
76.2 32.6 ^
108.8 62.8 ✓^ 4.8 ✓

73.8
107.3 33.5 ^
74.0 32.3 ^
106.3 65.8 ✓^ 4.6 ✓

162.8 Index above
196.6 ~~200.0 wrong~~ = 33.8 ^
166.1 ~~173.9~~ 33.9 ^
200.0 67.7 ✓^ 4.6 ✓

~~Comp. star c with~~

~~7 57~~ ~~346.9~~ ~~Index above~~

Oct. 12. 1892.

8 26 Comp. of 11 mag. with 13 mag.

244.3 Index above.
299.1 54.8
242.9 61.5
3044 116.3 ✓ 3.3 ✓

329.0 Index below
31.0 62.0
330.7 57.3
28.0 119.3 ✓ 3.2 ✓

330.8 59.0
29.8 64.8
327.3 123.8 ✓ 3.1 ✓
32.1

58.0 Index above
121.2 63.2
63.2 60.6
123.8 123.8 ✓ 3.1 ✓

8 55 ~~Last~~ Somewhat troubled by clouds. Last reading especially difficult.

9 4 p 2 (13 mag), (13 mag.) 2.5 p
f 1.5 (11 mag), (11 mag.) 3 m

Cloudy

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Oct. 12, 1892.

R. Hrs. Min.
16 34 +72.9
23 8
+6 34

Comp. of 11th mag. with star d.

9 40
160.0 Index to left & below
204.1 44.1
157.9 46.3
204.2 90.4 ✓ 3.9 ✓

~~113.4~~ Index to right & above
~~247.0~~ ~~133.6~~
68.4
112.7 44.3
67.8 44.4 3.9 ✓
112.2 88.7 ✓

68.0
113.8 45.8
69.0 43.9 3.9 ✓
112.9 89.7 ✓

155.2 Index to left & below
207.0 51.8
158.0 44.9
202.9 96.7 ✓ 3.7 ✓

Too cloudy at present for rel. Est.

Oct. 12, 1892.

10 33 k 2,5 (11 mag), (11 mag) 2,5 l

S. Cygni
20 8 +57,2
24 18
+4 10

10 50 0 2 S, 8 2 p in large tel.
300 pr. for finder
Est. 13.0

Night somewhat poor.

Oct. 13. 1892.

S. Persei — W. obs.

26 8 +57.2
21 15
−4 53

C with 13 mag. — ~~Index to right~~ above

7 40

173.0
189.0 16.0
170.0 19.~~0~~2
189.2 35.~~0~~2 ✓ 6.1 ✓

82.2
98.7 16.5
81.0 22.0
103.0 38.5 ✓ 5.9 ✓

78.1
99.5 21.4
83.7 15.3
99.0 36.7 ✓ 6.0 ✓

172.0 Index above
191.0 19.0
170.1 20.2 5.8 ✓
190.3 39.2 ✓

Oct. 13, 1892.

Comp. star c with 11 mag.

7 57 346.9 Index above
16.9 30.0^
346.0 31.8^
17.8 61.8✓^ 4.8✓

77.2 Index below
104.0 26.8^
77.7 29.5^
107.2 56.3✓^ 5.0✓

77.8
108.5 30.7^
78.3 28.4^
106.7 59.1✓^ 4.9✓

167.8 Index above
197.0 29.2^
166.2 30.0^
196.2 59.2✓^ 4.9✓

Comp. of 11 mag. with 13 mag.

8 20 243.0 Index above
299.9 56.9^
243.0 55.0^ 3.4✓
298.0 111.9✓^

330.2 62.8^ Index below
33.0 57.7^
331.9 120.5✓^ 3.2✓
29.6

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332.1
30.7 58.6^
334.0 56.9^ ✓
30.9 115.5 ✓^ 3.3 ✓

62.0 +Index above
121.5 59.5^
61.1 57.9^
8 45 119.0 117.4 ✓^ 3.3 ✓

o 2 (13 mag), (13 mag) 2 p
l 1 (11 mag), (11 mag) 3 m

Comp. of 11 mag. with star d.
R. Urs Min.
16 34 +72.9
23 4
6 30

9 22 70.0 Index right & above
115.1 45.1^
67.8 48.3^
116.1 93.4 ✓^ 3.8 ✓

157.6 47.7^
205.3 42.1^
160.9 89.8 ✓^ 3.9 ✓
203.0

Oct. 13, 1892.

162.0
200.8 ~~x~~38.8
156.5 48.5
205.0 87.3 4.0

64.0 Index right & above
118.0 54.0
67.9 47.3
115.2 101.3 3.6

10 0 R 1 (11 mag), (11 mag.) 25 l

Com. of 8.9 mag right 11 mag.
S. Cygni
20 8 + 57.2
23 43
+3 35

10 15 340.8 Index to left & above
20.9 40.1
336.9 48.3
25.2 88.4 4.0

65.2 Index to right & below
118.8 53.6
68.9 43.8
112.7 97.4 3.7

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67.9
113.0 45.1
65.0 51.3
116.3 96.4 ✓ 3.7 ✓

158.2 Index to left & above
207.2 49.0
159.4 41.6
201.0 90.6 ✓ 3.9 ✓

Com. of 8.9 mag. with 13 mag.

10 28 167.5 Index to right & above
193.8 26.3
167.8 29.2
197.0 55.5 ✓ 5.0 ✓

258.1 Index to left & below
288.0 ~~30.9~~ 29.9
258.0 ~~28.0~~ 28.0
286.0 ~~58.9~~ ~~4.6~~ 4.9 ✓ 57.9 ✓

254.6
288.4 33.8
256.1 30.9
287.0 64.7 ✓ 4.7 ✓

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169.2 Right & above
195.0 25.8
168.9 26.9
195.8 52.7 5.2 ✓

Comp. of 11 mag. with 13 mag.

10 45
149.4 Index to right
213.1 63.7
154.0 55.1
209.1 118.8 3.2 ✓

58.0 Index to left
121.7 63.7
55.0 73.6
128.6 137.3 2.8 ✓

54.1
129.9 75.8
55.2 72.8
128.0 148.6 2.6 ✓

152.5 ~~149.5~~ maladjusted Index to right & above
211.0 ~~208.0~~ 58.5
152.0 57.9
209.9 116.4 3.3 ✓

Obs. in this last series rather difficult partly on account of faintness of star & also troubled somewhat by haze & light cloud.

Oct. 13. 1892.

o 1,5 S, S 2,5 p in large tel.
300 p. for finder
Cor. 13.0

11 13

Last night progressively growing rather worse. Although stars could be ~~p~~ pretty well seen at the last every the sky was ~~f~~ some ~~fogg~~ hazy - possibly a little fog also.

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New Comet disc̀ by Photography
at Lick Obs. Gr. obs.

19 41 +12.0
21 25
+1 44
21 33
+1 52

19 33 56

19 40 56 +11 56
-1 44 -5
19 39 12 +11 51

92
55
37

+2.81
37
19 67
8 43
103.97

+8.5
37
595
255
314.5

19 40 +10.2
22 8
2 28

Comet looked for, both by general sweeping & then by accurate identification with D.M. star but not found. If the place given

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is right (allowing for the motion as given) it must be exceedingly faint and practically invisible. Sky a little hazy & a good many faint stars in field so that a faint comet might be difficult in identification.

Exam. of regions about variables to select 11 and 13 mag. stars for Photometric meas.

S. Bootis
14 15 +54.5
22 45
+8 30

Region too low.

T. Cephei
21 7 +67.6
22 50
+1 43

9 25 Star d has an 11 mag. 5' or 6' away & a 13 mag a little more than half way from it & the 11 mag. Star d has already been meas. with the M. P.
Star d is most a field away from the Var. but still it is thought that the faint stars

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meas. Phot. can be comp. with the faint comp. stars

S. Cephei

21 37 +78.4
23 23
+1 46
23 33
+1 56

9 55 D.M. +78° 758 has an 11.7 mag. star within 2.5 min. of it also a 12.0 within 2m of it also a 12.7 within $3^m.5$ of it the latter being on the north side. The first & last of these are the best cases to meas. the last star is little over a field from the Var. but not much & the first faint star mentioned is about 1'8' from the Var. Star 758 is an 8.8 D.M. star but has not yet been meas. with the M. P.

R. Urs. ~~Min~~ Maj.

34
10 32 +69.2
23 58
+13 26
-10 34

Star h has a 9.9 mag. 5' distant from it which could be taken if desirable

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also a 12.1 mag. 4.5' distant which could also be taken. The 12.1 forms an isos triangle with stars h & n
No other stars available.

T. Urs. Maj
12 33 + 60.4
24 23
-12 10

Star g has a 10.6 within 1' of it & at times it seems as if there was a very faint star within about 4" on the other side of it. The 10.6 is ~~pretty~~ rather near g & possibly the faint star would be too faint to meas. because although the altitude is low it is not steadily seen. It is doubtful if it could be meas. ~~There are one or two other cases but they are not in easy reach of the Var. & do not come very well [illegible] mag. with the faint stars.~~ Star f has an 11 mag. within 4' of it which could be meas. with it but it is nearly a field & a half away from the Var. Region low which makes critical exam. a little more difficult although there do not seem to be any more good
10 √6 cases in connection with this Var.

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Comet e 1892 (Barnard) Gr. obs.

19	46	50		+10	21
	-1	44			-5
19	45	6		+10	16

19	44	+10.0
21	56	
+2	12	

Comet found. It is about in place indicated by Ephemeris.
Comp. star = D.M +10° 4072 (5.5 mag.) K.

Pos. zero 144.5
45.0
Setting 189.5

22	11	37.5	*
	11	58.3	*
	12	43.6	☄
	13	6.5	☄
	13	30.6	
	13	52.2	
	14	38.5 Dek.0.3 sec.	
	15	0.5	

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22	15	26.5	
	15	48.2	
	16	34.6	ded. 0.2 sec
	16	56.5	
	17	35.1	
	17	57.2	−0.4 sec
	18	43.0	
	19	5.5	
	~~19~~	~~31.2~~	
	20	13.9	
	20	35.5	−.2 sec
	21	21.5	−.2 sec
	21	44.6	
	22	9.5	
	22	31.6	
	23	17.7	
	23	40.5	
	24	8.2	
	24	30.2	
	25	17.3	
	25	39.5	+0.2

Order star, star, comet, comet. Star in southern half. Comet in northern half.
~~Comet very faint, 13 mag, 14 fully as 13 mag. 1' in diam. No very well defined nucleus~~

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~~visible, Probably on account of faintness & yet there seems to be a tendency to~~ central condensation. Co.

B 236 B. 395

22 42	20.0		8	34	0.0
43	20.0			35	0.0

∴ B. 236 is 3m 3.3 slow.

Comet faint. 12 mag. 1′ in diam. Nucleus rather stellar. Individual peculiarities of comet now a little plainer than before as it is getting away from a faint star which it was somewhat near, so that its peculiarities are rather better seen.

Circumpolar Var. W. obs.

S Bootis

14 16 +54.5
23 6
+8 50

9 8 f 2.5 S, S 3 9 in large tel.
300 ft. for finder
Cost. 10.1

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R. Urs. Min.

16 34 +72.9
23 23
+6 49

9 23 f 2 R, R 2 g in finder
f 2 R, R 2 g in large tel.
Est. 11.2 (prob. should be 10.2)
~~Prob. 11.2~~

R. Draconis

16 26 +67.3
23 37
+7 11

9 33 f 1.5 R, R 2.5 g in finder.
f 1.5 R, R 2.5 g in large tel.
Est. 8.6

S. Cygni

20 8 +57.2
23 54
+3 46

9 50 S = m in large tel.
Too fr. for finder.
Est. 12.1

Oct. 19. 1892.

T. Cephei

21 4 +67.7
24 6
+ 3 2

10 3 h – $\underline{T}$ in finder
h = $\underline{T}$ in large tel.
Est. 8.0

S. Cephei

21 37 +78.3
24 19
+ 2 42

10 22 ~~q~~ [illegible] 2 S, $\underline{S}$ 4 r in large tel.
Too fr. for finder.
Est. 12.9

R. Cassiop.

23 51 +49.7
24 36
+ 0 45

Too high up.

Oct. 19. 1892.

S, Cassiop
1 10 +72.1
~~24~~ 39
-0 31

10 40 s 3 S, S, t in large tel.
Too fr. for finder.
Est. 13.2

S. Persei
2 8 +57.2
0 54
~~24~~ 14
-1

10 54 Altitude so high that it is impossible to handle it successfully.

Posted to here.

Feb. 19. 1892.

Obs. of Solar Eclipse. Fr. obs.

B 394 is 0ˢ.1 fast.

	B. 236			B. 394.	
12	58	38.0	22	48	0.0
	59	38.2		49	0.0

	B. & C. 1182			B. 394.	
22	51	39.3	22	51	0.0
	52	39.2		52	0.0
	53	39.2		53	0.0

B 236 is 3ᵐ 5ˢ.6 slow.
B. & C. 1182 " 0ᵐ 39ˢ.2 fast.

First contact missed.

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B. & C. 1182			B. 394.		
0	45	37.0	0	45	0.0
	46	37.0		46	0.0

B. 236.			B. 394.		
18	58	57.2	0	48	0.0
	59	57.4		49	0.0

Obs. of Last Contact, Polar. Eq. 8, obs. Summerose.

17h ~~15~~m s
~~16~~
~~17~~
18 58.8 (First tip) = Last contact.
19 5.8 (2nd tip) – Certainly past.

---

17 18 58.8 ✓ Time by B. 236 of Last Con.
+3 6.9 ✓ Chr. cor.
17 22 5.7 ✓ Cor. sid. time of last Con.
14 13 55.9 ✓
3 8 9.8 ✓
– 30.8 ✓
3 7 39.0 ✓ East. time last Contact.

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B. & C. 1182.
3 16 34.5
17 34.5

B. 394.
3 16 0.0
17 0.0

B. 236.
17 29 21.0
30 21.2

B. 394.
3 18 0.0
19 0.0

17 29 21.0 ✓ = 3 18 0.0 ✓
14 13 55.9 ✓   3 14 53.1 ✓
3 15 25.1 ✓   3 6.9 ✓ slow.
−32.0 ✓
3 14 53.1 ✓

∴ B. 236 is 3m 6.9s slow.

Observations made with 15 inch Equatorial. Cap on, with 5 in. ap. driving clock on.

Last contact observed through thin clouds, but sun's limb perfectly well seen, by ~~contact~~ projection on paper, which was the method used.

Eastern time last contact, (see previous page), was 3h 7m 39.0s

7 secs. later, a check observation showed last contact to be certainly past.

Sun's limb well seen in both observations.

Oct. 22, 1892

Circumpolar Variables W. obs.

R. Cassiop. +49.7

23 51
21 57
—*1 54

22 5
—1 46

r 1.5R, R 2.5 r in large tel.
Too faint for finder

7 -50 Est. 10.8

T. Cassiop.

24 18 +55.9
22 14
— 2 4

k 3.5T, T 2 l in large tel.
k 3T, T 2l in finder.

8 - 1 Est. 9.9

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S. Persei   M. obs.

26 8   +57.2
22 25
~~+20 17~~
-3 43

h 2 S, S 4.5 k in large tel.
h 2.5 S, S 4 k in finder.
8 21 Est. 10.0

T. Persei

d 3 T, T 1 e in finder
d 3 T, T 2 e in large tel.

8 26 Est 9.1

R. Aurigae

29 3   +53.0
22 51
-6 12

~~R~~ g 4 R, R 1 h in large tel.
R = h in finder. Observation in finder rather difficult on account of proximity of variable to star g.
8 45 Est 9.8.

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R. Lyncis

30	50	+55.0
23	10	
−7	40	

p 2 R, R 2 q in large tel
too faint for finder.

9 6 Est. 12.8

R. Ursa Maj.

34	31	+69.3
23	31	
−11	0	

r 3 R, R 3 s in large tel.
Rather too faint for finder.

9 20 Est 11.0

Oct. 22, 1892

T. Urs. Maj. W. obs.

36 33 +60.4
23 45
−12 48

σ 2 T, T 3 ρ in large tel.
Too faint for finder.
9 33 Est! 11.4

S. Urs. Maj. +61.7
36 34
23 58
−12 36

S = e in large tel
S = e in finder
9 39 Est 8.2

R. Camelop.
14 40 +84.1
24 6
+9 26

f 2 R, R 2 g in finder
f 2 R, R 2 g in large tel.
9 53 Est 10.5

Oct 22, 1892.

Nova Aurigae. H. obs.

5 23 + 32.0
0 20
-5 3

q 3 Nova, Nova 1 r in large tel
q 3 Nova, Nova 1 r in finder

10 10 Spectrum principally monocromatic

10 21 308.7 Index to right
52.2 103.5
308.7 102.2
50.9 205.7 ✓ ~~1.5~~ ✓
154.3 -0.49

37.2 Index to left
144.4 107.2
37.0 107.4
144.4 214.6 ✓ ~~1.3~~ ✓
145.4 -0.67

38.0
144.0 106.0
38.8 106.5
145.3 212.5 ✓ ~~1.4~~ ✓
147.5 -0.62

310.3 Index to right
50.9 100.6
310.0 103.0
53.0 203.6 ✓ ~~1.5~~ ✓
156.4 -0.45

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309.3 Index to right.
54.0 104.7
308.0 104.0
52.0 208.7 ~~1.5~~
151.3 -0.55

36.0 Index to left
146.5 110.5
38.0 106.1
144.1 216.6 ~~1.3~~
143.4 -0.71

10 51
10 31.0

Oct. 2~~3~~4. 1892.

Photometric meas. of Comp. Stars for

T. Cephei W. Obs.

21 7 +67.6

23 45

+2 38

Comp. of Stand with 13 mag.

9 42 & dis. >267.7 Index to right.

274.5 6.8 ✓

268.8 5.7 ✓

273.9 11.9 ✓ 8.4 ✓

358.2 Index to left.

3.9 5.7 ✓

358.0 6.8 ✓ 8.3 ✓

4.8 12.5 ✓

358.0

4.8 6.8

358.2 5.8 8.3 ✓

4.0 12.6 ✓

88.1 Index to right.

94.7 6.6 ✓

88.0 6.8 ✓

94.8 13.4 ✓ 8.2 ✓

Oct. 24. 1892.

Comp. of stand. with 11 mag.

9 58 d dis. > 86.0 Index to right
99.6 13.6 ✓^
87.7 10.3 ✓^
98.0 23.9 ✓^ 6.9 ✓

175.2 Index to left.
187.0 11.8 ✓^
174.6 12.2 ✓^
186.8 24.0 ✓^ 6.9 ✓

174.0
187.0 13.0 ^
175.2 11.1 ^
186.3 24.1 ✓^ 6.9 ✓

85.1 Index to right.
96.6 11.5 ^
84.2 13.8 ^
98.0 25.3 ✓^ 6.8 ✓

Comp. of 11 & 13 mag's.

10 13 334.0 Index to right.
11 mag. dis. > 27.0 53.0 ✓^
336.1 48.7 ✓^
24.8 101.7 ✓ ^3.6 ✓

Oct. 24. 1892.

63.2 Index to left.
119.1 ✓✓.9 ✓^
60.1 ✓9.9 ✓^
120.0 11✓.8 ✓^ 3.3 ✓

✓8.2
121.9 63.7 ✓^
64.2 ✓2.6 ^
116.8 116.3 ✓^ 3.3 ✓

336.9 Index to right
10 22 27.0 ✓0.1 ✓^
331.9 ✓4.1 ✓^
26.0 104.2 ✓^ 3.6 ✓

The 11 mag. prec. star d 26sec. & is 4' south of it. The 13 mag. prec. star d 14sec & 2.5' south of it. Comp. of the 13 & 11 mag. together is rather difficult.

The 11th mag. below, which is another one, was compared with star h. It is a good star but has no 13th near it or near h that is a good candidate.

Comp. of star L with an 11 mag. star 29sec fol. 4.5' south of it.

Oct. 24. 1892.

10 37 h dis. > 262.0 Index to right & below.

281.0 19.0 ✓^

261.0 20.1 ✓^

281.1 39.1 ✓^ 5.8 ✓

351.8 Index to left & above

12.9 21.1 ✓^

354.4 17.4 ✓^

11.8 38.5 ✓^ 5.9 ✓

352.8

10.8 18.0 ✓^

351.0 21.5 ✓^

12.5 39.5 ✓^ 5.8 ✓

wrong ~~79.4~~ Index to right & above

82.0

104.7 22.7 ✓^

83.8 17.2 ✓^

10 56 101.0 39.9 ✓^ 5.8 ✓

Troubled a little in last series by unlikeness of images due to distance of stars apart.

Oct. 28. 1892.

Expts. with Phot. 2 on Comet a 1892 (Brooks.) Gr. Ho.

23 45 +39.5
23 45
0

Too high up.

Nebula in Andromeda. Gr. Ho.

0 36 +40.5
23 49
−47

24 31
16 37 36.7
+7 54

Oct. 28. 1892.

Turned on Neb. in Andromeda — also one in Aquarius. Putting nebula out of focus gives a diffused light which apparently can be well measured.

Neb. in Gemini.

7 22 +21.2
0 55
-6 27

Nova Aurigae. Tr. obs.

5 23 +32.0
1 20
+4 3

10 . 50 q 2 N, N 2 r in lar tel.

Posted to here.

Nov. 3. 1892.

Susp. Var. near S. Persei

26 13 +57.9
22 50
+3 23

Stars certainly 4 grades brighter than S.V. ~~sto~~ stand
and e is 9.1 by Photometer.

S. M. Wedge Zone. W. obs.
Circ's 102. +19°

19 28 +19.5
23 28
+4 00

24 4064 ~~2.66~~ ~~2.12~~ 2.23
2.16
2.21 6.60 2.86 ✓

4067 4.02
4.27 ✓
4.23 12.52 5.~~17~~ 42
wrong ✓

4084 ~~2.9~~ 3.70 10.85 4.70 ✓
3.60
3.55

Nov. 3. 1892.

4087 2.38
2.57
2.90 $7.\overset{8}{\cancel{7}}5$ $\overset{3.40}{\cancel{3.36}}$ ✓

4094 2.82
2.90
2.90 $\overset{8}{\cancel{7}}.62$ $\overset{3.73}{\cancel{3.30}}$ ✓

4096 2.90
3.00
2.96 8.86 3.84 ✓

4103 2.20 6.92 3.00 ✓
2.40 Same star taken as in
2.32 series 82.

4107 2.81
2.74
2.77 8.32 3.60 ✓

4106 missing.
4107 checks with 4103 & there is no star
corresponding with $410\overset{6}{\cancel{7}}$.

4113 2.72
2.82
2.95 $8.4\overset{9}{\cancel{2}}$ 3.68 ✓

Nov. 3. 1892.

4121 2.62
2.60
2.65 7.87 3.41 ✓

4125 4.14
4.00
4.00 12.14 5.2~~4~~6 ✓

Star 4130 which is to be next taken fol. 4125 31.5^{sec}
8 54 & is about 2^m south instead of 1^m north of it as
the DM gives it. There is no doubt as to what star
is meant for 4130.

4130 2.60
3.10
2.88 ~~7~~8.58 ~~3.28~~ 3.72 ✓

4138 2.78
2.69
2.71 8.18 3.54 ✓

4142 2.05
1.80 Star faint
1.85 5.70 2.487 ✓

4146 3.79
4.11
3.82 11.72 5.07 ✓

Nov. 3. 1892.

4150 . 2.71
2,98
2,70 8.39 3.6~~2~~3 ✓

4155 2.41 Prec. of several nearly in line. ✓
2.59
2.50 ~~8~~7.50 ~~3.68~~ 3.25

4161 4.60
4.75
4.51 13.86 6.00 ✓

4164 4.30
4.38
4.59 1~~2~~3.27 ~~5.31~~ 5.17 5 ✓

4167 2.45 7.80 3.3~~7~~8 ✓
2.75 Star assumed as 4167 fol.
2.60 4164, 24s 3'.5 south of it.

4173 - 3.67 This star has a fainter companion
3.79 ~~South~~, slightly south
3.71 preceding. This principal
component measured. 11.17 4.84 ✓

4175 5.09
5.19
5.50 15.78 6.83 ✓

Nov. 3. 1892.

4176	3.83		
	4.19		
	4.10	12.12	5.25 ✓
4182	2.71		
	2.70		
	2.75	8.16	3.53 ✓
4192	2.99 ~~2.50~~ wrong		
	3.09		
	2.99	9.07	3.93 ✓
4195	5.61		
	5.43		
	5.57	16.61	7.19 ✓
4196	5.29		
	5.40		
	5.50	16.19	7.0~~4~~1 ✓
4202 -	3.28		
	3.52		
	3.60	10.40	4.~~38~~50 ✓
4205	4.17		
	4.20		
	4.08	12.45	~~4~~5.39 ✓

Nov. 3. 1892.

4214 1.93
2.01 Star faint.
2.00 5.94 2.57 ✓

~~4~~
~~4~~221 4.59
4.60
4.61 13.~~7~~80 5.93^8 ✓

~~4~~222 2.33
2.58
2.50 7.41 3.2~~6~~^{1} ✓

4223 2.46
2.49
2.45 7.40 3.20 ✓

4228 2.80
2.92
2.94 8.66 3.75 ✓

4232 2.40
2.51
λ 2.55 7.46 3.23 ✓

4235 3.00
2.95
2.98 8.93 3.87 ✓

4239 3.31
3.25
3.30 9.86 4.27 ✓

Nov. 3. 1892.

4200 2,75
2,92
3,18 8.85 3.83 ✓

4257 3.69
3.80
4.02 11.57 4.98 ✓

Star 4257 checks in position, but it has a 9.5 fol. it 3sec 0'.5 north of it which is not in the D.M. It seems to be reddish & this with its absence from D.M. would indicate variability.

Susp. var. meas. next.

S. Var. 3,88
3,99
3,93 11.80 5.11 ✓ ~~4.93~~

4265 2.60
2,79
2,70 8.09 3.50 ✓

4268 3,19
3,25
3,40 9.84 4.26 ✓

4270 2,81 This star is about 1' north of
2,94 4268 instead of 2m south
3,00 as by D.M. $\overset{8}{7}$.7~~8~~5 3.79 ✓

4280 4,09 ~~3.70~~ wrong
4,10
4,10 12.29 5.37^{2} ✓

Nov. 3. 1892.

10 31 This star 4280 checks perfectly in position with bright stars & is decidedly brighter than 9.3 Looks as bright as 9.0, perhaps var.

Nova Aurigae

5 23 +32.0
1 45
-3 38

10 50 9 2.5 N, N 1.5 s in large tel.
Too fr. for finder.

Nov. 5. 1892.

Experiments with Phot. R on large tel. to show Mr. Bailey its general method of operation.

I. M. Wedge Zone. W. obs.

Series 103. +19°

19 28 +19.5
23 42
+4 14

8 30 4125 4.30
4.48
4.42 13.20 ~~4.62~~ 5.72

4130 3.11
3.30 Same star taken as in previous
3.20 series. 9.61 4.16

4138 2.70
3.03
3.12 8.85 ~~3.83~~ 3.83

4142 2.04
2.17
2.25 6.46 2.80

Nov. 5. 1892.

4446	4.20				
	4.32				
	4.31		12.83	5.5~~4~~6	
4450	2.69				
	2.82				
	3.30		8.81	3.81	
4455	2.96				Same star taken as in
	2.90				previous series.
	2.81		8.67	3.75	
4461	4.85				
	4.60				
	4.60		14.05	6.05	
4464	4.38				
	4.41				
	4.60		13.39	5.~~79~~80	
4467	2.38				
	2.70				
	2.52		~~8~~7.60	3.29 ~~2.85~~	
4473	~~4.59~~	4.00			
	~~4.70~~	4.30			
	~~4.61~~	4.39	12.69	5.49	

Nov. 5. 1892.

475	5.50		
	5.70		
	5.52	16.72	7.24
476	3.90		
	4.28		
	4.24	12.42	5.38
482	2.69		
	2.55		
	2.78	8.02	3.47
4192	2.75		
	3.00		
	3.19	8.~~8~~94	3.87
4195	5.25		
	5.22		
	5.78	15.62	6.78
4196	4.70		
	5.00		
	5.02	14.72	6.37
4202	3.42		
	3.52		
	3.75	10.69	4.6~~2~~3
4205	4.50		
	4.60		
	4.60	13.70	5.~~8~~93

Nov. 5. 1892.

4214	2.68		
	2.20		
	2.70	7.58	3.28
4221	4.76		
	4.71		
	4.75	14.22	6.16
4222	2.53		
	2.90		
	2.91	8.34	3.61
4223	2.60		
	2.80		
	2.50	7.90	3.42
4228	2.81		
	3.19		
	3.19	9.19	3.98
4232	2.42		
	2.70		
	2.75	7.87	3.41
4235	2.92		
	3.20		
	3.00	9.12	3.95
4239	3.10		
	3.05		
	3.11	9.26	4.01

Nov. 5. 1892:

4250	2.70		
	3.00		
	2.80	8.50	3.68
	~~3.77~~		
	~~3.80~~		
	~~4.30~~		
	~~4.50~~ wrong star		
	~~4.60~~		
4257	3.90		
	4.40		
	4.30	12.60	5.46
S.V.	3.45		
	3.50		
	3.79	10.74	4.65
	~~3.49~~		
	~~3.80~~ wrong		
	~~3.70~~		
4265	2.77		
	2.83		
	2.81	8.41	3.64
4268	3.28		
	3.16		
	3.30	9.74	4.22

Nov. 5. 1892.

4270	3.00		
	3.01		
	2.90	8.91	3.86
4280	4.38		
	4.60		
	4.62	1~~2~~3.60	~~5.46~~ ~~5.88~~ 5.89
4290	2.78		
	3.10		
	3.00	8.88	3.84
4294	2.80		
	2.99		
	3.20	8.99	3.89
4302	2.67		
	2.82		
	2.80	8.29	3.59
4304	3.33		
	3.49		
	3.28	10.10	4.37
4305	2.81		
	3.01		
	3.11	8.93	3.87
4318	2.60		
	2.75		
	2.70	8.05	3.4~~8~~9

Nov. 5, 1892,

4327 3,98
3,70
3,75 11.43 4.9~~8~~5'

10 3A 4329 3,23
3,60 Rather close double combined
3,40 light meas. ~~8~~10.23' 4. ~~00~~43'

Nova Aurigae
5 23 +32.0
1 55
-3 28

10 52 9 2.5 N, N 1 ≃ in large tel.

Nov. 8. 1892.

Exam. of Comp. Stars for
R. Vulpeculae

20 52 +21.8
23 05
+2 13

20 58 +23.0
23 58
+3 00

Interval between d and e' a little larger. Examination of sequence not finished, stopped for

New Comet (Holmes) W. obs.

0 47
0 6
−0 41

310.75 zero
45.0
265.75 setting

Comet prec. star x 46 sec. & is 4' south of it.
Star x = DM. +38° 129 (7.8 K)

Nov. 8, 1892.

0	27	19.5		☄
	28	0.0	Dec. 0.4	☄
	29	16.6	Dec 0.3	*
	30	9.7		*
		~~39.2~~		
	30	39.2		
	31	19.5		
	32	35.6		
	33	28.7		

	33	54.6
	34	35.5
	35	51.7
	36	45.0

	37	10.5
	37	50.8
	39	7.5
	40	0.5

Order in prec transits comet, comet star, star
Comet the southern, Star the northern.

Comp. Star = DM. +34°/36 (A.G.K)

Nov. 8. 1892.

1893
1855
38

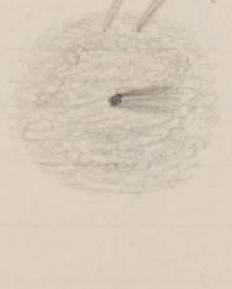
0 45 1.2 +38 14.1 = Star X.
+2 3.9 +12.5
0 47 5.1 +38 26.6 (* 1893)
−46. −4
0 46 19.s +38 23. Ap. pl. ☄.

+3.26
38
2608
978
123.88

+19.7
38
1576
591
748.6 (12
60
148
120
28.6

~~Coma~~ Coma 5′ in diameter.

There is a rather well defined nucleus, and also, within the coma, a sort of fan shaped appendage to the nucleus, like a small and short tail. The light of the rest, and so principal part of the coma, is pretty uniform, until one gets pretty near the border, where it fades off.



Nov. 8. 1882.

B. 236			B. 394.	
4.	44	40.0	13 16.	0.0
	45	40.1	17	0.0

∴ 236 is 2m 20.8 slow.

Waited until time of eclipse, but too cloudy for observation.

Became a little clearer just before eclipse time, but too late to get eclipse

Tried New Comet. W. ds.

0 46 +38.4
4 53
+4 7

5 1 33.2 0≡
2 10.0 0≡
3 38.4 *
4 23.5 *

~~6 3.5~~
~~6 31.0~~

Nov. 8. 1892.

5	7	42.7
	8	21.5
	9	50.0
	10	35.5
	11	19.8
	11	57.5
	13	26.5
	14	11.1
	~~15~~	~~15.0~~
	16	27.8
	17	5.5
	18	34.6
	19	19.1
	20	59.1
	21	36.0
	23	6.0
	23	50.0

Order in preceding transits œ œ * *
œ in southern half, * in northern half,
Same comp. star used as before.
Observations difficult – through clouds.

Nov. 10. 1892.

Comet Holmes. Gr. Obs.

Rather clearing but still considerably cloudy.

0	47	+38.0
3	50	
+3	3	

Too cloudy at present to see ☄.

Now a little clearer.

Pos. Zero. 309.5
45.0
Setting 264.5

Comp. Star = +37° 159 (6.7 L)

4	28	42.5	☄
	29	20.0	☄
	30	38.8	✱
	30	57.8	✱

Nov. 10. 1892.

4 32 2.0
32 38.1
33 58.0
34 16.1

35 6.0
35 43.2
37 2.0
37 20.2

38 8.2
38 44.5
40 4.5
40 22.4

Cloud and haze

~~42 40.0~~
~~44 5.1~~
~~44 40.4~~
~~46 1.6~~
lost.

Nov. 10. 1892.

~~4 47 9.8~~
~~47 45.0~~

~~48 44.1~~

49 40.0
50 15.0
51 36.0
51 52.4

Order in preceding transits
☄ ☄ * *
Comet in ~~southern~~ northern half, inside.
Star " southern " outside.

Observation rather difficult, especially in last set.

Diameter of coma 36 secs. from two transits. = 7' 4."
Seeing rather bad. Nucleus rather blurry.
Coma larger than on the 8th – fully 7' in diam.
13 25 Comet has same general appearance, as on 8th only nucleus and small tail not as sharply defined.
Sky too bad for measures of light.

Nov. 10. 1892.

	B. 236			B. 394.	
5	8	2.4	13	31	0.0
	9	2.5		32	0.0

B. 394 is $1\overset{s}{.}9$ fast. ∴ 236 is $1^{m}\,52\overset{s}{.}2$ slow.

Nov. 11. 1892.

Comet Holmes. W. Obs.

0 45 +38.2
23 3
−1 42

Focus of larger telescope. 25 mm.
Set at 61 mm. Comp. Star ~~γ~~ β Androm.

8h 8m

	Inside F.	Outside F.	
	5.7	15.0	Nucleus.
5.4	5.4	16.0	15.6 5.4 2)10.2 5.1 diff.
	5.0	15.9	7.86 ~~7.9~~ magn.

	Inside F.	Outside F.	
	~~4.4~~	15.9	0'.5 from nuc. in line of tail.
4.5	4.5	16.2	16.4 4.5 2)11.9 6.0 diff.
	4.6	17.0	8.21 ~~8.2~~ magn.

	Focus.	Outside F.	
	11.2 ~~0.0~~	20.0	0'.5 from nuc. opp. tail.
10.7	10.8	19.8	19.9 10.7 9.2 diff.
	10.0	20.0	9.14 ~~9.0~~ magn.

Large tel. cannot be carried ~~[illegible]~~ inside focus by the requisite amount.

Nov. 11. 1892.

~~Pos. zero. 171~~

Pos. zero 171.9
45.0
Setting 216.9

0	24	36.9		☄
	25	17.6	+1.0 sec	☄
	26	55.5	− 0.5 sec	*
	27	21.7		*
	27	45.0	+0.5 sec	
	28	26.4		
	30 ~~29~~	4.0		
	30	30.5		
	~~30~~	~~54.7~~		
	31	59.2		
	32	41.4		
	33	18.2		
	34	44.5		
	35	19.6		
	36	1.5		
	37	38.7		
	38	4.5	+0.3 sec	

Nov. 11. 1892.

0	39	38.0
	40	20.0
	41	57.5
	42	23.3

Obs. in prec. transits Comet, Comet, Star Star. Comet in Northern half. Star in southern half.

Comp. star same as that of last night.

General appearance of comet about the same as that of last night only it seems rather brighter.
The diam. of the coma seems to the eye a little larger than last night. Transits indicate the same. The nucleus seems to be gradually becoming a little less sharply marked & rather more blurry. This may be partly due to adjacent parts becoming rather brighter. But both nucleus & short tail in coma seem to have rather less individuality than at first. There also seems to be a second faint nucleus in the tail not far from principal nucleus. It may however be a faint star, but there seems to be a small agglomeration of light there.

Nov. 11, 1892.

B. 236.			B. 394.		
0	57	11.1	9	17	0.0
	58	11.2		18	0.0

∴ B. 236 is 1m r.a.a slow.

Transits of Nucleus & what seems to be a rather close faint indefinite point of light. Called X. nucleus, but maybe a faint star. It seems like a possible accompaniment

0	45	+ 38.2
1	54	
+1	9	

1	58	28.5	x
	58	31.5	y
	59	3.5	x
	59	12.0	y
2	~~1~~	~~1.5~~	
	~~1~~	~~5.4~~	
	1	47.5	
	1	49.6	
	2	29.5	
	2	32.5	
	3	14.5	
	3	16.5	
	3	55.5	
	4	1.0	

Nov. 11. 1892

2	5	27.5
	5	30.0
	6	10.5
	6	13.5
	6	45.0
	6	57.0
	7	31.5
	7	35.0
		~~42.5~~
		~~41.2~~
	~~10~~	~~13.5~~
	10	36.0
	10	39.0
	11	19.5
	11	24.0 + 0.5 sec
	12	28.5
	12	31.2
	13	13.0
	13	16.3
	15	27.0
	15	39.5
	16	23.5
	16	26.6

Order in preci transits. Nucleus, 2, Nucleus, 1, 2
first in northern half.

Nov. 11. 1892,

Finishing of Exam. of Comp stars for
R. Vulpeculae

20 √7 +22.8
2 32
+√6 B√

11 √ Balance of selection quite good

Nov. 14. 1892.

0 45 +32.0
23 13
−1 32

New Comet (Holmes) W obs.

Pos. zero. 71.6
45.0
Setting 116.6

23	22	30.5	brt. star = Comp. *
	23	14.5	fr. star
	23	24.5	fr. star
	23	35.0	brt. star

Both in northern half. Brt. star 7.5 mag. Ft. star 9.3 mag.

23	25	51.5	Comet.
	26	30.0 −0.5	Comet
	29	26.5	*
	29	37.0	*

Order in prec. transits Comet. Comet. Star. Star. ~~Cloudy~~. Comet in southern half. Star in ~~Comet~~ northern half. Obs. not more than one half weight. Nucleus barely seen at time of transit. As near as can be determined the Comet looks about the same as when last seen.
Cloudy.

Nov. 14 1892,

Diam. of coma about the same as when last seen as near as can be determined.

Pos. of Comp. star.
0 47 +38.0

8 15 No stars visible, thickly cloudy everywhere.

Nov. ~~15~~ 14. 1892.

B. 236			B. 394.		
14	35	50.0	22	42	0.0
	36	50.2		43	0.0

∴ B 236 is 2m 23.1s slow.

Nov. 16. 1892.

Comet Holmes. Gr. obs.

0 4v +34.0
1 2v
+4 0

Comet much larger in area than when last well seen (on Nov. 11.) and apparently also when last seen under unfavorable circumstances on Nov. 14.

Comet to right 13± in diam.
" " " by transits 6 v secs. diam.
Its light, however, is intrinsically fainter and ~~the~~ the ≡ seems to be rather fainter in general.
~~Tail phenomenon rather disappearing~~.
Nucleus growing some fainter and not as well defined, although comet is still bright.
On looking again, it should be said that the tail phenomenon is not disappearing but that it is rather larger and longer, more diffuse, and not intrinsically quite as bright.
In a word, all the parts are broadening out but growing rather fainter and more diffuse.

Nov. 16. 1892.

δ Cephei. St. obs.

22 24 +57.7
25 50
+3 26

Measts of components of δ Cephei with Phot. R, Index to right.

10 25 68.2 < Str. comp. des.
194.5 126.3
66.0 132.2
198.2 258.5 0.4✓

Turned 180°. Index to left.
162.0
287.5 125.5
156.0 135.8 0.3✓
291.8 261.3

157.8 141.0
298.8
161.7 132.3 0.0✓
294.0 273.3

Turned 180.0 Index to right.
255.7 127.9
23.6
10 40 266.0 144.7 0.0✓
30.7 272.6

Troubled in above settings about keeping object in centre of field. Clock gave trouble.

Nov. 16, 1892.

Clock gave much trouble in preceding series. Series retaken below.

10h 45m 245.0 145.0 Index to right.
300.0
251.8 130.5 −0.1✓
22.3 275.5

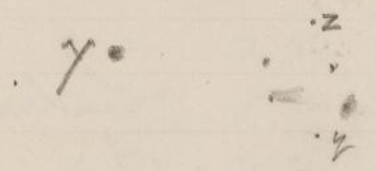
164.0 126.8 Index to left.
290.8
156.0 140.1 0.2✓
296.1 266.9

156.0 143.2
299.2 0.1✓ " " "
162.1 125.9
288.0 269.1

254.1 127.1 Index to right.
21.2 0.1✓
11 0 246.1 142.7
28.8 269.8

Nov. 16. 1892.

Rel. Est. of Holmes = Fr. sto.



11 15 y 3.5 =, = 4 z

Comet Holmes.

0 45 +38.0
5 50
+5 5

Nucleus.

Large tel. out of focus by 35.7 mm. = 1'.

Outside	Focus.		
23.8	9.0		10.1 mag ~~10.0 mag~~.
24.0	9.0	14.6 diff.	
23.2	9.2		
23.7	9.1		

0'.5 from Nucleus; in line of tail.
Large tel. in focus.

Outside.	Focus.		
25.0	10.1		10.2 mag.
25.2	9.5	15.0 diff.	
24.6	10.0		
24.9	9.9.		

~~15.0 diff.~~

Nov. 16. 1892.

0.5 from nucleus, opp. tail.
Large tel. in focus.

	Outside	Focus.	
14 20	34.0	10.0	11.2 magn.
	33.2	9.5	23.8 diff.
	33.5	9.8	
	33.6	9.8	

Comp. Star ~~of~~ β Androm.

Pos. Zero 141.1
45.0
Setting. 186.1

6 32 43.5 ☄
33 1.0 ☄
33 27.0 *
33 45.4 *

35 3.0
35 19.4
35 46.0
36 5.0

Nov. 16, 1892.

6 37 0.5
16.5
43.0
38 2.2

38 54.0
39 10.5
36.0
39 56.2

41 22.0
41 37.7
42 3.5
42 23.8

Order ☄ ☄ ✱ ✱
☄ in northern half, inside.
✱ " " " outside.
Nucleus rather ~~to~~ diffuse, and ~~seeing~~ obs. a little uncertain; especially at this altitude.
Comp. ✱ 7.8 mag.
8.8 fol. comp. ✱ 57 secs. 7' south.
8.7 " 8.8 7 secs. 5.5 north.
7.5 " 8.7 35 " 10' south.
9.1 " 7.5 19 " 3' north.

∴ Comp. Star = +37° 143 (7.7 L.)

Nov. 16. 1892.

$6^h\ 55^m$
6 7

0 43

~~+37.4~~
+37.4 Comp. *

B 394
$15^h\ 08^m$
10

B + C 1182
$14^h\ 49^m\ 19.0^s$
57 19.0

Eclipse could not be taken. Jupiter disap. below horizon five min. before theoretical time of reap.; Comp. sat in-visible some little time before that.

B. 236
7 23 22.1
24 22.4

B. 394.
15 23 0.0
24 0.0

∴ B. 236 is $2^m\ 32.0^s$ slow.

Nov. 17. 1892.

~~[illegible]~~ Comet Holmes. W. Obs.

0 45 +37.4
23 27
—
−1 18

138.8 Pos. zero
45.0
—
183.8 Setting

23 43 6.5 ☄
43 47.0 ☄
44 8.0 −0.2 *
44 35.5 +0.3 *

45 9.6
45 49.0
46 16.4
46 38.5
*
47 20.0
47 59.5
48 20.6
48 49.5

~~49~~

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23 49 23.4
50 3.2
50 24.2
50 52.6

51 14.0 + 0.2
51 53.5
52 14.6
52 44.5 − 0.3

Order in prec. transits Comet, Comet, Star Star. Comet in Southern half. Star in Northern half. Same Comp. star used as last night.
Nucleus rather poorly defined. Considerable condensation at nucleus but nucleus rather hazy.

B 236 B 394
0 1 27.4 7 58 0.0
2 27.5 59 0.0

General appearance of Comet about the same as that of last night. Became cloudy before diam of comet was determined by transits but it was scaled quite accurately with the eye & bar and apparently did not differ from the diam. of last night.

Nov. 17. 1892.

8 5 Star y 4 comet, Comet 4 star z

Reap. Jup. I. Phot. R. P. obs. L. rec.
Comp. with either Sat. II or III and the difference in light will probably show which.
Comp. with Sat. II.

9 44 15.
8 12
9 52 27. East. Time Ecl.

Limit of Vei.

9	51	50,0		315,6	11.6
	52	5,0		327,2	9,0 20.6
		26,0	9 50 28	315,6	10.3
		34,0	13.8	324,6	320.8
	54	3,0	9 52 17	Mean,	
		7,0	9 52 21	315,0	
		13,0	9 52 27	332,6	
		21,5	9 52 36	304,0	
		30,0	9 52 44	337,9	
		37,0	9 52 51	299,6	
		44,0	9 52 58	345,2	
		52,0	9 53 6	297,2	
	55	0,0	9 53 14	344,8	
		7,0	9 53 21	293,1	
		16,0	9 53 30	351,3	

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9	55	25.0	9 53 39	289.4	
		32.0	9 53 46	354.6	
		39.0	9 53 53	286.1	
		47.0	9 54 1	355.4	
		56.0	9 54 10	285.6	
	56	10.5	9 54 24	1.4	
		17.0	9 54 31	274.4	
		25.0	9 54 39	2.2	
		31.0	9 54 45	278.4	
		38.0	9 54 52	1.9	
		47.5	9 55 2	276.1	
		55.0	9 55 9	7.7	
	57	4.0	9 55 18	274.5	
		12.0	9 55 26	4.7	→
		20.5	x	276.2	89.5
		30.0		5.7	90.3 179.8 89.9
		39.0	9 55 48	275.6	1
		47.0	34.1	5.9	320.8
		55.0		275.4	
	58	5.0		8.3	92.9 93.8 186.7 93.4
		13.0	9 56 22	274.7	2
		21.0	8.5	8.0	321.5
		29.5		276.7	89.4 89.3 89.4
		35.0		6.1	
		45.0	9 56 55	276.3	3
		53.0	40.6	5.6	321.2
	59	0.5		274.2	92.6 94.0 186.6 93.3
		8.0		6.8	

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9	59	15.5	9 57 26	272.6	8
		28.0	12.0	6.6	320.0
		38.0		273.5	
		48.0		8.2	5
		58.0		279.0	

BAC 1182. B 394.

10	3	46.5	10	2	0.0
	4	46.5		3	0.0

Clouds prevented any farther observations for constant above.

Nov. 19. 1892.

Comet Holmes W.O.b.

0 45 +37.4
23 34
−1 11

23 48 10.0
49 27.4 Provis. transits only.
50 17.3
51 36.6

Nucleus of Comet is now separating from Star so that transit can be taken with 450 far soon. meantime will examine Comp Stars for

R. Aquarii.
23 34 −16.2
25 8
+1 34

Interval between a & b ~~r~~ rather large no other star however seems to be readily at hand to insert bet. them. Possibly however another can be found.
Interval bet. b & c rather large but not as bad as the interval bet. a & b it looks as if a star a little way north of c & a little fol. it could be inserted with advantage bet. a & b.

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Star e is a little brighter than star f although the S.D. makes is a little fainter. Otherwise selection very good.

Comet Holmes.

```
    0 45
   25 46
  +1   1
```

Pos. zero 135.7
112.5
Setting 23.2

2	24	57.5		o=
	25	6.0		o=
	27	5.3	−0.3	*
	27	17.5		*
	29	14.5		
	29	22.0		
	31	21.5		
	31	34.5		

~~5.5~~
~~16.6~~

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2 32 31.5
32 40.0
34 39.5
34 52.0

35 24.0
35 31.7
37 31.0
37 42.7

38 48.6
38 57.2
40 57.1
41 9.0 + 0.3

Order in prec. transits Comet, Comet, Star, Star. Another bar micrometer used tonight. 3rd power ring micrometer eye piece also used. The bar micrometer used tonight is composed of two bars placed at an angle of 45° with each other & intersecting about in the centre of field. Comet in northern angle & Star in southern angle of bars.

~~495~~
~~7.0~~
2 46 35.5
46 44.2 − 0.2
48 43.4
48 55.5

Nov. 19. 1892.

This last ~~star~~ set taken under exactly the same conditions as the previous ones.

v	52	23.4
	52	32.5
	54	32.2
	54	43.5
	(	
	55	12.3
	55	21.5
	57	21.4
	57	32.5

Last two sets taken under the same conditions as the previous ones. Becoming more cloudy again. The first ~~one~~ & last two sets are the best, the first being the best of all. the intermediate ones are somewhat uncertain from haze. Nucleus rather faint & difficult to obs. in all the sets.

Comp. star = DM + 36°, 134 ~~184~~ (9.1B)

An eye estimate made about eight o'clock in the evening shews the

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sky was clear, gave the following.

Y 4 Comet, Comet 4 Z

Obsr. put on but it is impossible to make light measurements. Sky quite thick. Comet invisible to naked eye.

B. 236.
3 20 37.5
21 37.7

B. 394.
11 9 0.0
10 0.0

∴ 236 is 2^m $24^s.6$ slow.

Nov. 20. 1892.

Comet Holmes. Lr. obs.

0 45 +37,2
5 5
+4 20

~~Pos zero 129.0~~
~~112.5~~
~~Setting 241.5~~

Pos. Zero 107.8
112.5
Setting 220.3

5	49	23.2	*
	49	37.3	*
	49	47.2	☄
	49	57.1	☄
	50	19.2	
	50	33.5 + 0.2	
	50	43.8	
	50	53.6	
~~5~~	~~51~~	~~25.4~~	
	~~51~~	~~39.2~~	
	~~51~~	~~49.5~~	
	~~51~~	~~58.8~~	

Reject *

Nov. 20, 1892.

5 52 32.5
52 47.0
52 57.0
53 6.4

5 53 28.1
53 42.3
52.3
54 1.8

5 ~~54~~ ~~32.0~~
~~46.2~~
~~56.0~~
~~55~~

5 55 36.9
55 51.2
56 1.2
56 10.8

5 56 48.0
57 2.0
57 11.8
57 21.6

5 57 48.0
58 1.9
58 11.5
58 22.0

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5	58	39.5
	58	53.3
	59	4.3
	59	12.8
5	59	36.5
	59	51.0 − 0.2
6	0	0.4
	0	10.5
6	0	51.2
	1	5.4
	1	15.1
	1.	24.7

Orders: Star Star Comet Comet:
45° intersecting bar used
Star in southern angle of bar
Comet " northern " " "

Transit for diameter of Comet.	6	5	26.0	} Reject
		6	26.6	
"	6	8	0.3	}
		9	23.0	

Star: DM. 36°. 126 (1855) ^ $0^h\ 39^m\ 47.2$ +36 50.4 (8.5)

Nov. 20. 1892.

Phot. 2 put on but atmospheric conditions not good enough at this altitude, combined with faintness of comet, for measts of light.

	B.236			B.394		
7	25	5.0	15	9	0.0
	26	5.1		10	0.0

∴ B236 is $2^{m}\ 28^{s}.9$ slow.

An estimate about 8^{h} this evening made the comet

$\underline{\gamma} < \epsilon,\ \epsilon < \underline{\zeta}$

Nov. 21. 1892.

Susp. ☆ Brooks. Tr. obs.

12 58 +14.0
8 20
−4 38
7 22

h
8 21 10

R.A $\overset{h}{7}$ 23 30

Dec. +13.9

Comet Brooks found.

~~Ro~~ Rather near a 10.5 magn. star but not near enough to prevent transits. Nucleus distinctly visible.

Pos. Zero 220.5
45.0
Setting. 265.5

Nov. 21. 1892.

8	43	35.5	ε
	44	4.8.	ε
	44	24.5	*
	45	13.5	*
	46	12.1	
	46	41.5	
	47	1.0	
	47	50.0	
	48	40.3	
	49	9.7	
	49	28.8	
	50	17.8	
	51	7.8	
	51	37.0	
	51	55.5	
	52	45.0	
	~~54~~	~~27.2~~	
	55	27.0	
		54.1	
	56	14.4	
	57	3.8	

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Order in transits ☄ ☄ * *
Both in northern half.

Comet 10.5 to 11 mag. Nucleus pretty well defined. Comet rather near a moderately faint star, but it seems to have a small, rather fan shaped tail, extending north, a little preceding.
Total length 1.5'

Later.

Now that the comet is getting farther from the star, it looks less as if there was much of any tail, as the ~~[illegible]~~ part of coma opposite tail is probably partly obliterated by ~~ty~~ proximity to star.

Comp. Star = DM. +14° 2578 (7.4K)

	B. 236.		B. 394.	
9	33	13.0	17 13	0.0
	34	13.2	14	0.0

∴ B. 236 is ~~2^m 49~~ 2^m $41.^s9$ slow. ✓

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Comet Holmes. Sr. obs.

0 45 +37.4
23 45
+1 0

Pos. zero 253.7
45.0
Setting 298.7

~~0~~		~~35~~		
		~~40~~		
0h	11	39.5		*
	11	47.5	+0.5	☄
	12	24.5	+0.2	*
	12	37.1	±	☄
	13	13.5		
	13	23.4		
	13	59.2		
	14	13.0		
	14	38.5		
	14	48.5		
	15	24.0	−0.2	
	15	37.1	+0.2	

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0	17	20.0	
	17	33.4	
	18	8.0	
	18	18.5	
	18	49.5	
	19	1.6	
	19	37.5	
	19	48.3	
	20	16.0	
	20	29.2	+0.2
	21	4.5	
	21	14.3	
	22	57.5	
	23	11.2	
	23	46.0	
	23	56.5	
	~~24~~ 24	~~19.0~~	57.3
	25	~~21~~	10.5
	25	45.5	
	25	56.3	

Order in prec. transit Star, Comet; Star, Comet. Star in northern half. Comet in southern.
Comet considerably brighter to night Nucleus somewhat stellar but its general faintness together with the rather

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bright nebulosity immediately about it makes obs. somewhat difficult. There is some trace of a tail visible but not quite as marked as on some of the previous dates & not quite as long.

9	33	29.5	Prec. Edge of Coma.
	34	40.5	Fol. " " "
	~~35~~	~~16.5~~	
	~~36~~	~~26.5~~	

35	16.5	Prec. Edge of Coma.
36	28.0	Fol. " " "

Transits taken from prec. to following which is pretty nearly in line of tail. Comet not quite so broad in north & south line. In north & south line perhaps 12'.5 in diam.

Cloudy

B236			B394		
1	0	40.5	8	38	60.0
	1	40.5		39	60

∴ B.236 is 2^m $46^s.4$ slow.

Z.D. ☄ = 52.6 Abs. = 0.16
Z.D. * = 55.0 " = 0.14
0.02

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0 45
1 59
+1 14

Nucleus with large tail, 36mm out of focus.
~~Focus 12.1~~ 7

Clouds	Focus	Outside	
	12.1	28.5	10.29 ✓ ~~10.3~~ magn.
	12.5	27.6	
	11.8	27.0	
12.1	~~28.5~~	27.7	
	~~27.6~~	12.1	
	~~27.0~~	15.6	

0'.5 from nucleus in line of tail.

12.8	32.2	10.76 ~~10.7~~ magn.
12.7	32.0	
12.0	31.5	
12.5	31.9	
	12.5	
	19.4	

9.2h ± 0'.5 from nucleus opp. tail.

12.1	37.8	11.31 ~~11.3~~ magn.
12.7	36.7	
11.8	37.2	
12.2	37.2	
	12.2	
	25.0	

Comp. star = β Andromeda

⅓ 5 Comet, Comet 3 ⅔
Comet does not look quite as bright intrinsically as in the early part of evening.

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It may be due to diffused cloud in air.

Pos. zero 287.0
45.0
Setting 242.0

Clouds

2 57 36.5

Clouds

Clouds

Clouds prevented transits.

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Comet ~~#~~ Brooks.

12 59 + 14,6
7 55
---
5 4
6 56

12 59
8 3
---
4 56
7 4

Pos. Zero 287.4
45.0

332.4

8 ~~17,0~~
~~28,0~~

8 26 8,3 ☄
20,5 ☄
27,0 *
26 33,8 *

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8 27 18.5
31.5
38.5
27 45.0

28 22.2
32.5
39.5
28 46.5

~~31 21.5~~
~~24.0~~
~~30.0~~
~~36.2~~

~~49.5~~
~~.6~~
35 29.0
42.0
48.3
35 54.9

~~48~~
~~.5~~

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8 37 51.0
38 40.0
10.0
38 16.0

Order ☄ ☄ * *
Comet in northern half outside,
Star " southern " inside.

Comet 1′ in diam. Nucleus somewhat ~~rather~~ stellar but seeing rather poor.
Coma rather more abundant on preceding side, showing indications of incipient tail, as indicated last night.

Comp. Star = 8 m. +14° 2579 (A.G.K.)

B. 236
8 51 54.6
52 54.9

B. 394.
16 28 0.0
29 0.0

∴ B 236 is 2m 49.5s slow.

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Comet Holmes W. obs.

0 45 + 37.4
23 56
− 0 49

0	2	47.5	☄
	2	53.5	*
	3	9.6	*
	3	36.3	☄
	3	55.5	
	4	1.5 +0.2	
	4	19.4	
	4	44.5 +0.3	
	5	~~8~~46.0	
	5	53.0	
	6	9.2	
	6	34.3	
	7	7.0	
	7	13.5	
	7	30.5 − 0.5	
	7	55.2 +0.2	
	8	48.5	
	8	54.4	
	9	10.5 +0.2	
	9	36.7	

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0	10	29.6
	10	35.5
	10	51.6
	11	17.8
	11	51.6
	11	57.5 −0.2
	12	13.5
	12	40.2

Order. Comet, Star, Star, Comet.
Comet in southern half inside, star in northern half outside.

332.3 Pos. zero
45.0
287.3 Setting

0	25	42.5
	26	55.0
	27	9.5
	27	53.8

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		14.5
0	30	19.5
	31	21.6
	32	21.5
	33	18.6

Coma is somewhat irregular in shape.
Diam. in a northerly direction. All of 1.5' in
the northern & southerly direction.
Diam of northern direction larger than last night.

0	45
0	37
- 0	8

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Transits by Mr. Bailey of ☄ and same comp. star.

1	4	46.0	☄
	4	50.5	*
	5	2.0	*
	5	26.5	☄
	6	20.0	
		26.0	
	6	36.7	
	7	0.2	
	7	39.0	
		44.7	
		55.3	
	8	19.0	
	9	21.7	
		28.0	
		38.7	
	10	3.0	
	10	35.0	
	10	39.0	
		49.7	
	11	14.2	

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1	12	0.2
		4.5
		15.7
		39.7
	13	16.1
		20.2
		31.1
	13	56.0
	14	31.0
		35.1
		46.7
	15	11.0
	16	7.0
		11.0
		22.0
	16	46.7
	17	11.7
		15.0
		26.0
	17	51.4

Order in preceding transits ☄ * * ☄
Comet in southern half, inside square.
Star in northern half, outside square.
Same comp. star used as in ~~my own~~ transits.
by Fr.

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Cloudy

Some clearer again

0	45
1	57
+1	12

Meas. of light of Comet with Phot. 2.

Meas. of nucleus itself large tel. 36mm out of focus Comp. star β Androm.

Focus	Outside	
13.8	26.0	9.96 ~~10.0~~ mg.
14.1	28.0	
14.0	28.2	
14.0	27.4 ~~14.0~~ 13.4	

0.5 from Nucleus in line of tail.

h
9.8 ±

14.0	27.2	9.96 ~~10.0~~ mg.
14.5	27.4	
13.7	28.0	
14.1	27.5 ~~14.1~~ 13.4	

0.5 from Nucleus opposite tail.

14.0	36.7	10.91 ~~10.9 mg.~~
14.6	35.0	
14.1	33.4	
14.2	35.0 ~~14.2~~ 20.8	

General appearance of Comet a little fainter than last night.

Sky now seems pretty ~~pretty~~ clear although Comet does not look quite as brt. perhaps as before cloud came.

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Transits of Comet Holmes again. W. obs.

322.8 Pos. zero.
45.0
277.8 Setting

2 48 49.5 ☄
48 52.5 *
49 8.5 −02 *
49 30.5 ☄

49 49.0
49 51.2
50 8.5 −0.2
50 30.0 +02

50 55.5
50 58.5 −0.3 x
51 14.5
51 35.7

51 55.5
51 58.5
52 15.2
52 37.0

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v 53 1.5
53 3.5 −0.2
53 20.5
53 42.6

54 6.5
54 9.5
54 26.5
54 47.6

55 15.0
55 18.0
55 35.2
55 57.0

56 20.0
56 22.0
56 39.0
57 1.0

57 27.5 −0.3
57 29.5 ~~+0~~
57 46.5
58 8.6

58 30.0
58 32.1
58 49.5
59 11.3

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3	0	4.5	
	0	6.9	−0.2
	0	24.0	
	0	45.5	

order in prec. transits Comet, Star, Star, Comet.
Comet in southern half inside square
Star in northern " outside "

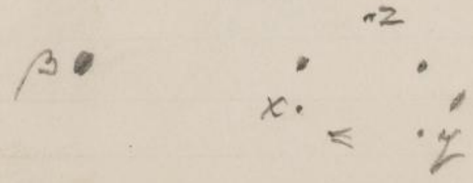
~~Atmos~~
Comet not quite so bright and nucleus not quite so well defined as in the first series early part of evening probably from somewhat poorer atmospheric conditions.
Obs. somewhat difficult

	R 236			R 394	
3	8	47.8	10	42	8.0
	9	47.9		43	✓ 0.0

∴ 236 is 2^m & 6.0^s slow.

Comp. star in all the transits this evening is D.M. +36°126 (A.&K.)

11 14 z 3 Comet, Comet 2 ×



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B + C. 11 + 2.			B. 394.		
			~~11~~	~~33~~	~~0.0~~
11	34	22.0	11	34	0.0
	35	22.0		35	0.0

11	39	58
	4	12
11	44	10.
11	34	0
	10	10.
11	34	22
11	44	32.

Reap. Jup. I. Phot. R. P. obs. 4. rec. Leaving radius. Comp. with + northern ~~nearest sat~~ fol. Jup. Comp. with Sat. III.

Limit of V is.

11	47	6.0				224.1	15.2
		15.0				239.3	12.8
							28.0
		24.0	11	46	57.4	224.2	14.0
		32.5	19.4			237.6	231.4

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11	48	21.0	11 47 59.0	
		27.0	11 48 05.0	223.6
		33.0	11 48 11.0	242.5
		39.5	11 48 17.5	217.6
		45.5	11 48 23.5	250.0
		51.0	11 48 29.0	213.3
		56.0	11 48 34.0	251.2
	49	2.0	11 48 40.0	211.5
		8.5	11 48 46.5	254.2
		14.0	11 48 52.0	209.7
		20.0	11 48 58.0	256.3
		28.5	11 49 06.5	205.2
		35.0	11 49 13.0	258.0
		43.5	11 49 21.5	201.6
		49.0	11 49 27.0	261.7
		57.0	11 49 35.0	200.7
	50	4.0	11 49 42.0	263.3
		11.5	11 49 49.5	198.3
		17.0	11 49 55.0	264.9
		23.5	11 50 01.0	197.1
		30.0	11 50 08.0	270.0
		37.0	11 50 15.0	195.1
		43.0	11 50 21.0	270.0
		50.0	11 50 28.0	192.5
		56.5	11 50 34.5	267.1
	51	2.5	11 50 40.5	189.1
		10.5	11 50 48.5	273.0

Nov. 24, 1892.

11	51	19.0	11 50 57.0	186.9	
		26.0	11 51 04.6	275.1	
		34.0	11 51 12.0	185.6	
		41.0	11 51 19.0	271.0	
		48.5		188.1	87.2
		57.0		275.3	85.4 172.6
	52	4.0	11 51 39.5	187.6	86.3
		12.5	0.5	273.0	231.0
		20.0		188.0	88.4
		29.0		276.4	80.1 168.5
		39.0	11 52 12.8	191.9	84.2
		47.0	33.8	272.0	232.1
		54.5		188.7	85.1
	53	2.5		273.8	86.5 171.6
		11.0	11 52 45.8	186.9	85.8
		19.0	6.8	272.5	230.2
		27.0		191.2	84.2
		34.5		275.4	85.8 170.0
		41.5	11 53 17.1	189.8	85.0
		49.5	38.1	275.6	233.0
		59.0		188.1	85.4
	54	5.5		273.5	84.6 170.0
		11.5	11 53 47.8	186.4	85.0
		19.0	8.8	271.0	229.8
		27.0		189.2	86.6
		35.0	11 54 32.1 53.1	269.8	86.7 167.3 83.6

Nov. 24. 1892.

11	55	10.5		186.7	
		20.0		277.4	229.8 6
		27.0		186.2	83.5 81.7
		36.0		270.3	165.2 82.6
		47.5	11 55 19.0	187.3	
		52.5	40.0	269.0	228.4
	56	1.0		190.1	75.1 88.0
		9.0		265.2	163.1 81.6 2
		17.0	11 55 52.4	185.3	
		26.5	13.4	273.3	228.5

B. + C. 1182.

12	9	21.1
	10	21.0

B. 394.

12	9	0.0
	10	0.0

Nov. 24. 1892.

Brooks New Comet. Gr. obs.

13 1 +15.3
7 59
—5 2
6 58

Pos. Zero. 285.3
45.0
330.3

8 22 9.5 *
22 39.0 *
25 18.0 ☄
26 3.0 ☄

26 46.8
27 16.7
29 55.5
30 41.5

31 31.0
32 1.2
34 40.9
35 25.5

Nov. 24. 1892.

8 36 27.2
36 57.5
39 36.8
40 22.5

41 12.6
41 43.5
44 23.0
45 9.0

46 22.1
46 53.7
49 32.8
50 19.1

Order * * ☄ ☄.
Star in northern half.
Comet " southern " .
Comet 1′ in diam. Nucleus rather stellar and fairly well defined. Seeing fair.
Coma seems to extend rather the most to preceding, ~~but not very much so~~. as on previous nights.
Comp. Star = D.M. +15° 2541 (7.9 L)

B. 236.			B. 394.		
9	3	30.0	16	30	0.0
	4	30.2		31	0.0

i.e. B 236 is 1^{m} $7.^{s}8$ slow.

Dec. 2, 1892.

Comp Stars for
B Pegasi

23 12 +7.2
24 58
+1 46

23 12
26 36
+3 24

Stars a & b need to be looked at in ~~the~~ 6^{in} to see about their relative brightness. Interval bet. stars b & c seems a little large but still is not bad. Otherwise selection very good.

R. Aquarii

23 34 −16.2
27 35
+4 1

Dec. 2, 1892.

Cloudy first of evening.
Showed Dr. Bigelow of Boston, Moon & Jupiter with various powers.

Dec. 3. 1892.

Comet Holmes. Gr. obs.

0 44 + 36.~~5~~7
0 28
— 0 16

Comet not found.

B 236 . B 394
0 52 35.5 7 46 5.0
53 35.5 47 5.0

0 58 +4.6
1 4
—0 6

Reap. of Jup. I, Phot. R. P. obs. Gr. rec.
Comp. with Sat. next prs.: = Sat. II.
Limit of V's:

δ 7 44.0 104.2 37.1
7δ 6.0 141.3 23.4
60.5
32.0 8 9 41 113.2 30.2
47.5 7.4 136.6 123.8

Dec. 3. 1892.

A	11	16,0	8	12	50	seen.
		19,0	8	12	53	113,6
		28,5	8	13	2	131,3
		36,0	8	13	10	108,3
		44,0	8	13	18	143,7
		59,0	8	13	33	99,2
	12	7,0	8	13	41	146,5
		19,0	8	13	53	92,9
		29,5	8	14	4	150,6
		42,0	8	14	16	90,8
		49,0	8	14	23	153,0
		56,0	8	14	30	87,4
	13	2,0	8	14	36	154,4
		9,0	8	14	43	85,3
		17,0	8	14	51	159,3
		23,5	8	14	58	86,0
		30,0	8	15	4	164,7
		38,0	8	15	12	78,5
		44,0	8	15	18	167,0
		51,0	8	15	25	86,3
		58,0	8	15	32	164,3
	14	6,0	8	15	40	88,9
		15,0	8	15	49	161,8
		27,0	~~8~~	~~16~~	~~1~~	82,6
		33,0	~~8~~	~~16~~	~~7~~	167,4
		40,0	~~8~~	~~16~~	~~14~~	80,9
		49,0	8	16	11	176,3

37.2

125.3

84.8
89.4
174.2
87.1

Dec. 3. 1892.

8	14	56.5		79.7	86.3
	15 ~~8.5~~	4.0		166.0	90.1
		12.0	8 16 43	79.2	176.4 88.2
		22.5	8.8	169.3	123.6
		29.5		77.1	90.3
		37.0		167.4	82.1
		51.0	8 17 18	82.8	172.4 86.2
		58.0	43.9	164.9	123.0
	16	6.0		78.9	92.3
		14.5		171.2	78.7
		21.0	8 17 52	84.0	171.0 85.5
		31.5	18.2	162.7	124.2
		37.5		80.0	83.0 96.9
		44.5		163.0	179.9 ~~89~~
		53.5	8 18 23	78.5	90.0 5
	17	1.0	49.1	175.4	124.2
		16.0		81.3	82.0
		22.0		163.3	86.9
		29.5	8 19 0	80.6	168.9 84.4 6
		35.5	25.8	167.5	123.2
		43.0		75.7	92.3
		57.0		168.0	82.4
	18	42.5	8 19 52	82.6	174.7 87.4
		51.0	18.4	165.0	~~1~~122.8
	19	1.5		78.7	88.2
		10.5		166.9	96.3
		22.0	8 20 50	75.0	184.5 92.2
		29.0	15.8	171.3	123.0

Dec. ~~2~~ 3. 1892.

Straps of sector broken so that Jupiter was continually getting out of centre of field, thereby changing zero of readings.

BAC 1182			B 394		
8	27	25.5	8	29	0.0
	28	25.5		30	0.0

Revision of Comp. Stars for Var. St. obs.

R Androm.

0	14	+ 37.2
1	50	
+1	36	

Clouds

There is not very much diff. in brightness bet. x and f; possibly x could be omitted.

Dec. 5. 1892.

Revision of Comp. Stars for Var. Stars,
R Androm.

0 14 +37.2
0 49
+0 35

The diff bet. l & n' is not very large possibly l could be omitted. There is not much diff. bet x and z; possibly x could be omitted. Otherwise selection pretty good.

Revision of Comp. stars for —
R. Piscium
1 31 +1.8
2 3
+0 32

Star d is the same as star b

1 20 +3.0
2 40
+1 20

Dec. 5. 1892.

Possibly star f could be omitted.
Star a not quite bright enough to cover var.
Var. comes up to 7.4

Revision of Comp. stars for
R Arietis

2 11 +22.5
3 25
+1 14

There is trouble in the identification on list of some of the brighter stars besides several of them are not wanted as var. only comes up to 7.6.
Possibly a could be used for the first and Dm +25° 350 for the second, and star f for the third.

2 1 +15.9
3 39
+1 38

Possibly the first three stars could be Dm +25°362 (6.8) and 25°343 (7.2) and 25° 350 (7.6)

Dec. 7. 1892.

Comet Holmes. Gr. obs.

~~Too near meridian at present.~~

1 3 45
0 20 00 +35.2
0 42 45

Comp. Star = D.M. +35° 151 (A & B)

Pos. zero 290.5
45.0
Setting 335.5

1	28	9.5	*
	28	32.5	*
	28	58.3	☄
	29	43.0	☄
	30	14.5	+0.2
	30	37.1	
	31	3.8	

Clouds

Order in prec. transit star, star comet, comet. Both in northern half.

Dec. 7. 1892

Comet visible in finder. It is however rather faint.

Single set taken on previous page pretty good.

B 236			B 394		
2	8	5.0	8	46	0.0
	9	5.0		47	0.0