NG
11365
521

1999ApJ...521

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KG-11365.520

1360phae.proj...521W

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1893phae.proj..521W

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1893phtec..proj..62S

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1893phae.proj.521w

Posted to here.

Sept. 16, 1893.

~~Ab.~~ A. A. B. C. [illegible]

[illegible] −20.4

[illegible]

[illegible]

[illegible]

Abandoned moon too bright.

Yarnal 7820

[illegible] −2&3

[illegible]

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1893phae.proj.521w

Sept 16, 1893.

δ Cassiop. Ob. obs.

24		
0	18	+55.9
20	50	
-3	28	
12	00	
+8	32	

m 4 J, J 1 o in large telescope,
m 4 J, J 1 o in finder bad ft.

9:14 Esti 11.5

R Cassiop. Ob. obs.

23	57	+49.7
21	16	
-2	35	
12	00	
+9	25	

m 3 R, R 2 m in ~~large telescope~~ finder
m 2.5 R, R 2.5 m in large telescope.

9:24 Est. 9.1

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1893phae.proj.:521W

Sept 16, 1893.

S. Cephei.

21	37	+78.3
21	26	
−0	11	
12	00	
11	49	

b4 S, S 1m in large telescopes, Rather two ft. for finder.

9:43 Est. 11.5

R. Camelop.

14	40	+84.1
21	48	
+7	08	

n 2.5 R, R 2 0 in large telescope two ft. for finder.

9:57 Est. 13.6

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1893phae.proj..521w

Sept 16, 1893.

S Boötis.

Comp. of * c with ft *.		Phot. R. Ot. obs.
14	16	+54.6
22	0	
+7	44	Too low.

S. Persei.

Comp. of * c with ft * to extend photometric scale to ft. magn. Phot R. Ot. obs.

2	8	+57.2
22	3	
-4	5	
12	0	
+7	55	

Index to left & below.

10:22

176.5 ft rds.

357.2 160.7 ✓^

174.9

337.6 162.7 ✓^

323.4 ✓^ -2.0 ✓

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1893phae.proj..521

Sept 16, 1893.

Index to right + above.

262.8
66.6 163.8 ✓^

264.0
68.8 164.8 ✓^
328.6 ✓^ −2.3 ✓

263.9
68.0 164.1 ✓^

266.0
67.4 161.4 ✓^
325.5 ✓^ −2.1 ✓

Index to left + below.

173.9
337.0 163.1 ✓^

175.0
337.7 162.7 ✓^
325.8 ✓^ −2.1 ✓

175.5
338.0 162.5 ✓^

174.9
337.5 162.6 ✓^
325.1 ✓^ −2.1 ✓

Index to right + above.

263.9
67.8 163.9 ✓^

263.1
68.3 165.2 ✓^
329.1 ✓^ −2.3 ✓

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1893phae.proj..521w

Sept 16, 1893.

T. Cephei.

21	5	468.0
22	49	
71	44	

c 4 T, T 3,5 d in finder,
c 4 T, T 3.5 d in large telescope.

11.06 Est. 7.7

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1893phae.proj..5217

Sept. 19, 1893

Special cases of Wedge Zones.

Series +9°.

15	24	+9.1
19	39	
+4	15	

Abandoned, region a little low & air full of remnants of storm.

Series. 136 (Special) +9°

17	43	+9.9
20	8	
+2	25	

8:16	3493	3.70		
		3.69.		
		3.65	11.04	4.78
	3501	3.40		
		3.40		
		3.51	10.31	4.46

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1893phae.proj..521w

Sept 19, 1893.

	✕3506	2,40		
		2,25		
		2,29	6.94	3,00
	3508	3,40		
		3,42		
		3,42	10.24	4,43
	3509	2,39		
		2.45		
8:28		2.37	7.21	3,12

Sirius 137. (Special) +19°.

18	28	+20,4
20	45	
+2	17	

8:50	3704	2.58		
		2.52		
		2.50	7.60	3,29
	3705	2,90		
		2.89		
		3.06	8.85	3,83

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1893phae.proj..521W

Sept. 19, 1893.

3706	2,30		
	2.50		
	2,30	7.10‹	3.07
3708	2.99		
	2.88		
	3,00	8.87‹	3.84
3716	4.96		
	4.73		
	4.73	14.42‹	6.24
3729	~~2,81~~ wrong.		
	~~2.50~~		
	2.20		
	2,20	6.90‹	2.99
3751	~~2.28~~ dome interferes.		
	~~2.20~~		
	2,30		
	2.32		
	2.30	6,92‹	3,00
3753	4.17		
	4.20		
	3.92	12.29‹	5,32

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1893phae.proj..521w

19
Sept ~~18~~, 1893.

3758

~~2.05~~ wrong.
~~2.08~~
~~2.20~~
2.40
2.31
9.35 2.41 7.12 < 3.08

Stopped gone for a while that stars were growing a little dimmer from increasing & varying fogg.

Means of Dr. Doubles. Obst R. Obs.

Σ 46' 16 Cygni.

19	38		+50.2
22	34		
+2	56	Too light.	
1	Σ 22 80	100 Herculis.	
18	3		+26.1
22	41		
4	38		

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1893phae.proj..521W

19
Sept. ~~18~~, 1893.

10:35

Index above. A.
209.0 (southern image dia.
294.0 85.0 ↑
208.1
298.0 89.9 ↑
174.9 ↑ − 0.09 ~~+2.1~~ ↑

Index below. B.
295.2
28.5 93.3 ↑
301.0
26.5 85.5 ↑
178.8 ↑ − 0.02 ~~+2.0~~ ↑
298.7
26.8 88.1 ↑
297.4
29.2 91.8 ↑
179.9 ↑ − 0.00 ~~+2.0~~ ↑

Index above. A.
31.8
119.1 87.3 ↑
30.0
117.6 87.6 ↑
174.9 ↑ − 0.09 ~~+2.1~~ ↑
28.7
117.9 89.2 ↑
30.6
118.8 88.2 ↑
177.4 − 0.05 ~~+2.0~~ ↑

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1893phae.proj .521w

19

Sept. ~~18~~ 93.

Index below. B.

115.8

208.2 92.4 n

117.5

10:52 210.0 92.5 n

184.9 n + 0.09 ~~+1.9~~ n

175.1

Images a little ft. from fog.

B 236 0 I 1327 11h 5m 3s A = E.T.

0 ~~2~~ 3 51.0 ~~2~~ 5 1.0 =

0 4 51.0 2 6 1.0

I 1327 is 45.7 S. ∴ B 236 is 1m 55.7 S.

Dis. Jap. I. Phot. R. 5 sts. Clyweree, Comp. with nearest & southern & brtr of 2 sat. on following side of Jup. = Sat. II.

12 12 56

+ 12

12 27 2. E.T.

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1893phae.proj..521

Sept. 19, 1893

			0	27	1,5	29.0	95.9		read.	
			0	27	29.2 20.5	124.9	1 99.8		76.3	
			12	16	38 38.0	25.7	2)195.7			
					57.0	125.5	97.85			
				28	15.0	25.6				
12	17	49		28	40 33.0	124.0	2 98.4			
					48.0	23.7	100.9		74.5	
				29	2.0	124.6	2)199.3			
					25.5	24.1	99.65			
			19	24	30 15		100.8			
				30	11.5	124.9	3 100.0		74.6	
					24.0	24.7	2)200.8			
				31	0.0	124.7	100.4			
			20	32	13.0	- 1 Sec. 23.2	100.8			
				31	24 34.0	124.0	4 102.5		74.3	
					44.5	23.8	2)203.3			
				32	6.0	126.3	101.65			
					54.0	23.4	102.6			
			22	20	33 8.0	126.0	102.0		75.4	
				33	12 17.5	25.0	5 2)204.6			
					27.0	127.0	102.3			
					36.5	27.9	105.0			
			23	0	33 52 46.5	126.9	6 104.5		75.9	
					54.0	21.1	2)209.5			
					34. 7.0	125.6	104.75			

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1893phae.proj..521w

Sept 19, 1893

	34	17.5	23.5	103.5		
12	23 38	27.0	127.0	7	99.1	74.9
	34 30	34.0	25.0		202.6	
		42.0	124.1		101.3	
		51.5	22.8	101.6		
12h	24m 18.a 35	2.5	124.4	100.5		73.4
	35 10	13.0	23.0	8	202.1	
		31.0	123.5		101.05	
24	53	45.0	25.0			
25	0	52.5	123.9			
	936	1.0	25.5			
	16	8.5	120.2			
	27	19.0	27.0			
	34	26.0	120.2			
	41	33.5 – 2 sec.	31.2			
	47	40.5	117.3			
	55	48.0	29.0			
26	3	55.5	115.7			
	937	2.5	31.0			
	17	10.0	114.2			
	25 ~~35~~	18.0	36.6			
	32 ~~42~~	25.0	112.0			
	39 ~~49~~	32.5	39.8			
	47 57	40.0	111.1			
	~~27~~ 55 5	48.0	43.9			

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1893phae.proj..521v

Sept 19, 1893.

27	3				
~~27~~	~~13~~	37	56.5	103.0	
27	12	~~22~~ 38	5.0	43.9	
	21	~~31~~ -	14.0	98.1	
	31	~~41~~ -	23.5	55.2	
	43	~~53~~ -	35.5	92.2	
	52	~~62~~ -	45.0	57.5	
12	28	7. -	59.5	90.0	

not seen later

	Sim.	Dis.			
	39	34.5	55.1		
40	4	49.0	92.0	36.9 ✓	74.0
	40	17.0	56.0	37.1 ✓	
		36.0	93.1	~~74.0~~ ✓	
				37.0 ✓	

Seeing fair. Images somewhat elongated from distance of comparison satellite.

B 236			T 1927		
0	51	50.7	0	53	1.0
0	52	50.7	0	54	1.0

T 1927 is 45.7 s. ∴ B 236 is ~~55.0~~ 56.0 s.

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1893phae.proj..521w

Sept 20. 1893

Special cases of

* D. M. Wedge Zone. W. obs.

Series 138 (special) +9°.

15	24	+9.1
19	29	
+4	5	

7.29	3048	~~2.37~~ wrong.	3.00		
		~~2.48~~	3.28		
		~~2.58~~	3.12	9.40	4.07
	3053	2.80			
		2.72			
		2.75		8.27	3.58 ✓
	3059	2.89			
		2.81			
		2.99		8.69	3.76
	3066	4.58			
		4.69			
		4.75		14.02	6.07
	3069	3.57			
		3.70			
7.43		3.75		11.02	4.77

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1893phae.proj..521v

Sept. 20, 1893.

	30 34	3.82		
		3.80		
7:50		3.80	11.42 <	4:94

Series 139 (Special) +9°.

17	43		+9.9
20	11		
+2	28		

8:35	3493	4.15		
		3.92		
		4.00	12.07 <	5.22
	3501	3.75		
		4.10		
		3.85	11.70 <	5.07
	3506	2.90		
		2.68	A. V 6 <	3.71
		2.98		
	3508	4.50		
		4.57		
		4.49	13.56 <	5.87

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1893phae.proj,.521w

Sept. 20, 1893.

	3509	3,12		
		2.92		
8:52		3,12	9.16 <	3.97

New Series +19°

Series 140 (Special).

18	28		+20,4
21	11		
+2	43		

9:08	3704	2.68		
		2.57		
		2.59	7.84 <	3.39
	3705	3.31		
		3.30		
		3.28	9.89 <	4.28
	3706	2.88		
		2.70		
		2.74	8.32 <	3.60

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1893phae.proj..521v

Sept 20, 1893.

3708	3.37		
	3.25	9.70 ✓	4.20 ✓
	3.08	~~9.60~~	~~4.16~~
3716	5.38		
	5.30		
	5.32	16.00 ‹	6.93
3729	2.82		
	3.01		
	2.88	8.71 ‹	3.77
3736	5.19		
	5.19		
	5.21	15.59 ‹	6.75
3751	2.70		
	2.77		
	2.90	8.37 ‹	3.62
3768	4.12		
	3.99		
	3.90	12.01 ‹	5.20
38 38	3.02		
	2.90		
	3.05	8.97 ‹	3.88 ✓

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1893phae.proj..521w

Sept 20, 1893.

	3852	3.28		
		2.90		
		3.08	9.26	4.01
	3854	4.49		
		4.70		
9.47		4.69	13.88	6.01

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1893phae.proj..521v

Sept, 21, 1873.

E 31' 36,37 Herculis -

16	31	+ 4,5
19	42	
+3	8	

Index to right + below.

7,28

278.0 ⟨ftr dis.

44,8 126.8 ✓

283,2

39,9 116.7 ✓

243.5 ✓ +0.7 ✓

Index to left & ~~above~~ 11 65 -1.7

15,9

129.0 113,1 ✓

clouds thicker.

11.0

133.0 122.0 ✓

235,1 ✓ +0.9 ✓

10,8 1249 -1.09

133.2 122.4 ✓

13,1

126.4 113.3 ✓

235.7 ✓ +0.9 ✓

124.3 -1.10

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1893phae.proj..521w

Sept. 21, 1893

Index to right & below.

100.8		
225.3	124.5 ✓ 1	
103.1		
218.8	115.7 ✓ 1	
	240.2 ✓ 1	+0.8 ✓ 1
103.5	119.8	-1.20
218.8	115.3 ✓ 1	
101.8		
224.5	122.7 ✓ 1	
	238.0 ✓ 1	+0.9 ✓ 1
	~~122.0~~	-1.15

Index to left ~~& above.~~

198.0		
307.0	109.0 ✓ 1	
193.0		
311.1	118.1 ✓ 1	
	227.1 ✓ 1	+1.1 ✓ 1
	132.9	-0.92

7:44

Becoming too cloudy to continue.

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1893phae.proj..521v

Sept. 26, 1893.

T 1327 is 40.s3 slow

B 236			T 1327	13h 15m 2.s5 S.T.	
2	32	54.8	2	35	1.0 =
	33	54.7		36	1.0
	34	54.7		37	1.0

Dis. Jupr. I Phot R.V. obs. Clymer Rec.
Compared with Scat IV = 1st Sat. on right.

		48	30.		57.4	
			42.5	114.3	171.7	1
2h	48m	46.9	53.0	1120	59.0	
14h	10m	v=2.1	2.0	226.3	176.0	114.8
		49	12.0	113.2	60.7	
	49	31.0	18.0	107.3	168.0	
14	11	36.2	44.0	11.5.0	58.0	2
			50.0	222.3	173.0	114.9
		50	0.0	111.2	55.2	
	50	16.6	12.5	121.0	176.2	
14	12	21.8	24.0	111.5	61.7	3
			30.0	232.5	173.4	116.8
			44.0	116.2	57.9	
	51	0.5	53.0	114.1	172.0	
14	13	5.7	7.0	118.7	55.7	4
5	1		18.0	232.8	174.4	115.0
				116.4		

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1893phae.proj..521W

Lick 26, 1893

2	51	29.0			56.1		
		43.0		119.4	175.5	5	
	51 49.1	54.0	0.5	119.3	55.9		
14	13 53.8			119.4			
	52	10.5			175.2	115.7	
	52 54.8	36.0			55.2		
14	14 59.5						
		49.0		118.6	173.8		
	53	1.5		116.8	58.2	6	
		12.5		235.4			
				117.7	175.0	115.6	
	53 45.1	26.5			56.7		
14	15 49.4						
		39.5		116.6	173.3		
		56.5		116.0	58.0	7	
	54	4.0		116.3			
		18.5			174.0	115.5	
	54 31.5			~~115~~	57.2		
		6.2					
14	16 ~~37~~	28.0		115.9	173.1		
		38.0		115.1	59.0	8	
		49.5		115.5	174.1	115.8	
		59.0			58.0		
	55	7.0		119.5	177.5		
	55 13.1		0.5	118.9	56.2	9	
14	17 17.3	18.5		119.2			
		28.0			175.1	116.7	
		40.0			59.0		
		56.5		112.0	171.0	10	
	56	12.0		116.7	59.1		
	56 2.5	21.5		114.4	175.8	116.2	
14	18 6.7						

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1893phae.proj..5219

Sept 26, 1893.

→

	58 14 20 22.7	19.0	0.5	64.0	
14	20 · 36.7	27.0		160.0	
	36.7	33.0		67.8	
	44.7	41.0		161.7	
	52.2	48.5		72.3	
	58.2	54.5		157.0	
2159	4.2	0.5		74.9	
	9.7	6.0		150.7	
	16.2	12.5		84.3	
	22.2	18.5		147.8	
	31.2	27.5		85.7	
	40.7	37.0		139.0	
	48.2	44.5		98.8	
22	1.7	58.0		124.5	

not seen later.

Lim. Dis.

3	1	13.0		101.8		23.9
		36.0	0.5	125.7		21.9
14	23	47.6	52.5	1	44.4	103.3	22.9
	2		16.0			125.2	114.0

Seeing a little blurry but fairly good.

B 236.				F 1327		in 40.3 slow
3	13	54.5	3	16	1.0	
	14	54.5		17	1.0	

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1893phae.proj.521W

Sept. 24. 1893.

Series 141 (special) Tr. obs.

+19°

~~22 17' +24~~

~~20~~

23 16 + 20.0

20 3K

-2 K2

12 0

9. 14

There is a star fol. Δ ht 19° 5099 by 10ˢ, 3½ m. n.; call the * a, mag. of * a 9.4. Star is a * fol. * a 5ˢ, 7½ m. n.; call this * b. Star a was prob. obs. in one zone and b in the other, obst. being quite faint. ~~Star~~ D.M. is prob. wrong in one co-ordinate. * b is about 11' n. of 5099, which is pretty nearly right as regards Dec. by D.M., but it is wrong as regards R.A. Will measure both *s.

7 56 5091 5.45

5.50

5.33 16.28 ✓ 7.0 v −

Star a 2.87

2.92

3.10 8.89 ✓ 3.0 v −

5101 ?

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1893phae.proj..521W

Sept. 28, 1893

Star b	1.71		
	1.80		
	1.98	5.49 ✓	2.3 A
5127	4.90		
	5.10		
	5.11	15.11 ✓	6.5 K
5152	3.48		
	3.50		
	3.80	10.78 ✓	4.67
5156	2.44		
	2.60		
	2.55	7.59 ✓	3.29
5157	~~2.60~~ wrong		
	3.10		
	3.31		
	3.00	9.41 ✓	4.07
5165	3.30		
	3.43		
	3.40	10.13 ✓	4.39
5166	3.10		
	3.20		
	3.17	9.47 ✓	4.10

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1893phae.proj.5217

Sept. 28, 1893.

9 10 5197 4.97
5.20
5.10 15.27 ✓ 6.61

Series 142 (special) W. Obs.
+19°

18	55	+20°0
22	~~21~~	
+3	26	

18	55
22	27
+3	32

9 4r 3838 2.79
2.70
2.70 8.19 ✓ 3.5r −

3852 2.30 prec. sl. bttr, & N. of two ~~xx~~
2.27
2.22 6.89 ✓ 2.9A

3854 3.70
3.80
3.65 11.15 ✓ 4.A3

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1893phae.proj..521N

Sept 28, 1893

3892	2.89		
	2.98		
	3.00	8.79 ✓	3.41
3898	2.09		prec., s., & sl. ftr. of two
	2.28		
	2.18	6.47 ✓	2.40
3904	3.27		
	3.28		
	3.34	9.89 ✓	4.20
3994	~~5.05~~		
	5.10		
	5.10	15.25 ✓	6.60
4002	2.80		
	2.81		
	2.89	8.50 ✓	3.60
4013	2.71		
	2.85		
	3.00	8.56 ✓	3.71

10 30

Stopped by clouds, which, however, did not affect zone.

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1893phae.proj.521w

Oct. 2. 1893.

N. G. C. 6773.

G. C. 2 ⊀ ⊿ ▽ ⊀

1⊿	~~7.⊿~~ 7⊿	−20.⊀
20	3	
+1	▽▽	

Nebula thought to be found by P. & Tr. in position, but clouds came immediately.

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1893phae.proj..521w

Oct. 5, 1892.

N.G.C. 6578
G.C. 24854

18 8 −20°.4
19 43
+1 35

No neb. found in the region as indicated by old Record Book. Sky pretty clear.

N.G.C. 6644.
16 21 −24°.3
20 6
+1 45

~~20 11 26~~
20h 12m 48s.0
20 16 1.2
3 13.2

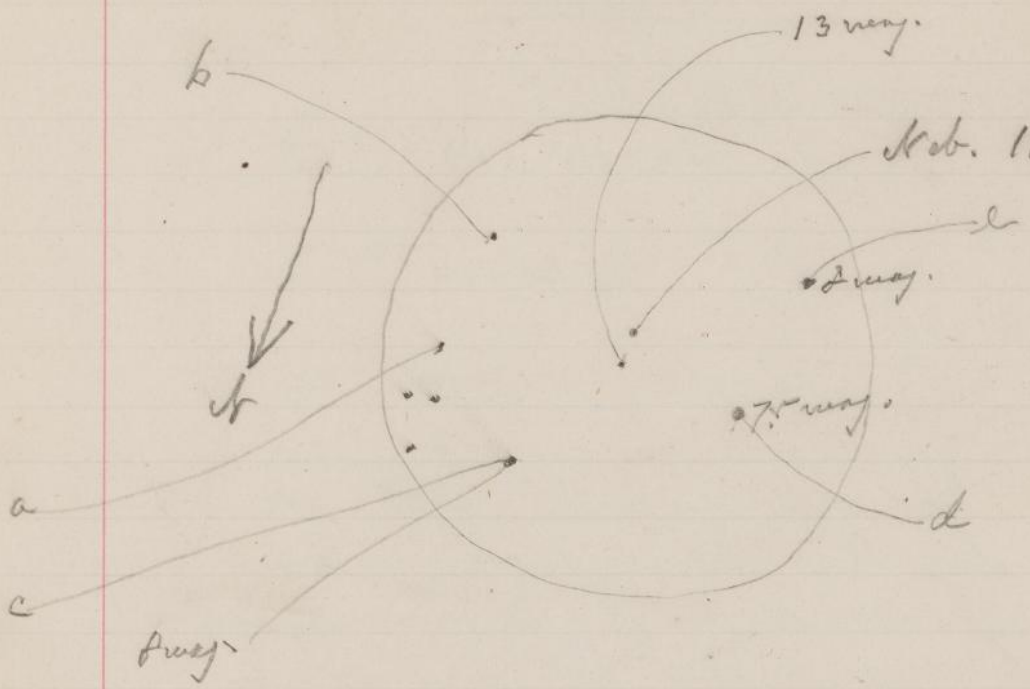
20 17 49.8
20 21 3.*2
3 13.84

Therefore Plan. neb. fol. Yarnall 7820 by 3m 13s.5 and is 7'.5 arc north of it.

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1893phae.proj.521w

Oct. 5, 1893



A 13 mag. star prec. neb. 1.5 sec. and is 1' of are north of it.

Reap. of Jup. III. Phot. R., W. obs., Jansen rec. Comp. with Sat. of right of Jup. that is on foll. side. ~~4~~ = Sat. ~~IV~~.

L. V.

22	~~38~~ ~~39~~			~~2 4 9.8~~	ref.
	~~39~~ ~~2~~	Limit of Vis		~~2 9 6.5~~	"
22	39	42	~~9 h 2.4 m 7.4 s 6.4~~	250.2	33.6
	40	39		283.8	34.6 / 34.1
	41	5	40 43.5	248.4	266.4
		28	29 8.4	283.0	

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1999phae.proj..521w

Oct. 5, 1892

[42]	34	22	30	59.1	241.1
	44	22	31	9.3 ~~8.5~~	~~0.5~~ 289.8
	50			~~15.3 14.5~~	250.0
	57			~~22.3 21.5~~	290.8
43	6			~~31.3 30.5~~	242.8
	14			~~39.3 38.5~~	258.0
	20			~~45.3 44.5~~	248.0
	26			~~51.3 50.5~~	293.5
	32			~~57.3 56.5~~	241.5
	39		32	~~4.3 3.5~~	291.8
	44			8.5	0.5 242.0
	50			14.5	292.2
	56			20.5	237.9
44	4			28.5	295.8
	14			38.5	237.9
	22			46.5	294.8
	30			54.5	239.2
	40		33	4.5	302.0
	47			11.5	236.8
	55			19.5	301.2
45	3			27.5	231.9
	10			34.5	302.0
	18			42.5	233.0
	27			51.5	304.0
	35				227.2
	44	45	47.8		~~0.5~~ 303.0
	52		34	12.5	229.8

75.8
74.0
150.2

265.7

3035

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1893phae.proj.521w

Oct 5, 1892

46 0
8
16
25
35
43
51
59
47 6
16
25
33
45
55
48 2
10
18
25
34
~~44~~
58
49 10
19
27
36
43

46 21.0
34 45.8

46 54.8
35 19.7

47 29.8
35 54.7

48 6.2
36 30.8

48 46.8
37 11.1

49 31.2
37 55.8

310.5
227.8
314.8
228.0
310.2
223.8
312.1
228.0
308.0
223.2
310.5
223.9
216.8
221.0
313.4
221.9
312.8
221.7
311.2
~~2~~
220.8
314.4
219.8
317.9
217.2
317.0

77.0
82.2
79.6

267.7

88.3
80.0
84.2

268.0

87.3
92.9
90.1

268.6

92.4
90.9
91.6

7.3

89.5
93.6
91.6

Altered position of comp. sat.

267.0

98.1
99.8
99.0

268.0

1893phae.proj..521w

Oct. 5, 1893

50 .
0
12
20
34
43
52
3
14
30
47
56
5
14
29
41
50
4
14
28.
45
7
18
27
37
48

50 50 51.5 0.5
38 29.4

50 48.0
39 18.8

51 36.8
40 7.6

52 22.2
40 46.0

53 9.0
41 3.4

54 9.2
42 3.6

217.8
214.1
216.9
219.2
213.0
219.1
215.7
219.0
212.2
221.1
208 5
224.0
210.4
219.9
213.2
223.9
210.8
225.5
207.0
226.1
208.8
224.0
208.0
224.2
207.2
224.4

96.3
102.3
99.3

266.0

106.1
103.3
104.7

266.7

108.9
115.5
112.2

266.4

109.5
110.7
110.1

266.8

114.7
119.1
116.9

267.4

115.2
116.2
115.7

266.2

3

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1893phae.proj.v521w

Oct. 5, 1893

		59	54	54.8		207.8	266.6
55		15	43	17.6		327.3	147.6
		27		24.7		208.0	120.3
		40	55	18.1		327.9	119.0
		49	44	43.8	0.5	206.5	119.9
		59		6.6		323.2	116.7
				13.1			18.3
56		10				207.2	266.4
		21	56	25.5		326.9	119.7
		31	44	48		205.7	120.2
		40		5.5		325.9	120.0
		59				206.1	266.4
57		10	57	17.5		324.8	118.7
		22	45	0		205.2	122.7
		39		40.3		327.9	120.1
		51				202.2	266.0
58		2	58	8.0		325.9	123.7
		14	46	0.8	0.5	204.9	123.1
		25		3.4		328.0	123.4
		37				204.0	265.2
		48	59	57.0	0.5	328.0	124.0
23	24	6	48	19		202.2	122.0
		17		26.3		324.2	123.0
		29				202.5	264.6
		44	1	49.8		327.2	124.7
		56	4	34.8	0.5	204.0	123.2
	2	60	59	56.6		327.2	124.0
			50	11.6			265.2

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1893phae.proj..521W

Oct. 5, 1893

Chron. comp.

	F. 1077 is 37.5 slow			Bond 236	
23	14.5	1.0	23	14.1	49.4
	16	1.0		12	49.3
	17	1.0		13	49.4

Seeing fairly good, Sat did not reap. quite in the positions indicated by chron. so that there was a slight delay in obtaining first setting

	F 1077 is 37.5 slow			Bond 236	
$10^h\ 30^m\ 44^s$ G.M.T. =	23 45	1.0	23	41	49.2
	23 46	1.0		42	49.2

Dis. Jap. I. Phot. R. P. obs. H. rec.
Comp. with sat. IV.

Limit of Vis. of Sat. I.

	23	45	37.	34.6	
Mean =	23	45	55.2	49	14.6
$10^h\ 34^m\ 9^s$ G.M.T.		46	2	3.4	12.4
				35 55.2 34.6.2	13.5
			13	0.6	

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1893phae.proj.521w

Oct. 5. 1893.

23	K7	17.			31,3		
		3~			(KK,K	113.1	
23	K7	38.6				108.9	
10	3~	~3.1	8.7.	K4,	87.2 3~,2	111.0	
				~4.	(K1,(		
		K4		9	33,(	108.1	
				19		108.5	
	48	24.8			(K1,2	108.3	
10	36	39.1		29	88.0 3K7		
				K2	1K3,2		
				~K	31,1	115.2	
	K9			6	1K6,3	102.0	
						108.6	
	49	14.0		19	87.2 3K4		
10	37	28.3		37	136,4		
				K4	36.0		
				~4		103.0	
				6	139.0	114.8	
	50	2.0				107.4	
10	38	16.3		16	88.7 3K.0		
				32	1K~,4		
				K7	24~.	106.7	
	50	50.5~			13~,2	107.2	
10	39	4.3		~6	0.5	107.0	
				~1	84.4 33,K		
				7	1K0,6		
				23	33,1	105.9	
				3~	139.0	98.6	
	51	37.8				107.4	
10	39	51.6		X3	87.0 3K~	102.4	
				~0	137.3		
				~9	32,7	106.3	
				4	139.0	109.7	
	~2					108.0	
	52	12.0		16	88.2 2~,7		
10	40	25.8			1K~,K		
				2~			

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1893phae.proj..521w

Oct. 5, 1893.

20	52	34	36.4	112.8
	52	51.5	1446	105.3
10	41	5.3	1446	109.0
		3	88.1	34
		10	140.7	→
10	41	34.8.	21	32.7
		43.8.	20	133.3
		49.8	36	36.7
		56.3	43	0.5 135
	42	2.3	49	21.2
		9.3	16	136.6
		16.3	3	29.0
		24.3	11	136.7
		31.3	18	43.4
		37.3	24	126.6
		42.3	29	44.4
		47.3	34	124.4
		53.3	40	42.0
		58.3	45	129.6
	43	4.3	51	44.4
		8.3	55	129.4
		14.3	1	44.0
		20.3	7	129.9
		28.3	12	43.7
		32.3	19	124.6
		39.3	26	42.0
		46.3	33	122.2
		52.3	39	50.
		58.3	45	117.7

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1893phae.proj..521w

Oct. 5. 1893.

23	44	5.3		197
10		11.3		105
	56	17.3		63.4
		23.3		102
		29.3		70.6
		37.3		95.0

Limit of Vis. Sat IX.

	57		17		
23	57	29.8	26	0.5	76.1
					94.6
10	45	42.6	33	86.4	78.8
			43		96.0

22.5
21.2
21.8

Seeing fair but images of Sat. poor.

J 1327 is 37.5 slow			Bond 236		
0	27	1.0	0	23	49.0
0	28	1.0	0	24	49.0

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1893phae.proj..521W

Oct. 6, 1893.

D. M. Wedge Jones W. obs.

Series 143 (Special)

Clouds

Still cloudy with no prospect of clearing.

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1893phae.proj..521w

Oct. 7, 1893.

Location of A. G. C. 6747.

1	α −20, ζ
19	55
+1	47

Bright reference star follows Sag. by 1^m ~~22~~ ~~35~~ and is 10' south of it

Plan. neb. found. Position gear. 224.1, 45.0

269.1

20	28	37.3	faint star
		59.2	Bright "
	29	19.0	faint "
		37.5	−.5° Bright "
	31	8.4	
		30.0	
		50.0	
	32	8.5	
		29.1	
		50.0	
	33	10.0	
		29.0	
		45.5	
	34	7.5	
		27.4	
		46.4	

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1893phae.proj..521w

Oct. 7. 1893.

35 6.0

27.0

47.0

26 6.0

Fair star in northern half, bright star in southern half.

Location of plan. neb. with ref. to 12 mag. star closely adjacent: position-gero 224.°1 sch at 229.°1

~~4~~

~~212~~

~~47 24.0~~

47 57.7 12 mag. star

48 7.0 nebula

48 36.9

44.5

~~5.0~~

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1893phae.proj..521w

Oct. 7, 1893

56	18.1
	25.9
	47.1
	53
57	17.4
	24.0

Same again with position circle at 219.1

59	43.5
	54.0
0	10.8
	21.9
0	33.9 Nebula
	42.8 12 mag. star
1	28.9
	39.0
2	12.6
	21.4
~~3~~	~~6.6~~
2	47.9
	54.5

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1893phae.proj..521w

Oct. 7. 1893.

3 5:0
13:0 +1.5

3 24.5
44.6

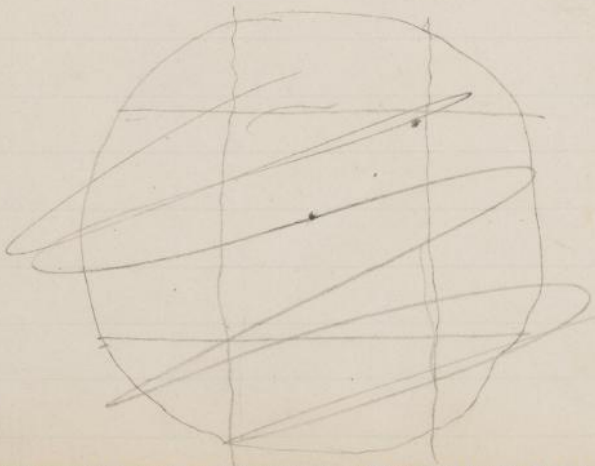
~~1.5~~
~~6.6~~
~~29.5~~

~~4~~ 40.9
48.1

Neb. fall. 12 mag. star 1.5 of time and is 0.2 ~~mm~~ north of it

There is a 14.5 mag. star just. the 12 mag. by 3.5 s. in same declination. Call this star a. There is a 13.9 mag. star just. 12 mag. star by 1.0 s. and 2.2 ~~south~~ of it. Call this star b

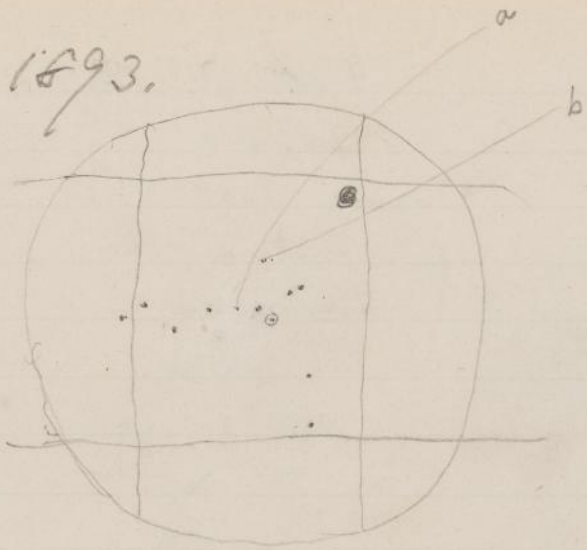
~~tt~~ ~~little~~ b 1.5 neb. 2.5 a



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1893phae.proj..521w

Oct. 7. 1893.



See also p. 42 of this book.

Stopped by clouds.

Still cloudy.

Still cloudy

D. M. Wedge Gone

Series 143 (special) W. obs.

+19°

~~1855~~	55	+20°
23	21	
4	26	

10 ✓ 3858

2.80

2.91

2.72 8.43✓ 3.6✓✓

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1893phao.proj.521W

Oct. 7, 1893

3892	3.01		
	3.10		
	2.95	9.06 ✓	3.92 ✓
3898	2.25		
	2.30		
	2.10	6.65 ✓	2.84 ✓
3904	3.42		
	3.30		
	3.25	9.97 ✓	4.1K ✓
3997	5.20		
	5.25		
	5.00	15.45 ✓	6.69 ✓
4002	2.80		
	2.85		
	2.88	8.53 ✓	3.69 ✓
4013	3.00		
	2.75		
	2.92	8.67 ✓	3.7 ✓

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1893phae.proj.521w

Oct. 7. 1893.

Plan. Neb. N. G. C. 6r-7a was discd. Aug. 18, 1892. It fol. the 12 magn. star by 1.5 secs. and is 10" north of it.

The 12 magn. prec. A. G. C. 2K 44 7 by 20.1 secs. and is 5' 23" north of it.

∴ Neb. prec. A. G. C. 2K 44 7 by 18.6 secs. and is 5' 33" north of it.

See also Comet Red. Book. No. 13. pp. 14K-5.

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1893phae.proj..521N

Oct 9, 1893.

23 16. +20°
20 46
-2 30

Wedge Gone W. obs.

Series 144 (special) +19°

7 ✓0	5091	5.45		
		5.60		
		5.52	16.57 ✓	~~7.2~~ 7.17
	5101 star a	3.00		
		2.90		
		2.81	8.71 ✓	~~3.4~~ 3.77
	5101 star b	1.85		
		2.02		
		1.98	5.86 ✓	2.54
	5127	5.00		
		4.85		
		4.92	14.77 ✓	6.40
	5152	3.70		
		3.85		
		3.67	11.22 ✓	4.46

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1893phae.proj..521W

Oct. 9, 1893

5156	2.40		
	2.60		
	2.72	7.72 ✓	3.34
5157	3.01		
	2.90		
	2.88	8.79 ✓	3.21
5165	3.41		
	3.45		
	3.52	10.38 ✓	4.49
5166	3.10		
	3.08		
	3.00	9.18 ✓	3.97
8 45	5197	5.01	
		5.25	
		5.32	15.58 ✓	6.75

Series 148 (special) +9°

19	8	+ 10.0
22	25	
+3	17	

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1893phae.proj..521

Oct. 9, 1892

9	20	4064	3.65	
			3.80	
			3.80	11.25 ✓ K.47
		4050	2.69	
			2.80	
			2.79	8.28 ✓ 3.59
		4082	2.71	
			2.69	
			2.63	8.03 ✓ 3.K4
		~~4146~~ 4129	3.30	
			3.34	
			3.45	10.09 ✓ K.37
		4140	2.52	star faint; some star
			2.49	obs. has in zone 68
			2.40	7.41 ✓ 3.21
		4149	3.81	
			3.86	
			3.90	11.57 ✓ 5.01
		4203	2.85	
			3.13	
			3.27	9.25 ✓ K.01

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1893phae.proj..521W

Oct. 9, 1893

4212		4.19		
		4.17		
		3.96	12.32 ✓	5.33
4237		2.69		
		3.08		
		3.10	9.07 ✓	3.93

Stopped by clouds, but probably none of the previous altrs effected.

	19 . 38			
4585	20 30	3.08		
	52	3.29		
		3.12	9.49 ✓	4.11
4586		2.84		
		3.00		
		3.20	9.04 ✓	3.91
4588		4.10		
		4.10		
		4.13	12.33 ✓	5.34
4688		3.49		
		3.69		
		3.49	10.67 ✓	4.6 ~

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1893phae.proj..521

Oct. 9, 1893

	4689	2.70			
		2.70			
		2.80	8.20 ✓	3.✓✓	
11	0	4692	2.40		
			2.53		
			2.52	7.45 ✓	3.23

One or two scattered clouds noticed in this region as last star was finished, but probably star not effected.

B 296 ∓ 1327, is 37.9 slow

2	30	25.0	13h 2m ✓3✓6.5=2	34	1.0
2	31	25.0	2	35	1.0

Dis Jupr. II. Phot. R. Obs. Clymer Rec. Compared with Sat III.

	2	39	45.0	216.1	89.9
					91.6
		40	3.5	306.0	90.6
mean = 2h 40m 10.0 =			18.5	216.9	261.9
13 12 37.0 E.T.			33.0	308.5	

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1893phae.proj..521W

Oct 9, 1893.

2	40	46.0		215.8	91.3	
		55.0		307.1	90.7	
					2 91.0	
	41 41.2	5.5		216.0	261.4	
13	13. 27.2	14.5		306.7		
		26.0				
	42	10.5		217.0	89.8	
				306.8	88.0	
	42 8.6	25.0		218.0	88.9	
13	14 35.6	33.0		306.0	262.0	
		41.5				
				218.8	87.6	
	42 52.0	48.0		306.4	86.5	
13	15 19.0	55.0		217.3	87.0	
	43	3.5		303.8	261.6	
		13.0				
				217.8	87.9	
0.5	43 25.6	20.0		305.7	87.6	
13	15 52.1	30.0		219.4	87.8	
		39.5			262.5	
		47.0		307.0		
				218.0	90.0	
	43 54.2	54.5		308.0	88.0	
	44 25.7	3.0			89.0	
13	16	12.5		217.0	262.0	
		22.0		305.0		
				218.1	85.9	
	44 33.6	29.5		304.0	87.9	
13	17 0.1	38.0		219.0	86.9	
		45.0		306.9	262.0	
		57.0		219.0		

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1893phae.proj..521W

Oct 9, 1893.

			57.0		219.0	86.0	
	45		6.0		305.0	86.1	
						86.0	
	45	17.2	28.0		218.0	8261.5	
13	17	43.7	38.0		304.1		
	50		8.0		216.2	88.8	
			25.5		305.0	86.8	
						87.8	
1.0 / 0.5	50	32.8	39.0		218.2	9	
13	22	58.3	58.5		305.0	261.1	
	51		34.0		217.8	87.1	
			43.5		305.9	89.5	
	51	51.6				88.3	
13	24	18.1	53.0		217.0	10	
	52		16.0		306.5	262.0	
	53		18.0		219.0	86.0	
			26.0		305.0	82.2	
						84.1	
0.5	53	31.2	36.5		220.0	261.6	
13	25	52.2	44.5		302.2		
			52.0		220.4	83.9	
	54		1.5		304.3	79.8	
			8.0		221.4	81.8	
	54	4.2					
13	26	30.2	15.5		301.2	261.8	
			23.0		223.4	75.7	
			30.5		299.1	75.9	
	54	33.9				75.8	
13	26	54.9	38.0		221.8		
			44.0		297.7	260.5	
			51.0		223.5		

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1893phae.proj..521w

Oct. 9. 1893.

			51.0	223.5		
			58.0	298.8	75.3	
					72.2	
13	55 27	1.8 2.6 .8	6.0	224.0	73.8	
			12.0	296.2	260.6	
			18.5	226.8		
	05 55	28.8	26.0	296.1	69.3	
13	27	3 5.3	32.5	228.8	65.2	
			38.0	294.0	67.2	261.4
13	28	8 0.5	45.0	230.8		
		7 18.0	52.5	292.0		
56		6 2.5	2.0	231.1		
		7 38.5	13.0	293.1		
		6 4.5	22.0	234.8		
		3 5.5	29.0	287.4		
29		1 0.0	36.5	237.5		
		8 0.5	45.0	285.7		
		8 1.5	54.0	241.1		
57		6 2.0	1.5	282.3		
		5 3.5	11.0	243.0		
		1 4.0	18.5	280.1		
		7 4.0	22.5	243.2		
		3 5.5	29.0	278.8		
30		0.0	35.5	248.0		
		6 0.5	42.0	276.8		
		2 1.5	48.0	250.0		
		18 2.5	54.0	274.0		
58		6 2.0	1.5	256.8		

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Oct. 9. 1893.

13	30	34 35.5	9.0		271.0
		38 40.0	14.0	0.5	254.0
		6 48.0	22.0		268.8
		6 58.0	32.0		256.0
		[illegible] 31 7 8.0	43.0		266.0

not seen later

Saw Vis.

59	11.5			256.0		11.0	
	28.0	59	32.4	267.0		9.8	
						10.4	
~~38.~~	38.0	13 31	6 58.4	256.2	261.3		
~~57.~~	52.0			266.0	~~259.8~~		

Seeing good.

D 236 F 1327 is 37.9 slow

3	5	24.7	3	9	1.0
3	6	24.7	3	10	1.0

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1893phae.proj..521w

Oct. 10, 1893

~~B~~

Comparison stars for variables. ~~+12h 33m +60°.4~~
I Urs. Maj.

12	33	W. obs.
20	55	
+8	25	+60.4

7 v-o

○ 2 var., var. 2½, in large telescope
○ 2 var., var. 2½, in finder, but faint
Est. 11.2

R Draconis

16	26	+67°.3 W. obs.
21	27	
+5	1	

8 8 1 m

○ 2 var., var. 1.5 ≤
too faint for finder
Est. 12.6

R Aurigæ

5	3	+53°.0
21	43	29 2
16	40	21 48
12	00	7 15
4	40	12 00
		4 45

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Oct. 10, 1893

≏ 1.5R , R 3.5S , in large tel.
too faint for finder
Exh. 13.6

Wedge Phot. Zone W. obs.

Series 146 (special) +9°

19	8	+10°
22	16	
3	8	

A. VV	4064	3.82		
		3.85		
		3.90	11.57 V	V.01 V
	4080	2.83		
		2.70		
		2.62	8.15 V	3.V3 V
	4082	2.70		
		2.85		
		2.82	8.38 V	3.63 V
	4129	3.30		
		3.30		
		3.27	9.87 V	V.27 V

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Oct. 10, 1893

4140	2.30		
	2.32		
	2.20	6.82 ✓	2.9 ✓
4149	3.85		
	3.88		
	4.00	11.73 ✓	2.94 ✓
4203	3.01		
	3.20		
	3.18	9.39 ✓	2.97 ✓
4212	4.00		
	3.95		
	3.97	11.92 ✓	2.96 ✓
4237	3.10		
	3.15		
	3.18	9.43 ✓	2.94 ✓
4585	3.28		
	3.32		
	3.40	10.00 ✓	2.93 ✓
4586	3.01		
	3.10		
	3.22	9.33 ✓	2.90 ✓

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Oct. 10, 1893

4588	4.00		
	4.11		
	4.08	12.19 ✓	4.06 ✓
4688	3.50		
	3.72		
	3.77	10.99 ✓	4.76 ✓
4689	2.50		
	2.62		
	2.95	8.37 ✓	3.62 ✓
10 ✓ 4692	2.50		
	2.62		
	2.68	7.80 ✓	3.38 ✓

Extension of Photometric Scale.

R Cygni W obs.

+55° 1

6	49
0	5
6	44
12	00
5	16

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1893phae.proj..521w

Oct. 10, 1892

Star n can be comp. with star m, but prob. better still a faint star north fol. star h can be comp. with it

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1893phae.proj..521w

Oct. 11, 1893.

Extension of Photometric Scale

S Persei W. Obs.

2	8	+57°.2
26	8	
21	2	
5	6	
12	00	
6	54	

Index above

~~+644.8~~

180.2

341.6 161.4 v^

182.3

343.2 160.9 v^

322.3 v^ −1.9

Index below

271.0

73.7 162.7 v^

274.0

73.9 159.9 v^

322.6 v^ −1.9

270.8

73.5 162.7 v^

271.6

73.7 162.1 v^

324.8 v^ −2.1

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1893phae.proj..521w

Oct. 11, 1893

Index above

0.5	
163.4	162.9
359.0	~~167.2~~
166.2	167.2
	330.1 − 2.4
359.6	
165.9	166.3
1.5	
164.7	163.2
	329.5 − 2.4.

Index below

89.5	~~163.5~~
253.0	163.5
88.2	
252.8	164.6
	328.1 − 2.3

A 40

ζ Bootis W. Obs.

14	16	54°.6
22	27	
+8	11	

Abandoned, region rather low and faint star practicably invisible.

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1893phae.proj..521w

Oct. 11, 1893

Extension of Photometric Scale.

R Camelopardi W. obs.

Star b comp. with star K.

14	40	+84.1
22	48	
8	08	

This observation on Index to right

R Camelop. rejected throughout as great difficulty was had with drizzly clock, hazy prisms &c. and no confidence is had in the results even without reducing them.

	359.3	
	164.7	165.4 ✓^
	359.9	
	162.7	162.8 ✓^
		328.2 ✓^ −2.3

Index to left

	98.5	
	251.1	152.6 ✓^
	98.0	
	248.7	150.7 ✓^
		303.3 ✓^ −1.0

	98.5	
	249.2	150.7 ✓^
	98.8	
	250.0	151.2 ✓^
		301.9 ✓^ −0.9

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1893phae.proj:521w

Oct. 11, 1893

Index to right

1.0	162.0 ✓^
163.0	
1.2	
163.7	162.5 ✓^
	324.5 ✓^ −2.0
0.8	
163.5	162.7 ✓^
1.2	
163.6	162.4 ✓^
	325.1 ✓^ −2.1

Index to left

98.1	
249.2	151.1 ✓^
98.6	
249.5	150.9 ✓^
	302.0 ✓^ −1.9

R Lyncis W. obs.

6	49	+55°.1
0	1	
6	40	
12	00	
5	20	

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1893phae.proj..521W

Oct. 11, 1893

Index below

271.1
62.0 150.9 ✓^
270.0
61.9 151.9 ✓^
302.8 ✓^ −1.0

Index above

0.9
158.2 152.3 ✓^
1.0
153.5 152.5 ✓^
304.8 ✓^ −1.0

0.8
152.5 151.9 ✓^
0.9
152.0 151.1 ✓^
302.8 ✓^ −1.0

Index below

92.2
242.8 150.6 ✓^
90.6
242.2 151.6 ✓^
302.2 ✓^ −0.9

91.0
243.3 152.3 ✓^
90.5
243.1 152.6 ✓^
304.9 ✓^ −1.1

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1893phae.proj..521w

Oct. 11, 1893

Index above

	182.0	
11	332.1	150.1^
	180.0	
	332.2	152.2^
		302.3^ −0.9

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1893phae.proj..521W

Oct. 12, 1893.

In west dome early part of evening.

Extension of Photometric Scale. Phot. R.

R Canelopardi W. obs.

comp. of + to with + K

14	40	84.1
22	41	
+8	1	

Index to right

122.4		
284.7	162.3	
124.0		
283.0	159.0	
	321.3	-1.8

Index to left

216.0		
11.3	155.3	
214.1		
12.3	158.2	
	313.5	-1.4

214.0		
12.3	158.3	
215.8		
11.7	155.9	
	314.2	-1.4

Index to right

302.9		
102.7	159.8	
302.2		
104.0	161.8	
	321.6	-1.8

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1893phae.proj..521w

Oct. 12, 1893

302.9	
103.0	160.1 ✓^
302.0	
104.0	162.0 ✓^
	322.1 ✓^ −1.9 ✓

Index to left

34.2	
193.8	159.6 ✓^
36.0	
191.9	155.9 ✓^
	315.5 ✓^ −1.5 ✓

Sky a little hazy, images faint and observations difficult

R Lyncis		M. obs.
6	49	5-5.1
30	49	
23	47	
7	02	
12	00	
+4	58	

Sky becoming too cloudy to measure star

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1893phae.proj..521W

Oct. 12, 1893

Σ Tauri. Tr. ob.

415 + 25°.2

015

400

1200

+8 00

~~40.0~~ Index to right

40.0

186.0 146.0

34.0

190.2 156.2

302.2 −0.9

Index to left

121.1

278.6 151.5

Index to left

305.0

97.9 152.9 ^

304.7

99.2 154.5 ^

307.4 ^ ~~−1.2~~ −3.16

~~×5 42.6~~

Index to right

33.2

192.0 158.8 ^

39.3

189.0 149.7 ^

308.5 ^ ~~−1.2~~

51.5 −3.21

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1893phae.proj..521w

Oct. 12, 1893

39.2
188.0 148.8 ↑
34.2
190.0 155.8 ↑
304.6 ↑ ~~1.0~~ ✓
~~50.4~~ ↑ − 3.04

Index to left

125.2
278.5 153.3 ↑
127.0
278.8 151.8 ↑
305.1 ↑ ~~1.1~~ ✓
~~54.9~~ ↑ − 3.07
126.0
278.1 152.1 ↑
128.9
276.4 147.5 ↑
299.6 ↑ ~~0.8~~ ✓
~~50.4~~ ↑ − 2.84

Index to right

36.3
191.2 154.9 ↑
36.0
11 00 190.2 154.2 ↑
309.1 ↑ ~~1.2~~ ✓
50.9 ↑ − 3.24

Sky somewhat hazy; observ. a little difficult from haze and proximity of bright star.

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1893phae.proj..521W

Oct. 12, 1893.

B 236			F 1327		
1	5	4.0	1	9	1.0
1	6	4.0	1	10	1.0
1	7	4.0	1	11	1.0

Fr. 1327 is 37.7 above.

Ne Jupr. III. Obst R. Obs. Clymer Recr.
Compr. with 1st sat on left = Sat. I.

∴ 1h 9m 1.0 by Fr. 1327 = 11h 26m 19.5s G.T.

1	25	5.0		156.3		92.0	
		15.5		248.3		87.3	
1h 20m 21.0s =		28.5		203.5	161.0	1	89.6
11h 46m 34.0s G.T.		38.0			248.3		
		53.0			160.2		86.4
	26	3.0			246.6	2	88.4
1	26	8.9		204.2	160.8		87.4
		15.0			249.2		
11	47	21.1	24.5		160.0		85.5
			34.0		245.5		84.5
	26	50.5	44.0				~~87.0~~ 86.5
11	48	2.7	54.0	203.5	160.5	3	
	27		10.0		248.0		
			18.0		158.0		93.3
	27	38.0	28.5		251.3		88.9
11	48	43.2	38.5	205.0	160.8	4	91.1
			47.0		249.7		

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Oct. 12, 1893

	27		5.0		160.1	91.9	
	28		11.0		252.0	88.8	
	28	18.0	22.0	205.2	159.9	90.4	
11	49	30.2	42.0		248.7		
			51.0		158.1	92.9	
	29		1.0		251.0	91.0	
	29	5.4	9.5	0.5 205.5	157.0	92.0	6
11	50	17.1	20.0		248.0		
			36.6		158.0		
	29	51.1	44.5		248.2	90.2	
11	51	2.8	56.0	203.0	158.0	90.0	7
	30		8.0		248.0	90.1	
			17.0		157.9	87.3	
	30	33.6	28.5		247.2	86.1	
11	51	45.3	36.5	203.6	160.7	86.7	8
			52.5		246.8		
	51		3.0		162.0	84.8	
	31	19.5	14.0		246.8	89.3	
11	52	31.2	25.5	204.4	159.7	87.0	9
			35.5		249.0		
			46.0		163.0	82.0	
	32	1.6	56.5	0.5	245.0	82.8	
11	52	12.8	8.0	205.7	166.0	82.4	10
			16.0		248.8		
			24.0		162.0	84.9	
	32	38.4	33.0		246.9	85.2	
11	53	49.6				85.0	

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1893phae.proj..521W

Oct. 12, 1893,

	32		43.0	204.5	162.0	(1		
			53.5		247.2			
	33		6.0		160.7	88.8		
			20.0		249.5	88.8		
		33	24.6			88.8		
11		54	35.8	28.5	204.8	160.2	(2	
				44.0		249.0		
	34			2.0		162.5	82.5	
				15.5		245.0	87.9	
		34	20.0				85.2	
11		55	31.2	25.5	204.8	160.2	(3	
				37.0		248.1		
				52.5		160.2	87.5	
							82.6	
	35			9.0		247.7	85.0	
		35	17.4	30.0	0.5	204.2	163.1	(4
11		56	28.7	38.0			245.7	
				46.0			163.5	84.5
		36	8.6					85.1
11		57	14.3	55.0			248.0	84.8
	36			9.0		205.2	162.2	(5
				24.5			247.3	
				35.0			163.8	83.1
		36	52.8	48.0			248.9	75.3
11		58	3.8	59.0	5.2	207.6	167.3	79.2
								(6
	37			9.0			242.6	
				18.0			165.0	77.0
		37	33.0	29.0	0.5		242.0	76.9
		58	43.8	38.0		203.6	165.3	77.0
								(7
				47.8			242.2	
				57.0			165.8	

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Oct. 12. 1893.

	38		10.0		242.5	76.7
	38	13.4	18.5	204.0	165.4	77.1
11	59	23.8	28.0		242.5	76.9
			40.0		166.5	76.3
	38	53.1	47.5		242.8	72.0
12	0	3.3	57.0	203.8	167.0	74.2
	39		8.0		239.0	
			18.0		167.2	71.8
	39	35.8	30.0		239.0	66.1
12	0	46.0	42.0	203.0	169.9	2069.0
			53.0		236.0	
			59.0		170.3	66.7
	40		6.5		237.0	67.9
	40	11.8	14.5	204.2	170.8	67.3
12	1	22.0	27.0		238.7	
			36.5		170.0	68.0
	40	50.4	47.0	0.5	238.0	67.7
12	2	6.1	55.0	204.4	176.0	67.8
	41		3.0		233.7	
			10.0		175.0	60.5
	41	22.1	18.5		235.5	64.7
12	2	31.8	25.0	204.4	171.3	62.6
			35.0		236.0	
	41	57.4	42.5		172.5	61.5
12	3	7.1	52.0		234.0	59.0
						60.2

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Oct. 12, 1893.

1	42.	3.0	203.4	174.0		
		12.0		233.0		
		20.0		174.2		
	42.	32.6	29.0	232.0	57.8	
					54.6	
					56.2	
12	3	42.3	36.0	204.2	178.0	
			45.5		232.6	
			53.5		178.5	
	43		1.0		229.2	50.7
					53.3	
					52.0	
	43	4.9	9.0	204.1	177.7	
12	4	14.7	16.0		231.0	
			23.5		178.0	
					53.3	
	43	35.9	33.5	0.5	231.3	49.0
					51.2	
12	4	45.7	40.0	204.1	179.0	
			46.5		228.0	
			54.5		177.7	51.2
	44		4.5		228.9	48.8
					50.0	
	44	9.6	15.0	203.4	179.0	
12	5	18.8	24.5		227.8	
			32.0		180.8	
					47.2	
	44	43.6	40.0		228.0	42.9
					45.0	
12	5	52.8	48.0	203.9	182.0	
			54.5		224.9	
	45		3.0		184.4	40.8
	45	13.0	9.0		225.2	40.1
					40.4	
12	6	22.2	17.0	203.4	182.8	
			23.0		222.1	

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1893phae.proj..521W

Oct. 12, 1893

	45		33.5		181.8	44.9
	45	44.4	41.0		226.7	35.2
12	6	53.6	48.0	203.4	185.0	40.0
			55.0		220.2	
	46		2.0		185.5	
			~~10.5~~		22	35.5
	46	18.8	17.0		221.0	36.2
12	7	28.0	24.0	203.7	186.0	35.8
			32.0		222.2	
	46	48.9	38.0	0.5	187.0	
12	7	57.6	45.0		220.3	33.3
			52.0	204.0	188.2	32.4
	47		0.5		220.6	32.8
12	8	15.2	6.5		189.0	
		21.7	13.0		217.3	
		27.7	19.0		189.6	
		34.7	26.0		219.9	
		42.2	33.5		189.8	
		48.7	40.0		216.9	
		54.7	47.0		191.0	
	9	01.7	53.0		216.0	
	48	07.7	0.0		191.1	
		14.7	6.0		215.1	
		26.2	19.5		191.1	
		28.2	18.5		214.2	

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1893phae.proj..521W

Oct. 12, 1893.

12	48	9	25.0	192.0
		40	31.5	215.0
		6	37.5	192.0
			44.0	214.0
			50.0	194.0
		10	55.5	213.6
	49		2.0	194.0
			8.5	214.0
			15.0	195.0
			22.5 0.5	212.8
			33.0	196.0
			44.0	212.1
		11	57.0	196.0
	50		11.5	208.4

not seen later

Lima. Dis.

	50	45.0	194.8		16.2
		56.0	211.0		12.7
					14.4
	51	1.2	6.5	202.6 196.0	
12	12		17.5	208.7	

~~Compared with 1st sat. on left = sat I.~~

B 236 F 1927 { 12h 16m 10.9s E.T.

1	57	3.6	2	1	1.0 = A
1	58	3.6	2	2	1.0

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1893phae.proj..521w

Oct. 12, 1893.

Obs of Jap. I, Phot R, Hobs, Clymer Rec, Comp, with remaining sat. on left = sat II

2	10		5.0		159.0	
			15.0		247.0	88.0
2 10 1893			24.0	204.0	161.0	88.1
12h 31m	25.0	E.T.	35.5		249.1	88.0
			47.0		162.0	87.5
	11	4.5	55.0		249.5	94.2
						2 90.8
12	32	11 9.6	12.0	205.8	158.8	
			24.0		253.0	
			33.0		157.9	91.0
	11	53.6	48.0		248.9	91.0
						3 91.0
12	32	12 58.7	1.5	203.4	158.0	
			12.0		249.0	
			29.5		159.2	89.4
	12	44.2	38.0		248.6	93.8
						4 91.6
12	33	49.3	50.0	204.4	158.1	
			59.5		251.9	
	13		8.0		157.0	92.9
			15.0	0.5	249.9	87.2
	13	22.8				5 90.0
12	34	27.4	36.0	204.4	161.8	
			38.0		249.0	

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1899phae.proj..521w

Oct. 12, 1899.

	13		54.0		162.5	85.4 85.2 85.3
	14		0.0		247.9	
	14	2.8	6.0	206.8°	164.1	6
12	35	7.4	11.0		249.3	
			18.0		166.5	80.7 84.8 82.8
	14	30.1	25.0		247.2	
12	35	34.7	33.5	206.2	163.3	
			44.0		248.1	
12	35	53.6	49.0		162.8	
	36	2.1	57.5		246.0	
	15	9.6	5.0		164.0	
		16.6	12.0		247.0	
		23.6	19.0		166.0	
		31.1	26.5		243.2	
		38.6	34.0		170.0	
		44.6	49.0		242.5	
		51.1	46.5		167.2	
		57.6	53.0		244.1	
	37 16	5.6	1.0		169.3	
		12.6	8.0		238.9	
		22.1	17.5		172.8	
		28.6	24.5	0.5	233.0	
		38.1	34.0		176.1	
		48.1	43.0		228.4	
		54.1	51.0		179.3	
	38	2.1	58.0		226.0	

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1893phae.proj..521w

Oct. 12, 1893.

2	12	17 38	14.1	7,0	184.7	
			18.1	14,0	222.9	
			24.6	21.5	188.0	
			37.1	29,0	218,1	
			42.1	39,0	194,0	
			54.1	47,0	211,0	

not seen later.

Lina. Vis.

2		18		16,5	191,8	21,3
				25.0	213,1	19.8
		18	31.2			20.6
	12	39	34.3	37,0	203.2 194,0	
				46.5	213,8	

Seeing good images somewhat elongated settings made with some difficulty as reading circle of Plat. moves very hard & there is a constant tendency of Plat to slip & turn in its bearings so that plat. had to be held in position with the left hand while settings & illuminations were made with the right tendency to or similar difficulty during latter part of previous eclipse.

Difficulty with Plat. remedied before following eclipse was taken.

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1893phae.proj..52W

Oct. 12, 1893.

B 236 F. 1327.

2	25	3.5	$12^h 46^m 6^s$ G.T. = 2	29	1.0
2	26	3.5		30	1.0

Refr. Jupr. III. Phot R. Obs, Clymer Ree. compared with farther sat. on left = Sat. II.

Lim of Vis.

	3	4	52.5	47.9		14.3
		5	22.0	62.2		16.2
	5	24.4	34.0	54.0	44.9	15.2
13	26	20.3	49.0		61.1	

							Sum
			9	51.0			
13	31	1.9 G.T. =	10	6.5			46.0
	13	31	5 37	58.0			70.8
		1	58.4	3.0			41.0
		32	3.4	8.0			70.2
			9.4	14.0			39.0
			13.4	18.0			71.0
			20.4	25.0			35.5
			26.4	31.0			70.0
			33.9	38.5			38.0
			37.4	42.6			72.8
			43.4	48.0			37.2
			48.9	54.5			74.0

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1893phae.proj..521w

Oct. 12, 1893

3 13	32	54.4	0.0		38.0	
	33	8.4	6.0		73.0	
		6.9	12.5		35.2	
		17.9	18.5		71.3	
		24.4	25.0		33.0	
		28.9	32.5		76.1	
		34.4	40.0		34.3	
		46.9	51.5		75.8	
		54.9	59.5		31.0	
	134	0.9	7.0		78.5	
			15.0		31.8	46.2
	13	38.9	24.0		78.0	46.7
13	34	26.8	40.5	55.3	32.3	46.4
			48.0		79.0	
	14		5.0		25.1	
	14	18.9	16.0		85.3	60.2
13	35	13.8	23.0	55.6	22.2	67.5
			31.5		89.7	63.8
			40.5		22.0	
			49.5		83.8	69.7
	15		1.5		91.7	70.2
	15	51.1	13.0	55.9	19.9	70.0
13	36	0.0	23.5		90.1	
			32.0		19.9	70.2
	15	47.2	42.5		90.1	74.6
13	36	42.1	52.5	55.2	18.0	72.4
					92.6	

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1893phae.proj..521W

Oct. 12, 1893.

3	16		2.0		92.6	
			14.0	0.5	10.0	86.0
	16	29.4	24.5	0.5	96.0	82.8
13	37	23.8	35.0	53.7	13.0	84.4
			44.0		95.8	
			59.0		13.1	78.9
	17		17.0		92.0	84.4
	17	19.9	27.5	53.9	13.1	86.6
13	38	14.3	36.0		97.5	
			48.0		14.4	82.4
	18		0.5		96.8	82.7
	18	7.2	14.5	55.2	13.5	82.6
13	39	1.6	26.0		96.2	
			38.0		10.1	
	18 | 57.5		55.0		99.2	89.1
13	39	51.9	4.0	55.6	13.0	87.1
	19		13.0	0.5	100.1	88.1
			25.5		13.0	
	19	43.4	39.0	0.5	101.9	88.9
13	40	37.2	49.0	56.7	12.0	88.0
	20		0.0		100.0	88.4
			14.0		9.0	
	20	32.6	23.0		103.9	94.9
13	41	26.5	41.5	54.5	7.1	91.0
			52.0		98.1	93.0

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1893phae.proj..521w

Oct. 12, 1893.

	21.		7.0		6.9		
			16.0		101.1		94.2
	21	22.4	28.5		5.0		96.8
13	42	16.3		53.7			95.5
			38.0		101.8		
			51.5		5.9		95.8
							101.0
	22		4.0		101.7	3	98.4
	22	10.6	15.0	0.5	4.0		
13	43	4.0		54.2			
			32.0		105.0		
			41.0		6.1		98.7
	~~23~~ 23						102.0
	~~32~~	00.5	50.5		104.8	4	100.4
13	~~44~~ 43	53.9					
	23		4.5	56.2	6.0		
			26.0		108.0		
			50.5		6.3		101.7
	24		2.5		108.0		99.2
	24	11.5					100.4
13	~~48~~ 45	4.9	20.0	56.8	6.8	5	
			33.0		106.0		
			47.0		5.3		102.7
	25	23.5	58.5	0.5	108.0		103.9
13	~~46~~	16.4					103.3
	25		49.0	56.4	4.1	6	
			59.5		108.0		
	27		2.0		2.8		106.9
							107.5
	27	22.9	16.5		109.7		107.2
13	~~48~~ 47	15.8	30.0	56.2	2.5	7	
			43.0		110.0		
			59.0		4.0		

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1893phae.proj..521w

Oct. 12, 1893.

			59.0		4.0	103.8
	28		10.5		107.8	106.9
						105.4
	28	20.1	25.0	56.2	3.0	8
13	49	12.5	46.10		109.9	
			~~56.5~~		~~2.0~~	

Seeing pretty good. Images a little elongated. Electric wires came out of key after first setting so that a stop had to be made to insert them.

	B. 236			F. 1527.	
3	37	3,1	3	41	1,0
3	38	3,1	3	42	1,0

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1893phae.proj..521W

Saturday Oct: 14, 1893. Hercules

Even in W. dome first of evening, revising comp. stars for S Extension of Photometric Scale.

S Persei W. Obs.

2	8	+ 57°.2
26	8	
22	33	
3	35	
12	00	
+ 8	25	

Index above

~~+91.3~~

356.6 . 165.3 ✓1

191.3

356.0 163.7 ✓1

329.0 ✓1 − 2.3 ✓

Index below

283.2

87.0 163.8 ✓1

281.8

86.8 165.0 ✓1

328.8 ✓1 − 2.3 ✓

283.0

86.2 163.2 ✓1

283.0

86.0 163.0 ✓1

326.2 ✓1 − 2.1 ✓

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1893phae.proj..521W

Oct. 14, 1893.

Index above

12.0
175.7 163.7
12.0
174.7 162.7
326.4 − 2.2

12.0
175.0 163.0
11.3
175.0 163.7
326.7 − 2.2

Index ~~below~~ to left ~~2.2~~

101.3
266.1 164.8
101.0
265.9 164.9
329.7 − 2.4

R Bandeloup. W. obs.

14 40 84°1
23 21
+9 41

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1893phae.proj..521W

Oct. 14, 1893

Index to left

103.7
266.8 163.1 ✓^
106.0
265.8 159.8 ✓^
322.9 ✓^ - 1.9 ✓

Index to right

~~197.9~~
~~352.9~~ ~~155.0~~
~~196.2~~
195.8
356.2 160.4 ✓^
197.3
354.0 156.7 ✓^
317.1 ✓^ - 1.6 ✓

198.1
355.0 156.9 ✓^
196.8
355.8 159.0 ✓^
315.9 ✓^ - 1.6 ✓

Index to left. ~~- 1.~~

286.2
87.6 161.4 ✓^
286.0
86.7 160.7 ✓^
322.1 ✓^ - 1.9 ✓

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1893phae.proj..521W

Oct. 14, 1893

286.5
86.0 159.5 ✓^
284.8
87.0 162.2 ✓^
321.7 ✓^ − 1.9 ✓

~~14.8~~ 4.8
175.0 160.2 ✓^
15.9
175.0 159.1 ✓^
319.3 ✓^ − 1.7 ✓

R Lyncis Th. obs.

6	49	+55°.1
0	3	
6	46	
12	00	
+5	14	

Index ~~above~~ below

198.5
352.0 153.5 ✓^
199.6
252.8 153.2 ✓^
306.7 ✓^ − 1.1 ✓

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1893phae.proj..521w

Oct. 14, 1893.

Index ~~above~~ below

289.0
82.1 153.1 ✓1
291.6
81.1 149.5 ✓1
302.6 ✓1 − 1.0 ✓

290.2
81.7 151.5 ✓1
288.8
82.0 153.2 ✓1
304.7 ✓1 − 1.0 ✓

Index ~~below~~ above

18,7
172.0 153.3 ✓1
20.0
170.2 150.2 ✓1
303.5 ✓1 − 1.0 ✓

22.0
171.1 149.1 ✓1
20.8
171.5 150.7 ✓1
299.8 ✓1 − 0.9 ✓

Index below

108.4
261.5 153.1 ✓1
109.1
261.1 152.0 ✓1
305.1 ✓1 − 1.1 ✓

11² 2ᵐ

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1893phae.proj..521W

Oct. 17, 1893.

Extension of Photometric Scale

		N. obs.
α Bootis		
14.	16	54.6
21	30	
+ 7	14	

Index to right and above.

83.1		
251.7	168.6	✓1
82.8		
250.5	167.7	✓1
	336.3 ✓1	− 2.9 ✓

Index to left and below

171.8		
340.4	168.6	✓1
173.5		
339.8	166.2	✓1
	334.9 ✓1	− 2.8 ✓
172.5		
339.3	166.8	✓2
171.5		
341.2	169.7	✓1
	336.5 ✓2	− 2.9 ✓

Index to right and above

26 ~~5.0~~ 4.8		
69.0	164.8	✓1

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1893phae.proj..521W

Oct 17, 1893.

263.2
70.0 166.8 ✓^
331.0 ✓^ − 2.5 ✓

262.5
71.2 168.7 ✓^
263.7
69.0 165.2 ✓^
334.0 ✓^ − 2.7 ✓

Index to left and below.

353.0
160.0 167.0 ✓^
353.2
160.7 167.5 ✓^
334.5 ✓^ − 2.8 ✓

R Camelopardi W. obs.

14 40 84.°1
22 50
+ 8 10

Index to right.

196.3
354.5 158.2 ✓^
197.0
353.0 156.0 ✓^
314.2 ✓^ − 1.5 ✓

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1893phae.proj..521W

Oct. 17 1893.

Index to left.

286.1
84.3 158.2 ✓^

284.7
85.7 161.0 ✓^
319.2 ✓^ -1.7 ✓

284.7
85.5 160.8 ✓^

285.5
84.1 158.6 ✓^
319.4 ✓^ -1.7 ✓

Index to right

195.5
352.8 157.3 ✓^

195.5
353.9 158.4 ✓^
315.7 ✓^ -1.5 ✓

195.0
354.5 159.5 ✓^

195.9
354.0 158.1 ✓^
317.6 ✓^ -1.6 ✓

Index to left.

286.5
86.2 159.7 ✓^

284.8
85.8 161.0 ✓^
320.7 ✓^ -1.8 ✓

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1893phae.proj..521W

Oct. 17, 1893

DM - Wedge Zone

Series 1K7. (special) +19.°8 Mt. obs.

22 31 +19.°9

24 5

1 24

10	10	4969	3.25		
			3.20		
			3.31	9.76 ✓	4.23 ✓
		4971	3.00		
			3.01		
			3.08	9.09 ✓	3.94 ✓
		5005	3.91		
			4.18		
			4.20	12.28 ✓	5.32 ✓
		5007	3.25		
			3.42		
			3.40	10.07 ✓	4.36 ✓
		5011	2.50		
			2.55		
			2.56	7.61 ✓	3.30 ✓

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1893phae.proj.:5211

Oct. 17, 1893.

5016 2.10
2.25
2.38 6.73 2.91

~~5039~~
10 3 5039 4.51
4.60
4.77 13.88 6.01

Brooks α = 1893. IV.
Letting fall $\delta = \alpha$ at 15h E. T.,

5h 0m
12 23 ± + 13° ±
−7 23
12 0
5 37

New δ Brooks. Hr. obs.

12 21 +12.9
6 20
− 6 1

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1893phae.proj.521w

Oct. 17. 1893.

Comet found.

6 7 6 30

− √ √3

Asp. pole. = 12 + 13.1°

2 3

Pos. Zero 11√.3

Setting √√.0

160.3

6 3A 1√.0

√2 0

39 0.√

39 √9.0

√1 0.3

36√

√√√

√1 √A.0

√√ 3√.1

√6.0

√3 √√

31.9

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1893phae.proj..521W

Oct 17. 1893.

6 K K 2 K.7
K K.0
K K 3.K
K K 22.0

K K K 2.K
K6 22.2

K7 1.2
K 0.0
K 0.0
K7 K 9.0

K K 2 K.3
K 7.K
K9 7.7
K 6.K

K 0 K.K
K 3.0
K 3.K
K1 2.6

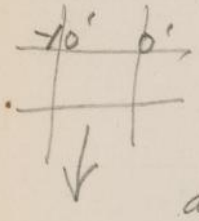
Comet in southern half
Slat 9 northern
Comet rather bright. - Rather diffuse - tail 7' long to north pre. - Coma 1.5 diam. -

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1893phae.proj..521w

Oct. 17: 1893.

Fit slit fol c. * 11m. 6' south
" " " " " 19h. 3' "



a	6	√√	30.0	Dec +1'	9.3 meg,
b	6	√√	40.0	Dec. −4'	9.3 "
c	6	√9	33.√	" −1.3'	

c	7	1	29.√	"	−9' − 9.0 meg,
b		2	36.√	"	−7.√ − 4.4 "

d	7	√	√9.√	Dec. −12.√ − 7.4 meg,	
e		√	16.0	Dec. −13.√ − 4.9 "	
b		6	27.0	Dec. −1.2' − 4.4 meg,	

f		4	√9.0	"	−3' 4.4 meg,
d		10	24.√	"	−2.√ 7.4 "
e		10	√√.0	"	−3.√ 4.9 "

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1893phae.proj..521V

Oct. 17. 1893.

	B. 236.		B. 39 K.	
7	18	49.0	17	20 0.0
	19	49.1		21 0.0

39K is 0.5 fast.

∴ B. 236 is 5m 9.5s slow.

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1893phae.proj..521W

Oct 18, 1893.

In West dome early part of evening.

Extension of Photometric Scale.

	ζ Bootis	W. obs.
14	16	54°.6
22	12	
+7	56	

Index to right and above

262.5

70.9 168.4 ✓1

264.0

69.0 165.0 ✓1

333.4 ✓1 − 2.7 ✓

Index to left and below

172.0

340.6 168.6 ✓1

173.1

340.0 166.9 ✓1

335.5 ✓1 − 2.8 ✓

172.9

339.9 167.0 ✓1

171.7

341.1 169.4 ✓1

336.4 ✓1 − 2.9 ✓

Index to right and above

83.2

251.9 168.7 ✓1

83.1

250.2 167.1 ✓1

335.8 ✓1 − 2.9 ✓

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1893phae.proj.:521W

Oct. 18, 1893.

84.0
249.0 165.0 ν^
83.1
249.4 166.3 ν^
331.3 ν^ − 2.4 ν

Index to left and below

353.1
160.0 166.9 ν^
353.2
160.9 167.7 ν^
334.6 ν^ − 2.8 ν

Circumpolar Variables

T Ursae Majoris W. obs.

12	31	60.3
23	10	
+10	39	

m 1.5 J, J 3 m, in large tel.
too faint for finder
Est. 10.2

9 0

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1893phae.proj..521w

Oct. 18, 1893

R Draconis W obs.

16	26	+67°4
23	26	
7	00	

9 36+ g 2 R, R 2 ≤, in large tel. too faint for finder. Est. 12.2

D.H. Hedge Jones

Series 14A. (special), + 19° W. obs.

20	11	+20°0
23	45	
+3	34	

9 "K4	4305	3.59		
		3.49		
		3.49	10.57 ✓	K.5A ✓
	4318	2.75		
		2.97		
		3.00	8.72 ✓	3.7A ✓
	4327	3.88		
		4.10		
		4.11	12.09 ✓	5.23 ✓

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1893phae.proj..521W

Oct. 18, 1893

4496	2.82		
	2.79		
	2.90	8.51 ✓	3.6A ✓
4498	2.62		
	2.80		
	2.75	8.17 ✓	3.[illegible] ✓
4501	5.60		
	5.71		
	5.61	16.92 ✓	7.33 ✓
4503	2.80		Prec. and str. of pair
	3.10		
	2.88	8.78 ✓	3.40 ✓
4509	3.30		
	3.49		
	3.46	10.19 ✓	[illegible] ✓
4515	3.21		
	3.45		
	3.44	10.10 ✓	[illegible] ✓
4618	4.10		
	4.20		
	4.25	12.55 ✓	[illegible] ✓

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1893phae.proj..521W

Oct. 18, 1893

4628	2.90		
	2.90		
	2.95	8.75 v	3.79 v
4630	2.70		
	2.88		
	2.80	8.38 v	3.63 v
4631	2.87		
	2.86		
	2.71	8.44 v	3.66 v
4636	3.19		
	3.31		
	3.18	9.68 v	K.19

11 3

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1993phae.proj..521W

Oct. 20, 1893

o Beti W. obs.

26	14	-3.4
21	50	
4	24	
12	00	
+7	36	

Too cloudy

X Byguì W obs.

19	46	+32.7
21	53	
+2	7	

7 ~~40~~

19	41	+33.4
22	13	
+2	32	

8 138

Index below

10.0

179.0 169.0 V1

10.4

179.0 168.6 V1

339.6 V1 ~~3.0 V~~

22 - 4 - 5.04

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1893phae.proj..521w

Oct. 20, 1893

Index above.

99.9
269.8 169.9
100.3
270.0 169.7
339.6
20.4 - 5.20

100.5
269.7 169.2
100.8
270.0 169.2
338.4
21.6 - 5.12

Index below

13h 23.8 Gr M.T.

190.1
359.8 169.7
190.9
359.3 168.4
338.1
21.9 - 5.09

190.0
359.1 169.1
190.8
359.1 168.3
337.4
22.6 - 5.02

Index above

280.0
89.9 169.9
280.0
89.9 169.9
339.8
20.2 - 5.27 of it

bomp. made with a 11 magn. star, [illegible] Cygni by 16 sec. and 3' south
clouds growing thicker

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1893phae.proj..521W

Oct. 20, 1893

This star is a little nearer the variable than Dm. +32° 3591 (9.5) and is very nearly as bright

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1893phae.proj,.521w

Oct. 21, 1893.

χ Cygni. W. obs.

		19	46
7	χ6.0 ~~32~~	21	49
		+2	3

+32°.7

Index below

10.1

179.0 168.9 ✓^

9.9

179.5 169.6 ✓^

338.5 ✓^ ~~-3.1~~ ✓ -5.13 ×

21.3 ×

Index above

99.4

12 χ6.0 ½ M.T. 271.0 171.6 ✓^

106.0

271.0 171.0 ✓^

342.6 ✓^ -3.6 ✓ -5.59 +

17.4

99.7

270.5 170.8 ✓^

99.7

271.0 171.9 ✓^

342.1 ✓^ -3.5 ✓

17.9 × -5.53 +

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1893phae.proj..521W

Oct 21, 1893

Index below

188.8

1.0 172.2 v^

188.2

0.2 172.0 v^

344.2 v^ ~~-3.8~~ v - 5.40 x

15.8

189.0

0.2 171.2 v^

189.0

1.1 172.1 v^

343.3 v^ ~~-3.7~~ v - 5.68 x

16.7

Index above

280.0

90.0 170.0 v^

279.8

90.3 170.5 v^

340.5 v^ ~~-3.3~~ v - 5.35 x

19.5

8 28 f 3.5 v, v 2.5 g in field-glass Yr. obs.

f 3 v, v 3 g in finder " "

8 32 f 3 v, v 3 g in field-glass Jarvis obs.

B. 398 is 0.6 fast.

B 394 v9.4 v B 236

~~8~~ ~~47~~ ~~48~~ ~~0.0~~ 23 6 46.0

8 49 00.0 23 7 46.1

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1893phae.proj,.521w

Oct. 21, 1893.

Sis. Sup. I. Phot. R. P. obs. Trace.
Comp. with sat pro. I = Sat. III.
Limit of Vis.

23	10	23.0		79.1		378.2	
		23.5		109.6		94.6	
8	51	50.3	15 0.0	43.A	30.5		
		41.5	37.5		21.7		
		52.0		107.7	26.2		
	11	37.5		39.0			
		59.0	249.5	151.6	112.6	377.4	
8	53	15.2	12 2.4		109.2	94.4	
	12	12.5		38.5	110.9		
		20.5		144.0	—		
		25.5		44.0			
8	53	54.4	166.5	151.4	107.4	384.7	
		37.5	12 41.6		109.0	96.1	
		46.5		40.0	108.2		
		54.0		149.0	—		
	13	5.5		39.1			
8	54	3 58	92.0	146.7	107.6	374.6	
		14.5	13 23.0		107.8	93.6	
		31.0		40.5	107.7		
		41.0		143	—		
		45.5		39.6			
			240.0		114.1	369.3	
8	55	12.3	56.0 14 0.0	142.9	114.4	92.3	
	14	6.0		39.6	114.2		
		11.5		150.0	—		

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1893phae..proj..521W

Oct. 21. 1893.

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1893phae.proj..521w

Oct. 21. 1893.

23	1	[illegible]	59	52.8	[illegible]
		[illegible]		59.3	[illegible]
		[illegible]	9	0 4.3	[illegible]
		[illegible]		9.3	[illegible]
	19	[illegible]		14.8	[illegible]
		[illegible]		22.8	[illegible]
		[illegible]		30.3	[illegible]
No tip given		27.0 ±		38.8	600
		[illegible]		48.8	[illegible]
		[illegible]	0.5	~~0.5~~ 55.8	[illegible]
		[illegible]	1	0.8	[illegible]
		[illegible]		5.8	[illegible]
	20	2.9		13.3	[illegible]
		[illegible]		18.8	[illegible]
		[illegible]		29.8	[illegible]
		330		44.3	[illegible]
		[illegible]	1	54.3	[illegible] uncertain,

		B 394		B 236		
9	7	00.0	23	25	4 49.0
9	8	00.0	23	26	49.2

Meas. of ○ beta with adjacent 9 magn. star.

Phot. R. A.	obs.	
2	18	−4.5
0	0	
2	18	
12	00	
+9	42	

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1893phae.proj..521W

Oct. 21, 1893

9 45

Index to right and above

311.0
62.8 111.8
310.8
61.0 110.2
222.0
138.9 −0.81

Index to left and below

36.0
153.2 117.2
38.1
151.0 112.9
230.1
129.9 −0.98
38.4
152.1 113.7
37.5
154.0 116.5
230.2
129.8 −0.98

Index to right and above

129.9
241.5 111.6
132.5
239.0 106.5
218.1
141.9 −0.74
130.1
237.8 107.7
129.0
240.0 111.0
218.7
141.3 −0.75

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1893phae.proj..521w

Oct 21, 1893

Index to left and below

215.0
334.0 119.0 ✓^
218.0
10 5 332.0 114.0 ✓^
233.0 ✓^ ~~0~~ ✓
127.0 -1.04

Dm. Wedge Zone

Series 149. (special) +19° Wm. obs.

20	11	+20.0
24	30	
+ 4	19	

10 D 4305
3.50
3.61
3.65 10.76 ✓ 4.66 ✓

4318
2.80
2.68
2.65 8.13 ✓ 3.52 ✓

4327
3.95
3.85
3.88 11.68 ✓ 5.06 ✓

4496
2.80
2.71
2.70 8.21 ✓ 3.55 ✓

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1893phae.proj..521W

Oct 21, 1893

4498	2.81		
	2.75		
	2.67	8.23	3.76
4501	5.50		
	5.45		
	5.48	16.43	7.11
4503	3.00		
	3.10		
	3.16	9.26	2.01
4509	3.25		
	3.28		
	3.30	9.83	2.26
4515	3.42		
	3.48		
	3.55	10.45	2.72
4618	4.00		
	3.95		
	4.01	11.96	3.14
4628	2.75		
	2.77		
	2.78	8.30	3.09

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1893phae.proj,.521w

Oct 21, 1893

	4630	2.82		
		2.98		
		2.97	8.77 v	3.40 v
	4631	2.71		
		2.91		
		3.02	8.64 v	3.74 v
10	K2	4636	3.40	
			3.27	
			3.48	10.15 v 4.39 v

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Oct. 24. 1893.

x-byqjw W. obs.

19 46 +32.7
21 59
+2 13

Abandoned.

Meas. of bright double stars. Phot. 12.
2379 - 5 Aquilae
18 40 -6.1

22 7
+3 27

Index to left and above

210.0
336.4 ↑ 126.4 ↑
210.0
338.0 128.0 ↑ 1.52
254.4 ↑ ~~+0.5~~
~~105.6~~

Index to ~~right~~ and below

298.9
70.0 131.1 ↑
301.0
68.3 127.3 ↑
258.4 ↑ ~~0.4~~ ↑ 1.62
101.6
301.0
68.0 127.0 ↑
103.2
299.0
68.8 129.8 ↑ 1.58
256.8 ↑ ~~0.4~~ ↑

1893phae.proj..521
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1893phae.proj..521V

Ach. 24, 1893

Index to left and above

31.3
157.7 1264 ↑
29.3
160.0 1307 ↑
2571 ↑ ~~044~~ ↑
30.3 1029 1.59
158.0 1277 ↑
31.0
157.5 1265 ↑ 1.52
1542 ~~015~~ ↑
~~1058~~

Index to right and below

121.1
249.1 1280 ↑
120.2
248.0 1278 ↑ 1.55
2558 ~~004~~ ↑
1042

β Lyrae 39' N. obs.
18 45 +35° 2
22 46
4 1

Index to right.

107.8
261.9 1541 ↑
107.2
262.5 1553 ↑
3094 -12 ↑

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1893phae.proj..521W

Oct. 24, 1893

Index to left

196.4
353.5 157.1 ^

196.0
353.0 157.0 ^

314.1 ^ −1.5 ^

195.8
353.2 157.4 ^

195.2
352.5 157.3 ^

314.7 ^ −1.5 ^

Index to right

285.8
82.0 156.2 ^

285.8
82.3 156.5 ^

312.7 −1.4 ^

285.9
83.1 157.2 ^

285.0
82.0 157.0 ^

314.2 −1.5 ^

Index to left

16.7
173.7 157.0 ^

16.3
172.5 156.2 ^

313.2 −1.4 ^

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1893phae.proj..521w

Oct. 24, 1893

χ begun N. obs.

This is the variable.

δ 56 Ρ 19 46 +32°7

~~ξ Ursæ~~ 23 11

+3 25

Index below

189.6

2.0 173.0^

188.9

1.2 172.3^

345.3^ ~~4.0~~

Index above 14.7 -5.96

279.0

91.6 172.6^

13 5-6.0 Gr. M. Time.

279.1

91.8 172.7^

345.3^ ~~4.0~~

279.0 14.7 -5.96

91.4 172.4^

279.1

91.2 172.1^

~~344.5~~ ~~3.8~~

Index below 10.5 -5.85

189.1

1.3 172.2^

189.1

1.3 172.2^

344.4^ ~~3.8~~

15.6 -5.83

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1893phae.proj..521W

Oct. 24, 1893

188.9
1.0 172.1^

189.1
1.4 172.3^

344.4^ ~~3.8~~ 5.83
15.6

Index above

279.0
91.2 172.2^

279.7
91.2 171.5^

343.7^ ~~3.7~~ 5.94
16.3

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1893phae.proj..521w

Oct. 25, 1893.

Meas. of bright double stars, phot. R.

2342 55 Tauri W. obs.

P. A. 12° Dist. 2″ resp. (V.A., A.V.)

18 29 +4.8

21 57

+3 30

Index to left and below

~~19.9~~

~~166.0~~ .1

18.9

165.0 146.1

17.2 276

168.5 151.3

297.4 ~~10.8~~

62.6

Index to ~~right~~ and above

~~104.9~~

~~260.0~~ 155.1

114.0

254.0 140.0

106.2

260.1 153.9 2.64

293.9 ~~.6~~

66.4

106.3

261.2 154.9

110.4

253.7 143.3 279

298.2 ~~.6~~

61.8

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1893phae.proj..521W

Oct. 25, 1893.

110.0
257.5 147.5
108.7
259.2 150.3
297.8 — 27A
62.2

Index to left and below

~~200.3~~
196.2
349.3 153.1
199.8
346.0 146.2
299.3 — 28A
60.7
199.8
346.9 147.1
197.9
348.6 150.7
297.8 — 27B
62.2

2417 θ Serpentis W. obs.
Pos. Angl. 100°, Dist. 20″. Magn. 4.4, 4.6

18	50	+4.0
22	53	
+4	3	

Index to right

A 24

222.5
324.4 101.6 160.8 −0.37
224.2
321.8 97.6
199.2 +6

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1893phae.proj..521w

Oct. 25, 1893

Index to left

313.0
50.8 97.8
310.7
53.5 102.8
200.6 +6
(5)9.4 - 0.39
313.0
53.8 100.8
312.9
52.3 99.4
200.2 +6
(5)8.8 - 0.32

Index to right

45.7
141.8 96.1
40.3
149.7 109.4
205.5 +5
(5)4.9 - 0.46
39.0
146.1 107.1
45.0
141.4 96.4
203.5 +6
(5)6.5 0.45

Index to left

136.8
232.8 96.0
129.1
236.1 107.0
203.0 +6
(5)7.0 - 0.44

∂ 36
∂ 30

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1893phae..proj..521W

Oct 25, 1893.

χ Cygni W. obs.

9 01.0 19 46 +32.7

~~8 47~~ 23 20

3 34

Index below

98.5

270.1 171.6 ✓^

99.2

269.0 169.8 ✓^

341.4 ✓^ ~~3.4~~ ✓ − 5.45

18.6

Index above

188.9

359.3 170.4 ✓^

188.0

00.0 172.8 ✓^

342.4 ✓^ ~~3.6~~ ✓ − 5.57

17.6

14 11.0 Gr. M. Time.

188.4

359.9 171.5 ✓^

188.0

0.0 172.0 ✓^

343.5 ✓^ ~~3.7~~ ✓ − 5.70

16.5

Index below

98.5

270.0 171.5 ✓^

98.2

269.7 171.5 ✓^

343.0 ✓^ ~~3.6~~ ✓ − 5.64

17.0

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1893phae.proj..521w

Oct. 25, 1893

98.1
270.1 172.0 ✓^
98.5
269.8 171.3 ✓^
343.3 ✓^ ~~.37~~ ✓ − 5.68
Index above ~~16.7~~

188.2
359.8 171.6 ✓^
188.0
359.8 171.8 ✓^
343.4 ✓^ ~~−.37~~ ✓ − 5.70
16.6
clouds

χ Cygni (again) H. obs.

Index above
8.0
180.1 172.1 ✓^
8.0
180.0 172.0 ✓^
344.1 ✓^ ~~−3.8~~ ✓ − 5.79
Index below ~~15.9~~

98.7
269.3 170.6 ✓^
98.0
270.0 172.0 ✓^
342.6 ✓^ ~~−.36~~ ✓ − 5.59
17.4

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1893phae.proj..521W

Oct. 25. 1892

98.0
269.9 171.9 ✓^
98.8
269.4 170.6 ✓^
342.5 ✓^ ~~3.6~~ ✓ − 5.58
175
Index above

188.4
359.9 171.5 ✓^
188.0
0.1 172.1 ✓^
343.6 ✓^ ~~3.7~~ ✓ − 5.72
16.4
14 21.0 Gr. M. Time.
187.7
0.0 172.3 ✓^
188.0
0.0 172.0 ✓^
344.3 ✓^ ~~3.8~~ ✓ − 5.82
15.7
Index below

278.5
89.7 171.2 ✓^
278.5
89.8 171.3 ✓^
342.5 ✓^ ~~3.6~~ ✓ − 5.58
17.5

10 37 ~~2~~ 4 X, x 1 ~~f~~ in Op. glass Yr. ob.
α 2.5 X, " "
& α is ϕ by gui

1893phae.proj..521w

Oct. 25, 1893

Σ 11# 1 Pegasi 11 obs.

21 16 + 19°.2
25 16
+4 00

Index to right and below

99.0
267.3 168.3
100.1
266.5 166.4
334.7 ÷2.8 4.7f
25.3

Index to left and above

190.8
355.9 165.1
189.9
355.8 165.9
331.0 -2.5 4.4f
29.0

190.0
356.7 166.7
189.8
356.2 166.4
333.1 -2.6 4.6K
26.9

Index to right and below

280.0
85.9 165.9
279.9
86.0 166.1
332.0 -2.6 4.5S
28.0

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1893phae.proj..521W

Oct. 25, 1893

279.7
86.0 166.3 ✓1

278.9 4.74
86.9 168.0 ✓1

334.3 ✓1 −2.7 ✓1

25.7

Index to left and above.

9.8
175.8 166.0 ✓1

9.5 4.61
176.2 166.7 ✓1

332.7 ✓1 −2.6 ✓1

27.3

4.78	4.44
4.55	4.64
4.74	4.61
.207	.173
4.69	4.58

4.64

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1893phae.proj..521W

Oct 28, 1893

χ Cygni W. obs.

9	330	19	46	+32°.7
~~9~~	~~19~~	23	64	
		4	18	

Index below

277.8
90.5 172.7^

278.1
90.2 172.1^

344.8^ ~~3.9~~ ✓ − 5.89
Index above 15.2

8.8
179.9 171.1^
8.0
180.0 172.0^

16 43.0 Gr M.T.

343.1^ ~~2.7~~ ✓ − 5.66
16.9
8.3
180.0 171.7^
8.3
180.0 171.7^

343.4^ ~~3.7~~ ✓ − 5.70
Index below 16.6 ~~3.7~~
clouds
98.0
270.0 172.0^ 15.7 = − 0.82
97.9
270.2 172.3^
344.2^ ~~3.6~~ ✓

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1893phae.proj..521W

Oct. 28, 1893

97.8		
270.3	172.5 ^	
98.0		
270.0	172.0 ^	
	344.5 ^	~~3.8~~ v − 5.45
	10.5 <	

Index above

188.5		
389.9	181.4 ^	
188.0		
0.0	172.0 ^	
	343.4 ^	~~3.7~~ v − 5.70
	16.6 <	

Clouds came up about the middle of the preliminary series, so that latter part of series was taken through more or less clouds, but images were pretty well seen

Balloon 103

10	27	0.0	1	7	45.0				
	23	0.0		8	45.1				
71327	36.6 slow			B. 236.					
1	12	1.0	1	12	8.5	10	26	23.3	
	13	1.0	1	13	8.5				

10	47. 21	
	Δ 12	
10	47. 33	
10	27	0
	33	33.
1	7	45.
1	41	12.

Ap. time ecl. by B. 236.

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1893phae.proj,.521W

Oct. 28, 1893

Dis. of Jupiter I, Phot. R, Th. obs. Jan. 1893 comp. with first sat. folh. = Sat. II.

1	29	24			225.2	1103.2
		40		201	327.7	275.8
		58	10	44 24	02.1 50.2	226.3 102.5 177.7 100.1
	30	19			324.0	
		31			224.9	1101.7
		42		223	323.4	275.4
	31	7	10	45 30	7.7 55.8	229.0 98.5 95.4 97.0
		23			324.4	
	~~32~~	42			~~2~~25.2	1100.4
		55		241	323.0	275.1
	32	5	10	46 32	12.1 0.2	228.0 96.2 ~~96.8~~ 97.0
		19			324.2	
		23			228.8	1098.9
		40		180	323.0	274.7
		53	10	46 32	56.9 45.0	225.1 94.2 96.9 ~~95.6~~
	33	4			322.0	
		26			227.8	1098.7
		40		210	321.0	274.7
		58	10	48 33	3.9 52.5	225.1 93.2 ~~89.7~~ 96.4
	34	26			324.8	
		37		219	228.2	1102.4
		52		34	325.4	275.6
	35	0	10	49	228.0	97.2 92.8 95.0
		10			324.8	
		25		160	225.2	1099.8
		36	10	49 35	51.8 40.0	322.4 275.0

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1893phae.proj.521w

Oct. 28, 1892

	45			227.17	97.2 / 98.0 / 97.6	
	54			325.1	clouds	
36	7			227.8		
	16	36	99 / 24.8 / 0.5	232.2	1100.9 / 275.2	
	28	50	35.7 / ~~29.8~~	229.9	8 / 95.4 / 90.1 / ~~92.8~~	
	48			320.0		
37	14			228.8		
	26	37	144 / 36.0	317.9	1090.1 / 272.5	
	46	51	46.9 / ~~35.0~~	224.7	9 / 89.1 / 94.0 / 91.6	
	58			318.7		
38	18			227.0	1095.8 / 274.0	
	25	38	119 / 29.8	318.3		
	34	52	40.7	226.8	10 / 91.3 / 96.9 / 94.1	
	42			323.7		
	53	53	3.4 0.5	226.1		
39	2		12.4	319.2		
	12		22.4	226.5		
	23		33.4	323.2		
	36		46.4	226.1		
	51	54	1.4	321.0		
	58		8.4	231.4		
40	8		19.4	317.7		
	17		27.4	235.0		
	26		36.4	318.3		
	37		47.4	237.8		
	46		56.4	310.0		
	55	55	5.4	235.2		

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1893phae.proj..521w

Oct. 24. 1893.

41	2	60	55	12.4	305.1
	11			21.4	242.1
	19			29.4	306.1
	28			38.4	248.4
	41			51.4	296.0
	53		56	2.9	258.0
42	5			14.9	289.5
	~~36~~				not seen later

Limits of Visibility

43	16		161	262.0	1099.9
	28	43	40.2	287.0	275.0
	51	60	57 50.1	262.9	25.0
44	6			288.0	25.1
					25.0

Most of the observations, especially of Moore in last half of eclipse made through passing clouds. Images inordinately elongated.

Balloon 103 B 256

11	12	0.0	1	57	52.5
	13	0.0		58	52.6

Fr. 1327. B 256

12	1	1.0	2	1	8.1
	2	1.0		2	8.1

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1893phae.proj.521

Posted to here.

Oct 31, 1893

~~ζ Draconis~~
S Bootis W. obs.

14	17	5415
22	55	
+8	38	

~~ζ Draconis~~
~~S Bootis~~

ζ Draconis. W obs.

16	26	+67°14
22	52	
+6	27	

Faint * used in phot. comp. with star * f to extend phot. scale to * g hence the two stars compared is f and g

f = K, K = 5 g in large tel.
too faint for finder
Est. 11.8

8 15

1893phae.proj..521w

Oct. 31, 1893

S Persei W. obs.

26	8	+57.2
23	18	
2	50	
12	00	
+9	10	

Abandoned, no chart.

R Aurigae W. obs.

23	3	+ 53.0
23	35	
5.	28	
12	00	
+6	32	

fair star comp. with g with Phot. R.
is star g.

∴ g 1 R, R 3 R in large tel.
too faint for finder
E 12.9

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1893phae.proj.521w

Oct. 31, 1893

R Lyncis W. obs.

6 49 +55.0
23 55
6 54
12 00
+5 06

0 4 faint, faint star 1 p

f 1 R, R 2.5 f
9 38 Est 12.7

χ Cygni W. obs.

19 46 +32°.7
24 52
5

(Region a little low.)

e 4 χ χ 1.5 f in field glass
a 2.5 χ. in " "
10 20 e 3.5 χ, χ 1.5 f naked eye } W. obs.
a 2 χ " "

10 22 e 2 χ χ 3 f with naked eye } Jewson.
~~a 2 χ~~
" " "
χ 2 a

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1893phae.proj..521w

Oct. 31, 1893

χ Cygni — Wobs.

19 46 32°.7

25 21

37.9 5 35

10 ~~25~~

~~27~~ Index below

277.8

90.7 172.9^

278.4

90.7 172.3^

345.2^ ~~3.9~~ − 5.90

16.8

Index above

7.9

180.0 172.1^

15 47.9 Gr. Mt.

7.9

180.3 172.4^

344.5^ ~~3.8~~ − 5.85

19.5

7.7

180.1 172.4^

8.3

179.9 171.6^

344.0^ ~~3.8~~ − 5.78

16.0

Index below

98.3

270.0 171.7^

97.8

271.0 173.2^

344.9^ ~~3.9~~ − 5.90

15.1

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1893phae.proj.521w

Oct. 31, 1893

97.8	
270.9	173.1 ^
98.4	
270.2	171.8 ^
	344.9 ^ − ~~3.9~~ ✓ − 5.90 ×
Index above	1.51 ×
188.2	
359.9	171.7 ^
188.0	
0.1	172.1 ^
	343.8 ^ − ~~3.7~~ ✓ − 5.70 ×
	16.2 +

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1893phae.proj..521W

Posted to here.

Nov. 1. 1893.

χ Cygni.

7 25 e 3.v χ . χ 1.v f. } Yr. obs.
α 2 χ

e 2 χ χ 3 f } Jauson obs.
χ 1 α

8 5 Fine aurora with double arch, the lower one being 6° this way from bright to pole star and the upper one about half way; streamers ascending vertically up to the pole star and beyond, and flocculent patches of light scattered through out northern part of sky

D.M. +62° 596 Yr. obs.
3 33 +62°.2
2 3 8 Compared with D.M.
4 25 +62° 59.6 Color 7.
1 2 00
7 35

8 25 Index to left

~~302.4~~
299.3
69.9 130.6 v^
303.3
71.4 128.1 v^
258.7 v^ ~~+0.4~~ v
~~241.8~~
101.3 -1.62

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1893phae.proj.521W

Nov 1, 1893

Index to right.

23.1
164.6 141.5 ✓^
26.4
157.9 131.5 ✓^
273.0 ✓^ ~~0.0~~ ✓
~~27.0~~ - 2.00
28.0 57.0
161.0 133.0 ✓^
26.0
160.9 134.9 ✓^
267.9 ✓^ + ~~0.1~~ ✓
Index to left ~~92.1~~ ~~0.1~~ - 1.56
117.3
248.7 131.4 ✓^
123.5
246.0 122.5 ✓^
253.9 ✓^ + ~~0.5~~ ✓ - 1.51
120.9 106.1
246.9 126.0 ✓^
117.7
250.2 132.5 ✓^
258.5 ✓^ + ~~0.4~~ ✓ - 1.62
Index to right 101.5
204.8
341.8 137.0 ✓^
208.0
336.9 128.9 ✓^
265.9 ✓^ ~~+0.7~~ ✓ - 1.51
94.1

8 50
8 37.5

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1893phae.proj..521W

Nov. 1, 1893

DM +62° 596 W. obs.

9 0 d 4 (v96), (v96) 2 e in 6 inch.
Sky hazy.

9 20 d 4 v (v96), (v96) 3 e " " " with red glass over eye piece.
Sky somewhat clear.

Extension of Phot. Scale W. obs.

S bygone | comp. star e with faint stars.
20 8 | +57°.1
24 36 | Faint x fol. x 2 14.7 sec.
+4 28 | and is 2'.8 north of it

Index above
288.0
81.0 153.0^
289.1
78.0 148.9^
301.9^ -0.9 v

Index below
19.5
169.5 150.0^
19.0
168.2 149.2^
299.2^ -0.8 v

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1893phae.proj..521w

Nov. 1, 1893

17.9		
167.8	149.9 ^	
19.7		
168.0	148.3 ^	
	298.2 ^	-0.8 v

Index above

108.9		
260.1	151.2 ^	
109.9		
259.4	149.5 ^	~~-0.9~~
	300.7 ^	-0.9 v

108.1		
258.9	150.8 ^	
109.8		
259.0	149.2 ^	
	300.0 ^	-0.9 v

Index below

200.2		
349.7	149.5 ^	
198.6		
349.3	150.7 ^	
	300.2 ^	-0.9 v

Considerable auroral light in north, sky becoming considerably cloudy.

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1893phae.proj..521W

Nov. 2, 1892

ϱ beta N. obs.

7 59?

26	14	$-3^{\circ}4$
23	3	
3	11	
12	00	
+8	49	

Index to left

305.5
60.8 115.3 ✓1
314.3
51.3 97.0 ✓1
212.3 ✓1 +7 ✓
147.7 −0.62

Index to right

48.9
140.0 91.1 ✓1
39.8
146.2 106.4 ✓1
197.5 ✓1 +7 ✓
162.5 −0.33

41.9
145.8 103.9 ✓1
47.1
140.0 92.9 ✓1
196.8 ✓1 +7 ✓
163.2 −0.32

Index to left

136.8
230.3 93.5 ✓1
127.9
241.0 113.1 ✓1
206.6 ✓1 +7 ✓

153.4 − 0.5

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1893phae.proj..521W

Nov. 2, 1893

127.0
238.3 111.3
135.0
231.0 96.0
207.3 +5
Index to right 152.7 −0.52

229.8
318.9 89.1
220.8
326.9 106.1
195.2 +7
164.8 −0.29

χ bygni

e 3.5 χ χ 1 f W. obs.
α 1.5 χ W. obs.

e 2 χ χ 3 f Janson obs.
χ 2 α " "

χ bygni W obs.

19 46 +32.7°
24 23
+4 3.7

9 19

blonds

1893phae.proj..521w

Nov. 2, 1893

Index above

187.2
0.5 173.3^

188.0
0.1 172.1^

345.4^ ~~4.0~~ ✓
14.6 - 5.98 *

Index below

277.3
90.4 173.1^

277.1
90.9 173.8^

346.9^ ~~-4.2~~ ✓
13.1 - 6.21 *

276.9
91.0 174.1^

277.2
90.9 173.7^

347.8^ ~~-4.4~~ ✓
12.2 - 6.37 *

Index above

7.3
180.3 173.0^

7.5
180.2 172.7^

345.7^ ~~-4.0~~ ✓
14.3 - 6.02 *

7.4
180.2 172.8^

7.8
180.2 172.4^

345.2^ ~~-3.7~~ ✓
14.8 - 5.90 *

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1893phae.proj..521W

Nov. 12, 1893

Index below

98.0
270.2 172.2^
97.4
271.0 173.6^

345.8^ ~~-4.0~~ v - 6.04 v
14.2 x

Same again.

Index below

97.5
270.9 173.4^
97.7
270.9 173.2^

346.6^ ~~-4.2~~ v - 6.16 ^
13.4 x

Index above

187.7
0.2 172.5^
187.3
0.1 172.8^

345.3^ ~~-4.0~~ v - 5.96 x
14.7 x

187.7
0.3 172.6^
187.7
0.1 172.4^

345.0^ ~~-3.9~~ v - 5.92 ^
15.0 x

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1893phae.proj..521w

Nov. 2, 1893

Index / below

277.8

90.7 172.9^

277.7

clouds

10 30 Stopped by clouds

Much troubled by clouds throughout evening.

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1893phae.proj..521W

Nov. 3, 1893

bloudy first of the evening

X by gun. W. obs.

e 3 X, X 2 f In field glass W. obs.

X 2 a " " " " "

	O	bctw	W. obs.
	26	14	$-3.^{\circ}4$
42.6			
8 ~~29~~	23	37	
	2	37	
	12	00	
	9	23.	

Index to right

47.2

142.5 95.3 ✓^

39.8

147.4 107.6 ✓^

202.9 ✓^ 1.6 ✓

13 53 6 M.M.T. Index to left 157.1 −0.4 ✗

137.4

239.7 102.3 ✓^

132.3

232.8 100.5 ✓^

202.8 ✓^ 1.6 ✓

157.2 −0.43

133.4

231.7 98.3 ✓^

129.2

239.7 116.5 ✓^

208.8 ✓^ 1.6 ✓

151.2 0.55

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1893phae.proj .521w

Nov. 3, 1893

Index to night

216.7
328.8 112.1 ✓
226.0 99.0 ✓
325.0 211.1 ✓ ~~.4~~ ✓
148.9 -0.60

224.0
324.2 100.2 ✓
219.2
327.1 107.9 ✓
208.1 ✓ ~~.5~~ ✓
Index to left 51.9 -0.54

307.1
60.5 11.34 ✓
311.1
53.4 102.3
215.7 ✓ ~~.3~~ ✓
144.2 -0.69

9 0 V. 4.5 (9.2 magn.) in large tel.
c V 4 (9.2 magn.) in finder

χ Cygni Wolbr.

9 ~~8~~ 18.6 19 46 +32° 7
24 13
+4 27

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1893phae.proj..521W

Nov. 3, 1893

Index below

277.6
91.0 173.4
277.8
90.7 172.9
346.3 −4.1

Index above

8.0
179.8 171.8
8.0
180.2 172.2
344.0 −3.8

1E 2846 Gr. M. Time 7.8
180.0 172.2
8.2
180.0 171.8
344.0 −3.8

Index below

97.6
270.2 172.6
97.2
271.2 174.0
346.6 −4.2

97.3
271.1 173.8
97.7
270.5 172.8
346.6 −4.2

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1893phae.proj..521w

Nov. 3, 1893

Index above

188.4
0.0 171.6 ^
188.0
359.9 171.9 ^
343.5 ^ − 3.7 ^

S bygni W. obs.

Comp. with 49 map. closely adjacent.

20 8 +57.1°
24 49
+4 41

Index above

288.2
80.9 152.7 ^
289.0
781.1 149.1 ^
301.2 ^ − 0.9 ^

9 41

Index below

18.0
167.7 149.7 ^
19.9
168.2 148.3 ^
298.0 ^ − 0.2 ^

19.7 149.6 ^
169.3
19.2 148.8 ^
168.0 298.4 ^ − 0.2

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1893phae.proj..521W

Nov. 9, 1893

Index above

108.2
260.0 15 1.8^
109.5 14 9.6^
259.1 30 1.4^ −0.9 v

108.7 15 1.3^
260.0
109.7 15 0.1^
259.8 30 1.4^ −0.9 v

Index below

200.0 14 9.5^
349.5
198.5 15 0.7^
349.2 30 0.2^ −0.9 v

	J 1327			B 236	
~~9'~~	7	1.0	~~8'~~	6	17.6
	8	1.0	0	7	

10 24 49
2 12

10 33 1. Time rd.

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1893phae.proj..521w

Nov. 3. 1893.

Dis. Jup. II. Stat. R. Ob. Gr. rec.
Comp. with northern ^pre of two sats of Jupiter. =
= Sat. III.

Limit of Vis.

/ ~~30 32.0~~ ~~100.0~~ vg
~~31 16.0~~ ~~102.0~~ "

	31	37.0						
10	23	17.9	37.0	31	204.5	46.6		375.1
			36.0		51.1	103.0		93.8
			32.0			43.7	18.8	
						103.0	20.1	
							19.4	

	32	29.0			184.5	46.0		371.4
10	24	12.9	30.0	32	46.1	132.0		92.8
			30.0			33.3	75.2	
	33	30				129.3	76.9	
		10.0					75.6	
			23.0	33	109.0	48.0		382.1
10	24	54.0	30.0		27.2	130.7		95.5
			31.0			37.0	72.7	
						132.6	77.8	
							75.2	
	34	10.0			308.5	132.0		370.7
10	25	43.9	26.0	34	17.1	129.4		92.7
			33.0			33.1	72.2	
						131.0	77.9	
							75.0	

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Nov. 3. 1893

1 34 445 268.5 577 371.4
92.8

10 26 33.4 530 35 7.1 0.5 127.6 69.9
35 180 57.2 71.7
33.0 124.9 70.8

41.5 224.5 588 378.5
10 27 22.4 49.0 35 56.1 131.6 94.6
36 25 56.0 72.8
115 132.2 76.1
74.4

215 137.5 587 371.7
10 28 0.7 300 36 34.4 127.6 92.9
39.0 59.0 72.9
47.0 120.4 71.4
72.2

55.0 58.2 378.3
37 3.0 132.3 94.6
10 28 33.5 12.0 37 29.0 7.2 56.2 74.1
19.0 131.6 75.4
74.8

26.0 150.0 56.4 378.7
10 29 3.8 335 37 37.5 1306 94.7
42.0 59.7 74.2
485 132.0 72.3
73.2

55.0 56.4 364.8
38 25 38 23.0 5.8 0.5 126.4 91.2
10 29 31.6 9.5 56.2 70.4
16.0 125.4 69.2
69.8

28.0 61.6 382.8
10 30 3.0 34.0 38 149.0 37.2 130.6 95.7
42.0 63.8 69.2
42.0 126.6 62.8
66.0

1893phae.proj..521W

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1893phae.proj..521w

Nov. 3. 1893.

1 BF	42.0			63	10
	49.0			126.6	→
	56.0	10	30	21.8	67.4
39	2.4			28.3	124.2
	9.4			35.3	63.0
	17.0			42.8	122.7
	24.4			51.3	66.4
	32.0			57.8	121.2
	39.0		31	4.8	63.1
	46.4			12.3	119.7
	52.4			18.3	64.9
	58.4			24.3	117.1
40	4.0			30.8	70.2
	11.0			36.8	114.6
	18.4			43.3	71.4
	24.0			50.8	113.3
	31.0			59.8	74.1
	39.0		32	04.8	112.2
	45.0		32	10.8	72.9
	51.0	0.5	32	16.3	096
	57.0			22.3	77.4
41	4.0			30.3	105.6
	12.4			38.8	79.3
	19.4			44.8	105.4
	26.0			51.3	63.4
	31.0			56.3	105.2

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1893phae.proj..521

Nov. 3. 1893.

1	K1	J6,V10	33	K1.8 & J,1	
	K2,0			K7,3 (0 1,9	
	V 2,010		33	17.3 ~~very.~~	~~K7,K~~

Seeing good but image of comparison rat. poor and apparently somewhat out of focus.

	F 1327			B 236	
1	49	1.0	1	48	17.3
	50	1.0		49	17.3
	B 394			B 236	
10	43	00	1	51	36.4
	44	00		52	36.5

B. 394 just right at time of above comparison.

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1893phae.proj,.521w

Nov. 6, 1893

	B 3944			B 236	
6	49	0.0	22	28	30.6
	50	0.0		29	30.7

7 10.46
A 12
7 16 Vt. Sun Sol. (Eastern Time)

22 A 30.6
29 Vt
22 34. 29.

6 49 0
7 12 Vt
29 Vt

Dis. Jup. I. Phot. R. Obs. Sr. rec.
Comp. with Sat fol. Jupiter = Sat. III.

Limit of Vis.

22	27	19.0		22.2	
		36.0		23K.3	13.1
		161.0			
	27	40.2	9 10.4	20V.9	23.1
7	8	6.5	22 7.6	229.0	36.2
		57.V			16.1

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1893phae.proj..521

Nov. 6. 1893.

22	24	27.0			1446	+	
	17 45	24.0		914.1	270.4	82.7	
	28 43.6			228.5	1469	84.9	
7	9 9.9	70.7				83.6	
	29	1.0			2697		
		120			1490		
	27.5	20.0		911.3	2626	79.6	
	29 24.4			227.8		73.1	
7	9 50.7	29.0			1903	76.4	
		367			2657		
					1476		
	314.0	40.0		925.6	270.2	92.6	
	30 18.5	76.7		231.4		83.6	
7	10 38 44.8	42.7			1471	88.1	
		71.0			270.7		
		774			1449		
	31	4.0		912.9	2644	79.9	
	46.0			228.2		80.4	
	31 11.5	16.0	0.5		1473	80.2	
7	11 37.3	23.7			2676		
		31.7			1446		
	191.0			917.7	267.7	79.3	
	31 47.8	41.0		229.4		78.0	
7	12 13.6	72.7			1912	78.6	
	32	6.0			2692		
		220			1467		
	176.5	34.0		904.6	267.2	80.8	
	32 44.1			226.2		85.2	
7	13 9.9	74.7			1471	78.0	
	33	6.0			2630		

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1893phae.proj..521w

Apr. 6, 1893.

2	33	14.5	190.5				
	103.0	22.0	905.2	26.5	7	75.1	
	33 25.8	29.5	226.3	46.2		76.9	
7	13 51.6	37.0		26 3.1		76.0	
		46.0		187.7			
	244.0					80.4	
	34 1.0	56.5	0.5	910.7	26.1	74.5	
7	14 26.8	6.5		227.7	190.7	4	77.4
	34	16.0			26.7		
		22.5			192.4		
	139.5	30.0		914.1			
	34 34.9	40.0		228.5	26 3.6	9	70.8
7	15 0.2	47.0			192.5		72.7
		0.0			26.5.2		71.8
	35				194.6		
	56.5	9.0		915.6	26.5.2		69.6
	35 14.1	19.5		228.9	191.6	10	73.6
7	15 39.4	30.0			26.5.2		71.6
7	16 2.8	37.5			191.3		
	12.3	47.0			266.1		
	24.3	59.0			193.6		
	36 38.3	4.0			26 3.1		
	43.8	14.5			195.6		
	51.3	26.0			26.4.4		
	56.3	31.0			191.5		
	17 1.3	36.0			26.5.4		
	6.3	41.5	0.5		196.7		
	10.8	46.0			24.9.4		
	16.8	57.0	+52.0 assumed		190.7		

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1893phae.proj..521

Nov. 6, 1893.

2	36	27.07	17	21.8	27.5
	37	6.0		28.8	19.4
		10.0		34.8	27.1
		15.5		40.3	19.4
		21.5		46.3	27.2
		24.0		52.8	19.2
		30.0		59.8	27.3
		42.0	18	6.8	20.2
		47.0		11.8	27.1
		53.0		17.8	20.0
	38	0.2		24.8	26.4
		7.0		31.8	20.4
		12.0		37.8	26.2
		19.5		44.3	21.2
		25.0		49.8	24.4
		32.0		56.8	29.2
		37.0	19	1.8	26.5
		43.5		8.3	21.7
		49.0		13.8	25.1
		55.07	19	18.8	21.1

Seeing good.

	B 394				B 236	
7	23	0.0		22	42	31.0
	24	0.0			43	31.2

At above time, B. 394 had no error.

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1893phae.proj..521w

Nov. 6, 1893

o beta'		N obs.
26	14	− 3.4
23	43	
2	31	
12	00	
+9	29	

Right and above

6.0

95.0 89.0 ✓^

358.3

100.2 181.9 ✓^

190.9 ✓^ ~~+1.8~~ ✓

169.1 −0.20

Index to left and below

84.9

196.7 111.8 ✓^

91.3

185.0 93.7 ✓^

205.5 ✓^ ~~+1.5~~ ✓

154.5 −0.49

90.2

184.7 94.5 ✓^

82.0

194.7 112.7 ✓^

207.2 ✓^ ~~+1.5~~ ✓

152.8 −0.52

Index to right and above

174.7

284.2 109.5 ✓^

183.9 159.9

274.5 90.6 ✓^ −0.38

200.1 ✓^ ~~+1.0~~ ✓

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1893phae.proj..521

Nov. 6, 1893

183.2
274.0 90.8 ✓
174.8
284.8 92 ✓
10 ~~8.0~~
~~288.8~~ ✓ +~~1.6~~ ✓ 160.0
-0.38

Index to left and below
263.2
15.2 112.0 ✓
271.0
6.3 95.3 ✓ ~~158.7~~
207.3 +~~1.5~~ ✓ -0.52

9 00 ✓ 0 4 (9.2 mags) in large tel
0 4 (9.2 mags) in finder

x bygni W. obs.
ε 3.5 x x 2.5 f in op. glass W. obs.
β 3.5 x " " " " "

ε 3 x x ~~+5~~ 2 f with naked eye W. obs.
β 3 x " " " " "

9 20.7 19 46 +32°.7
~~4~~ 24 27
+4 41

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1893phae.proj--521w

Nov. 6, 1893

Index below

233.1
47.3 174.2 ✓^
232.8
47.3 174.5 ✓^
348.7 ✓^ ~~-4.5~~ ✓
11.3 x -6.53 x

Index above

32~~2~~.9
136.4 173.5 ✓^
323.7
136.5 172.8 ✓^
346.3 ✓^ ~~-4.1~~ ✓
13.7 x x -6.11 x

323.9
136.0 172.1 ✓^
323.7
136.2 172.5 ✓^
344.6 ✓^ ~~-3.9~~ ✓
15.4 x -5.86 x

14 30.7 Fr. M. T.

Index below

233.0
46.9 173.9 ✓^
233.2
~~4~~6.2 173.0 ✓^
346.9 ✓^ ~~-4.2~~ ✓
13.1 x -6.21 x

233.0
46.7 173.7 ✓^
233.0
46.9 173.9 ✓^
347.6 ✓^ ~~-4.3~~ ✓
12.4 x -6.33 x

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1893phae.proj..521V

Nov. 6, 1893

Index above

322.8

136.3 T 173.5 ✓^

323.1

136.5 173.4 ✓^

346.9 ✓^ -4.2 ✓

13.1+ -6.2^

10h00 ℓ 2 χ χ 2 f with naked eye N. obs.

β 3 χ " " " "

ℓ 2 γ χ 2 f in opt. glass N. obs.

β 3 χ " " " "

Exclusive of Photometric Scale N. obs.

S bygni N. obs.

20 β +57°.1

25 24

+5 16 Right and above.

242.3 < Ft. dis. ✓^

10 04 37.2 154.9 ✓^

244.0 seen.

37.0 153.0 ✓^

307.9 ✓^ -1.2 ✓

Index to left and below

334.2

124.3 150.1 ✓^

335.0

125.0 150.0 ✓^

300.1 ✓^ -0.9 ✓

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1893phae.proj..521W

Nov. 6, 1893

335.0		
124.7	149.7 ✓	
334.8		
125.0	150.2 ✓	
	299.9 ✓	−0.9 ✓

Index to right and above.

63.1		
216.8	153.7 ✓	
63.1		
216.0	152.9 ✓	
	306.5 ✓	−1.1 ✓

65.0		
217.2	152.2 ✓	
64.5		
215.2	150.7 ✓	
	302.9 ✓	−1.0 ✓

Index to left and below

155.2		
304.5	149.3 ✓	
154.1		
304.0	149.9 ✓	
	299.2 ✓	−0.8 ✓

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1893phae.proj..521W

Nov. 7, 1893

	♯ 7 Cygni		
7 40	ε 2 χ, χ 3 f	naked eye	W. obs.
	β 3 ξ	" "	" "
	ε 2 χ χ 3 f	opt. glass	" "
	β 3 χ		
7 50	ε 1 χ χ 4 f	naked eye	Jamm obs.
	χ 2 ♯ β 3 χ	" "	" "
	ε 2 χ χ 3 f	opt. glass	" "
	χ 1 ♯ β 4 χ	" "	" "

ο beti		W. obs.
26	14	− 3°.4
23	8	
3	6	
12	60	
+.8	54	

Index left and below

94.0		
185.0	91.0	✓
85.7		
192.0	106.3	✓
	197.3	✓ 17 ✓

Index to right and above + 62.7 − 0.33

174.2		
285.0	110.8	✓ +.7
183.8		
275.0	91.2	✓
	2030	✓ +6 ✓ 0.42
	1580	

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1893phae.proj..521w

Nov. 7, 1893

182.0
276.9 94.9 ✓^
175.0
283.7 108.7 ✓^
✓^
203.6 ~~+5~~ ✓
156.4 -0.45

Index to left and below

263.2
157.9 ~~1~~ 102.7 ✓^
271.8 ~~271.8~~
5.5 93.7 ✓^
✓^
206.4 ~~+5~~ ✓
153.6 -0.50

270.8
8.8 98.0 ✓^
263.5
13.8 110.3 ✓^
✓^
208.3 ~~+5~~ ✓
151.7 -0.57

Index to right and above

357.5
104.0 ~~1~~ 06.5 ✓^
~~6.0~~
97.0 91.0 ✓^
✓^
197.5 ~~+7~~ ✓
162.5 -0.33

8 15 ✓ V 4. 9.2 magn in large tel.
V 3.5 9.2 magn " finder

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1893phae.proj..521

Nov. 7, 1893

		x byggui	Wolbach
8	52.6	19 46	+32.7
	39	23 63	
	44	+4 17	

Index above

143.0		
316.1	173.1 ✓	
143.2		
316.5	173.3 ✓	
	346.4 ✓	−4.1 ✓
	13.6	− 6.13

Index below

233.2		
46.0	172.8 ✓	
233.6		
46.0	172.4 ✓	
	345.2 ✓	−3.9 ✓
	14.8	− 5.95

13

16 02.6 Mean Mt.

233.8		
46.0	172.2 ✓	
233.4		
46.4	173.0 ✓	
	345.2 ✓	−3.9 ✓
	14.8	− 5.95

Index above

323.0		
136.9	173.9 ✓	
323.2		
136.2	173.0 ✓	
	346.9 ✓	−4.2 ✓
	13	− 6.21

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1893phae.proj..521w

Nov. 7, 1893

323.5
136.9 173.4 ✓^
323.2
136.8 173.6 ✓^
347.0 ✓^ ~~-4.2~~ ✓ -6.23 +
Index below 13.0 ✓
53.3
226.8 183.5 ✓^
53.7
226.7 173.0 ✓^
346.5 ✓^ ~~-4.1~~ ✓ -6.13 +
13.5 +

S by pri W obs.
Relative est. of faint * used in calculating phot. scale. 0 3 faint *, faint * 1.5 ϕ in large tel. too faint for finder

20	8	+57.1
24	31	
+4	23	

~~R Draconis~~ ~~W obs.~~
~~Rel. est. of fnt.~~
~~Decl. +62°.96~~

3	3.2	~~+62°.0~~
0	5.1	
2	4.2	
12	0.0	
9	1.8	~~Abandoned~~

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1893phae.proj..5214

Nov. 7, 1893

R Aurigæ W. obs.

~~Relative est. of faint star used in extending photo scale.~~

04 R, R 1.5 p in large tel.
too faint for finder

Est. 12.2 +53°.0

5	3
1	34
+3	29
12	00
+8	31

R Lyncis W. obs.

Rel. est. of faint * used in extending phot. scale Faint * = p

Est. 12.6 p 2.5 R R 2.5 g in large tel. too faint for finder

10h37

+55.1

6	49
1	49
5	00
12	00
+7	00

~~R Urs. Majoris~~

+69°.3

10	32
2	5
8	27
12	00
3	33

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1893phae.proj .521w

Nov. 7, 1893.

Haze so thick that region is uncertain as to identification, and it is not possible to make a comparison.

~~X 2~~

$\underline{\epsilon}$ 2 X, X 2,5 f with naked eye, Dr. obs.

β 3 $\underline{X}$ " " " " "

~~7 22~~

$\underline{\epsilon}$ 2 X, X 3 f " opera glass " "

β 3 X " " " " "

$\underline{\epsilon}$ 1 X, X 4 f with naked eye Dansomabo,

β 3 $\underline{X}$, $\underline{X}$ 3 d " " " " "

$\underline{\epsilon}$ 2 X, X X3 f in opera glass " "

β 3 $\underline{X}$, X 9 d " " " " "

The above relative estimates were erroneously recorded on this page, but were transferred to page 175.

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1893phae.proj..5210

Nov 9, 1893.

χ by gnd

ℓ 2 χ , χ 2.5 f with naked eye W. obs.
β 3 χ " " " " "

7 22 ℓ 2 χ , χ 3 f " opera glass " "
β 3 χ " " " " "

ℓ 1 χ , χ 4 f " naked eye Jansen obs.
β 3 χ , χ 3 a " " " " "

ℓ 2 χ , χ 3 f " opera glass " "
β 3 χ , χ 3 a " " " " "

ℓ beti W. obs.

7 28 26 14 −3.°4
23 00
3 14
12 00
+8 46

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1893phae.proj.521w

Nov. 9, 1893.

Index to right

353.2

105.0 111.8 ✓^

1.0

97.9 96.9 ✓^

208.7 ✓^ ~~+115~~ ✓

Index to left 151.3 −0.55

92.0

185.0 93.0 ✓^

84.2

194.2 110.0 ✓^

203.0 ✓^

157.0 ~~+116~~ ✓ −0.44

84.2

191.8 107.6 ✓^

92.2

182.0 89.8 ✓^

197.4 ✓^ ~~+1.7~~ ✓

Index to right 162.6 −0.33

3.8

100.0 96.2 ✓^

356.9

104.3 107.4 ✓^

203.6 ✓^ ~~+115~~ ✓

355.5 156 ✓ −0.45

104.2 108.7 ✓^

1.6

99.0 97.4 ✓^

206.1 ✓^ ~~+115~~ ✓

158.9 −0.50

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1893phae.proj..521

Nov. 9, 1893

Index to left

91.8
184.8 93.0 ✓
83.7
193.2 109.5 ✓
202.5 ✓ +1.6 ✓
157.5 −0.43

bicle of phot. goes hard at times, leading to make phot turns in obs bearing on the tel. Obs. found that he had to make obs. rather slowly and hold on to phot while making them, but as care was exercised throughout setting + reading thought to be all right.

DM +62° 596 Color 7. M1 obs.

3	33	+62.°3
0	1	
3	32	
12	00	
+8	28	

Index to left

~~255.0~~
~~251.9~~ 126.9
257.5
22.0 124.5 ✓
251.8
27.7 135.9 ✓
260.4 ✓ +0.3 ✓
99.6 −1.67

8 05

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1893phae.proj..521W

Nov. 9, 1893.

Index to right

339.5
117.2 137.7 ✓^
347.9
112.5 124.6 ✓^
262.3 ✓^ ~~+0.3~~ ✓

347.2 97.7 -1.71
113.8 126.6 ✓^
342.0
117 0 195.0 ✓^
261.6 ✓^ ~~+0.3~~ ✓

Index to left 98.4 -1.70

~~70.0~~
~~269.0~~ 199.0
75.7
201.7 126.0 ✓^
70.6
208.7 138.1 ✓^
264.1 ✓^ +0.2 ✓

72.0 95.9 -1.76
207.2
75.5 135.2 ✓^
205.1 129.6 ✓^
264.8 ✓^ +0.2 ✓

Index to right 93.2 -1.75

167.1
296.0 128.9 ✓^
162.2
296.1/1022 133.9 ✓^ -1.60
257.2 ✓^ +0.4 ✓

8 25
8 15

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1893phae.proj..5217

Nov. 9, 1893

bloudy.

Phot. aided, circle turns a little more easily, but still gives trouble.

	x bygni		N. obs.
9 13.6	19	46	+32°7
	24	32	
	+4	46	

bloudy

Index above.

322.9
136.9 — 174.0 ✓^
323.2
136.9 — 173.7 ✓^
347.7 ✓^ — −4.3 ✓
13.3 × — −6.35 ×

Index below

53.8		clouds
226.2	172.4 ✓^	
53.0		
226.9	173.9 ✓^	
	346.3 ✓^	
53.0	13.7 ×	−4.1 ✓
226.9	173.9 ✓^	−6.11 ×

14 23.6 Greenwich

clouds

52.9
226.6 — 173.7 ✓^
347.6 ✓^ — −4.3 ✓
12.4 × — −6.33 ×

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1893phae.proj..521W

Nov. 9, 1893

Index above

143.0
316.3 — 173.3 ✓A
142.9
317.0 — 174.1 ✓A
347.4 ✓A — −4.3 ✓
126 × — −6.30 ×
149.9
317.0 — 174.1 ✓A
143.0
316.9 — 173.9 ✓A
348.0 ✓A — −4.4 ✓
12.0 × — −6.40 ×

Index below

233.0
46.7 — 173.7 ✓A
233.0
clouds
46.6 — 173.6 ✓A
347.3 ✓A — −4.3 ✓
12.7 × — −6.28 ×

I Cygni — W. obs.

Rel. est. of faint star used in extending photometric scale

20	8	+57°.1
25	13	
+5	5	

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1893phae.proj..521

Nov. 9, 1893

o 3 faint *, faint * 1 p

R Lyncis W. obs.

6	49	+55°.1
1	40	
5	9	
12	00	
+6	51	

10 20 o 4 faint * faint * 1 p.
p 3.5 R, R 2 ~~q~~

10 23 Est. 12.6

~~S Ursae Majoris~~ S Ursae Majoris

12	33	+60°.4
1	57	
+ ~~q~~ 10	36	
12	00	
+ ~~2~~ 1	24	

~~p 1 fr star fr. *~~

10 50 q 1 fl *, fl * 3 R (this belongs to S Ursae Maj.)
Stars fairly well seen, but region rather low, it is probably not best to estimate for star in ~~cent~~ S Ursae Maj as region is rather low.

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1893phae.proj..521w

Nov. 10, 1893

S Boötis U. obs.

14 16 +54°6

22 · 55

+ 8 39

7 35 k 3.5 S, s 2 l

Eph. 11.3

χ bygni

e 2 χ, χ 3 f with naked eye Fr. obs.

7 Kα β 2.5 χ " " " " "

χ 2 α " " " " "

e 2.5 χ · χ 3 f · in opera glass " "

7 50 β 3 χ " " " " "

χ 2 α " " " " "

e 1 χ, χ 4 f with naked eye Jasmon obs

7 54 β 4 χ " " " " "

α χ 3 d " " " " "

e 2 χ, χ 3 f " opera glass " "

7 56 β 3 χ " " " " "

χ 3 d " " " " "

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1893phae.proj..5217

Nov. 10, 1893

R Draconis W. obs.

16	26	+67.3
23	36	
+7	10	

0 35 R, R 1.5 p in large tel.
too faint for finder
Est. 11.6

8 8

D.M. +62° 596 W. obs.

3	33	+62°.3
23	46	
3	47	
12	00	
+8	13	

Index to left.

2500

8 20

27.2	137.2 ✓	
256.2		
21.9	125.7 ✓	
	262.9 ✓	~~+0.3~~ ✓
	97.1	-1.73

Index to right

348.7		
113.3	124.6 ✓	
343.7		
117.0	133.3 ✓	
	257.9 ✓	~~+0.4~~ ✓
	102.1	-1.61

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1893phae.proj..521w

Nov. 10, 1893

3 41.7			
1 17.0	134.3	✓	
348.0			
112.9	124.9	✓	
	259.2	✓	+0.4 ✓
Index to left	008		−1.64
80.2			
202.9	122.7	✓	
72.7			
208.0	135.3	✓	
	258.0	✓	+0.4 ✓
	102.0		−1.61
71.0			
206.9	135.9	✓	
77.2			
202.0	124.8	✓	
	260.7	✓	+0.3 ✓
Index to right	98.3		−1.70
168.8			
291.0	122.2	✓	
163.0			
297.3	134.3	✓	
	256.5	✓	+0.4 ✓
	103.5		−1.57

8 41
8 30.5

0 beti	N. obs.	
26	14	−3.4
29	21	
1	53	
12 =	00	
+ 10	7	

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1893phae.proj..5211

Nov. 10, 1893

A 50 0 4 (9.2 mags) in large telescope.

Index to left

8 55

270.8

12.0 101.2 ✓

262.9

18.4 115.5 ✓

216.7 ✓ +~~1.3~~ ✓

Index to right 143.3 -0.71

355.1

105.0 109.9 ✓

1.5

96.8 95.3 ✓

205.2 ✓ +~~1.5~~ ✓

154.8 -0.48

5.2

98.0 92.8 ✓

~~+6.2~~ ~~95.0~~

355.2

103.3 108.1 ✓

200.9 ✓ +~~1.6~~ ✓

Index to left 159.1 ~~+1.6~~ -0.40

83.9

197.3 113.4 ✓

89.0

189.2 100.2 ✓

213.6 ✓ +~~1.4~~ ✓

146.4 -0.65

92.8

187.5 94.7 ✓

84.0

195.2 111.2 ✓

205.9 ✓ +~~1.5~~ ✓

154.1 -0.50

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1893phae.proj..521w

Nov. 10, 1893

Index to night.

175.0

284.8 109.8 ✓1

181.8

9 9 275.1 93.3 ✓1

203.1 ✓1 ~~+4.6~~ ✓

156.9 ~~-0.7~~

X bygui W. obs.

19 46 +32°.7

25 9

+5 23

Index above

9 43 323.2

136.2 173.0 ✓1

323.0

136.4 173.4 ✓1

346.4 ✓1 ~~-4.1~~ ✓

Index below 173.6 -6.1

53.3

226.2 172.9 ✓1

53.9

226.2 172.3 ✓1

345.2 ✓1 ~~-3.9~~ ✓

14.8 -5.9

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1893phae.proj..521

Nov. 10, 1893

53.8
226.7 172.9 ✓^
~~+ 172.9~~
53.2
226.9 1737 ✓^
3466 ✓^ ~~-4.2~~ ✓
Index above 13.4 ×
- 6.16 ×

1430
317.1 174.1 ✓^
323.9
136.0 1721 ✓^
3462 ✓^ ~~-4.1~~ ✓
13.8 ×
- 6.10 ×

323.7
136.2 172.5 ✓^
323.0
136.8 1738 ✓^
3463 ✓^ ~~-4.1~~ ✓
Index below 13.7 ×
- 6.11 ×

53.8
226.9 173.1 ✓^
53.9
226.2 1723 ✓^
3454 ✓^ ~~-4.0~~ ✓
14.6 ×
- 5.98 ×

9 5-3
14 68.0 Gr. M.T.

S bygone W. obs.
20 8 +57°.1
25 45
+5 37

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1893phae.proj..521w

Nov. 10, 1893.

10 22 $\underline{0}$ 3 fl *, fl * 1 p

R Lyncis Wolbach

6	49	+55°.1
2	7	
4	42	
12	00	
+7	18	

10 42 0 4 fl. *, fl. * 1 p

p 3 R, R 1,5 q

Est. 12.5

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1893phae.proj.521v

Nov. 11, 1893.

~~χ. 2.√~~ χ byguw

		e	2.√	χ,	χ	3	f	with naked eye. Fr. obs.
7	23	β	3	χ				" " " " "
		χ	2	α				" " " " "
		e	3	χ,	χ	2.√	f	in opera glass. " "
7	2√	β	3	χ				" " " " "
		χ	2	α				" " " " "
		e	1	χ,	χ	4	f	with naked eye Janson obs.
7	21	β	3	χ				" " " " "
		~~χ~~	3	α				" " " " "
		e	2	χ,	χ	3	f	in opera glass " "
7	27	β	3	χ				" " " " "
		χ	3	α				" " " " "

Star to be obs at the request of Mr. Backhouse

19	2	$-6^{\circ}.6$
23	11	
+ 4	9	

Abandoned, too low.

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1893phae.proj--521w

Nov. 11, 1892

α beta		W obs.
26	14	− 3.94
23	21	
2	53	
12	00	
+ 9.	7	

Index to left and below

41.1

153.7 112.6 ✓

48.9

145.0 96.1 ✓

208.7 ✓

155.3 +1.5 ✓ −0.55

Index to right and above

131.9

242.3 110.4 ✓

140.1

234.3 94.2 ✓

204.6 ✓

155.4 +1.5 ✓ −0.47

143.1

232.8 89.7 ✓

13 ~~6.6~~ 6.1

238.9 102.8 ✓

192.5 ✓

167.5 +1.8 ✓ −0.24

Index to left and below

219.0

335.8 116.8 ✓

229.9

329.3 99.4 ✓

216.2 ✓

143.8 +1.3 ✓ −0.70

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1893phae..proj..521V

June 11, 1893

228.2
325.3 97.1 ✓^
222.1 153.2
331.8 109.7 ✓^ −0.51
206.8 ✓^ +1.5 ✓

Index to right and above

317.0
63.1 109.1 ✓^
δ 20 320.9
54.3 93.4 ✓^
202.5 ✓^ +1.6 ✓
157.5
−0.43

χ Bygni M. obs.

366 19 46 +32°7
8 23 23 63
+4 17

Index above

101.8
274.9 173.1 ✓^
101.4
274.8 173.4 ✓^
346.5 ✓^ −4.1 ✓
Index below 13.5 ✓ −6.1 ✗

191.8
5.4 173.6 ✓^
13 366 G.M.T.
191.8
5.0 173.2 ✓^
346.8 ✓^ ✗ −4.2 ✓ −6.20
13.2

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1893phae.proj..521W

Nov. 11, 1893

191.9
4.9 173.0 ✓A

191.1
5.1 174.0 ✓A

~~Index above~~ 347.0 ✓A ~~4.2~~ ✓ -6.23 ✓
Index above 1.30

281.7
94.9 173.2 ✓A

281.7
94.7 173.0 ✓A

346.2 ✓A -4.1 ✓ -6.10 ✓
1.38

281.5
95.0 173.5 ✓A

281.8
95.0 173.2 ✓A

346.7 ✓A -4.2 ✓
Index below 1.33 -6.18

11.2
185.0 173.8 ✓A

11.3
185.1 173.8 ✓A

347.6 ✓A -4.3 ✓
1.24 -6.33

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1893phae.proj..5219

Nov. 11, 1892

ν Sagg.		W. obs.
20	38	+47°.3
25	14	
+4	36	

Clouds

Reads new chart (notation)

$\underline{n}$ 2 V, V 3 $\underline{0}$ in large tel. (letters in ^)
Too faint for finder

10 0 Est. 10.6

Slightly cloudy at time of est. but est. made at an interval when it became pretty clear, so that est. is thought to be pretty good.

R Piscium		W. obs.
1	10	+2°.9
1	52	
+0	42	

Clouds

1	10	
2	9	
+0	59	+2°.9

More clouds

$\underline{n}$ 3 R, R 3 $\underline{0}$ in large tel.
too faint for finder

Est. 10.5

(over)

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1893phae.proj..521w

Nov. 11, 1893

Estimate on R Piscium in Reed's notation on chart.

Some clouds at time of estimate, but est. thought to be pretty good

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1893phae.proj..521W

Posted to here.

Nov. 17. 1893.

B. 236.

23	30	31.7
	31	31.4

B. 394.

7	26	0.0
	27	0.0

7 47 Too cloudy for eclipse.

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1893phae.proj..521w

Nov. 14., 1893

X-bygni

7 16 ~~ε 3 X, X 2.5 f~~ ~~β 2 X,~~ ~~α 4 X~~ in opera glass, Fr. obs.

" " "

" " "

Moon passed the quarter.

7 14 ε 3 X, X 2.5 f with naked eye Fr. obs.

β 2 X,

α 3 X

" " "

" " "

ε 2 X, X 4 f with naked eye Janson obs.

7 18 β 4 X, " " " " "

X 3 α " " " " "

ε 3 X, X 3 f with opera glasses " "

7 20 β 4 X " " " " "

X 3 α " " " " "

	ρ beta		W. obs.
	26	14	-3.4
	23	31	
	2	43	
	12	00	
	+9	47	

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1893phae.proj..521M

Nov. 18, 1893.

Index to left and below

7 30

48.6
148.5 100.5 ✓^
42.9
152.9 110.0 ✓^
210.5 ✓^ +1.4 ✓
149.5 -0.58

Index to right and above

135.0
239.9 104.9 ✓^
142.3
234.2 91.9 ✓^
196.8 ✓^ +1.7 ✓
163.2 -0.32
142.0
233.8 91.8 ✓^
135.9
239.2 103.3 ✓^
195.1 ✓^ +1.7 ✓
164.9 -0.29

Index to left and below

222.8
334.3 111.5 ✓^
227.1
327.3 100.2 ✓^
211.7 ✓^ +1.4 ✓
328.0 148.3 -0.61
326.0 98.0 ✓^
224.0
332.3 108.3 ✓^
206.3 ✓^ +1.5 ✓
153.7 -0.50

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1893phae.proj..521W

Nov. 18, 1893

Index to right and above

316.0
59.9 — 103.9 ✓^
318.0
54.8 — 96.8 ✓^
200.7 ✓^
159.3 +1.6 ✓
-0.39

752

C 2 4 (9.2 magn) in large tel.
2 3.5 (9.2 magn) in finder

X by gmt — Wash. obs.

19 — 46 — +32°.7.
23 — 67
+4 — 21

Index above

281.1
95.0 — 173.9 ✓^
281.5
94.9 — 173.4 ✓^
347.3 ✓^ -4.3 ✓
12.7 -6.28

Index below

12.1
185.2 — 173.1 ✓^
12.0
185.9 — 173.9 ✓^
347.0 ✓^ -4.2 ✓
13.0 -6.23

8 15±

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1893phae.proj.521W

Nov. 18, 1893

11.5			
186.1	174.6 ✓^		
12.4			
184.1	171.7 ✓^		
	346.3 ✓^	~~+4.1~~ ✓	−6.11 ✓
Index above	13.7 ^		
101.9			
275.0	173.1 ✓^		
101.0			
275.3	174.3 ✓^		
	347.4 ✓^	~~+4.2~~ ✓	
	12.6 ✓		−6.30 ✓
101.1			
275.0	173.9 ✓^		
101.8			
274.9	173.1 ✓^		
	347.0 ✓^	−4.2 ✓	−6.23 ✓
Index below	13.0 ✓		
191.9			
4.1	172.2 ✓^		
190.9			
4.9	174.0 ✓^		
	346.2 ✓^	−4.1 ✓	−6.10 ✓
	13.8 ✓		

δ 2 ✓

13 20.0 Gr. M.T.

Dm Wedge Zone (special) Notes

Series 1 ✓ 0. +19°

22	50	+20.°0
24	46	
+1	56	

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1893phae.proj..521w

Nov. 18, 1893

A	K3	4986	3.20	
			2.99	
			3.12	9.31 ✓ 4.03 ✓
		4987	2.61	
			2.83	
			2.91	8.35 ✓ ~~3.24~~ ✓ 3.62 ✓
		5022	2.41	f. s. + sl. betr. of 2 class 1
			2.58	
			2.57	7.56 ✓ 3.27 ✓
		5023	2.92	
			3.00	
			3.08	9.00 ✓ 3.90 ✓
		5031	3.03	
			3.00	
			3.02	9.05 ✓ 3.92 ✓
		5039	4.30	
			4.23	
			4.18	12.71 ✓ 5.50 ✓
g	31	5041	3.29	
			3.38	
			3.47	10.14 ✓ 4.39 ✓

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1893phae.proj..521M

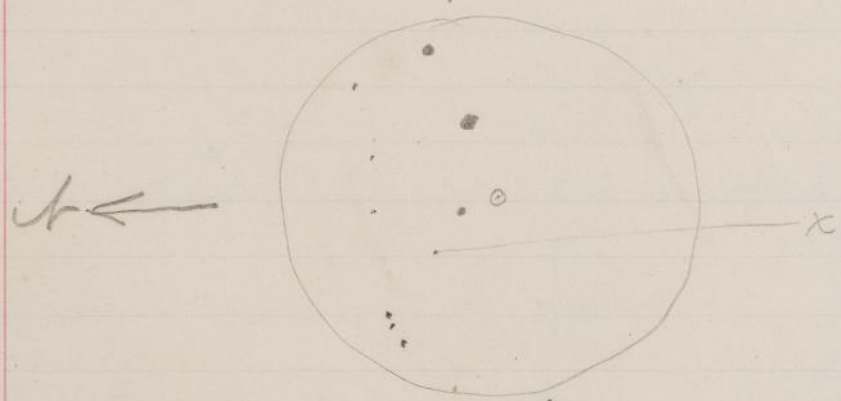
Nov. 16, 1893

There is an error in the δ Cas.
Clavis +19° 50' 41" is 9.1 mag. &
" " 50' 52" is 9.5 mag.
The δ Cas. has the mags reversed.
The stars check in position with .39.

~~β Cygni~~ ~~H obs~~

β Cygni H. obs.

19	27	50.0
26	24	
+6	57	



star x

Var. equals ~~+ +~~ in above diagram
x is not on chart and is a new
star selected tonight
Est. of Var. 13.7
Considerable moon and region a little
low

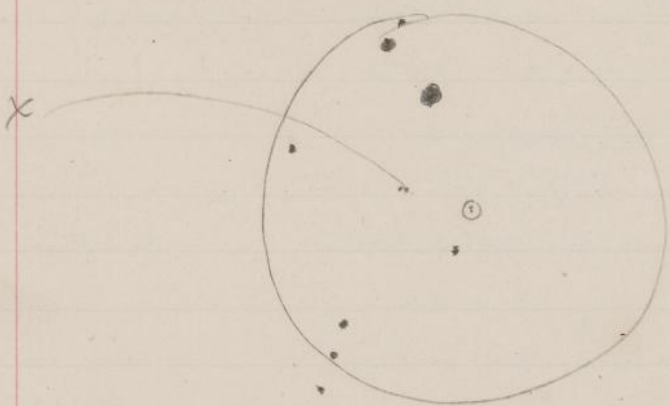
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1893phae.proj .521W

June 18, 1893

S Tauri W. obs.

4	22	+10.0
2	46	
1	36	
12	00	
10	24	



The above is an obs. of R Tauri.



V. 4 star X

10 56 Est. 13.2

Obs. difficult and somewhat uncertain on account of bright moonlight, moon not very far distant.

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1893phae.proj..5211

Nov. 20. 1893.

B. 236.

5 6 53,5

7 53,5

B. 394 = 0.1 fast

12 ~~50~~ 49 ~~0.0~~ 59.9

51 0.0

~~Dis~~ Reap. Jupr. I. Rhat R. Wabs. Clymer Rec.
Lim. Vis. comp with Saturn

night of Jupr. with Sat. following ∓ Sat. III.

5	27	35,0	25	8.0	1,7	32.2	
		54,0	28	4.5	14,7	8.0	
	28	10.5	13	11	7.4	2,0	13.0
		38,5			13,8		11.8
							12.4

5	33	0.5	51,5	16	53.9	Lun.
	54	0.5	21,0	17	22.9	344,0
			31,5		33.4	30,0
			39,5		41.4	346.2
			48.0		49.9	34,0
			57,5		59.4	338.5
	35		5,0	18	6.9	39,0
			14,0		15.9	333,0
			21,0		22.9	39,0
			39,0		40.9	335,0
			47,0		48.9	42.8
			57,5		59.4	331.8

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1893phae.proj..521W

Nov. 20, 1893.

36	7,0	13	7.4 19	8.9	44.9	
	15.5			17.4	331,0	
	23.5			25.4	47.6	
	30,0			31.9	328.8	
	37,0			38.9	45.2	
	45,0			46.9	327.5	
	54.5			56.4	51.8	
37	3,0		20	4.9	330,0	
	0.5 9,0			10.4	54,5	
	19,5			20.9	328.9	
	26.0			27.4	51,0	
	33,5				329.9	1468.7
	42.5	37	1930 48.2		48.8	7.29
	52,0	13	20	49.6	327.9	80.9 80.4 80.6
38	5.0				47.7	
	34,0				330.0	1472.4
	43.5	38	1930 48.2		47.2	98.1 77.2 72.2 78.7
	53.5	13	21	49.6	331.5	
39	2.0				43.7	
	10.0				329.1	1468.5
	16.5	39	930 23.2		42.9	37.1
	28.5	13	22	24.6	331.7	73.8 73.1 73.4
	34.8				44.8	

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1893phae..proj..521U

Nov. 20. 1893.

	38.0		44.8			
	45.0		330.0	1470.0		
40	4.0	25.5	45.2	47.5		
	0.5 40	6.4				75.2
~~44~~	14.0 23	7.3	329.0			76.8
	22.5		45.8			76.0
	34.5		327.2	1468.8		
	44.5	197.0	44.5	7.2		
	40	49.2				77.3
	54.0 23	50.1	331.5			74.1
						75.7
41	4.0		45.6			
	18.0		327.4	1470.9		
	22.5	108.5	47.0	7.7		
	41	27.1				79.6
	51.0 24	28.0	331.6			73.3
	42.0		44.9			76.4
	55.0		327.8			
42	3.0	44.5	44.2	1467.9		
	42	11.1		6.8		76.4
	19.5 25	12.0	327.8			79.4
	27.0		47.2			77.9
	38.0		331.0	1971	7.2	
	37.5	222.0	49.9		9.0	
	42	55.5				76.9
	59.0 25	56.4	330.0			76.3
	13.5		46.3			77.6

Seeing good. Sat. Reap sight on edge of Jup. which was unexpected so that a small amount of time was consumed in adjusting comp. Sat.. Observations very difficult throughout, almost impossible at the first on account of close proximity

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1893phae.proj..521w

Nov. 20. 1893.

of satellites to Jupr.

	B. 236.		B. 394.	
6	55	1.0	13 34	0.0
	56	1.0	39	0.0

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1993phae.proj..521W

Nov. 22, 1893

B	2 3 6			B	3 9 4	= 1.4 slow	
23	4 X'	40.6		23	18	1.4	
	42	40.8			19	0.0	

Rap. of Sup. I. Phot. R. A. obs. Jansen
sec., comp. with Sat. foll. Sup. = Sat. III.

0	2	9	11	7	45	27.3 Suspected
			18			34.3 Seen
			38			49.3 168.0
			39			55.3 215.1
			46		46	02.3 165.5
			52			08.3 213.3
		10	0		46	16.3 158.0
			9			25.3 221.3
			16			32.3 157.4
			24			40.3 218.9
			30			46.3 156.8
			37			53.3 219.1
			45		47	01.3 150.1
			53			09.3 228.8 2 ?
		11	4		47	20.3 149.7
			12			28.3 229.5 2 ?
			20			36.3 147.1

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1893phae.proj..521W

This page accidentally skipped

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1893phae.proj..521v

This page accidentally omitted

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1893phae.proj..521w

Nov. 22, 1893

11	29 7	47	45.3	231.9		
	39		55.3	150.2		
	46	48	2.3	231.0		
	56		12.3	149.0		
12	5		21.3	232.5		
	0.5 16		31.8	146.6		
	26		41.8	230.1		
	34		49.8	144.1		
	48	49	03.8	234.8		
	57	48.		145.8		
13	7 13	12.0		235.7	759.5	189.9
	17 7	49	27.8	143.7	89.9	
	27			234.3	90.6	90.2
	36	0		142.2		
	45 13	24.0		236.0	756.4	189.1
	57 7	50	10.8	144.2	93.8	89.8
14	6			234.0		91.8
	14			1425		
	25 14	12.8		237.5	758.2	189.6
	40 7	50	47.8	142.8	93.0	92.6
	49			235.4		93.8
15	5			141.7	759.8	
	0.5 14 15	20.8		234.1	190.0	
	26 7	51	36.1	145.0	92.4	94.0
	38			234.0		93.2

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1893phae.proj..521W

Nov. 22. 1892

15	5		144.1		
	14 16	72 18.0	224.0	756.9	189.2
	22 52	33.3	146.2		89.9 / 86.4 / 88.2
	21		232.6		
	54		142.4		
		37		761.6	
17	5 17	9.2	240.1		190.4
	14 53	24.5	142.7		97.7 / 93.7 / 95.7
	24		236.4		
	33		142.2		
	43 17	199 49.8	233.7	753.8	188.5
	54	5.1			91.5 / 93.8 / 92.6
	57		142.1		
18	6		235.9		
	17		141.0		
	24 18	120 30.0	235.0	756.0	189.0
0.5	35 54	44.8	141.5		94.0 / 97.0 / 95.5
	44		238.5		
	54		141.0		
		57		759.4	
19	5 19	14.2	238.1		189.8
	19 55	29.0	140.5		99.1 / 99.3 / 98.2
	39		209.8		

9. 21

22	26		162.8		
		193		756.4	
05	37 22	48.2	215.1		189.1
	517 59	2.5	165.0		52.3 / 48.5 / 50.4
22	19		219.5		

Images somewhat blurry, dat. resp. on limb of sp. comp. made with considerable difficulty consequently

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1893phae.proj..521w

Nov. 22, 1893

β 394

8	8	49
	9	0.0

β 236

6	31	49
	32	

8	10	0,0	0	33	48,8
	11	0.0	0	34	49.0

ℓ beta		M. obs.
26	14	$-3^{0}.4$
24	42	
1	32	
1.2	00	
10	28	

Index to right

134.2		
243.6	109.4 ✓^	
136.3		
240.2	103.9 ✓^	
	213.3 ✓^	+1.4 ✓
Index to left 146.7		-0.64
224.0		
332.6	108.6 ✓^	
222.7		
332.1	109.4 ✓^	
	218.0 ✓^	+1.3 ✓
	142.0	-0.73

8 30

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From 22, 1893

223.0		
331.8	108.8	
221.9		
331.1	109.2	
	218.0	+1.3
Index to right	142.0	-0.73
315.0		
61.9	106.9	
314.1		
62.7	108.6	
	215.5	+1.3
	144.5	-0.68
315.0		
61.0	106.0	
314.1		
63.0	108.9	
	214.9	+1.3
Index to left.	145.1	-0.67
42.7		
153.0	110.3	
2.7		
48.7		
150.3	107.6	
	217.9	+1.3
	142.1	-0.73

8 50

0 5 (9.2 magn.) in large tel.

0 5 (9.2 magn.) in finder but rather faint moon bright.

Est. 8.6

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1893phae.proj.521w

Nov. 22, 1893

X bijqui		N obs.
19	46	+32.°7
25	17	
+5	31	

Index below

9 .8

191.7
5.0 173.3 ✓ ^
197.2
4.2 172.0
345.3 ✓ ^ −4.0 ✓
Index above 14.7 − 5.96

102.8
274.5 171.7 ✓ ^
102.0
274.2 172.2 ✓ ^
343.9 ✓ ^ −3.8 ✓
102.0 16.1 × 5.76 +
274.7
102.2 172.7 ✓ ^
274.5 172.3 ✓ ^
345.0 ✓ ^ −3.9 ✓
Index below 15.0 < − 5.92 ×

192.2
4.7 172.5 ✓ ^
192.5
4.5 172.0 ✓ ^
344.5 ✓ ^ −3.6 ✓
15.5 × − 5.95 +

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Nov. 22, 1893

192.0
4.2 172.2 ✓^
191.8
5.2° 173.2 ✓^
345.4 ✓^ −4.0 ✓
Index about 14.6 −5.98 ×

281.8
9 24 94.9 173.1 ✓^
9 16.0 Sid. M.T. 282.1
94.3 172.2 ✓^
345.3 ✓^ −4.0 ✓
14.7 −5.96

Region somewhat low

D.M. Wedge Bone (Special) W. obs.
~~Series 151~~ +19° Series 151.

22 50 +20.0°
26 12
+ 3 22

10 Ø 4986 3.25
3.28
3.22 9.7/5 ^ 4.22

4987 2.75
2.80
2.95 8.5/0 ^ 3.68

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Nov. 22, 1893

5022	2.51		
	2.40		
	2.42	7.33 ^	3.17
5023	3.10		
	2.95		
	3.18	9.23 ^	4.00
5031	2.90		
	2.85		
	2.80	8.55 ^	3.70
5039	4.30		
	4.37		
	4.28	12.95 ^	5.61
5041	3.25		
	3.44		
	3.20	9.89 ^	4.28

10 25

~~2998 94 Aqu~~

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Nov. 22, 1893

Σ 2922 8 Lacertae W. obs.

22 30 +39.0°
26 46
+4 16

Index to left and below
41.5
152.0 110.5 ✓^
41.0
152.1 111.1 ✓^
221.6 ✓^ +12 ✓ 0.81 ✓
138.4

Index to right and above
135.0
242.2 107.2 ✓^
132.1
243.7 111.6 ✓^
218.8 ✓^ +1.2 ✓ 0.7 ✓
141.2

10 3 ✓

132.1
242.7 110.6 ✓^
133.8
243.2 109.4 ✓^
220.0 ✓^ +1.2 ✓
140.0

Index to left and below 0.77 ✓
222.7
330.7 108.0 ✓^
223.1
330.5 107.4 ✓^
215.4 ✓^ +1.2 ✓ 0.62 ✓
144.6

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June 22, 1893

222.0		
332.7	110.7 ✓	
222.5		
331.2	108.7 ✓	
	219.4 ✓	+1.2 ✓ 0.76 ✓
	220.6	

Index to right and above

313.2		
61.8	108.6 ✓	
312.0		
62.8	110.8 ✓	
	219.4 ✓	+1.2 ✓ 0.76 ✓
	146.6	

10 ✓✓

0.81	0.75
0.68	0.77
0.76	0.76
15	18
0.75	0.76

0.76

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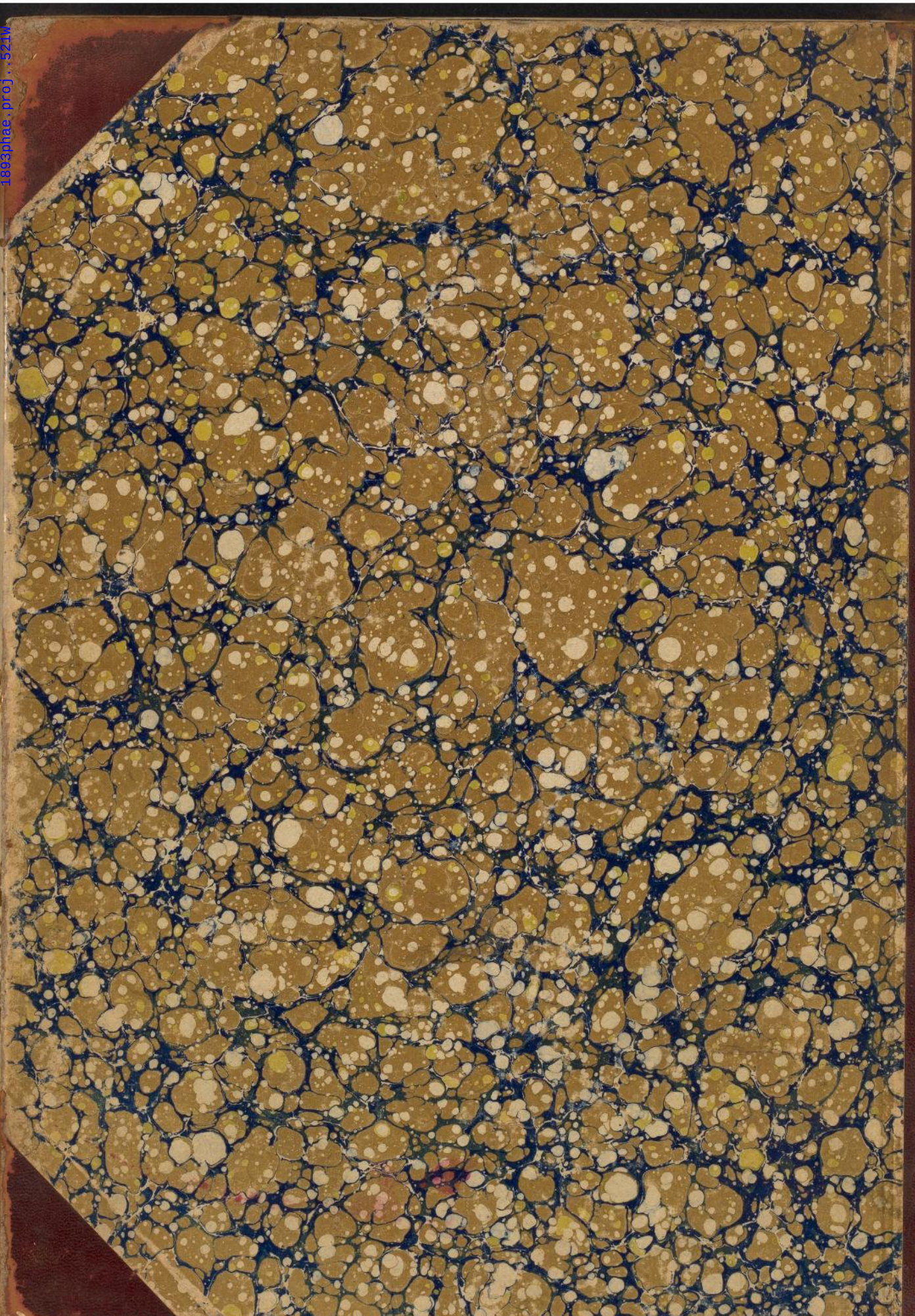
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