KG
11365
527

1994phae.proj..528W

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KG 11365.529

1894phae.proj..528w

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Dec. 20. 1894.

χ Cygni: Phot. d: W: obs.

+33.4

19 +1
1/5 38/57

Measurements of faint comparison stars for χ Cygni with Phot. d.

Star l.

0.62
0.63
0.51
0.35
0.53
2.64 0.528

Log 0.528 = 9.72263 5
48.61315
1,38685
11.10
12.49
2.31
14.80 = mag.

7 34 46

Star k.

0.79
0.73
0.65
0.59
0.62
3.38 0.676

Log 0.676 = 9.82995 5
49.14975
0.85025
11.10
11.95
2.31
14.26 = mag.

7 42 58

Star h.

0.84
0.65
0.74
0.71
0.68
3.62 0.724

Log 0.724 = 9.85974 5
49.29870
0.70130
11.10
11.80
2.31
14.11 = mag.

7 47 13

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1894phae.proj..528W

Dec. 20. 1894.

Star g.

0.95
0.98
1.00
0.88
0.86
4.67 0.934

Log 0.934. = 9.97035
5
49.85175
0.14825
11.10
11.25
2.31
13.56 = magn.

Star f.

0.83
0.86
0.80
0.88
0.95
4.32 0.864

Log 0.864 = 9.93651.
5
49.68255
0.31745
11.10
11.42
2.31
13.73 = magn.

Star E.

1.10
1.05
0.98
0.97
0.96
5.06 1.012

Log 1.012 = 0.00518
5
0.02590
11.10
11.07
2.31
13.38 = magn.

Star d.

1.07
1.19
1.23
1.20
1.24
5.93 1.186

Log 1.186 = 0.07408
5
0.37040
11.10
10.83
2.31
13.14 = magn.

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1894phae.proj..528W

Dec. 20. 1894.

Not able to complete measurements on account of fog: above measurements rejected as stars were seen to be seriously affected by fog during measurements and faintness of stars steadily increased. Comp. star = γ Cygni (gamma Cygni)

S Cephei :	Phot. δ :	W : obs.
21	37	+7 r.3
2	40	
5	3	

Star r.

0.74
0.83
0.82
0.80
0.79
3.98 0.796

8 45 37

Log 0.796 = 9.90091 5

49.50455
0.49545
11.10
11.60
3.37
14.97 = magn

Star s.

0.63
0.63
0.69
0.71
0.70
3.36 0.672

8 48 49

Log 0.672 = 9.82737 5

49.13685
0.86315
11.10
11.96
3.37
15.33 = magn

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1894phae.proj..528W

Dec. 20. 1894.

Star t. Log 0.574 = 9.758915

	0.51		48.79455
8 52 10	0.53		1.20545
	0.57		11.10
	0.67		12.31
	0.59		3.37
	2.87	0.574	15.68 = magn.

Star qf. Log 1.274 = 0.10517

	1.17		1.52585
8 57 0	1.26		11.10
	1.33		10.57
	1.30		3.37
	1.31		13.94 = magn.
	6.37	1.274	

Star yh. Log 1.550 = 0.19033

	1.63		0.95165
9 0 30	1.66		11.10
	1.49		10.15
	1.51		3.37
	1.46		13.52 = magn.
	7.75	1.550	

Star rn. Log 2.310 = 0.36361

	2.39		1.81805
9 5 46	2.25		11.10
	2.29		9.28
	2.36		3.37
	2.26		12.65 = magn.
	11.55	2.310	

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1894phae.proj.-.528W

Dec. 20. 1894.

~~Star k.~~

~~4.60~~
~~4.45~~
~~4.48~~
~~4.55~~
~~4.52~~

9 10 25 Thought dome possibly cut off.

~~Star t.~~

~~4.17~~
~~4.08~~
~~4.09~~
~~4.20~~

9 13 37 Dome cuts off.

Star k again.

4.59
4.44
4.40
4.35
4.25
22.03 4.406

9 16 0

Log 4.406 = 0.644404
5
3.220220
11.10
7.88
3.37
11.25 = magn.

Star R again.

3.87
3.89
4.03
4.14
4.20
20.11 4.022

9 20 13

Log 4.022 = 0.604444
5
3.022220
11.10
8.08
3.37
11.45 = magn.

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1894phae.proj..528W

Dec. 20. 1894.

~~Star O.~~ S Cephei.

4.69
4.71
4.71
4.65
4.91
23.67 4.734

Log 4.734 = 0.67523
5
3.37615
11.10
7.72
3.37
11.09 = magn.

Star O.

1.41
1.34
1.38
1.39
1.45
6.97 1.394

Log 1.394 = 0.14426
5
0.72130
11.10
10.38
3.37
13.75 = magn.

Star m.

2.56
2.82
2.66
2.52
~~2.61~~
2.71
13.27 2.654

Log 2.654 = 0.42390
5
2.11950
11.10
8.98
3.37
12.35 = magn.

Comparison star used in above measurements of S Cephei was γ Cephei (gamma Cephei.)

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1894phae..proj..528W

Dec. 20. 1894.

o Ceti: Phot. R: W: obs.

2 4 -2.5

4/2 20/16

Index to left and below:

356.8 < comparison stars dist.

10 12 32 96.0 99.2^

345.8 118.5^

104.3 217.7^ ~~1.3~~^

142.3 -0.73

Index to right and above.

76.8 117.1^

10 15 1 193.9

85.2 98.7^

183.9 215.8^ ~~1.3~~^

144.2 -0.69

88.3 99.0^

10 17 45 187.3

74.0 121.6^

195.6 220.6^ ~~1.2~~^

139.4 -0.79

Index to left and below.

167.8 117.5^

10 20 23 285.3

175.7 98.5^

274.2 216.0^ ~~1.3~~^

144.0 -0.69

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1894phae.proj..528W

Dec. 20. 1894.

	177.1	99.2	
10 22 12	276.3	118.7	
	166.8	217.9^	~~1.3~~ ^
	285.5	142.1	-0.73

Index to right and above.

	255.1	118.3^	
10 24 50	13.4		
10 18 47	267.1	100.0^	~~1.3~~ ^
	7.1	218.3^	-0.74
		141.7	

Σ 11.83 : Phot. R: W obs.

8	0	-8.9
4	45	
-3	15	
8	45	

Position angle = 330° : Distance = 30" :
mags = 5.4 and 7.6.

Index to right and below.

	252.0	faint dis.	
10 29 50	20.9	128.9^	
	256.0		-1.42
	17.0	121.0^ 110.1	~~0.6~~
		238.9^	

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1894phae..proj..528W

Dec. 20. 1894.

Index to left and above.

			345.2	123.5^	
10	41	19	108.7		
			338.2	129.8^	
			108.0	253.3^	~~0.5~~ ^
				1086 7	-1.69
			340.3	126.2^	
10	43	0	106.5		
			337.2	129.5^	~~0.4~~
			106.7	255.7^	
				104.3	-1.55

Index to right and below.

			69.9	128.1^	
10	44	34	198.0		
			71.8	126.1^	
			197.9	254.2^	~~0.5~~ ^
				1048	-1.52
			70.8	127.2^	
10	46	6	198.0		
			72.5	125.9^	~~0.5~~ ^
			198.4	253.1^	-1.49
				106.9	

Index to left and above.

			163.0	126.1^	
10	43	53	289.1		
			165.4	124.8^	
			290.2	250.9^	~~0.6~~ ^
				1091	-1.44

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1894phae.proj..528W

Posted to here.

Dec. 21. 1894.

7	0	Cloudy.
7	30	Cloudy.
8	0	Worse.
8	30	Still cloudy.

7

7

7

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1894phae..proj..528W

Dec. 22. 1894.

χ Cygni: Phot d: W: obs

19 +1 +33.4

$\frac{1}{6}$ $\frac{+3}{2}$

Star b.

0.40
0.40
0.35
0.38
0.40
1.93 0.386

7 33 22

Log 0.386 = 9.58659
5
47.93295
2.06705
11.10
13.17
2.31
15.48 = magn.

Star R.

0.62
0.65
0.65
0.61
0.62
3.15 0.630

7 35 45

Log 0.630 = 9.79934
5
48.99670
1.00330
11.10
12.10
2.31
14.41 = magn.

Star h.

0.69
0.66
0.68
0.70
0.72
3.45 0.690

7 38 17

Log 0.690 = 9.83885
5
49.19425
0.80575
11.10
11.91
2.31
14.22 = magn.

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1894phae.proj..528W

Dec. 22. 1894.

Star q.

	0.89	
7 40 30	0.94	
	0.95	
	0.82	
	0.86	
	4.46	0.892

Log 0.892 = 9.95036
5
49.75180
0.24820
11.10
11.35
2.31
13.66 = magn.

Star f.

	0.91	
7 43 28	0.97	
	0.98	
	1.04	
	0.98	
	4.88	0.976

Log 0.976 = 9.98945
5
49.94725
0.05275
11.10
11.15
2.31
13.46 = magn.

Star e.

	1.13	
7 46 32	1.20	
	1.16	
	1.17	
	1.19	
	5.85	1.170

Log 1.170 = 0.06819
5
0.34095
11.10
10.76
2.31
13.07 = magn.

Star d.

	1.42	
7 50 7	1.59	
	1.54	
	1.54	
	1.55	
	7.64	1.528

Log 1.528 = 0.18412
5
0.92060
11.10
10.18
2.31
12.49 = magn.

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1894phae.proj..528W

Dec. 22. 1894.

Star c. Log 1.550 = 0.19033
5
0.95165
11.10
10.15
2.31
12.46 = magn.

1.49
1.55
7 52 13 1.62
1.55
1.54
7.75 1.550

Star d again. Log 1.484 = 0.17143
5
0.85715
11.10
10.24
2.31
12.55 = magn.

1.41
7 54 18 1.48
1.54
1.49
1.50
7.42 1.484

Star b. Log 2.030 = 0.30750
5
1.53750
11.10
9.56
2.31
11.87 = magn.

1.90
7 56 38 2.03
2.04
2.12
2.06
10.15 2.030

Star a. Log 2.770 = 0.44248
5
2.21240
11.10
8.89
2.31
11.20 = magn.

2.91
8 1 48 2.71
2.70
2.78
2.69
13.85 2.770

Mean time = 7h 46m 40s

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1894phae.proj..528W

Dec. 22. 1894.

Comparison star in preceding measurements is, ~~γ Cephei (gamma Upbiij).~~ γ Cygni. (Gamma Cygni)

Relative estimates of faint comparison stars for χ Cygni:

~~k~~ ~~k~~	3++	l
~~l~~ K	4.	~~k~~ ~~k~~
~~g~~ ι	+3.5	~~l~~ K
~~f~~ θ	4.5	~~g~~ ι
~~e~~ η	3.	~~f~~ θ
~~d~~ ζ	+3.5	~~e~~ η
~~c~~ ε	~~5~~ 4. ~~5~~	~~d~~ ζ
~~b~~ δ	4.5	~~c~~ ε
~~a~~ γ	4.5	~~b~~ δ

The letters in red. are final notation.

Previous estimates & measures in provisional ~~Const~~ notation as indicated in diagram book 7 2. page 202.

m. P: 4H1: W: obs.

3	31	+62.8
2	50	
	~~+9~~	
-0	41	
11	19	

abandoned.

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Dec. 22. 1894.

R Ursae Min: Phot. W: obs

16	34	+72.9
2	53	
10	19	

h. 3.5 k
k. 4. l

The above are relative estimates of the standard h, k, and l in final notation.

~~Three~~ Four ~~more~~ more comparison stars selected on R. Urs. Min: namely m. n. and o: estimates on same.

~~m 3 n~~
~~n 3 o~~

l.	3.	m.
m.	3	n.
n.	4.	o.
o	4	

These are in final notation. as added

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Dec. 22. 1894.

Measurements of same with Phot. d. W: obs

Star k.

3.3 X
3.06
3.52 wrong.
3.50
3.88

9 25 15

Star m.

3.06
2.94
3.15
3.09
3.02
15.26 3.052

9 29 4

Log 3.052 = 0.48458
5
2.42290
11.10
8.68
3.27
11.95 = magn.

Star k again.

3.49
2.94
3.52
3.72
3.66
17.33 3.466

9 31 52

Log 3.466 = 0.53983
5
2.69915
11.10
8.40
3.27
11.67 = magn.

Star m.

2.56
2.77
2.93
2.89
2.62
13.77 2.754

9 34 45

Log 2.754 = 0.43996
5
2.19980
11.10
8.90
3.27
12.17 = magn.

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1894phae.proj..528W

Dec. 22. 1894.

Star O.

2.50
2.13
2.38
2.36
2.17
11.54 2.308

Log 2.308 = 0.36324

5
1,81620
11.10
9.28
3.27
12.55 = magn

Comparison star in preceding measurements is ζ Draconis (Zeta Draconis)

m. Q. HH1 : Phot R. W: obs.

3 31 +62.8
H 15
0 44

Index to left.

245.2 < comparison star dist.
26.8 141.6^
249.3 133.4^ −2.05
22.7 275.0^ −0.1^
85.0

Index to right.

340.2 133.3^
113.5 138.7^ −1.97
337.0 272.0^ 0.0^
115.7 88.0

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1894phae.proj..528W

Dec. 22, 1894.

		335.9	139.1^	
10	12	0	115.0	132.2^	−1.9
			339.8	271.3^	0.1^
			112.0	88.7	

Index to left.

		71.0	132.1^	
10	14	40	203.1		
			66.8	140.0^	−1.97
			206.8	272.1^	0.0^
				87.9	

		65.7	141.3^	
10	17	14	207.0		
			71.2	129.0^	+1.92
			200.2	270.3^	0.1^
				89.7	

Index to right.

		158.9	134.8^	
10	19	47	293.7		−2.01
			156.2	138.7^	0.0^
			294.9	273.5^	
				86.5	

10 13 32

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1894phae.proj..528W

Dec. 22. 1894.

δ. Cephei: Phot. O: W: obs.

+68.1

21 h 5
4 50
7 45

~~Star t.~~

~~1.71~~
1.60
10 43 10 1.71
1.77
~~1.74~~

~~Star s.~~

~~1.84~~
10 44 22 1.97
1.98
~~1.77~~
1.70

Star r.

3.05
10 50 2 3.03
3.04
2.89
2.91
14.92 2.984

Log 2.984 = 0.474805

23.7400
11.10
8.73
3.39
12.12 = magn.

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1894phae.proj..528W

Dec. 22. 1894.

Star t again. Log 1.504 = 0.17725
5
0.88625
11.10
10.21
3.39
13.60 = magn

		1.44	
10	56	10	1.52
			1.51
			1.55
			1.50
			7.52 1.504

Star s again. Log 2.026 = 0.30664
5
1.53320
11.10
9.57
3.39
12.96 = magn.

		1.91	
10	58	0	2.09
			2.01
			2.03
			2.09
			10.13 2.026

Comp. Star used in preceding measurements was β Cephei (Beta Cephei)

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1894phae..proj..528W

Dec. 25, 1894

B & C 1182 B ~~294~~ 103

12	44	12.0	12	45	0,0
12	45	12.0	12	46	0,0

B + C = 48^s slow.

Resp. Insp. I. Obst. B. W. obs. Clymer rec.
Comp. with 1st Sat following. = Sat II.

Limit of Vis.

	13	10	33.5	121.0	25.5 < 541.9 <
			45.0	146.5	135.5 <
13^h 11^m 47^s			58.0	124.2	
		11	40.0	150.2	26.0 < / 25.8 <
13 14 33	13	13	45.0	Sem.	
36			48.0	118.5	35.0 <
47			59.0	153.5	38.3 <
54			5.5	115.2	42.0 <
15 4			15.5	157.2	45.7 <
10			21.5	111.5	48.5 <
17			29.0	160.0	46.3 <
24			36.0	113.7	46.3 <
32			43.5	160.0	50.2 <
38			50.0	109.8	53.9 <
43			55.0	163.7	55.0 <
50			2.0	108.7	55.5 <
58			10.0	164.2	55.7 <

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1894phae.proj.,528W

Dec. 25, 1894

13h 16m 8s		15	19.5	108.5	60.4 <	
	16		28.0	168.9	62.7 <	
	24		35.5	106.2	63.0 <	
	30		42.0	169.2	66.4 <	
	38		49.5	102.8	65.5 <	
	44		56.5	168.3	65.5 <	
	52	16	4.0	102.8	70.6 <	
	59		11.0	173.4	71.2 <	
17	8		20.0	102.2	69.8 <	
	15		27.0	172.0	75.0 <	
	21		33.0	97.0	76.7 <	
	30		41.5	173.7		
			49.0	100.0	74.9	547.5
			55.0	174.9		136.9
17	48	17	2.0	99.2	74.2	
			12.0	173.4	74.6	
			19.0	95.0	81.0	537.2
18	20		26.5	176.0		134.3
			39.0	92.0	82.2	
			41.5	174.2	81.6	
			49.0	96.5	80.5	547.3
			57.0	177.0		136.8
	49	18	5.0	97.0	79.8	
			13.0	176.8	80.2	
			24.0	92.0	87.0	544.1
			32.0	179.0		136.1

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1894phae..proj...528w

Dec. 25, 1894.

$13^h\ 19^m\ 25^s$	18	42.0	91.2	4	85.0	
		50.0	176.2		86.0	
		57.0	92.0		85.8	545.1
57	19	6.5	177.8			136.3
		13.0	95.0	5	85.3	
		20.5	180.3		85.6	
		29.5	95.0		84.7	545.6
20 29		37.0	179.7	6		136.4
		42.5	93.9		83.1	
		54.0	177.0		83.9	
	20	5.0	96.2		82.2	544.7
		14.5	178.4	7		136.2
21 27	21	~~52.0~~ 4.0	89.6		90.9	
		13.0	180.5		86.6	
		21.5	91.3		91.2	543.6
22 23		29.5	182.5			135.9
		37.0	91.1	8	87.6	
		50.0	178.7		890.4	

Seeing somewhat blurry but not very bad. Sat. reappeared close to limb of Jup. so that 1st setting was probably a little delayed. Sat. suspected a little before the first time given but could not be certain of it & no equalization was possible.

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1894phae.proj..528W

December 25, 1894.

Lick 1182			Ball 103		
13	35	12.2	13	36	0.0
13	36	12.2	13	37	0.0

B+C. = 48^s slow.

Ball 103 is 0.^{s}5 fast.

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1894phae.proj.-.528W

Dec. 27. 1894.

G. 236.

1 ✓4 19.✓
✓✓ 19.6

Balloon 10.B.

7 19 0.0
20 0.0

AB 236 = 6m 3s slow.

Reappearance of 7 written I.: Phot R: W: obs. Chamberlain: compared with first of two satellites preceding = prob. Sat. II.

Limit of Visibility.

2h	11	56	117.2	38.8	546.5
	12	16.5	156.0		136.6
7 37 5		37.5	119.7	33.9	
~~2h 18m 28s~~	13	0	153.6	36.4	

7 42 46

2h	18	10	seen.	
		16	111.8	53.4 <
43		29.5	165.2	53.1 <
		39.5	112.1	48.0 <
		48.5	160.1	59.0 <
		55.5	101.1	68.9 <
	19	0	170.0	69.2 <
		8.5	100.8	65.2 <
		16.5	166.0	67.1 <
44		30	98.9	75.1 <
		37	174.0	75.0 <
		42.5	99.0	70.2 <
		50.5	169.2	68.7 <
	20	0	100.5	71.4 <

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1894phae.proj..528W

Dec. 27, 1894.

							171.9	
	44	44			8,5		171.9	76.9 <
	46	7			15,5		95.0	79.0 <
		52			22.5		174.0	78.0 <
		58			30		96.0	78.8 <
45		6	4		37		174.8	83.8 <
		29			49		91.0	91.7 <
		13			0		182.7	90.7 <
		25			9,5		92.0	89.2 <
		36			20,5		181,2	
		46	21		34		87.9	95.1 542.6
47		58			43		183.0	135.6
46		2			50,5		93,2	1 85.3
		7			59		178.5	90.2
		8			7		91.3	
		6	22		14,5		179.2	87.9 539.8
		7	7	46 54	21		86.8	135.0 2
		8			29,5		182.5	95.7
		9			38		87.8	91.8
		27	4	47 26	45		183.9	96.1 545.7
		44	1		53,5		89.0	3 136.4
		3			1,5		183.0	96.0
29		1	23		10,5		89.2	96.0
		7	7	48 5	22,5		183.2	542.6
		1	1		36,5		90.2	96.0 135.6
		5			48		182.0	4
		6			4		88.9	91.8
28		1	25		13,5		182.7	93.9 548.4
		2	7	48 53	24,5		91.8	93.8 137.1
		29	1		31		185.0	5
		4			42		85.9	93.2
		50	7	49 30	51.5		182.1	93.5 545.7
			1					96.2 136.4

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1894phae.proj...528W

Dec. 27. 1894.

4h	48	7			59	90.9		
	49	8		26	7	186.8	95.96 / 96.0	
	50	9			16.5	89.5	96.2	545.5 / 136.4
	51	10	7	50	26.5	185.7		
	52	11			38.5	85.1	100.1 / 98.2	
	53	12			48.5	185.2		
	54	13			58	88.8	99.2	547.0 / 136.8
	55	14	7	51	9.5	188.0		
	56	15		27	22	88.2	8 / 938 / 96.5	
	57	16			29.5	182.0		

Much wind and sudden clearing of storm so that Jupiter was somewhat blurry: satellite also reappeared close behind to Jupiter: probably first setting ~~somewhat~~ a little delayed on account of this.

B. 236.

2	35	26.0	
	36	26.1	

Ballon 103.

2	41	29.3
8	0	0.0
	1	0.0

Ballon 103 just right.
B 236 = 6 in 3° slow
Ice in grooves, Cleared it out.

8 30 Cloudy.

8 50 Still cloudy.

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1894phae.proj.528W

Dec. 29. 1894.

R. ws. Min: Phot. O. W: obs.

16 3H +72.9
2 15
9 41

h. H. m.
m. ~~4.5~~ 5. n.
n. 4.5 0.
0 3 6

Measurement of faint comparison stars for R. ws. Min.

Star h.

3.08
3.19
2.99
3.10
3.15
15.51 3.102.

Star m.

2.75
2.91
2.87
2.90
2.96
14.39 = 2.878

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1894phae..proj...528w

Dec. 29. 1894.

Star m.

8 12 5

2.58
2.12
2.41
2.41
2.32
11.84 2.368

Star 0.

8 16 40

1.87
1.88
1.85
1.89
1.87
9.36 1.872

Same comparison stars taken again as emergent pencils were not coincident & gave much trouble.

Emergent pencils adjusted and following series thought to be much better.

Star 0 again.

8 25 20

1.85
2.01
2.00
2.11
2.00
9.97 1.994

Log 1.994 = 0.29973
5
1.49865
11.10
9.60
3.27
12.87 = mag.

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1894phae.proj. .528W

Dec. 29. 1894.

Star b again. Log 3.384 = 0.52943

3.46
3.63
3.02
3.25
3.56
16.92 3.384

2,64715
11.10
8.45
3.27
11.72 = magn.

Star m again. Log 2.830 = 0.45179

2.77
2.78
2.78
2.86
2.96
14.15 2.830

2,25895
11.10
8.84
3.27
12.11 = magn.

Star n again. Log 2.376 = 0.37585

2.44
2.37
2.35
2.31
2.40
11.87 2.376

1,87925
11.10
9.22
3.27
12.49 = magn.

Mean time = 8h 29m 52s

Comparison star used in above measurements =
5 Draconis (Zeta Draconis)
5. Cephei. Phot. d: W: obs.

2 | 5 +68.1
3 | 45
6 | 40

Comparison star = β Cephei (Beta Cephei)

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1894phae..proj...528W

Dec. 29. 1894.

Star t.

1.52
1.65
1.71
~~1.78~~ 1.79
1.59
8.17 1.634

9 22 23

Log 1.634 = 0.21325
5
1,06625
11.10
10.03
3.39
13.42 = magn.

Star S.

2.12
2.20
2.01
2.15
2.10
10.58 2.116

9 26 11

Log 2.116 = 0.32552
5
1.62760
11.10
9.47
3.39
12.86 = magn.

Star r.

3.40
3.20
3.42
3.28
3.34
16.64 3.328

9 30 36

Mean time $9^h 26^m 23^s$

Log 3.328 = 0.52218
5
2.61090
11.10
8.49
2.39
11.88 = magn.

S. Cephei: Phot. d: W. obs.

21 39 +7 8.3
4 25
6 48

Comparison star = γ Cephei (gamma Cephei)

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1894phae.proj.528W

Dec. 29. 1894.

Star R.

~~5~~. 21
~~5~~. 31
5. 20
5. 32
5. 27
26. 31 5. 262

Log 5. 262 = 0. 72115
5
3 60575
11. 10
7. 49
3. 37
10. 86 = magn.

Star b.

5. 44
5. 34
5. 34
5. 27
5. 53
26. 95 5. 390

Log 5. 390 = 0. 73159
5
3. 65795
11. 10
7. 44
3. 37
10. 81 = magn.

Star m.

2. 40
2. 53
2. 80
2. 70
2. 67
13. 10 2. 620

Log 2. 620 = 0. 41830
5
2. 09150
11. 10
9. 01
3. 37
12. 38 = magn.

Star p.

1. 93
2. 20
2. 19
2. 00
2. 14
10. 46 2. 092

Log 2. 092 = 0. 32056
5
1. 60280
11. 10
9. 50
3. 37
12. 87 = magn.

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1894phae..proj...528W

Dec. 29. 1894.

Star r. Log 1.010 = 0.00432 5

0.87 0.02160

10 23 10 1.03 11.10

1.09 11.08

~~1.21~~ seem to lie wrong. 3.37

1.08 14.45 = magn.

0.98

5.05 1.010

Star s. Log 0.882 = 9.94547 5

0.78 49.72735

10 26 14 0.95 0.27265

0.91 11.10

0.92 11.37

0.85 3.37

4.41 0.882 14.74 = magn.

Star t. Log 0.730 = 9.86332 5

0.71 49.31660

10 28 47 0.80 0.68340

0.78 11.10

0.67 11.78

0.69 5 3.37

3.65 0.730 15.15 = magn.

Star q. Log 1.932 = 0.28601 5

1.95 1.43005

10 31 56 1.90 11.10

2.02 9.67

1.99 3.37

1.80 13.04 = magn.

9.66 1.932

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1894phae.proj..528W

Dec. 29, 1894

Star m.

3.70
3.42
~~3.94~~ wrong.
3.43
3.60
~~3.55~~ 5
17.70 3.540

Log 3.540 = 0.54900
5
2.74500
11.10
8.36
3.37
11.73 = magn.

Star O.

2.32
2.23
2.24
2.19
2.15
11.13 2.226

Log 2.226 = 0.34753
5
1.73765
11.10
9.36
3.37
12.73 = magn.

Comparison star = γ Cephei (gamma Cephei)

O Ceti:

5 40
2/3 4/36

-2.5

Index to left and below.

347.0
107.2 ∠ comparison star dis.
341.2 120.2°
104.3 123.1°
243.3°
116.7

~~0.1~~ -1.27

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1894phae..proj..528W

Dec 20. 29. 1894.

Index to right and above.

		68.1		
		202.8	134.7^	
11	4	20		
		74.0	126.9^	~~0.3~~^
		200.9	261.6^	-1.70
			98.4	
		44.3		
		194.8	117.5^	
11	5	45		
		75.4	123.6^	~~0.4~~^
		199.0	241.1^	-1.22
			118.9	

Index to left and below.

		159.8	132.2^	
11	7	45		
		292.0		
		171.2	112.8^	
		284.0	245.0^	~~0.7~~^
			115.0	-1.30
		~~167.5~~		
		~~175.1~~		
		260.6	113.1^	
11	9	22		
		164.0	125.0^	~~0.6~~^
		289.0	238.1^	-1.15
			121.9	

Index to right and above.

		257.0		
		13.0	116.0^	
11	11	2		
		260.0	114.8^	1.0^
11	~~07~~	~~05~~	230.8^	-1.00
	06	48	129.2	

Troubled somewhat by frost on eyepiece.

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1894phae.proj..528W

Jan. 1. 1895.

Measst. of Comp. Stars for R Draconis with Phot. I. 4 in. Ob.

16 26 +67.4
26 20
+9 6

Star g

1.32
1.21
1.20
1.1 v
1.2 v
6.10 1.220

Log 1.220 = 0.08636
5
0.43180
11.10
10.67
2.82
13.49 = magn.

7 39

Star r

1.2 v
1.20
1.33
1.3 v
1.16
6.26 1.252

Log 1.252 = 0.09760
5
0.48800
11.10
10.61
2.82
13.43 = magn.

Star u

0.7 v
0.83
0.6 v
0.70
0.73
3.66 0.732

Log 0.732 = 9.86451
5
49.32255
0.67745
11.10
11.78 =
2.82
14.60 = magn.

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1894phae..proj..528W

Jan. 1, 1895.

Star t. Log 0.708 = 9.85003

0.85		5	
0.70		49.25015	
0.67		0.74985	
0.85		11.10	
0.77		11.85	
3.54	0.708	2.82	
		14.67 = magn.	

Star s Log 0.894 = 9.95134

0.89		5	
0.95		49.75670	
0.96		0.24330	
0.87		11.10	
0.80		11.34	
4.47	0.894	2.82	
		14.16 = magn.	

Star v Log 0.520 = 9.71600

0.50		5	
0.55		48.58000	
0.51		1.42000	
0.55		11.10	
0.70		12.52	
2.60	0.520	2.82	
		15.34 = magn.	

Star w Log 0.582 = 9.76492

0.57		5	
0.60		48.82460	
0.55		1.17540	
0.52		11.10	
0.67		12.28	
2.91	0.582	2.82	
		15.10 = magn.	

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1894phae.proj.,528W

Jan. 1. 1894.

Star β. Log 1.870 = 0.27184
5
1.35920

2.00	11.10
1.91	9.74
1.80	2.82
1.83	12.56 = magn.
1.81	
9.35 1.870	

Star ο Log 2.238 = 0.34986
5
1.74930

2.40	11.10
2.43	9.35
2.10	2.82
2.20	12.17 = magn.
2.01	
11.19 2.238	

Star ν Log 3.968 = 0.59857
5
2.99285

3.90	11.10
4.01	8.11
4.00	2.82
3.90	10.93 = magn.
3.94	
19.84 3.968	

Δ V 1

Comp. Star used in above measurement was γ Draconis (Eta Draconis)

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1894phae..proj...528W

Jan. 1, 1894 V.

Meast. of Saint Comp. class for R Ura. Min. Plat. I. G. ob.

16	34	+72.9
24	10	
11	36	

L 4 m.
m 3 2
m 3,7 0
0 4 8

The above in final reduction, as added,

9 40

Star L	Log 3.636 = 0.56062
3,62	5
3.99	2.80310
3.96	11.10
3,31	8.30
3.30	3.27
18.18 3.636	11.57½ magn.

Star m	Log 2.602 = 0.41531
2,57	5
2,61	2.07655
2,72	11.10
2,77	9.02
2,72	3.27
13.01 2.602	12.29 = magn.

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1894phae.proj..528W

Jan. 1. 1894.

Star w	Log 2.350 = 0.37107
2.24	5
2.40	1.85535
2.19	11.10
2.49	9.24
2.43	3.27
11.75 2.350	12.51 = magn.

Star O	Log 1.916 = 0.28240
1.93	5
2.02	1.41200
2.09	11.10
1.83	9.69
1.71 (1.71)	3.27
9.58 1.916	12.96 = magn.

10 1

Comp. Star in above means = 8 Draconis (Zeta Draconis)

Means of Faint Comp. Stars for

T Cephei. H. obs.

21	v	+.16 ±1
29	0	
+7	vv	

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1894phae.proj...528W

Jan. 1. 1895.

Star t. Log 1.654 = 0.21854
5
1.09270
11.10
10.01
3.39
13.40 = magn.

10 20

1.61	
1.67	
1.79	
1.64	
1.66	
8.27	1.654

Star s Log 2.128 = 0.32797
5
1.63985
11.10
9.46
3.39
12.85 = magn.

2.02	
2.14	
2.14	
2.14	
2.16	
10.64	2.128

Star r Log 3.250 = 0.51188
5
2.55940
11.10
8.54
3.39
11.93 = magn.

10 43

3.11	
3.14	
3.23	
3.24	
3.49	
16.25	3.250

Comp. Star same as on Dec. 29 =
= β Cephei (Beta Cephei)

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1894phae.proj..528W

Jan. 2. 1895.

Σ. Ursae maj: * W: obs.

12	33	+60.4
2	25	
10	8	

abandoned.

R. Aurigae: W: obs.

5	3	+53.0
2	30	
-2	33	
9	27	

estimate = 13.0 : in large telescope : too faint for finder.

7 +3 +5 9 3 var : var. 2 2

S Cygni : W: obs.

20	8	+57.2
2	45	
6	37	

Star t faintly seen : star u pretty certainly seen at intervals ; variable quite certainly seen at intervals and by indirect vision.

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1894phae.proj..528W

Jan. 2, 1895.

8 0 0 t. 2. var.: var. 3. u.
in large telescope: too faint for finder:
estimate = 14.7.

T. Ursae. Maj. W: obs.

12	33	+60.4
3	10	
-9	23	
2	37	

S 2 var: var. 4 t
in large telescope: too faint for finder.
estimate = 12.3.

Region rather low: moon somewhat bright and observation difficult.

variable thought to be correctly identified but from faintness, low altitude, and moonlight, there is a possible difficulty about identification of variable with relation to adjacent stars.

4 35 0

R. Cassiop. W: obs.

23	52	+49.7
3	45	
3	53	

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1894phae.proj..528W

Jan. 2. 1895.

Star β. (beta) Log 0.408 = 9.61066
5
48.05330
1.94670

0.35
0.47
0.39
0.43
0.40
2.04 0.408

This is faint comp. star β. – the last in the series of comp. stars.

11.10
13.05
2.42
15.47 = magn.

Star α (alpha) Log 0.484 = 9.68485
5
48.42425
1.57575
11.10
12.68
2.42
15.10 = magn.

0.53
0.52
0.48
0.45
0.44
2.42 0.484

Star γ. Log 0.598 = 9.77670
5
48.88350
1.11650
11.10
12.22
2.42
14.64 = magn.

0.62
0.61
0.59
0.58
0.59
2.99 0.598

Star ζ. Log 0.544 = 9.73560
5
48.67800
1.32200
11.10
12.42
2.42
14.84 = magn.

0.53
0.59
0.53
0.52
0.55
2.72 0.544

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1894phae.proj..528W

Jan. 2. 1895.

Star w. Log 0.830 = 9.91908
5
49.59540
0.40460
11.10
11.50
2.42
13.92 = magn.

0.85
0.88
0.82
0.78
0.82
4.15 0.830

9 48 39

Star x. Log 0.694 = 9.84136
5
49.20680
0.79320
11.10
11.89
2.42
14.31 = magn.

0.73
0.77
0.62
0.70
0.65
3.47 0.694

9 52 18

Star t. Log 1.408 = 0.14860
5
0.74300
11.10
10.36
2.42
12.78 = magn.

1.34
1.50
1.40
1.43
1.34
7.04 1.408

9 57 3

Star u. Log 1.284 = 0.10857
5
0.54285
11.10
10.56
2.42
12.98 = magn.

1.10
1.21
1.39
1.34
1.38
6.42 1.284

9 59 45

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1894phae.proj..528W

Jan. 2. 1895.

Star r.

1.66	
1.62	
1.62	
1.79	
1.90	
8.59	1.718

Log 1.718 = 0.23502

5

1.17510

11.10

9.92

2.42

12.34 = magn.

Star r difficult being close to variable.

Star s.

1.40	
1.64	
1.66	
1.61	
1.49	
7.80	1.560

Log 1.560 = 0.19312

5

0.96560

11.10

10.13

2.42

12.55 = magn.

Star q.

2.10	
2.22	
2.19	
2.25	
2.30	
11.06	2.212

Log 2.212 = 0.34479

5

1.72395

11.10

9.38

2.42

11.80 = magn.

Mean time 9 51 37

Comparison star used in preceding measurements = β Cassiop (beta Cassiop.)

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1894phae.proj..528w

Jan. 2. 1895

☉ Leti :	Phot. R:	W: obs.
2	4	-2.5
5/3	30/26	

Index to left and below.

347.5	∠ comparison stands.	
10 36 5 104.8	117.3 ^	
338.2	128.0 ^	
106.2	245.3 ^	~~0.4~~ ^
	114.7	-1.31

Index to right and above.

256.3	118.8 ^	
10 38 31 15.1		
251.5	129.2 ^	
	248.0 ^	~~0.6~~ ^
20.7	112.0	-1.37

251.1	129.8 ^	
10 40 4 20.9		
254.0	119.7 ^	
	249.5 ^	~~0.6~~ ^
13.7	110.5	-1.41

Index to left and below.

347.1	116.0 ^	
10 42 11 103.1		
340.0	128.2 ^	-1.29
106.2	244.2 ^	~~0.4~~ ^
	115.8	

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1894phae.proj..528W

Jan. 2. 1895.

		340.6	129.3^	
10	44	10	109.9	
		345.9	119.9^	-1.40
		105.8	249.2^	~~0.6~~^
			110.8	

Index to right and above.

		77.1	116.7^	
10	46	31	193.8	
10	41	15	70.0	131.2^ -1.37
		201.2	247.9^	~~0.6~~^
			112.1	

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1894phae.proj.:528w

Posted to here.

Jan. 4. 1895.

measurement of faint comparison stars for R Lyncis with Phot. D: W: obs.

6	+9	+55.1
2	+5	
-4	4	
7	56	

r 3.5 var: var 2 s:

absolute estimate 13.8 : estimate probably a little affected by moon-light.

7 56 0

S Ryttes bright for measurement of faint comparison stars with Phot. D.

Nova Aurigae: Phot R: W: obs.

5	23	+72.0
3	7	
-2	16	
9	44	

Index below.

8 9 0

~~183.9~~ < north following star dis.

269.1

172.0

269.7

~~65.2~~

~~97.7~~

18 2.9

~~1.9~~

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1894phae.proj..528W

Jan. 4. 1895.

Index above: This set and one on previous page rejected as it was found that telescope was out of focus. Reversed and began anew.

265.3	101.7	
7.0	78.5	2.0
276.5	180.2	
355.0		

Index above.

274.1	81.6^	
355.7		
262.0	106.7^	
8.7	188.3^	1.8^
	171.7	-0.16

Index below.

351.2	106.7^	
97.9	85.8^	
2.9	192.5^	1.8^
88.7	167.5	-0.24

4.2		
87.0	82.8^	
352.1	105.1^	
97.2	187.9^	1.9^
	172.1	-0.15

Index above.

81.0	109.0^	
190.0	82.7^	
95.0	191.7^	1.8^
177.7	168.3	-0.22

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1894phae.proj...528W

Jan 4. 1895.

95.8 80.2^
8 22 10 176.0 108.4^
82.5 188.6^ ~~11.4~~^
~~188.4~~ 171.4 -0.16
190.9

Index below.

172.5 104.5^ -0.07
8 25 24 277.0 79.2^ ~~1.9~~^
8 19.7 186.2 183.7^
265.4 176.3

Altitude high and moon rather bright making observations rather difficult.

O	Clti:	Phot. R:	W: obs
2	4		-2.5
3	40		
1	36		

Index to right and above.

256.2 < comp. star dis.
8 46 49 17.9 121.7^
248.0
23.0 135.0^ ~~0.4~~^
256.7^ -1.5P
103.3

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1894phae.proj..528W

Jan. 4. 1895.

Index to left and below.

		335.1		
		~~334.0~~	139.5^	
8	49	44	114.6	
			123.8^	
			263.3^	~~0.3~~^
			96.7	-1.77
		343.7	124.0^	
8	51	43	109.7	
			139.7^	
			263.7^	~~0.3~~^
			96.3	-1.75

Index to right and above.

		67.0		
			136.2^	
8	54	2	203.2	
			123.9^	
			260.1^	~~0.3~~^
		198.0	99.9	-1.66
		94.2		
			121.8^	
8	56	0	196.0	
			134.8^	
			256.6^	~~0.4~~^
		202.8	103.4	-1.57

Index to left and below.

		156.1		
			137.7^	
8	58	22	293.8	
			126.5^	
			264.2^	~~0.2~~^
8	52	47	95.8	-1.76

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1894phae.proj...528W

Jan. 4. 1895.

m. P.	HH:	Phot. R:	W: obs.
3	31		+62.8
4	29		
0	58		

Index to left and below.

243.1 ∠ comp. star dis.

9 30 51	26.5	143.4^	
	255.0	121.1^	-1.77
	16.1	264.5^	0.2^
		94.5	

Index to right and above.

	344.0		
9 34 11	106.5	122.5^	
	334.5		-1.80
	~~332.0~~	143.0^	0.2^
	117.5	265.5^	
		94.5	

	332.4		
9 37 0	118.3	145.9^	
	343.9		-1.90
	107.4	123.5^	0.1^
		269.4^	
		906	

Index to left and below.

	72.5	130.5^	
9 40 5	203.0		-2.05
	~~68.7~~ 64.7	144.6^	-0.1^
	209.0	275.1^	
		84.9	

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1894phae.proj..528W

Jan. 4. 1895.

		63.8	144.7^		
9	43	43	208.5		−2.09
			70.9	131.8^	−0.1^
			202.7	276.5^	
				83.5 −	

Index to right and above.

			161.0	128.0^	
9	46	39	289.0		−1.99
			153.2	144.8^	0.0^
9	38.7		298.0	272.8^	
				87.2	

R. Cassiop: Phot. d: W: obs

23	32	+49.7
5	0	
5	8	

Star Beta.

	0.47	
10	0.47	
	0.52	
	0.50	
	0.48	
	2.44^	0.488^

Log 0.488 = 9.68842^
5
48.44210^
1.55790^
11.10
12.66^
2.42
15.08^ = magn.

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1894phae..proj..528W

Jan. 7. 1895.

Star alpha.

10	10	30

0.50
0.52
0.52
0.53
0.54
2.61^ 0.522^

Log 0.522 = 9.71767^
5
48.58835^
1.41165^
11.10
12.51^
2.42
14.93^ = magn.

Star γ.

10	13	26

0.55
0.56
0.56
0.58
0.59
2.84^ 0.568^

Log 0.568 = 9.75435^
5
48.77175^
1.22825^
11.10
12.33^
2.42
14.75^ = magn.

Star ζ.

10	15	17

0.54
0.54
0.53
0.52
0.49
2.65^ 0.530^

Log 0.530 = 9.72428^
5
48.62140^
1.37860^
11.10
12.48^
2.42
14.90^ = magn.

Star ω.

10	18	21

0.71
0.70
0.70
0.73
0.73
3.57^ 0.714^

Log 0.714 = 9.85370^
5
49.26850^
0.73150^
11.10
11.83^
2.42
14.25^ = magn.

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1894phae.proj..528W

Jan. 4. 1895.

Star t.

10	20	36

1.13
1.10
1.18
1.15
1.13
5.69^ 1.138^

Log 1.138 = 0.05614^
5
0.28070^
11.10
10.82^
2.42
13.24^ = magn.

Star u.

10	23	58

0.98
1.07
1.12
1.17
1.15
5.49^ 1.098^

Log 1.098 = 0.04060^
5
0.20300^
11.10
10.90^
2.42
13.32^

Star x.

~~first~~ wrong.

10	29	22

0.61
0.66
0.66
0.64
0.60
3.17^ 0.634^

Log 0.634 = 9.80209^
5
49.01045^
0.98955^
11.10
12.09^
2.42
14.51^ = magn.

Star s.

10	31	54

1.49
1.48
1.40
1.45
1.43
7.25^ 1.450^

Log 1.450 = 0.16137^
5
0.80685^
11.10
10.29^
2.42
12.71^ = magn.

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1894phae.proj...528W

Jan. 4. 1895.

Star q.

1.80
1.95
1.91
1.82
1.95
9.43^ 1.886^

Log 1.886 = 0.27554^
5
1.37770^
11.10
9.72^
2.42^
12.14 = magn.

10 26 25

Star r.

1.76
1.98
1.74
1.79
1.63
8.60^ 1.720^

Log 1.720 = 0.23553^
5
1.17765^
11.10
9.92^
2.42^
12.34 = magn.

10 29 12

Variable (= R Cassiop.)

5.04
4.79
4.52
4.69
4.59
23.63^ 4.726^

Log 4.726 = 0.67449^
5
3.37245^
11.10
7.73^
2.42
10.15^

10 43 41

Mean time = 10h 24m 11s

Measurements rather difficult on account of moon-light and faintness of faint stars as well as on account of bright back ground of sky in larger telescope.

Comparison star same as on Jan. 2. 1895 page 46 L = Beta Cassiop.)

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1894phae.proj..528W

Friday Jan. 11, 1895

α Aql. 958
11 : 11 : 44.0
11 : 12 : 44.0

α Bell 103
11 : 11 : 00
11 : 12 : 00

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1894phae..proj..528W

Monday Jan 14, 1895

α + 10, 958			Ball 103.		
6	13	52.3	6	13	0,0
6	14	52.3	6	14	0,0

Kraft. of Jup. III. Phot R. W. Obs. Clymerre.
Comp. with eastern most Sat. = Satt I.

Sim. Vis.

6	38	17.0	309.3		
		44.0	321.3	12.0	1260.8
					315.2
6 38 5	39	9.0	309.2	11.8	
		41.0	321.0	11.9	

6	45	27	6	46	20.5	Sim.
		37			30.5	306.2 20.5
		49			42.5	326.7 24.8
		54			47.0	301.9 25.1
	46	2			55.0	327.0 23.7
		9		47	1.5	303.3 26.7
		15			7.5	330.0 26.2
		20			13.0	303.8 28.2
		26			14.0	332.0 31.0
		32			25.0	301.0 35.0
		39			32.0	336.0 40.0
		47			39.5	276.0 40.3
		52			45.0	336.3 41.3

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1894phae.proj..528W

Jan. 14, 1895

6	46	59		51.5	295.0	45.0	
	47	5		58.0	340.0	46.1	
		11	48	3.5	293.9	49.2	
		17		10.0	343.1	51.9	
		21		14.5	297.2	46.6	
		26		19.0	337.8	48.0	
		37		31.0	289.8	52.0	
		44		38.5	341.8	51.8	
		52		46.5	290.0	54.0	
		59		53.0	344.0	58.2	
	48	4		58.0	285.8	61.2	
		10	49	3.5	347.0	60.0	
		17		11.0	287.0	57.1	
		22		16.0	344.1	58.1	
		28		22.5	286.0	60.0	
		34		28.0	346.0		
				33.5	285.9	57.4	1258.4
				38.0	343.3		314.6
6	48	54		44.0	282.8	65.2 / 61.3	
				51.0	347.2		
				56.0	283.1	67.9	1272.8
6	49	16	50	2.5	351.0		318.2
				13.5	282.0	74.7 / 71.3	
				20.0	356.7		
				27.0	278.8		1262.7
				32.0	353.0	74.2	315.7
6	49	48		46.0	274.0		
				57.0	356.9	82.9 / 78.6	

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1894phae.proj..528W

Jan. 24, 1895

		51	5.0	276.2	79.8		1262.4 315.6
6	50	24	12.5	356.0			
			21.0	273.2	83.8		
			32.0	357.0	81.8		
			39.0	272.2	85.8		1261.9 ~~201.9~~ ~~2255~~
			47.0	358.0			315.5
6	50	57	54.0	269.7	92.3		
		52	1.5	2.0	89.0		1263.8 ~~543.8~~ ~~136.0~~
			8.5	270.8	90.2		316.0
			14.0	1.0		6	
6	51	27	24.5	271.0	90.0		
			34.0	1.0	90.1		1269.7 ~~549.7~~ ~~137.4~~
			42.0	266.7	96.3		
6	52	3	~~50.0~~	3.0		7	317.4
	6	53	0.5	272.0	96.0		
			10.5	08.0	96.2		
			17.0	270.0	91.4		1260.2 ~~540.2~~ ~~135.0~~
6	52	36	26.0	1.4		8	315.0
			34.0	265.8	97.2		
			40.0	8.0	94.3		1272.4 ~~652.4~~ ~~138.1~~
			48.0	268.7	95.3		318.1
			57.0	4.0		9	
6	53	8	3.0	269.1	101.5		
		54	16.0	10.6	98.4		1257.6 ~~537.6~~ ~~134.3~~
			25.0	263.0	104.0		
			34.0	7.0		10	314.3
6	53	47	45.0	259.1	108.9		
					106.4		

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1894phae.proj..528W

Jan. 14, 1895

					10
		56,0	8.0		
	55	2.5	257.0	111.9	1253.9 / 533.9 / 133.5 / 313.5
		10.5			
6	54	29	20,0	8.9	11
			27.0	261.0	106.0
			39.0	7.0	109.0
			48.0	258.0	116.0
6	55	17	9.0	14.0	1265.5 / 545.5 / 136.4 / 316.4
	56		12,0	260.2	113.1
			27.0	13.3	114.6
			36,0	258.0	109.9
			46.0	7.9	1276.5 / 550.5 / 134.1 / 314.1
6	55	57	55.0	262.8	
			3.5	7.8	105.0 / 107.4
	57		15,0	269.8	99.0
			22.0	8.8	1271.6 / 551.6 / 137.9 / 317.9
6	56	35	32,0	258.0	117.0
			43.0	15.0	108.0
			53.0	259.8	112.0
6	57	13	3,0	11.8	1263.5 / 548.5 / 135.9 / 315.9
	58		10,0	262.9	106.1
			18.0	9.0	109.0
			24.0	264.7	104.3
			33.0	9.0	1265.4 / 545.4 / 136.4 / 316.4
6	57	45	42.0	263.0	106.0
			51.0	9.0	105.2
			59.5	262.0	

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1894phae.proj..528W

Jan. 14, 1895.

6	58	18		59	7.5	10.3	108.3	1263.5 ~~543.5~~ ~~+36.9~~ 316.9
					13.0	263.0	5	17
					21.5	8.2	105.2	
					32.0	263.7	106.8	1270.1 ~~550.1~~ ~~+37.5~~ 317.5
					43.0	11.7	108.0	12
6	59	00	7	0	3.5	262.5	6	
					13.0	12.2	109.7	
					22.0	262.8	108.8	1264.3 ~~544.3~~ ~~+36.1~~ 316.1
					28.0	10.2	107.4	19
6	59	40			37.5	262.1		
					45.0	9.2	107.1	
					55.0	260.0	107.2	1269.1 ~~549.1~~ ~~+36.8~~ 317.3
			7	1	20.5	13.0	113.0	20
7	0	28			31.0	266.2	8	
					39.0	9.9	103.7	
							108.4	

Seeing pretty good. Images however a little blurry.

Yr. IV. II. III. I. E.

A + D 958

			Ball 103
7	13	52.5	7 : 13 0.0
7	14	52.5	7 : 14 0.0

Ballon 103 is 0.s2 fast. A + D. 53s fast.

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1894phae.proj..528W

Jan. 14. 1895.

o Ceti : Phot. R: W: obs.

2	4	-2.5
4	0	
1	56	

Index to left and below.

333.9 ∠ comp. star dis.

116.0	142.1^	
~~325.7~~		
329.4	152.6^	
	294.7^	~~-0.7~~^
122.0	65.3	-2.67

Index to right and above.

59.0	152.3^	
211.3		
63.9	142.6^	
	294.9^	~~-0.7~~^
206.5	65.1	-2.67

64.3	141.6^	
205.9		
59.4	151.6^	-2.61
	293.2^	-0.6^
211.0	66.8	

Index to left and below.

149.8	153.3^	
303.1		
154.0	140.1^	-0.6^
	293.4^	-2.62
294.1	66.6	

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1894phae..proj..528W

Jan. 14. 1895.

	154.6	142.7 ^	
8 33 25	297.3		
	149.3	152.6 ^	-0.4 ^
	301.9	295.3 ^	-2.69
		64.7	

Index to right and above.

	239.1	151.1 ^	
8 35 22	30.2		
	245.8	139.3 ^	-0.5 ^
8 30 04	25.1	290.4 ^	-2.52
		69.6	

Σ590 : 55 Enid : Phot. R : W: obs

H	38	-9.0
H	30	
-0	8	
11	52	

Position angle = 340°: distance = 8": mag. = 6.3 and 6.8

blends.

Star angle and declination of this star seem a little out but it is the only double of this kind that can be found hereabouts.

blends.

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1894phae.proj..528W

Jan. 14. 1895

Index above. A.

354.0

blouds.

8 56 23	96.2	∠ fainter star dis.	
	359.6	102.2^	
	91.2	91.6^	
		193.8^	
		~~1.7^~~	
		166.2	−0.26

Index below. B.

	95.3	77.8^	
9 23 58	173.1		
	79.2	111.7^	~~1.8^~~
	190.9	189.5^	
		170.5	−0.14

	~~85.0~~		
9 24 10	~~191.0~~		
	93.5	83.5^	
	177.0		
	85.0	100.8^	
	~~+90.0~~	184.3^	
	185.8	~~1.9^~~	
A. Index above.		175.7	−0.08
	170.8	105.9^	
9 27 24	276.7		
	183.9	89.2^	
	273.1	195.1^	~~2.7^~~
		164.9	−0.29

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1894phae.proj..528W

Jan. 14. 1895.

184.8 — 82.6^
267.7
105.1^
174.1 — 187.7^ — ~~1.9^~~
279.2 — 172.3 — −0.14

B. Index below.

261.8 — 108.2^
10.0 — ~~87.7^~~ — ~~1.9^~~
274.1 — 195.9^ — ~~1.7~~
351.8 — 174.1 — −0.11

~~Index~~

2289: 33 Arict. Phot. R: Wilus.

2 — 33 — +26.5
6 — 16
3 — 43

Position angle = 350°; distance = 25″:
mag. = 5.5 and 9.0

Index below.

233.3 — < northern and fainter dis:
36.9 — 163.6^
236.1
33.2 — 157.1^
320.7^
489.3 — ~~1.8^~~ — −2.30

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1894phae.proj..528W

Jan. 14. 1895.

Index above.

	324.9	158.0 ^	
10 33 19	122.9		
		167.6 ^	
	320.9	~~325.6~~ ^	~~- 2.1 ^~~
	128.5	34.4	- 4.10

	322.0		
10 37 49	128.2	166.2 ^	
	325.0	158.0 ^	~~- 2.0 ^~~
	123.0	324.2 ^	- 4.01
		35.8	

Index below.

	56.9	158.3 ^	
10 36 16	215.2		
	52.2	165.7 ^	~~- 2.0 ^~~
	217.9	324.0 ^	
		36.0	- 4.09

	52.0		
		166.9 ^	
10 37 43	218.9		
	55.2	158.7 ^	~~- 2.1 ^~~
	213.9	325.6 ^	
		34.4	- 4.10

Index above.

	147.2	157.0 ^	
10 09 8	308.2		
~~32 16~~		165.6 ^	
	143.1	322.6 ^	~~- 1.9 ^~~
10 35 23	308.7	37.4	- 3.92

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1894phae..proj..528W

Jan. 17. 1895.

o Ceti: Phot R: W: obs.

2 4 -2.5
3 26
1 22

Index to ~~right~~ left and ~~above~~ below.

~~3 2 6. 1~~
~~2 4 3. 7~~
1 2 3. 3 < comp. star dis.
~~27. 7~~
3 3 1. 5
1 1 9. 2

157.2^
147.7^
304.9^
55.1

~~+1.1~~ ^
-3.05

Index to ~~left~~ right and ~~below~~ above.

~~60. 2~~
~~66. 0~~
148.7^
2 0 8. 9
5 6. 7
2 1 2. 5

155.8^
304.5^
55.5

~~+1.0~~ ^
3.04

57.7
2 1 3. 1
~~202. 4~~
6 2. 3
2 0 7. 2

155.4^
144.9^
300.3^
59.7

-0.9^
-2.86

Index to ~~right~~ left and ~~above~~ below.

1 5 4. 0
2 9 9. 0
~~299. 8~~
1 4 5. 9
3 0 4. 3

145.0^
158.4^
303.4^
56.6

~~+1.0~~ ^
-2.99

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1894phae.proj..528W

Jan. 17. 1895.

145.7 — 137.6 ^
303.3
152.2 — 147.0 ^
299.2
~~296.8~~ — 304.6 ^
55.4

- ~~1.0~~ ^
- 3.04

Index to right and above.

243.2 — 144.7 ^
27.9
237.1 — 156.9 ^
~~32.1~~
~~34.0~~ — 301.6 ^
34.0 — 58.4

- ~~0.9~~ ^
- 2.92

R. Urs. Maj: W. Obs.

10 — 32 — +69.3
4 — 5
16 — 27
5 — 33

Phot. R: ~~compar~~ relative measurement of R Ursae majoris and comparison star π which is about 3.5 north of variable and a little following.

Index to left and below.

7.9
8 3.0 < comparison star dis.
~~8 4.0~~ — 75.1
15.0
78.0 — 63.0
138.1

2.8

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1894phae.proj..528W

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Index to right and above.

			105.0	63.9	
8	29	58	168.9		
			96.0	83.2	2.6
			179.2	147.1	
			95.8	81.2	
8	32	58	177.0		
			102.0	69.0	
			171.0	150.2	2.6

Index to left and below.

			198.0	54.3	
8	36	36	252.3		
			186.0	74.1	
			260.1	128.4	3.0
			159.2	73.5	
8	40	1	262.7		
			199.0	53.5	
			252.5	127.0	3.0

Index to right and above.

			285.1	59.9	
8	44	9	345.0		
			272.1	84.0	2.7
			356.1	143.9	

Measurements difficult on account of faintness of variable.

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1894phae.proj..528W

Jan. 17. 1895.

S. H.5. var: var. ~~+~~ 2. ±.
in large telescope: too faint for finder:
estimate = 12.7.

Relative estimates of several comparison stars for R. Urs. Maj. W: obs.

Star l is brighter to-night than star k.

l	3.5	k in finder.
l	4	k in large telescope.
h	5	l in finder.
h	6	l in large telescope.
k	3	m in finder.
k	3.5	m in large telescope.
m	3.5	o in large telescope.
m	3	o in finder.
m	2	o in finder.
~~m~~	~~2~~	~~o in large telescope.~~
o	2	m in large telescope.
m	3	n in finder.
o	3	p in finder
o	4	p in large telescope
n	4	p in finder

9 42

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1894phae.proj..528W

Jan. 17. 1895.

Relative estimates of several faint comparison stars for δ. Cephei. W: obs

21		5		+68.1
6		0		
8		55		

~~b~~	4	h	in finder.
b	4.5	h	in large telescope.
h	3	~~g~~	in finder
h	3	g	in large telescope.
~~g~~	4	k	in finder
g	4.5	k	in large telescope.

10 25

R: Aurigae: W: obs

5	3	+53.0
6	33	
1	30	

P. 2.5 var : var 2 g in large
10 40 telescope : too faint for finder: estimate = 12.9.

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1894phae.proj..528W

Jan. 17, 1895.

S. wrs. maj. W: obs

12	33	60.4
6	50	
-5	43	
6	17	

abandoned

Rcap. Jup. I. Alert R. W. Obs, Clymer rec.
Comp with first of two Sat. fall. = Sat III.

Obs.			Obs.		
13	17	01.9	13	16	α 8
13	18	02.0	13	17	α 8

α + 10 958 = 61^s fast.

13	27	30	1h.	28	31,	Sun.
		36			37.	309.0 14.2 <
		44			45	323.2 21.2
		51			52	302.0 24.1 <
		56			57	326.1 28.4
13	28	1		29	2	297.7 34.6 <
		6			7.	332.3 34.5
		12			13.	297.8 35.2
		18			19	333.0 39.1
		24			25	293.9 41.3

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1894phae.proj...528W

Jan. 17, 1895.

13	28	31			32	335.2	43.0
		37			38	292.2	43.6
		42			43	325.8	49.9
		48			49	285.9	52.3
		53			54	238.2	51.2
	29	1		30	02	287.0	53.0
		6			7	340.0	57.2
		12			13	282.8	57.2
		19			20	340.0	54.8
		26			27	285.2	59.5
		31			32	344.7	60.5
		38			39	284.2	61.0
		45			46	345.2	67.4
		51			52	277.8	70.4
	30	1		31	2	348.2	70.9
		8			9	277.3	70.7
		14			15	348.0	76.3
		19			20	271.7	81.1
		27			28	352.8	79.8
		34			35	273.0	82.1
		38			39	355.1	
					44	269.2	89.8
					53	359.0	
13	30	57		32	3	269.8	84.5
					11	354.3	87.2

1252.3
313.6

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1894phae.proj..528W

Jan. 17, 1895.

		16	276.4	76.5	1260.2	
13	31	27	25	352.9		315.0
			33	269.7	91.5	
			39	1.2	84.0	
			46	269.1	88.2	1250.9
13	31	57	53	357.3		312.7
		33	2	270.0	84.5	
			9	354.5	86.4	
			14	270.9	85.2	1250.9
			21	356.1		312.7
13	32	24	28	268.0	87.9	
			38	355.9	86.6	
			52	274.3	79.7	1254.3
13	33	00	58	354.0		313.6
		34	4	267.0	92.0	
			13	359.0	85.8	
			19	269.1	88.0	1249.0
			26	357.1		312.2
13	33	28	32	266.0	90.8	
			40	356.8	89.4	
			47	265.0	92.6	1258.5
13	33	57	55	357.6		313.1
		35	2	270.0	89.9	
			9	359.9	91.2	
			15	264.2	93.8	1244.3
13	34	28	23	358.0		311.1
			35	268.1	85.9	
			43	354.0	89.8	

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1894phae..proj...528W

Jan. 17, 1895

Lima, Peru.

	~~53~~			
36	53	307,0	15.8	1256.8
13 36 11 37	3	322,8		314.2
	15	305,0	17.0	
	37	322,0	16.4	

Seeing pretty good.

α Aq.	10.958 *		B 394		
13	48	2,0	13	47	0,8
13	49	2,0	13	48	0,8

α + 10.958 = 61^s fast.

Bond was 0.$\tilde{2}$ slow.

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1894phae.proj..528W

Jan. 19. 1895.

30 Experiment with phot. d. which has just been fixed so that internal prism moves across the field.

Reappearance of Jupiter I: Phot R: W: obs. Cram recorder: compared with 1st. of 2 satellites following = Satellite II.

	A.			B.		
7	40	9 58	√.√	7 39	0.9²	
	41		√.√	40	0.9²	

A + 10 958 = 65ˢ fast.

Lim. of Visibility.

7	53	2	116.1	32.9 <	532.0	
		16	149.0		133.0	
52	23					
7 ~~54~~	~~38~~	34	116.9	33.1 <		
	54	1	150.0	33.0 <		

56	25					
7 ~~55~~	~~35~~	7 57	30	seen		
	33					
	~~43~~		38	115.5	43.5 <	
	45					
	~~55~~		50	154.0	44.3 <	
	51					
	~~55~~		56	114.7	45.3 <	
	57					
~~57~~	X	58	2	160.0	44.8 <	
	4					
57	~~44~~		9	115.2	57.8 <	
	14					
	~~24~~		19	167.0	65.5 <	
	21					
	~~31~~		26	101.5	64.7 <	

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1894phae..proj...528W

Jan. 19. 1895.

	57	27			32	166.2	64.1 <		
7	~~57~~	~~37~~			38	102.1	68.4 <		
		33			44	170.5	71.7 <		
		~~43~~							
		39			50	98.8	69.7 <		
		~~47~~							
		~~45~~							
		~~55~~			56	168.5	65.6 <		
7	57	51							
~~8~~	~~60~~	1							
		57							
		X		54	2	102.9	69.9 <		
		3							
	58	~~13~~			8	172.8	74.8 <		
		~~8~~							
		~~18~~			13	98.0	71.2 <		
		14							
		~~24~~			19	169.2	72.5 <		
		19							
		~~29~~			25	96.7	79.8 <		
		~~28~~							
		~~38~~			33	176.5	84.6 <		
		35							
		~~45~~			40	91.9	85.2 <		
		~~42~~							
		~~52~~			47	177.1	90.9 <		
		48							
		~~58~~			53	86.2	91.9 <		
7	58	55							
~~8~~	*	~~5~~	8	0	0	178.1	87.8 <		
		2							
	59	~~12~~			7	90.3	90.9 <		
		12							
		~~22~~			17	181.2	99.2 <		
		23							
		~~33~~			28	~~83.9~~	~~107.1~~ <		
		30				189.1			
		~~40~~			35				
						92.0	100.1	555.2	
					42		1	138.8	
					54	192.1			
7	59	53							
~~8~~	2	3		1	3	~~88.9~~	~~95.1~~		
						183.1	97.6		
					11				
						~~83.9~~	107.6	549.3	
					19		2		
						191.5		137.3	
					37				
8	0	35							
	2	~~40~~			47	86.7	100.5		
							~~104.0~~		
					56	187.2	104.0		
				2	4	~~88.0~~	3	544.3	
							96.0	136.1	
					12	184.0			

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1894phae.proj..528W

Jan. 19. 1895.

8 1 11 / 3 21	8	2	19	88.0	96.3	
			29	184.3	96.2	
			39	85.9	99.3	550.4
8 1 46 / 3 56			46	185.2	4	137.6
			53	87.0	105.3	
		3	6	192.3	102.3	
		4	23	83.0	107.9	541.6
			32	190.9	5	135.4
8 3 31 / 5 41			42	81.7	104.3	
			49	186.0	106.1	
			58	79.9	108.1	539.1
8 4 5 / 6 15		5	6	185.0	6	134.8
			14	88.0	95.2	
			24	183.2	101.6	
			32	86.0	103.1	556.2
8 4 42 / 6 52			43	189.1	7	139.0
			51	88.1	104.9	
		6	2	193.0	104.0	
			24	79.2	109.9	542.9
8 5 39 / 7 49			36	189.1	8	135.7
			50	83.6	107.4	
		7	6	191.0	108.6	

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1894phae..proj..528W

Jan. 19, 1895

A. ⊀ D. 958 — B. 39 ⊀

♂	13	V.V	♂	12	0.0²
	14	V.6		13	0.0²

Observations a little slower than usual at the first and delayed somewhat on account of partial failure and dimness of electric light at the time ^; troubled throughout eclipse also somewhat by dimness of electric light; seeing a little blurry but not particularly bad.

Bond = 0ˢ.2 slow.

A. ⊀ D. 958 = 65ˢ fast.

Octi:	Phot R:	W: obs.
2	4	−2.5
4	25	
26	29	

Index to left and below.

151.0 comp. star dip 149.1

300.1			
144.6	161.6 ^		−1.3 ^
306.2	310.7 ^		−3.30
	49.3		

8 29 45

Index to right and above.

236.0			
35.8	159.8 ^	51.3	−3.22
240.0	148.9 ^		−1.2 ^
	308.7 ^		

8 32 14

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1894phae.proj..528W

Jan. 19. 1895.

	240.9	148.8^		
8	33	46	29.7			
	235.0	159.5^	-~~1.2~~^	9
			308.3^	
	34.5	51.7	-3.20	

Index to left and below.

	324.7	160.3^		
8	36	0	125.0			
	329.2	150.7^	-~~1.3~~^	
			311.0^	
	119.9	79.0	-3.32	

	329.7			
8	37	29	120.0	150.3^		9
	323.7	161.0^		
			311.3^	
	124.7	48.7	-~~1.3~~^ -3.33	

Index to right and above.

	55.2	158.6^		
8	39	54	213.8			
	59.7	150.3^		9
			308.9^	
	210.0	51.1	-~~1.2~~^ -3.23	

6 34 11

Measurements of faint comparison stars for R Urs. Maj. with Phot. O. W. obs. 9

10 32 +69.3

5 9

-5 23

6 27

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1894phae..proj..528W

Jan. 19. 1895.

Star r.

Prism to left		Prism to right		Prism to right
1.72	Log 1.863 = 0.27021	1.05	Log 1.053 = 0.02243	1.39	Log 1.323 = 0.12156
1.97	1.35705	1.10	0.11215	1.31	0.60780
1.90	11.10		11.10		11.10
	9.75		10.99		10.49
	1.96	1.01	1.96	1.27	1.96
	11.71 mag.		12.95 mag.		12.45 = mag.
1.863	1.05	1.053		1.323	
	1.0	1st + 2nd sets.		mag = 12.33	
	1.01	1st + 3rd "		" = 12.08	

9 21 20

Star s.

Prism to left.		Prism to right.	
1.32	Log 1.437 = 0.15746	0.97	Log 0.963 = 9.98363
1.49	0.47830	0.96	49.91815
1.50	11.10	0.96	0.08185
1.437	10.31	0.963	11.10
	1.96	mag = 12.70	11.18
	12.27 = mag.		1.96
			13.14 = mag.

9 45 34

Star t.

Prism to right.	Prism to left.
0.62	0.74
0.68	0.81
0.56	0.76

9 51 30

Wrong Stars

Star z.

Prism to left.	Prism to right.
0.51	0.34
0.53	0.38
0.60	0.37

9 50 18

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1894phae.proj..528W

Jan. 19. 1895.

Star x.

Prism to left.

10	5	50	0.37
			0.41
			0.43
			0.403

Log 0.403 = 9.60531 (5)
48.026 55 (5)
1.97345
11.10
13.07
1.96
15.03 = mag.

Prism to right.

0.40
0.41
0.43
0.413

Log 0.413 = 9.61595 (5)
48.079 75 (5)
1.92025
11.10
13.02
1.96
14.98 = mag.

mag = 15.00

Star α.

Prism to left.

10	6	45	0.31
			0.33
			0.32
			0.320

Log 0.320 = 9.50515 (5)
47.525 75 (5)
2.47425
11.10
13.57
1.96
15.53 = mag.

Prism to right.

0.31
0.27
0.32
0.300

Log 0.300 = 9.47712 (5)
47.385 60
2.61440
11.10
13.71
1.96
15.67 = mag.

mag = 15.60

Star t.

Prism to left.

10	7	51	0.83
			0.95
			0.86
			0.880

Log 0.880 = 9.94448 (5)
49.722 40
2.27760
11.10
11.38
1.96
13.34 = mag.

Prism to right.

1.27
1.26
1.23
1.253

Log 1.253 = 0.09795 (5)
0.489 75
11.10
10.61
1.96
12.57 = mag.

mag = 12.96

Star z.

Prism to left.

10	8	50	0.60
			0.68
			0.63

Prism to right.

wrong star.

Star z.

Prism to left.

10	10	25	0.41
			0.37
			0.30
			0.360

Log 0.360 = 9.55630 (5)
47.781 50
2.21850
11.10
13.32
1.96
15.28 = mag.

Prism to right.

0.40
0.48
0.45
0.443

Log 0.443 = 9.64640 (5)
48.232 00
1.76800
11.10
12.87
1.96
14.83 = mag.

Trans. 15 06

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1894phae..proj..528W

Jan. 19. 1895.

Star w.

Prism to left.

0.55 Log 0.587 = 9.76864 Log 0.500 = 9.69897
0.59 48.84320 48.49485
0.62 1.15680 1.50515
0.587 11.10 11.10
12.26 12.61
1.96 1.96
14.22 = mag. 14.57 = mag. 0.500
mag = 14.40

Prism to right.

0.48
0.52
0.50

Star y.

Prism to ~~right~~ left.

0.32 Log 0.340 = 9.53148 Log 0.327 = 9.51455
0.35 47.65740 47.57275
0.35 2.34260 2.42725
0.340 11.10 11.10
13.44 13.53
1.96 1.96
15.40 = mag. 15.49 = mag. 0.327
mag = 15.44

Prism to ~~left~~ right.

0.33
0.33
0.32

Star u.

Prism to left.

0.73 Log 0.763 = 9.88252 Log 0.663 = 9.82151
0.81 49.41260 49.10755
0.75 0.58740 0.89245
0.763 11.10 11.10
11.68 11.99
1.96 1.96
13.65 = mag. 13.95 = mag. 0.663
mag. = 13.80

Prism to right.

0.68
0.66
0.65

Mean time = $10^h\ 47^m\ 32^s$

Comparison star used in above measurements = d
Bros. maj. (alpha)

S. Cephei

21 5 +68.1
7 0
-9 55
2 5

Abandoned.

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1894phae.proj..528W

Posted to here.

Jan. 22. 1895.

o Cete. Gr. obs.

9	2	4	−2.√
	6	0	
	+3	√−6	

Index to right and above.

√56.3 < Comp. star dec.

9 KA

213.√	157.2^		
√4.3			
21√.8	161.√^		
	318.7^	−~~+.7~~^	
	41.3	−3.70	
146.0	160.√^	Index left + below.	
306.√			
14√.1	159.9^		
30√.0	320.4^	−~~1.0~~^	
	39.6	−3.79	
147.√	157.6^		
30√.1			
144.9	162.0^		
306.9	319.6^	−~~+.7~~^	
	40.4	−3.75	

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1894phae.proj..528W

Jan. 22. 1894.

Index right and above.

23 V. A 160.0 ^
3 V. A
237.2 15 V. 6 ^
32.2 31 V. 6 ^ - 1.5 ^
44.4 - 3.54

237.0 15 V. 3 ^
32.3
23 V. 2 160.3 ^
3 V. V 31 V. 6 ^ - 1.5 ^
44.4 - 3.54

Index to left and below.

32 0.9
12 V. 1 160.2 ^
32 V. 2 159.9 ^
32 V. 1 320.1 ^ - 1.4 ^
39.9 - 3.77

10 2V
10 06 30

Σ 249. 33 Arcetis Gr. Ob.

Pos. Asy. 3 V V. Dist 23''
Mags. V. V and 6.6

Index below.

233.5 6 pts. and northern obs.
10 32 36.0 162.5'
236.0 157.0
33.0 319.5'
40.5' - 3.74

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1894phae.proj..528W

Jan. 22. 1894

Index above.

326.0

123.0 159.0 "

317.4 167.7 "

125.5 324.7 "

353 " — 4.04

321.1

127.4 166.7 "

345.2 167.8 "

122.0 345 "

345.5 — 4.03

Index below.

55.4

216.3 160.5 "

51.7 163.3 "

215.0 323.8 "

36.2 " — 3.99

53.3

217.7 164.4 "

54.7 158.5 "

213.2 322.9 "

37.1 — 3.93

Index above.

146.1

305.1 159.0

141.7 166.8

307.5 326.8 "

342 " — 4.11

10 55

10 405

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1894phae.proj..528W

Jan. 23. 1895.

o Ceti : Phot. R: W: obs.

3 45
2 4
1 41

-2.5

Index to left and below.

323.3 ∠ comp. star dis.
126.1 162.8^
326.8
123.1 156.3^
319.1^
40.9

-1.7^
-3.72

Index to right and above.

57.0
211.9 154.9^
53.1 163.3^
216.4 318.2^
41.8

-1.7^
-3.67

53.5
215.4 161.9^
55.9 158.1^
214.0 320.0^
40.0

-1.8^
-3.77

Index to left and below.

146.8
303.6 156.8^
143.1 162.9^
306.0 319.7^
40.3

-1.8^
-3.77

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Jan. 23. 1895.

	143.2	162.8 ^		
7 36 49	306.0			
	146.9	~~156.0~~ ^		~~+ 1.7~~ ^
	302.9	~~398.8~~ ^		
		41.2		- 3.76

Index to right and above.

	236.8	156.9 ^		
7 38 32	33.7			
7 34 34	232.8	~~163.6~~ ^		~~1.8~~ ^
	36.4	~~320.5~~ ^		
		89.5		- 3.79

d t / ~~v~~ 2, / ~~v~~ 2 s in aluminum field glasses. 8 13 W. obs.

V above is a Cetí.

Comp. star s (above) is ~~brte~~ fainter than t in field glasses. to right.

8 38 S 2 N : N 1 u Cram. ~~C.~~ obs.

9 5 N = S Attwill. obs.

All observations above made with aluminum field glasses.

9 40 v = S Waite : obs.

9 45 t 2 v : N 1 S Clymer : obs.

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1894phae.proj..528W

Jan. 23. 1895.

Measurements of faint comparison stars for R. Urs. Maj with Phot. d.

R. Urs. maj: W: obs.

10	32	+69.3
5	52	
−4	40	
+7	20	

S Cephei: W: obs

21	37	+78.3
6	20	
+8	43	

k 4 var: var 3 m in large telescope.
too faint for finder: estimate 10.2.

10 32 var = l. Waite: obs.

R. Urs. maj. W: obs

10	32	69.3
7	2	
−3	30	
8	30	

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1894phae.proj..528W

Jan. 23. 1895.

Measurements of faint comparison stars for R. Urs. Maj. with Phot. R. W: obs.

~~Star r~~

~~1.11~~

Star r.

Prism to left.

1.33
1.42
1.47
4.22
1.407

Log 1.407 = 0.14829
5
0.74145
11.10
10.36
1.96
12.32

Prism to right.

1.14
1.37
1.31
3.82
1.273

Log 1.273 = 0.10483
5
0.52415
11.10
10.58
1.96
12.54

Magn. 12.43

Star s.

Prism to left.

1.06
1.16
1.22
3.44
1.147

Log 1.147 = 0.05956
5
0.29780
11.10
10.80
1.96
12.76

Prism to right.

1.13
1.16
1.12
3.41
1.137

Log 1.137 = 0.05576
5
0.27880
11.10
10.82
1.96
12.78

Magn. = 12.77

Star u.

Prism to left.

0.69
0.74
0.85
2.28
0.760

Log 0.760 = 9.88081
5
49.40405
9.59595
11.10
11.70
1.96
13.66

Prism to right.

0.81
0.73
0.76
2.30
0.767

Log 0.767 = 9.88480
5
49.42400
0.57600
11.10
11.68
1.96
13.64

Magn. = 13.65

Comp. star in above measurements = α Ursae Maj. (alpha)

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1894phae.proj..528W

Jan. 24. 1895.

7 37 C o Ceti = t. in Aluminum field glass. K. obs.

7 V-3 C t 1 v. v 2 s in " field Sk. Faint obs.

o Ceti: Phot. R: W: obs.

2 4 -2.5

4/2 10/6

Index to right and above.

236.1 < comp. star dis.

8 6 39 33.9 157.8^

233.1 162.8^

95.9 320.6^ ~~-1.8~~^

39.4 -3.80

Index to left and below.

322.5 164.8^

8 9 33 127.3

325.6 159.2^ ~~-2.0~~^

324.0^ -4.00

124.8 36.0

326.5

8 12 23 124.2 157.7^

321.4 165.5^ ~~-2.0~~^

323.2^ -3.95

126.9 36.8

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3420

Jan. 24. 1895.

Index to right and above.

	53.0	163.7^	
8 15 0	216.7		
	55.8	156.6^	
	212.4	320.3^	~~1.8^~~
		39.7	-3.79
	55.2	157.5^	
8 16 46	212.7		
	53.6	163.9^	~~1.8^~~
	217.5	321.4^	-3.85
		38.6	

Index to left and below.

	~~143.8~~ ~~5.7~~	164.2^	
8 19 11	308.0		
8 13 15	146.9	158.4^	~~1.9^~~
	305.3	322.6^	-3.92
		37.4	

R. Ars. Maj:	Phot. D.	W: obs.
10	32	+69.3
4	55	
	~~23~~	
-5	37	
6	23	

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Jan. 24. 1895.

Stars.

Prism to left.

1.58
1.63
1.68
4.89
1.630

Log 1.630 = 0.21219 5
1.06095
11.10
10.04
1.96
12.00
magn = 12.48

Prism to right.

0.99
1.16
0.99
3.14
1.047

Log 1.047 = 0.01995 5
0.09975
11.10
11.00
1.96
12.96

Stars.

Prism to left.

1.34
1.48
1.43
1.49
1.38
4.15
1.383

Log 1.383 = 0.14082 5
0.70410
11.10
10.40
1.96
12.36
magn. = 12.66

Prism to right.

0.99
1.07
1.09
3.15
1.050

Log 1.050 = 0.02119 5
0.10595
11.10
10.99
1.96
12.95

Stars.

Prism to left.

0.86
0.80
0.82
2.48
0.827

Log 0.827 = 9.91751 5
49.58555
0.41445
11.10
11.51
1.96
13.47
magn = 13.66

Prism to right.

0.67
0.68
0.74
2.09
0.697

Log 0.697 = 9.84323 5
49.21615
0.78385
11.10
11.88
1.96
13.84

Stars.

Prism to left.

0.99
0.89
0.92
2.80
0.933

Log 0.933 = 9.96988 5
49.84940
0.15060
11.10
11.25
1.96
13.21
magn. = 13.10

Prism to right.

1.00
1.05
1.03
3.08
1.027

Log 1.027 = 0.01157 5
0.05785
11.10
11.04
1.96
13.00

Stars.

Prism to left.

0.45
0.48
0.40
1.33
0.443

Log 0.443 = 9.64640 5
48.23200
1.76800
11.10
12.87
1.96
magn = 15.12

Prism to right.

0.34
0.32
0.35
1.01
0.337

Log 0.337 = 9.52763 5
47.63815
2.36185
11.10
13.46
1.96
15.42

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1894phae.proj..528W

Jan. 24. 1895.

Star x.

Prism to left.

0.54	Log 0.580 = 9.76343	5
0.59		48.81715
0.61		1.18285
1.74		11.10
0.580		12.28
		1.96
		14.24

9 37 27

Imagu. = 14.60

Prism to right.

0.44	Log 0.417 = 9.62014	5
0.41		48.10070
0.40		1.89930
1.25		11.10
0.417		13.00
		1.96
		14.96

Star α (= alpha)

Prism to left.

0.37	Log 0.350 = 9.54407	5
0.33		47.72035
0.35		2.27965
1.05		11.10
0.350		13.38
		1.96
		15.34

9 39 21

Imagu. = 15.52

Clouds at 9 0.

Prism to right.

0.30	Log 0.297 = 9.47276	5
0.30		47.36380
0.29		2.63620
0.30		11.10
0.89		13.74
0.297		1.96
		15.70

Star w.

Prism to left.

0.53	Log 0.577 = 9.76118	5
0.58		48.80590
0.62		1.19410
1.73		11.10
0.577		12.29
		1.96
		14.25

9 40 22

Imagu. = 14.48

Clouds at 9 15.

Prism to right.

0.48	Log 0.470 = 9.67210	5
0.47		48.36050
0.46		1.63950
1.41		11.10
0.470		13.74
		1.96
		15.70

Star y.

Prism to left.

0.49	Log 0.487 = 9.68753	5
0.46		48.43765
0.51		1.56235
0.56		11.10
1.46		12.66
0.487		1.96
		14.62

9 41 54

Imagu. = 14.82

Mean time $9^h\ 35^m\ 14^s$

Prism to right.

0.38	Log 0.403 = 9.60531	5
0.41		48.02655
0.42		1.97345
1.21		11.10
0.403		13.07
		1.96
		15.03

Comparison star used in above measurements = α Urs. Maj. (alpha)

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1894phae.proj..528W

Jan. 24. 1895.

R Draconis: Phot. d.

16	26	+67.4
6	30	
-9	56	
2	4	

Starg.

Prism to left.

0.99	Log 1.047 = 0.01995	5
1.02		0.09975
1.13		11.10
3.14		11.00
1.047		2.13
		13.13

10 17 37

Prism to right.

1.00	Log 1.013 = 0.00561	5
1.01		0.02805
1.03		11.10
3.04		11.07
1.013		2.13
		13.20

Magn. = 13.60 (16)

Star U.

Prism to left.

0.75	Log 0.657 = 9.81757	6
0.62		49.08785
0.60		0.91215
1.97		11.10
0.657		12.01
		2.13
		14.14

10 18 46

Prism to right.

0.68	Log 0.637 = 9.80444	5
0.63		49.02070
0.60		0.97930
1.91		11.10
0.637		12.08
		2.13
		14.21

Magn. = 14.18

Star S.

Prism to left.

0.80	Log 0.827 = 9.91751	5
0.87		49.58755
0.81		0.41245
2.48		11.10
0.827		11.51
		2.13
		13.64

10 20 25

Prism to right.

0.68	Log 0.677 = 9.83059	5
0.69		49.15295
0.66		0.84705
2.03		11.10
0.677		11.95
		2.13
		14.08

Magn. = 13.86

Comparison star = B Urs. Min. (= Beta)

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1894phae.proj..528W

Jan. 24. 1895.

Star r.

Prism to left.

		Log 0.877 = 9.94300	5
	0.93		49.71500
10	29	22	0.85	0.28500
			0.85	11.10
			2.63	11.38
			0.877	2.13
				13.51

Prism to right.

		Log 0.770 = 9.88649	5
	0.79		49.43245
	0.77		0.56755
	0.75		11.10
	2.31		11.67
	0.770		2.13
			13.80

Mean Magn. = 13.66

Star N.

Prism to left.

		Log 0.567 = 9.75358	5
	0.58		48.76790
10	26	25	0.57	1.23210
			0.55	11.10
			1.70	12.33
			0.567	2.13
				14.46

Prism to right.

		Log 0.460 = 9.66276	5
	0.46		48.31380
	0.47		1.68620
	0.45		11.10
	1.38		12.79
	0.460		2.13
			14.92

Mean Magn. = 14.69

Star w.

Prism to left.

		Log 0.407 = 9.60959	5
	0.43		48.04795
10	27	8	0.40	1.95205
			0.39	11.10
			1.22	13.05
			0.407	2.13
				15.18

Prism to right.

		Log 0.363 = 9.55991	5
	0.42		47.79955
	0.32		2.20045
	0.35		11.10
	1.09		13.30
	0.363		2.13
			15.43

Mean Magn. = 15.30

Star t.

Prism to left.

		Log 0.680 = 9.83251	5
	0.69		49.16255
10	31	43	0.68	0.83745
			0.67	11.10
			2.04	11.94
			0.680	2.13
				14.07

Prism to right.

		Log 0.570 = 9.75587	5
	0.57		48.77935
	0.57		1.22065
	0.57		11.10
	1.71		12.32
	0.570		2.13
			14.45

Mean Magn. = 14.26

Mean time $10^h\ 24^m\ 29^s$

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Jan. 2r. 1894r.

o Ceti.

7 10 r ~~3~~ ~~2r~~ ~~2~~ v ~~2~~ v / t (O.S.) Y. obs. c

~~2 v v / t " Attwill obs.~~

r = t " Clymer obs. c

r = t (A.E.) Traute " c

t / v, v 2 v O.S. Attwill " c

r = t " Crum " c

o Ceti: Phot. R. W: obs.

2 4 -2.5

4 15

2 11

~~Index to left and below.~~

146.0 comp. star dis.

8 0 41 305.0 159.0

235.9 160.9

~~36.6~~

Index to right and above.

235.6 159.8^

8 3 54 35.4

233.5 163.7^

37.2 323.5^ ~~-2.0^~~

37.5 -3.91

Index to left and below.

8 323.1 165.0^

8 5 5 128.1

325.2 160.1^

325.3 325.1^ 349 ~~2.1^~~ -3.67

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1894phae.proj.528W

Jan. 25. 1895.

		325.1		159.7	129.2	164.7^	
8	9	10	124.8		293.9		
			322.7	151.8	131.1	161.8^	
			114.5	311.5	292.9	326.5^	33.5
						-2.7^	
						-4.16	

Index to right and above.

		38.7	164.3^		
8	12	0	203.0		
			40.1	160.1^	-2.0^
			200.2	324.4^	
				35.6	-4.03
			40.2		
8	13	57	201.9	161.7^	
			39.0	165.0^	-2.2^
			204.0	326.7^	-4.17
				33.3	

Index to ~~right~~ left and below.

		131.7	160.3^		
8	20	5	292.0		
			129.3	165.5^	-2.1^
8	10	42	294.8	325.8^	-4.11
				34.2	

Images a little faint on account of haze.

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1894phae..proj..528W

Jan. 27, 1894 G.M.T.

A. & D. 958. B. 394.

A	47	23.0	A	46	0.0
	48	23.0		47	0.0

A. & D. 958 = 1m 23s fast.

Limb of Ris.

119.3	1	13.0		8	55	45		
29.8	33.2	46.2			56	7	8	54 50
	32.1	14.0				22		
	32.6	46.1				39		

Reappearance of Jupiter II: Phot. R: W: obs. Cram recorder. (re end of eclipse)

seen,			9	0	16	8 58	53
> 56.3	2.7				26	59	3
< 56.2	59.0				36		13
< 56.2	2.8				44		21
Assume 59.0	~~13.0~~	9.0			51		28
< 72.1	56.0				59		34
< 68.1	68.1			1	4		41
< 64.9	0.0				11		48
< 75.1	67.9				19		56
< 81.0	379.8				26	9 0	3
< 81.1	70.8				36		13
< 81.5	349.7				43		20
< 91.4	71.2				52		29
< 96.1	339.8			2	2		39
< 88.1	75.9				11		48

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1894phae.proj.,528W

Jan. 25. 1895.

	<88.1 347.8		21	9	0	58
	~~90.9~~ < 75.9		29 →		1	6
1564.8 <	94.2 < 345.0		37			
391.2 <	~~94.8~~ 79.2		45	1. 9	1	27
31.2 <	91.8 < 344.7		54			
	93.0 < 76.2	3	4 →			
1559.2 <	97.9 < 341.1		12			
389.8 <			~~25~~			
29.8 <	~~94.9~~ < 79.0		56	2. 9	2	30
	96.4 < 342.1	4	6 ~~00~~			
	77.0		17			
1563.4 <	99.8 < 341.2		31			
390.8 <	81.0		40	3. 9	3	21
30.8 <	~~97.0~~ < 342.1		49 ~~00~~			
	98.4 < 79.1		58			
1568.9 <	98.9 < 342.9	5	9			
392.2 <	81.8	28	28	4. 9	4	10
32.2 <	~~101.4~~ < 341.4		43 ~~00~~			
	100.2 < 82.8		53			
1561.0 <	103.0 < 337.0	6	2			
390.2 <	80.0		14	5. 9	4	56
30.2 <	~~104.0~~ < 340.0		24 ~~00~~			
	103.5 < 87.0		35			
1561.4 <	100.3 < 340.7		50			
390.4 <	81.0	7	4	6. 9	5	46
30.4 <	~~105.9~~ < 336.9		13 ~~00~~			
	103.1 < 82.8		28			
1568.3 <	99.2 < 341.8	9	18	7.		
392.1 <	81.0		29	9	8	11
32.1 <						

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1894phae..proj..528W

Jan. 2V. 1859 V.

	106.9	339.3		38				
	103.0	86.2		49 m				
1563.8 <	98.2	342.8		59				
391.0 <		81.0	10	15	8)	9	8	53
31.0 <								
	104.0	328.0		20				
	101.1	82.0		29 m				
1561.4 <	106.4	335.9		41				
390.4 <		82.3		55				
30.4 <								
	102.8	340.2	11	8	9)	9	9	38
	104.6	83.0		19				

4. 4D. 9V A.			13. 394.		
9	16	23.0	9	1V	8.0
	17	23.0		16	0.0

Bond 394 = 0s.2 slow. 4+10.958 = 1m 23s fast.

Compared with first and fainter of 2 satellites on preceding side = satellite IV.

Seeing pretty good most of the time but blurry at intervals.

Observation exceedingly difficult on account of very high altitude of Jupiter and the fact that observer could not even sit on seat of chair but had to hang on the extreme edge of same.

A short stool had to be made to move Dome.

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1894phae.proj.528W

Jan. 25. 1895.

Σ 924 : 20 ½ sem W : obs.

6	25	+17.9
6	34	
0	9	

Star cannot be found : sky too thick.

Σ 1245 : P VIII : 108 : W : obs.

8	29	+7.1
6	43	
-1	46	
10	14	

No star visible : sky too thick.

Adjusted pencils of Phot. d.

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1894phae..proj..528W

Jan. 27. 1894.

o Ceti.

7 30 r 1 V, V 3 t with naked eye Haute obs.

r 1 V, V 3 t " " " Clymer "

The above copied in this book Jan. 28.
being an observation of Jan 27.

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1894phae.proj..528W

Jan. ~~28~~ 29. 1895.

Search for comet thought to have been seen by Mr. Woodbreade of Phila.

Search made with ~~east~~ west equatorial.

A	K 3	+ 3 K.A
4	40	
4	3	
8	43	
4	46	
3	57	
9	13	+ 35.0
4	53	
4	20	
8	50	+ 48.0
4	56	
2	54	
9	13	+ 35.0
5	11	
− 4	2	
8	43	+ 34.8
5	15	
− 3	28	

No comet found

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1894phae.proj..528w

29.

Jan. ~~28~~. 1895

S. Cephei: W: obs.

21 37 +78.3

5/8 42/5

9 2 R + ~~3.5~~ var: var 3.5 m.
in large telescope.
R 3 var: var 3 m
in finder but faint.
estimate = 10.6.

9 10 R = var. Waite obs.

---

o Ceti:

9 ~~Eq~~ ♂♀ 3 var: var 1 r (makedenge) W: obs
♂♀ 3 var: var 2 r (" ") Waite obs

2 + Phot. R. -2.5

6/3 0/56

~~Index to right and above.~~

~~220.5~~ +61.5

9 27 20 ~~22.0~~

~~306.8~~

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1894phae.proj.528W

~~29.~~

Jan. ~~28~~. 1895.

Index to left and below.

306.8 ~ comp. star dis.

116.5 169.7^

309.2

113.2 164.0^ ~~-2.7~~^

333.7^ -4.69

26.3

Index to right and above.

40.0 162.0^

202.0

37.3 168.7^ ~~-2.5~~^

206.0 330.7^ -4.45

29.3

37.3 168.4^

205.7

40.0 163.2^ ~~-2.5~~^

203.2 331.6^ -4.52

28.4

Index to left and below.

131.1 161.8^

292.9

127.1 168.0^ ~~-2.4~~^

295.1 329.8^ -4.39

30.2

127.3 168.6^

295.9

130.3 163.6^ ~~-2.6~~^

293.9 332.2^ 4.57

27.8

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1894phae.proj..528W

29.
Jan. ~~28~~ 1895.

Index to right and above.

~~+127.3~~
~~295.9~~
~~+30.3~~
~~293.9~~

~~+6.6~~
~~+63.6~~
~~332.2~~

9 34 50

9 36 30

9 32 40

220.0
22.9
217.4
24.5

162.9^
167.1^
330.0^
30.0

~~2.7~~^
-4.40

R. Carinae.

23 6 7

52 52 0

+49.7

abandoned.

S Cephei: Phot. D. W. obs.

21 6 9

37 57 20

+78.3

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1894phae.proj..528W

29.
Jan. ~~28~~. 1895.

Auxiliary telescope 45° to left of vertical:
Eyes parallel to stars.

Star K.

Prism to left and above.

2.24 Log 2.163 = 0.33506 (5)
2.20 — 1.67530
2.05 — 11.10
6.49 — 9.42
2.163 — 2.15
— 11.57
— Magn. = 11.83

Prism to right and below.

1.68 Log 1.703 = 0.23121 (5)
1.73 — 1.15605
1.70 — 11.10
5.11 — 9.94
1.703 — 2.15
— 12.09

Star L.

Prism to left and above.

2.35 Log 2.327 = 0.36680 (5)
2.24 — 1.83400
2.39 — 11.10
~~2.42~~ — 9.27
6.98 — 2.15
2.327 — 11.42
— Magn. = 11.56

Prism to right and below.

1.88 Log 2.040 = 0.30963 (5)
2.12 — 1.54815
2.12 — 11.10
6.12 — 9.55
2.040 — 2.15
— 11.70

Star M.

Prism to left and above.

1.11 Log 1.140 = 0.05690 (5)
1.12 — 0.28450
1.19 — 11.10
3.42 — 10.82
1.140 — 2.15
— 12.97
— Magn. = 13.08

Prism to right and below.

1.05 Log 1.033 = 0.01410 (5)
1.02 — 0.07050
1.03 — 11.16
3.10 — 11.03
1.033 — 2.15
— 13.18

Star N.

Prism to left and above.

0.85 Log 0.883 = 9.94596 (5)
0.90 — 49.72980
0.90 — 0.27020
2.65 — 11.10
0.883 — 11.37
— 2.15
— 13.52
— Magn. = 13.56

Prism to right and below.

0.85 Log 0.847 = 9.92788 (5)
0.85 — 49.63940
0.84 — 0.36060
2.54 — 11.10
0.847 — 11.46
— 2.15
— 13.61

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1894phae.proj..528W

29.

Jan. ~~28~~. 1895.

Star q.

Prism to left and above.

0.79 Log 0.797 = 9.90146
0.83 49.5073 0
0.77 0.4927 0
2.39 11.10
0.797 11.59
2.15
13.74 Magn. = 13.81

Prism to right & below.

0.76 Log 0.747 = 9.87332
0.74 49.3666 0
0.74 0.6334 0
2.24 11.10
0.747 11.73
2.15
13.88

Star r.

Prism to left and above.

0.42 ~~0.43~~ Log 0.427 = 9.63043
0.43 ~~0.45~~ 48.1521
0.43 ~~0.42~~ 1.8478
1.28 11.10
0.427 12.95
2.15
15.10 Magn. = 15.08

Prism to right and below.

0.43 Log 0.433 = 9.63649
0.45 48.1824
0.42 1.8176
1.30 11.10
0.433 12.92
2.15
15.07

Star s.

Prism to left and above.

0.39 Log 0.397 = 9.59879
0.42 47.9939
0.38 2.0060
1.19 11.10
0.397 13.11
2.15
15.26 Magn. = 15.28

Prism to right and below.

0.42 Log 0.390 = 9.59106
0.38 47.9553
0.37 2.0447
1.17 11.10
0.390 13.14
2.15
15.29

Star t.

Prism to left and ~~below~~ above.

0.34 Log 0.337 = 9.52763
0.34 47.6381
0.33 2.3619
1.01 11.10
0.337 13.46
2.15
15.61 Magn. = 15.62

Prism to right and below.

0.35 Log 0.333 = 9.52244
0.33 47.6122
0.32 2.3878
1.00 11.10
0.333 13.49
2.15
15.64

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1894phae.proj..528W

29.

Jan. ~~28~~. 1895.

Star m.

Prism to left and above.

1.52	Log 1.453 = 0.16227	
1.43	0.81135	
1.71	11.10	
4.36	10.29	
1.453	2.15	
	12.44	Magn. = 12.60

Prism to right and below.

1.21	Log 1.247 = 0.09587
1.29	0.47935
1.24	11.10
3.74	10.62
1.247	2.15
	12.77

10 49 32

Star o.

Prism to left and above.

1.00	Log 1.040 = 0.01703
1.07	0.08515
1.05	11.10
3.12	11.01
1.040	2.15
	13.16

Prism to right and below.

0.77	Log 0.807 = 9.90687
0.81	49.53435
0.84	0.46565
2.42	11.10
0.807	11.57
	2.15
	13.72

10 56 7

Mean time = $10^h\ 34^m\ 26^s$

Magn. = 13.44

Comparison star = Polaris.

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1894phae.proj..528W

Jan. 30. 1895.

h	15	Cloudy.	
h	30	"	
7	45	"	
		o Ceti	W; obs.
		2 h	-2.5
		h 53	
		2 49	
8	30	Still cloudy	

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1894phae.proj..528W

Jan. 31. 1895.

o Ceti: Phot. R. W. obs

2 4 -2.5

4/2 35/31

Index to right and above.

40.0 ∠ comp. star dis.

204.0 164.0 ^

36.8 169.2 ^

206.0 333.2 ^ ~~-2.7~~ ^

26.8 -4.65 blends.

Index to left and below.

127.4 168.8 ^

296.3

130.1 162.9 ^ ~~-2.5~~ ^

293.0 331.7 ^ -4.53

28.3

130.2 163.7 ^

293.9

127.0 169.0 ^ ~~-2.6~~ ^

296.0 332.7 ^ -4.61

27.3

Index to right and above.

216.0 170.0 ^

26.0

219.4 164.4 ^ ~~-2.8~~ ^

23.8 334.4 ^ -4.75

25.6

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1894phae.proj...528W

Jan. 31. 1895.

218.7	1453^	
34.0		
217.0	168.3^	-2.7^
25.3	333.6^	-4.68
	26.4	

Index to left and below.

307.0	169.2^	
116.2		
308.9	164.5^	-2.7^
113.4	333.7^	-4.69
	26.3	

8 2 43

7 56 41

Room too near region for opera glass estimate of variable.

δ Cephei: W: obs.

21	34	+78.3
5	34	
8	0	

Abandoned: too cloudy

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1894phae.proj..528W

Jan. 31. 1895.

Σ 855: Wols.

~~6~~	~~2~~	
6	2	+2.V
6	7	
0	5	

9 15 Too cloudy.

Σ 924: 20 b cm: W: ols

6	25	+17.9
6	15	

Too cloudy.

Thickly cloudy: growing worse.

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1894phae.proj..528W

Posted to here.

Feb. 5. 1895.

~~o Ceti~~ o Ceti.

e o 2 var : var 2 p with naked eye : W : obs.
e o 1 var : var 3 p " " " Waite obs.

Bright moon : estimate somewhat uncertain.

o Ceti.

2 4 -2.5 Phot. R. W: obs

5/2 3/59

Index to right and above.

35.3 ∠ comp. star dir.

7 56 23 207.8 172.5^
38.0
204.0 166.0^ ~~-3.1~~ ^
338.5^ -5.13
21.5

Index to left and below.

126.0 166.1^
7 59 7 294.1
125.9 171.5^ ~~-5.0~~ ^
337.6^ -5.04
297.4 22.4

126.9 170.1^
8 2 55 297.0
128.7 165.9^
336.0^
294.6 24.0 ~~-4.9~~ ^ -4.89

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1894phae.proj..528W

Feb. 5. 1895.

Index to right and above.

8 4 41	220.0	164.1^	
	24.1		
	216.0	170.8^	
	26.8	334.9^	~~-2.8^~~
		25.1	-4.79

	~~215.8~~		
	~~26.4~~		
	2		
6 6 4	~~2~~15.8	170.2^	
8 7 20	26.0		
	218.3	166.7^	~~-3.0^~~
	25.0	336.9^	-4.98
		23.1	

Index to left and below.

	307.0		
8 6 40	114.8	167.8^	
8 03 11	305.8	170.2^	~~-3.1^~~
	116.0	338.0^	-5.08
		22.0	

o Leti.

Waite: obs.

C o 1 var: var 3 p with naked eye.

S Cephei

21	37	+78.3
5	37	
8	0	

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1894phae..proj...528w

Feb. 5. 1895.

k 3 S:S + m W: obs.

estimate = 10.5

Waite: obs.

k 3 S S + m in large telescope

R. Draconis. Phot. R: W: obs.

16	26	+67.4
6	25	
10	1	
1	59	

R. Cassiop: Phot. R. W: obs.

23	52	+49.7
6	58	
7	6	

9 43 54

Index to right and above.

155.7 ∠ comp. star dir.

266.0 110.3^

150.5

273.3 122.8^

233.1^

126.9

D^

= 1.04

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1894phae.proj..528W

Feb. 5. 1895.

Index to left and below.

	239.8	121.2^		
9	50	48	1.0	
			243.7	114.0^
			357.7	235.2^
				122.8
				1.09
			244.7	110.5^
9	54	12	355.2	
			236.8	126.1^
			2.9	236.6^
				123.4
				1.12

Index to right and above.

	~~310.9~~			
			82.2	110.3^
9	58	25	330.9	116.1^
			87.0	226.4^
				139.6
				0.90
			331.0	
10	1	4	89.0	118.0^
			338.2	106.6^
			84.8	224.6^
				139.4
				0.87

Index to left and below.

			239.0	124.0^
9	56	26	3.0	
			245.0	103.9^
	324	50	348.9	227.9^
9	57	08		132.1
				-0.94

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1894phae.proj..528W

Feb. 5. 1895.

G. Cassiop.	Phot R.	W. obs.
0 19	+55.9	
7 45		
7 26		

Index to right and above.

275.0	< comp. star dis.	
323.9	48.9^	
270.9		
333.0	62.1^	~~3.4~~^
	111.0^	1.39

Index to left and below.

~~179.8~~
~~234.6~~
~~2~~

182.1		
241.9	59.8^	~~3.5~~^
188.3	48.7^	1.45
234.0	108.5^	
186.9		
236.5	49.6^	
181.0	61.9^	~~3.4~~^
242.9	111.5^	1.38

10 35 35

10 33 30

10 40 10
~~10 40~~

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1894phae.proj..528W

Feb. 5. 1895.

Index to right and above.

10 42 28	272.9	56.5^	
	329.4		
	278,9	45.5^	
	324.4	102.0^	~~2.6^~~ 1.61
10 43 50	275.7	49.7^	
	325.4		
	273.9	53.0^	~~2.6^~~
	326.9	102.7^	1.59

Index to left and below.

10 45. 48	181.0	58.8^	
	239.8		
	186.0	50.0^	~~3.4^~~
	236.0	108.8^	1.45

25.1 21
10 41 57

var. is fainter than comp star.

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1894phae.proj..528W

Posted to here.

Feb. 6. 1895.

o Cti: Phot: R. W: obs.

2 4 -2.5

4 55

2 51

Index to right and above.

218.0 < comp. star dis.

24.8 166.8 ✓

7 42 47

215.2

171.7 ✓

26.9 338.5 ✓ ~~-3.1~~ ✓

21.5 - 5.13

Index to left and below.

305.1 172.2 ✓

7 44 53

117.3

166.9 ✓ ~~-3.1~~ ✓

308.0 339.1 ✓ - 5.19

114.9 20.9

307.7 165.7 ✓

7 46 25

113.4

172.1 ✓

305.1 337.8 ✓ ~~-3.1~~ ✓

117.2 22.2 - 5.06

Index to right and above.

35.0 171.8 ✓

7 48 16

206.8

165.7 ✓

38.0 337.5 ✓ ~~-3.0~~ ✓

203.7 22.5 - 5.04

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1894phae.proj..528W

Feb. 6. 1895.

37.8
204.0 166.2 ✓
36.0 170.9 ✓ ~~-3.0~~ ✓
206.9 337.1 ✓ -4.99
229

Index to left and below.

125.2
296.9 171.7 ✓
128.0 166.7 ✓
294.7 338.4 ✓ ~~-3.11~~ ✓
21.6 -5.12

7 49 29

7 51 30

7 47 13

δ Cephei: Phot. R: W:obs=

21 5 +65.1

5 25

8 20

Index below.

237.9 < comp star dis.
12.0 134.1 ✓
240.5
8.1 127.6 ✓
261.7 ✓
9 3 ~~-3.3~~ ✓
1.70

8 16 45

Index above.

3341
93.0 118.9 ✓
338.0 117.0 ✓ ~~0.7~~ ✓
235.9 1.10

8 18 9

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1894phae..proj..528W

Feb. 6. 1895.

		327.5	127.4 ✓		
8	20	47	94.9		
		333.3	118.2 ✓	~~0.7~~ ✓	
		91.5	245.6 ✓		
			~~1144~~	1.32	
		Index below.			
		51.0	139.8 ✓		
8	23	9	190.8		
		60.0	125.0 ✓	~~0.2~~ ✓	
		185.0	264.8 ✓		
			95.2	1.72°	
		59.9	125.1 ✓		
8	24	26	185.0		
		52.9	138.4 ✓	~~0.3~~ ✓	
		191.3	263.5 ✓		
			96.3°	1.74	
		Index above.			
		333.0	118.0 ✓		
8	21	40	91.0		
		325.1	130.9 ✓	~~0.6~~ ✓	
		96.0	248.9 ✓		
			111.1	1.39	
124	36				
+ 20	46				

Comp. star is the fainter of the two.

Above observations exceedingly difficult on account of faintness of stars when superadded in morning light.

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1894phae.proj..528W

Feb. 6. 1895.

~~o Gtx.~~

~~o~~

o Ceti.

o micron = 0 W: obs.

Observation difficult and uncertain in bright moon-light.

γ Cephei. W: obs.

21	37	+78.3
5	57	
4	20	

~~Observation~~

R 3 S: S 4 m. W: obs

in large telescope: estimate = 10.6.

γ Cassiop. W: obs.

0	19	+55.9
6	9	
5	50	

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1894phae..proj...528W

Feb. 6. 1895

Index to right

273.0 < comb. star dis.

8 55 25

335.9 62.9 ^ <

270.0

329.9 ~~9.9~~ ^ <

(122.8 ^ < ~~3.1~~ ✓ 1.13

Index to left.

359.5 64.6 ^ < ~~5.6~~

8 57 32

64.1

4.8 ~~2.5~~ ^ < ~~2.5~~ 1.26

57.3 117.1 ^ ~~3.3~~ ^

8.3 49.6 ^

8 58 28

57.9

1.1 60.8 ^

61.5 110.0 ^ ~~3.4~~ ^ 1.39

Index to right.

99.0 49.0 ^

9 0 36

148.0

90.3 ~~2.2~~ ^

148.5 107.2 ^ ~~3.4~~ ^ 1.48

93.0

9 1 32

150.6 57.6 ✓

98.0 47.7 ^

145.7 105.3 ^ ~~3.4~~ ^ 1.39

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1894phae.proj...528W

Feb. 6. 1895.

Index to left.

359.0 66.0^
65.0
4.0 rr.0^
59.0 121.0^ 3.~~5~~^ 1.17

~~8~~ 54 20

~~———————~~

35.2 53

~~F 5 F 49~~

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1894phae..proj..528W

Feb. 11. 1895.

o Ceti.

7 35 0 = n naked eye. W: obs.c

7 35 m 1 o : o 1 n (n. e.) Cram: obs.c

7 42 m = o (n. e.) Attwill obs.c

Reapp. Jup. I: Phot. R: W: obs. Cram recorder.
compared with ~~first~~ means of three satellites preceding Jup.
A. & D. gr. ∝ (= Sat. III.)

7 46 1.2
47 1.2

A & D. = 2m 1.4 fast.

B. 39 ~~was~~ 0.2 fast at 4h P. M. East. T.

B. 39 ~~43~~ ~~59.8~~ 42 59.0
~~44~~ ~~59.8~~ 45 59.0

Limit of Visibility.

8	4	49		208.0	850.1
	5	27	8.8	217.2	212.5
8 3 29		48	9.1	209.9	
	6	1	9.0	217.0	

8	11	29	8	13	31	seen.	
		41			43	207.2	11.0 <
		49			51	218.2	18.0 <
		54			56	200.2	21.8 <
	12	1		H	3	222.0	23.1 <
		8			10	196.9	25.3 <

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1894phae.proj.528W

Feb. 11. 1895.

8	12	14		16	224.2	25.4 <
		21		23	198.8	26.4 <
		27		29	225.2	31.4 <
		32		34	192.8	39.4 <
		39		41	233.2	40.1 <
		46		48	192.1	42.6 <
		53		55	235.7	48.1 <
	13	8	15	10	189.6	55.6 <
		15		17	242.2	58.2 <
		22		24	185.0	55.0 <
		33		35	240.0	59.2 <
		39		41	180.8	56.3 <
		45		47	247.1	64.1 <
		53		55	183.0	62.0 <
	14	[illegible]	16	2	245.0	62.1 <
		11		13	182.9	63.1 <
		13		15	246.0	69.1 <
		21		23	176.9	67.7 <
		29		31	244.6	63.4 <
		38		40	181.2	70.1 <
		41		43	251.3	74.4 <
		52		54	176.9	72.1 <
		59	17	1	249.0	~~76.0 <~~ 844.0 <
	15	[illegible]		8	173.0	211.0 <
		[illegible]		15	75.5 < 248.5	
		[illegible]		23	170.8	
		17		31	80.9 < 251.7	
				38	78.2 < 175.0	~ 856.2 <
				44	77.0 < 252.0	214.0 <

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1894phae..proj...528W

Feb. 11. 1895.

8	15	46		51	176.0		
				59	77.2 < 253.2		
			(18)	7	77.1 < 176.0	849.0 <	
			23	9	76.0 < 252.0	212.2 <	
16	15			21	174.2 3		
				32	72.6 < 246.8		
				41	74.3 < 177.1	863.7 <	
		50		43	77.8 < 254.9	215.9 <	
				58	76.7 < 177.5		
			(19)	4	77.2 < 254.2 4		
			24	14	174.8	852.2 <	
17	22			21	78.7 < 253.5 5	213.0 <	
				27	172.0		
				34	79.9 < 251.9		
				40	79.3 < 174.8	848.0 <	
		48		46	75.2 < 250.0	212.0 <	
				53	173.0 6		
			20	0	77.2 < 250.2		
				6	76.2 < 173.0	854.3 <	
18	14			12	79.2 < 252.2	213.6 <	
				19	175.1 7		
				27	78.9 < 254.0		
				34	79.0 < 171.5	848.5 <	
		42		40	80.5 < 252.0	212.1 <	
				47	74.4 < 175.3 8		
				56	77.4 < 249.7		
			21	4	174.8	848.7 <	
				11	73.3 < 248.1		
19	14			20	76.2 < 174.8	212.2 <	
					251.0		

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1894phae.proj.528W

Feb. 11. 1895

21 30 251.0

Seeing pretty good: measurements rather difficult on account of extreme altitude: occassional fog in eyepiece & elongation of images: yet observations thought to be pretty good.

Add = 2m 1.6 fast:

A. & D. 9 v A. B. 39 K.

A 29 1.4 A 26 59.8
30 1.V 27 58.8

o Ceti: Phot. R: W: obs.

2 4 -2.5
6 30
4 26

Index to right and above.

218.2 < comp. star dis.
25.1 166.9 r
216.2
27.9 171.7 r
338.6 r

-3.1 r
-5.14

21.4

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Feb. 11. 1895.

Index to left and below.

	307.0	170.9 ✓		
9 3 38	117.9			
	308.0	168.8 ✓		~~3.3~~ ✓
	116.8	339.7 ✓		-5.26
		20.9		
	307.7			
	116.5	168.8 ✓		
9 5 12	306.2	171.6 ✓		~~3.3~~ ✓
	117.8	340.4 ✓		-5.33
		19.6		

Index to right and above.

	36.8	170.2 ✓		
	207.0			
9 6 54	37.5	169.0 ✓		~~3.7~~ ✓
	206.5	339.2 ✓		-5.20
		20.8		
	38.0	168.4 ✓		
	206.4			
9 8 53	37.0	170.8 ✓		~~3.3~~ ✓
	207.8	339.2 ✓		-5.20
		20.8		

Index to left and below.

	126.~~5~~ 7	170.~~4~~ 7 ✓		
9 10 58	297.~~2~~5			
	125.0	168.4 ✓		~~3.2~~ ✓
	296.4	339.1 ✓		-5.19
		20.9		

9 06 11

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1894phae.proj.528W

Feb. 11, 1895.

T Cephei: W: obs

21 5 +68.1

7 0

+19 55

9 45 m 1 var: var. 2 n
in large telescope. attimit: obs.

m 2 var: var. 1 n
ertimate 10.0 W: obs.

var = n cramm: obs.

m 1 var: var 2 n inmst equatorial: W. obs.

S Cephei:

21 37 +78.3

7 45

10 12

k 4 var: var 3 m
10 10 in large telescope. cramm: obs.

k 4 var: var 3.5 m
10 12 in large telescope. W: obs.

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1894phae..proj...528W

Feb. 11. 1895.

k 4 var : var 3 n
w large tube up. Atwill Obs.

δ. Cephei.

21 5 +68.1
8 20
11 15

β. Cephei : w: obs.

21 37 +98.3
8 32
10 55

Star l.

Prism to left.

10 58 55	2.01	0.307	0.230
11 0 40	2.01	1.1 37	1.1 20
	2.08	11.10	11.10
	10	9.96	9.9
	2.03	2.1	2.1
		11.71	12.10

Prism to right.

1.67
1.71
1.71
3/2.09
1.90

Star k.

Prism to left.

11 4 7	1.79	0.270	0.2330
11 8 0	1.79	1.2 20	1.1 60
	1.76	11.10	11.10
	2	9.9	9.9
	1.78	2.1	2.1
		12.00	12.09

Prism to right.

1.65
1.66
1.81
3/2.12
1.71

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1894phae.proj.528W

Feb. 11. 1895.

Star m.

Prism to left.

11	6	5	0.98	*9.9423	
11	7	45	0.97	K9.911 v	9.4921
			0.94	v6.	K9.460 v
			19	0.09	v0.
			0.96	11.10	0.v K
				2.1v	11.10
				13.34	2.1v
					13.79

Prism to right.

0.92	
0.69	
0.73	
3/2.34	
0.78	

Star p.

Prism to left.

11	9	50	0.80	9.4633	
11	11	30	0.72	K9.316 v	9.6721
			0.67	v0.	K9.360 v
			3/2.19	0.63	v0.
			0.73	11.10	1.6K
				2.1v	11.10
				13.93	2.1v
					14.89

Prism to right.

0.49	
0.47	
0.44	
3/1.40	
0.47	

Star q.

Prism to left.

11	14	45	0.63	9.7924	
11	17	9	0.64	K9.620	9.633 v
			0.59	v0.	K9.467 v
			3/1.86	1.04	v0.
			0.62	11.10	1.83
				2.1v	11.10
				14.29	2.1v
					14.03

Prism to right.

0.43	
0.42	
0.43	
3/1.28	
0.43	

Star m.

Prism to left.

11	19	10	1.09	0.0120	
11	20	52	1.00	0.0660	9.419 v
			0.99	11.10	K9.097 v
			3/3.08	11.04	v0.
			1.03	2.1v	0.90
				13.19	11.10
					2.1v
					14.1v

Prism to right.

0.65	
0.66	
0.68	
3/1.9	
0.66	

Star o.

Prism to left.

11	24	0	0.66	9.4129	
11	25	0	0.62	K9.064 v	9.7924
			0.67	v6.	K9.620
			1.9 v	9.94	v0.
			0.65	11.10	1.04
				2.1v	11.10
				14.19	2.1v
					14.39

Prism to right.

0.60	
0.59	
0.67	
1.86	
0.62	

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1894phae.proj..528W

Feb. 11. 1895

Comp. star = Polaris: auxiliary telescope 70°
to left of vertical.

Mean time =
11 11 42

Cor. for Abr. = 0.13 to be subtracted.

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1894phae.proj.528W

Feb. 13. 1895.

o Ceti.

Jm 2 V, V 2 m with naked eye. Estimate is
7 29 the mean of eyes in ~~not~~ reversed positions with
reference to stars. Gr. obs.

7 37 o Ceti = m (being the mean of eyes in reversed positions) Attwill obs.

7 40 o Ceti = m (being the mean of eyes in reversed positions) Crum obs.

o Ceti.

Phot. R: W: obs.

5	54	
2/3	4	-2.5
	50	

Index to right and above.

8 19 29

21 9.3	comp. star dis.	
26.0	166.7 ^	
216.2		
28.5	172.3 ^	~~-5.2~~ ^
	339.0 ^	-5.18
	21.0	

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1894phae.proj..528W

Feb. 13, 1895.

Index to left and below.

		306.0	172.7^	
8	21	24	118.7	
		309.0	166.9^	-~~3.2~~ ^
		115.9	339.6^	-5.25
			20.4	
		309.0	166.2^	
8	23	~~34~~ 46	~~115.2~~	
			~~+2.0~~	
		306.0	172.7^	-~~3.0~~ ^
		118.7	338.9^	-5.17
			21.1	

Index to right and above.

		36.2	171.8^	
8	25	53	205.0	
		37.8	167.9^	-~~3.2~~ ^
		205.7	339.7^	-5.26
			20.3	
		37.3	167.7^	
8	27	34	205.0	
		36.2	171.7^	-~~3.2~~ ^
		207.9	339.4^	-5.23
			20.6	

Index to left and below.

		126.9	171.1^	
8	30	48	298.0	
		127.7	168.6^	-~~3.2~~ ^
		296.3	339.7^	-5.26
			20.3	
8	24	48		

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1894phae.proj.1528W

Feb. 13. 1895.

δ. Cephei: W: obs

21 37 +78.3
6 27
8 50

8 45 K 4 var: var. 3 m W: obs.
in large telescope: estimate = 10.5

8 50 K 4 var: var. 2 mm
in large telescope. Cramm. obs

9 38 K 4 var: var 3 m
in large telescope: Attwill: obs.

Comp. star in following measurements = Polaris.

Star K.

Prism to left.

10 2 43 2.49 Log 2.273 = 0.35660
10 1 1 2.12 5
2.21 1.78300
6.82 11.10
2.273 9.32
2.15
11.47

Magn. = 11.40

Prism to right.

Log 2.423 = 0.38435
2.34 5
2.55 1.92175
2.38 11.10
7.27 9.18
2.423 2.15
11.33

Star L.

Prism to left.

10 5 20 2.58 Log 2.543 = 0.40535
2.46 5
2.59 2.02675
7.63 11.10
2.543 9.07
2.15
11.22

Magn. = 11.40

Prism to right.

Log 2.117 = 0.32577
2.15 5
2.05 1.62885
2.12 11.10
6.32 9.47
2.107 2.15
11.62

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1894phae..proj..528W

Feb. 13. 1895.

Star n.

			Prism to left.	Log 1.160 = 0.06446	Log 1.127 = 0.05192	Prism to right.
10	11	6	1.16	5	5	1.14
10	14	13	1.15	0.32230	0.25960	1.16
			1.17	11.10	11.10	1.08
			3.48	10.78	10.84	3.38
			1.160	2.15	2.15	1.127
				12.93	12.99	
				magn. = 12.96		

Star p.

			Prism to left.	Log 0.703 = 9.84696	Log 0.780 = 9.89209	Prism to right.
10	19	25	0.71	5	5	0.76
10	17	51	0.71	49.23480	49.46045	0.77
			0.69	0.76520	0.53955	0.81
			2.11	11.10	11.10	2.34
			0.703	11.87	11.64	0.780
				2.15	2.15	
				14.02	13.79	
				magn. = 13.90		

Star o.

			Prism to left.	Log 0.820 = 9.91381	Log 0.757 = 9.87910	Prism to right.
10	23	20	0.80	5	5	0.71
10	25	33	0.83	49.56905	49.39550	0.78
			0.83	0.43096	0.66450	0.78
			2.46	11.10	11.10	2.27
			0.820	11.53	11.70	0.757
				2.15	2.15	
				13.68	13.86	
				magn. = 13.76		

Star m.

			Prism to left.	Log 1.120 = 0.04922	Log 1.150 = 0.06070	Prism to right.
10	28	0	1.11	5	5	1.09
10	30	20	1.09	0.24610	0.30250	1.14
			1.16	11.10	11.10	1.22
			3.36	10.56	10.80	3.45
			1.120	2.15	2.15	1.150
				13.00	12.95	
				magn. = 12.98		

Star q.

			Prism to left.	Log 0.823 = 9.91540	Log 0.913 = 9.96047	Prism to right.
10	34	0	0.86	5	5	0.93
10	32	15	0.79	49.57700	49.80235	0.87
mean time			0.82	0.42300	0.19765	0.94
10	17	42	2.47	11.10	11.10	2.74
			0.823	11.67	11.30	0.913
				2.15	2.15	
				13.67		
				magn. = 13.56		

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1894phae.proj..528W

Feb. 13. 1895

S. Cephei.

11 5 R 3 var : var 4 m
in large tele wpz Watts: obs.

Cor. for Abs. = 0.10 to be subtracted.

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1894phae..proj..528W

Feb. 15. 1895.

o beti.

gm 3 var : var 1 M : naked eye Cram. obs.

c m 1 var : var 3 m w obs naked eye

~~b + var~~
✓ var 3 m b 1 var A obs.

o beti: Phot. R: W: obs.

Index to right and above.

216.3 < comp star dis.
25.8 167.5

Index to ~~right~~ left and below.

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1894phae.proj..528W

Feb. 15. 1895

Index to right and above.

215.4 ∠ comp star dis.

7 50 43	27.9	172.5^	
	217.0		
	26.1	169.1^	~~3.5~~^
		341.6^	-5.47
		18.4	

Index to left and below.

	307.9	167.6^	
7 52 2	115.5		
	306.3	171.5^	~~-3.2~~^
	117.8	339.1^	-5.19
		20.9	

	305.9	172.8^	
7 53 37	118.7		
	307.7	168.7^	~~3.5~~^
	116.4	341.5^	-5.46
		18.5	

Index to right and above.

	38.8	166.3^	
7 55 30	205.1		
	36.8	170.2^	~~-2.9~~^
	208.0	336.5^	-4.94
		23.5	

	37.1	171.1^	
7 57 36	208.2		
	38.1	168.1^	~~-3.2~~^
	206.2	339.2^	-5.20
		20.8	

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1894phae.proj...528W

Feb. 15. 1895.

Index to left and below.

7 59 21	127.8	169.0 ^	
	296.8	~~171.7~~ ^	
	126.0	171.7	
7 54 48	297.4	340.47 ^	~~5.24~~ ^
		19.3	-5.37

Obti again W: obs.

Index to left and below.

	126.9	< comp. star dis.	
8 3 15	298.2	171.3 ^	
	127.8	168.4 ^	
	296.2	339.7 ^	~~3.3~~ ^
		20.3	5.26

Index to right and above.

	217.5		
8 4 35	26.2	168.7 ^	
	215.7	172.8 ^	~~3.5~~ ^
	28.5	341.5 ^	-5.46
		18.5	

	216.1	171.1 ^	
8. 6 15	27.2		
	217.0	169.3 ^	~~3.3~~ ^
	26.3	340.4 ^	-5.33
		19.6	

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1894phae.proj.528W

Feb. 15. 1895.

Index to left and below.

307.7	169.1 ^		
116.8			
306.0	172.1 ^		~~3.1~~ ^
116.1	341.2 ^		-5.43
	18.8		
305.9	172.1 ^		
118.0	170.5 ^		~~3.0~~ ^
307.3	342.6 ^		-5.59
117.8	17.4		

Index to right and above.

37.0	169.9 ^		
206.9			
36.0	172.0 ^		~~3.5~~ ^
208.0	341.9 ^		-5.51
	18.1		

8 07 00

δ Cassiop:

Cram: obs.

0	19	+55.9
6	16	
5	57	

9 40 9 3 var: var 2 h

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1894phae.proj..528W

Feb. 15. 1895.

δ. Cassiop. Gram obs

1	9	+71.8
7/6	55/46	

10 30 g H var: var ~~2 5~~ g

Comparison difficult on account of distance between stars.

R Aurigae. Gram obs.

5	6	+53.4
9/4	6/0	

11 Abandoned as star was not certainly identified.

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1894phae.proj. 528W

Feb. 16. 1895.

o Ceti.

dm 2 var : var 2 n : naked
7 15 eye . brain : obs.

7 20 dm 1 var : var 3 n : naked
eye . W : obs.

Phot. R : W : obs.

2 + -2.5
5/3 29/25

Index to right and above.

36.8 < comp. star dis.
7 34 52 207.2 170.4^
39.0 167.1^
206.1 337.5^ ~~-3.0^~~
22.5 -5.03

Index to left and below.

128.7 166.6^
7 38 40 296.3
126.8 171.0^ ~~-3.0^~~
297.8 337.6^ -5.04
22.4

126.2 171.7^
7 41 30 297.9
127.1 169.9^ ~~-3.5^~~
297.0 341.6^ -5.47
18.7

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1894phae.proj..528W

Feb. 16. 1895.

Index to right and above.

217.8	168.2^		
26.0			
216.5	171.5^		~~-3.3~~^
28.0	339.7^		-5.26
	20.3		

216.3	171.4^		
27.7			
217.5	169.6^		~~-3.4~~^
27.1	341.0^		-3.40
	19.0		

Index to left and below.

306.7	169.9^		
116.6			
305.8	172.1^		~~-3.5~~^
117.9	342.0^		-3.52
	18.0		

7 50 55

7 42 55

8. Cephei: W: obs

21 37 +78.3

6/8 5/28

8 20 [illegible] var: var 2 m. in large telescope Cram obs.

8 1.25 K 5 var: var 2.5 m. in large telescope: estimate = 12.0 W: obs.

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1894phae.proj.528W

Feb. 16, 1895.

Comparison star = Polaris : auxiliary telescope 35° to left of vertical : eyes parallel to stars.

Phot. d: W: Obs.

Star k.

Prism to left.

8	37	35	2.61	
8	40	35	2.74	
			2.55	
			7.90	
			2.633	

Log 2.633 = 0.42045 (5)

2.10225
11.10
9.00
2.15
11.15

Prism to right.

	2.19
	2.16
	2.28
	6.63
	2.210

Log 2.210 = 0.34439 (5)

1.72195
11.10
9.38
2.15
11.53

Magn. = 11.34

Star l.

Prism to left.

8	46	44	2.37	
8	41	39	2.50	
			2.50	
			7.37	
			2.457	

Log 2.457 = 0.39041 (5)

1.95205
11.10
9.15
2.15
11.30

Prism to right.

	2.03
	1.85
	1.92
	5.80
	1.933

Log 1.933 = 0.28623 (5)

1.43115
11.10
9.67
2.15
11.82

Magn. = 11.56

Star n.

Prism to left.

6	49	50	1.26	
6	53	0	1.34	
			1.29	
			3.89	
			1.297	

Log 1.297 = 0.11294 (5)

0.56470
11.10
1.954
2.15
12.69

Prism to right.

	.94
	.90
	0.95
	2.79
	0.930

Log .930 = 9.96848 (5)

49.84240
0.15760
11.10
11.26
2.15
13.41

Magn. = 13.05

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1894phae.proj...528W

Feb. 16. 1895.

Star p.

Prism to left.

8	59	55	0.88	Log 0.897 = 9.95279
9	4	52	0.90	5
			0.91	49.76395
			2.69	0.23605
			0.897	11.10
				11.34
				2.15
				13.49

Prism to right.

Log 0.903 = 9.95569	0.84
5	
49.77845	0.96
0.22155	
11.10	
11.32	0.91
2.15	
13.47	2.71
Magn. = 13.48	0.903

Star Variable.

Prism to left.

9	6	43	1.65	Log 1.617 = 0.20871
9	8	58	1.46	5
			1.74	1.04355
			4.85	11.10
			1.617	10.06
				2.15
				12.21

Prism to right.

Log 1.300 = 0.11394	1.29
5	
0.56970	1.29
11.10	
11.67	1.32
2.15	
13.82	3.90
Magn. = 13.02	1.300

Star r.

Prism to left.

9	19	0	0.54	Log 0.520 = 9.71600
9	26	34	0.50	5
			0.52	48.58000
			1.56	1.42000
			0.520	11.10
				12.52
				2.15
				14.67

Prism to right.

Log 0.417 = 9.62014	0.38
5	
48.10070	0.43
1.89930	
11.10	0.44
13.00	
2.15	1.25
15.15	0.417
Magn. = 14.91	

Star s.

Prism to left.

9	20	20	0.44	Log 0.437 = 9.64048
9	27	8	0.43	5
			0.44	48.20240
			1.31	1.79760
			0.437	11.10
				12.90
				2.15
				15.05

Prism to right.

Log 0.407 = 9.60959	0.43
5	
48.02795	0.39
1.95205	
11.10	0.40
13.05	
2.15	1.22
15.20	0.407
Magn. = 15.12	

Star t.

Prism to left.

9	21	20	0.38	Log 0.377 = 9.57634
9	28	30	0.36	5
			0.39	47.88670
			1.13	2.11830
			0.377	11.10
				13.22
				2.15
				15.37

Prism to right.

Log 0.383 = 9.58320	0.38
5	
47.91600	0.41
2.08400	
11.10	0.36
13.18	1.15
2.15	0.383
15.33	
Magn. = 15.35	

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Star o.

Prism to left.

9	33	55	0.86
9	37	59	0.99
9	39	0	0.94
			2.81
			0.937

Log 0.937 = 9.97174

49.85870
0.14130
11.10
11.24
2.15
13.39

Prism to right.

Log 0.770 = 9.88649

49.43245
0.56755
11.10
11.67
2.15
13.82

0.77	10
0.78	10
0.76	
2.31	
0.770	

Magn. = 13.60

Star m.

Prism to left.

9	35	13	1.51
9	39	0	1.44
			1.01
			4.56
			1.520

Log 1.520 = 0.18184

0.90920
11.10
10.20
2.15
12.35

Prism to right.

Log 1.330 = 0.12385

0.61925
11.10
10.48
2.15
12.63

1.25	10
1.37	10
1.37	
3.99	
1.330	

Magn. = 12.49

Star q.

Prism to left.

9	41	2	0.96
9	43	53	1.00
			0.95
			2.91
			0.970

Log 0.970 = 9.98677

49.93385
0.06615
11.10
11.17
2.15
13.32

Prism to right.

Log 0.790 = 9.89763

49.48815
0.51185
11.10
11.61
2.15
13.76

0.79	10
0.78	10
0.80	
2.37	
0.790	

Magn. = 13.54

Mean time 9 13 51
Cor. for alt. in above = 0.10 to be sub.

R. hrs. min: Phot. d: W. obs.

16	34	+72.9
8	5	
−8	29	
3	31	

Auxiliary telescope 30° to left of vertical: comp. star = B (Beta)
hrs. min.

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Star l.

Prism to left.

10	32	0	1.68	Log 1.587 = 0.20058 / 5 = 1.00290
10	34	7	1.53	11.10
			1.55	10.10
			4.76	2.13
			1.587	12.23

Prism to right.

1.69	Log 1.753 = 0.24378 / 5 = 1.21890	
1.89	11.10	
1.68	9.88	
5.26	2.13	
1.753	12.01	

Magn. = 12.12

Star m.

Prism to left.

10	42	45	1.60	Log 1.500 = 0.17609 / 5 = 0.88045
10	38	12	1.30	11.10
			1.60	10.22
			4.50	2.13
			1.500	12.35

Prism to right.

1.49	Log 1.410 = 0.14922 / 5 = 0.74610	
1.34	11.10	
1.40	10.35	
4.23	2.13	
1.410	12.48	

Magn. = 12.42

Star n.

Prism to left.

10	44	4	1.43	Log 1.427 = 0.15442 / 5 = 0.77210
10	47	16	1.34	11.10
			1.51	10.33
			4.28	2.13
			1.427	12.46

Prism to right.

1.05	Log 1.003 = 0.00130 / 5 = 0.00650	
0.99	11.10	
0.97	11.09	
3.01	2.13	
1.003	13.22	

Magn. = 12.84

Star o.

Prism to left.

10	52	0	0.99	Log 1.000 = 0.00000 / 5 = 0.00000
10	54	40	1.02	11.10
			0.99	11.10
			3.00	2.13
			1.000	13.23
mean time				
10	43	56		

Prism to right.

1.42	Log 1.563 = 0.19397 / 5 = 0.96980	
1.63	11.10	
1.64	10.13	
4.69	2.13	
1.563	12.26	

Magn. = 12.74

Cor. for abr. in above. = 0.05 to be sub.

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B 39 is 0.9 fast.
B+C = 1m 7s fast

B. & C. 1652.

B. 39

7 4g ~~32.1~~ 6.0 ~~B+C. 39.5 fast.~~ 7 4δ ~~26.1~~ 0.0

5 0 6.0 4ε ~~26.1~~ 0.0

I. ⊖ II. III. IV. Dis. Jup. IV. Fr. obs. Cram rac.
Compared with sat. close to sat. IV, and a little south preceding = Sat. II.

			28.5		182.5	849.2 <	
7	~~56~~ 55	~~8~~ 41	44.0	62.9 <	245.4	212.3 <	
			54.5		178.3		
	7	57	3.5	~~64.7~~ 63.8 <	243.0		
			20.5	1.0	184.8	852.6 <	
7	56	~~58~~ 31	29.5	57.9 <	242.7	213.2 <	
			43		182.1		
			57.	60.9 <	243.0		
	58		6	1.2 59.4 <	179.2	846.1 <	
			15	65.8 <	245.0	211.5 <	
7	57	~~41~~ 14	26	66.5 <	177.7		
			37.5	66.2 <	244.2		
			52.5	0.9 60.9 <	181.0	847.0 <	
7	58	~~28~~ 1	59 2.5	~~59.9~~	241.9	211.8 <	
			14.5	63.7 <	180.2		
			24	62.3 <	243.9		
			36	1.1	176.9	844.7 <	
7	~~59~~ 58	~~12~~ 45	47.5	69.1 <	246.0	211.2 <	
			57	67.8 <	177.0		
	8	0	6	68.4 <	244.8		
			16	0.8	177.0	846.9 <	
7	59	~~62~~ 27	24.5	68.0 <	245.0	211.7 <	
			40	62.9 <	181.0		

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8	0	55		243.9		
	1	9		178.9		845.1 <
	~~20~~	~~2~~20	66.1 <	245.0		211.3 <
8	0	~~46~~ 21		37.5	177.9	
		47	0.9	65.4 < 65.8 <	243.3	
	2	05			179.5	849.8 <
		9.5	66.5 <		246.0	212.4 <
8	1	~~36~~ 9		19	178.1	
		35.5		68.1 <		
		49.5	0.9	67.3 <	246.2	
		59.5	66.3 <		178.2	849.8 <
					244.5	212.4 <
8	~~3~~ 2	~~49~~ 52				
	4	55			182.9	
	5	10		61.3 <		
		22	1.0	63.8 <	244.2	
		37	64.8 <		180.2	849.1 <
					246.0	212.3 <
8	5	~~28~~ 1				
	6	39.5			178.0	
		53		67.9 <		
			0.9	66.4 <	245.9	
	7	1	66.8 <		180.1	849.9 <
		10.5			246.9	212.5 <
8	7	~~26~~ 6 59				
	9	0			179.9	
		14.5		63.1 <		
		22	1.0	65.0 <	243.0	
		31	64.8 <		179.1	849.8 <
8	8	~~55~~ 31			243.9	212.4 <
		46.5			182.8	
		55		61.2 <		
			1.1	63.0 <	244.0	

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		8,5				
8	10	~~8,5~~		182.1		854.9 <
		19		60.8 <	243.9	213.7 <
8 9	~~19~~	34,5		56.1 <	185.9	
		42,5	1.3	58.4 <	242.0	
		57,		184.0		850.5 <
	11	6,5		58.7 <	242.7	212.6 <
8 10	~~5~~ ~~22~~	18,5		63.6 <	180.1	
		27	1.1	61.2 <	243.7	
		38		184.0		852.2 <
8	~~10 46~~ ~~11 13~~	46		57.6 <	241.6	213.(0?) <
		55,5			184.7	
	12	6,		57.2 <	241.9	
		21,5	1.3	57.4 <	183.3	855.3 <
8 11	~~29~~ ~~56~~	29,5		60.5 <	243.8	213.8 <
		38			183.5	
		49		61.2 <	244.7	
	13	4	1.2	60.8 <	185.0	852.2 <
		12,5		57.2 <	242.2	213.(0?) <
8 12	~~18~~ ~~45~~	34			182.0	
		44		61.0 <	243.0	
		58,5	1.2	59.1 <	183.2	848.2 <
8 13	~~13~~ ~~40~~	9,5	14	57.6 <	240.8	212.0 <
		28,5			183.2	
		40		57.8 <	241.0	
		48	1.3	57.7 <	181.0	867.3 <
8	~~13 54~~ ~~14 27~~	55,5		63.0 <	244.0	212.8 <
	15	4,5			185.0	
		14		56.3 <	241.3	
		27	1.2	59.6 <	185.2	
				55.6 <		

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							185.2			
					24		240.8		852.0 <	
8	14	34	8	15	46.5		60.2 <	182.9	213.0 <	
8	~~15~~	+			55	1.3	57.9 <	243.1		
								182.5	848.6 <	
				16	3.5		57.7 <	240.2	212.2 <	
					11.5					
		14			28.5			185.2		
8	15	~~41~~			35.5		55.5 <			
						1.3	56.6 <	240.7		
				17	6			183.5	850.1 <	
					14		57.5 <	241.0	212.5 <	
		13								
8	16	~~40~~			23			182.7		
					32		60.2 <			
						1.2	58.8 <	242.9		
					50			183.0	841.7 <	
				18	2.		55.0 <	238.0	210.4 <	
		00								
8	17	~~27~~			11.5			181.5		
					17.5		57.7 <	239.2		
						1.4	56.4 <			
					25.5			188.5	853.5 <	
					33		51.5 <	240.0	213.4 <	
		32								
8	17	~~39~~			42			185.8		
					49.5		53.4 <	239.2		
						1.4	52.4 <			
					58			185.0	847.1 <	
		7					54.2 <	239.2	211.8 <	
8	18	~~34~~		19	9.5					
					17.5		57.1 <	182.9		
					26					
						1.4	55.6 <	240.0		
		18	48		40.5			184.2	853.3 <	
8		~~19~~	~~16~~				54.8 <	239.0	213.3 <	
					49.5					
					57			186.4		
							57.3 <			
				20	9			240.7		
						1.4	56.0 <			
					17			183.8	846.2 <	
		28					53.2 <			
8	19	~~55~~			25			237.0	211.6 <	

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8	20	44			187.3		
		52	1.6	50.8 / 52.0	236.1		
	21	0.5			189.0	850.0	
		8.5		47.0	236.0	212.5	
8	20 ~~33~~ 6	16.5			187.0		
		24		51.0 / 49.0	236.0		
		34	1.7		186.9	850.4	
		43		51.9	238.8	212.6	
8	20 41 ~~21 8~~	51			189.0		
	22	1		46.7 / 49.3	235.7		
		9	1.9		189.2	854.1	
		16		48.8	236.0	213.5	
8	21 17 ~~44~~	29			189.9		
		37.5		47.1 / 48.0	237.0		
		44	1.8		188.0	848.0	
		53		48.1	236.1	212.0	
8	21 56 ~~22 3~~	12			188.8		
	23	22.5		46.3 / 47.2	235.1		
		31.5	1.8		188.3	851.1	
8	22 41 ~~23 8~~	40.5		46.7	235.0	212.8	
		55			191.8		
	24	2.5		44.2 / 45.4	236.0		
		10.5	1.9		192.1	851.1	
8	23 20 ~~47~~	21.5		41.9	234.0	212.8	
		31			191.0		
		41.5		43.0 / 42.4	234.0		
		53.5	2.1		190.0	849.4	
	25	5		43.5	233.5	212.4	
8	24 2 ~~8~~	10			192.0		
				41.9			

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	8	25	21.5		233.9	
			33		45.0 188.0	847.7
			44.5		233.0	211.9
	8	24 46 ~~25 13~~				
		26	1		42.9 191.9	
			9.5	2.0	44.0 234.8	
			18		43.5 190.0	848.3
			27.5		233.5	212.1
	8	25 26 ~~53~~	36.5		191.8	
			45	2.1	41.2 42.4 233.0	
			52.5		39.8 191.2	846.4
	8	26 3 ~~30~~			231.0	211.6
		27	5.5		193.2	
			12.5	2.3	37.8 38.8 231.0	
			21		47.3 185.1	840.6
			30		232.4	210.2
			41.5			
	8	26 29 ~~27 6~~	50		190.9	
			58		41.3 44.3 232.2	
		28	11	2.0	37.8 190.1	849.2
	8	27 17 ~~44~~	17.5		230.9	212.3
			28.5		193.0	
			36.5		39.2 232.2	
			56.5	2.3	38.5 193.0	850.5
	8	27 57 ~~28 24~~	54.5		39.2 232.2	212.6
		29	6		194.0	
		z	15.5		37.3 38.2 231.3	
			25	2.3	43.2 191.8	850.0
			38.5		235.0 moved	212.5
	8	28 30 ~~37~~	40		190.9 images	
			47	2.2	35.4 39.3 224.1 slightly	

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	20	4		34.6	196.4	853.6
		16.5			231.0	213.4
8	29	~~40~~ 13				
		24.5			194.2	
		32.5		37.8	232.0	
		42	2.4	36.2		
				37.9	193.1	853.9
8	~~30~~ 29	~~21~~ 54			231.0	213.5
	31	7.5			195.0	
		16.5		39.8	234.8	
		25	2.3	38.8		
				36.2	195.0	849.7
8	~~31~~ 30	~~1~~ 34			231.2	212.4
		32.5				
		49			194.0	
		56		35.5		
			2.5	35.8	229.5	
	32	7.5		36.0	193.2	846.2
8	31	~~47~~ 15			229.2	211.6
		16.5				
		25			194.9	
		35.5		34.1		
			2.5	35.0	229.0	
		45				
				31.2	196.8	849.8
		55			228.0	212.4
8	~~32~~ 31	~~20~~ 53				
	33	3.5			196.0	
		13		33.0		
			2.7	32.1	229.0	moved
		31.5				
				36.4	193.8	images
		40			230.2	slightly
8	~~33~~ 32	~~6~~ 39				848.9
		49.5			196.0	212.2
		57.5		32.9		
			2.5	34.6	228.9	
	34	11.5				
				33.0	194.0	843.6
		20.5			227.0	210.9
8	33	~~46~~ 19			196.1	
		29		30.4		
		39	2.9	31.7	226.5	
	35	4.5				
				30.1	196.1	

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		14			226.2	843.2
8	34	~~41~~		25.5	196.6	210.8
				37	27.7	224.3
			2.9	46	28.9	
					30.1	197.9 850.1
	34	54		56.5		228.0 212.5
8	~~35~~	~~21~~				
		36		4		194.2
				12.5	27.8	226.0
			2.9	20.5	28.0	
		26			26.9	198.1 845.3
8	35	~~53~~		28		225.0 211.3
				36		198.2
				45	25.8	
			3.1	56	26.4	224.0
					26.5	199.5 850.7
8	36	~~28~~ 1		3.5		226.0 212.7
		37		11		200.3
				18.5	24.6	
			3.2	25	25.6	224.9
					27.1	197.0 844.5
	36	38		37		224.1 211.1
8	~~37~~	~~5~~		51.5		198.9
					25.6	
		38	3.1	0	26.4	224.5
				9		
					26.8	199.2 847.2
8	37	~~41~~ 14		16		226.0 211.8
				23		196.0
				32.5	30.0	
			3.0	48	28.4	226.0
					27.0	198.8 850.9
8	38	~~2~~		57		225.8 212.7
		39		19		199.9
				27	26.5	
			3.1	41	26.8	226.4
					21.0	201.0 847.0
				51		222.0 211.8

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8	38 39	50 47	40	1.5		201.2		
				11	3.6	21.6 / 21.3	222.8	
				18.5		23.0	206.3	843.4
8	39	25 02		23			223.3	210.8
				35			197.7	
				47	3.4	24.4 / 23.7	222.1	
			41	2.5		21.8	199.3	844.0
8	40	11 38		11			221.1	211.0
				20			199.1	
				34.5	3.4	25.4 / 23.6	224.5	
				45		21.8	201.0	848.8
				58.5			222.8	212.2
			42	clouds				
8	41 42	38 5		30.5			201.0	
			43			23.0 / 22.4		
			44	44.5			224.0	
			45	0			202.1	847.2
				11.5		18.2	220.3	211.8
8	44	15 43		27			202.8	
				44		19.2 / 18.7	222.0	
					3.9	clouds		
8	46 47	54 21	48	0		K.3	15.6	204.3
	47	17 44		23				219.8
	48	45 12		51		K.2	16.3	203.5
	48	26 42	49	17		K.3	15.8	219.3
	49	8		48		K.2	12.3	207.0
	49	1 28	50	7		K.6	14.0	221.0

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8	49	~~31 58~~	8	50	37	K2 ~~16.3~~	204.7
	50	00 ~~7~~		51	515	~~16.7~~ K2 14.3	219.0

Troubled by clouds somewhat at the last: but ~~just when~~ just after second satellite seemed to be certainly seen but faint. Last two settings a little more uncertain but still satellite thought to be seen in each, although satellite was at extreme limit of visibility: became so cloudy after last setting that limit of readings could not be taken: still cloudy at 9h 7m, and Jupiter invisible to naked eye.

B. 394 is 0.7 fast.

B. + C. 1142.			B. 394.		
9	12	4.1	9	11	~~+1 0.0~~
	13	4.1		12	~~+1 0.0~~

B+C = ~~1m 5s~~ fast.

Bond 394 ~~+6s slow~~

is 0.9 fast.

10 5 Too cloudy to observe reappearance.

From a plot of the preceding observations, it appears that the first 12 sets only should be used for constant, and these have been so used.

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B. + C. 11 f 2.

9	43	3.4
	44	3.3

B. 39 K.

9	42	0.0
	43	0.0

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Obsti.

7 10ᶜ m 2 var : var 2 n : naked
* eyε. Cram : obs.

7 20ᶜ m 2 var : var 2 n : naked
eyε. W : obs.

2 7 -2.5
5
3

44
40

Phot. R: W: obs.

Index to right and above.

218.0 ∠ comp. star dis.
7 32 43 26.0 168.0 ✓
215.8 172.4 ✓
28.2 340.4 ✓ ~~-3.3~~ ✓
19.6 .33

Index to left and below.

305.9 172.1 ✓
7 34 51 118.0
308.5 167.4 ✓
115.9 339.5 ✓ ~~-3.2~~ ✓
20.6 -.2 ×

308.6 167.5 ✓
7 37 13 116.1
306.2 172.1 ✓ ~~-3.2~~ ✓
118.3 339.6 ✓ .20
20.4

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Feb. 20. 1895.

Index to right and above.

36.2	171.0 ✓		
207.2			
37.2	169.9 ✓		~~-3.4~~ ✓
207.1	340.9 ✓		-5.39
	19.1		
37.4			
207.1	169.7 ✓		
37.0	171.2 ✓		~~-3.4~~ ✓
208.2	340.9 ✓		-5.39
	19.1		

Index to left and below.

126.2	171.9 ✓		
298.1			
127.5	169.5 ✓		~~-3.4~~ ✓
297.0	341.4 ✓		-5.39
	18.6		

7 38 57

T. Andromi: Phot. R: W. obs.

0	6	+26.2
6	15	
6	9	

0	1	+28.3
6	21	
6	20	

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Feb. 20. 1895.

Index to right and above.

334.0 < comp. star dis.

8	15	35	93.7 119.7 ✓
			338.2 106.9 ✓ −0.91 ✓
			85.1 226.6 ✓ ~~+1.1~~ ✓
			133.4

Index to left and below.

~~356.5~~ 67.8

			111.2 ✓
8	20	3	179.0 −1.04 ✓
			62.2 121.9 ✓ ~~+1.0~~ ✓
			184.1 233.1 ✓
			126.9
			65.7 116.5 ✓
8	21	55	182.2 −0.96 ✓
			66.0 112.7 ✓ ~~+1.0~~ ✓
			178.7 229.2 ✓
			130.8

Index to right and above.

			161.1 104.6 ✓
			265.7 −0.81 ✓
8	24	20	153.6 117.4 ✓ ~~+1.2~~ ✓
			271.0 222.0 ✓
			138.0
			156.2 116.5 ✓ ✓
8	26	20	272.7 −0.94
8	28	30	156.0 110.0 ✓ ~~+1.1~~
			266.0 226.5 ✓
			133.5

6 | 136 43

8 22 47.16

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1894phae.proj..528W

Feb. 20. 1895.

Index to left and below.

246.3	111.6 ✓	
357.9		−0.97 ✓
243.0	118.2 ✓	~~+1.0~~
1.2	229.8 ✓	
	130.2	

6h	52m	48.s0
	53	18.0
	53	39.3
6	54	56.2
	55	26.0
	55	47.3

Comp. star used above with T. Andromedae, precedes it 21.s3 and is about 0.'2 south of it. This comp. star is about 10.v5 or 11th mag. and has a slightly ftr. star preceding it 1.s5 and 0.'2 south of it.

T. Androm. identified by adjacent bright stars.

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1894phae.proj..528W

Feb. 20. 1895.

o Leti.

c m ~ 1.5 omicron, omicron 2.5 n

with naked eye: * Attivill: obs.

δ. Cephei: Phot d: W: obs.

21	37	+7 8,3
7	15	
9	38	

Auxiliary telescope 40° to left of vertical: eyes parallel to stars.

Star K.

Prism to left.

9	21	20	2.42	0. 3909 / 1.9 v K v
9	24	37	2.44	11.10 / 9.1 v
			2.52	2.1 v
			2.46	mag. 11.30

Prism to right.

0. 34K3 / 1.721 v	2.15
11.10 / 9.38	2.17
2.1 v	2.32
mag. 11.v3	2.21

mean = 1.42

Star L.

Prism to left.

9	26	30	2.30	0. 37K2 / 1.27 K0
9	29	47	2.40	11.10 / 9.23
			2.41	2.1 v
			2.37	mag. 11.32

Prism to right.

0. 3 v K1 / 1.77 0 v	2.17
11.10 / 9.33	2.31
2.1 v	2.31
mag. 11.K0	2.26

Stoot

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1894phae.proj.528W

Feb. 20. 1895.

Star m.

Prism to left.

9	33	43	1.38	0.1139	0.0531	1.11
9	35	7	1.30	0.6991	0.2611	1.13
			1.23	11.10	11.10	1.16
			1.30	10.13	10.43	1.13
				2.1	2.1	
				12.6	12.9	

Prism to right.

Star p.

Prism to left.

9	39	5	0.92	9.9411	9.9223	0.92
9	32	26	0.83	9.7221	9.9111	0.96
			0.88	10.	10.	1.00
			0.82	0.22	0.09	0.96
			0.82	11.10	11.10	
				2.1	2.1	
				13.3	13.3	

Prism to right.

Star o.

Prism to left.

9	42	25	1.07	9.9916	9.9496	0.90
9	45	30	1.01	9.9720	9.7470	0.88
			0.93	10.	10.	0.90
			0.99	0.02	0.21	
				11.10	11.10	
				2.1	2.1	
				13.27	13.10	

Prism to right.

Star m.

Prism to left.

9	48	38	0.75	9.9021	0.0607	1.08
9	51	55	0.83	9.8421	0.3035	1.20
			0.86	10.		1.18
			0.81	0.46	0.30	
				11.10	11.10	
				2.1	2.1	
				13.71	13.50	

0.30
11.10
10.80
2.1
12.9

Prism to right.

~~Star~~ Variable.

Prism to left.

9	53	25	1.49	0.1644	0.0934	1.22
9	55	23	1.46	0.4220	0.4670	1.24
			1.44	11.10	11.10	1.26
			1.46	10.24	10.63	
				2.1	2.1	
				12.43	12.73	

Prism to right.

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1894phae.proj..528W

Feb. 20. 1895.

Star r.

Prism to left.

9	57	12	0.57	9.7160
10	2	55	0.50	KR.VR00
			0.48	VR0.
			0.VR2	1.K2
				11.10
				2.1V
				1K.67

Prism to right.

9.6V32	0.40
KR.2660	0.47
VR0.	0.47
1.73	0.47
11.10	
2.1V	
1K.9A	0.KV

Star s.

Prism to left.

9	58	55	0.40	9.6120
10	4	30	0.41	KR.06K0
			0.42	VR0.
			0.K1	1.9K
				11.10
				2.1V
				1V.19

Prism to right.

9.6021	0.38
KR.010V	0.42
VR0.	0.40
1.99	
11.10	
2.1V	
1V.2K	0.K0

Star t.

Prism to left.

9	59	49	0.33	9.VV63
10	6	3	0.39	K7.7A1V
			0.37	VR0.
			0.36	2.23
				11.10
				2.1V
				1V.K7

Prism to right.

9.VKK1	0.36
K7.720V	0.33
VR0.	0.35
2.2K	
11.10	
2.1V	
1V.V3	0.3V

Star y.

Prism to left.

10	8	0	0.80	9.K921
10	10	35	0.77	K9.K60V
			0.78	VR0.
			0.7A	0.VK
				11.10
				2.1V
				13.79

Prism to right.

9.A261	0.65
K9.130V	0.66
VR0.	0.69
0.A3	
11.10	
2.1V	
1K12	0.67

Comparison star = Polaris.

Mean time
9 47 36

Cor. for abs. in alt. = 0.10 to be sub.

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Feb. 20. 1895.

Est. 10.a

10 13 K v S, S 2, v m in lar, tel, 1 Wash. obs.

10 17 K 4 S, S 2 m " " " Cranbrook "

10 25 K 3 S; S 1 m " " " Attwill obs.

R. Ass. Min: Phot. d: W: obs.

16 34 +72.9
8 50
-7 44
4 10

Auxiliary telescope 35° to left of vertical: eyes parallel to stars.

Star.

Prism to left.

10 56 40	1.76	0.230K		0.206K	1.61
10 59 18	1.66	1.1520		1.0340	1.63
	1.67	11.10		11.10	
	1.70	9.95		10.07	1.59
		2.13		2.13	
		12.08	Magn.: 12.14	12.20	1.61

Prism to right.

Star no.

Prism to left.

11 0 30	1.31	0.1430		0.1271	1.39
11 2 50	1.59	4715 0		0.635 5	1.33
	1.27	11.10		11.10	
	1.39	10.38		10.46	1.29
		2.13		2.13	
		12.51	Magn.: 12.59	12.59	1.34

Prism to right.

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1894phae.proj...528W

Feb. 20. 1895.

Star m.

	Prism to left.			Prism to right.	
11 5 25	1.36	0.0935		0.0335	1.13
11 7 15	1.22	0,4670		0,1670	1.01
	1.14	11.10		11.10	1.09
	1.24	10.63		10,93	1.04
		2.13		2.13	
		12.76 magn. = 12.91		13.06	

Star o.

	Prism to left.			Prism to right.	
11 10 15	1.14	0.0607		9.9465	1.02
11 12 30	1.15	0,3035		49.9340	0.93
	1.15	11.10		0,0660	0.96
	1.15	10,80		11.10	0.97
		2.13		11.17	
		12.93 magn. = 13.12		2.13	
				13.30	

Mean time
11 4 20 Comp. star = Beta Lus. Mm.
Cor. for abs. in above = 0.05 to be sub.

ζ. Cephei.

21 37 +78.3
9 37
12 0

11 25 K 5 S : S 1 m. Waite obs.

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1894phae.proj.,528W

Feb. 21. 1895.

o Ceti

7 29 c m 2 Var. Var 2 m with naked eye Sr. Obs.

7 30 c m 3 var: var 2 m: naked eye. Gram: obs.

T Andron. Sr. Obs.

0 / +24.3

5 53

5 52

Phot. R:

Index to left and below.

2 3 4. 3

~~3 5 5.0~~ ∠ comp. star dis.

7 43 21 2.8 125.5^

243.0 115.5^ −1.21

358.5 241.0^ ~~0.8^~~

119.0

Index to right and above.

334.9 107.2^

7 45 55 82.1

329.9 122.0^ −0.96

91.9 229.2^ 1.0^

130.8

331.0 178.3^

7 48 40 89.3

334.0 108.0^ 0.4 −0.90

82.0 226.3^ 1.1^

133.7

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1894phae.proj...528W

Feb. 21. 1895.

7 43 21
45 55
48 40

Index to left and below.

63.0		
176.9	113.9 ^	−1.05
7 51 23		
62.1	119.4 ^	1.0 ^
181.5	233.3 ^	
	126.7	

55.7		
7 55 0	128.4 ^	−1.14
65.0	111.2 ^	0.9 ^
176.2	239.6 ^	
	122.4	

Index to right and above.

155.1		
7 59 0	107.9 ^	−0.74 <
263.0	103 ^	
158.7	184.4	1.3 ^
6 30.3 21 201	217.3	
7 50 35.16	8.2 ^	
265.0	141.8	

Same comp. stars used as last night.

α Ari. Phot R: W: obs.

2 4 −2.5

6 24
4 20

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1894phae.proj..528W

Feb. 21. 1895.

Index to right and above.

	34.9	comp. star dis	
8 9 20	204.3	169.4 ^	
	33.4		
	205.5	172.1 ^	~~-3.5~~ ^
		341.5 ^	-3.46 ✓
		18.5	

Index to left and below.

	123.8	171.7 ^	
8 13 19	295.5		
	124.8	169.8 ^	~~-3.5~~ ^
	294.6	341.5 ^	-3.46 ✓
		18.5	

	124.4	170.0 ^	
8 16 20	294.4		
	123.6	171.7 ^	~~-3.5~~ ^
	295.3	341.7 ^	-3.48 ✓
		18.3	

Index to right and above.

	213.6	171.5 ^	
8 19 55	25.1		
	214.2	170.7 ^	~~-3.5~~ ^
	24.9	342.2 ^	-3.54 ✓
		17.8	

	214.2	170.5 ^	
8 22 25	24.7		
	213.9	170.9 ^	~~-3.4~~ ^
	24.8	341.8 ^	-3.45 ✓
		18.6	

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1894phae.proj...528W

Feb. 21. 1895.

Index to left and below.

304.0
115.2
304.3
114.3

171.2^

170.0^

341.2^
18.8

8 26 2
8 17 53

δ. Cephei: Phot. d: W: obs.

21 37 +78.3
6 53
9 16

Comparison Star c° Polaris.

Star K.

Prism to left.

8 44 50
8 47 5

2.45
2.38
2.43
7.26
2.420

Log 2.420 = 0.38382
1.91910
11.10
9.18
2.15
11.33

Log 2.233 = 0.34889
1.74445
11.10
9.36
2.15
11.51

Prism to right.

2.24
2.21
2.25
6.70
2.233

Magn. = 11.42

Star L.

Prism to left.

8 49 0
8 52 15

2.43
2.45
2.58
7.46
2.487

Log 2.487 = 0.39568
1.97840
11.10
9.12
2.15
11.27

Log 2.200 = 0.34242
1.71210
11.10
9.39
2.15
11.54

Prism to right.

2.15
2.15
2.30
6.60
2.200

Magn. = 11.40

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1894phae.proj..528W

Feb. 21. 1895.

Star m.

Prism to left.

1.24	Log 1.230 = 0.08991	Log 1.197 = 0.07809	1.13
1.19	0.44955	0.39045	1.25
1.26	11.10	11.10	1.21
3.69	10.65	10.71	3.59
1.230	2.15	2.15	1.197
	12.80	12.86	
	Magn. = 12.83		

Prism to right.

Star p.

Prism to left.

0.94	Log 0.937 = 9.97174	Log 0.950 = 9.95424	0.92
0.91	49.85870	49.77120	0.88
0.96	0.14130	0.22880	0.90
2.81	11.10	11.10	2.70
0.937	11.24	11.33	0.900
	2.15	2.15	
	13.39	13.48	
	Magn. = 13.44		

Prism to right.

Variable star

Prism to left.

1.44	Log 1.323 = 0.12156	Log 1.437 = 0.15746	1.38
1.25	0.60780	0.78730	1.45
1.28	11.10	11.10	1.48
3.97	10.49	10.31	4.31
1.323	2.15	2.15	1.437
	12.64	12.46	
	Magn. = 12.55		

Prism to right.

Star n.

Prism to left.

0.52	Log 0.523 = 9.71850	Log 0.383 = 9.58320	0.39
0.52	48.59250	47.91600	0.38
0.53	1.40750	2.08400	0.38
1.57	11.10	11.10	1.15
0.523	12.51	13.18	0.383
	2.15	2.15	
	14.66	15.33	
	Magn. = 15.00		

Prism to right.

Star s.

Prism to left.

0.49	Log 0.473 = 9.67486	Log 0.367 = 9.56467	0.36
0.46	48.37430	47.82335	0.38
0.47	1.62570	2.17665	0.36
1.42	11.10	11.10	1.10
0.473	12.73	13.28	0.367
	2.15	2.15	
	14.88	15.43	
	Magn. = 15.00		

Prism to right.

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1894phae.proj...528w

Feb. 21. 1895.

Star t.

Prism to left.

Log 0.440 = 9.64345

9	21	10	0.46
9	29	25	0.47
			0.44
			1.32
			0.440

5
48.21725
1.78275
11,10
12.88
2.15
15.03

Prism to right.

Log 0.317 = 9.50106

	0.33
	0.32
	0.30
	0.95
	0.317

5
47.50530
2.49470
11,10
13,59
2.15
15.74

Magn. = 15.38

Star o.

Prism to left.

Log 0.830 = 9.91908

9	35	5	0.86
9	37	35	0.77
			0.86
			2.49
mean time			0.830
9	12	18	

5
49.59540
0.40460
11,10
11,50
2.15
13.65

Prism to right.

Log 0.807 = 9.90687

	0.83
	0.82
	0.81
	2.42
	0.807

5
49.53435
0.46565
11,10
11,57
2.15
13.72

Magn. = 13.68

Star m.

Prism to left.

Prism to right.

9 . .
9 . .
. .

Star g.

Prism to left.

Prism to right.

9 . .
9 . .
. .

10 30 Stopped by clouds.

Cor. for abs. in above = 0.10 to be sub.

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1894phae.proj..528W

Feb. 22. 1894 V.

O Ceti.

7 16 vm 1 Var. Var 2 n with naked eye Sr. obs.

7 30 vm 2 var: var 2 n: naked eye 2 Oram: Obs.

T. Androm: PhotR.: W: obs.

0 1 +28.3

5/5 57/56

Index to right and above.

150.0 < comp. star dis.

7 41 6 268.9 1189 ✓

158.1 ~~0.9~~

264.7 106.6 ✓ 1.1 ✓

225.5 ✓

134.5

Index to left and below.

250.6 105.7 ✓

7 44 13 356.3 ~~1.8~~ ✓

240.1 116.7 ✓ 1.2

356.8 222.4

137.6

241.9 114.3 ✓

7 46 25 C 356.2 ~~0.7~~ ✓

247.5 105.8 ✓ 1.2

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1894phae..proj..528W

Feb. 22. 1895.

7 41 6
44 13
46 25

Index to right and above.

334.7	107.3 ✓	
82.0		−0.96
328.0	122.0 ✓ ✓	1.0 ✓
90.0	229.3	
	(230.)	

7 49 25

333.0	117.0 ✓	
90.0		−0.81
337.0	104.9 ✓ ✓	1.2 ✓
81.9	221.9	
	(238.)	

7 51 30

Index to left and below.

68.1	101.4 ✓	
169.5		−0.70
63.2	114.9 ✓ ✓	1.3 ✓
178.1	216.3	
	(143.)	

7 54 5

6 286 44

7 47 47.3

Same comp. star as last evening.

o Leti.

d m 1.5 var : var 4 m
naked eye. Attenuation.

2 4 −2.5 Fr. obs.

6/4 24
20

Clouds.

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1894phae.proj..528W

Feb. 22. 1895.

Index to left and below.

302.5 ∠ comp. star dis.
115.0 172.5 ^
304.9
112.9 168.0 ^ ~~3.3~~ ^
340.5 ^ 19.5 - 5.35

Index to right and above.

34.7 168.3 ^
203.0
32.2 172.9 ^ ~~3.4~~ ^
205.1 341.2 ^ - 5.43
18.8

32.8 172.2 ^
205.0
34.0 170.1 ^ ~~3.6~~ ^
204.1 342.3 ^ - 5.56
17.7

Index to left and below.

125.7 172.2 ^ 129.2
297.9 305.5 176.3 ^
125.7 176.1 ^ 133.1 172.9 ^
301.8 348.3 ^ 306.0 349.2 ^
11.7 ^ 10.8 ^
~~-6.46~~ ~~-6.63~~
-6.46
clouds .109
-6.54

133.3
305.8 172.5 ^
132.1 174.7 ^
306.8 347.2 ^
~~4.9~~ ^
12.8 -6.26

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1894phae.proj..528W

Feb. 22. 1894.

Index to right and above.

221.2	173.1 ^	
34.3		
223.3	170.2 ^	~~-3.17~~ ^
33.5	343.3 ^	-3.68
	16.7	

8 29 45
8 11 40

~~Obti~~ Obti again.

Index to right and above.

26.1 < computer Dis.

193.1	167.0 ✓	
22.9	171.8 ✓	
194.7	338.8 ✓	~~-3.2~~ ✓
	21.2	-5.16

8 34 46

Index to left and below.

113.0	172.0 ✓	
285.0		
113.3	169.9 ✓	~~-3.5~~ ✓
283.2	341.9 ✓	-5.51
	18.1	

8 37 0

293.8	170.1 ✓	
103.9	172.4 ✓	
292.6	342.5 ✓	~~-3.6~~ ✓
105.0	17.5	-5.58

8 39 30

Index to right and above.

22.5	171.7 ✓	
194.2		
24.0	169.2 ✓	~~-3.4~~ ✓
	340.9 ✓	-5.39

8 42 0

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1894phae.proj..528W

Feb. 22, 1895.

24.0 169.0 ✓
193.0
23.0 171.0 ✓ ~~5.2~~ ✓
194.0 340.0 ✓ -5.29
20.0

Index to left and below.

~~13.0~~ ~~1719~~
~~254.9~~ 169.0 ✓
114.0 172.0 ✓ ~~-5.14~~ ✓
253.0 341.0 ✓ -5.40
112.8 19.0
254.8

8 45 40
8 40 23

S Ciphei. Gram. obs.

21 37 +78.3
7 34
-12 3
11 57

10 8 Abandoned in large equatorial as star could not be certainly identified.

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1894phae.proj..528W

Feb. 22. 1895.

West Equatorial.

δ Cephei

10 32 var = n cram obs

R. Urs. Maj.

Not var not seen cram obs.

10 40

Q Urs. Min

c 4 var : var 2 d

cram obs.

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1894phae.proj..528W

Feb. 23. 1894

o Ceti

7 18 c m 1.r Var. Var. 2 n (naked Eye) Fr. obs.

7 19 c m 2 var: var 2 n: naked eye. Dram: obs.

T. Androm: Phot. R: W: obs.

0 1 +28.3

5/5 53/52

Index to right and above.

~~3[illegible]~~
~~2[illegible]~~ < comp. star dis. 320.3
~~2[illegible]~~ 72.0 −1.04
~~[illegible]~~ +2.0
111.7^ 317.0 1.0
121.0^ 76.0 ~~+1.0~~
232.7^
127.3

Index to left and below.

49.7 121.6^
7 37 10 171.9 −0.96
53.6 107.5^ 1.0^
161.1 229.1^
130.9

58.0 104.0^
7 30 2 162.0 −0.74
52.0 114.2^
166.2 218.2^ 1.3^
141.8

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Index to right and above.

~~138.4~~
~~139.7~~ 119.5^ −0.89

257.9

147.0 106.2^ 1.1^

253.2 225.7^

134.3

144.0 109.7^

253.7 −0.87

142.0 115.0^ 1.1^

257.0 224.7^

135.3

Index to left and below.

~~155.8~~
~~157.8~~ 103.9^

159.7 −0.70

55.1 112.6^ 1.2^

167.7 216.5^

143.5

Obsti: Phot. R: W: obs

−2.15

Index to left and below.

114.3 2 comp. star dis.

282.6 168.3^

112.2

285.0 172.8^

1895.541

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Index to right and above.

202.7	171.6^		
14.1			
203.5	168.7^		
12.2	340.3^		
	19.7		-5.32
204.0			
12.9	168.9^		
202.7	171.3^		
14.0	340.2^		
	19.8		-5.31

Index to left and below.

292.7	171.5^		
104.2			
294.2	169.1^		
103.3	340.6^		
	19.4		-5.36
292.8			
103.0	169.2^		
292.2	172.2^		
104.5	341.4^		
	18.6		-5.45

Index to right and above.

22.2	171.8^		
194.0			
23.7	169.6^		
193.2	341.4^		
	18.6		-5.45

Low aurora arch in the north: summit of arch

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1894phae..proj..528W

Feb. 23. 1895.

δ Cephei : Phot. d : W: obs

21 37 +783
6 47
9 10

Auxiliary telescope 35° to left of vertical: eyes parallel w star

Star m.

Prism to left. Log 1.703 = 0.23121 Prism to right. Log 1.283 = 0.10823

8	53	50	1.74			.25
8	57	25	1.71			1.27
			1.66			1.33
			5.11	1.15605	0.54115	3.85
			1.703	11.10	11.10	1.283
				9.94	10.56	
				2.15	2.15	
				12.09	12.71	

Magn. = 12.40

Star o.

Prism to left. Log 0.880 = 9.94448 Prism to right. Log 1.010 = 0.00432

9	0	37	0.88			.04
8	59	32	0.87			1.00
			0.89			0.99
			2.64	49.72240	0.02160	3.03
			0.880	0.27760	11.10	1.010
				11.10	11.06	
				2.15	2.15	
				13.53	13.23	

Magn. = 13.38

Star q

Prism to left. Log 0.767 = 9.88480 Prism to right. Log 0.757 = 9.87911

9	2	25	0.70			0.71
9	4	42	0.80			0.80
			0.80			0.76
			2.30	49.42400	49.39550	2.27
			0.767	0.67600	0.60450	0.757
				11.10	11.10	
				2.15	2.15	
				13.83	13.85	

Magn. = 13.84

variable.

Prism to left. Log 1.537 = 0.18667 Prism to right. Log 1.367 = 0.13577

9	9	23	1.66			1.26
9	8	18	1.49			1.40
			1.46			1.42
			4.61	0.93335	0.67885	4.19
				11.10	11.10	
				10.17	10.42	
				2.15	2.15	
				12.32	12.67	

Magn. = 12.49

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Feb. 23. 1895.

Starr.

Prism to left.

9 10 52	0.43	Log 0.460 = 9.66276	Log 0.473 = 9.67486	0.41
9 18 55	0.50	48.31380	48.37430	0.54
	0.45	1.68620	1.62570	0.47
	1.38	11.10	11.10	1.42
	0.460	2.15	2.15	0.473
		14.94	14.88	
			magn. = 14.91	

Prism to right.

Star S.

Prism to left.

9 13 40	0.42	Log 0.437 = 9.64048	Log 0.403 = 9.60531	0.40
9 20 28	0.46	48.20240	48.02655	0.42
	0.41	1.79760	1.97345	0.39
	1.31	11.10	11.10	1.21
	0.437	2.15	2.15	0.403
		15.05	15.22	
			magn. = 15.14	

Prism to right.

Star t.

Prism to left.

9 15 20	0.38	Log 0.403 = 9.60531	Log 0.373 = 9.57114	0.38
9 21 55	0.47	48.02655	47.85855	0.36
	0.34	1.97345	2.14145	0.38
	1.21	11.10	11.10	1.12
	0.403	2.15	2.15	0.373
		15.22	15.39	
			magn. = 15.30	

Prism to right.

Star p.

Prism to left.

9 26 42	0.93	Log 0.903 = 9.95569	Log 0.780 = 9.89209	0.80
9 30 10	0.92	49.77845	49.46045	0.79
	0.86	0.22155	0.53955	0.75
	2.71	11.10	11.10	2.34
	0.903	2.15	2.15	0.780
		13.47	13.79	
			magn. = 13.63	

Prism to right.

Star n.

Prism to left.

9 33 17	1.27	Log 1.180 = 0.07188	Log 1.173 = 0.06930	1.13
9 34 55	1.18	0.35940	0.34650	1.16
	1.09	11.10	11.10	1.23
	3.54	10.74	10.75	3.52
	1.180	2.15	2.15	1.173
		12.89	12.90	
			magn. = 12.90	

Prism to right.

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Feb. 23. 1895.

Star k.

Prism to left.

9 37 43	2.11	Log 2.283 = 0.35851	Log 2.220 = 0.34635	Prism to right.
9 40 13	2.33	5	5	2.29
	2.41	1.79255	1.73175	2.25
	6.85	11.10	11.10	2.12
	2.283	9.31	9.37	6.66
		2.15	2.15	2.220
		11.46	11.52	
		Magn. = 11.49		

Star l.

Prism to left.

9 42 17	2.10	Log 2.183 = 0.33905	Log 2.283 = 0.35851	Prism to right.
9 44 47	2.17	5	5	2.24
	2.28	1.69525	1.79255	2.27
	6.55	11.10	11.10	2.34
	2.183	9.40	9.31	6.85
		2.15	2.15	2.283
		11.55	11.46	
		Magn. = 11.50		

Star m.

Prism to left.

9 51 15	1.60	Log 1.520 = 0.18184	Log 1.430 = 0.15534	Prism to right.
9 53 31	1.48	5	5	1.37
	1.48	0.90920	0.77670	1.45
	4.56	11.10	11.10	1.47
	1.520	10.19	10.32	4.29
		2.15	2.15	1.430
		12.34	12.47	
		Magn. = 12.40		

Star ~~A~~ q

Prism to left.

9 58 17	0.80	Log 0.800 = 9.90309	Log 0.677 = 9.83059	Prism to right.
10 0 0	0.81	5	5	0.68
	0.79	49.5 15 45	49.15295	0.66
	2.40	0.48455	0.84705	0.69
	0.800	11.10	11.10	2.03
		2.15	2.15	0.677
		13.73	14.10	
		Magn. = 13.92		

Mean time 9 24 13 Comp star = Polaris.

Cor. for alt. in above = 0.10 to be sub.

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Feb. 23. 1895.

10 15 R 5 var: var 2 m
in large telescope. W: obs.

10 20 R 5 var: var 2 m
in large telescope. Gram obs.

R Urs. Min. Phot. d. W. obs

16 34 +72.9
8 55
7 39
4 21

Comp. star = Beta Urs. Min.

Star l.

Prism to left.

10 32 40 1.71
10 36 9 1.93
1.90
5.54
1.847

Log 1.847 = 0.26647 − 5
1.33235 −
11.10
9.77
2.13
11.90

Prism to right.

Log 1.647 = 0.21669 − 5
1.08345 −
11.10
10.02
2.13
12.15

1.57
1.66
1.71
4.94
1.647

Magn. = 12.02

Star m.

Prism to left.

10 39 9 1.57
10 41 40 1.56
1.57
4.70
1.567

Log 1.567 = 0.19507 − 5
0.97535
11.10
10.12
2.13
12.25

Prism to right.

Log 1.667 = 0.22194 − 5
1.10970
11.10
9.99
2.13
12.12

1.53
1.67
1.70
5.00
1.667

Magn. = 12.18

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Feb. 23. 1895.

Stur n.

Prism to left.

10 44 20	1.30	Log 1.337 = 0.12613	Log 1.153 = 0.06183
10 46 48	1.40	5	5
	1.31	0.63065	0.30915
	4.01	11.10	11.10
	1.337	10.47	10.79
		2.13	2.13
		12.60	12.92
		magn. = 12.76	

Prism to right.

1.19	
1.16	
1.11	
3.46	
1.153	

Stur o.

Prism to left.

10 48 50	1.09	Log 1.067 = 0.02816	Log 1.040 = 0.01703
10 50 52	1.05	5	5
	1.06	0.14080	0.08515
	3.20	11.10	11.10
mean time	1.067	10.96	11.01
10 49 40		2.13	2.13
		12.09	13.14
		magn. = 13.12	

Prism to right.

1.06	
1.03	
1.03	
3.12	
1.040	

Cor. for abr. in alt. = 0.08 to be subt.

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1894phae.proj..528W

Feb. 25. 1895.

$\frac{1}{2}$ Beti.

2 4 −2,5 W: obs.

6 5

4 1

30 Too cloudy: abandoned.

Experiments with Phot. R. on Beta Orionis with eye piece out of focus and pasteboard cap over objective, this cap having two rectangular apertures. Settings on equalizations of images of ~~two~~ pairs of rectangles.

~~2 3 4~~

~~2 3 4~~

333.2	2 3.5	4.1
56.7		
	9 5.3	3.2
152.0		
	2 9.0	3.9
241.0		
	2 9.0	3.9
330.0		
	9 5.9	3.2
65.9		
	2 2.6	4.0
154.5		
	9 1.2	3.9
246.3		
	2 5.7	4.0
332.0		
	9 5.2	3.2
67.8		
	2 9.7	3.9
157.5		
	2 9.6	3.9
246.9		
	2 6.1	4.0
333.0		
	9 2.0	3.9
65.0		
	9 0.3	3.9
155.3		

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1894phae.proj..528W

Feb. 25. 1895.

	22.1	4.0
243.4		
333.9	90.5	3.9
65.0	91.1	3.9
151.8	26.2	4.0
242.0	90.2	3.9

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1894phae.proj..528W

Feb. 26. 1895

B+C. 11A 2.

6 K0 31,3
K1 31.2

B 394.

6 39 0.5
K0 0.5

Reapp. of Dup. III : W : obs : Chron recorder : Phot R :
compared with first and only satellite following Dup.
(before Satellite III reappeared) = ~~Sat.~~ IV.
B+C 1m 31s fast. Bond 394. slow 0.5s

III IV

Lim. of Visibility.

		6	49	37	20.3	96.7 ~~37~~ 117.0	~~432.9~~
6	48	33	49	54		~~117.0~~	432.9
			50	13		100.2	108.2
				30	18.8 / 19.6	119.0	

54	21	6	55	52	Reen.
	25			56	94.1 29.4
	38		56	9	123.5 36.5
	47		~~11~~	17.5	88.0 38.9
	55			26	126.9 38.9
55	1			32.5	88.0 42.0
	7			38	130.0 45.0
	13			43.5	85.0 47.8
	19			50	132.8 51.6
	~~24~~ 29		57	0.5	81.2 51.4
	~~32~~ 37			8.5	132.6 47.6
	~~40~~ 45			15.5	85.0 52.9

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6	55	~~48~~ 53		23.5	127.9	56.6		
		~~53~~ 58		29	81.3	56.3		
	56	~~50~~ 5		35.5	137.6	59.6		
		~~8~~ 13		43.5	78.0	62.8		
		~~14~~ 19		50.5	140.8	63.6		
		~~24~~ 29		56.5	77.2	64.9		
		~~32~~ 37	58	7.5	142.1	68.4		
		~~40~~ 45		16.5	73.7	72.5		
		~~52~~ 57		27.5	146.2	78.7		
	57	X 6		37	67.5	82.0		
		15		46	149.5	84.7		
		24		55	64.8	90.5		
		33	59	3.5	155.3			
		~~41~~		12.5	63.5		441.6 <	
6	57	~~55~~		22	91.5<	155.0	110.4 <	
		~~59~~		29.5	64.0			
	~~58~~			38	95.1<	159.1		
				46	93.3<	58.3	436.9 <	
				54.5	102.8<	161.1	109.2 <	
58	29	7	0	4		57.0		
				13.5	103.5<	160.5		
				22.5	103.2<	58.8	444.7 <	
	59	7		35	104.1<	162.9	111.2 <	
				46		55.8		
				54.5	111.4<	167.2		
				3.5	107.8<	54.3	441.5 <	
				12.5	111.6<	165.9	110.4 <	
	59	46		21	112.7<	54.3		
				30.5	112.2<	167.0		

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		7	1	39	113.1 <	54.6	444.3 <
7	0	25		50.5		167.7	111.1 <
			2	1.5	114.6 <	53.7	
				13.5	113.8 <	168.3	
				~~24~~ 24.5		49.2	438.7 <
1	7			34	120.5 <	169.7	109.7 <
				43	116.2 <	51.8	
				51	118.4 <	168.0	
			3	2.5	119.8 <	51.1	443.0 <
1	47			11		170.9	110.8 <
				23	123.0 <	49.0	
				36.5	121.4 <	172.0	
			(prob. 48.5)	58.5		47.9	435.5 <
				59	121.4 <	169.3	108.9 <
2	34		4	11		46.9	
				23	124.5 <	171.4	
				37	123.0 <	49.2	443.3 <
				49.5	125.7 <	174.9	110.8 <
3	24		5	2	125.2 <	47.0	
				12.5	125.4 <	172.2	
				29.5	126.3 <	45.7	441.0 <
				43		172.0	110.2 <
4	17			51.5	128.9 <	47.2	
			6	9	127.6 <	176.1	
				22	126.3 <	45.8	436.6 <
				30.5		172.1	109.2 <
5	27		7	22.5	128.9 <	44.9	
				34	127.6 <	173.8	
				48		47.3	

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1894phae.proj..528W

Feb. 26. 1895.

7	6	32	7	7	56	128.6 <	43.3 171.9	432.9 <	108.2 <
				8	6	127.7 <	45.0	2	
					18	128.2 <	172.7		
					20.5		47.2	438.7 <	
					37.	124.1 <	171.3	109.7 <	
	7	11			45		45.2	3	
					53.5	129.8 <			
						127.0 <	175.0		
				9	0.5		42.2	436.2 <	
		49			12.5	~~121.6~~ 131.6 <	173.8	109.0 <	
					23.5	127.8 <	46.2	4	
					36	~~124.7~~ <	174.0		
				10	4.5	129.7 <	45.0	439.5 <	
					14	129.9 <	174.9	109.9 <	
	8	48			24		44.4	~~439.1~~	~~109.8~~
					32	130.0 <			
						130.0 <	174.8		
					40.5		42.7	434.0 <	
			(prob. 49.)		59.	130.4 <	173.1	108.5 <	
	9	23			56.5	129.8 <	44.2	6	
				11	7.5	130.1 <	174.0		
					26		48.0	445.8 <	
	10	10			35.5	129.0 <	177.0	111.4 <	
					44	129.4 <	45.7	7	
					54	129.2 <	175.1		
				12	2.5	130.3 <	43.7	438.0 <	
					13		174.0	109.5 <	
	10	48	(prob. 23)		42	128.1 <	46.1	8	
					33	129.2 <	174.2		

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1894phae.proj..528W

Feb. 26. 1895.

Seeing pretty good, but Dup. very high and almost on the meridian: observer learning to make observations on his Knees.

B. & C. #1182			B #394	
23	30.8		22	~~.55~~
24	30.7	Use this.	23	~~.55~~
25	30.6		24	~~.55~~
26	30.6		25	~~.55~~

B + C = 1m 30s fast. Bond 394 slow 0s.55

O. Andromedae: Phot. R: W: obs.

+28.3

0 1
10 17
6 16

Index to right and above.

141.6	comp. star dis.	
259.0	115.2 ✓	
147.9		−0.74
251.0	103.1 ✓	1.3 ✓
	218.3	
	141.7	

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Index to left and below.

7	45	23		
			237.0	
			~~247.2~~	103.2 ✓
7	49	0	340.2	−0.65
			231.8	110.5 ✓ 1.4
			342.3	213.7 ✓
				146.3
			240.4	94.3 ✓
7	51	55	334.7	✓ −0.31
			238.0	102.1 ✓ 1.7
			940.1	196.4
				163.6

Index to right and above.

			327.5	
				103.9 ✓
7	54	40	71.4	−0.70
			320.1	✓ 112.2 1.3
			92.3	216.1 ✓
				143.9
			326.1	
				107.9 ✓
7	56	40	74.0	−0.54
			329.7	100.1 ✓ 1.5
			69.8	207.0
				152.0

Index to left and below.

			54.0	105.2
7	58	55	159.2	

Clouds. 1

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1894phae.proj..528W

Feb. 26, 1895.

Obsti: Phot. R: W: obs.

2 4 -2.5

6 42

4 38

Index to right and above.

23.9 < comp. star dis.

8 5 45 192.9 169.0 ✓

22.0

194.8 172.8 ✓ -3.5 ✓

341.8 ✓

18.2 -5.50

Index to left and below.

112.6 171.4 ✓

8 7 48 284.0

114.2

282.2 168.0 ✓ -3.2 ✓

339.4 ✓

20.6 -5.23

114.7 168.3 ✓

8 9 25 283.0

112.8 171.4 ✓ -3.3 ✓

284.2 339.7 ✓

20.3 -5.26

Index to right and above.

202.2 171.8 ✓

8 10 55 14.0

203.7 168.3 ✓ -3.3 ✓

12.0 340.1 ✓

19.9 -5.30

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1894phae..proj..528W

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203.6	169.9 ✓	23.8 ✓
12.6	166.5 ✓	193.0 169.2 ✓
207.2	336.4 ✓	−2.8 22.1 172.3 ✓
19.7		341.5 ✓
		194.4 ✓
		18.5
		−0.46

Index to left and below.

292.8	171.5 ✓	
104.3	170.2 ✓	−2.5 ✓
293.3	341.7 ✓	−0.48
103.5	18.3	

8 12 15

8 13 45

8 09 59

Result of Sup. II: Phot R: W: Obs. beam nearer compared with second satellite following = Satellite III.

B + C ☆ 1182

8	21	30.4	
	22	30.3	
	23	30.5	
	24	30.5	

B ☆ 394

8	20	45 ~~00.00~~
	21	00.00
	22	00.00
	23	00.00

B + C = 1m 30s fast. Band 39 ☆ slow 0.7s

Limit of Visibility.

8	36	25	281.0	12.7	1149.8
		38	293.7		287.4
8 35		51	282.0	11.1	
	37	3	293.1	11.9	

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1894phae.proj..528W

Feb. 26. 1895.

○ Oct. Attwill: obs

8 35

var = m : region low : estimate uncertain : probably not of full value

8	37	18	8	38	48	mean.	
		24			54	101.3	17.6 <
		36		39	6.5	118.9	23.1 <
					14.	95.8	22.7 <
		54			24.	116.5	26.3 <
	38	2			31.5	92.2	29.9 <
		8			37.5	122.1	34.8 <
		14			44.5	89.3	38.9 <
		22			52.	126.2	39.5 <
		30			59.5	86.7	44.6 <
		36		40	6.5	131.3	43.1 <
		44			13.5	88.2	46.9 <
		52			22.	135.1	58.3 <
	39	1			31.	86	65.4 <
		12			41.5	142.2	59.2 <
		18			48.	83.0	57.1 <
		24			54.5	140.1	60.0 <
		32		41	1.5	80.1	61.3 <
		37			7.	141.4	63.4 <
		44			14.5	78.0	63.3 <

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8	39	52		22.	141.3	67.1 <	
	40	4		24.5	74.2	67.0 <	
		11		41.	141.2	67.2 <	
		20		50.	74.0	70.0 <	
		30		59.5	144.0	66.3 <	
		37	42	7.	77.7	64.5 <	
		45		15.	142.2	69.2 <	
				26.	73.0	435.0 <	
				33.5	71.2 < 144.2	108.8 <	
	41	8		42.	73.4		
				51.	70.0 < 143.4		
				54.	70.6 < 141.0 (prob 71.1)		
			43	7.	76.2 147.3	433.4	
		42		14.5	71.8	108.4	
				25.5	71.4 143.2		
				33.5	73.8		
	42	18		42.5	77.3 < 146.1	425.6 <	
				52.	67.8	106.4 <	
					75.1 < 142.9		
			44	2.5	76.2 <		
				10.5	67.8	432.1 <	
		54		20.	77.4 < 145.2	108.0 <	
				28.	78.7 < 70.2		
				39.	78.0 < 148.9		
				46.5	69.0	429.5 <	
					73.2 <	107.4 <	
	45	10					
	43	40	47	7.	142.2		
				16.5	68.1 < 75.1		
				27.5	70.6 < 143.2		
				37.	33.9 (prob 73.9)		

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Feb. 26. 1895.

				73.9		433.5 <
				68.8 <	142.7	108.4 <
	47	49				
8	46	26	48		72.0	
			3	72.9 <		
			14	70.8 <	144.9	6
			25		74.0	435.9 <
				69.8 <		~~109.0~~ <
	47	10	34.5		143.8	108.9
			45		74.0	
			54	70.1 <		
				70.0 <	144.1	7
		49	9		72.3	429.4 <
	47	54	19.5	69.8 <	142.1	107.4 <
			29		72.0	8
			39	71.0 <		
				70.4 <	143.0	

B. + C. 1142.

A	∨A	30.0
	∨9	30.0

B+C = 1m 30s fast

B. 394.

A	∨7	~~0.0~~ .45
	∨A	0.0

Bond 0.7 ∨ slow.

Seeing getting good.

S Cephei W: obs.

21	37	+78.3
8	3	
10	26	

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Feb. 26. 1895.

9 25 R 5.5 var : var 1.5 m
in large telescope : estimate = 11.5 W: obs.

9 30 R 5 var: var 2 m
in large telescope : Cram obs.

9 38 R 5 var: var 3 m
in large telescope : Attwill obs.

R. Cassiop. W: obs

23	52	+49.7
8	22	
8	30	

Too low : abandoned.

S Cassiop: Phot. d. W: obs.

1	10	+72.1
8	30	
7	20	

Auxiliary telescope 70° to west of vertical: eye is parallel to stars.

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Feb. 26. 1895.

Star q.

	Prism to left.		Prism to right.	
10 6 0	1.65	0.21K4	0.23vv	1.71
10 8 0	1.55	1.07K0	1.17v	1.76
	1.71	11.10	11.16	1.68
	3/1.91	10.03	9.92	3/2.15
	mean 1.64	2.K2	2.K2	1.72
		12.K4	12.34	

Star s.

	Prism to left.		Prism to right.	
10 9 52	1.16	0.06K2	0.1106	1.24
10 12 0	1.14	0.3K10	0.vv30	1.29
	1.22	11.10	11.10	1.33
	3/.v2	10.76	10.vv	3/.46
	1.17	2.K2	2.K2	1.29
		13.14	12.97	

Star t.

	Prism to left.		Prism to right.	
10 15 8	0.91	9.9494v	0.0046v	1.04
10 33 43	0.87	49.7K70	0.0K30	1.00
	0.89	v0.	11.10	1.01
	3/2.67	0.2v	11.06	3/.0v
	0.89	11.10	2.K2	1.02
		2.K2	13.K2	
		13.72		

Star w.

	Prism to left.		Prism to right.	
10 17 0	0.71	9.0Kv1v	9.2Kv1v	0.70
10 35 45	0.69	49.22vv	49.22vv	0.70
	0.70	v0.	v0.	0.70
	3/2.10	0.77	0.77	
	0.70	11.10	11.10	0.70
		2.K2	2.K2	
		14.29	14.29	

Star u.

	Prism to left.		Prism to right.	
10 19 0	0.74	9.8921v	9.93Kv	0.87
10 37 52	0.84	49.460v	49.672v	0.85
	0.75	v0.	v0.	0.87
	3/2.33	0.vK	0.33	
		11.10	11.10	
		2.K2	2.K2	
			13.96	

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Feb. 26. 1895.

Star x.

Prism to left.

10	22	15	0.65	9.7924	
10	29	24	0.59	9620	
			0.63	1.04	
			3/1.47	11.10	
			0.62	2.42	
				1K.96	

Prism to right.

9.7442	0.54	
7410	0.57	
1.26	0.56	
11.10	3/.17	
2.42	0.56	
1K.78		

Star y.

Prism to left.

10	25	25	0.54	9.6902	
10	31	08	0.48	4.4V10	
			0.46	1.VV	
			3/1.48	11.10	
			0.49	2.42	
				1V.07	

Prism to right.

9.6124	0.43	~~0.54~~
4.06K0	0.38	~~0.57~~
1.9K	0.42	~~0.56~~
11.10	3/.03	
2.42	0.41	
1V.46		

Star r.

Prism to left.

10	41	0	1.30	0.1173	
10	44	28	1.27	0.V26V	
			1.37	11.10	
			3/.9K	10.V1	
			1.31	2.42	
				12.93	

Prism to right.

0.00K3	1.47	
0.021V	1.54	
11.10	1.53	
11.04	3/1.0K	
2.42	1.01	
13V9		

Comp. star = Beta Cassiop.

Absorption in short obs.

Mean of times = 10h 2K 1K.

22 2V 10.2

1V 27.7

9 K.9

1 12.3

7 V2.6 = N. ob. Var.

+72.1 = Dec. "

9 K.9

0 2.4

9 2.1 = N. A. β Cassiop.

+V4.V = Dec. " "

90° − 32°.1 = V7°.9 = Z. D. Variable.

90 − 17.V = 72.V = Z. D. Comp. Star.

0.9 = Pole Var.

2.3 = " Comp. Star.

0.23 = Abs. Var.

0.60 = " Comp. Star.

0.37 = Diff. Abs. to be added

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Feb. 27. 1895.

γ Andromedæ. Wash. obs.

0	1	+2A.3
6	27	
+6	26	

Too cloudy to be seen.

ο Ceti. Wash. obs.

2	K	−2.V
6	3V	
+K	31	

55

Blinding.

Index to right and above.

23.0	< comp. star dis.	
194.3	171.3^	
24.7		
192.7	168.0^	−3.2^
	339.3^	−5.23
	20.6	

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1894phae.proj..528W

Feb. 27. 1895.

Index to left and below.

113.7	170.1 ^	
283.8		
112.7	171.6 ^	~~2.5~~ ^
284.3	341.7 ^	-5.48
	1 P. 3	

112.2		
285.2	172.0 ^	-5.50
113.2		
283.1	169.9 ^	~~2.5~~ ^
	341.9 ^	-5.51
	1 P. 1	

Index to right and above.

204.0	169.1 ^
13.1	

Islands thick.

Objects now entirely invisible.

Index to left and below.

Observations made with some difficulty thro' clouds: images rather faint

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1894phae.proj.528W

Feb. 27. 1894

Attempted experiments on Sirius in order to see if focus can be obtained on plane of atmospheric disturbance.

Too cloudy for any satisfactory conclusion

16' θ^2 Orionis : Phot. R. W: obs.

0 57 29 −5.5

7 45

2 16

9 10 Sky a little clearer.

Position angle = 230°: distance = 50"

4.8 and 6.0 = mag.

9 14 50 Index to right and below. A,

319.0 < fainter dis.

79.2 120.2 ^

325.9

69.4 103.5 ^

223.7 ^ 1.2 ^

136.3 — O-AV

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1894phae.proj..528W

Feb. 27. 1894

Index to left and above.

	56.0		
	158.7	102.7 ^	
9 16 30	51.3	116.7 ^	1.2 ^
	168.0	219.4 ^	
		140.6	-0.76
	52.9	113.3 ^	
	166.2		
9 12 57	59.1	102.4 ^	1.3 ^
	161.9	216.1 ^	
		143.9	-0.70

Index to right and below.

	146.0	104.9 ^	
	250.9		
9 19 30	140.0	114.2 ^	1.2 ^
	254.2	219.1 ^	
		140.9	-0.76
	138.5	119.4 ^	
	257.9		
9 20 50	145.3	104.2 ^	1.2 ^
	249.5	223.6 ^	
		136.4	-0.85

Index to left and above.

	236.7		
	340.0	103.3 ^	
9 22 30	234.0	109.4 ^	
	343.4	212.7 ^	1.4 ^
		147.3	-0.63

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1894phae.proj. 528W

Feb. 27. 1895.

Exp. with Phot. R: and paste-board cap with rectangular apertures over objective.
Equalization of all 4 images. W: obs.

69.1	42.0	4.1	+2	4.14	.30	~~+.17~~	+.12
149.1							
246.0	96.9	3.7	-2	~~3.76~~			
329.1	43.1	4.1	+2	4.10	.26	~~+.13~~	+.14
65.0	95.9	3.8	-1	3.76			
153.0	44.0	4.0	+1	3.99	.08	~~-.05~~	-.04
249.2	96.2	3.8	-1	3.74			
331.8	42.6	4.1	+2	4.12	.28	~~+.15~~	+.16
66.0	94.2	3.8	-1	3.80			
152.0	46.0	4.0	+1	4.02	.15		+.03 ~~+.02~~
243.9	91.9	3.9	0	3.86			-.01
331.0	47.1	4.0	+1	3.99	.11		~~-.02~~
67.0	96.0	3.8	-1	3.76			-.04
154.9	47.9	4.0	+1	3.99	.08		~~-.01~~
244.0	49.1	3.9	0	3.94			-.20
336.1	92.1	3.9	0	3.86	-.08		~~-.21~~
65.0	48.9	3.9	0	3.95			-.04
152.8	47.8	4.0	+1	3.99	.08		~~-.00~~
244.2	91.4	3.9	0	3.82			-.02
333.2	49.0	3.9	0	3.94	.04		~~-.09~~
66.2	93.0	3.8	-1	3.83			+.03
152.2	46.0	4.0	+1	4.02	.15		~~+.02~~
246.3	94.1	3.8	-1	3.81			+.07
331.2	48.9	4.1	+2	4.06	.19		~~+.06~~
64.9	93.7	3.8	-1	3.82			~~+.17~~ ~~-.11~~ 1.16
155.0	90.1	3.9	0	3.91	.09		-.13 -.14 1.13

Gradually troubled by clouds

Obs: somewhat uncertain

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1894phae.proj..528W

Feb. 27. 1895

Mean = +.116

+.61
−.67
17 | ±1.28
±.08

243.7
330.8
63.0
152.7

4.4K	K.0	+1	3.96
4.7K	K.0	+1	3.94
92.2	3.9	0	3.96
4.9.7	3.9	0	3.92

3.96
3.94 .10 −.02 −.03
3.96 −.11 +.10
3.92 .01 +16
29 | 11.38 − 9
3.92 29 | 2.1
±0.09

Equalization of two central images in contact.

4.4.7	3.9	0	3.9
91.0	3.9	0	3.89
94.9	3.4	−1	3.79
4.9.4	3.9	0	3.93
4.9.7	3.9	0	3.92
4.4.4	3.9	0	3.91
92.2	3.9	0	3.96
4.9.0	3.9	0	3.94
4.9.0	3.9	0	3.94
94.0	3.4	−1	3.41
4.1.0	K.1	+2	K.01
94.1	3.4	−1	3.41
90.9	3.9	0	3.89
4.6.0	K.0	+1	K.02
92.7	3.8	−1	3.66
4.9.3	3.9	0	3.94
90.3	3.9	0	3.90
4.9.0	3.9	0	3.94
4.6.7	K.0	+1	K.00
90.2	3.9	0	3.91
92.4	3.8	−1	3.84

Results somewhat uncertain. Sky troubled by clouds.

+.0 | +.07
−.19 | −.17
+.01 | +.03
−.04 | −.06
+.04 | +.06
−.1 | −.13
−.16 | −.14
+.1 | +.17
+.03 | +.0
+.04 | +.06
−.01 | +.01

241.3
330.0
61.0
155.9
245.3
335.0
63.8
156.0
245.0
334.0
63.0
157.0
242.0
336.1
67.0
153.0
245.7
335.0
65.3
154.3
241.0
331.2
64.0

+K
−.1
22 | ±.9
±0.04

Mean = −.024

+.4
−.0
11 | ±.9
±.046

22 | 7.9
22 = 3.90

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1894phae.proj.528W

Posted to here.

Mar. 5. 1895.

T. Androm : Phot. R : W : obs

0 1 +28.3

5 47

5 46

Cannot be measured : moon and twilight too bright.

6 50

o Ceti : Phot. R : W : obs.

2 4 -2.5

6 4

4 0

Index to right and above.

Reject — ~~204.0~~ comp. star dis.

clamp 13.8 ~~169.8~~

screw 203.2

loose ~~14.2~~ 1710

3408

23.3

194.9

23.8

~~3.4~~ 194.0

171.6

174.2

341.8

~~3.5~~

Index to left and below.

293.1 172.0

105.1

294.0 170.1

104.1 342.1

17.9

~~3.5~~

1 P. 2

- 5.50

- 5.53

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1894phae.proj..528W

Mar. 5. 1895.

	294.6			
	103.9	169.3 ✓		
7 6 50	292.9	172.2 ✓		~~5.5~~ ✓
	105.1	341.5 ✓		5.46
		18.5		

Index to right and above.

	22.9			
	194.8	171.9 ✓		
7 9 10	24.2	169.7 ✓		~~3.5~~ ✓
	193.9	341.6 ✓		5.47
		18.4		

	23.9			
	194.0	170.1 ✓		
7 18 10	23.0	171.9 ✓		
	194.9	342.0 ✓		~~5.5~~ ✓
		18.0		5.52

Index to left and below.

	114.0			
	283.9	169.9 ✓		
7 14 20	113.3	171.7 ✓		~~5.5~~ ✓
7 05 02	285.0	341.6 ✓		5.47
		18.~~6~~		

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1894phae.proj..528W

Mar. 5. 1895.

B. & C. 1142.

7 2r 3.2
26 3.3

B. 394.

7 23 0.0
24 0.0

∴ Comp. Star was B & C - 2m 2s fast. B 394. 0.7 slow.

Dis. of Jup. III: Phot. R: W: obs. Crum.
+23°/0m/(7.3) Recorder: Compared with object on ~~sight~~ following side of Jup: said object being not quite so far from limb of Jup as only remaining Satell. of Jup. on left is.

7	44	46		21.5	129.6<	46.0
				39	175.6	444.1<
						111.0 (1)
				56.5	123.5<	49.5
			47	16.5	126.6<	173.0
				55.5		41.2 434.8<
		46	15	48	8.5	133.2< 108.7<
						174.5 (2)
				25.5	133.0<	43.0
				37.5	133.1<	176.0
				49.5		45.2 438.2<
	47	8	49	3.5	129.3<	174.5 109.6<
						(3)
				14.5	128.9<	44.8
				32.5	129.1<	173.7
				51		42.7 431.3<
	48	3		59.5	130.2<	172.9 107.8<
						(4)
			50	9	129.7<	43.0
				20.5	130.0<	172.7
				31		45.2 436.2<
		46		43	128.0<	173.2 109.0<
						(5)
				52.5	126.8<	45.5
			51	5	127.4<	172.3
				16		48.1

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1894phae.proj.:529W

Mar. 5, 1895

7	49	28	7		51	26	122.9<	171.0	437.1< (6)
						345	126.0<	46.0	109.3<
						46	124.4<	172.0	
						56	125.1<	46.0	433.2<
					52	5		171.1	108.3< (7)
50	10					17	131.9<	42.1	
						30	128.5<	174.0	
						40.5	128.9<	45.8	440.5<
						54.5		174.7	110.1< (8)
		58			53	9.5	130.0<	45.0	
						20	129.4<	175.0	
						28.5	128.8<	45.1	437.3<
51	42					38		173.9	109.3< (9)
						47.5	126.3<	46.0	
					54	0.5	127.6<	172.3	
						10	129.2<	44.8 ~~442.3~~	435.3<
						21		174.0 ~~110.6~~	108.5< (10)
52	24					31	123.9<	46.3	
						39.5	126.6<	170.2	
						52	129.1<	46.9	441.4<
					55	4		176.0	110.4< (11)
53	6					14	127.5<	45.5	
						23	128.3<	173.0	
						35	126.9<	46.1	436.0<
						40		173.0	109.0< (12)
		46				52		44.9	
					56	2.5	127.1<	172.0	
						13.5	127.0<	46.3	442.3<
						27	128.5<	174.8	110.6<

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1894phue.proj...528W

Mar. 5. 1895.

7	54	29	7	5 L	36	129.0 <	46.1	13
					47	128.8 <	175.1	
					57		44.8	441.3 <
	55	11		57	5	131.2 <	176.0	110.3 <
					18		44.0	
					28	132.5 <	176.5	
					39	131.8 <	45.6	436.4 <
		52			46.5	126.7 <	172.2	109.1 <
					59	126.7 <	46.0	
			5	5	7.5	126.7 <	172.7	
					29		44.1	437.2 <
	56	40			39.5	131.9 <	176.0	109.3 <
					46	127.3 <	44.9	
					51.5	129.6 <	172.2	
				59	1		47.7	438.7 <
					9.5	124.5 <	172.2	109.7 <
	57	15			23	127.2 <	45.8	
					32.5	125.8 <	173.0	
					43.5	127.0 <	45.7	435.6 <
					54		172.7	108.9 <
	59	8		0	5.5	119.2 <	49.0	
					15.5	123.1 <	168.2	
					25		49.1	441.3 <
					35.5	123.4 <	172.5	110.4 <
	58	41			49.5	122.1 <	48.9	
					57.5	122.8 <	171.0	
				1	7.5	120.1 <	49.7	436.9 <
					20		169.8	109.2 <
	59	23			36.5	113.0 <	52.2	
						112.8 <	172.2	

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39		165.2			
48.5			51.0	442.0 <	
	119.0<			110.5 <	
57.5		170.0		~~[illegible]~~	
8 0 1 2			54.0		
	113.0<				
16.5	116.0<	167.0			
26			53.0	434.9 <	
	110.1<				
33.5		163.8		108.7 <	
37				~~[illegible]~~	
42			53.1		
	112.6<				
51	111.4<	165.7			
3			56.0	436.9 <	
	105.8<				
12		161.8		109.2 <	
1 15				~~[illegible]~~	
20			58.0		
	103.1<				
29	104.4<	161.1			
40			58.2	438.0 <	
	102.6<				
49		160.8		109.5 <	
54 4				~~[illegible]~~	
1			59.0		
	101.0<				
10.5	101.8<	160.0			
22.5			60.8	438.1 <	
	96.4<				
31.5		157.2		109.5 <	
2 35				~~[illegible]~~	
39.5		62.2			
	91.7<				
47.5	94.0<	155.9			
55					
55.5		64.8		84.2	
3 3 5					
3.5		149.0		81.8	
13				~~[illegible]~~	
14		67.2		83.8	
21					
22		151.0		86.2	
29					
29.5		64.2		87.2	
37					
38		152.0		76.0	
46					
47		76.0		68.7	
55					
56.5		144.7		66.7	
4 5 6					
6		76.0		66.0	
14					
15		144.0		68.8	
26					
26		75.2		66.6	
33					
34		141.5		60.8	

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8	4	41		42.5	81.0	57.8
		53		53.5	138.8	55.1
	8 5	12	7	13	83.7	48.4
		22		23	132.1	45.1
		39		39.5	87.0	40.0
	6	1	8	1.5	127.8	

not seen later.

Lim. of Visibility.

8	8	58	37.8	89.2	435.4
	9	11		127.0	108.8
8	7	19	31	36.8	91.2
			40	37.3	124.0

altitude rather high and images consderably elongated & colored; comparisons a little difficult and slower but eclipse considered good.

B. + C. 11 Aug.

8	28	2.0
	29	2.0

B + C = 2m 1s fast.

B. 39K.

8	26	0.7 ~~0.0~~
	27	0.7 ~~0.0~~

For balance of this evening's work see book #7 B.

Bond 39K is 0.7 slow.

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