1999phae.proj.1342.

KG
11366
v.338

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1896phae.proj.1342.

Continued from p220 of book #85

Nov. 10, 1896.

V Sagittæ : PhotT: W: obs.

20	41	47.2
23	0	
2	19	

Star y' comp. with star q.
Index to left and below.

28.0 < star q dis.

45	50.1		
	26.4	22.1'	3.45'
	50.4	24.0'	
		46.1'	

	25.6		
	51.1	25.5'	3.32'
	27.2	23.5'	3.38'
	50.7	49.0'	

Index to right and above.

	114.1		
	138.5	24'	3.41'
	115.6	25.5'	
	141.1	49.9'	

	115.7	23.5'	3.50'
52	139.2	21.7'	3.46'
	116.6	45.2'	
	138.9	mean	= 3.42'

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Nov. 10. 1896.

y 4.5 y' : y' 3.5 δ W:obs.

R.S. Cygni: Phot Σ. W:obs.

20 10 +37.5
23 57
3 47.

Order of comp. stars is
f, f', e, d, c, b, a.

Star f = D.M. +38° 3955 (9.2)

f f 4.5 f' : f' 3 e
e 5 d : d 5 c } W:obs.
c 3.5 b : b 3 a

e' inserted photometrically between e and f.

Order of brightness of these stars is e, e', d, c, b, a.

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1896phae.proj.1342

Nov. 10, 1896.

Star a comp. with star p.
Index to left and below p.

33.5
43.4 < star p dis.

32.9	9.9 >	5.29 >
43.0	10.1 >	
	20.0 >	

32.8
42.4

33.6	9.6 >	
43.2	9.6 >	5.38 >
	19.2 >	5.34 >

Index to right and above.

123.3
132.4
121.8
132.7

	9.1 >	5.29 >
	10.9 >	
	20.0 >	

132.7
132.8
122.4
132.4

	9.6 >	
	10.0 >	5.33 >
	19.6 >	5.31 >
	mean =	5.32 >

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1896phae.proj.1342.

Nov. 10, 1896.

Stars in comp. with st. p.
Index to right and above.

	123.0	< star p 2 is.	
9	40 134.2		
	122.5	11.2>	
	133.4	11.2>	5.04>
		22.4>	
	121.6		
	133.3	11.7>	
	122.4	10.9>	5.02>
	133.6	22.6>	5.03>

Index to left and above.

	213.4		
	223.6	10.2>	
	213.4	10.6>	5.20>
	224.0	20.8>	
	213.2		
9	47 223.4	10.5>	5.36>
	214.1	8.9>	5.28>
	223.0	19.4>	
		mean = 5.16>	

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Nov. 10. 1896.

Star C comp. with star p.
Index to left and below.

	211.9	< star p dis.	
9 49	226.0		
	212.3	14.1 >	4.63 >
	225.2	12.9 >	
		27.0 >	
	212.2		
	225.8	13.6 >	4.61 >
	211.6	13.7 >	4.62 >
	225.3	27.3 >	

Index to right and above.

	301.4		
	316.8	15.1 >	
	303.0	13.7 >	4.49 >
	316.4	28.8 >	
	303.1		
9 55	316.0	12.9 >	4.62 >
	301.1	14.3 >	4.56 >
	315.4	27.2 >	
		mean =	4.59 >

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1896phae.proj.1342.

Nov. 10, 1896.

Star 2 comp. with star 6

Index to right and above.

297.9	< star 6 dia.		
317.8			
299.8		19.9″	
314.2		17.4″	3.92″
		37.3″	
298.4			
317.1		18.7″	
297.7		20.8″	3.79″
318.5		39.5″	3.86″

Index to left and below.

27.7			
48.2		20.5″	
28.5		19.5″	3.77″
48.0		40.0″	
28.4			
48.3		19.9″	
28.3		21.1″	3.71″
49.4		41.0″	3.74″
		mean =	3.80″

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1896phae.proj.1342.

Nov. 10, 1896.

Stars comp. with star 6.

Index Left + Below

24.4
51.8
24.1
51.8

27.4 >
27.7 >
55.1 >

3.05 >

10 8

24.1
51.8
24.1
52.8

27.7 >
28.7 >
56.4 >

3.00 >
3.02 >

Index Right + Above

115.0
142.2
111.3
142.8

27.2 >
31.5 >
58.7 >

2.91 >

113.4
142.4
113.5
142.0

29.0 >
28.5 >
57.5 >

2.96 >
2.94 >

mean = 2.98 >

10 14.5

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1896phae.proj.1342.

November 10, 1896.

Star ε compared with ρ.

Index Right & Above

		116.3		
10	18	140.2	23.9 >	3.39 >
		115.8	23.6 >	
		139.4	47.5 >	

116.9	23.9 >	3.52 >
138.8	22.9 >	~~3.47~~
116.5	46.8 >	~~3.43~~
139.4		3.46 >

Index Left & Below

208.5		
230.9	22.4 >	
207.8	22.5 >	3.51 >
230.3	44.9 >	

		207.8		
10	22	231.0	23.2 >	
		206.8	25.6 >	3.33 >
		232.4	48.8 >	3.42 >
				mean = 3.44 >

~~Order of brightness~~

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1896phae.proj.1342.

November 10, 1896.

R Pegasi. Gr. obs.

23 1 +9.0
26 1c
+3 17

η v η'
η' 3.v θ
θ 4 λ
λ 4 μ
μ 4 ξ
ξ 3 ξ'

10 v 2

left to Below

~~+ 17~~

~~29 24~~
~~2 1 4~~ ?
~~8~~

11 19

Should prob. be 32.4 ~~3 2 4~~ 8

29 5 9
32 0 3

29.0 v
24.4 v
v 3.4 v 3.12 v

2963
3213
2926
3248

25.0 >
32.2 >
57.2 >

2.97 >
3.04 v

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1896phae.proj.1342.

November 10, 1896.

Right & Above.

23.2			
56.4	33.2 >		2.95 >
24.6	24.4 >		
51.0	57.6 >		
24.8			
11 24.0	53.2	28.4 >	2.81 >
	32.8 >	2.88 >	
22.4	61.2 >	mean = 2.96	
55.2			

Arnold + Dent #958. Band #394.

$13^h\ 47^m\ 55^s.1 = 13^h\ 47^m\ 00^s.0$

The following estimates of mass relative to Sirius was obtained to night.

11	50	Mass =	Sirius.	Davidson obs.
12	0	Mass 3	Sirius	H. "
12	0	" =	"	Crew "
12	30	" 3	"	Davidson "

Observation of Mass difficult to all the observers owing to its red color, brightness, and distance from Sirius.
No allowance made for atmospheric absorption.

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1896phae.proj.1342.

Nov. 11. 1896. (Wednesday.

R Cygni. Fr. obs.

20 10 +37.V
2K 10
+K 0

7 0 Cloudy

8 0 Cloudy

8 20 Sudden clearing.
Stars comp. with stamp.
Index to left and above.

8 55

33.0	< stamp dis	
45.0		
31.4	12.0 >	
46.2	14.8 >	
	26.8 >	4.6V >

29.7		
47.1	17.4	
30.7	16.3	
47.0	33.7	4.1V >
		4.40 >

Index to right and above.

120.1		
134.9	14.8	
121.7	14.1	
135.8	28.9	4.4R >

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1896phae.proj.1342.

Nov. 11. 1896.

mean = 4.37>

9 05	119.4		
	135.7	16.3>	
	118.8	16.8>	
		33.1>	4.19>
	135.6		4.34>

Above star taken with extreme difficulty: almost invisible.

Stand comp. with star p.
Index to right and above.

9 14	116.8	
	139.2 < star p dis.	
	115.9	22.4>
	138.7	22.8>
		45.2> 3.70>

	114.0		
	138.1	21.1>	
	115.3	24.0>	
	139.3	45.1>	3.70>
			3.50>

Index to left and below.

	206.0		
	229.3	23.3>	
	207.7	21.3>	3.53>
	229.0	44.6>	

	205.1		
9 26	229.1	24.0>	3.57>
	209.2	19.7>	3.55>
	228.9	43.7>	
		mean	= 3.52>

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1896phae.proj.1342.

Nov. 11, 1896.

Star & comp. with star p.
Index to left and below.

9h	35	206.3	Star p dis.
		232.5	
		204.1	26.2 >
		234.4	30.3 > 3.00 >
			56.5 >
		205.3	
		235.2	29.9 >
		205.8	25.8 > 3.03 >
		231.6	55.7 > 3.02 >

Index to right and above.

		295.4	
		321.2	25.8 >
		294.9	26.0 > 3.19 >
		320.9	51.8 >
		296.2	
9	41	324.7	28.5 >
		295.3	26.1 > 3.07 >
		321.4	54.6 > 3.13 >
			mean = 3.08 >

Measurements on all these comp. stars made with great difficulty.
Cleared suddenly; air very moist and quite bright moon.
Stars a and b can not be measured.

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1896phae.proj.1342.

Nov. 11, 1896.

f	3.5	f' : f'	4	ε	} W:obs
ε	4	d : d	4	c	
c	4	b : b	3	a	

estimates on a and b very difficult.

Object glass found to be fogged.

o Ceti	Phot R:	W:obs
2	4	-2.5
1	35	
0	29	

var. is brighter.

Index to right and above

19.0	< var. dis.	
47.7		
20.2	28.7 >	
45.8	25.6 >	-3.09 >
	54.3 >	

10 04

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Nov. 11, 1896

20.4		
46.1	25.7 >	−3.13 >
19.6	27.5 >	−3.11 >
47.1	43.2 >	
	5	

Index to left and below.

108.8		
134.6	28.8 >	
110.2	26.0 >	−3.07 >
136.2	54.8 >	

110.6		
135.9	25.3 >	−3.14 >
109.0	24.7 >	−3.10 >
136.7	53.0 >	mean = 3.10 >

10 12

10 08 00
55
10 07 05

Same again. With
Index to left and below.

24

104.2	< van. dis.	
136.9		
111.6	29.5 >	−3.16 >
134.7	23.1 >	
	52.6 >	

111.6		
135.5	23.9 >	−3.21 >
109.0	27.6 >	−3.18 >
136.6	51.5 >	

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Nov. 11, 1896.

Index to right and above.

197.2		
226.4	29.2>	
201.1	24.5>	−3.11>
225.6	53.7>	

201.1		
226.1	25.0>	−3.24>
200.2	25.6>	−3.18>
225.9	50.6>	mean = 3.18>

mean of means = 3.14>

10 33

10	28	30
		55
~~10~~	~~18~~	
10	27	35

N bygni. Phot. Obs

20	41	+47.2
2	20	
5	39	

Abandoned: fog progressively growing thicker and objective and mirror so thick that nothing further can be done

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Nov. 11, 1896.

β Persei: Phot. N: Cram: obs.

Index to right and above.

21.4 < β dis.

11	39.3	51.9	30.2 >	3.02 >
		23.3	25.7 >	
		49.0	55.9 >	
		25.0		
11	46.1	50.0	25.0 >	3.11 >
		22.3	28.7 >	3.06 >
		51.0	53.7 >	

Index to left and below.

		107.7		
11	51.5	144.8	37.1 >	2.44 >
		110.8	34.9 >	
		145.7	72.0 >	
		109.0		
11	56.5	144.1	35.1 >	2.48 >
11	48.4 >	109.3	35.7 >	2.46 >
11	47.5 > =	145.0	70.8 >	
corrected time.			mean =	2.76 >

Immediately before taking above group, focus was so adjusted that the images were perhaps more nearly similar than before.

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Nov. 11, 1896.

Arnold + Dent #958 Bond #394.

$12^h\ 20^m\ 57^s.5 = 12^h\ 20^m\ 00^s.0$

therefore Arnold + Dent #958 is fast of Bond #394 by $57^s.5$: but Bond #394 is $2^s.-$ slow: therefore Arnold + Dent is $55^s.-$ fast of true time or $0^m.9$ fast: hence subtract $0^m.9$

B Persei again: Chamberlain.

Index to left and above.

		108 .5	< B dis.		
13	00.6	145 .1			
			36.6 >		
		109 .4	35.8 >	2.43	
		145 .2	72.4 >		
		109 .4			
13	07.3	144 .1	34.7 >		
		109 .9	33.8 >	2.56 >	
		143 .7	68.5 >	2.50 >	

Index to right and below.

		203.4			
13	13.9	230.9	27.5 >		
		202.5	29.3 >	2.98 >	
		232.8	56.8 >		

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Nov. 11, 1896

		203.6		
13	20.0	231.4	27.8 >	
13	10.4 >	202.3	29.3 >	2.94 >
13	09.5 >	231.6	57.1 >	2.98 >
corrected time			mean = 2.74 >	

Same again: Cram: obs.
Index to right and below.

		23.0		
13	42.5	52.0 ~~53.4~~	< B dis.	
		24.1	29.0 >	
		51.2	27.1 >	3.01 >
			56.1 >	
		25.2		
13	48.2	50.2	25.0 >	3.20 >
		24.0	26.7 >	3.10 >
		50.7	51.7 >	

Index to left and above.

		105.8		
13	55.5	144.1	38.3 >	2.33 >
		108.9	37.2 >	
		146.1	75.5 >	
		110.0		
14	00.9	143.6	33.6 >	2.55 >
13	51.8 >	109.5	35.2 >	2:44 >
13	50.9 > =	144.7	68.8 >	
corrected time			mean = 2.4	

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1896phae.proj.1342.

Nov. 11, 1896.

Stopped by clouds:

14 10 All cloudy.

no stars visible.

Cloudy till a

16 15 Sudden clearing.

β Persei: Phot. N: Cram: obs

Index above.

289.9 < β dis.

16 49.7 322.8

287.7 32.9 > 2.53 >

324.0 36.3 >

69.2 >

290.2

16 57.2 023.9 33.7 >

291.3 30.5 > 2.71 >

321.8 64.2 > 2.62 >

Index below.

202.2

17 05.2 231.3 29.1 >

202.2 30.3 > 2.88 >

232.5 59.4 >

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1896phae.proj.1342.

Nov. 11, 1896.

		203.7		
17	12.6	231 .5	27.8 >	3.02 >
17	01.2 >	203 .5	28.1 >	2.95 >
17	00.3 > =	231 .6	55.9 >	
corrected	time		mean	= 2.78 >

Altho' second half of group is considered very good, it is found that perhaps the first half is uncertain, as plate-rest may have interfered, it having been found necessary to move plate in middst of group.

Obs. was bothered to find region at first: discovered that slit, thro' which sight at region is taken, was very loose, causy the trouble

17 15 Stopped by clouds & approaching daylight

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1896phae.proj.1342.

Nov. 14, 1896. (Saturday.

(B Lyrae: Phot. N: Cram'ds.

Index above.

		253.5	< B dia.	
5	37.2	302.3	48.8 >	
		251.2	51.2 >	1.66 >
		302.4	100.0 >	
		254.0		
5	42.6	300.4	46.4 >	1.76 >
		253.3	49.6 >	1.71 >
		302.9	96.0 >	

Index below.

		343.6		
5	48.8	33.0	49.4 >	
		342.9	49.3 >	1.69 >
		32.2	98.7 >	
		344.3		
5	52.0	31.7	47.4 >	1.76 >
5	45.2 >	342.8	48.5 >	1.72 >
		31.3	95.9 >	

mean = 1.72 >

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1896phae.proj.1342.

Nov. 14, 1896.

Same again: Cram: obs.

Index 1 obs.

		344.0	< β dis.		
b	09.5	00.7			
		343.8	46.7 >		
		31.2	47.4 >		1.81 >
			94.1 >		
		343.0			
b	12.7	31.5	48.5 >		
		342.3	50.9 >		1.67 >
		33.2	99.4 >		1.74 >
		Index above.			
		254.5			
b	19.1	301.6	47.1 >		
		252.8	48.0 >		1.78 >
		300.8	95.1 >		
		252.2			
b	25.7	302.4	50.2 >		
b	16.2 >	251.4	51.8 >		1.61 >
		302.2	102.0 >		1.70 >
					mean = 1.72 >

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1896phae.proj.1342.

Nov. 14. 1896.

Same again: Cram: obs.

Index above.

		253.8	< B dis.	
6	42.4	302.2	48.4 >	
		253.7	46.2 >	1.79 >
		299.9	94.6 >	
		251.8		
6	59.6	301.2	49.4 >	
		254.3	47.0 >	1.75 >
		301.3	96.4 >	1.77 >

Index below.

		342.0		
6	56.6	35.0	53.0 >	
		341.9 ~~339.7~~	52.5 >	1.52 >
		34.4	105.5 >	
		342.0		
7	03.2	33.0	51.0 >	1.61 >
6	55.8 .4 >	342.8	50.9 >	1.56 >
		33.7	101.9 >	mean = 1.66 >

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1896phae.proj.1342.

Nov. 14. 1896.

Same again: Cram. obs.
Index below.

340.2 ~ β dis.
33.7
Stopped.
341.6
Stopped. Reject.
34.3
342.5
Clouds.
30.7
342.0
32.6 ~~36.4~~
Clouds.

Clouds so thick so continue.
Abandoned because of clouds.

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1896phae.proj.1342.

Nov. 14, 1896.

Σ Aquarii. W: obs.

20	40	-5.5
23	23	
2	43	

~~η 3 η'~~ Rejct.

30 Clouds.

45 Clouds over region.

Clouds too thick to estimate.

Σ 53' { 48 Cygni / P ~~XX~~ 248 : Phot. R: W. obs.

20	32	+31.1
23	48	
3	16	

Position angle = 160°: distance = 3':
mag. = 5.9 and 6.1
Northern comp. slightly brighter.

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1896phae.proj.1342.

Nov. 14. 1896.

Index to right and above. d.

329.0
45.7 < northern and brighter dus.
321.3
53.4 ~~54.4~~

76.7 ✓
92.1 ✓
16A.A > 0.21 >

321.9 ~~50.8~~
53.4

91.A >

328.8
46.8

7A.0 >
169.A > 0.19 >
0.20 >

Index to left and below. B.

59.4
136.3
50.2
143.5

76.9 ✓
93.3 ✓
170.2 ✓ 0.19 >

51.6
142.4
58.5
136.6 ~~+35.7~~

90.A ✓
7A.1 ✓
16A.9 0.21 >
0.20 >

Islands thicken.

Mean = 0.20 >

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1896phae.proj.1342.

Nov. 14, 1896.

Σ 2726 : 52 Cygni :
Phot-M : W. Lubs.

20	41	+30.2
24	10	
3	29	

Position angle = 70° : distance = 4" :
magn. = 4.0 and 9.2 :

Index above.

	32.3	< brighter dis.	
8 23	46.4		
35.0 ~~34.3~~	~~34.6~~	14.1 >	
	45.3	10.3 >	
		24.4 >	4.46 >
	33.4		
	45.5	11.8 >	
	30.8	15.6 >	
	46.4	27.4 >	4.60 >
			4.73 >

Index below.

123.6		
136.4	12.8 >	
121.2	15.3 >	
136.5	28.1 >	4.57 >

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	123.2		
8 33	134.3	11.1 >	
	124.7	11.7 >	
	136.4	22.8 >	5.00 >
			4.78 >
			4.76 >

Observation very difficult because of closeness of stars and bad seeing.

W Struvii. W obs

16	30	+34.6
24	36	
8	06	

abandoned: too low.

ζ Ursæ Majoris: W obs.

Rel. Est. of Comp. Stars.

20	57	+23.7
24	42	
3	45	

ε 4.5 ζ 3.5 η } W obs

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Region thoroughly identified: there is a star about in position of δ as indicated on chart but is not as bright as δ ought to be it is much fainter than δ: assuming this star to be δ, estimate is

9 18 δ 3 (δ)? (δ)! 1 η: relation between γ and δ seems to be about right: if chart is right. δ would seem to be possibly a var: there is certainly no star in position of δ of required brightness.

estimate between γ and ε is about 0.8 or 0.9 magn.

W Orionis. W: obs

Rel. Est. of Comp. Stars.

20	41	+47.2
1	17	
4	36	

9 30 γ 4.5 γ' : γ' 3 δ W: obs

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R Cygni: W:obs

Rel. Estn. of Comps. Vars.

2 3	1	+9.0
2 2 / 2 1	21 / 30	

9 ~~11~~ P ~~3.5~~ 4.5 1 : 5 4 η W:obs.

moon too bright and stars too faint for Phot. I.

R. S. Lyrae: Phot. I W:obs.

Rel. Est. of Comps. Vars.

20	10	+37.5
2 5 / 5 5	5 5 / +5	

10 0 clouds

10 12	t / t	3.5	t' : t'	3	ε
	ε / ε	3	ε' : ε'	5	d
	d	4	c : c	5	b
	b	3	a.		

W:obs

Obs. estimates made thro' light clouds.

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~~Stan c comp with stan p.~~
~~Index to left and below.~~
~~31.9~~
~~Seconds~~

abandoned.

Stan d comp. with stan p.
Index to left and below.

	28.1	< stan p dec.		
10 32	48.9			
	28.6	20.8 >		
	48.0	19.4 >		
		40.2 >	3.76 >	
	29.6			
	47.9	18.3 >		
	27.2	20.8 >		
	42.0	39.1 >	3.42 >	
			3.79 >	

Index to right and above.

	116.1			
	139.1	23.0 >		
	117.3	21.0 >		
	138.3	44.0 >	3.76 >	
	117.6			
10 32	138.7	21.1 >		
117.0	~~117.9~~	20.9	366 >	
	137.9	42.0	3.67 >	
			mean = 3.79 >	

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Star 1 comp with star 5.
Index to right and above.

	114.6	< stan 5 dis.
~~to~~ ~~41~~	140.7	
	115.6	-6.1
Reject.	139.8	24.2
comp. with		50.3
wrong star.	116.8	
	139.8	23.0
	113.4	27.3
	140.7	50.3

Index to left and below.

	209.0		
10 47	230.2	21.2 >	
	204.8	27.2 >	
	232.1	48.6 >	3.33 >
	203.6		
~~to~~	232.2	28.6 >	
	209.0	21.2 >	
	230.2	49.8 >	3.24 >
			3.30 >

Index to right and above.

	298.8	
	308.9	20.1 ✓
	296.2	24.4
	320.6	44.5	3.53

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298.0
318.0 20.0>
296.9 22.5>
319.4 42.5> 3.63>
3.57>

10 55 Clouds. Mean = 3.44>

Star & comp. with star p.
Index to right and alm

296.5 < Star p dis.
10 57 321.0
294.7 24.5>
322.6 27.9>
52.4> 3.17>

294.3
322.9 28.6>
294.9 26.3>
321.2 54.9> 3.07>
3.12>

Index to left and behind.

23.0
50.6 27.6>
23.6 28.7>
52.3 56.3> 3.00>

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		24.0		
11	0	53.0	29.0 >	
		23.3	29.4 >	
		52.7	58.4 >	2.92 >
				2.96 >
				Mean = 3.0 E (

S was a, b, and c were too faint in moonlight to be measured.

Troubled somewhat by clouds during measures, but measures considered good.

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Nov. 16, 1896. (Monday.

β Persei: Phot. N. Cram: obs.

15 Because of very heavy fog, bright moon, and low altitude, it is impossible to see region at all.

β Lyrae: Phot. N: Cram: obs

Index above.

		23.5	< β dis.	
5	37.7	65.3	41.8 >	
		21.8	41.7 >	2.09 >
		63.5	83.5 >	
		21.9		
5	42.0	65.7	43.8 >	
		23.5	40.8 >	2.06 >
		64.3	84.6 >	2.08 >

Index below.

		115.8		
5	46.9	154.5	38.7 >	2.17 >
		113.8	42.0 >	
		155.8	80.7 >	
		116.1		
5	51.2	155.6	39.5 >	2.29 >
5	44.4 >	116.7	37.3 >	2.23 >
		154.0	76.8 >	

mean = 2.16 >

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Same again: Cramps.

Index below.

		115.3	< (B dis.	
b	01.8	153.0	37.7>	
		114.3	40.9>	2.24>
		155.2 ~~+58.1~~	78.6>	
		114.2		
b	08.1	155.4		
		117.5	41.2> clouds still	6:15
		153.4	35.9> 77.1>	2.28>
				2.26>

Index above.

		205.9		
b	28.6	247.7	41.8 ~~clouds~~ still	6:26
		204.4	41.6>	2.10>
		246.0	83.4>	
		203.9		
b	34.9	247.1	43.2>	2.02>
b	18.4>	204.5	43.0>	2.06>
		247.5	86.2> clouds.	
			mean =	2.16>

First of above groups taken with some difficulty because of faintness of images in heavy haze and bright moonlight.

Second of groups taken with great difficulty: interrupted frequently by clouds, and last set of groups ~~of~~ spoiled by clouds; images

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very faint and settings at last very doubtful; perhaps this group ought to be rejected.

6 45 Stopped by clouds

7 0 Clouds thick

7 30 Clouds still thick.

7 45 Clouds a little thinner.

Σ 2585: δ Sagittae: Phot R: W: obs.

19	43	+18.8
23	53	
4	10	

Position angle = 300°; distance = 10″; magn. = 5.8 and 8.9.

Index to right and above

8 07 214.1

234.8 < bright. dis.

215.0 20.7 >

Clouds 233.5 18.5 > 3.81 >

39.2 >

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214.8		
235.2	20.4>	3.71>
212.7	20.7>	3.76>
233.4	41.1>	

Index to left and below.

304.7		
322.7	18.0>	
305.1	16.8>	4.08>
321.9	34.8>	

304.0			
324.2	20.2>		
302.6	20.7>	3.72>	
323.3	40.9>	3.90>	
		mean = 3.83>	

8	14
8	10>

Σ 2726 : 52 Cygni : Phot. H. Wolbs.

20	40	+30.2
24	25	
3	45	

Position angle = 70°; distance = 7";
magn. = 4.0 and 9.0.

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Index to right and below.

		123.0	< brighter dis.		
8	29	135.0			
		122.6 ~~124.9~~	12.0 >		
		135.4	12.8 >		4.82 >
			24.8 >		
		125.2			
7	33	blends 136.3	11.1 >		4.94 >
		122.0	12.4 >		4.88 >
		134.4	23.5 >		

Index to left and above.

		213.0			
		224.6	11.6 >		
		212.3	13.3 >		4.81 >
		225.6 ~~226.7~~	~~14.4~~		
			24.9 >		
		218.2.8			
8	39	224.8	12.0 >		5.00 >
8	34 >	215.3	10.8 >		4.90 >
		226.1	22.8 >		
				means =	4.89 >

Images rather faint: measurements taken thro' some light clouds.

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Σ 2822 : μ Lyncis : Phot. H : Wolbach

21	38	+28.2
24	48	
3	10	

Position angle = 110° : distance = 5″.6 :
magn. = 4.0 and 5.2.

Index to left.

188.6	< brighter dis.	
246.5		
188.3	54.9 >	
250.6	62.3 >	1.19 >
	120.2 >	

188.0		
250.3	62.3 >	1.05 >
187.9	64.1 >	1.12 >
252.0	126.4 >	
	63.	

Index to right.

280.0	59.0 >	1.22 >
339.0	59.9 >	
278.3	118.9 >	
338.2		

279.3	59.6 >	1.23 >
338.9	58.9 >	1.22 >
280.0	118.5 >	
338.9	mean =	1.17 >

9 / 01
8 58 >

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Nov. 16, 1896.

Σ 2838 : 100 Aqr B : Phot R : W. obs.

9/9

21 48 −3.9
25 05
3 17

9 07 Islands thick: not seen

Position angle = 175°: distance = 20″:
magn. = 5.9 and 8.8.

9 10 Islands too thick.

Index to right and below,
31.1 < brightest.

9 28 Islands

56.9	25.8 >	
32.3	23.4 >	3.31 >
55.7	49.2 >	

33.9		
55.3	21.4 >	3.41 >
30.8	25.6 >	3.36 >
56.4	47.0 >	

Index to left and above

122.2		
148.1 ~~+26.6~~	25.9 >	
123.5	~~22.7~~	3.33 >
146.2	48.6	

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9	43	122.9	23.1 >	3.35 >
9	36 >	146.0	25.2 >	3.34 >
		121.7	48.3 >	
		146.9		mean = 3.35 >

Observations very difficult: made thro' clouds.

Arnold + Dent # 958. Bond #394.

$9^{h}\ 55^{m}\ \cancel{53.9^{s}}\ 54.0^{s} = 9^{h}.\quad 55^{m}\ 00^{s}.0$

Arnold + Dent #958 is therefore $54^{s}.0$ fast of Bond #394, which is assumed true time: subtract $0^{m}.9$

u Ophei: Phot. 5: Wires.

0	30	+81.7
2	03	
1	33	

B 394 practically has no correction.

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Index to left and below.

			83.4		
10	15	00	143.9	< var dis.	
		~~+5.0~~	75.0	90.5 >	
			186.2	111.2 >	0.41 >
				201.7 >	
			74.2		
10	16	40	186.4	112.5 >	
			83.4	90.8 >	0.44 >
			142	203.3 >	0.42 >

I Index to right and above.

			172.0		
10	20	00	266.9	94.9 >	
			162.1	116.2 >	0.60 >
			248.3	211.1 >	
	21				
	~~+8~~		161.8		
10	~~x3~~	33	278.6	116.8 >	
10	18	18 >	171.4	97.1 >	0.65 >
	18.3 >		268.8	213.9 >	0.62 >
+5	-0.9 >				
10	17.4 >				
15	17.4 >	= corrected G.M.S.			mean = 0.52 >
15	17	24			
			141.3		
10	23	49	270.4	99.4 >	
			158.6	119.1 >	0.74 >
			277.7	218.5 >	

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Nov. 16. 1896.

		161.3		
10	25	31	276.0	114.7 > 0.65 >
			169.6	99.2 > 0.70 >
			268.8	213.9 >

II Index to left and below.

			254.6	
10	27	37	354.4	99.8 > 0.62 >
			251.7	112.3 >
			364.0	212.1 >

			248.4	
10	29	15	366.7	118.3 > 0.68 >
10	26	33 >	254.2	97.2 > 0.65 >
+5	26.6		354.4	215.5 >
	-0.9			mean = 0.68 >

15 25.7 > = corrected & m.s.

10 20 39

			254.9	
10	31	15	354.8	96.9 > 0.65 >
			248.8	117.1 >
			365.9	214.0 >

			249.2	
10	32	24	364.1	114.9 > 0.73 >
			255.9	102.8 > 0.69 >
			357.7	217.7 >

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III Index to right and above.

		346.6		
10	35	24	86.3	99.7> 0.77>
			334.0	120.1>
			94.1	219.8>
			338.0	
10	34	11	94.7	119.7> 0.82>
10	34	06>	345.3	102.4> 0.80>
		34.1>	84.7	222.1>
15		33.2> = correct B.m.S.		mean = 0.74>
15	33	12		

		345.8		
10	38	46	84.4	101.6>
			338.0	119.0> 0.79>
			94.0	220.6>
			337.0	
10	40	20	98.4	121.4> 0.83>
		346.2	~~344.4~~	101.4> 0.81>
			84.6	222.8>

IV Index to left and below.

			79.7	
10	42	10 ~~34~~	179.3	99.6>
			69.2	119.2> 0.75>
			188.4	218.8>

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		71.6			
10	~~44~~ ~~45~~ 30	189.8	118.2		0.86
10	41 26	76.2	106.1		0.80
	41.4	182.3	224.3	mean	~~0.84~~
15	40.5 = correct G.m.T.				M = +0.80
15	40 32				

		78.6			
10	46 00	149.7	101.1		
	clouds thicken	70.7	118.9		0.77
		189.6	220.0		
		71.0			
10	48 ~~00~~ 31	187.2 ~~189.8~~	116.2		
		79.6	101.4		0.73
		181.0	217.6		0.75

I Index to right and above.

		164.4			
10	50 44	270.6	103.2		
		159.0	120.4		0.85
		249.4	223.6		
		159.9			
10	52 31	277.6	117.7		
10	49 26	165.9	104.9		0.83
	49.4	270.8	222.6		0.84
15	48.5 = correct G.m.T.			mean =	0.80
15	48 32				

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			166.6			
10	55	23	269.8	103.2 >		
			154.4	123.7 >		0.91 >
			clouds thick 281.1	226.9 >		
			159.2			
10	58	02	282.0	122.8 >		
			167.3	102.9 >		0.89 >
			270.2	225.4 >		0.90 >

VI Index left and below.

			256.4			
11	00	46	358.3	101.9 >		
			244.4	122.9 >		0.87 >
			367.6	224.8 >		
			247.7			
11	02	24	366.1	118.4 >		
10	59	08 >	253.0	107.0 >		0.88 >
+5	59.1 >		360.0	225.4 >		0.88 >
15	58.2 > = correct G.M.T.					
10	08	14			mean =	0.89 >
			261.1			
11	04	07	358.3	97.2 >		
			247.8	118.2 >		0.68 >
			366.0	215.4 >		

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		247.1		
		366.2	119.1 >	
11	05	28	97.7 >	0.71 >
		259.0	216.8 >	0.70 >
		356.7		

VII Index long^t and above.

		342.6		
		92.1	109.5 >	
11	08	08	115.0 >	0.87 >
		337.4	224.5 >	
		92.4		

		341.8		
		95.9	114.1 >	
11	09	20	109.4 >	0.84 >
11	06	46	223.5 >	0.86 >
		06.8 >		mean = 0.78 >
16		05.9 > = corrd. G.M.T.		

16 d 07 2

		343.0		
		92.6	109.6 >	
11	11	26	116.2 >	0.89 >
		338.0	225.8 >	
		94.2		

		340.8		
		94.7	113.9 >	
11	13	10	107.4 >	0.80 >
		343.7	221.3 >	
		91.1		0.84 >

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VIII Index to left and below.

			75.4			
11	15	56	182.7	107.3 >		
			72.5	114.6 >	0.81 >	
			184.1	221.9 >		
			71.7 ~~69.0~~			
11	14	23	188.4	116.7 >	0.89 >	
11	14	29 >	74.2	109.0 >		
		14.5 >	183.2	225.7 >	0.85 >	
16		13.6 > = corrected G.M.T.			mean = 0.84 >	
16	13	35				

			74.1			
11	21	51	184.6 ~~+8+.7~~	110.5 >	0.82 >	
			74.6	111.8 >		
			186.4	222.3 >		
			73.8			
11	23	43	185.0	111.2 >		
			75.1	107.5 >	0.75 >	
			182.6	218.7 >	0.78 >	

IX Index to right and above.

			167.8			
11	26	07	273.8	106.0 >		
			160.3	116.2 >	0.82 >	
			276.5	222.2 >		

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		162.3		
11	24 40	244.6	115.3 >	
11	24 50 >	166.3	108.6 >	0.85 >
	24.8 >	274.9	223.9 >	0.84 >
16	23.9 > = correct G.m.s.		mean = 0.81 >	
16	23 56			

		164.9		
11	29 00	275.0	110.1 >	
		161.9	116.7 >	0.91 >
		278.6	226.8 >	
		166.6		
11	30 27	277.4	115.8 >	
		164.9	108.8 >	0.87 >
		273.7	224.6 >	0.89 >

I Index to left and below.

		250.3		
11	33 44	363.7	113.4 >	
		250.6	113.6 >	0.92 >
		364.2	227.0 >	
		249.8		
11	34 50	362.7	113.9 >	0.89 >
11	32 00 >	252.4 ~~256.6~~	111.9 >	0.90 >
	32.0 >	364.3	225.8 >	
16	31.1 > = correct G.m.s.		mean =	0.90 >
16	31 6			

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Nov. 16, 1896.

Arnold + Dent #958 : Bond #394

$11^h\ 46^m\ 54^s.0 = 11^h\ 46^m\ 00^s.0$

Arnold + Dent is therefore $54^s.0$ fast of Bond #394, which is assumed true time: subtract $0^m.9$.

Too cloudy for B Persei until about 13:15

B Persei : Phot. N : Camidis
Full Brightness.
Index to left and above.

		298.5	< B dis.	
13	52.8	334.8	39.3 >	
		302.8	34.3 >	2.39 >
		334.1	73.6 >	
		303.9		
14	01.4	334.2	33.3 >	
		299.6	39.1 >	2.43 >
		338.7	72.4 >	2.41 >

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Index to right and below.

		213.7		
14	11.0	244.9	31.2>	
		214.5	30.9>	2.78>
		245.4	62.1>	
		213.1		
14	15.6	245.0	31.9>	2.69>
14	05.2>	214.2	32.8>	2.74>
14	04.3> = corrected time	247.0	64.7>	mean = 2.58>

Same again: Cram: obs.

Index to right and below.

213.8 ∠B dia

14	31.5	248.0	34.2>	
		215.4	29.6>	2.72>
		245.0	63.8>	
		216.8		
14	35.8	244.0	27.2>	2.79>
		213.0	34.7>	2.76>
		247.7	61.9>	

Index to left and above.

		303.4		
14	43.3	335.8	32.4>	2.57>
		302.2	35.8>	
		338.0	68.2>	

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Nov. 16, 1896.

		300.7		
14	48.1	338.5	37.8>	
14	39.7>	302.0	35.8>	2.39>
14	38.8> = corrected time	337.8	73.6>	2.48>
			mean	= 2.62>

In two groups above, the images were somewhat dissimilar and focus not the best: focus was readjusted and two following groups taken: observations not considered good.

Sun again: Cumulus.
Index to right and above.

		267.5 < B dis.		
16	34.9	300.4	32.9>	
		268.8	28.8>	2.80>
		297.6	61.7>	
		270.0		
16	39.5	298.6	28.6>	2.81>
		266.6	32.8>	2.80>
		299.4	61.4>	

Index to left and below.

		356.3		
16	44.1	30.1	33.8>	2.70>
		359.4	30.5>	
		29.9	64.3>	

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Nov. 16, 1896.

		356.9		
16	48.0	28.1	31.2 >	~~2.58~~
		355.9	~~36.6~~ 34.7 >	2.65 >
16	41.6'			
16	40.7 > = corrected time.	30.6 ~~32.5~~	~~67.8~~ 65.9 >	2.68 >
	In alm. seeing very good.		mean = 2.74 >	

Same again. Cram: obs.
Index to left and below.

		354.6 < B dec.		
17	04.2	31.3	36.7 >	
		358.3	31.0 >	2.59 >
		29.3	67.7 >	

		358.5		
17	10.7	26.5	28.0 >	2.70 >
		355.4	36.4 >	2.64 >
		31.8	64.4 >	

Index to right and above.

		265.2 ~~305.9~~		
17	16.2	305.9	40.7 >	2.46 >
		269.3	30.8 >	
		300.1	71.5 >	

		268.7		
17	24.0	297.9	29.2 >	2.64 >
17	13.8'	263.7	37.0 >	2.55 >
17	12.9' = corrected time.	300.7	66.2 >	
			mean = 2.60 >	

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Nov. 16, 1896.

In two last groups focus was readjusted, making images almost exactly similar. First of the last two groups is considered by far the best; the last group was hurried because of daylight.

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Nov. 17. 1896 (Tuesday

B. Lyrae : Phot. N. : Cram : obs.

Index b clam.

		45.8	< B dis.		
5	58.3	93.4		47.6 >	
		49.7		39.0 >	2.01 >
		88.7		86.6 >	
		47.3			
6	05.2	90.0		42.7 >	
		47.1		43.9 >	2.01 >
		91.0		86.6 >	2.01 >

Index abv.

		145.0		
6	13.7	174.3	29.3 >	3.07 >
		147.6	25.6 >	
		143.2	54.9 >	

		142.5			
6	18.1 clouds	142.3 ~~144.8~~	29.8 > ~~32.3~~		2.87 >
6	08.8 >	144.8 ~~143.1~~	30.0 > ~~32.3~~		2.97 >
		144.8 ~~145.4~~	59.8 >		mean = 2.49 >

Last part of group taken thro' heavy clouds : the images at no time were visible at the same ~~time~~ moment : observations

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Nov. 14. 1896

most extremely difficult and uncertain
in last part: wt about 1/4.

6 35 Stopped by clouds.

7 25 Clouds thick: no chance for further
work

It should have been stated concerning
the last set of the group on β Lyrae that
the last three settings were corrected as well as
possible in a brief moment of clearer seeing
immediately after finishing group.

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Nov. 18, 1896. (Wednesday

5h 30 Fairly clear but some light clouds

β Lyrae: Phot. N: Comm obs

Altho' β Lyrae can be seen it is too cloudy to see comp. star sufficiently well: light mist and fog as well.

6 0 Still too hazy.

7 0 Seeing worse.

7 15 no chance for any more

1896phae.proj.1342.

Nov. 19. 1896 (Thursday

5 30 cloudy

6 0 Still cloudy

7 30 Cloudy

8 00 Little clearer

β Lyrae :: Shut N: Cham ds
Index to right and obs.

142.6 < B dis
8 07.8 145.3 32.7
144.9 29.3 2.79
144.2 62.10

146.1
clouds till 8:25
clouds again

8 45 Stopped by ~~stopped~~ clouds

No chance for β Persei as region is cloudy.

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Nov. 22nd 1896. (Sunday)

Wells Variable: Phot I: Sr. 65.

20 31 +17°2
21 15
+KK

Index to left and above.

		184.6	← comp. standard.	
5	03	56	249.4	
			185.7	61.8 <
			251.3	65.6 < (1.03 ~~1.10~~
				124.4 <
			188.0	
5	05	43	250.2	62.2 < + (1.06)
		189.1	~~1 1 1 1~~	62.0 <
			251.1	124.2 < 1.10 <

Index to right and below

			273.6	
5	08	31	340.8	67.2 <
			276.9	63.5 <
			340.4	130.7 < 0.96 <
			276.4	(0.93) <
5	09	58	341.0	64.6 <
			273.5	69.3 < 0.90 <
			342.8	133.9 < 1.02 <

4 (28 8 <
10 7 2 <
+2 40
10 9 42 [-4 27 18]

M = 1.02

1896phae.proj.1342.

Nov. 22, 1896.

5	14	47	276.4		
			342.6	66.2 <	
			275.9	65.0 <	0.95 <
			340.9	131.2 <	
			278.1		(0.96) <
5	16	12	340.0	61.9 <	
			273.9	68.2 <	0.98 <
			342.1	130.1 <	

II Index to left and above.

			4.8		
5	19	00	71.4	66.6 <	
			5.8	65.5 <	0.94 <
			71.3	132.1 <	
			4.6		(0.92) <
5	20	45	69.0	64.4 <	
			4.4	69.0 <	0.91 <
			93.4	133.4 <	

III = 0.94 <

10.21

	70	44 <		
10	17	41		
	2	40		
10	20	21 <		
-4	16	39		

Arnold + Dut #958 : Band #394

$5^h\ 23^m\ 19.7^s = 5^h\ 26^m\ 00.0^s$

23 19.76

+2 40.4

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Nov. 22, 1896.

			3 .4			
5	28	00	94 .4	71.0 <		
			6 .7	60.3 <		
			64 .0	131.3 <	0.90 <	
			4 .6		(0.90) <	
5	30	17	69 .3	64 .7 <		
			6 .8	66 .7 <		
			93 .5	131.4 <	0.90 <	

III Index to right and below.

			97 .3			
5	33	03	162 .1	64 .8 <		
			98 .0	58 .5 <	1.12 <	
			156 .5	123 .3 <		
			100 .4		(1.06) <	
5	34	33	160 .9	60 .5 <		
			96 .3	68 .1 <	1.01 <	
			164 .4	128 .6 <	10.27 <	
					M = 1.00 <	

5 | 120 -3 <

10 31 28 <
+2 40
10 33 8
-4 2 -2

113

			96 .6			
	36	06	163 .8	67 .2 <		
			99 .2	61 .4 <	1.01 <	
			160 .6	128 .6 <		

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1896phae.proj.1342.

Nov. 22, 1896.

			98.8		(1.02)<
5	34	15	158.2	59.4<	
		94.2	~~95.4~~	68.5<	1.02<
			162.7	127.9<	

IV Index to left and above.

			184.3		
5	39	35	252.0	64.7<	
			189.0	57.4<	1.14<
			246.4	122.1<	
			183.0		(1.09)<
5	41	34	254.1	71.1<	
	~~4~~ 1	54 30<	189.6	56.1<	1.04<
10	38	38<	245.7	127.2<	10.33<
	2	40			M=1.06<
10	41	18<			
-3	-5	42			

			189.5		
5	41	50	249.1	59.6<	
			188.8	63.0<	1.14<
			251.8	122.6<	
			188.2		(1.12)<
5	46	35	248.8	60.6<	
			187.0	64.2<	1.09<
			251,2	124.8<	

V Index to right and below

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Nov. 22. 1896.

5	50	28	278.9		
			338.6	59.7 <	
			278.7	58.7 <	1.23 <
			337.4	118.4 <	
					(1.21) <
5	52	30	278.7		
			337.1	58.4 <	
	4	194 33 <	277.4	61.6 <	1.19 <
	10	48 38 <	339.0	120.0 <	1.043 <
		2 40			M = 1.116 <
	10	51 48			
	−3	45 42			
			277.2		
5	54	49	337.6	60.4 <	
			279.4	56.6 <	1.26 <
			336.0	117.0 <	
					(1.18) <
			275.0		
5	56	46	338.4	63.4 <	
			276.6	61.1 <	1.10 <
			337.7	124.5 <	

VI Index to left and above.

			6.0		
5	59	10	70.7	64.7 <	
			10.7	60.4 <	1.08 <
			71.1	125.1 <	

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Nov. 22, 1896

11.8 (1.16)<
65.9 54.1<
6.3 64.0<
90.2 118.1< 1.23<
10.44<
M = 1.17<

6 00 27
4 (2 31 12 <
10 57 48 <
2 40
11 0 28
-3 36 32

4.1
68.7 64.6<
9.4 55.3<
64.7 119.9< 1.19<

10.8 (1.20)<
6 04 29 65.4 54.6<
4.1 65.2<
69.3 119.8< 1.20<

VII Index to right and below

97.4
6 06 22 168.4 66.0<
99.3 55.9<
155.2 121.9< 1.15<

99.7 (1.14)<
6 07 51 155.6 55.9<
4 (21 57 < 93.6 67.5< 1.12<
11 5 28 161.1 123.4<
2 40 10.44<
11 8 8 M = 1.17<
-3 28 52

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1896phae.proj.1342.

dpt Nov. 22, 1896.

			93.6		
6	09	22	163.5	69.9 <	
			98.6	56.0 <	1.07 <
			154.6	125.9 <	
					(1.12) <
			100.8		
6	10	49	156.9	56.1 <	
			95.6	64.6 <	1.18 <
			160.2	120.7 <	

VIII. Index to left and above.

			191.5		
6	12	53	247.0	55.5 <	
			195.0	48.3 <	1.56 <
			243.3	103.8 <	
					(1.48) <
			195.8		
6	14	25	244.1	48.3 <	
			189.8	62.0 <	1.41 <
			251.8	110.3 <	1.57 <
	4(47)	29 <			III = 1.30 <
11	11	52			
	+2	40			
11	14	32			
−3	22	28			
			190.2		
6	19	15	249.0	58.8 <	
			195.1	48.6 <	1.48 <
			243.4	107.4 <	

209

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Nov. 22. 1896

193.4 (1.46)<

6 18 29 242.6 49.2<
188.6 60.0< 1.44<
248.6 109.2<

II Index to right and below.

279.7
6 21 15 338.3 59.2<
284.6 48.5< 1.47<
333.1 107.7<

284.4 (1.48)<
6 22 29 332.3 47.9.<
279.0 59.1<
338.1 107.0< 1.49<
10.74<
III = 1.47<

4(79 38)

11 19 v-k
+2 +0
11 22 34
-3 14 26

276.7
6 23 56 309.4
285.1 48.3< 1.39<
333.4 111.0<

285.0 (1.45)<
6 25 32 332.1 47.1<
279.0 58.8<
334.8 105.9< 1.51<
9

1896phae.proj.1342.

Nov. 22, 1896.

I Index to left and above.

6 27 40

6.9		
68.9	62.0 <	
13.0	51.5 <	1.34 <
64.5	113.5 <	
		(1.38) <
14.2	49.5 <	
64.3	60.8 <	1.41 <
8.0	110.3 <	
68.8		10.69 <
		M = 1.42 <

6 29 01

4 26 9 <

11 26 32 <

2 40

11 29 12

-3 7 48

6 33 47

6.7		
70.7	64.0 <	
15.3	48.1 <	1.37 <
63.4	112.1 <	
		(1.44) <
15.9		
63.9	48.0 <	
8.9	54.9 <	1.07 <
66.8	105.9 <	

II Index to right and below.

6 34 25

101.1		
160.3	59.2 <	
105.0	50.4 <	1.43 <
155.4	109.6 <	

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Nov. 22, 1896.

		103.3		(1.50)
6	38 33	152.6	49.3 <	
	4 (25 6 <	102.1	54.0 <	1.58 <
11	36 16 <	156.1	103.3 <	
	+2 +0			10.74 <
11	38 5-6			M = 1.47 <
-2	5-8	4		

		102.8		
6	43 14	156.5	54.2 <	
		104.1	48.5 <	1.59 <
		152.6	102.7 <	
				0
		102.6		(1.67)
6	44 42	151.9	49.3 <	
		103.6	52.0 <	1.62 <
		155.6	101.3 <	

~~XII~~ I index to left and above.

		189.7		
6	46 35	244.2	54.5 <	
		197.4	43.9 <	1.70 <
		241.3	98.4 <	
				(1.79) <
		196.8		
6	47 48	241.2	44.4 <	
	4 (22 19 <	194.4	47.0 <	1.88 <
11	45- 34.8	241.4	91.4 <	10.87
	2 40			M = 1.70 <
11	48 1 5-			
-2	48 45-			

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Nov. 22, 1896.

194.6
245.3 50.7 <
197.7 41.9 < 1.84 <
239.6 92.6 <

196.9 (1.84) <
241.4 44.5 <
194.5 47.9 < 1.85 <
242.4 92.4 <

XIII Index to night and hours.

282.9
6 52 43 331.2 48.3 <
286.8 42.6 < 1.89 <
329.4 90.9 <

287.0 (1.87) <
6 56 32 328.3 41.3 <
281.2 51.1 < 1.85 <
332.3 92.4 <

4 | 209 9 <
11 v-2 17 <
+2 40
11 v7 v7
-2 42 3

M = 1.86 <
11.13 <

285.8
6 58 54 331.4 45.6 <
284.1 43.9 < 1.93 <
331.0 89.5 <

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6 58 07 Nov. 22, 1896.

		284.1		(1.90)
7	50	27	330.7	43.6
			282.4	48.2 1.86
			330.6	91.8

XIV Index to left and down.

			14.4	
7	02	46	62.1	47.7
			14.3	41.8 1.94
			58.6	89.5
				(1.88)
			14.7	
7	04	07	60.4	45.1
			14.2	47.5 1.83
			61.9	92.6 11.16
				M = 1.89

	4	6	14	
12	1	34		
	2	40		
12	4	14		
−2	32	46		

			12.6	
7	05	2	60.8	48.2
			14.7	43.7 1.86
			61.4	91.9
				(1.92)
			14.4	
7	06	29	60.7	43.3
			15.9	44.5 1.97
			60.4	87.8

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Nov. 22, 1896

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

		103.1		
7	08 28	151.9	48.8 <	
		107.9	42.7 <	1.87 <
		150.6	91.5 <	
				(1.84) <
		106.7	45.3 <	
4	10 15	152.0	48.2 <	1.82 <
	4 30 33 <	105.9	93.5 <	
	12 7 38 <	154.1		
	2 40			
	12 10 18 <			
	−2 26 42			

III = 1.88 <
11.1 52

		103.3		
7	11 27	152.0	48.7 <	
		106.8	41.7 <	1.90 <
		148.5	90.4 <	
				(1.94) <
		109.1	29.9 <	
7	12 59	149.0	47.6 <	1.98 <
		105.8	87.5 <	
		153.4		

XVI Index to left and above.

		198.4		
7	15 04	240.3	41.9 <	
		198.1	38.2 <	2.19 <
		236.3	80.1 <	

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1896phae.proj.1342.

Nov. 22. 1896.

(2.19)<

199.6
239.0 39.4<
198.9 40.6< 2.19<
239.5 80.0<

11.3 3<

M = 2.06<

7 16 14
4 15 44<
12 13 56<
2 40
12 16 36
-2 20 24

224<

197.6
9 19 25 240.1 42.5<
198.2 38.9< 2.15<
239.1 81.4<

200.3 (2.18)<
7 21 10 237.9 37.6<
198.1 41.9< 2.21<
240.0 79.5<

XVII

Index tonight and below.

288.5
7 23 46 329.4 40.9<
288.2 39.0< 2.20<
329.3 79.9<

290.4 (2.22)<
7 25 20 328.4 38.0<
288.8 40.6< 2.24<
329.4 78.6<
4 89 41
12 22 25<
2 40
12 25 5
-2 11 55

0<

M = 22

11.48<

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Nov. 22. 1896.

7 28 57

287.9
325.8
286.8
326.4

37.9 <
39.6 < 2.27 <
77.5 <

(2.32) <

7 29 45

289.8
325.1
288.3
326.8

35.3 <
38.5 < 2.38 <
73.8 <

XXII

Index to ~~right~~ left and above.

7 33 04

19.0
58.2
20.1
56.7

39.2 <
36.6 < 2.32 <
75.8 <

19.7
58.4
20.2
57.3

(2.32) <
38.7 <
37.0 < 2.32 <
75.7 <

III = 2.32 <
11.59 <

7 34 29

4 | 126 15 <

12 31 34
+2 40
12 34 14
-2.2 46

7 36 50

17.3
57.7
19.8
56.1

40.4 <
36.3 < 2.29 <
76.7 <

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1896phae.proj.1342.

Nov. 22, 1896.

36 50

(2.34)<

19.2

38 35

56.6 37.4<

19.6 36.6< 2.38<

56.2 74.0<

XIX Index to right and below.

107.2

41 16

147.0 39.8<

111.1 36.0< 2.32<

147.1 75.8<

109.3 (2.34)<

42 44

146.9 37.6<

4(10-9 25<

200-

111.0 36.9< 2.36<

12 39 51

147.9 74.5<

42 40

12 42 31

-1 54 29

$\mathcal{M} = 2.34 <$

11.6 /<

140.4

48 15

146.1 35.7<

110.2 36.0< 2.45<

146.2 71.7<

(2.48)<

111.4 ~~112.1~~

50 21

144.1 32.7<

109.7 37.4< 2.50<

147.1 70.1<

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1896phae.proj.1342.

Nov. 22, 1896.

XX Index to left and above.

7 53 14	203.3		
	236.1	32.8<	
	202.3	35.4<	2.07<
	234.7	68.2<	
			(2.06)<
	201.0		
7 54 36	235.2	34.2<	
4(206 26<	201.4	34.8<	2.04<
12 51 36<	236.2	69.0<	
2 40			III = 2.02<
12 54.16			11.79<
-1 42 44			

	203.1		
7 56 30	235.3	32.2<	
	202.4	33.8<	2.64<
	236.2	66.0<	
			(2.62)<
	201.4		
7 57 45	234.6	33.2<	
	202.6	33.7<	2.61<
	236.3	66.9<	

XXI Index to right and below.

	289.0		
7 59 36	323.2	34.2<	
	293.9	29.1<	2.74<
	323.0	63.3<	

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1896phae.proj.1342.

Nov. 22 1896.

290.7	32.4 <	(2.72) <
323.1		
291.7	21.7 <	
323.4	64.1 <	2.71 <

M = 2.67 <

11.94 <

8 01 00

4 | 23 4 57 <

12 58 43 <

+2 40

13 1 23 <

-1 35 37

Arnold + Put #958 : Band #394

8^h 08^m $19.6 = 8^h$ 11^m $50^s.0$

8. 19.6

+2 40.4

1896phae.proj.1342.

Nov. 23. 1896. (Monday)

Σ 2667 P. XX. 116. * H. ds.

20 1A +0°.6
2K 30
+4. 12 Too low.

Σ 2726. ν2 Cygni. H. ds.

20 K0 +30.2
2K 30
+3 ν0

8.23

143.9
178.5
163.1
174.6

142.9

Clouds thick

9.05 Sky thickly clouded, no chance for farther work

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1896phae.proj.1342.

Nov. 24 1896 (Tuesday)

S Mus. Maj. W:obs.

12 34 +61.7
23 55
11 21

7 20 Too cloudy: abandoned.

S Leyagni W obs.

20 08 +57.2
23 55
3 47

20 05
24 03
3 05 X 5

7 32 Too cloudy

20 05
24 17
4 9

Clouds too thick

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1896phae.proj.1342.

Nov 24 1896

O Ceti

2	04	- 2.5
~~24~~	20	
~~22~~	16	

2	14
0	25
~~1~~	~~49~~
10	11

Cloudy thick

Pretty cloudy but will try again for S Cygni.

20	08	+ 5 - 7.2
25	15	
4	57	

20	08
25	15
5	7

Star S probably faintly seen, fainter stars not certainly seen, variable not certainly seen, variable probably fainter than 13.0 ~~8 0.~~

~~Sw~~

7 - 46

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1896phae.proj.1342.

Nov. 24, 1896.

Bright moon light and clouds.

Sky more or less cloudy everywhere.

α Cet

2	04	−2.5
+	25	
−0	39	
12	00	
11	21	

Clouds too thick

Index left + below.

9. 78	333.0	
	343.0 < Var. dis.	20,0 ✓
	334.7	20,0 ✓
	354.7	40.0 ✓ 3,77 ✓
9. 19	334.9	
	354.5	19.6 ✓
	334.7	19.2 ✓ 3.68 ✓
	353.9	38.4 ✓ 3,84 ✓

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1896phae.proj.1342.

Nov. 24. 1896.

Index right + above.

9 – 23	65.0	16.8 ✓		
	83.5			
	65.0	17.1		
	72.1	35.9 ✓	4.01 ✓	
9 – 25	65.0	16.3 ✓		
	74.3			
9 21 ~~30~~ 15	64.0	19.1 ✓		
	83.5 –	35.4 ✓	4.01 ✓	
			4.01	
			3.90 ✓	
9 – 29	64.0			
	~~73.0~~	83.0	19.0 ✓	
	64.5			
	82.0	17.2 ✓		
		36.2 ✓	3.99 ✓	
9 – 30	65.0			
	84.5	16.2 ✓		
	64.2	17.2 ✓	4.09 ✓	
	82.0	34.6 ✓	~~3.91~~	
			~~3.90~~	
			4.04 ✓	

Index left + below.

9 – 34	155.2		
	172.5	17.6 ✓	
	155.0	17.7	
	172.7	35.3 ✓	4.04 ✓

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1896phae.proj.1342.

Nov. 24. 1896.

9 – 36

153.9
173.2 19.3 ✓
~~174.1~~

9 32 15 ~~30~~

154.0 20.1 ✓
174.1 39.4 ✓

3.90 ✓
3.92 ✓
~~3.98~~
3.94 ✓

9 – 46

~~174.1~~
~~174.7~~
~~155.2~~
174.6

Reject. Photometer slips.

9 – 48

~~174.9~~
~~174.0~~
~~154.1~~
~~172.4~~

~~Index right + above~~

—

—

—

Index right & above

9 – 53

~~245.1~~
263.0 17.9 ✓
245.4
261.5 16.1 ✓
34.0 ✓ 4.13 ✓

—

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1896phae.proj.1342.

Nov. 24. 1896.

	245,8	16,2 ✓		
9 55	262,0			
	244,1	18.7 ✓		
	242,8	34.9 ✓	4.07 ✓	
			4.10 ✓	

Index left & below

~~334,8~~			
333,7	20.4 ✓		
9 55 ~~4~~ 334,1			
335,0	17.7 ✓		
352,7	34.1 ✓	3.44 ✓	
334,9			
10 D ~~334,2~~ 352,6	17.7 ✓		
9 ~~37~~ 56 30 333,9	19.2 ✓		
352,6	36.9 ✓	3.9 ✓	
		3.92 ✓	
		4.01 ✓	

This last group added as it was feared that photometer slipped in previous group, but results seem to be all right in all the groups.

Observations through some cloud.

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1896phae.proj.1342.

Nov. 24. 1896.

Σ 30 v-3. Gr. obs.

23 v6 +6v.4
26 v-0
+2 v-4

Position of angle 75°
Distance 15". Mags 6.0, 7.5-

~~222.6~~
~~217.2~~ Index right + below.
228.2 < betr. dist.

18 28

45.8	274.0		
61.8	223.2		
107.6	285.0	- 1.47	
	225.8	- 1.48	
57.0	282.8		
49.7	228.2	- 1.49	
106.7	277.9		

Index left + above. Mean = +4.6

	322.1	
49.9	12.0	1.48
57.6	314.9	
107.5	12.5	1.45

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1896phae.proj.1342.

Nov. 24. 1896.

	314.1		
10 33	11,9	578	
	318.9	52.1	
	11.8	109,9	1.44

Clouds too thick for any thing farther

Observations made through clouds

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1896phae.proj.1342.

Nov. 27 1896 (Friday)

Considerably cloudy

Stars dim

Object glass some bedewed

Will try however for W. Obs.
S Cygni +57+2

20	8
24	12
4	4

20	8
24	20
4	12

Sky pretty thick

Comparison star S thought to be suspected, faintly at intervals while observer first looked, variable not seen.

7h 47. Sky now thicker. Star small S not visible.

S1, N ✓ Sky somewhat cloudy

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1896phae.proj.1342.

Nov 21 1896

Square bar micrometer put on but ~~sky~~ variable not seen.

Sky now too thicke for faint var.

~~Op~~ Σ 267 v. K Cephei. Fr. ob.

20	13	+ 77.3
24	37	
4	24	

Position angle equals 125°
distance = 7" magn. = 4.0 and 8.3

Index to left
332.0 < brighter ds

Sky now so thick that companion is not seen

8 17

334.3
331.~~8~~
335.0

Sky too thick
Abandoned for faint companion

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1896phae.proj.1342.

Nov. 27 1896

o ceti Phot R W. Obs.

12 04 - 2.45
1 25 03
09
06

11

8 10 Object glass bedewed.

Sky thick no stars visible in this region.

2 04
1 28
36
11 24

Index below

	336.4		
8 48	351.8	15.4<	
	335.0	16.8<	
	351.8	32.2<	4.25<
8			
8 52	336.1		
	351.5	15.4<	
	335.0	16.0	
	351.0	31.4	4.30
			4.28

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1896phae.proj.1342.

Nov. 27, 1896.

Index above

~~8~~		64.3		
~~8~~	56	83.8	19.5	
		~~83.8~~		
		64.0	17.0	
		81.0	36.5	3.97
		66.0	15.0	
9	00	81.0		
		65.0	17.0	
		82.0	32.0	4.26
8	54	00		4.12

Index ~~below~~ above. mean 4.20

64.5

Clouds ~~thick~~

~~4~~ ~~12~~ ~~55.8~~

		65.8	16.0	
9	~~08~~ 12	81.2		
		65.0	16.2	
		81.2	32.2	4.25
		65.0	16.3	
9.	12	81.3		
		65.8	15.7	
		81.5	32.0	4.26
				4.26

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1896phae.proj.1342.

Nov 27 1896

Index below.

		156.0		
9	15	172.1	16.1	
		156.0	16.2	
		172.2	32.3	4.25
		155.3	16.7	
9	16	172.0		
		Assume 175.9	16.3	
~~9~~	~~13~~	172.2	33.0	4.19
9	12 45			4.22

Sky now becoming thickly clouded. No farther chance for work

1896phae.proj.1342.

Nov. 30. 1896. (Monday)

A.A.+S. 9r4.
1h 4f r9.0
49 r9.0

B. 394.
1h 49.00
r0 00

Dis, Sat, I. Phot, R. W, Obs. Waitara
Compared with second set, pre. = Sat III
Reduced & Checked.

	15	10 30	92.2		
15 10 47 x		44	173.3	81.1	
+1		52	93.0	81.1	
15 10 48 x		11.01	174.1	81.1	+0.3 x
		08	93.1		
11 21 x		15	173.0	79.9 x	
+1		25	91.4	80.9	
15 11 22 x		36	173.3	80.4 x	+0.4 x
15 11 52 x		51	89.2	85.4	+0.2
12 01 x	12	00	174.6	78.6	+0.4
11 x		10	96.0	77.0	+0.5
20 x		19	173.0	73.8	+0.6
26 x		25	99.2	68.8	+0.8
33 x		32	168.0	68.0	+0.9
60 x		39	100.0	61.0	+1.1
67 x		46	161.0	61.2	+1.1
58 x		57	99.8	68.0	+0.9
13 11 x	13	10	167.8	63.1	+1.1
20 x		19	104.7	55.3	+1.4
29 x		28	160.0	51.2	+1.6
44 x		43	108.8	49.2	+1.7

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1896phae.proj.1342.

Nov. 30, 1896.

15 13 33	15 13	54	158.0	47.8 + 1.8
14 06	14	05	110.2	45.7 + 1.9
18		17	155.9	44.1 + 2.0
28		27	111.8	40.2 + 2.2
39		38	152.0	38.0 + 2.6
59		58	118.0	
16 31	16	30	Not seen.	

L. V.

	15 16	50	118.0	
15 17 05	17	00	147.8	29.8
+1		10	116.8	31.0
15 17 06		20	147.8	30.4 + 2.8

Observations of above eclipse considered to be very poor and of not much value.
Seeing was the worst observed ever known. Sat. pretty close to planet. Jups. looking greatly and oscillating satellites continually. Some frost on objective.
Observation delayed at start by frost on nichol, and also somewhat by frost throughout observation.

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Indophae_proj_1942.

Nov. 30, 1896.

	A + Q. 958.			B 394.	
15	29	59.0	15	30	00.0
15	30	59.0	15	31	00.0

Chron. Corr = +1 sec.

When differences are taken on previous eclipse (p. 93. 94) the differences and corresponding angles run very well and much better than was expected so that eclipse in seems to be very good.

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1896phae.proj.1342.

Dec 1 1896. (Tuesday)

S Cygni W. Obs.

20 18 +57.2

24 25-

4 17

Star A seen star E seen. Star W thought to be seen at intervals but variable not seen even when bright star is put behind it. Variable probably fainter than 14.9.

7 69 On looking again W thinks that he possibly sees the var. if so it is about equal to star W which is about mag. of ~~about~~ 14.5.

R Ursae Majoris W. Obs.

10 32 +69.2

25- 00

14 28

9 32

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Dec. 1, 1896.

~~4 var., , variable.~~

~~24 var., ; var. 1~~

8 15 est. 10.2 c

δ Ursae Maj. W Obs.

12 33 +61.8

25- 10-
12 42

h 1 var.; var. 5-6

8 26 estimate 8.9 c

~~δ Bootis~~

δ Bootis W = obs.

14 14 + 5-4.6

25- 45-
11 29

8 46 Too low

R Leonis W = obs

14 40 +84.1

25- 50
11 10

14 40

25- 54
11 14

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1896phae.proj.1342.

Dec. 1, 1896.

R Camelop VE obs.

~~d 3 var. var. 2 e~~

9. 12 cd 3 var, var. 2 e in lar. tel.
cd 2,5 var. var 1,5 e in finder
Est. 9.1

~~R S Cygni Phot S T~~

R S. Cygni. Phot. S. Tr. obs.

20	08	+ 38.2
26	17	
6	9	

9 25 e 3 e'
e' 4,5 d

32.7

20	08
26	57
6	49

Comp. Star c

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1999phae.proj.1042.

Dec. 1, 1896.

Index below

32.5

10 8

45.5 — 12.7 <

31.8

46.9 — 15.1 <

27.2 < 4.v7

31.0 — 14.0 <

45.0

30.5 — 15.0 —

45.8 — 29.0 < 4.44

4.v2

Index above

121.4

134.9 — 13.5 <

121.3

135.7 — 14.4 <

27.9 < 4.v6

119.9

135.6 — 15.7 <

10 18

120.1

135.0 — 14.9 <

30.6 < 4.36

14.46

Comp. star 5 4.49 = mean.

Index above

121.7

134.7 — 13.0 <

10 21

122.9

134.4 — 12.5 <

25.5 — 4.71

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1896phae.proj.1342.

Dec 1 1896

123.3 11.0<
134.3
122.9 9.8<
132.7 20.8< v.20
Index below 4.9<

213.1
~~222.1~~
10 29 224.0 10.9<
213.4 11.2<
224.6 22.1< v.07

213.1
10 35 222.5 9.7<
214.0 9.1<
223.1 18.8< v.43
v.2v
v.12 mean.

Observations on this last star quite difficult and a little uncertain from faintness of star and low alt.

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1896phae.proj.1342.

Dec 1 1896

R Pegasi W— Obs.

23	03	+9.0
27	42	
4	39	

~~7 4~~

p 4 5

Examination of new photometric arrangement on photometer H

Σ≠ 61 W— obs

0	43	27.0
4	05	
3	22	

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1896phae.proj.1342.

Dec 3 1896 (Thursday)

Brilliant Aurora all through north and extending nearly to zenith consisting of arches and bright patches of light.

7 – 10

S. Boötis 9h — obs.

14	16	+34.6
24	30	
10	14	
14	14	
24	36	
10	20	

Star m seen. Star n not certainly seen. Var suspected* at intervals. Var. thought† to be at least four grades fainter than m but regard is bad and night hazy in aurora so that observation is very uncertain.

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1896phae.proj.1342.

Dec. 3 1896.

R Vulpeculae W – obs

+ 22, 8

20 5-6
2 5- 5 6
5- 0 0

8 10 ~~4~~ Y 4 δ
δ 4 ε

A 15 Aurora is now a low, bright arch, extending, at its summit, to about 1/3 the altitude of pole star.

~~R~~ R S Cygni W – obs.

+ 39, 5 –

20 10
2 5 – 3 7
5- 27

~~ε 4 ε'~~
~~ε' 4, 5-~~

8 35 ε 4 ε'
ε' 4, 5-d

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1896phae.proj.1342.

Dec 3 1896

R Pegasi W – Obs.

23	03	+9.0
26	00	
2	57	

23	03
26	05 –
8	02

E with h.

Index left and below

120.8

9 22

135.4	14.6 <	
120.0	13.7 <	4.53 <
133.7	28.3 <	

(4.54)

121.5 –		
135.4	13.9 <	
119.8	14.3 <	4.54 <
134.1	28.2 <	

Index right and above

211.8

224.6	12.8 <	
211.4	12.9 <	4.74 <
224.3	25.7 <	

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1896phae.proj.1342.

Dec 3 1896.

~~211.0~~
211.0
225.6 14.1
211.0 13.7 4.57
225.2 27.8

(4.66)

9 34

9 28 0

M = 4.60

E with h.
Index right and above
~~210.5~~
~~222.0~~

9 40

211.7
226.1 14.4
215.6 18.8 4.18
227.4 33.2

204.6 (4.20)
227.1 17.5
210.2 15.2 4.21
225.4 32.7

Index left and below
301.5
316.9 14.2
300.3 15.3 4.44
315.6 29.5

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1896phae.proj.1342.

Dec 3 1896

(4.33)

9 57

9 45 30

299.4
316.8
301.1
317.0

16.6 <
15.9 <
32.5 <

4.22

M = 4.26

μ with Lr.

Index left and below

~~299.4~~
295.6
320.4
297.3
319.5

21.8 <
22.2 <
44.0 <

3.56 <

9 55

(3.66) <

297.3
318.1
299.5
318.9

20.8 <
19.4 <
40.2 <

3.76 <

Index right and above

27.0
~~51.0~~ 57.0
26.1
57.4

24.0 <
20.3 <
44.3 <

3.30 <

(3.30)

27.0
57.3
27.9
58.8

24.3
22.9
47.2

3.40 <

M = 3.50

10 55

10 0 0

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1896phae.proj.1342.

Dec 3 1896.

λ with Lr

Index to right and above

10 · 9

23.5		
53.4		
26.1	29.6 <	
53.7	27.6 <	2.97 <
	57.2 <	

26.6		(3.13) ✓
51.5	24.9 <	
25.9	24.7 <	3.29 <
50.6	49.6 <	

Index left and below.

115.6		
138.9	23.3 <	
114.9	26.1 <	3.30 <
141.0	49.4 <	

116.0		(3.32) ✓
142.0	26.0 <	
117.9	22.7 <	3.33 <
140.6	48.7 <	M = 3.32 ✓

10 ~~30~~25

10 17 0

δ with Lr

Index left and below

10 30

113.0		
143.9	30.9 <	
112.1	30.6 <	2.80 <
142.7	61.5 <	

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1896phae.proj.1342.

Dec 3 1896.

113,1
143,8 29.9 <
113,5 31.7 < 2.80 <
145,2 61.6 <

(2.80) v

Index right and above.

205,1
233,2 28.1 <
205,6 26.8 < 3.07 <
232,4 54.9 <

205,0
233,0 28.0 <
205,9 29.4 < 2.96 <
233,3 57.4 <

(3.02) v

M = 2.91 v

10 45
10 40 0

1896phae.proj.1342.

Dec. 3, 1896.

Comp. of Chron.

B 3944. A + 10. 9558.

14 41 00.0 = 14 40 50.5

14 42 00.0 = 14 41 50.5

+0m 9.5s +0.3s

Dec. Sat. II, Obst. R. W. obs. Waitsea,
Comp. with Sat. most pre. = Sat II.

Bond 3944 is 0.3s slow.

East Limb. 14 45 50 ~~Obs.~~

~~46 20 261.5 Reject~~

46 42 (25-8.0) (314.5) 265.8 96.2

49 2.0 1. -0.2

58 269.0 ~~96.2~~ (94.2)

47 10 1.2

22 (1614.5) 269.8

34 (403.6) (43.6) 359.7 89.9

50 86.8 (90.6) 21 0.0

48 1 178.2 91.4

14 (28.1) 88.5

23 (182.0) 178.3 89.8

32 84.0 (91.6) 31 -0.1

40 177.3 93.3

47 (28.9) 85.0

55 (132.2) 178.0 93.0

49 2 88.9 (90.4) 41 0.0

14 176.8 87.9

~~4(149~~

~~14 48 49.8~~

4(219

14 46 (5-4.8)
+10.

14 47 5

4(167

14 47 41.8
+10

14 47 52

4(109

14 48 27.2
+10

14 48 37

4(235

14 48 (5-9.5)
+10

14 49 10

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1896phae.proj.1342.

Dec. 3, 1896.

Each Line.

14	49	27	32.4	87.2		
		33	33.1	177.0	89.8	5
		39		91.0	(88.0)	+0.1
		47		177.2	86.2	
	54	33	31.8	88.2		
		48	32.9	177.6	89.4	6
		58	33.0	90.0	(87.7)	+0.1
	55	10		176.0	86.0	
		17	30.8	89.0		
		28	32.7	177.0	88.0	
		~~43~~		~~177.5~~	~~Reject~~	7
	56	22		89.8	(86.6)	+0.1
		30		175.0	85.2	
		42	36.4	92.3		
		53	34.1	177.9	85.6	8
		59		90.6	(85.3)	+0.2
	57	06		175.6	85.0	
		15		89.0		
		39	29.8	175.2	86.2	9
		44	32.4	90.6	(85.3)	+0.2
		51		175.0	84.4	
		58		89.0		
	58	06	28.9	174.9	85.9	
		20	32.2	92.0	(83.4)	10
		28		173.0	81.0	+0.3

4(146
14 49 36.5
+10
14 49 46

4(209
14 54 52.2
+10
14 55 2

4(217
14 55 54.2
+10
14 56 4

4(220
14 56 55.0
+10
14 57 5

4(149
14 57 37.2
+10
14 57 47

4(232 52
14 58 13.0
+10
14 58 23

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East Time

Dec. 3, 1896.

			39	-29.7	90.0		
4(214	14	58		132.4	175.5	87.5	
14 58 53.5			48				
+10							
14 59 4			58		87.1	(87.8)	+0.1
		59	09		177.1	90.0	
			19				
4(147				-27.6	88.0		
14 59 36.8			28	131.9	174.4	86.4	
+10			38		85.8	Reject	
14 59 47							
			45		88.4	(87.4)	+0.1
			55		176.8	88.4	
					89.2		
4(86	15	00	05	-28.9			
15 0 21.5			15	132.2	174.8	85.6	
+10							
15 0 32			27		89.9	(85.4)	+0.2
			39		175.0	85.1	
					89.0		
4(32			49	-31.7			
15 01 8.0			59	132.9	175.0	86.0	
+10							
15 01 18		01	16		88.8	(88.0)	+0.1
			28		178.9	90.1	
					88.9		
4(214			38	-31.6			
15 01 53.5			48	132.9	176.8	87.9	
+10							
15 2 4		02	00		91.1	(85.8)	+0.2
			08		174.8	83.7	
					88.7		
4(130			19	-53.8			
15 02 32.5			28	133.95	177.0	88.3	
+10				134.0			
15 2 42			37		90.9	(88.3)	+0.1
			46		179.2	88.3	
					90.2		
		03	58	-28.1			
			08	132.0	174.9	84.7	

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Dec 3, 1896.

Clock Time

4(50<			58			847	
15- 04 12.5<		4	08				
+10	15	04	16		89.0	(84.8)<	+0.2<
15- 4 22<			28		174.0	85.0<	
					85.9		
4(212<			39	5-22.1<			
15- 04 5-3.0<			48	130.5-<	171.9	82.0<	
+10					88.1	(83.0)<	+0.3<
15- 5- 3<			58				
		05	07		172.2	84.1<	
4(165-<			26	53.1.3<	92.8		
15- 05- 41.2<			34	132.8<	172.1	79.3<	
+10					92.3	(80.6)<	+0.4<
15- 5- 5-1<			48		174.1	81.8<	
			57				
4(100<		06	09	5323<	94.4		
15- 06 25.0<			21	133.1<	174.1	79.7<	
+10					92.8	(79.0)<	+0.4<
15- 6 30<			30		171.0	78.2<	
			40				
4(43			52	5-27.5-<	94.2		
15- 07 10.8<		07	06	131.9<	169.2	75.0<	
+10					94.3	(75.2)<	+0.6<
15- 7 21<			18		169.8	75.5-<	
			27				
4(211<			37	5-27.0<	96.9		
15- 07 5-2.8<			47	131.8<	167.0	70.1<	
+10					98.8	(67.8)<	+0.9<
15- 8 3<			59		164.3	65.5-<	
		08	08				
4(128<			17	5-28.0<	99.7		
15- 08 32.0<			25	132.0<	163.9	64.2<	
+10					99.2	(65.1)<	+1.0<
15- 8 42<			36		165.2	66.0<	
			50				
		09	01		97.9		

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Each Time.

Dec. 3, 1896.

4(68 15	09	01	5 20.7	97.9		
15 09 17.0 15	09	14	130.2	162.0	64.1	
+10						
15 9 27		22		100.0	(62.4)	+1.1
		31		160.8	60.8	
4(229		41	531.2	106.8		
15 09 57.2		53	~~107.8~~ ~~1[illegible]~~	162.0	55.2	
+10	10	02	132.8	103.3	(55.5)	+1.4
15 10 7		13		159.1	55.8	
4(148		22	528.3	105.0		
15 10 37.0		32	132.81	158.4	53.4	
+10		42		109.7	(49.4)	+1.7
15 10 47		52		155.2	45.5	
15 11 18	11	08		109.8		
15 11 26		16		157.1	47.3	+1.8
15 11 35		25		111.0	46.81	+1.9
15 11 47		37		152.2	41.2	+2.1
15 11 57		47		113.0	39.2	+2.2
15 12 6		56		150.3	37.3	+2.4
15 12 18	12	08		114.2	36.1	+2.4
15 12 29		19		149.8	35.6	+2.5
15 12 47		37		116.8	33.0	+2.6
15 12 55		45		149.0	32.2	+2.7
15 13 6		56		117.6	31.4	+2.8
15 13 20	13	10		149.0	31.4	+2.8
15 13 34		24		119.0	30.0	+2.9
15 13 47		37		146.4	27.4	+3.1
15 13 58		48		119.9	26.5	+3.1
15 14 11	14	01		145.7	25.8	+3.2

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Dec. 3, 1896.

Clock Time

15	14	28	15	14	18	122.0	23.7 + 3.4
15	14	46			36	144.0	22.0 + 3.6

Not seen later.

Limit of Visibility.

4 (20 − 47			15	15	55	121.4	
15	16	26		16	06	141.8	20.4
		+10			41	123.8	16.4 +4.0
15	16	37		17	05	140.2	(18.4)

Seeing pretty good.

B 394. Comes of Chrome. A + D. 958.

15	32	00	=	15	31	50.5
15	33	00	=		32	50.5
					+0	9.5 + 0.3 =
						+0 9.8

Bond # 394 is 0.3 slow

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Posted to here.

Dec. 5. 1896. (Saturday.

R Pegasi Phot. J: W: obs.

~3 03 +9.0
~4 35

Considerable clouds and haze

2 with 4.

Index right and above

21.6
51.0 29.7<

21.9 29.1< 2.91 ✓
51.0 √4.4<

22.7 27.6< (2.96) ✓
50.3

21.1 2.4.7< 3.00 ✓
49.8 √6.3<

Index left and above

115.9 25.4<
141.3

115.5 26.9< 3.17 ✓
142.4 √2.3<

(3.12) ✓

114.6 26.5<
141.1

115.0 24.1< 3.07 ✓
143.1 √4.6<

M = 3.04 ✓

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1896phae.proj.1342

Dec 5 1896

θ with L.

8 07

111.1 33.K<
144.5
112.0 32.9<
144.9 66.3< 2.63<

111.8 32.6<
144.4
112.8 31.2< 2.72<
144.0 63.K< 2.6K<

Index to right and above

205.1 2V.9<
231.0
205.0 2V.V<
230.5 V1.K< 3.21<

199.9 32.1<
232.0
201.0 30.V<
231.5 62.6< 2.76<

8 17

13 12 0

V.97
2.9K<
2.A3<
2.6V.
11.47

M =

1896phae.proj.1342.

Dec 5 1896

μ with ζ.

8 32

207.5
227.8
209.1
229.0

20.3<
19.9<
40.12

3.76
~~3.7~~

209.0
227.8
~~206~~

~~7A~~
18.A<

205.9
228.1

22.2<
41.0<

3.71
3.714

Index left and below

297.0
319.5
298.4
319.2

22.5<
20.2<
43.3<

3.59<

8 41
13 86 30

299.0
318.3
297.0
319.9

19.3<
22.9<
42.2<

3.65<
3.62<
3.64<
4.64
12.32

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Dec. 5. 1896.

Troubled and delayed in measurements by ~~a~~ cloud and haze. Sky clearer, however during latter part of measurements

R S. Cygni		W — obs.
20	10	+3".4
26	05	
5-	5-5	

9 05

34.2
43.1 8.9<
31.8 11.3<
43.1 20.2< 5".27<

34.0 10.1<
44.1
~~5~~ 34.5 8.7<
43.2 18.8< 5".43<
5".35<

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Dec. v. 1896.

Index right and above

12 2,3	10.6 <	
13 2,9		
12 1.0	11.5 <	
132.5	22.1 <	v.07 <

122.0	12.0 <	
134.0		
121.9	10.1 <	
132.0	22.1 <	v.07 <

v.07 <
v.07 -
v.21 < mean.
~~2.60~~
~~13.24~~

9 20
9 14 0

Measurements on above star very difficult clouds and haze increasing.

S Aquarii W — obs

22	49	-21.1
26	42	
3	23	

Clouds in this region. Abandoned

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Dec 5 1896

S Pegasi W— obs.

23	13
26	44
3	31

+ 8.1

23	14
27	00
3	41

+9.5

Sky getting too thick for comparison stars for variables

Ω ~~Eridani~~ Cet W— obs,

2	04
3	15
1	11

- 2.5

Index right and above

10 13

38.8
48.3
37.5
48.5
~~37.0~~
37.0
48.8
38.0
49.0

~~9.5 < 19.5~~
11.0 <
20.5 <

v-24 <

(v-12)

11.8 <
11.0
22.8

v-01 <
~~v-20~~

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1896phae.proj.1342.

Dec 5 1896

Index left and below

~~137.0~~	127.5		
~~149.0~~	139.5		
126.9		12.0 <	
134.8		12.1 <	488 <
		24.1 <	

127.4			(481)
139.1		11.7 <	
125.7		14.0 <	
~~140.0~~	1.397	25.7 <	474 <

10 26

15 19 30

M = 4.96

Observations made through increasing clouds. Last settings very difficult and a little uncertain.

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Dec. 7 1896 (Monday)

α Ceti.

7 42 c fs 1 Var. Var. 3 q Bradford obs.

7 50 c fs 1,v Var, Var. 2,v q Yr. obs.
8 42 c fs 1 Var. Var. 2 q Cram obs.

ν Pegasi. Yr. obs.

23 1K +9.v
25 30
2 1a

R ~~7 5 q~~, ~~q 2 r~~ Odd star
abandoned.

8 52 p 5 q, q 4 r, r 3 s
s 4 t, t' 4 u, u 4 w, w 3 x.
w compared with b 9 Y – obs
Index left and ~~below~~ above

9 16 300.4
316.0 15.6
300.7 16.1
315.8 33.7 4.1v

300.9 16.2
317.1
300.1 17.0
317.1 33.2 4.1v
4.16

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1896phae.proj.1342.

Dec. 7 1896

Index ~~left~~ right and ~~above~~ below

28.6
47.5 18.9
29.0
46.5 17.0
35.9 4.01 v

29.0
50.6 21.6
27.9
46.7 18.8
40.4 3.7 v
3.46 v
4.02 v = mean.

9 24
9 20 0

x. compared with k W — obs.

Index right below

30.8
45.2 14.4
30.0
45.3 15.3
29.7 4.42 v

9 35

30.4
46.0 15.6
31.0
47.0 16.0
31.6 4.29 v
4.36 v

Index left and above

122.0
136.5 14.5
120.3
136.0 16.2
30.7 4.3 v

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Dec 7 1896

121.0
135.5 (4.5
119.9
135.0 (5.1
29.6 4.43
4.39
4.38 = sugar.

9 49 = 45
9 40 0

w compared with h
Index left and above

115.6
139.7 24.1
116.0
139.2 23.2
47.3 3.40

9 48

116.9
140.0 23.1
116.1
139.0 22.9
46.0 3.46
3.43

Index right and below

208.0
228.4 20.4
208.3
229.1 20.8
41.2 3.70

207.0
224.8 20.8
207.0
227.9 21.2
42.0 3.66
3.66
3.56

9 57
9 52 30

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1896phae.proj.1342.

Dec 7 1896.

Star t compared with b W. obs

Index right and below

	206.0		
	229.1	23.1	
10 07	204.5		
	230.7	26.2	3.30 v.
		3.0	

	205.0		
	230.8	25.8	
	207.3		
	230.8	23.5	3.30 v
		2.3	3.30 v

Index left and above

	297.0		
	322.1	25.1	
	297.0		
	322.8	25.8	3.24 v
		0.7	

	297.0		
	321.5	24.5	
10 16			
10 11 30	295.9	26.1	3.25 v
	322.0	0.4	3.24
			3.27 = mean.

Star r compared with b

10 18 Index left and above.

	292.2		
	326.0	33.8	
	292.1		
	326.0	33.9	2.2 v
		69.7	

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Dec. 7 1896

292.9
325.0 32.1

290.6 36.9
327.5 69.0

Index right and below

18.0
57.9 39.9
21.0
55.0 34.0
73.9

20.2 32.6
55.8
19.0
56.6 37.6
73.2

2.60
2.39
2.46 = mean.

R Andromedae W- ofa,

0	13	+3 7.2
4	05	
3	52	

10 26
10 22 0

S 4 a, a 5 B, B 3.5
gamma, gamma 3.5 delta, delta
4 epsilon, epsilon 4 zeta, zeta
5 etta

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1896phae..proj..1342.

Dec. 7. 1896.

ζ 4 α
α ζ β
β 3.ν γ
γ 3.ν δ
δ 4 ε
ε 4 ζ
ζ 5 η

10 ν7

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1896phae.proj.1442

Dec. 9 1896. (Wednesday)

7 05 Cloudy

7 30 Still cloudy

7 & 8 00 Still cloudy.

8 30 Still cloudy with no prospect of clearing.

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1896phae.proj.1342.

Dec. 10. 1896. (Thursday)

7 0 Cloudy.

7 30 "

8 0 "

8 20 Sky a little clearer. Will try for

0 Cati W. ds.

2 4 -2.V

1 V0

-0 1 K

Prob. left and below.

8 30 217.0 12.0<
229.0

217.0 11.7<
228.7 23.7< 4.92<

217.0 11.0<
228.0

218.0

Clouds thick 11.0<
229.0 22.0< V.0A<
V.00<

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Dec 10 1896

Probs right and above

~~297.4~~ 3	304.1	10.7 <
308.1	314.8	
315.6	307.5	10.2 <
307.8	314.6	21.5 < .13 -
317.9	307.5	10.1 <
307.8	317.9	
317.9	307.5	10.1 <
307.8	317.9	20.2 < .27 <
		.20 <
		Mean - .10 <
		9.2
		4.10

8 45

13 37 30

Measurements made with some difficulty, especially at the last. Images generally faint when equalized although settings were corrected in several instances by waiting until stars came out brighter. Sky now completely covered with thick clouds.

No chance for anything farther;

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Dec. 11 1896.

20	31	+17.5
26	0	
+v	29	

20.	31	W. Delphini.
26	55	
5	34	B.D. +17° 4367

Inder right and above

~~8~~
~~175.3~~
357.6
75.0 < Comp. + 7 dis. 174<
8 38
355.8 87.9< 0.28<
83.7 16v.3<

356.3 (0.29)<
83.1 86.8<
1.0 77.5< 0.30<
78.5 164.3<

Inder left and below,

55.4
170.2 84.8<
86.9 85.8< 0.18<
172.7 170.6<

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1896phae.proj.1342.

Dec. 11, 1896.

	86.9		(0.22)<
8 52	173.8	86.9<	
	88.4	79.9<	0.25- <
13 45- 0	168.3	166.8<	M = 0.26 <

Index left and below

89.3		
169.5	80.2<	
84.0	91.2<	0.16<
175.2	171.4<	

88.6		(0.21)<
174.9	86.3<	
89.1	79.8<	0.26<
168.9	166.1<	

Index right and above

90.1	175.6		
9 10 169.9	260.1	84.5<	
86.9	182.1	76.8<	0.36<
70.9	258.9	161.3<	

191.0		(0.34)<
260.0		
175.6	79.0<	
259.1	83.5-<	0.33<
	162.5-<	

M = 0.28

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Dec. 11 1896.

Measurements from the star made with much difficulty. Troubled seriously by moonlight low alt. an haze. Observer thinks that observations should be rejected.

δ Pegasi	W − obs
23 14	+9.5
27 25	
4 11	

	p	4.5 q
10 04	q	4 r
	r	3.5 s
	s	4.5 t
	t	3 u
	u	3.5 v
	v	3 x

YD

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Dec 11 1896.

R Andromedae W - obs.

0	13	+37.4
3	55	
3	42	

10 30

S	4.V	α
α	4	β
β	3	γ
γ	4	δ
δ	4	ε
ε	3	ζ
ζ	4	η

R Piscium W - obs.

1	25	+3.4
4	21	
3	56	

Clouds now in this region so that revision could not be finished

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Dec. 12, 1896. (Saturday)

~~S. Peg~~

7 10 Somewhat cloudy.

Now somewhat clearer.

S Pegasi W— obs.

23	14	+ 9,5
2 5	1 5	
2	1	

Cloud in this region

p	4	q
q	3,5	r
r	3	s
8 12 s	4,5	t
t	3,5	u
u	3	v
v	3.5	x

More clouds again.

Considerably cloudy in places and clouds increasing but will try for comparison stars for R Andromedae.

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Dec. 12, 1896.

R Andromedae W – obs.

0	13	+37.4
1	42	
1	29	

Sky considerably cloudy

	ν	4
	ι	4
	β	4
	γ	4
α 20	γ	3.V–
	δ	3.V–
	ε	4
	ζ	4.V–

α 20

Estimates made through some light clouds, but clouds thinner than other regions.

Sky too bad and moonlight to bright to use photometer T. Sky becoming very cloudy but will try for O ceti.

O Ceti

2.	4	-2.5–
2	15–	
	11	

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1896phae.proj.1342.

Dec 12 1896

Index left and below

	106.5		
8 43	119.5	13.3 <	
	108.0	11.0 <	4.56 <
	119.0	24.3 <	

(4.96) < Repeat

	107.1		
	118.4	11.3 <	
	108.0	11.0 <	.00 <
	119.0	22.3 <	4.96

Index right and above

	198.1		
	209.0	10.9 <	
	197.1	12.0 <	4.99 <
	209.1	22.9 <	

(.07) <

	197.2	11.6 <	
8 57	208.8		
	198.4	+9.7 <	.7/.2 <
13 47 0	208.1	21.3 <	M = .02

Index right and above

	198.2		
8 55	208.0	9.8 <	
	197.0	11.7 <	.13 <
	208.7	21.5 <	

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Dec. 12, 1896.

197.0		(v.12)<
~~209.0~~	11.4<	
208.4		
198.5	10.3<	v.11<
208.8	21.7<	

Index left and below

298.1		
297.9	9.8<	
287.9		
297.8	9.9<	v.32<
	19.7<	

288.2	9.7<	(v.32)<
297.9		
288.2	9.9<	v.33<
298.1	19.6<	M = v.22<

8 5.9

13 v7 0

Photometer was found to be slipping in its bearings so that above sets on Omicron were rejected and two new groups taken below.

Index left and below

288.2		
298.2	10.0<	
288.0		
298.6	10.6<	
	20.6<	v.23<

9 11

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1896phae.proj.1342.

Dec 12 1896

287.5
297.6 10.1<

288.5
298.2 9.7<
19.8< √.31<
√.27< ✓

Index right and above

15.4
28.4 10.0<

17.7
28.5 10.2<
20.2< √.20<

17.2
28.8 11.6<

9 18

18.7
28.0 9.3<
14 14 30 20.9< √.19<
√20<
√.24 = ✓ mean.<

Index right and above

18.0
28.5 10.5<

9 20

17.0
28.5 11.5<
22.0< √.02<

17.0
28.8 11.8<

18.9
28.0 9.1<
20.9< √.19<
√.14<

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1896phae.proj.1342.

Dec 12 1896

Index left and below.

108.2
118.7 10,V<
107.8
118.8 11.0<
21.V< V.13<

108.0
118.3 10.3<
108.2
118.7 10.V<
20.R< V.20<
V.16<
V.1V< mean.

4 24
14 22 0

M. P. 441. Gr. Sts.

3 31 +62.R
3 1V

In high. Abandoned.

Var. in Circ. Min W-ofs

1V 5V +75.2
3 2V

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1896phae.proj.1342.

Dec. 12, 1896.

1 ✓	✓ 0
27	2 ✓
+11	3 ✓

Clouds growing thicker
Sky in this region now a little clearer.

Index right and ~~above~~ below

96.9		
130.1	33.2 <	
96.6	33.1 <	2.63 <
129.7	66.3 <	

96.2		(2.05) <
130.4	34.2 <	
95.0	36.8 <	2.47 <
131.8	71.0 <	

Index left and above

186.0		
220.8	~~3~~ 34.8 <	
185.0	37.8 <	2.42 <
222.8	72.6 <	

186.5		(2.47) <
221.0	34.5 <	
184.8	37.2 <	2.52 <
220.0	69.7 <	

M = 2.57 <

10 10
15 06 30

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1896phae.proj.1342.

Dec. 12, 1896.

Observations made with considerable difficulty through clouds.

Σ 1110 Mr − obs

7	27	+32.2	
3	58		
−3	29		
4	31		

Photometer R

Index above ~~and~~

	260.8		
10 38	328.8	68.0 <	
	262.1	58.0 <	1.06 <
	320.1	126.0 <	
H 38	266.5		1.14 <
	315.2	57.7 <	
	259.8	67.4 <	1.21 <
	327.2	119.1 <	

Index below

	347.0		
	59.7	71.7 <	
	352.5	58.5 <	0.97 <
	51.0	130.2 <	

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1896phae.prgj.1342.

Dec. 12 1896.

3 49.5			(0.82)
53.5	64.0 <		
3 43.2	80.6 <	0.68 <	
63.8	144.6 <		M = 0.98

Photometer R was used as Photometer H had been dismantled. Photometer H should really have been used as images in reversing do not quite go over each other.

Position angle 240°. distance 4", mag. 2.8 and 3.6

Troubled throughout evening by clouds.

Dec. ~~12.~~ 14. 1896.

Ipr. Davidson found o = u at 7h 30m last evening (Dec. 13.) The moon was bright and near.

Above Obs. posted as o Ceti.

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1896phae.proj.1342.

Dec. 14, 1896. (Monday)

M. P. 441 W— obs.

3	31	+62,5
~~X~~1	15⁻	
2	16	
1	20	
−2	11	
9	K9	

Index below

7 40 90,1
1311,7
~~8 4~~
86,1

Var. is bstr. than comp. star.

7 45 Var. dis. > 86.1 √K.1<
140,2
89.0 K8.8<
137.8 10 2.9< 1.√9.

90.5 K8.0<
138.5
86.2 √K.0<
140,2 10 2.0< 1.61<
1.60<

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1896phae.proj.1342.

Dec 14 1896

Index above

179.1 ~0.1<
229.2

181.5 ~0.4<
227.3 ~0.9 1.76<
~~[illegible]~~

181.0 ~0.1<
226.1

179.1 ~0.4<
~~228.5~~ ~0.4~ 1.80<
1.78<
1.69 = mean. <

7 50
12 47 30

Index above

179.8 ~0.2<
229.0

181.2 ~0.7<
226.7 ~0.7< 1.79<

181.5 ~3.9<
225.4

179.0 ~0.2<
229.2 ~~3.9~~ 1.81<
~~3.9~~ 1.80<
3.1

Index below

269.8 ~7.2<
317.0

270.0 ~6.0<
316.0 ~3.2< 1.83<

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1896phae.proj.1342,

Dec. 14, 1896.

7 58

7 55.0

271.3
316.3
270.4 K6.9<
317.3
91.9<

1.A6<
1.AK<
1.A2 = mean.

Var in Arc. Min — W − obs

15' 5.0 +78.2
2 5'
13 4.5'
26 V'
+10 1 V'

Var. is bstr. than comp. star.
Under right and below

95.9 < Var. dis.
8 26 131.2 3 V.3<
95.4 3 V.2< = 2.49<
130.6 7 0.V<

96.0 (−2.V0<)
+2
131.0 3 V.0<
96.1 3 K.8< = 2.V1<
130.9 6 9.8<

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1896phae.proj.1342.

Dec. 14, 1896.

Index left and above

185.8
220.0 34.2<
187.1 33.9< = 2.57<
~~220.4~~ 68.1<
221.0

(2.59)

186.8
219.0 32.2<
186.0 34.6< = 2.61<
220.6 66.8<

III = 2.54

8 34
13 30 0

Comparison stars for var. 1h=06.

1 26 +1.8
2 ~~45~~
1 19

Sky too bright and to much light cloud for faint comp. stars for var.

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1896phae.proj.1342.

Dec. 14, 1896.

Nova Aurigae W. — obs.

5⁻ 23 +32.0

2 5⁻5⁻

-2 28

9 32 Star b compared with c.

Index right and above.

291.1

9 21 324.7 < northern and brtr. dis.

336 <

292.0 310 < 2.69 <

323.0 646 <

292.6 (2.72)

322.0 29.4 <

290.4 33.4 < 2.76 <

323.8 62.8 <

Index left and below.

349.0

55⁻.8 66.8 <

352.9 61.7 < 1.01 < 51.5 3.21

54.6 128.5 < ~~64.5~~

351.4 (.096) <

9 25 56.1 64.7 <

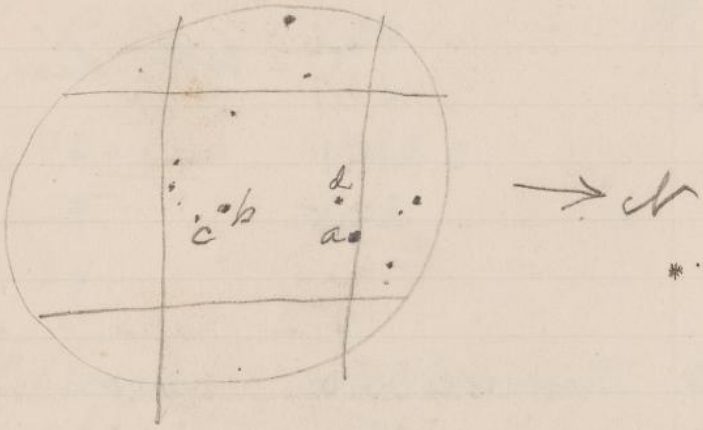
346.1 68.4 < 0.91 <

54.5 133.1 < 46.9 3.41

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1896phae.proj.1342.

Dec. 14, 1896.



Star b pol. a ~~7m~~ 6 secs. and is 7' S.
c prec. d 4.5 secs. 7" south.
c pol. a 4. " 8" "
" c prec. b 3.5 secs. and is 1.2 south.

Σ 106 v. 20 Lyncis. Yr. obs.
Abandoned.

Σ 36. v 1 Piscium. Yr. obs.

0 26 +6.2
9 35
3 9

3 12

Position angle. 85.0 Distance 25"
Mag. ✱ 5.0 9.3

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1896phae.proj.1342.

Dec 14 1896.

Index right and above A.

	12.6	< bstr. dis.	
10 01	30.7	18.1 <	
	11.1	23.4 <	3.69 <
	34.5	41.5 <	
	11.4		(3.63) <
	35.0	23.6 <	
	12.4	20.2 <	3.57 <
	32.6	43.8 <	

Index left and below B.

	102.6		
	122.5	19.9 <	
	100.6	20.2 <	3.50 <
	125.8	45.1 <	
	99.4		(3.56) <
10 05	124.2	24.8 <	
	104.0	17.8 <	3.63 <
	121.8	42.6 <	

M = 3.60

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1896phae.proj.1342.

Dec. 14, 1896.

Σ 1′ P. O. 175. 176. Gr. Obs.

0	40	+30.3
4	9	
3	29	

North following component seems slightly the brighter.
Position angle 220°. Dist 4.5"
Mags. 6.7; 6.8

Index left and above B.

332.1		
71.7	North fol. dis.	
10 27	99.6	
335.1	93.9	
69.0	193.5	
	46.5	+0.25

335.4		
67.7	92.3	+0.25
331.0	100.9	
71.9	193.2	
	46.8	+0.25

Index right and below A.

65.8		
161.9	96.1	
67.0	91.6	
158.6	187.7	
	172.3	+0.1

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1896phae.proj.1342.

Dec 14, 1896.

	68.1		
10 31	155.0	86.9 ✓	
	63.7	98.8	+0.12 ✓
15 29 0	162.5	185.7 ✓	
		174.3	+0.11 ✓

Mean = + ~~0.12~~ 0.12 ✓

Σ 79 Cmdr 164 B

0	53	+44.1
4	30	
3	87	

Index below

	357.5	
10 42	66.8	75.3
	358.7	62.0
	60.2	137.3 −0.83 ✓
		−0.78 ✓
	357.3	
	62.8	65.5
	351.7	77.2
	68.9	142.7 −0.72 ✓

Index above Mean = −0.76 ✓

	81.1	
	157.9	76.8
	87.5	64.5
	152.0	141.3 −0.75 ✓

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1896phae.proj.1342.

Dec, 14. 1896.

		87.8		
10	50	148.3	60.5	−0.74
15	46	79.2	81.0	
		160.2	141.5	−0.74

Position angle 195°. Dist 8"
Mags 6.0 7.1

Comp. of Chrom.

A + D		958	B		394
17	18	47.2	17	19	00.0
17	19	47.2	17	20	00.0

Dia. Sat. II Phot. R. W. Obs. Waite rea. Comp. Sat. in one close to Sat. II which disappeared and was Sat. I.

17			17	26	41
27	43				57
	+13			27	12
27	16				21
27	45				30
	+13				40
27	58				50

261.0
338.7 77.7 [1]
260.1 (80.8)
344.1 84.0 <1

258.7
344.0 85.3 [2]
258.1 (82.5)
337.8 79.7

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1896phae.proj.1342

Dec. 14, 1896.

17	28	07	337.8		
2F 28		12	260.5		
13		21	343.2	82.5	[3]
2F 38		30	258.0	(81.5)	
		38	338.3	80.3	
		52	258.8		
08		59	341.7	82.9	[4]
29 03		29 13	259.0	(82.0)	
13		29	340.0	81.0	
29 24		44	258.0		
35 57		53	337.0		[5] 79.0
13	36	01	261.5		(78.2)
36 10		09	339.2		77.3
36 28		16	261.8		
13		23	341.8		[6] 80.0
36 41		31	261.7		(78.2)
		40	338.0		76.3
36 57		48	259.0		
13		56	337.8		[7] 78.8
37 11	37	02	262.0		(78.0)
		08	339.2		77.2
37 26		15	260.7		
13		22	339.0		[8] 78.3
37 39		30	261.8		(77.2)
		37	338.0		76.2
37 57		44	262.0		76.6
38 03		50	338.6		74.6
12		59	264.0		69.8
			338.8		

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1896phae.proj.1342.

Dec. 14, 1896.

38	19	17	38	06	333.8	70.0 <
	27			14	263.8	68.5 <
	35			22	332.3	66.1 <
	44			31	266.2	67.8 <
	57			38	324.0	65.5 <
	55			42	268.5	62.5 <
39	01			48	331.0	60.2 <
	07			54	270.8	62.0 <
	14		39	01	332.8	63.9 <
	19			06	268.9	58.9 <
	27			14	327.8	53.4 <
	34			21	274.4	53.4 <
	42			29	327.8	49.4 <
	49			36	278.4	44.5 <
	56			43	322.9	45.5 <
40	04			51	277.4	40.4 <
	13		40	00	317.8	36.3 <
	21			08	281.5	32.6 <
	30			17	314.1	27.1 <
	43			30	287.0	20.0 <
	53			40	307.0	15.0 <
41	03			50	292.0	12.5 <
	15		41	02	307.5	

not seen later.

Limit of Visibility

17	41	31	289.8	
		45	310.5	

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1896phae.proj.1342.

Dec. 14, 1896.

17 41 5-6 13 = 17 42 09

17 42 10 20.7 290.7
20 19.1 309.8
39.8
19.9

Seeing somewhat blurry but pretty good at intervals all windows of dome were opened as seeing somewhat improved but seeing necessarily blurry at times from orbal waves and approaching Cloudiness so that observer at last when sat. greni faint had to wait a little at times in order to see sat. distinctly Sat. I was pretty close to Sat II but did not give very serious trouble.

Comp. of Chrom.

A + 10, 9 5 8. B 3 9 4.

18	10	47.2	18	11	00.0
18	11	47.2	18	12	00.0

∴ Cor. to ephemeris = +0m 13s.

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1896phae.proj.1342.

Dec. 17, 1896. (Thursday)

α Cephei Phot. I. W- obs.

0	30	+81.7
1	35	
1	05	

Index to left.

	264.3	< Var. dec.	
7 50	302.4	35.1 v	
	254.8	58.1 v	1.70 <
	312.9	96.2 v	

255.0		(1.74)
312.5	57.5 v	
265.0	40.0 v	1.72 <
305.0	97.5 v	

Index to right

~~345.9~~		
40.1		
~~339.5~~		
343.0		
8 05 45.7	62.7 v	
350.1	44.9 v	1.47 <
35.0	107.6 v	

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1896phae.proj.1342.

Dec 17 1896

		337.8			(1.50)
8	06	35.0	43.2		
3	24	341.1	61.9		1.53 <
13	0 20	43.0	105.1		M = 1.62
		346.6			
8	08	44.0	57.4 <		
		349.2	46.9 <		1.55 <
		36.1	104.3 <		
		349.1			(1.50)
8	10	34.8	45.7 <		
		343.4	62.3 <		1.46 <
		45.7	108.0 <		

Index to left.

		76.8			
8	16	132.9	56.1 <		
		83.0	43.0 <		1.68 <
		126.0	99.1 <		
		82.0			(1.66)
8	17	127.1	45.1 <		
13	13 0	77.4	50.7 <		1.65 <
		132.5	100.2 <		
					M = 1.58

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1896phae.proj.1342.

Dec. 17, 1896.

		76.5			
8	21	132.3	55.8 <		
		83.8	43.9 <	1.66 <	
		126.9	99.7 <		
				(1.68)	
		83.0			
8	23	126.2	43.2 <		
		77.0	54.9 <	1.70 <	
		~~138.0~~	98.1 <		
		131.9			
		Index to right.			
		165.1			
8	27	219.1	54.0 <		
		169.3	49.7 <	1.57 <	
		219.0	103.7 <		
				(1.60)	
		171.5			
8	29	217.2	45.7 <		
		168.1	55.9 <	1.62 <	
13	25 0	224.0	101.3 <		M = 1.64
		159.8			
8	35	224.1	64.3 <		
		172.3	46.2 <	1.41 <	
		218.5	110.5 <		

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1896phae.proj.1342.

Dec 17 1896

35

171.5
~~214.6~~
2 37 218.0 46.5<
167.0 5-6.7< 1.5-8<
223.7 103.2<

~~8 89~~
~~1698.9~~
~~2023.1~~
~~1771.0~~
~~2175-~~

Index left

~~43~~ 2
8 ~~45~~
255.2
312.7 57.5<
269.0 42.9< 1.65-<
305.9 100.4<

~~47~~ 2
8 ~~43~~ (1.68)
263.1
304.5- 41.4<
256.0 5-6.4< 1.71< M = 1.5-9
13 40 ~~40~~ 812.4 97.8<

253.2
8 29 313.8 60.6<
262.1 43.9< 1.55-<
306.0 104.5-<

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1896phae.proj.1342.

Dec 17 1896

		262.2		(1.5-8)	
8	52	306.8	44.6 <		
		254.4	56.8 <	1.62 <	
		311.2	101.4 <		

Index to right.

		345.1			
8	56	43.1	58.0 <		
		348.9	48.0 <	1.57 <	
		36.9	106.0 <		
		~~345.8~~			

		345.8		(1.55-)	
		~~41.9~~			
8	58	43.1	57.3 <		
4	(210-	350.1	40.3 <	1.59 <	M = 1.56
13	53	39.4	102.6 <		

Σ 36 51 Piscium 9r — 8r.
Phot. R.

0	26	+6.2
3	15-	
2	49	

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1896phae.proj.1342.

Dec 17 1896

Index left and below B

		201.1	∠ brtr < dist <	
9	20	220.4	19.3 <	
		198.0	23.0 <	3.64 <
		221.0	42.3 <	
		198.1		(3.64)
9	23	221.8	23.7 <	
		200.1	18.8 <	3.63 <
		118.9	42.5 <	

Index right and above A.

		291.2		
9	25	310.4	19.2 <	
		287.8	24.2 <	3.59 <
		312.0	43.4 <	
		287.4		(3.56)
9	27	311.6	24.2 <	
	42	290.2	20.4 <	3.53 <
14	23	310.6	44.6 <	

M = 3.60

Position angle 85° Dist 25"

Mag. 5.3, 9.0

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1896phae.proj.1342.

Dec 17 1896

O Cati Phot. R. W- obs

2	04	-2.0-
3	42	
1	38	

Index to right and above

294.0 < Var. dec.

305.4	11.4 <	
295.5	9.6 <	5.18 <
305.1	21.0 <	

9 58

-(5.30)

296.0		
305.0	9.0 <	
295.0	9.9 <	5.41 <
304.9	18.9 <	

Index left and below

25.6		
35.0	9.4 <	
25.5	10.3 <	5.32 <
35.8	19.7 <	

-(5.34)

25.7		
35.4	9.7 <	
25.5	9.6 <	5.37 <
35.1	19.3 <	

9 58

14 54 0

M = -5.32

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1896phae.proj.1342.

Dec 17. 1896

25.0
34.9 9.9<
25.9 10.0<
35.9 19.9< √.30<

25.3 (√.33)
35.2 9.9<
25.8 9.5<
35.3 19.4< √.36<

Index night and above
115.0
125.4 10.4<
115.1 10.5<
125.6 20.9< √.79<

115.4 (√.72)
125.7 10.3<
115.1 10.2<
125.3 20.5< √.24<

10 08
15 04 0

M = √.28

Σ 46 5-5 Piscium. Fr. ds. Phot. R.

0 33 +20.8
4 20
3 47

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1896phae.proj.1342.

Dec. 17, 1897.

Seeing growing so bad that a very close double cannot be measured.

Σ 117 Ψ Cassiop. Phot. R W-ton.

1	17	+ 67.5 -
4	40	
3	23	

Position angle 110°. Distance 30"
Magn. ~~4.2~~ 4.5 - 9.0

Index right and below
112.6 < brighter disappears.
10 44 127.9 15.3 <
112.8 14.0 < 4.40 <
126.8 29.3 <

113.9 (4.42)
127.0 13.1 <
112.0 16.9 < 4.40 <
128.9 30.0 <

Index left and above
202.6
217.9 15.3 <
202.9 14.6 < 4.41 <
217.5 29.9 <

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1896phae.proj.1342.

Dec 17, 1896.

203.0		(436)	
217.8	14.8 <		
201.8	16.7 <	430 <	
215.5 −	31.5 <		M = 439

Σ 131 Phot. R W-obs.

1	25 −	+60.0
5	20	
8	~~35~~ 5 35	

Abandoned

Σ 4' 56 Androm W-obs.
Phot. R.

1'	49	+36.6
5	05 −	
3	16	

South following star is slightly brighter.
Position angle 300°. Dist. 3'
mags 5.5 6.0

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1896phae.proj.1342.

Dec. 17, 1896.

Index left and below

~~2.64.5~~

257.5 ← S. Fides.

10 07

345.0 87.5<

259.2 84.4< 0.15<

343.6 171.9<

259.5 (0.18)

343.0 83.5<

259.7 85.2< 0.21<

344.9 168.7<

Index right and above

346.2

70.0 83.8<

352.2 76.3< 0.38<

68.5 160.1<

353.8 (0.34)

11 12 70.9 77.1<

347.5 87.5< 0.29<

75.0 164.6<

16 09 30

III = 0.26

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1896phae.proj.1342.

Dec 19, 1896. (Saturday)

W Cephei Phot T gr-obs

0	30	+1.7
1	37	
1	7	

~~Phot~~

7 38 30

164.0
224.1
215.0

Index to right

175.0 < var. dia.
216.1 +1.1 <
166.0 -7.1 <
223.1 9+.2 < -1.70 <

8 40 30

166.0 -7.9 <
223.9
172.4 +4.6 <
217.0 102.- 1.60 <
1.6 -

Index to left

8 42 25

255.8 -6.2 <
312.0
261.9 +3.6 <
305.5 99.+ 1.66 <

8 46 26

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1896phae.proj.1342.

Dec. 19, 1896.

	263.2	41.7 <	
48 51	304.9		
48 12	255.7	99 <	
12 44 33 <	311.6	97.6 <	1.7 <
			1.69 <
			1.67 mean. <
	255.0	96.0 <	
50 40	311.0		
	262.1	42 <	
	305.0	92.9 <	1.64 <
	263.1	43.1 <	
52 18	306.2		
	255.3	94 <	
	305.7	96.5 <	1.74 <
			1.71 <

Index to right

	346.0		
57 40	41.9	95.9 <	
	350.0		
	37.9	87.9 <	
	~~350.~~	103.8 <	1.96 <
	350.0	45.9 <	
58 18	35.9		
58 56 <	344.5	92 <	
12 54 44 <	44.0	105.1 <	1.93 <
			1.94 <
			1.6 2 < mean

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1896phae.proj.1342.

Dec. 19, 1896.

			343.6	60.6 <	
8	1	56	44.2		
			350.1	K V.A <	
			35.9	106 K <	1.V-0 <
			349.2	K A.0 <	
8	4	34	37.2		
			344.5	V 7 2 <	
			42.0	10 V.2 <	1.V.3 < / 1.V-2 <
			Index to left.		
			77.0		
8	8	10	133.8	V 6.A <	
			82.7	K 6 2 <	
			128.9	103.0 <	1.V A <
			~~29.9~~		
			81.5	K V.V <	
8	10	10	127.0		
			78.3	V 3 9 <	
			132.2	99.K <	1.67 < / 1.62 < / 1.V 7 < mean.
			79.3	V 3.V <	
8	12	31	132.8		
			80.9	K 9 V <	
			130.4	103.0 <	1.V A <

K 2 K V 0 <
13 06 12.5 <

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1896phae.proj.1342.

Dec 19, 1896.

δ 14 45

81.9
~~1263~~ K6.1<
128.0
77.6 V6.3<
133.9 102K< 1.60<
1.V9<

Index to right

δ 18 40

167.5
222.4 VK.9<
172.1
216.6 KK.V< 99.K< 1.67<

δ 20-26

K(66 22<
13 16 30.5<

171.0 K6.6<
217.0
166.9 VKK<
221.7 100K< 1.6K<
1.66<
1.62 < mean.

δ 23 4

166.1 V4.7<
220.8
171.8 KV.1<
216.9 99.8< 1.66<

δ 25 18

170.9 47.1<
218.0
166.1 VV.6<
221.7 102.7< 1.V9<
1.62<

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1896phae.proj.1342.

23 4
25 18

Dec 19 1896
Index to left

25 7.0 ∨K 9<
31 1.9
26 0.1 K∨ 9<
30 6.0 ——— 1.64<
100.2<

8 29 42

262.1 K2.9<
8 32 3 305.0
257.5
309.9 ∨2.K< 1.77<
——— 9∨.3< 1.70<
K110 7< ——— 1.66< mean.
13 27 31.8<

A. +D. 9∨8. B. 39K.
2 ∨K 46.2 2 ∨∨ 0.0

Sky pretty cloudy but will try for a double star.

Σ 60' Phot R W-obs

23 29 +59.8
27 15
3 49

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1896phae.proj.1342.

Dec. 19. 1896.

Southern star seems slightly brighter.
Position angle 30° Dist 4'
Mags 6.3 6.4

Index ~~to~~ ~~left~~. B.

	259.5	< southern & brtr dist.	
8 17	345.0	85.5 <	
	255.2	93.1 <	0.03 <
	348.3	178.6 <	
	254.3		(0.07)
	346.0	91.7 <	
	258.8	82.2 <	0.11 <
	341.0	173.9 <	

Index to right A.

352.9		
69.0	76.1 <	
345.9	89.5 <	0.27 <
75.4	165.6 <	
344.0		(0.27)
73.9	89.9 <	
353.2	79.9 <	0.27 <
69.1	165.8 <	

9 24
14 20 30

M = 0.17

Observations made through some clouds.

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1896phae.proj.1442.

Dec 19 1896

Σ 30 5-3 Phot R - W - obs.

23 56 +65.4

27 40
3 44

Position angle 65° . Dist 15"
Mags 6.6 7.2
Index left and above

179.0
9 35 244.4 65.4 <
186.9 44.6 < 1.42
231.5 110.0 <

(1.46)

184.8
9 37 235.0 50.2 <
180.6 56.5 < 1.49
237.1 106.7 <

Index right and below

270.2
331.5 61.3 <
177.2 47.8 < 1.21 <
325.0 119.1 <

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1896phae.proj.1342.

Dec 19 1896

	275.8		(1.30-)		
8 42	322.0	46.2-			
14 39 30	271.5	60.8-	1.49-		M = 1.40
	332.3	107.0-			

Σ 46 5-5- Piscium Phot R. W = obs.

0 33 + 20
abandoned

Σ 36 5-1 Piscium Phot R W - obs

0 26 ~~26~~ +6.2
Abandoned, too cloudy in this region.

Σ 117 Ψ Cassiop Phot R W = obs

1 17 +67.5
4 4
2 47

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1896phae.proj.1342.

Dec 19 1896
Position angle 105° Dist 30"
Mags 4.4 9.0
Index right and below

9 57

112.3			
127.7	15.4		
114.2	11.9	4.61	
126.1	27.3		

(4.58)

113.8			
126.7	12.9		
112.0	15.2	4.55	
127.2	28.1		

Index left and above

202.6			
218.2	15.6		
203.1	13.9	4.44	
217.0	29.5		

(4.44)

10 04

203.0			
216.9	13.9		
202.4	15.6	4.44	
215.0	29.5		

15 0 30

M = 4.51

Σ 150 ✓ Arietis W-Obs
Phot R

1 47 +15.7

4 35

2 48

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1896phae.proj.1342.

Dec. 19, 1896.

Position angle 350° Dist 8"
Mags 4.3 4.4

Index left and above

	170.0 < brtr. dir.	
10 30	247.0 77.0 <	
	162.4 95.0	
	257.4 172.0	− 0.13
	160.8	− 0.12
	259.9 99.1 <	
	171.1 359 <	
	247.0 175.0 <	− 009

Index right and below Mean = − 0.13

	250.7	
	346.4 95.7 <	
	260.3 78.2 <	
	338.5 173.9 <	− 0.11
	260.9	− 0.14
10 40	338.5 77.6 <	
10 − 30 − 0	254.8 94.2 <	
	349.0 171.8 <	− 0.16

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1896phae.proj.1342.

Dec. 19, 1896.

Σ 4' 56 Androm W-obs
Phot R

1	49	+ 36.6
4	56	
8	7	

Southern and following star seems slightly brighter
Position angle 300° Dist 3' of arc
Mags 6.0 6.1

Index left and ~~above~~ below
76.3 <south foll and brter dis.
10 54 167.8 91.5
78.8 85.5
164.3 177.0 −0.06

79.5 −0.10
162.0 82.5
75.1 90.8
165.9 173.3 −0.13

Index right and above
165.3
256.1 91.5
167.0 84.3
251.3 175.8 −0.08

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1896phae.proj.1342.

Dec. 19, 1896.

	169.5		-0.12
11 00	252.2	82.7	
	166.4	88.6	
15 57	255.0	171.3	-0.16

Mean = -0.11

2 23

9 56

38.

-0.4

1896phae.proj.1342.

Dec. 20, 1896. (Sunday.)

Reap. Sat. IV. Phot. R.
W. obs. Waterman.
Comp. with most pre. sat. on
pre. side = Sat. II.

13	46	1 <	13	45	41	Sean.		
	46	13 <			53	198.0		
		22 <		46	02	225.6	27.6 <	3.0 <
		30 <			10	194.5	31 <	2.8 <
		38 <			18	224.8	30.3 <	2.8 <
		46 <			26	194.2	30.6 <	2.8 <
		51 <			31	223.0	28.8 <	3.0 <
	47	00 <			40	194.2	28.8 <	3.0 <
		07 <			47	224.1	29.9 <	2.9 <
		14 <			54	194.0	30 <	2.9 <
		19 <			59	224.0	30.0 <	2.9 <
		29 <		47	09	193.9	30.1 <	2.9 <
		36 <			16	225.0	31.1 <	2.8 <
		42 <			22	193.1	31.9 <	2.7 <
		50 <			30	227.7	34.6 <	2.5 <
		57 <			37	192.1	35.6 <	2.5 <
	48	03 <			43	226.9	34.8 <	2.5 <
		10 <			50	191.8	35.1 <	2.5 <
		17 <			57	228.0	36.2 <	2.4 <

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1896phae.proj.1342.

Dec. 20, 1896.

13	48	24<	13	48	04		228.0				
		36<			16		190.0	38.0<	2.3<		
		42<			22		229.2	39.2<	2.2<		
		48<			28		188.3	40.9<	2.1<		
		55<			35		232.8	44.5<	1.9<		
	49	02<			42		188.8	44.0<	2.0<		
		08<			48		234.6	44.5<	1.9<		
		17<			57		188.3	46.3<	1.8<		
							236.0	47.7<	1.8<		
		46(60<		49	04	8					
13	49	15.0<			11	42.5<	187.3	44.7<	1.7<		
13	49	35			19	210.6<	236.0	(50.0)<			
					26		184.0	51.2<			
							235.2	99.9<			
		46(171<			33	837.4<	182.7	53.3<	1.5<		
13	49	42.8<			40	209.4<	236.0	(55.42)<			
13	50	02			46		181.8	55.1<			
					52		236.9	56.2			
		46(54<		50	04	839.0<	178.5	60.3<	1.2<		
13	50	14.8<			12	209.8<	238.8	64.1<			
13	50	34			18		181.8	(59.3)<			
					25		239.9				
		46(168<			32	841.2<	181.5	59.5<	1.1<		
13	50	42.0<			38	210.3<	241.0	62.7<			
13	51	02			46		178.0	(61.1)<			
					52		240.7				
		46(67<		51	05	845.1<	178.9	65.7<	1.0<		
13	51	16.8<			11	211.3<	244.6	64.6<			
13	51	36			21		178.5	130.3<			
					30		243.1	(64.2)			

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1896phae.proj.1042.

Dec. 20, 1896.

13	51	21			178.5		
		30			243.1		
		47		839<	177.0	63.2<	
	4(232<						
13	51	55		209.8<	240.2	6A.V<	0.9<
13	52	18		210.0<		131.7<	
	52	01			177.1	(6V.A)<	
		09			245.6		
		16		843.0<	175.3	69.4<	
	4(124<						
13	52	31.0<		210.8<	244.7		
13	52	51				69.0<	0.8<
		36			177.0	13A.K<	
		43			246.0	(69.2)<	
		50		838.2<	174.0	70.0<	
	4(6<						
13	53	01.5<		209.6<	244.0	66.2<	0.9<
13	53	22					
	53	05			177.0	136.7<	
						6A.1<	
		14			243.2		
	4(148<						
13	53	37.0<		835.1<	173.3	72.7<	
13	53	57		208.8<	246.0		0.7<
		41			172.1	71.6<	
						(144.3)<	
		47			243.7	72.2<	
	4(32<						
13	54	08.0<		842.9<	173.0		
13	54	28		210.7<	249.8	76.8<	~~0.6~~ 0.5<
	54	14			172.4	(76.0)<	
		21			247.7	7 53<	
	4(163<						
13	54	40.8<		838.4<	173.9		
13	54	57		209.6<	245.2	71.3<	0.7<
		45			173.5	(71.8)<	
		54			245.8	72.3<	

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1896phae..proj..1342.

Dec. 20, 1896.

K(69<	13	55	03	838.6<	172.9	75.8<	0.6<
13 55 17.2<			14	209.6<	248.7		
13 55 37			22		171.3	(75.1)<	
			30		245.7	74.4<	
			37		173.0	reject.	
K(2<			44	835.0<	170.8		
13 56 05.0<			52	208.8<	247.0	76.2<	0.5<
13 56 25			56	01	174.2	reject.	
		56	09		171.0	(74.7)<	
			17		246.2	75.2<	
K(177<			25	837.8<	173.2		
13 56 44.2<			33	209.4<	249.8	reject.	0.5<
13 57 04			41		248.0	74.8<	
			48		169.7	(76.0)<	
		57	03		246.9	77.2<	
K(148<			16	834.5<	168.5		
13 57 37.0<			32	208.6<	247.8	79.3<	0.4<
13 57 57			45		169.2	(79.6)<	
			55		249.0	79.8<	
K(66<		58	03	836.4<	169.2		
13 58 16.5<			10	209.1<	249.9	80.7<	0.4<
13 58 36			22		169.2	(79.8)<	
			31		248.1	78.9<	
K(227<			39	840.6<	171.2		
13 58 56.8<			49	210.2<	247.7	76.5<	0.5<
13 59 16		59	00		170.9	(78.2)<	
			19		250.8	79.9<	

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1896phae.proj.1242.

Dec. 20, 1896.

		13 59 19			250.8			
	K(170<		28	839.7<	170.9			
13 59 42.5<			37	209.9<	248.0	77.1<		0.5<
14 00 02			48		171.0	(78.0)<		
			57		249.8	78.8<		
	K(99<	14 00	018	836.1<	169.1			
14 00 24.8<			22	209.0<	250.0	80.9<		0.4<
14 00 44			30		169.0	(80.0)<		
			39		248.0	79.0<		
	K(41<		55	838.8<	171.1			
14 01 10.2<		01	03	209.7<	249.0	77.9<		0.4<
14 01 30			17		168.5	(79.8)<	1,	
			29		250.2	81.7<		
	K(51<		36	838.4<	169.9			
14 02 12.8<		02	06	209.6<	249.6	79.7<		
14 02 32			19		169.1	(80.2)<	2,	0.4<
			30		249.8	80.7<		
	K(35<		49	839.8<	170.9			
14 03 08.8<		03	06	209.8<	248.8	77.9<		
14 03 28			15	210.0<	170.9	(78.1)<	3,	0.5<
			23		249.2	78.3<		
	K(199<		37	840.8<	171.0			
14 03 49.8<			45	210.2<	248.1	77.1<		
14 04 09			53		171.7	(77.6)<	4,	0.5<
		04	04		250.0	78.3<		
			13		170.0			

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1896phae.proj.1342.

Dec. 20, 1896.

	13	8368	170.0			
K(117<14	04 21	209.2	249.0	79.0		
14 04 29.2	32		168.1	(80.3)	0.4	
14 04 49	51		249.7	81.6		
	05 03	8412	171.0			
K2K 26	12	210.3	250.7	79.7		
14 06 06.5	07 00		169.3	(80.3)	0.4	
14 06 26	11		250.2	80.9		
	29	8336	168.8			
K(207	50	208.4	247.0	78.2		
14 07 57.8	59	1	169.2	(78.8)	0.4	
14 08 11	08 09		248.6	79.4		
	28	8388	170.7			
K(228	57	209.7	248.5	77.8		
14 08 57.0	09 03		170.8	(77.9)	0.5	
14 09 17	27		248.8	78.0		

Limit of Visibility.

K(5 27<14	10 24	8388	199.8		
14 11 21.8	39	209.5	218.5	18.7	
14 11 41	11 46		201.8	16.2	4.1
	12 38		218.0	(17.4)	

Seeing pretty good.

Sat. reappeared a little nt of.

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1896phae.proj.1442.

Dec. 20, 1896.

~~E~~ position, and rather near Sect. III so that observer was delayed a few seconds, at the start by necessary adjustment of images.

Comp. of Chron.

A + D 958.			B 394.		
14	29	41.5	14	30	00.0
14	30	41.5	14	31	00.0
			14	30	+1.5
				+0	18.5
Error of Bond 394 = +1.1					+1.1
				+0	19.6

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1896phae.proj.1342.

Dec. 22, 1896. (Tuesday)

Noticed some stars out and came to observatory but it came all cloudy right away.

8 10 Cloudy.

O Ceti W— Oba

2	4	-2.5
2	48	
	44	

Clouds pretty thick

8 45 Sky all thick. No chance for any work. Clouds steadily growing thicker.

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1896phae.proj.1342

Dec. 23rd, 1896. (Wednesday).

Comp. of Chrono.

A + D. 9-58. B 394.

17 21 54.0 = 17 23 00.0
17 22 54.0 = 17 24 00.0
2 2 -4.0
6.9

Re. Sat III. Plut. R. W. obs. Waitree,

Comp. with first sat. on following side = Sat. II.

17	-4	09 < +	17	53	02	susp.		
	-5	34 < +			27	seen.		
	-5	03 + <			56	183.1	62.6 <	1.1 <
		20 - <		54	18	245.7	69.7 <	0.8 <
		43 < +			36	176.0	69.1 <	0.8 <
		-8 < +			51	245.1	71.9 <	0.7 <
	-6	10 - < +		-5	08	173.2	71.9 <	0.7 <
		33 < +			26	245.1	68.4 <	0.8 <
		48 < +			41	176.7	68.-5 <	0.8 <
	-7	04 < +			57	245.2	69.0 <	0.8 <
		19 +		56	12	176.2	74.9 <	0.6 <
		44 +			37	251.1		
		4(116 <		-7	04	836.7 <	172.0	
17	-7	29.0 < +			24	209.2 <	250.8 78.8 <	
	+1	6.6			37		164.0 (82.4) + <	+0.3 <
17	-8	36 < +			51		249.9 8-.9 + <	
		4(117 < +		58	07	841.4 <	164.9	
17	-8	29.2 + <			22	210.4 <	256.1 91.2 ^ <	
	+1	6.6						
17	-9	36 < +						

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Dec. 23, 1896.

17	58	36		167.4 (88.4)*	+0.1
		52.		253.0 85.6*	
	59	10	849.8	167.3	
		28	212.4	262.3 95.0*	
		42		161.2 (96.4)*	−0.2
18	00	08		259.0 97.8*	
		20	843.7	164.8	
		33	210.9	259.0 94.2*	
		45		167.0 (90.0)*	0.0
		59		252.9 85.9*	
	01	16	846.0	165.8	
		27	211.5	252.9 87.1*	
		38		168.2 (89.0)*	0.0
		48		259.1 90.9*	
		59	845.6	160.1	
	02	10	211.4	260.0 99.9*	
		21		163.5 (99.2)*	−0.4
		31		262.0 98.5*	
		47	849.8	167.5	
		57	212.4	256.8 89.3*	
	03	09		166.0 (91.4)*	−0.1
		20		259.5 93.5*	
		37	850.1	167.8	
		47	212.5	260.7 92.9*	
		56		165.9 (91.4)*	−0.1
	04	07		255.7 89.8*	

17 59 37.0 < +
+1 6.6
18 0 44 <

18 0 39.2 <
+1 6.6
18 1 46 <

18 01 32.2 <
1 +6.6
18 2 49 <

18 02 12.2 <
18 03 22 <

18 03 03.2 <
18 04 10 <

18 03 57.8 <
8 +1 6.6
18 4 58 <

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Dec. 23, 1896.

			04	29	837.9<	165.0	
				39	209.5<	251.7	86.7<
				54		159.7	(94.2)< −0.2<
			05	03		261.5	101.8<
				19	849.5<	166.1	
				28	212.4<	257.0	90.9<
				36		166.2	(92.4)< −0.1<
				44		260.2	94.0<
				55	847.0<	165.7	
			06	02	211.8<	259.3	93.6<
				11		161.2	(96.6)< −0.3<
				19		260.8	99.6<
				27	843.3<	162.0	
				38	210.8<	258.0	96.0<
				53		165.3	(94.4)< −0.2<
			07	02		258.0	92.7<
				12	851.5<	166.0	
				21	212.9<	262.—	96.2<
				38		165.2	(94.6)< −0.2<
				52		258.1	92.9<
			08	07	840.2<	162.3	
				18	210.0<	259.1	96.8<
				39		163.8	(94.0)< −0.2<
				50		255.0	91.2<

4(18 ~~47~~ 18
18 04 46.2<
18 05 53<

4(127<
18 05 31.8<
18 06 38<

4(27<
18 06 06.8<
18 07 13<

4(180<
18 06 45.0<
18 07 52<

4(121<
18 07 30.2<
18 ~~08~~ 37<
08

4(114<
18 08 28.5<
18 09 35<

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lookphae.proj.1342.

Dec. 23, 1896.

			1A				
	4(5-2 <	+7	09	00	8438 <	159.1	
18	09	13.0 < +		09	211.0 <	261.0	101.9 < 7.
18	10	20 < +		18		155.9	(106.9) < + −0.6 <
				25-		267.8	111.9 <
	4(19 2 < +			34	8477 <	160.3	
18	09	48.0 < +		43	211.9 <	263.8	103.5- < +
18	10	5-5- < 8		52		167.8	(95.8) 8 < + −0.2 <
			10	03		255.8	88.0 <

Limit of Visibility.

			1A				
	4(15-5- <	+7	10	21	8415- <	187.2	
18	10	38.8 <		32	210.4 <	231.2	44.0 < +
18	11	45- < +		46		187.2	(46.4) < + +1.8 <
				56		235.9	48.7 < +

Seeing pretty bad. Cleared in the night. Wind somewhat strong. Cold pretty severe. Ther. +5°.0 Some light cloud in sky. Beside these conditions caused the seeing to be pretty bad. Sat. III also reappeared very close to limb of Jupr. The nearest Sat. that could be compared with Sat. III was nearly 8' (of arc) away. The range of phase is only a little over 5'.1 (of arc.) So that comp. sat.

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1896phae.proj.1342.

Dec. 23, 1896.

could not be brought to meet Sat. III. The only way observer could do was to compare Sat. III. on one side of planet and close to it with comp. sat. some little distance away on the other side of planet. All these conditions made the settings extremely difficult and uncertain. Observer thinks that eclipses ought to be repeated. The comp. sat.

From bad condition observer was partially somewhat late in his first settings.

Comp. of Chron.

A + 20. 9 58.			B 394.		
18	31	54.0	18	33	00.0
18	32	54.0	18	34	00.0
				32	54.0
				+1	6.0
Correction for B 394 =					+0.6
				+1	06.6

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1896phae.proj.1342.

Dec 24 1896 (Thursday).

Went over in west dome to revise list of comparison stars for W Cassiop. W-obs.

0	39	+47.0
2	0	
1	21	

0	39
2	12
1	33

	π	4 π′
	π′	3 α
	α	5 ψ
2 20	ψ	4.5 φ
	φ	3 δ
	δ	3 ε
	ε	4 S

Star β on list is ftr. than φ and rather near a brtr. star. and had better be omitted.
Star π′ is inserted and is Dm. +46° 183 (8.7)

1896phae.proj.1342.

Dec 24 1896.

R Ceti W- obs

2 23 - 0.4

3 16

1 33

1

R Ceti is up bright contrary to expectations. and as moon is now getting up faint comp. stars can ~~now~~ well be selected

2

1

S Cygni W- obs

20 8 + 0-7.2.

25 25

8 20

Star ~~a~~ faintly seen; star t thought to be seen at intervals. Var, thought to be seen at intervals; I f ~~s~~ the estimate would be 2 1 var. var 3 t estimate 14.2 region rather low moon up. c

10.0 ±

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1896phae.proj.1342.

Dec. 24 1896,

R Ursa Maj. N – obs.

10 33 +69.2

4 45
5 48
12
6 12

Var is now wh rather bright.
10.3 ± Ke 2 var, var 2 l estimate 5.8
Move pretty bright and now getting
up ~~too pretty bright~~ for faint variables.

O ~~eta~~ ceti

2 4 -2.1'
5 4
3 0

Under right and above

+ 115.8
10 39 125.2 9.4<
116.0 9.6< 5.40<
125.6 19.0<

(5.42)

115.8
125.2 9.4<
116.0 9.3< 5.44<
125.3 18.7<

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1896phae.proj.1542.

Dec. 24. 1896.

Index left and below

206.0
215.3 9.3<
205.2 9.8< .39<
215.0 19.1<

205.1 (.37<)
215.0 9.9<
205.6 9.6< .30<
215.2 19.5<

10 45
10 42 0

M = .40

Same again

205.4
215.1 9.7<
205.4 9.8< .35<
215.2 19.5<

10 47

205.0 (.36<)
214.8 9.8<
205.6 9.4< .38<
215.0 19.2<

Index right and above

295.8
305.1 9.3<
295.1 9.9< .38<
305.0 19.2<

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1896phae.proj.1342.

Dec. 24, 1896.

10	5-2	295.8		(5.43) <
		305.0	9.2 <	
		295.9	9.1 <	5.44 <
15-	49.30	305.0	18.3 <	

M = 5.40

1896phae.proj.1342

Dec. 26, 1896. (Saturday)

Sky still pretty cloudy
7 40 No chance for anything at present
but possibly a double star.
More cloudy again.

Sky now clearer, will now
try for comparison stars for

δ Pegasi. 9r – obs

28	14	+ 8.6
26	37	
8	23	

Clouds again

23	14
26	50
3	36

Clouds

Star x compared with k 9r – obs

23	14	+ 9.5 –	Phot T.	9r – obs
26	55			
3	41			

Index to left and above

8 35 94.6 < 17.1 <
111.7
95.5 16.5 < 4.1 <
112.0 33.6 <

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1896phae.proj.1342.

Dec. 26, 1896.

94.7 (V.V<
110.2
93.4 19.6<
113.0 3V.1<

(4.10)

4.06<

Index to right and below

186.8 (V.V<
202.3 16.1<
185.6 31.6<
201.7

4.29<

(4.35)

187.0
201.0 14.0<
186.7 (V.2<
201.9 29.2<

4.46<

M = 4.24

8 42
13 38 30

Star W compared with k

184.2
204.0 19.8<
183.5 19.1<
203.9 39.0<

3.99<

184.7
202.7 18.0<
184.6 19.9<
204.5 37.9<

(3.84)

3.89<

8 45

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1896phae.proj.1342

Dec. 26. 1896.

Index left and above

274.2		
295.8	21.6 <	
272.0	22.0 <	3.0-8 <
294.0	43.6 <	

(3.64)

275.1		
294.1	19.0 <	
273.9	22.1 <	3.71 <
296.0	41.1 <	

M = 3.74

8 53

13 49 0

u compared with k

271.9		
298.0	26.1 <	
271.5	25.9 <	3.18 <
297.7	52.0 <	
~~272~~		

8 56

(3.24)

272.0		
297.6	25.6 <	
272.3	23.8 <	3.30 <
~~296.1~~	49.4 <	

Index right and below

0.4		
28.5	28.1 <	
1.2	27.4 <	3.04 <
28.6	55.5 <	

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1896phae.proj.1342.

Dec, 26, 1896.

		1.1		(3.10)
9	6	26.5	25.7<	
14	01	1.1	26.5<	3.17<
	0	27.6	52.2<	

M = 317

Clouds
9 23 Still Cloudy

t compared with h

	35 9.5		
	~~31.6~~		
9	41 29.6	30.1<	
	1.0	24.6<	3.07<
	25.6	54.7<	

	35 9.4	0	(2.92)
	30.0	3 6<	
	35 8.7	32.1<	2.76<
	30.8	62.7<	

Index left and above

	89.0		
	117.6	36.6<	
	84.0	36.1<	2.42<
	120.1	72.7<	

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1896phae.proj.1342

Dec. 26, 1896.

9 49
14 45 0

87.0
121.9 34.9 <
89.6 28.6 < 2.73 <
118.2 63.5 <

(2.58)

M = 2.75

ν compared with ζ

82.2
124.5 42.3 <
84.1 39.7 < 2.14 <
123.8 82.0 <

9 51

82.3
127.9 40.6 <
83.0 42.6 < 2.10 <
125.6 83.2 <

(2.12)

Index right and below

177.0
214.0 37.0 <
177.6 35.3 < 2.43 <
212.9 72.3 <

9 57
14 54 0

177.8
211.7 33.9 <
178.6 35.3 < 2.53 <
213.9 69.2 <

(2.48)

M = 2.30

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1896phae.proj.1342.

Dec. 26, 1896.

Much delayed on account of clouds Star t was compared ~~through~~ some light clouds. In the case of t, and r region was getting pretty low.

Faint variables

δ Cygni

20	8	+57.2
~~29~~	~~5~~	
9	0	

Looked carefully for δ. Cygni nineth mag. star near but just behind star. Var. suspected at times. Star r easily seen. Star t seen. If var is seen the estimate would be

t 1.5 var. var 2 w

10 40 estimate 14.8. Region low but sky pretty clear

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1896phae.proj.1342

Dec. 26, 1896.

S. Boötis 9r-obs.

14	16	+5-4.6
5-	23	
8	5-3	
3	7.	

10 56 0 1,5- var, Var 1,5- 7=

Region pretty low and star considerably faint. Region rather too low for good absolute estimate. Relative est. thought to be all right.

7

7/12

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1896phae.proj.1342.

Dec. 28, 1896. (Monday)
Some cloudy in west but will try for
S. Pegasi 9h-6h

		Phot T
23	14	+8.6
26	5	
2	07	

2 07

Star x compared with b
Index left and above

7 44

94.5	< Comp star dia.	
113.0	18.5 <	
95.1	17.1 <	4.03 <
112.2	35.6 <	

96.1		(4.03) <
113.7	17.6 <	
95.8	17.9 <	4.03 <
113.7	35.5 <	

Index right and below

185.4		
202.3	16.9 <	
183.9	16.9 <	4.14 <
200.8	33.8 <	

184.6		(4.12) <
201.9	17.3 <	
184.3	17.2 <	4.10 <
201.5	34.5 <	

M = 4.08 <

7 58
12 47 0

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1896phae.proj.1342.

206

Dec. 25, 1896.

Star w compared with h

182.8

7 54 203.7 20.9<

182.5 22.0<

204.5 42.9< 3.61<

182.3 (3.64)<

204.2 21.9<

183.4 19.8< 3.68<

203.2 41.7<

Index left and above

275.0

293.7 (18.)<

273.9 20.1< 3.54<

~~294.0~~ 38.8<

294.0

(3.76)<

274.1

8 00 296.1 22.0<

12 57 0 275.0 19.6< 3.68<

294.6 41.6<

M = 3.70<

Star w compared with h

271.9

8 3 295.4 23.5<

271.8 25.3< 3.33<

297.1 48.8<

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1896phae.proj.1342.

Dec 28 1896

271.0 (3.28)<
297.0 26.0<
271.1 25.3< 3.22<
295.4 5-1.3<

Index to right and below

2.0
26.8 24.8<
1.8 26.3< 3.23<
28.1 5-1.1<

(3.17)<

359.3
26.5 27.2<
1.9 26.7< 3.11<
28.6 5-3.9<

M = 3.22<

8 15
13 09 0

Start to compare with h

1.0
28.4 27.4<
358.9 31.9< 2.89<
30.8 5-9.3<

8 19

357.8 (2.82)<
30.8 33.0<
0.4 29.9< 2.95<
30.3 62.9<

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Dec. 28, 1896.

Index left and above

87.6		
118.9	31.3<	
88.2	30.9<	2.78<
119.1	62.2<	

(2.75)<

88.0		
119.2	31.2<	
87.1	32.7<	2.72<
119.8	63.9<	

M = 2.78<

8 26

13 22 30<

Star 2 compared with 1

82.9		
127.0	44.1<	
83.0	41.6<	2.03<
124.6	85.7<	

(2.07)<

84.2		
124.0	39.8<	
81.2	43.2<	2.11<
124.4	83.0<	

8 29

Index to right and below

174.9		
215.2	40.3<	
175.0	37.8<	2.25<
212.8	78.1<	

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1896phae.proj.1342.

Dec. 28, 1896.

	175.7		(2.24)<	
8 87	213.7	38.0<		
	173.8	40.4<	2.24<	M = 2.16<
13 33 0<	214.2	78.4<		

Possibly a little haze in region of observation but thought not to be enough to serious effect measurements.

Revision and selection of faint comparison stars for

R & S. Tauri W-obs.

4	20	+10.9
4	3	
	17	
11	43	
11	46	

o	3 p
p	4.5 q
q	5 r
r	3.5 s
s	4.5 t
t	5 w
w	4 v

↑ 35

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1896phae.proj.1342

Dec. 28, 1896.

w 3.5 x

x 3 y

y 3.5 z

Star ± compared with g -

Index above

276.1	< g	dis:	
293.8		17.7<	
275.6		18.3<	4.00<
293.9		36.0<	

(4.06)

275.4		
292.5	17.1<	
275.8	17.1<	4.11<
292.9	34.2<	

Index below

4.0		
23.2	19.2<	
4.9	18.3<	3.91<
23.2	37.5<	

(3.82)

3.9		
22.8	18.9<	
3.1	21.8<	3.73<
24.9	40.7	

10 86

10 46

15 42 0

M = 3.9K

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1896phae.proj.1342.

Dec 29. 1896. (Tuesday)

Sky pretty cloudy and growing worse.

~~Sygma~~ Σ 29

= Σ29 v 0.241 Cephei. B. Gr. ds

22 46 +61.1
24 23
1 37

blonds too thick

0 Ceti

2 4 -2.5
2 2.5-
21

Sky all ~~thick~~

Sky still too cloudy for any work

8 35- Too cloudy for work

8 45- " " " "

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1896phae.proj.142

Dec. 30, 1896. (Wednesday)

Selection of faint comp^rs. stars for

R Ceti W- obs.

2 20 −1.4
2 29
9

n 4 n'
n 5 0
n' 4 n"
n" 3.5 0
0 4 p
p 3.5 q
q 3 r
r 3 s

8 20

s is the faintest star which can be seen with any certainty tonight. In fact several of the faintest stars are seen ~~with~~ and estimated with some difficulty on account of somewhat foggy conditions

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1896phae.proj.1342.

Dec. 30, 1896.

Estimates for faint comp. stars for

R. & L. ~~Tauri~~ Tauri W= obs.

4	20	+ 10.9	
3	45		
	35		
11	25		
1			

	o 4	p
	p 5	q
	q 3.5	k
9	w k 3	s
	s 3.5	t
	t 5	u
	u 4	w
	w 4	x
	x 2.5	y
	y 4	z

w compared with q

Index above

	99.4	comp. dis.
9 35	109.6	10.2 <
	98.5	9.7 <
	108.2	19.9 <

J-30 <

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1896phae.proj.142.

Dec. 30, 1896.

98.5		(5.54)<
105.1	9.6<	
98.3	9.6<	5.38<
107.9	19.2<	

Index below

~~190.8~~		
189.2		
198.9	9.7<	
190.8	8.3<	5.52<
199.1	18.0<	

190.0		(5.52)<	
199.1	9.1<		
190.3	8.8<	5.53<	$M = 5.43$
199.1	17.9<		

9 . 50
14 42 30

Grant ~~error~~ error to Frost Done to revise comp. class for U Parser with Gen. Read.

1896phae.proj.1342.

Dec. 31, 1896. (Thursday)

R Ceti W- obs.

2 8	20	-1.4
2	23	
	3	

abandoned for

T Androm. Phot. T. W- obs.
Comp. star is 7.5 Mag. near.

0	14	+26.1
2	28	
2	14	

2	40
2	26

Index to right

277.1	< comp star dia	
291.0	13.9 <	
277.0	14.7 <	4.5 - <
291.7	28.6 <	
~~277.5~~		

(4.5-5) <

277.5 -		
290.1	12.6 <	
277.8	14.2 <	4.6 5 - <
292.0	26.8 <	

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1896phae.proj.342.

Dec. 31, 1896.
Index to left

5.9
21.0 15.1<
6.0 13.9< 4.45<
19.9 29.0<

(4.39)

4.9
19.7 14.8<
4.5 16.7< 4.30<
21.2 31.5<

M = 4.48

8 01
12 58 00

Nova Aurigae Phot. R. Obs.

V 23 +32.0
3 8
2 15

Index above

26.0
87.2 < with full disc.
23.3 61.2<
88.2 64.9< 1.06<
126.1<

(1.08)

23.8
88.8 65.0<
26.5 59.5< 1.10<
86.0 124.5<

8 40

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Dec. 31, 1896.

Index below

113.5
176.2 62.7<
~~188.3~~ 110.5 69.5<
180.0 132.2<

0.93<

5 45
13 42 30

111.1 (0.95)
180.0 68.9<
116.8 58.2<
175.0 127.1<

1.04<

W = 1.03

~~Ref~~

Comparison star is star ~~D~~ S
S is star provis. called b on p. 149.
Chara " " " " " C " " "

Rel. estimates on comparison stars for

R ~~A~~ Ceti

W - obs.

2 20 -1.4
4 57
2 37

~~2~~ 20
4 5
1 45

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n	4.5⁻	n'
n'	3.5⁻	n''
n''	3.5⁻	0
0.	3	p
p	4	q
q	3.5⁻	r
r	3.5⁻	S

q 30

Went over in west dome to revise comparison stars for W. Camelop and R Arietis.

b_2 and c_2 substituted for a, b, and c on R Arietis.

Concluded finally to hold original sequence.

Estimates on comp. stars for ~~R~~ U Camelop. are as follows, with 6 inch.

5	4	c
c	3.5⁻	X
X	4	4
4	2.5⁻	ξ
ξ	3	X
X	4.5⁻	4
4	4	m

Yr. obs.

10 5⁻0

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