KG
11365
531

1896phae.proj..532w

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KG 11365.531

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5

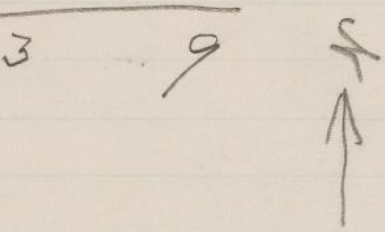
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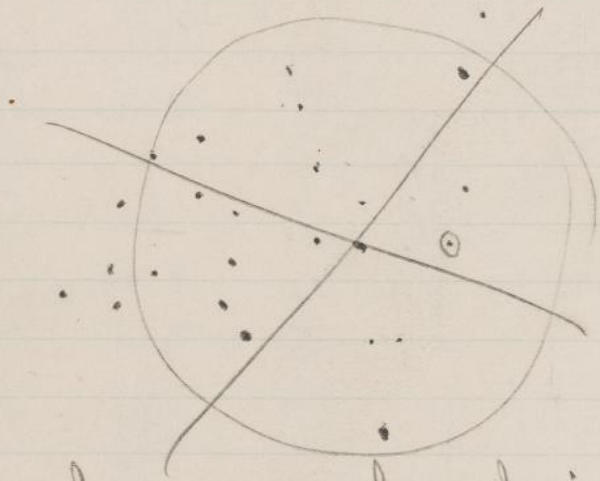
1896phae.proj..532w

Jan. 3. 1896. (Friday)

Wall's Var. L.Obs.

20	31	+17.4
23	40	
+3	9	



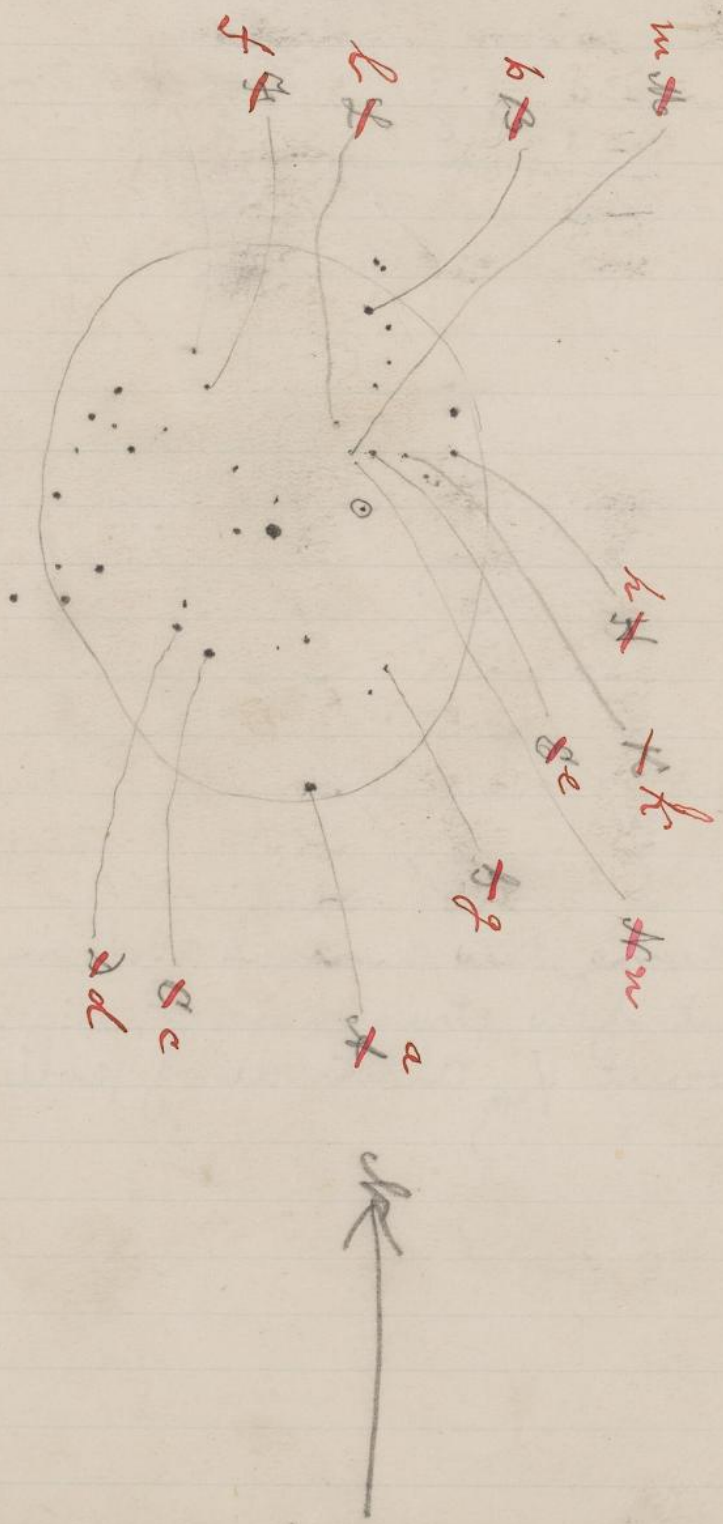


5 30 long low auroral arch in north with but few streamers: height of arch = about 1/4 altitude of pole.

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Jan. 3. 1896.



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Jan. 3. 1896.

Rel. Estimates between comp. stars selected on previous page. W. Leo.
Also est. of Variable:

	a	2	var
+ 40	var	1	b	W: obs.
	var	2.5	b

	c	3	c
	b	2.5	b
	a	3	a
6 0	var	3.5	var	W: obs
	var	3.5	var
	a	3	a
	var	3.5	var
	b	3	b

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Jan. 3. 1896.

J Phot. T. W. obs.

Measurements of diffiuse in brightness between ~~6.0 and 6.7~~ 6.7 magn. ~~and~~ (+17° 43 v-v) and intermediate star.

Index to left.

257.6	< brighter dist.	
274.4	16.8 <	
256.1	19.1 <	4.01 <
275.2	35.9 <	

256.2		
274.9	18.7 <	
257.7	15.7 <	4.10 <
273.4	34.4 <	

Index to right.

346.7		
367.4	20.7	
342.3	28.9	3.29
11.2	49.6	

342.4		
11.4	29.0	3.21
345.3	22.5	
367.8	51.5	

Concluded to retake last two sets as object was not well seen.

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1896phae.proj..532w

Jan. 3. 1896.

Last two sets repeated.

345.9		
365.3	19.4 <	
344.0	26.4 <	3.47 <
10.4	45.8 <	
343.7		
369.9	26.2 <	
345.8	21.8 <	3.36 <
367.6	48.0 <	4)14.94
		3.735

6 48
(60
6 30 0

The amount of difference in brightness between intermediate star and star a (a is comp. star in diagram on page 2 of this book)

Index to left.

140.0	< a dis.	
201.3	61.3 <	1.42 <
151.6	48.7 <	
200.3	110.0 <	
150.7		
202.8	52.1 <	
148.3	55.4 <	1.48 <
203.7	107.5 <	

6 55

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1896phae.proj..532w

5r

Jan. 3. 1896.

Index to right.

1.42
1.48

239.3

292.6 53.3 <

244.6 45.1 <

289.7 98.4 < 1.70 <

246.4

289 2 42.8 <

238.7 56.3 < 1.68 <

295.0 99.1 <

4 (228

1.57

7 15

14 (70

7 0

7 20 Biblian arch of auroral light, summit of arch being about 1/3 altitude of pole with but few streamers: a second and lower partial arch also visible, the eastern part of arch being complete and the western part of arch wanting: summit of lower partial arch about 1/2 altitude of main arch

7 42 Auroral light has almost entirely disappeared

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1896phae.proj...532w

Jan. 3. 1896.

Obsti: PhotR: Winds

2 4 −2.5

3/0 49/44

Index right.

303.2 ∠ 0 dis

317.5 14.3 ✓

302.9 13.4 ✓

316.3 27.7 ✓ F.72 ✓

302.6

315.4 12.8 ✓

304.2 12.4 ✓ ~~+0.1~~

316.6 ~~319.3~~ 25.2 ~~25.9~~ F.79 ✓

Index to left.

34.0

46.9 12.9 ✓

32.9 13.1

46.0 26.0 ✓ F.72 ✓

33.9

45.6 11.7 ✓

34.2 12.9 ✓

47.1 24.6 ✓ F.82 ✓

4(293

4.732

7 56

7 53

1 56

7 54 56

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1896phae.proj..532w

Jan. 3. 1896.

T Andromedae Phot. W. obs.

0 14 +26.1

2/3 5/5/1

Index to left.

256.6 < comp. stars obs

276.6

254.4 20.0 <

277.8 23.4 < 3.59 <

43.4 <

~~Index~~

255.8

277.0 21.2 <

257.3 20.6 < 3.67 <

277.9 41.8 <

256.2

278.0 22.1 <

255.6 22.1 < 3.55 <

44.2 <

277.7

Index to right.

347.4

367.0 19.6 <

346.9 17.4 < 3.94 <

364.3 37.0 <

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1896phae.proj..592w

Jan. 3. 1896.

347.8
365.4 — 17.6 <
345.6 — 20.5 < — 3.58 <
366.1 — 38.1 <

~~Landor~~

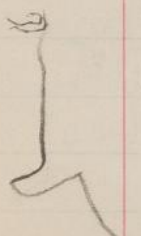
346.8
367.1 — 20.3 <
346.8 — 16.1 < — 3.98 <
362.9 — 36.4 <

16 10
8 5 0

Setting for Eclipse of Sat. IV.

9 7
2 37
+0 30

+19.4



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1896phae.proj..532w

Jan. 3, 1896.

Comp. Chron. B+C. 1182.

Bal 103 = 14 6 00.0 B+C = 14 4 4.2
" " = 14 7 00.0 " = 14 5 4.1

Dis. Imp. IV. Phot. R. W. Sh. Waite nec.
Comp. with other Sat. on same side
= Sat. II.

14 15 44	14	13	48.0	518.5	91.0			
55	14	16 03	59.0	129.6	171.0			
16 04		14	8.0		89.2	(79.0) 80.0 / 78.1		1
30			34.0		167.3			
41			45.0	518.4	91.0			
53	14	16 56	57.0	129.6	167.1			
17 02		15	6.0		93.8	(74.4) 76.1 / 72.7		2
10			14.0		166.5			
18			22.0	519.7	91.0			
26	14	17 30	29.0	129.9	168.0			
36			40.0		91.0	(77.6) 77.0 / 78.7		3
43			47.0		169.7			
53			57.0	524.0	93.2			
18 10		16	14.0	~~515.5~~	168.0			
20	14	18 12	24.0	131.0	93.8	(75.0) 74.8 / 75.2		4
26			30.0		169.0			
35			39.0	508.0	92.0			
44	14	18 50	48.0	127.0	163.0			
57		17	1.0		89.0	(73.2) 71.0 / 75.0		5
19 04			8.0		164.0			

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1896phae.proj..502w

Jan. 3, 1896

14	19	16	14	17	20.0	516.7	91.0		
		23			27.0	129.2	165.0	74.0	6
		33	14	19 28	37.0		95.2	(72.2) 70.3	
		41			45.0		165.5		
		51			55.0	522.3	95.3		
		57		18	1.0	130.6	164.8	69.5	7
20	06		14	20 02	10.0		95.1	(70.3) 72.0	
		12			16.0		167.1		
		29			33.0	525.1	95.2		
		36			40.0	131.3	166.8	71.6	
		48	14	20 42	52.0		94.1	(73.8) 75.9	8
		55			59.0		169.0		
21		48		19	52.0	519.2	90.0		
		57		20	1.0	129.8	169.0	79.0	
22	05		14	22 01	9.0		90.2	(77.4) 69.8	9
		13			17.0		170.0		
		21			25.0	518.6	90.3		
		29			33.0	129.6	168.0	77.7	
		36	14	22 32	40.0		91.3	(77.7) 77.7	10
		44			48.0		169.0		
		51			55.0	518.3	94.0		
		59		21	~~3.0~~ 8.3	129.6	166.0	72.0	
23	08		14	23 03	12.0		94.1	(71.0) 70.1	11
		15			19.0		164.2		
		23			27.0	517.1	93.		
		30			34.0	129.3	167.8	74.8	
		39	14	23 34	43.0		91.0	(74.6) 74.3	12
		46			50.0		165.3		

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1896phae.proj..532w

Jan. 3, 1896

14 24 01	14	22	5.0	5185	93.2			
07	14	24 11	11.0	129.6	167.2	74.0	13	
14			18.0		91.2	(74.8)		
23			27.0		166.9	75.7		
32			36.0	5208	91.9			
37	14	24 40	41.0	130.2	166.8	74.9		
43			47.0		92.1	(76.4)	14	
50			54.0		170.0	77.9		
56		23	0.0	5162	92.2			
25 01	14	25 04	5.0	129.0	167.0	74.8		
07			11.0		89.0	(76.9)	15	
14			18.0		168.0	79.0		
20			24.0	5171	90.0			
26	14	25 29	29.0	129.3	168.1	78.1		
32			36.0		94.0	(74.9)	16	
39			43.0		165.0	71.0		
28 41		26	45.0	5246	93.3			
51	14	28 54	55.0	131.2	170.0	76.7		
59		27	3.0		93.3	(76.7)	17	
29 06			10.0		168.0	74.7		
14			18.0	5206	93.0			
19	14	29 25	23.0	130.2	165.8	72.8		
30			34.0		91.8	(75.5)	18	
38			42.0		170.0	78.2		
45			49.0	5790	92.0			
51	14	29 55	55.0	129.8	168.8	76.8		
58		28	2.0		91.2	(76.3)	19	
30 07			11.0		167.0	75.8		

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1896phae.proj...532w

Jan. 3, 1896.

14 30 25	14	28	29.0	522.5	91.3			
32			36.0	130.6	165.2	77.9		
37	14	30 35	41.0		92.0	(78.0)	2.0	
45			49.0		170.0	78.0		
53			59.0	526.1	93.1			
31 03	14	31 08 29	6.0	129.0	166.2	73.1		
13			16.0		90.0	(75.0)		
20			23.0		166.8	76.8	2.1	
34			37.0	518.8	91.9			
41	14	31 54	44.0	129.7	167.0	75.1		
32 05		30	8.0		91.2	(76.3)		
15			18.0		168.7	77.5	2.2	
48			51.0	523.1	92.9			
56	14	32 59	59.0	130.8	171.0	78.1		
33 03		31	6.0		94.0	(74.6)		
10			13.0		165.2	71.2	2.3	
21			24.0	520.9	93.0			
32	14	33 40	35.0	130.2	168.9	75.9		
49			52.0		92.0	(75.4)	2.6	
56			59.0		167.0	75.0		
34 03		32	6.0	519.4	95.0			
11	14	34 16	14.0	129.8	168.2	73.2		
21			24.0		92.0	(72.7)	2.5	
28			31.0		164.2	72.2		
49			52.0	520.8	91.1			
57	14	35 01 33	0.0	130.2	168.8	77.7		
35 05			8.0		94.9	(74.4)	2.6	
12			15.0		166.0	71.1		

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1896phae.proj..532w

Jan. 3, 1896.

14	36	17	14	34	20.0	518.9	94.0		
		29			32.0	129.7	168.9	74.9	
		37	14	36	32 40.0		91.0	(74.4)	
		47			50.0		165.0	74.0	
	37	03		35	6.0	515.2	93.0		
		11			14.0	128.8	165.9	72.9	
		20	14	37	16 23.0		89.0	(75.6)	
		31			34.0		167.3	78.3	
		37			40.0	521.7	93.8		
		45			48.0	130.4	167.1	73.3	
		55	14	37	52 58.0		94.0	(73.0)	
	38	02		36	5.0		166.8	72.8	
		12			15.0	515.8	92.0		
		19			22.5	129.0	165.0	73.0	
		35	14	38	27 38.5		94.0	(71.9)	
		42			45.0		164.8	70.8	
		49			52.0	513.7	94.0		
		59		37	1.5	128.4	164.0	70.0	
	39	17	14	39	08 20.0		91.2	(71.6)	
		27			29.5		164.5	73.3	
		36			39.0	515.8	94.9		
		45			47.5	129.0	163.0	68.1	
		59	14	39	51 1.5		94.9	(68.1)	
	40	05		38	8.5		163.0	68.1	
		13			16.5	519.8	98.9		
		21			23.5	~~129.0~~	163.0	64.2	
		29	14	40	26 32.5	130.0	96.0	(65.0)	

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1896phae..proj..532w

Jan. 3, 1896.

							96.0	
							65.9	~~33~~
14	40	41	14	38	43.5		161.9	
		49			51.5	578.8	98.0	
		57	14	41 02	59.5	129.7	161.0	63.0
	41	09		39	12.0		99.8	(61.6) ~~34~~
		14			17.0		160.0	60.2
		21			23.5	516.0	98.8	
		31			34.5	129.0	158.2	59.4
		42	14	41 36	45.0		100.0	(59.2) ~~34~~
		51			54.0		159.0	59.0
		59		40	1.5	513.2	99.0	
	42	06			9.0	128.3	156.0	57.0
				moved images slightly				
			14	42 14				(55.4) ~~36~~
		22			25.0		102.2	
		29			32.0		156.0	53.8
		37			40.5	521.3	104.2	
		43	14	42 48	46.0	130.3	158.2	54.0
		51			54.5		105.2	(51.3)
	43	00		41	3.0		153.7	48.5 ~~37~~
		07			10.0	519.6	105.1	
		15	14	43 18	18.5	129.9	153.7	48.6
		24			24.5		107.8	(46.9) ~~34~~
		31			34.5		153.0	45.2
		39			42.0	518.7	107.8	
		48	14	43 51	51.0	129.7	151.8	44.0
		55			57.5		109.8	(41.7) ~~39~~
	44	01		42	4.5		149.3	39.5
		15			17.5		111.3	

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Jan. 3, 1896.

						111.3		
							37.8	
14	44	23	14	42	25.5	519.4	149.1	(37.4) ~~40~~
		31	14	44 26	33.5	129.8	111.0	37.0
		3 X5			~~38~~.5		148.0	
		4 2			45.0	515.5	110.0	
		4 9			52.5	128.9	148.0	38.0
		5 X6	14	44 53	59.0		112.2	(35.5) ~~41~~ 33.1
~~46~~		45 X0		43	8.0		145.3	
		2 2			25.0		114.0	33.0
		3 X1			33.5		147.0	33.8
		3 X7			40.5		1~~42~~.2	33.8
		4 6			49.0		147.0	~~33.6~~ 35.0
~~46~~		5 ~~X~~3			56.5		112.0	31.0
		5 X9		44	2.5		143.0	~~31.4~~ 26.8
46		0 X5			8.0		116.~~2~~	26.9
		1 X5			17.5		143.1	~~26.9~~ 26.1
		1 X9			22.0		117.0	25.2
		2 X5			28.5		142.2	~~25.2~~ 23.2
		3 X3			35.5		119.0	22.0
		39			42.5		141.0	~~22.0~~ 22.2
		45			48.0		118.8	19.4
		55			58.5		138.2	~~19.4~~ 17.0
47		03		45	6.0		121.2	17.8
		11			13.5		139.0	~~17.8~~ 17.2
		17			20.5		121.8	17.0
		25			28.5		138.8	~~17.0~~ 16.4
		31			34.0		122.4	15.6
		39			42.5		138.0	~~15.6~~ 15.7

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Jan. 3, 1896.

138.0

						~~15.7~~	
14	47	50	14	45	53.0	122.3	~~6.3~~ 13.7
	48	05		46	8.5	136.0	~~13.7~~ 8.0
		17			19.5	127.0	~~8.0~~ 7.2
		35			38.0	134.2	~~7.2~~
	49	05		47	8.0	Not seen later.	
		29			32.5	124.0	12.0
		38	14	49	46	41.0	521.2 130.3 136.0
		51				53.5	125.0
	50	07		48	9.5	136.2	11.2

L. V (11.6)

Seeing good.

Comp. Chron. B+C. 1182.

Bal. 10h = 14 55 00.0 B+C. = 14 53 3.3

" " = 14 56 00.0 " = 14 54 3.3

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1896phae.proj..532w

Jan. 3. 1896.

N. G. C. v 2 v 3.

13	2.8	−31°6
11	06	
2	22	

Nova very faint in moonlight, but thought to be certainly seen.

$11^h\ 8^m\ 0^s$ e 2 d, d 1 a. W obs

$11^h\ 9^m\ 0^s$ f 2 e, e 1 g. W. obs

Same notation as in R. Bk. 7 8 p. 141
Nothing extraordinary can be made out with spectroscope.

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1896phae.proj..532w

Jan. 4. 1896. (Saturday)

Trolls Var. Gr. obs.

20 31 +17.α
24 20
+3 49

α 2 var
var 1 β
var 2.5 b

5 30 W. obs.

Ballon #103: Band b #1182

$5^h\ 38^m\ 0.^s0 = 5^h\ 38^m$ 35^m ~~+0.7~~
41.7

measures of diff. in brightness between 6.7 magn (+17° 4355) and intermediate var: Phot. W. obs.

Index to left.

	255.2	< brighter dis.	
6 25	272.3	17.1 <	
	254.1	19.1 <	3.99 <
	273.2	36.2 <	
	253.0		
	272.4	19.4 <	3.99 <
	255.4	16.8 <	
	272.~~4~~2	36.2 <	

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1896phae.proj..532w

Jan. 4. 1897 b

Index to right.

342.1		
364.3	22.2 <	3.22 <
338.8	29.1 <	
367.9	51.3 <	
340.4		
368.3	27.9 <	
341.9	23.0 <	3.24 <
364.9	50.9 <	

6 31
2 | 0-6
6 28 0

Sprocket wheel reads 9.5 in above measurements.

Measures of diff in brightness between intermediate star + star A (a = comp star in diagram on page 2 of this work)
Phot. I:
W. obs

Index to left.

148.6	< A Sis	
200.3		
150.6	51.7 <	1.70 <
197.1	46.5 <	
	98.2 <	
150.3		
199.4	49.1 <	
147.1	54.0 <	1.58 <
201.1	103.1 <	

1.64

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1896phae.proj..532w

Jan 4. 1896.

1 index to right.

236.2		
287.3	51.1 <	1.47 <
235.0	56.6 <	
291.6	107.7 <	
234.9		
290.4	55.3 <	
238.3	49.0 <	1.55 <
287.3	104.3 <	1.51

6 44
82
6 41 0

Sprocket wheel reads 6.9 in above measures
Zero of sprocket wheel = 0.0

~~Jan~~

Examined images when sprocketwheel read 9.5 and they seemed to be pretty circular and practically all right.

~~0 less~~ ~~Phot~~

~~=~~ ~~+~~ ~~=2.5~~

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1896phae.proj..532w

Jan 4. 1896.

Relativ estimatis of comp. stars for Wells's Var.

Wells Var	Wells Rel	Chandler Var	Chandler Rel
2	2.5	3	3
		4	2
		5	3
		6	3.5
		7	3.5

W: obs

D	Beta	PhotR	W: obs
2	4	-2.5	
0/2	5/4		

D made to left.

213.0	< van Dis	
226.8	13.5 <	4.79 <
214.2	11.6 <	
225.8	25.1 <	

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1896phae.proj..532w

Jan. 4. 1896

214.3
225.6 11.3 <
213.8 11.4 < 5.01 <
225.2 22.7 <

Index to right

303.7
316.1 12.4 <
304.2 11.8 < 4.87 <
316.0 24.2 <

304.0
315.4 11.4 <
303.5 12.1 +3.1 < 4.94 <
315.6 316.6 23.5 24.5 <

4(19 6 1
4.90

S Leyani W. obs

20 8 +57.2
13 20
7 12

Stars seen: Var. not seen. S Leyani
8 15 not certainly seen when bright Var is covered with bar.
Var. probably fainter than 14.9

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1896phae.proj..532w

Jan 4. 1896.

R Aurigae W. obs

5	3	+53.0
11	15	
11	28	
10	32	

Goodenough

R Hydrae W. obs

6	49	+55.1
5	29	
8	10	
	50	

S 1 var var 3 t:

estimate = 13.7 W obs

8 2

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1896phae.proj..532w

Jan 5, 1896. (Sunday

Ballou #103. Band b #1182

4h ~~30m 0.0s~~ = 4h ~~0m 0.0s~~

33m 0.0s = 24 9.6

24 25 9.2

3 4 0.0

B + C 1182# is slow 8m 50.8s

Chronometer found to be standing losing during 1m of Ballou #103 and so when set thought it might need winding

Arnold + Dent #~~4~~ 958 Ballou #103

4h 40m 17.2s = 4h 40m 0.0s

40 17.2

Arndel + Dent is fast - 0m 17.2s

Wells (Algol) Var: Phot 5. W. obs

20 31 +17.7

24 5

3 34

5 17 C 3.5 var

var 1 D W. obs

5 22 C 3.5 var

var 0.5 D W. obs

5 24 var = D

5 26 25 C 3.5 var W. obs

var 0.5 D

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1896phae.proj..532w

Jan 5. 1896.

Index above

5	22	1	298.7
			230.2
			294.9
			228.7
5	37	15	296.2
			224.1
			299.3

75.9 <
61.7 <
37.6 <
+0.82 <

67.6 <
75.2 <
14218 <
+0.72 <

Index below I

1	89	5	317.1
			27.2
			327.0
			20.1

70.1 <
53.1 <
123.2 <
+1.12 <

5	09	54	325.4
			22.7
			320.2
			27.1

57.3 <
66.9 <
124.2 <
+1.10 <
3.76 <
0.94 <
*

5 09 54
4 29 15
5 37 19.0
-1 0
5 37 2.
10 37 2.
27 ~~47~~
5 41 027

Index below

			319.0
			27.0
			327.5
			20.8

68.0 <
53.3 <
121.3 <
+1.16 <

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1896phae.proj..532w

Jan 5. 1896

5 42 56

325.2
19.8
318.5
25.1

57.5<
66.6< ±1.17<
121.1<

Index above

51.7

5 45 [illegible]

117.7
55.6
110.9

66.0<
55.3< ±1.16<
121.0<

56.2
111.7
49.0
117.9

55.4<
68.9< ±1.10<
124.3<

459<
1.15<

5 46 16

+15 19
43 49.8
-13.1
43 32.8
43 32.8

5 48 [illegible]

49.0
120.9
56.0
110.9

7 19<
54.9< ±1.05<
126.8<

5 49 16

56.3
112.7
48.6
111.4

56.4<
69.8< ±1.06<
126.2<

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1896phae.proj..532w

48 12
49 16

Jan 5. 1896

Index below IV

141.1
2046 63.5<
143.2 ~~148.0~~ 56.4<
199.6 119.9< +1.19<

146.8
203.1 53.3<
147.1 55.3<
202.4 108.6< +1.48<
4.75<
1.19<

145.1
202.6 57.5< +1.32<
144.3 ~~148.1~~ 56.9<
201.2 114.4<

146.6
199.8 53.2<
145.7 55.9< +1.44<
201.6 109.1<

Index above IV

220.9
29 2.4 61.5<
234.2 59.0< +1.18<
293.2 120.5<

Screw post of electric light came out and was compelled subsequently to read ande with lantern.

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1896phate.proj...532w

Jan 5. 1896

6 3 52

4 | 120 3

6 0 0.7 s ✓

-17.

5 59 43.7 s

10 119 63.4 ✓

6 5 59

23 4.5
29 6.6
229.9
29416

62.1 <
64.7 < +1.05 <
126.8 < 499
1.27
1.247 s

Above.

201.2
293.2
235.4
294.2

620 <
58.8 < +1.18 <
120.8 <

6 7 20

235.2
29216
231.0
293.0

57.4 <
62.0 < +1.21 <
119.4 < 1.20 <

Undisturbed

6 9 23

326.3
23.3
328.8
19.6

47.0 <
50.8 < +1.47
107.8 <

610 52

4 | 33 3 s

6 8 23.8 ✓

-17.

6. 8 6.8

11 8 6.4 ✓

322.6
18.5
324.5
21.7

559 < +1.3 ✓
57.2 <~~+1.3~~ <
113.1 < 15.21 <
1.30 <

1.41
120
261
1.30 s

M = 1.30

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1896phae.proj..532w

Jan 5, 1896

323.2
6 12 40 29.1 59.9 <
329.0 51.9 < +1.38 <
20.4 111.8 <

329.8
6 19 56 19.7 +9.9 <
325.9 58.10 <
23.9 107.9 < +1.47 <

Indexabove VI

53.2
6 16 5 110.9 57.7 <
57.6 53.6 < +1.39 <
111.2 111.3 <

59.5
6 17 50 111.6 52.1 <
56.6 57.4 < +1.48 <
114.0 109.5 < 5,67
1,42 <

4 | 20 31
6 15 7.8 ✓
-12.0 ✓
6 14 50.8 ✓
11 14 -0.8 ✓

2nd

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1896phae.proj..532w

Jan 5, 1896.

Ballou #103 Arnold + Dent #958

~~6h 45m 45.0s~~ = 6h 45m 17.1s

6 45 00.0

Arnold + Dent 958# is fast 0m 17.1s

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1896phae.proj..532w

Jan. 6. 1896. (Monday)

Wells Var. Str. Stn.

20 31 +17f
26 V
+V 3f

~~Estimates of f.~~

f

Stars A compared with star f:

Index above

	68.6	< C dis	
7 4	111.9	43.3 <	2.01
	70.8	44.2 <	
	114.0	86.5 <	
	68.1		
7 5	118.6	43.5 <	
	70.7	45.4 <	1.94
	110.1	88.9 <	2 (99 s-)
			1.975

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1896phae.proj..532w

Jan 6. 1896

Star A

Index Values		
163.9	35.1 <	
199.0	35.3 <	2.49
162.5 ~~+18.9~~	70.4 <	
197.8		

162.1	36.6 <	
198.7	32.3 <	2.54
164.9	68.9 <	
197.2		

~~2.25~~

2 (103
2.57.5-
1.98
2 (45-0
2.25-

$m = *$

Star A compared with Star D

Index Values		
150.4		
209.0	58.6 <	
154.6	52.7 <	1.39
207.3	111.3 <	

153.9		
212.1	58.2 <	
153.2	57.2 <	1.29
210.4	115.4 <	

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1896phae.proj..532w

Jan. 6. 1896

1.39
1.29
1.34 <

Index above

			239.4			
7	16	302.7	~~303.3~~	63.3 <		
			238.0	67.8 <	0.96	
			305.8	131.1 <		
			240.3			
7	18		303.0	62.7 <		
7	15	0	238.9	65.9 <	1.01	2(1.97
			304.8	128.6 <	~~4.65~~	0.98
					~~1.162~~	1.34
						2(232
					M =	1.16

Star C compared with star 1

Index above.

		255.8	< C dis		
7	22	287.8	32.0 <	2.81	
		252.9	29.2 <		
		282.1	61.2 <		
		253.0			
7	24	289.8	36.8 <		
		257.3	28.0 <	2.68	
		285.2	64.8 <	2(1.49	
				2.745	

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1896phae.proj..532w

Jan. 6. 1896.

Index below.

245.4 — 2 — 2.84
14.2 — 2 8.8 <
345.1 — 3 1.8 <
16.9 — 0.6 <

347.2
14.6
34X.6 — 25.5 <
14.1 — 5 2.9 <

7 29 — 7 29 — 7 — 4(22 — 25 30

3.14 — 2.86

$\mathfrak{M} = 2.80$

Notation used is same as that on page 2 of this book.

Ω Cet. — H. Ab.

2 < — 2.v
3 3v
+1 31

Index left and below

8 31

2146 < bttr. dis.
224.69 — 10.3 v
214.1 — 11.1 v — 21.4 v
225.2

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1896phae.proj..532w

8 31

8 35

Jan. 6. 1896.

215.1

224.8 9.7 v

210.2 v 5.30 v

215.0 19.9 v 5.22

225.2

Index right thorn.

306.1

8 37 314.3 8.2 v

306.0 7.1 v 5.87 v

313.1 15.3 v

303.8

314.3 8.5 v

8 38 306.2 8.0 v 5.71 v

314.2 16.5 v 5.79

M = 5.50

4 | 21 2.99

5.498

8 3 5 15

16 5

8 51 20

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1896phae.proj..532w

Jan. 6, 1896.

M.P. 441 N. of

3 31
4 31
100

+62.8

Index right and above.

Var. dis. > 193.5 51.4 ✓
9 30 244.9
196.8 ✓ -1.72 ✓
243.0 46.2 ✓
97.6 ✓

195.2 47.9
9h 32m 243.1
191.3 54.1 -1.61 ✓
245.4 102.0 133
-1.66

Index left and below.

9 34 Circle read wrong way Repeat.

285.0 49.3
334.3
3 0 1.0
292.2 38.8
331.0

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1896phae.proj..532w

9 30
32

Jan. 6, 1896.

1.66

~~294.8~~

9 36

285.8 46.1 <
331.9
282.7 53.8 < −1.66 ✓
336.5 99.9 <

9 37

4 | 15−
9 33 45−

283.0 53.7 <
336.7
~~286.4~~ −1.73 ✓
286.7 43.3 < 139
330.0 97.0 < 1.69 5−
1.66
~~+5~~
~~4.60~~
Mean 1.68

B. + C. 1142.

9 39 ✓✓.3
40 ✓✓.1

Balloon 103.

9 ✓6 0.0
✓7 0.0

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1896phae.proj...532w

Jan, 6, 1896.

Dis appearance of Jupiter's ~~two~~ I ~~II~~.

Photometer R N. ob.

Rich. mc.

Compared with nearest of two satellites on following side. = Sat. II.

~~9 50 45~~ Corrected & checked

9 51 32 x	9 50	10,5		177.7
+16 21		32,5	85.8	263.5 1
10 7 53 x		33,5	85.5 x	177.5
		49,5	85.6 x	263.0
9 52 16 x		57,5		178.0
+16 22	50 2	9.0	87.8 x	265.8
10 8 38 x		23,5	86.8 x	173.4 2
		~~34,5~~	~~87.3~~ x	260.2
		48.0		174.1
9 53 08 x	9 50 3	3.0	271.8	3 97.7 x
+16 23		14,5	176.0	84.0
10 9 31 x		25,0	260.0	90.8 x
		37.0	178.8	18.8
9 53 56 x		47.0	266.8	80 x
16 24	50 4	5.0	177.1	85.6 x
10 10 20 x		13.5	262.7	86.8
9 54 47 x		33.5	177.8	
16 25		41.0	261.0	83.2 (v)
10 11 12 x		52.0	176.8	86.x
	50 5	3,0	~~264.2~~ 84.8	13.6
		12.0	177.8	~~3 36 66.4~~
		22,5	85.3 x 2631	~~14.1~~

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1896phae.proj..532w

Jan 6 1896.

9 55 28						
16 26 9	5 5	34.0	87.0	177.0		6
10 11 55		44.0	86.2	264.0		
	5 8	40.5		174.8	0.8	
9 59 08		53.0	89.4	264.2		(7
16 31	5 9	23.0	87.9	177.1	87.1	
10 15 39		36.0	88.6	265.0		
		43.5		177.1		
10 00 02		52.5	86.1	263.2	86.1	(8
16 3X 10	5 0	2.5	89.4			
10 16 34		11.0	87.8	175.8	87.7	
		23.0		265.2		
		34.0		176.6		
10 01 10		50.0				(9
16 34	1	4.0	87.4	264.0	87.7	
10 17 44		28.0	88.3	177.0	88.3	
		35.0	87.8	265.3		
		58.5		177.0		
10 02 45	2	8.0	89.2	266.2	89.2	(10
16 36	3	19.0	89.0	177.0	89.0	
10 19 21		35.0	89.1	266.0		
	5	31.0		176.0		(11
10 05 49		43.4	89.5	265.5	89.5	
16 60		54.5	87.6	176.8		
10 22 29	6	9.0	88.6	264.4	87.6	

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1896phae.proj..532w

Jan. 6, 1896.

10 6 38	10	6	22.0	179.0	(12
16 41			34.0	263.1	84.1
10 23 19			44.5	175.1	87.6
			57.5	262.7	85.8
10 8 43	10	8	22.5	179.9	(13
16 44			39.5	264.0	84.1
10 25 27			45.5	175.0	87.4
		9	5.0	262.4	85.8
10 09 29			15.0	174.5	
16 45			23.5	266.5	(14 91.8
10 26 14			33.0	183.0	83.0
			43.5	266.0	87.4
			51.0	179.0	
10 10 44	10	10	00.0	262.0	(15 83.0
16 46			9.0	176.0	86.0
10 26 50			16.0	262.0	86.5
10 10 49			32.5	178.3	
16 47			44.0	265.0	(16 86.7
10 27 36			54.0	176.2	84.6
		11	4.0	260.8	85.6
10 11 34			15.5	174.5	
16 48			25.5	262.9	(17 88.4
10 28 22			37.0	176.3	83.8
			49.0	270.7	86.1
10 28 58		11	59.6	260.1	
	12		9.5	176.5	
29 04			20.0	260.2	83.7

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1896phae.proj..532w

Jan. 4 1896.

10	29	21		32,0	183.2	77.0
	29	31		41,0	256.0	72.8
		39		49	183.8	72.2
		45		53,0	253,3	71.5
		56		6,0	191,7	63.6
			13			
	30	02		12,5	254.0	62.3
		08		18,5	189.2	64.8
		16		24,5	254.6	65.4
		20		29,5	190.0	64.6
		30		38,5	252.5	62.5
		44		53,0	188.0	64.5
		54		3,0	257.0	63.0
			14			
	31	04		11,5	190.8	60.2
		12		20,0	246.0	55.2
		21		29,0	197.2	48.8
		28		35,3	246.8	49.6
		37		45,2	200,1	46.7
		48		53,5	237.5	37.4
	32	5		12,0	208,7	28.8
			15			
		16		23,5	231,3	22.6

16 not seen later.

limit of visibility

			16	52	202.2	
10	17	14	17	9,0	238.4	36.2
	+16	56		22,0	205.0	29.7
						65.9
	10 3/4	10		34,0	234.7	33.0

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1896phae.proj..532w

Jan. 6. 1896.

~~Seeing~~ Nathan poor.
Air somewhat unsteady.
Satellite also disappeared quite close to limb of planet ~~so that~~ it was possible not seen as late as it otherwise ~~would~~ would have been.

B. + C. 1142.			Ballon 103.		
10	34	340	10	∨6	0.0
		33.7		∨7	0.0

B. + C. 1142 is losing fast. but as the comparison on p. 32. differs from that on this page by over a minute, I asked Mr. Waite to take some more comparisons during the night of this date (Jan. 6/7). His comparisons are as follows viz:

Jan. 6. 1896.

	B. + C. 1142.			Ballon 103.			
12	34	∨9.0	12	∨7	0.0	-17	1.0
	39	∨8.7		∨8	0.0	18	1.3
	40	∨8.∨		∨9	0.0	18	1.∨
	41	∨8.2	13	0	0.0	18	1.8
17	6	∨2.2	17	26	0.0	19	17.8
	7	∨1.6		27	0.0	19	18.4
	8	∨1.1		28	0.0	19	18.9
	9	∨1.0		29	0.0	-19	19.0

See also p. ∨∨.

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1896phae.proj..532w

Jan 8 1896.
Wednesday

Walls Var. ~~S. Obs.~~ (Element obs)

5 45 [f] not visible

" " The above with the 12 inch.

---

o Ceti. Hr. obs.

2 4 — 2.5
2 5
23 59

2^h K- — 2.9
2 K7
+0 K3

Index right + above.

o dis. 3 0 4.0 — 10.0 c
3 1 4.0
3 0 4.9
3 1 4.3

9.4 c
19.4 v c √.36 c

7 43

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Jan. 8, 1896.

		30 4.7			
7	45	31 4.0	9.3 <		
		30 4.1	10.4 <		
		31 4.5	19.7 <	5.32 <	
				3 2.4	

Index left & below.

		34.0			
7	48	45.1	11.1 <		
		34.3			
		45.0	10.7 <		
			21.8 <	5.10 <	

		34.1			
7	52	45.0	10.9 <		
	4)188	33.9	11.1 <		
7	47 0	45.0	22.0 <	5.08 <	
				5.09	
				2 (0.43	
				5.21	

Images rather faint. Observations made through clouds.
Observations considered poor and probably should be rejected.

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1896phae.proj..532W

Jan. 8. 1896.

Σ 1065 20 Lyncis.

~~7h 13m~~ +50.°4

7 13
3 3
-3 3
4 22

Position angle. 80°
distance 15"
Magnitudes 6.6 6.8
Index to right + below.

A.

8 1/2 4 Str. dis. → 347.0
86.6 99.6 <
351.0 88.8 <
79.8 188.4 < −0.16
171.6

8 15 353.2 −0.10
79.4 86.2 <
350.9 95.9 <
86.8 182.1 < −0.04
177.9

Index left + above.

B.

~~355.7~~
80.0
8 17 175.8 95.8 <
84.5 89.4 <
175.9 185.2 < −0.10 <
174.8

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1896phae.proj..532w

Jan. 8, 1896

	82.3		-0.12
8 18	175.9	93.6 <	
4 | 24	81.0	93.0 <	
8 16 0	174.0	186.6 ≤	0.13
		173.4	
		Mean =	-0.11

Observations were extremely difficult on account of clouds being thick. Images almost invisible ✱ Observation considered to be only ½ weight.

Too cloudy for further work.

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1896phae.proj..532w

Jan. 11. 1896. (Saturday)

Transit of Comp. Stars for Wolf's Var. with Asst. T. Tr. obs.

20 31 +17.8
2E 6W
+E 1E A Compared with * C
Index to left and above

5 41
520
+8.0
132.1 80.1 <
54.8 75.1 < +0.47 <
129.9 155.2 <

57.1
5 44
129.2 72.1 <
52.0 82.8 <
134.8 154.9 < +0.48 <
0.48

Index to right & below

1439
5 47
216.7 72.8 <
74.7 < +0.62 <
145.5 147.5 <
2202

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1896phae.proj..532w

Jan. 11. 1896.

1445

5⁻ 48

+(20

5⁻ 40⁻ 0

217.0 72.5⁻ <

143.6 72.6 < +0.67 <

216.2 145.1 < 0.64

2112

0.56

At Cmps with *D.

158.8

5 52 209.7 5⁻0.9 < 1.25 <

148.8 65⁻0 <

213.8 115⁻9 <

15⁻0.9

5 53 212.2 61.3 <

152.0 5⁻7.5⁻ < 1.22 <

209.5⁻ 118.8 < 1.25⁻

237.1

~~303.0~~

5 57 307.3 70.2 < 0.85⁻ <

239.6 66.2 <

305.8 136.4 <

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1896phae.proj..532w

Jan. 11. 1896.

5 59

0⁻ 0⁻0⁻ 1⁰⁻

240.0
303.1 63.1 <
239.2 67.8 < +0.96 <
307.0 130.9 < 0.8 5⁻ 1.2 5⁻
2 (1.81 0.90
0.900⁻ 2 (2.15⁻ 1.07 5⁻

Index left and above ^ Compared with * f.

6 02

251.2
292.1 40.9 <
248.1 44.9 < +2.03 <
293.0 85.8 <

6 04

250.0
293.7 43.7 <
248.8 41.8 < +2.06 <
289.8 84.7 < 2.04

6 11

165.1
201.7 36.6 <
164.0 35.7 < +2.43 <
199.7 72.3 <

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1896phae.proj..532w

Jan. 11. 1896.

166.9

6 12

198.3 31.4 <

166.7 33.7 < +2.67 <

6 7 15 6 5.1 < 2(11.0

2.5-5-

2(5-9

2.295-

At Compared with * H.
Index to right + below

168.8

6 15

193.0 24.2 <

167.5- 26.9 < 3.23 <

5- 1.1 <

194.4

167.9

6 17

193.0 25-1 <

169.0 24.5- < 3.29 <

49.6 < 2(12.

193.5- 3.26

Index to left + above

255.1

6 20

287.1 32.0 < 2.66 <

255.2 32.6 <

6 5.6 <

287.8

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1896phae.proj..532W

Jan. 11. 1896.

6 23

6 18 45

256.7
286.9
255.8
286.2

30.2 = 2.66
30.4 = +2.84 =
60.6 = 2|10-0
2.75

Estimate of Mr. Taylor Reed's f.
in connection with Wells Var. Yr. obs.

6 vv h 1[f].[f] 2 k

O. Calc.

O Calc

M. obs.

2 4 -2.05
2 | 42
38

abandoned for the present.

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1896phae.proj..532w

1896

Jan. 11, ~~1896~~.

Nova Aurigae N. obs.

5	23	+ 32.°0
3	00	
− 2	23 m	
9 h	37 m	

5	27
3	5
2	18
9	42

Index Orion

	Northern-most >	91.0		
~~7~~ 37	disappear.	171.0	80.0 <	
		91.1	77.9 <	
		169.0	157.9 <	0.42 <
		92.1		
7 38		166.9	76.8 <	
		88.0	84.2 <	
		172.2 ~~+ 7[37.2~~	161.0 <	0.36 <

2)78
0.39

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1896phae.proj..532w

35
38

Jan. 11, 1896.

0.39

Index alone

179.0

7 40 258.2 79.2 <

182.2 75.7 <

257.9 154.9 < 0.48 <

179.9

7 43 259.2 79.3 <

4(156 182.0 ~~+80.0~~ ~~74.9~~ 76.0 < 0.47 <

7 39 0 ~~256.9~~ 258.0 ~~154.2~~ 155.3 <0.49

0.48
0.39
0.87
0.435

α Cti. M. obs

2 4
3 36
1 32

- 2.5

2 4
3 45
1 41

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1896phae.proj..532W

Jan. 11, 1896.

Index left & below.

		Vari.	214.8		
8	13	disappears	224.6	9.8 <	
			215.0	9.7 <	
			224.7	19.5 <	5.35 <
			214.9		
8	14		224.5	9.6 <	
			215.0	9.2 <	
			224.2	18.8 <	5.43 <
					2(78
					5.39

Index right & above.

			304.8		
8	17		314.0	9.2 <	
			305.7	8.3 <	
			314.0	17.5 <	5.58 <
			305.0		
8	19		314.2	9.2 <	
			304.2	10.0 <	
			314.2	19.2 <	5.38 <
					5.48
					9 20
					−5.44
					+3.76

4(23

5 1.5 4.5

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1896phae.proj..532w

Jan. 11, 1896.

~~ε 99 φ Piscium~~

~~1 7 +23~~

ε 100 z Piscium.

Stewart obs.

107 +6.9

410

33

Index right + below

1	52.0		
27	2.6	120.8	<
166	.3	103.0	<
269	.3	223.8	< −0.8
		136.2	<

98

Index

4.5

70	.2	65.7	<
~~094~~	7.0	~~67.4~~	< 0.91
~~175.9~~	74.4	133.1	< 2 +0.06 +0.03

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1896phae.proj..532w

January 11, 1896.

238.6

16.9 1383

240.0 1365 −2.05

16.5− 2748

85-2

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1896phae.proj..532w

Jan. 13. 1896. (Monday)

Wells Variable * N. obs.

+17°.7

20 31
8 5

20 31
25 26
4 54

Clouds and twilight.
Index left & above.

			60.9		
5	59		120.8		
			62.0		
6	00	Star a disapp.	125.1	63.1	
			61.0	63.0	
			1240	126.1	1.06

Clouds thick 60.1

Sky pretty cloudy but will try for Σ 2922 δ Lacertæ.

22 30 +39°.0
27 30
5 00

All cloudy again.

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1896phae.proj..532w

Jan. 13. 1896.

A 15 Sky all thickly cloudy.
No stars visible.

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1896phae.proj..532W

Jan 14 1896 (Tuesday.)

Wells Variable.

Wr. 0h 4,

20 31 + 17.8

25 30

4 59

Comp. D with H. Index above. 4

5 51 64.0 ∨7.7 <
112.1
62.0 ∨6.0 <
118.0 113.7 < 1.33 <

Comp. with star D.

5 53 66.0
118.8 ∨2.8 <
65.9 ∨4.1 <
120.0 +7 106.9 < 1.49 <
2(82
1.41 <

D comp with H Index above.

5 55 72.0 ∨2.0 <
114.0
74.0 ∨2.6 < 2.06 <
116.6 ∧4.6 <

5 57 68.8 ∨2.3 <
111.1
72.8 3.92 <
112.0 ∧1.5 < 2.15 <
2(21
2.100 <
1.44
2(0.01
1.55

1896phae.proj..532w

Jan 14. 1896

h# compared with a. Index above.

6 00	259.7		
	257.3	27.6 <	
	255.0	33.0 <	
	288.0	60.6 <	2.64 <
	254.4		
6 2	258.7	34.3 <	
	254.0	34.8 <	
	288.8	69.1 <	2.77 <
			2 | 138
			2.69 <

h # compared with a. Index below.

6 5	350.1		
	14.2	24.1 <	
	349.1		
	124	23.3 <	
		47.4 <	3.39 <
	345.8		
6 6	23.0	37.2 <	
	346.7		
	14.8	22.1 <	
		59.3 <	2.67 <
			2 | 60 6
			3.03 <
			2.69
			2 | 5.72
			2.86 <

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1896phae.proj..532w

Jan 14, 1896.

f compared with a. Index below.

341.3 ∠03 ∠
21.6

341.9 3AA ∠
20.7 79.1 ∠ 2.22 ∠

341.4 ∠0.9 ∠
22.3

341.6 39√ ∠
21.0 60.4 ∠ 2(6 ∠
2.20 ∠

Means
220 ∠
210 ∠
2.15 ∠

d a
Comp with I. Index below.

334.0 √6A ∠
30.8

331.6 √72 ∠
28.8 114.0 ∠ 133 ∠

331.4 √9.9 ∠
31.3

333.7 √√.1 ∠
28.8 11√.0 ∠ 1.30 ∠
1.32

h 1.√[f], [f] 2 k
in 12 inch.
[f] is Mr. Taylor Reeds [f]

~~k 2 b b 2~~

l 2 m. m 2 n

1.41
1.32
2(73
1.360

6 8 5 5
5 7

6 10
4(24 10
6 2 30

6 14
5 1
5 3

6 30
4(24 25
6 7 0

6 37

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1896phae.proj...532w

Jan. 14, 1896.

○ Ceti M. obs.

2 4 − 2.5

2 37

33

Index right + above

variable disappears } > 123.8

6 52 132.9 9.1 <

123.9 9.4 <

133.3 18.5 < 5.46 <

123.8

6 55 133.4 9.6 <

123.5 8.8 <

132.3 ~~19.4~~ 18.4 < 5.47 <

5.46 <

Index left + below

212.5

6 57 222.3 9.8 <

213.3 9.2 <

222.5 18.0 < 5.52 <

213.6 ~~213.7~~

223.0 9.5 <

212.6 10.1 <

222.7 19.6 < 5.33 <

5.46

5.42

5.44

7 00

4 | 224

6 56 0

2 24

6 53 36

3 | 8 5

5.42 5

1896phae.proj..532w

Jan. 14, 1896.

Measurment of faint comparison stars for R Cassiop. with photometer
J. H. ds.

23 52 +49°.7
27 00.
3 08.

7 40 cloudy.

8 00 "

8 30 " with no chance for anything better.

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1896phae..proj..532w

Jan. 14, 1896.

Comp. of Chron.

Bal. 103.			B + C. 1182		
14	39	00.0	14	41	24.5
14	40	00.0	14	42	24.0

Dia. Ink. III. Phot. R. W. sk. Wait obs.
Comp. with Sat. quite close to Sat III
on same side. = Sat. I.
checked.

12 50	14	49	45		78.1	
−2 22			58	93.9+	172.0	93.9
14 47 39 ✓		50	5	96.0+	80.0	92.0
		15	15	189.9+	176.0	96.0
			25	95.0	82.2	93.8 0.2+
50 35+			32	94.5+	177.0	94.8
−2 22			38	92+	84.8	92.2 0.1+
48 13 ✓			44	186.0+	176.0	91.2
		51	25	93.0	77.9	98.1
51 39 ✓			34	99.9+	177.8	99.9
−2 21 ✓			42	90.0	83.0	94.8
49 17 ✓			50	189.9+	173.0	90.0 0.2+
		52	00	95.0+	80.3	92.7
52 12 ✓			7	94.9+	175.2	94.9 +
−2 21			15	94.2 ✓	81.8	93.4 0.2
49 51 ✓			24	189.1+	176.0	94.2
				94.6+		

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1896phae.proj..532w

Jan. 14, 1896.

	14	52	35		78.0	
52 44			44	96.2	174.8	
-2 21			53	93.8	80.7	
50 27			59	154.5		
				94.4	172.7	0.2
		53	5		85.3	
53 10			14	92.4	173.7	
-2 21			21	91.7	82.0	
50 37			31	150.1		0.0
			40	90.0	173.7	
					81.8	
53 55			49	94.9	176.7	
-2 21				96.6	80.2	
51 34		54	00	191.5		0.2
			11	95.2	176.8	
			20		81.0	
54 31			27	94.1	175.1	
-2 21			35	94.5	81.7	
52 10			43	188.6		0.2
			52	94.3	176.2	
					79.3	
53 09		55	00	97.4	176.7	
-2 20			18	97.2	77.0	
52 49			27	195.2		0.3
			36	97.6	174.8	
					82.1	
55 44			44	91.1	173.2	
-2 20			52	93.0	80.2	
53 24		56	00	184.1		0.1
			9	92.0	173.2	
			17		83.8	
					174.3	

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1896phae..proj..532w

Jan. 14, 1896.

14 56 22	14	5-6	27	90.5+ 82.2.	
-2 20			35	176.0	0.1
54 02			44	80.9	
14 56 54			50	177.9	
-2 20			58	83.0	0.1
54 34		57	6	171.0	
07 32			14	88.9	
-2 20			25	176.0	
55 12			41	83.8	0.1
			47	174.0	
			54	84.0	
57 05		58	1	174.0	
-2 20			10	86.0	
54 45			15	171.0	0.1
			23	83.0	
57 34			31	173.0	
-2 19			39	87.0	
55 15			45	172.7	0.1
			54	85.0	
59 07		59	00	172.3	
-2 19			13	81.0	0.0
56 48			20	172.8	
			29	87.4	
59 44			36	171.2	
-2 19			50	79.2	0.0
57 25			59	174.8	

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1896phae.proj..532w

Jan. 14, 1896.

	15	00	15		81.7	
15 00 27			23	94.1+	175.8	
-2 19				2.0+		
14 58 09			33	96.1+	83.0	
			42	91.0	171.0	0.0+
			54		83.0	
15 01 07		1	3	2.0	171.0	
-2 19				6.3+		
14 58 48			12	174.3+	83.8	0.1+
			19	7.2+	170.1	
			28		81.7	
15 01 42			38	91.3+	173.0	
-2 18				9.3+		
14 59 24			48	100.6+	85.0	
			54	90.3+	174.3	0.0+
		2	14		80.8	
02 27			22	89.2+	170.0	
-2 17				90.3+		
15 00 09			31	179.7+	83.0	0.0+
			42	89.8+	173.5	
			50		82.0	
03 04			57	89.6+	171.6	
-2 18		3	10	92.7+	81.0	
15 00 46				182.3+		0.0+
			17	91.2+	173.7	
			27		82.4	
03 44			34	87.8+	170.2	
-2 18				95.0+		
15 01 26			54	182.8+	80.0	
		4	00	91.4	175.0	0.1+
			51		77.5	
			59		175.8	

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1896phae.proj..532w

Jan. 14, 1896

15 05 04	15	5	8	92.3 27.1	82.7	
-2 16			18	155.4 92.7	169.8	0.1
15 02 46			25		82.0	
15 05 86			32	91.2	173.2	
-2 17			40	91.2	80.2	
15 03 19			46	183.0 91.5	172.0	0.1
			56		82.0	
15 06 08		6	3	88.2	170.8	
-2 17			14	87.7	84.0	
15 03 51			21	176.5 88.2	171.7	0.1
		7	4		83.0	
07 16			12	88.7	171.7	
-2 17			21	90.9	82.1	
04 59			29	179.6 89.8	173.0	0.0
			38		82.2	
07 50			44	88.2	171.0	
-2 17			53	94.0 172.2	81.0	0.1
05 33		8	4	91.4	175.0	
			19		81.8	
05 30			26	91.2	173.0	
-2 16			33	88.6	85.0	
06 14			40	173.6 87.9	169.6	0.1
			47		84.0	
05 57			54	89.2	168.9	
-2 16		9	00	173.7 86.8	83.2	0.1
06 41			8		172.0	

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1896phae.proj..532w

Jan. 14, 1896

	15	9	20		82.2	
15 09 30			25	29.7+	170.0	
-2 16				9 0.2+	82.0	0.0+
07 14			35	176.6+		
			42	29.3+	172.8	
					83.8	
			59			
10 10		10	6	29.0+	172.8	
-2 16				27.5+		0.1+
07 54			14	176.5+	85.0	
				25.2+		
			19		172.5	
					86.1	
			27			
10 40			35	23.9+	169.0	
-2 16				26.5+		
			45	169.7+	85.5	0.2+
08 24				24.9+		
			53		172.0	
					83.0	
		11	2			
11 14			9	21.0+	171.8	
-2 16				24.7+		0.1+
08 58			18		85.0	
				173.2+		
			25	26.6+	169.4	
					84.0	
			32			
11 45			39	27.0+	171.0	
-2 16				29.2+		
09 29			49	176.2+	84.8	0.1+
				27.1+		
			59		174.0	
					86.2	
			10			
		12				
12 24			19	20.0+	167.0	
-2 15				23.0+		
10 09			28		84.0	0.3+
				163.2+		
			38	21.9+	167.0	
					83.8	
			46			
			53		167.2	

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1896phae..proj..532w

Jan. 14, 1896.

15 12 57	15	13	00	23.4		
− 2 15				75.5	88.7	
15 10.42			10	19.4	64.2	0.4
			18	79.4	85.0	
15 13 29			25	20.7	165.8	
− 2 15				74.3		
11 14			33	13.1	90.7	0.5
			39	77.6	165.0	
			51		85.7	
13 56		14	3	23.5	169.2	
− 2 15				79.1		
11 41			12	162.6	85.0	0.3
			20	21.3	164.1	
			28		90.8	
14 44			37	76.2	167.0	
− 2 15				78.6		
12 29			53	13.4	86.2	0.6
			59	77.4	164.8	
		15	6		92.0	
15 16			12	70.0	162.0	
− 2 14			19	71.6		
13 02				141.6	94.4	
			26	70.8	166.0	0.7
			33		93.5	
15 45			42	68.3	162.0	
− 2 14			49	62.0		
13 31				136.5	91.0	0.8
			56	65.2	159.0	
		16	3		93.2	
16 15			12	70.6	163.8	
− 2 14			19	63.2		
14 01				133.8	95.2	0.9
			26	66.9	158.4	

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1896phae.proj..532w

Jan. 14, 1896.

15	16	46	15	16	35	98.0	
	-2	14			43	66.0 164.0	
	14	32			50	59.7 99.3	1.1
					55	125.7 159.0	
				17	2	62.4 101.9	
	17	15			13	53.2 155.2	
	-2	14			20	53.7 100.0	1.4
	15	01			27	109.0 155.7	
					35	54.5 102.5	
	17	44			41	51.5 154.0	
	-2	14			46	49.2 101.7	1.6
15	15	30			54	101.3 151.5	
15	15	47		18	1	50.6 107.2	
		53			7	155.8	
	16	02			16	106.2	
		09			23	149.8	
		16			30	106.0	
		23			37	148.1	
		30			44	108.7	
		37			51	144.9	
		44			57	110.2	
		51		19	4	140.3	
	17	00	01		14	114.2	
		06	07		20	139.4	
		13	14		27	115.5	
		23	24		37	138.0	

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1896phae..proj...532w

Jan. 14, 1896.

15 17 36	15	19	49	114.2
42			55	138.0
52		20	5	117.7
18 01			14	134.0
13			26	120.1
26			39	134.2
32			55	120.7
42		21	5	135.0

Not seen later.

Limit of Visibility.

	15	21	29	121.2
15 21 44			38	134.0
2 13			48	121.7
15 19 31			59	132.0

12.5
10.3
23.1
11.6

Seeing pretty good. Sat. dia. rather close to limit. of Jup.

Comp. of Chron.

Bal 102 B+C 1182

15	27	00.0	15	29	10.6
15	28	00.0	15	30	10.1

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1896phae.proj..532w

Jan. 15. 1896. (Wednesday)

A. & D. 9 v. s.

6 12 K.0
13 4.0

Ballon 103.

6 12 0.0
13 0.0

Disappearance of Jupiter I. Phot. R
N. obs.
Steward & Bisbee readers.

6	34	04	169,7		96.3		
6 34 21 K		16	266.0	1	96.3	95.1	
6 34 17		28	171,7		94.3	95.1	
		37	266.8		95.1	-0.2	
6 35 8		50	170.8		95.0	95.2	
05 4 K	35-	02	266.0	2	95.2	96.9	
		13	170.8		95.2	96.0	
		26	267.7		96.9	-0.3	
6 36 12	36	00	170.8		96.9	93.9	
36 8		08	264.7	3	93.9	94.8	
		15-	172.0		92.7	94.0	
		27	266.0		94.0	-0.2	
6 36 v9		35-	170,3		95.7	93.9	
36 v v		47	264.2		93.9	94.3	
						94.1	
	37	12	170.2	4	94.0		
		23	264,5-		94.3	-0.2	
		36	173.1		91.4	89.5	
6 37 v6		48	262,6		89.5	89.9	
37 v2	38	02	173.0		89.6	89.7	
		16	262.9		89.9	.0	

Compared with nearest satellite on same (preceding) edge = Sat. III.

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1896phae.proj..532w

Jan. 15, 1896.

6 38 43 / 38 39	6	38	30	175.8	8 7.2
			35	263.0	8 4.1
			48	175.2	11.3
			58	259.3	8 5.6
					+ 0.2
6 39 34 / 39 30		39	10	178.7	8 1.3
			22	260.0	8 1.9
			48	176.3	8 1.6
			58	258.2	+ 0.3
6 40 33 / 40 29		40	15	176.7	8 4.3
			24	261.0	8 6.2
			39	174.7	10.5
			54	260.8	8 5.2
					0.2
6 41 22 / 41 18		41	03	174.3	8 7.0
			13	261.3	8 6.1
			31	176.0	8 6.6
			40	262.1	0.1
			51	176.2	8 3.6
6 42 4 / 42 0		42	00	259.8	8 1.3
			08	176.3	8 2.4
			19	257.8	0.3
6 43 52 / 43 48		43	35	175.2	8 5.0
			47	260.2	8 3.5
			56	175.0	8 3.2
		44	08	258.5	0.2
			58	1730	8 8.2
6 45 13 / 45 9		45	08	261.2	8 7.5
			19	176.2	8 7.6
					0.1

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1896phae.proj..532w

Jan 15, 1896

	6	45	27	263,2	
6:46 4			51	173.1	89.2
46 0			58	264.3 13	88 / 120
		46	09	176.0	86.0
			17	25[illegible]	+0.2
			42	176,1	86.9
6 46 54			49	263.0 14	87.0
46 50			56	174,2	87.0 / 0.1
		47	05	261,2	
6 47 34			21	170,0	97.0
47 30			30	267.0 15	92.5
			39	173,0	94.2 / -0.2
			45	264.0	
6 48 8			58	172,0	87.5
48 4		48	04	259,5 16	87.3
			12	172.5	87.4
			19	259,8	+0.1
6 48 45			33	177,3	84.5
48 41			40	261,8	86.1
			50	177,8 17	85.3
			56	263,9	+0.2
6 49 18		49	04	179,8	80.0
49 14			10	259,8 18	79.7
			20	177.1	79.8 / 0.4
			37	256,8	
6 49 57			49	175,9	86.1 / 0.1
49 53			53	262.0 19	81.2
		50	00	178.0	83.6
			5	2592	
			15	180.0	0.2

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1896phae.proj..532w

Jan 15, 1896.

6 50 26					
50 22		24	25 5.2	75.2	
		30	182.8 20	74.7	0.6
		36	25 7.5	75.0	
6 ~~50 35~~	50m	(39 5) = ~~34~~	1763	81.1	
6 50 ~~47 42~~		46	25 7.4	85.2	0.3
47 50		54	172.8 21	83.2	
51 3	51	4	25 7.2		
6 51 20		10	174.9	84.4	
16		17	25 9.3	80.3	
		25	1810 22	82.4	0.3
		30	2613		
6 51 50		38	1805	83.5	
46		46	2640	79.6	
		54	1832 23	75.1	
		00	25 4.8	77.6	0.5
6 52 2	52	06	181.2	70.1	0.8
9		13	25 1.3	74.1	0.6
14		18	176.2	76.8	0.5
21		25	253.0	73.2	0.6
28		32	179.8	77.2	0.5
31		35	25 7.0	74.0	0.6
37		41	183.0	69.0	0.8
44		48	25 2.0	73.2	0.6
50		54	178.8	72.2	0.7
58	53	2	25 1.0	64.2	1.0
53 4		8	186.8	59.0	1.2
10		14	245.8	60.6	1.2
17		18	185.2	68.8	0.8
24		28	254.0	71.0	0.7

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1896phae.proj..532W

Jan. 15, 1896.

6	53	31.	6	53	35.	183.0	67.8 0.9
		39.			43	250.8	58.8 1.2
		47.			51	192.0	50.0 1.7
		56.		54	00	242.0	51.2 1.6
	54	5.			9	190.8	53.4 1.5
		13.			17	244.2	53.2 1.5
		26.			30	191.0	42.0 2.1
		35.			39	233.0	44.6 1.9
		44.			48	187.5	47.4 1.8
	55	2.		55	6	235.9	

Not seen later. limit of visibility

					42	197.0	
6	55	56.			51	234.0	42.0<
		52		56	00	194.8	39.6< 2.15<
					13	234.1	81.6<
							40.8
							2.1

Altitude low. Images constantly boiling and flurry. Satellite disappeared close to limb of planet. These conditions probably caused the sat. to be seen not quite as late as it otherwise would have been.

Mr. Steward recorded during most of the eclipse and then as Rich had come he recorded for the balance thus making Mr Steward to go to the 12th.

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1896phae.proj..532W

1

Jan. 14. 1896.

		A. + D.	g v f.		Ballon	103.
7	11	4.4		7	11	0.0
	12	4.5			12	0.0

---

o Ceti.

2	4
3	20
1	16

$-2.^{\circ}5$

Index to night + above.

	1 2 3.3			
7 30	1 3 2.1	8.8 <		
	1 2 3.7	8.3 <		
	1 3 2.0	17.1 <	5.63 <	
	1 2 3.5			
7 32	1 3 2.4	8.9 <		
	1 2 3.5	9.5 <		
	1 3 3.0	18.4 <	5.47 <	
			5.55	

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1896phae.proj..532w

Jan. 15, 1896.

Index to left + below

	213.9			
7 34	222.9	9.0 <		
	212.6	9.6 <		
	222[.0]^2	18.6 <	5.45 <	
	213.0			
7 36	222.1	9.1 <		
7 33 0	213.6	9.4 <		
4	223.0	18.5 <	5.46 <	
7 32 56			5.46	
			5.55	
			2101	
			5.505	

Measurment of faint comparison stars for R Cassiop with Photo. J. W. ols.

23 5-2 + 49.7

27 45

3 5-3m

~~H~~ comp with ~~H~~ Index above

	15-4.0			
8 19	217.5	63.5 <		
	148.0	82.3 <	0.27 <	
	230.3	16 5.8 <		

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1896phae.proj..532w

Jan. 15, 1896.

0.27

8 21

147.0
229.1
155.6
215.8

82.1 <
60.2 <
2.3 <
14

0.73 <
~~0.34~~
~~2 6 1~~
~~0.30 5~~
2 | 100
0.50

Index letters

9 21

235.4
309.2
241.4
304.5

73.8 <
63.1 <
136.9 <

0.84 <

9 23

4 | 35 24
8 51

204

241.6
305.5
236.0 ~~232.5~~
312.4

63.9 <
76.4 <
140.3 <

0.77 <
2 | 161
0.80 5

~~70~~
~~30~~
~~2 1 1 0~~
~~0.5 5~~

~~80~~
~~50~~
2 | 130
0.65

M =

~~D~~ comp with ~~M~~

Index above.

8 25

164.5
205.0
161.2
212.5

40 5 <
5 13 <
91.8 <

1.87 <

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1896phae.proj..532w

8 25

Jan. 16, 1896.

1.57

	161.7		
8 26	212.8	51.1 <	
	163.2	40.8 <	1.86
	204.0	91.9 <	1.86

Index below.

	243.5		
9 26	296.2	52.7 <	
	243.0	56.4 <	1.44
	299.4	109.1 <	

	243.5		
9 28	301.1	57.6 <	
8 56 0	243.9	51.4 <	1.44
	295.3	109.0 <	1.44
			1.86
			2)130
			$2m = 1.65$

δ^g comp with δ^m above

	171.0		
8 29	200.0	29.0 <	
	167.8	33.6 <	262
	205.4	66.6 <	

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1896phae.proj..532w

Jan. 15, 1896.

167.8 ~~169.8~~
8 3[0]' 207.4 ~~205.3~~ 39.6 <
171.9 30.5 < 2.50
202.4 70.1 < 2.56

Below

257.4
9 31 291.2 33.8 <
254.4 40.1 < 2.38
294.5 73.9 <

256.2
9 32 294.4 38.2 <
9 0 30 257.4 33.4 < 2.45
290.8 71.6 < 2(83
~~246.5~~
242

42
56
2(98
$\mathfrak{M}$ = 2.49

$\mathfrak{M}$'s comp. mth ~~M~~ m Index above.

175.6
8 3[illegible] 199.3 23.7 <
173.8 25.2 < 3.32
199.0 48.9 <

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1896phae.proj..532w

Jan. 15, 1896.

8 34 3.02 <

172.3
8 35 198.9 26.6 <
173.8 24.1 < 3.24 <
197.9 √ 0.7 < 3.28

Index below

259.8
9 35 288.9 29.1 <
260.5 32.5 < 2.80
293.0 61.6 <

260.0
9 38 290.0 30.0 <
264.1 259.4 25.4 <
289.5 √ 5.4 < 3.04

~~9 0 6~~
9 5 30

2.92
3.28
2 | 6.20
M = 3.10 <

Dp comp. with m.

Index above.

168.4
A 8 37 203.2 34.8 <
163.8 46.2 < 2.17
210.0 81.0 <

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1896phae.proj..532w

Jan. 15, 1896.

		164.5		
8	38	207.4	42.9 <	
		167.2	37.0 <	2.20
		204.2	79.9 <	2.18

Index ~~above~~ below

		259.8		
9	40	295.5	35.7 <	
		256.0	39.9 <	2.33
		295.9	75.6 <	

		254.5		
	9 41	292.4	37.9 <	
		254.6	41.6 <	2.21
9	9 0	296.2	79.5 <	

2.27
18
2(45
$\mathfrak{M} = 2.225$

r comp with ~~M~~ $\mathfrak{M}$.

Index above.

		166.0		
8	42	205.2	2	
		167.0	39.2	
		202.0	35.0	2.07
			74.2	

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1896phae.proj..532w

8 42

Jan. 15, 1896.

2.07

8 44

166.3		
202.3	36.0 <	
167.8	34.9 <	2.48
202.7	709 <	2 ⟌ 8 5
		2.425

258.2		
292.5	34.3 <	
258.5	33.5 <	2.58
292.0	67.8 <	

257.0		
289.5	32.5 <	
258.0 ~~290.5~~	32.2 <	2.69
290.2	64.7 <	2 ⟌ 127
		2.635

9 13

3 ⟌ 26 49

8 : 56.20

42 2.64

64

2 ⟌ 106

M = 2.53 <

t comp with m

Index above.

~~8 46~~

8 46

175.6		
194.5	18.9 <	
169.9	29.1 <	3.36
199.0	48.0 <	

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1896phae.proj..532w

Jan. 15, 1896.

336

8 49

172.3
196.1 23.8 <
173.5 20.3 <
193.8 44.1 <

3.5-5-
2(91
3.45-
6

Index letters

9 6

260.0
284.2 24.2 <
263.5 21.0 <
284.5 45.2 <

3.5-0

3 (26 41
8 53 40

264.3
285.1 20.8 <
263.0 22.2 <
285.2 43.0 <

3.61
2(11 1
3.5-0-0-
6

M = 3.51

8 52

In comp. with m Index above.

177.6
193.3 15.7 <
176.7 17.7 <
194.4 33.4 <

4.17-

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1896phae.proj..532w

8 52 Jan. 15, 1896.

417

	177.9			
8 53	194.0	16.1 <		
	178.5	13.3 <	4.45 <	262
	191.8	29.4 <		4.31

Index below

	269.6			
9 4	282.2	12.6 <		
	264.3	17.2 <	4.42 <	
	281.5	29.8 <		

	245.4			
9h 5m	282.0	16.6 <		
	268.2	15.0 <	4.29 <	271
4 | 35 54	283.2	31.6 <		4.3
8 58 30				6

150
54
234

436
431
217
4.345

m = 4.345

m comp. with m Index above.

	173.5			
8 55	196.3	12.8 <		
	169.0	32.1 <	3.01 <	
	201.1	44.9 <		

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1896phae.proj..532w

Jan 15, 1896

	172.4		
8 56	200.0	27.6 <	
	174.1	22.5 <	3.27 <
	196.6	50.1 <	3.51
			2|78 <
			3.39 <

Index below.

	2635	
8 59	285.5	22.0 <
	263.2	22.2 <
	285.4	44.2 <

	260.1		
9 1	286.0	25.9 <	
4|231	265.4	20.6 <	3.43 <
8 57 45.	286.0	46.5 <	2|98 <
			3.49 <

M = 3.44 <

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1896phae.proj..532w

Jan. 15, 1896.

Σ 100 3 Pisc.

~~M. obs.~~

1	07	+ 6.9
5	30	
4	43	

Abandoned Taylor.

Σ 289 33 ~~Arthur~~ Aristis.
Stewart. obs.

2	33	+ 26.5
5	5 5	
3	22	

Index to right and below.

10 15 Bta star dia. > 301.4
314.8 13.4 <
293.7 20.0 < 4.17 <
313.7 33.4 <

297.6
315.6 18.0 <
302.8 12.0 < 4.40 <
314.8 30.0 < 26-7
4.286

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1896phae.proj..532w

Jan. 15, 1896.

Index to left & above.

10 44

2 5 9

10 29 30

~~210.8~~ ~~45.6~~

224.4

~~212.5~~ 208.2

~~223.6~~ 227.3

13.6 <

19.1 <

32.7 <

4.21 <

~~B~~ 206.3

224.8

210.3

226.6

18.5 <

16.3 <

34.8 <

4.08 <

4.14

$\mathfrak{M}$ = 4.21

ξ 289 33 Arietis Harvard Obs.

Index to left and above.

11 05

211.7

225.4

206.8

225.3

13.7 <

18.5 <

32.2 <

4.20 <

209.9

225.8

209.8

224.4

15.9 <

14.6 <

30.5 <

4.37 <

4.31

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1896phae.proj..532W

Jan 15 1896

Index to right & below

11 21

2(26

11 13 0

301.7
315.8
298.8
314.3

18.1 <
15.5 <
29.6 <

4.43 <

299.0
315.7
299.7
315.0

6.
17.7 <
15.3 <
30.0 <
2

4.26 <
2(69
4.345
4.31

Im = 4.32

Comp of Chron

Bal. 103 A+L 958.

15 41 00.0 = 15 41 4.6
15 42 00.0 = 15 42 4.6

Dia. Jupr. II. Phot. R. on tel. Waite obs

Sat. II disappears at 16h 10m 32s Sy
A+L 958.

Sat close to limit of Jupr Seeing good.

Bal. 103 A+L 958.

16 18 00.0 = 16 18 4.6
16 19 00.0 = 16 19 4.6

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1896phae.proj..532w

(Thursday.) Jan. 16, 1896.

○ Cetc. Mt. Blo.

2 4 -2.5°
3 20
1h 16m

Index right + above.

	303.7			
7 23	312.0	8.3 <		
	304.2	8.7 <		
	312.9	17.0 <		5.64 <

	303.8			
7 24	312.9	9.1 <		
	302.9	10.0 < 9.1		
312.9	312.0	19.1 < 18.2		5.39 <

2 (103
4.5-1.5-

Index left + below.

	32.0		
7 24	42.0	10.0 <	
	34.1	8.6 <	
	42.7	18.6 <	5.45 <

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1896phae.proj..532w

Jan. 16, 1896.

5.33
5.45
2)78
5.39

33.1
42.6 9.5<
32.7 10.1<
42.8 19.6< 5.33<

5.39
5.52
2)91
5.455 <
5.46

MM = 5.455
MM = 5.46

Measurement of faint comparison stars for T Cassiopeiae with Photo. T. W. ob.

0 19 +55.9
3 50
3 31

r comp. with f. Index above.

34.1 33.9
48.3 14.2<
32.9 18.3< 4.22<
31.2 32 5<

31.2
50.2
34.5
50.3

19.0<
16.0<
3 50<

4.06<
4.14<

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Jan. 16, 1896.

2 with f. Index below.

9 18 17

123.3
141.5
1234
138.8

182 <
154 <
336 <

4.15 <

9 2 1 0

1233
141.9
125.8
139.5

18.6 <
13.7 <
323 <

4.24 <
239
4.19.5 <

911 = 4.17 <

5 comp. with f. Index aberr.

8 4 5 6

35.0 36.5
48.5 49.8
34.5 35.0
49.2 48.5

13.5 <
14.7 <
28.2 <

4.54 <

8 4 5 6

35.0
48.8
34.4
48.9

13.8 <
14.5 <
28.3 <

4.53 <
4.54 <

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1896phae.proj..532w

& 46
48

Jan. 16, 1896.

Switch f Index below. (4.54)

9 3 1/2

1 25.7
1 38.1 12.4
1 25.0 13.2 4.75
1 38.2 25.6

9 3 3/4

4 | 36 40
9 10 0

1 24.2
1 39.7 15.5
1 24.9 14.1 4.48
1 39.0 29.6 2 | 11 8
4.59

M = 4.56

g comp. with f. Index above.

8 5 3/4

30.2
51.8 21.6
33.3 16.2 3.89
49.5 37.8

8 5 5/6

33.6
51.5 17.9
31.9 19.1 3.94
51.0 37.0 2 | 18 3
~~5.916~~
3.92

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1896phae.proj..532w

8 5?
8 56

Jan. 16, 1896.

g with f Index below.

9 3 8

124.2
141.8 17.6 <
124.4 16.2 < 4.14 <
140.6 33.8 <
~~123.0~~

9 3 8

123.0
139.0 16.0 <
124.1 17.6 < 4.15 < 3.92 <
141.7 33.6 < 4.14 < 4.14 <
2 | 806
-4.03 <

4 | 37 6
9 16 30

f comp with g Index above.

23.8
8 5 9 62.9

t comp with f Index above

9 x²

38.0 –
46.0 8.0 <
36.2 9.0 – 5.64 <
45.2 17.0 <

9 5 6

35.5
46.5 11.0 <
34.6 11.8 < 5.00 <
46.4 22.8 < 5.32

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1896phae.proj..532w

9 2
9 6

Jan 16, 1896.

t with f. Index below.

	125.8		(5.32)
9 27	138.1	12.3 <	
	129.0	9.1 <	5.14 <
	138.1	21.4 <	

	127.3		
9 28	138.1	10.8 <	
463	126.5	9.5 <	5.26 <
9 15 30	136.0	20.3 <	5.20 <

M = 5.26 <

p comp with f. Index above.

	29.3		
9 8	5.5.1	25.8 <	
	27.5	31.2 <	2.98 <
	5.8.7	5.7.0 <	

	27.5		
9 8	5.6.5	29.0 <	
	30.5	25.9 <	3.07 <
	56.4	5.4.9 <	2(60 5. <
			3.025 <

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Jan. 16, 1896.

9 17

9 20

123.3
141.5
123.4
138.8

for s instead of p.

123.3
141.9
125.8
139.5

p corrupt with f corrections. Index below.

9 4 X²

117.9
145.4
118.4
145.7

7
2.4.5
27.3 c 3.07
5 3.8 c
4

9 4 5⁴

4 | 10 3
9 25 45

1 [3] 6.5
145.9
118.0
146.1

29.4 c
28.1 c
57.5 c

2.96 c
2 | 607
3.035

307
296
603
3.015

2
3.0 X
3.02
3.032

m =

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1896phae.proj..532w

Jan 16, 1896.

Variable in Ursae Minor N. obs.

15 50 +78.°2

6 5

9 45

2 15

Indy night.

10 2 3 variable disapp. } 16.2

58.7 42.5 <

18.2 39.6 <

57.8 82.1 < − 2.13 <

16.9

10 2 4 57.4 40.5 <

13.4 40.8 < 1.88 <

64.2 81.3 2.16

2(401)

Indy left. − 2.005 <

115.1

10 2 7 151.5 36.4 <

106.5 [109.1] 39.0 <

145.5 75.4 < − 2.33 <

107.0

10 3 8 1 146.0 39.0 <

106.4 41.4 <

147.8 80.4 < − 2.18 <

4(10) 2(5-1)

10 26 30 − 2.255-

2.00
2.56
2.28

M =

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Jan. 16, 1896. Thursday.

S Bootis Nobs.

14 16 +5° 4'.6

6 45

7 31

4 29

L 2 5 variable 35 K estimate 106

Jan 18, 1896. Saturday.

O Ceti.

24 −2° .5

3 35

1 31

Dudy to left.

	213.2		
7 35	222.7	9.5 <	
	213.1	8.8 <	
	221.9	18.3 <	5.48 <

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1896phae.proj..582w

7 35

Jan 18, 1896.

5.48

	213.0		
7 38	222.2	9.2	
	213.2	8.9	
	222.1	18.1	5.51
			5.50

Index right.

	304.0		
7 41	312.1	8.1	
	303.0	10.0	
	313.0	18.1	5.51

	303.0		
7 44	312.7	9.7	
4 18-8	304.2	8.0	
7 39 30	312.2	17.7	5.56
			5.54

M = 5.52

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1896phate.proj...532w

Jan. 18, 1896.

Comparison stars for T Cassiopeiae

0 19 + 5 5.9
4 15.
3 56

The interval between the two comparison stars p and q is too large, so star p" has been inserted, two nights between them.

8 19 p 5 p', p" 3 q,

r comp with f Index above.

8 31

34.1		
49.9	15.8 <	
36.2	11.5 <	4.61
47.7	27.3 <	

8 32

35.8		
49.5	13.7 <	
33.2	16.6 <	4.38
49.8	30.3 <	219.9
		4.495

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1896phae.proj.532w

f 31
s 32

Jan. 18, 1896.

Index Arm

		124.0		
9 16	143.8	~~142.0~~	19.8	
		123.5	17.3	3.93
		140.8	37.1	

		124.5		
9 19	150	140.0	15.5	
4 | 35 38	05	121.9	20.9	3.98
8 54 30	218	142.8	36.4	2 | 11
				3.955
				4.50
				2 | 846
				M = 4.23

s comp with f

Index above.

	37.5		
8 35	48.2	10.7 <	
	35.4	12.8 <	4.94
	48.2	23.5 <	

	34.9	12.9 <	
8 37	47.8	12.0 <	
	35.8	24.9 <	4.81
	47.8		2 | 175
			4.87 5

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1896phae.proj..532w

Jan. 18, 1896.

Index Arcs

	124.2		
4 32	138.7	14.5	
3 | 26 44 1.64	126.0	14.4	4.48
8 54 40	140.4	28.9	
	125.0		
	141.7	16.7	4.35
	126.4	14.1	2 | 83
	140.5	30.8	4.415
			4.58
			2 | 130
			4.65

t comp with f

Index above.

	36.8		
8 39	47.0	10.2 <	
	35.5	10.9 <	5.17
	46.4	21.1 <	
	36.8		
8 41	45.8	9.0 <	
	37.8	9.4 <	
	47.2	18.4 <	5.47
			5.32

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1896phae.proj. .532W

39
41

Jan. 18, 1896.

Index below

124.0		
139.6	15.6	
125.5°	12.0	5.12
137.5°	21.6	

(5.06)

127.0		
137.5°	10.5°	
126.6	12.2	5.01
138.8	22.7	2 | 13
		5.06 5°
		17.2 2
		2 | 38
		5.19

9 ~~42~~ 2

3 \| 26 42 | 162
8 54

g comp. with f

Index above

33.5°		
51.0	17.5°	
32.9	19.0°	3.97
51.9	36.5°	

8 43

34.6		
51.5°	16.9°	
34.0	16.5°	4.17
50.5	33.4°	4.07

8 45°

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1896phae..proj..532w

8 43
8 45

Jan. 18, 1896.

Indep Arbn.

	124.0		
9 27	140.2	16.2	
	123.4	16.6	4.21
	140.0	32.8	
	122.6		
9 29	140.2	17.6	
4) 36 24	123.2	16.9	4.10
9 6 0	140.1	34.5	2) 31
			4.15

16
2) 23
4.115

M = 4.12

1

p comp. with f.

Index above.

	28.4		
8 49	56.5	28.1 <	
	28.1	28.9 <	2.98
	57.0	57.0 <	
	28.5		
8 50	56.5	28.0 <	
30.5 ~~31.0~~		23.8 <	3.19
	54.3	51.8 <	2) 6 17
			3.085

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1896phae.proj..532w

8 49
8 50

Jan. 18, 1896.

Index below

9 9

119.2
145.8
117.5
148.2

26.6
30.7
57.3

2.96

9 11

4 | 35 59 | 8 59 45

180
59
239

116.4
146.1
119.9
144.8

29.7
24.9
54.6

3.07
2 | 603
3.01 5

M = 3.05

p' comp with f

Index above.

8 54

31.0
52.8
31.5
51.8

21.8 <
20.3 <
42.1 <

3.65

8 56

31.6
53.9
31.4
53.6

22.3 <
22.2 <
44.5 <

3.53
3.59

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1896phae..proj..532W

Jan. 18, 1896.

Index Nebr.

	120.3		
9 4	144.4	23.1	
	120.4	22.9	3.46
	143.3	46.0	
	120.8		
9 6	143.9	23.1	
	121.0	23.5	3.43
9 00	144.5	46.6	3.44

M = 3.52

3.5 g.

ϕ 4 variable variable

~~comp with~~ Index above

ϕ 4 variable variable 1.5 ϕ"

ϕ estimate 11.1

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1896phae.proj..532W

Jan. 18, 1896.

Measurements of 20 Vk + V 9° 24' 12" + 24.12
with Phot. R. Yr. obs.
+ 59.4

23 Vk +60.0
30 30
6 26

Index to right

rsd component disappears

10 33	275.7		
	341.6		
	271.0		
	336.0		
	279.5		
10 34	336.9	57.4 <	
	271.5	73.4 <	
	344.9	130.8 <	0.96 <
	268.5		
10 36	346.2	77.7 <	
	278.8	57.2 <	
	336.0	134.9 <	0.88 <
		Index to left.	0.92
	9.1		
10 38	66.6	57.7 <	
	359.8	73.2 <	
	73.0	130.9 <	0.96 <

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1896phae.proj..532w

Jan. 18. 1896

	359.5		
1041	72.2	72.7 <	
4|149	7.1	61.1 <	
10 37 15	68.2	133.8 <	0.90 <
		m = 0.92	0.93
			.97

By the sys the 3rd star is the brighter.

5 Cassiop.

1	10	+72°.1
7	00	-
8	50	

stars t, u, and w seen, Stars x and y seen Variable thought to be certainly seen at intervals, and to be about 1.5 grades fainter than star y estimate 14.9

11h v

1896phae.proj..532w

Jan. 22. 1896. (Wednesday)

α Cephei Gr. Sid.

0 30 +01.8
1 √0
+1 20

Divided to left b

5h 52m	Var. dis	273.7	
		357.7	84.0 <
		273.8	
		349.0	75.2 <
			159.2 < −0.40 <

5 55		274.0	
		347.8	73.8 < −0.32 <
		270.1	
		358.0	87.9 <
I			161.7 < −0.35 <

Divided to right and a

5 58		174.7	
		264.8	90.1 <
		187.5	
		255.1	67.6 <
			157.7 < −0.43 <

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1896phae.proj..532w

Jan. 22, 1896.

6 00

4 | 22 5-

5- 5-6 15 <

186.4 67.3 <

253.7

177.3 86.7 <

264.0 154.0 < 0.50 <

4 | 168 <

M = +0.42 <

a

6 02 var. dis > 174.4

264.3 89.9 <

187.1 70.0 <

257.1 159.9 < −0.38 <

185.8

6 03 257.0 71.2 < −0.3F

176.2 88.9 <

265.1 160.1 < −0.36 <

II Index to left b

272.8

6 05 358.0 85.2 <

273.7 71.4 <

347.1 156.6 < −0.45 <

275.2

6 07 349.0 73.8 < −0.40

271.0 88.0 <

359.0 161.8 < −0.35 <

4 | 156

M = −0.39 <

4 | 17

6 4 15 <

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1896phae.proj..532w

Jan. 22, 1896

b

ran dis >

6 0 8	268.0		
	357.8	89.8 <	
	275.0	73.5 <	
	348.5	163.3 <	−0.32 <
6 10	275.2		−0.32
	348.8	73.6 <	
	269.8	89.4 <	−0.32 <
	359.2	163.0 <	~~0.30~~

III Index to night a

ran. dia. >

6 15	5.2		
	81.1	75.9 <	
	6.3	71.8 <	
	78.1	147.7 <	−0.62 <
6 17	5.8		
	75.9	70.1 <	−0.43 <
	359.1	86.9 <	
	86.0	157.0 <	−0.44 <
			4 (17 0 <
		M = +0.42	−0.425 <

6 (5-0 / 12 30 <

a

ran. dis. >

6 19	1.9		
	85.4	83.5 <	
	8.1	70.2 <	
	78.3	153.7 <	−0.60 <

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1896phae..proj...532W

Jan. 22, 1896.

~~11.9~~

~~var~~ D 4.2

6 20

81.9	77.7 <	−0.37
358.8	89.4 <	
88.2	167.1 <	−0.24 <

IV Index to left b

var. dis. > 84.0

6 22

173.0	85.0 <	
94.0	88.1 <	
172.1	173.1 <	−0.13 <

93.0

6 24

173.0	80.0 <	−0.22 <
92.5	83.2 <	
175.7	163.2 <	−0.32 <

4 | 8 5

6 21 15 <

4 | 17.9 <

gal = +0.30 0.298 <

var. dis. > 84.0 b

6 27

178.5	94.5 <	
83.0	87.4 <	
1704	181.9 <	
	178.1 <	+0.03 <

91.2

6 29

173.2	82.0 <	.00
81.2	96.5 <	
177.7	178.5 <	−0.3 <

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1896phae.proj..532w

6 27
6 29

Jan. 22, 1896.

V

Index to right a

6 32

168.1		
270.9	102.8 <	−0.11
177.8	85.3 <	−0.05
263.1	188.1 <	−0.03
	171.9 <	+0.03
		−0.29
		+0.03
		4|26
		−0.065

6 34

4\|12 2

6 30 30 <

180.1		
263.4	83.3 <	
168.8	102.8 <	
271.6	186.1 <	
	173.9 <	+0.11 <

m = +0.06

var dis > a

168.0		
273.4	105.4 <	
172.6		
264.3	91.7 <	
	1967.1 <	
	16 2.9 <	+0.32 <

6 36

6 41

175.0		
266.2	91.2 <	
167.9	106.8 <	+0.33
274.7	198.0 <	
	16 2.0 <	+0.34 <

VI

Index to left b

6 44

262.8		
5.8	103.0 <	
261.6		
358.9	97.3 <	
	200.3 <	
	159.7 <	+0.39

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1896phae.proj..532w

Jan. 22, 1896.

$m = +0.37$ (4 stars)

6 46	2637	
4 | 167	0,2	96.8
6 41 45<	2621	
	7,8	105,7 +0,41
		202.5
		157.5 +0.43

	2608	b
6 55	8.7	107.9 <
	2581	106.2 <
	4,3	214.1 <
		145.9 < +0.66
	2588	
6 57	4.2	105.4 < +0.70
	2587	112.9 <
	11.6	218.3 <
		141.7 < +0.74

VII

Index to right

	3537	a
708	97.7	104.0 <
	3531	101.2 <
	943	205.2 <
		154.8 < +0.48
	3549	
701	95.9	101.0 < +0.56
	3504	110.0 <
	100.4	211.0 <
		149.0 < +0.59

$m = +0.62$ (4 stars)

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1896phae.proj..532w

Jan. 22, 1896.

~~-0.48~~
~~-0.09~~

	vanish. >	349.2	a	
7 03		95.3	106.1 <	
		352.5	101.8 <	
		94.3	207.9 <	
			152.1 <	+0.53 <
		353.8		
7 06		94.2	100.4 <	
		347.1	111.4 <	+0.56
		98.5	211.0 <	
VIII			149.0 <	+0.59 <
	Index to left	b		
		72.9		
7 09		185.2	112.3 <	
		82.7	100.7 <	
		183.4	213.0 <	
			147.0 <	+0.63 <
		83.3		
7 10	$m = -0.59$	183.4	100.1 <	
4 28 <		73.4	111.9 <	+0.62
7 7 0 <		185.3	212.0 <	
			148.0 <	+0.61 <
				4236
	b Index to left + below			+0.59 <
		72.6		
7 13		187.1	114.5 <	
		80.5	103.5 <	
		184.0	218.0 <	
			142.0 <	+0.73 <

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1896phae.proj..532w

Jan. 22, 1896.

		79.4		
7	15	182.8	103.4 <	
		72.0	115.5 <	+0.7F
		187.5	218.9 <	
			141.1 <	+0.75 <

IX a Index to night + above.

		161.0		
7	18	281.8	120.8 <	
		164.0	109.0 <	
		2730	229.8 <	7 <
		~~1644~~	130.2 <	+0.98

		1644		
7	20	276.2	111.8 <	
		157.1	123.4 <	+0.03
		280.5	235.2 <	
	4 66		124.8 <	+1.09 <
7	16 30 <			435-4 <
			a	Gh = +0.885 <

		347.5		
7	27	101.5	114.0 <	
		347.0	115.0 <	
		102.0	229.0 <	
		~~346~~	131.0 <	+ 0.96 <
		346.6		
7	30	101.8	115.2 <	
		353.5	98.9 <	+.41
		92.4	214.1 <	
			145.9 <	+ 0.66 <

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1896phae.proj..532w

27
30

Jan. 22, 1896

X

Index to left + below. b

	82.8		− 0.96
			− 0.66
7 33	184.6	101.8 <	
	70.5	120.0 <	
	190.5	221.8 <	
		138.2 <	+ 0.81 <
	73.2		
7 35	186.9	113.7 <	
	80.7	100.7 <	+ 0.74
	181.4	214.4 <	
		145.6 <	+ 0.66 <
		4)309	
		+ 0.772	

Index below. b

	77.0		
8 52	184.1	107.1	
	73.8	112.4	+ 0.76
	186.2	219.5	
		140.5	
	76.8		+ 0.76
8 54	185.0	109.9	
	76.0	109.0	+ 0.75
	185.0	218.9	
		141.1	

XI

Index above. a

	164.5		
8 57	278.6	114.1	
	159.5	116.0	+ 0.98
	275.5	230.1	
		129.9	

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1896phae.proj...532w

Jan. 22 1896

	159.6			+0.97
8 58	274.6	115.0		
4 | 21	165.7	114.2	+0.96	
8 55 15	279.9	229.2	4 | 3 85	
		130.8	+0.862	

Index above. a

	165.7		
8 59	280.7	115.0	
	160.0	116.6	+1.01
	276.6	231.6	
		128.4	

	~~158.8~~		+0.96
~~9 2~~	~~276.7~~		
	160.0		
9 7	275.5	115.5	
	165.3	113.5	+0.96
XII	278.8	229.0	
		131.0	

Index below b

	75.1		
9 10	182.5	107.4	
	74.6	112.6	+0.77
	187.2	220.0	
		140.0	

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1896phae.proj..522W

8 59
9 7
9 10

January 22, 1896.

−1.01
−0.96
−0.77

~~25 8.3~~
~~25 1.5~~

+0.86

9 14

13.2	121.7 *	
25 9.2	107.3	+0.96
6.5	229.0	4370
	131.0	+0.925 <

4|36 30
9 7 30 <

b

9 16

25 6.5		
6.0	109.5 <	
25 3.7	119.1 <	+0.95 <
12.8	228.6 <	
	131.4 <	

+0.96

9 18

249.5		
12.0	122.5 <	
25 9.5	107.5 <	+0.98 <
~~7.0~~	230.0 <	
	130.0 <	

XIII

2nd exp about a

9 21

346.7		
97.5	110.8 <	
347.6	113.6 <	+0.86 <
101.2	224.4 <	
	135.6 <	

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1896phae.proj..532w

Jan. 22, 1896

9 22

4(7 7

9 19 15 <

3 50.0
1 00.5
3 49.7
9 5.5

1105 <
1058 <
216.3 <
143.7 <

+0.70 <
4(349 <
+0.872 < = m

+0.7

9 27

3 50.2
97.2
349.5
101.3

a

1070 <
111.8 <
218.8 <
141.2 <

+0.75 <

+0.72

9 29

3 51.0
100.5
349.0
95.8

109.5 <
106.8 <
216.3 <
143.7 <

+0.70 <

XIV

Index below 5 <

9 31

78.4
183.5
73.7
182.8

105.1 <
109.1 <
214.2 <
145.8 <

+0.66 <

+0.6

9 02

4(11 9

9 29 45 <

73.5
186.0
79.2
183.2

112.5 <
104.0 <
216.5 <
143.5 <

+0.70 <
4(281 <
+0.703

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1896phae.proj..532w

Jan. 22, 1896.

Index ~~above~~ below b

	78.6		
9 34	186.4	108.4 <	
	75.5	109.1 <	+0.72 <
	184.6	217.5 <	
		142.5 <	

+0.64

	76.5		
9 35	184.0	107.5 <	
	79.3	101.5 <	+0.56 <
	181.8	209.0 <	
		151.0 <	

XV

Index above a

	166.5		
9 38	276.5	110.0 <	
	161.5	111.3 <	
	272.8	221.3 <	+0.80 <
		138.7 <	

	165.0		+0.76
9 39	274.0	109.0 <	
	166.1	110.4 <	
	276.5	219.4 <	+0.76 <
		140.6 <	4)284 <
9 36 30 <			M = +0.71 <

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1896phae.proj..532w

Jan. 22, 1896.

Index ~~above~~ ~~below~~ ~~Index below~~ a

	356.0		
9 55	87.0	91.0 <	
	357.5	96.5 <	+0.14 <
	94.0	187.5 <	
		172.5 <	

+0.10

	357.0		
9 56	90.9	93.9 <	
	357.8	89.2 <	+0.06 <
	87.0	183.1 <	
		176.9 <	

Index below. b

	89.1		
9 59	177.6	88.5 <	
	83.4	92.1 <	+0.01 <
	175.5	180.6 <	
		179.4 <	

-0.04

	85.3			
10 00	175.6	90.3 <		
4 (230	88.9	84.7 <	−0.09 <	4 | 30
9 57 30 <	173.6	175.0 <		+0.07

M = +0.08

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1896phae.proj..522W

Jan. 22, 1896.

Index below b

10		90.6	
9	2	174.7	84.2
		86.7	88.3
		174.0	172.5

mean ±0.14

−0.16

10		86.0	
9	3	174.0	89.0
		91.3	80.9
		172.2	169.9

mean ±0.19

Index above. a

		175.4	
10		270.2	94.8
9	6	170.5	95.7
		266.2	190.5
			169.5

−0.20

mean ±0.20

mean −0.18

		171.0	
10		266.4	95.4
8	7	176.2	93.6
		269.8	189.0
			171.0

4 18

1.0 4 30

−0.17

+0.17

+0.37 mean

+0.33

+4 04 −0.17

M = +0.01

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1896phate.proj.:532w

Jan 22, 1896.

Index above. a

	178.8			
10 10	269.0	90.2 <		
	168.8	95.2 <	− 0.10	
	264.0	185.4 <	+0.10 <	
		174.6 <		
				−0.06
				+0.04
	173.5			
10 13	265.6	92.1 <		
	179.0	86.8 <	0.02 <	
	265.8	178.9 <		

Index below b

	171.0			
10 17	270.8	99.8 <		
	172.0	93.0 <	− 0.24	
	265.0	192.8 <	+0.24 <	
	T	167.2 <		
				−0.30
				+0.30
	170.4			+0.17
10 19	266.8	96.4 <	− 0.36	mean
4 19	170.7	102.7 <	+0.36	−0.18
10 14 45 <	273.4	199.1 <	+0.06 <	
		+0.9 <	+0.90	
		160.9	+0.02	
			4.88	
			+0.22 <	

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1896phae.proj..532W

Jan. 22, 1896. ∠

Index lower. b

	170.3		
10 21	273.2	102.9 ∠	
	171.5	96.2 ∠	∓0.36 ∠
	267.7	199.1 ∠	
		160.9 ∠	

Prob. wrong image dis.

	170.4		
10 23	267.3	96.9 ∠	−0.39 ∨
	168.3	105.1 ∠	
	273.4	202.0 ∠	∓0.42 ∠
		158.0 ∠	

Index above. a

	5.0		
10 25	77.7	72.7 ∠	
	4.0	80.5 ∠	∓0.51 ∠
	84.5	153.2 ∠	
	~~4.2~~		

−0.56 ∨

−0.46

	4.2		
10 27	85.0	80.8 ∠	
	8.0	69.8 ∠	∓0.56 ∠
10 24 0 ∠	77.8 ~~75.6~~	150.6 ∠	

+1.07
+0.78
429
+0.07

M = +0.07

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1896phae.proj..532w

Jan. 22, 1896. <

Index above. a

	8.2		
10 33	77.0	68.8 <	
	5.0	77.4 <	∓0.65 <
	82.4	146.2 <	

−0.66

	4.5		
10 34	82.4	77.9 <	
	7.9	68.0 <	∓0.66 <
	75.9	145.9 <	

Index below b

	97.5		
10 36	166.9	69.4 <	
	94.0	74.9 <	∓0.69 <
	168.9	144.3 <	

−0.64

	92.7		
10 37	169.2	76.5 <	
	98.4	68.6 <	∓0.67 <
10 35 0 <	167.0	145.1 <	4|27

M = +0.668

M = +0.67

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1896phae.proj..522W

Jan. 22, 1896.

Index below b

	96.0		
10 40	166.5	70.5 <	
	93.4	76.5 <	± 0.63 <
	169.9	147.0 <	

−0.70

	95.1		
42	168.1	73.0 <	
	94.1	67.0 <	± 0.77 <
	163.1	140.0 <	

Index above. a

	184.5		
10 44	261.8	77.3 <	
	180.0	78.9 <	± 0.45 <
	258.9	156.2 <	

−0.46

	178.8		
10 45	259.7	80.9 <	
	186.0	75.2 <	± 0.46 <
	261.2	156.1 <	4 (231

10 42 45 <

4 (11

$\delta x = -0.578$

$M = \pm 0.58$ <

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1896phae.proj..532w

Jan. 22, 1896.

Index above a

	11.5		
11 5	71.9	60.4 <	
	11.0	65.1 <	± 1.07 <
	76.1	125.5 <	

−1.08

	11.0		
11 7	78.0	67.0 <	
	13.3	57.7 <	± 1.09 <
	71.0	124.7 <	

Index below b

	1024		
11 10	161.2	58.8 <	
	94.9	67.9 <	± 1.05 <
	162.8	126.7 <	

−1.06

	95.0		
11 12	162.8	67.8 <	
	103.3	57.2 <	± 1.08 <
11 8 30 <	160.5	125.0 <	429
			−1.07

M = 1.07

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1896phae.proj..532W

Jan. 22, 1896.

Index below b

		102.7		
11	13	162.7	60.0 <	
		95.8	68.2 <	∓1.02 <
		164.0	128.2 <	

−1.06

		95.5		
11	14	164.1	68.6 <	
		104.0	56.1 <	∓1.09 <
		160.1	124.7 <	

XXII

Index above a

		190.9		
11	16	256.4	64.5 <	
		186.0	69.2 <	∓0.90 <
		256.2	133.7 <	

−0.86

		181.0		
11	17	256.5	75.5 <	
		192.1	62.7 <	∓0.81 <
11	15	254.8	138.2 <	4)382
				−0.95

M = ∓0.96 <

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1996phae.proj..532w

Jan. 22, 1896.

Index above. a

	192.8		
11 24	264.3	61.5 <	
	186.6	68.3 <	∓ 0.98 <
	263.8	129.8 <	

−0.9K

	186.6		
11 25	266.2	69.7 <	
	190.0	63.6 <	∓ 0.91 <
	263.6	133.3 <	

Index below b

	283.6		
11 27	344.1	60.6 <	
	274.2	74.6 <	∓ 0.87 <
	[2]348.8	135.2 <	

−0.80

	275.9		
11 28	348.6	72.6 <	
	277.1	69.1 <	∓ 0.74 <
	346.2	141.7 <	4(350
			−0.875

M = ∓0.88

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1896phae.proj..532W

Jan 22, 1896 <

Index below b

	274.5		
11 32	348.5	74.0 <	
	284.0	5 5 5 <	± 0.99 <
	339.5	129.5 <	

-1.02

	284.8		
11 34	339.6	54.8 <	
	275.0	71.4 <	± 1.06 <
	346.4	126.2 <	

Index above a

	277.7		
11 36	345.7	68.0 <	
	286.4	53.2 <	± 1.17 <
	339.6	121.2 <	

-1.19

	286.2		
11 37	338.1	52.9 <	
	279.2	66.4 <	± 1.21 <
	345.6	119.3 <	

4 | 19

11 34 45 <

4 | 443

M = ± 1.11 <

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1896phae.proj..532w

Jan. 22, 1896.

Index bloor 5

	280.0		
11 38	344.5	64.5 <	
	285.9	54.1 <	−1.22 <
	340.0	118.6 <	

−1.20

	283.6		
11 40	340.4	56.8 <	
	280.3	63.9 <	−1.18 <
	344.2	120.7 <	

Index above a

	12.9		
11 41	75.6	62.7 <	
	15.9	50.6 <	−1.34 <
	66.5	113.3 <	

−1.26

	14.3		
11 43	69.8	55.5 <	
	12.4	63.3 <	−1.22 <
11 40 30 <	75.7	118.8 <	4|96
			−1.24

M = −1.24 <

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1896phae.proj..532w

Jan. 22, 1896

Index above a

11 45	12.5			
	73.6	61.1 <		
	15.3	5 1.5 <		+1.36 <
	66.8	11 2.6 <		
				-1.31
	16.5			
11 46	66.9	5 0.4 <		
	12.1	66.4 <		+1.26 <
	78.5	11 6.8 <		

Index below b

	100.5			
11 49	15 8.2	5 7.7 <		
	113.3	45 6 <		+1.5 8 <
	15 8.9	103.3 <		
				-1.44
	105.6			
11 50	15 8.5	5 2.9 <		
	100.2	61.4 <		+1.32 <
11 47 30 <	161.6	11 4.3 <		4(15 2
				-1.38

M = +1.38

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1896phae.proj..532w

Jan. 22, 1896.

Index Arbor b

	101.5		
11 51	163.2	61.7 <	
	105.6	51.6 <	±1.34 <
	157.2	113.3 <	

−1.33

	104.2		
11 54	159.8	55.6 <	
	101.5	58.7 <	±1.32 <
	160.2	114.3 <	

XXVII

Index Arbor a

	189.0		
11 51	252.8	63.8 <	
	195.3	53.7 <	±1.25 <
	249.0	117.5 <	

−1.20

	194.7	5	
11 57	249.2	±45 <	
4|18	186.0	63 <	±1.15 <
11 54 30 <	253.3	121.8 <	4|106
			−1.265

M = ±1.26 <

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1896phae.proj..532w

Jan. 22, 1896

Index above a

	187.7		
11 58	252.2	64.5 c	
	197.6	53.1 c	∓1.25 c
	250.7	117.6 c	

−1.20

	197.8		
11 59	254.0	56.2 c	
	186.7	66.1 c	∓1.14 c
	252.8	122.3 c	

Index below b

	279.7		
12 1	343.8	64.1 c	
	290.3	47.0 c	−1.39 c
	337.3	111.1 c	

−1.33

	287.9		
12 2	334.8	46.9 c	
	276.2	69.6 c	∓1.27 c
345.8	341.8	116.5 c	4(10.5 − 1.262

m = ∓1.26 c

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1896phae.proj...532W

Jan. 22, 1896.

Index below b

	277.8		
12 4	344.4	66.6 <	
	290.0	47.2 <	−1.33 <
	337.2	113.8 <	

−1.30

	288.5		
12 5	334.8	46.3 <	
	277.3	70.0 <	−1.27 <
	347.3	116.3 <	

XXIX.

Index above a

	12.2		
12 6	76.0	63.8 <	
	17.9	49.6 <	−1.34 <
	67.5	113.4 <	

−1.4 <

	20.0		
12 7	65.0	45.0 <	
	12.0	62.1 <	−1.49 <
	74.1	107.1 <	4|143
			−1.36 <

12 5 30 <

M = −1.36 <

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1896phae.proj..532W

Jan 27 1896

U Cephei

Each time of Minimum is $7^h\ 21^m$

0 30 81.7
2 30
2 00

Index to left + below b

I variable dis appears

6 9		168.9		
		262.2	93.3 <	
		176.3	77.2 <	
		253.5	170.5 <	− 0.18
		176.8		− 0.04
6 11		253.8	77.0 <	
		163.7	103.6 <	
		267.3	180.6 <	+ 0.01 <
			179.4 <	

Index to right + above. a

		252.1		
6 14		356.2	104.1 <	
		263.4	78.6 <	
		342.0	182.7 <	+ 0.05 <
			177.3 <	
		265.9		
6 15		345.0	79.1 <	+ 0.04
		250.6	107.2 <	
		357.6	186.3 <	+ 0.12 <
			173.7 <	

4 | 49

6 12.2 15
21.0
−1 8.8

+0.18
−0.18
0.00

m =

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Index to right + above a

II

6 17	250.5			
	358.0	107.5 <		
	265.3	79.2 <		
	344.5	186.7 <		+0.13 <
		173.3 <		
	264.6			+0.15
6 18	346.4	81.8 <		
	250.5	107.0 <		
	357.5	188.8 <		+0.17
		171.2 <		

Index to left + below b

	341.6			
6 21	91.7	110.1 <		
	352.0	85.8 <		
	77.8	195.9 <		+0.30
		164.1 <		

+0.32

	348.6		90.9	
6 22	79.5	90.8 <	107.2	= +0.34
	342.2	87.2 <	198.1	
	89.4	178.1	161.9	
		89		

6 19 30
7 21
−1 1.5

$m = +0.235$ (4194)

0.24

−0.03	
−0.03	
+0.60	
4 0.57	
+0.042	

m =

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1896phae.proj..532w

Jan. 27, 1896.

Index to left + below. b

III

6 24	342.8		
	88.6	105.8 <	
	349.5	91.2 <	
	80,8	197.0 <	+ 0.32 <
		163.0	

341.5	~~347.2~~		+ 0.36
	88.8	107.3 <	
348.5	~~261.4~~	94.3 <	
	82.8	201.6 <	
		158.4 <	+ 0,41 <

Index to right + above. a

	70.5		
6 33	182.4	111.9 <	
	78.2	95.2 <	
	173.4	207.1 <	+ 0,52 <
		152.9 <	

	79.8		
6 34	172.3	92.5 <	+ 0,40
	69.7	104.1 <	
	173.8	196.6 <	
		163.4 <	+ 0,32 <
		4 | 15 7	

m = + 0.392

6 91
6 30 20
7 21
− 0 50.7

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1896phae.proj..532W

Jan. 27, 1896.

Index to right + above a

IV

	68.7		
6 36	183.3	114.6 <	
	76.4	98.1 <	
	174.5	212.7 <	+0.63
		157.3 <	
			+0.68
	76.4		
6 37	176.3	99.9 <	
	66.8	118.4 <	
	185.2	218.3 <	+0.7[illegible] <
		151.7 <	

Index to left + below b

	159.2		
6 39	271.7	112.5 <	
	165.4	98.0 <	
	263.4	210.5 <	+0.5[illegible]
		149.5 <	
	164.5		+0.6 ~
6 40	264.0	99.5 <	
	156.6	114.2 <	
	270.8	213.7 <	
		156.3 <	+0.6 5 <
			4 | 260
		M =	+0.65

6 38 0
7 21
— 0 43

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1896phae.proj..532w

Jan 27, 1896

Index left + below b

V

	156.9		
6 42	271.4	114.5 <	
	164.6	99.9 <	
	264.5	214.4 <	+0.66 <
		114.6 <	
	163.2		+0.73
6 43	268.7	105.5 <	
	157.6	115.7 <	
	273.3	221.2 <	+0.80 <
		134.8 <	

Index to right + above. a

	67.0 ~~247.2~~		
6 45	186.2 ~~7.5~~	119.2 <	
	76.3	100.2 <	
	176.5	219.4 <	+0.76 <
		110.6 <	
	75.4		+0.70
6 48	174.2	98.8 <	
	67.3	114.7 <	
	182.0	213.5 <	+0.64 <
		116.5 <	

4(18

6 44 30

7 21

−0 36.5

4(286

M = +0.715

0.72

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1896phae.proj..532w

Jan. 27, 1896.

Ends to right + above. a

VI

6 49	68.0		117.6	
	185.6	117.6 <	105.9	+0.84
	74.9	195.9 <	223.5	
	180.8	233.5	136.5	
		126.5	~~+1.0~~	

	75.2		~~+0.89~~
6 50	177.0	101.8 <	
	66.5	116.1 <	+0.74
	182.6	217.9 <	+0.73 <
		141.1 <	

Ends to left + below. b

	155.4		
	271.8	116.4 <	
6 53	161.5	104.0 <	
	265.5	220.4 <	+0.72 <
		139.6 <	

	163.4		+0.77
6 54	266.9	103.5 <	
	155.5	116.0 <	
	271.5	219.5 <	+0.76 <
		140.5 <	

6 57 30
7 21
—0 29.5

4 | 332
= +0.83

M = 4 | 310
0.778

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1896phae.proj.532w

Jan. 27, 1896.

Index to left + below. b

VII

	158.1		
6 55	271.6	113.5 <	
	160.4	107.2 <	
	267.6	220.7 <	+0.79 <
		(39.3 <	
	160.7		+0.76
6 56	267.0	106.3 <	
	159.2	111.6 <	
	270.8	217.9 <	+0.73 <
		1[illegible] <	

Index to right + above. a

	264.6		
6 59	2.8	98.2 <	
	252.5	104.4 <	
	356.9	202.6 <	+0.[illegible]3 <
		157.[illegible] <	
	253.6		
7 00	356.0	102.4 <	+0.60
	244.6	116.8 <	
	1.4	219.2 <	
		1[illegible]0.8 <	+0.76 <
			4(271 <
		M =	+0.68 <

6 53 30

7 21

- 0 23 5

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1896phae.proj..532w

Jan. 27, 1896.

Index to right + above a

VIII

7 02	244.9			
	2.0	117.1 <		
	256.5	98.2 <		
	354.7	215.3 <	+0.68	
		144.7 <		
	253.2			+0.78
7 04	352.3	99.1 <		
	244.6	117.7 <		
	2.3	216.8 <	+0.71 <	
		143.2 <		

Index to left + below b

7 5	332.9			
	97.0	124.1 <		
	342.5	104.0 <		
	86.5	228.1 <		
		131.9 <	+0.9K <	
				+0.90
	342.2			
7 6	88.8	106.6 <	106.6	
	335.8	138.1	118.1	
	93.9	224.7	224.7	
		135.3	135.3	+0.47
4(17				4(320
7 4 15				m = +0.80
7 21				
-0 168				

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1896phae.proj..532w

Jan. 27, 1896.

Index to left + below b

IX

	337.4			
7 09	95.1	127.7	117.7	
	342.3	106.5	106.5	+0.86
	88.8	234.2	224.2	
		125.4	10 5.8	
			~~+.07~~	
	341.9			+0.90
7 10	91.0	109.1 <		
	335.2	118.8 <		
	94.0	227.9 <	+0.9K <	
		132.1 <		

Index to right + above. a

	67.0		
7 12	185.3	118.3 <	
	71.0	108.0 <	
	179.0	226.3 <	+0.90 <
		133.7 <	
			+0.86
	72.0		
7 13	179.4	107.4 <	
	67.8	114.7 <	
7 11 0	182.5	222.1 <	+0.92 <
7 21		137.9 <	4 | 323
-0 10			+0.93

Sky thickly clouded with no prospect of clearing.

4 \| 35-2
M = +0.88

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1896phae.proj..532w

Jan. 28, 1896.

U. Cephei 1 N. obs.

0	30	+ 81.7
4	00	
3	30	

o Ceti.

2	4	— 2.5
4	10	
2	6	

Clouds came so suddenly and so thickly that o Ceti could not be found.

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1896phae.proj..532W

Posted to here.

Jan 30. 1896 (Thursday)

o Ceti. M. obs.

2h 4m −2°.5
4h 10m
2h 6m

Index to right and above.

		342.5			
7	34	351.1	8.6 <		
		342.3	8.9 <		
		351.2	17.5 <	5.58 <	
		342.1			
7	35	351.2	9.1 <		
		342.1	8.5 <		
		350.6	17.6 <	5.57 <	

Index to left + below. 5.58

		70.5	~~70.8~~			
7	~~42~~ 37	79.5	~~88.9~~	9.0 <		
		70.0	~~70.5~~	8.8 <		
		78.8	~~89.3~~	17.8 <	5.54 <	
		~~70.4~~	~~70.5~~	72.9		
7	~~43~~ 40	~~78.3~~	~~74.9~~	82.3	~~7.9~~ 9.4 <	
		70.0		72.3	~~8.5~~ 9.0 <	
7	38 30	~~78.5~~		81.3	~~16.4~~ 18.4 <	~~5.72~~ 5.47

M = 5.54

5.50

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1896phae.proj...532W

Jan. 30, 1896.

U. Cephei W. obs.

0 30 +81.°7

~~4~~ 50

4 20

Index about to night.

I variable disappears

8 12	30.2			
	84.8	54.6 <		
	35.0	43.7 <		
	78.7	98.3 <		1.70 <
	35.2			
8 15	79.6	44.4 <		
	30.027	56.5 <		
	86.5	106.9 <		1.63 <

Index blurr and to left.

	109.1			
8 19	175.8	66.7 <		
	1264	43.6 <		
	170.0	110.3 <		1.41 <
	124.1			
8 ~~41~~ 2	167.3	43.2 <		
4(67	117.8	50.7 <		
8 16 45	173.5	98.9 <		1.68 <

$m = 1.60$

4(242
1.605

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1896phae.proj..532w

Jan. 30, 1896.

Index to left & below.

II

		117.6		
8	23	174.2	56.6 <	
		125.1	44.1 <	
		169.2	100.7 <	1.64 <

C

		124.4		
8	28	168.9	44.5 <	
		118.8	56.0 <	
		173.8	100.5 <	1.64 <

Index above and to right

		208.0		
8	32	264.8	56.8 <	
		214.7	46.5 <	
		261.2	103.3 <	1.58 <

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1896phae.proj..532w

Jan. 30 1896.

Index above and to right

III

8 34

4(117

8 29 15

212.2
262.0 49.8 <
2094 55.0 <
2644 104.8 <

II.

1.54 <

4(240
1.60

M =

208.5
8 34 263.9 55.4 <
213.4 47.6 <
261.0 103.0 <

1.58 <

34.1 ~~Index below and to left.~~
8 39 78.8 44.7 <
31.1 53.0 <
84.1 97.7 <

1.71 <

Index below and to left

119.5
171.9 52.4 <
8 42 123.4 46.8 <
170.2 99.2 <

1.68 <

122.6
8 43 169.5 46.9 <
118.0 55.0 <
8 39 30 173.0 101.9 <

III

1.61 <

4(25.8
1.645

M = 1.64

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1896phae.proj..532w

Jan. 30, 1896.

Index below and to left.

	IV	119.2		
8	46	174.0	54.8	
		124.8	44.7	
		169.5	99.5	1.67
		125.4		
8	47	169.5	44.1	
		116.4	57.2	
		173.6	101.3	1.62

Index above and to right.

		209.5		
8	50	263.0	53.5	
		212.5	49.3	
		261.8	102.8	1.59
		212.8		
8	51	261.8	49.0	IV.
8	48 30	209.0	54.2	
		263.2	103.2	1.58

4 (246
1.615

M = 1.62

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1896phae.proj..532w

Jan. 30, 1896.

Lindsay above and to right

V

	209.5		
8 53	264.2	54.7 <	
	211.4	47.6 <	
	259.0	102.3 <	1.60 <

	212.0		
8 54	260.4	48.4 <	
	207.8	57.3 <	
	265.1	105.7 <	1.52 <

Lindsay below and to left.

8 53	298.7		
	357.2	58.5 <	
	303.3	48.0 <	
	351.3	106.5 <	1.50 <

	304.2		V.
8 59	352.0	47.8 <	
	298.1	58.3 <	
4|19	356.4	106.1 <	1.51 <
8 54 45			4|213
			1.532

$\mathfrak{M} = 1.53$

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1896phae.proj..532w

Jan 30. 1896

Measurements of D.M. ~~+√-9 2ℓ10 and 2ℓ12~~ +√-9° 2ℓ10' and 2ℓ12' Weather.

~~VI~~

2 3 5-4 +6 0.0

3 0 .1 0

6 1 6

Index to right ~~and below~~

	2nd star disappears	34.2		
9 5-3		92.3	58.1 <	
		30.8	69.4 <	
		100.2	127.5 <	1.03 <
		31.0		
9 54		96.5	65.5 <	
		36.2	58.2 <	
		94.4	123.7 <	1.11 <
			Index to left.	1.07
		126.4		
9 5-2		184.3	57.9 <	
		122.5	65.6 <	
		188.1	123.5 <	1.12 <
		120.4		
10 1		189.1	68.7 <	
~~+(224~~		126.9	57.2 <	
9 5-6 0		184.1	123.9 <	1.07 <
				1.095-

M = 1.08

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1896phae.proj...532w

Jan. 30, 1896.

Σ 390 Camel 4 Hrs. Ht. do.

~~VII~~

3	20	+ 6°5.0
7	00	
8	40	

Position angle 160° dis. 15" mags 4.6 9.4

Index right + above

	bright disk	236.7		
10 20		251.2	14.5 <	
		237.6	13.7 <	
		251.3	28.2 <	4.54 <
		237.9		H.5.0
10 21		252.0	14.1 <	
		236.3	15.0 <	
		251.3	29.1 <	4.47 <
				4.50
			Index left + below	
		327.5		
10 23		341.2	13.7 <	Mean = 4.52
		327.4	13.8 <	
		341.2	27.5 <	4.59 <
		327.3		
10 25		340.5	13.2 <	H 5.4
4 [9]		326.5	15.7 <	
10 28 15		342.2	28.9 <	4.48 <
			~~M = 4.47~~	~~4.44~~

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1896phae.proj..532w

Jan. 30, 1896.

Σ 548 W. obs.

4	21	+ 30.°1
7	25	
3	4	

It would seem that this might be the pair wanted although the dis. of comp. does not agree with Doub. Stars Book. The following are the position angle and distance of the stars which will now be measured
P. A. 35° dis 18" Mag's 5.8 7.8

Index right + blow

	36.1		
10 43	91.0	54.9 <	
	44.0	40.9 <	1.76
	84.9	95.8 <	

182

	44.2		
10 45	84.6	40.4 <	
	38.9	51.1 <	1.87
	90.0	91.5 <	1.82

Index left + down

	127.5		
10 46	184.7	57.2	
	133.3	49.2	1.50
	182.5	106.4	

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1896phae.proj...532w

Jan 30 1896

M = 1.60

	115.0		
10 53	174.5	59.5	1.28
4 | 187	127.0	56.4	
10 46 45	183.4	115.9	1.39
			Mean 1.60

E 747 133 Orionis B Nebs.

5 29 — 6.1

7 45

2 16

P A 220° Dis 35" 5.6 6.7

Index to left ~~above~~.

brighter disap.	213.5		
11 3	273.9	60.4	
	207.5	74.6	0.58
	282.1	135.0	
	207.6		
11 4	283.7	76.1	
	211.7	64.3	0.77
	276.0	140.4	0.82

Index ~~above~~ to right.

	302.9		
11 5	7.3	64.4	
	297.2	76.8	0.75
	14.0	141.2	

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1896phae.proj..532w

Jan 3, 1896.

11 5	297.8	75.9	
	13.7	61.2	0.83
11 4 15	304.3	137.1	0.79
	5.6		

M = 0.80

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1896phate.proj...532w

Feb. 2. 1896. (Sunday)

A. + D. 9 + A. Ballon 103.

~~13 7 8~~

13 7 43.6 13 7 0.0
A 43.6 A 0.0

Resp. Jup. II. W. of E. Water rec. Phot. R.
Comp. with Sat. following Jup. some
three diameters of Jup. = Sat. I.

13 23 V1	13 23	29	200.8	L V	27.4
44		40	228.2		29.5
13 23 7		59	202.0		24.4
	24	15	223.5		3.3

13 31 ~~27~~	13 31	27	198.2	28.7	3.0
44		41	226.9	28.0	3.0
13 30 43		49	198.9	33.1	2.6
30 57		58	232.0	44.5	1.9
31 V					
31 14					

Incorrect comp. set. nearer limit of Jup.

31 25	32 9		187.5	51.1	1.6
34		18	239.0	30.9	1.6
43		27	188.1	49.7	1.8
49		33	235.8	47.6	1.8
13 31 VV		39	188.2	42.5	1.5

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1896phae.proj..532W

Feb. 2, 1896.

13	32	1.	13	32	45	240.7	1.5	4.0
		7			51	186.7	1.5	3.5
		13			57	240.2	1.3	6.9
		20		33	4	183.3	1.3	8.7
		25			9	242.0	1.3	7.9
		30			14	184.1	1.2	60.1
		34			18	244.2	1.1	62.2
		39			23	182.0	1.1	62.2
		45			29	244.2	0.9	67.4
		52			36	176.8	0.8	69.2
		59			43	246.0	1.0	65.1
	33	5			49	180.9	0.8	68.8
		10			54	249.7	0.8	69.9
		23		34	7	179.8	0.9	67.2
		31			15	247.0	0.9	68.0
		35			19	179.0	0.8	69.0
	33	43			27	248.0		
13	34	46			36	173.2		75.6
		44			42	248.8		70.0
	34	2			49	177.8	0.7	1. 72.8
					57	247.8		
	35	20		35	6	180.2		69.6
		44			13	249.8		68.8
	34	36			26	178.2	0.8	2. 69.2
					35	247.0		
					45	179.3		

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Feb. 2, 1896.

12. 35 55	13	35 50	249.3		70.0	
44		59	178.2	3.	68.0	0.8
35 11		36 6	246.2		69.0	
36 29		16	179.0		73.1	
44		24	252.1		70.3	
35 45		33	178.2	4.	71.7	0.7
		42	248.5			
13 37 2		50	177.1		69.9	
44		58	247.0		74.6	
36 18		37 6	175.2	5.	72.2	0.7
		13	249.8			
38 29		38 15	175.8		72.7	
44		25	248.5		77.9	0.6
37 45		33	174.9	6.	75.3	
		43	252.8			
39 6		52	176.2		75.9	
44		39 1	252.1		72.9	0.6
38 22		10	178.9	7.	74.4	
		19	251.8			
39 45		28	177.0		75.4	
44		37	252.4	8.	77.0	0.5
13 39 1		48	176.0		76.2	
		40 6	253.0			

Obs were somewhat delayed especially at the first by constant frost on eyepiece. Sat. also reappeared closer to limb of Jup. than was indicated by almanac necessitating readjusting of the image. Seeing fairly good

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1896phae.proj..532w

Feb. 2, 1896.

Comp. of Chromo.

A+L 958 Ballou 103.

13	49	44.0	=	13	49	00.0
13	50	44.0	=	13	50	00.0

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1896phae.proj...532W

Posted to here.

Feb. 4. 1896.

1 Cet. Lt. too.

2 ∠ −2.0
∠ V−0
+2 ∠6

~~227.0~~
~~237.5~~

Index right + above

	227.0		
7 30	236.0	9.0 <	
	224.0	8.0 <	
	236.0	17.0 <	5.64 <
	227.9		
	236.0	8.1 <	
	227.0	9.0 <	
	236.0	17.1 <	5.63 <
		Index left and below	5.64
	317.0		
7 50	325.7	8.7 <	
	317.2	7 8.8 <	
	325.0	16.5 <	5.71 <

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1896phae.proj..532W

30
50

Feb
~~Jan~~ 8 1896

Index left + below

	317.1		
7 52	325.1	8.0 <	M = 8.70
3 | 13 2	317.2	7.9 <	
7 44 0	325.1	15.9 <	5.79 <

75
6 E
139
57.695

Measurement ~~off~~ faint comparison stars for S Cephei Photo. I N. ds.

21 37 #78.3
29 45
8 8

Abandoned. for present.

I Cassiop.
Comp. Star p' compared with f.
Index below

32.0		
52.6	20.6 <	
31.9	19.1 <	
51.0	39.7 <	3.79 <
32.3		3.66
55.0	22.7 <	
30.7	22.1 <	
52.8	44.8 <	3.52 <

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1896phae.proj...532w

Feb. 8, 1896.

Cludy above.

122.0			
145.1	23.1 <		
120.9	21.2 <		
142.1	44.3 <	3.54 <	
			(+351)
119.6			
144.2	24.6 <		
123.6	21.0 <		
144.6	45.6 <	3.48 <	

M = 3.58

102
3.51
3.66
11 7
585

4) 2.33
.58

β 4 β'. β' 4 γ

S Cephei again.

21 37 + 78.3
30 30
8 53

Cloudy. Too cloudy to try any longer on this.

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1896phae.proj..532w

Feb. 8, 1896.

ε 5-33 H. V 72 Nebs.

4 16 +34.0
6 55
2 39

Pos. ang. 65° distance 20" Mags 6.1 – 7.7
Index to left.

	290.7		
9 36	352.7	62.0 <	
	291.9	58.2 <	
	350.1	120.2 <	1.19 <
	293.2		
9 38	347.3	54.1 <	
	290.1	60.5 <	
	350.6	114.6 <	1.31 <
	Index to right.		1.25
	20.2		
9 40	82.4	60.2 <	
	22.5	57.8 <	
	80.3	118.0 <	1.24 <
	22.7		
9 42	78.0	55.3 <	123
4 | 15 6	18.2	63.3 <	
9 39 0	81.5	118.6 <	1.22 <
	123		4) 4.96
			Mean 1.24 <

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1896phae.proj..532w

Feb 8, 1896

≦ 464 3 Per. M. ds.

3 46 + 31.5
7 20
3 34

Companion stars entirely invisible in clouds.

Measurements of D.M. +59° 2810 and 2812 M. ds.

2354
3130
736 +60.0

Sky thickly covered with clouds. No chance for anything further.

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1896phae.proj..532W

Feb. 10, 1896

o Ceti. Mols.

2 4 −2.°5
4 55
2 51

Index to right + above

		228.1	43.1		
7	25	235.5	55.3	7.4 < X 2.2	
		226.5	47.2	9.2 < 8.2	− 5.70 <
		235.7	55.4	16.6 < 10.4	5.25
			47.0		
7	27		55.4	8.4 <	
			47.5	8.1 <	
		55.6	56.2	16,5 <	− 5.71 <
				Index to left + below	5.70
			137.5		
7	29		144.9	7.4 <	
			137.1	7.8 <	
			144.9	15.2 <	− 5.89 <
			137.3		
7	30		145.2	7.9 <	
			137.7	7.5 <	
			145.2	15.4 <	− 5.86 <
	4	111			5.88
7	27	45			

M = −5.79

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1896phae.proj..532W

Feb. 10, 1896

T. Androm.

0	14	+26.°1
5	25	
5	11	

5	37	59.5
5	33	6.4
	1	6.9

~~37 21.3~~

5h	38m	24.s4
	39	16.1
		51.7

5h	38m	57.s5
	39	21.4
		23.5

Stopped by clouds in this region.

Measurement of D.M. +59° 2810 + 2812

23	54	+60.°0
30	15	
6	21	

All cloudy in this region.

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1896phae.proj..532w

Feb. 10, 1896.

Σ 8'6' cete 499 B. N. ds.

3 3 +7.°0
6 20
3 17

too cloudy.
Sky little clearer.
Pos. Ang 175° Dis 80" Magns 6.9 & 7.2
all cloudy again.
9 45 Sky thickly clouded no stars visible.

Feb 11, 1896

U. Cephei N. ds.

0 30 +81.°7
3 31
3 01

Index to left + below b

I comp. Star 189.1
6 1 disap. 259.7 70.6 <
187.3 78.2 < +0.60
265.5 146.8 <

188.8 +0.6K
6 3 263.1 74.3 <
190.0 clouds 69.7 < +0.69
6 1 259.7 144.0 <

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1896phae.proj...532w

Feb 14 1896

Index to right + above. a

clouds.

99.5

6 12	168.3	68.8 <		
	100.0	69.2 <	+0.81	
	169.2	138.0 <		+0.46
	~~1664~~			4 | 300
	100.4			+0.75
6 14	166.5	66.1 <		M = 0.75
6 7 30	160.3	67.9 <		
	168.2	134.0 <	+0.90	

II

	101.2		a	
6 17	166.2	65.0 <		
	100.5	68.0 <	+0.92	
	168.5	133.0 <		

98.3 +0.90

6 18	168.5	70.2 <	
	102.3	64.0 <	+0.89
	166.3	134.2 <	

Index to left + below b

	189.4		
6 21	259.5	70.1 <	
	185.8	78.2 <	+0.61
	264.0	148.3 <	

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1896phae.proj..532W

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Index to left + below b

	188.2			+0.63
6 23	262.4	74.2 <		
6 19 40	189.0	72.1 <	+0.65	
	261.1	146.3 <	4 (307	
			0.77 = m	

III

	186.7		b	
6 25	260.5	73.8 <		
	185.6	73.2 <	+0.63	
	261.8	147.0 <		
				+0.68
	189.4			
6 26	261.4	72.0 <		
	188.3	69.6 <	+0.74	
	257.9	141.6 <		

Index to right + above a

	278.3			
6 30	352.1	73.8 <		
	281.0	66.5 <	+0.77	
	247.5	140.3 <		
				+0.76
	283.0			
6 31	350.5	67.5 <		
	277.0	71.3 <	+0.80	
6 28 0	348.3	138.8 <	(294	
			0.74 = m	

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1896phae.proj..532W

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Index to right + above. a

IV

	276.5		
6 33	349.5	73.0 <	
	281.4	65.5 <	+0.80
	346.9	138.5 <	

+0.81

	283.2		
6 34	349.2	66.0 <	
	279.8	71.5 <	+0.82
	351.3	137.5 <	

Index to left + below b

	13.8		
6 36	77.8	64.0 <	
	8.7	69.1 <	+0.91
	77.8	133.1 <	

+0.92

	9.4		
6 38	77.8	68.4 <	
6 35 45	13.4	63.6 <	+0.94
	77.0	132.0 <	4)347
			0.87

$M = 0.87$

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Feb 11 1896

Index left + below b

V

	12.8		
6 40	76.3	63.5 <	
10.0 ~~2.6~~		69.0 <	+0.93
	79.0	132.5 <	
	~~9.1~~		
	a		+0.~~44~~
	9.1		
6 ~~43~~	78.3	69.2 <	
	9.1	68.7 <	+0.82
	77.8	137.9 <	

Index to right + above a

	102.6		
6 44	167.9	65.3 <	
	98.6	69.9 <	+0.87
	168.5	135.2 <	

+0.90

	98.4		
6 ~~45~~	168.8	70.4 <	
12	103.0	62.6 <	+0.92
6 43 0	165.6	153.0 <	4|354
		3	0.89
		8	0.885

M = 0.8~~9~~

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1896phae.proj...532w

Feb. 11, 1896.

Index to right + above. a

VI	100.5		
7 45	165.0	64.5 <	
	95.6	70.2 <	+0.88
	165.8	134.7 <	

+0.44

	97.9		
7: 47	170.5	72.6 <	
	102.2	62.0 <	+0.88
	164.2	134.6 <	

Index to left + below b

	191.0		
7 49	259.0	68.0 <	
	187.6	74.2 <	
	261.8	142.2 <	+0.73

+0.70

	188.1		
7 50	261.5	73.4 <	
	188.2	72.2 <	+0.66
7 45 45	260.4	145.6 <	4)315
			0.79

$m = 0.79$

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Feb 11, 1896

Index to left + Arbor b

VII
7 59

187.1		
258.3	71.2 <	
189.2	72.0 <	+0.71
261.2	143.2 <	

+0.70

188.3		
259.8	71.5 <	
188.2	72.0 <	+0.70
260.2	143.5 <	

8 00

Clouds thick Index to right + above a

8 3

275.8		
349.5	73.7 <	
280.3	66.1 <	+0.78
346.4	139.8 <	

+0.80

8 4

~~280.5~~ ~~99.5~~		
345.3	64.8 <	
275.2	72.3 <	+0.83
347.5	137.1 <	4|3.02
		0.76

8 1 30

Clouds thick.

m = 0.76

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Feb. 11, 1896.

Sunday to night + about. 2

VIII

	273.8			
8 15	352.5	78.7 <		
	273.0	77.4 <	+0.46	
	3504	156.1 <		

+0.53

	273.3			
8 16	351.8	78.5 <		
	278.1	70.2 <	+0.60	
	348.3	148.7 <		

Sunday to left + Below. 6

	8.1			
8 18	76.7	68.6 <		
	1.8	71.9 <	+0.76	
	83.7	140.5 <		

+0.62

	0.0			
8 20	84.2	84.2 <		
4(69	6.8	70.5 <	+0.48	
8 17 15	77.3	154.7 <	4(230	
			0.575	

$\mathfrak{M} = 0.58$

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1896phae.proj..532w

Feb. 11, 1896

Index to left & below b

IX

8 22	7.2			
	8.0.0	72.8 <		
1,0	3 5 6	83.2 <	+0.46	
	84.2	156.0 <		

+0.42

	359.5			
8 23	84.5	85.0 <		
	6.0	75.0 <		+0.38
	81.0	160.0 <		

Index to right & above. a

	98.0			
8 25	170.6	72.6 <		
	87.7	85.5 <	+0.42	
	173.2	158.1 <		

+0.43

	89.8			
8 26	174.5	84.7 <		
	95.7	72.0 <	+0.44	
8 24 0	167.7	156.7 <	4 | 170	
			0.425	

M = 0.42

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1896phae..proj..532w

Feb, 11, 1896.

Index to right + above a

	95.4		
8 31	168.2	72.8 <	
	85.6	91.2 <	+0.30
	176.8	164.0 <	

+0.1K

	87.8		
8 32	175.7	87.9 <	
	81.3	93.6 <	−0.03
	174.9	181.5 <	
		178.5	

Index to left + below b

	177.9		
8 36	265.3	87.4 <	
	173.3	94.4 <	−0.03
	267.7	181.8 <	
		178.2	

−0.11

	17.43		
8 39	270.6	96.3	
4 18	174.3	93.6	−0.19
8 34 30	267.9	189.9	
		170.1	

−0.25
+0.30
4 +0.05

m = +0.012

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1896phae.proj..532W

Feb. 11, 1896 -

Index to left + above b

XI

8 40	173.9		
	263.9	90.0 <	
	173.5	100.6 <	∓0.20
	274.1	190.6 <	
		169.4	

−0.16

8 42	171.7		
	272.6	100.9 <	
	177.8	88.2 <	∓0.17
	266.0	189.1 <	
		170.9	

Index ~~to right~~ + above. a

8 44	264.3		
	353.9	89.6 <	
	2631	97.9 <	—
	361.0	187.5 <	∓0.14
		172.5	

−0.17

	262.8		
8 45	359.0	96.2 <	
Clouds	265.7	94.1 <	
	359.8	190.3 <	∓0.20
		169.7	

4(11) 4(71)

8 42 45 0.18

M = +0.18.

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1896phae.proj..532w

Feb, 11, 1896.

Index above a

XII.

		265.8		
8 47	clouds that	356.8	91.0 <	
		263.8	97.5 <	∓0.16
		1.3	188.5 <	
			191.5	

−0.16

	265.0		
8 48	359.9	94.9 <	
	264.6	92.9 <	
	357.5	187.8 <	∓0.15
		192.2	

Index below b

	357.7		
8 50	86.5	88.8 <	
	349.0	107.2 <	
	96.2	196.0 <	∓0.30
		164.0	

−0.29

	347.2		
8 51	93.8	106.6 <	
	356.1	88.1 <	
	84.2	194.7 <	∓0.28
		165.3	
8 49 0			4(8 9
			∓0.22

M = 0.22

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1896phae.proj..532w

Feb. 11, 1896.

Index below b

XIII
8 57

358.3		
85.2	86.9 <	
346.2	108.3 <	
94.6	195.2 <	+0.29 v
	164.8	

1664 −0.46

6 58

278.2	111.8 <	
169.2	100.8 <	
270.0	212.6 <	+0.63 v
	147.4	

Index above. a

9 12

263.8		
358.1	94.3 <	
259.9	105.0 <	
364.9	199.3 <	+0.37
	(60.)	

258.7 −0.3 v

9 2

363.4	104.7 <	
265.7	92.8 <	
358.5	197.5 <	+0.33
	162.5	

8 59 30

A162
0.405

M = 0.40

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1896phae.proj...532w

Feb, 11, 1896.

Index above. a

~~XIV~~

9 4	262.9		
	358.2	95.3 <	
	257.5	107.2 <	~~X~~ 0.43
	364.7	202.5 <	
		157.5	

-0.EK

9 6	2584		
	364.3	105.9 <	
	262.0	98.0 <	~~X~~ 0.46
	360.0	203.9 <	
		156.1	

Index below b

9 8	355.0		
	91.4	96.4 <	
	343.3	112.7 <	~~X~~ 0.56
	96.0	209.1 <	
		150.9	

-0.60

9 10	342.3		
	96.5	114.2 <	
	351.2	99.1 <	~~X~~ 0.64
	90.3	213.3 <	209
9 7 0		146.7	0.522

M = 0.52

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1896phae.proj..532w

Feb. 11, 1896.

Index below b

XII

	352.5		
12	90.5	98.0 <	
	343.4	113.0 <	−0.59
	96.4	211.0 <	
		149.0	

−0.66

	342.6		
9 14	97.3	114.7 <	
	350.0	103.2 <	−0.73
	93.2	217.9 <	
		142.1	

Index above a

	72.0		
9 16	185.2	113.2 <	
	80.9	95.0 <	−0.54
	175.1	208.2 <	
		151.8	

+0.60

	83.6		
9 17	180.5	96.9 <	
	70.1	117.5 <	−0.66
	197.6	214.4 <	4)252
		145.6	+0.63

9 14 45

M = +0.63

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1896phae.proj..532w

Feb. 11, 1896.

Index above a

XVI

9 ~~10~~ 24	69.5		
	186.6	117.1 <	
	78.5	101.2 <	~~×~~0.74
	179.7	218.3 <	
		141.7	
	80.8		−0.72
9 25	180.0	99.2 <	
	69.8	117.2 <	~~×~~0.70
	187.01 ~~840~~	216.4 <	
		143.6	

Index below b

	159.7		
9 26	281.7	122.0 <	Clouds
	165.0	109.4 <	~~×~~1.01 ✓
	2744	237.4 <	
		128.6	
	[3]50.5	Clouds thick	~~×~~1.52 ✓
			−1.26
9 27	272.3	~~+218~~ ~~782~~	121.8 < 0.72
	[3]49.6	~~324~~ ~~1.6~~	132.4 < 1.98
	282.0		254.2 < 99
9 25 30			105.8

4 (39)

$\eta_4 = +0.99$

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1896phae.proj..532w

Feb. 15, 1896.

Index below. b

XVII		157.0 ~~4.15~~		
9	33	280.2 ~~7.5~~	123.2 c	
		164.5	110.1 c	~~1.05~~
		274.6	233.3 c	
			126.7	
				−1.06
		165.5		
9	34	273.2	107.7 c	
		156.6	126.9 c	
		283.6	234.6 c	~~1.08~~
			125.4	

Index above. a

		251.2		
9	36	369.3	118.1 c	
		255.9	105.3 c	
		361.2	223.4 c	~~0.84~~
			136.6	
				−0.~~46~~
		259.3		
9	~~28~~	364.0	104.7 c	
		250.6	121.9 c	
9	35 15	12.7	226.6 c	~~0.91~~
			133.4	4)388
				−0.97

4)21

M = 0.97

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1896phae.proj...532w

Feb. 11, 1896.

Index above. a

XVIII

9 46	253.2		
	10.0	116.8	
	253.8	109.6	−0.91
	3.4	226.4	
		133.6	

−0.86

	259.4		
9 47	4.6	1052	
	252.8	118.9	−0.86
	11.7	224.1	
		135.9	

Index below b

9 50	337.3		
	102.8	125.5	
	346.1	110.4	
	96.5	235.9	−1.10
		124.1	

−1.14

	346.4		
9 52	95.5	109.1	
	334.5	1306	
9 48 45	105.1	239.7	−1.19
		120.3	206
			4⌈406
			1.5015

$\mu = 1.023$

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1896phae.proj..532w

Feb. 15, 1896.

Under below b

XIX

9 54 bark disap } > ~~1044~~ 1040

1544 504 <

961 640 < −1.32

1601 1144 <

−1.24

955

9 55 1619 664 <

1022 520 < −1.23

1542 1184 <

Under above a

1843

9 57 2566 725 <

1823 638 < −0.85

2461 1363 <

−0.9K

1944

9 59

2492 548 <

1829 723 < −1.04

2552 1271 <

9 56 45

444

−1.11

M = 1.01

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1896phae.proj..532W

Feb. 11, 1896.

Index above. <

~~X X~~	187.4	6	
10 17	253.6	~~X~~ 6.2 <	
	194.6	51.5 <	−1.24
	246.1	~~1~~ 7.7 <	

−1.22

	192.9		
10 18	246.8	53.9 <	
	185.6	65.7 <	−1.20
	251.3	119.6 <	

Index below >

	285.4 ~~306.2~~		
10 25	332.9	47.5 <	
	278.8	61.9 <	
	340.7	109.4 <	−1.43

−1.34

	278.6		
10 26	347.4	68.8	
	285.1	48.7	−1.25
10 21 30	333.8	117.5	112
			−1.28

$\mathfrak{M} = 1.28$

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1896phae.proj..532w

Feb. 11, 1896.

Index below b

XXI

10 27	287.3		
	334.5	47.2 <	
	280.3	58.1 <	−1.53
	338.4	105.3 <	

−1.55

10 28	278.8		
	340.2	61.4 <	
	289.6	42.2 <	−1.57
	331.8	103.6 <	

Index above. a

10 31	13.8		
	63.7	49.9 <	
	6.3	65.9 <	−1.29
	72.1	115.8 <	

−1.25

10 32	6.6		
	76.8	70.2 <	
	13.7	49.1 <	−1.21
	62.8	119.3 <	160
10 28 30			1.40

M = 1.40

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1896phae.proj..532w

Feb 11, 1896

Index above a

XXII	15.7		
10 34	61.2	45.5 <	
	2.6	73.9 <	−1.21
	76.5	119.4 <	

−1.24

	5.2		
10 35	73.6	68.4 <	
	17.8	44.1	−1.36
	61.9	112.5	

Index below b

	105.5		
10 38	150.3	44.8	
	97.4	62.0	−1.49
	159.4	106.8	

−1.50

	96.3		
10 39	158.0	61.7	
	106.6	44.6	−1.50
	151.2	106.3	
			156
			−1.39
10 36 30			

M = 1.39

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1896phae.proj..532w

Feb 14, 1896

Index below b

XXIII

	108.5		
10 40	148.9	40.4 <	
	96.0	62.4 <	1.59
	158.4	102.8 <	

-1.51

	94.8		
10 41	159.8	65.0 <	
	107.0	44.6 <	-1.43
	151.6	109.6 <	

Index above. a

	194.4		
10 44	246.5	52.1 <	
	184.5	66.8 <	-1.22
	251.3	118.9 <	

-1.19

	183.5		
10 45	252.6	69.1 <	
	194.1	52.5 <	-1.16
10 42 30	246.6	121.6 <	4(140
			1.35-

$\Delta\alpha$ = 1.35

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1896phae.proj..532w

Feb. 11, 1896.

Index above a

~~XXIV~~	194.4		
10 47	246.5	52.1 <	
	184.2	67.9 <	−1.19
	252.1	120	

−1.21

	184.4		
10 49	250.2	65.8 <	
	194.0	52.5 <	−1.23
	246.5	118.3 <	

Index below b

	290.4		
10 51	330.0	39.6 <	
	279.6	59.9 <	−1.67
	339.5	99.5 <	

−1.62

	277.8		
10 53	340.8	63.0 <	
	289.6	40.0 <	−1.58
10 50.0	329.6	103.0 <	(16)
			−1.42

$\mathfrak{M} = 1.42$

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1896phae.proj..532W

Feb. 11, 1896.

Index below b

XXV

10 54	289.2		
	330.5	41.3 <	
	278.3	61.3 <	− 1.59
	339.6	1026 <	

−1.54

	277.2		
11 00	339.1	61.9 <	
	287.4	41.9 <	− 1.56
	329.3	103.8	

Index above. a

	16.8		
11 1	58.2	41.4 <	
	6.5	6 X.7 <	− 1.56
	69.2	10 B.1 <	

−1.46

	4.4		
11 3	72.6	68.2 <	
	15.0	44.5 <	− 1.36
11 0 30	59.5	112.7 <	(20)
			− 1.518

M = 6.52

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1896phae.proj..532w

Feb. 11, 1896

Index above a

XXVI	15.9		
11 6	58.6	42.7 <	
	2.8	68.0 <	−1.40
	70.8	110.7 <	

−1.40

	3.5		
11 7	70.7	67.2 <	
	16.5	43.3 <	−1.41
	59.8	110.5 <	

Index below b

	105.7		
11 9	147.9	42.2 <	
	108.3	46.5 <	−1.95
	154.7	88.8 <	

−2.00

	108.8		
11 10	156.5	47.7 <	
	108.6	37.6 <	−2.04
	146.2	85.3 <	680
			−1.70
11 8 0			

M = 1.70

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1896phae.proj..532w

Feb. 11, 1896

Index below b

~~XXVII~~	107.2		
11 19	144.0	36.8 <	
	99.5	55.3 <	−1.56
	154.8	92.1 <	

−1.82

	99.3		
11 20	154.6	55.3 <	
	107.5	40.1 <	−1.77
	149.6	95.4 <	

Index above a

	X93.0		
11 22	244.0	51.0 <	
	182.0	70.1 <	−1.17
	252.1	121.1 <	

−1.67

	182.0		
11 23	252.3	70.3 <	
	191.5	50.8 <	−1.17
	242.3	121.1 <	

199

−1.498

11 21 0

$\mathfrak{M} = 1.50$

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1896phae..proj..532W

Feb. 11, 1896.

Index above a

XXVIII

	194.2		
11 25	242.3	48.1 <	
	183.3	68.9 <	−1.26
	252.2	117.0 <	

−1.20

	180.0		
11 26	252.8	72.8 <	
	192.7	50.0 <	−1.13
	242.7	122.8 <	

Index below b

	287.5		
11 29	333.9	46.4 <	
	283.7	46.8 <	−1.83
	330.5	93.2 <	

−1.76

	284.4		
11 30	331.6	47.2 <	
	283.5	49.9 <	−1.73
	333.4	97.1 <	69 5
11 27 30			−1.49

$\mathfrak{M} = 1.49$

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1896phae.proj..532w

Feb. 11, 1896.

Sirius below. b

~~XXIX~~	284.3		
11 31	333.3	49.0 <	
	285.0	46.8 <	−1.76
	331.8	95.8 <	
	)		
			−1.80
	285.9		
11 33	328.3	42.4 <	
	279.8	50.2 <	−1.84
	330.0	92.6 <	

Sirius above. a

	9.3		
11 34	624	53.1 <	
	12.2	48.8 <	−1.61
	61.0	101.9 <	
			−1.71
	12.2		
11 35	60.4	48.2 <	
	5.5	58.5 <	−1.49
11 33 15	64.0	106.7 <	270
			−1.68

$M = 1.68$

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1896phae.proj--532w

Feb. 11, 1896.

Index above a

XXX	9.1		
11 41	61.7	52.6 <	
	11.1	49.3 <	−1.61
	60.4	101.9 <	

−1.63

	12.5		
11 42	63.6	51.1 <	
	12.0	49.0 <	−1.65
	61.0	100.1 <	

Index below b

	101.8		
11 45	150.3	48.5	
	100.4	50.1	−1.69
	150.5	98.6	

−1.69

	101.4		
11 46	150.3	48.9	
	101.7	49.8	−1.69
11 43 30	151.5	98.7	

4)24
−1.66

M = 1.66

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1896phae.proj..532w

Feb 11, 1896

Index below b

XXXI

11 48

101.3
149.3 48.0 <
104.5 44.0 <
148.5 92.0 <

-1.86

-1.46

106.4

11 49

149.8 43.4 <
101.2 48.3 <
149.5 91.7 <

-1.87

Index above. a

189.7

11 50

245.6 56.9 <
188.8 57.6 <
246.4 113.5 <

-1.34

-1.25

186.5

11 51

248.8 62.3 <
185.5 59.1 <
244.6 121.4 <

-1.16

223

-1.56

11 49 30

M = 1.56

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1896phae..proj...532W

Feb 11, 1896

Index above a

XXXII	191.8		
125	243,0	51.2 <	
	188.3	56.0 <	−1.48
	2443	107.2 <	
			−1.46
	189.2		
126	244.5	55.3 <	
	190.2	54.1 <	−1.45
	243.3	105.4 <	

Index below. b

127	283.2		
	332.8	49.6 <	
	282.5	46.9 <	−1.74
	329.4	96.5	
			−1.72
	283.4		
129	331.4	48.0	−1.69
4(2)	281.1	50.8	
126 45	331.9	98.8	(236
			1.59

M=1.59

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1896phae.proj..532w

Feb 11, 1896.

Index below b

XXXIII

12 10

2804
3339 53.5
2850 46.7 −1.65
3317 100.2

−1.71

12 11

2854
3303 44.9
2828 50.5 −1.77
3333 95.4

Index above. a

12 12

8.6
604 51.8
130 44.7 −1.74
577 96.5

−1.70

12 13

12.0
577 45.7
7.5 54.5 −1.65
620 100.2 281
−1.70

12 11 30

M = 1.70

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1896phae..proj...532W

Feb, 11. 1896

Index above. a

~~XXXIV~~

5.1

12 15

66.1 61.0
12.3 47.7 − 1.45
60.0 108.7

−1.46

11.2

12 16

61.0 49.8
7.5 57.4 − 1.48
64.9 107.2

Index below 6

12 17

98.6
150.5 51.9
105.0 46.5 − 1.70
151.5 98.4

10 −1.64

104.3

12 18

151.2 46.9
98.4 53.0 − 1.66
151.4 99.9 229
− 1.57

12 16 30

M = 1.57

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1896phae.proj..532w

Feb. 12, 1896.

T. Andromedae. W. obs.
Meant with Phot. T. and 7½ mags.

0 14 +26.°1
5 20
5 6

Index to left + below

	277.7		
7 46	291.8	14.1 <	
	278.1	14.1 <	
	292.2	28.2 <	+4.54 <
	276.2		
7 48	292.7	16.5 <	
	276.5	16.3 <	
	292.8	32.8 <	+4.21 <
			7.5
			4.38

Index to right + above.

	187.4		
7 52	200.2	12.8 <	
	188.7	9.9 <	
	198.6	22.7 <	+5.01 <
	189.2		
7 55	198.3	9.1 <	
4)20 1	188.4	12.0 <	
7 50 15	200.4	21.1 <	5.17 <

~~+16.93~~ 5.09
~~4.76~~
5.09
4.38
+9.47

M = 4.74

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1896phae..proj...532W

Feb. 12, 1896.

Measst. of star a (R 6h. p. 151) and Dm. +26° 37 (AA)ff. with Refl. S. Gr. obs.

Dudx to left & below

		265.1		
8	9	306.7	41.6 <	
		268.2	36.0 <	2.27
		304.2	77.6 <	

		266.3		
8	11	302.2	35.9 <	
		264.3	42.4 <	2.25
		306.7	78.8 <	2.26

Dudx to right and above

		179.5		
8	3	211.8	32.3 <	
		182.8	25.4 <	2.95
		208.2	57.7 <	

		180.7		
8	5	209.4	28.7 <	
		178.1	35.3 <	2.71
		213.4	64.0 <	2.83

4/38

8 9 30

2.83
2.26
109
2.54

M = 2.54

γ Cassiop. Comp. star f

A 20 f 4.5 f' c f' 49

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1896phae.proj..532w

Feb. 12, 1896.

S Cephei. Phot. I. Fr. obs.

~~Index to~~

21 37 +78°3

30 25 Star 2 comp. with.

8 48

Star 2 and Index to left + above.

		349.1 ~~352.9~~		
9	16	11.3 ~~11.4~~	22.2 <	
		351.0	20.1 <	3.64
		11.1	42.3 <	
		350.9		
9	18	13.5	22.6 <	
		351.2	21.6 <	3.57
		12.8	44.2 <	(3.60)
			Index to right + blow.	
		77.7		
9	22	105.1	27.4 <	
		82.1	18.9 <	3.44 <
		101.0	46.3 <	
		81.3		
9	25	100.8	19.5 <	
	81	81.0	24.2 <	3.57 <
9	20	105.2	43.7 <	101
				(3.50)

M = 3.57

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1896phae..proj..532W

Feb 12 1896

Star ~~m~~ and

Index to ~~right + below~~ left + above

10	27	164.0	77.6	
		187.2	165.8	23.2
		162.3	72.0	28.6
		190.9	192.3	51.8

3.19

10	30	163.0	71.5	
		191.0	164.6	28.0
		162.8	78.9	22.9
		185.7	105.0	50.9

3.24
(3.22)

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

10	7		250.7	
			282.1	31.4
			247.3	36.8
			284.1	68.2

2.57

10	9		247.0	
			281.0	34.0
			251.4	27.7
			279.1	61.7

4(23.

10 5 45

2.80
137
(2.68)

$m = 2.95$

32.0
26.8
59.0
2.95

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1896phae.proj..532w

Feb 12, 1896.

star. p

Sirius below

~~2 5 3.6~~

10 11 ~~2 7 2.1~~

~~2 5 3.5~~

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1896phae.proj..532w

Feb. 12, 1896.

Stars 3v

Index below.

		250.5		
10	21	280.5	30.0 <	
		253.2	24.0 <	3.10 <
		277.2	54.0 <	

		251.6		
10	23	280.8	23.0 <	
		252.5	27.7 <	3.24 <
		290.2	50.7 <	(3.17)

Index above.

		334.4		
16	28	16.3	41.9 <	
		325.2	50.8 <	1.84 <
		16.0	92.7 <	

		326.2		
10	29	24.0	57.8 <	
	421	314.1	69.4 <	1.04 <
10	25 15	23.5	127.2 <	(1.44)

M = 2.30

1.44
3.17
4.61
2.30

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1896phae.proj..532w

Posted to here.

Feb. 14, 1896.

T. Andromedae. Dr. ds

Comp of star a with 8.1 mag.

0 14 +26°.1

5 25

5 11

Index above.

	339.3			
7 40	1.2	21.9 ✓		
	336.0	25.7 ✓		
	1.7	47.6 ✓		3.38 <
	336.4			
41	2.9	26.5 ✓		
	343.0	18.5 ✓		
	361.5	45.0 ✓		3.51 <
		Index below		59
				3.445
	69.8			
45	91.6	21.8 ✓		
	67.4	28.8 ✓		
	96.2	50.6 ✓		3.24 <
	67.2			
46	96.3	29.1 ✓		
	69.8	20.2 ✓		
7 43 0	90.0	49.3 ✓		3.30 <
				3.27
				3.44
				71
				3.305

$m = 3.36$

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1896phae.proj...532w

Feb. 14, 1896.

Comp. of a with 8.8 mag. H. ds

ds

Index to left + below

	244.8		
7 58	275.9	31.1 ✓	
	243.1	35.4 ✓	
	278.5	66.5 ✓	2.42 <
	241.7		
8 00	280.8	39.1 ✓	
	244.9	32.0 ✓	
	276.9	71.1 ✓	2.47 <
			2.54

Index to right + above.

	336.8		
3	5.2	28.4 ✓	
	332.7	36.0 ✓	
	8.7	64.4 ✓	2.70 <
	332.3		
5	9.4	37.1 ✓	
	337.2	27.8 ✓	
	5.0 ~~5.7~~	64.9 ✓	2.68 <
			2.69
			2.54
			123
			2.610

8 1 30

M = 2.62

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1896phae.proj..532w

Feb. 14, 1896.

o Ceti' Wds.

2 4 −2.5
6 15⁻
4 11

Index to right.

8 4	200.7	26.7	7.1 <	
	207.8	33.1		
	198.5	25.3		5.74
	207.7	35.1	9.2 <	
			16.3 <	
	198.7	24.1	9.1 <	
8 4	207.8	30.1		5.72
	200.6	27.3	7.3 <	5.73
	207.9		16.4 <	

Index to left.

	290.3		6.5 <	
8 51	296.8			
	288.9		9.0 <	5.85
	297.9		15.5 <	
	288.7	10.6	9.6 <	
8 53	298.3			5.74
	289.8	6.7	6.7 <	
8 5⁻ 0	296.5	17.3	16.3 <	5.80

M = 5.76

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1896phae.proj..532W

Feb 14 1896

S. Cephei W. obs.

Star a comp both stars E

21 37 +78°3

31 5-5-

10 +8

Index to left & above.

	262,3			
9 15	287,2	24,9 <		
	263,3		3.27	
	288,4	25,1 <		
		+0,0 <		
	264,0	23,4 <		
9 17	287,8		3.43	
	264,3	22,7 <	70	
	297,0	+6,5 <	(3.35) <	

Index tonight & below.

	356,3	20,9 <		
9 19	17,2			
	355-5-	20,5 <	3.69	
	16,0	41,4		
	354,2	21,3 <		
9 20	15,5-			
471	357,1	18,2 <	3.79	36
9 17 45	15,3	39,5 <	(3.74) <	39
				109
				0-4-

M = 3.54

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1896phae.proj..532w

Feb 14 1896

Star m comp with star ε

Index to right & above

	346.4			
9 23	24.1	37.7 <		
	343.6	41.9 <	2.21	
	25.5	79.6 <		
	345.2			
9 25	25.2	40.0 <		
	345.0	40.8 <	2.17	
	25.8	80.8 <	(2.19)	

Index to left & above

	81.3			
9 27	107.7	26.4 <		
	81.5	28.1 <	3.08	
	109.6	54.5 <		
	81.6			
9 26	109.4	27.8 <		
	80.0	27.1 <	3.07	
9 25 45	107.1	54.9 <	(3.08)	

$m = 2.64$

2.19
3.08
5 27
2.635

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1896phae.proj...532w

Feb 14, 1896

Star ≷ comp with star ≷

Index to left + above,

		256,5		
9	48	281,4	24.9 <	
		254,8	27.8 <	3.15⁻
		282,6	5⁻2.7 <	

	1	255⁻,4		
9	49	281,0	25,6 <	
		256,5⁻	26.1 <	3.20
		282.6	5⁻1.7 <	(3.18)

Index to right + below

		348.9		
9	5⁻2	8,0	19.1 <	
		348,2	19.7 <	3.84
		7,9	38.8 <	
		~~349,7~~		

		349,4		
9	5⁻3	7,0	17.6 <	
		348,7	17.9 <	4.03
9	51	6.6	35.5⁻ <	787

3.935⁻ = (3.94)

97
18
112
56

μ = 3.5⁻6

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1896phae.proj.532w

Feb 14, 1896

Star & comp. with star &

	346,3	Index to right + below	
9 59	7,7	21.4 <	
	348,3	18.7 <	3.76
	7,0	40.1 <	
	~~349.1~~		
	349.1		
10 00	8.5	19.4 <	3.98
	350.2	16.9 <	174
	7.1	36.3 <	3.87

Index to left + above.

	79.3		
10 3	98.8	19.5 -	
	78.6	18.6	3.98
	97.2	38.1	
	79.5		
10 5	96.2	16.7	3.99
40 7	79.4	19.5	
10 1 45	98.9	36.2	3.94

$m = 3.90$

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1896phae.proj..532W

Feb. 14, 1896.

Star	ϕ	comp with star	ϕ	
	76.1	Index to left + above		
10 7	98.3	22.2		
	76.0	24.5		3.42
	100.5	46.7		
	76.4			
10 9	98.7	22.3		
	76.2	25.1		3.39
	101.3	47.4		(3.40)
	167.6	Index to right + below		
	184.6	17.0		
10 11	165.0	25.0		3.66
	190.0	42.0		
	164.5			
10 12	190.5	26.0		
	168.4	18.8		3.52
10 9 45	187.2	44.8		(3.59)

$m = (3.48) = 3.50$

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1896phae.proj...532w

Feb. 14, 1896.

Star ~~W~~ comp mtl star E

Index to right + lower

		164.0		
10	15	191.8	27.8	
		162.2	30.7	2.92
		192.9	58.5	

		141.5		
10	16	192.0	30.5	
		164.7	24.3	3.07
		189.0	54.8	2.99

Index to left + lower.

		250.5		
10	17	284.5	34.0	
		254.0	33.8	2.58
		287.8	67.8	

		252.2		
10	19	284.8	32.6	
		254.3	31.8	2.70
		286.1	64.4	2.64
10	16	15		99
				163
				162

$\eta = 2.82$

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