1895phae.proj.1338.

KG
11366
v.334

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1895phat..proj..1338.

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1895phae.proj.1338.

Nov. 5. 1895.

T. and

Nov 5, 1895

W: obs

2 4
22
-1
10

6.1

7 59 25

8 2 56

101.9

84.1

65.6
101.4
66.8
100.5

8 5 10

35.8
33.7
69.5

Index above.

8 10 26

153.9
193.1
157.6
190.2

39.2
32.6
71.8

2.45

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1895phae.proj.1338.

Nov. 5. 1895.

T. androm: Phot T: W: obs

24	14	+26.1
22	50	
-1	24	
10	36	

Index above.

	59.3	< comp. star dia
7 59 25	107.3	48.0
	55.9	55.8
	111.7	103.8

Index below.

	63.9	
8 2 56	111.9	48.0
	65.8	36.1
	101.9	84.1
	65.6	
8 5 10	101.4	35.8
	66.8	33.7
	100.5	69.5

Index above.

8 10 26	153.9	
	193.1	39.2
	157.6	32.6
	190.2	71.8

2.45

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1895phae.proj.1338.

Nov. 5. 1895.

		157.3		
8	11	53	191.1	33.8
			156.2	35.0
			191.2	68.8

~~Index~~

		156.1		
8	12	32	191.4	35.3
			157.4	33.1
			190.5	68.4

Index lubw.

		249.4		
8	16	16	282.1	32.7
			248.0	32.0
			280.0	64.7

		248.4		
8	17	26	280.8	32.4
			249.2	31.5
			280.7	63.9

		248.7		
8	19	0	281.7	33.0
			247.4	34.5
			281.9	67.5

2.5 ✓

Reject all above observations: nical

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1895phae.proj.1338

Nov. 5. 1895.

prism found to be loose: also greasy and observations found to be those of wrong star.

Times of all settings this evening taken from B+C #1182

B+C #1182. Ballou #103.

$7^h\ 32^m\ 23^s.5 = 7^h\ 25^m\ 0^s.0$

Σ464: 3 Pw: Phot R: W: obs

3 46 +31.5

23 46

4 0

8 40 Cloudy

8 50 Abandoned: too cloudy.

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1895phae.proj.1338.

Nov. 5. 1895.

Σ 470: 32 Eri. H II 36 : Phot H: W: ob

3 48 -3.3
0 8
13 40
*8 20

8 50 Thickly cloudy : stars invisible

9 10 Two clouds for further work

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1895phae.proj.1338.

Nov. 6. 1895.

χ Cygni:	Phot. R:	W: obs.
19	41	+33.4
23	21	
3	40	

Index to right and below.

8 22 0

96.2	< comp. star dis.	
186.3		
	90.1 <	
94.3	89.6 <	+0.01 <
183.9	179.7 <	
95.0		
184.6	89.6 <	
91.8	96.0 <	−0.11 <
187.8	185.6 <	
	174.4	
93.2	92.0 <	
185.2	85.6 <	+0.05 <
96.3	177.6 <	
181.9		

Index to left and above.

187.6		
273.7	86.1 <	
184.0	93.0 <	+0.02 <
277.0	179.1 <	

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1895phae.proj.1338.

Nov. 6. 1895.

184.2		
275.0	90.8 <	
186.4	87.5 <	+ 0.03 <
273.9	178.3 <	

184.0		
273.5	89.5 <	− 0.00 <
184.8	90.6 <	
275.4	180.1 <	
	179.9	

8 30 35
8 26 17.5

B + C. #1182 Ballou #103

$9^h\ 9\quad 52.^s4 = 9^h\ 2^m\ 0.^s0$

We struck into Lund Dome to examine region of DM + 5° : 4928 (9.1) : star appears to be missing.

Z 550 : 1 bamdop: Photom: W. ob

4	22	+ 53.6
24.	35	
−3	27	
8	33	

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1895phae.proj.1338.

Nov. 6. 1895.

Index ~~about~~ left and above.

85.8	< brighton dis.	
151.2	65.4 <	
88.4	59.3 <	~~1.09~~ <
147.7	124.7 <	— - . . .

9 39

Index right and below.

178.2		
239.1	60.9 <	
174.1	69.6 <	~~0.97~~ <
243.7	130.5 <	- - -

173.0		
243.7	70.7 <	
177.7	62.5 <	~~0.91~~ <
240.2	133.2 <	- - -

Index left and above.

269.9	59.5 <	
329.4	66.2 <	~~1.07~~ <
266.4	125.7 <	- - - .
332.6		

266.0	66.2 <	
332.2	64.7 <	~~0.96~~ <
266.7	130.9 <	- -
331.4		

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1895phae.proj.1338.

Nov. 6. 1895.

9 39

Index right and ~~above~~ below.

9 50

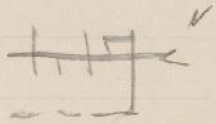
2 | 89

44.5

9

1.3
60.3
357.9
60.1

59.0 <
62.2 <
121.2 <



Position angle = 290°: distance = 10"
magn = 5.3 and 6.2

Σ 16′: θ² Orionis: Phot R. W: obs

5	29	-5.5
1	15	
-4	14	
7	46	

Abandoned: identification uncertain

Σ 764: H.N. 75: Phot R: W: obs

5	33	+29.4
1	33	
-4	0	
8	0	

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1895phae.proj.1338.

Nov. 6. 1895.

Position angle = 20°, distance = 25
magn = 6.3 and 6.8

Index ~~about~~. right and above.

102.0	< brighter dis.	
178.1	76.1 <	
104.4	71.9 <	0.61
176.3	148.0 <	

10 28

Index to left and below.

195.6	66.4 <	
262.0	72.4 <	0.80
193.7	138.8 <	
266.1		

192.0		
266.2	74.2 <	
195.7	67.3 <	0.74
263.0	141.5 <	

Index to right and above.

285.1		
354.9	69.8 <	
282.7	77.1 <	0.64
359.8	146.9 <	

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1895phae.proj.1338.

Nov. 6, 1895.

283.8	74.0 <	
357.8	68.6 <	0.72
284.6	142.6 <	
353.2		

10 28

10 37

2 65

10 32.5

Index to left and below.

10.2		
84.2	74.0 <	
128	73.3 <	0.63
86.1	147.3 <	

Σ 753 : 26 am : Phot R : W : ab

5	30	+30.4
1	55	
13	35	
8	25	

Position angle = 285° distance = 12"
magn = 5.7 and 8.1

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1895phae.proj.1338.

Nov. 6, 1895.

Index to right below.

128.5	< brightness dis	
150.3	21.8 <	
122.0	34.9 <	2.99
156.9	56.7 <	

10 47

Index to left above.

213.3		
245.2	31.9 <	
217.8	22.2 <	3.10
240.0	54.1 <	

219.2		
239.7	20.5 <	
212.3	34.9 <	3.04
247.2	55.4 <	

Index to right below.

303.2	32.0 <	
335.2	22.2 <	3.09
308.2	54.2 <	
330.4		

307.1	22.9 <	
330.0	30.7 <	3.11
304.6	53.6 <	
335.3		

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1895phae.proj.1338.

10 47

Nov. 6, 1895.

Index to right and ~~above~~ Lyelons.

~~34.2~~	130.0		
~~65.2~~	149.2	19.2 <	
	121.2	32.5 <	3.20
	153.7	51.7 <	

10 58
~~55~~
2 | 105

10 52 30

Wells' Susp. Var. Yr. obs.

11 0 a / Var
c 2 Var
Var 1.5 b
} Trust Eq. Yr. obs.

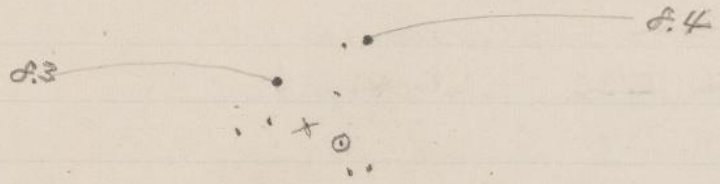
11h 0m Var / a
c 2 Var
Var 1.5 b
} Trust Equat. used. } Cram obs.

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1895phae.proj.1338.

Nov. 7. 1895.

Diagram of the position of new Variable.
viz: 3 M. + V° 492 ∝ (9.1) 21h V Km + V.°K



Mr. Attwill and Mr. Grundell last night (Nov. 6) looked up region of new variable (+V° 492 ∝ 9.0) with Test Equatorial.

The star is not visible tonight in 6 inch. Region thoroughly identified. — Also region identified this morning again by photographic plate. H.

See Test Eq. book. p. 6V.
Pos. of Var for 1895 is

21h V3m K6.9s +V° 2V.6

1895phae.proj.1338.

Nov. 7. 1895.

ζ Herculis:	Phot S.	W. obs.
17	53	+15.1
22	38	
4	45	

Index to right and above.

	261.6	l		
	300.3	< comp. stars dis.		
7 36 40			38.7 <	
	264.1	r	32.5 <	2.47 <
	296.6		71.2 <	
	265.6	l		
	298.7		33.1 <	
7 38 49				2.44 <
	262.2	l	29.0 <	
	301.2		72.1 <	

I Index to left and below.

	171.7	tr		
	207.4		35.7 <	
7 52 55				2.34 <
	171.0	rl	39.6 <	
	210.6		75.3 <	
	168.4	rl		
	211.4		43.0 <	
7 54 47				2.15 <
	170.7	tr	38.4 <	
4 183 11	209.1		81.4 <	4 140
7 45 47.75				2.35

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1895phae.proj.1338.

Nov. 7, 1895.

Index to right and above.

			170.3	r		
7	56	25	208.4		38.1 <	
			171.8	l	40.7 <	2.23 <
			212.5		78.8 <	
			168.3	l		
7	57	46	211.9		43.6 <	2.03 <
			169.4	r	42.0 <	
			211.4		85.6 <	

II

Index to left and below.

			264.2	r		
8	0	23	299.0		34.8 <	
			261.1	l	40.5 <	2.34 <
			301.6		75.3 <	
			263.9	l		
8	2	12	301.6		37.7 <	
			262.7	r	37.2 <	2.35 <
			299.9		74.9 <	

4 | 236 46

59 11.5

4 | 9 5

2.23 5

Index to right and above,

r

l

1895phae.proj.1338.

Nov. 7. 1895.

Abandoned: too hazy: impossible to follow further: stars practically invisible.

8 15

B+b #1182. Ballou #103.

$8^h\ 26^m\ 25^s.6 = 8^h\ 19^m\ 0^s.0$

In previous observations of ζ Herculis, the stars were throughout faint, and increasingly so to the last, so at the last they were with me the utmost of visibility: in all the observations equalizations difficult and somewhat uncertain and at the last extremely so.

Examination of region of nebula found on photographic plate.

21 51 + 5.3

$\frac{23}{2}$ $\frac{57}{6}$

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1895phae.proj.1338.

Nov. 7. 1895.

0h	12m	45s.4	
		59.0	13s.6
	13	20.0	
		33.8	13.8
	14	7.1	
		36.0	28.9
		52.3	
	15	21.2	28.9

9 0

BD +17° 4367 (suspected variable by Miss Wells)
Obs. W. Equatorial
a 2 V ; V 2 b ; V 3 c

1895phae.proj.1338.

Nov. 7. 1895.

o Oeti. Photo R: w.obs.

2	4	−2.5
0	44	
−1	20	
10	40	

Index below.

267.0 < comp star dis.

9 36 12 10.9 103.9 ✓

269.6 98.9 ✓

8.5 202.8 ✓ −0.43 <

107.2

Index above.

1.2

9 38 22 99.0 97.8 ✓

359.3 100.2 ✓

99.5 198.0 ✓ −0.34 <

162.0

358.9

9 39 53 99.7 100.8 ✓

3.7 93.3 ✓

97.0 194.1 ✓ −0.27 <

165.9

Index below.

91.7

41 48 189.0 97.3 ✓

89.1 101.1 ✓ −0.3 <

198.4 166

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1895phae.proj.1338.

Nov. 7. 1895

			91.7		
9	43	24	190.6	98.9 ✓	
			90.3	98.2 ✓	
			188.5	197.1 ✓	−0.32
				162.9	

Index above.

			181.8		
9	44	57	276.5	94.7 ✓	
			179.2	100.7 ✓	
			260.0	195.4 ✓	−0.29
				~~144.6~~	
9	40	46			

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1895phae.proj.1338.

Nov. 15. 1895.

Schaeberle's new var: W Ods

23° 50' 31" +15° 8.9

Will serve as a 7.0 mag.

23	55	+15.5
23	45	
0	10	
23	56	+16.7
23	49	
0	7	
23	49	+15.5
24	0	
0	11	
23	55	+15.5
24	10	
0	15	

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1895phae.proj.1338.

Nov. 15. 1895.

24h. 38m. 19.1s.
39m. 58.5s 1m. 39.4s.

Index above.

			354.0		
			~~359.6~~		
9	7	~~0~~	79.2 ~~79.7~~	∠ compl.	81.2
			360.8	l	75.8
			76.6		157.0
			357.2	l	
9	9	0	76.0		78.8
			358.6	∧	81.0
			79.6		159.8

Index below

			88.1	± l	
9	15	58	165.9		77.8
			87.2	± ∧	82.7
			169.9		160.5
			85.2	± ∧	
9	18	13	168.5		83.3
			88.4	∧ l	79.5
			167.9		162.8

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1895phae.proj.1338.

Nov. 15. 1895

9 22 31

88.8 l
161.6
88.6 ∩
170.3

88.7 ∩
9 25 20 161.8
92.0 l
162.4

73.1

Index above

Atmospheric conditions very bad. Stopped by clouds. All the above observations rejected.

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1895phae..proj.1338.

Nov. 16, 1895.

Chandler's new Var: Chart 5. Wales
This Var. is 2m + 1r° 4p 1r (9.3)

23 51 +15.1
21 51

I index to left and above.

		172.8	^		
		258.1	< comp. variables	85.3 <	
6	0	3			
		187.0	l	64.2 <	0.58
		251.2		149.5 <	
		186.3	l		
6	1	57			
		251.6		65.3 <	
		173.6	^	90.1 <	0.47
		263.7		155.4 <	

I

I index to right and below.

		156.8 ~~+60.0~~	^		
6	11 ~~4~~	26 ~~43~~	277.7 ~~276.4~~	120.9 <	~~+16.4~~
			166.1 ~~+67.3~~	104.5 l	~~98.3~~
			270.6 ~~265.6~~	225.4 <	~~214.7~~
				134.6	
		167.9 ~~172.2~~		l	
6	13 ~~6~~	0 ~~90~~	270.4 ~~264.9~~	102.5 <	~~92.7~~
			158.7 ~~+59.2~~	119.1 <	~~+18.4~~
			277.8 ~~277.6~~	221.6 <	~~211.1~~
				138.4	

4 | 26 26 (146)
6 6 36.5 <
+1 8
6 7 44.5 <

0.81
4 | 274 <
0.685 <

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1895phae.proj.1338.

Nov. 16. 1895.

Index to left and above

		175.4	∩		
6	27	28	260.0		84.6 <
			187.5	∟	63.6 < 0.61 <
			251.1		148.2 <
			187.2	∟	
6	29	0	252.6		65.4 <
			174.2	∩	67.1 < 0.53 <
			261.3		152.5 <

II

Index to right and below.

		264.6	∩		
6	32	28	352.8		88.2 < 0.45 <
			274.3	∟	68.0 <
			342.3		156.2 <
			274.6	∟	
6	34	0	343.7		69.1 <
			263.1	∩	92.3 < 0.35 <
			355.4		161.4 < 4)19 4 <
					0.485 <

4)122 56 176

6 30 44 <
+1 8
6 31 52 <

B.+C. #1182.
$6^h\ 39^m\ 52^s.0$ = $6^h\ 41^m\ 0^s.0$
6 39 −2.0
B+C #1181 is slow $1^m\ 8^s.0$

Ballou #103

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1895phae.proj.1338.

Nov. 16, 1895.

		267.0	∧	83.0 <		
6	46	30	350.0			
			273.6	∠	71.4 <	0.49 <
			345.0		154.4 <	
			274.9	∠	69.8 <	
6	48	8	344.7		81.6 <	0.55 <
			267.2	∧*	151.4 <	
			348.8			

III

Index to left and above.

		354.6	∧	86.5 <		
6	51	12	81.1			
			364.6	∠	67.6 <	0.50 <
			72.2		154.1 <	
			362.9	∠	66.7 <	
6	52	22	69.6		82.7 <	0.59 <
			356.2	∧	149.4 <	4 | 213 <
			78.9			0.532 5

4 | 198 23 <

6 49 35.75 <
+/ 8.0

6 50 43.75 <

		351.2	∧	94.0 <		
7	0	33	85.2			
			4.9	∠	65.1 <	0.40 <
			70.0		159.1 <	

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1895phae.proj.1338.

Nov. 16. 1895.

	0	33				0.40
			5.8	l		
7	1	57	72.5		66.7 <	
			351.7	λ	89.6 <	0.45 <
			81.0		156.3 <	

IV

Index to right and below.

			85.4	λ		
7	5	12	171.4		86.0 <	
			92.2	l	70.8 <	0.44 <
			163.0		156.8 <	
			92.3	l		
7	6	31	161.1		68.8 <	
	4	14 13 <	82.0	λ	85.6 <	0.49 <
7	3	33.25° <	167.6		154.4 <	4 | 18 <
	+1	8				0.445 <
7	4	41.25° <				
			83.3	λ		
7	7	48	167.7		84.4 <	
			95.7	l	67.7 <	0.53 <
			163.4		152.1 <	
			91.2	l		
7	9	8	161.4		70.2 <	
			81.7	λ	90.3 <	0.37 <
			172.0		160.5 <	

V

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1895phae..proj.1338.

Nov. 16. 1895.

I index to left and above.

7 7 48					
7 9 8					
	83.1	≥			
7 10 18	170.2		87.1 <		−0.02 <
	95.0	l	93.6 <		−.02
	188.9		180.7 <		
			179.3		
	91.7	l			
7 12 41	165.0		73.3 <		
4|39 55 180	84.0	≥	87.9 <		0.36 <
7 9 58.75 <	171.9		161.2 <		0.31 <
+1 9					4|124 <
7 11 7.75 <					31 <
	82.7	≥			
7 24 7	172.9		90.2 <		
	94.0	l	70.2 <		0.37 <
	164.2		160.4 <		
	91.7	l	73.9 <		
7 26 23	165.6		85.4 <		0.39 <
7 28 44	84.2	≥	159.3 <		
	169.6				

VI

I index to right and below.

	172.7	≥			
7 29 41	262.1		89.4 <		0.36 <
	183.7	L	71.8 <		
7 31 10	255.5		161.2 <		0.24
4|111 21 201					4|136 <
7 27 50.25 <					0.34 <

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Nov. 16. 1895.

7	31	10		180.6	l		
				256.0		75.4 <	
7	27	50.25 <		172.8	∼	91.8 <	0.24 <
	+1	10.		264.6		167.2 <	0.34 <
7	29	0.25 <					
				173.0	∧		
7	39	20		262.2		89.3 <	
				180.8	l	77.1 <	0.26 <
				257.9		166.4 <	
				183.0	l		
7	41	2		257.1		74.1 <	
				176.3	∧	86.0 <	0.38 <
				262.3		160.1 <	

VII

Index to left and above.

				267.0	∧		
7	44	10		251.1		84.1 <	
				275.6	l	67.6 <	0.54 <
				343.2		151.7 <	
				275.7	l		
7	45	56		345.0		69.3 <	
				266.2	∼	86.9 <	0.45 <
	4/17	0 28		353.1		156.2 <	4/16 3 <
7	42	37.5 <					0.4075 <
	+1	16.					
7	43	47 <					

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Nov. 16. 1895.

Index to right and below.

7	58 30	271.0 ~~+69.0~~	∧	
	~~46 +5~~	351.9 ~~351.9~~		809 <
		295.6 ~~277.0~~	l	66.8 < 0.62 <
		342.4 .		147.7 <
		276.0	l	
8	0 40	341.3		65.3 <
		265.8	∧	86.1 < 0.55 <
		351.9		151.4 <

~~VIII~~

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

		357.0	∧	
8	4 21	76.9		79.9 <
		3.5	l	69.4 < 0.59 <
		72.9		149.3 <
		2.5	l	
	8 6 7	72.2		69.7 <
	4 | 32 9 48	355.7	l	835 < 0.51 <
	8 2 27 <	79.2		152.2 < 4 | 227 <
	+ 1 10			0.56
	8 3 37 <			
		358.2	∧	
8	14 27	78.6		80.3 < 0.55 <
		1.3	l	71.2 <
		72.5		151.5 <

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	14	27				
			2.9	l		0.5⁻5⁻
8	16	23	72.5		69.6 <	
			356.7	∩	80.3 <	0.58 <
			77.0		149.9 <	

IX

Index to right and sinus.

			86.6	~~89.7~~	∩	
	22	29				
8	~~#~~	~~55~~	166.1	~~166.8~~	79.5 <	~~77.7~~
			90.8	~~94.0~~	71.7 < l	~~94.9~~
			162.5	~~191.9~~	151.2 <	~~175.6~~

0.55 <

			92.7	l		
8	20	42	161.2		68.6 <	
	4 | 74	2 <	88.0	∩	78.8 <	.0.63 <
8	18	30.5⁻ <	166.8		147.4 <	4 | 231 <
	+1	11				0.5⁻77.5⁻ <
8	19	41.5⁻ <				

Index to tube and sinus.

			180.2	∩		
8	42	42	255.2		75.0 <	
			163.4	l	69.8 <	0.68 <
			253.2		144.8 <	
			184.2	l		
8	45	26	252.9		68.6 <	
			175.8	∩	78.0 <	0.64 <
			253.8		146.6 <	

X

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Nov. 16. 1895.

δ 43 42
δ 45 36

Index to ~~Left~~ right and ~~above~~ below. 0.68
0.64

273.0 ν
347.0 74.0 <
276.9 l 64.8 < 0.80 <
341.7 138.8 <

274.3 l
343.9 69.6 <
273.6 ν 69.8 < 0.79 <
343.4 139.4 < 4|29 1 <
Star thick 0.7275 <

δ 54 39
4|196 14 <
δ 49 3,5 <
+1 12.
δ 50 15,5 <

274.6 ~~272.8~~ ν
9 17 36
9 ~~7~~ ~~24~~ 345.1 ~~341.0~~ 70.5 < ~~68.2~~
276.8 279.0 65.3 l < ~~61.0~~ 0.86 <
342.1 340.0 135.8 < ~~129.2~~

Star invisible
276.6 l
9 20 0 340.6 64.0 <
274.6 ν 67.9 < 0.94 <
342.5 131.9 <

XI
Index to ~~right and above~~ above.
4.7 ν
9 23 42 70.4 65.7 <
5.2 l 65.8 < 0.95 <
9 25 7 71.0 131.5 < 0.97
4|37 2 <
0.93 <

4|86 25 <
9 21 36.25 <
+1 13
9 22 49.25 <

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1895phae.proj.1338.

Nov. 16, 1895.

9	25	4		4r.7	l	65.4 <
9	21	36.20		70.1		64.8 < 0.97 <
	1	13.	~	5.1	~	130.2 < 0.93
9	22	49.20		69.9		

B + b #1182:

$9^h\ 14^m 46^s.9 = 9^h\ 16^m\ 0^s.0$

$9\quad 14\quad 46.9$

B+C #1182 is slow $1^m\ 13.1^s$

B allow #103:

9

9

9

9

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1895phae.proj.1338.

Posted to here.

Nov. 18. 1895

U Cephei. Phot. I. Hours.

0	V 0	+41.°1
1	1 V	
+0	2 V	

Comp. Star = Sch. +41° 27 (4.6)

Index ~~Below~~ left L

		98.1	R	
9	35 0	160.8	L	62.7 <
		97.2	L	59.8 < → 1.14 <
		157.0	L	122.5° <
		96.8	L	Var. disappears → 1.02
9	36 45	160.7	L	63.9 <
		91.7	R	69.7 < → 0.90 <
		161.4	R	133.6 < 2.04
				−1.02

Right a = I.

Index ~~Above~~

		182.0	R	
9	41 15	256.8	R	74.8 <
		188.1	L	58.6 < → 0.91 <
		246.7	L	123 4 <
		190.7	L	
9	42 47	245.6	L	54.9 <
		180.8	R	74.8 < → 0.99 < −0.9
		255.6	R	129.7 < 4 394 <

4 | 15° 5′ 47″ | 227

9 | 38 | 56.7° <
+2 | 10

9 | 46 | 63 =

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1895phae.proj.1338.

November 18, 1895.

181.0 R a

9 44 46 255.8 R 74.8<
189.6 L 57.9< −0.92<
247.5 L 132.7<

189.3 L
9 46 17 248.8 L 59.5<
181.2 R 72.7< −0.93< −0.9
253.9 R 132.2<

Index left II b

274.9 R
9 50 15 343.8 R 68.9<
276.4 L 62.5< −0.95<
338.9 L 131.4<

274.2 L
9 51 47 339.6 L 65.4<
4|193 5< 273.9 R 67.5< −0.92< −0.94
48 16.25< 341.4 R 132.9< 4|12<
+2 10 0.93<
9 50 26.25<

273.1 R b
9 53 42 342.4 R 69.3<
276.8 L 63.2< 0.93<
340.0 L 132.5<

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1895phae..proj.1338.

November 18, 1895.

9 53. 42

0.93

~~9 51 28~~ 275.2 L

9 55 28 340.6 L 65.4 <

273.8 R 71.8 < 0.83 <

345.6 R 127.2 < −0.AF

Index Right III a

2.2 R

10 0 45 72.8 R 70.6 <

5.7 L 63.7 < −0.89 <

69.4 L 134.3 <

5.6 L

10 2 16 70.4 R 64.8 <

9 4|232 11 < 0.5 − R 71.9 < −0.84 < −0.46

10 58 2.75 < 72.4 R 136.7 < 4|349 <

+2 10 −0.8725 <

11 0 12.75 <

10

2.8 R a

10 3 47 73.6 − R 70.8 <

2.2 L 62.6 < 0.91 <

69.8 L 133.4 <

6.0 L

10 5 17 69.3 L 63.3 <

359.0 R 76.0 < 079 <

75.0 R 139.3 < −0.AF

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1895phae.proj.1338.

November 18, 1895.

3 47
5 17

Index Left IV b

270.2 R
9 79

10 9 21 348.0 R 77.8 <
272.4 L 70.8 < − 0.60 <
343.2 L 148.6 <

272.0 L
10 10 45 342.4 L 70.4 <
4 29 10 < 271.4 R 73.1 < − 0.69 < − 0.64
10 7 17.5 < 345.1 R 144.1 < 4 29 9 <
+2 11 0.7475 <
10 9 28.5 <

Ballon 103 h m s
B+C 1182 10 17 0.0
" " is slow 2m 11.0s
Ballon 103 10 14 49.0
B+C 1182 10 18 0.0
" " " is slow 2m 11.0s 10 14.5 49.0

269.1 R b
10 20 41 348.1 R 79.0 <
272.0 L 70.4 < − 0.59 <
342.4 L 149.4 <

274.2 L
10 22 42 342.4 L 68.2 <
269.0 R 79.9 < − 0.61 <
348.9 R 148.1 < − 0.60

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1895phae.proj.1338.

November 18, 1895.

10 20 41
10 22 42

Index Right a V.

	358.3	R		
10 25 15	78.2	R	79.9 <	
	3.2	R	67.6 <	−0.62 <
	70.8	R	147.5 <	
	1.7	R		
10 27 4	72.8	R	71.1 <	
4 15 42 m	358.2	R	82.8 <	−0.50 < −0.56
10 23 53.5 <	81.0	R	153.9 <	4 | 232 <
+2 11				0.58 <
10 26 6.5 <				

	352.4	R	Images gone: Clouds.
10	.	R	
	.	R	
	.	R	Sky thickly covered with clouds; no chance for anything farther.
	.	R	
10	.	R	

Troubled by clouds throughout observations; and stopped by clouds.
Comp. star = 2 m. + 41° 27 (4.6)

Index Left VI

	.	R	
10	.	R	
	.	R	
	.	R	

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November 18, 1895.

		hrs		
L	Ballon 103#	11	6	00
L	B+C 1182#	11	3	48.0
R	B+C 1182# is slow		2m	12.0s
R		hrs		
	Ballon 103#	11	7	00
	B+C 1182#	11	4	48.0
	" " is slow		2m	12.0

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1895phae.proj.1338.

Nov. 19, 1895.

7 0 cloudy

7 20 " "

Fried position of micrometer when at focus:

When micrometer tube is slipped into tail piece so that when micrometer abutts against tail piece tube, flange of tail piece is racked away from tail end of telescope by just one inch

Sagyni: W: obs.

20	8	+57.2
24	8	
4	0	

8 0 cloudy.

8 15 " stars invisible.

8 30 " " "

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Nov. 19. 1895.

8 40 Star t seen for a moment.

S Cygni not seen: probably fainter than star t.

9 0 Sky a little clearer again.

9 5 Star r seen for a moment: S Cygni probably seen and about equal to star t: sky not really clear; observation rather difficult.

R Draconis. W. Uhl

16	26	+67.4
1	10	
8	44	

9 15 Clouds.

Clouds again.

9 25 R Draconis glimpsed for a moment: it seemed to be about equal to comp star O but observation is not certain

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Nov. 19, 1895

9 10 Thickly cloudy and growing worse

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Nov. 21, 1895.

B+C #1182: Ballou #103

7h 2m 27.s0 = 7h 6m 0.s0

7 2 27.0

B+C 1182 is Slow 3m 33.0s

o Ceti: Phot R: W: obs.

2 4 -2.5

23 54

2 10

Index Ballou.

50.4 < comp star dis.

160.5

54.3 110.1 <

157.4 103.1 < -0.64 <

213.2 <

146.8

Index above.

141.2 ~~65.2~~ wrong image dis.

250.2 ~~147.0~~ ~~81.8~~ 109.0 <

147.5 98.9 < -0.53 <

246.4 207.9 <

152.1

145.7 100.5 <

246.2 106.8 < -0.52 <

141.7 207.3 <

248.5 152.7

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1895phae.proj.1338.

7 46 20

Nov. 21. 1895.

64
$\sqrt{-3}$
$\sqrt{-2}$

Index below.

232.6		
340.8	108.2 <	
235.7	102.3 <	−0.58 <
338.0	210.5 <	
	149. $\sqrt{-}$	

233.7		
337.1	103.4 <	
53.9	103.0 <	−0.50 <
156.9	206.4 <	
	1 $\sqrt{-}$ 3.6	

Index above.

146.5		
246.3	99.8 <	
142.9	104.0 <	−0.145 <
246.9	203.8 <	6) 322
	1 $\sqrt{-}$ 6.2	4. $\sqrt{-}$ 366+

7 59 38

2) 10 $\sqrt{-}$ $\sqrt{-}$8 <

7 $\sqrt{-}$2 59 <
+3 3/4

7 $\sqrt{-}$6 33 <

o Leti is brighter of the two.

Variable star (−1°: 475)

3	5	−1.8
0	50	
−2	15	
9	45	

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Nov. 21, 1895

1h	44m	57s.5
	45	22.3
		31.5
	46	1.8

Faint star precedes variable 9s.2 :
1' north of it.
Faint star follows variable 30s :
5' south of it
called preceding star A.
called following star B.

9 35 A 3.5 var : var 1.5 B : estimate
= 13.0 W : obs

Disappearance of Jup. I : Phot R : W. obs
Cram recorder : compared with mean of 3 satellites on following side = satellite II
B + L #1182 Ballou #103

9h	~~44m~~	~~23s.4~~ =	9h ~~48m~~	~~0s.0~~
	~~45~~	——	~~49~~	~~0.0~~
	46	23.0 =	50	0.0
	47	23.0 =	51	0.0

B others at first by beats of other sounder.

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Nov. 21, 1895.

10	06	43		10	3	6	4 7778.9 / 194.7	151.1		
		58				21		237.0	85.9	
	07	10	10	07	05	33		153.8	(84.6) = 0.2	1
		24				47		237.0	83.2	
		36				59	4 7781.9 / 195.48	154.7		
		45	10	08	07 4	8		237.5	82.8	
	08	27				49		155.2	(81.0) = 0.3	2
		37				59		234.5	79.3	
		47			5	9	4 7780.5 / 195.1	153.0		
		55	10	10	02	17		235.0	82.0	
10	08				6	30		155.0	(82.2) = 0.3	3
		17				39		237.5	82.5	
		30				5	4 7781.1 / 195.28	156.5		
		41	10	10	26 7	3		234.2	77.7	
		51				13		156.2	(77.8) = 0.5	4
11	04					26		234.2	78.0	
		12				34	4 7793 / 194.8	153.8		
		21	10	11	25	43		234.1	80.3	
		30				52		154.5	(81.4) = 0.3	5
		37				54		236.9	82.4	
		45			8	7	4 7780 / 194.5	157.2		
		55	10	12	00	17		231.0	73.8	
12	05					27		154.7	(72.1)	6
		13				35		230.1	70.4 = 0.7	
		20				42		160.0	71.1	
		25				47		237.1	~~71.1~~	
		32				54		~~154.8~~ 154.8	76.3	

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10	12	39	10	9	1	225.2	70.4	
		46			8	158.9	66.3	
		54			16	226.8	67.9	
	13	00			22	159.5	69.3	
		08			30	229.0	71.5	
		20			42	162.2	66.8	
		27			49	~~230.9~~ 230.9	68.7	
		34			56	163.8	67.1	
		40		10	2	227.2	63.4	
		48			10	159.2	68.0	
		56			18	223.2	64.0	
	14	03			25	165.1	58.1	
		15			37	221.2	56.1	
		22			44	169.0	52.2	
		32			54	221.2	52.2	
		39		11.	1	169.3	51.9	
		46			9	217.8	47.5	
		54			16	174.5	43.3	
	15	02			24	211.5	37.0	
		12			34	180.0	31.5	
		25			47	206.0	26.0	
		40		12	2	not seen later		

lim. of visibility.

10	15	58	10	10	12	20	177.2	31.6
	16	11	10	16	19	33 778.4	208.8	(31.8)
		26				48 194.6	180.2	
		41			13	3	212.2	32.0

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Nov. 21, 1895.

Seeing rather poor: images somewhat blurry and flickering, making observations at last (when a stable view [illegible].) somewhat difficult and necessarily slow.

B+L #1182: Ballou #103

10^h	22^m	$21.^s7$	$= 10^h$	26^m	$0.^s0$
	23	21.6		27	0.0

Lelands' Var.

11 30 [illegible] Var. 2.5 var. 4.5 Var. in field glass. W. obs

11 15 var 2 Var: var 5 Var in field glass cram obs

11 25 A 5 Var. Var = 6 in ~~Field Glass~~ Great Eq. W. obs.

The above rel. estimates are to connect the Field Glass observations (Field Glass is now to be wholly used) with the Great Eq. observations (Great Eq. having been previously used).

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T Coronae. Plot. T. Gr. obs.

1 ✓ ✓2 +27.2
21 ✓✓
+6 3

Index above.

	279.2	< Comp. star dis.	
✓h 43 9✓	340.0	5 43.9 5	60.8 <
	281.1	37	✓6.7 < 1.2✓ <
	3378	57	117.✓ <
	279.0	< (A.A dis.)	✓8.0 <
	337.0		
	277.6		63.2 <
	340.8		121.2 < 1.17 <

Index below.

~~69~~		
10.0		
66.2		✓6.2 <
11.0		
628		✓1.8 < 1.46 <
		108.0 <
11.7		
62.7	5h 5✓0 2 5	✓1.0 <
10.0		✓✓.1 < 1.✓1 <
65.1		106.1 <

✓ ✓0 2
2 | 9 3 11
5- 46 3 5✓.5-

Correction to watch used above = +7.✓ secs.

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1895phae.proj.1338.

Nov. 27. 1895.

Sprocket wheel reads 3.2

Reading of sprocket wheel thought to be a little small, but ~~variable~~ region thoroughly identified in ordinary eye piece before inserting photometer. The A.A and 9.V clearly seen in position in photometer, and no other star ~~any where~~ near enough the variable to be apparently confounded with it, so that there is not much doubt but that the variable was the star compared with the A.A

Comp. star was Dm +26° 2763 (A.A
Var. is Dm. +26° 2765 (9.V)

Sprocket wheel reads −0.9 when the prisms are way down against eye end.

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Nov. 27, 1895.

Obsti: Phot R W: obs

2 4 -2.5
0 40
1 24

Index above.

136.5 < comparison star
253.0 116.5 <
146.2 98.6 <
244.8 215.1 < − 0.68 <
144.9

Index below.

233.0
343.0 110.0 <
227.6 115.5 < − 0.89 <
343.1 225.5 <
134.5

226.4
343.5 117.1 <
232.4 109.6 < − 0.91 <
342.0 226.7 <
133.3

Index above.

322.7 0
69.1 136.4 ~~− 0.89~~
321.9 109.1 <
71.0 245.5 − 06.8
1
144.5

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1895phae.proj.1338

8 5m 5s

Nov. 27. 1895.

321.7		
70.9	109.2<	
322.0	108.0<	− 0.72<
70.0	217.2<	
	142.8	

Index bilars.

51.3		
160.2	108.9<	− 0.80<
49.2	112.2<	
161.4	221.1<	
	138.9<	

8	22	49
2	27	54
8	13	57
	6	33
8	7	24

Comp. star is fainter of two.

Bond #394: B+b #1182:

$8^h.\ 37^m.\ 27.^s2 = 8^h.\ 44^m.\ 0.^s0$

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1895phae.proj.1338.

Nov. 27, 1895

H.P. 2894 : W: obs

Too much moonlight and cloud to see object: region also rather low

T. Androm: Phot T. W: obs

+26.1

0	14
1	50
+1	36
~~+2~~	~~+4~~

Index to left ~~and above~~ and below

202.2 < comp star dis.

9 24 2

235.3		
200.4	33.1 <	
236.1	35.7 <	2.55 <
	68.8 <	

Index to right ~~and~~ and above

291.1		
325.6	34.5 <	
291.2	34.8 <	2.53 <
326.0	69.3 <	

26 56

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1895phae..proj..1338..

Nov. 27. 1895

9 24 2
26 0.6

291.0		
9 29 0 326.7	35.7 <	
291.0	34.1 <	2.51 <
325.1	69.8 <	

Index left and below

20.6		
9 36 47 53.6	33.0 <	
21.4	32.4 <	2.66 <
53.8	65.4 <	

23.6		
9 37 36 52.3	28.7 <	
21.7	31.2 <	2.86 <
52.9	59.9 <	

Index to right and above

107.4		
9 39 54 144.8	37.4 <	
6 19 3 48 108.7	35.1 <	2.43 <
9 32 18 142.8	72.5 <	

~~Also~~ Last two sets made two seconds

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1895phae.proj.1338.

Nov. 27, 1895

H. P 899 :

10 0 a 2.3 var:var 3.5 b: w obs

10 5 var 2 a : var 5. b: cham obs

4h 59 +1.0
3 0
1 59
10 1

0h 12m 3.8
13 22.3
18s.5

10 35 a 2 var. var. 3 b. Wait etc.

I was also aware.

11 55 45

26.6 < var dis.
48.8
25.0 22.2 < 3.36 <
50.9 25.9 <
48.1 <

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1895phae.proj.1338.

Nov. 27, 1895.

11	58	0	26.7		
			50.2	23.5 <	
			26.8	21.8 <	3.49 <
			48.6	45.3 <	

Index Virginis.

11	1	25	294.3		
			321.4	27.1 <	
			296.1	22.7 <	3.28 <
			318.8	49.8 <	

11	3	31	296.3		
			315.8	22.5 <	3.34 <
			294.7	26.0 <	
			320.7	48.5 <	

4)238 51
10 59 42.8

Comp. star used with the above co
Dec. +0° 9 3 E (9.3)

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1895phae.proj.1338.

Nov. 24. 1895.

B.A.C. 1162.
11 2K √4.6
2√ √4√

B. 394.
11 32 0.0
33 0.0

Dia. Jup. I. W. otz. Waite rec
Phot. R.
Compared with first of two sats.
following = Sat. II
Sat. II. disappears in readings.

11	44	8	144.7	
11 44 26		20	245.8	(1) 101.1+
+ 7 6		31	147.9	97.1+
11 51 32		43	245.0	198.2
		57	144.0	99.1+ = -0.3
	45	8	243.3	(2) 99.3+
11 45 16		21	146.8	96.2
+ 7 6		29	243.0	195.5+
11 52 22	46	53	146.0	97.4+ = -0.3
	47	1	245.2	99.2+
11 47 7		13	143.3	(3) 103.7+
+ 7 6		23	247.0	202.9+
11 54 14	48	49	145.8	101.4+ = -0.4
		58	245.2	99.4+
				(4) 103.2+
11 49 6	49	14	142.8	202.6+
+ 7 6		25	246.0	101.3+ = -0.4
11 56 12				

Moved image a little in field —

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1895phae..proj.1338.

Nov. 28, 1895.

50	57		145.5		
51	6	95.5+	241.0		
11 51 15	19	96.6+	147.5		(5)
+7 6				-0.3	
11 58 21	25	194.1+	246.1		
52	43	97.0	146.5		
11 52 49	53	98.1+	244.6		
+7 6		98.1+			
11 59 55	53 4	196.9+	147.0	-0.3*	(6)
	15	98.4+	245.8		
	54 20		146.2		
11 54 33	30	99.3+	245.5		(7)
+7 6	38	99.1+	146.1	-0.4*	
12 01 39	45	195.4+	245.2		

Moved mags a little in field, and, with reduction to each, set 45 at 99.2

55	45		143.8		
11 55 57	53	99.4+	243.2		
7 6	56 2	100.2+	145.2	-0.4*	(8)
12 03 03	9	200.2+	246.0		
		100.1+			
	17		145.0		
11 56 21	25	98.8+	243.8		
7 6	33	97.7+	145.3	0.3*	(9)
12 03 34		196.5+			
	39	98.2+	243.0		
	50		145.0		
11 56 59	56	97.8+	239.8		
7 6	57 1	98.0+		0.2*	(10)
12 04 05		192.8+	147.0		
	8	96.4+	245.0		
	13		147.5		
11 57 23	19	100.5+	248.0	0.4*	(11)
7 6		100.1+			
12 04 29	26	200.6+	148.9		
		100.3+			

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1895phae.proj.1338.

Nov. 24. 1895.

	11	57	33	249.0		
11	07 52		42	143.2		
	7 6		50	102.2 246.0		
12	04 58		56	94.0 147.0		1/2
		58	2	200.2 100.4 245.0		-0.4
			10	148.3		
11	58 19		16	96.5 244.8		
	7 6		21	96.3 150.7		0.2 / 3
12	05 25		29	96.4 247.0		
12	05 45		35	93.5 147.7		
	05 51		45	90.4 241.2		
	58		52	93.2 150.8		
	06 6	59	0	93.4 244.0		
	12		6	86.2 150.6		
	19		13	84.6 236.8		
	25		19	83.8 152.2		
	31		25	80.9 238.0		
	39		33	81.9 157.1		
	45		39	86.0 239.0		
	52		47	82.0 153.0		
	07 01		55	78.8 235.0		
	07 11	00	5	73.6 156.2		
	18		12	69.6 229.8		
	29		23	64.0 160.2		
	36		31	56.3 224.2		
	46		40	56 167.9		
	55		49	48.7 221.5		
	01		55	43.2 171.8		

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1895phae..proj.1338.

Nov. 24. 1895.

08 14 12	01	8	31.8	215.0
27		21	22.0	183.2
39		33		205.2
		=		not seen later.

Limit of Vis.

09 27 12	02	21		185.8
30		24	20.3	206.1
57		51	24.0	183.2
			44.3	
10 10	03	4	22.2	207.2
9 46				

Seeing rather poor. Images blurry and somewhat out of round. There is a reflection in the eyepiece which almost overlaps the two sats which are being compared. This reflection is a rather bright and moves with Jupiter. So that it is not a ghost of Jupiter. It occasioned a little trouble at the last, especially as the sat. was becoming faint.

B+C. 1182 B 3941

12	15	53.7	12	23	00.0	
12	16	53.7	12	24	00.0	

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1895phae.proj.1338.

Nov. 29. 1895.

7 0 Cloudy.

7 15 Still cloudy.

7 45 " "

8 0 Cloudy.

8 10 Too cloudy for any work and growing worse.

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1895phae..proj.1338.

Nov. 30, 1895.

Chandler's new Var: Phot. ⊙: obs.

23 49 +15.5
0 35
0 46

0h 4 3m 55.8s
4 4m 25.8s
45 19.5
53.7s

Comp. star. = D.M. +15° 4916 (8.8 K)

0h 56m 40.5s
10.4
29.9s

Index above
174.1 < comp. star dis.
260.9
180.2 l 86.8 <
256.4 76.2 < 0.32 <
163.0 <

179.8 l
259.7 79.9 <
175.9 l 85.2 < 0.28 <
261.1 165.1 <

8 11 40

8 7 5

I

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1895phae.proj.1338.

Nov. 30. 1895.

Index below.

		269.1	∧		
8	9	30	350.9		81.8 <
			273.7	l	70.7 < 0.53 <
			344.4		152.5 <
			270.9	l	
8	10	34	344.4		73.5 <
			264.5	∧	86.1 < 0.39 <
8		12.20 <	350.6		159.6 < 4|152 <
	+8	0			0.38 <
8	16	12.25 <			
			271.2	∧	
8	19	40	349.0		77.8 <
			269.4	l	76.8 < 0.49 <
			346.2		154.6 <
			271.4	l	
8	21	12	346.8		75.4 <
			267.7	∧	82.2 < 0.43 <
			349.9		157.6 <

II

Index above.

		358.3	∧		
8	24	22	75.4		77.1 <
			358.2	l	81.0 < 0.42 <
			79.2		158.1 <

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1895phae.proj.1338.

Nov. 30. 1895.

8 19 40
21 12
24 23

8 25 57

4 | 91 12

8 22 48
8 0

8 30 48

359.1	l			
76.3		77.2 <		
359.6	∼	79.0 <		0.45 <
78.6		156.2 <		4 | 19
				0.448

8 21 52

357.1	∧			
78.7		81.6 <		
0.0	l	77.6 <		0.40 <
77.6		159.2 <		

8 24 0

358.9	l			
77.7		78.8 <		
358.8	∼	81.3 <		0.38 <
80.1		160.1 <		

III

Index below.

8 37 12

83.2	∧			
170.4		87.2 <		
86.9	l	84.3 <		0.16 <
171.2		171.5 <		

8 38 56

87.4	l			
170.6		83.2 <		
82.5	∼	85.8 <		0.21 <
168.3		169.0 <		4 | 11.5
				0.288

4 | 22 6

8 35 31.5
+8 0

18 43 31.5

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1895phae.proj.1338.

Nov. 30. 1895.

			84.2	∧			
8	48	8	169.9		85.7 <		
			89.4	l	80.9 <	0.25 <	
			170.3		166.6 <		
			87.8	l			
8	50	12	169.4		79.6 <		
			83.7	∧	86.4 <	0.27 <	
			170.1		166.0 <		

IV

Indecisive.

			180.0	∧	80.2 <		
8	52	20	260.2		79.1 <	0.39 <	
			179.6	l	159.3 <		
			258.7				
			180.1	l			
8	55	4	259.0		78.9 <		
			178.2	∧	81.8 <	0.37 <	
			260.0		160.7 <	4 | 12.8	
						0.32	

4 \| 206 14

8 51 33.5

8 51 20

8 59 33.5

			174.3	∧			
9	4	20	263.1		88.8 <		
			179.7 ~~183.1~~	l	79.5 <	0.22 <	
			259.2		108.3 <		

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1895phae.proj.1338.

Nov. 30. 1895.

9	4	30			0.22
			179.4	l	
9	7	7	256.7		77.3 <
			176.9	2	84.1 < 0.35 <
			261.0		161.4 <
			V		
			Index Lulus.		
			271.4	2	
9	9	22	347.7		76.3 <
			273.8	l	69.9 < 0.65 <
			343.7		146.2 <
			272.0	l	
9	12	40	344.4		72.4 <
	4	33 50	270.9	2	77.3 < 0.58 <
9	8	27.5	348.2		149.7 < 4 | 180
	8	2.8			0.45
9	16	30.3			
			273.2	2	
9	34	0	345.4		72.2 <
			276.2	l	67.5 < 0.78 <
			343.7		139.7 <
			277.5	l	
9	35	43	342.3		64.8 <
			271.4	2	75.1 < 0.78
			346.5		139.9 <
			VI		

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1895phae.proj.1338.

Nov. 30. 1895.

9 34 0
35 43

0.78
0.78

Index above.

1.5 ∧

9 37 23

75.8 74.3 <
359.4 l 75.5 < 0.58 <
74.9 149.8 <

358.5 l

9 40 23

76.2 77.7 <
359.4 ∧ 77.3 0.48 <
155.0 4|2.62
0.655

4|147 29

9 36 52.25 76.7 ~~77.3~~
8 3.9

9 44 56.10

23 ∧

9 57 43

74.1 71.8 <
359.1 l 77.6 < 0.59 <
76.7 149.4 <

0.0 l

9 59 8

76.6 76.6 <
0.0 ∧ 73.7 < 0.57 <
73.7 150.3 <

VII

Index below.

89.0 ∧

10 1 58

165.7 76.7 <
90.4 l 73.2 < 0.58 <
163.6 149.9 <

9
9
10

10
44
1
1

10

10

10

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1895phae.proj.1338.

9 57 43
9 59 8
10 1 58

Nov. 30, 1895.

89.1 l
164.1 75.0 <
78.6 ∧ 76.0 < 0.56 <
164.6 151.0 < 4)30
0.5775

10 3 20
4 40 2 22
10 0 35.5
8 3.9
10 8 39.4

B + C #1182 Ballou #103.

$9^h\ 19^m\ 56^s.1 = 9^h.\ 28^m.\ 0^s.0$
$9\quad 19\quad 56.1$
B + C 1182 is slow $8^m\quad 3.9^s$

88.8 ∧
10 9 12 167.1 78.3 <
89.4 l 72.8 < 0.56 <
161.7 150.6 <

91.0 l
10 11 0 165.0 74.0 <
90.2 ∧ 77.7 < 0.54 <
167.9 151.7 <
Index above VIII
180.6 ∧
10 14 10 254.6 74.0 <
160.5 l 78.7 < 0.52 <
259.2 152.7 <

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1895phae.proj.1338.

Nov. 30. 1895.

183.4	l			
257.6		74.2 <		
179.9	~	75.9 <	0.58 <	
255.2		149.5 <	4|20	
			0.05	

182.2	~			
255.7		73.5 <		
185.6	l	67.4 <	0.76 <	
253.0		140.9 <		

187.4	l			
255.5		68.1 <		
181.4	~	72.6 <	0.76 <	
254.0		140.7 <		

IX

Index Lulus

277.5	~			
343.5		66.0 <		
279.5	l	61.5 <	1.03 <	
341.0		127.5 <		

278.1	l			
237.5		59.4 <		
274.6	~	67.6 <	1.04 <	
342.2		127.0 <	43.9	
			0.897	

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1895phae.proj.1338.

Nov. 30. 1895.

			275.4	∧		
10	35	40	340.1		64.7 <	
			275.9	l	65.5 <	0.97 <
			341.4		130.2 <	
			275.0	l		
10	37	53	341.1		66.1 <	
			276.1	∧	68.7 <	0.88 <
			344.8		134.8 <	

Index above

			3.5	∧	6	
10	40	29	70.0		69.5 <	
			3.2	l	69.6 <	0.85 <
			72.8		139.1 <	
					6	
			2.9	l		
10	42	45	75.0		72.1 <	
	4)156	52	5.1	∧	67.2 <	0.79 <
10	39	13	72.3		129.3 <	4)349
	+8	6.4				0.8725
10	47	19.4				
			3.9	∧		
10	49	19	73.1		69.2 <	
			0.3	l	73.5 <	0.72 <
			73.8		142.7 <	

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1895phae.proj.1338.

Nov. 30. 1895.

49 19

0.72

2.2 l

10 51 3 74.7 72.5 <

2.0 ~ 71.5 < 0.69 <

72.5 144.0 <

Index Lulus. XI

94.7 ~

10 53 29 162.0 68.3 <

91.1 l 74.6 < 0.72 <

165.7 142.9 <

89.1 l

10 55 28 165.9 76.8 <

4|209 29 90.9 ~ 65.5 < 0.73 <

10 52 +8 22,25 159.4 142,3 < 4|28"6

11 0 28.60 0.715

B+b #1182. Balloon #103

$11^h\ 2^m\ 53.6^s = 11^h\ 11^m\ 0.^s0$

11 2 53.6

8m 6,4s

B+C 1182 # is slow →

94,2 ~

11 11 6 160.4 66.2 <

93,7 l 68.4 < 0.88 <

162.1 134.6 <

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1895phae.proj.1338.

11 11 6 Nov. 30, 1895.

0.88

92.1 l

11 12 50 165.1 73.0<

92.5 ∧ 70.6< 0.70<

164.1 143.6<

Index above. XII

182.6 ∧

11 15 46 257.9 75.3<

141.6 l 77.2< 0.53<

258.8 152.5<

140.4 l

11 19 31 258.6 78.2<

4)17 13 182.1 ∧ 74.4< 0.52<

11 14 18.25 256.5 152.6< 4)26 3

8 6.4 0.65-8

11 22 24.65

141.4 ∧

11 22 19 255.6 74.2<

160.9 l 78.3< 0.53<

259.2 152.5<

141.8 l

11 24 47 257.8 76.0<

160.9 ∧ 76.2< 0.52<

259.1 152.2<

XIII

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1895phae.proj.1338.

1 23 19
1 24 47

Nov. 30. 1895.

0.5-3
0.5-3

Index below.

	272.0	∩		
11 27 19	345.6		73.6 <	
	274.7	l	66.2 <	0.78 <
	340.9		139.8 <	
	275.2	l		
11 28 55	341.8		66.5 <	
4|24 20	272.2	∩	94.0 <	
11 26 5-	346.2		140.5 <	0.76 <
8 7.4				4|260
11 34 12.4				0.65-

	274.6	∩		
11 45 35	343.4		68.8 <	
	275.2	l	67.2 <	0.86 <
	342.4		136.0 <	
	274.4	l		
11 47 47	344.3		69.9 <	
	272.6	∩	73.5 <	0.71 <
	346.1		143.4 <	

XIV

Index above.

	0.3	∩		
11 5 8	78.4		78.1 <	
Assume	356.1	l	80.8 <	0.40 <
11 +0 6	76.9		158.9 <	

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1895phae..proj.1338.

Nov. 30. 1895.

	359.0	l		
h m s	79.2		79.6 <	
11 51 49	358.9	s	80.4	0.38
4 | 11 9 5 17	79.2		160.0	4 | 23 8
11 48 49.25 c				0.59
+8 8.4				
11 56 57.65 <				
	1.1	s		
11 58 26	75.8		74.7 <	
	257.2	l	81.8 <	0.45 <
	79.1		156.5 <	
	258.4	l		
11 59 47	79.0		80.6 <	
	258.9	s	81.3 <	0.34 <
	80.2		161.9 <	

XV

Index below

	85.2	s		
hrs m s	165.9		80.6 <	
12 2 0	87.8	l	78.9 <	0.39 <
	166.7		159.5 <	
	90.4	l		
12 3 38	167.0		76.9 <	
4 | 48 3 51 180 51	91.4	s	73.8 <	0.56 <
12 0 57.75 < 231	165.2		150.7 <	4 | 17 4 <
+8 8.4				0.435 <
12 9 6.15 <				

B+C #1182 Ballou #103

12h 15m 51.6 = 12h 24m 0.0

12 15 51.6 12 15 8 8.4

B+C 1182 is slow

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1895phae.proj.1338.

Dec. 2, 1895.

Dia. Jupr. III. Phot. R. W. Obs. Watertown.
Comp. with Sat. close to Sat. III
on same side = Sat. II.

~~15~~					
~~3~~	2	00	Clouds.		
~~15~~					
~~3~~	3	08	0.0	Sat. III dis.	
		24	80.0	80.0	
15 3 57.5	4	00	359.0	46.8	− 1
9 12.0				166.8	
15 13 10	5	18	85.8	83.4	+ 0.3
		35	359.0		
		48	78.5	79.	
15 6 51.8	7	35	358.3	43.2	− 2
9 12.0				162.7	
15 16 4	8	29	81.5	81.4	− 0.3
	10	15	356.1	83.9	
15 10 27.5		24	80.0	84.0	+ 3
9 12.0		30	354.0	167.9	− 0.2
15 19 40		41	78.0	84.0	
	11	11	352.1	88.1	
15 11 41.0		21	80.2	89.0	
9 12.0		44	355.8	177.1	− 0.1
15 20 53	12	28	84.8	88.6	
	13	23	358.8	87.0	
15 13 46.2		46	85.8	89.4	
9 12.0		54	352.3	176.4	
15 22 58	14	2	81.7	88.2	+ 0.1
		13	354.2	90.8	
15 14 26.0		20	85.0	94.0	− 6
9 12.0				184.8	+ 0.1
15 23 38				92.4	

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1h					
3	14	31	353.0	6	
		40	67.0		
	15	21	348.5		99.0
1h	1h	35.5			
	9	12.0			
1h	24	48	87.5	7	
		33			
		39	344.5		107.7
		49	92.2	+0.5	206.7
					103.4
1h	2h	32.	337.1	4	
1h	2h	46.			
1h	16	39.0	98.5		
		34.			
1h	2h	56.	337.0		
		44			
1h	26	10	99.0		
		~~58~~	~~the diffraction~~		
1h	26	28	335.8		
	17	16			
1h	26	37	98.9		
		25			
1h	26	47	336.0		
		35			
1h	26	58	100.8		
		46			
1h	27	9	332.0		
		57			
1h	28	2	115.5		
	18	50			

Limit of visibility. not seen later

~~1h~~					
1h	~~3~~	22	33	300.2	20.8
					21.3
1h	22	58			
	9	12			
1h	32	10	321.0		42.1
	~~3~~	22	42		
	~~3~~	23	1	301.5	21.0
	~~3~~	23	36	322.8	

Clouds began to come in heavy masses just before beginning to observe eclipse so that observer was continually troubled by clouds all the settings being taken through

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clouds of varying density. In a part of the observations the satellites being quite faint. Troubled also somewhat by some kind of reflected light about Jupr. Possibly due to something in connection with the instruments.

Comp. of Chron.

B+C 1182			Bd. 103,		
15	32	48.0	15	42	00.0
15	33	48.0	15	43	00.0
15	34	48.0	15	44	00.0

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u Ophei: Phot 5: W: obs.

0 30 +81.7

0 5

Comp. star = 2 mu. +01° 27 (A6)

Index to left. 6

285.7 l

7 12 30 338.0 < vanish 47.3 <

280.2 ~ 58.4 < 1:52 <

339.6 Cloud. 105.7 <

280.1 ~

7 15 10 339.1 59.0 <

284.2 l 49.9 < 1:44 <

334.1 108.9 ~~57.6~~

284.1 l

7 16 21 334.1 50.0 <

279.9 ~ 58.5 < -1.45 <

338.4 108.5 < 1.47 >

Index to right a

11.0 ~

7 24 4 66.9 55.9 < -1H5 <

4 68 5- 10.8 l 52.6 < ~~1.38~~

7 17 1.25- 63.4 108.5 < -1.71

-4 34. 5 20.7

7 12.4 27.25 -X.514

11 10.0

-3 57.6

86

1.465

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7	25 49	17.8	l
		62.3	
		10.8	~
		64.2	
		11.0	~ a
		66.9	
		14.9	l
		61.1	
7	28 25	15.3	l
		60.1	
		10.3	~
		66.1	

(1.58)

44.5 <
53.4 < — 1.71 <
97.9 <

M = 1.53

55.9 <
46.2 < — 1.61 <
102.1 <

44.8 <
55.8 < — 1.64 <
100.6 < — 1.62 ~

Index to left II 5

7	30 20	100.6	~
		161.1	
		104.9	l
		153.6	
		102.4	l
		154.9	
		97.6	~
		158.3	

60.5 <
48.7 < — 1.44 <
109.2 <

51.5 <
60.7 < — 1.37 — 1.40
112.2 <

4 | 206
— 1.515

7 36 24
4 | 120 56
7 30 14
— 4 33
7 25.7 41
11 10.0
-3 44.3

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		99.6	∩	b	
7	40 ~~44~~ 44	158.4		58.8 <	
		103.9	l	52.0 <	−1.40 <
		155.9		110.8 <	
		101.9	l		
7	38 38	156.8		54.9 <	
		96.2	∩	61.4 <	−1.27 <
	157.6 ~~159.0~~			116.3 <	−1.35

Index to right. III a

		187.9	∩		
7	46 48	249.1		61.2 <	
		191.7	l	53.5 <	−1.31 <
		245.2		114.7 <	
		193.6	l		
7	48 25	245.7		52.1 <	−1.36
	4|174 32	190.4	∩	57.8 <	−1.42 <
7	43 38	248.2		109.9 <	4|140
	− 4 32				−1.35
	7 39.1 6				
	11 10.0				
	−3 36.9				
		190.7	∩	a	
7	54 39	250.7		60.0 <	
40		192.0	l	53.7 <	−1.32 <
		245.7		113.7 <	

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−1.33

	193.9	l		
56 47	245.7		51.8 <	
	187.9	∩	63.3 <	−1.30 <
	251.2		115.1 <	−1.32

Index to left IV 4

	279.1	∩		
58 53	342.8		63.7 <	
	281.8	l	55.2 <	−1.22 <
	337.0		118.9 <	
	280.8	l		
8 0 27	335.4		54.6 <	−1.26
4|230 16	278.4	∩	60.3 <	−1.31 <
7 57 34	338.7		114.9 <	4|116
−4 32				−1.29
7 5 3.0 2				
17 10.0				
−3 14.0				
8 7 8	279.6	∩	5	
	340.4		60.8 <	
	281.9	l	55.0 <	−1.29 <
	336.9		115.8 <	
	281.9	l		
8 8 27	336.2		54.4 <	
	279.2	∩	60.4 <	−1.31 <
	339.7		114.8 <	−1.30

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8 7 8
8 8 27

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−1.29
−1.31

Index to right V a

	7.5	1		
8 11 11	64.0		60.5 <	
	12.0	1	52.0 <	−1.36 <
	64.0		112.5 <	
	12.1	1		
8 13 23	64.7		52.6 <	−1.34
4(40 9	8.2	2	61.1 <	−1.33 <
8 10 2.25	69.3		113.7 <	4(129
−4 31				−1.3225
4 31.5 31.25				
17 10.0				
−3 4.5				

	8.4	1	a	
8 28 15	67.0		58.6 <	
	11.1	1	52.6 <	−1.39 <
	63.7		111.2 <	
	11.0	1		
8 29 54	66.2		55.2 <	
	8.2	2	61.4 <	−1.27 <
	69.6		116.0 <	−1.33

Index to left. VI b

	95.9	2		
8 32 23	160.0		64.1 <	
	98.4	1	60.9 <	−1.08 <
	159.2		125.0 <	

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− 1.39
− 1.27
− 1.08

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28 15
29 54
32 123

B.+C. #1182. Ballou #103.

8h 19m 31.s0 = 8h 15m 0.s0

B+C 1182# is fast 4m 31.0s

		98.2	l	
8	32	53	160.1	61.9 < −1.04
	4	124	15	95.2 ∧ 68.0 < −0.98 <
8	31	3.75	162.2	129.9 < 4 47 2
	−4	31		−1.18
8	27.5	32.8		
11	10.0			
−2	425			
		93.6	∧	
8	37	18	160.9	67.3 <
			94.6	l 61.1 < −1.01 <
			158.7	128.4 <
			96.3	l
8	40	12	159.0	62.7 <
			95.0	∧ 67.4 < −0.98 <
			162.7	130.1 < −1.00
			Index to right.	VII a
			185.5	∧
8	42	27	252.1	66.6 <
			189.3	l 59.6 < −1.06 <
			248.9	126.2 <
			188.1	l
8	44	1	248.2	60.1 < −1.02
	4	164	58	183.9 ∧ 70.2 < −0.97 <
8	41	14.5	2s 411	~~254.9~~ 130.3 < 4 402
	−4	30		−1.005
8	36.7	44.5		
11	10.0			
12	33	3		

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3.

183.0 ∧ a

8 50 35

257.2 74.3 <
182.7 62.5 < −0.84 <
251.2 136.8 <

189.8 l

8 52 14

249.0 59.2 <
185.0 ∧ 70.5 <
255.5 129.7 < −0.99 <
−0.92

Indicator left. VIII b

279.6 ∧
8 54 40
345.8 72.2 <
278.2 l 62.6 < −0.88 <
340.9 134.8 <

277.5 l
8 56 50 62.9 < −0.88
340.4 72.2 < −0.87 <
4|14 25 274.2 ∧ 135.2 < 4|35-8
8 53 346.5 0.89 5
−4 30
8 49.1 6.2

11 10.0
−2 20.9

9 4 5

272.0 ∧ b
347.7 75.7 < −0.77 <
277.9 l 64.6 <
342.5 140.2 <

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4 3

- 0.77

		276.5	l	64.9 <	
9	5 20	341.4		72.0 <	- 0.84 <
		273.7	2	136.9 <	- 0.20
		345.7			

Index to night IX a

		1.9	2		
9	4 44	77.1		75.2 <	
		9.2	l	60.7 <	- 0.86 <
		70.0		135.9 <	
		8.1	l		- 0.49
9	10 14	69.0		60.9 <	
	4 28 31	2.7	2	72.0 <	- 0.90 <
9	7 7.75	75.7		132.9 <	4 33 7
	- 4 29				- 0.8425
9	2.6 38.8				
11	100				
- 2	7.4				
9	17 56	359.6	2	a	
		75.9		76.3 <	
		6.9	l	62.2 <	- 0.78 <
		70.2		129.6 <	
		7.1	l		
9	19 13	68.7		61.6 <	
		1.9	2	75.5 <	- 0.83 <
	77.4	70.0		137.1 <	- 0.20

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9 17 56
9 19 13

Index right. ⊖ X

91.9 l
9 21 54 168.9 77.0 <
92.9 l 69.4 < −0.65 <
162.3 146.4 <

94.2 l 67.9 <
9 24 28 162.1 ~~+6+1~~ ~~66.9~~ −0.64
4|83 31 87.6 r 79.7 < −0.62 <
9 20 52.75 − 4 28 167.3 147.6 < 4|28 8
9 16.4 24.8 −0.72
11 10.0
−1 53.6

87.1 r ⊖
9 33 29 167.2 80.1 <
91.8 l 70.3 < −0.51 <
165.1 153.4 <

91.4 l
9 38 [illegible] 164.2 72.8 <
85.6 r 83.7 < −0.45 <
169.3 156.5 < −0.42

Index right XI ⊜

179.6 r
9 47 28 [illegible] 261.5 81.9 < −0.58 <
185.6 l 68.0 <
253.6 149.9 <

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33 23
30 1
37 28

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−0.51
−0.45
−0.58

185.3 l
256.3
177.9 ∩
264.3

9 39 45
4|25 37
9 36 24.25
−4 28
9 31.9 56.2
11 10.6
−1 38.1

71.0 < −0.50
86.4 < −0.43 <
157.4 < 4|19 7
−0.4925

175.0 ∩ a
267.0
181.7 l
257.9

92.0 <
76.2 < −0.22 <
168.2 <

9 47 24

184.0 l
258.4
175.1 ∩
265.3

9 49 0

74.4 <
90.2 < −0.29 <
164.6 < −0.26

Index to left XII 5

80.7 173.0
176.1 266.1
86.4 166.1
170.6 269.2

95.4 < 93.1
84.2 < 03.1
179.6 < 96.2

−0.01 <

88.2 l
169.5
80.2 ∩
173.3

9 56 38
4|21 3 9
9 53 17.25
−4 27
9 48.8 50.2
41 10.0
−1 21.2

81.3 < −0.06
93.1 < −0.11 <
174.4 < 4|63
−0.1875

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84.3 ↑ b

10 8 0

174.0 89.7 <

177.0 l 99.2 < +0.17 <

176.2 188.9 <

171.1

76.6 l 100.5 <

10 9 47

177.1 89.6 < +0.19 <

80.9 ↑ 190.1 <

169.9 +0.18

173.5

Index to right. a XIII

170.4 ↑

10 13 0

5,0 273.1 102.7 <

175.3 l 90.4 < +0.25 <

265.7 193.1 <

166.9

l +0.24

176.6

10 14 50

266.0 89.4 <

166.9 ↑ 106.3 < +0.30 <

4 | 45 - 37 273.2 195.7 < 4 | 91

10 11 24.20 164.3 +0.228

−4 26

10 6.0 58.2

11 10.0

−1 5.0

10 19 52

167.0 ↑ a

275.7 108.7 <

178.9 l 93.0 < +0.141 <

266.9 201.7 <

158.3

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10 19 53					
	174.8	l			+0.41
					+0.40
10 21 40	265.5		90.7 <		
	165.0	~	109.8 <		+0.39 <
	274.8		200.5 <		
			159.5		
	Index to left. ≤ XIV				
	254.9	~			
10 24 0	368.6		113.7 <		
	262.6	l	94.3 <		+0.54 <
	356.9		208.0 <		
			152.0		
	261.0	l			+0.52
10 25 20	354.6		93.6 <		
4 9 1 3	255.4	~	111.8 <		+0.49 <
10 22 45.7 s-	367.2		205.4 <		4 1 8 3
-4 26			154.6		+0.457 s-
10 18.3 19.8					
11 10.0					
-0 51.7					
	252.5	~ b			
10 31 7	367.2		114.7 <		
	260.6	l			+0.61 <
	357.5		96.9 <		
			211.6 <		
			148.4		
	257.9	l			
10 32 31	362.1		104.2 <		
	255.0	~	113.0 <		+0.72 <
	368.0		217.2 <		+0.66
			142.8		

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10 31 7
10 32 31

Index to Right XV

343.2 ~
+93.9 95 +0.49
350.0 l 110.7 <
+55.0 95.0 <
205.7 <
15-4.3

+0.77

349.2 l 96.7 <
85.9 111.2 <
341.6 ~ 211.9 < +0.61 <
96.8 148.1 < 4)243
+0.6075

10 36 50
4)18-28
10 33 52
-4 26
10 29.4 26
11 10.0
-0 40.6
10 38 20

343.5 ~ = 110.2 <
93.7
349.8 l 98.2 <
ff.0 ~~55.0~~ ~~87.1~~ 208 < +0.54 <
151.6

351.8 l 94.8 <
86.6 114.1 <
340.9 ~ 208.9 < +0.77 <
95.0 151.1 +0.54

10 40 6

Index to left XVI

75.6 ~
10 42 35 179.7 104.1 <
69.0 l 115.7 < +0.77
184.7 219.8 <
140.2

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					+0.54
					+0.55
					+0.747
	68.0	l	119.0 <		
	187.0				
	79.3	∩	98.6 <		+0.75
	177.9		217.6 <	+0.73 <	
			142.4	4|29.9	
				+0.6475	
	69.1	∩			
	184.5		115.4 <		
	76.1	l	106.9 <	+0.82 <	
	182.0		222.3 <		
			137.7		
	75.7	l			
	182.1		106.4 <		
	68.4	∩	116.7 <	+0.84 <	
	185.1		223.1 <	+0.83	
			136.9		

Index to right a XVII

	162.7	∩			
	278.1		115.4 <		
	168.6	l	101.3 <	+0.71 <	
	269.9		216.7 <		
			143.3		
					+0.76
	169.4	l			
	270.0		100.6 <	+0.80 <	
	159.0	∩	120.8 <	4|3.17	
	279.8		221.4 <	+0.7925	
			138.6		

10	38	20	
	40	6	
	42	35	
10	44	3	
	4|165	4	
10	41	16	
	−4	25	
10	36.8	51	
11	10.0		
−0	33.2		
10	57	10	
10	58	56	
11	2	27	
	4|239	49	149 49 198
10	59	57.15	
	−4	24	
10	55.6	33.2	
11	10		
−8	14.4		

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161.4 r a
" " 29 277.9 116.5 <
170.5 l 100.6 < +0.72 <
271.1 217.1 <
142.9

168.9 l
" " 14 270.9 102.0 <
160.4 r 119.4 < +0.80 <
279.8 221.4 < +0.76
138.6

Index to left ~~XVIII~~

252.8 r
" 16 30 13.9 101.9 < +0.64
258.0 l 353.5
359.9 136.5

+0.84

256.9 l
" 18 14 362.2 105.3 <
251.2 r 117.5 < +0.83 <
168.8 22218 < 4319
137.2 +0.798

" 14 53,75 150 55 215
-4 24
" 10 29.8
" 10.0
+0 0.5

252.9 r b
" 27 55 367.8 113.9 <
255.1 l 108.8 < +0.83 <
369.9 222.7 <
137.3

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	255.1	l		~~+0.83~~
11 29 44	363.3		108.2 <	+0.82
	253.0	~	113.4 <	+0.81 <
	366.4		221.6 <	
			138.4	

Index rougher a XIX

	343.0	~		
11 32 5	94.4		111.4 <	
	345.1	l	105.6 <	+0.71 <
	90.7		247.0	
			143.0	

+0.70

	345.8	l		
11 22 35	92.9		107.1 <	
4 123 19	345.6	~	109.4 <	+0.70 <
11 30 49.75	95.0		216.5 <	4 30 5
−4 23			(143.0	+0.7625
11 26.4 26.8				
11 10				
~~4 3 6~~				
+0 16.4	342.1	~	a	
11 39 10	95.6		113.5 <	
	344.1	l	107.5 <	+0.79 <
	91.6		221.0 <	
			139.0	

	345.5	l		
11 40 45	92.0		106.5 <	+0.74 <
	343.0	~	111.7 <	~~0.79~~
	94.7		218.2 <	+0.76
			141.8	

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+0.79
+0.74

Index to left XX

clouds

11 39 10
11 40 45

50 49

70.4 ~~77.0~~ ≷ ≷
184.4 ~~188.2~~ 114.0 <
73.8 ≷ 109.1 < +0.80 <
180.9 221.1 <
139.9

75.0 ≷
182.3 109.3 <
69.4 ≷ 116.9 < +0.86 <
186.2 224.2 < 4 319
135.8 +0.797

11 42 20
11 48 3 4
11 45 46
−4 23
11 41.4 23
11 10
+0 31.4
10 0 40

clouds

70.9 ≷ ≷
185.0 114.1 <
71.2 ≷ 114.6 < +0.95 <
185.8 228.7 <
131.3

some

74.5 ~~76.4~~ ≷ 105.3 <
179.8 115.2 <
69.2 ≷ 220.5 < +0.78 <
184.4 199.5 +0.46

Index to right a XXI

12 3 9

165.3 ≷ 109.1 <
274.4
+64.5 ≷ 108.7 < +0.73 <
273.2 217.8 <
142.2

12 6 45

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1895phae.proj.1338.

12 0 40
2 3 9
2 6 45-

December 3, 1895

+0.95-
+0.78
+0.75

12 8 17

4|18 57

12 4 42.75-
−4 22

12 0.3 20.8
11 10.0
+0 5-0.3

167.0 l
273.7
161.8 ∧
275.9

106.7 < +0.76
114.1 <
220.8 < +0.79 <
139.2 4|3 25-
+0.8125-

12 16 45-0

162.7 ∧ a
275.2
166.5 l
276.2

112.5 < +0.82 <
109.7 <
222.2 <
137.8

166.4 l
273.6
162.9 ∧
275.1

12 18 36

107.2 <
112.2 < +0.76 <
219.4 < +0.79
140.6

Index to left XXII 5

253.0 2
369.6
256.0 l
366.9

116.6 <
110.9 < +0.93 <
227.5 <
132.5-

+0.86

255.9 l
362.7
252.9 ∧
368.4

106.8 <
116.1 < +0.83 <
222.9 <
137.1 4|33 4
+0.83-

12 21 40

12 24 42

4|81 48

12 20 27
−4 21

12 16.1 6
11 10
+1 6.1

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1895phae..proj.1338.

December 3, 1895.

		253.9	2		
*					
12	33	10	366.3		112.4 <
			257.2	1	106.0 < +0.74 <
			363.2		218.4 <
					141.6
			256.4	1	
12	34	50	362.1		105.7 <
			252.5	2	114.6 < +0.78 <
			367.1		220.3 < +0.76
					139.7

Index to right

		343.2	2		
12	37	33	94.6		111.4 <
			345.2	1	104.8 < +0.70 <
			90.0		216.2 <
					143.8
					+0.66
		349.6	1		
12	39	15	90.2		100.6 <
			343.5	2	111.3 < +0.60 <
			94.8		211.9 < 4/283
					148.1 +0.7075

4/24 48

12 36 12

− 4 21

12 31.8 51

11 10

+1 21.8

12 47 19

		344.1	2		
			91.0		106.9 <
			348.4	1	101.7 < +0.55 <
			90.1		208.6 <
					155.4

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1895phae.proj.1338.

12 47 19 December 3, 1895.

	347.4	l	101.9 <	+0.54
12 48 58	89.2		106.2 <	+0.54 <
346.0 ~~346.5~~		2	208.1 <	
	92.2		105-1.9	

Index to left 5 XXIV

	69.3	2		
12 51 46	185.1		115.8 <	
	76.2	l	104.4 <	+0.78 <
	180.6		220.2 <	
			139.8	~~+0.72~~
	76.8	l		
12 52 38	181.7		104.9 <	
4/20/41	72.6	2	109.8 <	+0.67 <
12 50 25.25	182.4		214.7 <	4 | 25-4
-4 20			145.3	+0.635-
12 46.1 5.2				
11 10				
+1 36.1				
12 59 55	72.6	2	h	
	182.5		109.9 <	
	77.7	l	100.3 <	+0.58 <
	178.0		210.2 <	
			149.8	
	76.4	l		
1 2 17	179.6		103.2 <	
	74.2	2	106.8 <	+0.58 <
	181.0		210.0 <	+0.574
			105-0.0	

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1895phae..proj.1338.

12 59 58
1 2 17

December 3, 1895.

Index to right: XXV

164.0	∧	a	
273.7		109.7 <	
167.2	l	104.5 <	+0.66 <
271.7		214.2 <	
		145.8	
172.3	l		+0.61
271.8		99.5 <	
165.0	∧	109.6 <	+0.56 <
274.6		209.1 <	4)238
		150.9	+0.595

1 4 57

1 6 34

4)52 13 43

13 3 25.75
−4 20

12 59.1 58
11 10
+1 49.1

1 10 17

169.1	∧	a	
265.1		96.0 <	
170.1	l	93.2 <	
266.3		189.2 <	+ 0.17 <
		170.8	
172.7	l		
268.4		95.7 <	
169.2	∧	100.1 <	
269.3		195.8 <	+ 0.30 <
		164.2	+0.24

1 17 55

Index to left: ~~V~~ XXVI

175.0	∧		
267.0		92.0 <	
177.8	l	85.2 <	
263.0		177.2 <	− 0.05 <

1 20 26

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1895phae.proj.1338.

December 3, 1895

				+0.17
				+0.30
				−0.05
178.0	l			
261.4		83.4 <		−0.03
172.9	∧	96.1 <		
269.0		179.5 <	−0.01 <	
			−0.06	
			+0.47	
			4[0.41	
			+0.1025	

266.0	∧	b		
357.1		91.1 <		
269.0	l	83.5 <		
352.5		174.6 <	−0.10 <	

268.6	l			
051.4		82.8 <		
262.1	∧	97.2 <		
359.3		180.0 <	0.00 <	
			−0.07	

Indistinguishable ~~a~~ XXVII

353.0	∧	~~b~~ a		
81.9		88.9 <		
359.4	l	98.6 <		
78.0		187.5 <	−0.25 <	
			−0.20	
0.2	l			
79.5		79.3 <		
352.2	∧	91.4 <	−0.17 <	
83.6		170.7 <	4[5.1	
			−0.1275	

1	16	17		
1	17	55		
1	20	26		

1	22	0	
	4[76	38	
13	19	9.5	
	−4	19	
13	14.8	50.5	
11	10		
+2	4.8		

1	29	42	

1	30	50	

1	32	45	

1	34	18	
	4[127	36	
13	31	54	
	−4	18	
13	27.1	36	
11	10		
+2	17.6		

150
36
214

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1895phae.proj.1338.

December 3, 1895.

	353.7	∧	a	
1 36 15	83.1			89.4 <
	358.8	l		77.5 <
	76.3			166.9 < −0.2 <
	357.6	l		
1 37 34	77.1			79.5 <
	356.7	∧		85.8 < −0.28 <
	82.5			165.3 < −0.26

Industro left. ≤ XXVIII

	81.0	∧		
1 39 32	171.9			90.9 <
	~~88.0~~	l		81.0 < −0.15 <
	169.0			171.9 <
	87.7	l		−0.2 <
1 41 30	165.9 ~~169.6~~			78.2 <
	83.5	∧		86.4 < −0.29 <
	169.9			164.6 < 4 | 97

4 | 15-4 51 −0.2425

13 38 42.7 −

4 18

13 34.4 24.8

11 10

+2 24.4

B + C #1182

Ballou #103

1h 49m 18.0s = 13h 45m 0.0s

13 49 18.0

B + C 1182# is fast 4m 18.0s

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1895phae.proj.1338.

B+C 1182 # is fast 4m 31.0 at 8hrs 15m 00.0

" " " " 4 18.0 " 13 45 00

loss 13.0 in 5 30 00

At		subtract		
8hrs	15m	"	4m	31.0
8	40	"	4	30
9	5	"	4	29
9	30	"	4	28
9	55	"	4	27
10	20	"	4	26
10	45	"	4	25
11	10	"	4	24
11	35	"	4	23
12	00	"	4	22
12	25	"	4	21
12	50	"	4	20
13	15	"	4	19
13	45	"	4	18

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1895phae.proj.1338.

Dec. 4. 1895.

Obsti: Phot. S. Byerly W: obs.

2 4 -2.5

0 55

-1 9

10 51

Index above.

7 56 5

276.8 < var dis.

343.5 66.7 <

274.6 71.1 < -0.82 <

345.7 137.8 <

275.2

7 58 45

343.4 68.2 <

276.8 66.7 < -0.88 <

343.5 134.9 <

Index below.

8 1 9

9.0

71.2 62.2 <

9.4 59.9 < -1.14 <

69.3 122.1 <

8.0

8 2 45

4(23 8 44

7 59 41

3 54

7 55 47

72.3 64.3 <

9.9 62.1 < -1.05 <

72.0 126.4 <

4(3 8 9

0.9725

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1895phae.proj.1338.

Dec. 4. 1895.

Observations made this quite thick & increasing clouds: observations, especially at the last extremely difficult: stars almost invisible.

This may account for difference between sides.

B + b #1182: Ballon #103

8^h	21^m	$53^s.6$	$= 8^h$	18^m	$0^s.0$
	22			19^m	$0^s.0$

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1895phae.proj.1338.

Dec. 6. 1894 5.

S Serpentis : W: obs.

20 8 +57.2
0 45
4 37

4 45 of 3 var:

8 0 Comp. stars r, s, and t, seen: var. thought to be probably seen at intervals: t

t 2.5 var : W: obs.
var about equal to star m as near as can be determined.

estimate = 15.0. W: obs.

R Draconis: W: obs.

16 26 +67.4
1 26
9 0

m 2 var: var 8.5 m m
large telescope: rather too faint for finder
estimate = 10.3
W: obs

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1895phae.proj.1338.

Dec. 6. 1895.

R. Camelop: W: obs.

14 +0 +84.1
1 40
11 0

R thought to be identified altho vers are rather faint.

8 45 0 1.5 var: var 2 p W: obs
estimate = 14.0

R. Lyncis: W: obs

6 +9 +55.1
2 0
-4 +9
7 11

9 0 9f 2 var var = 1.5 ~~var~~ 2 Apsides not : W: obs.
in large tele scope: too faint for finder:
estimate = 13.6

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1895phae.proj.1338.

Dec. 6. 1895.

R Aurigae: W: obs.

5 3 +53.0

2 23

2 40

9 20

meant for W. prob.

9 20 var = $\frac{\Sigma}{n}$ i estimate = 10.6 : W: obs

Nova Aurigae: Phot R: W: obs.

9 1 23 +32.0

2 36

2 47

9 13

Index above.

9 43

358.2 < northern and brighter <

63.0

359.3 +4.8 <

77.5 78.2 < ×0.32

105.0 <

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1895phae.proj.1338.

Dec 6. 1895.

+ 0.32

~~Index~~

359.8
82.5 — 82.7 <
359.5 — 81.1 < + 0.31
80.6 — 163.8 <

Index below.

88.5
172.1 — 83.6 <
87.8 — 80.1 < + 0.31
167.9 — 163.7 <

~~Index~~

91.4
168.9 — 77.5 <
88.4 — 82.3 < + 0.38
170.7 — 159.8 < 412
+ 0.33

9 50
2 | 93
9 46 30

Ballou #103: B+b #1182.

10h. 4m 0.s0 = 10h 6m 49.s5

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1895phae.proj.1338.

Dec. 6, 1895.

O Obti: Phot R: W: obs

2 4 −2.5

3/1 30/26

Index above.

98.5
162.2 < var dis

10 29

97.6 63.7 <
162.8 65.2 < −1.00 <
128.9 <

99.3 ~~96.9~~

162.6 63.3 <
98.0 63.8 <
161.8 127.1 < −1.04 <

Index below.

188.9 ~~100.1~~ 60.9 <
249.8 ~~148.5~~ ~~114.8~~

187.5 66.0 < −1.04 <
253.5 126.9 <

188.1
249.4 61.3 <
185.9 66.4 < −1.03 <
252.3 127.7 <

10 38
2 67

10 33 30
2 47

10 30 43

4 11
1.028

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1895phae.proj.1338.

Dec. 6, 1895.

γ Andromedæ: Phot γ; Wide

0 14 +26.1

4/3 0/46

10 50 clouds

Index to left.

18.2 < comp. star dis.

10 55 44.7 ~~44.2~~ 26.3 <

18.9 25.2 < 3.20 <

44.1 51.7 <

20.3

42.8 22.5 <

18.0 24.7 < 3.40 <

42.7 47.2 <

16.0 29.1 <

11 00 45.1 ~~41.8~~ ~~25.8~~

19.2 22.6 < 3.20 <

10 57.5 41.9 51.7 <

The above 3 sets were on γ Andromedæ, but the rest (to middle of p. 111) were on wrong star. Clouds caused trouble and misidentification, as was subsequently proved.

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1895phae.proj.1338.

Dec. 6. 1895.

Index to right.

16.3		
47.7	314 <	2.73 <
15.0	323 <	
47.9	637 <	
12.7		
47.6	349 <	2.73 <
16.9	287 <	
45.6	636 <	
17.7		
47.4	297 <	2.73 <
13.2	340 <	
47.5 ~~47.4~~	637 <	
14.8		
46.7	219 <	2.80 <
16.8	296 <	
46.4	615 <	
16.9		
45.6	296 <	2.80 <
15.4	328 <	
46.2	615 <	

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1895phae.proj.1338.

Dec 6, 1895.

14.1		
46.8	32.7 <	
16.8	29.3 <	2.79 <
46.1	62.0 <	

Indirect light.

104.0		
140.8	36.8 <	
102.1	39.3 <	2.31 <
141.4	76.1 <	

102.0		
139.0	37.0 <	
101.2 ~~100.7~~	38.0 <	2.35 <
139.2	75.0 <	

103.4		
140.9	37.5 <	
100.2	40.4 <	2.26 <
140.6	77.9 <	

11 12

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1895phae.proj.1338.

Dec. 6. 1895.

18.6		
43.8	25.2 <	3.18
17.1	26.9 <	
44.0	52.1 <	
18.9		
42.6	23.9 <	
19.4		

Balloon 103.

B. + C. 1182			~~A. 39K.~~		
12	33	47.0	12	31	0.0
	34	47.0		32	0.0
			12	34	47.0

B + C #1182 is fast 2m 47.0s

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1895phae.proj.1338.

Posted to here.

Dec. 12. 1895.

Nisp. Wells Var. (Algol type) Fr. do.

7 1V Thickly cloudy.

20 31 +17.7
2V 1V
+F FF

Cloudy.

8 0 "

2V V0
+V 19

8 20 Cloudy.

26 0
+V. 29

Cloudy.

26 1V
+V 44

Cloudy.

8 3V Cloudy.

26 2V
+V V4

Cloudy.

8 V0 "

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1895phae.proj.1338.

Dec. 12. 1895.

		20 31	+17.7
		26 40	
9	0	+6 9	Cloudy.
		27 9	
		+6 34	
9	30	Cloudy.	

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1895phae.proj.1338.

Dec. 16. 1895

Phot R.

Wells (Algol) Var. ^ Wds.

20 31 +17.2

2 7

+K 36

h m

7 44 31,2 < Comp. star dec. Var. compared with 7 magnitude star

53.1 21.9 B.D. +17° 4370

27.5 26.9 Index right and above

54.4 48.8

3.33

7 46 36.1 21.9

58.0 29.9

27.0 51.8 3.19

56.9

I.

Index left & below

~~[illegible]~~

121.2

7 50 8 140.6 19.4

114.1 29.2 3.33

146.3 48.6

115.2

7 51 40 146.5 31.3

4)191 48 122.0 17.5 3.33

7 47 57 139.5 48.8 4)118

3.295

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1895phae.proj.1338.

Dec. 14, 1895.

Watch used on time of first two of sets on previous page (= Prof. Searle's watch) assumed to be correct.

Watch used on last two of sets on previous page is 45 sec. slow.

B.+O. #1182. Ballou #103.

8h 1m. 50s.0 = 8h. 3m 0s.0
+1 10.0

~~30~~

	300.7	< Comp. clock dec.		
8 10 8	321.0		20.3 <	3.24 <
	295.5		30.4 <	
	325.9		50.7 <	
	294.6			
8 11 24	320.4		25.8 <	3.44 <
	300.1		20.5 <	
	320.6		46.3 <	

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1895phae.proj.1338.

Dec. 14. 1895.

II Index to right and above.

		30.4		
8	13	9	50.0	19.6 <
			25.3	29.7 < 3.20 <
			55.0	49.3 <
			25.7	
8	14	10	57.8	32.1 <
			31.0	19.1 < 3.22 <
8	12	15.25	50.1	51.2 <

4/9 1 — 4/120 — 3.30

Wellis(Algol)Var: Phot I: Wolfs Star c. compared with var.

Index above.

		77.1	< var dif.
8	30	52	165.0 88.2 <
			72.7 98.0 < ± 0.12
			170.7 186.2 <
			173.8
			74.5
8	32	44	170.4 95.9 <
			80.2 105.0 < ± 0.40 <
			185.3 200.9 <
			159.1

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1895phae.proj.1338.

Dec. 14. 1895.

20 52
32 14

±0.12
±0.40

Index below

170.3
8 35 21 255.3 84.9<
168.3 92.6< = 0.05<
260.9 177.5<

166.4
8 36 38 258.7 92.3<
168.7 87.9< = 0.00
256.6 180.2<

+0.52
−0.05
41.47
±0.12

4|15 5
8 33 46.2
+1 11.
A 34 57.
57 0 0.
13 34 57.

Star compared with 7.0 mag

Index below

197.6
8 29 17 227.8 <7.0 mag Dec 50 0.2<
200.4 225.5< 3.15<
222.9 52.7<

200.3
8 40 30 222.9 22.6
198.2 ~~+~~ 27.8 3.25
226.0 50.4

Index above

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1895phae.proj.1338.

39 17
40 30

Dec. 14, 1895.

3.15
3.25

286.8
315.3 28.5<
291.2 22.2< 3.24<
312.4 50.7<

290.7
314.5 23.8<
288.1 28.2< 3.18<
316.4 52.1< 4.82
3.205

8 44 15 5
4|167 15 195
8 41 49

Index above.
Stars C compared with stars A

353.6 <HαC dis
73.8
354.1 8 0.2<
69.7 75.6< -0.46<
155.8<

355.4
68.2 72.8<
354.7 79.6< -0.53<
74.3 152.4<

2 50 ~

8 51 45

Index below

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1895phae.proj.1338.

50 3
51 45

Dec. 14. 1895.

0.44
0.53

60.2

8 54 40

157.8 77.6 <
84.9 74.6 < −0.53
158.9 152 2 <

85.9

8 56 4

159.0 73.1 <
81.2 ~~+08.2~~ − 0.55 <
159.4 ~~159.4~~ 78.2 < 4|207
151.3 < − 0.52

4|12 30
8 53 7.5

from c compared with standard
Index below

93.7 < standard
9 0 40 149.1 55.4 <
97.0 51.6 < 1.49 <
148.6 107.0 <

95.2

9 1 48 145.1 49.9 <
94.2 54.1 < 1.56 <
148.3 104.0 <

Index above

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1895phae.proj.1338.

Dec. 14. 1895

0	40				1.49
1	48				1.56
		182.9			
9	3	29	236.2		
			187.7	52.3 <	1.72 <
			232.0	45.3 <	
				97.6 <	
			188.4		
9	4	47	232.0	44.6 <	
			186.5	50.6 <	1.78 <
			237.1	95.2 <	4(20-0-
					1.63)0-

4|10 5-4

9 2 43.5-

B+D #1182: Ballou #103

$9^h\ 25^m\ 48^s.2 = 9^h\ 27^m\ 0^s.0$

Dio Jup. I: Phot Q: Wolfs harm recorder.

10	9	33	2	10^h 9^m	12	167.0	107.1
	1	18	2		29	274.1	104.4
10	10	40	4		39	169.1	211.5 -0.6
					55		105.8
						275.1	271.5
10	10	24	4	10	5	164.0	111.2
	1	13			18	275.2	105.2 2
10	11	37	4		30	169.0	216.4
					41	274.2	108.2 -0.7

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1895phae.proj.1338.

Dec. 14, 1895

10	11	7			
	1	13			
10	12	20			
10	11	48			
	1	13			
10	13	1			
10	12	25			
	1	13			
10	13	38			
10	13	1			
	1	13			
10	14	14			
10	13	46			
	1	13			
10	14	59			
10	14	44			
	1	13			
10	15	57			
10	15	53			
	1	13			
10	17	6			

10h	10m	8		
		51	166.9	107.6
	11	1	274.5	108.9
		12	167.0	265.
				108.2
		23	275.9	−0.7
		32	168.0	105.1
		~~37~~	———	106.3
		42	273.1	211.4
				105.7
		55	167.7	−0.6
	12	4	274.0	
		12	167.3	108.5
		21	275.8	105.1
		29	167.0	213.6
				106.8
		37	272.1	−0.6
		46	166.8	104.2
		55	271.0	106.0
	13	6	168.0	210.2
				105.1
		16	274.0	−0.6
		25	168.2	106.0
		34	274.2	107.3
		57	168.0	213.3
				106.6
	14	7	275.3	−0.6
		28	165.5	106.4
		38	271.9	101.2
		50	168.8	207.6
				103.8
		59	270.0	−0.5
	15	12	170.2	102.7
		22	273.0	107.1
	16	23	166.8	209.8
				104.9
		36	273.9	−0.6

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Dec 14, 1895

10 16 54
1 13
10 18 7

10 17 23
1 13
10 18 36

10 17 52
1 13
10 19 5

10 18 24
1 13
10 19 37

10 18 54
1 13
10 20 7

10 19 21
1 13
10 20 34

10 20 50
10 20 56
21 3
21 9

	42	168.8	104.0	
	48	272.8	107.9	10
	58	167.8	211.9	
17	6	275.7	106.0 -0.6	1
	13	169.8	100.9	
	19	270.7	102.1	
	26	172.0	203.0	11
	35	274.1	101.5 -0.4	
	41	168.0	101.1	
	48	269.1	103.	
	55	169.0	102.0 -0.5	12
18	4	272.0		
	12	169.0	105.3	
	18	~~277~~ 274.3	111.7	13
	31	169.4	103.5 -0.5	
	37	271.1		
	42	168.9	103.4	
	51	272.3	102.9	14
	58	168.1	103.5 -0.5	
19	5	271.0		
	12	172.2	~~94.8~~	
	18	267.0	96.3	
	24	171.2	95.6	15
	31	267.5	-0.2	
	37	172.0	96.0 -0.2	
	42	268.0	91.0 0.0	1
	50	172.0	88.0 +0.1	
	~~58~~	268.0	87.8 +0.1	1

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Dec. 14, 1895

10	21	20	20	7	177.2	83.6 +0.2
		27		14	260.8	89.7 0.0
10	21	32		19	171.1	82.9 +0.3
		38		~~25~~	264.0	83.7 +0.2
		43		30	180.3	81.9 0.3
		49		36	262.2	83.4 0.3
		56		43	178.8	80.2 0.4
	22	4		51	259.0	80.5 0.4
		9		56	178.5	76.5 0.5
		15	21	2	255.0	70.1 0.8
		26		8	184.9	69.0 0.8
		28		15	253.9	64.1 1.0
		34		21	189.8	61.2 1.1
		40		27	251.0	60.0 1.2
		46		33	191.0	56.5 1.3
		52		39	247.5	56.4 1.4
		58		45	191.1	49.9 1.7
	23	6		53	241.0	38.8 2.3
		15	22 22	2	202.2	29.8 2.9
		25		~~12~~	232.0	26.6 3.1
		36		23	205.4	27.1 3.1
		46		33	232.5	

not seen later 41

Sum Nos

10	23	6	10 h	22 m	53 s	206.4	25.8
	1	13		23	0	232.2	
10	24	19			10	206.7	= 24.5 / 25.2 = 3.3
					19	201.2	

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1895phae.proj.1338.

Dec. 14. 1895.

~~Expposed~~

There are 4 satellites on preceding side of which first was satellite I which has just disappeared and second was comparison satellite in eclipse ≷ : comp. satellite was ~~probably~~ satellite II. ✓

Seeing good : circle of photometer moved rather hard on account of cold making observations a little slow.

There is some halo probably caused by small amount of frost between lenses of objective so that last setting may have been affected by this and not quite as late as they otherwise would have been as satellite I was involved in this halo.

B. & D. # 1182 : Dallas # 103.

$10^h\ 35^m\ 46^s.4 = 10^h\ 34^m\ 0^s.0$

Chron. corr. up to $9^h\ 53^m$ from beginning $1^m\ 12^s$
from there on use corr. of $11^m\ 12^s$

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1895phae.proj.1338.

Dec. 14. 1895

o Leti : Rho R : Wolf

r 4 −2.5
r 4 30
r 26

Index to right

10	49	46	245.0 / 335.1 / 284.8 / 336.2 — 50.1 < / 51.4 < / 101.5 < — −1.62 <
10	51	9	285.0 / 336.6 / 282.2 / 333.0 — 51.6 < / 50.8 < / 102.4 < — −1.60 <

Index to left

10	52	35	11.2 / 64.0 / 15.3 / 64.7 — 52.8 < / 49.4 < / 102.2 < — −1.60 <
10	54	40	16.2 / 64.6 / 14.6 / 64.4 — 48.4 < / 51.5 < 50 / 99.9 < — −1.66 <
10	52	2.5	4 | 208 10
	1	10	4 | 8
10	53	12	1.62

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1895phae.proj.1338.

Dec. 17, 1895.

G. C. √2 √3. and possible
stars in it. Fr. Ho.

13 31 −30.6
10 30
−3 1

10 √5
−2 √6

10 √0
−2 √1

13 310
3√.3
√.3 −30,√
13 3√,6

13 36.3
10 55
2 41

13 28
10 56
2 30

13h 34m.3 −31° 1'.9

−31°.0
2h 38m
11 0
13 38

15

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1895phae.proj.1338.

Dec. 15. 1895.

13 2d
11 r
-2 23
22

11 10 20 10 15 -31°.8

13 2A -31.6
11 30
-1 rA

13 2d 9 -31° 3K'
36 2K -30 r2
+A 1r +K2

13 36 -30.9
11 r1
-1 Kr

Asteria not found

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1895phae.proj.1338.

Dec. 16. 1895. Monday.

B + b. #1182. Ballou #103

$7^h\ 9^m\ 53^s.7 = 7^h\ 12^m\ 0^s.0$

7 20 a 1 var 2 b W: obs

Wells (Algol) Var; Phot 5 : W: ob

20	31	+17.7
3	29	
4	46	

Star c. with var.

Index above

	172.3	< c · dis	
7 29 49	254.6	82.3 <	
	165.6	93.0 <	+0.09 <
	258.6	175.3 <	

(0.17)

	169.1.		
7 31 14	255.7	86.6 <	
	172.0 ~~253.6~~	80.2 <	+0.25 <
	252.2	166.8 <	

Index below.

	262.1		
8 22 40	343.8	81.7 <	
	256.9	96.0 <	+0.04 <
	352.9	177.7 <	

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1895phae.proj.1338.

Dec. 16, 1895.

8 24 0 223
4|10 7 43
8 26 55 8 223
+2 6.3
8 29 2.1
5 0 0
13 29 2.

256.0
252.9 — 262.4 — 347.1

969<
84.9<
181.8<
178.2

M = +0.08

+0.00 (0.04)

#1 0.03<
~~0.38~~
~~+0.03~~
~~4|0.35~~
~~-0.088~~

Star C with stem E.
Index above.

185.6
239.8 < C dis.
188.2
236.8

7 33 43

54.2<
48.6< −1.59<
102.8<

187.7
237.2
185.9
238.2

7 35 2

49.5<
52.3< −1.61<
101.8<

Index below.

95.8
148.0
97.9
145.2

8 1 30

52.2<
47.3< −1.67<
99.5<

97.1
145.3
97.9
146.3

8 2 44
4|19 3 0
7 48 15

48.2<
48.4 < −1.74<
96.6< 4|261
−1.652

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1895phae.proj.1338.

Dec. 16. 1895

Scan with d.
Index above.

189.2 < c dis.

7 26 57 = 57

238.0 48.8 <
190.9 45.1 < −1.81 <
236.0 93.9 <

191.1

7 38 0

234.5 43.4 <
185.7 51.6 < −1.78 <
237.2 95.0 <

Index below.

93.9

8 4 48

149.4 55.5 <
96.8 50.8 < −1.50 <
147.6 106.3 <

96.7

8 6 6

148.9 52.2 <
94.7 37.4 < −1.43 <
152.1 109.6 <

4|20 5 57
7 57 27.8

4|25 2
−1.63

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1895phae.proj.1338.

Dec. 16, 1895.

Stars with a.

Index above.

		179.1	< c dis.	
7	42	247.1	68.0 <	
		170.0		
		255.4	85.4 <	−0.51 <
			153.4 <	
		168.9		
7	44	60	252.2	83.3 <
			176.7	70.2 <
			246.9	153.5 < −0.51 <

Index below.

		267.1		
8	18	30	236.5	69.4 <
			261.4	83.2 < −0.52 <
			344.6	152.6 <
			262.2	84.0 <
8	20	0	246.2	71.3 <
			267.2	155.3 < −0.147 <
			238.6	4 | 201
				−0.502

4 | 32 6 13
8 1 33.2

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1895phae.proj.1338.

Dec. 16, 1895.

Sirius with b.

		179.6	< c dis.	
7	47	20	247.3	67.7 <
			180.4	68.9 < −0.84 <
			249.3	136.6 <
			179.7	
7	48	45	248.5	68.8 <
			180.2	65.5 < −0.89 <
			245.7	134.3 <

Index below.

			289.7	
8	13	5	347.7	58.0 <
			263.9	82.2 < −0.77 <
			346.1	140.2 <
			263.3	
8	15	2	342.9	79.6 <
			261.4	84.7 < −0.30 <
			346.1	164.3 <

4 | 125 − 18
8 | 1 | 19.5 −

4 | 280
−0.70

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1895phae.proj.1338.

Dec. 16. 1895.

Star with 7.0 mag

~~+3100~~

Index above

			109.6			
7	51	35	133.4	∠ 7.0 mag dis		
			100.8	23.8 <		
			140.0	~~143.9~~	39.2 <	2.75 <
					63.0 <	
			103.0			
7	52	54	139.6	36.6 <		
			109.6	22.6 <		
			132.2	59.2 <		2.89 <

Index Eulum.

			203.0			
7	54	46	223.4	20.4 <		
			197.5	30.6 <		3.20 <
			228.1	51.0 <		
			197.5			
7	59	9	226.9	29.4 <		
			202.7	19.5 <		3.32 <
			222.2	48.9 <		
			202.1	~~195.6~~	21.5 <	
8	~~9~~ 1	~~20~~ 55	223.6	~~226.6~~	~~34.0~~	
					34.4 <	3.02 <
8	10	49	195.2	~~202.7~~	55.9 <	
48	1	43	229.6			
8	0	17.16				

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1895phae.proj.1338.

Dec. 16. 1895.

196.6
8 10 49 228.0 31.4 <
201.7 31.4 < 3.15 <
223.1 52.8 <

Orbit: Phot R Wds

2 4 -2.5
2 14
1 10

Index above

104.5 < van Dis
9 21 10 154.2 49.7 <
108.1 ~~105.9~~
155.8 47.7 <
97.4 < -1.72 <

103.8
153.2 47.4 <
108.2 ~~103.0~~ 46.6 < -1.81 <
154.8 94.0 <

Index below.

196.2
244.4 48.2 <
196.2 48.8 < -1.73 <
245.0 97.0 <

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Dec. 16. 1895.

9 29 44		196.7		
2 | 50 54		243.5	46.8 <	
9 25 27	243.3	196.2	47.1 ~~46.6~~	− 1.81 <
2. 10		~~243.8~~	9 3.9 ~~3.4~~	7.07
9 27 37				− 1.77

Andromeda : Phot. Obs.

0	14	+26.1
3	42	
3	28	

Index handle to preceding.

Index to left.

	21.9 <	comp. standards	
9 54 52	41.9	20.0 <	
	20.2	23.5 <	3.58 <
	43.7	43.5 <	

Index to right.

	107.8		
9 58 47	134.9	27.1 <	
	110.4	22.3 <	3.30 <
	132.7	49.4 <	

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Dec. 16. 1895

						3.58
						3.30
			110.6			
10	0	32	133.2	22.6 <		
			108.4	26.3 <		3.32 <
			134.7	48.9 <		
			Index to left.			
			200.2			
10	3	6	225.6	25.4 <		
			201.1	23.7 ~~22.6~~		3.31 <
			2248 ~~223.7~~	49.1 ~~48.0~~ 49.1		
			202.1			
10	5	40	224.0	21.9 <		
			201.8	22.8 <		3.52 <
			224.6	44.7 <		
			Index to right.			
			290.9			
10	9	35	316.1	25.2 <		3.29 <
			291.0	24.4 <		6 | 232
			315.4	49.6 <		3.386

60	10	9
10	1	41.5

of both ends
When images are ~~together~~
coincident, spreader which reads
2.0 : zero of spreader which
reads −0.9

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Dec. 16, 1895.

δ Cassiop: Wolbs

0*	19	+55.9
4	35	
4	16	

Bonsb #1182: Ballou #103.

$10^h\ 47^m\ 48^s.5 = 10^h\ 50^m\ 0^s.0$

10 55 m 5 var : var 1 0 : Wolbs estimate = 11.8 : rather too faint for finder

R. A. 0. 52 53

10	30	
13	31	−31.0
−3	1	

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Dec. 16, 1895.

11	6	=	√	4
16	30		√	24
√	24		10	24.

10	24	
13	24	.8
−3	0	−31.6

13	28	
10	22	
−3	06	−31°,8

10	31	09
10	31	41
		−32

13	28	
10	30	
−2	58	−21°8

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1895phae..proj.1338.

Dec. 16, 1895.

10	33	24.5	
10	34	25.0	
			− 60.5

10	35	25	
10	36	51	
			− 86

10	38	30	
10	38	57	
			− 27

10	40	15	
10	40	57	
			− 42

10	42	10	
10	42	44	
			− 34

10	54	51	
10	55	10	
			− 19

10	55	37	
10	56	20	
			− 43

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Dec. 16, 1895.

10	57	23
10	57	35
		-12

11	26	35
11	26	56
		-21

A star follows nebula 21^s 2′ south of it. Call this b.
A star follows the nebula 22^s 3′.8 south of it. Call this a.
There seem to be two sort of condensations in the nebula. The south preceding being the brighter and the south following being a sort of stellar point.

11	29	53
11	30	5
		-12

A star precedes nebula 12^s slightly north. Call this c.

Call south preceding condensation of nebula d and south following e

5 30 (mean time) B.A.C. 1182
11 32 Sid. C | d, d | a

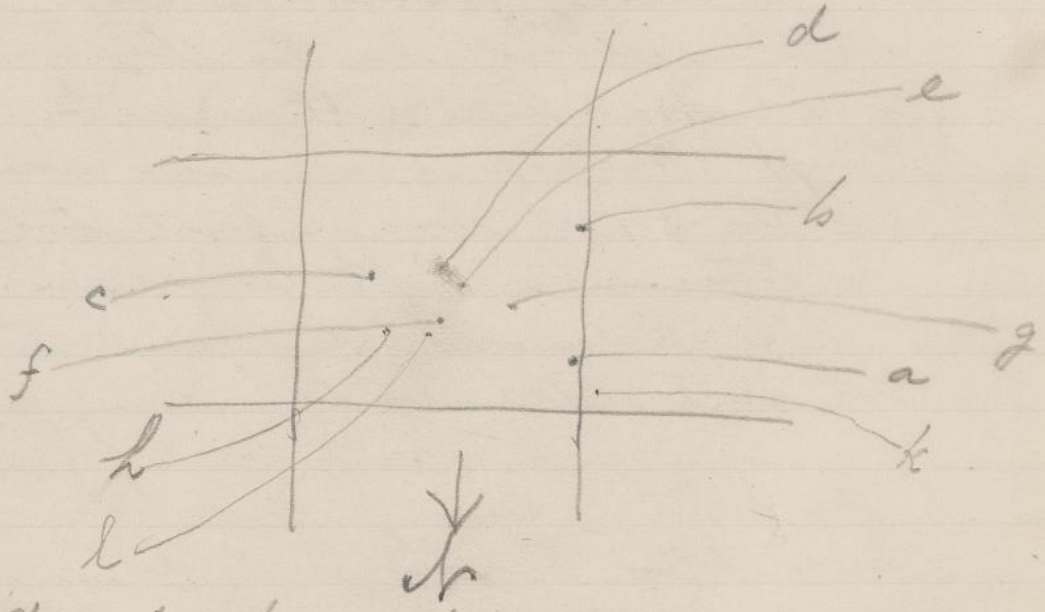
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1895phae.proj.1338.

Dec. 16. 1895 v.

A star preceds e 2ˢ, 2' north
Call this f.
A star follows e 9ˢ 1½' north
Call this g.

~~fig~~ 1 e; e 2 g



For stars h and k see R. A1. p. 170. - also p. 20 v.
" star l see R. A1. p. 20 v.

Resumé.

There is a principal condensation to nebula represented by d above. The nebula seems to extend as far as e, and at this ~~point~~ place, quite certainly we have what seems to be a small stellar point (e) At any rate, between d and e the nebula is less bright. and if e is a distinct and independent point, it is pretty certain that the nebula is somewhat elevated in this direction and independent of it.

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The star c is Thome's 9.7 and the nebula is his 9.5

Assuming his scale, the total light would perhaps be 9.5, the principal condensation (d) 9.7, and the point e one to one and a half mags. ftr.

When the spectroscope was put on, the object was very uncertain and well nigh invisible, especially as the sky was beginning to grow light. At times ~~the~~ ~~the~~ H. thought the appearance was monochromatic but the object was so faint that it was uncertain. No bright lines seen.

The nebula was rather faint throughout but quite well seen. H.

The point e seems to be rather sharper and more stellar than the point d.

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1895phae.proj.1338.

Tuesday Dec 17 1895

Eastern time

6 22 Prof Wells Algol Comitis
Prof Searle observe. S.C.B. recorder

6 24 v 2 d h 3 V
6 32 v 4 d b 1 V
6 40 v 4 d b 1 V: but observation made doubtful by haze.
6 51 haze too thick and variable for observation

20 31
1 16
4 45

7 10 b 3 variables 3.5 d

Index above

7 25 52

356.1 << dec.
62.2
357.2 67.2 <
65.4 68.2 <
125.4 <

+0.87

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Dec. 17. 1895.

7 25 52

0.87

0.9

+0.90

7 27 53

63.9 63.0 <

357.6 69.3 < +0.93

66.9 132,3 <

Index Below I

80.1

7 30 23

158.2 78.1 <

84.1 ~~57.8~~ ~~78.8~~ < +0.44 <

162.9 156.9 <

36

~~35~~ 5

+0.34

7 ~~33~~ ~~26~~

83.2

162.5 79.3 <

74.9 87.2 <

162.1 166.5 < +0.25 <

4|120 23 <

4|249 <

+0.622 <

7 30 51.05 <

+42 45.3 <

12 372 51.05 <

Below.

83.8

7 37 0

158.9 75.1 <

85.0 77.1 <

162.1 152.2 <

+0.53 <

7 38 21

79.9

161.8 81.9 <

84.2 75.9 <

160.1 157.8 <

+0.42 <

Index above

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1895phae.proj.1338.

Dec. 17. 1895.

0.52
0.42

7 37 0
38 21

179.8
246.9 67.1<
171.7 ~~+68.7~~ 81.9< +0.59<
253.6 149.0<

7 41 7

173.3
250.3 77.0<
180.4 68.8< +0.66<
249.2 145.8< 220² <<
+0.54 <<

7 43 23
4159 51 <
7 39 57.8 <
+82 45.3 <
12 482 431 <

180
51
231

Below. Above.

177.3
1 48 30 246.6 69.3<
172.7 81.3< +0.56<
254.0 150.6<

171.6
7 52 30 252.9 81.3<
176.1 69.6< +0.56<
245.7 ~~245.1~~ 150.9<

Index Index

2666
7 55 8 336.9 70.3<
260.5 86.7< +0.44<
347.2 157.0<

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1895phae.proj.1338.

14

48 30
52 30
55 8

Dec. 17. 1895.

56
56
44

7 57 22

262.2
345.9 83.7 <
263.2 78.5 < +0.34 <
341.7 162.2 <

265.1
341.3 76.2 <
261.0 84.6 < +0.37 <
345.6 160.8 < 227 <
+0.454 <

7 58 44

5 | 27 2 | 14 <

7 54 26.8 <
+ 8 2 45 53
12 58 10.2
12 57 12.1

Below.

262.4
346.6 84.2 <
266.2 79.8 < +0.30
346.0 164.0 <

8 2 10

265.8
342.0 76.2 <
259.3 87.1 < +0.32 <
346.4 163.3 <

8 2 40

Index above

248.7
358.7 110.0
254.1 100.1
354.2 210.1

8 5 47

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1895phae.proj.1338.

2 10
2 40

Dec. 17. 1895

30
32

351.8
76.8 — 85.0 <
354.2 — 73.7 < — +0.41 <
68.0 — 158.7 <

356.9
70.7 — 73.8 <
351.8 ~~352.1~~ — 81.6 < — +0.47 <
73.4 — 155.4 < — 1.50' <
+0.375 <

8 9 48

4 | 23 — 2 <
8 — 5 — 45.5 <
+32 — ~~45.3~~ <
13 — ~~8~~ — ~~29.0~~
13 — 8 — 30.8

Above.

8 11 37

352.8 — 1
74.2 — ~~1~~ 1.5 <
356.0 — ~~5~~ 5.2 < — ~~0.25~~
71.9 — 156.8 < — +0.44 <

356.6 — 7
69.1 — ~~2~~ 2.5 < — +0.50
352.8 — 81.2 < — ~~0.31~~
94.0 — 153.7 <
5

Index below.

8 17 10

~~76.6~~
166.9 — 89.7 <
77.3 — 89.8 < — +0.01 <
167.1 — 179.5 <
~~78.5~~

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11 37
13 8
17 10

Dec. 17. 1895.

0.44
0.50
0.01

78.5
169.2 90.8 <
76.7 91.6 < −0.05 <
168.3 182.4 < 177.6

Below.

79.6
166.4 86.8 <
78.8 89.3 < +0.07 <
168.1 176.1 <

8 19 15
4 | 21 | 10 <
8 15 17.5 <
+32 45.3 <
13 78 2.8
13 118 2.8 <

8 20 50

8 22 20

73.7
168.9 95.2 < −0.09 <
78.6 89.5 <
168.1 184.7 <
175.3

Index above

170.1 82.6 <
252.7 80.0 < +0.33 <
172.2 162.6 <
252.2

8 27 2

171.8
250.0 78.2 <
170.4 82.0 < +0.38 <
252.4 160.2 < 0.69
+0.17

9 5 <
4 | 90
+0.225 <

78
8
4 | 69
+0.172

8 30 10
29
4 | 100 28 <
8 25 7 <
+32 45.3
13 28 52.5 <
13 27 52.3

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Dec. 17. 1895

174.2
253.1 78.9<
175.1 77.0< +0.46<
252.1 155.9<

8 07 50

175.9
252.6 76.7<
170.9 81.0< +0.43<
251.9 157.7<

8 38 51

Index Lulus

260.7 81.3
346.7 167.1
265.1 75.8
342.8 170.5

85.8<
94.7< -0.01<
180.5<
179.5

8 45 0

77.7
169.5
77.8
168.6

91.8<
90.8< -0.05<
182.6< 0.83
177.4 0.21

0.89
4|0.83
+0.208

8 46 45

4|16 8 26<

8 42 6.5<
+42 40.3<
13 44 01.8<
13 44 01.8

73.8
168.8 95.0<
76.7 92.5< -0.14<
169.2 187.5<
172.5

8 48 21

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1895phae.proj.1338.

48 21

Dec. 17. 1895

−0.14

80.6

8 50 10

168.9 883 < −0.01

77.4 92.4 < ~~−0.02~~

169.8 180.7 <

179.3 <

Index above

174.3

8 54 9

253.3 79.0 <

172.3 84.8 < +0.31 <

257.1 169.8 <

165.2

8 55 45

255.1 89.9 <

171.1 82.2 < +0.15 <

253.3 172.1 < 0.30 <

4 | 208 25 <

8 52 6.2 <

+32 40.3

13 54 51.5

−0.15 0.07

+0.46 46

4 | 0.31 20

+0.078

9 0 var 1 a. w: obs.

var 2 b.

c 2 var.

Band b #1182: Ballou #103.

$9^h\ 6^m\ 14.7^s - 9^h\ 9^m\ 0.0^s$

6 14.7

B + C 1182 # is slow $-3^m\ 45.3^s$

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1895phae.proj.1338.

Dec. 17. 1895

obsti. PhotR: D. ds

2 4 −2.5

4 10
2 6

Index above.

285.2
~~288.8~~
~~333.0~~
~~331.4~~

10 22 0 ~~19 24~~

~~287.0~~ < var dis.
~~333.0~~

~~+3.1~~
~~48.3~~ <
~~45.1~~ < −1.82 <
92.4 <

289.0
331.4
285.8
333.0

10 23 58

42.4 <
47.2 < −1.92 <
89.6 <

Index to left and below

16.9
64.8
18.4
62.0

10 26 15

47.9 <
43.6 < −1.87 <
91.5 <

19.4
61.4
~~15.0~~
64.4

16.5

10 29 9

42.0 <
47.9 < −1.92 <
89.9 <

1.53
−1.88

4 21 16

10 25 19
+3 +5
10 29 4

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1895phae.proj.1338.

Dec 0. 17. 1895.

S Cassiop. W obs.

1 0 +72.1
47 43
57 33

11 0 S Cassiop thought to be seen as interval although it is extremely faint.

γ 2 S : estimate = 15.0 W obs

Band to #1182 : Ballou #103
11h 14m 11.8 = 11h 17m 0.0s

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1895phae.proj.1338.

Dec. 18, 1895.

Bond 6 #1182: Ballou #103

$7^h\ 3^m\ 47^s.4 = 7^h\ 7^m\ 0^s.0$

7 0 cloudy.

Wells (algol) Var: W. obs.

20	31	+17.7
1	31	
5	0	

Set on Wells Var. but clouds so thick that no stars visible.

7 30 cloudy.

7 45 Still cloudy.

8 0 Little clearer

8 15 Worse.

8 20 Went over in West Dome and got a momentary glimpse of stars. Could be as near as could be pushed varied about 3 or 4 grades fainter than a

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Dec. 18. 1895

and 2 grades brighter than b: glimpse was only momentary and was then immediately.

This observation was difficult and more or less affected by dense clouds

From this observation it would seem as though ver. was at normal brightness

8 40 S Ry very thick in the west and thick everywhere.

On turning down telescope, object glass was found to be heavily coated with dew so that any further observations are impossible

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Dec. 19. 1895.

Bams to #1182 Ballon #103

$7^h\ 7^m\ 19^s.3 = 7\frac{1}{2}^h\ 11\frac{1}{2}^m\ 0^s.0$ (19.3)

∴ B+C. 11½ was 3 ~~m~~ ~~s~~ 40.7 slow. (40.7 slow)

Wells (Algol) Var: Phot 5: Wolbs

20 31 +17.7

1/3 40/9

Var. and comp.
Index above.

174.9
253.0 < c dis.
160.2
258.8

7 28 15

~~5~~ ~~m~~
78.1 <
98.6 < +0.06 <
176.7 <

165.0
260.6
175.8
253.9

7 29 30

95.6 <
78.1 < +0.12 <
173.7 <

Index below

261.1
242.6
259.2
353.5

7 49 17

82.5 <
94.2 < +0.06 <
176.7 <

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1895phae.proj.1338.

28 10
29 30
49 17

Dec 19. 1895.

0.06
0.12
0.06

~~349.6256.1~~ 255.5
~~350.2~~ 351.4 95.9 <
260.5 84.1 < 0.00 <
344.6 180.0 < 0.06 <

7 ~~53~~ 0 ~~40~~
4 1.60 2
7 40 0.5
+3 K0.7
K3 K1.2
12 K3 K1.2

7.0 and c
Index above.

287.7
7 31 ~~32~~ 318.8 ~~320.2~~ < 7.0 dis
292.6 ~~294.4~~ 31.1 <
312.4 19.8 < −3.24 <
50.9 <

293.7
7 32 0 312.8 19.1 <
288.6 27.5 < −3.43 <
316.1 46.6 <

Index below.

21.9
8 26 48 42.0 28.1 < −3.86
23.4 17.3 < ~~3.92~~
40.7 31.4 <

23.8
8 28 20 41.0 17.2 <
21.6 22.0 < −3.81 <
43.6 39.2 <
~~14.40~~
~~3.80~~
4 1234
−3.58

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1895phae.proj.1338.

Dec. 19. 1895.

Star c and star e.

Index above

			7.4	< c dis		
7	32	35	56.7		49.3 <	+1.72 <
			8.0		48.0 <	
			56.0		97.3 <	
			8.1			+1.66
7	34	50	56.6		48.5 <	+.11
			6.2		~~49.1~~ 49.4 <	
			57.6		97.9	
					99.9	

Index below.

278.4 +

			329.4	~~< c dis~~		
7	55	8	278.4		51.0 <	
			329.3		50.9 <	+1.61 <
					101.9 <	
			277.4			
7	56	52	325.6		48.2 <	
			280.8		45.3 <	
			326.1		93.5 <	+1.82 <
			280.4			
8	1	8	324.1		43.8 <	
			277.2		50.5 <	
			327.7		94.3 <	+1.80 <
5	24	30			5 | 361	~~2.66~~
7	48	18			+1.722	~~+.78~~

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1895phae.proj.1338.

Dec. 19. 1895.

Iver e and ~~vega~~ Lyr e

Index above.

			358.2	~~60.1~~	< e dis	
7	~~37~~ 36	~~35~~ 0	63.0	~~182.8~~	~~84.8~~ 84.2 <	
				356.4	72.0 <	+0.84 <
				68.4	136.8 <	
				356.9		
7	38	~~46~~ 46	68.7	~~72.7~~	71.8 <	
				356.2	68.2 <	+0.77 <
				64.4	140.0 <	

Index below.

				261.1	80.8 < 83.9	
8	9.	15		345.0	82.9 . 80.8	
				262.4	~~56.6~~ (164.7)	
			343.2	~~339.0~~	164.7	+0.29 <
				263.1		
8	13	34		342.5	79.4 <	
31	39	4	263.2	~~265.9~~	81.1 <	+0.37 <
7	54	46		344.3	160.5 <	227 <
100						+0.57
09						0.568
217						

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1895phae.proj.1338.

Dec. 19. 1895.

Star and comp'd
Index above

		187.8	< e dis	
7	41	15	235.4	47.6 <
		182.2	+5.0	52.9 < +1.52 <
			240.2	105.5 <
			184.7	
7	42	31	242.9	58.2 <
			189.6	47.5 < +1.52 <
			237.1	105.7 <

Index below

			275.8	
7	44	22	226.8	51.0 <
			277.5	50.1 < +1.56 <
			330.6	104.1 <
			277.4	
7	46	50	330.2	52.8 <
			288.2	44.2 < +1.73 <
			324.4	97.0 < 96.33 <
				1.68
				+1.582

7 43 32.2

Stage thicken

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Dec. 19. 1895.

Transcribe again.

Index below.

Reject

8	17	39	
		168.0	
		260.6	
		160.1	92.6
		268.7	105.6
			198.2
8	20	14	80.7
			162.0
			81.9
			159.4
			164.9
8	22	46	82.7
			163.8
			82.4
			164.4

Index above.

Reject

8	32	51	178.9
			230.9
			165.4
			233.9
8	35	43	178.8
			253.6
			177.7
			247.9

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Dec. 19. 1895.

	176.8		
8 42 7	252.9	76.1 <	
	180.8	68.3 <	+0.69 <
	249.1	144.4 <	
	175.3		
8 44 23	252.9	77.6 <	
4 | 129 30	174.6	76.6 <	+0.49 <
8 32 22,5	251.2	154.2 <	1.80 <
			0.45 <

obsti: Phot R obs

2 4 -2.5

3 44

1 40

9 30 Clouds

9 35 cloudy

Index to left

14.3	~~+0.0~~	< var Dec	1.86 <
9 42 15	62.0	47.7 <	
	14.3	44.5 <	
	61.8	92.2 <	

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Dec. 19. 1895.

9 42 15

−1.86

17.4

60.4 ~~63.3~~ ~~9~~

17.8 42.0 <

60.1 42.3 < 2.04 <

85.3 <

Sunday night.

105.8

151.6 ~~153.8~~ ~~47.4~~

108.7 45.8 <

152.0 44.3 < 1.91 <

90.1 <

108.1

150.6 42.5 <

108.7 42.6 < 2.05 <

151.3 85.1 < 17.86

1.97

1.96 5

9 48 19

19 30 34

9 45 17

3 44

9 48 01

R Leonis W. obs

+55.1

6 +9

4 15

12 24

9 16

1895phae.proj.1338.

Dec. 19. 1895.

Banda b# 1182 Ballon #103

$10^h\ 4^m\ 15^s.7 = 10^h\ 11^m\ 0^s.0$

10 15 2 3 var : var 1.5 S : W. obs

estimate = 12.8

R Urs. Maj. W. obs

10 32 +69.3
4 35
−5 57
6 3

27 S 3.5 var var = ± : W. obs

estimate = 12.1

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N. G. C. 5263

13 28 -31.6
10 43
-2 45
9 15

13 28 -31°.6
10 47
-2 51

11 12 60
11 13 11
-11

11 14 34
11 15 13
-39

There is ~~—~~ no possible doubt as to the existence of the Nova.
Seen better to night than on the other night, (Dec. 16)
It was certainly seen tonight with No. 1. ring micrometer eye piece.
With no 2 ring micrometer eye piece

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it is easily seen, and also easily seen with Mars micrometer eye piece.

Seen also with eye piece of spectroscope.

v Kv c 2.v d, d / a
v K7 f / e, e 2.v g
} Rotation the same as on page 141.

The nova, in the higher powers especially, is a more sharp, intense, stellar point, than the principal condensation.

When prism is held in the hand in front of eye piece, the principal condensation and nova are seen, and ~~seem to be~~ in their natural shape, with no perceptible trace of continuous spectrum. Possibly the intervening nebulosity seen at same time.

Prism rotated in hand, and ~~the~~ lake wipes placed at different angles of rotation, with no perceptible change in appearance.

When prism is inserted in tube of spectroscope, the whole phenomenon is very much fainter, and also more doubtful, although, at times, the same appearance as above is suspected.

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$7^h\ 6^m\ 50.7^s = 7^h\ 11^m\ 0.0^s$

Bando #1182 . Ballou #103

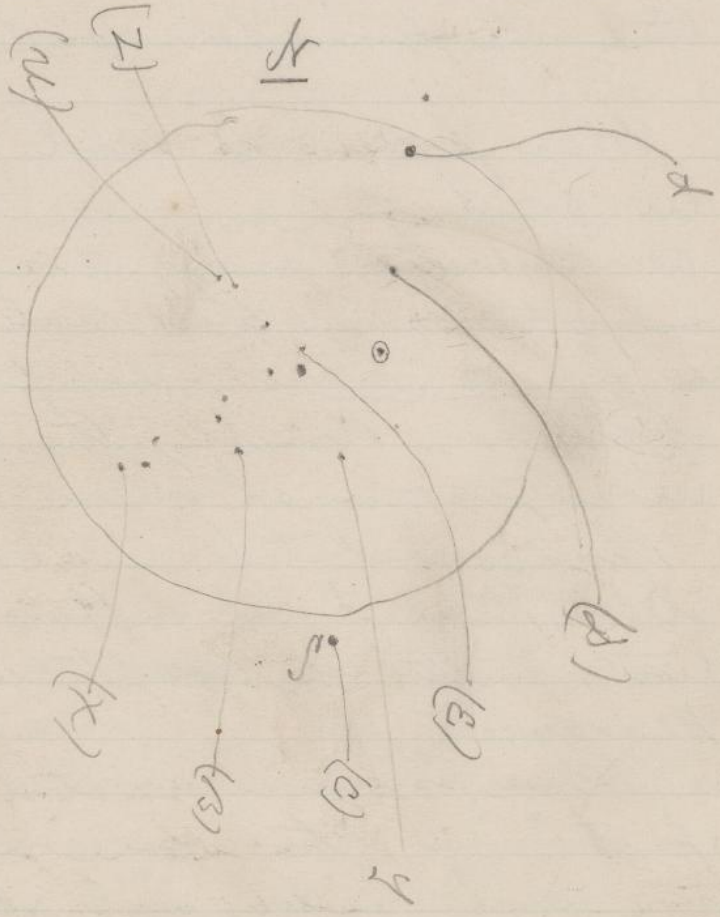
7 6 +0.7

∴ B & C. is F 9.3 slow.

Wilis (algol) Var: W: obs

20 31 +17.7

1/5 35/4



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Index above.
Star c and var.

			255.0	Var.			
8	16	29	351.4	~~c~~ dis.			
					96.4 ✓		
			256.2		95.8 ✓	+ 0.23 ✓	
			352.0		192.2 ✓		
			257.6				
8	18	0	347.8		90.2 ✓	+ 0.12 ✓	
			252.6		96.1 ✓		
			348.7		186.3 ✓		

Index below.

			78.2				
8	29	25	170.2		92.0 ✓	+ 0.26 ✓	
			68.3		101.8 ✓		
			170.1		193.8 ✓		
			72.4		96.6 ✓		
8	31	18	169.0	~~168.8~~	95.5 ✓	+ 0.23 ✓	
			72.7		192.1 ✓	0.84 <	
			168.2	~~164.2~~		+ 0.21 <	

4|9 5 12 ✓
8 23 48 ✓
+K 10.7 ✓
8 27 ✓2.7 ✓
✓ 13 27 ✓2.7 ✓

8 C = var var 1.5 a W: obs: in large telescope.
~~H~~ var = a Davidson obs: in large telescope.
8 3 var = a Davidson obs: in West Equatorial.
C = var: var 1.5 a W: obs: in finder.
This apparent variation may quite probably be due to light cloud + haze in the west: against which plate, was put on, star a seemed to be [illegible]

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Dec. 20. 1895.

Index above.
Iron C and Iron a.
355.4 < c dis.

8 20 30

70.8	75.4 ✓	
352.9 ✓	75.4 ✓	+ 0.56 <
68.3	150.8	

355.1

8 21 55

69.4	74.3 ✓	
354.7	73.6 ✓	+ 0.62 <
68.3	147.9 ✓	

Index Iulus

8 24 43

82.4 ~~58.3~~		
158.8 ~~+58.6~~	76.4 ✓	
87.8	69.7 ✓	+ 0.65 <
157.5	146.1 ✓	

84.2

8 26 8

160.4	76.2 ✓	
81.3	81.8 ✓	+ 0.42 <
163.1	158.0	225 <
		+ 0.56 <

4 | 13 16
8 23 19

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$8^h\ 51^m\ 48^s.8 = 8^h\ 56^m\ 0^s.0$

B+C #1182 Ballon #103

∴ B+C is $\overline{+}$ 11.2 slow.

Provisional selection of comp. stars for Wells Var.

A = (C)
B = (A)
C = (B)
D = (X)
E = (Y)
F = (Z) + (d)
H = (U)

For second rotation in parentheses see p. 166 of this book.

8 h

(C)	2	var
(C)	3.5	a
(b)	1	a
(b)	2.5	x
(x)	4	y
(y)	2.5	d
(d)	2	z
(z)	3.5	u

w : obs

In above estimates which were made before putting phot. on, both (B) and (A) were found brighter than var. so this probably confirms suspicion that region was irregularly affected by clouds.

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Dec. 20. 1895.

measurement of annual comp stars for R Carrisp with Pkor I. Wolb

23	52	+49.7
2	30	
3	38	

Index above.
Star m compared with star n

264.9	< m dis.	
342.4		
266.7	77.5 <	
341.0	74.3 <	+ 0.54
	151.8 <	

0.54

265.7		
341.7	76.0 <	
263.5	75.4 <	+ 0.55
338.9	151.4 <	

Index below.

172.8		
252.9	80.1 <	+0.57
175.9	70.4 <	
246.3	150.5 <	

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176.7			(±0.60]
243.5	66.8 <		
170.2	81.1 <	+0.62	
251.3	147.9 <	4 | 228 <	
		+0.57 <	

10 52
2 | 20 41
10 20 30

Index above.
Star m compared with star 0

275.2	< m dis.	
231.7	56.5 <	+1.19
270.6	63.6 <	
334.2	120.1 <	

9 53

+1.16

267.7		
337.6	69.9 <	
276.0	53.6 <	+1.12
329.6	123.5 <	

Index below.

181.1		
246.2	65.1 <	+1.33
187.3	48.7 <	
236.0	113.8 <	

+1.30

185.8		
237.8	52.0 <	
179.9	64.3 <	+1.27
244.2	116.3 <	4 | 916 <
		−1.228 <

10 ~~51~~ 52
2 | 20 48
10 24 0

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Dec. 20. 1895.

When m is compared with g
Sprocket wheel reads 9.9
~~Standard~~ String ~~Standard~~ Handle ~~Sticks~~ to right.
Star m compared with star g.

Index above

281.6	< m dis	
323.0	41.4 <	+ 2.12
282.7	41.2 <	
323.9	82.6 <	

2.17

284.3	~~39~~ 38.5 <	
322.8	40.6 <	+ 2.22
282.3	79.1 <	
322.9		

Index below

190.1		
232.0	41.9 <	
194.1	36.9 <	+ 2.23
221.0	78.8 <	

2.27

194.1		
230.9	36.8 <	
192.8	~~39.5~~	
232.2	39.4 <	+ 2.31
	76.2 <	4)8.8 <
		+ 2.22 <

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Dec. 20. 1895.

Star m compared with stars 8.

Index above.

288.3	< m dis.	
319.3	31.0 <	
290.7	27.1 <	+2.93
317.8	58.1 <	

+2.90

289.9		
316.9	27.0 <	
286.2	33.1 <	+2.86
319.3	60.1 <	

Index below.

196.9		
229.0	32.1 <	
198.0	30.0 <	+2.78
228.0	62.1 <	

+2.84

197.2		
228.1	30.9 <	+2.91
199.4	27.9 <	
227.3	58.8 <	4(348 <
		+2.87 <

10 10

11 7

2(21 17

10 38 30

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1895phae.proj.1338.

Dec. 20. 1895.

Star compared with star p.
Index above.

282.7	< mn dis.	
324.3	40.6 <	+ 2.13
282.3	41.5 <	
323.8	82.1 <	
		2.12
283.9		
324.6	40.7 <	
281.8	42.5 <	+ 2.10
324.3	83.2 <	

Index below.

191.1		
234.9	43.8 <	+ 2.08
193.1	40.3 <	
233.4	84.1 <	
		2.05
193.4		
232.1	38.7 <	
190.2	47.5 <	+ 2.02
237.7	86.2 <	4 | 3 3 <
		+ 2.082 <

10 14

11 10
2 | 21 24.
10 42 0

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Storm compared with drawn Index above.

	284.0	< mid.	
10 18	322.7	38.7 <	
	287.1	34.6 <	+2.40
	321.7	73.3 <	
	284.7		+2.42
	322.3	37.6 <	
	285.0	34.9 <	+2.43
	320.2	72.5 <	

Index below.

192.9		
230.1	37.2 <	+2.36
194.1	37.3 <	
231.4	74.5 <	
		+2.48
195.1		
230.7	35.6 <	
196.6	31.6 <	+2.60
228.2	67.2 <	4 | 17 9 <
		+2.448 <

11 15

2 \| 24 33

10 46 30

Observations taken with considerable difficulty because of close proximity to sun. which is bright.

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Star m compared with star t.

Index above.

291.0	< m dus.	
314.1	23.1 <	+ 3.38
291.4	24.6 <	
316.0	47.7 <	+ 3.40
292.2		
315.1	22.9 <	
291.6	24.0 <	+ 3.41
315.6	46.9 <	

Index below.

~~194.1~~	190.1		
230.9	232.0	41.9	36.8
192.8	194.1	36.9	39.4
232.2	231.0	78.8	76.2

~~194.1~~ ~~195.2~~

233.7 39.6

194.6 35.3

229.9 74.9

~~191.1~~ 198.2 202.9

~~234.9~~ ~~+3.8~~ 229.0 20.8 < 223.7 20.8 <

202.6 21.5 < 148.6 29.5 <

224.1 52.3 < 228.1 50.3 <

+ 3.17 3.26

(+ 3.22)

11 17

2 (21 39

10 49 30

4 (122

+ 3.305

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Star m compared with star n.

m index above

292.7	< m dia.		
318.4		25.7 <	+ 3.43
294.6		20.8 <	
315.4		46.5 <	
			+ 3.58
294.0			
313.0		19.0 <	
293.7		21.6 <	+ 3.74
315.3		40.6 <	

n index below.

198.3		25.6 <	
223.9		20.4 <	+ 3.46
203.0		46.0 <	
223.4			+ 3.42
201.1		21.1 <	
222.2		26.5 <	+ 3.38
200.1		47.6 <	4)201.6
226.6			+ 3,50 2 <

10 30

10 49

2)79

10 39 30

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Dec. 20. 1895.

Star m compared with stars W.
Index above.

	293.0	< m dis.	
10 22	312.8		
	295.3	19.8 <	
	310.5	15.2 <	+ 4.06
		35.0 <	4.02
	296.4		
	310.7	14.3 <	
	295.4	19.0 <	+ 4.17
	314.4	33.3 <	

Index below.

	202.9		
	222.7	19.6 <	
	205.3	15.0 <	+ 4.09
	220.3	34.6 <	
			+ 4.20
	204.7	15.7 <	
10 46	220.4	15.6 <	+ 4.31
2)79.	205.7	21.3 <	4)63 <
10 39 30	221.3		+ 4.16 <

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Dec. 22, 1895.

Band b #1182. Ballon #103

$4^h\ 31^m\ 56^s.9 = 4^h\ 36^m\ 0^s.0$

$\therefore$ B & C. is v^r 37^m slow. 37

Wells (algol) var: Phot. Wiabs

20	31	+17.7
23	20	
2	49	

c a variable b: also var = a: both in large telescope and in finder: Wiabs.

Index above.

165.9	~~10.9~~	97.8 <	
263.7	~~261.8~~	~~99.5~~	
171.6		83.9 <	−0.03 <
255.5		181.7 <	
		178.3	
163.6			
262.3		98.7 <	
171.5		85.8 <	−0.08 <
257.3		184.5 <	
		171.5	

Index below.

266.1			
342.9		76.8 <	+0.19 <
260.1		93.4 <	
353.5		170.2 <	

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Dec. 22. 1895.

−0.03
−0.08
0.19

			255.1		
5	21	45	351.6	96.5 <	
			266.6	75.1 <	+0.16 <
			341.7	171.6 <	−0.11
					+0.35
					4|0.24
					+0.06 ✓

Below.

			266.3		
5	27	24	342.5	76.2 <	
			258.9	91.3 <	+0.24 <
			350.2	167.5 <	

			259.3		
5	29	12	349.4	90.1 <	
			266.8	75.0 <	+0.28 <
			341.8	165.1 <	

Index above II

			347.3		
5	31	17	78.1	90.8 <	
			349.7	85.6 <	+0.07 <
			75.3	176.4 <	

			351.6		
5	33	29	72.1	80.5 <	
			348.0	88.1 <	+0.22 <
			76.1	168.6 <	4|81
					0.202

4|121	42	
5 30	25.5 ✓	
+5	K.3 ✓	
5 3 5	29.8 ✓	
5		
10 3 5	29.8 ✓	

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Dec. 22. 1895.

Above

		345.1			
5	24	56	81.1	86.0 <	
			351.9	79.7 <	+0.08 <
			71.6	175.7 <	
			355.8		
5	36	10	73.3	77.5 <	
			346.0	92.0 <	+0.20 <
			78.0	169.5 <	

Index below ~~III~~

			81.1		
5	29	8	166.1	85.0 <	
			75.2	93.2 <	+0.03 <
			168.4	178.2 <	
			74.5		
5	40	45	167.6	93.1 <	
			82.0	82.1 <	+0.09 <
			164.1	175.2 <	

4|40
0.10

			81.8		
5	44	20	165.6	83.8 <	
			78.4 ~~73.7~~	91.0 <	+0.10 <
			169.4	174.8 <	

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Dec. 22. 1895.

0.10

	44	20			
			76.7		
5	46	20	169.2	92.5 <	
			81.4	83.0 <	+0.08 <
			164.4	175.5 <	
			Index above IV		
			170.9		
5	49	36	258.4	87.5 <	
			167.7	91.7 <	+0.02 <
			259.4	179.2 <	
			166.9		
5	51	44	259.8	92.9 <	+0.06 <
			172.7	83.7 <	4 | 26
			256.4	176.6 <	0.065
			Above.		
			173.2		
5	53	52	258.2	85.0 <	
			168.3 ~~+0.1.9~~	90.9 <	+0.08 <
			259.2	175.9 <	
			169.2		
5	56	22	260.8	91.6 <	
			172.2	84.6 <	+0.07 <
			256.8	176.2 <	

4 \| 192 0
0 48 0
- + K7
10 -3 K7

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1895phae.proj.1338.

Dec. 22, 1895.

Index below V

263.0
344.2
259.2
348.3

81.2 <
89.1 <
170.3 <

+0.18 <

5 58 35

78.0
167.4
81.6
163.7

89.4 <
82.1 <
171.5 <

+0.16 <

4 | 49
0.12.2

6 2 58 = 180 + 48 = 228

4 | 231 48

5 57 57.1 ✓
✓ ✓ 1.9 ✓
11 3 1.9 ✓

6 12 c 2 var : var 2 b W : obs.

var = a : in large telescope : same in finder throughout.

Band b #1182. Ballou #103

$6^h\ 22^m\ 54^s.6 = 6^h\ 28^m\ 0^s.0$

∴ B. & C. is ✓ ✓ K star.

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1895phae.proj.1338.

Dec. 24. 1894.

Bond b #1182 Ballau #103

$7^h\ 1^m\ 59.^s6 = 7^h\ 8^m\ 0.^s0$

Wells (Algol) Var : Phot 5 : W:ob

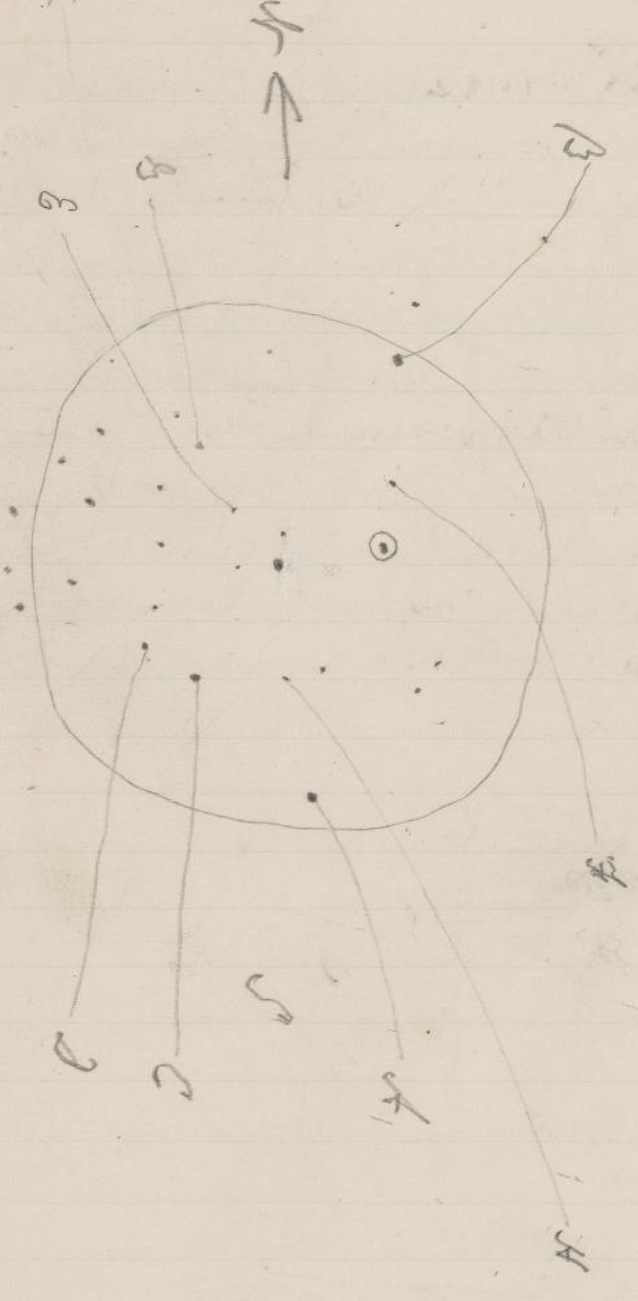
20 31 +17.7

1/5 40/9

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1895phae.proj.1338.

Dec. 24. 1895.



Mrs. Pickering's supplement to R.P.A. No. 2.

The above is selection of comp stars for Wellsvar: see next page

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1895phae.proj.1338.

Dec. 24. 1895.

Sky considerably cloudy at commencement of selection & steadily growing worse: although stars seemed to be fairly well seen the most of selection: probably a little remission ought to be exercised on a clear night especially among the faintest stars.

Estimates given below & can hardly be considered very critical, especially as some of faintest stars were hardly seen at time of estimate immediately after estimates put on Shot 5. at which time 7.0 mag had become invisible.

a	3	b	}	W: obs
b	2	c		
c	3	d		
d	3	e		
e	2	f		
f	2.5	g		

7 45

~~c g var~~
~~var a~~

A	3	var:	} rotation of p. 187.	W: obs
var	=	B		
var	2.5	C		

7 20

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1895phae.proj.1338.

Dec. 24. 1895.

All estimates on preceding page are in notation indicated on Page 185

8 0 Sky very thickly clouded and growing worse. No chance for further work.

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1895phae.proj.1338.

Dec. 27. 1895.

S Urs. maj. Cram obs.

12	37	+61.9
2	10	
10	27	
1	33	

8 0 var = a Cram obs

Moonlight bright and altitude low so that at times var looked brighter than a : see below.

S. Urs. maj. Cram obs.

8 15 var = a Cram obs

On account of low altitude + bright moon var. at times seemed brighter than a : see above : confirmed in finder.

R. Urs min. Cram obs

16	34	+72.9
3	30	
10	56	

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1895phae.proj.1338.

Dec. 27. 1895.

9 0 Clouds

9 10 Bothered terribly by great difficulty in moving telescope from chair.

10 5 f 1.5 var var 2 g Cramobs
Owing to telescope moving hard, it was extremely difficult to pass from one comp star to another but observation considered good.

T. Cephei Cramobs

21 | 5 | 8 — 6 | 26 | 20 — +67.7

11 10 var = ||| Cramobs

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Dec. 31. 1895.

Wells Var. Plot. I. Sr. obs.

20 31 +17.2
23 40
+3 9

23 √3
+3 22

5 20 B 0.5 var
A 3 var
var 2 C

Changed Estimates, in relation on p. 184.

Index above.
57.0 < e dis
5 26 45 142.8 85.8 <
61.1 78.2 < + 0.30 <
139.3 164.0 <

60.7
5 28 14 136.6 75.9 <
52.4 90.7 < + 0.25 <
144.1 166.6 <

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1895phae.proj.1338.

Dec. 31. 1895.

Index below I

	138.5		
5 30 7	239.2	100.7 <	− 0.15 <
	148.4	87.1 <	
	225.5	187.8 <	
		172.2	
	149.7		
5 31 45	233.1	83.4 <	
4|116 5-1	143.2	93.7 <	+ 0.05 <
5 29 12.8 ✓	236.9	177.1 <	+0.60
+16.			15-
5 29 28.8			4|0.45
10 29 24.8 ✓			+0.112

Below.

	143.4		
5 33 0	236.9	93.5 <	+ 0.13 <
	150.0	79.6 <	
	229.6	173.1 <	
	145.8		
5 34 2	237.7	91.9 <	
	144.2	92.9 <	− 0.09 <
	237.1	184.8 <	
		175.2	

Index above II

	235.2		
5 35 48	329.2	92.0 <	+ 0.12 <
37 13	240.8	81.5 <	0.08
	322.3	173.5 <	+ 0.33
4|20 3			9
5 35 5- 0.8 +16.			4|0.24
5 34 5- 16.8 35 16.8 ✓			+0.06

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1895phae.proj.1338.

Dec. 31, 1895

			235.8		
5	37	12	322.4	86.6 <	
			235.4	89.4 <	+ 0.08 <
			324.8	176.0 <	

Nebula

			237.1		
5	39	48	328.1	91.0 <	
			240.0	86.0 <	+ 0.06 <
			326.0	177.0 <	

			240.3		
5	41	10	323.4	83.1 <	
			235.9	90.3 <	+ 0.13 <
			326.2	173.4 <	

Index below III

			326.1		
5	43	3	59.8	93.7 <	
			329.8	84.3 <	+ 0.04 <
			54.1	178.0 <	

			329.2		
5	44	16	51.6	82.4 <	
			323.9	94.8 <	+ 0.05 <
			58.7	177.2 <	

4 | 168 17

5 42 42
16.

5 42 ~~8.2~~
10 42 20. <

4 | 28
0.07

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1895phae.proj.1338

D 20.31.1895.

Below.

5 45 26	322.1		
	60.8	98.7 <	
	334.1	81.0 <	+0.01 <
	55.1	179.7 <	
	330.2		
5 46 46	52.0	82.8 <	
	321.3	96.9 <	+0.01 <
	58.2	179.7 <	

Index above IV

	54.2		
5 48 42	143.5	89.3 <	
	58.7	81.2 <	+0.18 <
	139.9	170.5 <	
	63.1		
5 50 17	139.8	76.7 <	
	51.4	93.4 <	+0.19 <
	174.8	170.1 <	4 0.39
			0.098

4 191 21
0 47 50.2 ✓
+16.0
~~0 48 4.2~~
10 44 6.2 ✓

Above.

	53.5		
5 51 20	144.4	90.9 <	
	60.2	80.8 <	+0.16 <
	141.0	171.7 <	

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Dec 31, 1895

0.16

59.8

5	52 40	141.1	81.3 <	
		55.8	88.2 <	+0.20 <
		144.0	169.5 <	

Index below V

141.1

5	54 38	238.1	97.0 <	
		143.2	90.2 <	−0.14 <
		232.4	187.2 <	
			172.8	

143.4

5	56 5	234.9	91.5 <	−0.13 <
		142.1	95.6 <	−0.27
		227.7	187.1 <	+0.36
			172.9	4|09
				+0.022

4|14 53

5 03 43.2

+16

10 53 09.2

Below.

143.9

6	4 11	237.1	93.2 <	
		147.0	89.0 <	−0.04
		236.0	182.2 <	
			177.8	

147.2

6	5 4	235.0	87.8 <	
		140.2	93.0 <	−0.02
		233.2	180.8 <	
			179.2	

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1905phae.proj.1338.

Dec. 31, 1895.

Index above VI

6 9 39

234.1
324.8 90.7 <
239.8 87.9 <
325.7 178.6 <

+0.03

240.2
321.3 81.1 <
234.0 93.4 <
327.4 174.5 <

+0.10
+0.13
−0.06
+0.07
+0.018

6 11 3

4 (30 46

6 7 41.5−

+16.

6 7 57.5−

11

231.8
329.1 97.3 <
239.4 87.2 < −0.08
324.6 184.5 <
175.5−, 5−

(−0.06)

238.2
326.6 88.4 <
233.1 93.8 < −0.04
326.9 182.2 <
177.8

6 12 26

6 12 38

Index Lubors VII

142.0 141.6
240.0 241.0
145.4 145.5
234.2 235.0

97.0 <
88.8 <
185.8 <
174.2

−0.11
−0.10

6 18 33

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Dec. 31, 1895.

(-0.08)

145.9
282.8 — 87.9 <
142.1 — 94.9 < — 0.05
237.0 — 182.8 <
177.2 mean = (-0.07)

6 20 J
6 16 42
6 16 26
5 +17
11 16 27.

Below.

142.1
6 21 35 239.6 — 97.5 <
145.3 — 88.4 < — 0.11
232.7 — 185.9 <
174.1

(-0.06)

1
144.6
6 23 2 233.6 — 89.0 <
142.5 — 91.7 <
234.2 — 180.7 <
179.3

Index above VIII

235.4
6 25 0 328.0 — 92.6 <
240.5 — 83.4 < +0.08
323.9 — 176.0 <

(+0.10)

238.8
6 26 12 324.7 — 85.9 <
236.4 — 87.4 < +0.13
323.8 — 173.3 <

+0.21
−0.12
4 (0.09)
+0.022

4 115 49
6 23 57.2
19
24 15.8
11 23 14.2

180
57
239

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DEC. 31. 1895.

Above.

		237.8		
6	28	27	324.1	86.0 <
			241.4	80.2 < +0.2
			321.6	166.5 <
			239.6	
6	29	30	320.2	83.7 <
			237.4	87.2 < +0.1
			~~326.4~~	170.9 <
			324.6	

Index below. IX

		325.2		
6	43	60.3	95.1 <	
		331.3	81.9 <	+0.06
		53.2	177.0 <	
		328.4		
6	44	57	86.7 <	
		55.1	95.7	
		321.4	~~172.4~~	−0.0
		57.1	182.4	+0.48
			177.6	−0.0
				4|43
				+0.108

4 | 146 7
6 36 31.7 −
+17
6 36 48.8
11 36 49.

Bandb #1182

6h 35m 42.6s = 6h

Ballou #103

36m 0.0s
3 −
42.6
17.4

B & C 1182 # is slow 0m

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Dec. 31, 1895.

			326.8	9		
6	46	16	59.6	82.8 <		
			330.9	83.4 <	+0.07	
			54.3	~~166.2~~		
				176.2		
			333.1			
6	48	10 ~~39~~	55.6 ~~49.2~~	82.5 <		
			324.8 ~~327.9~~	93.4 <	+0.08	
			58.2	175.9 <		
			Index Above X			
			54.8			
6	50	29	142.9	88.1 <		
			60.2	79.8 <	+0.23	
			140.0	167.9 <		
			61.4			
6	52	8	141.0	79.6 <		
	4(19)	3	51.1	89.6 <	+0.20	
6	49	15.70 ✓	140.7	169.2 <	4(5-8	
		+17			0.145	
6	49	32.8 ✓				
11	49	32.2 ✓				
			58.2			
6	55	42	143.3	85.1 <		
			61.8	78.6 <	+0.31	
			140.4	163.7 <		

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1895phae.proj.1338

6 55 42 Dec 31. 1895.

0.31

61.5 ~~63.4~~

6 57 18

142.1 80.6 <
57.1 85.4 < +0.27
142.5 166.0 <

Index below XI

141.7

6 59 15

236.1 94.4 <
146.2 89.5 < −0.07
235.7 183.9 <
176.1

145.2

7 0 43

4|232 55
6 58 18.7
+18. ✓
6 58 31.8 ✓
✓
11 56 31.8 ✓

234.1 88.9 <
143.8 92.6 <
236.4 181.5 < −0.03
178.5 −0.10
+0.58
4|48
+0.12

145.9

1 2 21

236.8 90.9 < *
143.6 91.6 < *
235.2 182.5 < * −0.05 < *
177.5 *

(−0.11) *

145.2

1 3 49

234.7 89.5 *
139.2 99.7 * −0.17 *
238.9 189.2 *
170.8 *

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1895phae.proj.1338.

2 21
3 49

Dec. 31. 1895. (−0.11)
−0.02
−0.17

Index above XII

	233.1		
7 6 27	327.1	94.0 <	
	234.0	91.6 <	−0.11 <
	325.6	185.6 <	
		174.4	(−0.04)
	240.6		
7 7 56	326.2	85.6 <	
4 20 33	234.9	92.9 <	+0.03 <
0− 8.20−	327.8	178.5 <	4 30
7 +18			−0.07
7 0− 26.25			Mean (−0.08)
12 4 26.25			

Above.

	236.6		
7 9 27	326.1	89.5 <	
	239.1	80.3 <	+0.19
	319.4	169.8 <	
	237.4		
7 11 20	324.8	87.4 <	+0.09
	238.8	87.8 <	
	326.6	175.2 <	

Index below XIII

	325.2		
7 13 29	57.1	91.9 <	
	328.8	83.2 <	+0.09
	52.0	175.1 <	

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1895phae.proj.1338.

Dec. 31. 1895.

7 15 24

4(49 40.

7 12 25.

+18. ✓

7 12 43. ✓

7 12 43. ✓

326.4
51.2
332.8
54.9

84.8 <
82.1 <
166.9 <

+0.25

4(62
0.10 5

Below.

7 17 0

327.4
54.4
326.2
48.6

87.0 <
82.4 < +0.20
169.4 <

7 18 20

328.3
53.9
329.2
52.0

85.6 <
82.8 < +0.22
168.4 <

7 19 48

~~Index above~~ XIV

329.3
55.9
326.5
56.9

86.6
80.4
167.0

7. 21 0

328.8
52.2
327.8
52.3

83.4
84.5
167.9

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17 0
18 20

Dec. 31, 1895.

~~3283~~
~~59.5~~
~~321.9~~

0.20
0.22

Index above. ~~XIV~~

57.2

7 26 22

138.4 81.2 <
60.1 82.0 < +0.32
142.1 163.2 <

60.9

7 29 3

145.9 85.0 <
56.2 88.8 < +0.12
145.0 173.8 <

4|86
0.215

7 22 43,8
+18

7 29 7.8
12 23 1.6

58.3 Above.

7 35 17

138.9 80.6 <
55.2 85.1 <
140.3 165.7 < +0.27 <

60.4

7 36 53

143.9 83.5 <
60.7 78.0 < +0.35 <
138.7 161.5 <

~~Index below XV~~

329.3
55.9
326.5
56.9

7 19 48

86.6
90.4 +0.06
177.0

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1895phae.proj.1338.

Dec. 31, 1895.

7 21 25

4 | 113 23

7 28 20.8

+19.

7 28 40.8 ✓

12 28 39.8

328.8
52.2
327.8
523

834
84.5
167.9

+0.23

4 | 91

0.228

Hour.

7 41 11

329.0
53.0
333.2
46.0

84.0 <
72.8 <
156.8 < +0.44 <

7 40 0

325.2
47.5
326.9
52.9

82.3 <
86.0 <
168.3 < +0.2 <

Index below XVI

7 44 38

55.2
142.4
59.0
138.7

87.2 <
79.4 <
166.6 < +0.2 ✓ <

59.3
146.3
60.9
144.0

87.0 <
83.1 <
170.1 <

+0.19 <

4 | 110

0.27 5-

7 45 50

4 | 14 33.

7 43 38.2 ✓

+0 +19.

7 43 58.2

12 43 57.2 ✓

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1895phae.proj.1338.

Dec. 31, 1895.

7 55 B a 2 var
A a 4 a var
var = b b
w: obs.

B and b #1162 Ballou #108

8h 1m 40.5 = 8h 2m 0.0
8 1 40.5
B & C 1182# is slow 0m 19.5

8 5 b 1.5 var w: obs
var 2.5 D

8 9 C 2 Var.
Var 2 D
W. obs.

8 14. C 2 Var.
Var 2 D
W. obs.
Objects well right invisible and estimate uncertain.

Above estimates in notation on p. 14 r.

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1895phae.proj.1338.

Jan. 1. 1896.

Ω Leti : Phot R. : W: obs

Index to right

123.0		
137.7 <	14.7 <	
122.7	14.4 <	4.47 <
137.1	29.1 <	
303.0		
316.7	13.7 <	
302.4	15.5 <	4.46 <
317.9	29.2 <	

Index to left

33.0		
47.5	14.5 <	4.52 <
33.2	14.0 <	
47.2	28.5 <	
32.6		
46.8	14.2 <	4.52 <
33.0	14.3	4) 17 97
47.3	28.5 <	4.49 2

8 6 42

8 13 88

2(20 21

8 10 10.5

52

8 11 02

1895phae.proj.1338.

Jan 1. 1896

T. Andromeda.	Phot T.	Wolbs
0	14	+26.1
Wolbs	20	
	6	

15h	40m	54.8
	41	46.0
		51s.2
	42	22.8
		46.4
		27s.6

Index

.

.

.

.

Index

q = 0 Abandoned : two faint for photometer

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1895phae.proj.1338.

Jan. 1. 1896.

Band b #1182. Balloon #103

9h 10m 7.8 9h 11m 0.0

Σ 1' : P.O. 175 and 176 : Phot R : obs

0 40 +30.3

4/3 20

40

South preceding component is brighter

320° = position angle : 45" = distance : 6.5 and 6.8 = magn.

Index to left.

9 25 45

0.6	< south preceding +	
78.1	brighter dis.	
354.2	77.5 <	
83.3	89.1 <	−0.25
	166.6 <	
354.1		−0.24
85.2	91.1 <	
1.1	76.3 <	−0.24
77.4	167.4 <	

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1895phae.proj.1338.

25 45

Jan. 1 1896. 0.25 0.24

Index bright.

84.2		
172.4	85.2 <	0.08
84.4	90.7 <	
175.1	175.9 <	−0.06

82.4		
177.9	95.5 <	0.05
90.0	81.9 <	4(6 2
171.9	177.4 <	0.14 8

−0.14

9 | 31 | 28

4 | 5 | 13

9 | 14 | 18.2

Σ 88 ψ' Piscium: PhtR: Wds

0	59	+20.8
4	40	
13	41	

Southern and following thought to be slightly brighter

Position angle = 30° : distance = 30″

mags = +.9 and +.0.

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1895phae.proj.1338.

Jan 5.1, 1896.

Index above.

175.3
264.2 < southern. following + brighter dis.
169.0
270.9

88.9 <
101.9 < −0.20
190.8 <
169.2

164.9
273.3
173.6
266.3

108.4 <
92.7 <
201.1 < −0.40
158.9

Index below.

264.4 ~~273.9~~
254.5 ~~265.4~~
258.7 ~~262.9~~
362.3 360.1

~~91.5~~ 90.1 <
~~97.2~~ 103.6 < −0.26
188.7 193.7 <
166.3

260.5
357.8
264.4
358.5

−0.24

97.3 <
94.1 <
191.4 < −0.22
168.6 4108
0.27

Observer is little in doubt as to which one is brighter but southern and following was made to disappear.

On looking again observer is inclined to think that north preceding is about 0.1 mags brighter.

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1895phae.proj.1338.

Jan. 1. 1896.

Σ 90 : 77 Cisaim : Phot R : w.obs

0	59	+4.3
5/4	0	
	1	

Position angle = 275° : distance 3.5"
magn = 6.2 and 6.7

Index to right.

90.4	< brighter dis	
166.8	76.4 <	
99.3	62.1 <	0.80
161.4	138.5 <	

0.82

98.8		
160.5	61.7 <	
93.2	75.2 <	0.84
168.4	136.9 <	

Index to left.

186.0		
255.2	69.2 <	
189.1	61.9 <	0.96
251.0	131.1 <	

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1895phae.proj.1338.

Jan. 1. 1890.

10	6	50		
	2	8	48	
10		4	24	

187.8
251.3
185.2
254.9

63.5 <
69.7 <
133.2 <

0.94
0.91
4 | 30-1
0.877 v-
88

Band b #1182 Ballon #103

$10^h\ 11^m\ \cancel{6^s}\ 5^s = 10^h\ 12^m\ 0^s.0$
$6^s.4$

Dis. Jup. II : Phot. R: w: obs.
Cam: recorder.
Comp. with first of two satellites following = Satellite I.

10 49 23	$10^h\ 49^m$	0^s	2648	87.7	
55		14	352.5	85.5	
10 50 18		31	266.7	86.6	-0.1
		46	352.2		
10 50 12		56	262.2	90.8	
5	50	5	353.0	81.8	
5 17		16	270.0	86.3	-0.1
		31	351.8		
		47	265.7	86.1	
	51	2	351.8	84.7	-0.2

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1895phae.proj.1338.

Jan 1. 1895

10 √1 6 +	10	51	13	270.1	3
10 √2 1 +			23	354.8	
10 √1 √8 +			39	272.0	78.0
√2 √3 +			53	350.0	87.7 − 0.3
		52	4	267.1	82.8
			15	354.8	
10 √2 40 ×			26	270.1	84.9
√3 3√ ×			35	355.0	82.√ − 0.2
			43	266.2	83.7
			56	348.7	
10 √3 38 ×		53	14	268.7	87.6
√4 33 ×			32	356.3	83.6 − 0.2
			47	268.2	85.6
			57	351.8	
10 √4 26 ×		54	9	269.3	80.7
√√ 21 ×			21	350.0	8√.4 − 0.3
			31	266.8	83.0
			41	352.2	
10 √5 4 ×			50	270.0	83.8
√5 √9 +			58	353.8	83.1 − 0.3
		55	9	268.2	83.4
			20	351.3	
10 √5 √2 ×			31	262.5	93.5
√6 47 ×			44	356.0	87.2 − 0.1
		56	2	266.0	86.4
			9	353.2	90.4
10 √6 2 ×			16	266.0	86.1
√7 2 +			23	352.1	92.4 0.0

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1895phae.proj.1338.

Jan 1, 1896.

	10^h	56^m	31	261.8	
			39	354.2	
			51	262.2	
			59	356.0	
		57	6	263.2	
			12	353.3	
			19	260.2	
			27	0.4	
			36	261.2	
			43	358.8	
	10	58	46	263.2	
		58	0	0.0	
			6	266.2	
			13	0.1	
			23	266.7	
			33	5.8	
			43	250.8	
			52	7.1	
		59	3	248.8	
			12	4.9	
			19	251.3	
			26	12.2	
			50	245.8	
		60	1	23.5	
			12	234.2	
			22	22.0	
			36	235.1	
			50	25.1	
	11	1	2	not run later.	

10		
	93.8	
(1	90.1	+0.1
	92.0	
	100.2	
(2	97.6	+0.3
	98.9	
	96.8	0.3
	93.8	0.1
×3	93.9	0.1
	93.4	0.1
	99.1	0.3
	115.0	1.0
	116.3	1.0
	118.3	1.1
	126.1	1.0
	113.6	0.9
	120.9	1.2
	126.4	1.5
	137.7	2.1
	149.3	2.8
	147.8	2.7
	146.9	2.6
	150.0	2.9

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Jan. 1. 1895 6.

Diam of res: comps of satellites

11	1m	22s	206.3	28.1
		35	234.1	26.7
		51	208.3	27.8
	2	8	235.0	27.4
				3.1

11 1 47 x
55 x
11 2 39 x

In above ellipse satellite II was made to disappear by accident instead of comp. satellite but in diam. of visibility comp. satellite disappears.

Observations made with considerable difficulty on account of elongation of images, and inconvenient altitude: chair also gave trouble: room not far from region.

Bamberg. # 1142.

11h 15m 4.6

Ballou #103.

11h. 16m. 0.5.0

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1 Jan. 2. 1896. (Thursday)

Stella Variable. Gr. 6h.

20 31 +17°2
24 0
+3 29

See next page for
continuation of record

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(Thursday) Jan 2. 1896.

Wells (Algol) var. W: obs

20 31 +17.8

0/3 4/33

I was momentary interval in above so, var. run at normal brightness.

a 2.5 var
B 1 var
var 2 b

W: obs

Estimate moderately some doyd but thought to be pretty good although twilight is still rather strong.

a 3 B
B 2.5 b

W. obs.

Clouds thick immediately after above estimate

1895phae.proj.1338.

3 obs.

Jan. 2. 1896.

Near estimates and the sun fairly bright at times and corrections to apex 1 A.M.

Dw Hgl

3.5
+ 2.5
3.0

Clouds thick

3 obs.

Near estimates corrections to apex and motion 1 A.M.

B obs.

Same again

Bgl Rw Hgl D H

3
-2.5
+3
2.5
3.0

Clouds

Too cloudy for further work.

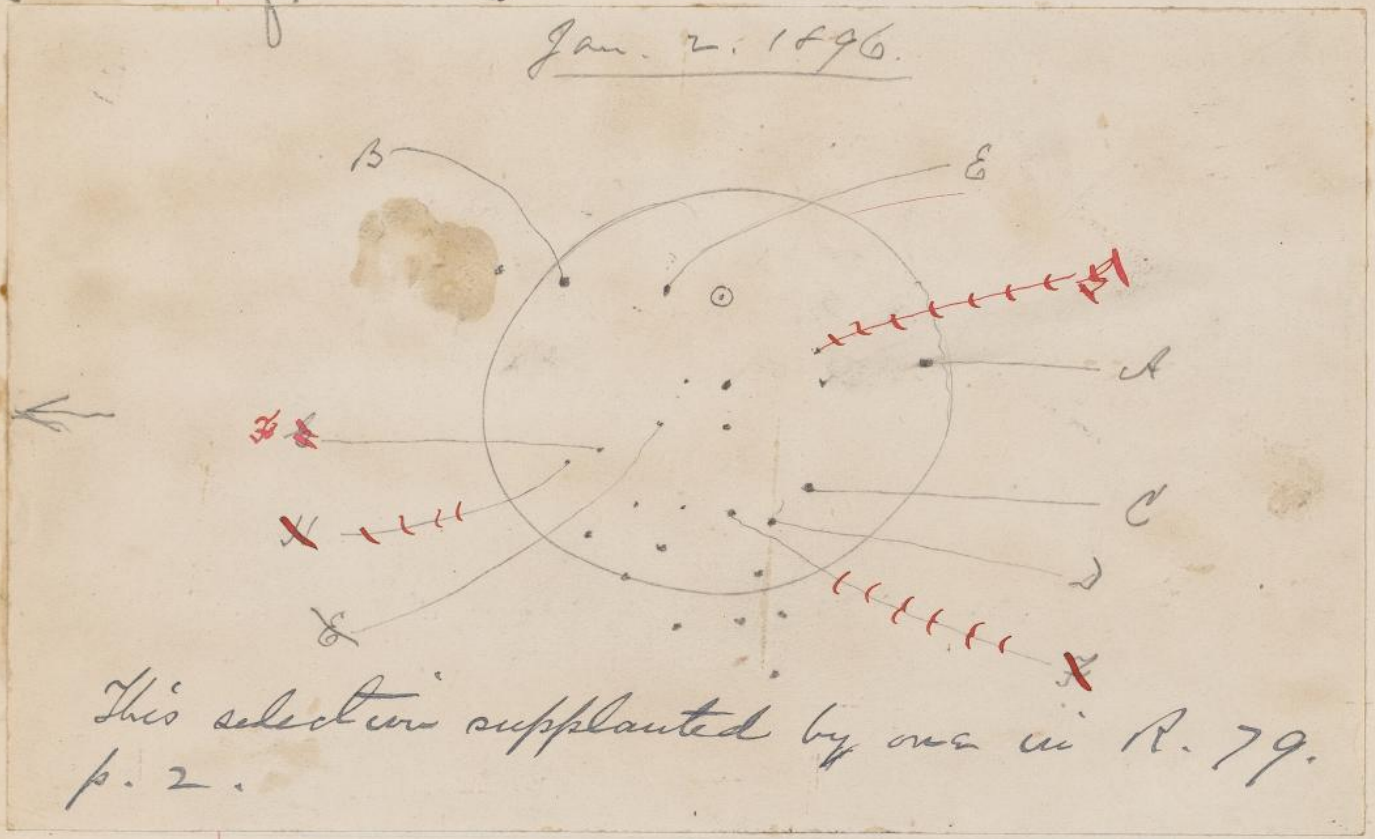
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Posted to here.

(Friday) Jan. 3. 1896.

Jan. 2. 1896.



This selection supplanted by one in R. 79. p. 2.

The above is a diagram of the ~~stars~~ sequence as selected last night, through some cloudiness however.

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6.

Jan. 8. 1895.

Index to left.

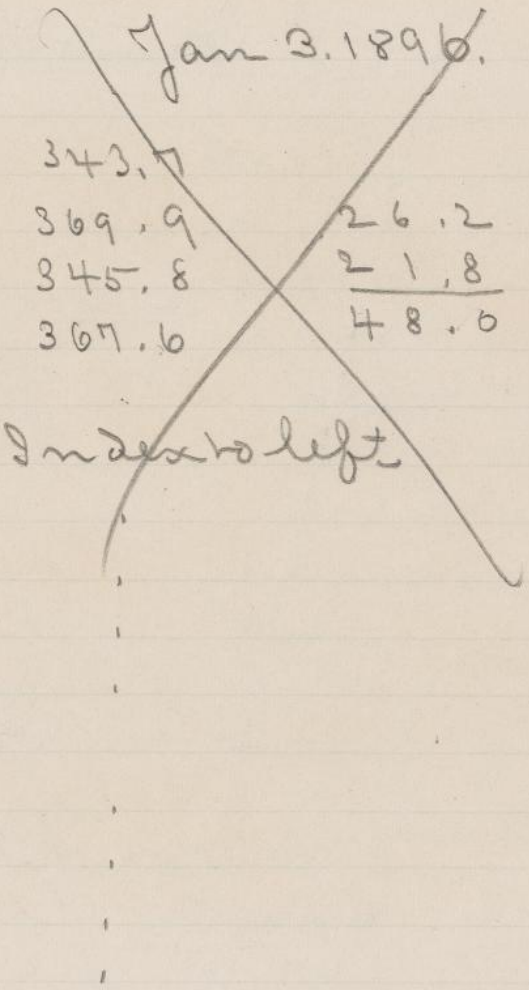
257.6	< brighter dis.
274.4	16.8
256.1	19.1
275.2	35.9
256.2	
274.9	18.7
257.7	15.7
273.4	34 4

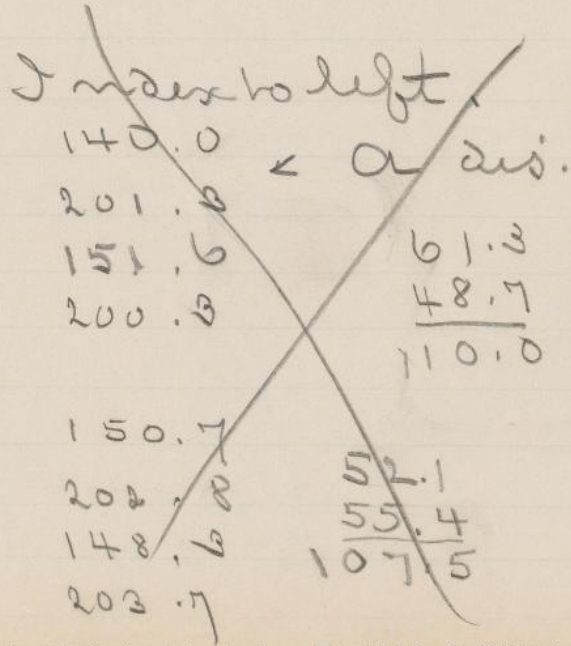
Index to right.

346.7	
367.4	20.7
342.3	28.9
11.2	49.6
342.4	
11.4	29.0
345.3	22.5
367.8	51.5
345.9	
365.3	19.4
344.0	26.4
10.4	45.8

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1895phot.proj.1398.





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Jan. 3. 1896.

Index to night.

	239.3	
	292.6	53.3
	244.6	45.1
	289.7	98.4
	246.4	
289.2	~~286.7~~	42.8
	238.4	56.3
	295.0	99.1

The preceding numbers (crossed out) were accidentally copied in this book, and have been transferred to new book, where the diagram is, and the remainder of to nights' work.

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