KG
1365
539

1897phae..proj..540W

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1897phae.proj..540w

KG 11365.539

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KG11365.539

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1897phae.proj..540W

November 23, 1897. (Tuesday)

0 Watch correction = −30 secs. (Watch is 30 sec fast)

		± beti	Phot R. (modification) (Pencils together)	H. Obs.
		26 4	−2.5	
		24 0		
		2 4		
		9 56		

Index right

		323.7 Δ Var. dis	7.5′	
7	57	331.2	5.2′	
		325.0	12.7′ −6.25′	
		330.2		
		324.7	6.1′	(−6.22)′
		330.5	7.4′	
		323.5	13.5′ −6.15′	
		331.2		

Index left

		54.0	7.2′	
		61.2	6.1′	
		54.4	13.3′ −6.15′	
		60.5		
		54.3	6.1′	(−6.22)′
8	02	60.4	6.8′	
7	59.5	54.1	12.9′ −6.25′	
5	−.5	60.9		
12	59.0			

Mean − 6.22′

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1897phae.proj..540W

Nov. 23, 1897.

Same again.

		54.5	6.0'	
8	04	60.5	6.3'	
		54.5	12.3' − 6.35'	
		60.8		
		54.3	6.1'	(−6.32)'
		60.4	6.6'	
		54.4	12.7' − 6.28'	
		61.0		

Index right.

		144.0	7.6'	
		151.6	5.9'	
		144.7	13.5' − 6.15'	
		150.6		
		144.7	5.8'	(−6.22)'
8	09	150.5	6.9'	
8	06.5	144.2	12.7' − 6.28'	
5	−.5	151.1		
13	06.0		Mean −6.27	

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1897phae.proj..540W

Nov. 23, 1897.

S Ceti. Comp. Stars. Phot D. H. Obs.

24 12 −9.7

24 52

40

~~k 5.5 var, 00~~

8 41 k 5.5 k'

k' + l

o compared with g

Index right and above

147.6 < g dis. 34.2'

8 53 181.8 33.8'

148.2 68.0' +2.57'

182.0

149.0 33.0' (+2.58)

182.0 34.2'

149.0 67.2' +2.60'

183.2

Index left and below

242.2 26.8'

269.0 29.0'

241.8 55.8' +3.02'

270.8

241.1 30.9' (+2.96)

9 00 272.0 27.8'

241.7 58.7' +2.91'

269.5 Mean +2.77

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1897phae.proj..540W

Nov. 23, 1897.

l compared with g.
Index below.

	230.1	48.9'	
9	05 279.0	46.8'	
	233.0	95.7' +1.76'	
	279.8		
	230.5	49.3'	(+1.72)
	279.8	50.3'	
	231.9	99.6' +1.67'	
	282.2		

Index above

317.4	52.9'	
10.3	53.1'	
318.8	106.0' +1.51'	
11.9		
320.0	50.6'	(+1.56)
9 10 10.6	51.5'	
319.5	102.1' +1.61'	
11.0		Mean +1.64

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1897phae.proj..540w

Nov. 23, 1897

N compared with g.

Index right and above

	326.1	< g dis.	37.7'	
9 13	3.8		36.9'	
	326.9		74.6' + 2.36'	
	3.8			
	325.1		38.0'	(+2.39)
	3.1		34.8'	
	327.5		72.8' + 2.42'	
	2.3			

Index left and below.

58.6		32.2'	
90.8		30.0'	
~~60.2~~ 59.5		62.2' + 2.78'	
89.5			
59.7		33.9'	(+2.74)
9 25 93.6		30.6'	
59.3		64.5' + 2.69'	
89.9			

Mean +2.56

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1897phae.proj..540W

Nov. 23, 1897.

k' compared with
Index ~~left~~ right and above

	314.8	<g dis.	57.5'
9	12.3		61.1'
16	313.8		118.6' + 1.22'
	14.9		

313.8	61.1'	(+1.22)
14.9	58.3'	
314.9	119.4' + 1.21'	
13.2		

Index left and below.

~~48.0~~	48.0	54.6'
102.6	~~103.3~~	53.7'
47.8		108.3' + 1.46'
101.5		

49.0	54.0'	(+1.46).
9 21 103.0	54.6'	
47.2	108.6' + 1.45'	
101.8		

Mean + 1.34

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1897phae.proj..540W

Nov. 23, 1897.

α compared with g

Index left and below

		65.0 < g dis.	19.0'	
g	29	84.0	18.0'	
		66.2	37.0' +3.94'	
		84.2		
		64.5	20.4'	(+3.86)
		84.9	19.5'	
		64.6	39.9' +3.77'	
		84.1		

Index right about above

	154.3	20.7'	
	175.0	19.5'	
	155.5	40.2' +3.76'	
	175.0		
	155.3	20.7'	(+3.78)
g	34 176.0	18.6'	
	156.5	39.3' +3.81'	
	175.1		

Mean +3.82

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1897phae.proj..540W

Nov. 23, 1897.

m compared with g

Index right

	140.0	g dis	49.5'
9	35 189.5		51.5'
	139.8		101.0' +1.63'
	191.3		
	141.5		51.0' (+1.62)
	192.5		50.7'
	138.9		101.7' +1.61'
	189.6		

Index left

	234.2		42.3'
	276.5		48.4'
	232.6		90.7' +1.90'
	281.0		
	232.2		47.5' (+1.88)
9	42 279.7		44.9'
	232.1		92.4' +1.85'
	277.0		

Mean +1.75

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1897phae.proj..540W

Nov. 23, 1897.

p compared with g

Index left

		242.0	26.3'
10	12	268.3	27.1'
		241.5	53.4' + 3.12'
		268.6	
			(+3.18)
		241.7	26.6'
		268.3	24.2'
		243.0	50.8' + 3.24'
		267.2	

Index right

		330.2	28.8'
		359.0	29.0'
		330.8	57.8' + 2.94'
		359.8	
		328.8	31.2' (+2.89)
10	18	0.0	29.4'
		330.8	60.6' + 2.84'
		0.2	

Mean + 3.04

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1897phae.proj..540W

Nov. 23, 1897.

g compared with g.
Index right and above

		332.6	< g dis.	24.1'
10	19	356.7		24.9'
		332.0		49.0' +3.32'
		356.9		

333.8	22.2'	(+3.38)
356.0	24.1'	
333.0	46.3' +3.44'	
357.1		

Index left and below

~~63.9~~	63.2	22.8'	
86.0		21.6'	
63.6		44.4' +3.54'	
85.2			

63.9		22.1'	(+3.53)
10 24 86.0		22.6'	
63.0		44.7' +3.52'	
85.6			

Mean +3.46

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1897phae.proj..540W

Nov 23, 1897

SS Cygni N. Obs.

21 34 +42.6

26 55

5 21

10 46 var = δ in large telescope.

Transits to obtain positions of Comp. Stars for SS Cygni.

3	17	47.5	Y	north half
	18	18.0	k	south "
	18	42.5	Y	north half
	19	8.2	k	south half
3	20	19.2	Y	north half
	20	49.3	k	south half
	21	13.3	Y	north half
	21	49.4	k	south half

δ & k compared with k

3	25	33.8	δ	north half
	25	47.3	k	south half
	26	14.5	δ k	north half
	26	48.0	k δ	south half
3	27	36.0	δ	north half
	27	49.5	k	south half
	28	17.4	δ	north half
	28	50.5	k	south half

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1897phae.proj..540W

Nov. 23, 1897.

g compared with k

3	30	19.4	k south half
	30	33.7	g north "
	30	57.0	g " "
	31	28.0	k south "

~~3 ° 25~~

3	32	42.4	k south half
	32	57.0	g north half
	33	20.0	g " "
	33	51.0	k south "

α with k

3	35	2.0	α south half
	35	25.5	α " " +0.5/8
	35	37.4	k " "
	36	12.6	k " "

3	36	51.3	α south half
	37	14.5	α " "
	37	26.0	k South half
	38	3.1	k south half

Var. with k

3	39	37.0	var south half
	39	54.5	var " "
	40	5.4	k " "
	40	19.6	k " "

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1897phae.proj..540W

Nov. 23, 1897

3	40	49.2	var south half
	41	5.5	var south half
	41	17.4	k south "
	41	32.3	k south "

p with q

3	43	26.4	q south half
	43	45.4	p north "
	43	57.8	p " "
	44	35.5	q south "

3	45	18.2	q south half
	45	36.3	p north "
	46	48.0	p "
	48	27.2	q south half

0' with k

3	48	8.0	0' north half
	48	48.0	0' " "
	49	12.5	k south " outside
	49	31.2	k " " "

3	~~50~~ 49	58.1	0' north half
	50	38.0	0' " "
	51	2.5	k south half outside
	51	21.0	k " " "

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1897phae.proj..540W

Nov. 23, 1897

B with k

3	55	19.4	k	north half
	55	39.3	B	" "
	56	24.4	k	" "
	56	27.2	B	" "

~~3 57 18.0 k north half~~

3	57	55.0	k	north half
	58	14.5	B	" "
	58	59.5	k	" "
	59	2.3	B	" "

Var with k.

~~4~~	~~0~~	~~2.0~~	~~var~~	
4	1	21.7	var	north half
	1	47.8	k	" "
	2	14.3	var	" "
	2	41.8	k	north "

q with k.

4	3	33.0	k	south half
	3	47.8	q	north half
	4	10.5	q	" "
	4	41.4	k	south " — 0.5

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1897phae.proj..540W

November 24, 1897. (Wednesday)

ο Ceti		H. Obs.
26	4	-2.5
24	6	
1	58	
10	2	

Tried Phot H. on ο Ceti, with star just inserted. There are two ο's, each one having apparently an auxiallry ο near it; and also two comparison stars; but all these images can be made to disappear.

Comparison stars for S Ceti.	Phot. T.	H. Obs.
24	12	-9.7
24	29	
0	17	

α compared with g
Index right and above.

	334.4	< g dis	19.6'
8 10	354.0		20.7'
	334.0		40.3' +3.75'
	354.7		
	333.6		21.0' (+3.72)
	354.6		20.3'
	334.1		41.3' +3.70'
	354.4		

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1897phae.proj..540W

Nov. 24, 1897.

Index left and below.

64.0	21.0'
85.0	20.9'
64.3	41.9' +3.67'
85.2	

	63.7	20.5'	(+3.69)
8 16	84.2	20.6'	
	65.0	41.1' +3.71'	
	85.6		

Mean +3.70

B compared with g
Index left and below

67.3	<g dis.	16.2'
8 19 83.5		14.9'
67.8		31.1' +4.32'
82.7		

67.6	14.6'	(+4.32)
82.2	16.6'	
66.2	31.2' +4.32'	
82.8		

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1897phae.proj..540W

Nov. 24, 1897.

Index right and above

155.4	15.9'	
174.3	16.3'	
157.7	32.2'	+4.25'
174.0		

	158.3	13.7'	(+4.32)
8 34	172.0	16.4'	
	157.2	30.1'	+4.40'
	173.6		

Mean +4.32

g compared with g

Index right and above

	153.5	g dis. 23.6'	
8 37	177.1	23.0'	
	154.0	46.6'	+3.43'
	177.0		
	~~150~~		
	155.9	20.1'	(+3.47)
	176.0	24.9'	
	153.1	45.0'	+3.51'
	178.0		

Index left and below

243.7	22.6'	
266.3	23.2'	
243.8	45.8'	+3.47'
267.0		

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1897phae.proj..540W

Nov. 24, 1897

(+3.40)

		243.6	24.4'
δ	49	268.0	24.0'
		243.7	48.4' ∴ +3.34'
		267.7	

Mean +3.44

p compared with q.

Index right and above

		150.7	28.3'
δ	40	179.0	30.0'
		150.0	58.3' +2.93'
		180.0	

150.6	29.2'	(+2.93)
179.8	29.1'	
179.9	58.3' +2.93'	
179.0		

Index left and below

		241.8	28.9'
		270.7	29.0'
		241.2	57.9' +2.94'
		270.7	

		241.8	29.2'
δ	45	271.0	29.3'
		241.1	58.5' +2.92'
		270.4	

(+2.93)

Mean +2.93

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1897phae.proj..540W

Nov. 24, 1897.

U Ceti. Comp. Stars. H. Obs.

.2	29	−12.8
1	29	
1	0	
11	0	

9 26 l 4 m
m 3.5 n
n 4 o
o 5.5 p
p 5 q
q 4.5 r
9 30 r 4 s

m compared with e
Index right and above.

56.3	< e dis.	36.7'
9 44 93.0		38.8'
56.2		75.5' + 2.33'
95.0		

56.1	38.6'	(+2.34)
94.7	35.9'	
56.8	74.5' + 2.36'	
92.7		

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1897phae.proj..540W

Nov. 24, 1894.

Index left and below

143.0	46.0'	
189.0	42.8'	
143.4	88.8'	+1.95'
186.2		

144.4	42.7'	(+1.98)
9 50 187.1	44.1'	
142.2	86.8'	+2.00'
~~187.3~~ 186.3		

Mean +2.16

p compared with e

Index left and below.

153.7	22.6'	
9 53 176.3	23.6'	
153.7	46.2'	+3.45'
177.3		

152.3	23.1'	(+3.44)
175.4	23.2'	
153.8	46.3'	+3.44'
177.0		

Index right and above.

~~245.9~~	245.0	21.8'
~~266.9~~ Ecl. blonde	266.8	24.1'
10 10 Somecloud	244.9	45.9' +3.46'
	269.0	

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1897phae.proj..540W

Nov. 24, 1897.

246.1 22.9' (+3.54)
10 11 269.0 20.0'
245.0 42.9' + 3.61'
~~266.~~
265.0 Mean +3.49

N compared with E
Index right
240.4 < E dis 30.8'
10 15 271.2 29.2'
241.4 60.0' + 2.86'
270.6

240.0 31.3' (+2.84)
271.3 30.1'
241.3 61.4' + 2.81'
271.4

Index left
327.1 35.3'
2.4 33.7'
328.5 69.0' + 2.54'
2.2

328.7 34.3' (+2.55)
10 19 3.0 34.1'
328.2 68.4' + 2.56'
~~3.~~
2.3 Mean +2.70

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1897phae.proj..540W

Nov. 24, 1897

S S Cygni. H. Obs.

21	34	+42.6
26	54	
5	20	

10 42 cy 2 var, var 4th in large telescope.

Transits for positions of Comp Stars with Square Bar

~~Pos. 0 = 133.6 + 45°~~

3 45.0

178.6

10 48 Clouds

Pos. 0 = 133.5

45.0

178.5

3	26	7.0	var south half	
	26	35.5	k " "	
	26	46.4	var " "	
	27	12.5	k " "	
3	27	55.0	var south half	
	28	23.2	k " "	$-0.^{s}5$
	28	33.5	var " "	$+1.^{s}0$
	29	0.2	k " "	

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1897phae.proj..540W

Nov. 24, 1894.

3	30	25.0	y	north half
	30	47.2	k	south "
	31	11.4	y	north " $-0^{g}.5-$
	31	55.4	k	south "
3	32	15.0	y	north half
	32	36.0	k	south "
	33	0.2	y	north "
	33	44.1	k	south "
3	34	24.6	d	north half
	34	37.7	k	south "
	35	5.3	d	north "
	35	39.0	k	south "
3	37	15.1	d	north half
	37	26.9	k	south "
	37	54.1	d	north "
	38	28.5	k	south "
3	40	46.0	p	north half
	41	6.3	q	south "
	41	37.3	p	north "
	41	38.3	q	south "
	43	24.9	p	north half
	43	43.9	q	south half
	44	14.3	p	north half
	44	15.6	q	south half

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1897phae.proj..540W

Nov. 24, 1897.

3	46	29.3	o'	north half
	47	7.4	o'	" "
	47	33.4	k	south " outside
	47	51.2	k	" " "
3	48	34.0	o'	north. half
	49	12.1	o'	nooth "
	49	38.4	k	south " outside 0.5
	49	55.1	k	" " " +0.3
3	51	55.0	g	north half
	52	21.3	k	south "
	52	48.4	k	" "
	52	59.1	g	no
3	53	12.4	g	north half
	53	39.0	k	south "
	54	6.0	k	south half +0.7
	54	17.2	g	north half
3	55	42.0	Bk	north half
	56	2.0	B	" "
	56	32.0	k	" "
	56	34.5	B	" "
2	57	8.4	k	north half
	57	28.1	B	" "
	57	58.0	k	" " -0.3
	58	0.2	B	" "

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1897phae.proj..540W

Nov. 24. 1897.

~~3 59 25.0 α north half +0.2~~

4	1	22.5	α	north half	−0.2 s
	1	53.3	α	" "	+0.5 s
	2	10.0	k	" "	
	2	29.0	k	" "	
4	3	4.0	α	north half	
	3	35.8	α	" "	
	3	52.4	k	" "	
	4	10.4	k	" "	

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1897phae.proj..540W

Posted to here.

November 27, 1897. (Saturday.)

7 00 Watch Correction = − 22.5 sec. (Watch is 22.5 sec. fast)

			N Delphini.	Phot. D.	N. Obs.
			20 31	+17°.7	
			23 59		
			3 28		
			Index above.		
			326.8	Comp. dia. 64.1′	
7	30	17	30.9	60.0′	
			327.2	124.1′	+1.10″
			27.2		
			329.8	60.1′	(+1.12)
31	53		29.9	62.8′	
			327.1	122.9′	+1.13″
			29.9		
			Index below.		
			53.9	70.1′	
34	4		124.0	60.1′	
			58.7	130.2′	+0.97″
			~~+17.0~~ 118.8		
			59.8	59.2′	(+1.02)
36	12		119.0	66.1′	
11	86′		55.1	125.3′	+1.08″
7 33	6′		121.2		
5	−23				
12 32	43				

Mean +1.07

9.27

10.34

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1897phae.proj..540w

Nov. 27, 1897.

II

			52.3	70.5'	
7	38	17	122.8	58.5'	
			60.3	129.0' +1.00 ✓	
			118.8		
			60.4	58.1'	(+1.04)
40	1		118.5	66.5'	
			55.1	124.6' +1.09 ✓	
			121.6		

Index above.

			145.3	64.7'	
42	53		210.0	58.7'	
			150.6	123.4' +1.12 ✓	
			209.3		
			149.9	57.7'	(+1.16)
	44	27	207.6	62.2'	
	4	98'	147.7	119.9' +1.19 ✓	
7	41	24'	209.9		
5		-23			
12	41	1			

Mean +1.10

9.27

10.37

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1897phae.proj..540W

Nov. 27, 1897.

			146.8	62.4'	
7	47	2	209.2	58.5'	
			151.2	120.9' +1.17	
			209.7		
			150.0	57.4'	(+1.20)
48	38		207.4	60.8'	
			147.2	118.2' +1.23	
			208.0		

Index below.

			235.2'	65.0'	
51	21		300.2	59.0'	
			240.7	124.0' +1.11	
			299.7		
			242.9	54.3'	(+1.16)
~~52~~	~~54~~		297.2	65.2'	
198	115'		235.1	119.5' +1.20	
7	49	59"	300.3		
5		-23			
12	49	36			

Mean +1.18

9.27

10.45

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1897phae.proj.:540w

Nov. 27, 1897.

IV

	236.7	60.3 →	
7 57 2	296.7	58.3 →	
	239.5	118.8 →	+1.22 ✓
	297.8		
	240.4	56.8 →	(+1.24)
59 14	297.2	60.8 →	
	238.9	117.6 →	+1.25 ✓
	299.7		

Index above.

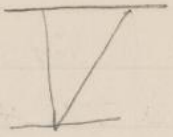
	329.7	58.0 →	
5 2 39	27.7	54.0 →	
	332.7	112.0 →	+1.37 ✓
	26.7		
	332.7	53.3 →	(+1.42)
4 37	26.0	53.9 →	
2 92 →	331.6	107.2 →	+1.48 ✓
8 0 53 →	255		
5 -23			
13 0 30			

Mean +1.33
9.27
10.60

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1897phae.proj..540W

Nov. 27, 1897.



			332.0	52.4'	
8	8	15	24.4	51.0'	
			332.9	103.4'	+1.57 ✓
			23.9		
			332.6	52.3'	(+1.53)
	10	8	24.9	54.6'	
			331.1	106.9'	+1.49 ✓
			25.7		

Index below.

			58.3	59.1'	
	12	36	117.4	53.0'	
			60.9	112.1'	+1.37 ✓
			113.9		
			~~62.6~~ 61.2	53.1'	(+1.38)
	14	17	114.3	58.1'	
	4	76'	60.7	111.2'	+1.39 ✓
8	11	19'	118.8		
5		-23			
13	10	56			

Mean +1.46

9.27

10.73

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1897phae.proj..540W

Nov. 27, 1897.

VI

		61.5	53.9 ›	
8	16 43	115.4	50.0 ›	
		62.9	103.9 ›	+1.56 ✓
		112.9		
		63.2	50.1 ›	(+1.55)
18	45	113.3	54.7 ›	
		61.0	104.8 ›	+1.54 ✓
		115.7		

Index above

		154.0	50.5 ›	
21	49	204.5	53.3 ›	
		151.0	103.8 ›	+1.56 ✓
		204.3		
		153.4	49.9 ›	(+1.60)
2	3 59	203.3	50.5 ›	
78	196 ›	153.5	100.4 ›	+1.65 ✓
8	20 19 ›	204.0		
5	-23			
13	19 56			

Mean +1.58

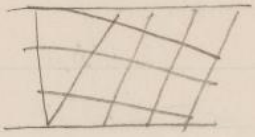
9.27

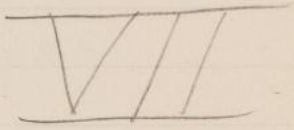
10.85

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1897phae.proj..540W

Nov. 27, 1897.





		152.6	49.1'	
8	27	1 201.7	49.5'	
		153.5	98.6' +1.69	v
		203.0		
		154.3	47.2'	(+1.74)
	28	47 201.5	47.14'	
		154.6	94.6' +1.79	v
		202.0		

Index below.

		244.7	48.0'	
	31	21 292.7	46.6'	
		245.9	94.6' +1.79	v
		292.5		
		246.1	46.9'	(+1.80)
	33	7 293.0	47.2'	
	119	76' 244.9	94.1' +1.81	v
8	30	4' 292.1		
5		-23		
13	29	41		

Mean +1.77

9.27

11.04

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1897phae.proj..540W

Nov. 27, 1897.

VIII

			243.0	51.9'	
8	38	25	294.9	47.4'	
			244.1	~~98.3~~	
			291.5	99.3' +1.67 ✓	
			244.4	45.5'	(+1.74)
39	59		289.9	48.0'	
			245.0	93.5' +1.82 ✓	
			293.0		

Index above.

			335.9	44.5'	
42	36		20.4	44.3'	
			336.7	88.8' +1.95 ✓	
			21.0		
			338.0	43.6'	(+2.00)
44	10		21.6	41.3'	
3	130°		338.4	84.9' +2.05 ✓	
8	41	17"	19.m		
5		-23			
13	40	54			

Mean +1.87
9.27
11.14

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1897phae.proj..540W

Nov. 27, 1897

IX

		336.4	42.9'		
8	48	44	19.3	42.9'	
			336.1	85.8' +2.03 ✓	
			19.6		
			337.0	42.2'	(+2.06)
50	43		19.2	41.0'	
			337.3	83.2' +2.10 ✓	
			18.3		

Under below

			~~63.4~~ 64.3	46.0'	
53	34		110.3	40.2'	
			69.0	86.2' +2.02 ✓	
			109.2		
			68.0	39.1'	(+2.09)
	55	35	107.1	42.1'	
	7	156'	~~66.4~~	81.2' +2.16 ✓	
8	52	24'	66.9		
5		-23	109.0	Mean +2.08	
13	52	1		9.27	
				11.35	

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1897phae.proj..540W

Nov. 27, 1897

			66.4	42.6	
8	57	49	109.0	40.8	
			68.0	83.4	+2.10
			108.8		
			67.5	40.9	(+2.08)
	59	43	108.4	44.1	
			66.3	85.0	+2.05
			110.4		
			Index above		
			158.8	39.5	
9	3	8	198.3	39.9	
			159.3	79.4	+2.21
			199.2		
			157.8	39.7	
	5	30	197.5	38.0	(+2.24)
	4	130	~~154.4~~	~~78.7~~	
9	1	32	158.6	77.7	+2.26
5		23	~~191.0~~		
14	1	9	196.6		

Mean +2.16

9.27

11.43

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1897phae.proj..540W

Nov. 27, 1897

XI

		159.3	36.1		
9	13	47	195.4	37.0	
			161.0	73.1	+2.41
			198.0		
			159.6	37.3	(+2.45)
	16	38	196.9	33.2	
			161.8	70.5	+2.49
			195.0		
			Under below.		
			248.7	39.5	
	19	53	287.7	37.5	
			250.0	77.0	+2.28
			287.5		
			249.0	37.1	(+2.32)
	22	8	286.1	37.0	
	70	146	248.7	74.1	+2.37
9	18	6	285.7		
5		-23			
14	17	43			

Mean +2.38

9.27

11.65

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1897phae.prj..540W

Nov 27, 1897

XII

	246.3	40.3	
9 25 47	286.6	36.4	
	250.3	76.7	+2.29
	286.7		
	250.2	36.4	(+2.32)
27 49	286.6	38.2	
	248.8	74.6	+2.36
	284.0		

Index above

	342.0	33.0	
30 30	15.0	33.0	
	342.5	66.0	+2.64
	15.5		
	342.4	33.4	(+2.64)
37 35	15.6	32.3	
11 4 161	343.8	65.7	+2.65
9 29 10	16.1		
5 23			
14 28 47			

Mean +2.48

9.27

11.75

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1897phae.proj..540W

Nov. 27, 1897.

XIII

		343.4	31.3'		
9	35	44	14.7	32.4'	
			342.3	63.7' +2.73 ✓	
			14.7		
			344.4	31.3'	(+2.74)
39	48		13.7	31.9'	
			343.9	63.2' +2.74 ✓	
			15.8		

Order below

			70.8	35.4'	
40	52		106.0	31.6'	
			72.9	67.0' +2.61 ✓	
			104.5		
			72.3	32.9'	(+2.62)
		44	105.2	33.1'	
		156	192' 72.2	66.0' +2.64 ✓	
9	39	48'	105.3		
5		-23			
14	39	25			

Mean +2.68
9.27
11.95

9 50 Watch Correction = −23.5 sec. (Watch is 23.5 sec fast)

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1897phae.proj..540W

Nov. 27, 1897.

S S Cygni. H. Obs.

21	34	+42.6
26	34	
5	0	

10 3 Cy 2 var, var 1 d in large telescope.

Examination of Region of Standards Near Pole
H. Obs.

1	22	+58.5
3	5	
2	43	

h is the brightest
d next
k "
c "
l "
e "
f "

Estimates below with Power 103

h 3 d
d 2.5 k
k 6 c
c 2.5 l
l 7.5 e
e 2.5 f

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1897phae.proj..540W

Nov 27, 1897

Estimates below with one inch Eyepiece & Power 270

h 3.5 d
d 4 k
k 7 l
l 1.5 c
c 7 e
e 3 f

A star in about the right position for g thought to be certainly seen, but the interval from f to g would be too large to estimate.

~~Seeing not a little poor~~
Seeing not the best. Considerable wind air cold and stars a little blurry

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1897phae.proj..540W

November 30, 1897. (Tuesday)

6 50 Hatch Correction = −52 sec

SS Cygni M. Obs

21 37 +42.7

23 45

2 8

7 02 Cn 1.5 var, var 2.5 0

Comp Star = m =

Index left and above

53.1 < Comp dis 71.9 ✓

7 6 58 125.0 78.6 ✓

49.7 150.5 ✓ +0.57 ✓

127.8

+0.V.A. ✓

50.0 75.3 ✓

8 50 125.3 74.1 ✓

51.3 149.4 ✓ +0.59 ✓

125.4

Index right and below

145.2 70.3 ✓

10 48 215.5 70.6 ✓

142.2 140.9 ✓ +0.76 ✓

212.8

+0.7K ✓

141.9 72.5 ✓

+0.66 ✓ mean.

17 18 214.4 69.7 ✓

8.93

7 9 44 ✓

5 −52 143.0 142.2 ✓ +0.73 ✓

9.59

12 8 52 212.7

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1897phae.proj..540W

Nov. 30, 1897.

II

		143.9	70.1 ✓		
7	13	54 214.0	70.6 ✓		
		141.8	140.7 ✓	+0.76 ✓	
		212.4			
				+0.76 ✓	
		143.5	71.3 ✓		
	15	28 214.8	69.9 ✓		
		143.0	141.2 ✓	+0.75 ✓	
		212.9			

Index left and above

		233.8	71.9 ✓		
17	25	305.7	81.4 ✓		
		225.5	153.3 ✓	+0.51 ✓	
		309.9			
				+0.76 ✓	
		229.1	76.9 ✓	+0.67 ✓	
	18	52 306.0	72.9 ✓	8.93	Mean.
7	16	25 237.7	149.8 ✓	+0.58 ✓	9.58
5		-52 305.1			
12	15	33			

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1897phae.proj..540W

Nov. 30, 1897.

		230.2	74.8 ✓	
7	24	18 305.0	< Clouds 75.0 ✓	
		230.1	149.8 ✓	+0.58 ✓
		305.1		
				+0.54 ✓
		230.0	76.2 ✓	
25	55	306.2	77.6 ✓	
		228.3	153.8 ✓	+0.50 ✓
		305.9		

Index right and below

		325.3	< Clouds ~~Images faint~~	68.5 ✓
28	37	33.8		69.1 ✓
		326.0		137.6 ✓ +0.82 ✓
		35.1		

		327.5	65.2 ✓	+0.44
	30 56	32.7	70.4 ✓	~~+0.69 mean.~~
7	29 26	328.4	135.6 ✓	+0.86 ✓ ~~+0.69 mean.~~
5	-52	33.8		
12	26 34			
7	32	Clouds rather thick		+0.69 ✓ mean.
				8.93
				9.62

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1897phae.proj..540W

Nov. 30, 1897.

IV

		322.5	73.5 ✓		
7	36	6	36.0	70.9 ✓	
			324.0	144.4 ✓	+0.69 ✓
			34.9		
					+0.70 ✓
			323.7	70.2 ✓	
37	52		33.9	73.6 ✓	
			322.3	143.8 ✓	+0.70 ✓
			35.9		

Index left.

			49.9	78.8 ›	
40	~~21~~ 44		+30.0	125.7 71.1 ›	
			51.9	149.9 ›	+0.58 ✓
			123.0		
					+0.52 ✓
			51.0 < Clouds	77.7 ›	
	42	16	128.7	77.8 ›	
7	39	18	51.1	155.5 ›	+0.47 ✓
5		-52	128.9		
12	38	22			

+0.61 ✓ mean.

8.93

9.54

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1897phae.proj..540W

Nov. 30, 1897

V

48.7 78.3
7 45 9 127.0 76.0
51.2 154.3 +0.49
~~126.7~~ 127.2

+0.48

49.1 77.7
46 46 126.8 77.0
48.7 154.7 +0.48
125.7

Index right < Clouds thick

143.0 70.0
49 6 213.0 71.1
143.4 141.1 +0.75
215.5

+0.76

142.8 72.6
51 5 215.4 70.1
7 .48 2 142.9 142.7 +0.72
5 -52 213.0
12 47 10

beam +0.61
8.93
9.54

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1897phae.proj..540W

Nov. 30, 1897.

VI

			145.7	62.1'		
7	58	24	213.8			
			142.4	71.0'		
			213.4	139.1'	+0.79	
			141.1	73.2'	+0.76	
8	0	24	214.3			
			142.6	69.8'		
			212.0	142.6'	+0.72	

Index left

			228.5	80.3'		
	3	10	308.8			
			229.2	76.8'		
			306.0	153.1'	+0.44	
			231.0	74.9'	+0.49	
	4	51	305.9			
8	1	53.'	227.9	77.1'		
5		-52	305.0	152.0'	+0.54	
13	0	51				

mean = ~~60~~ 0.62

8.93

9.55

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1897phae.proj..540W

Nov. 30, 1897

VII

		225.0	80.9'		
8	8	15	305.9		
			231.8	74.7'	
			306.5		
				155.6'	+0.47"
			231.1	73.8'	
	11	20	304.9		+0.52"
	X		230.7	76.2'	
			306.4	150.0'	+0.58"

Index right.

			326.1		
15	34		32.8	66.7'	
			322.0		
			34.7	72.2'	
				138.9'	+0.80"
			319.0		
	17	36	35.4	76.4'	+0.72"
4	13	16'	323.0		
5		-52	32.8	69.8'	
				146.2'	+0.65"
13	12	19			

mean = +0.62"

8.93

9.55

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1897phae.proj..540W

Nov. 30, 1897

~~211.6~~
~~8 22 5 222.4~~

VIII

321.9
8 22 59 35.2 73.3'
323.0 71.4'
34.4 144.7' +0.68"

327.9 71.8' +0.64"
24 25 34.4
321.9 73.9'
35.8 146.4' +0.67"

Index left
46.0 43.0'
27 32 129.0
50.2
126.5 76.3'
149.3' +0.39"

47.7 74.9'
2 8 56 126.6 +0.42"
8 2 52.0 77.0'
5 52
13 25 6 129.0 151.9' +0.46"

mean = +0.44"
8.93
9.48

8 30 Clouds thick.

8 50 Watch korrection - 52 sec

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1897phae.proj..540W

Nov. 30, 1897

IX

9	7 37	PH 5.7	227.5		
	~~4 54~~	~~PH 9.9~~	310.0	∠2.2°	
		~~Ecy~~ 50.2	227.5		
		128.9	310.3	∠2.2° / 16 V.0°	+0.29 V
		225.3			
9	24	311.3		∠6.0°	+0.30 V
		229.9			
		307.8		22.9° / 163.9°	+0.30 V

Index right

		324.0		
11	30	33.2	69.2°	
		321.2		
		38.5	22.3° / 146.9°	+0.64 V
		321.4		
	13 17	36.3	74.9°	+0.63 V
9	10 26	323.3		
5	-52	36.0	22.7° / 147.6°	+0.62 V
74	9 34			

Mean = +0.46 V

8.93

9.39

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1897phae.proj..540W

Nov. 30, 1897

X

323.2
9 14 58 35.9 72.7'
320.3
37.4 72.1'
149.2' +0.58 ✓

320.1
16 34 38.9 72.2'
321.0
35.3 72.3'
157.1' +0.51 ✓

+0.54 ✓

Index left
48.9 72.2'
18 50 127.4
44.6 72.2'
130.8 162.6' +0.33 ✓

44.9 72.2'
20 12 130.3
9 17 30 44.9
5 -52 129.9 72.0'
14 16 46 162.9' +0.30 ✓

+0.32 ✓

Mean = +0.53 ✓
8.93
9.36

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1897phae.proj..540W

Nov. 30, 1897.

XI

9
8 27 16 47.9
129.4 +1.5'
45.8 +5.6'
131.4 167.1' +0.24"

~~131.4~~

23 32 46.1 +5.2' +0.24"
131.3
47.1 +2.5'
129.6 167.7' +0.23"

Index right

143.0
26 54 215.3 72.3'
138.0
216.7 71.0' +0.56"

141.2
28 28 217.0 75.8' +0.56"

9 25 12 147.3
5 -52 217.2 74.9'
14 24 26 170.7' +0.56"

mean = +0.540"

8.93
9.33

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1897phae.proj..540W

Nov. 30, 1897.

XII

~~142.6~~ 141.4

9 33 15 214.7 } 73.3'
140.3 } 74.7'
219.0 } 72.0' +0.54"

141.3
35 3 216.9 } 75.6' +0.56"
140.8 } 74.3'
215.1 } 149.9' +0.58"

Index left

225.8
37 3 313.7 } 87.9'
229.5 } 84.2'
309.7 } 164.1' +0.22"

229.1
38 5 308.8 } 79.7' +0.26"
9 36 7 227.0 } 81.1'
5 -52 312.1 } 164.4' +0.29"
14 35 15

Mean = +0.41"
8.93
9.34

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1897phae.proj..540W

Nov. 30, 1897

XIII

	224.8	Av. K'		
9 41 7	310.2			
	227.3	81.7'		
	309.0	167.1'	+0.24 v	
	227.1	82.0'		+0.22 v
47 57	311.1			
	225.2	82.6'		
	310.8	169.6'	+0.20 v	

Index right

	~~320.0~~ 319.3			
45 6	39.2	79.9'		
	321.0			
	34.0	73.0'		
		(72.9')	+0.52 v	
	320.5			
46 13	34.9	74.4'		+0.50 v
9 43 52	~~316.4~~			
5 -52	317.5	80.4'		
14 42 59	37.9	(172.2')	+0.48 v	

Mean = +0.36 v

8.93

9.29

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1897phae.proj..540W

Nov. 30, 1897.

XLV

316.1 ∠ 5.8
9 57 58 41.9
321.5 2 ∠ 0
35.5 ∠ 9.2 +0.38 ✓

~~59~~ 321.8 ∠ 3.5 +0.03 ✓
59 24 35.3
316.8 ∠ 1.5 ∠ 5.0 +0.48 ✓
~~+0.8~~ 38.3

Index left.
43.0 ∠ 7.4
10 1 54 130.4
48.9 ∠ 0.2
129.1 ∠ 67.6 +0.24 ✓

48.2 ∠ 1.6 +0.20 ✓
3 37 129.8
10 0 ~~03~~ 44.5 ∠ 9.5
5 52 134.0 ∠ 71.1 +0.17 ✓
14 59 51

Mean = +0.32 ✓
8.93
9.25

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1897phae.proj..540W

Nov. 30, 1897

XV

	44.0			
10 5 28	132.6			
	48.4			
	128.5	164.7	+0.21	
	46.9			+0.19
7 0	128.2			
	44.0			
	133.7	171.8	+0.17	
Index right				
	140.0			
9 7	219.3			
	141.7			
	217.8	176.1	+0.47	
	140.0			+0.46
10 34	216.0			
10 2	138.0			
5 -52	219.0	147.0	+0.44	
15 7 10				

mean = +0.32

8.93

9.25

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1897phae.proj..540W

Nov. 30, 1897

XVI

		138.0	Δ2.0'		
10	34	50	220.0		
			140.0		
			218.4	Δ78.4' / 160.4'	+0.37"
			138.9	Δ4.4'	
36	36		217.7		+0.40"
			138.4	Δ2.9'	
			214.3	Δ75.9'	+0.43"

Index left

		226.1	Δ9.6'		
38	50	315.7			
		230.0	Δ0.0'		
		310.0	Δ69.6'		+0.20"
		225.7	Δ1.1'		+0.18"
40	30	310.8			
10	37	223.5	Δ9.4'		
5	-52	312.9	Δ89.4'		+0.10"
15	36	50			

mean = +0.26"

8.93

9.19

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1897phae.proj..540W

Nov. 30, 97

XVII

223.7 A9.3'
10 47 8 313.0

227.7 A3.0'
~~309~~ 310.7 172.3' +0.14"

225.6 A2.0'
43 44 310.8 +0.16"

224.1 A7.2'
311.9 169.8' +0.19"

Index right

318.0 A4.3'
45 40 47.3

320.2 76.0'
36.2 160.3' +0.38"

321.2
38.1 76.9' +0.36"
47 2
10 ~~47~~ 32
5 32
15 43 46 316.6 A7.0'
41.6 161.9' +0.34"

mean = +0.26"
8.93
9.19

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1897phae.proj..540W

Nov. 30, 1897.

XVIII

316.5
10 49 4 40.8 Δ4.0'
319.3
36.2 26.9'
160.9' +0.36'

320.5
50 26 35.0 Δ4.5' +0.34'
316.1
41.0 Δ4.9'
159.4' +0.39'

Index left

310.4
58 0 46.0 40.9
57 16 135.8 94.9'
46.0
43.2 130.0 Δ4.0'
129.9' +0.02'

310.5
11 0 40 ~~40.9~~ 41.5 Δ3.9' +0.11'
~~53 52~~ 46.0 <clouds 131.4 <clouds
10 vk 32' 43.5 46.5
5 -52 ~~44.9~~ 131.7 Δ5.2'
169.1' +0.20'
15 53 40 44.8

Mean = +0.24'
8.93
9.17

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1997phae.proj..540w

Nov. 30, 1897.

XIX

43.1
11 7 53 135.0 91.9'
46.7
133.7 47.0' / 138.9' +0.02 ✓

45.2
4 44 132.3 47.1' +0.05 ✓
45.0
133.4 44.4' / 137.5' +0.08 ✓

Index right

135.1
42.2'
7 1 270.3 228.2' / 186.2' +0.41 ✓
138.8
215.0 < Clouds thick

135.2
42.2' +0.34 ✓
9 40 219.4
11 6 44' 136.8 42.2' / 166.4' +0.26 ✓
5 32 219.0
16 5 12
11 17 Clouds thick

Mean = +0.20 ✓
5.93
9.13

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1897phae.proj..540W

Nov. 30, 1897

XX

11 1

11 15 Stopped by Clouds.

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1897phae.proj.540W

December 2, 1897. (Thursday)

5 0 Watch Correction = −10 sec. (Watch is 10 sec. fast.)

γ Delphini. Phot. I. H. Obs.

20 31 +17.°7

5 15 22 17 Moonlight and clouds. Observations

1 46 difficult. Star faint

Index above.

I

358.8 32.9 ✓

5 27 30 31.7

359.6 ✓

24.2 ✓

27.8 61.1 ✓ +2.82'

358.8 30.4 ✓

29 20 29.2 (+2.81)'

357.4 ✓

31.3 ✓

28.7 61.7 ✓ +2.80'

Index below

55.3 34.7 ✓

31 40 120.0

87.0 ✓

33.0 ✓

120.0 67.7 ✓ +2.59'

86.6 32.4 ✓

33 56 119.0 (+2.64)'

0 146' 86.6

32.2 ✓

5 30 38' 118.8 64.6 ✓ +2.69'

5 −10

Mean +2.72'

10 30 28'

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1897phae.proj..540W

Dec. 2, 1897.

II

86.8 32.K ✓
5 34 53 119.2
87.4 32.6 ✓
119.0 64.0 ✓ +2.71'

85.4 32.9 ✓
36 26 118.3 (+2.68)'
87.7 32.6 ✓
120.3 64.5 ✓ +2.66'

Index above.

179.0 24.3 ✓
38 36 207.3
179.7 30.2 ✓
209.9 54.5 ✓ +2.92'

177.2 33.9 ✓
40 17 211.1 (+2.83)'

28 132' 179.0 29.2 ✓
5 37 33' 208.2 63.7 ✓ +2.74'
5 -10 Mean +2.76'
10 37 23'

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1897phae.proj..540W

Dec. 2, 1897

~~+75.2~~ < more clouds. Clouds thick

III

~~5 42~~ 180.3 27.4 ✓

5 44 55 207.7

~~+75.9~~ 177.2 34.3 ✓

211.5 61.7 ✓ +2.80'

Clouds thicker

177.0 33.0 ✓

47 2 210.0 (+2.80)'

178.9 24.4 ✓

207.7 61.4 ✓ +2.79'

Index below.

267.0 30.2 ✓

49 48 297.8

268.0 32.1 ✓

300.1 62.9 ✓ +2.75'

267.2 33.4 ✓

51 22 300.6 (+2.72)'

31 127' 267.8 31.2 ✓

5 48 17' 299.0 64.6 ✓ +2.69'

5 -10 Mean +2.76'

10 48 7'

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1897phae.proj..540W

R4

Dec. 2, 1897.

IV

		268.2	32.8 ✓	
5	53	42 300.6		
		268.0	31.7 ✓	
		299.7	63.1 ✓	+2.71'
		268.0	31.8 ✓	
55	0	299.8		(+2.70)'
		268.4	33.1 ✓	
		301.5	64.9 ✓	+2.68'

Index above

		357.9 <Clouds thicker		
57	18	27.9	30.0 ✓	
		357.0		
		29.0	32.0 ✓	
			62.0 ✓	+2.79'
		356.1	33.3 ✓	
	59	22 29.4		(+2.72)'
	24	82' 358.4	32.1 ✓	
5	56	20' 30.5	64.4 ✓	+2.66'
5		-10		Mean +2.71'
10	56	10'		

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1897phae.prj..540W

Dec. 2, 1897.

V

			307.8	31.2 ✓	
6	1	50	29.0		
			358.2	30.9 ✓	
			29.1	62.1 ✓	+2.78 ✓
			358.6	29.6 ✓	(+2.86) ✓
3	26		28.2		
			359.9	29.2 ✓	
			28.1	57.8 ✓	+2.94 ✓

Index below.

			269.9	30.9 ✓	
6	2		300.8	Clouds thicker	
			266.4	31.9 ✓	
			302.3	66.2 ✓	+2.61 ✓
			266.9		
	7	49	299.4	32.5 ✓	(+2.65) ✓
	17	127 ✓	267.1	32.2 ✓	
6	4	47 ✓	299.3	64.7 ✓	+2.69 ✓
5		-10			Mean +2.76 ✓
5	4	37 ✓			

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1897phae.proj..540W

Dec. 2, 1897.

VI

6	19	34	~~266.5~~	263.8	36.4 ✓
~~6~~	~~12~~	~~46~~	~~299.0~~	300.2	
			~~267.0~~	267.7	31.0 ✓
			301.0	298.7	67.4 ✓ +2.59'
			~~294.7~~ Clouds thicker	270.8	30.4 ✓
21	32	~~7~~	. Stars gone.	301.2	(+2.65)'
			.	266.9	33.7 ✓
			.	300.6	64.1 ✓ +2.71'

Index above, Clouds thicker

		358.0	22.0 ✓
24	3	~~26~~.0	
		358.0	29.9 ✓
		27.9	57.9 ✓ +2.94'
		359.0	24.1 ✓
	25 40	27.1	(+2.94)'
	9 109'	357.0	30.0 ✓
6	22 42'	27.0	56.1 ✓ +2.93'
5	-10		Mean +2.80'
11	22 32'		

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1897phae.proj..540W

Dec. 2, 1897.

VII

		358.0	31.0 ✓		
6	29	26 29.0			
		359.8	28.2 ✓		
		28.0	29.2 ✓	+2.89'	
		~~357.~~ 358.7	30.0 ✓		(+2.89)'
30	2				
~~28~~	2	28.7			
		358.3	29.3 ✓		
		27.6	29.3 ✓	+2.89'	

Index below.

		84.5	31.3 ✓		
32	42	119.8			
		87.0	Clouds thicker		
		117.8	30.8 ✓	+2.64'	
		88.0	30.4 ✓		
~~31~~	~~29~~	118.4			
5	99'	86.3			(+2.69)'
6	31 40'	~~119.9~~	32.9 ✓	+2.74'	
5	-10	119.2	63.3		
11	31 30'				

Mean +2.79'

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1897phae.proj..540W

Dec, 2, 1897.

VIII

87.8 35.2 v +
6 37 25 123.0
86.1 31.1 v
117.2 66.3 v + 2.63 ' +

87.0 33.4 + v
38 58 120.4 (+2.62)'
85.3 33.7 + v
119.0 67.1 + v + 2.60 '

Index above.

180.0 24.0 v +
41 31 205.0
179.8 24.2 v +
208.0 v 6.2 + v + 3.01 ' +

179.3 24.7 + v
42 34 208.0 (+3.01)''
38 148' 180.0 27.5 + v
6 40 7' 207.5 v 6.2 + v + 3.01 ' +
5 10 Mean +2.82 + 7
11 39 57'

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1897phae.proj..540W

Dec. 2, 1897

IX

		178.8	33.2 ✓		
6	48	12	212.0	< Clouds thick	
			176.3	32.7 ✓	
			209.0	65.9 ✓	+2.65'
			179.2	28.7 ✓	
52	30		207.9		(+2.79)'
			178.2	29.4 ✓	
			207.6	57.1 ✓	+2.93'

Index below

			264.1	< Clouds thicker	
55		12	300.3	36.2 ✓	
			269.0		
			300.8	31.8 ✓	
				68.0 ✓	+2.57'
	57	15	268.0	33.0 ✓	
	~~56~~	~~46~~	301.0		(+2.54)'
	12	69'	264.8	37.2 ✓	
6	53	17'	302.0	70.2 ✓	+2.50'
5		-10			
11	53	7'			Mean +2.67'

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1897phae.proj..540W

Dec. 2, 1897

7 0 Clouds thick

265.1

3 K.A ✓

7 5 52 299.9

267.7

~~297.8~~ 299.0 31.3 ✓ / 66.1 ✓ +2.64?

269.9

32.3 ✓

8 30 302.2 (+2.69)?

267.8

298.8 31.0 ✓ / 63.3 ✓ +2.74?

Index above
Clouds thick.

356.9

33.1 ✓

12 22 30.0

357.5

29.7 32.2 ✓ / 65.3 ✓ +2.67?

357.4 <Clouds thick

35

14 ~~11~~ 30.3 32.9 ✓ (+2.66)?

39 139? 356.6?

7 10 20? 29.2 32.6 ✓ / 65.5 ✓ +2.66?

5 -10

12 10 10?

Mean +2.68?

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1897phae.proj..540W

Dec. 2, 1897

S S Cygni Phot T. H. Obs

21 37 +42.7
24 17
2 40 Comp star = m =

Index left and above. b

51.1 < Comp dis 105.7'
7 26 25 156.8 107.3'
49.1 213.0'
156.4 147.0' - 0.63'

48.9 107.6'
25 26 156.5 103.1' (-0.61)
[illegible] 51.0 210.7'
154.1 149.3' - 0.59'

Index right and below a
Clouds thick
145.3 92.1'
31 57 237.4 95.8'
144.8 187.9'
240
230.6 172.1' - 0.15'

147.8 93.2'
32 23 241.0 97.4' (-0.18)
37 131' 145.6 190.6'
7 29 48' 243.0 169.4' - 0.20'
5 -11 Mean -0.40
12 29 37'

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1897phae.proj..540W

Dec. 2, 1897

Same again a

		145.0	98.7'	
7	33 29	243.7	94.6'	
		146.2	193.3'	
		240.8	166.7' − 0.25'	
		146.8	91.0'	
34	37	237.8	97.8'	(−0.21)
		145.0	188.8'	
		242.8	171.2' − 0.17'	

Index left and above b

		236.0	97.2'	
36	23	333.2	104.0'	
		~~229.0~~ 230.0	201.2'	
		334.0	158.8' − 0.40'	
		230.0	107.0'	
	37 55	337.0	105.6'	(−0.52)
	20 144'	228.2	212.6'	
77	35 38'	333.8	147.4' − 0.63'	
35	−11		Mean −0.36	
112	35 27'			

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1897phae.proj..540W

Dec. 2, 1897

Same again. b

		236.0	98.0'	
7	40	3 334.0	107.4'	
		230.0	205.4'	
		337.4	154.6' − 0.49'	
		230.0	105.2'	
41	33	335.2	99.1'	(−0.48)
		235.9	204.3'	
		335.0	155.7' − 0.46'	

Index right and below a

		326,5	93.0'	
42	56	59.5	99.3'	
		324.7	192.3'	
		~~64.2~~ 640	167.7' − 0.23'	
		326.3	94.0'	
44	32	60.3	93.3'	(−0.18)
7	124'	326.7	187.3'	
7	42 16'	60.0	172.7' − 0.14'	
5'	−11			
12	42 5'			

Mean −0.33

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1897phae.proj..540W

Dec 2, 1897

Same again. a

		327.5	94.6'	
7	45	38 62.1	96.7'	
		326.2	191.3'	
		62.9	168.7' − 0.21'	
		324.6	99.2'	
47	15	63.8	93.2'	(−0.22)
		327.2	192.4'	
		60.4	167.6' − 0.24'	

Index left and above b

		53.9	101.7'	
49	56	155.6	102.6'	
		~~49.4~~ 50.2	204.3'	
		152.8	155.7' − 0.46'	
		52.8	101.6'	
	51	36 154.4	101.2'	(−0.44)
	32	165' 53.0	202.8	
7	48	41' 154.2	157.2' − 0.43'	
5		−11		
12	48	30'		

Mean −0.33

The 1st of the above four groups on 2S Cygni most affected by clouds and the 2nd and 3d the least affected

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1897phae.proj..540W

Dec. 2, 1897

Pretty Cloudy but will try for
W Delphini (again) Phot ☉ H. Obs.

20	31	+17.7
26	22	
~~4~~	51	

8 34 Clouds thick Var. invisible

9 15 Altitude now very low. Thickly cloudy everywhere and steadily growing worse no chance for anything farther

9 20 Watch Correction = −11 sec. (Watch is 11 sec fast

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1897phae.proj..540W

Posted to here.

December 6, 1897 (Monday.)

7 0 Watch Correction = −1.5 sec. (Watch is +5 sec. fast.)

S S Cygni. Phot. T. H. Obs.

21 37 +42.7

24 37

3 0

Comp Star = m.

Index left and above. b

65.1 < Comp dis 77.3'

7 25 38 142.4 85.8'

60.8 163.1' +0.32'

146.6

60.6 84.1' (+0.30)

27 30 144.7 81.2'

63.0 165.3' +0.28'

144.2

Index right and below a

157.2 72.9'

29 53 230.1 84.1'

150.7 157.0' +0.44'

234.8

151.8 85.0' (+0.42)

31 44 236.8 74.2'

7 20 41. 156.5 159.2' +0.40'

5 −45

12 27 56 230.7

Mean +0.36

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1897phae.proj..540W

Dec. 6, 1897.

Same again a

		154.7	75.8′	
7	33	25	230.5	82.1′
			154.3	157.9′ +0.42′
			236.4	

		153.6	79.6′	(+0.45)
35	6	233.2	75.4′	
		155.6	155.0′ +0.48′	
		231.0		

Index left and above

		243.0	80.9′	b
37	9	323.9	82.1′	
		242.8	163.0′ +0.32′	
		324.9		

		~~243.1~~		
~~39~~	~~14~~	~~325.4~~		
~~41~~	~~43~~	242.8	82.9′	(+0.30)
41	43	325.7	82.7′	
7	36	241.3	165.6′ +0.27′	
5	~~45~~	324.0		
12	36	6		Mean +0.38

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1897phae.proj..540W

Dec. 6, 1897.

Same again.

~~7~~	~~44~~	~~243.0~~		
		244.8	77.4'	
7	45 29	322.2	85.5'	
		241.2	162.9' +0.32'	
		326.7		
		240.3	85.8'	(+0.27)
	47 25	326.1	82.5'	
		241.8	168.3' +0.22'	
		324.3		

Index right and below

		335.8	75.0'	
	49 47	50.8	78.2'	
		334.5	153.2' +0.51'	
		52.7		
		333.0	80.0'	(+0.47)
	51 25	53.0	77.3'	
7	Kd 32.	334.2	157.3' +0.43'	
5	-45	51.5		Mean +0.37
12	47 47			

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1897phae.proj..540w

Dec. 6, 1897.

Same again

			336.3	74.0'	
7	55	45	50.3	79.0'	
			339.8	153.0' +0.52'	
			52.8		
			331.4	80.6'	(+0.48)'
	57	41	52.0	75.7'	
			335.9	156.3' +0.45'	
			51.6		

Index left and above.

			64.7	78.5'	
8	0	12	143.2	85.6'	
			60.4	164.1' +0.30'	
			146.0		
			59.7	87.4'	(+0.26)'
	1	54	147.1	81.0'	
7	52	53.	64.0	168.4' +0.22'	
5		-45	145.0		
12	58	8			Mean +0.37'

8 12 m 4 var, var 1.5 m in large telescope
m 4 var, var 2 m in finder

Star m faint in finder

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1897phae.proj..540W

Dec. 6, 1897.

☉ Beta	Phot R. (new modification)	H. Obs.
2 4	-2.5	
1 34		
30		
11 30		

8 38 Clouds

8 54 Sky all Cloudy

8

9 8 Clouds thick

10 5 Stopped by Clouds

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1897phae.proj.:540w

December 9 1897 (Thursday)

S S Cygni. Phot I. A Obs

21 37 +42.7
25 58
4 21

21 37 +42.7
26 20
4 43

8 50 Cloudy. Stars invisible

9 15 Clouded up. ~~No possible~~ Nothing further possible

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1897phae.proj..540W

December 11, 1897. (Saturday)

7 0 Hatch Correction = $-\frac{12}{\cancel{12}}$ sec. (Hatch is 12 sec fast)

		S S Cygni.	Phot. F.		Vis. Obs.
		21 37	+42.7		
		24 54			
		3 17	Comp. Star = m		
		Index left and above			
		265.0	Comp dis	36.7'	
7	31 49	301.7		38.5'	
		264.2		75.2'	+2.34'
		302.7			
		263.8		39.0'	(+2.28)
	33 27	302.8		40.1'	
		263.0		79.1'	+2.22'
		303.1			
		Index right and below.			
		358.3		32.7'	
	35 38	31.0		30.8'	
		358.5		63.5'	+2.73'
		29.3			
		357.9		31.1'	(+2.77)
	38 24	29.0		30.3'	
	17 138'	357.4		61.4'	+2.81'
7	34 50'	27.7			
5	-12				
12	34 38				

Mean = +2.52

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1897phae.proj.540W

Dec. 11, 1897.

Same again

		359.0	28.7′	
7	40	8 27.7	28.5′	
		359.3	57.2 +2.97′	
		27.8		
		358.8	30.2′	(+2.91)
41	22	29.0	30.0′	
		358.4	60.2′ +2.85′	
		~~27.8~~		
		28.4		

Ended left and above

		86.2	36.1′	
43	48	122.3	39.0′	
		83.0	75.1′ +2.34′	
		122.0		
		84.2	37.9′	(+2.35)
45	32	122.1	36.6′	
9	110′	84.9	74.5′ +2.36′	
7	42	42′ 121.5		
5		-12		Mean = +2.63
12	42	30		
~~5~~				

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1897phae.proj..540W

Dec. 11, 1897

Same again.

		87.3	34.3'	
7	48	0 121.6	36.9'	
		84.1	71.2' +2.47'	
		121.0		
		85.0	36.2'	(+2.44)
50	26	121.2	37.2'	
		85.1	73.4' +2.40'	
		122.3		

Index right and below

		177.8	31.3'	
52	32 ~~28~~	208.3	31.0'	
		178.0	62.3' +2.77'	
		209.0		
		179.8	28.9'	(+2.84)
54	44	208.7	29.9'	
4	102'	179.0	58.8' +2.91'	
7	51 26'	208.9		
5	-12			
12	51 14			
8	06			

Mean = +2.64

B 2.5 var, var 2y in large telescope
Too faint for finders
Above observations and estimates somewhat difficult
Stars rather faint. Moon nearly full and some fog
on object glass

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1997phae.proj..540W

Dec. 11, 1897.

		Correction	Phot. R.	Vis. Obs.
2	4		-2.5	
1	5H	Pencils in the old way, that is: overlapping		
	10	about 2/5.		
11	50			
8	30	Troubled with cat-gut string.		
		Index right		
		95.7	8.0'	
98	53	103.7	7.1'	
		96.2	15.1'	-5.90'
		103.3		
		95.8	7.7'	(-5.84)
		103.5	8.2'	
		95.7	15.9'	-5.79'
		103.9		
		Index left		
		185.8	8.3'	
		194.1	7.1'	
		186.3	15.4'	-5.86'
		193.4		
		186.2	7.1'	(-5.89)
8	57	193.3	7.9'	
8	55.0	185.9	15.0'	-5.92'
5				
13	55.0	193.8		Mean -5.86

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1897phae.proj..540W

Dec. 11, 1897.

Same again.

		185.9	7.8'	
8	59	193.7	6.2'	
		186.7	14.0'	-6.07'
		192.9		
		186.6	6.1'	(-6.10)
		192.7	7.5'	
		~~193.8~~ 186.3	13.6'	-6.13'
		193.8		

Index right

		275.5	8.5'	
		284.0	6.7'	
		276.4	15.2'	-5.89'
		283.1		
		276.7	6.1'	(-5.92)
9	5	282.8	8.7'	
9	020	275.3	14.8'	-5.95'
5		284.0		
14	020			

Mean = -6.01

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1897phae.proj..540W

Dec. 18, 1897

M. P. HH1 N. Obs.

3 31 +62.8
2 49
42
11 18

9 18 Too high. Abandoned

T Andromodae Phot. T. N. Obs.

0 14 +26.1
2 59
2 45

Index right and above

242.7 < Comp. dec 80.0'
9 39 322.7 71.6'
248.2 151.6' +0.54'
319.8

246.3 73.5' (+0.55)'
319.8 77.3'
244.7 150.8' +0.56'
322.0

Index left and below

~~335.7~~
334.2 81.8'
56.0 70.8"
338.5 152.6' +0.52'
49.3

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1897phae.proj..540W

DEC. 11, 1897

(+0.58)'

		339.2	70.9'
9	46	50.1	75.4'
9	42.5	335.5	146.3' +0.65'
5		50.9	Mean +0.56'
14	42.5		

Same again

		333.3	80.9'
9	48	54.2	70.3'
		339.0	151.2' +0.55'
		49.3	

339.0	70.0'	(+0.60)'
49.0	76.1'	
335.9	146.1' +0.65'	
52.0		

Index right and above

62.4	83.3'
145.7	75.8'
64.9	159.1' +0.40'
140.7	

		65.1	75.2' (+0.44)'
9	54	140.3	79.4'
9	51.0	62.9	154.6' +0.49'
5		142.3	
14	51.0		Mean +0.52'

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1897phae.proj..540W

Dec. 11, 1897.

Minoris

S Ursae ~~Majoris~~ Phot. R. H. Obs

15 50 +78.2

27 40

11 50 Var is the brighter

Index above

73.1 < Var. dec. 52.5'

10 32 125.6 53.4'

73.8 105.9' -1.51'

127.2

71.7

~~71.8~~ 52.5' (-1.52)'

124.2 52.8'

72.6 105.3' -1.53'

125.4

Index below

~~164.9~~ 161.7 55.7'

~~218.8~~ 217.4 56.1'

161.4 111.8' -1.38'

217.5

164.0 51.8' (-1.42)'

10 42 215.8 56.8'

10 37.0 162.1 108.6' -1.45'

5 218.9

15 37.0

Mean -1.47'

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1897phae.proj..540W

Dec. 11, 1897.

Same again

		161.8	57.2'	
10	45	219.0	55.2'	
		164.3	112.4' -1.36'	
		219.5		
		163.3	52.9'	(-1.46)'
		216.2	51.1'	
		~~161.3~~ 163.9	104.0' -1.56'	
		~~215.0~~ 215.2		

Index above

		252.8	53.1'	
		305.9	55.8'	
		251.6	108.9' -1.44'	
		307.4		
		252.8	56.2'	(-1.43)'
10	54	309.0	53.7'	
10	49.5	253.3	109.9' -1.42'	
5		307.0		Mean -1.44'
15	49.5			

Focusing screw of large telescope stuck and can not be made to run. Consequently photometer could not be brought to focus in the ordinary way and had to be run out a little from tube and held while settings were made. It may be that photometer turned very slightly during settings although strenuous attempts were made to avoid it.

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1897phae.proj..540W

Dec. 11, 1897

Σ 60 Phot R N. Obs.

0 41 +57.2

4 41

4 0

Cos. angle 210°, dis 8 sec, Magn 4.1 and 8.0

Index above and right

89.1 Lbrighterdis

11 9 110.9 21.8 ✓

89.9 20.8 ✓

110.7 42.6 ✓ − 3.63 ✓

88.5 − 3.54

110.3 21.8 ✓

87.7 24.3 ✓

112.0 46.1 ✓ − 3.45 ✓

Index below and left Mean = − 3.50 ✓

178.0

202.7 24.7 ✓

179.3 21.1

200.4 45.8 ✓ − 3.47 ✓

179.2 − 3.46 ✓

11 16 199.9 20.7 ✓

11 25 174.4 25.4 ✓

5 202.8 46.1 ✓ − 3.45 ✓

16 25

12 30 Experimented with Phot V on West Balcony

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1897phae.proj..540W

Postect to here.

December 15, 1897 (Wednesday)

7	0	Cloudy.
7	30	Cloudy.
8	0	Cloudy
8	30	Still Cloudy
9	0	Still all cloudy and growing worse.
9	5	All Cloudy everywhere growing worse. No possibly of clearing. Object glass fogged. Dome reeking with moisture Pier all wet.

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1897phae.proj..540W

December 16, 1897. (Thursday.)

7 0 All Cloudy

7 30 Still Cloudy

o Ceti Phot R. H. Obs.

2 4 -2.5
1 44
20
11 40

7 50 All Cloudy
~~o Ceti~~
2 4 -2.5
2 0
11 56

8 12 Cloudy
Index left
~~246.2~~
246.4 Towards 8.0°

5 18 254.4 7.1°
247.6 15.1° - 5.90°
254.7

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1897phae.proj..540W

DEC. 16, 1897

(-5.96)

247.2 7.3'
254.5 7.0'
247.0 14.3' -6.02'
254.0

Index right

335.9 8.8'
344.7 8.4'
336.3 17.2' -5.62'
344.7

(-5.62)

336.7 8.3'
345.0 9.0'
336.0 17.3' -5.61'
345.0

8	21.5
8	21.5
5	
13	21.5

Mean -5.79

Same again

336.7 8.2'
~~7.2~~
344.9 7.7'
337.0 ~~11.9~~
344.7 15.9' -5.79'

8	27

336.5 8.5'
345.0 8.8'
336.2 17.3' -5.61'
345.0

(-5.70)

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1897plae.proj...540w

Dec. 16, 1897

Index left

		66.4	7.5'
		74.2	~~7.7'~~
		66.9	15.5' -5.85'
		74.6	
		67.0	7.7' (-5.78)
8	34	74.7	8.9'
8	30.5	~~66.7~~	16.6' -5.70'
5		66.0	
13	30.5	74.9	Mean -5.74

o Ceti observed through some light cloud and haze.

Comp. Stars for U Ceti 4 Obs

2	28	-13.0
2	48	
	20	

9 07 o 5 p
p 4 q
q 4 r
r 3 s

Becoming too cloudy to put the Photometer on.

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1897phae.proj..540W

Dec. 16, 1897

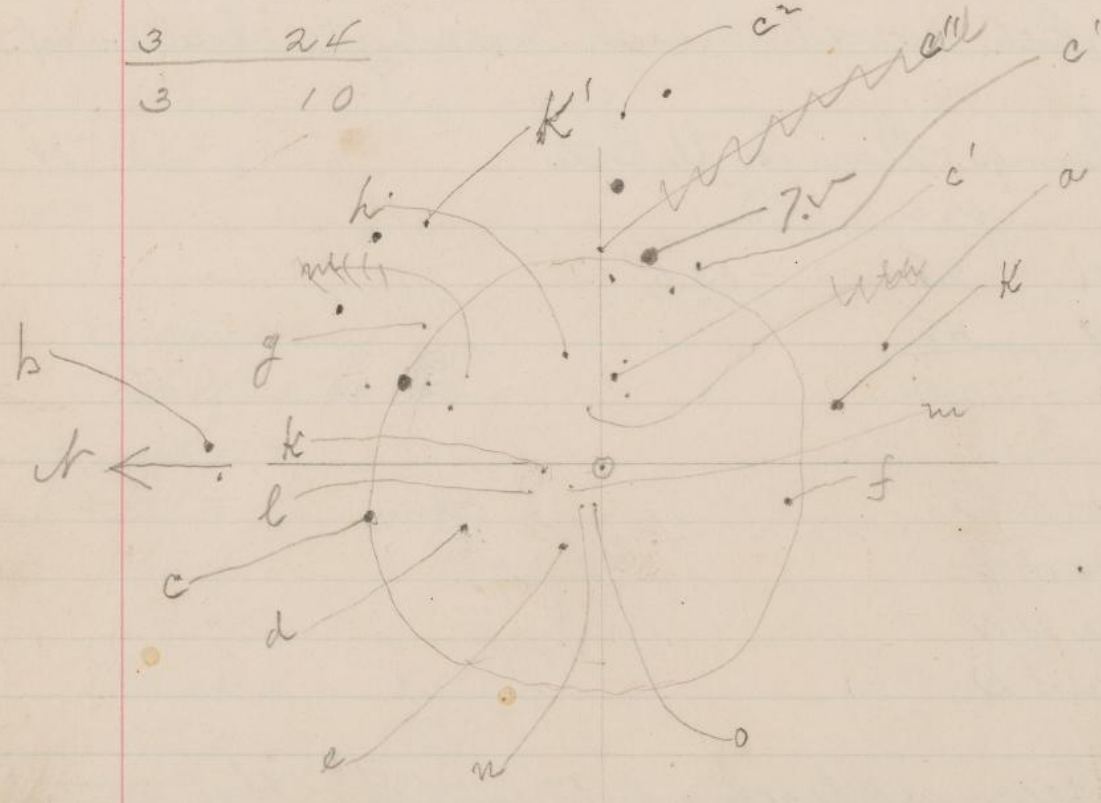
S S Cygni Phot T. H. Obs

21 37 +42.7
27 7
5 30

9 17c/ 0.5 var, var 2 d in large telescope

T Andromodae. comp Stars. H. Obs

0 14 +26.1
3 24
3 10



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1897phae.proj..540W

Dec. 16, 1897.

d F e
e 3 f
f 3 g
g 4.5 h
10 5.0 h 5 k
k 3.5 l
l 6 m

T Andromodae Phot. T. H. Obs.

Index left and below

		150.0	Comp dis	85.7'
11	32	235.7		78.8'
11	3	152.9		164.5' + 0.29'
		231.7		
		152.4		80.2' (+0.32)
		232.6		81.5'
		151.7		161.7' +0.35'
		233.2		

Index right and above

243.2		84.5'
327.7		79.9'
243.1		164.4' +0.30'
323.0		

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1897phae.proj..540W

Dec. 16, 1897.

		243.8	79.4'	(+0.31)
11	36	323.2	83.8'	
11	34.0	241.9	163.2' +0.32'	
5		325.7		
16	340		Mean +0.32	

Same again

	242.1	83.0'	
11 38	325.1	79.7'	
	243.0	162.7' +0.33'	
	322.7		

242.7	79.2'	(+0.30)
321.9	87.0'	
240.0	166.2' +0.26'	
327.0		

Index left and below

332.0	83.0'	
55.0	71.9'	
337.4	154.9' +0.48'	
49.3		

	335.2	77.8'	(+0.47)
1 42	53.0	78.2'	
11 40.0	334.0	156.0' +0.46'	
5	52.2		
16 40.0		Mean +0.38	

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1897phae.prOj..540w

December 15, 1897. (Saturday)

7 0 Hatch Correction. = + 4.5 sec. (Hatch is 4.5 sec. slow.)

U Ceti Comparison Stars H. Obs

2	28	-13.0
1	32	
	56	
11	4	

7 35 b 5.5 m
m 4.5 n
~~n 3.5 o~~
~~n 3 o~~
n 2.5 o
o 6 p
p 3 q
q 4 r
r 5 s

See next page for photometric observations of Comp. Stars for U Ceti

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1897phae.proj.540W

Dec. 15, 1897

Comp. Stars for U Ceti, Phot. T. H. Obs.

r, compared with e

Index left

	94.3	Comp. dis. 17.1'	
8	5 111.4	15.0'	
	95.9	32.1' +4.25'	
	110.9		
	95.6	14.4'	(+4.22)
	110.0	18.5'	
	94.3	32.9' +4.20'	
	112.8		

Index right

	185.8	15.9'	
	201.7	13.9'	
	186.2	29.8' +4.42'	
	200.1		
	186.6	14.3'	(+4.36)
8	15 200.9	17.0'	
	185.7	31.3' +4.31'	
	202.7		

Mean +4.29

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1897phae.prj..540W

Dec. 15, 1897.

q compared with e.

Index right and above.

		185.6	Comp. dis 17.6'	
8	18	203.2	16.0'	
		186.7	33.6'	+4.15'
		202.7		
		185.0	17.1'	(+4.10)
		202.1	18.3'	
		186.0	35.4'	+4.04'
		204.3		

Index left and below.

		275.7	17.5'	
		293.2	18.7'	
		273.3	36.2'	+3.99'
		292.0		
		273.0	21.0'	(+3.94)
8	26	294.0	16.7'	
		275.9	37.7'	+3.90'
		292.6		

Mean +4.02

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1897phae.proj..540W

Dec. 15, 1897

p compared with e.
Index left and below.

6		269.9	Comp. dis	27.4'
8	31	297.3		21.3'
		273.7		48.7' +3.33'
		295.0		
		274.5		20.2' (+3.40)
		294.7		25.6'
		270.4		45.8' +3.47'
		296.0		

Index right and above.

	0.5	24.9'
	25.4	19.6'
	3.6	44.5' +3.53'
	23.2	
	3.7	19.3' (+3.54)
8	39 23.0	24.9'
	0.7	44.2' +3.55'
	25.6	

Mean +3.47

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1997phae.proj..540w

Dec. 18, 1897

m. compared with e.
Index right and above

		355.4 < Comp. dis	35.5'	
8	41	30.9	43.6'	
		351.4	79.1' +2.22'	
		35.0		
		352.1	42.3'	(+2.23)
		34.4	36.3'	
		354.7	78.6' +2.24'	
		31.0		

Index left and below.

		81.6	44.2'	
		122.8	47.6'	
		78.4	88.8' +1.95'	
		126.0		
		81.0	45.2'	(+1.99)
8	47	126.2	40.7'	
		83.0	85.9' +2.03'	
		123.7		

Mean +2.11

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1897phae.proj.540W

Dec 18, 1897.

n compared with e

Index left ~~and~~

	85.4	Comp. dis	33.9'
9	09 119.3		34.2'
	86.0		68.1' +2.57'
	120.2		
	85.8		33.8' (+2.58)
	119.6		34.0'
	85.0		67.8' +2.58'
	~~118.6~~		
	119.0		

Index right ~~and~~

	177.8		33.2'
	211.0		32.1'
	177.9		65.3' +2.67'
	210.0		
	178.8		31.2' (+2.55)
9	15 210.0		41.3'
	178.4		72.5' +2.43'
	~~119.3~~		
	119.7		

Mean +2.56

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1997phae.proj.540w

Dec. 15, 1897.

o compared with e.

Index right

		178.5	Comp dis 29.0'	
9	18	207.5	29.5'	
		180.0	58.5' +2.92'	
		209.5		
		180.8	27.2'	(+2.97)
		208.0	28.7'	
		179.4	55.9' +3.02'	
		208.1		

Index left.

		266.0	33.8'	
		299.8	31.4'	
		267.0	65.2' +2.67'	
		298.4		
		267.7	33.2'	(+2.64)
9	22	300.9	33.9'	
		266.1	67.1' +2.60'	
		300.0		

Mean +2.08

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1897phae.proj.540W

Dec. 18, 1897

Comparison Stars for T Andromodea W. Obs

0 14 +26.1
B 32
3 18

9 40 d 4.5 e
e 3.5 f
f 3 g
g 3 h
h 5.5 k
k 3 l
l 6 m
m 4.5 n
n 3.5 o

For comp Stars see diagram see page 96 of this book.

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1897phae.proj..540W

Dec. 15, 1897.

T Androm. Phot. T. H. Obs

Index left

		328.6	79.3'	
		48.1	90.4'	
9	57	328.3	169.7' +0.20'	
		58.7		
		327.7	88.3'	(+0.24)'
		56.0	77.3'	
		332.8	165.6' +0.27'	
		~~48.1~~		
		50.1		

Index right

		63.2	81.1'	
		144.3	88.0'	
		58.9	169.1' +0.20'	
		146.9		
		56.7	92.9'	(+0.13)'
10	02	149.6	53.9'	
9	59.5	60.9	176.8' +0.06'	
5		144.8		
14	59.5			

Mean +0.18'

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1897phae.proj..540W

Dec. 15, 1897.

Same again

		60.8	83.3'	
10	4	144.1	89.0'	
		56.3	172.3'	+0.14'
		147.3		
		56.4	92.9'	(+0.11)
		149.3	82.7'	
		61.9	175.6'	+0.08'
		144.6		

Index left

		155.4	77.6'	
		233.0	85.5'	
		150.8	163.1'	+0.32'
		236.3		
		147.9	90.3'	(+0.28)
10	8	238.2	77.1'	
10	6.0	154.2	167.4'	+0.24'
5		231.3		
15	6.0			Mean +0.20

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1897phae.proj..540W

Dec. 15, 1897

Y Orionis H. Obs

5	46	20.3
4	43	
1	3	
10	57	

5	46
5	18
	28

11 20 r 2.5 var, var 3.5 S in large telescope
estimate 10.7
In finder star q is decidedly brighter than the var. and r is also brighter than the var, but var is so close to q in the finder to give an estimate. The relative brightness of var. with respect to q and r, both in the large telescope and finder confirmed also by Mr. Frost.

T Androm. Comp. Stars. H. Obs.

0	14	+26.1
5	34	
5	20	

See next page for measurements.

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1897phae.proj..540W

Dec. 15, 1897.

Comp. Stars for M Andromedae. Phot T. H. Obs.
e compared with +26° 37 (AA)
Index left and below

		0.0	< Comp. dis.	24.3'
11	38	24.3		21.9'
		2.5		46.2' +3.45'
		24.4		
		3.3		20.7' (+3.48)'
		24.0		24.5'
		0.3		45.2' +3.50'
		24.8		

Index right and above.

		88.0		26.8'
		114.8		23.7'
		91.3		50.5' +3.25'
		115.0		
		90.0		25.2' (+3.20)'
11	42	115.2		27.6'
		89.4		52.8' +3.15'
		114.0		

Mean +3.32'

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1897phae.proj..540W

DEC. 15, 1897

d compared with +26° 37 (AA)

Index right

	90.0	27.0'	
"	44 117.0	27.5'	
	89.5	54.5' +3.08'	
	117.0		
	90.0	25.0'	(+3.13)'
	115.0	27.0'	
	89.4	52.0' +3.18'	
	116.4		

Index left

	181.8	24.2'	
	206.0	24.9'	
	181.1	49.1' +3.31'	
	206.0		
	181.3	25.8'	(+3.28)'
"	45 207.1	24.7'	
	181.3	50.5' +3.25'	
	206.0		

Mean +3.20'

Compared with bright star preceding the 7.5 magn. star.

For stars c and d see diagrams Page 96.

Region getting rather low Stars somewhat faint

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1897phae.proj..540W

Dec. 19, 1897 (Sunday,)

Comp. of Chron.

B 394. A+D 958.

15 50 00.0 = 15 51 23.8

15 51 00.0 = 15 52 23.8

∴ Chron. corr. = $-1^m 24^s$.

Dir. Just. I. Phot. R. W. obs. Wintere.

Comp. with first set. on following side = Sett. II.

16 22 09 x	16	21	10	125.2	Reject this
−1 −24		21	28	52.0 177.2	set. One of the
16 20 45 x		22	50	90.6 196.2	readings wrong
		23	09	286.8	
23 37 x			20	193.0	
−1 −24			32	94.2 x 287.2	
~~22 13 x~~			41	101.1 x 193.0	2
			54	97.6 294.1	
		24	14	189.3	
24 34 x			27	103.7 x 293.0	
−1 −24			39	95.1 x 193.9	3
23 10 x			54	99.4 x 289.0	
		25	09	190.2	
25 24 x			19	97.8 x 288.0	4
−1 −24			31	101.0 x 184.2	
24 00 x				99.4 x	

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1897phae.proj..540W

Dec. 19, 1897.

	16 25	39	285.2
16 24 24		48	187.2
39		57	284.8 ~~xxxx~~
45	26	09	193.2
54		18	286.0
20 02		26	188.9
15		34	282.9
20		44	195.2
30		54	285.2
40	27	04	192.8
49		13	280.7
58		22	195.8
26 08		32	278.3
17		41	196.9
26		50	283.0
36	28	00	201.0
45		09	271.8
54		18	201.8
27 05		29	271.9
23		47	205.2
36	29	00	270.3
		~~33~~	~~209.0~~ reject.

Not seen later

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1897phae.proj..540W

Dec. 19, 1897.

Limit of Visibility.

16	30	35*	16	30	20	210.0
	-1-24				36	607 270.7
16	29	11	~~5m7~~		52	58.1* 211.2
					31	59.4* 269.3

Seeing extremely bad. Eclipse not considered good, and settings very uncertain. It was almost impossible to tell when an equalization was made, even at full brightness. The images then were very faint and not steadily seen. The time of dis. and the last settings were very uncertain. The bad seeing is due to the cold snap. Troubled also by supplementary images of the in field. Some of these might ~~out~~ the two sets in question, and this cannot be avoided.

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1897phae.proj..540W

Dec. 19, 1897.

Comp. of Chron.

23 3 94. A.D. 958.

17	05	00.0 =	17	06	23.8
17	06	00.0 =	17	07	23.8

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1897phae.proj..540W

December 21, 1897 (Tuesday)

6 15 Watch Correction = −8 sec. (Watch is 8 sec. fast.)

H Delphini. Phot. T H. Obs.

20 31 +17.7

24 40

4 9

Index above

331.8 <Comp. dis. 82.5'

6 30 44 54.3 74.6'

335.4 157.1' + 0.44'

50.0

336.9 73.8' (+0.44)'

32 46 50.7 82.6'

331.2 156.4' + 0.45'

53.8

Index below

67.8 75.2'

34 45 143.0 88.1'

58.4 163.3' + 0.32'

146.5

58.8 85.4' (+0.30)'

36 22 144.2 79.2'

12 157' 64.4 164.6' + 0.29'

6 33 39' 63.8

5 −8' 143.0

11 33 31'

9.27

Mean +0.37'

0.64'

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1897phae.proj...540W

Dec. 21, 1897

			66.0	73.3'	
6	38	0	139.3	86.4'	II
			59.0	159.7' + 0.39'	
			145.4		
			62.0	81.2'	(+0.40)'
39	17		143.2	77.0'	
			65.0	158.2' + 0.42'	
			142.0		
			Index above		
			156.1	75.0'	
42	38		231.1	81.3'	
			152.0	156.3' + 0.45'	
			233.3		
			154.3	78.0'	(+0.50)'
	45	7	232.3	73.9'	
	44	62'	156.1	151.9' + 0.54'	
6	41	16'	230.0		Mean 9.27 +0.45'
5		-8'			9.72'
11	41	8'			

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1897phae.proj..540W

Dec. 21, 1897

III

			157.8	72.6'	
6	47	20	230.4	77.2'	
			154.5	149.8' + 0.58'	
			231.7		
			154.1	78.6'	(+0.58)'
	49	3	232.7	71.7'	
			157.2	150.3' + 0.57'	
			228.9		

Index below.

			245.0 ~~249.2~~	72.1'	
	51	54	320.1	77.6'	
			245.0	149.7' + 0.58'	
			322.6		
			243.1	81.3'	(+0.54)'
	53	34'	324.4	72.4'	
	40	111	248.0	153.7' + 0.50'	
6	50	28'	320.4		9.27
5		-8'			Mean +0.56'
11	50	20'			9.83'

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1897phae.proj..540W

DEC. 21, 1897.

IV

			248.5	73.5'	
6	56	35	322.0	80.8'	
			243.7	154.3' + 0.49'	
			324.5		
			243.8	80.5'	(+0.50)'
	58	14	324.3	73.3'	
			247.7	153.8' + 0.50'	
			321.0		

Index above

			339.9	68.1'	
7	0	44	48.0	75.5'	
			335.1	143.6' + 0.70'	
			50.6		
			334.0	77.7'	(+0.67)'
	2	57	51.7	68.9'	
	36	150'	339.0	146.6' + 0.64'	
6	59	38'	47.9		
5		-8'			
11	59	30'			

9.27.
Mean +0.58'
9.85'

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1897phae.proj..540W

Dec. 21, 1897

V

			339.3	67.6'	
7	7	11	46.9	77.3'	
			333.7	144.9' + 0.65'	
			51.0		
			336.7	74.9'	(+0.70)'
	8	50	51.6	67.6'	
			340.0	142.5' + 0.72'	
			47.6		

Index below.

			67.6	71.6'	
	11	5	139.2	79.1'	
			63.2	150.7' + 0.56'	
			142.3		
			64.0	78.3'	(+0.55)'
		12 58	142.3	73.4'	
		38 124'	66.0	151.7' + 0.54'	
6	7	10 1'	139.4		
5	5	-8'			
11	12	9 53'			

9.27'
Mean +0.62
9.89'

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1897phae.proj..540W

Dec. 21, 1897

VI

		67.0	72.9'	
7	15 8	139.9	79.0'	
		63.3	151.9' + 0.54'	
		142.3		
		65.8	74.4'	(+0.58)'
16	55	140.2	72.8'	
		66.7	147.2' + 0.63'	
		139.5		

Index above

		161.0	67.5'	
19	50	228.5	72.4'	
		156.8	139.9' + 0.78'	
		229.2		
		157.0	73.2'	(+0.78)'
	21 42	230.2	67.2'	
	31 155'	159.9	140.4' + 0.77'	
7	18 24'	227.1		
5	-8'			
12	18 16'			

9.27
Mean +0.68
9.95'

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1897phae.proj..540W

Dec. 21, 1897.

			160.0	66.6'	
7	27	12	226.6	71.1'	VII
			157.7	137.7' + 0.82'	
			228.8		
			158.0	70.5'	(+0.82)'
	29	17	229.85	66.6'	
			160.7	137.1' + 0.83'	
			227.3		
			Index below		
			249.0	67.0'	
	32	7	316.0	76.6'	
			244.4	143.6' + 0.70'	
			321.0		
			246.0	74.5'	(+0.70)'
	34	0	320.5	68.6'	
	2	36'	248.7	143.1' + 0.71'	
7	30	39'	317.3		Mean +0.76'
5		-8'			9.27
12	30	31'			10.03'

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1897phae.proj..540W

Dec. 21, 1897

VIII

			250.5	66.9'	
7	36	25	317.4	73.6'	
			247.1	140.5' + 0.76'	
			320.7		
			247.1	73.9'	(+0.74)'
	38	19	321.0	68.1'	
			250.2	142.0' + 0.73'	
			318.3		

Index above

			341.6	62.4'	
	40	53	44.0	68.2'	
			338.7	130.6' + 0.97'	
			~~45.6~~ 46.9		
			340.2	67.1'	(+1.00)'
	43	14	47.3	60.1'	
	37	111'	341.7	127.2' + 1.04'	
7	39	43'	41.8		
5		-8'			
12	39	35'			

9.27
Mean +0.87'
10.14'

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1897phae.proj.540W

Dec. 21, 1897

341.3 62.6'

7 46 26 43.9 67.7' IX

337.7 130.3' + 0.97'

~~46.4~~ 45.4

335.1 66.9' (+0.97)'

48 8 45.0 63.4'

341.8 130.3' + 0.97'

45.2

Index below

72.4 64.3'

50 20 136.7 72.3'

66.7 136.6' + 0.84'

139.0

69.0 69.8' (+0.85)'

52 22 138.8 66.1'

36 75' 70.3 135.9' + 0.86'

7 49 19' 136.4

5 -8'

12 49 11'

9.27

Mean +0.91'

10.18'

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1897phae.proj..540w

Dec. 21, 1897

			68.5	66.8'	X
7	54	30	135.3	71.0'	
			65.3	137.8' + 0.82'	
			136.3		
			68.0	71.0'	(+0.82)'
57	24		69.0	67.2'	
	10		69.0 Clouds	138.2' + 0.81'	
			136.2		
			Index above		
			161.4	61.6'	
59	42		222.0	66.2'	
			160.0	127.8' + 1.03'	
			226.2		
			160.0	66.6'	(+1.04)'
8	0	57	226.6	60.2'	
	30	15.3'	163.0	126.8' + 1.05'	
7	58	8'	223.2		
5		-8'		Mean 9.27 / +0.93'	
12	58	0'		10.20'	

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1897phae.proj..540W

Dec. 21, 1894

XI

			165.3	54.0'	
8	11	30	219.3	62.9'	
			161.1	116.9' + 1.26'	
			224.0		
			161.4	64.7'	(+1.18)'
	15	20	226.1	59.9'	
			163.D	124.6' + 1.09'	
			227.9		

Index below.

			252.3	62.0'	
	17	44	314.3	62.6'	
			253.4	124.6' + 1.09'	
			316.0		
			253.D	<clouds, 61.1'	(+1.11)'
	20	4	314.1	61.6'	
	23	98'	253.7	122.7' + 1.13'	
8	16	10'	315.3		
5		-8'			9.27
				Mean	+1.14'
13	16	2'			10.41'

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1997phae.proj..540w

Dec. 21, 1897

XII

		252.8	62.2°	
8	23 32	315.0	61.8°	
		252.2	124.0° + 1.11°	
		314.0		
		252.8	64.0°	(+1.10)°
25	14	316.8 Clouds	61.3°	
		253.0	125.3° + 1.08°	
		314.3		

Index above

		344.5	~~77.2~~	
30	24	~~38.4~~ 41.7	57.2°	
		343.4	58.4°	
		~~42.8~~ 41.8	115.6° + 1.29°	
		346.1	56.7°	(+1.30)°
	34 33	42.8	58.1°	
	32 71°	~~345.0~~	114.8° + 1.31°	
8	28 18°	245.8		
5	-8°	43.9		9.27
			Mean	+1.20°
13	28 10°			10.47°

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1897phae.proj..540W

Dec. 21, 1897

XIII

			345.5	ν K.9'	
8	43	19	40.4		
			346.7	ν 3.6'	
			40.3	108.5' + 1.45'	
			347.1	ν 3.6'	
	45	16	40.7		(+1.46)'
			346.0	ν K.0'	
			40.0	107.6' + 1.47'	

Index below.

			73.1	61.9'	
	48	38	135.0		
			78.6	ν 2.1'	
			130.7	116.0' + 1.33'	
			76.6		
	~~50~~	54	129.9	ν 3.3'	(+1.40)'
	26	127'	76.2	ν ν.0'	
8	47	2'	131.2	104.3' + 1.46'	9.27
5		-8'			Mean +1.43'
13	+6	54'			19.70'

I roulled somewhat in preceding observation by low altitude and clouds.
Last settings especially difficult

9 15 Watch Correction = -8 sec

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1997phae.proj..540w

DEC. 21, 1897

T Andromodae. W. Obs

0	14	+ 26.1
3	55	
3	41	

9. 45 d 3 e
e 3.5 f
f 4 g
g 4.5 h
h 6 k
k 3 l
l 5.5 m
m 4 n
n 4 o

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1897phae.proj.540W

DEC. 21, 1897

Andromedae. Phot T. H. Obs

Measurement of Var with 7.5 Comp. star

Index left

152.3 < Comp. dis.

10 06 235.8 ±3.5 ✓

~~+13.0~~ 153.0

240.7 ±7.7 ✓ / 171.2 ✓ +0.17 ✓

151.3

238.8 ±7.5 ✓ (+0.22 ✓)

153.0 ±8.1 ✓

231.1 16 ✓.6 ✓ +0.27 ✓

Index right

243.0 ±2.0 ✓

325.0

236.2 ±9 ✓.2 ✓

331.4 177.2 ✓ +0.0 ✓ ✓

235.6

10 11 330.6 9 ✓.0 ✓ (0.00) ✓

10 5.5 238.4 ±7.3 ✓

5 325.7 182.3 ✓

15 5.5 177.7 ✓ −0.04 ✓

Mean +0.11 ✓

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1897phae.proj.540w

Dec. 21, 1897

Same again

		239.2			
10	12	327.0	87.8 ✓		
		238.5	101.0 ✓		
		339.5	188.8 ✓		
			171.2 ✓	−0.17 ✓	
		238.0	93.0 ✓		(−0.11) ✓
		331.0			
		238.4	89.8 ✓		
		327.8	182.8 ✓		
			177.6 ✓	−0.07 ✓	

Index left

		328.0			
		55.4	87.4 ✓		
		332.0			
		53.5	81.5 ✓		
			168.9 ✓	+0.21 ✓	
		333.0			
		54.3	81.3 ✓		(+0.22) ✓
10	17				
10	14.5	329.1			
5		~~55.5~~	86.7 ✓		
15	14.5	55.8	168.0 ✓	+0.23 ✓	

Mean +0.06

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1897phae.proj.540W

Dec. 21, 1894

Measurment of Comp Stars for
T Andromedae Phot. T H. Obs.

~~compared with~~
~~Index~~

10 36 Haze getting too thick for measurment of
Comparison Stars.

o Ceti Phot. R H. Obs

2 1 4 −2.5
4 54
2 50

Index right and below

36.2
10 46 45.2 9.0
34.4
44.4 7.0 / 16.0 / v.72 /

34.1
44.9 7.8 /
~~35.4~~
35.8 9.9 /
45.7 17.7 / v.76 /

(v.67) /

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1897phae.proj..540W

DEC. 21, 1897.

Index left and above

126.9
134.2
128.7
134.4

7.3 ✓
v.7 ✓
13.0 ✓ 6.23 ✓

128.6
134.1

5.v ✓ (6.20) ✓

10 37
10 48.5
5
15 48.5

134.7

7.2 ✓
13.3 ✓ 6.12 ✓ mean v.9K ✓

Same again

126.2
134.8
127.8
134.2

2.6 ✓
6.K ✓
15.0 ✓ v.92 ✓

127.6
133.4
125.7
134.4

v.2 ✓
2.7 ✓
14.v ✓ v.99 ✓

(v.96) ✓

Index right and below

215.6
225.2
217.0
224.5

9.6 ✓
2.v ✓
17.1 ✓ v.63 ✓

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1897phae.proj.540w

Dec. 21, 1897.

		216.8			
10	58	224.7	7.9 ✓		(v.v4) ✓
10	55.0	215.6			
5			10.1 ✓		
15	55.0	225.7	10.0 ✓	v.v2 ✓	mean v.77 ✓

Observations difficult ~~Hav~~ on acct of thick haze.

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1897phae.proj..540W

Posted to here.

December 23, 1897. (Thursday)

o Ceti — Phot. R. — H. Obs.

2 4 — −2.5

2 40 — One prism at focus and fencals brought together by rotating said prism 180° from its old position.

36

Index right

83.5 < Van. dis. — 8.3'

8 34 91.8 — 8.1'

83.5 — 16.4' −5.72'

91.9

83.3 — 8.4' — (−5.68)'

91.7 — 8.6'

83.3 — 17.0' −5.64'

91.9

Index left.

173.5 — 7.2'

180.7 — 7.3'

173.7 — 14.5' −5.99'

181.0

173.9 — 7.7' — (−5.94)'

8 41 181.6 — 7.5'

8 37.5 173.7 — 15.2' −5.89'

5 181.2

13 37.5

Mean −5.81'

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136

1897phae.proj..540W

Dec. 23, 1897.

Same again.

	173.9	7.8'	
8	181.7	7.8'	
	174.0	15.6' - 5.83'	
	181.8		
	174.3	7.1'	(-5.86)'
	181.4	8.0'	
	173.8	15.1' - 5.90'	
	181.8		

Index right

	263.3	8.5'	
	271.8	8.2'	
	263.4	16.7' - 5.68'	
	271.6		
	263.2	8.3'	(-5.72)'
8	271.5	7.9'	
8	263.6	16.2' - 5.75'	
5	271.5		

8	52	
8	48.0	
5		
13	48.0	

Mean - 5.79

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1897phae.proj..540W

Dec. 23, 1897.

T Andromodae. ~~Phot. T. Comp. Stars.~~ N. Obs.

0	14	+ 26,
3	25	
3	11	

Estimates for Comp. Stars for T Andromodae. N. Obs.

9 08 m 3 n
n 3 0

For stars see page 96. of this book.

Index left	T Andromodae. Phot. T. N. Obs.
326.3 <Comp dis	97.4'
9 19 63.7	81.4'
332.0	178.8' + 0.02'
53.4	
332.7	81.0' (+0.06)'
53.7	93.5'
327.0	174.5' + 0.10'
~~61.4~~	
60.5	

Index right

54.8	96.2'
151.0	86.6'
59.7	182.8'
146.3	177.2' − 0.05'

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1897phae.proj..540W

DEC. 23, 1897.

		57.8	88.8'	(−0.08)'
9	26	146.6	96.8'	
9.	22.5	54.8	185.6'	
5		151.6	174.4' − 0.11'	
14	22.5			Mean −0.01'

Same, again.

		54.9	97.5'	
9	25	152.4	88.2'	
		58.7	185.7'	
		146.9	174.3' − 0.11'	

		59.8	87.2'	(−0.10)'
		~~146.4~~	147.0	~~97.2'~~
		54.8	184.4'	
		~~152.4~~	175.6' − 0.08"	
		152.0		

Index left.

		149.5	89.2'	
		238.7	81.0'	
		158.0	170.2' + 0.19'	
		234.0		
				(+0.19)'
		153.4	79.7'	
9	36	233.1	90.1'	
9	32.0	145.3	169.8' + 0.19'	
5		238.4		
14	32.0			Mean +0.04'

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1897phae.proj..540W

Dec. 23, 1897

Measurements of Comp Stars for
T Andromedae. Phot T. At Obs
= +26° 37 (AA)
I compared with same comp stars as Dec 6, 1897
Index left and below

	182.6	22.8	
	205.4	22.5	
9	182.9	45.3	+3.49
49	205.4		

	181.9	22.0	(+3.52)
	203.9	22.0	
	183.0	44.0	+3.56
	205.0		

Index right and above.

	270.3	25.3	
	295.6	24.2	
	270.7	49.5	+3.29
	294.9		

	271.6	24.1	(+3.29)
10	295.7	25.5	
0	270.8	49.6	+3.29
	~~296.4~~		
	296.3		Mean +3.40

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1897phae.proj..540W

Dec. 23, 1897.

d compared with +ε 26° 37 (Ac)

Index right

		270.0	28.3′
10	4	298.3	25.9
		269.8	54.2′ +3.09′
		295.7	

270.0	28.2′	(+3.02)′
298.2	29.4′	
270.1	57.6′ +2.95′	
299.5		

Index left

		1.0	23.6′
		24.6	22.7′
		1.5	46.3′ +3.44′
		24.2	

0.6	24.3′	(+3.42)′
24.9	22.6′	
1.8	46.9′ +3.41′	
24.4		

Mean +3.22

f too faint to measure tonight.

Measurements rather difficult on acct of haze—
Stars faint

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1897phae.proj..540w

Dec. 23, 1897

~~5 46~~

	5	46	+ 20.3
	4	46	
	1	0	
	11	0	

.10 37 q 2 var, var 2.5 r in large telescope
q 3 var, var 2 r in finder. but difficult

p 3 var, var 2 q in large telescope Frost. Obs.

Σ 1415 Phot R. N. Obs.

	10	8	+71.7 Prism at focus. Pencil together
	5	17	
	4.	56	
	7	4	

Index right and below

	199,0	68.0	
10	56 267,0	75.4	
	196,8	143.4	− 0.71
	272,2		
			− 0.73
	197,2	71.9	
	269,1	69.4	
	196.9	141.3	− 0.75
	266.3		

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1897phae.proj..540W

Dec. 23, 1897

Index left and above.

288.0
356.7
~~284.2~~ 284.2
~~2.5~~ 0.0

68.2
75.8
144.0 − 0.69

280.2
0.7
~~289.4~~
289.0
357.9

−0.64

80.5
68.9
149.4 − 0.59

Mean = 0.68

Pos angle 75° dis 16sec Magn 6.0 and 7.1

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1897phae.proj..540w

December 24, 1897. (Friday)

		○ Ceti	Phot. R.		N. Obs
		2 & 4	-2.5		
		1 42			
		22			
		11 38			
		Index right			
		212.8	7.2 ✓		
		< Var. dis.			
7	34	220.0	8.1 ✓		
		212.4	15.3 ✓	.47 ✓	
		220.5			
				-(.44) ✓	
		212.4	7.9 ✓		
		220.3	7.9 ✓		
		212.5	15.8 ✓	.40 ✓	
		220.4			
		Index left.			
		302.0	8.4 ✓		
		310.4	9.1 ✓		
		301.8	17.5 ✓	.44 ✓	
		310.9			
				-(.60) ✓	
		302.0	8.7 ✓		
7	39	310.7	8.5 ✓		
7	36.5	302.2	17.2 ✓	.62 ✓	
5		310.7		mean .72 ✓	
12	36.5				

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1897phae.proj..540W

Dec. 24, 1894.

Same again

		302.0	.6 v	
7	41	310.6		
		302.0	.6 v	
		310.6	17.2 v	.62

~~302.1~~		301.9	.9 v	−(.62) v
~~310.8~~		310.8		
.		302.2		
.		310.6	.6 v	
			17.3 v	.61

Index right.

		32.4	.4 v	
		40.8		
		32.3	.4 v	
		40.7	16.4 v	.67

		32.4	.2 v	−(.64) v
7	52	40.6		
7	46.5	32.4		
5		40.8	.4 v	
			16.6 v	.70
12	46.5			

$$\frac{\text{mean} - .6\,v}{\text{General mean} - .6\,v}$$

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Dec. 24, 1897.

Comp. Stars for

T Andromodae. Phot. T. H. Obs.

0 14 +26.1

2 36

2 22

h compared with ~~5.0~~ same star as last night. = Dm. +26° 37 (AA)

Index right

95.2 Comp. dis.
8 30 111.6 16.4 ✓

94.3
112.6 18.3 / 34.7 ✓ K.09 ✓

93.9 18.1 ✓ (K.12)
112.0

95.3 15.5 / 33.6 ✓ K.17 ✓
110.8

Index left

~~187.0~~ 186.0
201.8 15.8 ✓
186.8
203.2 16.4 / 32.2 ✓ K.28 ✓

185.9
8 36 203.2 17.3 ✓ (K.23) ✓
8 33.0 186.0
5 201.4 15.4 / 32.7 ✓ K.21 ✓
13 33.0

Mean K.18 ✓

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1897phae.proj..540W

Dec. 24, 1897.

= +26° 37 (A.R.)

k compared with same comp star as last night.

Index left

187.7 Comp. dis

8 41 199.8 12.1

187.8

200.4 12.6 / 2 K.7 K.83

189.0 13.0 (K.79)

202.0

187.5 12.6 / 2 K.6 K.7

200.1

Index right.

~~276.1~~ 277.1

289.1 12.0

276.4

290.3 13.9 / 2 K.9 K.73

277.8 12.9 (K.76)

8 47 290.7

8 44.0 246.8 12.2 / 2 K.1 K.79

5 289.0

13 44.0

Mean K.78

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1897phae.prj - 540W

DEC. 24, 1897.

g compared with +26° 37 (A.R.)

Index right

		273.8	Comp. dis		
9	6	293.7	19.9 ✓		
		274.4			
		292.0	17.6 / 37.5 ✓	✓	3.91 ✓
		273.0	18.7 ✓		
		291.7			(3.46) ✓
		273.3	20.5 ✓		
		293.8	39.2 ✓		3.41 ✓

Index left.

		183.6	18.4 ✓		
		202.0			
		184.9			
		201.9	17.0 ✓ / 35.4 ✓	✓	4.04 ✓
		~~184.7~~	184.2		
9	13	202.8	18.6 ✓		(3.94) ✓
		184.0			
		204.0	20.0 ✓ / 38.6 ✓	✓	3.47 ✓

Mean 3.90 ✓

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1897phae.proj.540W

Dec. 24, 1897.

f. compared with +26° 37 (AA)

Index left and below

183.0
21.1 ✓
9 17 204.1

183.2
205.0 21.8 ✓ / K 2.9 ✓ 3.61 ✓

183.0
203.4 20.K ✓ (3.66) ✓

183.2
204.0 20.8 ✓ / K 1.2 ✓ 3.70 ✓

Index right and above.

272.0
~~296.0~~ 295.0 23.0 ✓

273.7
294.1 20.K ✓ / K 3.K ✓ 3.59 ✓

273.0
22.0 ✓
9 23 295.0 (3.60) ✓

273.4
~~294.2~~ 21.1 ✓ / K 3.1 ✓ 3.60 ✓
294.5

Mean 3.63 ✓

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1897phae.proj..540W

Dec. 24, 1897.

T Andromedae. Phot. T. H. Obs.
Compared with D.M. 26° +40 (7.5)
Index right

~~235.2~~ 234.7 < Comp'ds.

9 26 331.0
243.0 96.3 v
325.1 92.1 v
188.4 v +0.03 v

242.8 92.1 v
324.9 (−0.01 v)
234.2 100.5 v
334.7 142.6 v
177.4 v −0.0 v

Index left

332.1 93.0 v
~~53.6~~ 55.1
324.6 94.4 v
63.0 141.4 v
182.6 v −0.03 v
324.2
62.0 97.2 v (+0.02)
9 28.5 334.0 79.2 v
5 53.2 177.0 v +0.06 v
14 28.5

Mean 0.00 v

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1897phae.proj.540W

Dec. 24, 1897

Same again

333.1 ~0.K v
53.5
324.9 9K.K v
593 17K.0 v +0.10 v

326.4
~~63.3~~ 61.0 9K.6 v (+0.13) v
335.1
51.9 16.0 v / 171.K v +0.16 v

Inder right

60.3 ~6.6 v
146.9
53.4
151.2 97.v v / 18K.1 v
17v.9 v −0.04 v
~~56.~~ 55.1

9 38 150.2 9v.1 v (−0.12) v
9 35.0 55.2 9.3.K v / 18A.v v
5 148.6
14 35.0 171.v v −0.16 v

Mean 0.00 v
Gen. Mean 0.00 v

10

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1897phae.proj..540W

Dec. 24, 1894.

Comp. Stars for U Ceti. Phot. T. H. Obs.

2 28 −13.0

4 28

2 0

r compared with e

Index left

93.0 <Comp dis.

10 17 110.5 17.5 ✓

95.0

112.0 17.0 ✓

3 V.V ✓ K.03 ✓

92.1 14.9 ✓ (K.06)

111.0

95.0

~~109.9~~ 17.5 ✓

3 K.K ✓ K.10 ✓

110.5

Index right

185.8 16.6 ✓

200.4

~~154.8~~ 185.3 16.0 ✓

201.3 30.6 ✓ K.36 ✓

185.8 17.7 ✓ (K.37) ✓

10 22 201.5

186.0 16.6 ✓

200.6 30.3 ✓ K.34 ✓

Mean K.22 ✓

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1897phae.proj.540W

Dec. 24, 1897

g compared with e

Index right

184.0 Comp. dis.
202.5 18.5 ✓
185.8
201.5 15.7 ✓ ✓
3 4.2 4.11 ✓

184.9
202.8 17.9 ✓ (4.04 ✓)
185.0
203.6 18.6 ✓ ✓
3 6.5 ✓ 3.97 ✓

Index left.

274.3 18.4 ✓
292.7
274.9
292.5 17.9 ✓ ✓
3 6.3 3.92 ✓

274.8
293.0 18.2 ✓ (3.92) ✓
274.3
292.6 18.3 ✓ ✓
3 6.5 ✓ 3.97 mean 4.01 ✓

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1997phae.prdj..540W

Dec. 24, 1894

o compared with e.

Index left.

		268.4	< Comp dis	
10	35	300.6	32.2	
		267.0		
		300.0	33.0 / 6)65.2	2.67

267.0			
299.5	32.5		(2.66)
267.2	33.0		
300.2	33.0 / 6)65.5	2.66	

Index right

358.9	30.7		
29.6			
~~0.0~~ 359.0			
26.7	27.7 / 6)54.4	2.92	

358.0			
10 39 27.4	29.4		(2.93)
358.9	24.6 / 6)49.0	2.94	
27.5			

Mean 2.40

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1897phae.proj..540W

Dec. 24, 1897

Index right

3.0
21.0 18.0 v
10 47
4.3
22.0 17.7 v
3 v.7 v K.02 v

4.0
22.4 18.4 v (3.96 v)
3.0
22.1 19.1 v
3 7.v v 3.91 v

Index left

92.0
115.0 23.0 v
92.0
112.8 20.8 v
K3.8 v 3.v7 v

93.1
112.6 19.v v (3.66 v)
10 52
92.0
113.0 21.0 v
K0.v v 3.7K v

Mean 3.81 v

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1897phae.proj..540W

Dec. 24, 1897.

μ Orionis			W. Obs
5	46	+20.3	
5	28		
	18		
11	42		
5	46		
5	35		
	11		
23	49		

11 15 γ 3 var, var 2 r in large telescope } W. Obs.
same in finder

ρ 3 var, var 2 q in large telescope Frost obs.

Frost makes the four. fainter than γ in finder

Experimented to night (Dec. 24.) with the prisms of Phot. R. in their field position – that is, with the pencils together and the lines of section of the two prisms inclined to each other thus ☒ ≠ one prism being fixed at focus and the other running ☒ ≠

Between Ceti, which is about 3.4 mags, sometimes seems to disappear entirely (with the ≠ Foucault prism in certain ways) but sometimes ο Ceti is 13 mags. and at other times (4 mags. and ☆. There is a patch of light in the field, due probably to reflection, but it goes the opposite way with respect to the stars, and so this is easily seen.

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1897phae.proj..540W

Dec. 26, 1897. (Sunday)

Dis. Jup. I. Phot. R. W. ob. Watts rec.

Comps. with nearest of three sets. on following side = Sat. II.

Chron Corr. = −1 m 39 secs.

18 16 41*	18 16 28		171.8	sat. I. dis.
−1 −39			clouds.	
18 15 02*	36	86.2*	258.0	1
	45	89.0*	172.0	
	55	87.6*	261.0	92.4*
			clouds thick.	
17 21*	17 09		170.1	
−1 −39	16	90.8*	260.9	
15 42*	26	93.8*	169.2	
	33	92.3*	263.0	87.7
			clouds thick.	
17 54*	43		175.1	
−1 −39	50	95.4*	260.5	
16 15*	57	88.8*	171.2	3
	18 06	92.1*	260.0	87.9*
18 26*	12		171.1	
−1 −39	20	89.9*	261.0	
16 47*	31	92.9*	171.0	4
	40	91.4*	263.9	88.6*

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1897phae.proj..540W

Dec. 26, 1897.

		18	18	49	170.0	
19	01*			55	920* 262.0	
−1	39		19	05	862* 172.9	V
17	22*			15	891* 259.1	90.9 V
				27	175.8	
19	40*			37	862* 262.0	
−1	39			45	909* 172.0	
18	01*			53	886* 262.9	6
			20	03	960* 171.8	91.4*
18	24*			12	958* 267.8	840*
	33*			20	930* 172.0	846.2*
	41*			28	978* 265.0	87.0*
	49*			37	1029* 167.2	82.2*
	58*			45	1043* 270.1	77.1*
19	06*			57	1024* 165.8	75.7*
	18*		21	08	1044* 268.2	77.6*
	29*			18	1092* 163.8	75.6*
	39			27	1190* 273.0	70.8*
	48*			38	1250* 154.0	61.0*
	59*			48	1266* 279.0	55.0*
20	09*			55	1320* 152.2	53.2*
	16*		22	05	1385* 284.2	48.0*
	26*			15	1443* 145.7	41.5*
	36*			25	1542* 290.0	35.7*
	46*			37	1695* 135.8	25.8*
	58*			52	1711* 305.3	10.5*
21	13*					8.9*

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1897phae.proj..540W

Dec. 26, 1897.

18 21 20*	18	23	04	173.7*	134.2	6.3*
37*			16		307.9	

Not seen later.

Limit of Vis. Sat. II.

24 24*	18	24	03		298.0	
-1 -39			15	17.0*	315.0	
22* 45*			31	16.8*	298.2	
			46	16.4*	314.0	

Troubled somewhat by clouds; also by frost on eye piece. Clock broke down so that obs. had to follow by hand. Seeing pretty good, in general. By accident obs. made sat. I. disappear in the early settings, and as eclipse had been started that way, same system was continued throughout for L. V. however sat. II was made to disappear.

Comp. of Chron.

B 394. A + 12 9 58.

18	36	00.0	=	18	37	39.0
18	37	00.0	=	18	38	39.0

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1897phae.proj..540W

December 27, 1897. (Monday)

○ Beti.		Phot. Pr.	H. Obs.
2	4	-2.5	
1	58	~~Lines~~ of section of crystals at an angle with ~~each~~ other	
	6.	One prism at focus, the other running.	
11	54	Pencils together.	

In one position of the Foucault prism, ~~the~~ ○ ~~at its~~ when in center of field minimum is about equal to a 14th magn. star, and sometimes seems to almost completely disappear, ~~when in the~~ With the Foucault prism turned 180° from this, ~~the~~ ○ is about equal to a 13th magn. star.

Index right.

	107.2	Var dis 8.8'	
7 35	116.0	8.7'	
	107.5	17.5' -5.55'	
	116.2		
	107.2	9.4'	(-5.45)'
	116.6	10.3'	
	106.3	19.7' -5.32'	
	116.6		

Index left.

	197.0	10.0'
	~~2058~~	9.2'
	207.0	19.2' -5.35'
	197.0	
	206.2	

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1897phae.proj..540W

Dec. 27, 1897.

		197.4	8.9'	(-5.40)'
7	41	206.3	9.9'	
7	38.0	196.8	18.8' - 5.43'	
5		206.7		
12	38.0		Mean -5.42'	

Same again.

	196.7	9.7'	
7 42	206.4	9.2'	
	197.1	18.9' - 5.41'	
	206.3		
	197.0	9.5'	(-5.42)'
	206.5	9.2'	
	197.0	18.7' - 5.44'	
	206.2		

Index right.

	286.2	9.1'	
	296.3	10.3'	
	286.4	19.4' - 5.36'	
	296.7		
	286.7	9.7'	(-5.40)'
7	49	296.4	9.1'
7	45.5	287.0	18.8' - 5.43'
5		296.1	
12	45.5		Mean - 5.41

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1897phae.proj..540W

Dec. 27, 1897

When the prisms are together and the penals simply overlapping, in the original way, the disappearnce of omicron is pretty complete, ~~too~~ with o on both sides of 9.2 magn. star, and ~~r~~ Foucault in both positions, that is the disappearance of o is petty complete under all circumstances and a little more so than when the pencils are together, and the prisms arranged as in the previous experiment on page 159, where pencils are together and one prism remaining at focus. The supplementary image is however brighter, but the field is in general somewhat darker, the patch of light is not ~~quite as bright~~ ~~gone~~, and there are ~~not so many supplementary images~~ however 5 or 6 supplementary images, one being much brighter than in the ~~previous experiment~~

---

o Lecti again. Phot R. prism in old way W. Obs.
Index right Pencils overlapping 2/5

110.4 10.0'
25 ~~121.0~~ 120.4 8.6'
111.4 18.6' -5.45'
~~119.4~~ 120.0

111.0 9.0' (-5.40)'
120.0 10.4'
110.4 19.4' -5.36'
120.8

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1897phae.proj.540W

Dec. 27, 1897.

Index left.

200.2	10.0'	
210.2	7.9'	
201.6	17.9' - 5.53'	
209.5		
201.3	8.4'	(-5.52)'
209.7	9.8'	
200.6	18.2' - 5.50'	
210.4		

8 30
8 27.5
5
13 27.5

Mean -5.46'

Same again.

200.2	10.2'	
210.4	8.6'	
201.2	18.8' - 5.43'	
209.8		
201.3	8.1'	(-5.48)'
209.4	9.7'	
200.7	17.8' - 5.54'	
210.4		

8 32

Index right.

290.3	10.8'
301.1	8.6'
291.3	19.4' - 5.36'
299.9	

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1897phae.proj..540W

Dec. 27, 1897.

		291.0	8.8'	(-5.42)'
5	40	299.8	9.5'	
8	36.0	290.7	18.3' -5.48'	
5				
13	36.0	300.2		

Mean -5.45'

Comp. Stars for U Ceti. Phot. M. M. Obs.

2 28 -13.0

3 35

A new comp. star 2 was selected to-night as the previous star 2 seems to have grown brtr. and now to be brtr. than m

9 06 W 5 0

o 4.5 p

2 28

3 55

1 27

o compared with m.

Index left.

166.3 ∠m dis. 54.5'

9 22 22 28 58.0'

166.0 112.5' +1.36

224.0

166.3 58.1' (+1.34)'

224.4 56.5'

165.5 114.6' +1.31

222.0

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1897phae.proj..540W

Dec. 27, 1897.

Index right.

247.8 68.5'
316.3 68.8'
249.5 137.3' +0.83
318.3

2500 68.7' (+0.84)'
29 318.7 67.5'
2488 136.2' +0.85
316.3

Mean +1.09'

Comp Stars for T Andromedae Phot. T. H. Obs

0 14 +26.1
4 14
4 0

See next page for Photometric Measurements.

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1897phae.proj..540W

Dec. 27, 1897

Comp. Stars for T Androm. Phot. T. H. Obs.

K compared with (8.5 magn)

Index right and above

		276.4	Comp. dis. 14.7'	
9	44	291.1	12.8'	
		277.1	27.5' + 4.59'	
		289.9		
		276.5	13.5'	(+4.59)'
		290.0	14.1'	
		276.9	27.6' + 4.59'	
		291.0		

Index left and below

		7.4	12.4'	
		19.8	11.7'	
		7.0	24.1' + 4.88'	
		18.7		
		~~6.7~~ ~~6.4~~ 6.7	11.9'	(+4.89)'
9	52	~~18.4~~ 18.6	12.0'	
		~~7.0~~	23.9' + 4.90'	
		6.8		
		18.8		

Mean +4.74'

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1897phae.proj.540W

Dec. 27, 1897

h, compared with (5.6 magn)
Index left and below.

	4.9 < Comp. dis.	17.2'	
9	55 22.1	15.4'	
	5.2	32.6'	+4.22'
	20.6		
	5.1	14.7'	(+4.30)'
	19.8	15.8'	
	4.5	30.5'	+4.37'
	20.3		

Index right and above.

91.7	21.0'	
112.7	18.8'	
93.2	39.8'	~~+4.76~~
112.0		+3.78'
94.5	17.8'	(+3.84)'
10 02 112.3	19.8'	
92.8	37.6'	+3.91'
112.6		

Mean +4.07'

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1897phae.proj..540w

Dec. 27, 1897

g compared with 5.8 magn
Index right and below

		91.8 < Comp. dis.	20.5'	
10	06	112.3	21.4'	
		93.0	41.9'	+3.67'
		114.4		
		92.8	21.7'	(+3.63)'
		114.5	21.6'	
		92.5	43.3'	+3.59'
		114.1		

Index left and above

		183.8	18.7'	
		202.5	20.3'	
		182.9	39.0'	+3.82'
		203.2		
		182.7	20.3'	(+3.80)'
10	12	203.0	19.5'	
		182.5	39.8'	+3.78'
		202.0		

Mean ~~+3.74'~~ +3.72'

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1897phae.proj..540W

Dec. 27, 1897

f compared with (5.5 magn.)
Index left and below.

		180.3	Comp dis. 22.4'	
10	15	202.7	20.2'	
		184.0	42.6' +3.63'	
		204.2		
		182.4	21.6'	(+3.63)'
		204.0	21.0'	
		183.0	42.6' +3.63'	
		204.0		

Index right and above.

		273.4	21.3'	
		294.7	23.0'	
		272.0	44.3' +3.54'	
		295.0		
		272.7	22.3'	(+3.54)'
10	21	295.0	22.2'	
		272.5	44.5' +3.53'	
		294.7		

Mean +3.55'

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1897phae.proj..540W

Dec. 27, 1897

T Andromedae Phot. T. N. Obs

Comp Star = 7.5 magn

Index right and above

		59.4 s Complus	88.4'
10	28	147.8	98.9'
		53.3	187.3'
		152.2	172.7' − 0.14'
		54.1	98.9'
		153.0	91.4' (−0.17)'
		~~59.4~~	190.3'
		58.0	169.7' − 0.20'
		149.4	

Index left and below

		150.0	86.5'
		236.5	93.3'
		146.7	179.8' + 0.00'
		240.0	
		147.0	94.0' (0.00)'
10	33	241.0	85.4'
10	30.5	151.0	179.4' + 0.01'
5		236.4	
15	30.5		Mean −0.05'

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1897phae.proj..540W

Dec. 27, 1897

Same again

		152.3	82.6'
10	35	234.9	94.0'
		147.8	176.6' + 0.06'
		241.8	

149.7	89.1'	(+0.12)'
238.8	80.9	
153.4	170.0' + 0.19'	
234.3		

Index right and above

240.0	89.8'
329.8	95.7'
236.4	185.5'
332.1	174.5' − 0.10"

		234.8	96.9'	
10	41	331.7	87.6'	(−0.09)'
10	38.0	240.7	184.5'	
5		328.3	175.5' − 0.05'	
15	38.0			Mean +0.02'
10	48	m	4.5 n	
		n	3.5 o	

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1997phac.proj..340W

Dec. 27, 1897

U Orionis H. Obs

5 46 +20.3
5 36
10
11 50

11 0.5 pr 4 var, var q in large telescope H. Obs.
looks to be
var 2 or 3 grade fainter than q in finder H. Obs.

11 7 var about = to p in large telescope Frost obs
var " = to q in finder " Obs.

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1897phae.proj..540W

December 28, 1897 (Tuesday)

4 30 Watch Correction = + 22 sec. (Watch ~~Cor~~ is 22 sec slow)

U Pegasi.	Phot. T.	W. Obs.
23 . 49	+ 15.1	
23 29		
20		
23 49	+ 15.5	
23 45		
4		

Comparison Star = D.M. + 15° 4916 (8.8)

~~∴ At 4h 30m~~

∴ From 4h 30m to 6h 19m Corr. = + 22s.
" " 6 19 " 9 57 " = + 21.
" " 9 57 " 11 45 " = + 20.

5
5
10

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1997phaeP.proj..540W

Dec. 25, 1897

U Pegasi. Phot. T. H. Obs.

Index above

~~+58.1~~

154.1 ← Comp dis.

I

5 24 23 233.0 78.9'

163.7 60.K'

224.1 139.3' +0.79'

162.5

25 40 224.2 61.7' (0.7K)

155.0 77.9'

232.9 139.6' +0.7K'

Index below

248.5

27 27 322.0 74.K'

250.0 67.2'

317.2 1K7.7' +0.66'

0.6K

249.5

28 57 315.8 66.0' +0.71'

24 127 246.3 77.K'

5 26 32 323.7 1K3.K' Mean 0.73

5 +22

10 26 54

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1897phae.proj..540W

Dec. 25, 1897

		244.2	80.6°		II
5	31	3 324.5	70.3°		
		249.7	150.9°	+0.56 v	
		320.0			
		250.0	68.5°		(+0.60)°
32	33	318.5	77.7°		
		244.3	146.2°	+0.65 v	
		322.0			

Index above.

	336.2	75.0°		
35	0 51.2	69.0°		
~~340.+~~	339.0	144.0°	+0.69 v	
	48.0			
	340.2	68.3°		(+0.73)°
36	44 48.5	71.8°		
14	80 336.7	140.1°	+0.77 v	
5	33 50 v	48.5		
5	+22			
10	34 12			

Mean +0.66°

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1897phae.proj..540W

Dec. 25, 1897

		334.5	76.9'		
5	38	56	51.4	67.5'	III
			339.3	144.4' +0.69 v	
			46.8		
			339.7	67.3'	(40.72)'
40	50		47.0	74.4'	
			336.6	141.7' +0.74 v	
			51.0		

Index below.

			64.0	77.8'	
43	3		141.8	73.7'	
			67.0	151.5' +0.55 v	
			140.7		
			65.4	76.4'	(40.52)'
44	43		141.8	77.2'	
5	152		65.9	153.6' +0.50 v	
5	41	53 v	142.5		
5		+22			
10	42	15			

Mean +0.62

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1897phae.proj.540W

Dec. 25, 1897.

IV

			65.2	76.0'	
5	51	33	141.2	77.9'	6
			64.2	153.9' +0.50	
			142.1		
			64.0	78.1'	(+0.48)'
	53	42	142.1	78.5'	
			63.5	156.6' +0.45	
			142.0		

Index above.

			336.9	72.0'	
	56	33	48.9	70.3'	
			337.0	142.3' +0.73	
			47.3		
					(+0.67)'
			336.0	73.0'	
	58	0	49.0	75.0'	
	18	108	335.0	148.0' +0.61	
5	54	57	50.0		6
5		+22		Mean +0.58	5
10	55	17			11

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1897phae.proj..540W

Dec. 25, 1897

V

		335.6	75.1'	
6	~~0 45~~ 1 18	50.7	70.0'	
		337.0	145.1'	+0.67
		47.0		
		336.5	71.5'	(+0.66)'
3	5	48.0	74.0'	
		337.0	145.5'	+0.66
		51.0		

Index below.

		61.4	81.4'	
5	~~20~~ 48	~~145.0~~ 142.8	76.2'	
		64.1	157.6'	+0.43
		140.3		
		65.4	77.6'	(+0.40)'
	7 11	143.0	82.7'	
	16 82	62.6	160.3'	+0.38
6	4 20	145.3		
5	+22		Mean +0.53'	
11	4 42			

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1897phae.proj.540W

Dec. 25, 1897

VI

		61.0	84.0'		
6	9	1	145.0	78.7'	
			63.3	162.7'	+0.33 ✓
			142.0		
			64.1	~~79.7~~ 77.7	(+0.32)'
	10	40	144.8	80.7'	
			62.7	82.8'	
			145.5	163.5'	+0.31 ✓
			Index above		
			156.5	75.5'	
	13	28	232.0	73.3'	
			157.5	148.8'	+0.60 ✓
			230.8		
			157.0	71.8'	(+0.59)'
	14	57	228.8	77.9'	
	06	126 ✓	154.1	149.7'	+0.58 ✓
6	12	2	232.0		
5		+22		Mean +0.46'	
11	12	24			

6

6
5
11

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1897phae.proj.:540w

Dec. 28, 1897.

VII

			155.5	77.5'		
6	27	39	233.0	77.0'		
			155.3	154.5'	+0.49	✓
			232.3			
			155.0	76.6'	(+0.46)'	
29	45		231.6	80.1'		
			152.8	156.7'	+0.44	✓
			232.9			

Index below

			242.8	81.6'		
32	17		324.4	78.9'		
			244.3	160.5'	+0.37	✓
			323.2			
			243.4	~~78.1'~~	78.4'	(+0.38)'
~~33~~	~~56~~		~~320.2~~	~~81.9'~~	81.9'	
34	6		321.8	~~170.3'~~	~~+0.15~~ 160.3'	+0.38 ✓
	2	107	243.0			
6	30	57 ✓	234.9		Mean +0.42'	
5		+21	324.9 assumed.			
~~11~~	~~31~~	~~7~~				
11	31	18				

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1897phae.proj..540W

Dec. 25, 1897

VIII

			241.0	82.0'	
6	36	47	323.0	76.9'	6
			244.7	158.9' + 0.40"	
			321.6		
			245.1	77.4'	(+0.40)'
	38	37	322.5	81.2'	
			242.2	158.6' + 0.41"	
			323.4		
			Index above		
			332.1	81.1'	
	40	41	53.2	77.4'	
			334.4	158.5' + 0.41"	
			51.8		
			336.2	74.3'	(+0.46)'
	42	39	50.5	79.8'	
	36	164	333.4	154.1' + 0.50"	
6	39	41"	53.2	Mean +0.43'	6
5		+21			5
11	40	2			11

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1897phae.proj.540W

DEC. 28, 1897.

IX

			334.3	78.9°	
6	45	30	53.2	73.5°	
			336.6	152.4°	+ 0.53 ✓
			50.1		
			334.6	76.3°	(+0.47)°
47	18		50.9	82.1°	
			331.0	158.4°	+ 0.41 ✓
			53.1		

Index below

			61.0	84.7°	
49	23		~~146.5~~ 145.7	78.4°	
			63.0	163.1°	+ 0.32 ✓
			141.4		
			65.7	77.7°	(+0.32)°
50	53		143.4	85.9°	
31	124		61.1	163.6°	+ 0.31 ✓
6	48	16 ✓	~~147.4~~		
5		+21	147.0		Mean +0.40°
11	48	37.			

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1897phae.proj..540W

Dec. 25, 1897.

X

			60.8	84.7'		
6	52	45	~~146.0~~ 145.5	79.2'		7
			63.0	163.9'	+0.30 v	
			142.2			
			64.0	79.0'	(+0.30)'	
54	4		143.0	85.7'		
			60.0	164.7'	+0.29 v	
			145.7			
			Index above			
			152.7	79.3'		
56	2		232.0	77.6'		
			156.0	156.9'	+0.44 v	
			233.6			
			156.9	75.0'	(+0.44)'	
57	32		231.9	82.3'		
19	83		151.0	157.3'	+0.43 v	
6	55	6 v	233.3			7
5		+21		Mean +0.37'		5
11	55	27				12

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1897phae.proj. 540W

DEC. 25, 1897

XI

		154.2	80.0'		
7	22	3	234.2	77.8'	
			155.0	157.8'	+0.42 ✓
			232.8		
			157.1	74.2'	(+0.46)'
23	47	~~230.7~~	231.3	79.1'	
			153.0	153.3'	+0.51 ✓
			232.1		

Index below

27	23	~~238.0~~	58.8	88.2'	
~~25~~	~~59~~	324.2	147.0	74.4'	
		66.6		162.6'	+0.33 ✓
		141.0			
		64.6		78.4'	(+0.35)'
26	48	~~142.7~~	143.0	82.4'	
20	121	64.0		160.8'	+0.37 ✓
7	25	30 ✓	146.4		
5		+21			
12	25	51			

Mean +0.40

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1897phae.proj..540W

DEC. 25, 1897

XII

62.0 85.0'

7 30 29 147.0 79.7'

62.3 164.7' +0.29

142.0

63.3 76.9' (+0.30)'

31 53 140.2 87.0'

59.0 163.9' +0.30

146.0

Index above

153.2 80.0'

34 5 233.2 75.2'

155.9 155.2' +0.47

231.1

155.2 75.8' (+0.46)'

35 31 231.0 80.2'

10 118 153.0 156.0' +0.46

7 33 0 233.2

5 +21 Mean +0.38

12 33 21

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1897phae.proj..540W

DEC. 25, 1897.

XIII

		153.0	80.4'	
7	37 40	233.4	73.3'	
		157.0	153.7' + 0.50	
		230.3		
		156.8	74.2'	(+0.48)'
39	47 ~~49~~	231.0	81.2'	
		153.6	155.4' + 0.47	
		234.8		

Index below.

		242.5	82.3'	
42	11	~~325.8~~ 325.5	78.3'	
		246.7	160.6' + 0.37	
		325.0		
		245.2	80.0'	
	43 39	325.2	~~91.6'~~	(+0.36)'
	1 37	242.8	~~171.6' + 0.16~~	
7	40 49	~~234.6~~	~~81.6~~ 161.6	+ 0.35
5	+21	324.4 assumed		Mean +0.42'
12	41 10			

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1897phae.proj..540W

DEC. 25, 1897.

XIV

		241.8			
7	48	07	326.0	84.2'	
			248.7	73.3'	
			322.0	157.5'	+0.43'
			246.7		
49	33		322.7	76.0'	0.40'
			240.6		
			~~326.5~~	84.3'	
			325.9	161.3'	+0.36'
			Index above		
			332.9		
51	54		53.0	40.1'	
			335.7	74.9'	
			50.6	155.0'	+0.44'
					0.52'
			335.9		
	53	30	47.5	71.6'	
	1	124	332.3		+0.55'
7	50	46'	52.0	79.7'	
5		+21		151.3'	mean 0.46'
12	51	7			

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1897phae.proj..540W

DEC. 25, 1897

XV

336.2 74.5'
8 1 4 25 50.7 74.7'
336.4 ✱149.2' + 0.59"
51.1

335.9 73.1' (+0.60)'
15 54 49.0 74.5'
335.3 ✱147.6' + 0.62"
49.8

Index below.

63.6 78.9'
18 19 142.5 78.1'
63.0 ✱157.0' + 0.44"
141.1

~~66.2~~ 64.7 76.9' (+0.46)'
19 47 141.6 78.1'
~~65~~ 63.2 155.0' + 0.45"
26 145 141.3 Mean +0.53'
8 17 6"
5 +21
13 17 27

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1897phae.proj..540W

DEC. 25, 1897.

XVI

62.4 81.3'
8 24 8 148.7 75.7'
64.2 157.0' + 0.44"
139.9

64.3 80.7' (+0.42)'
25 57 145.0 78.0'
~~62.5~~ 158.7' + 0.41"
63.2
141.2
Under above.

157.9 72.2'
28 9 230.1 70.3'
158.4 142.5' + 0.72"
228.7

158.1 70.6' (+0.70)'
29 25 228.7 73.4'
26 93 156.0 144.0' + 0.69"
8 26 53 229.4
5 +21 Mean +0.56'
13 27 14

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1897phae.proj..540W

DEC. 25, 1897.

XVII

			156.5	72.0'	
8	31	1	~~229.0~~ 228.5	70.0'	
			158.0	142.0' + 0.73 v	
			228.0		
			157.9	69.7'	(+0.73)'
32	~~30~~ 50		227.6	72.7'	
			156.7	142.4' + 0.73 v	
			229.4		
			Index below		
			244.0	77.8'	
34	52		321.8	73.3'	
			246.0	151.1' + 0.55 v	
			319.3		
			245.7	74.6'	(+0.60)'
~~34~~ 3	57		320.3	70.9'	
20	154		248.1	145.5' + 0.66 v	
8	35	38 v	319.0	Mean +0.66'	
5		+21			
13	35	59			

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1897phae.proj..540W

Dec. 25, 1897.

XVIII

			245.7	75.5'	
8	45	24	~~322.2~~ 321.2	73.2'	
			248.9	148.7' +0.60"	
			322.1		
			246.0	74.3'	(+0.60)'
47			320.3	74.3'	
46			247.4	148.6' +0.60"	
			321.7		
			Index above		
			338.8	70.1'	
49	44	30	~~50.0~~ 48.9	69.7'	
			338.2	139.8' +0.78"	
			47.9		
			339.2	67.6'	(+0.80)'
	51	22	46.8	70.0'	
	32	78	338.0	137.6' +0.82"	
8	48	20	48.0		
5		+21		Mean +0.70'	
13	48	41			

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1897phae.proj..540w

Dec. 25, 1897.

			336.6	71.7'		XIX
8	55	24	48.3	65.7'		
			340.3	137.4' + 0.83 ✓		
			46.0			
	57	12	338.8	66.9'	(+0.84)'	
	~~56~~	~~58~~	45.7	68.9'		
			338.1	135.8' + 0.86 ✓		
			47.0			
			Index below			
			65.2	74.2'		
59	~~14~~	30	~~+10.1~~ 139.4	70.5'		
			~~68.1~~ 67.5	144.7' + 0.68 ✓		
			138.0			
			~~69.0~~ 68.5	70.2'	(+0.70)'	
9	1	0	138.7	72.8'		
	32	66	66.5	143.0' + 0.71 ✓		
8	58	16 ✓	139.3			
5		+21			Mean +0.77'	
13	58	37				

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1897phae.proj..540W

DEC. 25, 1897.

		68.0		
		~~67.7~~	71.3'	XX
	14			
9	~~13~~	12	139.3	72.2'
			68.0	143.5' + 0.70
			140.2	
			68.0	70.8' (+0.74)'
	16	13	138.8	69.3'
			68.5	140.1' + 0.77
			137.8	

Index above.

			161.0	64.1'
	18	22	225.1	63.1'
			161.8	127.2' + 1.04
			224.9	
			162.2	64.6' (+1.01)'
	19	46	226.8	65.3'
	27	93	~~160.0~~	129.9' + 0.98
9	17	8	161.0	
5		+21	226.3	Mean +0.88'
14	17	29		

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1897phae.proj..540W

Dec. 25, 1897.

~~XXI~~

		162.2	65.0'	
9	21 36	227.2	64.5'	
		161.7	129.5' +0.99	
		226.2		
		160.2	65.0'	(+0.96)'
	23 16	225.2	68.0'	
		~~+5~~.	133.0' +0.92	
		160.0		
		225.0		

Index below.

		248.3	70.7'	
	24 52	319.0	68.2'	
		249.8	138.9' +0.80	
		318.0		
		248.7	69.0'	(+0.78)'
	26 50	317.7	71.9'	
	14 154	247.8	140.9' +0.76	
9	24 8	319.7		
5	+21			
14	24 29			

Mean ~~+0.82~~' +0.87'

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1897phae.proj..540W

DEC. 28, 1897.

XXII

			248.6	70.9'	
9	30	32	319.5	70.2'	
			248.7	141.1' + 0.75	✓
			318.9		
			~~255.0~~ 251.2	65.9'	(+0.80)'
	32	37	. 317.1	70.7'	
			248.3	136.6' + 0.84	✓
			319.0		
			Index above		
			340.0	67.2'	
	34	56	47.2	64.8'	
			339.3	132.0' + 0.94	✓
			44.1		
					(+0.90)'
			341.0	65.9'	
	36	12	46.9	69.2'	
	12	157	338.0	135.1' + 0.87	✓
9	33	39 ✓	47.2	Mean +0.85'	
5		+21			
14	34	0			

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1907phae.proj. 540w

Dec. 25, 1897.

XXIII

~~339.7~~

		339.7	66.5'	
9	40 20	46.2	64.3'	
		341.4	130.8'	+0.96
		45.7		
		340.3	64.1'	(+0.96)'
41	35	45.4	66.4'	
		339.3	130.5'	+0.97
		45.7		

Index below

		66.9	72.6'	
43	37	139.5	69.0'	
		69.2	141.6'	+0.74
		138.2		
		67.8	70.5'	(+0.74)
45	6	138.3	70.9'	
9	98	66.6	141.4'	+0.75
9	42 40	137.5		
5	+21			Mean +0.85
14	43 1			

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1897phae.proj..540W

Dec. 25, 1897.

XXIV

		64.7	71.6'		
9	46	43	136.3	72.7'	
			67.3	144.3'	+0.69 ✓
			~~137.3~~	140.0	
			67.8	72.4'	(+0.68)'
	48	26	140.2	72.1'	
			67.7	144.5'	+0.68 ✓
			139.8		

Index above

	51	3	157.9	69.6'	
	~~50~~	~~42~~	227.3	68.8'	
			160.0	138.4'	+0.81 ✓
			228.8		
			160.0	69.3'	(+0.82)'
	52	32	229.3	68.4'	
	37	104 ✓	159.2	137.7'	+0.82 ✓
9	49	41	227.6		
5		+21			Mean +0.75'
14	50	2			

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1897phae.proj..540w

Dec. 25, 1897.

XXV

~~157.9~~

158.5 69.3'

10 3 54 227.8 74.0'

156.0 143.3' +0.71 ✓

~~229.0~~ 230.0

158.0 70.3' (+0.73)'

5 9 228.3 70.7'

157.8 141.0' +0.75 ✓

228.5

Index below

247.2 72.8'

6 50 ~~319.~~ 320.0 74.0'

246.0 146.8' +0.64 ✓

320.0

~~246.5 247.0~~

~~8 43 20~~ Reject ~~+39.0~~

~~247.0~~

~~+~~ (+0.60)'

246.0 76.2'

10 35 322.2 74.8'

24 148 247.2 151.0' +0.56 ✓

10 6 37 322.0 Mean +0.66'

5 +20

15 6 57

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1897phae.proj..540W

Dec. 25, 1897

XXVI

		246,3	76.0'	
10	12 12	322,3	80.2'	
		245,8	156.2' + 0.45 ✓	
		326,0		
		243.7	78.8'	(+0.48)'
13	36	322.5	75.0'	
		246.3	153.8' + 0.50 ✓	
		321.3		
		Index above		
		337.0	72.8'	
15	33	49.8	72.2'	
		337.0	145.0' + 0.67 ✓	
		49.2		
	17 7	337.0	72.6'	(+0.68)'
	+6 50	49.6	72.2'	
	17 88 ✓	337.8	144.8' + 0.68 ✓	
10	14 37	50.0		
5	+20		Mean +0.58	
15	14 57			

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1897phae.proj..540W

Dec. 25, 1897.

XXVII

			337.1	70.4	
10	18	48	48.5	74.4	
			336.6	~~144.8~~	
			51.0	145.8 + 0.66	
			336.0	74.0	(+0.64)
19	56		50.0	73.9	
			335.9	147.9 + 0.62	
			49.8		

Index below.

			64.2	77.4	
21	28		141.6	79.3	
			64.0	156.7 + 0.44	
			143.3		
			63.0	79.7	(+0.41)
	22	40	142.7	80.1	
	00	172	63.2	159.8 + 0.38	
10	20	43	143.3		
5		+20			
15	21	3			

Mean +0.52

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1897phae.proj..540W

DEC. 25, 1897

XXVIII

			64.7	79.8°	
10	24	22	144.5	79.4°	
			64.0	159.2° + 0.40 ✓	
			143.4		
			63.3	76.7°	(+0.42)°
25	32		140.0	80.1°	
			62.5	156.8° + 0.44 ✓	
			142.6		
			Index above		
			158.5	71.5°	
27	8		230.0	75.8°	
			154.2	147.3° + 0.63 ✓	
			230.0		
			156.3	74.4°	(+0.63)°
28	44		230.7	72.7°	
24	106		156.4	147.1° + 0.63 ✓	
10	26	26 ✓	229.1		
5		+20			
15	26	146			

Mean +0.52°

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1897phae.proj..540W

Dec. 25, 1897

XXIX

			156.0	74.0'	
10	30	20	~~229.~~ 230.0	74.7'	
			156.3	148.7' + 0.60"	
			~~231.1~~ 231.0		
			156.7	74.8'	(+0.61)'
31	44		231.5	72.9'	
			157.0	147.7' + 0.62"	
			229.9		

Index below

			246.7	75.2'	
33	51		321.9	81.0'	
			242.4	156.2' + 0.45"	
			323.4		
			243.9	80.9'	(+0.42)'
35	29		324.8	78.0'	
9	147		245.0	158.9' + 0.40"	
10	32	52"	323.0		
5		+20			
15	33	12			

Mean +0.52'

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1897phae.proj.540W

Dec. 25, 1897

XXX

			242.2	83.6'	
10	53	36	~~326.0~~ 325.8	81.2'	
			248.0	164.8' +0.29	
			324.2		
			243.5	81.3'	(+0.33)'
			~~244.0~~	79.2'	
	55	52	324.8	160.5' +0.37	
			244.6		
			323.8		
			Order above		
			334.1	75.8'	
	57	50	49.9	76.0'	
			334.0	151.8' +0.54	
			50.0		
			336.5	74.8'	(+0.54)'
	59	5	51.3	77.2'	
	24	143	334.0	152.0' +0.54	
10	56	36	51.2		
5		+20		Mean +0.44'	
15	56	56			

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1897phae.proj..540W

Dec. 25, 1897

XXXI

			335.3	74.7'	
11	0	24	~~49.0~~ 50.0	76.0'	
			334.2	150.7' + 0.56	
			50.2		
			336.0	73.3'	(+0.56)'
1	56		49.3	77.9'	
			334.9	151.2' + 0.55	
			52.8		

Index below

			61.8	80.9'	
3	25		142.7	79.0'	
			64.6	159.9' + 0.38	
			143.6		
			62.8	80.9'	(+0.38)'
5	1		143.7	79.3'	
9	109	✓	~~64.0~~	160.2' + 0.38	
11	2	42	64.0		
5		+20	143.3	Mean +0.47'	
16	3	2			

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1897phae.proj..540W

Dec. 25, 1897

	9 56	~~62.8~~	60.7	82.9'	XXXII
11	~~8 52~~	~~Rejected~~	143.6	82.3'	
		reject.	61.8	165.2' +0.28	
			144.1		
		64.3		77.7'	(+0.37)'
	12 13	142.0		78.3'	
		64.7		156.0' +0.46	
		143.0			
		Index above.			
		155.2		78.3'	
	13 56	233.5		73.9'	
		156.9		152.2' +0.53	
		230.8			
		156.3		~~65.6~~	(+0.53)'
	15 39	231.9		75.6'	
	9 164	155.2		76.8'	
11	12 56	156.4		152.4' +0.53	
5	+20	233.2			
16	13 16			Mean +0.45'	

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1897phae.proj..540W

Dec. 28, 1897.

XXXIII

		157.0	72.9'		
II	17 39	229.9	77.4'		
		~~155.9~~ 156.6	150.3'	+0.57	
		234.0			
		157.0	74.5'	(+0.56)	
	19 23	231.5	77.3'		
		156.2	151.8'	+0.54	
		233.5			
		Index below			
		243.4	77.2'		
	21 59	320.6	81.9'		
		243.4	159.1'	+0.40	
		325.3			
		243.0	81.4'	(+0.39)	
	24 19	324.4	78.4'		
	1 140	244.8	159.8'	+0.38	
11	20 50	323.2			
5	+20				
16	21 10				

Mean +0.48

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1897phae.proj..540W

Dec. 25, 1897.

~~XXVI~~

			241.8	80.8°	
11	26	9	322.6	77.2°	
			245.3	158.0° + 0.42 ✓	~~XXXIV~~
			322.5		
			245.8	78.5°	(+0.40)°
	28	13	324.3	81.8°	
			244.0	160.3° + 0.38 ✓	
			325.8		

Index above

			~~332.8~~ 333.0	80.9°	
	30	26	53.9	74.4°	
			334.7	155.3° + 0.47 ✓	
			49.1		
			335.4	72.8°	(+0.48)°
	32	22	48.2	81.8°	
	36	40	332.2	154.6° + 0.49 ✓	
11	29	18 ✓	54.0		
5		+20			
16	29	38			

Mean +0.44°

11 45. Watch Correction = +20 sec.
(Watch is 20 sec slow

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1897phae.proj..540W

December 30, 1897. Thursday

U Pegasi Phot T. H. Obs.

~~23 49 +15.5~~
23 48 +14.4
27 5
3 17 Comp Star = DM +15° 4916 (8.8)

8 0 Watch Correction = +8 sec.
Index below.

62.1 Comp ds 84.3'
9 31 0 146.4 80.5'
63.5 164.8' +0.29 v
~~+43.7~~ 144.0

I

65.6 76.9' (+0.37)'
33 3 142.5 79.4'
64.2 156.3' +0.45 v
143.6

Index above

~~154.8~~ 155.7 73.0'
36 0 228.7 69.4'
159.4 142.4' +0.73 v
228.8

158.7 72.5' (+0.68)'
37 20 231.2 74.6'
17 23' 157.0 147.1' +0.63 v
9 34 21' 231.6
15 +8
14 34 29

Mean +0.52'

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1897phae.proj..540W

Dec. 30, 1897.

II

		156.7	73.3′	
9	39	18	230.0	73.3′
			156.9	146.6′ + 0.64″
			230.2	
			157.3	70.7′ (+0.66)′
	40	38	228.0	74.6′
			155.3	145.3′ +0.67″
			229.9	

Index below

		246.9	76.3′	
42	57	323.2	77.5′	
		246.3	153.8′ +0.50″	
		323.8		
		244.0	79.5′ (+0.44)′	
	44	18	323.5	80.3′
	5	131′	243.9	159.8′ +0.38″
9	41	48′	324.2	
5		+8		Mean +0.55′
14	41	56		

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1897phae.proj..540W

Dec. 30, 1897.

III

		245.5	78.5'		
9	46 14	324.0	78.7'		
		244.0	157.2'	+0.43	✓
		322.7			
		245.7	76.5'		(+0.44)'
	47 45	322.2	79.4'		
		244.3	155.9'	+0.46	✓
		323.7			

Index above

		~~338.0~~ 337.5	74.1'		
50	4	. 51.6	70.0'		
		338.9	144.1'	+0.69	✓
		48.9			
		337.4	70.4'		(+0.72)'
	54 49	47.8	70.6'		
	37 112'	337.7	141.0'	+0.75	✓
9	49 113'	48.3			
5	+8				
14	49 51				

Mean +0.58'

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1897phae.proj..540W

Dec. 30, 1897.

IV

		339.1	68.9'	
10	1	45	48.0	68.5'
			340.2	137.4' +0.83 ✓
			48.7	
				(+0.82)'
			340.0	69.2'
3	27		49.2	68.6'
			338.8	137.8' +0.82 ✓
			47.4	

Index below

6	1		65.0	76.3'
5	5		141.3	78.1'
			63.3	154.4' +0.49 ✓
			141.4	
			64.0	76.5' (+0.54)'
	7	40	140.5	73.0'
	17	113'	66.4	149.5' +0.58 ✓
10	4	43'	139.4	
5		+8		Mean +0.68'
15	4	51		

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1897phae.proj..540W

Dec 30, 1897

V

			63.8	75.0'	
10	11	2	~~+38.9~~ 138.8	78.0'	
			63.0	153.0' +0.52	
			141.0		
			64.3	76.2'	(+0.54)'
12	55		140.5	74.0'	
			66.2	150.2' +0.57	
			140.2		

Index above

			158.3	69.7'	
15	5		228.0	67.0'	
			160.2	136.7' +0.84	
			227.2		
			159.0	66.5'	(+0.90)'
		58			
16		~~30~~	225.5	64.6'	
14	120'		160.7	131.1' +0.96	
10	14	0'	225.3		
5		+8			
15	14	8			

Mean +0.72'

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1897phae.proj..540W

DEC. 30, 1897.

VI

		161.9	62.5'	
10	25 14	224.4	62.8'	
		162.2	125.3' +1.08 ✓	
		225.0		
	~~7~~	164.0	60.4'	(+1.09)'
	26 40	224.4	63.7'	
		162.3	124.1' +1.10 ✓	
		226.0		
		Index below		
		247.0	71.3'	
	29 40	318.3	70.0'	
		249.0	141.3' +0.75 ✓	
		319.0		
		249.1	69.9'	(+0.80)'
	31 35	319.0	66.2'	✓
	31 129'	250.8	136.1' +0.85	
10	28 17'	317.0		Mean +0.94'
5	+8			
15	28 25			

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1897phae.proj..540W

Dec. 30, 1897

VII

		259.2	64.8°	
10	34	3 315.0	69.5°	
		249.8	134.3° + 0.89 ✓	
		319.3		
		248.6	71.4°	(+0.88)°
	43	5 320.0	63.6°	
		~~251.4~~	135.0° +0.88 ✓	
		252.0		
		315.6		
		Index above		
		342.0	60.0°	
	45	51 42.0	63.5°	
		342.2	123.5° +1.12 ✓	
		45.7		
		339.9	64.2°	(+1.08)°
	48	14 44.1	62.2°	
	20	73° 341.5	126.4° +1.05 ✓	
10	42	48° 43.4		
5		+8		Mean +0.98°
15	42	56		

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1897phae.proj..540W

Dec. 30, 1897.

VIII

			345.1	58.9'	
10	50	40	44.0	59.5'	
			343.2	118.4' + 1.23"	
			42.7		
			343.0	63.0'	(+1.17)'
52	16		46.0	60.9'	
			341.1	123.9' + 1.11"	
			42.0		

Index below.

			69.5	64.8'	
55	6		134.3	67.1'	
			70.8	131.9' + 0.94"	
			137.9		
			67.0	70.4'	(+0.92)'
57	13		137.4	62.7'	
14	75'		70.2	133.1' + 0.91"	
10	53	49	132.9		
5		+8		Mean +1.04'	
15	53	57			

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1897phae.proj..540W

Dec. 30, 1897.

IX

			68.0	69.2'	
10	59	33	134.2	65.1'	
			71.3	134.3' +0.89 ✓	
			136.4		
			68.0	70.4'	(+0.85)'
11	1	16	138.4	68.0'	
			~~67.8~~	138.4' +0.81 ✓	
			68.0		
			136.0		
			Index above.		
			163.2	59.1'	
	3	31	2223	63.0'	
			160.0	122.1' ~~+0~~ +1.14 ✓	
			2230		
			162.5	61.5'	(+1.10)'
	5	16	2224.0	64.7'	
	8	96'	162.3	126.2' +1.06 ✓	
11	2	24'	2227.0		
5		+8			Mean +0.98'
16	2	32	Shutter begins to interfere		

Observations throughout rather difficult on acct of moonlight. Stars somewhat faint & more shining on object glass.

11 15 Watch Correction = +8 sec.

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1897phae.proj..540W

January 1, 1898. (Saturday)

U Pegasi Phot. T. H. Obs.

23 48 +14.4
26 8
2 20

7 0 Watch Correction = −3 sec. (Watch is fast 3 sec.)
23 48
26 14
2 26

Index below. I

249.2 < Comp. dis. 69.0 ✓
7 39 56 318.2 66.4 ✓
250.0 135.4 ✓ +0.97
316.4

+0.90

251.0 65.4 ✓
42 15 316.4 66.9 ✓
250.8 132.3 ✓ +0.93
317.7

Index above.

45 11 342.3 61.0 ✓
~~44 47~~ ~~43.0~~ 43.3 63.5 ✓
341.5 124.5 ✓ +1.10
45.0 12 43 38
−10 38
+2 6

+1.14

343.2 61.1 ✓
47 21 44.3 60.0 ✓
13 10 3
17 43 46 342.0 121.1 ✓ +1.17
−5
12 43 38 42.0

Mean +1.02

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1897phae.proj..540W

Jan 1, 1898

II

		342.7	60.3 ✓	
7	49 34	43.0	61.3 ✓	
		342.3	121.6 ✓	+1.16
		43.6		
				+1.6
		~~341.3~~		
		~~340.9~~	62.6 ✓	
51	37	43.9	60.0 ✓	
		341.8	122.6 ✓	+1.1
		41.8		

Index below.

		68.9	68.3 ✓	
53	43	137.2	72.7 ✓	
		67.3	141.0 ✓	+0.9
		140.0		
				+0.77
		67.7	73.0 ✓	
	55 40	140.7	66.3 ✓	
	& 140	70.0	139.3	+0.79
7	52 3 & ✓	136.2		
5	-3			
12	52 33			mean +0.96
	10 38			
	+ 2 15			

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1897phae.proj..540W

Jan. 1, 1898

III

			69.6	66.6 ✓		
7	58	34	136.2	70.9 ✓		
			~~67.7~~ 68.0	137.5 ✓	+0.42	
			138.9			
			68.3	69.5 ✓		+0.41
8	1	0	137.8	69.2 ✓		
			68.5	138.7 ✓	+0.40	
			137.7			

Index above.

			162.1	64.2 ✓		
4	2		226.3	64.8 ✓		
			161.3	129.0 ✓	+1.00	
			226.1			
			162.2	63.0 ✓		+1.00
	6	43	225.2	65.5 ✓		
	9	79	160.4	128.5 ✓	+1.01	
13	2	31 ✓	225.9		mean +0.90	
		-3				
13	2	32				
-10	38					
+2	25					

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1897phae.proj..540W

Jan. 1, 1895.

IV

		161.5			
		~~161.9~~	64.5 ✓		
8	9. 57	226.0	64.1 ✓		
		162.0	128.6 ✓	+1.01 ✓	
		226.1			
					+0.94 ✓
		160.7	66.3 ✓		
11	43	227.0	69.2 ✓		
		160.0	135.5 ✓	+0.47 ✓	
		229.2			

Index below.

	248.4	71.4 ✓		
14 29	319.8	74.5 ✓		
	246.5	145.9 ✓	+0.66 ✓	
	321.0			
				+0.64 ✓
	247.7	73.3 ✓		
16 41 ~~46~~	~~321.6~~ 321.0	70.9 ✓		
~~0~~ 170	249.4	144.2 ✓	+0.69 ✓	
13 ~~13~~ 12 ✓	320.3			
-3				
13 13 9				
-10 38				
+2 35				

mean +0.41 ✓

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1897phae.proj..540W

Jan. 1, 1895.

V

		246.7	74.3 ✓	
8	19 43	321.0	75.2 ✓	
		245.8	149.5 ✓	+0.52 ✓
		321.0		
		248.3	73.1 ✓	+0.60 ✓
22	3 11	321.4	73.9 ✓	
		247.4	147.0 ✓	+0.63 ✓
		321.3		

Index above

	340.0	67.9 ✓	
24	5 47.9	69.9 ✓	
	339.3	137.8 ✓	+0.42 ✓
	49.2		
			+0.79 ✓
	337.4	70.2 ✓	
25	57 47.6	70.6 ✓	
10	10 2 336.9	140.8 ✓	+0.76 ✓
13	22 5 ✓ 47.5		
	-3		
13	22 54		
-10	38		
+2	45		

Mean +0.70 ✓

Continued in Book 95.

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