1897phae.proj.1349

KG
11366
v. 345

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1907phio.proj..1249

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1897phot.proj.15429

Oct. 9, 1897 (Saturday)

7 0 Watch Correction = 0

S Cephei. Phot. T. H. Obs.

21	37	+78.3	
20	37		
1	0		
11	0	Comp Star = e.	

Index left and above.

	9.0 < Comp. dis.	68.0'	
7 33	77.0	72.1'	
	7.9	140.1'	+0.77'
	80.0		
	6.7	73.6'	(+0.74)'
	80.3	69.6'	
	~~+0.4~~	143.2'	+0.71'
	9.0		
	78.6		

Index right and below.

	101.2		
	Clouds	66.6'	
	167.8	67.2'	
	99.8	133.8'	+0.90'
	167.0		
	97.9	70.3'	(+0.90)
7 40	168.2	62.8'	
7 36.5	101.5	133.1'	+0.91'
5			
12 36.5	164.3		Mean +0.82

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1897phae.proj.1349.

Oct. 9, 1897

Same again.

		101.1	65.3'
7	43	166.4	71.4'
		97.0	136.7' +0.84'
		168.4	

98.1	70.2'	(+0.85)'
168.3	65.4'	
101.7	135.6' +0.86'	
~~+66.8~~		
167.1		

Index left and above.

7	48	Clouds troublesome	
		~~+91.4~~	
		187.1	71.9'
		259.0	74.3'
		186.5	146.2' +0.65'
		260.8	

		185.1	75.3'
7	51	263.4	69.4'
7	47.0	~~+90.9~~	144.7' +0.68'
5		189.0	
12	47.0	258.4	

(+0.66)'

Mean +0.76'

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1897phae..proj..1349.

Oct. 9. 1897.

Σ 79 Phot. R. 7h. Obs.

24 53 +44.1

21 23

3 30

8 30

Pos. angle 200° dis. 8" and magn. 5.8 and 7.0

Index below and left.

289.0 < N and brighter dis.

8 13 352.3 63.3"

282.3 79.7"

362.0 143.0" − 0.71"

281.3 − 0.74"

2.4. 81.1"

290.2 59.3

349.5 140.4 − 0.77"

Index above and right. Mean = − 0.76"

21.4

81.3 59.9"

~~10.4~~ 80.8

9.5 140.7" − 0.76"

90.3

11.2 − 0.78"

8 21 90.3 79.1"

13 17 21.2 60.3

81.5 139.4 − 0.79"

(over)

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1897phae.proj.1349.

Oct. 9, 1897.

Measurements somewhat difficult on account of constrained positon

Σ 318		Phot. R.	H. Obs.
26	46	+37.8	
22	30		
4	16		
7	44		

Positem angle 250° dis 14" Magn 5.7 and 10.1
Index right and below.

132.7 brighter and NF dis.

9	10	147.3	146
		130.6	17.8
		148.4	324 - 4.23
		130.8	- 4.22
		148.0	17.2
		130.9	15.5
		146.4	32.7 - 4.21

Index left and above Mean = - 4.12

		221.6	
		238.8	17.2
		220.3	17.9
		238.2	35.1 - 4.06
		220.0	- 4.03
9	16	238.9	18.9
14	13	221.3	17.2
		238.5	36.1 - 4.00

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1897phae.proj.1349.

Oct. 9, 1897.

		○ Cetei	Phot. R.	H. Obs.
		26 4	-2.5	
		22 45		
		3 19		
		8 41		
		Index above		
		308.9 < var. dis.	19.5'	
9	36	328.4	20.6'	
		309.4	40.1' -3.76'	
		330.0		
		307.9	22.4'	(-3.74)'
		330.3	18.5'	
		309.8	40.9' -3.72'	
		328.3		
		Index below		
		41.1	18.9'	
		60.0	19.2'	
		40.9	38.1' -3.88'	
		60.1		
		40.9	20.1'	(-3.86)'
9	42	61.0	18.4'	
9	39.0	40.9	38.5' -3.85'	
5		59.3		
14	39.0		Mean -3.80'	

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1897phae.proj.1349.

Oct. 9, 1897.

Same again

	41.0	18.9'
9	59.9	20.3'
	40.8	39.2' -3.81'
	61.1	
	39.9	21.1' (-3.82)'
	61.0	17.9'
	41.4	39.0' -3.82'
	59.3	

Index above

	130.8	19.2'
	150.0	20.7'
	130.1	39.9' -3.77'
	150.8	
	130.1	20.9' (-3.78)'
9 49	151.0	18.9'
9 46.0	130.4	39.8' -3.78'
5	149.3	Mean -3.80'
14 46.0		

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1897phae.proj.1349.

Oct. 9, 1897.

		S Ursae Minoris	Phot. R.	N. Obs.
		15 50	+78.2	
		23 20		
		7 30		

Index above.

		113.0	51.4'	
		164.4	50.3'	
10	2	114.7	101.7' -1.61'	
		165.0		
		115.0	49.7'	(-1.66)'
		164.7	48.5'	
		114.9	98.2' -1.70'	
		163.4		

Index below.

		205.8	48.2'	
		254.0	44.1'	
		207.0	92.3' -1.85'	
		251.1		
		206.5	45.7'	(-1.84)'
10	8	252.2	47.7'	
10	5.0	205.3	93.4' -1.82'	
5		253.0		
15	5.0			

Mean -1.75'

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1897phae.proj.1349.

Oct. 9, 1897.

Sande again.

		203.8	50.0'
10	10	253.8	48.9'
		206.3	98.9' -1.65'
		255.2	
		204.9	48.8' (-1.70)'
		253.7	48.3'
		205.5	97.1' -1.73'
		253.8	

Index above.

		294.8	49.1'
		343.9	48.8'
		294.0	97.9' -1.71'
		342.8	
		297.3	44.3' (-1.77)'
10	15	341.6	48.9'
10	12.5	295.0	93.2' -1.83'
5		343.9	
15	12.5		Mean -1.74'

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1897phae.proj.1349

Oct. 9, 1897.

Σ 518 Phot. R. N. Obs.

28	10	−7.5
23	45	
4	25	
7	35	

Abandoned too low.

Σ 452 Phot. R. N. Obs.

27	41	+10.5
23	50	
3	51	
8	9	

Abandoned Seeing too bad.

S S Cygni Phot. T. N. Obs

21	34	+42.6
24	20	
2	46	

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1897phae.proj.1349.

Oct. 9, 1897

S S Cygni. Phot. T. N. Obs

Comp star = m.

Index above and left

			89.5	< Comp dis.	90.0'
11	1	38	179.5		90.9'
			88.7		180.9'
			179.6		179.1' − 0.02'
			88.0		91.0' (0.00)
	3	12	179.0		87.6
			90.2		178.6' + 0.03'
			177.8		

Index below and right

			183.8		82.5'
	5	35	266.3		89.0'
			179.0		171.5' + 0.16'
			268.0		
			182.9		86.8' (+ 0.16)
	7	7	269.7		84.3'
	16	92	181.8		171.1' + 0.17'
11	4	23	266.1		
5		+2			Mean + 0.08
16	4	25			

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1897phae.proj.1349.

Oct. 9, 1897.

Same again

			181.6	84.8'	
11	8	25	266.4	87.9'	
			179.2	172.7' +0.14'	
			267.1		
			~~180.9~~ 181.9	84.8'	(+0.10)
10	56				
~~10~~ 9	~~55~~		~~266.0~~ 266.7	91.3'	
			175.0	176.1' +0.07'	
			269.3		

Order left and above

			271.0	85.9'	
13	18		356.9	84.1'	
			270.9	170.0' +0.19'	
			355.0		
			271.0	84.0'	(+0.15)
	14	49	355.0	90.3'	
	5	148	268.2	174.3' +0.11'	
11	11	52	358.5		
5		+2			
16	11	54			
11		21			

Mean +0.12

M 2 var, var 3.5 n in large telescope

M 2 var, var 3 n in finder, but faint

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1897phae.proj.1349.

Oct. 9, 1897.

Examination of Nebulae in Orion for so-called new star.

The small lumpy nebulous mass on the edge of which the so-called new star was, is easily seen tonight, but no star is certainly visible with any of the various powers used, although there is a possible suspicion of a faint stella faint at times, but it is wholly uncertain. Powers used were 2", 1", 300, and achromatic of 400. H. Obs.

12 15 Watch Correction + 2 sec.

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1897phae.proj.1349.

Postect to here.

Oct. 13, 1897. (Wednesday.)

S Cephei		Phot. T.	H. Obs
21	37	+78.3	
22	0		
	23		
21	33	+78.3	
22	10		
	37		
21	51	+78.5	
22	17		
	26		

Index to dec. circle has probably moved as abandoned for present will try double star

Σ 2349

18	32	+33.4
22	26	
3	54	

Set on α Lyrae. Dec circle found to be wrong
Index adjusted

18	32	+38.6
22	35	
4	3	

Chronometer found to be 4 min Fast.

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1897phae.proj.1349.

Oct. 13, 1897.

Σ 2349 Phot. M. M. Obs.

18 32 +33.4

22 35

4 3

9 8 Chronometer 7 min slow

18 32

22 55

4 23

Pos. angle 200°, dis 7", magn 5.5 and 10.6 9.5

Index above

~~218.9~~

9 ~~13~~ ~~264.1~~

~~219.8~~

~~263.0~~

~~Index above~~

220.0

9 ~~17~~ ~~233.5~~ 234.0

~~Phot.~~ ~~Images~~ not well adjusted Readjusted them.

~~Index below~~ (See next page.)

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1897phae.proj.1349.

Oct. 13, 1897.

Σ 2349 Phot. H. H. Obs

Index above.

		219.0		
9	20	232.8	13.8	
		219.9	13.3	
		233.2	27.1	− 4.64
		220.1		− 4.64
		232.1	12.0	
		217.8	15.1	
		232.9	27.1	− 4.64

Index below. Mean = − 4.48

		305.9		
		325.6	16.7	
		309.7	13.5	
		323.2	30.2	− 4.39
		309.9		− 4.33
9	27	324.0	14.1	
		306.2	17.8	
		324.0	31.9	− 4.27

Observations difficult on account of faintness of companion

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1897phae.proj.1349.

Oct. 13, 1897.

Σ 2521 Phot R. N. Obs.

19 ' 21 +19.7

23 ~~23 70~~

~~3 49~~

4 2

Pos angle 30° dis 25" Magn 5.5 and 10.5

Index right and below

313.8

9 40 324.4 10.6

312.0 13.8

325.8 24.2 — 4.87

— 4.80

312.4

325.9 13.5

312.9 12.4

325.3 25.9 — 4.73

Index left and above Mean = −4.80

41.6

55.9 14.3

42.4 12.5

54.9 26.8 — 4.65

42.8

9 46 55.0 12.2 — 4.79

42.8 11.4

54.2 23.6 — 4.93

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1897phae.proj.1349.

Oct. 13, 1897.

☉ Ecli.	Phot. R.	H. Obs
26 .4	−2.5	
23 30		
2 34		
9 26		

Index above.

131.4 < var. dis.

9 57 146.8

130.2

148.4

Reject above Phot. moving.

Index above

129.7 < var. dis. 18.6'

10 0 145.3 17.7'

129.9 36.3' −3.98'

147.6

130.9 17.1' (−4.02)

148.0 17.9'

130.1 35.0' −4.06'

148.0

Index below.

220.4 17.5'

237.9 16.9'

220.3 34.4' −4.10'

237.2

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1897phae.proj.1349.

Oct. 13, 1897.

		220.2	17.7'	(-4.04)
10	5	237.9	18.8'	
10	2.5	219.2	36.5' - 3.97'	
5				
15	2.5	238.0		

Mean - 4.03

Same again

		219.6	18.5'
10	6	238.1	17.2'
		220.1	35.7' - 4.02'
		237.3	

220.3	17.4'	(4.02)
237.7	18.5'	
219.5	35.9' - 4.01'	
238.0		

Order above

		309.6	~~22.2'~~	17.4 ✓	
		331.8	22.4'	17.6 ✓	
		310.0	~~44.6' - 3.53'~~	35.4 ✓	4.04 ✓
		332.4			
		310.0	~~22.6'~~	~~(-3.52)~~ 17.4 ✓	(4.04) ✓
10	11	332.6	22.1'	17.9 ✓	
10	8.5	309.7	~~44.7' - 3.52'~~	35.3 ✓	4.04 ✓
5		331.8			
15	8.5				

~~Mean - 3.74~~

Mean - 4.03 ✓

As it ~~is~~ is quite evident that the readings in ~~two~~ last sets were made in wrong directions, they have been changed as above

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1897phae.proj.1349.

Oct. 13, 1897.

S Cephei Phot. ☆ +78.3 H. Obs.

21 37
24 2
2 25

Index above

	101.6	< Comp. dis.	63.4'
10	27	165.0	64.0'
		102.0	127.4' +1.03'
		166.0	
		100.8	62.5' (+1.03)
		163.3	65.1'
		100.2	127.6' +1.03'
		165.3	

Index below

		194.0	61.6'
		255.6	64.5'
		190.8	126.1' +1.06'
		255.3	
		192.2	64.6' (+1.05)
10	32	256.8	62.3'
10	29.5	192.7	126.9' +1.04'
5		255.0	
15	29.5		Mean +1.04

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1897phae.proj.1349.

Oct. 13, 1897

Same again

		194.0	63.2′	
10	34	257.2	66.4′	
		189.9	129.6′ +0.99′	
		256.3		
		192.8	61.9′	(+1.05)
		254.7	61.7′	
		193.6	123.6′ +1.11′	
		255.3		

Index above

		282.0	65.4′	
		347.4	63.8′	
		282.0	129.2′ +1.00′	
		345.8		
		283.1	64.0′	(+1.00)
10	39	347.1	65.5′	
10	36.5	281.1	129.5′ +0.99′	
5		346.6		
15	36.5			Mean +1.02

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1897phae.proj.1349.

Oct. 13, 1897.

S S Cygni. Phot. ☉ H. Obs.

21 . 34 +42.6

24 34

2 57 Comp star = m

Index left and above

289.3 (Comp. dis 49.4'

11 3 38 338.7 52.1'

286.9 101.5' +1.62'

339.0

287.5 53.5' (+1.56)

5 18 341.0 53.1'

287.1 106.6' +1.50'

340.2

Index right and below

16.8 53.2'

7 17 70.0 53.9'

16.9 107.1' +1.49'

70.8

15.1 55.0' (+1.49)

8 34 70.1 51.8'

23 107 18.1 106.8' +1.49'

11 6 12 69.9

5

16 6 12

Mean +1.52

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1897phae.proj.1349.

Oct. 13, 1897

Same again.

			18.0	51.7′	
11	9	54	69.7	53.8′	
			15.0	105.5′ +1.52′	
			68.8		
			17.2	52.7′	(+1.55)
	11	22	69.9	50.5′	
			17.8	103.2′ +1.58′	
			68.3		

Index left and above.

			107.1	51.7′	
	13.	17	158.8	53.5′	
			106.8	105.2′ +1.53′	
			160.3		
			105.0	54.9′	(+1.51)
	14.	45	159.9	52.1′	
	7	138	106.1	107.0′ +1.49′	
11	12	20	158.2		
5					
16	12	20			Mean +1.53
11		28	pl var, var 2 d. in large telescope		
			Too faint for finder		

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1897phae.proj.1349.

Oct. 13, 1897.

Comp. Stars for S S Cygni H. Obs.

11	30	h	5.5 h'
		h'	3 k
		k	1 l
		l	4 m
		m	5 n
		n	1.5 o
		o	3 o'
		o'	3 p
		p	2.5 q
		α	1.5 q
		p	2 α
		α	3 β
		β	3.5 γ
		γ	2 δ
11	40	q	1.5 β

Rather bright moonlight. Estimates a little difficult
Some light cloud. Estimates not considered quite
as good as if the moon was absent and the sky
perfectly clear

7 0 Watch Correction = -0.5 sec.
11 45 " " = -0.5 sec.

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1897phae.proj.1349.

Oct. 14. 1897. (Thursday)

Σ 36. W. Obs.

24	26	+6.2
21	6	
3	20	
8	40	

7 20 Clouds pretty thick.
Abandoned too cloudy

Σ 90 Phot H. N. Obs

24	5.9	+4.2
21	14	
3	45	
8	15	

7 25 Too cloudy No stars visible in this region. Rochon.
Today H. inserted a double-image prism in Phot. H not far from focus, and rotated it until ~~the~~ two emergent pencils from the quartz and spar prisms, were almost completely superimposed, and the other pencils were extinguished. The fixed spar prism could not be brought close to focus on account of peculiarities in construction of Phot H. The distance of this prism from the eye piece which is usually used with Phot. H is perhaps about $\frac{3}{32}$ of an inch. This being fixed and the quartz prism running up and down the tube of the photometer when it is run up to the farther end of the photometer, the pencils are still quite completely superimposed. An attempt is being made to night to try this form

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1897phae.proj.1349.

Oct. 14, 1897

If photometer but the sky is very cloudy.
Σ 90. Phot H [with additional double image prism inserted as above] H. Obs.

24 59 +4.2
21 55
3 4
8 56

Pos angle 90° dis 30" Magn 5.8 and 6.8
Index left and below.

352.8 (brighter dis
8 12 57.0 64.2 ✓
355.9 62.8 ✓
58.4 (26.) ✓ 1.0 ✓

352.5 66.4 ✓ (0.96 ✓)
58.9
349.2 69.0 ✓
58.2 13 ✓ 4 ✓ 0.87 ✓

Index right and above
83.3 61.7 ✓
145.0 ✓
81.9 64.2 ✓
147.1 (26.9) ✓ 1.04 ✓

1
~~80.2~~ 83.0 66.0 ✓ (0.98 ✓)
8 21 149.0
8 16.5 81.8 66.2 ✓
148.0 (13.2) ✓ 0.93

Mean 0.9

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1897phae.proj.1349.

Oct. 14, 1897

Σ 99

25 7 +23.9

Σ 147 Phot N. H Obs,

25	34	-11.9
22	20	
3	14	
8	46	

8 33 Cloudy

Too cloudy to measure.

Σ

α Leti Phot. R. H. Obs.

26	4	-2.5
22	40	
3	24	
8	36	

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1897phlee.proj.15349

Oct. 14, 1897.

o Ceti. Phot. R. H. Obs.

Index below.

41.2 <vandis

8 52 57.3 16.1 ✓

41.0

57.1 16.1 ✓ / 32.2 ✓ − 4.2 ✓ ✓

(−4.30)

41.0 15.4 ✓

56.4

41.8 15.7 ✓ / 30.9 ✓ − 4.3 4 ✓

Index above.

130.2 17.7 ✓

147.9

131.1 16.1 ✓ / 33.2 ✓ − 4.1 4 ✓

147.2

(4.14)

130.8 16.2 ✓

8 59 147.0

8 55.5 130.0 17.7 ✓ / 33.9 ✓ − 4.1 3 ✓

5

13 55.5 147.7

Mean − 4.22

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1897phae.proj.1349.

Oct. 14, 1897.

Same again.

		130.9		
			16.3 ✓	
9	1	147.2		
		131.0	16.4 ✓	
			32.7 ✓	K.21 ✓
		147.4		
		130.3	17.1 ✓	(K.16)
		147.4		
		130.8	17.1 ✓	
			34.2 ✓	K.11 ✓
		147.9		

Index below.

		220.9		
			16.9 ✓	
		237.8		
		220.9	16.1 ✓	
			33.0 ✓	K.19 ✓
		237.0		
		220.3	16.7 ✓	(K.12)
9	8	237.0		
9	4.5	220.6	16.8 ✓	
5				
14	4.5	237.4	33.5 ✓	K.16 ✓

Mean — K.17

Images faint. Observations made through clouds.

9 13 Clouds growing thicker.

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1897phae..proj..1349

Oct. 14, 1897.

Σ 307

26 H2 +55.4
Abandoned
Σ 331 Phot H. (Objective Prism inserted) H. Obs.

26 52 +51.9
23 6
3 46
8 14
Pos. angle F5° dis 12" Magn 5.4 and 6.7

Index below
152.9 Lighter dis.
9 23 230.8 ~~62.8~~ ✓
172.3
235.1 62.8 ✓
111.6 1.3 A ✓

172.8 63.0 1.3 A ✓
235.8
179.9 ~~62.5~~
228.4 111.✓ 1.3 A ✓

Index above
272.5 ~~6.4~~ ✓
318.9
266.8 ~~9.1~~ ✓
325.9 10✓.✓ ✓ 1.✓-2 ✓

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1897phae.proj.1349.

Oct. 14, 1897

266.0
9 31 324.0 58.0 (1.53)
271.2
14.4 318.2 57.0 1.54
105.0
mean 1.56

Σ 528 Phot H. (Starfield inserted) / H. Obs.

28 15 +25.3
23 30
4 45
7 15

Pos angle 25° dis 18." 5.5 and 7.9
Index right and above
276.8
9 43 310.9 34.1
281.0
308.0 27.0 2.42
61.1

280.9
309.9 29.0 (2.42)
278.2
310.0 31.8 2.43
60.8

Index left and below
10.3
44.1 33.8
11.0
38.2 27.2 2.42
61.0

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1897phae.proj.1349

Oct. 14, 1897

12.1 25.2 ✓ (2.89) ✓

9 49 37.3.

10.7. $\frac{32.1}{7.3}$ ✓ 2.96 ✓ mean 2.86

42.8

Observations extremely difficult on acct of bright moonlight and clouds

9 50 Too cloudy to continue further

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1897phae.proj.1349.

Oct. 15, 1897. (Friday)

7 0 Watch Correction = −7 sec.

H Delphini Phot. T. H. Obs.

20 31 +17.7

21 38

1 0

Index left and above

195.0 Comp. div 61.9'.

7 32 3 256.9 59.3'

195.1 121.2' +1.17'

254.4

193.1 61.8' (+1.14)'

33 30 254.9 62.7'

193.3 124.5' +1.10'

256.0

Index right and below

284.5 57.2'

35 34 341.7 57.0'

286.2 114.2' +1.32'

343.2

285.9 55.5' (+1.34)'

36 56 341.4 57.2'

16 123' 285.0 112.7' +1.36'

7 34 31' 342.2

5 −7 Mean +1.24'

12 34 24

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1897phae.proj.1349

Oct. 15, 1897.

	284.6	59.0'	
7 40 2	343.6	59.8'	
	282.5	118.8' +1.22'	
	342.3		
	284.2	60.8'	(+1.24)'
41 17	345.0	56.7'	
	284.0	117.5' +1.25'	
	340.7		

Index left and above

	13.0	60.3'	
42 54	73.3	57.6'	
	15.5	117.9' +1.24'	
	73.1		
	14.1	61.2'	(+1.21)'
44 26	75.3	59.6'	
7 99'	12.3	120.8' +1.18'	
7 42 10'	71.9		
5 -7			
12 42 3			

Mean +1.22'

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1897phae.proj.1349.

Oct. 15, 1897.

		15.1	57.2'	
7	45	57 72.3	66.2'	
		11.8	123.4' +1.12'	
		78.0		
		11.3	64.1'	(+1.14)'
47	16	75.4	57.7'	
		14.9	121.8' +1.15'	
		72.6		

Under right and below

		102.5	61.3'	
49	23	163.8	68.2'	
		98.8	129.5' +0.99'	
		167.0		
		100.3	69.0'	(+0.94)'
	50 27	169.3	67.7'	
	191 118'	103.0	131.2' +0.95'	
7	48 14'	165.2	Mean +1.06'	
5	-7			
12	48 7			

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1897phae.proj.1349.

Oct 15, 1897

IV

		101.3	63.8′	
7	53 52	165.1	66.1′	
		101.1	129.9′ +0.98′	
		167.2		
		102.6	63.5′	(+1.00)′
	55 3	166.1	64.7′	
		103.2	128.2′ +1.02′	
		167.9		

Index left and above

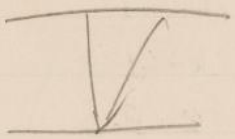
	193.0	62.2′	
57 6	255.2	62.9′	
	193.6	125.1′ +1.08′	
	256.5		
	191.7	64.3′	(+1.08)′
58 16	256.0	61.2′	
23 75′	192.1	125.5′ +1.07′	
7 56 4′	253.3		
5 -7			
12 55 57			

Mean +1.04′

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1897phae.proj.1349.

Oct 15, 1897



			193.3	60.8'	
7	59	34	254.1	64.7'	
			192.3	125.5'	+1.07'
			254.0		
			192.3	63.9'	(+1.06)'
8	1	0	256.2	62.4'	
			193.6	126.3'	+1.06'
			256.0		

Index right and below

			281.1	64.1'	
	3	16	345.2	63.1'	
			280.4	127.2'	+1.04'.
			343.5		
			277.1	68.7'	(+1.00)'
	4	28	345.8	62.7'	
	7	78	2821	131.4'	+0.95'
8	2	4	344.8		
5		-7			
13	1	57			

Mean +1.03'

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1897phae.proj.1349.

Oct 15, 1897

VI

		287.0	61.8'	
8	6	4 343.8	66.7'	
		278.3	128.5'	+1.01'
		345.0		
		278.9	66.5'	(+0.98)'
7	21	345.4	65.1'	
		278.9	131.6'	+0.95'
		344.0		

Index left and above

		12.0	63.4'	
9	8	75.4	67.4'	
		9.8	130.8'	+0.96'
		77.2		
		9.8	66.4'	(+0.94)'
	10 42	76.2	66.4'	
	32 75'	9.6	132.8'	+0.92'
8	8 19'	76.0		
5	-7			
13	8 12			

Mean +0.96'

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1897phae.proj.1349.

Oct 15, 1897.

			9.7	65.7'	
8	12	21	75.4	67.8'	
			9.0	133.5' +0.91'	
			76.8		
			10.8	67.3'	(+0.92)'
13	24		78.1	65.2'	
			10.8	132.5' +0.93'	
			76.0		

Index right and below

			101.0	66.8'	
15	18		167.8	68.3'	
			98.7	135.1' +0.87'	
			167.0		
			97.8	70.2'	(+0.84)'
	16	40	~~68.0~~ 168.0	67.5'	
	16	103	99.2	137.7' +0.82'	
8	14	26	166.7		
5		-7			
13	14	21			

Mean +0.88'

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1897phae.proj.1349.

Oct. 15, 1897

	101.0	66.8'	
	~~102.0~~		
8 18 4	167.8	69.7'	
	99.3	136.5' +0.84'	
	169.0		
	99.2	72.0'	(+0.82)'
1910	171.2	67.0'	
	100.1	139.0' +0.79'	
	167.1		

Index left and above

	190.2	68.8'	
20 57	259.0	70.6'	
	188.9	139.4' +0.79	
	259.5		
	187.7	70.3'	(+0.80)'
22 24	258.0	68.0'	
79 90'	189.1	138.3' +0.81'	
8 20 8	257.1		
5 -7			
13 20 1			

Mean +0.81'

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1897phae.proj.1349.

Oct 15, 1897

			186.5	74.5'	
8	25	7	261.0	67.6'	
			189.6	142.1'	+0.73'
			257.2		

IX

		187.1	71.8'	(+0.72)'
26	28	258.9	71.8'	
		186.6	143.6'	+0.70'
		260.4		

Index right and below

		280.4	67.4'	
28	22	347.8	73.1'	
		276.0	140.5'	+0.76'
		349.1		

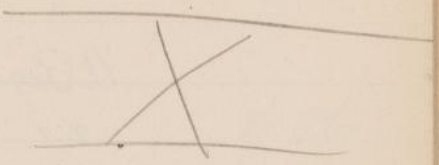
		274.9	74.0'	(+0.74)'
29	37	348.9	68.0'	
8	28 94'	280.0	142.0'	+0.73'
8	27 24'	348.0		
5	-7			
13	27 17			

Mean +0.73'

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1897phae.proj.1349.

Oct 15, 1897



279.8 — 67.4'

8 30 57 347.2 — 73.0'

276.1 — 140.4' + 0.77'

349.1

275.8 — 72.5' — (+0.72)'

31 03 348.3 — 72.4'

278.3 — 1449' + 0.68'

350.7

Index left and above

~~8.6~~

~~34 21 78.6~~

8.4 — 69.4

35 39 77.8 — 72.7'

7.0 — 142.1' + 0.73

79.7

37 20 7.7 — 71.9' — (+0.70)'

~~36 49~~ ~~81.~~ + 79.6 — 73.4'

13 163' 6.1 — 145.3' + 0.67'

8 33 56 ~~80.~~

5 -7

13 33 51 79.5

Mean +0.71'

8 H5 Watch Correction = −7 sec

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1897phae.proj.1349.

Oct. 16, 1897. (Saturday)

U Pegasi. Phot. ☉ H. Obs.

23 49 + 15.5

21 0

2 49

9 11

7 10 Cloudy

23 49

21 22

2 27

9 33

23 49

21 42

2 7

9 53

8 15 Still cloudy

23 49

22 25

1 24

10 36

8 40 U Pegasi found but all cloudy again

23 49

22 55

0 54

11 6

9 20 After long trying. It is found utterly impossible to do anything with U Pegasi tonight Cloudiness steadily increasing.

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1897phae.proj.1349

Oct. 16, 1897.

Σ 422 N. Obs

24	31	+0.2
23	20	
4	11	
7	49	

9 21 Clouds too thick.

Σ 145 N. Obs.

25	34	+25.1
23	22	
2	12	
9	48	

9 25 Clouds too thick

Σ 289 Phot. Mt. N. Obs

26	33	+26.5
23	25	
3	8	
8	52	

9 31 Bright component seen at times. Fainter component invisible.

Index

16.9

9 34 Clouds thick ~~29.1~~

9 37 30.5, 25.9

} Reject.

9 45 Clouds thick

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1897phae.proj.1349.

Oct. 16, 1897

9 48 Night so bad and steadily growing worse that it is impossible to do anything even on double stars Clouds steadily growing thicker

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1897phae.proj.1349

Oct. 15, 1897. (Monday.)

U Pegasi. Phot. T. H. Obs.

23 49 +15.5

21 2 Comp. Star = Dm. +15° 4916 (A.A)

2 47

9 13

6 50 Watch Correction = +11 sec.

Index left and above.

			6.1	Comp. dia	74.1 ✓
7	28	10	80.2		74.8 ✓
			5.7		148.9 ✓ +0.60'
			80.5		
			5.8		75.3 ✓ (+0.59)
30	2		81.1		74.4 ✓
			5.7		149.7 ✓ +0.58'
			80.1		

Index right and below.

		97.8	73.8 ✓	
32	18	171.6	77.0 ✓	
		95.2	150.8 ✓ +0.56'	
		172.2		
		~~92.4~~		(+0.56)
		95.1	76.7 ✓	
34	9	171.8	73.8 ✓	
4	39	96.3	150.5 ✓ +0.57'	
7 31	10	~~+69.9~~ ✓		
5				
12 31	10 +11	170.1		Mean +0.58
12 31	21			

I

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1897phae.proj.1349.

Oct. 18, 1897.

II

			96.2	72.5 ✓	
7	39	36	168.7	74.9 ✓	
			96.7	147.4 ✓	+0.63
			171.6		
			95.5	75.0 ✓	(+0.62)
41	44		170.5	73.7 ✓	
			~~97.5~~ 96.2	148.7 ✓	+0.60
			~~+65.8~~ 169.9		

Index left and above.

			189.9	67.3 ✓	
46	2		257.2	72.6 ✓	
			189.1	139.9 ✓	+0.75
			261.7		
			186.2	75.7 ✓	(+0.69)
	48	5	261.9	73.1 ✓	
	14	87	187.0	148.8 ✓	+0.60
7	43	52	260.1		
5					
12	43	52			
		+11			
12	44	3			

Mean +0.66

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1907phao.proj.1349

Oct. 15, 1897.

III

		184.7	74.8 ✓		
7	49	53	259.0	74.2 ✓	
			187.1	149.0 ✓	+0.59
			261.3		
			186.0	76.0 ✓	(+0.63)
51	36		262.0	69.1 ✓	
			188.0	145.1 ✓	+0.67
			257.1		

Index right and below.

		275.9	72.7 ✓		
54	32		348.6	70.4 ✓	
			277.8	143.1 ✓	+0.71
			348.2		
			278.3	70.1 ✓	(+0.74)
	56	6	348.4	70.4 ✓	
	10	127	277.1	140.5 ✓	+0.76
7	53	2 ✓	347.5		
5					
12	53	2			
1		+11			
12	53	13			

Mean +0.68

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1897phae.proj.1349.

Oct. 15, 1897

IV

			276.8	71.0 ✓	
7	59	22	347.8	71.3 ✓	
			277.2	142.3 ✓	+0.73
			348.5		
			278.4	69.0 ✓	(+0.74)
8	1	48	347.4	72.3 ✓	
			276.7	141.3 ✓	+0.75
			349.0		

Index left and above.

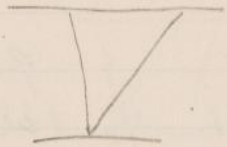
			9.2	68.7 ✓	
	4	38	77.9	70.4 ✓	
			~~6.2~~ 8.5	139.1 ✓	+0.79
			78.9		
			7.2	68.1 ✓	(+0.82)
	6	49	75.3	67.7 ✓	
	10	157	8.6	135.8 ✓	+0.86
8	3	9	76.3		
5					
13	3	9			
		+11			
13	3	20			

Mean +0.78

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1907phac.proj.1349

Oct. 15, 1897.



		7.1	69.9 ✓		
5	10	40 77.0	67.9 ✓		
		~~7.1~~ 8.2	137.8 ✓	+0.82 ✓	
		76.1			
		9.3	68.1 ✓		(+0.86)
13	0	77.4	66.4 ✓		
		9.5	134.5 ✓	+0.89 ✓	
		75.9			

Index right and below.

		99.1	67.8 ✓		
15	33	166.9	68.6 ✓		
		99.2	136.4 ✓	+0.85 ✓	
		~~+68.2~~ 167.5			
		99.0	68.4 ✓		(+0.82)
	17	56 167.4	70.4 ✓		
	15	129 99.7	138.8 ✓	+0.80 ✓	
8	14	17 ✓ 170.1			Mean +0.84
5					
13	14	+17			
13	14	28			
	5	20			

Observing through some light cloud. Sky hazy

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1897phae.proj.1349.

Oct. 15, 1897

VI

			98.9	69.5 ✓	
8	21	7	168.4	66.2 ✓	
			101.0	135.7 ✓ +0.86 ✓	
			167.2		
			101.7	64.5 ✓	(+0.90)
	23	5	166.2	66.9 ✓	
			100.9	131.4 ✓ +0.95 ✓	
			167.8		

Index left and above

			192.6	63.3 ✓	
	26	5	255.9	67.5 ✓	
			191.0	130.8 ✓ +0.96 ✓	
			255.5		
			190.0	66.9 ✓	(+0.96)
	27	59	256.9	64.3 ✓	
	17	76	192.0	131.2 ✓ +0.95 ✓	
8	24	34	256.3		Mean +0.93
5					
13	24	34			
		+11			
13	24	45			

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1897phae.proj.1349

Oct. 15, 1897

8 37 Clouds Considerably thick

VII

~~8~~ 8 37 40 ~~193.9~~ 191.0 67.5 ✓
~~8 37 42~~ ~~258.2~~ 258.5 67.0 ✓
134.5 ✓ +0.89

190.1
257.1

190.3 66.2 ✓ (+0.90)
39 18 256.5 66.4 ✓
190.5 132.6 ✓ +0.92
256.9

Index right, and below

282.3 60.1 ✓
42 12 342.4 65.5 ✓
~~Clouds thick~~ 125.6 ✓ +1.07

280.3
345.8
~~13~~ .

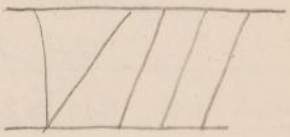
(+1.05)

281.2 64.1 ✓
44 39 345.3 63.4 ✓
2 10 9 280.8 127.5 ✓ +1.03
8 40 57 344.2 Mean +0.98
5
13 40 57
+11
13 41 8

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1897phae.proj.1349.

Oct. 15, 1897



			283.3	60.8 ✓	
8	49	21	344.1	65.0 ✓	
			281.0	125.8 ✓	+1.07 ✓
			346.0		
			279.3	65.7 ✓	(+1.02)
51	41		345.0	64.9 ✓	
			280.2	130.6 ✓	+0.97 ✓
			345.1		

Index left, and above

			11.5	63.9 ✓	
54	48		75.4	63.3 ✓	
			11.8	127.2 ✓	+1.04 ✓
			75.1		
			12.0	65.1 ✓	(+1.02)
	57	10	77.1	64.5 ✓	
	11	120	10.0	129.6 ✓	+0.99 ✓
8	53	15	74.5		
5					
13	53	15			
		+11			
13	53	26			

Mean +1.02

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1897phae.proj.1349

Oct. 15, 1897.

			11.7	63.4 ✓	
9	1	38	75.1	65.2 ✓	
			11.1	128.6 ✓	+1.01 ✓
			76.3		
			11.9	65.2 ✓	(+0.96)
	2	31	77.1	68.7 ✓	
			8.6	133.9 ✓	+0.90 ✓
			77.3		

Index right and below.

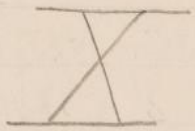
			102.9	63.9 ✓	
	6	26	166.8	67.1 ✓	
			99.8	131.0 ✓	+0.96 ✓
			166.9		
			100.0	68.9 ✓	(+0.92)
	8	6	168.9	66.5 ✓	
	17	101	99.9	135.4 ✓	+0.87 ✓
9	4	40	166.4		
5					
14	4	40			
		+11			
14	4	51			

Mean +0.94

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Oct. 15, 1897



			100.0	68.2 ✓	
9	9	53	168.2	72.2 ✓	9
			97.4	140.4 ✓ +0.77	
			169.6		
			96.7	71.5 ✓	(+0.76)
12	21		+70.6 168.2	70.0 ✓	
11	45		98.4	141.5 ✓ +0.74	
			168.4		

Index left and above

			189.5	72.6 ✓	
15	12		262.1	73.6 ✓	
			188.3	146.2 ✓ +0.65	
			261.9		
			189.5	70.4 ✓	(+0.66)
	16	56	259.9	75.5 ✓	
	12	142	187.1	145.9 ✓ +0.66	
9	13	36	262.6		
5					
14	13	36			
		+11			
14	13	47			

Mean +0.71

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Oct. 15, 1897.

XI

			186.3	75.3 ✓	
9	20	0	261.6	69.1 ✓	
			188.5	144.4 ✓	+0.69
			257.6		
			190.7	68.3 ✓	(+0.71)
22	0		259.0	74.0 ✓	
			187.6	142.3 ✓	+0.73
			261.6		

Index right and below

			277.9	72.3 ✓	
24	51		350.2	69.0 ✓	
			279.2	141.3	+0.75
			348.2		
			277.5	72.0 ✓	(+0.72)
26	27		349.5	72.4 ✓	
12	78		277.0	144.4 ✓	+0.69
9	23	20	349.4		
5					
14	23	20			
		+11			
14	23	31			

Mean +0.72

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Oct. 18, 1897.

XII

			277.3	71.9 ✓	
9	30	46	349.2	76.9 ✓	9
			275.0	148.8 ✓ +0.60	
			351.9		
			275.2	75.6 ✓	(+0.61)
	32	24	350.8	72.3 ✓	
			277.9	147.9 ✓ +0.62	
			350.2		

Index left and above.

			6.3	75.2 ✓	
	35	4	81.5	74.6 ✓	
			5.2	149.8 ✓ +0.58	
			79.5		
			4.2	76.6 ✓	(+0.57)
	36	50	80.8	74.4 ✓	
	13	124	6.9	151.0 ✓ +0.56	
9	33	46	~~77.9~~		
5			81.3	Mean +0.59	
14	33	46			
		+14			
14	33	57			

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1897phae..proj..1349.

Oct. 18, 1897.

XIII

			5.4	75.5 ✓	
9	46	11	80.9	76.4 ✓	
			5.9	151.9 ✓	+0.54'
			82.3		
			4.9	76.2 ✓	(+0.56)
47	38		81.1	74.2 ✓	
			7.2	150.4 ✓	+0.57'
			~~80.6~~ 81.4		

Index right and below

			97.0	71.2 ✓	
57	3		168.2	75.4 ✓	
			95.9	146.6 ✓	+0.64'
			171.3		
			95.2	77.7 ✓	(+0.56)
	52	52	172.9	76.7 ✓	
	196	104	95.0	154.4 ✓	+0.49'
9	49	26	171.7		
5					
14	49	26			
		+11			
14	49	37			

Mean +0.56

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Oct. 18, 1897.

XIV

			95.4	74.6 ✓		
9	58	25	170.0	78.2 ✓		
			93.8	152.8 ✓	+0.52	
			172.0			
			92.8	81.1 ✓		(+0.49)
10	0	27	173.9	74.6 ✓		
			95.5	155.7 ✓	+0.46	
			170.1			

Index left and above

			187.0	77.9 ✓		
	3	42	264.9	78.9 ✓		
			183.2	156.8 ✓	+0.44	
			262.1			
			185.7			
	~~5~~	~~19~~	~~265.5~~	79.3 ✓		(+0.42)
	6	0	265.0	79.2 ✓		
	7	94	184.5	158.5 ✓	+0.41	
10	2	8	263.7			
5						
15	2	8				
		+11				
15	2	19				

Mean +0.46

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Oct. 15, 1897.

XV

			186.9	78.1 ✓	
10	9	47	265.0	80.5 ✓	
			183.0	158.6 ✓	+0.41 ✓
			263.5		
			186.7	77.8 ✓	(+0.44)
	11	31	264.5	77.1 ✓	
			187.2	154.9 ✓	+0.48 ✓
			264.3		

Index right, and below.

			277.4	72.1 ✓	
	13	40	349.5	78.3 ✓	
			274.2	150.4 ✓	+0.57 ✓
			352.5		
			272.0	81.2 ✓	(+0.52)
	15	4	353.2	74.7 ✓	
	8	122	275.2	155.9 ✓	+0.46 ✓
10	12	30	349.9		
5					
15	12	30			
		+10			
15	12	40			

Mean +0.48

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Oct. 18, 1897.

XVI

			3.9	78.6 ✓	
10	25	21	82.5	80.8 ✓	
			3.3	159.4 ✓	+0.39'
			84.1		
			2.0	80.9 ✓	(+0.38)
26	57		82.9	80.2 ✓	
			2.2	161.1 ✓	+0.36'
			82.4		

Index left and above.

			90.7	83.2 ✓	
29	40		173.9	78.9 ✓	
			93.3	162.1 ✓	+0.34'
			172.2		
			93.8	77.5 ✓	(+0.38)
	31	42	171.3	80.4 ✓	
	111	160	92.6	157.9 ✓	+0.42'
10	28	25	173.0		
5					
15	28	25			
		+10			
15	28	35			

Mean +0.38

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Oct, 18, 1897.

XVII

			90.1	84.9 ✓	
10	37	20	175.0	77.8 ✓	
			94.4	162.7 ✓ +0.33	
			172.2		
			~~96.3~~ 95.1	77.3 ✓	(+0.34)
39	8		172.4	83.8 ✓	
			90.0	161.1 ✓ +0.36	
			173.8		

Index right and below

			182.9	83.0 ✓	
42	48		265.9	80.9 ✓	
			183.0	163.9 ✓ +0.30	
			263.9		
			184.7	77.4 ✓	(+0.34)
~~44~~	~~40~~		262.1	83.0 ✓	
2	116		183.2	160.4 ✓ +0.37	
10	40	59	266.2		
5					
15	40	59			
		+10			
15	41	9			

Mean +0.34

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Oct. 18, 1897.

XVIII

		181.9	85.4 ✓		
10	42	32	267.3	81.4 ✓	
			182.9	166.8 ✓	+0.25
			264.3		
			184.0	79.0 ✓	(+0.28)
49	43		263.0	84.0 ✓	
			180.2	163.0 ✓	+0.32
			264.2		

Index left and above.

		276.5	76.4 ✓		
53	21	352.9	82.0 ✓		
		273.0	158.4 ✓	+0.41	
		355.0			
		273.0	81.8 ✓	(+0.38)	
55	0	354.8	79.9 ✓		
19	96	274.9	161.7 ✓	+0.35	
10	50	9	354.8	Mean +0.33	
5					
15	50	9			
		+10			
15	51	19			

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Oct. 15, 1897

XIX

			277.7	71.6 ✓		
10	55	42	349.3	79.2 ✓		
			~~269.7~~	274.3	150.8 ✓	+0.56
			353.5			
			272.8	81.3 ✓		(+0.50)
11	0	22	354.1	75.7 ✓		
			274.5	157.0 ✓		+0.44
			350.2			

Index right and below.

			5.7	76.4 ✓		
	3	44	82.1	83.2 ✓		
			1.6	159.6 ✓		+0.39
			84.8			
			0.2	81.1 ✓		(+0.41)
	5	26	81.3	76.2 ✓		
	6	134	5.4	157.3 ✓		+0.43
11	2	4	~~83.1~~			
5			81.6			Mean +0.46
16	2	4				
		+10				
16	2	14				

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Oct. 18, 1897

XX

			5.4	75.2 ✓	
11	11	0	80.6	82.8 ✓	
			0.2	158.0 ✓	+0.42
			83.0		
			2.6	81.6 ✓	(+0.43)
14	21		84.2	75.1 ✓	
			4.8	156.7 ✓	+0.44
			79.9		

Index left and above

			95.2	77.0 ✓	
18	58		172.2	84.8 ✓	
			90.2	161.8 ✓	+0.35
			175.0		
			94.3	80.3 ✓	(+0.38)
	19	51	174.6	77.6 ✓	
	22	130	94.8	157.9 ✓	+0.42
11	16	2	172.4		
5					
16	16	2			
		+10			
16	16	12			

Mean +0.40

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Oct. 15, 1897

XXI

			94.9	79.6 ✓	
11	22	3	174.5	81.3 ✓	
			93.0	160.9 ✓	+0.36 ✓
			174.3		
			94.0	80.7 ✓	(+0.38)
	24	13	174.7	78.3 ✓	
			94.5	159.0 ✓	+0.40 ✓
			172.8		

Index right and below

			185.0	79.2 ✓	
	27	48	264.2	81.1 ✓	
			185.0	160.3 ✓	+0.38 ✓
			266.1		
			183.9	80.8 ✓	(+0.38)
	29	38	264.7	78.9 ✓	
	22	102	184.0	159.7 ✓	+0.39 ✓
11	25	56	262.9		Mean +0.38
5					
16	25	56			
		+10			
16	26	6			

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Oct. 18, 1897.

XXII

			187.8	73.7 ✓	
11	31	20	261.5	79.4 ✓	
			185.8	153.1 ✓ +0.51	
			265.2		
			183.3	81.6 ✓	(+0.44)
	32	41	264.9	78.7 ✓	
			185.0	160.3 ✓ +0.38	
			263.7		

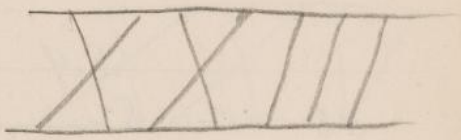
Index left and above

			275.4	75.8 ✓	
	34	46	351.2	78.4 ✓	
			272.8	154.2 ✓ +0.49	
			351.2		
			273.9	78.9 ✓	(+0.48)
	36	5	352.8	77.0 ✓	
	13	112	275.0	155.9 ✓ +0.46	
11	33	43	352.0		Mean +0.46
5					
16	33	43			
		+10			
16	33	53			

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Oct. 18, 1897.



		276.4	73.0 ✓		
11	45	6	349.4	77.7 ✓	
			273.5	150.7 ✓	+0.56
			351.2		
			275.1	77.7 ✓	(+0.53)
46	~~25~~	50	352.8	75.9 ✓	
			276.1	153.6 ✓	+0.50
			352.0		

Index right and below.

		4.0	78.9 ✓		
49	17	82.9	78.2 ✓		
		4.1	157.1 ✓	+0.44	
		82.3			
		4.0	79.0 ✓	(+0.44)	
	51	20	83.0	78.7 ✓	
	191	93	4.5	157.7 ✓	+0.43
11	48	8	83.2		
5					
16	48	8			
		+10			
16	48	18			

Mean +0.48

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Oct. 18, 1897.

XXIV

			5.9	76.8 ✓	
11	53	45	82.7	80.3 ✓	
			4.2	157.1 ✓	+0.44
			84.5		
			4.9	76.2 ✓	(+0.46)
	55	11	81.1	78.8 ✓	
			3.0	155.0 ✓	+0.48
			81.8		

Index left and above

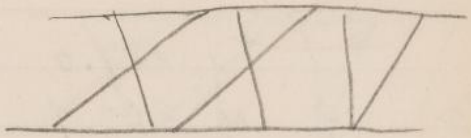
			98.4	71.5 ✓	
	59	16	169.9	80.0 ✓	
			92.1	151.5 ✓	+0.55
			172.1		
			95.2	79.0 ✓	(+0.50)
12	0	52	174.2	77.3 ✓	
	227	124	95.9	156.3 ✓	+0.45
11	57	16	173.2		
5					
16	57	16			
		+10			
16	57	26			

Mean +0.48

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Oct. 15, 1897



			92.4	80.8 ✓	
12	6	20	173.2	76.5 ✓	
			96.2	157.3 ✓	+0.43
			172.7		
			94.3	78.4 ✓	(+0.44)
8	10		172.7	78.6 ✓	
			94.1	157.0 ✓	+0.44
			172.7		

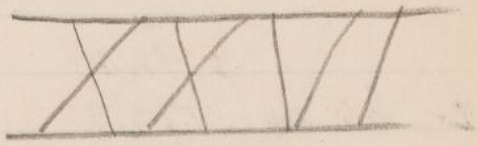
Index right and below.

			187.5	71.5 ✓	
10	42		259.0	78.3 ✓	
			185.7	149.8 ✓	+0.58
			264.0		
			187.2	76.4 ✓	(+0.56)
	12	10	263.6	74.7 ✓	
	36	82	~~188.0~~	151.1	+0.55
12	9	20	187.6		
5			262.3		Mean +0.50
17	9	20			
		+10			
17	9	20			

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			187.0	74.7 ✓	
12	19	11	261.7	73.7 ✓	
			185.3	148.4 ✓	+0.61
			259.0		
			186.1	76.0 ✓	(+0.58)
20	34		262.1	75.1 ✓	
			186.9	151.1 ✓	+0.55
			262.0		

Index left and above

			276.8	73.1 ✓	
22	27		349.9	72.0 ✓	
			277.1	145.1 ✓	+0.67
			349.1		
			276.0	74.1 ✓	(+0.64)
24	5		350.1	74.5 ✓	
5	78		275.8	148.6 ✓	+0.60
12	21	34	350.3		Mean +0.61

5

17 21 34

+10

17 21 44

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Oct. 15, 1897.

XXVII

		276.6	74.3 ✓		
12	26	20	350.9	74.7 ✓	
			275.3	149.0	+0.59
			350.0		
			277.3	72.8	(+0.63)
27	42		350.1	72.3	
			277.1	145.1	+0.67
			349.4		

Index right and below

		8.0	72.3		
31	9	80.3	71.5		
		8.0	143.8	+0.70	
		79.5			
		5.3	75.2	(+0.64)	
	33	80.5	74.1		
	11 7	72 6.0	149.3	+0.59	
12	29	33 80.1			
5					
17	29	33			
	[	+10			
17	29	43			

Mean +0.64

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Oct. 18, 1897.

XXVIII

	9.7	69.2'	
12 3 4 20	78.9	73.9'	
	6.9	143.1' +0.71'	
	80.8		
	6.9	71.3'	(+0.69)
35 50	78.2	73.9'	
	5.9	145.2' +0.67'	
	79.8		

Index left and above

	96.8	74.7'	
38 3	171.5	71.9'	
	97.8	146.6' +0.64'	
	169.7		
	98.2	71.6'	(+0.70)
39 36	169.8	69.4'	
26 103	99.3	141.0' +0.75'	
12 36 56	168.7		
5			
17 36 56			
+10			
17 37 6			

Mean +0.70

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XXIX

		99.5	69.3'	
12	41 33	168.8	74.0'	
		95.3	143.3' +0.71'	
		169.3		
		97.4	72.5'	(+0.69)
	43 22	169.9	72.5'	
		95.2	145.0' +0.67'	
		170.7		

Index right and below

		188.7	73.1'	
	45 35	261.8	68.2'	
		189.8	141.3' +0.75'	
		258.0		
		188.0	69.1'	(+0.78)
	47 2	257.1	69.8'	
	16 92	188.9	138.9' +0.80'	
12	44 23	258.7		
5				Mean +0.74
17	44 23			
	+10			
17	44 33			

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Oct. 18, 1897.

			189.0	68.8′	
12	48	40	257.8	70.3′	
			187.9	139.1′ +0.79′	
			258.2		
			186.7	70.8′	(+0.78)′
	50	6	257.5	69.9′	
			189.9	140.7′ +0.76′	
			259.8		

Index left and above

			278.2	71.2′	
	52	1	349.4	69.2′	
			278.3	140.4′ +0.77′	
			347.5		
			279.0	70.0′	(+0.76)′
	53	16	349.0	71.1′	
	3	63	278.2	141.1′ +0.75′	
12	51	1	349.3		
5					
17	51	1			
		+10			
17	51	11			

Mean +0.77′

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Oct. 15, 1897.

XXXI

			278.2	68.8′	
12	54	45	346.0	67.5′	
			279.3	136.3′	+0.85′
			346.8		
			278.9	68.0′	(+0.81)′
56	26		346.9	72.4′	
			278.6	140.4′	+0.77′
			348.0		

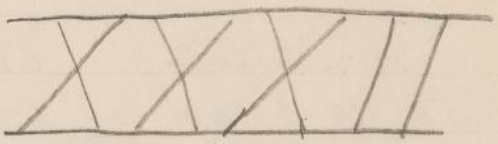
Index right and below

			9.0	68.5′	
58	19		77.5	68.4′	
			8.5	136.9′	+0.84′
			76.9		
			7.9	70.4′	(+0.82)′
13	0	4	78.3	68.5′	
	278	94	8.9	138.9′	+0.80′
12	57	24	77.4		Mean +0.82′
5					
17	57	24			
		+10			
17	57	34			

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Oct. 18, 1897.



			7.3	70.7'	
13	2	15	78.0	69.0'	
			7.3	139.7'	+0.75'
			76.3		
			8.9	69.0'	(+0.79)'
	3	31	77.9	69.6'	
			7.4	138.6'	+0.80'
			77.0		

Index left and above

			101.3	66.5'	
	5	14	167.8	70.8'	
			98.1	137.3'	+0.83'
			168.9		
			99.8		(+0.80)'
	~~6~~	~~18~~	~~+++.+~~	69.6'	
	6	36	169.4	70.3'	
	16	96	98.9	139.9'	+0.75'
13	4	24	169.2		
5					
18	4	24			
		+10			
18	4	34			
13		15			

Mean +0.80

Watch Correction = +10 sec.

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1897phae.proj.1349

Oct. 19, 1897. (Tuesday)

7 15 Cloudy

7 30 Somewhat clearer. Will try for Comp Stars for R Aquarii H. Obs.

23	33	-16.2
21	43	
1	50	
10	10	

7 45 Sky not clear. Some cloud in this region.

7 50 Clouds.

7 56 r 4 s
s 4.5 t
t 5 u

8 10 Put on Photometer V.

8 14 Clouds again

8 32 Sky now a little clearer

8 36 After much trying it is still too cloudy for comp stars for variables

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1897phae.proj.1349.

Oct. 19, 1897.

Σ 2349 N. Obs.

18 32 +33.4
22 49
4 17

Too Cloudy. abandoned.

Σ 2404 N. Obs.

18 45 +10.5
22 50
4 5

8 50 Abandoned Atmospheric conditions to bad for this star.

Σ 2424 N. Obs.

18 53 +13.5
23 1
4 8

8 56 Abandoned too cloudy.

Σ 45-1 N. Obs.

19 36 ~~-8.6~~ ~~-8.5~~ -8.6
23 8
3 32

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1897phae.proj.1349.

Oct. 19, 1897.

Σ 45′ Phot. R. H. Obs.

Pos. angle 150°, dis. 1.′7. Magn. 6.3 and 6.9

Index above

		278.3	N and brighter dis.	
9	5	358.4		8 0.1
		277.2		8 1.1
		358.3		161.2 — 0.36
		277.6		— 0.38
		357.1		79.5
		279.1		79.6
		358.7		159.1 — 0.40

Mean = — 0.42

Index below

		11.2	
		87.0	75.8
		7.8	8 0.0
		87.8	155.8 — 0.46
		9.2	— 0.47
9	10	89.0	79.8
		11.7	75.3
		87.0	1551 — 0.48

Measurements made through clouds.

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1897phae.proj.1349.

Oct. 19, 1897.

Σ 2456 Phot. ~~R.~~ (Star prism inserted) N. Obs.

19 9 +49.6
23 25 Stars about equal in brightness, but N F component
4 16 seems slightly the brighter.
Pos. angle 200° dis 10" Magn 6.2 and 6.3
Index above. A.

0.9 < N F and brighter dis. 92.7
9 23 93.6 84.3
4.7 177.0 0.06
89.0

7.8 80.2 (0.10)
9 25 Clouds 92.0
88.0 172.2 0.15
~~359.7~~
2.0
94.0

Index below B.
89.4 95.4
184.8 76.1
97.5 171.5 0.16
173.6

97.2 77.1 (0.12)
9 29 174.3 < Clouds. 98.7
87.2 175.8 0.08
185.9

Mean 0.11

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1897phae.proj.1349.

Oct. 19, 1897.

Σ 2580 Phot A. with sparprism inserted H. Obs.

19 42 +33.5

23 44

4 2

Pos. angle 70° dis 25″ Magn 5.1 and 5.3

Index right and below

	216.2	21.2		
9	38 237.4	27.1		
	212.7	+8.3	3.35	
	239.8			
	211.7	29.6		(3.31)
	241.3	20.4		
	217.2	50.0	3.27	
	237.6			

Index left and above

	303.4	23.5		
	326.9	25.7		
	302.2	+9.2	3.31	
	327.9			
	301.5	26.5		(3.30)
9	43 325.0	23.3		
	304.1	+9.8	3.28	
	327.4			Mean 3.30

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1897phae.proj.1349.

Oct. 19, 1897

Σ 2637 Phot A. (sf. prism inserted) M. Obs.

20 5 +20.5

23 58 δ Sagittae.

3 53

Pos. angle 320° dis 11" Magn. 5.9 and 8.4

Index 6ft and below

	208.3	38.7	
9 52	247.0	33.0	
	208.8	71.7	2.45
	241.8		

Stars faint (2.42)

207.9	35.8	
243.7	37.6	
207.6	73.4	2.40
245.2		

Index right and above

296.9	43.7	
340.6	35.9	
299.9	79.6	2.21
335.8		

296.5	36.0	(2.22)
9 59 332.5	42.5	
294.7	78.5	2.24
337.2		

Mean 2.32

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1897phae.proj.1349.

Oct. 22, 1897. (Friday.)

7 0 Cloudy

7 30 Still Cloudy.

8 30 Still Cloudy. No chance for any work.

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1897phae.proj.1349.

Oct. 23, 1897. (Saturday)

6 55 Watch Correction = −12 sec.

R Aquarii. Phot. T. H. Obs.

23	33	−16.2
21	55	
1	35	
10	25	

23	35	−16.2
22	2	
1	33	
10	27	

r compared with m

Index left and above.

287.5	Comp. dis.	50.4′
7 45 337.9		49.7′
288.2		100.1′ +1.65′
337.9		

288.1	51.3′	(+1.64)
339.4	49.4′	
291.0	100.7′ +1.64′	
340.4		

Index right and below.

19.8	48.0′
67.8	49.6′
18.9	97.6′ +1.72′
68.5	

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1897phae.proj.1349.

Oct. 23, 1897.

		18.2	50.8'	(+1.68)
7	51	69.0	49.6'	
		~~20.9~~	100.4' +1.65'	
		19.1		
		68.7	Mean +1.66	

s compared with m
Index above.

	111.2	Comp. dis.	40.9'
7	59	152.1	46.9'
		108.4	87.8' +1.97'
		155.3	
			(+2.02)
		110.3	
		~~111.2~~	44.0'
		154.3	39.9'
		112.3	83.9' +2.08'
		152.2	

Index below.

		203.5	40.4'
		243.9	43.0'
		203.0	83.4' +2.10'
		246.0	
		203.8	41.5' (+2.10)
8	18	245.3	41.6'
		203.7	83.1' +2.10'
		245.3	

Mean +2.06

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1897phae.proj.1349.

Oct. 23, 1897

pr. compared with m

~~pr~~

Index above.

	106.0	Comp. dis.	55.0'
8	6 161.0		62.6'
	100.9		117.6' +1.25'
	163.5		
	103.1		60.8' (+1.27)
	163.9		55.0'
	104.9		115.8' +1.29'
	159.9		

Index below.

	198.1		55.2'
	253.3		60.4'
	193.8		115.6' +1.29'
	254.2		
	193.4		59.5' (+1.34)
8	13 252.9		52.0'
	197.2		111.5' +1.38'
	249.2		

Mean +1.30

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1897phae.proj.1349.

Oct. 23, 1897.

t compared with ~~m~~ h

Index left and above

		215.2 4 Comp. dia	18.1'	
8	30	233.3	19.5'	
		213.8	37.6'	+3.91'
		233.3		
		212.1	22.0'	(43.79)
		234.1	19.9'	
		214.9	41.9'	+3.67'
		234.8		

Index right and

		304.4	19.0'	
		323.4	18.2'	
		302.9	37.2'	+3.93'
		321.1		
		303.4	20.3'	(+3.84)
8	36	323.7	19.8'	
		302.9	40.1'	+3.76'
		322.7		

Mean +3.82

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1897phae.proj.1349.

Oct. 23, 1897.

u compared with h
Index right and below

	304.7	14.9'	
8	40 319.6	14.8'	
	304.9	29.7' + 4.42'	
	319.7		
	304.9	15.0'	(+4.39)
	319.9	15.6'	9
	304.0	30.6' + 4.36'	
	319.6		

Index left and above.

	36.8	13.1'	
	49.9	15.1'	
	34.8	28.2' + 4.34'	
	49.9		
	35.2	14.0'	(+4.48)
8	48 49.2	15.7'	
	34.2	29.7' + 4.42	
	49.9	Mean +4.44	

9
9
5
14

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1897phae.proj.1349

Oct. 23, 1897.

o Eti — Phot. R. — H. Obs

	26	4	−2.5
	23	26	
	2	38	
	9	22	

Index above

		131.6 < var. dis.	12.2′
9	13	143.8	12.0′
		132.0	24.2′ − 4.87′
		144.0	
		131.3	11.7′ (−4.86)
		143.0	12.8′
		130.4	24.5′ − 4.85′
		143.2	

Index below.

		220.9	12.5′
		233.4	12.7′
		220.9	25.2′ − 4.79′
		233.6	
		221.0	13.1′ (−4.76)
9	19	234.1	12.7′
9	16.0	220.7	25.8′ − 4.73
5		233.4	Mean −4.81
14	16.0		

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1897phae.proj.1349.

Oct. 23, 1897.

Same again.

	220.5	13.5′	
9 21	234.0	13.2′	
	220.9	26.7′ - 4.66	
	234.1		
	221.3	12.3′	(-4.75)
	233.6	12.3′	
	220.9	24.6′ - 4.84	
	233.2		

Index above.

	311.2	12.4′	
	323.6	12.9′	
	311.0	25.3′ - 4.78	
	323.9		
	311.0	12.8′	(-4.79)
	~~310.8~~		
9 27	323.8	12.2′	
9 240	310.9	25.0′ - 4.80	
5	323.1		Mean - 4.77
14 240			

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1897phae.proj.1349

Oct. 23, 1897.

Comparison Stars for R Sagitarii — N. Obs.

19 9 −19.2
24 9
5 0

9 45 Abandoned. too low.

~~Revison~~ of Comp Stars for R Piscium — N. Obs.

25 20 +2.8
24 20
1 00
11 00

10 8m 5.5 σ
~~σ 4.5 α~~
σ 4 α'
α' 4 α
α 3.5 β
β 4.5 β'
β' 3 γ
γ 3 γ'
γ' 4.5 δ
10 20 δ 6 ε

~~Comp~~

Troubled somewhat by fog.

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1897phae.proj.1349.

Oct. 23, 1897

Comparison Stars for δ Cygni W. Obs.

21 34 +42.6
24 48
3 14

β compared with m.
Index left and above
299.5 < Comp. dis. 32.8'
11 12 332.0 34.9'
297.2 67.7' + 2.59'
332.1

298.7 34.5' (+2.53)
333.2 36.6'
296.9 71.1' + 2.47'
333.5

Index right and below
24.7 38.3'
63.0 43.3'
22.2 81.6' + 2.15'
65.5

25.7 41.6' (+2.12)
11 16 66.8 42.5'
24.3 84.1' + 2.05'
66.8 Mean + 2.32

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1897phae.proj.1349

Oct. 23, 1897

& compared with m

Index right and below

		20.0	+9.3'	
11	18	69.3	48.1'	
		20.6	97.4' +1.72'	
		68.7		
		17.8	49.4'	(+1.72)
		67.2	48.3'	
		20.7	97.7' +1.71'	
		69.0		

Index left and above.

		110.7	52.4'	
		163.1	50.1'	
		110.7	102.5' +1.60'	
		160.8		
		109.9	51.0'	(+1.57)
11	30	160.9	53.8'	
		109.2	104.8' +1.54'	
		163.0		Mean +1.64

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1897phae.proj.1349.

Oct 23, 1897

y compared with m
Index right and below

		29.2	< Comp dis 32.3'	
11	22	61.5	34.1'	
		27.9	66.4' +2.63'	
		62.0		
		28.4	31.7'	(+2.68)
		60.1	32.2'	
		29.1	63.9' +2.72'	
		61.3		

Index left and above

		118.2	33.1'
		151.3	39.7'
		116.1	72.8' +2.42'
		155.8	
		120.3	33.6' (+2.48)
11	27	153.9	35.5'
		117.9	69.1' +2.54'
		153.4	Mean +2.58

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1907phac.proj.1349

Oct. 23, 1897.

γ compared with m.

Index left

		113.8	< Comp dir 45.3'	
11	32	159.1	43.9'	
		114.1	89.2' +1.94'	
		158.0		
		114.7	44.4'	(+1.96)
		159.1	43.2'	
		115.0	87.6' +1.98'	
		158.2		

Index right

		207.4	39.5'	
		246.9	38.2'	
		208.0	77.7' +2.26'	
		246.2		
		207.0	38.0'	
11	45	245.0	38.2'	(+2.28)
		207.5	76.2' +2.31'	
		245.7		

Mean +2.12

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1897phae.proj.1349.

Oct. 23, 1897.

p compared with m.

Index left and below

		112.3	<Comp dis	48.1'
11	36	160.4		50.1'
		112.0		98.2' +1.70'
		162.1		
		108.5		52.9' (+1.64)
		161.4		49.8'
		112.4		102.7' +1.59'
		162.2		

Index right and above

		205.0	43.0'
		248.0	51.2'
		200.8	94.2' +1.80'
		252.0	
		202.3	48.9' (+1.84)
11	40	251.2	42.8'
		205.0	91.7' +1.87'
		247.8	

Mean +1.74

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1897phlec.proj.1349

Oct. 23, 1897

o' compared with m

Index right and above

		198.9	56.4'	
11	49	255.3	52.1'	
		201.0	108.5' + 1.45'	
		253.1		
		201.2	52.6'	(+1.46)
		253.8	54.8'	
		199.8	107.4' + 1.48'	
		254.6		

~~Index~~ left and below

		~~285.9~~		
		~~282.9~~	59.4'	
		345.1	51.9'	
		288.3	111.3' + 1.39'	
		340.2		
		288.6	52.6'	(+1.38)
11	54	341.2	59.1'	
		~~283.6~~	111.7' + 1.38	
		285.1		
		344.2		Mean +1.42

12 0 Considerable fog

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1897phae.proj.1349.

Oct. 25, 1897. (Monday.)

6 55 Watch Correction = 0

R Aquarii, Comp. Stars for, Phot. T. H. Obs.

23 35 . -16.2

21 45

1 50

10 10

r compared with m.

Index left and above.

112.8 ∓2.2'

7 30 165.0

111.7 ∓3.5'

165.2 10∓.7' 1.∓2'

110.6 ∓3.7' (1.∓2)'

164.3

112.9 ∓2.1'

165.0 10∓.2' 1.∓2'

Index right and below.

205.0 ∓0.0'

255.0

203.7 ∓4.4'

252.1 9∓.4' 1.70'

1.70'

203.9 ∓0.0'

7 39 253.9

205.5 47.7' 1.71'

253.2 97.7' Mean 1.61'

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1997phae.proj.1349

Oct. 25, 1897.

S compared with m.
Index below.

206.7 K3.1'
7 41 249.8
205.6 K2.2'
2505 ~~K4.3~~ 2.04'
85.3'

205.9 K0.8'
249.7 (2.07)'
207.4 K3.7'
251.1 ΔK,V 2.06'

Index above.

300.6 39.8'
340.4
299.3 K2.0'
341.3 Δ1.4' 2.14'

299.5 K0.9' 2.11'
7 52 340.4
298.2 K2.9'
341.1 Δ3.4' 2.06'

mean ~~2.09~~ 2.08

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1897phae.proj.1349.

Oct. 25, 1894.

p compared with m.
Index above.

		290.9	Comp. dis.	
8	2	349.0	√8.1'	
		291.0		
		346.0	√√6'	
			113.1'	1.3√'
		290.0	√√6'	
		345.6		(1.36)'
		291.2	√6√'	
		347.7	112.1'	1.37'

Index below.

		22.4	√4.4'	
		77.2		
		22.9	√1.9'	
		74.5	106.7'	1.49'
		22.7	√1.7"	(1.√0)'
8	12	74.4		
		21.7	√4.6'	
		76.3	106.3'	1.√0'

Mean 1.43'

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1897phae.proj.1349

Oct. 25, 1897.

Comparison Stars for R Piscium. H. Obs.

25 20 +2.8

23 5

2 15

9 45

m 7 n

n 5.5 o

o 3 α'

α' 4.5 α

α 3.5 β

β 4.5 β'

~~β' 3.5 γ~~

~~β' 2.5 γ~~

~~β' 3 γ~~

γ 3 γ'

γ' 5 δ

~~δ 3 ε~~

δ 4 ε

ε 3.5 ζ

ζ 2.5 η

9 15 η 4 θ

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1897phae.proj.1249.

Oct. 25, 1897.

Comparison Stars for R Piscium. Phot. T. H. Obs.

β compared with k.

Index left

	210.3	37.0'	
9 31	247.3	39.8'	9
	208.2	76.8'	+2.29'
	248.0		

208.0	40.7'	(+2.24)
248.7	39.0'	
209.3	79.7'	+2.20'
248.3		

Index right.

299.9	39.2'	
339.1	41.6'	
297.3	80.8'	+2.17'
338.9		

295.8	43.0'	(+2.12)
9 54 338.8	41.2'	9
297.6	84.2'	+2.07'
338.8		Mean +2.18

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1897phae.proj.1349.

Oct. 25, 1897.

B' compared with k

Index left

		214.3	29.1'	
9	35	243.4	29.9'	
		214.6	59.0'	+2.90'
		244.5		
		214.9	27.0'	(+2.98)
		241.9	27.9'	
		215.6	54.9'	+3.07'
		243.5		

Index right

		303.0	30.4'	
		333.4	29.5'	
		303.5	59.9'	+2.86'
		333.0		
		304.0	29.0'	(+2.92)
9	50	333.0	28.0'	
		303.7	57.0'	+2.95'
		331.7		Mean +2.95

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1897phae.proj.1349.

Oct. 25, 1897

~~K~~ compared with k.

Index left

	217.1	< Comp dis.	24.3'
9	40 241.4		23.6'
	217.5		47.9' +3.37'
	241.1		
	216.4		24.6' (+3.39)
	241.0		22.4'
	217.9		47.0' +3.41'
	240.3		

Index right.

	304.5		26.2'
	331.0		25.0'
	304.8		51.2' +3.22'
	329.8		
	304.9		26.3' (+3.21)
9	46 331.2		25.3'
	305.2		51.6' +3.20'
	330.5		Mean +3.30

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1897phae.proj.1349.

Oct. 25, 1897.

Comparison Stars for S Cygni. Phot T. H. Obs.

21 3H +H2.6

2H 3H

3 0

B, compared with m

Index left and above.

		299.1	< Comp dis. 39.0'	
10	20	338.1	36.9'	
		299.9	75.9' + 2.32'	
		336.8		
		300.4	37.0'	(+2.36)
		337.4	36.4'	
		300.1	73.4' + 2.40'	
		336.5		

Index right and below.

		31.7	35.3'	
		67.0	33.6'	
		33.7	68.9' + 2.54'	
		67.3		
		31.4	35.5'	(+2.52)
10	25	66.9	34.9'	
		32.4	70.4' + 2.49'	Mean +2.44
		67.3		

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1897phae.proj.1349.

Oct. 25, 1894

α compared with m.

Index right ~~and below~~

		26.3	46.0'	
		72.3	44.4'	
10	28	27.9	90.4' +1.90'	
		72.3		
		27.8	42.9'	(+1.92)
		70.7	45.9'	
		26.7	88.8' +1.95'	
		72.6		

Index left

		114.9	46.3'	
		161.2	47.6'	
		115.3	93.9' +1.81'	
		162.9		
		116.0	46.1'	(+1.80)
10	33	162.1	48.3'	
		113.7	94.4' +1.80'	
		162.0	Mean +1.86	

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1897phae.proj.1349.

Oct. 25, 1897

Y compared with m.

Index left

		122.3	30.7'	
10	36	153.0	32.6'	
		122.4	63.3' +2.74'	
		155.0		
		122.2	32.6'	(+2.76)
		154.8	29.9'	
		122.8	62.5' +2.77'	
		152.7		

Index right

		216.3	26.3'	
		242.6	31.3'	
		213.9	57.6' +2.95'	
		245.2		
		214.6	29.6'	(+2.92)
10	43	244.2	29.3'	
		213.9	58.9' +2.90'	
		243.2		Mean +2.84

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1897phae.proj.1349.

Oct. 25, 1897.

q compared with m.

Index right

		207.2	43.5'
10	45	250.7	41.9'
		209.2	85.4' +2.04'
		251.1	
		210.0	39.6' (+2.09)
		249.6	42.4'
		208.6	82.0' +2.14'
		251.0	

Index left

		297.0	43.0'
		340.0	42.0'
		297.1	85.0' +2.05'
		339.1	
		295.1	43.9' (+2.02)
10	52	339.0	43.6'
		294.1	87.5' +1.98'
		340.7	Mean +2.06

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1897phae.proj.1349.

Oct. 25, 1897.

p compared with m.

Index left.

		292.7	52.6'
10	54.	345.3	45.5'
		296.8	98.1' +1.70
		342.3	

295.5	45.7'	(+1.72)
341.2	50.5'	
293.6	96.2' +1.75'	
344.1		

Index right.

24.0	50.0'	
74.0	45.4'	
26.1	95.4' +1.77'	
71.5		

		26.7	44.5'
11	0	71.2	49.8'
		25.0	94.3' +1.80'
		74.8	

(+1.78)

Mean +1.75

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1897phae.proj.1349.

Oct. 25, 1897

o' compared with m.

Index right and above

		21.4	57.6'
11	8	79.0	61.3'
		18.7	118.9' +1.22'
		80.0	

18.8	62.6'	(+1.20)
81.4	58.0'	
21.2	120.6' +1.18'	
79.2		

Index left and below.

110.1	56.7'	
166.8	67.0'	
102.9	123.7' +1.11'	
169.9		

		105.1	67.6' (+1.06)
11	15	172.7	60.6'
		108.0	128.2' +1.02'
		165.6	Mean +1.13

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1897phae.proj.1349.

Oct. 25, 1897

δ compared with m.

Index left

		125.1	27.1'
11	18	152.2	26.2'
		125.1	53.3' + 3.13'
		151.3	
		125.5	25.4' (+3.16)
		150.9	26.7'
		124.5	52.1' + 3.18'
		151.2	

Index right

		216.2	26.4'
		242.6	23.4'
		216.5	49.8' + 3.25'
		239.9	
		215.8	24.2' (+3.30)
11	24	240.0	24.4'
		216.4	48.6' + 3.33'
		240.8	Mean +3.23

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1897phae.proj.1349.

Oct. 25, 1897.

11 30 h 5 h'
h' 4 k
k 2 l
l 4 m
m 5.5 n
n 2.5 o
o 3 o'
o' 3 p
p 2.5 q
α 1.5 q
α 3 β
β 3 γ
γ 2.5 δ
p 3 α
11 38 q 2.5 β

11 45 Watch Correction = + 1 sec

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1897phae.proj.1349

Oct. 26, 1897. (Tuesday.)

7 0 Watch Correction = − 4 sec.

R Piscium. H. Obs.

25 20 +2.8

22 0

3 20

8 40

7 32 m 7 n

n 5 o

o 3.5 α'

α' 5.5 α

α 3 β

β 5.5 β'

~~β' 3.5 γ~~

β' 2 γ

γ 3 γ'

γ' 5 δ

δ 4 ε

ε 3 ζ

~~ζ~~ 3 η

7 45 η 3.5 θ

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1897phae.proj.1349.

Oct. 26, 1897.

Comparison Stars for R Piscium Phot. T. H. Obs.

B compared with k.

Index left and below

	25.2	< Comp. dis.	38.8	
7	58 67.0		35.5	
	30.8		74.3	2.37
	66.3			
				(2.38)
	30.3		35.2	
	65.5		38.4	
	29.3		73.6	2.39
	67.7			

Index right and above.

120.0	38.2		
158.2	41.7		
119.0	79.9	2.20	
160.7			
			2.23
119.9	40.5		
8 24 160.4	37.2		
120.0	77.7	2.26	
157.2		Mean	2.30

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1897phae.proj.1349

Oct. 26, 1897.

B' compared with k.
Index left and below.

		34.3	28.3	
8	2	62.6	26.7	
		33.9	55.0	3.06
		60.6		

(3.11)

		35.6	25.8	
		61.4	26.8	
		34.2	52.6	3.16
		61.0		

Index right and above.

		124.7	30.0	
		154.7	28.1	
		125.1	58.1	2.93
		153.2		

(2.93)

		124.7	28.0	
8	19	152.7	30.3	
		124.9	58.3	2.93
		155.2		

Mean 3.02

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1897phae.proj.1249.

Oct. 26, 1897.

Y' compared with ℏ.
Index left and below.

	34.7	24.9	
8	59.6	20.5	
7	37.5	45.4	3.44
	58.0		
			(3.44)
	36.3	22.0	
	58.3	25.3	
	34.9	47.3	3.40
	60.2		

Index right and above.

	127.9	24.1	
	152.0	25.3	
	126.8	49.4	3.30
	152.1		
			(3.34)
	128.3	24.0	
8	14 152.3	23.7	
	127.8	47.7	3.34
	151.5		mean 3.39

8 40 Heavy fog came up so that no farther observations could be taken on comparison stars.

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1897phae.proj.1349

Oct. 26, 1897.

Σ 2675 Phot R. ~~Phot. T.~~ (~~Star system inverted.~~) H. Obs.

20	13
23	53
3	40

+77.3

Gas angle 125°. dia 8 sec, Magn. 4.0 and 8.3

9 23 ~~Fog~~ thick

Index right

307.8

9 26 325.9 18.1

305.5 21.4

326.9 39.5 — 3.79

303.9 — 3.72

328.0 24.1

307.7 18.1

325.8 42.2 — 3.65

Index left Mean = − 3.67

37.4

57.0 19.6

35.5 23.0

58.5 42.6 — 3.63

36.0 — 3.62

9 33 60.4 24.4

36.5 18.3

54.8 42.7 — 3.62

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1897phae.proj.1349.

Oct. 26, 1894.

Σ U Cephei	Phot. T.	N. Obs.
24 30	+81.7	
24 15		
0 ~~46~~		
11 46		

Index left and below

		281.4 < var dis.	75.8'	
9				
~~10~~	55 29	357.2	85.6'	
		276.4	161.4' − 0.35'	
		2.0		

58	55	280.0	281.2	75.6' (−0.42)
~~57~~	~~6~~	0.3	356.8	79.4'
		35 .	279.1	155.0' − 0.48'
		.	358.5	

Index right and above.

		7.2	84.2'	
10	1 9	91.4	72.5'	
		13.2	156.7' − 0.44'	
		85.7		
		10.7	74.3'	(−0.46)
	2 37	85.0	80.7'	
	236 120	8.3	155.0' − 0.48'	
9	59 30	89.0		
5	−4			
14	59 26			

Mean −0.44

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1897phec.proj.1349.

Oct. 26, 1897.

II

			8.3	79.9'	
10	3	55	88.2	74.8'	
			11.8	154.7' − 0.48'	
			86.6		
			11.1	76.4'	(−0.44)
5	7		87.5	83.0'	
			7.3	159.4' − 0.39'	
			90.3		

Index left and below.

			93.4	95.6'	
6	52		189.0	76.1'	
			98.9	171.7' − 0.16'	
			175.0		
			103.2	73.2'	(−0.27)
	8	48	176.4	87.1'	
	22	162	93.9	160.3' − 0.38'	
10	6	10	181.0	Mean −0.36	
5		−4			
15	6	6			

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1897phae.proj.1349.

Oct. 26, 1897.

III

			95.9	84.0°	
10	10	31	179.9	76.5°	
			99.9	160.5° − 0.37°	
			176.4		
			99.0	77.9°	(−0.33)
	12	23	176.9	86.8°	
			93.2	164.7° − 0.29°	
			180.0		

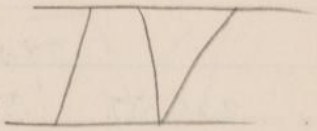
Index right.

			183.6	90.9°	
	15	5	274.5	83.3°	
			186.5	174.2° − 0.11°	
			269.8		
			190.0	81.8°	(−0.14)
	16	55	271.8	89.2°	
	13	114	185.6	171.0° − 0.17°	
10	13	44	274.8		
5		−4		Mean − 0.24	
15	13	40			

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1897phec.proj.15419

Oct. 26, 1897



		184.6	89.3'	
10	18 32	273.9	80.6'	
		187.8	169.9' − 0.19'	
		268.4		
		188.5	81.5'	(−0.14)
	19 52	270.0	94.4'	
		181.7	175.9' − 0.05'	
		276.1		

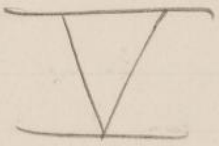
Under left

	273.2	91.8'	
21 53	5.0	83.3'	
	277.0	175.1' − 0.09'	
	0.3		
	277.4	86.6'	(−0.04)
23 31	4.0	94.1'	
1 168	272.2	180.7'	
10 20 57	6.3	179.3 + 0.01'	
5 −4			Mean −0.09
15 20 53			

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1897phae.proj.1349.

Oct. 26, 1897.



			270.7	94.4'	
10	24	57	5.1	84.2'	
			277.1	178.6'	− 0.03'
			1.3		
			276.8	85.6'	(0.00)
	26	13	2.4	96.2'	
			271.2	181.8'	
			7.4	178.2 + 0.03'	

Index right.

			1.0	98.5'	
	28	7	99.5	91.5'	
			3.8	190.0'	
			95.3	170.0 + 0.19'	
			4.3	90.5'	
	29	22	94.8	92.0'	(+0.12)
	27	99	~~0.8~~	182.5'	
10	27	10	2.0	177.5 + 0.05'	
5		−4	94.0	Mean +0.06	
15	27	6			

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1897phae.proj.1349

Oct. 26, 1897.

VI

			359.4	97.8'	
		3	97.2	92.3'	
10	31	8	3.5	190.1'	
			95.8	169.9 + 0.19'	
			3.2	94.1'	
			+.3		
32	24		97.3	101.0'	(+0.24)
			359.0	195.1'	
			100.0	164.9 + 0.29'	

Index left

		87.9	98.9'	
34	31	186.8	93.3'	
		91.7	192.2'	
		185.0	167.8 + 0.23'	
		91.4	91.3'	
36	0	182.7	101.7'	(+0.24)
13	58	87.1	193.0'	
10 33	30	188.8	167.0 + 0.25'	
5	-4			Mean +0.24
15 33	26			

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1897phae.proj.1349.

Oct. 26, 1897.

VII

		87.1	100.9'	
10	37	34	188.0	96.5'
			90.8	197.4'
			187.3	162.6 + 0.33'
			89.1	97.6'
	39	14	186.7	106.8' (+0.40)
			84.3	204.4'
			191.1	155.6 + 0.47'

Index right

			179.2	101.8'
	41	39	280.0	97.2'
			181.8	199.0'
			279.0	161.0 + 0.36'
			179.0	100.0'
	43	10	279.0	102.7' (+0.40)
	00	97	179.3	202.7'
10	40	24	282.0	157.3 + 0.43'
5		-4		Mean +0.40
15	40	20		

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1897phae..proj.1349

Oct. 26, 1897.

	176.5	105.6'	
10 45 18	282.1	101.4'	
	177.5	207.0'	
	279.9	153.0 + 0.52'	
	177.8	102.0'	
46 51	279.8	107.3'	(+0.54)
	177.7	209.3'	
	282.0	150.7 + 0.56'	

Index left

	265.3	106.6'	
49 4	11.9	106.5'	
	266.4	213.1'	
	12.9	146.9 + 0.64'	
	266.2	104.4'	
50 57	10.6	110.8'	(+0.66)
190 130	264.0	215.2'	
10 48 2	14.8	144.8 + 0.68'	
5 -4			Mean +0.60
15 47 58			

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1897phae.proj.1349.

Oct. 26, 1897

IX

			264.7	108.0'	
10	57	55	12.2	108.7'	
			267.3	216.7'	
			16.0	143.3 + 0.71'	
			268.1	104.2'	
	54	42	12.3	112.1'	(+0.70)
			262.9	216.3'	
			15.0	143.7 + 0.70'	

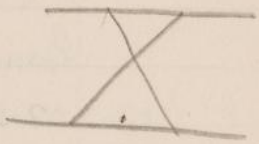
Under right

			351.6	113.0'	
	57	5	104.6	106.5'	
			355.1	219.5'	
			101.6	140.5 + 0.76'	
			353.2	109.3'	
	58	44	102.5	114.9'	(+0.81)
	21	146	351.6	224.2'	
10	55	52	106.5	135.8 + 0.86'	
5		−4			Mean +0.76
15	55	48			

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1897phae.proj.1349

Oct. 26, 1897



			353.5	112.1'	
11	1	20	105.6	108.1'	
			355.7	220.2'	
			103.8	139.8 + 0.78'	
			353.8	109.0'	
	3	23	102.8	110.7'	(+0.78)
			356.5	219.7'	
			104.2	140.3 + 0.77'	

Index left

			82.1	112.9'	
	5	28	195.0	111.4'	
			82.8	224.3'	
			194.2	135.7 + 0.86'	
			~~82.7~~		
			82.3	112.5'	
	7	57	194.8	115.3'	(+0.90)
	16	128	80.9	227.8'	
11	4	32	196.2	132.2 + 0.93'	
5		44			Mean +0.84
16	4	28	Observations made through some varying fog. Slight fog on object glass noticed at end of series.		

11 15 Watch Correction = − 4 sec.

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1897phae.proj.1349.

Oct. 27, 1897. (Wednesday)

Comparison Stars for R Piscium. Phot. F. H. Obs. 8

25 20 +2.8

22	20
3	0
9	0

7 45 m 6 m
ε 3 5
5 45 η 8
7 50 η 5 θ

α' compared with k.
Index above.

201.1 <Comp dis. 56.9'
8 18 258.0 48.3'
204.4 105.2' +1.53'
252.7

204.7 47.9' (+1.52)
252.6 58.0'
199.4 105.9' +1.51'
257.4

Index below. 8

289.1 56.0'
345.1 47.4'
294.9 103.4' +1.57'
342.3

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1897phae.proj.1349.

Oct. 27, 1897.

		294.8	47.9'	(+1.58)
1.	8	26 342.7	54.7'	
		290.7	102.6' + 1.59'	Mean +1.55
		345.4		

y compared with k.
Index right

		304.2	<comp. dis.	30.0'
8		30 334.2		28.8'
		303.9		58.8' + 2.91'
		332.7		

302.2	31.4'	(+2.86)
333.6	30.3'	
302.4	61.7' + 2.80'	
332.7		

Index left.

34.4	28.1'	
62.5	30.6'	
33.1	58.7' + 2.91'	
63.7		

	33.7	29.2'	(+2.90)
8	37 62.9	29.7'	
	34.2	58.9' + 2.90'	
	63.9		Mean +2.88

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1897phae.proj.1349.

Oct. 27, 1897.

δ compared with k.

Index left

		38.0	19.0'
8	40	57.0	20.4'
		37.6	39.4' +3.80'
		58.0	

9

37.6	20.3'	(+3.76)
57.9	20.6'	
37.2	40.9' +3.72'	
57.8		

Index right

130.0	19.5'	
149.5	19.5'	
130.5	39.0' +3.82'	
150.0		

130.6	19.3'	(+3.80)
149.9	20.2'	
129.5	39.5' +3.79'	
149.7		Mean +3.78

8 50

Clouds came up rather suddenly after above.

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1897phae.proj.1349.

Oct. 27, 1897.

H. Obs.

R Cygni

19 33 +49.9

24 5

4 32

9 40 Clouds thick everywhere and growing worse. No chance for anything fartht.

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1897phae.proj.1349.

Posted to here.

Oct. 29, 1897. (Friday.)

Comparison Stars for R Piscium. Phot. & H. Obs.

25 20 +2.8

22 27

2 53

9 7

α' compared with k.

Index left and above.

		201.2	Comp. dis	55.0
7	49	256.2		49.0
		205.2		104.0 +1.56
		254.2		

		~~204.3~~	202.1	54.9 (+1.56)
7	52	~~253.5~~	Clouds 257.0	49.5
		.	204.4	104.4 +1.55
		.	253.9	

Index right and below.

8	0	Clouds		
		294.8		
		~~292.0~~		48.4
		343.2		53.8
		291.4		102.2 +1.60
		345.2		

		289.4	55.8	(+1.55)
8	2	345.2	50.7	
		292.0	106.5 +1.50	
		342.7		

Mean +1.56

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1897phae.proj:1349.

Oct. 29, 1897.

7 0 Watch Correction = − 6 sec

U Pegasi. Phot. T. N. Obs.

23 55 +15.4

22 55

1 0

11 0

Index above.

7.3 < Comp. dis 83.7'

8 36 42 91.0 74.8'

12.0 158.5' + 0.41

86.8

12.8 69.4' (+0.49)

38 22 82.2 80.9'

9.2 150.3' + 0.57

90.1

Index below

96.8 83.0'

41 9 179.8 77.0'

100.0 160.0' ~~+ 3.8~~ +0.38

177.0

101.1 74.7' (+0.39)

42 58 175.8 84.2'

157 131 96.6 158.9' + 0.40

8 39 48 180.8 Mean +0.44

5 −7

13 39 41

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1897phae.proj.1349.

Oct. 29, 1897.

			97.9	82.8'	
8	49	2	180.7	77.6'	
			99.6	160.4' + 0.37	
			177.2		
			100.0	77.0'	(+0.38)
	50	49	177.0	81.9'	
			98.1	158.9' + 0.40	
			180.0		

Index ~~below~~ above.

			187.1	81.5'	
	53	4	268.6	74.7'	
			193.3	156.2' + 0.45	
			268.0		
			192.5	70.2'	(+0.51)
	54	45	262.7	80.3'	
	6	100	189.7	150.5' + 0.57	
8	51	55	270.0		Mean +0.44
5		-7			
13	51	48			

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1897phae.proj.1349

Oct. 29, 1897

			191.0	77.0'	
8	57	1	268.0	76.9'	
			189.3	153.9'	+0.50
			266.2		
			194.9	71.9'	(+0.50)
	58	53	266.8	82.3'	
	~~58~~	~~53~~	189.4	154.2'	+0.49
			271.7		

Index below

			277.0	82.4'	
9	1	25	359.4	70.6'	
			283.4	153.0'	+0.52
			354.0		
			283.8	69.4'	(+0.56)
	3	12	353.2	79.7'	
	239	94	273.3	149.1'	+0.59
9	0	8	358.0		Mean +0.53
5		7			
14	0	1			

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1897phae.proj.1349.

Oct. 29, 1897.

IV

			277.3	80.5'	
9	5	29	357.8	70.2'	
			282.7	150.7' + 0.56	
			352.9		
			283.3	71.9'	(+0.56)
7	16		355.2	79.5'	
			278.7	151.4' + 0.55	
			358.2		
			Index above.		
			9.5	79.5'	
9	40		89.0	71.8'	
			13.1	151.3' + 0.55	
			84.9		
			14.5	69.6'	(+0.56)
	11	5	84.1	79.0'	
	32	90	10.0	148.6' + 0.56	
9	8	22	89.0		Mean +0.56
5		-7			
14	8	15			

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1897phae..proj.1349.

Oct. 29, 1897

			8.9	81.4'	
9	13	38 ~~20~~	90.3	70.7'	
			13.3	152.1' + 0.53	
			84.0		
			13.2	68.7'	(+0.58)
	15	8	81.9	77.8'	
			9.0	146.5' +0.64	
			86.8		

Index below.

			97.0	82.4'	
	18	6	179.4	71.0'	
			103.0	153.4' + 0.51	
			174.0		
			103.5	69.0'	(+0.56)
		19 39	172.5	79.2'	
		27 91	100.1	148.2' + 0.61	
9	17	8	179.3		Mean +0.57
5		-7			
14	17	1			

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1897phae.proj.1349.

Oct. 29, 1897.

			101.8	76.0'	
9	22	76	177.8	70.1'	
			103.2	146.1' + 0.65	
			173.3		
			103.2	70.3'	(+0.67)
	24	8	173.5	74.1'	
			100.2	144.4' + 0.69	
			174.3		
			Index above		
			192.1	73.1'	
	26	24	265.2	69.9'	
			193.8	143.0' + 0.71	
			263.7		
			194.7	68.3'	(+0.72)
	28	5	263.0	74.5'	
	20	63	190.6	142.8' + 0.72	
9	25	16	265.1		Mean +0.70
5		-7			
14	25	9			

VI

9

9

5

14

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1897phae.proj.1349

Oct. 29, 1897

VII

			191.3	76.0′	
9	31	57	267.3	67.9′	
			194.1	143.9′	+0.70
			262.0		
			195.0	68.0′	(+0.72)
	33	29	263.0	73.1′	
			193.0	141.1′	+0.75
			266.1		
			Index below		
			281.7	75.1′	
	35	45	356.3	67.3′	
			286.2	142.4′	+0.73
			353.5		
			286.1	66.9′	(+0.74)
	37	32	353.0	74.8′	
	16	157	280.9	141.7′	+0.74
9	34	39	355.7		Mean +0.73
5		-7			
14	34	32			

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1897phae.proj.1349.

Oct. 29, 1897.

			282.5	70.5'	
9	39	10	353.0	67.7'	9
			285.3	138.2'	+0.81
			353.0		

VIII

	40	58	286.8	65.1'	(+0.88)
~~11~~	~~40~~	~~42~~	351.9	66.9'	
			285.5	132.0'	+0.94
			3524		

Index above.

			15.1	69.0'	
45	49		84.1	70.7'	
			14.3	139.7'	+0.78
			85.0		

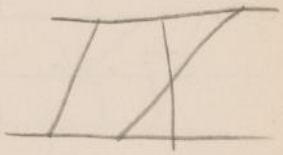
			14.5	69.0'	(+0.82)
	47	10	83.5	66.1'	
	11	127	15.1	135.1'	+0.87
9	43	17	81.2		Mean +0.85
5		7			
14	43	10			

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1897phae.proj.1349

Oct. 29, 1897

			12.8	69.7'	
9	48	57	82.5	67.1'	
			14.7	136.8' + 0.84	
			81.8		



			14.2	70.1'	(+0.86)
	50	44	84.3	63.0'	
			15.9	135.1' + 0.87	
			80.9		

Index below.

			101.7	75.1'	
	53	10	176.8	67.5'	
			105.9	142.6' + 0.72	
			173.4		

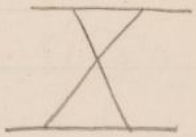
			105.0	67.4'	(+0.79)
	54	44	172.4	68.5'	
	5	149	105.2	135.9' + 0.86	
9	51	52	173.7		Mean +0.82
5		-7			
14	51	45			

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1897phae.proj.1349.

Oct. 29, 1897.

			103.2	70.7'	
9	57	16	173.9	69.7'	
			104.2	140.4'	+0.77
			173.9		



			104.0	68.7'	(+0.78)
	59	28	172.7	70.2'	
			103.0	138.9'	+0.80
			173.2		

Under above.

			195.7	68.5'	
10	2	5	264.2	66.4'	
			197.4	134.9'	+0.88
			263.8		

			196.2	69.9'	(+0.80)
	3	32	266.1	72.1'	
	1	81	191.8	142.0'	+0.73
10	0	35	263.9		Mean +0.79
5		-7			
15	0	28			

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1897phae.proj.1349

Oct. 29, 1897.

			192.7	75.3'	
10	5	40	268.0	68.3'	
			195.7	143.6' + 0.70	
			264.0		

XI

			195.4	68.8'	(+0.77)
7	28		264.2	68.0'	
			195.1	136.8' + 0.84	
			263.1		

Order below

			284.3	68.6'	
10	4		352.9	66.0'	
			285.0	134.6' + 0.88	
			351.0		

			284.3	69.0'	(+0.83)
	11	55	353.3	70.7'	
	33	127	284.3	139.4' + 0.78	
10	8	47	355.0		Mean +0.80
5		-7			
15	8	40			

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1897phae.proj.1349

Oct. 29, 1897.

			282.8	71.3'	
10	17	45	354.1	69.9'	
			284.1	141.2'	+0.75
			354.0		

XII

			284.4	69.5'	(+0.76)
19	12		353.9	70.2'	
			282.8	139.7'	+0.78
			353.0		

Index above

			13.3	69.6'	
21	34		82.9	68.0'	
			14.3	137.6'	+0.82
			82.3		

			14.1	67.9'	(+0.79)
	23	6	82.0	72.6'	
	0	97	12.3	140.5'	+0.76
10	20	24	84.9		Mean +0.78
5		-7			
15	20	17			

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1897phae.proj.1349

Oct. 29, 1897.

			10.8	77.0'	
10	29	43	87.8	67.0'	
			14.0	144.0'	+0.69
			81.0		

XIII

			13.7	69.3'	(+0.67)
	31	7	83.0	77.1'	
			9.9	146.4'	+0.65
			87.0		

Under below

			102.4	73.9'	
	33	30	176.3	71.5'	
			103.1	145.4'	+0.67
			174.6		

			102.3	72.9'	(+0.64)
	35	20	175.2	74.7'	
	8	100	102.1	147.6'	+0.62
10	32	25	176.8		Mean +0.66
5		-8			
15	32	17			

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1897phae.proj.1349

Oct. 29, 1897

XIV

			103.0	75.0'	
10	38	4	178.0	72.1'	
			103.7	147.1'	+0.63
			175.8		
			104.3	71.0'	(+0.64)
	39	39	175.3	75.5'	
			101.7	146.5'	+0.64
			177.2		
			Index above		
			193.2	71.0'	
	42	6	364.2	73.3'	
			192.7	144.3'	+0.69
			166.0		
			193.9	72.1'	(+0.67)
	43	33	266.0	74.1'	
	2	102	192.8	146.2'	+0.65
10	40	55	266.9		Mean +0.66
5		-8			
15	40	47			

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1897phae..proj..147.

Oct. 29, 1897

		190.9	77.9'		
10	46	6 268.8	73.0'		
		193.0	150.9'	+0.56	
		266.0			

XV

	191.6	75.1'		(+0.54)
48	2 266.7	77.8'		
	190.2	152.9'	+0.52	
	268.0			

Index below

	281.5	75.4'		
50	25 356.9	72.7'		
	282.8	148.1'	+0.61	
	355.5			

	283.1	73.8'		(+0.62)
52	12 356.9	73.6'		
196	45 283.9	147.4'	+0.63	
10 49	11 357.5			Mean +0.58
5	-8			
15 49	3			

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1897phae.proj.1349.

Oct. 29, 1897.

			282.4	72.8'	
10	54	15	355.2	73.7'	
			282.1	146.5'	+0.64
			355.8		

XVI

			281.1	75.3'	(+0.57)
	55	28	356.4	78.3'	
			280.1	153.6'	+0.50
			358.4		

Index below.

			11.2	74.9'	
	59	6	86.1	72.1'	
			12.9	147.0'	+0.63
			85.0		

			12.0	75.8'	(+0.60)
11	8	34	87.8	74.3	
	228	83	11.5	150.1'	+0.57
10	57	21	85.8		Mean +0.58
5		-8			
15	57	13			

11

5

16

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1897phae.proj.1349.

Oct. 29, 1897

			10.3	76.8'	
11	5	39	87.1	75.1'	
			11.7	151.9' + 0.54	
			86.8		

XVII

			13.5	~~73.5~~ 73.5'	(+0.53)
7	17		87.0	~~80.1~~ 79.1'	
			9.9	152.6' + 0.52	
			89.0		

Index above

			99.9	78.4'	
9	32		178.3	78.2'	
			100.8	156.6' + 0.45	
			179.0		

			~~108.7~~		
			102.0	74.4'	(+0.48)
	11	53	176.4	78.2'	
	32	161	100.9	152.6' + 0.52	
11	8	40	179.1	Mean +0.50	
5		-8			
16	8	32			

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1897phae.proj.1349.

Oct. 29, 1897.

			99.7	78.8′	
11	13	40	178.0	76.5′	
			101.4	155.3′ + 0.47	
			177.9		
			102.0	76.9′	(+0.46)
15	16		178.9	80.0′	
			99.4	156.9′ + 0.44	
			179.4		

Index above

			189.0	79.0′	
18	1		265.0	78.1′	
			189.9	157.1′ + 0.44	
			268.0		
			189.9	77.0′	(+0.42)
19	58		266.9	81.5′	
25	115		187.0	158.5′ + 0.41	
11	16	44	268.5	Mean +0.44	
5		−8			
16	16	36			

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1897phae.proj.1349.

Oct. 29, 1897.

		189.0			
		~~190.4~~	81.8'		
11	22	46 270.8	81.0'		
		189.3	162.8' + 0.33		
		270.3			
		190.2	80.2'	(0.37)	
24	2	270.4	78.5'		
		189.7	158.7' + 0.41		
		268.2			

Index below

		281.3	76.9'		
26	6	358.2	77.0'		
		280.5	153.9' + 0.50		
		357.5			
		279.2	78.0'	(0.49)	
~~27~~	~~32~~	357.2	76.9'		
19	86	280.5	154.9' + 0.48		
11	25	6 357.4		Mean + 0.43	
5		-8			
16	24	58			

11 40 Watch Correction = − 8 sec

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1897phae.proj.1349.

Oct. 30, 1897. (Saturday.)

7 0 Watch Correction = 0

Comparison Stars for R Piscium. Phot. T. H. Obs.

25 20 +2.8 7

22 15

3 5

8 55

y compared with k

Index left.

214.8 < Comp. dis. 28.4'

7 42 243.2 29.0'

214.9 57.4' +2.96'

243.9

215.8 27.9' (+2.99)

243.7 28.0'

215.6 55.9' +3.02'

243.6

Index right. 8

302.3 31.0'

333.3 30.8'

302.8 61.8' +2.79'

333.6

301.8 32.5' (+2.78)

7 53 334.3 29.8'

303.3 62.3' +2.77'

333.1 Mean +2.88

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1897phae.proj.1349.

Oct. 30, 1897.

δ compared with k.

Index right

		307.9	Comp. dis. 20.3'	
7	57	328.2	21.0'	
		307.1	41.3' +3.70'	
		325.1		
		307.2	21.6'	(+3.66)
		328.6	21.3'	
		307.1	42.9' +3.61'	
		328.4		

Index left.

	38.8	17.7'	
	56.5.	19.0'	
	38.7	36.7' +3.96'	
	57.7		
	39.1	19.8'	(+3.92)
8	58.9	18.1'	
	39.2	37.9' +3.89'	
	57.3		

Mean +3.79

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1897phae.proj.1349.

Oct. 30, 1897.

o Ceti		Phot. R.	H. Obs.
26	4	-2.5	
23	14		
2	50		
9	10		

Index below.

219.5	< var. dis.	10.5'	
230.0		9.0'	
220.9		19.5' - 5.35'	
229.9			
220.1		9.9'	(-5.37)
230.0		9.2'	
220.2		19.1' - 5.39'	
229.4			

Index above.

310.0		9.9'	
319.9		9.2'	
310.0		19.1' - 5.39'	
319.2			
309.9		9.3'	(-5.44)
219.2		9.0'	
310.9		18.3' - 5.48'	
319.9			Mean -5.40

8 28

8 35

8 31.5

5

13 31.5

8

8

5

13

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1897phae.proj.1349.

Oct. 30, 1897.

Same again

	309.9	309.0	10.8'
49	319.9	319.8	9.0'
31	Reject	310.7	19.8' − 5.31'
8		319.7	

310.0	9.4'	(−5.30)
319.4	10.5'	
309.3	19.9' − 5.30'	
319.8		

Index below.

38.5	10.0'
48.5	9.0'
39.5	19.0' − 5.40'
48.5	

		40.0	9.0'	(−5.46)
8	59	49.0	9.1'	
8	54.0	39.8	18.1' − 5.57'	
5		48.9		Mean −5.38
13	54.0			

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1897phae.proj.1349.

Oct. 30, 1897.

Revision and Selection of Faint Comparison Stars for S Ceti. W. Obs.

24 11 −8.9
24 10

9 37 k 5.5 l
l 4.5 m
m 5.5 m'
m' 3 n
n 3 o
o 2.5 p
p 3 q
q 3 α
α 4.5 β
β 3.5 γ
9 57 γ 4 δ

Comparison Stars for S Cygni Phot. T. W. Obs.

21 34 +42.6
24 54
3 20

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1897phae.proj.1349.

Oct. 30, 1897

B compared with m
Index left and above.

	116.9	< Comp dia	37.8'
10	22 154.7		40.6'
	118.7		78.4' + 2.24'
	159.3		
			=
	118.9		38.5' (+2.26)
	157.4		38.3'
	119.7		76.8' + 2.29'
	158.0		

Index right and below

	212.0		34.9'
	246.9		37.0'
	210.9		71.9' + 2.44'
	247.9		
	211.2		36.9' (+2.45)
10	28 248.1		34.5'
	211.5		71.4' + 2.46'
	246.0		

Mean + 2.36

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1897phae.proj.1349.

Oct. 30, 1897

y compared with m.

Index right

		215.4	Comp. dia.	26.4'
10	31	241.8		29.0'
		214.5		55.4' +3.04'
		243.5		

213.5	31.3'	(+2.99)
244.8	26.5'	
215.4	57.8' +2.94'	
241.9		

Index left

303.2	32.0'	
335.2	31.0'	
303.9	63.0' +2.75'	
334.9		

		304.1	31.1' (+2.78)
10	55	335.2	30.0'
		304.8	61.1' +2.82'
		334.8	Mean +2.85

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1897phae.proj.1349

Oct. 30, 1897

δ compared with m

Index right

		217.4	<Comp. dis.	22.9'
10	35	240.3		22.4'
		216.8		45.3' +3.49'
		239.2		
				+3.46
		216.9		23.4' ~~(+2.46)~~
		240.3		22.9' ~~+3.0~~
		216.9		46.3' +3.44'
		239.8		

Index left

	304.5	28.3'	
	332.8	27.7'	
	304.5	56.0' +3.02'	
	332.2		
	306.2	26.6'	(+3.07)
10	52 332.8	26.9'	
	305.0	53.5' +3.12'	
	331.9		Mean +3.27

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1897phae.proj.1349.

Oct. 30, 1897

q compared with m.

Index right

		208.0	<Comp. dis	41.6'
10	42	249.6		41.3' 11
		207.8		82.9' +2.11'
		249.1		

208.3	41.3'	(+2.11)
249.6	41.7'	
208.3	83.0'	+2.11'
250.0		

Index left.

295.7	46.5'	
342.2	44.4'	
296.7	90.9'	+1.89'
341.1		

		298.3	41.1'	(+1.96)
10	48	339.4	44.5'	11
		297.1	85.6'	+2.03'
		341.6		Mean +1.98

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1897phae.proj.1349

Oct. 30, 1897.

α compared with m.

Index left and above

		295.0	Comp. dis.	46.8'
11	1	341.8		47.2'
		294.1		94.0' +1.81'
		341.3		
		295.0		47.1' (+1.84)
		342.1		44.9'
		296.85		92.0' +1.86'
		341.4		

Index right and below

		29.8		42.6'
		72.4		42.6'
		27.8		85.2' +2.05'
		70.4		
		28.3		41.6' (+2.05)
11	6	69.9		43.5'
		27.5		85.1' +2.05'
		71.0		

Mean +1.94

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1897phae.proj.1349.

Oct. 30, 1897

o' compared with m
Index right and above

		22.0	< Comp. dis.	52.4'
11	10	74.4		61.9'
		18.0		114.3' +1.32'
		79.9		
		16.5		63.7' (+1.26)
		80.2		55.8'
		21.4		119.5' +1.20'
		77.2		

Index left and below

		109.9		59.2'
		169.1		66.5'
		105.0		125.7' +1.07'
		171.5		
		103.2		
		~~102.7~~		69.3' (+1.04)
11	16	172.5		59.1'
		108.7		128.4' +1.01'
		167.8		Mean +1.15

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1897phae.proj.1349

Oct. 30, 1897.

p compared with m
Index left and below

		109.9	Comp. dis. 53.5'	
11	19	163.4	48.6'	
		114.0	102.1' +1.61'	
		162.6		
		115.2	46.5'	(+1.65)
		161.7	52.0'	
		112.2	98.5' +1.69'	
		164.2		

Index right and above.

		203.4	51.6'	
		255.0	46.1'	
		205.5	97.7' +1.71'	
		251.6		
		205.9	47.2'	(+1.72)
11	24	253.1	49.8'	
		204.6	97.0' +1.73'	
		254.4		Mean +1.68

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1897phae.proj.1349.

November 3, 1897. (Wednesday)

6 50 Watch correction = +14 sec. (Watch is slow 14 sec.)

		ν Delphini.	Phot. T.	H. Obs.
		20	31	+17.7
		22	16	
		1	45	

Index above.

		21.2	<Comp. dis.	57.8'
7	13	4	79.0	55.9'
			20.8	113.7' + 1.33'
			76.7	
			20.4	55.9' (+1.34)
	14	32	76.3	57.7'
			20.7	113.6' + 1.34'
			78.4	

Index below

			112.2	56.8'
	16	35	169.0	57.5'
			109.8	114.3' + 1.32'
			167.3	
			111.2	54.9' (+1.34)
	18	3	166.1	57.1'
	21	74	110.8	112.0' + 1.37'
7	15	34	167.9	
5		+14		
12	15	48		

Mean +1.34

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1897phae.proj.1349.

Nov. 3, 1897.

II

			109.9	58.9'	
7	22	2	168.8	52.6'	
			113.6	111.5' + 1.38'	
			166.2		
			114.9	51.3'	(+1.446)
23	24		166.2	53.7'	
			113.5	105.0' + 1.54'	
			167.2		

Index above.

			199.0	58.1'	
25	44		257.1	49.8'	
			206.0	107.9' + 1.47'	
			255.8		
			201.1	55.0'	(+1.43)
	27	26	256.1	56.0'	
	17	96	200.0	111.0' + 1.39'	
7	24	39	256.0		
5		+14			
12	24	53			

Mean +1.44

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1897phae.proj.1349

Nov. 3, 1897.

			204.9	50.0'	
7	29	8	254.9	55.5'	III
			201.6	105.5' +1.52'	
			257.1		
			201.3	54.2'	(+1.50)
	30	32	255.5	53.3'	
			203.0	107.5' +1.48'	
			256.3		

Index below

			293.4	49.0'	
	32	52	342.4	58.1'	
			286.9	107.1' +1.49'	
			345.0		
			292.9	52.1'	(+1.55)
	34	34	345.0	49.8'	
	5	126	295.2	101.9' +1.61'	
7	31	46	345.0		
5		+14			Mean +1.52
12	32	0			

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1907PASP..19..167

Nov. 3, 1897.

			294.0	50.2'	
7	36	9	344.2	50.1'	
			292.2	100.3' +1.65'	
			342.3		
			291.9	50.9'	(+1.69)
37	53		342.8	46.0'	
			295.1	96.9' +1.73'	
			341.1		

Index above

			25.0	46.6'	
39	55		71.6	52.9'	
			23.1	99.5' +1.67'	
			76.0		
			27.8	52.3'	(+1.66)
41	32		75.1	48.1'	
33	149		24.8	100.4' +1.65'	
7	38	52	72.9		
5		+14			
12	39	6			

Mean +1.68

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1897phae.proj.1349.

Nov. 3, 1897.

V

		24.9	47.6'	
7	46 37	72.5	50.0'	
		23.1	97.6' +1.72'	
		73.1		
		25.3	47.6'	(+1.76)
	48 44	72.9	46.7'	
		24.0	94.3' +1.80'	
		70.7		

Index below.

		116.1	45.5'	
	50 50	161.6	50.0'	
		114.9	95.5' +1.77'	
		164.9		
		116.1	47.5'	(+1.80)
	52 36	163.6	45.2'	
	36 167	115.9	92.7' +1.84'	
7	49 42	161.1		Mean +1.78
5	5 +14			
12	49 56			

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1897phae.proj.1349.

Nov. 3, 1897

VI

			116.7	43.3'	
7	54	20	160.0	45.5'	
			115.3	88.8' +1.95'	
			160.8		
			118.0	46.2'	(+1.95)
	56	18	164.2	42.4'	
			116.6	88.6' +1.95'	
			159.0		

Index above

			207.2	44.7'	
	58	32	251.9	45.6'	
			204.8	90.3' +1.91'	
			250.4		
					(+1.90)
			206.2	46.8'	
8	0	32	253.0	44.5'	
	28	102	206.6	91.3' +1.88'	
7	57	20	251.1		Mean +1.92
5		+14			
12	57	34			

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1897phae.proj.1349.

Nov. 3, 1897.

VII

			207.5	44.2'	
8	4	9	251.7	45.0'	
			205.0	89.2' +1.94'	
			250.0		
			205.0	46.0'	(+1.94)
5	56		251.0	43.0'	
			207.0	89.0' +1.94'	
			250.0		

Index below.

			298.7	39.9'	
7.	58		338.6	43.4'	
			297.2	83.3' + 2.10'	
			340.6		
			295.8	43.7'	(+2.08)
	9	38	339.5	41.1'	
	25	161	298.9	84.8' + 2.06'	
8	6	55	340.0		
5		+14			
13	7	9			

Mean +2.01

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1907phae.proj.13219

Nov. 3, 1897.

VIII

		298.8	41.6'	
8	11	26 340.~~8~~4	41.8'	
		~~295.9~~	83.4' + 2.10'	
		297.7		
		339.5		
		298.0	41.7'	(+2.09)
13	12	339.7	42.1'	
		295.9	83.8' + 2.05'	
		338.0		

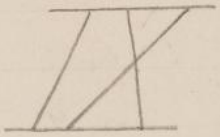
Index above.

		29.0	40.8'	
16	4	69.8	41.0'	
		~~27.8~~	81.8' + 2.14'	
		28.2		
		69.2		
				(+2.19)
		29.3	39.7'	
	17 28	69.0	38.7'	
	17 70	29.0	78.4' + 2.24'	
8	14 32	67.7		Mean + 2.14
5	+14			
13	14 46			

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1897phae.proj.1349

Nov. 3, 1897.



			29.9	37.0'	
8	19	12	66.9	39.6'	
			28.3	76.6' + 2.30'	
			67.9		
			28.3	40.6'	(+2.28)'
	21	5	68.9	37.3'	
			30.4	77.9' + 2.26'	
			67.7		

Index below.

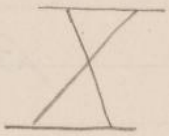
			120.0	37.1'	
	23	25	157.1	41.9'	
			117.6	79.0' + 2.22'	
			159.5		
			120.2	38.6'	(+2.28)
	24	56	158.8	36.3'	
	7	98	120.0	74.9' + 2.35'	
8	22	10	156.3		
5		+14		Mean +2.28	
13	22	24			

8
5
13
8

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1897phae.proj.1349.

Nov. 3, 1897



			121.0	35.8'	
8	26	39	156.8	38.8'	
			119.2	74.6' + 2.36'	
			158.0		
			119.0	37.1'	(+2.36)
29	5		156.1	37.1'	
			120.0	74.2' + 2.37'	
			157.1		

Under above.

			210.1	37.5'	
33	7		247.6	38.8'	
			210.1	76.3' + 2.31'	
			248.9		
			211.1	35.0'	(+2.38)
	35	13	246.1	37.0'	
	3	64	210.3	72.0' + 2.44'	
8	31	1	247.3		Mean +2.37
5		+14			
13	31	15			
8		50	Hatch correction = +14 sec.		

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1897phae.proj.1349

Nov. 3, 1897.

β Lyrae. W. Obs.

18 46 +33.2

24 6

5 20

Comp. Stars for S Cephei W. Obs.

24 9 −8.9

24 26

17

9 30 k 5.5 k'
k' 4.5 l
l 3.5 m
m 5.5 m'
m' 3.5 n
n 2.5 o
o 3.5 p
p 5 q
q 4 α
α 3.5 β
β 3.5 γ
γ 4 δ

9 39 δ is pretty faint Considerable moonlight

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1897phae.proj.1349.

Nov. 3, 1897

Comp. Stars for S S Cygni. Phot. D. H. Obs.

21 34 +42.6

25 47

3 33

δ compared with m.

Index left

306.1 < Comp. dis 25.3

10 14 331.4 25.8

305.8 51.1 +3.23'

331.6

305.3 27.0 (+3.20)

332.3 25.5

306.1 52.5 +3.16'

331.6

Index right

36.7 23.4

60.1 23.3

36.7 46.7 +3.42'

60.0

36.3 24.2 (+3.39)

10 22 60.5 23.9

36.4 48.1 +3.36'

60.3 Mean +3.30

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1897phae.proj.1349

Nov. 3, 1894.

Comp Stars for U Ceti. N. Obs

26	19	-13.0
25	45	
0	34	
11	26	

10 47 k 4 l
l 4.5 m
m 3 n
~~alt is apparently not needed.~~
n 4.5 o

11 8 Moon too bright for selection of anymore stars.

Chron. Comp.

B 394 A.D. 958

15	07	00.0	= 15	09	42.3
15	08	00.0	= 15	10	42.3

∴ Cor. to A. B. is - 2m 42.3s

Dis. Jup. IV. Phot. R. W. & Waite rec.
Comp. with brightest and most distant of satellites. on free side = Sat. III.

	15	20	38	151.2 +9.3 v
		21	00	210.5
Cor. Incls.				
10				
N 19 30.	[N	21	12.] 22	153.3 +57.7 / N
			50	211.0 +8.5 v 117.0 v

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1897phae.proj.1349

Nov. 3, 1897.

	15	22	08	156.1	vv.1 v	
			20	211.2	60.0 v	2.
Nv 19	47. v	(1v	22 29.) 37	154.8	11v.1 v	
			51	214.8	v7.6 v	
		23	10	153.8	vv.0 v	
			v28	208.8	v7.1 v	
Nv 20	v2. v	(1v	23 34.) 43	154.8	112.1 v	3.
			55	211.9	v6.0 v	
		24	18	153.0	60.1 v	
			v30	213.1		
Nv 21	v4. v	(1v	24 36.) 41	153.1	v7.6 v	4.
			57	210.7	117.7 v	
		25	12	152.1	v4.4 v	
			v25	213.0	60.9 v	
Nv 22	v0. v	(1v	25 32.) 38	151.8	v4.3 v	5.
			53	210.1	119.2 v	
		26	14	151.3	v9.6 v	
			v26	215.0	63.7 v	
Nv 23	v9. v	(1v	26 41.) 55	154.9	v7.4 v	6.
			10	212.3	121.1 v	
		27	21	152.0	60.6 v	
			v38	213.0	61.0 v	
Nv 24	0. v	(1v	27 42.) 50	149.2	61.v v	7.
			00	210.7	122.v v	
		28	18	154.2	61.2 v	
			v28	213.0	v4.4 v	
Nv 26	7. v	(1v	28 49.) 29	149.0	64.4 v	8.
			10	213.8	123.6 v	
		29	20		61.4 v	

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1897phae.proj.1349

Nov. 3, 1897.

At this point rec. went down to 11th to start plate.

	15	38	04	152.9	4A.1 v
			20	201.0	
lv 3v 46. v	(lv	30	20.) 31	161.2	39.v v
					876 v
			56	200.7	43.A v
		39	07	164.7	
					3v.A v
			20	200.5	36.v v
lv 36 46. v	(lv	39	20.) 35	165.3	723 v
			~~48~~	201.8	36. v
			59	163.2	34.9 v
		40	11	198.1	
					32.1 v
lv 37 36. v	(lv	40	10.) 23	166.0	670 v
			37	198.1	33.v v
			~~49~~	166.2	
					30.v v
		41	04	196.7	
					2A.3 v
lv 30 26. v	(lv	41	4.) 14	168.9	vA.A v
			24	197.2	29.4 v
			36	169.0	
					2.4A v
lv 39 1v. v	(lv	41	v7.) 51	193.8	29.3 v
		42	04	167.8	v4.1 v
			16	197.1	27.0 v
			32	169.8	
lv 39 v0. v			45	193.7	
40 3. v					
40 23. v		43	05	170.0	
40 4A. v			30	191.0	
41 13. v			55	171.4	
41 4F v		44	26	192.0	
42 10. v			52	173.8	

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1897phae.proj.1349

Nov. 3, 1897.

15 42 46.v 15 45 28 191.5
1r. 8v. later.

L. V.

15 46 19 169.9 22.9 v
15 46 42.v 29 192.8
(15 44 0.v) 47 170.7 22.3 v
47 14 193.0 Fr. 2 v 22.6 v

Observations very difficult. Region low. Settings had to be made very slowly and with care.

Dis. Jup. I. Phot. R. W. obs. Wolfrace. Comp. with more dist. of two sats. on free side = Sat. III.

16 04 47.x 16 04 20 141.3
-2 -42 38 77.0x 218.3
16 02 05.x 52 79.1 141.1 1
280° seeing blurry.
05 17 220.2
05 52.x 32 142.8
-02 -42 45 77.1x 219.9
03 10.x 58 77.8x 143.7 2
06 15 77.4 221.5

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1897phae.proj.1349

Nov. 3, 1897.

	16	06	37	145.0	16
16 06 59*			50	73.3* 218.3	3
-2 -42		07	04	73.0* 146.9	
16 04 17*			24	73.2* 219.9	
			42	142.0	
08 04*			57	77.8* 219.8	
2 -42		08	12	70.4* 146.5	4
05 22*			26	74.1* 216.9	
			40	146.3	
09 01*			57	71.7* 218.0	
-2 -42		09	08	74.1* 145.1	5
06 19*			19	72.9* 219.2	
			28	146.0	
09 55*				seeing blurry.	
-2 -42			47	73.2* 219.2	9
07 13*		10	09	74.6* 148.0	6
			16	73.9* 222.6	
10 34*			23	149.1	
-2 -42			30	70.9* 220.0	
07 52*			38	76.7* 143.1	7
			47	73.8* 219.8	
			58	144.8	
11 16*					1
-2 -42		11	12	78.6* 223.0	
08 34*			21	71.0* 146.0	8
			33	74.8* 217.0	
16 08 58*			40	144.2	
09 08			50	218.2	

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1897phae.proj.1349.

Nov. 3, 1897.

16 09 18	16	12	00	144.9	
29			11	217.9	
41			23	149.0	
54			36	214.2	
10 01			43	152.1	
08			50	212.2	
14			56	155.0	
26		13	07	211.8	
34			16	157.1	
47			29	203.7	
59			41	160.0	
11 06			48	200.9	
16			58	166.7	
24		14	06	197.8	
34			16	165.2	
47			29	195.0	
59			41	169.8	
12 10			52	193.9	

Not seen later.

L. V.

16 15 45	16	15	20	170.0	
-2 -42			38	~~214.8~~	194.8
16 13 03			51	27.2	168.8
		16	12	25.0	196.0

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1897phae.proj.1349.

Nov. 3, 1897.

Sat. dia. pretty close to limb of Jup. Seeing at times quite blurry, and especially sat. grew faint observations got rather difficult. Settings had to be made with slowness especially as sat. grew faint.

Comps. of Chrom.

B 394 A + D 958.

17	02	00.0	=	17	04	42.3
17	03	00.0	=	17	05	42.3

7

8

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1897phae.proj.1349

November 4, 1897. (Thursday)

Comparison Stars for S Ceti — N. Obs.

24	9	-8.9
22	39	
1	30	
10	30	

24	9	-8.9
22	48	
1	21	
10	39	

7 50 k 6 k'
k' 4.5 l
l 4 m
m 6 m'
m' 3.5 n
n 3.5 o
o 3.5 p
p 4.5 q
q 4 α
α 4.5 β
β 3.5 γ
8 7 γ 5 δ

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1897phae.proj.1349.

Nov. 4, 1897.

Comparison Stars for S Cet. Phot. T. H. Obs.

o compared with g.

Index above.

	122.1	< Comp. dis.	33.8'
8	22 155.9		34.2'
	121.4		68.0' + 2.57'
	155.6		
	121.7		34.0' (+2.56)
	155.7		34.3'
	122.8		68.3' + 2.56'
	157.1		

Index below.

	213.0		32.8'
	245.8		31.8'
	214.3		64.6' + 2.69'
	246.1		
	215.2		30.0' (+2.73)
8	31 245.2		32.3'
	213.1		62.3' + 2.77'
	245.4		

Mean +2.64

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1897phae.proj.1349

Nov. 4, 1897.

n compared with g.

Index below

		212.1		
		~~243.0~~ < Comp. dis	30.9'	
8	35	243.0	33.5'	
		212.5	64.4' + 2.70'	
		246.0		
		213.8	32.1'	(+2.66)
		245.9	34.4'	
		211.8	66.5' + 2.62'	
		246.2		

Index above.

		300.7	36.2'	
		336.9	36.4'	
		300.0	72.6' + 2.42'	
		336.4		
		300.4	38.0'	(+2.39)
8	43	338.4	36.4'	
		299.7	74.4' + 2.36'	
		336.1		

Mean +2.52

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1897phae.proj.1349.

Nov. 4, 1897.

k' compared with g.

Index above.

	109.9 < Comp. dis.	58.2'	
8	48 168.1	54.5'	9
	110.7	112.7' +1.36'	
	165.2		
	111.0	56.2'	(+1.34)
	167.2	57.6'	
	111.1	113.8' +1.33'	
	165.7		

Index below.

	204.2	53.4'	
	257.6	55.6'	
	202.6	109.0' +1.44'	
	258.2		
	203.3	53.4'	(+1.44)
8	56 256.7	55.5'	9
	201.7	108.9' +1.44'	
	257.2		

Mean +1.39

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1897phae.proj.1349

Nov. 4, 1897

m compared with g

Index left

		207.0	45.8′	
9	0	252.8	50.3′	
		203.9	96.1′ +1.75′	
		254.2		
		204.5	51.4′	(+1.70)
		256.2	48.6′	
		204.7	100.0′ +1.66′	
		253.3		

Index right.

		294.0	48.1′	
		342.1	46.3′	
		294.8	94.4′ +1.80′	
		341.1		
		292.7	49.3′	(+1.76)
9	12	342.0	47.6′	
		294.2	96.9′ +1.73′	
		341.8		

Mean +1.73

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1897phae.proj.1349.

Nov. 4, 1897.

l, compared with g.

Index, above

	294.7	< Comp. dis	51.8'
9	17 346.5		52.8'
	292.2		104.6' + 1.54'
	345.0		
	293.0		54.2' (+1.50)
	347.2		54.5'
	292.5		108.7' + 1.45'
	347.0		

Index below.

20.9	54.8'	
75.7	60.0'	
18.3	114.8' + 1.31'	
78.3		
18.3	57.1'	(+1.35)
9 22 75.4	53.9'	
21.5	111.0' + 1.39'	
75.4		

Mean + 1.42

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1897phae.proj.1349

Nov. 4, 1897.

Comparison Stars for U Cetei. H. Obs.

26	19	-13.0
24	~~47~~	
1	35	
10	25	

26	19	-13.0
25	17	
1	2	
10	58	

10 19 l 4 m
m 4 n
n 3.5 o
o 6 p
~~p 3.5 q~~
p 4 q
q 4 r
r 3.5 s
s is the faintest star that can be selected ~~tonight~~

S Cephei Phot T. H Obs.

21	37	+7 5.3
26	7	
4	30	

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1897phae.proj.1349

Nov. 4, 1897

S Cephei Phot. T. H. Obs.

Comp Star = e

Index above

	113.2	Comp dis	50.8'
11	164.0	12	52.6'
	112.7		103.4' +1.57'
	165.3		
	112.7		53.1' (+1.55)
	165.8		52.2'
	112.2		105.3' +1.53'
	164.4		

Index below

	204.9		48.1'
	253.0		51.9'
	205.0		100.0' +1.66'
	256.9		
	204.2		52.2' (+1.65)
11	256.4	16	48.6'
11	205.8	14.0	100.8' +1.64'
5	254.4		Mean +1.60
16		14.0	

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1897phae.proj.1349

Nov. 4, 1897

Same again

		205.5	48.8′
11	18	254.3	52.6′
		203.5	101.4′ +1.62′
		256.1	
		*	
		203.8	52.2′ (+1.60)
		256.0	50.6′
		204.3	102.8′ +1.59′
		254.9	

Index above

		292.0	52.1′
		344.1	50.0′
		294.0	102.1′ +1.61′
		344.0	
		292.1	53.4′ (+1.54)
11	24	345.5	54.0′
11	21.0	292.2	107.4′ +1.48′
5		~~343.3~~	
16	21.0	346.2	Mean +1.57

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1897phae.proj.1349.

November 6, 1897. (Saturday)

M.O. 441 Phot. R. H. Obs

27 31 +62.8

22 38

4 53

7 7

Index left and below

353.1 < Vanadis 58.7'

7 42 51.8 58.5'

353.7 117.2' - 1.25'

52.2

354.3 57.4' (-1.26)

51.7 58.6'

353.4 116.0' - 1.28'

52.0

Index right and above.

82.5 61.0'

143.8 59.3'

82.6 120.3' - 1.19'

141.9

84.4 57.8' (-1.22)

7 50 142.2 59.1'

7 46 81.9 116.9' - 1.26'

5 141.0

12 460

Mean -1.24

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1007phac.proj.1349.

Nov. 6, 1894.

Same again

		83.0	58.3'	
7	52	141.3	60.6'	
		83.0	118.9' − 1.22'	
		143.6		
		83.7	58.4'	(−1.24)
		142.1	58.9'	
		83.8	117.3 − 1.25'	
		142.7		

Index left and below

		174.3	57.4'	
		231.7	60.9'	
		171.9	118.3' − 1.23'	
		232.8		
		170.9	62.0'	(−1.18)
7	59	232.9	61.1'	
7	55.5	172.3	123.1' − 1.13'	
5		233.4		
12	55.5			Mean − 1.21

Var is the brighter.

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1897phae.proj.1349

Nov. 6, 1897.

H Delphini.	Phot. T.	H. Obs
20 31	+17.7	
23 31		
3 0		

Var compared with star a.

Index above

181.7 < comp. dis	96.3'	
8 19 278.0	85.7'	
186.0	182.0'	
271.7	178.0' — −0.04'	
155.0	85.1'	(0.00)'
270.1	93.3'	
182.0	178.4'	+0.03'
275.3		

Index below

273.7	90.8'	
4.5	83.4'	+0.11
277.5	174.2'	~~+0.13~~
~~8~~ 0.9		(+0.10)'
277.2	84.6'	
8 25 1.8	90.3'	
8 22.0 273.0	175.1'	+0.09'
5 3.5		mean +0.05'
13 22.0		

8

8
8
5
13

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1897phae.proj.1349.

Nov. 6, 1897.

Same again

		273.0	91.0'	
8	27	+.0	82.1'	
		278.0	173.1'	+0.13'
		0.1		
				(+0.11)'
		275.9	86.0'	
		~~359.3~~	89.4'	
		1.9	175.4'	+0.09'
		274.9		
		+.3		

Index above.

		6.8	86.2'	
		93.0	91.1'	
		5.7	177.3'	+0.04'
		96.8		
				+0.06'
		~~6.9~~		
		3.8	89.8'	
8	34	93.6	87.1'	
8	30.5	5.1	176.9'	+0.06'
5		97.2		
13	30.5			Mean. +0.06'

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1897phae.proj.1349.

Nov. 6, 1897.

a compared with 10.5

~~Var compared with 10.5 magn.~~

Index above

	25.5	49.5'	Comp. dis.
8 37	75.0	49.3'	
	24.7	98.8'	+1.69'
	74.0		

(1.6 ~)'

23.3	49.7'	
73.0	52.2'	
22.8	101.9'	+1.61'
75.0		

Index below

114.7	47.5'	
162.2	49.4'	
113.6	96.9'	+1.73'
163.0		

~~17~~ (1.70)"

	113.3	51.0'	
8 44	164.3	48.4'	
8 40.5	114.1	99.4'	1.67'
5	162.5		
13 40.5			

Mean +1.64'

8
8
5
13

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1997phae.proj.1349.

Nov. 6, 1897

Same again.

		115.2	47.8'	
8	49	163.0	54.1'	
		111.1	101.9'	+1.61'
		165.2		
		114.0	50.3'	(1.64)'
		164.3	49.6'	
		114.4	99.9'	+1.66'
		164.0		

Index above

		204.8	48.2'	
		253.0	50.3'	
		203.9	98.5'	+1.69'
		254.2		
		204.0	49.7'	(1.64)'
8	58	253.7	49.3'	
8	53.5	205.0	99.0'	+1.62'
5				
13	53.5	254.3		

mean +1.66'

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1897phae.proj.1349.

Nov. 6, 1897.

γ Delphini Phot R. Yk. Obs

Var and 10.5 magn compared

Index above

357.2	49.8'		
47.0	49.1'		
358.1	98.9'	+1.64'	
47.2			
~~0.4~~		(1.66)'	
358.7	49.1'		
47.8	51.1'		
356.8	100.2'	+1.67'	
47.9			

Index below

85.4	54.0'		
139.4	49.8'		
87.3	103.8'	+1.76'	
137.1			
		(1.63)'	
89.4	47.6'		
137.0	50.8'		
87.2	98.4'	+1.70'	
138.0			

mean +1.69'

9 7

9

9 14

9 10.5

5

14 10.5

9

9

5

14

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1897phae.proj.1349.

Nov. 6, 1897.

Same again.

		85.7	54.2'	
9	17	139.9	50 2'	
		87.3	104.4'	+1.77'
		137.5		
		87.1	50.8'	(1.76)'
		137.9	53.0'	
		86.0	103.8'	+1.76'
		139.0		

Index above

		177.0	48.4'	
		225.4	46.5'	
		179.6	94.9'	+1.79'
		226.1		
				(1.80)'
		180.0	46.4'	
9	26	226.4	47.4'	
9	21.5	179.0	94.1'	1.81'
5		226.4		
14	21.5			Mean ~~1.63~~ 1.62'

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1897phae.proj.1349.

Nov. 6, 1897

		○ Beti.	Phot R.	H. Obs.
		26 4	-2.5	10
		25 4		
		1 0		
		11 0		
		Index above		
		287.9 < Var. dis.	8.3'	
9	53	296.2	8.4'	
		287.8	16.7' - 5.68'	
		296.2		
		287.4	9.6'	(-5.58)
		296.0	8.7'	
		287.9	18.3' - 5.48'	
		296.6		
		Index below.		1
		18.0	8.5'	10
		26.5	8.7'	10
		17.5	17.2 - 5.62'	5
		26.2		15
				(-5.57)
		17.6	8.8'	1
10	1	26.4	9.2'	
9	57	17.5	18.0' - 5.52'	
5		26.7		
14	57.0			

Mean - 5.58

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1897phae.proj.1349

Nov. 6, 1897.

Same, again.

		17.9	8.3'
10	4	26.2	8.2'
		18.0	16.5' − 5.71'
		26.2	
		17.9	8.8' (−5.67)
		26.7	8.3'
		18.0	17.1' − 5.63'
		26.3	

Index above

		108.1	8.8'
		116.9	9.0'
		107.9	17.8' − 5.54'
		116.9	
		~~108.0~~	(−5.64)
1		107.9	9.0'
10	13	116.9	7.3
10	8.5	108.9	16.3 − 5.74'
5			
15	18.5	116.2	Mean −5.66

10 15 Chair got off the track. Stopped to replace it

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1897phae.proj.1349.

Nov. 6, 1897.

δ Ursae Minoris. Phot R. H. Obs

15 5-0 +75.2
25 40
9 50

15 5-0 +75.2
28 15
12 25

Index left

267.8 < Var. dir 49.9'
317.7 51.2'
267.8 101.1' - 1.63'
319.0

266.6 50.6' (-1.62)
317.2 50.9'
267.7 101.5' - 1.62'
318.6

Index right

358.8 45.9'
44.7 48.0'
358.4 93.9' - 1.81'
46.4

12 7

12
12
5
17

12

12
12
5
17

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1897phae.proj.1349.

Nov. 6, 1897.

(−1.81)

		357.0	48.1'
12	11	45.1	45.8'
12	9.0	358.4	93.9' − 1.81'
5		44.2	Mean − 1.72
17	9.0		

Same again

		358.7	45.6'
12	12	44.3	46.9'
		358.0	92.5' − 1.85'
		44.9	

0.0	45.2'	(−1.88)
45.2	44.4'	
0.6	89.6' − 1.92'	
45.0		

Index left

87.7	48.6'	
136.3	49.4'	
89.0	98.0' − 1.71'	
138.4		

		86.8	48.4' (−1.74)
12	16	135.2	46.9'
12	14.0	89.1	95.3' − 1.77'
5		136.0	Mean − 1.81
17	14.0		

Variable is the brighter

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1897phae.proj.1349.

Nov. 9. 1897 (Tuesday).

δ Cephei. Phot. F. W. Obs. 8

21 37 +78.3

23 25 9

1 48

8 10 Abandoned

Σ 24 24 Phot. H. (Span prism inserted) W. Obs

18 53 +13.5

23 45

4 52

F 15- Abandoned too low

Σ 25 55 Phot H. (Span prism inserted) W. Obs

19 43 +18.8

23 48

4 5-

8 25- Seeing very bad On this account, and from faintness of companion, this double abandonded

Σ 26 37 Phot. H. (Span prism inserted) W. Obs.

20 4 +20.5

24 4

4 0

8 33 Clouds

8 36 Clouds thick

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1897phae.proj.1349.

Nov. 9, 1897.

8 47 Cloudsthick

9 20 Still all cloudy

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1897phae.proj.1349.

November 10, 1897 (Wednesday)

δ Cephei.

21	37	+78.3
22	50	
1	13	

Comp star = e

Index left and below

31.3	Comp dis	50.0'
81.3		56.6'
27.9		106.6' +1.50'
84.5		

28.0	55.5'	(+1.54)'
83.5	48.2'	
31.1	103.7' +1.57'	
79.3		

Index right and above

121.4	50.6'	
172.0	57.8'	
119.9	108.4' +1.45'	
177.7		

118.0	58.7'	(+1.50)'
176.7	46.0'	
129.9	104.7' +1.54'	
169.9		

Mean +1.52'

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1897phae.proj.1349.

Nov. 10, 1897.

Same again

		123.9	48.3'	
7	30	172.2	60.7'	
		119.2	109.0' +1.44'	
		179.9		
		115.7	62.2'	(+1.41)'
		177.9	49.3'	
		122.8	111.5' +1.38'	
		172.1		

Index left and below

		216.5	43.7'	
		260.2	52.3'	
		212.9	96.0' +1.76'	
		265.2		
		212.2	53.5'	(+1.74)'
7	35	265.7	43.6'	
7	32.5	217.9	97.1' +1.73'	
5		261.5		
12	32.5			Mean +1.58

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1897phae.proj.1349.

Nov. 10, 1897.

Σ 2838 Phot. M. (Spar prism inserted) M. Obs

21	45	−3.9
25	28	
3	40	

Pos. angle 175°, dis 22 sec. Magn 6.0 and 8.5

9 55 Clouds in this region

Index below.

124.8 < brighter dis.

10 2 148.1 23.3

clouds 23.4

123.2 46.7 − 3.42

146.6

123.9 − 3.40

146.1 22.2

124.3 23.2

149.5 47.4 − 3.39

Index above Mean = − 3.40

215.5

236.1 20.6

214.0 26.0

238.0 46.6 − 3.33

− 3.36

213.9

10 10 236.0 22.1 10

10 06 215.3 21.6

236.7 43.5 − 3.38

(See note next page)

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1897phae.proj.1349.

Nov. 10, 1894.

18 17 Observations ~~exceedingly~~ extremely difficult on acct of low altitude, bright moonlight and some cloud
Σ 2909 Phot M. (Span prism inserted) H. Obs.
22 23 −0.7 (Achromatic Power 400)
25 53
3 brighter 30 South following component thought to be slightly
Pos. angle 320°, dis 3.5 sec. Magn 4.0 and 4.1
~~Index~~ left and below. B.
244.2 < S Fol and brighter dis.

10 23 329.0 ± 1.8
239.0 91.7
330.7 173.5 − 0.12

241.5 − 0.18
329.5 ± 8.0
Clouds 79.4
246.8 167.4 − 0.24
326.2
Index right and above. A. Mean = − 0.16
333.0
57.6 ± 4.6
331.1 ± 8.6
59.2 173.2 − 0.13

330.1 − 0.14
10 31 58.2 ± 4.1
334.4 ± 3.2
54.9 171.3 − 0.16

Observation difficult on acct of closeness of components and bad seeing

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1897phae.proj.1349.

Nov. 10, 1897.

Σ 2960 Phot H. (Spar prism inserted) W. Obs

22	50	+41.0
27	15	
4	25	

11 0 String of Phot broke so that it cannot be used.

S S Cygni. W. Obs.

21	34	+42.6
26	40	
5	6	

~~+1.5~~

11 22 S × 1, 1.5 D in large telescope Est. 11.4

Students here during the evening ~~in connection with~~ preparing to observe Meteors on Nov. 13, 1897. Explained to them method of work for that evening and laid out general plan of work.

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1897phae.proj.1349.

Nov. 12. 1897. (Friday)

Mr. Lundin brought up Photometer R this morning, the alterations having been completed.

It has been changed so that both quartz prisms can run together with their full power as before, or one can be ~~turned 90°~~ rotated 90° and be clamped close to the piece, ~~while~~ thus bringing the emergent pencils together, while the other prism runs up and down the tube.

In the new, alternative, modified form, it will be called Phot. R. and in the old form, with both prisms running together, it will still be called Phot. R.

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November 12, 1897 (Friday)

Σ 2758 Phot R. (new modification.) W. Obs.

21 1 +38.1

24 17 No. with Phot. W.

3 16

Index right and below.

23.1 < brighter dis 67.8

8 41 90.9 74.0

18.7 141.8 0.74

92.7

0.78'

18.2 72.7

90.9 72.0

18.4 144.7 0.64

90.4

Index left and above

111.7 67.1

178.8 74.7

109.0 141.8 0.74

183.7

0.70

~~0.69~~

107.7 75.3

8 47 183.0 70.3

109.0 145.6 0.66

8 44 179.3

Pos angle 120°, dis 18 sec, Magn 5.4 and 5.8

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Nov. 12, 1897.

~~When~~ The preceding measurement was made with the new modification of Phot. R, as indicated on Page 211. of this book.

When one of the prisms is at focus, the emergent pencils seem to be well together, as judged from effect on images when the eye is moved over different parts of the field, that is the ordinary and extraordinary images do not alter their relative brightness, as they do when both of the prisms are run together.

We thought at first that the images were a little sharper when both prisms are run together, but a second trial with prisms apart, shows that the images are very nearly, if not quite as sharp under this latter condition.

Σ 2822		~~Phot R. (new modification)~~	N. Obs.
21	38	+28.2	
25	2		
3	24		

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Nov. 12, 1897.

Σ 2822. Phot. H. (Span prism inserted) H. Obs.
Pos angle 120°, dis H sec. Magn H. 0 and 5.0
Index left and above.

		283.2 brighter dis.
~~9~~	~~38~~	~~346.7~~
9	39	343.8
		281.9
		344.8
		286.4
		344.1
		281.0
		346.9

Index right and below

10	0	Clouds thick
10	10	Impossible to finish this star on account of clouds.

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Nov. 12, 1897

Σ 57′ Phot R (new modification) N. Obs

21 32 +66,2

25 55

4 23

North following component thought to be slightly the brighter

Pos angle 210°, dis 3-min, mags 6.5 and 6.6

Index left B.

	359.0	<brighter dis.	92.8	
10	91.8	20	95.6	
	359.0		188.4	
	92.6		171.6	0.16
	359.1		94.1	
	93.2		94.6	(0.16)
	359.0		188.7	
	93.6		171.3	0.16

Index right A.

~~88.9~~	~~90.7~~	89.0	91.4
~~180.2~~	~~180.4~~	180.4	92.9
Rej		89.9	184.3
		182.8	175.7 0.08
	88.4		93.1
10 29	~~182.0~~	181.5	93.9 (0.10)
	~~89.5~~	87.4	187.0
		181.3	173.0 0.13

Mean 0.13

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Nov. 17, 1897

Σ2873 Phot R. (new modification) W. Obs

22 3 +52.2

26 23

+ 20

Pos angle 70° dis 14 Sec Magn 6.3 and 7.0

Index right and above

181.2 <brighter dis.

10 48 265.8 <K.6

188.2 701

258.3 (rK.)

189.8 69.3

259.1

182.0 <3.7

265.7 (r3.0

Index left and below

272.2

~~353.7~~ 355.9 <3.7

277.8 <Clouds thick> 0.K

348.2 (rK1

281.0 66.6

10 55 347.6

273.1 <6

357.7 (r1.2

Observations made through coördinate cloud.

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Nov. 13: 1897. (Saturday)

Sr. with 9 men observed Leonids throughout the night till 6 A.M.

90 meteors seen, some being from other radiants, but mainly from Leo.

Troubled by clouds and moonlight. Pretty clear from 12h 30m to 2h and again from 2h 30m to 4h, mostly clear afterwards.

Many meteors faint, and most of them swift. This confirms the opinion that probably many meteors were lost from clouds and moonlight.

Arnold + Dent used on East Balcony and B + C. 1882 on West Balcony.

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November 16, 1897 (Tuesday)

7 0 Cloudy

7 30 Cloudy

8 0 Still cloudy

8 30 Still cloudy with no chance of clearing.

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November 15, 1897. (Thursday.)

7 0 Cloudy

SS Cygni. H. Obs

21 34 +42.6

28 56

2 22

8 10. Quite cloudy.

8 5 cy 1 var, var 2d in large telescope.

8 16 cy 1 var, var 1.5 d in large "

~~Considerably~~ Var. and comp. stars very well seen in gaps in the clouds.

8 4 cy 1 var, var 2d in large telescope.

9 0 Clouds thick

Σ 2960 Phot R. (new modification) H. Obs.

22 50 +41.0

25 26 | There is a quite faint companion at pos angle 330° dis 2"/sec. Magns. 12.5.

7 36 | Pos angle 45° dis. 1.'2 min. Magns. 5.3 and 5.9

Index left and below.

122.6 18.7

9 32 141.3 17.9

122.8 36.6 3.96

140.7

123.2 17.8 (3.90)

141.0 20.9

123.0 38.7 3.84

143.9

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Nov. 18, 1897.

Index right and above.

212.7	18.7		
231.4	18.1		
212.3	36.8	3.95	
230.4			
212.4	~~19.+~~ 20.1		(3.82)
9 37 232.5	21.1		
211.2	41.2	1 3.70	
232.3		Mean 3.86	

The more distant pair measured as indicated by above pos. angle and distance. The nearer companion too faint to measure.

9 46 Coming up thickly cloudy again

Comp. Stars for Variables.
Too cloudy abandoned.

Σ 3047

23	46	+37.2
25	56	
2	10	

9 50 Clouds thick

10 0 All thickly cloudy again no chance for anything ~~farther~~

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