1898phae.proj.1355

KG
11366
v.351

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1898pnae.proj..1355..

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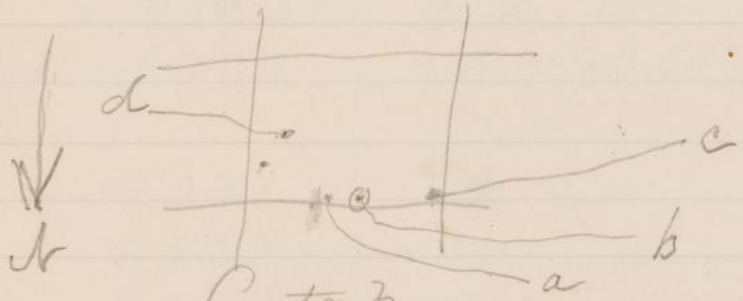
1898phat..proj.1333.

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1898phae.proj.1355.

Sept. 6, 1898 (Tuesday)

Planet Q.2. $20^h\ 44^m$ −6.1
17 45



a to b
6.5
7 44 8 6.6
6.3
b to c
15.5
7 45 15.5
15.7

a to b
5.6
7 56 5.6
5.6
b to c
16.0
7 57 16.2
16.2

c = −6° 7622 (9.7)
d = −6° 7618 (9.8)

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1898phae.proj.1355.

a to b Sept 6. 1898.

4.4

8 14 4.4

4.4

b to c

17.3

8 16 17.1

17.#3

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1898phae.proj.1355.

Sept. 6, 1898.

Planet 22 Phot I.

Index Right & Above

	238.5	< comp. star dec.		
8 41 30	273.7	34.9		
	238.6	32.4		
	271.0	67.3	+2.60	
	239.1			
D 47 20	272.0	32.9		+2.58
	237.1	35.9		
	273.0	68.8	+2.58	

Left & Below

	323.1			
55 35	6.4	42.4		
	326.0	39.2		
	5.2	81.6	+2.15	
	324.3			
57 00	5.1	41.5		+2.08
1 25	322.0	44.5		
8 80 21	6.5	86.0	+2.02	
+ 3				
13 50 24				

Mean +2.33

Comp. star = S.D. − 6° 5626 (9.2)

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1898phae.proj.1355.

Sept. 6, 1898.

		327.0		
8	59 00	6.3	39.3	
		324.1	41.9	
		6.0	81.2	+2.16
		324.5		+2.14
9	00 30	5.5	41.0	
		325.3	41.2	
		6.5	82.2	+2.13

Right and Above

		58.0		
6	00	90.0	32.0	
		58.0	32.5	
		90.5	64.5	+2.69
		58.1		
8	10	89.5	31.4	+2.72
20	00	58.1	31.7	
9	3 30	89.7	63.1	+2.74
	+3			
14	3 33			

Mean +2.73

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1898phae.proj.1355.

Sept. 6, 1898

	56.F		
9 11 58	90.1	33.3	
	58.5	31.2	
	89.7	64.5	+2.69
	58.2		+2.69
13 40	90.6	32.4	
	57.0	32.1	
	89.1	64.5	+2.69

Left & Below

	146.5		
16 30	186.4	39.9	
	145.0	40.5	
	185.8	80.7	+2.17
	142.5		+2.18
18 00	185.0	40.5	
20 00	145.3	40.0	
9 15 + 3 00	185.3	80.5	+2.18
14 15 3			

Mean +2.44

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1898phae.proj.1355.

Sept. 6. 1898.

		a to b	b to c
		0.5	20.6
9	20	0.5	20.6
		0.7	20.5

The above object assumed for the asteroid is such

Variable discovered by Müller & Kempf
= D.M. +20° 4200

$19^h\ 28^m$ +19.5

21 4

1 36

1898phae.proj.1355.

Sept. 6. 1895.

Coorp. Chr = +20° ±20s (9.2)

Index Right

	1405	< var dia.	
9 57 00	186.0	40.5	
	145.3	39.7	
	185.0	80.2	-2.00
	145.1		-208
58 30	185.1	40.0	
	142.2	43.3	
	185.5	83.3	-2.10

Index Left

	237.96		
10 2 00	271.85	33.9	
	204.0	40.5	
	274.5	74.4	-2.36
	234.2		-2.30
3 40	275.9	41.7	
1 10	235.9	36.6	
10 00 15	272.5	78.3	-2.25
+3			
15 00 21			

Mean -219

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1898phae.proj.1355.

Sept. 6, 1898

Index Left

236.7

10 ~~9~~ 00 273.01 36.4

235.0 40.8

2758 772 −2.28

~~2335~~ 235.2 −2.30

16 ~~20~~ ~~00~~ ~~27465~~ 2740 38.8

Clouds 36.9

~~236.0~~ 757 −2.32

273.0

Clouds

~~48 3~~ Index Right

323.1

4830 4.2 46.1

323.0 42.1

5.1 532 −2.10

323.5

5 0 00 5.5 42.0 −2.11

~~193 55~~

324.2 40.7

10 30 59 4.9 527 −2.12

+3

10 3~~1~~ 2

Mean −2.20

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1898phae.proj.1355.

Sept 6, 1898.

	323.5			
10 51 48	5.5	42.0		
	323.9	42.1		
	6.0	54.1	2.08	
	323.2			
53 00	6.5	43.3		2.07
	Cloudy	41.3		
	329.9	54.6	2.06	
	5.2			
	Indy Left.			
	56.0			
39 00	93.0	37.0		
	53.2	40.9		
	94.1	77.9	226	
	54.1			
11 1 40	95.9	41.8		2.23
225 20	55.3	37.9		
10 56 20	98.2	79.7	220	
+3				
15 56 23				

Mean 2.15

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1898phae.proj.1355.

Sept. 6, 1895.

		55.6
H	3 30	93.5
		53.0
		95.6
		54.0
11	11 00	95.8
		~~56.0~~
		94.0

54.2

~~La~~ Troubld in obsvations of above variable. by clouds

Watch correction + 3 seconds (watch is slow)

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1898phae.proj.1355.

Sept. 5, 1895 (Thursday)

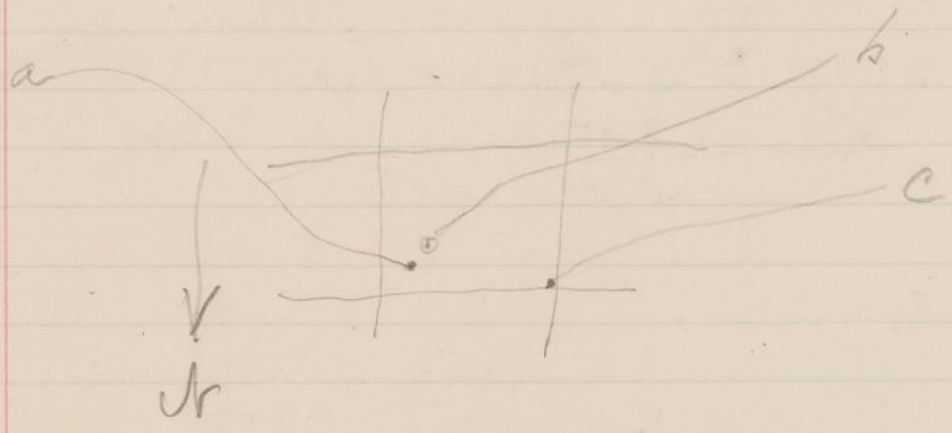
Planet Q2 Phot. I.

20 44 −6.1
18 53
1 41

20 44
19 1
1 43

a to b
+3.5
+3.6
+3.5

7 44



a = −6° 56′ (8.2)
c = −6° 56′ (8.1)

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1898phae.proj.1355.

Sept. 5, 1895.

a to b
+ 0.5 Recd.
8 45 + 0.6
+ 0.5

Asteroid is about 1.3 south of star a

Too cloudy to measure Asteroid at present.

Variable discovered by Mullen & Kongl = U Vulpec.

19 25 +19.5
20 25
57

9/14

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1898phae.proj.1355.

Left. A. 1892.

Comp. Var = +20° K20 K (9.2)

Index left

	277.2		
9 24 20	279.4	33.6	
	277.0	34.6	
	272.3	68.2	-2.07
	278.5		-2.07
26 30	272.4	33.9	
	271.5	34.3	
	272.8	68.2	-2.07
	Clouds		
	326.2		
	7.85	41.3	
34 30	325.1	39.2	
	48.3	80.5	-2.15
	324.7		
35 20	4.3	40.1	-2.18
0 40	325.0	40.8	
9 30 10	5.78	80.9	-2.17
14 30 30			

Mean -2.38

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1898phae.proj.1355.

Sept. 8, 1895.

Right

3235

9 37 40 6.75 42.0

3255 38.7

4.2 80.7 -2.17

3239.2

40 10 4.1 40.9 -2.14

3243.2 42.5

Clouds 83.4 -2.10

5.7

Left

56.95

93.50 36.5

Clouds 35.6

56.5 72.1 -2.44

92.1

10 2 10 56.0

92.9 36.9 -2.41

191 5 Clouds thick

9 47 46 56.3 36.9

+20 93.2 73.8 -2.38

14 48 6

Mean -2.25

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1898phae.proj.1355.

Sept 8, 1898.

53.3
10 h 35 94.0

Troubled throughout evening greatly by clouds
Observations on above variable through clouds and much of the time quite difficult as stars were very faint

+20 sec. (Watch is slow)

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1898phae.proj.1355.

Fri. September 9 1898.

R Sagittarii. $19^h\ 09^m$ $-19°\ 2$

$18\ 40$

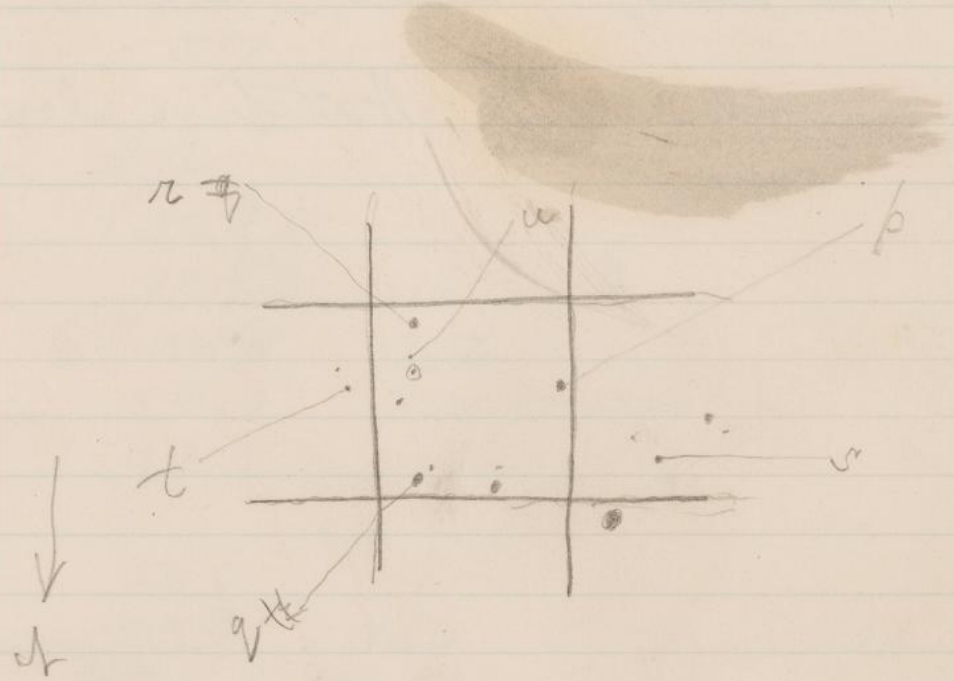
$-\ 0\ 21$ Yr. obs.

$11\ 39$

19^h 28^m

P 4m Q

Q 2 R



19 47

R 6 S

S 3 T

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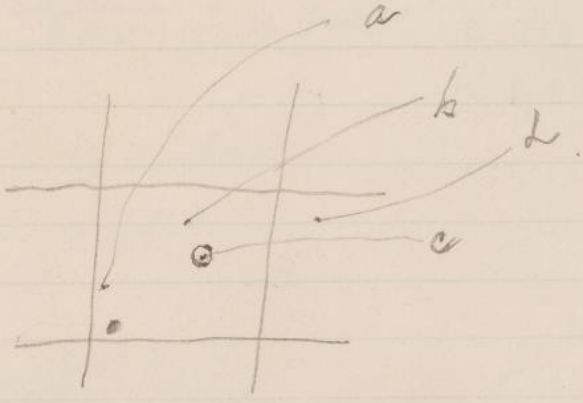
1898phae.proj.1355.

Fri., September 9, 1898.

19h 48m T N (5)

Planet 2Q W. obs.

20 44 −6.1
19 49
−0 V V
11 V



B to C C to D

+5.5 −31.0
8h 29m E.T. +5.5 −31.3 8h 32m E.T.
+5.5 −31.2

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1898phae.proj.1355.

Friday, September 7 1898

Planet DQ. W. Olbers.

B TO C (2044, −6,1)

+ 4,0

9 02 C.T. + 4,0

+ 3,9

C TO D

~~33,9~~

− 33,0

9 05 C.T. − 33,0

− 33,0

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1898phae..proj.1355.

Friday September 9 1895.
Planet 22 Phot. ✓ N. Obs.

Index above.

Comp. Star dec.

		245.4	19.9 ✓		
9	3K	265.3			
	~~+1.7~~	243.8	20.3 ✓		
		264.1	K0.2 ✓	+3.76 ✓	
		245.5	19.8 ✓		+(3.80) ✓
9	37.	265.3			
	~~+1.7~~	245.4	18.7 ✓		
		264.1	3K.✓ ✓	+3.8✓ ✓	

Index below.

	C.T.	333.2	21.6 ✓		
	ℓ K	354.8			
		332.2			
		~~338.4~~	2✓.0 ✓		
			K66 ✓	+3.K3 ✓	
		357.2			
		332.2	23.8 ✓		(+3.KK) ✓
	9 44	356.0			
	1✓7.	~~330.5~~			
	9 39.2	332.6	22.3 ✓		
	✓ +1.7				
		355.1	K6.1 ✓	+3.4✓ ✓	
	1K K0.9 ✓				

mean +3.62 ✓

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1898phae.proj.1355.

Friday, September 9, 1898.

Index below. Wr. Obs.

~~330,8~~

C.T.

9 47.4 332,8 22.3 ✓

355,1

332,8

23.2 ✓

K5.5 ✓ 3.KA ✓

355,2

~~330,8~~

9 49.5 331,2 2K.0 ✓

355,2 (3.K0 ✓)

~~330,1~~

~~332,0~~

331,6 23.2 ✓

K9.2 ✓ 3.K0 ✓

354,8

Index above.

63,6

9 55 ~~84,8~~ 21.5 ✓

85,1

~~64,6~~

64,6

83,3 1A.7 ✓

K02 ✓ 3.76 ✓

63,8 21.2 ✓

9 57 85,0 (3.70 ✓)

20 F.9 ~~64,0~~

9 ✓ ✓22 63,8

1.7

14 ✓3.9 ✓ ~~84,9~~ 21.3 ✓

85,1 K2.5 ✓ 3.63 ✓ Mean 3.57 ✓

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1898phae.proj.1355.

Friday, September 9 1898.

Index above. W. Obs.

~~62.8~~
~~63.9~~
E.T. 63.7 21.3
9 59.5 85.0

~~62.9~~
63.4 21.6 / 42.9 3.61
10 00.5 85.0

~~62.8~~
63.5 21.6 (3.60)
85.1

63.2 22.0 / 43.6 3.62
10 02.7 85.2

Index below.

151.0
10 05.2 ~~176.5~~ 25.6
176.6
151.4 25.6 / 0.2 3.26
176.0

(3.26)

~~150.4~~
151.0
10 07.1 ~~176.1~~ 25.0
176.0 25.2 / 0.2 3.26
151.2
~~176.2~~

31.0
10 3.0
1.7
4.7 4.3

Mean 3.43

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1898phae.proj.1355.

Friday, September 9, 1878.

Planet DQ. W. Obs.

(2044 -6,1)

		B TO C
		+1,0
	E.T.	
10	13,5	+1,2
		+1,3

		C TO D
		-36,0
10	15,0	-35,5
		-35,6

Comp. Star on above Asteroid =

~~$\Delta\delta = 6'' \sqrt{600} (\Delta v)$~~

$= \sqrt{\Delta} - 6'' \sqrt{600} \Delta (\Delta v)$

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1898phae.proj.1355.

Friday, September 9 1898.

Var. disc. by Muller + Kempf.
= U Vulpeculae. (Prof. T.)

W-obs.

h m
19 28 + 19,3 -
22 00
2 32

Index left.

E.T.

10 36,4	240,1
	269,4
	240,9
	240,5
	~~268,3~~
	268,8
	~~248,9~~
	240,5
	270,0
	269,4
	238,2
	269,2
20 43	270,6
	270,1

Comp. Star for U Vulpeculae =
2 M. + 20° 4 20 K (9.2)

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1898phae.proj.1355.

Sept. 9, 1898.

Index left.

325,8
2,3
327,2
0,6

327,7
0,0
0,5

327,0
2,9
1,9

E.T.
10 43,2

Index Rt

326,8
327,0
1,5

327,1
0,8

10 45

328,8
328,0
0,9

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1898phae.proj.1355.

Sept. 9. 1898.

326,8
327,2
2,0

10 48,5

5-9,0

Index left.

E.T.
10 50,1

89,6
60,3
89,1
89,5
89,0
87,8
88,2

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1898phae.proj.1355.

Sept. 9. 1898.

Index left.

10	58 S.T.	59.6	Var. dis.	2.6 v
		88.2		
		59.3		3.02 v
		89.5		2.42 v − 2.91 v
		59.2		2.9.2 v −(2.93) v
10	59.5	88.64		
		59.9		2.42 v
		88.4		2.97 v − 2.95 v

Index ft.

		147.0		3.42 v
		184.2		
11		181.7		
1	02.	147.0		3.42 v
		181.25		6.97 v − 2.52 v
		147.0		3.46 v
11	03.0	182.6		−(2.50) v
	2.42 v	147.0		3.42 v
		182.1		10.9 v − 2.42 v
10				Mean − 2.92 v
11	0.6			
+5	1.7			
16	2.3 v			

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1898phae.proj.1355.

Left. 9. 1898.

	147.0	34.5 ✓	
11	181.5	34.3 ✓	
X2 05	147.5	~~40.8~~	
	181.5	~~74.6~~ 64.8 ✓	−2.55 ✓
	147.3	34.2 ✓	(−2.52) ✓
E.	182.5	34.2 ✓	
	147.3	70.4 ✓	−2.49 ✓
	182.5		
	~~183.0~~		
	241.7	Index-left	
11 14	267.8	26.1 ✓	
	240.85	27.9 ✓	
	268.4	55.0 ✓	−3.10 ✓
	240.3		
11 16	269.8	29.5 ✓	−(3.04) ✓
43	241.0	27.2 ✓	
11 10.8	268.2	56.7 ✓	−2.99 ✓
+5 1.7			
16 12.5 ✓			Mean −2.75 ✓

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1898phae.proj.1355.

Sept. 9. 1898.

Index left.

		240.3	293		
11	18.5	267.6			
		268.2			
		249.5	24.5		
		268.7	57.7	−3.03	
		240.3	301	(2.96)	
11	19	270.4			
		240.2	24.5		
		269.0	54.9	−2.90	

Index Rt

		326.7	34.7		
	22.	1.7			
		328.0	33		
		0.85	66.2	−2.57	
		327.6	32.9	(2.62)	
11	23.5	0.15			
	23.0	328.0	32.7		
11	20.4	0.7	65.6	−2.66	
+5	1.7				
16	22.5				

Mean −2.79

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1898phae.proj.1355.

~~Left. 9.7 Rapk.~~

327,6 Index Rt

1,4

2,0

325,2

326,6

0,8

|| 25 — 3 3 A ✓

321 ✓

6r.9 ✓ — 2.6r ✓

328,6 31.r ✓ — (2.66 ✓)

0,1

|| 27 — 3 3r ✓

3 2 7,2

3 2 5,1 9

6r.0 ✓ — 2.6 ✓

0,7

6 — : Index left.

60,2 30.0 ✓

|| 29,5 — 90,2

61,5

88,9 29.4 ✓

r9.4 ✓ — 2.96 ✓

58,7 30.0 ✓ — 2.90 ✓

88,8

|| 3 — 60,2 30 7

112.r ✓ 60.7 ✓ — 2.4 ✓

|| 28,1 — 90,9

+r 1,7

16 29.8 ✓

Mean. — 2.7 ✓

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1898phae.proj.1355.

Sept. 9. 1898.

Index left.

		60.1	2.76	
11	33	87.9		
		60.0	2.69	
		88.9	6.45	−3.00
		60.0		
		~~88.8~~ ~~87.9~~ 89.2	2.92	−(2.92)
11	36	60.1	3.10	
		91.4	6.02	−2.42

Index right.

		~~148.7~~ ~~146.9~~		
		180.75	3.14	
11	39	~~148.8~~ 149.9	3.23	
		181.2	6.41	−2.71
		~~147.7~~ ~~148.1~~	3.23	−(2.70)
		180.0		
11	41	~~148.4~~ 148.2	3.23	
	149.	180.4	6.46	−2.69
11	37.2			
+r	1.7			
16	38.9			

Mean − 2.81

Watch was 1m 40s slow of Bond 39 h.

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1898phae.proj.1355.

Sept. 10. 1898. (Saturday)

Cloudy all the first half of evening.

9 0 Some gaps - A little clearer.

9 10 All cloudy again.

9 35 Still cloudy with no prospect of clearing.

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1898phae.proj.1355.

Sept. 12 1898 (Monday)

R Sagittarii

19 09 −19.2
19 03
06 E

Est. of comp. stars.

P 5 Q
Q 5 R — {Estimate, which is remembered, omitted in record by accident.
R 4.5 S
7 36 S 4.5 T
T 4 U

Minor Planet 2 Q1 Phot. I.

20 44 −6.1
19 30
1 14

a to b

13.0
7 58.0 13.0 13.1
13.2

b to c

10.5
7 59 10.0 10.5
10.5

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1999phae.proj.1355.

Sept. 12, 1895.

b & to d

23.0

8 01 23.0 . 23.1

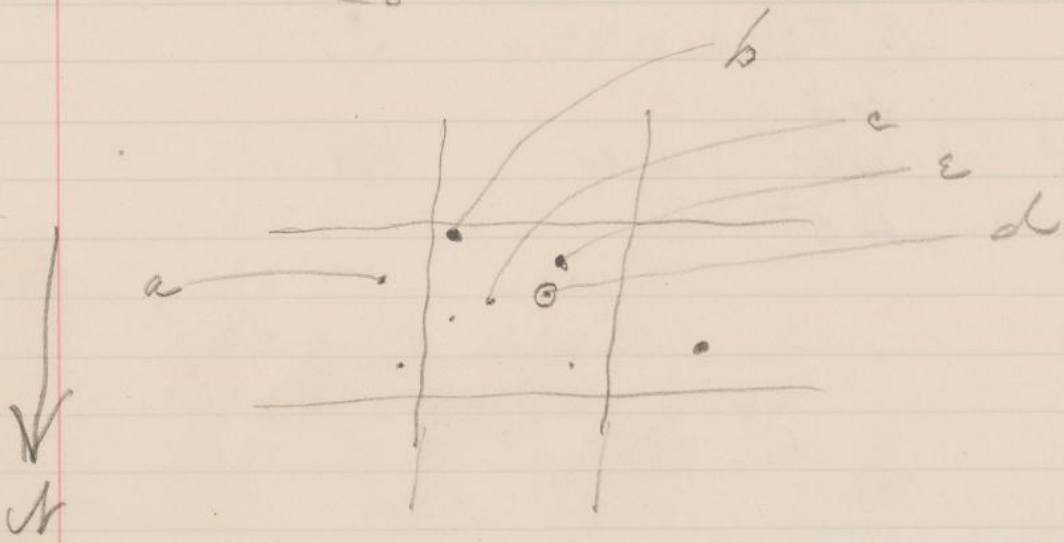
23.2

d to c

2.9

8 02 2.8 2.8

28



a to b

13 0

8 28 13.2 13.1

13.0

d to e

4.0

8 30 4.2 4.1

4.0

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1898phae.proj.1355.

Sept. 12 1895.

b to c

10.2

δ 32 10.0 10.3

10.5

c to d

12.0

δ 35 11.5 11.7

11.6

351

b to e

4.3

δ 44 4.4 4.4

4.5

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1898phae.proj.1355.

Sept. 12, 1898.

above

	333.0		
8 51 40	3570	240	
	332.1	240	
	356.1	480	+336 ~~2.08~~
	333.0		+338
	356.6	236	~~2.74~~
55 25	3335	234	
	3569	478 0	+341

below

	63.9		
58 35	46.1	222	
	63.0	232	
	46.2	454	+349
	63.0		+344
9 0 50	865	235	
226 30	63.3	236	
8 56 38	46.9	471	+340
13 56 38			

4545.5810

Mean +3.46

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1898phae.proj.1355.

Sept. 12, 1895

	62.5			
9 3 25	87.0	24.5		9
	63.8	23.3		
	87.1	47.8	337	
	63.0		3.40	
5-30	87.0	24.0		
	62.9	22.6		
	85.5	46.6	3.43	
	Above			
	15 25			
9 30	178.0	25.5		
	152.0	25.2		
	177.2	50.7	3.24	
	151.5		3.22	
13 10	177.0	25.5		
31 35	157.07	25.1		9
9 7 54	176.8	51.6	3.20	14
14 7 54				
4545.6888				

Mean 3.31

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1998phae.proj.1355.

Sept 12, 1898.

		151.5		
9	15 20	177.1	25.6	
		151.3	25.6	
		176.9	51.2	3.22
		152.0		3.26
17	00	176.5	24.5	
		152.1	24.9	
		177.0	49.4	3.30
		below		
		243.8*		
21	00	266.8	23.0	
		243.1	23.0	
		266.1	46.0	3.46
		243.8		
	25 46	266.2	22.9	3.46
	79 6	242.8	23.3	
9	19 46	266.1	46.2	3.45
14	19 46			

45-45=.0971

Mean 3.36

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1898phae.proj.1355.

Sept. 12, 1898.

		d to e
		6.5
9	34	6.3
		6.5

Comp. Star in above meacts =
SD − 6° V V 79 (A.A)

The above object measured is the asteroid,

Variable discovered by Miller & Kempff
= U Vulpec.

19	28	+19.5
21	26	
1	58	4

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1898phae.proj.1355.

Sept. 12, 1898.

	Index	Eff		
	239.0			
9 5 6 20	271.7	32.7		
	239.0	32.3		
	271.3	65.0	-2.68	
	239.5			
5 8 20	271.0	31.5		-2.70
	238.7	32.4		
	2711	63.9	-2.72	
10 2 00	226.5			
	3.3	36.8		
	325.5	37.0		
	2.0	73.8	-2.38	
	327.0			
5 00	2.5	33.5		-2.41
1 40	026.9	36.6		
9 60 25	3.5	72.1	-2.44	
15 00 25				

4545.6263

Mean. -2.546

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1898phae.proj.1355.

Sept. 12, 1898.

Right

		326.3			
10	8	25	4.0	377	
			327.5	395	
	1		7.0	772	-2.28
			326.5		
	10	10	2.6	361	-2.34
			326.1	369	
			3.0	730	-2.41

Left

		57.0			
8	5		91.5	345	
			57.0	335	
			91.5	680	-2.57

		57.4			
	15	45	90.9	335	-2.58
	2	25	57.6	339	
10	10	44	91.5	674	-2.59
15	10	40			
		38			

4545-6323

Mean -2.46

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1898phae.proj.1355.

Sept. 12, 1895.

	56.5		
10 14 40	91.0	345	
	57.5	32.8	
	90.3	67.3	−2.60
	57.4		−2.60
20 45	90.9	33.5	
	57.0	34.2	
	91.2	67.7	−2.59
	Right		
	145.8		
24 5	183.0	37.2	
	147.0	37.0	
	184.0	74.2	−2.37
	146.9		−2.40
25 20	183.4	36.5	
8 50	1480	35.0	
10 22 12	1825	720	−2.44
15 22 12			

4545.6404

Juan −2.50

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1898phae.proj.1355.

Sept 12 1895

	147.3			
10 30 00	182.8	35.5		
	147.5	34.5		
	182.0	70.0	-2.51	
	146.9			
32 00	1824.1	35.2		-2.49
	147.1	35.5		
	182.9	71.0	-2.47	
2	Left			
	2390			
39 40	272.1	33.1		
	239.1	33.0		
	272.1	66.1	-2.64	
	237.8			-2.60
41 40	2728	35.3		
143 20	239.1	32.9		
10 35 50	2720.	68.2	-2.07	
15 35 50				
4045.6499				

Mean -2.04

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1898phae.proj.1355.

Sept. 12, 1898.

	239.2		
10 48 35	272.1	32.9	
	239.0	32.5	
	271.5	65.4	-2.66

	239.5		
46 30	271.8	33.0	-2.63
	237.3	34.2	
	271.5	67.2	-2.60

Right

	327.1		
10 51 00	3.0	35.9	
	327.0	35.5	
	25	71.4	-2.46

	326.5		
5 3 00	2.1	35.6	-2.46
194 5	326.5	36.1	
10 48 31	2.6	71.7	-2.40
15 48 31			
4540.6587			

Mean -2.54

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1898phae.proj.1355.

Sept. 12, 1895.

Variable discovered by Miller & Kenyon
= S T Cygni W obs.

19	39	+2A.9
22	54	
3	12 W	

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1898phae.proj.1355.

Sept. 13, 1898 (Tuesday)

R Sagitarii

19 09 −19.2

19 00

9E

Recompared with k

42.9

8 3 10 103.2 60.3

46.9 55.4

102 3 115.7 1.29

465

4 50 1030 56.5 1.24

42.2 63.7

106.9 120.2 1.19

Left

132.0

6 36 199.5 67.5

136.9 62.6

199.5 130.1 0.98

135.1

8 50 195.5 60.4 0.98

23 26 130.5 69.5

8 5 51 200.0 129.9 0.98

+10

13 6 1

Mean 1.11

P-2

P5-2.

time 2 15-R

7 25R 5-S

S 4 T

T 3.5 U

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1898phae.proj.1355.

Sept. 18, 1898.

Below compared with K

	139.4			
8 6 30	191.1	51.7		
	140.0	51.1		
	191.1	102.8	1.09	
	139.1			
8 00	191.1	52.0		1.56
	139.1	52.7		
	191.8	104.7	1.54	

Above

	232.0			
14 30	279.0	47.0		
	227.9	52.0		
	279.9	99.0	1.68	
	229.0			
16 40	282.5	53.5		1.64
5 40	231.0	49.1		
8 11 25 +10	280.1	102.6	1.59	
13 11 35				

Mean 1.60

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1898phae.proj.1355.

Sept. 13, 1898.

ν compared with k

Right & above

		290.1		
8	18	50	279.0	494
			229.5	50.5
			280.0	99.9 1.66
			229.2	
	20	00	280.5	51.3 1.68
			231.5	46.5
			278.0	97.8 1.71

Left & below

		319.0		
	22	50	10.0	51.0
			317.0	54.5
			11.5	105.5 1.52
			318.4	
	24	15	11.5	53.1 1.53
	5	55	318.0	51.9
8	21	29	9.9	105.0 1.54
13	21	39		

Mean 1.60

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1898phae.proj.1355.

Sept. 13, 1895.

t with k

328.1

8 27 40 3.0 349.

327.8 341

1.9 690 2.54

327.1

28 50 2.0 349 2.52

326.8 353

1.8 702 2.50

Right ascension

57.5

31 00 90.6 331

56.5 335

90.0 666 2.62

57.5 2.64

32 00 88.6 331

119 30 56.1 345

8 29 52 90.6 656 2.66

+10

13 30 2

Mean 2.58

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1898phae.proj.1355.

Sept. 13 1898

u work k

	~~53.5~~			
8 34 30	96.0	345		
	~~56.0~~	325		
	~~29.0~~	67.0	261	
	~~58.9~~			
36 00	~~52.9~~	300		2.71
	57.6	314		
	~~59.0~~	614	251	
	~~Left below~~			
	147.0			
38 30	181.6	346		
	147.0	351		
	182.1	697	202	
	146.8			
39 50	182.0	362		2.50
28 00	145.1	344		
8 37 12	~~182.5~~	706	249	
+10				
13 37 22				

Mean 2.60

Observations on star u difficult on account of close proximity of variable which is brighter.

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1898phae.proj.1355.

Sept 13 1895

Minor Planet Q.2. Wolbz.

20 44 −6.1
20 34
10 E

a to b
10.5
8 51 10.3 10.4
10.2

b to c
3.4
8 52 3.2 3.4
3.5

c to d
16.5
8 53 17.0 16.8
16.8

a to b
10.2
9 15 10.4
1 10.4

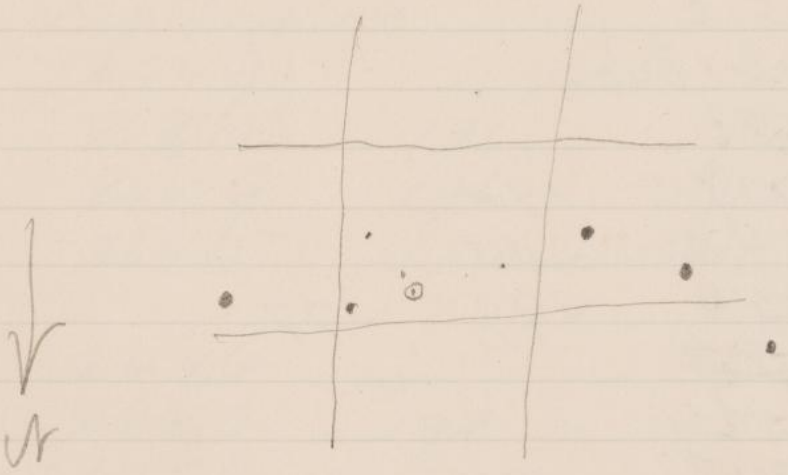
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1898phae.proj.1355.

Sept. 18 1898

		b to c	
		2.2	
9	16	2.5	2.3
		2.2	

		c to d	
		17.5	
9	17	17.5	
		17.7	
		75	



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1898phae.proj.1355.

Sept. 13, 1898.

Right & Above

		64.9		
9	28 00	83.6	18.7	
		64.5	20.0	
		84.5	38.7	3.84
		64.1		
29	30	83.5	19.4	3.86
		64.6	18.7	
		83.3	38.1	3.85

Left below

		154.1		
32	00	173.5	19.4	
		154.5	20.5	
		175.0	39.9	3.77
		~~152.9~~		
		152.9		
		174.3	21.4	3.73
34	00	154.0	20.0	
3	30	174.0	41.4	+3.69
9 30	52			
	+10			
14 31	2			

Mean 3.80

Comp. Star = σ^2 D −6° rr aa (A3)

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1898phae.proj.1355.

~~Sept. 13 1898.~~

	154.0			
9 35 14	~~173.4~~	194		
	153.1	204		
	173.5	398	3.78	
	154.0			
37 00	174.8	203		3.78
	~~154.9~~	196		
	174.5	399	3.77	
	Right Above			
	244.9			
9 40 00	~~264.0~~	191		
	244.9	196		
	264.5	387	384	
	244.6			
42 30	264.0	194		3.86
154 44	245.0	184		
9 38 41	263.4	378	3.89	
+10				
14 38 51				

Mean +382

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1898phae.proj.1355.

Sept. 13, 1898.

	246.0			
9 45 00	263.5	17.5		
	246.8	19.0		
	265.0	36.5	3.97	
9 58 00	~~244.7~~	245.0		4.00
9 46 30	~~26.5~~	262.5	18.5	
	~~335.0~~	246.5	16.9	
	~~254.5~~	263.4	35.4	4.04

Index below

	335.0			
51 10	~~355.2~~	20.2		
	~~334.0~~	21.2		
	355.2	41.4	3.69	
	334.0			
52 00	~~354.25~~	20.5		3.72
8 10	334.5	20.1		
9 52 47 +10	3546	40.6	3.74	
~~15 52 52~~				
14 51 57			Mean 3.86	

Observations of Planet little difficult on account of close proximity of a ft. star of about same brightness

1898phae.proj.1355.

Sept 13, 1895

Variable by Smith + Kimball + Velpec.

b to c

0.8

10 5 a.8 19 28 + 19.5

0.8 22 34

2 35 W

c to d

19.3

10 7 19.5

19.3

a to b

10.5

10 8 10.5

10.4

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1898phae.proj.1355.

Sept 13, 1898

Left

	276.0		
10 20 30	273.1	37.1	
	276.8	35.3	
	272.1	72.4	−2.43
	276.2		
24 50	272.0	38.8	−2.40
	275.0	38.5	
	272.5	74.3	−2.37

Right

	322.7		
26 10	4.5	41.8	
	324.0	39.4	
	3.1	80.9	−2.17
	325.0		
27 50	2.5	38.5	−2.18
99 20	322.9	41.2	
10 24 50 +10	4.1	79.7	−2.20
15 25 00			

Mean −2.29

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1898phae.proj.1355.

Sept 13, 1898.

	325.0			
10 30 00	41	39.1		
	325.0	38.2		
	3.2	77.3	-228	
	325.2			
31 40	3.9	38.7		-2.26
	324.5	39.8		
	4.8	78.5	-224	
	left			
	56.6			
35 00	925	39.9		
	545	39.5		
	94.0	79.4	-233	
	54.4			
36 00	945	40.1		-2.29
132 40	550	38.1		
18 33 40	931	78.2	-225	
15 33 20				

Mean -2.28

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1898phae.proj.1355.

Sept 13, 1898

Left

57.0

10 42 20 93.5 36.5

55.0 38.5

93.5 75.0 −2.35

54.5

95.1 40.6 −2.27

44 30 54.5 39.7

94.2 80.3 −2.19

Right

143.0

48 40 184.2 41.2

143.6 41.3

184.9 82.5 −2.12

143.8

50 20 184.7 40.9 −2.14

185 50 144.0 40.5

10 46 28 +10 184.95 81.4 −2.15

16 46 38

Mean −2.20

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1898phae.proj.1355.

Sept 13, 1898.

Right

1435

10 59 15 — 18 45 — 41.0

1445 — 40.5

145.0 — 81.5 — −2.15

1435

5 33 30 — 1850 — 41.5 — −2.14

1440 — 40.8

1448 — 82.3 — −2.13

Left

2355

57 30 — 2740 — 38.5

2360 — 37.5

273.85 — 76.0 — −2.32

2365

11 00 00 — 2742 — 37.7 — −2.20

223 15 — 2347 — 39.1

16 35 49 — 273.8 — 76.8 — −2.29

+10

15 58 59

−2.22

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1898phae.proj.1355.

Sept 13, 1898.

	234.9		
1 30	227.4	38.5	
	235.0	38.8	
	278.8	77.3	−2.28
	235.42		
3 00	273.5	38.3	−2.30
	235.6	37.4	
	273.0	75.7	−2.32
	Right		
	321.0		
4 30	4.0	41.0	
	325.2	39.3	
	4.5	50.3	−2.19
	324.5		
6 00	4.0	39.5	−2.21
15 00	325.2	39.3	
11 3 8	4.5	78.8	−2.23
+10			−2.28
16 3 18			

Mean −2.26

1898phae.proj.1355.

Sept 14 1898

R Sagitarii Phot. T W. Obs.

19 09 ~~+28.9~~ -19.2

19 05

04 E

p with k Phot 9

		226.0		
7	22 00	283.0	57.0	
		226.9	58.1	
		285.0	115.1	1.30
		224.8		
	24 40	282.0	57.2	1.30
		227.5	57.4	
		284.9	114.6	1.31

Sept 8 Pilovo

		314.1		
	26 00	15.0	60.9	
		314.2	59.9	
		14.1	120.8	1.18
		315.0		1.16
	27 30	15.0	60.0	
	20 10	313.0	62.2	
1	25 2	15.2	122.2	1.14
	+10			
12	25 14			

Mean 1.23

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1898phae.proj.1355.

Sept 14, 1895.

Left 2 below
Q work

		319.2		
7	30 30	12.0	52.8	
		319.0	50.9	
		9.9	103.7	1.57
		3180		
31	45	14.0	56.0	1.53
		319.0	51.0	
		10.0	107.0	149

Right 2 above

		490		
35	15	100.1	51.1	
		49.0	51.1	
		100.1	102.2	1.60
		49.5		
	36 50	100.0	505	1.64
	14 20	50.0	490	
1	33 ~~+32~~	99.0	99.5	1.67
12	33 47			

Mean 1.58

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1898phae.proj.1355.

Sept. 14, 1898.

2 with k
Right of above

	49.2		
7 40 25	99.0	498	
	50 1	489	
	99.0	98.7	1.69
	49.4		
4200	99.5	50.1	167
	50.0	50.2	
	199.2	100.3	1.65

Left of below

	138.2		
45 30	191.6	53.4	
	140.1	49.9	
	190.0	103.3	1.58

	138		1.58
47 20	199.2	51.4	
15 15	132.0	52.3	
7 43 49	1903	1037	1.57
+12			
12 44 1			

Mean 1.62

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1898phae.proj.1355.

Sept 14, 1898.

Left of below
Cwoth K

		147.1		
7	57 40	181.1	340	
		147.3	348	
		182.1	688	2.56

		~~145.5~~		
		147.0		2.56
	54 10	182.1	351	
		147.2	328	
		180.0	679	2.58

Right of above

		238.2		
	57 30	272.0	338	
		240.0	320	
		272.0	659	2.60
		~~241.1~~		

		241.1		2.724
	59 10	271.6	305	
	22 30	240.6	306	
7	54 38	271.2	611	2.52
	+12			
12	55 50			

Mean 2.65

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1898phae.proj.1355.

Sept. 14, 1898

u with R

	239.0			
S 6 30	271.0	32.0		
	240.0	32.1		
	272.1	64.1	2.71	
	242.0			
S 30	271.1	29.1		2.79
	240.4	30.7		
	272.1	59.8	2.87	

Left & below

	226.1			
61 40	1.40	34.9		
	226.9	35.1		
	20	70.0	2.51	
	227.0			
14 0	1.0	34.0		2.53
0 40	226.5	34.7		
N 10 10	1.2	68.7	2.55	Mean 2.66
+12				
13 10 22				

Observations rather difficult especially on ft. stars because of haze

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1898phae.proj.1355.

Sept. 14, 1895.

Minor Planet D2.

2044 −6.1
2014
30 E

a to b

2.6
δ 32 2.7 2.7
2.8

a to c

3.0
δ 32.5 2.8
2.5 2.8
2.7

b to d

0.6
δ 33.5 0.7 0.7
0.7

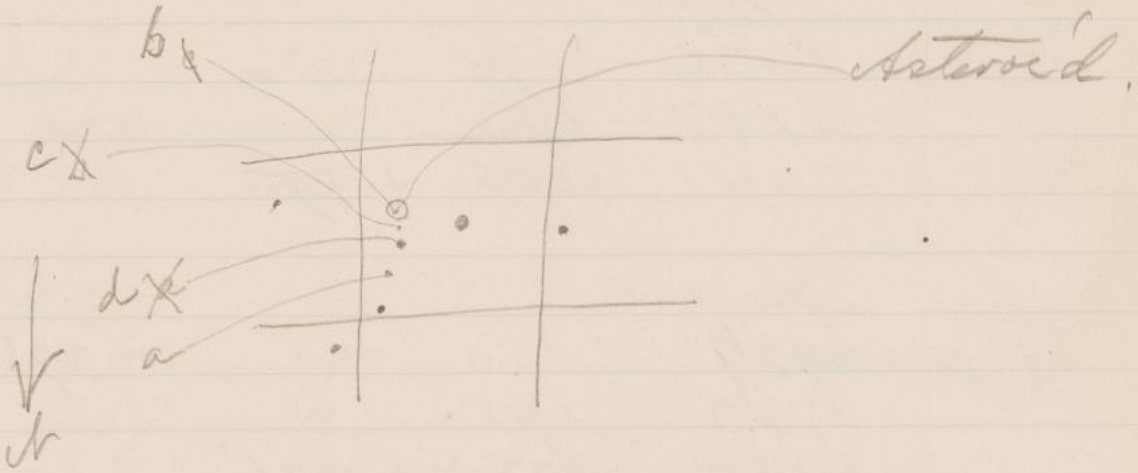
c to d

×0.7
Δ 34 ×0.8 0.7
×0.7

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1898phae.proj.1355.

Sept. 14, 1898.



a to b

1.7
8 59 1.7 1.7
1.6

a to c

2.9
8 59.5 2.6
2.7

b to d

1.6
9 0.5 1.6 1.6
1.5

c to d

0.7
9 1.0 0.5 0.5
0.5

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1898phae.proj.1355.

Sept 14, 1898

		above		
		276.1		
9	12 00	293.6	17.5	
		274.8	19.3	
		294.1	36.8	+3.95
		274.9		
	15 20	292.9	18.0	+3.98
		276.0	17.8	
		293.8	35.8	+4.01
		below		
		3.0		
	19 00	23.5	20.5	
		3.0	20.0	
		23.5	40.5	+3.74
		4.0		+3.80
	21 00	23.0	19.0	
	67 20	4.0	19.3	
9	16 50	27.0	38.3	+3.86
	+12			
17	17 2			

Mean +3.87 ± 9

Comp. Star = SD −6° SRSA (A3)

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1898phae.proj.1355.

Sept 14 1898

	2.6			
9 24 14	23.2	20.6		
	3.2	20.2		
	23.4	40.8	+3.72	
	4 3.7			
27 00	28.6	19.3		+3.75
	2.7	20.5		
	23.2	39.8	+3.78	
	above			
	94.1			
30 30	112.1	18.0		
	94.2	17.4		
	111.6	35.4	+4.04	
	94.3			
33 30	11.8	17.5		+4.04
115 34	94.1	17.9		
9 28 54				
+2	112.0	35.4	+4.04	
14 29 6				

Mean 13.90

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1898phae.proj.1355.

Sept 14, 1898.

		above		
		94.2		
9	~~3~~ ~~40~~	111.03	17.1	
		94.5	17.9	
		112.0	35.0	+4.06
		95.0		+4.09
	~~36~~ ~~42~~ 50	111.6	16.6	
		94.0	17.5	
		111.5	34.1	+4.12
		below		
		183.2		
	~~3~~ ~~48~~ 30	203.0	19.8	
		184.0	19.1	
		203.1	38.9	+3.83
		184.0		
	~~41~~ 20	203.5	19.5	+3.86
	197 30	184.5	18.4	
9	49 22	202.9	37.9	+3.89
	+12			
14	49 34			Mean +3.98
	151 30	Watch correction +12 sec		
9	37 52	(watch is slow)		
	+10			
14	38 2			

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1898phae..proj.1355.

Sept. 14 1898.

		a to b
		-1.0
10	21	-1.0
		-1.0

		b to d
		4.0
10	22	4.0
		4.0

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1898phae.proj.1355.

Sept. 14, 1895.

Variable due by Mullen & Kempf =
= U Velpic.

19 28 +19.5
22 19
2 51 W

~~Sept~~

83.0
10 35 10 124.1
83.0
129.8

84.0
37 00 123.0
84.1
123.0

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1898phae.proj.1355.

Sept. 14, 1898.

	Left			
	82.1			
10 44 00	123.5	41.4		
	84.0	39.9		
	123.9	81.3	−2.16	
	84.5			
4 51 0	123.9	39.4		−2.15
	84.0	40.5		
	124.5	79.9	−2.20	
	Right			
	170.0			
47 20	215.0	44.0		
	172.0	42.0		
	215.0	86.0	−2.02	
	172.1			
43 00	214.0	41.9		−2.04
20 00	172.0	42.5		
10 45.00				
+12	2145	84.4	−2.07	
15 45 12				

Mean 2.11

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1898phae.proj.1355.

Sept 14 1898

Right

	172.1		
10 50 10	214.1	42.0	
	172.5	41.6	
	214.0	83.5	−2.09
	174.6		
57 15	213.9	39.9	−2.11
	171.0	42.4	
	212.4	82.3	−2.13

Left.

54	263.0		
49 00	303.1	40.1	
	264.0	41.0	
	305.0	81.1	−2.16
	2641		
	3030	38.9	−2.18
56 01	2629	41.3	
11 25	3042	80.2	−2.19
10 52 51			
+12			
15 53 3			

Mean −2.14

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1999phas.proj.1355

Sept. 14. 1898.

	2640			
10 57 10	303.4	39.4		
	2640	39.5		
	Clouds	78.9	2.23	
	303.5			
	~~2640~~			
	~~2640~~	~~00~~		2.24
59 00	302.0	38.0		
	2640	40.1		
	3041	78.1	2.20	
	~~303.0~~			
	Right.			
	353.0			
11 6 30	~~350~~	41.5		
	350.1	39.9		
	33.0	81.4	2.15	
	353.0			
7 40	332	40.2		214
250 20	3525	41.7		
10 62 35				
+12	342	81.9	2.14	
16 62 47				

Mean 219

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1898phae.proj.1355.

Sept 14 1898

	Right			
	353.5			
1 9 40	34.5	41.0		
	352.5	40.6		
	33.1	81.6	-2.10	
	352.9			
12 00	33.1	40.2		-2.17
	353.0	40.1		
	33.1	80.3	-2.19	
	left			
	83.1			
15 00	124.7	41.6		
	84.0	39.1		
	120.1	80.7	-2.17	
	K			
	83.5			
16 00	123.1	39.6		-2.17
52 40	83.0	41.4		
11 13 10	124.4	81.0	-2.17	
+12				
16 13 22				

Mean -2.17

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1898phae.proj.1355.

Sept. 14, 1898.

Sept

83.5

11 18 10 123.1 39.6

83.1 41.0

124.1 80.6 2.18

83.1

27 30 124.0 40.9 2.18

83.9 39.6

123.5 80.5 2.18

Right & below

172.5

29 06 213.1 40.6

172.0 41.1

213.1 81.7 2.14

172.5

30 45 214.5 42.0 2.12

10 25 173.1 40.9

11 26 26 +12 214.0 82.9 2.11

16 26 33

Mean 2.15

Observations of preceding variable made through thin of thin veering cloud

Cloud appears increasing & stars fr. last of time in last 2 groups.

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1898phae.proj.1355.

Sept. 16. 1898. (Friday)

Var. disc. by Muller & Kempf =
S Cygni. Plat. 7. 4h. 55m.

19 39 +24.9
20 47
+1 8

Right hand above
35 7.0
9 7 01 31.1 34.1
356.2 34.9
31.1 69.0 −2.54

355.5
8 40 31.1 35.6 −2.53
357.0 33.9
30.9 69.5 −2.52
Left hand low
87.2
12 00 119.0 31.5
85.5 36.5
122.0 68.0 −2.56

86.5
14 16 122.0 35.5 −2.54
1 50 87.9 34.1
9 10 28 122.0 69.6 −2.52
14 10 28.
4549.5907

Mean −2.54

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1898phae.proj.1355.

Sept. 16. 1892.

		86.8			
9	16 30	120.0	33.2		
		86.9	35.0		
		121.9	68.2	-2.57	
		87.0			
18	30	121.1	34.1		-2.60
		86.5	32.6		
		119.1	66.7	-2.62	
		Right & Above			
		176.9			
21	40	211.8	34.9		
		175.7	37.1		
		212.8	72.0	-2.44	
		~~212.8~~			
		175.1			
	2 34	212.0	36.9		-2.43
	0 14	176.2	35.8		
9	20 4	212.0	72.7	-2.42	
14	20 4.				
	4549.5973				

Mean -2.52

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1898phae.proj.1355.

Sept. 16. 1898.

		1765.0		
9	27 00	211.1	35.1	
		175.0	37.0	
		212.0	72.1	-2.44
		1754		
9	10	212.6	37.2	-2.44
		176.5	34.5	
		211.0	71.7	-2.45
		Left blow		
		2670		
35	50	301.6	34.6	
		265.4	36.6	
		302.0	71.2	-2.47
		2661		
40	20	300.5	34.4	-2.49
132	20	265.5	35.6	
9 33	5	301.1	70.0	-2.07
14 33	5			

4549.6063

Mean -2.46

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1898phae.proj.1355.

Sept. 16. 1898.

	265.5			
9 44 00	302.1	36.6		
	265.9	34.1		
	300.0	70.7	-2.48	
	267.5			
47 00	300.8	32.8		-2.52
	265.9	35.2		
	301.1	68.0	-2.57	
	Right Above			
	355.1			
50 30	32.0	36.9		
	356.0	34.5		
	30.5	71.4	-2.46	
	356.0			
52 20	31.5	35.5		-2.47
193 50	355.5	35.4		
9 48 25	30.9	70.9	-2.48	
14 48 28				
4549.6171				

Mean -2.50

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1898phae.proj.1355.

Sept 16 1898

	355.0		
9 55 20	349	36.9	
	356.7	33.9	
	30.6	70.8	-2.48
	355.5		
58 0	30.9	35.4	-2.48
	355.4	35.7	
	31.1	71.1	-2.47
	left below		
	86.5		
10 2 20	121.0	34.5	
	86.6	33.0	
	119.6	67.5	-2.59
	87.0		
4 20	119.1	32.8	-2.58
0 00	85.9	35.5	
9 60 00	121.4	68.3	-2.56
10 00 00		Mean	-2.53
15 00 00			
4549.6250			

Comp Star = DM. +24° 3467 (9.1)

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1898phae.proj.1355.

Sept 16 1898

Joining by Phot T. of 2 Comp. Stars for ♃ Aquarii with 2 Comp. stars for Minor Planet ♃.

20 44 −6.1
22 24
1 44

Clouds thick no chance for more work.

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1898phae.proj.1355.

Sept. 17, 1898 (Saturday)

Ran desic by Mueller & Kempf. =

α Virginis 19ᵐ 28ˢ +19° 5′ Phot. I.

8 33

Right & above

356.9

6 41 30 300 33.1

356.8 34.1

30.9 67.2 −2.6.0

3555

43 30 31.1 35.6 (−2.0.4)

355.2 34.9

30.1 70.5 −2.4.9

Left & below.

87.1

46 00 119.5 32.4

88.2 32.5 −2.67

121.0 65.2 −2.34

89.0

47 50 120.8 31.5 (−2.68)

18 50 87.8 33.2 −2.68

6 44 42 121.0 65.0 −2.35

11 44 49

4550. 489.6

4544. 470.0

+6.0125

6.0195

Light cloud stars faint.

Mean −2.61

1898phae.proj.1355.

Sept. 17, 1898

Sept 2 below

8 7.6

6 52 45 | 117.6 30.0

87.3 32.2

119.5 62.2 2.78

8 7.9 ~~88.1~~

~~5 4~~ 56 30 | ~~12 1.1~~ 119.1 31.2 (278)

88.2 30.9

119.1 62.1 2.78

Right 2 above

177.0

5 9 40 | 210.1 ~~8~~ 5 33.5

177.6 33.3

210.9 66.8 2.61

177.7

7 1 20 | 209.9 32.2 (2.67)

230 15

6 57 34 | 177.8 31.5

+7

11 57 41 | 209.3 63.7 2.73

4560.4984

4544.4700

+6.0283

Mean 2.72

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1898phae.proj.1355.

Sept. 17. 1898

		178.0			
7	3 10	210.0	32.0		
		177.1	32.0		
		209.1	640	271	
		178.5			
5	5	210.8	33.3		(268)
		178.2	32.7		
		210.9	66.0	2.64	
		Sept 2 below			
		267.6			
9	45	297.5	30.9		
		268.2	29.3		
		298.5	61.2	2.81	
		267.3			
	12 10	298.9	31.6		(2.80)
	80 10				
7	7 32	268.2	30.3		
	+7	298.5	61.9	2.79	
12	7 39				

4050.6053
4544.4700
+6.0353

Mean 274

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1898phae.proj.1355.

Sept 17, 1898.

	267.5			
7 15 50	299.42	31.7		
	267.0	32.8		
	299.8	64.5	269	
	267.8			
18 20	295.0	31.6		273
	267.7	30.8		
	298.25	62.4	277	
Right Above				
	357.0			
23 20	28.7	31.7		
	357.5	31.4		
	28.9	63.1	274	
	357.2			
25 40	28.5	31.3		272
3 10	357.0	33.0		
7 20 48	30.0	64.3	270	
+7				
12 20 55				

4550.5140
4544.4700
+6.0440

Mean 272

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1898phae.proj.1355.

Sept. 17, 1895.

		35.6.9			
7	29	30	29.9	33.0	
			35[illegible].0	33.2	
			30.2	66.2	2.64
			35 7.0		
21	20		29.0	32.0	2.66
			35[illegible].0	32.6	
			29.4	64.6	2.69

Left ~~8~~ below

			87.5		
35		30	120.0	32.5	
			88.5	30.5	
			119.0	63.0	2.75
			88.5		
	37	50	119.0	30.5	2.76
	14	10	88.0	31.9	
7	33	32	119.9	62.4	2.77
		+7			
12	33	39			

4560.5233
4044.4700
+6.0533

Mean 2.71

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1898phae..proj.1355.

Sept 17 1895

* β Lyrae Phot W Wolz

Bright & above

197.0

δ 8 30 228.4 31.4 ✓

199.0 26.1 ✓

225.1 −57.5 ✓ −2.96 ✓

199.9

13 00 224.9 25.0 ✓ (−2.95 ✓)

195.7 31.3 ✓

227.0 56.3 −3.00 ✓

Sept 68

287.2

16 50 317.2 30.4 ✓

291.9 21.6 ✓

313.5 52.0 −3.18 ✓

290.7

20 00 313.5 22.8 ✓ (−3.16 ✓)

✓ & 20 286.9 30.4 ✓

* 14 35 ✓ 317.3 53.2 −3.13 ✓

✓ 7.

13 14 42 ✓ Mean −3.07 ✓

✓ ✓ 0.5519

40 50.1240

+ 0.4279

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1898phae.proj.1355.

Sept. 17. 1898.

	287.0			
d 23 45	317.d	30.5		
	291.24	23.2		
	314.46	54.0	-3.10	
	291.5			
26 50	313.8	22.3		(-3.15)
	287.46	29.6		
	317.2	51.9	-3.20	
	Right			
	17.87			
30 30	47.82	30.5		
	19.05	25.9		
	44.9	56.4	-3.00	
	19.8			
33 20	44.6	24.8		(-2.96)
~~113 37~~	15.1	33.9		
114 27	49.20	58.7	-2.91	
2 2 36				
5 7				
13 28 43				
4550.5616				
4550.1240				
+0.4376				

mean 3.06

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1898phae..proj.1355.

Sept 17 1898

Right

	17.1		
7h 45m a.m.	49.0	32.9	
	19.4	26.4	
	45.8	59.3	−2.89
	19.6		
4230	45.83	25.7	(−2.90)
	16.4	32.7	
	49.91	58.4	−2.92
	Left		
	107.2		
45 10	137.7	30.5	
	111.0	22.5	
	133.5	53.0	−3.14
	111.2		
	111.2	21.2	(−3.14)
4800	132.4	31.9	
180 40	106.5	53.1	−3.14
7h 45m 10	132.44		
5	7		
13 45 17			Mean −3.02

45 00 5731
45 00 1240
+0.4491

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1898phae.proj.1355.

Sept. 17. 1898 A.

X

Left.

1060

9 12 30 132.0 31.0 ✓

111.0 22.6 ✓

133.6 53.6 ✓ -3.11 ✓

111.1

15 00 134.8 229 ✓ (-3.11 ✓)

106.5 30.7 ✓

132 53.6 ✓ ✓ -3.11 ✓

Right

1955

18 50 227.83 31.8 ✓

195.84 25.8 ✓

224.2 ~~57.6~~ ~~(-2.9)~~

✓7.6 -2.9 ✓

1953

21 20 224.59 26.6 ✓ (-2.92 ✓)

67 40 195.72 32.8 ✓

9 16 ✓✓ 2250.594 -2.88 ✓

14 17 2 ✓

4550.5952

4550.1240

+ 0.4712

Mean -3.02 ✓

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1898phae..proj.1355.

Sept. 17. 1898

195.4
9 24 50 224.5 33.1
195.0 270 2.46
225.0 6 70.1 ~~2.50~~

195.95 6.48
2640 224.9 26.4
195.3 33.2 ~~2.68~~ (−2.46)
227.5 59.6 2.57

Sept 7
228.7
3040 317.9 30.1
291.7 23.0
314.0 53.1 − 3.14

290.92
33 20 313.5 22.3
11 30 286.9 9.00 ~~5.27~~
9 20 vz. 316.9 52.3 3.17 3.16
6 7
14 25 59.
4550.6034
4550.1240
+0.4794

~~2.91~~
~~5.5~~
Mean − 3.01

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1898phae.proj.1355.

Sept 17, 1895

284.0
9 37 20 316.4 24.4
290.5
~~314.9~~ ~~0.9~~ 23.6
2.0 − 3.12

290.81
41 20 314.0 23.9 (− 3.1K)
287.2
217.6 20.K / K.3 − 3.09

Right
15.5 32.4
4555 47.9
19.0
45.0 26.0 / 4.4 − 2.92

18.9 25.4 (− 2.92)
47 5 44.7
170 0 15.83 32.6 / 4.K − 2.92
9 42 42 47.9
5 7
14 42 49.

Mean − 3.03

4550.6131
4550.1240
+0.4891

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1896phac.proj.1355.

Sept. 17. 1896.

♃

Right

16.0
49.0 — 33.0 ✓

20.0
44.5 — 24.5 / 27.5 ✓ — −2.96 ✓

19.9
45.4 — 25.5 ✓ — (−2.96 ✓)

16.4
48.5 — 32.1 ✓ / 27.6 ✓ — −2.9 ✓

Left

187.0
137.1 — 30.1 ✓

110.82
134.5 — 24.3 / 27.6 ✓ — −3.0 ✓

110.3
133.8 — 23.5 ✓ — (−3.1 ✓)

180.0
137.6 — 29.6 / 23.1 ✓ — −3.1 ✓

Mean — 3.0 ✓

15 5 25 ✓

4550.6258
4550.1240
+0.5018

1898phae.proj.1355.

Sept. 17. 1898

Left.

10 11 10 — 105.3 — 137.7 — 119.2 — 134.0 — 29.4 — 23.8 — 3.2 — 3.13

14 30 — 110.4 — 134.2 — 107.3 — 136.9 — 23.7 — 29.6 — 3.3 — 3.13

Right.

17 28 — 195.5 — 224.0 — 200.0 — 224.9 — 32.5 — 24.9 — 7.4 — 2.96

21 30 — 197.6 — 224.7 — 27.1 — 2.9

6 30 — 196.1 — 226.9 — 30.8 — 7.9 — 2.9

10 16 A. — 5 — 15 16 15

+0.6362
+0.1240
+0.5122

(3.13)

(2.9)

Mean — 3.0

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1898phae.proj.1355.

Sept. 17. 1898.

	196.0	32.3	
10 24 30	228.3		
	197.9	27.4	
	225.7	60.1	−2.46
	198.0		
27 00	225.5	27.5	(−2.44)
	196.0		
	227.3	31.3	
		57.5	−2.91
	Left		
	246.5	30.5	
31 20	3169		
	229.5		
	314.6	27.1	
		57.6	−3.03
	250.5		
	229.0		
33 30	315.0	27.5	(−3.00)
11 6 20	284.5		
10 29	0 15 #8	31.4	
0 7		56.9	−2.94
15 29 12.			
4550.6402			
4550.1240			
+0.5212			Mean −2.94

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1898phae.proj.1355.

Sept. 17. 1898.

X

	288.4	28.8 v	
10 40 15	317 02		
	288.8	26.3 v	
	315.1	27.1 v	− 3.0 v
	289.1		
43 00	314 87	27.6 v	(−3.04 v)
	287.0		
	316.8	29.8 v	
	Right	27.4 v	− 3.0 v
	16.5		
45 10	478	30.4 v	
	175		
	478.0	27.4 v	
		27.0 v	− 2.9 v
	18.4	26.7 v	(−2.92 v)
4 9 20	45.1		
177 Kr	15.6	32.3 v	
10 Kk 26.	47.9	29.0 v	− 2.90 v
5 7			
10 44 33. v			
4550.6560			
4550.1240			
+0.5320			

Mean − 2.94 v

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1898phae.proj.1355.

Sept. 17. 1898.

15 57 00	18.47		
	47.5	29.4 ✓	
	17.9		
	46.5	28.6 ✓	
		7A.0 ✓	−2.9K ✓
	17.9		
16 41 00	46.6	2A.1 ✓	(−2.92 ✓)
	16.7		
	47.42	30.7 ✓	
		7A.6 ✓	−2.91 ✓
	Left		
	107.6		
3 00	137.4K	29.K ✓	
	109.5		
	135.1	25.6 ✓	
		7.7.K ✓	−3.0K ✓
	110.0		
5 00	1348	2K.A ✓	(−3.13 ✓)
6 00	10A.85		
11 1 30	1350	26.7 ✓	
		7.1.3 ✓	−3.22 ✓
16 1 37 ✓			

mean −3.02 ✓

4005.6675
4555.1240
+0.5435

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1898phae.proj.1355.

Sept. 17. 1898.

		107.5	24.7 ✓	
11	11	00	132.2	
		109.0	26.0 ✓	
		135.0	50.7 ✓	− 3.07 ✓
		110.0	24.0 ✓	(− 3.12 ✓)
14	15		134.0	
		107.0	24.1 ✓	
		131.1	52.1 ✓	− 3.18 ✓
		Right		
		195.2	33.4 ✓	
16	45		228.6	
		198.2	26.7 ✓	
		224.9	60.1 ✓	− 2.46 ✓
		199.5	25.7 ✓	(− 2.92 ✓)
18	15		225.0	
20	15		196.6	
11	15		2280	31.4 ✓
0				56.9 ✓ − 2.92 ✓
16	15	11		

Mean 3.02 ✓

4550.6772
4530.1240
+0.5532

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1898phae.proj.1355.

Sept. 17. 1898.

Right

	1960		
11 25-30	227.5	31.K	
	198.40	26.K	
	224.9	27.9	-2.9K
	197.9	27.K	(-2.9)
	225.3		
29 00	196.9	32.1	
	229.0	29.K	-2.46

Left

	287.5		
31 40	316.88	29.3	
	289	24.K	
	314.3	27.7	-3.11
	289.8	27.1	(-3.12)
	314.9		
34 10	2456	24.K	
120 20	316.0	23.K	-3.12

11 30 K
.5 7
16 30 12.K

4550.6876
4550.1240
+0.5636

mean -3.02

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1898phae.proj.1355.

Sept. 17. 1898.

	287.5	2R.7	
11 37 30	316.2		
	290.1	2K.9	
	315.0	r36	−3.11
	289.0	2r.2	
39 30	314.2		(−3.11)
	2N9.0	2A.7	
	315.7	r3.9	−3.11

Right

	15.9	323	
4200	48.2		
	19.0	26.0	
	45.0	rA.3	−2.93
	1A9	2r.6	
4400	44.5		(−2.97)
~~167 0~~	16.6	30.r	
163 0	47.1	r6.1	−3.01

Mean −3.0K

16 40 Kr.
5 7
16 40 52.

4550.6950
4550.1240
+0.5710

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1898phae.proj.1355.

Sept. 17. 1898 A.

	161	31.0	
11 46 40	47.7		
	19.7		
	44.9	25.2 / 6.2	− 3.01
	18.8		
49 10	44.3	25.5	(− 3.00)
	16.0		
	47.0	31.0 / 6.5	− 3.00
	Sept.		
	107.5		
5 30	135.2	27.7	
	109.3		
	1345	25.2 / 2.9	− 3.14
	109.0		
5 10	134.5	25.5	(− 3.12)
200 30	107.2		
11 50 A.	136.0	28.8 / 4.3	− 3.09
5 7			
16 50 15.			

4550.7015
4550.1240
+0.5775

Watch correction +7 sec (Watch is slow)
much troubled by clouds during obs. Images faint at times.
Mean 3.06

On this date, image of β used was reversed over the A.V in line with other B, and not in the usual way. Observations one half wt.

B β A.V β

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1898phae.proj.1355.

Posted to here.

Sept. 29 1898 (Tuesday)

Nebulae in Andromeda

~~24~~ 0 36^m +40.6

19 33

5 3

24 36

19 50

4 46

24 36

20 27

4 ~~12~~ 9

24 36

20 24

4 12

7 52

Bright mass of light about in centre of nebulae running up into rather a stellar point.

Spectroscope put on.

Spectrum of this stellar point very faintly continuous

Clouds

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1898phae.proj.1355.

Sept 20 1898

Star + Neb. one rev. of screw head outside focus. Plot. I. Hr. 60.

	Right & above			
	164.0			
9 6 5.0	221.0 < comp star dir.			
	165.1	ν 7.0 ν		
	219.8	ν 4.7 ν		
		111.7 ν	± 1.3 2 ν	
	167.6	ν 2.3 ν		(± 1.4 1 ν)
8 30	219.9			
	164.9	ν 6.8 ν		
	221.7	109.1 ν	± 1.4 4 ν	
	below			
	251.2	66.7 ν		
12 30	317.9			
	252.2	61.9 ν		
	314.1	124.6 ν	± 1.0 1 ν	
	252.2	61.7 ν		(± 1.0 K ν)
14 10	313.9			
	251.2	63.4 ν		
	314.6	127.1 ν	± 1.0 2 ν	

Mean ± 1.2 2 ν

Comp Star used in measrs. with Plot. I on Neb. = 2 m. + 50° 1 K ν (9.0)

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1898phae.proj.1355.

Sept. 20. 1898.
Star + Neb. in foci. Plot of N. Obs.

		75.9	Comp star dir		
9	16	50	124.0		
			74.0	K7.1 ✓	
			125.1	K7.1 ✓	
				922 ✓	+1.26 ✓
			80.1	K7.0 ✓	(+1.24 ✓)
18	20		127.1		
			80.9	K6.9 ✓	
			127.8	923 ✓	+1.21 ✓
			above		
			164.1	K6.1 ✓	
21	34		220.2		
			165.0	K6.2 ✓	
			221.2	1123 ✓	+1.36 ✓
			163.4	K7.2 ✓	(+1.32 ✓)
28	20		221.2		
			164.1	K7.0 ✓	
			222.1	1127.2 ✓	+1.29 ✓

Mean +1.27 ✓

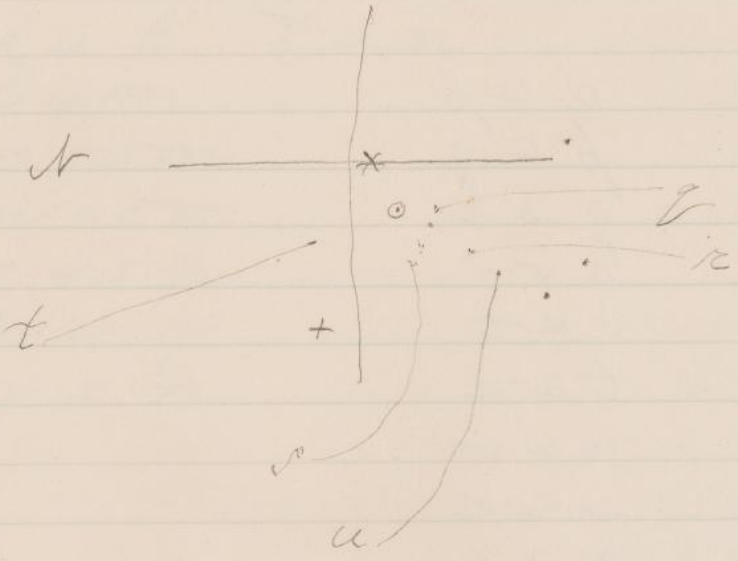
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1898phae.proj.1355.

Sept. 20. 1898.

Comp. Stars for S Coronae

15	28	+31.9
22	00	
6	32	



n K o
o K p
p 3, r q
q 3 r
r r s
s K, r t
t K u

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1898phae.proj.1355.

Sept. 20. 1898.

Comp Stars for R Cygni. Gr. Ms.

19	3K	+V0.0
-22	K7	
+3	13	

0 4 p
p 4 q
q 3 r
r v s
s 4.v t
t 3.v u
u 4 w
w 4.v x
x 3 y
y 4 z

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1898phae.proj.1355.

Sept. 21. 1898. (Wednesday)

Comp. Stars for S Serpentis Fr. obs.
Watch correction +12 sec. (watch is slow)

1r	1k	+1r.0
19.	1k	
+2	0	

k 4 l ~~l 4 n~~
l 4 m
m 5.5 n
n 4.5 o
o 4.5 p
p 4 q
q 5 r

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1898phae.proj.1355.

Sept 21 1898

q compared with b

Index left.

78.9 / Ledir

7 43 00 128.5 49.6

78.0 50.0

128.0 99.6 +1.67

78.5

43 10 128.1 49.6 +1.68

78.6 48.5

127.1 98.1 +1.70

right

161.0

47 50 221.4 57.4

163.4 58.8

222.2 116.2 +1.25

161.8

49 35 221.0 59.2 +1.26

25 35 163.0 59.0

7 46 24.5 222.0 118.2 +1.23

12 46 36"

Mean +1.47

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1898phae.proj.1355

Sept 21 1898

	p with l			
	163.0			
7 52 00	220.1	57.1		
	163.4	56.6		
	220.0	113.7	1.33	
	163.9			
53 20	228.5	56.6		1.32
	164.0	58.5		
	222.5	115.1	1.30	
	Left			
	269.1			
56 10	308.8	49.7		
	260.1	51.9		
	312.0	101.6	1.62	
	257.1			
57 00	308.9	50.8		1.62
18 30	257.2	51.0		
7 54 38	308.2	101.8	1.61	
+12				
12 54 50				

Mean 1.47

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1898phae.proj.1355.

Sept 21, 1898

Storm with b.

	8 7.2			
8 7 01	118.1	30.9		
	8 7.2	31.5		
	119.0	62.7	2.76	
	88.0			
8 00	118.1	30.1		2.77
	87.0	32.0		
	1190	62.1	2.78	
	Night			
	174.9			
10 10	210.0	35.1		
	175.5	34.4		
	209.9	69.5	2.52	
	175.5			
11 30	210.4	34.9		2.51
36 40	175.4	35.4		
8 9 10.				
+2	210.8	70.3	2.50	
13 9 22.				

Mean 2.64

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1898phae.proj.1355.

Sept. 21, 1898.

		n w t b		
		177.6		
✗	14 40	205.6	25.0	
		180.1	28.0	
		2081	56.0	302
		178.0		
	15 40	207.3	29.3	2.99
		177.5	28.0	
		205.5	57.3	2.96
		Sept		
		272.0		
	18 00	295.2	23.2	
		270.0	26.9	
		296.9	501	3.27
	19 20	271.0		
	27 40	295.0	24.0	3.32
✗	16 55	271.4	23.9	
	+12			
	18 17 7	295.3	479	3.37

Mean 3.16

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1898phae.proj.1355.

Sept 21, 1898.

		O with C			
		90.18			
8	21	50	114.5	23.7	
			91.6	22.9	
			114.5	46.6	343
			90.9		
24	00		114.1	23.2	346
			92.0	22.2	
			114.2	45.4	349
			light		
			182.0		
26	00		205.1	23.1	
			180.0	25.1	
			205.1	48.2	330
			180.1		
	27	10	206.5	26.4	330
	19	00	181.8	24.3	
8	24	45			
		+12	206.1	50.7	324
13	24	57			

Mean 338

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1898phae.proj.1355.

Sept. 21, 1898

Comp. stars for S Coronae Wolz.

$10^{h}16$ $+33.5$

20 57

$+5-41$

m 4.5 m

m 3 0

0 3 p

p 4.5 q

q 4.5 r

r 4.5 s

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1898phae.proj.1355.

Sept 21 1895

s compared with k

	Sept			
		1833		
9 19 40		203.85	20.2	
		185.2	18.0	
		203.2	382	387
		1849		
21 15		203.25	18.6	388
		183.5	19.5	
		203.0	38.1	388
		night		
		2729		
23 45		293.0	20.1	
		273.0	20.1	
		293.1	40.2	376
		273.2		380
	25 30	2938	206	
	20 10	273.9	182	
9	22 38 42	292.1	38.8	384
14	22 50 42			

Mean 384

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1898phae.proj.1355.

Sept. 21, 1898.

r/f with k

		26.5			
9	27 30	296.0	27.5		
		269.2	26.6		
		296.8	54.1	3.10	
		27.1.0			
	30 00	2969	25.9		3.14
		270.2	26.3		
		296.5	52.2	3.17	
		left			
		358.1			
	33 00	24.585	27.4		
		359.5	28.1		
		27.6	55.5	3.04	
		~~0.0~~			
		0.0			
		~~3569.5~~			
	35 00	27.0	27.0		3.10
	5 30	0.1	25.6		
9	31 22				
	+12	25.7	52.6	3.16	
14	31 34				

Imean 3.12

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1898phae.proj.1355.

Sept. 21, 1898.

h. with k

35 2.5

9 38 20 34.5 42.0

35 1.5 40.5

32.0 52.5 2.12

351.1

39 00 33.2 42.1 2.10

352.3 41.7

34.0 53.8 2.08

Right

δ 2 45

42 16 123.1 40.6

δ 2.2 40.1

122.3 50.7 2.17

δ 2.5

44 06 123.0 40.5 2.14

4 20 δ 1.9 42.0

9 41 05 +12 123.9 52.5 2.12

14 41 17

Mean 2.12

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1898phae.proj.1355.

Sept. 21, 1895

α Delphini Phot. & Wolz.

20h 31m +17.5

22 34

2 3

Abandoned too late for article time

Comp stars for R Cygni

19 32 +49.9

21 4

3 32

m 4.5 m

n 3 o

o 4 p

p 6 q

q 3, r p

11 1r r 3 s

s r, r t

t 6 u

u 4, r w

w 3 x

x r, r y

y r z

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1898phae.proj.1355.

Sept 23 1898

Serpentis

15 14 +15.1
19 48
4 34

Clouds

k 4.0 l
l 4 m
m 5 n
n 4.5 o
o 4 p
p 4.5 q
q 5 r

Phot. just on Clouds thick

O Ceti Phot. W. Hrobs.
Too Cloudy

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1898phae.proj.1355.

Sept 23, 1898

Comp Stars for R Cygni

19 32 +49.9

21 25

1 53

Abandoned

S Coronae Comp. Stars Wobs.

15 16 +33.5

21 26

6 10

m 4 n

m 3.5 o

o 3 p

p 4 q

q 5 r

r 5 s

9 7

all stuck again

Too Cloudy for anything

further.

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1898phae.proj.1355.

Sept 26 1898 (Mon.)

U Delphini

$20^h\ 31^m\ +17.8$

$19\ 57$

$34^m E$

7^h 00 All cloudy

7 30 " "

8 00 " "

8

20 31

21 33

1 2 W

Still thickly cloudly no chance for work.

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1898phae.proj.1355

Sept 27, 1895 (Tues)

(A.Z.) W. obs.

−6° r r 67 compared with −6° r r 60 Eq.

Planet 102. Phot. r.

Watch correction 0

20	44	−6.1
22	32	
1	48	

	262.0			
10 10 00	308.5	< Engltn div.	41.5	
	263.4		39.7	
	303.1		81.2	+2.16
	263.5			
11 50	303.9		40.4	+2.12
	260.6		43.4	
	304.0		83.8	+2.08

Left below

	350.2		
15 00	37.5	47.3	
	351.5	42.4	
	33.4	89.7	+1.92
	350.2		
16 50	33.3	43.1	+1.94
13 40	350.8	45.3	
10 13 25	36.1	88.4	+1.96
15 13 20			

Mean +2.03

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1898phae.proj.1355.

Sept. 27. 1894.

Same Again

		348.8		
10	19 20	37.3	48.5	
		349.9	44.0	
		33.9	92.5	+1.85
		352.0		
21	00	~~34.7~~ 33.2	41.2	+1.90
		348.0	47.9	
		35.9	89.1	+1.94

Right & Above

		81.6		
25	25	~~124.6~~ 123.6	+20	
		83.0	40.1	
		123.1	82.1	+2.13
		81.0		
	26 10	124.2	43.2	+2.08
	10 55	80.2	42.8	
10	22 44			
15	22 44	123.0	86.0	+2.02

Mean +1.99

∴ v-v-67 (8.2) is 2.01 bets. than v-v-60 (9.4)

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1898phae.proj.1355.

Sept. 27, 1898.

−6° V V V 0 (S.S.) comp. with −6° V V 60 (G.W.)

Right & Above

161.0

10 30 30	226.0	65.0		
	160.0	68.5		
	225.5	133.5	−0.91	
	1585			
33 10	229.0	70.5		−0.88
	161.2	65.8		
	227.0	136.3	−0.86	

Left & Below

255.1.

37 40	311.0	55.9		
	254.0	58.0		
	312.0	113.9	−1.33	
	252.5			
39 20	311.6	59.1		−1.28
20 40	253.2	59.3		
10 35 10				
15 35 10	313.5	118.4	−1.23	

Mean −1.08

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1898phae.proj.1355.

Sept. 27, 1898.

Left & below

2537

10 43 00 3120 58.2

2540 59.0

3130 1172 −1.26

2543

44 40 3130 58.7 −1.24

2525 60.0

312.5 118.7 −1.22

Right & above

~~3441~~ 340.0

~~47~~ 48 30 ~~48.9~~ 45.4 65.4

3425 63.0

45.5 128.4 −1.01

3409

50 30 44.6 63.1 −1.02

186 40 341.2 643

10 44 40 455 ~~127.4~~ −1.03

15 44 40

Mean −1.13

∴ ν ν ν 0 (A.2) is 1.10 ~~brtr.~~ ftr. than ν ν 60 (9.4)

∴ ν ν ν 0 (A.2) is 0.91 ~~brtr.~~ ftr. than ν ν 67 A.2

(ν ν ν 0 is also wanted).

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1898phae.proj.1355.

Sept. 27, 1898.

$-6°$ vv dd (A3) comp. with $-6°$ vv 79 (AA)

Phot. V.

Hv. 660.

	242.9			
	327.4	84.5		
11 56	243.0	80.1		
	323.1	164.6	−0.29	
	243.5			
5 50	323.9	80.4		−0.34
	242.3	79.7		
	322.0	160.1	−0.38	
	Left & below			
	383.0			
7 40	555.4	82.4		
	380.1	82.9		
	53.0	165.3	−0.28	
	330.5			
9 00	53.1	82.6		−0.26
127 30	330.5	84.5		
11 6 52				
16 6 52	55.0	167.1	−0.24	

Mean −0.30

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1898phae.proj.1355.

Sept. 27. 1898.

Same again

		330.0		
11	10	40	55.8 bright dir	851
			332.0	833
			55.3	168.4 — 0.22
			3284	
12	00		54.9	826.5 — 0.17
			327.8	872
			55.0	173.7 — 0.12

Right & above

17	40		62.2	63.8
+3	50		142.0	143.05 79.7
			62.8	62.8 81.3
			144.1	161.0 — 036

			62.5	
	19	10	142.4	79.9 — 0.36
	19	30	62.3	81.3
11	14	52	143.6	161.2 — 0.36
16	14	52		

Mean −0.26

∴ VV Aq (6.3) is 0.2q brtr. than VV 79 (4q)

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1898phae.proj.1355.

Planet D2. Sept. 28, 1898. (Wednesday)

20 44 −6.1
20 10
34 E

Above
261.1

7 31 54	304.2	43.1		
	263.5	40.4		
	303.9	83.5	2.09	

262.9

34 11	303.1	40.2		2.08
	260.5	44.3		
	304.8	84.5	2.06	

below
349.2

37 18	36.1	42.9		
	350.9	41.9		
	32.8	88.8	19.5	

351.1

39 13	34.0	42.9		1.94
22 36	349.1	46.9		
7 35 39	36.0	89.8	19.2	
12 35 39				

Mean 2.01

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1898phae.proj,1355.

Sept. 25, 1898.

Same again

		348.1	337.1		
7	43 34 / 42 7	347.8	338.0	41.9	
		351.9	349.0	47.1	
			36.1	89.0	1.94
		349.0			
46	11	36.1	47.1		1.95
		351.1	41.0		
		321	88.1		1.96

Above

		84.1			
50	47	122.0	37.9		
		82.8	40.2		
		129.0	78.1	225	
		81.0			
	52 31	122.2	41.2		2.22
	193 23	83.0	39.1		
7	48 21	122.1	80.3	2.19	
12	48 21				

Mean 2.08

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1898phae.proj.1355.

Sept. 28, 1898.

Same again

	159.4		
7 57 36	224.1	64.7	
	155.5	71.0	
	226.5	135.7	0.86
	159.0		
59 8	226.2	67.2	0.92
	160.9	62.2	
	223.1	129.4	0.99
	below		
	253.1		
8 1 47	313.0	59.9	
	250.5	62.6	
	313.1	122.5	1.14
	252.1		
3 34	314.9	62.8	1.16
20 5	254.0	58.0	
8 5 1	0 120	120.8	1.18
13 5 1			
2 5			
8 00 31			
13 00 31			

Mean 1.04

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1898phae.proj.1355.

Sept. 28. 1898.

	below			
	~~2540~~	203.0		
8 ~~6 37~~ 9 00	~~312.1~~	315.1	62.1	
	~~251.6~~	253.9	57.7	
		311.6	119.8	-1.20
	253.0			
11 26	312.4	59.4		-1.178
	252.1	62.8		
	313.9	121.2	-1.17	
	Above			
	339.8			
17 00	45.1	65.3		
	342.0	62.1		
	44.1	127.4	-1.03	
	341.8			
18 18	41.9	60.1		-1.06
15 44	339.2	65.3		
8 13 56				
13 13 56	445	125.4	-1.05	

Mean +0 -1.12

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1898phae.proj.1355.

Sept 28, 1898.

		Above
		60.0
δ	26 30	144.2
		64.5
		141.1
		65.1
	28 24	142.9
		60.0
		1431
		below.
		150.0
	31 9	238.0
		152.1
		232.1
		152.1
	32 33	233.0

Previous of Photometer caught so that it had to be removed and fixed.

Rejected

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1898phae.proj.1355.

Sept 28, 1898.

			Above		
			240.1		
8	59	20	325.1	85.0	
			244.0	77.5	
			321.5	162.5	-0.33
			244.9		
9	0	32	321.2	76.3	-0.39
			242.9	80.2	
			323.1	156.5	-0.45
			below		
			330.1		
	2	55	56.9	86.8	
			332.0	81.8	
			53.8	168.6	-0.22
			330.9		
	4	33	57.0	86.1	-0.20
	7	20	331.5	84.4	
8	61	~~20~~ 50	53.9	170.5	-0.18
9	1	~~20~~ 50			
14	1	~~20~~ 50			

Mean -0.30

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1898phae.proj.1355.

Sept. 25, 1898

Same again

	3304			
9 6 7	56.2	858		
	330.1	838		
	53.9	1696	-0.20	
	332.5			
8 3	52.9	801		-0.24
	329.1	859		
	55.0	1660	-0.27	

Above

	61.5			
11 11	145.2	837		
	62.1	804		
	142.5	1641	-0.30	
	63.0			
12 37	141.1	781		-0.33
37 58	61.1	828		
9 9 30	143.9	1609	-0.36	
14 9 30				

Mean -0.28

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1898phae.proj.1355.

Sept 25 1898

Mr. P. 441. Yr. Obs.

27 Phot. R.

∓ 31 +62,4

22 12

− 5 19

6 41

822

9 32 10 142.0 Kvandis 59.8

82.1 58.9

141.0 118.7 −1.22

829

33 9 139.2 563 −1.28

82.1 57.0

139.1 1133 −1.34

Sept.

1721

35 00 227.9 558

175.0 54.1

2291 109.9 −1.42

1739

36 18 228.1 542 −1.42

16 37

9 34 9 1721 56.0

14 34 9 228.1 1102 −1.41

Mean −1.35

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1898phae.proj.1355.

Sept 25 1898

	175-4			
9 38 00	227.5	52.1		
	172.8	55.1		
	227.9	107.2	-1.48	
	174.2			
39 19	230.0	55.8		-1.46
	174.4	53.7		
	228.1	109.5	-1.43	
	Right.			
	262.1			
40 30	320.9	58.8		
	260.9	59.5		
	320.4	118.3	-1.23	
	261.9			
41 51	321.9	60.0		-1.22
159 40	261.0	59.2		
9 39 55	320.2	119.2	-1.21	
14 39 55				

Mean - 1.34

Watch correction 0

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1898phae.proj.1355.

Sept. 24 1894.

O Beti

26 4 — 2.0
23 55
2 9

		110.0	3.2	
11	14	12	113.2	
			110.4	1.8
			112.2	5.0	8.31

		111.8	1.0	
16	45	112.8		8.92
		110.5	2.3	
		112.9	3.3	9.1K

Sept below

		200.9	2.1	
18	00	203.0		
		201.9	1.1	
		203.0	3.2	9.26

		201.0	1.2	
18	54	202.2		9.5K
		201.6	1.3	
		202.9	2.5	9.81

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1898phae.proj.1355.

Sept. 24. 1894.

Same again
201,1
1 2028 202,2

Reject obs. on o Ceti. Star does not dis.

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1898phae.proj.1355.

Sept. 29, 1895 (Thurs.)

P T Cygni. Phot. T. Vr. obs.

19 39 +28.9

20 4

25E

Abandoned. Too high.

T Androm. Phot T. Vr. obs.

~~25~~ 14 +26.1

20 10

4 4

7 6

Abandoned

MP 441 W obs.

27 31 6 2.8

20 19

7 12

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1898phae.proj.1355.

Sept. 29, 1898.

	353.5
7 73 79 20	46.5
	350.5
	48.2
	350.1
40 50	49.9
	350.9
	47.1

Rejected

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1898phae.proj.1355.

Sept. 29, 1898

Sept & Above

351.0

7 42 58 47.8 Kwordin. 56.8

351.6 58.5

50.1 115.3 −1.30

351.1

44 12 49.5 58.4 −1.25

351.2 57.9

49.1 116.3 −1.27

Right & below

82.4

45 45 138.1 55.7

82.4 57.4

139.5 113.8 −1.35

83.6

47 25 138.1 55.2 −1.36

20 20 82.6 57.0

7 45 5 139.6 112.2 −1.37

12 45 5

Mean −1.32

7
12

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1898phae.proj.1355

Sept. 29, 1895.

		80.1		
7	49 54	129.2	59.1	
		83.9	55.0	
		138.9	114.1	−1.32
		83.0		
5	14	140.0	57.0	−1.30
		81.5	58.6	
		140.1	115.6	−1.29

Left & Above

		170.3		
5	3 25	228.8	58.5	
		171.6	55.9	
		227.5	114.4	−1.32
		172.4		
5	5 9	222.0	55.6	−1.31
	9 42	170.1	59.4	
7	52 26	229.5	115.0	−1.30
12	52 26			

Mean −13.0

Waited for Prof. W. H. Pickering to observe the moon.

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1898phae.proj.1355.

Sept 29, 1898

β Lyrae. Phot. Mr. Hicks.

1 A 46 + 33.2

22 28

3 42 W.

Right & below

322.1 2K.3

9 46 28 346.4

328.2 22.8

346.0 K7.1 − 3.K0

322.2 22.7

48 25 344.9 −3.K0

321.8 2K.3

346.1 K7.0 − 3.K1

Left & Above

52.0 2K.2

51 24 76.2

53.5 21.K

74.9 Kv.6 − 3.KA

53.1 20.9

53 10 74.0 − 3.v2

199 27 52.5 23.3

9 49 v2 75.8 Kk.2 − 3.v5

14 49 52

Mean −3.K6

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1898phae.proj.1355

Sept 29 1898.

51.9
56 17. 76.2 24.3
53.2
750 21.8 / K6.1 − 3.Kr

533
58 19 749 21.6 − 3.Kr
51.6
761 24.Kr / K6.1 − 3.Kr

Right below.

141.20
10 0 45 166.9 21.9
142.0
164.9 22.9 / K8.8 − 3.33

1422
2 3 1648 22.6 − 3.35

237 24 1409.2
9 59 21. 1649.0 21.3 / K7.9 − 3.37
14 59 21

Mean. −3.Ko

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1898phae.proj.1355.

Sept. 29, 1898.

	141.9	2K.6		
10 8 57	166.5			
	142.9	22.3		
	164.7	K6.9	−3.K1	
	1428	22.3		−3.K0
12 14	1651			
	148.5	2V.0		
	1665	K7.3	−3.K0	
	Left & above			
	232.0	2K.K		
16 15	256.4			
	233.5	21.K		
	254.9	KV.A	−3.K7	
	232.9	21.6		−3.KV
18 34	255.4			
V6 0	231.5	2V.0		
10 1K 0	256.5	K6.6	−3.K3	
15 14 0				

Mean −3.K2

The three preceding groups on B Lyrae were taken with a black paper cap over double image prism, this cap having an oblong rectangular slot aperture in it so that the image of B could be just behind edge of aperture.

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1898phae.proj.1355.

Sept. 29. 1898.

S Tau Cygni Phot T Vr obs.

19 39 +25.9
28 27
3 ~~45~~

Abandoned for S Lyrae

S Lyrae.

1846 +33.2
2350
5 4

39.9 24.3.
11 2 24 64.2
41.6 21.4
63.0 ~~45.7~~ -3.47

41.4 21.6 -3.49
7 9 63.0
40.0 23.4
63.4 ~~45.0~~ -3.51

Right ascension

130.2 23.1
9 20 153.9
131.1
153.4 ~~45.4~~ -3.49

131.2 21.4 -3.51
10 25 152.6
32 1A 130.5 23.1
11 A 4
16 8 4 153.6 ~~44.5~~ -3.53

Mean -3.50

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1898phae.proj.1355.

Sept 29, 1898.

Right V.

		130.0		
		3.6	23.A	
11	17	30	154.8	
			131.0	22.6
			153.6	K6.K — 3.KK
			131.5	21.V
	19	59	153.0	— 3.K7
			130.1	23.7
			153.8	KV.2 — 3.V0

Left V.

		220.5		
24	21	244.0	23.V	
		220.6		
		243.1	22.V	
			K6.0	— 3.K6
		221.1		
	28	11	243.0	21.9 — 3.K9
		13	1	220.3
11		23	15	22.A
16		23	15	243.1 — 3.V2
		10	21	
11		22	30	Mean — 3.KA
16		22	30	

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1898phae.proj.1355.

Sept. 29, 1898.

Sept. below

220.2
243.9
220.3
243.1

23.7
22.8
46.5
-3.43

1 34 15

220.5
243.1
220.5
243.5

22.6
23.0
45.6
-3.46
-3.44

38 54

Right Above

309.9
334.5
309.9
333.5

24.6
23.6
48.2
-3.37

43 30

309.0
333.4

24.2
-3.32

46 31

3 10
11 40 48
16 40 48

308.9
334.1

24.2
49.4
-3.30

Mean -3.39

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1898phae.proj.1355.

Sept. 29, 1898.

Right & Above

~~310.8~~

309.1 24.3

12 5 15 334.4

310.0

333.1 23.1 / 47.4 −3.34.

309.2 24.7 −3.32

8 30 333.9

309.6 24.7 / 49.4 −3.30

234.3

Left & below

39.3 24.6

11 39 63.9

39.8 24.2 / 44.0 −3.33

39.8 24.2 −3.34

13 58 64.0

39 22 40.0

12 9 51 63.9 23.9 / 47.1 −3.36

~~17~~ 9 51

~~16~~

17

Mean −3.33

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1898phae.proj.1355.

Sept. 29. 1898.

Same again

~~6844~~

39.8 2K.3

12 22 40 6.4.1

39.82 2K.7

63.9 K9.0 −3.32

39.8 2K.1 −3.32

24 30 63.9

39.2 2K.7

63.9 K4.8 −3.33

Right & above

129.9 2K.2

27 24 154.1

130.1 2K.9

154.0 K4.1 −3.36

130.2

29 45 153.9 2K.7 −3.33

" 14 19 129.3

11 28 34 154.9 2K.6

~~1 28 34~~ K9.3 −3.30

24 19 Mean −3.32

12 26 5

187 26 5

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1898phae.proj.1355.

Sept. 29, 1898.

Right & Above

	129.0	25.2	
12 33 0	154.82		
	130.0	24.1	
	154.1	49.3	−3.30
	129.9	24.1	−3.31
34 46	154.0		
	129.2	24.9	
	154.1	49.0	−3.32

Left and below

	218.98	25.4	
38 44	243.82		
	220.2	24.0	
	244.2	48.4	−3.30
	220.2	23.6	−3.34
42 00	243.8		
30			
148 30	219.7	24.2	
12 37 18	243.9	47.2	−3.37
17 37 48			Mean −3.32

Watch correction 0.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1898phae.proj.1355.

Sept. 30, 1898. (Friday)

S Tauri W obs.

19 39 +28.9
20 40 Watch correction +5 sec.
Above 1 1 (Watch is slow)
I

173.9 < var. dis

7 43 00 214.1 40.2
170.1 46.0
216.1 56.2 -202

1720

54 9 210.9 43.9 -205
173.9 39.9
213.8 53.8 -208

below
264.5

56 40 303.1 38.6
260.9 42.2
303.1 50.8 -217

262.0 -219

52 58 303.0 41.0
6 47 263.3 38.6
7 51 42 301.9 79.6 -221
+0
12 51 47

4563.5360

Mean -212

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1898phae.proj.1355.

Sept. 30, 1898.

II

below

263.9

8 0 15 302.4 38.5

268.1 40.9

304.0 79.4 − 2.21

261.9

1 57 ~~34.9~~ 303.9 42.0 − 2.16

263.5 41.0

304.5 83.0 − 2.11

Below

340.4

5 24 35.2 40.8

35.29 ~~48.1~~ 93.9 − 1.81 ~~2.08~~

33.0

3535 − 1.92

7 15 34.1 40.3

14 51 349.2 40.9

8 3 42 35.1 86.2 − 2.02

123 3 47

4563.5443

Mean − 2.04

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1898phae.proj.1355.

Sept. 30, 1898.

above

349.9 III

8 9 0 35.1 40.2

333.0 38.9

31.9 541 −208

352.9

11 5 32.0 39.1 −2.08

350.1 45.0

35.1 541 −208

left below

82.0

14 47 124.2 42.2

24.5 37.7

122.2 79.9 −2.20

83.4

17 17 121.3 37.9 −2.24

12 9 83.5 39.5

8 13 2 124.0 77.4 −2.27

+5

13 13 7

4563.5508.

Mean −2.16

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1898phae.proj.1355.

Sept. 30. 1898.

Slit & below

82.0

IV

8 21 15 123.2 41.2

84.4 38.5

122.9 79.7 -220

83.9

22 31 121.8 37.9 -221

82.2 41.1

123.3 79.0 -222

Right & Above

172.2

25 52 215.1 44.9

173.1 40.2

213.3 85.1 -200

172.6 -206

27 32 213.2 40.6

17 13 171.9 43.6 -207

8 24 18

+5 215.5 84.2

13 24 23

4563.5586

Mean -2.14

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1898phae.proj.1355

Sept. 30, 1898.

same again

V

	170.6			
8 30 44	214.3	43.7		
	171.2	42.6		
	213.8	86.3	-20.1	
	172.6			
31 47	213.0	40.4		-2.04
	170.5	44.0		
	214.5	84.4	-20.7	

Left & below

	~~2624~~	264.1		
3 5 42	~~3043~~	301.0	36.9	
	262.1		41.0	
	303.1		77.9	-22.6
	261.9			
41 56	303.6		41.7	-2.22
140 9	264.1		39.5	
8 35 + 5	302.9		80.5	-21.8

13 35 7

4563 .56681

Mean -2.13

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1898phae.proj.1355.

Sept. 30. 1898.

β Lyrae

18 46 +33.2

21 38

Sept 2 52

I

218.4

8 55 37 245.2 26.8

221.1 22.0

243.1 48.8 -3.33

220.5

5 9 00 244.0 23.2 -3.30

218.3 27.0

245.3 50.2 -3.26

Right

306.1

9 2 48 338.5 32.4

308.1 26.8

334.9 65.2 -2.67

309.0

5 2 335.9 26.9 -2.62

2 27 305.9 31.5

9 0 37 337.4 68.4 -2.56

+ 5

14 0 42

4063.5838

Mean 3.46 -2.96

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1898phae.proj.1355.

Sept 1530, 1898.

	Right			
	3062			II
9 8 28	337.3	31.1		
	309.2	26.3		
	3355	57.4	-2.96	
	3085			
10 49	335.4	26.9		-2.93
	305.9	31.7		
	337.6	58.6	-291	
	Left			
	377			
13 42	67.9	30.2		
	41.6	21.5		
	63.1	51.7	-3.20	
	42.0			
15 51	62.5	20.5		-3.28
8 50	38.1	27.5		
9 12 12				
+ 5	65.9	48.3	-3.35	
14 12 17				
4563.5919				

Mean. -3.10

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1898phae.proj.1355.

Sept. 30, 1898.

III

37.0

9 18 34 68.0 31.0

41.1 22.1

63.2 53.1 −3.14

40.1

20 53 63.5 23.4 −3.25

41.6 24.7

66.3 48.1 −3.36

Right

125.5

26 11 158.7 33.2

128.6 26.2

154.8 59.4 −2.88

125.7

28 27 154.9 26.2 −2.58

14 5 125.3 33.0

9 23 31 +5 158.3 59.2 −2.59

14 23 36

4563.5997

Mean −3.06

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1898phae.proj.1355.

Sept. 30, 1898.

IV

	126.0			
9 34 32	158.6	32.6		
	128.3	27.3		
	155.6	59.9	-2.86	
	128.9			
35 25	155.2	26.3		-2.87
	124.7	33.2		
	157.9	59.5	-2.88	
	Sept			
	217.3			
39 33	245.2	27.9		
	221.1	22.1		
	243.2	50.0	-3.27	
	221.0			
42 52	243.1	22.1		-3.28
152 22	217.5	27.2		
9 38 6				
+5	245.0	49.3	-3.30	
14 38 11				
4563.6098				

Mean - 3.08

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1898phae.proj.1355.

Sept. 30, 1895.

Left.

218.2

V

9 44 39 245.3 27.1

220.0 23.8

243.8 50.9 −3.24

220.0

47 00 243.6 23.6 −3.22

218.1 28.1

246.2 51.7 −3.20

Right

305.8

50 49 338.1 32.3

308.1 26.9

335.0 59.2 −25.9

308.3

52 52 334.5 26.2 −2.93

195 20 306.9 30.9

9 48 30 +5 337.8 57.1 −29.7

14 48 55

4563.6173

Mean −3.08

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1898phae.proj.1355.

Sept. 30, 1898.

	3055			
9	5630	3378	32.0	
		3090	26.3	
		3353	58.3	-2.93
		3094		
10	0	23	3390	29.6	-2.88
			3062	31.1	
			3373	610.7	-2.84 -2.50
		Sept.			
		3796			
9	32	6790	29.4	
		4112	23.3	
		6405	52.7	-3.15
		4041		
	18	9	6444	24.3	-3.16
	4	44	3885	27.9	
10	6	11	6664	52.2	-3.17
		+0			
15	6	16			

45636294

Mean -3.02

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1898phae.proj.1355.

Sept. 30, 1898.

VII

38.1

10 17 52 65.8 27.7

41.2 22.7

63.9 50.4 −3.25

40.6

19 27 64.0 23.4 −3.42

39.8 26.7

65.5 43.3 −3.59

Right.

126.3

21 52 152.8 31.5

128.4 26.3

155.0 57.8 −2.94

129.1

25 9 154.5 25.4 −2.95

4 20. 126.4 32.1

10 21 +5

15 21 10. 158.5 57.5 −2.96

4563.6397

Mean −2.318

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1898phae.proj.1355.

Sept. 30, 1898.

VIII

		126.0		
10	28 42	158.1	32.1	
		128.8	26.6	
		155.4	58.7	-2.91
		129.0		
	30 44	155.0	26.0	-2.92
		126.70	32.0	
		158.0	58.0	-2.94

Sept.

		217.0		
	35 54	247.0	30.0	
		221.1	23.1	
		244.2	53.1	-3.14
		221.1		
	38 11	244.9	23.8	-3.16
	13 31	217.8	28.3	
10	33 23			
	+5	246.1	52.1	-3.18
	15 33 28			

4563.6482

Mean -3.04

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1898phae.proj.1355.

Sept. 30, 1898.

	Left.		IX	
	218.0			
10 41 45	246.2	28.2		
	220.2	23.4		
	243.6	51.6	−3.20	
	220.0			
44 37	243.45	23.5		−3.24
	219.0	26.3		
	245.3	49.8	−3.28	
	Right			
	306.57			
7 55	337.4	30.7		
	308.2	26.8		
	335.0	57.5	−2.96	
	308.0			
50 29	335.46	27.6		−2.93
184 46	305.9	31.4		
10 46 12	337.3	59.0	−2.98	
+5				
15 46 17				
45 63.6071			Mean −3.08	

In all the preceding groups on B Lyrae paper cap with slot in it was over double image prism in order to conceal the bright B while otha the other images were being compared.

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1898phae.proj.1355.

Posted to Lera.

Oct. 1, 1898. (Saturday)

U Vulpec. +11 sec Watch correction

19 28 +19.5

20 15

37 W

I

171.1 Lavardis.

7 41 38 214.9 43.8 U Vulpec = +20° 4200

169.0 43.9 Comp Star = +20 4204 (9.2)

214.9 89.7 -1.92

170.8

44 2 214.5 43.7 -1.94

170.6 44.5

215.1 88.2 -1.96

Left of Above

263.9

46 10 303.5 39.6

263.0 39.9

302.9 79.5 -2.21

262.8

47 40 303.0 40.2 -2.20

19 30 263.5 39.5

7 44 52 +11 303.0 79.7 -2.20

12 45 3

4564.5315

4560.4700

4.0615

Mean -2.0 -1.97

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1898phae.proj.1355.

Oct 1, 1895

same & again

263.1 II

7 52 23 303.5 40.4

262.0 40.1

302.1 50.5 -2.18

2623

309.0 40.7 -2.18

53 58 263.0 40.0

303.0 50.7 -2.17

Right

350.0

57 5 35.1 45.1

350.2 44.6

34.8 8*9.7 -1.92 ~~3.28~~

350.0

55 42 34.5 44.5 -1.95

22 8 351.0 43.1

7 55 32 +11 34.1 87.6 -1.98

12 55 43

4564.5387

4560.4706

4.0687

Mean -2.06

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1898phae.proj.1355.

Oct. 1. 1898

Right.

III

	350.8			
8 00 30	33.0	+2.2		
	351.6	+3.3		
	34.9	85.5	-2.04	
	351.3			
2 29	34.2	+2.9	-2.02	
	351.5	+3.4		
	34.9	86.3	-2.01	
	Left			
	2.5			
	~~8 30~~			
6 34	122.4	39.9		
	82.2	+1.8		
	124.0	81.7	-2.14	
	81.1			
8 29	121.9	40.8	-2.16	
18 2	82.6	39.4		
8 4 30				
+11	122.6	80.2	-2.19	
13 4 41				

4564. 5449
4560. 4700
4.0749

Mean -2.09

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1898phae.proj.1355.

Oct. 1. 1898.

Left. IV

A2.9

8 11 53	122.2	39.3		
	80.9	43.1		
	124.0	82.4	2.12	
	82.5			
13 30	123.0	40.5		2.18
	84.0	38.0		
	122.0	78.5	2.24	

Right

18 15	171.0	170.1		
16 42	227.7	214.9	44.8	
	171.1	171.5	42.5	
		214.0	87.3	1.99
	172.5			
20 33	214.9	42.9		2.00
64 34	171.0	44.1		
8 16 8				
+11	215.1	87.0	2.00	
13 16 19.				

4564.5530
4560.4700
4.0830

Mean 2.09

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1898phae.proj.1355.

Oct. 1. 1898.

Bright V

1699

8 24 28 214.6 44.7

171.2 43.7

214.9 88.4 1.96

170.5

25 29 215.9 45.4 1.94

171.0 44.1

215.1 89.5 1.93

left & above

263.8

30 21 305.0 41.2

264.0 40.1

304.1 81.3 2.16

264.2

32 32 304.1 39.9 2.18

112 59 264.2 39.9

8 28 33 +11

13 28 44 23 304.1 79.8 2.20

4564.5614

4560.4700

+4.0914

Mean 206

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1898phae.proj.1355.

Oct. 1. 1898.

S T Cygni Phot T. W obs.

S T Cygni = +25° 3460 Comp star = DM+25° 3467 (9.)

19 39 +25.9

27 41

left + below 2 1

I

88.0 } var dis.
117.4 29.4
8 46 39 86.9 32.2
119.1 61.6 -2.50

87.9
47 42 118.8 30.9 -2.50
87.8 30.7
118.5 61.6 -2.50

Right + Above

178.1
50 45 209.9 31.8
177.1 34.0
211.1 65.8 -2.65

177.8
5 2 00 211.5 34.5 -2.62
197 6 177.3 32.8
8 49 16 210.1 67.3 -2.60
+11
13 49 27

4564.5760
4563.9960
0.5800

Mean -2.71

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1898phae.proj.1355.

Oct. 6. 1898.

Right & Above

176.9

8 55-57 209.0 321

176.3 345

211.1 669 -261 II

176.1

5 6 33 210.0 339 -262

177.5 320

210.0 664 -263

Left & below

269.1

9 2 3 297.8 28.7

267.0 31.7

298.7 604 -284

267.2

3 47 300.0 325 -290

238 20 267.5 300

8 59 35 +11 298.5 625 -276

13 59 46

4564.5832

4563.996

0.5872

Mean -2.71

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1898phae.proj.1355.

Oct. 1. 1898.

Left below

2698 III

9 8 32 297.5 27.7

267.5 32.6

300.1 60.3 −2.85

2685

11 38 300.5 32.0 −2.79

267.5 31.7

299.2 63.7 −2.73

Right above

3569

14 6 29.0 32.1

356.1 33.8

29.9 65.9 −2.65

356.4

15 41 31.5 35.1 −2.62

9.57 357.1 32.0

9 12 29 29.1 67.1 −2.60

+11

14 12 40

4564.5922

4563.996

0.5962

Mean −2.70

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1898phae.proj.1355.

Oct 1. 1898.

Right Hlow

	36.71		IV	
9 ~~15~~ 41	28.1	31.0		
23	35.62	34.3		
	30.5	60.3	-2.67	
	356.2			
~~29~~ 42	30.1	33.9		-2.67
24	358.0	31.3		
	293	65.2	-2.67	

Left Hlow

	84.0			
28 16	117.1	291		
	27.0	32.4		
	1194	61.5	-2.80	
	86.1			
30 12	1145	324		-2.75
106 51	86.8	32.0		
9 26 42				
+11	118.8	644	-2.70	
14 26 53				

4564.6020
4563.996
0.6060

Mean -271

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1898phae.proj,1355.

Oct 1, 1895.

Left & below
~~Right & above~~

V

88.1

9 32 00 118.2 30.1
87.0 31.1
178.1 61.2 −2.51

869

34 2 119.6 32.7 −2.76
87.9 31.1
119.0 63.8 −2.72

~~Right & above~~
~~Left & below~~

177.1

37 5 210.9 33.8
176.1 30.4
211.5 69.2 −2.53

176.1

39 36 211.0 34.9 −2.56
22 43 177.1 33.0
9 35 41 210.1 67.9 −2.58
+11
14 35 52.

4564.6082
4563.996
0.6122

Mean −2.66

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1898phae.proj.1355.

Oct. 1, 1898.

β Lyrae Phot W 11 obs.

18 46 +33.2

22 48

4 2

Left

10 5 35	129.4	21.0		
~~10 00 30~~	150.0	~~21.9~~	20.8	
	~~120.0~~ 20	218.1	22.1	
	15	240.2	42.9	3.61

217.9

8 3	240.4	22.5		3.60
	219.2	21.0		
	240.2	43.5	3.08	

Right

308.3

13 21	331.1	22.8		
	307.3	23.6		
	330.9	46.4	3.44	
			~~2.63~~	

307.0

18 34	331.0	24.0		3.45
5 33	308.2	21.9		
10 11 23	330.1	45.9	3.46	
15 11 34				

4564.6261
4563.040
1.5861

Mean 3.52

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1898phae.proj.1355.

Oct. 1. 1898.

Right

	308.7			
10 26 30	329.8	21.1		
	305.9	25.9		
	331.8	47.0	3.41	
	306.6			
36 37	332.0	25.4		3.39
	308.0	22.4		
	330.4	47.8	3.37	
	Sept.			
	39.2			
44 00	59.2	20.0		
	37.6	24.2		
	61.8	44.2	3.50	
	37.8			
47 53	61.3	23.5		3.54
155 00	39.0	21.0		
10 38 45 +11	60.0	44.5	3.53	
15 38 56				

4564.6520
4563.0440
1.6120

Mean 3.46

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1898phae..proj.1355.

Oct. 1: 1898.

	Left			
	38.9			
10 53 40	59.6	20.7		
	37.8	22.7		
	60.5	43.4	3.09	
	38.0			
57 59	61.1	23.1		3.58
	38.6	20.9		
	59.65	44.0	3.56	
	Right			
	128.0			
11 4 10	100.8	22.8		
	128.1	23.0		
	151.1	45.8	3.47	
	127.1			
7 22	151.3	24.2		3.46
3 51	128.1	22.2		
11 00 48	150.3	46.4	3.44	
16 00 59				

Mean 3.52

4564.6674
4563.040
1.6274

In previous settings on β Lyrae, unobstructed prism was used, and head twisted so that eyes were parallel to slots.

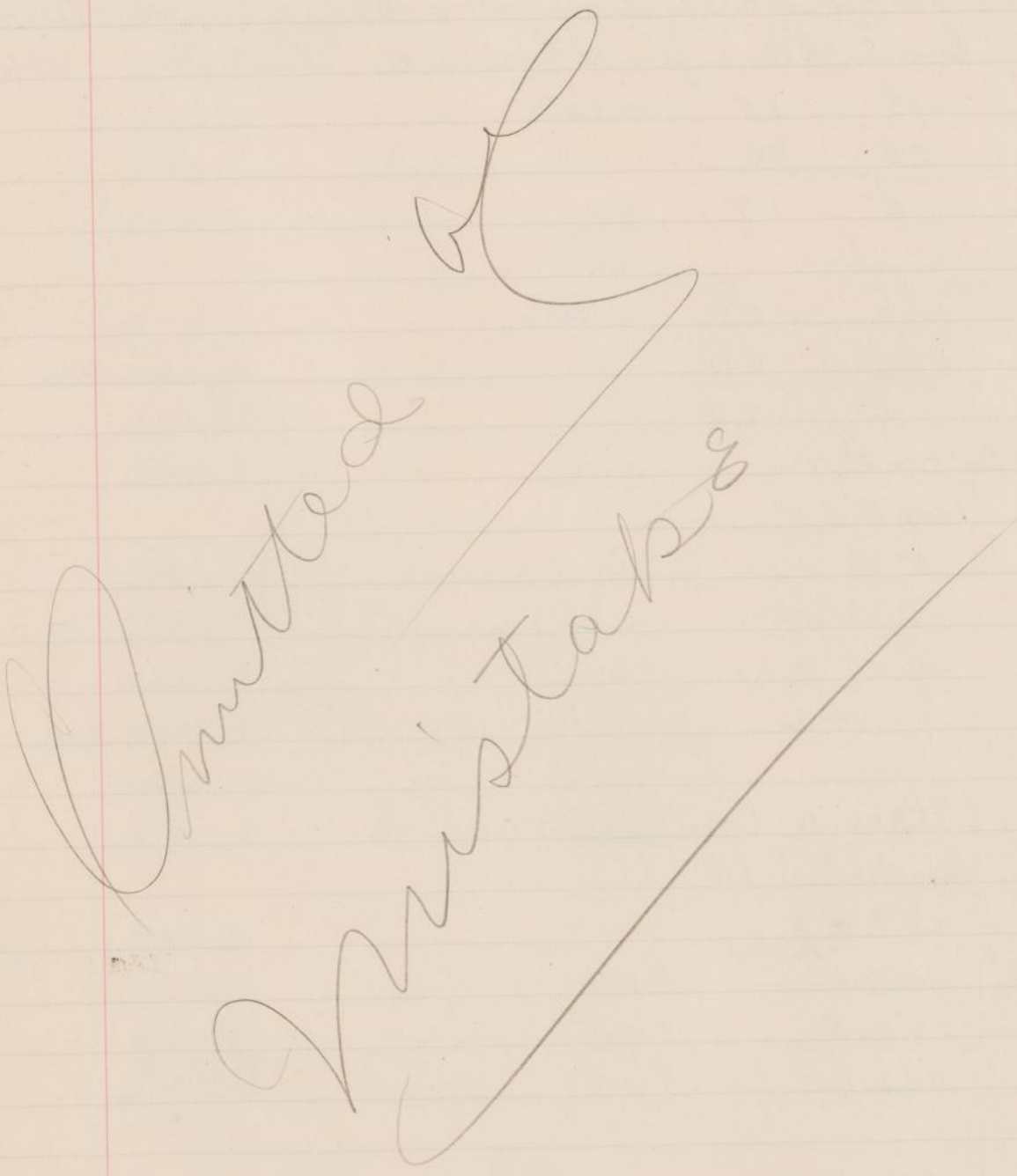
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Omitted by mistake

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1898phae.proj.1355.



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1898phae.proj.1355.

October 3, 1898. (Monday.)

00 Hatch Correction = +6 sec. (Hatch is slow)
Comp. Stars for S Coronae. Phot. T. H. Obs.

15	15	+32.0
20	30	
5	15	

15	08	+34.0
20	36	
5	28	

32 m ~~4~~ n
n 3.50
o 3 p
p + q
q 5 & r
r + s

Stars compared with k.
Index left
181.8 <k, dis

38	202.1	20.3	
	182.5	19.6	
	202.1	39.9	3.77
	182.4		
	202.0	19.6	3.80
	183.1	19.1	
	202.2	38.7	3.84

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1898phae.proj.1355

Oct. 3, 1898.

Index right.

	273.8		
	292.2	18.4	
	272.1	19.9	
	292.0	38.3	3.86
	272.5		
43	293.7	21.2	3.82
	273.8	18.5	
	292.3	39.7	3.79
		Mean	3.81

Star r compared with k.

Index right and above

	267.8	< k dis.	
45	295.8	28.0	
	269.5	25.0	
	294.5	53.0	3.14
	270.0		
	294.7	24.7	3.14
	267.8	26.5	
	296.3	53.2	3.13
	~~297.~~		

Index left and below.

358.4		
25.8	27.4	
359.2	26.0	
25.2	53.4	3.12

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1898phae.proj.1355.

Oct. 3, 1898.

0.7

7 50 25.8 25.1 3.20
359.5 24.9
24.4 50.0 3.27

Mean 3.17

Star p, compared with k.
Index left and above.

353.3
k
7 52 31.0 37.7
352.0 82.0
34.0 79.7 2.20

350.3
34.7 44.4 2.14
352.6 39.4
32.0 83.8 2.08

Index right and below.

81.6
123.1 41.5
80.5 43.5
124.0 85.0 2.05

80.0
8 00 123.7 43.7 2.05
82.0 41.5
123.5 85.2 2.05

Mean 2.10

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1898phae.proj.1355.

Oct. 3, 1895.

15 15 +32.0
21 20
6 15

15 15 +32.0
22 00
6 +5

S T Cygni. Phot. H. Obs.

19 39 +28.9
22 04
2 25

19 39 +28.9
22 19
2 +0

19 39 +28.9
22 59
3 20

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1898phae.proj.1355.

Oct. 3, 1895.

S Tbygni. Phot. F. H. Obs

Index right and above

I

169.2 2 var.

9 54 32 215.7

172.4

213.3

172.1

56 20 213.8

169.3

215.7

Index left and below

Clouds.

Stopped for Prof. W. H. Pickering to observe moon

19 . 39 +28.9 reject preceding setting

23 . 39 on this variable

1 00

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1898phae.proj.1355.

Oct. 3, 1898.

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

Index right and above. I

353.2 < var. dis.

10 34 00 33.7 +0.5

352.6 +1.5

34.1 82.0 -2.14

352.1

35 44 34.0 +1.9 -2.12

351.7 +1.4

33.1 83.3 -2.10

Index left and below

80.3

38 16 123.0 +1.7

80.3 +4.4

124.7 86.1 -2.02

82.3

+0 00 123.7 +1.4 -2.08

148 00 81.0 +0.8

10 37 +6 00 121.8 82.2 -2.13

15 37 6

4566.6508

4563.996

2.6548

Mean -2.10

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1898phae.proj.1355.

Oct. 3, 1895.

II

82.9
10 H1 12 121.8 38.9
81.0 H1.7
122.7 806 −2.18

81.9
H2 32 122.9 H1.0 −2.18
82.6 39.2
121.8 802 −2.19

Index right, and above

172.0
H4 40 213.7 H1.7
171.7 H29
214.6 846 −2.06

171.0
H6 24 214.3 H3.3 −2.07
14 48 172.7 H0.5
10 43 H3
15 43 48 213.5 841 −2.05

Mean −2.12

4566.6555
4563.996
2.6595

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1898phae.proj.1355.

Oct. 3, 1898.

III

		171.9			
10	48	08	213.1	H1.2	
			170.6	H4.1	
			214.7	85.3	-2.04
			170.1		
49	25		214.1	H4.0	-2.04
			171.0	H1.1	
			213.1	85.1	-2.05

Index left and below.

		~~261.0~~			
		263.4			
52	20	302.9	39.5		
		261.8	H1.4		
		303.2	80.9	-2.17	
		261.7			
58	12	303.5	H1.8		-2.16
8	8	263.0	H0.0		
10 52	2	303.0	81.8	-2.14	
	+6				
45 52	8				

4566.6612
4563.996
2.6652

Mean -2.10

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1898phae.proj.1355.

Oct. 3, 1895.

IV

	262.7			
11 00 00	302.5	39.8		
	261.6	40.2		
	302.8	81.0	2.17	
	261.5			
	~~304.1~~		2.14	
01 20	303.7	42.2		
	262.8	40.2		
	~~302.6~~	82.4	2.12	
	303.0			

Index right and above

	~~353.4~~			
~~03 56~~	~~350.7~~			
	352.2			
07 40	34.5	42.3		
	351.0	42.5		
	33.5	84.8	2.06	
	352.1			
08 48	33.6	41.5	2.06	
17 48	351.0	42.9		
11 4 27	33.9	84.4	2.07	
+ 6				
16 4 33				

Mean 2.10

4566.6698
4563.996
2.6738

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1898phae.proj.1355.

Oct. 3, 1898

V

			357.0			
11	13	12	344	434		
			352.2	42.3		
			34.5	55.7	203	
			352.6			
14	20		33.9	41.3		205
			351.0	43.0		
			34.0	543	207	

Index left and below

			82.4			
20	00		123.8	41.4		
			83.0	40.0		
			123.0	81.4	215	
			82.4			
22	04		122.6	40.2		214
69	36		81.7	41.8		
11 17	24	+6	123.5	82.0	214	
16 17	30.					

Mean 2.10

4566.6789
4563.996
2.6829

Much troubled throughout previous groups by clouds. Setting however made with much care and thought to be good.

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1898phae.proj.1355.

Wednesday, October 5, 1898.

Examination of Great Cluster in Hercules
M. 13 E.C. Pickering Obs.
Comp. with Charts of Scheiner and Bond
Brightest stars est. magn. 11.5
Faintest stars seen with difficulty estimated
magn. 15 or fainter
Clouds
9 07 Stopped by clouds.
Moon rising, but does not seriously
interfere.

9 25 Moon too bright

S Cygni Phot. T. H. Obs

19 39 +25.9
23 04
3 25

1898phae.proj.1355.

Oct. 5, 1895.

		S Tbygni.	Phot. T.		H. Obs.
		Index right and above			I
		357.4	2 var. div		
9	58	00	30.3	32.9 ✓	
			356.7	336 ✓	
			30.3	66 ✓ ✓	−2.6 ~
			356.3	342 ✓	(−2.6 ~)
10	01	04	30.5		
			356.4	326 ✓	
			29.0	66.4 ✓	−2.61
		Index left and below			
			56.7	31.5 ✓	
03	20		118.2		
			56.1	339 ✓	−2.66
			120.0	65.4 ✓	
					−2.64
			56.6	336 ✓	
04	28		120.2		
6	52		87.6	327 ✓	
9. 61	43		120.3	66.3 ✓	−2.63
10 1	43				−2.63
15 1	43				

4568.6262
4567.8400
0.7862

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1898phae.proj.1355.

Oct. 5, 1895

II

		86.9			
10	07	00	118.8	31.9	
			86.1	340	
			120.1	67.9	2.67
			86.3	33.8	
08	52		120.1		2.66
			87.5	313	
			118.8	67.1	2.67

Index right and above

			176.7		
11	44		210.2	33.5	
			175.0	356	
			210.6	69.1	2.674
			174.8		2.674
			174.8	36.9	
13	16		211.7		
	0	52	174.2	320	
10	20	13	209.2	64.9	2.674
15	10	13			2.60

4568.6320
4567.8400
0.7920

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1898phae.proj.1355.

Oct. 5, 1898.

III

	177.1	326		
10 17 44	209.7			
	175.6	3.6		
	211.2	6A.2	2.57	
	175.7	3.6		(2.56)
19 54	211.3			
	177.0	329		
	209.9	6A.5	2.56	

Index left and below

	~~269.2~~			
	267.4	310		
22 52	298.4			
	266.7	333		
	300.0	643	2.70	
	266.1	332		(2.6A)
25 00	299.3			
5 32	267.0	320		
10 21 23	299.0	652	2.67	
15 21 23				2.6-

4568.6399
4567.8466
0.7999

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1898phae.proj.1355.

Oct. 5, 1898

IV

267.9
10 27 32 299.1 31.2
266.0 333
299.3 64.5 2.76 69

265.8 35.2
29 52 300.0 (2.6 3 X)
Stars faint clouds
266.4 330
299.4 64.2 2.57

Index right and above
357.0
33 12 30.7 337
356.7 333
30.0 67.0 2.61

Stars faint. (2.79)
356.3 34.4
35 44 30.7
6 20 356.4 336
10 31 35 30.0 64.0 2.57

10 31 35
4568.6469
4567.8400
0.8069

2.61

10
15
4
40

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1898phae.proj.1355.

Oct. 5, 1898.

V

356.0
10 38 20 29.5 33V
357.5
31.0 33V
67.0 2.61

356.0
40 08 31.2 32V (2.5F)
~~357.0~~
356.7 33.2
29.9 64K 2.56

Index left and below.

87.4 31.F
44 20 119.2
86.4 33K
119.8 67.2 2.67

86.4 336 2.6V
46 36 120.0
9 24 86.4 327
10 42 21 119.1 663 2.63
15 42 21 2.62
4568.6045
4067.8400
.8145

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1898phae.proj.1355.

Posted to here.

October 6, 1895. (Thursday)

6 40 Hatch Correction = −20 sec. (Hatch is fast.)
Comp. Stars for S Herculis. H. Obs.

16	+5	+15°.2
20	05	
3	20	

7

7 00 n 5.5 o
o 4.5 p
p 4.5 q
q 5 r
~~r 5.5 s~~
~~s 6 t~~
~~s 6 s~~
r 5.5 s
s 6 t
7 19 t 3 u

7

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1898phae.proj.1355.

Oct. 6, 1898.

Comp. Stars for S Herculis. Phot. F. H. Obs.

Star t compared with k.
Index left and below.

		270.6			
		293.0	22.4		
7	26	271.3	22.7		
		294.0	45.1	3.50	
		271.3			
		293.7	22.4		3.52
		271.2	22.0		
		293.2	44.4	3.54	

Index right and above.

		1.0			
		24.4	23.4		
		1.3	22.4		
		23.7	45.8	3.47	
		1.0			
7	31	24.3	23.3		3.48
		1.4	22.3		
		23.7	45.6	3.48	

Mean 3.50

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1898phae.proj.1355.

Oct. 6, 1895.

Star s compared with k.

Index right and above.

356.7 Lkdis.

7	35	29.0	32.3	7
		357.2	31.0	
		~~27.~~	63.3	2.74
		28.2		

355.7			2.71
29.8	~~38.9~~ 39		
357.2	30.8		
28.0	64.9	2.65	

Index left and below.

	87.2		
	117.8	30.6	
	85.0	33.4	
	118.4	64.0	2.71

		85.4		2.78
7	39.	117.7	32.3	
		88.0	28.3	2.74
		116.3	60.6	

mean 2.74

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1898phae.proj.1355.

Oct. 6, 1898.

Star r compared with k.

Index left and below.

83.7 2 k dus

7	H	121.0	37.3	
		83.8	35.7	
		119.5	73.0	241

83.7

		118.5	34.8	248
		85.0	34.0	
		119.0	68.8	205

Index right and above.

173.7

		211.85	37.8	
		175.0	35.0	
		210.0	72.8	242

174.0

7	H	211.0	37.0	240
		174.3	36.7	
		211.0	73.7	239

Mean 244

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1898phae.proj.1355.

Oct. 6, 1898.

Star q compared with k

Index right and above.

		170.0	2 k dis		
7	50	214.4	444		7
		170.4	445		
		214.9	8 * 8.9	1.94	
		171.6			
		215.2	436	2.09	
		172.0	41.7		
		213.7	553	2.04	

Index left and below.

		262.0			
		302.2	402		
		261.8	414		
		303.2	516	2.15	
		262.7			
7	56	303.3	406	2.18	
		262.5	38.7		
		301.2	793	2.22	8

Imean 2.14

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1898phae.proj.1355.

Oct. 6, 1898

Star p compared with k

Index left and below.

257.4
2k
7 59 307.1 49.7
257.0 51.8
308.8 101.5 1.62

258.1
~~306.1~~ 1.66
307.0 48.9
~~258.~~ 49.5
257.9 98.4 1.70
307.4

Index right and above

346.8
38.1 51.3
346.8 51.0
37.8 102.3 1.60

~~345.6~~
8 04 38.0 52.4 1.56
346.0 52.8
38.8 105.2 1.53

Mean 1.61

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1898phae.proj.1355.

Oct. 6, 1898

Compi. Stars for R Coronae W. Obs.

15 42 +28.9
21 32
5 50

8

8 25 q 6 r
r 6 s
s 3 t
t 3.5 u
u 3.5 w
w 3.5 x
x 3 y

9

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1898phae.proj.1355.

Oct. 6, 1895.

Comp. Stars for R Coronae Phot. F. H. Obs

Star u compared with f

Index left

185.8 < f dec.

8 57 200.5 14.7

185.0 16.2

201.2 30.9 4.34

185.4

201.0 15.6 4.28

184.9 17.0

201.9 32.6 4.22

Index right

275.3

290.8 15.5

275.5 14.7

290.2 30.2 4.39

275.2

9 56 289.7 14.5 4.42

275.1 14.9

290.0 29.4 4.45

Mean 4.35

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1898phae.proj.1355.

Oct. 6, 1898.

Star s, compared with f

Index right and below.

		272.0	f dw	
8	59	292.4	20.4	
		272.4	20.6	
		293.0	41.0	3.71
		273.3		
		292.1	18.8	3.76
		272.5	20.5	
		293.0	39.3	3.81

Index left and above

		3.1		
		23.9	20.8	
		2.0	21.6	
		23.6	42.4	3.64
		2.0		
9	03	22.3	20.3	3.68
		1.7	20.4	
		22.1	40.7	3.73

Mean 3.72

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1898phae.proj.1355.

Oct. 6, 1898.

Star t compared with f.
Index above

		1.4			
9	08	24.7	<f. dus.	23.3	
		2.8		20.3	
		23.1		43.6	3.58
		2.0			
		23.1		21.1	3.62
		2.0		21.1	
		23.1		42.2	3.65

Index below.

		92.4			
		112.9		20.5	
		91.2		21.4	
		112.6		41.9	3.67
		93.8			
9	14	112.7		18.9	3.76
		93.0		19.4	
		112.4		38.3	3.86

Mean 3.69

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1898phae..proj..1355.

Oct. 6, 1898.

Comp. Stars for S Coronae. M. Obs.

10 10 +32.0

22 35

7 20

9 25 m 5 n

n 3 o

o 4 p

p 4 q

q 4 r

r 5 s

Comp. Stars for R Cygni. M. Obs

19 32 +49.9

22 45

3 13

9 43 m 5 n

n 3 o

o 4.5 p

p 5.5 q

q 4 r

r 3.5 s

s 5 t

t 5.5 u

u 5 w

w 3.5 x

x 5 y

y 5 z

10

10

15

43

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1898phae.proj.1355.

Oct. 6, 1898.

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

19 39 +25°.9

23 29 Comp. Star = +25°3467 (9.1)

3 50

Index right and above

I

353.8 < var. dis.

10 17 20 32.3 38.5

351.2 42.8

34.0 81.3 −216

352.1

21 04 34.0 41.9 −2.18

354.0 37.9

31.9 79.8 −220

Index left and below.

53.8

23 25 120.5 36.7

81.47 41.0

123.7 77.7 −226

52.0

25 12 123.5 41.5 −225

7 4 53.8 36.9

10 21 ~~46~~ 46 120.7 78.4 −2.24

−20

15 21 26

4569.6799

4567.8486

+1.7999

Mean −222

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1898phae.proj.1355.

Oct. 6, 1898

II

		84.2			
10	27 00	120.4	362		
		80.9	423		
		123.2	78.5	2.24	
		82.4			
28	24	133.8	41.4		2.22
		83.2	38.3		
		121.5	79.7	2.20	

Index right and above.

		1740			
31	00	212.7	387		
		170.6	447		
		215.3	534	2.10	
		171.5			
		~~216.0~~			2.10
33	16	215.7	442		
119	40	173.1	38.7		
10 29	53 -20	~~212.0~~	82.9	2.11	
15 29	35	211.8			

4569.6455
4564.8400
1.8055

Mean 2.16

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1898phae.proj.1355.

Oct. 6, 1895

III

			172.1			
10	35	48	212.2	40.1		
			170.7	432		
			213.9	533	210	
			170.9			
38	00		216.0	45.1		2.08
			172.7	394		
			212.1	845	2.06	

Index left and below.

			~~265.0~~			
			264.3			
41	20		300.7	36.4		
			261.6	41.4		
			303.0	77.8	226	
			262.5			
43	20		304.0	41.5		224
158	28		263.3	375		
10 39	37		300.8	79.0	222	
	-20					
15 39	17					

Mean 216

4569.6523
4567.8400
1.8123

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1898phae.proj.1355.

Oct. 6, 1898

IV

		~~266.6~~			
		265.8			
10	46 12	300.9	35.1		
		262.2	41.3		
		303.5	76.4	2.30	
		261.0			
	48 00	302.7	41.7		2.24
		263.2	38.4		
		301.6	80.1	2.19	

Index right and above.

		354.7			
	50 40	33.~~6~~0	35.3		
		351.1	42.9		
		34.0	81.2	2.16	
		350.8			
	52 20	32.9	42.1		2.16
	197 12	353.7	38.9		
10	49 15	32.6	81.0	2.17	
	-20				
15	48 58				

4569.6590
4567.8401
1.8190

Mean 2.20

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1898phae.proj.1355.

Oct. 6, 1895.

V

		353.6			
10	54	20	32.2	38.6	
			351.9	424	
			34.3	81.0	217
			351.3		
57	04		33.5	422	218
			353.1	384	
			31.5	80.6	218

Index left and below

			83.9		
11	01	40	121.0	371	
			~~80.~~	414	
			81.3	785	224
			122.7		
			81.7		
	03	28	122.9	41.2	226
	236	32	84.3	361	
10	59	8	120.4	773	225
		-20			
10	58	48			

4569.6659
4567.8480
1.8259

Mean 222

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1898phae.proj.1355.

Oct. 7, 1898. (Friday)

7 00 bloudy

7 30 Still cloudy

8 00 Still bloudy

8 30 Blouds and rain.

8 50 bloudy with no prospect of clearing

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1898phae.proj.1355.

October 8, 1898. (Saturday)

7 00 Hatch Correction = −52 sec. (Hatch is fast.)

Comp. Stars for S Herculis. H. Obs.

16 +5 +15.°2
30
~~29~~
+5

34 00

Star t compared with k.
Index right and above.

1.0 <k dis.
7 30 24.7 23.7
0.8 23.8
24.6 47.5 3.39

1.4
24.2 22.8 3.39
0.1 24.6
24.7 47.4 3.39

Index left and below.

92.7
112.8 20.1
92.2 20.1
112.3 40.2 3.76

92.4 3.74
7 38 113.2 20.8
92.3 19.9
112.2 40.7 3.73 Mean 3.56

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1898phae.proj.1355.

Oct. 8, 1898.

Star S compared with k.
Index left and below.

89.0 2 k dis.

7	+5	119.4	30.4		7
		87.0	30.4		
		117.4	60.8	2.53	
		86.8			
		116.9	30.1	2.54	
		87.2	30.6		
		117.4	60.7	2.54	

Index right and above.

		176.0			
		210.0	34.0		
		176.1	33.6		
		209.7	67.6	2.59	
		176.1			
7	52	208.4	32.3	2.62	8
		176.7	33.1		
		209.8	65.4	2.66	

Mean 2.73

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1898phae.proj.1355.

Oct. 5, 1898.

Star r compared with k.
Index right and above.

		175.3 k dis		
7	55	211.7	36.4	
		175.0	35.0	
		213.0	71.4	2.36
		175.1		
		211.3	36.2	2.38
		175.0	37.2	
		212.2	73.4	2.40

Index left and below

		265.1		
		301.1	36.0	
		265.6	35.4	
		301.0	71.4	2.46
		264.7		
8	00	301.2	36.5	2.48
		265.9	34.1	
		300.0	70.6	2.49

Mean 2.43

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1898phae.proj.1355.

Oct. 8, 1898.

Star g compared with k.

Index left and below.

261.3 < k dis

δ 02 302.3 +1.0

~~263.2~~ ~~+1.1~~

262.3 δ 2.1 2.13

~~302.0~~

303.4

262.1 2.14

302.0 3.9

262.0 +1.5

303.5 δ 1.4 2.15

Index right and above.

351.3

Stars faint, clouds.

33.8 +2.0

351.4 +1.9

33.3 δ 4.4 2.07

350.7

δ 11 32.8 +2.1 2.08

352.0 +1.3

33.3 δ 3.4 2.10

Mean 2.11

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1898phae.proj.1355

Oct. 5, 1895

Star p, compared with k
Index right and above

345.9 < k dis

8	14	42.3	56.4	
		345.8	53.3	
		39.1	109.7	1.42

		344.7		
		39.0	54.3	1.42
		344.2	55.8	
		40.0	110.1	1.42

Index left and below.

		77.0		
		128.5	51.5	
		78.8	49.2	
		128.0	100.7	1.64

		78.3		
8	21	128.5	50.2	1.64
		77.0	50.7	
		127.7	100.9	1.63

Mean 1.53

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1898phae.proj.1355.

Oct. 8, 1898.

Comp. Stars for S Herculis. H. Obs

8 27 n 5 +°
o 5 p
p 4 q
q 4 r
r 4 s
s 6 t
t 3.5 u

Continued on page 1 of

R 101.

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1898phae.proj.1355.

Postect to Lere.

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1898phae.proj.1355.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1898phae.proj.1355.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1898phae..proj.1355.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1898phae.proj.1355.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1898phme.proj.1355.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System