1898phae.proj.1356.

KG
11366
v.352

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1998phae.proj..256.

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1898phae.proj.1356.

Oct. 8, 1898.

Continued from Book R 100.

Comp. Stars for R Coronae H. Obs.

15 42 +28.9
22 07
6 25

Star S compared with f.
Index left and above.
181.5 < f dis.

8 53 203.3 21.8
181.1 22.8
203.9 44.6 3.53

182.7
204.8 21.3 3.57
181.3 21.7
203.0 43.0 3.61

Index right and below.
272.2
292.3 20.1
271.8 19.5
291.3 39.6 3.79

271.7
8 59 291.3 19.6 3.78
271.6 20.6
292.2 40.2 3.76 Mean 3.68

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1898phae.proj.1356.

Oct. 8, 1898.

Star r compared with f.
Index left and below.

~~89.8~~
90.2 < f dis.

9	04	113.0	22.8	
		89.8	25.2	
		115.0	48.0	3.36

88.8
~~111.2~~ 3.28

115.0	26.2		
89.4	25.3		
114.7	51.5	3.21	

Index right and above.

178.6			
206.0	27.4		
177.1	28.9		
206.0	56.3	3.00	

178.0

9	10	206.5	28.5	3.02
		179.3	26.7	
		206.0	55.2	3.05

Mean 3.15

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1898phae.proj.1356.

Oct. 8, 1898.

Comp. Stars for R Coronae. H. Obs.

9 14 q 5.5 r
r 6 s
s 3.5 t
t 5 u
u 3 w
w 4 x
x 3 y

Comp. Stars for R Cygni. H. Obs

19 32 +49.9
22 52
3 20

9 44 m 4 n
n 3.5 o
& o 4 p
p 5 q
q 3.5 r
~~r 5.5 s~~ r 6 s
s 5 t
t 5 u
~~u 4 w~~ u 3.5 w
~~w 3 x~~ w 5 x
~~x 4.5 y~~ x 6 y
y 4 ~~z~~ y 4.5 z

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1898phae.proj.1356.

Oct. 8, 1895

S T Cygni. Phot. T. N. Obs.

19 39 +28°9
23 29
3 50 Comp. Star = DM. +28° 3467 (9.1)

Index right and above.

I

356.7 < var. dis.

10 1H 32 28.02 31.5
354.7 35.5
30.2 67.0 2.61

354.2

16 52 32.3 38.1 2.54
357.0 33.0
~~27.86~~ 71.1 2.47
30.0

Index left and below.

88.3

19 24 117.3 29.0
85.4 33.9
119.3 62.9 2.75

85.7

21 48 119.2 33.5 2.73
72 36 87.1 30.7
10 18 9 117.8 64.2 271
-52
16 17 17

4571.6370
4567.8400
+ 3.7970

Mean 2.64

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1898phae.proj.1356.

Oct. 8, 1898

II

~~10 24 52~~ ~~87.3~~ ~~117.0~~ ~~Clouds.~~ Reject ~~86.5~~ ~~119.4~~

86.8

10 40 32 119.7 32.9

87.1 30.0

117.1 62.9 2.70

87.5

42 08 118.2 30.7 2.74

86.8 32.6

119.4 63.3 2.74

Index right and above.

176.3

45 16 211.4 35.1

177.8 32.2

210.0 67.3 2.60

177.4

47 20 209.0 31.6 2.58

15 16 175.4 36.6

10 43 449 212.0 68.2 2.57

-52

15 42 5.97

4571.6549

4567.8406

+3.8149

Mean 2.66

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1898phae.proj.1356.

Oct. 8, 1898.

III

			174.9		
10	50	00	212.9	38.0	
			177.9	30.8	
			208.7	68.8	2.55
			~~178~~		
			177.6		
			~~208.7~~		2.56
	51	32	209.0	31.4	
			175.0	36.8	
			211.8	68.2	2.57

Index left and below

			266.2		
	53	40	300.2	34.0	
			268.4	29.4	
			297.8	63.4	2.73
			268.8		
	55	00	298.4	29.6	2.75
	10	12	266.5	32.8	
10	52	33	299.3	62.4	2.77
		-52			
15	51	41			

4571.6609
4567.8400
3.8209

Mean 2.66

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1898phae.proj.1356.

Oct. 5, 1898.

Clouds.

IV

267.0
10 57 32 299.3
269.2
blonde
297.4

Reject

Clouds too thick.

268.7
11 14 25 299.6
266.6
299.1

Reject

267.7
19 10 299.9

Clear again.

IV

268.7
11 27 44 298.9 5 29.8
267.4 31.9
299.3 61.7 280

267.0
29 00 299.7 32.7 278
268.5 29.8
298.3 62.5 277

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1898phae.proj.1356.

Oct. 8, 1898

Index right and above

358.7
~~27.9~~

11 31 40 28.3 29.6
356.0 33.8
29.8 63.4 273
~~3.12~~

356.0

33 32 29.7 33.7 272
1 56 357.1 30.3
11 30 29 27.4 64.0 271
-52
16 29 37

4571.6872
4567.8400
+3.8472

mean 270

357.6

11 35 20 27.7 30.1
356.1 33.3
29.4 63.4 273

356.0

37 12 28.46 32.6 273
357.0 31.0
28.0 63.6 273

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1898phae.proj.1356.

Oct. 5, 1898.

Index left and below

			87.5			
11	39	32	117.6	29.8		
			86.0	31.8		
			117.8	61.6	280	
			~~55.6~~			
			87.0			
	41	16	119.4	32.4		280
	153	20	88.60	29.0		
11	38	20				
		-52	117.0	61.4	281	
16	37	28				

Mean 2.76

4571.6928
4567.8400
3.8528

Troubled by clouds, especially in latter part of group.

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1898phae.proj.1356.

Oct. 9, 1898 (Sunday.)

		○ Cité.		W. obs.
12	28	~~♀~~	1.5 Var., Var.	2.5 ~~W~~.

Above observation made with naked eye.

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1898phae.proj.1356.

October 10, 1898 (Monday)

7 00 Hatch Correction = -27sec (Hatch is fast)

Comp. Stars for ~~δ Herculis~~ R Coronae. Phot. & N. Obs.

15 +2 +28.9

20 +2

5 00

Star W compared with f.

Index above

187.6 < f dis.

7 26 198.6 11.0

185.7 12.7

198.4 23.7 4.92

186.4

199.5 13.4 4.82

186.5 12.6

199.1 26.0 4.72

Index below

277.1

290.0 12.9

276.6 13.3

289.9 26.2 4.70

276.2

7 31 289.4 13.2 4.72

276.7 12.7

289.4 25.9 473

Mean 4.77

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1898phae.proj.1356.

Oct. 10, 1898

Star u compared with f.

Index right

		275.~~7~~ 2 f dis.			
7	36	290.5	14.8		7
		~~274.9~~	15.1		
		275.2	29.9	4.41	
		290.3			
		275.1		4.40	
		291.1	16.0		
		276.3	14.1		
		290.4	30.1	4.40	

Index left.

		6.0			
		20.1	14.1		
		4.4	15.8		
		20.2	29.9	4.41	
		5.0			
7	41	19.7	14.7	4.43	7
		5.2	14.7		
		19.9	29.4	4.45	

Mean 4.42

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1898phae.proj.1356.

Oct. 10, 1898

Star r. compared with f.
Index right and above

0.7 < d

7	44	26.4	25.3	
		1.4	24.3	
		~~25.7~~		
		~~24.6~~	49.6	3.29

		0.9		
		26.7	25.8	3.26
		0.8	24.9	
		25.7	50.7	3.24

Index left and below.

		89.4		
		116.0	26.5	
		91.8	22.9	
		114.7	49.4	3.30

		89.3		
		~~113.4~~		3.28
7	50	114.0	24.7	
		~~89.2~~	25.4	
		90.4	50.1	3.27
		115.8		

Mean 3.27

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1898phae.proj.1356.

Oct. 10, 1898.

Star t compared with f
Index below

		93.3			
7	53	111.5	18.2		
		93.0	19.9		
		112.9	38.1	3.85	
		92.7			
		113.0	20.3		3.84
		92.9	19.0		
		111.9	39.3	3.81	

Index above.

		182.4			
		202.0	19.6		
		182.4	21.0		
		203.4	40.6	3.74	
		182.0			
7	59	203.1	21.1		3.72
		183.0	20.2		
		203.2	41.3	3.70	

Mean 3.78

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1898phae.proj.1356.

Oct. 10, 1898.

Comp. Stars for R Coronae. H. Obs.

δ 05 q 5 r
r 6 s
s 3 t
t 4 u
u 3 w
w 3 x
x 3.5 y

Comp. Stars for S Herculis H. Obs

16 45 +15.2
21 45
5 00

δ 19 n 5 o
o 5 p
p 4.5 q
q 4 r
r 4 s
s 5.5 t
t 4 u

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1898phae.proj.1356.

~~Comp.~~ Oct. 10, 1898.

Comp. Stars for R Cygni. Phot. F. 7 Obs

19 32 +49.9°
21 57
2 25

Star r compared with n.
Index left and above
160.0
δ +5 226.1 ←n. dis. 66.1
161.0 63.9
224.9 130.0 0.95

162.9
223.2 60.3 1.06
162.2 61.9
224.1 122.2 1.14

Index right and below
252.7
~~314.5~~
313.4 60.7
252.8 60.9
313.7 121.6 1.16

2
353.4
δ 53 313.7 60.3 1.14
252.0 62.4
314.4 122.7 1.13

Mean 1.10

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1898phae.proj.1356.

Oct. 10, 1898.

Star t compared with n.
Index right and below.

		261.5	2 rn ds.		
10	42	303.7	42.2		
		262.1	41.3		
		303.4	83.5	2.09	
		262.2			
		304.0	41.8		2.13
		264.0	39.0		
		303.0	80.8	2.17	

Index left and above.

		351.7			
		36.0	43		
		351.1	43.8		
		34.9	87.1	1.96	
		349.8			
10	49	33.7	43.9		1.98
		352.5	42.6		
		35.1	86.5	2.01	

Mean 2.06

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1898phae.proj.1356.

Oct. 10. 1898.

ο Ceti.

11 20 ~~ℓ~~ = Var. Var. ~~ν~~ − ~~ν~~ Yr. obs. (St. E.)

11 20 Var. = ~~π~~ g Colsoni " "

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1898phae.proj.1356.

Oct. 11, 1898. (Tuesday)

7 00 Hatch correction = −45 sec. (Hatch is fast)
Comp. Stars for R Coronae. Phot. T. M. Obs.
15 42 +25.9
20 46
5 04
Star w. compared with f.
Index above
186.7 f ds.

7 20 199.8 13.1
186.0 16.1
202.1 29.2 4.46

186.0
200.1 14.1 4.52
186.5 13.5
200.0 27.6 4.59

Index below.
277.1
289.3 12.2
276.8 11.9
288.7 24.1 4.88

276.7
7 29 288.8 12.1 4.92
277.3 11.3
288.6 23.4 4.95

Mean 4.72

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1898phae.proj.1356.

Oct. 11, 1898.

Comp. Stars for R Herculis. H. Obs

15 55 +18.°2
21 10
5 15

35 Clouds.

15 55 +18.°2
21 32
5 37

14 0 H. 5 p
~~p 6 q~~
p 4.5 q
q 5 r

Comp. Stars for R Can. Ven. H. Obs

39
13 ~~44~~ +39.2
22 19
8 40

Too low

Comp. Stars for S Serpentis H. Obs.

15 14 +15.1
22 21
7 07

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1898phae.proj.1356.

Oct. 11, 1898.

Comp. Stars for R Cygni. Phot. T. >1.0b

19 32 +49°.9
22 27
2 55

8 57 Clouds
Star R compared with ~~22~~ 72.
Index left.

346.0
9 07 38.86 <n dis. 5 2 ~~8~~ 6
346.5 50.5
37.40 103.1 1.85 58

347.0
38.4 51.4 1.56
345.4 53.3
38.7 104.7 1.54

Index right
78.4
127.8 49.4
78.1 49.7
127.8 99.1 1.68

78.4
9 15 127.5 49.1 1.68
78.5 50.2
128.7 99.3 1.67

Mean 1.62

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1898phae.proj.1356.

Oct. 11, 1895

Star t compared with n.
Index right and below.

		86.6	∠n dis.		
9	19	118.8	32.2		
		85.7	33.0		
		118.7	65.2	2.67	
		85.0			
		118.2	33.2		268
		86.5	31.8		
		118.3	65.0	2.68	

Index left and above.

		175.8			
		Clouds			
		210.9	35.1		
		176.1	35.1		
		211.2	70.2	2.50	
		175.0			
9	49	210.1	35.1		249
		175.2	35.8		
		211.0	70.9	2.48	

Mean 2.58

Troubled by clouds. Observations difficult

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1898phae.proj.1356.

Oct. 11, 1898

S Tygni. Phot. F. 1t. Obs

19 39 +25.9
23 34
3 55

10 35 Stopped by clouds

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1898phae.proj.1356.

Oct. 12, 1898 (Wednesday)

ζ Serpentis W obs

10 10 +14.8
20 21
5 6

Watch correction +7 sec (watch slow)

6 44 00 k 4 l
l 3.5 m
m 5 n
m 5 o
o 4 p
p 4.5 q
q 5 r

R Herculis

10 55.5 +18.2
20 27
4 32

0 5.5 p
7 1 p 2.5 q
q 4.5 r
r 4 ~~s~~
~~s~~ 3 ~~t~~ t
7 8.5 t ~~x~~ 3.5 ~~y~~ u

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1898phae.proj.1356.

Oct. 12, 1898.

Star q compared with k

right & above

3540

~~283~~

7 23 56 29.2 35.2

354.2 35.1

29.3 70.3 2.50

353.9

25 29 29.5 30.6 246

355.1 36.8

31.9 72.4 2.43

Left & below

84.0

27 30 ~~116.4~~ 32.5

83.6 36.3

119.9 69.8 2.51

84.1

29 14 119.5 35.4 2.50

~~26 12 9~~ ~~32~~ 35.0

7 26 ~~47~~ 118.2 70.4 2.49

+ 7

12 26 ~~54~~ 39

Mean 2.48

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1898phae.proj.1356.

Oct. 12, 1898.

p with k
Sift & below

78.5

7	32	24	122.5	44.0	
			80.2	42.1	
			122.3	86.1	2.02

80.3

	34	00	120.5	40.2	2.12
			82.8	39.2	
			122.0	79.4	2.21

right & above

170.9

	36	29	213.6	42.7	
			171.9	40.7	
			212.6	83.4	2.10

171.8

	37	49	212.2	40.4	2.10
	20	42	169.0	43.2	
7	35	10	212.2	83.6	2.09
		+7			
12	35	17			

Mean 2.11

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1898phae..proj..1356.

Oct. 12. 1898.

o compared with k

Left & below

		2567		
7	41	0. 310.3	53.6	
		253.9	58.1	
		312.0	111.7	1.38
		254.9		
43	40	310.0	55.1	1.38
		255.9	56.2	
		312.1	111.3	1.39

Right & above

		3444		
45	21	42.0	57.6	
		3443	57.7	
		42.0	114.93	1.30
		344.4		
	47	54 48.9	57.5	1.28
	17	55 343.2	59.0	
7	44	29 42.2	116.5	1.27
		+7		
12	44	36		

Mean 1.33

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1898phae.proj.1356.

Oct 12 1898.

U Vulpec. W obs.

19 25 +19 5
21 45
2 17

Left & above

267.2 2.99 ✓
9 27 20 297.1
265.0
298.3 33.3 / 63.2 ✓ ✓ −2.74 ✓ I

267.1 30.4 ✓ −2.82 ✓
2 54 297.5
267.9 24.7 / 54.1 ✓ ✓ −2.89 ✓
296.6

Right & below

355.0 30.1 ✓
32 30 26.1
355.4 32.6 / 62.7 ✓ ✓ −2.76 ✓
298.0

355.1 −2.74 ✓
33.0 ✓
28.1
355.0 30.6 / 63.6 ✓ ✓ −2.73 ✓
25.26

Mean −2.74 ✓

34 8
122 ✓2
9 30 43.✓
✓ 7.
1K 30 ✓0.✓
4✓7✓.68KA✓
4✓68.K700✓
+7.13KA✓

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1898phae.proj.1356.

Oct. 12. 1898.

Right & below

II

355.5
9 38 24 ~~26.7~~ 31.1
27.0

354.5 32.6
27.1 64.1 −2.71

355.6 33.0 −2.69
37 52 28.6

356.2 32.1
28.3 60.4 −2.63

Left & above

87.1
41 28 116.96 29.1
85.2 32.2
117.4 61.7 −2.60

85.0
42 46 116.1 31.1 −2.62
1 2 30 87.0
9 39 32.1 58 29.1
7.1
14 39 2.1 61 60.2 −2.47

Mean −2.76

47 7. 610
47 62. 4700
47.1410

1898phae.proj.1356.

Oct. 12. 1898.

Left of above

	86.5	29.7 v		
9 45 10	116.2			
	85.3	33.6 v		
	118.9	63.3 v	−2.74 v	
	85.2	32.9 v		−2.76 v
47 00	118.1			
	86.9	29.6 v		
	116.5	62.5 v	−2.77 v	

Right of below

	176.1	33.0 v		
49 6	209.1			
	174.3	34.6 v		
	208.9	67.6 v	−2.79 v	
	174.9	34.2 v		−2.79 v
51 6	209.1			
192 22	175.2	33.3 v		
9 48 6. v	208.5	67.5 v	−2.79 v	
7 v				
1F 48 13. v				

Fr 7r. 6168 v
4r-6a. 4700 v
+7.1468 v

Mean −2.68 v

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1898phae.proj.1356.

Oct. 12, 1898.

Right & below

IV

9 53 24

176.3 207.1 30.8 ✓
175.2 208.5 33.3 ✓ / 64.1 ✓ −2.7 ✓

5 4 54

174.2 208.0 33.8 ✓ −2.6 ✓
176.8 208.8 32.0 ✓ / 64.2 ✓ −2.6 ✓

Left & above

5 8 00

267.40 297.0 30.0 ✓
266.5 295.1 31.6 ✓ / 61.6 ✓ −2.40 ✓

5 9 24

266.7 298.0 31.3 ✓ −2.42 ✓
267.5 297.1 29.6 ✓ / 60.9 ✓ −2.43 ✓

22 ✓ 42
9 ✓ 6 26. ✓
✓ 7.
14 ✓ 6 33. ✓

✓ 7 ✓ 6226 ✓
✓ 6 8. 6700 ✓
+7.1 ✓ 26

Mean −2.7 ✓

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1898phae.proj.1356.

Oct. 12. 1898.

V

Rt Left & above

2664
10 1 15 2969 30.V
2671
2974 30.3 / 60.6 −2.43

2655 32.3 −2.42
2 48 2978
2672 29.2 / 61.5 −2.40
2964

Right & below

3570 30.V
7 14 2775
2548
2875 32.7 / 63.2 −2.74

3545 33.V −2.70
9 06 2800
20 17 3550
10 V 4. 27.2 32.2 / 65.7 −2.6V
V 2.
15 V 11.
4V7V. 6206
4V6A. 4700
+7.1V86

Mean −2.76

1898phae.proj.1356.

Oct. 12. 1898.

S T. Cygni Phot T Wdz.

1939
2356
4 17

+28.9.

Rey
1726 29.K
10 23 48 207.0
177.4 30.1
207.5 59.5 −2.KK

177.8 31.0 −2.KK
24 24 208.8
176.6 30.6
207.2 61.6 −2.K0

left & below
269.1 28.1
2614 297.2
269.1 27.K
296.5 57.5 −3.0K

266.5 30.6 −2.93
2702 297.1
102 K 267.5 30.K
10 2 32.2979 61.0 −2.K2

−2.KK

~~K-7.K3K0~~
~~K-7.6KK0~~
~~+3.7 5 0K~~
~~5~~
1 2 3

~~K-7.K3KK~~
K-7.6K2K
K-7.5200
+0.11 KK

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1898phae.proj.1356.

Oct. 12. 1898.

Left of below — II

	267.9	29.6 ✓	
10 25 44	296.5		
	266.7	30.1 ✓	
	296.8	29.7 ✓	−2.91 ✓
	267.6		
	297.1	29.5 ✓ ✓	−2.49 ✓
29 42	267.0	30.1 ✓	
	297.1	29.6 ✓	−2.47 ✓

Right of above

	356.5	29.9 ✓	
31 22	25.4		
	356.4	29.6 ✓	
	26.0	26.5 ✓	−2.92 ✓
	357.0	29.2 ✓	
32 32	276.2		−2.44 ✓
122 20	355.2	31.3 ✓	
10 30	326.5 ✓	60.5 ✓	−2.44 ✓

Mean −2.42 ✓

~~4×7×.4339~~ ✓
~~4×71.6460~~ ✓
~~+3.7×39~~ ✓
✓ 7
1✓ 30 42. ✓
4×7×.6463 ✓
4×7×.×240 ✓
+0.1183 ✓

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1898phae.proj.1356.

Oct. 12. 1896.

Right & above III

3F
10 ~~30~~ 40 3572 24.F
25.7
3566 31.0
27.5 ~~F9.F~~ 29.F -2.4F

3F 3558 31.2 -2.46
~~40~~28 27.0
3565 29.3
25.48 60.F -2.4F

Left & below
87.1 29.6
37 0 116.7
87.0 30.1
117.1 ~~F9.7~~ 29.7 -2.47

86.0 31.0 -2.47
3820 117.0
87.9 24.6
10 36 24F 116.X5 ~~F9.6~~ 29.6 -2.47
Mean -2.46

~~FF7F. FF20~~
~~FF71. 6660~~
~~+3.7F40~~
F 7.
1F 36 31.F
FF7F. 6F0F
FF7F. F240
+0.1 F2F

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1898phae.proj.1356.

Oct. 12. 1898.

IV

Left & below

87.2 29.7 ✓
10 39 44 116.9

87.2 30.7 ✓
117.9 60.4 ✓ −2.4 ✓

86.5 31.1 ✓ −2.2 ✓
40 36 117.6

86.9 30.2 ✓
117.1 61.3 ✓ −2.1 ✓

Right & Above

175.2 24.4 ✓
43 0 200.6

176.0 32.1 ✓
208.1 60.5 ✓ −2.4 ✓

175.6 32.2 ✓ −2.2 ✓
43 54 207.8

167 14 177.2
10 41 44.✓ 206.9 29.7 ✓
61.9 ✓ −2.9 ✓

Mean −2.2 ✓

~~+0.7617 ✓~~

+0.1261 ✓

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1898phae.proj.1356.

Oct. 12, 1898.

Right & Above V

177.0 29.9 ✓
104554 206.9
176.3 31.3 ✓
207.6 61.2 ✓ −2.41 ✓

175.4 32.4 ✓ −2.74 ✓
208.2
4400 177.1 29.9 ✓
207.0 62.9 ✓ −2.96 ✓

Left & below

267.4 29.1 ✓
5058 296.5
266.1 30.7 ✓
296.8 59.8 ✓ −2.49 ✓

266.1 31.7 ✓ −2.44
8216 297.8
197 267.5 29.4 ✓
10 K9 17.✓ 296.9 61.1 ✓ −2.42 ✓
Mean −2.41

~~K9 r. K r 9 ✓~~
~~K9 1. 6 K 0 ✓~~
~~+3.7669 K~~

11 10 e = 2 Var. Var. 15 N. (A.G.) Gr. obs.
11 19 e = 3 " " 15 " Calcon obs.

✓ 7.
1✓ K9 2K ✓
K9 r. 6 r 93 ✓
K9 r. r 2 8 0 ✓
+0.1313 ✓

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1898phae.proj.1356.

Oct. 13. 1892 (Thursday)

Comp. Stars

R Herculis. W. Obs.

		1v	v-v	+10.2
		20	29	
		4	34	

Left & above Stars compared with k

		271.5		
7	3	10	292.1	20.6
			271.6	20.5
			292.1	41.1

3.71

		272.3		3.78
5	46		292.3	20.0
			273.1	18.8
			291.9	38.8

3.84

Right & below

		0.6		
9				
4	0		24.0	23.4
			359.5	24.5
			24.0	47.9

3.37

		3		
		359.9		
11	0		24.3	24.4
			359.9	23.0
			22.9	47.4

3.38

3.39

Mean 3.08

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1898phae.proj.1356.

Oct. 13, 1898.

Q compared with Le

Right above

	354.9			
7 20 12	~~278~~			
	280	23.1		
	355.1	~~334~~		
	285	~~97~~		
		665	2.62	
	354.9			
22 22	289	340		2.60
	354.8	34.1		
	289	681	257	

Left below

	264.0			
3 29 6	300.5	36.5		
	263.0	36.5		
	301.5	750	2.35	
	264.9			
34 14	302.0	37.1		237
	264.5	36.5		
	301.0	73.6	239	

Mean 2.48

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1898phae.proj.1256.

Oct 13 1898

Left & below p with k

261.0

38 46	302.0	41.0		
	264.0	38.6		
	300.1	79.6	2.21	

261.1

40 26	300.0	38.9		222
	261.1	39.9		
	300.4	78.8	223	

Right & above

349.1

43 20	31.2	42.1		
	352.9	38.6		
	31.5	80.7	2.17	

352.7

45 18	30.9	38.2		218
	350.6	41.9		
	32.5	80.1	219	

R Herculis

0 5 p

p 3 q

q 4 r

r 4 x

x 3.5 y

y 4 z

Mean 220

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1898phae.proj.1356.

Oct. 13 1898.

σ compared with k

Right & above

		345.0		
7	49	38.1	53.1	
		345.0	55.1	
		40.1	108.2	1.46
		341.9		
51	36	42.1	60.2	1.37
		343.3	55.7	
		39.0	115.9	1.28

Left & below

		75.6		
55	40	127.0	51.4	
		72.7	58.4	
		131.1	109.8	1.42
		72.2		
57	54	131.5	59.3	1.39
		75.1	53.1	
		128.2	112.4	1.36

Mean 1.38

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1898phae.proj.1356.

Oct 13 1898

S Serpentis

15 15 +14.5

22 00

6 45

k 4.5 l

l 4.5 m

m 5 n

n 5 o

o 4 p

p 4.5 q

8 20 q 5 r

U Vulpec

19 28 +19.5

22 11

2 43

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1898phae.proj.1356.

Oct 13, 1898.

Left & above

85.2

8 44 54 119.45 34.3 ✓

88.1 29.4 ✓

117.5 63.7 2.73

87.1

45 45 118.0 30.9 ✓ 2.7

85.5 33.4 ✓

118.9 64.3 ✓ 2.70

Right & below

1736

49 32 209.9 36.3 ✓

175.2 33.9 ✓

209.1 70.2 ✓ 2.70

1738

52 18 208.4 34.5 ✓ 2.70

192 24 174.1 35.5 ✓

A KA 6, 209.9 70.3 2.70

✓ +17.

13 KR 23.

4✓76.✓7✓3

4✓76.K700

+0.10✓3

mean 2.61

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1898phae.proj.1356.

Oct 13 1895

Right & below

II

133.9

56 6 208.6 35.7

174.6 34.2

208.8 69.9 25.1

1755

209.0 34.5

173.0 36.2

209.2 70.7

Left & Above

2638

044 295.1 34.3

266.1 34.1

297.2 68.4 2.66

267.0

3 40 293.2 29.4

6.4

230 30 266.0 32.1

298.1 61.

+17.

Mean 2.61

+0.1132

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1898phae.proj.1356.

Oct. 13 1898.

Left & Above III

	265.1	32.6		
9 7 20	297.7			
	266.9	30.5		
	297.4	63.1	2.74	
	266.9	29.7		2.74
9 12	296.6			
	265.0	33.0		
	298.0	62.7	2.76	

Right & below

	353.0	34.2		
13 14	29.2			
	306.0	31.1		
	27.1	65.3	2.67	
	355.7	32.3		2.66
14 36	28.0			
KK 22	353.0	33.9		
9 11 6.	28.9	66.2	2.64	
17.			Mean 2.70	
14 11 23.				

4v 76. v913
4v 76. K700
+0.1213

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1898phae.proj.1356.

Oct 13, 1895

Right & below

IV

	355.5			
9 17 50	29.4	33.9		
	355.0	33.0		
	28.0	66.9	2.61	
				2.61
	355.6	31.2		
19 8	27.4			
	355.0	3r 0		
	30.0	66.2	2.61	
	Left & above			
	84.5			
22 12	119.4	3K.9		
	86.5			
	117.0	30.r		
		6r.2	2.66	
	87.2	30.0		2.66
24 20	118.72			
A3 30	84.5	3r.2		
9 20 r2	119.7	6r.2	2.67	
r 17			Mean	2.64
1K 21 9.				

Kr 76. r9 A0
Kr 76. K500
+0.12 A0

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1898phae.proj.1356.

Oct 13 1898

Left of above

V

85.9
9 28 35 119.2 — 33.3
87.1
117.1 — 30.0
633 — 2.74

87.1
30 30 118.0 — 31.4 — 2.70
84.8
118.4 — 34.0
66.4 — 2.66

Right of above

173.0
35 6 209.8 — 36.8
174.87
209.1 — 34.4
71.2 — 2.47

2.46

175.6
37 20 209.7 — 34.1
131 34 173.1
9 32 V 209.8 — 36.7
V 17.
1533 11. — 70.4 — 2.44

mean 2.459.

V 26.6063
V 26.6700
+0.0637

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1898phae.proj.1356.

Oct 13. 1898.

SS Cygni

19 39 : +28.9
23 33
3 54. I

Right & above

	175.7			
9 55 14	210.1	34.4		
	174.0			
	212.1	38.1	243	
		72.5		
	172.7			
	212.5	39.8		2.40
57 28	175.3			
	210.1	34.8	2.36	
		74.6		
	Left & below			
	~~260.0~~			
	267.5			
	299.6	32.1		
10 00 40	263.7			
	299.1	35.4	2.59	
		67.5		
	263.0			
	300.5	37.5		2.54
2 38	265.2			
	298.84	33.2		
236 0		70.7	2.48	
9 59 0				
+17				
14 59 17				

4076.6245
4570.5280
1.0965

Mean 2.47

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1898phae.proj.1356.

Oct 13 1898

Left & below

II

	266.5			
10 5 52	299.1	32.6		
	264.0	36.2		
	300.8	69.8	2.53	
	264.1	36.1		
8 0 30	300.2		2.55	
	267.1	32.1		
	299.2	68.2	2.57	

Right & above

	355.0	33.0		
10 44	25.0			
	353.2	36.9		
	30.1	69.9	2.51	
	353.0			
	29.6	36.6		
12 50			2.50	
37 56	355.0	34.0		
10 9 29	29.0	70.6	2.49	
+17				
10 9.46				

Mean 2.52

457 66318
457 05280
~~2 1038~~
+1.1038

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1898phae.proj.1356.

Oct 13. 1898.

Right of Above

III

	356.9			
10 15 18	25.8	31.4		
	352.6	34.5		
	31.1	70.4	2.49	
19 30	~~353.0~~	355.0	3K.1	2.46
~~17 47~~	~~30.4~~	29.1		
		352.0	34.6	
		30.6	72.7	2.42
	Left of below			
	84.86	35.6		
22 50	120.2			
	84.9	33.2		
	118.1	68.8	2.55	
	85.7	33.2		
24 18	118.9			2.56
1 56	84.86	34.8		
10 20 29	119.4	68.0	2.57	
+17				
15 20 46				

40 76.6395
4575.5280
+1.1115

Mean 2.51

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1898phae.proj.1356.

Oct. 13. 1898.

Left of below. IV

84.5

10 26 22 120.0 35.5

86.0 33.4

119.4 62.9 254

85.2

28 36 119.0 33.8 254

84.9 35.1

120.0 62.9 254

Right of above

173.0 36.2

37 00 209.5

174.9 35.4

210.3 72.2 243

175.1 34.9

39 12 210.0

11 10 72.9 243

10 32 48 173.1 37.5

+17

15 33 05 210.76 72.4 243

45766482

45705280

+1.1202

Mean 248

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1898phae.proj.1356.

Oct 13 1898

Right & above

		174.5		
10	42 32	211.3	36.8	
		175.5		
		209.5	34.0 / 70.8	248
		175.0		
45	00	208.1	33.1	256
		177.2		
		210.1	32.9 / 66.0	264

Left & below

		265.8		
45	0	301.5	36.7	
		265.80		
		300.1	35.1 / 71.6	245
		266.8		
5	6 30	299.1	32.3	249
199	2	264.1		
10	49 46	301.1	37.0 / 69.3	253
	+17			
15	50 5 3			

4576.6999
4575.5280
+1.1319

V

Mean 2.52

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1898phae.proj.1356.

Oct 15, 1898. (Saturday)

W R Hercules. Yr. obs.

1555 +18.2
21 03
5 8

0.5 f
p3 g
g 4.5 l
2 4.5 l

Oct 8, 1898 #101
(cont. from Book "R 100". Phot T W obs.

next bk = no. 102

+17.8

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1898phae.proj.1356.

Oct 15. 1898. (Saturday)

W R Hercules. Yr. No.

10 55 +18.2
21 03
5 8

0 5 /
p 3 q
q 4.5 r
r 4.5 s
s B t
t 4 u

all dandy

W Delphini Phot T W ds 1

20 31 +17.8
21 48
1 17

20 31
29 19
1 48

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1898phae.proj.1356.

Oct 15, 1898

Left of above

I

769

8 540 125.0 48.1

79.2 4.33

122.5 91.4 1.88

80.0

56 18 122.0 42.0 1.94

clouds 4.53

75.07 57.3 1.99

124.0

Right of below

~~168.3~~ 170.9

9 0 1 ~~219.+~~ 213.1 42.2

clouds 40.0

170.9 52.2 2.13

~~5 30~~ 210.9

~~+1.0~~

171.0

6 38 213.1 42.1 2.05

236 57 169.1 40.9

8 59 14 215.0 58.0 1.97

+1

13 59 15

~~4578.5441~~

~~4578.5827~~ 4578.5527

~~4578.7284~~ 4573.9220

~~5543~~

4.6607

2.00

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1898phae.proj.1356.

Oct. 15. 1898.

Right & below

~~Left 21~~ II

~~170.1~~ 169.8

9 9 16 214.8 45.0

178 1.3 41.8

213.1 86.8 2.00

171.9

Clouds 2.04

11 54 213.0 41.1

170.5 42.4

212.9 83.5 2.09

Clouds

Left & above

262.2

23 32 301.2 39.0

~~26~~ 3 .0 39.0

302.0 78.0 2.25

263.9

25 00 301.6 37.7 2.30

~~69 49~~ 263.6 37.4

9 72 301.0 75.1 2.34

9 13 47

~~44~~ 13 1

~~4525.5008~~

~~45 70.0920~~ 4578.5954 Mean 217

~~45.73.9220~~ 4573.9220

~~4.6705~~ + 4.6734

69 42

9 17 25

+1

14 17 26

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1898phae.proj.1356

56

Oct 15. 1898.

Left of above clouds — III

264.1

9 30 18 — 299.1 — 35.0

264.1 — 36.7

300.8 — 71.7 — 2.45

263.1

Clouds — 2.42

32 00 — 300.6 — 37.5

264.1 — 35.9

300.0 — 73.4 — 240

Right of below Clouds

353.0

39 54 — 29.5 — 34.8

353.7 — 35.5

29.2 — 70.3 — 2.50

354.0

42 35 — 28.0 — 34.0 — 2.52

144 47 — 354.3 — 34.7

9 36 12 — 29.0 — 68.7 — 2.55

+1

14 36 13 — Mean 2.47

~~4078.5668~~

~~4078.680~~

6084

4073.9220

4.6864

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1898phae.proj.1356.

Oct. 15. 1898.

Right & below

IV

354.6

9 44 32 31.0 36.4

354.0 37.9

31.9 74.3 2.37

354.0

4 8 16 28.8 34.8 2.46

353.1 33.8

28.9 68.6 2.55

Left & above

82.7

5 0 30 121.5 38.8

84.6 36.8

120.4 75.6 2.33

85.0

5 3 00 119.4 34.4 2.42

196 18 84.3 35.3

9 49 41 119.6 69.7 20-2

14 49 5

~~4575.5760~~

4575.6178

~~4573.9220~~

4.6958

244

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1898phae.proj.1356

Oct. 15, 1898.

		Left & Above			V
		85.1			
9	54	25	120.1	35.0	
			85.9	34.2	
			Clouds	8	
			120.1	69.2	2.53
			85.0		
56	32		120.0	35.0	2.54
			85.6	34.0	
			119.6	69.0	2.54
			Right & blow		
			176.4		
59	44		207.8	31.4	
			175.5	34.8	
			210.3	66.2	2.64
			174.0		
			170.1		
10	1	50	208.3	33.2	2.63
	232	34	175.5	33.3	
9	58	8			
		H	208.7	66.5	2.62
14	58	9			

H578.6242
4578.9220
4.7022

mean 2.58

Greatly troubled by clouds throughout. Settings rather difficult, especially at the last.

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1898phae.proj.1356.

Oct 15 1898.

S T Cygni		Phot. T.		W obs.
		1939	+28.9	
		246		
		427		I.
Right + above				
35 1.2				
Clouds				
16 26 45	31.2	40.0		
	347.1	497		
	36.8	897	1.92	
	348.0			
31 28	352.	46.2		1.94
	350.4	41.6		
	320	875	1.97	
Left + below				
	82.3			
36				
1 0	120.79	38.6		
	79.1	444		
	123.5	83.0	2.11	
	79.5			
37 32	124.4	44.9		2.08
191 45	82.1	398		
10 32 56	121.9	84.7	2.06	
+1				
10 32 57				
4578.6479				
4070.5288				
3.1199				

Mean 201

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1898phae.proj.1356.

Oct. 15. 1898.

II

Left & below

82.8

10 3+3+ 121.9 39'

~~121.94~~ ~~42.2~~

123.6 81.3 2.16

~~79~~

~~80.2~~ 2.14

42 32. 123.4 432

82.5 ~~39.4~~

121.9 826 2.12

Right & Above

170.6

~~208.9~~

44 33 211.6 41.0

~~168.4~~ ~~44.5~~

212.9 85.5 2.04

~~160~~

169

46 39 214.8 451 202

172 22 170.0 41.6

10 43 5 211.6 86.7 2.00

+1

15 43 6 (mean 208)

4578.6550

4575.5280

3.1270

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1898phae.proj.1356.

Apr 15 1898

III

Right & above

~~+731~~

170.0

10 49 00 212.6

171.5

210.6

170.0

50 40 210.0

Watch correction +1 sec

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1898phae.proj.1356.

Posted to here.

Oct. 17 1898 (Monday)

R Herculis Phot T W obs.

15 55 + 15.2

21 4

Right 5 9

s compared with k.

181.3

7 11 24 203.R 21.9

180.0 23.6

2036 45.5 3.48

180.6

~~201.9~~ 3.51

13 00 2024 21.8

180.7 22.5

2032 44.3 3.54

Left

271.9

15 32 292.6 20.7

270.0 23.0

293.0 43.7 3.57

272.5

17 20 294.9 22.4 3.63

17 16 273.2 19.0

7 14 19 +11 292.2 41.4 3.69

12 14 30

Mean 3.57

Watch correction +11 sec (watch slow)

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1898phae.proj.1356.

Oct 17 1898.

r with k

	Left			
	267.1			
7 19 32	297.0	29.9		
	266.4	28.9		
	295.3	58.8	29.1	
	267.5			
22 00	296.9	29.4		29.1
	266.81	29.4		
	297.3	58.8	29.1	
	Right			
	357.3			
20 40	28.8	28.8		
	358.1	29.8		
	27.9	59.3	29.9	
	357.6			
28 00	26.9	29.3		29.0
10 12	356.6	29.4		
7 23 48 +11	26.0	58.7	29.1	
12 23 59				

Mean 29.0

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1898phae.proj.1356.

Oct 17, 1898

R Can. Ven. Phot T. W obs.

13	46	+40.4
21	53	
8	7	

p 4 q
q 3 r
r 4 s
8 8 s 3.5 t
t 3.5 u
u 4 w

Too low for anything farther

R Cygni Phot T W obs.

19	32	+49.9
22	32	
3	00	

Abandoned

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1898phae.proj.1356.

Apr. 17, 1898.

S T Lyrae Phot T W obs

			19	39	25.9
	Left R below		23	00	
	26.50		3	21	
9	19	40	117.0	31.0	
			82.6	35.5	
			121.1	69.5	2.52
			83.0		
21	6		120.4	37.4	2.50
			85.8	33.2	
			119.0	70.6	2.49
			Right Above.		
			175.3		
24	00		210.6	35.3	
			172.1	40.1	
			212.2	75.4	2.33
			171.0		
25	38		211.9	40.9	2.33
10	24		175.4	34.5	
9	22	36			
		+11	209.9	75.4	2.33
14	22	47			

4580.5992
4579.3720
+1.2272

Mean 2.41

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1898phae.proj.1356.

Oct 17 1898

Right & Above II

		175.5		
9	30	30	209.3	33.8
			173.1	39.7
			212.8	73.5 2.89
			172.2	
32	08		213.2	2.86
			212.9	39.7
			173.0	35.6
			209.7	75.3 2.84

Left & below

			266.1	
34	20		299.2	33.1
			263.4	37.3
			300.7	70.4 2.49
			263.0	
36	36		301.1	38.1 2.46
13	26		265.9	34.1
9	33	22	300.0	72.2 2.43
		+11		
14	33	33		

45 80. 606 6
45 79. 3720
1.2346

Mean .241

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1898phae.proj.1356.

Oct 17 1898

Left & below III

266.0

9 37 52 300.0 34.0

262.5 39.4

302.2 73.4 240

264.0

39 15 301.4 37.4 244

266.1 33.1

299.2 70.5 249

Right & above

3555

41 48 29.02 33.7

35-2.2 38.7

30.9 72.4 243

353.1

43 12 305 37.4 244

3 7 35-4.8 34.7

9. 40 47 295 72.1 244

111

1 7 54 40 58

~~4550.6035.~~

4550.6118

4579.3720

1.2398

Mean 244

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1898phae.proj.1356.

Oct 17 1898

Right & above IV

	354.9			
9 45 50	29.1	34.2		
	352.5	38.9		
	31.4	73.1	241	
	352.8			
47 45	31.85	39.2		238
	354.0	35.8		
	~~29~~ 29.8	75.0	235	
	~~30~~.0			

Left & Below

	20.4			
50 48	119.6	34.2		
	84.0	37.4		
	121.4	71.6	245	
	820			
52 14	1226	39.6		242
196 37	857	34.1		
9 49 9	1195	737	239	
+11				
14 49 20				

4080.6176
4579.3720
+1.2456

Mean 2.40

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1898phae.proj.1356.

Oct 17 1898

Left & below

+6.3

9 54 00 1191 32.8

+3.8 36.8

120.6 69.6 252

83.9

55 49 121.5 37.6 247

84.2 35.1

119.3 72.7 242

Right & Above

174.5

55 36 210.1 35.6

171.2 41.7

212.9 77.3 228

170.8

10 00 00 210.5 39.7 230

167 85 174.0 36.4

9 41 66 210.1 75.8 232

+11

9 41 77

15

228 20

9 57 6

+11

14 57 17

40 50.6281

45 79.3720

1.2511

Mean 238

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1898phae.proj.1356.

Oct 17 1898

U Vulpec.			Phot. ☆	W obs.	
			1928	+19.5	
			24 7		
			439		
Left above				I	
	261.2				
10 8 00	303.4	42.2			
	260.5	41.9			
	302.4	84.1	205		
	261.5				
10 5	302.6	41.1		2.10	
	262.0	41.1			
	303.1	82.2	213		
Right below					
	352.0				
10 0	31.9	39.9			
	350.0	43.0			
	33.0	82.9	211		
	348.9				
17 00	34.1	45.2		2.06	
9 5	352.0	41.2			
10 12 16	33.2	86.4	201		
+11					
10 12 27					
4580.6386					
4576.4700					
4.1686					

Mean 205

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1898phae.proj.1356.

Oct 17 1898.

Right + below II

352.1

10 19 30 324 403

3505 436

341 839 2.08

350.1

21 44 340 439 204

351.0 428

343.8 867 2.00

Left + above

327

2343 122.83 39.56

798 432

123.0 828 211

80.3

2530 123.63 430 210

10 27 820 405

10 22 37 122.5 833 209

+11

15 22 48

4080.6409

4576.4700

+ 4.1709

(mean 207

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1898phae.proj.1356.

Oct 17, 1895.

Left & above

82.1

10 27 00 123.0 40.9

~~111~~ 40.1

820 51.0 2.17

122.1

80.9 2.18

28 32 122.9 42.0

82.8 38.2

121.0 50.2 2.19

Right & ~~abo~~ below

17 81.6

30 41 213.0 41.4

168.1 45.0

213.1 56.4 2.01

168.9

32 54 214.0 45.1 2.00

119 7 171.40 41.6

10 29 47 212.6 56.7 2.00

+11

15 29 58

4058.6458.

4076.4700

4.1758

2.09

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1898phae.proj.1356.

Oct 17 1898

	Right & below			+Y
	170.3			
10 34 30	212.9			
	213.2	+2.9		
	+699	+3.5		
	170.0	56.7	200	
	213.8			
	?			
	170.0			1.99
37 2	214.5	+4.5		
	170.5	+3.1		
	213.9	57.6	1.95	
	Left & above			
	262.4			
	303.0	+1.0		
40 6	262.1	+0.9		
	303.0	51.9	2.14	
	2621			2.16
41 15	3025	+0.4		
153 13	2622	+0.0		
10 38 18	3022	50.4	2.18	
+11				
15 38 29				
4580.6018				
4576.4700				
+4.1318				

Mean 2.05

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1898phae.proj.1356

Oct 17 1898

Left & above V

263.0

10 44 40 302.5 39.5

260.5 41.2

302.0 80.7 2.17

262.1

42 8 303.3 41.2 2.18

263.0 39.0

302.0 80.2 2.19

Right & below

350.0

50 8 33.3 43.3

342.5 41.0

33.5 84.3 2.07

353.0

51 51 32.9 39.9 2.10

188 42 350.8 42.2

10 47 10 +11 93.0 82.1 2.13

15 47 21

4080. 6579

4576. 4700

4.1879

"2.14

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1898phae.proj.1356.

Posted to here.

Oct. 20. 1892. (Thursday)

R Hercules. Phot. Yr. 60.

1v	vv	+12.2
21	0	
+v	v	

Watch correction −1 sec (watch fast)

R comes and with R index left.

	266.0		
6 40	296.v	29.7	
	266.1	29.3	
	29v.4	59.0	290
	267.0		
6 47	296.6	29.6	292
	264.6	28.6	
	297.v	58.2	293

Index right.

	3v7.0		
6 v1	2v.6	28.6	
	3v7.9	29.7	
	27.6	58.3	293
	3v7.9		
6 v6	26.7	28.8	292
14	3v6.v	29.7	
	26.2	58.5	292

Mean 292

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1898phae.proj.1356.

Oct. 20. 1892.

~~T Herculis.~~ Wr. obs.

~~Selection of Comp. Stars.~~

R Can. Ven. Wr. obs.

Selection of faint comp. stars.

+39 2

+39 13 41

21 02

8h 11m

Abandoned.

T Herculis W. obs

Selection of ff. comp Stars

15 6 +31 4

21 09

3 53

20 m

m 5 n

n 4 o

o 3 p

~~p 3 q~~

p 4 5 q

q 6 r

r 5 s

s 3 t

8 044

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1898phae.proj.1356.

Oct. 20, 1898.

U Cephei Phot T Wobs

0 58 +81.8
0 50

28

0 50 +81.1
0 39

11

0 30 81,7
23 KV

– KV

24 50 81.1.
23 48
---
1 2

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1898phae.proj.1356.

78

Oct 20, 1898.

I

Left.

149.0

9 48 00 239.2 Nadir 90.2

148.0 88.0

Clouds. 178.2 −0.03

236.0

147.7 −0.02

50 15 238.0 90.3

Clouds. 89.7

147.5 180.0 −0.00

237.2

Right

235.5

53 45 326.3 90.8

237.0 91.0

328.0 181.8

360.0

178.2 +0.03

236.8

56 00 326.5 89.7 0.00

8 00 237.8 88.6

9 52 −00 326.4 178.3 −0.03

14 51 59

45836194

+0.02

Mean −0.01

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1898phae.proj.1356.

Oct. 20, 1898.

	Right			II
	236.6			
9 54 30	327.5	90.9		
	235.6	94.6		
	330.2	185.5	+ 0.10	
		1745		
	234.5			
10 1 01	329.2	94.7		+ 0.16
	231.2	96.9		
	328.1	191.6		
	Left	168.4	+ 0.22	
	324.1			
4 40	62.4	98.3		
	324.1	97.9		
	62.0	196.2		
		163.8	+ 031	
	322.9			
6 38	61.8	98.9		
10 48	322.2	100.4		+ 0.34
10 82 42	62.6	199.3		
-1				
15 2 41		160.7	+ 0.37	
4583.6269				

Mean +0.25

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1898phae.proj.1356.

Oct 20. 1895.

Left

10	9	0°	322.0		
			62.5	100.5	
			322.0	100.4	
			62.4	200.9	
				109.1	+ 0.40
			322.1		
	10	42	61.6	99.5	
			319.9	102.9	+ 0.42
			62.8	202.4	
				157.6	+ 0.43

Right.

			57.4		
	13	36	152.9	101.5	
			52.0	98.9	
			150.9	200.4	
				159.6	+ 0.39
			53.1		
	15	52	151.5	98.4	
	9	10	50.5	100.3	+ 0.38
10	12	18	151.0	198.9	
		−1			
15	12	17		161.1	+ 0.36

4553 .6335

Mean + 0.40

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1898phae.proj.1356.

Oct. 20. 1895

	Right			
	51.3			
10 18 00	154.5	1032		
	51.3	1012		
	15 2.0	2044		
		1056	+ 0.47	
	51.3			
20 00	1529	1016		
	50.2	1054		+ 0.50
	155.6	2070		
	Left.	1530	+ 0.52	
	1349			
24 6	247.5	1126		
	138.8	1087		
	2470	2213		
		1387	+ 0.50	
	1364			
27 00	247.4	1110		
9 6	136.0	1115		+ 0.82
10 22 16	247.8	2228		
		1372	+ 0.83	
15 22 15				
4583.6404				

Mean + 0.686

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1898phae.proj.1356.

Oct. 20. 1898.

~~Right~~ V

		Left			
		134.8			
10	38	25	248.2	113.4	
			139.5	107.0	
			246.5	220.4	
				139.6	+ 0.78
			136.7		
	36	56	248.6	111.9	
			136.0	112.7	+ 0.82
			248.7	224.6	
			Right.	135.4	+ 0.87
			227.1		
	40	10	338.2	111.1	
			228.1	107.8	
			335.9	218.9	
				141.1	+ 0.70
			228.4		
	42	30	334.6	106.2	+ 0.72
	153	1	227.9	110.2	
10	38	15	338.1	216.4	+ 0.70
		-1		143.6	Mean + 0.77
10	38	14			

4053.6515

U Cephei was the brighter at the beginning of observations and the fainter at end of same Troubled by clouds during observations.

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1898phae.proj.1356.

Oct. 20. 1892.

o Ceti.

11	1V	o	1	g	(A. S.) W. Sto.
11	1V	g	1	o	" Spencer "
11	1V	g	1	o	" Colson "

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1898phae.proj.1356

Oct. 24. 1898. (Monday)

λ Cygni. Phot. I. Sh. obs.

19 39 +24.9
23 39
+4 0

Index left + below.
266.3
~~20~~ 24 50 297.5 31.2
265.9 31.5
297.8 62.7 2.76

266.3
27 10 297.8 31.5 2.78
268.0 29.9
297.9 61.4 2.81

Index right + above.
358.5
30 25 28.1 29.6
357.9 31.3
29.2 60.9 2.83

32 35 10
115 00
~~8~~ 28 ~~45~~ -12
13 28 33
4587.617
4583.4160
4.3457

6.0
35 ~~4.5~~
29.3
30.1
33.3 2.74
Clouds thick.
356.6 32.6
Clouds thick. 60.9 2.65
~~28.8~~ 29.2
Mean 2.76

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1898phae.proj.1356.

Oct. 24, 1898.

Index rt + above.

		357.1		
9				
24	03 35	29.8	32.7	
		357.1	32.1	
		29.2	64.8	2.68
		357.1		
9				
24	05 00	28.8	31.7	2.71
		357.2	31.6	
		28.8	63.3	2.74

Index left + below.

		86.8		
9				
24	07 38	119.5	32.7	
		85.8		
		86.2	33.1	
		118.9	65.8	2.65
		86.8		
9				
24	10 15	118.8	32.0	2.68
	26 28	87.0	31.8	
9	6 37	118.8	63.8	2.72
	-12			
	14 6 20			

4587.5878
4583.2160
4.3718

Mean 2.70

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1898phae.proj.1356

Oct. 24, 1898.

Index left + below.

87.8

9
~~2+~~ 16 02 116.2 28.4
85.4 32.4
117.8 60.8 2.83

86.0

9
~~2+~~ 17 52 119.1 33.1 2.78
86.9 30.0
116.9 63.1 2.74

Index Rt. + above.

178.8

9
~~2+~~ 20 04 207.0 28.2
175.9 33.2
209.1 61.4 2.81

~~178.8~~ 176.9

9
~~2+~~ 21 29 209.9 33.9 2.74
~~78.5~~ 27 176.9 31.6
9 18 ~~52~~ -12 208.5 65.5 2.66
14 18 40

Mean 2.76

4087.5963
4583.2762
4.3803

1898phae.proj.1356.

Oct. 24, 1898.

Index right & above.

9		178.1		
~~2~~	25 13	208.1	30.0	
		177.1	32.0	
		209.1	62.0	2.79
9		175.6		
~~2~~	26 12	210.0	34.4	2.72
		177.3	31.2	
		208.5	65.6	2.66

Index left & below.

9		269.8		
~~2~~	28 08	296.4	26.6	
		267.5	29.5	
		297.0	56.1	3.01
9		267.1		
~~2~~	28 01	297.3	30.2	2.93
	27 34	267.1	30.0	
9	26 ~~54~~ 20	297.1	60.2	2.85
	14 26 42			

4587.6019
4583.2160
4.3859

Mean 282

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1898phae.proj.1356

Oct. 24, 1898.

Index left + below.

9		267.1		
~~21~~	30 05	296.8	29.7	
		266.5	31.3	
		297.8	61.0	282
9		266.4		
~~21~~	32 14	298.3	31.9	281
		267.6	29.7	
		297.3	61.6	280

Index rt. + above.

9		~~297~~ 357.8		
~~21~~	33 42	28.8	31.0	
		356.8	31.7	
		28.5	62.7	276
9		356.8		
~~21~~	35 02	28.3	32.3	274
	11 3	356.4	31.8	
9	32 46	28.2	64.1	271
14	-12			
14	32 34			

4587 6060
4583.2160
4.3900

Mean 275

1898phae.proj.1356.

Dec 24, 1898

Nova Aurigae.

ν	26	+30.4
0	34	
−4	ν2	
7	2	

Index left ~~+ below~~

~~62.8~~

~~22 1800~~ ~~112.8~~ Phot. loose.

59.1 ∠ Star "S" dis.

22 2002	112.9	53.8	
	67.5	41.9	
	109.4	95.7	1.76
	65.2		
22 24 23	109.1	43.9	1.78
	64.4	50.4	
	114.8	94.3	1.80

Index 28. ~~+ below~~

	155.3		
	4.0		
22 28 51	205.6	48.7	
	158.6	41.9	
	~~199.0~~ 200.5	90.6	1.90

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1898phae.proj.1356.

Oct, 24, 1898.

Indepnt. ~~Labour~~.

156.5

22 32 41	200.4	43.9	1.58
10 105 57	156	47.5	
26 29	202.4	91.7	1.57
-12			Mean 1.58
15 26 17			

4587.6433
4583.2160
4.4273

0. Cete. Phot. R. Nr. obs.

2 14 −3°.4
1 10
−1 04

Indepnt.

266.1

22 47 29	272.0	5.9	
	266.8	5.1	
	271.9	11.0	6.05
	266.8		
22 49 15	272.1	5.3	6.55
	266.0	6.1	
	272.1	11.4	6.05

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1898phae.proj.1356.

Oct. 24, 1898.

Index left.

355.7

22 51 28 — 1.9 — 6.2

356.1 — 5.8

1.9 — 12.0 — 6.40

356.2

22 53 02 — 1.9 — 5.7 — 6.43

1 14 — 356.0 — 6.0

10 50 18 — 2.0 — 11.7 — 6.46

-12

15 50 6

4587.6598

4583.2160

4.4438

Mean 6.49

6.0

35 5.1 5

22 55 30 — 1.7 — 5.7

356.2 — 5.7

1.9 — 11.4 — 6.51

356.2

22 57 05 — 1.9 — 5.7 — 6.51

356.2 — 5.7

1.9 — 11.4 — 6.51

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1898phae.proj.1356.

Oct. 24, 1898.

		Index. rt.		
		85.8		
23	00 17	92.0	6.2	
		86.2	5.8	
		92.0	12.0	6.40
		86.8		
23	02 21	91.8	5.7	6.43
	285 13	86.0	6.0	
22	58 48	92.0	11.7	6.46
	-12			
215	58 36			
4587.	6657			
4583.	2160			
	4.4497			Mean 6.47

Correction for Waite's watch (which was used in all the preceding obs.) was -12 secs.

♀ Cats.

11	23	g 2.5 v.	Gr. obs.
"	"	g 2 v.	Colson "
"	"	g 1.5 v.	Waite "

The above obs. of ♀ Cats' was made Oct. 24. and copied in here Oct. 25.

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1898phae.proj.1356.

Oct. 25, 1898. (Tuesday)

S T. Cygni		Phot T		W obs.
		19	39	25.9
		22	4	
		2	25	

Watch correction − 1 sec (watch fast)

Left & below

25.6

1 45 00	119.0	33.4		
	8 3.4	37.7		
	121.1	71.1	2.47	

23.8

46 30	122.5	38.7		2.43
	25.80	35.0		
	120.0	73.7	2.39	

Right & above

174.6

49 24	211.0	36.4		
	173.1	40.4		
	213.5	76.8	229	

171.2

50 38	2130	41.8		2.26
191 32	173.4	37.2		
7 47 53	210.6	79.0	222	
−1				
12 47 52				

4588.5332
4587.0600
+1.4732

Mean 234

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1898phae.proj.1356.

Oct. 25, 1895.

Right above II

1749

7 53 20 2103 35.4

1728 39.8

2121 752 2.84

1720

55 15 2139 41.9 2.26

1730 38.4

2114 80.3 219

Left below

2655

5 8 16 2990 33.5

2615 40.8

3023 743 2.37

2621

59 42 3015 39.4 2.36

26 33 2652 35.7

7 56 38 29 751 2.34

12 56 37 3020.2

Mean 2.81

4588.5393

4087.0600

+1.4793

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1898phae.proj.1356.

Oct. 25. 1898.

Left & below

		265.4		III
8	4 00	300.0	34.6	
		262.7	39.2	
		301.9	73.8	2.38
		268.0		
6	7	301.1	33.1	240
		265.0	34.5	
		300.5	72.6	242

Right & above

		354.1		
8	19	30.9	36.8	
		352.5	39.3	
		31.8	76.1	2.31
		352.9		
	11 4	31.8	35.9	2.30
	29 30	353.8	37.5	
8	22	31.6	76.7	229
13	7 21			

Mean 2.35

1.4588.5368
4587.0600
+1.4868

1898phae.proj.1356.

Oct. 25, 1898.

		Right & above			IV
		353.9			
8	14	00	31.0	37.1	
			351.1	40.9	
			32.0	7.80	2.23
			351.2		
	16	15	32.1	40.9	2.24
			353.3	37.5	
			30.8	7.84	2.24
			Left & below		
			~~84.6~~		
	18	55	119.3	9.45	
			83.3	35.7	
			~~120.2~~	7.35	2.39
			120.0		
			83.0		
	21	6	121.8	38.8	2.36
	70	16	84.5	36.4	
8	17	34	120.9	7.52	2.34
		-1			
13	17	33			

4588.5539
4587.0606
+1.4939

Mean 2.30

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1898phae.proj.1356.

Oct. 25 1898

Left & below

V

δ 5.0

8 26 44	120.3	353		
	δ 3.9	376		
	121.5	729	2.41	
	δ 3.1			
28 28	121.9	358		2.38
	δ 3.9	361		
	120.8	719	2.35	

Right & above

174.0

33 00	211.2	372		
	173.9	387		
	212.6	759	2.32	
	171.9			
34 30	212.82	403		2.27
2 42	172.8	388		
δ 30 40	211.6	791	2.22	
13 30 89				

4588.5629
4587.0600
+1.5029

Mean 2.32

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1898phae.proj.1356.

Oct 25 - 1898

U Cephei

24 50 81.1
23 13
1 37

o Ceti.

A V2 h 1,V var. var. 3K (A.E.) Yr. obs.
" " h = var. " Spencer obs.

Moon bright observations a little difficult
o is lowest of stars compared.

U Cephei. Phot. T. Yr. obs.

24 50 81.1
23 38
1 12

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ucoplae.prj.1050.

Oct 20 1898

Right I

62.1 Z vanadis

9 18 00	141.5	79.4	
	60.8	80.8	
	141.6	160.2	− 0.38
	63.2		
19 33	140.9	77.7	− 0.39
	61.2	81.4	
	142.6	159.1	− 0.40

Left.

	147.9		
22 36	236.0	88.1	
	150.0	83.1	
	233.1	171.2	− 0.17
	151.0		
24 55	234.9	83.9	− 0.16
5 4	148.6	87.5	
9 21 16	236.1	171.4	− 0.16

14 21 (2) 15

4558.5950
4558.6044
−.0064

Mean − 0.27

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1898phae.proj.1356.

Oct. 20, 1898.

II

Left

147.4

9 26 34 236.8 89.4

147.1 89.7

236.8 179.1 − 0.02

148.5

28 00 234.50 86.5 − 0.02

145.6 92.4

23.0 178.9 − 002

Right.

238.1

30 40 327.0 88.9

240.0 88.0

325.0 176.9 − 0.11

240.0

32 32 324.9 84.9 − 0.09

117 46 236.2 90.7

9 29 26 326.9 175.6 − 0.08

14 29 25

4588.6038

4588.6044

− .0006

Mean − 0.06

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1898phae..proj..1356.

Oct 25 1898

Right

III

235.1

9 85 35 327.7 926

238.9 876

326.5 180.2 0.00

179.8

237.6

36 49 325.9 883 + 0.02

235.2 938

324.7 181.9 + 0.03

left 178.1

323.1

39 00 59.2 96.1

328.9 973

61.2 193.4 + 0.25

166.6

325.0

41 5 59.6 946 + 026

102 29 323.1 990

9 38 7 62.1 1936 + 026

1664

14 38 6

4588.6098

4588.6044

+.0054

Mean + 0.14

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1898phae.proj.1356

Oct 25 1898.

		Left			IV
		321.2			
9	42	34	66.3	1851.	
			321.1	102.0	
			63.1	207.1	
				152.9	+ 0.52
			321.9		
44	8		61.8	989.9	
			324.2	97.6	+ 0.42
			61.8	197.5	
			Right	162.5	+ 0.33
			55.9		
47	6		152.9	970	
			53.0	98.5	
			151.5	195.5	+ 029
				1645	
			53.1		
	48	39	1506	975	+ 0.30
	22	27	53.0	98.9	
9	45	37	151.9	196.4	+ 031
14	45	36		163.6	

4588.6100
4588.6044
+0.0106

Mean + 0.36

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1898phae.proj.1356.

Oct 25, 1898.

V

Right.

52.5

9 58 40	1519	99.4	
	51.5	100.5	
	1520	199.9	+0.38
		160.1	
	52.0		
52 0	1525	100.5	+0.41
	51.0	102.5	
	1574.0	203.0	
		157[illegible].0	+0.44

Left

	136.9		
5 4 32	246.0	109.1	
	141.0	103.9	
	244.9	213.0	+0.63
		147.0	
	139.0		
56 15	245.0	106.0	
13 27	137.6	109.4	+0.66
9 53 22	247.0	215.4	
14 53 21		144.6	+0.68

408A. 6204
458. 6044
+0.0160

Mean +0.54

1898phae.proj.1256.

Oct 25. 1898

T Andromedae Phot. T. Grebb.

0 17 +26.4

1 ▽0

+1 33

Above I

336.0

10 27 42 48.5 ← comparison dist 72.5

335.0 74.8

Clouds 147.3 +0.63

49.8

336.1 +0.66

30 00 49.9 73.8

337.9 70.1

48.8 143.9 +0.70

Flour

65.1

33 20 137.6 72.5

64.4 71.7

136.1 144.2 +0.69

67.5

35 00 137.1 70.6 +0.71

6 2 65.5 71.7

10 31 30 1 137.2 142.3 +0.73

15 31 29

Mean +0.68

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1898phae.proj.1356.

Oct 25. 1898.

		below			II
		65.1			
16	36 45	135.9	70.8		
		67.1	70.4		
		137.5	141.2	+0.75	
		66.0			
38	15	138.9	72.9		+0.72
		66.2	70.9		
		137.1	143.8	+0.70	
		above			
		154.0			
40	40	229.9	75.9		
		154.5	76.0		
		230.5	151.9	+0.74	
		156.5			
	42 10	227.5	71.0		+0.058
	157 50	155.2	77.3		
10	39 28	232.5	148.3	+0.61	
15	39 27				

Mean +0.60

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1898phae.proj.1256.

Oct 25, 1898.

Above
1536
10 45 00 229.2
154.95
232.1

154.9
46 42 330.2
1549

Variable confused with 7.5 magn star
All observations made with difficulty through clouds. Stars sometimes brighter & then fainter.

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1898phae.proj.1356.

Oct. 27, 1898 (Thursday)

U Vulpec. Phot. T. U obs.

19 28 +19.5
22 6
2 38

Watch correction − 1 sec (watch fast)

	267.0	Index left & above		I
7 40 00	298.1	31.1		
	265.5	33.0		
	298.5	64.1	2.71	
	264.9			
41 22	298.2	33.3		2.71
	267.0	30.8		
	297.5	64.1	2.71	
	Right & below			
	356.9			
44 9	27.1	30.2		
	355.7	33.9		
	29.0	63.5	273	
	356.0			
46 22	28.9	32.9		272
11 53	355.4	31.5		
7 42 05 −1	26.9	64.4	270	
12 42 57				

Mean 272

4590.5299
4584.4706
6.0593

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1898phae.proj.1356.

Oct. 27, 1898

Right & below

	356.1			
7 48 41	27.6	31.5		
	355.0	32.9		
	27.9	64.4	2.70	
	355.5			
51 15	28.4	33.3		2.72
	357.1	30.1		
	27.2	63.4	2.73	

Left & above

	27.8			
54 00	116.9	29.1		
	85.9	31.4		
	117.3	60.5	2.84	
	86.8			
53 47	117.0	30.8		2.82
9 43	86.5	30.6		
7 52 26	117.1	61.4	2.81	

12 52 20

4590.5364
4584.4700
6.0664

Mean 2.77

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1898phae.proj.1356.

Oct 27 1898

Left & above

		27.1			
7	38 6	116.9	29.5		
		86.4	31.0		
		117.4	60.8	283	
		86.2			
	59 07	117.9	31.7		282
		87.1	29.6		
		116.7	61.3	281	

Right & below.

		1776.7			
8	3 00	207.7	31.0		
		174.8	34.3		
		209.1	65.3	2.67	
		174.8			
	5 00	208.0	33.2		2.64
	6	170.0	33.3		
8	561 30	208.4	66.5	262	
	13 1 29				

4590.5425
4584.4700
6.0728

Mean 2.73

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1898phae.proj.1356

Oct 27 1898

Right & below IV

17h 67

8 6 44 208.0 31.3

170.6 32.7

208.3 64.0 2.71

170.6

8 46 20~~8.8~~ 33.2 2.68

176.0 32.2

208.2 65.4 2.66

Left & above

268.0

11 5 292.0 30.0

267.1 31.1

298.2 61.1 2.82

267.5

13 27 298.8 31.8 2.81

0 2 268.1 29.8

8 40 0 297.9 61.6 2.80

13 9 59

45°90.0486

45°84.4700

6.0786

Mean 274

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1898phae.proj.1356.

Oct. 27, 1898.

Left & above

	268.5			
8 10 41	297.5	29.0		
	267.0	30.7		
	298.2	59.7	2.87	
	267.8			
18 47	298.0	30.2		288
	267.8	29.2		
	297.0	59.4	2.88	

Right & below

	356.0			
21 40	24.1	32.1		
	355.8	32.2		
	28.0	64.3	2.70	
	356.3			
23 51	28.1	31.8		272
79 59	355.6	31.8		
8 19 60	27.4	63.6	2.73	
13 19 59				

4590.5556
4584.4700
6.0856

Mean 280

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1898phae.proj.1356.

Aug. 27, 1898.

8 T Cygni			Phot T		Wolz
			19	39	22.9
			23	10	
Right & above			3	31	I
		3502.5			
r	32	44	32.4	39.9	
			3502.5	40.3	
			32.8	80.2	219
			3501.9		
	34	30	31.4	39.5	222
			3502.2	39.8	
			31.6	79.3	220
Left & below					
			44.5		
	37	19	1201.0	36.5	
			825	40.0	
			122.5	76.5	230
			82.2		
	39	22.	122.6	40.4	228
	23	09	840	37.7	
8	35	60	121.7	78.1	220
13	35	59			Mean 220

4590.5667
4587.0606
3.5067

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1898phae.proj.1356.

Ad 27 1898

Left & below

83.2

8 41 20 120.0 373

82.1 401

122.2 774 2.27

83.0

42 48 123.1 401 2.28

83.2 370

120.2 771 228

Right & above

173.5

45 8 212.6 391

171.8 414

213.2 805 218

172.3

46 39 213.4 411 218

15 55 172.9 893

8 43 56 212.2 804 218

13 43 56

40 90.5721

45 87.0600

+ 3.5129

Mean 223

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1898phae.proj.1356.

Oct 27 1895

Right & below above III

173.5

8 49 00 212.7 39.2

172.1 41.5

213.6 80.7 2.17

172.5

50 30 213.9 41.4 2.18

173.9 38.5

212.4 79.9 2.20

Left & below

264.7

54 44 301.2 36.5

262.9 40.0

302.9 76.5 2.30

263.0

55 24 301.0 38.0 2.32

9 42 264.0 37.3

8 52 26 301.3 75.3 2.34

13 52 20.

4590.6721
4587.0600
+3.5181

2.25

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1898phae.proj.1356.

Oct 27, 1898

Left & below

IV

	263.8			
8 57 31	301.0	37.7		
	262.6	39.9		
	302.5	77.6	227	
	262.9			
59 9	301.6	38.7		2.28 30
	264.3	37.1		
	301.24	75.8	2.82	

Right & above

	352.9			
9 2 14	32.0	39.1		
	351.7	40.5		
	32.2	79.6	221	
	351.3			
4 33	32.1	40.8		2.20
3 27	352.9	39.0		
8 60 52	31.9	79.8	220	
1				
14 00 51				

4090.8889
4587.0600
3.5289

Mean 2.25

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1898phae.proj.1356

Apr 27 1898.

Right & above

V

3 5 3.1

9 6 50 31.10 38.2

3 5 2.5 39.4

32 1.9 77.6 2.27

3 5 1.5

8 50 32.52 40.7 2.23

35 2.8 39.4

32.2 80.1 2.19

Left & below

83.1

12 32 121.1 38.0

83.0 38.6

121.6 76.6 2.30

83.0

14 29 121.6 38.6 2.30

2 41 83.5 37.5

9 20 40 121.0 76.1 2.31

14 20 39

4590.5976

4587.0600

+3.5376

Mean 2.26

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1898phae.proj.1356.

Oct. 28, 1898 (Friday)

U Vulpec. Phot. ☆ W. obs.

19 28 +19.5

23 46

4 18

Correction of watch +3-2 c watch slow

Left & above

27.5

9 13 20 116.5 29.3

86.4 31.5

117.9 *60.8 2.53

85.5

15 3 118.0 32.5 2.50

26.8 30.3

117.4 62.8 2.76

Right & below

177.1

17 15 208.1 31.0

176.5 31.8

208.3 62.8 2.76

176.9

19 22 206.6 29.7 2.82

25 0 177.0 30.0

9 16 15 +5 207.0 59.7 2.87

14 16 20 Mean 2.81

4591.5946

4584.4700

7.1246

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1898phae.proj.1356.

Oct 28, 1898

Right & below

177.71

9 21 28	207.9	30.8		
	175.8	31.6		
	207.4	62.4	277	
	176.9			
23 00	207.1	30.2		278
	176.8	31.8		
	208.0	62.0	279	

Left & above

26 19	~~297.1~~ 267.3			
	297.1	29.8		
	266.6	31.4		
	298.0	61.2	281	
	267.2			
29 00	297.1	29.9		282
19 47	266.4	30.9		
9 24 57	297.23	60.8	283	
+6				
14 275 62				

4591.6007
4584.4700
7.1307

Mean 280

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1898phae.proj.1356.

Oct 28 1898

Left & above III

		267.8			
9	31	30	297.0	29.2	
			268.0	28.3	
			297.3	57.5	296
			266.2		
	33	10	298.0	31.8	286
			266.3	30.7	
			297.0	62.5	277

Right & below

		35-5.9			
	36	30	27.5	31.6	
			356.5	30.5	
			27.0	62.1	279
			356.7		
	39	11	27.5	30.8	280
	20	21	357.0	30.6	
9	35	5	27.46	61.4	281
14	35	10			

Mean 283

4591.6077
4584.4700
7.1377

1898phae.proj.1356.

Oct 28 1898.

Right & below

		35 7.1		
9	42 26	27.8	30.7	
		356.5	30.0	
		26 5	60.7	2.84
		357.0		
	44 38	27.1	30.1	2.82
		356.4	31.1	
		27.5	61.2	2.81

Left & above

		87.0		
	47 36	117.4	30.4	
		87.2	29.8	
		117.0	60.2	2.85
		87.4		
	50 54	118.0	30.6	2.84
	185 34	87.0	30.3	
19	46 24	117.3	60.9	2.89
	+5			
1	14 46 2.9			

4591.6158
4584.4700
7.1458

Mean 2.82

1898phae.proj.1356.

Oct 25 1895

Left & above

	274			
9 55 15	117.2	29.5		
	87.3	29.9		
	117.2	59.7	2.87	
	87.1			
58 00	117.3	30.2		2.86
	87.1	29.8		
	116.9	60.0	2.86	

Right & below

	176.9			
10 1 10	207.7	30.8		
	176.5	31.5		
	207.8	62.3	2.77	
	176.5			
3 40	208.1	31.6		2.78
238 5	177.0	30.5		
9 59 31 +5	207.5	62.1	2.79	
14 59 36				

40 91.6247
40 84.4700
7.1547

Mean 281

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1898phae.proj.1356.

Oct. 28, 1898.

☉ Cat.		Phot-W R	W obs
		26	
		12	-3.6
		24 06	
		~~22 44~~	
		-1 16	
		10 44	

Left

	173.3		
10 29 15	179.7	6.4	
	174.4	4.6	
	179.0	11.0	-6.59 ✓
	174.5		
34 37	179.2	4.7	6.70 ✓
	174.4	4.8	
	179.2	9.5	6.91 ✓

Right

	263.4		
40 26	270.1	6.7	
	264.6	5.6	
	270.2	12.3	6.30 ✓
	264.6		
42 50	270.0	5.4	6.36 ✓
			~~6.38~~
147 8	263.5	6.7	6.34 ✓
10 36 47	270.32	12.1	~~6.40~~
15 36 52			Mean = 6.56 ✓
4091.6506			

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1898phae.proj.1356.

Oct 28. 1898

Right.

II

	263.7		
10 45 54	270.2	6.5	
	263.9	6.9	6.33
	269.8	~~6.4~~	~~6.16~~
		12.4	
	264.1		6.33
48 00	269.9	5.8	~~6.24~~
	263.4	~~6.6~~	
	2~~6~~9 70.0	12.4	6.33

Left.

	353.0		
50 20	360.0	7.0	
	354.0	5.8	
	359.08	12.8	6.26
	354.0		
52 47	359.7	5.7	6.30
197 1	353.1	6.7	
10 49 10	359.8	12.4	6.33
~~+5~~			
10 49 20			
45 91.6 92			

−6.32

Mean ~~6.27~~

11h 30m g 3 0, 0 3k (M. E.) Kr. obs.

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1898phae.proj.1356.

Oct. 31, 1895 (Monday)

S T Cygni Phot T. Wobs.

19 39 +25.9
22 25
2h 46

Right & above

355.2

7 38 9 31.82 36.0

354.2 38.2

32.4 74.2 v 2.37 v

353.5

39 41 32.1 38.6 2.36 v

354.9 35.9

30.28 74.5 2.36 v

Left & below

358.3

44 26 119.1 33.8

82.4 40.8

123.2 74.6 v 2.36 v

83.3

48 00 120.4 37.1 2.39 v

170 16 84.1 35.7

7 42 38 v 119.8 72.8 2.42 v

v +3.

12 42 37 v

Kv 9K.v 296

4v-90.90 K0 v

+3.62v6 v

Mean 2.38 v

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1898phae.proj.1356.

Oct. 31, 1898. (Monday)

Left & below II

85.1

7 50 30 119.4 34.3'

84.1 36.3'

120.4 70.6 ✓ 249 ✓

828

52 31 120.5 37.7 246 ✓

85.5 34.5'

~~145~~ 72.2 ✓ 243 ✓

120.0

Right & above

175.0

55 9 210.0 35.0

172.0 40.2'

212.2 75.2 234 ✓

172.2

56 44 211.8 39.6 232 ✓

214 ✓ 4. 174.0 36.5'

7 ✓ 3 44. ✓ 211.0 76.1 231 ✓

✓ 3.

12 ✓ 3 47. ✓

4 ✓ 94. ✓ 37 4 ✓

4 ✓ 90.90 40 ✓

43.633 4 ✓

Mean 239 ✓

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1898phae.proj.1356.

Oct. 31, 1895.

Right & above

III

		174.8		
8	00 00	210.3	35.5	
		172.2	40.4	
		212.6	70.9	2.32
		172.5		
2	10	211.0	38.5	2.34
		174.4	36.3	
		210.7	74.8	2.30

Left & below

		266.2		
7	6	299.8	33.6	
		264.0	35.8	
		299.8	69.4	2.53
		~~263.8~~		
		~~266.2~~		
11	10	266.1		2.53
20	26	299.3	33.2	
6.		263.5	36.1	
3.		~~300.1~~	69.3	2.53
9.		299.6		

4×94.5K×2
4×90.90K0
+3.6K12

Mean 2.44

1898phae.proj.1356.

Oct. 31, 1898.

Left & below IV

264.9

8 17 15 — 300.4 — 35.5

265.0 — 34.4

299.4 — 69.9 — 2.51 ✓

265.3

18 45 — 299.4 — 34.1 — 2.52 ✓

264.7 — 30.6

300.3 — 69.7 — 2.52 ✓

Right & above

353.9

21 41 — 353.7 — 37.3

353.8 — 36.8

30.6 — 74.1 ✓ — 2.37 ✓

354.5

23 15 — 30.1 — 35.6 — 2.39 ✓

8 0 ν 6 — 353.0 — 37.3

8 20 1K ν — 30.3 — 72.9 ✓ — 2.41 ✓

ν 3,

13 20 17, ν

4ν94.νννδ ν

Kν90.90K0 ν

+3.6ν1δ ν

Mean 2.46 ✓

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1898phae.proj.1356

Oct. 31, 1898.

Right & above

30-37

8 25-17 30.3 38.6

354.3 30.8

30.1 72.4 243°

35 44

27 00 30.5 36.1 239°

353.5 35.7

32.2 74.8 235°

Left & below

33.96

29 44 120.3 36.7

85.0 33.3

114.3 70.0 251°

85.5

32 22 119.2 33.7 250°

114 23 84.0 36.8

2 A 36.° 120.8 78.5 249°

3.°

13 2 A 39.° Mean 2.40°

4°94.°61°

4°90.90 K0°

+3.6°7°

Watch correction +9 sec (Watch slow)

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1898phae.proj.1356.

Oct. 31, 1898.

MP 4411 — 20 obs.

		27 3	33	62.3
		28	37	
			3	56
	left		A	4
	280.4	Level on Dec.		
8 58 00	344.3		63.9	
	282.0		62.1	
	344.1		126.0	1.06
	282.8			
59 45	342.1		59.3	1.14
	283.5		59.9	
	343.4		119.2	1.21
	Right			
	122			
9 1 26	72.3		60.1	
	123		63.1	
	75.4		123.2	1.12
	11.2			
3 20	75.3		64.1	1.04
242 31	17.7		62.8	
8 60 38	74.5		126.9	1.04
+3				
14 00 41				Mean 1.11

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1898phae.proj.1356

Apr. 31, 1898

Right II

		12.2		
9	4 30	73.0	60.8	
		11.5	60.5	
		72.0	121.3	1.16
		10.4		
6	18	74.5	64.1	1.08
		9.0	64.9	
		73.9	129.0	1.00

Left.

		10.2		
7	49	162.9	59.7	
		100.5	65.6	
		166.1	125.3	1.08
		101.3		
	9 25	166.2	64.9	1.06
	28 2	102.2	62.8	
9	7 +3	165.0	127.7	1.03
14	7 3			

Mean 1.07

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1898phae.proj.1356.

Oct. 31, 1898.

S T Cygni Phot T Wedge I

19 39 28.9
24 10
4 31

Right & above
175.6
9 2h 20 208.9 33.3
171.9 38.9
210.8 72.2 243 v

173.8
29 53 212.1 38.3 241 v
174.2 35.3
289.5 73.6 239 v

Left & below
267.0
32 31 297.7 30.7
263.5 36.8
300.3 67.5 209 v

262.2
34 29 292.7 36.5 206 v
12 v 13 266.0 32.7
9 31 14 v 298.7 69.2 253 v
9 v 3.
14 31 21 v
4 v 9 K. 60 v 2 v
4 v 90. 90 K 0 v
+3.70.12 v

Mean 245 v

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1898phae.proj.1356

Oct 31, 1898.

Left & below. II

266.2

9 37 54 299.0 32.8

264.8 33.2

300.0 68.0 2.07 ✓

265.3

41 21 299.1 33.8 2.08 ✓

265.0 33.6

298.6 67.4 2.09 ✓

Right & above

354.9

44 15 29.1 34.2

353.6 36.5

30.1 70.7 2.48 ✓

353.5

46 10 30.0 36.5 2.50 ✓

170 K0 355.1 33.0

9 K2 K0. 28.1 69.5 2.52 ✓

✓ 3.

14 K2 K3. ✓

4✓94.6130 ✓

4✓90.90K0 ✓

+3.7090 ✓

2.54 ✓

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1898phae.proj.1356.

Oct 31 1895

Right & above

III

35-43

9 05-4.18 24.2 33.9

354.0 36.4

30.4 ~~03~~

70.3 2.00 v

3535

56 19 29.0 35.5 2.50 v

353.7 34.8

24.5 70.3 2.50 v

Left & below

84.5

59 00 114.1 33.6

85.1 33.7

114.2 67.3 2.60 v

84.2

3

~~10~~ 80 00 114.4 34.2 2.62 v

~~9 37~~ 86.0 31.8

~~9 37~~ 117.8 66.0 2.64 v

232 37

9 v8 9.3 v 2.56 v

14 v8 12.1 v

4v94.6237 v

4v90.9060 v

+3.7197 v

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1898phae.proj.1356.

Oct 31 1898

Left & below IV

87.52
118.80 30.8
10,829 85.1 32.9
120.0 65.7 2.65 v

~~84.1~~
10 38 118.9 33.8 2.65 v
86.6 32.1
118.1 65.9 2.60 v

Right & above
~~175.8~~
~~14 00~~ 209.0 ~~34.8~~
~~13 30~~ 174.7 35.6
210.3 69.8 2.51 v

174.83 2.54 v
16 45 208.8 34.5
K9 52 174.45 33.87
10 12 20 v 208.78 68.2 2.57 v
v 3.
15 12 31 v
4v9K.6339 v
4v90.90K0 v
+3.72977 v

~~Mean 2.57~~
Mean 2.60 v

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1898phae.proj.1356.

Oct 31 1898.

Right & above. V

	174.3			
10 20 49	208.3	34.0		
	174.0	30.8		
	209.8	69.8 v	2.71 v	
	173.9			2.72 v
23 20	210.1	36.2		
	176.0	33.2		
	209.2	69.4 v	2.73 v	
	Left & below			
	267.0			
28 10	297.8	30.8		
	266.0	32.8		
	298.2	63.0 v	2.77 v	
	265.7			2.72 v
31 46	298.2	32.5		
104 v	266.3	31.8		
10 26 1. v	294.1	64.3 v	2.70 v	
v 3.				
1v 26 4. v				
4v 9K.6K32 v				
4v 90.90K0 v				
+3.7392 v				

Mean 2.62 v

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1898phae.proj.1356.

Oct 31 1898.

Pandrom. Photo Wobs

24 17 26.4

25 34

1 17

Left

67.1

10 46 00 1379 < comp stars dia

65.1 70.8

1380 72.9

143.7 0.70

67.9

47 30 137.1 69.2 0.74

67.0 70.0

137.0 139.2 0.79

Right.

154.5

49 30 227.0 72.5

154.5 72.9

227.4 145.4 0.67

1542

51 00 228.9 73.8 0.65

194 00 155.0 73.5

10 48 30

+ 3

10 48 33 228.5 147.3 0.63

Mean 0.70

I

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1999phae.proj.1356.

Oct 31 1894

		Mgth.			II
		153.9			
10	52 15	228.1	74.2		
		153.6	75.4		
		229.0	149.6	0.58	
		153.9			
	3 57	229.2	75.3		0.58
		155.0	74.0		
		229.0	149.3	0.59	
		Left.			
		248.9			
	56 45	315.4	66.5		
		247.2	69.6		
		316.8	136.1	0.85	
		247.0			
	58 00	318	71.0		0.82
	20 50	249.0	68.8		
10	55 12				
	+3	317.8	139.8	0.78	
15	55 10				

Mean 0.70

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1898phae.proj.1550

Posted to here.

Nov. 1. 1895 (Tuesday)

T Herculis Phot. W obs.

18	6	+31.4
22	9	
3	57	

Watch correction + 3 (Watch slow)

l 5 m
m 4.5 n
n 4 o
o 3.5 p
7 14 p 4 q
q 6 r
r 4.5 s
s 3.5 t

R Cygni Phot. π W obs.

19	32	+49.9
22	19	
2	47	

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1899phae.proj.1356.

Nov. 1, 1895

l. r compared with n

	Right			
	258.5			
7 48 10	307.4	48.9		
	254.5	54.9		
	309.4	103.8	1.56	
	254.9			
50 00	307.9	53.0		1.60
	258.5	48.0		
	306.28	101.0	1.63	
	Left			
	346.1			
52 30	36.9	50.8		
	345.0	54.0		
	39.0	104.8	1.57	
	345.3			
54 20	38.1	52.8		1.60
5	347.8	47.3		
7 51 10	343	100.1	1.65	
+3				
12 57 18	35.1			
40°90.0356				

Mean 1.60

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1898phae.proj.1356.

Nov. 1, 1898.

t with n

Left

1748.

1 20	210.0	35.2		
	174.0	36.5		
	210.5	71.7	2.45	
	175.0			
2 52	204	33.4		2.49
	174.0	35.9		
	209.89	69.3	2.53	

Right

	265.0			
5 50	299.6	34.6		
	265.9	33.7		
	299.6	68.3	2.06	
	266.0			
7 32	296.5	30.5		2.64
17 34	265.2	33.1		
8 4 24	298.3	63.6	2.78	
7 3				
13 4 29				

4595.5447

Mean 2.56

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1898phae.prbj.1356.

Nov. 4, 1895.

w with n

Right.

	2678			
8 10 30	2942	26.4		
	2689	25.0		
	2939	51.4	3.21 ✓	
	2676			
12 15	2956	28.0		3.10 ✓
	2689	25.4		~~2.10~~
	2978	56.4	3.00 ✓	

Left

	~~3556~~			
17 26	2553	29.7		
	3570	25.9		
	259	55.6	2.91 ✓	
	3570			
	~~3560~~			
19 10	~~2555~~	29.0		2.92 ✓
19 21	3550	29.3		
8 14 00	24.3	58.3	2.93 ✓	
+3				
13 14 53				
4095.0020				

Mean ~~2.91~~ 3.01 ✓

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1898phae.proj.1356.

~~Oct~~ Nov. 1, 1898

u with n

Sept.

355.2

8 21 54	27.9	32.7		
	358.2	31.2		
	29.4	63.9	2.72	
	355.3			
	29.0	33.7		2.70
23 30	355.1	31.4		
	26.5	65.1	2.67	

Right

85.9

26 00	117.82	31.3		
	84.9	31.0		
	115.9	62.3	2.77	
	84.9			
28 00	116.2	31.3		2.72
19 34	87.4	25.5		
8 24 51	115.9	59.8	2.87	
+3				
13 24 53				

4 95.5589

Mean 2.76

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1898phae.proj.1956.

~~Oct~~ Nov. 1898

x with n

Right

90.0

8 07 15	112.9	22.9		
	92.1	19.0		
	11.1	41.9	3.67	
	90.4			
5 8 40	110.0	19.6		363
	89.2	23.8		
	113.0	43.4	3.59	
	Left.			
	177.0			
9 0 40	204.9	27.9		
	179.2	23.0		
	202.2	50.9	3.24	
	180.0			
2 20	202.3	22.3		332
238 40	180.2	24.7		
8 59 41	204.9	47.0	3.41	
+3				
13 59 44				

40.90.0831

Mean 348

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1898phae.proj.1356.

Nov. 1, 1898.

R Ursa Min 2 obs.

16 34 +73.0

24 33

7 59

~~Abandoned~~ Abandoned

O Ceti Phot. R 2 obs

2 4 -2.5

1 00

1 4

2 12 -3.6

1 3

1 9

Left

308.0

1070 314.4 6.4

309.0 5.9

314.9 12.3 6.35

308.5

8-15 314.9 6.4 6.38

308.5 5.5

314.0 11.9 6.42

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1898phae.proj.1956.

Nov 1. 1898

~~Diff~~ Right

	38.7			
18 10 00	45.3	6.6		
	39.0	6.4		
	45.4	13.0	6.23	
	39.5			
11 30	45.7	6.2		6.34
36 55	39.0	5.5		
10 9 14	44.05	11.7	6.46	Mean 6.36
15 9 17				
4595. 6814				
	38.9			
13 08	45.0	6.1		
	39.2	5.6		
	44.8	11.7	6.46	
	39.1			
14 32	46.0	6.9		6.34
	38.9	6.2		
	45.1	13.1	6.21	

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1898phae.proj.1356

Nov 1, 1898.

Sept

	128.6		
10 16 31	135.1	6.5	
	128.9	6.5	
	135.4	13.0	6.23
	129.2		
18 34	135.0	5.8	6.26
22 37	128.2	6.8	
10 15 39			
+ 3	135.0	12.6	6.30
15 15 42			

Mean 6.30

40-95.6359

τ Androm.	Phot τ	Wobs.
24	14	+26.1
25	25	
1	11	
24	14	
25	31	
1	17	
24 8	26.5	
25 37		
1 29		

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1898phae.proj.1356.

Nov. 1, 1898.

Right of above

8 22	335.8	338.0		
4 6 55	47.9	452	672	
		335.9	735.1	
		51.0	1423	0.73

	335.8		
5 0 36	405.8	700	0.74
	336.7	714	
	48.1	1414	0.75

Left below

	65.1		
5 2 50	140.8	705	
	68.4	697	
	138.1	1454	0.67

	64.1		
5 5 35	1382	741	0.70
7 23	65.9	683	
10 57 51	134.2	1424	0.73
+3			
15 57 54			
4095.6610			

Mean 0.72

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1898phae.proj.1356.

Nov. 2, 1898. (Wed.)

T Herculis Phot. W obs.

18	6	31.4
22	25	
4	19	

Watch correction + 3 sec (watch slow)

7 40 l 4.5 m
m 5 n
n 5 o
o 3 p
p 4 q
q 5.5 r
r 5 s
s 3 t

R Cygni Phot H W obs.

19	32	49.9
22	47	
3	15	

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1898phae.proj.1356.

Nov 2. 1898.

	Left			
	x	compared with ν.		
	179.4			
7 56 00	203.9	24.5		
	180.0	26.9		
	206.9	51.4	3.21	
	180.0			
58 00	204.9	24.9		3.24
	180.1	24.9		
	205.0	49.8	3.28	
	Right			
	269.0			
8 0 46	293.4	24.4		
	271.8	20.9		
	292.7	45.3	3.49	
	272.9			
2 37	293.0	20.1		3.53
	270.5	23.7		
	294.2	43.8	3.57	

Mean 3.38

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1898phae.proj.1356.

Nov. 2. 1898.

w compared with n.

Right.

		271.5			
8	6	0	294.0	22.5	
			267.6	27.4	
			295.0	49.9	3.25 ✓
			268.6		
8	11		298.0	29.4	3.14 ✓
			267.9	27.2	
			295.1	56.6	2.99 ✓

Left.

			357.1		
11	42		26.8	29.7	
			356.0	31.5	
			~~28.2~~ 27.5	61.2	2.81 ✓
			355.9		
13	34		26.9	31.0	2.81 ✓
			357.2	30.2	
			27.4	61.2	2.81 ✓

Mean 2.98 ✓

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1898phae.proj.1356.

Nov. 2, 1895.

u compared with n

Left.

		304.3		
8	17	10	27.0	32.7
			357.4	29.2
			26.6	61.9

2.79 v

		357.5		
19	10		29.2	31.7
			355.1	34.3
			29.4	66.0

2.72 v

2.64 v

Right.

		87.0		
22	5		~~114.3~~	25.5
			85.9	30.1
			116.0	55.9

2.90 v

		87.5		
24	34		~~114.5~~	25.0
			86.5	28.8
			115.3	56.8

2.94 v

2.95 v

Mean. 2.83 v

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1898phae.proj.1356.

Nov 2. 1898.

S Cygni Phot T W obs

20 2 +5-7.5
24 4
4 2

20 8
24 12 +5-7.1
4 4

Star t seen
Star is thought to be seen
Variable thought to be seen at intervals
9 19 t 3 var: var 1 s
Stars fr. in moonlight.
1" eye-piece used

R Aurigae W obs.

5 3 +5-3.0
~~0~~ 24 27
~~19~~ 24
4 36

5 3
0 36
4 27

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1898phae.proj.1356.

Nov. 2, 1898.

5 3 +V 3.0
0 F0
F 23
7 37

9 43 0 3.5 Var: var 1.5 p Est 12.0

o Ceti Phot R W obs.

2 12 -3.6
0 51
1 21
10 39

2 12
0 57
1 15
10 45

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1898phae.proj.1356.

Nov. 2. 1898.

Left

I

		~~124.0~~ 124.0			
10	4	30.	~~131.0~~ 131.5	7.5	
			124.4	7.0	
			131.4	14.5	599
			124.6		
7	12		131.3	6.7	6.06
			124.1	6.9	
			131.0	13.6	6.13

Right.

			214.1		
9	18		221.1	7.0	
			214.9	6.2	
			221.1	13.2	6.20
			214.3		
	11	49	221.4	7.1	612
	32	49	214.0	7.0	
10	8	12	221.0	14.1	6.05
		+3			
15	8	15			

4096.6307

Mean 6.08

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1898phae.proj.1356.

Nov 2 1898

Right II

214.30

10 13 38 221.82 7.2

214.6 6.9

221.5 14.18 6.07

214.6

15 20 221.3 6.7 6.10

214.2 6.9

221.1 13.6 6.13

Left

304.1

18 26 310.6 6.5

304.2 6.6

310.8 13.1 6.23

304.5

21 15 310.8 6.3 6.24

68 39 304.0 6.6

10 17 6 310.6 12.9 6.20

+3

15 17 9

4596.6369

Mean 617

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1898phae.proj.1356

Nov. 2 1898

R Cassiop. 2 w obs

23 ○ 1 +49.7

20 − 34

1 43

10 40 u 2.5 var: var 2.5 w Est 13.0

○ Cet.

11h 30m h 3, V, V 3, V K (A. E.) Yr. obs.

12 26 h 3 V, V 2 K " Colson "

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1998phae.proj.1356.

Posted to here.

Nov. 3, 1898 (Thursday.)

Sawyer's New Variable W obs

Watch correction + 3 sec. (Watch slow)

		right	18	16	+12.0
		~~Left~~ & above	22	19	
		174.9 Kvardis.	4	3	I
7	33 00	210.6	35.7		
		176.6	31.4		
		208.0	67.1	2.60	
		174.8			
34	33	208.0	33.2		2.56
		173.5	36.5		
		210.0	69.7	2.52	
		~~Right~~ & below	sub		
		268.0			
37	8	300.0	32.0		
		268.5	28.5		
		297.0	60.5	2.84	
		267.0			
38	37	297.0	30.0		2.80
23	18	265.1	32.3		
7	35	~~49~~ 510	297.4	62.3	2.77
		+ 3			Mean 2.68
12	35	53			

45 97.5249
45 96.7882 0 = Epoch 34
0.73679

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1898phae.proj.1356.

Nov 3 1898

Left & below

II

266.1

7 40 34 298.0 319

267.9 284

296.3 603 2.85

268.5

42 00 297.0 285 2.83

266.1 328

295.9 613 2.81

Right & above

354.3

45 04 30.4 36.1

356.7 315

~~28~~ 676 2.59

28.2

357.6 2.60

46 44 26.8 292

14 22 355.6 349

7 43 36 30.5 641 2.71

+3

12 43 39

4597.5303

4076.78820

0.7423

Mean 2.74

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1999phae.proj.1356.

Nov 3 1898

Right & above III

	354.5			
7 48 33	28.4	33.9		
	355.8	31.8		
	27.6	65.7	2.65	
	356.0			
50 08	27.9	31.9		2.64
	355.5	34.5		
	30.0	66.4	2.63	

Left & below.

	85.9			
54 45	118.9	33.0		
	87.1	28.8		
	115.9	61.8	2.79	
	~~+16.0~~			
	86.2			
54 20	116.2	30.0		2.75
~~42 36~~	86.0	32.4		
7 53 9	118.4	62.4	2.77	
+3				

12 53 12
4597.5369
4596.7820
0.7489

Mean 2.71

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1898phae.proj.1356.

Nov. 3, 1898.

Left & below

IV

		87.0			
8	6	00.	117.8	308	
			86.6	304	
			117.0	61.2	2.81
			86.9		
8	1		117.1	302	2.80
			85.3	317	
			117.0	61.9	2.79

Right & above

		175.2			
10	4		208.9	337	
			176.0	328	
			208.8	665	2.62
			1760		
	11	15	208.5	325	2.61
	35	20	174.5	347	
8	8	30	~~210.1~~	672	2.60
		+3			
13	8	53	209.2		

Mean 2.70

4597.5478
4596.7880
0.7598

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1898phae.proj.1356.

Nov 3 1898

Right & above V

174.5

8 14 49	209.6	35.1		
	175.9	32.4		
	208.3	67.5	2.59	

175.9

16 15	209.1	33.2		2.60
	175.2	33.9		
	209.1	67.1	2.60	

Left & below

265.8

19 22	298.4	33.0		
	268.1	28.4		
	296.5	61.4	2.81	

267.5

21 04	296.3	28.8		2.81
71 30	266.1	32.5		
8 17 52 +3	298.6	61.3	2.81	
13 17 55			Mean	2.70

45-97.5541
45 96.78820
5.7659

Comp. Star used in prec. means =
DM. + 12° 3566 (9.3)

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1898phae.proj.1356.

Nov. 3, 1898.

U Vulpec Phot π Wobs.

19 28 +19.5
23 46
4 18

Left & above
84.4 van dia
9 0 15 120.0 35.6
81.6 38.4
120.0 74.0 2.38

83.0
2 38 121.9 38.9 2.35
84.0 37
121.1 76.0 2.32

Right & below
173.6
4 40 211.1 37.5
171.8 39
211.2 76.9 2.29

172.3
6 4 212.1 39.8 2.26
13 37 172.1 39
9 43 24 210.2 78.9 2.23
14 3 27

4597.5807
4592.4700
+5.1107

Mean 2.30

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1898phae.proj.1356.

Nov 3 1898

II

Right & below

	171.6			
9 7 13	211.9	40.3		
	171.8	40.8		
	212.6	81.1	2.16	
	172.1			
9 30	212.1	40.0		220
	172.2	39.9		
	211.1	78.9	2.23	

Left & above

	~~264.4~~			
	263.6			
11 52	300.8	37.2		
	263.5	36.0		
	299.5	73.2	2.40	
	264.0			
18 20	300.5	36.5		2.41
1 55	264.2	36.3		
9 10 29	300.5	72.8	2.42	
+ 3				
14 10 32				

Mean 230

40-97.5907
4592.4700
+5.1207

1898phae.proj.1356

Nov. 3, 1898

Left & above

2626

9	15	30	300.1	37.5	
			264.1	35.7	
			300.8	73.2	240

2640

	17	00	300.6	36.6	242
			264.6	35.6	
			300.2	72.2	2.43

Right & below

352.8

	19	20	31.1	38.3	
			350.8	41.3	
			32.1	79.6	2.21

352.1

	22	11	31.6	39.5	2284
	74	01	352.9	38.4	
9	18	340	31.3	77.9	2.26
		+3			
14	18	343			

4097.5962
4092.4700
5.1262

Mean 2383

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1999phae.proj.1356.

Nov 3 1895

Right & below IV

	352.1			
9 24 30	32.1	39.0		
	352.3	39.7		
	32.0	79.7	2.23	
	352.0			
25 06	32.5	40.5		2.21
	353.1	39.5		
	32.6	80.0	2.19	

Left & above

	84.0			
29 00	120.5	36.5		
	82.6	38.5		
	121.1	75.0	2.30	
	82.5			
30 30	120.9	38.4		2.32
109 56	82.6	38.0		
9 27 29 +3	120.6	76.4	2.30	
14 27 32				

4597.6025
4592.4700
+5.1325

Mean 226

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1898phae.proj.1356.

Nov 3 1898

Left & above

~~240~~

83.7

9 32 40 120.3 36.6

831 37.3

1204 73.9 2.38

83.1

34 34 121.0 37.9 2.36

83.2 36.9

120.1 74.8 2.35

Right & below

172.0

38 31 212.0 40.0

172.3 39.8

212.1 79.8 2.20

172.1

41 52 211.4 39.3 2.22

147 37 171.9 39.1

9 36 ~~54~~ 57 211.0 78.4 2.24

+3

14 36 ~~54~~ 57

Mean 2.29

4597.6090

4592.4700

+5.1390

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1899phae.proj.1356.

Nov 3 1895

Phot ↑ 20 obs.

Parkhurst's New Variable = 0m+15°4082

20 8 +14.8

	Left & above	24 5-8		
	332.9	4 50		I
10 12 15	45.8	(comp stor dis		
	3359	72.9		
	47.6	71.7		
		144.6	0.68	
	395.1			
13 36	4+.1	73.0		
	395.7	71.1		0.68
	46.8	144.1	0.69	
	Right & below			
	66.8			
16 00	135.9	69.1		
	687.6	67.4		
	135.0	136.5	0.84	
	~~69.1~~			
	68.8			
17 41	135.2	66.4		0.85
19 32	68.3	69.4		
10 14 5 53 +3	137.7	135.8	0.86	
15 14 5-6				

4597.6353

Mean 0.76

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1898phae.proj.1356.

Nov 3 1898

Right & below

62.0

10 19 50	137.2	69.2		
	67.8	68.3		
	136.1	137.5	0.82	
	67.6			
21 28	137.1	69.5		0.80
	66.6	70.1		
	136.7	139.6	0.75	

Left & above

	156.9			
26 24	230.4	73.5		
	157.0	71.1		
	228.1	144.6	0.68	
	155.9			
28 30	228.6	72.7		0.70
16 12	156.0	69.9		
10 24 3	2259	142.6	0.72	
+3				
15 24 6				

+5 97.6418

Mean 0.70

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1898phae.proj.1356.

Nov. 3, 1895.

Left of above III

	154.3			
10 33 00	229.1	74.8		
	155.1	74.0		
	229.1	148.8	0.60	
	156.2			
34 36	227.8	71.6		0.64
	155.5	73.1		
	228.6	144.7	0.68	

Right of below

	246.1			
37 42	319.2	73.1		
	245.0	72.3		
	317.3	145.4	0.67	
	246.0			
40 12	318.0	72.0		0.70
145 30	247.1	70.4		
10 36 22 +3	317.5	142.4	0.73	
15 36 25				
4597.6503				

Mean .687

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1898phae.proj.1356

Nov 3 1895

Right & below

	245.9			
10 42 44	318.1	72.2		
	247.5	68.5		
	316.0	140.7	076	
	246.4			
44 44	315.8	69.4		0.76
	245.6	71.9		
	317.5	141.3	0.75	

Left & below

	336.1			
46 52	475	71.4		
	334.0	72.0		
	46.0	143.4	0.71	
	335.6			
44 15	46.1	70.5		0.72
22 35	335.9	71.2		
10 45 39	47.1	141.7	0.74	
+3				
10 45 42				

4097.6567

Mean 0.74

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1898phae.proj.1356.

Nov 3 1898

Left & above

	335.5			
10 50	47.30	71.5		
	336.8	71.7		
	48.5	143.2	0.71	
	336.0			
51 40	48.0	72.0		0.71
	336.9	71.1		
	48.0	143.1	0.71	

Right & below

	66.1			
54 40	137.5	71.4		
	67.8	69.7		
	137.5	141.1	0.70	
	65.7			
56 8	137.5	71.8		0.70
12 41	67.5	69.4		
10 53 10 +3	136.9	141.2	0.70	
15 53 13				

(Mean 0.73)

4597.6619

Comp. Star used in prec. measts. =
Dm. +15° 4044 (A.C.)

o Cetí.

11 28	h 4 v. v 3 K	N. E.	W. obs.
11 28	h 4 v. v 3 k	" "	Colson "

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1898phae.proj.1356

Nov. 4, 1898. (Fri)

Sawyer's Variable Phot. Obs

			18 16	+12.0	
			21 34		
		Right & above	3 18		I
		3531			
6	33 10	32.4	39.3		
		355.0	35.0		
		30.0	74.3	2.37	
		355.2		2.43	
34	38	28.X5	33.3		
		352.0	37.3		
		29.3	70.6	2.49	
		Left & below.			
		83.1			
37	00	119.0	35.9		
		85.2	33.0		
		117 8.2	68.9	2.54	
		85.3		2.56	
38	40	117.7	32.4		
23	28	84.9	95.0		
6 35	52	119.9	67.4	2.59	
11 35.9	52				
				2.58	

4598.4832
4597.6777 = Ep 35
+ 0.8055

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1898phae.proj.1356.

Nov 4, 1895.

Left & below

II

	83.8			
6 41 38	119.4	356		
	84.8	322		
	117.0	678	258	
	85.7			
47 40	115.18	301		2.6
	83.8	352		
	119.0	653	267	

Right & above

	175.2			
46 52	209.0	398		
	172.4	387		
	211.1	725	243	
	172.1			2.36
48 40	211.6	395		
20 50	175.2	356		
6 40 12	210.8	751	234	
11 40 12				

4598.4897
4597.6777
+0.8120

2.40

1898phae.proj.1356

Nov. 4, 1898

Right & above

174.5

6 51 45 209.0 34.2

172.0 39.1

211.1 73.3 240

171.7

53 14 211.1 39.4 2.38

174.5 35.5

210.0 74.9 2.35

Left & below

267.0

56 24 299.2 32.2

265.5 35.0

300.5 67.2 2.60

264.5

~~3 2 38~~ 300.9 36.5 2.53

20 1 264.8 34.9

6 55 0 ~~299.3~~ 71.4 2.46

4 55 0 299.7 -2.46

45 98.4960

40 97.6787

+0.8188

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1898phae.proj.1356.

Nov. 4. 1898.

Sept V below — IV

		266.3		
7	3 40	297.9	31.6	
		264.0	36.9	
		300.9	68.5	2.56
		264.1		
	6 00	300.9	36.8	2.72
		265.8	34.2	
		299.0	71.0	247

Right V above

		354.0		
	8 40	30.6	36.6	
		353.0	39.2	
		32.2	75.8	232
		352.8		
	11 00	31.69	39.1	2.30
	29 25	356	38.3	
7	21	31.9	77.4	227
12	7.4 21			2.41

4598.5051
4597.6777
+0.8274

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1898phae.proj.1356.

Nov. 4, 1898.

Right & above.

	352.5			V
7 15 10	31.3	38.8		
	350.6	41.4		
	32.0	80.2	2.19	
	351.5			
16 56	31.2	39.7		223
	353.5	37.9		
	31.4	77.6	227	

Left & below.

	~~85.2~~			
	84.8			
20 23	119.8	35.0		
	84.0	37.0		
	121.80	72.0	244	
	81.4			
22 15	120.7	39.3		234
74 44	83.2	36.1		
7 18 41	119.3	75.4	233	
12 18 41				234

4098.5180
4597.6777
+0.8353

1898phae.proj.1356.

Nov 4 1898

Left

84.7
~~20.7~~
~~+1104~~
~~1204~~

7 29 30 1199 35.2
~~83.4~~ 37.4
120.8 72.6 242

82.1

31 36 122.7 40.6 2.3
~~84.50~~ 37.3
121.3 77.9 226

Right & above

170.4

35 00 ~~2130~~ 2.8 212.4
172.0 40.2
212.2 82.6 2.12

172.83

37 5 211.5 39.2 2.13
13 11 170.2 42.7
7 33 18 ~~2129~~ 2 81.9 2.14
12 33 18

2.2

4098.5231
4587.6777
+0.8454

1898phae.proj.1356

Nov 4 1898

Right above VII

170.2

7 41 42 212.8 42.6

171.0 41.9

~~219~~ 84.5 2.06

212.9

171.5 2.02

44 25 212.4 41.~~4~~

~~171.8~~ 42.3

213.1 83.7 2.09

Left below

263.0

49 24 301.3 38.3

263.5 38.2

301.7 76.5 2.30

262.5

51.38 301.4 38.9 2.26

187 5 262.1 40.1

7 46 46 302.2 79.0 2.22

12 46.8 46

4598.5825

4597.6777

+0.8548

2.17

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1898phae.proj.1356.

Nov 4. 1898

Left & below

VIII

262.4

7 35 30 301.8 39.4

262.4 38.7

301.1 78.1 2.20

26 26

263.0

57 38 302.1 39.5 2.23

261.9 40.1

302.0 79.6 2.21

Right & above

351.9

8 10 27 32.3 40.4

351.4 43.1

34.5 83.5 2.09

351.5

2.04

2 30 34.68 43.3

286 0 351.4 40.6

7 59 1 32.0 83.9 2.08

12 59 1

2.16

40-98.5410

4597.6777

+ 0.8633

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1898phae.proj.1356.

Nov. 4 1898

Right & above

IX

35 2.8

8 6 47 38.3 40.5

351.21 42.2

33.3 82.7 2.12

349.8

9 10 33.9 44.1 2.02

351.28 40.8

32.6 84.9 2.05

Left & below

82.1

13 39 120.9 38.8

81.3 41.3

122.6 80.1 2.19

80.6

16 00 122.3 41.7 2.16

5 36 81.3 40.2

8 11 24 121.5 81.9 2.14

13 11 24 2.12

4098.5496

4597.6777

+0.8719

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1898phae.proj.1356.

Nov. 4, 1898.

Left & below. X

82.0

8 21 20 121.4 39.4

~~80.8~~ 41.8

812 81.2 2.16

1230

~~1230~~

23 15 813 2.16

122.7 41.4

81.97 39.5

121.2 80.9 2.17

Right & above

~~3000~~ 170.50

3000 214.0 44.0

169.8 43.2

2130 87.2 1.99

1692

1.98

3300 213.1 43.9

107 35 ~~170.1~~ 44.1

8 26 54 169.8 88.0 1.97

13 26 54 213.9 2.07

4598.5603

4597.6777

+0.8826

1898phae.proj.1356

Nov. 4. 1898.

Right & above

		172.1		
8	37 54	212.8	40.7	
		169.1	44.8	
		213.9	85.5	2.04
		169.9		2.04
	43 15	213.8	43.9	
		171.9	42.0	
		213.9	85.9	2.03

Left & below

		2685		
	47 54	301.0	37.5	
		262.3	38.7	
		301.0	76.2	2.31
		2627		2.3
	49 42	3008	38.1	
	18 45	264.9	35.8	
8	44 41	300.7	73.9	2.88
13	44 41			2.19

4098.5727
4098.5673 = Ep. 36
+0.0054
.0096
.0150

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1898phae.proj.1356.

Nov 4 1898

Left & below

XII

264.0

8 0 2 45 300.84 36.4

2626 38.0

300.6 74.4 2.36

264.6

2.40

54 33 300.9 36.3

264.0 35.9

299.9 72.2 2.43

Right & above

3536

57 47 31.9 38.3

35.68 40.2

32.0 78.5 2.24

3521

2.22

5 9 10 33.1 41.0

23 45 352.9 38.9

8 55 56 31.8 79 2.20

13 55 56

2.31

4598.5805

4598.5673

0.0132

.8896

.9028

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Nov 4 1898

Parkhurst's Variable Rho δ 20 Wolf

20 8 +14.8

27 55

Left & above 47

335.4 Comp std dis.

9 53 45 48.6 73.2

336.7 68.9

45.6 142.1 0.73

336.1

55 30 46.9 70.8 0.70

334.0 73.9

47.9 144.7 0.68

Right & ~~above~~ below

65.7

57 54 137.0 71.3

68.9 66.4

135.3 137.7 0.82

65.3

59 50 136.8 71.5 0.77

26 59 66.0 71.3

9 06 ~~40~~ 45 137.3 142.8 0.72

14 56.8 45

4598.6228

~~4591.5673~~

Mean 0.74

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1898phae.proj.1356

Nov. 4 1898

Right & below — II

649

10 1 34 — 138.4 — 73.5

669 — 69.2

136.1 — 142.7 — 0.72

66.7

2 48 — 136.0 — 69.3 — 0.76

67.9 — 69.0

136.9 — 138.3 — 081

Left and above

139.9

1 44 — 227.5 — 73.6

158.0 — 71.3

229.3 — 144.9 — 068

158.9

13 10 — 229.1 — 70.2 — 0.70

28 16 — 155.0 — 73.0

10 7 4 — 224.0 — 143.2 — 0.71

15 7 4

4598.6300

(mean 0.73

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1898phae.proj.1356

Nov. 4 1898.

Left of above

	1549			
10 15 00	228.8	73.9		
	1756.0	71.5		
	227.5	1454	0.67	
	1565			
16 45	227.6	71.1		0.66
	154.4	75.1		
	229.5	146.2	0.65	

Right of below

	~~246.4~~			
	~~319.1~~			
	247.9			
21 40	317.9	70.0		
	245.8	71.2		
	317.0	141.2	0.70	
	246.9			
28 7	320.5	73.6		0.74
1 31 2	248.9	68.1		
10 20 23	316.0	141.7	0.74	
15 20 23				
4098.6392				

Mean 0.70

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1898phae.proj.1356.

Nov 4 1898

Right & below

	247.0			
18 29 30	38.1	71.1		
	~~246.9~~	70.4		
	247.5	141.5	0.74	
	317.9			
	247.1			
31 8	316.5	69.4		0.73
	246.6	73.4		
	320.0	142.8	0.72	

Left and above

	336.1			
34 10	46.1	70.0		
	337.2	69.9		
	47.1	139.9	0.78	
	336.0			
35 45	47.6	71.6		0.74
10 33	337.0	71.5		
10 32 38	48.5	143.1	0.71	
10 32 38				

~~4598.4393~~

4598.6476

Mean 0.74

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1898phae.proj.1356.

Nov 4, 1898

Left & above

336.7

10 38 15 47.1 70.3

336.0 71.1

47.1 141.4 0.75

336.0.

41 20 47.0 71.0 0.74

335.7 71.8

47.5 1428 0.72

Right & below

69.7

44 38 136.6 68.9

68.0 68.0

1360 136.9 0.84

64.9

45 40 137.2 70.3 0.80

9 53 67.1 70.9

10 42 28 1380 141.2 0.75

15 42 28

4598.6546

Mean 0.77

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1898phae.proj.1356

Nov. V. 1898. (Saturday)

Sawyer's new Var. Phot. V. Gr. 60.

18	24	+12, V
21	10	
+2	E6	

18	24
21	25

V	V0	Cloudy.
6	0	"
7	0	"
A	0	"
A	30	All thickly cloudy. No chance for any work.

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1898phae.proj.1356.

Pocketto here

Nov. 7. 1898. (Mon.)

Planet	D.		W. obs.
	21	4	-4.6
	22	20	
	1	16	
	21	2	-4.0
	22	28	
	1	26	

		c compared with a		Star c compared with b	
		4.2		17.5	
		4.2		17.5	
7	28	4.0	4.2	17.4	17.4
		4.2		17.5	
		4.2		17.3	

		Star d compared with a		Star d compared with b	
		10.5		11.0	
		10.2		11.0	
7	33	10.5	10.4	11.3	11.1
		10.5		11.0	
		10.3		11.1	

		Star e compared with a		Star e compared with b	
		18.0		3.3	
		18.0		3.2	
7	41	18.0	18.1	3.3	3.2
		18.3		3.2	
		18.0		3.1	

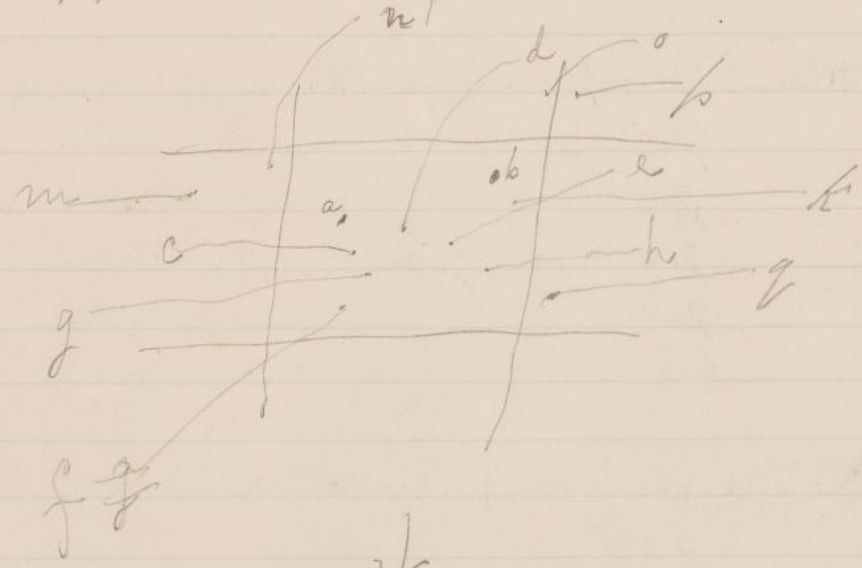
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1898phae..proj..1356.

Nov. 7. 1898.

		Star f compared with star a		Star f compared with star b	
		3.3		18.0	
		3.3		18.1	
7	44	3.4	3.4	18.0	18.0
		3.5		18.0	
		3.5		18.0	

		Star g compared with star a		Star g compared with star b	
		8.0		13.7	
		8.0		13.8	
7	50	8.0	8.0	13.6	13.6
		8.1		13.5	
		7.9		13.5	



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1898phae.proj.1356.

Nov. 7, 1898.

Star h compared with b Star compared with

		0.0	
		+0.2	
8	03	+0.2	+0.2
		+0.3	
		+0.5	

Star k comp. with star b

		5.0	
		4.7	
8	23	5.0	4.9
		4.7	
		5.0	

Star b comp. with star a

		7.0	
		7.0	
8	47	7.0	7.0
		7.0	
		6.8	

Star m comp. with a

		35.5	
		36.0	
8	52	35.8	35.8
		36.0	
		36.0	

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1898phae.proj.1356.

Nov. 7, 1898.

Star n comp. with star a.

12.5
12.5
12.7 126
8 58 12.7
12.5

Star o comp. with star b

6.0
6.0
6.0 6.0
9 10 5.8
6.0

Star p comps. with star b.

15.0
14.5
9 11 14.5 14.6
14.5
14.5

Star q comps with b

16.5
17.0
9 25 16.8 16.8
16.8
16.9

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1898phae.proj.1366.

Nov. 7, 1898.

	U Vulpec	Phot.		U obs.
		19	28	19.5
		28	46	
		6	18	

Left & above

	2649			
10 30 8	300.0	35.1		
	264.0	36.5		
	300.5	71.6	240	
	2630			
32 14	299.0	36.0		248
	264.3	34.2		
	2985	70.2	250	

Right & below

	3571			
35 00	27.8	30.7		
	3540	37.0		
	31.0	67.7	259	
	3526			
36 45	28.3	35.7		252
14 7	3539	36.2		
10 33 7	30.1	71.9	244	
15 33 7				

4601.6480
4600.4700
+1.1780

Mean 250

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1898phae.proj.1356.

Nov. 7. 1898.

Right & below

353.3
30.3 37.0
10 ~~38~~ 30 356.1 33.5
29.9 70.5 248

352.2
40 5 21.1 35.9 246
353.4 36.1
29.0 72.0 244

Left & above

834
42 42 121.0 37.6
~~844~~ 37.6
835 75.2 234
121.1

81.0
44 00 120.5 39.5 235
5 17 84.9 35.1
10 41 .19 ~~119.5~~ 74.6 236
15 41 .19 120.0

4601.6037
4600.4700
+1.1837

Mean 240.

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1898phae.proj.1356.

Nov. 7 1898.

III

Left & above

81.3

10 47 27 121.5

82.0

122.2

82.1

Abandoned too low

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1898phae.proj.1356.

Nov. 8, 1898. (Tuesday)

Planet D 2 Wolf.

21	4
22	25
1	21

-47

Watch correction +8 sec. (Watch slow)

Star b comp. with star a

12.0
12.0
7 17 12.2 120
12.0
120

Star c comp. with star a

13.0
13.0
7 20 13.0 129
12.6
12.8

Star d comp. with star a

14.5
7 22 14.8
14.5 146
14.5
14.5

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1898phae.proj.1356.

Nov. 8. 1898.

Star e comp. with star a

9.2
9.4
7 20 9.1 9.3
9.5
9.2

Star f comp. with star a

14.5
14.8
7 28 15.0 14.9
15.0
15.0

cloudy

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1898phae.proj.1356.

Nov. 8, 1898.

U Vulpec Phot T Wobs.

19 22 19.5

Left & above 23 32

~~7~~ 4

~~7~~K 4

8 19 30 303.1

262.4

263.0

302.0

261.0

31 32 301.3

262.8

300.5

Right & below

Abandoned.

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1898phae.proj.1356

Nov 8. 1898.

Right & below

I

351.0

L 50 50 31.4 40.4

352.9 39.8

32.0 80.2 2.19

352.6

57 44 32.8 40.2 2.20

352.3 39.5

31.8 79.7 2.20

Left and above

82.1

56 5 122.41 40.0

81.6 39.9

121.5 79.9 2.20

L24

L19 3. 9 122.0 39.6 2.20

221 48 81.5 40.6

8 55 27 122.1 80.2 2.19

+8

13 55 35

4602.5803

4600.4700

+2.1103

Mean 2.20

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1898phae.proj.1356.

Nov. 8, 1898.

Left and above II

82.5

9 11 24 121.3 38.5
81.6 40.9
122.5 79.7 220

82.6

14 54 121.1 38.5 224
83.0 38.3
121.3 76.8 229

Right & below

171.8

17 40 212.0 +0.2
173.2 37.9
211.1 78.1 225

171.8

20 24 210.9 39.1 224
64 22 172.0 39.3
9 16 6 211.3 78.4 224
+8
14 16 14

4602.5940
4600.4700
+2.1245

Mean 224

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1898phae.proj.1356.

Nov. 8. 1898.

Right & below

	172.0			III
10 25 00	211.7	39.7		
	171.6	39.5		
	211.1	79.2	2.22	
	172.0			
21 19	211.8	39.8		2.20
	172.0	40.3		
	212.3	80.1	2.19	

Left & above

	262.4			
83 45	302.1	39.7		
	262.6	39.2		
	300.7	77.9	2.26	
	262.7			
39.6	301.7	39.0		2.24
6 10	262.1	39.8		
10 31 32	301.9	78.8	2.23	
+8				
15 31 40				

4602.6470
4600.4700
+2.1770

9 ✓4

" "

0 Ceti. Mean 2.22

h 4 Var. Var. 3 K N. E. H. Ho.

h 4 " " 3 K " Spencer "

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1898phae.proj.1356.

Posted to here.

Nov, 8, 1898.

	o Ceti	Phot		Wolbach
		2 12	-3.6	
	Right	1 22		
	213,5	50		I
10 3 43	220,8	73		
	214,1	6.5		
	220.6	13.8	-6.10	
	214.1			
7 15	220.6	6.5	-6.12	
	213.6	7.1		
	220.7	13.6	-6.13	
	Left.			
	303.0			
9 40	311,0	8.0		
	304.7	5.9		
	310.6	13.9	-6.08	
	304.3			
11 48	310,6	6.3	-6.20	
32 26	304,75	6.1		
10 8 6	310.6	12.4	-6.33	
+8				
15 8 14				

4602.6307

Mean -6.16

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1898phae.proj.1356.

Nov 8 1898

Left

304.2

10 17 20 310.8 6.6

304.6 6.2

310,8 12.8 - 6.26

304.5

19 30 311,0 6.5 -6.22.

304.2 6.8

311.0 13.3 - 6.18

Right.

34.21

22 48 40.98 6.7

34.4 6.5

40.9 13.2 -6.20

34.2

24 00 40.88 6.6 -6.20

4 28 34.1 6.6

10 21 7 40.7 13.2 -6.20

+8

15 21 15

4602.6397

Mean -6.21

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1898phae.proj.1356.

Nov. 11. 1898. (Friday)

Planet & Q W. ob.

21 10 — V. I

22 10.

1 00 W

Watch correction +10 sec (Watch slow.)

Star b comp. with star a

~~5.2~~

~~5.0~~

6 48 2.6

2.6

2.7

6 49 2.9

2.8

2.8

Star d comp. with star b

4.5

4.8

6. 0-2 4.7

4.5

4.7

4.8

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1898phae.proj.1356.

Nov. 11, 1895.

Star c comp with star a.

6.3
6.5
6 56 6.3
6.3
6.5
6.3

Star d comp. with star a

4.9
4.5
4.7
7 17 4.9
4.5
4.6

Star d comp with star b

3.1
3.0
7 18 3.0
3.0
3.0
3.0

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1898phae.proj.1356.

Nov 11, 1898.

For Zero 3468 Planet 8 Q.

Fr. 0

301.∝

1st group.

23h	33m	44.4	Star,	} South half.
	34	01.8		
	35	16.1	Planet	} South half.
		37.2	"	

35	57.6	−0.2	
36	15.6		2
37	29.8		
	50.0	+0.1	

~~38 14.6 −0.2~~

38	57.5		3
39	15.5		
40	30.1	−0.2	
	50.6		

41	11.6		4
	29.7		
42	43.6	+0.4	
43	04.7		

43	32.4	−0.2	
5	50.9		
44	05.5		5
	25.3	+0.4	

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1898phae.proj.1356.

Nov. 11, 1898.

2 d "groups.

23h	46	51.3		
	47	10.0	+0.11	+
	48	24.5		
	48	45.2		
	49	04.0		1
	50	19.6		
		39.0	−0.2	
				2
	51	22.6		
	51	53.1		
	52	11.8		2
	53	27.5	−0.2	
		46.5	−0.5	
	54	07.6		
	54	42.8		3
	55	01.8	−0.2	
	56	17.5	−0.2	
		36.2		
	56	54.0		
	57	13.0		4
	58	28.5	+0.3	
		48.0		

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1898phae.proj.1356.

Nov. 17, 1898

0^h	00^m	00.5	
		19.4	
	01	35.5	5
		53.9	

3d " group.

			1
	02	23.2	
		42.6 −0.1 v	
	03	59.0 v	
	04	17.2 −0.2	
	05	00.6	
		20.0 −0.1 v	
	06	36.4	2
		54.5 −0.1	
	07	13.8 −0.1 v	
		33.6 −0.2	3
	08	50.0	
	09	08.1	
	09	27.9	
		47.1 +0.1 v	4
	11	04.8	
		22.5 −0.3 v	

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1898phae.proj.1356.

Nov. 11, 1898

0^h	11	$56.5 - 0.2$	5
	12	15.9	
	13	33.0	
		$51.0 - 0.2$	

Comp. Star = SD − K° 40 2 (9.2) Sch. = Schjellerup 2527

B 312.			B 236.		
h	48	0.0	0	26	20.7
	49	0.0		27	21.0
	50	0.0		28	21.2

∴ Correction to B 312. is $+2^m$ 0.1

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1898phae.proj.1356.

Nov. 11, 1898.

Planet DQ. Plat. 2. H. obs.

Left & above

& 5.

9 16 10 18.9 ~~18.4~~

& 4.9 13.9

17.8 12.9

26.8 4.65

5.0

18 46 17.7 12.7

3.7 14.8 4.62

18.5 27.5 4.59

Right & above

96.80

21 14 108.1 12.18

9 16.5 11.2

107.7 23.3 4.96

95.4 4.97

22 37 107.3 11.9

9 78 47 96.84 11.2

19 42 +10 107.6 23.1 4.95

14 19 52

Mean 4.80

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1898phae.proj.1356.

Nov. 11, 1898.

Right & below

		96.6			
9	23 52	107.9	11.3		
		96.1	11.7		
		107.8	23.0	4.98	
		96.3			
	25 30	107.8	11.5		5.00
		95.8	11.2		
		107.0	22.7	5.01	

Left and above

		185.6			
	28 00	198.5	12.9		
		186.4	11.6		
		198.0	24.5	4.85	
		185.6			
	29 40	199.0	13.4		4.80
	27 2	185.9	12.1		
9	26 46	198.0	25.5	4.76	
	+10				
14	26 56				

Mean 4.90

Comp. $\delta_{1900} = \delta_D - 4^\circ\ 5410 (A - K)$

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1898phae.proj.1356.

Nov. 11, 1898.

U Vulpec Phot P W obs

19 28 19.5
25 26
6 58

Left & above

2639 I

9 53 10 29.85 34.6
262.8 36.9
299.7 71.5 2.46

268.0

5436 300.2 37.0 2.44
263.6 35.4
299.0 72.4 2.43

Right & below

353.0

5627 29.6 36.6
350.8 42.0
328 78.6 2.24

3520

87 45 343.7 41.7 2.22
21 58 353.6 38.4
9 55 20 +10 32.0 80.1 2.19

14 55m 40

4600 : 6200
4600 . 4700
+5. 1500

Mean 2.33

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1898phae.proj.1356.

Nov 11 1898

Right & below

II

353.0

9 59 10 32.40 39.0

352.2 38.8

31.0 77.8 2.26

352.9

10 or 15 32.50 39.1 2.27

352.9 38.0

30.9 77.1 2.28

left & above

23.6

2 22 119.4 36.8

82.6 38.9

127.45 74.7 2.36

82.5

3 32 119.4 36.9 2.34

5 25 81.8 38.5

9 61 21 120.23 75.4 2.33

+10

15 1. 31

4605.6261

4600.4700

+5.1561

Mean 2.30

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1898phae.proj.1356.

Nov. 11. 1898.

III

Left & above

81.6

18 0 45 119.3 37.7

82.0 39.3

120.3 77.0 2.28

81.1

7 19 119.8 38.7 2.32

83.2 36.0

119.2 74.7 2.36

Right & below

174.0

10 00 213.9 39.9

170.1 41.1

211.2 80.3 2.19

171.1

12 20 214.5 40.4 2.22

35 24 172.5 37.6

10 8 57 210.1 78.0 2.25

+10

15 9 1

4605.6312

4600.4700

+5.1612

Mean 2.27

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Nov. 11, 1898

Right & below

	171.6			
10 13 56	210.4	38.8		
	170.3	39.7		
	200.0	78.5	2.24	
	170.8			
15 30	211.1	40.3		2.24
	171.7	38.3		
	210.0	78.6	224	

left & above

~~299.3~~				
	264.9			
18 00	299.3	34.4		
	263.0	38.0		
	301.0	72.4	243	
	263.5			
~~20 20~~	299.6	36.1		2.44
~~67 48~~	263.6	35.4		
~~10 16 56~~ +10	299.0	71.5	2.46	
~~15 17 6~~				

(mean 2.34

67 46
10 16 56
+10
15 17 6

4605.6369
4608.4700
+6.1669

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Left & above

	2621			V
r 24 00	2989	368		
	2630	361		
	2991	729	241	
	2637			
25 34	2991	354		244
	2636 2	361		
	2993	715	246	

Right & below

	3531			
27 30	324	393		
	3514	711		
	325	804	218	
	3521			
28 45	323	402		221
25 49	3531	382		
10 26 27	313	784	224	
+10				
15 26 37				

0 Ceti. Mean 232

12 10	h 5 Var.	Var. 2K	N. 6.	N. obs.	
12 11	h 4 Var.	Var. 2K	"	Colour obs.	

4605.6435
4600.4700
0.1735

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Nov. 12, 1898. (Saturday)

Planet D.2. W obs.

2 10 −5.1
23 2
~~2 8~~
1 52

182 ~/11.7
91 5.2
96 secs. 5.2 north.

Star b comps. with star a

2.0
2.0
7 0-4 2.0
2.0
2.0

Star b comp. with star c

1.5
1.6
7 56 1.5
1.7
1.5

Asteroid identified but too cloudy to measure; invisible most of time in ordinary eye piece.

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1898phao.proj.1356.

Nov. 12. 1898

R Cygni Phot T Wolf.

19 53 +50.0

Comp. Star a 24 8

4 35

Left

177.2

8 37 30 206.1 29.9 v

175.7

206.1 30.4 v

v 93 v 2.49 v

175.9 31.1 v 2.47 v

40 32 207.0

176.9 29.1 v

206.0 60.2 v 2.44 v

1

Right

266.6 30.0 v

42 40 297.4

267.1 29.9 v

297.0 60.9 v 2.45 v

266.1 30.2 v 2.45 v

44 24 296.9

5 6 267.9 29.3 v

8 41 16 297.2 60.1 v 2.46 v

−1 mean + 2.46 v

3 41 15

4606.5702

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Nov. 12, 1898.

Comp. stars for T Herculis 2 obs

18 6 +31.4

24 38

6 32

b 5 m

m 5 m

n 4.5 o

9 10 o 8 p

p 4.5 q

q 6 r

r 4 s

s 3.5 t

Watch correction - 1 sec. (watch ~~slow~~ fast)

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Nov. 12, 1898.

Parkhurst new variable

20 8 +14.8

20-24

5. 16

abandoned too hazy

X Ceti W obs

3 11 −1.5

1 5N

1 18

abandoned

o Ceti Phot. R W obs

Left 2 12 −3.6

308.7

10,2,50 | 303.8 7.6 1 5 5

303.1 7.0 17 I

310.1 14.6 5.98

246 | 308.0 310,2 303.0 310 3 7.2 7.3 14.5 5.99 5.98

Right

26.30 | 33.0 40.1 33.5 40.3 7.1 6.8 13.9 6.08

28.45 | 33.6 40.1 33.0 40.2 6.5 7.2 13.7 6.11 6.10

21 11

10 25 18

15 25 17

4606.6426

mean 6.04

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1898phae.proj.1356.

Nov. 12, 1898

II

time	Right.		
10, 30, 39	33.1		
	40.9	7.8	
	33.5	7.0	
	40.5	14.8	5.90
	33.6		5.98
10, 32, 19	40.6	7.0	
	33.2	7.4	
	40.6	14.4	6.01

Left.

~~35, 30 | 13 99~~

37, 00	122.8		
	130.8	8.0	
	123.4	7.1	
	130.5	15.1	5.90
39, 00	123.5		
	130.3	6.8	5.99
	123.1	7.1	
	130.2	13.9	6.08

18.58
11 34 44
15 34 43
4606.6491

o Cet. Mean 5.98

10 4v h 6 var. var 1v k Yr. obs. (H E.)

10 4v h 6 Var. Var 1v k Spencer " "

Var. a little more in hage than comp. class.

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1996phae.proj.1356.

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