KG
11365
589

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KG 11365.589

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Mar. 10. 1908.

B. + C. 1182. B. 394.

9	37	2 V.0		9	37	0.0
	38	2 V.0			38	0.0

Re Opp Jup. I Phot R. 26 Abs Rowe Rec
Compared with nearer of two Sats (before eclipse) on same foll. side = Sat II

N	7	23	10	7	46		Suspected	
	7	3 V		7	58		~~Seeing~~	psew
	7	V 0		8	13		211.0	
	8	13		8	36	39.V	250.5	+2.2
	8	2 V		8	48	VV.3	195.2	+1.4
	8	36		8	59	63.8	259.0	+1.0
	8	K 8		9	11	68.0	191.0	+0.9
	9	K		9	27	71.8	262.8	+0.7
	9	14		9	37	7 V.4	187.4	+0.6
	9	2 K		9	47	79.7	267.1	+0.4
	9	37		10	0	8 3.4	183.7	+0.3
	9	K 9		10	12	8 6.3	270.0	+0.1
	10	1		10	24	90.8	179.2	0.0
	10	22		10	45	9 V.6	274.8	−0.2
	10	K 3		11	6	9 V.8	179.0	−0.2
	11	31		11	26	97.0	276.0	−0.3
				11	43		178.8 ~~+79.8~~	
				12	6	92.2	277.0	

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1908phaeo.proj..590W

Mar. 10, 1908.

	12	33	97.0	178.0	-0.3	1
	13	16	97.6	275.0		
	13	28		179.1		
	13	42	96.9	276.0	-0.3	
	13	53	97.6	178.5		2
	14	6	97.2	276.1		
	14	18		179.5		
	14	29	96.6	275.0	-0.2	
	14	37	96.2	179.9		3
	14	53	96.4	275.1		
	15	4		179.9		
	15	20	96.3	275.2	-0.2	
	15	32	97.0	179.0	+0.0	4
	15	47	96.2	276.0		
	16	2		179.2		
	16	13	96.2	276.0	-0.2	
	16	24	94.8	180.0		
	16	39	96.2	274.8		
	16	52		179.3		
	17	4	96.2	275.5	-0.2	
	17	20	96.6	179.2		6
	17	31	96.9	274.8		
	17	42		179.0		
	17	57	97.6	276.5	-0.3	
	18	9	96.2	178.8		7
	18	20	96.2	275.0		

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1908phae.proj..590W

Mar. 10, 1908

10	18	28		179.2	
	18	39	97.4	276.6	−0.3
	18	55	96.3	179.1	8
	19	10	96.2	275.4	
	19	28		178.5 ~~178.9~~	
	19	45	97.9	276.4	
	21	18	99.0	178.0	−0.3 9
	21	39	98.4	277.0	
	~~21~~	~~50~~		Limit of visibility	
	22	4	43.1	205.9	
	22	22	40.8	249.0	+2.1
	22	37	42.0	206.3	
	22	54		247.1	

Seeing somewhat blurry, altitude high, Jupiter and images a little fuzzy, cold rather sharp making seeing a little blurry but eclipse considered pretty good with care exercised

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1908phae.proj..590W

Mar. 10, 1908

B. & C. 1142.			B. 394.		
10	31	21.5	10	31	0.0
	32	21.5		32	0.0

Mar. 31, 1907 Aurigae

5	50	+4.7.9
10	10	
4	20	

Impossible to measure variable ~~o~~ ratio factorily tonight on account of bright moon light, faintness of variable, and some what poor seeing. ~~It is~~ At the present time the comp. star of March 7, 1908. cannot be measured very satisfactorily with the comp. star of March 9, 1908. on account of bright moon light and the fact that the sky is becoming more or less cloudy. The two comparison stars can be better picked some other night.

W's watch used for times
Watch 14. secs. fast.

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1908phae.proj..590W

Mar. 11, 1908 (Wednesday).

U Als. Rowe Rec.

7 10 Sky pretty cloudy everywhere especially in the north.

Fourth Type Star +14° 1283

6	12	+14.8
7	3	
0	51	Phot. T.

Full Aperture Used.

Color 6 with ordinary eyepiece.

Index left. B. — Fourth type dis.

267.0	~~Index left~~
7 41 45 344.0	77.0 ✓
92.8	64.7 ✓
157.5	141.7 ✓ −0.74 ✓
273.5	64.5 ✓ −0.72
338.0	79.4 ✓
86.1	143.9 ✓ −0.70 ✓
165.5	

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1908phae.proj..590W

Mar. 11, 1908.

Index	Right A.	
184.1	64.9	
249.0	77.5	
357.5	142.4	-0.73
75.0		
		-0.73
176.8	77.4	
254.2	64.8	
3.8	142.2	-0.73
68.6		

Mean -0.72

7 49 50
91 3
7 4 46
+ -1
12 45 33
Ro 12. 31

S.T. 7 30
H.A+1 8
Dec +15.2
P.A. 203.2 Vernier B.
Sprocket -5.5 B, -4.5 C.

Sky pretty cloudy but clouds somewhat thinner in this region at time of observation. The clouds were not of a heavy massive character but rather of a somewhat condensed feathery nature so that the stars, under measurement were very well seen through them. The images also, were relatively steady. Measurement considered good.

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1908phae.proj..590W

Mar. 11, 1908

Fourth Type Star -1° 23 12

9	32	-0.5
8	0	
1	32	
12		
10	28	

Sky too cloudy, abandoned

W's watch used for times
Watch 15 sec. fast.

L. P. P.

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1908phae.proj..590W

Mar. 12, 1908 (Thursday)

Fourth Type Star +59° 2810

$\frac{0}{7}$ $\frac{2}{2}$ $\frac{}{7}$ $\frac{}{0}$ +58.3

W. Obs. Rowe Rec. Phot. T.

Color 7 with ordinary eyepiece.

Full aperture Used.

Index Lt B. B.

177.6 ← Fourth Type Dis.

7 38 15

253.2 75.6 ✓

4.8 59.1 ✓

63.9 134.7 ✓ −0.88 ✓

186.6 59.6 ✓ −0.87 ✓

246.2 76.2 ✓

357.7 135.8 ✓ −0.86 ✓

73.9

Index Rt a A.

90.6 72.4 ✓

163.0 62.7 ✓

275.3 135.1 −0.87 ✓

338.0

−0.85 ✓

94.9 60.9 ✓

155.8 76.2 ✓

270.0 137.1 ✓ −0.83 ✓

346.2

Mean −0.86 ✓

7 45 45

24 0. ✓

7 42 0. ✓

+✓ +1. ✓

12 42 1. ✓

α 13.✓292 ✓

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1908phae.proj..590W

Mar. 12, 1908

S.T 7 31
H.A +7. 33
Dec +60.1
P.A 259.8 Vernier B
Sprocket −0.5 B, +0.5 C.

Fourth Type Star +14°.2048

9	7	+15.5
7	57	
1	10	W. Obs. Rowe Rec.
12		Phot. T.
10	50	

Color 3 with ordinary eyepiece

Index Above	A.	
357.3	Fourth Type Dis	
74.5	77.2	
190.2	50.6	
240.8	127.8	−1.63
10.5	50.4	−1.08
60.9	71.9	
179.3	122.3	−1.14
251.2		

8 39 5

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1908phae.proj..590W

Mar. 12, 1908.

Index Below B.

265.8	76 5	
342.3	54 4	
99.0	130.9	−0.96
153.4		
		−0.98
280.9	52.6	
333.5	76 7	
87.8	129.3	−0.99
164.5		

Mean −1.03

S 48 30
27 3
A 43 44
+1 +1
13 43 49
A 013.5721

S. T. 8 33
H. A. −0 37
Dec +13.9
P. A. 2820 Vernier B
Sprocket. −3.5 B, −2.5 C

Fourth Type star +46° 1817

12	38	+46.2
9	0	
3	38	
12		
8	22	

Telescope necessary to look up. Found,

Color 6 with ordinary eyepiece
Wilds. Power Res. Phot 4.

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1908phae.proj..590W

Mar. 12, 1908

Index Lt a B.

24.5 ← Fourth Type Dis.

9 30 50

49.1	24.6 ✓	
206.8	18.0 ✓	
224.8	42.6 ✓	−3.63 ✓
27.2	19.4 ✓	−3.52 ✓
46.6	27.5 ✓	
201.5	46.9 ✓	−3.41 ✓
229.0		

Index R+B A.

291.6	27.7 ✓	
319.3	17.8 ✓	
118.7	45.5 ✓	−3.48 ✓
136.5		
		−3.48 ✓
297.2	17.5 ✓	
314.7	28.0 ✓	
112.7	45.5	−3.48 ✓
140.7		

Mean −3.50 ✓

9 37 10

	66	0. ✓
9	34	0. ✓
tr		+1. ✓
14	34	1. ✓

α 13.6069 ✓

S.T. 9 21

H.A. −3 22

Dec + 45.3

P.A 258.5 Vernier B

Sprocket −2.5 B, −1.5 C.

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1908phae..proj..590W

Mar. 12, 1908.

Fourth Type Star + 610 667

3	44	+62.7
9	35	
5	51	

Color 3 with ordinary eyepiece

Index L + a B,

90.8 ← Fourth Type Dec

10·8 35

150.0	69.2 ✓	
277.2	561 ✓	
333.3	125.3 ✓	−1.08 ✓
99.0	54.2 ✓	−1.06 ✓
153.2	73.4 ✓	
269.3	127.6 ✓	−1.03 ✓
3427.		

Index R + B +,

356.1	76.7 ✓	
72.8	559 ✓	
188.7	132.6 ✓	−0.92 ✓
244.6		
		−0.88 ✓
7.6	58.1 ✓	
65.7	786 ✓	
176.2	136.7 ✓	−0.84 ✓
2548		

Mean −0.97 ✓

10- 15 45

	24 20.	✓
10	12 10.	✓
hr	+1.	✓
hr	12 11.	✓
Ao	13.6334	✓

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1908phae.proj..590V

Mar. 12, 1908.

S. T. 9 59
H. A. +6 0
Dec. +62.1
P. A. 185.5 Vernier B
Sprocket -4.5 B, -3.5 C.

Fourth Type Star +38° 1539
6 26 +38.6
10 10
3 44 W. Obs. Pour Rec
~~10~~ Phot T.
~~8~~ 16
Color 5 with ordinary eyepiece

Index Lt A B.
289.5 ← Fourth Type Dis.
322.5 33.0
114.0 238
137.8 56.8 −2.98

293.9 24.5 −2.98
318.4 321
110.7 56.6 −2.99
142.8

10 42 50

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1908phae..proj..590W

Mar. 12. 1908

Index R+B A.

200.8 31.6 ✓
232.4 22.7 ✓
25.6 54.3 ✓ −3.09 ✓
48.3

−3.04 ✓

205.0 22.8 ✓
227.8 33.7 ✓
20.1 56.5 ✓ −3.00 ✓
53.8

Mean −3.01 ✓

10 50 0
92 ✓0. ✓
10 46 2✓ ✓
+✓ +1. ✓
1✓ 46 26. ✓

A013.6✓72 ✓

S.T. 10 33
H.A. +4 2
Dec. +39.0
P.A. 191.0 Vernier B
Sprocket −3.5 B, −2.5 C

W's watch used for times.
Watch 1 sec. slow.

L. P. P.

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1908phae.proj..590

Mar. 14, 1908 (Saturday)

Fourth Type Star + 53° 66

0	29	+53.1
7	13	
6	44	

W. dbs. Rowe Rec. Phot. T.
Abandoned. Haze too thick.

Fourth Type Star +68° 617

10	35	+68.2
7	35	
3	0	
12		
9	0	

Color 5 with ordinary eyepiece
W dbs. Rowe Rec. Phot T.

Index Ltd B.

	197.8 ← Fourth Type Dis	
7 57 30	233.4 35.6 ✓	
	23.2 28.0 ✓	
	51.2 63.6 ✓	−2.73 ✓
	202.2 26.8 ✓	−2.64 ✓
	229.0 41.8 ✓	
	16.0 68.6 ✓	−2.55 ✓
	57.8	

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1908phae.proj..590W

Mar. 14, 1908

Index	R+B	A.
106.4	40.8 ✓	
147.2	24.3 ✓	
294.6	65.1 ✓	−2.67 ✓
318.9		
		−2.64 ✓
113.9	27.1 ✓	
141.0	39.6 ✓	
286.0	66.7 ✓	−2.62 ✓
325.6		

Mean −2.64 ✓

8	3	55
	121	2 √. ✓
a	0	42 ✓
+√		+14. ✓
13	0	√6. ✓

a01√. √423 ✓

S.T. 7 55
H.A −2 45
Dec. +67.4
P.A. 239.5 Vernier B
Sprocket −3.5, −2.5 B, −1.9 C.

Fourth Type Star +31° 1388

6	36	+29.1
8	6	
1	30	

Cola 5 with ordinary eyepiece

W. Obs. Row Rec. Phot. T.

Full Aperture Used.

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1908phae.proj..590

Mar. 14, 1908

Index R & a A.

261.7 ← Comp. Star Dec.

348.4 86.7 ✓

93.8 64.2 ✓

158.0 150.9 ✓ +0.56 ✓

276.9 65.5 ✓ +0.52 ✓

342.4 89.7 ✓

81.7 155.2 ✓ +0.47 ✓

171.4

Index L & B B.

352.6 91.8 ✓

84.4 66.2 ✓

183.8 158.0 ✓ +0.42 ✓

250.0

+0.38

5.8 66.0 ✓

71.8 96.7 ✓

167.7 162.7 ✓ +0.33

264.4

Mean +0.45 ✓

S. T. 8 41

H. A. +2 3

Dec. +31.9

P. A. 110.0 Vernier B

Sprocket — 3.5 A, −2.5 B, −1.8 C.

8 36 35

8 50 35

27 10. ✓

& 43 3√. ✓

+√ +14. ✓

13 43 49. ✓

201√. √721 ✓

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1908phae.proj..599W

Mar 14, 1908

ε Aurigae

4 52 +43.6
9 10
4 18 U. Ob. Rowe Rec. Phot T.

7 inch Cap used.

Index L+a B. I

116 5 ← Variable Dis
137.6 21.1 ✓
300.0 136 ✓
383.0 34.1 ✓ −4.12 ✓

9 36 35

119.8 14.6 ✓ −4.08 ✓
134.4 20.9 ✓
295.5 35.5 ✓ −4.03
316.4

Index R+B A. ✓

25.0 22.6 ✓
47.6 15.5 ✓
208.4 38.1 ✓ −3.88 ✓
223.9

−3.92 ✓

28.9 14.7 ✓
43.6 22.0 ✓
205.3 36.7 ✓ −3.96 ✓
227.3

Mean 4.00 ✓

9 43 50

0 0 2 ✓ ✓
−9 40 12. ✓
+✓ +14. ✓
14 40 26 ✓
+00 N. 6114 ✓

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1908phae.proj..590W

Mar. 14, 1908

Index R+B	d.
25.1	21.5 ✓
46.6	14.1 ✓
209.9	35.6 ✓ − 4.03 ✓
224.6	
	− 3.96 ✓
28.6	15.7 ✓
44.3	22.2 ✓
204.5	37.9 ✓ − 3.89 ✓
226.7	

Index L+A	B:
296.2	18.5 ✓
314.7	14.4 ✓
119.6	32.9 ✓ − 4.20 ✓
134.8	
	− 4.12 ✓
298.8	15.2 ✓
314.0	20.3 ✓
116.4	35.5 ✓ − 4.03 ✓
136.7	

Mean − 4.04 ✓

S.T. 9 52 Gen. mean = − 4.02 ✓
H.A. +4 56
Dec. +44.2
P.A. 357.5 Vernier B
Sprocket − 8.5 B, − 7.5 C.

8 3. 9 47 20

8 5 9 58 5

8 10 ✓ 25. ✓
& 4. 9 ✓2 42. ✓
+✓ +✓ +14. ✓
13 43 14 ✓2 ✓6.
20 ✓. 20 ✓. 6200 ✓

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1908phae.proj..590W

Mar. 14, 1908

Somewhat troubled by light cloud in last groups but cloud of a feathery character and although increasing in amount, it was not very dense. Extreme care exercised and measurements considered good.

W's watch used for times
Watch 14 secs slow.

L. P. P.

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1908phlate.proj...59@

Mar. 16, 1908 (Monday)

8 30 Clouds U. Ab. Rowe Rec

Fourth Type Star. −17° 2442

8		15	−17.1
8		35	
0	.	20	

8 40 Clouds thick.

Reapp Jup. II Phot R. U'db Rowe Rec

B. + C. 11 h 2			B. 394.		
9	18	3.5	9	18	0.0
9	19	3.6	9	19	0.0

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1908phae.proj..590W

Mar. 16, 1908

9	40	11	Somewhat cloudy
		45	Clouds thin
	41	16	Clouds thicker
		39	Clouds thick. Jupiter invisible in telescope
	42	19	Clouds thick. Jupiter invisible in telescope
	42	42	Clouds thinner. Sat II not seen
	43	5	Clouds thin. Sat. not seen
		30	Clouds thin. Sat. not seen
	44	0	Clouds thin. Sat not seen
		12	Sat. seen. but in contact with Sat I
	45	14	Clouds thick. Jupiter invisible in telescope
	46	5	Clouds thick. Jupiter invisible in telescope

Continually troubled by clouds but phot. kept on throughout. ~~Thuas~~ Sat. II reappeared in contact with Sat. I. Sat. II was suspected before a tip was given that it was actually seen, but the fact that it was in contact with the other Sat. caused a little necessary delay in the confirmation. Even if it had been clear, nothing could have been done in the way of photometric measurements, as the two Sats. simply looked like one

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1908phae.proj..590W

Mar. 16, 1908.

elongated Sat. and a little later, they were practically superimposed.

B. + C, 1182.

9	√2	2.0	
9	59	2.0	

B. 394

9	√2	0.0
9	59	0.0

L. P. P.

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1908phae.proj.590W

Mar. 19, 1908 (Thursday)

Ti Obs. Rowe Rec

7 15 Sky all cloudy at present time.

7 35 Sky all cloudy.

H.P. 3879 = +62° 2007

22 0 +62.9
32 8 30
10 30

W Obs Rowe Rec. Phot. T.

	Index L+A	B.	
	202.3	33.1 v	Suspected Var. Dis.
8 41 50	235.4	19.7 v	
	26.0	52.8 v	− 3.15 v
	45.7		
			− 3.22 v
	206.0	21.0 v	
	227.0	28.6 v	
	22.4	49.6 v	− 3.29 v
	51.0		

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1908phae.proj..590W

Mar. 19, 1908

Index	R & B	A.
110.3	31.5 ✓	
141.8	22.1 ✓	
294.5	53.6 ✓	−3.11 ✓
316.6		
		−3.09 ✓
115.3	23.0 ✓	
138.3	31.7 ✓	
290.0	54.7 ✓	−3.07 ✓
321.7		

Mean −3.16 ✓

8 51 45

93 3 ✓ ✓

8 46 44 ✓

+ ✓ +34 ✓

13 47 22 ✓

8020 ✓ 7746 ✓

S. T. 9 5

H.A. +11 8

Dec. +63.8

P.A. 152.3 Vernier B

Sprocket. −5.5 B, −4.5 C

Fourth Type Star −17° 2442

8	15	−17.1
9	30	
1	15	

Abandoned.

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1908phae.proj..590W

Mar. 19, 1908.

Fourth Type Star -1^{0} 23 12

9	33	-0.5
10	23	
0	50	W. Obs. Rowe Rec. Phot. T.

Color. 3. with ordinary eyepiece.

Index Left B.

190.7	Comp Star Dis.	
242.6	54.9 ✓	
15.7	39.9 ✓	
55.6	91.8	+1.87 ✓

10 29 40

195.2	40.0 ✓	+1.88 ✓
235.2	51.1 ✓	
10.4	91.1 ✓	+1.88 ✓
61.5		

Index Right A. ✓

101.0	50.2	
151.2	39.4 ✓	
286.9	89.6 ✓	+1.92 ✓
326.3		

+1.88 ✓

106.6	38.6 ✓	
145.2	54.7 ✓	
279.3	93.3 ✓	+1.83 ✓
334.0		

Mean +1.88 ✓

10 36 15

6 ✓ ✓ ✓. ✓

10 3 2 ✓ 8. ✓

+✓ +34. ✓

1✓ 33 32. ✓

8020.6403 ✓

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1908phae.proj..590W

Mar. 19, 1908.

S. T. 10 46
H. A. +1 0
Dec. −1.0
P. A. 210.2 Vernier B
Sprocket. −0.5 B, +0.5 C

W's watch used for times
Watch 34 secs. slow.

L. P. P.

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1908phae.proj..590V

Mar. 21, 1908 (Saturday)

R. Z. Cassiop.

2 7 5 — 36 36 0 — +69.0

W Obs Rowe Rec. Phot T

Index L+a B.

110.4 ← Variable Dis

7 29 40

143.1 — 32.7 ✓

272.8 — 255 ✓

318.3 — 582 ✓ — −2.93 ✓

114.4 — 23.8 ✓ — −2.90 ✓

138.2 — 356 ✓

289.1 — 594 ✓ — −2.88 ✓

324.7

Index R+B A.

19.0 — 34.9 ✓

53.9 — 22.2 ✓

205.3 — 571 ✓ — −2.97 ✓

227.5

−2.96 ✓

24.1 — 23.9 ✓

48.0 — ~~38.2~~ — 33.7 ✓

197.7 — ~~62.1~~ — 57.6 ✓ — −2.95 ✓ — ~~2.78~~

231.4 ~~235.9~~

7 37 15

66 ✓✓ ✓

7 33 24 ✓

+✓ +✓✓ ✓

12 34 9 ✓

+022.✓237 ✓

Mean −2.93 ✓

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1908phae.proj..590W

Mar. 21, 1908

S.T. 7 58
H.A. +5 16
Dec +69.7
P.A 208.2 Vernier B
Sprocket −2.5A, −1.5B, −1.0C.

Double Star No 71 (Comstocks List) =
Pollux ~~A B~~ and Companions.

7	37	+28.3
8	47	
1	10	

U. Obs. Rowe Rec. Phot. T
Comp. star used in following measurements was +28° 1467 (9.2)

Comp. star and companion at P.A 90° (From Pollux) and Dist 22.1" = D

Index	L+a	
104.4 ←	Comp Star Dec	
152.6	47.6 ✓	
286.6	38.4 ✓	
325.0	86.0 ✓	+2.02 ✓
111.6	31.2 ✓	+2.16 ✓
142.8	45.4 ✓	
281.3	76.6 ✓	+2.30 ✓
326.7		

8 54 30

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1908phae.proj..590V

Mar. 21, 1908

Ridley R+B

13.0	42.8 ✓	
55.8	40.9 ✓	
195.5	83.7 ✓	+2.09 ✓
236.4		

+2.12 ✓

19.0	37.0 ✓	
56.0	44.6 ✓	
193.0	81.6 ✓	+2.15 ✓
237.6		

Mean +2.14 ✓

9 4 15

11 δ 4V. ✓

♀ ✓ 9 22. ✓

+V +4V. ✓

14 δ 7. ✓

~~δ022.6V1~~ Comp. star and companion at P.A. 73° (From Pollux)

δ022.✓δ34✓ and Dist. 190." = C

Ridley R+B

9 9 10

6.6 ← Comp Star Dis

63.4	56.8 ✓	
192.1	45.9 ✓	
238.0	102.7 ✓	+1.59 ✓

13.0	47.2 ✓	+1.52 ✓
60.2	60.8 ✓	
185.0	108.0 ✓	+1.46 ✓
245.8		

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1908phae.proj..590W

Mar. 21, 1908.

Index Dec

274.4	59.2 ✓	
333.6	39.2 ✓	
106.5	98.4 ✓	+1.70 ✓
145.7		
		+1.68 ✓
287.0	39.6 ✓	
326.6	60.2 ✓	
95.6	99.8 ✓	+1.66 ✓
155.8		
		Mean +1.60 ✓

9 17 5
26 15. ✓
9 13 A. ✓
+r +Kr. ✓
14 13 r3 ✓
A022. r930 ✓

Compstar and companion at P.A. 76° (From Pollux) and Dist 244". = B.

Index Above

9 21 30

269.0	Comp Star Dec	
344.8	75.0 ✓	
99.7	53.1 ✓	
152.8	128.1 ✓	+1.02 ✓
279.0	52.9 ✓	+1.04 ✓
331.9	72.7 ✓	
90.6	125.6 ✓	+1.07 ✓
162.7		

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1908phae.proj..590W

Mar. 21, 1908

Index Below

177.3 77.8 ✓
255.1 49.9 ✓
10.0 127.7 ✓ +1.03 ✓
59.9

+1.00 ✓
~~0.99~~

188.8 53.4 ✓
242.2 76.8 ✓
357.6 130.2 ✓ +0.97 ✓
74.4

9 29 30
✓1 0. ✓
9 2✓ 30. ✓
+✓ +✓.
1✓ 26 1✓. ✓
022.60 ✓+

Mean +1.82 ✓

Comps. star and companion at P.A. 328° (From Pollux) and Dist 170" = E.

Index 1+B

10.0 11.0 ← Comp Star Dis.
56.5 46.5 ✓
201.4 37.0 ✓
238.4 83.5 ✓ +2.09 ✓

9 37 40

160 41.4 ✓ +2.04 ✓
57.4 46.0 ✓
189.8 87.4 ✓ +1.98 ✓
235.8

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1908phae.proj..590W

Mar. 21, 1908

Index R+a

286.2	38.5 ✓	
324.7	30.0 ✓	
113.0	68.5 ✓	+2.56 ✓
143.0		
		+2.56 ✓
295.8	22.1 ✓	
317.9	46.0 ✓	
107.2	68.1 ✓	+2.57 ✓
153.2		
		Mean +2.30 ✓

9 47 8

8 4 40. ✓

9 4 2 20. ✓

+r +4r. ✓

14 43 .5 ✓

+022. 6133 ✓ Pollux and Comp. Star.

Index R+a

214.8	Pollux Dec.	
217.7	2.9 ✓	
35.1	4.4 ✓	
39.5	7.3 ✓	−7.48 ✓
214.2	4.8 ✓	−7.51 ✓
219.0	2.3 ✓	
35.0 ~~35.4~~	7.1 ✓	−7.54 ✓
37.3		

9 57 30

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1908phae.proj..590W

Mar 21. 1908

Index L & B

125.2 3.2 ✓
128.4 4.7 ✓
363.2 7.9 ✓ − 7.31 ✓
307.9

− 7.44 ✓

124.3 4.3 ✓
128.6 2.7 ✓
3033 ~~304.4~~ 7.0 ✓ − 7.57
~~305.9~~ 306.0

Mean − 7.48 ✓

10 3 55
121 2V. ✓
10 0 Fz. ✓
+V +H. ✓
15 1 27. ✓
A022.6260 ✓

~~Double Star~~

Fourth Type Star − 13° 3407

11 33 − 13.7
10 57
0 43
12
11 17

Color 2 with ordinary eyepiece

Index Left B.

342.4 ← Comp Star Dis

11 2 10.

87.6 105.2 ✓
174.9 80.6 ✓
255.5 185.8 ✓ − 0.11 ✓
174.2

3533 87.3 ✓
80.6 107.3 ✓ − 0.20 ✓
161.6 194.6 ✓
268.9 165.4 ✓ − 0.28 ✓

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1908phae.proj..590W

Mar. 21. 1908 P.

Wire	Right A.	
260.8	90 8. ✓	
351.6	111 5. ✓	
72.0	202.3 ✓	
183.5	157.7 ✓	−0.43 ✓
251.2	108.2 ✓	−0.38 ✓
359.4	88.5 ✓	
81.4	196.7 ✓	
169.9	163.3 ✓	−0.32 ✓

Mean −0.29 ✓

11	8	10
	10	20. ✓
11	✓	10. ✓
+5		+Kr. ✓
16	✓	✓✓. ✓

A022.6707 ✓

S. T. 11 28
H. A. −0 3
Dec. −14.8
P. A. ~~278~~ 357.5 Vernier B
Sprocket +0.5 B, +1.5 C

W3 watch used for times
Watch 45 secs slow.

L. P. P.

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1908phae.proj..590W

Mar. 24, 1908 (Tuesday)

R. Z. Cassiopeiae

W. Obs. Roux Rec. Phot. T

2 8 5 — 36 16 40 — +69.0

Index 1+a.

2898 Var. Dis

322.5 — 32.7 ✓

113.6 — 239 ✓

137.5 — 56.6 ✓ — 2.99 ✓

7 57 38

293.6 — 25.2 ✓ — 2.96 ✓

318.8 — 332 ✓

110.2 — 58.4 ✓ — 2.92 ✓

143.4

Index R+B.

198.7 — 353 ✓

234.8 — 249 ✓

24.0 — 60.2 ✓ — 2.85 ✓

48.9

— 2.88 ✓

204.5 — 23.9 ✓

228.4 — 351 ✓

18.7 — 59.0 ✓ — 2.90 ✓

538

Mean — 2.92 ✓

8 5 20

122 √0. ✓

A 1 2√. ✓

+√ 1 A. ✓

13 2 33. ✓

A025.

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1908phae.proj..590W

Mar. 24, 1908

S.T. 8 36
H.A. +5 53
Dec. +69.7
P.A. 209.0 Vernier B
Sprocket. -2.5 A, -1.5 B, -1.0 C.

X Persei

3 45 +31.4
9 10
5 25 Ob. Rowe Rec Phot T.
9.5 m. cap used

Index Left
198.7 ← Var. Dis.
232.6 33.9 ✓
24.5 24.0 ✓
48.5 57.9 ✓ -2.94 ✓

203.6 26.9 ✓ -2.86 ✓
230.5 35.2 ✓
18.8 62.1 ✓ -2.78 ✓
54.0

Index Right
116.6 22.9 ✓
139.5 30.0 ✓
291.6 52.9 ✓ -3.14 ✓
321.6

9 0 38

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1908phae.proj..590W

Mar 24, 1908

−3.10″

112.2	33.0″
145.2	22.2″
295.2	55.2″ − 3.05″
317.4	

Mean − 2.98″

9 13 20

13 +0.″

9 6 +.″

+ 1 .″

14 2 3.″

2.02″.

S.T. 9 47

H.A. +5 57

~~Dec.~~ +31.0

P.A. 241.6 Vernier B

Sprocket. −6.5A, −5.5B, −5.0C

In preceding group on χ Persei, region thoroughly identified before putting on phot.

Iris

9	31	+5.3
10	6	
0	35	

Abandoned. Will perhaps take it up tomorrow night.

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1908phae.proj..590W

Mar. 24, 1908

Y. Camelop.

76	25	+76.3
10	45	
34	20	

W. Abs. Rowe Rec. Phot. T

Index R+a

6.5 ← Comp. Star Dec.

10 38 5

71.1	44.6 ✓	
171.0	98.1 ✓	
261.1	154.7 ✓	+0.48 ✓
351.7	88.6 ✓	+0.53 ✓
80.3	61.0 ✓	
188.5	149.6 ✓	+0.58 ✓
249.5		

Index L+B.

277.0	57.8 ✓	
334.8	81.9 ✓	
87.2	139.7 ✓	+0.78 ✓
169.1		
		+0.81 ✓
266.2	80.9 ✓	
346.5	56.6 ✓	
97.3	136.9 ✓	+0.84 ✓
153.9		

Mean +0.67 ✓

10 45 45

	£3	√0. ✓
10	41	√5. ✓
+√	1	£. ✓
1√	43	3. ✓

£025.

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1908phae.proj..590W

Mar. 24, 1908

S.T. 11 20
H.A. +3 50
Dec. +76.8
P.A. 167.2 Vernier B
Sprocket -1.5 B, -0.5 C

W's watch used for times
Watch 1 min. 8 secs. slow.

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1908phae.proj..590W

Mar. 24, 1905.

	B. + C. 1142.		B. 394.	
13	30	14.4	13 30	0.0
	31	14.4	31	0.0

Reap. Sup. ~~II~~ I. Phot R & Obs Bowie Ser
Comp. with nearest of three Sats. (before eclipse) = Sat. ~~II~~ I.
Limits of this.

	13	~~52~~	~~37~~			
		52	55			207.8
14 53 20.v		53	11	39.7 v	+2.3 v	247.2
-19.v		"	30	36.3		208.5
14 53 1.v		"	44	38.0 v		244.8
14 52 29.v	13	58	48			
14 52 42.v		59	1	71.6 v	+0.7 v	260.0 ~~193.0~~
14 49 50.v	14	0	9	74.2 v	+0.5 v	189.0
19 0 10.v		0	29	79.7 v	+0.4 v	267.2
19 0 21.v		0	40	77.5 v	+0.5 v	187.5
19 0 35.v		0	54	77.5 v	+0.5 v	265.0
19 0 49.v		1	8	74.0 v	+0.5 v	187.0
19 1 2.v		1	21	82.5 v	+0.3 v	269.5
19 1 15.v		1	34	84.7 v	+0.2 v	184.5
19 1 29.v		1	44	83.2 v	+0.3 v	265.0
19 1 36.v		1	55	82.5 v	+0.3 v	185.5
19 1 46.v		2	5	84.5 v	+0.2 v	270.0
		2	19	82.1 v		186.2
		2	30	80.7 v		268.3
				81.4 v	+0.3 v	

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1908phae.proj..590W

Mar. 24, 1905

19 2 35				
-19.	14			
19 2 16				
	2	40		186.5
	2	51		267.2
	3	2	Δ 3.0	186.0
19 3 19.	3	14	Δ 0.0	269.0 +0.3
-19.	3	24	Δ 1.5	187.5
19 3 0	3	37		267.5
	3	56	Δ 1.2	186.0
19 4 14.	4	9	Δ 4.4	267.2
-19	4	21	Δ 3.0	186.0 +0.3
19 3 55	4	31		270.8
	4	43		184.1
19 4 59.	4	55	Δ 4.7	268.8
-19.	5	4	Δ 6.0	184.0 +0.2
19 4 40.	5	14	Δ 5.4	270.0
	5	34		183.8
19 5 54.	5	47	Δ 3.3	267.1 +0.3
-19.	6	1	Δ 0.5	187.5
19 5 35	6	14	Δ 1.9	268.0
	6	27		186.8
19 6 42	6	41	Δ 0.3	267.1 +0.3
-19	6	55	Δ 6.0	183.8
19 6 29	7	9	Δ 3.2	269.8
	7	22		184.2
19 7 38.	7	33	Δ 6.0	270.2 +0.1
-19.	7	43	Δ 7.3	183.1
19 7 19.	7	53	Δ 6.6	270.4
	8	3		183.5
19 8 19.	8	12	Δ 6.1	269.6 +0.2
-19			Δ 3.1	
19 8 0.			Δ 4.6	

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1908phae.proj..590W

Mar. 24, 1908.

14	♋	26	155, 0
	♌	36	268. 1

Altitude rather low and seeing rather hazy. Hand rising.

B. + C. 1182.			B. 394.		
14	23	18.5	14	23	0,0
	24	18.4		24	0,0

From unavoidable delays, the eclipse could not be begun until 23h 18m.5 Sid. Time, apparently, ~~about~~ about up at full brightness. Seeing rather poor and region rather low.

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1908phae.proj..590W

Mar. 25, 1908. (Wednesday)

Iris.

9	31	+5.3
7	41	
1	50	
12	0	
10	10	

10 lbs. Rowe Rec. Phot T.

7 42 Iris precedes a by 18 secs. and is 3.5 north of it.

Comps. star = b = +5° 22 3 (9.5)

a = +5° = 9 40 42 +5° 17.1 (A.R.V)
-18.
Iris = = 9 39 50. +5 20.6 "

Index Reg A.

3599 ← Iris D.S.

72.2	72.9"	
198.0	56.9"	
246.3	128.6"	-1.01"

7 56 30

8.8	57.7"	-1.01 ←
66.5	70.9"	
180.6	128.6"	-1.01"
251.5		

Index R+B A.

269.3	72.1"	
341.4	54.5"	
100.8	126.6"	-1.05".
155.3		

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1908phae.proj..590W

Mar. 25, 1908

−1.08

2827 49.6
3323 74.1
89.3 123.7 −1.11
163.4

Mean −1.04

Index R+B A. II

270.0 73.0
343.0 55.6
99.6 128.6 −1.01
155.2

−0.94

279.0 57.2
336.2 78.0
88.0 135.2 −0.87
166.0

Index L+a B.

178.9 74.1
253.0 54.4
6.5 128.5 −1.01
60.9

−0.96

191.0 55.4
246.4 77.8
357.8 133.2 −0.91
75.6

Mean −0.95

8 5 50

	122	20.
A	1	10.
+V	1	17.
13	2	27.

A026. V43V

8 11 25

8 19 55

	31	20.
A	1V	40.
+V	1	17.
13	16	V7.

−A026. VV35V−

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1908phae.proj..590W

Mar. 25, 1908

Index L+A B. III

8 28 38

181.6 729 ✓
254.5 562 ✓
6.8 129.1 ✓ −1.00 ✓
63.0

−0.98 ✓

189.5 57.1 ✓
246.6 73.8 ✓
359.5 130.9 ✓ −0.96 ✓
73.3

Index R+B A.

90.5 75.5 ✓
166.0 54.7 ✓
280.6 130.2 ✓ −0.97 ✓
335.3

−0.96 ✓

101.5 55.5 ✓
157.0 76.2 ✓
269.0 131.7 ✓ −0.94 ✓
345.2

Mean −0.97

8 37 20
6 ✓ 50. ✓
8 32 ✓✓ ✓
+✓ 1 17. ✓
13 38 12. ✓
A026.✓6✓4 ✓

Index R.+B A. IV

8 45 40

94.2 70.5 ✓
164.7 50.5 ✓
282.5 121.0 ✓ −1.17 ✓
333.0

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1908phae.proj..590

Mar. 25, 1908

−1.06

100.1 56.7
156.8 74.1
270.0 130.8 −0.96
344.1

Index & a B.
359.5 74.5
74.0 53.6
190.6 128.1 −1.02
244.2

−1.01

8.1 55.8
63.9 73.7
181.2 129.2 −1.00
254.6

Mean −1.04

8 56 35
102 15
4 1 8
1 1 1
13 2 2

Clouds
Index & a B. V
1.0 72.8
73.8 54.7
190.1 127.5 −1.03
244.8

9 10 40

−1.08

7.8 56.4
64.2 74.3
179.8 130.7 −0.96
254.1

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1900phaeproj..596W

Mar. 25, 1908.

Index R+B. A.

270.1 73.8 ✓
343.9 54.6 ✓
99.8 128.3 ✓ −1.01 ✓
154.3

−1.00 ✓

280.3 55.0 ✓
335.3 74.0 ✓
89.3 129.0 ✓ −1.00 ✓
163.3

Mean −1.00 ✓

9 21 25

32 ✓ ✓
9 16 2. ✓
+✓ 1 17. ✓
14 17 19. ✓
A0 26. ✓ 9 ✓ 3 ✓

Index R+B A. VI

9 34 50

270.2 73.4 ✓
343.6 55.0 ✓
99.4 128.4 ✓ −1.01 ✓
154.4

−1.02 ✓

280.6 53.3 ✓
333.9 74.0 ✓
90.0 127.3 ✓ −1.04 ✓
164.0

Index L+a. B.

180.2 73.8 ✓
254.0 56.0 ✓
8.0 129.8 ✓ −0.98 ✓
64.0

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1908phae.proj..590W

Mar. 25, 1908

9 43 15
7 ✓ ✓.
9 39 2.
+✓ 1 17. ✓
14 40 19. ✓
A 26.6113 ✓

9 50 25

10 0 0
11 0 2✓. ✓
9 ✓✓ 12. ✓
+✓ 1 17. ✓
14 ✓6 29. ✓
A 26.622✓

-0.98✓

190.2 54.8✓
245.0 75.8✓
359.4 130.6✓ -0.97✓
75.2

Mean -1.00✓

Index L+a A. VII

180.1 72.9✓
253.0 56.7✓
8.3 129.6✓ -0.99✓
65.0

-0.98✓

189.0 55.2✓
244.2 75.2✓
359.4 130.4✓ -0.97✓
74.6

Index R+B A.

88.8 75.6✓
164.3 53.1✓
280.7 128.6✓ -1.01✓
333.8

-1.02✓

99.2 54.2✓
153.4 72.7✓
270.8 126.9✓ -1.04✓
343.5

Mean -1.03✓

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1900phae.proj..590W

Mar. 25, 1908

Index R+B K. VIII

10 16 25

271.8 70.7 ✓
342.5 55.6 ✓
99.0 126.3 ✓ −1.06 ✓
154.6

−1.06 ✓

281.0 52.4 ✓
333.4 73.6 ✓
90.5 125.9 ✓ −1.07 ✓
164.0

Index L+a B.

179.4 73.6 ✓
253.0 55.8 ✓
8.2 129.4 ✓ −0.99 ✓
64.0

0.98 ✓

188.7 55.1 ✓
243.8 74.7 ✓
0.0 ~~359.7~~ 129.8 ✓ 0.98 ✓
74.7

Mean −1.02 ✓

10 23 20
39 ✓
10 19 ✓2. ✓
✓ 1 17. ✓
✓ 21 9. ✓
Δ026.6397 ✓

Index L+a IX B. ✓

10 33 0

178.2 74.8 ✓
253.0 54.7 ✓
9.5 129.5 ✓ −0.99 ✓
64.2

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1908phae.proj..590W

Mar. 25, 1908

− 0.98

189.3	54.9 ✓
244.2	75.0 ✓
0.0	129.9 ✓ −0.98 ✓
75.0	

Index R+B B.

89,5	74.8 ✓
164.3	53.8 ✓
279.7	128.6 ✓ −1.01 ✓
333.5	

− 1.63 ✓

100.5	53.5 ✓
154.0	73.2 ✓
270.5	126.7 ✓ −1.05 ✓
343.7	

Mean −1.00

10	40	45	
	73	45.	✓
10	36	52.	✓
+✓	1	17.	✓
1✓	3A	9.	✓

A026.6✓1✓+ ✓

S.T. 11 18

H.A. +1 33

Dec + 4.4

P.A. 287.0 Vernier B.

Troubled in early part of series by blurry seeing afterwards seeing became somewhat better.

W's watch used for times,
Watch 1m 17 secs. slow.

L. P. P.

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1908phae.proj..590W

Mar. 26, 1908. (Thursday)

Readg. Jup. I. H. obs. H. sec.

Cleared too ~~cloudy~~ suddenly to observe photometrically.

Δ^h	2^h	30^m	Not seen.
	2	45	" "
	2	0	" "
	2	10.	" "
	2	23.	seen.
	2	30.	Not.
	2	47.	quite bright.

No. 1. eyepiece (positive), power 270, used.
Sky pretty clear in this region.
H. E. used, Watch running well.

Watch 1^m 27^s slow.

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1908phae.proj..590W

Mar 26, 1908.

R Z. Cassiop.

2	36	+69.0
9	26	
6	50	

W Obs Rowe Rec Phot T.
Abandoned. Too cloudy in this region.

Iris

9	31	+5.3
9	31	
0	0	

W. Obs. Rowe Rec.

9	5	14
9	5	53
9.	6	15
9	6	54
9	7	11
9	7	51

9 7 Iris precedes star a ~~by 39.3 secs.~~ (of last night) by 39.3 secs and is 7.6 north of it. Hence the object observed last night for Iris, was Iris.

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1908phae.proj..590W

Mar. 26, 1908

Quite a pronounced Aurora this evening. It was first noticed about 7 hrs. 15 mins. P.M. and lasted over an hour. Although somewhat cloudy a portion of the time, there were large gaps in the north and north west even there (as well as in the zenith) so that bright streamers, as well as large masses of bright shimmering light, were visible in the north, north west, west of zenith, and zenith. The streamers and collected masses of light continually shifted their position more or less and the whole display was quite brilliant. The light gradually shrunk and faded away into the north so that at about 8 hrs 30 mins P.M, the Aurora had pretty completely vanished as far as could be discerned. It ought to be added, however, that some what heavier clouds came up in the north after that time so that even at the present time (9 hrs 20 mins P.M) W. has a suspicion that there may be still some faint Auroral light low down in the north, shining through and above the clouds.

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1908phae.proj..590V

Mar. 26, 1908

Fourth Type Star — 1^{o} 2312 W. H. Rowe rec.

9	33	−0.5 Plot. ✓
10	18	
0	45	

Index Left B.

	12.6 ←	Comps. Star Dis
9 52 15	65.2	53.2 ✓
	198.7	36.4 ✓
	234.1	88.6 ✓ +1.95 ✓
	18.5	38.3 ✓ +1.93 ✓
	56.8	51.9 ✓
	188.5	90.2 ✓ +1.91 ✓
	240.4	

Index Right A. ✓

	280.3	53.6
	333.9	35.0 ✓
	109.7	88.6 ✓ +1.95 ✓
	144.7	
		+1.98 ✓
	289.5	35.0 ✓
	324.5	51.6 ✓
	100.1	86.6 ✓ +2.01 ✓
	151.7	

Mean +1.96 ✓

9	57	0
	10 9	15. ✓
9	√4	38. ✓
+√	1	27. ✓
14	√6	√. ✓

$\delta 0^{h}27.6223$ ✓

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1908phae.proj.590W

Mar 26, 1908

S.T. 10 39
H.A +0 50
Dec. -1.0
P.A. 210.8 Vernier B
Sprocket -0.5 B, +0.5 C

No watch used for times.
Watch 1mm. 27 sec. slow.

~~From transits last night & to~~
From transits last night and to night, I found that Iris follows the computed places (computed places for Mar. 25.5 and Mar. 27.5) by about +3 secs. and is about 9' south of it. The daily motion of Iris is about -20 secs. in R.A. and +4' in Dec. at present time. It is evidently approaching the 2d. stationary point.

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1908phae.proj..590

Mar. 28, 1908 (Saturday)

Double Star Σ 1890 (In old double Star book)
= 39 Bootis

14	46	+49.2
9	6	
5	40	
13		W Obs. Roive Rec.
6	20	

P. A. 45° .. Dist. 3."5

B 33 Cloudé now much thicker every where. Impossible to measure double at present time.

Four Type Star +24° 1686

7	36	+24.8
4	30	
1	54	

Fourth Type only barely visible with ordinary eyepiece, cannot possibly be measured photometrically Sky pretty cloudy every where, and progressively growing worse. No chance for any thing further

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1908phae.proj..590W

Mar 30, 1908 (Monday).

Z. Draconis.

11	46	+73.0
8	21	
3	25	W. Obs. Rough Rec Phot T.
12	0	
8	35	

Index Above A.

196.0	Comp Star Dis	
236.9	40.9 ✓	
3.8	65.4 ✓	
69.2	106.3 ✓	+1.50 ✓

7 42 10

184.6	62.4 ✓	+1.54 ✓
247.0	40.6 ✓	
16.8	103.0 ✓	+1.58 ✓
57.4		

Index Below B.

114.4	35.8 ✓	
150.2	64.2 ✓	
275.4	100.0 ✓	+1.66 ✓
339.6		

+1.60 ✓

94.0	63.8 ✓	
157.8	40.7 ✓	
288.4	104.0 ✓	+1.55 ✓
328.6		

Mean +1.57 ✓

7 50 20

92 30.

7 46 N. ✓

+r 2 7. ✓

12 48 22. ✓

80 31.5 336 ✓

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1908phae.proj..590W

Mar. 30, 1908

Index Below. B. II

~~1160~~

Clouds

	104.5	40.1	
8 2 55	144.6	658	
	274.6	105.9	+1.51
	348.4		
			+1.54
	91.0	65.5	
8 7 25	156.5	38.6	
	288.2	104.1	+1.56
	326.8		

Index Above A.

	18.9	38.6	
8 11 45	57.5	56.5	
	186.5	95.1	+1.78
	243.0		
			+1.70
	6.8	64.0	
8 15 0	70.8	37.4 37.8	
	197.8	101.4 101.8	+1.61
	235.6	~~235.2~~	

	37	√	√
	9	16.	√
	2	7.	√
13	11	23.	√

8031. √496 √

Mean +1.62 √

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1908phae.proj..590W

Mar. 30, 1908

Index Above A. III

	16.8	41.9 ✓
8 20 35	58.7	56.4 ✓
	1883	98.3 ✓ +1.70 ✓
	244.7	

+1.75 ✓

	6.8	60.0 ✓
8 24 10	66.8	34.4 ✓
	198.4	94.4 ✓ +1.80 ✓
	232.8	

Index Below B.

	292.5	30.0 ✓
8 27 45	322.5	57.2 ✓
	97.2	87.2 ✓ +1.99 ✓
	154.4	

+1.86 ✓

	273.4	59.5 ✓
8 30 20	332.9	38.1 ✓
	108.1	97.6 ✓ +1.72 ✓
	146.2	

102 √0 ✓
+ 2√ 42. ✓
+√ 2 7. ✓
13 27 49. ✓
A031.√610 ✓

Mean +1.80 ✓

Index Below B. ✓ IV

	288.2	35.5 ✓
8 35 10	323.7	57.3 ✓
	98.1	92.8 ✓ +1.84 ✓
	155.4	

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1908phae.proj..590W

Mar. 30, 1908

+1.88

	280.1	55.2
8 37 40	335.3	34.2
	109.4	89.4 +1.93
	143.6	

Index above A.

	198.6	35.8
8 41 40	234.4	49.3
	9.5	85.1 +2.05
	58.8	

+2.00

	188.2	54.9
8 45 0	243.1	34.1
	20.5	89.0 +1.94
	54.6	

	159	30
A	39	52
+V	2	7.
	13	41 59.

A 031.570 A

Mean +1.94

Index above A. E

	202.6	30.7
8 52 15	233.3	49.6
	14.4	80.3 +2.19
	64.0	

+2.23

	192.7	49.5
8 55 10	242.2	28.1
	23.0	77.6 +2.27
	51.1	

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1908phae.proj..590W

Mar. 30, 1908

Index Below B.

8 59 40

111.1 34.5 ✓
145.6 48.5 ✓
283.9 83.0 ✓ +2.11 ✓
332.4

+2.24 ✓

9 2 30

104.7 46.1 ✓
150.8 27.9 ✓
292.6 74.0 ✓ +2.38 ✓
320.5

229 3 ✓ ✓
4 ✓ 7 24 ✓
+r 2 7 ✓
13 ✓9 31 ✓
Δ031 ✓ Δ30 ✓

Mean +2.24 ✓

Index ~~Above~~ Below V1

9 7 20

112.2 29.7 ✓
141.9 41.9 ✓
286.9 71.6 ✓
328.8

9 11 30

106.6 43.1 ✓
149.7 21.7 ✓
296.1 64.8 ✓
317.8

Stopped by clouds, impossible to finish last group. Reject same partial groups.
Troubled more or less throughout whole series by varying haze and light cloud. Observations rather difficult throughout but settings made slowly and with all possible care.

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1908phae.proj..590W

Mar. 30, 1908.

P. A. Sprocket etc not read as electric light gave out and before P. A. setting could be made readings ~~could~~ be effected, region was lost in cloud. Region, however, thoroughly identified before beginning

Ub watch used for times
Ubatch 2 mins. 7 secs slow.

L. P. P.

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1908phae.proj..590W

April 1, 1908 (Wednesday)

Aquitania

12	3	+ 23.5
8	20	
3	43	
12		
8	17	

W. Alb. Rowe Rec

Transits of a and b

7 47

27.3
27.2
27.2
27.2
27.4
27.3

6)163.6

27.3

Transits of b and c

7 50

7.5
7.4
7.2
7.5
7.5
7.4

6)44.5

7.4

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1908phae.proj..590W

April 1, 1908

Transits of b + d

7 54

32.8
32.4
32.5
32.5
32.5
32.5
6 | 195.2
32.5

Transits of a + e

8 0

1.5
1.5
1.5
1.5
1.4
1.5
1.5
7 | 10.4
1.5

Transits of e + f

8 5

39.7
39.7
39.9
39.7
39.9
39.9
4 | 10.0
7 | 278.8
39.8

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1908phae.proj..590W

April 1, 1908

8 28 Clouds

Transits of a' + b'

11.0
11.0
10.9
10.8
11.0
8 56 11.1
11.1
11.2
11.0
11.0
11.0
11 | 12 | 1
11.0

Transits of b' + c'

	1.0	1.1
	1.2	1.3
	1.0	1.4
	1.1	1.1
	1.1	1.0
	1.2	17 | 19.6
9.0	1.0	1.2
	1.2	
	1.3	
	1.1	
	1.4	
	1.1	

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1908phae.proj..590W

April 1, 1908

Transits of a" + b"

9 22

11.5
11.6
11.3
11.4
11.5
57 57.2
11.4

Transits of b" + c"

9 25

16.4
16.4
16.5
16.1
16.4
16.3
6 98.1
16.41

Aquitania is not in place indicated by ephemeris. Transits of quite a number of stars near this region taken but asteroid not found.

Double Star No 123 (Comstock's list) = 72 Virginis

13 25 -5.7
10 45
2 40
12
9 20

W. Obs Roux Ree. Phot. R, one prism removed.
R.A. 17° Dist 0.'5 Mags. 6.5, 11.0

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1908phae.proj..590W

April 6, 1908

Indef Rta A.

130.7	← Southern + Brk Dis	
143.0	12.3 ✓	
307.0	15.6 ✓	
322.6	27.9 ✓	4.56 ✓
129.0	14.8 ✓	4.47 ✓
143.8	15.5 ✓	
308.6	30.3 ✓	4.38 ✓
324.1		

Indef Lt B. B.

37.0	18.4 ✓	
55.4	15.6 ✓	
218.8	34.0 ✓	4.13 ✓
234.4		
		4.15 ✓
40.0	15.8 ✓	
55.8	17.5 ✓	
218.4	33.3 ✓	4.17 ✓
235.9		

10 45

10 10 15

17 20. ✓

10 7 10. ✓

+v −46. ✓

14 6 24. ✓

Mean 4.31 ✓

Observations difficult, companion faint in light cloud and haze

W's watch used for times

Watch 46 secs fast

L. P. P.

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1908phae.proj..590V

April 3, 1908. (Friday)

R. Z. Cassiop.

2 36 +69.0
8 46
6 ... 10 26 cls. Rowe Rec. Phot T.

Judex Lta B.

274.0 ✓ Var. Obs
340.0 66.6 ✓
101.1 48.3 ✓
149.4 114.3 ✓ −1.32 ✓

283.8 46.2 ✓ −1.38 ✓
330.0 63.4 ✓
94.3 109.6 ✓ −1.43 ✓
157.7

Judex RAB A.

187.1 62.9 ✓
250.0 40.7 ✓
16.1 103.6 ✓ −1.57 ✓
56.8

−1.60 ✓

198.2 39.5 ✓
237.7 61.8 ✓
6.0 101.3 ✓ −1.62 ✓
67.8

Mean −1.49 ✓

7 50 50

7 58 20

9 10. ✓
7 ✓4 2✓. ✓
✓ −27.
12 ✓4 8. ✓
8035. ✓376 ✓

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1908phae.proj..590W

April 3, 1908

Index R+B A. II

186.3 64.5 ✓
250.8 38.9 ✓
178 103.4 ✓ −1.57 ✓
56.2

8 0 50

−1.62 ✓

197.6 40.3 ✓
237.9 59.4 ✓
5.0 99.7 ✓ −1.66 ✓
64.4

Index R+a B.

98.3 57.9 ✓
156.2 41.9 ✓
284.6 99.8 ✓ −1.66 ✓
326.5

−1.70 ✓

106.0 40.3 ✓
146.3 56.6 ✓
277.4 96.9 ✓ −1.73 ✓
334.0

Mean −1.66 ✓

8 9 35
10 25. ✓
A √ 12. ✓
+√ −27 ✓
13 4 45. ✓
8 03 √. √ 4 √ 0 ✓

Index R+a B. III

98.4 56.8 ✓
153.2 40.8 ✓
286.5 97.6 ✓ −1.72 ✓
327.3

8 12 10

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1908phae.proj..590

April 3, 1908

1.76

186.0	40.3
146.3	54.6
279.9	94.9 − 1.79
334.5	

Index R+B A.

9.0	56.9
65.9	35.5
200.6	92.4 − 1.85
236.1	

− 1.86

17.8	38.1
55.9	53.6
190.6	91.7 − 1.87
244.2 ~~244.4~~	

Mean − 1.81

8 19 15

31 2√

∅ 1√ 42.

+√ −27.

13 1√ 1√

∅ 03√.√√22

8 23 5

Index R+B A. IV

8.9	52.3
61.2	34.7
260.0	87.0 − 2.00
234.7	

− 1.98

17.9	37.0
54.9	51.1
191.5	88.1 − 1.96
242.6	

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1908phae.proj..590v

April 3, 1908.

Index 1 + a B.

283.4	48.0 ✓	
331.4	37.0 ✓	
107.0	85.0 ✓	−2.05 ✓
144.0		
		−2.06 ✓
288.9	36.7 ✓	
325.6	47.9 ✓	
103.6	84.6 ✓	−2.06 ✓
151.5		
		Mean −2.02 ✓

8 30 30

✓3 30. ✓
A 26 4A. ✓
tr −27. ✓
13 26 21.
A03✓. ✓600 ✓

8 33 40

Index 1 + a B. V

283.1	48.1 ✓	
331.2	35.6 ✓	
108.4	83.7 ✓	−2.09 ✓
144.0		
		−2.10 ✓
289.6	35.8 ✓	
325.4	47.6 ✓	
102.4	83.4 ✓	−2.10 ✓
150.0		

Index R + B A.

194.4	45.9 ✓	
240.3	32.4 ✓	
20.1	78.3 ✓	−2.25 ✓
52.5		

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1908phae.proj..590

April 3, 1908

8 41 35

7 1

α 37 30

+ -27

13 37 11

α 0 3 . 5 6 7 +

8 44 45

8 54 50

9 9 3

α 49 40

+ -27

13 49 21

α 0 3 . 5 7 6 0

-2.28

202.1 31.3

233.4 44.9

13.6 76.2 -2.31

58.5

Mean -2.19

Index R+B B.

194.2 45.0

239.2 27.6

24.0 72.6 -2.42

51.6

-2.42

203.0 28.3

231.3 44.0

14.8 72.3 -2.43

58.8 ~~58.7~~

Index L+A B.

102.5 46.0

148.5 27.6

293.4 73.6 -2.39

321.0

-2.40

111.5 29.4

140.9 43.4

284.9 72.8 -2.42

328.3

Mean -2.41

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1908phae.proj..590V

April 3, 1908

S.T. 10 11
H.A. +7 28
Dec. +69.8
P.A. 28.0 Vernier B
Sprocket −2.5A, −1.5B, −1.0C

Double Star No. 155 (Comstock's List) =
4 Draconis A.C

17 42 +72.2
11 12
6 30
12
5 30

U Obs. Rowe Rec. Phot R, one prism removed
P.A. (with respect to 4th Mag.) 122° Dist. 93 Mags
Comparison made of C with B which latter is the 6th Mag.
~~Comparison~~ to star a (4th Mag) of No. 154 Comstock's List,
immediately preceding No. 155

10 16 30

Index	B	B.	
312.9	9.2	v	
322.1	11.7	v	v.19 v
131.5	20.9	v	~~5.20~~
143.2			
			5.13 2 v
311.7	12.3	v	
324.0	9.9	v	
132.6	22.2	v	5.06 v
142.5			

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1908phae.proj..590W

April 3, 1908

Index R+a	A.	
224.8	7.3	
232.1	11.2	
42.4	18.5	5.46
53.6		
		5.35
221.7	12.9	
234.0	9.2	.13
43.1	21.5	~~5.24~~
52.8		

Mean 5.21

W's watch used for times
Watch 27 secs. fast.

L. A. P.

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1908phae.proj..590W

April 4, 1908 (Saturday).

H. P 3879 = +62° 2007 (5.7).

2 2 0 +63.9

32 8 20

10 20

U. Obs Rouse Rec. Phot. T.

Index L+A. B.

21.4 ← Var. Dis

7 25 40 52.5 31.1 ✓

206.1 21.2 ✓

227.3 52.3 ✓ −3.17 ✓

25.9 21.3 ✓ −3.20 ✓

47.2 29.5 ✓

201.4 508 ✓ −3.24 ✓

230.9

Index R+B A.

288.7 34.8 ✓

323.5 23.2 ✓

115.4 58.0 ✓ −2.94 ✓

138.6

−3.01 ✓

295.7 21.8 ✓

7 34 10 317.5 32.6 ✓

✓9 ✓0. ✓ 109.8 54.4 ✓ −3.08 ✓

7 29 ✓✓. ✓ 142.4

−18. ✓

12 29 37. ✓

δ 36. ✓ 20 ✓+ ✓

Means −3.18 ✓2

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1908phae.proj..590W

April 4, 1908

S.T. 8 48
H.A. +10 52
Dec +63.3
P.A. 3 151.4 Vernier B
Sprocket -5.5 B, -4.5 C.

Z. Persei.

2 33 +42.2
9 33
7 0

U Abs Rowe Rec. Phot. T.

~~173.5~~

Judex Lt a

353.3 ← Comp Star Dis

8 37 45

77.5 84.2 ✓
187.8 57.7 ✓
245.5 141.9 +0.74 ✓

6.8 58.9 ✓ +0.71 ✓
65.7 85.6 ✓
173.6 144.6 +0.68 ✓
259.2

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1900phae.proj..590w

April 4, 1908.

Index R+B

266.0	82.4 ✓	
348.4	61.7 ✓	
97.1	144.1 ✓	+0.69 ✓
158.8		

+0.66 ✓

280.2	59.6 ✓	
339.8	87.0 ✓	
84.2	146.6 ✓	+0.64 ✓
171.2		

Mean 0.68

S 44 50
A2 3 ✓ ✓
A 41 1A. ✓
+r -1A. ✓
13 41 0. ✓
A036. r701 ✓

S.T. 9 59
H.A. +7 25
Dec. +42.2
P.A. 1975
~~1792~~ Vernier B
Sprocket -2.5 B, -1.5 C

Double star No 123 (Comstock's list) = 72 Virginis.

13	24	-5.7
10	29	
2	55	
12		
9	5	

P.A. 17° Dist 0.5 Mags.

W. Obs. Rowe Rec. Phot. R, one prism removed.

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1908phae.proj..590W

April 4, 1908

A + B

41.6 ← Southern + Brite Dio.

9 31 25

53.3	11.7 ✓	
223.0	7 2 ✓	
230 2	18.9 ✓	5.41 ✓
42.7	8.7 ✓	5.06 ✓
51.4	17.5 ✓	
218.3	26.2 ✓	4.70 ✓
235.8		

Index Rta

309.8	15.2 ✓	
325.0	8.6 ✓	
134.0	23.8 ✓	4.91 ✓
142.6		
		4.91 ✓
312.7	8.6 ✓	
321.3	15.2 ✓	
129.5	23.8 ✓	4.91 ✓
144.7		

Mean 4.98 ✓

9 38 25

69 √0. ✓

9 34 √√. ✓

+√ -14. ✓

14 34 37. ✓

£036.6073 ✓

Measurements very difficult on account of faintness of companion in Phot., blurry seeing, and proximity of faint companion to bright component.

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1908phae.proj..590W

April 4, 1908

Double Star No. 131 (Comstock's List) -
β Serpentis

15	40
11	0
4	40
12	
7	20

+15.9

U Obs. Rowe Rea.
Phot R, one prism removed

P.A. 265° Dist. 0.5

Index R & B

132.7 ← Toll. + Brb. Dio.		
141.6	8.9 ✓	
312.6	8.4 ✓	
321.0	17.3 ✓	5.61 ✓
133.1	7.5 ✓	5.80 ✓
140.6	7.0 ✓	
313.3	14.5 ✓	5.99 ✓
320.3		

10 9 45

Index R + a

42.9	8.4 ✓	
51.3	4.9 ✓	
224.5	13.3 ✓	6.18 ✓
229.4		
		6.04 ✓
43.6	6.8 ✓	
49.6	9.2 ✓	
222.7	15.2 ✓	5.89 ✓
231.9		

Mean 5.92 ✓

10 18 15

28	0. ✓
10 14	0. ✓
+r	−18. ✓
1r 13	42. ✓

A 036.634 5 − ✓

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1908phae.proj..590W

April 4, 1908.

Faint companion pretty well seen most of the time and bright companion disappears quite completely in Phot. The seeing, however was more a less blurry some of the time and this with the proximity of faint companion to bright companion made the observations a little difficult. By waiting, however, for intervals of good seeing and exercising much care, the observations on previous double are considered good.

W's watch used for times
Watch 18 secs fast

L. P. P.

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1908phae.proj..590w

April 6, 1908 (Monday).

Y Camelop.

7 26 +76.2

abandoned for present altitude rather high and telescope near pier.

Turned on Sirius with Phot T inserted in telescope.

6 41 −16.6

8 51

2 10 W. Abs Rowe Rec.

Achromatic prisms down at eye and not only both primary images bright in field but secondary images at the right + left of these respectively visible and quite bright due to the fact that they are not fully cut out by eye stop. Taking the left hand one of primary images, three or four somewhat faint auxiliary images quite close to primary image, are easily seen running along on a faintish bar of light, said faintish images and bar of light revolving around primary when Nichol is rotated. Said bar of light also extends on left of the primary with tendency to one or two secondary images, but it is fainter and the images not quite so pronounced. Other whisps of light with slight tendency to nuclei also seen. The general phenomena of rotating whisps of light and

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1908phae.proj..590W

April 6, 1908

rotating nuclei seen with both principal images. In certain positions of the eye, additional whisps of light and nuclei appear, one being moderately bright and at a little distance from left hand primary image

When achromatic prisms are run up back a short distance, a bright ~~star~~ star like point appears on the right of right hand primary image nearly in line with its secondary. It rotates with the achromatic prisms but not with the Nichol and keeps its relation to the right hand primary image and its secondary. It is as bright as a 7.5 Mag. star and disappears with the disappearance of the primary. Nothing so pronounced as this seen in connection with the left hand primary. The left hand secondary has a ghost which is quite bright and visible at times. Other ghosts seen in field apparently but somewhat farther off.

The above mentioned star like ghost to the right of right hand primary image approaches the right hand secondary image as prisms are run up the track but not quite in a direct line

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1908phae.proj..590V

April 6, 1908.

γ. Camelop.

7	26	+76.2
9	46	
2	20	

16 Obs. Rowe Rec. Phot T.

Index Rta A.

185.7 ← Comp. Star Dis

232.9	47.2 ✓	
357.4	62.0 ✓	
59.4	109.2 ✓	+1.44

8 59 5

176.9	67.6 ✓	+1.34
244.5	50.0 ✓	
1.3	117.6 ✓	+1.2✓
51.3		

Index Rtb B.

99.2	42.2 ✓	
141.4	60.5 ✓	
268.2	102.7 ✓	+1.✓9
328.7		

+1.✓✓

87.4	63.9 ✓	
151.3	42.2 ✓	
277.6	106.1 ✓	+1.✓1
319.8		Mean +1.44

9 6 55

	6 0. ✓	
9	3 0. ✓	
+✓	+3. ✓	
14	3 3. ✓	

403.✓✓✓4 ✓

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1908phae.proj..590W

April 6, 1908.

Index L+B B. II

97.3	43.9 ✓	
141.2	64.1 ✓	
266.9	108.0 ✓	+1.46
331.0		

+1.50

86.8	63.4 ✓	
150.2	40.8 ✓	
277.8	104.2 ✓	+1.55
318.6		

Index R+a A.

5.3	48.7 ✓	
54.0	66.9 ✓	
174.3	115.6	+1.29
241.2		

354.4	64.3 ✓	Something wrong with one of last two readings. This group rejected. Mean +1.40 ✓
62.7 ~~62.8~~		
176.8	66.7 ✓	
243.5 ~~246.2~~	130.0	

9 17 35

27 47. ✓

9 13 52. ✓

+5 −3. ✓

14 13 49. ✓

A03A ✓930 ✓

Index R+a A. III

9 21 50

353.2	71.6	
64.8		
186.0	47.2	
233.2	118.8	+1.22

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1908phae.proj..590W

April 6, 1908.

3.2
54.5 +1.3 +1.20
174.5 69.9
244.4 121.2 +1.17

Index L+B B.
265.6 67.4
333.0
96.0 44.2
140.8 112.2 +1.37

277.2 +5.6 +1.33
322.8
82.0 70.1
152.1 115.7 +1.29 Mean +1.26

9 31 0
+2 +0. +
9 26 27. +
+ -3. +
14 26 22. +
+0 3A. 6017 +

Index L+B B. LE
264.0
335.0 71.0
94.0 49.6
143.6 120.6 +1.18

9 34 30

273.9 +0.1 +1.02
324.0
84.6 67.1
151.7 117.2 +1.2+

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1908phae.proj..590W

April 6, 1908

Index R+a A.

171.5	73.3 v	
244.8	v3.9	
3.4	127.2	+1.04
57.3		

+0.9R

183.2	52.4 v	
235.6	80.3 v	
349.1	132.7 v	+0.9v
69.4		

Mean +1.10 v

9 42 25

76 vv. v

9 3R 2R. v

+v −3. v

14 3R 2v. v

R03R.6100 v

Index R+a A.

171.8	75.7 v	
247.5	534 v	
1.7	129.1 v	+1.00
55.1		

+0.9A

182.0	54.2 v	
236.2	772 v	
351.0	131.4 v	+0.9v
68.2		

9 47 45

Index L+B. B.

81.9	75.0 v	
156.9	428 v	
277.6	127.8 v	+1.03 v
330.4		

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1908phae.proj..590V

April 6, 1908

95.2	47.6 ✓	+1.11
142.8	72.6 ✓	
264.0	120.2 ✓	+1.19
3366		Mean +1.0K ✓

9 5545

10330. ✓

9 ✓1 4✓. ✓

+✓ −3. ✓

1✓ ✓1 42. ✓

Δ03Δ.6192 ✓

ST 11 15

H.A +3 45

Dec +76.8

P.A 167.5 Vernier 13

Spr. Set −1.5 B, −0.5 C

Z. P. P.

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1908phae.proj..590V

April 6, 1908

B+C	1182		B	394	
10	6	3.0	10	6	0.0
10	7	3.0	10	7	0.0

Reap. Jup. III, Phot R, 26. Obs. Rowe Rec.
Compared with nearer to Jupiter of two Sats (before eclipse) = Sat I

N	21	36.	10	21	36		Fake Alarms	
	24	30.		24	30		"Snap."	
	27	5.		27	4			
	27	15.		27	14		Rem	
	27	25.			24	22.2	216.0	+3.5
	27	42.			41	29.0	238.8	+2.9
	28	3.		28	2	36.2	209.8	+2.4
	28	16.			15	40.6	246.0	+2.2
	28	26.			25	44.6	205.4	+1.9
	28	38.			37	47.3	250.0	+1.8
	28	49.			48	52.5	202.7	+1.5
	29	2.		29	1	55.4	255.2	+1.4
	29	13.			12	57.2	199.8	+1.3

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1908phae.proj..590V

April 6, 1908

1V	29	26.	10	29	25	60.0	257.0	+1.2
	29	37.		29	36	60.6	197.0	+1.2
	29	V0.		29	49	62.0	257.6	+1.1
	30	2.		30	1	6V.9	195.6	+0.9
	30	16.		30	15		261.5	
				30	30	7V.6	192.8	
1V	30	V3.		30	45	79.0	268.4	
		+1.		31	0	77.3	~~190~~. 189.0	+0.V
1V	30	V4.		31	18		268.0	
				31	34	81.6	187.0	
1V	31	V8.		31	53	82.0	268.8	+0.3
		+2.		32	4	81.9	~~187.2~~ 186.5	
1V	32	0.		32	19		268.5	
				32	34	85.2	185.0	
1V	32	V7.		32	50	87.0	270.2	
		+2.		33	5	86.1	186.5	+0.1
1V	32	V9.		33	18		273.5	
				33	33	89.0	184.0	
1V	33	V1.		33	44	90.2	273.0	
		+2.		33	56	89.6	183.0	0.0
1V	33	V3.		34	11		273.2	
				34	24	91.7	181.1	
1V	34	43.		34	35	92.0	272.8	
		+2.		34	50	91.8	181.0	−0.1
1V	34	4V.		35	3		273.0	
				3V	14	93.8	180.2	
1V	3V	34.		3V	28	92.V	274.0	
		+2.		3V	42	93.2	180.5	−0.1
1V	3V	36.						

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1908phae.proj..590W

April 6, 1908

	10	35	54		273.0	
		36	5	92.1	180.0	
IV 36 24.		36	21	91.7	272.1	−0.1
+3.		36	30	91.9	180.5	
IV 36 27.		36	40		272.2	
		36	50	91.8	180.7	
IV 37 9.		37	1	91.2	272.5	
+3.		37	17	91.5	181.0	−0.1
IV 37 12.		37	27		272.2	
		37	37	91.4	180.1	
IV 37 46.		37	50	90.7	271.5	
+3.		38	2	91.0	180.8	0.0
IV 37 49.		38	13		271.0	
		38	30	91.9	181.1	
IV 38 48.		38	40	91.5	272.5 273.0	−0.1
+3.		38	55	91.7	181.5	
IV 38 51.		39	7		273.0	2
		39	21	91.2	181.6	
IV 39 37.		39	33	92.5	272.8	−0.1
+3.		39	42	91.8	180.3	3
IV 39 40.		39	52		272.8	
	10	40	7	90.5	181.5	
IV 40 24.		40	18	91.8	272.0	0.0
+3.		40	29	91.2	181.4	4
IV 40 27.		40	40		273.2	
		40	52	90.2	181.8	
IV 41 12.		41	4	89.8	272.0	0.0
+3.				90.0		
IV 41 15.						

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1908phae.proj..590V

April 6, 1908

10	41	19			182.0	
	41	33			271.8	
	41	44	91.4		180.6	
	41	56	90.5		272.0	0.0
	44	1	91.0		182.5	6
	44	11			273.0	
	44	32	90.0		181.5	
	44	45	92.0		271.5	0.0
	44	57	91.0		182.0	7
	45	9			274.0	
	45	21	91.0		182.4	
	45	31	90.6	273.4 ~~272.5~~		0.0
	45	53	90.9		182.2	8
	46	10			273.0	

Limit of Visibility.

10	46	43	17.5	215.5	
	47	7	15.0	233.0	+4.2
	47	39	16.2	218.0	
10	47	53		233.0	

Seeing pretty good

B+C 1182

~~10~~	~~53~~	~~54.8~~
10	54	54.0
10	55	54.0

B394

~~10~~	~~54~~	~~0.0~~
10	55	0.0
10	56	0.0

U63 watch used for times U watch 3 secs slow.

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1908phae.proj..590

April 7, 1908 (Tuesday)

Double Star Σ 1306 = σ² Ursa Maj. (In old D.S. Book)

9	0	+67.6
10	5	
1	5	

Wdb. Rous Rec.

Too close and altitude too high.

Fourth Type Star +38° 1538

6	27	+38.6
10	27	
4	0	

Wdb Rous Rec. Phot T.

Color Tw with ordinary eyepiece

Full Aperture Used.

Index Sta B.

284.7 ← Fourth Type Dis.

316.7	32.0	
108.6	25.7	
184.3	57.7	−2.95

287.2	27.4	−2.89
314.6	33.5	
104.5	60.9	−2.83
138.0		

9 10 25

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1908phae.proj..590

April 7, 1908

Index R & B A.

193.0	37.5 ✓		
230.5	26.1 ✓		
18.6	63.6 ✓	−2.73 ✓	
44.7			−2.83 ✓
			~~2.75~~
200.1	24.9 ✓		
225.0	~~37.5~~	33.2 ✓	
	~~62.4~~	~~58.1~~ ✓	−2.93 ✓
13.0		~~2.77~~	
46.2 ~~50.5~~			−2.86 ✓
		Mean	~~2.89~~

Q 17 48
24 r. −
9 14 2. ✓
+r +13. ✓
14 14 r. ✓
A 039. r 932 ✓

S. T. 10 45
H A. +4 14
Dec. +69.0
Q a 192.8 Vernier B
Sprocket −3.5 B, −2.5 C

Fourth Type Star +2° 1715

7	26	+3.6
11	1	
3	35	

W Obs Rous Rec Phot T.

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1908phae.proj..590V

April 7, 1908

Index 1+a B.

354.6 ← Comp Star Dec.
70.8 76.2 ✓
186.0 53.2 ✓
239.2 129.4 +0.99 ✓

6.2 51.8 ✓ +1.02 ✓
58.0 75.4 ✓
172.1 127.2 ✓ +1.04 ✓
247.5

Index R+B A.

266.5 72.7 ✓
339.2 54.4 ✓
97.0 127.1 ✓ +1.04 ✓
151.4

+1.06 ✓

274.9 51.8 ✓
326.7 73.9 ✓
86.1 125.7 ✓ +1.07 ✓
159.0

Mean +1.04 ✓

S.T. 11 26
H.A. +3 54
Dec +2.7
P.A. 207.2 Vernier B
Sprocket -2.5 A, -1.5 B, -0.8 C

9 53 5

10 0 25
113 30 ✓
10 ✓6 ✓5. ✓
+✓ +13. ✓
1✓ ✓6 ✓A. ✓
£039.6146 ✓

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1908phae.proj..5907

April 7, 1908

At a little after 9 hrs. 30 mins this evening, on looking out northern window, noticed quite a little Auroral light in the north under pole ~~somewhat~~ rather low down and with tendency to be an arch and with several bright streamers extending upwards nearly to half the altitude of pole star. The phenomenon was very perceptible in moon light although the Auroral light was only fairly intense. Noticed also last Sunday evening towards midnight considerable Auroral light in the north, the light being rather more brilliant than tonight and of a somewhat patchy character. It should also be added that at ten o'clock tonight the Auroral light of tonight had faded out and become invisible.

Double Star No 133 (Comstock's List) =
V Serpentis

15	5 0	+16.0
11	3 0	
4	0	
12		
8	0	

P-A. 314 Dist 195 Mags

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1908phae.proj..590W

April 7, 1908

Index Lt B B.

10 40 45

43.5	South. Fall of Beta. Dra	
47.4	3.9	
225.9	1.4	
227.3	5.3	8.18

~~47.0~~		8.36
44.8	1.5	
46.3	3.6	
224.2 ~~226.1~~	4.5	8.53
227.2		

Index Rt a A.

314.4	~~315.9~~	2.5	
	316.9	3.1	
	134.3	5.6	8.06
	137.4		

8.06

315.3	~~316.1~~	1.7	
	317.0	3.9	
134.1	~~133.5~~	5.6	8.06
	138.0		

Mean 8.21

10 51 40

	92	2 v. v
10	46	12. v
+v		+13. v
1v	46	2 v. v

Ap 39.6 v 72 v

Measurements extremely difficult. The principal component is so bright that in many of the settings it is extremely difficult to make the bright image disappear. The whole measurement was very unsatisfactory.

W's watch used for times

Y. P. P. Watch 13 secs. slow.

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1900phaeproj..590V

April 9, 1908. (Thursday).

R. Z. Cassiop

2	36	+69.0
8	46	
6	10	

W. Obs. Roux Rec. Phot. T.

Index L & A B. I

272.1 ←	Var. Dis	
326.7	54.6	
98.8	44.2	
143.0	98.8	-1.69

7 29 25

279.2	40.4	-1.71
320.6	56.5	
94.2	96.9	-1.73
149.7		

Index R & B A.

182.5	58.5	
241.0	42.1	
10.3	100.6	-1.64
52.4		

-1.68

192.4	39.2	
231.6	58.4	
22	97.6	-1.72
60.6		

Mean -1.70

7 36 46
66 10
7 33
+v +24.
12 33 33.

Pole +1.v.233

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1908phae.proj..590W

April 9, 1908

Index R+B A. II

1808	~~R+B~~	
2404	59.6 v	
12.5	37.8 v	
58.3	97.4 v	−1.72 v
195.6	35.5 v	−1.79 v
231.1	56.4 v	
2.4	91.9 v	−1.86 v
58.8		

Index L+a B.

94.8	49.5 v	
144.3	38.0 v	
283.1	87.5 v	−1.98 v
321.1		
		−1.97 v
102.6	37.6 v	
140.2	50.8 v	
276.3	88.4 v	−1.96 v
327.1		

Mean −1.88 v

Index L+a B. III

96.8	47.6 v	
144.4	32.1 v	
285.4	79.7 v	−2.20 v
317.5		

7 39 55

~~7 42 15~~

7 47 20

47 1 v

7 43 38 v

+v +28 v

12 44 6 v

041 v 307 v

7 51 35

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1900phae.proj..599V

April 9, 1908

−2.12

104.3 33.8
7 54 25 138.1 51.4
275.4 85.2 −2.05
3268

Index R+B A.
6.2 49.8
7 57 8 56.0 31.5
197.0 81.3 −2.16
228.5

−2.14

15.2 33.0
7 59 0 48.2 49.8
187.4 82.8 −2.11
237.2 ~~2368~~

Mean −2.13

220
7 30
+2A.
12
8041.389

Index R+B A. IV
44 51.4
8 3 16 55.8 29.7
197.5 81.1 −2.16
227.2

−2.13

15.8 31.8
8 5 45 47.6 51.3
187.0 83.1 −2.10
238.3

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1908phae.proj..590W

April 9, 1908

Index Lt a B.

8 9 38

276.1 49.4
325.5 29.2
106.8 78.6 -2.24
136.0 -2.37

8 11 25

287.8
316.4 28.6
99.0 45.1
144.1 73.7 -2.39
Mean -2.22

29 0
7 2
13 7 6.
40 41. 471

Index Lt a B. V

8 14 5

279.8 42.7
322.5 28.2
107.4 70.9 -2.48
135.6 -2.49

8 17 35

287.4 28.6
316.0 41.6
101.0 70.2 -2.50
142.6

Index Rt B A.

8 19 15

188.8 45.6
234.4 28.5
17.3 74.1 -2.37
45.8

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1900phae.proj..590r

April 9, 1908

−2.38

198.0 28.1

226.1 ~~45.9~~ 45.6

8.6 ~~74.0~~ 73.7 −2.39

54.2 ~~54.5~~

Mean −2.44

8 21 58

72 4

10 11.

+2A.

13 10 39.

41. 46

Index R+B A. H

190.9 41.8

232.7 26.4

18.0 68.2 −2.57

44.4

−2.52

8 26 20

199.6 ~~219.9~~ 26.0

225.6 44.9

8.2 70.9 −2.48

53.1

Index ~~A~~ a B.

100.5 38.8

8 33 30 139.8 26.5

288.2 65.3 −2.67

314.7

−2.58

107.2 28.3

135.5 41.9

280.6 70.7 −2.50

322.5

Mean −2.55

8 35 30

12 0

31 2A.

+2A.

13 31 6.

40 46 38

1908phae.proj..590W

April 9, 1908

S.T. 10 11
H.A. +7 28
Dec +69.8
P.A. 27.2 Vernier B
Sprocket −2.5A, −1.5B, −1.0C

Fourth Type star +14° 1283
6 12 +14.8
11 7
4 55 W. Abs Rous Rec. Phot

Color 3/4 with ordinary eyepiece
9.5 m. Caps used
Index R+A B.
838 ← 4th Type Dis.
161.5 77.7 v
271.0 61.8 v
332.8 139.5 v −0.78 v

87.8 65.4 v −0.81 v
153.2 71.5 v
265.0 136.9 v −0.84 v
336.5

Index R+B A.
348.8 84.4 v
73.2 56.8 v
184.7 141.3 v −0.75 v
241.5

9 45 50

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1909phae.proj..599

April 9, 1908

−0.76″

9 52 0

97 r0. ✓
9 48 rr. ✓
+r +2A. ✓
14 49 23. ✓
80 41.6177 ✓

0.0 63.2 ✓
63.2 76 6 ✓
174.6 139.8 ✓ −0.78 ✓
251.2

Mean −0.78 ✓

S.T. 11 25
H.A. +5 4
Dec +15.2
P.A. 203.8 Vernier B
Sprocket −5.5 B, −4.5 C.

Fourth Type Star −13° 3407
11 33 −13.7
11 33
0 0 6 dbls Rowe Rec Phot T

Color 3 with ordinary eye piece

Index Left B.
2640 ← 4th Type Dus
3363 72.3 ✓
80.5 88.1 ✓
168.6 160 4 ✓ −0.38 ✓ 7
−0.26 ✓

10 16 55.

252.8 95.9 ✓
348.7 76.5 ✓
84.3 172.4 ✓ −0.14 ✓
160.8

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1908phae.proj..590W

April 9, 1908

Index	Right	A.
180.0	66.0	v
246.0	86.4	v
348.8	152.4	v −0.53 v
75.2		
		−0.39 v
164.6	93.0	v
257.6	73.7	v
355.3	166.7	v −0.25 v
69.0		

Mean −0.32 v

10	22	45
	39	F0. v
10	19	v0. v
+v		+2A. v
1v	20	1A. v

A0 41.639 v

S.T.
H.A.
Dec
P.A.
Sprocket.

H.A, etc not read as region was accidently lost during reduction of observation but region thoroughly identified before beginning.

W's watch used for times
Watch .28 secs. slow.

L. P. A.

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1908phae.proj..590V

Apr. 9. 1908.

	B. + C. 1142.		B. 394.	
11	25	31.7	11 30	0.0
	26	31.7	31	0.0
11	47	32.4	11 √2	0.0
	48	32.3	√3	0.0

Reap. Jup. I. Phot. R. H. Obs. Bowie Rec.
Comp. with Sat. on pres. side = Sat. II.

						Sup.	
17	17	36.√	12	13	7	Seen	
17	17	43.√			14		
17	17	49.√			20	√35√	111.5 +1.√
17	18	3.√			34	√7.9√	165.0 +1.3
17	18	17.√			46	62.9√	107.1 +1.1
17	18	27.√			56	69.1√	170.0 +0.2
17	18	36.√		14	7	76.√√	100.9 +0.√
17	18	49.√			20	42.4√	177.4 +0.3
17	19	0.√			31	46.2√	95.0 +0.1
17	19	14.√			45	49.0√	181.5 0.0
17	19	27.√			56	49.2√	92.5 0.0
17	19	36.√		15	7	90.1√	182.0 0.0
17	19	44.√			15 50	90.9√	91.9 0.0
17	19	58.√			29	92.0√	182.5 −0.1

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1908phae.proj..590W

Mar. 9. 1908.

17h 20m 8s	12	15	39	91.0	90.0	0.0
20 19			50	92.5	181.0	-0.1
20 32		16	3	93.3	88.5	-0.1
20 42			13	93.2	181.8	-0.1
20 52			23	94.2	88.0	-0.2
21 8			31		182.2	
		16	44		87.9	
17 17 1		16	52	95.1	183.0	
+4 29		17	6	94.5 / 94.8	89.0	1
17 21 30		17	23	-0.2	183.5	
		17	31		87.8	
17 17 46		17	41	94.2	182.0	
+4 29		17	52	94.4 / 94.3	87.7	2
17 22 15		18	2	-0.2	182.1	
		18	12		88.5	
17 18 26		18	20	95.1	183.6	
+4 29		18	31	94.7 / 94.9	87.5	3
17 22 55		18	42	-0.2	182.2	
		18	56		87.0	
17 19 14		19	9	97.0	184.0	
+4 29		19	20	95.9 / 96.4	87.6	4
17 23 43		19	30	-0.2	183.5	
		19	42		87.3	
17 20 2		19	59	97.2	184.5	
+4 29		20	10	96.6 / 96.9	87.0	
17 24 31		20	17	-0.3	183.6	
		20	26		87.6	
17 20 47		20	39	97.4	185.0	
+4 29				96.4 / 96.9		
17 25 16				-0.3		

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1908phae.proj..590V

Thursday April 9, 1908.

		12	20	52		87.1	6
		12	21	3		183.5	
			21	15		87.0	
17	21	37. ✓	21	31	97.8 ✓	184.8	7
	+4	29. ✓	21	45	97.9	87.1	
17	26	6. ✓	21	57	97.8 ✓ −0.3 ✓	185.0	
			22	7	98.1 ✓	87.1	
17	22	22. ✓	22	17	✓	185.2	A
	+4	29. ✓	22	27	97.7	86.8	
17	26	√1. ✓	22	38	97.9 ✓ −0.3 ✓	184.5	
			22	48	98.1 ✓	87.6	
17	23	42. ✓	22	58	✓	185.7	
	+4	29. ✓	24	23	97.5	86.5	9
17	28	11. ✓	24	38	97.8 ✓ −0.3 ✓	184.0	

Limits of Vis.

			24	57	38.2 ✓	116.8	
17	25	21. ✓	25	16		155.0	
	+4	29. ✓	25	29	39.1 ✓	117.1	
17	29	√0. ✓	25	42	38.6 ✓ +2.3 ✓	156.2	

Seeing fairly good but region ~~rather~~ low and just quite near Moon, however as ~~the~~ air is ~~pretty~~ clear the sky about just was moderately dark notwithstanding ~~the~~ proximity of ~~the~~ Moon and ~~the~~ eclipse is considered good

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1908phae.proj..590W

Apr. 9. 1908.

B. + C. 1142.

12	34	30.5	
	35	30.5	

B. 394.

12	39	0.0
	40	0.0

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1908phae.proj..590V

April 11, 1908. (Saturday)

Double Star δ Orionis = Bu. 2796 Components AC

5 26 − 0.4
8 46
3 20

Wdbs. Rowe Rec. Phot R.

Clouds
P. A. 0° Dist. 0.9

7 32 Still cloudy
Index R+A

219.8 ~~41.0~~ ← Southern Belt Dis I.
7 39 35 231.7 ~~48.3~~ ~~7.3~~ 11.9 ✓
11.1
38.4 ~~222.3~~ ~~10.9~~ 26.0 ✓ 4.72 ✓
52.5 ~~233.2~~ 18.2 5.50

4.52 ✓

37.6 16.2 ✓
53.8 15.1 ✓
31.3 ✓ 4.31 ✓

Clouds
217.8
232.9

Index R+B

307.6 16.0 ✓
323.6 16.5 ✓
126.6
143.1 32.5 ✓ 4.22 ✓

307.8
322.8 15.0 ✓ 4.30 ✓
127.5 15.5 ✓
143.0 30.5 ✓ 4.37 ✓
Mean 4.41 ✓

7 57 58.
97 2 ✓
7 44 42 ✓
+r +44.
12 49 26 ✓
2043.5 3443 ✓

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1908phae.proj..590W

April 11, 1908

Same again.

Index R + B

8 0 50	388.5	13.5 ✓	II
	322.0	16.1 ✓	
	126.6	29.6 ✓	4.43 ✓
	142.7		
			4.38 ✓
	307.2	15.9 ✓	
	323.1	15.3 ✓	
	127.6	31.2 ✓	4.32 ✓
	142.9		

Index L + A

219.2	13.7 ✓	
232.9	14.3 ✓	
38.2	28.0 ✓	4.55 ✓
52.5		
		4.57 ✓
217.9	14.3 ✓	
232.2	13.3 ✓	
38.7	27.6 ✓	4.59 ✓
52.0		

8 8 25		
9	15. ✓	
2 4	32. ✓	
+r	+44. ✓	
13 r	22. ✓	
2043. r4r4 ✓		

Mean 4.48 ✓

Gen. Mean 4.44 ✓

Much troubled by clouds especially in first group. First groups measured through gaps in clouds and through some light passing cloud. In second group sky was rather clearer, the region getting somewhat low in last measurements, the telescope being down in lower small shutters. Throughout

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1908phae.proj..590

April 11, 1908

all the observations the wind was very high and images somewhat blurry. Barometer rather low but rising rapidly, and also growing somewhat colder, storm progressively clearing off. As there was something wrong in first set of first groups. (probably circle accidentally read wrongly) this set was retaken. Measurements made slowly and with all possible care, so that measurements are considered good

Meast. of D.M +69° 181 (9.0) (Comp. Star for R Z Cassiop) with +69° 178 (9.5)

2	36	+69.0
10	36	
8	0	

W. Lb. Rowe Rec. Phot. T.

Index R & A.

9 13 25

261.0	Comp Star Dec	
343.4	82.4 ✓	
91.3	61.9 ✓	
153.2	144.3 ✓	−0.69 ✓
269.8	64.1 ✓	−0.70 ✓
333.9	79.1 ✓	
81.7	143.2 ✓	−0.71 ✓
160.8		

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1908phae.proj..590W

April 11, 1908

Index	Lt B	B.
169.7		84.4
254.1		61.0
358.5		145.4 −0.67
59.5		

180.6	63.5	−0.66
244.1	98.34	−0.44
343.2	156.9	−0.64
76.6		

Mean −0.683

Index	Lt B	B. II
169.2		88.3
257.5		61.5
359.2		149.8 −0.58
60.7		

−0.53

178.9	65.9	
244.8	89.1	
346.0	155.0	−0.48
75.1		

Index	Rt A	A.
78.6		85.2
163.8		64.4
268.3		149.6 −0.58
332.7		

9 21 25
34 −0.
9 17 2−.
+− +44.
14 14 9.
A0 43.−9−9

9 24 10

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1908phae.proj..590Y

April 11, 1908

−0.66

92.9 60.1
153.0 82.1
259.7 142.2 −0.73
341.8

Mean −0.60
General " 0.67

9 32 10
6 20.
9 2A 10.
+ +44.
14 2A 4.
A0F3.6034

S.T. 11 2.0
H.A +8. 37
Dec +69.8
P.A 302.7 Vernier B
Sprocket +0.5 B, +1.5 C

Double Star DM +19° 1162 (9.0) and 1163 (9.0)
No 1163 is very perceptibly the brighter to the eye in telescope.

P.A. 335.0 Dist. 1.5± Mags. 9.0, 9.5
U. Obs Rows Rec. Phot. R, one prism removed

Index Above
194.8 68.1 South Foll. Prtn. Dis
262.1 77.2
9.5 145.3 0.67
86.7

10 14 10

0.67

1900 79.8
269.8 65.5
12.5 145.3 0.67
78.0

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1908phae.proj..590W

April 11, 1908.

Index	Below	
103.0	62	
170.2	79.0	
277.0	146.2	0.61
356.0		

0.60

95.1	83.9	
179.0	67.9	
283.0	151.8	0.54
350.9		

Mean 0.64

10	21	18
	35	20.
10	17	40.
+5		+44.
15	18	24.

A0 43.637A

Ub's watch used for times
Ubatch 44 secs. slow.

L. P. P.

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1908phae.proj..590

April 13, 1908 (Monday)

Double Star

δ Orionis = Bu. 2796 Components A C.

5	26	−0.4
9	26	
4	0	

W Obs. Rowe Rec. Phot R.

P.A 0° Dist 0.9

Index Lt a I

38.5	12.8 ✓	Southern + Brtr Dis
51.3	15.1 ✓	
217.2	27.9 ✓	4.56 ✓
232.3		

4.52 ✓

37.4	14.8 ✓	
52.2	14.0 ✓	
218.2	28.8 ✓	4.49 ✓
232.2		

Index R + B

307.5	15.3 ✓	
322.8	15.9 ✓	
126.6	31.2 ✓	4.32 ✓
142.5		

4.32 ✓

307.0	15.8 ✓	
322.8	15.2 ✓	
127.0	31.0 ✓	4.33 ✓
142.2		

Mean 4.42 ✓

7 45 15

7 52 20

97 3 ✓ ✓

7 48 48 ✓

+ ✓ −9. ✓

12 48 39. ✓

0.04 ✓ ✓ 337 ✓

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1908phae.proj..590W

April 13, 1908

Index R+B

308.3	13.3 ✓	
321.6	16.8 ✓	
126.8	30.1 ✓	4.40 ✓
143.6		

4.41 ✓

307.2	14.6 ✓	
321.8	15.2 ✓	
127.6	29.8 ✓	4.42 ✓
142.2		

Index L+a

218.2	14.1 ✓	
232.3	15.2 ✓	
37.1	29.3 ✓	4.45 ✓
52.3		

4.52 ✓

218.2	14.1 ✓	
232.3	13.3 ✓	
38.1	27.4 ✓	4.60 ✓
51.4		

Mean 4.46 ✓

General Mean 4.47 ✓

7 54 40

8 2 50

	117	30. ✓
Δ	√Δ	4√. ✓
+√		−9. ✓
13	√Δ	36. ✓

Δ0 4√. √Δ 23 ✓

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1908phae..proj..590W

April 13, 1908.

Double Star DM+14° 1089 and 1090

5 42 +14.2

10 9 20 ~~47~~

~~4~~ 5

4 38

W. Obs. Rous Rec. Phot R.

P.A. 150° Dist. 1.5± Mags. 8.5, 9.0

Index Above

928 ← North Prec. + Brtr Dbl.

8 51 50

180.8 87.2 ✓

275.8 78.2 ✓

354.0 165.4 ✓ 0.2X

0.3X ✓

95.4 81.5 ✓

176.9 77.4 ✓

277.0 158.9 ✓ 0.40 ✓

354.4

Index Below

7.4 ~~262~~3 74.1 ✓

81.5 ~~60~~ 79.2 ✓

186.0 153.3 ✓ 0.51 ✓

265.2

0.48 ✓

4.8 79.8 ✓

84.6 76.6 ✓

187.4 156.4 ✓ 0.45 ✓

264.0

Mean 0.48 ✓

9 - 2 50

114 40. ✓

9 ✓7 20. ✓

+5 −9. ✓

~~14~~ 13 ✓7 11.

~~20 4 5 6 2 39~~ ✓

20 4 5 5 0 13 ✓

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1908phae.proj..590W

April 13, 1908

Double Star DM +7° 1312 + 1314

6	25	+7.4
11	5	
4	40	

W. dbs. Rowe Rey. Phot R.
P.A. 325° Dist. 2.5″

Index Below

286.0 ← South. Fall of Brtr. Dis.

9 30 50

342.8	66.8 ✓	
93.0	84.4 ✓	
177.4	141.2 ✓	0.75 ✓
275.0	80.2 ✓	0.76 ✓
355.2	59.5 ✓	
106.6	139.7 ✓	0.78 ✓
166.1		

Index Above

196.0	60.2 ✓	
256.2	79.7 ✓	
53	139.9 ✓	0.78 ✓
83.0		
		0.84 ✓
187.4	78.9 ✓	
266.3	54.8 ✓	
19.4	133.7 ✓	0.90 ✓
74.2		

Mean 0.80 ✓

9 38 50

	69 40. ✓	
9	34 40. ✓	
+r	-9. ✓	
14	34 41. ✓	

Adopt. 6074 ✓

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1900phae.proj..5906

April 13, 1908.

B & L 1182 — B 394

10	6	11.2	10	6	0.0
10	7	11.1	10	7	0.0

Dec. Jup. III. Phot. R. 16 Abs Rous Rec.
Compared with outer of two Sats. (before eclipses) on same foll. side = Sat. I

10	21	36			~~179.0~~ 178.2		
	21	59	99.7		277.9		
	22	23	102.8 / 101.2	−0.4	177.2 ~~176.5~~		1
	28	1			280.0		
	23	12	101.1		177.8		
	23	29			278.9		
	23	45	102.5 / 101.8	−0.5	176.5		2
	23	59			279.0		
	24	25	100.4		177.9		
	24	40	100.4		278.3		
	24	58	100.4	−0.4	178.0		3
	25	30			278.4		
	25	55	100.5		178.0		
	26	12	100.5 / 100.5	−0.4	278.5		4
	26	31			178.3		
	26	48			278.8		
	27	45	101.0		177.0		
	27	58	101.5 / 101.1	−0.4	278.0		

15 22 15.
−10.
15 22 05.

15 23 36.
−10.
15 23 26.

15 24 53.
−10.
15 24 43.

15 26 22.
−10.
15 26 12.

15 28 6.
−10.
15 27 56.

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1908phae.proj..590W

April 13, 1908.

10	28	14			176.8	
	28	28			278.5	
	29	3			177.0	
	29	19	100.√		277.5	
	29	49	101.6 / 101.0	−0.4	177.0	6
	30	4			278.6	
	30	30	100.2		177.3	
	30	50	101.√		277.5	
	31	3	100.8	−0.4	177.0	7
	31	19			278.5	
	32	5	103.0		176.5	
	32	23	102.2		279.5	
	32	38	102.6	−0.√	176.8	8
	32	56			279.0	
	33	59	100.8		177.0	
	34	17	100.0		277.8	
	34	37	100.4	−0.4	178.2	9
	34	49			278.2	
	35	24	100.8		177.0	
	35	39	100.9		277.8	
	35	58	100.8	−0.4	178.0	10
	36	8			278.9	
	36	42	100.3		177.2	
	37	3	99.8		277.5	
	37	20	100.0	−0.4	176.4	11
	37	33			276.2	
	38	15	99.9		177.8	
	38	30	100.7 / 100.3	−0.4	277.7	12

1√	29	34.	
		−9.	
1√	29	25.	
1√	30	26.	
		−9.	
1√	30	17.	
1√	32	30.	
		−9.	
1√	32	21.	
1√	34	26.	
		−9.	
1√	34	17.	
1√	35	47.	
		−9.	
1√	35	38.	
1√	37	10.	
		−9.	
1√	37	1.	
1√	38	42.	
		−9.	
1√	38	33.	

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1908phaeb.proj..5900

April 13, 1908

	10	38	52			176.7
		39	11			277.4
		39	52	9 v.v		179.5
IV 40 20.		40	12			275.0 13
-9		40	29	9 v.7 / 9 v.6	−0.2	180.8
IV 40 11.		40	46			276.5
		41	6	9 8.0		177.8
IV 41 30.		41	25	9 6.9		275.8
-9.		41	39	97.4	−0.3	179.5 14
IV 41 21.		41	50			276.4
		42	11	9 8.8		178.4
IV 42 36.		42	26	9 8.2		277.2 IV
-8.		42	48	98.v	−0.3	178.0
IV 42 28.		42	59			276.2
		43	22	97.7		178.1
IV 43 v4		43	38	9 8.0		275.8
-8.		44	9	97.8	−0.3	177.0 16
IV 43 46.		44	26			275.0
		44	55			179.0
IV 45 18.		45	9	97.7		276.7
-8.		45	26	97.6 / 97.6	−0.3	178.4
IV 45 10.		45	43			276.0
		46	8	99.v		176.5
IV 46 33.		46	25	97.2		276.0
-8.		46	42	98.4	−0.3	179.0
IV 46 25.		46	58			276.2
		47	18	97.0		179.5
IV 47 45.		47	35	9 v.9 / 96.4	−0.2	276.5
-8.						
IV 47 37.						

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1908phae.proj..590W

April 13, 1908

			10	47	59			179.5
				48	8			275.2
				48	19	94.6		179.2
14	48	42.		48	34	94.0		273.8
		-8.		48	47	94.3	-0.2	179.5
13	48	34.		49	7		273.5	274.0
				49	33	90.8		181.0
14	49	14.		49	48	24		271.0
		-8.		50	1	87.2	+0.1	183.5
14	49	46.		10	13			268.0
				10	34	82.7		184.3
14	10	18.		10	50	78.4		267.0
		-8.		51	7	80.6	+0.4	186.5
14	10	10.		11	19			264.9
14	11	25.		11	33	70.1	+0.8	189.5
	11	38.		11	46	68.1	+0.8	260.0
	11	47.		11	55	66.1	+0.9	191.5
	11	17.		52	5	62.9	+1.1	258.0
	12	13.		12	21	60.7	+1.2	195.1
	12	23.		12	31	58.3	+1.3	255.8
	12	33.		12	41	55.1	+1.4	197.5
	12	10.		12	58	53.0	+1.4	253.0
	13	1.		53	9	53.3	+1.5	197.5
	13	27.		13	35	44.8	+1.7	250.8
	13	37.		13	45	46.0	+1.9	202.0
	14	12.		54	0	39.2	+2.2	248.0
	14	2.		14	10	32.2	+2.7	208.8
	14	12.		14	20	26.9	+3.1	241.0

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1900phae.proj..590v

April 13, 1908

1v	4	24 v	10	54	32	22.9 v +3.5 v	214.1
	v4	43 v		v4	51		237.0 ~~239.8~~
	vv	2 v		55	10	Seen	104
	vv	13 v		vv	21	Suspected	
	vv	20 v		vv	27	Suspected	
				~~20~~	2		

Limit of Visibility

			10	56	20	25.0 v	213.5
1v	v6	49. v		v6	37	25.5 v	238.5
		-7 v		v6	59	25.2 v +3.3 v	212.1
1v	v6	42. v		57	19		237.6

	BfC 1182			B 394		
11	2	7.0	11	2	0.0
11	3	7.1	11	3	0.0

Seeing in general ~~pretty~~ rather good. It was, however, a little bluvvy but this bluviness was not excessive but was rather moderate in character so that until the Sat. became rather faint, the slight amount of bluviness did not give much of any trouble. In the very last settings, when the Sat. got quite faint, this bluviness gave a little trouble but all the settings made with great care by waiting a little for the air to steady, so that all the settings are considered good except the last one or two. These were a little uncertain. Both ~~this exception~~ however the possible exception of the last one or two

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1908phae.proj..590W

April 13, 1908

settings, the eclipse is considered first class throughout.

W's watch used for times before eclipse.
Watch 9 secs fast.

L. P. P.

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1908phae.proj..5907

April 14, 1908 (Tuesday)

Double Star δ Draconis = Be. 2796 Components A C

5 26 −0.4
9 6
3 40

U. Obs. Rowe Rec. Phot. R

P.A. 0° Dist. 0.9

Index L+a

38.5 Southern + Brtr Dis'
52.0 13.5 ✓
217.5 14.5 ✓
232.0 28.0 ✓ 4.55 ✓

7 20 10

37.8 14.5 ✓ 4.52 ✓
52.3 14.2 ✓
218.2 28.7 ✓ 4.50 ✓
232.4

Index R+B

308.3 13.7 ✓
322.0 13.8 ✓
128.4 27.5 ✓ 4.59 ✓
142.2

4.56 ✓

308.4 14.1 ✓
322.5 14.1 ✓
127.9 28.2 ✓ 4.54 ✓
142.0

Mean 4.54 ✓

7 28 40
40 r0. ✓
7 24 2r. ✓
+r +1. ✓
12 24 26. ✓
p046. r170 ✓

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1908phae.proj..590W

April 14, 1908

Same Again
Index R+B

308.4	14.0 ✓	
322.4	13.9 ✓	
128.0	27.9 ✓	4.56 ✓
141.9		

4.57 ✓

307.9	14.3 ✓	
322.2	13.9 ✓	
128.1	28.2 ✓	4.54 ✓
142.0		

Index L+a

218.2	13.7 ✓	
231.9	13.5 ✓	
38.5	27.2 ✓	4.62 ✓
52.0		

4.62 ✓

218.2	14.0 ✓	
232.2	13.2 ✓	
38.9	27.2 ✓	4.62 ✓
52.1		

Mean 4.58 ✓
General Mean 4.56 ✓

7 31 20

7 39 50

	71	10. ✓
7	3✓	3✓. ✓
+✓		+1. ✓
12	3✓	36. ✓

δ 046.✓247 ✓

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1908phae.proj..590

April 14, 1908

Double Star DM -9° 1714 + 1716

6	40	−10.0
9	45	
3	5	

W. Alvs Rowe Rec. Phot R, one prism removed and with ordinary eyepiece, there is not much difference in brightness between the two components of this double In measurements, however, and in P.A. given the following component assumed to be very slightly the brighter

P.A. 265° Dist. 0.7± Mags. 9.0, 9.2

Finder L+B

269.9 ~~+265~~	Foll + Slightly Brtr. Dis.	
5.8	95.9 ✓	
101.6	70.7 ✓	
172.3	166.6 ✓	0.25 ✓

8 11 55

0.22 ✓

282.8	71.8 ✓	
354.6	98.8 ✓	
88.7	170.6 ✓	0.18 ✓
187.5		

Finder R+a

357.7	97.3 ✓	
95.0	70.1 ✓	
192.6	167.4 ✓	0.24 ✓
262.7		

0.21 ✓

10.8	92.9 ✓	
83.7	97.4 ✓	
180.5	170.3	0.18 ✓
277.9		

Mean 0.22 ✓

8 24 40

	36	37. ✓
∂	10	10. ✓
+5		+1. ✓
13	10	19.

∂ 46 ✓ 46 ✓

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1908phae.proj..590W

April 14, 1908.

In settings on above groups, following component assumed to be slightly the brighter. This is borne out by the measurements and also agrees with the D M. Measurements made slowly and with great care and result considered good

Fourth Type star -1° 2312

9	32	-0.5
11	~~8~~	
1	35	

W Abs Rowe Rec Phot T.

Index left B.

186.6 ← Comp Star Dec

235.6	49.0 ✓	
11.6	398 ✓	
51.4	88.8 ✓	+1.95 ✓

9 26 45

192.3	37.7 ✓	+1.93 ✓
230.0	526 ✓	
5.6	903 ✓	+1.91 ✓
58.2		

Index Right A.

93.7	53.6 ✓	
147.3	395 ✓	
282.5	931 ✓	+1.83 ✓
322.0		

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1908phae.proj..590

April 14, 1908

1.78 v

101.6	40.2 v	
141.8	56.8 v	
273.4	97.0 v	+1.78 v
330.2		

Mean +1.86 v

9	36	10
	62	vv. v
9	31	28. v
+v		+1. v
14	31	29. v
8046.	60	v2 v

S.T. 11 31
H.A. +1 43
Dec. -1.1
P.A. 211.2 Vernier B
Sprocket -0.5 B, +0.5 C

~~Sprocket not read as the had b~~

Fourth Type Star +38° 1539

6	27	+38.6
11	47	
5	20	

Color 7 with ordinary eyepiece.

Full aperture used.

U. Obs. Power Rec. Phot. T.

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1908phae.proj..590W

April 14, 1908

Index Rt a B

104.0 ← 4th Type Dio

139.3 35.3 ✓

289.0 260 ✓

315.0 61.3 ✓ −2.81 ✓

108.0 26.6 ✓ −2.84 ✓

134.6 332 ✓

284.9 57.8 ✓ −2.87 ✓

318.1

Index Rt B A.

12.5 37.3 ✓

49.8 25.9 ✓

199.2 632 ✓ −2.74 ✓

225.1

−2.74 ✓

18.8 27.1 ✓

45.9 360 ✓

194.3 63.1 ✓ −2.73 4 ✓

230.3

Mean −2.79 ✓

10 8 50

10 16 20

25 10. ✓

10 12 35. ✓

+5 +1. ✓

15 12 36. ✓

A0 46.6337 ✓

S.T. 12 9

H.A. +5 37

Dec. +39.0

D-A 189.5 Vernier B

Sprocket −3.5B, −2.5C

L. A. P.

W's watch used for times. Watch 1 sec. slow.

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1908phae.proj..5907

April 16, 1908 (Thursday)

Double Star δ Arietis = Bu 2796 Components A C

5 26 −0.4
9 6
3 48

Ub. Obs. Roma Rec. Phot. R

Indy Lta

38.3 ✓ Southern + Beta. Dec
523 14.0 ✓
218.6 14 2 ✓
232.8 28.2 ✓ 4.54 ✓

7 17 56

38.1 13.7 ✓ 4.57 ✓
51.8 13 7 ✓
218.5 27.4 ✓ 4.60 ✓
232.2

Indy R+B

308.3 14.4 ✓
322.7 14.4 ✓
127.7 28.8 ✓ 4.49 ✓
142.1

4.56 ✓

308 3 13.8 ✓
321.6 13.6 ✓
128.2 26.9 ✓ 4.64 ✓
141.8 ~~141.9~~

Mean 4.56 ✓

7 27 5
4√ 0. ✓
7 22 30. ✓
+√ +20. ✓
12 22 50. ✓
8048.√159 ✓

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1908phae.proj..590W

April 16, 1968

Same again.

Index R+B

308.5	13.1 ✓	
321.6	14.8 ✓	
1277	27.9 ✓	4.56 ✓
1425		
		4.52 ✓
3079	14.1 ✓	
322.0	14.8 ✓	
1273	28.9 ✓	4.48 ✓
1421		

Index L+A

218.1	14.5 ✓	
232.6	15.3 ✓	
37.7	29.8 ✓	4.42 ✓
53.0		
		4.48 ✓
217.9	14.6 ✓	
232.5	13.6 ✓	
38.5	28.1 ✓	4.55 ✓
52.0		

7 38 40

7 39 15

69 √√. ✓

7 34 √2. ✓

+√ +20. ✓

12 3√ 1. ✓

2.04 2. √2 4√ ✓

Mean 4.50 ✓

General Mean 4.53 ✓

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1908phae.proj..590

April 16, 1908.

Double Star A.G.C. 10445

7	52	-25.1
10	2	
2	10	

Abandoned.

Double Star A.G.C. 12021 + 12022

8	48	-24.9
10	6	
1	.2 0	
8	40	-24.9
10	14	
1	34	

P.A. 150° Dist. 0.'9 ± Mags. 9.0+9.3

U. Obs. Rows Rec. Phot. R.

Index 1+a.

8 29 5

91.0	← North, Prec. + Rtn. Dis.	
182.5	91.5 ✓	
278.9	96.1 ✓	
355.0	167.6 ✓	0.24 ✓
98.9	73.4 ✓	032 ✓
172.3	86.1 ✓	
274.9	159.5 ✓	0.39 ✓
1.0		

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1908phae.proj..590W

April. 16. 1908

Index R & B

0.0	90.7 ✓	
	79.2 ✓	
90.7	169.9 ✓	0.19 ✓
187.7		0.25 ✓
266.9		
10.2	73.2 ✓	
83.4	90.4 ✓	
183.2	163.6 ✓	0.31 ✓
273.6		

Mean 0.28 ✓

8	39	8	
	6 A	✓.	✓
A	3 Y	2.	✓
+✓		+20.	✓
13	3 Y	22.	✓

A 0 Y A. ✓ 6 ✓ 6

Region thoroughly identified.

The double which was measured immediately above is the one wanted. Its place was identified by taking a 6.5 Mag about 5' preceding and nearly the same Dec and running from that to the double by moving the Telescope that amount. The P.A. Mags. & Dist. of components also agree with the pair wanted. as indicated in the A.G.C.

Double Star DM +29° 2844 + 2845

15	6	+39.2
11	6	
4	0	
12	0	
8	0	

P.A. 105° Dist 0.6± Components about equal in brightness
See note at end of group.
W. Obs Rowe Ref. Phot R, one prism removed

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1908phae.proj..590

April 16, 1908

Index Left

	93.0 ←	Prec. & Brtr. Dus.
9 22 45	177.8	84.8 ✓
	266.2	100.2 ✓
	6.4	185.0 ✓ ✓
		175.0 0.09 ✓
	86.3	101.7 ✓ 0.08 ✓
	188.0	81.9 ✓ ✓
	276.5	183.6 ✓
	358.4	176.4 ✓ 0.07 ✓

Index Right

	3.9	83.1 ✓
	87.0	103.2 ✓
	175.0	186.3 ✓ ✓ 0.12 ✓
	278.2	173.7 ✓
	355.0	101.3 ✓ ✓ 0.13 ✓
	96.3	86.1 ✓ ✓
	184.0	187.4 ✓
	270.1	172.6 ✓ 0.14 ✓

Mean 0.10 ✓

9 31 45

	14 30.	✓
9	27 1.	✓
+✓	+20.	✓
14	27 31.	✓

20 Ka. 602 ✓ + ✓

It was assumed in beginning the observations that the Prec. was slightly the Brtr., although there is not much difference between the components. The measurements, however, (which were made with great care,) and are very accordant

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1908phae.proj..590W

April 16, 1908

make the following star slightly the Brto

~~F Leyrat~~.

Fourth Type Star +36° 3243

18	40	+37.4
12	0	
6	40	
12	0	
5	20	

Index R+a A.

341.0 ← Comp Star Dec.

16 26 0

81.9	100.9 ✓	
168.5	85.4 ✓	
253.9	186.3 ✓	
	173.7 ✓	−0.12 ✓
348.0	88.2 ✓	
76.2	105.1 ✓	−0.12 ✓
157.5	193.3 ✓	
262.6	166.7 ✓	−0.25 ✓

Index L+B B.

249.9	99.2 ✓	
349.1	~~75~~ 74.7 ✓	
82.6	174.9 ✓	+0.09
1583		

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1908phae.proj..590

April 16, 1908

+0.09

260.8	76.1		
336.9	990		
72.8	175.1	+0.09	
17.8		Mean −0.04	

	10	30	40
	√6	40.	√
11	2A	20.	√
+√		+20.	√
1√	2A	40.	√

A0 4A 64 49 √

S.T. 12 30
H.A. −5 59
Dec +36.2
P.A. 180.0 Vernier B
Sprocket −3.5 A, −2.5 B, −2.0 C

U's watch used for times.
Watch 20 secs. slow.

Z. P. P.

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1908phae.proj..590W

April 17, 1908 (Friday).

Double Star δ Orionis. = Bu. 2796, Components A.C.

5	26	−0.4
9	16	
3	50	

U. Obs: Rowe Rec. Phot. R.

7 24 25

310.8
323 4
130.4
144.1

310.8
323.8

Found that one quartz prism had been removed from Phot. R. which latter was being used. As all the previous measurements on this star have been made with Phot R with both quartz prisms, discontinued above observations in order to assert additional quartz prism. This being done, the following two groups were made with both prisms inserted. Reject above partial groups.

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1908phae.proj..590

April 17, 1908.

Index R+B

127.2	14.7 ✓	Southern + Extra Dis.
141.9	14.3 ✓	
308.1	29.0 ✓	4.48 ✓
322.4		
		4.48 ✓
127.6	14.4 ✓	
142.0	14.5 ✓	
308.1	28.9 ✓	4.48 ✓
322.6		

Index L+C

38.4	13.5 ✓	
51.9	15.1 ✓	
217.3	28.6 ✓	4.51 ✓
232.4		
		4.55 ✓
37.8	14.2 ✓	
52.0	13.3 ✓	
218.9	27.5 ✓	4.59 ✓
2822		

Mean 4.52 ✓

7 32 30

7 39 35

7 12 √. ✓

7 36 2. ✓

+r +27. ✓

12 36 29. ✓

2049. r2r3 ✓

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1908phae.proj..590W

April 17, 1908

Same Again

Index L+a

37.9 14.1 ✓
52.0 14 2 ✓
218.1 28. 3 ✓ 4.53 ✓
2323

4.52 ✓

38.2 14.1 ✓
523 14 4 ✓
2183 28. 5 ✓ 4.52 ✓
282.7

Index R+B

308.8 14.3 ✓
3223 15 5 ✓
127.1 29 8 ✓ 4.42 ✓
142.6

4.46 ✓

308.4 14.2 ✓
322.6 14 6 ✓
127.6 28 .8 ✓ 4.49 ✓
1422

Mean 4.49 ✓
General Mean 4.50 ✓

7 42 8

2 48 30

90 30. ✓
7 4√ 1√. ✓
+√ +27. ✓
12 4√ 42. ✓
80 49. √317 ✓

8

8
& +√ 13

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1908phae.proj..590r

April 17, 1908.

Double Star OM +7° 1312+1314

6	25	+7.4
10	25	
4	0	

W. Obs Roma Rec. Phot R.
P.A. 325° Dist 2.5″

Index Below

8 39 15

100.7	← South, Fill & Brth Dev.	
172.4	71.7 ✓	
287.4	57.0 ✓	
344.4	128.7 ✓	1.00
106.4	60.3 ✓	0.98
166.7	76.5 ✓	
280.0	130.8 ✓	0.96
350.5		

Index above

7.7	76.3 ✓	
84.0	59.4 ✓	
196.2	135.7 ✓	0.86
255.6		
		0.84
13.2	62.7 ✓	
75.9	75.6 ✓	
186.7	138.3 ✓	0.81
262.3		

Mean 0.91

8 47 20

	86	3V. ✓
8	43	18. ✓
+V		+27. ✓
13	43	45. ✓

8049.5721 ✓

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1908phae.proj..590W

April 17, 1908

B+C 1182			B, 394		
9	2	10.0	9	2	0.0
9	3	9.9	9	3	0.0

Reap. Jup. II Phot R. W. Obs. Rouse Pac.

Compared with nearer of two Sats on preceding side = Sat. III.

14	19	6.	9	19	14	Suspected		
	19	26.		19	34	Seen. ~~Still more strongly suspected~~		
	19	33.		19	41	Strongly seen.		
	19	55.		20	3	40.0	+2.2	115.0
	20	5		20	13	41.7	+2.1	155.0
	20	16.		20	24	46.0	+1.9	113.0
	20	28		20	36	49.9	+1.7	159.0 ~~+58.2~~
	20	38.		20	46	53.2	+1.5	109.1
	20	49.		20	57	54.3	+1.5	162.3
	20	59.		21	7	56.9	+1.3	108.0 ~~+08.5~~
	21	6.		21	16	60.7	+1.2	164.9
	21	18		21	26	66.6	+1.0	104.2 ~~+03.7~~

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1908phae.proj..590r

April 17, 1908

14	21	30.	9	21	38	66.2	+0.9	169.8	
	21	41.		21	49	66.3	+0.9	103.6	
	21	52.		22	3	67.4	+0.9	169.8	
	22	5.		22	13	70.0	+0.8	102.5	
	22	16.		22	24	71.7	+0.7	172.5	
	22	26.		22	34	73.2	+0.6	100.8	
	22	38.		22	46	74.5	+0.6	174.0	
	22	48.		22	56	74.5	+0.6	99.5	
	23	1.		23	9			174.0	
				23	17	77.2		97.7	
	23	37.		23	31			174.9	
		-6.		23	44	77.7		97.0	1
14	23	29.		23	57	77.4	+0.5	174.7	
				24	9			97.2	
	24	26.		24	20	77.3		174.5	
		-8		24	32	77.1		96.7	2
	24	18.		24	42	77.2	+0.5	173.8	
				25	4			97.0	
	25	26		25	15	77.0		174.0	
		-8.		25	27	76.6		97.5	3
	25	18.		25	37	76.8	+0.5	174.1	
				25	47			97.4	
	26	29.		25	58	76.1		173.5	4
		-8.		26	8	77.4		96.8	
	26	21.		26	19	76.8	+0.5	173.7	
				26	31			97.7	
	27	6.		26	46	76.1		173.8	5
		-8		26	55	77.6			
14	26	58.				76.8	+0.5		

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1908phae.proj..590W

April 17, 1908.

			9	27	13		96.5	√
				27	29		174.1	
				28	8	76.7	97.1	
14	28	2√		28	19		173.8	
		-2.		28	33	77.2 / 76.2 +0.√	97.7	6
14	28	17.		28	41		173.5	
				28	59	76.6	98.0	
14	29	19.		29	13		174.6	
		-8.		29	24	77.4	97.3	7
14	29	11.		29	40	77.0 +0.√	174.7	
				29	49		96.5	
14	30	11.		30	5	76.1	174.6	
		-7.		30	20	77.2	97.0	8
14	30	4		30	30	76.0 +0.√	174.8	
				30	42		97.6	
14	31	√0.		30	54	76.4	174.0	
		-7.		32	45	77.0	97.0	9
14	31	43.		32	57	76.2 +0.√	174.0 assumed.	

Limit of Visibility

			9	33	27		124.0	
14	33	√4.		33	44	22.√	146.5	
		-7.		33	59	23.2 / 22.6 +3.√	125.3	
14	33	47.		34	26		148.1	

B+C 1182

9	41	6.3	
9	42	6.4	

B 394

9	41	00	
9	42	00	

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1908phaeproj..596V

April 17, 1908

Seeing pretty good. Eclipse considered good

Fourth Type Star +36° 3243.

18 40 +37.4

12 0

6 40 U. Obs. Rowe Rec. Phot T.

12

5 50

Index Above A.

259.6 ← 4th Type Star

340.3 ∠0.7

89.6

153.6 $\frac{64.0}{144.7}$ −0.64

270.8 62.9 −0.64

333.7

78.9 $\frac{∠1.3}{140.2}$ −0.61

164.2

Index Below B.

172.2

252.2 ∠0.0

1.0 $\frac{61.2}{141.2}$ −0.71

62.2

176.9

242.5 6.6 −0.66

349.0 $\frac{∠4.7}{∠0.3}$ −0.57

73.7

Mean −0.62

10 27 35

10 32 50

60 2.5

10 30 12.

+2.7

30 39.

∠0.49.6462

1908phae.proj..590W

April 17, 1908

S.T. 12 36
H.A -6 4
Dec +36.2
P.A 236.8 Vernier B
Sprocket +0.5 B, +1.5 C.

U's watch used for times on all but Elysse
Watch 27 secs. slow

L. P. P.

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1908phae.proj..599V

Apr. 20. 1908. (~~Tuesday~~). (Monday).

Double Star Dem. +39° 2444 - V. W. to. W. rev. Phot R.

1V 6 +39.2
11 V9
-3 11.7 Components alt. equal.
A 49.

Index right.

4.2 ∠ Prec. dis.

9 VV
AA.1 A3.9 V
176.V
277.2 100.7 V
1AA.6 V
17V.A V 0.09 V

3V7.1
96.2 99.1 V 0.08 V
1A6.9 AA.6 V
271.V 1A3.7 V
Left. 176.3 V 0.07 V

A7.9
189.2 101.3 V
274.3 A2.7 V
3V7.0 1A4.0 V 0.08 V
176.0 V

90.0 0.10 V
176.V A6.V V
269.1 99.1 V
A.2 1AV.6 V 0.11 V
17A.A V

10 14
129
10 4 30.V
+V +42. V
1V V 12.V
AAV2.6286 V

0.09

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1908phae.proj..590W

Apr. 20. 1908.

Double Star Dec. +13° 3063 – 4. W. ob. W. red.
Phot. R.

16	0	+13.6
12	36	
−3	24	
4	36	

Clouds.

W's watch used for times. Watch 42 secs. slow.

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1908phae.proj..599V

April 20 1908

B. + C. 1102. B. 394.

12 6 37.0 12 7 00
7 37.0 8 00

Dis. Jups. IV Phot R (one prism removed) & Obs Bowie, Rec 1
Comps with ~~other Sats on same~~ fol side = Sat II

	12	31	15	64.0		15.0	
17 32 4.		31	59	64.2		79.0	1
+23.		32	21	64.1	+1.0	14.1	
17 32 27.		32	36			78.3	
		32	58			15.0	
17 33 30.		33	25	61.0		76.0	2
+23.		33	40	59.2		18.0	
17 33 53.		33	57	60.1	+1.2	77.2	
		34	21			17.0	
17 34 53		34	45	62.0		79.0	3
+23		35	2	62.9		16.9	
17 35 16.		35	24	62.4	+1.1	79.8	
		35	47			17.6	
17 36 20.		36	10	59.6		77.2	
+23		36	30	63.2		15.8	
17 36 43.		36	53	61.4	+1.1	79.0	
		37	7			16.0	
17 37 36		37	30	63.0		79.0	
+23		37	40	61.9		16.2	
17 37 59.		36	9	62.4	+1.1	78.1	
		38	36			16.8	
17 39 2.		38	54	61.9		78.7	
+23.				61.5			
17 39 25.				61.7	+1.1		

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1908phae.proj..590W

April 20, 1908

		12	39	9			17.1
			39	30			78.6
			39	49	60.6 ✓		16.9
17	40	25. ✓	40	7			77.5
		+23. ✓	40	36	62.3 ✓		16.2
17	40	48.	41	9	61.4 ✓	+1.1 ✓	78.5
			41	40			16.0
17	42	22. ✓	42	2	63.0 ✓		79.0
		+23. ✓	42	34	62.✓ ✓		16.1
17	42	45 ✓ ✓	43	12	62.8 ✓	+1.1 ✓	78.6
			44	26			Took phot. and put on ordinary eye piece
			47	9	Put on phot again		
17	47	46. ✓	47	23	62.✓ ✓	+1.1 ✓	15.5
	48	19. ✓	47	56	✓8.0 ✓	+1.3 ✓	78.0
	49	10. ✓	48	47	✓3.4 ✓	+1.✓ ✓	20.0
	49	37. ✓	49	14	✓1.4 ✓	+1.6 ✓	73.4
	✓0	✓1	50	28	47.9 ✓	+1.8 ✓	22.0
	✓1	24	51	1			69.9
			51	19	Took off phot. and put on ordinary eyepiece		
	✓2	13 ✓	51	50			Seen but faint
	✓2	40 ✓	52	17			"
	✓3	4.	52	41			"
	✓3	21.	✓12	58			Snap
	✓3	33.	53	10			Seen
	✓4	12	✓13	49			Not seen

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1908phae..proj..599W

Apr. 20. 1908.

B. + C. 1122.

13	3	37.V
	4	37.V

B. 394.

13	4	0.0
	5	0.0

L. P. P.

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1908phae.proj..590V

April 24 1908 (Tuesday)

Double Star δ Librae = Bu. 2796. Components A C

5	26	−0.4
9	26	
4	0	W. Obs. Rough Rec. Phot R.

Clouds in this region.

Still cloudy in this region.

Index L+R

	38.6	Southern + Brt D is
7 22 15	52.7	14.1 ✓
	217.1	16.5 ✓
	233.6	30.6 ✓ 4.36 ✓
	38.1	14.5 ✓ 4.40 ✓
	52.6	15.0 ✓
	218.4	29.5 ✓ 4.44 ✓
	233.4	

Index R+B

	308.0	14.9 ✓
	322.9	16.1 ✓
	126.8	31.0 ✓ 4.33 ✓
	142.9	
		4.34 ✓
	308.0	15.3 ✓
7 29 25	323.3	16.5 ✓
51 40. ✓	127.6	30.8 ✓ 4.36 ✓
7 2r r0. ✓	1430	~~142.5~~
+r +47. ✓		
12 26 37. ✓		
for 3. r10r+ ✓		

Clouds

Mean 4.37 ✓

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1908phae.proj.:599

April 21, 1908

Same Again.

Index R+B

308.0	14.4 ✓	
322.4	15.8 ✓	
126.7	30.2 ✓	4.39 ✓
142.5		
		4.38 ✓
308.4	14.4 ✓	
322.8	16.0 ✓	
127.0	30.4 ✓	4.37 ✓
1430		

7 33 35

Index L+a

218.2	14.6 ✓	
232.8	15.1 ✓	
37.8	29.7	4.42 ✓
52.9		
		4.40 ✓
218.3	14.8 ✓	
233.1	15.6 ✓	
37.6	30.4 ✓	4.37 ✓
53.2		

7 41 20

74 vv. ✓

7 37 28. ✓

+v +47. ✓

12 32 1v. ✓

Ao v 3. v 26 v + ✓

Mean 4.39 ✓

General Mean 4.38 ✓

The greatest possible care exercised throughout the preceding observations and general result considered pretty good. Observer was, however, troubled more or less throughout both groups

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1908phae.proj..590V

April 21, 1908

by slowly passing clouds and haze of moderate density. The region was also pretty low (object glass being down in middle of small shutter). Throughout observations, the twilight also was rather strong.

u Herculis.

17	12	+33.2
10	52	
6	20	
12		
5	40	~~7m~~.

U. Ob. Roma Rec. Phot. T

7 m. exp.

Indy Right A.

2843 ← Var. Dis

9 24 10

3190	34.7 ✓	
1080	26.3 ✓	
134.3	61.0 ✓	−2.82 ✓
2888	24.9 ✓	−2.83 ✓
313.7	35.7 ✓	
1042	60.6 ✓	−2.84 ✓
1399		

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1908phae.proj..590

April 21, 1908

Index Left B.

19.5	+191.6	25.1
44.6	~~229.0~~	39.9
	190.8	65.0 −2.68
	229.9	

−2.74

	12.2	36.8
	49.0	25.0
	197.4	61.8 −2.79
222.4	~~225.1~~	

9 34 45

9 29	20.
+r	+47.
1F 30	1 r.

for 3,6043

Mean 2.78

Same Again. but with 9.5 m. cap.

Index Left B.

	191.7	36.1 Var. Dus
9 47 50	227.8	26.9
	17.5	63.0 −2.75
	44.4	

−2.68

	196.7	28.5
	225.2	38.7
	11.5	67.2 −2.60
	50.2	

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1908phae.proj..590W

April 21, 1908

Index Right A.

102.5	40.1
142.6	26.3
287.0	66.4 −2.63
313.3	

−2.68

110.0	26.2
136.2	37.4
281.2	63.6 −2.73
318.6	

Mean −2.68

9 54 35

102 2

9 1 12

+ +47

14 1 9

40 3.6194

Same Again but with 7in. cap.

Index Right A.

2833 Var Dis

10 16 5

318.0	34.7
110.7	25.9
136.6	60.6 −2.84

286.8	26.0 −2.78
312.8	38.2
103.6	64.2 −2.71
141.8	

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1908phae.proj..590V

April 21, 1908

Index Left B.

190.7	38.0	− v
229.2	248 v	
18.2	63.3 v	−2.74 v
43.0		
		−2.72 v
199.4	26.6 v	
226.0	37.4 v	
10.8	64.0 v	−2.71 v
48.2	~~48.8~~	

10 25 0

41 v.

10 20 32. v

+v +49. v

1v 21 19. v

Aov 3.639 v

Mean −2.75 v

S.T. 12 47

H.A. −4 28

Dec +32.7

PR 133.0 Vernier B

Sprocket −4.5B, −3.5C

W's watch used for times

Watch 47 secs. slow.

L. P. P.

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1908phae.proj..590W

April 22, 1908 (Wednesday)

Double Star ϑ Orionis = Bu 2796 Components AC

5	26	−0.4
9	36	
4	10	

6 Obs. Rowe Rec. Phot R.

Index Ft a

	37.0 ←	Southern Brt Dis
7 20 5	53.6	16.6 ✓
	217.6	15.6 ✓
	233.2	32.2 ✓ 4.25 ✓
	37.6	15.2 ✓ 4.28 ✓
	52.8	16.2 ✓
	217.4	31.4 ✓ 4.30 ✓
	233.6	

Index R to B

	307.4	15.6 ✓
	323.0	15.1 ✓
	128.0	30.7 ✓ 4.35 ✓
	143.1	
		4.32 ✓
308.2	~~307.8~~	15.2 ✓
	323.4	16.4 ✓
	126.9	31.6 ✓ 4.29 ✓
	143.3	

7 28 43

	42	√0. ✓
7	24	2√. ✓
+√		+40. ✓
	12	2√ √. ✓

40 √4. √17√− ✓

Mean 4.30 ✓

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1908phae.proj..5907

April 22, 1908

Same Again
Index R+B

7 32 58

307.8		
323.1	15.3	
127.6	15.8	
143.4	31.1	4.32
307.5	15.8	4.26
323.3	17.3	
126.7	33.1	4.19
144.0 ~~143.8~~		

Index L+a

217.3	16.2	
233.5	16.0	
37.8	32.2	4.25
53.8		
		4.23
217.9	16.9	
234.8	15.8	
37.5	32.7	4.21
53.3		

7 42 0
74 r0.
1 37 2r.
r +40.
12 3A r.
Δ0 54. r26r-

Mean 4.24
General Mean 4.27

Region rather low. Twilight somewhat ~~rather~~ strong at the first of observations but towards the end of the second groups, it had practically

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1908phae.proj..590W

April 22, 1908

faded out. The sky is somewhat murky for a little distance up from the horizon and the haze was ~~a little~~ somewhat evident on the images occasionally but both images were of course affected alike and the companion itself was never so dim but that it was easily seen at equalization. The greatest possible care was exercised and results are considered good.

R. Z. Cassiop

2	36	+69.0
10	36	
8	0	

W Obs Roux Rec. Phot T

	Index Dia	B.	I
	105.2 ← Var. Dis		
8 33 30	138.0	328 ✓	
	288.0	245 ✓	
	312.6	573 ✓	−296 ✓
	1080	258 ✓	−284 ✓
8 35 50	1338	280 ✓	
	2814	638 ✓	−272 ✓
	3194		

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1908phae.proj..5907

April 22, 1908

Index R+B A.

	11.0	38.7 ✓
8 38 25	49.7	23.7 ✓
	2000	62.4 ✓ −2.77 ✓
	223.7	
	~~203~~	−2.76 ✓
198.7	~~203~~	25.3 ✓
~~8 40 35~~	~~44.7~~	38.0 ✓
8 42 15	224.0	63.3 ✓ −2.74 ✓
150 0 ✓	13.1	
+ 37 30. ✓	37.1	
+5 +40.		
13 38 10.		

New start in set above, as H. was not sure whether he reversed wires after 2d setting.

for 4. ✓ 682 ✓

Mean −2.80 ✓

Index R+B A. II

	193.7	35.8 ✓
8 50 30	229.5	26.0 ✓
	17.6	61.8 ✓ −2.79 ✓
	43.6	
		−2.86 ✓
	199.0	26.5 ✓
8 53 25	225.5	42.4 ✓
	10.0	68.9 ✓ −2.54 ✓
	52.4	

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1908phae.proj..590W

April 22, 1908

Index Lta B.

98.8	42.2	
141.0	26.6	
288.9	68.8	−2.55
315.5		
		−2.60
107.0	27.8	
134.8	38.0	
2822	65.8	−2.65
320.2		
	Mean	−2.63

Index Lta B. III

99.9		
141.6	41.7	
287.9	28.3	
316.2	70.0	−2.51
105.0	30.1	−2.51
135.1	39.9	
281.4	70.0	−2.51
321.3		

Index R + B A.

9.2	44.2	
53.4	27.6	
198.4	71.8	−2.43
226.0		

8 56 38

8 59 0

9 6 35

9 9 40

9 13 25

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1908phae.proj..590

April 22, 1908

−2.45

17.8 28.8
46.6 42.8
190.6 71.6 = −2.45
233.4

Mean −2.48

9 15 30
4 10
9 11 18.
+ +40.
14 11 58.
4 0 4.917

Index R+B A. II

9 23 15
9.4 47.5
56.9 30.7
196.5 78.2 −2.25
227.2

−2.26

9 26 5
15.6 32.0
47.6 45.8
187.7 77.8 = −2.26
2335

Index L+a B.

9 29 30
277.2 46.8
324.8 31.9
102.9 78.7 = −2.23
134.8

−2.25

9 32 0
110 50.
9 27 42.
+ +40.
14 20 22.
4 0 4.6031

2870 29.3
3163 48.1
97.3 77.4 = −2.27
145.1

Mean −2.26

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1908phae.proj..590W

April 22, 1908

Index Bta B. E

276.4 49.1 ✓
9 41 40 325.5 33.4 ✓
103.0 82.5 ✓ −2.12 ✓
136.4

−2.10 ✓

285.2 32.7 ✓
9 44 20 317.9 ~~318.0~~ 51.1 ✓
94.8 83.8 ✓ −2.08 ✓
145.9

Index R+B A.

185.0 50.7 ✓
9 47 0 235.7 33.5 ✓
14.0 84.2 ✓ −2.07 ✓
47.5

−2.60 ✓

~~215.6~~ ~~198~~
~~229.6~~
2.0 55.7 ✓
9 51 25 57.7 34.8 34.0 ✓ 89.7 ✓ −1.92 ✓
194.4 ~~90.5~~ ~~190~~
228.4 229.2

124 2 ✓
9 46 6. ✓
+ ✓ +40. ✓
14 46 46. ✓
20 ✓ 4.61 ✓ 9 ✓

Mean −2.05 ✓

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1908phae.proj..5907

April 22, 1908.

S.T. 12 17
H.A +9 34
Dec 69.8
P.X 209.2 Vernier B
Sprocket −2.5 A, −1.5 B, −1.0 C

u Herculis.

17	12	+33.2
12	27	
4	45	
12		
7	15	

6 Obs Power Phot T.

Vis. Cap.

Index	Left	B.
	12.1	← Var. Dis.
10 845	47.4	35.3 ✓
	197.2	26 8 ✓
	224.0	62.1 ✓ −278 ✓
	17.2	27.1 ✓ −2.69 ✓
	44.3	40.0 ✓
	190.2	67.1 ✓ −2.60 ✓
	230.2	

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1908phae.proj..590W

April 22, 1908

Index Right A.

280.3
318.1 37.8
109.6 25.1
134.7 62.9 −2.75

288.4 25.4 −2.72
313.8 38.9
102.7 64.3 −2.70
141.6

Mean −2.70

10 15 58
24 3v.
10 12 10.
tv +40.
1v 12 v2.
Aorf. 6340

Same again but with 9.5 in. cap

Index Right A.

283.0 ← Various
10 23 45
319.2 36.2
109.1 23.2
132.3 59.4 −2.88

290.2 22.4 −2.84
312.6 39.1
101.8 61.5 −2.80
140.9

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1908phae.proj...590W

April 22, 1908

Index	Left	B.
	190.9	38.7 ✓
	229.6	24.4 ✓
	181	63.1 ✓ — 2.74 ✓
	42.5	
		— 2.70 ✓
	198.6	25.0 ✓
	223.6	40.3 ✓
	9.4	65.3 ✓ — 2.67 ✓
	49.7	
		Mean — 2.77 ✓

18 38 50
✓ 35. ✓
10 27 10. ✓
+✓ +50. ✓
15 27 52. ✓
✓4.6444 ✓

S. T. 12 57
H. A. −4 17
Dec. +32.5'
P. A. 132.7 Vernon B
Sprocket −4.5 B, −3.5 C.

W's watch used for times
Watch 40 secs slow.

L. P. P.

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1908phae.proj..590W

April 23, 1908 (Thursday)

7 0 Sky pretty cloudy with some tendency to breaking up.

7 15 Sky rather more cloudy

7 30 Sky ~~pret~~ generally cloudy.

8 0 " " "

8 30 " " "

8 55 Somewhat clearer in northern part of the heavens.

ν Herculis

7	12	+33.2
11	32	
5	40	
12		
6	20	

W. Obs Rowe Rec Phot T.
Compared with regular comparison star

7 in. cap used

Index Right A. I
283.0 ← Var Dis
9 40 20 316.6 33.6 ✓
1083 278
136.6 60.9 ✓ − 283 ✓

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1908phaeq.proj.:sgow

April 23, 1908.

−2.82″

286.6	26.2″
312.8	35.3″
105.7	61.5″ −2.80″
141.0	

Ridge Left. B.

192.2	36.1″
228.3	26.7″
174	62.5″ 2.77″
43.8	

2.72″

197.0	27.7″
224.7	37.7″
11.0	65.4″ 2.66″
48.7	

9 49 25
89 Fr.″
9 FF r2.″
Fr +3F.″
14 Fr 26.″
80 r. 6149″

Mean −2.77″

Clouds increasing in last part of groups, especially in very last of groups and ~~—~~ troubled most of all in last setting. The last setting considered a grain uncertain but pretty close and practically about right. The clouds were of a rather feathery character and were not vibratory or troublesome in the other settings

Same Variable compared with. II
9.5 in cap. used

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1908phae.proj..590W

April 23, 1908

Index f + B B.

199.0 ← Var D is.

10 4 15

223.3 24.3 ✓

22.5 16.9 ✓

39.4 41.2 ✓ −3.70 ✓

203.2 16.5 ✓ −3.70

219.7 24.8 ✓

18.8 41.3 ✓ −3.70 ✓

43.6

Index R + a A.

112.2 21.0 ✓

133.2 14.7 ✓

292.5 35.7 ✓ −4.02 ✓

307.2

−3.99 ✓

114.8 14.7 ✓

10 11 15

129.5 21.9 ✓

288.6 36.6 ✓ −3.96 ✓

310.5

Mean −3.84 ✓

Kr 30. ✓

10 7 Kr. ✓

+r +34. ✓

Kr A 19. ✓

A 05r. 630A ✓

Same Variable compared with regular comp. star.

III

9.5cm cap. used

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1908phae.proj..590W

April 23, 1908

Index Right A.

104.4	← Var Dec	
136.6	32.2 ✓	
289.1	233 ✓	
312.4	55.5 ✓	−3.08 ✓

10 31 25

109.6	23.8 ✓	−2.97 ✓
133.4	36.6 ✓	
280.8	60.4 ✓	−2.84 ✓
317.4		

Index Left B.

10.8	39.5 ✓	
50.3	28.0 ✓	
197.3	67.5 ✓	−2.59 ✓
225.3		

−2.64 ✓

18.0	24.9 ✓	
42.9	39.6 ✓	
191.3	64.5 ✓	−2.69 ✓
230.9		

10 38 40

70 ν. ✓

10 3ν 2. ✓

+ν +34. ✓

1ν 3ν 36. ✓

Δα νν. 6497 ✓

Mean −2.78 ✓

S.T.

H.A. −4 8

Dec 32.5

P.A. 133.5 Vernier B

Sprocket −4.5 B, −3.5 C

Y.P.P.

W's watch used for times. Watch 34 secs slow.

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1908phae.proj..590V

April 24, 1908 (Friday)

Double Star δ Orionis = Bu. 2796 Components AC

5	26	−0.4
9	46	
4	20	

W. Obs. Rough Rec. Phot R.

Index R+B

7 24 0

127.4 ←	Southern + Brb Dis	
143.6	16.2 ✓	
308.9	13.0 ✓	
321.9	29.2 ✓	4.45 ✓
		6
127.4	16.3 ✓	4.38 ✓
143.7	15.1 ✓	
308.0	31.4 ✓	4.30 ✓
323.1		

Index L+a

37.3	17.0 ✓	
54.3	13.4 ✓	
219.6	30.4 ✓	4.37 ✓
233.0		

~~7. 36 50~~
~~7 34 45~~

~~2172 39.2~~
~~2347~~ 51.6

Clouds. Companion gone.

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1900phae.proj.:590W

April 24, 1908

4.39
4.40

21 7.2	17.5
23 4.7	12.4
Clouds	29.9 4.4
39.0	
51.4	

7 38 50
6 2 0.
7 31 27
+V +33.
12 31 A.
A 6.222

Mean 4.38

Region low; sky hazy throughout with more or less cloud for some distance up from the horizon. Observations throughout made through more or less cloud; Seeing, also, was a little blurry. The cloud was rather denser in the last half of group than in the first half, the images, some of the time seem pretty faint and W. had to wait at times for sky to become a little clearer. The observations were made with the greatest care and slowly and the general result is considered fairly good but groups regarded as having only one half weight.

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1908phae.proj..590V

April 24, 1908

Double Star Σ 23′ = 32, 33 Com. Ber. Arnold. U.S. book)

12	46	+17.8
14	16	
1	30	W. Obs. Rough Rec
12		Phot. R
10	30	

P.A. 45° Dist 3′.2 I Mags.

Index R+A

88.4 ← Prec. Location + Orb. Dir.

9 23 50

182.0	93.6 ✓	
284.0	63.2 ✓	
347.2	156.8 ✓	0.44 ✓
101.9	70.0 ✓	0.44 ✓
171.9	87.5 ✓	
272.5	157.5	0.43 ✓
0.0		

Index L+B

1.5	86.9	
88.4	64.6	
195.3	151.5	0.55 ✓
259.9		
		0.56 ✓
13.0	63.9	
76.9	85.8	
183.6	149.7	0.58 ✓
269.4		

Mean 0.50 ✓

9 31 0

	√4	√0. ✓
9	27	2√. ✓
+√		+33.
14	27	√8. ✓

2056.6028 ✓

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1900phaev.proj:.599W

April 24, 1908

u Hercules

17	12	+33.2
12	9	
5	3	
12		
6	57	

U. Obs. Rouse Rec. Phot.

Var. measured with regular comp. star.
7 u cap used

Index Right A.

283.4 ←	Var. D	
318.2	348 ✓	
109.0	248 ✓	
133.8	59.6 ✓	−2.87 ✓

9 52 5

289.4	24.5 ✓	−2.78 ✓
313.9	402 ✓	
101.4	64.7 ✓	−2.69 ✓
141.6		

Index left B.

189.0	39.8 ✓	
228.8	242 ✓	
182	64.0 ✓	−2.71 ✓
42.4		

−2.70 ✓

196.8	26.4 ✓	
223.2	38.3 ✓	
11.0	64.7 ✓	−2.69 ✓
49.3		

Mean −2.74 ✓

9 89 15 (5)
111 20. ✓
9 ✓✓ 40. ✓
+✓ +33. ✓
14 ✓6 93. ✓
for 6.6223 ✓

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1908phae.proj..590

April 24, 1908

Var. measured with.

9.5 in. cap. used.

Index Lt B B

	199.8 ← Var. Dis.	
10 11 35	223.4 23.6 ✓	
	23.3 14.3 ✓	
	37.6 37.9 ✓	−3.89 ✓
	203.0 16.4 ✓	−3.76 ✓
	219.4 25.9 ✓	
	17.9 42.3 ✓	−3.64 ✓
	43.8	

Index R+a A

	111.2 22.8 ✓	
	134.0 14.7 ✓	
	292.6 37.5 ✓	−3.91 ✓
	307.3	
		−3.97 ✓
	115.2 14.3 ✓	
	129.5 22.2	
	289.8 36.5 ✓	−3.97 ✓
	312.0	

Mean −3.85 ✓

10	19	45
	31	20. ✓
10	15	40. ✓
15		+33. ✓
15	16	13. ✓

for 6.6362 ✓

Readings correspond to last comps. also used in groups immediately above

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1908phae.proj..599W

April 24, 1908.

ST 12 57
H.A. -4 17
Dec +32.3
P.A. 341.7 Vernier B
Sprocket -5.5 B, -4.5 C

Provisional comp. star precedes regular comp. star by 33 secs and is 10.5 south of it.
Mag. of provisional comp. star 8.8

A slightly fainter star follows provisional comp. star by 7 secs and is 2.2 south of it.

Ub's watch used for times.
Watch 33 secs slow

L. A. P.

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1908phae.proj..590

April 29, 1908 (Wednesday)

Double Star ξ Orionis = Bu 2796 Components A C

5	26	-0.4
9	56	
4	30	

U. Obs. Rous Rec. Phot. R

Clouds and haze in this region.
Companion practically invisible with ordinary eyepiece

Index Lt a

	38.1	← Var Dis
7 26 20	52.2	14.1 ✓
	217.9	15.7 ✓
	233.6	29.8 ✓ -4.42 ✓
	38.4	13.8 ✓ -4.39 ✓
	52.2	16.8 ✓
	217.0	30.6 ✓ -4.36 ✓
	233.8	

Index Lt B

	307.4	16.3 ✓
	323.7	14.5 ✓
	127.9	30.8 ✓ -4.35 ✓
	142.4	
		-4.34 ✓
	308.5	13.6 ✓
	322.1	17.5 ✓
	126.0	31.1 ✓ -4.32 ✓
	143.5	

Mean -4.36 ✓

7 37 0

	6 3	20. ✓
7	31	40. ✓
+r		+r. ✓
12	32	30. ✓

Δ 061. ✓ 226 ✓

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1908phae.proj.590

April 29, 1908

Same Again.

	Index	R+B
7 44 55	306.9	17.1
	324.0	14.8
	127.8	31.9 − 4.27
	142.6	

4.26

	308.8	13.0
	321.8	19.1
	125.8	32.1 − 4.25
	144.9	

Index f+a

	215.7	19.5
	235.2	12.7
	39.0	32.2 − 4.26
	51.7	

7 f+

9 v.

7 f 9 2 v.

+v +v a.

12 v 0 26.

f 0 61. v 350 v

The preceding observations on δ Chioms were ~~rather~~ difficult throughout on account of low altitude, rather poor atmospheric conditions, and more or less cloud through which Alb. was working part of the time. The second partial group was more satisfactory than the first complete group as the first group, the seeing was rather more steady than in second and the images rather better defined. In the second group the images were more flaring + unsteady. Altogether the first group is considered little the better of two but neither of groups are considered quite as critical as those which have been taken on previous evenings on this star, although they are considered pretty good in a general way.

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1908phae.proj..590W

April 29, 1908

Var. 31, 1907

5 50 +47.9
11 40
5 50

W Obs Roux Rec. Phot. T.

Index Lta B.

3552 = Comp. Star Dec.
66.0 70.8 v
185.4 48 v
234.2 119.6 v +1.20 v

9 19 15

5.4 49.6 v +1.22 v
55.0 68.4 v
175.6 118.0 v +1.24 v
244.0

Index R+B A.

269.5 66.1 v
335.6 44.1 v
98.4 110.2 v +1.41 v
142.5

+1.33 v

278.1 44.8 v
322.9 72.7 v
84.9 117.5 v +1.25 v
157.6

9 38 5
49 20. v
9 24 40. v
+5 +52. v
14 25 38. v
+061.6018 v

Clouds.

Mean +1.28 v

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1908phae.proj..590V

April 29, 1908.

9 51 30

Index R+B A.

267.3

Clouds	67.9 ✓
335.2	46.4 ✓
98.0	11 43 ✓ +1.32 ✓
144.4	

+1.28 ✓

277.5

Clouds	49.5 ✓
327.0	68.7 ✓
87.0	118.2 ✓ +1.23 ✓
155.7	

Index L+a B.

178.2	67.0 ✓
245.2	51.7 ✓
3.9	118.7 ✓ +1.22 ✓
55.6	

10 1

112 30.✓

9 ✓6 15.✓

+✓ +✓2.✓

14 ✓7 13.✓

20 61.62 30 ✓

Clouds

Stopped by clouds

Mean +1.2✓ ✓

Comp. Star in the two preceding groups=

Star d (Nr AN 174, 366) = +47°1268 (9.3)

over.

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1908phae.proj..590W

April 29, 1908.

Troubled more a less throughout observations on Var 31, 1907 on two preceding pages, by clouds. The and stopped by clouds before last set of secnd groups could be completed. The observations were rather difficult throughout on account of somewhat low altitude, cloudiness, and faintness of Var. but the greatest care was exercised and in the settings which were made slowly and observations considered good.

As it came up cloudy and W. waited for it to clear, the region drifted in the continued cloudiness so that P. A. Sprocket, etc were not read but region thoroughly identified before beginning observations

W's watch used for times
Watch 58 secs slow.

E. P. P.

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1908phae.proj..590V

May 1. 1908. (Friday).

δ Orionis. W. ob. W. red.
Phot. R.

V	26	−0.4
10	12	
4	V 2	

R + B.

1224		
141.6	13.2	
309.2		
321.2	12.0 / 25.3	4.78 V
1243	14.4	4.66 V
1427		
3042	13.6 / 28.0	4.VV V
322.4		

L. + A.

37.7	15.3	
V 30		
2140	14.6 / 29.9	4.41 V
232.6		
3041	14.1	4.39 V
52.2		
217.0	16.3 / 30.4	4.37 V
233.3		

Mean 4.5 2/4

7	3041	42.1 V
	67	42. V
7	33	V1. V
+V		+42 V
12	34	33. V

8063. V240 V

L. P. P.

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1908phae.proj..590W

May 1. 1908.

γ Virginis. Yerkes.

12	23	−3.2
10	47	
−1	36	
10	22	
13	0	
12	23	
40	37	

The rest of the evening was consumed in experiments with the 15 inch and 24 inch telescopes, and by Leon Campbell, Prof. W. H. Pickering and Prof. S. C. Chandler, in seeing how many faint stars could be seen within a certain quadrilateral of stars (of which one was γ Virginis) on Hagen's chart.

At about ~~11~~ 11h 45m P. M., the above experiments having been finished, tried for Var. 31, 1907 on next page. But the region was so low that nothing could be done.

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1908phae.proj..590V

May 1. 1908.

Var. 31. 1907. Y. Hb.

V	V-0	+47.9
14	3V-	
+2	4V-	

Region too low, clouds also in this region.

L. P. P.

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1908phae.proj..590W

May 2, 1908 (Saturday)

Double Star No 7121 (Burnham's Cat.)

15	1	+48.1
10	16	
4	45	
12		
7	15	

14	59	+47.2
10	19	
4	40	
12		
7	20	

W. Obs. Power Rec.
Abandoned

Var. 31. 1907.

5	50	+47.9
10	50	
5	10	

Variable seen but through more or less cloud
Tried hard for a long time to measure it but
it is impossible to do so. Clouds now
steadily growing thicker. When variable
was best seen with ordinary eyepiece (but
through more or less cloud + haze) it was much
fainter than the star 2' north of it which
was used as comp. star with Phot. R. on

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1908phae.proj..590V

May 2, 1908.

Mar. 7. A rough relative estimate of variable with this comp. star would make it ~~perhaps a magnitude to a mag~~ roughly about a magnitude fainter than this comp. star. In other words, it is radically fainter than comp. star but easily seen and fairly bright.

~~δ~~ ν Herculis

17	12		+33,2
12	0		
5	12		
12			
6	~~+5~~		

9 5 Clouds now growing thicker everywhere and air more damp. No stars visible except Jupiter and that only dimly seen through clouds. Apparently no chance for anything further.

L. P. P.

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1908phae.proj..590W

May 5, 1908. (Tuesday)

~~U~~ u Herculis

17	12	+33.2
10	52	
6	20	
12		
5	40	

Abandoned. Too low & too cloudy in this region

Var. 31. 1907

5	50	+47.9
10	60	
5	10	

W. Ols. Rowe Rec.

8 45 Variable seen through gaps and thin places in clouds but sky is so cloudy with only momentary thinning of clouds that is impossible to measure it photometrically. As near as can be estimated through thin places in clouds the Var. does not seem to be much different in brightness from what it was on from what it was on May 2. (See page 188 + 189 of this book). Var. easily seen at times notwithstanding the clouds and moonlight. Roughly it would strike W. as about three quarters of a magnitude fainter than the old comp. star 2' north of it.

W's watch used for times
Watch 9 secs. slow

L. P. R.

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1908phae.proj..590W

May 9. 1908 Saturday.

7 10 Cloudy but a small gap low in East. Will try for δ Orionis. Hr. obs.

v	26	−0.4
10	v0	
+v	24	

11	13
+v	47

7 v0 δ Orionis finally found in a small gap under the clouds. (The clouds are solid just above). Principal component is a large red, swelling and shrinking, confused blur, and companion only glimpsed once. Hence ~~cannot be measured~~ double cannot be measured

H. A. = +v^h 50^m Dec. = −0.4 Hr.

Var. 31. 1907. +47.9 Hr. obs. Rowe Rec.

5^h	50^m
12	2v
+6	3v

Phot. R. One Prism removed.

Compared with star 2′ north of variable

For measts. see next page.

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1908phae.proj..590W

May 9, 1908

Index R+B

214.0	33.5	Comp Star Dis.
247.5	47.3	
23.5	80.8	+2.17
70.8		
		+2.10
202.0	47.6	
249.6	38.6	
32.0	86.2	+2.02
70.6		

9 29 10

Index L+A B.

121.9	33.6	
157.5	38.0	
299.5	73.6	+2.39
337.5	~~338.0~~	
114.5	~~113.2~~	

Mean +2.24

and a little uncertain

9	h 0	±	
	79	10.	
9	39	3h.	
h		-12.	
14	39	17.	
	∂071.6106		

Measts. extremely difficult. Measts. made through more or less clouds, stopped also by clouds and low altitude and bright moonlight so that fourth set could not be taken, although it was tried for, for some time. The greatest possible care was exercised in the measts. but owing to

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1900phae.proj.:590V

May 9. 1908

the very unfavorable circumstances previously mentioned; the result is not considered as having more than one half (½) weight at the outside

~~α~~ $\underline{u}$ Hercules

17	12	+33.2
14	7.	
3	5	11 Mo Rowe Rec
12		
8	55	Phot T.

7in cap used
Var. with old regular comp star.

Index Left B.

191.0	—	Var. Dis
229.8	38.8 ✓	
16.2	28.5 ✓	
44.7	67.3 ✓	−2.60 ✓

10 53 40

196.4	28.1 ✓	−2.58 ✓
224.5	40.7 ✓	
10.5	68.8 ✓	−2.55 ✓
51.2		

Index Right A.

101.8	40.8 ✓	
142.6	24.4 ✓	
287.6	65.2 ✓	−2.67 ✓
312.0		

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1908phae.proj..590W

May 9. 1908

-2.68

109.6	27.4	
137.0	41.2	
279.4	68.6	2.58
320.8		

Mean -260

11 0 25

114 v.

10 v7 2.

+v -18.

1v v6 44.

Tue cap used

Var. compared with new provisional comp. star

Index R+a

109.7	← Var. D.o	
134.3	24.6	
293.0	15.8	
308.3	39.9	-3.77

11 4 5

113.5	16.5	-3.84
130.0	20.9	
290.4	37.4	-3.92
311.3		

Index L+B

18.9	22.4	
41.3	16.0	
203.4	38.4	-3.86
219.4		

-3.82

23.5	15.1	
38.6	24.6	
198.9	39.7	-3.79
223.5		

Mean -3.83

11 10 10

14 1v.

11 7 8

+v -18.

16 6 v0

a071.6714

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1900phae.proj..590V

May 9, 1908.

S.T. 2 43
H.A. −2 33
Dec +32.5
P.A. 162.0 Vernier B
Sprocket. −5.5 B, −4.5 C

P.A. & Sprocket readings correspond to comparison with new provisional comp. star

Ub's watch used for times.
Uwatch 18 secs. fast.

L. A. P.

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1908phae.proj..590W

May 11, 1908 (Monday)

δ Chionis

5	26	−0.4
10	46	
5	20	

U. Obs. Rowe Rec.

δ Chionis cannot be obtained tonight on account of clouds, very low altitude and bright moonlight, a heavy bank of clouds now rising in this region

Var. 31. 1907

5	50	+47.9
10	20	
5	30	

U. Obs. Rowe Rec

Clouds, twilight, and moonlight prevent observation of above variable. Will try for κ Herculis

~~76~~ 21 Herculis. compared with odd, regular long. Star -

17	12	+33.2
11	37	
5	35	
12		
6	25	

7 m cap used U. Obs. Rowe Rec. Phot 7

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1900phae.proj..590V

May 11, 1908

8 1 20

Index Left B.

12.0 ←	Var Duo	
49.4	37.4 ✓	
195.8	30.2 ✓	
226.0	67.6 ✓	−2.59 ✓
16.4	28.6 ✓	−2.52 ✓
45.0	43.3 ✓	
188.8	71.9 ✓	−2.44 ✓
232.1		

Index Right. A.

280.7	40.5 ✓	
321.2	25.6 ✓	
108.3	66.1 ✓	−2.64 ✓
133.9		
		−2.60 ✓
288.7	25.3 ✓	
314.8	43.5 ✓	
99.4	68.8 ✓	−2.55 ✓
142.9		

Mean −2.56 ✓

8 9 50

11 10. ✓
2 ✓ 3✓. ✓
+✓ −3. ✓
13 4 ✓7. ✓
2073. ✓45 1 ✓

Sky pretty clear in above group. This group considered good. Became cloudy before next following groups.

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May 11, 1908

Same again but with new provisional Comp. Star.

Index R + a Two caps used

18 17 40

109.5 ← Var Dis
132.0
293.8
309.4

113.6
129.4
288.4
314.2

Index L + B

19.7
43.0
203.2
218.8

2.7
38.2
198.0
224.5

8 24 20

	K 2	0. ✓
A	21	0. ✓
+√		−3A.
13	20	22. ✓

A073.√√√9 ✓

Region thoroughly identified before beginning. Sprocket regulyseth not made use order to get ready for eclipse which comes shortly

The second group with new provisional comp. star was merely for a rough check + comparison with first group and also to test value of the latter comp. star but it became so cloudy in last group that said last group is not considered of much value

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May 11, 1908

	B-C	1182		B 394	
8	36	52.3	8	37	.00
8	37	52.2	8	38	00

Reapp. Jup. I. Phot R. U Ma. Rowe Rec.
Compared with nearer and brtr. of two rather close Sats. on preceding side of Jupiter =
Sat. III

13	√7	1√.	8	57	6			Suspected
	√7	20.	8	57	11			Seen
	√7	2√.			16			Better seen.
	√7	3δ.			29	√6.0	+1.4	115.0
	√7	√2			43	61.δ	+1.1	171.0
	√δ	δ.			59	66.δ	+0.9	109.2
	√δ	1δ		58	9	72.δ	+0.7	176.8
	√δ	2δ.			19	74.3	+0.6	103.2
	√δ	4√.			36	78.4	+0.4	177.5
	√δ	√δ.			49	δ0.7	+0.4	99.1
	√9	10.		59	1			179.8
	√9	23.			14			Clouds
					~~21~~			~~97.1~~
	√9	44.			34			Clouds thick

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1908phae.proj..590W

May 11, 1908.

Clouds still thick

14	3	12					
		+10.					
14	3	22.					
14	4	16.					
		+10.					
14	4	26.					
14		24.					
		+10.					
14		34.					
14	6	43.					
		+10.					
14	6	53.					
14		1.					
		+10.					
14		11.					
14	9	2.					
		+10.					
14	9	12.					

9	0	48				964	
	1	5					
	1	34				187.8	
	2	48	79.7			102.2	
	3	5	80.0			181.9	
	3	19	79.8		+0.4	102.0	1
	3	35				182.0	
	3	49				102.2	
	4	10	79.1			181.3	
	4	27	78.3			102.7	2
	4	39	78.7		+0.4	181.0	
	5	1				102.7	103.2
		20	78.3			181.0	
		29	76.9			103.1	3
		47	77.6		+0.4	180.0	
	6	17				103.5	
	6	34	76.7			180.2	
	6	49	80.7			100.7	4
	7	12	78.7		+0.4	181.4	
	7	35				101.3	
	7	51	81.3			182.6	
	8	13	78.0			102.0	
	8	24	79.6		+0.4	180.0	
	8	37				102.5	
	8	50	79.7			182.2	
	9	13	77.4			103.0	6
	9	29	78.6		+0.4	180.4	
	9	48.				101.3	

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1908phae.proj..590

May 11, 1908.

	9	10	4	±0.1	181.8	
14 11 39.		10	13	±0.1	Clouds thicker	
+10.		12	32	±0.3 +0.4	102.2	7
14 11 49.		13	47		1823	
		14	3		1013	
14 14 26.		14	21	±0.2	181.5	
+11.		14	31	±0.3	102.7	8
14 14 37		14	50	79.2 +0.4	181.0	

Troubled throughout by increasing cloudiness At the very first the clouds were fairly thin but after a few settings had been made they became very much thicker so that it was impossible to make any more settings until clouds became somewhat thinner again Clouds would alternately grow very thick and then somewhat thinner. Setting had to be made somewhat slowly and with care. On account of the thickness of clouds, limit of readibility could not be taken at the end

B+C 1182			B 394		
9	24	48.5	9	25	0.0
9	25	48.5	9	26	50

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1908phae.proj .590W

May 11, 1908

9 55 Clouds now becoming thick again everywhere. No chance for anything further

W's watch used for times
Watch 38 secs. fast

L. P. P.

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1908phae.proj..590

May 12. 1908. (Tuesday).

δ Orionis. H. Ho.

5	26	−0.4
10	vv	
+v	29	

Clouds in this region.
Beginning to rain.

Abandoned after long trying.

Var 31. 1907. H. Ho.

5	50	+47.9
11	2v	
+v	3v	
11	43	
+v	v3	

U Ori. Rowe Rec

Moon very bright and near the full. Var. extremely faint but thought to be glimpsed. It is, however, so faint that in the moonlight, it is utterly impossible to measure it tonight.

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1908phae.proj..590W

May 12, 1908.

~~tt~~ u Herculis

17	12	+33.2
12	47	
4	25	
12		
7	35	

Compared with old regular Comp. Star. 7 inch. ref.

Ridex Left B.

8.6 ←	Var. Dec	
530	44.4 ✓	
192.1	35.7 ✓	
2278	80.1 ✓	−2.19 ✓

9 17 15

13.6	34.0 ✓	−2.20 ✓
47.6	45.3 ✓	
188.4	79.3 ✓	−2.22 ✓
233.7		

Ridex Right A.

278.1	45.2 ✓	
323.3	30.3 ✓	
106.4	75.5 ✓	−2.33 ✓
136.7		

−2.34 ✓

285.1	32.2 ✓	
317.3	42.9 ✓	
100.1	75.1 ✓	−2.34 ✓
143.0		

Mean −2.27 ✓

9 26 80

	43	45 ✓
9	21	52 ✓
45		−47 ✓
14	21	5 ✓

2074.5980 ✓

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1908phae.proj..590f

May 12, 1908

Clouds came up immediately after finishing above group. Sky clear, however, while group was taken

W's watch used for times.
Watch 47 secs. fast.

L. P. P.

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1908phae.proj..590W

May 13. 1908. (Wednesday).

~~$\alpha\alpha$~~ α Herculis.			W. obs.
17	12	+33.2	
10	√√		
−6	17.		
√	43.		

Clouds and low altitudes present variable being found + measured.

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1908phae.proj..5907

May 14, 1908 (Thursday)

~~7~~ 24 Herculis

17 12 +33.2

10 52

6 20

12

5 40 W. Clb Rowe Rec. Phot T.

7 in. cap used.

Index Left B.

11.7 Var Dis

8 3 55

50.2 38.5 ✓

196.5 29.7 ✓

226.2 68.2 −2.57 ✓

14.4 29.1 ✓ −2.52 ✓

435 42.4 ✓

189.4 71.5 ✓ −246 ✓

231.8

Index Right A.

2810 38.9

319.9 24.0 ✓

1089 63.9 ✓ −2.72 ✓

133.9 −2.71 ✓

2880 23.9 ✓

311.9 40.4 ✓

1023 64.3 ✓ −2.70 ✓

142.7

Mean −2.62 ✓

8 11 58

1r 4r. ✓

2 7 r2. ✓

+r −r8.

13 6 r4. ✓

2076. r464 ✓

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1908phae.proj..590W

May 14, 1908

Same Again

Index Right A.

		Var Dis.
280.0		
321.7	41.7 ✓	
109.7	24.1 ✓	
133.8	65.8 ✓	−2.65 ✓
289.0	24.0 ✓	−2.66 ✓
313.0	41.2 ✓	
181.0	65.2 ✓	−2.67 ✓
142.2		

Index Left B.

191.6	40.0 ✓	
231.6	27.1 ✓	
16.8	67.1 ✓	−2.60 ✓
43.9		
		−2.51 ✓
197.7	27.8 ✓	
225.5	44.9 ✓	
8.1	72.7 ✓	−2.42 ✓
53.0		

8 14 45

~~8~~ 22 30

37 15. ✓

& 18 32. ✓

+✓ −✓A. ✓

13 17 40 ✓

2076. ✓✓40 ✓

Mean −2.58 ✓

Troubled in above groups by light cloud & haze ~~especially in first group~~ but rather more continuously in first group. Great care, however, exercised by making settings slowly & cautiously, and results

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1908phae.proj..590f

May 14, 1908.

considered good

P.A. 133 Vernier B.
S.T. 12 20
H.A. -4 54
Sprocket -4.5 B, -3.5 C
Dec. +33.2

Fourth Type Mar +38° 1539

6	27	+38.6
12	37	
6	10	

Full aperture used. Moon at the full.
Color b with ordinary eyepiece

U. Ob. Power	Rec.	Phot. T.
Index	Sta	B.
104.4	< 4th Type D-a	
8 57 55 1862	31.8 ✓	
2880	27.4 ✓	
315.4	59 2 ✓	-2.89 ✓
107.3	25.6 ✓	-2.90 ✓
1829	33 2 ✓	
284.5	58.8 ✓	-2.91 ✓
3177		

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1908phae.proj..590W

May 14, 1908

Index	R+B	A.
106	38.4 ✓	
49.0	28.4 ✓	
1968	66.8 ✓	−2.61 ✓
225.2		

−2.61 ✓

16.4	29.6 ✓	
46.0	37.2 ✓	
1928	66.8 ✓	−2.61 ✓
2300		

Mean −2.76 ✓

9	5	38
	123	2V. ✓
9	1	42. ✓
+V		−VA.
14	0	44. ✓

A076. VA32 ✓

S.T. 12 57
H.A. +6 26
Dec. +39.1
P.A. 191.5 Vernier B
Sprocket −3.5 B, −2.5 C.

Double Star (New List). = Burham's Cat. 4949.

9	3	+62.2
13	13	
4	10	

P.A. 25° Dist. 25″ Mags 7.0, 7.2

U. Ob. Rowe Rec. Phot R

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1908phae.proj..590

May 14, 1908

Index L+a

7.1 ← South Prec & Brtn. Diss.

86.9	79.8 ✓	
186.8	82.6 ✓	
269.4	162.4 ✓	0.33 ✓

8.2	77.6 ✓	0.38 ✓
85.8	80.2 ✓	
188.3	157.8 ✓	0.42 ✓
268.5		

Index R+B

2783	77.3 ✓	
355.6	81.2 ✓	
96.8	158.5 ✓	0.41 ✓
178.0		

0.40 ✓

277.2	78.8 ✓	
356.0	81.1 ✓	
97.8	159.9 ✓	0.38 ✓
178.9		

Mean 0.39 ✓

8 34 30

9 41 40

76 10. ✓

9 30 v. ✓

+v −v0. ✓

14 37 7. ✓

α0 76.6091 ✓

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1908phae.proj.590W

N.L = New List

May 14, 1908

Double Star ~~(N. L.)~~ New List = Burnham's Cat. 4972

9	6	+53.2
13	41	
4	35	

P.A. 48° Dist 20" Mags 7.4, 7.5
U.Obs. Doue Rec. Phot. R

Index R+B

273.4	South. Prec. & Brit Dis.	
1.4	88.0 ✓	
94.8	85.3 ✓	
180.1	173.3 ✓	0.13 ✓

9 59 48

275.3	87.1 ✓	0.11
0.4	87.8 ✓	
91.5	174.9 ✓	0.09.
181.3		

Index L+a

182.7	88.9 ✓	
271.6	86.7 ✓	
4.5	175.6 ✓	0.08 ✓
91.2		

0.06 ✓

184.4	87.0 ✓	
271.4	90.4 ✓	
23	177.4 ✓	0.03 ✓
92.7		

Mean ~~0.07~~ 0.04 ✓

10 6 50

	126	30 ✓
10	3	17 ✓
+1		14 ✓
17	2	17 ✓

2076, 6266 ✓

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1908phae.proj..590/

May 14, 1908

There is not much difference in brightness of components but South, Rec component assumed to be slightly the brtr. This in accordance also with the above measurements.

New List.

Double Star ~~(A. L.)~~ = Burnham's Cat. 3732

6	51	+37.3
14	6	
7	15	

Abandoned. Too low.

New List.

Double Star ~~(A. L.)~~ = Burnham's cat 6474.

13	17	+3.3
14	17	
1	0	

P.A. 76° Dist. 27" Mags. 7.1, 7.3

W. Obs. Roux Rec. Phot. R

Index L+B

	182.1 ✓	
10 31 50	271.1 89.0 ✓	
	8.7 78.7 ✓	
	87.4 167.7 ✓	0.23
	1860 81.5 ✓	0.22
	267.5 87.5 ✓	
	3.5 169.0	021
	91.0	

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1908phae.proj.590w

May 14, 1908

Index	R+a	
91.8	90.3 ✓	
181.6	89.4 ✓	
277.0	187.7 ✓	0.20 ✓
356.4		

0.20 ✓

96.0	82.9 ✓	
178.9	86.9 ✓	
273.9	169.8 ✓	0.19 ✓
0.8		

Mean 0.21 ✓

18	37	50
	69	40. ✓
10	34	20. ✓
+r		−r8. ✓
1r	33	r2. ✓

α 076.648r ✓

Ws watch used for times
Watch 58 secs fast.

L. P. P.

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1908phae.proj..590

May 15, 1908. (Friday).

~~u~~ ~~tc~~ Hercules.

17	12	+33 2
11	42	
5	30	
6	30	

U Ob. Rows Rec. Phot T.

Index Left B. 7m. cap used

120	Var Dio	
50.0	38.0 ✓	
197.7	26.2 ✓	
223.9	64.2	−2.71 ✓
=		
16.9	26.3 ✓	−2.69 ✓
43.2	38.8 ✓	
191.2	65.1	−2.67 ✓
230.0		

7 56 45

Index Right Ay

281.6	37.4 ✓	
319.0	25.7 ✓	
109.4	63.1	−2.74 ✓
135.1		

−2.74 ✓

288.0	25.2 ✓	
313.2	38.0 ✓	
103.2	63.2	−2.74 ✓
141.2		

8 3 40

120 2√

2 0 12. ✓

+√ −√0. ✓

12 √9 22. ✓

2077. √4/3 ✓

Mean −2.72 ✓

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1908phae.proj..590W

May 15, 1908.

Same Again.

Index Right A.

8 9 50

282.1 35.3 ✓
317.4 27.8 ✓
108.2 63.1 − 2.74 ✓
136.0

− 2.75 ✓

287.8 35.7 ✓
313.5 36.9 ✓
162.8 62.6 − 2.76 ✓
139.7

Index Left B.

191.2 40.6 ✓
231.8 24.7 ✓
17.7 65.3 ✓ − 2.67 ✓
42.4

− 2.64 ✓

197.7 26.8 ✓
224.5 39.8 ✓
10.8 66.6 − 2.62 ✓
50.6

8 17 50

27 40. ✓
& 13 √0. ✓
+√ −√0. ✓
13 13 0. ✓
Diff. √√07 ✓

Mean − 2.70 ✓

S.T. 12 14
H.A. −5 4
Dec 132.5
PA 133.3 Vernier B
Sprocket −4.5 B, −3.5 C.

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1908phae.proj..590

May 15. 1908.

New List.

Double Star ~~Cr. L. 7099~~ = Burnham's Cat. 7099.

14	56
12	26
2	30
9	30

+ 54.3

U. Obs. Rouse Rec. Phot R

P.A 343° Dist 41" Mags 7.0, 7.6

Index Above

278.7	← South, Foll. + Brtr. Ors	
356.3	77.6 ✓	
103.8	68.4 ✓	
172.2	146.0 ✓	0.65 ✓

0.67 ✓

284.8	66.7 ✓	
351.5	77.5 ✓	
98.1	144.2 ✓	0.69 ✓
175.6		

Index Below

189.3	77.2 ✓	
266.5	69.0 ✓	
12.0	146.2 ✓	0.65 ✓
81.0		

0.64 ✓

192.3	72.1 ✓	
265.0	73.2 ✓	
7.4	147.9 ✓	0.62 ✓
84.6		

Mean 0.66 ✓

8° 41' 35"

8	47	40
	Δ 9	1r. ✓
Δ	44	3Δ. ✓
+r		−r0. ✓
13	43	4Δ. ✓

Δ0°77. r721 ✓

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1908phae.proj..590W

May 15. 1908

New List.

Double Star (A.E.) = Burnham's Cat 7844.

15	34	+36.6
12	44	
2	50	U. Ob. Rouse Ree Phot. R
9	10	

Tidey R+B

183.2	Prec + Bth Dec	
270.8	87.6 ✓	
1.7	90 5 ✓	
92.2	178.1	−0.03 ✓

9 9 8 25

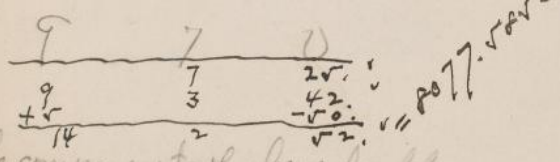
182.5	91.3 ✓	−0.01 ✓
273.8	89 .1 ✓	
3.4	180 .4 ✓	
92.5	179 6	+0.01 ✓

Tidey L+A

90.8	98.4 ✓	
181.2	85.8 ✓	
273.3	176. 2 ✓	−0.07 ✓
359.1		−0.06 ✓

93.0	88.7 ✓	
181.7	88.6 ✓	
272.9	177.3 ✓	−0.05 ✓
1.5	8.	

Mean −0.04 ✓



The components of above double

These stars have the right P.A + Dist but they are about 2 grades in brightness both to eye + by meas ts. and do not differ by 0.5 Mag. as in. decided in Burnham's Cat. Sky rather cloudy but will look them up again more thoroughly another night

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1908phae.proj..590

May 15, 1908

Observation used for times
Watch 50 secs. fast

L. P. P.

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