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1905phae.proj..575W

April 27, 1905 (Thursday)

Eunomia Phot I. H. of a Bowie rec

8	19	+13.1
10	2	
1	43	

Eunomia follows comp. star by 44 sec. and is 7'.7 north of it.

Comp. Star = +11° 1864 (9.0) being the same comp. star used on Apr. 25.

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1905phae.proj..575W

April 27, 1905

Index & B.

52.0 Comp Star dis.

8	16	34	119.0 ←	67.0'
			240.6	51.6'
			292.2	118.6' +1.22'

B

63.8 +1.30'

8	21	8	110.6	46.8'
			232.4	65.2'
			297.6	112.0' +1.37'

Index R & A

327.4

A

8	28	2	23.5	56.1'
			139.0	75.8'
			214.8	131.9' 0.94'

318.1 +0.97'

8	32	55	32.1	74.0'
			149.9	54.9'
			204.8	128.9' 1.00'

	97'	99"
8	24	40"
5	1	2"
13	25	42"

Mean +1.14'

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1905phae.proj..575W

April 27 1905

Index R & A

~~203~~ 147.3

8 45 44

203.0 55.7' A
318.8 73.7'
32.5 129.4' +0.99'

138.7 +1.00'

8 52 14

213.7 75.0'
328.2 54.2'
22.4 129.2' +1.00'

Index L & B.

59.5

9 1 16

111.4 51.9' B
229.0 72.2'
301.2 124.1' +1.10'

49.3 +1.06'

9 6 14

123.4 74.1'
238.0 53.4'
291.4 127.5' +1.03'

34 104 58'
8 56 22'
5 1 2
13 57 24'

Mean +1.03'

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1905phae.proj..575W

April 27 1905

Index δ υ B

			240.0		III
9	17	40	290.9	50.9'	
			49.7	70.0'	B
			119.7	120.9	+1.17'
			230.8		+1.22'
9	24	40	299.4	68.6'	
			61.0	48.0'	
			109.0	116.6'	+1.27'

Index R A

			330.2		
9	34	13	22.9	52.7'	A
			142.9	67.2'	
			210.1	119.9'	+1.19'
			321.4		+1.19'
9	40	34	30.9	69.5'	
			149.1	50.4'	
			199.5	119.9'	+1.19'

	115'	127'	
9	28	77'	
5	1	2	
14	30	19'	

Mean +1.20'

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1905phae.proj..575W

April 27, 1905

S.T. $12^h\ 59^m$
H.A. $+4\ 30$
Dec. $+12.0$
P.A. 244.4 Dec B
Sprocket -1.5 B
" -0.5 b

H's watch used for times tonight
H watch 1 m. 2 sec slow

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1905phae.proj..575W

Apr. 28. 1905. (Friday)

Eunomia. Phot H. obs Bonn sec

h	19	+13.1
10	25	
+2	6	

Eunomia follows comp. star by 1m 34 sec and is 4'.8 north of it.

Comp. star = +11° 1864 (9.0) being the same comp. star used on Apr. 25 and 27.

8
8
5
13

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1905phaa.proj...575W

April 28, 1905

Index R & A

149.3 ← comp star dis

δ 22 48

204.8	55.5′		A
319.6	71.4′		
31.0	126.9′	+1.04′	
138.0		+1.08′	
211.2 ~~212.1~~	73.2′		
330.2	50.0′		
20.2	123.2′	+1.12′	

δ 26 32

Index L & B

δ 33 58

62.7			
110.9	~~48.2′~~		
233.6	63.1′		B
296.7	111.3′	+1.39′	
51.4		+1.31′	
118.4	67.0′		
239.1	51.4′		
290.5	118.4′	+1.23′	

Mean +1.20′

δ 41 28

	122°	166′
8	30	72′
8	31	12′
5		58′
13	32	10

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1905phae.proj..575W

April 28, 1905

Index 2 2B

			59.8		B
8	47	46	109.8	50.0'	
			233.9	64.6	
			298.5	114.6'	+1.31'
			52.0		+1.27'
8	51	56	117.5	65.5'	
			239.3	52.8'	
			292.1	118.3'	+1.23'

Index R 2A

			328.0		
8	59	14	21.9	53.9'	A
			138.0	73.7'	
			211.7	127.6'	+1.03'
			317.6		+0.98'
9	3	28	30.6	73.0'	
			145.0	58.7'	
33	160	144		131.7'	+0.94'
8	55'	36	203.7		
5		58			
13	56	34			Mean +1.12'

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1905phae.proj...575W

April 28, 1905

Indep R & A

326.3 III

9 10 8 24.6 58.3'
136.6 76.4'
213.0 134.7' +0.88' A

320.2 +0.94'

9 14 15 30.8 70.6'
146.0 59.1'
205.1 129.7' +0.99'

Indep L & B

240.1

9 19 44 292.3 52.2'
52.0 67.0'
119.0 119.2' +1.21' B-

232.5 +1.24'

9 23 32 297.9 65.4'
60.0 50.5'
110.85 115.9' +1.25'

Mean +1.09'

6 6 99'

9 16 55'
5 58
14 17 53'

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1905phae.proj..575W

April 28 1905

Index L & B IV

242.0
290.1 48.1'
53.0 63.8'
116.8 111.9 1.37'

~~332.8~~ 59.8 1.45
~~292.4~~ 110.1 50.3'
237.5 55.0' 105.3' 1.53'
292.5

9 53 0

~~3 6 12~~
10 6 55

Index R & A

140.1
207.0 66.9'
332.0 ~~48.8~~ 115.7 1.29'
20.8

1.37

10 16 33
19 ~ 22'
10 ~ 29'
5 58'
15 6 27'

S.T. 13h 25m
H.A. +4h 55m
Dec. +12.0
P.A 265.2
Sprockets -4.5 B
" -3.5 b

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1905phaa.proj...575W

April 28, 1905

Images could not be exactly set before reading as Limonia disappeared in fog

Observations throughout evening difficult and a little uncertain at times The conditions of the evening were rather bad The afternoon was quite densely foggy. The fog cleared up pretty thoroughly after sunset as regards the massive character of the fog, there was however throughout evening more or less fog which increased in amount and progressively from zenith to horizon East wind rather strong and cold, making seeing also rather bad, and as said above the observations were rather difficult throughout and a portion of the time were decidedly difficult All possible care exercised however in making the settings It was impossible to finish the last group, and the last (third) set of this group was quite uncertain

W's watch used for times tonight
Watch 58 sec slow

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1905phae.proj..575W

May 1 (1905) (Monday)

Eunomia. Phot. J Hoke. Bowie rec.

8	19	+13.1
10	26	
2	7	

7 38 0 Eunomia follows +11° 1880 (9.0) by 0.2 sec and is 8.8 south of it.

Comp. Star +11° 1887 (9.5)

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1905phae.proj..575W

May 1, 1905

8 1 0 Blonde

Index R&A

222.6 ← comp. stars dis. I

8 15 8 296.0 73.4'

34.5 A

122.4 47.9'

161.3' +0.36'

213.8 93.4'

8 18 12 307.2 +0.30'

43.9 73.4'

117.3 166.2' +0.25'

Index L&B

131.1

8 23 4 210.0 79.9' B

302.5

38.8 96.3'

175.2' +0.09'

122.0

8 28 40 217.0 ~~216.8~~ 95.0' +0.16'

~~26 13~~

315.0

84 64 72.4°

8 21 16 27.4 167.8' +0.24'

5 +52

13 22 8

Mean +0.23'

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1905phae.proj..575W

May 1, 1905

Index L to B

			130.0	76.0'	II	
8	34	25	206.0			8
			305.5	91.2'	B	
			36.7	169.2'	+0.20'	
			124.5	92.6'	+0.23'	
8	38	25	217.1			
			313.8	73.8'		
			27.6	166.4'	+0.26'	

Index R to A

			42.5	72.4'		
8	43	46	114.9		A	9
			215.0	90.0'		
			305.0	162.4'	+0.33'	
			37.3	65.4'	+0.32'	
8	47	58	122.7			9
	162'	154'	225.0	71.4'		3
8	40	68	296.8	157.2'	+0.43'	8
5		52'				9
13	42	0			+0.30'	5
						14

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1905phae.proj..575W

May 1 1905

Index R & A

III

43.9

8	58	56	116.2	72.3'	
			216.8	89.5'	
			306.3	161.8'	+0.35'

33.9 +0.30'

9	1	13	125.5 ~~+261~~	91.6'	
			223.2	75.2'	
			298.4	166.8'	+0.25'

Index L & B

314.2

9	8	40	29.7	75.5'	
			119.0	97.7'	
			216.7	173.2'	+0.13'

303.2 +0.10'

9	12	20	37.5	94.3'	
			128.9	82.3'	
			211.2	176.6'	+0.06'

+0.20'

35	79	129
8	64	77
9	5	17
5		52
14	6	9

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1905phae.proj..575W

May 1, 1905

Index L & B — IV

310.0

9	20	22	32.2	82.2'
			119.1	103.7'
				185.9'
			222.8	174.1' — 0.11'

B

300.2

9	24	15	39.4	99.2' — 0.04
			129.3	79.9'
			209.2	179.1' + 0.02'

Index Red

218.0

A

9	27	56	301.9	83.9'
			30.1	96.8'
				180.7'
			126.9	179.3' — 0.01'

213.5

9	30	55	307.9	94.1' + 0.06
			38.6	79.6'
			118.2	173.7' + 0.12'

	101'	148'	
9	25	52'	
5		52'	+ 0.01'
14	26	44'	

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1905phae.proj..575W

May 1. 1905.

Index R & A

V

		220.1	A20.	
9	42	30	302.11	
			26.9	102.A.
			129.7	1AKA.
				175.2.
			212.0	
9	46	22	309.6	97.6
			37.7	A23
			120.0	179.9.

A

−0.09.

−0.04.

+0.00.

Index D & B

			127.4	A5.7.
9	53	6	213.A1	
			298.3	105.6.
			43.9	191.3.
				62.7.
			116.9	106.5.
9	57	24	223.4	
			306.0	A6.7.
	198.	82.	32.7 ~~33.3~~	193.2.
9	49	50.		166.8.
5		52.		
14	50	42.		

B

−0.21.

−0.23.

−0.25.

−0.14.

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1905phae.proj..575W

May 1. 1905

Index L & B

		124.1		VI
10	5	54	213.2	B
			296.0	
			43.8	
				−0.32
			116.8	
10	10	20	223.4	
			305.8	−0.30
			34.7	
				−0.29

Index R & A

		37.0		
10	14	30	121.2	A
			211.1	
			311.2	−0.05
			27.0	−0.10
10	17	40	130.4	
			218.1	
			300.7	−0.11
	46	144		
10	11	66		
5		52		
15	12	58		−0.20

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1905phae.proj..575W

May 1. 1905

Index R & A

38.6 VII

10 23 18 119.8 81.2'
209.3 99.4'
308.7 180.6'
179.4' -0.01'

29.6

10 27 2 127.9 98.3' -0.01'
219.0 82.0'
301.0 180.3'
179.7' -0.01'

Index L & B

305.1

10 32 45 31.8 86.7'
117.3 105.4'
222.7 192.1'
167.9' -0.23'

296.6

10 36 17 41.20 104.4' -0.22'
126.9 86.7'
213.6 191.1'
168.9' -0.21'
-0.12'

118' 85'
10 29 51'
5 52'
15 30 43'

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1905phae.proj..575W

May 1. 1905.

Index L&B VIII

306.8

10	45	35	31.80	84.2	
			119.6	100.4	B
			220.0	154.6	
				175.4	−0.09

298.0

10	50	46	38.0	100.0	−0.08
			127.2	84.4	
			211.6	184.4	
				175.6	−0.08

Index R&A

221.3

10	57	45	298.0	76.7	
			31.6	91.9	A
			123.5	168.6	+0.22

214.2 +0.22

11	3	44	302.8	88.6	
			37.8	79.3	
41	155	170	117.1	167.9	+0.23
10	53	88			
5		52			+0.07
15	55	20			

S.T. 14h 2m
L.A. 5 32
Dec. 12.0
O.A. 269.0 var B
Sprocket −4.5 B
−3.5 L

H's watch used for times
Hatch 52 sec slow

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1905phae.proj..575W

May 3, 1905 (Wednesday)

Eunomia Phot. I H. obs. Bowie rec.

8	19	+13.1
10	21	
2	2	

7 55 0 Eunomia follows comp. star by 4 sec. and is 9'.8 south of it

Comp. Star = + 11° 1887 (9.5)

For measurements see following pages.

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1905phae.proj..575W

May 3 1905

Index S&A

I

135.1 bomp star dis

8 10 0 216.2 81.1'
98.0'
307.5 179.1' +0.02' (B)
45.5

+0.06'

127.3
8 13 35 224.8 97.5'
76.5'
317.0 174.0' +0.11'
33.5

Index R&B

44.1
126.4 ~~+25.9~~ 82.3' (A)
8 18 40 218.9 95.5'
314.4 177.8' +0.04'

+0.10'

38.0
8 23 36 134.2 96.2'
228.7 75.8'
64' 111' 302.5 172.0' +0.15'
8 16 28 blonds
5 +47
13 17 15

Mean +0.08'

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1905phae.proj..575W

May 3. 1905.

Index R & B

II

~~1 1 2~~

blonde 47.3

8 44 8 123.9 76.6'

221.3 91.5'

312.8 168.1' +0.22' A

358.8 +0.21'

8 47 40 131.2 92.4'

227.3 76.7'

~~304.0~~ ~~30 5.5~~ 169.1' +0.20'

Index L & b

~~3193~~

~~57 58~~ ~~333 340~~ B

137.1

8 59 52 212.8 75.7'

309.8 91.6'

41.4 167.3' 0.24'

132.0 +0.26'

9 5 22 221.1 89.1'

33 155 122 317.1 75.9'

8. 53. 76. 33.0 165.0' 0.29'

8 54 16.

5 +47.

13 55 3.

Mean +0.24'

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1905phae.proj...575W

May 3 1905

Index L&A — III

		139.0		
9	12	11	211.8	72.8'
			310.2	92.0'
			42.2	164.8' +0.29' (B)
			128.8	+0.25'
9	15	34	223.2	94.4'
			318.3	74.4'
			32.7	168.8' +0.21'

Index R&B

		50.5		
9	22	4	123.4	72.9' (A)
			221.3	89.5'
			310.8	162.4' +0.33'
			42.3	+0.41'
9	26	30	127.1	84.8'
			231.3	69.7'
			301.0	154.5' +0.49'

	75'	79'	
9	18	65'	
5		+47'	
14	19	52'	

Mean +0.33'

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1905phae.proj...575W

May 3 1905

Index R+B

48,9

9 39 46	121,9	73.0'		
	221,8	89.7'		
	311,5	162.7'	+0,33'	A
	42,0		+0,39'	
9 43 57	128,8	86.8'		
	231,4	69.8'		
	301,2	156.6'	+0,45'	

Index A+A

318,7

9 51 35	33,0	74.3'		
	129,1	93.9'		B
	223,0	168.2'	+0.22'	
	309,0		+0,18'	
	43,9	94.9'		
	139,4	78.0'		
	217,4	172.9'	+0.13'	

Mean +0,28'

10	0	20
37	133	158'
9	48'	54'
5		+47'
14	49	41

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1905phae.proj..575W

May 3, 1905

Index Cor.

314.9

10 14 32 32.1

Stopped by clouds and low altitude

S. T.	13	39
H.A.	5	5
Dec	12.0	
P.A.	348.8 for B	
Sprocket	−0.5 B	
"	+0.5 b	

Atmospheric conditions throughout evening somewhat poor. Delayed by clouds and twilight in early part of evening; then it was somewhat clearer but as altitude decreased, the fog and somewhat atmospheric conditions ~~together with the decreasing~~ as well as the altitude ~~rendered the together with~~ diminishing brightness of asteroid rendered the observations somewhat labored an difficult The asteroid at beginning of observations was a little less than 10' distant from comp. star consequently the field was not quite clear However the ~~greatest~~ care exercised and obs. considered good

K's watch used for times
K watch 47 sec slow

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1905phae.proj..575W

May 4, 1905 (Thursday)

Eunomia Phot. J Hobs. Bowie rec.

8	19	+13.1
10	26	
2	7	

7 38 Eunomia follows comp star 57.5 sec. and 12.5 south of it

8 0 0 Eunomia now very slightly follows (0.2 sec) and is about 1.2 north of it having moved to following about 1 sec in a little over 20 minutes

Same comp. star used as on May 1. 1905. = +11°1842 (9.5)

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1905phae.proj..575W

May 4, 1905

Index Above

			129.5	Groups Standis		I
8	13	48	217.7 ~~216.9~~	88.2		
			301.8	104.6		
			46.4	192.8		
				167.2	−0.24	(A)
			122.5			
8	16	55	225.6	103.1	−0.18	
			311.5	84.0		
			35.5	187.1		
				172.9	−0.13	

Index Below

			42.1			
A	22	36	125.5	83.4		(B)
			217.2	95.0		
			312.2	178.4	+0.03	
			35.2		+0.07	
8	27	36	127.8	92.6		
			223.2	81.6		
			304.8	174.2	+0.11	
	78	175				
8	19	74				
5		+44				
13	20	58				

Mean −0.06

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1905phae.proj..575W

May 4. 1905.

Index Below

		44.1		II
8	36	2	122.0	77.9
			215.2	97.1
			312.3	175.0 +0.09
			35.8	+0.11
8	40	33	129.1	93.3
			225.0	80.0
			305.0	173.3 +0.13

Index Above

			312.5	
8	47	55	32.4	79.9
			124.9	100.1
			225.0	180.0 0.00
			302.9	+0.00
8	50	52	43.1	100.2
			135.1	79.1
			214.2	179.3 +0.01

	173	142
8	43	50
5		44
13	44	34

Mean +0.06

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1905phae.proj..575W

May 4, 1903

Index Above — III

			313.9		
8	58	14	311	77.2'	A
			124.9	100.4'	
			225.3	177.6'	+0.05'
			303.6		+0.07'
9	2	3	42.2	98.6'	
			135.5	76.5'	
			212.0 ~~211.7~~	175.1'	+0.09'

Index Below

			226.8		B
9	10	48	301.9	75.1'	
			40.1	80.9'	
			121.0	156.0'	+0.46'
			220.4		+0.42'
9	15	42	309.0	88.6'	
			47.7	71.0'	
			118.7	159.6	+0.39'
35	85	107'			
8	66	42'			
5		+44'			
14	7	26'			

Mean + 0.24'

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1905phag.proj.,575W

May 4 1905

Index Below

IV

9 30 35
9 31 0

228.7
300.4 71.7 :
41.5 81.7 :
123.2 153.4 . +0.51 .

(B)

220.1 +0.48 .

9 35 18

306.9 86.8 :
49.3 69.6 :
118.9 156.4 . +0.45 .

Index Above

9 57 36
~~48 2~~

305.3 ~~228.1~~
38.6 ~~299.5~~ 93.3 :
132.8 ~~40.9~~ 82.0 :
214.8 ~~125.5~~ 175.3 . +0.09 .

(A)

315.9 +0.10 .

10 1 4

37 123 93
9 45 68
5 44
14 46 52

32.3 76.4 :
123.9 98.4 :
222.3 174.8 . +0.10 .

Mean +0.29 .

Shutter interfered slightly at end of second set in above group. Shutter lowered after second set. After third set found that phot. had not been reversed in middle of group, then reversed phot. retook third set and afterwards took fourth set

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1905phae.proj..575W

May 4 1905

Index Above

V

3046

10	8	10	39.6	95.0	A
			130.2	80.1	
			210.3	175.1	+0.09
			310.7		+0.01
10	14	20	33.037.1	82.3	
			121.5	101.3	
			222.8	183.6	
				176.4	−0.07

Index Below

B

			215.0		
10	18	47	308.5	93.5	
			42.1	77.0	
			119.1	170.5	+0.18
			225.0		+0.21
10	22	54	300.5	75.5	
	6	131	36.5	91.6	
10	15	63	125.41	167.1	+0.24
5		44			
15	16	47			Mean +0.11

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1905phae.proj..575W

May 4 1905

Index Below

	217.1			VI
10 28 24	310.9	93.8		
	43.2	77.8		B
	121.0	171.6	+0.16	
	223.2		+0.16	
10 32 38	300.1	76.9		
	34.8	94.2		
	129.0	171.1	+0.17	

Index Above

	119.5			A
10 37 56	224.8	105.3		
	312.3	80.2		
	32.5	185.5		
		174.5	−0.10	
	128.6		−0.16	
10 44 53	215.9	87.3		
	298.3	104.1		
	42.4	191.4		
		168.6	−0.22	

	141	171
10	35	58
5		44
15	36	42

Mean 0.00

S.T. 14h 00m
H.A. 5 23
Dec. 12.0
P.A. 315.2 on B
Sprocket −3.5 B
" −2.5 b

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1905phae.proj..575W

May 4, 1905

10 57 The object assumed for Eunomia turns out to be Eunomia. In the first of the evening it preceded +11° 1859 (9.5) by 1 sec and was a little over 1' north of it. At the present time ~~it follows Eunomia~~ approx the asteroid follows the above star by approximately ~~by~~ ab. 7 sec and is slightly north of it - this last time and dec being taken in field of photometer

Observations of tonight rather slow and labored. Troubled by east wind, some fog and glare of electric lights on same. In early part of series the asteroid was within about 1' of above mentioned star so that great care had to be exercised in placing the images. In later part of series however (as asteroid got somewhat farther from star) the observations in this respect became a little easier. The greatest possible care exercised throughout evening, but from above mentioned considerations the obs. were in general somewhat difficult

W's watch used for times
Watch 44 sec slow

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1905phae.proj..576W

May 5 1905 (Friday)

Eunomia Phot J. H. obs Bowie rec.

8	19	13.1
10	35	
2	16	

7 50 0 Eunomia follows comp. star of May 4. by 1m 53 sec and is 15.7 south of it

9 22 0 Impossible to do anything photometrically with Eunomia Clouds now growing thick everywhere No chance for anything further

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1905phae.proj..575W

May 8, 1905 (Monday)

Iris Phot. I. 4. obs. Bowie rec.

13	42	-17.4
10	42	
3	0	
9	0	

8 27 Iris follows -17° 39' 9 (A.9) by 40.5 sec. and is 4.0 south of it

9 5 Iris follows -17° 39' 9 (A.9) by 39.2 sec and is 3.9 south of it

Comp. Mer = -17° 39' 54 (9.2)

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1905phae.proj...575W

May 8, 1905

Index Band A.

183.9 Iris. dis.

272.4 44.5 ✓

14.4 69.5 ✓

83.9 160.0 ✓ −0.42 ✓ I A

9 23 56

194.2 67.7 ✓ −0.40 ✓

261.9 92.6 ✓

1.7 160.3 ✓ −0.34 ✓

9 27 4

Index L + B

88.5 99.0 ✓

187.5 77.5 ✓

279.2 176.5 ✓ −0.06 ✓ B

357.0

9 32 22

98.9 74.5 ✓ −0.04 ✓

177.4 101.0 ✓

278.0 179.5 ✓ −0.01 ✓

9 37 6

119 88

9 29 67

5 36

14 30 43

9.0 8.4

Mean −0.22 ✓

6974.60 ✓

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1905phae.proj..575W

May 8, 1905.

Index L & B

		89.0		II
9	46	7	188.0 ~~187.4~~	99.0 v
			281.9	
			359.4	77.2 v
				176.2 v
				−0.06 v
				B
			98.9	
9	50	38	178.4 177.9	79.2 v
				−0.02 v
			267.9	101.1 v
			9.0	
				180.6 v
				179.4 v
				+0.01 v

Index R & A

			1.9	93.3 v
				A
9	55	40	95.2	
			194.1	64.1 v
			262.2	161.4 v
				−0.3 v
			14.1	
				62.3 v
			82.4	−0.3 v
			181.7	93.6 v
			275.3	
				161.9 v
				−0.3 v
				Mean −0.18 v

10	0	30
37	151	115
9	52	74
5		36
14	53	50

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1905phae.proj..575W

May 8, 1905

Index R & A

III

	5.0			
	93.3	88.3 ✓		
10 13 22	193.2	71.5 ✓		A
	264.7	~~169.4~~ 159.4 ✓	−0.32 ✓	
	14.0			
	84.9	70.9 ✓		
10 16 20	182.5	69.9 ✓	−0.32 ✓	
	272.4	160.4 ✓	−0.37 ✓	

Index L & B.

	267.8			
	7.2	99.4 ✓		
	98.5	79.3 ✓		
10 20 48	177.8	179.3 ✓	−0.02 ✓	B
	280.7	77.0 ✓	−0.04 ✓	
	357.7			
	87.9	100.4 ✓		
10 24 55	188.83	177.4 ✓	−0.05 ✓	
73 145				
10 18 51				
5 36				
15 19 27				

Mean −0.21 ✓

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1905phae.proj..575W

May 8, 1905

Index L B

269.9 100.0 IV

10 35 5 9.9 B

95.1 94.5

176.6 194.5 −0.03

276.6 82.1

10 38 48 358.7 0.00

89.6 92.7

188.3 120.2

179.2 +0.02

Index R K A

182.9 91.2

10 44 40 274.1

13.1 70.5 A

83.6 161.7 −0.3

194.4 64.3 −0.3

10 48 48 262.7

165 141 1.8 93.5

10 41 50 95.3 96.0 161.2 −0.3

5 36 Mean −0.18

15 42 26

Reversed telescope from west to east side of pier, after above group. (Hence index R + A in second half of above group, becomes L + B in first half of next group).

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1905phae.proj..575W

May 8, 1905

Index ~~A+B~~ Σ+B

			91.5	9K.r ✓	II
11	11	35	186.0		
			279.0	92.3 ✓	
			356.3	171.2 ✓	−0.16 ✓ B
			98.1	99.1 ✓	−0.10 ✓
11	13	48	177.2		
			267.5	90.r ✓	
			6.0 ~~475~~	177.6 ✓	−0.0r ✓

Index ~~A+B~~ R+A

			4.8	89.4 ✓	A.
11	20	56	94.2		
			183.6	69.3 ✓	
			262.9	178.7 ✓	−0.41 ✓
			13.5	91.3 ✓	−0.36 ✓
11	24	32	84.88		
			181.8	92.6 ✓	
			274.4	163.9 ✓	−0.30 ✓
					Mean −0.23 ✓

	68.	171.
11	17.	43.
5		36.
16	18	19.

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1905phae.proj..575W

May 8, 1905

Index ~~L+B~~ R+A

		5.1	49.1°	~~V.I~~
11	31	57	94.2	
			195.0	66.9°
			261.9	156.0° −0.46° A
			13.6	
			83.1	69.5° −0.44°
11	36	8	153.6	69.9°
			271.5	157.8° −0.43°

Index ~~R+D~~ L+B.

		269.6		
		6.8	97.2°	B
11	42	2	99.3	97.7° −0.09° ~~−0.10~~
			177.0	174.9°
			278.0	80.4° −0.06°
11	45	38	358.4	
			90.6	92.2°
			188.4	190.2° −0.03°

mean −0.25°

	154	105
11	38	56
5		36
16	39	32

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1905phae.proj..575W

May 8. 1905

L + B.

~~Index Ret~~

VII

	268.7			
	7.2	94.5		
11 53 46	101.6	96.0		(B)
	179.6	176.5	−0.06	
	279.4			
	357.8	78.4	−0.05	
11 57 45	90.2			
	189.8	99.6	−0.04	
		178.0		

Index Rod (Index known to be 8 + 4)

	181.6	91.6		
12 3 46	273.2			
	14.0	69.3		(A)
	83.3	160.9	−0.36	
	194.4	67.6	−0.32	
	262.0			
	2.1	91.5		
	93.6	159.1	−0.40	

Mean −0.22

12 6	48	
46	119	185
11	59	91
12	0	31
5		36
17	1	7

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1905phae.proj..575W

May 8, 1905

Index Rod

VIII

			183.8	26.2	
12	16	56	270.6		
			14.4	62.7	
			83.1	189.9	−0.47

A

			193.9	70.1	−0.43
12	20	44	264.0		
			4.4	69.4	
			93.8	159.5	−0.39

Index & a B

B

			89.8	99.6	
12	26	48	189.4		
			281.2	74.9	
			356.1	174.5	−0.10

			101.8	74.5	−0.14 ~~−0.04~~
12	~~30~~ 29	48	176.3		
			270.2	96.3	
			6.35	170.2	−0.17

	91	196
12	22	94
12	23	34
5		36
17	24	10

~~−0.26~~

Mean −0.24

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1905phae.proj..575

January 8, 1905

Index L & B

90.0 IX

187.4 97.4 v

281.1 93.7 v

356.2 175.1 v −0.1 v B

100.0 77.8 v −0.1 v

177.5

270.9 46.3 v

7.2 193.4 v −0.1 v

12h 36m 25s

12 39 55

Index R & A

5.6 182.7 v

94.3 A

195.0 64.6 v

263.6 157.3 v −0.4 v

14.0 64.2 v −0.4 v

82.5

182.6 82.9 v

271.5 157.7 v −0.4 v

Mean −0.2 v

12 44 54

12 45 35

167 172

12 41 88

5 36

17 43 4

ΔJ 16 13

R.A. +2 28

Dec −17.0

P.L. 247.0 for B

Sprocket −3.5 B

" −2.5 b

It's watch used for times

Watch 36 sec. slow.

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1905phae.proj..575W

May 9, 1905 (Tuesday)

Lunonia Phot. Z. H. obs. Borrie rec.

8	19	+13.1
10	53	
2	34	

7 56 0 Lunonia precedes +11° 1901 (9.5) by 8 sec and is 8.0 south of it

8. 5 0 blonds

8 15 0 blonds

Comp. Star = +11° 1904 (9.5)

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1905phae.proj..575M

May 9, 1905.

Lindsay R & A

		109,85	Comp. Star dis.	I
		192.0	42.5	42.5 v
		302.7	101.2	61.2 v
	3.9 assumed	~~303.9~~	143.7	143.7 +0.70
			~~194.8~~	
		121.0	63.5 v	
		184.5		+0.66
		259.2	74.2 v	
		13.4	147.7 v	+0.62 v

Lindsay R & B

		13.8	95.0 v	
		108.8		
		206.5	70.0 v	
		276.5	165.0 v	+0.29 v
		26.0	74.4 v	+0.26 v
		100.8		
		195.7	92.7 v	
		288.84	167.5 v	+0.24 v

Mean +0.46 v

2	40	12
	136	63
A	34	16 v
+5		+34.5 v
13	34	50.5 v

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1905phae.proj..575W

May 9, 1905

Index A & B

II

15.0
109.7 94.7 ✓
204.3
279.8 170.2 ✓ +0.19 ✓

8 47 58

25.0
100.3 75.3 ✓ +0.16 ✓

8 52 18

193.0
290.0 172.3 ✓ +0.14 ✓

Index R & A

288.9 46.1 ✓
15.0

8 58 6

118.2 64.0 ✓
186.2 171.1 ✓ +0.50 ✓

298.9 66.2 ✓ +0.50 ✓
5.1 ~~414~~

9 4 10

108.0 42.1 ✓
196.1 154.3 ✓ +0.49 ✓

221 92
A ✓✓ 32. ✓
✓ +34. ✓
13 ✓6 12 ✓

Mean +0.33 ✓

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1905phae.proj..575W

May 9. 1905

Index R + A

9 11 0

286.4
19.0 92.6 ✓
116.2
185.1 68.9 ✓
161.5 ✓ +0.3 ✓

III

A

9 13 48

297.6
9.5 71.9 ✓
106.8
197.4 90.6 ✓
162.5 ✓ +0.33 ✓

+0.34 ✓

Index R & B.

9 17 45

194.0
250.2 94.2 ✓
24.0
101.2 77.2 ✓
171.4 ✓ +0.16 ✓

B

9 20 54

201.6
279.4 77.8 ✓
12.6
111.8 99.2 ✓
177.0 ✓ +0.06 ✓

+0.11 ✓

61 147
9 15 57 ✓
+✓ +34 ✓
14 16 26 ✓

Mean = +0.22 ✓

Troubled by clouds in last half of above group and especially in third set and first of last set

1905phae.proj..575W

May 9, 1905

193.9

9 28 54 290.1

blonde

10h 7m 0 Still blondy

S.J. 2h 10m
H.A. ? see remark
Dec. +11.5
P.A. 97.5 & nB
Sprocket −2.5 R
" −1.5 b

Hour angle not read, as clouds came up and continued through evening, so that stars could not be kept in the field and consequently the hour angle was not known at the end. The reading of position angle and sprocket are pretty nearly correct, although not exact, since images could not be superimposed for above reason, Region however thoroughly identified before beginning. Observations throughout a little difficult mainly on account of moonlight, the moon being not very far distant

As mentioned above observer was

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1905phad.proj..575W

May 9. 1905.

troubled by clouds in last part of third group, settings however made with as much care as possible.

H's watch used for times tonight
Hatch 3.4 sec. slow.

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1905phae.proj..575W

May 10, 1905 (Wednesday)

Eunomia Phot I H obs Bowie

8	30	10.1
10	56	
+2	26	

Comp. Star = +11° 1904 (9.5m)

Eunomia precedes comp. star of last night
8 7 0 by 17.5 sec. and is 3.'0 south of it.
There is a fainter object preceding compstar of last night by 3 sec and is 6.'5 south of it, but this cannot be Eunomia.

Abandoned. Moon too bright and near

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1905phad.proj...575W

May 10, 1905.

Iris Phot 3 H. obs. Bowie rec.

13	42	-17.4
11	56	
1	46	
10	14	

Iris precedes -17° 3959 (8.9) by 59.0 sec and is 9.2 south of it.

There is no star in the place of Iris on May 8 so that object taken on that night for Iris, was Iris.

Same comp. star used as on May 8. =
= Comp. Star = -17° 39+4 (9.2)

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1905phae.proj..575W

May 10 1905

Index A & B

		251.6	6 comp star dist	
9	1	0	22.9	101.3	
			110.7	A1.0	I
			191.7	122.3	
				177.7	−0.04	B
			291.7	A3.3	
9	3	53	15.0		−0.10
			98.8	10 KR	
			203.6	122.1	−0.15
				171.9	

Index R & A

			188.4		
9	9	15	295.0	106.6 ✓	A
			15.6	86.3 ✓	
			104.9	192.9 ✓	
				167.1	−0.24
			198.3		
9	13	10	285.7 ~~286.2~~	87.4 ✓	−0.22
			6.5	109.0 ✓	
			115.5	196.4 ✓	
				163.6 ✓	−0.31

Mean −0.19

	26	7A ✓
9	6	50 ✓
+V		+32. ✓
14	7	22 ✓

6976. VAA ✓

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1905phao.proj..575W

May 10. 1905

Index R & L

		187.4	109.1 v	
9	21	16	296.5	II
			20.7	A2.3 v
			103.0	191.8 v
				166.6 v −0.22
			199.1	
9	24	30	285.0	A1.9 v −0.24
			7.7	107.6 v
			115.3	193.5 v
				166.5 v −0.25

Index L & B

		279.0	106.2 v	
9	30	16	25.2	
			110.2	A1.8 v
				182.0 v
			192.0	172.0 v −0.15
			291.1	A1.6 v −0.12
			12.7	
			100.6	103.3 v
			203.9	184.9 v
				175.1 v −0.09
				Mean −0.18

9	33	20
	10	A2 v
9	27	20 v
tr		+32 v
14	27	52 v

6976.603 v

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1905phae.proj..575W

May 10 1905

Index L & B

279.0 III

~~44~~ ~~5~~ ~~24.8~~ 10K.K ✓

9 ~~45~~ 35 23.4

109.2 23.6 ✓ B

192.8 116.0 ✓

172.0 ✓ −0.1 ✓

291.2

15.5 AK.3 ✓ −0.12

97.5 106.K ✓

203.5 9 190.7 ✓

169.3 ✓ −0.20

Light cloud in this region during set. in above two sets

Index R A

187.8 106.3 ✓

9 55 52 294.1

20.4 AV.0 ✓ A

191.3 ✓

105.4 162.7 ✓ −0.21

198.8 AA.1 ✓ −0.22

286.9 10K.3 ✓

9.7 192K ✓

114.10 167.6 ✓ −0.2K

Mean −0.20

10 1 30

209 17 ✓ ✓

9 ✓2 ✓9 ✓

+✓ +32 ✓

14 ✓3 31 "Troubled by some feathery cloud throughout

6976.620 ✓ above group

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1905phaa.proj..575W

May 10 1905

Index R & A

	189.9	103.4 v		IV
10 10 21	293.3	Av. 7 v		
	19.0	189.1		A
	104.7	170.9	−0.17	
	195.4	22.4 v	−0.20	
10 13 30	283.8			
	10.1	103.9 v		
		192.3 v		
	114.0	167.7 v	−0.23	

Index S & B

	~~100.6~~			
	~~203.0~~			
	~~19.5~~			B
	280.7	103.5 v		
10 23 5	24.2 ~~25.0~~			
		A 3.6 v		
	110.4	167.1 v		
	194.0	172.9 v	−0.13	
	286.9	27.1 v	−0.16	
10 31 18	14.0			
77 74 v	101.0	102.5 v		
10 19 34 v		129.6 v		
+v +32. v	203.5	170.4 v	−0.18	
15 20 6 v			Mean −0.18	
6976.639 v				

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1905phae.proj..575W

May 10. 1905

S. T. 14 16
~~H.A.~~ +0 27
Dec -18.0
P.A. 178.2
Sprocket -3.5 B
" -2.5 b

Observations in last group made through considerable cloud and somewhat difficult. The clouds tonight were of a somewhat feathery, streaky, character and gradually increasing in amount due to the approach of a low barometer, clouds now becoming somewhat denser 10.54

~~It's~~ watch used for times ~~tonight~~
Watch 32 sec. slow

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1905phae.proj...575W

May 11. 1905. (Thursday)

Eunomia

A	26	+11 0.1
11	9	
+2	K3	

Eunomia fol. comp. star of last night by 41.5 secs. and is abt. 7.0 south of it.

Phot. meas. cannot be made on account of proximity of moon and haze.

Iris.

13	42	−17.K
11	KV	
−1	V7	
10	3	

Abandoned. Sky too cloudy in this region.

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1905phae.proj..575W

May. 11. 1905.

ζ Librae

15	4	-19.2
12	25	
-2	39	
9	21	

For means, see two fol. pages.

9
9
5
14

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1905phae.proj..575W

May 11.1905.

Index above

~~40.0~~ 38.5 ← 46.4 v Var. dis.

9840 − 84.9

− 9.5 in Cap.

− 209.0 62.2 v

− 277.2 116.6 v −1.31 v

− 27.2 66.5 v −1.34 v

− 93.7

− 220.2 45.2 v (A)

− 265.4 111.7 v −1.34 v

Index below

− 211.0

− 352.5 41.5 v

− 118.3

− 185.4 67.1 / 108.6 v −1.45 v (B)

9265

− 298.4 65.6 v −1.44 v

− 4.0

− 133.2 40.0 v

− 173.2 106.6 v −1.52 v

Mean −1.41 v

9	34	85	.
9	17	42	.
5		+32	.
14	18	14	.

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1905phae.proj..575W

May 11 1905.

Index below

302.0
1.2 v9.2 v

132.3
173.6 41.3 v
100 v - 1.64 v

(B)

310.2
353.5 43.3 v -1.60 v

123.6
183.9 60.3 v
103.6 v -1.57 v

Index above

209.8
273.0 63.2 v

(A)

37.5
85.9 48.4 v
111.6 v -1.38 v

219.1
265.5 46.4 v -1.40 v

29.9
93.8 63.9 v
110.3 v -1.41 v

Mean 1.50 v

9 40 25

9 52 10

	92	35
9	46	18
5		+32
14	46	50

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1905phae.proj..575W

May 11 1905.

S. T.	$13^h.35^m$
H. A.	-1 33
Dec	-19.8
P. A.	247.0 Vert B.
Sprocket	-2.5 B
"	-1.5 b

Trouble throughout by some cloud. For second group clouds more trouble some, and especially so in last half of second group.

W's watch used for time To-night 32 sec slow.

10 1v Clouds now thick every where no chance for anything further.

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1905phae.proj..575W

May 12, 1905 (Friday)

ν Cephei Phot. 3 W. obj. Bowie sec.

23	50	+824
11	30	
12	20	
11	40	

On account of very bad atmospheric conditions it was impossible to find ν Cephei with the finder. Took off phot and finally found it with large telescope Fog however which had been coming in somewhat immediatly became so thick that variable entirely dis. in large telescope.

8 15 0

8 20 0 Fog now very thick.

blinds and fog thick everywhere, strong each wind, no chance for anything further. Moon now has entirely dis.

8
8
5
13

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1905phae.proj...575W

May 13, 1905 (Saturday)

Vbegher Phot. J. K. obs Bowie rec. 9.5" bapi

		23	50	Index R & B		
		11	5			
8	7	28	12	45	33.8	var. dia
			12	26	91.8	58.0'
					197.0	91.1'
			11	35	288.1	149.1' −0.59'
			12	15		
					16.5	
					105.5	89.0' −0.60'
					212.2	58.7'
					270.9	147.7' −0.62'

Index R & B

					301.2	
					1.8	60.6'
					111.6	81.9'
					193.5	142.5' −0.72'
					291.4	
					13.8	82.4' −0.78'
					124.9	54.0'
8	20	38			178.9	136.4' −0.85'
	27	66				
6	13	63				
5		31				
13	14	34				

Mean −0.69'

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1905phae.proj..575W

May 13, 1905

Index R & B

	301.9		
8 38 45	2.5	60.6'	
	111.0	80.6'	
	191.6	141.2	−0.75'

A

	291.7		
	11.5	79.8'	−0.78'
	122.4	58.5'	
	180.9	138.3'	−0.81'

Index L & A

	211.3		
	273.1	61.8'	
	17.0	86.2'	
	103.2	148.0'	−0.61'

B

	200.9		−0.67'
8 50 42	282.6	81.7'	
88 87'	31.7	60.6'	
8 44 44'	92.3	142.3'	−0.73'
5 +31'			
13 45 15'			

Mean −0.72'

L.T. −12h 45m
H.A. −11 7
Dec. +82.1
P.A. 145.0 Ver. B.
Sprockets −2.5 B
−1.5 b

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1905phae.proj..575M

May 13, 1905

-Camelop 044065 Phot H. obs

4	36	67.9
13	5	
8	29	

Abandoned. Sky thick in the north. More clouds coming in the west. Night now becoming bad. Dew on objects glass.

H's watch used for times tonight. Watch 31 sec. slow.

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1905phae.proj..575W

May 19, 1905 (Friday)

044068 – bamelop. Phot. J. H. de Bruin. rec

4 40 +66.1
11 42
7 2

9.5 bap.

7 49 0 blonds and twilight. All cloudy south of zenith also north of zenith

Index L×B

218.3 ← comp. Star dis.

8 15 20

276.5 68.2'
36.7 50.1'
86.8 118.3' +1.23'

B

216.6 +1.25'
268.0 51.4'
29.0 65.0'
94.0 116.4' +1.27'

Index R×A

300.5
6.5 66.0'
127.8 44.0'
171.8 110.0' +1.42'

A

309.2 +1.48'
352.7 43.5'
120.6 60.9'
181.5 104.4' +1.55'

Mean +1.36'

8 40 0
55 20'
8 27 40'
5 +16'
13 27 56'

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1905phae.proj..575W

May 19, 1905.

S. T. $13^h\ 26^m$
H. A See note below.
Dec. 68.2
P. A 79.5
Sprocket -1.5 B
" -0.5 b

Hour angle not read as clouds became more troublesome, images dis. in clouds and so could not be sure of the hour angle readings. Images also could not be exactly superposed but position angle and sprocket thought to be quite close. Region also thoroughly identified

Two group taken, troubled somewhat by light streaky clouds and rather more so in last half of group, extreme care however exercised and obs. considered very good

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1905phae.proj..575W

May 19. 1905.

Variable 130802 Phot. J. H. obs. Bowie. rec.

13 6 -2.7
14 0
54

Indep. R&A

297.2 Var. dis.
5.7 68.5'
108.2 86.7'
194.9 155.2' -0.47'

290.7 -0.50'
14.0 83.3'
117.5 69.3'
186.8 152.6' -0.52'

Indep. R&B

206.8
277.7 70.9'
17.9 85.4'
103.3 156.3' -0.45'

197.6 -0.42'
285.1 87.5'
26.1 72.3'
98.4 159.8' -0.38'

Mean. -0.46'

10 25 20

10 34 2
59 22
10 29 41
5 +16
15 29 57

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1905phae.proj..575W

May 19. 1905.

S.J. 14h 48m.
H.A +1 38
Dec -2.0
P.A 146.5 Ver. B
Sprocket -3.5 A
" -2.5 B
" -1.9 b

Clouds now growing thick. No chance for anything further.

It's watch used for times tonight.
Watch 16 sec. slow.

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1905phae.proj..575W

May 20, 1905 (Saturday)

H. W. 62 Phot. H. Astr. Bowie sec.

15	7	+19.8
11	50	
-3	17	
8	43	~~This star abandoned.~~

12	18	
-2	52	+19.0
15	10	

P. A ~~3 5 5~~ 0.° Dist. 25 sec. Image.
5.8 6.8

For results, see next page.

The star measured on p. 73. was H. W. 62, as was proved by reference to Dun. chart-Vol. and Herschel Gen. Cat.
Some difficulty was experienced at first, in finding it on account of strong twilight and the fact that the Dec. index was somewhat out.

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1905phae.proj...575W

May 20, 1905.

H. H. 62 = Σ 1919.

Index L & A

352 0.2 Brighter dis.

8 17 38

57.1	66.9		
166.3	71.9		
238.2	138.8	0.80	B
344.7		0.78	
57.5	72.8		
168.3	68.2		
236.5	141.0	0.75	

Index R & B

259.8			
327.3	67.5		A
78.0	63.2		
141.2	130.7	0.96	
256.7		0.86	
329.0	72.3		
78.5	69.0		
147.5	141.3	0.75	

Mean 0.82

8 27 40

44 78

8 22 39

5 +18

13 22 57

Altitude rather high and observations somewhat difficult

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1905phae.proj..575W

May 20, 1905.

ι Librae Phot J Wolz Barie rec.

15	6	-19.4	7 in bag
12	55		
2	17		
9	49		

Index R & d

38.1 ← var. dia.

9 6 20

82.8			
212.6	44.7		A
271.4	58.8		
	103.5	-1.57	
29.9		-1.48	
88.5	58.6		
215.1	52.1		
267.2	110.7	-1.40	

Index L & B

307.2			
353.9	46.7		B
125.4	52.9		
178.3	99.6	-1.67	
303.6		-1.70	
354.6	51.0		
128.8	46.2		
175.0	97.2	-1.73	

Mean -1.59

9	17	22	
	213	42	
9	11	51	
5		+18	
14	12	9	

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1905phae.proj...575W

May 20, 1905.

Index L a B

		305.9		
9	27	40	356.3	50.4'
			126.0	50.5'
			176.5	100.9' −1.63'

304.7		−1.63'
354.4	49.7'	B
126.3	51.3'	
177.6	101.0'	−1.63'

Index R a A.

		215.7		
		270.1	54.4'	
		34.9	53.8'	
		88.7	108.2'	−1.46'

A

212.7		−1.46'
267.4	54.7'	
35.5	52.9'	
88.4	107.6'	−1.47'

Mean −1.54'

9	37	45
	64'	85'
9	32'	42'
5		+18'
14	33	00'

R.A. $13^h\ 56^m$.
R.A. $-1^h\ 13^m$
Dec. −20.0
P.A. 66.0 Var B
Sprocket −2.5 B
" −1.5 b

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1905phae.proj..575W

May 20 1905

ζ Cephei. Phot. I. H. obs. Bowie rec.

23	50	+82.4	9.5 Cap
14	10		
9	40		
2	20		

Index Right.

297.4		← var dis	
6.2	68.8′		
111.0	78.0′		
159.0	146.8′	−0.64′	A
294.5		−0.70′	
10.0	75.5′		
118.1	65.1′		
183.2	140.6	−0.76′	

Index Left

212.0			
276.0	64.0′		B
21.0	79.5′		
100.5	143.5	−0.70′	
200.6		−0.70′	
278.0	77.4′		
26.3	66.6′		
92.9	144.0	−0.69′	

Mean −0.70′

10	53	34	
	95	52	′
10	47	56	′
5		+18	″
15	48	14	

S. T. $15^h\ 20^m$
R.A. −8 36
Dec. +82.1
P.A. 144.1
Sprockets −2.5 B
" −1.5 b

His watch used for times.
Watch 18 sec. slow.

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1905phae.proj...575W

May 22, 1905 (Monday)

Eunomia: Phot J. H. de Bonne rec

A	√0	+10.0
12	K0	
+3	√0	

Approaching cloudiness became so thick that although the bright setting star was seen for a little, the fainter D. M. stay die. and then shortly after the bright star; so that Eunomia could not be found

Double Star α Librae Phot R. H. de Bonne rec

14	45	−15.6
13	12	
1	33	
10	27	

9 25 o All cloudy everywhere. No chance for anything further

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1905phae.proj..575W

May 23, 1905. (Tuesday)

Eunomia Phot. J. Kobe. Bowie rec

8	50	+10.4
11	53	
3	3	
	21	
3	24	

Transits to identify Eunomia (with reference to 3 stars)

1A

4

A 32 K 1F2

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1905phae.proj...575W

May 23, 1905

Index Below.

282.0

9 14 10 21.0 ~~20.3~~ ← Eunomia dis.

110.4	99.0	
192.0	81.6	
	180.6	
	179.4	−0.01
291.8		
9 23. 48 128	81.0	−0.02
100.8	101.2	
	182.2	
202.0	177.8	−0.04

Stopped by low altitude, haze, and faintness of asteroid

S.J. 13^h 50^m
H.A. +4 54
Dec. +10.2
P.A. 145.5

Sprocket not read as obs. wished to put on ordinary eyepiece immediately in order to take transits and so did not wish to move tel.

9 40 0 Eunomia now precedes +10° 1913 (8.5) by 12.7 sec. and is 5'.8 south of it
(3 sec. motion obtained)
Comp. Star = +10° 1917 (9.5)

The object measured above proved to be Eunomia It was impossible to finish the group and the settings actually taken were somewhat difficult and labored although, thought to be pretty good. Delayed a little at the start by some cloud and haze, as well as

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1905phae.proj..575W

May 23, 1905

from the fact that the objects suspected of being binaries had to be proved to be such by transits since there were two or three adjacent stars that were not very much fainter.

Durchm. Var. 122001 Phot. J. H. obs. Bonn rec

12	12	+0.1	Full aperture used.
14	53		
2	41		

For measurements see fol. page.

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1905phae.proj..575W

May 23, 1905.

Index L & B

211.6 ← var dia.

269.3	57.7		
40.6	39.9		
80.5	97.6	−1.72	B.

219.6			
260.3	40.7	−1.70	
31.8	58.3		
90.1	99.0	−1.68	

Index R. & A.

122.4			
178.6	56.2		
311.2	39.9		
351.1	96.1	−1.75	A.

131.0		−1.81	
167.5	36.5		
303.1	55.2		
358.3	91.7	−1.87	

Means −1.76

10 52 42

11 2 30

21	54	72
10	57	36
5		+14
15	57	50

S.T. 15h 32m

R.A. + 3h 10m

Dec. + 1.4

R.A. 263.5 Var B.

Sprocket − 1.5 B

" − 0.5 b.

It's watch used for times

Watch 14 sec. slow.

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1905phae.proj..575W

May 24, 1905 (Wednesday)

Eunomia Phot I. H. obs Bowie rec.

8	50	+10.4
12	3	
3	13	

8 21 0 Eunomia follows +10° 1913 (8.5) by 50.3 sec. and is 10'.0 south of it.

After a thorough trial, found it was impossible to measure Eunomia on account of clouds, combined with low altitude.

R R Lyrae Phot. I W. obs. Bowie rec

19	19	+43.1
13	40	
5	39	
6	21	

For measurements, next page

Comp. Star = +42° 3341 (9.2) See note on p. 86.

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1905phae.proj..575W

May 24 1905.

Index left & above

43.3 ← var. dis.

10 27 0	75.0	31.7'		
	220.1	43.5'		
	263.6	75.2'	-2.34'	B
	39.0		-2.38'	
	81.2	42.2'		
	226.2	30.7'		
	256.9	72.9'	-2.41'	

Index R & B

	316.9		
	344.8	27.9'	
	132.6	35.6'	
	168.2	63.5'	-2.73' A
	311.6		-2.70'
10 37 4	348.6	37.0'	
64 4 :	136.0	28.6'	
10 32 2 :	164.6	65.6'	-2.66'
5 +7 :			
15 32 9 :			

Mean -2.54'

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1905phae.proj..575W

May 24 1905

Index R & B

316.0			
345.8	29.8		
132.7	36.6		
169.3	66.4	−2.63	A
310.6		−2.64	
348.7	38.1		
136.6	28.1		
164.7	66.2	−2.64	

Index L & A

226.3			
257.4	31.1		
38.7	42.3		
81.0	73.4	−2.40	B
218.8		−2.36	
263.3	44.5		
44.0	30.9		
74.9	75.4	−2.33	

Means −2.50

10	50	6	11
	90	41	21
10	45	20	10
5		+7	5
15	45	27	15

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1905phae.proj..575W

May 24 1905

Index L & A

	226.0			
10 52 35	257.5	31.5'		B
	39.0	43.6'		
	82.6	75.1'	-2.34	
	219.0			-2.36'
	262.1	43.1'		
	43.6	31.1'		
	74.7	74.2'	-2.37	

Index R & B

	136.0			
	164.0	28.0'		
	311.0	39.0'		A
	350.0	67.0'	-2.61	
	131.1			
11 0 8	170.0	38.9'		-2.60'
	316.7	29.0'		
	345.7	67.9'	-2.58	

21	52	43'
10	56	22'
5		+7'
15	56	29'

Mean -2.48'

S. T. 15h. 33m.
H.A. -3 51
Dec. +42.0
P.A. 208.5 for B
S prochet -3.5 B
" -2.5 b

H's watch used for times.
H watch 7 sec. slow.

over.

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1905phae.proj..575W

June. 25. 1905.

The region of R R Lyrae and its comp. star were thoroughly identified with ordinary eye-piece (Phot. T. off.) in gaps in clouds ~~before the 3 groups~~ last night before the 3 groups were taken. Then photometer was put on but it became still more cloudy. However. the image of the variable was run up nearly to the comp. star, although the latter was difficult to find for a long time.

~~Finally~~ There is another star (+42° 3341 (9.2)) of about the same brightness, and having somewhat similar companions, rather near the regular comp. star. In the cloudiness, this latter star was accidentally used, and this mistake was found out during the observations when it became clearer. However. +42° 3341 (9.2) was used with the variable in all three groups and no change was made.

8

8 | 8 5 | 13

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1905phae.proj..575W

May 25, 1905. (Thursday)

H. H. $= \Sigma$ 1919 Phot. H. H. obs: Bowie rec.
62 ∧
15 7 +19.8
12 3
−3 4
8 56

P.A. +3.0 Dist. 25" Mags. 5.8 6.7

Index 4A

	170.0	Southern and brighter dis	
8 7 3	238.6	68.6'	
	349.5	68.2'	
	57.7	136.8'	0.84' (B)
	168.4		0.82'
	238.1	69.7'	
	349.0	69.1'	
	58.1	138.8'	0.80'

Index. R & B

	79.0		
	147.4	68.4'	(A)
	258.5	70.5'	
	329.0	138.9'	0.80'
	79.0		0.81'
8 17 47	147.9	68.9'	
24 50	259.4	68.6'	
8 12 25	328.0	137.5'	0.82'
5 +1			
13 12 26			Mean 0.82'

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1905phae.proj..575W

May 25 1905

Z Draconis Phot Ir. obs Bowie rec

11	47	+73.0
13	27	
1	40	

Abandoned Some clouds in this region and altitude rather high.

R R Lyrae Phot. I Ir. obs. Bowie rec

19	19	+43.1
13	42	
5	37	
6	23	

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1905phae.proj..575W

May 25, 1905.

Index S. & A.

37.3 ← 45.1 · var. dis
82.4

9 35 23 I

blends 210.3 61.2 B
271.5 106.3 −1.50

30.6 56.8 −1.58
87.4
219.6 53.5 −1.65
263.1 100.3

Index R & B

311.8 3 A.A
350.6
123.7 50.7 −19.3 A
174.4 ~~+9.5~~ ~~+.67~~

−1.26
~~+.76~~

304.2 52.2
357.0
130.3 40.0
170.3 ~~+69.5~~ 92.2 −1.44

−1.73
Mean ~~−1.67~~

9 49 25
82 51
9 41 26
5 +1
14 41 27

6991.6121

1905phae.proj..575w

May 25, 1905.

Index R & B

			310.4	K0.K'	
9	56	35	350.8		
			123.9	K9.3'	
			173.2	K9.7'	−1.92'
			305.7	K4.7'	
9	58	48	354.4		−1.95'
			130.4	32.7'	
			169.1	27.K'	−1.94'

Index & A

			220.7	K1.6'	
10	1	32	262.3		
			31.8	5K.2'	
			86.0	95.8'	−1.76'
			213.2	5K.9'	−1.79'
10	4	2	268.1		
			40.1	34.5'	
			78.6	93.K'	−1.42'

Mean − 1.87'

38'	119'	117'	
9	59	74	
10	0	14	
5		1	
15	0	15	

6991.6251

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1905phae.proj..575W

May 25 1905

Index A & A

	220.8		III	
10 7 32	261.5	K0.7'		
	33.4	ν3.6'		
	87.0	9K.3'	-1.80'	B
	213.0	ν6.0'		
10 9 56	269.0		-1.78'	
	89.8	39A'		
	79.6	9ν.A'	-1.76'	

Index R & B

	133.0	3ν.ν'		
10 12 43	168.5			A
	303.6	ν0.6'		
	354.2	A6.1'	-2.02'	
	125.6	47.9'	-2.09'	
10 16 11	173.5			
	314.2	33.4'		
	347.6	A1.3'	-2.16'	
44 142'				
10 11 36'			Mean -1.94'	
5 +1'				
15 11 37'				

6991.6330

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1905phae.proj..575W

May 25, 1905

Index R & B

		133.2		IV
10	20	38	166.7	33.5'
			306.6	46.2'
			352.8	79.7' −2.20' A
			blonde	
			126.5	−2.21'
10	23	48	172.4	45.9'
			313.2	33.8'
			346.6	79.3' −2.22'

Index L & A

			42.0	37.2'
10	27	20	79.2	B
			216.2	50.3'
			266.5	87.5' −1.98'
			34.2	50.1' −1.97'
10	29	58	84.3	
			220.7	34.1'
			258.8	88.2' −1.96'
	99	164		
10	24	86		
5		+1		
15	25	27		Mean −2.09'

6991.6427

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1905phae.proj..575W

May 25, 1905

Index L & A V

			42.4		
			77.9	35.5'	
10	34	14	214.6	42.0'	B
			266.6	47.5'	-1.98'
			34.0	50.2'	
10	37	40	84.8		-2.00'
			223.5	35.0'	
			258.5	47.5'	-2.03'

Index R & B A

			315.4		
10	41	54	347.0	31.6'	
			129.1	42.7'	
			171.8	74.3'	-2.37'
			308.8		-2.40'
10	44	40	351.3	42.5'	
			135.7	30.0'	
			165.7	72.5'	-2.43'

	156	148	'
10	39	37	'
5		+1	'
15	39	38	'

Mean -2.20

6991.6 525+

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1905phae.proj..575W

May 25 1905

Index R & B

315.4
346.3 30.9 VI
10 49 22
129.7 41.5
171.2 72.4 -2.43' A

308.5 42.4
350.9 -2.44'
10 51 56
134.6 29.7
164.3 72.1 -2.44'

Index L. & A.

42.5 ~~224.9~~ 34.4
76.9 ~~257.0~~ B
10 57 30
216.2 42.3
264.5 42.7 -2.12'

36.5 44.5 -2.14'
81.0
11 0 55
224.1 34.0
258.1 74.5 -2.24'
41 157 163
10 54 56
5 1
15 54 57 Mean -2.31'

6991.6632 S.J. 15h 39m
H.A. -3 45
Dec. +42.1
P.A 37.5 Vol. B
Δ proc. -3.5 A
" -2.5 B
" -1.9 b

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1905phae.proj..575N

May 25, 1905

Regular comp. star in preceding groups tonight, and not the comp. star of last night

H's watch used for times tonight
Watch 1 sec. slow.

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1905phae.proj..575W

May 27 1905 (Saturday)

Sky all cloudy early part of evening up to 9 o'clock About 9 o'clock sky became clearer and some stars coming out. then opened dome but southern scud began

9 20 to come immediately and at present time quite thickly overspreads entire sky

9 33 Thick southern scud now overspreading the entire sky Apparently no chance for anything further

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1905phae.proj...576W

May 29, 1905 (Monday)

7 35 o Sky generally cloudy

R V Ophiuchi Phot. H. obs. Bowe rec.

17	19	+7.7
12	30	
4	49	
7	11	
	25	
7	36	

7 45 o Sky all cloudy

8 0 0 " " "

8 15 o " " "

8 20 o No stars visible in this region either in finder or large telescope.

8 30 No stars visible.

9 20 Sky still all cloudy and growing worse, no chance for anything tonight

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1905phae.proj..575W

May 30, 1905 (Tuesday)

ν Vulpeculae Phot H. obs Bowie rec.

20 30 +26.1
12 45
---
7 45
4 15

Too low at present

Clouds in various parts of sky.

ζ 1495 Phot. H. obs. Bowie rec.

10 52 +59.6
12 52
---
2 0

Too cloudy

– Camelop Phot I H. obs. Bowie rec.

4 36 67.9
13 24
---
8 38

Sky thickly cloudy in this region

8 40 0 Cloudy everywhere
9 22 0 Still cloudy everywhere with no prospect of clearing

8
8
5
13

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1905phae.proj..575W

May 31, 1905 (Wednesday)

Double Star

ε 1962 Phot. W. H. obs. Bowie rec.

15	32	−8.3
12	30	
3	2	
8	58	

P. A. 190° Dist. 13" Image. 6.1 & 6.2

Index R & B A.

339.8 ← Northern & brighter disc

66.6	86.8'		
160.2	86.3'		A
246.5	173.1'	0.13'	
340.4		0.13'	
67.4	87.0'		
160.7	86.1'		
246.8	173.1'	0.13'	

Index L & A B. B

248.7			
337.2	88.5'		
69.7	87.5'		
157.2	176.0'	0.08'	
250.0		0.07'	
336.7	86.7'		
67.4	89.8'		
157.2	176.5'	0.06'	

Means 0.10'

δ 2 40

8	11	38
	13	78
8	6	69
5		30
13	6	39

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1905phae.proj..575W

May 31, 1905

R V Ophiuchi Phot J. W. obs. Bowie rec

17 19 +7.7
13 25
3 54
8 6

Index R & A

19.7 ← Comp Star dis

105.5	85.8'	
209.2	63.7'	
272.9	149.5'	+0.58'

28.8		+0.52'
95.7	66.9'	
199.3	88.6'	
287.9	155.5'	+0.47'

Index R & B

288.8

15.3	86.5'	
119.3	65.8'	
185.1	152.3'	+0.53'

299.6		+0.57'
6.3	66.7'	
110.4	81.6'	
192.0	148.3'	+0.61'

Means +0.54'

8 56 50

9 7 30

17	63	80 '
8	61	70 '
9	2	10 '
5		-30 '
14	1	40 '

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1905phae.proj...575W

May 31, 1905.

Index R & B

290.1

14.4	84.3		
119.0	67.1		
186.1	151.4	+0.55	A

300.1 +0.56

6.5	66.4		
110.9	83.1		
194.0	149.5	+0.58	

Index A & A

208.8

273.8	65.0		
18.5	87.2		B
105.7	152.2	+0.53	

198.1 +0.54

285.1	87.0		
30.3	64.7		
95.0	151.7	+0.54	

Mean +0.55

9 10 38

9 20 20

30 58

9 15 29

5 -30

14 14 59

S.J. 14h 32m

H.A -2 59

Dec +6 8

P.A 105.6 for B

Sprocket -2.5 A

" -1.5 B

" -0.9 b

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1905phae.proj..575W

May 31, 1905.

4. 1904 Vulpeculae Phot. J. K. obs. Barnard rec.

20	31	+26.0
14	46	
5	45	
6	15	

(B)

Index L & B

	278.7	comp star dis.
10 33 47	26.6 ~~28.0~~	107.9'
	111.2	85.0'
	196.2	192.9'
		167.1' −0.24'

289.6		
14.8	85.2'	−0.24'
97.9	108.3'	
206.2	193.5'	
	166.5'	−0.25'

Index Q & A

197.4		
290.5	93.1'	(A)
9.0	108.5'	
117.5	201.6'	
	158.4'	−0.41'

186.0		
295.2	109.2'	−0.37'
18.8	88.0'	
106.8	197.2'	
	162.8'	−0.33'

Mean −0.30'

10	43	24
	76	71
10	38	36
5		−30
15	38	6

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1905phae.proj...575W

May 31, 1905

Index Rod

197.7

10 47 42	~~287.5~~ 8.2	90.5		
	8.9	106.1		A
	115.0	196.6		
		163.4	−0.32	
	187.9			
	296.6	108.7		−0.31
	19.0	87.2		
	106.2	195.9		
		164.1	−0.30	

Index Rod B

	108.3			
	198.0	89.7		B
	281.6	102.7		
	24.3	192.4		
		167.6	−0.24	
	99.6			
10 59 22	207.40	107.4		−0.27
106 64	287.6	88.6		
10 53 32	16.2	196.0		
5 −30		164.0	−0.30	
15 53 2				

Mean −0.29

S.J. 16h 9m

H.A. −4 25

Dec. +25.6

P.A. 140.0 Rod B

Sprocket −5.5 A

" −4.5 B

" −3.9 b

Measurements made through light cloud and haze but extreme care exercised and obs. considered good

It's watch used for time tonight

Watch 30 sec. fast

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1905phae.proj..575W

June 1, 1905 (Thursday)

Σ 2241 γ Draconis. Phot. H. H. Obs. Bowie rec.

17	45	+72.2
12	30	
5	15	
6	45	

P. A. 15° Dist. 30″ Image. 4.0 & 5.1

Index Right & Above

A

	263.0		
8 3 10	322.6	← Southern & brighter dia	
	83.0	59.6′	
	142.3	59.3′	
		118.9′	1.22′
	262.2		1.22′
	322.9	60.7′	
	83.9	58.4′	
	142.3	119.1′	1.21′

Index Left & Below

B

	171.0		
	231.1	60.1′	
	352.5	60.7′	
	53.2	120.8′	1.18′
	171.0		1.16′
8 12 0	232.0	61.0′	
15 10	351.5	60.8′	
8 7 35	52.3	121.8′	1.15′
5 30			Means 1.19′
13 7 5			

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1905phae..proj..575W

June 1, 1905

Σ 2308 40,41 Draconis Phot. & M. obs Bowser

18	9	+80.0
13	28	
4	41	
7	19	

P. A. 230° Dist. 20" Mags. 5.4 & 6.1

Index S & B

71,8 ← Brighter dis.

8 45 48

152.5	80.7'		
253.1	77.3'		B
330.4	158.0'	0.42'	
72.0		0.41'	
151.0	79.0'		
251.2	80.1'		
331.3	159.1'	0.40'	

Index R & A

341.3			A
64.8	83.5'		
163.6	79.6'		
243.2	163.1'	0.32'	
341.6		0.34'	
61.8	80.2'		
161.8	80.8'		
242.6	161.0'	0.36'	

Mean 0.38'

8	56	56
	101	104
8	50	82
5		-30
13	50	52

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1905phae.proj..575W

June 1 1905

R V Ophiuchi +7° 3404 Phot. 3 Harv. Bouvier.

17 19 +7.7
14 14
3 5
8 55

Index L & A

10 24 35

19.3 Comp star dia (B)
107.5 88.2'
209.4 66.4'
275.8 154.6' +0.49'

28.2 +0.44'
96.3 68.1'
197.6 91.8'
289.4 159.9' +0.38'

Index R & B

(A)

302.0
5.4 63.4'
109.0 84.0'
193.0 147.4' +0.63'

289.4 +0,52
17.5 88.1'
118.0 70.5'
188.5 158.6' +0.41'

Mean +0,48'

10 32 48
56 83
10 28 42
5 -30
15 28 12

S.J. 15h 45m
H.A. -1 46
Dec +6.7
P.A. 286.0 Dec B
Sprocket -2.5 A
" -1.5 B
-0.9 C

11
11
5
16

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1905phae.proj...575W

June 1 1905

4 1904 δ Vulpeculae Phot J. H. obs Bowser

20 31 +26.0
15 49

4 42
7 18

Index δ & B

	108.6	comps. star dis.
11 0 20	196.2	87.6'
	278.1	107.5'
	25.6	195.1'
		164.9' −0.29'

B

	290.0	~~98.8~~	
	15.0	~~206.3~~	85.0' −0.24'
	98.1		105.8'
	203.9		190.8'
			169.2' −0.20'

Index R & A

186.9		
297.1	110.2'	
19.2	84.7'	
103.9	194.9'	
	165.1'	−0.28'

A

197.9

11 10 25	285.3	87.4'	−0.25
10 45	10.4	104.3'	
11 5 22	114.7	191.7'	
5 −30		168.3'	−0.22'
16 4 52			Mean −0.24

R.J. 16h 16m
R.A. − 4 18
Dec. +25.5
P.A. 320.5 Var B

Sprocket −5.5 A.
" −4.5 B.
" −3.9 b.

Q's watch used
Watch 30 sec. fast.

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1905phae.proj..575W

June 3. 1905 (Saturday)

Σ 1962 Phot. Dr. W. obs. Bowie rec.

15	32	−8.3
12	30	
3	2	
8	58	

P. A. 190° Dist. 13" Mags. 6.1 & 6.2

Index 2 vs A B

	247.9	Northern & brighter dis.	
8 5 20	334.5	86.6'	
	66.6	88.5'	B
	155.1	175.1'	0.09'
	246.3		0.06'
	335.0	88.7'	
	65.4	89.1'	
	154.5	177.8'	0.04'

Index 2 vs B A

	157.1		
	244.2	87.1'	A
	337.6	88.7'	
	66.3	175.8'	0.08'
	158.8		0.11'
8 17 26	243.6	84.8'	
22 36	336.9	87.6'	
8 11 18	64.5	172.4'	0.14'
5 31			
13 10 47			Means 0.08'

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1905phae.proj..575W

June 3, 1905

R.V Sgrae	Phot. H.	H. obs. Bouvier
19 17	+33.2	
13 32		
5 45	14	
6 15	15	
	29	

A faint star presumably the var. precedes +32° 3377 (9.1) by 3.″7 and is 5.′6 south of it
A 12.5 magn. star precedes the star assumed to be the var. by about 4.6 sec and is 0.′7 north of it

For measurements see following pages.

Comp. Star used = +32° 3374 (9.2)

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1905phae.proj..575W

June 3, 1905

Index R & A

			352.5		A
9	19	35	33.0 ← Comp. star dis		
			172.8	40.5'	
			205.8	33.0'	
				73.5'	+2.39'
			357.4		
9	25	30	23.9	26.5'	+2.48'
			170.0	42.0'	
			212.0	68.5	+2.56'

Index L & B

			257.9		
9	32	22	304.0	46.1'	B
			86.0	30.0'	
			116.0	76.1	+2.31'
			263.6		+2.26'
9	86	0	297.3	33.7'	
			79.0	45.8'	
			124.8	79.5'	+2.21'
					Mean +2.37'

	112	87	'
9	28	22	'
5		-31	'
14	27	51	'

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1905phae.proj..575W

June 3, 1905

Index L & B

259.3 (B)

9	39	15	303.1	43.8'	
			84.0	32.3'	
			116.3	76.1'	+2.31'
			264.7		+2.30'
9	42	40	295.6	30.9'	
			76.7	46.3'	
			123.0	77.2	+2.28'

Index R & A

169.4 (A)

9	48	12	209.3	39.9'	
			357.5	26.6'	
			24.1	66.5'	+2.62'
			176.0		+2.60'
9	52	48	204.9	28.9'	
			351.8	39.2'	
			31.0 ~~303~~	68.1'	+2.57'
	181	115'			
9	45	44'			
5		-31'			
14	45	13'			

Mean +2.45'

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1905phae.proj..575W

June 3 1905

R R Lyrae Phot. J H. obs. Bowe rec.

19 19 +43.1
15 7
4 12
7 48

A

Index Above I

259.0 Var. dis.

10 19 2 304.4 45.4'
71.0 59.9'
130.9 105.3 -1.53'

249.3 -1.50'

10 21 40 313.4 64.1'
78.5 43.7'
122.2 107.8' -1.47'

Index Below B

171.0

10 25 38 210.8 39.8'
341.8 56.1'
37.9 95.9' -1.76'

162.1 -1.78'

10 28 30 219.0 56.9'
351.9 38.0'
29.9 94.9' -1.79'

93 110'
10 23 42'
5 -31'
15 23 11'

Mean -1.64'

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1905phae.proj..575W

June 3 1905

Index Below

			172.3		B
10	32	48	210.6	38.3'	II
			342.1	55.7'	
			37.8	94.0'	-1.81'
			162.0		-1.74'
10	35	27	222.0	60.0'	
			350.6	39.9'	
			30.5	99.9'	-1.66'

Index Above

			79.2		A
10	38	20	122.9	43.7'	
			253.4	57.8'	
			311.2	101.5'	-1.62'
			68.0		-1.54
10	40	30	132.5	64.5'	
			259.9	43.4'	
			303.3	107.9'	-1.47'
10	145	125'			
10	36	46'			
5		-31'			
15	36	15'			

Mean -1.64'

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1905phae.proj..575W

June 3, 1905

Index Above

		38	78.1		III A
10	42	~~48~~	121.2	43.1'	
			249.4	64.5'	
			313.9	107.6'	-1.47'
			69.5		-1.52'
10	44	38	129.5	60.0'	
			259.4	43.6'	
			303.0	103.6'	-1.57'

Index Below

			351.9		B
10	48	16	32.04	40.5'	
			160.7	58.3'	
			219.0	98.8'	-1.69'
			341.9		-1.70'
10	50	54	39.8	57.9'	
	184	146	170.6	40.0'	
10	46	36	210.6	97.9'	-1.71'
5		-31			
15	46	5			Mean -1.61'

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1905phae.proj..575W

June 3 1905

Index Below

B IV

			349.4	41.9'	
10	56	30	31.3		
			163.7	77.9'	
			218.6	96.8'	-1.7K'
			340.8	60.1'	
10	59	14	40.9		-1.71'
			170.6	39.0'	
			209.6	99.1'	-1.6K'

Index Stove

A

			260.5		
11	2	56	303.8	43.3'	
			67.8	63.4'	
			131.2	106.7'	-1.49'
			249.3	61.6'	-1.54'
11	5	38	310.9		
			79.2	41.5'	
			120.7	103.1'	-1.54'

42	122	138	'
10	60	64	'
5		-31	'
16	0	33	'

Mean -1.62'

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1905phae.proj..575W

June 3, 1905

Index Above

		260.4	41.9 ✓	V	
11	9	1	302.3		11
		68.2	63.3 ✓		
		131.5	105.2 ✓	−1.53'	A
		248.0	65.6 ✓	−1.48 ✓	
11	11	8	313.6		11
		78.0	43.7 ✓		
		121.7	109.3 ✓	−1.43'	

Index Below

		172.1	39.0 ✓		
11	14	2	211.1		11
		342.6	48.0 ✓		B
		40.6	97.6 ✓	−1.73'	
		161.6	48.3 ✓	−1.71 ✓	
11	16	18	219.9		11
		351.4	40.4 ✓		
		31.8	92.7 ✓	−1.69'	

	50	29		
11	12	37		11
5		−31		5
16	12	6		16

Mean −1.60 ✓

7000.6751

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1905phae.proj..575W

June 3 1905

Index Below (B)

			171.7	38.1'	
11	22	40	209.8		VI
			342.0		
			37.5	55.5' / 93.6	-1.41"
			162.3	55.3'	
11	25	5	217.6		-1.78"
			351.6	41.1'	
			32.7	96.4'	-1.75"

Index Above (A)

			79.6	42.7'	
11	27	44	122.3		
			251.9	59.6' / 102.3	-1.60"
			70.8	54.2'	-1.64"
11	29	16	129.0		
			260.6	41.2'	
			301.8	99.4'	-1.67"

	103	105	
11	25	71	
5		-31	
16	25	40	

Mean -1.7 1"

7000.6845—

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1905phae.proj..575W

June 3, 1905

Index Above

			77.0		
11	40	15	122.3	45.3	VII
			255.5	133.2	
			309.4	99.9	-1.65 A
			72.1	51.4	
11	41	54	123.9		-1.74
			262.4	140.0	
			302.4	91.8	-1.87

Index Below

			352.1	34.5	
11	45	56	30.6		
			164.4	51.8	
			216.2	90.3	-1.91 B
			343.8	55.5	-1.92
11	47	52	38.3		
	173	177	173.9	34.6	
11	43	59	208.5	89.1	-1.94
5		-31			
16	43	28			Mean -1.85

7000.6968

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1905phae.proj..575W

June 3. 1905

Index Below

			351.0	39.9			
11	55	37	30.9				
			167.9	47.9			VIII
			215.8	47.8	-1.97		B
			345.5				
11	57	33	36.9 ~~37.5~~	51.4		-2.00	
			173.2				
			208.0	34.8	-2.02		
			34.8	62			

Index Above

			261.8	36.9			
12	1	0	298.7				
			74.5	0.4			A
			124.9	47.3	-1.99		
			255.8				
12	3	30	306.3	50.5		-2.03	
46	116	100	83.4				
11	59	25	117.3	33.9	-2.07		
5		-31		47.4			
16	58	54					

Mean -2.02

7000.7075+

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1905phae.proj..575w

June 3, 1905

Index Above

	263.2			IX
12 9 54	300.2	37.0'		
	76.0			A
	124.0	41.0'		
		41.0'	-2.05"	
	256.6			
12 12 47	305.4	41.4'	-2.10"	
	83.0			
	115.9	32.9'		
		41.7'	-2.14"	

Index Below

	174.9	32.5'		
12 17 17	207.4			
	347.4	47.7'		
	35.1	40.2'	-2.19"	
				B
	169.0			
12 21 30	211.0	42.0'	-2.24"	
	356.1	31.9'		
59 148	28.0	33.9'	-2.38"	
12 14 82				
5 -31				
17 14 51			Mean	-2.19"

70 00.7186

1905phae.proj..575W

June 3, 1905

Index Below

	173.9	30.6 ✓	X
12 24 54	204.5		
	349.2	43.9 ✓	B
	33.1	74.5 ✓ −2.36	
	169.2	42.5 ✓	
27 57	211.7		−2.36
	355.5	31.7 ✓	
	27.2	74.2 ✓ −2.37	

Index Above

	84.3	32.4 ✓	
12 32 25	116.7		
	259.0	44.5 ✓	A
	303.5	76.9 ✓ −2.29	
	77.2	42.2 ✓	
12 34 25	122.4		−2.30
117 161	265.2	31.3 ✓	
12 29 55	296.5	76.5 ✓ −2.30	
5 −31			
17 29 24			

Mean −2.33 ✓

7000.7288

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1905phae.proj..575W

June 3 1905

S.J. 17^h 40^m
S.A. − 1 29
Dec +42.0
P.A. 38.5 Ver. B
Sprocket − 3.5 A
" − 2.5 B
" − 1.9 C

H's watch used for times tonight
Watch 31 sec fast

It was intended to start a little early on R R Lyrae in order to be sure and cover the variation, but as R R Lyrae came a little later than was anticipated, 10 groups in all, were taken.

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1905phae.proj..575W

June 8, 1905 (Thursday)

Σ 1962 Phot. ☆ ☆. obs. Bowie rec.

15	32	-8.3
13	2	
2	30	
9	30	

P.A. 190° Dist. 1.3" Mags. 6.1 & 6.2

Index L & A B.

66.0 ← Northern & brighter dis.

8 0 48

154.3	88.3'	
246.9	87.5'	(B)
334.4	175.8'	0.08'

66.9		0.06'
154.7	87.8'	
246.6	89.3'	
335.9	177.1'	0.05'

Index R & B A.

338.0		(A)
66.6	88.6'	
157.8	85.7'	
243.5	174.3'	0.11'

336.2		
66.4	90.2'	0.06'
155.4	89.6'	
245.0	179.8'	0.00'
		Mean 0.06'

8 7 58

	7	106'
8	3	83'
5		-25"
13	3	58'

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1905phae.proj..575W

June 8, 1905

Iris Phot. I Strobe. Bowie sec.

13	32	-14.5
13	40	
	8	

13	20	-15.2
14	12	
	52	

Iris follow -14° 37′ 0 (A.6) by 27.5 sec and 2.5 south of it

Comp. Star = -14° 37′ 5 (A.A)

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1905phae.proj..575W

June 8. 1905

9 14 12

Index Above I

67.8	Comp Star	
134.8	67.0'	
234.5	93.0'	
327.5	160.0'	+0.32' A
56.7	45.1'	+0.46'
141.8		
245.4	66.6'	
312.0	111.7'	+0.54'

Index Below

338.8	61.6'	
40.4		B
148.0	45.1'	
233.1	106.7'	+0.64'
331.0	74.4'	+0.70'
49.4		
159.7	62.0'	
221.7	140.4'	+0.77'

Mean +0.54'

9	24	15	
	38	27	'
9	19	14	'
5		-25	'
14	18	49	'

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1905phae.proj..575W

June 8, 1905

Index Below

		339.0			II
9	25	38	41.9	62.9'	9
			150.3	81.7'	
			232.0	144.6'	+0.68'
			330.0		+0.68'
9	31	48	50.3	80.3'	9
			158.2	64.8'	
			223.0	145.1'	+0.67'

Index Above

		246.0			
9	36.	20	314.7 ~~313.5~~	68.7'	9
			57.3	86.6'	A
			143.9	155.3'	+0.47'
			235.9		+0.48'
9	39	48	323.1	87.2'	9
			65.9	67.8'	
			133.7	155.0'	+0.48'
	134'	154'			
9	33	68'			9
5		-25'			5
					Mean +0.58'
14	33	43'			14

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1905phae.proj..575W

June 8, 1905

Index Above

		245.1		III
9	45	54	314.7	69.6'
			58.2	86.3' A
			144.5	155.9' + 0.46'
			236.1	+ 0.46'
9	49	6	323.8	87.7'
			66.0	68.4'
			134.4	156.1' + 0.46'

Index Below

			127.5	
9	53	5	223.1	6 85.6' B
			330.8	81.2'
			52.0	4 86.8' + 0.64'
				+ 0.63'
			150.0	
9	56	30	231.2	81.2'
			338.2	66.3'
			44.5	147.5' + 0.62'
				+ 0.54'

	203	95'
9	50	69'
5		-25'
14	50	44'

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1905phae.proj..575W

June 8, 1905.

Index Below IV

		158.0		
10	3	18	223.9	65.9'
			330.9	
			51.2	40.3'
				146.2' +0.6v'
			149.4	
10	7	54	233.0	83.6' +0.6z'
			338.0	
			43.0	65.0'
				148.6' +0.6o'

Index Above

~~316.9 65.3~~

			64.2	
10	16	6'	134.0	69.8'
			234.0	
			325.7	91.7'
				161v' +0.3v'
			57.0	
10	19	21	144.2	87.2' +0.3s'
			243.9	
			314.9	71.0'
				158.2' +0.4z'
				Mean +0.50'
	45'	99'		
10	11	40'		
5		-25'		
15	11	15'		

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1905phae.proj...575W

June 8 1905

Index Above

	66.3			V
10 24 20	134.7	68.4'		
	236.2	89.6'		
	325.8	158.0'	+0.42'	A
	58.7			+0.42'
10 26 58	143.2	84.5'		
	243.5	73.8'		
	317.3	158.3'	+0.41'	

Index Below

	338.6			
10 30 58	43.5	64.9'		B
	147.5	85.1'		
	232.6	150.0'	+0.58'	
	330.0			+0.63'
10 34 14	51.4	81.4'		
	158.8	63.4'		
	~~224~~ 222	144.8'	+0.68'	
10 114 150				
10 28 68				
5 -25			Mean +0.52'	
15 28 43				

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1905phae.proj..575W

June 8 1905

Index Below

			337.3		VI
10	38	30	43.5 ~~42.2~~	66.2'	
			148.5	84.3'	
			232.8	150.5'	+0.57' (B)
			332.1		+0.61'
10	41	2	530	80.9'	
			158.0	65.3'	
			223.3	146.2'	+0.65'

Index Above

			243.0		
10	46	8	317.0	74.0'	
			55.3	87.8'	
			143.1	161.8'	+0.35' (A)
			235.6		+0.40'
10	49	15	323.4	87.8'	
	174'	55'	66.2	68.5'	
10	43	44'	1347	156.3'	+0.45'
5		-25'			
15	43	19'			Mean +0.50'

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1905phae.proj...575W

June 8 1905

Index Above

VII

			243.8	740.	
10	57	2	317.8		
			55.6	42.2.	
			143.8	162.2	+0.34.

A

			233.9	90.1.	
11	0	1	324.0		+0.32.
			66.0	67.6.	
			133.6	77.	+0.43.

Index Below

			157.0	66.2.	
11	5	5	223.8		
			328.2	47.	
			52.9	151.2	+0.22.

B

			148.0	42.8.	
11	9	45	232.8		+0.26.
			337.5	62.2.	
43	71.	53	43.0	150.3	+0.27.
10	62	58			
5		−25		Mean	+0.47.
16	2	33			

8.3 4h 45m
R.A +3 17
Dec −14.0
P.A 290.0

Sprocket reading not taken, as observer did not wish to lose region and before taking transits, and sprocket not be read without turning telescope down.

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1905phae.proj..575W

June 8, 1905.

Object observed in preceding groups follows reference star of first of evening, by 27.5 sec and is 2.'5 south of it hence object observed for Iris is not Iris but is a star

H' watch used for times tonight
Hatch 25 sec. fast

June 10. 1904.

Note: From examination of region of Iris of last night, it turns out that the preceding observations, made June 2, were, after all, observations of stars.

Observations throughout evening, difficult, on account of moonlight, + rather low altitude, Altitude also progressively decreasing. Much moisture also in air, increasing the glare.

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1905phae.proj..575W

June 9, 1905. (Friday)

Iris. Phot. I Hr. obs. Bowie rec.

13	32	−14,5
13	05	
	27	
11	33	

13	20	−15.2
13	44	
	24	

Iris follows −14° 37′ 0 (A6) by 29.0 sec and is 0.′8 south of it hence the object observed last night for Iris, was Iris after all, it being near its stationary point

Same comp. star as was used last night

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1905phae.proj..575W

June 9, 1905

Index Above

			64.9	Comp Star dia	
8	45	30	134.9	70.0'	
			233.8	91.2'	I
			325.0	161.2'	+0.36'
			56.2		+0.40'
8	49	15	144.9	88.7'	
			246.0	68.4'	
			314.4	157.1'	+0.44' A

Index Below

			340.4		
8	54	15	42.1	61.7'	
			150.5	77.2'	
			227.7	138.9'	+0.80' B
			333.4		+0.80'
8	57	25	49.2	75.8'	
			158.7	62.9'	
			221.6	138.7'	+0.80'
					Mean +0.60'
	205	85			
8	51	36			
5		-23			
13	51	13			

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1905phae.proj..575w

June 9, 1905.

Index Below

	338.0			
9 5 4	43.0	65.0'		II
	151.1	80.3'		
	231.4	145.3'	+0.67'	B
	334.0		+0.75'	
9 8 18	48.0	74.0'		
	159.9	63.0'		
	222.9	137.0'	+0.83'	

Index Above

	247.7			
9 14 3	315.1	67.4'		
	58.8	84.9'		A
	143.7	152.3'	+0.53'	
	238.2		+0.55'	
9 17 48	324.1	85.9'		
	68.8	64.3'		
	133.1	150.2'	+0.57'	
			Mean +0.65'	

	44	73'
9	11	18'
5		-23'
14	10	55'

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1905phae.proj..575W

June 9 1905

			Index Above			III
			245.0			
9	23	46	313.0	68.0'		
			60.0	82.4'		
			142.4	150.4'	+0.57'	(A)
			238.3		+0.54'	
9	28	4	323.4	85.1'		
			65.8	67.6'		
			133.4	152.7'	+0.52'	
			Index Below			
			159.7			
			222.6	62.9'		
9	33	0	328.0	84.1'		(B)
			52.1	147.0'	+0.63'	
			149.6		0.63'	
9	38	48	233.0	83.4'		
			339.8	63.6'		
			43.4	147.0'	+0.63'	
	122	98'				
9	30	54'				
5		-23'				
14	30	31'				

Mean +0.58'

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1905phae.proj..575W

June 9 1905

Index Below

		158.9		IV
9	46	38	221.7	62.8'
			331.0	79.9'
			50.9	142.7' +0.72'
				Ⓑ
			150.0	
9	51	54	229.0	79.0' +0.72'
			339.8	63.1'
			42.9	142.1' +0.73'

Index Above

		68.9		
9	58	4	133.3	64.4'
			23555	87.6'
			323.1	152.0' +0.54' Ⓐ
			59.8	+0.56'
10	1	54	142.7	82.9'
			246.0	67.1'
37	156	150		
9	54	38	313.1 ~~314.0~~	150.0' +0.58'
5		-23		
14	54	15		

Mean +0.64'

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1905phae.proj..575W

June 9, 1905.

Index Above

V

68.8

10 15 49	132.9	64.1'		
	236.6	87.0'		
	323.6	151.1	+0.55'	A
	58.3		+0.60'	
10 19 58	140.0	81.7'		
	248.0	64.8'		
	312.8	146.5'	+0.64'	

Index Below

	339.9			
10 26 55	41.0	61.1'		
	150.0	79.5'		(B)
	229.5	140.6'	+0.76'	
	331.3		+0.76'	
10 36 17	50.0	78.7'		
96 179'	159.0	62.0'		
10 24 45'	221.0	~~220.8~~ 140.7'	+0.76'	
5 -23'				
15 24 22'				

Mean +0.68'

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1905phae.proj..575W

June 9 1905

Index Below.

	339.6	61.6'	
10 58 54	41.2	77.0'	
	151.0	138.6'	0.80
	228.0		

Impossible to proceed further. Reject above set. Obs. in this set somewhat uncertain.

S. J. 16^{h} 30
S. A. + 2 59
Dec. − 14.0
P. A. 106.0 Var B.
Sprocket − 4.5 B
" − 3.5 b

H's watch used for times tonight
Watch 23 sec fast.

Observations throughout evening difficult, on account of bright moonlight, and rather low altitude. Altitude also ~~very~~ progressively decreasing.

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1905phae.proj..575W

June 10, 1905 (Saturday)

9 30 Sky cloudy throughout the whole evening so far, and now growing still worse, ~~and~~ so that there is no chance for anything tonight

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1905phae.proj..575W

June 15, 1905 (Thursday)

α Librae Double star Phot. R Obs. Bowie

14 45 — 15.6
13 50
55
11 5

P.A. 310° Dist. 4'± Mags. 3.0 & 6.0

Index Below

87.0 ← Brighter dis B.

8 12 10

126.0	39.0'	
268.0	38.5'	
306.5	77.5'	2.27'

85.5		2.23
128.2	42.7'	
267.4	37.6'	
305.0	80.3'	2.19'

Index Above

0.8

34.8	34.0'	A.
178.2	37.8'	
216.0	71.8'	2.45'

357.3		2.40
37.0	39.7'	
179.3	35.6'	
214.9	75.3'	2.34'

8 19 30
31 40
8 15 50
5 -25
13 15 25

Mean 2.32

Obs. somewhat dif. on account of brightness of image but especially from the fact that the images

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1905phae.proj..575W

June 15, 1905.

are not round and are colored, the distance between them being rather large

V Aquilae Phot. I H. obs Bowie rec.

18	56	-5.9
14	35	
4	21	
7	39	

9.5 bap used

For measurements see next page.

9
9
9
5
14

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1905phae.proj..575W

June 15, 1905.

Index L & A

59.0 bump. star rdgs.

9 26 46

142.0 83.0'
245.0 72.0'
317.0 155.0' +0.45'

64.0 +0.46'
133.7 69.7'
236.4 87.0'
323.4 156.7' +0.44'

Index R & B

328.0
51.0 83.0'
155.3 69.3'
224.6 152.3' +0.53'

335.1 +0.50'
45.0 69.9'
148.0 85.5'
233.5 155.4' +0.47'

Mean +0.48'

9 37 40

9 63 86'
9 31 73'
5 -25'
14 31 48'

S.J. 15h 35m
L.A. -3h 25m
Dec. -6.3
C.A. 300.6 Var B
Sprocket -2.5 B
" -1.5 b

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1905phae.proj..575W

June 15 1905

4 1904 V Vulpeculae Phot. J W. obs. Bowie rec

20 31 +26.0
15 45
4 46
7 14

Index Left

	46.0	Dan. div.	
10 30 45	158.0	112.0'	
	235.3	88.0'	
		200.0'	
	323.3	160.0'	+0.38'
	56.3		
	146.0	89.7'	+0.39'
	224.5	111.3'	
		201.0'	
	335.8	159.0'	+0.40'

Index Right

	317.2		
	64.4	107.2'	
	147.8	82.8'	
		190.0'	
	230.6	170.0'	+0.19'
	326.2		
10 40 46	53.6	87.4'	+0.20'
70 91	137.4	104.4'	
10 35 46		191.8'	
5 -25	241.8	168.2'	+0.22'
15 35 21			Insana +0.30'

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1905phae.proj.,.575W

June 15 1905

Index Right

	317.0		
10 45 8	62.0	105.0	
	146.7	86.2	A
	232.9	191.2	
		168.8	+0.21
	327.4		
	52.6	85.2	+0.23
	135.5	107.9	
	243.4	193.1	
		166.9	+0.25

Index Left

	223.5		
	336.4	112.9	B
	55.1	91.0	
	146.1	203.9	
		156.1	+0.46
	234.3		
10 56 00	326.1	91.8	+0.44
101 8	45.0	110.5	
10 50 34	155.5	202.3	
5 -25		157.7	+0.43
15 50 9			Mean +0.34

S.T. 17h 4m
H.A -3 30
Dec. +25.6
C.A 141.5 Dec B.
Sprocket - 5.5 A
" - 4.5 B
" - 3.9 b

H's watch used for times
H watch 25 sec. fast.

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1905phae.proj..575W

June 24, 1905. (Saturday)

ζ Librae Phot J H. obs Bowie sec.

15 6 19.4
14 28
3δ
11 22

7" bap.

Index L & B

	165.0 ←	war dia	
8 20 40	213.8	45.8'	
	345.5	49.7'	(B)
	35.4	95.7'	-1.76'
	166.6		-1.76'
	216.9	50.3'	
	348.1	45.5	
	33.6	95.8	-1.76'

Index R & A

	74.8		
	126.7	51.9'	(A)
	250.5	58.1'	
	308.9	110.0'	-1.42
	72.2		-1.48'
δ 33 δ	128.9	56.7'	
53 48'	256.0	48.6'	
δ 26 54'	304.6	105.3'	-1.53'
5 -21'			Mean -1.62'
13 26 33'			

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1905phae.proj..575W

June 24, 1905.

S.S. 15^h 13^m
S.d. 0 0
Dec. −20.
P.A. 67.4 Var B
Sprocket −2.5 B
" −1.5 b

4 1904 Σ Vulpeculae Phot. J H. obs. Bowie rec

20	31	+26.0
15	15	
5	16	
6	44	

For measurements see next page

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1905phae.proj..575W

June 24. 1905.

Index L & B

48.0 ← var dis.

9	9	40	
		154.0	106.0'
		238.8	85.2'
			191.2'
		324.0	168.8' +0.21'

(B)

55.0

		146.2	91.2' +0.28'
		226.0	106.8'
		332.8	198.0'
			162.0' +0.34'

Index R & A

322.0

		61.8	99.8'
		147.0	85.0'
		232.0	184.8'
			175.2' +0.09'

(A)

328.5

9	18	40	
		54.5	86.0' +0.11'
		140.4	100.9'
		241.43	186.9'
			173.1' +0.13'
	27	80	
9	13	70	
5		−21	
14	13	49	Mean +0.20'

9 9

9 5 14

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1905phae.proj...575W

June 24, 1905.

Index R & A

	318.0		
9 22 23	61.2	103.2'	A
	148.5	82.5'	
	231.0	185.7'	
		174.3'	+0.11'
	328.0		
	52.1	84.1'	+0.14'
	137.0	105.0'	
	242.0	189.1'	
		170.9'	+0.17'

Index L & B

	226.9		
	333.3	106.4'	B
	58.0	88.5'	
	146.5	194.9'	
		165.1'	+0.28'
	235.1		
9 31 15	325.3	90.2'	+0.31'
	46.0	107.5'	
	153.5	197.7'	
		162.3'	+0.34'

	53 38	'
9	26 49	'
5	-21	'
14	26 28	'

L.T. 16h 32m — Mean +0.22'
Lo. A. -4 2
Dec. +25.5
R.A. 141.5
Sprocket -5.5 A
" -4.5 B
" -3.9 B

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1905phae.proj..575W

June 24, 1905

Z Draconis Phot. 3 Hr. obs. Bouvier.

11 46 +73.0
16 42
4 56
5 14
10

I

Index Above

348.1 comp. star. (A)
31.9 43.8'
172.0 36.8'
208.8' 80.6' +2.18'

353.0 +2.15'
10 41 26
27.2 34.2'
165.0 49.5'
213.5 82.7' +2.12'

Index Below

254.1 (B)
10 45 8
306.3 52.2'
82.0 35.3'
117.3 87.5' +1.98'

262.0 +1.98'
10 45 43
299.8 37.8'
76.6 50.0'
126.6 87.8' +1.97'

171 131'
10 42 78'
5 -21'
15 42 57'

Mean +2.06'

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1905phae.proj..575W

June 24 1905

Index Below

II

		255.9			
10	51	32	307.3	48.4'	
			82.0	38.8'	B
			120.8	87.2'	+1.99'
			262.6		+2.02'
10	54	14	300.8	38.2'	
			76.5	46.7'	
			123.2	84.9'	+2.05'

Index Above

			170.4		
10	57	30	213.0	42.6'	A
			354.0	34.2'	
			28.2	76.8'	+2.29'
			173.8		+2.30'
10	58	58	209.2	35.4'	
	220	134'	350.0	40.9'	
10	55	34'	30.9	76.3'	+2.31'
5		-21'			
15	55	13'			

Mean +2.16'

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1905phae.proj..575W

June 24 1905

III

Index Above

A

			168.8		
11	2	40	211.3	42.5'	
			355.3	30.3'	
			25.6	72.8'	+2.42'
			174.0		+2.47'
11	5	20	206.0	32.0'	
			352.5	37.5'	
			30.0	69.5'	+2.52'

Index Below

B

			78.5		
11	8	15	119.5	41.0'	
			265.0	30.2'	
			295.2	71.2'	+2.47
			84.5		+2.46'
11	11	32	115.8	31.0'	
			260.7	41.1'	
			301.8	72.1'	+2.44

	26'	107'	
11	6	57'	
5		-21'	
16	6	36'	

Mean +2.46'

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1905phae.proj..575W

June 24 1905

Index Below

IV

81.0

B

11	14	37	119.5	38.5'	
			265.9	31.0'	
			296.9	69.5'	+2.52'
			85.5		+2.56'
11	18	9	114.7	29.2'	
			261.8	38.0'	
			299.8	67.2'	+2.60'

Index Above

354.6

A

11	21	40	27.5	32.9'	
			178.3	26.2'	
			204.5	59.1'	+2.89'
			358.9		+3.00'
11	25	38	23.2	24.3'	
			175.9	29.1'	
			205.0	53.4'	+3.12'

	78	124	
11	19	61	
5		-21	
16	19	40	

Mean +2.78'

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1905phae.proj..575W

June 24, 1905.

Index Above

V

			356.5		
11	30	0	26.5	30.0'	A
			178.2	24.6'	
			202.8	54.6'	+3.07'
			358.1		+3.14'
11	34	11	21.7	23.6'	
			176.0	27.8'	
			203.8	51.4'	+3.21'

Index Below

			268.1		
11	39	28	297.0	28.9'	B
			90.0 ~~89.0~~	21.8'	
			111.8	50.7'	+3.24'
			269.8		+3.27'
11	45	20	291.8	22.0'	
			86.8	27.3'	
			114.1	49.3	+3.30'

	148	59	'
11	37	15	'
5		-21	'
16	36	54	'

Mean +3.20'

S.T. 18 20
R.A. +6 37
Dec +73.0
P.A. 173.0 Ver B
Sprocket -0.5 A
" +0.5 B
" +1.1 b

W's watch used for times
Watch 21 sec fast

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1905phae.proj..575W

June 27, 1905. (Tuesday)

18|3|5 – Serpentis Phot J W. obs Bowie rec

bomp Star −15° 49 27 (5.7)

18	12	−15.9
14	50	
3	22	

2 & A

Wrong Star.

~~47 2~~

8 52 54

172.8		
~~198.1~~		
2.4	bomp Star	
19.3	16.9	
3.9	12.3	
16.2	39.2	3.81
182.7		4.02
196.9	14.2	
2.1	18.2	
20.3	32.4	4.23

Index R & B

91.1		
110.4	19.3	
273.6	14.4	
288.0	33.7	4.15
93.7		4.15
107.9	14.2	
271.0	19.5	
290.5	33.7	4.15

9 2 40

4.08

The above measurements are of wrong star. Object misidentified in clouds
Right object measured on next page

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1905phae.proj..575W

June 27, 1905

18 13 15 – Serpentis Comp. Stars – 15° 4927 (5.7)

Index R & B

268.2 Comp Stars dia.

9	24	2	291.7 ~~294.83~~	23.5'	
			86.6	29.8'	
			116.4	53.3'	+3.13' (A)
			263.3		+3.14'
			296.7	33.4'	
			90.4	19.6'	
			110.0	53.0'	+3.14'

Index L & A

			181.0		
			202.2	21.2'	
			353.4	32.2'	(B)
			25.6	53.4'	+3.12'
			172.4		+3.18'
9	32	0	202.8	30.4'	
			1.0	20.3'	
			21.3	50.7'	+3.24'

Mean +3.16'

	56	2
9	28	1
5		–15
14	27	46

S. T. 16^h 19^m

H. A. –1 55

Dec. – 16.1

P. A 326.0 Ver. A.

Sprocket – 2.5 B

" – 1.5 b

Troubled by clouds in last set especially in last settings

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1905phae.proj..575W

June 27, 1905

Full aperture

1844.08 δ Scuti Phot J K. obs. Bouvé

18 42 −8.5 Comp. Star = −2°4732 (A2)

16 42

2 0

Index L & A

72.1 ← var dis

10 39 54 126.5 54.4'

244.7 72.7'

317.4 127.1' −1.04'

63.9

134.3 70.4' −1.07'

254.0 53.9'

307.9 124.3' −1.10'

Index R & B

347.2

33.7 46.5'

156.2 67.8'

224.0 114.3' −1.32'

337.1

10 48 47 43.9 66.8' −1.28'

87 101 164.2 50.8'

10 43 80 215.0 ~~214.0~~ 117.6' −1.25'

5 −15

15 44 5 Mean −1.18'

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1905phae.proj..575W

June 27, 1905.

S. J. 17 37
Ho. A. - 1 9
Dec. - 8.5
P. A. 284.7 Var B
Sproket -1.5 A
" -0.5 B
" +0.1 b

H's watch need for times
Watch 15 sec fast.

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1905phae.proj..575W

June 28, 1905. (Wednesday)

120206 R Virginis W. obs. Bowie rec. Phot. T.
Comp. Star = −5° 3′ 20″ (A.R.)

11 58 −5.0
14 40
+2 42
9 +8

Above
~~+64.2~~ var. dis
~~+63.3~~
~~217.4~~
353.6
27.6 ← var. dis
161.1 34.0′
217.7 56.6′
90.6′ −1.90′

345.0 −1.82′
38.5 53.5′
167.3 43.1′
210.4 96.6′ −1.74′

Index Below
259.1
303.0 43.9′
69.9 63.1′
133.0 107.0′ −1.49′ −1.49

Means −1.66′

57 28
9 12 40

9 27 0
39 40′
9 19 50′
5 −15
14 19 35

S.T. 16h 10m
Sid. +4. 6
Dec. −6.0
P.d 131.5 Var. B
Sprocket −4.5 B
" −3.5 b

Measurements made through more or less clouds obs. however waiting for images to become steady in brightness Fourth set prevented by clouds Obs. ½ wt

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1905phae.proj..575W

June 28 1905

U Sagittae Phot. J Hk. obs, Bowie rec.

19	19	+19,5
16	18	
3	1	
8	59	

Comp. Star = +19° 3974 (A6) I

Index Left

	339,1	b comp Star dia	
10 2 46	41,4	62.3'	
	150,4	78.3'	
	228,7	140.6'	+0.76'
	333,1		+0.86'
10 4 38	47,8	74.7'	
	161,4	55.7'	
	217,1	130.4'	+0.97'

Index Right

	240,4		
10 7 0	320,0	79.6'	
	70,6	59.3'	
	129.9	138.9'	0.80'
	252,8		
10 9 0	308,6	55.8'	+0,80'
	59,0	83.4'	
	142,4	139.2'	0.79'

Mean +0,83'

	22	84
10	5	51
5		-15
15	5	36

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1905phae.proj..575W

June 28 1905

Index Right

	235.9			II
10 11 42	321.6	85.7'		
	71.2	57.4'		
	128.6	143.1'	+0.71'	A
	253.0		+0.71'	
	311.2	58.2'		
10 13 40	58.2	85.1'		
	143.3	143.3'	+0.71'	

Index Left

	162.0			B
10 16 32	217.8	55.8'		
	331.7	76.3'		
	48.0	132.1'	+0.94'	
	150.4		+0.97'	
10 18 32	230.6	80.2'		
	345.2	49.0'		
	34.2	129.2'	+1.00'	

	58	146
10	14	66
5		−15
15	14	51

Mean +0.84'

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1905phae.proj..575W

June 28 1905

Index Left

			163.8		III
10	22	36	221.9	58.1'	
			331.4	75.5'	(B)
			46.9	133.6' +0.90'	
			153.3		+0.96'
10	25	30	229.8	76.5'	
			343.6	51.7'	
			35.3	128.2' +1.02'	

Index Right

			72.0		
10	28	12	128.6	56.6'	(A)
			238.7	81.2'	
			319.9	137.8' +0.82'	
			60.4		+0.85'
10	31	16	139.4 6 140.1	79.2'	
			252.5	55.6'	
	106	94'	308.1	134.8' +0.88'	
10	26	54'			
5		-15'			
15	26	39'			

Mean +0.90'

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1905phae.proj...575W

June 28 1905

Index Right

(A)

		73,4		
10	35	6	128,2	54.8'
			236,0	57.1'
			323.1	141.9' +0.74'
			61.0	+0.76'
10	37	22	139.7	78.7'
			249,9	60.7'
			310.6	139.4' +0.79'

Index Left

(B)

			161,0	
10	41	32	222,5	61.5'
			328,0	85.0'
			53,0	146.5' +0.64'
			148.0	+0.62'
10	43	30	235.7	87.7'
			340.5	60.5'
			41.0	148.2' +0.61'

	156	90'
10	39	22'
5		-15'
15	39	7'

Mean +0.69'

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1905phae.proj..575W

June 28, 1905

Index Left

			159.0		
10	45	55	222.6	63.6'	V
			328.0	84.4'	
			52.4	148.0'	+0.61'
			147.8		+0.56'
10	49	28	234.7	86.9'	
			337.0	65.8'	B.
			42.8	152.7'	+0.52'

Index Right

			67.1		
10	54	2	133.9	66.8'	
			229.8	100.0'	
			329.8	166.8'	+0.25' A
			53.0		+0.24'
10	57	0	148.2	95.2'	
			245.3	72.4'	
			317.7	167.6'	+0.24'

Mean +0.40'

	205°	85'
10	51	36
5		-15
15	51	21

S.T. 17^h 57^m
R.A. −1 18
Dec. +18.6
P.A. 314.0 Ver.B.
Sprocket −3.5 B
" −2.5 b

H's watch used for times
Watch 15 sec fast

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1905phao.proj.,575W

June 29, 1905. (Thursday)

Iris Phot. J H. obs. Bowie rec.

13	37	−13.5	13	37
14	30		16	5
	53		2	28

16 50 Abandoned for present too cloudy ←
Comp. Star = −13° 37 42 (9.1)
δ 30 Iris fol. comp. star by 1m 7 sec. and is
2'.9 south of it.

192816 − Sagittarii Phot. J H. obs. Bowie rec.

19
19
17
2
9

.v466
.vv32
1.0990 v

2.0 v
2.

Abandoned for Iris again

Iris Phot. J H. obs. Bowie rec.

13	37	−13.5
17	10.	
3	33	

For measurements see next page

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1905phae.proj..575W

June 29, 1905. (Thursday)

Iris		Phot.		H. obs.	Bowie rec.
13	37	-13.5	13	37
14	30		16	5
	53		2	28

16 50 Abandoned for present ~~too~~ cloudy ←
Comp. Star = -13° 37 42 (9.1)
8 30 Iris fol. comp. star by 1m 7 sec. and is 2'.9 south of it.

192816 - Sagittarii Phot. H. obs. Bowie rec.

~~19~~	~~34~~	~~-16.6~~
19	29	-16.6
17	3	
2	26	
9	34	

Abandoned for Iris again

Iris		Phot.	H. obs.	Bowie rec.
13	37	-13.5		
17	10.			
3	33			

For measurements see next page

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1905phae.proj..575W

June 29 1905

Index R & A

	247.9		
10 47 48	313.5	= comp. star dis.	
	59.2	65.6'	
	141.5	82.3'	
		147.9'	+0.62'
	238.5		+0.70
	318.0	79.5'	
	69.0	60.8'	
	129.8	140.3'	+0.77' A

Index L & B

	164.5		
	216.0	51.5'	
	338.5	66.3'	
	448	117.8'	+1.24' B
	156.2		+1.18
	223.6	67.4'	
	341.5	56.0'	
	37.5	123.4'	+1.12'

11	3	~~15~~ 5
21	50	63
10	55	32
5		-17
15	55	15

+0.94

S.J. 17^h 54^m
H.A. +4 18
Dec. −13.5
P.A. 101.5 Ver.B.
Sprocket −2.5 A
" −1.5 B
" +0.9 C

Obs. made with much dif. on account of low altitude and clouds

11
5
16

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1905phae.proj...575W

June 29, 1905

19 28 16 - Sagittarii Phot 3 St. obs Bowie sec

19	29	-16.6
18	00	Comps. Star = -16° V 363 (9.1)
1	29	Index L u B
10	31	

358.0

11 25 50 238 var dis

B

175.1	25.8'	
207.2	32.1'	
	57.9'	-2.94'

353.4

25.8	32.4'	-3.00'
179.6	22.4'	
202.0	54.8'	-3.07'

Index R u A

267.4

A

293.7	26.3'	
81.0	37.7'	
118.7	64.0'	-2.71'

260.6 -2.66'

300.6	40.0'	
87.4	26.5'	
113.9	66.5'	-2.62'

Mean -2.83'

11	35	27
	63	77
11	31	68
5		-17
16	31	51

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1905phae.proj..575W

June 29 1905

S. J. 18^{h} 24^{m}
Hb. A −1 6
Dec −17.0
P. A 33.5 Ver B.
Sprocket −2.5 B
" −1.5 b

He's watch used for times tonight
Watch 17 sec. fast.

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1905phae.proj..575W

June 30. 1905. (Friday)

Iris Phot. 5 H. obs. Bowie rec.

13	37	-13.5
14	43	
1	6	

9 0 Iris follows comp. star of last night (-13° 37 Kz (9.1)) by 1 m 25 sec. and is 2'.2 south of it.

9 50 Impossible to measure Iris tonight Abandoned

S Scuti Phot. 5. H. obs. Bowie rec.

15	45	-8.0
16	50	
1	55	
10	5	

9."5 Capi

For measurements see next page.

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1905phae.proj..575W

June 30, 1905.

Index L & A 9.5 bap

250.5 var. dis

10 28 22	310.0	59.5'	
	63.6	73.6'	
	137.2	133.1'	-0.91'
	243.6		-0.96'
	316.5	72.9'	
	73.0	55.6'	
	128.6	128.5'	-1.01'

Index R & B

	161.9		
	218.8	56.9'	
	338.9	66.7'	
	45.6	123.6'	-1.11'
	154.2		-1.10'
10 38 2	226.0	71.8'	
66 24'	344.0	52.9'	
10 33 12'	36.9	124.7'	-1.09'
5 -19'			
15 32 53'			

Mean -1.03'

S. T. 17h. 37m.
H. A -1 10
Dec -8.6
P. A 286.0 Ver. B
Sprocket -1.5 A.
" -0.5 B.
" +0.1 b

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1905phaq_proj_575W

June 30, 1905

ν Aquilae Phot. J H. obs. Bowie sec.

18	54	-5.9	9.5 bafh
17	50		
1	4		
10	56		

Abandoned.

H's watch used for times tonight
Watch 19 sec. fast.

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1905phae.proj..575W

July 1, 1905. (Saturday)

γ Draconis Phot. 3 H. obs. Bowie rec.
20 40. +33.4 Full aperture used.
14 43
5 57 Index Used
6 3

262.6 ← var. dis.

8 50 36
+5 −19
13 50 17

299.0 36.4'
76.4. 49.1'
125.5 85.5' −2.04

254.0 −2.04
305,8 51.8'
84,0 33.4'
117.4 85.2' −2.05

Stopped by heavy clouds Apparently no chance for anything further.

Comp. Star = +34° 4190 (9.2)
P. A. 230.0 Ver. B.
Sprockets −0.5 A.
" +0.5 B.
" +1.1 B.

H's watch used for times tonight
Watch 19 sec fast.

9
9
5
14

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1905phae.proj...575W

July 3, 1905. (Monday)

Iris. Phot. J W. obs. Bowie sc.

13 37 −13.5 Comp. Star = −13° 37′ ″ (B.D.)
14~~15~~ 56 Iris precedes comp. star of tonight by 53.5 s
1~~7~~ 29 Index R & A and is 8′.9 south of it

9 8 48

164.4 ← Comp Star dec
216.0 √1.6′
397.6 64.0′
41.6 110.6′ +1.29

343.1 62.4′ +1.34
45.5
166.0 ~~42.3~~
214.3 110.7′ +1.40

Index L & B

73.2
128.6 √√.4′
240.0 78.8′
318.8 13~~4~~.2′ +0.89

64.0
136.10 72.0′ +0.89
250.8 62.2′
313.0 ~~74.1~~ 13~~4~~.2′ +0.89 Mean +1.12

9 38 23
46 71
9 23 36
5 −26
14 23 10

Above observations very difficult throughout. Settings therefore a little uncertain and especially so towards the end. All possible care however exercised.

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1905phae.proj..575W

July 3 1905

L x B

74.1 57.0

131.1

Region so low and haze and fog so thick that it is impossible to do anything further on Iris tonight

S.J.	17	17
H.A.	+ 3	37
Dec	- 13.1	
P.A	63.0 Var B	
Sprocket	- 2.5 A	
"	- 1.5 B	
"	- 0.9 b	

Sprocket and P.A not perfectly exact as images could not be exactly set on account of clouds and low altitude. The P.A. and sprocket pretty close.

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1905phae.proj...575W

July 3, 1905

δ Bijgni

20	40	+33.4
17	32	
3	8	
8	52	

Index LkA

	261.0	var dia	
10 55 38	300.1	39.1'	
	74.6	49.7'	
	124.3	88.8'	-1.95'
	254.3		-1.96'
	307.2 ~~308.7~~	52.9'	
	82.2	34.8'	
	117.0	87.7'	-1.98'

Index RaB

174.8		
209.5	34.7'	
345.0	50.0'	
35.0	84.7'	-2.06'
166.6		-2.08'
215.1	48.5'	
353.4	35.0'	
28.4	83.5'	-2.09'

Mean -2.02'

11	3	10
21	58	48
10	59	24
5		-26
15	58	58

Comp. Star = +34° 4190 (9.2)

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1905phae.proj..575W

July 3 1905

Index R & B

173.5

11 6 24	208.0	34.5'		A
	346.9	48.8'		
	35.7	83.3'	2.10'	
	164.7		-2.05'	
	216.0	51.3'		
	353.7	35.4'		
	29.1	86.7'	-2.00'	

Index L & A

	82.6			
	118.0	35.4'		
	257.2	48.8'		
	306.0	84.2'	-2.07'	B
	74.0		-2.02'	
11 13 32	125.9	51.9'		
19 56'	262.3	35.5'		
11 9 58'	297.8	87.4'	-1.98'	
5 -26'				
16 9 32'				

Mean -2.04

S.T. 17h 28m
L.L. -2 22
Dec +33.7
P.A. 49.0 for B.
Sprockets -0.5 A
" +0.5 B
∴ +1.1 b

It's watch used for times
Watch 26 sec fast

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1905phae.proj..575W

July 6 1905 (Thursday)

Iris Phot J H. obs. Bowie rec.

13 37 -13.5
14 55
1 18

8 25 0 Iris follows comp star by 18.0 sec and is 9.1 south
Same Comp. Star as on July 3 = −13° 3755 (8.8)

Index Grid

255.6 ← comp star dis

8 52 0 306.4 ~~305.9~~ 50.8'
67.0 68.0'
135.0 118.8' +1.22'

245.2 +1.16'
8 55 18 315.3 70.1'
72.2 53.7'
125.9 123.8' +1.11'

Index R&B

157.8
8 59 10 223.6 65.8'
345.8 48.2'
34.0 114.0' +1.33'

167.0 +1.33'
9 2 35 214.8 47.8'
337.4 66.0'
43.4 113.8' +1.33'

Mean +1.24'

33 168 63
8 57 16
5 −26
13 56 50

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1905phae.proj..575W

July 6, 1905

Index R & B

157.3 A

9 7 56 223.2 65.9'
346.3 47.0'
33.3 112.9' +1.35'

165.8 +1.32'

9 12 12 214.5 48.7'
337.7 67.5'
45.2 116.2' +1.28'

Index L & A.

64.3

9 16 48 136.1 71.8' B
254.3 51.8'
306.1 123.6' +1.11'

76.4 +1.15'

9 20 24 125.3 48.9'
244.9 71.3'
316.2 120.2' +1.19'

55' 140'.
9 13 80'.
5 -26'.
14 13 54'.

Mean +1.24

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1905phae.proj..575W

July 6, 1905.

			66.2		
9	26	6	135.7	69.5'	
			254.0	52.6'	
			306.6	122.1'	1.14

75.1

clouds Stopped by clouds

P.A 339.0 Her B
Sprocket −0.5 A
" +0.5 B
" +1.1 b

Only sprocket and position angle read as clouds came somewhat suddenly and obs. waited for clouds to clear up, so that telescope drifted in the meantime. P.A. & sprocket not quite exact as clouds came suddenly and images could not be superimposed Readings however pretty close, region thoroughly identified, Comp. Star used was the same as was used on July 3

H.'s watch used for times tonight
Watch 26 sec. fast

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1905phae.proj..575W

July 7 1905 (Friday)

Iris Phot J H. Obs. Bowie Rec.

13 37 −13.5
15 62
1 25

Same comp. Stars as last night

Iris follows comp. star by 44.3 and is 9.'3 south Iris has gone from the place of last night so that object observed for Iris last night was Iris. Index L x A

65.6 ← comp. star dis.

8 34 8 135.7 70.1' I
254.2 √2.7'
306.9 122.4' +1.13' B

75.1 √1.9' +1.13'
8 37 52 127.0
245.6 ~~+3.8~~ 10.8'
316.4 122.7' +1.13'

Index R x B

338.6 64.7'
8 43 20 43.3 A
164.2 49√'
213.7 114.2' +1.32'

344.5 √1.3' +1.28'
8 47 55 35.8

161 135'
8 40 49'
5 −26
13 40 23'

157.4 66.6' +1.24'
224.0 117.9' ~~+1.19~~ +1.20'

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1905phae.proj..575W

July 7, 1905

Index R & B

			338.9	64.3'	II
8	53	57	43.2		
			165.7	49.4'	3'
			215.1	113.7'	+1.3
			346.1	64.6'	A
8	56	36	34.7		+1.3 2
			157.5	65.6'	
			223.1	114.2'	+1.32'

Index L & A.

			247.8	62.4'	
9	1	4	316.2		B
			75.2	42.3'	
			123.5 ~~+14.2~~	116.7'	+1.27'
			254.2	53.0'	+1.22'
9	4	33	307.2		
			66.0	64.7'	
			134.7	121.7'	+1.16'
34	114	130	'		
8	58	62	'		
5		-26	'		
13	58	36	'		+1.247'

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1905phae.proj..575W

July 7 1905

Index L & A

III

			245.6	69.2'	
9	9	32	314.8		
			73.9	71.6'	
			125.3	120.6'	+1.12'
			254.0	73.8'	+1.12'
9	12	5	307.4		
			66.2	67.2'	
			134.60	121.2'	+1.17'

(B)

Index R & B

			158.5	63.2'	
9	17	30	221.7		
			346.4	47.2'	
			34.2	111.0'	+1.39'
			165.9	74.9'	+1.35'
9	20	46	214.8		
			339.0	63.2'	
			42.2	112.1'	+1.37'
	59	113'			
9	14	58'			
5		-26'			
14	14	32'			+1.24'

(A)

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1905phae.proj..575W

July 7 1905

Index R & B

IV

156.9 6K.0.
9 28 36 220.9
346.1 K.A.2.
34.3 112.2. +1.37.

166.7
9 32 48 2141 ~~213.9~~ 47.4. +1.K3.
3423 59.6.
41.9 107.0. +1.K9.

Index L & A

65.6 62.6.
9 38 35 134.2
254.6 r-2.1.
306.7 120.7. +1.12.

73.2 r-K.0. +1.14.
9 42 30 126.4 7.2
246.2 69.A.
316.0 123.A. +1.11.

140 149.
9 35 37.
5 -26.
14 35 11. +1.2A.

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1905phae.proj..575W

July 7. 1905

Index L & A

65.8

V

9 50 38 135.6 ~~136.3~~ 69.8'

254.3 v 3.5'

306.8 121.3' +1.14'

B

73.4

9 54 30 126.2 v 2.8' +1.16'

247.0 67.8'

314.8 120.6' +1.18'

Index R & B

342.6 v 9.4'

9 58 48 432.0

166.3 47.2'

213.5 106.6' 1.50 +~~1.49~~

A

346.8 49.1'

10 3 35 35.9 +1.42'

157.5 60.0'

37 165 151 221.5 113.1' +1.35'

9 56 53

5 -26

14 56 27

Mean +1.29'

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1905phae.proj..575W

July 7, 1905.
Index R & B

~~341.3~~ 347.0
~~41.1~~ 35.1 48.1
158.0 62.8
220.8 110.9

~~18 20~~
25 58

S. S. 17^h 57^m
H. A $+4^h$ 18^m
Dec. -13.5
P. A. 138.0 Ver. B
Sprocket -1.5 B
" -0.5 b

Groe Phot H. Obs. Bowie Rec.
21 34 -14.7
18 32
3 2
8 58

Over.

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1905phae.proj..575W

July 7, 1905.

D to 8.7 Magn.

11 57 0 D precedes 8.7 Magn by 9.5 sec

12 1 0 d to e = 6.0 sec

12 5 0 f to a = 12.2 sec

12 10 0 g to a = 10.5 sec

Poor thoughts to be found tonight but impossible to measure on account of clouds

It's watch used for times tonight
Watch 26 sec. fast.

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1905phae.proj..575W

July 8 1905 (Saturday)

γ Cygni Phot. J. K. Obs. Bonn rec.

20 40 +33.4
15 23
5 17
6 43 Index L×A I

255.1 ← var. dist.
8 58 12 305.6 50.5' (B)
69.5 61.0'
130.5 111.5' -1.38'

249.5 -1.41'
La 9 0 48 313.0 63.5'
77.4 ~~79.0~~ 45.7'
123.1 109.2' -1.44'

Index R×B

169.2
9 4 56 211.0 41.8' (A)
340.0 58.0'
38.0 99.8' -1.66'

160.8
9 7 18 220.6 ~~221.2~~ 59.8' -1.66'
349.8 40.2'
30.0 100.0' -1.66'

35 69 134'
8 62 48'
5 -26'
14 2 22' -1.54'

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1905phae.proj..575W

July 8. 1905.

Index R & B

169.8 II

9	11	22	210.0	40.2'	
			340.0	59.6'	-1.66' A
			39.6	99.8'	-1.~~42~~
					-1.64'
			159.7		-~~1.52~~
9	14	10	218.9	59.2'	
			349.2	42.1'	
			31.3	101.3'	-1.62'

Index L & A

76.6

9	16	57	124.7	~~123.9~~	48.1'
				247.8	64.9'
				312.7	113.0' -1.35' B

70.5

9	19	55	128.5	58.0'

blinds now thick

	60	144
9	15	36
5		-26
14	15	10

Mean -1.50' ~~1.44~~

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1905phae_proj_575N

July 8 1905

Index L&A

		258.6	45.0'		III
9	32 53	303.6 ~~302.5~~	66.5'		
		66.4	111.5'	-1.38'	
		132.9			B
		~~247.9~~ 68.0			-1.39'
9	37 14	~~312.35~~ 132.0	64.0'		
		257.0	48.6'		
		303.6	110.6'	-1.40'	

Index R&B

		551.0			
9	40 30	29.8	38.8'		A
		158.4	62.0'		
		220.4	100.8'	-1.64'	
		338.2			-1.61'
9	42 38	40.9	62.7'		
	151 135	170.4	40.6'		
9	37 79	211.0	103.3'	-1.58'	
5	-26				
14	37 53				

Means -1.50

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1905phae.proj..575W

July 8 1905.

Index R & B IV

			351,0		
9	47	12	30,8	39.8'	
			162,6	57.1'	A
			219,7	96.9'	-1.73'
			341,2		-1.71'
9	50	0	38,2	57.0'	
			169,0	41.6'	
			210,6	98.6'	-1.69'

Index C. & A.

			257,8		
9	53	8	303,4	45.6'	B
			67,2	63.3'	
			130.5	108.9'	-1.44'
			248,0		
9	55	48	314,4	66.4'	-1.42'
			77,4	44.3'	
			121,7	110.7'	-1.40'
	205	68			
9	51	32			
5		-26			
14	51	6			Mean -1.56'

S. J. 17 36
Z. A. -3 10
Dec +33,8
P. A 49,0 Ver B
Sprocket - 0.5 A
" + 0.5 B
" +1.1 C

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1905phae.proj..575W

July 8, 1905.

Eros	Phot	H. Obs. Bowie Rec.
21	34	-14.7
17	42	
3	52	
8	8	

Nothing can be done with Eros tonight Theoretically Eros should precede 5th magn. star and be slightly north of it. A very faint star has been seen tonight in about this position but nothing can be done in transits or phot. measurements on account of very bad atmospheric conditions and proximity of bright star

H's watch used for times tonight Watch 26 sec. fast.

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1905phae.proj..575W

July 9 1905 (Sunday)

Eros	Phot	H. Obs.	Davis Rec.
21	34	-14.7	
18	25		
3	9		
8	51		

8

~~Searched for Eros~~ Got on the region of Eros a little after 11 o'clock sky more or less murky and much glare in the south from electric lights. Used ordinary eye piece power 103 and also 1" eye piece power 270 & a bar being put in the latter eyepiece A thorough examination about computed place made Transits of a large number of objects taken around about region; continued search until daylight Eros not found

9
17
8
5
13

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1905phas.proj...575W

July 12, 1905. (Wednesday)

γ Cygni. Phot 3 H. Obs. Bonn Rec.

20 40 +33.4

16 6

4 34

7 26

Index L×A

297.1 ← var dis

8 52 2x

332.86 35.5'

107.0 55.8'

162.8 91.3' -1.88' (B)

286.0 -1.88'

344.0 58.0'

117.4 32.8'

150.2 90.8' -1.89'

Index R×B

208.8 (A)

240.9 32.1'

19.0 49.8'

68.8 81.7' -2.14'

201.1

9 1 18

249.50 47.9' -2.17'

28.6 31.9'

60.5 79.8' -2.20'

17 53 42

8 56 51

5 -29

13 56 22

Mean -2.02'

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1905phae.proj..575W

July 12, 1905.

S.J. $16^h\ 48^m$
H.A. $-4\ \ 0$
Dec. $+33.9$
P.A. 229.1 Ver. B
Sprockets -0.5 A
" $+0.5$ B
" $+1.1$ b

V Vulpeculae Phot. J. H. Obs. Bowie Rec.

20	30	+26.1
17	12	
3	18	
8	x 2	

For measurements see next page.

9

9

9/5

14

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1905phao.proj..575W

July 12, 1905.

Index Left

	271.1	var dis.	
9 50 30	359.51	88.0'	
	99.0	71.1'	
	170.1	159.1'	-0.40'
	281.0		-0.34'
	351.7	70.7'	
	86.7	94.1'	(B)
	180.8	164.8'	-0.29'

Index Right

	181.5		
	267.8	86.3'	
	13.5	63.1'	(A)
	76.6	149.4'	-0.59'
	191.4		-0.58'
	255.8	64.4'	
	2.7	85.3'	
	88.0	149.7'	-0.58'

9 59 36		
	109' 66"	
9/5	54' 63"	
	-29"	
14 54 34		

Mean -0.46'

S.J. 17h 44m
Ho.A. - 2 48
Dec. +25.5
P.A. 325.5 ver.B
Sprocket -5.5 A
" -4.5 B
" -3.9 b

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1905phae.proj..575W

July 12, 1905

V Cephei Phot. J. H. Oke. Bowie Rec.

23 50 +82.4 9.5 Grapr.
17 50
6 00

6
6

Index L x B

271.5 var. dis

10 36 35 359.3 87.8' (B)
102.0 64.9'
166.9 152.7' -0.52'

283.0 -0.48'
346.7 63.7'
88.7 93.1'
181.8 156.8' -0.44'

Index R x A (A)

187.0 +83.2
262.5 267.5 ~~64.3~~ 75.5'
17.5 ~~56.5~~ 56.5
74.0 ~~40.8~~ 132.0' -0.94'
~~0.76~~

196.6 ~~0.78~~
252.9 56.3' -0.96'
8.5 4.5 73.5 ~~68.4~~
82.0 ~~86.9~~ ~~138.7~~ ~~0.80~~
129.8' -0.98
~~-0.63~~

10 47 5
83 40
10 41 50
5 -29
15 41 21

Mean -0.72

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1905phaa.proj..575W

July 12 1905

S.T. $18^h\ 43^m$
H.A. $-5\ \ 10$
Dec. $+82.0$
P.A. 324.6 Ver. B
Sprocket -2.5 B
" -1.5 b

W's watch used for times tonight
Watch 29 sec fast.

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1905phae.proj..575W

July 13. 1905. (Thursday)

χ Cygni Phot. J H. Obs. Bowie Rec

20 40 +33.4
15 40
5 00 Index Above
7 00

108.5 ← var. dia
8 21 34 161.2 52.7'
295.3 37.5'
332.8 90.2' -1.91'

116.8 -1.93'
152.6 35.8'
288.0 52.8'
340.8 88.6' -1.95'

Index Below
21.5
67.4 45.9'
208.3 33.1'
241.4 79.0 -2.22'

29.4 -2.22'
8 31 39 61.2 31.8
52 73' 201.3 47.2
8 26 36' 248.5 79.0 -2.22'
5 -30' Mean -2.08'
13 26 6'

8
8
5
13

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1905phae.proj...575W

July 13 1905

Index Below

18.9		
68.0	49.1'	B
207.9	33.8'	
241.7	82.9"	-2.11'
27.7		-2.16'
62.4	34.7'	
201.8	44.8'	
246.6	79.5'	-2.21'

Index Above

285.7		A
341.7	56.0'	
118.0	34.0'	
152.0	90.0'	-1.91'
296.0		-1.90'
331.9	35.9'	
160.0	55.0'	
	90.9'	-1.89'

Mean -2.03'

8 39 28

8 48 2

87 30 · 105.0 ~~107.0~~

8 43 45 :

5 -30 :

13 43 15 Sid. J. 16h 41m

R.A. -4 8

Dec. +33.8

P.A. 49.0 Ver. B

Sprocket -0.5 A

" +0.5 B

" +1.1 b

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1905phae.proj..575W

July 13 1905

δ Vulpeculae Phot. J. H. Obs. Bowie Res.

20 30 +26.1
16 48
3 42
8 18

Index left

	270.0	var dis	
9 22 40	359,5	89.5'	(B)
	97.5	74.6'	
	172.1	164.1'	-0.30'
	276.9		-0.30'
	351.7	74.8'	
	89.6	89.0'	
	178.6	163.8'	-0.31'

Index Right

	181.8		(A)
	269.3	87.5'	
	11.5	65.9'	
	77.4	153.4'	-0.51'
	190.3		
9 30 24	259,0	68.7'	-0.42'
52 64'	0.7	87.3'	
9 26 32'	88.0	156.0'	-0.46'
5 -30'			
14 26 2'		Mean	-0.39'

9

9

9 5 14

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1905phae.proj..575W

July 13, 1905

Index Right

	181.5		
9 33 35	268.8	87.3'	A
	9.5	70.3'	
	79.8	157.6'	-0.43'
	189.8		-0.44'
	259.2	69.4'	
	1.1	86.4'	
	87.5	155.8'	-0.46'

Index Left

	89.8		
	178.1	88.3'	B
	279.9	67.9'	
	347.8	156.2	-0.45'
	100.1		
9 40 48	169.0	68.9'	-0.42'
	268.1	90.7'	
	358.8	159.6'	-0.39'

Mean -0.43'

	73	83'
9	36	72'
5		-30'
14	36	42'

S.T. 17 51
H.A. -2 43
Dec +25.5
P.A. 145.4 Var B.
Sprocket -5.5 A
-4.5 B
-3.9 b

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1905phae.proj..575W

July 13, 1905.

18 13 15 – Serpentis Phot. 3 2t. Obs. Bowie Rec.

18	11	– 15.9
18	10	
11	5½	Index L & A

	211.4 ←	bisect. Star dia	
10 42 14	236.8	25.4'	
	32.5	24.0'	
	56.5	49.4'	+3.30' (B)
	211.1		+3.22'
	238.0	26.9'	
	31.4	25.9'	
	57.3	52.8'	+3.15'

Index R & B

	121.0		
	148.4	27.4'	(A)
	301.6	26.5'	
	328.1	53.9'	+3.11'
	121.5		+3.09'
10 50 30	147.8	26.3'	
92 44'	300.8	28.4'	
10 46 22'	329.2	54.7'	+3.07'
5 -30'			Mean +3.16'
15 45 52'			

S.T. 18h 41m
H.A. + 0 25
Dec. – 16.2
P.A. 325.0 Ver. B
Sprocket – 2.5 B
" – 1.5 b

It's watch used for times
Watch 30 sec. fast.

8
8
8
5
13

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1905phae.proj..575W

July 15, 1905 (Saturday)

γ Cygni Phot J H. Obs: Bowie Rec.

20 40 +33.4

15 40

5 00

7 00

Index L & A

8 23 45

114.7			
151.7	37.0'		
289.0	52.9'		B
341.9	89.9'	-1.92'	
			-1.93'
107.5			
160.6	53.1'		
296.8	35.9'		
332.7	89.0'	-1.94'	

Index R & B

28.4			
61.5	33.1'		
201.4	47.3'		A
248.7	80.4'	-2.15'	
			-2.16'
20.6			
67.9	47.3'		
208.3	34.5'		
242.8	81.8'	-2.14'	

8 34 48

57 93'

8 28 76'

5 -25'

13 28 51'

Mean -2.04'

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1905phae.proj..575W

July 15 1905

S.J. 16 34
H.A. -4 14
Dec. +33.8
P.A. 228.5 Ver B
Sprocket -0.5 A
" +0.5 B
" +1.1 b

V Vulpeculae Phot. J H. Obs. Bowie Rec.
20 30 +26.1
16 39
3 51
8 9

For measurements see fol. page.

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1905phae.proj..575W

July 15, 1905.

Index Left

	268.6 ← var dia.		
9 3 3	358.8	90.2'	
	98.5	70.7'	
	169.2	160.9'	−0.36'
	277.3		−0.34'
	351.0	73.7'	
	88.5	89.1'	
	177.6	162.8'	−0.33'

Index Right

	180.8		
	268.8	88.0'	
	11.7	67.5'	
	79.2	155.5'	−0.47'
	190.4		−0.47'
	258.3	67.9'	
	0.2	87.7'	
	87.9	155.6'	−0.47'

Mean −0.40'

9	10	0
	13	3
9	6	32
5		−25
14	6	7

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1905phae.proj..575W

July 15. 1905.

Index Right

	179.1		
9 13 22	268.8	89.7°	
	11.5	65.6°	
	77.1	155.3°	−0.47′

A

189.8		−0.44′
257.4	67.6°	
358.6	90.5°	
89.1	158.1°	−0.42′

Index Left

B

87.8		
178.2	90.4°	
278.8	88.9°	
347.7	159.3°	−0.39′

	99.5		−0.36′
9 21 46	168.87	69.2°	
	267.2	93.8°	
	1.0	163.0°	−0.32′

Mean −0.40

9 34 68.	
9 17 34.	
5 −25.	
14 17 9.	

10

10
.5
15

Sid. 17h 21m
Eq. A. −3 13
Dec. +25.5
P.A. 145.7 Ver B
Sprocket −5.5 A
" −4.5 B
" −3.9 b

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1905phaa.proj..575

July 15 1905

S	Sruti	Phot.	J	K. Obs.	Bonn	Rec.
15	45	- 8.0				9.5 bap
17	45					
1	0					
11	0					

Index L & A

106.1 ← var. dis.

161.2	55.1'	
279.7	70.3'	
350.0	125.4'	-1.08'

10 16 56

99.7		-1.06'
167.5	67.8'	
255.2	58.9'	
344.1	126.7'	-1.05'

B

Index R & B

16.6		
72.0	55.4'	
195.1	58.9'	
254.0	114.3'	-1.32'

A

10.7		-1.32'
74.9	64.2'	
198.9	49.7'	
248.6	113.9'	-1.33'

10 24 55

40 111

10 20 56

5 -25

15 20 31

Mean -1.19'

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1905phae.proj..575W

July 15 1905

Index R & B

		17.3		
10	28	3	70.0	52.7'
			190.4	64.7'
			255.1	117.4' -1.25' A
			12.0	-1.27'
			75.5	63.5'
			197.7	52.1'
			249.8	115.6' -1.29'

Index & R A

			286.0	
			345.0	59.0'
			98.7	70.5'
			169.2	129.5' -0.99' B
			278.6	-1.02
10	36	18	350.8	72.2'
	64	21	107.5 ~~105.2~~	55.0'
10	32	10	162.5	127.2' -1.04'
5		-25		
15	31	45		

Mean -1.14'

S.T. 18h 45m
H.A. 0 0
Dec. -8.6
P.A. 106.0 Sun B
Sprocket -1.5 A
" -0.5 B
" +0.1 b

H's watch need fastening
Hatch 25 sec. fast

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1905phaa.proj..575W

July 17. 1905 (Monday)

Hy by grnd Phot. J H. Obs. Bowie Rec.

20 40 +33.4

15. 46

4 54

7 6

Index L & A I

117.0 ← var. dia.

161.9 44.9'

284.4 70.7'

355.1 115.6' -1.29' B

106.5 -1.32'

8 16 2

1730 66.5'

295.2 46.8'

342.0 113.3' -1.34'

Index R & B

30.0 A

8 21 0

68.5 38.5'

199.8 59.1'

258.9 97.6' -1.72'

20.0 -1.70'

8 23 35

77.92 57.2'

208.0 41.5'

249.5 98.7' -1.69'

Mean -1.51'

~~+3~~

8 13 10

73' 47'

8 18 27'

5 -22'

13 18 5'

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1905phae.proj..575W

July 17 1905

Index R & B

II

29,0

8 27 42 — 70,0 — 41.0'

201,3 — 56.3'

257,6 — 97.3' — -1.72' — A

20,5 — -1.69'

8 31 5 — 78,8 — 58,3'

209,1 — 41.4'

250,5 — 99.7' — -1.66'

Index L & A

294,7

8 34 44 — 342,7 — 48.0'

106,8 — 65.1' — B

171,9 — 113.1' — -1,35'

286,8 — -1,36'

8 37 22 — 351,4 — 64.6'

115,5 — 46.9'

162,4 — 111.5' — -1,38'

129 113'

8 32 43'

5 -22'

13 32 21

Mean -1.52'

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1905phae.proj..575W

July 17 1905

Index D & A

			294.5		III
8	45	2	345.0	50.5'	
			105.0	65.6'	
			170.6	116.1'	-1.28' B
			286.0		-1.29'
8	48	12	354.5	68.5'	
			115.9	46.7'	
			162.6	115.2'	-1.30'

Index R & B

			208.9		
8	51	38	249.9	41.0'	A
			19.7	59.7'	
			79.4	100.7'	-1.64'
			198.5		-1.62'
8	54	33	258.3	59.8'	
			27.0	43.1'	
			70.1	102.9'	-1.59'

Mean -1.46'

	198	85	
8	49	51	
5		-22	
13	49	29	

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1905phae.proj..575W

July 17, 1905

Index R & B

			209.2		IV
9	3	32	250.9	41.7'	
			18.1	62.4'	
			80.5	104.1'	-1.56' A
			199.0		-1.58'
9	6	10	259.2	60.2'	
			29.0	42.3'	
			71.3	102.5'	-1.60'

Index L & A

			115.3		
9	10	24	162.0	46.7'	
			286.5	65.8'	
			352.3	112.5'	-1.36' B
			106.0		-1.38'
9	12	52	171.8	65.8'	
			298.0	45.6'	
			343.6	111.4'	-1.39'
					-1.48'

	31	118'
9	7	74'
5		-22'
14	7	52

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1905phae.proj..575W

July 17, 1905.

Index L & A

V

116.1

9	23	38	161.0	44.9'	
			288.4	64.3'	
			352.7	109.2'	-1.44' B

166.9 -1.44'

9	26	42	170.1	63.2'	
			297.0	45.8'	
			342.8	109.0'	-1.44'

Index R & B

28.8

9	31	12	70.7	41.9'	
			200.7	56.6'	
			257.3	98.5'	-1.69' A

21.0 -1.68'

9	33	47	79.4	58.4'	
			208.4	40.6'	
			249.0	99.0'	-1.68'

	113	139'	
9	28	50'	
5		22'	
14	28	28'	

Mean -1.56'

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1905phae.proj..575W

July 17, 1905.

Index R & B

			28.4		VI
9	38	48	70.9	42.5'	
			201.6	56.7'	
			258.3	99.2'	-1.68'
			20.3		-1.70'
9	41	10	77.8	57.5'	
			208.4	40.3'	
			248.7	97.8'	-1.71'

Index L & A

			297.8		
9	44	33	341.7	43.9'	
			107.2	62.6'	
			169.8	106.5'	-1.50'
			289.0		-1.54'
9	47	18	348.9	59.9'	
			116.9	42.7'	
			159.6	102.6'	-1.59'

	170	109	'
9	42	57	'
5		-22	'
14	42	35	'

Mean -1.62'

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1905phae.proj..575W

July 17, 1905.

Index L & A

VII

			117.2		
9	54	4	160.9	43.7'	
			289.9	58.9'	
			348.8	102.6'	-1.59'
			109.4.		-1.64'
9	52	10	167.0	57.6'	
			299.0	41.6'	
			340.6	99.2'	-1.68'

Index R & B

			30.9		
10	3	13	68.0	37.1'	
			201.4	54.1'	
			255.5	91.2'	-1.88'
			22.4		-1.88'
10	7	0	75.3	52.9'	
			209.8	38.5'	
			248.3	91.4'	-1.88'

38	116	27	'
9	59	7	'
5		-22	'
14	58	45	'

Mean -1.76'

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1905phot.proj...575W

July 17 1905

Index R & B

		210.0		VIII
10	17	4	247.6	37.6'
			26.7	48.2'
			74.9	85.8' -2.03' A
			203.6	-2.00'
10	22	12	253.8	50.2'
			31.0	37.7'
			68.97	87.9' -1.97'

Index L & A

			118.8	B
10	28	12	160.5	41.7'
			291.0	53.8'
			344.8	95.5' -1.77'

		Clouds	113.1	-1.98'
			160.9	47.8'
10	34	30	208.7	32.8'
	101	58'	341.5 ~~342.1~~	80.6' -2.18'
10	25	30'	Stopped by clouds	
5		-22'		Mean -1.99'
15	25	8'		

S. J. 18h 39m
Dec +33.7
P. A 50.1 Ver. B
Sprocket -0.5 A
+0.5 B
+1.1 b

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1905phae.proj..575W

July 17, 1905

Hour circle not read at the last as clouds came up and images could not be set in centre of field, tel. undoubtedly drifted a little before reading up. Images not exactly superimposed before reading sprocket and P. A. but images quite near together. Troubled somewhat by light cloud of varying density in last two groups, but the greatest possible care exercised

It's a watch used for times tonight

Watch 22 sec. fast

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