KG
11365
572

1904phae.proj..573W

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KG-113665.572

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KG 11365.572

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1904phae.proj..573W

Dec. 16. 1904.
Continued from Book 14.

V Cephei Phot T. W. Obs. Cartes Rec

23h 50m 82.4
2 4 0
+4 10 9½ in. leaf used.

Index left + Below. B
Var. Lev.

106.0 ← 63.5
169.5
276.5 41.4
358.3 145.3 −0.67

95.6 43.4 −0.70
179.0 59.1
288.8 142.5 −0.72
347.9

Index Right + Above A

16.0 62.3
78.3
182.2 47.3 −0.54
269.5 149.6

−0.62

5.5 45.3
90.8
196.5 60.4 −0.66
256.9 145.7

Mean −0.66

10·13·50

10·25·30
39 20.
10 19 40.
+5 −15.
15 19 25.

1904phao.proj...573W

Dec. 16. 1904

same again A

10.28.25

17.5 ✓9.2 ✓
77.3
185.5 ✓4.4 ✓
270.3 144.6 ✓ −0.6 A ✓

6.3 A2.1 ✓ −0.7 1 ✓
88.4 ✓9.6 ✓
197.8 141.7 ✓ −0.7 K ✓
257.4

Ladder left + Below B

288.9 ✓A.2 ✓
347.1
95.0 A✓.2 ✓
180.2 143.K ✓ −0.7 1 ✓

−0.70 ✓

10.42.30

275.8 A3.✓ ✓
~~359.8~~ 359.3 60.0 ✓
107.0 143.✓ ✓ −0.70 ✓
167.0

Mean −0.70 ✓

90 ✓✓. ✓
10 3✓ 2A. ✓
+✓ −1✓. ✓
1✓ 3✓ 13 ✓

L.T. 4h 5′/m Gen. Mean −0.6A ✓
H.A + 4h 5′2 m
Dec + 82.2
P.A. 143.5
Sprocket. − 2.5 B
− 1.5 b

We watch used for time to night. Watch 15 sec fast

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1904phae.proj..573W

Dec. 19. 1904 (Monday)

~~9~~

B. & C. 11 & 2.
9 5 & 2.0
√9 2.0

B, 394.
9 √& 0.0
√9 0.0

≡R

Phot. ~~D.~~ W. Dick
Carter Rec.

Resp. sup. I. Phot. R. Hr. obs. Carter rec.
Compared with regrets of 3 asts. (before + elipse)
to Jupiter. = Sat. III.

Cor. Times.			16					
10	47	3	10	47	0		fair	
10	47	27			24	35.0	106.0	+2.5
10	47	38			33	46.9	141.0	+1.8
10	47	48			43	54.2	94.1	+1.5
10	48	0			57	53.3	~~153~~	148.3 +1.5
10	48	11		48	8	56.3	95.0	+1.4
10	48	25			22	59.8	151.3	+1.2
10	48	36			33	61.7	91.5	+1.1
10	48	53			50	63.0	153.2	+1.1
10	49	8		49	5	64.8	90.2	+1.0
10	49	15			12	68.9	155.0	+0.8
10	49	28			25	69.7	86.1	+0.8
10	49	37			34	73.6	155.8	+0.6
10	49	51			48	76.2	82.2	+0.5

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1904phad.proj...573W

Dec. 19. 1904.

10	50	2	10	49	89	78.4	168.4	+0.4
10	50	14		38	11	81.6	80.0	+0.3
10	50	30			27		161.6	
					34	81.8	80.0	
10	50	56			47	81.5		
		+3				163.3	161.8	+0.3
10	50	59			9	81.6	79.5	
					16		161.0	
					37		77.5	
10	51	56			47	83.6	161.1	
		+3				86.8		
10	51	59			9	170.4	77.2	+0.2
						85.2		
					16		64.0	
					36		77.1	
10	52	59			48	85.0	162.1	
		4				85.2		
10	53	3			5	170.2	76.4	+0.2
						85.1		
					28		162.0	
					48		78.2	
10	54	14			10	83.5	161.7	
		4				85.7		
10	54	18			24	169.2	76.4	+0.2
						84.6		
					35		162.1	
					47	84.4	77.1	
10	55	4			9	83.7	161.8	
		4						
10	55	8			8	168.1	77.3	+0.2
						84.0		
					23		161.0	
					46		77.0	
10	56	12			2	85.9	162.9	
		4				83.6		
10	56	16			22	169.5	78.2	+0.2
						84.8		
					37		161.8	
					4		78.4	

Uncor.

Cor.

Cor.

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1904phae.proj..573W

Dec. 19. 1904.

10	57	34		57	17	82.8	161.2		
		+4			47	84.5		79.0	+0.2
10	57	38		58	10	83.6	168.5		
10	58	50			24	85.1	77.0		
		+4			38	83.9	162.1		+0.2
10	58	54		59	2	84.5	77.4		
11	0	10			18		61.3		
		+4			42	83.3	77.7		
11	0	14		60	57	85.5	161.0		
					24	168.8	78.0		+0.2
					96	84.4	163.3		
					48		77.2		
11	1	16		61	5	86.3	163.5		
		+4			29	85.3	77.5		+0.2
11	1	20			44	171.6	162.8		
					24	85.8	77.4		
11	4	42		62	48	84.5	162.8		
		5			35	85.1	77.0		+0.2
11	4	47		63	0	169.6	162.1		
						84.8			

Limit of Vis.

11	8	21		64	17	24.5	107.5		
		5			28	24.4	132.0		
11	8	26			44	48.9	107.7		+3.3
						24.4	132.1		

I stopped for several minutes to count up and see if the requisite number of sets of full brightness had been obtained

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1904phad.proj...573W

Dec 19: 1904

Seeing pretty good

	B. + C. 11h 2.		B. 394.	
11	29	⌐2.7	30	0.0
	30	⌐2.7	31	0.0
	31	⌐2.7	32	0.0

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1904phae.proj..573W

Dec. 21. 1904 (Wednesday)

ε Aurigae Phot. T. W. Orbs
& Astro. Rec.

7 in. cofr

4 ⌐2 +43.6
1 ⌐6
-2 ⌐6
9 ⌐

Index Above A

221.7 ← Var. dis.
7.53.40 236.0 14.3
36.6 20.⌐
57.1 34.⌐ -4.0⌐

217.8 22.6 -4.0⌐
240.4
39.6 13.9
59.5 36.⌐ -3.97

Index Below B

180.5 13.⌐
147.3
207.3 19.7
33.⌐ -4.16
327.0

128.0 -4.1⌐
147.7 19.7
310.4 13.3
323.7 33.0 -4.19

mean -4.10

8.4.25
1⌐⌐76⌐
7⌐⌐62.
7⌐9 2
+⌐ -12
12⌐⌐50

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1904phaa.proj..573W

Dec 21. 1904.

Same Again B

8. 13.0

131.5 14.0 ✓
145.5
907.4 20.0 ✓
927.4 34.0 ✓ −4.13 ✓

128.7 19.5 ✓ −4.14 ✓
148.2
910.7 14.0 ✓
927.7 33.5 ✓ −4.16 ✓

Under Above.

~~40.5~~ 41.0
54.6 13.6 ✓
218.0 22.4 ✓
240.4 36.0 ✓ −4.00 ✓

36.0 20.6 ✓ −4.04 ✓
56.6
222.8 14.1 ✓
236.4 34.7 ✓ −4.09 ✓

Mean −4.09 ✓
Gen. Mean −4.10 ✓

8.21.40
3K 40.
A 17 20. ✓
tr −12. ✓
13 17 A. ✓

1.T 2h 47.m
H.A −2h 10m
Dec +44.1
P.A. 358.0
Products −8.5 A − 7.5 B − 6.9 k

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1904phae.proj..573W

Dec. 21. 1904.

Phot. F. W. Ilse
Carte Rec

V. Cephei
23h 50 +82.4
27 30
+3 +0 9½ cap.

Index Right + Above A

195.0 ← Var. dis.
257.5 62.3
3.3 +2.1
91.4 +0.4 −0.57

9.26.35

185.2 +7.6 −0.61
270.8
17.5 60.6
78.1 146.2 −0.68

Index left + Below B

106.5 61.0
167.5
276.7 +2.3
359.0 143.3 −0.71

97.5 +0.5 −0.74
178.0
288.1 +9.1
347.2 139.6 −0.72

Mean −0.68

9.36.0
6235
9318
+5 −12
1431 6

9
+5
14

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1904phas.proj..573W

Dec. 21, 1904.

B same again

9.38.50

107.5
167.0 59.5
277.1 74.5
355.6 138.0 −0.41

97.0 79.9 −0.40
176.9
284.4 59.1
347.5 139.0 −0.79

Ends Right Above. A

15.0 65.5
80.5
185.3 64.4
270.7 150.9 −0.56

75 4.2 −0.56
89.2 64.0
194.8 65.2
260.0 150.2 −0.57

Mean −0.62
Gen. Mean −0.62

85.40
9390
94675
+5 −12
14473

L. T. 4h 21m
H.A. +4h 22m
Dec. +82.1
P.A 328.3
Approx. −2.5 R −1.5 D

1904phae.proj..573W

Dec 21. 1904

Phot T. W. Webb
Eastern Rec.

D60 5.21 Mount Vac. +21°1146

6 6 +22.5
4 42

−1 24
10 36

Index Right + Above A

271.0 ← 88.5 ✓ Var. Lis.
359.5
10.37.1 101.0 70.0 ✓
171.0 158.5 ✓ −0.41 ✓

−0.42 ✓

285.0 66.8 ✓
351.8
~~97.8~~ 89.5 90.0 ✓
179.5 156.8 ✓ −0.44 ✓

Index Left + Below B

180.5
276.0 95.5 ✓
5.1 80.7 ✓
85.8 176.2 ✓ −0.07 ✓

186.5 81.4 ✓ −0.06 ✓
267.9
35 8.2 95.8 ✓
94.0 177.2 ✓ −0.05 ✓

Mean −0.24 ✓

10 48.20
85 20. ✓
10 42 40. ✓
+5 −12. ✓
---
15 42 28. ✓

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1904phae.proj..573w

Dec. 21. 1904.

S. T. 5h 22m
M. M. – 0h 46m
Dec. + 22:1
P. A. 207.5
Sprocket – 3.5 A – 2.5 B – 1.9 C

Full aperture used
W's watch used for trains to-night,
watch 12 sec. fast

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1904phae.proj..573W

Dec. 28. 1904. (Wednesday)

B & C. 1102. B.394.

6 12 52.7 6 13 0.0
13 52.7 14 0.0

Recp. sup. I. Phot. R. W. obs. Bowie rec. Compared with nearest of two cats. on free side = Sat. II.

Cor. Times.			Times of Trans.					
7	6	39	7	6	24	30.3	104.2	
7	6	49		6	34	30.5	134.5	
7	6	54		6	39	10.8	106.5	+2.8
7	7	22		7	7	30.4	137.0	
7	6	56						
7	12	1		11	46		susp.	
7	12	11			56		seen.	
7	12	17		12	2	51.4	99.2	+1.6
7	12	28		12	13	57.1	150.6	+1.3
7	12	39			24	60.5	93.5	+1.2
7	12	49			33	61.9	154.0	+1.1
7	12	57		12	41	68.9	92.1	+0.8
7	13	7			51	72.5	~~62.0~~ 161.0	+0.7
7	13	18		13	2	78.6	88.5	+0.4
7	13	30		13	14	85.2	167.1	+0.2
7	13	41			25	84.6	81.9	+0.2
					~~50~~			
7	14	20		14	4	89.1	166.5	0.0
7	14	30			14	91.6	77.4	−0.1
7	14	46			30		~~67.8~~ 169.0	

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1904phae.proj..573W

Dec. 28. 1904

Cor. Incr.							
~~7 15 20~~			~~50~~	~~24~~	~~1042~~	~~735~~	
				~~1345~~			
	15	4			172.0		
		16	97.7		74.5		
		30	96.0		172.2		
7 15 35 (Amear.)			193.7			1	
+16		41	96.8		76.1		−0.3
7 15 51 Cor. I.		53			172.1		
	16	7	98.8		74.7		
7 16 27		18	99.5		173.5		
+16			198.3			2	
7 16 43 Cor. I.	"	34	99.2		73.5		−0.4
	"	49			173.0		
	17	2			74.2		
7 17 27	"	24	97.9		172.1		
+16	"	35	98.7		73.1	3	−0.3
7 17 43 Cor. I.	"	46	196.6		71.8		
	17	59	98.3		72.2		
7 18 18	18	10	98.8		171.0		
+16	"	22	99.5		73.0	4	−0.4
7 18 34 Cor. I.	"	40	198.3		172.5		
	"	51	99.2		73.5		
7 19 16	19	11	98.5		172.0		
+16	"	27	100.0		72.2		
7 19 32 Cor. I.	"	36	198.5		172.2		−0.4
	"	51	99.2		73.6		
7 20 11	20	2	98.5		172.8		
+17	"	13	197.7		71.9	6	−0.3
7 20 28 Cor. I.	"	38	98.8		170.4		
	"	53			72.0		

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1904phae.proj..573W

Dec. 28 1904

7 22 20		21	11	99.7	171.7		
+17		23	29	100.9	72.5	7	−0.4
7 22 37	Cor. 7.	23	48	200.6	173.4		
		24	2	100.3	72.9		
7 24 36	"	"	15	99.3	172.2		
+17	"	"	31	100.5	72.2	A	−0.4
7 24 53	Cor. 7.	25	8	199.8			
			34	99.9	172.7		

Seeing a little blurry but fairly good.

B + C. 11A2.

7	41	40.4	
	42	40.4	

B. 394

7	42	0.0
	43	0.0

γ Camelop. Phot. Vr. obs. Bowie 122

7	24	+76.3
3	r	
−4	19	
7	41	

Comp. Star = +76° 24r (9.r)

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1904phae.proj..573W

Dec. 28. 1904

Index above.

	− 95.0 ←	C.S. dis.	A
.4.	= 177.7	82.7.	
	− 257.5	61.7.	
	− 349.2	144.4	+0.69.
4.			
	−107.0	61.7.	(+0.74.)
	−168.7		
	−280.2	74.0.	
	−358.2	139.7	+0.72.

Index below. B.

− 8.8	77.4.	
−86.6	62.8.	
−196.2	140.6	+0.76.
−259.0		
−14.5	62.5.	+(0.76).
−77.0		
−189.3	74.9.	
−268.2	141.8	+0.75.

mean +0.75.

	9	10	19
	17	67	67.
	8	63	63.
	+5		−11.
	14	3	52.

& 5748

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1904phae.proj..573W

Dec. 28 1904

Same again

Finding below.

-8.7			
-88.5	79.8		
-196.2	61.1		B
-257.3	140.9	+0.76	
-15.2	61.0	+(0.74)	
-76.2			
-187.5	41.5		
-269.0	142.5	+0.72	

Finding above.

-290.4	87.0 / 59.6	√9.3		A
-349.~~6~~				
-105.6	42.4			
-188.0	149.4	~~0.39~~	141.7	+0.74
-286.4	65.6	~~0.44~~		+(0.69)
-352.0				
-96.2	41.2			
-137.4	146.8	+0.64		

Mean +0.72

9 26=45

39 53

9 18 56

+5 -11

14 18 45

√. T. 5h 6m

H. A. −2h 25m

Dec. +76°.3

R. A. 346°.0

√bracket − 1.5 A

" − 0.5 B

" + 0.1 C

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1904phaq.proj..573W

Dec. 22. 1904

Ct's watch used for times on γ Canes Ven.
Watch 11. secs. fast.

Continually troubled by clouds during observations on γ Canes Ven

In third set on previous page, it was noticed that the first two settings were erroneous, either from clouds or accidental erroneous reading of circle. These two settings retaken.

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1904phae.proj..573W

Dec. 29 1904 (Thursday)

χ Cygni. Phot. V. W. to. Bonn rec.

19 K V− +3.6
2 K 3 V−
+ K V−0

Index S. A.

For means, see pp. 21 and 22.

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1904phae.proj..573W

Dec. 29 1904

Index left & above

9.1" cap. B

Var. dis.

216.2	2 3 8	
240.3	17.9	-3.62
39.4	41.7	3.20
57.3		(-3.70)
217.5	17.8	3.22
235.3	2 3 1	-3.72
37.0	40.9	3.24
blonde		
60.1		

55949

Index right & below A

125.3	25.2	
150.5	18.1	
308.4	43.3	-3.59
326.5		
189.0	19.2	-3.62
148.2	23.0	
305.5	42.3	-3.64
328.5		

Mean -3.66

6120

11 71 49

5 65 54

+5 -11

11 5 43

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1904phae.proj..573W

Dec 29 1904

Same again

Index R. & B

A

		var. dis	
	308.3	17.9	
	326.2	24.4	
6 30 10	126.0	42.3	= 3.64
	150.4		
	305.3	23.5	− 3.64
	328.8	18.6	
	128.8	42.1	= 3.65
	147.4		

Index L & A

B

	214.8	24.0	
	238.8	18.9	
	39.0	42.9	− 3.61
	57.9		
6 40 55			
70 65			
6 35 32	217.0		− 3.63
+5 −11	235.6	18.6	
11 35 21	37.3	23.5	
	60.8	42.1	= 3.65

Means − 3.64

Gen means − 3.65

.10

Weight. = 4.45

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1904phaq.proj..573W

Dec. 29 1904

S. T. $1^h\ 49^m$

H. A $+6^h\ 1^m$

Dec $+32°.2$

P. A $25°.0$

Spriket -2.5 ~~A~~ B

-1.5 C

γ Cassiop. Phot. I. Fr. ds. Bowie rec.

7 24 +76.3

2 4

− V 20

6 40

For measurements see next page

Comp. Star = +76° 24 V (9.V)

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1904phae.proj..573W

Dec. 29 1904

Index R & A

~~97.5~~

~~blonde~~

~~96.8~~

7 40 40 blonde A.

Index R & A

278.5	Com. Star dec.	
357.8	79.3	
104.9	65.7	
170.6	145.0	+0.67

+0.6

285.2	64.2	
349.4	83.0	
94.2	147.2	+0.63
177.2		

Index L. & B.

186.7	78.5	B.
265.2		
14.6	64.2	
78.8	142.7	+0.72

7 52 30	194.0	68.0 +0.66
92 70	262.0	
7 46 35	6.7	60.3
+5 -11	87.0	128.3 +0.61
12 46 24		

+0.66

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1904phae.proj..573W

Dec. 29 1904

S. T. 2h 48m
H. A −4h 41m
Dec +76.8
P. A 167.5 Ver. B.
Sproket −1.5 A
" −0.5 B
" +0.1 C

B. + C. 11 A2.

δ		
	40	√4.
	41	√4
	42	√4.

B. 394.

Δh		
	41	0.0
	42	0.0
	43	0.0

Dis. Jup. II. Phot. R. W. ob. Bowie rec.
Comp. with nearer of two sats. on prec. side
= Sat. I.

over.

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1904phae.proj..573W

Dec. 29 1904

			9	23	40	92.5	162.3		
9	24	30		24	5	90.1	254.8	1	
		+9				182.6			
9	24	39	"	"	53	91.3	166.0		0.0
				25	20		256.1		
			"	"	39	89.2	166.8		
9	26	20	"	26	3	91.0	256.0	2	
		9	"	"	38	180.2	165.0		0.0
9	26	29	"	"	58	90.1	256.0		
			"	27	26		167.0		
9	27	54	"	"	42	90.5	257.5	3	0.0
		9	"	"	58	90.8	164.2		
9	28	3	"			181.3			
			"	28	32	90.6	255.0		
9	29	1	"	"	51	92.8	165.0		−0.1
9	29	19	"	29	9	93.3	257.8		−0.1
9	29	48	"	"	38	84.5	164.5		+0.2
9	30	14	"	30	4	81.0	249.0		+0.3
9	30	38	"	"	28	82.0	168.0		+0.3
9	31	0	"	"	50	77.0	250.0		+0.5
9	31	28	"	31	18	64.8	173.0		+1.0
9	31	40	"	"	30	60.8	237.8		+1.2
9	32	0	"	"	50	58.0	177.0		+1.3
9	32	18	9	32	8		235.0		

Not seen later

Limit of visibility

9	33	32	172.0	
"	"	45	236.8	

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1904phae.proj..573w

Dec. 29, 1904

9	34	0 ✓	9	33	~~38~~	64.8 65.1	174.9		
		+10 ✓	"	34	45	129.9 65.0	240.0	+1.0 ✓	
				~~35~~					
9	34	10. ✓							

B. + C. 1182.

9	41	49.✓	
	42	49.✓	

B. 394.

9	42	0.0	
	43	0.0	

Sat. II came out of occultation only about 9 minutes before it disappeared in eclipse, so that it was practically out and close to limb of Jupiter throughout. Observations probably not of much value. Last 2 or 3 settings quite uncertain, being somewhat blurry.

U Cephei.

0	✓1	+21.3
4	4✓	
+3	✓4	

For measurements see next page

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1904phae.proj...573W

Dec. 29. 1904.

Index Above +

	276.8	Var. dis.	
18 2 22	357.5	20.7	I
	105.2		
	170.5	65.3 / 1K6.0	−0.6V
" 4 28	285.0	6K.2	−0.6
	349.2		
	92.8	47.2 / 1V1.4	−0.VV
	180.0		

Index Below B

	187.0	42.V	
10 10 5	269.5		
	14.0	6K.0 / 1K6.V	−0.6K
	78.0		
	196.5	66.K	−0.V2
" 11 55	262.9		
	4.0	46.6 / 1V3.0	−0.V2
	90.6		

24 V0	
10 7 12	
+V −11.	
1V 7 1.	

Mean −0.V9
4.41
7.42

6244.6299 Obs.
6244.7377 Comp. time min. cor. for Lt. Eq.
−0.1078

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1904phae.proj..573W

Dec. 29. 1904.

~~1420~~ ~~1824.0~~ II

~~2~~

~~16.5~~

Index Below (B)

13.0
10 16 10 81.0 6A.0 "
184.2 A9.6 "
273.8 1V7.6 " -0.43 v

4.9 A5.1 " -0.47 v
17 50 90.0
194.8 6A.2 "
263.0 1V3.3 " -0.V1 v

Index Above

286.2 6V.6 " (A)
20 40 251.8
91.0 92K "
183.4 1VA.0 " -0.42 v

271.8 90.K " -0.40 v
22 30 2.2
77 10 v v 102.2 69.0 "
10 19 1A. v v 171.2 1V9.K " -0.39 v
+V -11. v v
1V 19 7. v v

Mean -0.4K v
A.4V v
7.97 v

.63A3 V
.2377
-.099K v

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1904phae.proj..573W

Dec. 29. 1904.

Index Above

A

	283.8	62.0''		
10 25 50	351.8			III
	87.9	95.9 ''		
	183.8	163.9 ''	−0,30	
27 5	270.9	93.3 ''	−0,30	
	4.2			
	101.2	71.4 ''		
	172.6	164.7 ''	−0,29	

Index below

B

32 5	190.6	74.4 ''	
	265.0		
	358.7	93.3	
	92.0	167.7	−0,23
34 10	181.2	92.9	−0,26
11 9 10.	274.1		
10 29 42.	10.7	72.0	
+s −11.	82.7	164.9	−0,29
15 29 37.			
.645			
.7377			
−6,0922			

Mean −0,24
4,41
4,13

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1904phad.proj..673w

Dec. 29. 1904.

Index Below

B IV

10 39 30

190.7
264.2 73.5
358.0 93.8
96.5 / 172.0 −0.1

~~179.2~~
~~277.0~~ −0.1

40 55

356.4 93.8
94.8
190.2 76.2
266.4 / 170.0 −0.1

Index Above

A

47 5

277.2 81.9
259.1
85.9 / 101.9 / 183.8
187.8 / 176.2 +0.0

10 49.10
176 40.
10 44 10.
+ −11.
173 43 59
.6776
.7377
−.0621

268.0 101.8
9.8
94.2 82.3
176.5 / 184.1
177.9 +0.0

+0.0

Mean −0.02
2.41
2.39

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1904phae.proj..573W

Dec 29 1904

Index above

	276.8		A V
10 50 0	258.0	+1.2	
	85.0	102.6	
	187.6	103.8	
		176.2	+0.07
	265.5		
	10.2	10K.7	+0.11
	94.3	+3.K	
	177.7	1+4.1	+0.1V
		171.9	

Index below

	184.5		B
10 58 30	272.4	+7.9	
	353.5	107.0	
	100.5	194.9	+0.2+
		165.1	
	171.4		
	282.0	110.6	+0.33
	2.0		
	91.5	+9.5	
		200.1	
		159.9	+0.3+

Mean +0.22

+.41

+.63

11	1	12
41	161	87
10	55	37
5		-11
15	55	26

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1904phad.proj..573W

Dec 29 1904

Index below

B

VI

11 6 10

182.2
272.0 89.8
350.7 113.3
104.0 203.1
1r6.9 +0.44

11 8 20

171.2 112.6
283.8 +0.44
2.0 91.0
93.0 203.6
1r6.6 +0.4r

Index above

A

11 12 30

89.5 93.7
183.2
259.6 116.4
16.0 210.1
149.9 +0.r4

79.3 114.4
194.1 +0.r4
270.2 95.7
5.9 210.r
149.r +0.r4

11 15 35

42 3r

11 10 39.

+r -11.

16 10 24.

.6740
.6739
.7377
-.0634

mean +0.r4
8.41
8.92

1904phae.proj..573W

Dec. 29, 1904

S.T.	6^h	11^m
R.A.	$+5^h$	15^m
Dec.	+81.1	
P.A.	16.0	
Sproket	-1.5	A
"	-0.5	B
"	+0.1	C

W'a watch used for time to night
Watch 11 sec. fast

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1904phaa.proj...573W

Dec. 30 1904 Friday

γ Camelop. Phot. I. Yr. obs. Bonn

7 2K +76.3
12 20
− V K
6 V-6

Index R. A.

7 32 15 278.0 C.S. dia A.
357.9 79.9
105.8 62.9
168.7 142.8 +0.72

285.8 61.8 (+0.72)
347.6 81.0
95.5 142.8 +0.72
176.5

Index S. B.

44.30 185.7 83.4 B.
269.1 65.7
14.0 149.1 +0.59
79.7

195.0 66.5 (+0.60)
261.5 81.3
6.5 147.8 +0.62
87.8 Mean +0.66

7 44 30
76 45
7 38 22
+5 −11
12 38 11

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1904phae.proj..573W

Dec. 30 1904.

As some clouds came into the region, a second group was not taken.

S. T. $2^h\ 56^m$
H. A. $-4^h\ 34^m$
Dec. $+76°.4$
P. A. 165.5
Sproket -1.5 A
" -0.5 B
" $+0.1$ b

Z Draconis

11	46	+73.0
3	18	
−8	28	
3	32	

For measurements see next page.

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1904phae.proj...573W

Dec. 30 1904

Phot. T. W. obs. Bowie rec.

Index L & B. B

105.5 ← com. dis. (dis)

8 56 35

168.1	62.6'	
292.0	48.2'	
340.2	110.8'	+1.40

112.2		+1.40'
160.0	47.8'	
285.5	63.1'	
348.6	110.9'	+1.40'

Index R. & A. A

15.5		
76.1	60.6	
203.6	48.2	
251.8	108.8'	+1.45'

22.0		+1.42'
70.4	48.4'	
196.0	62.9'	
258.9	111.3'	+1.39'

9 7 50

17 63 85 ✓

8 61 72 ✓

+ − ✓

14 2 5 ✓

Mean +1.41'

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1904phae.proj..573W

Dec. 30 1904

S.J. $4^h.22^m$.
H.A $-7^h.16^m$
Dec. +73.0
P.A 353.0
Sprokets -0.5 A
" +0.5 B
" +1.1 C

As it came up cloudy, images could not be exactly set and the teloscope may have drifted a little in hour angle, but region thoroughly identified before measurement

Sky somewhat misty during obser- vations of above group, but the greatest possible care exercised 7

Phot. T. W. obs. Bowie rec.
W's watch used for times tonight. 7
Watch 7 sec fast

7

7
+5
12

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1904phaa.proj..573W

Jan. 4 Wednesday 1905.

Z Draconis Phot. J Obs. K. Bonn rec

11 46 +73.0

2 35

9 11

12 00

2 49

I

R & A

7 26. 20

19.0 C.S.D.

74.4 55.4

46.1

203.7 101.5 +1.62

249.8

A

249 +1.62

7 29. 30

67.9 43.0

58.1

197.5 101.1 +1.63

255.6

R & B.

7 34 10

288.6

345.8 57.2

112.5 48.3

160.8 105.5 +1.52

B

7 38 10

293.8 +1.50

127 70

7 31 62

+5 −11

12 31 51

341.0 47.2

106.0 60.2

166.2 107.0 +1.49

+1.56

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1904phae.proj..573W

Jan. 4. 1905.

Same again

II

L + B

7 42 30

286.2

B

347.5 61.3

113.0 45.2

158.2 106.5 +1.50

292.4 +1.44

4 6 .05 340.7 48.3

105.7 62.9

168.6 111.2 +1.39

Q + A

51 00

196.6

A

255.6 59.0

24.2 43.8

68.0 102.8 +1.59

204.0 +1.56

54 30 248.5 44.8

193 65 15.3 60.2

7 48 31 15.5 105.0 +1.54

+5 -11

12 48 20 +1.50

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1904phae.proj..573W

Jan. 4. 1905.

III

R. & A.

A

8 1 25	195.0			
	257.6	62.6		
	24.0	45.0		
	69.0	107.6	+1.47	
				+1.50
5 00	203.8			
	249.9	46.1		
	15.8	58.8		
	74.6	104.9	+1.54	

L. & B.

B.

~~9 35~~	~~108.2~~			
	~~165.2~~			
11.20	288.2			
	344.0	55.8		
	112.2	49.1		
	159.3	102.9	+1.59	
				+1.58
14 0	293.3			
	338.8	45.5		
31 45	107.2	58.5		
8 7 56	165.7	104.0	+1.56	
+5 -11				
				+1.54
13 7 45				

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1904phae.proj..573W

Jan 4 1905

L & B

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1904phae.proj..573W

Jan. 4 1905

B + C. 11 A 2.			B. 394.		
A	31	45.4	A	32	0.0
	32	45.5		33	0.0

B. + C. 11 A 2.			B 394.		
A	52	45.0	A	53	0.0
	53	45.0		54	0.0

Reap. of Jup. I Phot. R H. Obs Bonn rec.
Comp with sat. on prec. side = Sat II

over.

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1904phae.proj..573W

Jan 4 1905
Limit of vis.

			9	2	55	57.8	178.0		
9	3	1		3	24	57.3	235.8		9
		+16		"	36	115.1	197.7	+1.3	9
9	3	17		"	48	57.6	235.0		
9	8	21	9	8	5		seen		9
9	8	31		"	15	63.9	179.1	+1.0	9
9	8	44		"	28	67.3	243.0	+0.9	
9	8	52		"	36	70.0	175.7	+0.8	
9	9	4		"	48	76.7	245.7	+0.5	9
9	9	14		"	58	78.9	169.0	+0.4	9
9	9	24	9	9	8	81.1	247.9	+0.3	
9	9	34		"	18	85.2	166.8	+0.2	
9	9	42		"	26	88.5	252.0	+0.1	9
9	9	52		"	36	91.2	163.5	0.0	9
9	10	00		"	44	93.7	254.7	−0.1	
9	10	25	10	9		96.0	161.0	−0.2	
9	10	33		"	17	99.6	257.0	−0.4	9
9	10	43		"	27	101.6	157.4	−0.4	9
9	10	54		"	38	100.0	259.0	−0.4	
9	11	9		"	53	98.0	159.0	−0.3	
9	11	19	11	11	3	98.8	257.0	−0.3	9
9	11	29		"	13	94.6	158.2	−0.2	9
9	12	10		"	~~11~~ 54		252.8		
9	12	24	9	12	4	96.9	159.1		
		16		"	15	95.3	256.0		9
9	12	40		"	32	192.2	161.2	−0.2	9
						96.1			

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1904phae.proj..573W

Jan. 4. 1905.

			12	44		256.5	1
9	13	15	13	1	95.5	159.5	
		+16	"	11	97.5	255.0	
9	13	31	"	19	193.0	159.5	2 −0.2
			"	29	96.5	257.0	
			"	41	94.5	159.0	
9	13	58	"	49	100.0	253.5	
		+17	14	3	194.5	155.0	3 −0.3
9	14	15	"	17	97.2	255.0	
			"	28	94.5	160.0	
9	14	48	"	44	99.0	254.5	4
		+17	"	54	193.5	157.0	−0.3
9	15	5	15	4	96.8	256.0	
			"	17	95.0	159.5	
9	15	34	"	28	94.5	254.5	
		+17	"	38	189.5	160.0	5 −0.2
9	15	51	"	51	94.8	254.5	
			16	3	95.6	159.5	
9	16	28	"	13	94.0	255.1	
		+17	"	32	189.6	160.5	6 −0.2
9	16	45	17	4	94.8	254.5	
			"	15	94.5	159.5	
9	17	27	"	22	96.1	254.0	
		+17	"	31	190.6	159.0	7 −0.2
9	17	44	"	40	95.3	255.1	
			"	48		159.0	
9	18	2	"	57	97.5	256.5	
		+17	18	7	95.4	158.8	−0.2
9	18	19			192.9		
					96.4		

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1904phae.proj..573W

Jan 4 1905

18	16		254 2	δ	
"	27	93.7	159.8		
"	42	99.8	253.5		
19	2	193.5	156.2		−0.3
"	11	96.8	256.0	9	
"	20	96.5	159.0		
"	31	95.3	255.5		
21	24	191.8	159.0		−0.2
"	38	95.9	254.3		

9	18	50	
		+17	
9	19	7	

9	20	28	
		+17	
9	20	45	

Seeing rather blurry.

B.+C. 1182

9	26	42.5
	27	42.5

B. 394.

9	27	00
	28	0.0

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1904phae.proj...573W

Jan. 4: 1905 I

Z Draconis Phot J. H. Obs. Bowie rec.

11 46 +73.0

4 vv

-6 v-1

v 9

L & B. — C. N. Lis.

9 52 30

293.5
339.0 — 4v.v' — B.
118.2 — 3v.2'
154.0 — ∠13' — +2.16'

300.5 — 3H.1' — +2.13'
9 55 10 — 334.6
111.0 — 49.3'
160.3 — ∠3.4' — +2.10'

R & A

202.5 — Hv.0'
58 00 — 247.5 — A.
30.5
62.4 — 31.9' — ∠6.9' — +2.29'

210.6 — 32.4' — +2.31'
10 00 10 — 243.0
24.2 — H3.1'
67.3 — ∠v.v' — +2.33'

37 165 50'
9 56 28'
5 -11'
14 56 17'

Mean +2.22'

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1904phae.proj..573W

Jan 4 1905

Same again

II

R & A

199.6 ~ comm star dis

10 3 5 — 248.4 — 42.2' — A

29.3

62.8 — 33.5' — 23' — +2.13'

5 5 — 210.0 — 34.3' — +2.20'

244.3

23.5 — 31.1'

66.6 — 77.4' — +2.27'

L & B.

114.0

8 20 — 157.2 — 43.2' — B

298.0 — 35.0' — +2.25'

333.0 — 78.2'

120.2 — 31.2' — +2.35'

11 15 — 152.0

27 45 — 295.8 — 40.0'

10 6 56 — 335.8 — 71.8' — +2.45'

+5 -11

15 6 45

+2.24'

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1904phaa.proj...573W

Jan 4 1905

Same again L & B.

		116.8	3 A.	B	III
10	15	00	155.0		
			301.2	3 R. 6'	
			329.8	66.2'	+2.61'
			122.2	27.3'	+2.66'
			149.5		
18	10		296.8	3.6. A'	
			333.6	64.1'	+2.71'
			R. & A.		
			26.5	37.5'	A.
22	30		64.0		
			213.9	25.A'	
			239.7	63.3'	+2.74'
			32.0	24.7'	+2.42'
	26	00	56.7		
	81	40	209.2	34.6'	
10	20	25	243.8	59.3'	+2.49'
+5		11			
15	20	14			+2.74'

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1904phae.proj..573W

Jan 4 1904

IV

R & A

28.8 com star dia

10 30 30 60.2 31.4' A.

214.8 23.1'

237.9 √44.5' +3.02'

34.0 20.9'

10 33 25 54.9 +3.17'

210.8 29.4'

240.2 √0.3' +3.26'

L & B

301.0 29.2' B.

10 39 00 330.8

126.9 14.9'

145.8 √47' +3.33'

306.8 12.2' +3.48'

10 44 00 325.0

146 55 124.6 24.3'

10 36 44 √2.5' +3.63'

+5 -11 148.9

15 36 33 +3.32'

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1904phae.proj..573W

Jan. 4. 1905

S 2 B
304.2
10 52 05 325.1

An attempt was made to take a fifth group but as the thermom. was rather low & there was some wind and seeing a little flurry, it was not quite possible to do it well so a fifth group was aband.-

S. T. 6h 9m
H.A. -5h 32m
Dec. + 72 8
P.A. 171.5 Ver. B.
Sproket + 0.5 B
" + 1.5 b
"

W's watch used for times tonight
Watch 11 sec. fast

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1904phae.proj..573W

Jan 5 1905 (Thursday).

S S Cygni. Phot T. H. obs. Bonn rec.

21 3v +K2.6
2v 37
+K 2

Index L. C. V. dis. B.

207.5 39.v'
247.0 2v.2'
32.5 6v.3' +2.67v
~~211.8~~ 58.3

6 39 52

~~242.0~~ 212.0 +2.64'
241.5 29.v'
25.5 37.3'
62.8 66.2' +2.61v

Index R.

115.2 40.v'
155.7 A.
300.4 30.0'
330.4 70.v' +2.49v

120.4 30.3' +2.v0v
150.7
296.5 39.2'
336.3 70.1' +2.v0v

Mean +2.v7v

6 57 25
9 6 77'
6 48 38'
+5 -14'
11 48 24'

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1904phae.proj...5726

Jan 5. 1905.

Same again

	115.2		
	155.0	39.8	A
7 1 05	302.5	27.0	
	329.5	66.8	+2.61
	121.4	29.1	+2.64
	150.5		
	298.0	36.3	
	334.3	65.4	+2.66

Index Left

	25.3	38.2	
	63.5		
	211.0	29.0	B
	240.0	67.2	+2.60
	30.4	29.6	+2.60
	60.0		
	207.2	37.8	
	245.0	67.4	+2.59

	13	52	
	14	57	
7	7	28	
+5		-14	
12	7	14	

Mean +2.62

Gen. Mean +2.60

4.93

11.53

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1904phae.proj..573W

Jan. 5. 1905

S.J. 2^h 59^m
R.A. $+5^h$ 16^m
Dec. +42.9
P.A. 58.0 Ver. B.
Sproket -4.5 A
" -3.5 B
" -2.9 b

I Andromeda Nebula

0 1F +26.1
3 30
+3 16

9.5 bap

3 √2
3 3A

Measurements next page.

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1904phaa.proj..573W

Jan. 5. 1905

Index L & B

B.

288.0 ← C.S.D.
348.0 60.0.
94.5 AK.1.
178.6 TKK.1. +0.69.

276.4 79.K. +0.7K.
355.8
105.5 60.K.
166.2 139.A. +0.7A.

Index R. & A

192.6 65.K. A
258.0
4.6 A5.7.
90.3 K51.1. +0.55.

185.3 79.5. +0.6K.
264.8
15.2 63.0.
78.2 142.5. +0.72.

+0.69

8 43 15

8 51 45
9 4 60
8 47 30
+5 -14
13 47 16

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1904phae.proj..573W

Jan. 5. 1905

Same again

8 54 52

191.8	6 r. 0.	A
256.8		
5.2	1 r.	
86.7	146 r.	+0.6 K.

184.2	3.6	+0.6 K.
267.8	63.6	
13.8	147.2	+0.63.
77.4		
L & B.		

105.6	62.	B.
167.8		
2749	41.	
359.0	146.3	+0.6 r.

93.0	4 r.	+0.6 r.
178.5		
255.2	60 r.	
346.0	146.3	+0.6 r.

Mean +0.6 K

9 3 40

17 57 92.

8 58 76.

+5 −17.

14 59 2.

S.J. 4h 32m

H.A. 4h 12m

Dec. +26.0

P.A. 83.0 Ver. B.

Sprocket −0.5 B

" +0.5 C

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1904phaq.proj..573W

Jan. 5. 1905.

δ Cephei Phot J. W. obs. Bonn. rec.

23 50 +82.4
29 13
+5 23

9.5 cap

Index 2 & B — Var. dis. B

287.5 59.3'
347.1
91.6 47.2'
179.4 147.1' −0.63'

276.2 41.2' −0.62'
357.4
104.2 61.6'
165.8 142.2' −0.72'

Index R. & A A

198.0 56.2'
254.2
1.8 47.7'
89.5 143.9' −0.70'

182.0 24.7' −0.72'
266.7
18.0 57.1'
75.1 141.8' −0.74'
mean −0.70'

10 2 00

10 13 00
15 00
10 7 30
+5 −14
15 7 16

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1904phae.proj..573W

Jan. 5. 1905

Index R & A

196.6 — var. dis

10 16 25

254.0 ∨7.4

2.1 2∨9.

88.0 143.3 −0.71

181.5 2K.2 −0.70

266.3

16.5 5∨9.∨

76.0 144.3 −0.69

Index L. & B.

106.5

166.0 ∨9.∨

276.0 21.2

357.2 140.7 −0.76

91.5 27.7 −0.70

179.2

286.5 ∨2.7

345.2 146.4 −0.6∨

Mean −0.70

10 27 15

43 40

10 21 50

+5 −14

15 21 36

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1904phaq.proj..573W

Jan. 5. 1905.

S. J. 6 2m
H. A. +6h 3m
Dec. +82.2
P. A. 143.8 Der B
Sprocket. -2.5 B
-1.5 C

W's watch used for times tonight
Watch 14 sec. fast.

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1904phae.proj..573W

Jan. 7, 1905 (Saturday)

T. Androm. Phot. J. H. obs. Bonn rec.

0 8 +26.5 9.5 cap

2 47

+2 39

10

2 49

Index L & B.

277.3 < C.S. Dia.

353.5 76.2 v

104.2 √8.3 v

162.5 134.√ v +0.89 v

7 42 54 B.

287.4 √9.0 v +0.84 v

346.4

93.7 8.3 √

174.0 139.3 v +0.79 v

Index R & A.

191.7 68.3 v

260.0 A.

1.8 66.6 v

90.4 156.9 √ +0.44 v

182.5 25.√ v +0.√0 v

268.0

14.0 6√.0 v

79.0 150.√ v +0.√7 v

7 54 10

96 64

7 48 32

+5 −11

12 48 21

Mean +0.67 v

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1904phae.proj..573W

Jan. 7. 1905.
Same again
R & L

7 57 25

192.2		
258.1	65.9	
1.8	66.7	
88.5	126	+0.52

A

150.8	90.4	+0.48
271.2		
11.0	66.7	
77.7	157.1	+0.44

L & B

96.0	77.8	
173.8		
285.0	60.5	
345.5	138.3	+0.81

B

106.8	58.2	+0.82
165.0		
276.8	78.7	
355.5	136.9	+0.84

8	8	3
15	65	28
7	62	44
+5		-11
13	2	33

Mean +0.65
Gen Mean +0.66

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1904phae.proj..573W

Jan. 7. 1905.

S.J. $3^h\ 54^m$
S.A. $3^h\ 35^m$
Dec $+26°.0$
P.A. $84°.8$ Var. B
Sprocket -0.5 B
$+0.5$ C

S. S. Bygni Phot. J W. obs. Bonn rec.

21 35 +42.6
24 10
+6 35

For mosts. see pp. 63, 64.

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1904phae.proj...573W

Jan. 7. 1905.

Index Left

199.3 ← C. S. dis.

8 52 59

255.6	56.3'	B.
25.8	39.7'	
65.5	96.0'	+1.76'

204.2		+1.77'
245.0	40.8'	
17.6	54.4'	
72.8	95.2	+1.78'

Index R.

289.5		
338.2	48.7	
116.5	38.3	
154.8	87.0	~~2.00~~

~~1.85~~

296.5		
335.0	38.5	
110.3	59.7	
160.0	98.2	~~+1.70~~

~~9 2 25~~
~~17 54 84~~
~~8 45 42~~
~~+5 -11~~
~~13 45 31~~

S.T 4h 49m
R.A 7h 7m
Dec. +42.9
P.L. 235.0
Sprocket -4.5 A.
-3.5 B.
-2.9 b.

(over)

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1904phae.proj..573w

Jan. 7 1905

Index R.			
109.5			
161.7	52.2'		
295.5	38.5'		
334.0	90.7'	+1.90'	A.

115.0		+1.83'	
156.5	41.5'		
288.0	54.5'		
342.5	96.0'	+1.76'	

Mean +1.80'

9	23	0
17	75	59.
8	67	60.
+5		-11.
14	7	49.

Second group not taken as region was getting rather too low.

Much troubled by clouds on last two sets on previous page, images also varying relatively.

As it became clearer, last two sets retaken on this page

o Ceti Phot R. W. obs Bonner

2	12	-3.5
√	12	
+3	6	

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1904phae.proj..573W

Jan. 7. 1905.

Index R & B

28 2/2 ← Dar. dis

blonde. Stars gone

A

10 8 30

314.5	27.5'	
105.2	21.8	
130.0	49.3'	-3.30'

288.7	24.0'	-3.24'
312.7	27.8'	
106.2	51.8'	-3.19'
134.0		

Index L & A

B.

15.5	28.8'	
44.3	22.1'	
196.8	50.9'	-3.24'
218.9		

10 36 35

44 65

10 22 32'

+5 -11'

15 22 21'

17.1		-3.22'
40.7		
blonde again		
195.0	23.6'	
223.3	28.3'	
	51.9'	-3.20'

-3.23'

9.19

5.96

We's watch used for times tonight

Watch 11 sec. fast

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1904phae.proj..573W

Jan. 9. 1905. (Monday)

I Andromi. Phot J W. obs Bowie rec.

0 8m +26.5
2 55
+2 47

0 8m +26.5
3 2
+2 54

0 8
3 27
+3 19

7 0 All cloudy

7 15 " "

7 30 " "

7 45 " "

8 0 " "

Although it was pretty cloudy nevertheless opened dome and tried for I Andromi. Star could not be found through the clouds and clouds now are much thicker and more persistent. No stars visible

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1904phae.proj..573W

Jan. 10 1905. (Tuesday)

J Androm. Phot. J W. obs. Bonn. sec.
Full aperture used

0	8m	+26.5
2	30	
+2	22	
2	42	
+2	34	

Index L & B.
90.9 ← Bonn Star. dis.

7 16 45 B.

178.3	87.4'	
283.8	63.2'	
346.5	150.6'	+0.56'

+0.56'

103.9		
165.9	62.0'	
271.5	89.3'	
0.8	151.3'	+0.55'

Index R. & A.

A

4.5		
87.10	82.5'	
193.8	61.7'	
255.5	144.2'	+0.69'

7 26 55

42	100	
7 21	50	
+5	-9	
12 21	41	

15.8		+0.72'
75.8	60.0'	
184.8	81.2'	
266.0	141.2'	+0.75'

Mean +0.64'

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1904phae.proj..573W

Jan. 10. 1905

Same again

Index R & A

~~+.5~~ 3.0

A

7 31 20

87.0 84.0'

194.2 63.3'

257.5 147.3' +0.63'

+0.62'

12.4

76.9 645'

155.3 835'

265.8 148.0' +0.61'

Index L & B

270.7

1.5 90.8'

103.0 64.3'

167.3 155.1' +0.48'

B.

+0.52'

284.0

347.4 63.4'

91.5 89.0'

178.5 150.4' +0.57'

7	40	25
	71	45
7	35	52
+5		-9
12	35	41

Mean +0.57'

S.J. 3^h 28m Gem Mean +0.60

H.A. 3^h 8m

Dec. +26° 0

P.A. 83.4 Ver. B.

Sprocket -0.5 B

+0.5 C

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1904phae.proj..573W

Jan. 10. 1905.

SS bygni Phot J H. obs. Bonn rec

21	35	+42.6
27	35	
+6	00	
27	45	
+6	10	
28	15	
+6	40	

Clouds came up in the West and N. preventing observations of above variable although comparison star was previously found with phot.

060521 Doubt. Var. +21° 1146
Phot. J. H. obs. Bonn rec.

6	6	+22.5
4	45	
−1	21	
12	00	
10	39	

Full aperture used

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1904phae.proj..573W

Jan. 10, 1905.

Index & B

359.2
~~92~~91.6 var. dia B.
89.3 92.4
262.0 72.7
165.1 −0.25

8.2 −0.26
81.2 73.0
175.2 94.4
272.6 167.4 −0.24

Index R & A.

273.0
358.2 85.2
99.0 73.4
172.4 158.6 −0.41

279.2 −0.36
352.6 79.4
90.8 90.1
180.9 163.5 −0.31

Mean −0.31

	40	45
	66	50
9	33	25
+5		9
14	33	16

9 26 5

S.J 5h 31m
H.A −0 37m
Dec. +22.0
P.A. 27.0 Ver. B.
Spoket −3.5 A
−2.5 B
−1.9 C

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1904phae.proj..573W

Jan. 10. 1905.

Double Star ♋ ζ (Zeta) Cancri Phot R M. obs
Barnard.

8h	6m	+17.9
5	45	
−2	21	
12	00	
9	+9	

Abandoned. Sky rather cloudy to do anything further.

Hs watch used for times tonight
Watch 9 sec fast

Sky clear in observations of γ Androm but sky more or less cloudy during remainder of evening Although sky was somewhat cloudy during observations of 060521 yet the altitude was somewhat high and the images quite steady in their light Observations of Game considered good

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1904phae.proj..573W

Jan 13 1905 (Friday)

T. Androm. Phot. J H. obs. Bowie sec.

		0	8 m	+26.5
		3	18	
		+3	10	
		3	36	
		+3	28	
		4	8	
		4	0	
		4	35	274.5
8	54	00	4 27	blonde thicker again
9	2	10		358.7

blonde all thick everywhere, impossible to do anything further continually attempted to get T Androm. through slightly thinner place in clouds, but impossible

5

5

5

+5

10

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1904phae.proj..573W

Jan. 14. 1905. (Saturday)

X Cygni Phot. J W. obs. Barnard
9.5 cap

19 45 +32.6

25 3~

5 18

7

5 25

Index A & B

29.8 ↔ var. dis
58.6

5 45 45

214.8 28.8
227
237.5 51.5 −3.21

34.0 −3.14
56.6 22.6
209.8 32.2
242.0 54.8 −3.07

Index B. B

299.5
331.3 31.8
22.6
124.0 54.4 −3.08
146.6

−3.04

303.5
327.4 23.9
32.2
119.6 56.1 −3.01
151.8

mean −3.09

5 53 55
98 100
5 49 50
+5 −8
10 49 42

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1904phae.proj..573W

Jan. 14. 1905

Same again R. & B

5 57 35

298.5
332.5 34.0
22.7
123.8 56.7' -2.99"
146.5

A.

304.4 -3.03"
327.4 23.0'
119.4 31.6'
151.0 54.6' -3.07"

Index Lat.

210.5
241.5 31.0'
34.2 21.8'
56.0 52.8' -3.15"

B.

214.0 -3.10"
237.2 23.2'
29.0 32.0'
61.0 55.2' -3.05"

6 6 35
11 63' 70"
5 61 65'
+5 -8"
11 1 57"

Mean -3.06"
Sum Mean -3.04"
A. 10"
Y. 0.2"

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1904phae.proj..573W

Jan 14. 1905

S. T. 2^h 17^m
H. A $+6^h$ 27^m
Dec. +32
P. A. 26.0 Ser. B
Sprocket -2.5 B
-1.5 b

S S Cygni Phot. T. St. obs. Barn. rec

21	35	+42.6
26	35	
+5		

For measurements see next page.

(over.)

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1904phae.proj..573W

Jan 14 1905

Index L & A

179.0 com star dec B

6 54 48

274.9 95.9 ✓
9.6 73.9 ✓
83.5 169.8 ✓ +0.19 ✓

185.2 +0.11 ✓
264.2 79.0 ✓
356.5 ~~39.1~~
~~+8.1~~
95.6 99.1 ✓ +0.03 ✓
172.1 ✓

Index R. & B.

84.8 A
184.2 99.4 ✓
~~277.5~~ ~~94.4~~
~~+83.8~~
351.9 173.8 ✓ +0.12 ✓

96.1 ~~56.6~~ +0.14 ✓
172.7 ~~+0.0.5~~ 76.6 ✓
265.9 ~~+89.1~~ 94.9 ✓
~~6.4~~ ~~94.9~~
0.2 171 ✓ +0.16 ✓

7 2 20
13 56 68
6 58 34
+5 -8
11 58 26

Mean +0.12 ✓
.03 ✓
Mean. 9.0 ✓

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1904phae.proj...573w

Jan. 14. 1905

S. T. 3h 12m
R. A 5h 30m
Dec +42.9
P. A 58.0 Var. B.
Sprocket -4.5 A
-3.5 B
-2.9 b

I Androm Phot. I. K. obs Bouvier rec

0	8m	+26.5
3	15	
+3	7	

For measurements see next page

(over)

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1904phae.proj..573W

Jan. 14. 1905

Index L & B.

272.2 comptar dis
1.2

B

7 37 08

101.2 89.0'
169.0 67.8'
156.8' +0.44" ~~0.45~~

283.5 +0.42"
348.8 65.3'
90.9 86.9'
177.8 152.2' +0.53"

Index R. & A

A

183.7
267.8 84.1'
11.0 66.0'
77.0 150.1' +0.57"

+0.59"

193.5
258.0 64.5'
3.0 83.7'
86.7 148.2' +0.61"

Mean +0.54"

7 46 20
14 83 28
7 41 44
+5 −8
12 41 36

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1904phae.proj..573W

Jan. 14 1905
Same again
Index R. A

182.5
269.4 86.9
14.9 60.6
75.5 147.5 +0.62 ✓ A

+0.59 ✓

192.3
257.5 65.2
1.9 85.8
87.7 151.0 +0.56 ✓

Index L. B

91.1
176.8 85.7
283.2 66.3
349.5 152.0 +0.54 ✓ B

+0.56 ✓

103.1
16 6.1 63.0
273.2 86.8
.0 149.8 +0.58 ✓

7 48 35

7 55 38
103 73
7 51 66
5 -8
12 51 58

Mean +0.57 ✓
Gen. Mean +0.56 ✓

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1904phae.proj..573W

Jan. 14. 1905

S.T. $4^h\ 8^m$
R.A. $+3^a\ 50^m$
Dec. +26.0
P.A 84.0 Vesi. B.
Sprocket −0.5 B
" +0.5 b

0 beti Phot. R. H. obs. Bonn. rec.

2	12	− 3.5
4	26	
+2	14	

See Page 81.

8
+5
13

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1904phae.proj...573W

Jan. 14. 1905.

Index R. & B

110.2 var dis
125.5 15.3'
290.9 13.4'
304.3 28.7' −4.50 ✓

110.5
124.5 14.0'
~~+7.4~~ 15.9'
290.1 ~~31.4~~ ~~4.30~~
306.0 29.9' −4.41 ✓

Index L. & A

18.8
34.8 16.0'
200.3 12.7'
213.0 28.7' −4.50 ✓ (B)

−4.50 ✓

20.0
~~32.8~~ 3.0 13.0'
198.8 15.8'
214.6 28.8' −4.49 ✓

8 46 37

.55 11
101 48
8 50 54
+5 −8
13 50 46

Means −4.48 ✓
9.19 ✓
Range 4.71 ✓

S. J. 5h 6m
H. A +2 50
Dec −4.0

We watch used for times tonight
Watch 8 sec fast

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1904phae.proj..573W

Jan. 16. 1905. (Monday)

B. & C. 1142 — B. 394.

5 59. 59.2 — 5 59 00

6 00 59.1 — 6 00 00

Reap of Jup. II Phot R. W. obs. Bmw rec.

Compared with one of two Sat. on fol. side Jup, the comp Sat being the nearer to Jup of the two also the more preceding, more northern and brighter of two = Sat III

6	20	32			112.0	
		47	15.0		127.0	
		58	16.9		112.0	+2.7
	21	20	31.9		128.9	

24	39	25	36		seen	
24	57	25	54	33.0	103.0	+2.6
25	7	26	4	31.0	136.0	+2.8
25	14		11	35.9	105.0	+2.4
25	22		19	38.9	140.9	+2.3
25	31		28	41.0	102.0	+2.1
25	39		36	47.8	143.0	+1.8
25	48	6	45	48.3	95.2	+1.7
25	58	26	55	48.0	143.5	+1.8
26	10	27	7	54.0	95.5	+1.5
26	19		16	60.3	149.5	+1.2
26	28		25	59.0	89.2	+1.2
26	38		35	60.7	148.2	+1.2
26	47	27	44	63.5	87.5	+1.0
26	57	27	54	62.2	151.0	+1.1
27	12	28	8	64.7	88.8	+1.0

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1904phaa.proj..573W

Jan. 16. 1905.

6	27	29		25	67.3	153.5		+0.9
	27	43		39	69.8	86.2		+0.8
	27	52		48		156.0		
			29	60	72.6	85.2		
6	29	15		10	75.0	157.8		
		56			147.6			
6	28	19		20	73.8	83.1		+0.6
				31		158.1		
				40	73.3	84.2		
6	29	56		50	72.8	157.5		
		56			146.1			
6	29	0	30	2	73.0	83.2		+0.7
				12		156.0		
				24	73.0	83.8		
6	30	39		33	73.6	156.8		
		56			146.6			
6	29	43		44	73.3	83.2		+0.6
				54		156.8		
			31	4	74.1	83.0		
6	31	28		22	72.3	157.1		
		56			146.4			
6	30	32		38	73.2	84.5		+0.6
				49		156.8		
			32	2	73.9	83.8		
6	32	17		10	73.3	157.7		
		56			147.2			
6	31	21		22	73.6	83.5		+0.6
				33		156.8		
				47	73.4	83.6		
6	33	6	33	1	73.6	157.0		
		56			147.0			
6	32	10		13	73.5	83.2		0.6
				21		156.8		
				30	73.2	83.5		
				38		156.7		

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1904phae.proj..573W

Jan. 16. 1905

6	33	43		45	73.4	83.1		+0.6
		−56	33		146.6			
6	32	47	~~34~~	58	73.3	156.5	7	
			34	12	73.3	83.7		
6	34	57		23	71.7	157.8		
		−56			145.0	84.3		
6	34	1	35	30	72.5	156.0	8	+0.7
				42				
			36	8	74.4	83.0		
6	36	24		18	72.4	157.4		
		−56			146.8			
6	35	28		30	73.4	84.1	9	+0.6
				42		156.5		
			36	52	73.5	83.3		
6	40	2	37	16	72.6	156.8		
		55			146.1			
6	39	7	42	48	73.0	84.1	10	+0.7
			43	12		156.47		

Seeing fairly good

B & C		1182	B		394
6	53	54.0	6	54	0.0
6	54	54.0	6	55	0.0

Hewes at $6^h\ 6^m\ 24^s$. B. & C. 1182 was 54^s fast.

" " 6 17 15. " " " 57^s "

" " 6 24 2 " " " 56^s "

" " 6 32 49 " " " 55^s "

" " 6 49 36 " " " 54^s "

7

7
+5
12

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1904phaa.proj..573W

Jan. 16. 1905.

S S bygni Phot. 3 W. obs Bonn. rec

21 35 +42.6
27 . 16
5 41

Index L & R

3.0
86.4
193.4
256.3

com. star dis

83.4'
62.9'
146.3' +0.65'

B.

7 29 55

14.1
76.0
186.0
266.0

+ 0.70'

61.9'
80.0'
141.9' +0.74'

Index R & B.

271.2
354.5
103.1
164.8

83.3'
61.7'
145.0' +0.67'

A

284.0
346.4
92.6
176.8

+0.66'

62.4'
84.2'
146.6' +0.64'

Mean +0.65'

7 39 20

68 75
7 34 38
+5 −4
12 34 34

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1904phae.proj..573W

Jan. 16 1905

Same again

271.7
357.8 86.1'
104.2 61.6'
165.8 147.7' +0.62'

A

283.0 +0.62'
346.5 63.5'
92.3 84.4'
176.7 147.9' +0.62'

Index L. & A

183.7
264.5 80.8'
13.6 61.9'
75.5 142.7' +0.72'

B.

~~191.2~~ +0.70'
193.2
256.8 63.6'
5.0 81.0'
56.0 144.6' +0.68'

Mean +0.66'
Gen Mean +0.67'

8.93
+9.60

7 42 00

~~49 18~~
51 00
93 00'
7 46 30'
+5 -4'
12 46 26

S. J. 4h 01m
H. A. +6h 20m
Dec. +43°.0
P. A 59.0 Gen B.
Sprocket -4.5 A
-3.5 B
-2.9 b

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1904phae.proj..573W

Jan. 16. 1905.

I Anderson Phot. I Hkobz. Bonn. rec

0 8 + 26.5
4 39
4 31

Index L & B.
91.1 comp. star dis.
178.5 87.4'
282.2 67.6'
349.8 155.0' +0.48'

8 51 28 B.

101.0 +0.50'
169.5 68.5'
272.0 85.0'
357.0 153.5' +0.51'

Index R & A

3.5
85.8 82.3'
194.3 61.9'
256.2 144.2' +0.69'

A.

8 59 2
110 30
8 55 15
+5 -4
13 55 11

14.0 +0.71'
73.5 59.5'
184.0 82.5'
266.5 142.0' +0.73'

~~Index~~ Mean +0.60'

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1904phae.proj..573W

Jan. 16. 1905.

Same again R & A

4.0

9 1 21

86.0	82.0°	
192.9	63.7°	
256.6	145.7°	0.66°

A

13.5 +0.66°

77.0	63.5°	
184.0	82.0°	
266.0	145.5°	0.66°

Index L & B.

269.5

357.8	88.3°	
102.6	66.9°	
169.5	155.2°	0.47°

B.

283.2

3~~49.0~~	50.6	+0.48°
92.2	67.4°	
	87.0°	
179.2	154.4°	0.49°

9	9	13
	10	34
9	5	17
+5		-4
14	5	13

S.J. 5h 23m mean +0.57°
H.A. +5h 5m Sem. mean +0.52
Dec. +26.0
P.A. 84.0 Ver. B
Sprocket -0.5 B.
+0.5 b.

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1904phae.proj..573W

Jan. 16. 1905

Σ 1123. Phot. R.

α	δ	−Δ.9
5	40	
−2	20	
12	00	
9	40	

Heavy clouds came up covering the whole sky so that nothing further could be accomplished

Ht's watch used for times tonight
Watch 4 sec fast

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1904phae.proj..573W

Jan. 17. 1905. (Tuesday)

S S bygmi Phot J. K. de Bonne rec

21 35 +42.6
28 27
6 52
28 34
28 59 Index L.

189.4 ← comp star. dec.
8 34 22 260.5 71.1' B
19.0 53.0'
72.0 124.1' +1.10'

198.0 +1.16'
251.0 53.0'
11.8 66.1'
77.9 119.1' +1.21'

Index R.
100.2 A
166.5 66.3'
287.4 56.3'
343.7 122.6' +1.14'

107.2 +1.13'
8 45 10 162.4 55.2'
79' 32' 281.8 68.2'
8 39 46' 350.0 123.4' +1.12'
+5 +16'
13 40 2'

Mean +1.14'
8.93
+10.07'

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1904phae.proj..573

Jan. 17. 1905.

S.J. 4 58
H.A. 7h 15m
Dec. +43.0
P.A 238.5 Dec B
Sproket −4.5 A
−3.5 B
−2.9 b

J. Androm Phot J Kobe Bruce rec

0 8 +26.5
5 2
+ 4 54
5 16
+5 8

blonde

For measurements see next page.

(over)

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1904phae.proj..573W

Jan. 17. 1905

Index d. & B

9 22 55

93.1 com star dis.
176.4 83.3'
283.5 66.0'
349.5 149.3' +0.59

blonde

99.2 +0.57
169.2 70.0'
276.5 81.5'
358.0 151.5' +0.55

blonde

Index R. & A.

Stopped by clouds

J. J. 6 13
H. A. 5 50 m
Dec +26.0
P. A. 267.0
Sprket -0.5 B
+0.5 b

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1904phae.proj..573W

Jan 17 1905

10 10 00 Waited some little time to see if sky would not clear again so that preceding group could be finished but clouds still thick and quite heavy everywhere

The quantities given in the preceding schedule at bottom of previous page must not be considered as necessarily rigorously exact for on account of clouds the images could not be superposed and the tel. during the elapsed time may have drifted some in hour angle

The region however of X I Androm was thoroughly identified in advance and the right objects observed.

W's watch used for times tonight
Watch 16 sec slow

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1904phae.proj..573W

Jan. 19. 1905 (Thursday)

S.S. bygni Phot. J. H. obs. Bmi. rec.

21 35 42.6
27 34
+5 59 Index L.

21.8 ← com. star dis.
67.7
204.9 45.9'
240.9 36.0'
81.9' +2.14'

7 39 18

~~25.5~~ 28.1 33.4' +2.08'
~~63.8~~ 61.5 52.9'
~~207.9~~ 198.0 86.3' +2.01'
250.9

Index R.

288.5
339.6 51.1'
116.8 40.2'
157.0 91.3' +1.88'

Blonde

297.8 +1.90'
338.0 40.2'
110.2 49.3'
159.5 89.5 +1.93'

8 13 35
15 52 53
7 56 26
+5 +42
12 57 8

mean +1.99'
.93
10.92

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1904phae.proj..573W

Jan 19 1905

S. T. 4 36
R. A + 6h 53m
Dec. + 43.0
P. A. 238.1 Ver. B.
Sproket -4.5 A
" -3.5 B
" -2.9 b

Measurements made with some diffiulty though more or less floating clouds, the greatest possible care however exercised, (observer waiting for clearer spaces between clouds) and observations considered good.

J Androm. Phot J R.A. Bowie rec.

0 8 +26.5
4 42
+ 4 34

For measurements see next page

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1904phae.proj..573W

Jan 19 1905

L e B

924 com star dia

8 38 26

177.7
285.0 85.3'
346.6 61.6'
146.9' +0.64'

B

101.5 +0.64'
168.0 66.5'
275.9 80.7'
356.6 147.2' +0.63'

Index R & L

2.3
85.8 83.5'
195.0 61.2'
256.2 144.7' +0.65'

A

11.9 +0.66'
75.8 63.9'
184.4 82.2'
266.6 146.1' +0.65'

Mean +0.65

8	49	48
	87'	74'
6	43	67'
+5		+42'
13	44	49'

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1904phae.proj...573W

Jan. 19. 1905.

Same again R & A

4.0

8 51 18

85.4 81.4'
192.2 67.0'
259.2 148.4' +0.61' A

13.2 +0.64'
76.5 63.3'
185.9 81.4'
267.3 144.7' +0.68'

Index L. & B.

273.0
357.8 84.8'
101.4 64.6'
166.0 149.4' +0.59' B

282.8 +0.60'
9 1 35 347.6 64.8'
17 52 53 347.6 84.1'
8 56 26 92.8 148.9' +0.60'
+5 +42' 176.9
13 57 8'

Mean +0.62'
Gn. Mean +0.64

S.J. 5 26
H.A. 5h 7m
Dec. +26.0
P.A. 85.0 Ver. B
Spokes −0.5 B
+0.5 b

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1904phae.proj..573W

Jan 19 1905

δ Cephei Phot J H. obs Bowie rec.

23	50	+82.4	9.5 bap
29	45		
+5	55		
30	53		
?	3		

9 46 00 bloudy

30	v− v	
23	v 0	
+7	v	

10 46 35

Index L & B

283.0	64.8	var. dis
347.8	75.8	
96.2	140.6	−0.76
172.0		B.
		−0.79
277.5		
353.0	75.5	
104.0	62.2	
166.2	137.7	−0.82

Index R. & A

193.5		
257.6	64.1	
4.0	81.5	
85.5	145.6	−0.66
		A
185.5		−0.69
266.0	80.5	
13.1	68.1	
81.2	148.6	−0.60
		Mean −0.71

10	54	22
	100	57
10	50	28
+5		+42
15	51	10

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1904phae.proj..573w

Jan. 19. 1905.

S. T. 7h 25m
H. A. +7h. 27m
Dec. +82.0
P. A. 324.5 Ver. B.
Sprocket -2.5 B
-1.5 b

Hi's watch used for times tonight
Watch 42 sec. slow

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1904phae.proj..573W

Jan. 20. 1905. (Friday)

B. + C. 1142. B. 394.

6 46 44.5 6 47 0.0

47 44.5 6 48 0.0

Resp of Jup I Phot. R. U. obs. Bonn rec
compared with nearer of two Sats. (before eclipse)
on fol. side = Sat II

East. Time.							
7h	28m	42.v	7	28	26	susp	
					~~43~~		
7	29	20.v		29	4	70.v	172.5	0.8v
7	29	8.8v		"	12	73.8v	243.0	0.6v
7	29	38v		"	22	76.8v	169.6	0.5v
7	29	49v		"	33	79.3v	246.0	0.4v
7	30	2v		"	46	80.3v	166.7	0.4v
7	30	13v		"	57	80.7v	247.0	0.4v
				30	7		dinde	
7	30	36v		30	20	82.0v	166.5	0.3v
7	30	57v		"	41	85.4v	248.5	0.2v
7	31	11v		"	55	82.1v	163.1	0.1v
7	31	20v		31	4	90.4v	251.2	0.0v
7	31	31v		"	15	94.3v	160.8	−0.2v
7	31	44v		"	28	94.6v	255.1	−0.2v
7	32	9v		"	53	94.7v	159.5	−0.2v
7	32	25v		32	9		255.0	
~~7~~	~~32~~	~~39~~		"	23		159.8	
7	~~32~~	~~60~~	← 7 32 ~~46~~ 52v	"	34	94.7v	254.5	
7	~~33~~	~~3~~		"	47		1580	1−0.2v
	~~33~~	~~21~~		33	5	97.0v	255.0	
				"	19	191.7v 97.8v	160.1	~~0.2~~

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1904phae.proj.--573w

Jan. 20. 1905.

			7.	3-3	31	94.7	254.8	
7	33	37		"	44		159.0	−0.2
				"	55	96.8 / 191.5 / 95.8	255.8 / 160.5	−0.2
				34	16	94.7	255.2	
7	34	40		"	32		159.7	−0.2
				"	49	95.0 / 189.7 / 94.8	254.7 / 160.2	−0.2
				35	5	94.9	255.1	
7	36	12		"	22		clouds	−0.2
7	35	56		"	35			
				"	45			
				36	18	95.7 / 190.6 / 95.3	161.5 / 257.2	
				"	31	94.4	161.0	
		1		"	59		255.4	
7	37	34		37	20		161.9	−0.2
				"	48	95.3 / 189.7 / 94.8	257.2	
				38	12	94.7	161.8	
7	40	0		"	26		256.5	
7	39	44		"	50		159.5	−0.2
				40	39	97.2 / 191.9 / 96.0	257.0	
				40	59	97.0	159.1	
		44		41	9		256.1	
7	41	28		"	18		159.9	−0.2
				"	36	96.0 / 193.0 / 96.5	255.9	
				"	50	97.1	158.9	
		46		42	7		256.0	
7	42	30		"	16		160.1	−0.3
				"	37	97.1 / 194.2 / 97.1	257.2	
				43	1			

stopped to see if sweeps sets had been altered for constant.

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1904phae.proj..573W

Jan 20 1905.

~~Limits of visibility~~

43	46	188.0
44	5	232.8
	24	187.9

Limit of visibility again

	7	45	48		187.0
		46	29	Kv.v	232.5
7	46	~~26~~	39	Kv.v	187.5
			46	Kv.v	233.0

~~47~~ As sky became somewhat clearer a second limit of vis. was taken just above and the first one abandoned before finishing

B. & C. 1142.

7	50	43.5	
	51	43.4	

B. 394.

7	51	0.0
	52	0.0

The whole of the above eclipse taken through more or less passing clouds The clouds in general were rather more dense during the varing part of the eclapse than during the latter part.

Owing to clouds the settings could not be started as early or made as frequently during the varing part of the eclipse, as they would have been had the sky been clear. Seeing most of the time somewhat hurry, but at other times rather better.

The general character of the clouds was that of varing density, there being sometimes rather clear spaces while at other times the clouds were thicker

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1904phae.proj...573W

Jan. 20, 1905.

S S bygm. Phot. I ⅌ obs. Bonn. rec.

21 3.5 42.6

28 41

+7 6 Abandoned.

Region too low, moon bright and some clouds

I Androm. Phot. I ⅌ obs, Bonn rec.

o δ +26.5°

4 47

+4 39

For measurements see next page.

(over)

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1904phae.proj..573W

Jan. 20. 1905.

Index L. 2 B

B

273.8 ← com. star. dist

355.5 81.7'

δ 42 00 103.0 63.5'

166.5 145.2' +0.67'

284.2 +0.67'

347.5 63.3'

94.0 82.1'

176.1 145.4' +0.67'

Index R. & A

A

182.8

265.3 82.5'

13.2 63.3'

76.5 145.8' +0.66'

192.5 +0.64'

257.5 65.0'

2.8 83.2'

86.0 148.2' +0.61'

Mean +0.66'

δ	52	01
	94	01
8	47	00
5		+42
13	47	42

S. J. 5h 16m

H. A. +4h 57m

Dec. +26.0

P. A. 264.0 Ver. B

Spokes −0.5 B

+0.5 B

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1904phas.proj...573W

Jan. 20. 1905.

Σ 6 v v c Leporis. Phot. R. Yr. obs. Bowie rec.

v	7	−12.0
5	5 5	
48		

Abandoned, moonlight too bright to see companion.

Σ 66 A β Orionis. Phot. R. Yr. obs. Bowie rec.

v	10	−2.3
6	10	
+1	00	

Seeing too flurry to measure this double

Σ 919 11 Monoc. Phot. R. Yr. obs. Bowie rec.

6	23	−6.9
6	20	
−0	3	

(over.)

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1904phae.proj..573W

Jan 20. 1905.

Pos. Ang. 130° Dist 2".1 Mags. V.0, V.1

Index L

175.5 ← var. dis

10 10 06	258.0	82.5'
	355.5	84.5'
340	90.0	167.0' −0.25'

	173.5	−0.21'
	260.0	86.5'
	355.0	84.4'
	79.4	170.9' −0.17'

Index R.

	84.0	
	169.8	85.8'
	260.4	94.1'
	354.5	179.9' 0.00

10 18 59	85.0	+0.04'
28 65	178.5	93.5'
10 14 32	262.0	91.0'
5 42	353.0	184.5' +0.02'
15 15 14		177.5'

Mean −0.02'

North preceding component assumed to be slightly the brighter,

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1904phas.proj.:573W

Jan. 20. 1905

044062 – Cambridge Phot. Ht. de Bonne roc.

4	39	+62.0	9.5
7	0		
+2	21		

Index L. of A

	189.2	← com. star. dis.	
10 55 40	264.6	77.4°	
	15.3	58.7°	
	74.0	136.1°	+0.85°

B.

	197.5		+0.80°
	256.5	59.0°	
	8.6	71.5°	
	80.1	140.5°	+0.76°

Index R. of B

	100.5		
	170.7	70.2°	
	284.6	58.4°	
	343.0	128.6°	+1.01°

A

	105.9		+0.99°
	165.0	59.1°	
	280.1	71.4°	
	351.5	130.5°	+0.97°

11	2	50
21	57	9.0°
10	58	45°
5		+42°
15	59	27°

Mean +0.90°

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1904phae.proj..573W

Jan. 20 1905

S J 7h 23
L. S 2h 37m
Dec + 67.8
R.A 261.5 Ver B
Sprokets −1.5 B
−0.5 b

Ha watch used for times tonight
Watch 42 sec. slow

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1904phaa.proj..573W

Jan. 23. 1905 (Monday)

B & C 1182

5 54 25
55 25

B 394

5 54 00
55 00

Use Sat II ~~Pass~~ R. A. as Bruce rec
Comp with nearer of two Sats on preceide = Sat I

6 32 59
37 13
~~38 10~~

154.0
169.0
~~275.8~~

Nothing could be done in a way of observing the eclipse.

Sat II came out of Occultation only a few minutes before it disappeared in eclipse Sat II seen, but all the time close to the limb of Sat. which latter was boiling and overlapping Sat. most of the time

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1904phae.proj..573W

Jan. 23. 1905.

SS Bygni Phot. J. H. de. Bonne rec

21 35 42.5

27 27

+5 52

Index L

	star	dec
209.0		
246.0	39.0'	
30.8	27.0'	
57.8	66.0'	+2.64'

7 9 5 B

212.6 +2.72'

237.5	24.9'	
26.0	36.4'	
62.4	61.3'	+2.81'

Index R

~~116.2~~		
153.2	37.0'	
300.0	28.0'	+2.68'
328.0	65.0'	~~2.75~~

A

7 18 16

27' 21'

7 13 40'

+5 +22'

12 14' 2'

120.5 +2.62'

145.5	28.0'	
295.0	40.4'	
335.4	68.4'	+2.56'

+2.67'

8.93'

+11.60'

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1904phaa.proj..573W

Jan 23 1905

S. J. H 2
L. A b 20
Dec +42.9
PA 239.5 Ver B
Spokes -4.5 A
-3.5 B
-2.9 b

Seeing somewhat hurry

Triadrom.
0 f +26.5
4 1f
+4 f

Phot. J. H. obs. Barn. rec.

For measurements see next page

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1904phae.proj..573W

Jan. 23. 1905.

L & B

	294.6	com star dia	
7 58 35	356.4	81.8'	
	104.3	63.1'	B
	167.4	144.9'	+0.62'
	285.0	60.9'	+0.6F'
	345.9		
	92.5	23.7'	
	196.2	144.6'	+0.62'
	184.6		
	265.0	20.4'	
	15.0	60.5'	A
	75.5	140.9'	+0.76'
	192.5	62.2'	+0.74'
	254.7		
	4.9	20.3'	
	85.2	142.5'	+0.72'

8	5	30
15	63	65'
7	61	62'
5		+22
13	2	24'

Mean +0.71'

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1904phae.proj..573w

Jan 23 1905

S.J. 4 38
Ha 4 4^2 18
Dec +26.0
P.A 265.0 Var B
Sphoid −0.5 B
+0.5 b

Ursa Major. Phot. J. Ir. obs. Bonn. rec.

0	50	81.3
4	42	
3	52	
5	1	
4	59	

9.5 bar

For measurements see next page

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1904phae.proj..573W

Jan 23 1905

Index A

93.8 ← var dia. I

8 40 25 175.8

283.5 82.0'

348.6 65.1' −0.63" A

101.1 −0.52"

8 43 00 166.8 65.7'

272.5 86.4'

358.9 192.1' −0.53"

Index Below

360.3 88.9'

46 45 89.2

192.0

259.4 67.4' B

196.3' −0.45"

11.5

50 05 81.2 69.7' −0.42"

179° 75' 180.2 90.2'

8 44 64" 270.4 189.9' −0.32"

+5 +22

13 45 26'

Mean −0.50"

8.41"

7.91"

6869.5732"

6869.6673" = Incr Inc. with Lt. Eq. applied.

−.0941"

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1904phao.proj..573W

Jan 23 1905

Index Below II

359.6

δ 52 40 91.2 91.6'

189.1 72.0'

261.1 163.6' -0.31'

B

9.5 -0.31'

δ 55 02 81.4 71.9'

179.2 91.7'

270.9 163.6' -0.31'

Index

269.3

δ 59 00 1.7 92.4'

96.3

171.5 75.2'

167.6' -0.24'

A

279.4 -0.22

354.2 74.8'

89.1 94.9'

182.0 169.7' -0.20'

9 2 44

33 168° 86' ✓

8 57° 22' ✓

+5 +22

13 57 44 ✓

6869.5217 ✓

6869.6673 ✓

-.0856 ✓

Mean -0.26' ✓

2.41'

2.15' ✓

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1904phae.proj..573W

Jan 23 1905

Index Above III

267.8

9 4 42 — 3.0 — 95.2'

98.0 — 74.5'

172.5 — 69.7' — −0.20' — A

277.4 — −0.16'

7 34 — 353.6 — 76.2'

86.0 — 97.4'

183.4 — 173.6' — −0.12'

Index Below

173.7

11 02 — 275.6 — 101.9'

4.5 — 80.4'

84.9 — 182.3' — 177.7 — +0.04' — B

185.0 — +0.04'

13 47 — 267.5 — 82.5'

35 125 ✓ — 353.0 — 103.6'

9 8 76 ✓ — 96.6 — 186.1

5 22 ✓ — 173.9 — +0.11'

14 9 38 ✓

Mean −0.04 ✓

6269.5900 ✓ — 2.61 ✓

6569.6673 ✓ — 2.37 ✓

−.0773 ✓

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1904phae.proj..573W

Jan 23. 1905.

Index Below IV

172.8

9 17 05 278.0 105.2
4.5 82.4 (B)
86.9 187.6
(1)72.4 +0.14

182.5

19 54 267.7 85.2 0.1A
351.3 107.0
98.3 192.2
167.4 +0.23

Index Above

78.0

23 30 188.3 110.3 (A)
272.2 86.3
358.5 196.6
163.4 +0.32

88.9

27 00 180.5 91.6 +0.2A
269.5 101.0
10.5 192.6
167.4 +0.2K

Mean +0.23
2.41
2.64

86 89
9 21 52
5 +22
14 22 14

6869.5924
6869.6673
−.0686

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1904phae.proj..573W

Jan 23 1905

Index Above

	78.5	110.A	
9 30 04	189.3	A9.K	
	270.2	20 02	
	359.6	159.2	+0.38

A

	86.0		+0.44
32 10	179.4	93.4	
	259.5	113.0	
	12.5	153.6	+0.50

Index Below

	348.5	115.0	
37 10	103.5	95.6	
	177.5	210.6	
	273.4	149.K	+0.59

B

	354.5	101.3	+0.64
	95.8	114.6	
	168.0	215.9	
	282.6	144.1	+0.69

Mean +0.54

A.41

A.95

40	04	
139	28	
9 34	52	
5	22	
14 35	14	

6269.6077

6569.6673

−.0596

L. J. 6h 18m

L. A. 5h 20m

Dec. 81.0

P. A. 196.0 Var. B.

Spitzer −1.5 B

" −0.5 b

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1904phae.proj..573W

Jan. 23, 1905.

In the early part of the observations the moon (two days past the full) came up. Besides during the observations there were more or less light clouds in this region. This together with the fact that the 9.5 bar was on made the obs. very difficult especially as the var. grew fainter but all possible care exercised.

Seeing somewhat thuny

Ø's watch used for times tonight
Watch 22 sec slow

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1904phae.proj..573W

Jan. 26 1905 (Thursday)

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

23	⌐3	+⌐0.2
28	30	
4	37	

Comp. Star = +50° 4199 (2.7)

23	⌐2	+49.2	
24	⌐7	A & B	R
+⌐	5	299.0	com. star. dis.
5	8	330.5	31.5'
9 11 35		121.4	27.6'
		149.0	59.1' +2.89'

300.5 +2.81'

329.5 29.0'
117.6 34.4'
152.0 63.4' +2.73'

Index R. & A

207.9
243.4 35.5' A
32.0 29.0'
61.0 64.5' +2.69'

211.0 +2.72'

239.4 28.4'
28.8 34.5'
63.3 62.9' +2.75'

Mean +2.76

	28	00
	39	35
9	19	48
5		+4
14	19	52

Seeing Hazy Obs. rather dif

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1904phae.proj..573W

Jan. 26. 1905.

tvr°.4199 (8.7) compared with tvr° 4208 (7.2)

Index R & A

293.0	← tvr° 4208 dev.	
336.5	43.5	Mean of 4208 by
118.6	32.4	Vol. tvr = 7.17
151.0	75.9 +2.32	

299.3		+2.30
330.5	31.2	
111.0	45.5	
156.5	76.7 +2.29	

L & B

202.0			
245.8	43.8		
30.6	30.6	74.4	2.36
61.2			

+2.26

207.8	34.8		
242.6	46.5	81.3	2.16
21.5			
68.0			

Mean +2.28

	48	12
	89	12
9	44	36
5		+4
14	44	40

9 41 00

S. S. $6^{h}\ 33^{m}$
R. A. $6^{h}\ 35^{m}$
Dec. $5°\ 0.0$
P. A. 137 Var B
Sproket −2.5 B
−1.5 L

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1904phae.proj..573W

Jan. 26. 1905.

$\underline{\alpha}$ beta Phot. R. Ht. obs. Brorie sec.

2	12	−3.5
6	42.	
+4	30	
+4	35	

Index L. & b

33.0 ← var. dir

10 15 00

42.2	9.2	A
214.0	8.2	
222.2	17.4	−5.59

32.6		−5.51
42.9	10.3	
213.0	8.5	
221.5	18.8	−5.43

Index R. & B A

303.6		
312.0	8.4	
123.0	10.5	
133.5	18.9	−5.41

302.8		−5.37
313.6	10.8	
123.4	8.8	
132.2	~~20.7~~ 19.6	−5.33

25	32	
40	32	
10 20	16	
5	+4	
15 20	20	

Mean −5.44

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1904phae.proj..573w

Jan. 26, 1905.

S. J. 7ʰ 17ᵐ
H. A. 4ʰ 59ᵐ
Dec. −3.9

H's watch used for times tonight
Hatch 4 sec slow

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1904phae.proj..573W

Jan 27 1905 (Friday)

B. + C. 1142.

9 4 40.0

B. 394.

9 5 0.0

Reap Sup I (to Phys. R (to Jupiter) W. obs Bonn rec
comp. with nearest of two Sats. (before eclipse)
on fol. side = Sat III

9	23	22	9	23	00		seen	
	25	21	9	24	59.	54.0	191.0	+1.5
	25	46		25	24	64.0	245.0	+1.0
	25	59			37	66.6	181.0	+0.9
	26	13			51	67.6	247.6	+0.9
	27	4		26	42	70.5	180.0	+0.8
	27	15	+22		53	72.7	250.5	+0.7
	27	31		27	9	75.3	177.8	+0.6
	27	45			23	74.1	253.1	+0.6
	28	3			41	77.0	179.0	+0.5
	28	17			55		256.0	
							179.2	
	28	28	(uncor.)	28	9			
		+23			19	75.8	255.0	+0.5
	28	51	cor		33	75.8	180.1	
					49	151.6	255.9	
						75.8		
				29	3		179.7	
	29	34	uncor		19	76.6	256.3	2
		+23			33	75.5	+80.8	change
	29	57	cor		48	152.1	179.0	+0.5
				30	7	76.0	254.5	
					42		177.5	
	31	17	(uncor)	31	13	77.3	254.8	3
		+23			29	74.9	179.0	
9	31	40	cor.			152.2		+0.5
						76.1		

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1904phae.proj..573w

Jan. 27. 1905.

	9	31	45		253.9	3
			55		179.5	
9 32 23		32	10	75.0	253.3 254.5	
+23				76.1		
9 32 46			35	151.1	178.9	4 +0.6
			51	75.6	255.0	
		33	2		178.8	
9 33 35			30	77.2	256.0	
+23				76.9		
9 33 58			45	154.1	179.1	5 +0.5
		34	4	77.0	256.0	
			21	76.0	179.0	
34 55			46	76.9	255.0	
+23				152.9		
9 35 18		35	9	76.4	179.1	6 +0.5
			24		256.0	
			36	75.6	179.5	
36 4			52	76.4	255.1	
+23				152.0		
9 36 27		36	12	76.0	179.1	7 +0.5
			34		255.5	
			45	76.9	179.1	
38 21		37	10	76.8	256.0	
+24		39	32	153.7	179.0	8 +0.5
9 38 45			58	76.8	255.8	

L.V.

It became so cloudy again, limit of vis. could not be taken.

(over.)

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1904phae.proj..573W

Jan. 27 1905

Sky during eclipse more or less hazy and cloudy. After Sat. was first seen, delay in getting first setting by bad general conditions in sky so that the varing parts of the Nebe. are not very numerous.

B. + C. 11 Az.			B. 394		
9	46	35.5	9	47	0.0
	47	35.5		48	0.0

Tried to get limits of Nebs. at end of eclipse but it became so cloudy again that this could not be done and the Sats. disappeared in clouds even at full brightness

∴ at $9^h\ 4^m\ 40^s$, B. + C. 11 Az was 20.0 plus.

" 9 9 20. " " " 20.5 "

" 9 18 ~~30~~ 21. " " " 21.5 "

" 9 ~~25~~ 27 ~~40~~ 45 " " " 22.5 "

" 9 37 16 " " " 23.5 "

" 9 ~~46~~ 46 35. " " " 24.5 "

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1904phas.proj...573W

Jan. 28 1905 (Saturday)

J Anderson. Phot. J. W. obs. Barn. rec.

0	8	+26.5
4	5	
+3	57	

Index L & B

275.5 ← comparison dis.

354.2	78.7	
103.0	61.5	
164.5	140.2	+0.77

7 26 10

B

256.0 +0.76

346.4

93.7	60.4	
174.4	80.7	
	141.1	+0.75

Index R & A

185.4

263.5	78.1	
14.5	59.0	
78.5	137.1	+0.83

A

196.5 +0.88

253.5	57.0	
7.0	75.1	
82.1	132.1	+0.94

Mean +0.82

7	32	44
	58	54
7	29	27
5		−9
12	29	18

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1904phae.proj..573W

Jan 28 1905

S. J. 4^h 30^m
H. A. $+4^a$ 11^m
Dec. $+26.0$
P. A 264.0 Var B
Sprocket -0.5 B
$+0.5$ b

U Cephei Phot. J. K. obs. Bonn rec.

0	50	81.3
4	33	
+3	43	

Full aperture used.

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1904phae.proj...573W

Jan. 28. 1905.

I

Index A

276.3 ← var dia

8 14 15 352.9 76.6
100.5 67.3
167.8 143.9 −0.70″ A

282.0 −0.67″

8 16 10 346.8 64.8
92.8 82.1
174.9 146.9 −0.64″

Index B

184.2

8 21 8 266.4 82.2
71.3 67.7
79.0 149.9 −0.58″ B

−0.72″

190.7

8 23 40 258.9 68.2
1.0 88.0
89.0 156.2 −0.45″

74 73
8 18 48
5 −9
13 18 39

mean −0.60″

6274.72″46″
6274.72″32″
−0.0926″

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1904phae.proj..573W

Jan. 28. 1905.

II

Index B

182.0

6 27 20 — 268.7 — 86.7
67.7
10.8 — 154.4 — −0.49 v
78.5

B

189.3 — −0.43 v

6 30 14 — 258.6 — 69.3
359.5 — 90.5
90.0 — 159.8 — −0.38 v

Index A

86.0

6 33 35 — 179.6 — 93.6
69.3
280.4 — 162.9 — −0.32 v
349.7

A

98.

98.4 — −0.30 v

6 36 00 — 170.7 — 72.3
93.6
267.8 — 165.9 — −0.27 v
1.4

126. 69.
5 31 47.
5 −9.
13 31 38.

Increase −0.37 v

6274.636 v
6274.632 v
−0.0496 v

−0.41 v
−0.04 v

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1904phae.proj...573w

Jan 25 1905

Index A

87.1
181.2
279.0
350.7

δ 39 10

94.1
77.7
165.8 − 0.27

A

96.4
172.3
267.6
3.6

−0.21

δ 41 40

79.9
96.0
171.9 − 0.15

Index B

356.2
92.5
186.2
263.8

δ 45 40

96.3
77.6
173.9 − 0.11

B

5.5
84.9
175.6
273.5

−0.04

δ 48 45

79.4
97.9
177.3 − 0.05

	173	135
δ	43	49
5		−9
13	43	~~39~~ 40

Mean −0.14

6874.720
6874.632
−0.0412

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1904phae.proj..573W

Jan. 28. 1905

IV

Index B

353.3

8 52 01 — 95.5 — 102.2 — 79.1 — 181.3 — 178.7 v — +0.2 v — B

264.4

3.2

8 54 35 — 86.8 — 83.6 — 102.4 — 186.0 — 174.0 — +0.06 v — +0.11 v

174.9

277.3

Index A

264.7

8 58 38 — 7.0 — 102.3 — 87.2 — 189.5 — 170.5 v — +0.18 v — A

90.0

177.2

272.3 — +0.23 v

359.4

80.0

187.8

87.1 — 107.8 — 194.9 — 165.1 v — +0.28 v

hours +0.14 v

9 1 20

33 165 94

8 56 38

+5 −9

13 56 29

6474. v209 v

6474. 6v32 v

−0.0723 v

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1904phaa.proj...573W

Jan 22. 1905.

Index A

	260.5		
9 4 35	9.3	108.5	
	90.4	87.6	
	178.0	196.1	
		163.9 v	+0.30 v

	272.5		
9 7 08	359.5	87.0	+0.34 v
	77.1	112.9	
	190.0	199.9	
		160.1 v	+0.32 v

Index B

	169.9		
9 11 40.	281.4	111.5	
	359.0	92.0	
	91.0	203.5	
		156.5 v	+0.42 v

	179.6		
9 14 44	271.9	92.3	+0.44 v
	347.4	115.0	
	102.04	207.3	
		152.7 v	+0.52

	36	127
9	9	32
+5		−9
14	9	23

Mean +0.41 v

6274 v299 v
6274.6 v32 v
−0.0633 v

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1904phae.proj..573W

Jan 25 1905

VI

Index B

167.4

9	18	10	283.5	116.1	
			356.5	96.9	
			93.4	213.0	+0.63
				147.0	B

176.0 +0.66

9	20	30	273.9	97.9	
			345.7	118.5	
			104.2	216.4	
				143.6	+0.70

Index A

75.5

9	24	32	191.3	115.8	A
			265.5	97.7	
			3.2	213.5	
				146.5	+0.64

84.3 +0.66

9	27	18	183.4	99.1	
	89.	90.	256.8	116.6	
9	22	38.	13.4	215.7	
+5		-9.		144.3	+0.69
14	22	29.			

6474.7989
6474.6732
−0.0757

S.J. 6^h 18^m Mean +0.66
Z.A. +5 20^m
Dec. +81.0
P.A. 15.6 Ver B
Sprocket −1.5 A
−0.5 B
+0.1 b

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1904phae_proj...573W

Jan. 28. 1905.

R Cassiop Phot T H obs. Bowie rec.

23 53 +50.8
30 50 Comp. Cor = + 50' 4199 (A.)
+6 57

116.3 ← com star dist
149.4 33.1
299.0 32.9
331.9 66.0 +2.64

10 17 11

116.4 +2.64
151.4 35.0
299.2 30.8
330.0 65.8 +2.65

Ind R & B

27.7
60.0 32.3
208.2 32.2
240.4 64.5 2.69

29.1 +2.68
61.4 32.3
209.0 33.3
242.3 65.6 2.66 +2.66

10 26 52
43 63
10 21 62
+5 -9
15 21 53

P. A. 190°.0

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1904phae.proj..573W

Jan 28. 1905

+r0.4199 (2.) Comp. Star for R Cassiop. sup. 12m
compared with +r0.4202 (2.2)

Index R & A

111.0 ← 7.2 mag. dis.

10 49 02

155.5 44.5
298.0 33.5
331.5 78.0 2.25

116.6 +2.21
152.6 36.0
291.7 44.9
336.6 80.9 2.17

Index L & B

25.3
65.5 40.2
207.0 34.0
241.0 74.2 2.37

+2.34

28.9 33.6
62.5 43.0
203.3 76.6 2.30
246.3

Mean +2.28

10 56 55
105 57
10 52 58
+5 -9
15 52 49

S.T. 7h 51m
L.A. +7h 55m
Dec. +50.0
P.A. 137.0 Var. B
Sprocket -2.5 B
-1.5 b

W's watch used for times tonight Watch 9 sec. fast

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1904phae.proj..573W

Jan. 30. 1904. (Saturday).

B.~~*~~ C. 1182			B. 394		
~~*~~	25	5.5	~~*~~	25	0.0
♂	26	5.5	♂	26	0.0

~~Resp.~~ Dia. Jup. II. Gr. obs. Bowie rec.
Eclipse could not be taken photometrically so was taken with eyepiece. (See remarks at end)

9	14	49	Sat. seen very close to limb of planet
	15	57	" seen
	16	23	" "
		38	" "
		53	" "
	17	10	" "
		24	" "
		34	" "
		43	" "
		55	" "
	18	2	" "
		14	" "
		18	" "
		39	" " Int fainter
		53	" insp.
	19	10	" not sat. seen
		34	" " " "
	20	2	" " seen
		26	" " "

East. Time.
Corrected times.

9	14	20^m	Cor. times by +2^m.
9	18	41	" " " "
9	18	55	" " " "
9	19	12	" " " "
9	19	36	" " " "
9	20	4	" " " "
9	20	28	" " " "

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1904phae.proj..573W

Jan. 30. 1905.

$9^h\ 21^m\ 6^s$ 9 21 4 Sat. not seen
Cor. +2s.

Sat. disappeared so close to limb of Planet that it could not be taken photometrically, especially as the limb of Jup. was blurry and quite unsteady.

Dis. taken with 1½" eye-piece Sat. II came out of Occultation only about 6 min. before it dis. in eclipse (according to Almanac)

Somewhat troubled in taking dis. by blurriness of Jup. and proximity of Sat. to the same

Obs. however waited for moments of better definition in giving times for phenomena

B. & C. 1182			B. 394 +		
9	34	55.5	9	35	0.0
9	35	55.4	9	36	0.0

10
5
15

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1904phae.proj..573W

30.

Jan. ~~27~~. 1905.

R Cassiop. Phot. 7 V. obs. Bowie rec.

23 53 +50.8
30 39
+6 46
9
+6 55 Index Corr.

112.2 ← comp star dis.
151.9 39.7
297.5 30.9
328.4 70.6 +2.49

10 3 2

117.8 +2.52
150.2 32.4
297.5 36.6
334.1 69.0 +2.54

Index R & B

28.5
59.7 31.2
205.9 35.9
241.8 67.1 +2.60

+2.63

31.4
61.3 29.9
206.7 35.7
242.4 65.6 +2.66

Mean +2.58

26 14
29 16
10 14 38
5 -18
15 14 20

1904phae.proj..573W

Jan. 30. 1905.

S.T. 7h 33m
H.A. 7 38
Dec 50°1
P.A 190.2
Sprocket -3.5 B
" -2.5 b

H's watch used for times tonight.
Watch 18 sec. fast

7/7
7/7
7/7
7/7
7/7

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1904phae.proj..573W

Jan. 31. 1905. (Tuesday)

B & b 1182 — B 394

6 39 55.5 — 6 40 0.0

6 40 55.4 — 6 41 0.0

Dis. Jup. III Phot. R. H. obs. Bonn rec. comp. with nearer of two Sats. to Jup. (after eclipse on fol. side = Sat I

~~7~~	~~14~~	~~58~~					
7	16	10					
		+11					
7	16	21					
	15	21	98.5	86.0			
	16	7	96.2	184.5	1		
		24	97.4	86.8		−0.3	
		46		183.0			
	17	8		86.3			
7	17	41	97.2				
		12	98.1	183.5	2		
7	17	53	195.3	86.9		−0.3	
			97.6				
	18	11		~~184.2~~	185.0		
	19	13		86.4			
7	19	58	99.8				
		+12	100.7	186.2			
7	20	10	200.5	85.8	3	−0.4	
	20	24	100.2				
		45		186.5			
	~~21~~	~~10~~		~~83.9~~			
7	22	34	101.0	84.0			
		+12	100.5				
7	22	46	201.5	185.0	4		
	22	34	100.8	83.0		−0.4	
		57					
	23	17		183.5			
7		52		84.6			

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1904phae.proj..573W

Jan. 31. 1905.

7	24	19							
		+13							
7	24	32	7	24	8	101.4			
						99.7	186.0		
					28	201.1	85.5	5	
						100.6			−0.4
					48		185.2		
				25	26		85.5		
7	25	51				99.4			
		+13			43	103.0	184.9		
7	26	4			57	202.4	84.0	6	
				26	6	101.2	+		−0.4
					19		187.0		
					33		85.0		
7	26	51				99.5			
		+13			44	98.9	184.5	7	
7	27	4			55	198.4	85.1		−0.4
				27	13	99.2	184.0		
					28		85.0		
7	27	54				99.2			
		+13			46	96.0	184.2	8	
7	28	7			58	195.2	85.6	87.0	
				28	26	97.6	183.0		−0.3
					44		85.6		
7	29	10				96.7			
		+14		29	2	93.5	182.3	9	
7	29	24			19	190.2	88.5		
					34	95.1	182.0		−0.2
					44		90.5		
7	30	8				89.7			
		+14		30	3	89.7	180.2	10	
7	30	22			15	179.4	89.3		0.0
					31	89.7	179.0		
					43		90.1		
7	31	9	7			89.9			
		+14		31	2	87.5	180.0	11	
7	31	23			16	177.4	90.3		0.0
						88.7			

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1904phae_proj..573W

Jan. 31. 1905.

			7	31	34		177.8	
					54	85.3	91.5	
4.	7	32	14	32	5	80.5	176.8	12
			+14		21	82.9	94.5	+0.3
	7	32	28		36		175.0	
					51		93.2	
	7	33	8		59	79.6	172.8	
4.			+14		13	77.2	94.8	+0.4
	7	33	22	33	31	156.8	172.0	
					9	78.4	95.0	
				34	22	75.0	170.0	
	7	34	30		37	71.9	97.1	+0.6
			+15		51	146.9	169.0	
4.	7	34	45		7	73.4	~~98.4~~ 99.0	
				35	19	68.0	167.0	
	7	35	24		31	65.7	100.5	+0.9
			+15		41	133.7	166.2	
.3	7	35	39		51	66.8	102.5	
	7	36	20	36	6	63.7	166.2	
			+15		37	62.6	101.4	+1.1
.2	7	36	35		46	126.3	164.0	
					57	63.2	103.8	
	7	37	20	37	8	57.5	161.3	
			+15		18	58.0	104.5	
0.	7	37	35		~~47~~	115.5		+1.3
					57	57.8	162.5	
				7 38	10		~~103.6~~ 104.0	
0.					25		1622	

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1904phae.proj..573W

Jan. 31. 1905.

7	38	30						
		+15						
7	38	45	7	38	35	58.2	103.0	
					45	58.1	161.1	+1.3
				39	7	116.3	106.9	
7	39	34			30	58.2	161.0	
		+16			42	54.1	109.0	+1.6
7	39	50			55	48.5	157.5	
						102.6		
						51.3		
7	40	20		40	4	53.7	111.3	+2.0
7	40	30			14	53.0	155.0	+2.0
7	40	45			29	52.5	112.0	+2.1
7	40	59			43	51.0	154.5	+2.1
7	41	19		41	3	52.5	113.5	+2.3
7	41	39			23	37.2	151.9	+2.4
7	41	52			36	37.3	114.7	+2.5
7	42	7			51	31.5	150.0	+2.8
7	42	22		42	6	31.1	118.6	+2.8
7	42	40			24	25.9	149.7	+2.9
7	43	8			52	23.6	120.8	+3.4
7	43	25	7	43	9		144.4	
7	43	45			29		not seen later	

2. 5.

			7	44	15	25.5	120.5	
7	44	52			45	24.3	146.0	
		17		45	2	49.8	119.5	+3.3
7	45	9	7		21	24.9	143.8	

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1904phae.proj..573w

Jan. 31. 1905.

B a b 1182

7 51 42.0
7 52 42.0

B 394

7 52 0.0
7 53 0.0

o beti Phot R. H. obs Bonn rec

2 12 −3.5
5 10

+2 58

For measurements see next page.

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1904phae.proj..573W

Jan. 31. 1905.

Index L a b

217.3 ←		var. dis
224.8	7.5'	
36.2	9.9'	
46.1	17.4'	−5.59'

−5.54'

215.5		
225.8	10.3'	
37.1	8.0'	
45.1	18.3'	−5.48'

Index R vB

125.0		
135.6	7.6'	
305.8	11.2'	
317.0	18.8'	−5.43'

126.1		−5.34'
138.0	11.9'	
307.2	8.4'	
315.6	20.3'	−5.26'

Mean −5.44'
9.19
3.7 v

δ 24 38

B

A

δ 35 10
59 48'
δ 29 54'
+5 −20'
13 29 34'

S.J 5h 52m
H.A +3h 36m

1904phaeprój...573W

Jan 31 - 1905

B & C 1182
δ 43 41.8
δ 44 41.7

B. 394
δ 44 0.0
δ 45 0.0

Reap. Jup III Phot R W. obs Brnc sec bsmp. with nearer to Jup. of two Sats. ~~as~~ (before eclipse) on fol. side = Sat I

Limits of Vis.

9	8	30	9	7	58	39.2	200.1	
		22		8	16	41.5	239.3	
9	8	52	Add 22m		32	80.7	198.5	+2.2
				9	15	40.4	240.0	

9	11	6		10	44		seen	
9	11	27	Add 22m	11	5	46.6	198.5 cloudy	+1.8
9	11	47			25	47.3	245.1	+1.8
9	12	29			56	50.7	197.8	+1.6
9	12	34		12	11	55.5	248.5 cloudy	+1.4
9	13	12	Add 23m		49	56.5	193.0	+1.3
9	13	32		13	9	57.7	249.5	+1.3
9	14	0			37	68.7	191.8	+0.8
9	14	52		14	~~10~~ 29	74.3	260.5	+0.6
9	15	21			58	74.3	186.2	+0.6

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1904phae.proj..573W

Jan. 31 1905.

			9					
9	16	33		15			clouds thicker	
	~~16~~	~~54~~	Add 2	16	10	75.6	260.5	~~+0.6~~
					31		184.9	
9	~~17~~	~~17~~			54	75.6	260.5	+0.5
9	17	34			22	79.7	183.5	
9	~~17~~	~~45~~		17		155.3		
					54	77.6	263.2	
9	~~18~~	~~18~~						
9	~~18~~	~~37~~		18	13	80.8	183.0	
9	~~19~~	~~6~~				81.8		
9	19	12			42	162.6	263.8	
9	~~19~~	~~19~~			55	81.3	183.0	+0.3
9	~~19~~	~~44~~		19	20		264.8	
9	~~20~~	~~23~~			59	91.5	178.5	
9	~~20~~	~~39~~		20	15	89.5	265.0	+0.1
9	20	51			37	176.3	178.1	
9	~~21~~	~~1~~			56	88.2	267.9	
9	~~21~~	~~20~~	Add 2					
				21	30	93.5	175.3	
9	21	59			45	93.0	268.8	
		24				186.5		
9	22	23		22	15	93.2	176.0	−0.1
					26		269.0	
					43	95.5	175.5	
9	23	24		23	9	96.3	271.0	
		24				191.8		
9	23	48			43	95.9	173.5	−0.2
				24	2		269.8	
					29	97.7	173.8	
9	24	58	Add 2		49	101.0	271.5	
		25				198.7		
9	25	23		25	6	99.4	172.0	−0.4

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1904phaeproj...573w

Jan. 31. 1905.

			9					
9	26	24	✓					
		25	✓					
9	26	49	✓					
9	27	36	✓					
		25						
9	28	1	✓	Add 25.5				
9	28	49	✓					
		25						
9	29	14	✓					
9	30	11	✓					
		25	✓					
9	30	36						
9	31	30	✓					
		26		Add 26.5				
9	31	56	✓					
9	34	2	✓					
		26	✓					
9	34	28						

				3	
25	27		273.0		
	53	101.5	171.0		
		102.4			
26	19	203.9	272.5		−0.5
	34	102.0	171.1	✓	
	52		273.5		
27	12	102.9	171.1		
	27	102.0	274.0		
	45	204.9	172.0	✓	−0.5
	58	102.4	274.0		
28	29		170.0		
	39	103.5	273.5		
	52	103.4	170.4	6	−0.5
29	16	206.9	273.8		
	32	103.4	171.7		
	50	101.3	273.0		
30	34	103.5	170.0	7	−0.5
	48	204.8	273.5		
31	3	102.4	170.8		
	16	102.9	273.7		
	38	103.5	171.0	2	−0.5
32	2	206.4	274.5		
	17	103.2	170.5		
	45	103.0	274.0	3.5	
35	20	102.5	172.8	9	−0.5
	45	205.5	275.3		
		102.8			

Troubled by clouds especially in early parts of eclipse which delayed settings There was a little cloud

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1904phae.proj..573W

Jan. 31. 1905.

during limit of vis. As eclipse progressed the sky in this region became clearer and during the taking of constants it was pretty clear. As regards the character of the cloud, it was not hard broken cloud but rather a somewhat dense and a homogeneous light cloud Settings made with the greatest care possible and the settings that were made considered quite good

B & b 1182			B. 394.		
9	46	32.0	9	47	0.0
9	47	31.9	9	48	0.0

060 521 Doubt. Var. +21° 1146
W. obs. Bowie. rec.

6	6	+22.5
7	19	
1	13	

For means, see next page.

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1904phac.proj..573W

Jan. 31. 1905.

Index L

180.0 ← var dur

10 35 00

265.3
11.5
78.6

85.3'
67.1'
152.4' −0.53'

B.

191.0 −0.52'
257.1
1.5
88.8

66.1'
87.3'
153.4' −0.51'

Index R

100.6
168.0
270.2
359.0

67.4'
88.8'
156.2' −0.45'

A

90.0 −0.48'
178.6
281.0
345.7

88.6'
64.7'
153.3' −0.51'

Mean −0.50'

10 42 45
77 45'
10 38 52
+5 −20'
15 38 32

S.J. 7h 48m
H.A. 1h 40m
Dec. +21.2
R.A. 207.5
Sprokets −3.5 A
−2.5 B
−1.9 b

It's watch used for times tonight. Watch 20 sec fast.

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1904phae.proj..573W

Feb. 2. 1905. (Thursday)

α Bephei. Phot. J. H. obs. Bowie rec.

0 50 +81.3
4 32
+3 42

Full aperture used.

Index A.

90.0 ← var. dia. I

8 6 2
176.9 86.9'
281.3 68.3'
349.6 155.2' 0.47' b

97.7 70.0' −0.40'
8 8 43
167.27 92.5'
269.8 162.5' 0.33'
0.3

Index B

358.4 92.9'
91.3
8 12 26
188.6 72.4' −0.20' B
261.0 165.3'

−0.29

8 15 30
6.8 74.2'
81.0
181.0 90.0'
271.0 164.2' −0.30'

41' 10"
8 10 40'
5 −32'
13 10 8
6879.5487

Mean −0.34'
±.41'
±.07'

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1904phaa.proj...573W

Feb. 2. 1905.

Index B. II

	355.0			
	93.1	98.1		
8 18 20	188.0	73.4		
	261.4	171.5	−0.16	
				B
	9.0			
	82.6		−0.16	
8 20 25		73.6		
	175.0	98.3		
	273.3	171.9	−0.15	

Index A

	265.0			
	2.4	97.4		
8 24 18	94.5	98.1		
	172.6	175.5	−0.04	
				A
	276.5			
	356.6	80.1	−0.03	
8 27 00	82.6			
	183.4	180.9		
89 63		179.1	+0.02	
8 22 31				
+5 −32				
13 21 59				

Mean −0.10

6879.5569

.41

.31

1904phae.proj..573W

Feb. 2. 1905

III

Index A

264.0

8 30 42

6.1 102.1''
83.4''
92.4 185.5''
175.8 174.5'' +0.10''

275.6

8 33 35

355.0 79.4'' +0.04''
81.0 104.0''
183.4''
185.0 176.6'' +0.06''

Index B

~~190.0~~

~~37 2~~ ~~200.2~~

349.5

8 38 57

98.5 109.0''
87.0''
181.3 196.0''
268.3 164.0'' +0.30''

1.0

8 42 42 89.7 88.7'' +0.34''

143 176 170.1 111.4''
8 35 89 200.1''
5 -32 281.5 159.9'' +0.38''
13 35 57

6279.''667''

Mean +0.21''
2.41''
2.62''

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1904phae.proj...573w

Feb. 2. 1905.

Index B. IV

		348.4		
8	45	35	100.3	111.9 .. 92.2
			177.8	204.1 .. *
			270.0	155.9 .. +0.46 v
			~~359.0~~	
			357.7	+0.√0 v
8	50	48	91.5	93.8 .. 115.0 ..
			167.0	208.8 ..
			282.0	151.2 .. +0.√5 v

Index A

			258.2	
8	57	10	11.0	112.8 .. 95.0 ..
			85.5	207.8 ..
			180.5	152.2 .. +0.√3 v
			267.1	+0.√6 v
8	59	35	2.9	95.8 .. 115.1 ..
	211	128	76.2	210.9 .. +0.√9 v
8	52	72	191.3	149.1 .. ~~+0.79~~
5		−32		
13	52	40		

6279. √723 v

mean +0.√3 v
2.41 v
2.94 v

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1904phae.proj..573W

Feb. 2. 1905.

V

Index A

257.2 114.1
11.3
84.6 96.4
210.5
181.0 149.5 +0.52

264.7 99.0 +0.6v
3.7
74.8 118.3
217.3
193.1 142.7 +0.72

Index B

166.5 115.9
282.4
354.6 97.4
213.3
92.0 146.7 +0.64

+0.66

174.1
273.0 98.9
345.3 116.7
215.6
102.0 144.4 +0.69

mean +0.66
2.41
9.07

9 3 2
9 5 50
9 9 45
9 12 35
29 132
9 7 48
5 -32
14 7 16
6279.v2244

S.J. 6h 25m
R.A. +5 27
Dec. +81.0
C.A. 197.2 for B
Sprocket -1.5 B
-0.5 b

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1904phaa.proj...573W

Feb. 2. 1905.

o Ceti. Phot. R. H. obs. Bowie rec.

2	12	-3.5
6	48	
+4	36	

Index B

127.6	← var dist	
136.1	8.5 v	B
307.0	9.2 v	
316.2	17.7 v	− 5.56 v

9 54 2

126.8	10.2 v	−5.54 v
137.0		
307.4	7.9 v	
315.3	18.1 v	−5.51 v

Index A

A

37.0	8.1 v	
45.1		
216.9	8.9 v	
225.8	17.0 v	−5.64 v

36.0	10.2 v	−5.59 v
46.2		
217.3	7.6 v	
224.9	17.8 v	−5.54 v

Mean −5.56 v

9.19 v

3.63 v

10 4 55.

11	8	57 v
9	59	28 v
5		−32 v
14	58	56 •

S. T. 7 15

H. A +5 00

Dec −3.9

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1904phae.proj..573W

Feb. 2. 1905.

Phot. J. Kobe. Bowie. rec.

0 6 0 5 2 1 Doubt. Var. +21° 1146

6	6	+22.5
7	42	
1	36	

Index L & A

3.8 ← var. dis. (2)

81.4		
194.4	77.6°	
256.8	62.4°	
	140.0°	−0.77°

11.4		−0.73°
75.0	63.6°	
183.0	80.8°	
263.8	144.4°	−0.69°

Index R. & B

283.5		
345.7	62.2°	(A)
93.8	79.2°	
173.0	141.4°	−0.75°

274.4		−0.72°
353.5	79.1°	
101.3	65.6°	
166.9	144.7°	−0.68°

Mean −0.72°

10 49 0

10 56 04
105 4
10 52 32
5 −32
15 52 00

S. J. 8h 7m
H. A 2h 0m
Dec. +21.2
P. A 208.0 Ver. B
Sprokets −3.5 A
−2.5 B
−1.9 B

W's watch used for times tonight. Watch 32 sec. fast.

6
6
5
11

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1904phae_proj...573W

Feb. 3. 1905. (Friday)

χ Cygni. Phot. J. Hubs. Bonn. rec.

19	45	32.6
26	49	
7	04	
7	14	
7	19	
7	24	

Index L & A

208.3 ← var. dis.
240.7 32.4'
23.5 41.0'
64.5 73.4' −2.40'

B

202.8 43.2
246.0 −2.41'
30.9 29.6'
60.5 72.8' −2.42'

Index R & B

117.8 32.8'
150.6
292.5 44.7'
337.0 77.3' −2.28'

A

112.3 43.9' −2.30'
156.2
298.6 32.0'
330.6 75.9' −2.32'

6 7 20

6 16 15
23 35
6 11 48
5 −32
11 11 16

−2.36'
5.10
5.74'

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1904phae.proj..573W

Feb. 3. 1905.

S.J. 3 32
H.A. 7 43
Dec. +32°.1
P.A 205.5 Var. B.
Spurlock −2.5 B
" −1.5 b

0605 21 +21° 1146
Phot J Hodge, Bowes rec

6	6	+22.5
3	50	
−2	16	
9	44	
4	15	
1	51	

For measurements see next page

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1904phae.proj..573W

Feb. 3. 1905.

Index R & A

272.6 ← var dia

356.3 83.7'

100.5 66.9'

167.4 150.6 −0.56'

A

281.8 −0.53'

343.7 61.9'

88.5 91.7'

180.2 153.6' −0.50'

Index L & B

179.5

267.5 88.0'

11.8 65.6'

77.4 153.6' −0.50'

B

190.2 −0.46'

255.9 65.7'

358.9 92.5'

91.4 158.2' −0.42'

Mean −0.50'

7 14 30

7 22 00

36 30'

7 18 15'

5 −32'

12 17 43'

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1904phae.proj..573W

Feb. 3. 1905.

Index & α B

178.3
268.5 90.2'
13.2 64.2'
77.4 154.4' -0.49'

B

-0.50'

190.6 67.0'
257.6 87.0'
0.5 154.0' -0.50'
87.5

Index R α A

89.7
177.0 87.3'
280.5 65.0'
345.5 152.3' -0.53'

A

101.3 -0.52'
168.1 66.8'
270.8 86.6'
357.4 153.4' -0.51

Mean -0.51

7 42 40

7 49 30

91 70'
7 45 65'
5 -32

12 45 33'

S.T. 5h 5m
K.A -1 2
Dec. 22.0
P.A. 27.0 Var. B
Sprokt -3.5 A
-2.5 B
-1.9 b

9
17
8
5
13

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1904phae.proj..573W

Feb. 3, 1905

J Andrew. Phot. J. H. obs. Boone rec.

0	δ	26.5
5	39	
5	31	
5	35	

Index L & B.

96.1 ← com. star, dia.

171.0	74.9	
285.5	56.5	
342.0	131.4	+0.95

8 54 50 B

106.2		+1.01
161.5	55.6	
280.0	70.0	
350.0	125.6	+1.07

Index R & A

7.3		
76.7	69.4	
195.2	58.1	
253.3	127.5	+1.03

A

14.7		+1.00
71.3	56.6	
185.7	73.6	
259.3	130.2	+0.97

Mean +1.00

9	4	35
17	58	85.
8	59	42.
5		-32.
13	59	10.

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1904phae.proj..573W

Feb. 3. 1905.

Index R & A

9.2

9 16 00

78.1 68.9.
195.0 56.6.
251.6 125.5. +1.07.

A

+1.02.

15.0
72.5 57.5.
186.0 72.9.
258.9 130.4. +0.97.

Index L & B

275.7

B

350.0 74.3.
105.5 55.5.
161.0 129.8. +0.98.

286.0 +1.01.

9 24 30
40 30.
9 20 15.
5 -32.
14 19 43.

342.5 56.5.
97.6 70.7.
168.3 127.2. +1.04.

Mean +1.02.

S. T. 6h 41m
Ho. A. +6 23
Dec. +26.0
P.A 82.5 Vir. B.
Sprotts - 0.5 B
" + 0.5 B

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1904phae.proj...573W

Feb 3. 1905

Phot J W. obs Bowie rec.

060521 +21° 1146

6 6 +225

7 24

1 18

Index L & A

180.6 ← var. dis.

264.0 83.4'

12.5 61.6'

74.1 145.0' −0.67'

B

190.0 −0.62'

255.5 65.8'

1.0. 84.0'

85.0 149.8' −0.58'

Index R & B

89.0

177.2 89.2'

277.4 69.4

346.8 158.6 −0.41'

A

100.7 −0.41'

168.5 67.8'

267.2 90.5'

357.7 158.3 −0.41'

Mean −0.52'

10 37 22

10 45 35

82' 57"

10 41 28

+5 −32'

15 40 56'

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1904phae.proj..573W

Feb 3 1905

Index R & B

89.5

10 52 37

180.0 90.5'
281.0 64.5'
345.5 155.0' −0.48'

A

101.0 −0.47'
166.4 65.4'
267.0 90.6'
357.6 156.0' −0.46'

Index L & A

1.7
86.0 84.3'
191.0 65.6'
256.6 149.9' −0.58'

B

~~11 6 30~~

1.0 ~~86.2~~
87.2 ~~86.9~~
181.4 173.1' −0.60'
~~268.3~~

11 15 45 S.J. 8 35

21 67 82' K.A. +2 30 m
10 63 71' Dec. +21.2
+5 −32'
16 3 39' P.A. 28.5 Var B

Spokes −3.5 A
−2.5 B
−1.9 b

191.5 64.1'
255.6 83.5'
1.5 147.6 −0.62'
85.0

Mean −0.54'

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1904phae.proj..573

Feb. 3. 1905.

H's watch used for times tonight
Watch 32 sec. fast

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1904phae.proj..573W

Feb. 4. 1905. (Saturday)

0605 21 +21° 11 46 Phot Yerkes Bruce rec

6 6 +22.5

4 26

1 40

Index A+B

359.5 ← var. dia

91.0 91.5'

191.6 64.0'

255.6 155.5' −0.47'

B

11.2 −0.52'

74.1 62.9'

180.5 88.0'

268.5 150.9' −0.56'

Index R+A

270.7

355.3 84.6'

100.5 65.9'

166.4 150.5' −0.57'

A

281.4 −0.56'

346.8 65.4'

90.8 85.2'

176.0 150.6' −0.56'

Mean −0.54'

7 27 40

7 40 5

67 45'

7 33 52'

5 −37'

12 33 15'

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1904phae.proj...573

Feb 4 1905

Index R & A

A

271.5
355.5 84.0'
101.5 65.5'
167.0 149.5' −0.55'

−0.56'

281.3
346.4 65.1'
90.3 87.2'
177.5 152.3' −0.53'

Index L & B

181.6
267.8 86.2'
11.0 66.4'
77.4 152.6' −0.52'

B

191.2 −0.51'
257.5 66.3'
0.8 87.8'
88.6 154.1' −0.50'

Mean −0.54'

7 43 12

7 54 25

9 7 37'
7 48 48'
5 −37'
12 48 11'

S.T. 5^h 16^m
R.A. 0 52
Dec +22.0
P.A. 209.5
Spokes −3.5 A
−2.5 B
−1.9 b

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1904phae.proj..573W

Feb. 4. 1905.

Δ Camelop. Phot] W. ota Bonn

7 26 +76.3
5 46
1 40

Index R & B I

8 58 00

296.3 cam. star dis.
336.5 44.2
116.4 36.4
152.5 80.6 +2.18 B

296.7 +2.12
9 2 35
331.4 34.7
107.1 49.9
157.0 84.6 +2.06

Index R & B

201.5
9 6 55
245.0 43.5
25.0 36.0
61.0 79.5 +2.21 A

205.2 +2.13
9 11 20
241.5 36.3
18.9 48.9
67.8 85.2 2.05

35 77 110
8 64 42
5 -37
14 4 6

Mean +2.12

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1904phae.proj...573

Feb. 4. 1905.

Index R & B

200.5

9 15 05 — 245.6 — 45.1' — II
28.2 — 34.3'
62.5 — 79.4' — +2.21' — A

204.8 — +2.14'

9 18 15 — 238.5 — 33.7'
58.1 — 50.3'
68.4 — 84.0' — +2.08'

Index L & L

107.9

9 22 0 — 158.1 — 50.2'
295.1 — 36.3'
331.4 — 86.5' — +2.01' — B

103.0 — +1.82'

9 25 38 — 153.8 — 50.8'
289.8 — 50.2'
340.0 — 101.0' — +1.63'

80. 58'
9 20. 14'
5 −37'
14 19 37

Mean +1.98'

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1904phae.proj..573W

Feb. 4. 1905.

Index A & B

III

		103.6		
9	30	05	159.1	55.5
			294.9	39.5
			334.4	95.0 +1.78

B

			113.9	+1.82
				40.0
9	34	10	153.9	51.7
			288.1	91.7 +1.87
			339.8	

Index R & B

			18.5	
				51.7
9	41	10	70.2	40.2
			202.8	91.9 +1.86
			243.0	

A

			23.2	+1.84
				41.0
9	45	25	64.2	53.1
			195.4	94.1 +1.81
			248.5	

	150.	50.
9	37	42.
5		−37.
14	37	6.

Mean +1.83

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1904phae_proj...573W

Feb. 4. 1905.

Index R, & B

IV

17.7

9 50 54 — 70.5 — 53.1 — 40.0 — 93.1 — +1.83 — A

202.8

242.5

23.0 — +1.78

9 55 25 — 65.2 — 42.2 — 54.6 — 96.8 — +1.74

195.6

250.2

Index Set

285.4

10 1 16 — 339.5 — 54.1 — 47.1 — 101.2 — +1.63 — B

109.9

157.0

292.0 — +1.60

10 5 15 — 336.7 — 44.7 — 59.3 — 104.0 — +1.56

102.7

162.0

38	111	110	
9	57	72	
5		−37	
14	57	35	

Mean +1.69

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1904phae.proj..573W

Feb. 4. 1905.

Index L & A

		282.4		
10	9	54	340.9	58.5'
			108.0	47.6'
			155.6	106.1' +1.51'

			288.1	+1.45'
10	14	10	336.0	47.9'
			100.5	63.1'
			163.6	111.0' +1.39'

Index R & B

			193.7	
10	19	25	251.7	58.0'
			20.4	46.9'
			67.3	104.9' +1.54'

			199.0	+1.52'
10	24	45	246.4	47.4'
			13.0	58.6'
			71.6	106.0 +1.51'

Mean +1.48'

	66'	134'
10	16	64'
5		−37'
15	16	27'

S.J. 7^h 43^m
R.A. +0 15
Dec. +76.7
P.A. 167.5
Spokes. −1.5 A
−0.5 B
+0.1 B

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1904phae.proj...573W

Feb. 4. 1905.

W's watch used for times tonight
Watch 37 sec. fast.

In obs. on ζ Camelop. seeing somewhat
blurry and in general a little diffiault but
all possible care exercised

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1904phae.proj..573W

Feb. 7. 1905. (Tuesday)

Σ Draconis Phot. J. Hk. obs. Bowie rec.

11 46 +73.0

4 46

7 00

7 09

I

Index R & A

201.5 ← com. star. dis.

7 56 25

243.5 42.0

15.0 54.3

69.3 96.3 +1.75 A

194.0 +1.74

7 58 55

250.7 56.7

22.6 40.2

62.8 96.9 +1.73

Index L & B

114.1

8 3 36

151.9 37.8

285.4 54.9

340.3 92.7 +1.84 B

107.9 +1.93

6 7 22

157.8 49.9

295.2 36.1

331.3 86.0 +2.02

30. 124. 138.

7 61. 34.

5 -17.

13 1 17.

Mean + 1.84

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1904phae.proj...573W

Feb. 7. 1905

Index L+B

	114.0			II
8 11 50	149.8	35.8		
	288.2	49.2		B
	337.4	85.0	+2.05	
			+2.05	
	107.4			
8 14 27	156.8	49.4		
	295.3	35.5		
	330.8	84.9	+2.05	

Index R+A

	24.9	36.5		
	61.4	50.6		A
8 15 09	197.2	87.1	+1.99	
	247.8			
			+2.00	
	13.7			
8 20 05	64.5	50.8		
	2005.3	35.8		
63 91	240.6	86.6	+2.01	
8 15 68	1.1			
5 -17			Mean +2.02	
13 15 51				

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1904phae.proj..573W

Feb. 7. 1905.

Index R & A. III

			25.9		
8	23	19	57.8	31.9	8
			199.0	46.5	
			245.5	78.4 + 2.24	A

+2.24

			21.2	42.9	
8	25	49	64.1	35.3	8
			205.0	78.2 + 2.25	
			240.3		

Index L & B

			296.0		
8	31	09	328.8	32.8	8
			111.4	43.1	B
			154.5	75.9 + 2.32	

+2.32

			291.6		
8	33	35	334.7	43.1	8
			115.9	32.6	
			148.5	75.7 + 2.32	

	112.	112.		
8	28	28.		8
5		-17.		5
13	28	11.		13

Mean +2.28

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1904phae.proj...573W

Feb. 7. 1905.

Index 2 & B

IV

295.5
327.5 29.0.
112.0 43.0.
155.0 72.0. +2.44.

8 36 5 B

290.7 +2.42.
332.9 42.2.
116.7 31.5.
148.2 73.7. +2.39.

8 39 35

Index R & A

208.6
236.6 28.0.
24.4 36.4.
60.8 64.4. +2.70.

8 42 20 A

+2.62.

202.2
241.7 39.5.
27.7 29.3.
57.0 68.8. +2.55.

8 44 45

Mean +2.52.

161. 105.
8 40 41
5 -17.
13 40 24.

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1904phae.proj..573W

Feb 7 1905.

Index R & A

V

		207.9			
8	46	15	236.6	28.7	9
			25.4	34.4	
			59.8	63.1	+2.74

A

		203.4			+2.76
8	50	08	241.8	38.4	9
			29.9	23.9	
			53.8	62.3	+2.77

Index L & B

		118.5			
8	53	50	145.0	26.5	9
			294.0	35.6	
			329.6	62.1	+2.78

B

		115.5			+2.86
8	56	23	149.7	33.9	9
			300.7	24.1	
			324.8	58.0	+2.94

	205	96		9
8	51	39		9
5		-17		+5
13	51	22		14

Mean + 2.81

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1904phae.proj..573W

Feb. 7. 1905.

Index L+B VI

		120.7			
		143.4	22.7		
9	0	10	30.2		
		297.2	52.9	+3.14	B
		327.4			
		117.2		+3.15	
		145.1	30.9		
9	3	16	21.7		
		302.0	52.6	+3.16	
		323.7			

Index R+A

		31.2			
		52.3	21.1		
9	8	10	25.3		
		208.9	46.4	+3.44	A
		234.2			
		29.9		+3.44	
		55.3	25.4		
9	11	06	20.8		
		212.2	46.2	+3.45	
		233.0			

	22.	42.
9	5	40
+5		−17
14	5	23

Mean +3.30

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1904phae.proj..573W

Feb 7 1905

Index R & A

VII

31.2

9	14	14	49.9	18.7
			209.2	25.8
			235.0	44.5 +3.53

A

30.0 +3.62

9	16	58	54.0	24.0
			214.0	16.8
			230.5	40.8 +3.72

Index L & B

305.0

9	21	50	320.8	15.8
			121.5	20.6
			142.1	36.4 +3.92

B

+3.96

302.0

9	26	15	323.3	21.3
			124.6	15.7
			140.3	37.0 +3.94

Mean +3.79

	77	137
9	19	49
+5		−17
14	19	32

S. T. 6^h 58^m

N. A. −4 44

Dec. +73.0

P. A. 173.0 Var B

Sprocket −0.5 A

+0.5 B

+1.1 b

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1904phae.proj..573W

Feb. 7. 1905.

060521 +21°1146 Phot J Wolbach. Bouvier rec

6	6	+22.5
8	3	
2	0.	

Index Red

182.2	← var. dis		
264.2	82.0		
12.5	59.6		
72.4	141.6	−0.74	B
193.0		−0.75	
252.2	59.2		
1.5	78.7		
80.2	137.9	−0.82	

Index R. & B.

102.6			
162.9	60.3		
268.2	85.8		
354.0	146.1	−0.65	A
90.5		−0.60	
177.8	87.3		
278.0	63.9		
341.9	151.2	−0.55	
		Mean −0.69	

10 46 15

10	54	30
	100	45
10	50	22
+5		−17
15	50	5

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1904phae.proj..573W

Feb. 7. 1905.

Index R & B

101.5

10 55 30 — 165.0 — 63.5'

83.4'

270.5 — 146.9' — −0.64'

354.2

−0.62'

92.6

173.8 — 81.2'

67.0'

277.4 — 148.2' — −0.61' — A

344.4

Index L & A

0.0

82.5 — 82.5'

64.1'

190.2 — 146.6' — −0.64' — B

254.3

−0.68'

10.7

73.2 — 62.5'

79.5'

180.5 — 142.0' — −0.73

260.0

Mean −0.65'

11 2 40

21° 57' 70'

10 58 65

+5 −17

15 58 48

8

8

5

13

S.T. 8 45

Mo. A. +2 36

Dec. +21.2

P.A. 28.0 Var B

Spirlett. −3.5 A

−2.5 B

−1.9 b

We's watch used for times tonight

Watch 17 sec fast

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1904phae.proj..573W

Feb. 8. 1905 (Wednesday)

o beti. Phot. R. W. obs. Bowie. rec.

2	12	−3.6
5	38	
3	26	
3	38	

Index L & A

214.5'	← var. dis.	
225.0'	10.5'	
37.0'	8.5'	
45.5	19.0'	−5.40'

G

8 26 40

36.8		−5.40'
45.3	8.5'	
215.9	10.5'	
226.4	19.0'	−5.40'

Index R & B

306.0		
316.9	10.9'	
128.0	7.9	
135.9	18.8'	−5.43'

A

306.9		−5.38'
316.0	9.1'	
126.3	10.5'	
136.8	19.6'	−5.33'

		−5.39'
		9.19'
		3.80'

8 44 00

	70	40'
8	35	20'
5		−4'
13	35	16'

Obs. of o beti difficult throughout on account of rather low altitude and rather thick and variable haze. Before hour angle was read var.

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1904phae.proj..573W

Feb. 8. 1905.

disappeared in haze. Region thoroughly identified.

060521 +21° 1146 Phot. J. K. obs. Bowie. rec.

6	6	+22.5
4	51	
1	15	
10	45	

9 39 52

Index S + B

B

358.0		
86.0	88.0'	var. dis.
190.2	68.6'	
258.8	156.6'	−0.45'

178.8		−0.45'
266.5	87.7'	
8.3	68.5'	
76.8	156.2'	−0.45'

Index R + A

A

278.0		
347.3	69.3'	
90.3	84.9'	
175.2	154.2'	−0.49'

−0.51'

270.3		
355.0	84.7'	
99.0	67.6'	
166.6	152.3'	−0.53'

Mean − 0.48'

9	48	30
	81'	82'
9	40	71'
5		−4'
14	41	7'

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1904phae.proj..573

Feb. 8. 1905.

S. T. 5h 34m
H. A. − 0 34
Dec. + 22.0
P. A. 28.0 Ver. B
Spokes. − 3.5 A
" − 2.5 B
" − 1.9 b

0 44 06 − Camelopardalis

4 36 67.9
7 15
2 39
7
2 46

Abandoned.

W's watch used for times tonight
Watch 4 sec. fast.

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1904phae.proj..573W

Feb. 10. 1905. (Friday)

ε Cetii Phot. R. H. & Bare. sec

2 12 −3.6
5 00
2 48

Index R & B

307.7 ← var. dis
314.7 7.0
125.7 11.5
137.2 18.5 −5.46

7 33 15

307.0 305.8 −5.38
315.2 312.2 6.4 8.2
125.5 127.4 7.7 11.5
137.0 135.1 14.1 19.7 −5.32

Index L & A

216.2
225.9 9.7
36.6 8.7
45.3 18.4 −5.47

217.1 −5.49
224.87 7.6
35.5 10.5
46.0 18.1 −5.51

7 49 54
82. 72.
7 41 36.
+5 +20.
12 41 56.

Mean −5.47
9.19
3.75.

Trouble experienced with pencils and seeing in seconds set. Wind at times high and gusty. Sec. set accordingly retaken

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1904phae.proj..573W

Feb. 10. 1905.

S. T. 5 43
H. A. +3 27
Dec. −3.9

9.5 exp

044065 − Camelop. Phot. J. & Lz. Bone rec.

4 36 +67.9
7 5
+2 3 2
1 1
2 43

9 46 35

Index Lo A
189.6 com. star dis.
259.9 70.3'
17.0 51.0'
68.0 121.3' +1.16' (B)

+1.19

196.5
249.9 53.1'
8.0 65.6'
73.6 118.7' +1.22'

Index R & B
98.5
168.5 70.0'
286.0 54.6'
340.6 124.6' +1.09' (A)

+1.11'

107.5 52.0'
159.5 70.7'
277.6 122.7' +1.13'
348.5 Mean +1.15'

9 56 14
102 49'
9 51 24'
5 +20'
14 51 44'

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1904phae.proj..573W

Feb. 10. 1905.

S.D. 7^h 49^m
H.A $+3^h$ 3^m.
Dec. $+68.^\circ0$
P. A 263.0 Var B
Spoke to −1.5 B
−0.5 b

It is perfectly evident by looking in the finder that the variable is more than a magn. fainter than the comp star and also it is fainter, than when last obsd.

This impression was formed on looking in the finder before measurements.

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1904phae.proj..573W

Feb. 10. 1905

0605 21 +21°1146 Phot. J. H. & Bowser.

6 6 +22.5

7 55

1 49

9.5 cap

Index L & R

1.0 < var. dist

10 26 30

80.0 79.0

190.8 67.2

146.2 −0.65

258.0

−0.62

10.0

74.8 64.8

84.0

151.5 148.8 −0.60

265.5

Index R & B

270.8

82.5

353.3 64.5

147.0 −0.63

100.8

165.3

279.0 −0.60

345.4 66.4

83.3

91.1 149.7 −0.58

174.4

Mean −0.61

33 18

59 48

10 29 54

5 +20

15 30 14

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1904phae.proj..573W

Feb. 10. 1905.

Index R & B

271.1
354.5 83.4
64.2
100.8 147.6 −0.62
165.0

A

280.4 −0.64
346.0 65.6
80.6
92.0 146.2 −0.65
172.6

Index L & A

189.5
257.0 67.5
80.1
1.4 147.6 −0.62
81.5

B

182.5 −0.64
263.5 81.0
64.7
10.3 145.7 −0.66
75.0

Mean. −0.64

10	35	50
	79	90
10	39	75
+5		+20
15	40	35

10	44	40
	79	90
10	39	75
+5		+20
15	40	35

S. T. 8h 33m
H. A +2 25
Var +21.2
P. A. 28.0 Var B
Sprokets −3.5 A
−2.5 B
−1.9 B

We watch used for times tonight

Watch 20 sec. slow

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1904phae.proj..573W

Feb 11 1905 (Saturday)

Z Draconis Phot I & obs Same rec

11 46 +73.0
5 00
6 46
5 14

Index Rod

198.5 com star dist

7 28 35

247.1 48.6
9.2 63.0
72.2 111.6 +1.38

189.8 +1.34

7 32 57

256.0 66.2
48.7
17.6 114.9 +1.31
66.3

Index L.B.

108.8

7 37 02

157.2 48.4
62.6
281.2 111.0 +1.39
343.8

100.4 +1.40

7 40 20

162.6 62.2
48.1
287.2 110.3 +1.41
335.23

137 114
7 34 44
5 +18
12 35 2

Mean +1.37

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1904phae.proj..573W

Feb 11 1905

Index 2 + B

B

		109.5			II
7	44	45	154.3	44.8	
			280.6	61.9	
			342.5	106.7	1.49
			101.9		+1.50
7	47	50	163.6	61.7	
			290.4	44.6	
			335.0	106.3	1.50

Index R + A

		18.7			
		64.9		46.2	
7	52	02	191.4	63.5	
			254.9	109.7	1.42
			11.3		+1.44
7	55	05	72.0	60.7	
			198.0	47.0	
			245.0	107.7	1.47

	198	102	
7	49	56	
5		+18	
12	50	24	

Mean + 1.47

8
8
8
8
8
5
13

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1904phae.proj..573W

Feb. 11. 1905.

A

Index R & A

III

		19.0		
8	1	30	64.6	45.6
			189.0	64.0
			253.0	109.6	1.43

			10.2	+1.42
8	3	12	72.8	62.6
			199.0	48.0
			247.0	110.6	1.40

Index L & B

B

			290.5	
8	8	05	336.0	45.5
			102.4	59.7
			162.1	105.2	1.53

			282.0	+1.51
8	11	48	342.7	60.7
			109.1	46.2
			155.43	106.9	1.49

	23.	95.
8	5	69.
5		+18.
13	6	37.

+ Index +1.46

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1904phae.proj..573W

Feb. 11. 1905.

Index L & B

IV

			291.3		
8	18	50	336.+5.6	44.3	
			103.2	59.1	
			162.3	103.4	1.57

B

+1.56

			253.0		
8	21	56	341.6	58.6	
			109.0	46.3	
			155.3	104.9	1.54

Index R & A

			198.0		
8	27	45	247.5	49.5	
			12.1	60.3	
			72.4	109.8	1.42

A

+1.46

			191.8		
8	31	02	253.8	62.0	
			19.8	44.8	
			64.6	106.8	1.49

	97.	153	
8	24	53	
5		+18	
13	25.21		

Mean +1.51

8 / 5 / 13

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1904phae.proj..573

Feb 11 1905

Index R & A

V

197.1

δ 34 55

24 6.9 ~~7.2~~ 49.5
58.5
12.8 108.3 1.46
71.3

A

+1.47

191.0
253.1 62.1
19.3 45.2
64.5 107.3 1.48

δ 38 30

Index L & B

112.4
152.8 40.4
280.9 62.5
343.4 102.9 1.59

δ 43 05

B

101.6 +1.42
163.6 62.0
289.9 55.6
345.5 117.6 1.25

δ 46 12

161 102
δ 40 40
5 +18
13 40 58

Mean +1.44

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1904phae.proj..573W

Feb. 11. 1905.

Index L & B

VI

			110.5		
8	51	00	155.5	45.0	
			281.9	60.4	
			342.3	105.4	1.53

B

+1.54

			102.5		
8	53	50	162.0	59.5	
			289.0	45.5	
			334.5	105.0	1.54

Index R & A

			20.5		
8	55	14	63.5	43.0	
			190.0	61.8	
			251.8	104.8	1.54

A

+1.52

			13.2		
9	2	05	72.6	59.4	
			198.9	47.6	
			246.5	107.0	1.49

33	164	69	
8	56	17	
5		+1.8	
13	56	35	

Means + 1.53

19
9
5
14

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1904phae.proj...573W

Feb. 11. 1905.

Index R & A

VII

		20.9		
9	7	30	63.3	42.4
			190.4	62.1
			252.5	104.5 +1.55

			12.2	+1.54
9	10	20	70.8	58.6
			199.6	46.2
			245.8	104.8 +1.54

Index L & B

			291.5	
9	15	35	334.0	42.5
			103.0	58.4
			161.4	100.9 +1.63 B

			283.0	+1.66
9	19	20	340.5	57.5
			112.0	41.5
			153.5	99.0 +1.65

Mean +1.60

	51	105
9	12	71
5		+18
14	13	29

S.T. 7h 24m
H.A. -4 18
Dec. +73.0
P.D. 172.5 Sp. B.
Sprocket -0.5 A.
" +0.5 B
" +1.1 b.

Use watch used for times tonight
Watch 18 sec. slow

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1904phae.proj..573W

Feb. 13. 1905 (Monday)

Y Camelopardalis Phot I Hooker Bonner

7	24	+76.3
6	00	
1	24	
10.	36	

Index L & A

90.0	comparison dist.	B
172.5	82.5'	
250.0	65.9'	
345.9	148.4'	+0.61'

8 33 45

		+0.69'
98.4		
164.1	65.7'	
272.0	80.7'	
352.7	146.4'	+0.65'

Index R. & B

A

1.4		
81.4	80.0'	
189.0	64.3'	
253.3	144.3'	+0.69'

		+0.63'
11.0		
76.8	65.8'	
179.0	84.4'	
263.4	150.2'	+0.57'

Mean +0.63

8	45	50
	78'	95
8	39'	48
5		+20
13	40'	8

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1904phae.proj..573W

Feb. 13. 1905.

Index R+B

A

8 50 22	1.8		
	83.6	81.8	
	157.6	66.2	
	253.8	148.0	+0.61
			+0.62
	11.2		
	75.5	64.3	
	179.0	82.9	
	263.5 1.9	147.2	+0.63

Index L+A.

B

	275.0		
	350.0	75.0	
	97.0	69.4	
	166.4	144.4	+0.69
			+0.70
	251.8		
	346.2	64.4	
	90.9	79.5	
	170.4	143.9	+0.70

Mean +0.66

9	1	05
17	51	27
8	55	44
5		+20
13	56	4

S.J. 7^h 4^m
H.A. -0^h 25^m
Dec. +76.9
P.A. 347.0 Var. B
Spokes −1.5 A.
" −0.5 B.
" +0.1 C.

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1904phae.proj..573W

Feb 13 1905

044068 — Barnard Phot J K. de Bonis

4. 36 +67.9
7 38
3 2

9.5 bapr.

Index R+B

278.4 ← com star dis
345.5 67.1
107.0 49.9
156.9 117.0 +1.26 A

286.5 +1.28
336.6 50.1
99.4 64.6
164.0 114.7 +1.31

Index S+B

187.0 B
256.6 69.6
14.0 53.0
67.0 122.6 +1.14

194.0 +1.12
251.5 57.5
8.0 67.1
75.1 124.6 +1.09

Mean +1.20

9 56 0

10 6 40
19 62 40
9 61 20
+5 +20
15 1 40

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1904phao.proj...673W

Feb. 13. 1905.

S.T. $8^h\ 6^m$
H.A. +3 21
Dec. 67.5
P.A. 81.0 Var. B
Sprocket −1.5 B
" −0.5 b

060521 +21° 1146 Phot. J. Hartz. Bonn. rec.

6	6	+22.5
8	10	
2	14	
	13	
2	17	

9.5 bad

For measurements see next page.

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1904phae.proj..573W

Feb. 13 1905

Index L & A

358.8 ← var dia

83.6	84.8	
188.8	66.6	
255.4	151.4	−0.55

B

8.0		
75.5	67.5	−0.52
178.2	86.6	
264.8	154.1	−0.50

Index R & B

280.0		
344.3	64.3	
92.6	76.9	
169.5	141.2	−0.75

A

−0.74

272.8		
352.0	79.2	
99.8	62.7	
162.5	141.9	−0.74

Mean −0.63

10	50	10
	93	20
10	46	40
5		+20
15	47	00

S. T. 8h 46m

L. A. 2h 40m

Dec. +21.2

C. A. 206.5 Var B

Sprocket −3.5 A

" −2.5 B

" −1.9 b

Watch used for times tonight

Watch 20 sec. slow

7

7

5

12

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1904phae.proj...573W

Feb. 14. 1905 (Tuesday)

J Androm. Phot. J. Hubs. Bowie sec.

0	8	+26.5	0	6	26.2
5	18		5	23	
5	10		5	17	
5	20				

Index L & B

7 45 50	200.2 ← com. star. dis.		
	341.8	61.6'	B
	107.4	48.7'	
	156.1	110.3'	+1.41'
	208.9		+1.44'
	335.6	46.7'	
	100.5	61.6'	
	162.1	108.3'	+1.46'

Index R & A A

	191.6		
	255.1	63.5'	
	15.2	48.8'	
	64.0	112.3'	+1.36'
	196.7	49.5'	+1.36'
7 39 54	246.2	63.5'	
107' 104'	7.7	113.0'	+1.35'
7 53' 82'	71.2	Mean	+1.40'
5 +20'			
12 54 42'			

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1904phae.proj..573W

Feb. 14 1905.

S.I 6 h. 5 m.
H.A. 5 h. 46 m.
Dec. +26.0
P.A 264.0 Var. B
Spurious −0.5 B.
" +0.5 b.

Comp. Star 1 (for R Cassiop.)
R Cassiop. N. obs. Bonn. rec. Phot. I.

23	52	+50.0
30	11	
6	9	
	5	
6	14	

8
8
5
13

For measurements see next page.

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1904phae.proj...573W

Feb. 14, 1905.

Compared with +50° 4199 (A?) Dorrad Lorgn. C.L. = 9 Kr

Index L & A

8 39 02

103.2 ← com star dis		
161.0	57.8'	
256.8	44.6'	
331.4	102.4'	+1.60'

B

111.2		
152.5		+1.66'
283.9	41.3'	
339.5	55.6'	
	96.9'	+1.73'

Index R & B

12.2		
70.0	57.8'	
199.4	49.3'	
248.7	107.1'	+1.49'

A

19.0		+1.48'
66.8	47.8'	
190.6	59.8'	
250.4	107.6'	+1.47'

Mean. +1.57'

8 55 20

	94 22	'
8	47 11	'
5	+20	'
13	47 31	'

S.J. 6h 55m

H.A. 7 2

Dec. +50.1

P.A. 191.0 Var. B

Spokes −3.5 B

−2.5 b

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1904phae.proj..573W

Feb. 14. 1905.

Sophie. Phot J Hodge Bowie rec 9.5 bap

23	50	+52.4
31	41	
7	51	
	6	
7	57	

10 3 40

Index B.

281.5	var. dia.	B
342.1	60.6	
95.0	75.0	
170.0	135.6	−0.86

−0.87

275.5		
349.5	74.0	
101.1	60.9	
162.0	134.9	−0.88

Index A

A

185.5		
255.6	70.1	
359.8	82.2	
82.0	152.3	−0.53

−0.58

179.5		
262.4	82.9	
11.1	64.8	
75.9	147.7	−0.62

Means −0.72

10	12	12
	15	52
10	7	56
5		+20
15	8	16

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1904phae.proj..573W

Feb. 14, 1905

S.T.	$8^h\ 36^m$
M.A.	$8^h\ 37^m$
Dec.	+82.0
P.A.	322.6
Sprocket	−2.5 B
"	−1.5 b

H's watch used for times tonight
Watch 20 sec. slow

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1904phae.proj..573W

Feb. 15. 1905. (Wednesday)

7 20 Sky more or less cloudy

8.00 " " " " "

8.30 " " " " "

8.40 " much more cloudy

8.55 blonde still quite thick and apparently no chance for work

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1904phae.proj..573W

Feb. 16. 1905. (Thursday)

0 44 5 28 Doubt. Var. +28° 707 Phot. J. Str. tr. B wire rec.
9.5 brap.

4	44	+27.6
5	30	
0	46	
	10	
0	56	

7 59 0

Index L

283.5	5.8	comp. star dec.
340.0	54.2	
96.5	67.3	B
163.8	121.5	+1.16

275.8		+1.16
345.1	69.3	
105.0	51.9	
156.9	121.2	+1.17

Index R

A

192.2		
251.5	59.3	
4.2	74.1	
78.3	133.4	+0.91

184.7		+0.95
257.4	72.7	
13.0	56.6	
69.6	129.3	+0.99

Mean +1.06

8	9	32
15	68	32
7	64	16
5		+27
13	4	43

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1904phae.proj..573W

Feb. 16. 1905.

S.J. $6^h\ 24^m$
H.A. 1 38
Dec. +27.9
P.A. 219.0 Var. B
Sprokets − 1.5 B
" − 0.5 b

0 33451 Doubt. Var. +51° 762 Fair. Phot. 3 Bonn.

3	38	+ 50.3
6	32	
2	54	
2	55	
2	58	

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1904phae.proj..573W

Feb 16 1905

Index A

	260.8	comp. star dia.	
9 0 35	2.7	101.9	
	89.2	82.3	A
	171.5	184.2	
		175.8	−0.08
	271.1		
	351.7	80.6	−0.06
	80.2	101.7	
	181.9	177.7	−0.04

Index B

~~260.0~~	168.5		
~~350.~~	268.0	99.5	B
	359.0	79.8	
	78.8	179.3	+0.01
	178.2	83.8	−0.02
	262.0	99.3	
	352.2	183.1	
	91.5	176.9	−0.06

Mean −0.04

9	12	52
	12	87
9	6	44
5		+27
14	7	11

S. J. 7h 26m
R.A. +3 50
Dec. +50.7
P.A. 176.0
Sprokets −1.5 A
" −0.5 B
" +0.1 b

W's watch used for times tonight
Watch 27 sec slow

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1904phae.proj..573W

Feb. 17, 1905. (Friday)

8 30 Fairly clear

8 35 Some more clouds

8 50 Quite cloudy again

ε Aurigae Phot. I Kpbz. Bame rec.

7 in Cap

4	54	+43
4	52	+43.6
7	10	
2	18	
2	23	

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1904phae.proj..573W

Feb 17 1905

Index L & A

302.4 ← var. dia

320.4

124.1 18.0

138.3 14.2

32.2 −4.25 B

303.8

318.8 15.0 −4.20

121.8 18.5

140.3 33.5 −4.16

Index R & B

211.5

232.8 21.3

33.1 14.7

47.8 36.0 −4.00 A

213.2 −3.96

230.4 17.2

30.4 20.2

50.6 37.4 −3.92

Mean −4.08

9 23 18

9 36 40

59 58

9 29 59

+5 +32

14 30 31

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1904phae.proj..573W

Feb 17 1905

Index R&B

	211.7		
9 53 10	232.0	20.3'	
	32.6	17.0'	
	49.6	37.3'	−3.92' (A)

	212.7		−3.92'
	230.4	17.7'	
	31.0	19.7'	
	50.7	37.4'	−3.92'

Index L&A

	121.0		
	138.3	17.3'	
	303.9	15.9'	
	319.8	33.2'	−4.18 (B)

	123.4		−4.16'
10 3 47	138.6	15.2'	
19 56 57	302.2	18.4'	
9 58 28	320.6	33.6	−4.15
+5 +32			Juan −4.04'
14 59 0.0			

S.S. 8 38
Hor. A +3 42
Dec. +43.5
R.A. 358.8
Sprocket −8.5 A +15.5 A
" −7.5 B +16.5 B
" −6.9 b +17.1 b

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1904phae.proj..573W

Feb 17 1905

Troubled somewhat by clouds during preceding observations. Clouds not heavy and massive in their character, but of a somewhat lighter nature.

Watch used for times taken
Watch 9 2 sec slow

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1904phae.proj..573W

Feb. 18. 1905. (Saturday)

μ Cephei Phot. J. H. obs. Bonn rec

21	39	+58.1
29	40	
8	1	
	6	
8	7	

9.5 Cap

Index Red

287.7 ← var dia

335.6	47.9	
107.4	45.0	
152.4	92.9	−1.84

B

289.0		−1.89
333.2	44.2	
108.4	44.9	
153.3	89.1	−1.94

Index A + B

A

197.4		
243.4	46.0	
19.0	43.9	
62.9	89.9	−1.92

197.8		−1.92
245.5	47.7	
20.1	41.9	
62.0	89.6	−1.92

Mean −1.90

7	43	00
7	51	08
	94	08
7	47	04
+5		+35
12	47	39

S. T. 6h 11m
H. A. 8h 28m
Dec. +58.1
P. A. 179.9 var B.
Products −6.5 B
" −5.5 b

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1904phae.proj..573W

Feb. 18, 1905.

p Bassist Phot. J. Sk. obs. Bonn vc

9.5 bap

23	47	+56.7
30	25	
6	38	
	5	
6	43	

Index L & B

102.5	← var dia.		B
159.6	57.1		
282.5	56.9		
339.4	114.0	−1.33	B.

104.0		−1.34
159.2	55.2	
282.8	57.8	
340.6	113.0	−1.35

Index R & A

11.6			A.
71.0	59.4		
192.2	56.1		
248.3	115.5	−1.29	A

12.0		−1.28
68.0	56.0	
191.6	60.3	
251.9	116.3	−1.27
	Mean	−1.31

δ 28 40

δ 36 30

64	70	:
8 32	35	:
5	+35	:
13 33	10	:

S.J. 6h 54m
H.A. 7 0
Dec. +56.6
P.A. 302.0 Var. B
Sphere. −0.5 B
+0.5 b

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1904phae.proj...573W

Feb. 18. 1905.

060426 Dark Var +26°1117 Phot J. W. de Bower

6	2	+26.0	5	58	267
7	45		7	51	
1	43		1	53	

9.5 Exp

Index L & B

103.5		var dis
159.4	55.9	
274.5	71.7	
346.2	127.6	−1.03

B

94.6		−1.02
167.3	72.7	
282.8	55.8	
338.6	128.5	−1.01

Index R & A

11.7		
69.5	57.8	
183.0	73.7	
256.7	131.5	−0.95

A

−0.92

189.5	~~4.8~~	61.2	
250.7	~~79.0~~	73.0	
240		134.2	−0.89
	75.0		

Mean −0.97

10	21	02
	32	12
10	16	6
5		+35
15	16	41

10 11 10

S. J. 8 45
H. A. 2 38
Dec. +25.6
R.A. 282.5 Ver B
Sprocket −0.5 B
" +0.5 b

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1904phae.proj..573W

After finishing work turned tel. on Procyon and adjusted indices of dec. circle

Before adjustment, the indices read about .6 of a degree too small

W's watch used for times tonight

Watch 35 sec. slow

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1904phae.proj..573W

Feb. 20. 1904. (Thursday).

060426 Daubt. Var. +26° 1117 Plat. V.
W. obs. Bowie rec.

6 2 +26.0 9,v cafo.
4 20
+2 14

Index R + A.
Var. dio.
10 1v 12. 12.2 v4.4. 71.0
14 4.1 72.4
2v 6.v 131.2 −0.9v.

14 4.0 62.1 −0.90
2v 0.1
2.9 73.9
76.4 136.0 −0.46

Index L + B
276.0 71.1
3K 7.1 vK9
10 4.2 126.0 −1.06
1v 9.1

−1.06
96.4 71.6
10 v0 6. 164.4 v4.9
243.2 126.v −1.0v
33 4.1
65 18
10 32 39
5 +46
15 33 25

Mean −0.94

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1904phae.proj..573W

Feb. 20. 1905.

S. S.	9^h	14^m
H. A.	+3	6
Dec.	$+2\overset{\circ}{5}.9$	
Sprocket	$-0.\overline{5}B$	
"	$+0.\overline{5}C$	

Sid watch used for times to night.
Watch 46. was. slow.

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