KG
11365
664

1928phae.proj..665S

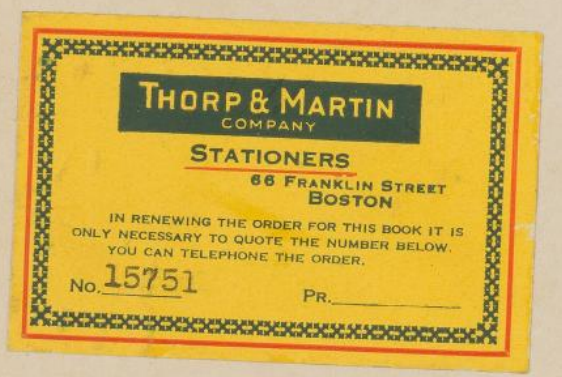
12-inch

Nov. 1928

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1928phae.proj..665S

KG 11365,664



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1928phae.proj..6655

KG 11305.664

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JUL 2 1956

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1928phae.proj..6655

Fri. Nov. 23-1928

HB Sawyer obs + rec

12" Polar Var right hand comp dis Rather thick; floating clouds Moon very bright

TU Cas

Phot T.

7:38	59.6		.51	
	111.2	51.6	1.28	
	233.6	54.5		48
	288.1			1.37
		106.1		
	52.9			
	107.5	54.6	1.46	
	235.7			
	289.1	53.4		1.37 ✓
		108.0		~~1.32~~
	150.6			
	202.0	51.4		
	325.0		1.30	
	28.9	63.9		
		115.3		
	142.7			1.26
	200.5	57.8		
	322.0		1.23	
7:27	225	60.5		
		118.3		

LE+.003

Light equation given in blue pencil throughout this book

242 5574.515 TU Cas always brighter than comp. star F.S.T. used.

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1928phae.proj..6655

2

Friday, Nov 23

TU Cas

NGS 006 1 rec

II

Left dis

7:32

144.4

197.0 52.6 ✓

320.4

25.6 65.2 ✓

118 −1.24

139.2 ✓

207.2 68.0 1.14

328.2

27.8 59.6 ✓ −1.03

126

70.0 ✓ Clouds?

105.7 35.7 ?

118.0 ✓

235.0 117.0

Large Cloud through Cas

Observations prossibly worthless

288.2 ✓ 1.23

48.6 120.4

7:42

106.7 ✓

232.0 175.3

257

114 −1.32

5574.525

LE +003

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1928phae.proj..6655

Friday Nov 23 TU Cas 1h43 00z + rc

7:49 Right dis

288.9
58.5 129.6 ✓

117.9
224.8 106.9 ✓

236.5 ~~123.3~~ — 1.12 ✓

289.8
53.0 123.2 ✓ — 1.34 ✓

108.0
240.4 132.4 ✓

255.6 ✓ ~~1044~~ — 1.55 ✓

151.8
196.5 44.7 ✓ 1.35 ✓

325.3
27.6 62.3 ✓

107.0 ✓ — 1.49

142.1
203.9 61.8 ✓ 1.36

7:56 326.6
22.9 56.3 ✓

118.1 ✓ — 1.23

5574536
1003

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1928phae.proj..6655

Friday, Nov 23

Left dec

IV

8'00

137.6
203.6
66.0 ✓

317.1
25.3
68.2 ✓ 0.89 ✓

134.2 ✓ 1.08 ✓

139.8
202.8
63.0 ✓

326.0
19.8
53.8 ✓ 1.26 ✓

116.8 ✓ 1.41 ✓

243.6
288.0
44.4 ✓

61.0
111.4
50.4 ✓ 1.79 ✓

94.8 ✓ 1.74 ✓

234.6
291.6
57.0 ✓ 1.68 ✓

64.6
108.8
42.2 ✓

8'08

99.2 ✓

.544
+003

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1928phae.proj..6655

Friday Nov 23

	Left dis		
8:12	231.7		
	287.1	55.4 ✓	V
	60.2	52.4 ✓	1.47 ✓
	112.6		
		107.8 ✓	1.50 ✓
	229.3	59.0 ✓	
	288.3		1.53 ✓
	58.9	46.1 ✓	
	105.0		
		105.1 ✓	1.29 ✓
	329.5	52.7 ✓	
	22 2		1.13 ✓
	135.0	70.4 ✓	
	205.4		
		123.1 ✓	1.08 ✓
	319.0	66.5 ✓	
	25.5		1.04 ✓
	140.5	60.4 ✓	
8:20	200.9		
		126.9 ✓	

.552

+003

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1928phae.proj..6655

Friday Nov 23 VI

	Right dis		
8:42	325.1	60.0 ✓	
	25.1		
	149.9	50.6 ✓	1.40 ✓
	200.5		
		110.6 ✓	1.35 ✓
	327.2	55.0 ✓	
	22.2		
	145.2	60.0 ✓	1.30 ✓
	205.2		
		115.0 ✓	1.60 ✓
	59.8	57.4 ✓	
	117.2		
	241.9	41.9 ✓	1.67 ✓
	283.8		
		99.3 ✓	1.84 ✓
	62.3	40.2 ✓	
	102.5		2.01 ✓
	244.6	46.1 ✓	
8.51	290.7		
		86.3 ✓	

.594
+ 003

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1928phae.proj...6655

Friday Nov 23 VII

9:03	Left edge	R dis	
	58.7	57.6 ✓	
	110.3		
	238.3	53.0 ✓	1.54 ✓
	291.3		
		104.6 ✓	1.56 ✓
	57.5	58.9 ✓	
	116.4		1.57 ✓
	243.4	44.8 ✓	
	288.2		
		103.7 ✓	1.50 1.56
	154.1	44.2 ✓	
	198.3		1.61 ✓
	325.4	57.8 ✓	
	23.2		1.45 ~~1.57~~
		102.0 ✓	
	138.6	~~46~~ 46.1 ✓	1.28 ~~1.51~~
	204.7		
	331.4	49.9 ✓	
9:12	21.3		
		186.0	

.589
+003

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1928phae.proj..6655

Friday Nov 23 VIII

9:28 L Eye — Left R eye

328.9	54.1 ✓	
23.0		1.18 ✓
139.4	66.5 ✓	
205.9		1.28
	120.6 ✓	
324.7	59.8 ✓	
24.5		1.34
146.4	58.6 ✓	
199.0		
	117.4 ✓	1.41 ✓
234.3		
105.3	61.9 ✓	
296.2		1.42 ✓
59.7	48.0 ✓	
107.7		1.56 ✓
	109.9 ✓	
233.4	56.6 ✓	
290.0		1.70 ✓
62.2	41.5 ✓	
103.7		
	98.1 ✓	

maybe eyes not accustomed to dark

9:38

.606
+003

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1928phae.proj..6655

Friday Nov 23 IX

9:55

	R dis	
241.7	44.6 ✓	
286.3		
55.6	54.0 ✓	
109.6		
	98.6 ✓	— 1.69 ✓
236.3	57.8 ✓	
294.1		− 1.58 ✓
56.6	50.1 ✓	
106.7		
	107.9 ✓	— 1.47 ✓
335.7	45.6 ✓	
21.3		Mean = −1.54 ✓
136.4	64.0 ✓	
200.4		
	109.6 ✓	− 1.43 ✓
328.5	57.7 ✓	
23.2		−1.49 ✓
145.8	49.5 ✓	
195.3		
	104.2 ✓	— 1.55 ✓

10:05

.625
+003

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1928phae.proj..6655

Nov 23 X

10:13 Left dis

329.7	48.4 ✓	
18.1		
139.1	58.6 ✓	1.49 ✓
197.7		
	107.0 ✓	31 / 1.54
329.5	53.2 ✓	1.13 / 1.59
22.7		
135.7	59.5 ✓	12 / 1.56
205.2		
	112.7	
56.0	67.5 ✓	
117.5		1.16
232.2	64.2 ✓	0.94
296.4		
	121.7	
47.2	69.9 ✓	1.15
117.1		0.94
235.1	61.9 ✓	
297.0		
	131.8	

No clouds seen
Stars faint
Observation different

0.94 / 1.16

10:34

.642
+ 603

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1928phae.proj...6656

Tues. Nov. 27/1928

E.S.T. from Noon

12" Polar LC Obs

7 22 SS Cyg 213f43 f.4

Phot T

TU Car

0 20 +5.22

Audouin Obs
LC Rec

Sfr. Left

7 36 40 329.5 < var dis
39.1 69.6
157.6* 65.7
217.3 135.3 - 0.87 ✓

3249 - 1338 0.96 ✓
31.9* 67.0
157.0 59.0
216.0 126.0 - 1.06 ✓

Sfr. Right. Mean = - 0.92
58.7
123.2* 64.5
241.4 70.6
312.0 135.1 - 0.87 ✓

f 003

58.9 - 135.0
127.5 73.6 0.88 ✓
247.0* 61.2
7 43 40 308.2 134.8 - 0.88 ✓

7 40 10
+5.78.

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1928phae.proj..6655

Tuesday Nov 27/1928

TU Cass

Miss Olmsted Obs
Andrews Rec

watch fast 31s

8 49.40

Spr rt.

77.2			
140.9 *	Vandiss	63.7	
250.6		59.7	
310.3		123.4	1.12
73.6		65.1	
138.7 *			1.08
251.5		61.3	
312.8		126.4	1.05

Spr left

mean = 1.07

159.0	Vandiss	65.2	
224.2 *			
357.4		51.0	
48.4		116.2	1.28
156.5		68.1	
224.6			1.05
337.8 *		70.1	
47.9		138.2	.81

+003

9 0 45

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1928phae..proj...665S

Tuesday Nov 27/1928

~~9737~~ T.U. Cass. Andrews Obs.
221. ~~Olmsted~~ Rec.

W.C. as Ref

Spar C.

~~221.2~~

9 08 50 ~~43.0~~

9 09 37 177.2
237.5 < vanes 60.3
346.0 *
~~547~~ 0
409
115.0 1.30

177.0
216.1
345.1 *
34.9 39.1 1.62
49.8
88.9 1.94

Spar N.

62.3
135.0 * 83.7 1.35
~~71.0~~ ~~1.25~~
~~+33.5~~
200.0 wave dial head 64.8
314.8

Spar N

+003 66.2
133.1 < vanes 66.9
~~245.8~~ *
314.4
68.6
135.5 0.87

R m S
9 20 37 72.5
129.0 * 57.5 .99
247.0
313.5 66.5 1.11
134.0

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1928phae.proj..6655

Tuesday Nov 27, 1928

TU Cass. Miss Olmsted o/z
Andrews rec.

Spr rt.

E.S.T.

9/28/25 ~~302.2~~ ~~76.2~~ < van dis / 14.0

9 33 15 68.9 < van dis 70.4
134.3
249.3 *
311.6 62.3
132.7 0.92

64.7
131.6 * 66.9 0.87
252.1
323.1 71.0
137.9 0.82

Spr left
~~(276)~~ 7.5 0.88 1.25
345.1 78.3
33.4
161.9 *
211.3 49.4
97.7 1.71

+003

348.6
39.4 50.8 1.62
*
9 42 50 157.9
203.5 45.6
106.4 1.50

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1928phae.proj...6655

Tuesday Nov 27, 1928

T U Cass

Andrews obs
Olmsted Rec

Spr ~~eqft~~.

~~9 48 10~~	~~214.8~~			
9 51 10	164.5			
	211.9 *	< var dis 47.4		
	350.0			
	41.1	51.1		
	161.1	98.5 —	169	
	213.0	52.1		
	346.3 *			1.62
	39.0	52.7		
		104.8 —	1.54	
	250.0			
	315.8	65.8		1.42
	73.5 *			
	136.5	63.0		
	253.6	128.8 —	1.00	
	310.9	57.3		
	67.9 *			1.21
$10^h 01^m 10^s$	130.6	52.7		
		110.0 —	1.42	

+003

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1928phae.proj..6656

Tuesday Nov 27/1928

TU Cass — miss Olmsted obs Andrews rec

Spr rt.

10 8 15

250.3	∠ran dis.		
312.2		61.9	
65.8 *			
129.5		63.7	
		125.6	1.07
253.7			
314.8		61.1	
62.1 *			1.01
132.3		70.2	
Spr lft		131.3	0.95
347.2			
33.4 *		46.2	1.28
168.7			
222.0		~~53~~ 53.3	
341.4		99.5	1.67
43.2		61.8	
164.8 *			1.55
212.5		47.7	
		109.5	1.43

?

T003

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1928phae.proj...6656

Tuesday Nov 27/1928

Andrews Obs
Olmsted Rec

	Spr left				
10 23 57	344.4				
	35.0	50.6			
	166.5 *	44.7			
	211.2	95.3	1.77		
	346.5				
	37.2	50.7		165	
	160.0 *	54.9			
	214.9	105.3	1.53		
	70.1				
	129.9	59.8			1.50
	254.1 *	57.9			
	311.0	117.7	1.24		
	79.1				
	128.9	49.8		1.34	
	250.6 *				
10 31 08	310.0	59.4			
		109.2	1.44		

+003

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1928phae.proj..6656

Tuesday, Nov. 27/1928

Watch fast 3s

10 35 15

TU Cass.

Miss Olmsted obs
Andrews rec.

Spr rt
(30/1.7)

76.8			
130.1	53.3		
288.4*			
302.9	53.5		
	106.8	1.49	
74.2			
123.0	49.8		1.49
250.3*			
307.3	57.0		
	106.8	1.49	
Spr left			
167.8			
212.6	54.8		1.71
345.5*			
27.5	42.0		
	96.8	1.74	
169.6			
204.0	34.4	3F	1.92
342.6*			
31.7	49.1		
	83.5	2.09	

10 44 25

+003

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1928phae.proj...6656

I

Wednesday December 5, 1928

TU Cass 0 20 51.8 +52.2

H.B.S. Obs

Var left - Aprock left + rec

5'.48	334.2	Left dis		
	41.7	67.5		
	154.8	63.6		
	218.4		0.96	
		131.1		
	333.2	70.9		
	44.1		0.88	
	155.3	67.2		
	222.5		0.81	
		138.1		
	67.8	66.3		
	134.1		0.86 ✓	
	283.3	67.4		
	310.7		0.90	
		133.7		
	61.3	77.2		
	138.5		0.84	
	249.9	61.9		
5'.59	311.8		0.79	
−1		139.1		

+003 5586.455

5h: 40 SS Cyg. 213843 ext 9.7 H.C. Obs.

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1928phae.proj..6655

II Dec 5 HBS Obs true

6'22

	Sprocket right	left dis	
	66.6	64.9 ✓	
	131.5		
	246.2	64.0 ✓	1.00 ✓
	310.2		
		128.9 ✓	
	63.0 ~~55.6~~	71.3 ✓	
	134.3		0.94 ✓
	247.2	63.8 ✓	
	311.0	135.1 ✓	0.87 ✓
	162.5	58.1 ✓	
	220.6		0.86 ✓
	329.5	75.5 ✓	
	45.0		
		133.6 ✓	0.90 ✓
	197.1	68.7 ✓	
	225.8		0.78 ✓
	334.7	66.6 ✓	
6'31	51.3	135.3 ✓	0.67 ✓

−1

+003 5586.476 ✓

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1928phae.proj...6656

III Dec 5 VHBS 003 + nc

6:46 S left

158.2 69.6 ✓

2278 0.63 ✓

331.6 77.4 ✓

49.0 ——

147.0 ✓ .56 0.66

152.5 77.0 ✓

2295 0.50 0.70

333.5 ~~86~~ 7 .7 ✓

50.2 ~~5~~

143.7

0.74

244.1 67.2 ✓

311.3 0.91 ✓

68.6 66.2 ✓

134.8 ——

133.4 ✓ 0.83 ✓

242.6 70.1 ✓

312.7 0.75 ✓

6:54 66.9 71.1 ✓

138.0 ——

141.2 ✓

−1

+003 5586.49 ~~3~~ 7 ✓

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1928phae.proj..6655

TV Dec 5 NBS obs + rec

7:12 Refl dis

239.6	74.8 ✓	
314.4		0.61 ✓
63.6	73.4 ✓	
137.0	148.2 ✓	
		0.64 ✓
233.2	77.9 ✓	
311.1		0.68 ✓
66.8	66.6 ✓	
133.4	174.5 ✓	
		0.54 ✓
331.6	72.7 ✓	
44.3		0.57 ✓
152.1	77.4 ✓	
229.5	150.1 ✓	0.45 ✓
324.3	90.7 ✓	
55.0		0.33 ✓
152.2	72.0 ✓	
224.2	162.7 ✓	

7:20

-1

+003 5586.510 ✓

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1928phae..proj...6656

V

Dec 5 Hill obs + rec
Bright light

7:47

159.5	6	85.3 ✓	
224.8			
334.7		67.3 ✓	
42.0			0.92 ✓
		132.6 ✓	
151.8	6	89.4 ✓	
221.2			0.90 ✓
338.6		65.4 ✓	
44.0			
		134.8 ✓	0.88 ✓
253.1		57.7 ✓	
310.8			0.92 ✓
62.4		71.9 ✓	
134.3			
		129.6 ✓	0.99 ✓
246.4		68.7 ✓	0.95 ✓
315.1			
65.5		63.9 ✓	
129.4			0.92 ✓
		132.6 ✓	

7:54

−1

+003 5586.535 ✓

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1928phae.proj..665S

VI Dec 5 HBS Obs + rec

Bright light

8:02

247.9 62.3

310.2

64.9 66.8 1.00

131.7

129.1 0.90

242.0 72.8

314.8 0.81

65.2 65.4

130.6

138.2 0.87

341.7 58.5

40.2 0.98

153.8 71.5

225.3

130.0 0.87

330.5 72.7

43.2 0.56

156.3 68.2

224.5

150.9

8:09

−1

5586.545

+003

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1928phae.proj...6655

VII Dec 5 HBL observer

8'.86

337.7	60.5		
38.2			
148.6	73.4		
222.0		0.90	
	133.9		
332.6	70.6		
43.2		0.88	
153.1	65.5		
218.6			
	136.1	0.85	
63.4	66.6		
130.0			0.87
243.3	70.9		
314.2			
	137.5	0.82	
67.0	70.3		
137.3		0.86	
245.0	63.3		
308.3			
	133.6	0.90	

8'.34

−1

+003

.562

1928phae.proj..6656

VIII Dec 5 HBS Observe

5.
8:40

65.3	66.1 ✓	
131.4		
241.8	71.6 ✓	0.82 ✓
313.4		
	137.7 ✓	0.82 ✓
63.6	68.1 ✓	
131.7		
241.9	69.0 ✓	0.83 ✓
310.9		0.86 ?
	137.1 ✓	
158.4	66.7 ✓	
225.1		0.83 9
333.7	67.6 ✓	
41.3		0.90 2
	134 3 ✓	
	4	
154.1	68.7 ✓	
222.8		0.96 ✓
339.8	62.1 ✓	
41.9		
	130.8 ✓	

8:56

-1

,579 ✓

+003

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1928phae.proj...6656

IX Dec 5 HBS Observe

9 8:41	154.0	64.1	
	218.1		
	334.7	70.3	0.89
	45.0		
		134.4	
	149.2	69.1	0.84
	218.3		
	337.8	70.3	0.79
	48.1		
		139.4	
	245.0		
	~~316.0~~	67.0	0.80
	312.0		
	~~65.~~		0.74
	58.9	74.9	
	133.8		
		141.9	0.77
	241.4	73.6	
	~~315.0~~		0.80
	65.0	65.0	
9:58	130.0		
−1		138.6	
1003	.617		

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1928phae.proj..6655

Tau Cas Series- X Dec 5 1928 obsv rec

Stars going behind building

10;14	249.3	64.0 ✓	
	313.3		
	71.3	53.3 ✓	1.25 ✓
	124.6		
		117.3 ✓	
			1.22 ✓
	250.7	56.7 ✓	
	307.4		
	67.4	63.3 ✓	1.19 ✓
	130.7		
		120.0 ✓	
			1.20 ✓
	341.7	60.9 ✓	
	42.6		
	163.6	6.1 55.9 ✓	1.26 ✓
	219.7		
		116.8 1.0 ✓	
			1.18 ✓
	344.4	55.6 ✓	
	40.0		1.09 ✓
	156.4	69.0 ✓	
10.24	225.4		
		124.6 ✓	

−1 Watch 1 min fast

+003 .637 ✓

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1928phae.proj..6655

Phot T

Thursday, Dec 6, 1928 Sprocket left HBS obs AS rec.

TU Cassiopeiae

5:25

217.5	118.1		
335.6			
40.6	117.6		
158.2		1.10	
	235.7	124.3	
227.1	105.1		
332.2		1.06	
35.4	127.4		
162.8		1.03	
	232.5	127.5	

Sprocket Right

75.7	50.3		1.29
126.0			
~~253.8~~	254.2	525	1.59
306.7			
	102.8		1.52
71.3	57.2		
128.5			1.45
254.3	51.3		
305.6			
	108.5		

5.33

-2

+003 5587.436

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1928phae.proj..6655

Thurs. Dec 6 1928 Obs + rec

TW Cas II

5
4:35

Sprock right	left dis	
70.7	50.5 ✓	
121.2		
250.6	51.7 ✓	1.60 ✓
302.3		
	102.2	
77.2	42.4 ✓	1.69 ✓
119.6		
253.2	52.7 ✓	1.78 ✓
305.9		
	95.1	1.38 ✓
159.0	55.5 ✓	
214.5		
336.2	64.6 ✓	1.19 ✓
40.8		
	120.1	1.07 ✓
155.3	73.4 ✓	✓
228.7		0.95
341.4	57.8 ✓	
39.2		
	131.2 ✓	

5:45
-2

T 003 .443 ✓

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1928phae.proj...6655

Thurs. Dec 6 '28. TU Cas III HBS obs + rec

5:47	158.3	54.6 ✓	
	212.9		
	338.1	58.5 ✓	1.35 ✓
	36.6		
		113.1 ✓	
	157.0	63.3 ✓	1.30 ✓
	220.3		
	341.3	54.2 ✓	1.25 ✓
	35.5		
		117.5 ✓	1.49 ✓
	254.1	49.0 ✓	
	303.7		
	70.0	57.3 ✓	1.50 ✓
	127.3		
		106.3 ✓	1.58 ✓
	251.0	53.5 ✓	
	304.5		1.65 ✓
	76.3	46.7 ✓	
5:55	123.0		
		100.2 ✓	

-2 ✓

+003 .457 ✓

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1928phae.proj..6655

Thurs. Dec 6 '28 HBS Obs & Rec

TU Cas IV

5'.56

Left dis	Spread right	
249.5	57.8 ✓	
301.3		
69.6	51.0 ✓	1.59 ✓
120.6		
	102.8 ✓	1.72 ✓
253.3	48.7 ✓	
302.0		1.86 ✓
~~78.0~~ 67	43.3 ✓	
121.3		1.42 ✓
	92.0 ✓	
343.2	52.6 ✓	
35.8		1.22 ✓
154.6	66.1 ✓	
220.7		1.12 ✓
	118.7 ✓	
336.0	64.1 ✓	✓
40.1		1.03
158.2	63.5 ✓	
221.7		
	127.6 ✓	

6'.05

-2

+003

.458 ✓

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1928phae.proj..6655

Thurs. Dec. 6, '28 H.B.S Obs. M.O. Rec.
TU Cas. I

~~8:00~~ ~~To~~ ~~Spruck right~~.

~~05.2~~
~~33.6~~

8:05 Left Dis. Spruck right.

53.6	119.5 ✓		
173.1			
227.1	134.2 ✓		1.50 ✓
1.3	253.7	106.3 ✓	~~0.65~~
			1.50 ✓
48.5	132.7 ✓		~~1.49~~
181.2			~~0.64~~
234.1	120.5 ✓		1.49 ✓
354.6	253.2	106.8 ✓	~~0.64~~
264.0	063.4 ✓		1.43 ✓
327.4			~~1.50~~
87.0	46.5 ✓		
133.5	109.9 ✓		1.42 ✓
269.8	50.2 ✓		1.36 ✓
320.0			
75.0	64.6 ✓		
139.6	114.8 ✓		1.31 ✓

8:10

~~2~~ .546 ✓

+003

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1928phae.proj..6655

Thurs. Dec. 6, 1928 H.B.S. Obs. MO Rec.
TU Cass.

8:24	At Diss.	Sprock. left.		
	262.0	62.7 ✓		
	324.7			
	88.6	48.7 ✓		
	137.3	111.4 ✓	1.39 ✓	
	269.8	48.2 ✓		
	318.0		1.40 ✓	
	79.7	61.9 ✓		
	141.6	110.1 ✓	1.42 ✓	
	354.7	54.7 ✓		
	49.4			1.58
	177.4	45.3 ✓		
	222.7	100.0 ✓	1.66 ✓	
	1.3	44.4 ✓		1.68
	45.7			
	176.3	54.0 ✓		
8:31	230.3	98.4 ✓	1.67	

~2

.560 ✓

+003

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1928phae.proj..6655

TU Cas VII Thurs Dec 6 NHB Solo + ree

	S right		
8:46	356.4	50.6 ✓	
	47.0		1.68 ✓
	180.0	48.4 ✓	
	228.4		
		99.0 ✓	8 1.66
	355.7	48.1 ✓	
	43.8		
	175.0	51.3 ✓	7 1.64
	226.3		
		99.4 ✓	5 1.54
	79.4	60.4 ✓	
	139.8		
	267.7	53.0 ✓	1.34 ✓
	320.7		
		113.4 ✓	1.42 ✓
	85.8	50.0 ✓	✓
	135.8		1.49
	265.4	56.9 ✓	
	322.3		
		106.9 ✓	

-2 ✓

.575 ✓

+003

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1928phae.proj..6656

TU Cas VIII NBS obs + red

9:05

76.7	64.0 ✓	
140.7		
263.9	55.8 ✓	1.20 ✓
319.7		
	119.8 ✓	
87.6	48.6 ✓	1.36 ✓
136.2		
267.3	56.9 ✓	1.52 ✓
324.2		
	105.5 ✓	58 1.65
180.8	52.2 ✓	
233.0		
2.0	41.5 ✓	1.82 ✓
43.5		
	93.7 ✓	80 1.94
181.4	43.9 ✓	
225.3		1.79 2.06
356.8	40.8 ✓	
47.6		
	984.7	

9:14

-2 ✓

.589 ✓

+003

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1928phae.proj..6656

T U Cas IX Thurs Dec 6 HBS 0004 rec

9:19	174.8	56.1 ✓	
	230.9		
	358.3	44.0 ✓	1.65 (42)
	52.3		
		100.1	1.80 (68)
	179.3	43.1 ✓	
	222.4		1.94 ✓
	357.9	45.8 ✓	
	43.7		
		88.9 ✓	1.77 (65)
	263.6	54.6 ✓	
	318.2		1.61 ✓
	88.0	47.1 ✓	
	135.1		1.62 ✓
		101.7 ✓	
	269.6	47.9 ✓	
	317.5		1.62 ✓
	82.7	53.4 ✓	
9:26	136.1		
		101.3 ✓	

-2

.598 ✓

+003

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1928phae.proj..6655

Thurs Dec 6 1928 TU Cas X HBS obs+rec

9:37	78.2	63.7	
	141.9		
	267.5	49.2	1.35
	316.7		
		112.9	1.43
	86.4	48.7	
	135.1		
	266.7	57.3	1.51
	324.0		
		106.0	1.47
	175.5	56.5	
	232.0		1.47
	357.8	51.2	
	48.0		
		107.7	1.51
	177.6	50.6	
	228.2		1.55
	356.4	53.8	
9:47	50.2		
		104.4	

.611

+003

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1928phae.proj...6655

	Hours	Deg	TU Cas XI		JHgS obs v rec
10:02	187.0	38.0 ✓			Stars very faint: i.e. going
	225.0				behind building. 3hrs west of mer.
	3.5	37.9 ✓		2.32	
	41.4				
		75.9 ✓			
	186.3	36.4 ✓		2.27	Reject
	222.7				
	359.5	42.8 ✓		2.22	
	42.3				
		79.2 ✓			
	267.2	42.4 ✓			2.30
	309.6				
	96.4	34.3 ✓		2.29	
	130.7				
		76.7 ✓			
	283.0	25.7 ✓			
	308.7			2.40	
	88.7	47.7 ✓			
10:15	136.4				
		73.4 ✓			

Watch 2 min fast

1003

.629 ✓

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1928phae.proj..665S

Wed ~~Thurs~~ Dec 13

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1928phae.proj...6655

Wed Dec 26 '28 TUCas HBS obs tree

R

5:39	330.7	50.2		Full moon rising
	20.9			Sky clear
	147.6	54.8	1.54	
	202.4			
		105.0		1.48
	321.6	62.4		
	24.0			
	151.7	47.3	1.42	
	199.0			1.31 ✓
		109.7		
	~~52.0~~			
	~~112.8~~	61.2		
	113.2		1.08	
	230.3	64.1		
	294.4			1.14
		125.3		
	53.7	62.4		
	116.1		1.20	
	236.0	57.3		
5:47	293.3			
		119.7		

+002 5607.447 ✓

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1928phae.proj..665S

II Wednesday Dec 26 TU Cas 14" Bs observee

6:03	52.3	67.9	
	120.2		
	228.0	65.0	0.92
	293.0		
		132.9	0.79
	45.0	76.2	
	121.2		0.66
	230.8	69.5	
	300.3		
		145.7	0.96
	144.3	56.4	
	200.7		
	316.5	71.7	1.02 ~~0.81~~
	28.2		
		128.1	1.03
	142.9	56.7	
	199.6		1.25
	325.2	60.9	
6:10	26.1		
		117.6	

+002 .462

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1928phae.proj..6655

III Wed Dec 26 Tau Cas HBS obs'n rec

6:15	147.8	54.5		
	202.3			
	326.2	55.9	1.41	
	22.1			
		110.4		1.30
	144.2	59.6		
	203.8			
	325.7	61.2	1.18	
	26.9			
		120.8		1.11 ✓
	231.2	67.5		
	298.7		0.91	
	48.8	66.0		
	114.8			0.92
		133.5		
	230.2	67.4		
	297.6		0.92	
	48.6	65.4		
6:24	114.0			
		132.8		

+002 .472 ✓

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1928phae.proj..665$

IV Wed Dec 26 TU Cas HBS obs

6:34	227.7	69.7	
	297.4		
	51.3	63.1	0.92
	114.4		
		132.8	0.84
	224.7	71.7	
	296.4		
	49.5	69.5	0.75
	119.0		
		141.2	1.08 0.92
	324.7	56.0	
	20.7		
	147.0	57.3	41 1.79
	201.3		
		170.3	1.32 1.00
	324.8	56.3	
	21.1		1.23 0.80
	141.1	62.2	
6:41	203.3		
		138.5	

+002 .484

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1928phae.proj..6655

E Wednesday December 26 '28 TU Cas H133 065

6:46	322.7	58.0		
	20.7			
	143.7	55.6	1.34	
	199.3			
		113.6		1.30
	325.6	60.1		
	25.7			
	143.0	56.2	1.27	
	199.2			
		116.3		1.04
	44.5	74.9		
	119.4			
	232.7	63.3	0.81	
	296.0			
	52.3	60.7		0.78
	113.0			
	226.5	70.7	0.95	
6:53	297.2			
		131.4		

+002 .493

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1928phae.proj..6655

VI Wednesday December 26 TU Cas NBSobs

7:03	46.7	70.0	
	116.7		
	230.1	67.8	0.82
	297.9		
		137.8	0.82
	54.6	62.7	
	117.3		
	228.3	74.3	0.83
	302.6		1.04 ✓
		137.0	
	139.1	61.0	
	200.1		
	326.7	55.6	1.27
	22.3		
		116.6	1.25
	142.4	58.2	
	200.6		
	322.4	60.0	1.23
7:11	22.4		
		118.2	

+002 .504 ✓

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1928phae.proj...6655

VII Wednesday December 26 '28 TU Cas HBS 000

7:18	142.1	57.3	
	199.4		
	322.8	58.7	1.28
	21.5		
		116.0	1.28
	144.4	56.2	
	200.6		
	324.1	60.2	1.27
	24.3		
		116.4	1.14
	234.8	57.6	
	292.4		
	49.4	67.6	1.08
	117.0		
		125.2	1.00
	227.6	68.4	
	296.0		0.91
	51.8	65.1	
7:26	116.9		
		133.5	

+002 .515

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1928phae.proj..6656

VIII Wed Dec 26 '28 TU Cas N13S obs

Sky a bit thick
Moon on right

7:38	231.3	67.5		
	298.8			
	52.3	66.2	0.90	
	118.5			
		133.7		0.84
	231.4	68.9		
	300.3		0.78	
	50.0	71.0		
	121.0			
		139.9		
	323.7	65.6		1.03 ~~0.98~~
	26.3		~~1.01~~ 1.23	
	~~147.3~~ ~~80.7~~	5 2.7		
	200.0			
		~~1~~ 18.3		~~1.11~~ 1.22
	324.5	59.6		
	24.1		1.21	
	142.0	59.8		
7:47	201.8			Stars now 2+ hours west of meridian, and faint. Unwise to continue.
		119.4		

✓

+002 .529

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1928phae.proj...6656

V Sunday December 30 '28

TU Cas NBS obs v rec

5:35	134.5	77.9	
	208.4		
	326.3	49.4	1.04
	15.7		
		127.3	
	146.7	53.3	1.08
	200.0		
	324.2	60.6	1.11
	24.8		
		123.9	
	230.0	65.3	1.08
	295.3		
	58.7	55.9	1:17
	114.6		
		121.2	
	230.0	60.7	1.09
	290.7		
	52.3	67.7	
5:42	120.0		1.01
		128.4	

+001 5611.443

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1928phae.proj..6656

II Sunday Dec 30 TU Cas NBS obs'rce

5.51	233.0	63.0		
	296.0		1.07	
	50.7	62.9		
	113.6			
		125.9		0.99
	234.6	60.9		
	295.5			
	45.9	72.3	0.91	1.08 ✓
	118.2			
		133.2		
	323.2	58.9		
	22.1			
	145.7	56.0	1.31	
	201.7			
		114.9		1.16
	323.9	59.2		
	23.1		1.01	
	139.5	69.1		
5.58	208.6			
		128.3		

+001 .455 ✓

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1928phae.proj...6656

III Sunday December 30 TU Cas HBS obs + rec

6.10	316.2	68.5		
	24.7			
	143.6	57.2	1.07	
	200.8			
		125.7		1.08
	323.3	59.8		
	23.1		1.10	
	139.7	64.5		
	204.2			
		124.3		
	52.7	61.8		1.05 ~~0.95~~
	114.5			
	234.5	56.7	1.23	
	291.2			
		118.5		1.02 ~~0.82~~
	45.4	65.9		
	111.3		8 0.81	
	225.0	72.4		
6.17	297.4			
		148.3		Reject

+001 .468

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1928phae.proj..6655

TV Sunday December 30 TU Cas HBS obs 1ree

6'.23	47.5	67.5		
	115.0			
	231.8	64.2	0.94	
	296.0			
		131.7		1.00
	52.4	61.1		
	113.5			
	231.7	65.0	1.06	
	296.7			1.05 ✓
		126.1		
	140.1	62.7		
	208.8			
	322.7	63.5	1.06	
	26.2			
		126.2		1.10
	140.5	63.1		
	203.6		1.15	
	329.3	58.9		
6'.30	28.2			
		122.0		

+001 .476 ✓

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1928phae.proj..6655

I Sunday December 30, 1928 TU Cas HBS 665

6:34	139.2	67.1		
	206.3			
	321.2	59.5	1.05	
	20.7			
		126.6		1.09
	147.3	53.7		
	201.0			
	318.3	69.1	1.13	
	27.4			
		122.8		1.08 ✓
	235.3	56.4		
	291.7			
	48.0	65.7	1.14	
	113.7			
		122.1		1.07
	229.1	66.3		
	295.4		0.96	
	52.0	64.8		
6:41	116.8			
		131.1		

Tool .484 ✓

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1928phae.proj..6655

VI Sunday, December 30 '28 TU Cas HBS Obs: Rice

6:44	229.5	69.5		
	299.0		1.00	
	53.7	59.3		
	113.0			
		128.8		0.92
	234.3	64.1		
	298.4		0.84	
	44.8	72.6		
	117.4			
		136.7		1.01 ✓
	321.0	66.3		
	27.3			
	142.8	55.6	1.15	
	198.4			
		121.9		1.10
	324.8	58.8		
	23.6		1.05	
	138.3	68.0		
6:51	206.3			
		126.8		

+001 .491 ✓

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1928phae.proj..6655

VII Sunday, December 30 '28 TU Cas Hbs obs'd rec

6:59	316.0	74.6		
	30.6			
	141.2	58.5	0.94	
	199.7			
		133.1		1.04
	323.8	62.2		
	26.0			
	143.7	60.4	1.14	
	204.1			
		122.6		
	51.6	63.5		0.97
	115.1			
	227.3	70.4	0.90	
	297.7			
		133.9		0.90
	46.4	69.6		
	116.0		0.89	
	233.4	64.9		
7:06	298.3			
		134.5		

+001 .501

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1928phae.proj..6655

VIII Sunday, December 30, 1928 TU Cas NBS ⊿δ+4 xc

7:10	53.6	60.7	
	114.3		
	231.0	65.8	1.05
	296.8		
		126.5	1.10
	55.7	61.1	
	116.8		1.15
	236.6	60.9	
	297.5		
		122.0	1.10 ✓
	145.1	63.6	
	208.7		1.06
	322.8	62.7	
	25.5		
		126.3	1.09
	142.4	64.3	
	206.7		1.12
	329.9	59.1	
7:16	29.0		
		123.4	

+001 .509 ✓

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1928phae.proj..6655

IX Sunday, December 30 1928 . TU Cas HBS observee

7:19	144.7	56.6		
	201.3			
	327.1	58.7	1.30	
	25.8			
		115.3		
	135.5	71.0		1.12
	206.5			
	323.2	61.4	0.93	
	24.6			
		132.4		1.04 ✓
	229.5	66.9		
	296.4		0.96	
	52.1	64.0		
	116.1			
		130.9		0.96
	229.7	71.6		
	301.3		0.95	
	52.3	59.9		
7:25	112.2			
		131.5		

.515 ✓

+001

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1928phae.proj..6656

X Sunday, December 30 TU Cas Hbs observe

7:43	224.7	70.0		
	294.7			
	46.3	69.2	0.79	
	115.5			
		139.2		0.84
	227.3	75.4		
	302.7		0.89	
	54.3	58.9		
	113.2			0.88
		134.3		
	324.2	61.1		
	25.3			
	130.9	75.6	0.84	
	206.5			
		136.7		0.90
	322.3	64.0		
	26.3		0.96	
	135.7	67.1		
7:49	202.8			
		131.1		

✓

.532

+001

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1928phae.proj...6656

XI Sunday, December 30 TU Cas NBS obs & rec

7:51	319.7	64.7		
	24.4			
	137.2	71.4	0.85	
	208.6			
		136.1		0.88
	315.7	69.3		
	25.0			
	139.0	64.7	0.90	
	203.7			
		134.0		0,85
	52.0	67.3		
	119.3			
	226.1	66.1	0.91	
	292.2			
		133.4		0,82
	48.0	70.4		
	118.4		0.72	
	225.4	72.2		
7:57	297.6			
		142.6		

.538

too l

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1928phae.proj..6655

XII Sunday, December 30, 1928 TU Cas HBS observ'ce

8:03

54.6	63.0		
117.6			
228.7	63.3	1.06	
292.0			
	126.3		0.94
51.7	65.3		
117.0			
227.5	72.3	0.82	
299.8			
	137.6		1.03 ✓
143.5	60.5		
204.0			
318.7	64.7	1.08	
23.4			
	125.2		1.12
144.7	61.0		
205.7 -		1.15	
325.2	60.8		
86.0			
	121.8		

8:09

.546 ✓

+001

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1928phae.proj...6656

~~K11~~ Sunday, December 30, 1928 TU Cas. HBS obs + rec

8:11	143.7	~~6~~ 6.6	
	210.3		
	320.6	69.4	0.86 ~~0.65~~
	30.0	~~3~~	
		136.0	0.85 ~~0.74~~
	137.4	71.7	
	209.1		0.84
	320.3	65.1	
	25.4		~~8~~ 0.93
		136.8	
	232.1	65.3	
	297.4		
	54.1	59.0	1.10
	113.1		
		124.3	1.12
	231.0	64.7	
	295.7		1.14
	57.0	57.5	
8:16	114.5		
		122.2	

✓
.552
+001

Stars now $2\frac{3}{4}$ hours west of meridian, and fading. Clear sky throughout this evening's series, and no moon.

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1928phae.proj..6656

I Monday, December 31, 1928 TU Cas HBS Office

5.33	144.3	58.0		Sky good
	202.3			
	326.3	54.4	1.36	
	20.7			
		112.4		
	144.2	57.4		1.20
	201.6			
	316.5	69.8	1.04	
	26.3			
		127.2		
	223.7	74.7		1.00 ✓
	298.4		0.90	
	56.4	59.3		
	115.7			
		134.0		0.80
	229.0	71.4		
	300.4		0.70	
	49.0	72.1		
5;41	121.1			
		143.5		

✓ ✓
5612.442

Watch 35 sec fast

+001

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1928phae.proj...6656

II Monday, December 31 1928 TU Cas ..... N93 ds

5.44

226.5	72.1		
298.6			
55.6	62.1	0.89	
117.7			
	134.2		
229.3	67.5		0.82
296.8			
49.0	73.0	0.76	
120.0			
	140.5		0.88 ✓
315.9	71.8		
27.7			
145.3	59.5	0.95	
204.8			
	131.3		0.94
321.3	64.3		
25.6		0.94	
138.3	67.5		
5.50 205.8			
	131.8		

+001
.450 ✓

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1928phae.proj..6655

III Monday, December 31 TU Cas HBS obs

6:00	319.3	57.5	
	26.8		
	136.4	66.9	0.89 ~~1.10~~
	203.3		
		124.4	0.97 ~~1.10~~
	326.0	61.8	
	27.8		
	141.3	63.0	1.09
	204.3		
		124.8	0.79 ~~0.84~~
	44.4	76.6	
	121.0		
	224.0	71.0	0.62
	295.0		
		147.6	0.59
	47.0	76.2	
	123.2		0.56
	224.8	74.7	
6:06	299.5		
		150.9	

tool
.460

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1928phae.proj...6656

IV Monday December 31 '28 TU Cas HBS observe

6:15	47.0	71.6		
	118.6			
	224.2	75.4	0.63	
	299.6			
		147.0		0.63
	~~44.0~~ ~~57.0~~	76.0		
	120.0		0.63	
	226.6	71.2		
	297.8			
		147.2		0.88
	144.7	58.0		
	202.7			
	324.1	60.8	1.22	
	24.9			
		118.8		1.14
	142.6	60.8		
	203.4		1.07	
	321.1	65.1		
6:21	26.2			
		125.9		

+001
.470

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1928phae.proj..6656

P Monday December 31 TU Cas NBS observe

6:36	145.7	54.6	
	200.3		
	323.6	60.8	1.29 / 1.68
	24.4		
		185.4	1.70
	139.8	67.6	
	207.4		
	326.3	55.8	1.12
	22.1		0.98
		123.4	
	232.3	66.3	
	298.6		
	47.8	75.4	0.70
	123.2		
		143.7	0.74
	229.1	72.3	
	301.4		0.77
	49.6	67.8	
6:43	117.4		
		140.1	

+001
.486

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1928phae.proj...6656

VI Monday, December 31 TU Cas HB3 obs + rec

7:24	143.5	65.2		
	208.7			
	327.5	59.4	1.10	
	26.9			
		124.6		
				1.12
	143.8	57.1		
	200.9			
	321.4	64.7	1.15	
	26.1			
		121.8		
				0.95 ✓
	229.7	73.2		
	302.9			
	47.6	69.7	0.72	
	117.3			
		142.9		
	233.1	64.1		0.78
	297.2			
	48.1	73.2	0.83	
7:31	121.3			
		137.3		

+001

.519 ✓

Field lost previous to this run, and photometer readjusted

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1928phae.proj..6656

VII Monday, December 31, 1928 TU Cas HB Sobrree

7:33	223.6	77.5	
	301.1		
	46.6	69.7	0.63
	116.3		
		147.2	0.78
	232.5	66.4	
	298.9		0.92
	49.3	66.4	
	115.7		0.88 ✓
		132.8	
	318.0	72.2	
	30.2		
	140.1	63.6	0.86
	203.7		
		135.8	0.97
	321.2	64.7	
	25.9	-	1.04
	142.0	62.2	
7:40	204.2		
		126.9	

+001
.525 ✓

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1928phae.proj...6656

VIII Monday, December 31, 1928 TU Cas HBS obs + dec

7:47	320.6	69.7		
	30.3			
	144.3	61.8	0.95	
	206.1			
		131.5		
	322.6	60.5		0.98
	23.1			
	137.7	67.7	1.02	
	205.4			
		128.2		0.95
	48.7	70.2		
	118.9			
	233.5	61.8	0.94	
	295.3			
		132.0		0.92
	49.7	67.8		
	117.5		0.91	
	227.2	66.6		
7:54	292.8			
		133.4		

+001
1535

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1928phae.proj..6655

IX Monday December 31, 1928 TV Cas HBS observer

7:59	49.4	70.0	
	119.4		
	231.9	67.5	0.82
	299.4		
		137.5	0.91
	51.3	67.7	
	119.0		
	236.1	61.3	1.02
	297.4		
		128.0	
	140.5	65.8	1.08
	206.3		
	328.2	53.1	1.17
	23.3		
		120.9	1.14
	143.0	61.5	
	204.5		
	320.3	63.4	1.09
8:06	23.7		
		124.9	

+001

.543

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1928phae.proj...6656

I Monday, December 31, 1928 TU Cas H135 obs+ree

8:07	138.4	67.7	
	206.1		
	325.9	56.5	1.10
	22.4		
		124.2	
			1.08
	144.5	61.7	
	206.2		
	320.3	65.1	1.05
	25.4		
		126.8	
			1.06 ✓
	233.5	58.5	
	292.0		
	49.6	66.2	1.09
	115.8		
		124.7	
			1.03
	230.2	66.3	
	296.5		0.97
	53.3	64.3	
8:13	117.6		
		130.6	

+001
.549 ✓

Stars 2 3/4 hrs off meridian

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1928phae.proj..6655

I Wednesday, January 2, 1929 TU Cas HOS 005 Yrec

5:43

359.1	52.0		Clear sky, but very high wind.
51.1			
166.4	67.5	1.20	
233.9			
	119.5		1.10
348.1	69.1		
57.2			
172.1	60.5	0.99	
232.6			
	129.6		0.93
79.1	66.7		
145.8			
251.7	77.9	0.68	
329.6			
	144.6		0.76
74.9	71.2		
146.1		0.85	
260.8	64.9		
325.7			
	136.1		

5:50

+001

5614.449

Watch OK

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1928phae.proj..6655

Wednesday, January 2 TU Cas HD8057 rec

5:52	80.7	69.3		
	148.0			
	258.1	70.5	0.82	
	328.6			
		137.8		0.70
	73.2	77.5		
	150.7			
	257.0	72.8	0.57	
	329.8			0.80
		150.3		
	172.2	62.9		
	235.1		0.96	
	348.0	67.8		
	55.8			
		130.7		0.90
	169.1	68.0		
	237.1		0.84	
	348.2	68.6		
5:59	56.8			
		136.6		

+001

.456

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1928phae.proj..6655

Wednesday, January 2, 1928 TU Cas H&S obs free

III

6:09

170.5	66.9		
237.4		0.89	
350.5	67.5		
58.0			0.86
	134.4		
165.2	72.5		
237.7		0.83	
351.6	64.6		
56.2			0.76
	137.1		
260.7	66.6		
327.3			
76.3	72.7	0.79	
149.0			
	139.3		0.66
253.6	80.1		
333.7		0.54	
75.9	71.6		
147.5			
	151.7		

6:16

+001

.466

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1928phae.proj..6655

Wednesday, January 2, 1929 TU Cas HBS observer

TV

6:25

256.4	69.4		
325.8			
78.7	74.1	0.70	
152.8			
	143.5		0.61
255.3	79.2		
334.5		0.52	
81.3	73.5		
154.8			
	152.7		0.76
348.7	67.5		
56.2		0.97	
171.4	62.9		
234.3			
	130.4		0.90
350.4	73.0		
63.4		0.83	
170.7	64.1		
234.8			
	137.1		

6:31

+001

.477

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1928phae.proj..6656

V Wednesday, January 2, 1928 TO Cas HBS obs y ree

6:39	343.8	71.6		
	55.4			
	165.7	74.3	0.66	
	240.0			
		145.9		
	349.4	80.7		0.71
	60.1			
	174.1	60.1	0.76	
	234.2			
		140.8		0.84 0.78
	78.7	69.3		
	148.0			
	256.8	69.5	0.80	
	326.3			
		138.8		0.86
	80.9	69.2		
	150.1		0.91	
	261.7	64.2		
6:46	325.7			
		133.4		

+001
.487

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1928phae.proj..6655

VI Wednesday, January 2 TU Cas HBS obs + red

7:02	166.2	62.3		
	233.5			
	351.0	71.8	0.79	
	62.8			
		139.1		
	167.1	71.3		0.86
	238.4			
	351.3	60.8	0.94	
	52.1			
		132.1		0.87
	259.5	69.2		
	326.7			
	80.3	69.2	0.85	
	149.5			
		136.4		
	255.3	74.2		0.78
	329.5			
	81.2	69.0	0.71	
7:09	150.2			
		143.2		

+001
.504

Photometer readjusted before this set

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1928phae.proj..6656

VII Wednesday, January 2, 1929 TU Cas HBS obs & rec

7:21	262.2	67.1		
	329.3		0.84	
	79.6	69.7		
	149.3			0.84
		136.8		
	254.6	74.2		
	328.8		0.84	
	83.2	62.5		0.78
	145.7			
		136.7		
	346.7	66.5		
	53.2		0.70	
	168.1	77.4		
	245.5			0.73
		143.9		
	345.0	70.5		
	55.5		0.76	
	168.8	70.2		
7:28	239.0			
		140.7		

tool
.517

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1928phae.proj..6655

VIII Wednesday, January 2, 1929 TU Cas HBS obs + rec

7:36	346.1	71.9		
	58.0			
	166.0	68.5	0.77	
	234.5			
		140.4		0.82
	349.9	68.6		
	58.5			
	166.4	66.8	0.87	
	233.2			0.74 ✓
		135.4		0.74
	78.4	69.5		
	147.9			
	252.6	71.5	0.63	
	330.1			
		147.0		0.66
	74.6	76.1		
	150.7		0.70	
	259.6	67.7		
7:43	327.3			
		143.8		

too l
.528 ✓

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1928phae.proj..6655

IX Wednesday, January 2, 1929 TU Cas HD3805 + rec

7:53	83.3	65.0	
	148.3		
	259.4	68.8	0.90
	328.2		
		133.8	
	75.0	73.4	0.92
	148.4		
	264.1	58.6	0.94
	322.7		
		132.0	0.84
	166.5	66.7	
	233.2		
	347.4	75.0	0.74
	62.4		
		141.7	
			0.76
	162.4	73.3	
	235.7		0.78
	348.7	66.6	
8:00	55.3		
		139.9	

tool
.539

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1928phae.proj...6655

X Wednesday, January 2, 1929 TU Cas HDS observee

8:02	178.9	62.7		
	233.6		0.95	
	351.7	68.9		
	60.6			0.86
		131.6		
	168.9	73.5		
	242.4		0.77	
	352.0	66.6		
	58.6			0.74 ✓
		140.1		
	256.9	70.3		
	327.2		0.70	
	76.4	73.2		
	149.6			0.61
		143.5		
	255.0	73.5		
	328.5		0.51	
	75.2	79.6		
8:09	154.8			
		153.1		

+001 ✓
.546

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1928phae.proj..6655

XI Wednesday, January 2, 1929 : TU Cas HBS obs + rec

8;12	258.8	68.0		
	326.8			
	79.5	71.9	0.78	
	151.4			
		139.9		0.78
	260.9	69.1		
	330.0			
	75.7	71.3	0.77	
	147.0			0.80 ✓
		140.4		
	348.5	67.0		
	55.5			
	167.7	68.8	0.86	
	236.5			0.81
		135.8		
	344.2	76.1		
	60.3 -		0.76	
	170.2	64.4		
8;19	234.6			
		140.5		

+ 001
.553 ✓

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1928phae.proj...6655

XII Wednesday, January 2, 1929 TU Cas H13 obs+ree

8:27	345.7	68.2		
	53.9		0.91	
	169.9	65.3		
	235.2	———		0.85
		133.5		
	348.8	70.6		
	59.4		0.79	
	171.4	68.6		
	240.0	———		
		139.2		0.82
	78.2	72.9		
	151.1		0.76	
	259.9	67.9		
	327.8	———		0.80
		140.8		
	76.4	74.4		
	150.8		0.85	
	265.5	61.8		
8:33	327.3	———		
		136.2		

+001

.562

Stars 3¼ hrs off meridian

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1928phae.proj..6656

I Friday, January 4, 1929 TU Cas HHS obs tree

6:04	350.0		
~~3.56~~	~~174.3~~	63.9	
	53.9		1.07
	172.5	61.8	
	234.3		1.62
		125.7	
	349.5	64.7	
	54.2		
	175.4	57.3	1.15
	232.7		0.97 ✓
		122.0	
	80.7	67.7	
	148.4		
	256.7	70.0	0.82
	326.7		
		137.7	0.82
	74.6	75.4	
	150.0		0.81
	261.3	63.0	
6.11	324.3		
		138.4	

+001 ✓ ✓
5616.464

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1928phae.proj..6656

Friday, Jan 4 TU Cas HBDobservee

II

6;13	78.1	69.8		
	147.9			
	253.4	73.8	0.70	
	327.2			
		143.6		
	74.7	72.5		0.76
	147.2			
	260.9	65.6	0.81	
	326.5			
		138.1		0.92
	175.0	58.7		
	233.7		1.25	
	351.6	58.7		
	50.3			
		117.4		1.17
	170.5	67.11		
	237.6		1.09	
	355.2	57.7		
6;20	52.9			
		124.8		

+001

.469

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1928phae.proj..6656

Friday, Jan 4 TU Cas HBS observer

III

6:50	172.2	64.3		
	236.5			
	347.7	65.5	0.98	
	53.2			
		129.8		0.98
	166.9	68.2		
	235.1			
	351.1	62.3	0.97	
	53.1			
		130.5		0.91 ✓
	262.9	63.5		
	326.4			
	73.4	73.6	0.83	
	147.0			
		137.1		0.84
	257.3	70.0		
	327.3		0.84	
	78.7	66.8		
6:57	145.5			
		136.8		

tool
.495 ✓

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1928phae.proj..6656

Friday, Jan 4 TV Cas HD obstrec

TV

	265.1	61.6	
7:18	326.7		
	77.7	74.7	0.85
	152.4		
		136.3	
	255.3	73.6	0.78
	328.9		
	79.7	69.4	0.71
	149.1		
		143.0	0.86 ✓
	349.8	62.0	
	51.8		0.88
	162.6	72.7	
	235.3		
		134.7	0.94
	344.2	70.0	
	54.2		1.00
	174.0	58.7	
7:18	232.7		
		128.7	

tool ✓
.510

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1928phae.proj..6655

I Monday, January 7'29 TU Cas HBS obs 1 rec

5'.58	353.4	52.0		
	45.4			Seeing very good,
	174.3	54.3	1.50	though high wind
	228.6			
		106.3		1.53
	357.6	54.4		
	52.0		1.56	
	180.3	49.5		
	229.8			52 1.46
		103.9		
	90.3	46.4		
	136.7		1.57	
	265.9	59.2		
	323.1			5 1.40
		103.6		
	87.1	56.9		
	144.0		44 1.22	
	263.3	5 62.0		
6'.05	315.3			
		9 118.9		

+001

5619.459

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1928phae.proj...6655

II Monday, January 7 TU Cas HBS old + rec

6:08	88.2	57.7		
	139.9			
	265.8	57.9	1.57	
	317.7			
		103.6		1.46
	86.9	55.7		
	142.6			
	265.7	57.5	1.34	
	318.2			1.62 ✓
		113.2		
	176.1	49.4		
	225.5			
	357.7	50.6	1.66	
	48.3			
		100.0		1.78
	176.3	44.9		
	221.2		1.89	
	0.8	45.9		
6.14	46.7			
		90.8		

+001
.466 ✓

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1928phae.proj..6655

III Monday, January 7, 1929 TU Cas HBS obs + see

6:21	177.3	46.8		
	224.1		1.66	
	359.3	53.1		
	52.4			1.60
		99.9		
	177.3	50.4		
	227.7		1.54	
	355.7	54.3		
	50.0			1.56 ✓
		104.7		
	265.0	54.4		
	319.4			
	85.3	55.1	1.43	
	140.4			
		109.5		
				1.53
	263.4	55.5		
	318.9		1.63	
	91.6	45.4		
6:27	137.0			
		100.9		

+001

.475 ✓

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1928phae.proj..665

IV Monday, January 7, 1929 TU Cas [illegible]

6:33	264.6	59.3		
	323.9			
	92.6	43.0	1.60	
	135.6			
		102.3		1.62
	267.2	49.0		
	316.2		1.64	
	87.8	51.6		
	139.4	100.6		
				1.61
	357.2	53.8		
	51.0		1.70	
	181.9	44.4		
	226.3			1.60
		98.2		
	357.8	54.8		
	52.6		1.51	
	175.3	51.4		
6:39	226.7			
		106.2		

f001

.483

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1928phae.proj..6655

V Monday, January 7, 1929 +U Cas Hazy & cirrus

6:53	359.0	57.3		
	50.3			
	178.3	47.0	1.70	
	225.3			
	~~0.~~	98.3		1.74
	0.5	50.4		
	50.9			
	179.1	45.2	1.77	
	224.3			1.69 ✓
		95.6		
	90.4	47.0		
	137.4			
	265.5	51.0	1.71	
	316.5			
		98.0		1.64
	89.4	50.9		
	140.3		157	
	269.6	52.6		
7:00	322.2			
		103.5		

+001
.497

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1928phae.proj..665S

VI Monday, January 7 TU Cas HD8 00

7:03	88.3	52.6		
	140.9			
	264.6	50.1	1.59	
	314.7			
		102.7		1.62
	88.2	53.2		
	141.4			
	267.7	47.6	1.64	
	315.3			1.50
		100.8		
	172.2	55.2		
	227.4		1.39	
	355.6	56.2		
	51.8			1.37
		111.4		
	175.3	52.6		
	227.9		1.35	
	353.8	60.2		
7:09	54.0			
		112.8		

+001
.504

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1928phae.proj..6655

VII Monday, January 7 TU Cas HD 8085

7:12	179.6	57.7		
	231.3			
	4.6	46.9	1.69	
	51.5			
		98.6		1.56
	179.2	49.8		
	229.0			
	354.8	59.8	1.43	
	54.6			1.68
		109.6		
	266.6	49.2		
	315.8			
	92.7	48.2	1.72	
	140.9			
		97.4		1.80
	267.9	44.8		
	312.7		1.87	
	91.4	46.8		
7:18	138.2			
		91.6		

tool
.510

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1928phae.proj..6655

VIII Monday, January 7, 1929 TO Cas HBS060

7:23	268.3	50.3		
	318.6			
	92.8	42.5	1.84	
	135.3			
		92.8		1.83
	268.0	48.3		
	316.3			
	89.4	45.1	1.82	
	134.5			1.78 ✓
		93.4		
	348.9	57.8		
	50.7		1.64	
	174.6	48.8		
	223.4			1.82
		100.6		
	359.3	46.4		
	45.7		1.79	
	175.5	48.5		
7:30	224.0			
		94.9		

f001
.518 ✓

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1928phae.proj..6655

IX Monday, January 7 TU Cas HD8 obs tree

7:36	0.4	49.7		
	50.1			
	179.6	48.3	1.71	
	227.9			
		98.0		1.72
	2.6	45.4		
	48.0			
	174.3	51.9	1.72	
	226.2			
		97.3		1.71 ✓
	89.1	49.1		
	138.2			
	269.4	48.7	1.71	
	318.1			
		97.8		1.70
	90.6	49.9		
	140.5		1.70	
	269.7	48.4		
7:42	318.1			
		98.3		

+001
.527 ✓

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1928phae.proj...0655

X Monday, January 7, 1929 TV Cas Hdg obsvrs

7:49	85.5	54.8			
	140.3				
	270.8	47.3	1.61		
	318.1				
		102.1			
	86.6	50.1		1.61	
	136.7				
	268.9	51.8	1.61		
	320.7				1.61 ✓
		101.9			
	174.9	50.8			
	225.7		1.63		
	0.3	50.1			
	50.4				
		100.9		1.62	
	175.0	53.1			
	228.1		1.61		
	0.3	48.7			
7:55	49.0				
		101.8			

+001
.536 ✓

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1928phae.proj..665S

XI Monday, January 7 TU Cas HBS obs + rec

8:00	169.6	62.0		
	231.6			
	357.1	52.5	1.31	
	49.6			
		114.5		
	177.7	49.6		1.49
	227.3			
	357.8	50.0	1.67	
	47.8			1.65
		99.6		
	267.8	49.2		
	317.0			
	87.4	48.6	1.71	
	136.0			
		97.8		1.81
	270.3	46.5		
	316.8			
	89.1	43.8	1.91	
8:07	132.9			
		90.3		

tool
.545

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1928phae.proj...6655

XII Monday, January 7, 1929 TU Cas HB Solstice

8;19	271.3	43.3		
	314.6			
	93.3	42.7	2.02	
	136.0			
		86.0		
	267.1	50.2		1.84
	317.3			
	87.9	49.9	1.65	
	137.8			
		100.1		1.79 ✓
	359.4	48.5		
	47.9			
	179.1	46.6	1.78	
	225.7			
		95.1		1.74
	359.9	50.6		
	48.5		1.70	
	177.5	47.8		
8;25	225.3			
		98.1		

3½ hrs off meridian

+001

.557 ✓

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1928phae.proj..6655

I Tuesday, January 8, 1929 TU Cas HBS obs + rec

5:59	358.2	56.8		
	55.0			
	176.5	57.9	1.45	
	228.4			
		108.7		1.29
	349.1	63.3		
	52.4			
	173.4	59.4	1.13	
	232.8			0.97 ✓
		122.7		
	82.0	69.0		
	151.0		0.73	
	258.7	73.1		
	331.8			0.65
		142.1		
	73.3	73.4		
	146.7		0.57	
	254.4	76.9		
6:06	327.3			
		150.3		

+001

Sky excellent.

✓ ✓
5620.459

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1928phae.proj...6355

II Tuesday, January 8 TU Ces ... Hobs+rec

6'09	79.2	69.8		
	149.0			
	262.7	64.0	0.90	
	326.7			
		133.8		0.76
	74.9	74.5		
	149.4			
	253.2	72.6	0.63	
	325.8			1.04 ✓
		147.1		
	177.3	57.2		
	234.5			
	354.0	58.7	1.28	
	52.7			
		115.9		1.32
	178.3	55.4		
	233.7		1.35	
	352.7	57.7		
6'15	50.4			
		113.1		

+001
466 ✓

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1928phae.proj..6655

II Tuesday, January 8 TU Cas HBS obs + rcc

6'23

171.3 64.8
336.1 1.18
354.4 55.9
50.3 —
120.7 1.20

173.3 57.4
230.7 1.23
350.8 60.9
51.7 —
~~194.6~~ 118.3 0.92

254.7 73.9
328.6 0.67
74.3 71.1
145.4 —
145.0 0.64

253.3 73.7
327.0 0.62

6'32

76.6 74.2
150.8 —
147.9

+001
.480
77

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1928phae.proj..6655

IV Tuesday, January 8 TU Cas HBS obs + rec

6;49	261.9	63.8		
	325.7			
	77.2	66.3	0.98	
	143.5			
		130.1		0.84
	259.2	69.2		
	328.4			
	75.3	75.1	0.69	
	150.4			
		144.3		1.02 ✓
	353.1	61.2		
	54.3			
	172.2	58.9	1.19	
	231.1			
		120.1		1.21
	350.7	61.4		
	52.1		1.23	
	173.6	57.0		
6;56	230.6			
		118.4		

+ 001

.494 ✓

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1928phae.proj..6655

V Tuesday, January 8 TU Cas HBS observer

7:02	347.8	68.9		
	56.7		1.11	
	176.2	54.7		
	230.9			
		123.6		1.16
	355.6	60.2		
	55.8			
	172.0	58.6	1.22	
	230.6			
		118.8		0.93 ✓
	75.4	74.0		
	149.4		0.58	
	253.7	75.7		
	329.4			
		149.7		0.70
	76.4	73.2		
	149.6		081	
7:001	259.0	64.8		
7:08	323.8			
		138.0		

.503 ✓

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1928phae.proj...665

VI Tuesday, January 8, 1929 TU Cas HJS obs. + rec

7:16	76.5	68.5		
	145.0			
	256.0	68.9	0.83	
	324.9			
		137.4		0.71
	70.5	80.5		
	151.0			
	257.5	68.9	0.59	
	326.4			0.92 ✓
		149.4		
	169.6	63.0		
	232.6		1.12	
	353.2	60.3		
	53.5			1.13
		123.3		
	173.1	60.0		
	233.1		1.14	
	353.2	62.5		
7:23	55.7			
		122.5		

+001
.514 ✓

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1928phae.proj..6656

VII Tuesday, January 8 TU Cas HSB obs + rec

7:30	170.6	63.8		
	234.4			
	349.1	73.0	0.84	
	62.1			
		136.8		
	165.2	71.3		0.90
	236.5			
	353.5	59.8	0.96	
	53.3			
		131.1		0.82
	259.0	68.7		
	327.7			
	75.2	72.1	0.76	
	147.3			
		140.8		0.74
	256.8	73.2		
	330.0			
	81.2	68.8	0.73	
7:37	150.0			
		142.0		

.524
+001

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1928phae.proj...6555

VIII Tuesday, January 8 TU Cas 1H2S obs + rec

7:40	261.5	59.6		
	321.1			
	70.4	75.5	0.87	
	145.9			
		135.1		0.76
	255.9	73.0		
	328.9		0.65	
	76.1	73.3		
	149.4			0.94
		146.3		
	350.5	61.4		
	51.9		1.14	
	171.2	61.2		
	232.4			1.12
		122.6		
	351.1	63.6		
	54.7		1.10	
	174.7	60.8		
7:47	235.5			
		124.4		

.5531
+001

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1928phae.proj..6656

IX Tuesday, January 8 TU Cas HBS 000+ice

7:57	349.7	59.6	
	49.3		1.27
	175.3	59.0	
	232.3		
		116.6	1.26
	349.5	59.9	
	49.4		
	176.9	59.8	1.24
	234.7		
		117.7	1.16 ✓
	76.7	73.7	
	150.4		
	263.9	55.1	1.00
	319.0		
		128.8	1.06
	80.3	63.5	
	143.8		1.11
	263.0	60.3	
8:04	323.3		
		123.8	

✓
.542
+001

Clouds very low in west; upper sky very clear

Stars faint and hard to measure

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1928phae.proj...6655

X Tuesday, January 8 TU Cas 14BS Obs Free

8'09	82.6	61.6		
	144.2			
	264.0	57.6	1.21	
	321.6			
		119.2		1.04
	75.4	71.8		
	147.2			
	261.5	63.6	0.88	
	324.5			
		134.8		1.23
	172.6	61.1		
	233.7			
	354.2	52.1	1.34	
	46.3			
		113.2		1.42
	181.4	51.5		
	232.9		1.49	
	354.5	55.2		
8'16	49.7			
		106.7		

.55 0
+001

Stars very difficult to measure 3½ hrs off meridian

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1928phae.proj..6656

I Saturday, January 12, 1929 TU Ces NBS obs tree

6:15

~~231.5~~

353.9	53.8		
47.7		1.53	
		~~1.30~~	
178.6	51.4		
230.0			1.58
	185.2		~~1.49~~
357.6	52.7		
50.3		1.64	
179.3	47.9		
227.2			
	100.6		1.20
79.7	64.7		
144.4			
262.4	67.0	0.94	
329.4			
	131.7		0.92
75.6	71.7		
147.3			
260.0	62.8	0.89	
322.8			
	134.5		

6:21

✓ ✓
5624.470
+001

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1928phae.proj...6656

II Saturday, January 12 TU Cas H138 obs + rec

6:23	75.2	71.2		
	146.4			
	260.2	67.1	0.81	
	327.3			
		138.3		0.79
	77.3	71.0		
	148.3			
	258.0	69.1	0.77	
	327.1			1.21
		140.1		
	180.9	50.2		
	231.1		1.60	
	356.2	52.2		
	48.4			1.62
		102.4		
	177.0	54.0		
	231.0		1.65	
	2.0	46.3		
6:29	48.3			
		100.3		

1.476

+001

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1928phae.proj..6656

III Saturday, January 12, 1929 TU Cas Hasbrouck

6'.34	175.0	53.5	
	228.5		
	356.6	52.2	1.52
	48.8		
		105.7	1.48
	179.4	51.2	
	230.6		1.43
	350.0	58.3	
	48.3		1.24
		109.5	
	261.3	62.4	
	323.7		1.00
	79.6	66.7	
	146.3		
		129.1	0.99
	260.5	62.3	
	322.8		0.98
	77.5	67.6	
6'.40	145.1		
		129.9	

✓
.484
+001

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1928phae.proj..6656

IV Saturday, January 12, 1929 TU Cas HR 335 obs + ree

6:44	263.5	61.8	
	325.3		
	83.3	67.7	0.99
	151.0		
		129.5.	
	262.4	59.3	1.00
	321.7		
	79.8	69.1	1.01
	148.9		
		128.4	
			1.17 ✓
	1.5	59.8	
	61.3		
	173.3	58.2	1.24
	231.5		
		118.0	
			1.34
	356.1	58.2	
	54.3		1.44
6:50	175.0	50.7	
	225.7		
		108.9	

.491 ✓

+001

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1928phae.proj..6655

F Saturday January 12, 1929 TU Cas Hbs obs'rec

7:03	352.5	58.1	
	50.6		
	174.3	58.9	1.26
	233.2		
		117.0	
			1.20
	352.6	67.1	
	59.7		
	176.5	55.0	1.14
	231.5		
		122.1	
			1.05
	80.3	65.1	
	145.4		
	258.1	67.1	0.93
	325.2		
		132.2	
			0.90
	79.6	69.8	
	149.4		0.88
	262.6	64.8	
7:09	327.4		
		134.6	

.504

+001

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1928phae.proj..6655

VI Saturday, January 12 TU Cas HR 8083 + Tee

7:13	77.7	67.7		
	145.4			
	260.7	66.5	0.89	
	327.2			
		134.2		
			0.96	
	82.9	61.8		
	144.7			
	258.5	66.1	1.02	
	324.6			1.07 ✓
		127.9		
	176.8	53.2		
	230.0			
	349.0	64.1	1.25	
	53.1			
		117.3		
			1.18	
	171.6	62.5		
	234.1		1.11	
	355.6	61.2		
7:18	56.8			
		123.7		

.510 ✓

+001

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1928phae.proj..6655

I Monday, January 14, 1929 TU Cas Harvard Observatory

6:00

~~57.4~~

172.3 59.3

231.6 1.23

349.6 59.1

48.7 ———

118.4 1.38

177.8 50.2

228.0

358.5 55.0 1.53

53.5 ———

105.2 1.19

265.2 61.2

326.4 1.06

81.7 64.8

146.5 ———

126.0 1.00

262.7 64.8

327.5 0.93

79.8 67.6

6:08 147.4 ———

132.4

5626.461

+000

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1928phae.proj...6663

II Monday, January 14, 1929 TU Cas HBS obs + ree

G.C.T.	259.6	68.5		
	328.1			
	77.1	67.4	0.86	
	144.5			
		135.9		0.91
	257.3	67.4		
	324.7			
	79.7	63.6	0.96	
	143.3			
		131.0		1.06
	352.7	57.4		
	50.1		1.29	
	170.6	58.2		
	228.8			
		115.6		1.22
	356.5	58.1		
	54.6		1.16	
	169.3	63.3		
6.18	232.6			
		121.4		

.468

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1928phae.proj..6655

TTI Monday, January 14, 1929 TU Cas HBS obs 72cc

6:25

352.6	59.3		
51.9			
170.6	61.1	1.18	
231.7	120.4		
355.7	58.4		1.24
54.1			
173.0	57.3	1.29	
230.3	115.7		1.07 ✓
77.8	67.7		
145.5		0.74	
253.0	74.2		
327.2	141.9		0.90
79.0	68.2		
147.2		1.05	
266.1	58.4		
324.5	126.6		

6:32

.477 ✓

+000

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1928phae.proj...6655

IV Monday, January 14, 1929 TU Cas HBS obs. rec

6:50	76.7	67.6		
	144.3		0.95	
	259.0	64.0		
	323.0	———		1.00
		131.6		
	80.8	65.5		
	146.3		1.06	
	260.3	60.7		
	321.0	———		1.18 ✓
		126.2		
	174.0	55.5		
	229.5		1.28	
	354.7	60.6		
	55.3	———		
		116.1		
				1.36
	175.5	53.1		
	228.6		1.43	
	354.2	56.2		
6:57	50.4	———		
		109.3		

.496 ✓

+ 00J

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1928phae.proj..6655

E Monday, January 14 TU Cas HBS obs + ice

7:08	174.3	56.3	
	230.6		
	356.1	55.5	1.38
	51.6		
		111.8	1.40
	176.1	55.5	
	231.6		
	354.4	54.4	1.42
	48.8		1.21 ✓
		109.9	
	265.5	58.7	
	324.2		1.09
	79.7	65.9	
	145.6		
		124.6	1.02
	259.3	70.7	
	330.0		0.95
	81.6	60.8	
7:15	142.4		
		131.5	

✓
.508
+ 000

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1928phae.proj...6655

VI Monday, January 14, 1929 TU Cas HBS obs + rec

7:25	262.9	56.3		
	319.2		0.99	
	74.5	73.3		
	147.8			0.92
		129.6		
	259.7	65.6		
	325.3		0.85	
	81.3	70.4		
	151.7			1.24
		136.0		
	359.5	48.6		
	48.1			
	173.4	57.9	1.50	
	231.3			
		106.5		1.36
	352.6	59.0		
	51.6		1.21	
	172.5	60.3		
7:37	232.8			
		119.3		

.519 ✓

+ 000

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1928phae.proj..6655

VII Monday, January 14, 1929 TU Cas HBS Obs Otee

7:47	356.1	60.8		
	56.9			
	176.7	53.7	1.31	
	230.4			
		114.5		1.33
	354.9	57.0		
	51.9		1.35	
	176.4	55.9		
	232.3			1.16 ✓
		112.9		
	82.1	67.1		
	149.2 ✓		1.13	
	276.6	55.6		
	332.2 ✓			0.99
		122.7		
	74.3	72.4		
	146.7 -		0.85	
	261.4	63.8		
7:54	325.2			Stars very hard to see for this set
✓		136.2		
.535				
+ 006				

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1928phae.proj..6655

I Tuesday, January 15, 1929 TU Cas Hds obs'd ree

6:45	173.0	61,5		
	234.5		1.16	
	351.4	59.8		Sky thick (near horizon), and Stars hard to measure
	51.2			
		121.3		1.27
	174.1	56.3		
	230.4			
	353.2	55.4	1.38	
	48.6			
		111.7		1.16
	259.3	66.1		
	325.4			
	84.1	60.5	1.05	
	144.6			
		126.6		1.06
	263.2	59.4		
	322.6		1.08	
	82.7	65.6		
6:51	148.3			
		125.0		

5627.491
+000

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1928phae.proj..6656

II Tuesday, January 15, 1929 TV Cas Hds obs

6:55

261.6	66.2		
327.8			
76.5	66.7	0.92	
143.2			
	132.9		0.94
265.5	64.2		
329.7			
76.6	67.4	0.95	
144.0			
	131.6		1.15
350.9	57.4		
48.3			
171.2	61.2	1.22	
232.4			
	118.6		1.36
356.2	55.7		
51.9		1.50	
177.7	50.8		
228.5			
	106.5		

7:02

.498

+000

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1928phae.proj...6656

III Tuesday, January 15, 1929 IV Cas HBS obs + rec

Sky now too thick to continue.

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1928phae.proj..6656

V Sunday, January 20, 1929 TU Cas V455 Oph Free

6:32

~~234.0~~
356.5 54.7 Half moon, but sky very clear
51.2
180.6 42.9 1.72
223.5
97.6 1.64
359.7 49.7
49.4 1.57
176.8 54.0
230.8
103.7 1.49
80.7 61.1
141.8 1.28
265.1 55.0
320.1
116.1 1.34
85.5 57.1
136.6 1.41
265.3 59.1
6:39 324.4
110.2

5632.483

+ 000

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1928phae.proj...6656

II Sunday, January 20, 1929 IV Cas HD 8 Tue

6:57	80.0	68.8	
	148.8		
	266.7	57.6	1.05
	324.3		
		126.4	1.24
	84.3	56.6	
	140.9		
	266.3	53.2	1.42
	319.5		
		109.8	1.31 ✓
	175.4	59.4	
	229.8		
	349.2	58.8	1.34
	48.0		
		113.2	1.38
	174.3	57.0	
	231.3		1.42
	355.2	52.7	
7:03	47.9		
		109.7	

.500 ✓

rough

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1928phae.proj..6656

III Sunday, January 20, 1929 RU Cas VHBS obs Dec

7:09	167.8	62.9	
	230.7		
	353.7	56.3	1.21
	50.0		
		119.2	1.29
	177.2	52.3	
	229.5		1.37
	354.0	59.9	
	53.9		
		112.2	1.27 ✓
	263.2	59.4	
	317.6		
	83.2	62.0	1.27
	145.2		
		116.4	1.25
	264.5	59.3	
	323.8		1.23
	83.4	59.1	
7:15	142.5		
		118.4	

✓
.508
+000

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1928phae.proj..6656

TV Sunday January 20, 1929 TV Cas Harvard Observatory

7:28	263.1	59.3		
	322.4			
	84.6	56.7	1.28	
	141.3			
		116.0		1.12
	260.3	65.8		
	326.1		0.96	
	77.6	65.2		
	142.8			
		131.0		1.19
	350.9	59.4		
	50.3		1.29	
	174.9	56.3		
	231.2			1.26
		115.7		
	351.6	58.6		
	50.2		1.24	
	174.3	59.12		
7:34	233.5			
		117.8		

.522
+000

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1928phae.proj..6656

V Sunday, January 20, 1929 W Cas NB Doorstrice

7:40	354.1	58.9		
	53.0			
	171.8	56.1	1.30	
	227.9			
		115.0		1.35
	353.8	55.4		
	49.2		1.40	
	176.5	55.2		
	231.7			
		110.6		1.28 ✓
	81.9	62.1		
	144.0		1.16	
	263.7	59.6		
	323.3			
		121.7		1.20
	81.5	60.3		
	141.8		1.23	
	264.3	57.9		
7:47	322.2			
		118.2		

.531 ✓

+ 000

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1928phae.proj...6656

VI Sunday, January 20, 1929 TV Cas HBS obs+rce

7:50	83.0	60.5		
	143.5			
	258.8	67.8	1.01	
	326.6			
		128.3		1.02
	81.0	65.5		
	146.5		1.04	
	262.6	61.4		
	324.0			
		126.9		1.14
	175.4	51.9		
	227.3			
	356.1	56.7	1.45	
	52.8			
		108.6		1.26
	169.3	63.5		
	232.8		1.08	
	353.5	61.8		
7:57	55.3			
		125.3		

Stars now 3 3/4 hours west of meridian

.538

+0.00

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1928phae.proj..6656

I Monday, January 21, 1929 TV Cas HBS obs & rec

6:10	165.3	70.8		
	236.1		0.96	Moon very bright, but sky clear.
	356.4	60.3		
	56.7			
		131.1		1.06
	172.5	58.4		
	230.9		1.15	
	3538	63.4		
	57.2			0.97
		121.8		
	258.7	63.9		
	322.6		1.05	
	83.2	62.7		
	145.9			0.88
		126.6		
	256.0	72.6		
	328.6		0.71	
	78.7	70.8		
6:17	149.5			
		143.4		

5633.468

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1928phae.proj..6656

II Monday, January 21 RV Cas HR 8085 rice

6'19	254.4	70.9		
	325.3			
	79.8	68.1	0.79	
	147.9			
		139.0		0.71
	254.8	69.8		
	324.6			
	75.9	77.3	0.63	
	153.2			0.90
		147.1		
	353.1	61.5		
	54.6		1.24	
	175.2	56.2		1.10
	231.4			
		117.7		
	349.3	67.1		
	56.4		0.97	
	172.0	63.5		
6'25	235.5			
		130.6		

.473

+ 0VV

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1928phae.proj..6655

III Monday, January 21, 1929 TU Cas HD38066 rec

6'30	350.8	66.7		
	57.5			
	174.5	60.6	1.04 ~~0.83~~	
	235.1			
		187.3		1.09 ~~0.98~~
	352.3	64.4		
	56.7		1.14	
	173.7	58.1		
	231.8			0.94 ~~0.89~~
		122.5		
	77.3	71.7		
	149.0			
	258.6	66.7	0.81	
	325.3			
		138.4		0.80
	74.4	75.3		
	149.7		0.79	
	258.2	64.1		
6'36	322.3			
		139.4		

.481
+000

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1928phae.proj..6655

IV Monday, January 21, 1929 TV Cas HBS 00 + rec

6.42	79.4	67.4		
	146.8			
	260.2	63.6	0.96	
	323.8			
		131.0		0.88
	77.2	75.1		
	152.3		0.79	
	262.1	64.3		
	326.4			1.10
		139.4		
	174.5	59.0		
	233.5		1.29	
	352.1	56.4		
	48.5			
		115.4		1.32
	178.2	51.3		
	229.5		1.36	
	352.0	61.0		
6.48	53.0			
		112.3		

.489

POOR

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1928phae.proj..6655

V Monday, January 21 TV Cas HBS obs + ree

6:52	170.9	63.4		
	234.3			
	353.3	57.1	1.18	
	50.4			
		120.5		1.20
	173.6	56.0		
	229.6			
	354.5	62.2	1.23	
	56.7			1.09
		118.2		
	261.1	65.6		
	326.7			
	82.0	66.5	0.94	
	148.5			
		132.1		0.98
	258.6	63.8		
	322.4			
	78.7	64.7	1.01	
6:59	143.4			
		128.5		

.497
+ 000

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1928phae.proj..6655

VI Monday, January 21, 1929 TU Cas [illegible]

7:02	258.6	65.5		
	324.1			
	78.5	68.4	0.98	
	142.9			
		129.9		0.96
	262.2	64.1		
	326.3			
	75.5	67.9	0.94	
	143.4			1.02
		132.0		
	351.4	60.7		
	52.1		1.13	
	173.9	62.0		
	235.9			1.09
		122.7		
	348.9	64.0		
	52.9		1.05	
	172.0	62.6		
7:06	234.6			
		126.6		

.503
+ 000

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1928phae.proj..6656

VII Monday, January 21, 1929 IV Cas NBS Observer

7:12	352.8	57.7		
	50.5			
	170.9	60.4	1.23	
	231.3			
		118.1		1.28
	352.7	56.5		
	49.2			
	171.0	59.2	1.33	
	228.2			1.11
		113.7		
	80.2	62.4		
	142.6			
	259.1	66.6	1.00	
	325.7			
		129.0		0.94
	81.0	63.8		
	144.8		0.87	
	252.8	71.5		
7:19	324.3			
		135.3		

✓
.511
+000

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1928phae.proj..6656

rIII Monday, January 21, 1929 TU Cas H3S obs+rec

7:28	78.1	69.9		
	148.0			
	262.0	63.1	0.92	
	325.1			
		133.0		0.96
	98.4	71.1		
	149.5			
	264.6	58.6	0.99	
	323.2			
		129.7		1.13
	179.6	51.7		
	231.3			
	346.8	63.0	1.31	
	49.8			
		114.7		1.30
	176.2	56.6		
	232.8			
	351.1	59.3	1.28	
7:34	50.4			
		115.9		

.522
+000

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1928phae.proj..6656

IX Monday, January 21, 1929 TU Cas HBS observer

7:38	172.1	62.4	
	234.5		
	352.6	60.2	1.14
	52.8		
		122.6	1.17
	173.4	60.0	
	233.4		
	353.0	59.5	1.20
	52.5		1.12 ✓
		119.5	
	263.2	64.3	
	327.5		
	80.3	61.7	
	142.0		1.06
		126.0	1.08
	264.2	58.4	
	322.6		
	77.1	66.5	1.09
7:45	143.6		
		124.9	

.529 ✓

+ 000

Stars now $3\frac{3}{4}$ hrs west of meridian, and very faint.

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1928phae.proj...6656

I Wednesday, January 23, 1929 W Cas Absorbance

6:17	~~234.7~~	178.8	56.3		Moon two days from full + very bright
	~~347.9~~	235.1		1.10	
	~~53.8~~	348.3	68.2		
		56.5			0.98
			124.5		
		164.1	72.6		
		236.7		0.86	
		352.7	63.4		
		56.1			0.97
			136.0		
		261.7	64.6		
		326.3			
		80.6	66.8	0.91	
		147.4			
			133.4		0.96
		262.1	65.5		
		327.6		1.02	
		83.5	62.4		
6:25		145.9			
			127.9		

5635.473
+000

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1928phae.proj..6656

II Wednesday, January 23, 1929 TU Cas HHSobsorce

6:39

260.5	64.3		
324.8		1.16	
83.2	59.2		
140.4			
	121.5		1.14
261.8	65.0		
326.8			
89.5	58.8	1.11	
148.3			
	123.8		0.93
350.9	63.5		
54.4		0.83	
164.4	73.7		
238.1			0.72
	137.2		
342.4	77.0		
59.4		0.60	
168.3	71.5		
239.8			
	148.5		

6:46

.487

+0.000

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1928phae.proj..6656

Wednesday, January 23, 1929 tU Cas HR 8000 + rec

7:11	348.1	69.6	
	57.7		0.89
	172.3	64.5	
	236.8	134.1	0.92
	349.0	67.7	
	56.7		0.95
	172.3	63.8	
	236.1	131.5	0.95
	81.7	61.7	
	143.4		0.92
	256.8	71.3	
	328.1	133.0	0.98
	78.3	65.9	
	144.2		1.05
	264.8	60.8	
7:19	325.6	126.7	

.510

Measuring too difficult to continue profitably.

tooo Stars 3½ hrs off meridian

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1928phae.proj..6655

I Thursday, January 24, 1929 IV Cas HBS 00 Tree

6:24	4.2	42.9		
	47.1			
	184.2	37.5	2.18	
	221.7			
		80.4		2.17
	2.0	41.3		
	43.3		2.16	
	183.6	40.0		
	223.6			1.84 ✓
		81.3		
	83.5	55.8		
	139.3			
	268.5	51.3	1.49	
	319.8			
		107.1		
	85.7	54.6		1.52
	140.3		1.56	
	269.1	49.2		
6:31	318.3			
		103.8		

✓ ✓
5636.477
+ 000

Moon very bright, but sky clear.

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1928phae.proj..6055

II Thursday, January 24, 1929 TU Cas HD 8000 area

6:31

	85.4	56.3	
	141.7		
	270.1	47.4	1.57
	317.5		
		103.7	1.61
	87.8	50.0	
	137.8		1.65
	267.2	50.1	
	317.3		1.90 ✓
		100.1	
	180.3	46.5	
	226.8		2.06
	3.2	38.3	
	41.5		
		84.8	2.20
	186.0	34.6	
	220.6		2.33
	2.4	41.0	
6:38	43.4		
		75.6	

.482 ✓

1000

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1928phae.proj..6656

II Thursday, January 24, 1929 Nr Cas HBS 00 Prec

6 7.44

184.1	42.3		
226.1			
0.9	40.7	2.11	
41.6			
	83.0		
181.1	42.9		2.04
224.0			
0.9	44.6	1.98	
45.5			
	87.5		1.90
270.5	44.9		
315.4		1.71	
84.3	53.0		
137.3			1.75
	97.9		
269.9	49.3		
319.2		1.79	
88.4	45.4		
133.8			
	94.7		

6.50

.491

+000

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1928phae.proj..6655

IV Thursday, January 24 IV Cas HBS obs 17cm

7:01	271.1	45.0	
	316.1		
	86.6	48.8	1.81
	135.4		
		93.8	1.66
	263.7	56.6	
	320.3		1.52
	86.5	49.1	
	135.6		1.79 ✓
		105.7	
	359.3	45.6	
	44.9		1.96
	181.2	42.5	
	223.7		1.92
		88.1	
	3.3	42.8	
	46.1		1.89
	180.5	48.0	
7:08	228.5		
		90.8	

.503 ✓

+000

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1928phae.proj..6655

V Thursday, January 24, 1929 W Cas 1HR5000 v xe

7'.15

1.6	43.8		
45.4			
184.2	41.3	2.05	
225.5			
	85.1		1.98
357.8	48.2		
46.0		1.92	
182.9	41.5		
224.4			1.85 ✓
	89.7		
85.1	52.3		
137.4		1.69	
270.8	46.4		
317.2			1.72
	98.7		
87.5	50.8		
138.3		1.74	
271.6	46.0		
317.6			
	96.8		

7'.22

✓

.512

+000

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1928phae.proj..6655

VI Thursday, January 24 W Cas HBS obs 1 to 6

7:34	87.0	53.3		
	140.3			
	270.2	48.2	1.62	
	318.4			
		101.5		1.61
	86.7	51.3		
	138.0		1.60	
	268.5	50.9		
	319.4			1.78
		102.2		
	177.8	45.5		
	223.3		2.01	
	3.5	40.9		
	44.4			1.94
		86.4		
	182.5	46.5		
	229.0		1.88	
	0.0	44.9		
7:40	44.9			
		91.4		

.526

+000 Stars 3 3/4 hrs off meridian

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1928phae.proj..6655

I Saturday, January 26, 1929 Tli Cas 14h8000 +52

Night clear + good; no moon yet.

6:01	178.8	53.4		
	232.2		1.57	
	359.0	50.2		
	49.2			1.60
		103.6		
	178.6	48.9		
	227.5		1.64	
	355.4	51.8		1.27 ✓
	47.2			
		100.7		
	259.1	72.8		
	331.9			
	80.2	61.2	0.90	
	141.4			
		134.0		
				0.94
	259.0	67.0		
	326.0		0.98	
	81.3	63.0		
6:07	144.3			
		130.0		

✓ ✓
5638.461

000

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1928phae.proj..6055

II Saturday, January 26, 1929 TU Cas HBS 000 0Ce

6:11	260.8	63.7		
	324.5		0.97	
	82.7	46.7		
	149.4		0.99	
		130.4		
	256.6	69.7		
	326.3		1.01	
	84.4	58.9		24 1.30
	143.3			
		128.6		
	358.3	48.5		
	46.8		1.57	
	177.7	55.1		1.49 1.61
	232.8			
		103.6		
	353.4	58.2	+1	
	51.6	5	1.65	
	177.9	42.1		
6:18	230.0			
		190.3		

.468

000

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1928phae.proj..6655

IV Saturday, January 26, 1929 Π Cas HPS 060 ora

6:31	358.3	48.9	1.49
	47.2		~~1.73~~
	172.2	48.2	
	230.4	~~197.1~~ 147.1	~~1.56~~ 1.44
	351.5	63.0	
	54.5		1.39
	180.0	48.3	
	228.3	111.3	~~1.41~~ 1.35
	86.5	52.2	
	138.7		
	262.6	60.7	1.35
	323.3	112.9	1.26
	82.8	61.8	
	144.6		1.16
	262.4	59.5	
6:37	321.9	121.3	

.482

ovo

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1928phae.proj..6555

IV Saturday, January 26, 1929 RL Cas Abs obs rec

6:55

84.5	67.5		
142.0			
261.0	65.3	0.92	
326.3			
	132.8		1.06
~~83.3~~ 75.7	61.2		
144.4			
263.1	58.1	1.21	
321.2			1.31 ✓
	119.3		
178.4	46.0		
224.4			
353.9	52.9	1.68	
46.8			
	98.9		1.56
176.3	56.4		
232.7		1.45	
358.9	52.1		
51.0			
	108.5		

7:02

✓
.498
000

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1928phae.proj..6655

V Saturday, January 26, 1929 TU Cas Hilo observer

7:06	176.8	52.6	
	229.4		
	357.3	50.5	1.58
	47.8		
		103.1	1.54
	173.3	57.5	
	230.8		
	358.7	48.7	1.51
	47.4		1.35 ~~1.40~~
		106.2	
	267.5	60.0	
	317.5		1.30
	81.9	65.1	
	147.0		1.26
		115.1	
	260.3	~~57~~.3	
	327.6		1.01 ~~1.05~~
	81.3	61.0	
7:12	142.3		
		118.3	

.506

000

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1928phae.proj..6655

VI Saturday, January 26, 1929 Mt Cas ABS 000 Nee

7:15

261.5	62.2		
323.7			
82.6	63.2	1.08	
145.8			
	125.4		1.10
259.1	45.2		
324.3			
86.4	58.2	1.12	1.30
134.6			
	123.4		
354.5	52.0		
46.5			
176.6	55.6	1.47	
232.2			
	107.6		1.49
351.8	59.7		
50.5		1.51	
183.3	46.2		
229.5			
	105.9		

7:21

.512

000

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1928phae.proj..6656

VII Saturday January 26, 1929 TV Cas HBS 005 Mck

7:34	351.4	56.6	
	48.0		
	177.4	57.3	1.40
	231.7		
		110.9	1.52
	354.5	51.8	
	45.9		1.65
	178.3	48.7	
	227.0		1.49
		100.1	
	86.3	59.0	
	143.3		1.35
	265.3	55.8	
	321.1		1.46
		112.8	
	81.5	58.1	
	139.6		1.56
	271.3	45.9	
7:40	317.2		
		104.0	

✓

.526

000

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1928phae.proj..6656

VIII Saturday, January 26, 1929 TU Cas HD8000Tac

7:40	81.6	59.5	
	141.1		
	262.4	58.0	1.25
	320.4		
		117.5	
			1.30
	82.7	58.9	
	141.6		
	264.2	59.6	1.36
	317.8		1.44 ✓
		112.5	
	177.8	47.6	
	225.4		1.71
	358.1	50.3	
	48.4		1.59
		97.9	
	180.9	49.7	1.67
	230.6		
	350.6	58.2	
7:47	48.8		
		107.9	

.531 ✓

Stars 4 hrs off meridian

000

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1928phae.proj..6656

I Sunday, January 27, 1929 T U Cas HD8000 mag

6:19 Sky excellent; no moon

	353.7	52.7	
	46.4		
	179.1	50.3	1.58
	229.4		
		103.0	
			1.62
	351.6	54.8	
	46.4		1.65
	177.3	49.5	
	226.8		1.29 ✓
		100.3	
	79.3	70.3	
	149.6		1.01
	265.5	58.0	
	323.5		0.96
		128.3	
	80.6	65.0	
	145.6		0.92
	258.7	67.6	
6:24	326.3		
		132.6	

✓ ✓
5639.473

−.001

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1928phae.proj..6656

II Sunday, January 27, 1929. TU Cas. HKL obs Pce

6:33	80.5	72.0		
	152.5		0.95	
	262.0	59.3		
	321.3			0.94
		131.3		
	74.3	72.4		
	146.7		0.93	
	263.1	59.9		1.18 ✓
	323.0			
		132.3		
	173.9	59.6		
	233.5		1.27	
	355.1	56.8		
	51.9			1.43
		116.4		
	178.6	51.9		
	230.5		1.59	
	0.5	51.0		
7:39	51.5			
		102.9		

✓
.483
-001

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1928phae.proj..6655

III Sunday, January 27. 1929 IV Cas Hale Obs rec

6:56	177.2	53.4	
	230.6		
	354.4	52.7	1.51
	47.1		
		106.1	1.50
	174.0	52.3	
	226.3		1.48
	354.5	55.0	✓
	49.5		1.30
		107.3	
	262.4	61.1	
	323.5		1.03
	77.3	66.7	
	144.0		1.11
		127.8	
	265.3	57.0	
	322.3		1.19
	81.3	63.3	
7:02	144.6		
		120.3	

✓
.499
−.001

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1928phae.proj...6655

IV Sunday, January 27, 1929 IV Cas HBS obs rce

7:07	270.0	49.0		
	319.0			
	77.5	65.5	1.31	
	143.0			
		114.5		1.14
	265.6	59.5		
	325.1			
	74.6	70.8	0.97	
	145.4			1.23 ✓
		130.3		
	357.1	57.9		
	55.0			
	173.7	56.3	1.32	
	230.0			
		114.2		1.32
	352.4	56.5		
	48.9		1.33	
	176.4	57.3		
7:13	233.7			
		113.8		

.50 7
-001

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1928phae.proj..6655

V Sunday, January 27, 1929 TV Cas HBS 005 + rec

7:15	353.1	58.9		
	52.0		1.52	
	185.5	46.7		
	232.2			1.41
		105.6		
	354.7	56.7		
	51.4		1.30	
	173.4	58.3		1.22 ✓
	231.7			
		115.0		
	76.8	69.6		
	146.4		1.02	
	265.5	58.5		
	324.0			1.04
		128.1		
	83.3	57.9		
	141.2		1.07	
	260.5	67.8		
7:21	328.3			
		125.7		

✓
.512
-001

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1928phae.proj...6055

VI Sunday, January 27, 1929 VII Cas #133 obs'd

7:39	76.3	72.9	
	149.2		
	266.8	58.0	0.96
	324.8		
		130.9	1.02
	81.4	60.9	
	142.3		1.08
	263.6	64.4	
	328.0		1.22
		125.3	
	178.3	52.5	
	230.8		1.40
	352.5	58.2	
	50.7	110.7	1.43
	178.0	52.9	1.46
	230.9		
	354.7	55.1	
7:45	49.8		
		108.0	

.529
−001

Stars 4 hrs off mer.

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1928phae.proj..6655

I

Monday, January 28, 1929 TU Cas J+13800

6.15	17115	64.0		Sky clear.
	235.5			
	351.0	59.4	1.12	
	50.4			
		123.4	1.22	
	174.1	60.6		
	234.7		1.32	
	357.5	53.7		1.00
	51.2			
		114.3		
	265.6	63.9		
	329.5		0.81	
	69.6	74.5		
	154.1		0.77	
		138.4		
	256.6	73.2		
	329.8		0.73	
	79.7	69.1		
6.22	148.8			
		142.3		

5640.470

-001

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1928phae.proj..6055

II Monday, January 28, 1929 TV Cas H32 obs + rec

6:22	258.5	70.7		
	329.2		0.62	
	73.5	76.8		
	150.3			0.69
		147.5		
	259.0	67.5		
	326.5		0.76	
	77.0	73.1		1.01
	150.1			
		140.6		
	355.2	51.5		
	46.7		1.25	
	171.6	65.7		
	237.3			1.33
		117.2		
	354.2	59.9		
	54.1		1.41	
	178.8	50.6		
6:28	229.4			
		110.5		

7
485
-001

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1928phae.proj..6656

III Monday, January 28, 1929 W Cas

6:29

355.4	54.8		
50.2		1.32	
176.3	59.5		
235.8			1.28
	114.3		
351.2	62.4		
53.6		1.23	
176.7	56.1		1.06
232.8			
	118.5		
73.5	73.2		
146.7		0.74	
260.0	68.3		
328.3			0.85
	141.5		
79.2	68.0	0.96	
147.2			
262.2	62.9		
325.1			
	130.9		

6:35

.480
-001

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1928phae.proj...6656

I Wednesday, January 30, 1929 TU Cas H138 055 v rec

6'.10	353.1	60.2		
	53.3			
	171.2	60.4	1.18	
	231.6			
		120.6		1.31
	359.7	50.1		
	49.8			
	174.5	58.9	1.44	
	233.4			1.00 ✓
		109.0		
	70.6	83.7		
	154.3		0.57	
	260.8	66.4		
	327.2			0.68
		150.1		
	78.3	70.9	0.79	
	149.2			
	259.8	68.4		
6'.17	328.3			
		139.3		

✓ ✓
5642,468
-001

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1928phae.proj..6656

II Wednesday, January 30, 1929 TU Cas HD8000 rec

6'.21

75.0	76.5		
151.5		0.83	
262.5	60.7		
323.2			0.85
	137.2		
81.2	67.6		
148.8		0.87	
255.4	67.6		1.06 ✓
323.0			
	135.2		
176.7	55.5		
232.2		1.23	
351.2	62.6		
53.8			126
	118.1		
177.4	56.1		
233.5		1.29	
349.2	59.4		
48.6			
	115.5		

6'.28

✓

.475

-001

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1928phae.proj..6655

III Wednesday, January 30, 1929 TU Cas NGS obs Rice

6:3 R6	176.7	59.9		
	236.6			
	355.1	55.6	1.29	
	50.7			
		115.5		1.12
	171.6	62.9		
	233.5		0.95	
	346.4	68.4		
	54.8			0.99
		131.3		
	254.2	77.4		
	331.6		0.72	
	80.5	65.1		
	145.6			0.86
		142.5		
	266.7	58.2		
	324.9		1.00	
	75.3	70.8		
6:42	146.1			
		129.0		

.485
-001

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1928phae.proj..6655

IV Wednesday, January 30, 1929 IV Cas Hills Observ

6:47	258.7	68.6		
	327.3		0.89	
	80.5	65.5		
	146.0			0.87
		134.1		
	259.8	64.6		
	324.4		0.85	1.03 ✓
	78.0	71.7		
	149.7			
		136.3		
	351.5	60.4		
	51.9		1.19	
	171.5	59.9		
	231.4			1.19
		120.3		
	357.1	59.2		
	56.3		1.19	
	172.5	0.0		
6:53	233.5			
		120.2		

✓
.493
-001

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1928phae.proj...6555

V Wednesday, January 30, 1929 M Cas HB Sobs + rec

7:06	354.2	58.9		
	53.1			
	168.6	65.7	1.09	
	234.3			
		124.6		0.99
	347.5	68.9		
	56.4		0.89	
	171.5	65.6		
	237.1			0.88 ✓
		134.5		
	78.9	71.7		
	150.6		0.80	
	255.4	67.0		
	322.4			0.78
		138.7		
	77.4	69.9	0.76	
	147.3			
	257.2	70.7		
7:12	327.9			
		140.6		

✓
1.506
-001

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1928phae.proj..6655

VI Wednesday, January 30, 1929 H Cas 1h33m00s 15m

7:14	77.9	71.8		
	149.7		0.85	
	261.5	64.5		
	326.0			
		136.3		
			0.74	
	76.2	75.1		
	151.3			
	254.3	72.5	0.62	0.95 ✓
	326.8			
		147.6		
	174.3	62.0		
	236.3			
	354.9	59.8	1.15	
	54.7			
		121.8		
			1.16	
	174.8	57.6		
	232.4		1.17	
	350.8	63.6		
7:20	54.4			
		121.2		

✓
.512
-001

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1928phae.proj..6655

VII Wednesday, January 30, 1929 VII Cas NBS 00 Ice

9:23	174.1	60.5		
	234.6		1.08	
	348.4	64.9		
	53.3			
		125.4		1.06
	172.5	59.7		
	232.2		1.05	
	345.3	66.8		
	52.1			0.92
		126.5		
	256.0	70.8		
	326.8			
	76.2	68.5	0.79	
	144.7			
		139.3		0.79
	265.8	63.0		
	328.8		0.79	
	76.5	76.0		
9:29	152.5			
		139.0		

.518
-001

Stars 4 hours off meridian

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1928phae.proj..665S

I Saturday, February 2, 1929 W Cas NBS Obs Free

6h56

175.5	53.9		
229.4			
354.4	53.7	1.47	
48.1			
	107.6		1.82
180.2	48.3		
228.5		1.96	
2.4	40.0		
42.4			1.54
	88.3		
268.1	49.1		
317.2		1.52	
84.7	56.4		
141.1			1.36
	105.5		
263.6	60.2		
323.8		1.21	
84.2	59.2		
143.4			
	119.4		

7h01

5645.498
- 001

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1928phae.proj..6055

II Saturday, February 2, 1929 TU Cas HKS obs + rec

7:03	267.4	55.8 ✓		
	323.2			
	86.9	49.1 ✓	1.53 ✓	
	136.3			
		105.2	1.54 ✓	
	263.8	52.3 ✓		
	316.1			
	84.7	52.0 ✓	1.55 ✓	
	136.7			1.72 ✓ ✓
		1073		
		40.9 ✓		
	2.3			
	43.2			
	178.4	49.5 ✓	1.90 ✓	
	227.9			
		90.4	1.89 ✓	
	1.9	45.4 ✓	✓	
	47.3		1.88	
	185.4	46.0 ✓		
7:10	231.4			
		91.4 ✓		

.504 ✓

-001

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1928phae.proj..6655

Saturday, February 2, 1929 TU Cas HBS observer

7:12

358.6	44.0 ✓		
42.6		2.01 ✓	
184.0	42.5 ✓		
226.5	86.5	1.98 ✓	
359.5	44.0 ✓		
43.5		1.94 ✓	
183.7	45.1 ✓		
228.8			
84.3	89.1	1.77 ✓	
84.3	58.2 ✓		
142.5		1.52 ✓	
270.4	47.6 ✓		
318.0	105.8	1.56 ✓	
88.1	46.1 ✓		
134.2		1.60 ✓	
270.0	56.4 ✓		
326.4	102.5		

7:18

✓

.570

-001

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1929phae.proj...6655

I Monday, February 4, 1929 YU Cas 14h8s0b Mee

6:21	181.4	49.9		
	231.3			
	356.6	44.5	1.80	
	41.1			
		94.4		1.75
	177.5	50.8		
	228.3		1.20	
	1.5	47.5		
	49.0	98.3		1.48 ✓
	262.8	63.1		
	325.9		1.23	
	82.4	55.1		
	137.5			1.26
		118.2		
	269.6	52.8		
	322.4		1.28	
	82.3	63.1		
6:29	145.4			
		115.9		

✓ ✓
5647.475
-001

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1928phae.proj..6655

II Monday, February 4 W Cas HBS 005 area

6133

265.4	58,8		
324.2		1.30	
90.6	56,4		
147.0			1.29
	115.2		
265.2	50.8		
316.0		1.28	
78.9	65,4		1,54
144.3			
	116.2		
358.3	57.0		
49.3		1.79	
182.4	43.9		
226.3			1.80
	94.9		
1.3	93.9		
45 2		1.81	
180.5	49.2		
229.7			
	94.1		

6 3 29

✓

,483

-001

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1928phae.proj...6653

III Monday, February 4, 1929 TU Cas HBS 00, Tree

6:44	358.8	46.5		
	45.3			
	186.5	38.1	2.05	
	224.9			
		84.9		1.92
	2.0	39.5		
	41.5		1.78	
	177.4	55.6		✓
	230.0			1.55
		95.1		
	86.4	62.5		
	142.9			
	267.3	53.2	1.29	
	320.5			
		115.7		1.18
	82.6	58.7		
	141.3		1.07	
	258.0	67.1		
6:50	325.1			
		125.8		

✓
.491
−001

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1928phae.proj..6655

IV Monday, February 4, 1929 Mt Cas NBS 005 mm

6:57	82.5	67.1		
	149.6		1.18	
	264.9	53.5		
	318.4			1.12
		120.6		
	82.2	61.6		
	143.8		1.05	1.62 .58
	261.4	64.8		
	326.2			
		126.4		
	184.6	42.7		
	227.3		2.51 20	
	3.3	39.2		
	40.5			2.12 04
		79.9		
	185.5	43.4		
	228.9		1.88	
	357.8	47.7		
7:03	45.5			
		91.1		

.500
-001

Stars now 4 hrs off meridian

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1928phae.proj...6655

Friday, Feb 8, 1929 TU Cas HBS obs 1 ree

6:18

182.3 42.2
224.5

5.3 36.3 2.24
41.6

78.5 2.26

187.4 35.7
223.1

3.3 41.4 2.28
44.7

77.1

262.4 61.3
323.7 1.20

85.5 58.3
143.8

119.6

264.5 55.5
320.0 1.13

85.7 67.6
143.3

6:25

123.1

5651.473

-001

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1928phae.proj..6655

II Friday, February 8, 1929 TU Cas HBS obs + rec

6;28	269.0	47.3	
	316.3		1.71
	90.0	50.5	
	140.5		
		97.8	-1.55
	267.7	55.3	
	323.0		1.39
	82.5	55.9	1.94
	138.4		
		111.2	
	3.6	39.1	
	42.7		
	183.9	35.8	2.35
	219.7		
		74.9	2.32
	4.0	40.9	
	44.9		2.28
	188.8	36.2	
6;34	225.0		
		77.1	

.480
-001

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1928phae..proj...665S

III Friday, February 8, 1929 TU Cas NBS Observer

6:37	0.7	45.1	
	45.8		
	183.0	37.2	2.13
	220.2		
		82.3	2.18
	3.6	37.9	
	41.5		2.22
	184.0	41.3	
	225.3		1.84
		79.2	
	81.7	57.6	
	139.3		1.52
	269.2	48.0	
	317.2		1.50
		105.6	
	86.0	53.6	
	139.6		1.47
	269.2	54.2	
6:43	323.4		
		107.8	

.486
-001

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1928phae.proj..6655

IV

Friday, Feb 8, 1929 T U Cas

91.4
138.2
266.4

Field lost. Stars 4 hrs off meridian

Clouds!

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1928phae.proj...6655

I Tuesday, February 12, 1929 HBS obs + rec TU Cas

6:25	349.2	61.3	
	50.5		1.39
	178.5	49.8	
	228.3		
		111.1	1.42
	0.4	45.8	
	46.2		
	171.8	63.0	1.45
	234.8		1.03
		108.8	
	72.3	81.3	
	153.6		
	264.8	61.2	0.72
	326.0		
		142.5	0.64
	79.0	69.7	
	148.7		0.57
	253.3	80.3	
6:37	333.6		
		150.0	

56555.477
-002

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1928phae.proj..6656

II Tuesday, February 12, 1929 TU Cas HBS 00

6:33

71.6	78.7		
150.3		0.76	
266.3	61.8		
328.1	140.5		
			0.68
70.3	72.4		
147.7			
256.4	71.1	0.60	
327.5	148.5		1.09
177.3	54.8		
232.1		1.40	
357.9	55.8		
53.7	110.6		1.50
174.1	54.9		
229.0		1.61	
353.3	47.1		
50.4	102.0		

6:40

.483

-002

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1928phae.proj...6655

Saturday 27 Sept. 1930. L&C Obs Pur

15h 11m

XX Cygni Phot T

P.A. = A 314.°5 Dist = 7.1

Cap. brightness dis Var is very ft.

9:55:45	271.°8		
56:55	300.2	28.4	
9 58:05	90.3	30.2	
10 0:10	120.5	58.6	+2.91
~~1:40~~			
1:40	271.0		+2.93.5
2:25	299.9	28.9	
3:25	92.3	28.4	
4:05	120.7	57.3	+2.96
8:20	183.0		+3.10
9:15	207.6	24.6	
10:15	2.9	24.9	
10:55	27.8	49.5	+3.29
12:15	182,0		+3.26.5
13:15	208.7	26.7	
14:15	2.7	24.2	+3.24
10:14:50	28.9	50.9	

Times are (Sid. T − 12h) according to watch F of Laboratory.
Test for possibility of measuring the star.

19

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1928phae.proj..6655

II

10: 36: 45	0.4		
38: 40	27.8	27.4	
40: 55	179.7	28.3	
43: 05	208.0	55.7	+ 3.03
45: 05	3.0		+ 3.18
46: 05	28.9	25.9	
48: 15	183.1	22.7	
48: 55	205.8	48.6	+ 3.33
52: 40	93.0		+ 3.12
53: 45	120.3	27.3	
54: 35	273.2	25.8	
55: 10	299.0	53.1	+ 3.14
56: 50	89.7		+ 3.05
57: 55	119.5	29.8	
58: 40	272.0	27.4	
59: 25	299.4	57.2	+ 2.97

Focus changed quite a little after this group.

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1928phae.proj..6655

11:13:45	87.4		
	121.4	34.0	
	267.9	34.7	
15:50	302.6	68.7	+2.55
17:50	87.2		+2.495
	122.4	35.2	
	267.0	36.8	
19:30	303.8	72.0	+2.44
21:35	180.1		
	209.6	29.5	+2.53
	− 0.7	33.0	
23:35	32.3	62.5	+2.77
24:25	177.1		+2.565
	215.0	37.9	
	355.3	36.5	
28:00	31.8	74.4	+2.36

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11:28:10	178.1		
	214.4	36.3	
	— 2.6	35.6	
34:W	33.0	71.9	+2.44
35:W	179.2		+2.50
	211.7	32.5	
	- 4.8	35.8	
36:50	31.0	68.3	+2.56
39.50	265.0		+2.35
	305.8	40.8	
	85.0	38.2	
41:50	123.2	79.0	+2.22
45.30	266.6		+2.20
	305.6	39.0	
	83.7	41.6	+2.18
11; 47:25	125.3	80.6	

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1928phae.proj...6655

11:55:20	267.4		
	305.0	37.6	
	84.0	40.5	
5:05	124.5	78.1	+2.25
11 59:40	267.3		+2.37
	303.9	36.6	
	88.8	34.0	
12 03:20	122.8	70.6	+2.49
5:25	−0.4		+2.60
	29.7	30.1	
	181.0	28.0	
7:30	209.0	58.1	+2.93
9:40	−1.8		+2.83
	29.0	30.8	
	179.5	32.8	
11:35	212.3	63.6	+2.73

This group more difficult.

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