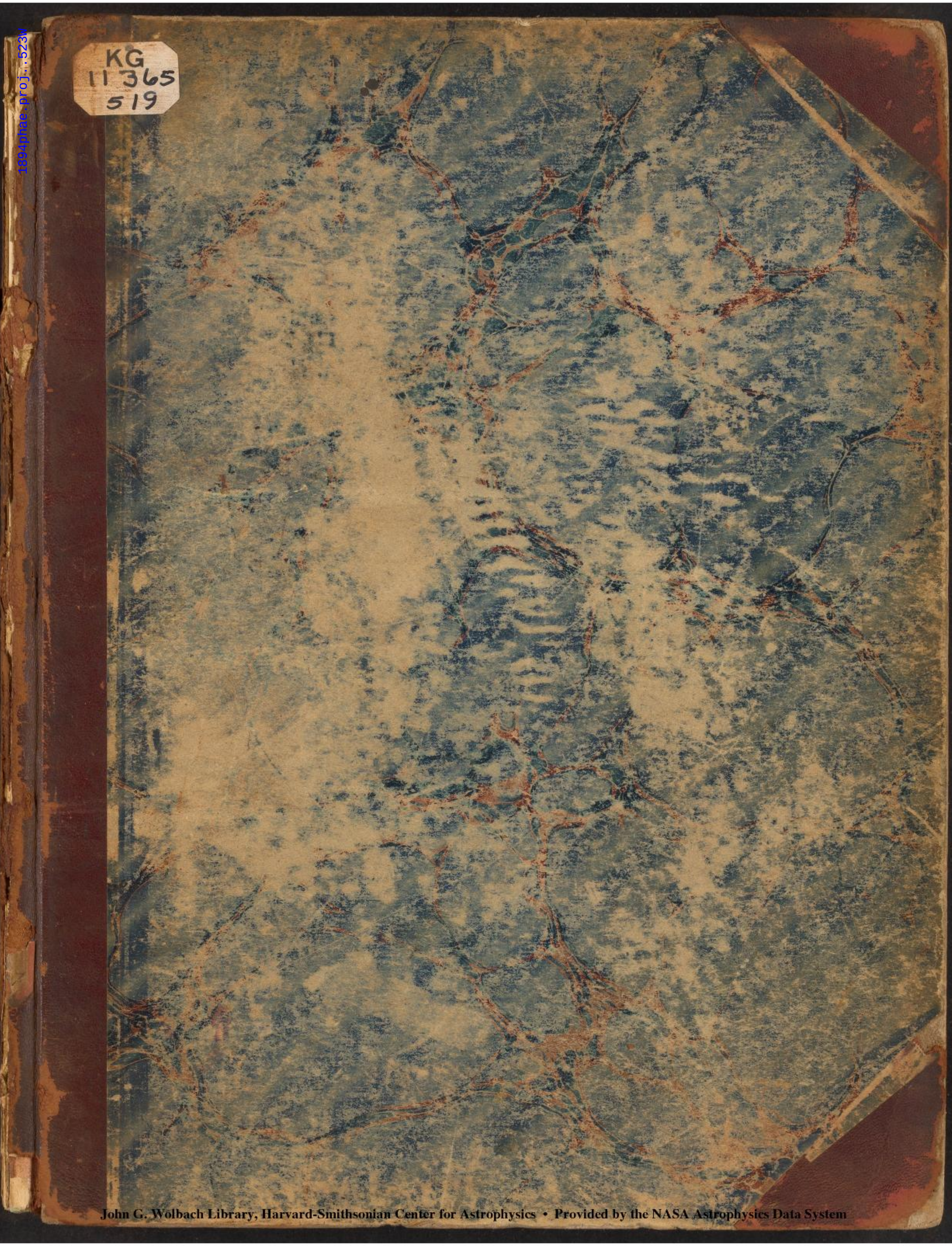
KG
11365
519



KG11365.522

1894pnae.proj..523W

KG 11365.522

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Jan. 30. 1894.

χ Cygni. W. obs.

Sky all cloudy again.

S Cygni H. obs.

20 8 . +57°.1
28 37
+8 26

Dome Shutters frozen, but finally opened. ~~Ice on~~ cannon balls, and groove filled with snow cleaned out snow from groove, but dome moved with ~~speed~~ difficulty and slowness.

Reap. of Jupiter I. Photo B. W. obs.
Janson Kek. comp. with first of two sats foll. = Sat. IV.

over

Jan. 30, 1894

Chr. error = $-8^{s}.0$ (assumed)

8.	25	28			false alarm, prob ghost eyepiece continually fogging
	31	15	~~31~~	23	Probably not seen,
	32	36	32	44	seen.
		44		52	37.2
		52	33	0	66.0
		59		7	31.0
	33	5		13	67.0
		12		20	27.0
		18		26	77.8
		24		32	22.2
		31		39	74.8
		38		46	15.1
		47		55	78.9
		53	34	1	15.3
		0		8	87.8
	34	6		14	8.0
		14		22	90.0
		24		32	399.5 ✓
		32		40	97.0
		38		46	0.2
		45		53	99.2
		52	35	0	359.1

Jan. 20, 1894

35	0	35	8″	102.5		
	7		15″	354.0		
	14		22″	99.0		
	22		30″	352.2		
	30		38″	106.1		
	39		47″	353.8		
	48		56″	100.9 → ″		
	57	~~36~~	~~5~~	352.0	~~911.3~~ ~~227.8~~	93.0 98.3 191.3 47.8″
36	4			101.0		
	14	36	37″ 9.2″	355.0	109.0 108.3 108.6″	
	22	36	17″	103.3		
	32			355.0		100.0 99.1″ 199.1 49.8″
	41	36	199 49.8″	105.0 Changed focus.		
	58	36	58″	356.1	110.0 106.7 108.4″	
37	8			103.0		
	16			353.8		94.8 97.3 192.1 48.0″
	25	37	114 28.5″	101.0	~~7~~	
	32	37	36″	355.1	107.2 107.1 107.2″	
	41			102.2		
	48			355.1		95.9 97.3 193.2 48.0″
	57	38	254 3.5″	100.8		
38	8	38	12″	355.1	4 105.7 107.1 106.4″	
	21			102.2		
	30			353.2		95.3 98.3 193.6 48.4″
	41	38	184 46.0″	102.1	5	
	52	38	54″	355.1	108.9 108.1 108.5″	
	1			103.2		

Jan. 30, 1894

39	1			103.2		
	16			354.0		99.0 96.1 195.1 48.8
	27	39	124 31.0	105.0	6	
	36	39	39.	352.0	111.0	
	45			104.1	112.1 111.6	
	56		294 ~~54~~	353.2		96.3 101.2 197.5 49.4
40	8		~~13.5~~	103.1		
42	18	41	13.5	357.2	7 109.9	
	32	41	22	104.0	106.8 108.4	
	42			354.1		96.1 99.0 195.1 48.8
	57	43	253 3.2	102.0	8	
43	11	43	11	355.1	107.9 108.8	
	23			103.9	108.4	

L.V.

44	58			35.1		
45	17	45	123 30.8	60.0	9	193.1 48.3
	46	45	39	37.2		24.9
46	2			60.8 ~~[illegible]~~		23.6 24.2

Troubled somewhat before beginning eclipse by fogging of nickle prism, fogging, however, practically absent during eclipse

Sat. ~~[illegible]~~ suspected some 5 seconds or so before time when it was recorded as actually seen.

Jan. 30, 1894

Chr. error = $-8\overset{s}{.}0$

	B+6 1182			B 394	
8	55	53.5	8	56	~~00.1~~ 1.5
	56	53.5		57	00.0
	B+6 1182			F 1327	
8	58		5	55	00.1
				56	00.1
9	0	53.1		57	00.0
	1	53.0		58	00.0

56	1.5
55	53.5
	$8\overset{s}{.}0$ sl. 1182

Cloudy

o Ceti

N. obs.

2	14	$-3\overset{o}{.}4$
6	3	
+ 3	49	

Left and above

9 12

163.2
289.0 125.8
157.0
297.0 140.0
B 265.8 ~~+0.3~~ −1.80
94.2

Right and below

248.5
28.0 139.5
252.9
21.5 128.6
268.1 ~~+0.1~~ −1.86
91.9

Jan. 30, 1894

256.5
24.0 127.5 ✓
252.8
27.6 134.8 ✓
262.3 ✓ +~~0.3~~ ✓
97.7 −1.71

Left and above

340.2
118.0 137.8 ✓
341.0
11~~2~~5.0 134.0 ✓
271.8 ✓ +~~0.0~~ ✓
88.2 −1.96

342.1
115.2 133.1 ✓
337.3
118.0 140.7 ✓
273.8 ✓ +~~0.9~~ ✓
86.2 −2.02

Right and below

68.4
205.2 136.8 ✓
72.0
9 30 205.0 133.0 ✓
269.8 ✓ +~~0.1~~ ✓
90.2 −1.91

✓
n 3 v, v 30 in finder
✓
9 57 C n 3 v, v 30 in large tel.

Region low, est. somewhat difficult.

Jan. 30, 1894

Nova Aurigae Mic obs.

5 23 +30°.2
7 10
+1 50

Troubled in finding Nova
Right and above

10 40 173.0 north foll. dir.
280.0 107.0 ✓^
174.0
281.2 107.2 ✓^
214.2 ✓^ ~~+1.3~~ ✓
145.8 −0.66

Left and below
266.0
12.2 106.2 ✓^
264.2
11.3 107.1 ✓^
213.3 ✓^ ~~+1.4~~ ✓
146.7 −0.64

263.9
13.0 109.1 ✓^
263.9
10.8 106.9 ✓^
216.0 ✓^ ~~+1.3~~ ✓
144.0 −0.69

Jan. 30, 1894

Right and above

~~273.7~~
~~356.8~~ ~~83.1~~
Wrong image dis. ~~275.2~~
~~358.0~~ ~~82.8~~ ✓
~~275.7~~
~~0.0~~ ~~84.3~~ ✓
~~167.1~~ ✓ ~~2.2~~

~~275.0~~
Wrong image dis. ~~358.0~~ ~~83.0~~
~~275.2~~
~~357.3~~ ~~82.1~~
~~165.1~~ ~~2.3~~

Left and below

262.8
14.5 111.7 ✓ʌ
261.4
13.$\overset{3}{7}$ 111.9 ✓ʌ
~~+09.8~~
~~221.5~~ ✓
223.6 ✓ʌ +~~1~~.2
136.4 -0.85

Right and above

357.9
162.0 104.1 ✓ʌ
355.3
103.2 107.9 ✓ʌ
212.0 ✓ʌ +~~1~~.4 ✓
148.0 -0.61

Jan. 30, 1894
Right and above.

11 7
10 53 30

356.9
103.7 106.8 ✓
356.9
103.7 106.8 ✓
213.6 ✓ ~~+1.4~~ ✓
146.4 -0.65

Jan. 31. 1894.

χ Cygni. Lr. obs.

19 46 +32.7
2 35
+6 49

2 40
19 46
+6 54

26 45
19 46.
6 59

26 54
19 46
7 8

27 16
19 46
7 30

228.3
45.0
273.3

3	~~2 2~~ 2 3	~~60~~ 0.0	Ft. Mor.
		3.0	Bt. "
		26.7	Ft. "
		59.5	Bt. "

Jan. 31, 1894.

3 24 14.0
16.3
42.5
25 14.0

~~25~~ 28.1
30.2
58.6 $+.5^s$
26 31.2

58.5
60.1
27 30.3
28 2.7

Order in preceding transits –
Faint stars
Bright "
Faint "
Bright "
Both in southern half;

The preceding transits represent a determination of the diff. of R. A. and Dec. of a Faint star preceding and south of χ Cygni, and χ itself. This faint star is the one with which χ is compared with Phot. R.

Jan. 31, 1894.

Dia. Jup. II. Phot. R. W. obs. – Wait rec.

Chr. error = − $6\overset{s}{.}7$ (assumed)

6	48	55			95.8		
	49	10	49	62 15.5c	175.1		552.7 138.2c
		19	49	2~~8~~3c	100.0	79.3 81.8 80.6c	
		38			181.8		
		47			97.3		~~80.7~~
		58	50	253 3.2c	178.0		554.6 138.6c
	50	9	50	10c	98.3	80.7 82.7 81.7c	
		19			181.0		
		28			100.0		
		44	50	193 48.2c	178.8		552.5 138.1c
		52	50	55c	100.6	78.8 72.5 75.6c	
	51	9			173.1		
		21			99.2		
		30	51	142 35.5c	177.9		555.3 138.8c
		40	51	4~~7~~3c	105.0	78.7 68.2 73.4c	
		51			173.2 →	2	
	52	1	52	8c	101.1		
		9		16c	172.0		
		15		22c	102.8		
		21		28c	169.2		
		28		35c	98.2		
		34		41c	168.1		
		41		48c	105.0		
		49		56c	169.1		

Jan. 31, 1894.

54? →	49	53	1^c	100.0
	60		7^c	163.8
53	5		12^c	109.0
	10		17^c	164.8
	15		22^c	108.5
	23		30^c	160.8
	29		36^c	111.2
	35		42^c	157.0
	40		47^c	113.8
	49		56^c	158.2
	56	54	3^c	120.0
54	4		11^c	155.0
	11		18^c	118.5
	29		36^c	155.0
	42		49^c	118.8
	54	55	1^c	153.0
55	3		10^c	seen.
	18	take off 3s	25 − 3 = 22^c	prob. seen.

L. J.

56	5			117.0	
	23	118		156.8	547.0 136.8^c
	36	56	29.5^c	120.0	
	54	56	38?	153.2	39.8 33.2 36.5^c

Seeing pretty good Sat. disappears very close to limb of Jup. On account of thin band and very high alt. observations are difficult. Comp with Sat on preceding side = Sat I.

Jan. 31, 1894.

		B+6 1182			B 394	
Chron. error = $-6^{s}.7^{c}$	7	7	53.6	7	8	~~00.0~~ 0.3^{c}
		8	53.6		9	00.0
		10	15.8	4	7 10 1327	00.1
		11	15.2		11	00.1

Rope to driving clock broke, repaired it.

		B+6 1182			B 394	
Chron. error = $-6^{s}.8^{c}$	8	50	53.5	8	51	~~00.0~~ 0.3^{c}

Reap. of Jupiter II. W. obs. Janson rec. Comp. with sat. prec. = Sat. I. Phot. R.

Chr. error = $-7^{s}.2$	9	10	28	10	35^{c}	Prob. not seen
			44		51^{c}	Seen
			50		57^{c}	125.1
		11	2	11	9^{c}	150.2
			11		18^{c}	124.1
			18		25^{c}	154.2
			24		31^{c}	120.2
			28		35^{c}	158.2
			35		42^{c}	116.0
			41		48^{c}	159.0
			47		54^{c}	112.1
			53	12	0^{c}	163.1

Jan 31, 1894

12	0	12	7ˢ	114.2	
~~12~~	5		12ˢ	162.7	
	11		18ˢ	111.5	
	18		25ˢ	163.2	
	24		31ˢ	108.8	
	~~31~~		~~38ˢ~~		
	35		42ˢ	170.8	
	43		50ˢ	107.1	
	50		57ˢ	172.0	
	57	13	4ˢ	103.8	
13	4		11ˢ	170.2	
	12		19ˢ	104.3	
	20		27ˢ	170.3	
	26		33ˢ	107.1	
	34		41ˢ	171.8	
	40		47ˢ	103.5	
	48		55ˢ	175.2	→ 2
	57		~~4~~	101.9	553.7
14	4	14	29 7.2ˢ	175.0	1 138.4ˢ
	10	14	14ˢ	102.0	73.1 70.8
	18			173.8	72.0ˢ
	25			100.2	557.0
	31	14	137 34.2ˢ	178.8	2 139.2ˢ
	37	14	41ˢ	101.8	78.6 74.4
	44			176.2	76.5ˢ

Jan. 21, 1894

					555.4 138.8<
	48			102.1	
	58	15	245 1.2<	176.0	73.9 76.7 75.3<
15	6	15	8<	100.3	3
	13			177.0	
	20			101.0	554.4 138.6<
	28	15	12,6 31.5<	178.9	
	35	15	39<	99.3	77.9 75.9 76.9<
	43			175.2	
	51			100.1	552.1< 138.0<
16	0		14	177.0	
	8	16	3.5<	100.2	76.9 5
		16	11<		74.6 75.8<
	15			174.8	
	22			100.2	551.4 137.8<
	29	16	130 32.5<	175.0	
	36	16	39<	100.0	74.86 76.2 75.5<
	43			176.2	
	50			102.2	555.3 138.8<
	58		16	179.8	
17	10	17	4.0<	101.1	
	18	17	11<	172.2	77.67 71.1 74.4<
	28			100.7	557.0< 139.2<
	38	17	165 41.2<	178.7	
	44	17	48<	102.8	78.48 72.4 75.4<
	55			175.2	
18	13			99.0	553.1 138.3<
	27	19	257 4.2<	177.3	9
19	42	19	11<	101.8	78.3 73.2 75.8<
	55			175.0	

Jan. 21, 1894

L. E.

20	27		212	128.0	552.0
	41	20	53.0^s	148.0	138.0^s
	59	21	0^s	128.0	20.0 20.0
.21	25			148.0	20.0^s

Seeing fairly good, sky somewhat hazy growing a little clearer towards last of eclipse.

Chr. error = -7.5^s

9	28	52.7	9	29	~~00.0~~ 0.2^s5
	29	52.7		30	00.0
9	31	51.5	6	32	00.1
	32	51.3		33	00.1

o Ceti		M. obs.
2	14	$-3^{\circ}.4$
6	35	
+ 4	21	

Too much cloud and haze, ~~no~~ star visible at this altitude.

Jan. 24, 1894

Phot. Meas. of Bright Double Stars W. obs.

528 χ ✻ Tauri W. obs.

4 15 +25.2°

7 22

+3 .7

Stars rather faint

Index above

10 30 293.1

340.5 47.4^

clouds thicker

296.0

341.0 45.0^

92.4^ + ~~3.9~~ ^

Index below − 1.85

30.5

70.1 39.6^ ~~2.14~~

clouds thicker

33.2

66.0 32.8^ − 2.43

72.4^ ~~+4.4~~ ^

30.2

64.2 34.0^

31.7

63.2 31.5^ 2.66

65.5^ ~~+4.7~~ ^

Jan. 31, 1894

Index above

30~~7.0~~ 4.3		
333.0	28.7 ^	
303.0		
334.3	31.2 ^	~~2.64~~
	60.0 ^	~~+4.9~~ ^
302.8		2.86
334.7	31.9 ^	
301.5		
334.0	3~~1~~2.5 ^	
	6~~1~~4.4	+4.7 ^
		2.70

Index below

32.2		
65.8	33.6 ^	
33.0		
63.0	30.0 ^	2.73
	63.6 ^	~~+4.7~~ ^

10 52 :

15 7

Obs. difficult, clouds quite thick.

Posted to here

Feb. 2, 1894

o Ceti N. obs.

2 14 -3°.4
4 29
+ 2 15

Left and above
7 38 345.8
111.3 125.5 ✓ʌ
333.0
121.0 148.0 ✓ʌ
273.5 ✓ʌ ~~0.1~~ ✓
86.5 -2.01

Right and below
164.1
210.6 146.5 ✓ʌ
73.3
203.0 129.7 ✓ʌ
276.2 ✓ʌ ~~-0.1~~ ✓
83.8 -2.08

71.7
203.7 132.0 ✓ʌ
65.3
209.1 143.8 ✓ʌ
275.8 ✓ʌ ~~-0.1~~ ✓
84.2 -2.07

Left and above
155.0
300.5 145.5 ✓ʌ
161.8
294.0 132.2 ✓ʌ
277.7 ✓ʌ [illegible] ✓
83.3 -2.13

Feb. 2, 1894

162.1
293.0 130.9
153.0
301.2 148.2
279.1 -~~0.0~~
80.9 -2.17

Right and below
244.7
31.6 146.9
254.9
clouds
2 7
2~~7.8~~ 12~~8~~.x
7 8
27~~4~~.~~8~~
4 7
785.3 ~~+0.0~~
2.04

n 2 v, v 4 0, in finder
8 14 C n 2.5 v, v 3 0, in large tel.

7 57

Observations taken through some light cloud and haze, too much clouds for absolute estimate.

Exclusive Photo Scale N. obs.

R Mrs. Minn.

16 24 +72°.9
5 38
10 56
12 04
4

Haze too thick to do anything on this variable

Feb. 2, 1894
Extension of Phot. Scale | Slate h and 12 magn. Stars
R. Mrs. Mag. N. obs.

10	32	+69°.8
5	57	
4	35	
12		
+7	25	

Left and above

22~~9.2~~ brighter dis.

237.8	16.7 ✓	
219.3		
239.8	20.5 ✓	
	37.2 ✓	+5.9 ✓

Right and below

131.0		
147.0	16.0 ✓	
128.3		
148.9	26.6 ✓	
	36.6 ✓	+6.0 ✓
128.0		
148.8	20.8 ✓	
129.9		
148.0	18.1 ✓	
	38.9 ✓	+5.8 ✓

Feb. 2, 1894

Left and above

42.3		
56.1	13.8 ✓	
39.1		
58.3	19.2 ✓	
	33.0 ✓	+6.2 ✓
39.0		
58.6	19.6 ✓	
40.8		
57.0	16.2 ✓	
	35.8 ✓	+6.0 ✓

Right and below

310.6		
327.2	16.6 ✓	
308.2		
328.1	19.9 ✓	
	36.5 ✓	+6.0 ✓

Meas. somewhat difficult on account of rather high altitude.

~~The two stars~~ The previous sets represent a phot. comp. between comp. star and faint star; the faint star foll. star by $4^s.8$ and 2' south of it. Faint star is about 12 magn.

Feb. 2, 1894

Rel. est. of 12 magn. star and stars s and t

s 3 ~~(12 magn.)~~, (12 magn.) 3 t

Extension of Phot. scale Mobs.

R Mrs. Mina

16 24 +72°.9
7 21
9 2
12
+2 57

Left and above

199.0 < brtr. dis.
258.5 59.5^{r}
197.0
258.0 $\frac{61.0^{r}}{120.5^{r}}$ $+3.2^{r}$

Right and below

286.0 64.1^{r}
350.1
290.0
347.7 $\frac{57.7^{r}}{121.8^{r}}$ $+3.2^{r}$

Feb. 2, 1894

2 89.8
58.7^{r}
3 48.5

2 88.5
60.5^{r}
3 49.0
119.2^{r} $+3.2^{r}$

Left and above

15.9
63.9^{r}
79.8

20.3
57.2^{r}
77.5
121.1^{r} $+3.2^{r}$

19.3
57.9^{r}
77.2

19.3
57.2^{r}
76.5
115.1^{r} $+3.3^{r}$

Right and below

104.0
64.8^{r}
168.8

109.0
59.9^{r}
168.9
124.7^{r} $+3.5^{r}$

Troubled by increasing haze. images
become pretty faint during meas.
settings especially at last difficult

Posted to here.

Feb. 5, 1894

o Ceti — M. obs.

2 14 $-3\overset{\circ}{.}4$
4 45
+2 31

Left and above

7 38 164.0
293.1 129.1 ✓^
152.0
$30\overset{1}{\cancel{3}}.\overset{3}{\cancel{2}}$ $1\cancel{8}9.\overset{3}{\cancel{2}}$ ✓^
278.4 ✓^ ~~-0.1~~ ✓
81.6 -2.15

Right and below

245.2
$32.\overset{9}{\cancel{4}}$ $147.\overset{6}{\cancel{7}}$ ✓^
254.5
23.9 129.4 ✓^
277.0 ✓^ ~~-0.1~~ ✓
830 -2.11
252.0
24.2 132.2 ✓^
244.1
32.2 148.1 ✓^
280.3 ✓^ ~~-0.2~~ ✓

Left and above 79.7 -2.20

332.8
121.7 148.9 ✓^
$34\overset{0}{\cancel{1}}.0$
116.0 136.0 ✓^
284.9 ✓^ -0.3 ✓
75.1 -2.34

Feb. 5, 1894

341.7
115.5 133.8 ✓^
334.1
12$\overset{1}{2}$.$\overset{3}{7}$ 147.2 ✓^
281.0 ✓^ ~~-0.2~~ ✓
79.0 -2.22

Right and below
65.1
211.7 146.6 ✓^
70.6
8 0 205.7 135.1 ✓^
281.7 ✓^ -0.2 ✓
78.3 -2.25

c n 1 v, v 4 0, in finder ✓
8 11 m 4 v, v 1 n, in large tel. ✓
Est. 78

Extension of Phot. Scale N. obs.

R Ursae Majoris N. obs.

10	32	+69°.8
5	45	
4	47	
12	00	
+7	13	

Feb 5, 1894

Right and below

~~Left and above~~

8 42 130.5 sbtr dis.

148.2 17.8 ✓^

128.9

148.7 19.8 ✓^

37.6 ✓^ +5.9 ✓

Left and above

~~40.0~~

~~57.9~~

41.0

56.8 15.8 ✓^

39.0

58.7 19.7 ✓^

35.5 ✓^ +6.0 ✓

39.3

~~57.8~~ 58.6 19.3 ✓^

41.0.

58.0 17.0 ✓^

36.3 ✓^ +6.0 ✓

Right and below

311.8

327.6 15.8 ✓^

309.7

328.6 18.9 ✓^

34.7 ✓^ +6.1 ✓

Feb. 5, 1894

309.7
329.4 19.7 ✓^
311.0
327.8 16.8 ✓^
36.5 ✓^ + 6.0 ✓

Left and above
40.9
57.0 16.1 ✓^
40.0
58.4 18.4 ✓^
34.5 ✓^ + 6.1 ✓

~~Seeing fairly good~~, images a little blurry and hazy, seeing pretty good, but not the very best.
9 12 s 3 12 magn., 12 magn. 3 t, in large tel., too faint for finder

Rel. est. of faint star in conn. with ext. of Phot. Scale N. obs.
δ Ursae Majoris N. obs.

12 36 + 61°.9
7 5
5 31
12 00
+ 6 29

9 58 q 2 faint star, faint star 2.5 r

Feb. 5, 1894

R Ursae Minoris   M. obs.

16	34	+72°.9
7	20	
9	14	
12	00	
+ 2	46	

~~k 1.5 faint star, faint star~~

h 2.5 faint star, faint star 2 k

est. ~~somewhat~~ rather difficult from prox. of bright star

Index below

288.0 < btr. dis.		
348.7	60.7 ✓^	
289.6		
346.4	56.8 ✓^	
	117.5 ✓^	+3.2 ✓

Index above

200.0		
255.7	55.7 ✓^	
198.0		
258.0	60.0 ✓^	
	115.7 ✓^	+3.3 ✓
197.9		
256.9	59.0 ✓^	
201.2		
257.0	55.8 ✓^	
	114.8 ✓^	+3.3 ✓

Feb. 5, 1894

Index below

	289.0		
	346.1	57.1 ✓^	
	289.7		
	345.0	55.3 ✓^	
		112.4 ✓^	+3.4 ✓
	288.0		
	345.9	57.9 ✓^	
	287.8		
	348.9	61.1 ✓^	
		119.0 ✓^	+3.2 ✓

Index above

	198.0		
	257.0	59.0 ✓^	
	197.7		
	257.0	59.3 ✓^	
		118.3 ✓^	+3.2 ✓

D.M. +62° 596 M. obs.

3	30	+62°.8	
7	56		
+4	26		

Index to right

	346.5		
10 45	109.1	< comp. star dis. 122.6 ✓^	
	354.9		
	103.0	108.1 ✓^	−0.99
		230.7 ✓^	~~+ [illegible]~~ ✓
		129.3	

Feb. 5, 1894

Index to left

83.2		
194.7	111.5 ✓	
74.0		
203.1	129.1 ✓	−1.21
	240.6 ✓	~~+0.8~~ ✓
	119.4	
74.7		
203.0	128.3 ✓	
84.0		
194.2	110.2 ✓	
	238.5 ✓	~~+1.1~~ ✓
	121.3	−1.16

Index to right

17~~8.4~~ 6.7		
280.1	103.4 ✓	
166.8		
291.2	124.4 ✓	
	227.8 ✓	~~+1.1~~ ✓
167.0	132.2	−0.93
290.7	123.7 ✓	
177.6		
278.6	101.0 ✓	
	224.7 ✓	~~+1.1~~ ✓
	135.3	−0.87

Index to left

267.2		
13.0	105.8 ✓	
258.2		
27.1	12~~3.8~~ 2.9 ✓	
	228.7 ✓	~~+1.0~~ ✓
	131.3	−0.95

11 6
10 56.5

Posted to here

Feb. 6, 1894

0 beta' u. obs.

2 14 − 3°.4
. 4 48
+ 2 34

~~Left and above~~
Right and below

7 35 252.3
24.9 132.6'^
243.0
33.5 150.5'^
283.1'^ ~~−0.3'~~
76.9 −2.29

Left and above
333.1
122.8 149.7'^
340.5
116.0 135.5'^
285.2'^ ~~−0.4'~~
74.8 −2.35

340.3
116.2 135.9'^
333.0
123.0 150.0'^
285.9'^ ~~−0.4'~~
74.1 −2.38

Right and below
63.6
213.8 150.2'^
71.8
206.0 134.2'^
284.4'^ ~~−0.3'~~
75.6 −2.33

Feb. 6, 1894

71.8
205.3 133.5″
63.2
213.8 150.6″

284.1″ -2.2'
75.9 -2.32

Left and above

153.2
303.0 149.8″
160.2
7 51 297.8 137.6″

287.4″ ~~-0.1'~~
72.6 -2.42

m 4 v, v 1.5 n, in finder ✓
7 57 c m 3 v, v 2.5 n, in large tel. ✓
Color 6

Extension of Phot. Scale U. obs.

I Cass. U. obs.

0 19 +55.°9
5 23

+5 4

Phot. Meas. of comp. stars k c and q,

Feb. 6, 1894

Index above

8 13 309.8 < btr. dis.

327.5 17.7‘^

310.8

326.5 15.7‘^

33.4‘^ +6.2‘

Index below.

41.5

58.0 16.5‘^

40.3

58.2 17.9‘^

34.4‘^ +6.1‘

40.8

58.7 17.9‘^

40.8

57.8 17.0‘^

34.9‘^ +6.1‘

Index above

131.0

145.8 14.8‘^

130.0

147.1 17.1‘^

31.9‘^ +6.3‘

131.1

146.0 14.9‘^

130.8

146.7 15.9‘^

30.8‘^ +6.3‘

Feb. 6, 1894

Index below

221.0

237.0   16.0ʿ^

220.0

8 32   237.0   17.0ʿ^

33.0ʿ^   +6.2ʿ

Extension of Phot. Scale   W. obs.

δ Cass.   W. obs.

1	10	+ 72°.1
6	33	
+ 5	23	

Phot. meas. of comp. star b and faint star

9.3 (faint star), (faint star) 1.5 r

Faint star foll. b 16.5 secs. and is 0.5' south of it.

Index below

9 36   44.0

54.0   10.0ʿ^

43.3

54.0   10.7ʿ^

20.7ʿ^   + 7.2ʿ

Feb. 6, 1894

Index above

132.0		
144.3	12.3	
133.0		
143.1	10.1	
	22.4	+7.0
132.2		
144.1	11.9	
131.8		
144.6	12.8	
	24.7	+6.8

Index below

222.9		
2~~2~~34.2	11.3	
222.7		
234.0	11.3	
	22.6	+7.0
223.2		
234.0	10.8	
222.7		
234.2	11.5	
	2~~1~~2.3	~~7.1~~ 7.1 ✓

Index above

312.2		
324.3	12.1	
312.7		
9 57 323.4	10.7	
	22.8	+7.0

Feb. 6, 1894

δ Cass. thought to be seen

s = y.

Est. 15.0

Chron. error = $-8\overset{s}{.}3$

	B+6 1182			B 394	
10	13	50.9	10	~~14~~ 13	~~00.0~~ 59.2
	14	50.8		15	00.0
				F 1327	
10	17	4.9	7	41	00.1
	18	4.7		42	00.1

Reap. of Disp. I. Phot. K. N. obs. Janssen
Comp. with first set. foll. = Set. ~~VI~~. IV.

Chron. error = $-8\overset{s}{.}5 \pm$

10	28	20	28	29	Prob. Seen
		33		42	Seen
		40		49	122.0
		52	29	1	155.0
	29	4		13	112.0
		14		23	167.9
		26		35	105.0
		35		44	178.0
		46		55	97.0
		53	30	~~6~~2	179.8
	30	1		10	92.0
		11		20	185.8
		20		29	90.8
		26		35	187.8

Feb. 6. 1894

30	25	30	44<	87.1	
	44		53<	1.86.2	
	55	31	4<	86.0	
31	3		12<	190.9	
	11		20<	87.4	
	21		30<	189.4	
	30		39<	837	
	41		50<	190.5	<
	49			85.7	
	58		253<	191.2	559.6< 139.9<
32	8	32	3.2<	91.0	1
		32	12<		105.5<
	18			191.7	100.7< 103.1<
	30			83.7	
	43		190<	193.0	552.8< 138.2<
	54	32	47.5<	84.2	2
		32	57<		109.3<
33	3			191.9	107.7< 108.5<
	12			84.7	
	24		111<	192.8	550.8< 137.7<
	33	33	27.8<	83.2	3
		33	37<		108.1<
	42			190.1	106.9< 107.5<
	50			85.7	
	59		255<	194.8	555.3< 138.8<
34	8	34	3.8<	84.8	4
		34	13<		106.1<
	18			193.0	108.2< 107.2<
	27			86.1	
	34		160<	190.3	553.5< 138.4<
	43	34	40.0<	84.8	
					104.2<
	56	34	49<	192.3	107.5< 105.8<

Feb. 6. 1894

35	6			85.1		
	15		79	194.0	6	555.9 139.0
	20	35	19.8	84.7		
	35	35	29	192.1	108.9 107.4 108.2	
36	37			84.0		555.0 138.8
	46		201	194.0		
	54	36	50.2	84.0		
37	4	36	59	193.0	110.0 109.0 109.5	
	14			84.8		553.4 138.4
	25		128	192.4		
	35	37	32.0	85.0		
	~~45~~ 54	37	41.	191.2	107.6 106.2 106.9	
			L.Q.			
38	16			124.9		
	33		150	154.0		557.9 139.5
	43	38	37.5	125.8		
	58	38	47	153.2	29.1 27.4 28.2	

Seeing fairly good, settings made a little more slowly than usual, from the fact that the driving clock had broken down. Settings had to be made with one hand, while the tel. was moved with the other.

It was noticed during eclipse that the ~~reversing~~ apparatus reversing phot. moved rather easily, but as setting circle moved very easily and care was exercised, it is thought that phot. did not rotate during settings.

Posted to here

Feb. 6, 1894

		B+G 1182			B 394	
chron. error = $-9^{s}.0$	10	54	50.2	10	54 ~~55~~	59.2 ~~00.0~~
		55	50.2		56	00.0
					F 1327	
	10	56	57.7	8	20	00.1
		57	57.5		22	00.1

Feb. 7. 189~~3~~4

		B. + C. 1182.				B. 394	
Chron. error = − 10.1s‹	11	20	49.0		11	~~21~~ 20	~~0.0~~ 59.1‹
		21	49.0			22	0.0

Reap. Jup. II. Pliot R. W. obs. Clymer rec.
Comp. with 1st sat. preceding = sat I.

Chron. error = −10.5s‹	11h.	45	54.5	false alarm.		
		46	45.5	46	56‹ seen.	
		47	6.5	47	17‹	127.0
			18.5		29‹	157.2
			30.0		41‹	119.0
			44.0		55‹	165.0
			54.5	48	5‹	109.7
		48	6.0		17‹	168.0
			13.5		24‹	109.0
			20.0		31‹	167.0 <
			30.0		41‹	105.3
			38.0		49‹	169.0
			44.5		55‹	105.8
			53.0	49	4‹	168.2
		49	3.5		14‹	106.3
			12.0		23‹	169.0
			20.0		31‹	108.7
			29.0		40‹	174.0

Feb. 7. 1894

	37.0	49	48^{s}	103.3		
	46.5		57^{s}	174.2		
	58.0	50	9^{s}	101.5		
50	5.0		16^{s}	175.0		^{s}
	11.5		108.0^{s}	102.9		552.2^{s}
	21.0	50	27.0^{s}	176.6	1	138.0^{s}
	32.0	50	38^{s}	98.2		73.7^{s} 76.3^{s}
	43.5			174.5		75.0^{s}
	52.5			95.0		552.0^{s}
51	2.0		220^{s}	179.8	2	138.0^{s}
	9.0	51	5.5^{s}	98.0		84.8^{s}
		51	16^{s}			81.2^{s}
	18.5			179.2		83.0^{s}
	31.0			100.9	3	560.0^{s} 140.0^{s}
	40.5		175.5^{s}	179.9		
	47.0	51	43.9^{s}	101.5		79.0^{s}
		51	55^{s}			76.2^{s}
	57.0			177.7		77.6^{s}
52	8.5			102.0		560.3^{s} 140.1^{s}
	17.0		94.0^{s}	180.2	4	
	26.5	52	23.5^{s}	101.0		78.2^{s}
		52	34^{s}			76.1^{s}
	42.0			177.1		77.2^{s}
	48			100.9		561.1^{s} 140.3^{s}
	57.0		254.5^{s}	181.9		
53	6.5	53	3.6^{s}	99.7	5	81.0^{s}
		53	14^{s}			78.9^{s}
	23.0			178.6		80.0^{s}

Feb. 7, 1894

	32.0			98.8	552.9
	42.0		183.0	178.0	138.2
	49.5	53	457.8	99.1	6 76.2
		53	57		80.9
	59.5			180.0	78.6
54	13.5			101.4	550.7
	21.0		102.0	175.2	137.7
	30.0	54	25.5	97.1	7 73.8
		54	36		79.9
	37.5			177.0	76.8
	45.0			98.7	557.2
55	13.0		35.5	177.0	139.3
	18.0	55	8.9	101.5	8 78.3
		55	20		78.5
	29.5			180.0	78.4

Lim Vis

11	56	1.0			117.5	
		15.5			164.7	557.4
		~~28.5~~			~~107.0~~	139.4
	59	22.0		441.5	115.0	47.2
			57	50.4		45.2
		43.0	58	1	160.2	46.2

Jup. low; seeing fairly good considering low altitude, Sky fairly clear until lim. of vis. then troubled more by cloud. settings necessarily made rather slowly on account of low altitude & Sat rather faint & not very well defined.

Feb. 7. 1894.

		B. & C. 1182.			B. 394	
Chron. error = − $10^{s}.9$ c	12	10	48.2	12	~~11~~ 10	~~0.0~~ 57.1 c
		11	48.2		12	0.0

Feb. 8, 1894

Index below

8	37	39.9		
		57.~~4~~0	17.~~5~~1 ✓ˆ	
		41.7		
		56.9	15.2 ✓ˆ	
			32.3 ✓ˆ	+6.2 ✓

Index above

~~139.8~~		
~~146.2~~	~~6.4~~	
130.6		
147.2	16.6 ✓ˆ	
131.8		
147.0	15.2 ✓ˆ	
	31.8 ✓ˆ	+6.3 ✓
131.0		
146.1	15.1 ✓ˆ	
130.0		
147.3	17.3 ✓ˆ	
	32.4 ✓ˆ	+6.2 ✓

Index below

220.0		
237.6	17.6 ✓ˆ	
clouds		
221.1		
236.6	15.5 ✓ˆ	
	33.1 ✓ˆ	+6.2 ✓

Feb. 8, 1894

220.7

clouds

236.2 15.5 ✓

219.2

237.5 18.3 ✓

33.8 ✓ +6.1 ✓

Index above

310.9

327.0 16.1 ✓

310.1

9 0 327.3 17.2 ✓

33.3 ✓ +6.2 ✓

Extension of Phot Scale N. obs.

δ Cassiop N. obs.

1 · 10 +72°.1

6 39

+5 29

Stopped by clouds

Brightest and below

223.0

234.5 11.5

clouds

Too cloudy for faint Star; abandoned.

Feb. 8, 1894

Extension of Phot. Scale N. obs.

R. Hrs. Min. N. obs.

16	34	+72°.9
7	32	
8	57	
12	00	
+3	3	

Index above

197.8		
257.1	59.3 ✓	
198.0		
258.0	60.0 ✓	
	119.3 ✓	+3.2 ✓

Index below.

289.4		
345.9	56.5 ✓	
289.5		
345.2	55.7 ✓	
	112.2 ✓	+3.4 ✓
288.2		
348.5	60.3 ✓	
290.0		
346.0	56.0 ✓	
	116.3 ✓	+3.3 ✓

Feb. 8, 1894

Index above

198.3		
256.4	58.1 ✓	
201.0		
257.1	56.1 ✓	
	114.2 ✓	+3.3 ✓
198.7		
258.1	59.4 ✓	
199.8		
255.6	55.8 ✓	
	115.2 ✓	+3.3 ✓

Index below

287.5		
348.5	61.0 ✓	
288.1		
345.2	57.1 ✓	
	118.1 ✓	+3.2 ✓

h 2 faint star, faint star 2 k

Extension of Phot. Scale   M obs

R Urs. Maj.   M obs

10.	32	+69°.8
8	8	
2	24	
12	00	
+9	36	

Feb. 8, 1894

Left and above

41.0		
57.4	16.4 ✓	
40.4		
58.5	18.1 ✓	
	34.5 ✓	+6.1 ✓

Right and below

309.4		
329.8	20.4 ✓	
311.1		
327.9	16.8 ✓	
	37.2 ✓	+5.9 ✓
311.9		
327.5	15.6 ✓	
310.0		
328.5	18.5 ✓	
	34.1 ✓	+6.1 ✓

Left and above

39.9		
58.7	18.8 ✓	
41.2		
57.9	16.7 ✓	
	35.5 ✓	+6.0 ✓
39.3		
58.4	19.1 ✓	
41.7		
56.5	14.8 ✓	
	33.9 ✓	+6.1 ✓

Feb. 8, 1894

Right and below.

130.0		
148.7	18.7^{vr}	
129.3		
148.5	19.2^{vr}	
	37.9^{vr}	+5.9^{v}

s 2.5 faint star, faint star 2.5 t

Posted to here.

Feb. 15. 1893.

$7^h\ 30^m$ Showed some signs of clearing. Came to Observatory, but all clouded up again.

$8^h\ 30^m$ Became rather clear. Came to Observatory again but dome frozen, and could not be moved. Worked on it, some three quarters of an hour, but still it could not be moved. Some clouds. again.

Feb. 16, 1894

S Cygni   M. obs.

20 . 8   +57°.1
29 40
+ 9 32

Not seen, Moon too bright.

R Cass.   M. obs.

23 51   +49°.7
29 51
+ 6 0

7. 57 β 52 R, R 3 t in large tel.
Est. 11.2   Too faint for finder

o Ceti   M. obs.

2 . 14   −3°.4
6 12
+ 3 58

Feb. 16, 1894

Left and above

8 17 102.0 < comp. star dir.

267.2 165.2 ✓^

105.2

265.3 160.1 ✓^

325.3 ✓^ ~~-2.0~~ ✓

34.7 -4.09

Right and below

195.6

355.0 159.4 ✓^

193.0

357.2 164.3 ✓^

323.7 ✓^ ~~-2.0~~ ✓

36.3 -3.98

193.0

357.0 164.0 ✓^

195.5

355.0 159.5 ✓^

323.5 ✓^ ~~-2.0~~ ✓

36.5 -3.97

Left and above

285.0

84.7 159.7 ✓^

282.8

87.7 164.9 ✓^

324.6 ✓^ ~~-3.0~~ ✓

35.4 -4.04

Feb 16, 1894

282.0
87.1 165.1 ✓
285.4
84.5 159.1 ✓
324.2 ✓ −~~2.0~~ ✓
35.8 −4.01

Bright and below

15.0
17$\overset{5}{\cancel{4}}$.0 1$\overset{60}{\cancel{59}}$.0 ✓
12.9
8 36 177.0 164.1 ✓ −~~2.0~~ ✓
324.1 ✓ −4.01
35.9

Moon too bright for relative estimate

~~S~~ Circumpolar Variables

S Boötis No obs.

1$\overset{6}{\cancel{2}}$ 8 +57°2
6 47
~~+4~~ 35
9 25
1$\overset{9}{2}$
2 35

Moon too bright; abandoned

Feb. 16, 1894

DM Wedge Zone +19° W. obs.

Series 16^{4}8 (Special)

4 32 +20.0

7 32

+3 00

/

8	2	720	2.60		
			2.70		
			2.75	8.05	3.49
		722	2.71		
			2.80		
			2.57	8.08	3.50
		728	3.49		
			3.40		
			3.37	10.26	4.44
		702	3.20		
			3.00		
			3.09	9.29	4.02
		730	2.71	Foll. and brighter of two	
			2.83		
			2.67	8.21	3.55

Feb 16, 1894

748	2.90		
	2,95		
	2,84	8,69	3,76
755	4.51		
	4,37		
	4.40	13,28	5,75
762	3.65		
	3.77		
	3.58	11.00	4.76
7.49	2,70		
	2,57		
	2.83	8,10	3.51
764	4.00		
	4.11		
	4.18	12.29	5,32
767	3.71		
	3.75		
	3.78	11.24	4.87
754	4.00		
	3.87		
	4.28	12.15	5.26

Feb. 16, 1894

	779	3.61		
		3,55		
		3.70	10.86	4.70
	784	3,25		
		3,30		
		3,17	9.72	4.21
	783	3,20		
		3.~~2~~39		
		3,10	9.69	4.20
	790	3,00		
		3,20		
		2.85	9,05	3.92
	793	4,01		
		4,11		
		4.18	12,~~29~~30	5.33
	787	2.90		
		2,95		
		2.78	8.~~8~~63	3.74
9 25	800	4.65		
		4,60		
		4,51	13.76	5.96

Feb. 16. 1894

DM 62° 596   N. obs.

3   30   +62.8

8   46

+5   16

Index to right

10 48   122.8 comp. dis.

245.1   122.3 ✓^

130.1

242.8   112.7 ✓^   −1.08

235.0 ✓^   + ~~0.9~~ ✓

125.0

Index to left

218.0

333.8   115.8 ✓^

213.0

336.9   123.9 ✓^   −1.19

229.7 ✓^   + ~~0.8~~ ✓

213.4   120.3

326.3   122.9 ✓^

217.9

333.0   115.1 ✓^

238.0 ✓^   + ~~0.9~~ ✓

122.0   −1.15

Index to right

309.0

62.8   113.8 ✓^

304.8

65.0   120.2 ✓^

234.0 ✓^   + [illegible] ✓

126.0   −1.06

Feb. 16, 1894

306.1
65.0 118.9 ✓
309.3
62.5 113.2 ✓
232.1 ✓ + ~~1.1~~ ✓
127.9 -1.02

Index to left

37.3
153.7 116.4 ✓
34.7
157.5 122.8 ✓
239.2 ✓ + ~~0.8~~ ✓
120.8 -1.18

11 6
10 57.0

Posted to here

Feb. 23, 1894

U Cephei   U. obs.

5   42   +81°.1
     18
+6   00

1   5   +81°.1
5   5.1
+4   46

o Ceti   U. obs.

2   14   −3°.4
5   55
+3   41

Right and below

~~8~~7 42

12.6
178.0   165.4^
9.3
181.5   172.2^
         337.6^   ~~5.04~~ ✓
         ~~22.4~~ ~~11.2~~   ~~2.1~~
~~Left and above~~ 22.4   −5.04
~~99.2~~
~~270.0~~   ~~170.8~~
~~100.9~~
~~268.4~~   ~~167.5~~
         338.3   −3.1
         21.7   −5.11

Feb. 23, 1894

~~181.8~~
~~268.5~~ ~~166.7~~
~~98.8~~
~~270.7~~ ~~171.9~~
~~338.6~~ ~~-3.1~~
~~Right and below~~
~~190.0~~
~~360.3~~ ~~170.3~~

Left and above
279.0
~~7h 48m~~ 91.0 172.0^
282.0
88.2 166.2^ ~~5.10~~
338.2^ ~~-6.11~~ ✓
~~21.8~~ ~~10.94~~
281.0
~~50~~ 88.3 1673^ 21.8 -5.10
279.2
90.3 171.1^ ~~5.12~~
338.4^ ~~-3.14~~ ✓
~~21.6~~ ~~10.80~~
Right and below 21.6 -5.12
9.4
180.8 171.4^
~~52~~ 11.0
178.5 167.5^ ~~5.11~~
338.9^ ~~-3.12~~ ✓
~~21.1~~ ~~10.55~~
21.1 - 5.17

Feb 23, 1894

12.0
178.8   166.8^
~~7 5 4~~   9.0
180.9   171.9^   ~~5.15~~
338.7^   ~~21.3~~   ~~+0.65~~   ~~-3.2~~ ✓
Left and above   21.3   - 5.15
98.9
268.8   169.9^
101.0
268.5   167.5^   ~~5.02~~
~~8 5 6~~   337.4^   ~~22.6~~   ~~11.30~~   ~~-3.0~~ ✓
22.6   - 5.02

U Cephei   U obs.
Comp. star = +21° 26
0   ~~30~~ 42   + 82.9
6   40
+6   60
Right and above.
303.0 < ~~Ass.~~ Comp. star dis.
66.8   123.8<^
8 28 55   299.5
8 28.9<^   71.0   13 ~~4~~1.5<^
29.1<^   255.3<^   ~~0.5~~
104.7<^
52.35<^   ~~1.54~~
3.50 ✓

Feb. 23, 1894

Left and below

		34.0		
8	30 30	156.0	122.0	
8	30.5	37.2		
	30.7	153.5	116.3	
			238.3 121.7 60.85	~~0.8~~ ~~1.16~~ 3.16 ✓
		34.7		
	32 13	154.2	119.5	
	32.2	35.2		
	32.4	155.1	119.9	
			239.4 120.6 60.30	~~0.8~~ ~~1.18~~ 3.12 ✓

Right and above

	119.7		
33 45	248.1	128.4	
33.8	125.5		
34.0	244.1	118.6	
		247.0 113.0 56.50	~~0.7~~ ~~1.35~~ 3.35 ✓
	125.8		
35 20	242.2	116.4	
35.3	120.0		
35.5	250.3	130.3	
		246.7 113.3 56.65	~~0.7~~ ~~1.34~~ 3.34 ✓

Left and below

	213.6		
37 20	337.3	123.7	
37.3	215.1		
37.5	333.7	118.6	
		242.3 117.7 58.85	~~0.8~~ ~~1.24~~ 3.24 ✓

Feb. 23, 1894

Right and above.

~~304.8~~

8 41 45 ~~66.6~~ ~~121.8~~

8 41.8 ~~300.3~~

42.0 ~~70.3~~ ~~130.0~~

~~251.8~~ ~~0.5~~ 176

108.2 54.10

B + C 1182 B 394

$-9^{s}.7$ 8 49 51.1 8 50 ~~0.1.0~~ 0.8

50 51.1 51 0.0

U Cephei again.

B 394 is $0^{s}.8$ slow

B. + C. 1182. B. 394

$-9^{s}.8$ 9 23 51.0 9 24 ~~0.0~~ 0.8

24 51.0 25 0.0

Comp with +81° 25.

Right and above

19915

9 36 16 336.1 136.6

9 36.2 203.7

36.4 335.0 131.6

268.2 ~~0.1~~ ~~187~~ 3.87

91.8 45.90

Left and below

296.1

63.0 126.9

39 5 292.5

39.1 64.1 131.6

39.3 258.5 ~~0.4~~ ~~1.6.2~~ 3.62

101.5 50.75

Feb. 23, 1894

	290.8		
9 40 15	61.0	130.2	
9 40.2	292.9		
40.4	62.8	130.9	3.68
		261.1	~~0.3~~ ~~1.68~~
		98.9 49.45	

Right and above

	20.3		
	154.2	133.9	
42 17	16.9		
42.1	154.5	137.6	3.96
42.3		271.5	~~0.6~~ ~~1.96~~
		88.5 44.25	
	18.0		
43 13	156.7	138.7	
43.2	19.7		
43.4	154.2	134.5	4.00
		273.2	~~0.0~~ ~~2.00~~
		86.8 43.40	

Left and below

	114.5		
44 45	240.6	126.1	
44.8	110.8		
45.0	242.2	131.4	3.60
		257.5	~~0.4~~ ~~1.60~~
		102.5 51.25	
	110.9		
46 4	242.2	131.3	
46.1	112.5		
46.3	242.9	130.4	3.70
		261.7	~~0.3~~ ~~1.70~~
		98.73 49.365	

Feb 23, 1894

Right and above

	197.2		
9 47 35	338.0	140.7	
9 47.6	198.0		
47.8	338.9	140.9	4.24
		281.6	~~−0.2~~ ~~2.24~~
		78.4 39.20	
	198.0		
49 8	339.0	141.0	
49.1	198.0		
49.3	338.0	140.0	4.22
		281.0	−0.2 ~~2.22~~
		79.0 39.50	

Left and below

	292.2		
50 42	62.5	130.3	
50.7	290.2		
50.9	64.4	134.2	3.77
		264.5	~~0.2~~ ~~1.77~~
		95.5 47.75	
	290.0		
51 52	66.7	136.7	
51.9	289.0		
52.1	65.0	136.0	3.97
		272.7	~~0.0~~ ~~1.97~~
		87.3 43.65	

Right and above

	19.0		
53 33	158.0	139.0	
53.6	15.0		
53.8	159.5	144.5	4.30
		283.5	~~−1.2~~ ~~2.30~~
		76.5 38.25	

Feb. 23, 1894

17.9
9 54 50 158.8 140.9
9 54.8 18.2
55.0 158.7 140.5 4.24
281.4 ~~-0.2~~ ~~2.24~~
78.6 39.30

Left and below

110.3
10 1 40 245.0 138.7
10 1.7 107.5
1.9 246.5 129.0 4.02
273.7 ~~0.0~~ ~~2.02~~
86.3 43.15

109.2
2 57 246.5 137.3
3.0 109.5
3.2 244.2 134.7 3.97
272.0 ~~0.0~~ ~~1.97~~
88.0 44.00

Right and above

~~111.1~~
197.0
6 12 339.7 142.7
6.2 194.0
6.4 342.0 148.0 4.53
290.7 -0.5 ~~2.53~~
69.3 34.65

196.0
8 25 341.7 145.7
8.4 198.5
8.6 340.1 141.6 4.42
287.3 ~~-0.4~~ ~~2.42~~
72.7 36.35

Feb. 23, 1894.

Left and below

		288.9			
10	9 48	68.0	139.1		
10	9.8	288.0			
	10.0	68.9	140.9		K.19
			280.0	~~-0.2~~	~~2.19~~
			80.0 40.00		
		288.0			
	11 46	65.5	137.5		
	11.3	287.0			
	11.5	68.1	141.1		K.15
			278.6	~~-0.2~~	~~2.15~~
			81.4 40.70		

Right and above

		15.2			
	13 31	161.2	146.0		
	13.5	14.0			
	13.7	160.1	146.1		K.58
			292.1	~~-0.6~~	~~2.58~~
			67.9 33.95		
		14.7			
	14 50	161.3	146.6		
	14.8	12.7			
	15.00	161.0	148.3		K.62
			294.9	~~-0.7~~	~~2.62~~
			65.1 32.55		

Left and below

		107.8			
	16 34	247.2	139.4		
	16.6	104.2			
	16.8	250.1	145.9		K.36
			285.3	~~-0.1~~	~~2.36~~
			74.7 37.35		

Feb. 23. 1894

	104.5		
10 18 00	253.0	148.5<^	
10 18.0<^	106.0		
18.2<^	249.2	143.2<^	4.56✓
		291.7<^	~~−0.6~~ ~~2.56~~<
		68.3<^ 34.15<^	

Right and above

	14.0		
21 5	162.4	148.4<^	
21.1<^	13.0		
21.3<^	161.2	148.3<^	4.74✓
		296.7<^	~~−0.7~~ ~~2.74~~<
		63.3<^ 31.65<^	
	14.0		
22 25	159.0	145.0<^	
22.4<^	11.0		
22.6<^	164.9	153.9<^	4.82✓
		298.9<^	~~−0.6~~ ~~2.82~~<
		61.1<^ 30.55<^	

Left and below

26 35	107.0		
26.6<^	249.5	142.5<^	
26.8<^	103.7		
	251.8	148.1<^	4.53✓
		290.6<^	~~−0.5~~ ~~2.53~~<
		69.4<^ 34.70<^	
	104.0		
28 12	250.7	146.7<^	
28.2<^	104.8		
28.4<^	246.0	141.2<^	4.44✓
		287.9<^	~~−0.4~~ ~~2.44~~<
		72.1<^ 36.05<^	

Feb. 23. 1894

Right and above

192.0
ct 29 38 — 342.0 — 150.0″
10 29.6″ — 193.1
29.8″ — 342.8 — 149.7″ — K.8r
299.7″ — ~~−0.1 2.80″~~
60.3″ 30.15″

191.9
30 55 — 342.7 — 150.8″
30.9″ — 190.7
31.1″ — 343.0 — 152.3″ — K.9r
303.1″ — ~~−1.0 2.98″~~

Left and below
56.9″ 28.45″

284.0
32 30 — 68.0 — 144.0″
32.5″ — 283.5
32.7″ — 69.7 — 146.2″ — K.51
290.2″ — ~~−0.5 2.51″~~
69.8″ 34.90″

284.1
70.3 — 146.2″
34|8 — 280.8
34.1″ — 70.7 — 149.9″ — K.72
34.3″ — 296.1″ — ~~−0.7 2.72″~~
63.9″ 31.95″

Right and above

11.2
35 35 — 162.0 — 150.8″
35.6″ — 10.0
35.8″ — 161.5 — 151.5″ — K.9K
302.3″ — ~~−0.9 2.94″~~
57.7″ 28.85″

Feb. 23, 1894

10.8
10 36 47 162.0 151.2<^
10 36.8<^ 12.1
37.0<^ 164.2 152.2<^ 4.99
203.4<^ −1.0 ~~2.99~~
56.6<^ 28.30<^

Left and below

103.4
38 40 $\overset{2}{3}$49.8 146.4<^
38.7<^ 103.2
38.9<^ 2$\overset{5}{\cancel{4}}$1.2 148.0<^ 4.66
294.4<^ −0.7 ~~2.66~~
65.6<^ 32.80<^

102.7
40 00 251.0 148.3<^
40.0<^ 103.2
40.2<^ 251.8 148.5<^ 4.74
296.8<^ ~~−0.7~~ ~~2.74~~
63.2<^ 31.60 ~~8~~<^

Right and above

194.8
42 46 343.2 148.4<^
42.8<^ 190.2
43.0<^ 344.0 153.8<^ 4.94
202.2<^ ~~−0.9~~ ~~2.94~~
57.8<^ 28.90<^

B+C 1182 B 394

−1$\overset{3}{1}$.4<^ 10 46 49.4 10 47 $\overset{0.8}{\cancel{00.0}}$
47 49.4 48 00.0

Feb 22, 1894

Troubled more or less during settings by frost on eye piece; also troubled by bad seeing, due to severe cold and wind, clock also gave trouble, and had to be abandoned, but care was taken to keep images as near in the center of field as possible.

Sat. Feb. 23-9, 1894.

Very brilliant aurora last night. arches and streamers all through north and extending at times down to equator. Aurora flashing, and coruscating, and at times assuming an ~~rosy~~ rosy tint. Aurora was first noticed about 6h 30 P.M. and lasted till after midnight.

Probably lasted still later, but observer retired at that time. W. obs.

Feb. 24, 1894

ο Ceti. n. obs.

2 14 - 3°.4
6 8
+3 56

Left and above

7 40 3.2
169.0 165.8 ✓^
~~359.7~~ 0.0
172.0 172.0 ✓^
337.8 ✓^ ~~-3.1~~ ✓
22.2 -5.06

Right and below

91.1
261.1 170.0 ✓^
94.0
258.9 164.9 ✓^
334.9 ✓^ ~~-3.8~~ ✓
25.1 -4.79
93.0
259.8 166.8 ✓^
90.0
263.0 173.0 ✓^
339.8 ✓^ ~~-3.2~~ ✓
20.2 - 5.27

Left and above

180.0
352.0 172.0 ✓^
182.3
349.5 167.2 ✓^
339.2 ✓^ - 3.2 ✓
20.8 - 5.20

Feb. 24, 1894

182.2
349.1 166.9 ✓
180.0
352.0 172.0 ✓
338.9 ✓ ~~-3.2~~ ✓
21.1 -5.17
Right and below
270.4
82.0 171.6 ✓
273.9
8 1 79.0 165.1 ✓
336.7 ✓ ~~-3.0~~ ✓
23.3 -4.96

8 20 ε Boötis = m ✓
Star m is the m of regular last ~~notation~~ revised notation in comparison Star books.
Est. ~~4.4~~ 4.1

δ Cygni M. obs.

20 8 +57°.2
31 10
-11 2

Abandoned, too low.

Feb. 24, 1894

S Cass.   N. obs.

1   10   +72°.1
7   17
+6   7

S Cass. quite certainly seen
S = x in large tel.!
8 50 Too faint for finder
Est. 14.8

S Boötis   N. obs.

14   11   +53°.3
7   28
6   42
12   00
+5   17

S = m in large tel.
9 10 Too faint for finder.
Est. 11.8

Feb. 24, 1894

δ Cephei N. obs.

21 37 +78.4
31 45
+ 10 8

l 4 S, S 2.5 m in large tel.
9 25 l 3.5 S, S 2 m in finder, but fair
Est. 11.2

Nova Aurigae N. obs.

5 22 +32°
8 22
+ 3 00

Index above
9 55 325.2 < prec and southern dis.
34.0 × 68.8 ✓
317.5
33.0 × 75.5 ✓
~~1~~144.3 ✓ + 2~~7~~ ✓
= 5.8
~~+~~-0.69

Below
48.0
121.2) 3.2 ✓
45.4
126.0 80.6 ✓
153.8 ✓ + ~~2.5~~ ✓
~~+~~-0.50

Feb. 24, 1894

45.0
126.4   81.4 √
50.8
122.0   71.2 √
152.6 √   ~~+2.5~~ ✓

Above   +0.52

137.0
212.8   75.8 √
140.3
212.8   72.5 √   +0.61
148.3 √   ~~+2.6~~ ✓

142.8
212.0   69.2 √
141.0
212.9   71.9 √   +0.75
141.1 √   ~~+2.8~~ ✓

Below

49.8
123.5   73.7 √
46.7
124.9   78.2 √   +0.54
151.9 √   ~~+2.5~~ ✓

10   14
10   04   30

Feb 2nd 1894

R Lyncis M. obs.

6 49 +55°1
8 61

2 12

10 32 0 2 R, R 2 p in large tel.
Est. 12m

S Cygni M. obs.

20 8 + 57.2
9 13

10 55
12 00

1 5

S Cygni suspected, but not certainly seen. Region rather low and seeing
10 45 rather poor.

Feb. 27. 1894.

Cloudy the first of evening.

Still hazy.

o Ceti. Fr. Ms.

2   14   −3.4
6   √3
+4   39

Clouds too thick for o Ceti.
Cannot see companion.

8^h 30^m Sky still cloudy and hazy.

Posted to here.

Feb. 28, 1894.

Pretty cloudy.

o Ceti U. obs.

~~274~~

2 14 - 3.4

5 60

+ 3 46

Comp. star invisible in photometer
Left and above

7 37 185.5 ~~5~~

351.0 169.5 ✓

180.7

352.0 171.3 ✓

340.8 ✓ ~~3.4~~ ✓

19.2 -5.38

Right and below

276.8

82.3 171.5 ✓

$2\overset{72}{84}.5$

7 41 82.0 169.5 ✓

341.0 ✓ - 3.4 ✓

19.0 -5.40

Observations very difficult, and made through clouds and haze

Feb. 28, 1894.

U Cephei		Thermo
0	42	+8°.9
6	45	
+6	3	

Steadily growing worse, sky now all cloudy.

dewed
A 25 Object glass now dewed..

March 1, 1894

o Ceti — M. obs.

2 — 14 — $-3°.4$
6 — 16
+ 4 — 2

Right and below

7
8 — 38 — 92.2
— 260.8 — 16~~7.8~~ 8.6 ✓^
90.0
263.0 — 173.0 ✓^
341.6 ✓^
18.4 — - ~~5.5~~ ✓ -5.47

Left and above
180.0
353.2 — 173.2 ✓^
182.0
350.9 — 168.9 ✓^
342.1 ✓^
17.9 — - ~~5.6~~ ✓ -5.58
181.4
350.3 — 168.9 ✓^
180.2
352.8 — 172.6 ✓^
341.5 ✓^
18.5 — - ~~5.5~~ ✓ -5.46

Right and below
269.5
82.9 — 173.4 ✓^
271.5
81.2 — 169.7 ✓^
343.1 ✓^
16.9 — - ~~5.7~~ ✓ -5.66

Mar. 1, 1894

~~271.5~~
~~81.5~~ ~~170.0~~
~~clouds~~

~~82.6~~
~~261.2~~ ~~178.6~~
~~90.0~~ Wrong image dis
~~263.0~~ ~~173.0~~
~~351.6~~ ~~75.2~~

~~90.0~~
~~262.9~~ ~~172.9~~
91.5
261.3 169.8 √^
90.0
262.6 172.6 √^
342.4 √^ ~~-2.6~~ √
17.6 -5.57

Left and above

179.5
352.2 172.7 √^
180.9
8 8 350.9 170.0 √^
342.7 ~~-5.6~~ √
17.3 -5.61

Meas. made through thin or less cloud; no absolute or rel. estimate can be obtained as O is practically invisible to the naked eye.

Mar. 1, 1894
Extension of Phot. Scale

γ Cass.			Th. obs.
6	18		+55°.9
6	68		
+6	50		

Index above

185.0		
347.6	162.6 ✓^	
185.1		
347.5	162.4 ✓^	
	325.0 ✓^	−2.1 ✓

Below

276.1		
78.5	162.4 ✓^	
274.0		
79.1	165.1 ✓^	
	327.5 ✓^	−22 ✓
276.4		
79.0	162.6 ✓^	
275.2		
77.2	162.0 ✓^	
	324.6 ✓^	−2.0 ✓

Above

~~347.7~~		
~~167.7~~	~~180.0~~	
4.0		
168.3	164.3 ✓^	
4.0		
167.0	163.0 ✓^	
	327.3 ✓^	−2.2 ✓

Mar. 1, 1894

5.2
168.3 163.1 ✓^
3.0
168.7 165.7 ✓^
328.8 ✓^ -2.3 ✓

Below

94.0
258.1 164.1 ✓^
275.5
77.2 161.7 ✓^
325.8 ✓^ -2.1 ✓

Extension of Phot. Scale.

S bars. M obs.

1 10 +7 2.1
7 48
+6 38

Right and below

91.7
260.8 169.1 ✓^
91.3
261.0 169.7 ✓^
338.8 ✓^ -3.2 ✓

Mar. 1, 1894

~~344.1~~
~~169.1~~ ~~185.1~~
1.0
170.7 169.7 ✓^
2.5
169.0 166.5 ✓^
336.2 ✓^ -2.9 ✓

1.8
169.0 167.5 ✓^
0.6
170.9 170.3 ✓^
337.8 ✓^ -3.1 ✓

Right and below

~~90.9~~
~~261.7~~ ~~170.8~~
90.7
260.9 170.2 ✓^
92.2
260.8 168.6 ✓^
338.8 ✓^ -3.2 ✓

91.1
260.8 169.7 ✓^
91.2
260.7 169.5 ✓^
339.2 ✓^ -3.2 ✓

Mar. 11. 1894

Left and above

180.9
351.5 170.6^{Sr}
182.0
349.8 167.8^{Sr}
          338.4^{Sr} -3.1^{s}

Meas. rather difficult, and made through varying haze.

g 2 faint star, faint star 1 s

Exten. of Phot. Scale.

δ Urs. Maj.;   Fr. As.

12   36   61.9
9   1
3   35
12
9   25

10   12   g 2 faint star, faint star 2 s

Mar 11 1894

	B+C 1182			B 394	
10	26	42.8	10	27	00.0
	27	42.8		28	00.0

Reap of Jup. I. Phot. R, N. obs. Janson rec

Jup. faintly vis. in large tel. at theor. time of eclipse; satellites wholly invisible. Region low, clouds thick in this region.

Estim. of Phot. Scale.

R. Mrs. Fleming.		N. obs.
16	34	> 2.9
9	43	
6	51	
12	00	
+5	9	

10 56 h 3 faint star, faint 2 k

Posted to here.

Mar. 2, 1894

	e Ceti		W obs.
	2 14		− 3°.4
	6 22		
	+4 8		
	Index below		
7 36	269.0		
	82.7	173.7 ✓^	
	271.0		
	81.7	170.7 ✓^	
		344.4 ✓^	− ~~5.8~~ ✓
	Above	15.6	− 5.83
	1.0		
	171.0	170.0 ✓^	
	359.7		
	172.8	173.1 ✓^	
		343.1 ✓^	− ~~5.7~~ ✓
	359.8	16.9	− 5.66
	172.8	173.0 ✓^	
	0.8		
	170.3	169.5 ✓^	
		342.5 ✓^	− ~~5.6~~ ✓
	Below	17.5	− 5.58
	90.7		
	261.7	171.0 ✓^	
	89.7		
	262.9	173.2 ✓^	
		344.2 ✓^	− ~~5.8~~ ✓
		15.8	− 5.80

Mar. 2, 1894

89.6
262.6 173.0 √ʌ
91.0
261.1 170.1 √ʌ
343.1 √ʌ -~~5.7~~ √
169 -5.66

above

181.0
351.0 170.0 √ʌ
179.2
7 50 352.3 173.1 √ʌ
343.1 √ʌ -~~5.7~~ √
16.9 -5.66

0 too low for estimate of rel. brightness with naked eye or field glass.

Exten. of Phot. Scale

δ Persei N. obs.

2 8 +57°.2
7 12
+5 4

faint star = star 0
Est. a little difficult on account of prox. of bright star, but bright star kept behind the bar as much as possible

Mar. 2, 1894

S Urs. Maj.   N. obs. Ex. Ph. Scale

12 32   +60°.4
7 46
4 46
12 00
+7 14

Clouds

t 2 faint star, faint star ~~7~~ 1.5 u

9 59 m 2 ~~x~~ I, I 3 u in large tel.
Est. 10.2

S. Boötis   N. obs. Ex. Phot. Scale

14 14   +55°.5
9 00
5 14
12 00
+6 46

n 3 faint star, faint star 1 o

10 17 k 4 S, S 1 l in large tel.
too faint for finder
Est. 11.2

Mar 2, 1894

δ M 6° 2596 N. obs.

3 . 30 +62.8

9 15

+ ~~6~~5 45

Index to right

10 30

34.0

1 40.5 106.5 √^

25.5

1 ~~48.5~~ 57 12~~3.0~~ 0 2 √^

226.7 √^ + ~~1.1~~ √

133.3 -0.91

To left

11 ~~4.2~~ 6.4

~~3~~2 34.7 118.3 √^

1 23.0

2 30.0 107.0 √^

225.3 √^ + ~~1.1~~ √

134.7 -0.88

1 21.3

2 30.0 108.7 √^

1 15.0

2 3~~8.0~~ 4.1 119.0 √^

227.7 √^ + ~~1.1~~ √

To right 132.3 -0.93

208.0

328.5 120.5 √^

210.7

325.0 114.3 √^

234.8 √^ + ~~0.9~~ √

125.2 -1.08

Mar. 2, 1894

213.0
324.0 111.0 ✓
206.8
327.0 120.2 ✓
231.2 ✓ +~~1.0~~ ✓
-1.00
To left 128.8

8.3
29~~6.0~~
455.0 116.7 ✓
303.1
48.0 104.9 ✓
221.6 ✓ + ~~1.2~~ ✓
- 0.81
138.4

10 55
10 42.5

Posted to here

Mar 3, 1894

~~7 28~~ o Ceti U. obs.

~~k 2 o~~

k 2 var, var. 2 m with naked eye
7 30 k 2 var, var 2 m in field glass } W obs.
Var. ~~k~~ = l " " "
Var. ~~k~~ = l with naked eye

k 2 var, with naked eye
7 30 k 2 var in field glass } Jamson
var 1 l " " "
var 1 l with naked eye

The above comps in final notation.

In above estimates no allowance is made for difference of atmospheric absorption, but the stars are estimated relatively just as they appear

2 14 - 3°.4
6 45
+4 31

Left and above.

7 56 1.0 ∠ Comp. Star dis.
171.2 170.2
359.0
173.0 174.0
344.2
15.8

~~- 3.8~~
- 5.80

Mar. 3, 1894

Right and below

89.3
262.8 173.5 ✓
90.5
261.8 171.3 ✓
344.8 ✓ ~~3.9~~ ✓
changed focus 5.2 -5.89
91.0
261.7 170.7 ✓
88.9
263.0 174.1 ✓
344.8 ✓ ~~-3.9~~ ✓
15.2 -5.89

Left and above

179.0
353.0 174.0 ✓
180.5
351.4 170.9 ✓
344.9 ✓ ~~3.9~~ ✓
15.1 -5.90
180.8
351.3 170.5 ✓
179.2
352.8 173.6 ✓
344.1 ✓ ~~3.8~~ ✓
15.9 -5.79

Right and below

269.1
82.9 173.8 ✓
270.5
8 14 82.0 171.5 ✓ ~~4.1~~ ✓
345.3 ✓
Images somewhat unsteady due to low altitude
14.7 -5.96 and wind

Mar 3, 1894

Exlens. Phot Scale

S bars. No. obs.

~~6~~1 10 ~~+72~~ 0 .1

7 31

+ ~~67~~ 21

Right and below

81.0 brt. star dis.

91.0 10.0 ✓^

80.4

91.8 11.4 ✓^

21.4 ✓^ ~~+7.1~~ ✓

Left and above

169.8

181.8 12.0 ✓^

170.2

180.3 10.1 ✓^

22.1 ✓^ ~~+7.1~~ ✓

170.2

180.~~4~~8 10.6 ✓^

169.4

182.0 12.6 ✓^

23.2 ✓^ +~~7~~.0 ✓

Mar. 3, 1894

Right and below

260.0		
271.9	11.9 √^	
260.5		
271.5	11.0 √^	
	22.9 √^	+7.0 √
260.8		
271.1	10.3 √^	
260.0		
272.0	12.0 √^	
	22.3 √^	+7.1 √

Left and above

$\overset{3}{\cancel{2}}$49.4		
9 15 362.0	12.6 √^	
350.2		
361.0	10.8 √^	
	23.4 √^	+6.9 √

Extens. of Phot Scale

S. bases.   N. obs

Rel. est. of faint star

9 25 faint star, faint star 12

Mar 3, 1894

Extension of Phot Scale

δ Persei . N. obs

2 8 +57°.2
8 28
+6 20

faint star = 0

Extension of Phot Scale

ι Ursa Maj. N. obs.

12 2.3 +60°.4
8 25
3 58
12 06
8 2

t 2 ft star, ft star 1 m

Mar. 2, 1894

Exclus. of Phot. Scale

S Boötis N. obs.

14 14 +55°.3
9 7
5 7
12 00
+6 52

n 2.5 ft. star, ph. star 1.0

S Cygni N. obs.

20 8 +57°.2
9. 15
10 53
12 00
1 7

Stars S and T thought to be quite certainly seen at intervals. S Cygni not certainly seen, although at least a suspicion is entertained.

10 30 fainter than 14.5.
region low

Posted to here

Mar 3, 1894

R Lyncis

6 49   +558°.1
9 29
+ 2 40

m 2.5 var, var. 2.5 n in large tel.
10 50 m 2 var, var. 2 n in finder
Est. 11.1

Mar. 6, 1894

o Ceti U. obs.

2 14 -3.°4
6 34
+4 20

Clouds, comp. star invisible

Right and below

7 31 88.5
262.4 173.9 ✓^
90.0
261.0 171.0 ✓^
344.9 ✓^ ~~-3.9~~ ✓
15.1 -5.90
~~-3.9~~

Left and above

180.0
35~~3.1~~1.3 171.3 ✓^
179.0
352.2 174.2 ✓^
345.5 ✓^ ~~-4.0~~ ✓
14.5 -5.99
179.2
353.0 173.8 ✓^
180.8
351.3 170.5 ✓^
344.3 ✓^ ~~-3.8~~ ✓
15.7 -5.80

Right and below

270.8
82.0 171.2 ✓^
269.2
83.2 174.0 ✓^ -5.95
345.2 ✓^ ~~-3.9~~ ✓
14.8

Mar. 6, 1894

269.6
83.1 173.5 ✓^
270.7
82.7 172.0 ✓^
345.5 ✓^ ~~-4.0~~ ✓
14.5 -5.99
Left and above
clouds

0.4
171.4 171.0 ✓^
359.1
7 54 172.3 173.2 ✓^
344.2 ✓^ ~~-3.8~~ ✓
Troubled by clouds 15.8 -5.80

Extens. of Photometric Scale.

δ Persei N. obs.

2 8 +57°.2
7 15
+5 7

n 3 ft star, ft star 1 0

Mar. 6, 1894.

Extension of Phot. Scale

τ Urs. Maj.   M. obs.

12	32	+60°.4
7	33	
5	00	
12		
+7	00	

t 2 ft slaū, ft slaū 1 u

Extension of Phot. Scale

δ Bootis   M obs.

14	14	+55°.3
7	52	
6	22	
12	00	
+5	38	

n 3 ft. slaū, ft. slaū 1 0

Mar. 6, 1894

Considerably cloudy

T Tauri		N obs.
4	20	+18°.9
8	11	
+3	51	

Region of T Tauri identified, but sky is so cloudy that no very definite opinion can be formed. T Tauri must, however, be faint, as some stars which it would seem ~~are~~ must be rather ~~very~~ faint are seen, at intervals, while T Tauri is wholly invisible. No stars now visible in large tel.

R Tauri		N. obs.
4	22	+10°.0
8	25	
+4	3	

10 15 Clouds thick, no stars visible, and steadily growing worse.

Mar. 6, 1894

δ Aurigae   N obs.

5 18   +24°.4
8 31
+3 13

Clouds so thick that region cannot be identified.

Double Stars Phot. R.

1657 24 Comae Berenices N. obs.

Too high

1850

14 23   +28°.8
8 50
5 33
12 00
+6 27

Clouds too thick too find double.

Mar. 6, 1894

1724 θ Virginis

13 3   − 4°.9
9 0
4 . 3

12 00
+7 57

Double invisible

855 —

6 2   + 2°.5
9 14
+3 12

Double invisible

Sky now becoming very thickly cloudy.

Posted to here.

Mar. 7, 1894

o beti   N. obs.

7 15   o = f beti ✓

2 14   −3°.4
6 32
+4 19

Right and below

7 23   91.0
261.8   170.8 ✓
89.0
263.9   174.9 ✓
345.7 ✓   −~~4.0~~ ✓
14.3   −6.02

Left and above

179.0
353.0   174.0 ✓
180.0
351.4   171.4 ✓
345.4 ✓   −~~4.0~~ ✓
14.6   −5.98

180.1
351.3   171.2 ✓
179.0
353.0   174.0 ✓
345.2 ✓   −~~3.9~~ ✓
14.8   −5.95

Mar. 7. 1894

Right and below.

268.8
83.0 174.2 ✓^
270.5
81.9 171.4 ✓^
345.6 ✓^ ~~-4.0~~ ✓
14.4 -6.01
271.0
81.6 170.6 ✓^
269.0
83.3 174.3 ✓^
344.9 ✓^ ~~-5.9~~ ✓
15.1 -5.90

Left and above

358.2
173.2 175.0 ✓^
0.0
171.7 171.7 ✓^
346.7 ✓^ -4.2 ✓
13.3 6.18
0.7
171.2 176.5 ✓^
359.0
7 40 173.2 174.2 ✓^
344.7 ✓^ -3.9 ✓
15.3 5.07

Mar. 7, 1894

715 S Arietis W. obs.

1 5 5 +12°.8
6 6 2
+5 7

Pos. 0 176.0
45.0
221.0

7 14 17
21

14 5 3.1 Brt.*
5 6.5 Ft. *
15 2 2.0 Brt.*
2 6.0 Ft.*

Order in transit bright star faint star, bright star faint star, both in northern half var thought to be seen, but very faint and equal to faint star.

8 8 Est. 14.0

Region rather low

Mar. 7, 1894

782 R Arietis N. obs.

2 07 $+\overset{2}{\cancel{1}}4^{\circ}.4$
7 24
+5 17

Var = star 0 in Reeds notation on chart (L. S.)
~~est~~ Same in finder
8 17 Est. 9.2

845 R Ceti N obs.

2 23 $-0^{\circ}.4$
7 35
+5 12

Region very low, but thought to be identified an R Ceti fairly bright, as near as can be determined it is about equal to star x in Reeds notation on old chart
8 25 Est. 9.0

Mar. 7, 1894

1537 τ Tauri   1537   N. obs.

4 20   +18°.9
7 41
+3 21

Pos ○ 284.2
45.0
229.2

~~7 41 23.0~~
~~50.2~~
~~16.6~~

7 42 44.0 ~~Ft. *~~ Var.
43 19.0 ~~Var.~~ Ft. *
27.6 Var.
57.6 Ft. *

Order in trans. var. ft star, var. ft. star
both in northern half, both ft. stars x

8. 35 Var = x
Est. 12.0

1577   κ Tauri   N. obs.

4 22   + 10.0
7 52
+3 30

Mar. 7, 1894

~~R~~ Var = star l in Reed's notation on old chart

8 45 Est. 10.5

Posted to here

Mar. 9. 1894.

7 0 Cloudy.

7 45 Still cloudy.

8 16 Still thickly cloudy. No stars visible.

Mar. 10, 1894

Chr. error = $+28^{s}.3$		B+6 1182			B 394		
	6	41	27.9	6	4 x^0	59.6 ~~00.0~~	
		42	27.9		42	00.0	

Reap. Jup. I. Phot. B. Mobs. Jansen Rec.
Comp. with first sat. prec. = Sat. II.
L. V.

6	58	18	~~6 57 50~~	160.2	704.2^s 176.0^s
		40	~~58 12~~ 184^s	192.2	
		56	58 46.0^s	160.1	32.0^s
	59	10	6 58 18^s	191.7	31.6^s 31.8^s
7	10	40	7 10 12^s		
		49	7 10 21^s	152.8	
	11	3	35^s	204.0	
		11	42^s	147.0	
		18	48^s	211.1	
		23	55^s	146.0	
		33	11 5^s	210.1	
		39	11^s	144.2	
		46	18^s	213.1	
		53	25^s	138.9	
	12	1	33^s	212.2	
		8	40^s	138.2	
		14	46^s	217.2	
		21	53^s	134.2	

Mar. 16, 1894

12	27	12	1	220.8		
	39		11	135.3		
	48		20	221.1		
	57		29	127.3		
13	5		37	223.3		
	13		45	128.9		
	20		52	221.1		
	28	13	0	125.5		
	33		9	228.2		
	45		17	126.8		
	55		27	227.7		
14	6		82	127.0		102.7 175.7
	15	14 13	20.5 52	224.2	1	
	26			124.7	97.2 102.1 99.6	
	35			226.8		
	45			124.0		103.4 175.8
	54		241	224.2		
15	6	15 14	0.2 32	127.0	2 100.2	
	16			228.2	101.2 100.7	
	28			124.7		109.5 177.4
	40	15	192 48.0	228.1	3	
	58	15	20	128.0	103.4 100.7 102.0	a little
16	6			228.7		altered focus
	21			126.0		108.8 177.2
	41	16	192 48.0	228.0	102.0 4	
	55	16	20	126.8	101.2 101.6	
17	5			228.0		

Mar. 10, 1894

17	17			125.2		704.3< 176.1<
	27		132<	227.0		
	39	17 17	33.0< 5<	126.0	5 101.7< 100.0< 100.8<	
	49			226.0		
18	54			128.9		710.6< 177.6<
19	5		35<	228.0		
	13	19 18	8.8< 41<	126.2	99.1< 101.3< 100.2<	
	23			227.5		
	31			127.8		702.3< 175.6<
	39	19	179< 44.8<	224.8	7	
	50	19	17<	125.5	97.0< 98.7< 97.8<	
	59			224.2		
20	13			125.0		705.6< 176.4<
	23	20	109< 27.2<	225.9	8	
	32	19	59<	127.0	100.9< 100.7< 100.8<	
	41			227.7		

~~Seeing fairly~~ Images rather elongated, and seeing a little unsteady at times, but on the whole seeing fairly good. Sky slightly hazy.

		B+C 1182			B 394	
Chr. error = $+27^{s}.6$<	7	26	27.2	7	285	~~00.0~~ 59.6
		27	27.1		27	00.0
	7	29	15.5	6	58	01.0
		30	15.3		59	01.0

Mar. 10, 1894

Faint Variables. W. obs.
Sky a very little hazy
R Orionis W. obs.

44 47 +7°.5
7 22
+2 35

Pos. 0 294.2
45.0
0. 339.2

Clouds

7 ~~43~~ 33 ~~Var~~
5 6.1
Clouds

53 47 Var
54 3 "
10.4 comp. star
30.5 " "

46.8 Var.
55 3.6 ~~com~~ Var
11.3 comp. star
30.0 " "

Both in southern half

Mar. 10, 1894

Call comp. star z
Var. 2 z in large tel,
8 27 too faint for finder
Est. 12.1

R Monocerotis' M. obs.

6 32 +9.8
8 2
+1 29

Pos. 0 336.9
450
d 0 381.9
21.9

8	14	52.2	comp. star
	15	15.1	Var.
		32.1	comp. star
		46.0	var
	16	2.5	comp. star
		25.1	Var.
		42.0	comp. star
		56.2	var.

Comp. star in southern half. Var. in
8 50 northern half. Var. = comp. star.
Est. 11.5 Clouds. Est made before clouds came again

Mar. 10, 1894

·2528 R Geminorum U-obs

7 0 +22.°~~2~~1

8 56

+1 56

Clouds

Thickly cloudy

10 0 Still cloudy

Posted to here.

Mar. 12, 1893.

7 4 Cloudy.

7 40 Still cloudy.

8 15 Still thickly cloudy and growing worse.

Mar. 13, 1894

o Ceti N. obs.

2	14	−3°.4
6	61	
+4	47	
2	14	−3°.4
6	68	
+4	54	
7	17	
+5	3	
7	28	
+5	14	

o Ceti cannot possibly be seen owing to clouds.

Σ 470 32 Eridani N. obs.

3	48	−3°.3
7	29	
+3	41	

Clouds too thick.

Both 4th magn. and 6th magn. components have disappeared.

8h 20m Clouds growing very thick; no ~~clouds~~ stars visible

Mar. 14. 1898.

o Ceti. Gr. Bs.

2 14 -3.8
6 58

78 40

Left and below

7 20 190.8 comp. star dis.

341.8 150.5^ 270

187.4

343.3 .155.9^ 270

306.4^ -1.1 ✓

Right and above
clouds

279.2

73.0 153.8^ 0

281.0

69.9 148.9^ 0

302.7^ -1.0 ✓

280.7

72.0 151.3^ 0

279.5

72.8 153.3^ 0

~~3.3~~ 304.6^ -1.0 ✓

Left and below

8.0

161.8 153.8^ 90

10.2

7 50 161.3 151.1^ 90

304.9^ -1.1 ✓

The above is probably not a mean of o Ceti

Mar. 14, 1894

o Ceti thought to be found and one set obtained below.

Right and below

8 5 270.7
82.5 171.8 ✓^ °
270.7
82.8 172.1 ✓^ °
3439 ✓^ −3.8 ✓

β Left and above
351.2

The above set is not of much value, and prob. ought not to be used, the comparison was almost invisible and seeing very bad on account of low altitude and clouds, o Ceti very close to horizon.

8 50 Still cloudy.

Posted to here

Mar. 16, 1894

o beta   M. obs.

2   14   − 3.4°
6   61
7   8   +4   47
clouds
Right and below
269.5
82.2   172.7 ✓^
268.7
8$\overset{3}{\cancel{4}}$.$\overset{8}{\cancel{0}}$ 175.$\overset{1}{3}$ ✓^
347.8 ✓^   ~~−4.4°~~ ✓
12.2   −6.37
Left and above
358.0
clouds
173.2   175.2 ✓^
359.1
172.5   173.4 ✓^
348.6 ✓^   ~~−4.5~~ ✓
11.4   −6.51
359.1
172.2   173.1 ✓^
clouds
358.2
173.2   175.0 ✓^
348.1 ✓^   ~~−4.4~~ ✓
clouds   11.9   −6.42

Mar. 16, 1894

Right and below

887

263.2   174.5^

clouds

Stopped by clouds, much troubled by clouds throughout observation, object of obs. thought to be pretty certainly o Ceti, although clouds prevent complete identification.

Faint Variables   N. obs.

R Comae Ber.

11	57	+19°.7
8	34	
3	23	
12	00	
+8	37	
11	53	20°.2
8	50	
3	3	
12	00	
+8	57	

Mar. 16, 1894

11 58 +18°.1
8 56
3 2
12 00
+8 58

12 00 +18°.15
9 00
3 00
12 00
+9 0.0

Index of circle moving, index altered.

11 58 +18°.1
9 7
2 51
12 00
+9 9

11 58 +18°.1
9 16
2 42
12 00
+9 18

Mar. 16, 1894

11	57	+19°.6
9	20	
2	37	
12	00	
+9	23	
11	53	+20°.2
9	22	
2	31	
12	00	
+9	29	
11	57	+19°.6
9	29	
2	28	
12	00	
+9	32	

Star n in last revised notation easily seen
This is a 9.4 D.M.

9	50	7.1	
		20.2	13.1
		58.9	
	51	11.6	12.7

March 6, 1894

Comp. star b (in last revised notation) is close beside the var. its magn. is 7.5.
There is a very faint star in moonlight which precedes b 12.9^s in same decl. it is prob. that this is rather a faint star (too faint to be already selected by the 6 inch and so can be used as a faint comp. star.
The var. is not seen, nor suspected, it must be at least a half a magn. fainter than
10 0 this faint star.
At times on looking again var. is thought to be poss. suspected, but cannot be certain of it.

5070 ~~Z V~~ Z Virginis N. obs.

17 5 - 10°.1
10 6
3 59
12 60
+8 1

This is not one of the 60 variables which has had comp. stars selected and revised, star x on chart in Chandler's notation is at times suspected and thought to be seen. The var. it would seem is fainter than x. for it is prob. not even suspected, but the region is decidedly

Mar 16, 1894

low, and not very much weight can be placed on the observations. The var, however

10 25 seems to be certainly faint

Ftr. 14.0 probably.

+62°.596 M. obs.

3 30 +62°.8

10 23

+6 53

10 39 Right and above

206.2 < comp. star dis.

326.2 120.0 ✓^

213.5

318.8 105.3 ✓^

225.3 ✓^ − 0.58

Left and ~~above~~ 124.7 + ~~1.1~~ ✓

301.2

50.8 109.6 ✓^

294.0

58.5 124.5 ✓^ −1.07 ✓

234.1 ✓^ ~~0.9~~

125.9

296.3

57.9 121.6 ✓^

301.0

51.2 110.2 ✓^ −1.02 ✓

231.8 ✓^ ~~1.0~~

125.2

Mar. 16, 1894

Right and above

2.4.0
138.0 114.0 ✓
26.4
1.45.3 118.9 ✓ -1.04
232.9 ✓ ~~1.0~~ ✓
127.1

25.8
144.7 118.9 ✓
32.8
40.7
1.~~39.7~~ 10~~8~~7.9 ✓
226.8 ✓ ~~1.1~~ ✓
1332 -0.91

Left and below

120.8
204.0 113.2 ✓
110.6
10 59
238.~~2~~5 127.~~8~~9 ✓
10 49.0
24~~0.8~~ ✓ ~~0.8~~ ✓
1.1
118.9 -1.22

Posted to here

Mar. 17. 1894.

Reap. Jup. I.   Go. obs.

9 6 Jupiter invisible at time of eclipse. Clouds thick. Became partly clear a little before eclipse time but clouded over before time of reappearance.

Mar. 19, 1894

0 bet.		W. obs.
2	14	-3.°4
7	8	
+ 4	54	

Right and below

269.9
82.9 173.0 ✓^
268.2
84.0 175.8 ✓^
348.8 ✓^ ~~-4.6~~ ✓
11.2 -6.55

7 12

Left and above

358.8
173.0 174.2 ✓^
359.4
172.3 172.9 ✓^
347.1 ✓^ ~~-4.2~~ ✓
12.9 -6.25

359.5
172.5 173.0 ✓^
358.5
173.0 174.5 ✓^
347.5 ✓^ ~~-4.3~~ ✓
12.5 -6.31

Right and below

88.8
263.0 174.2 ✓^
89.0
263.3 174.3 ✓^
348.5 ✓^ ~~-4.5~~ ✓
11.5 650

Mar. 19, 1894

89.7
263.2 173.5 ✓^
88.8
263.2 174.4 ✓^
347.9 ✓^ −4.4 ✓
12.3 −6.35

Left and above

179.0
353.1 174.1 ✓^
7 30 179.5
352.8 173.3. ✓^
347.4 ✓^ −4.3 ✓
12.6 −6.30

o very low, images large and rather blurry, light of images varying on account of low altitude and somewhat sudden cleanings, but settings thought too be very good

o Ceti and 9.2 magn. following.

$40^s.2$ Dec. +0.5 o Ceti = ✱ a
48.5 $8^s.3$ 9.1 magn. = ✱ b

~~33.8~~
41.6 ?

9.5
17.4 $7^s.9$
mean 8.1

∴ o Ceti pre. 9.2 magn. 8.1 secs. slightly south.

Mar. 19, 1894

~~7 37 8.8 Dec. +0.5' Dec. +1'.0 = * a = o Ceti;~~
~~39 25.6 " +1'.0 = * b = 7.5 magn.~~
~~42 46.0 = * c, Dec. +12', magn. 7.5~~

7 37 8.8 Dec. +0.5' = * a = o Ceti;
39 25.6 " +1.0 = * b = 9.1 magn.
42 46.0 " +12' = * c = 7.5 "
43 19.1 " −7' = * d = 8.3 "

D.M. Wedge Zone +19°

Series 16 ~~4~~ 5 (Special) W. obs.

4 33 +20°.0
8 19
+3 46

8 20 7 20 2.70
2.89
2.90 8.49 3.68

7 22 2.50
2.67
2.75 7.92 3.43

Mar. 19, 1894

728	3.51		
	3.62		
	3.67	10.80′	4.68′
703	3.00		
	3.22		
	3.35	~~1~~9.57′	4.14′

Wind~~ing~~ rising, and blowing quite hard.

730	2.75		
	2.60		
	$2.\overset{6}{5}6$	8.01′	3.47′
748	2.89		
	2.75		
	2.67	8.31′	3.60′
755	4.60		
	4.57		
	4.52	13.69′	5.93′
762	3.55		
	3.58		
	3.63	10.7.6′	4.66′
749	2.50		
	2.57		
	2.52	7.59′	3.29′

Mar. 19, 1894

764	4,10		
	4,23		
	4.27	12.60	5,46
767	3,75		
	3,82		
	3,93	11.50	4,98
754	4.01		
	4,18		
	428	12.47	5,40
779	3,70		
	3,78		
	3,82	11,30	4.89
784	3.16		
	3.01		
	3.10	9.27	4.01
783	3,00		
	3,10		
	3.12	9.22	3.99
790	3,25		
	3,20		
	3.18	9,63	4.17

Mar. 19, 1894

	793	4.00		
		4.10		
		3.92	12.02<	5.20<
	787	2.80		
		2.75		
		2.92	8.47<	3.67<
	800	4.58		
9 31		4.50		
		4.49	13.57<	5.88<

Series 166 (Special) W. obs.

$$\begin{array}{ll} 4 & 6 \\ 9 & 49 \\ \hline +5 & 43 \end{array} \qquad +9^{\circ}.9$$

	549	6.30		
9 ~~4~~0		6.11		
		6.08	18.49<	8.01<
	552	3.40		
		3.61		
		3.60	10.61<	4.59<

Mar. 19, 1894

545	3.50		
	3.55		
	3.33	10.38<	4.4~~6~~9
	~~3.16~~		
~~581~~	~~5.81~~		
	~~3.22~~		
	~~3.30~~	~~9.68~~	
581	3.00		
	2.90		
	2.95	8.85<	3.83<
590	5.70		
	5.68		
	5.73	17.11<	7.41<
605	3.27		
	3.25		
	3.28	9.80<	4.24<
606	4.80		
	4.92		
	4.75	14.47<	6.27<
619	4.37		
	4.45		
	4.28	13.10<	5.67<

Mar. 19, 1894

	614	2.30		
		2.27		
		2.38	6.95^r	3.01^r
	625	3.70		
		3.80		
		3.55	11.05^r	4.78^r
	627	3.50		
10 0		3.41		
		3.60	10.51^r	4.55^r

Bright Double Stars, Phot: R.

900 8 Monocerotis W. obs.

6	17	+4°.7
10	17	
+4	0	

Left and above

13.8 c ftr. dis.

157.0 143.2^r

18.5

147.3 128.8^r

272.0^r

880 [illegible] -1.97

Mar. 19, 1894

Right and below

108.5		
242.3	133.8 ^	
104.1		
246.7	142.6 ^	
	276.4 ^	~~-0.1~~ ^
102.1	83.6	
246.5	144.4 ^	-2.09
113.7		
240.1	126.4 ^	
	270.8 ^	~~+0.1~~ ^
	89.2	-1.94

Left and ~~above~~

198.9		
330.3	131.4 ^	
193.4		
338.2	144.8 ^	
	276.2 ^	~~-0.1~~ ^
194.~~8~~3	83.8	-2.08
337.8	143.5 ^	
199.9		
333.0	133.1 ^	
	276.6 ^	~~-0.1~~ ^
	83.4	-2.10

Right and ~~below~~

290.8		
59.8	129.0 ^	
284.5		
68.7	144.2 ^	
	273.2 ^	~~0.0~~ ^
	86.8	-2.00

Mar. 19, 1894

9.24 20 Gem. Wiobs.

6 25 +17°.9
10 36
+4 11

Index below

37.5 < Prec., south; + fir. dis.
136.2 98.7
28.5
141.7 113.2
211.9 ~~+1.4~~
Index above 145.1 −0.61
116.1
233.2 117.1
126.1
225.1 99.0
216.1 ~~+1.3~~
127.0 143.9 − 0.70
224.0 97.0
118.8
235.0 116.2
213.2 ~~+1.4~~
Index below 146.8 − 0.64
2 ~~08.7~~ 11.0
321.6 110.6
216.5
314.0 97.5
208.1 +~~1.5~~
151.9 − 0.54

Mar 19, 1894

218.9
315.6   96.7
210.7
321.4   110.7
207.4   ~~+1.5~~
152.6   −0.52
Index ~~above~~

299.2
53.2   113.9
307.9
40.0   92.1
206.0   ~~+1.5~~
154.0   −0.50

921   14 ~~[illegible]~~ 2 ~~ntu~~   Uoh.

6   24   +11°.4
10   52
+4   28

Posted to here

Mar. 20. 1894.

Pretty cloudy.

o Ceti. Gr. obs.

2 14 −3.4°
7 20
+5 6

Too cloudy.

7 40
+5 26

Still cloudy.

Bright Double Stars. Gr. obs.

Σ 480.

3 57 +62.0
8 25
+4 28

Index above.

311.1 = Pre + northern dis.
44.7 93.6°

313.3
38.9 85.6°

179.2° −0.02 ~~+2.0°~~

Mar. 20. 1894.

Index below.

46.2		
125.9	79.7^	
35.8		
132.5	96.7^	
	176.4^	−0.07 ~~+2.1~~ ✓
35.5		
131.8	96.3^	
47.0		
123.7	76.7^	
	173.0^	−0.13 ~~+2.1~~ ✓

Index above.

135.2		
216.7	81.5^	
128.8		
223.2	94.4^	
	175.9^	−0.08 ~~+2.1~~ ✓
128.7		
223.1	94.4^	
133.9		
218.2	84.3^	
	178.7^	−0.02 ~~+2.0~~ ✓

Index below.

228.7		
303.0	74.3^	
217.2		
315.1	97.9^	
	172.2^	−0.15 ~~+2.1~~ ✓

Mar. 20, 1894.

Σ 528   X Tauri   M. ob.

4   15   + 25°.3
8   .63
+4   48

Index below

99.8
252.0   152.2 ^
clouds
101.4
247.8   146.4 ^
298.6 ^   ~~−0.8~~ ^
61.4   2.81

Index above

191.0
339.0   148.0 ^
191.4
342.8   151.4 ^
299.4 ^   ~~−0.8~~ ^
60.6   2.84
190.0
341.2   151.2 ^
clouds
194.0
341.7   147.7 ^
298.9 ^   ~~−0.8~~ ^
61.1   2.82

Mar. 20, 1894

Index below

284.2
67.0 142.8 ^
281.3
71.0 149.7 ^
292.5 ^ ~~0.6~~ ^
67.5 2.59

~~281.7~~
~~71.4~~ ~~149.7~~

284.8
68.5 143.7 ^
281.0
71.5 150.5 ^
294.2 ^ − ~~0.6~~ ^
65.8 2.65

Index above

10.3
161.7 151.4 ^
14.0
157.8 143.8 ^
295.2 ^ ~~0.7~~ ^
64.8 2.68

Σ 533 H.V. 72 W. obs.

4 16 +34.0°
9 30
+5 14

Mar. 20, 1894

Index above

38.0 < fol. mov. + fix. dis.		
143.0	105.0 ^	
24.0		
146.8	122.8 ^	
	227.8 ^	~~+1.1~~ ^
Index below	~~132.2~~	−0.93
294.8		
58.7	123.9 ^	
298.1		
54.0	115.9 ^	
	239.8 ^	~~+0.8~~ ^
	120.2	−1.19
299.7		
54.0	114.3 ^	
293.7		
59.9 ~~60.2~~	126.2 ^	
	240.5 ^	~~+0.8~~ ^
Index above	119.5	−1.20
21.2		
149.2	128.0 ^	
27.8		
149.9	22 1XX.1	
	50 2X~~0~~.1	~~+0.6~~ ^ ~~0.8~~
26.9	109.9	−1.42
140.8	113.9 ^	
22.9		
147.0	124.1 ^	
	238.0 ^	~~+0.9~~ ^
	1320	−1.15

Mar. 20, 1894

Index below

113.1
237.0 125.9 ʌ
119.0
233.9 114.9 ʌ
240.8 ʌ ~~10.8~~ ʌ
1292 −1.00

Σ 552 H. M. 44 Mots.

4 22 +39°.7
9 53
+5 30

Index below

308.0
44.0 < fol. + sec. div. 96.0 ʌ
305.0
46.7 101.7 ʌ
197.7 ʌ ~~11.7~~ ʌ
Index a 162.3 −0.34

368
136.8 100.0 ʌ
34.7
136.0 101.3 ʌ
201.3 ʌ ~~11.6~~ ʌ
158.7 −0.41

Mar. 20, 1894

33.0		
138.3	105.3 ^	
34.0		
135.1	101.1 ^	
	206.4 ^	~~+1.5~~ ^
	Index ~~below~~ 155.36	−050
122.1		
228.7	106.6 ^	
126.0		
224.2	98.2 ^	
	204.8 ^	~~+1.5~~ ^
308.1	155.2	−0.47
47.0	98.9 ^	
304.9		
45.8	100.9 ^	
	199.8 ^	+1.6 ^
	Index ~~above~~ 160.2	−038
36.1		
135.8	99.7 ^	
35.7		
135.0	99.3 ^	
	199.0 ^	+~~1.6~~ ^
	161.0	−0.36

Mar. 20, 1894

Σ 550 1 Camel. W. obs.

4 22 + 53°.6
10 13
+5 51

Index above

117.0 < Prec. no. + ftr. divis.
224.0 107.0 ^
117.0
233.1 116.1 ^ – 0.84
223.1 ^ ~~+1.2~~ ^
136.9

Index below

208.6
322.9 114.3 ^
204.4
327.0 122.6 ^ – 1.13
236.9 ^ ~~+0.9~~
123.1
208.0
328.0 120.0 ^
210.9
323.8 112.9 ^
232.9 ^ ~~+1.0~~ ^
127.1 – 1.04

Index above

298.2
52.0 113.7 ^
299.9
54.3 114.4 ^
228.1 ^ ~~+1.1~~ ^
131.9 – 0.94

Mar. 20, 1894

300.1
52.7   112.6 ^
298.3
51.9   113.6 ^
&   226.2 ^   ~~+1.1~~ ^
113.8   −0.90
Index below

28.9
143.8   114.9 ^
23.3
146.1   122.8 ^
237.7 ^   ~~+0.9~~ ^
122.3   −1.14

610 → barrel

Σ 764   HR 75   N.

5 p   33   +29°.4
10   35
+5   2

Index to left

119.0 < fol. so. + fli. des.
232.0   113.0 ^
125.0
226.3   101.3 ^
214.3 ^   ~~+1.3~~ ^
107   −0.66

Mar. 20, 1894

Index to right.

215.0		
319.3	104.3 ʌ	
210.1		
323.2	113.1 ʌ	
	217.4 ʌ	~~+1.3~~ ʌ
210.0	1~~4~~2.26	−0.72
322.2	112.2 ʌ	
218.2		
317.7	99.5 ʌ	
	211.7 ʌ	~~+1.4~~ ʌ
	1~~4~~8.3	−0.61

Index to ~~left~~

304.9		
46.1	101.2 ʌ	
299.2		
53.7	114.5 ʌ	
	215.7 ʌ	~~+1.3~~ ʌ
300.0	1~~44~~.3	−0.69
53.3	113.3 ʌ	
306.0		
4~~3.5~~ 58	99.8 ʌ	
	~~97.5~~	
	21~~0.8~~ 3.1 ʌ	~~+1.4~~ ʌ
	~~14~~69	−0.64

right

Index to ~~left~~

33.0		
136.3	103.3 ʌ	
27.9		
140.7	113.0 ʌ	
	216.3 ʌ	~~+1.5~~ ʌ
	1~~4~~8.04	−0.70

Mar. 20, 1894

~~Σ 855~~

~~6 2~~ +2°.5
~~10 53~~
~~+4 51~~

~~Index above~~

~~291.0~~
~~62.0~~ ~~< fil. dis.~~ ~~131.0~~
~~286.0~~

Abandoned, too low and in cloud.

Σ 924 20 Gem. Uobs.

6 25 +17°.9
10 60
+4 35

Index above

~~42.2~~
~~129.9~~ ~~87.7~~
120.0 near fil. dis.
233.8 113.8
124.0
222.2 98.2
212.0 ~~+1.4~~
1480 −0.61

Mar 20, 1894

Index below

217.0
317.0 100.0 ^
210.0
322.8 112.8 ^

212.8 ^ ~~+1.4 ^~~
208.8 1472 −0.63
~~2~~3 22.0 114.2 ^
216.6
316.6 100.0 ^ ~~+1.3~~

2~~2~~1 4.2 ~~+1~~

Index a~~bove~~ 1458 0.66

307.8
42.1 94.3 ^
301.0
52.8 111.8 ^

206.1 ^ ~~+1.5 ^~~
1539 0.50
302.7
54.3 111.6 ^
309.0
44.0 95.0 ^

206.6 ^ ~~+1.5 ^~~

Index be~~low~~ 1534 −0.51

37.0
134.2 97.2 ^
30.2
11 2 142.2 111.9 ^

209.1 ^ ~~+1.4 ^~~
1509 −0.56

Posted to here.

Mar. 23, 1894

o beti   U. obs.

2   14   − 3.°4
7   27
+5   13

clouds
clouds
Left and above

179.0
7 8   353.0   174.0 ✓^
178.4
353.9   175.5 ✓^
349.5 ✓^   ~~−4.7~~ ✓
10.5   −6.69

Right and below

267.9
83.2   175.4 ✓^
269.0
82.7   173.7 ✓^
349.1 ✓^   ~~−4.6~~ ✓
10.9   −6.61
269.5
82.8   173.3 ✓^
268.6
83.0   174.4 ✓^
347.7 ✓^   ~~−4.9~~ ✓
12.3   −6.35

Mar. 23, 1894

Left and above

358.5
173.7   175.2 ✓^
359.$\overset{2}{\cancel{7}}$
7 30   172.4   173.2 ✓^
348.4 ✓^   ~~-4.5~~ ✓
11.6   -6.18

7. 47   4
12   8.0^

23.5
X   31.1   7.6^

Settings very difficult; images blurry, and changing in intensity. Observations made through more or less passing clouds; & very close to horizon. Last two sets thought not to be quite so good as first two.

The mean of the observed times of the above observations on α Cate. corresponds to an altitude of 3.°8, not allowing for refraction.

Faint Variables

3184 T Hydrae   No obs.

8   53   - 8.6
8   27
-    26

Mar. 23, 1894

8 47 43.8
48 17.9

Difficulty in identifying T Hydrae, star m (old notation) seems to be in position relatively to d (old notation) star i prec. star ~~sm~~ m 41^s 2^m north, star i is 11.5 magn. Now there as 12 magn star foll, i 8 sec. 2^m south. Now a 9.5 magn. foll. star i 15^s 1^m north. This would seem to be clearly g. a ~~12~~ 11.5 mag. star foll star g (~~i~~) 4.5^s ~~3~~ 2^m south. Stars assumed to be i and g together with the 12 magn seem to form a triangle similar to the on chart. The 11.5 magn is not down on chart but it can hardly be T Hydrae if the chart is right for T Hydrae should be south of the 12 magn. instead of north. The T Hydrae of chart, however, is not seen nor suspected. ~~Star~~ Reed's star i seems to be the faintest star selected on chart, old star i is fainter than this, and would seem to ~~be~~ make a good comparison star. Assuming for the moment that the 11.5 m is T Hydrae, old star i = T

Est of T 11.5

Star m prec. star d 38^s $5\frac{1}{2}^m$ south of it.

8 55 all the above stars are old notation.

Mar. 23, 1894

Pos. 0 200.0
45.0
0 2450 setting

9	19	10.0	star b (old notation)
	20	1.5	" "
	20	34.0	star i " "
	21	7.0	
	21	22.0	star b
	22	13.4	" "
	22	42.4	star i
		19.7	" "

star b in north half, star i in southern half.

DM Wedge Zones

Series 167 +19° N.obs

4 54 +21.3°
9 36
+4 42

Mar. 23, 1894

		831	4.18		
9	20		4.21		
			4.30	12.69^s	5.49^s
		835	2.82		
			3.10		
			3.00	8.92^s	3.86^s
		837	837 follows 835 13^s, 6^m south		
			2.40		
			2.50		
			2.43	7.32^s	3.17^s
		848	3.11		
			3.20	double star. comp. measured	
			3.08	9.39^s	4.07^s
		852	2.81		
			3.17		
			3.20	9.18^s	3.97^s
		866	3.20		
			3.31		
			3.30	9.81^s	4.25^s
		868	2.20		
			2.30		
			2.35	6.85^s	2.97^s

Mar. 23. 1894

871	2,97		
	2,98		
	2,90	8,85‹	3.83‹
874	2,60		
	2,77		
	$\overset{2}{\cancel{3}}.70$	8.07‹	3.49‹
876 ~~473~~	4.73		
	4.65		
	4.68	14.06‹	6.09‹
881	4.39		
	4.67		
	4.60	13.66‹	5.91‹
936	3.90		
	4.08		
	4.00	11.98‹	5.19‹
938	4.00		
	3.90		
	3.90	11.80‹	5.11‹
940	2,60		
	2,71		
	2.70	8,01‹	3.47‹

Mar. 23, 1894

94~~3~~4	2.58		
	2.82		
	2.71	8.11^{c}	3.51^{c}
943	2.27		
	~~2~~1.88		
	2.01	6.16^{c}	2.67^{c}
1067	3.80		
	4.00		
	3.92	11.72^{c}	5.07^{c}
1074	2.53		
	2.66		
	2.60	7.79^{c}	3.37^{c}
1079	3.50		
	3.51		
	3.55	10.56^{c}	4.57^{c}
108~~4~~5	3.10		star brt. for a g.5
	3.18		
	3.22	9.50^{c}	4.11^{c}
108~~5~~4	2.90		
	2.93		
	3.00	8.83^{c}	3.82^{c}

Mar. 22, 1894

1088	3.20		
	3.40		
	3.32	9.92 ✓	4,30 ✓
1090	2,61		
	2.98		
	3.20	8,79 ✓	3.81 ✓
1094	2,50		
	2.79		
	2,65	7.94 ✓	3,44 ✓
1098	2,60		
	2,55		
	2,62	7.77 ✓	3,36 ✓
1108	3,10		
	3.20		
	3.11	9.41 ✓	4,07 ✓
1112	2,32		
	2.49		
	2.52	7,33 ✓	3.17 ✓
1117	281		
	2,98		
	2,90	8,69 ✓	3,76 ✓

Mar. 23, 1894

1121	2.99	This star has a flr. comp. slightly north pr.	
	2.81		
	3.19	8.99	3.89
1133	2.68		
	2.87		
	2.80	8.35	3.62
1135	2.40		
	2.61		
	2.72	7.73	3.35
1146	4.20		
	4.30		
	4.18	12.68	5.49
1148	2.99		
	3.30		
	3.05	9.34	4.04
1162	2.82		
	3.20		
	3.18	9.20	3.98

Star 1162 is rather ft. for a 9.0; this may partly be due to the proximity of 1163 in the tel. of the Durchmusterung. 1163 foll. 1162 3.5 1^m south. Est. magn. of 1162, 9.4.

Mar. 23, 1894

	1163	4.07		
		4.20		
		4.39	12.66^{s}	5.48^{s}
~~11 16~~	1165	4.66		
~~16 59~~		4.80		
" "		4.68	14.14^{s}	6.12^{s}

15

Beginning with this date (Mar. 24, '94) variables not fully and certainly identified, are not posted either in Book of Ephemerides or on board.

Posted to here

Mar. 24, 1894

o beti Mobs.

v. 14 −3°.4

7 37

+5 23

Left and above

7 13

358.5

173.3 174.8 ✓

359.0

173.3 174.3 ✓

349.1 ✓ ~~−4.6~~ ✓

10.9 −6.61

Right and below

269.8

83.0 173.2 ✓

269.0

83.5 174.5 ✓

347.7 ✓ ~~−4.3~~ ✓

268.8 12.3 −6.38

83.0 174.2 ✓

269.2

7 28 82.7 173.5 ✓ −6.35

347.7 ✓ ~~−4.3~~

12.3

Farther settings cannot be taken. o beti very low when above settings were taken, images faint and comp. difficult. Images compared seen rather the best in first set.

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δ M Wedge Zone   W. obs,

Series 16~~7~~8 + 9° (Special)

		4	6	+9°.9	
		8	20		
		+4	14		
		549	6.20		
A	2		6.01		
			6.05	18.26	7.91
		552	3.57		
			3.60		
			3.72	10.89	4.72
		545	3.46		
			3.22		
			3.25	9.93	4.30
		581	3.00		
			3.10		
			3.15	9.25	4.01
		590	5.75		
			5.83		
			5.92	17.50	7.58

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	605	3.40		
		3,38		
		3.43	10.21	4.42
	606	4.85		
		4.70		
		4.72	14.27	6.18
	619	4.40		
		4.25		
		4.15	12.80	5,54
	614	2.31		
		2.12		
		2.15	6.58	2.85
	625	3.60		
		3.62		
		3.55	10.77	4.66
L A.6	62~~8~~7	3.65		
		3.50		
		3.61	10.76	4.66

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Faint Variables.

T Can. Min. Ir. obs.

7 28 +12°
9 5
+1 37

7 26 +12.6
9 7
+1 41

7 24 +13.0°
9 12
+1 48

9 2$\overset{5}{\cancel{6}}$ 56.1
26 32.6

There seems to be apparently a slight error in the old chart in the location of the variable and the faint star closely adjacent to it. The star assumed to be x follows star c $35^{s}.5$ and $6^{m}.5$ south of it, magn 12. it is decidedly fainter than stars y and z but it is the brightest star in this place. There is a faint star preceding star assumed to be x 4^{s}, 1^{m} south of it, magn 13.8, whereas

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the faint star on the circle surrounding the variable on old chart is a little north of it, but it would seem to be probably that star. There is a still fainter star prec. the last star mentioned 3^{s} 0.5^{m} north, magn 14.0; this may possibly be the variable but if it is not, the variable is invisible to night. This last star assumed to be possibly the variable is a little north of the star mentioned just before it, whereas the chart makes the variable a little ~~north~~ south of the star assumed to be the variable. If such, there is a faint star a little foll. & which is equal to it in brightness, which will be provisionally assumed as its comp. star tonight. The foll. is a location of it,

Pos. 0 199.3
45.0
0 244.3

9 40 47.4
53.5

16.5

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34.1
45.8

10.9
11.2

42 42.1
49.5

43 11.1

1st set	44	35.1	star x
		41.4	ftr. comp. star
	45	0.9	" " "
		4.4	star x
2d set.	46	30.1	
		36.0	
		55.2	
		59.0	

both in southern half.

There are two other fol ~~comp.~~ stars a little foll. ftr. comp. star, one being quite closely foll. and the other foll. the latter by a little larger interval, and is a little south of it. The first one is fully as faint as faint

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comp star, and the second one is fully
9 30 as bright and perhaps a little brighter
~~Sky~~ Sky now becomming hazy.
Sky now getting pretty clear in the West

DM Wedge Zone

Series ~~168~~ 169 +19°

5 51 +19°.9
10 26
+4 35

Still a little hazy in the west
abandoned for the present

R Geminorum

7 0 +22°.1
10 33
+3 33

Sky too hazy in this region.
Now clear in west in region of zone.

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8 M Wedge gone

Series 16~~8~~9 +19°

5 51 +19.9
10 41
+4 50

~~9 36 4.01~~
~~4.20~~
~~4.11 12.32~~

~~9 38 3.80~~
~~3.87~~
~~3.78 11.45~~

876 4.70
10 27 4.77
4.88 14.35 6.21

881 4.50
4.32
4.38 13.20 5.72

5 38 +19.9
10 66
5 28

Mar. 24, 1894

1067	3.90		
	3.95		
	4.02	11.87<	5.14<
1098	2.61		
	2,80		
	2,75	8,16<	3,53<
1108	3,00		
	2.87		
	3.10	8,97<	3.88<
1112	2.85		
	2,64		
	2,60	8.69<	3.50<
1117	2.90		
	3.10		
	3.05	9,05<	3,92<
1121	3,00		
	3,22		
	3.18	9,40<	4.07<
1133	2,80		
	2,65		
	261	8,06<	3,49<

Mar. 24, 1894.

	1135	2,58		
		2,50		
		2.42	7,50	3.25
	1146	4.22		
		4.30		
		4.41	12,93	5.60
	1148	3.10		
		3.22		
		3.31	9,63	4.17
	1162	3.10		
		3.17		
		3.18	9,45	4.09
	1163	4.41		
		4.22		
		4.30	129.3	5.60
11 5	1165	4.73		
		4.62		
		4.55	13.90	6.02

Posted to here.

Mar. 26. 1894

o Ceti W. obs.

2 14 −3°.4
7 50
+5 36

o Ceti seen, but companion not visible either with ordinary eye piece or in photometer. o Ceti followed down to the horizon. Some

7 38 cloudy at times.

Faint Variables W. obs.

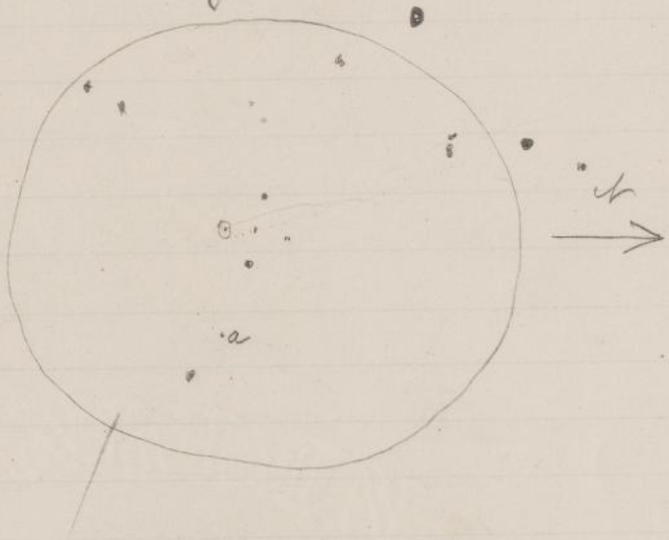
4377 T Virginis W. obs.

12 7 −4°.9
8 23
3 44
12 00
+8 16
clouds

11 58 −5°.0
8 56
3 2
12 0
+8 58
clouds

See next page

Mar. 2~~7~~6, 1894
T Virginis.



9 9 Var. = star a in lar. tel.
Tool ft. for finder.
Est. 14.1

Sky pretty clear but probably not the very best, as it has been cloudy, and there is some wind. Somewhat cold also.
Region also not very high.

Transits to locate. star a with reference to variable.

	Pos.	0 58.0	~~comp. star~~
		45.0	
		103.0	
9	3.6	31.5	comp. star
		44.9	"
		52.3	variable
	37	19.9	"

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9 37 51.9
38 5.7
13.0
39.4

both in northern half

R Comae N. obs.

11 57 +19°.6
9 5.6
2 1
1.2 00
+9 59

11 57
10 00
1 57
12 00
10 3

15 8.0
12.5
32.0
53.1

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16	22.1
	27.3
	46.0
17	8.5

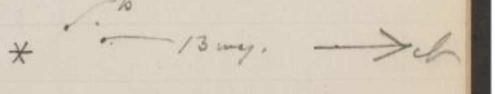
Order of prec. transit, bright star faint star, bright star, faint star. Both in northern half.

~~20~~	~~29.3~~
~~21~~	~~8.1~~
	~~9.2~~ ?
	~~33.0~~
	~~41.0~~

In above transits the bright star is star a on chart near var, and the faint star is thought to be the var.

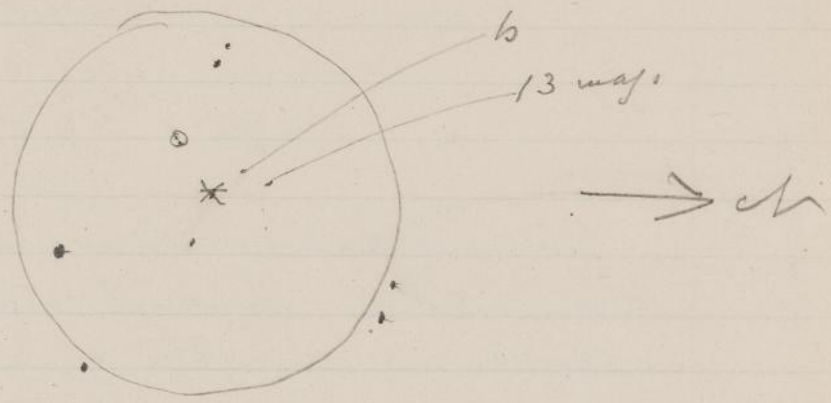
There is a very faint star, near star a, a little ~~south~~ north foll, and a little foll. the middle point of a line joining a and a 13 mag. star near by, but the seeing is so bad that it cannot be located with the bar. Call this star b. Var = b

9 55 Est. 14.7



See also diagram on next page.

Mar. 26, 1894



Star b in above diagram is comparison star b used on previous page to compare the variable with.

V Virginis		U. obs.
13	17	−3°.8
10	47	
2	30	
12	00	
+9	30	
13	24	−1°.6
10	49	
2	35	
12	00	
+9	25	

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11	1	24.0	var.	
		41.9	"	
	2	25.5	comp. star	
		34.4	"	[44.4(?)]

Var. in southern half, comp. star in northern half

The above transits are to locate a new comp. star. It is ~~apparently~~ the star on old chart, at $13^h\ 21^m\ 10^s$ and decl. − 2° 13'. Call this star a. Then V Virginis = star a.

10 5.0 Est. 11.0

The recorder thinks that $2^h\ 34^m.4$ above transits may possibly have been $2^h\ 44^m.4$

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U Cephei. Iv. obs.

0 √0 +81.1

8 2√

+7 3√

~~B+C. 1182 used. Compared with B 394 at beginning and at with it.~~

B+C. 1182 B. 394

8^h 1^m 23.8^s 8^h 1^m 4.0 ~~0.0~~

Compared with Dm. +81° 26.

Right and above.

h m s

8 15 37

- 11.9 147.2 90
- 159.1
- 12.3 148.7 90

8 15.6

-0.3

8 15.3

= 161.0 295.9 ~~-0.7~~ 4.71 ~~2.71~~

64.1 32.05

left and below

m s

17.36

- ~~116~~ 103.9 146.9 180
- 250.8 180

17.6

17.3

- 105.0 144.0
- 249.0 290.9 ~~-0.5~~ 4.54 ~~2.54~~

69.1 34.55

m s

19.41

- ~~160~~ 106.5 143.3 180
- 249.8 180

19.7

19.4

- 103.0 148.8
- 251.8 292.1 ~~-0.6~~ 4.58 ~~2.58~~

67.9 33.95

Mar. 30. 1898.

right + above

h	m s	-	193.0				270
8	22.0	-	338.2	145.2″			
8	22.0	-	195.2	143.8″		4.47	270
	21.7	-	339.0	289.0″	~~-0.5~~	~~2.47~~	
				71.00″	35.50″		
	m s	-	194.8	144.3″			
	23.4	-	339.1				270
	23.5	-	193.1	146.7″		4.54	270
	22.8	-	339.8	291.0″	~~-0.5~~	~~2.54~~	
				69.00″	34.50″		

left + below

		-	284.0				
	m s 25 21	-	71.2	147.2″			0
	25.4	-	284.9	144.1″		4.55	0
	25.1	-	69.0	291.3″	~~-0.5~~	~~2.55~~	
				68.7″	34.35″		
		-	284.0	146.7″			
	m s 26 28	-	70.7				0
	26.5	-	283.8	147.2″		4.64	
	26.2	-	71.0	293.9″	~~-0.6~~	~~2.64~~	0
				66.1″	33.05″		

Mar. 30, 1894.

right + above

h m s
8 28 0 - 11.0
8 28.0 - 161.1 150.1
27.7 - 11.0 149.4 4.84
- 160.4 299.5 ~~−0.8~~ ~~2.84~~
60.5 30.25

m s
- 13.1 147.4
29 10 - 160.5
29.2 - 13.3 147.8 4.68
28.9 - 161.1 295.2 ~~−0.7~~ ~~2.68~~
64.8 32.40

left + below

m s
- 103.0
30 36 - 250.3 147.3
30.6 - 104.2 143.8 4.54
30.3 - 248.0 291.1 ~~−0.5~~ ~~2.54~~
68.9 34.45

m s
- 104.3
31 47 - 250.0 145.7
31.8 - 102.2 146.8 4.58
31.5 - 249.0 292.5 ~~−0.6~~ ~~2.58~~
67.5 33.75

right + above

m
- 190.7 151.4
40.6 - 342.1
40.1 - 192.0 151.1 4.96
39.8 - 343.1 302.5 ~~−1.0~~ ~~2.96~~
57.5 28.75

Mar 30 1894

h m s

8 41 11 — 193.2 — 149.0

8 41.2 — 342.2

40.9 — 191.0 — 150.6 — 4.85

341.6 — 299.6 — 0.8 — ~~2.85~~

60.4 — 30.20

left & below

m s

282.0 — 150.3

42 36 — 72.3

42.6 — 284.0 — 147.2 — 4.76

42.3 — 71.2 — 297.5 — 0.8 — ~~2.76~~

62.5 — 31.25

m s

284.0 — 147.9

43 57 — 71.9

43.8 — 281.0 — 152.1 — 4.86

43.5 — 73.1 — 300.0 — 0.9 — ~~2.86~~

60.0 — 30.00

right & above

m s

11.0 — 152.1

45 40 — 163.1

45.7 — 11.8 — 149.4 — 4.92

45.4 — 161.2 — 301.5 — 0.9 — ~~2.92~~

58.5 — 29.25

m s

10.7 — 152.3

46 57 — 163.0

47.0 — 11.0 — 151.2 — 5.00

46.7 — 162.2 — 303.5 — 1.0 — ~~3.00~~

56.5 — 28.25

Mar. 30, 1894.

left + below

h m s
8 48 33
8 48.6
48.3

100.8
251.5 150.7
102.5
250.5 148.0
298.7 ~~-0.8~~
61.3 30.65
4.81
~~2.81~~

m s
49 49
49.8
49.5

103.1
248.1 145.0
101.7
253.3 151.6
296.6 ~~-0.7~~
63.4 31.70
4.73
~~2.73~~

right + above

m s
51 12
51.2
50.9

192.0
342.2 150.2
190.3
343.3 153.0
303.2 ~~-1.0~~
56.8 28.40
4.98
~~2.98~~

m s
52 11
52.2
51.9

192.9
342.0 149.1
190.0 ~~119.0~~
343.0 153.0 ~~124.0~~
~~273.1~~
302.1 ~~-0.9~~
57.9 28.95
4.94
~~2.94~~

left + below

m s
53 14
53.2
52.9

281.1
73.3 152.2
281.9
71.0 149.1
301.3 ~~-0.9~~
58.7 29.35
4.91
~~2.91~~

Mar. 30, 1894.

8h 54m 22s 283,3 146.8
8 54.4 70,1
54.1 280,9 153.1 4.86
74,0 299.9 ~~-0.9~~ ~~2.86~~
60.1 30.05

right + above

190,1 152.9
55m 43s 343,0
55.9 191,2 152.6 5.08
55.4 343,8 305.5 ~~-1.1~~ ~~3.08~~
54.5 27.25

190,1 153.2
56m 48s 343,3
56,8 190,2 151.1 5.02
56.5 341,3 304.3 ~~-1.0~~ ~~3.02~~
55.7 27.85

left + below

282,0 150.9
58m,0s 72,9
58.0 283,0 148.9 4.85
57.7 71,9 299.8 ~~-0.9~~ ~~2.85~~
60.2 30.10

282,7 149.3
59m 12s 72,0
59.2 281,0 153.0 4.94
58.9 74,0 302.3 ~~-0.9~~ ~~2.94~~
57.7 28.85

Mar 30, 1894

h m s
9 0 27 right + above

0.4^ #10.1
0.1^ 163.0 152.9^

10.8 152.2^ .06✓
163.0 305.1^ ~~-1.1~~ ~~3.06~~
54.9^ 27.45^

m s
9.9
2 20 162.8 152.9^
2.3^ 9.5 154.5^ .16✓
2.0^ 164.0 307.4^ ~~-1.2~~ ~~3.16~~
52.6^ 26.30^

left + below

m s
102.1
5 58 251.0 148.9^
6.0^ 101.0 152.8^ 4.90✓
5.7^ 253.0 300.9^ ~~-0.9~~ ~~2.90~~
59.1^ 29.55^

m s
101.0
7 43 252.8 151.8^
7.7^ 99.1 154.6^ .12✓
7.4^ 253.7 306.4^ ~~-1.1~~ ~~3.12~~
53.6^ 26.80^

right + above

m s
188.0
9 14 344.9 156.9^
9.2^ 189.5 155.4^ .38
8.9^ 344.9 312.3^ ~~-1.1~~ ~~3.38~~
47.7^ 23.85^

Mar. 30, 1894.

h
9 m s
10 21
10.4^
10.1^

191.1 152.6^
343.7
189.1 154.8^
343.9 307.4^ ~~-1.2~~
52.6^ 26.30^

5.16✓
~~3.16~~

left & below

m s
11 36
11.6^
11.3^

282.0 150.4^
72.4
280.2 152.7^
72.9 303.1^ ~~-1.0~~
56.9^ 28.45^

4.95✓
~~2.98~~

m s
12 44
12.7^
12.4^

280.5 152.0^
72.5
280.7 152.6^
73.3 304.6^ ~~-1.0~~
55.4^ 27.70^

5.04✓
~~3.04~~

right & above

m s
14 10
14.2^
13.9^

11.5 150.4^
161.9
10.8 152.2^
163.0 302.6^ ~~-1.0~~
57.4^ 28.70^

4.96✓
~~2.96~~

m s
15 20
15.3^
15.0^

9.9 151.6^
161.5
10.0 154.8^
164.8 306.4^ ~~-1.1~~
53.6^ 26.80^

5.12✓
~~3.12~~

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left + below

9^h $16^m 26^s$

16.4

16.1

100.7 152.3
253.0
100.1 153.4
253.5 305.7 ~~-1.1~~ 5.08 ~~3.08~~
54.3 27.15

$17^m 30^s$

17.5

17.2

102.0 150.8
252.8
100.4 152.6
253.0 303.4 ~~-1.0~~ 4.99 ~~2.99~~
56.6 28.30

right + above

$19^m 29^s$

19.5

19.2

191.0 153.9
344.9
189.0 156.0
345.0 309.9 ~~-1.3~~ 5.26 ~~3.26~~
50.1 25.05

$20^m 53^s$

20.9

20.6

188.9 156.8
345.7
188.0 155.3
343.3 312.1 ~~-1.4~~ 5.36 ~~3.36~~
47.9 23.95

left + below

$22^m 3^s$

22.0

21.7

282.7 151.3
74.0
281.9 149.8
71.7 301.1 ~~-0.9~~ 4.90 ~~2.90~~
58.9 29.45

Mar. 30, 1894.

h
24
9 23.4 279.8 154.2^
74.0
23.4^ 280.0 5.23
23.1^ 74.7 155.7^ ~~3.23~~
305.9^ ~~-1.2~~
51.1^ 25.50^

right & above

m s 9.3 152.0^
25 53 162.1
25.9^ 111.1 5.04
25.6^ 163.0 151.9^ ~~3.04~~
304.7^ ~~-1.0~~
55.30^ 27.65^

m s 10.1 152.9^
26 48 163.0
26.8^ 10.4 5.12
26.5^ 163.9 153.5^ ~~3.12~~
306.4^ ~~-1.1~~
53.6^ 26.80^

left & below

m s 99.8 153.5^
28 22 253.3
28.4^ 99.7 5.06
28.1^ 251.3 151.6^ 3.06
305.1^ ~~-1.1~~
54.9^ 27.45^

m s 100.9 150.2^
29 46 251.1
29.7^ 99.9 5.03
29.4^ 254.1 154.2^ ~~3.03~~
304.4^ ~~-1.0~~
55.6^ 27.80^

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right + above

h m s	188,7	154.5		
9 31,7	343,2			
31.1	189.8	153.2		5.17
30.8	343.0	307.7	~~-1.2~~	~~3.17~~
		52.3	26.15	

m s	191,7	150.5		
32 27	342,2			
32.4	190.1	153.9		5.03
32.1	344.0	304.4	~~-1.0~~	~~3.03~~
		55.6	27.80	

left + below

m s	281,0	152.9		
33 42	73.9			
33.7	281.7	150.8		5.00
33.4	72.5	303.7	~~-1.0~~	~~3.00~~
		56.3	28.15	

m s	281.8	149.5		
35 5	71.3			
35.1	279.0	154.8		5.02
34.8	73.8	304.3	~~-1.0~~	~~3.02~~
		55.7	27.85	

right + above

m s	10.0	154.0		
36 25	164.0			
36.4	10.2	154.2		5.19
36.1	164.4	308.2	~~[illegible]~~	~~3.19~~
		51.8	25.90	

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h m s 11.5
9 37 17 164.7 153.2
37.3 9.0 153.9 5.15
37.0 162.9 307.1 ~~−1.1~~ ~~3.14~~
52.9 26.45

left + below

m s 100.3 153.4
38 23 253.7
38.4 102.0 150.8 5.0
38.1 252.8 304.2 ~~−1.0~~ ~~3.02~~
55.8 27.90

m s 99.4 151.6
39 25 251.0
39.4 99.0 154.3 5.10
39.1 253.3 305.9 ~~−1.1~~ ~~3.10~~
54.1 27.05

right + above

m s 190.4 152.6
40 45 343.0
40.8 191.0
40.5 342.1 151.1 5.00
303.7 ~~−1.0~~ ~~3.00~~
56.3 28.15

B. + C. 1182 B. 394.
10 6 19.5 10 6 0.0
7 19.5 7 0.0

Mar. 30. 1894.

Search for Denning's New ☄
Tr. Ob.

9 √√ +32.2
11 0
+1 √

9 √√.
11 1√
+1 2 0

9 55
11 23
+1 28

Extended search made for comet but not found; it is now four days since the announcement of its dis-covery so that it probably has moved considerably Very abundant auroral light in field so that it is not to be wondered at that comet cannot be found

~~Very~~ Unusually brilliant aurora throughout evening
A first of evening there was a brilliant arch in S at right angles

Mar. 30, 1894

to the plane of the Meridian with streamers and irregular light farther North The main feature of the aurora was that it seemed to radiate from the Zenith as a centre. Its manifestations in the Zenith were especially fantastic and unique assuming a great variety of shapes which were constantly changing their form There was considerable rose tint especially in the W. It is now almost wholly N. of the Eq. and its brightest phases are N. of the Z. It is not as brilliant as earlier in the evening ~~and its forms are not as f~~
h m s and it has not much variety in form
10 57.0 at the present time

Apr. 2. 1894

Reap. Jup. I. Phot. R. W. obs. Waite, Rec.
Comp. with sat. fol. = Sat. II.

Chron. error = $+22^{s}.4$

7	25	3	7	24	41	false alarm	
		34		25	12	" "	
	26	5			43	~~first seen~~ susp.	
		15			53	seen	
		22		26	00	67.5	
		36			14	108.0	40.5
		44			22	63.0	45.0
		52			30	110.8	47.8
		59			37	59.0	51.8
	27	8			46	117.2	58.2
		15			53	52.5	64.7
		22		27	00	118.2	65.7
		32			10	49.8	68.4
		38			16	122.9	73.1
		46			24	48.2	74.7
		53			31	123.2	75.0
	28	3			41	48.3	74.9
		13			51	127.0	78.7
		21			59	46.8	80.2
		30		28	8	125.7	78.9
		38			16	43.0	82.7
		47			25	127.5	84.5
		57			35	44.2	83.3

Apr. 2. 1894.

7	29	8	7	28	46	126.8	826	
		20			58	40.0	86.8	
		36		29	14	133.2	93.2	
		46		231s		44.0		
		54	7	29	57.8	131.2	87.2	351.0
	30	1	7	29	36	44.5	86.8	87.8
		10				131.3	174.0	
		20				40.0	87.8	
				155s				
		30	7	30	38.8	127.8		336.9
		48	7	30	17.	40.4	88.3	84.2
		57				128.7	176.1	
	31	9				41.0	91.1	
				98s				
		18	7	31	24.5	132.1		344.8
		30	7	31	2	43.7	84.3	86.2
		41				128.0	175.4	
		50		256s		41.3	87.5	
	32	0	7	32	4.0	128.8		341.0
		9	7	31	42	42.8	85.3	85.2
		17				128.1	172.8	
		25		145s		43.9	84.3	
		33	7	32	36.2	128.2		341.3
		40	7	32	14.	41.2	86.8	85.3
		47				128.0	171.1	
		54		264		41.3	85.5	
	33	0	7	33	6.0	126.8	6	
			7	32	44			

Apr. 2, 1894

7	33	8		43.0	87.0	341.1
		22		130.0	172.5	85.3
		31	198s	39.0	90.7	
		45	7 33 49.5	129.7		339.7
		55	7 33 28	44.0	7 83.0	84.9
	34	7		127.0	193.9	
	35	32	201s	43.7	81.1	341.6
		43	7 35 50.2	124.8		85.4
		55	7 35 28	45.1	82.9 167.8	
	36	11		128.0		
			L. V.			
	37	27	232s	69.2	32.8	346.5
		46	7 37 58.0	102.0		86.6
	38	8	7 37 36.	72.0	31.3	
		31		103.3	64.1	

~~Seeing~~ ~~fairly~~ pretty ~~good at times, but at intervals quite blurry.~~
First setting delayed from blurry
~~state of atmosphere at time.~~

B + C. 1182.			Bond 394.		
7	46	23.8	7	46	~~0.0~~ 1.4
7	47	23.9	7	47	~~0.0~~ 1.4
7	48	23.8	7	48	~~0.0~~ 1.4

Apr. 2, 1894.

Dm. Wedge Zone (Special) W. B.

Series ~~169~~ 170 (Special)

+9°

	398	4.20		
8 35		4.15	12.76	5.52
		4.41		
	415	4.60		
		4.49	13.60	5.89
		4.51		
	433	2.67		
		2.55	7.75	3.36
		2.53		
	458	2.80		
		2.91	8.46	3.66
		2.75		
	466	2.77		
		2.90	8.32	3.60
		2.65		

Apr. 2, 1894.

473	2.95 3.10 3.00	foll. + northern of two. 9.05	 3.92
~~487~~	~~4.85~~ ~~4.70~~ ~~4.97~~	wrong star.	
487	4.40 4.33 4.51	13.24	5.74
496	3.70 3.91 3.83	11.44	4.96
504	2.73 2.77 2.65	foll. + southern of 2. 8.15	 3.53
516	4.00 3.87 3.95	11.82	5.12
520	4.30 4.44 4.22	12.96	5.61

9 20

Apr. 2. 1894.

5675 V Cor. Bor. F. Ls.

15 46 +40.2
10 30
—————
−5 16
6 44

10 38
—————
−5 8
6 52

There is a 12.5 mag. star with which V Cor. Bor. can be compared with Phot. R. but the photometer will not quite reach the 8.0 mag. Comparison abandoned.

U Leonis. F. Ls.

10 21. +15.5
11 30
—————
+1 9

The chart is deficient and region does not identify well.

Apr. 3. 1894.

Ice P. 441 = Dm. +62° 596. Gr. Ho.

3 29 +62.2
8 30
+5 1

Index to right.

7 44 29.0 112.5^ < Comp. star dis.
141.5
37.5 97.5^
135.0 210.0^ + ~~1.4~~ ✓
150.0 -0.58

Index to left.

129.1 94.9^
224.0
119.8 113.3^
233.1 208.2^ + ~~[illegible]~~ ✓
151.8 -0.54

120.5 110.6^
231.1
131.9 92.1^
224.0 202.7^ + ~~1.6~~ ✓
~~Index to right.~~
157.3 -0.43

Apr. 3. 1894.

Index to right.

221.0 94.0^
315.0

211.0 110.0^
321.0 204.0^ ~~+1.5~~ v
156.0 -0.46

208.0 115.9^
323.9

217.2 97.3^
314.5 213.2^ ~~+1.4~~ v
146.8 -0.64

Index to left.

307.4 98.6^
46.0

8 24 | 298.8 115.3^
8 04 | 54.1 213.9^ ~~+1.3~~ v
146.1 -0.65

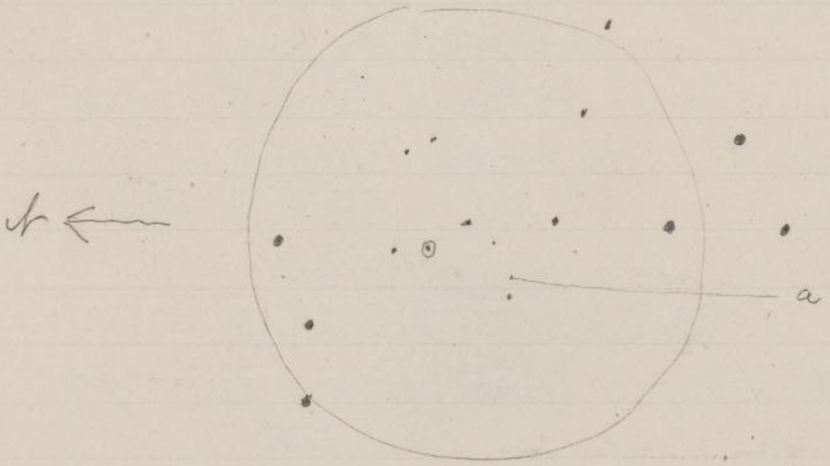
9 · 0 (+62° 593) 1 (596), (596) 1 (599).
same in lar. tel.
Est. 9.1

Apr. 3. 1894.

R Geminorum.

7 0 +22.1
10 17
+3 17

6 57 +22.9
10 26
+3 29



R = a in lar tel.
9 48 Too ft. for finder.
Est 14.0

Apr. 3. 1894.

Pos. Zero 333.5
85.0
18.5

~~-11^h~~ 11^h -1^m 13.5^s
-1^m 19.0
-1^m 35.5
-1^m 59.5^s

-4^m 3.0^s
-4^m 9.5^s
-4^m 22.5^s
-4^m 46.5^s

Order in prec. transits star(a) var, var. star(a) both Northern half.

U Leonis ~~W.O.C.~~ W. obs.

10^h 14^m +15.8
11 12
+0 58

Sky some hazy; var. not certainly seen, but at times ~~possibly~~ thought to be ~~suspe~~ possibly suspected. The faintest star seen in this region is a faint star on chart pretty close to var. in R.A. 10^h 16^m 4^s dec +14° ~~46~~ 47' this star is perhaps 13.0 mag The var. must certainly be a half a mag. fainter than this star and quite likely as much as a

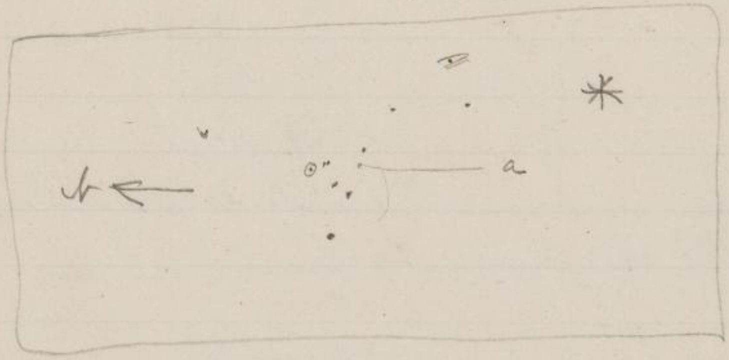
April 3, 1894.

whole mag. fainter but of this latter cannot be quite certain.

10^h 20^m Var. < 13.5

~~8°~~ T Geminorum, L. ob,

7^h 40^m +23.5
11 35
+3 55



Sky hazy and at times thin clouds. at intervals, however, var. thought to be seen, but it is pretty faint. About the faintest star which can certainly be seen in this region sufficiently well to plot it, is star (a) above. This would seem to be, perhaps, as faint as 12.8 mag. the var is perhaps a half a mag fainter than this

Var < 13 mag. probably.

Apr. 5. 1896.

m. P. 441 = +62° 5796. Gr. Ho.

3 29 +62.5
8 44
+5 15

8 51
+5 22

Index to right.

7 45
29.0 115.8 ✓ < Comp. * dis.
144.8
33.3 106.6 ✓
139.9 222.4 ✓ ~~+1.7~~ ✓
137.6 -0.82

Index to left.
127.1 98.9 ✓
226.0
119.8 111.6 ✓
231.4 210.5 ✓ ~~+1.1~~ ✓
149.5 -0.58

119.9 111.3 ✓
231.2
124.7 106.3 ✓
231.0 217.6 ✓ ~~+1.2~~ ✓
142.4 -0.73

April 5, 1894

Index to right.

215.3 102.7 ✓
318.0
211.5 110.4 ✓
321.9 213.1 ✓ ~~+17~~ ✓
146.9 −0.64

210.5 110.6 ✓
321.1
215.3 105.2 ✓
320.5 215.8 ✓ ~~+15.3~~ ✓
144.2 −0.69

Index to left.

303.1 108.1 ✓
51.2
299.9 114.4 ✓
54.3 222.5 ✓ ~~+17.2~~ ✓
137.5 −0.82

8h 5m
7 55

~~+62~~

Var. = (+62° 593)} in finder.
„ 1.5 (+62° 599)}

8 13

Var. = (+62° 593)} in lar. tel.
„ 2 (+62° 599)}

Thursday, April 5, 1894

Chron. cor. = $-85^{s}.1$

B+6 11~~9~~82

h	m	s
8	18	34.5
8	19	34.6

B394

~~8 20 00~~

h	m	s
8	~~20~~ 19	~~00~~ 59.6
8	~~21~~ 20	~~00~~ 59.6

Reap. Jup. II. Phot. R. G. Os. Davidson rec. Compared with 1st. sat. fol. = sat. III

8 31 34
8 12

8 39 46
8 20 0.

19 46.
8 18 34.

8 38 20. App. time Col.

Limit of Vis.

8^{h} — 35^{m} 51.2 $308^{s}.2$ −70.0

— 36^{m} 5.0 8 36 17.0 −99.8 29.8 339.8 85.0

— 36^{m} 23.0 8 37 42 −69.9

— 36^{m} 49.0 −100.1 30.2 ~~60.0~~ 30.0

Thursday April 5, 1894.

h							
A	38^m	4.0	8	39	29	susp.	
		8.5			33	seen.	
		17.0			42	75.7	23.3
		27.5			53	99.0	27.0
		35.0		40	00	72.0	27.9
		43.5			9	99.9	32.0
		50.0			15	67.9	33.1
	39	0.0			25	101.0	35.1
		7.5			33	65.9	39.1
		14.5			39	105.0	40.2
		21.0			46	64.8	43.3
		30.5			55	108.1	43.3
		37.5		41	3	64.8	46.2
		44.5			9	111.0	50.2
		53.8			19	60.8	49.3
	40	0.5			25	110.1	51.3
		10.0			35	58.8	55.3
		21.0			46	114.1	59.1
		30.0			55	55.0	61.0
		39.5		42	5	116.0	63.3
		54.5			19	52.7	63.4
	41	1.0			26	116.1	64.0
		12.0			37	52.1	65.9
		20.0			45	118.0 →	65.7
		34.5		~~95.0~~	59	52.3	~~68.7~~ 68.7
		40.0	~~8~~	43 ~~41~~	~~48.8~~ 5	121.0 →	~~34.7~~ ~~86.2~~ X
		56.0	~~8~~	~~43~~	~~14~~	50.3	
	42	3.5	8	42	10	117.1	66.8 ~~135.3~~ tor
			8	43	35		

April 5 1894.

340.6
85.2

8	42	15.0	~~119^s.5~~	54.2		1
		24.0	~~8 42 29.9~~	119.0	64.8 65.8	~~2~~
		36.0	~~8 43 55~~	49.0		~~341.2~~ ~~85.3~~
		44.5	8 42 49 8 44 14	119.0	70.0 ~~134.8~~	
		53.9	~~269^s.4~~	48.7		2 337.9 84.5
	43	3.0	~~8 43 7.3~~	121.0	72.1 71.0	~~3~~
		12.0	~~8 44 33~~	51.3		~~340.6~~ ~~85.2~~
		20.5	8 43 28 8 44 53	119.4	68.1 ~~140.2~~	
		32.5	~~203^s.5~~	49.0		3
		47.0	~~8 43 50.9~~	119.2	70.2 269.2	338.9 84.7 ~~4~~
		57.5	~~8 45 16~~	50.0		~~336.4~~ ~~84.1~~
	44	6.5	8 44 12 8 45 37	118.2	68.2 ~~138.4~~	
		17.0	~~127^s.5~~	50.7		4 341.1 85.3
		26.5	~~8 44 31.9~~	122.0	71.1 69.8	~~345.1~~ ~~86.3~~ ~~5~~
		38.0	~~8 45 57~~	53.1		
		46.0	8 44 53 8 46 18	119.1	66.0 ~~137.1~~	342.4 85.6
	45	0.0	~~58^s.5~~	51.5		5
		9.0	~~8 45 14.6~~	118.7	67.2 66.6	~~340.2~~ ~~85.0~~
		18.0	~~8 46 40~~	52.8		6 344.5 86.1
		31.5	8 45 40 8 47 5	117.2	64.4 ~~131.6~~	6
		48.5	~~270^s.5~~	53.7		
	46	2.5	~~8 46 7.6~~	120.8	67.1 65.8	~~344.7~~ ~~86.2~~
		14.5	~~8 47 33~~	51.2		7 341.4 85.4
		25.0	8 46 33 8 47 58	119.0	67.8 ~~134.9~~	
		40.0	~~230^s.0~~	54.0		7
		53.0	~~8 46 57.5~~	117.2	63.2 65.5	~~344.3~~ ~~86.1~~
	47	4.0	~~8 48 23~~	51.1		8 361.4 90.4
		13.0	8 47 20 8 48 45	122.0	70.9 ~~134.1~~	

April 5 1894

8^h	47	25.5	~~$362^s.0$~~	50.0	68.3 / 69.6 ~~335.2~~ ~~83.8~~ 8
		35.5	~~8 48 30.5~~	118.3	9
	49	21.5	~~8 49 56~~	47.1	7
		39.5	8 49 50 8 51 15 ~~$20^s.5$~~	119.8	72.7 332.5 / ~~141.0~~ 83.1
50		2.5		48.0	~~165.6~~
		18.0	~~8 50 10.2~~ ~~8 51 35~~	117.6	69.6 ~~82.8~~ / 71.2 9

Seeing pretty good considering low altitude Jup. boiling somewhat, however, especially at last of settings.

B + C 1182.				Bc 39 C	
9^h	2^m	34.5	9^h	~~4~~ 3	59.6 ~~0.0~~
9^h	3	34.5	9^h	~~4~~ 4	59.6 ~~0.0~~
9^h	4	34.5	9^h	~~4~~ 5	59.6 ~~0.0~~
9^h	5	34.5	9^h	~~4~~ 6	59.6 ~~0.0~~

Wedge Zone. Gr. obs.

+19°

Series. $17\overset{1}{9}$.

1162 — 3.07

9 16 — 3.09 9.35 4.05

— 3.19

April 5, 1894

1163	3.51		
	3.49	10.60	4.59
	3.60		
1165	~~4.13~~ 4.30		
	4.48	13.35	5.78
	4.57		
1173	2.89		
	2.98	8.89	3.85
	3.02		
1180	2.97		
	3.22	9.39	4.07
	3.20		
1182	4.10		
	3.90	12.07	5.23
	4.07		
1184	2.38		
	2.50	7.37	3.19
	2.49		
1194	3.02		
	2.98	8.90	3.85
	2.90		

April 5, 1894

1206	2.60		
	2.74	8.09	3.50
	2.75		
1207	2.92		
	3.10	9.14	3.96
	3.12		
1224	2.90		
	3.07	9.24	4.00
	3.27		
1226	2.65		
	2.91	8.44	3.65
	2.88		
1228	2.59		
	2.60	7.69	3.33
	2.50		
1243	3.30		
	3.10	9.60	4.15
	3.20		
1248	2.58		
	2.79	8.20	355
	2.83		

April 5, 1894.

1250	3.00			
	3.20	9.40	4.07	
	3.20			← This star is 0.3 of a mag. brighter than 1248
*				
1256	4.40			
	4.25	12.95	5.61	
	4.30			
1272	3.00			
	3.29	9.47	4.10	
	3.18			
1284	2.31			
	2.26	6.77	2.93	
	2.20			
1290	2.69			
	2.50	7.59	3.29	
	2.40			
1294	2.25			
	2.20	6.84	2.96	
	2.39			
1295	2.40			
	2.57	7.67	3.32	
	2.70			

April 5, 1894.

~~1296~~	3.20		
	~~3.29~~		
	3.31		
1300	3.02		
	3.00	9.02	3.91
	3.00		
1296	2.80		
	3.00	8.81	3.81
	3.01		
1301	2.89		
	3.00	8.89	3.85
	3.00		
1303	2.80		
	2.91	8.72	3.78
	3.01		
1305	4.29		
	4.12	12.81	5.55
	4.40		
1308	3.81		
	3.80	11.51	4.98
	3.90		

April 5, 1894.

	1313	5.01		
		4.79	14.50	6.28
		4.70		
	1331	3.58		
		3.50	10.75	4.65
		3.67		
	1334	2.60		
		2.92	8.35	3.62
		2.83		
	1337	2.52		
		2.80	8.31	3.60
		2.99		
	1339	2.71	Same as in series 40	
		3.90	9.51	4.12
		2.90		
	1341	3.42		
-10 √3		3.50	10.71	4.64
		3.79		

1894phae.p[0j..523W

1894phue.proj..523W